CONSTRUCTION PLAN FOR

MAPLE LAWN FARMS

Business District - Area 1

General Notes:

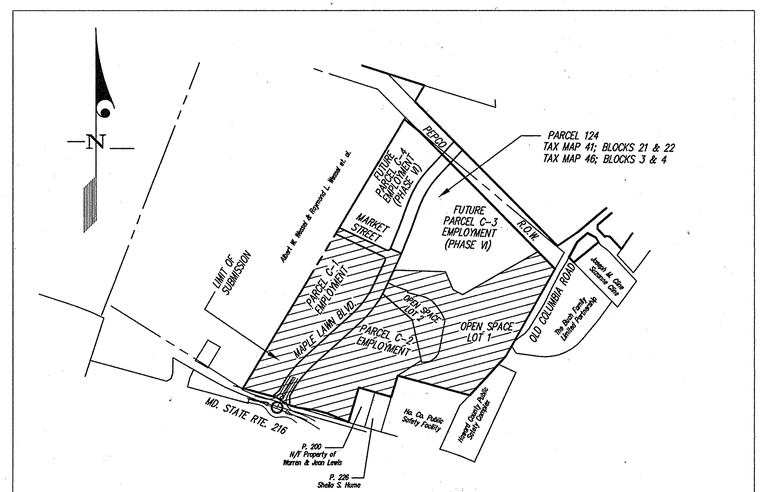
1. Zoning: Site is being developed under MXD-3 regulations, per ZB995M, which was approved on 2/8/01. Underlying Zoning is RR-DEO.
2. The previous Department of Planning and Zoning file numbers: S 01-17, ZB-995M, PB-353, WP-01-111 AND WP-02-54, P-02-12.
3. This project is in conformance with the latest Howard County standards unless waivers have been approved.
4. The Cemetery Inventory Maps do not show any cemeteries within the project limits.
5. The Scenic Roads Map does not indicate any scenic roads within or adjacent to the project limits.
6. This property was brought into the Metropolitan District August 20, 2001.
7. All Roads in this Development are public.
8. Gross Site Area: 507.9 Acres ±
   Total Area of Phase I: 51.98 Acres ±
   Area of Open Space: 21.15 Acres ±
   Area of 100 Year Floodplain in Phase One: 3.40 Acres ±
   Area of Roadways: 4.35 Acres±
   Area of Parcels: 26.48 Acres±
   Number of Parcels: 4 (2 buildable, 2 open space)
9. Open Space Requirements:
   Total Open Space Required: 18.2 Acres ± (35%)
   Total Open Space Provided: 21.15 Acres ± (41%)
10. Soils data was taken from the Soil Survey of Howard County, Maryland issued July 1968.
11. Topography indicated was taken from aerial topography prepared during March 1997 by 3DI and supplemented in the area of Maple Lawn Blvd.. and MD. Route 216 with field survey by Gutschick, Little, and Weber, P.A. and SHA construction plans.
12. Boundary information shown is based upon a field survey prepared by Gutschick, Little, and Weber, P.A. on or about June, 2001.
13. Wetland delineation by Exploration Research, Inc. approved by the Corps of of Engineers JD 63787-3 on 5/14/98. Notice of intent to issue a permit is covered by MDE Tracking #01-NT-0344/200165421.
14. The 100-year flood plain limits were determined by the floodplain study prepared by Gutschick, Little and Weber, P.A. as part of P 02-12.
15. Horizontal and vertical datum is based on Howard County Stations 46B2 and 41GA.
16. Existing utilities were taken from available Howard County records.
17. Public water and sewer to be utilized:
    Existing Water Contract Number: 44-3505
    Existing Sewer Contract Number: 20-1739 D
18. Traffic Study was prepared and submitted as part of S 01-17.
19. A noise study is not required because the land use under this Final Plan is commercial.
20. Sediment and erosion control measures will be included with Final Plans and Site Development Plans. will encroach beyond the L.O.D. shown. No sediment control devices
21. Parking requirements will be determined and provided at the Site Development Plan stages.
22. Street trees are provided per the Comprehensive Sketch Plan criteria with this final plan submission.
23. All buffering and other landscaping requirements/features will be shown at the Site Development Plan stage and will be provided in accordance with the Comprehensive Sketch Plan criteria.
24. 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.
25. Stormwater management is being provided at the facility on Open Space Lot Two. The facility will be a wetpond utilizing extention/detention for the one year storm event management and a permanent pool for water quality. Channel protection is also being provided in the facility. Recharge requirements will be provided on the parcels with the development of each pod. A volume equivalent to the recharge volume is within the stormwater management pond. The pond will be privately owned and maintained by a commercial owners association.The perforated 8"" HDPE out of MH 4 is being installed as part of the MDE permit approval. This device provides a recharge source (not a stormwater management device) for the existing wetlands in the area. This device will be part of the public storm drain system, but will not require any future maintenance. The stormceptor, SC-1, at the west end of the pond will be privately owned and maintained by the commercial owners association.
26. 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.
27. Vehicular Ingress and Egress to Maryland Route 216 and along the proposed Maple Lawn Blvd.. extension through the subdivision is restricted, except at the various points of access to be approved by the Department of Planning and Zoning. The conditions of WP 01-111, which was granted on May 2, 2001 allows the following:
    1. Additional points along Maple Lawn Blvd.. other than those permitted by Section 16.119(f)(1), subject to further analysis and approvals at later plan stages, and
    2. 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.
28. As stated in the Decision and Order for P.B. Case 353, which was signed on 7/11/01, 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 phase (or Final Plan) and other Preliminary Subdivision Plans submitted for this project shall not be approved by DPZ until funding test evaluation restrictions enunciated by the Zoning Board on page 22-23 of its decision on the PDP are met consistent with the requirements of Section 127.E.4.c.2 of the Zoning Regulations.
29. Minimum building setback restrictions from Maple Lawn Blvd., Maryland Route 216, Market Street and the project boundary will be in accordance with the Comprehensive Development Criteria approved with S-01-17.
30. 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 WP-02-54. WP 02-54 was granted on April 2, 2002, allowing the following:
    1. Development within a 100 year floodplain, and
    2. Grading and removal of vegetative cover within a 25' wetland buffer and a 50' stream buffer.

    The approval is subject to the following conditions:
    1. 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.
    2. MDE waterway construction approval is required prior to road plan approval.
    3. 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 submittals.
    4. 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".
31. Open space lots may contain active recreational facilities as allowed by the approved Comprehensive Development Criteria.
32. Phasing for this project is in accordance with the Decision and Order for Zoning Board Case No. ZB-995M and the Decision and Order for PB Case No. 353 (Comprehensive Sketch Plan, S-01-17).
33. Development for this phase will be done in accordance with the Comprehensive Development Criteria approved with S-01-17 and PB-353.
34. In a letter dated March 27, 2002, a determination that the environmental buffer disturbances for the proposed pedestrian pathway alignments shown on these plans are to be considered necessary disturbances in accordance with Section 16.116 (c) of the Subdivision Land Development Regulations. Also, the stream buffer and flood plain impact associated with the SWM facility outfall was determined by DPZ and SCD as an essential disturbance.
35. The existing structure which lied on the common property line of Maple Lawn Farms and Warren & Jean Lewis was relocated. The location shown on these plans was taken from a field survey done by Gutschick, Little and Weber on December 9, 2002.
36. In accordance with the traffic report, the Maryland Route 216 roundabout improvements will be constructed with this Phase 1 Final Plan. Offsite land acquisitions will not be required for the improvements.
37. The radius for curb fillets for the future entrances is 25' and the radius for curb fillets within the median island is 5'. All other curb radii are called out on the Road Construction Plans.
38. A portion of the existing impervious area at the Maryland Route 216 roundabout will be diverted to the proposed stormwater management facility on Open Space Lot 2. The amount being diverted is greater than the new impervious area being generated by the roundabout, thereby reducing the impact to the SHA pond from Maryland Route 216.
39. The transportation and transit design will be implemented as outlined in the Petitioner's Exhibit 55 as submitted as part of ZB 995M. A sheltered bus stop will be located in the southbound lane of Maple Lawn Blvd.. at centerline station 124+00. Signed bus stops will be located in both the north- and south-bound lanes of Maple Lawn Blvd.. at centerline station 5+35. Any shelters provided will be shown at Site Development Plan Stage for the building adjacent to that structure so that architectural and hardscape features can be coordinated.
40. A traffic study prepared for P-02-12 determined that signals are not warranted along Maple Lawn Blvd.. at this time. The developer understands and agrees that should there become a need for the signals in the future, the signals will be proposed as part of the next Preliminary Plan submission for the Business District. Conduits are being proposed on the Final Plans for this Phase in the event that the signals will need to be installed.
41. Sidewalks and ramps to be constructed per ADA requirements.
42. Minimum tree quantities and preferred spacing are as follows:

Maple Lawn Blvd.. & Road 'F'	1 tree per 40 linear feet, both sides:
All other streets:	1 tree per 30 linear feet, both sides:
Private Alleys	No trees required

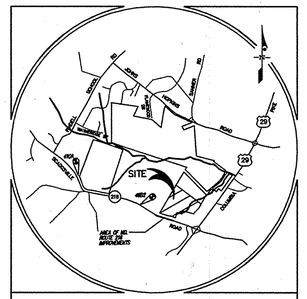
These are only minimum standards. Trees should be placed to align where possible with lot lines and demising walls of units so as to avoid blocking the fronts and/or doors and windows of units. The total number of street trees required for this phase is 131. We have provided 135 street trees. The surety for the street trees will be provided with the Dept. of Public Works Developer's Aggreement.

43. The improvements to the intersection of Route 216 and Pindell School Road will be prepared under a separate road plan set: The plan will be submitted in order for the permitting and completion of construction in the year 2004.
44. Sidewalks and trees located within the right-of-ways for Maple Lawn Blvd. and Market St. are shown for informational and bonding purposes. Sidewalks and trees will be installed in conjunction with adjacent Site Development Plans. Maintenance of sidewalks and trees within the right-of-ways will be the responsibility of the Commercial Owners Association.



LOCATION PLAN
SCALE: 1"=600'

Note: Road Name Change
Due to a late change in the name of the main road from "Sanner Road" to "Maple Lawn Boulevard", there may be residual locations in the plans still referring to Sanner Road. All such references to proposed Sanner Road shall be considered to mean Maple Lawn Boulevard. Furthermore, any references in the comprehensive sketch plan criteria to Sanner Road, shall apply to the new name.



VICINITY MAP
SCALE: 1" = 4000'

BENCHMARKS

41GA — ELEV. = 462.16
STANDARD DISC ON CONCRETE MONUMENT

46B2 — ELEV. = 474.67
STANDARD DISC ON CONCRETE MONUMENT

LEGEND

- ==== EXIST. CURB & GUTTER/PAVEMENT
- STANDARD CURB & GUTTER
- REVERSED CURB & GUTTER
- EX. 12"W EXISTING WATER MAIN
- EX. 18"SD EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- 4 4 4 PROP. TOP OF CURB ELEVATION
- PROPOSED STREET TREES
- AREA OF TEXTURED PAVEMENT
- STRIPED AREA
- EROSION CONTROL MATTING
- 4 NUMBER OF PARKING SPACES

SHEET INDEX

1. COVER SHEET
2. ROAD CONSTRUCTION AND STREET TREE PLAN - MAPLE LAWN BLVD.
3. ROAD CONSTRUCTION AND STREET TREE PLAN - MAPLE LAWN BLVD.
4. ROAD CONSTRUCTION AND STREET TREE PLAN - MARKET STREET
5. ROAD DETAILS - MAPLE LAWN BLVD. & MARKET STREET
6. ROAD CONSTRUCTION PLAN - MARYLAND ROUTE 216
7. SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MD. RTE. 216
8. SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MAPLE LAWN BLVD.
9. ROAD DETAILS - MARYLAND ROUTE 216
10. SEDIMENT CONTROL OVERVIEW PLAN (@ 1"=100')
11. GRADING/SEDIMENT CONTROL PLAN
12. GRADING/SEDIMENT CONTROL PLAN
13. GRADING/SEDIMENT CONTROL PLAN - MARYLAND ROUTE 216
14. SEDIMENT CONTROL DETAILS
15. SEDIMENT CONTROL DETAILS
16. STORM DRAIN DRAINAGE AREA MAP (@ 1"=100')
17. STORM DRAIN PROFILES AND SCHEDULES
18. STORM DRAIN PROFILES AND SCHEDULES
19. STORM DRAIN PROFILES AND SCHEDULES
20. PRE-DEVELOPMENT SWM DRAINAGE AREA MAP (@ 1"=100')
21. POST-DEVELOPMENT SWM DRAINAGE AREA MAP (@ 1"=100')
22. S.W.M. NOTES AND DETAILS
23. STORMWATER MANAGEMENT FACILITY DETAILS
24. STORMWATER MANAGEMENT FACILITY DETAILS
25. STORMWATER MANAGEMENT FACILITY DETAILS
26. STORMWATER MANAGEMENT FACILITY DETAILS
27. STORMWATER MANAGEMENT FACILITY DETAILS
28. FINAL FOREST CONSERVATION PLAN - PHASE I
29. FINAL FOREST CONSERVATION NOTES, SCHEDULES AND DETAILS
30. FINAL PERIMETER LANDSCAPING PLAN
31. PHASE II STREAM CHANNEL MITIGATION
32. PHASE II STREAM CHANNEL MITIGATION
33. PHASE II STREAM CHANNEL MITIGATION
34. AMENITY AREA PLAN

THE LIMITS OF THIS FINAL PLAN COVERS ALL THE DEVELOPMENT PROPOSED BY S-01-17 AS ANNUAL PHASE 1 (ALLOCATION YEAR 2004) WHICH IS ALSO THE 676,000 SF OF EMPLOYMENT ALLOWED BY PDP PHASE 1/STAGE 1 AND PHASE 2/STAGE 1.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/12/03

COUNTY FILE # F 03-07

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

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DATE	REVISION	BY	APP'R.
2014.9.19	⚠3 Revised sheet index to reflect additional sheet for amenity area.	D.E.V.	

OWNER:
G & R Maple Lawn, Inc. et. al.
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 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	1 OF 34

F-03-07

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STREET TREE SCHEDULE

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
+	Acer Sacharum / Green Mountain Sugar Maple	2½" col.	63	70	B & B Full Heads

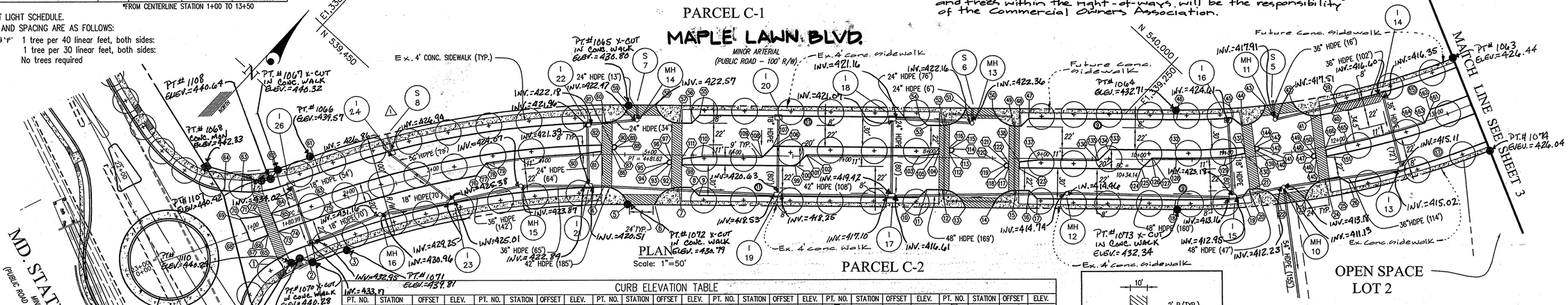
*FROM CENTERLINE STATION 1+00 TO 13+50

- SEE SHEET 5 FOR STREET LIGHT SCHEDULE.
- MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:
  - Maple Lawn Blvd. & Road 'F': 1 tree per 40 linear feet, both sides:
  - All other streets: 1 tree per 30 linear feet, both sides:
  - Private Alleys: No trees required

℄ CURVE DATA

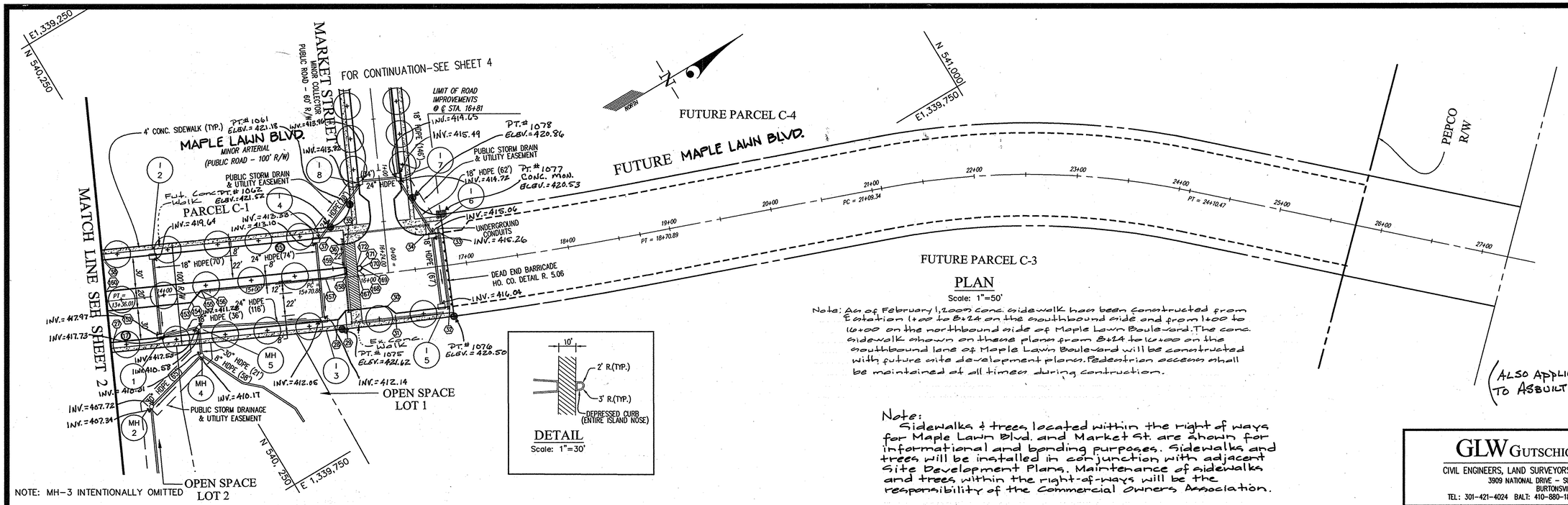
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
MAPLE LAWN BLVD.	1+80.99	none	4+81.62	870.00'	300.64'	151.83'	299.14'	N 37°45'38" E	19°47'57"
MAPLE LAWN BLVD.	10+34.14	none	13+36.01	775.00'	301.87'	152.87'	299.97'	N 36°30'05" E	22°19'03"

Note: Sidewalks & trees located within the right-of-ways for Maple Lawn Blvd and Market St. are shown for informational and bonding purposes. Sidewalks and trees will be installed in conjunction with adjacent Site Development Plans. Maintenance of sidewalks and trees within the right-of-ways will be the responsibility of the Commercial Owners Association.



CURB ELEVATION TABLE

PT. NO.	STATION	OFFSET	ELEV.
①	1+02.23	37.54'R.	~~440.84~~
②	1+42.63	32.00'R.	~~439.91~~
③	1+80.99	32.00'R.	~~438.92~~
④	4+60.22	32.00'R.	~~431.71~~
⑤	4+85.55	50.00'R.	~~431.69~~
⑥	5+11.62	50.00'R.	~~431.05~~
⑦	5+35.62	32.00'R.	~~430.08~~
⑧	5+48.24	32.00'R.	~~429.87~~
⑨	5+56.24	40.00'R.	~~429.53~~
⑩	7+76.24	40.00'R.	~~430.63~~
⑪	7+84.24	32.00'R.	~~431.04~~
⑫	7+99.62	32.00'R.	~~431.35~~
⑬	8+23.62	50.00'R.	~~432.33~~
⑭	8+49.62	50.00'R.	~~432.71~~
⑮	8+73.62	32.00'R.	~~432.41~~
⑯	8+87.25	32.00'R.	~~432.52~~
⑰	8+95.25	40.00'R.	~~432.35~~
⑱	10+34.14	40.00'R.	431.96
⑲	10+97.24	40.00'R.	~~430.94~~
⑳	11+04.00	32.00'R.	~~431.03~~
㉑	11+09.27	32.00'R.	~~430.91~~
㉒	11+31.72	50.00'R.	~~430.97~~
㉓	11+55.77	50.00'R.	~~430.43~~
㉔	11+78.22	32.00'R.	~~429.37~~
㉕	11+91.68	32.00'R.	~~429.07~~
㉖	12+00.18	40.00'R.	~~428.65~~
㉗	12+04.93	40.00'L.	~~428.55~~
㉘	11+97.37	32.00'L.	~~428.95~~
㉙	11+83.70	32.00'L.	~~429.25~~
㉚	11+57.92	50.00'L.	~~430.39~~
㉛	11+29.57	50.00'L.	~~431.02~~
㉜	11+02.24	32.00'L.	~~431.06~~
㉝	10+92.95	40.00'L.	~~431.02~~
㉞	10+34.14	40.00'L.	~~431.96~~
㉟	8+86.24	40.00'L.	~~432.29~~
㊱	8+78.24	32.00'L.	~~432.45~~
㊲	8+73.62	32.00'L.	~~432.41~~
㊳	8+49.62	50.00'L.	~~432.71~~
㊴	8+23.62	50.00'L.	~~432.33~~
㊵	7+99.62	32.00'L.	~~432.15~~
㊶	7+84.24	32.00'L.	~~431.04~~
㊷	7+76.24	40.00'L.	~~430.63~~
㊸	5+56.24	40.00'L.	~~429.54~~
㊹	5+48.24	32.00'L.	~~429.87~~
㊺	5+35.62	32.00'L.	~~430.06~~
㊻	5+11.62	50.00'L.	~~431.05~~
㊼	4+85.69	50.00'L.	~~431.63~~
㊽	4+62.85	32.00'L.	~~431.71~~
㊾	1+22.48	10.15'L.	~~440.90~~
㊿	1+80.99	10.00'L.	~~439.38~~
(101)	2+29.88	10.00'L.	~~439.73~~
(102)	2+64.30	10.00'L.	~~440.09~~
(103)	2+76.62	10.00'L.	~~440.18~~
(104)	2+96.62	3.29'L.	~~441.88~~
(105)	3+06.62	10.00'L.	~~441.75~~
(106)	3+30.59	10.00'L.	~~442.03~~
(107)	3+50.59	10.00'L.	~~442.31~~
(108)	3+70.59	10.00'L.	~~442.59~~
(109)	3+90.59	10.00'L.	~~442.87~~
(110)	4+10.59	10.00'L.	~~443.15~~
(111)	4+30.59	10.00'L.	~~443.43~~
(112)	4+50.59	10.00'L.	~~443.71~~
(113)	4+70.59	10.00'L.	~~443.99~~
(114)	4+90.59	10.00'L.	~~444.27~~
(115)	5+10.59	10.00'L.	~~444.55~~
(116)	5+30.59	10.00'L.	~~444.83~~
(117)	5+50.59	10.00'L.	~~445.11~~
(118)	5+70.59	10.00'L.	~~445.39~~
(119)	5+90.59	10.00'L.	~~445.67~~
(120)	6+10.59	10.00'L.	~~445.95~~
(121)	6+30.59	10.00'L.	~~446.23~~
(122)	6+50.59	10.00'L.	~~446.51~~
(123)	6+70.59	10.00'L.	~~446.79~~
(124)	6+90.59	10.00'L.	~~447.07~~
(125)	7+10.59	10.00'L.	~~447.35~~
(126)	7+30.59	10.00'L.	~~447.63~~
(127)	7+50.59	10.00'L.	~~447.91~~
(128)	7+70.59	10.00'L.	~~448.19~~
(129)	7+90.59	10.00'L.	~~448.47~~
(130)	8+10.59	10.00'L.	~~448.75~~
(131)	8+30.59	10.00'L.	~~449.03~~
(132)	8+50.59	10.00'L.	~~449.31~~
(133)	8+70.59	10.00'L.	~~449.59~~
(134)	8+90.59	10.00'L.	~~449.87~~
(135)	9+10.59	10.00'L.	~~450.15~~
(136)	9+30.59	10.00'L.	~~450.43~~
(137)	9+50.59	10.00'L.	~~450.71~~
(138)	9+70.59	10.00'L.	~~450.99~~
(139)	9+90.59	10.00'L.	~~451.27~~
(140)	10+10.59	10.00'L.	~~451.55~~
(141)	10+30.59	10.00'L.	~~451.83~~
(142)	10+50.59	10.00'L.	~~452.11~~
(143)	10+70.59	10.00'L.	~~452.39~~
(144)	10+90.59	10.00'L.	~~452.67~~
(145)	11+10.59	10.00'L.	~~452.95~~
(146)	11+30.59	10.00'L.	~~453.23~~
(147)	11+50.59	10.00'L.	~~453.51~~
(148)	11+70.59	10.00'L.	~~453.79~~
(149)	11+90.59	10.00'L.	~~454.07~~
(150)	12+10.59	10.00'L.	~~454.35~~
(151)	12+30.59	10.00'L.	~~454.63~~
(152)	12+50.59	10.00'L.	~~454.91~~
(153)	12+70.59	10.00'L.	~~455.19~~
(154)	12+90.59	10.00'L.	~~455.47~~
(155)	13+10.59	10.00'L.	~~455.75~~
(156)	13+30.59	10.00'L.	~~456.03~~
(157)	13+50.59	10.00'L.	~~456.31~~
(158)	13+70.59	10.00'L.	~~456.59~~
(159)	13+90.59	10.00'L.	~~456.87~~
(160)	14+10.59	10.00'L.	~~457.15~~
(161)	14+30.59	10.00'L.	~~457.43~~
(162)	14+50.59	10.00'L.	~~457.71~~
(163)	14+70.59	10.00'L.	~~457.99~~
(164)	14+90.59	10.00'L.	~~458.27~~
(165)	15+10.59	10.00'L.	~~458.55~~
(166)	15+30.59	10.00'L.	~~458.83~~
(167)	15+50.59	10.00'L.	~~459.11~~
(168)	15+70.59	10.00'L.	~~459.39~~
(169)	15+90.59	10.00'L.	~~459.67~~
(170)	16+10.59	10.00'L.	~~459.95~~
(171)	16+30.59	10.00'L.	~~460.23~~
(172)	16+50.59	10.00'L.	~~460.51~~
(173)	16+70.59	10.00'L.	~~460.79~~
(174)	16+90.59	10.00'L.	~~461.07~~
(175)	17+10.59	10.00'L.	~~461.35~~
(176)	17+30.59	10.00'L.	~~461.63~~
(177)	17+50.59	10.00'L.	~~461.91~~
(178)	17+70.59	10.00'L.	~~462.19~~
(179)	17+90.59	10.00'L.	~~462.47~~
(180)	18+10.59	10.00'L.	~~462.75~~
(181)	18+30.59	10.00'L.	~~463.03~~
(182)	18+50.59	10.00'L.	~~463.31~~
(183)	18+70.59	10.00'L.	~~463.59~~
(184)	18+90.59	10.00'L.	~~463.87~~
(185)	19+10.59	10.00'L.	~~464.15~~
(186)	19+30.59	10.00'L.	~~464.43~~
(187)	19+50.59	10.00'L.	~~464.71~~
(188)	19+70.59	10.00'L.	~~464.99~~
(189)	19+90.59	10.00'L.	~~465.27~~
(190)	20+10.59	10.00'L.	~~465.55~~
(191)	20+30.59	10.00'L.	~~465.83~~
(192)	20+50.59	10.00'L.	~~466.11~~
(193)	20+70.59	10.00'L.	~~466.39~~
(194)	20+90.59	10.00'L.	~~466.67~~
(195)	21+10.59	10.00'L.	~~466.95~~
(196)	21+30.59	10.00'L.	~~467.23~~
(197)	21+50.59	10.00'L.	~~467.51~~
(198)	21+70.59	10.00'L.	~~467.79~~
(199)	21+90.59	10.00'L.	~~468.07~~
(200)	22+10.59	10.00'L.	~~468.35~~
(201)	22+30.59	10.00'L.	~~468.63~~
(202)	22+50.59	10.00'L.	~~468.91~~
(203)	22+70.59	10.00'L.	~~469.19~~
(204)	22+90.59	10.00'L.	~~469.47~~
(205)	23+10.59	10.00'L.	~~469.75~~
(206)	23+30.59	10.00'L.	~~470.03~~
(207)	23+50.59	10.00'L.	~~470.31~~
(208)	23+70.59	10.00'L.	~~470.59~~
(209)	23+90.59	10.00'L.	~~470.87~~
(210)	24+10.59	10.00'L.	~~471.15~~
(211)	24+30.59	10.00'L.	~~471.43~~
(212)	24+50.59	10.00'L.	~~471.71~~
(213)	24+70.59	10.00'L.	~~471.99~~
(214)	24+90.59	10.00'L.	~~472.27~~
(215)	25+10.59	10.00'L.	~~472.55~~
(216)	25+30.59	10.00'L.	~~472.83~~
(217)	25+50.59	10.00'L.	~~473.11~~
(218)	25+70.59	10.00'L.	~~473.39~~
(219)	25+90.59	10.00'L.	~~473.67~~
(220)	26+10.59	10.00'L.	~~473.95~~
(221)	26+30.59	10.00'L.	~~474.23~~
(222)	26+50.59	10.00'L.	~~474.51~~
(223)	26+70.59	10.00'L.	~~474.79~~
(224)	26+90.59	10.00'L.	~~475.07~~
(225)	27+10.59	10.00'L.	~~475.35~~
(226)	27+30.59	10.00'L.	~~475.63~~
(227)	27+50.59	10.00'L.	~~475.91~~
(228)	27+70.59	10.00'L.	~~476.19~~
(229)	27+90.59	10.00'L.	~~476.47~~
(230)	28+10.59	10.00'L.	~~476.75~~
(231)	28+30.59	10.00'L.	~~477.03~~
(232)	28+50.59	10.00'L.	~~477.31~~
(233)	28+70.59	10.00'L.	~~477.59~~
(234)	28+90.59	10.00'L.	~~477.87~~
(235)	29+10.59	10.00'L.	~~478.15~~
(236)	29+30.59	10.00'L.	~~478.43~~
(237)	29+50.59	10.00'L.	~~478.71~~
(238)	29+70.59	10.00'L.	~~478.99~~
(239)	29+90.59	10.00'L.	~~479.27~~
(240)	30+10.59	10.00'L.	~~479.55~~
(241)	30+30.59	10.00'L.	~~479.83~~
(242)	30+50.59	10.00'L.	~~480.11~~
(243)	30+70.59	10.00'L.	~~480.39~~
(244)	30+90.59	10.00'L.	~~480.67~~
(245)	31+10.59	10.00'L.	~~480.95~~
(246)	31+30.59	10.00'L.	~~481.23~~
(247)	31+50.59	10.00'L.	~~481.51~~
(248)	31+70.59	10.00'L.	~~481.79~~
(249)	31+90.59	10.00'L.	~~482.07~~
(250)	32+10.59	10.00'L.	~~482.35~~
(251)	32+30.59	10.00'L.	~~482.63~~
(252)	32+50.59	10.00'L.	~~482.91~~
(253)	32+70.59	10.00'L.	~~483.19~~
(254)	32+90.59	10.00'L.	~~483.47~~
(255)	33+10.59	10.00'L.	~~483.75~~
(256)	33+30.59	10.00'L.	~~484.03~~
(257)	33+50.59	10.00'L.	~~484.31~~
(258)	33+70.59	10.00'L.	~~484.59~~
(259)	33+90.59	10.00'L.	~~484.87~~
(260)	34+10.59	10.00'L.	~~485.15~~
(261)	34+30.59	10.00'L.	~~485.43~~
(262)	34+50.59	10.00'L.	~~485.71~~
(263)	34+70.59	10.00'L.	~~485.99~~
(264)	34+90.59	10.00'L.	~~486.27~~
(265)	35+10.59	10.00'L.	~~486.55~~
(266)	35+30.59	10.00'L.	~~486.83~~
(267)	35+50.59	10.00'L.	~~487.11~~
(268)	35+70.59	10.00'L.	~~487.39~~
(269)	35+90.59	10.00'L.	~~487.67~~
(270)	36+10.59	10.00'L.	~~487.95~~
(271)	36+30.59	10.00'L.	~~488.23~~
(272)	36+50.59	10.00'L.	~~488.51~~
(273)	36+70.59	10.00'L.	~~488.79~~
(274)	36+90.59	10.00'L.	~~489.07~~
(275)	37+10.59	10.00'L.	~~489.35~~
(276)	37+30.59	10.00'L.	~~489.63~~
(277)	37+50.59	10.00'L.	~~489.91~~
(278)	37+70.59	10.00'L.	~~490.19~~
(279)	37+90.59	10.00'L.	~~490.47~~
(280)	38+10.59	10.00'L.	~~490.75~~
(281)	38+30.59	10.00'L.	~~491.03~~
(282)	38+50.59	10.00'L.	~~491.31~~
(283)	38+70.59	10.00'L.	~~491.59~~
(284)	38+90.59	10.00'L.	~~491.87~~
(285)	39+10.59	10.00'L.	~~492.15~~
(286)	39+30.59	10.00'L.	~~492.43~~
(287)	39+50.59	10.00'L.	~~492.71~~
(288)	39+70.59	10.00'L.	~~492.99~~
(289)	39+90.59	10.00'L.	~~493.27~~
(290)	40+10.59	10.00'L.	~~493.55~~
(291)	40+30.59	10.00'L.	~~493.83~~
(292)	40+50.59	10.00'L.	~~494.11~~
(293)	40+70.59	10.00'L.	~~494.39~~
(294)	40+90.59	10.00'L.	~~494.67~~
(295)	41+10.59	10.00'L.	~~494.95~~
(296)	41+30.59	10.00'L.	~~495.23~~
(297)	41+50.59	10.00'L.	~~495.51~~
(298)	41+70.59	10.00'L.	~~495.79~~
(299)	41+90.59	10.00'L.	~~496.07~~
(300)	42+10.59	10.00'L.	~~496.35~~
(301)	42+30.59	10.00'L.	~~496.63~~
(302)	42+50.59	10.00'L.	~~496.91~~
(303)	42+70.59	10.00'L.	~~497.19~~
(304)	42+90.59	10.00'L.	~~497.47~~
(305)	43+10.59	10.00'L.	~~497.75~~
(306)	43+30.59	10.00'L.	~~498.03~~
(307)	43+50.59	10.00'L.	~~498.31~~
(308)	43+70.59	10.00'L.	~~498.59~~
(309)	43+90.59	10.00'L.	~~498.87~~
(310)	44+10.59	10.00'L.	~~499.15~~
(311)	44+30.59	10.00'L.	~~499.43~~
(312)	44+50.59	10.00'L.	~~499.71~~
(313)	44+70.59	10.00'L.	~~499.99~~
(314)	44+90.59	10.00'L.	~~500.27~~
(315)	45+10.59	10.00'L.	~~500.55~~
(316)	45+30.59	10.00'L.	~~500.83~~
(317)	45+50.59	10.00'L.	~~501.11~~
(318)	45+70.59	10.00'L.	~~501.39~~
(319)	45+90.59	10.00'L.	~~501.67~~
(320)	46+10.59	10.00'L.	~~501.95~~
(321)	46+30.59	10.00'L.	~~502.23~~
(322)	46+50.59	10.00'L.	~~502.51~~
(323)	46+70.59	10.00'L.	~~502.79~~
(324)	46+90.59	10.00'L.	~~503.07~~
(325)	47+10.59	10.00'L.	~~503.35~~
(326)	47+30.59	10.00'L.	~~503.63~~
(327)	47+50.59	10.00'L.	~~503.91~~
(328)	47+70.59	10.00'L.	~~504.19~~
(329)	47+90.59	10.00'L.	~~504.47~~
(330)	48+10.59	10.00'L.	~~504.75~~
(331)	48+30.59	10.00'L.	~~505.03~~
(332)	48+50.59	10.00'L.	~~505.31~~
(333)	48+70.59	10.00'L.	~~505.59~~
(334)	48+90.59	10.00'L.	~~505.87~~
(335)	49+10.59	10.00'L.	~~506.15~~
(336)	49+30.59	10.00'L.	~~506.43~~
(337)	49+50.59	10.00'L.	~~506.71~~
(338)	49+70.59	10.00'L.	~~506.99~~
(339)	49+90.59	10.00'L.	~~507.27~~
(340)	50+10.59	10.00'L.	~~507.55~~
(341)	50+30.59	10.00'L.	~~507.83~~
(342)	50+50.59	10.00'L.	~~508.11~~
(343)	50+70.59	10.00'L.	~~508.39~~
(344)	50+90.59	10.00'L.	~~508.67~~
(345)	51+10.59	10.00'L.	~~508.95~~
(346)	51+30.59	10.00'L.	~~509.23~~
(347)	51+50.59	10.00'L.	~~509.51~~
(348)	51+70.59	10.00'L.	~~509.79~~
(349)	51+90.59	10.00'L.	~~510.07~~
(350)	52+10.59	10.00'L.	~~510.35~~
(351)	52+30.59	10.00'L.	~~510.63~~
(352)	52+50.59	10.00'L.	~~510.91~~
(353)	52+70.59	10.00'L.	~~511.19~~
(354)	52+90.59	10.00'L.	~~511.47~~
(355)	53+10.59	10.00'L.	~~511.75~~
(356)	53+30.59	10.00'L.	~~512.03~~
(357)	53+50.59	10.00'L.	~~512.31~~
(358)	53+70.59	10.00'L.	~~512.59~~
(359)	53+90.59	10.00'L.	~~512.87~~
(360)	54+10.59	10.00'L.	~~513.15~~
(361)	54+30.59	10.00'L.	~~513.43~~
(362)	54+50.59	10.00'L.	~~513.71~~
(363)	54+70.59	10.00'L.	~~513.99~~
(364)	54+90.59	10.00'L.	~~514.27~~
(365)	55+10.59	10.00'L.	~~514.55~~
(366)	55+30.59	10.00'L.	~~514.83~~
(367)	55+50.59	10.00'L.	~~515.11~~
(368)	55+70.59	10.00'L.	~~515.39~~
(369)	55+90.59	10.00'L.	~~515.67~~
(370)	56+10.59	10.00'L.	~~515.95~~
(371)	56+30.59	10.00'L.	~~516.23~~
(372)	56+50.59	10.00'L.	~~516.51~~
(373)	56+70.59	10.00'L.	~~516.79~~
(374)	56+90.59	10.00'L.	~~517.07~~
(375)	57+10.59	10.00'L.	~~517.35~~
(376)	57+30.59	10.00'L.	~~517.63~~
(377)	57+50.59	10.00'L.	~~517.91~~
(378)	57+70.59	10.00'L.	~~518.19~~
(379)	57+90.59	10.00'L.	~~518.47~~
(380)	58+10.59	10.00'L.	~~518.75~~
(381)	58+30.59	10.00'L.	~~519.03~~
(382)	58+50.59	10.00'L.	~~519.31~~
(383)	58+70.59	10.00'L.	~~519.59~~
(384)	58+90.59	10.00'L.	~~519.87~~
(385)	59+10.59	10.00'L.	~~520.15~~
(386)	59+30.59	10.00'L.	~~520.43~~
(387)	59+50.59	10.00'L.	~~520.71~~
(388)	59+70.59	10.00'L.	~~520.99~~
(389)	59+90.59	10.00'L.	~~521.27~~
(390)	60+10.59	10.00'L.	~~521.55~~
(391)	60+30.59	10.00'L.	~~521.83~~
(392)	60+50.59	10.00'L.	~~522.11~~
(393)	60+70.59	10.00'L.	~~522.39~~
(394)	60+90.59	10.00'L.	~~522.67~~
(395)	61+10.59	10.00'L.	~~522.95~~
(396)	61+30.59	10.00'L.	~~523.23~~
(397)	61+50.59	10.00'L.	~~523.51~~
(398)	61+70.59	10.00'L.	~~523.79~~
(399)	61+90.59	10.00'L.	~~524.07~~
(400)	62+10.59	10.00'L.	~~524.35~~
(401)	62+30.59	10.00'L.	~~524.63~~
(402)	62+50.59	10.00'L.	~~524.91~~
(403)	62+70.59	10.00'L.	~~525.19~~
(404)	62+90.59	10.00'L.	~~525.47~~
(405)	63+10.59	10.00'L.	~~525.75~~
(406)	63+30.59	10.00'L.	~~526.03~~
(407)	63+50.59	10.00'L.	~~526.31~~
(408)	63+70.59	10.00'L.	~~526.59~~
(409)	63+90.59	10.00'L.	~~526.87~~
(410)	64+10.59	10.00'L.	~~527.15~~
(411)	64+30.59	10.00'L.	~~527.43~~
(412)	64+50.59	10.00'L.	~~527.71~~
(413)	64+70.59	10.00'L.	~~527.99~~
(414)	64+90.59	10.00'L.	~~528.27~~
(415)	65+10.59	10.00'L.	~~528.55~~
(416)	65+30.59	10.00'L.	~~528.83~~
(417)	65+50.59	10.00'L.	~~529.11~~
(418)	65+70.59	10.00'L.	~~529.39~~
(419)	65+90.59	10.00'L.	~~529.67~~
(420)	66+10.59	10.00'L.	~~529.95~~
(421)	66+30.59	10.00'L.	~~530.23~~
(422)	66+50.59	10.00'L.	~~530.51~~
(423)	66+70.59	10.00'L.	~~530.79~~
(424)	66+90.59	10.00'L.	~~531.07~~
(425)	67+10.59	10.00'L.	~~531.35~~
(426)	67+30.59	10.00'L.	~~531.63~~
(427)	67+50.59	10.00'L.	~~531.91~~
(428)	67+70.59	10.00'L.	~~532.19~~
(429)	67+90.59	10.00'L.	~~532.47~~
(430)	68+10.59	10.00'L.	~~532.75~~
(431)	68+30.59	10.00'L.	~~533.03~~
(432)	68+50.59	10.00'L.	~~533.31~~
(433)	68+70.59	10.00'L.	~~533.59~~
(434)	68+90.59	10.00'L.	~~533.87~~
(435)	69+10.59	10.00'L.	~~534.15~~
(436)	69+30.59	10.00'L.	~~534.43~~
(437)	69+50.59	10.00'L.	~~534.71~~
(438)	69+70.59	10.00'L.	~~534.99~~
(439)	69+90.59	10.00'L.	~~535.27~~
(440)	70+10.59	10.00'L.	~~535.55~~
(441)	70+30.59	10.00'L.	~~535.83~~
(442)	70+50.59	10.00'L.	~~536.11~~
(443)	70+70.59	10.00'L.	~~536.39~~
(444)	70+90.59	10.00'L.	~~536.67~~
(445)	71+10.59	10.00'L.	~~536.95~~
(446)	71+30.59	10.00'L.	~~537.23~~
(447)	71+50.59	10.00'L.	~~537.51~~
(448)	71+70.59	10.00'L.	~~537.79~~
(449)	71+90.59	10.00'L.	~~538.07~~
(450)	72+10.59	10.00'L.	~~538.35~~
(451)	72+30.59	10.00'L.	~~538.63~~
(452)	72+50.59	10.00'L.	~~538.91~~
(453)	72+70.59	10.00'L.	~~539.19~~
(454)	72+90.59	10.00'L.	~~539.47~~
(455)	73+10.59	10.00'L.	~~539.75~~
(456)	73+30.59	10.00'L.	~~540.03~~
(457)	73+50.59	10.00'L.	~~540.31~~
(458)	73+70.59	10.00'L.	~~540.59~~
(459)	73+90.59	10.00'L.	~~540.87~~
(460)	74+10.59	10.00'L.	~~541.15~~
(461)	74+30.59	10.00'L.	~~541.43~~
(462)	74+50.59	10.00'L.	~~541.71~~
(463)	74+70.59	10.00'L.	~~541.99~~
(464)	74+90.59	10.00'L.	~~542.27~~
(465)	75+10.59	10.00'L.	~~542.55~~
(466)	75+30.59	10.00'L.	~~542.83~~
(467)	75+50.59	10.00'L.	~~543.11~~
(468)	75+70.59	10.00'L.	~~543.39~~
(469)	75+90.59	10.00'L.	~~543.67~~
(470)	76+10.59	10.00'L.	~~543.95~~
(471)	76+30.59	10.00'L.	~~544.23~~
(472)	76+50.59	10.00'L.	~~544.51~~
(473)	76+70.59	10.00'L.	~~544.79~~
(474)	76+90.59	10.00'L.	~~545.07~~
(475)	77+10.59	10.00'L.	~~545.35~~
(476)	77+30.59	10.00'L.	~~545.63~~
(477)	77+50.59	10.00'L.	~~545.91~~
(478)	77+70.59	10.00'L.	~~546.19~~
(479)	77+90.59	10.00'L.	~~546.47~~
(480)	78+10.59	10.00'L.	~~546.75~~
(481)	78+30.59	10.00'L.	~~547.03~~
(482)	78+50.59	10.00'L.	~~547.31~~
(483)	78+70.59	10.00'L.	~~547.59~~
(484)	78+90.59	10.00'L.	~~547.87~~
(485)	79+10.59	10.00'L.	~~548.15~~
(486)	79+30.59	10.00'L.	~~548.43~~
(487)	79+50.59	10.00'L.	~~548.71~~
(488)	79+70.59	10.00'L.	~~548.99~~
(489)	79+90.59	10.00'L.	~~549.27~~
(490)	80+10.59	10.00'L.	~~549.55~~
(491)	80+30.59	10.00'L.	~~549.83~~
(492)	80+50.59	10.00'L.	~~550.11~~
(493)	80+70.59	10.00'L.	~~550.39~~
(494)	80+90.59	10.00'L.	~~550.67~~
(495)	81+10.59	10.00'L.	~~550.95~~
(496)	81+30.59	10.00'L.	~~551.23~~
(497)	81+50.59	10.00'L.	~~551.51~~
(498)	81+70.59	10.00'L.	~~551.79~~
(499)	81+90.59	10.00'L.	~~552.07~~
(500)	82+10.59	10.00'L.	~~552.35~~
(501)	82+30.59	10.00'L.	~~552.63~~
(502)	82+50.59	10.00'L.	~~552.91~~
(503)	82+70.59	10.00'L.	~~553.19~~
(504)	82+90.59	10.00'L.	~~553.47~~
(505)	83+10.59	10.00'L.	~~553.75~~
(506)	83+30.59	10.00'L.	~~554.03~~
(507)	83+50.59	10.00'L.	~~554.31~~
(508)	83+70.59	10.00'L.	~~554.59~~
(509)	83+90.59	10.00'L.	~~554.87~~
(510)	84+10.59	10.00'L.	~~555.15~~
(511)	84+30.59	10.00'L.	~~555.43~~
(512)	84+50.59	10.00'L.	~~555.71~~
(513)	84+70.59



