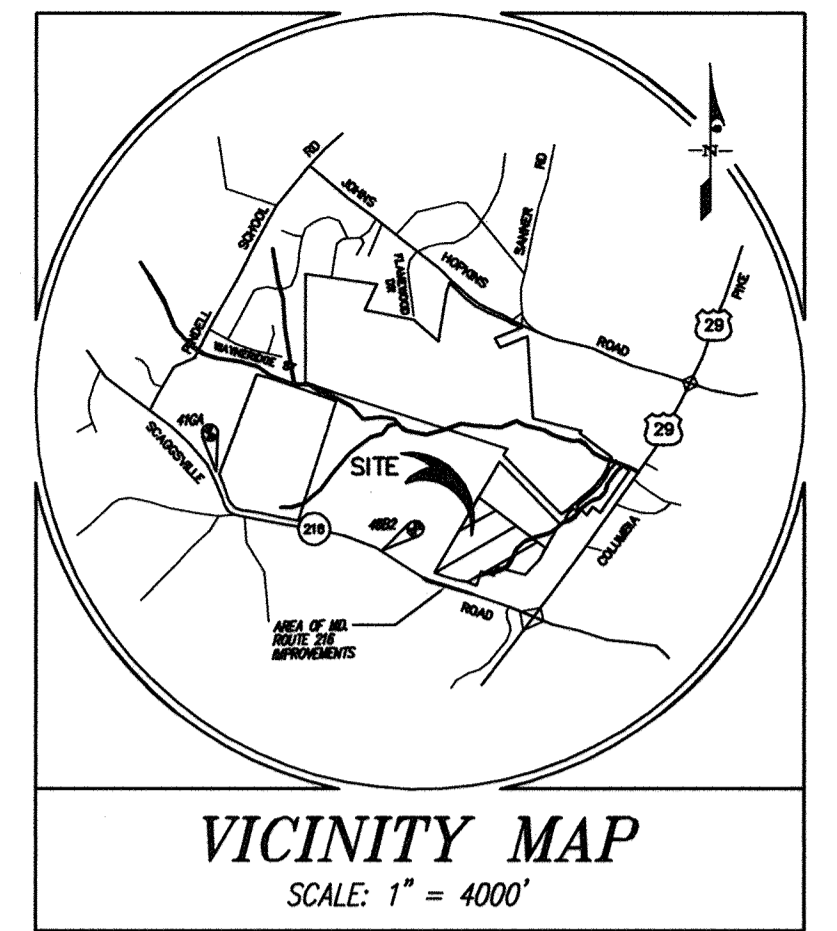


**General Notes:**

- Zoning: Site is being developed under MXD-3 regulations, per ZB995M, which was approved on 2/8/01. Underlying Zoning is RR-DEO.
- The previous Department of Planning and Zoning file numbers: S 01-17, ZB-995M, PB-353, WP-01-11 AND WP-02-54, P-02-12, F-18-112 (PLAT 24621)
- This project is in conformance with the latest Howard County standards unless waivers have been approved.
- The Cemetery Inventory Maps do not show any cemeteries within the project limits.
- The Scenic Roads Map does not indicate any scenic roads within or adjacent to the project limits.
- This property was brought into the Metropolitan District August 20, 2001.
- All Roads in this Development are public.
- 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 Roadway: 4.35 Acres ±  
Area of Parcels: 26.48 Acres ±  
Number of Parcels: 4 (2 buildable, 2 open space)
- Open Space Requirements:  
Total Open Space Required: 18.2 Acres ± (35%)  
Total Open Space Provided: 21.15 Acres ± (41%)
- Soils data was taken from the Soil Survey of Howard County, Maryland issued July 1968.
- Topography indicated was taken from aerial topography prepared during March 1997 by SDI 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.
- Boundary information shown is based upon a field survey prepared by Gutschick, Little, and Weber, P.A. on or about June, 2001.
- Wetland delineation by Exploration Research, Inc. approved by the Corps of Engineers ID 63787-3 on 5/14/98. Notice of intent to issue a permit is covered by MDE Tracking #01-NT-0344/200165421.
- The 100-year flood plain limits were determined by the floodplain study prepared by Gutschick, Little and Weber, P.A. as part of P 02-12.
- Horizontal and vertical datum is based on Howard County Stations 46B2 and 41GA.
- Existing utilities were taken from available Howard County records.
- Public water and sewer to be utilized:  
Existing Water Contract Number: 44-3505  
Existing Sewer Contract Number: 20-1739 D
- Traffic Study was prepared and submitted as part of S 01-17.
- A noise study is not required because the land use under this Final Plan is commercial.
- Sediment and erosion control measures will be included with Final Plans and Site Development Plans. No sediment control devices will encroach beyond the L.O.D. shown. No sediment control devices will be provided in accordance with the Comprehensive Sketch Plan criteria.
- Parking requirements will be determined and provided at the Site Development Plan stages.
- Street trees are provided per the Comprehensive Sketch Plan criteria with this final plan submission.
- 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.
- 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.
- Stormwater management is being provided at the facility on Open Space Lot Two. The facility will be a wetpond utilizing 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 pad. 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 stormcatcher, SC-1, at the west end of the pond will be privately owned and maintained by the commercial owners association.
- 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.
- 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 01-11, which was granted on May 2, 2001 allow the following:
  - Additional points along Maple Lawn Blvd., other than those permitted by Section 16.119(A), subject to further analysis and approvals at later plan stages, and
  - 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.
- 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 enacted by the Zoning Board on page 22-23 of its decision on the PDP are met consistent with the requirements of Section 12.7.E.4.c.2 of the Zoning Regulations.
- 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.

# CONSTRUCTION PLAN FOR MAPLE LAWN FARMS Business District - Area 1



**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 ..... PROP. TOP OF CURB ELEVATION
- ⊕ ..... PROPOSED STREET TREES
- ▨ ..... AREA OF TEXTURED PAVEMENT
- ▨ ..... STRIPED AREA
- ▨ ..... EROSION CONTROL MATTING
- ④ ..... NUMBER OF PARKING SPACES

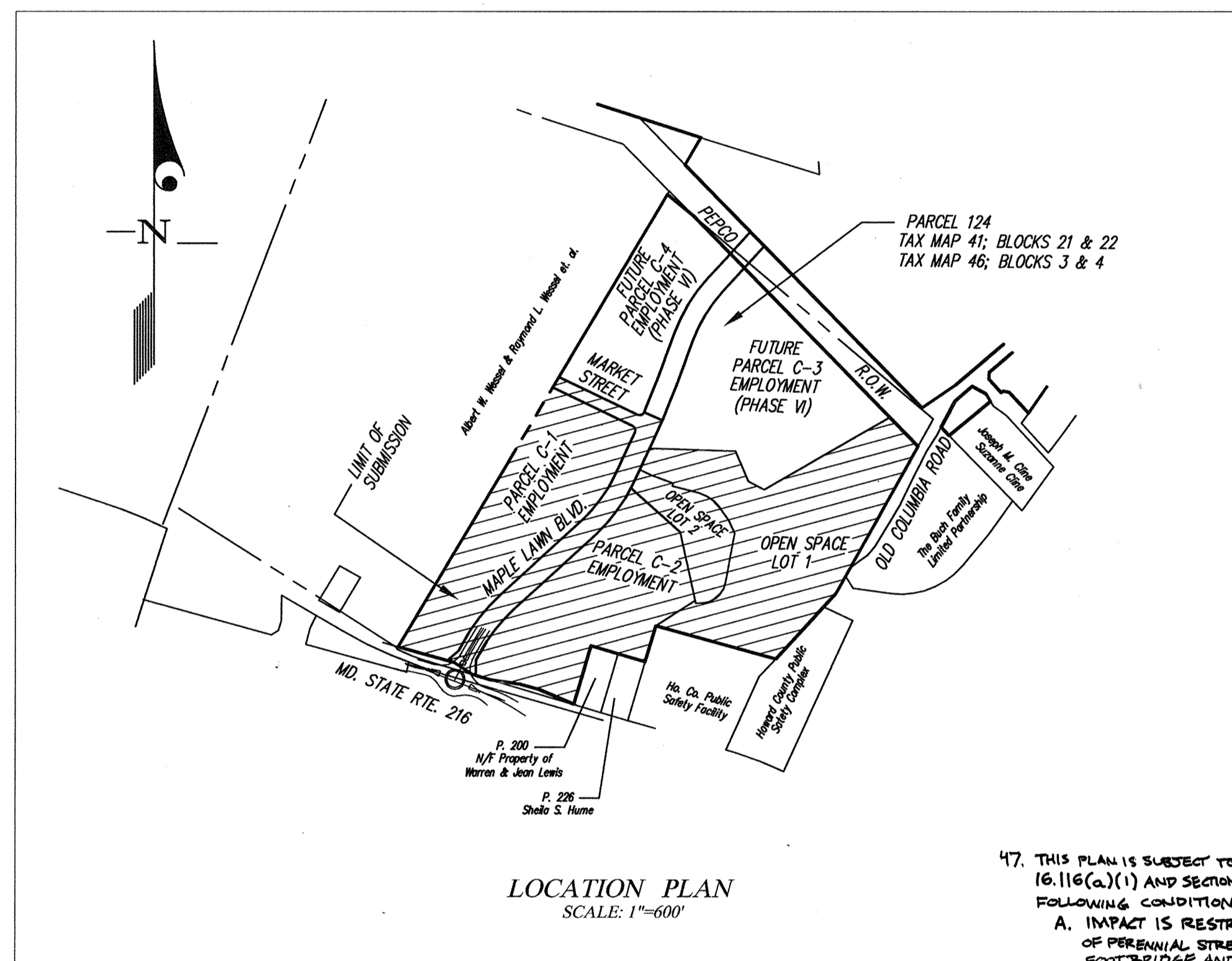
**SHEET INDEX**

- COVER SHEET
- ROAD CONSTRUCTION AND STREET TREE PLAN - MAPLE LAWN BLVD.
- ROAD CONSTRUCTION AND STREET TREE PLAN - MAPLE LAWN BLVD.
- ROAD CONSTRUCTION AND STREET TREE PLAN - MARKET STREET
- ROAD DETAILS - MAPLE LAWN BLVD. & MARKET STREET
- ROAD CONSTRUCTION PLAN - MARYLAND ROUTE 216
- SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MD. RTE. 216
- SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MAPLE LAWN BLVD.
- ROAD DETAILS - MARYLAND ROUTE 216
- SEDIMENT CONTROL OVERVIEW PLAN (@ 1"=100')
- GRADING/SEDIMENT CONTROL PLAN
- GRADING/SEDIMENT CONTROL PLAN - MARYLAND ROUTE 216
- GRADING/SEDIMENT CONTROL PLAN - MARYLAND ROUTE 216
- SEDIMENT CONTROL DETAILS
- SEDIMENT CONTROL DETAILS
- STORM DRAIN DRAINAGE AREA MAP (@ 1"=100')
- STORM DRAIN PROFILES AND SCHEDULES
- STORM DRAIN PROFILES AND SCHEDULES
- STORM DRAIN PROFILES AND SCHEDULES
- PRE-DEVELOPMENT SWM DRAINAGE AREA MAP (@ 1"=100')
- POST-DEVELOPMENT SWM DRAINAGE AREA MAP (@ 1"=100')
- S.W.M. NOTES AND DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS
- FINAL FOREST CONSERVATION PLAN - PHASE I
- FINAL FOREST CONSERVATION NOTES, SCHEDULES AND DETAILS
- FINAL PERIMETER LANDSCAPING PLAN
- PHASE II STREAM CHANNEL MITIGATION
- PHASE II STREAM CHANNEL MITIGATION
- PHASE II STREAM CHANNEL MITIGATION
- AMENITY AREA PLAN

- 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:
  - Development within a 100 year floodplain, and
  - Grading and removal of vegetative cover within a 25' wetland buffer and a 50' stream buffer.
 The approval is subject to the following conditions:
  - The waiver petition approval pertains to the limits of disturbance to the wetlands, stream channel, and floodplain areas identified within the proposed employment district located in the southeast portion of Parcel C-2.
  - MDE wetway construction approval is required prior to road plan approval.
  - All grading, clearing and filling disturbances within the 100 year floodplain, wetlands, stream channel and their required buffers are subject to obtaining all necessary Water Quality Certificates and Permits from the Maryland Departments of the Environment and Natural Resources and the U.S. Army Corps of Engineers, prior to commencement of any grading disturbances. Reference the approved permits, certificates or tracking numbers on all future plan and permit submittals.
  - 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 Exhibit "E".
- Open space lots may contain active recreational facilities as allowed by the approved Comprehensive Development Criteria.
- Phasing for this project is in accordance with the Decision and Order for Zoning Board Case No. ZB-995M and the Decision and Order for PB Case No. 353 (Comprehensive Sketch Plan, S-01-17).
- Development for this phase will be done in accordance with the Comprehensive Development Criteria approved with S-01-17 and PB-353.
- 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 SOD as an essential disturbance.
- 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.
- In accordance with the traffic report, the Maryland Route 216 roundabout improvements will be constructed with this Phase I Final Plan. Offsite land acquisitions will not be required for the improvements.
- 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.
- 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.
- 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 12+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 landscape features can be coordinated.
- 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. Conditions are being proposed on the Final Plans for this Phase in the event that the signals will need to be installed.
- Sidewalks and ramps to be constructed per ADA requirements.
- 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 surplus for the street trees will be provided with the Dept. of Public Works Developer's Agreement.
- 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.
- Sidewalks and trees located within the right-of-ways for Maple Lawn Blvd. and Market St. are shown for



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

- (CONTINUED)...
- 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.
- A LICENSE AGREEMENT WILL BE NEEDED FOR THE PATHWAY THROUGH OPEN SPACE LOT 1.
- CONTRACTOR TO NOTIFY HOWARD COUNTY RECREATION AND PARKS AT LEAST 48 HOURS IN ADVANCE OF CONSTRUCTION OF THE PATHWAY THROUGH OPEN SPACE LOT 1.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 2-25-03  
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*David H. Harris* 3/2/03  
Chief, Division of Land Development Date

*Michael J. O'Donovan* 3/2/03  
Chief, Development Engineering Division Date

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

DATE	REVISION	BY	APPR.
04/26/03	REVISED SHEET INDEX TO REFLECT ADDITIONAL SHEET FOR AMENITY AREA.	DEV.	R.H.V.
	REFLINE TO ILLUSTRATE A PATHWAY THROUGH HC OPEN SPACE LOT 1		

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)

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

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Finals\96079CSI.DWG 01/23/2003 10:58:23 AM EST

COUNTY FILE # F 03-07

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.

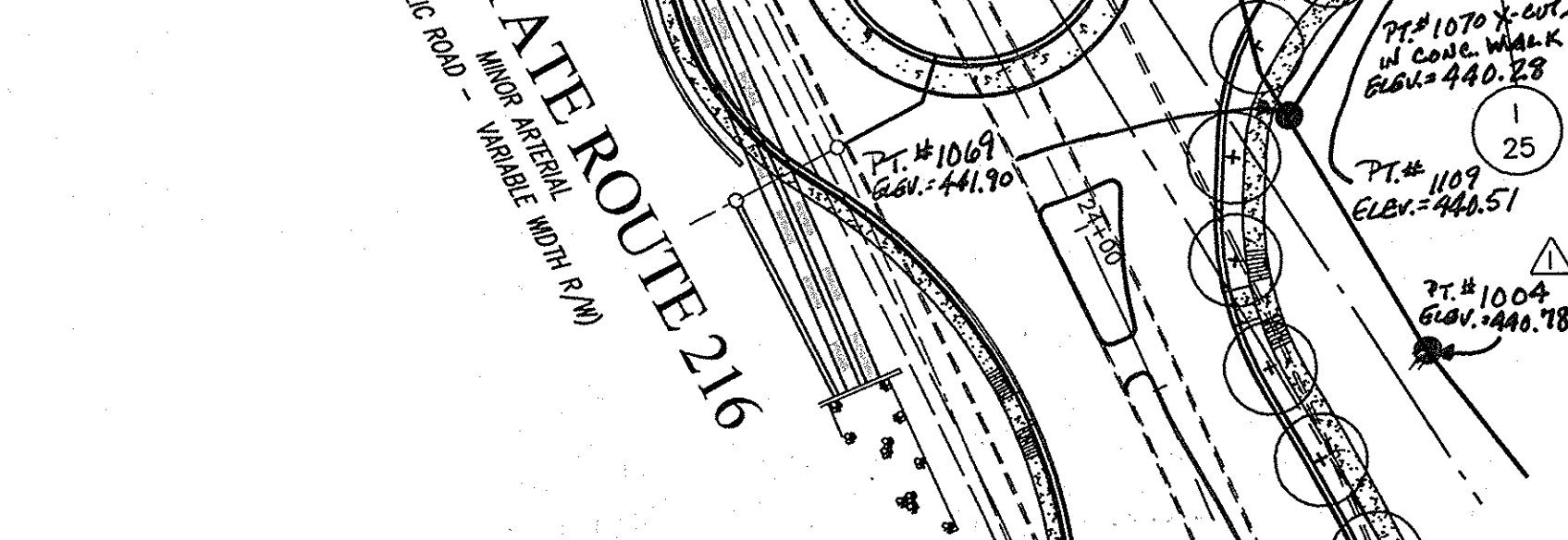
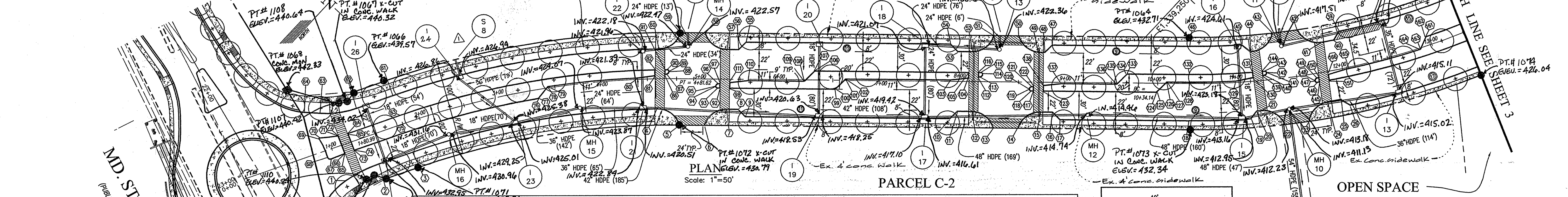
STREET TREE SCHEDULE					
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
(+)	Acer Saccharum / Green Mountain Sugar Maple	2 1/2" col.	63	70	B & B Full Heads

\*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 1 1 tree per 40 linear feet, both sides;  
 All other streets: 1 tree per 30 linear feet, both sides;  
 Private Alleys No trees required

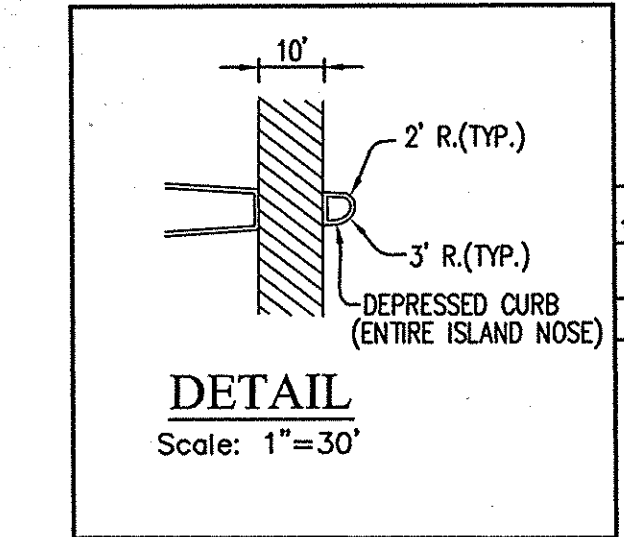
CURVE DATA							
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD
MAPLE LAWN BLVD.	1+80.99	none	4+81.62	870.00'	300.64'	151.83'	299.14'
MAPLE LAWN BLVD.	10+34.14	none	13+36.01	775.00'	301.87'	152.87'	299.97'

Note: Sidewalks & trees located within the right-of-ways for Maple Lawn Blvd. & 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.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.
1	1+02.23	37.54'R.	440.84	26	11+91.68	32.00'L.	429.07	51	1+21.43	9.12'L.	431.95	76	9+18.76	1.00'R.	429.56	101	9+67.42	10.00'L.	433.16
2	1+42.63	32.00'R.	439.91	27	12+00.18	40.00'R.	428.65	52	1+39.42	32.00'L.	430.97	77	8+68.65	4.34'L.	431.98	102	9+66.71	9.70'L.	433.16
3	1+80.99	32.00'R.	438.92	28	12+04.93	40.00'L.	428.66	53	1+00.43	39.92'L.	440.84	78	8+73.66	7.60'L.	431.88	103	9+56.40	0.70'R.	433.41
4	4+60.22	32.00'L.	431.71	29	11+97.37	32.00'L.	428.96	54	0+84.99	46.46'L.	444.44	79	8+73.66	7.60'L.	431.88	104	9+55.69	1.00'R.	433.41
5	4+85.55	50.00'R.	431.63	30	11+83.70	32.00'L.	429.26	55	1+11.93	8.97'R.	441.16	80	8+73.66	7.60'L.	431.87	105	8+08.96	4.70'L.	432.10
6	5+11.62	50.00'R.	431.65	31	11+57.92	50.00'L.	430.39	56	1+10.93	10.00'R.	441.16	81	8+11.46	8.65'L.	432.66	106	8+76.62	3.29'R.	433.63
7	5+35.82	32.00'R.	430.88	32	11+29.57	50.00'L.	431.02	57	0+95.63	10.67'R.	441.58	82	8+68.73	10.00'L.	431.75	107	8+09.57	10.00'L.	431.99
8	5+48.24	32.00'R.	429.87	33	11+02.24	32.00'L.	431.06	58	0+92.37	7.54'R.	441.74	83	8+28.59	10.00'R.	430.99	108	8+15.76	5.02'L.	431.33
9	5+56.24	40.00'R.	429.53	34	10+92.95	40.00'L.	431.02	59	0+90.37	14.40'L.	441.63	84	8+66.62	10.00'R.	430.80	109	8+18.48	7.96'L.	431.21
10	7+76.24	40.00'R.	430.65	35	10+34.14	40.00'L.	431.96	60	0+91.63	15.58'L.	441.63	85	8+63.62	10.00'R.	430.77	110	8+18.48	8.07'L.	431.21
11	7+84.24	32.00'R.	431.04	36	8+86.24	40.00'L.	432.29	61	1+10.54	11.31'L.	441.16	86	8+61.62	8.00'R.	432.79	111	8+16.46	10.00'L.	431.23
12	7+99.62	32.00'R.	431.35	37	8+78.24	32.00'L.	432.45	62	1+11.40	10.03'L.	441.16	87	8+61.62	7.68'R.	432.79	112	8+13.35	10.00'L.	431.23
13	8+23.62	50.00'R.	432.33	38	8+73.62	32.00'L.	432.44	63	1+21.92	8.39'R.	441.16	88	8+64.28	4.70'R.	432.87	113	8+13.35	10.00'L.	431.23
14	8+49.62	50.00'R.	432.74	39	8+49.62	50.00'L.	432.74	64	1+22.93	10.00'R.	440.90	89	8+76.62	4.43'R.	433.16	114	8+17.48	10.00'R.	430.01
15	8+73.62	32.00'R.	432.44	40	8+23.62	50.00'L.	432.33	65	1+80.99	10.00'R.	440.30	90	8+66.62	4.43'R.	433.16	115	8+17.48	10.00'R.	430.01
16	8+73.62	32.00'R.	432.44	41	8+23.62	50.00'L.	432.33	66	1+80.99	10.00'R.	440.30	91	8+66.62	4.43'R.	433.16	116	8+17.48	10.00'R.	430.01
17	8+73.62	32.00'R.	432.44	42	7+99.62	32.00'L.	431.35	67	3+30.24	10.00'R.	435.53	92	8+66.62	4.43'R.	433.16	117	8+17.48	10.00'R.	430.01
18	8+95.25	40.00'R.	432.35	43	7+84.24	32.00'L.	431.04	68	3+30.92	9.74'R.	435.53	93	8+66.62	4.43'R.	433.16	118	8+17.48	10.00'R.	430.01
19	10+34.14	40.00'R.	431.96	44	7+76.24	40.00'L.	430.63	69	3+42.35	0.73'L.	435.43	94	8+66.62	4.43'R.	433.16	119	8+17.48	10.00'R.	430.01
20	10+97.24	40.00'R.	430.94	45	5+56.24	40.00'L.	429.54	70	3+43.03	1.00'L.	435.43	95	8+66.62	4.43'R.	433.16	120	8+17.48	10.00'R.	430.01
21	11+09.27	32.00'R.	430.94	46	5+48.24	32.00'L.	429.87	71	4+38.62	1.00'L.	432.95	96	8+66.62	4.43'R.	433.16	121	8+17.48	10.00'R.	430.01
22	11+31.72	50.00'R.	430.97	47	5+35.82	32.00'L.	430.66	72	4+58.67	3.11'L.	432.33	97	8+66.62	4.43'R.	433.16	122	8+17.48	10.00'R.	430.01
23	11+55.77	50.00'R.	430.43	48	5+11.62	50.00'L.	431.05	73	4+58.67	3.11'L.	432.33	98	8+66.62	4.43'R.	433.16	123	8+17.48	10.00'R.	430.01
24	11+78.22	32.00'R.	429.34	49	4+85.55	50.00'L.	431.63	74	1+80.99	10.00'L.	439.30	99	8+66.62	4.43'R.	433.16	124	8+17.48	10.00'R.	430.01
				50	4+60.22	32.00'L.	431.71	75	1+22.48	10.15'L.	440.84	100	8+66.62	4.43'R.	433.16	125	8+17.48	10.00'R.	430.01



Date	Revision	By	Appr.
11/09	Added note describing limits of work	WJS	
7/30/09	Revised storm drain from 9.8 thru 1.23 and corrected top of curb elevations.	dev	

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

DESIGNED: Road Construction and Street Tree Plan - MAPLE LAWN FARMS Business District - Area I Parcel C-1, C-2, and Open Space Lots 1 & 2  
 DRAWN: JAU  
 CHECKED: DEV  
 DATE: JANUARY 2003

ELECTION DISTRICT NO. 5 HOWARD COUNTY, MD.

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

SCALE: AS SHOWN  
 DRAWING: 2 OF 34  
 ZONING: MXD-3  
 JOB NO.: 96079

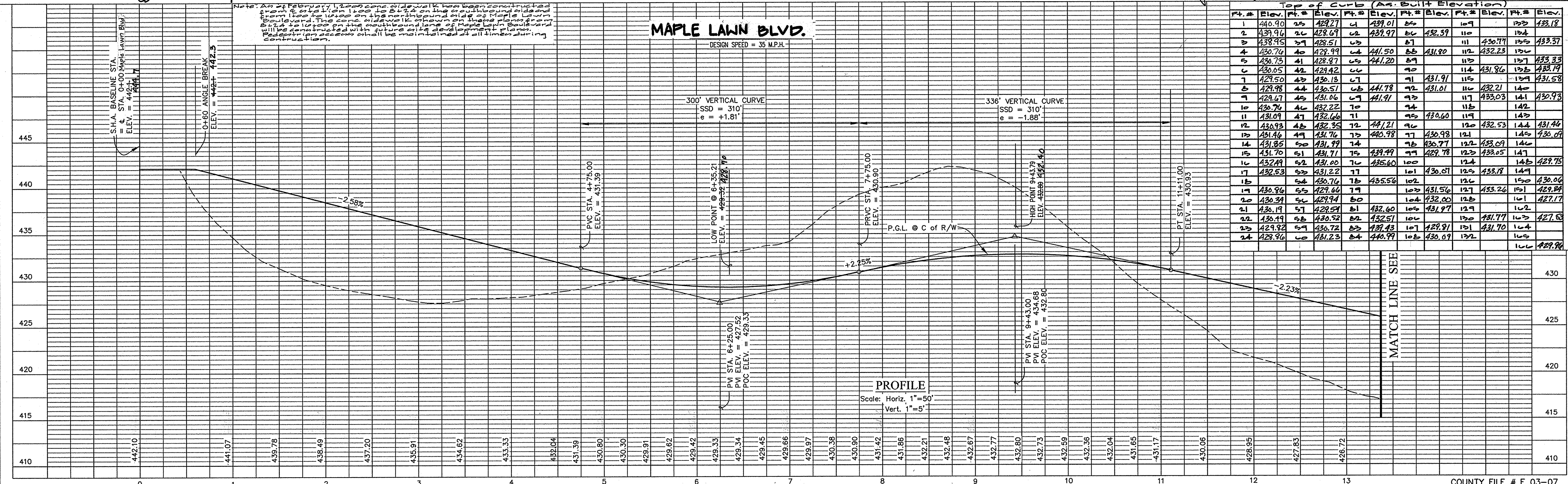
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways  
 Date: 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Chief, Division of Land Development  
 Date: 2/16/03

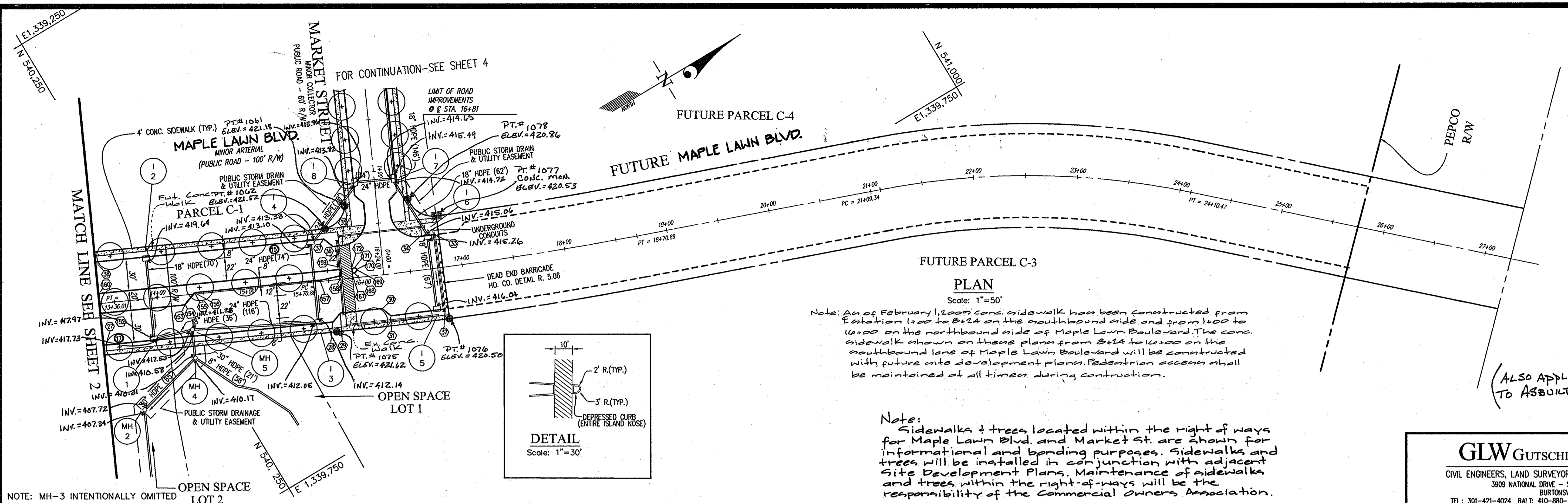
Chief, Development Engineering Division  
 Date: 2/16/03

SEE SHEET 6 FOR IMPROVEMENTS IN SHA RIGHT-OF-WAY

Note: As of February 1, 2003, the conc. sidewalk has been constructed from E of Sta. 1+00 to E of Sta. 13+50 on the southbound side and from E of Sta. 1+00 to E of Sta. 13+50 on the northbound side of Maple Lawn Blvd. The conc. sidewalk shown on these plans is to be constructed on the southbound lane of Maple Lawn Blvd. and will be constructed with future site development plans. Pedestrian access shall be maintained at all times during construction.



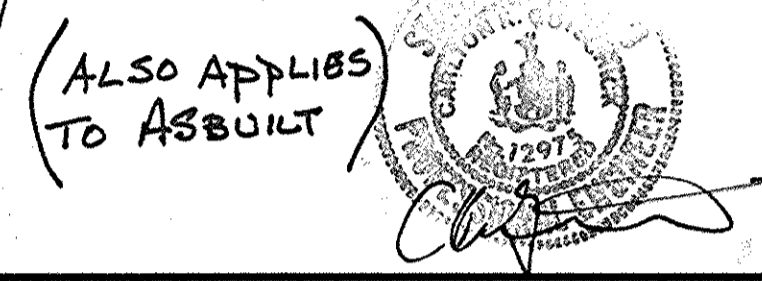
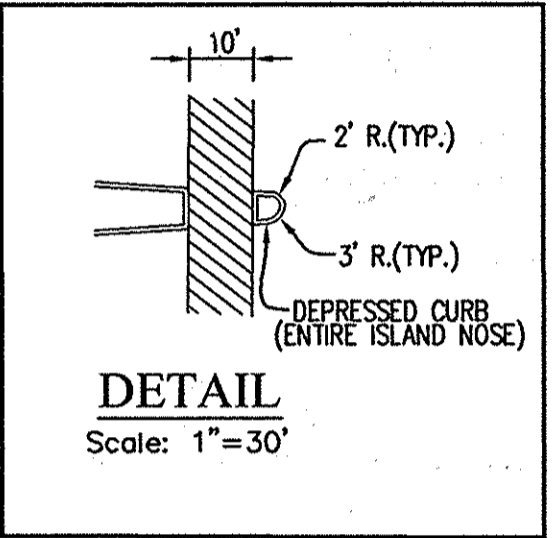
Top of Curb (As-Built Elevation)									
PT.#	Elev.	PT.#	Elev.	PT.#	Elev.	PT.#	Elev.	PT.#	Elev.
1	440.90	25	429.27	41	439.01	57	432.10	73	433.18
2	439.96	26	428.67	42	439.97	58	432.39	74	433.16
3	438.95	27	428.51	43	438.51	59	431.77	75	433.37
4	430.76	28	428.49	44	441.50	60	431.80	76	432.23
5	430.73	29	428.87	45	441.20	61	431.80	77	433.33
6	430.05	30	429.42	46	440.70	62	431.80	78	433.19
7	429.50	31	430.13	47	441.19	63	431.91	79	431.58
8	429.98	32	430.51	48	441.78	64	431.01	80	432.21
9	429.67	33	431.06	49	441.91	65	430.60	81	433.03
10	430.76	34	432.22	50	442.00	66	430.60	82	432.16
11	431.09	35	432.66	51	442.10	67	430.60	83	432.16
12	430.93	36	432.35	52	442.11	68	430.60	84	431.44
13	431.46	37	431.76	53	442.11	69	430.98	85	430.09
14	431.85	38	431.99	54	442.11	70	430.77	86	433.09
15	431.70	39	431.71	55	442.11	71	430.77	87	433.05
16	432.49	40	431.00	56	442.11	72	430.77	88	433.05
17	432.53	41	431.22	57	442.11	73	430.01	89	433.18
18	432.53	42	430.76	58	442.11	74	430.01	90	433.18
19	430.96	43	429.66	59	442.11	75	430.01	91	433.26
20	430.94	44	429.44	60	442.11	76	430.01	92	433.26
21	430.19	45	429.57	61	442.11	77	430.01	93	433.26
22	430.19	46	430.52	62	442.11	78	430.01	94	433.26
23	429.92	47	430.72	63	442.11	79	430.01	95	433.26
24	428.96	48	431.23	64	442.11	80	430.01	96	433.26



PT. NO.	STATION	OFFSET	ELEV.	
27	13+36.01	40.00R.	425.62	425.62
28	15+70.76	32.00R.	420.68	420.94
29	15+78.69	32.00R.	420.81	420.98
30	16+18.82	32.00R.	420.47	
31	16+26.50	40.00R.	420.21	
32	16+78.51	40.00R.	420.21	420.17
33	16+78.45	32.00L.	420.44	420.27
34	16+62.56	32.00L.	420.39	420.21
35	15+87.28	32.00L.	420.75	420.27
36	15+77.97	32.00L.	420.81	420.44
37	15+69.91	40.00L.	420.68	420.96
38	13+36.01	40.00L.	425.62	425.70
39	13+36.01	10.00R.	426.31	426.24
40	14+30.84	9.71R.	424.21	424.19
41	14+41.25	0.71L.	424.19	424.11
42	14+41.96	1.00L.	424.19	
43	15+84.06	1.00L.	421.68	
44	15+84.01	3.39L.	421.32	421.94
45	15+84.04	10.00L.	421.21	421.25
46	13+36.01	10.00L.	426.31	426.91
47	15+94.03	4.37L.	421.20	421.24
48	15+96.39	4.71L.	421.18	
49	15+99.07	7.69L.	421.12	
50	15+99.07	8.00L.	421.13	420.76
51	15+97.06	10.00L.	421.09	
52	15+94.07	10.00L.	421.11	421.21

Note: As of February 1, 2003 conc. sidewalk has been constructed from Station 1+00 to 8+24 on the southbound side and from 1+00 to 16+00 on the northbound side of Maple Lawn Boulevard. The conc. sidewalk shown on these plans from 8+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.

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.



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

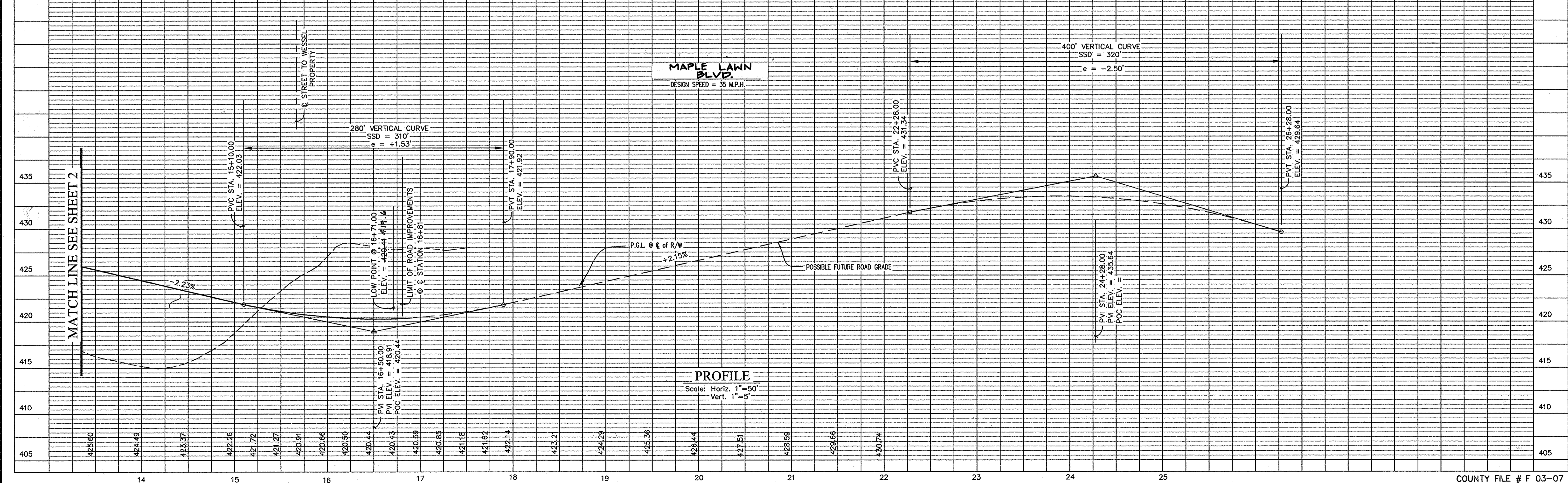
- SEE SHEET 5 FOR STREET LIGHT SCHEDULE.
- MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:  
 Maple Lawn Blvd. & Road "f" 1 tree per 40 linear feet, both sides;  
 All other streets: 1 tree per 30 linear feet, both sides;  
 Private Alleys No trees required

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
(+)	Acer Saccharum / Green Mountain Sugar Maple	2 1/2" col.	17	17	B & B Full Height

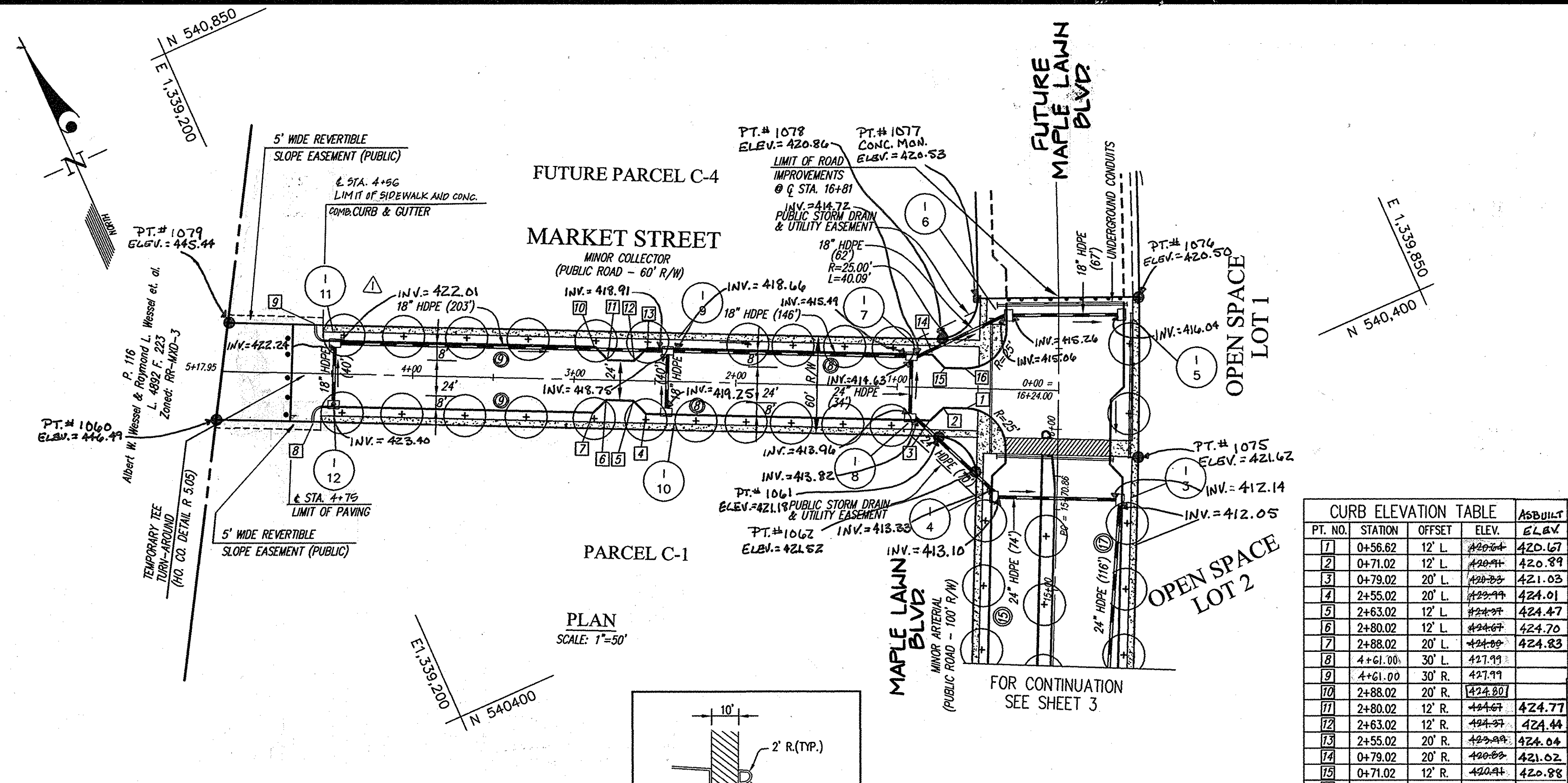
\*FROM CENTERLINE STATION 13+50 TO 16+81

Date	Description	By	Appr.
2/26/03	Added note describing limits of sidewalk constructed and label accordingly	WJL	DEV

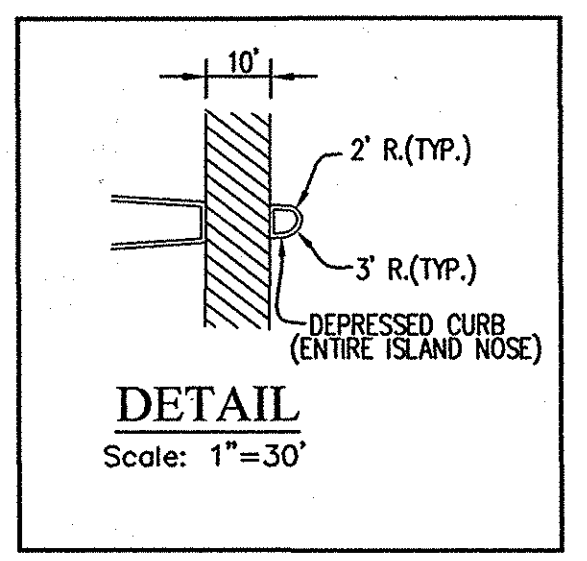
STREET NAME	P.C. STA.	P.C.C. STA.	P.T. STA.	RADIUS	ARC	TANGENT	CHORD	BEARING	DELTA
MAPLE LAWN BLVD	15+70.86	none	18+70.89	3375.00'	300.03'	150.11'	299.93'	S 22°47'45" W	05°05'36"



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PT. NO.	STATION	OFFSET	ELEV.	AS BUILT
17	0+56.62	12' L	420.67	420.67
2	0+71.02	12' L	420.89	420.89
3	0+79.02	20' L	421.03	421.03
4	2+55.02	20' L	424.01	424.01
5	2+63.02	12' L	424.47	424.47
6	2+80.02	12' L	424.70	424.70
7	2+88.02	20' L	424.83	424.83
8	4+61.00	30' R	421.99	
9	4+61.00	30' R	421.99	
10	2+88.02	20' R	424.80	
11	2+80.02	12' R	424.77	424.77
12	2+63.02	12' R	424.44	424.44
13	2+55.02	20' R	424.04	424.04
14	0+79.02	20' R	421.02	421.02
15	0+71.02	12' R	420.88	420.88
16	0+57.81	12' R	420.67	420.75



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.

Date	Revision	By	Appr.
1/20/03	Revise road grade, limit of work on this plan, and top of curbs.		dev.