Note: As of February 1, 2003 conc. sidewalk has been constructed from Estation 14+00 to 16+24 on the southbound side and from 14+00 to 16+00 on the northbound side of Maple Lawn Boulevard. The conc. sidewalk shown on these plans from 16+24 to 16+00 on the southbound lane of Maple Lawn Boulevard will be constructed with future site development plans. Pedestrian access shall be maintained at all times during construction.

DETAIL
Scale: 1"=30'

Note:
Sidewalks & trees located within the right of ways for Maple Lawn Blvd. and Market St. are shown for informational and bonding purposes. Sidewalks and trees will be installed in conjunction with adjacent Site Development Plans. Maintenance of sidewalks and trees within the right-of-ways will be the responsibility of the Commercial Owners Association.

CURB ELEVATION TABLE				
PT. NO.	STATION	OFFSET	ELEV.	
(27)	13+36.01	40.00'R.	425.62	425.44
(28)	15+70.76	32.00'R.	420.68	420.94
(29)	15+78.69	32.00'R.	420.81	420.98
(30)	16+18.82	32.00'R.	420.47	
(31)	16+26.50	40.00'R.	420.21	
(32)	16+78.51	40.00'R.	420.21	420.17
(33)	16+78.45	32.00'L.	420.44	420.27
(34)	16+62.56	32.00'L.	420.39	420.21
(35)	15+87.28	32.00'L.	420.75	420.27
(36)	15+77.97	32.00'L.	420.81	420.94
(37)	15+69.91	40.00'L.	420.68	420.96
(38)	13+36.01	40.00'L.	425.62	425.70
(152)	13+36.01	10.00'R.	426.31	426.26
(153)	14+30.13	10.00'R.	424.21	424.19
(154)	14+30.84	9.71'R	424.21	
(155)	14+41.25	0.71'L	424.19	424.11
(156)	14+41.96	1.00'L	424.19	
(157)	15+64.06	1.00'L	421.68	
(158)	15+84.01	3.39'L	421.32	421.54
(159)	15+84.04	10.00'L	421.21	421.25
(160)	13+36.01	10.00'L	426.31	426.31
(167)	15+94.03	4.37'L	421.20	421.24
(168)	15+96.39	4.71'L	421.18	
(169)	15+99.07	7.69'L	421.12	
(170)	15+99.07	8.00'L	421.13	420.76
(171)	15+97.06	10.00'L	421.09	
(172)	15+94.07	10.00'L	421.11	421.21

(ALSO APPLIES TO ASBUILT)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/21/03
Chief, Development Engineering Division — Date 2/18/03

- SEE SHEET 5 FOR STREET LIGHT SCHEDULE.
- MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:

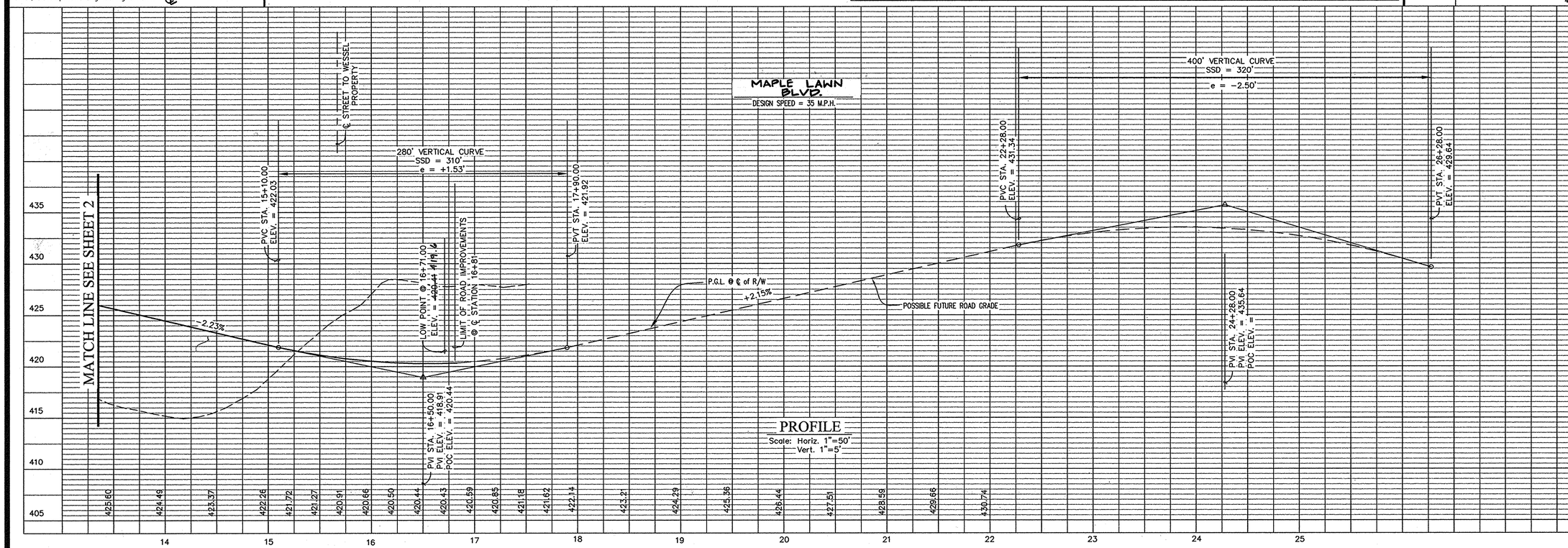
Maple Lawn Blvd. & Road 'F' — 1 tree per 40 linear feet, both sides:
All other streets: — 1 tree per 30 linear feet, both sides:
Private Alleys — No trees required

STREET TREE SCHEDULE					
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
(+)	Acer Sacharum / Green Mountain Sugar Maple	2½" cal.	17	17	B & B Full Heads

*FROM CENTERLINE STATION 13+50 TO 16+81

3/12/03	Added note describing limits of sidewalk constructed and label accordingly	WAJ	DEV
Date	Revision	By	App'n

℄ CURVE DATA									
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
MAPLE LAWN BLVD	15+70.86	none	18+70.89	3375.00'	300.03'	150.11'	299.93'	S 22°47'45" W	05°05'36"



PROFILE
Scale: Horiz. 1"=50'
Vert. 1"=5'

COUNTY FILE # F 03-07

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

DESIGNED	DEV
DRAWN	JAU
CHECKED	DEV
DATE	JANUARY 2003

Road Construction and Street Tree Plan
MAPLE LAWN FARMS
Business District - Area 1
Parcel C-1, C-2, and Open Space Lot 1 & 2
ELECTION DISTRICT NO.5 — HOWARD COUNTY, MD.

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

SCALE	AS SHOWN
DRAWING	3 OF 34
ZONING	MXD-3
JOB No.	96079

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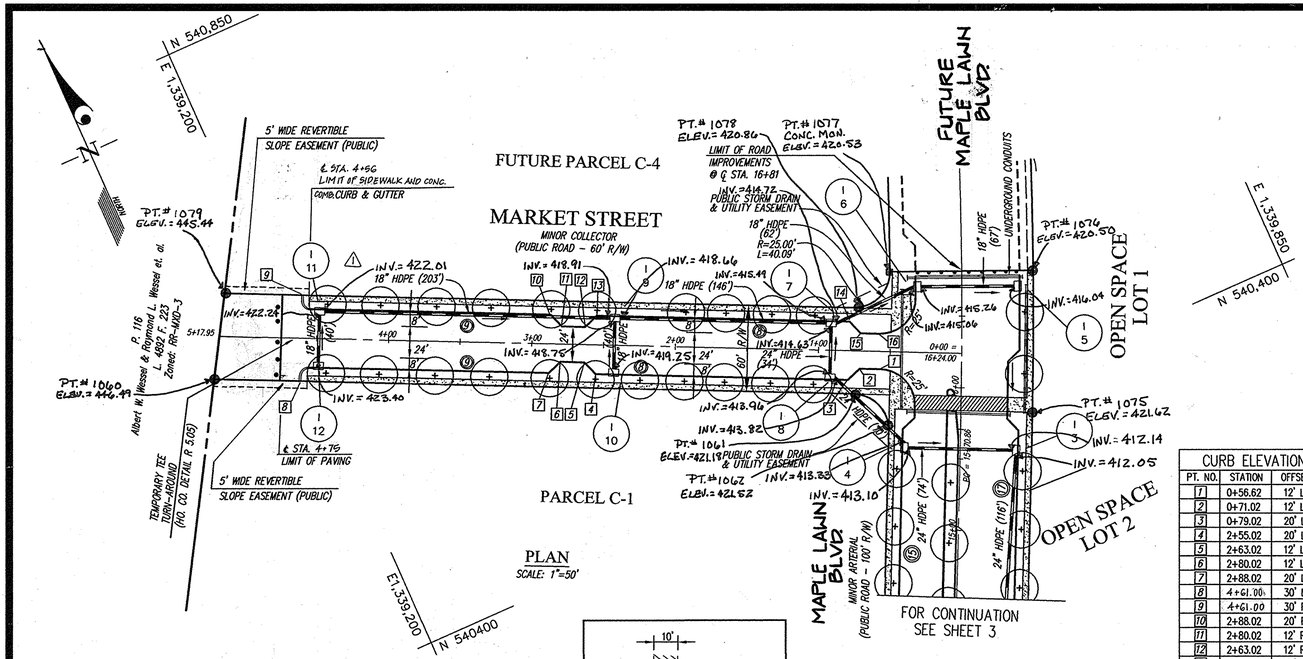
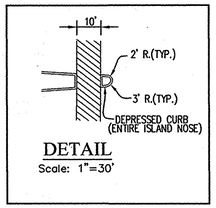


PLAN
SCALE: 1"=50'



DETAIL
Scale: 1"=30'

CURB ELEVATION TABLE				As Built
PT. NO.	STATION	OFFSET	ELEV.	EL EV.
1	0+56.82	12' L.	~~420.64~~	420.67
2	0+71.02	12' L.	~~420.91~~	420.89
3	0+79.02	20' L.	~~420.88~~	421.03
4	2+55.02	20' L.	~~422.99~~	424.01
5	2+63.02	12' L.	~~424.97~~	424.47
6	2+80.02	12' L.	~~424.67~~	424.70
7	2+88.02	20' L.	~~424.80~~	424.83
8	4+61.00\	30' L.	427.99	
9	4+61.00	30' R.	427.99	
10	2+88.02	20' R.	~~424.80~~	
11	2+80.02	12' R.	~~424.67~~	424.77
12	2+63.02	12' R.	~~424.37~~	424.44
13	2+55.02	20' R.	~~423.99~~	424.04
14	0+79.02	20' R.	~~420.88~~	421.02
15	0+71.02	12' R.	~~420.91~~	420.88
16	0+57.81	12' R.	~~420.67~~	420.75

Note:
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9/30/03	⚠ Revise road grade, limit of work on this plan, and top of curbs.	dev.	
Date	Revision	By	App'r.

(ALSO APPLIES TO ASBUILT)

- SEE SHEET 5 FOR STREET LIGHT SCHEDULE.
- MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:

Maple Lawn Blvd. & Road 'F' — 1 tree per 40 linear feet, both sides:
All other streets: — 1 tree per 30 linear feet, both sides:
Private Alleys — No trees required

STREET TREE SCHEDULE					
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
⊕	Acer Sacharum / Green Mountain Sugar Maple	2½" cal.	25	21**	B & B Full Heads

*FROM CENTERLINE STATION 1+00 TO 4+75

**21 STREET TREES IS ALL THAT IS POSSIBLE WHILE OBSERVING ALL REQUIRED CLEARANCES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/3/03
Chief, Development Engineering Division — Date 3/3/03

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

DESIGNED	DEV
DRAWN	JAU
CHECKED	DEV
DATE	JANUARY 2003

Road Construction and Street Tree Plan
MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
ELECTION DISTRICT NO.5 — HOWARD COUNTY, MD.

OWNER
G & R Maple Lawn, Inc., et. al.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD. 21208
Attn: Charlie O' Donovan
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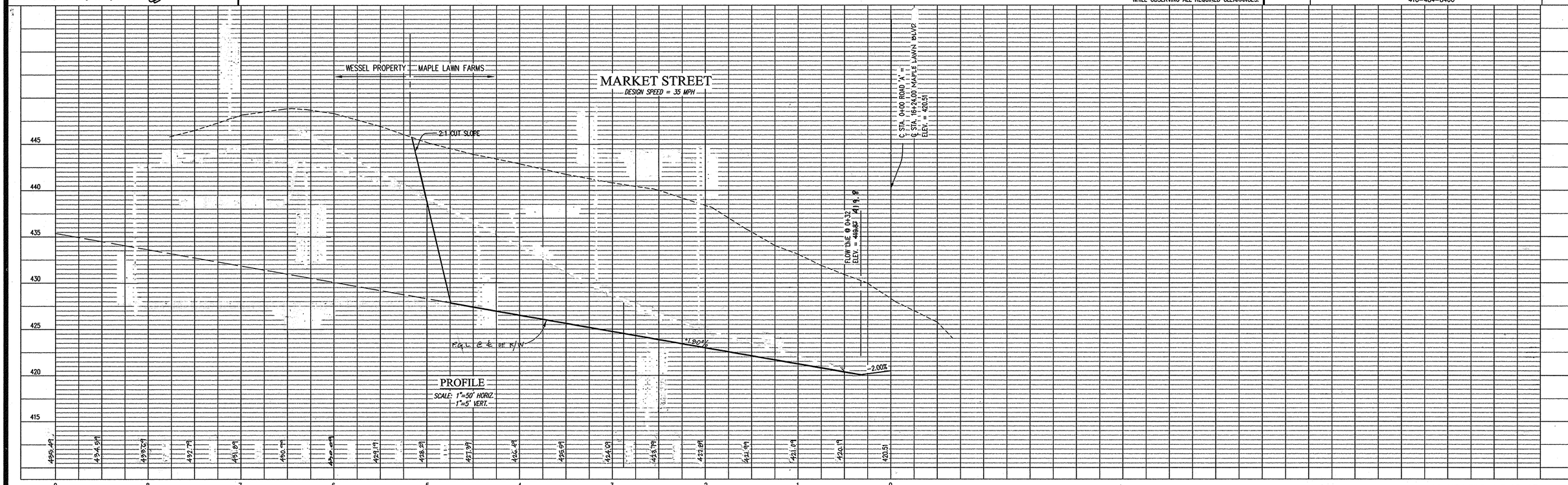
SCALE	AS SHOWN
DRAWING	4 OF 34
ZONING	MXD-3
JOB No.	96079



COUNTY FILE # F 03-07

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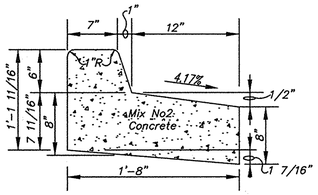
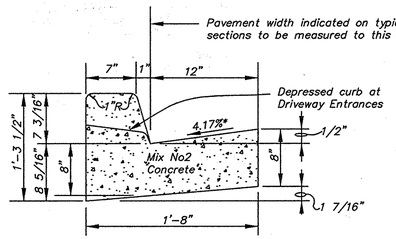
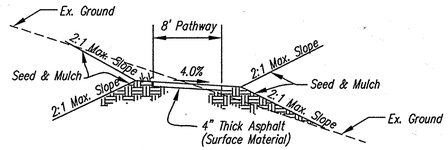


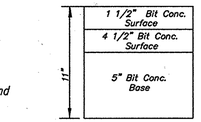
Reverse 7" Combination Curb & Gutter
N.T.S.



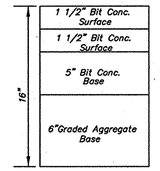
Standard 7" Combination Curb & Gutter
N.T.S.



8'-0" Pathway Detail
N.T.S.



P-5 Full Depth Bituminous Concrete
N.T.S.

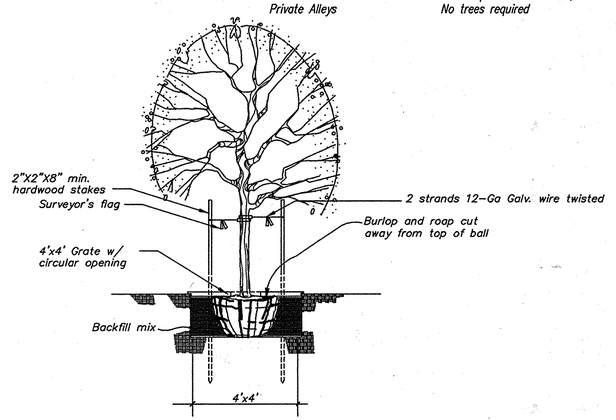


P-5 Granular Base (Alternate)
N.T.S.

Paving Sections
N.T.S.
Note: Other equivalent paving sections may be approved where approved by a professional soils engineer.

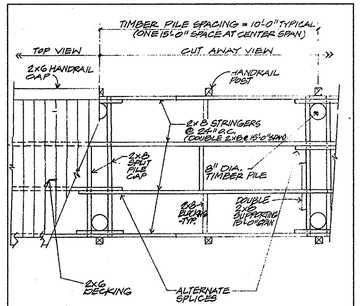
MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:

Maple Lawn Blvd. & Road 'F'	1 tree per 40 linear feet, both sides:
All other streets:	1 tree per 30 linear feet, both sides:
Private Alleys	No trees required

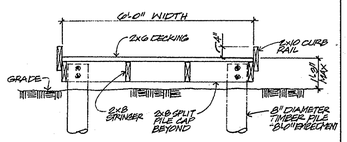


Typical Tree Guying Detail
N.T.S.

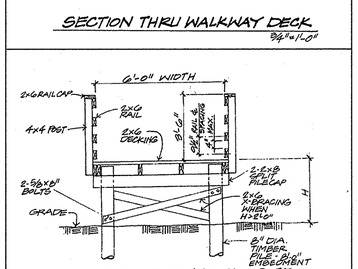
STREET LIGHT SCHEDULE			
LOCATION	LAMP TYPE	FIXTURE	POLE TYPE
℄ STA. 1+30 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 1+30 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 2+20 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 2+20 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 3+30 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 3+30 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 4+56 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 4+56 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 5+40 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 5+40 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 6+68 MAPLE LAWN BLVD., 42' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 6+68 MAPLE LAWN BLVD., 42' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 7+94 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 7+94 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 8+78 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 8+78 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 9+86 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 9+86 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 11+00 MAPLE LAWN BLVD., 38' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 11+00 MAPLE LAWN BLVD., 38' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 11+85 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 11+85 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 12+86 MAPLE LAWN BLVD., 42' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 12+86 MAPLE LAWN BLVD., 42' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 13+78 MAPLE LAWN BLVD., 42' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 13+78 MAPLE LAWN BLVD., 42' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 14+78 MAPLE LAWN BLVD., 42' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 14+78 MAPLE LAWN BLVD., 42' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 15+79 MAPLE LAWN BLVD., 35' RT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 15+79 MAPLE LAWN BLVD., 35' LT.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 0+65 MARKET STREET, 15' RT.	150-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 1+45 MARKET STREET, 22' LT.	150-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 2+25 MARKET STREET, 22' RT.	150-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 3+05 MARKET STREET, 22' LT.	150-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM
℄ STA. 3+85 MARKET STREET, 22' RT.	150-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/4' ALUMINUM ARM



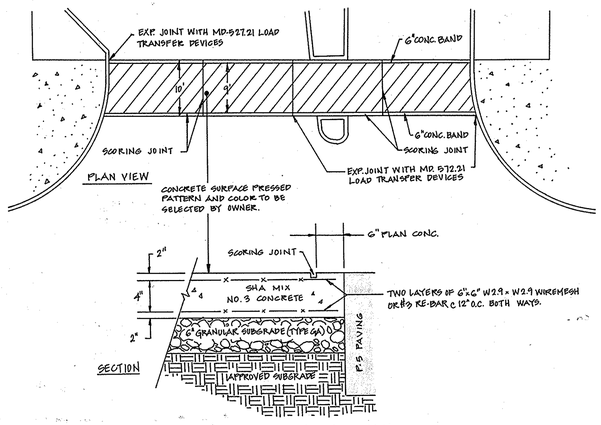
FIXED PIER FRAMING PLAN



SECTION THRU WALKWAY DECK
3/4"=1'-0"

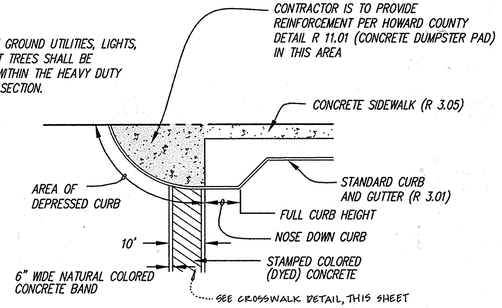


SECTION THRU FIXED PIER



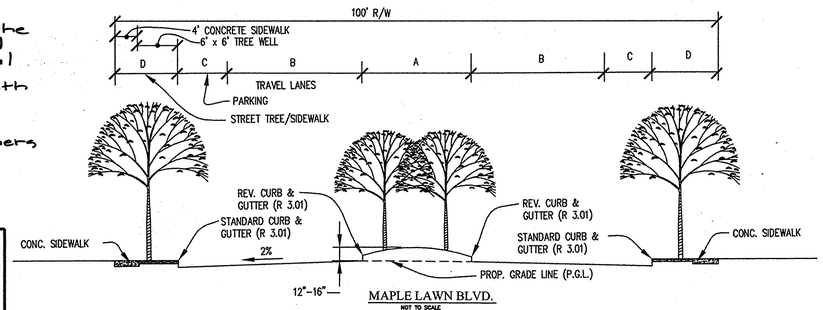
⚠ CROSS WALK DETAIL
NOT TO SCALE

NO ABOVE GROUND UTILITIES, LIGHTS, OR STREET TREES SHALL BE LOCATED WITHIN THE HEAVY DUTY SIDEWALK SECTION.



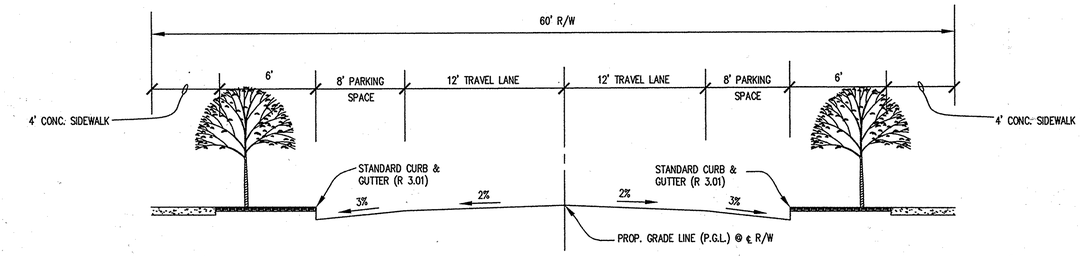
TYPICAL RAMPING DETAIL
N.T.S.

Note:
Sidewalks and trees located within the right-of-ways for Maple Lawn Blvd. and Market St. are shown for informational and bonding purposes. Sidewalks and trees will be installed in conjunction with adjacent Site Development Plans. Maintenance of sidewalks and trees within the right-of-ways will be the responsibility of the Commercial Owners Association.



MAPLE LAWN BLVD.
NOT TO SCALE

ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	A	B	C	D	E	R/W*	PAVING SECTION
MAPLE LAWN BLVD.	STA. 0+00 TO STA. 16+81	MINOR ARTERIAL	40 M.P.H.	20'	22'	8'	10'	—	100'	P-5



MARKET STREET
TYPICAL ROAD SECTION
NOT TO SCALE

ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	R/W*	PAVING SECTION
MARKET STREET	STA. 0+00 TO STA. 5+17.95	MINOR COLLECTOR	35 M.P.H.	60'	P-5

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/6/03

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

96079\finals\ph1-workplace\96079rd5.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠ ADDED CROSSWALK DETAIL.	JAU	

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

ROAD DETAILS - MAPLE LAWN BLVD. & MARKET STREET

MAPLE LAWN FARMS
Business District - Area 1
ParcelS C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
NO SCALE	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	5 OF 34

COUNTY FILE # F 03-07

F-03-07

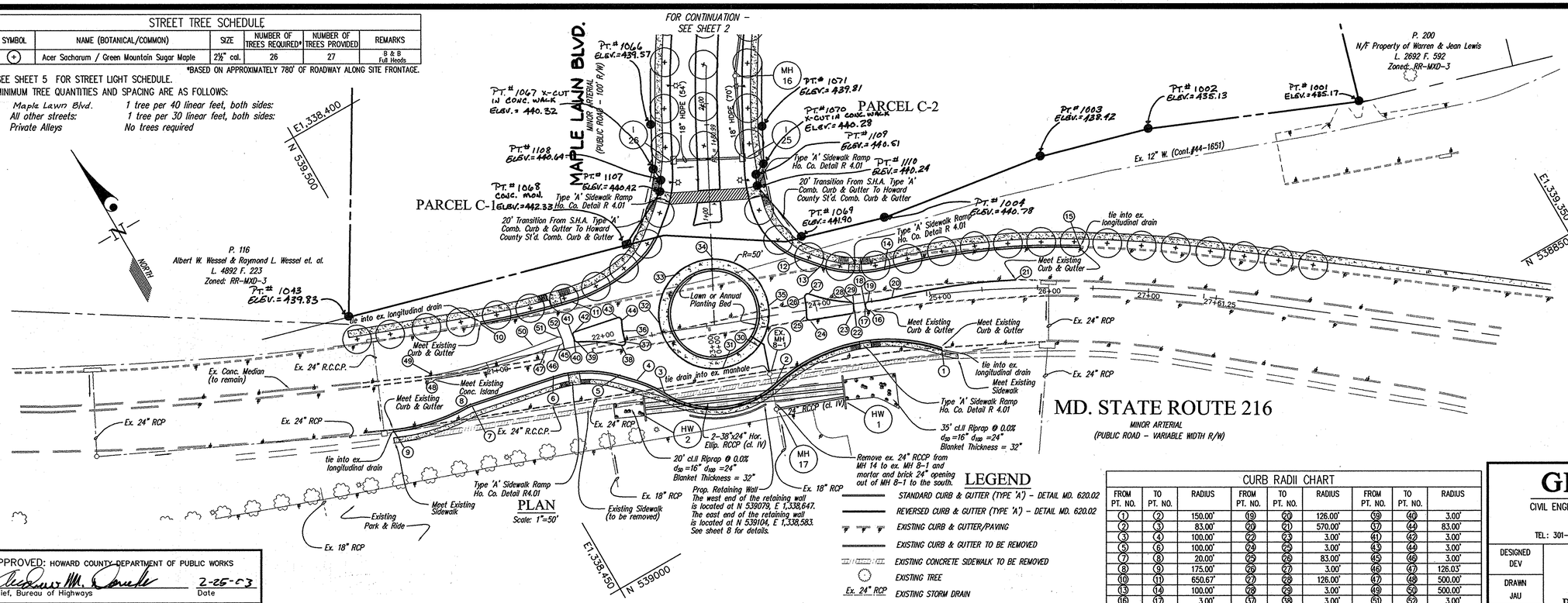
L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079RD5.DWG 12/10/2002 03:19:39 PM EST

STREET TREE SCHEDULE					
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
(+)	Acer Sacharum / Green Mountain Sugar Maple	2½" cal.	26	27	B & B Full Heads

*BASED ON APPROXIMATELY 780' OF ROADWAY ALONG SITE FRONTAGE.

- SEE SHEET 5 FOR STREET LIGHT SCHEDULE.
- MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:

Maple Lawn 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*



MD. STATE ROUTE 216

MINOR ARTERIAL
(PUBLIC ROAD – VARIABLE WIDTH R/W)

PLAN

Scale: 1"=50'

LEGEND

- STANDARD CURB & GUTTER (TYPE 'A') – DETAIL MD. 620.02
- REVERSED CURB & GUTTER (TYPE 'A') – DETAIL MD. 620.02
- EXISTING CURB & GUTTER/PAVING
- EXISTING CURB & GUTTER TO BE REMOVED
- EXISTING CONCRETE SIDEWALK TO BE REMOVED
- EXISTING TREE
- Ex. 24" RCP — EXISTING STORM DRAIN
- PROPOSED STORM DRAIN

CURB ELEVATION TABLE							
PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.
1	25+09.23	49.60'R.	~~A~~	27	23+95.30	14.94'L.	441.63
2	23+53.88	60.11'R.	~~441.07~~	28	24+31.28	1.70'L.	440.67
3	22+53.70	52.99'R.	~~442.52~~	29	24+33.65	1.44'R.	~~440.55~~
4	22+30.86	38.10'R.	~~442.90~~	30	23+35.99	31.46'R.	441.63
5	22+16.01	31.10'R.	~~443.11~~	31	23+08.03	40.07'R.	~~442.09~~
6	21+56.62	23.38'R.	~~443.39~~	32	22+58.02	9.92'L.	~~443.32~~
7	20+79.40	36.43'R.	——	33	22+78.62	50.38'L.	442.32
8	20+75.78	37.44'R.		34	23+15.29	59.40'L.	~~442.77~~
9	20+08.18	49.16'R.	~~A~~	35	23+58.02	9.94'L.	~~441.75~~
10	20+99.35	32.98'L.	~~A~~	36	22+24.92	7.40'L.	~~443.32~~
11	21+84.17	39.95'R.	~~443.34~~	37	22+25.70	2.46'R.	~~443.27~~
12	23+91.95	46.34'L.	~~442.02~~	38	22+21.58	5.65'R.	443.44
13	24+08.60	37.30'L.	~~441.70~~	39	21+82.92	3.65'L.	444.00
14	24+65.38	26.04'L.	~~440.87~~	40	21+80.19	6.15'L.	~~444.09~~
15	26+37.96	35.44'L.	~~A~~	41	21+79.48	10.40'L.	~~443.92~~
16	24+47.61	9.27'R.	~~A~~	42	21+81.94	13.85'L.	443.82
17	24+43.57	5.39'R.	~~440.28~~	43	22+21.84	20.54'L.	443.09
18	24+43.57	3.22'R.	~~440.28~~	44	22+25.32	17.28'L.	~~443.12~~
19	24+46.78	0.41'R.	440.28	45	21+69.88	7.40'L.	~~444.17~~
20	24+68.57	0.24'L.	~~439.83~~	46	21+67.25	3.77'L.	444.17
21	25+80.01	8.14'L.	~~A~~	47	21+54.96	1.97'L.	~~444.20~~
22	24+33.31	6.49'R.	~~440.40~~	48	20+51.13	1.93'R.	~~A~~
23	24+30.28	9.29'R.	440.37	49	20+47.36	2.14'L.	~~A~~
24	23+92.58	9.33'R.	441.08	50	21+42.61	5.91'L.	~~444.22~~
25	23+89.58	5.80'R.	~~441.23~~	51	21+66.01	11.04'L.	444.17
26	23+90.85	12.20'L.	~~441.63~~	52	21+69.58	8.75'L.	~~444.10~~

⚠ MEET EXISTING CURB AND GUTTER.

SEE SHEET 5 FOR STREET LIGHT SCHEDULE.

(ALSO APPLIES TO ASBUILT)

CURB RADII CHART								
FROM PT. NO.	TO PT. NO.	RADIUS	FROM PT. NO.	TO PT. NO.	RADIUS	FROM PT. NO.	TO PT. NO.	RADIUS
(1)	(2)	150.00'	(19)	(20)	126.00'	(39)	(40)	3.00'
(2)	(3)	83.00'	(20)	(21)	570.00'	(37)	(44)	83.00'
(3)	(4)	100.00'	(22)	(23)	3.00'	(41)	(42)	3.00'
(5)	(6)	100.00'	(24)	(25)	3.00'	(43)	(44)	3.00'
(7)	(8)	20.00'	(25)	(26)	83.00'	(45)	(46)	3.00'
(8)	(9)	175.00'	(26)	(27)	3.00'	(46)	(47)	126.03'
(10)	(11)	650.67'	(27)	(28)	126.00'	(47)	(48)	500.00'
(13)	(14)	100.00'	(28)	(29)	3.00'	(49)	(50)	500.00'
(16)	(17)	3.00'	(37)	(38)	3.00'	(51)	(52)	3.00'
(18)	(19)	3.00'	(38)	(39)	126.03'			

℄ CURVE DATA									
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
MD. RTE. 216	8+23.56		9+38.23	150.00' none	114.67'	52.38'	108.52'	S 36°46'50" W	98°41'21"
MD. RTE. 216	8+23.56		9+38.23	150.00' none	114.67'	52.38'	108.52'	S 36°46'50" W	98°41'21"

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/7/03

Chief, Development Engineering Division — Date 2/26/03

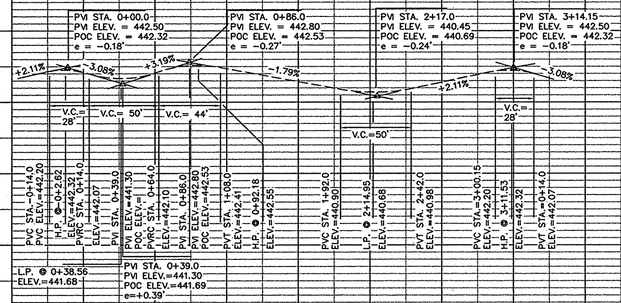
NOTES:
1. FOR GRADING & SEDIMENT CONTROL MEASURES, SEE SHEET 13.
2. FOR LIMITS OF WIDENING, RESURFACING, ETC., SEE SHEET 13.
3. FOR SIGNING, LIGHTING, AND PAVEMENT MARKING, SEE SHEET 7.
4. FOR DETAILS RELATING TO MD. ROUTE 216, SEE SHEET 9.
5. SEE SHEET 9 FOR LONGITUDINAL DRAIN INFORMATION.

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

DESIGNED DEV	Road Construction Plan - Md. Route 216
DRAWN JAU	MAPLE LAWN FARMS
CHECKED DEV	Business District - Area 1
DATE JANUARY 2003	Parcels C-1, C-2, and Open Space Lots 1 & 2
	ELECTION DISTRICT NO.5 — HOWARD COUNTY, MD.
	OWNER G & R Maple Lawn, Inc., et. al. Suite 410, Woodholme Center 1829 Reisterstown Road Baltimore, MD. 21208 Attn: Charlie O' Donovan 410-484-8400
SCALE AS SHOWN	
DRAWING 6 OF 34	
ZONING MXD-3	
JOB No. 96079	

ASBUILT CURB ELEVATION

PT. NO.	ELEV.	PT. NO	ELEV.
1	437.69	27	
2	441.25	28	
3	442.60	29	440.95
4	443.20	30	
5	443.69	31	442.08
6	444.33	32	442.92
7	444.21	33	
8		34	441.95
9	443.53	35	441.48
10	443.41	36	444.06
11	443.15	37	443.93
12	441.79	38	
13	442.02	39	
14	440.65	40	444.25
15	437.46	41	444.35
16		42	
17	440.68	43	
18	440.67	44	444.14
19		45	444.95
20	439.85	46	
21		47	444.27
22	441.03	48	443.62
23		49	443.93
24		50	444.10
25	441.79	51	
26	441.99	52	444.39



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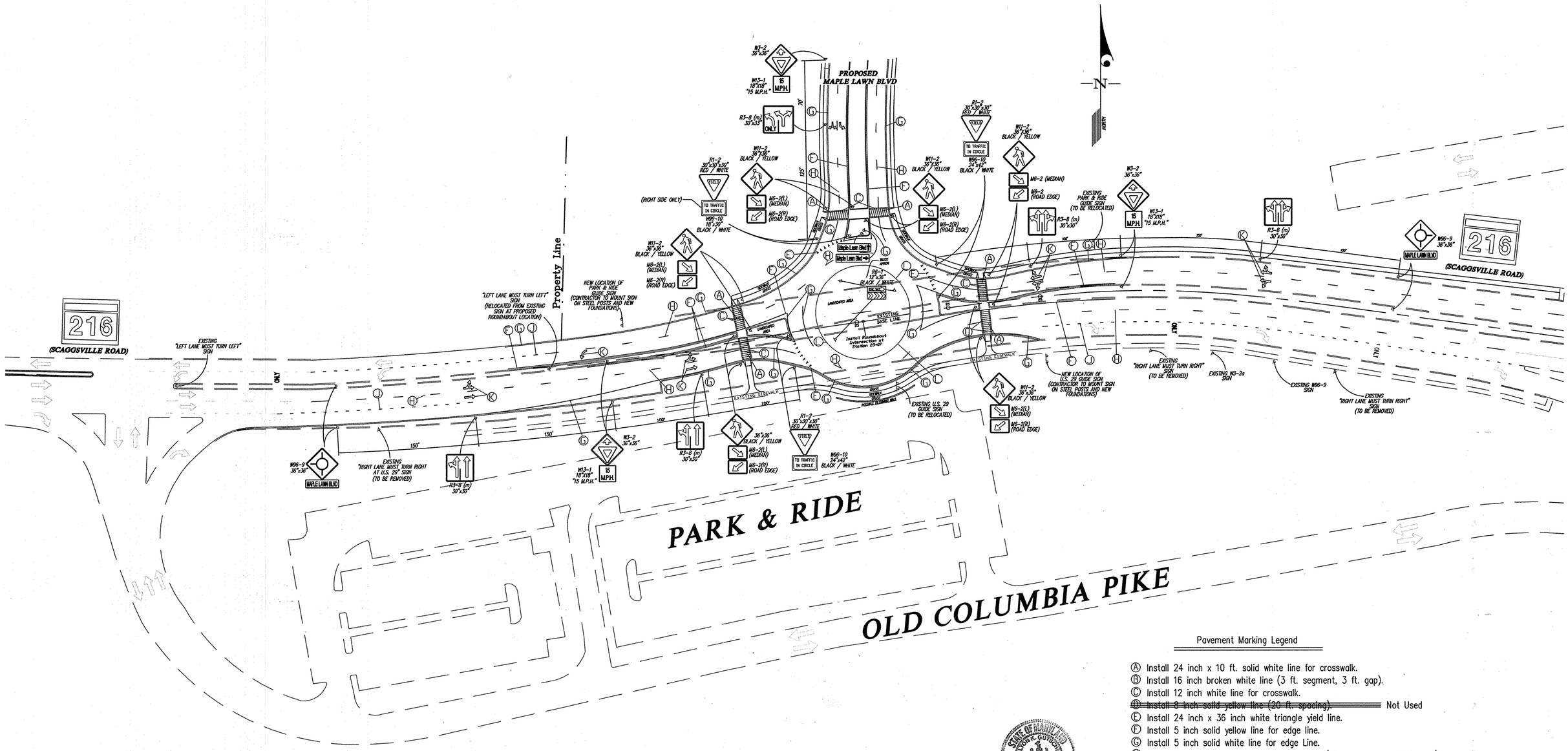
COUNTY FILE # F 03-07



Pavement Marking Legend

- Ⓐ Install 24 inch x 10 ft. solid white line for crosswalk.
- Ⓑ Install 16 inch broken white line (3 ft. segment, 3 ft. gap).
- Ⓒ Install 12 inch white line for crosswalk.
- ~~Ⓓ Install 8 inch solid yellow line (20 ft. spacing).~~ Not Used
- Ⓔ Install 24 inch x 36 inch white triangle yield line.
- Ⓕ Install 5 inch solid yellow line for edge line.
- Ⓖ Install 5 inch solid white line for edge Line.
- Ⓗ Install 5 inch broken white line for lane line (10 ft. segment, 30 ft. gap).
- Ⓙ Install 5 inch broken white line for lane line (3 ft. segment, 9 ft. gap).
- Ⓚ Install 8 ft. white legend arrow as shown.
- Ⓛ Install 10 inch solid yellow line for truck apron edge line.

NOTE: USE THERMO-PLASTIC FOR ALL MARKINGS

STATE OF MARYLAND — CARLTON K. GUTSCHICK — 7297 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/7/03

Chief, Development Engineering Division — Date 2/6/03

The Traffic Group, Inc.
Suite H
9900 Franklin Square Drive
Baltimore, Maryland 21236
410-931-6600
1-800-967-8455
Fax 410-931-6601

FOR SIGNAGE, TRAFFIC CONTROL, AND STRIPING PURPOSES ONLY!
FOR ROAD CONSTRUCTION INFORMATION SEE SHEETS 2,3 AND 6.

COUNTY FILE # F 03-07

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

\96079\PH1-WORKPLACE\FINALS\96079ST29.dwg | DES. PRD | DRN. PRD | CHK. DJ

DATE	REVISION	BY	APP'R.

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

SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MD. RTE. 216

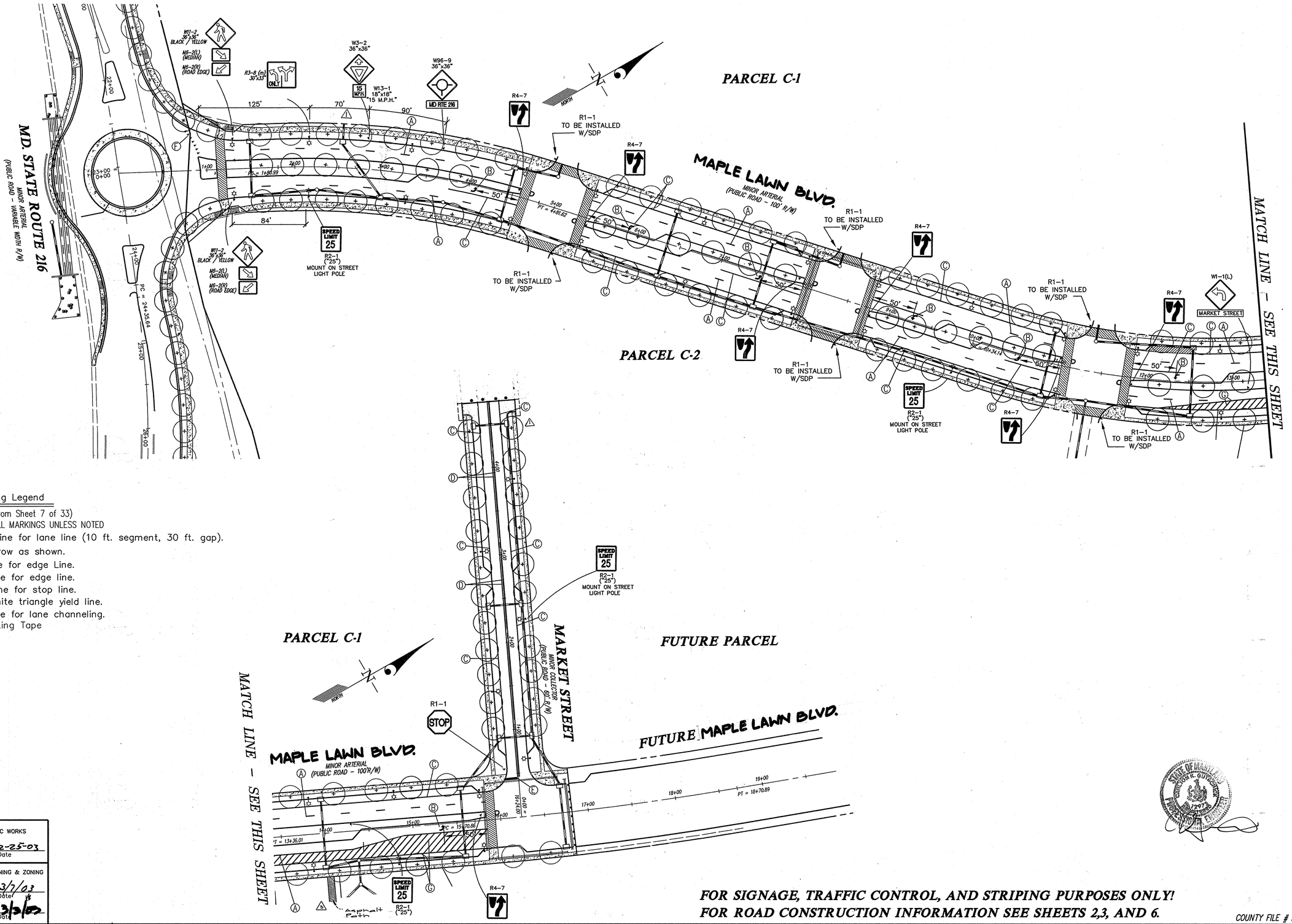
MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46, Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	7 OF 34

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079st29.dwg 01/28/03 09:44:11 AM CST

F-03-07



Pavement Marking Legend

(Letter designations differ from Sheet 7 of 33)

NOTE: USE THERMO-PLASTIC FOR ALL MARKINGS UNLESS NOTED

- Ⓐ Install 5 inch broken white line for lane line (10 ft. segment, 30 ft. gap).
- Ⓑ Install 5 ft. white legend arrow as shown.
- Ⓒ Install 5 inch solid white line for edge Line.
- Ⓓ Install 5 inch solid yellow line for edge line.
- Ⓔ Install 24 inch solid white line for stop line.
- Ⓕ Install 24 inch x 36 inch white triangle yield line.
- *Ⓖ Install 5 inch solid yellow line for lane channeling.

*Use Temporary Pavement Marking Tape

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 3/7/03

Chief, Development Engineering Division — Date 3/3/03

FOR SIGNAGE, TRAFFIC CONTROL, AND STRIPING PURPOSES ONLY!
FOR ROAD CONSTRUCTION INFORMATION SEE SHEETS 2,3, AND 6.

COUNTY FILE # F 03-07

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

\96079\phase 1\finals\96079sts.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
2004.9.14	(2) added asphalt path	DEV	
9/30/03	RELOCATED TEE TURNAROUND DUE TO REVISION TO ROAD GRADE AND ELIMINATED 1 STREET LIGHT. (1)	JAU	

PREPARED FOR :

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

SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
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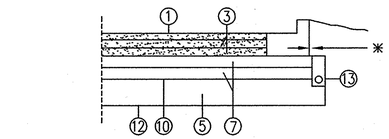
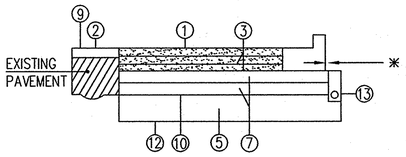
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	8 OF 34

F-03-07

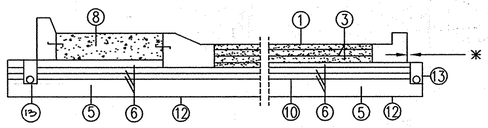


MD 216 – NEW CONSTRUCTION SECTION

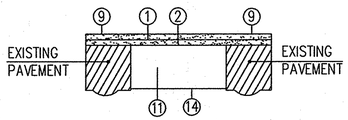


NOTE: EXTEND PAVEMENT SECTION FROM ADJOINING RESIDENTIAL DRIVEWAYS.

MD 216 – TYPICAL OVERLAY & WIDENING SECTION



ROUNDABOUT TRUCK APRON



FULL DEPTH PATCHING SECTION
MD 216

① 2.0" HOT MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFCE COURSE PG 70–22, LEVEL 3

② VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE 9.5 MM FOR BASE COURSE PG 70–22

③ 3.0" HOT MIX ASPHALT SUPERPAVE 25.0 MM FOR BASE COURSE PG 70–22

④ 3.0" HOT MIX ASPHALT SUPERPAVE 19.0 MM FOR BASE COURSE, LEVEL 3 PG 70–22

⑤ 12.0" GEOSYNTHETIC STABILIZED SUBGRADE USING AGGREGATE BASE

⑥ 4.0" BASE COURSE USING GRADED AGGREGATE BASE

⑦ 6.0" BASE COURSE USING GRADE AGGREGATE BASE

** ⑧ 8.0" JOINTED REINFORCED CONCRETE PAVEMENT MIX NO. 7 MODIFIED WITH 10X10 – W4XW4 GRADE 60 STEEL MESH REINFORCEMENT (COLORED AND STAMPED)

⑨ TOP OF EXISTING PAVEMENT AFTER CARBIDE GRINDING

⑩ TOP OF SUBGRADE

⑪ VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE 19.0 MM FOR PATCHING, PG 70–22

⑫ LIMIT OF CLASS 1 EXCAVATION

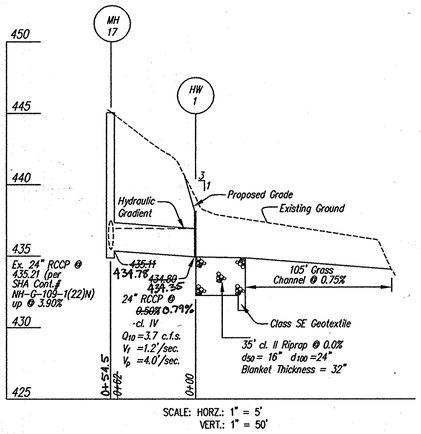
*** ⑬ LONGITUDINAL UNDERDRAINS

⑭ TOP OF EXISTING AGGREGATE BASE COURSE

* 2" GAB W/O TRAFFIC BARRIER; 12" GAB W/ TRAFFIC BARRIER.

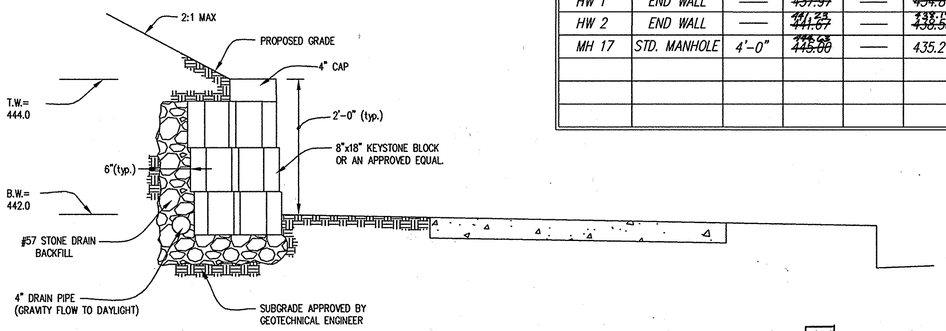
** PLACE 1" DIAMETER DOWEL BARS BETWEEN EACH SLAB AT 12" INTERVAL. PLACE 24" LONG BARS AT 35" INTERVAL BETWEEN THE TYPE B CURB & GUTTER AND THE CONCRETE TRUCK APRON.

*** LONGITUDINAL UNDERDRAINS SHALL BE WRAPPED WITH CLASS SD TYPE II GEOTEXILE.

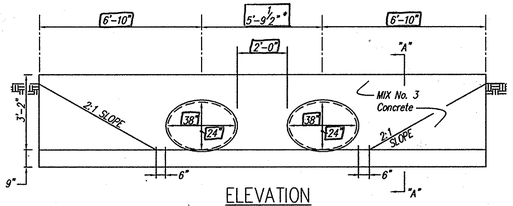


SCALE: HORZ.: 1" = 5'
VERT.: 1" = 50'

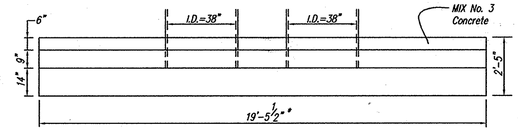
Note:
Drain system is suitable for wall sites where ground water seepage does not exist. A geotechnical engineer shall evaluate the wall site for groundwater conditions and provide alternative wall drain details as needed.



WALL DETAIL
NOT TO SCALE

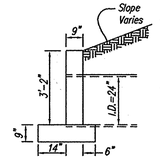


ELEVATION



PLAN

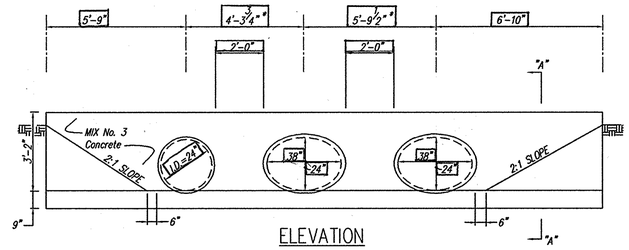
DETAIL for HW 2
Scale: 1"=3'



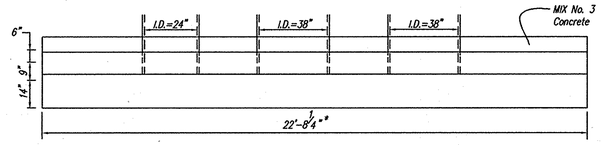
SECTION "A"–"A"

Reinforcement similar to that in MD. S.H.A. Standard No. MD 355.01 Contractor must provide shop drawings prior to the structure being manufactured.

* Assumes pipe thickness of 3¾"

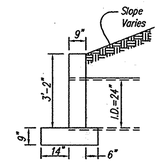


ELEVATION



PLAN

DETAIL for HW 1
Scale: 1"=3'



SECTION "A"–"A"

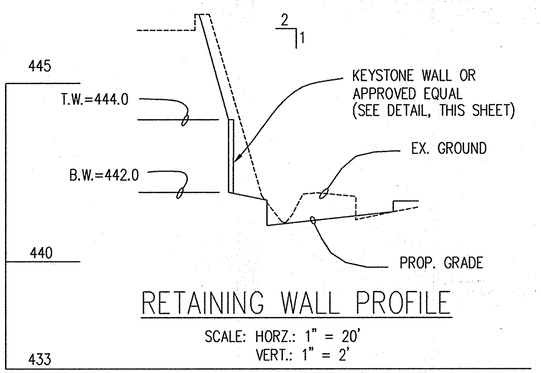
Reinforcement similar to that in MD. S.H.A. Standard No. MD 354.01 Contractor must provide shop drawings prior to the structure being manufactured.

* Assumes 38"x24" elliptical thickness of 3–3/4" and 24" circular pipe thickness of 3".

STRUCTURE SCHEDULE									
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS	REMARKS
HW 1	END WALL	——	~~437.97~~	——	~~434.00~~	~~434.41~~ S	see detail, this sheet	℄ STA. MD. RTE. 216 24+14.03 74.3' RT.	
HW 2	END WALL	——	~~441.67~~	——	~~438.50~~	~~438.10~~ S	see detail, this sheet	℄ STA. MD. RTE. 216 22+32.63 65.14' RT.	
MH 17	STD. MANHOLE	4'–0"	~~446.60~~	——	435.21	~~434.76~~ ~~435.11~~	MD. 383.21	℄ STA. MD. RTE. 216 23+42.72 84.06' RT.	

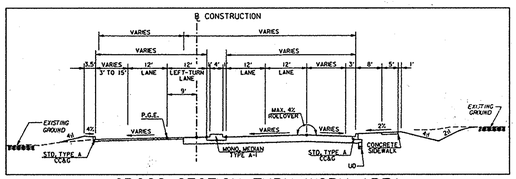
PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (l.f.)	REMARKS
38" x 24"	Horiz. Ellip* R.C.C.P.	360'	
24"	R.C.C.P.	60'	

* INDICATES HORIZONTAL ELLIPTICAL REINFORCED CONCRETE CULVERT PIPE.

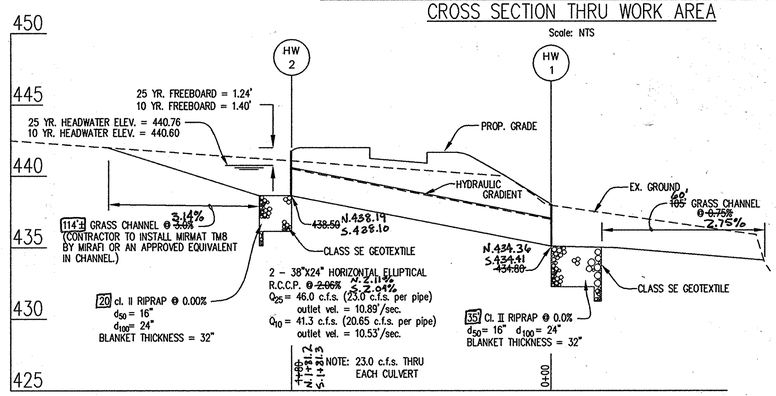


RETAINING WALL PROFILE

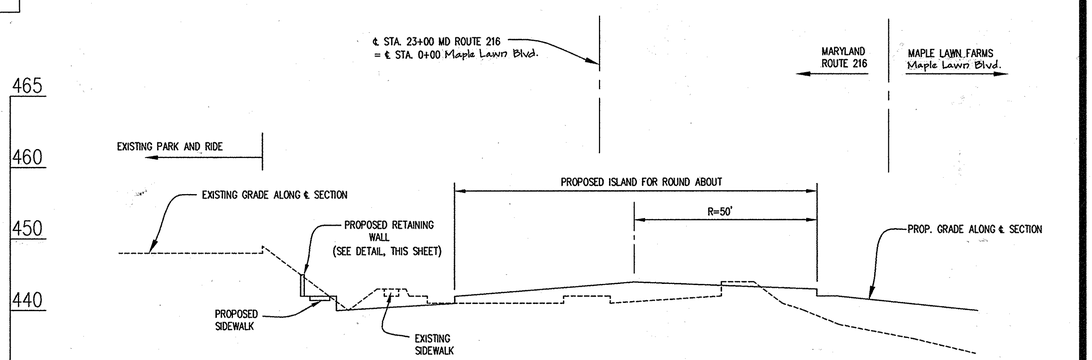
SCALE: HORZ.: 1" = 20'
VERT.: 1" = 2'



CROSS SECTION THRU WORK AREA
Scale: NTS



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



SECTION 'A'– 'A'
SCALE: HORZ.: 1" = 20'
VERT.: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/4/03

(ALSO APPLIES TO ASBUILT)

COUNTY FILE # F 03-07

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

96079\finals\ph1–workplace\96079rd7.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.

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

ROAD DETAILS - MARYLAND ROUTE 216

MAPLE LAWN FARMS
Business District - Area 1
Parcel C-1 & C-2, Lot 1 & Lot 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

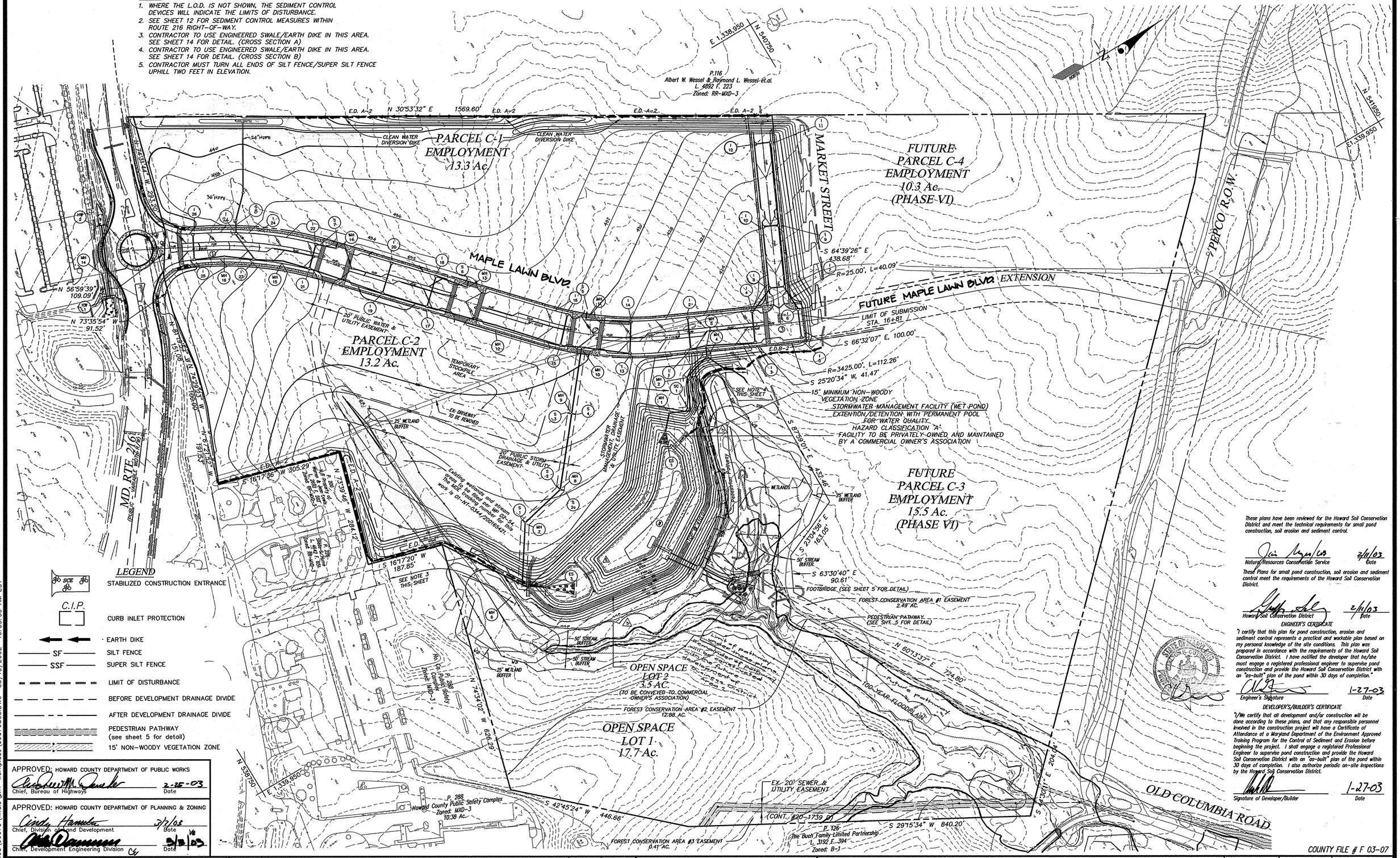
SCALE	ZONING	G. L. W. FILE No.
NO SCALE	MXD–3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	9 OF 34

F-03-07

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079rd7.dwg 06/14/2002 12:17:42 PM EDT

NOTES:

1. WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
2. SEE SHEET 12 FOR SEDIMENT CONTROL MEASURES WITHIN ROUTE 216 RIGHT-OF-WAY.
3. CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION A)
4. CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION B)
5. CONTRACTOR MUST TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UPHILL TWO FEET IN ELEVATION.



LEGEND

- SCE — STABILIZED CONSTRUCTION ENTRANCE
- C.I.P. — CURB INLET PROTECTION
- EARTH DIKE
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- BEFORE DEVELOPMENT DRAINAGE DIVIDE
- AFTER DEVELOPMENT DRAINAGE DIVIDE
- PEDESTRIAN PATHWAY (see sheet 5 for detail)
- 15' NON-WOODY VEGETATION ZONE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/7/03

Chief, Development Engineering Division — Date 2/13/03

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.

Natural Resources Conservation Service — Date 2/11/03

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

Howard Soil Conservation District — Date 2/11/03

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 — Date 1-27-03

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 1-27-03

COUNTY FILE # F 03-07

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

96079\FINAL\PH1-WORKPLACE\96079SC8.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	1 Revise location of storm drain in Maple Lawn Blvd. and through Parcel C-1. Revise grades on Parcel C-1 and along Market Street.	J.A.W.	
11/7/00	2 added forebay dewatering devicees		
2016.09.19	3 Added asphalt along top of dam removed portion along toe of dam	D.E.V.	

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

SEDIMENT CONTROL OVERVIEW PLAN

MAPLE LAWN FARMS

Business District - Area 1

Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	10 OF 34

F-03-07

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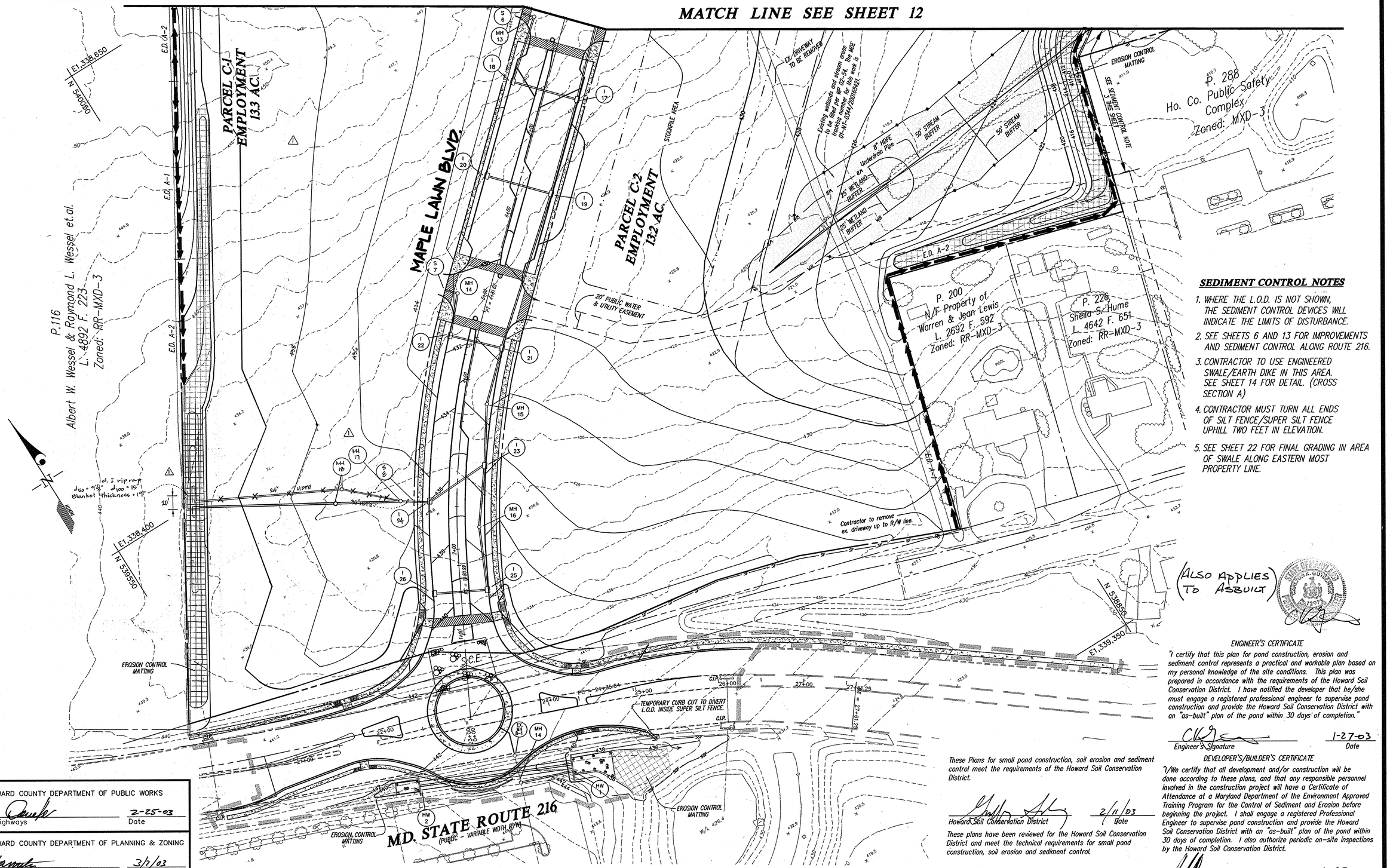

SEDIMENT CONTROL NOTES

1. WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
2. SEE SHEETS 6 AND 13 FOR IMPROVEMENTS AND SEDIMENT CONTROL ALONG ROUTE 216.
3. CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION A)
4. CONTRACTOR MUST TURN ALL ENDS OF SILT FENCE/SUPER SILT FENCE UPHILL TWO FEET IN ELEVATION.
5. SEE SHEET 22 FOR FINAL GRADING IN AREA OF SWALE ALONG EASTERN MOST PROPERTY LINE.

(ALSO APPLIES TO ASBUILT)

STATE OF MARYLAND — CHARLES W. GUTSCHICK — 7207 — REGISTERED PROFESSIONAL ENGINEER

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 — 1-27-03 Date

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Signature of Developer/Builder — 1-27-03 Date

COUNTY FILE # F 03-07

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

Howard Soil Conservation District — 2/11/03 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.

Natural Resources Conservation Service — 2/4/03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — 2-25-03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — 3/7/03 Date

Chief, Development Engineering Division — 3/3/03 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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96079\FINALS\PH1-WORKPLACE\96079SC9.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠1 Revise location of storm drain in Maple Lawn Blvd. & thru Par. C-1	J.A.U.	
	Revise grades on Parcel C-1.		

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

GRADING/SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	11 OF 34

F-03-07

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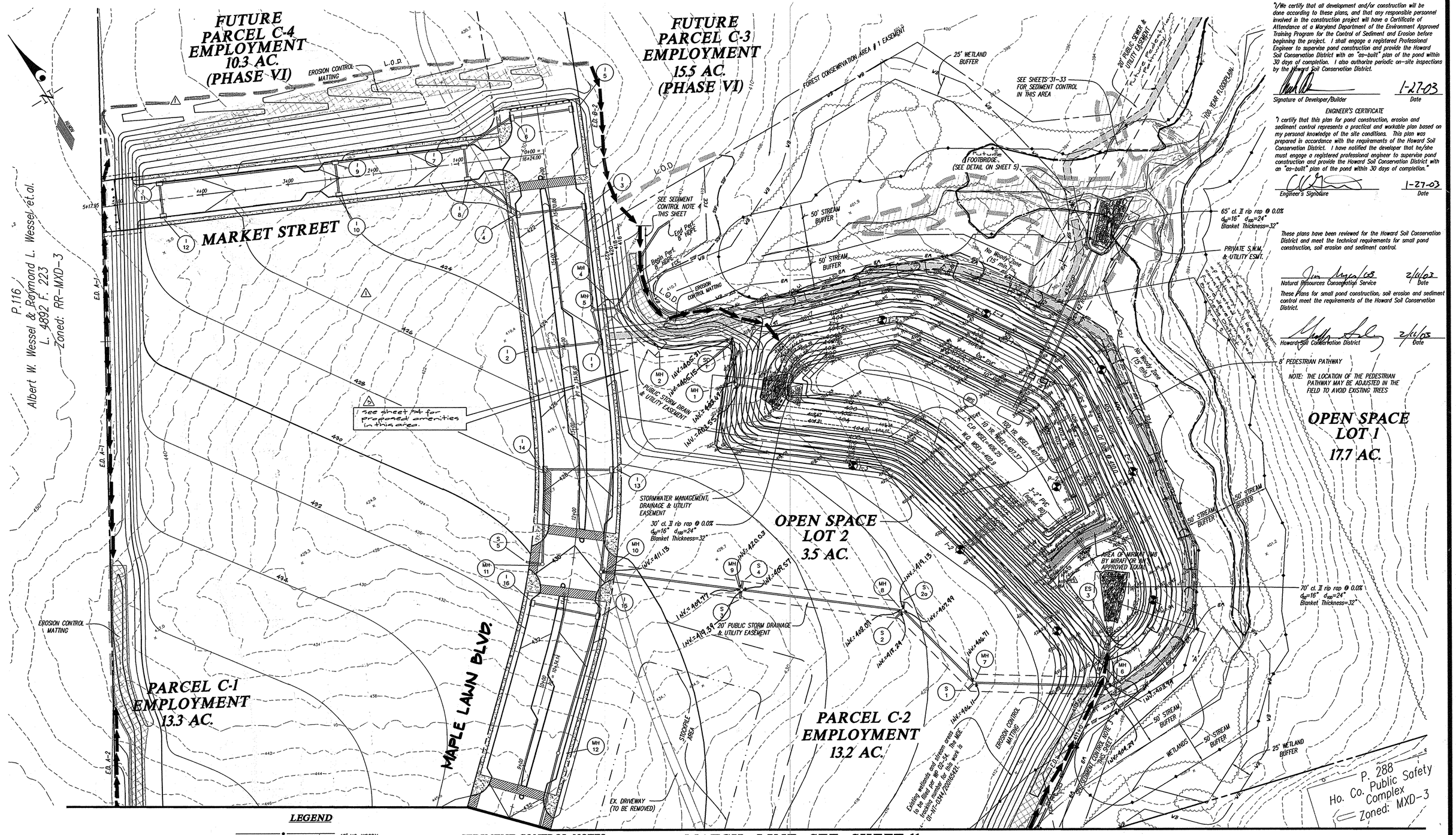

DEVELOPER'S/BUILDER'S CERTIFICATE

"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.