- 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

SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED*	NUMBER OF TREES PROVIDED	REMARKS
+	Acer Saccharum / Green Mountain Sugar Maple	2 1/2" 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: 3/7/03

Chief, Development Engineering Division  
 Date: 2/12/02

(ALSO APPLIES TO ASBUILT)

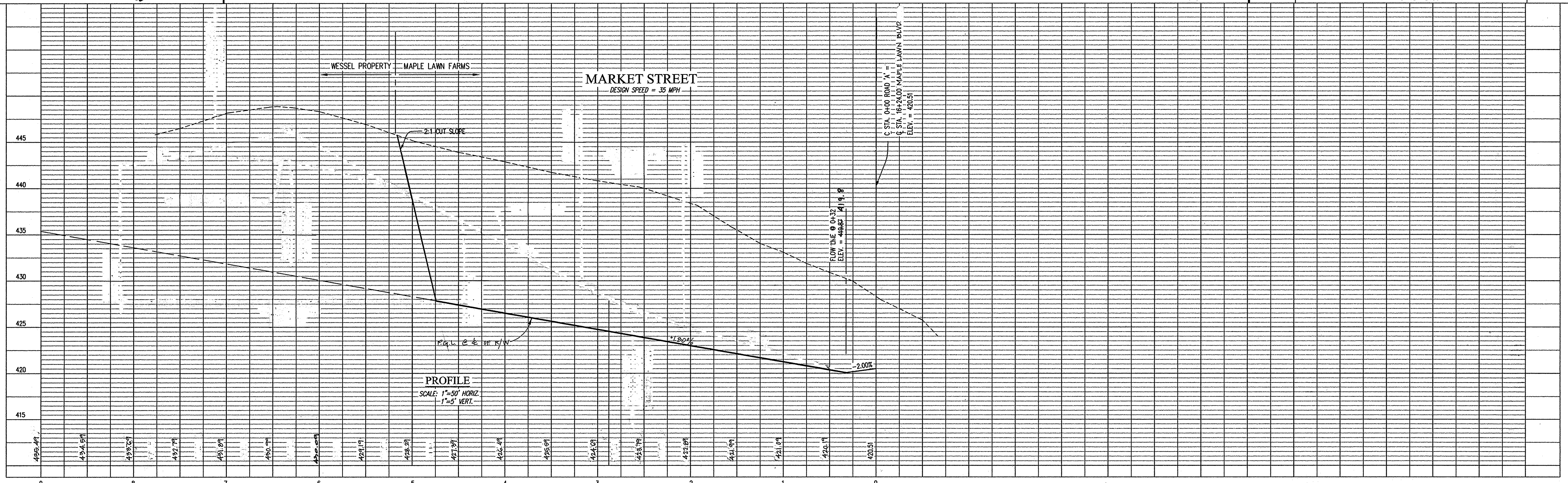
GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DESIGNED DEV  
 DRAWN JAU  
 CHECKED DEV  
 DATE JANUARY 2003

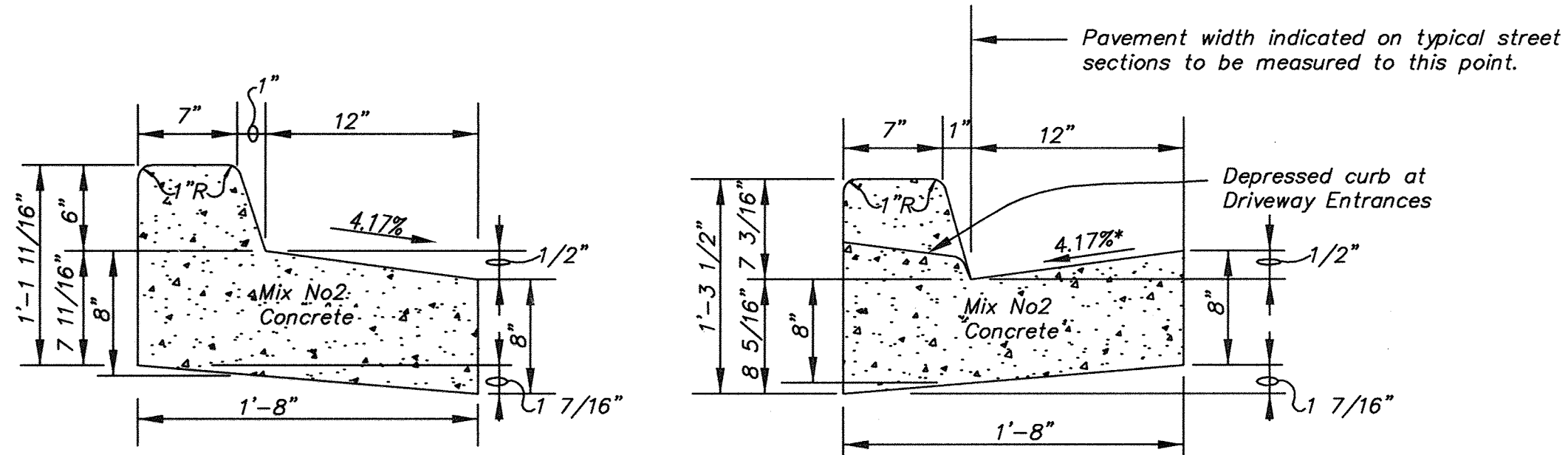
Road Construction and Street Tree Plan  
 MAPLE LAWN FARMS  
 Business District - Area 1  
 Parcels C-1, C-2, and Open Space Lots 1 & 2  
 ELECTION DISTRICT NO.5 HOWARD COUNTY, MD.

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

SCALE AS SHOWN  
 DRAWING 4 OF 34  
 ZONING MXD-3  
 JOB No. 96079

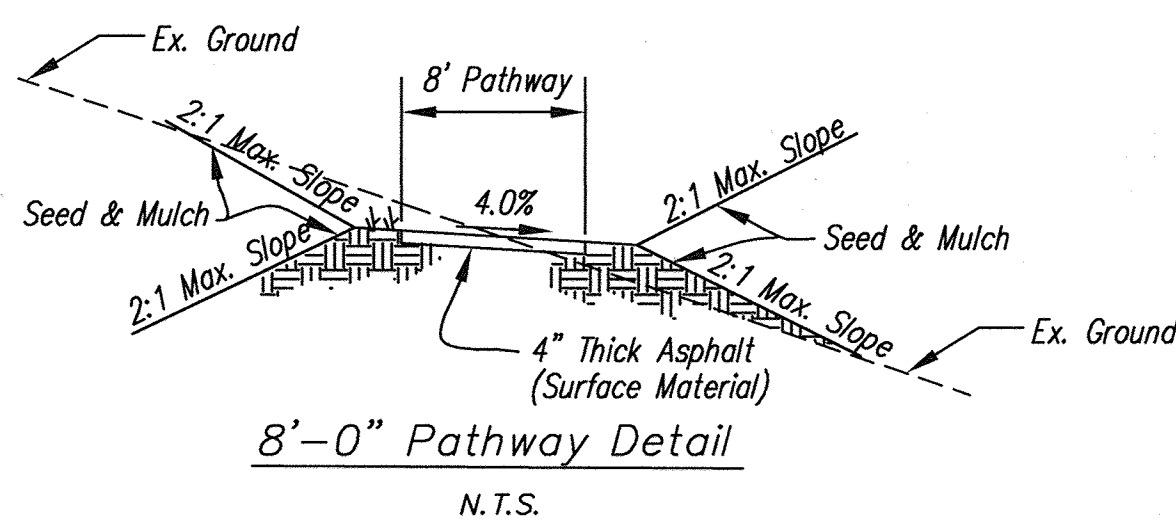


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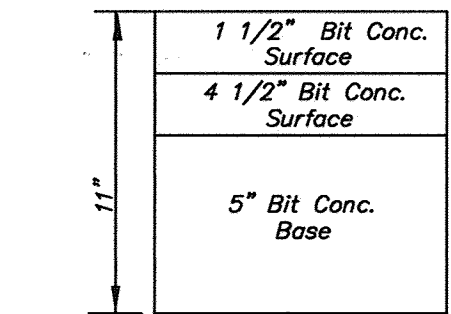


Reverse 7" Combination Curb & Gutter  
N.T.S.

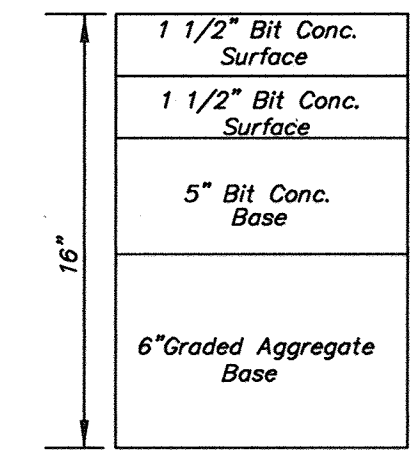
Standard 7" Combination Curb & Gutter  
N.T.S.



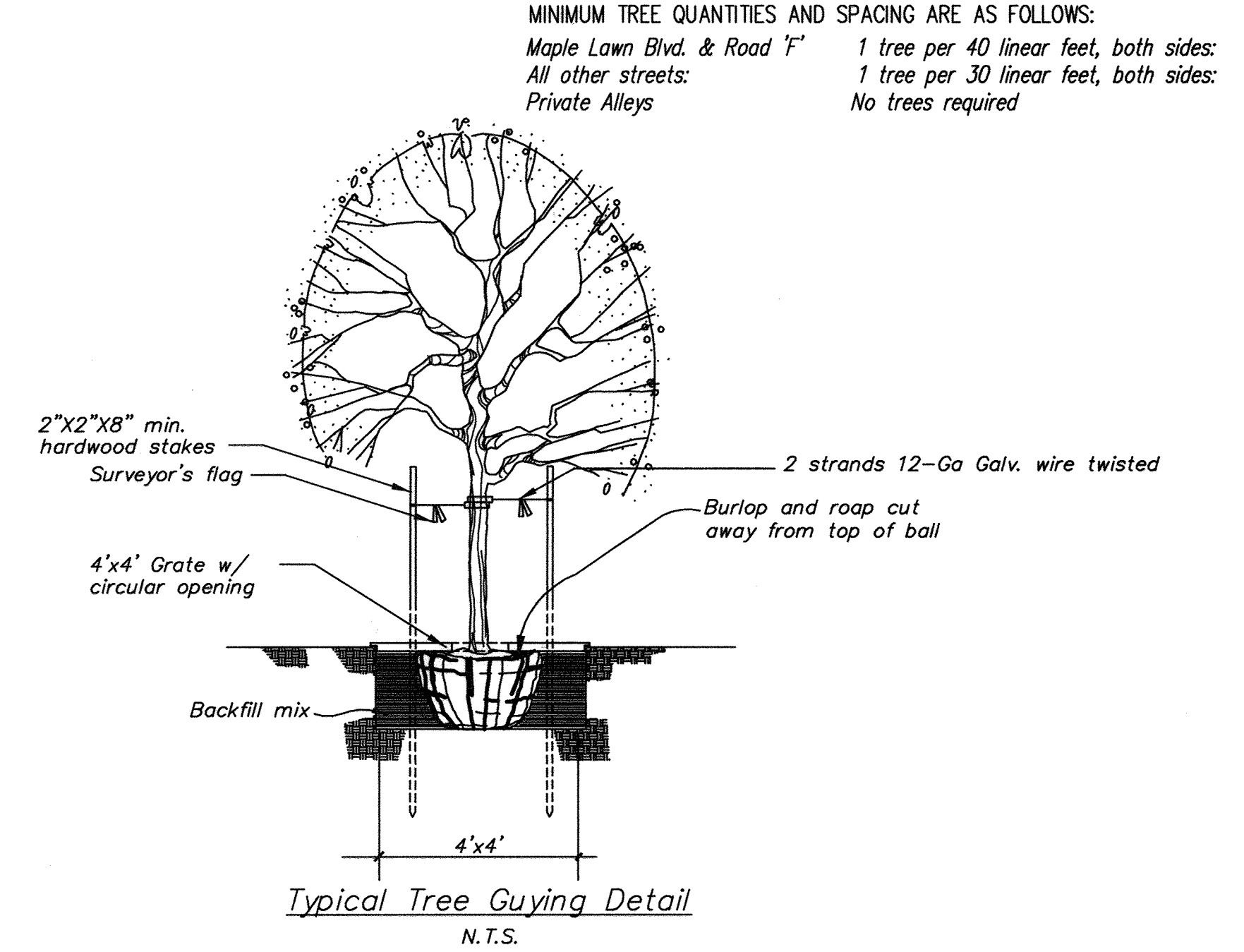
8'-0" Pathway Detail  
N.T.S.



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

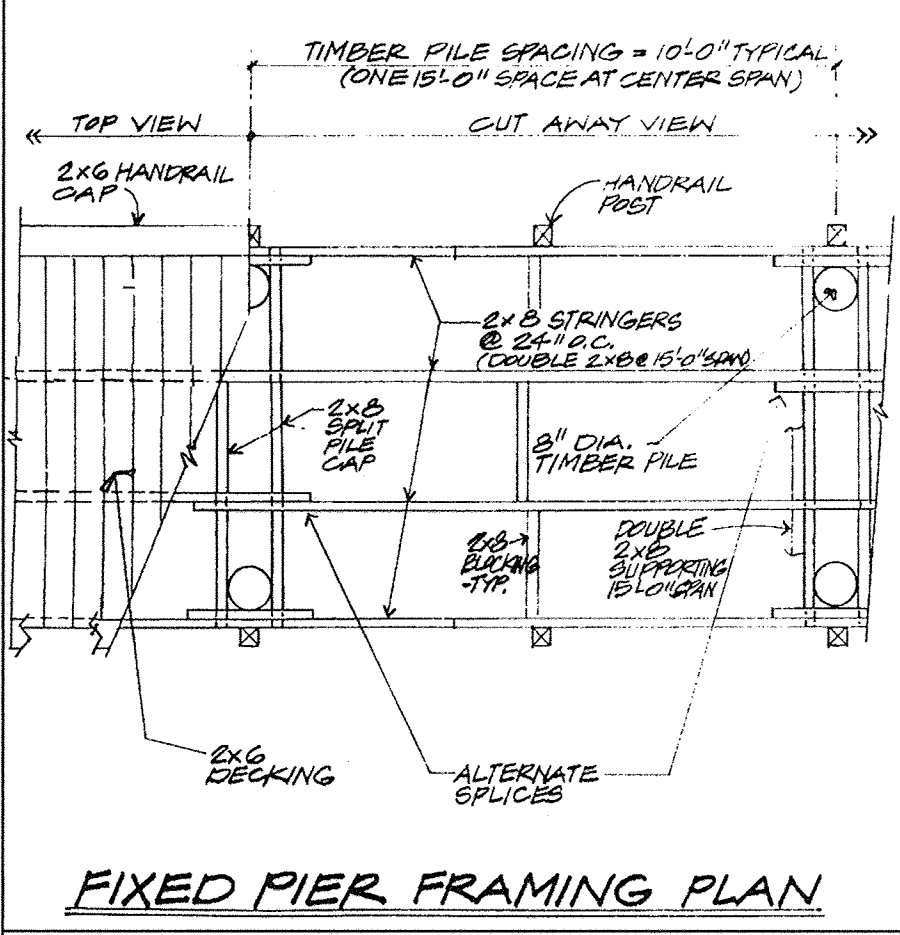


P-5 Granular Base (Alternate)  
N.T.S.

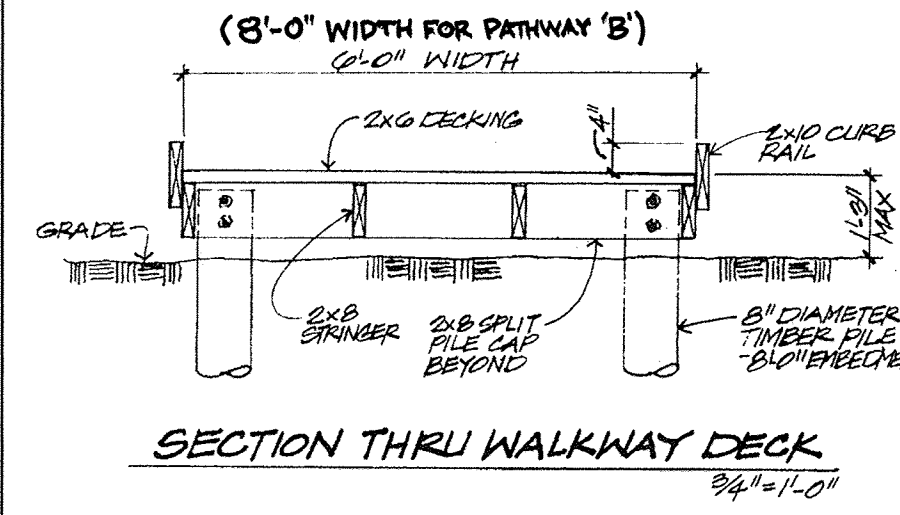


Typical Tree Guying Detail  
N.T.S.

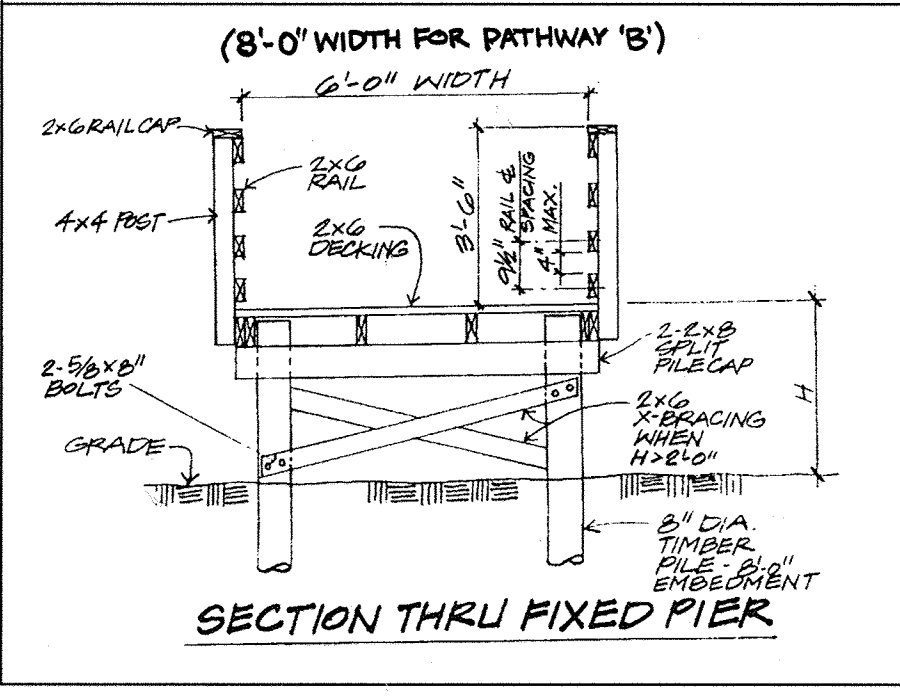
MINIMUM TREE QUANTITIES AND SPACING ARE AS FOLLOWS:  
Maple Lawn Blvd. & Road 'F' 1 tree per 40 linear feet, both sides;  
All other streets: 1 tree per 30 linear feet, both sides;  
Private Alleys No trees required



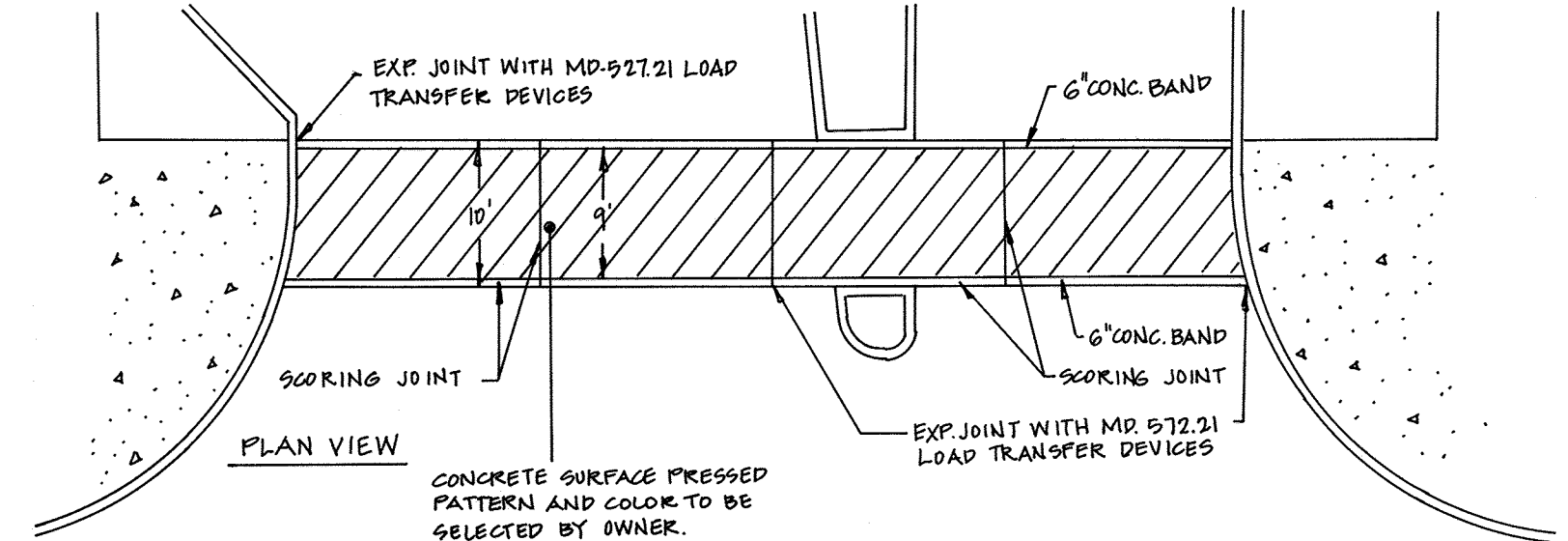
FIXED PIER FRAMING PLAN



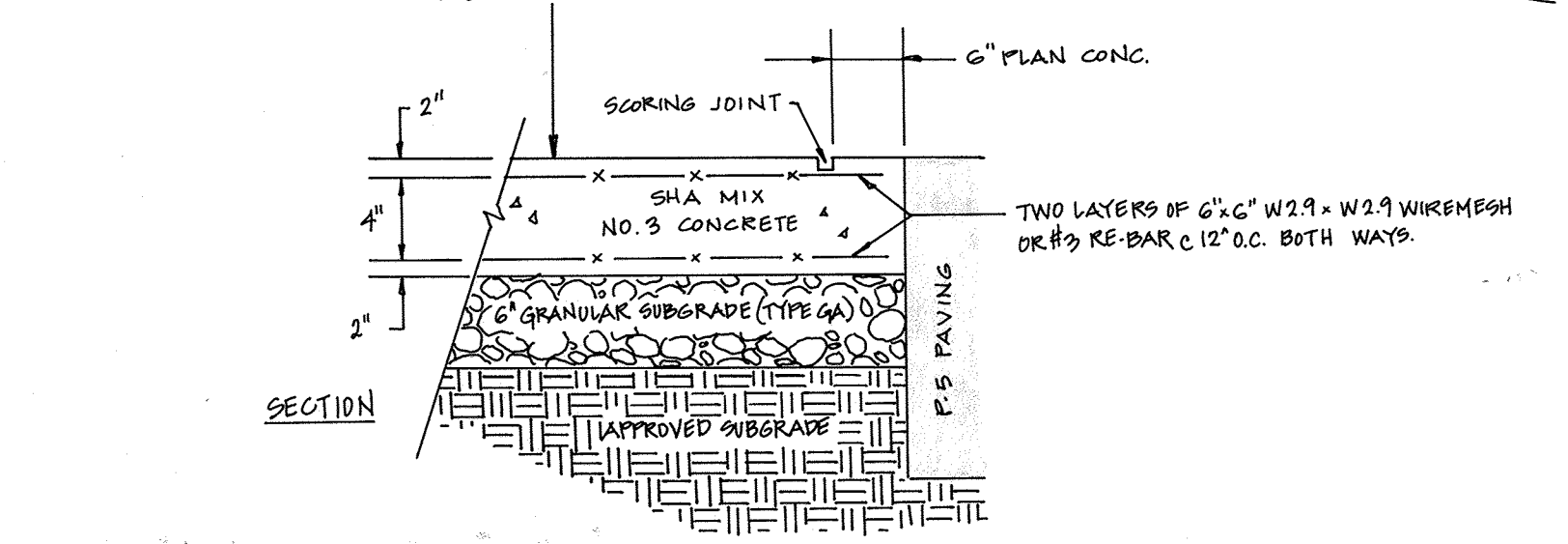
SECTION THRU WALKWAY DECK



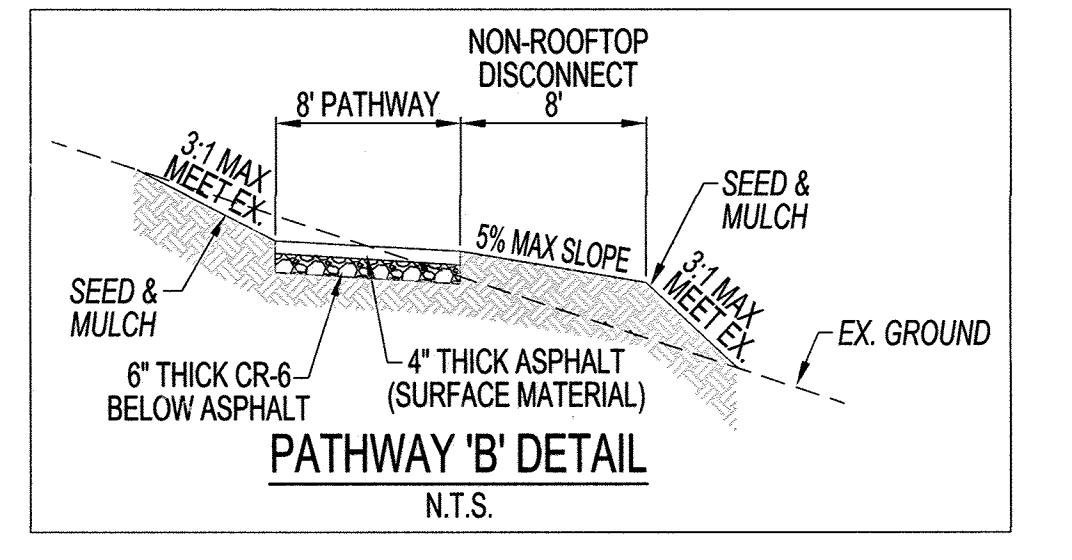
SECTION THRU FIXED PIER



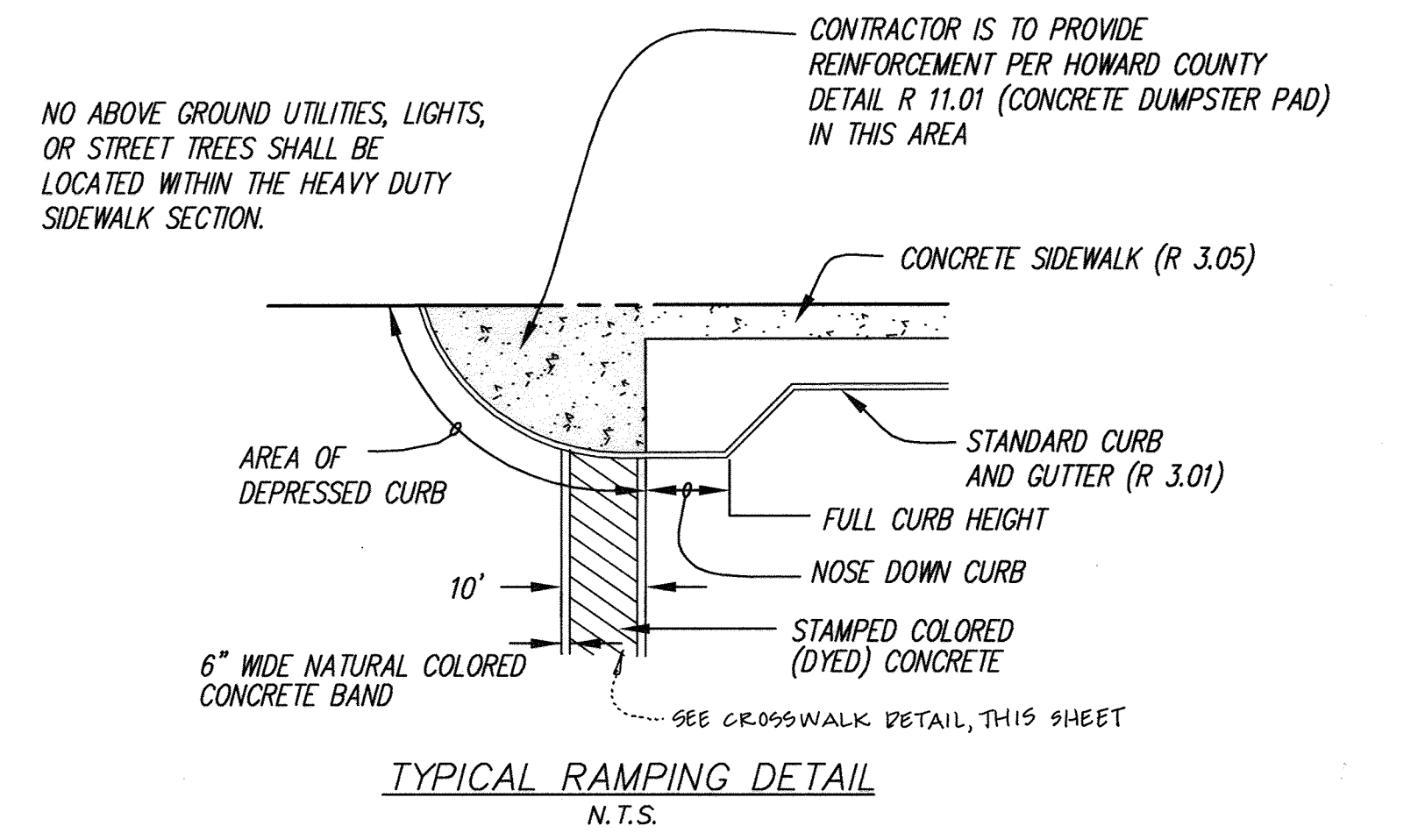
PLAN VIEW



SECTION



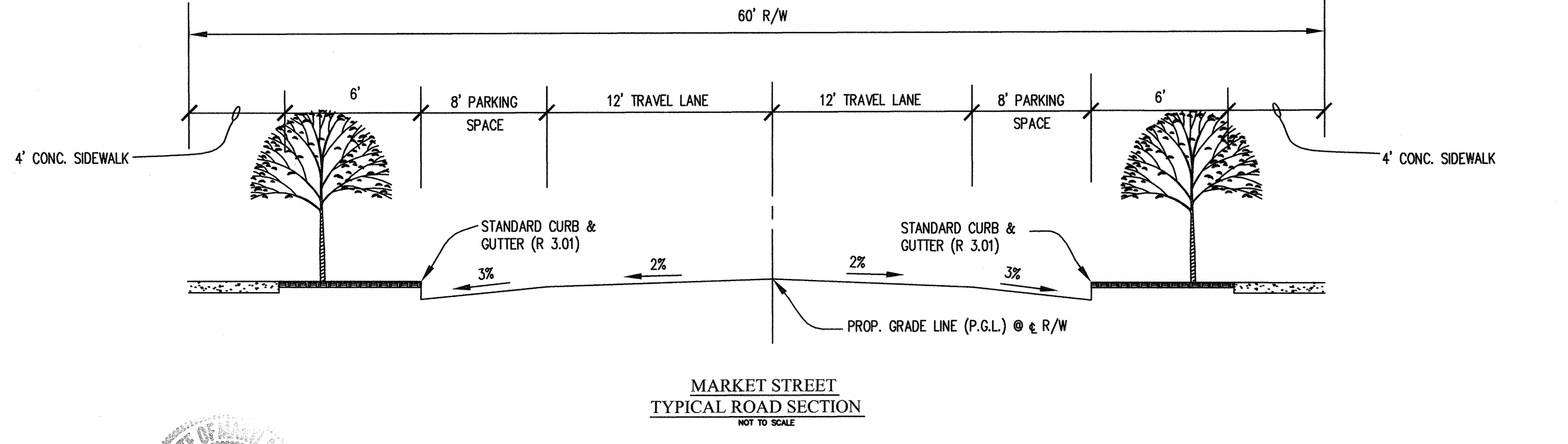
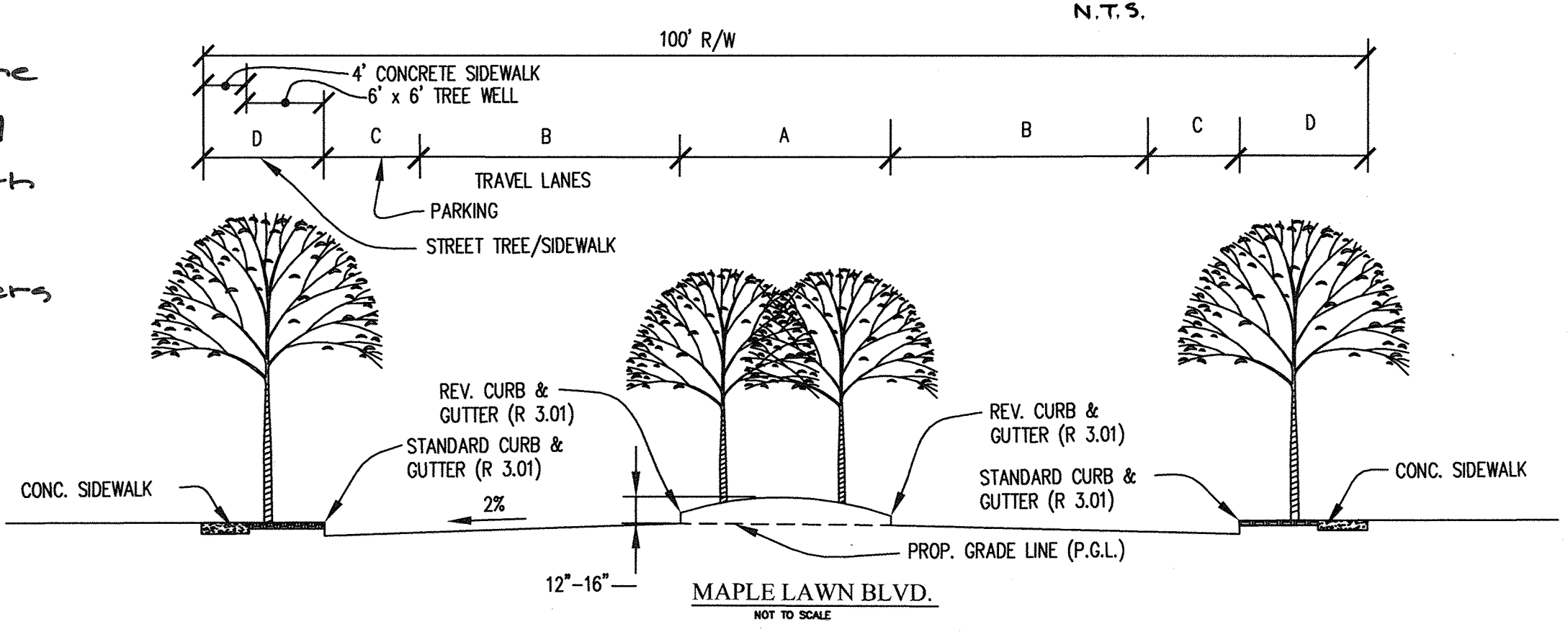
PATHWAY 'B' DETAIL  
N.T.S.



TYPICAL RAMPING 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	

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.



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

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 [Signature] 3/7/03  
 Chief, Division of Land Development  
 Date

[Signature] 3/2/03  
 Chief, Development Engineering Division  
 Date

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

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

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

DATE	REVISION	BY	APP'R.
9/20/02	ADDED CROSSWALK DETAIL.	JAU	
01/26/03	REDLINE TO ILLUSTRATE A PATHWAY THROUGH HC OPEN SPACE LOT 1	R.H.V.	

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

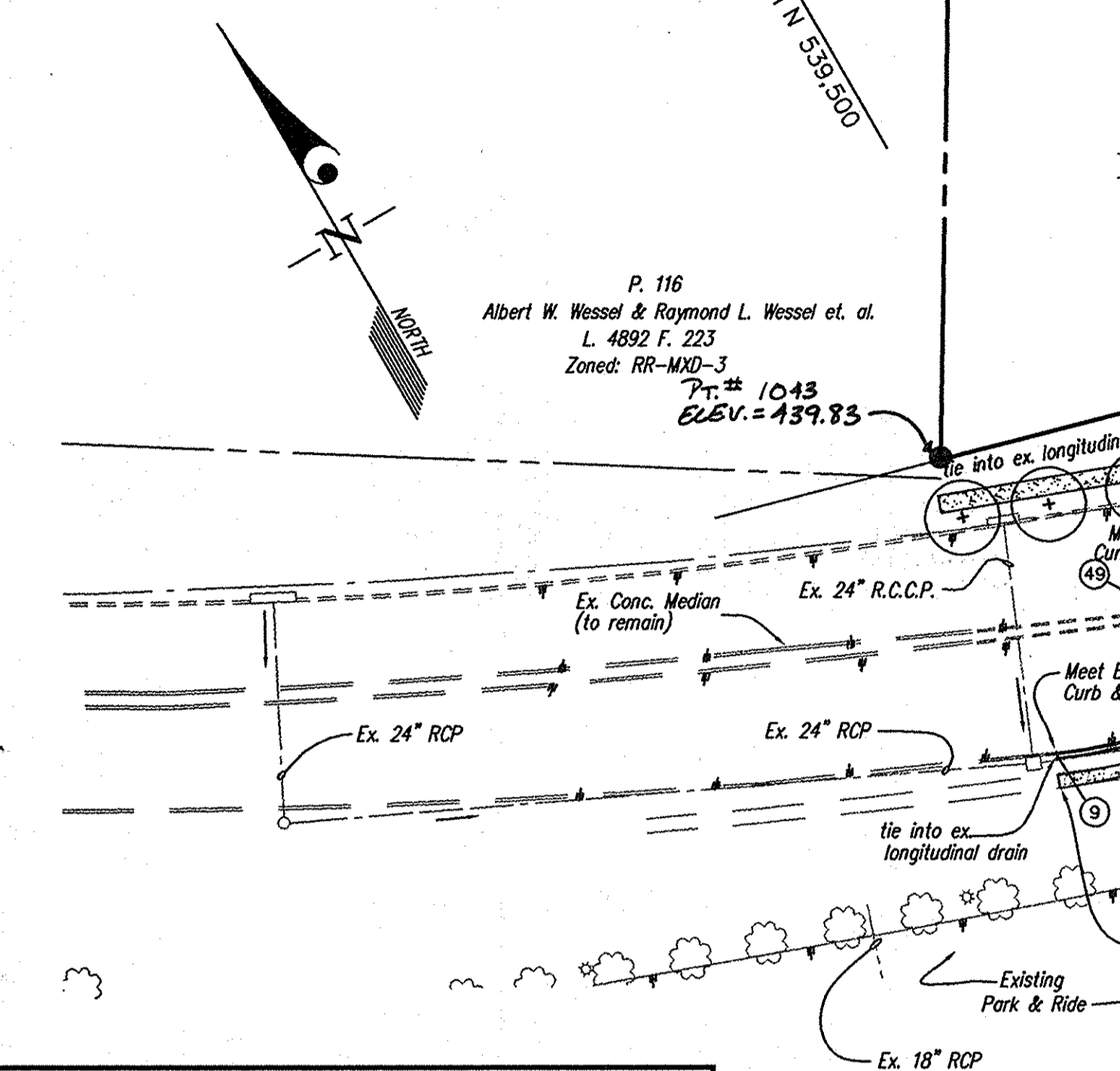


ROAD DETAILS - MAPLE LAWN BLVD. & MARKET STREET  
 MAPLE LAWN FARMS  
 Business District - Area 1  
 ParcelS C-1, C-2, and Open Space Lots 1 & 2  
 (Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)  
 HOWARD COUNTY, MARYLAND

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

STREET TREE SCHEDULE					
SYMBOL	NAME (BOTANICAL/COMMON)	SIZE	NUMBER OF TREES REQUIRED	NUMBER OF TREES PROVIDED	REMARKS
⊕	Acer Saccharum / Green Mountain Sugar Maple	2 1/2" cal.	26	27	B & B Full Heads

● 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

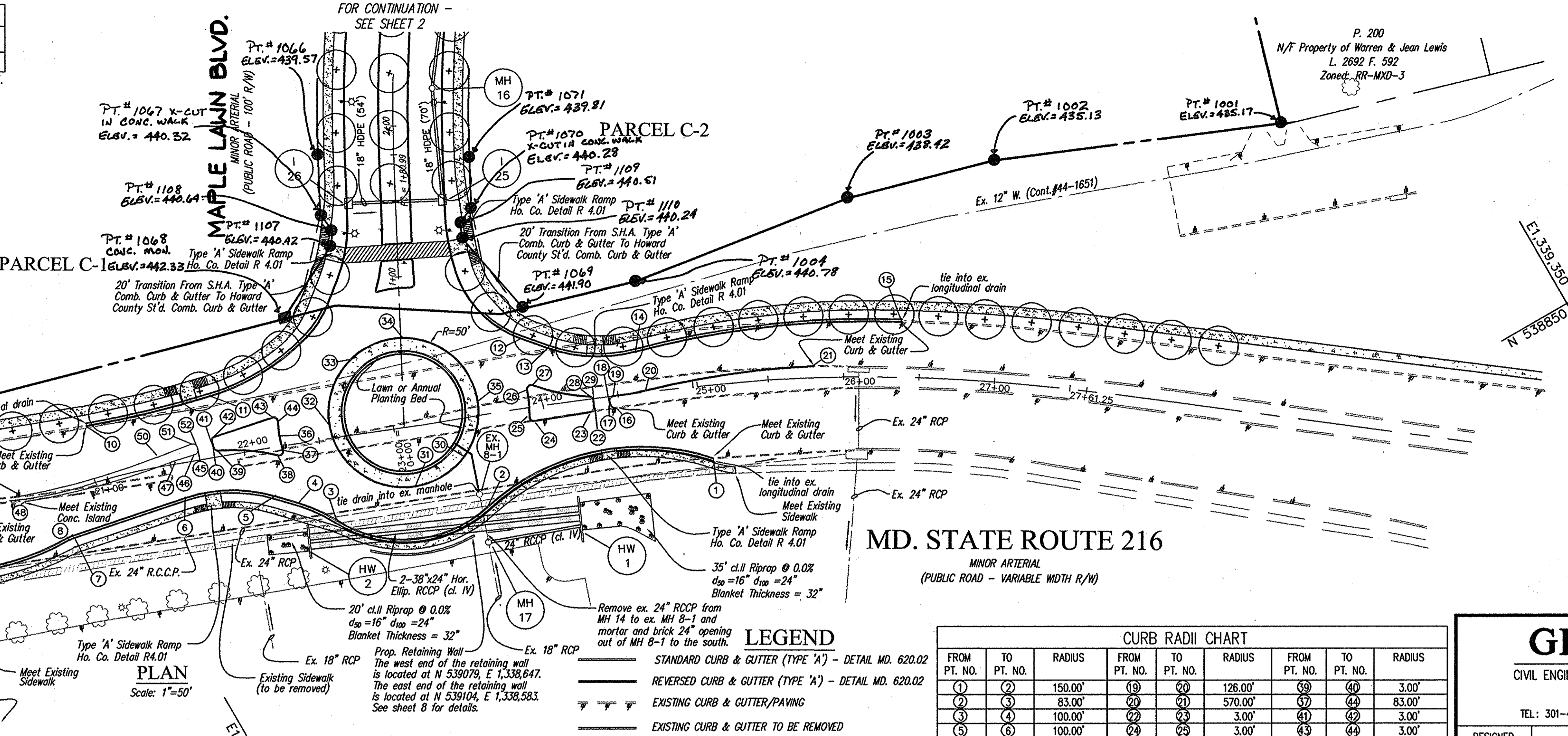


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Smith* 2-25-03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Andy Hamata* 3/7/03  
 Chief, Division of Land Development Date

*Paul Dammann* 3/14/03  
 Chief, Development Engineering Division Date

- 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.



- 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
  - EXISTING STORM DRAIN
  - PROPOSED STORM DRAIN

**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'	37	40	3.00'
2	3	83.00'	20	21	570.00'	41	42	83.00'
3	4	100.00'	21	22	3.00'	42	43	3.00'
4	5	100.00'	22	23	3.00'	43	44	3.00'
5	6	100.00'	23	24	3.00'	44	45	3.00'
6	7	20.00'	24	25	83.00'	45	46	3.00'
7	8	175.00'	25	26	3.00'	46	47	126.00'
8	9	175.00'	26	27	3.00'	47	48	500.00'
9	10	650.67'	27	28	126.00'	48	49	500.00'
10	11	100.00'	28	29	3.00'	49	50	500.00'
11	12	3.00'	29	30	3.00'	50	51	3.00'
12	13	3.00'	30	31	126.03'	51	52	3.00'

**¢ 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'	S 36°46'50" W	98°41'21"
MD. RTE. 216	8+23.56		9+38.23	150.00'	none	114.67'	52.38'	S 36°46'50" W	98°41'21"

**CURB ELEVATION TABLE**

PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.
1	25+09.23	49.60'R	441.63	27	23+95.30	14.94'L	441.63
2	23+53.88	60.11'R	441.67	28	24+31.26	1.70'L	440.67
3	22+53.70	52.99'R	442.02	29	24+33.65	1.44'R	440.56
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	443.44	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	443.77	33	22+78.62	50.38'L	442.32
8	20+75.78	37.44'R	443.39	34	23+15.29	59.40'L	442.77
9	20+08.18	49.16'R	443.77	35	23+58.02	9.94'L	441.79
10	20+99.35	32.98'L	443.34	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	443.29
12	23+91.95	46.34'L	443.02	38	22+21.58	5.65'R	443.44
13	24+08.60	37.30'L	441.79	39	21+82.92	3.65'L	444.00
14	24+65.38	28.04'L	440.67	40	21+80.19	6.15'L	444.09
15	26+37.96	35.44'L	441.63	41	21+78.48	10.40'L	443.62
16	24+47.61	9.27'R	440.28	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	444.42
19	24+46.78	0.41'R	440.28	45	21+69.88	7.40'L	444.47
20	24+68.57	0.24'L	439.85	46	21+67.25	3.77'L	444.17
21	25+80.01	8.14'L	440.47	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	444.22
23	24+30.28	9.29'R	440.37	49	20+47.36	2.14'L	444.22
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

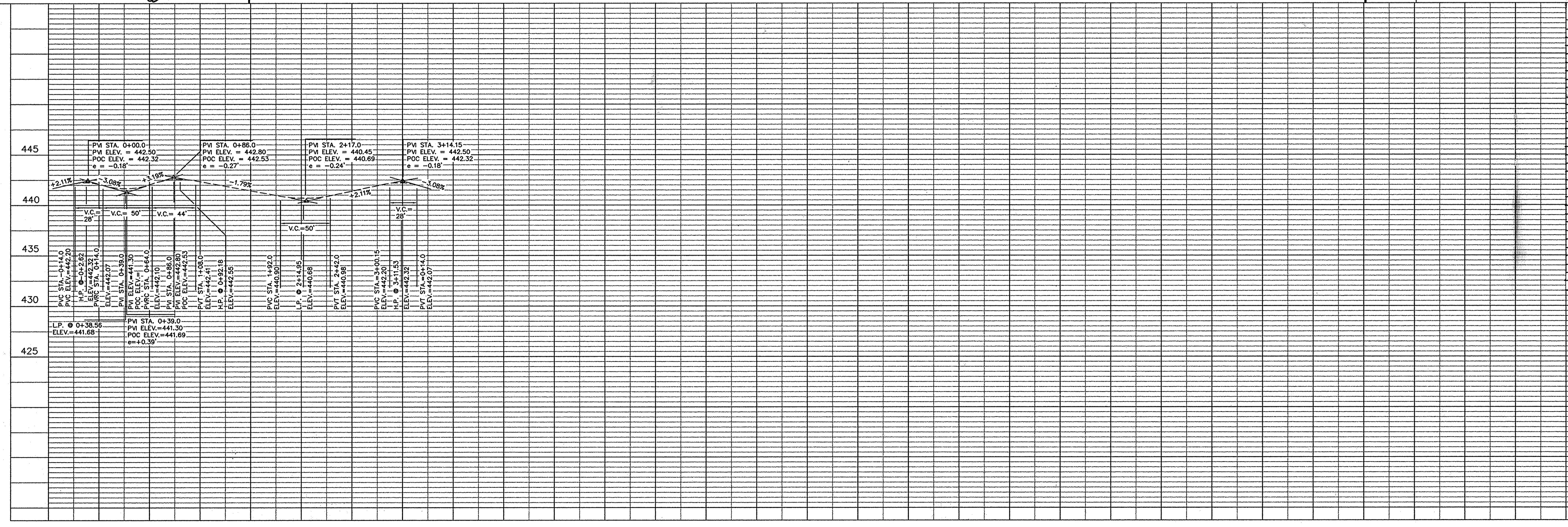
▲ MEET EXISTING CURB AND GUTTER.  
 SEE SHEET 5 FOR STREET LIGHT SCHEDULE.