Signature of Developer/Builder — 1-27-03 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."

Engineer's Signature — 1-27-03 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.

Natural Resources Conservation Service — 2/4/03 Date

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

Howard Soil Conservation District — 2/4/03 Date

LEGEND

15' NO-WOODY VEGETATION ZONE

SEDIMENT CONTROL NOTES

1. WHERE THE L.O.D. IS NOT SHOWN. THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
2. SEE SHEET 15 FOR BASIN SCHEDULE AND NOTES.
3. CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION A)
4. CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION B)
5. SEE SHEET 22 FOR FINAL GRADING IN AREA OF SWALE ALONG EASTERN MOST PROPERTY LINE.
6. See sheet 34 for sediment control needed for the construction in the amenity area and the asphalt path.
7. The path alignment shown on sheet 34 supercedes paths shown on this plan.

Stormwater Management Notes

1. The facility will be privately owned and maintained by a commercial owners association. Open Space Lot 2 will be conveyed to that association.
2. The stormwater management facility will be a wet extended detention pond utilizing a permenant pool for water quality.
3. The facility has an 'A' hazard classification.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/7/03

Chief, Development Engineering Division — Date 2/3/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

COUNTY FILE # F 03-07

DATE	REVISION	BY	APP'R.
9/30/03	⚠1 Revise grading along Market Street and across Parcel C-2.	JAU	
12/3/03	⚠2 Revise forebay dewatering device	KLP	
9/23/2010	⚠3 added notes for finding amenity & path information on sheet 34.	DEV	

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

96079\finals\ph1-workplace\96079sc10.dwg | DES. DEV | DRN. JAU | CHK. DEV

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

GRADING/SEDIMENT CONTROL PLAN

MAPLE LAWN FARMS

Business District - Area 1

Parcels C-1, C-2, and Open Space Lots 1 & 2

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	12 OF 34

F-03-07

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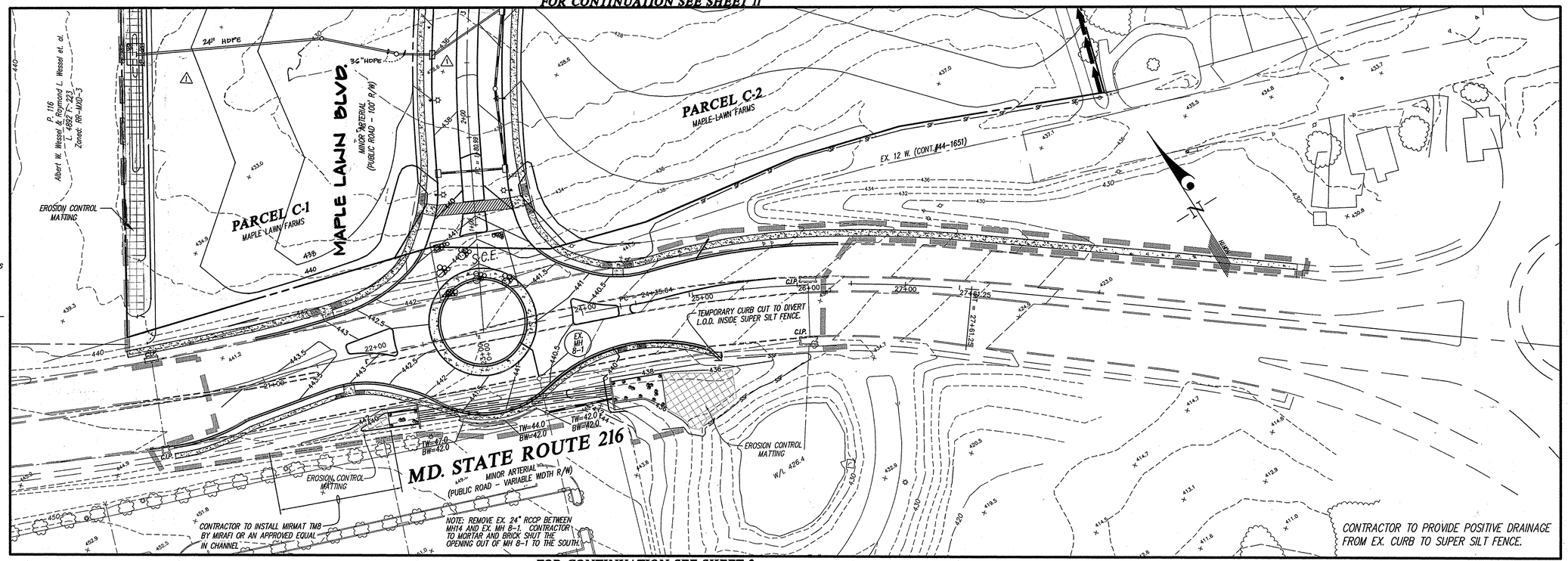
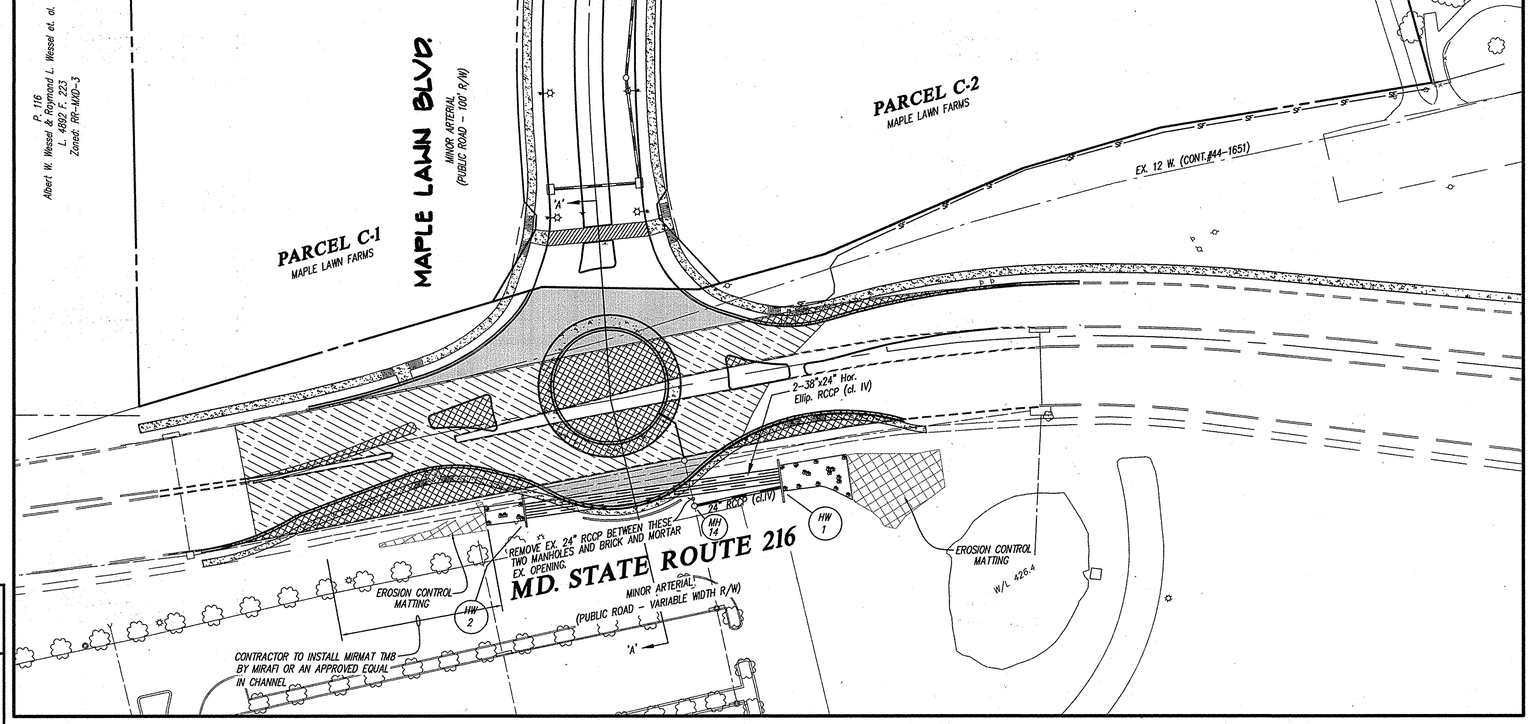
FOR CONTINUATION SEE SHEET 11



FOR CONTINUATION SEE SHEET 2



LEGEND

- PROPOSED ROADWAY PAVEMENT
- CONC. ISLAND TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING PAVEMENT TO BE MILLED AND OVERLAID
- EROSION CONTROL MATTING

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 — Date: 1-27-03

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Signature of Developer/Builder — Date: 1-27-03

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

Howard Soil Conservation District — Date: 2/11/03

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.

Natural Resources Conservation Service — Date: 2/11/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

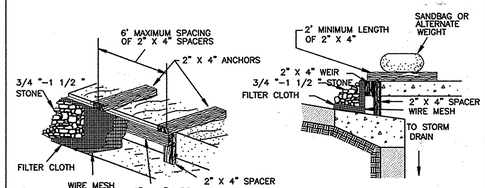
Chief, Bureau of Highways — Date: 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date: 3/7/03

Chief, Development Engineering Division — Date: 3/10/03

DETAIL 23C – CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

STANDARD SYMBOL: CIP

Construction Specifications

1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4') to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard drawing.

2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E – 16 – 5B	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WOKPLACE\96079SC11.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠1 Revise location of storm drain in Maple Lawn Blvd. & thru Parcel C-1. Revise grades on Parcel C-1.	JAU	

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

GRADING/SEDIMENT CONTROL PLAN - MD. RTE. 216

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	13 OF 34

F-03-07

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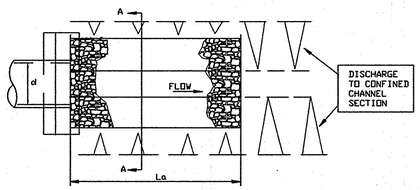
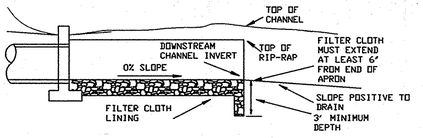
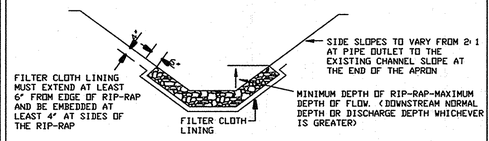
DETAIL 26 - ROCK OUTLET PROTECTION II



PLAN VIEW



ELEVATION



SECTION A-A

NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

Construction Specifications

1. The subgrade for the filter, rip-rap, 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.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

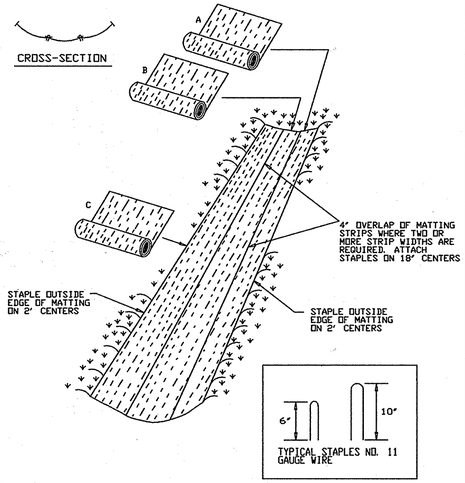
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. 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 rip-rap 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.

5. 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 F - 18 - 9	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

1. 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'.

2. Staple the 4' overlap in the channel center using an 18' spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

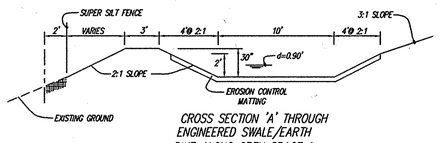
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. 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.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

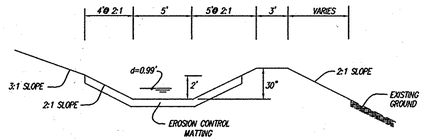
Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



CROSS SECTION 'A' THROUGH ENGINEERED SWALE/EARTH DIKE ALONG OPEN SPACE 1

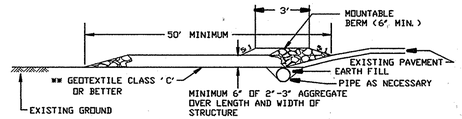
Scale: 1"=6' (Horz. & Vert.)



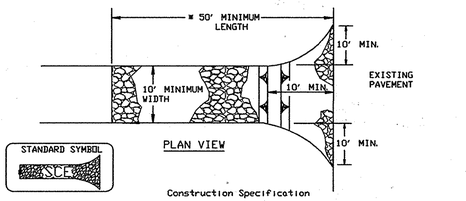
CROSS SECTION 'B' THROUGH ENGINEERED SWALE/EARTH DIKE ALONG SANNER ROAD

Scale: 1"=6' (Horz. & Vert.)

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



PROFILE



PLAN VIEW

Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

3. 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.

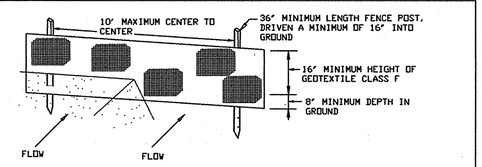
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. 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.

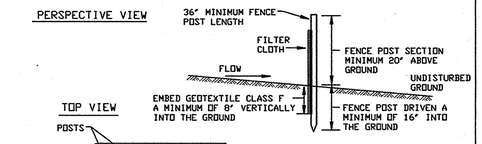
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

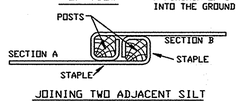
DETAIL 22 - SILT FENCE



PERSPECTIVE VIEW



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS

STANDARD SYMBOL
SF

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" 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 pond per linear foot.

2. 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/ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

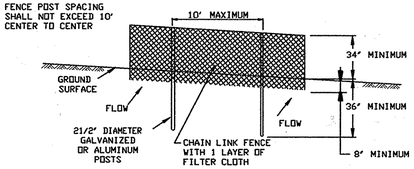
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

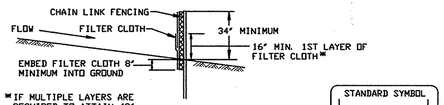
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER





STANDARD SYMBOL
SSF

Construction Specifications

1. 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.

2. 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.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

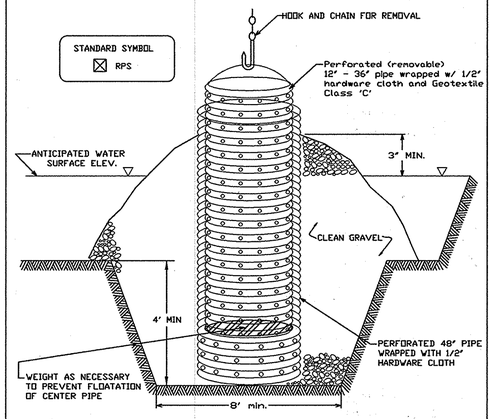
6. Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height

7. 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/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H - 26 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 20A - REMOVABLE PUMPING STATION



ELEVATION

Construction Specifications

1. 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.

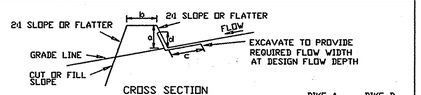
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. 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" slits 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.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

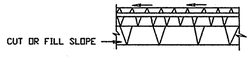
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 12 - 5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



CROSS SECTION

	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"



PLAN VIEW

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

STANDARD SYMBOL
A-2 B-3

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. 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.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A - 1 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 7/2/03

Chief, Development Engineering Division — Date 8/11/03

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 — *1-27-03 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."

Engineer's Signature — *1-27-03 Date*

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

Howard Soil Conservation District — *2/11/03 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.

Natural Resources Conservation Service — *2/11/03 Date*

COUNTY FILE # F 03-07

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

96079\finals\ph1-workplace\96079SC13.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.

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

SEDIMENT CONTROL DETAILS

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
NO SCALE	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	14 OF 34

F-03-07

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 131-1880

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 3 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 7 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone, can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

7. Site Analysis:

Total Area of Site (Phase 1)	:	51.98 Acres
Area Disturbed	:	35.7 Acres
Area to be roofed or paved	:	2.9 Acres
Area to be vegetatively stabilized	:	32.8 Acres
Total Cut	:	91852 Cu. Yds.
Total Fill	:	207714 Cu. Yds.
Off-site waste/borrow area location:		SDP-03-06, WLF, Phase I, Stage II & Phase II, Stage I

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day whichever is shorter.

TEMPORARY SEEDING NOTES (5)

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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (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 15 thru Oct. 15 seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 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

I. This practice is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplied of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

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

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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

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

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

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

II. For sites having disturbed areas under 5 acres:
   i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:
   i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
      d. No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.

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

   ii. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   i. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
   ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
   iii. Topsoil shall be uniformly distributed in a 4" -8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water
   iv. Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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:
   i. 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:
      a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      b. 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.
      c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
   iv. 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 Sodding. MD-VA Pub. #1 , Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

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

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

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 unreaform fertilizer (9 lbs/1000 sq ft).

2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru May 15 and Aug. 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 (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

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

DUST CONTROL

Definition

Controlling dust blowing and movement on construction sites and roads.

Purpose

To prevent blowing and movement of dust from exposes 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

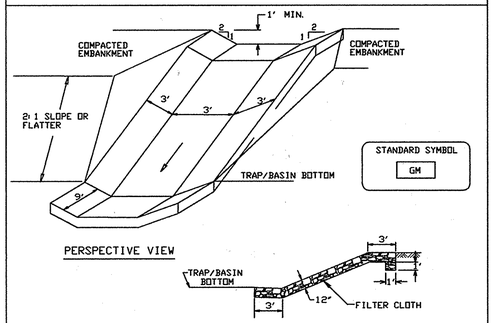
Temporary Methods

1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. 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 spaces about 12" apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. 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.
5. Barriers - Solid board fences, silt fences, burlap fences, straw bales, and similar material can be used to control air 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.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

Permanent Methods

1. 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.
2. Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
3. Stone - Cover surface with crushed stone or coarse gravel.

DETAIL 6 - GABION INFLOW PROTECTION

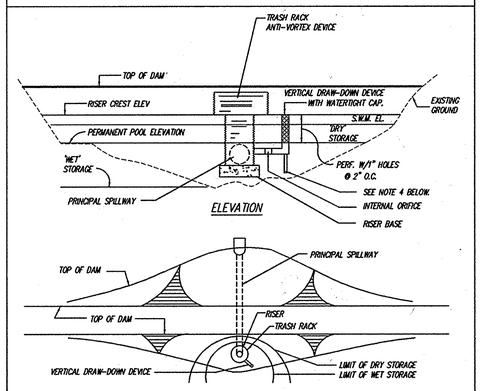


Construction Specifications

1. 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.
2. Geotextile Class C shall be installed under all gabion baskets.
3. The stone used to fill the gabion baskets shall be 4' - 7".
4. Gabions shall be installed in accordance with manufacturers recommendations.
5. 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 B - 7 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BASIN DRAWDOWN SCHEMATIC
VERTICAL DRAWDOWN DEVICE

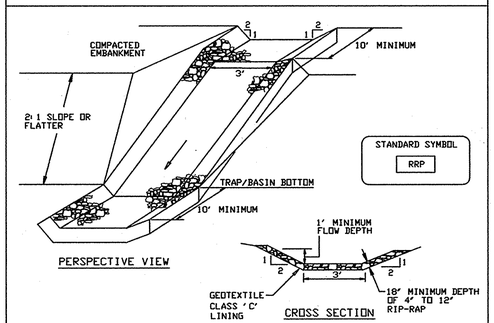


CONSTRUCTION SPECIFICATIONS

1. Perforations in the draw-down device may not extend into the wet storage.
2. The total area of the perforations must be greater than 4 times the area of the internal orifice.
3. The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
4. Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 guage minimum wire.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 18 - 30	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

1. 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.) botton width. The channel shall be lined with 4" to 12" rip- rap to a depth of 18".
2. Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
3. Entrance and exit sections shall be installed as shown on the detail section.
4. 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.
5. Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
6. Rip-rap should blend into existing ground.
7. 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 B - 6 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT AND ARRANGE FOR AN ON-SITE PRE-CONSTRUCTION MEETING. (1 DAY)
2. INSTALL SUPER SILT FENCE ALONG LIMIT OF DISTURBANCE ADJACENT TO THE STREAM BUFFER AND PEDESTRIAN PATHWAY. IN AREAS WHERE LIMIT OF DISTURBANCE IS ADJACENT TO A TREE SAVE AREA AND SUPER SILT FENCE IS NOT NEEDED, INSTALL TREE PROTECTION FENCE. (2 WEEKS)
3. BEGIN CONSTRUCTION OF SEDIMENT BASIN/STORMWATER MANAGEMENT FACILITY. (2 WEEKS)
4. ONCE THE FACILITY IS CONSTRUCTED AS SHOWN ON THESE PLANS UP TO ELEVATION 410.0, INSTALL THE DEWATERING DEVICE AND EARTH DIKES. (3 WEEKS)
5. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, REDIRCT THE EXISTING STREAM IN AREA OF THE STREAM MITIGATION WORK. (2 WEEKS)
6. INSTALL THE IMBRICATED RIP RAP ACCORDING TO THE GUIDELINES SHOWN ON SHEET 32 IN THE LOCATIONS SHOWN ON SHEET 31. (1 MONTH)
7. INSTALL THE STEP POOLS AND LIVE STAKE THE AREAS SHOWN ON SHEET 31 ACCORDING TO THE GUIDELINES SHOWN ON SHEET 33. NOTE: SOME PART OF THIS ITEM MAY NEED TO BE PERFORMED DURING THE INSTALLATION OF THE IMBRICATED RIP RAP. ANY WORK DESCRIBED IN THIS ITEM THAT IS REQUIRED FOR ITEM 6 NEEDS TO BE COORDINATED WITH THE SEDIMENT CONTROL INSPECTOR. (1 MONTH)

THESE ITEMS CAN BE PERFORMED AT THE SAME TIME AS ITEMS 6 AND 7:

8. INSTALL EARTH DIKE ALONG WESTERN MOST PROPERTY LINE AND INSTALL 24" HDPE INITIALLY BY LAYING IT ON EXISTING GROUND. (1 WEEK)
9. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN ROUGH GRADING. CONTRACTOR MUST IMPLEMENT DUST CONTROL MEASURES AS OUTLINED ON SHEET 15 WHEN CONDITIONS DICTATE OR WHEN REQUESTED BY SEDIMENT CONTROL INSPECTOR. (6 MONTHS)
10. INSTALL STORM DRAINS PER THESE'S PLANS AND THE WATER AND SEWER PER CONTRACT #34-4062 D. BLOCK 8" HDPE OUT OF MH 4 TO RECHARGE FACILITY. AS THE GRADES AROUND THE 24" HDPE (FROM WESTERN MOST PROPERTY LINE) AND STORM DRAIN CONSTRUCTION ALLOWS, TIE 24" HDPE INTO I-24 AT S-8. NO PORTION OF THE 24" HDPE MAY REMAIN WITHIN THE COUNTY RIGHT-OF-WAY. (6 WEEKS)
11. AS FILL PROGRESSES ALONG THE EARTH DIKE/SWALE ALONG THE SOUTHEAST PROPERTY LINE OF PARCEL C-2, MOVE THE EARTH DIKE AS NEEDED TO INSURE POSITIVE DRAINAGE TO THE SEDIMENT BASIN.
12. INSTALL CURB AND GUTTER, SIDEWALKS, AND BASE PAVING. (1 MONTH)
13. BEGIN CONSTRUCTION OF RECHARGE FACILITY AND CHANNEL MITIGATION. SEE SHEET 33 FOR SEQUENCING SPECIFIC TO THE CHANNEL MITIGATION. (1 MONTH)
14. FINE GRADE AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE TOPSOIL AND PERMANENT SEEDING NOTES. (1 MONTH)
15. INSTALL SURFACE COURSE PAVING. (1 WEEK)
16. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, CONVERT SEDIMENT BASIN TO STORMWATER MANAGEMENT FACILITY. (2 WEEKS)
17. REMOVE BLOCKING FROM 8" HDPE @ MH 4. (1 DAY)
18. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL DEVICES AND STABILIZE DISTURBED AREAS AS NEEDED. (1 WEEK)

(5) Sequence of Construction
(For construction of pathway & amenity area)

1. obtain grading permit & arrange for an on-site, pre-construction meeting with the sediment control inspector. (1 day)
2. Install stabilized construction entrance & 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 & the amenity area. (2 weeks)
4. Construct the gazebo & accompanying steps in the amenity area. (3 weeks)
5. Install asphalt path & steps. (1 month)
6. Construct the footbridge. (2 weeks)
7. Stabilize the disturbed areas in accordance with the permanent seeding notes. (1 month)
8. Once the contributing areas have been stabilized and the sediment control inspector has granted permission, remove the sediment control devices & stabilize disturbed areas in accordance with the permanent seeding notes. (1 week)

Permanent Seeding Summary (5)

Hardiness Zone: 6b
Seed Mixture: #9 (Tall Fescue/Kentucky Bluegrass)

No.	Species	Application Rate	Seeding Dates	Seeding Depths	Fertilizer Rate	Lime Rate
9	*Certified (90% by weight) Falcon IV, Penn 1914 & Rebel Exeda and Certified Kentucky Bluegrass blend (5% by weight) Courtyard, Raven & Yankee	6-8 lb/1000 s.f.	May 1 to May 15 Aug. 15 to Oct. 15	Tall Fescue blend 1/4-1/2 inch	1 lb/1000 s.f. (45 lb./acre)	90 lb./1000 s.f.

* other cultivars listed as "proven" in the most current UMD TT-77 may also be used.

See sheet 18 for storm drain profile across Parcel C-1. (1)

SEDIMENT BASIN INFORMATION

PRE-DEVELOPMENT DRAINAGE AREA	48.9 ACRES
POST-DEVELOPMENT DRAINAGE AREA	48.9 ACRES
TOTAL STORAGE REQUIRED (WET VOLUME & 1 YR. TSWM)	314,968 CF
TOTAL STORAGE PROVIDED	415,787 CF
RISER DIAMETER (CIRCUMFERENCE)	2-4'x6'
BARREL SIZE	2-42" RCCP
TOP OF DAM	410.00
RISER CREST ELEVATION	406.44
OUTLET ELEVATION (LIMIT OF WET VOLUME)	402.90
CLEANOUT ELEVATION	398.95
BOTTOM ELEVATION	395.00
BOTTOM DIMENSIONS	VARIES
PRE-DEVELOPMENT 1 YEAR DISCHARGE	4.25 CFS
POST-DEVELOPMENT 1 YEAR DISCHARGE (UNMANAGED)	89.29 CFS
POST-DEVELOPMENT 1 YEAR DISCHARGE (MANAGED)	3.43 CFS @ 406.44

COUNTY FILE # F 03-07

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/7/03
Chief, Development Engineering Division — Date 2/6/03

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 1-27-03

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 — Date 1-27-03

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.

Natural Resources Conservation Service — Date 2/11/03

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

Howard Soil Conservation District — Date 2/11/03

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

96079\finals\ph1-workplace\96079SC15.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	(1) Due to revisions, relocated storm drain profile to sheet 18.	JAU	
2/11/03	(5) revised sequence of construction & seeding notes	DEV	

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

SEDIMENT CONTROL DETAILS
MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
NO SCALE	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	15 OF 34

F-03-07

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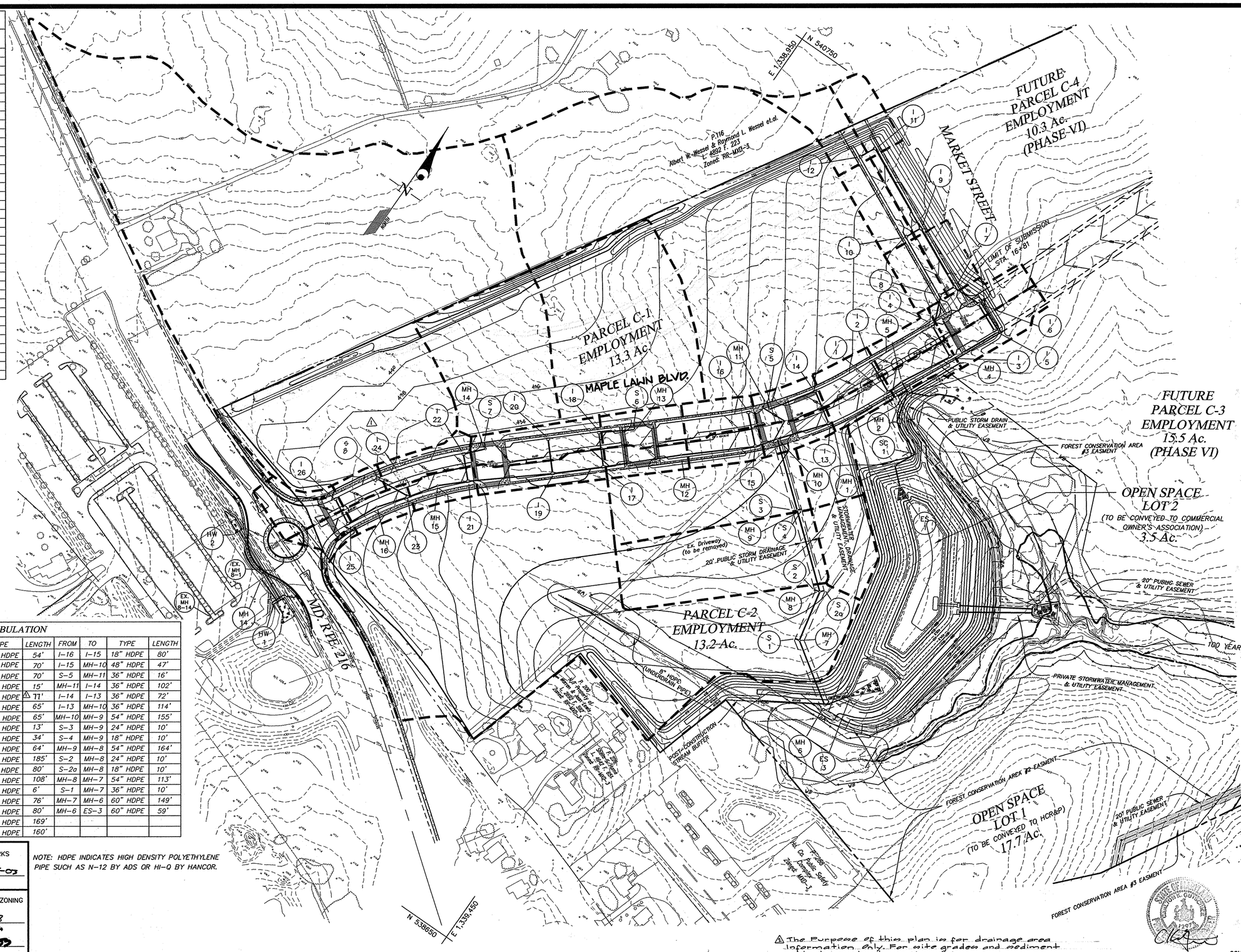
DRAINAGE AREA INFORMATION

STRUCTURE NO.	AREA	'C' VALUE	% IMP.
I-1	0.22	0.82	92%
I-2	0.20	0.82	92%
I-3	0.27	0.82	92%
I-4	0.27	0.82	92%
I-5	0.44	0.82	92%
I-6	0.40	0.82	92%
I-7	0.36	0.82	92%
I-8	0.34	0.82	92%
I-9	0.38	0.82	92%
I-10	0.36	0.82	92%
I-11	0.30	0.82	92%
I-12	0.38	0.82	92%
I-13	0.24	0.82	92%
I-14	0.24	0.82	92%
I-15	0.22	0.82	92%
I-16	0.22	0.82	92%
I-17	0.27	0.82	92%
I-18	0.27	0.82	92%
I-19	0.43	0.82	92%
I-20	0.43	0.82	92%
I-21	0.22	0.82	92%
I-22	0.27	0.82	92%
I-23	0.21	0.82	92%
I-24	0.14	0.82	92%
I-25	0.16	0.82	92%
I-26	0.33	0.82	92%
S-1	8.51	0.78	85%
S-2	1.55	0.78	85%
S-2a	0.53	0.78	85%
S-3	1.45	0.78	85%
S-4	0.46	0.78	85%
S-5	8.45	0.78	85%
S-6	2.91	0.78	85%
S-7	1.85	0.78	85%
S-8	13.07	0.78	85%

NOTE: THE 'C' VALUE FOR AREAS DRAINING TO THE INLETS ASSUMES 'C' SOIL DUE TO MASS GRADING AND A PERCENT IMPERVIOUS OF 92%. THE 'C' VALUE FOR AREAS DRAINING TO THE STUBS ASSUMES 'C' SOIL DUE TO MASS GRADING AND A PRCENT IMPERVIOUS OF 85%.

INLETS: 'C' VALUE=(0.92)(0.87) + (0.08)(0.24) = 0.82
STUBS: 'C' VALUE=(0.85)(0.87) + (0.15)(0.24) = 0.78



STORM DRAIN TABULATION

FROM	TO	TYPE	LENGTH	FROM	TO	TYPE	LENGTH	FROM	TO	TYPE	LENGTH
I-12	I-11	18" HDPE	40'	I-26	I-25	18" HDPE	54'	I-16	I-15	18" HDPE	80'
I-11	I-9	18" HDPE	203'	I-25	MH-16	18" HDPE	70'	I-15	MH-10	48" HDPE	47'
I-10	I-9	18" HDPE	40'	MH-16	I-23	18" HDPE	70'	S-5	MH-11	36" HDPE	16'
I-9	I-7	18" HDPE	146'	S-8	I-24	36" HDPE	15'	MH-11	I-14	36" HDPE	102'
I-5	I-6	18" HDPE	67'	I-24	I-23	36" HDPE	77'	I-14	I-13	36" HDPE	72'
I-6	I-7	18" HDPE	62'	I-23	MH-15	36" HDPE	65'	I-13	MH-10	36" HDPE	114'
I-7	I-8	24" HDPE	34'	MH-15	I-21	36" HDPE	65'	MH-10	MH-9	54" HDPE	155'
I-8	I-4	24" HDPE	70'	S-7	MH-14	24" HDPE	13'	S-3	MH-9	24" HDPE	10'
I-4	I-3	24" HDPE	74'	MH-14	I-22	24" HDPE	34'	S-4	MH-9	18" HDPE	10'
I-3	MH-5	24" HDPE	116'	I-22	I-21	24" HDPE	64'	MH-9	MH-8	54" HDPE	164'
I-2	I-1	18" HDPE	70'	I-21	I-19	42" HDPE	185'	S-2	MH-8	24" HDPE	10'
I-1	MH-5	18" HDPE	36'	I-20	I-19	18" HDPE	80'	S-2a	MH-8	18" HDPE	10'
MH-5	MH-4	30" HDPE	21'	I-19	I-17	42" HDPE	108'	MH-8	MH-7	54" HDPE	113'
MH-4	MH-3	30" HDPE	65'	S-6	MH-13	24" HDPE	6'	S-1	MH-7	36" HDPE	10'
MH-3	MH-2	30" HDPE	78'	MH-13	I-18	24" HDPE	76'	MH-7	MH-6	60" HDPE	149'
MH-2	MH-1	30" HDPE	47'	I-18	I-17	24" HDPE	80'	MH-6	ES-3	60" HDPE	59'
MH-1	ES-1	30" HDPE	46'	I-17	MH-12	48" HDPE	169'				
				MH-12	I-15	48" HDPE	160'				

NOTE: HDPE INDICATES HIGH DENSITY POLYETHYLENE PIPE SUCH AS N-12 BY ADS OR HI-Q BY HANCOR.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 7-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 3/3/03

Chief, Development Engineering Division — Date 3/10/03

⚠ The Purpose of this plan is for drainage area information only. For site grades and sediment control see sheets 10, 11, and 12.

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WORKPLACE\96079da14.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠ Revise storm drain location, drainage limits to realign S-8 for future development and reflected grading changes to Parcel C-1 & Market St.	JAU	
12/7/06	⚠ added purposes note		

PREPARED FOR :

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

STORM DRAIN DRAINAGE AREA MAP

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	16 OF 34

F-03-07

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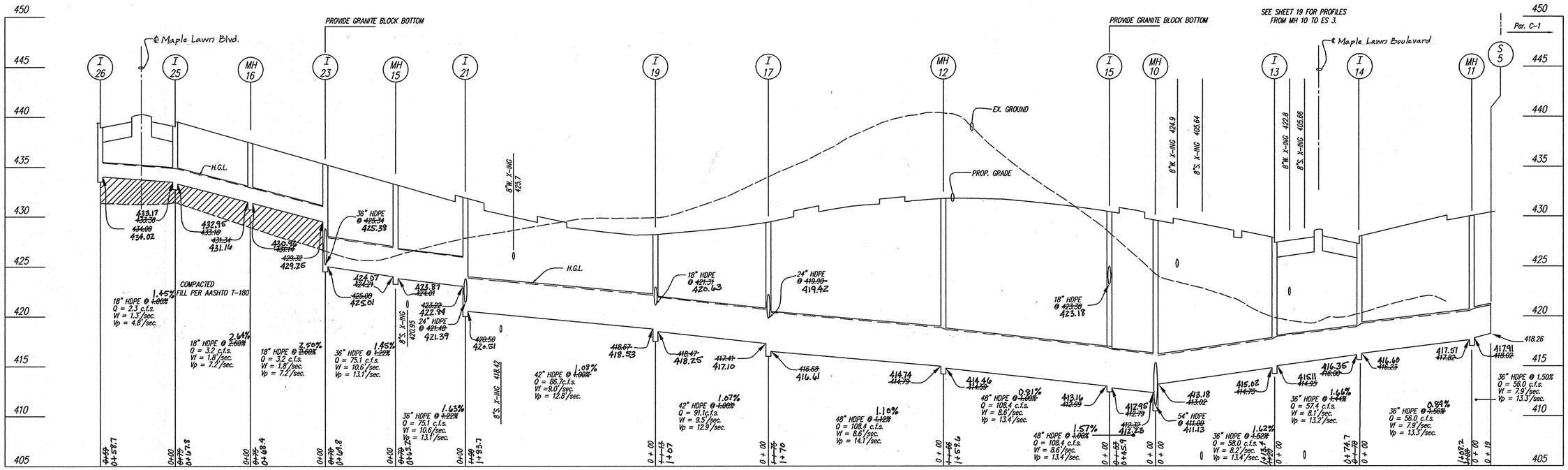

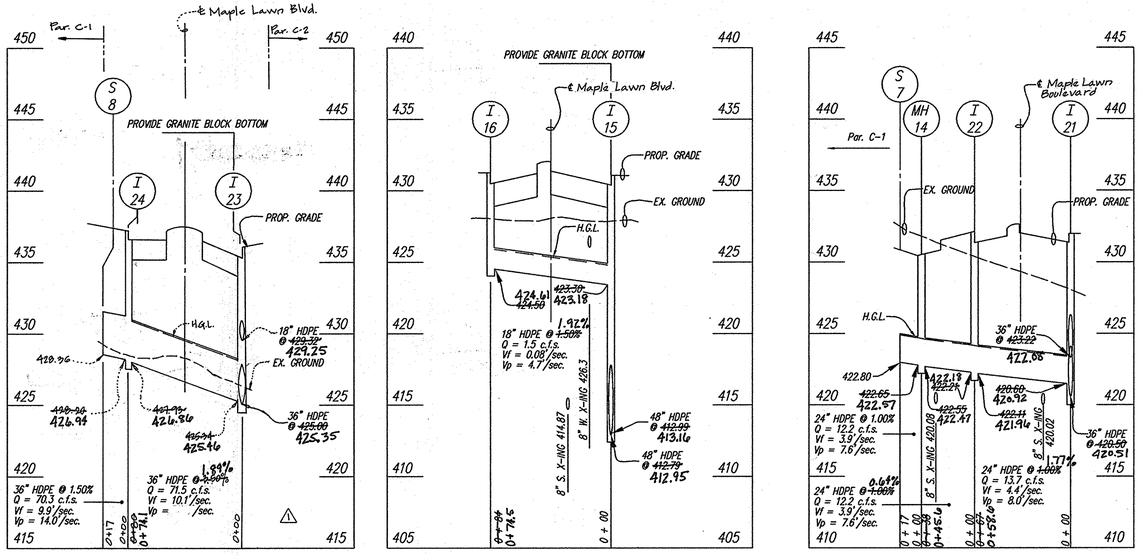

PROFILES

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'

PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (l.f.)	REMARKS
18"	HDPE	274'	
24"	HDPE	111'	
36"	HDPE	521' ⚠	
42"	HDPE	293'	
48"	HDPE	376'	

STRUCTURE SCHEDULE								
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	⚠1 LOCATIONS	REMARKS
I-13	DOUBLE 'S' COMBINATION	——	~~427.56~~ 427.57	~~427.40~~ 427.35	~~415.11~~ 414.95	~~415.02~~ 414.75	HO. CO. SD-4.34	N 540,076E 1,339,490	
I-14	DOUBLE 'S' COMBINATION	——	~~427.63~~ 427.57	~~427.31~~ 427.35	~~416.60~~ 416.23	~~416.35~~ 416.00	HO. CO. SD-4.34	N 540,123 E 1,339,422	
I-15	DOUBLE 'S' COMBINATION	——	~~431.27~~ 431.09	~~431.12~~ 430.89	~~423.18~~ 423.36	~~412.96~~ 412.79	HO. CO. SD-4.34	N 539,946 E 1,339,389	
I-16	DOUBLE 'S' COMBINATION	——	~~431.28~~ 431.12	~~431.15~~ 430.95	——	~~424.61~~ 424.39	HO. CO. SD-4.34	N 540,001 E 1,339,331	
I-17	DOUBLE 'S' COMBINATION	——	~~430.73~~ 430.19	~~430.11~~ 429.98	~~419.42~~ 419.90	~~416.61~~ 416.68	HO. CO. SD-4.34	N 539,713 E 1,339,137	
I-19	DOUBLE 'S' COMBINATION	——	~~429.81~~ 423.04	~~428.78~~ 429.04	~~420.63~~ 421.31	~~418.25~~ 418.47	HO. CO. SD-4.34	N 539,634 E 1,339,051	
I-21	DOUBLE 'S' COMBINATION	——	~~431.97~~ 431.74	~~431.51~~ 431.48	~~422.08~~ 422.22	~~420.51~~ 420.50	HO. CO. SD-4.34	N 539,517 E 1,338,912	
I-22	DOUBLE 'S' COMBINATION	——	~~432.29~~ 431.74	~~432.08~~ 431.48	~~422.18~~ 422.21	~~421.96~~ 422.11	HO. CO. SD-4.34	N 539,563 E 1,338,867	
I-23	DOUBLE 'S' COMBINATION	——	~~435.87~~ 435.66	~~435.73~~ 435.40	~~424.25~~ 423.32	~~425.01~~ 426.00	HO. CO. SD-4.34	N 539,406 E 1,338,816	
I-24 ⚠1	DOUBLE 'S' COMBINATION	——	~~427.19~~ 427.04	~~426.98~~ 426.89	~~426.98~~ 426.52	~~426.86~~ 426.86	HO. CO. SD-4.34	N ~~591,369~~ E 1, 338,710	
I-25	DOUBLE 'S' COMBINATION	——	~~439.95~~ 439.53	~~439.61~~ 439.27	~~433.17~~ 433.36	~~432.95~~ 433.16	HO. CO. SD-4.34	N 539,281 E 1,338,741	
I-26	DOUBLE 'S' COMBINATION	——	~~438.17~~ 439.53	~~438.62~~ 439.27	——	~~434.20~~ 434.00	HO. CO. SD-4.34	N 539,311 E 1,338,684	
MH-10	STD. MANHOLE	8'-0"	~~429.68~~ 423.41	——	~~413.18~~ 413.02	~~411.13~~ 411.00	MD 384.09	N 539,983 E 1,339,421	
MH-11	STD. MANHOLE	6'-0"	~~429.91~~ 429.86	——	~~417.91~~ 418.02	~~417.51~~ 417.82	MD 384.05	N 540,060 E 1,339,379	
MH-12	STD. MANHOLE	6'-0"	~~432.08~~ 430.09	——	~~414.79~~ 414.79	~~414.46~~ 414.59	MD 384.05	N 539,851 E 1,339,290	
MH-14	STD. MANHOLE	5'-0"	~~430.37~~ 430.48	——	~~422.57~~ 422.65	~~422.47~~ 422.55	HO. CO. G 5.13	N 539,594 E 1,338,896	
MH-15	STD. MANHOLE	6'-0"	~~433.37~~ 433.36	——	~~424.07~~ 424.24	~~423.87~~ 424.01	MD 384.05	N 539,446 E 1,338,856	
MH-16	STD. MANHOLE	6'-0"	~~431.26~~ 431.20	——	~~431.16~~ 431.34	~~430.96~~ 431.14	MD 384.05	N 539,349 E 1,338,772	

⚠1 COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.
⚠

(ALSO APPLIES TO ASBUILT)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/6/03

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WORKPLACE\96079SD15.DWG | DES. DEV | DRN. AEJ | CHK. DEV

DATE	REVISION	BY	APP'R.
7/30/03	⚠ Revised storm drain run S-8 to I-23, revised schedules accordingly & symbol used.	JAH	

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

STORMDRAIN PROFILES & SCHEDULES
MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	17 OF 34

F-03-07

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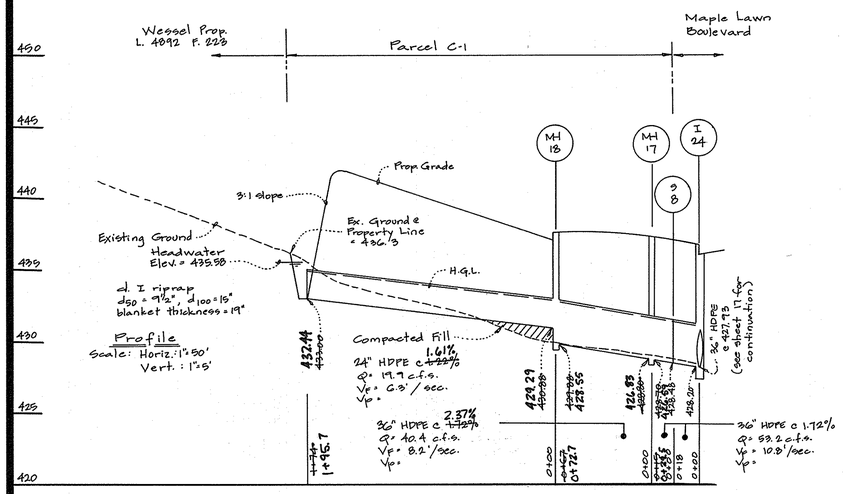


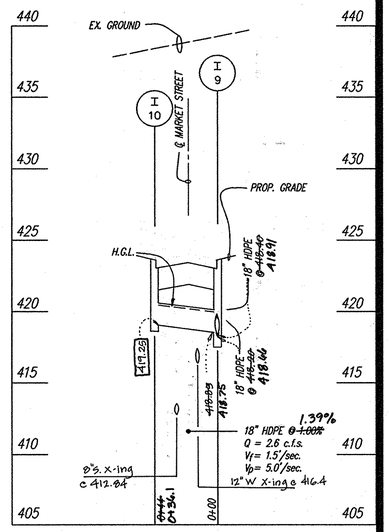
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS (1) ⚠	REMARKS
			STRUCTURE SCHEDULE						
I-1	DOUBLE 'S' COMB. INLET	-----	~~424.31~~ 424.34	~~424.15~~ 424.12	~~417.97~~ 418.00	~~417.73~~ 417.76	HO. CO. SD-4.34	N 540,210 E 1,339,559	
I-2	DOUBLE 'S' COMB. INLET	-----	~~424.85~~ 424.74	~~424.73~~ 424.72	-----	~~418.68~~ 418.00	HO. CO. SD-4.34	N 540,244 E 1,339,486	
I-9	DOUBLE 'S' COMB. INLET	-----	~~425.91~~ 423.84	~~423.68~~ 423.70	~~418.33~~ 418.20	~~418.02~~ 418.20	HO. CO. SD-4.34	N 540,556 E 1,339,410	
I-10	DOUBLE 'S' COMB. INLET	-----	423.84	~~423.74~~ 423.70	-----	419.20	HO. CO. SD-4.34	N 540,520 E 1,339,392	
I-11	DOUBLE 'S' COMB. INLET	-----	~~427.57~~ 427.50	~~427.40~~ 427.41	~~422.24~~ 422.50	~~422.01~~ 422.10	HO. CO. SD-4.34	N 540,644 E 1,339,223	
I-12	DOUBLE 'S' COMB. INLET	-----	~~427.61~~ 427.65	~~427.47~~ 427.41	-----	422.40	HO. CO. SD-4.34	N 540,608 E 1,339,206	
I-17	DOUBLE 'S' COMB. INLET	-----	~~430.18~~ 430.10	~~430.11~~ 429.98	~~419.42~~ 419.90	~~419.61~~ 419.66	HO. CO. SD-4.34	N 539,713 E 1,339,137	
I-18	DOUBLE 'S' COMB. INLET	-----	~~430.28~~ 430.10	~~430.10~~ 429.90	~~421.16~~ 421.36	~~421.07~~ 421.10	HO. CO. SD-4.34	N 539,772 E 1,339,083	
SC-1	STORMCEPTOR	5'-0"	~~416.37~~ 416.00	-----	~~405.27~~ 405.11	~~405.27~~ 405.90	BY MANUFACTURER	N 540,134 E 1,339,689	
⚠ MH 17	STD. MANHOLE	6'-0"	~~436.78~~ 434.50	-----	~~429.87~~ 429.80	~~429.59~~ 429.70	MD. 384.05	N 539,424 E 1,338,711	
MH 1	STD. MANHOLE	5'-0"	~~416.20~~ 416.50	-----	~~403.62~~ 403.75	~~403.48~~ 403.60	HO. CO. G 5.13	N 540,087 E 1,339,666	
MH 2	STD. MANHOLE	5'-0"	~~420.64~~ 420.00	-----	~~407.72~~ 408.10	~~407.54~~ 407.74	HO. CO. G 5.13	N 540,170 E 1,339,613	
MH 4	STD. MANHOLE	5'-0"	~~421.31~~ 421.75	-----	~~410.31~~ 410.50	~~410.12~~ 410.19	HO. CO. G 5.13	N 540,237 E 1,339,595	
MH 5	STD. MANHOLE	5'-0"	~~428.13~~ 423.41	-----	~~417.53~~ 417.00	~~416.58~~ 416.89	HO. CO. G 5.13	N 540,210 E 1,339,559	
MH 13	STD. MANHOLE	5'-0"	~~431.16~~ 431.05	-----	~~422.36~~ 422.77	~~422.16~~ 422.00	HO. CO. G 5.13	N 539,827 E 1,339,138	
⚠ MH 18	STD. MANHOLE	6'-0"	~~431.17~~ 434.50	-----	~~424.29~~ 424.00	~~424.58~~ 424.00	MD. 384.05	N 539,473 E 1,338,661	
ES-1	END SECTION	-----			-----	~~402.74~~ 402.00	BY MANUFACTURER	N 540,056 E 1,339,700	

⚠ (1) COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

(MH 3 HAS BEEN OMITTED INTENTIONALLY)

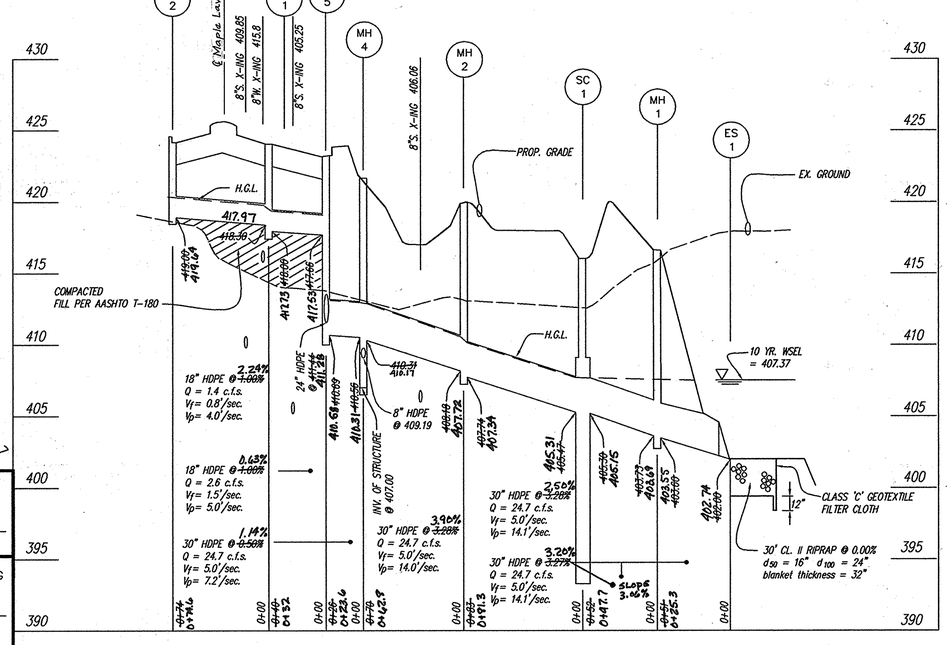
SIZE	TYPE	QUANTITY (l.f.)	REMARKS
	PIPE SCHEDULE		
18"	HDPE	146'	
24"	HDPE	⚠ 334'	
30"	HDPE	236'	
⚠ 36"	HDPE	76'	

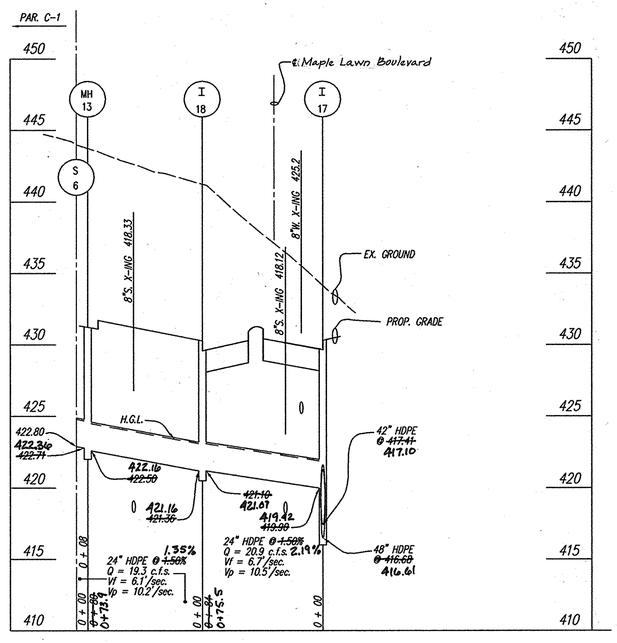
HDPE indicates High Density Polyethylene pipe, such as N-12 by ADS, or Hi-Q by Hancor, or an approved equal.

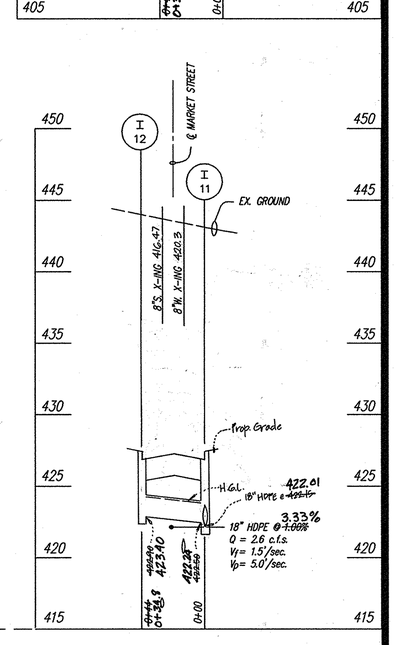


PROFILES

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'







(ALSO APPLIES TO AS BUILT)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 3/2/03

Chief, Development Engineering Division — Date 3/4/03

COUNTY FILE # F 03-07

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

96079\FINALS\PHI-WORKPLACE\96079SD16.DWG | DES. DEV | DRN. AEJ | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠ Revised sd. runs I-10 to I-9 and I-12 to I-11, structure schedule and symbol used in structure to eliminate confusion from redline designation.	JAW	

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

STORMDRAIN PROFILES & SCHEDULES

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	18 OF 34

F-03-07

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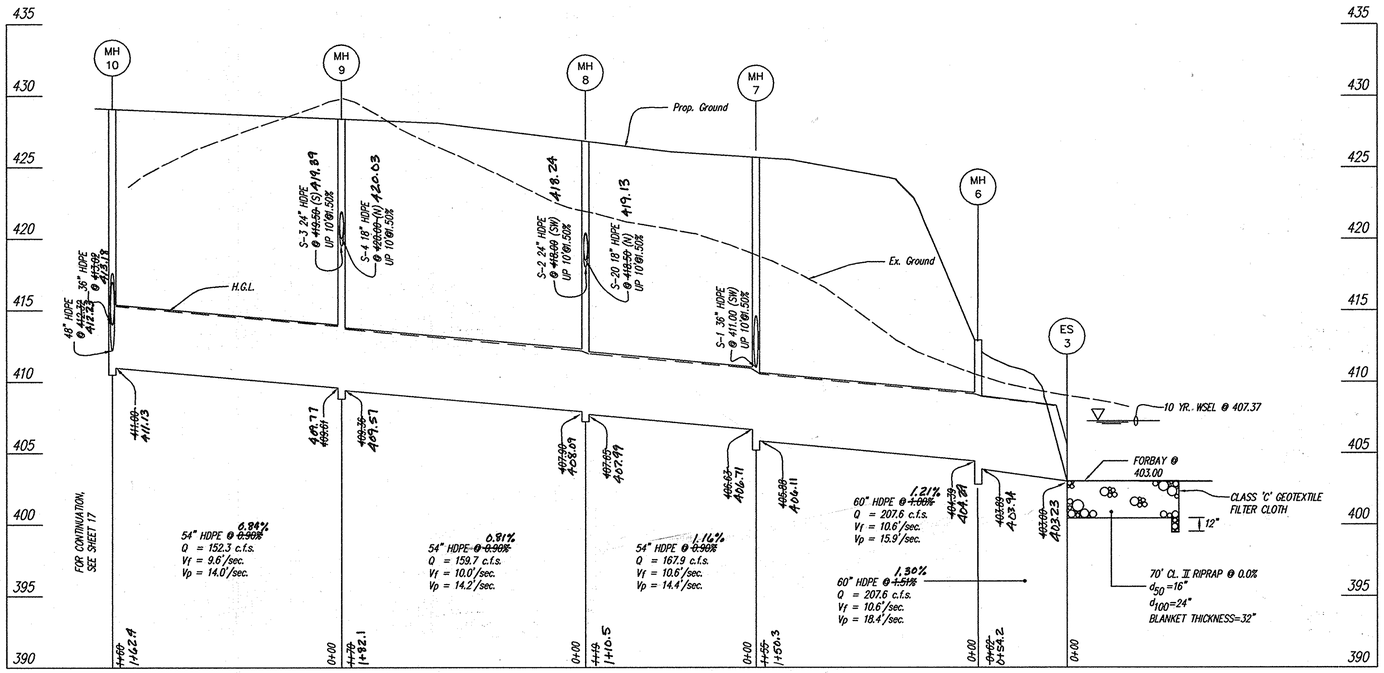

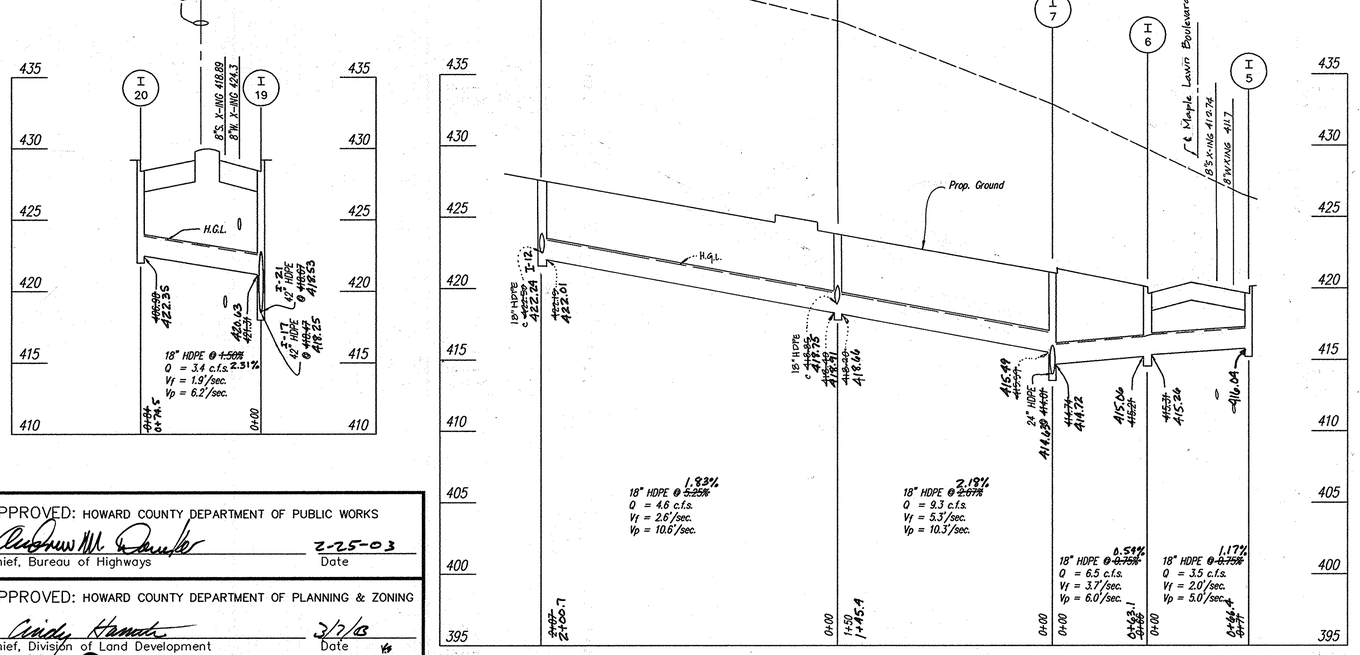

STRUCTURE SCHEDULE								
NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION UPPER	TOP ELEVATION LOWER	INVERT ELEVATION UPPER	INVERT ELEVATION LOWER	STD. DETAIL	LOCATIONS (1)	REMARKS
I-3	DOUBLE 'S' COMB. INLET	-----	~~421.64~~ 420.39	~~420.96~~ 420.25	~~412.14~~ 412.47	~~412.05~~ 412.37	HO. CO. SD-4.34	N 540,356 E 1,339,628	
I-4	DOUBLE 'S' COMB. INLET	-----	~~422.17~~ 420.85	~~420.93~~ 420.73	~~413.23~~ 413.13	~~413.10~~ 413.03	HO. CO. SD-4.34	N 540,390 E 1,339,556	
I-5	DOUBLE 'S' COMB. INLET	-----	~~420.13~~ 420.14	~~420.92~~ 420.14	416.90	~~416.84~~ 416.80	HO. CO. SD-4.34	N 540,461 E 1,339,676	
I-6	DOUBLE 'S' COMB. INLET	-----	~~419.95~~ 420.14	~~419.83~~ 420.14	~~415.26~~ 416.31	~~415.20~~ 416.21	HO. CO. SD-4.34	N 540,489 E 1,339,610	
I-7	DOUBLE 'S' COMB. INLET	-----	~~421.25~~ 421.12	~~421.17~~ 420.98	~~415.43~~ 415.54	~~414.53~~ 414.20	HO. CO. SD-4.34	N 540,491 E 1,339,546	
I-8	DOUBLE 'S' COMB. INLET	-----	~~421.31~~ 421.12	~~421.11~~ 420.98	~~413.76~~ 413.76	~~413.74~~ 413.66	HO. CO. SD-4.34	N 540,455 E 1,339,529	
I-9	DOUBLE 'S' COMB. INLET	-----	~~425.91~~ 423.84	~~423.68~~ 423.70	~~418.91~~ 418.85	~~418.66~~ 418.20	HO. CO. SD-4.34	N 540,556 E 1,339,410	
I-11	DOUBLE 'S' COMB. INLET	-----	~~427.67~~ 427.09	~~427.46~~ 427.41	~~422.28~~ 422.50	~~422.81~~ 422.15	HO. CO. SD-4.34	N 540,644 E 1,339,223	
I-19	DOUBLE 'S' COMB. INLET	-----	~~426.91~~ 426.84	~~423.78~~ 423.84	~~420.68~~ 421.37	~~420.58~~ 416.94	HO. CO. SD-4.34	N 539,625 E 1,339,041	
I-20	DOUBLE 'S' COMB. INLET	-----	~~428.79~~ 429.04	~~428.75~~ 429.04	-----	~~423.35~~ 406.96	HO. CO. SD-4.34	N 539,684 E 1,338,987	
MH 5	STD. MANHOLE	5'-0"	~~423.13~~ 423.41	-----	~~417.53~~ 417.60	~~410.58~~ 410.66	HO. CO. G 5.13	N 540,210 E 1,339,559	
MH 6	STD. MANHOLE	8'-0"	~~418.40~~ 412.90	-----	~~404.89~~ 404.39	~~408.94~~ 403.09	MD 384.09	N 539,558 E 1,339,845	
MH 7	STD. MANHOLE	7'-0"	~~425.21~~ 423.70	-----	~~407.71~~ 411.00	~~406.11~~ 408.00	MD 384.07	N 539,644 E 1,339,715	
MH 8	STD. MANHOLE	7'-0"	~~426.75~~ 426.70	-----	~~419.13~~ 418.50	~~407.99~~ 407.65	MD 384.07	N 539,760 E 1,339,690	
MH 9	STD. MANHOLE	7'-0"	~~436.21~~ 428.35	-----	~~426.83~~ 420.00	~~409.61~~ 409.36	MD 384.07	N 539,881 E 1,339,544	
MH 10	STD. MANHOLE	8'-0"	~~434.68~~ 429.86	-----	~~413.18~~ 413.02	~~411.13~~ 411.00	MD 384.09	N 539,983 E 1,339,421	
ES-3	END SECTION	------			-----	~~403.23~~ 403.00	BY MANUFACTURER	N 539,606 E 1,339,878	

(1) COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

PROFILES

SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'

PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (l.f.)	REMARKS
18"	HDPE	558'	
24"	HDPE	294'	
54"	HDPE	431'	
60"	HDPE	205'	

HDPE indicates High Density Polyethylene pipe, such as N-12 by ADS, or Hi-Q by Hancor or an approved equal.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/7/03
Chief, Development Engineering Division — Date 2/3/03

COUNTY FILE # F 03-07

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE – SUITE 250 – BURTONSVILLE OFFICE PARK
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96079\FINALS\PH1-WORKPLACE\96079SD17.DWG | DES. DEV | DRN. AEJ | CHK. DEV

DATE	REVISION	BY	APP'R.

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

STORMDRAIN PROFILES & SCHEDULES

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	19 OF 34

F-03-07

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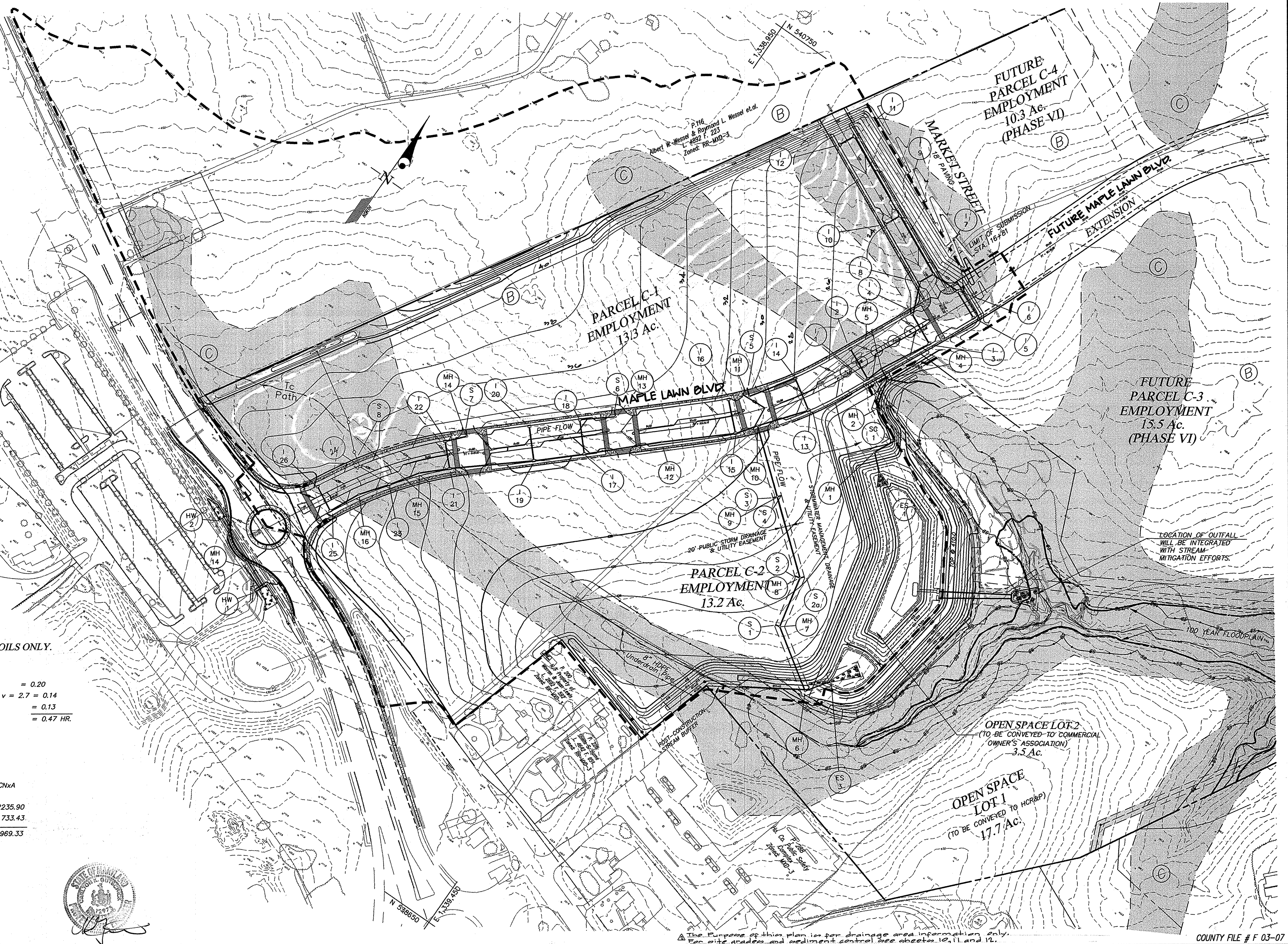

NOTE: DRAINAGE AREA CONSISTS OF 'B' & 'C' SOILS ONLY.

TIME OF CONCENTRATION

A–B 100' SHEET FLOW @3.0% (MEADOW n=0.24) = 0.20
B–C 1400' SHALLOW CONC. FLOW (UNPAVED @ 2.9%) v = 2.7 = 0.14
C–D 1200' STREAM FLOW @ 2.7% v = 2.5'/sec. = 0.13
= 0.47 HR.

DRAINAGE AREA INFORMATION

DRAINAGE AREA = 48.88 AC. ± = 0.0764 SQ. MILES±

CURVE NUMBER

SOIL GROUP	LAND USE	CURVE NUMBER	AREA	CNxA
B	MEADOW	58	38.55	2235.90
C	MEADOW	71	10.33	733.43
			48.88	2969.33

CN = 2969.33/48.88 = 61

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/10/03

⚠ The Purpose of this plan is for drainage area information only. For site grades and sediment control see sheets 10, 11 and 12.

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WORKPLACE\96079DA18.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	⚠1 Revise location of storm drain in Maple Lawn Blvd. and through Parcel C-1. Revise grades on Parcel C-1 and along Market Street.	JAU	
12/7/06	⚠2 added purpose note		

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

ELECTION DISTRICT No. 5

PRE-DEVELOPMENT S.W.M. DRAINAGE AREA MAP

MAPLE LAWN FARMS

Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22; 46: 3 & 4	20 OF 34

F-03-07

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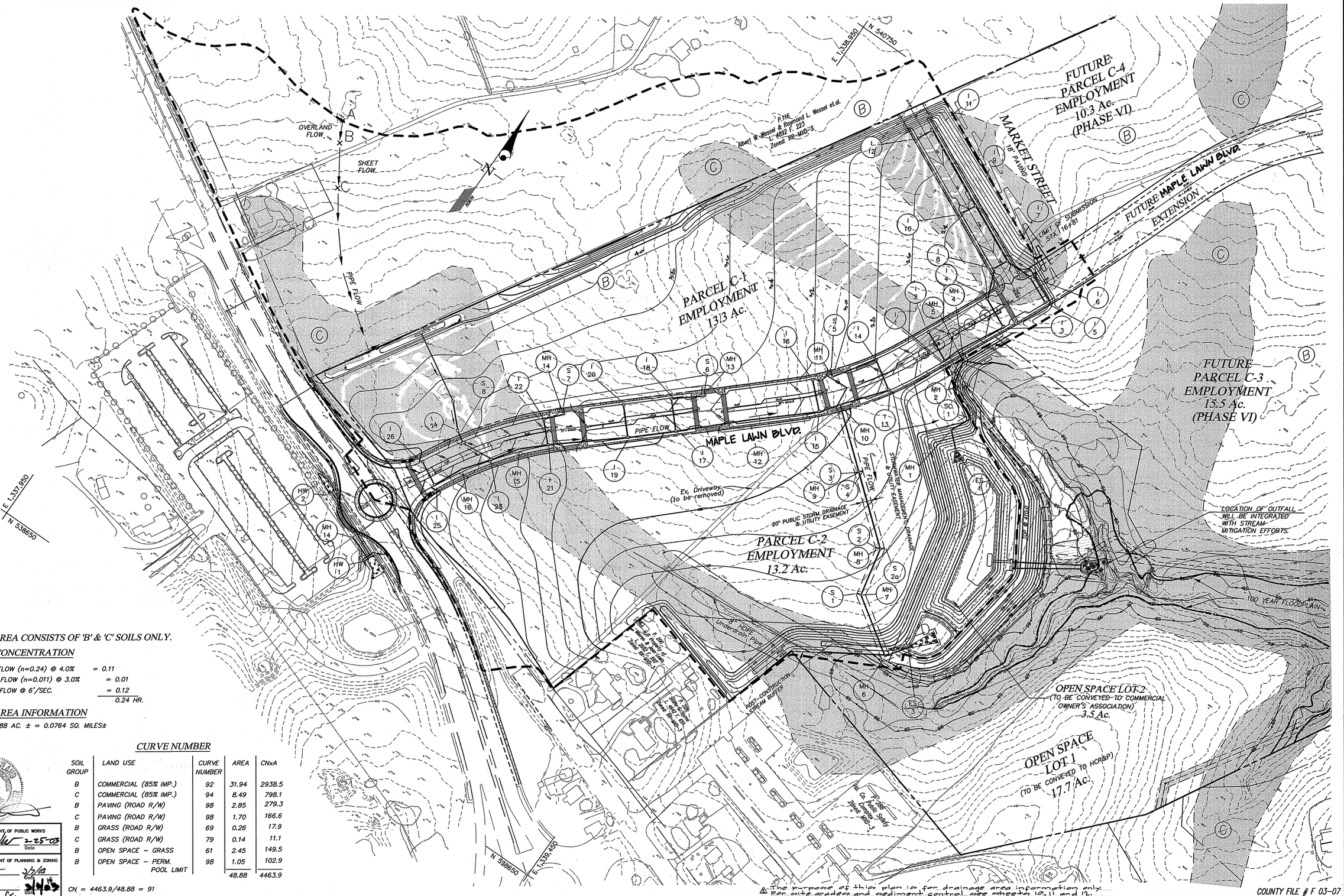

NOTE: DRAINAGE AREA CONSISTS OF 'B' & 'C' SOILS ONLY.

TIME OF CONCENTRATION

A–B	50' SHEET FLOW (n=0.24) @ 4.0%	= 0.11
B–C	100' SHEET FLOW (n=0.011) @ 3.0%	= 0.01
C–D	2500' PIPE FLOW @ 6'/SEC.	= 0.12
		0.24 HR.

DRAINAGE AREA INFORMATION

DRAINAGE AREA = 48.88 AC. ± = 0.0764 SQ. MILES±

CURVE NUMBER

SOIL GROUP	LAND USE	CURVE NUMBER	AREA	CNxA
B	COMMERCIAL (85% IMP.)	92	31.94	2938.5
C	COMMERCIAL (85% IMP.)	94	8.49	798.1
B	PAVING (ROAD R/W)	98	2.85	279.3
C	PAVING (ROAD R/W)	98	1.70	166.6
B	GRASS (ROAD R/W)	69	0.26	17.9
C	GRASS (ROAD R/W)	79	0.14	11.1
B	OPEN SPACE – GRASS	61	2.45	149.5
B	OPEN SPACE – PERM. POOL LIMIT	98	1.05	102.9
			48.88	4463.9

CN = 4463.9/48.88 = 91

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/7/03
Chief, Development Engineering Division — Date 2/4/03

The purpose of this plan is for drainage area information only. For site grades and sediment control see sheets 10, 11 and 12.

COUNTY FILE # F 03-07

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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

96079\FINALS\PH1-WORKPLACE\96079DA19.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
9/30/03	Revise location of storm drain in Maple Lawn Blvd. and through Parcel C-1. Revise grades on Parcel C-1 and along Market Street.	JAU	
12/10/02	added purpose note		

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

POST-DEVELOPMENT S.W.M. DRAINAGE AREA MAP

MAPLE LAWN FARMS

Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	21 OF 34

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F-03-07

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 sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Embankment Core – The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to 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 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent 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:

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

Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the 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 for 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.

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

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

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the 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, prepunched 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 lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

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

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

5. Backfilling shall conform to "Structure Backfill".

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

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

1. Materials – PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-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.

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

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

4. Backfilling shall conform to "Structure Backfill".

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

Concrete

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

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 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 sightly 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 needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

ADDITIONAL POND SPECIFICATIONS

Embankment Construction

The following procedures should be utilized to prepare the subgrade for embankment support and to construct the proposed embankments.

All trees, topsoil, organic materials, frozen, wet, soft or loose soils and other deleterious materials should be removed from the areas of proposed new embankment and wasted prior to the placement of fill. These stripping operations should be performed in a manner consistent with good erosion and sediment control practices and in accordance with Soil Conservation Guidelines.

After stripping operations have been completed, the exposed subgrade materials should be proofrolled with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone

Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.

Groundwater levels encountered in the borings during our field exploration indicated that groundwater is located at depths as shallow as 6± ft below existing surface grades. It is possible that groundwater may have an effect on the proposed construction, particularly during the excavation for and construction of a core trench.