(ALSO APPLIES TO ASBUILT)

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BIRTONVILLE OFFICE PARK  
 BIRTONVILLE, 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  
 ELECTION DISTRICT NO.5  
 HOWARD COUNTY, MD.  
 OWNER: G & R Maple Lawn, Inc., et al.  
 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

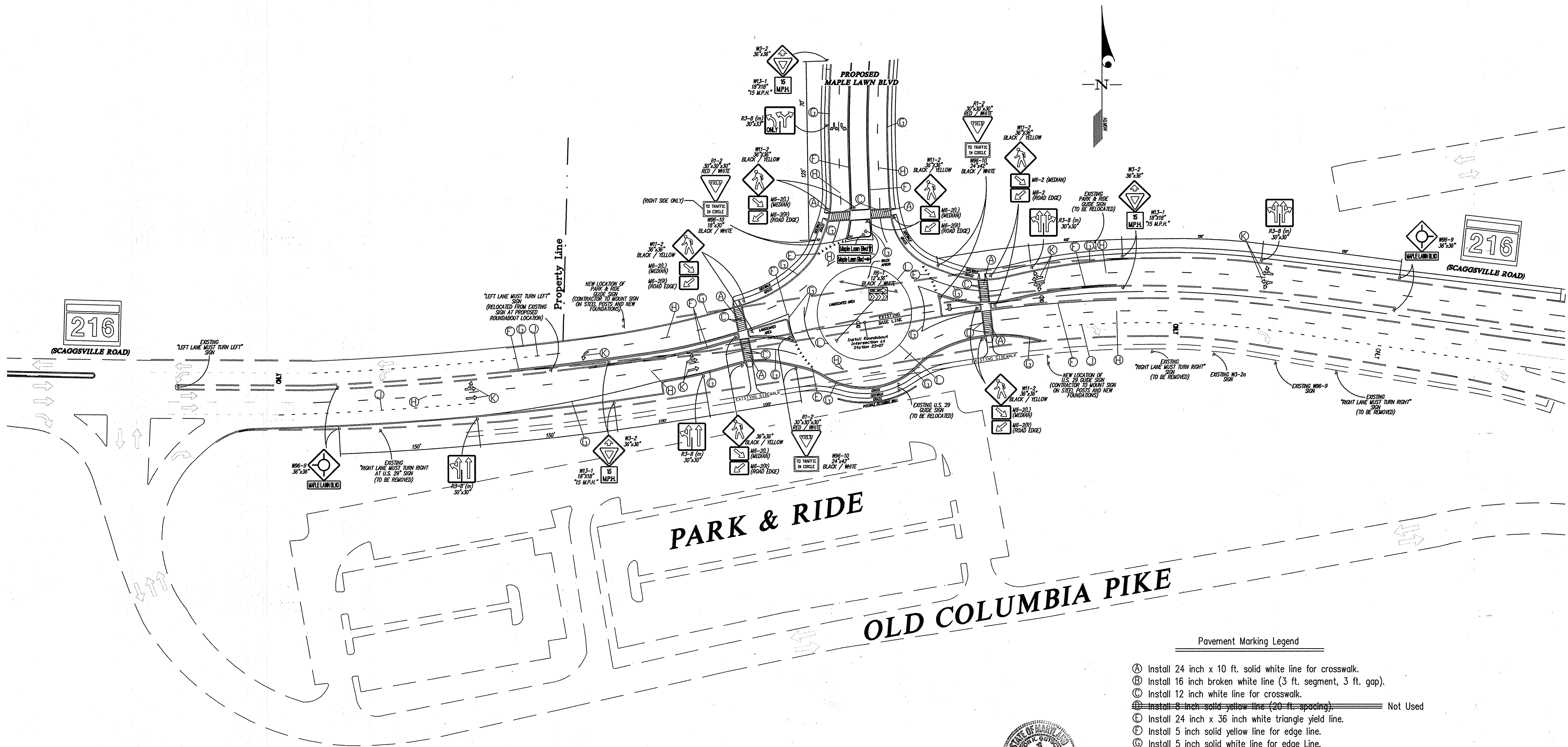


**ASBUILT CURB ELEVATION**

PT. NO.	ELEV.	PT. NO.	ELEV.
1	437.69	27	441.43
2	441.25	28	441.43
3	442.60	29	440.95
4	443.20	30	442.08
5	443.69	31	442.92
6	444.33	32	441.95
7	444.21	33	441.43
8		34	441.43
9	443.53	35	441.43
10	443.41	36	440.06
11	443.15	37	443.93
12	441.79	38	441.25
13	442.02	39	441.35
14	440.65	40	441.25
15	437.46	41	441.35
16	440.68	42	441.95
17	440.67	43	441.43
18	440.67	44	441.45
19	439.85	45	441.45
20	441.03	46	441.27
21	441.03	47	441.62
22	441.03	48	443.33
23	441.03	49	444.10
24	441.79	50	444.10
25	441.79	51	444.32
26	441.79	52	444.32

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



- Pavement Marking Legend**
- (A) Install 24 inch x 10 ft. solid white line for crosswalk.
  - (B) Install 16 inch broken white line (3 ft. segment, 3 ft. gap).
  - (C) Install 12 inch white line for crosswalk.
  - (D) Install 8 inch solid yellow line (20 ft. spacing). Not Used
  - (E) Install 24 inch x 36 inch white triangle yield line.
  - (F) Install 5 inch solid yellow line for edge line.
  - (G) Install 5 inch solid white line for edge line.
  - (H) Install 5 inch broken white line for lane line (10 ft. segment, 30 ft. gap).
  - (J) Install 5 inch broken white line for lane line (3 ft. segment, 9 ft. gap).
  - (K) Install 8 ft. white legend arrow as shown.
  - (L) Install 10 inch solid yellow line for truck apron edge line.
- NOTE: USE THERMO-PLASTIC FOR ALL MARKINGS



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Jankel* 2-25-03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Chris Hamada* 3/2/03  
 Chief, Division of Land Development Date

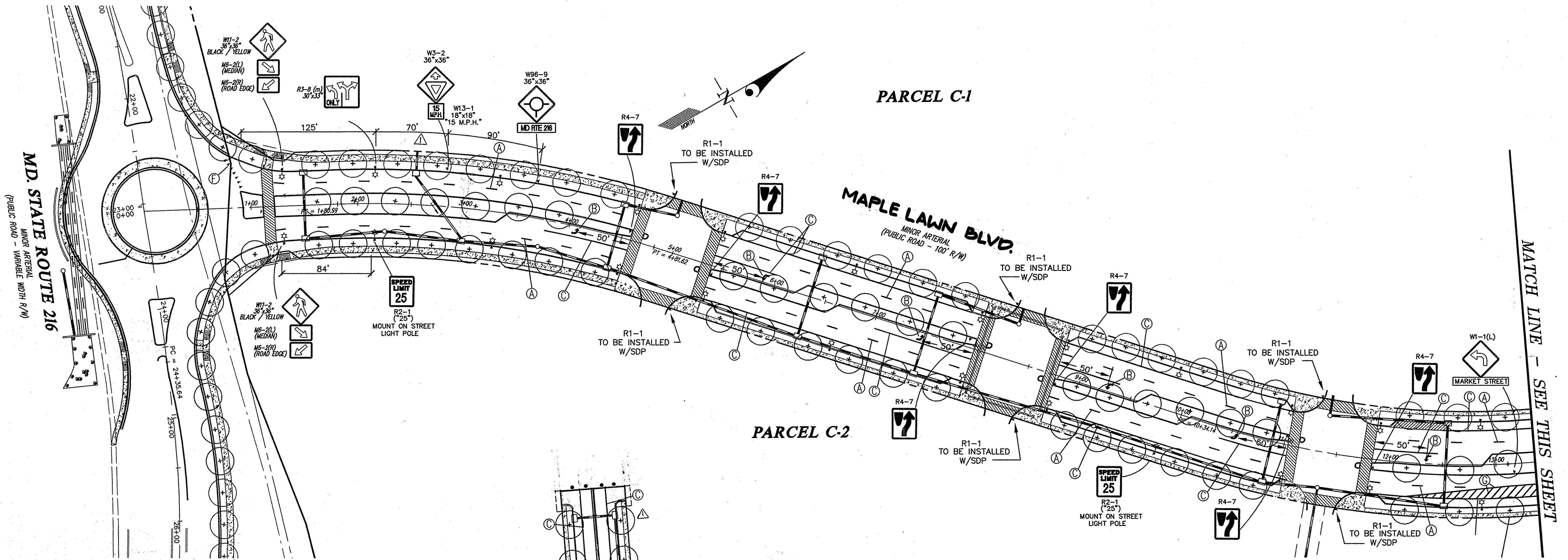
*Paul D. ...* 3/2/03  
 Chief, Development Engineering Division Date



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

<b>GLWGUTSCHICK LITTLE &amp; WEBER, P.A.</b> CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20886 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-589-2524 FAX: 301-421-4186		PREPARED FOR: G & R Maple Lawn, Inc., et. al. Suite 410, Woodholme Center 1829 Resisterstown Road Baltimore, Md. 21208 Attn: Charlie O'Donovan 410-484-8400		<b>SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN - MD. RTE. 216</b>  <b>MAPLE LAWN FARMS</b> - 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)		SCALE	ZONING	G. L. W. FILE No.
						1"=50'	MXD-3	96079
DATE		DATE		DATE		TAX MAP - GRID	SHEET	
3/2/03		3/2/03		3/2/03		41: 21 & 22	7 OF 34	
46: 3 & 4								

COUNTY FILE # F 03-07

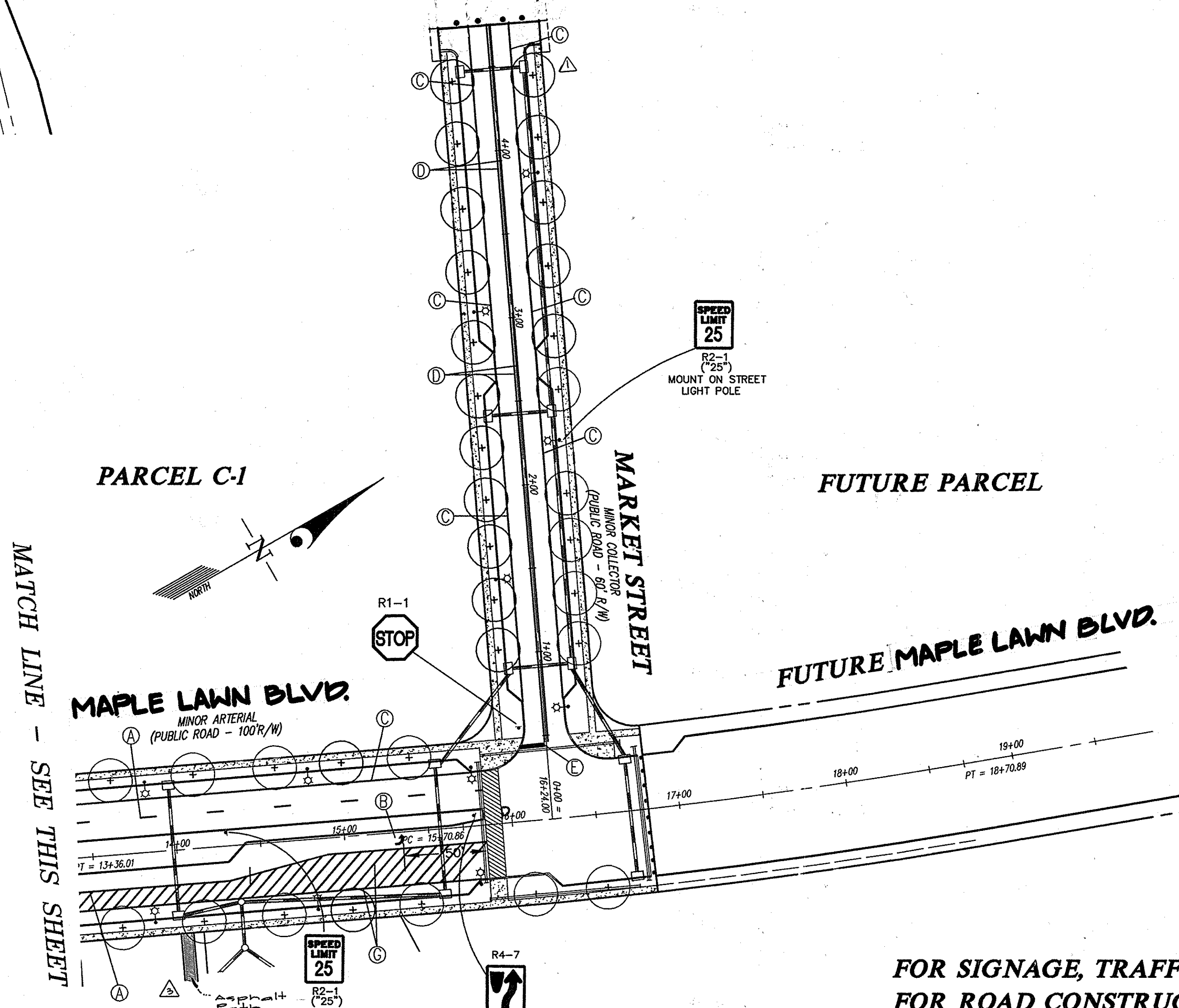


**Pavement Marking Legend**

(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  
*Andrew M. Decker* 2-25-03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Andy Hamata* 3/7/03  
 Chief, Division of Land Development Date  
*Chris Dammann* 3/2/03  
 Chief, Development Engineering Division Date

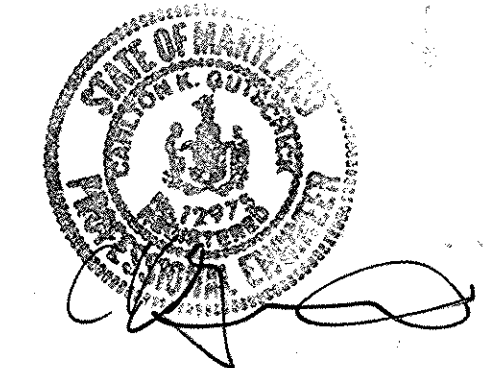
**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
2014.09.19	Added Asphalt Path	DEV	
7/20/09	RELOCATED THE TURNAROUND DUE TO REVISION TO ROAD GRADE AND ELIMINATED STREET LIGHT.	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

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

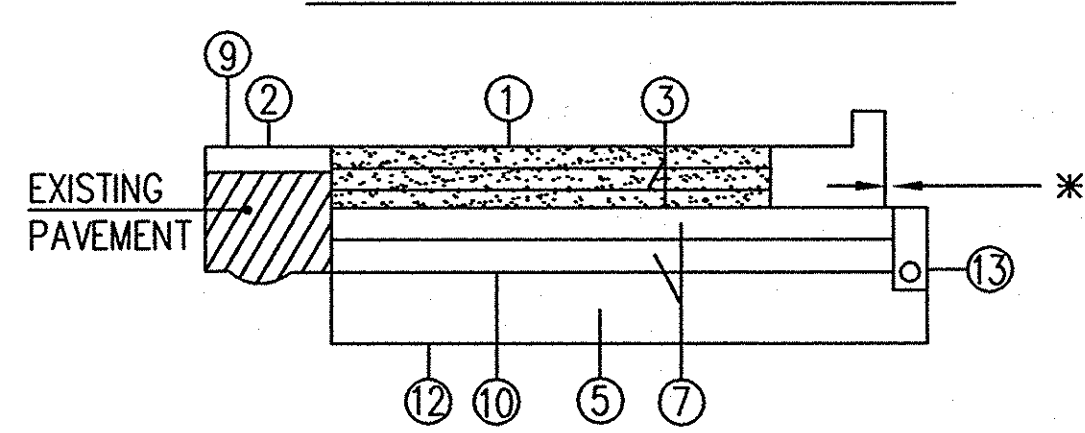
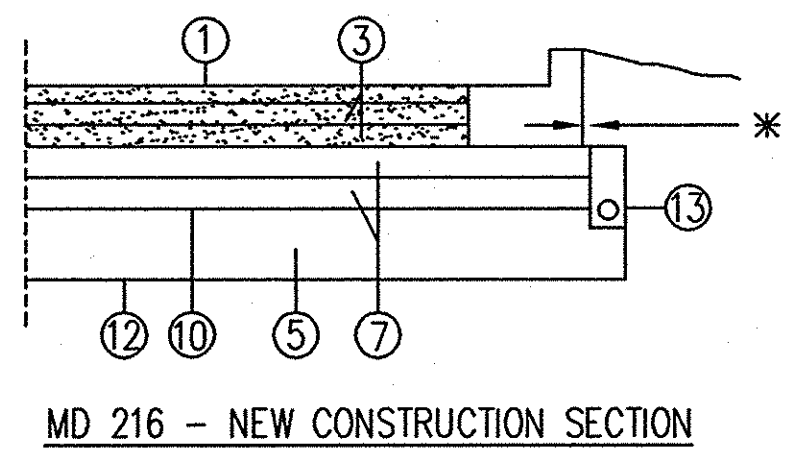
**SIGNAGE, TRAFFIC CONTROL AND STRIPING PLAN**  
**MAPLE LAWN FARMS**  
 Business District - Area 1  
 Parcels C-1, C-2 and Open Space Lots 1 & 2  
 (Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)  
 ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND



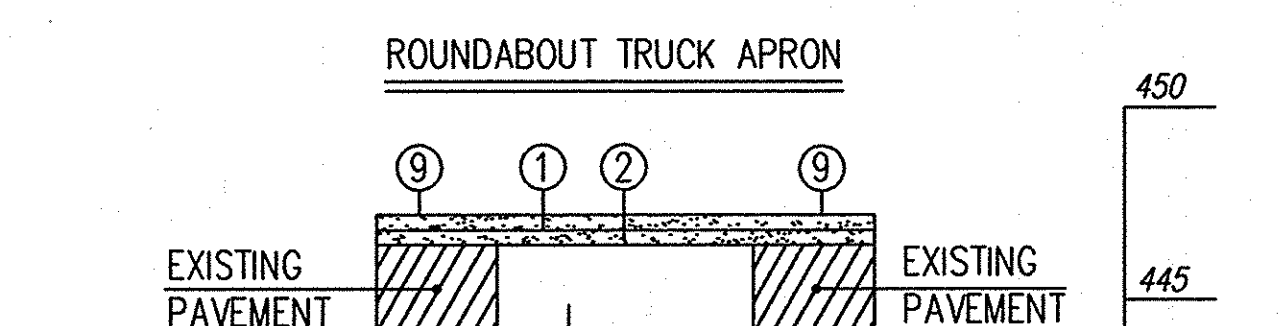
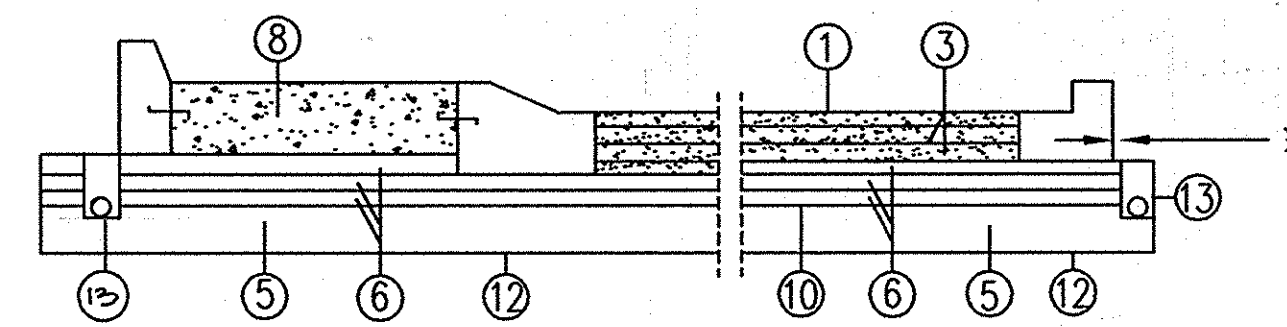
SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	8 OF 34

COUNTY FILE # F 03-07



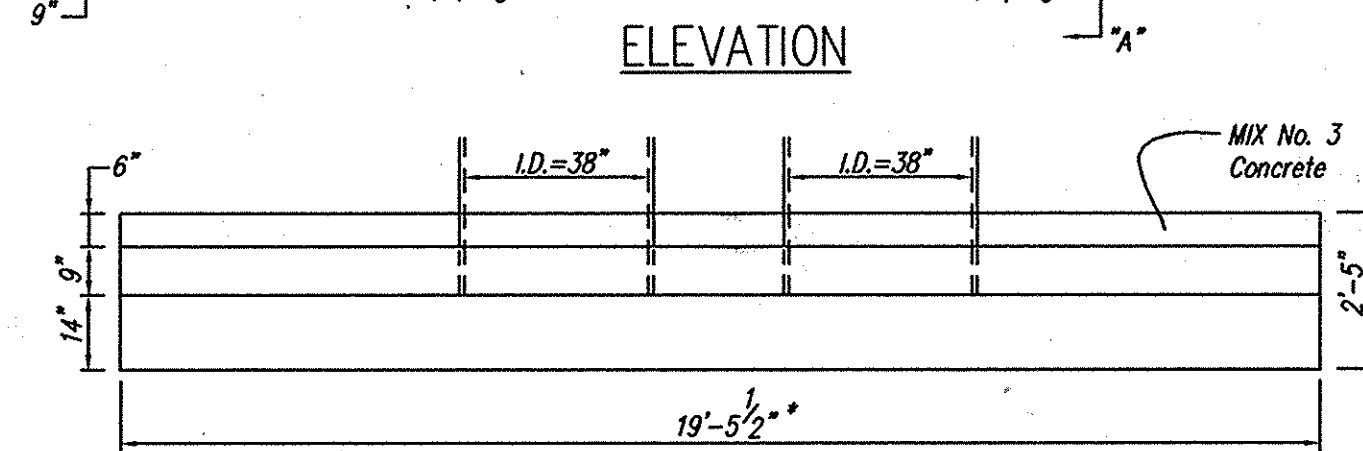
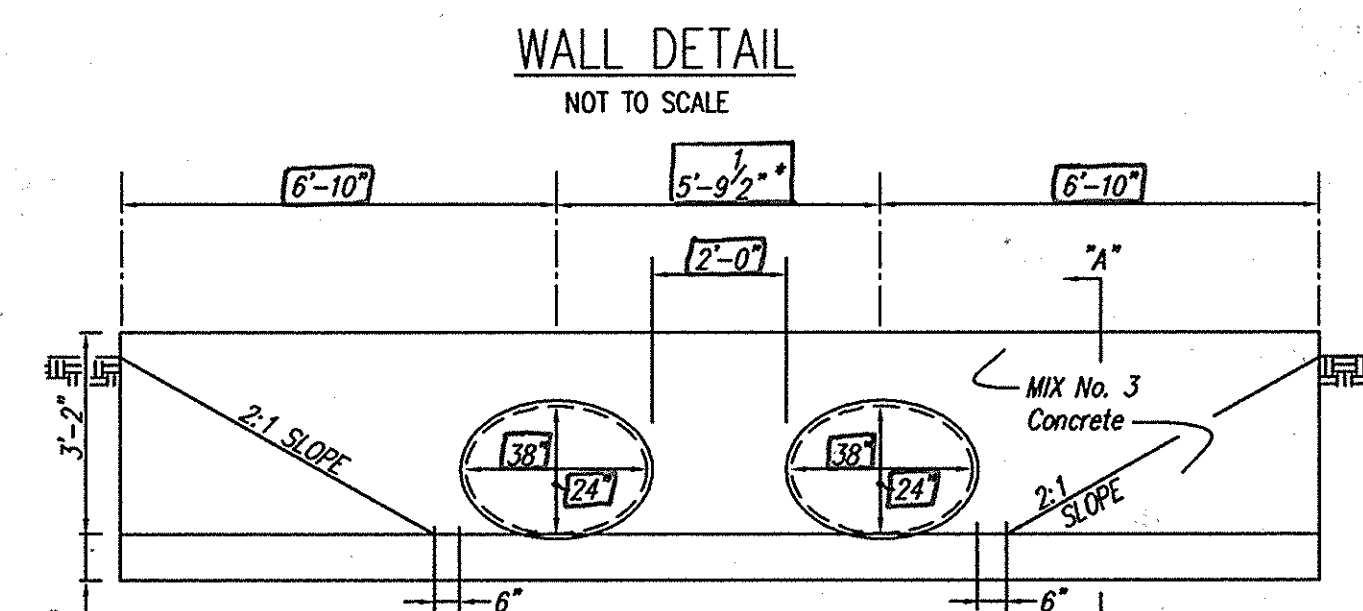
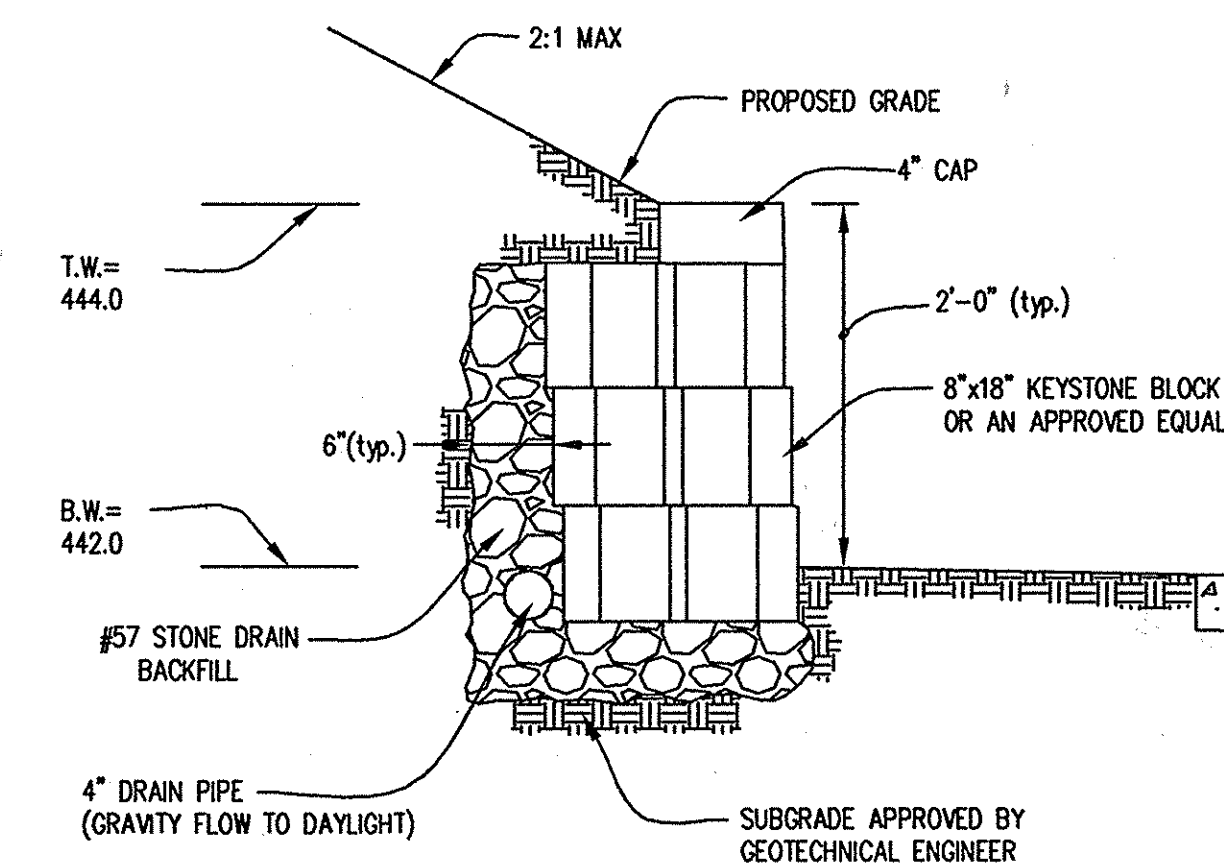


NOTE: EXTEND PAVEMENT SECTION FROM ADJOINING RESIDENTIAL DRIVEWAYS.

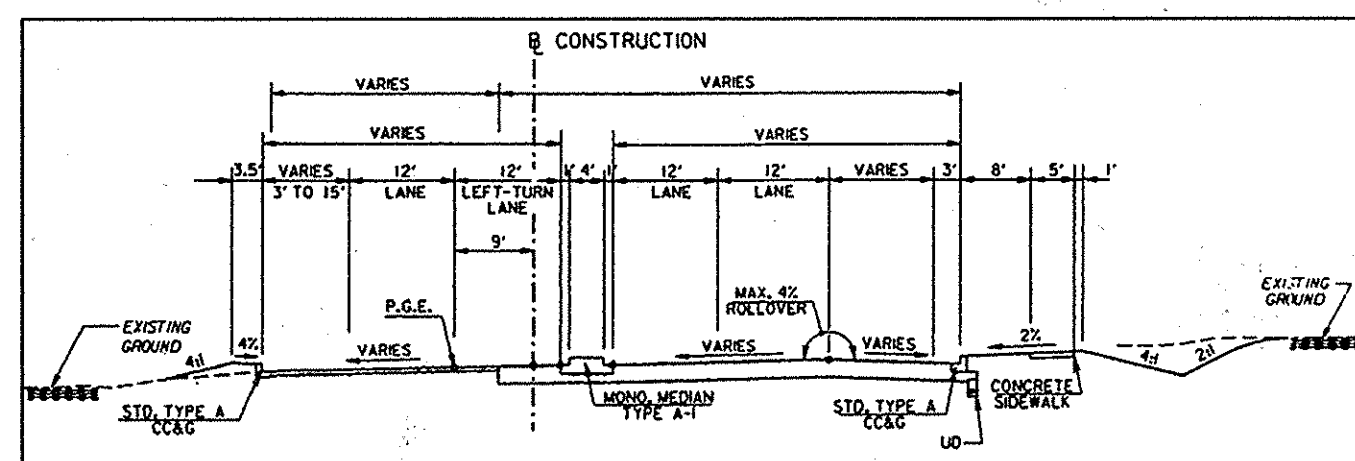


- ① 2.0" HOT MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFACE COURSE PG 70-22, LEVEL 3
- ② VARIABLE DEPTH HOT MIX ASPHALT SUPERPAVE 9.5 MM FOR BASE COURSE PG 70-22
- ③ 3.0" HOT MIX ASPHALT SUPERPAVE 25.0 MM FOR BASE COURSE PG 70-22
- ④ 3.0" HOT MIX ASPHALT SUPERPAVE 19.0 MM FOR BASE COURSE, LEVEL 3 PG 70-22
- 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 - MAXIMA 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
- ⑮ 2" GAB W/O TRAFFIC BARRIER; 12" GAB W/ TRAFFIC BARRIER.
- ⑯ 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.
- ⑰ LONGITUDINAL UNDERDRAINS SHALL BE WRAPPED WITH CLASS SD TYPE II GEOTEXTILE.

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.



PLAN  
DETAIL for HW 2  
Scale: 1"=3'

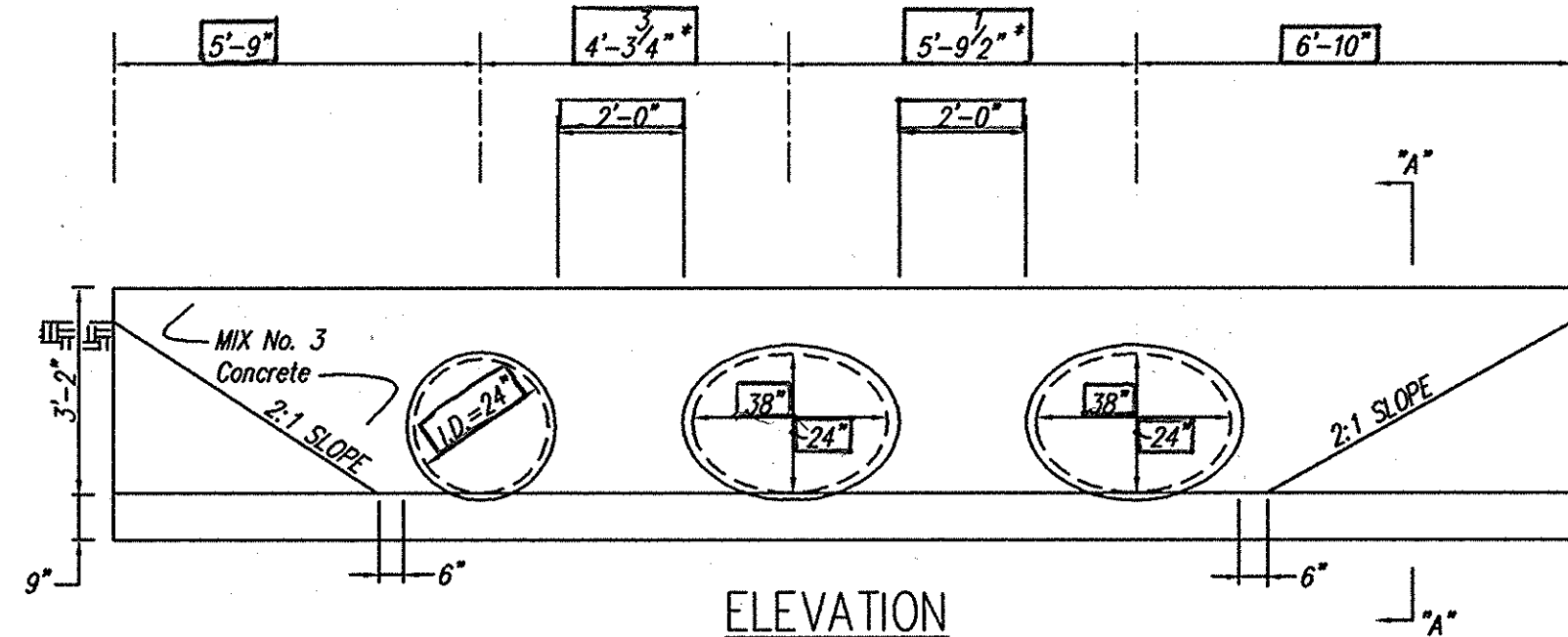


CROSS SECTION THRU WORK AREA  
Scale: NTS

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	LOCATIONS	REMARKS
			UPPER	LOWER	UPPER	LOWER			
HW 1	END WALL		432.53	437.97	434.26	434.415	see detail, this sheet	@ STA. MD. RTE. 216 24+14.03 74.3' RT.	
HW 2	END WALL		441.23	444.67	438.11	438.50	see detail, this sheet	@ STA. MD. RTE. 216 22+32.63 65.14' RT.	
MH 17	STD. MANHOLE	4'-0"	445.66		435.21	438.74	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'	

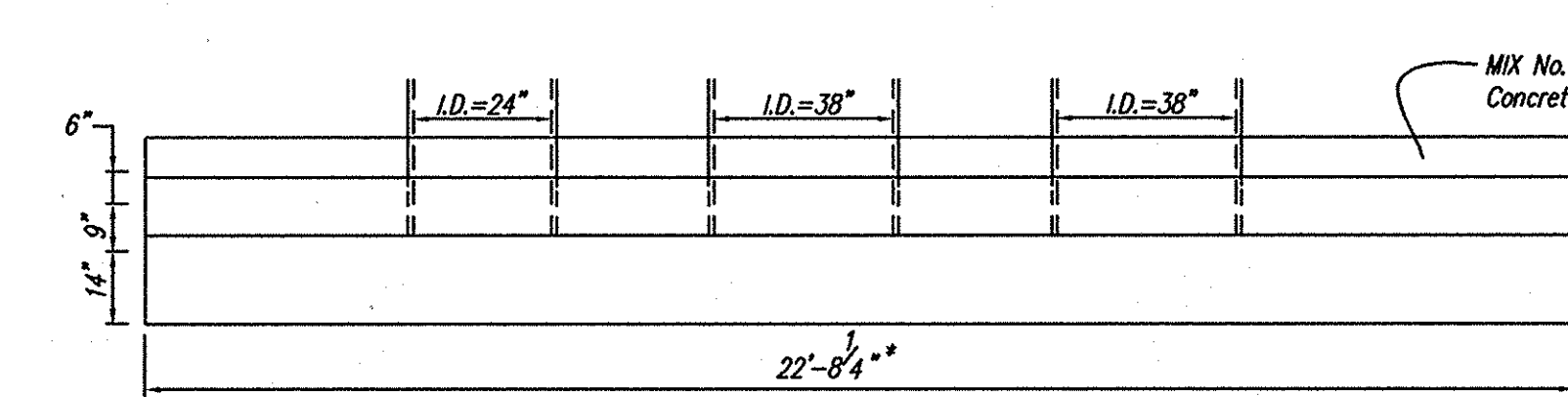
\* INDICATES HORIZONTAL ELLIPTICAL REINFORCED CONCRETE CULVERT PIPE.



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 3/4"

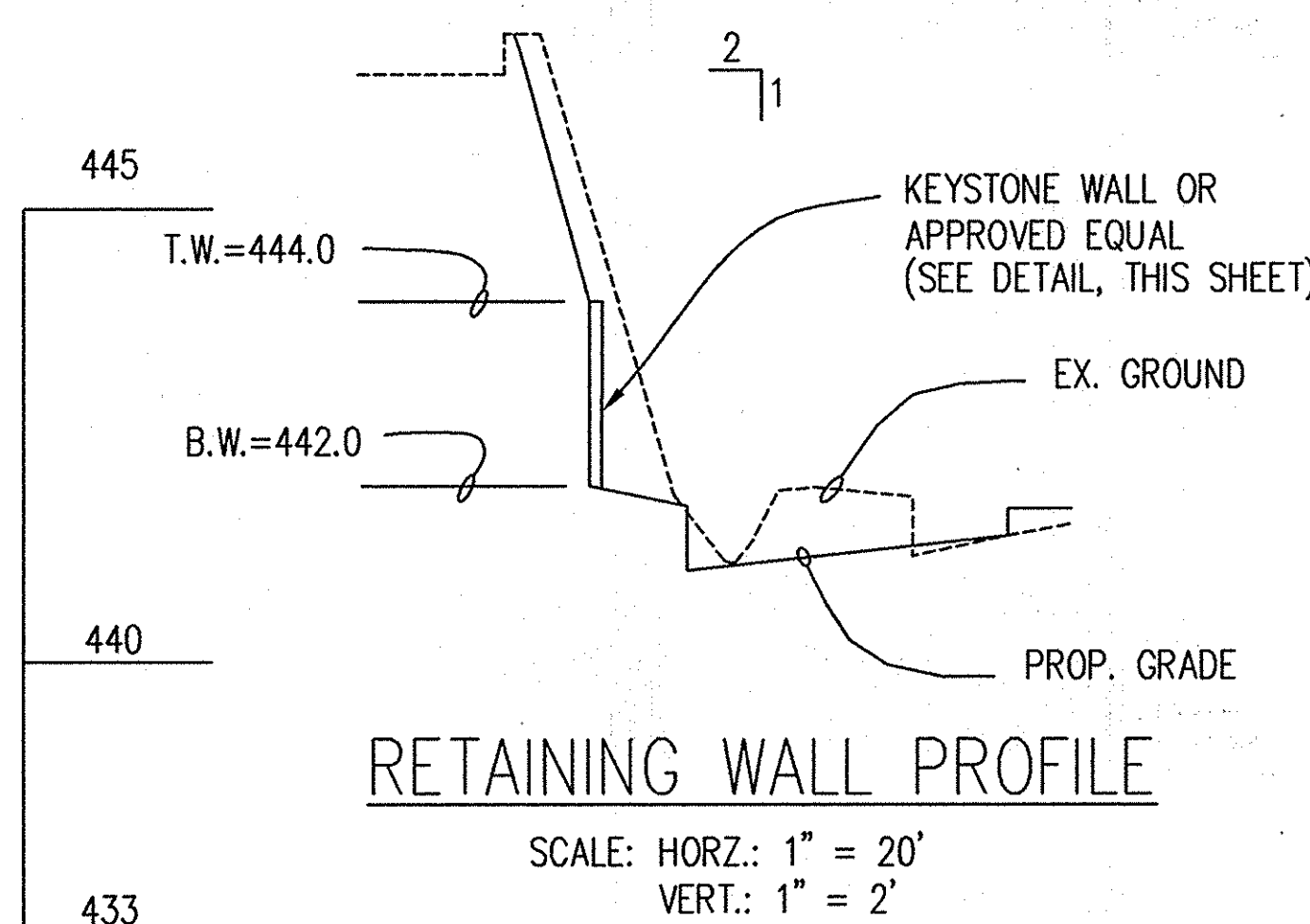


PLAN  
DETAIL for HW 1  
Scale: 1"=3'

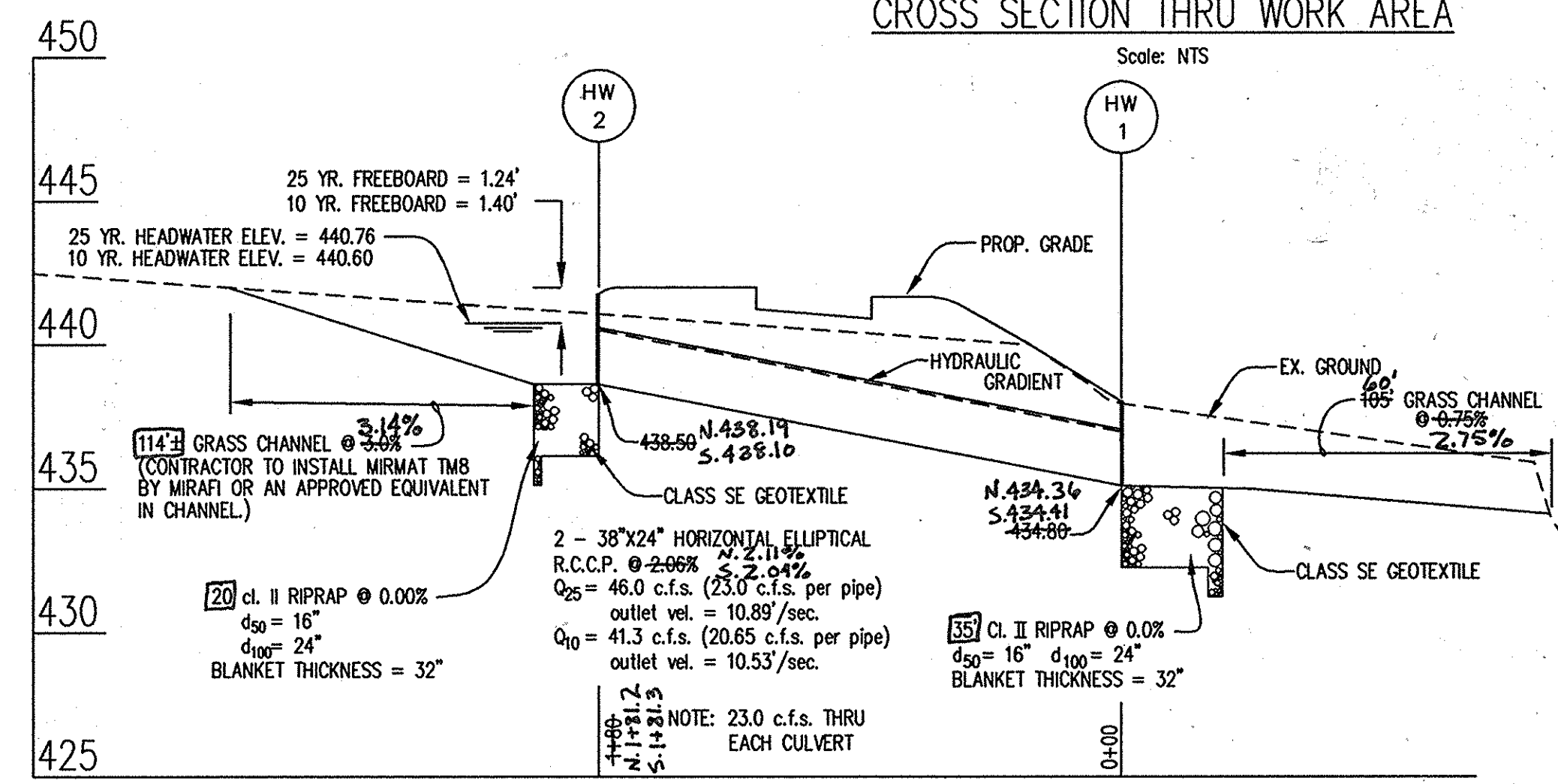
SECTION "A" - "A"

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.