Any water infiltration resulting from a shallow interception of the groundwater table, surface run-off, or perched water, if not too extensive, should be able to be controlled by means of sump pit and pump, or by gravity ditching procedures provided that the groundwater level must only be lowered by a depth of 1± ft to 2± ft. If the groundwater must be lowered by more than 1± ft to 2± ft, or if lesser amounts of water cannot be suitability lowered by pumping, then the use of a more extensive dewatering system such as deep wells or well points will be required.

Excavation for the core trench may require dewatering. It may be necessary to provide a "mud mat" to plug the water flow into the excavation. An uncompacted bridge lift is not recommended since this will not provide sufficient foundation support for the embankment and would also provide a path of water flow.

Fill Material Suitability

All materials to be used as fill in the embankment should be inspected, tested and approved by the Geotechnical Engineer. Based on our evaluation of the soils encountered borings conducted on the site, it appears that the on-site soils that are free from organics and other deleterious materials can be used for construction of the embankment. Moisture conditioning (that is, wetting or drying) of the materials may be required in order to achieve proper compaction depending on the season of the year. The moisture contents of the soils should be properly controlled to avoid extensive consolidation delays. Additional laboratory tests should be performed on the borrow materials prior to their use in the compacted fill.

Imported fill materials should be of equal or greater quality than the on-site materials and should be approved for use by the Geotechnical Engineer.

Fill Placement and Compaction

All fill materials must be placed and compacted in accordance with MD SCS 378 specifications. In particular, fill materials should be placed in relatively horizontal loose lifts of 8-inch maximum thickness and should be compacted to dry densities of at least 95 percent of the Standard Proctor maximum dry density

(ASTM D-698). Moisture contents should be maintained within ±2 percent of optimum moisture content, and preferably between optimum moisture content and +2 percent of optimum moisture content.

An experienced soils technician under the direction of a Geotechnical Engineer should perform field density tests on the embankment fill, as necessary, to verify that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer should be contacted for advice, as modifications to the compaction procedures may be appropriate.

Cut-off Trench Construction

A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment and cut-off trench. In accordance with Maryland Soil Conservation Specification 378 soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification GC, SC, CH, or CL.

It is our professional opinion that in addition to the soil materials described above a fine-grained soil, including Silt (ML) with a plasticity index of 10 or more can be utilized for the center of the embankment and core trench.

OPERATION AND MAINTENANCE SCHEDULE
FOR PRIVATELY OWNED AND MAINTAINED DETENTION POND

Routine Maintenance:

1. Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.

2. 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.

3. Debris and litter shall be removed during regular mowing operations and as needed.

4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance:

1. 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.

2. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond, or forebay, is half-full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

OPERATION AND MAINTENANCE SCHEDULE FOR
STORMCEPTOR WATER QUALITY DEVICE

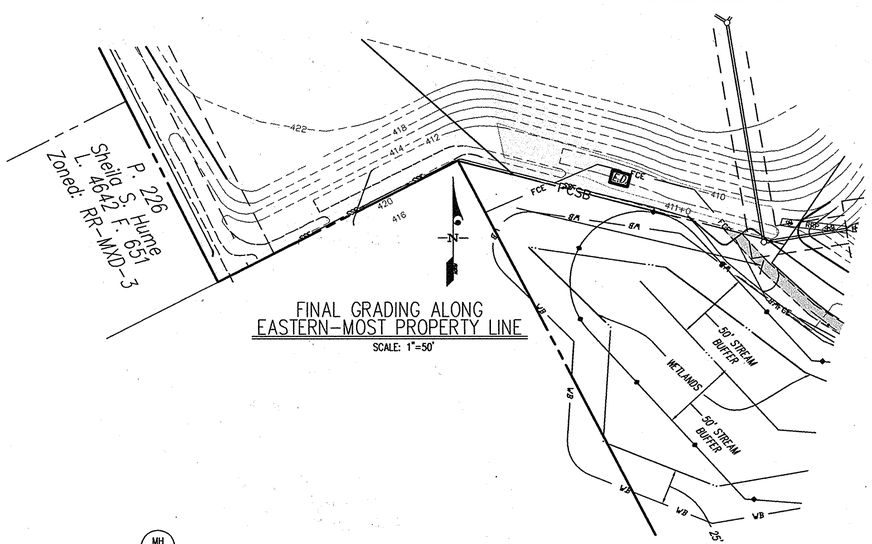
1. The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor until yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear Plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.

2. The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulator agencies.

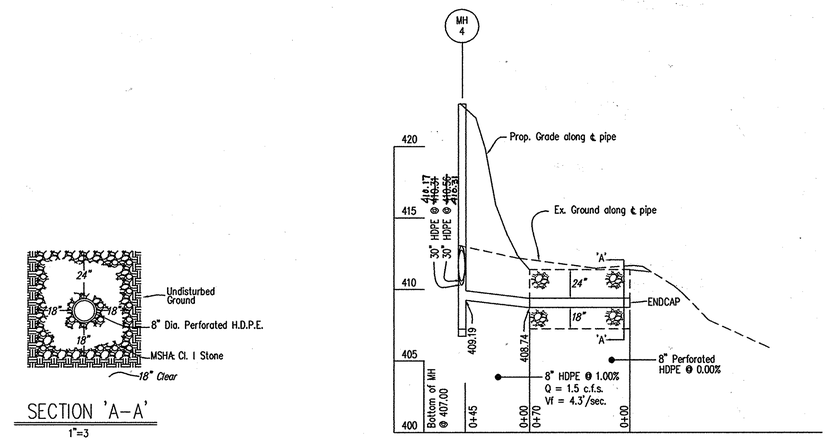
3. The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.

4. The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found, the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.

5. The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available to the Howard County officials upon their request.



FINAL GRADING ALONG
EASTERN-MOST PROPERTY LINE
SCALE: 1"=50'



SECTION 'A-A'
1"=3

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/3/03
Chief, Development Engineering Division — Date 2/4/03

Precast Concrete Stormceptor® Order Request Form

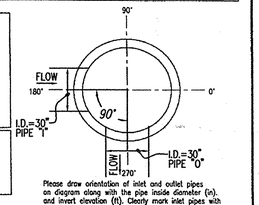
* TO BE INCLUDED ON SWM PLAN BY DESIGNER

CONTRACTOR INFORMATION

Name: to be determined
Address:
City:
State:
Zip Code:
Contact:
Phone:
Fax:

OWNER INFORMATION

Name: GREENBAUM & ROSE, INC.
Phone: 410-484-8400
Fax: 410-484-1943
CONTACT: CHARLIE O'DONOVAN



Please draw orientation of inlet and outlet pipes on diagram along with the pipe inside diameter (in). and invert elevation (ft). Clearly mark inlet pipes with an "I" and outlet pipes with an "O". Please provide the inlet/outlet pipe angle in degrees.

IMPERVIOUS DRAINAGE AREA FOR THIS UNIT:

Stormceptor® Model

STC			
900	☐	3600	☐
1200	☐	4800	☑
1800	☐	6000	☐
2400	☐	7200	☐

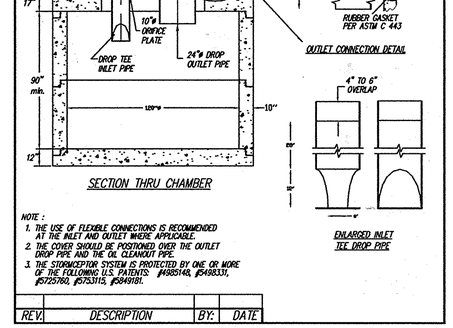
Insert Size	
DISC	☐
22"	☐
32"	☐
44"	☑
CUSTOM	

Manhole Number	SC-1
Top Elevation (ft)	416.00 417.31
Inlet Pipe Invert (ft)	406.28 405.53
Outlet Pipe Invert (ft)	406.20 405.43
Pipe Type	H.D.P.E.
Inlet Pipe Inside Diameter (ID)	30"
Inlet Pipe Outside Diameter (OD)	42"
Outlet Pipe Inside Diameter (ID)	30"
Outlet Pipe Outside Diameter (OD)	42"

Project Name: MAPLE LAWN FARMS
Approximate time frame of delivery-(weeks): DELIVERY DATE: MAY, 2003
Delivery Address: Street: 11320 SCAGGSVILLE RD (MD ROUTE 216)
City: SCAGGSVILLE State: MD Zip Code: 20723
Designer Company: GUTSCHICK, LITTLE, & WEBER, P.A.
Designer Contact: DOUG VANDE RYT Phone: 410-888-1820 Fax: 301-421-4186

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR Hydro Conduit
ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)971-1900
FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)971-1900

CSR — Hydro Conduit
STC 4800 Precast Concrete Stormceptor® (4800 US Gallon Capacity)
PROJECT LOCATION:
DR. BY:
CK. BY:
DATE:
SCALE: N.T.S.
DWG.#



SECTION THRU CHAMBER

NOTE :
1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. THE COVER SHOULD BE POSITIONED OVER THE OUTLET DROP PIPE AND THE OIL CLEANOUT PIPE.
3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985148, #5498331, #5725760, #5753115, #5849181.

REV.	DESCRIPTION	BY:	DATE

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 1-27-03

(ALSO APPLIES TO ASBUILT)

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 — Date 1-27-03

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.

Natural Resources Conservation Service — Date 2/4/03

COUNTY FILE # F 03-07

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

96079\finals\ph1-workplace\96079SC12.dwg | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.

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

S.W.M. NOTES AND DETAILS

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2, and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
NO SCALE	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	22 OF 34

F-03-07

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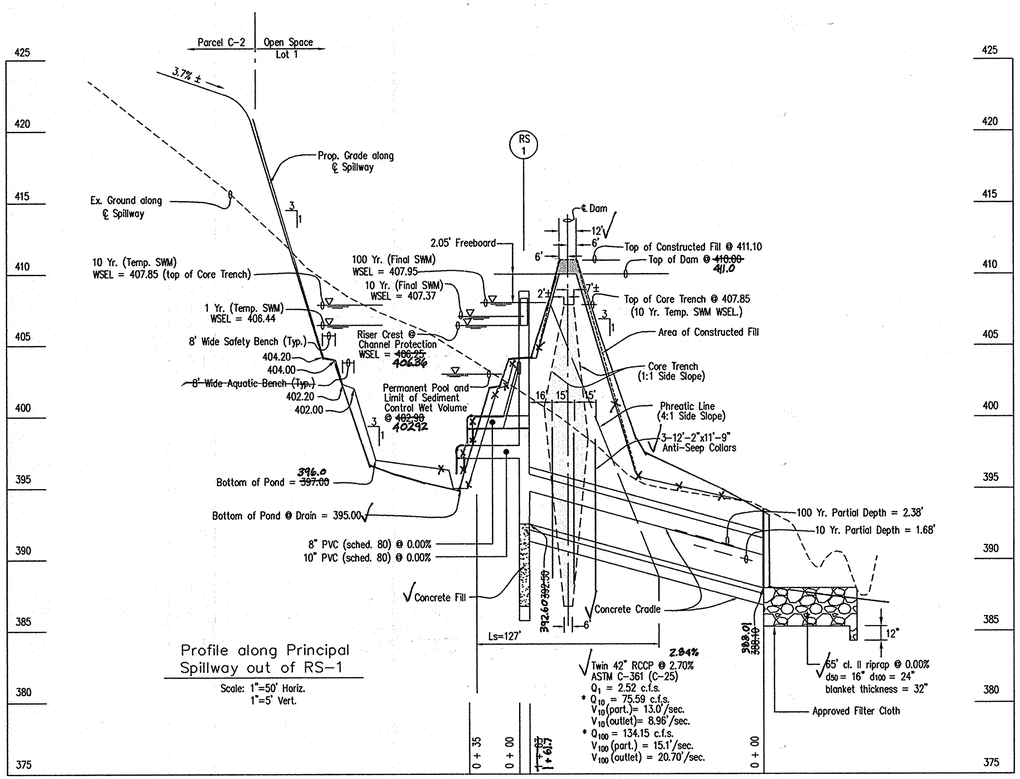
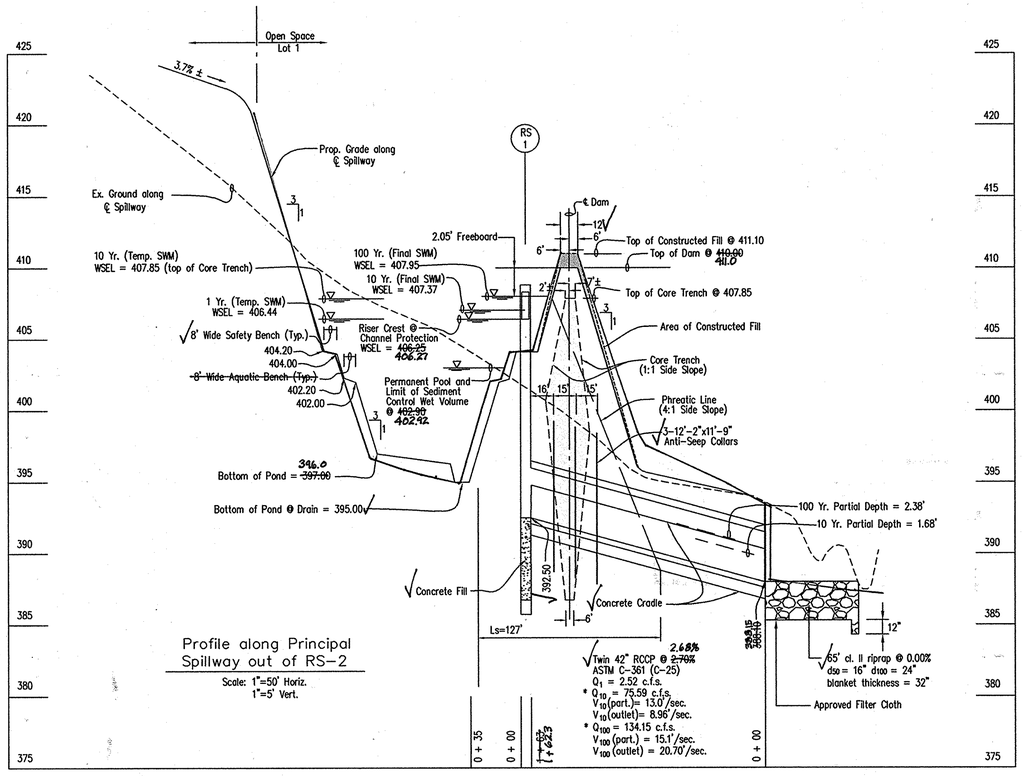
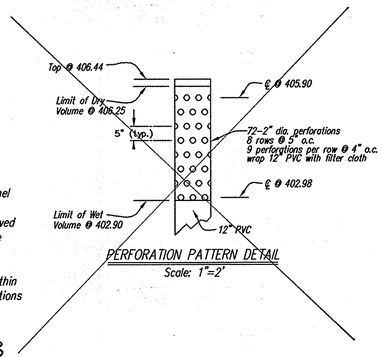


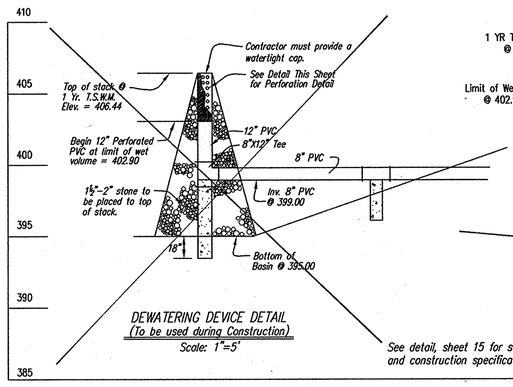


NOTE: THE TOTAL 10 YEAR DISCHARGE OUT OF THE FACILITY IS 151.18 CFS AND THE 100 YEAR DISCHARGE IS 268.30 CFS. THE 10 AND 100 YEAR FLOWS WILL BE SPLIT EQUALLY BETWEEN RS-1 AND RS-2. THE VALUES SHOWN IN THE PROFILES INDICATE THE FLOWS EACH STRUCTURE AND PRINCIPAL SPILLWAY WILL CONVEY.

NOTES:
1. CONTRACTOR MUST PROVIDE RUBBER GASKETS AT PIPE JOINTS ALONG BOTH 42" RCCP'S
2. THE FIRST JOINT MUST BE WITHIN FOUR FEET OF THE RISER STRUCTURE
3. CONTRACTOR MUST USE A MASTIC GROUT WHERE THE 42" RCCP CONNECTS TO THE RISER

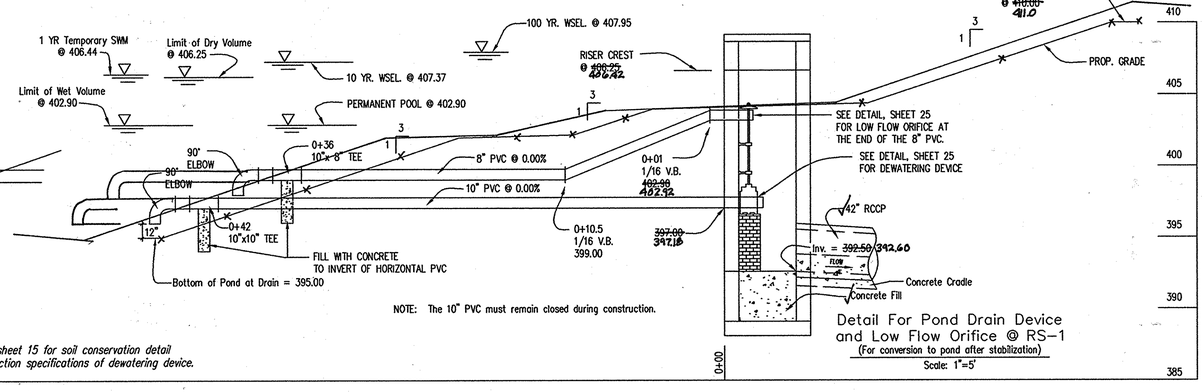


PERFORATION PATTERN DETAIL
Scale: 1"=2'



DEWATERING DEVICE DETAIL
(To be used during Construction)
Scale: 1"=5'

See detail, sheet 15 for soil conservation detail and construction specifications of dewatering device.



NOTE: The 10" PVC must remain closed during construction.

Detail For Pond Drain Device and Low Flow Orifice @ RS-1
(For conversion to pond after stabilization)
Scale: 1"=5'

DEVELOPER'S/BUILDER'S CERTIFICATE

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Signature of Developer/Builder — *Date* 1-27-03

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 — *Date* 1-27-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 2/2/03
Chief, Development Engineering Division — Date 3/3/03 VS

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

Howard Soil Conservation District — *Date* 2/4/03

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.

Natural Resources Conservation Service — *Date* 2/4/03

(ALSO APPLIES TO ASBUILT)

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WORKPLACE\96079SWM20.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.

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

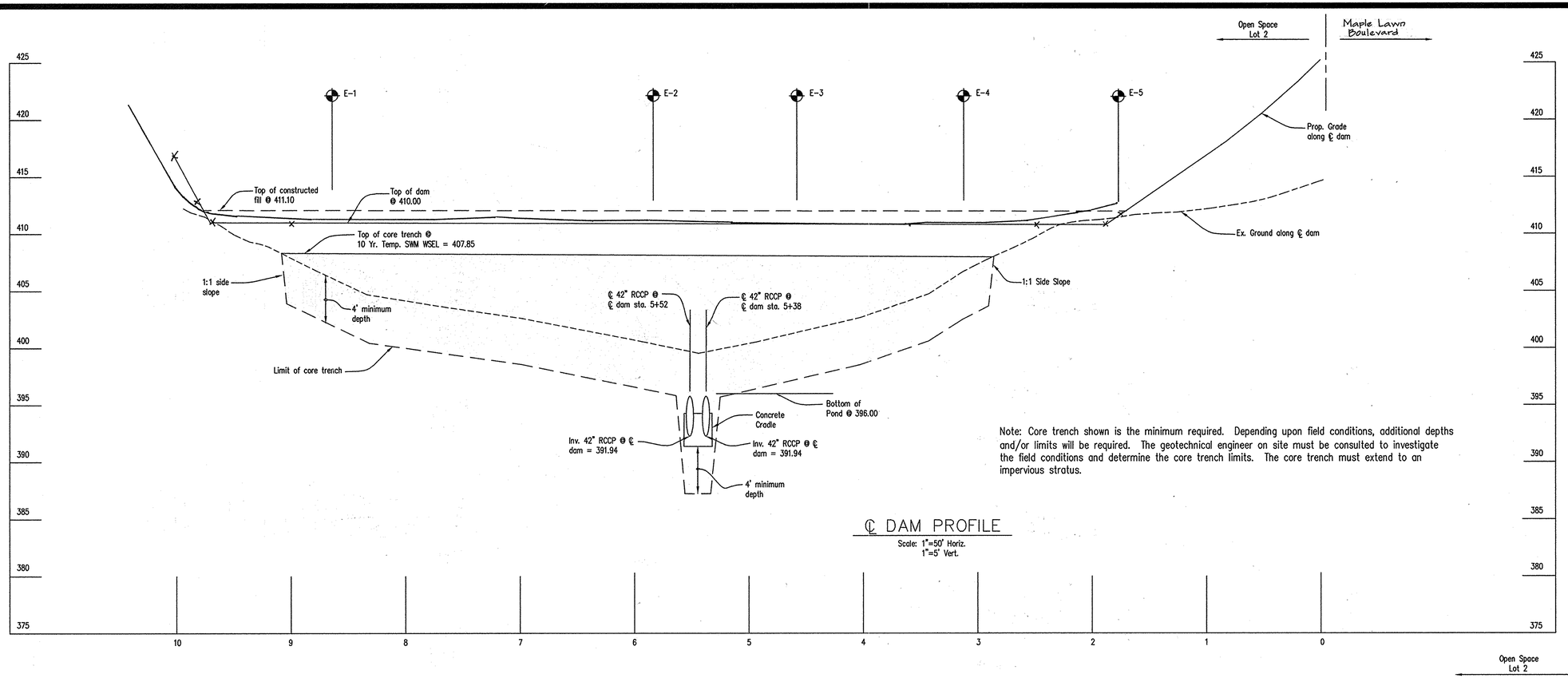
STORMWATER MANAGEMENT FACILITY DETAILS

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — *HOWARD COUNTY, MARYLAND*

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	23 OF 34

F-03-07

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079SWM20.dwg 07/19/2002 10:49:40 AM EDT



Note: Core trench shown is the minimum required. Depending upon field conditions, additional depths and/or limits will be required. The geotechnical engineer on site must be consulted to investigate the field conditions and determine the core trench limits. The core trench must extend to an impervious stratus.

℄ DAM PROFILE

Scale: 1"=50' Horiz.
1"=5' Vert.

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Signature of Developer/Builder — *Date* 1-27-03

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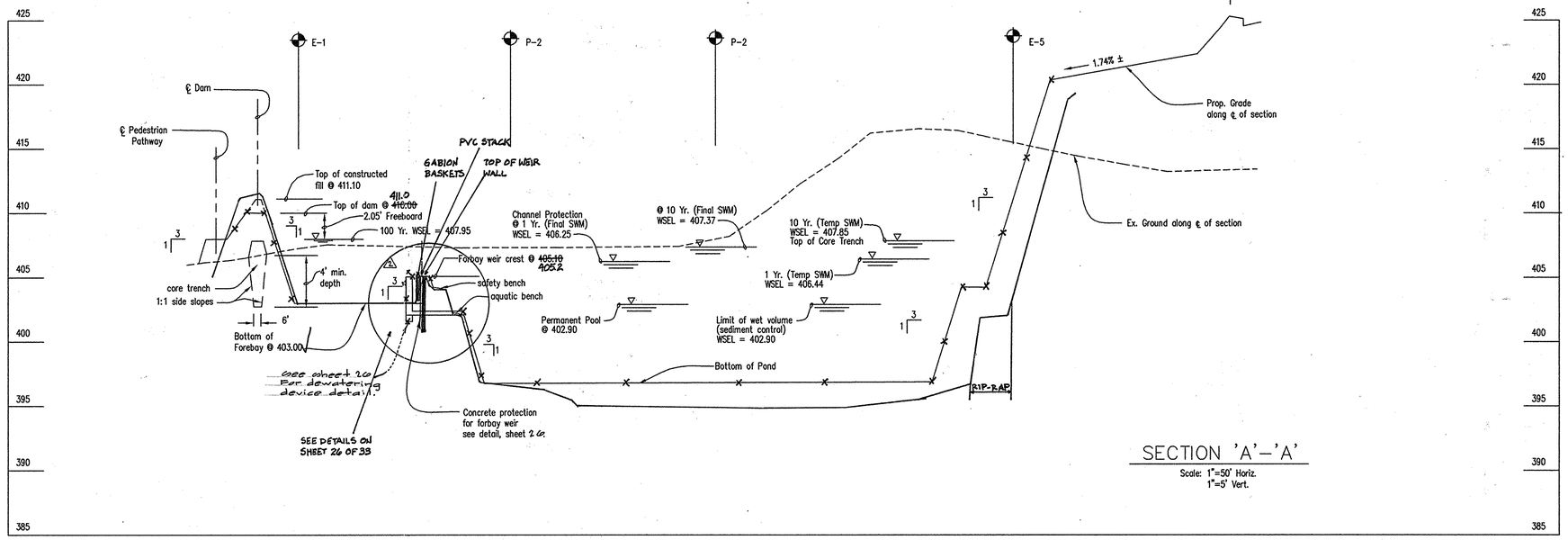
Engineer's Signature — *Date* 1-27-03

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

Howard Soil Conservation District — *Date* 2/11/03

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.

Natural Resources Conservation Service — *Date* 2/11/03



SECTION 'A'–'A'

Scale: 1"=50' Horiz.
1"=5' Vert.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/12/03

Chief, Development Engineering Division — Date 3/3/03

(ALSO APPLIES TO ASBUILT)

COUNTY FILE # F 03-07

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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96079\FINALS\PH1-WORKPLACE\96079SWM21.DWG | DES. DEV | DRN. JAU | CHK. DEV

DATE	REVISION	BY	APP'R.
12/23/02	removed DD-1 callout and rev. weir wall and dewatering device		

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

STORMWATER MANAGEMENT FACILITY DETAILS

MAPLE LAWN FARMS

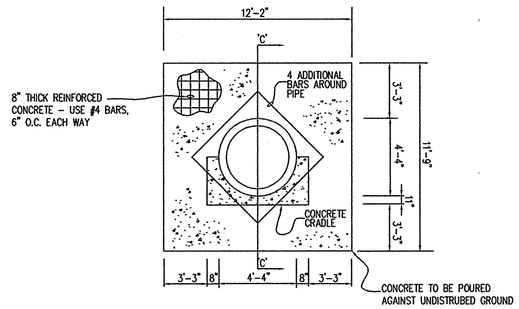
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — *HOWARD COUNTY, MARYLAND*

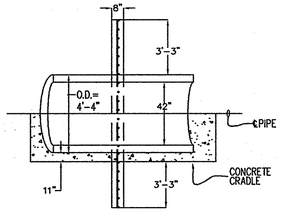
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	24 OF 34

F-03-07

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079SWM21.dwg 07/19/2002 10:43:19 AM EDT

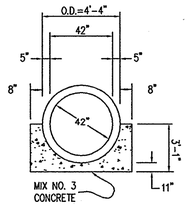


√ Anti Seep Collar Details
Not to Scale

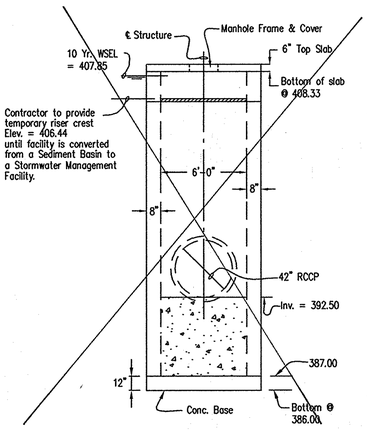


Section
'C'-'C'

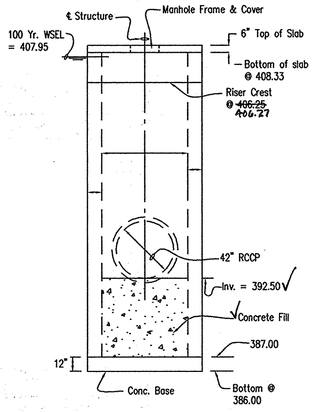
1. POUR CONCRETE TO UNDISTURBED EARTH.
2. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.



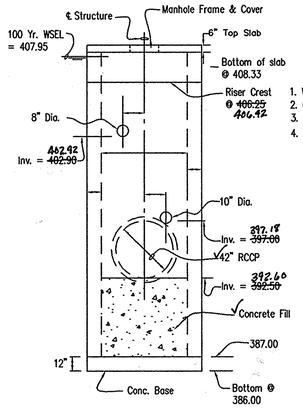
√ Concrete Cradle Detail
Not to Scale



RISER MODIFICATIONS FOR TEMPORARY STORMWATER MANAGEMENT
N.T.S.

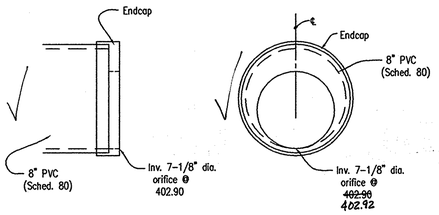


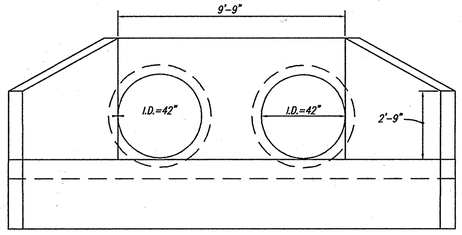
RS-2

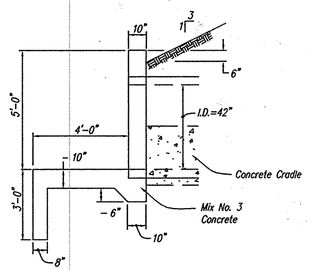


RS-1

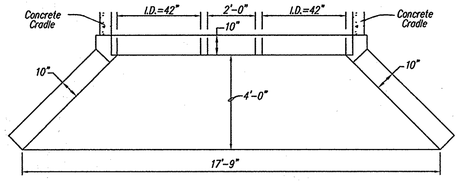
1. WEIR OPENING WILL BE PROVIDED ON ALL 4 SIDES OF RS-1 AND RS-2
2. CONTRACTOR MUST PROVIDE RUBBER GASKETS AT THE PIPE JOINTS ALONG BOTH 42" RCCP'S
3. THE FIRST JOINT MUST BE WITHIN FOUR FEET OF THE RISER STRUCTURE
4. CONTRACTOR MUST USE A MASTIC GROUT WHERE THE 42" RCCP CONNECTS TO THE RISER



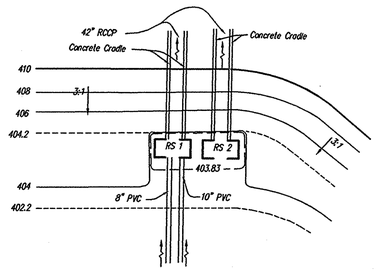




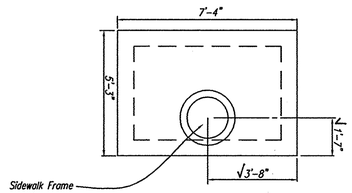
Reinforcement to be provided will be similar to that shown in Howard County detail SD 5.11. Contractor must provide shop drawings prior to structure being manufactured.



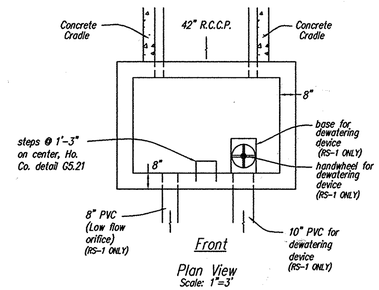
√ Detail for HW-3
Scale: 1"=3'



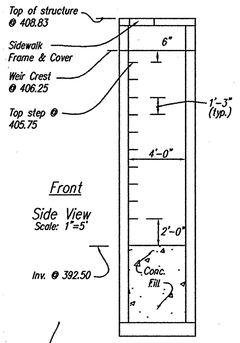
Plan for Grading around RS 1 and RS 2
Scale: 1"=20'



Front
Plan View Of Riser Top
Scale: 1"=3'



Front
Plan View
Scale: 1"=3'



Front
Side View
Scale: 1"=5'

Details for Location of Steps and Manhole Frame and Cover
Scale: As shown

(ALSO APPLIES TO ASBUILT)

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Signature of Developer/Builder — *1-27-03 Date*

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Howard Soil Conservation District — *2/11/03 Date*

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Engineer's Signature — *1-27-03 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.

Natural Resources Conservation Service — *2/11/03 Date*

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — 2-25-03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — 3/7/03 Date
Chief, Development Engineering Division — 2/7/03 Date

COUNTY FILE # F 03-07

GLW GUTSCHICK LITTLE & WEBER, P.A.
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96079\FINALS\PH1-WORKPLACE\96079SWM24.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.

PREPARED FOR :
G & R Maple Lawn, Inc., et. al.
Suite 410, Woodholme Center
1829 Reisterstown Road
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Attn: Charlie O'Donovan
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STORMWATER MANAGEMENT FACILITY DETAILS
MAPLE LAWN FARMS
Business District - Area 1
Parcel C-1 & C-2, Lot 1 & Lot 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	25 OF 34

F-03-07

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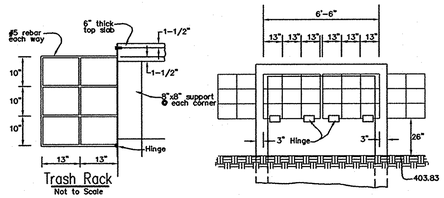
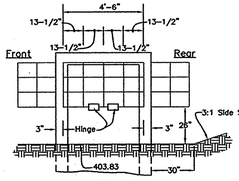


Trash Rack
Not to Scale

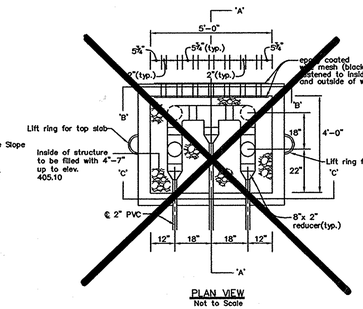
Note: 1. Trash rack mountings to be galvanized after fabrication.
2. Rebar must be galvanized and painted battleship gray.

Front & Rear

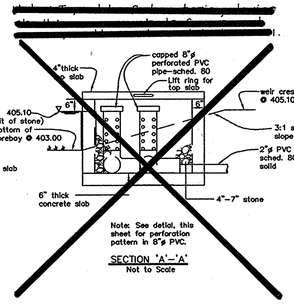
Trash Rack Details
Not to Scale



Sides

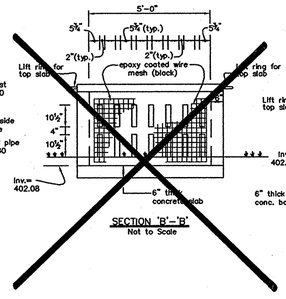


PLAN VIEW
Not to Scale

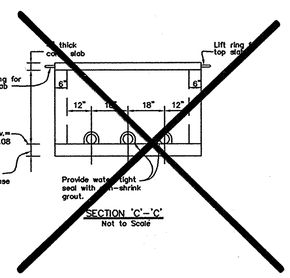


Note: See detail, this sheet for perforation pattern in 8"ø PVC.

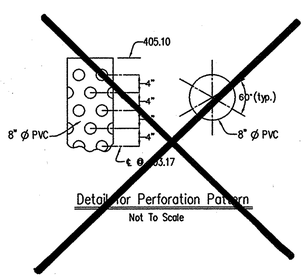
SECTION 'A'-'A'
Not to Scale



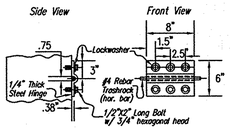
SECTION 'B'-'B'
Not to Scale



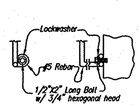
SECTION 'C'-'C'
Not to Scale



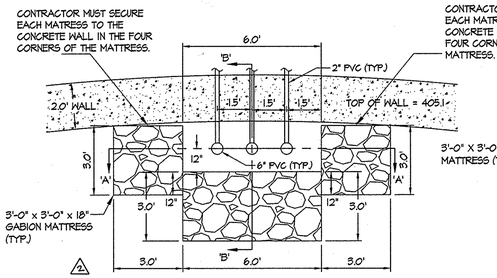
Detail for Perforation Pattern
Not To Scale

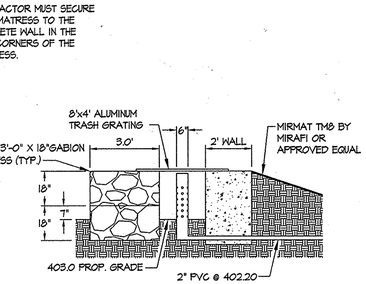


Hinge Detail
Not to Scale
Note: Trash rack mountings to be galvanized after fabrication.

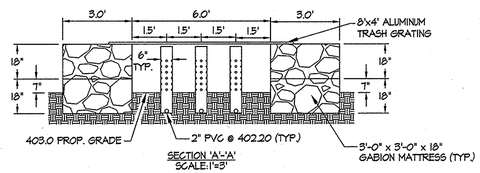


Detail for Securing Trash Rack
Not to Scale
Note: Trash rack mountings to be galvanized after fabrication.



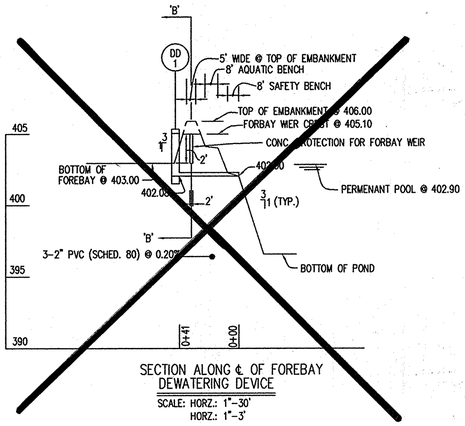


SECTION 'B'-'B'
SCALE: 1"=5'

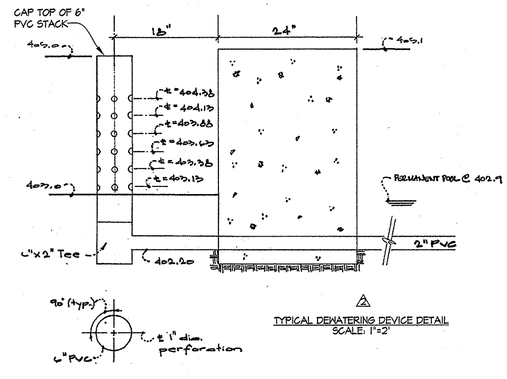


SECTION 'A'-'A'
SCALE: 1"=5'

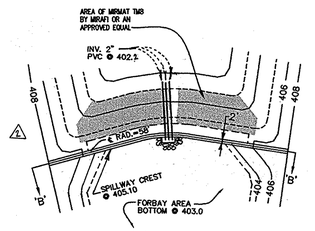
DEWATERING DEVICE DETAIL
SCALE: 1"=5'

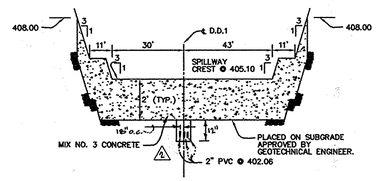


SECTION ALONG ℄ OF FOREBAY DEWATERING DEVICE
SCALE: HORZ.: 1"=30'
VERT.: 1"=3'

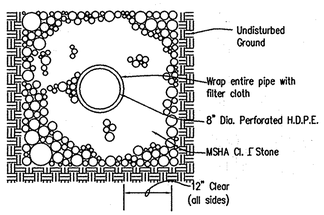


TYPICAL DEWATERING DEVICE DETAIL
SCALE: 1"=2'

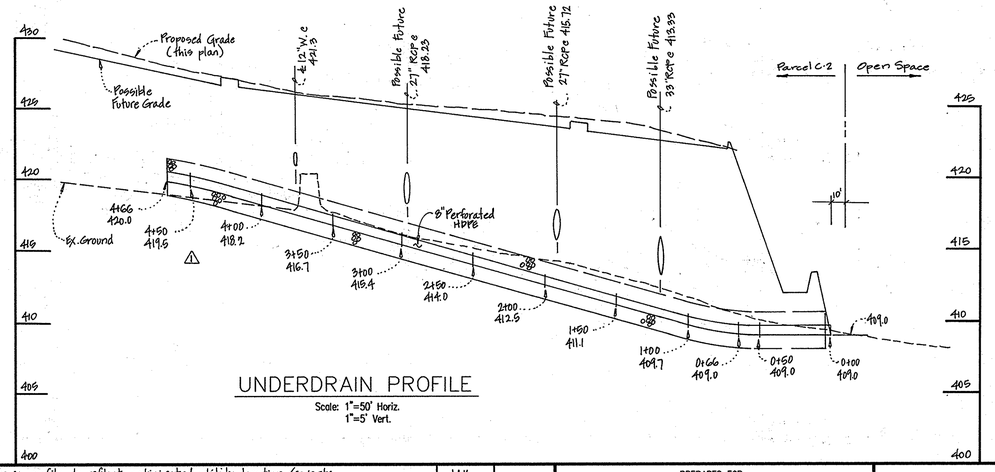




SECTION 'B-B'
SCALE: 1"=30' HORIZ.
1"=3' VERT.



Underdrain Detail
SECTION 'A'-'A'
1"=2'



UNDERDRAIN PROFILE
Scale: 1"=50' Horiz.
1"=5' Vert.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/3/03
Chief, Development Engineering Division — Date 3/3/03

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* 1-27-03

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

Howard Soil Conservation District — *Date* 2/11/03

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 — *Date* 1-27-03

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.

Natural Resources Conservation Service — *Date* 2/11/03

(ALSO APPLIES TO AS BUILT)

COUNTY FILE # F 03-07

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

96079\FINALS\PH1-WORKPLACE\96079SWM22.DWG | DES. | DRN. | CHK.

DATE	REVISION	BY	APP'R.
9/30/03	⚠ Revise underdrain profile to reflect anticipated utility location/inverts on future site plan.	JAH	
7/18/07	⚠ remove draw down details & added dewatering device detail		

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

STORMWATER MANAGEMENT FACILITY DETAILS

MAPLE LAWN FARMS
Business District - Area 1
Parcel C-1 & C-2, Lot 1 & Lot 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	26 OF 34

F-03-07

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079SWM22.dwg 10/09/2002 02:50:13 PM EST

HILLS - CARRIES
ENGINEERING ASSOCIATES, INC.
RECORD OF BOR. EXPLORATION
Page 1 of 2
Project Name Bridgeless Farms
Location Occoquin, Maryland
Job # 3100EA
Boring Number C-19
Sheet # 1 of 1
SAMPLE
Date Start/Finish 10/23-24/01
Date Started 10-23-01
Hammer Wt. 140 Lbs.
Hammer Drop 30 Inches
Type Bits 2.5" OD
Hole Diameter 6"
Hole Cave In 12'
Boring Before Hrs.
Foreman Lamont Smith
Inspector Chris Wilson
SURFACE
Brown, moist, very soft, micaceous fine sandy silt (ML)
Bottom of hole at 17.0'
SAMPLE TYPE
DRIVEN SPLIT SPOON (SAE)2
OTHER(NO.S) SHELBY TUBE
PITCHER SHELBY TUBE
CA-CHUNKS(JAR) RIGHT ANGLE CORE
RC-ROCK CORE
SAMPLE CONDITIONS
D-DISTURBED/UNDIS
LATACT
U-UNDISTURBED
GROUND WATER DEPTH
AT COMPLETION 7.0 FT.
AFTER ____ FT.
AFTER ____ FT.
SOIL DESCRIPTION
Brown, moist, very soft, micaceous fine sandy silt
Bottom of hole at 17.0'
SAMPLE
STRA. SCALE
DEPTH
DESCR.
BLOWS 6"
REC.
NO.
SAMPLE
NO.
REC.
BORING & SAMPLING NOTES
1-1-2-4
3-3

NOTE: THE 478 L.F. EDGE ON THE SOUTH SIDE OF OPEN SPACE LOT 1, SHALL BE PLANTED SO THAT THE PROVIDED TREES QUALIFY AS BOTH FOREST AND AN 'A' BUFFER. SPECIFICALLY, THE FOREST PLANTINGS SHALL BE ADJUSTED IN SIZE AND VARIETY ALONG THE EDGE TO PROVIDE THE BUFFER PLANTINGS DETAILED ON SHEET 30 IN SCHEDULE A.

E 1,338,950 N 540750

P.116
Albert W. Wessel & Raymond L. Wessel et.al.
L. 4892 F. 223
Zoned: RR-MXD-3

NORTH

N 542100
E 1,339,950

PARCEL C-1
EMPLOYMENT
13.3 Ac.

FUTURE
PARCEL C-4
EMPLOYMENT
10.3 Ac.
(PHASE VI)

MARKET STREET

MAPLE LAWN BLVD

PARCEL C-2
EMPLOYMENT
13.2 Ac.

LIMIT OF SUBMISSION
STA. 16+81

STORMWATER MANAGEMENT LANDSCAPE BUFFERING
AR 2
PS 3
TOTAL FOREST TO BE CLEARED IN NET TRACT 0.51 Ac.
FOREST PLANTING AREA #C 1.30 Ac.
15' MINIMUM NON-WOODY BUFFER ZONE

FOREST CONSERVATION ESMT. #1 2.49 Ac.

EX. 75' CONFLICT TREE ESMT L. 2385 F. 458

PEPCO R.O.W.

P. 165
Thomas & James A. Price
L. 3027 F. 141
Zoned: RR-MXD-3

Ex. Driveway (To be removed)

MD. RTE. 216

P. 200
Jeff Property Corp.
Warren Buffington
L. 887 F. 182
Zoned: RR-MXD-3

P. 200
Shell Oil Co.
L. 887 F. 654
Zoned: RR-MXD-3

FOREST PLANTING AREA #B 0.04 Ac.

OPEN SPACE LOT 2 3.5 Ac.

FUTURE
PARCEL C-3
EMPLOYMENT
15.5 Ac.
(PHASE VI)

CK 2
PS 15
LS 1

SEE NOTE 1 THIS SHEET

P. 288
Howard County Public Safety Complex
Zoned: MXD-3

CK 1
LS 1
AR 1
PS 5
LS 1
CK 4
AR 2
PS 4
CK 1

FOREST PLANTING AREA #A 2.49 Ac.

FOREST PLANTING AREA #D 0.04 Ac.

FOREST PLANTING AREA #C CONTINUED

FOREST PLANTING AREA #E 0.70 Ac.

100 YEAR F.P.

100 YEAR FLOOD PLAIN

FOREST CONSERVATION ESMT. #2 12.88 Ac.

EXISTING FOREST ON NET TRACT 9.45 Ac.
OPEN SPACE LOT 1
(TO BE CONVEYED TO HCR&P)
17.7 Ac.

FOREST CONSERVATION ESMT. #3 0.41 Ac.

N 539850 E 1,339,950

P. 126
The Busch Family Limited Partnership
L. 3192 F. 394
Zoned: B-1

Unmitigated 2020 65dBA limit

Old Columbia Rd.

This purpose of this plan is for forest Conservation only. For site grades and sediment control, see sheets 10, 11 and 12. ⚠

CONSERVATION ESMT #1:
AREA: 2.49 Ac
FOREST RETENTION IN NET TRACT: 0.98 Ac (credit)
FOREST RETENTION IN FLOOD PLAIN: 0.21 Ac (non-credit)
FOREST PLANTING IN NET TRACT: 1.27 Ac
FOREST PLANTING IN FLOOD PLAIN: 0.03 Ac

CONSERVATION ESMT #2:
AREA: 12.88 Ac
FOREST RETENTION IN NET TRACT: 7.60 Ac (credit)
FOREST RETENTION IN FLOOD PLAIN: 2.02 Ac (non-credit)
FOREST PLANTING IN NET TRACT: 2.66 Ac
FOREST PLANTING IN FLOOD PLAIN: 0.60 Ac

CONSERVATION ESMT #3:
AREA: 0.41 Ac
FOREST RETENTION IN NET TRACT: 0.36 Ac (credit)
FOREST RETENTION IN FLOOD PLAIN: 0.05 Ac (non-credit)
FOREST PLANTING IN NET TRACT: 0.00 Ac
FOREST PLANTING IN FLOOD PLAIN: 0.00 Ac

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — Date 3/7/03
Chief, Development Engineering Division — Date 3/5/03

SITE DATA

GROSS AREA - PHASE I: 51.98
NET TRACT AREA: 48.58

LEGEND

- EXISTING TOPOGRAPHY
- PROPOSED CONTOURS
- EXISTING TREE LINE
- 15-25% STEEP SLOPES
- 25% AND GREATER
- EXISTING STRUCTURES
- SOILS
- STREAM BUFFER
- WETLANDS
- FLOODPLAIN
- LIMIT OF DISTURBANCE
- TREE PLANTING AREA
- EXISTING FOREST
- TREE CLEARED AREA
- FOREST AREA TO BE CLEARED
- TREE PROTECTION SIGN
- FOREST CONSERVATION EASEMENT LINE

COUNTY FILE # F 03-07

STATE OF MARYLAND
TODD K. PHILLIPS
No. 6075
REGISTERED
LANDSCAPE ARCHITECT

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

96079\ph1\FINALS\96079FFC.DWG | DES. LMM | DRN. LMM | CHK. CKG

DATE	REVISION	BY	APP'R.
9/30/03	⚠ Added note to describe purpose of plan and limit its use.	JAIL	

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

FINAL FOREST CONSERVATION PLAN - PHASE I

MAPLE LAWN FARMS
~~Business~~ District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3-4	28 OF 34

F-03-07

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FOREST CONSERVATION WORKSHEET

SITE DATA

GROSS SITE AREA – PHASE I	51.98
AREA WITHIN 100-YEAR FLOOD PLAIN	3.40
NET TRACT AREA	48.58
LAND USE CATEGORY	MPD
AFFORESTATION THRESHOLD (15% x A)	7.29
CONSERVATION THRESHOLD (15% x A)	7.29
EXISTING FOREST COVER	
EXISTING FOREST ON NET TRACT AREA	9.45
AREA OF FOREST ABOVE AFFORESTATION THRESHOLD (On Net Tract Area)	2.16
AREA OF FOREST ABOVE CONSERVATION THRESHOLD (On Net Tract Area)	2.16
BREAK EVEN POINT	
FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	7.72
CLEARING PERMITTED WITHOUT MITIGATION	1.73
PROPOSED FOREST CLEARING	
FOREST AREAS TO BE CLEARED (On Net Tract Area)	0.51
FOREST AREAS TO BE RETAINED (On Net Tract Area)	8.94
PLANTING REQUIREMENTS	
REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD	1.02 *
REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD	0.00
CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	1.65
TOTAL REFORESTATION REQUIRED	0.00
TOTAL AFFORESTATION REQUIRED	0.00
TOTAL AFFORESTATION AND REFORESTATION REQUIRED	0.00
RETENTION CREDIT TO BE CARRIED FORWARD (Q-N)	0.63

PROPOSED METHODS OF FULFILLING FOREST CONSERVATION OBLIGATIONS:

BASED ON THE ABOVE CALCULATIONS, NO REFORESTATION PLANTING IS REQUIRED FOR PHASE 1. HOWEVER, 4.56 Ac. OF FORESTATION PLANTING WILL BE DONE IN ADVANCE AS FC BANKING FOR FUTURE PHASES. THE FOREST CONSERVATION BANKING CREDIT FROM PHASE 1 IS 5.14 Ac. (WHICH IS 4.56 Ac. OF PLANTING, PLUS 0.63 Ac OF REMAINING RETENTION CREDIT, MINUS 0.05 Ac. OF FOREST CONSERVATION RELEASED FROM NEIGHBORING PARCEL FOR PURPOSES OF THE WATER MAIN CONNECTION.)

FUTURE AFFORESTATION AND REFORESTATION WILL BE PROVIDED INCREMENTALLY AS THE DEVELOPMENT PROGRESSES. A RUNNING ACCOUNTING OF THE PROGRESS OF AFFORESTATION OR REFORESTATION WILL BE PROVIDED DURING EVERY STEP TO SHOW THAT PROGRESSION OF THIS AFFORESTATION IS ON TRACK.

* IN ORDER TO ACCOUNT FOR THE OVERALL MAPLE LAWN FARM (MLF) FOREST CONSERVATION OBLIGATION (WHICH IS IN AN AFFORESTATION SITUATION), THE PH-1 REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD IS TREATED AT 2:1 (2x0.51 = 1.02) EVEN THOUGH THERE IS AN "ARTIFICIAL EXCESS" OF FOREST AREA AS A RESULT OF DELINEATING THE BOUNDARY FOR THIS FIRST PHASE.

TABULATION OF PROPOSED FOREST CONSERVATION AREAS

	FOREST CONSERVATION ESMT	1	2	3	TOTAL
CREDITED	FOREST PLANTING PROVIDED IN THE 100-YR FLOOD PLAIN	1,171sf 0.03 Ac	26,153 sf 0.60 Ac	0.00	27,324 sf 0.63 Ac
CREDITED	FOREST PLANTING PROVIDED OUTSIDE THE 100 YR FLOOD PLAIN	55,429 sf 1.27 Ac	116,076 sf 2.66 Ac	0.00	171,505 sf 3.93 Ac
NON-CREDITED	FOREST RETENTION INSIDE THE 100-YR FLOOD PLAIN	9,139 sf 0.21 Ac	88,197 sf 2.02 Ac	2,309 sf 0.05 Ac	99,645 sf 2.28 Ac
CREDITED	FOREST RETENTION OUTSIDE THE 100-YR FLOOD PLAIN	42,920 sf 0.98 Ac	330,805 sf 7.60 Ac	15,394 sf 0.36 Ac	389,119 sf 8.94 Ac
	TOTAL AREA OF EACH FOREST CONSERVATION AREA	108,659 sf 2.49 Ac	561,231 sf 12.88 Ac	17,703 sf 0.41 Ac	687,593 sf 15.78 Ac

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 2/21/03

Chief, Development Engineering Division — Date 2/24/03

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

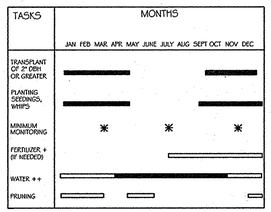
PHASE NO.	GROSS AC.	FLOODPLAIN AC.	NET TRACT AREA	EXG FOREST IN AC.	FOREST CLEARED	FOREST RETAINED	EXCESS RETENTION	REF/AFF. REQUIRED	CREDITED PLANTING PROVIDED	EXCESS FOREST CONS. (Planting+Retention)	COMMENTS
I	51.98	3.4	48.58	9.45	0.51	8.94	0.63	0.00	4.56	5.19	
*								0.05		(-0.05)	
TOTAL	51.98	3.4	48.58	9.45	0.51	8.94	0.63	0.05	4.56	5.14	

* Replacement of forest conservation area (1,958 S.F.) released from neighboring parcel (Howard County Public Safety Complex) for purposes of a required water main connection.

THE SURETY AMOUNT FOR FOREST RETENTION AREA OUTSIDE THE FLOOD PLAIN IS 8.94 Ac (389,119 S.F. x $ 0.20)=$77,824.00
THE SURETY AMOUNT FOR FOREST PLANTING IS FOR 4.56 Ac (198,829 sf per the tabulation chart minus a landscape credit of 11,000 sq. ft. for P-4 Perimeter 4 landscaping (14 2 1/2-3" Cal. trees x 400 s.f. = 24 evergreen trees x 225 s.f. = 11,000 s.f.)x $0.50 = $99,415.00 – $5,500.00 = $93,915.00
THE TOTAL SURETY AMOUNT IS $171,739.00 ($77,824+$93,915)

Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of $171,739.00. ($77,824+$93,915)

TREE PLANTING AND MAINTENANCE CALENDAR

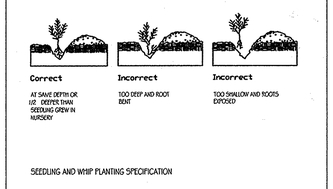


KEY
* ACTIVITIES DURING THESE MONTHS ARE DEPENDENT UPON GROUND CONDITIONS
GREATLY RECOMMENDED
RECOMMENDED WITH ADDITIONAL CARE
RECOMMENDED
+ DEPENDANT UPON SITE CONDITIONS
++ DEPENDANT UPON SITE CONDITIONS; WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

NOTE:
The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

SOURCE: adapted from the Maryland State FOREST CONSERVATION MANUAL

HANDLING AND PLANTING OF SEEDLING(4)



NOTE:
Mulching newly planted seedlings helps the soil retain moisture and it protects the seedling from compaction and stem injuries.

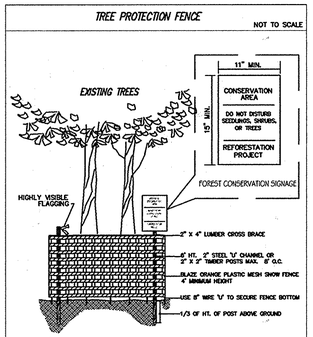
SOURCE: adapted from the Maryland State FOREST CONSERVATION MANUAL

NOTES:

1. THE QUANTITY SHOWN ABOVE IS FOR PLANTING WITH 2" CAL. TREES AT 20' X 20' SPACING. FOR PLANTING WITH 1" CAL. TREES OR WITH SEEDLINGS, THE ABOVE SHALL BE INCREASED BY THE FOLLOWING FACTOR.
   A. 2x FOR 1" CAL. TREES AT 15' X 15' SPACING.
   B. 7x FOR SEEDLINGS AT 8' X 8' SPACING.
2. ALL 1" AND 2" CAL. TREES SHALL BE B&B OR CONTAINER GROWN.
3. ALL SEEDLINGS SHALL BE 1-YEAR OR OLDER, 1/4" TO 1/2" CAL. AND WITH ROOTS NO LESS THAN 8" LONG OR IN CONTAINERS.
4. TREE SPECIES SHALL BE PLANTED IN RANDOM ARRANGEMENT, IMITATING THE NATURAL PATTERN OF THE FOREST. THE TREES SHALL BE PLANTED IN A RANDOM PATTERN AS WELL, APPROXIMATELY 20' ON CENTER.
5. ALONG P-4 OF THE LANDSCAPE PLAN, INCREASE REQUIRED CALIPER SIZE FOR FOLLOWING NOTED TREES:
   6 ACER RUBRUM – PLANT 2 1/2-3" CAL TREES ALONG PERIMETER EDGE.
   24 PINUS STROBUS 7-8' IN HEIGHT PLANTED ALONG PERIMETER EDGE.
   8 CERCIS CANADENSIS 2 1/2-3" CAL ALONG PERIMETER EDGE.

TREE PROTECTION FENCE

NOT TO SCALE



TREE PROTECTION FENCING
1. Forest protection device only.
2. Avoid root damage
3. Device must be maintained throughout construction.

adapted from the Maryland State FOREST CONSERVATION MANUAL

NOTES:

1. THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENTS AFTER THE REMOVAL OF THE TREE PROTECTION FENCING.
2. FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50' TO 100' APART AND AT ALL CORNERS WHERE THE EASEMENT CHANGES DIRECTION.
3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION PLANTING QUANTITY SCHEDULE

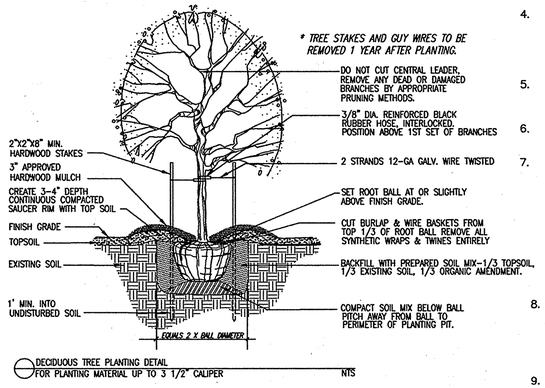
FOREST PLANTING LOCATION NO.	A (esmt.2)	B (esmt.2)	C (esmt.1)	D (esmt.2)	E (esmt.2)
AREA TO BE PLANTED (IN AC.)	2.49	0.04	1.30	0.04	0.70
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	249	4	130	4	70
CREDIT FOR LANDSCAPE TREES	N/A	N/A	N/A	N/A	N/A
REQUIRED QUANTITY OF 2" CAL. TREES TO BE PLANTED*	249	4	130	4	70

*ALTERNATE PLANTING DENSITY. THE REQUIRED QUANTITY TO BE PLANTED SHALL BE INCREASED BY A FACTOR OF:
A. 2x FOR PLANTING WITH 1" CAL. TREES
B. 7x FOR PLANTING WITH SEEDLINGS

FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	FOREST PLANTING AREA A	B	C	D	E
ACER NEGUNDO/BOX ELDER	15		11		
ACER RUBRUM/RED MAPLE	15	4	11	4	7
CERCIS CANADENSIS/EASTERN REDBUD	40		12		7
FRAXINUS PENNSYLVANICA/GREEN ASH	15		12		7
LIRIODENDRON TULIPFERA/TULIP TREE	15		12		7
PLATANUS OCCIDENTIALIS/ AMERICAN SYCAMORE (PLANETREE)	15		12		7
QUERCUS ALBA/WHITE OAK	16		12		7
QUERCUS PALUSTRIS/PIN OAK	16		12		7
QUERCUS RUBRUM/RED OAK	16		12		7
QUERCUS BICOLOR/SWAMP WHITE OAK	16		12		7
SALIX NIGRA/BLACK WILLOW	16		12		7
PINUS STROBUS/WHITE PINE	16				

Plantings for afforestation esmt. # 2, in planting area A have been reduced by 6 shade, 24 evergreen, and 8 ornamentals for the purposes of providing landscape perimeter buffering. The plant list on sheet 30 of 33 is for bonding purposes only.



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

STATE OF MARYLAND — JOHN L. GUTSCHICK — No. 807 — REGISTERED LANDSCAPE ARCHITECT

CONSTRUCTION PERIOD PROTECTION PROGRAM

1. The limit of forest retention shall be staked and flagged.
2. 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.
3. 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..
4. 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.
5. 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.

FOREST CONSERVATION PROGRAM SEQUENCE

1. OBTAIN ALL NECESSARY PERMITS.
2. STAKEOUT LIMITS OF DISTURBANCE.
3. FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE LIMITS OF GRADING AND CONSTRUCTION.
4. INSTALL FOREST CONSERVATION SIGNS (SEE DETAIL ON THIS SHEET) AND FOREST PROTECTION DEVICES ALONG THE FCE AREAS. (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES) SEE ALSO THE SEDIMENT CONTROL PLANS FOR OTHER PROTECTION MEASURES.
5. COMMENCE SITE CONSTRUCTION.
6. ONCE THE SOIL IS STABILIZED AND GRADING HAS BEEN COMPLETED, REMOVE TREE PROTECTION FENCE, BUT SIGNS ARE REQUIRED TO REMAIN.
7. INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
8. POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
9. FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATION.

GENERAL NOTES

1. This reforestation plan is provided in accordance with the requirements of Subtitle 12 "Forest Conservation" of the Howard County Code.
2. Implementation of this plan must be performed by a contractor that is knowledgeable and experienced in afforestation/reforestation techniques and practices.
3. 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 inspection 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.
4. At the end of the post-construction management and protection period, certification by a qualified consultant will be required before to the owner can be released from his/her forest conservation obligation to the administrator of the Howard County Forest Conservation program.
5. 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.
6. Street trees provided at Final Plan Stage. Landscape and Buffering requirements to be provided at Site Plan Stage.
7. The forest conservation requirements per Section 16.1202 of the Howard County Code and the Forest Conservation manual for Phase 1 of this project with an obligation of 7.72 acres (Break even point) will be fulfilled by the retention of existing forest in the amount of 8.94 credited acres. However 4.56 ac of afforestation planting will be done in advance as Forest conservation banking for future phases. The requirement for retention has been exceeded by 0.63 ac. This excess area of forest planting and retention will be utilized in future phases. The total area of forest conservation to be recorded equals 15.78 Acres. 13.5 Acres are credited, 2.28 acres are not credited.
8. 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.
9. The bearing and distances of the forest conservation easements can be seen on the recorded final subdivision plat .

COUNTY FILE # F 03-07

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

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DATE	REVISION	BY	APP'R.

PREPARED FOR :
G&R Maple Lawn, Inc. et. al.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD 21208
Attn: Mark Bennett
410.484.8400

FINAL FOREST CONSERVATION PLAN NOTES, SCHEDULES and DETAILS

MAPLE LAWN FARMS
Business District - Area 1
Parcels C-1, C-2 and Open Space Lots 1 & 2
(Parcel 124, T.M. Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 2 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	29 OF 34

F-03-07

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PERIMETER PLANTING SCHEDULE – SCHEDULE A

PERIMETER	PROPOSED LAND USE	ADJACENT LAND USE	TYPE OF BUFFER	LINEAR FEET OF ROADWAY FRONTAGE/ 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			HOW REQUIRED BUFFER IS BEING PROVIDED
							SHADE TREES	EVERGREEN TREES	ORNAMENTAL TREES	
P–1	EMPLOYMENT	ROADWAY	B	925'	NO	NO	12	47	16	DEFERRED TO S.D.P.
P–2	EMPLOYMENT	RESIDENTIAL (S.F.D.)	C	589'	NO	NO	8	30	10	DEFERRED TO S.D.P.
P–3	EMPLOYMENT	NON–RESIDENTIAL	A	187'	NO	NO	3	10	4	DEFERRED TO S.D.P.
P–4	OPEN SPACE	NON–RESIDENTIAL	A	478'	NO	NO	6	24	8	AFFORESTATION; PROVIDED, THIS PLAN
P–5	OPEN SPACE	NON–RESIDENTIAL	A	1502'	YES, 1502'	NO	19	76	25	EXISTING WOODS
P–6	EMPLOYMENT	LOW DENSITY/ NON–RESIDENTIAL	C	1569'	NO	NO	20	79	27	DEFERRED TO S.D.P.

SWM PLANTING SCHEDULE – SCHEDULE D

PROPOSED LAND USE	ADJACENT LAND USE	LINEAR FEET OF PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	# OF PLANTS REQUIRED			# OF PLANTS PROVIDED			CREDIT FOR EXISTING VEGETATION (Y, N, L.F.)
				SHADE TREES	EVERGREEN TREES	ORN. TREES	SHADE TREES	EVERGREEN TREES	ORN. TREES	
POND	OPEN SPACE	980'	YES, 980'	—	—	—	—	—	—	———
POND	ROADWAY	110'	NO	2	3	—	2	3	—	PROVIDED, THIS PLAN
POND	EMPLOYMENT	690'	NO	14	17	—	14	17	—	DEFERRED TO SDP

NOTES:

1. STREET TREES WILL BE PROVIDED AT FINAL PLAN STAGE.
2. INTERNAL PLANTING, PARKING LOT LANDSCAPING, AND STORMWATER MANAGEMENT BUFFERING WILL BE PROVIDED WITH THE SITE DEVELOPMENT PLANS.
3. THE BUFFERS SHOWN IN THE SCHEDULE ABOVE 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.
4. QUANTITIES SHOWN IN SCHEDULE D ARE BASED ON THE PLANTING RATES IN THE LANDSCAPE MANUAL FOR A 'B' TYPE BUFFER.

The developer and builders will be responsible for providing the required swm perimeter landscaping and the employment parcel landscaping for perimeters p–1, p–2, p–3 and p–6 at the site developement stage.

PLANT LIST

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT	COMMENTS
SHADE TREES					
AR	5	Acer rubrum 'Autumn Flame' Autumn Flame Maple	2 1/2–3" Cal.	B&B	
LS	3	Liquidambar styraciflua Sweet Gum	2 1/2–3" Cal.	B&B	
EVERGREEN TREES					
PS	27	Pinus strobus White Pine	8'–10' Ht.	B&B	
ORNAMENTAL TREES					
CK	8	Cornus Kousa 'Nationol' Nationol Kousa Dogwood	2–2 1/2" Cal. 8'–10' Ht.	B&B B&B	

THIS PLANT LIST FOR BONDING PURPOSES ONLY.
SEE FOREST CONSERVATION DETAIL SHEET FOR TREE PLANTING DETAILS.
PERIMETER PLANTING SURETY FOR 8 SHADE TREES (8 X $300) = $2,400.00
27 EVERGREEN TREES (27 X $150) = $4,050.00
8 ORNAMENTAL TREES (8 X $150) = $1,200.00
TOTAL SURETY FOR LANDSCAPE BUFFERING FOR PERIMETER P–4 AND SCHEDULE D BUFFERING ON MAPLE LAWN BLVD. $7,650.00

Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of $7,650.00.

DEVELOPERS' CERTIFICATE:

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Landscape Manual. I/We further certify that upon completion of the landscape installation, a letter of notice, accompanied with an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name — 1-27-03 Date

PERIMETER P-6
PERIMETER P-1
PERIMETER P-2
PERIMETER P-3
PERIMETER P-4
PERIMETER P-5
PARCEL C-1 EMPLOYMENT 13.1 Ac.
PARCEL C-2 EMPLOYMENT 13.2 Ac.
FUTURE PARCEL C-4 EMPLOYMENT 10.3 Ac. (PHASE VI)
FUTURE PARCEL C-3 EMPLOYMENT 15.5 Ac. (PHASE VI)
OPEN SPACE LOT 1 (TO BE CONVEYED TO HC R&P) 17.6 Ac.
OPEN SPACE LOT 2 (TO BE CONVEYED TO COMMERCIAL OWNER'S ASSOCIATION) 3.5 Ac.
MAPLE LAWN BLVD. Minor Arterial Public Road – 100' R/W
FUTURE MAPLE LAWN BLVD.
MARKET STREET 18' PAVING
MD. RTE. 216 Howard Road Minor Arterial Public Road Variable Width R/W
LIMIT OF SUBMISSION STA. 16+81
STORMWATER MANAGEMENT LANDSCAPE BUFFERING AR 2 PS 3
15' MINIMUM NON–WOODY BUFFER ZONE
STORMWATER MANAGEMENT FACILITY EXTENTION/DETENTION WITH PERMANENT POOL FOR WATER QUALITY HAZARD CLASSIFICATION 'A' FACILITY TO BE OWNED AND MAINTAINED BY A COMMERCIAL OWNER'S ASSOCIATION
EXISTING DRIVEWAY (to be removed)
25' WETLAND BUFFER
50' STREAM BUFFER
30' STREAM BUFFER
FOREST CONSERVATION EASEMENT
LOCATION OF PATHWAY IS APPROXIMATE. ACTUAL PLACEMENT SHALL BE ADJUSTED IN FIELD TO AVOID ANY UNNECESSARY TREE REMOVAL.
100–YEAR–FLOODPLAIN
EX. 20' SEWER & UTILITY EASEMENT (CONT. #20–1739 D)
OLD COLUMBIA ROAD
P. 200 Albert W. Wessel & Raymond L. Wessel et.al. L. 4892 F. 223 Zoned: RR–MXD–3
P. 116 Albert W. Wessel & Raymond L. Wessel et.al. L. 4892 F. 223 Zoned: RR–MXD–3
P. 288 Howard County Public Safety Complex Zoned: MXD–3 10.38 Ac.
P. 926 The Buch Family Limited Partnership L. 3192 F. 394 Zoned: B–1
E 1,538,950 N 540,750
E 1,538,950 N 539,750
N 541,500 El. 340,500
6.30 560

LEGEND

- SB — STREAM BUFFER
- WB — WETLAND BUFFER
- 100 YR FLOOD PLAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- PROPOSED SIDEWALK
- EXISTING CURB
- PATHWAY
- ACCESS POINT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — 2-25-03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development — 2/27/03 Date
Chief, Development Engineering Division — 3/10 Date

STATE OF MARYLAND STEPHEN A. POLLOCK 21807 REGISTERED LANDSCAPE ARCHITECT

COUNTY FILE # F–03–07

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

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DATE	REVISION	BY	APP'R.

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

FINAL PERIMETER LANDSCAPING PLAN
MAPLE LAWN FARMS
Business District - Area 1
Phase C-1 & C-2, Lot 1 & Lot 2
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)
ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD–3	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	30 OF 34

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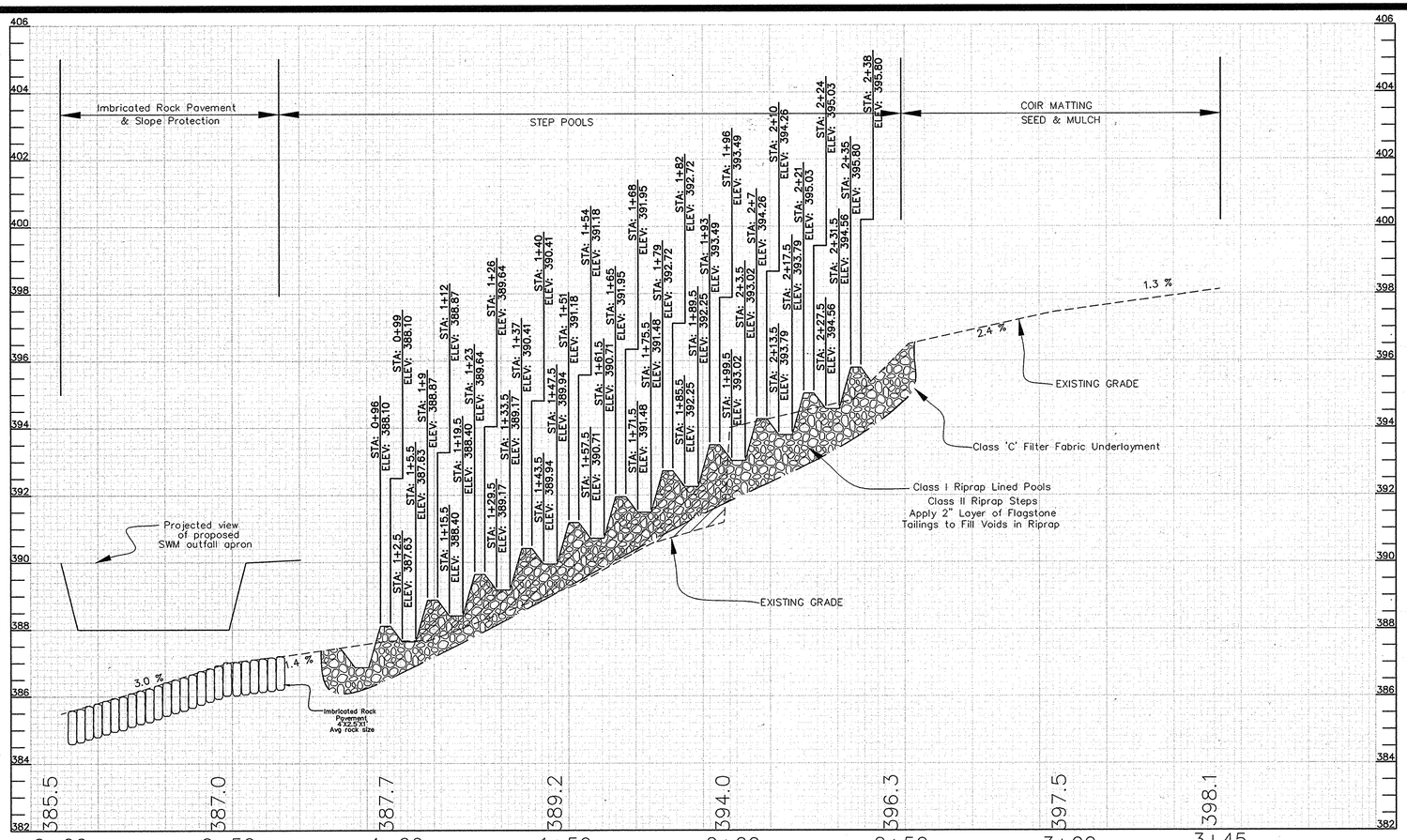
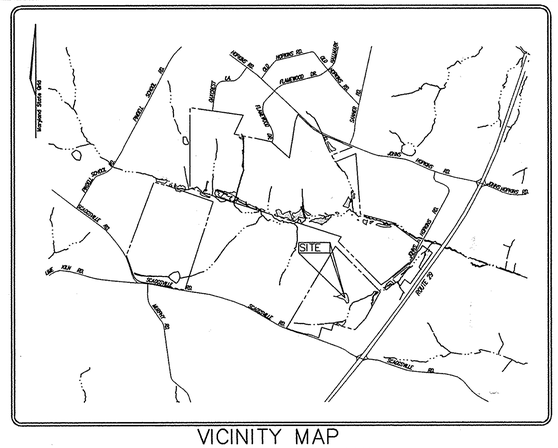


TRIB. STREAM PROFILE AT CENTERLINE

SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'

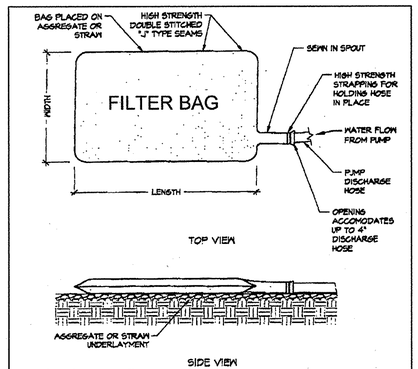
Plan Narrative

This plan provides in kind mitigation for area "A" (320 linear feet of channel). It provides a final stream stabilization design for a small first order intermittent stream and stabilizes two eroded meander bends on the main stream located within the employment district parcel C-4 of Maple Lawn Farm. This stream channel is primarily a Rosgen type G-6 channel. The gully is currently head cutting upstream through an existing palustrine forested & emergent wetland system. In time, this channel will eventually drain the wetland system as it allows subsurface flows to escape through the deeply incised channel. This design will stabilize the channel "in place" with a series of grade control step-pools, coir fabric and planting. Large riprap will be used for the sub-bedding, overlayed with flagstone tailings to fill voids and create a more natural riffle substrate. The post development hydrology will feature the use of flow splitters or other devices with first flush pollutant control to restore surface hydrology to the wetland in the upper reaches. In addition, the main channel will be stabilized along two outside meander bends both upstream and downstream of the tributary junction. Stabilization will involve placement of imbricated riprap boulders up to the bankfull elevation. This technique will limit bank disturbance near large trees. Every attempt will be made to preserve the existing trees.