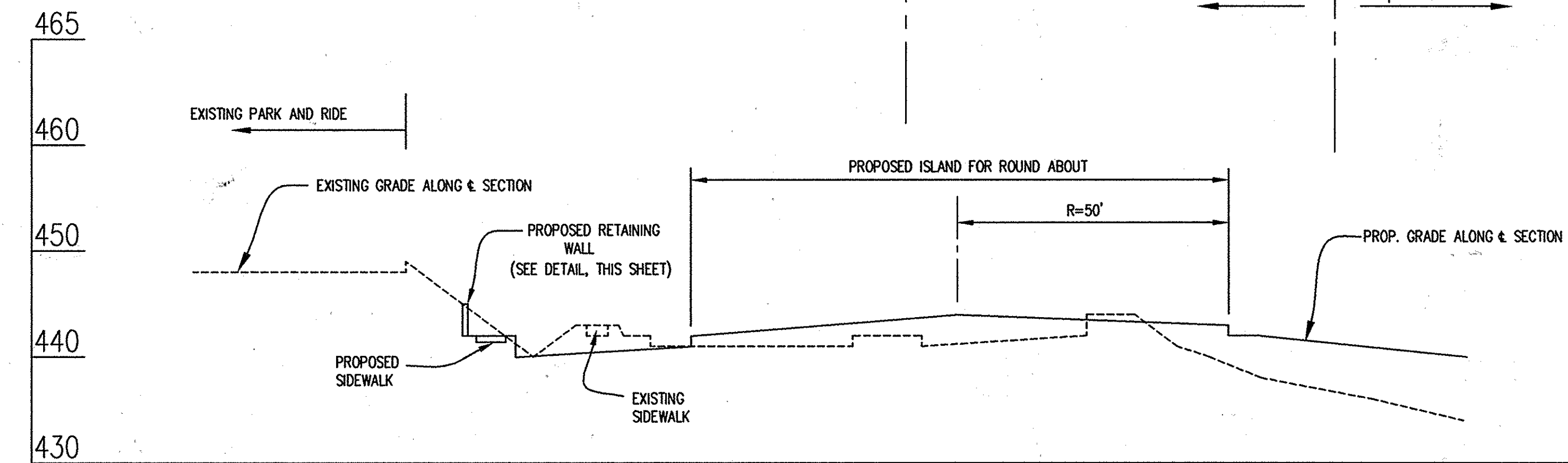
\* Assumes 38"x24" elliptical thickness of 3-3/4" and 24" circular pipe thickness of 3/4"



RETAINING WALL PROFILE  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'



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



SECTION "A" - "A"  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. ...* 2-25-03  
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*...* 3/7/03  
Chief, Division of Planning & Zoning

*...* 2/1/02  
Chief, Development Engineering Division



(ALSO APPLIES TO ASBUILT)

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20886  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

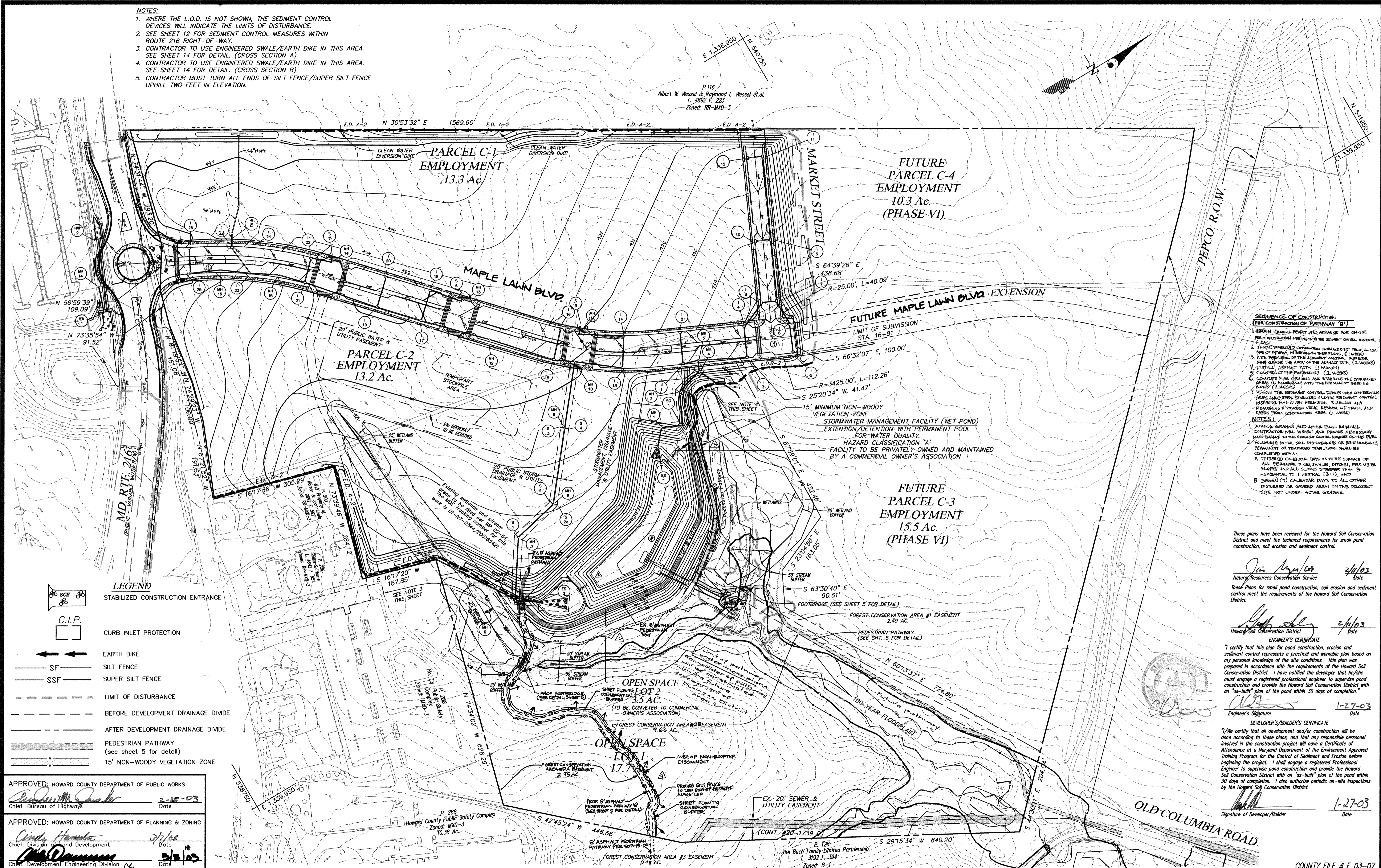
PREPARED FOR:  
G & R MAPLE LAWN INC., et. al.  
SUITE 410 WOODHOLME CTR.  
1829 REISTERSTOWN ROAD  
BALTIMORE, MD, 21208  
ATTN: CHARLIE O'DONOVAN  
410-484-8400

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)

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

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

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



- SEQUENCE OF CONSTRUCTION (FOR CONSTRUCTION OF PATHWAY 'B')**
- OBTAIN GRADING PERMIT AND ARRANGE FOR ON-SITE PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR.
  - GENERAL STABILIZED CONSTRUCTION ENTRANCE & SLOPE OR LOW SIDE OF PATHWAY, AS SHOWN ON THESE PLANS. (2 WEEKS)
  - WITH PERMIT OF THE SEDIMENT CONTROL INSPECTOR, FINE GRADE THE AREA OF THE ASPHALT PATH. (2 WEEKS)
  - INSTALL ASPHALT PATH. (1 MONTH)
  - CONSTRUCT THE PATHWAY. (2 WEEKS)
  - CONCRETE CURB, GRASS AND STABILIZE THE DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEDIMENT CONTROL PLAN. (2 WEEKS)
  - REMOVE THE SEDIMENT CONTROL DEVICES ONCE CONTRIBUTING AREAS HAVE BEEN STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAS GIVEN PERMISSION. STABILIZE ANY REMAINING DISTURBED AREAS. REMOVAL OF TRASH AND DEBRIS FROM CONSTRUCTION AREA. (1 WEEK)

- NOTES:**
- DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.
  - FOLLOWING INITIAL SOIL DISTURBANCES OR RE-DISTURBANCES, REGRADING OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
    - A. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMANENT DITCHES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
    - B. SEVEN (7) CALENDAR DAYS TO ALL OTHER DISTURBED OR GRUBBED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

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.

*Jim Lopez* 2/11/03  
Natural Resources Conservation Service Date

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

*John Kelly* 2/11/03  
Howard Soil Conservation District Date

**ENGINEER'S CERTIFICATE**  
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

*[Signature]* 1-27-03  
Engineer's Signature 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]* 1-27-03  
Signature of Developer/Builder Date

- LEGEND**
- 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**  
*[Signature]* 2-25-03  
Chief, Bureau of Highways Date

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**  
*[Signature]* 2/1/03  
Chief, Division of Land Development Date

*[Signature]* 2/1/03  
Chief, Development Engineering Division Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK  
BURTONTVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APPR.
2/30/03	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.U.	
2/25/03	2. Added silt fence deviating devices	J.A.U.	
2/14/03	3. Added asphalt along top of dam removed section along top of dam	J.A.U.	
04/26/03	4. RE-PLINE TO ILLUSTRATE A PATHWAY THROUGH H.C. OPEN SPACE LOT 1	R.H.V.	

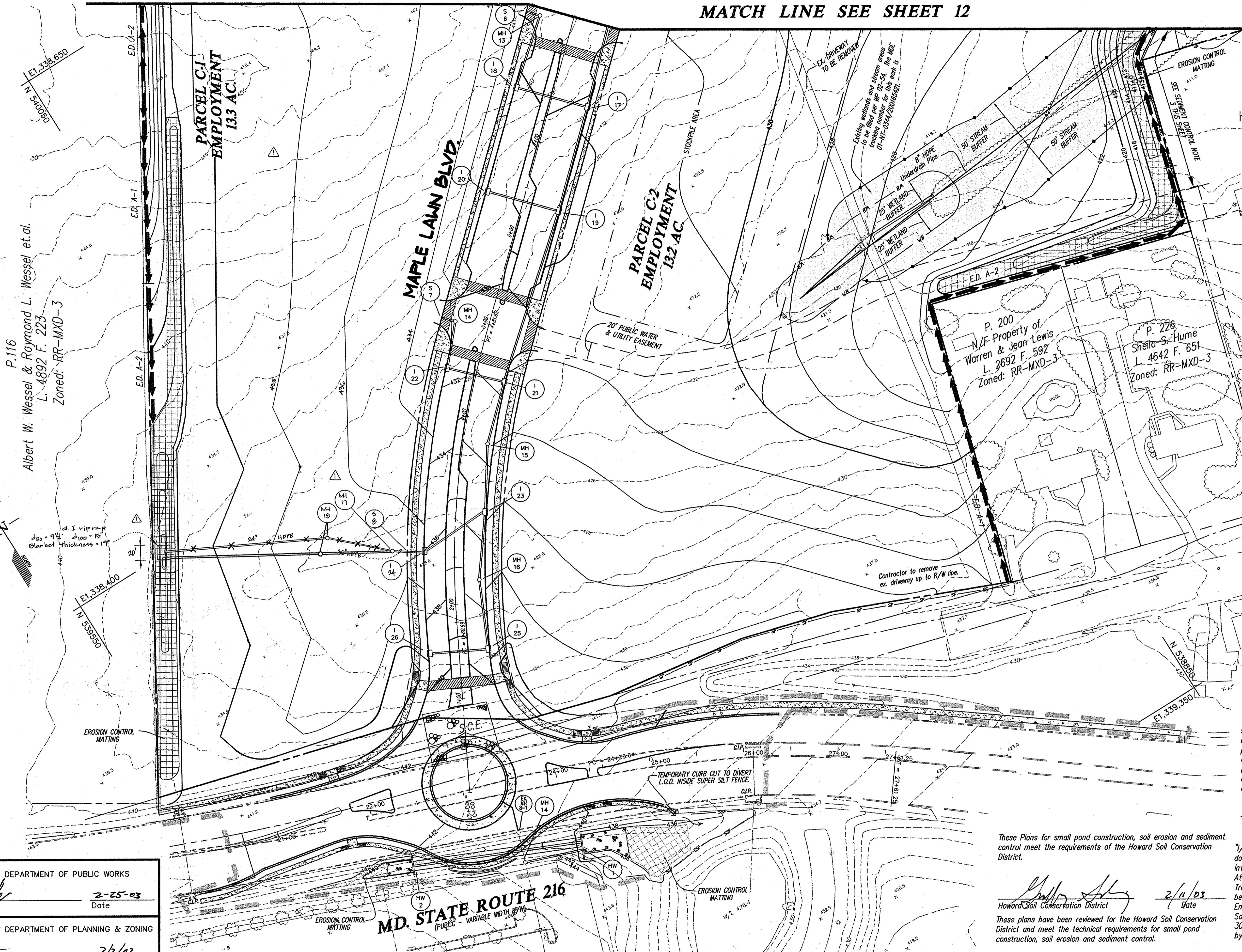
**PREPARED FOR:**  
G & R Maple Lawn, Inc., et. al.  
Suite 410, Woodstown Center  
1829 Reisterstown Road  
Baltimore, MD. 21208  
Attn: Charlie O'Donovan  
410-484-8400

**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

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MATCH LINE SEE SHEET 12



P. 288  
Ho. Co. Public Safety  
Complex  
Zoned: MXD-3

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

PARCEL C-2  
EMPLOYMENT  
132 AC

PARCEL C-1  
EMPLOYMENT  
133 AC

MAPLE LAWN BLVD

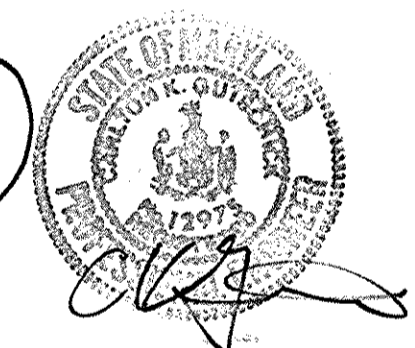
P. 200  
N/E Property of  
Warren & Jean Lewis  
L. 2692 F. 592  
Zoned: RR-MXD-3

P. 226  
Sheila S. Hume  
L. 4642 F. 651  
Zoned: RR-MXD-3

**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)



**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."

*CLG*  
Engineer's Signature  
1-27-03  
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."

*John Reynolds*  
Signature of Developer/Builder  
1-27-03  
Date

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

*John Reynolds*  
Howard Soil Conservation District  
2/4/03  
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.

*John Reynolds*  
Natural Resources Conservation Service  
2/4/03  
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Quirk*  
Chief, Bureau of Highways  
2-25-03  
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hamrick*  
Chief, Division of Land Development  
3/7/03  
Date

*John Reynolds*  
Chief, Development Engineering Division  
3/2/03  
Date

**GLWGUTSCHICK LITTLE & WEBER, PA**  
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	APPR.
1/30/03	Revise location of storm drain in Maple Lawn Blvd. & thru Parcel C-1 Revise grades on Parcel C-1.	J.A.U.	

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)

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

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

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

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

**MARKET STREET**

**PARCEL C-1  
 EMPLOYMENT  
 13.3 AC.**

**MAPLE LAWN BLVD.**

**OPEN SPACE  
 LOT 2  
 3.5 AC.**

**PARCEL C-2  
 EMPLOYMENT  
 13.2 AC.**

**OPEN SPACE  
 LOT 1  
 17.7 AC.**

**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: *[Signature]* 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: *[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: 2/16/03

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: 2/16/03

NOTE: THE LOCATION OF THE PEDESTRIAN PATHWAY MAY BE ADJUSTED IN THE FIELD TO AVOID EXISTING TREES

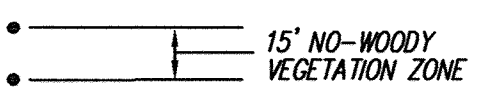
AREA OF NON-RAPIDLY DISCONNECT

FOREST CONSERVATION AREA #2B EASEMENT 9.63 AC.

FOREST CONSERVATION AREA #2A EASEMENT 2.75 AC.

P. 288  
 Ho. Co. Public Safety  
 Complex  
 Zoned: MXD-3

**LEGEND**



**SEDIMENT CONTROL NOTES**

- WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
- SEE SHEET 15 FOR BASIN SCHEDULE AND NOTES.
- CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION A)
- CONTRACTOR TO USE ENGINEERED SWALE/EARTH DIKE IN THIS AREA. SEE SHEET 14 FOR DETAIL. (CROSS SECTION B)

**MATCH LINE SEE SHEET 11**

- SEE SHEET 22 FOR FINAL GRADING IN AREA OF SWALE ALONG EASTERN MOST PROPERTY LINE.
- SEE SHEET 24 FOR SEDIMENT CONTROL NEEDED FOR THE CONSTRUCTION IN THE amenity area and the asphalt path. The path alignment shown on sheet 24 supercedes paths shown on this plan.

(ALSO APPLIES TO AS-BUILT)

**Stormwater Management Notes**

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

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

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

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

DATE	REVISION	BY	APPR.
9/30/02	Revise grading along Market Street and across Parcel C-2.	JAU	
11/9/02	Revise forebay dewatering device	WLP	
1/22/03	Added notes for finding amenity & path information on sheet 24.	BEV	
04/26/03	REDLINE TO ILLUSTRATE A PATHWAY THROUGH HO OPEN SPACE LOT 1	R.H.V.	

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

**GRADING/SEDIMENT CONTROL PLAN**  
**MAPLE LAWN FARMS**  
 Business District - Area 1  
 Parcels C-1, C-2, and Open Space Lots 1 & 2

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

COUNTY FILE # F 03-07

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

**ENGINEER'S CERTIFICATE**  
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

*[Signature]* 1-27-03  
 Engineer's Signature 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]* 1-27-03  
 Signature of Developer/Builder Date





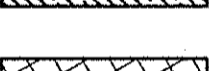
These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

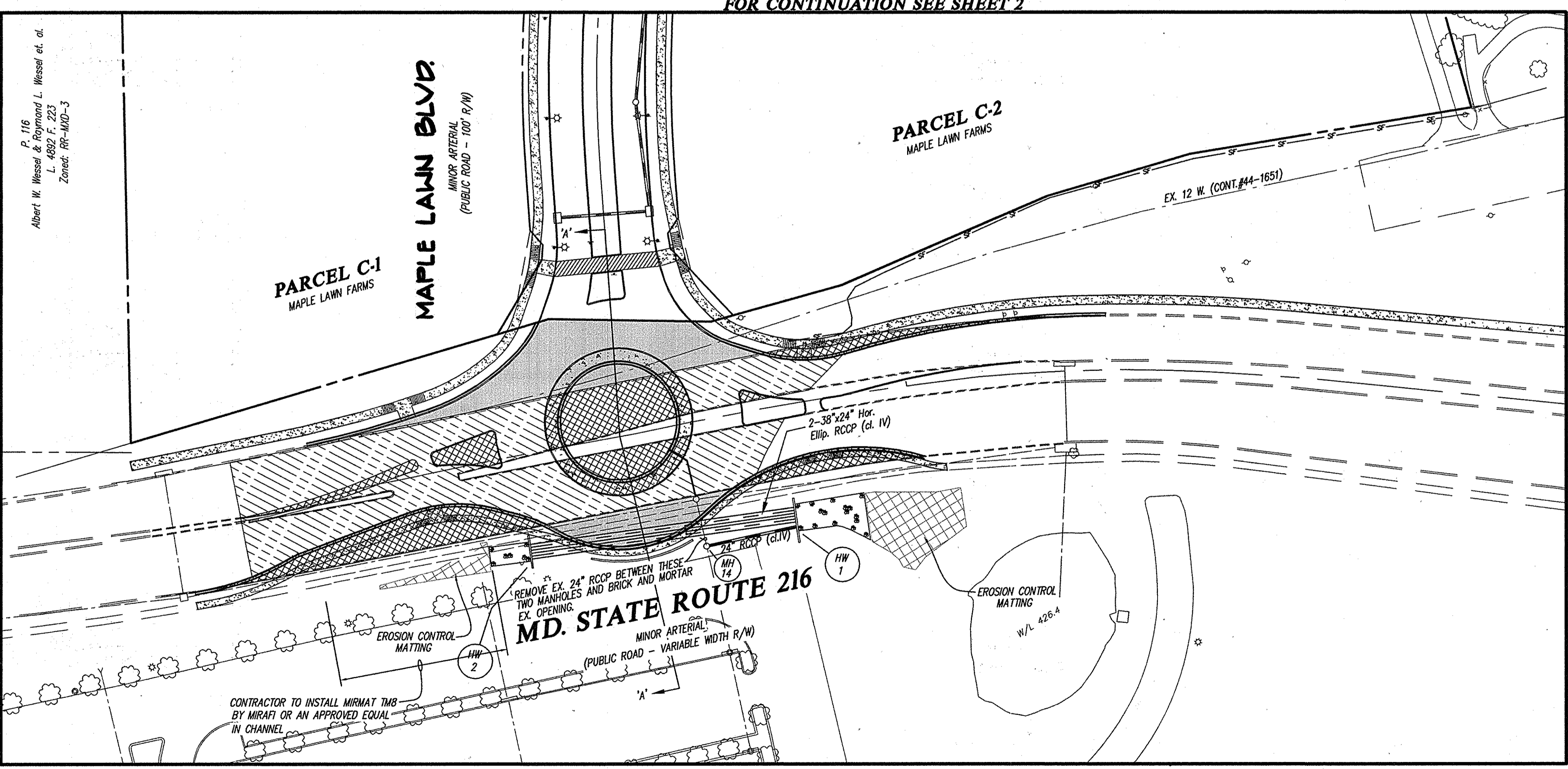
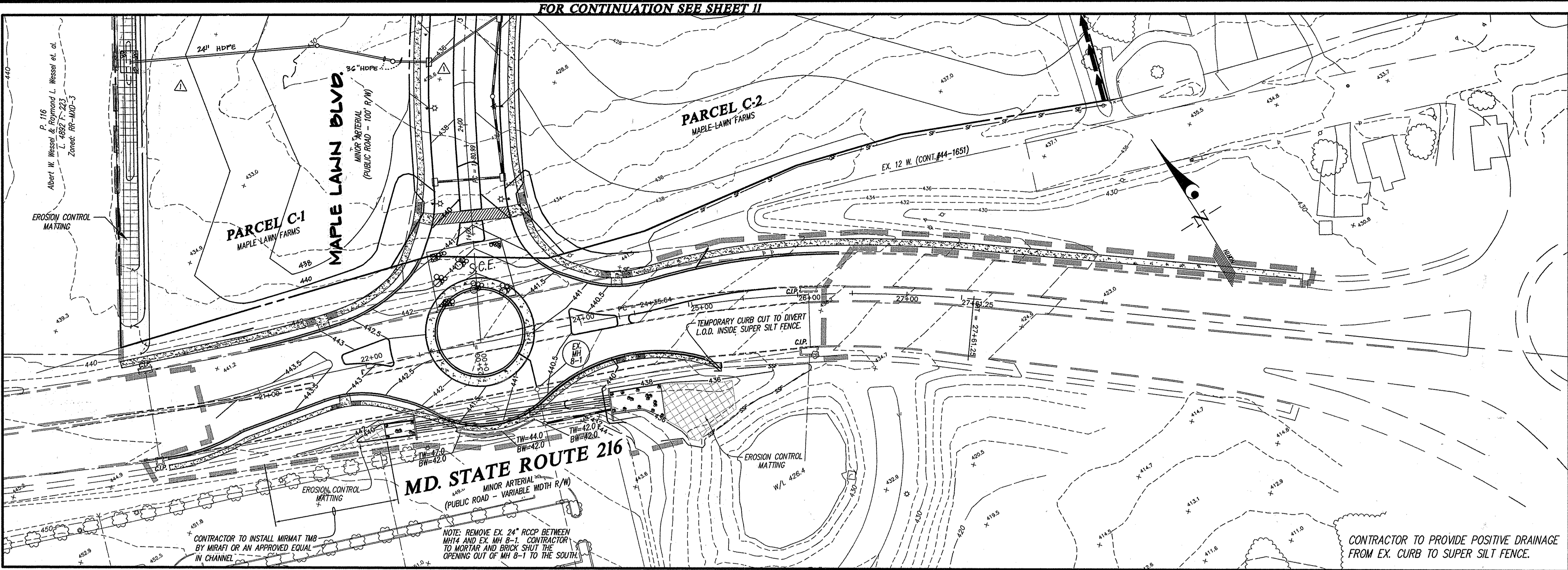
*[Signature]* 2/10/03  
 Howard Soil Conservation District Date

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

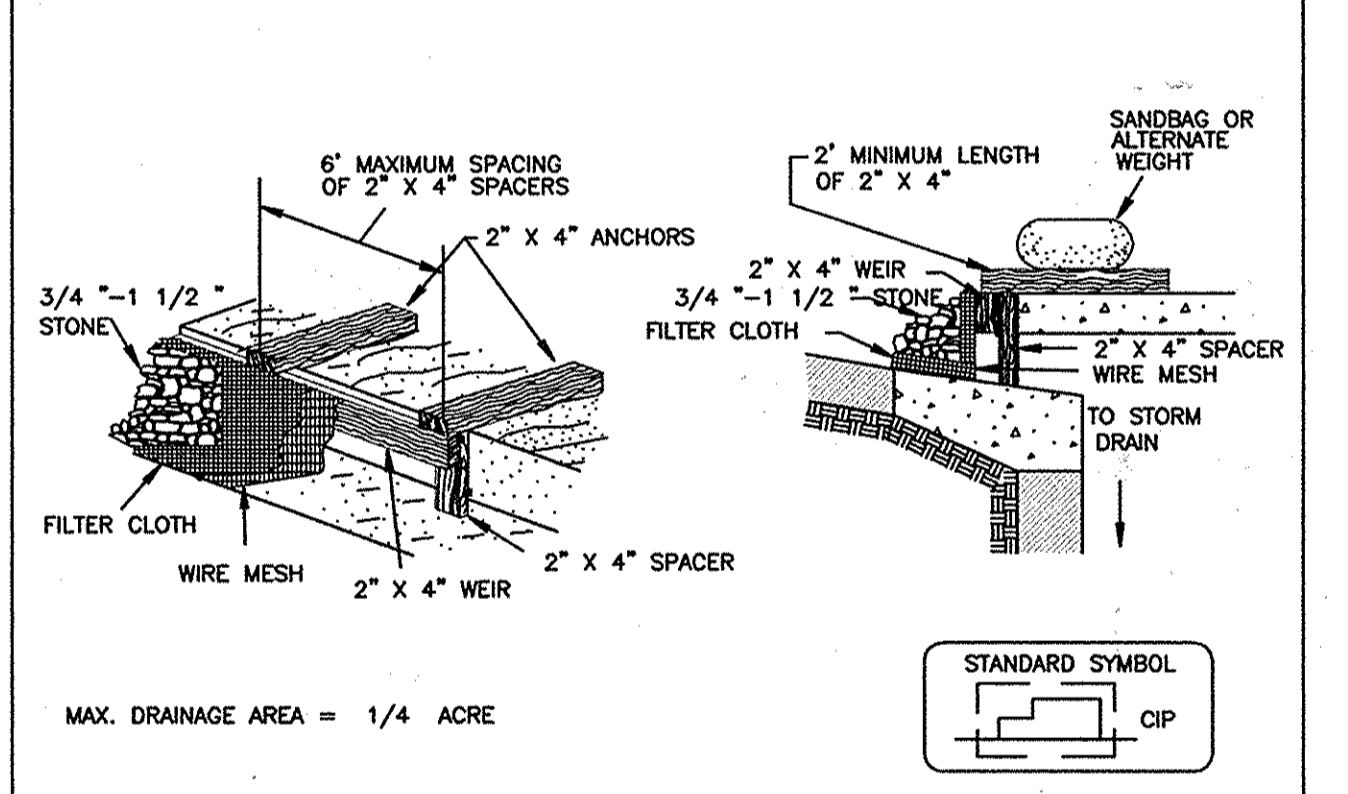
*[Signature]* 2/11/03  
 Natural Resources Conservation Service Date

**LEGEND**

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



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



- 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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 2-25-03  
 Chief, Bureau of Highways Date

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

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK  
 BURTOWNSVILLE, MARYLAND 20869  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
3/30/03	Revise location of storm drain in Maple Lawn Blvd. & how Parcel C-1. Revise grades on Parcel C-1.	JAU	

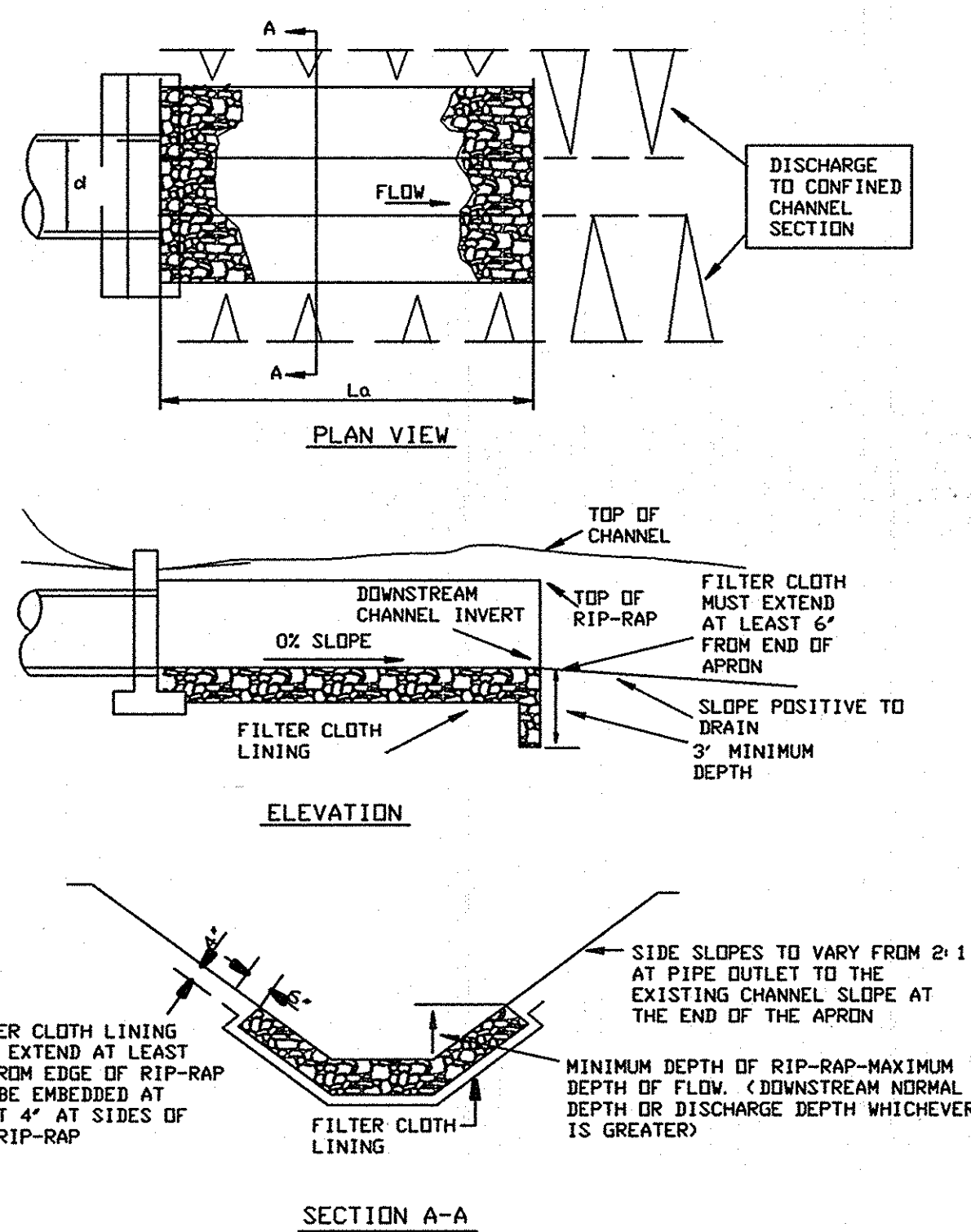
PREPARED FOR:  
 G & R Maple Lawn, Inc., et al.  
 Suite 410, Woodholme Center  
 1829 Resisterstown Road  
 Baltimore, MD, 21208  
 Attn: Charlie O'Donovan  
 410-484-8400

**GRADING/SEDIMENT CONTROL PLAN - 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

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

COUNTY FILE # F 03-07

DETAIL 26 - ROCK OUTLET PROTECTION II

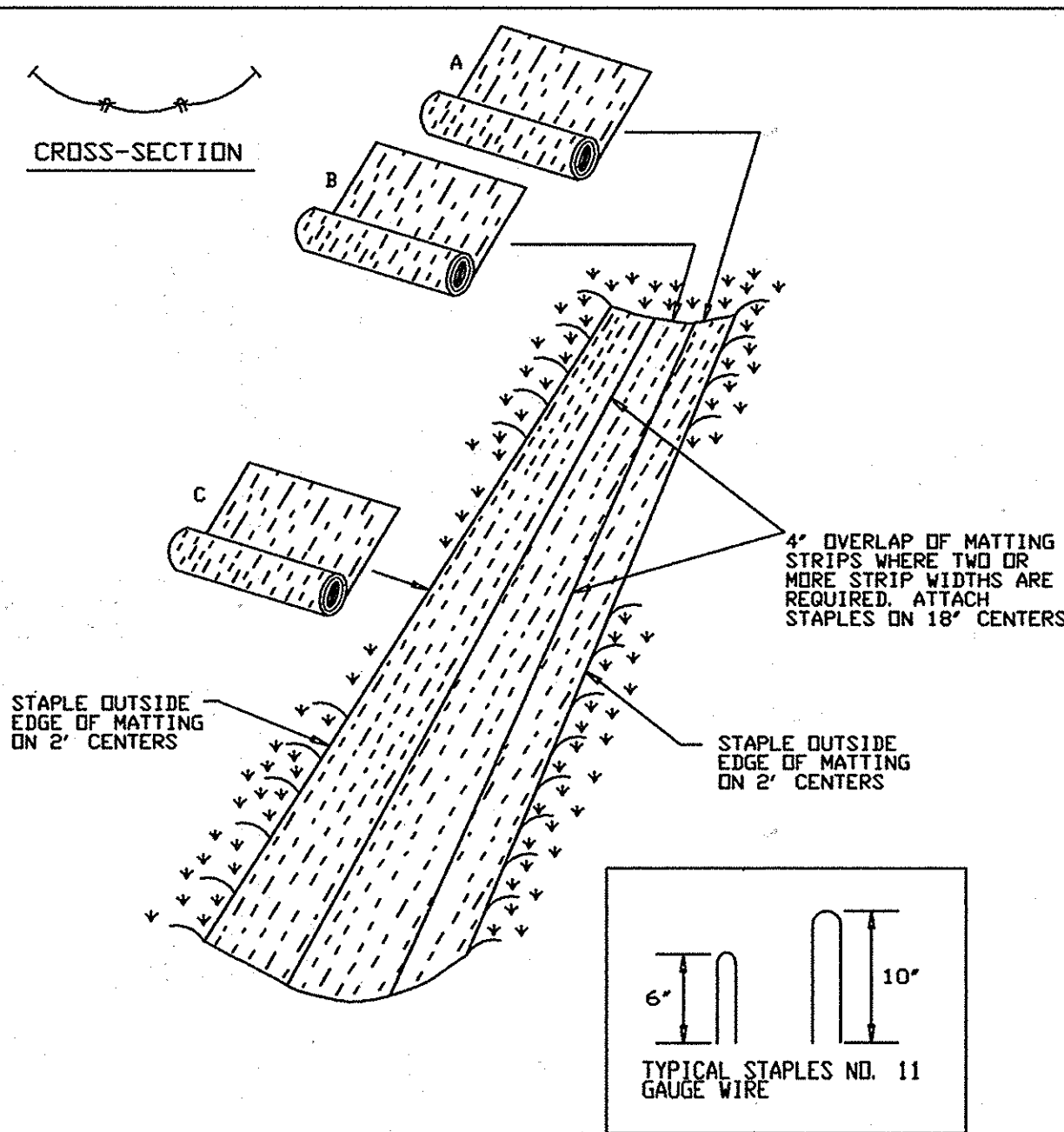


Construction Specifications

- 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.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile shall be protected from punching, cutting, or tearing. 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.
- 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.
- 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
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DETAIL 30 - EROSION CONTROL MATTING

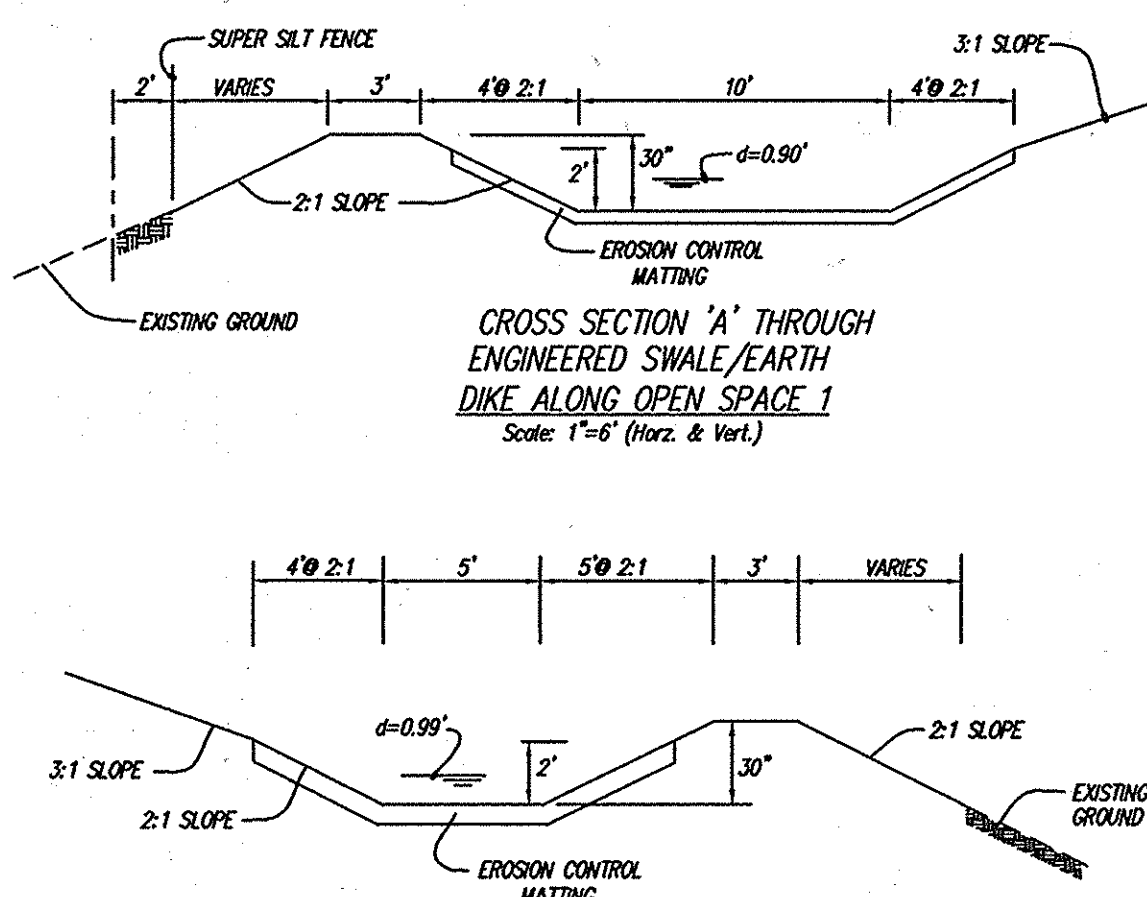


Construction Specifications

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

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

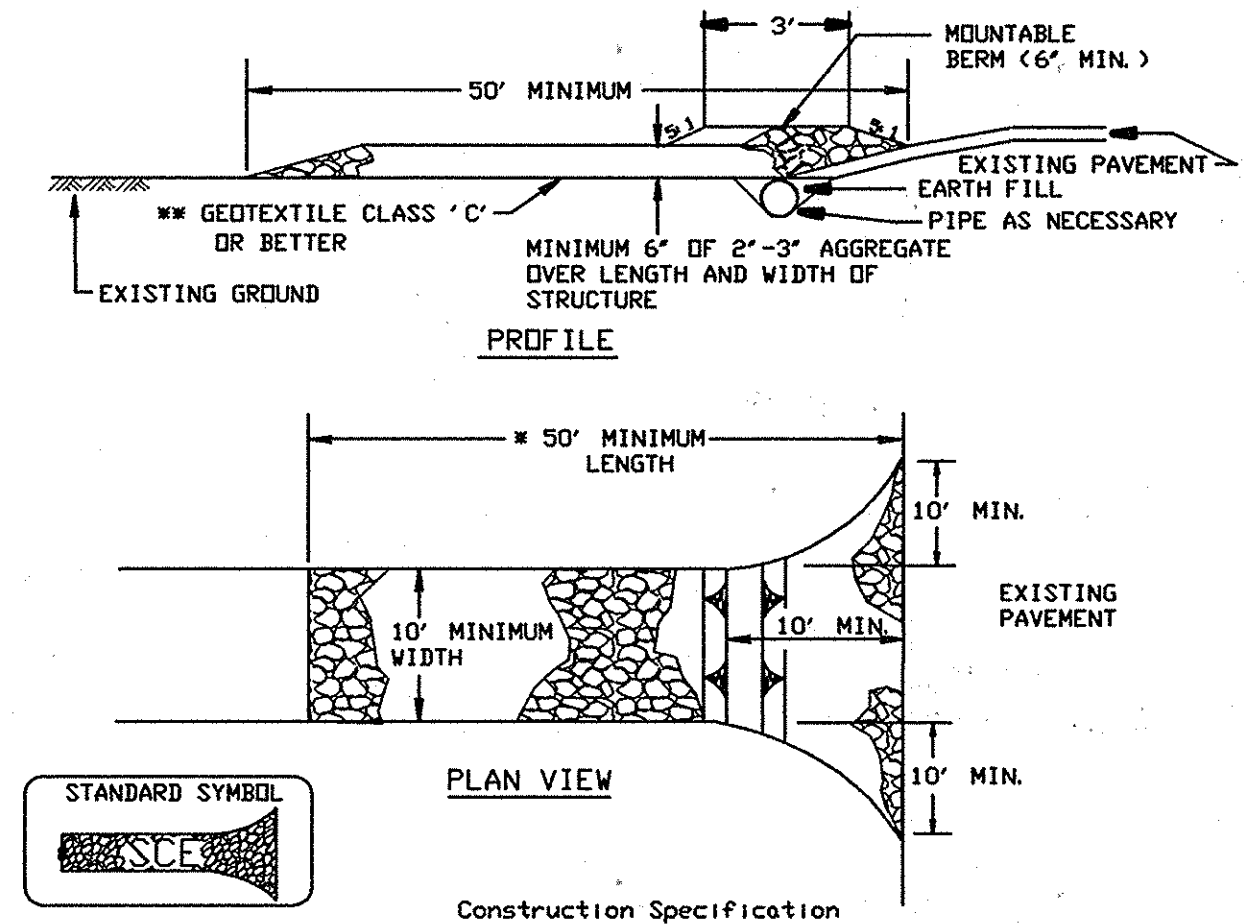
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G - 22 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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Construction Specifications

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

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

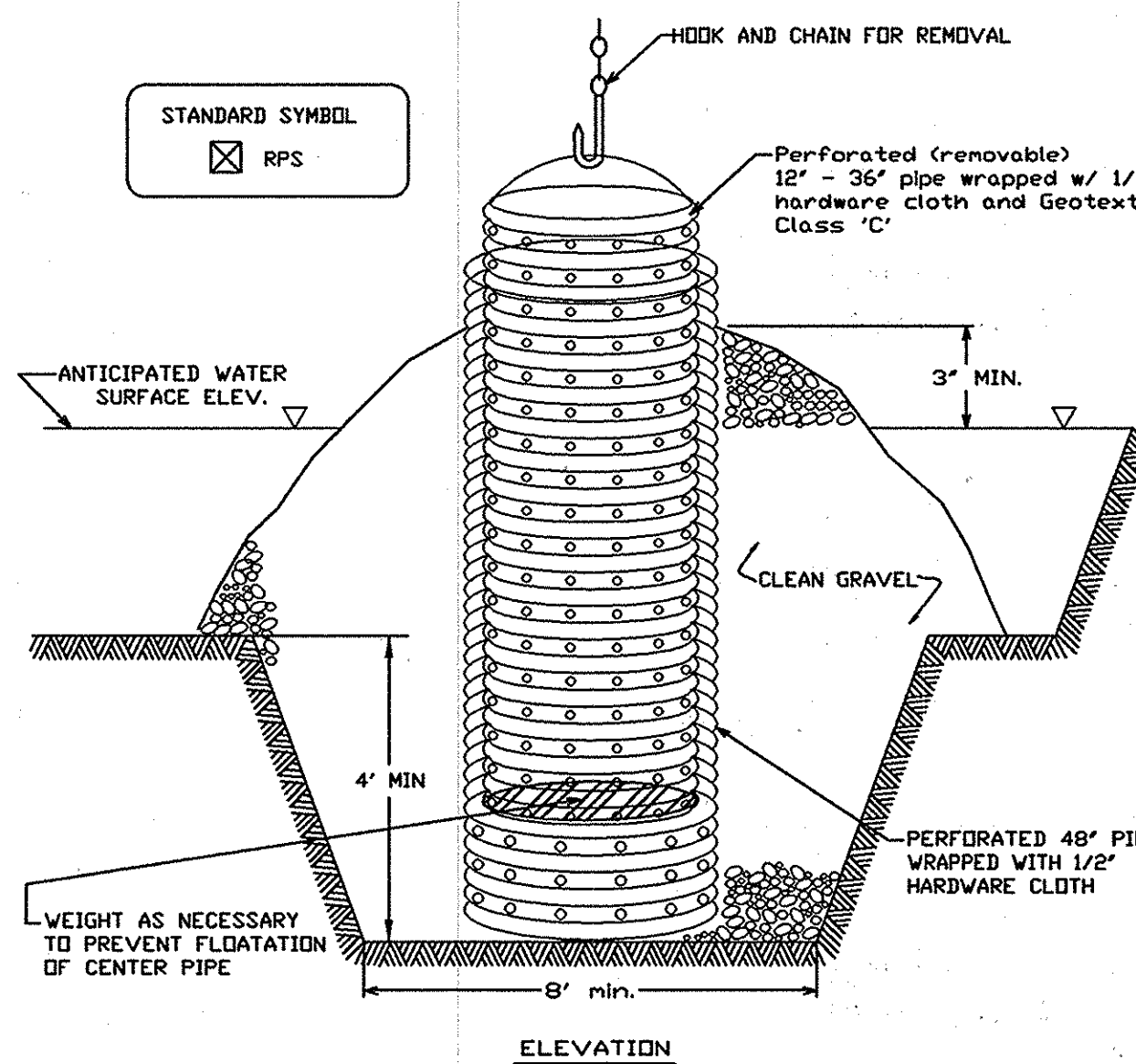


Construction Specifications

- Length - minimum of 50' (x30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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DETAIL 20A - REMOVABLE PUMPING STATION