VICINITY MAP

Scale 1"= 2000'



FILTER BAG

DETAIL OF PUMPED-SILT CONTROL SYSTEM

EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
8318 FOREST STREET
ELLICOTT CITY, MARYLAND 21043
TEL: (410) 750-1150 FAX:(410) 750-7350

STATE OF MARYLAND
ZACHARIA YOSEF FISCH
22418
PROFESSIONAL ENGINEER
Zacharia Y. Fisch
1/27/03

Legend

- Proposed contour
- 10 Foot contour Existing
- 2 Foot contour Existing
- LOD — Limit of Disturbance
- W — Wetland Limit
- Imbricated Riprap
- Coir fabric with seeding
- Coir fabric with willow staking
- Step Pools
- Imbricated riprap paving
- TPF — Tree Protection Fence
- P — Pump and Pipe for Pump-Around

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Zacharia Y. Fisch 1/27/03
SIGNATURE OF ENGINEER ZACHARIA Y. FISCH — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways — Date 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director	Date
Chief, Division of Land Development	Date 3/7/03
Chief, Development Engineering Division	Date 2/24/03

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

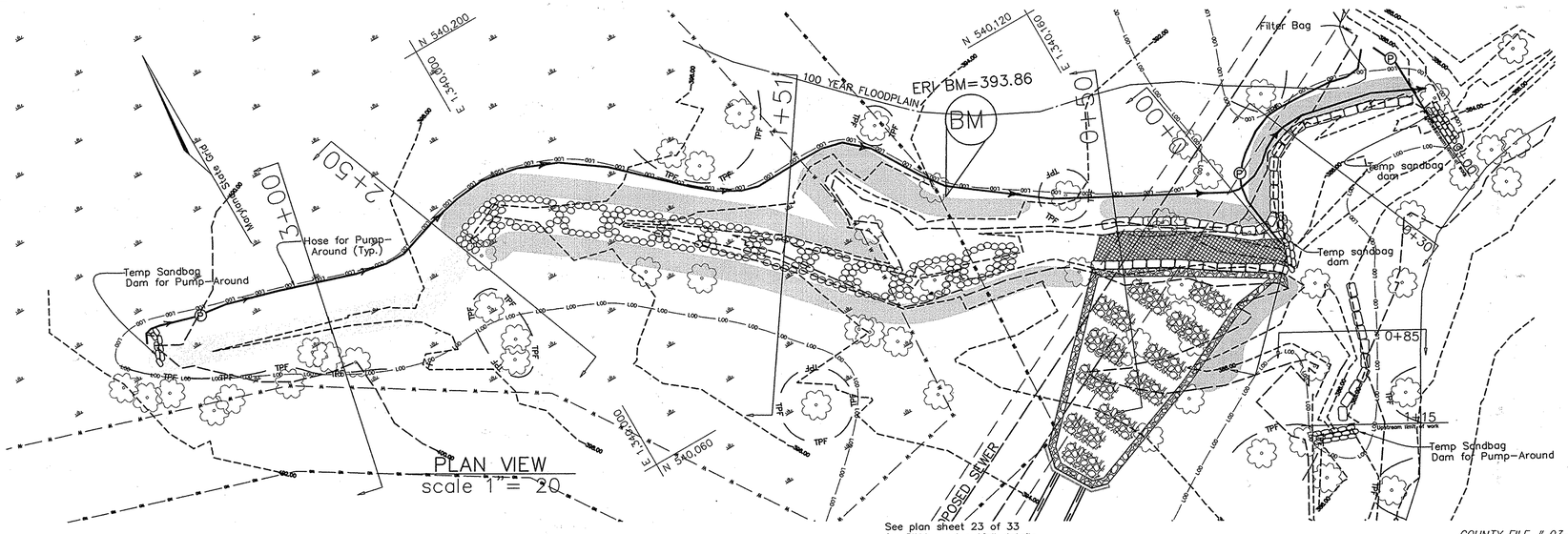
SIGNATURE OF DEVELOPER — DATE 1-27-03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 2/4/03

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

HOWARD SCD — DATE 2/4/03



PLAN VIEW
scale 1" = 20'

See plan sheet 23 of 33 for SWM pond outfall details

COUNTY FILE # 03-07

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
Tel:410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@cs.com

\96079\PHASE 1\FINALS\96079XR1.DWG | DES: SLH | DRN: DH | CHK: SLH

DATE	REVISION	BY	APP'R.

PREPARED FOR :
G&R Maple Lawn Inc., Et Al
Suite 410 Woodholme Center
1829 Reisterstown Road
Baltimore, Maryland 21208

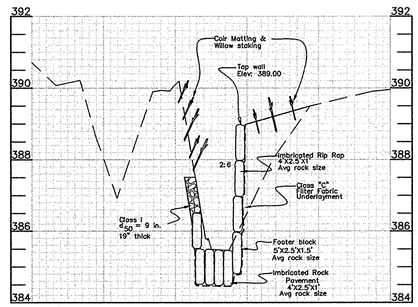
Stream Channel Mitigation and Sediment Control Plan

MAPLE LAWN FARMS

APPLICATION TRACKING NO. 01-NT-0344 / 200165421
USACE Permit #: CENAB-OP-RMS (Maple Lawn Farms/RDXING, PARKING AREA AND UTILITY LINE) 01-65421-5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RRMXD	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	0041 – 0021	31 OF 34

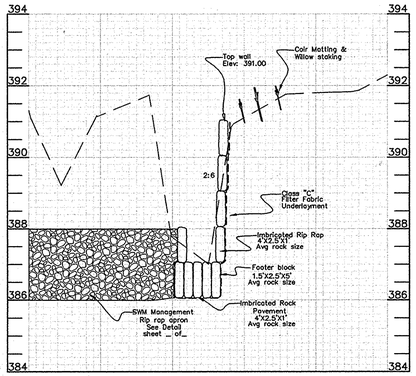
F-03-07



390.7	390.2	388.0	388.8	390.1	385.5	385.4	385.4	384.6	385.2	390.0
0+50	0+40	0+30	0+20	0+10	0+00	0+10	0+20	0+30	0+40	0+50

TRIB. STREAM X-SECTION 0+00

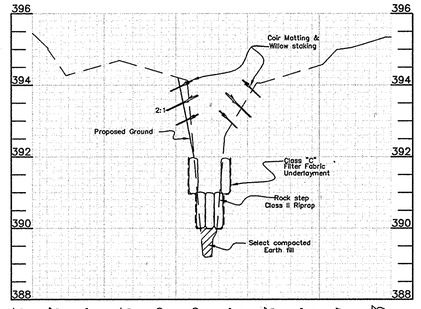
SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



391.3	389.4	391.2	391.6	387.8	387.0	391.1	391.7	391.8	391.8	392.3
0+50	0+40	0+30	0+20	0+10	0+00	0+10	0+20	0+30	0+40	0+50

TRIB. STREAM X-SECTION 0+50

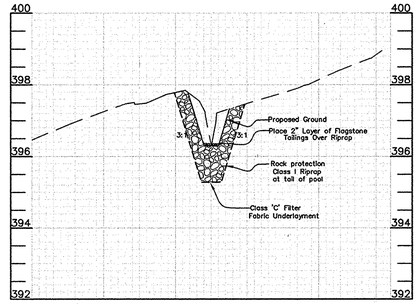
SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



395.5	394.3	394.6	394.5	394.2	389.2	393.6	394.3	394.6	395.1	395.3
0+50	0+40	0+30	0+20	0+10	0+00	0+10	0+20	0+30	0+40	0+50

TRIB. STREAM XSECTION 1+51

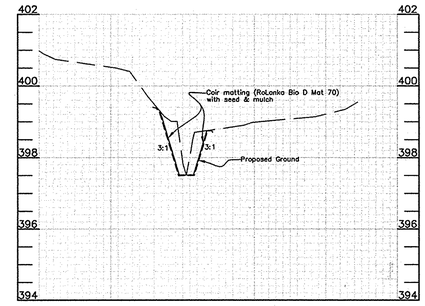
SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



396.5	396.9	397.3	397.5	397.8	396.3	397.5	397.8	398.1	398.6	399.0
0+50	0+40	0+30	0+20	0+10	0+00	0+10	0+20	0+30	0+40	0+48

TRIB. STREAM X-SECTION 2+50

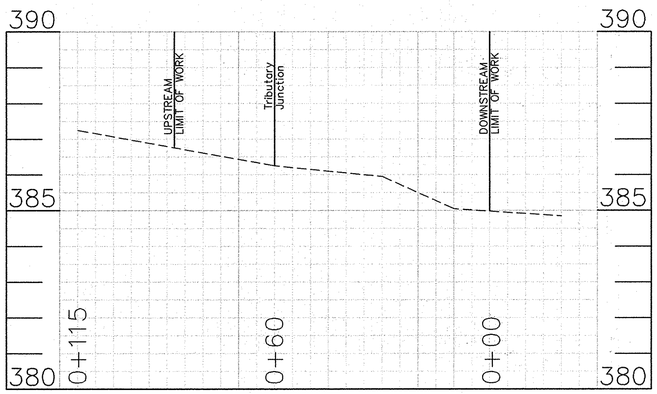
SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



400.9	400.7	400.5	399.6	397.5	398.8	399.0	399.1	399.2	399.6
0+40	0+30	0+20	0+10	0+00	0+10	0+20	0+30	0+40	0+49

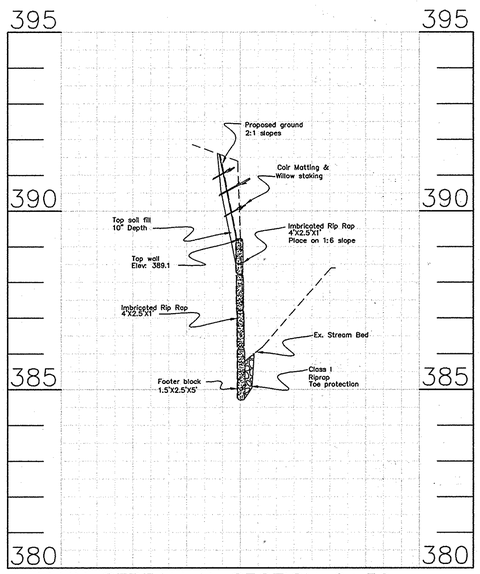
TRIB STREAM X-SECTION 3+00

SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



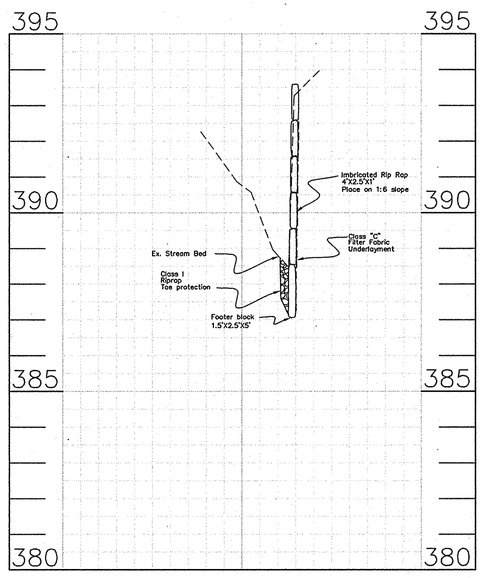
MAIN STREAM CHANNEL PROFILE

SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



MAIN STREAM X-SECTION 0+30
MAIN CHANNEL

SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'



MAIN STREAM X-SECTION 0+85
MAIN CHANNEL

SCALE : HORIZONTAL – 1"=20'
VERTICAL – 1"=2'

MGWC 2.2 IMBRICATED RIPRAP

MATERIAL SPECIFICATIONS

Materials for imbricated riprap construction and installation should meet the following requirements:

–Filters: Synthetic filter fabric may be used cautiously based on the 1994 MD Standards and Specifications for Soil Erosion and Sediment Control. Whenever possible, however, granular filters with a minimum thickness of 6 inches (15 cm) should be used with a gradation as found in Table 2.2.

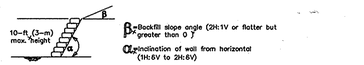
Table 2.2: Granular Filter Material Grading Specifications

Percent Less Than	U.S. Standard Sieve Size
100	2.5 in. (64 mm)
85–100	1 in. (25 mm)
60–100	0.5 in. (13 mm)
35–70	No.10
20–50	No.40
3–20	No.200

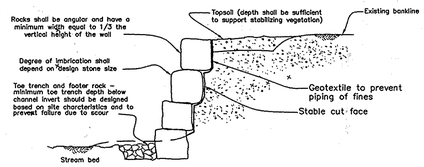
–Toe Riprap: The maximum diameter or weight of stone for toe riprap should be based upon the bankfull stream channel velocity as detailed in the MGWC 2.1: Riprap and Figure 2.1.

–Imbricated Stones: Imbricated riprap should be angular and blocky in shape such that they are stackable and should be sufficiently large to resist displacement by both the design storm event and the site-specific lateral earth stresses. Therefore, the length of the longest axis of each stone should be the greater of 1/3 the height of the proposed wall and the size necessary to resist the design stream flow according to MGWC 2.1: Riprap. A typical minimum axis length is 24 inches (0.6 meters).

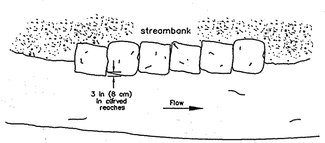
DETAIL: IMBRICATED RIPRAP



DEFINITION SKETCH



SECTION VIEW



PLAN VIEW

Construction Note:Stone blocks shall be rotated into the bank during placement such that the upstream blocks overlap the downstream blocks by a minimum of 3 inches (8 cm)

SLOPE STABILIZATION & PROTECTION

MGWC 2.2 IMBRICATED RIPRAP

INSTALLATION GUIDELINES

All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. The recommended construction procedure for imbricated riprap is as follows (refer to Detail 2.2):

1. The stream should be diverted according to a WMA recommended procedure (see Section 1, Temporary Instream Construction Measures, Maryland*s Guidelines to Waterway Construction), and the construction area should be dewatered.

2. All excavation should be made in reasonably close conformity with the existing stream slope and bed. The slope of the cut face should be in the range of 1H:6V to 2H:6V. Loose material at the toe of the embankment should be excavated until a stable foundation is reached, usually within 2 to 3 feet (0.6 to 0.9 meters) of the surface. The subgrade should be smooth, firm, and free from protruding objects or voids that would effect the proper positioning of the first layer of stones.

3. A graded granular filter or filter fabric should be placed on the face of the cut slope to prevent the migration of fine materials through the revetment. If filter fabric is used, it should be carefully and loosely placed on the prepared slope and secured. Adjacent strips should overlap a minimum of 8 inches (0.20 meters). If the filter fabric is torn or damaged, it should be repaired or replaced.

4. The rock layers should be neatly stacked with staggered joints so that each stone rests firmly on two stones in the tier below. Additionally, smaller stones should be used to fill voids so that each rock rests solidly on the previous rock layer with minimal opportunity for movement. Upon completion of the first layer of stone, the toe trench should be filled with Class III riprap sized according to MGWC 2.1: Riprap or additional imbricated stone. Two footer stones should be used where high potential for channel incision exists. The height of the imbricated revetment is dictated by the size of the stone used, and the height should not exceed 3 times the length of the longest axis and should not be greater than 10 feet (3 meters).

5. Placement of the granular backfill should occur concurrently with the stone placement. The backfill slope angle should be 2H:1V or flatter but should be greater than 0 degrees to facilitate drainage. Once all of the backfill is in place, it should be covered with a filter layer and a layer of topsoil sufficient to support a native vegetative cover.

6. The disturbed sections of the channel, including the slopes and stream bed, should be stabilized with methods approved by the WMA.

Note: The use of rock vanes (MGWC 3.3: Rock Vanes) should be considered to dissipate excessive toe velocities.

ENGINEERS CERTIFICATE

"I HEREBY 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.~~"

ZACHARIA Y. FISCH — 1/27/03
SIGNATURE OF ENGINEER — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — 2-25-03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

~~Director~~ — ~~Date~~

Chief, Division of Land Development — 2/3/03 Date

Chief, Development Engineering Division — 2/12/03 Date

EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
6310 FOREST STREET
ELLICOTT CITY, MARYLAND 21043
TEL: (410) 750-1150 FAX:(410) 750-7350

STATE OF MARYLAND — ZACHARIA YOSEF FISCH — 22418 — PROFESSIONAL ENGINEER

Zachariya Y. Fisch 1/24/03

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I 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."

SIGNATURE OF DEVELOPER — 1-27-03 DATE

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

USDA–NATURAL RESOURCES CONSERVATION SERVICE — 2/14/03 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 2/14/03 DATE

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
Tel:410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@cs.com

\96079\PHASE 1\FINALS\96079XR2.DWG | DES: SLH | DRN: DH | CHK: SLH

DATE	REVISION	BY	APP'R.

PREPARED FOR :
G&R Maple Lawn Inc., Et Al
Suite 410 Woodholme Center
1829 Reisterstown Road
Baltimore, Maryland 21208

Phase II Stream Channel Mitigation and Sediment Control Plan

MAPLE LAWN FARMS

APPLICATION TRACKING NO. 01-NT-0344 / 200165421

USACE Permit #: CENAB-OP-RMS (Maple Lawn Farms/RDXING, PARKING AREA AND UTILITY LINE) 01-65421-5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RRMXD	96079
DATE	TAX MAP – GRID	SHEET
JANUARY 2003	0041 – 0021	32 OF 34

COUNTY FILE # 03-07

F-03-07

BEST MANAGEMENT PRACTICES

FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

1. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILES OR STORED IN NONTIDAL WETLANDS, NON-TIDAL WETLAND BUFFERS, WATERWAYS, OR 100 YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOOD PLAIN.
3. DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
5. REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
6. RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:

   ANNUAL RYE GRASS (LOLIUM MULTIFLORUM)
   MILLET (SETARIA ITALICA)
   BARLEY (HORDEUM SPECIES)
   OATS (SP.)
   RYE (SECALE CEREALE)

   THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM

   USE I WATERS: IN STREAM WORK SHALL BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

PLANTING NOTES

1. Riparian areas may be planted as soon as reasonable to do so. Late winter- early spring plantings are preferred. Earliest planting dates will vary from year to year but planting may generally begin as soon as the ground is no longer frozen. Alternate planting dates may be considered as condition warrants.
2. Soil amendments and fertilization recommendations will be made based upon the results of soil analysis for nitrogen, phosphorus, potassium, organic matter content and pH. If required, fertilizer will be provided using a slow release, soluble 16-8-16 analysis designed to last 5-8 years contained in polyethylene perforated bags such as manufactured by ADCO Works, P.O. Box 310 Hollins, N.Y. 11423 or approved equal.
3. Plant materials will be planted in accordance with the Planting Distribution Diagram, Planting Details and plant schedule.
4. Plant material shall be nursery grown and inspected prior to planting. Plants not conforming to the American Standard for Nursery Stock specifications for size, form, vigor, or roots, or due to trunk wounds, breakage, desiccation, insect or disease must be replaced.
5. Planting stock must be protected from desiccation at all times prior to planting. Materials held for planting shall be moistened and placed in cool shaded areas until ready for placement.
6. Newly planted trees may require watering at least once per week during the first growing season depending on rainfall in order to get established. The initial planting operation should allow for watering during installation to completely soak backfill material.
7. Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angering is preferred with scarification of the sides of each hole.
8. Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
9. One hundred per cent (100 %) survival of riparian buffer plantings shall be guaranteed for one (1) year. Replacement plantings shall be provided after first year's growing season.

CONSTRUCTION NOTES/SPECIFICATIONS

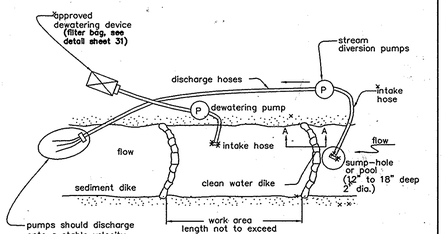
1. The contractor shall install appropriate sediment and erosion control devices before project. All work to be performed at the direction of the stream restoration specialist and these drawings.
2. The foundation area shall be cleared of trees, stumps, roots, sod, loose rock, or other objectionable material.
3. The cross-section shall be excavated to the neat lines and grades as shown on the plans. Over-excavated areas shall be backfilled with moist soil compacted to the density of the surrounding material.
4. No abrupt deviations from the design grade or horizontal alignment shall be permitted unless authorized by the ERI Stream Restoration Specialist.
5. Filter, bedding, and rock rip-rap shall be placed to line and grade in the manner specified.
6. Construction operations shall be done in such a manner that erosion, air, and water pollution will be minimized and held within legal limits. The completed job shall present a workmanlike appearance. All disturbed areas shall be vegetated or otherwise protected against soil erosion.
7. Filter cloth shall be placed beneath rip-rap where indicated. The filter cloth shall consist of either woven or no-woven monofilament fiber and shall conform to the ASTM D 1777, ASTM D 1682, Having a thickness of 20-60 Mils, and a grab strength of 90-120 LBS.
8. All boulders shall be well graded selected Class III Rip-rap boulders, natural in color and pre-approved by the Stream Restoration Specialist.
9. The subgrade for the filter, rip-rap, 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.
10. The rock or gravel shall conform to the specified grading limits when installed.
11. Geotextile shall be protected from punching, cutting, or tearing. Any 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.
12. Stone and boulders for the rip-rap may be placed by equipment. It 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 rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the small 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. Exact placement will be required as directed by the ERI Stream Specialist in the field.
13. The stone shall be placed so that it blends in with the existing grade. 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.

MGWC 2.: Pump-Around Practice

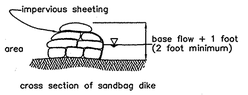
Description:
The work shall consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.
Implementation Sequence
Sediment control measures, pump arounds, and associated channel and bank construction shall be completed in the following sequence:

1. Construction activities including the installation of erosion and sediment control measures shall not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities shall be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and shall repair the damage at his/her own expense to the county's satisfaction.
2. The contractor shall notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor shall inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor shall conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. (The contractor shall stake out all limits of disturbance prior to the pre-construction meeting.) The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees shall not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction shall not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor shall stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor shall begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor shall only begin work in an area which can be completed by the end of the day (including grading adjacent to the channel). At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work shall not be conducted in the channel during rain events.
6. Sandbag dikes shall be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow shall be pumped around the work area. The pump shall discharge onto a stable velocity dissipater made of riprap or sandbags.
7. Water from the work area shall be pumped to sediment filtering measure such as a sediment bog. The measure shall be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures shall be used to minimize disturbance to the channel. Temporary stream crossings shall be used only when necessary and only where noted on the plans or specified by the engineer.
9. All stream restoration measures shall be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical corss-sections. All grading must be permanently stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, sandbag diversions, the water pump, and sediment filtering measure shall be moved to the next work area. This shall be accomplished by first moving the downstream sandbag dike to the new upstream pump around location and then by relocating the upstream sandbag dike, velocity dissipater, and sediment filter to the new downstream location.
11. A pump around must be installed on any tributary or storm drain outfall which contributes base-flow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the steam flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, shall follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem shall resume. Water from the tributary shall continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approved their removal.
14. After construction, all disturbed areas shall be regraded and revegetated as per the planting plan.

DETAIL 1.2: PUMP-AROUND PRACTICE



PLAN VIEW

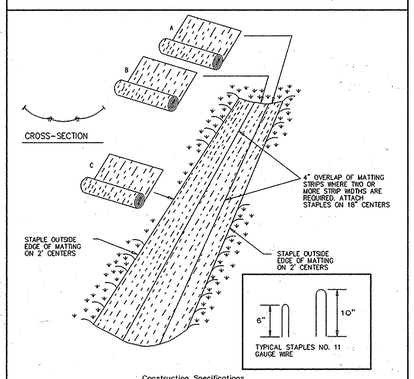


cross section of sandbag dike

SECTION A-A

Temporary Instream Construction Measures	REVISED NOVEMBER 2000 PAGE 1.2 - 3	Maryland Department of the Environment Water Management Administration

DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

1. 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".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. 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.
6. 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MGWC 3.9: STEP POOLS

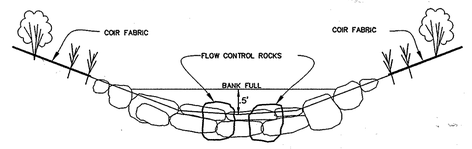
MATERIAL SPECIFICATIONS

Natural steps in step-pool morphologies can be formed by large clasts, bedrock outcrops, and large woody debris aligned across the channel. Engineered steps can be made from boulders, logs, and large woody debris chosen according to the desired height of the step. Additionally, boulders should be sized to resist the design storm event using MGWC 2.1: Riprap as a guide.

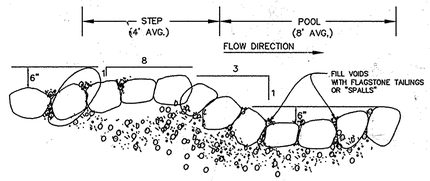
INSTALLATION GUIDELINES

All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. The proposed construction sequence for step pools is as follows (refer to Detail 3.9):

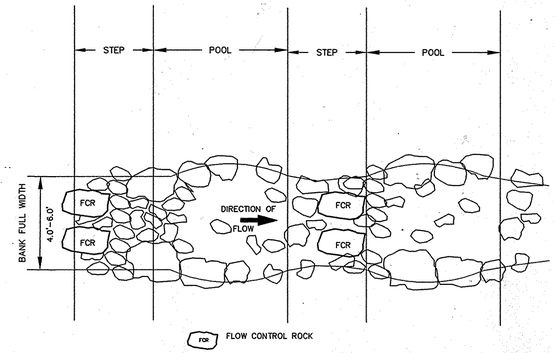
1. The stream should be redirected by an approved temporary stream diversion (See Section 1: Temporary Instream Construction Measures, Maryland's Guidelines to Waterway Construction), the construction area should be dewatered, and any disturbed banks should be stabilized.
2. Step-pool units should be designed and constructed to have a characteristic step height, H, and step length, L, as shown in Detail 3.9, and all steps should be firmly anchored into the stream bank.
3. Step rocks shall be placed on footer rocks so that they rest on two halves of each footer rock below, and so that the step rock is offset in the upstream direction. Footer rocks should extend below the scour hole elevation.
4. As a general guideline, the ratio of the mean steepness, defined as the averaged value of step height over step length, to the channel slope, S, should lie in the range of 1 to 2 ($1 <= \{(H/L)_{AVG}/S\} <= 2$). Typical spacings for step pools and cascades are provided in Detail 3.9(b) relating to alluvial channel morphologies.
5. Whenever practical, a reference reach with similar flow rates, bed and bank material characteristics, type and density of riparian vegetation, and channel gradient should be surveyed at low flows to determine appropriate values of H and L. At high discharges, step-pool characteristics may be obscured.
6. Once construction is completed, the diversion should be removed from upstream to downstream. Sediment control devices, including perimeter erosion controls, are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.



TYPICAL STEP GRADING AND STONE PLACEMENT
CROSS SECTION (N.T.S.)



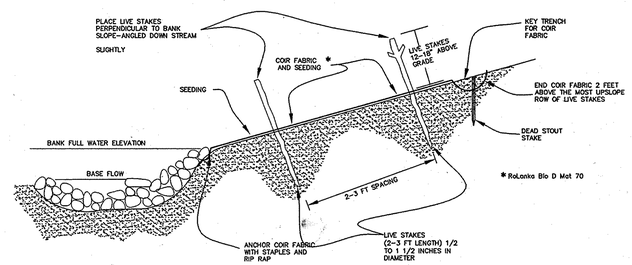
TYPICAL STEP GRADING AND STONE PLACEMENT
PROFILE VIEW (N.T.S.)



TYP. STEP-POOL GRADING AND STONE PLACEMENT
(N.T.S.)

STEP POOL CONSTRUCTION AND STONE PLACEMENT

STEP-POOL STRUCTURE TO BE CONSTRUCTED WITH CLASS I & II RIPRAP SIZE STONE, GREY IN COLOR, FROM A FREDERICK COUNTY SOURCE. CONTRACTOR TO INSURE THAT BOULDERS/STONES ARE PROPERLY KEYED-IN WITH EACH UPSTREAM STONE PARTIALLY PLACED OVER TOP THE ADJACENT DOWNSTREAM STONE. VOIDS IN STONE TO BE FILLED WITH FLAGSTONE TAILINGS OR "SPALLS", AS APPROVED BY THE ERI STREAM RESTORATION SPECIALIST.



TYPICAL LIVE STAKE AND COIR MATTING DETAIL
CROSS-SECTION VIEW (NOT TO SCALE)

SCHEDULE OF SEED MIX

BOTANICAL NAME	COMMON NAME	APPLICATION RATE (#/Ac.)	PERCENT OF MIX	REMARKS
LOLIUM MULTIFLORA	ANNUAL RYE GRASS	20	25	
AGROSTIS ALBA	RED TOP	4	40	
PANICUM CLANDESTINUM	DEER TONGUE GRASS	18	25	
BROMUS ARVENSIS	FIELD BROMEGRASS	9	10	WINTER SEED
OR	OR	OR	OR	OR
OANICUM RAMOSUM	BROWN TOP MILLET	9	10	SUMMER SEED

1. Apply fertilizer in accordance with rates and methods described for permanent seeding.

MATERIAL SPECIFICATIONS AND INSTALLATION GUIDELINES FOR LIVE STAKING

1. All cuttings shall be freshly cut from live woody plants of the species indicated, such as willow, alder, and shrub dogwood, during the dormant season.
2. Basal end of stake should be cut on an angle with the top cut square.
3. Prepare cuttings from dormant .5 in. to 2 in. diameter stock cut in 18in. to 3 feet long stakes.
4. Keep cuttings moist at all times.
5. Install stakes with deadblow hammer, angled downstream, on 3.0 ft. centers.
6. Replace live stakes that split or become mushroomed.
7. Install stakes with buds pointing upwards.

ENGINEERS CERTIFICATE

"I HEREBY 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.~~"

Zachariah Y. Fisch — 1/27/03
SIGNATURE OF ENGINEER ZACHARIA Y. FISCH — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — 2-25-03 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

~~Director~~ — ~~Date~~

Chief, Division of Land Development — 3/7/03 Date

Chief, Development Engineering Division — 3/21/03 Date

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I 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."

SIGNATURE OF DEVELOPER — 1-27-03 DATE

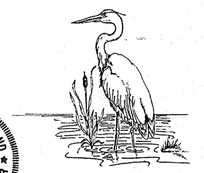
THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE — 2/11/03 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 2/11/03 DATE

STATE OF MARYLAND — ZACHARIAH YOSEF FISCH — 22418 — PROFESSIONAL ENGINEER
Zachariah Y. Fisch
1/27/03



EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS
8318 FORREST STREET
ELLICOTT CITY, MARYLAND 21043
TEL: (410) 750-1100 FAX: (410) 750-7350

COUNTY FILE # 03-07

DATE	REVISION			BY	APP'R.

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street Ellicott City, MD 21043
Tel:410-750-2251 Fax: 410-750-7350
E-mail: FSHAssociates@cs.com

\96079\PHASE 1\FINALS\96079XR3.DWG | DES. SLH | DRN. DSH | CHK. SLH

PREPARED FOR :
G&R Maple Lawn Inc., Et Al
Suite 410 Woodholme Center
1829 Reisterstown Road
Baltimore, Maryland 21208

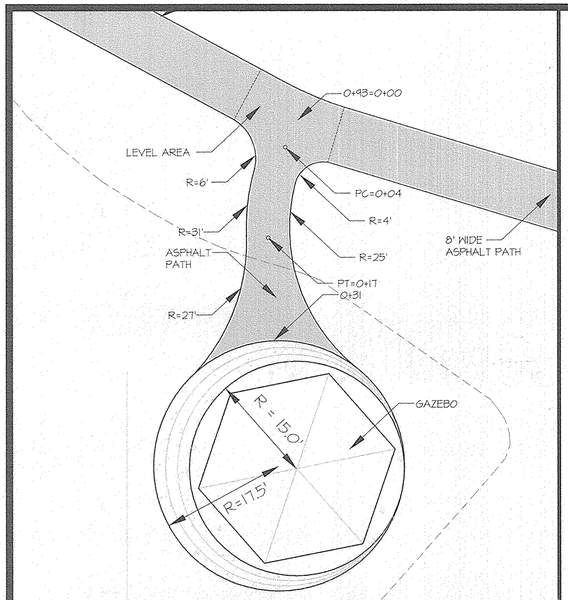
Phase II Stream Channel Mitigation and Sediment Control Plan

MAPLE LAWN FARMS

APPLICATION TRACKING NO. 01-NT-0344 / 200165421
USACE Permit #: CENAB-OP-RMS (Maple Lawn Farms/ROXING, PARKING AREA AND UTILITY LINE) 01-65421-5
HOWARD COUNTY, MARYLAND

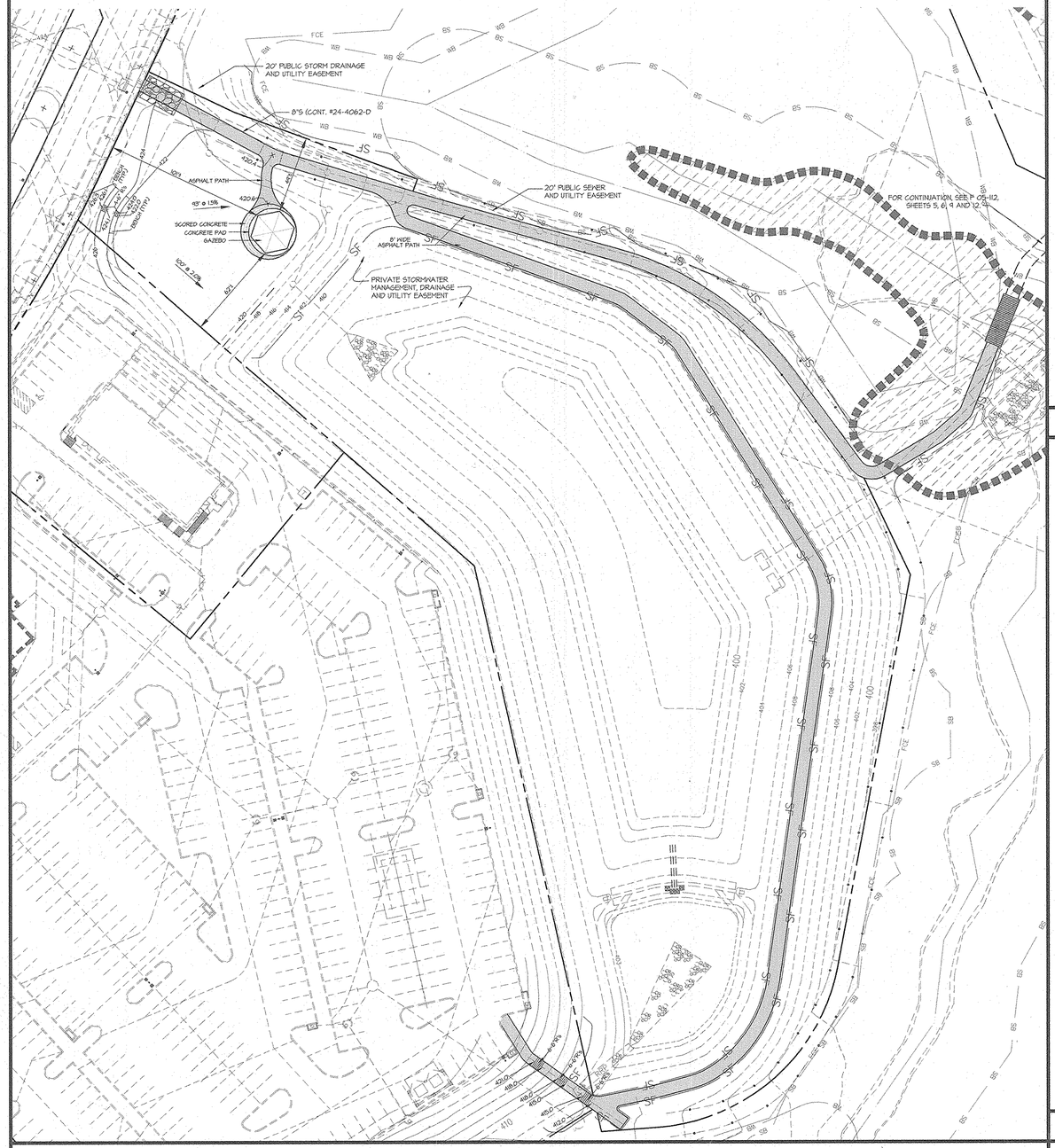
SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	RRMXD	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	0041 - 0021	33 OF 34

F-03-07

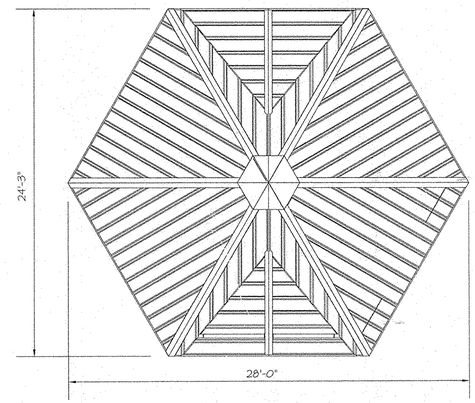


SEE DETAIL, THIS SHEET, FOR GAZEBO DIMENSIONS.

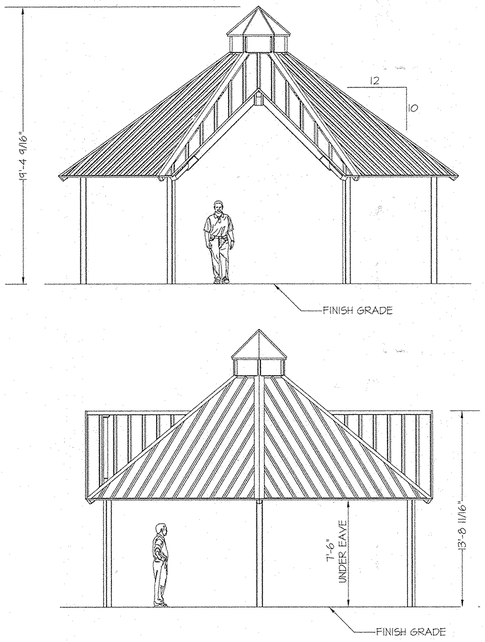
AMENITY AREA LANDSCAPE PLAN SCALE: 1" = 10'



AMENITY AREA GRADING PLAN SCALE: 1" = 40'



GAZEBO PLAN VIEW SCALE: 1" = 5'



GAZEBO ELEVATION VIEW SCALE: 1" = 5'

NOTES:
1. GRADING ON THIS SHEET SUPERCEDES GRADING ON SHEET 12.
2. SEE SHEET 15 FOR SEQUENCE OF CONSTRUCTION FOR THE WORK SHOWN ON THIS PLAN.
3. THE PAVILION IS EXEMPT FROM THE 10' BRL IN ACCORDANCE WITH THE COMPREHENSIVE SKETCH PLAN.
4. THE MAILBOX SLAB SHALL BE 3500 PSI, 4" CONCRETE SLAB ON GRADE, REINFORCED WITH 6"X6" - W 2.9 / W 2.9 WELDED WIRE FABRIC POURED OVER 4" POROUS FILL.

THE PURPOSE OF THIS PLAN IS TO PROVIDE DETAIL OF THE PROPOSED AMENITIES ON OPEN SPACE LOT 2

BUILDER'S CERTIFICATE

"WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HSCD."

SIGNATURE OF DEVELOPER/BUILDER — DATE 10/1/14

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF ENGINEER — DATE 10/1/14

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

SOIL CONSERVATION DISTRICT — DATE 10/9/14

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways — Date 10/15/2014

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Division of Land Development — Date 10/23/14

Chief, Development Engineering Division — Date 10.22.14

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

DATE	REVISION	BY	APP'R.

L:\2013\13-0109\CAD\SDP\SDP Phase 1 (13-0109)\Graphics\Amenity Site Plan (13-0109-10-00).dwg | DES. DEV | DRN. JRD | CHK. DEV

PREPARED FOR:
GREENEBAUM ENTERPRISES
1829 REISTERSTOWN ROAD
SUITE 300
BALTIMORE, MARYLAND 21208
MARK BENNETT
410-484-8400

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975 EXPIRATION DATE: MAY 26, 2016

10/1/14

AMENITY PLAN

MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 1
PARCELS C-1, C-2, AND OPEN SPACE LOTS 1 AND 2

ELECTION DISTRICT No. 5 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96-079
DATE	TAX MAP - GRID	SHEET
SEPT., 2014	41-21	34 OF 34

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