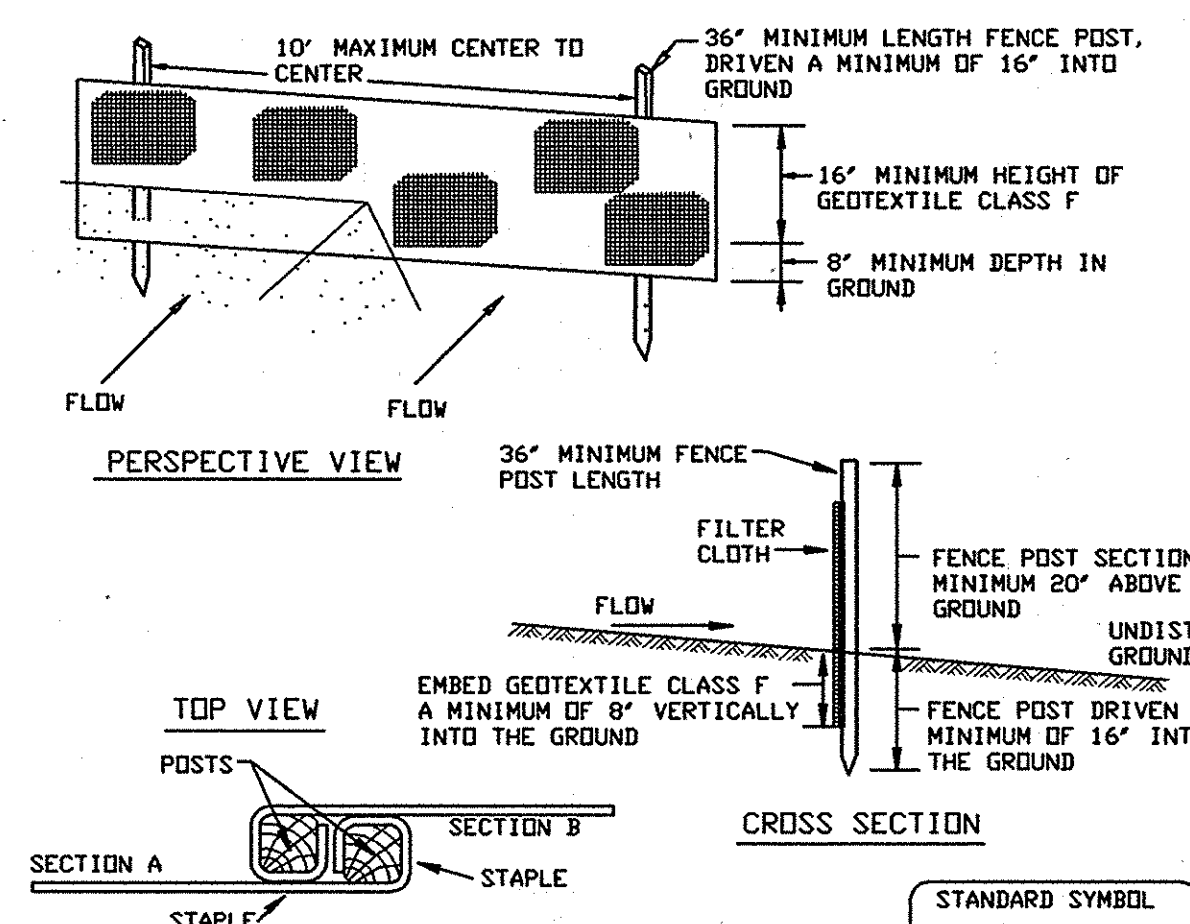


Construction Specifications

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

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DETAIL 22 - SILT FENCE



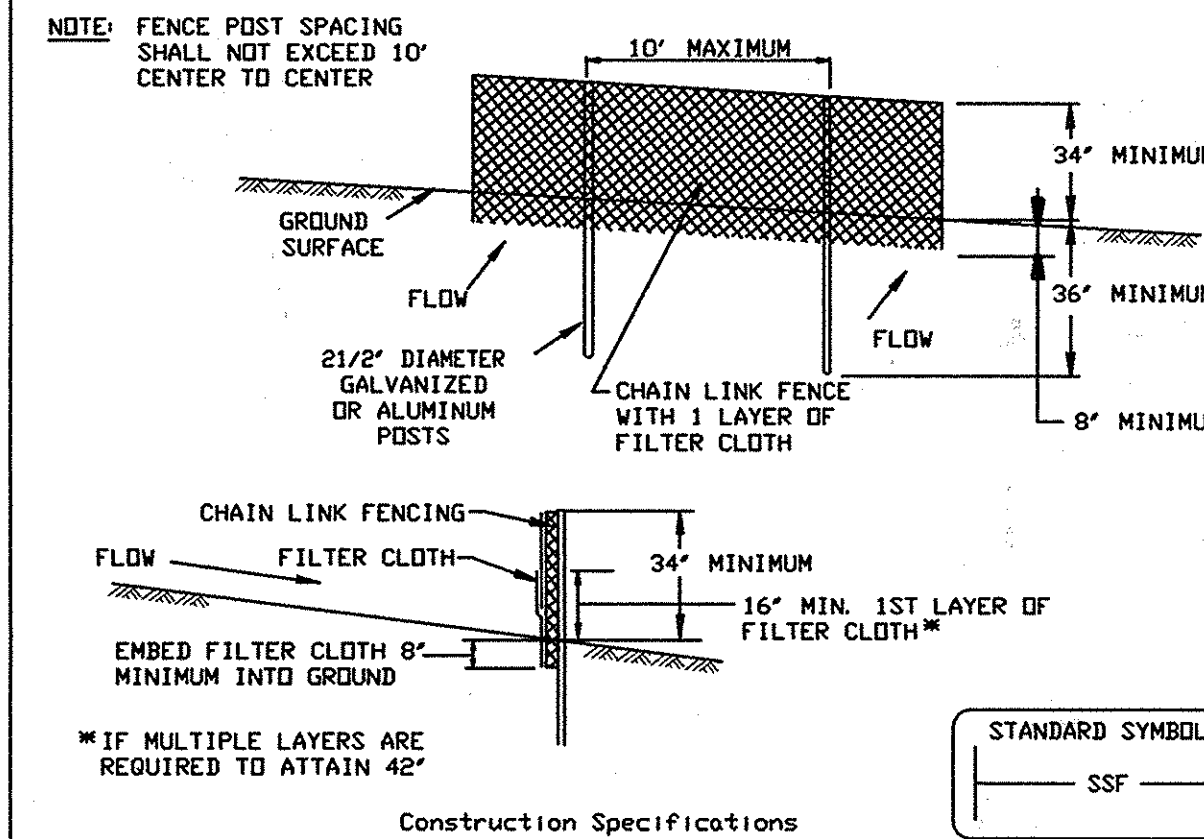
Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric cone together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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DETAIL 33 - SUPER SILT FENCE



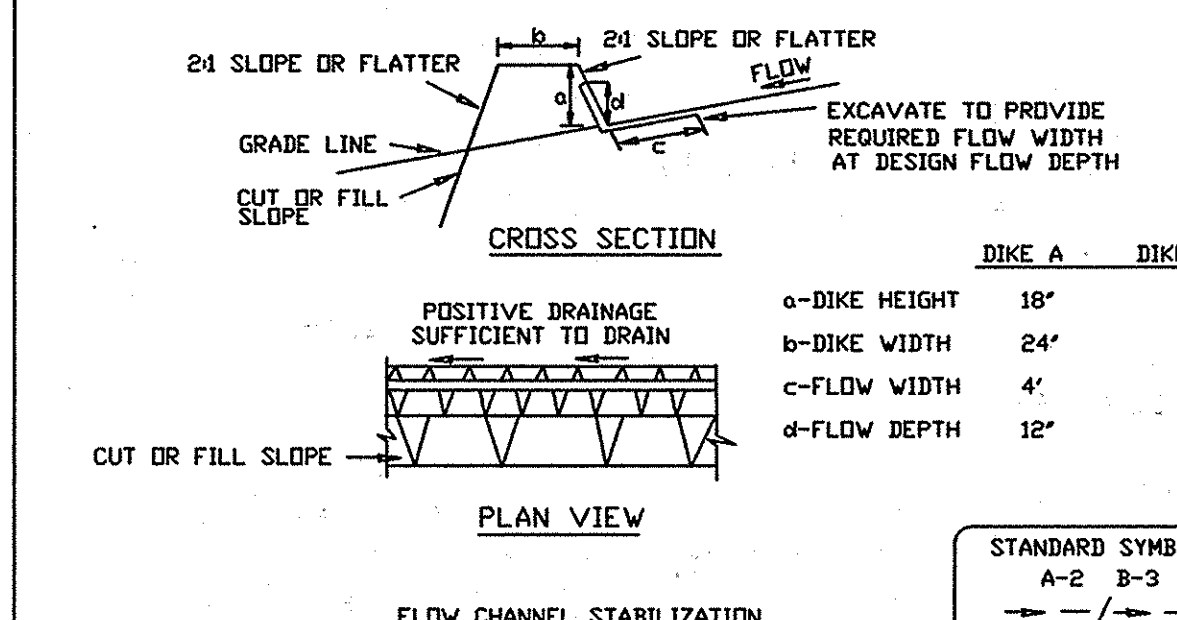
Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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DETAIL 1 - EARTH DIKE



Construction Specifications

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

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DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

ENGINEER'S CERTIFICATE

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

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: 2/16/03

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

Signature of Engineer  
 Date: 1-27-03

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

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

GLW GUTSCHICK LITTLE & WEBER, P.A.

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

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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 I  
 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)

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

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

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 redistribution, permanent or temporary stabilization shall be completed within: a) 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 rooted 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, MLF, 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

- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).
Seeding: For periods March 1 thru May 15 and from August 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 (0.7 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 unrattled 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 supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.
II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
II. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
III. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
IV. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
I. For sites having disturbed areas over 5 acres:
a. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
b. 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:
1. pH for topsoil shall be between 6.0 and 7.5. If the test result demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
2. Organic content of topsoil shall be not less than 1.5 percent by weight.
3. Topsoil having soluble salt greater than 500 parts per million shall not be used.
4. 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.
ii. 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.
c. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
II. 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, about 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 seeded preparation.

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

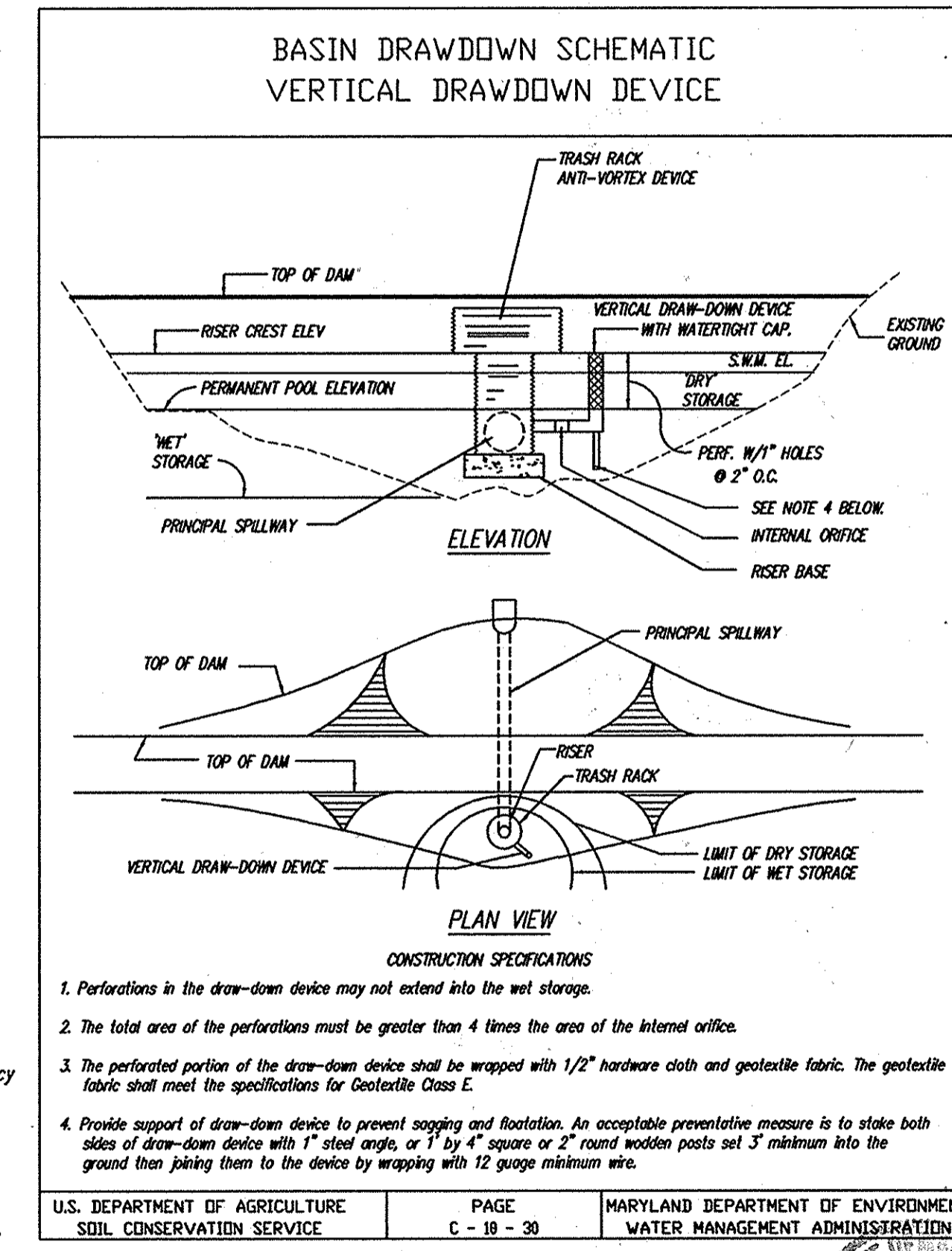
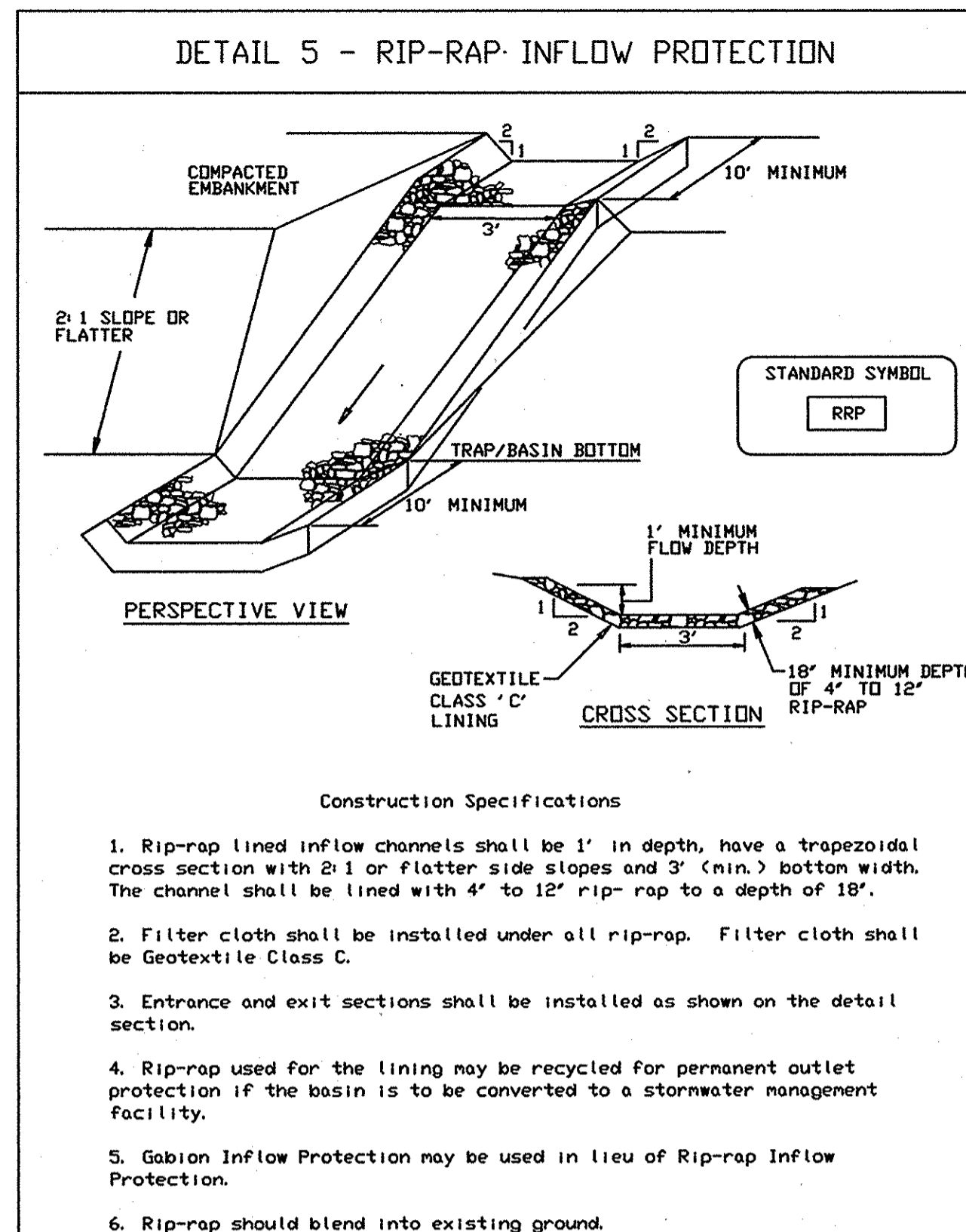
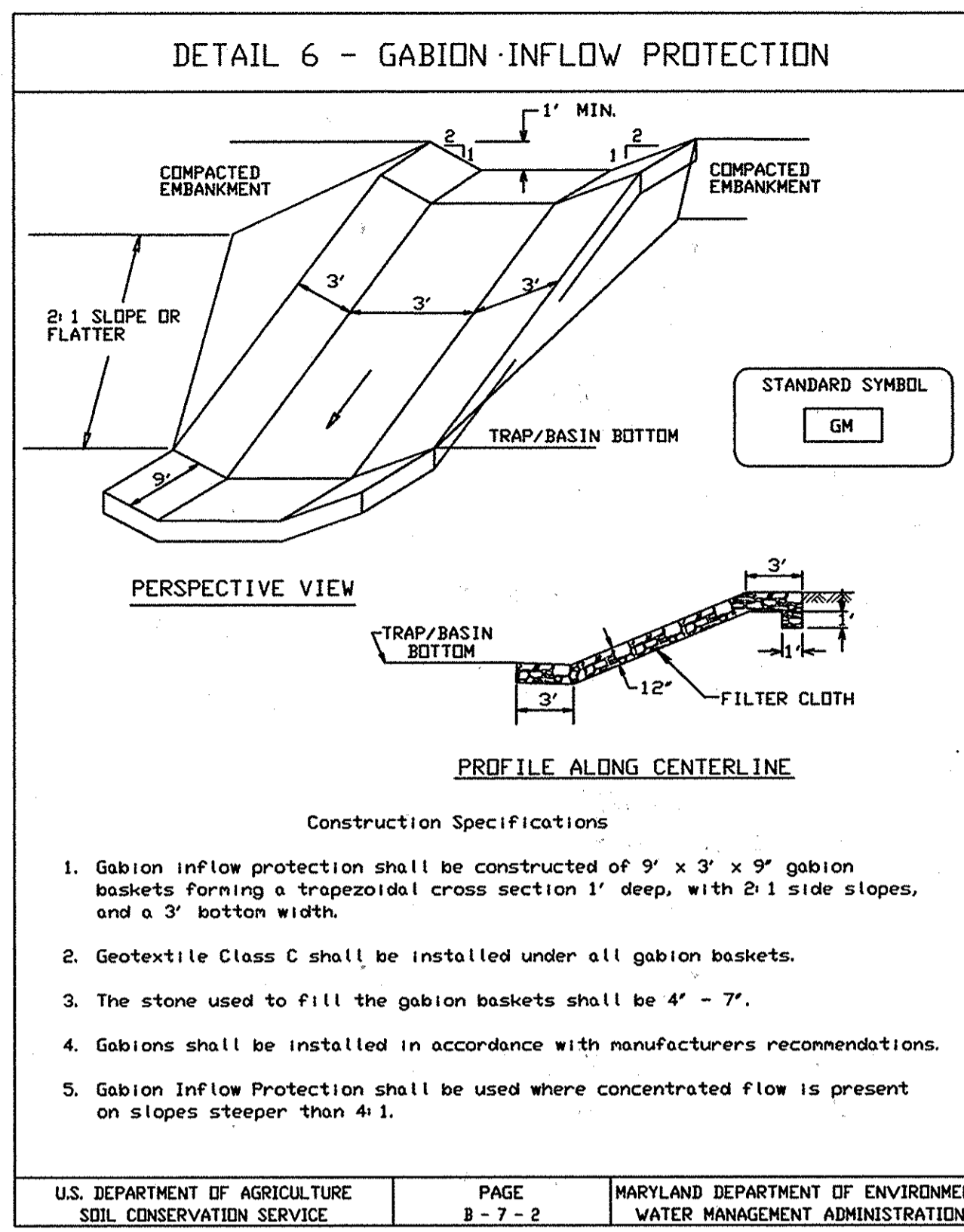
PERMANENT SEEDING NOTES

- Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 800 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 ureamform 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 unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.
Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.

DUST CONTROL

- Definition: Controlling dust blowing and movement on construction sites and roads.
Purpose: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.
Conditions Where Practice Applies: This practice is applicable to areas subject to dust blowing and movements where on and off-site damage is likely without treatment.
Specifications:
I. 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 spaced 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 reapplication.
II. 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.



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 gazebos & 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
Hardiness Zone: 6b
Seed Mixture: #9 (Tall Fescue/Kentucky Bluegrass)
Species: Kentucky 31 Tall Fescue, Penn. Top Knot Bluegrass, and certified Kentucky Bluegrass blend (5% by weight) Countywide, Raven #1 Tankage
Application Rate: 60 lbs/1000 sq ft
Seeding Dates: May 1 to May 15, Aug. 15 to Oct. 15
Seeding Depth: 1/4 - 1/2 inch
Fertilizer Rate: 10 lbs/1000 sq ft (4.9 lbs./acre)
Lime Rate: 90 lbs/1000 sq ft

- 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 SAFE 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, REDIRECT 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" HOPE 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 PLANS AND THE WATER AND SEWER PER CONTRACT #34-4062 D. BLOCK 8" HOPE OUT OF MH 4 TO RECHARGE FACILITY. AS THE GRADES AROUND THE 24" HOPE (FROM WESTERN MOST PROPERTY LINE) AND STORM DRAIN CONSTRUCTION ALLOWS, THE 24" HOPE INTO I-24 AT S-8. NO PORTION OF THE 24" HOPE 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" HOPE @ 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)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

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 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

ENGINEER'S CERTIFICATE
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.
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.

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK BURTNSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186
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. 48 Blocks 3 & 4)
SCALE: NO SCALE ZONING: MXD-3 G. L. W. FILE No.: 96079
DATE: JANUARY 2003 TAX MAP - GRID: 41: 21 & 22 SHEET: 15 OF 34
POST-DEVELOPMENT 1 YEAR DISCHARGE (UNMANAGED): 4.25 CFS
POST-DEVELOPMENT 1 YEAR DISCHARGE (MANAGED): 89.29 CFS
COUNTY FILE # F 03-07

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 PERCENT 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	11'	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'				

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: 3/1/03

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

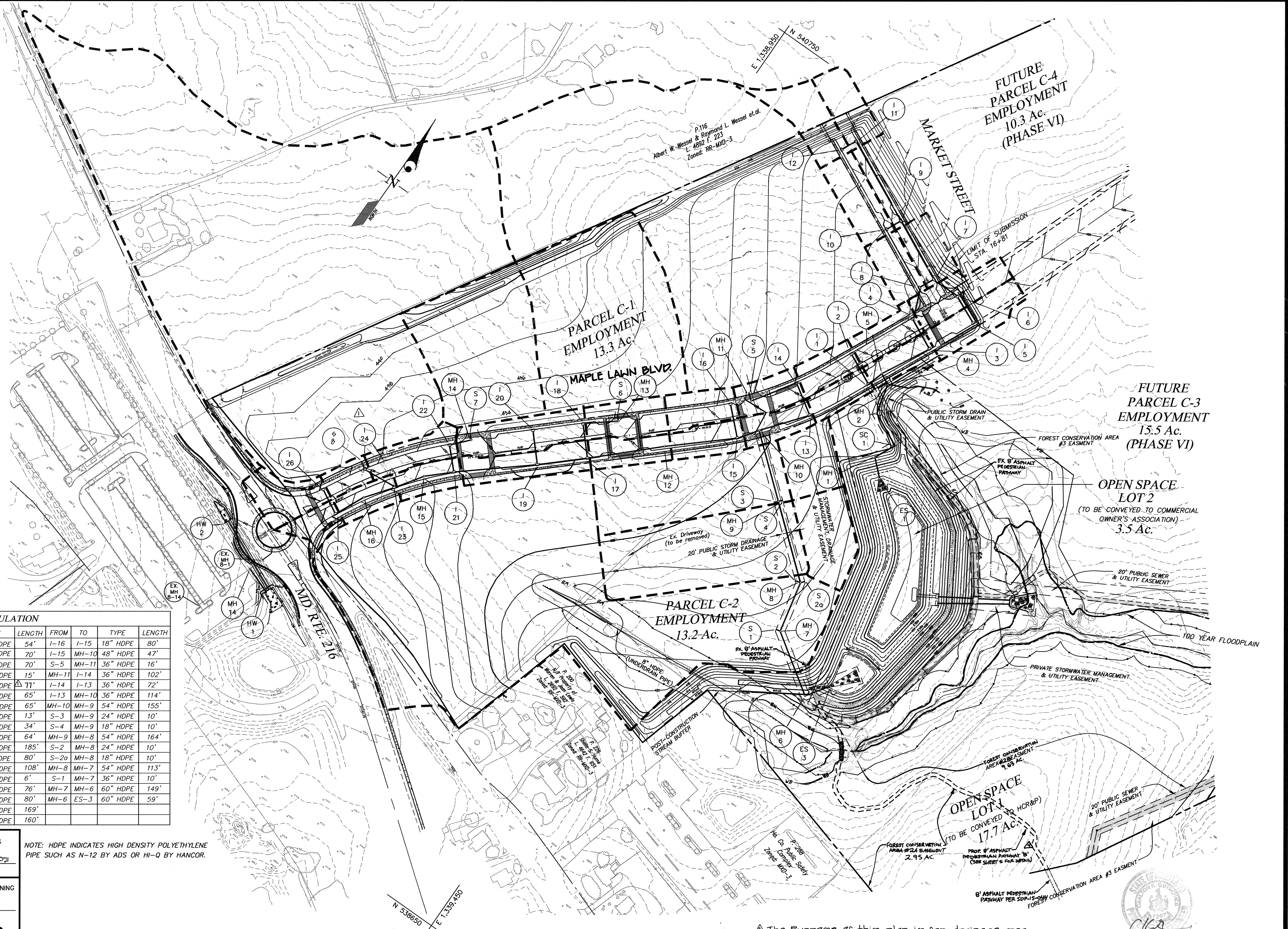
GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4108

DATE	REVISION	BY	APPR.
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	
11/9/04	Added purpose note	R.H.V.	
04/26/08	As Replied to Illustrate a Pathway through HC Open Space Lot 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

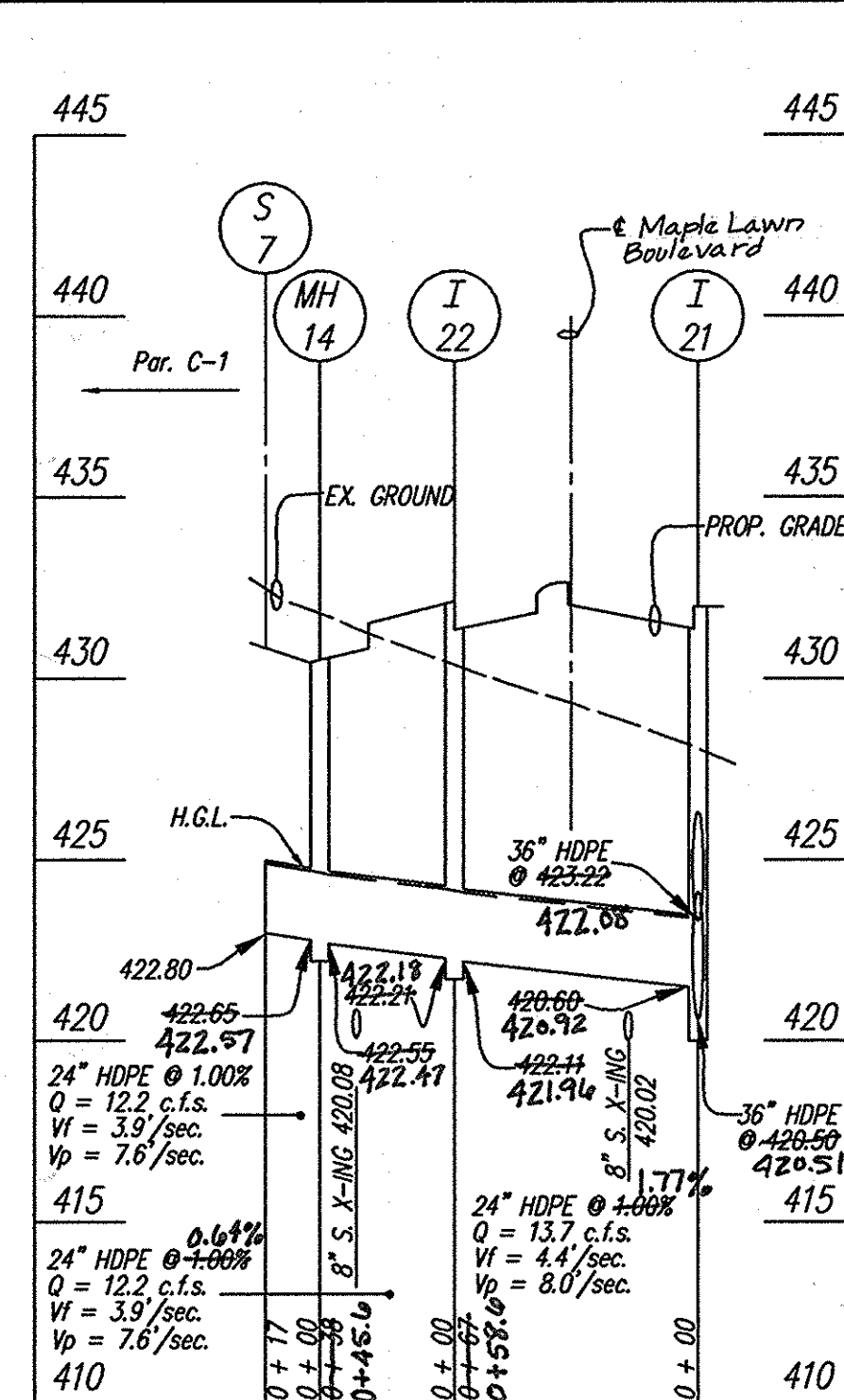
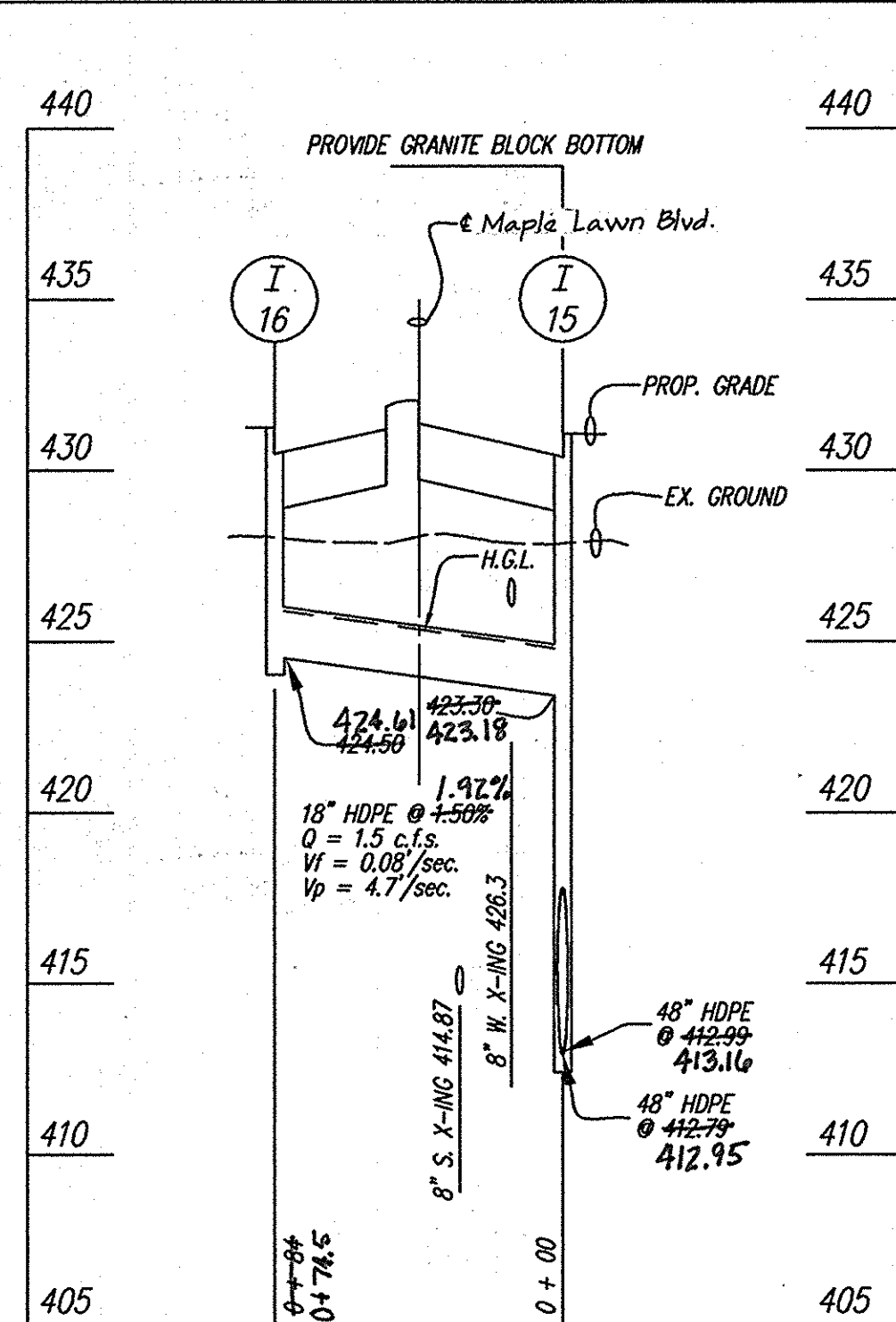
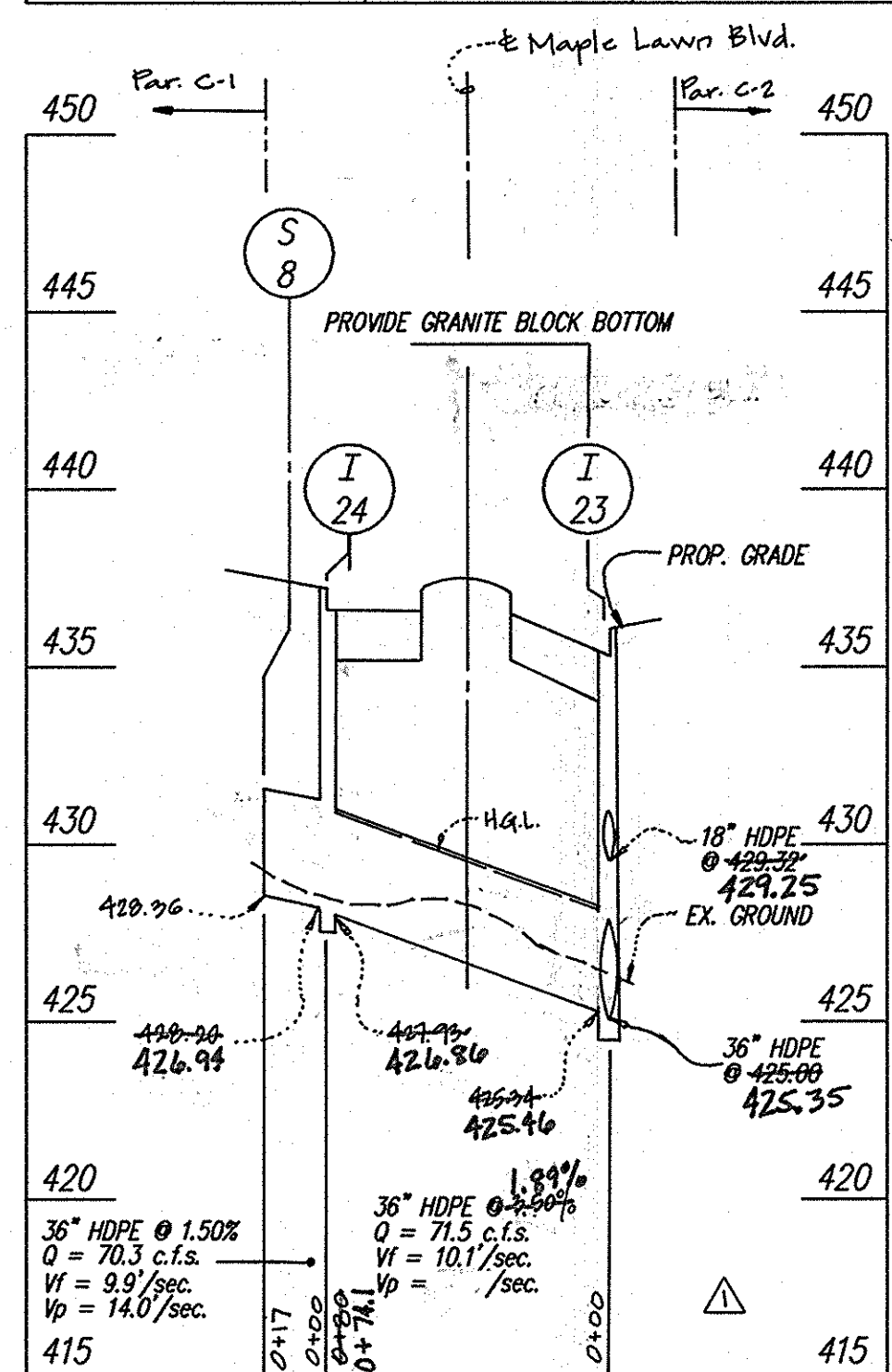
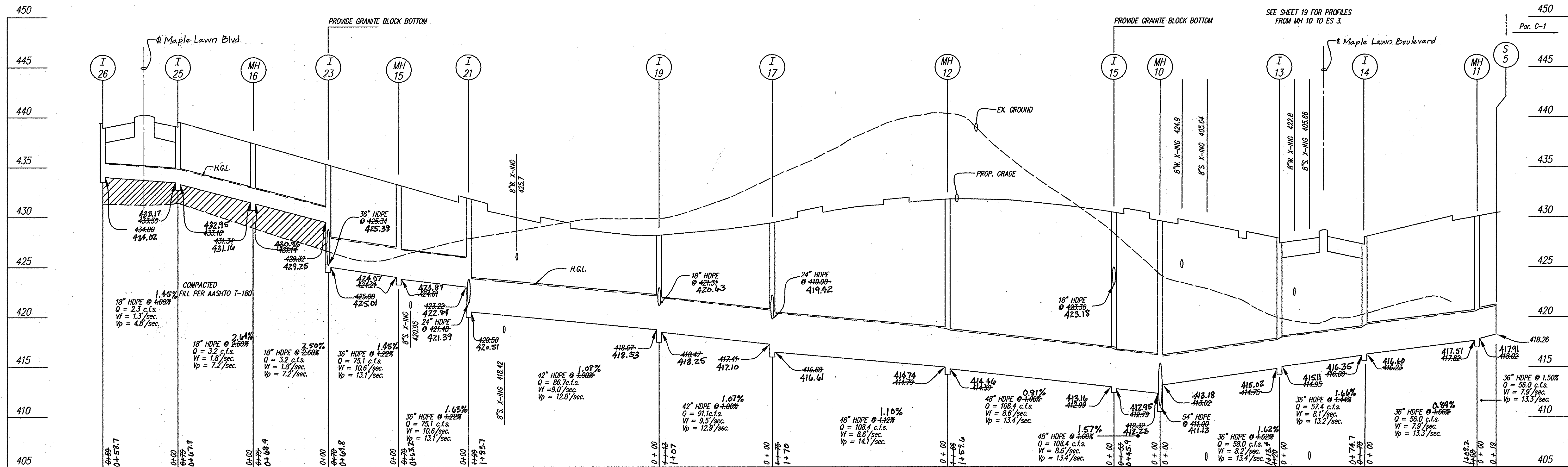
STORM DRAIN DRAINAGE AREA MAP  
 MAPLE LAWN FARMS  
 Business District - Area 1  
 Parcels C-1, C-2, and Open Space Lots 1 & 2  
 (Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

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



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**PROFILES**

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

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	LOCATIONS	REMARKS
			UPPER	LOWER	UPPER	LOWER			
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		431.27 430.69	431.12 430.69	423.18 423.30	412.95 412.79	HO. CO. SD-4.34	N 539,946 E 1,339,369	
I-16	DOUBLE 'S' COMBINATION		431.18 431.15	431.15 430.95	424.11 424.00	424.11 424.00	HO. CO. SD-4.34	N 540,001 E 1,339,331	
I-17	DOUBLE 'S' COMBINATION		430.73 430.10	430.11 429.90	419.42 419.00	416.61 416.60	HO. CO. SD-4.34	N 539,713 E 1,339,137	
I-19	DOUBLE 'S' COMBINATION		429.51 429.04	428.78 429.04	420.63 421.31	419.25 418.47	HO. CO. SD-4.34	N 539,634 E 1,339,051	
I-21	DOUBLE 'S' COMBINATION		431.97 431.74	431.57 431.40	422.08 422.00	420.51 420.50	HO. CO. SD-4.34	N 539,517 E 1,338,912	
I-22	DOUBLE 'S' COMBINATION		432.28 431.74	432.08 431.40	422.18 422.21	421.96 421.41	HO. CO. SD-4.34	N 539,563 E 1,338,867	
I-23	DOUBLE 'S' COMBINATION		435.87 435.10	435.73 435.40	429.25 429.32	425.01 425.00	HO. CO. SD-4.34	N 539,406 E 1,338,816	
I-24	DOUBLE 'S' COMBINATION		427.10 426.94	426.88 426.89	422.74 422.60	421.30 421.30	HO. CO. SD-4.34	N 539,368 E 1,338,710	
I-25	DOUBLE 'S' COMBINATION		439.85 439.57	439.47 439.27	433.17 433.30	432.95 432.16	HO. CO. SD-4.34	N 539,281 E 1,338,741	
I-26	DOUBLE 'S' COMBINATION		431.17 430.57	430.62 430.27	434.20 434.00	434.20 434.00	HO. CO. SD-4.34	N 539,311 E 1,338,684	
MH-10	STD. MANHOLE	8'-0"	429.68 429.60		413.18 411.00	411.13 411.00	MD 384.09	N 539,983 E 1,339,421	
MH-11	STD. MANHOLE	6'-0"	429.81 429.80		417.91 418.02	417.51 417.82	MD 384.05	N 540,060 E 1,339,379	
MH-12	STD. MANHOLE	6'-0"	432.08 430.07		414.74 414.79	414.46 414.59	MD 384.05	N 539,851 E 1,339,290	
MH-14	STD. MANHOLE	5'-0"	430.37 429.40		422.57 422.65	422.47 422.50	HO. CO. G 5.13	N 539,594 E 1,338,896	
MH-15	STD. MANHOLE	6'-0"	428.87 428.20		424.07 424.21	423.87 424.01	MD 384.05	N 539,446 E 1,338,856	
MH-16	STD. MANHOLE	6'-0"	431.26 430.50		430.76 431.34	430.76 431.14	MD 384.05	N 539,349 E 1,338,772	

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.

SIZE	TYPE	QUANTITY (I.F.)	REMARKS
18"	HDPE	274'	
24"	HDPE	111'	
36"	HDPE	521' $\Delta$	
42"	HDPE	293'	
48"	HDPE	376'	

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard M. Decker*  
Chief, Bureau of Highways  
2-25-03  
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

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

*Chris Donovon*  
Chief, Development Engineering Division  
3/1/03  
Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20886  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-959-2524 FAX: 301-421-4168

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

DATE	REVISION	BY	APPR.
1/30/03	Revised storm drain run 5+2 to 1+23, revised schedules accordingly & symbol used.	JAL	

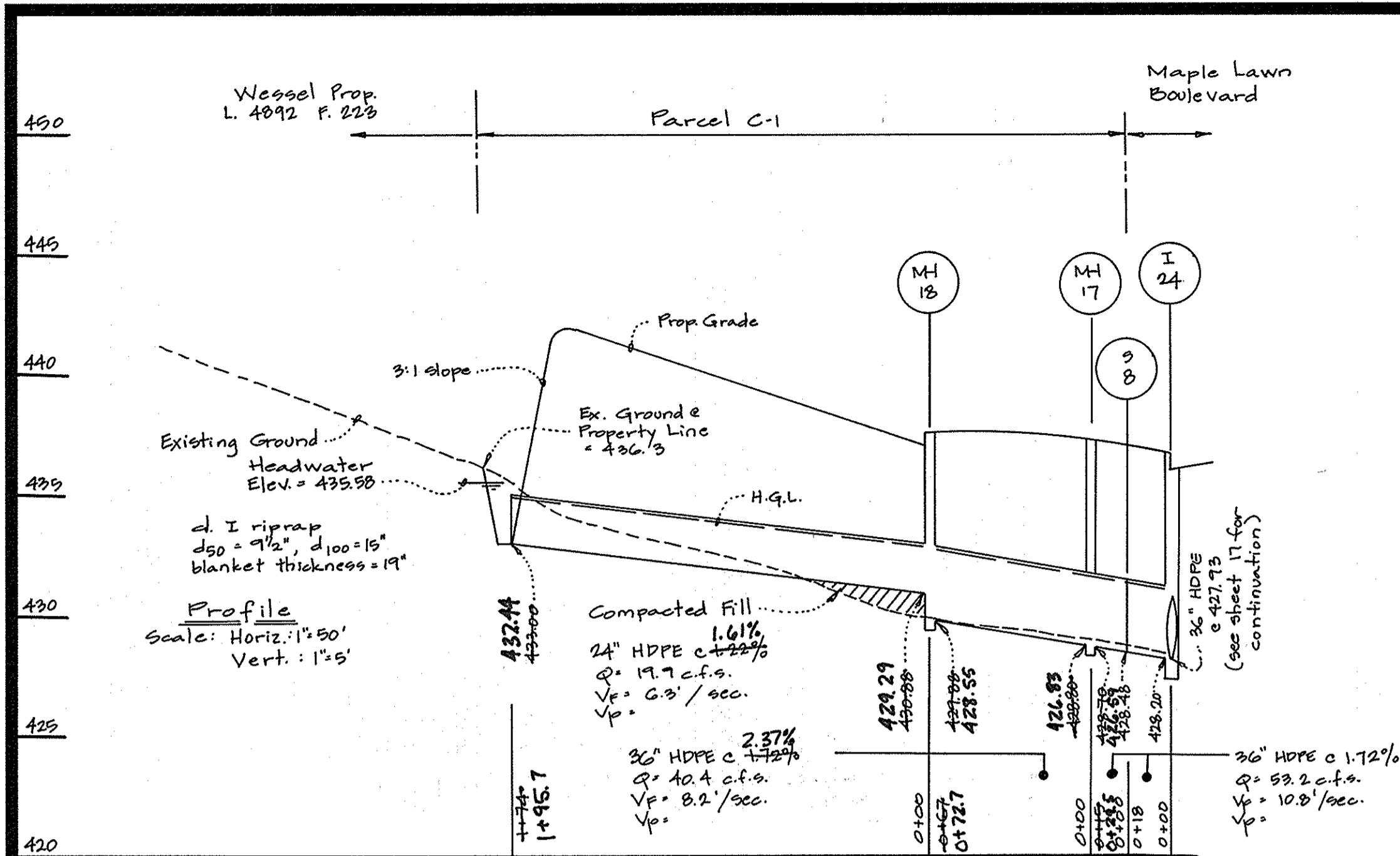
PREPARED FOR:

G & R Maple Lawn, Inc. et al.  
Suite 410, Woodholme Center  
1829 Reisterstown Road  
Baltimore, Md. 21209  
Attn: Charis 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)

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

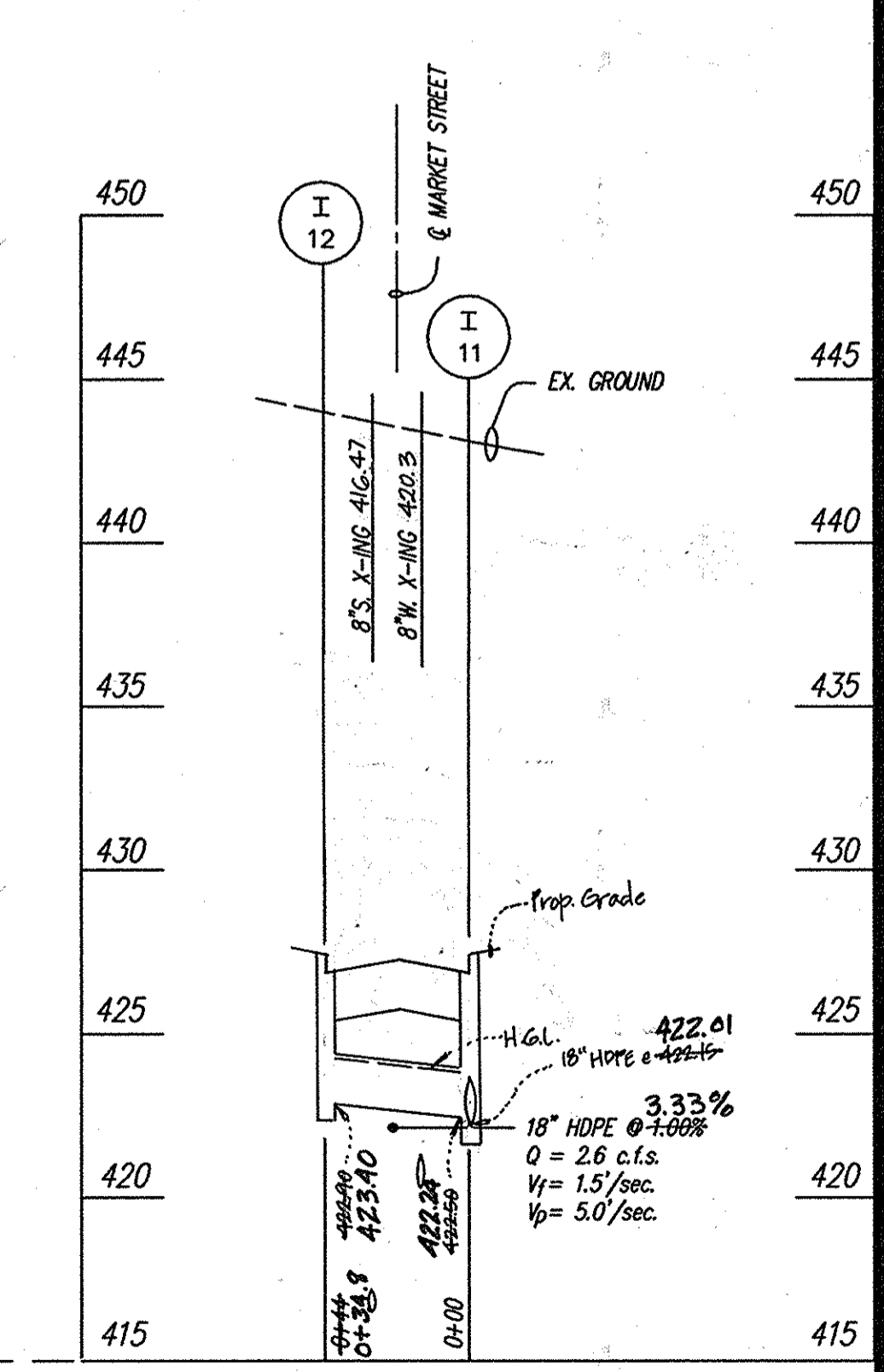
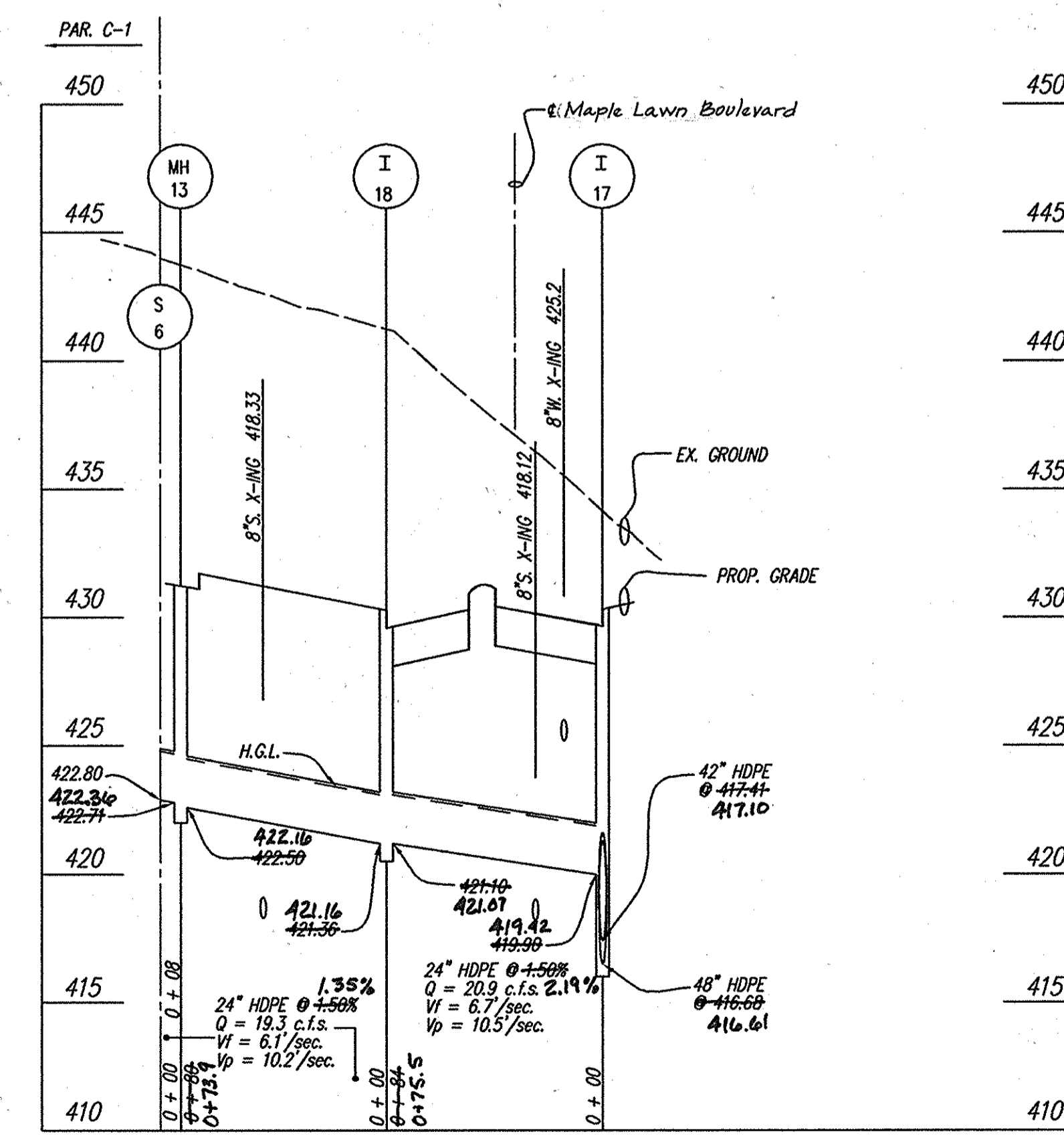
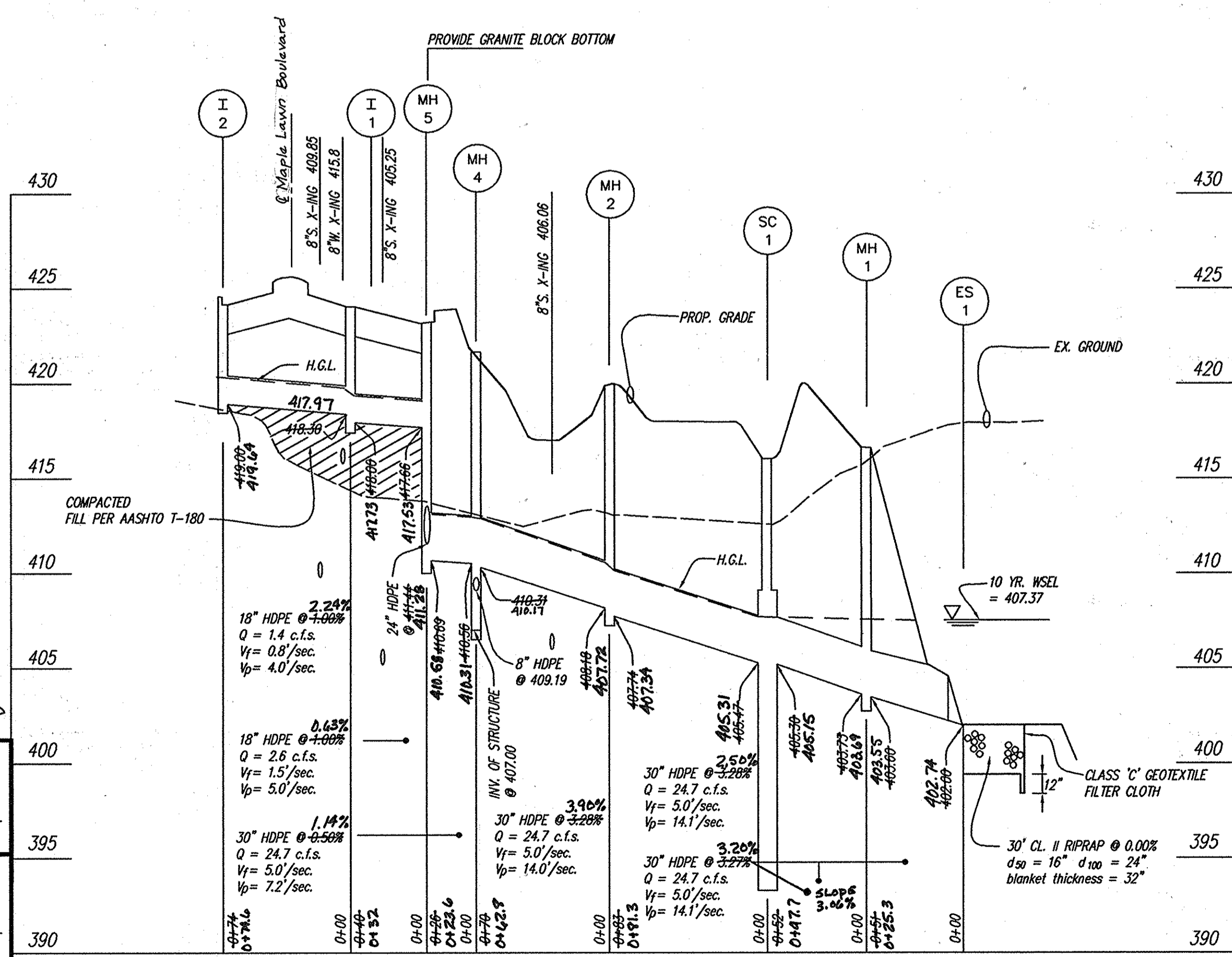
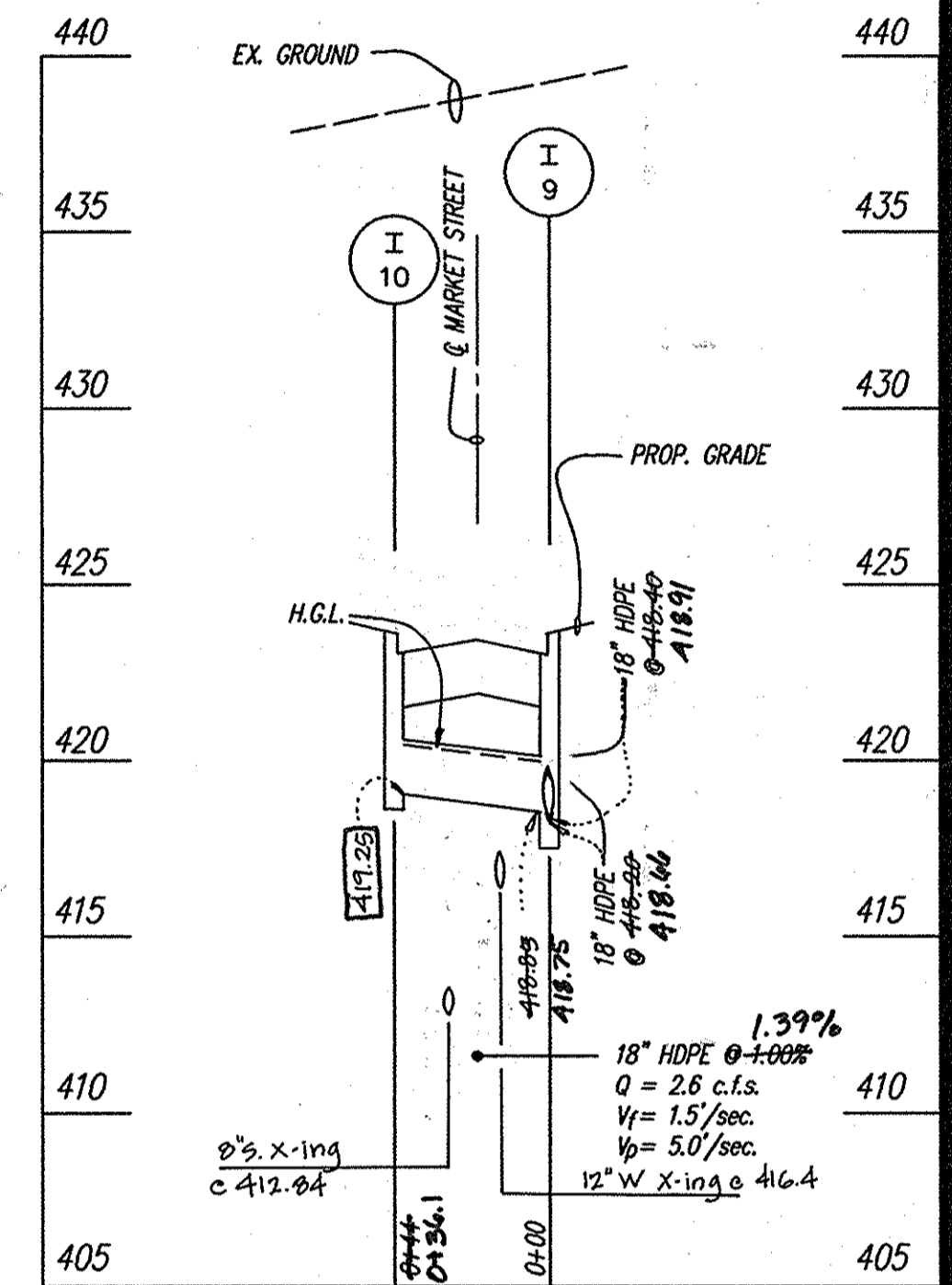


NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION		INVERT ELEVATION		STD. DETAIL	LOCATIONS	REMARKS
			UPPER	LOWER	UPPER	LOWER			
I-1	DOUBLE 'S' COMB. INLET	---	424.31	424.12	418.30	418.00	HO. CO. SD-4.34	N 540,210 E 1,339,559	
I-2	DOUBLE 'S' COMB. INLET	---	423.85	424.12	418.00	418.00	HO. CO. SD-4.34	N 540,244 E 1,339,486	
I-9	DOUBLE 'S' COMB. INLET	---	423.81	423.68	418.33	418.00	HO. CO. SD-4.34	N 540,556 E 1,339,410	
I-10	DOUBLE 'S' COMB. INLET	---	423.84	423.74	419.29	419.00	HO. CO. SD-4.34	N 540,520 E 1,339,392	
I-11	DOUBLE 'S' COMB. INLET	---	422.57	422.46	422.24	422.01	HO. CO. SD-4.34	N 540,644 E 1,339,223	
I-12	DOUBLE 'S' COMB. INLET	---	422.61	422.47	422.44	422.19	HO. CO. SD-4.34	N 540,608 E 1,339,206	
I-17	DOUBLE 'S' COMB. INLET	---	420.18	420.09	416.42	416.00	HO. CO. SD-4.34	N 539,713 E 1,339,137	
I-18	DOUBLE 'S' COMB. INLET	---	420.28	420.08	421.16	421.10	HO. CO. SD-4.34	N 539,772 E 1,339,083	
SC-1	STORMCEPTOR	5'-0"	416.27	---	405.27	405.27	BY MANUFACTURER	N 540,134 E 1,339,689	
MH 17	STD. MANHOLE	6'-0"	424.31	---	424.31	424.31	MD. 324.05	N 539,424 E 1,339,711	
MH 1	STD. MANHOLE	5'-0"	416.20	---	405.48	405.60	HO. CO. G 5.13	N 540,087 E 1,339,666	
MH 2	STD. MANHOLE	5'-0"	420.00	---	408.18	407.74	HO. CO. G 5.13	N 540,170 E 1,339,613	
MH 4	STD. MANHOLE	5'-0"	421.75	---	410.50	409.19	HO. CO. G 5.13	N 540,237 E 1,339,595	
MH 5	STD. MANHOLE	5'-0"	423.41	---	417.66	416.69	HO. CO. G 5.13	N 540,210 E 1,339,559	
MH 13	STD. MANHOLE	5'-0"	421.00	---	422.74	422.50	HO. CO. G 5.13	N 539,827 E 1,339,138	
MH 18	STD. MANHOLE	6'-0"	424.31	---	424.31	424.31	MD. 324.05	N 539,473 E 1,339,661	
ES-1	END SECTION	---	---	---	---	402.00	BY MANUFACTURER	N 540,056 E 1,339,700	

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)

PIPE SCHEDULE			
SIZE	TYPE	QUANTITY (L.F.)	REMARKS
18"	HDPE	146'	
24"	HDPE	236'	
30"	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'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Jankle*  
Chief, Bureau of Highways  
Date: 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hamilton*  
Chief, Division of Land Development  
Date: 3/1/03

*Chris Donovon*  
Chief, Development Engineering Division  
Date: 3/1/03

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

1/30/03 Revised s.d. runs I-10 to I-9 and I-12 to I-11, structure schedule and symbol used in structure to eliminate confusion from red line designation. JAW

PREPARED FOR:  
G & R Maple Lawn, Inc. et al.  
Suite 410, Woodholme Center  
1825 Risterstown Road  
Baltimore, Md. 21208  
Attn: Charlie O'Donovan  
410-484-8400

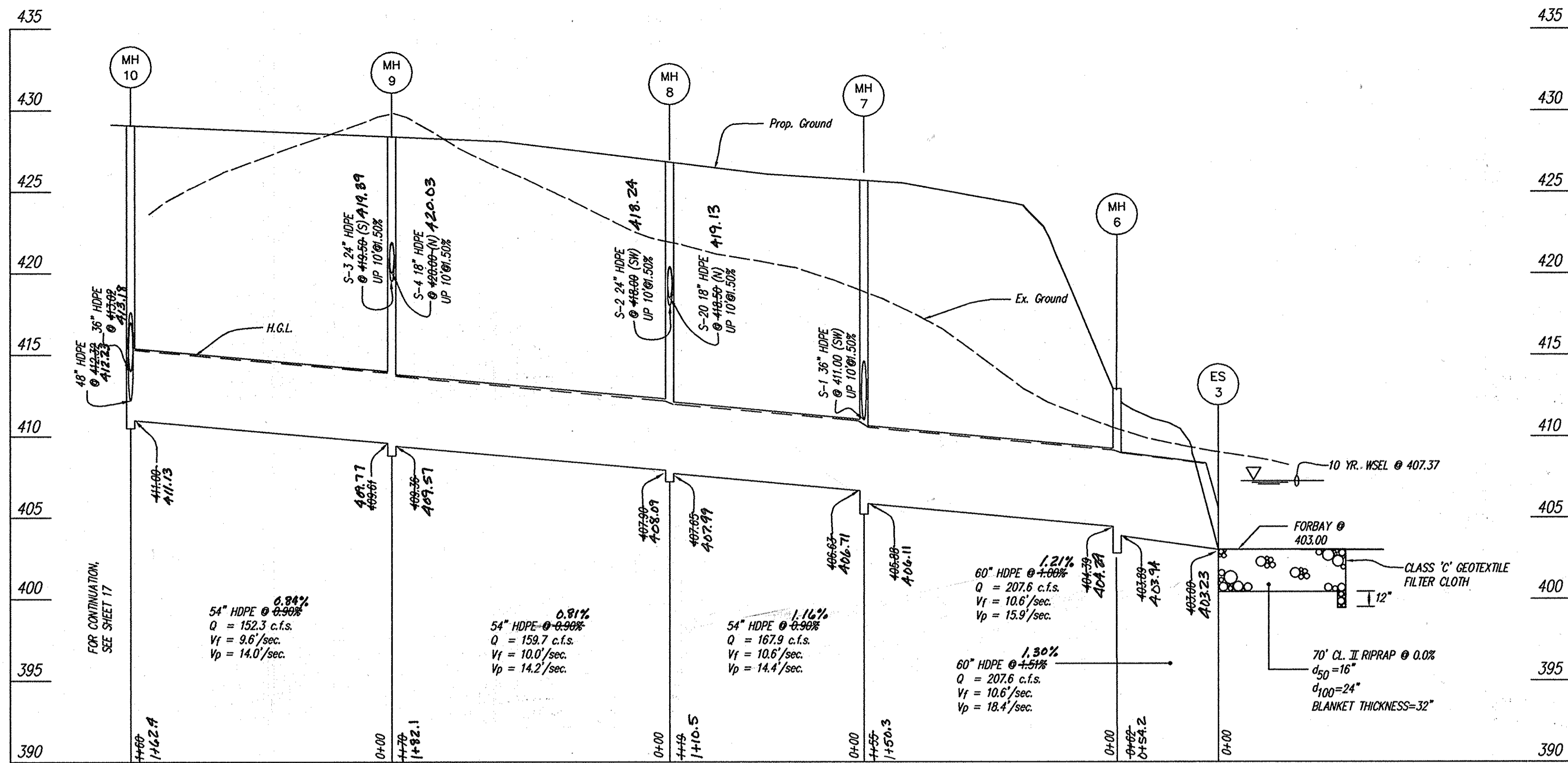
**STORMDRAIN PROFILES & SCHEDULES**  
**MAPLE LAWN FARMS**  
Business District - Area 1  
Parcels C-1, C-2 and Open Space Lots 1 & 2  
(Parcel 124, T.M. 41 Blocks 21 & 22, T.M. 46 Blocks 3 & 4)

ELECTION DISTRICT No. 5

SCALE: AS SHOWN  
ZONING: MXD-3  
G. L. W. FILE No.: 96079

DATE: JANUARY 2003  
TAX MAP - GRID: 41: 21 & 22  
46: 3 & 4  
SHEET: 18 OF 34

HOWARD COUNTY, MARYLAND



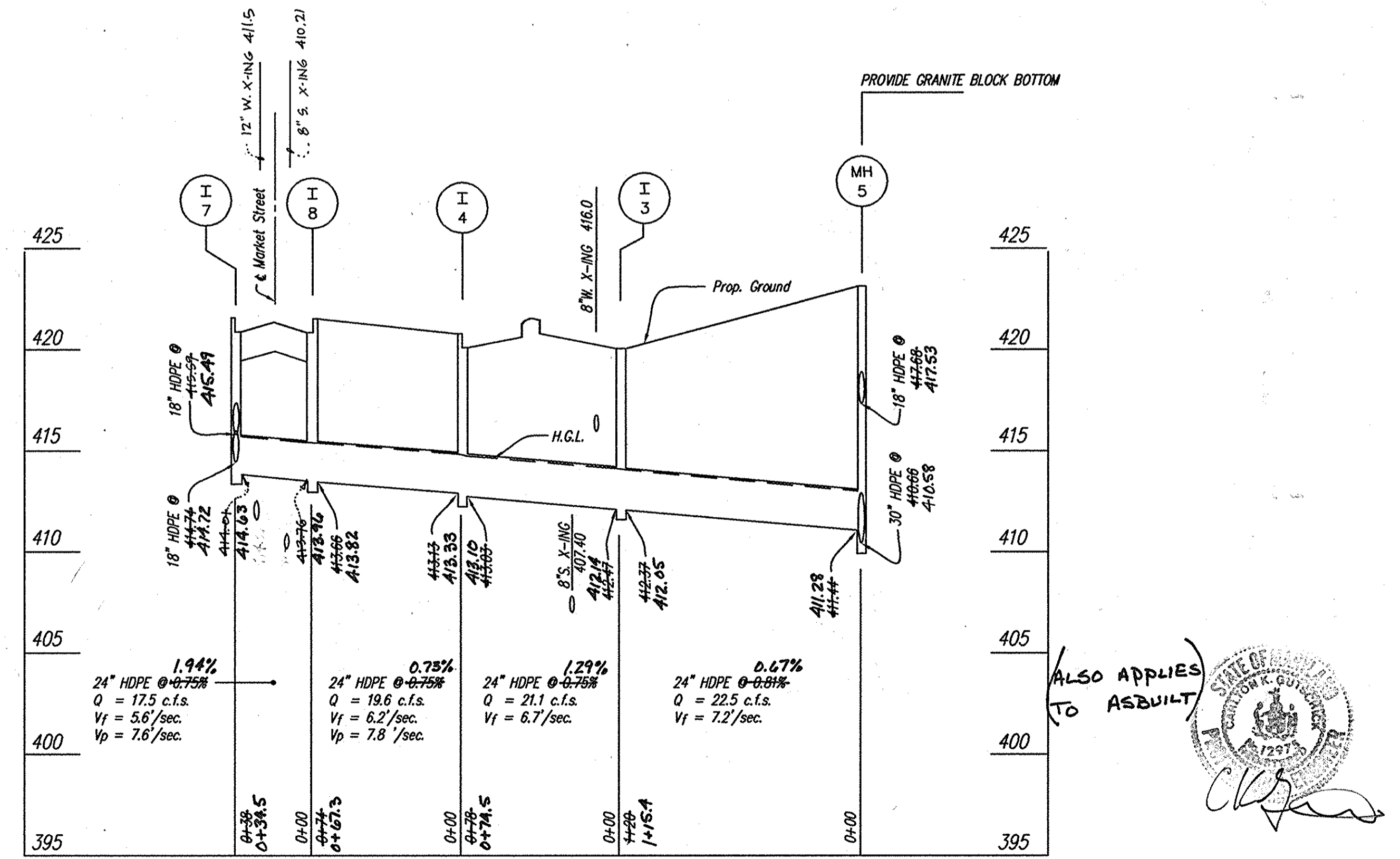
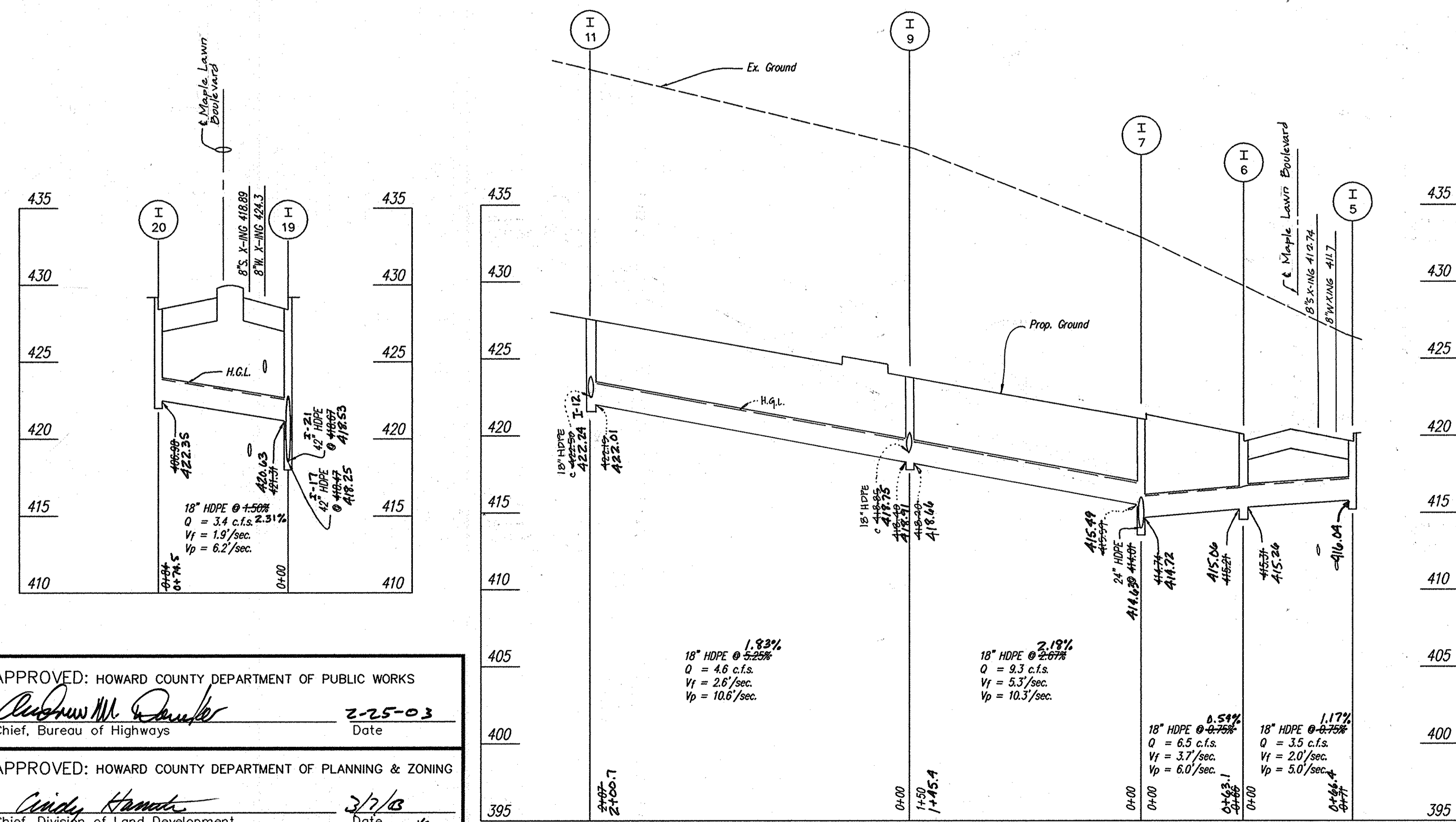
COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURB FOR INLETS AND TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS.

### PROFILES

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

PIPE SCHEDULE				REMARKS
SIZE	TYPE	QUANTITY (L.F.)		
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.



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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Dwyer* 2-25-03  
 Chief, Bureau of Highways Date

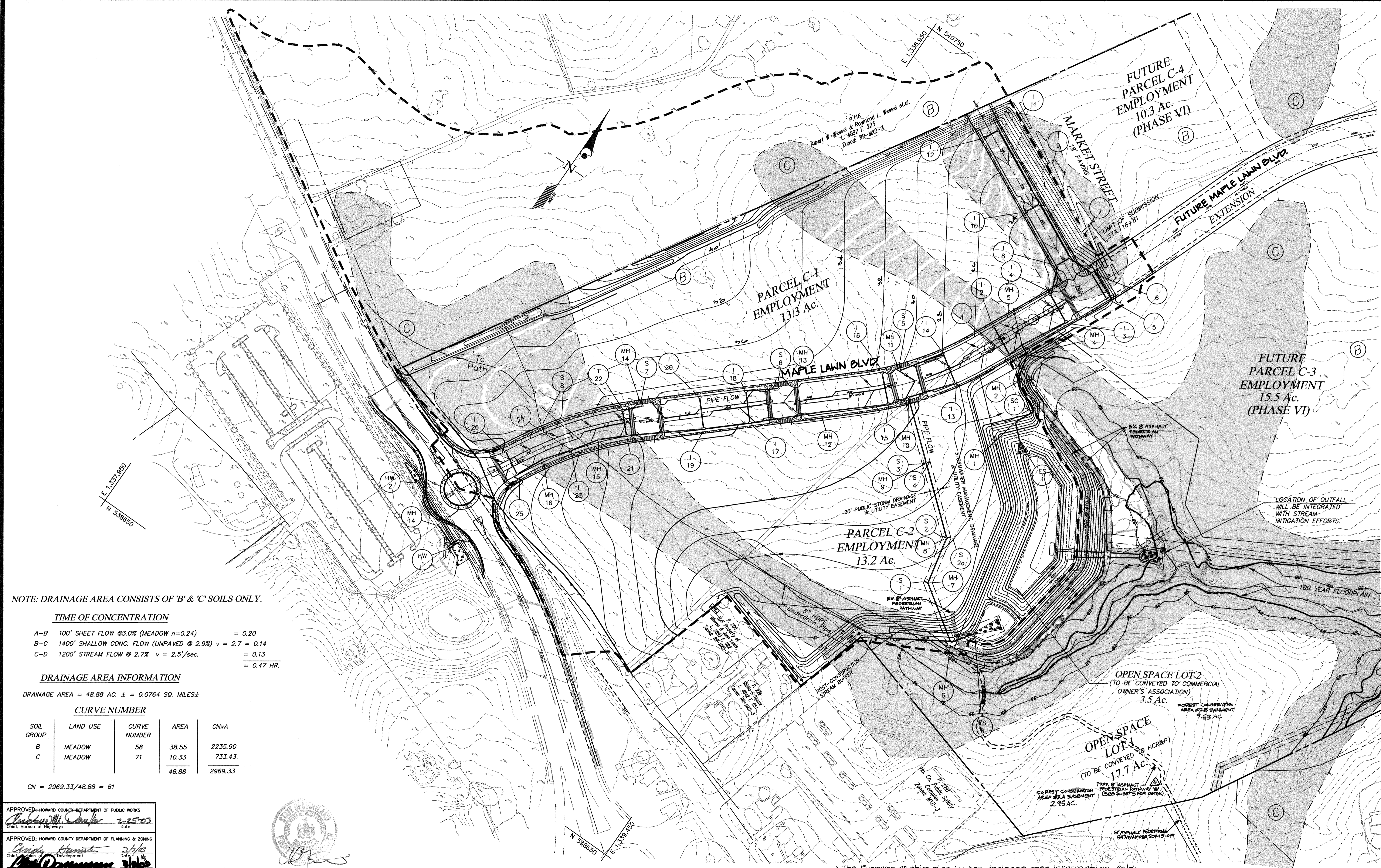
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hamrick* 3/7/03  
 Chief, Division of Land Development Date

*Chris Damann* 3/3/03  
 Chief, Development Engineering Division Date

<b>GLWGUTSCHICK LITTLE &amp; WEBER, P.A.</b> CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186				PREPARED FOR: G & R Maple Lawn, Inc. et. al. Suite 410, Woodholme Center 1829 Reisterstown Road Baltimore, Md. 21208 Attn: Charlie O'Donovan 410-484-8400				<b>STORMDRAIN PROFILES &amp; SCHEDULES</b> <b>MAPLE LAWN FARMS</b> 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: AS SHOWN ZONING: MXD-3 G. L. W. FILE NO.: 96079	
96079\FINALS\PH1-WORKPLACE\96079SD17.DWG DES. DEV DRN. AEJ CHK. DEV				DATE: _____ REVISION: _____ BY: _____ APPR: _____				DATE: JANUARY 2003 TAX MAP - GRID: 41: 21 & 22 46: 3 & 4 SHEET: 19 OF 34					



COUNTY FILE # F 03-07



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  
*Robert M. Conner* 2/25/03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Charles H. Hester* 2/1/03  
 Chief, Bureau of Planning & Zoning Date

*Chris D. ...* 2/1/03  
 Chief, Bureau of Engineering Division Date



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

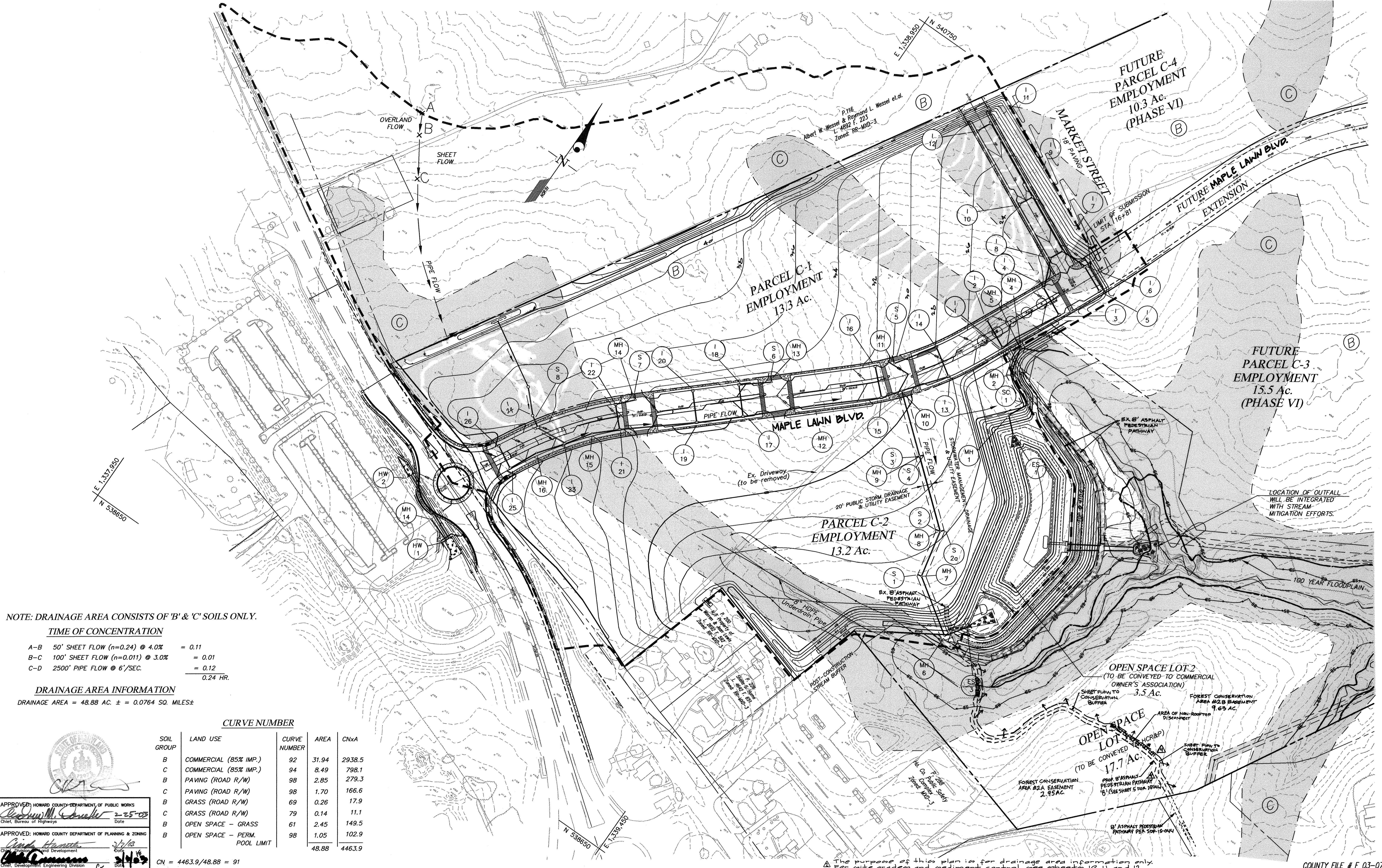
DATE	REVISION	BY	APPR.
9/30/03	Revise location of storm drain in Maple Lawn Blvd. and through Parcel C-1. Revise grades on Parcel C-1 and along Market Street.	JAU	
11/15/03	Added purpose note	R.H.V.	
01/26/18	Added REVISION TO ILLUSTRATE A PATHWAY THROUGH HC OPEN SPACE LOT 1		

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

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)  
 ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND

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

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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±

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  
 Date: 2/13/03

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

DATE	REVISION	BY	APPR.
1/30/03	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	R.H.V.	
01/26/03	Redline to illustrate a pathway through Open Space Lot 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

**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

COUNTY FILE # F 03-07

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds facility number 18.1.3. 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 stumped (topsoil). All trees, vegetation, roots and other objectionable material shall be removed.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rocks 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.

Placing the fill material shall be done in layers of 4" to 6" and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if approved 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...

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each fill shall be traversed by not less than one track of heavy equipment...

Plastic Pipe - The following criteria shall apply for plastic pipe: 1. Material - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with moisture content within ±2% of the optimum.

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.

Structure Backfill - Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the existing fill material.

Structure Backfill - Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the existing fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness...

Structure Backfill - Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the existing fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness...

Pipe Details - All pipes shall be circular in cross section.

Corroded Metal Pipe - All of the following criteria shall apply for corroded 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.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appearance shall conform to the requirements of AASHTO Specification M-274 with waterlight coupling bands or flanges.

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

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

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS. 3909 NATIONAL DRIVE - SUITE 230 - BURTONTOWN OFFICE PARK

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.

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.

Penetration. 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 4 1/2 feet below existing surface grades.

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.

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.

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.

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.

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.

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 (SM) with a plasticity index of 10 or more can be utilized for the center of the embankment and core trench.

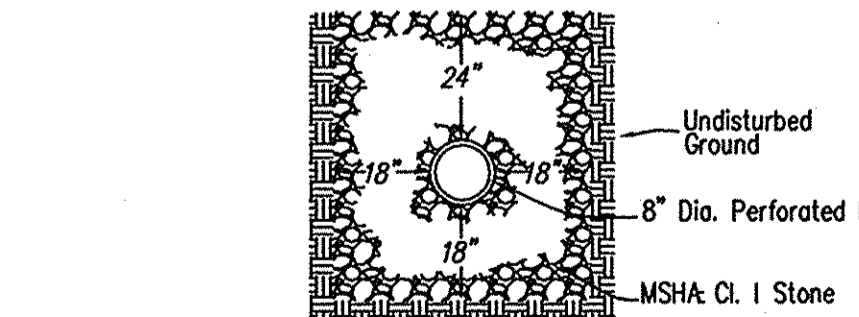
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed.

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.

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 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.



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.
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.
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.
2. The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills.
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.
4. The inlet and outlet pipes shall be checked for any obstructions at least once every six months.

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

PARCEL C-2

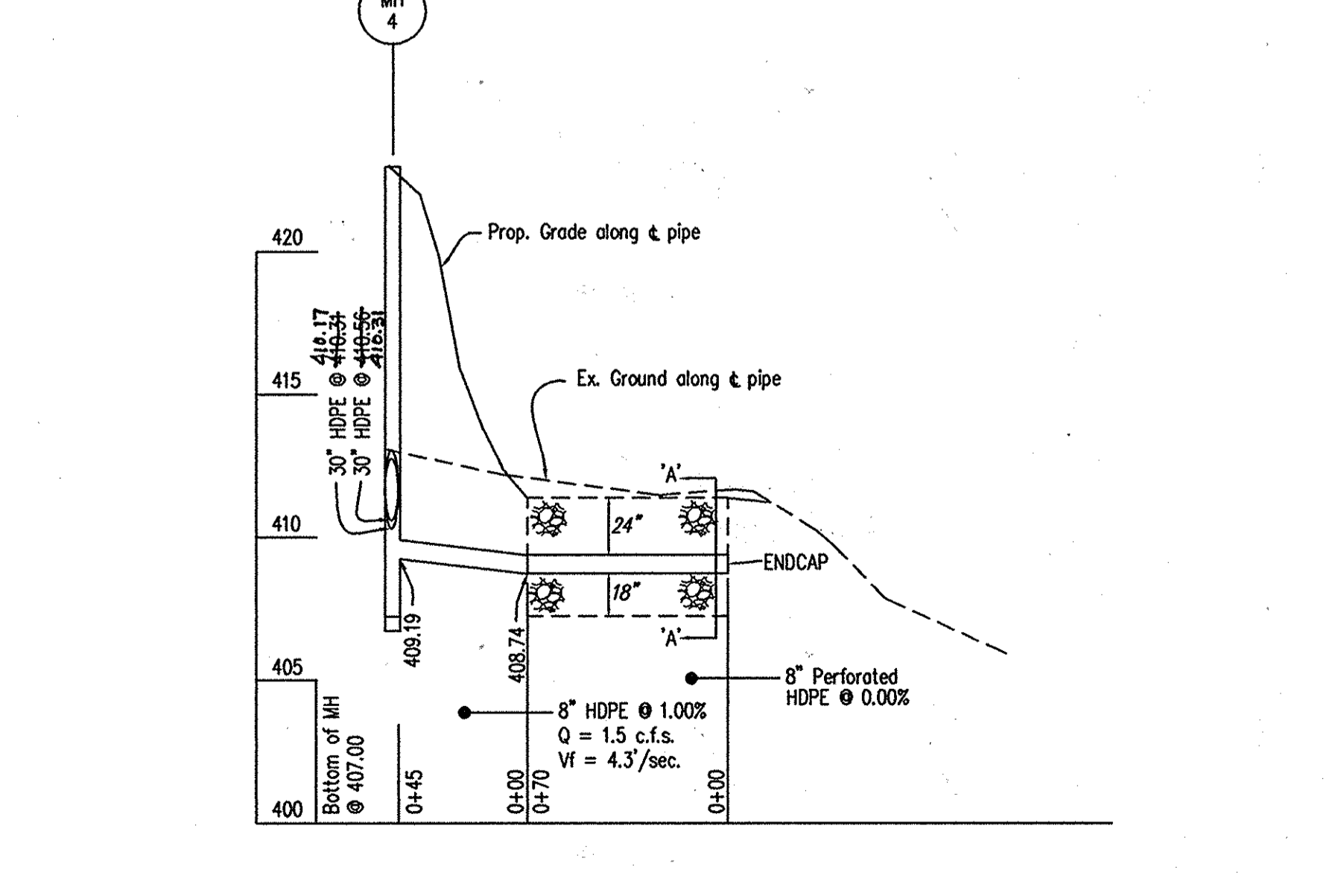
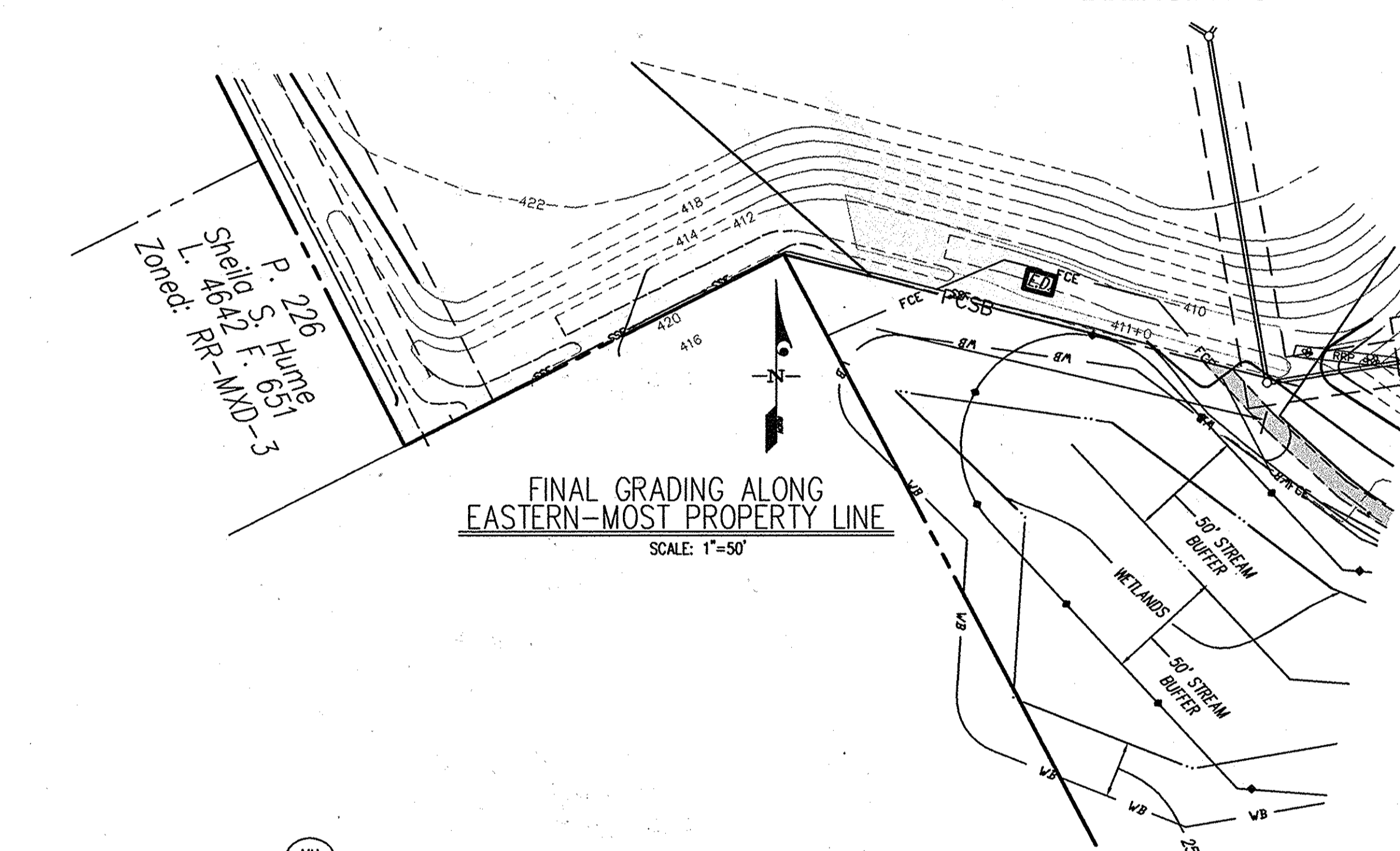


Table with columns: PREPARED FOR: (G & R MAPLE LAWN INC., et al.), S.W.M. NOTES AND DETAILS, MAPLE LAWN FARMS Business District - Area 1, and ELECTION DISTRICT No. 5.

Precast Concrete Stormceptor Order Request Form

CONTRACTOR INFORMATION section with fields for Name, Address, City, State, Zip Code, Contact, Phone, and Fax.

OWNER INFORMATION section with fields for Name, Address, City, State, Zip Code, Contact, Phone, and Fax.

Table for STORMCEPTOR Model and Insert Size selection. Columns include Model (90C, 120C, 180C, 240C), Insert Size (3600, 4800, 6000, 7200), and Insert Size (12, 18, 24, 30, 36, 42, 48, CUSTOM).

Project Name: MAPLE LAWN FARMS. Delivery Address: 11320 SCAGGSVILLE RD (MD ROUTE 216). Designer Company: GUTSCHICK, LITTLE & WEBER, P.A.

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR Hydro Conduit. ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)971-1900

CSR Hydro Conduit header with fields for Project Name, Location, Date, Scale, and Drawing Number.

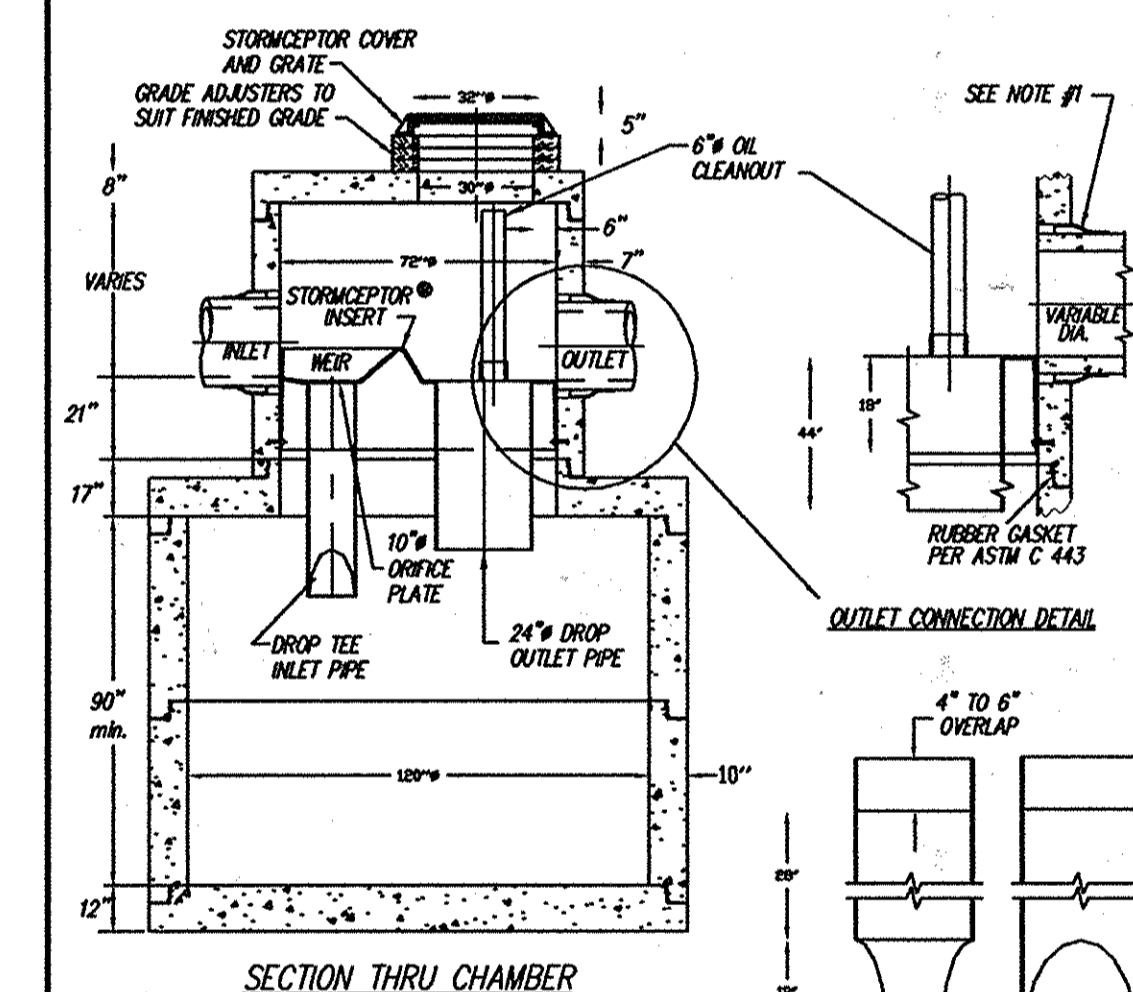


Table with columns: REV, DESCRIPTION, BY, DATE. It contains several revision entries for the drawing.

DEVELOPER'S/BUILDER'S CERTIFICATE. 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...

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.

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.

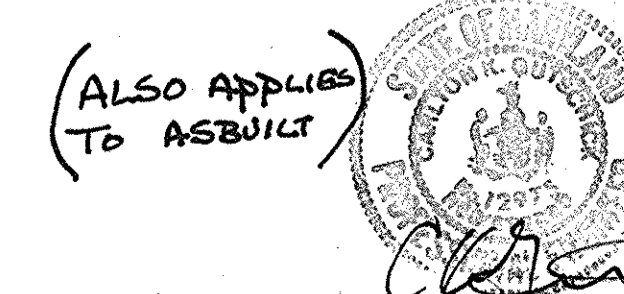
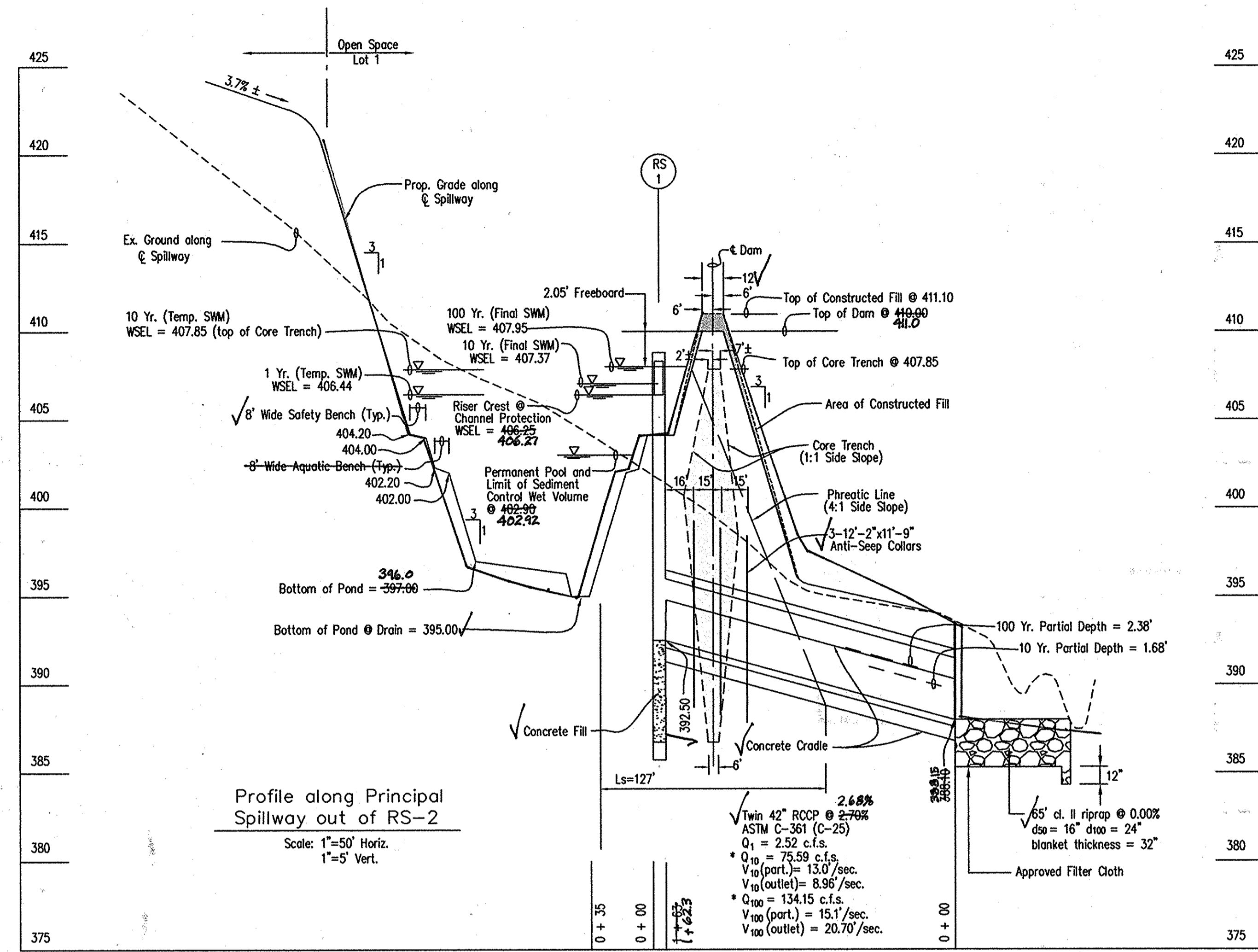
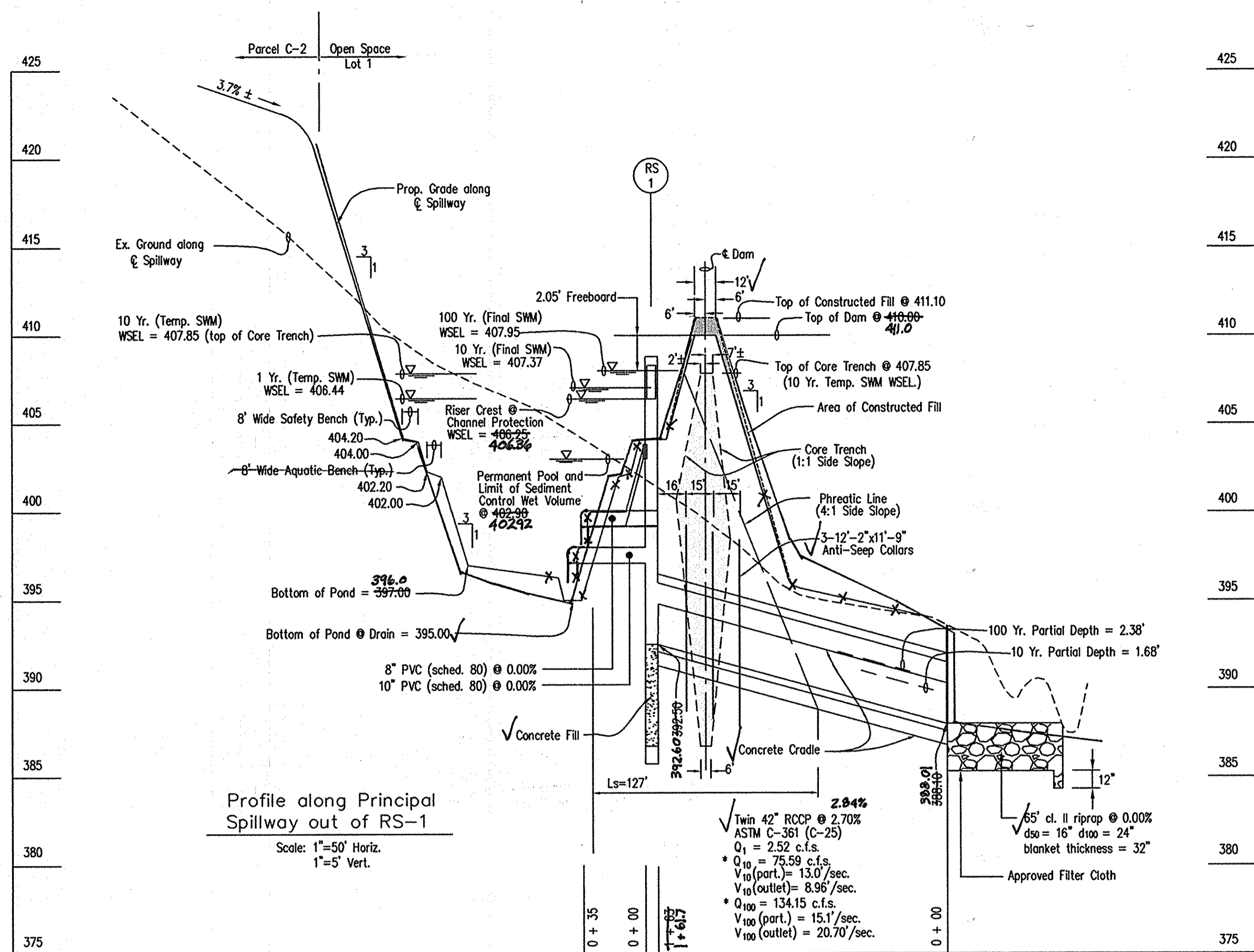


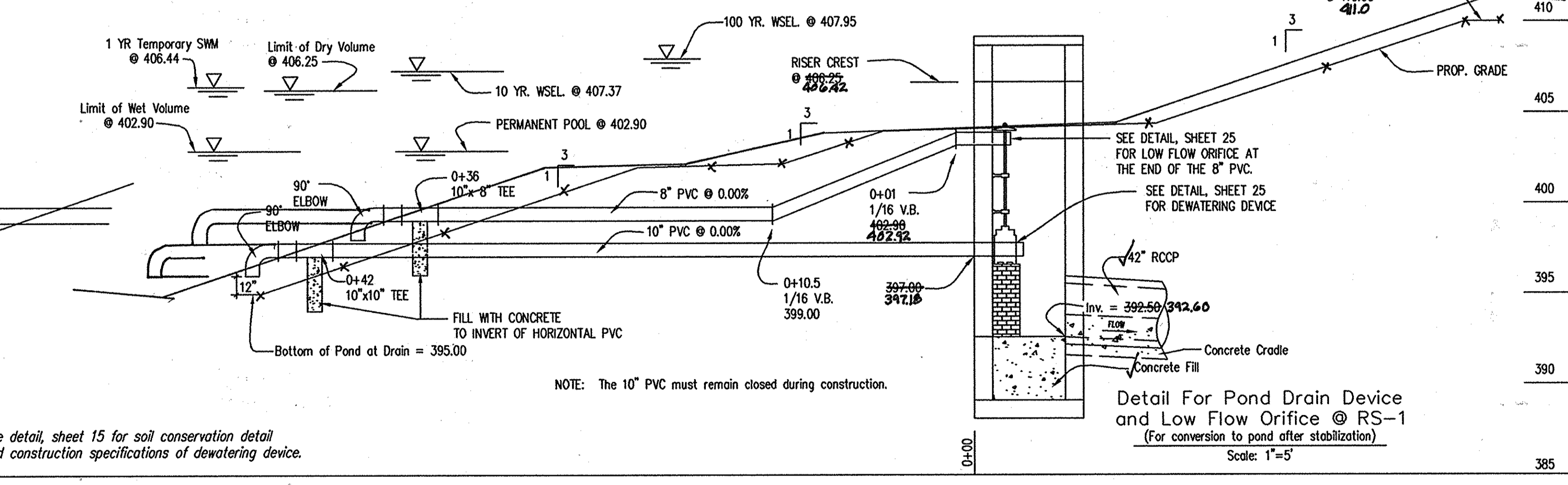
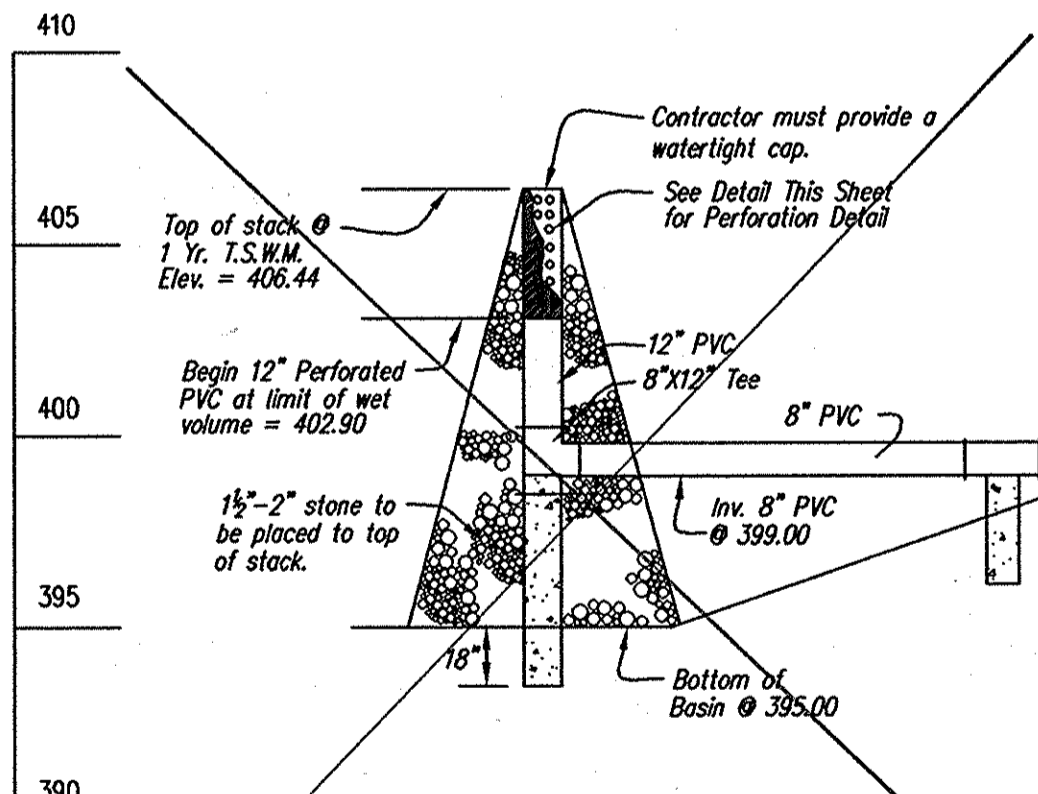
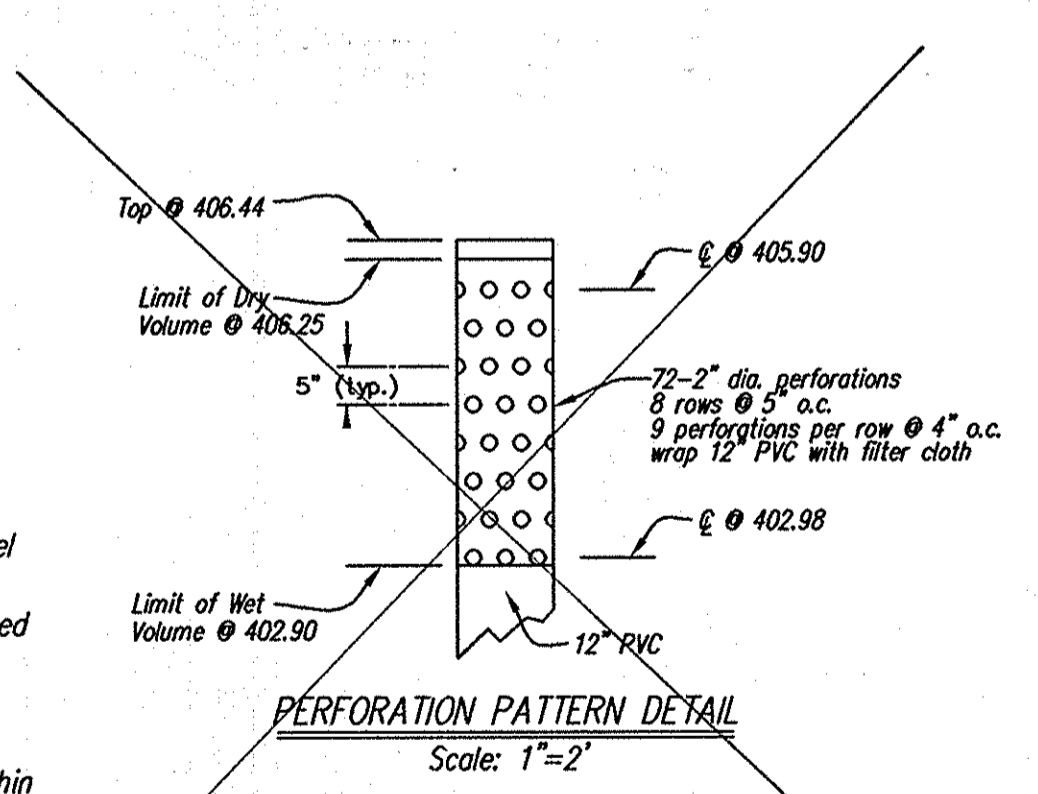
Table with columns: SCALE (NO SCALE), ZONING (MXD-3), SHEET (22 OF 34), DATE (JANUARY 2003), and TAX MAP - GRID (41: 21 & 22, 46: 3 & 4).

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- NOTES:
1. CONTRACTOR MUST PROVIDE RUBBER GASKETS AT PIPE JOINTS ALONG BOTH 42\"/>

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.

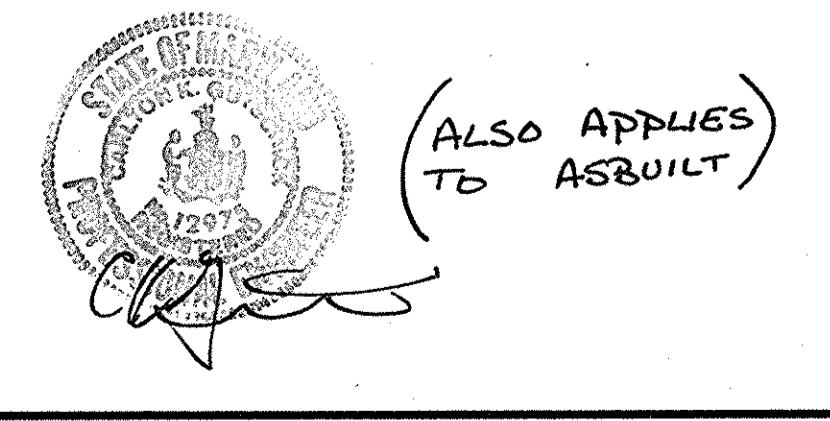


**DEVELOPER'S/BUILDER'S CERTIFICATE**  
 I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training 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: [Signature]  
 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: [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.  
 Signature: [Signature]  
 Date: 2/14/03  
 Howard Soil Conservation District

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.  
 Signature: [Signature]  
 Date: 2/14/03  
 Natural Resources Conservation Service



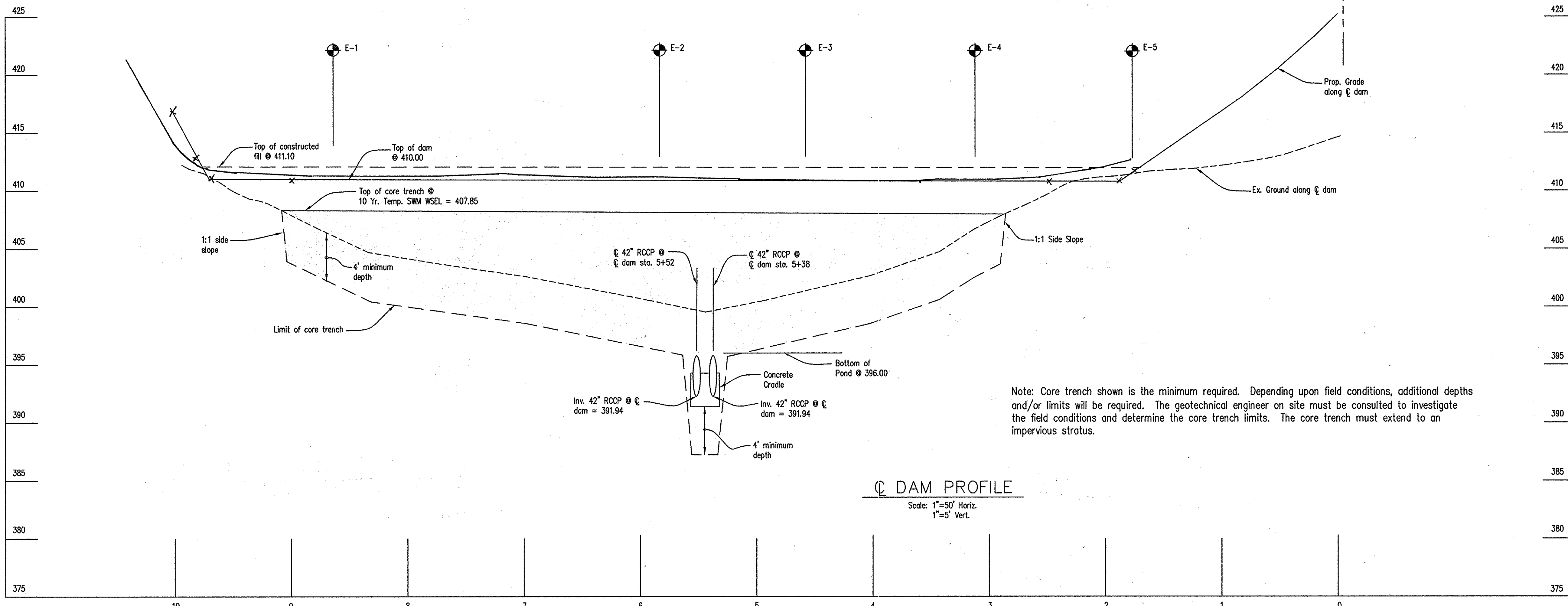
**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
 BURTNSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:  
 G & R Maple Lawn, Inc., et al.  
 Suite 410, Woodhams Center  
 1829 Restoration Road  
 Baltimore, MD 21208  
 Attn: Charles 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)  
 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



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

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.

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

**ENGINEER'S CERTIFICATE**  
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

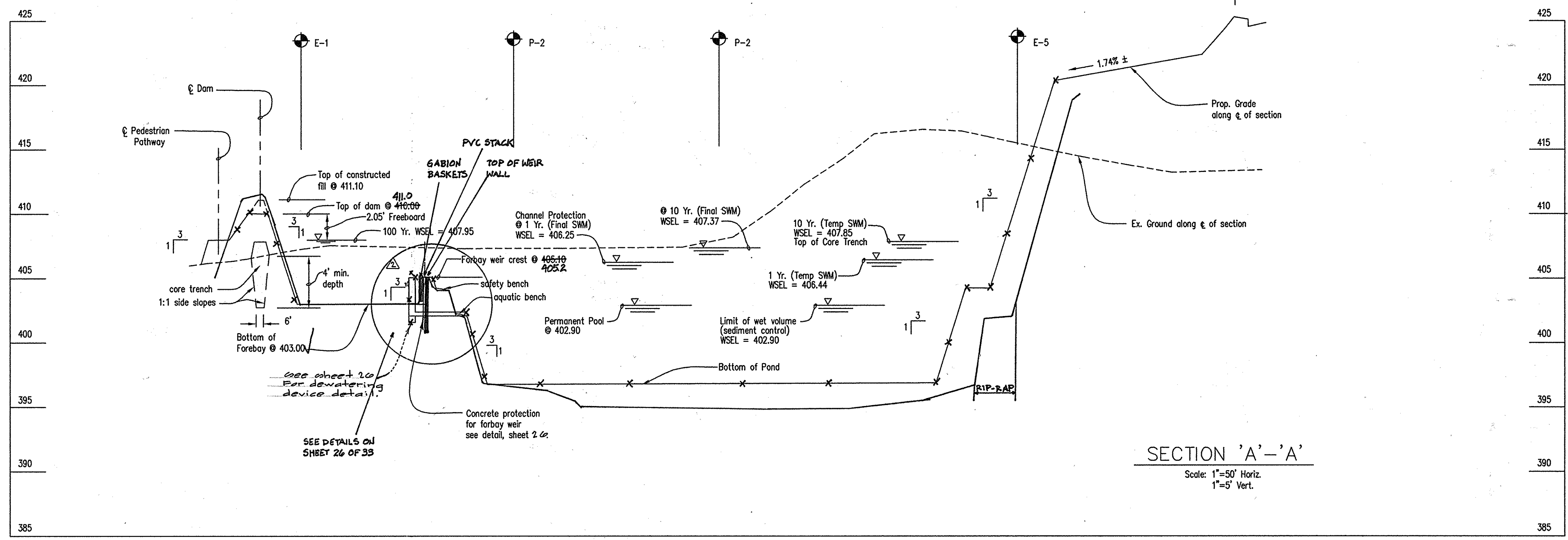
*[Signature]* 1-27-03  
Engineer's Signature Date

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

*[Signature]* 2/4/03  
Howard Soil Conservation District Date

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

*[Signature]* 2/4/03  
Natural Resources Conservation Service Date

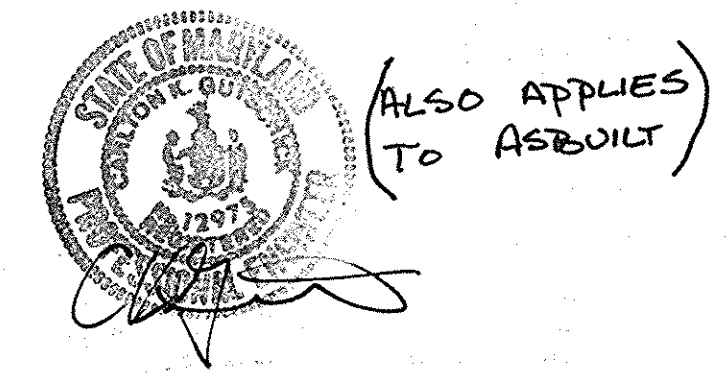


**SECTION 'A'-A'**  
Scale: 1"=50' Horiz.  
1"=5' Vert.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 2-25-03  
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*[Signature]* 3/2/03  
Chief, Division of Land Development Date

*[Signature]* 3/2/03  
Chief, Development Engineering Division Date



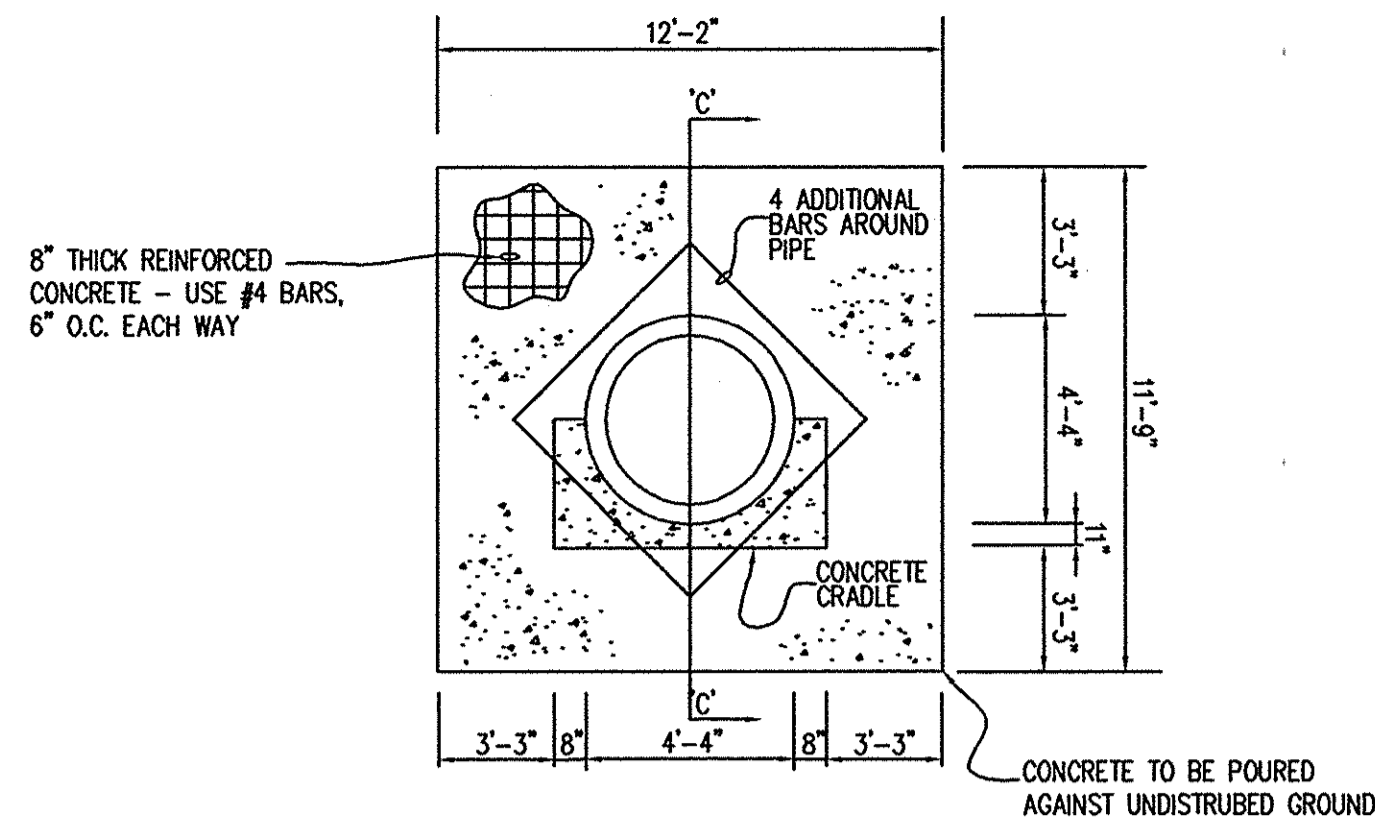
12/2/02	removed BB-1 callout and rev. weir wall and dewatering device			
DATE	REVISION	BY	APPR.	

PREPARED FOR:  
C & R Maple Lawn, Inc., et. al.  
Suite 410, Woodholme Center  
1829 Reisterstown Road  
Baltimore, MD 21208  
Attn: Charles O'Donovan  
410-484-3400

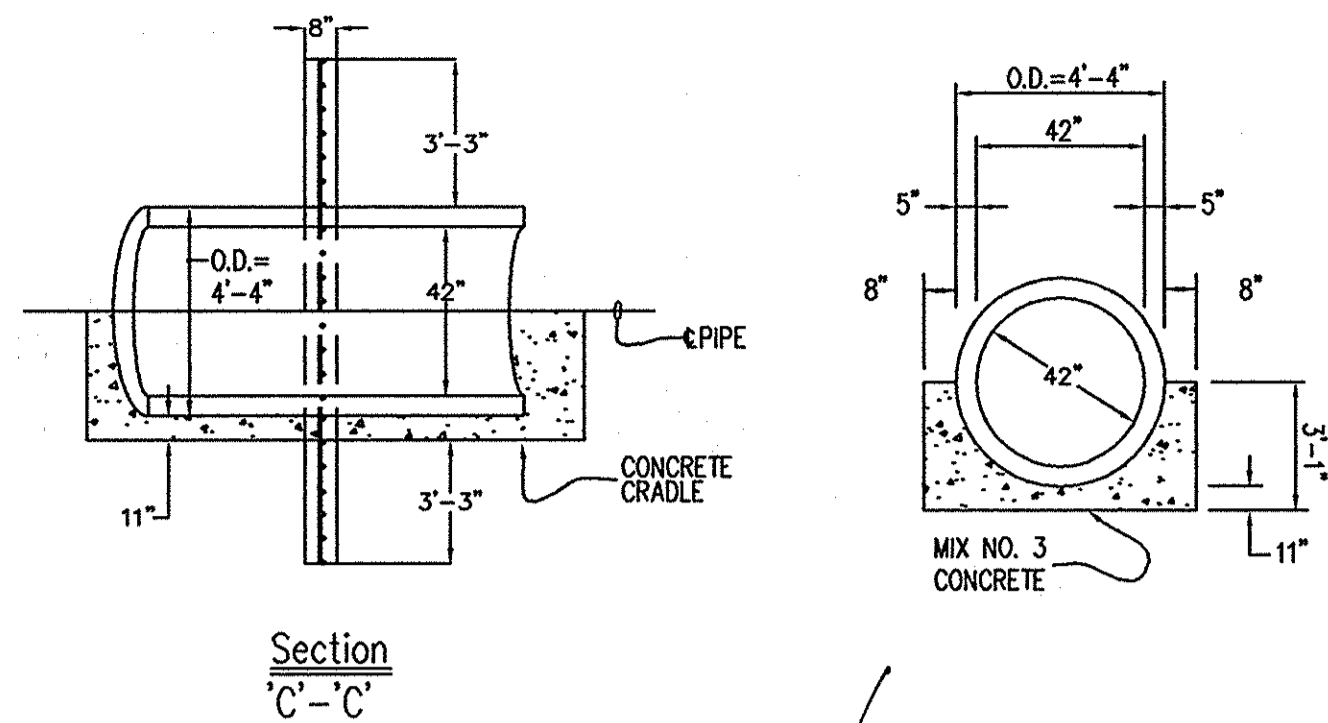
STORMWATER MANAGEMENT FACILITY DETAILS		
SCALE AS SHOWN	ZONING MXD-3	G. L. W. FILE No. 96079
DATE JANUARY 2003	TAX MAP - GRID 41: 21 & 22 46: 3 & 4	SHEET 24 OF 34
ELECTION DISTRICT No. 5		

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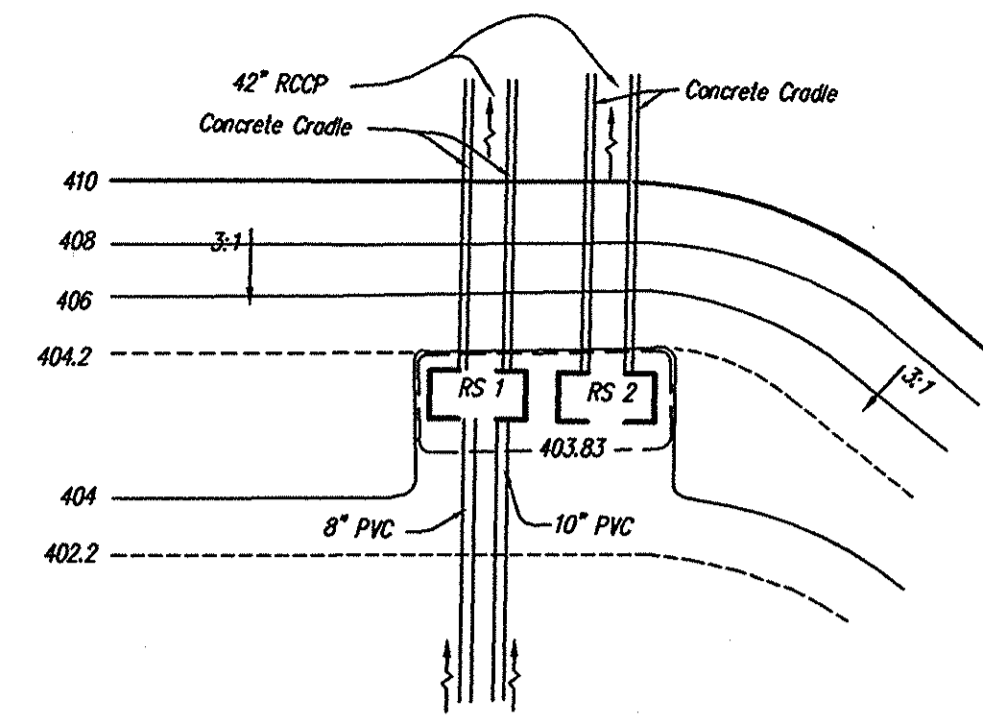


Anti Seep Collar Details  
Not to Scale

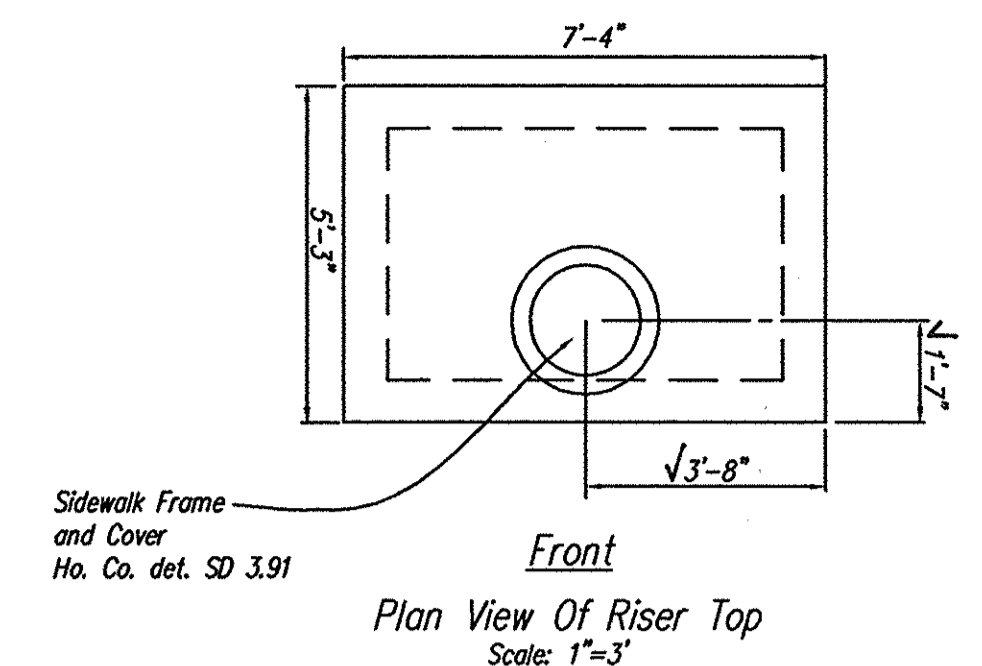


Concrete Cradle Detail  
Not to Scale

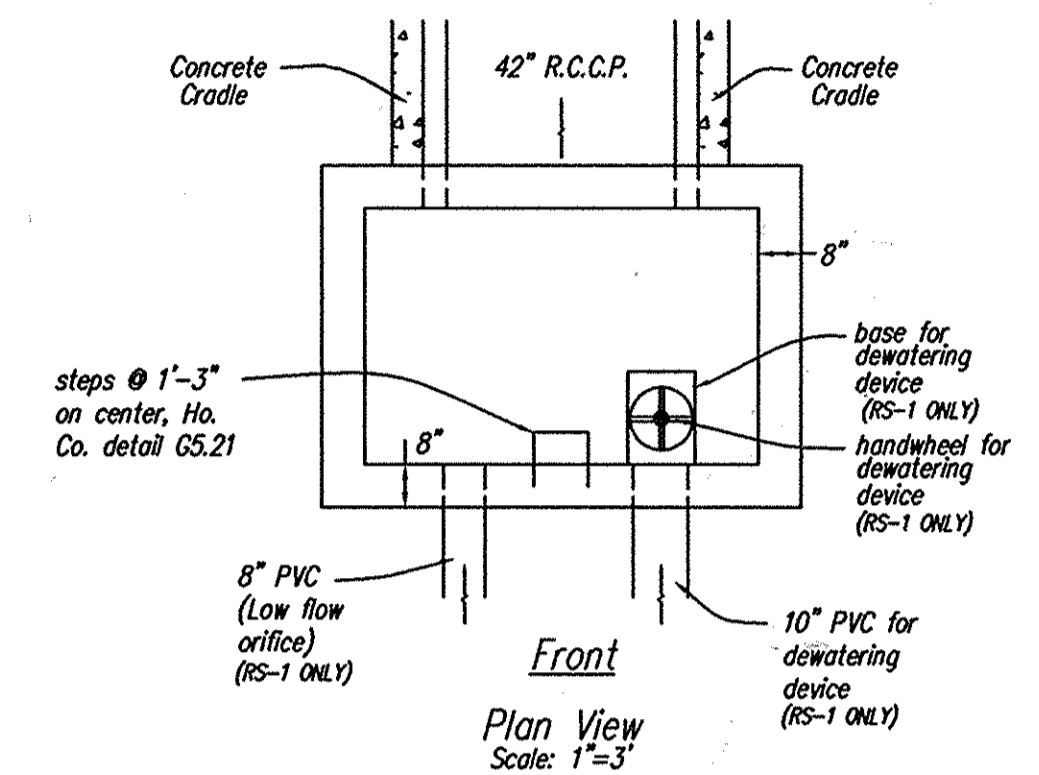
- POUR CONCRETE TO UNDISTURBED EARTH.
- REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.



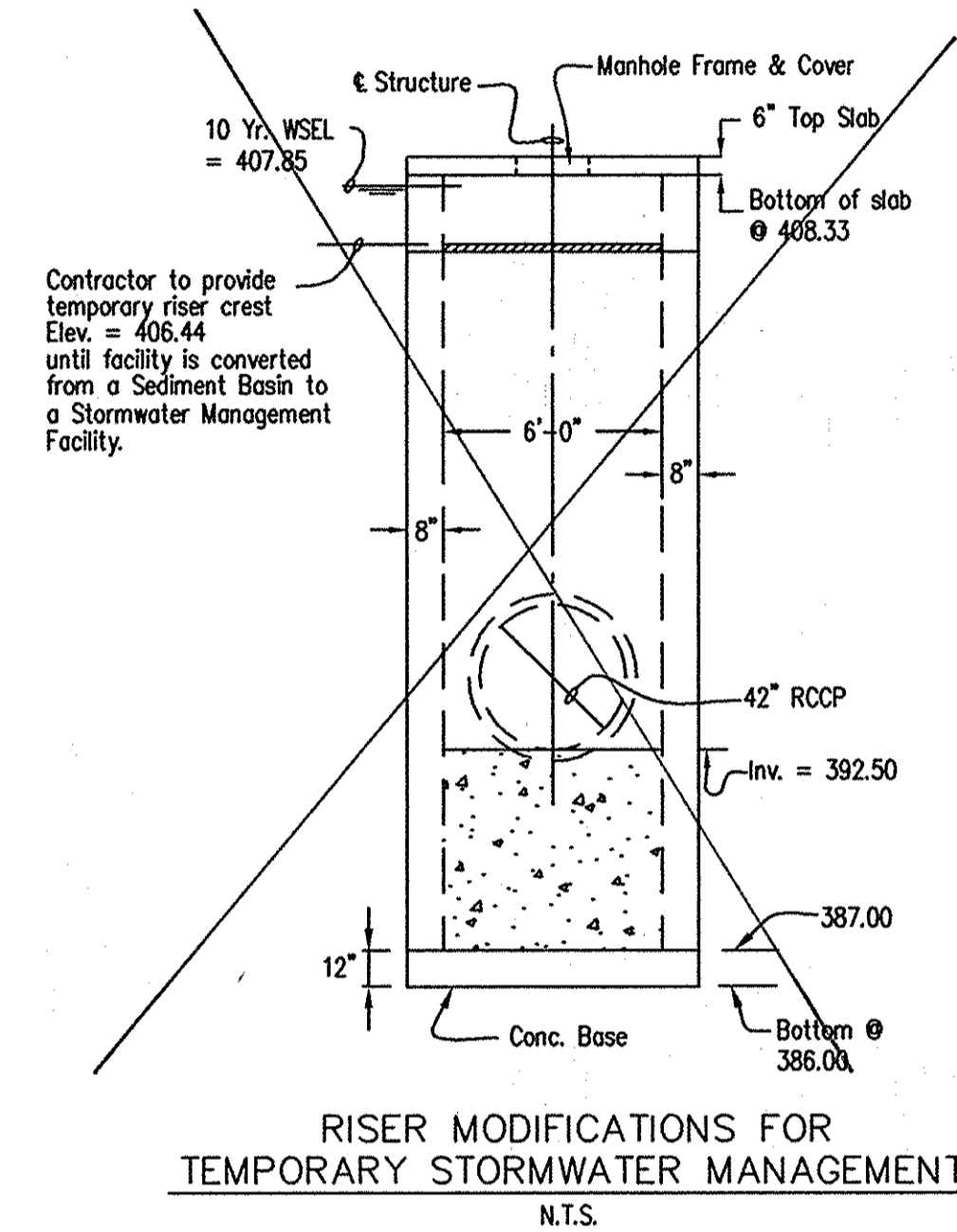
Plan for Grading  
around RS 1 and RS 2  
Scale: 1"=20'



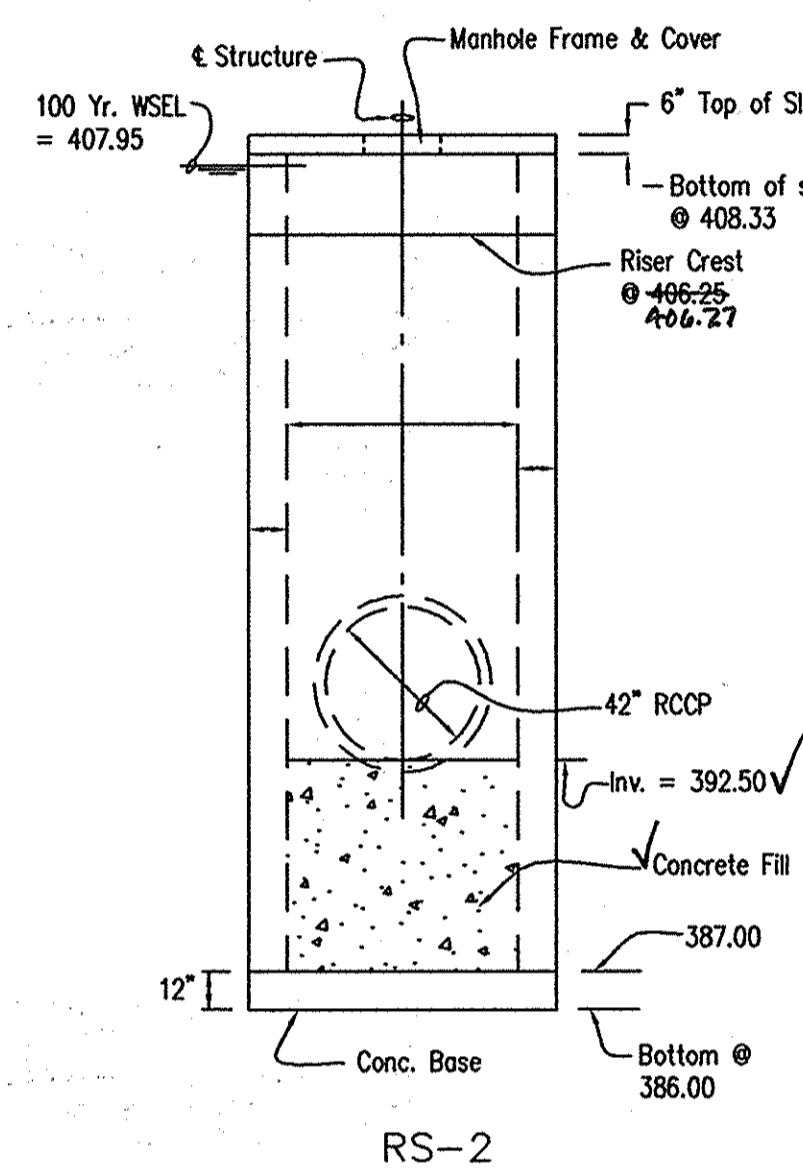
Front  
Plan View Of Riser Top  
Scale: 1"=3'



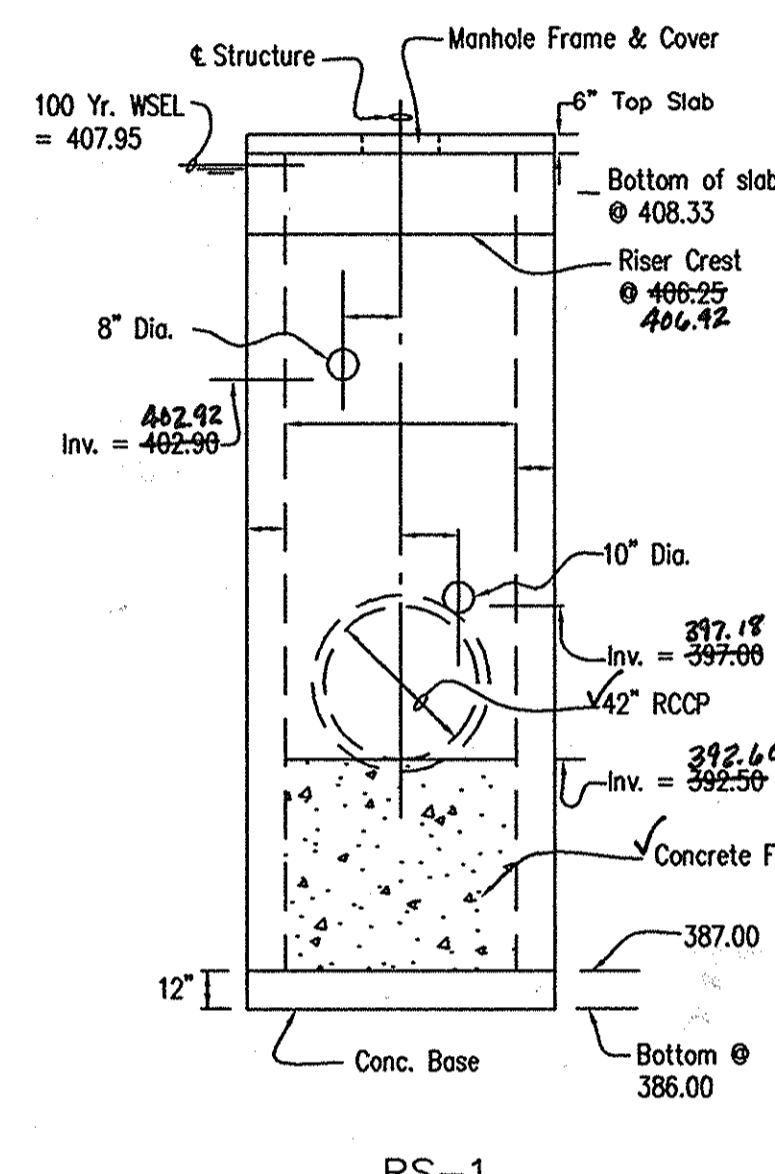
Front  
Plan View  
Scale: 1"=3'



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

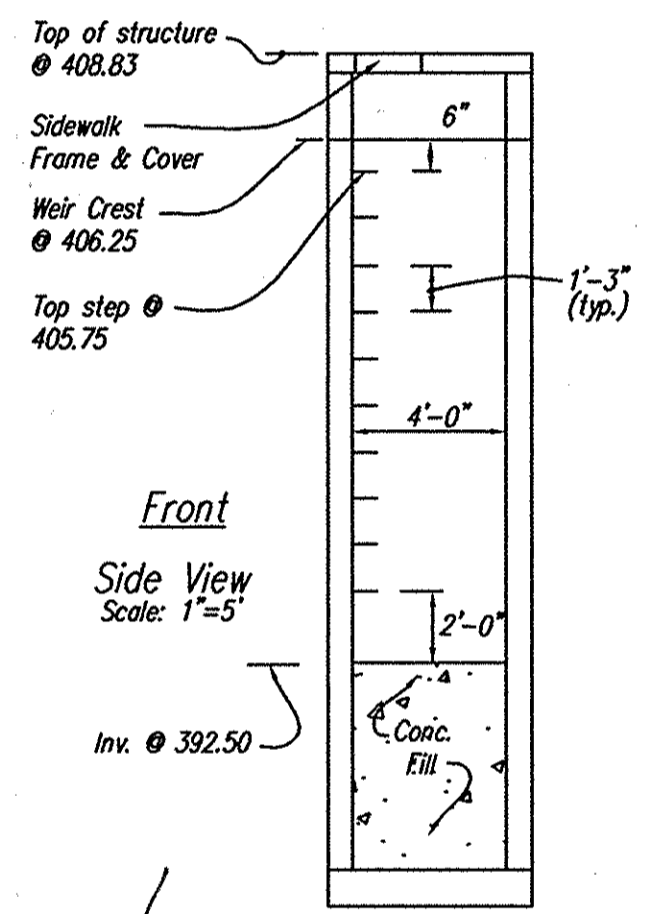


RS-2



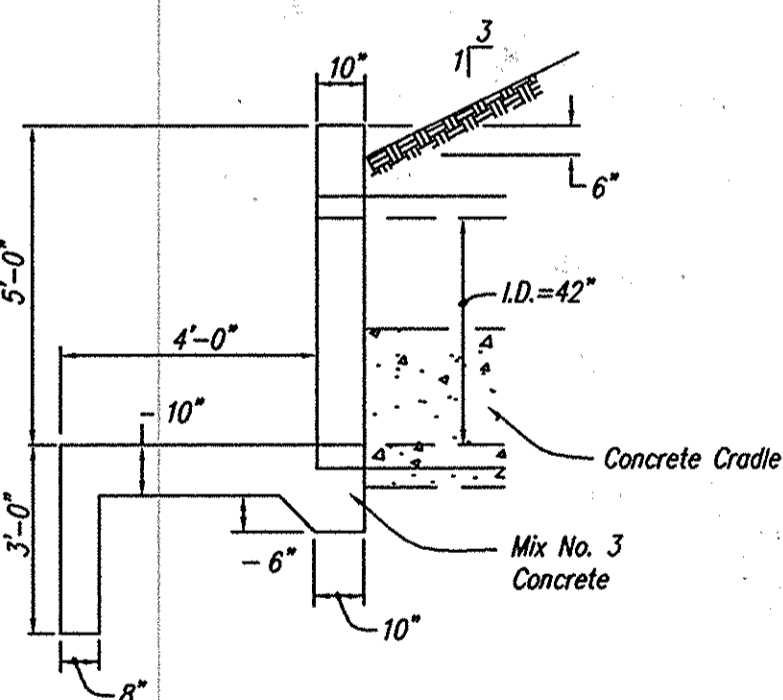
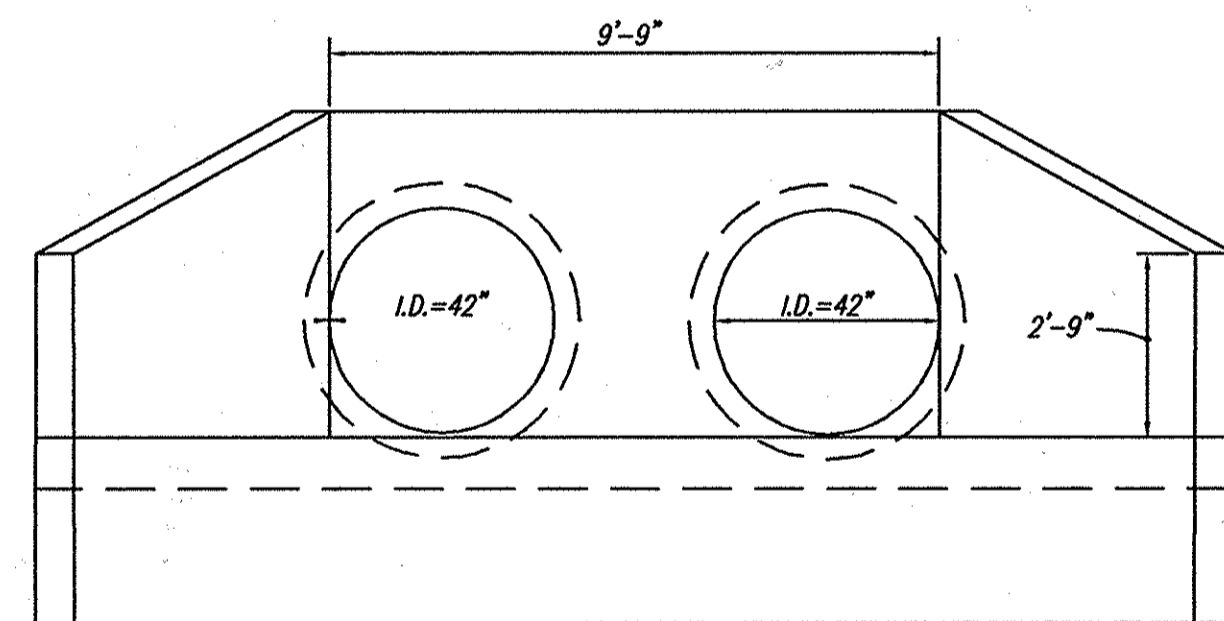
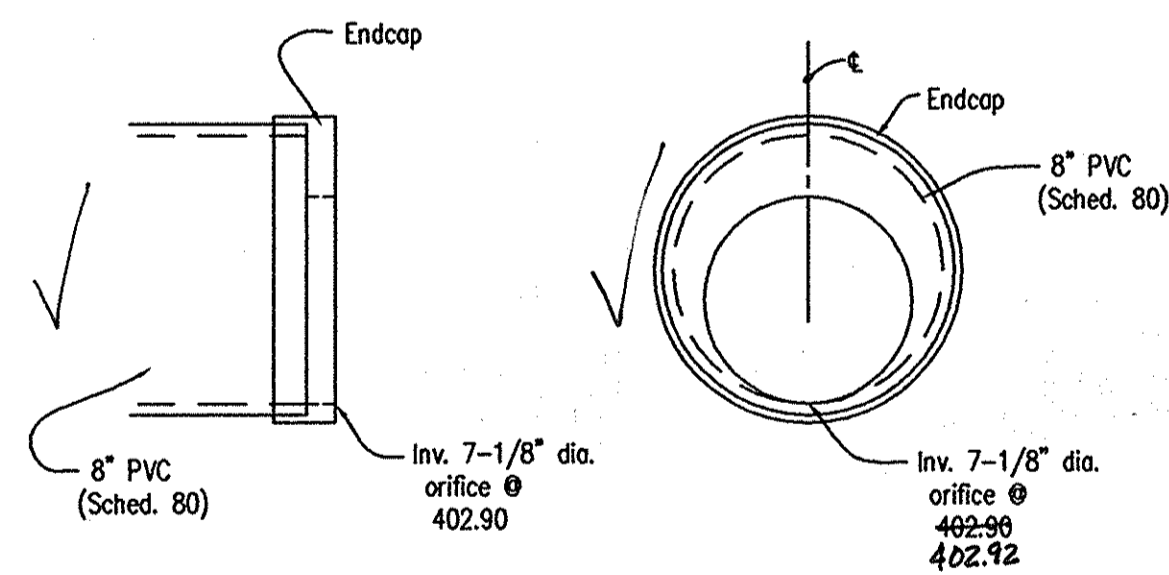
RS-1

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



Front  
Side View  
Scale: 1"=5'

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



Detail for HW-3  
Scale: 1"=3'

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Conroy* 2-25-03  
Chief, Bureau of Highways  
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Cindy Hammett* 3/2/03  
Chief, Division of Land Development  
Date

*John D. ...* 3/1/03  
Chief, Development Engineering Division  
Date

GLW GUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK  
BURTONTVILLE, MARYLAND 20986  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:  
G & R Maple Lawn, Inc., et. al.  
Site 410, Woodholme Center  
1029 Rotherdown 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)

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

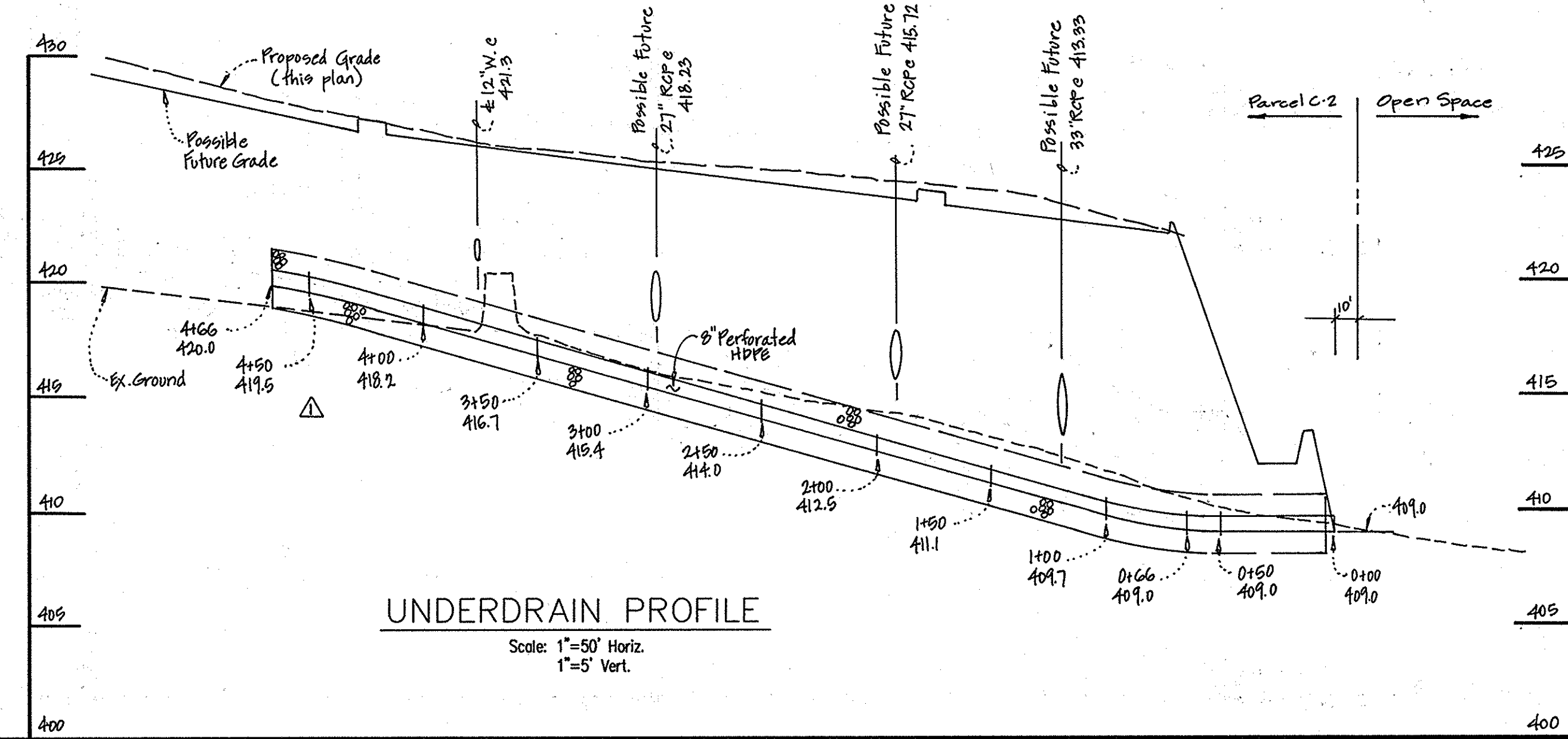
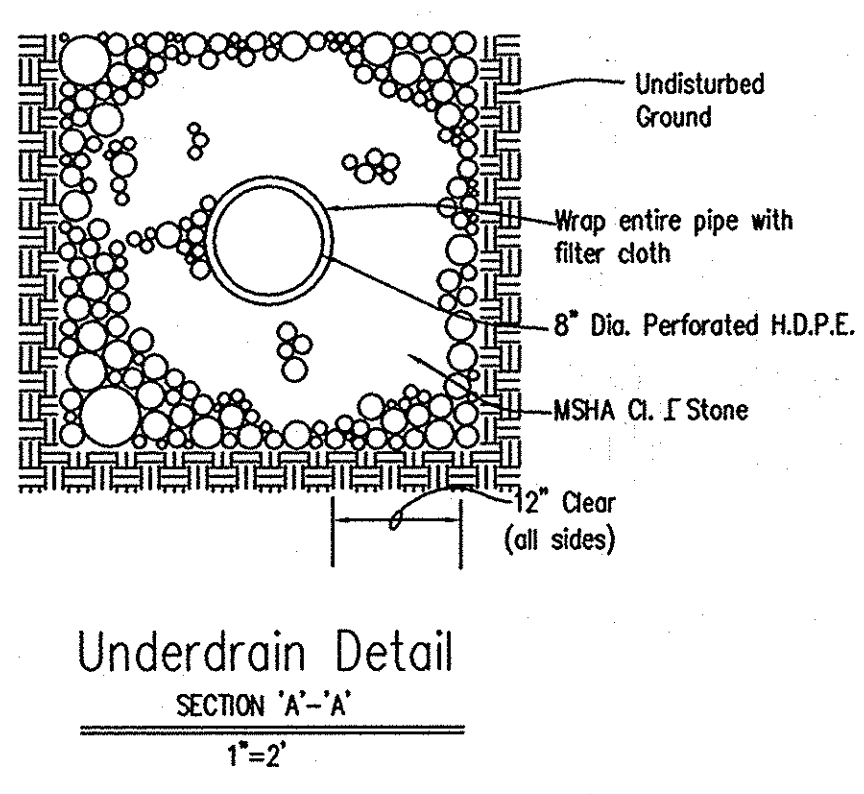
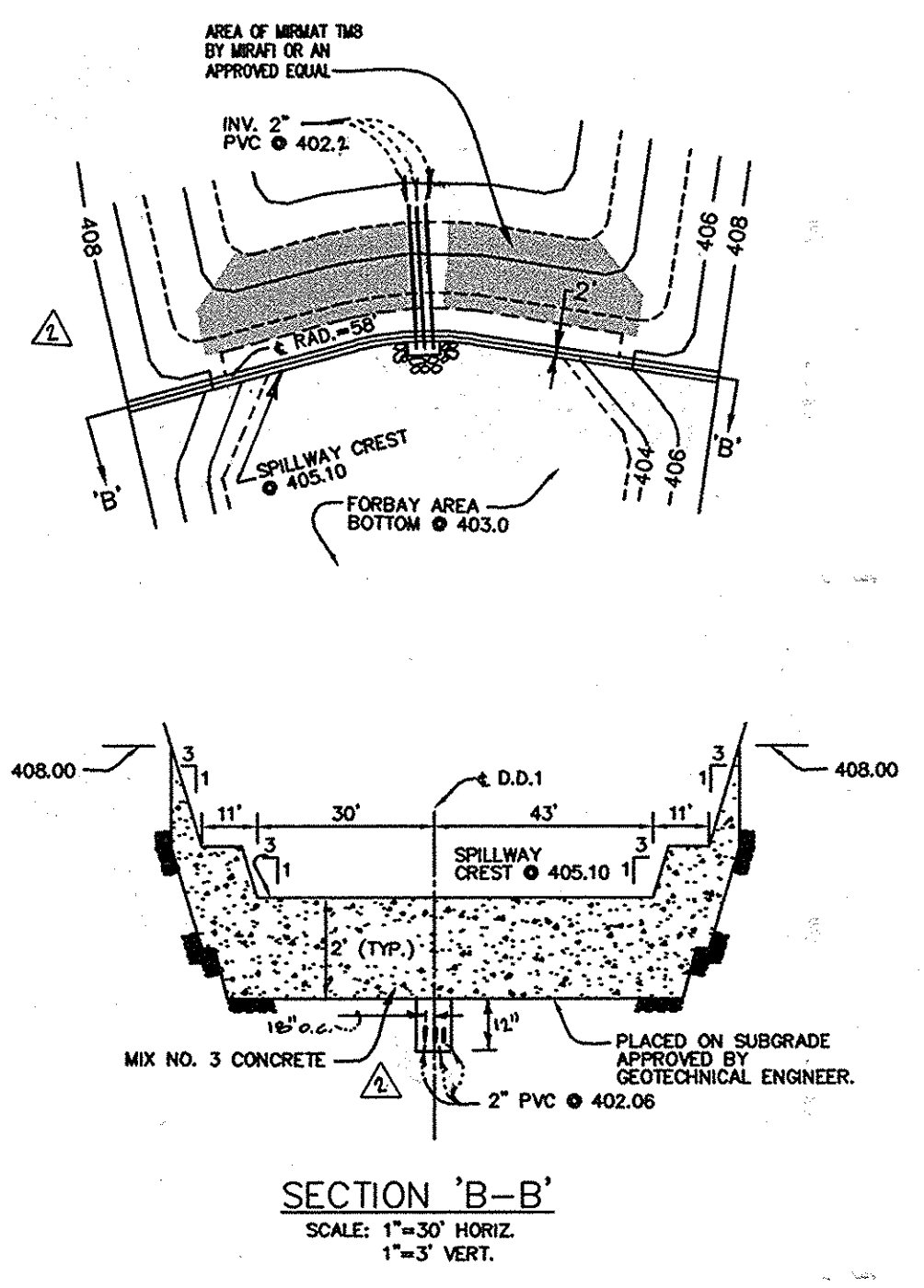
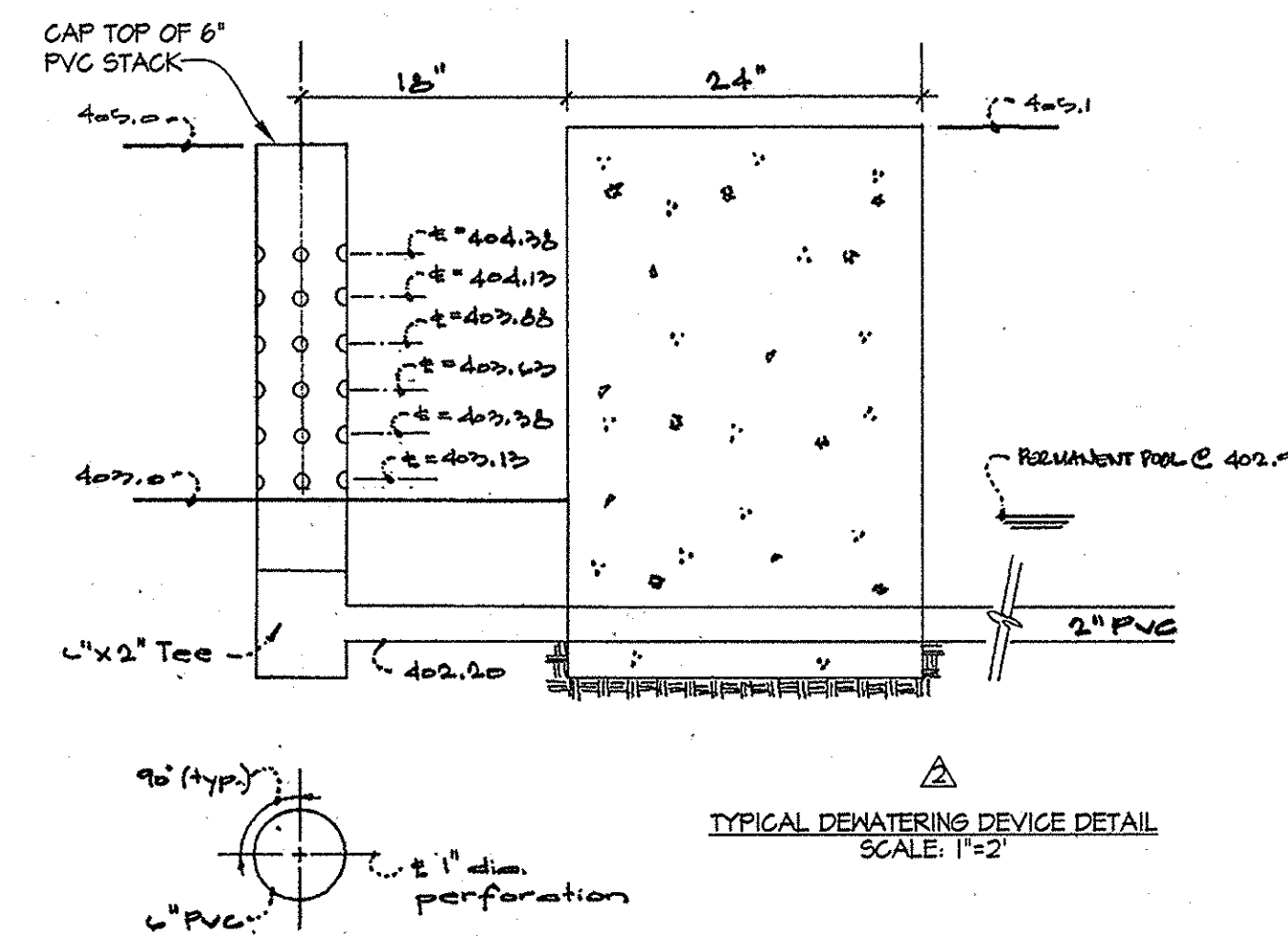
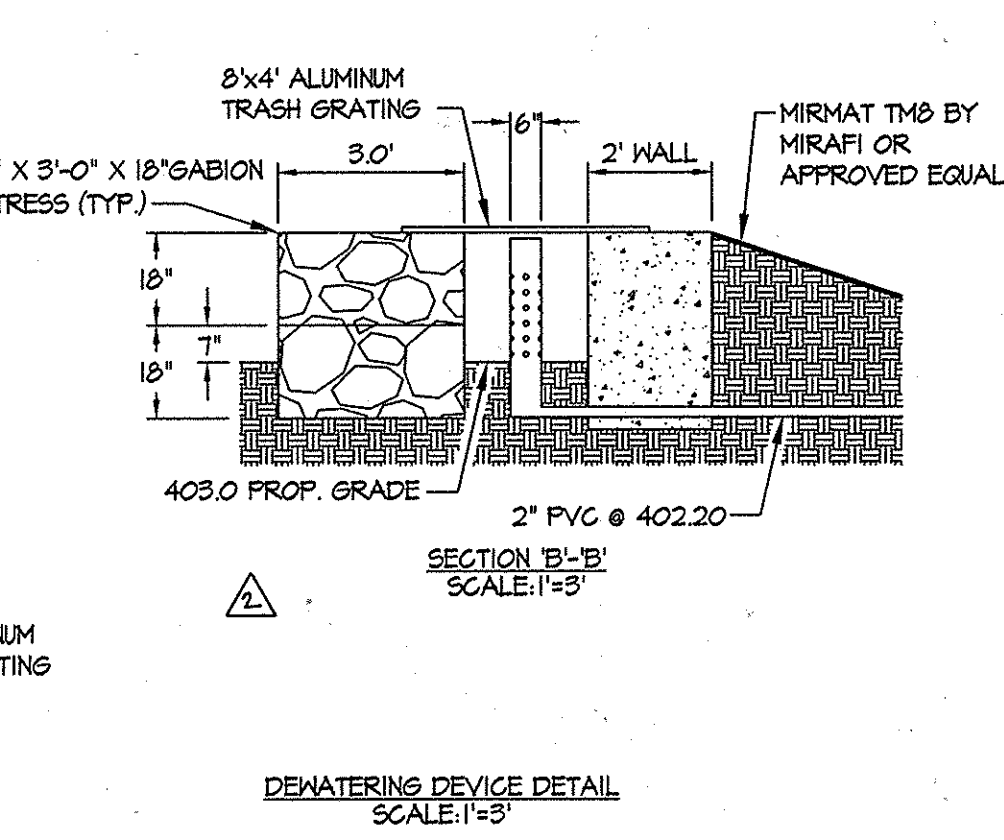
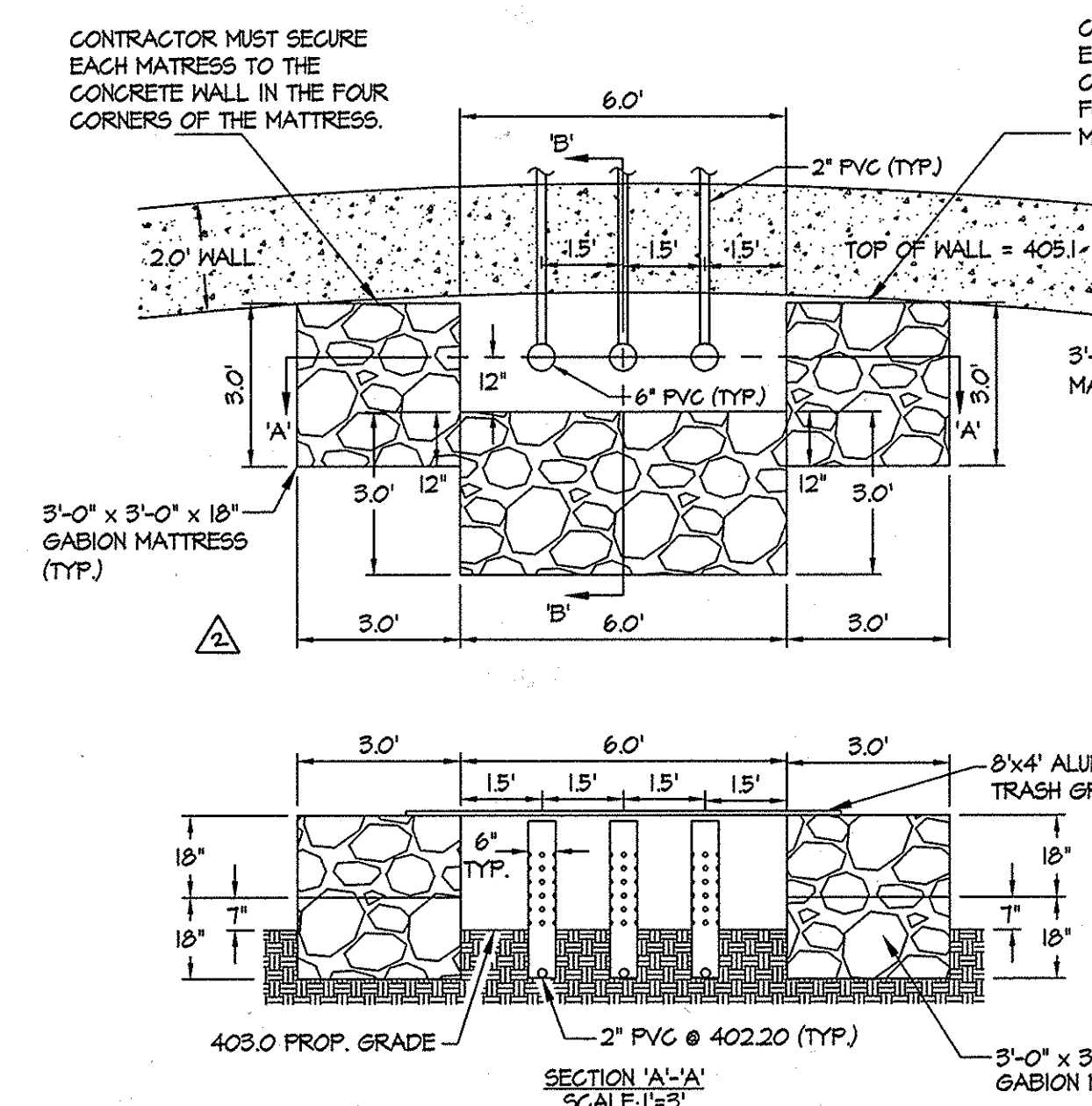
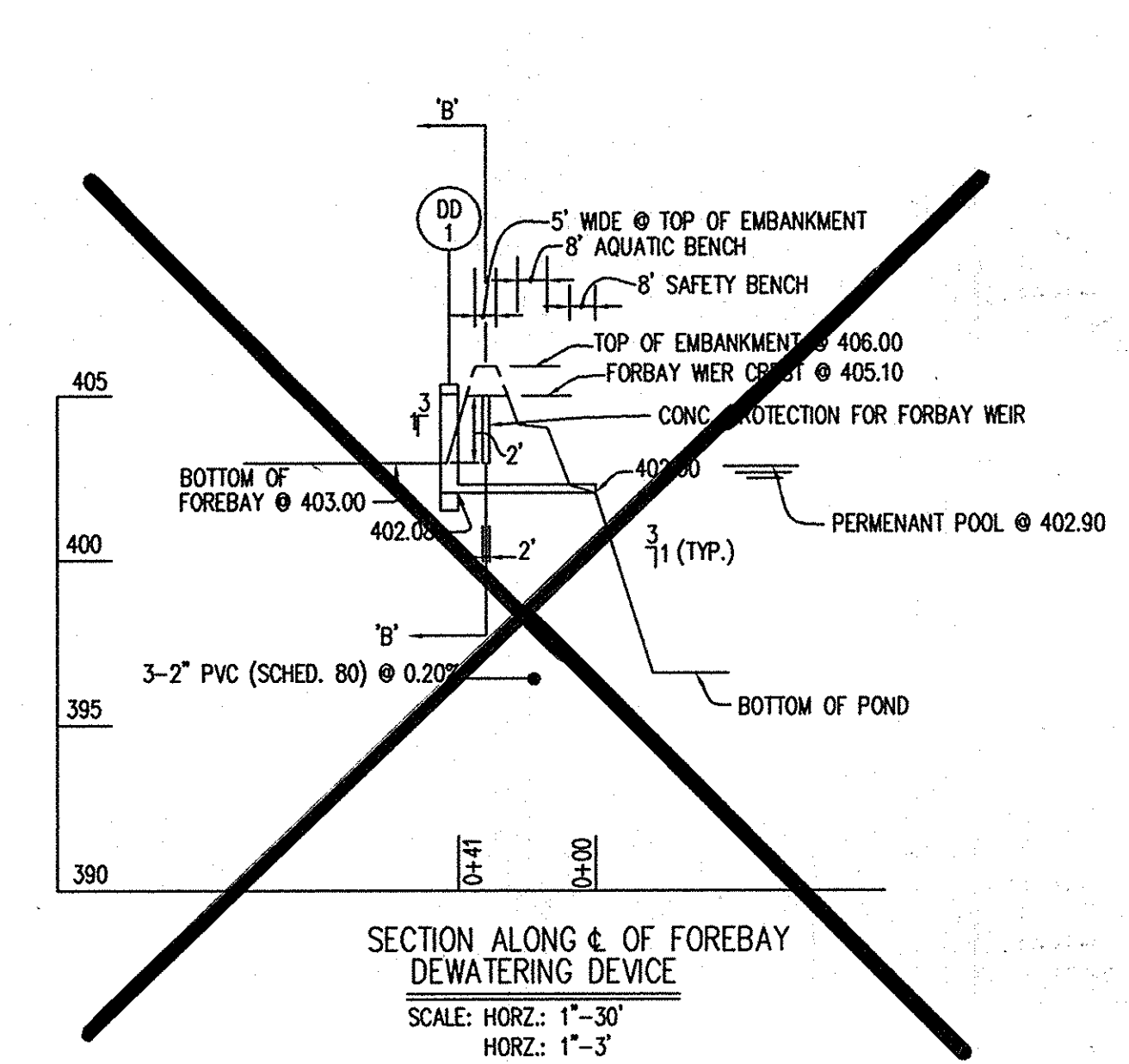
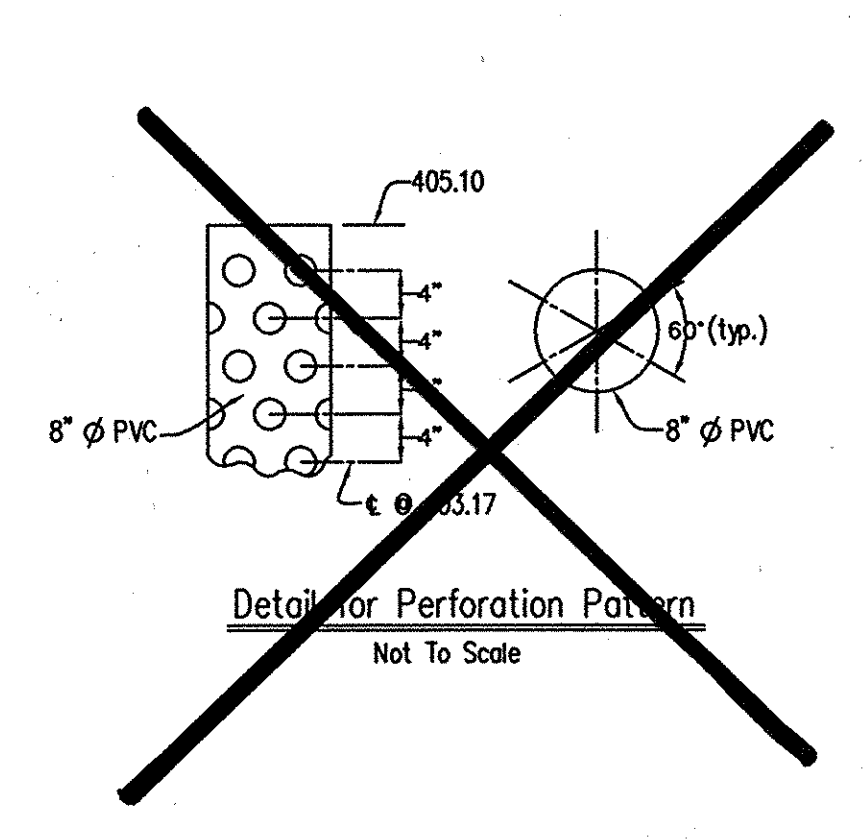
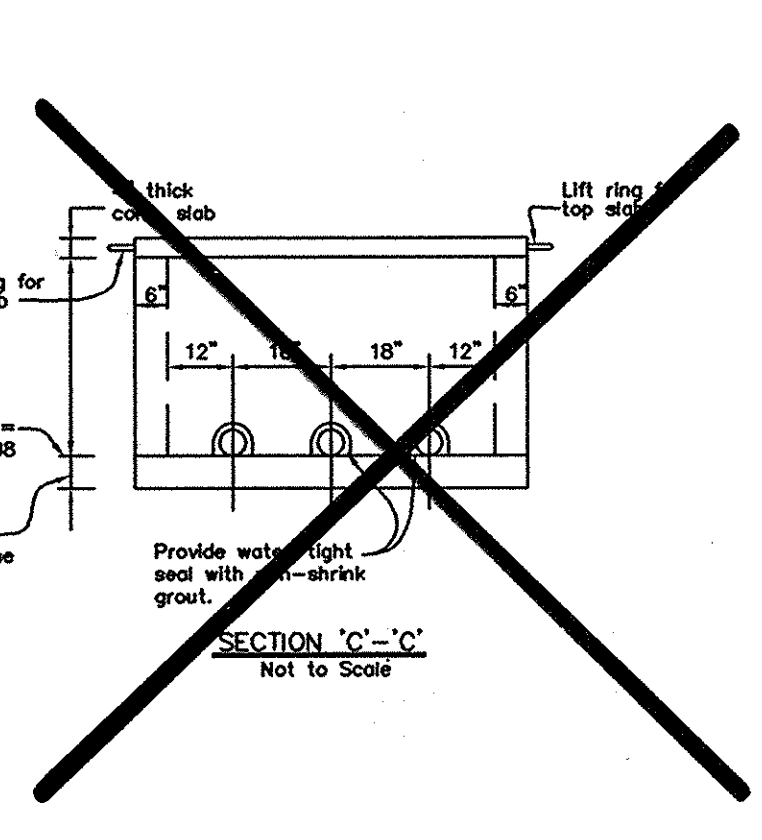
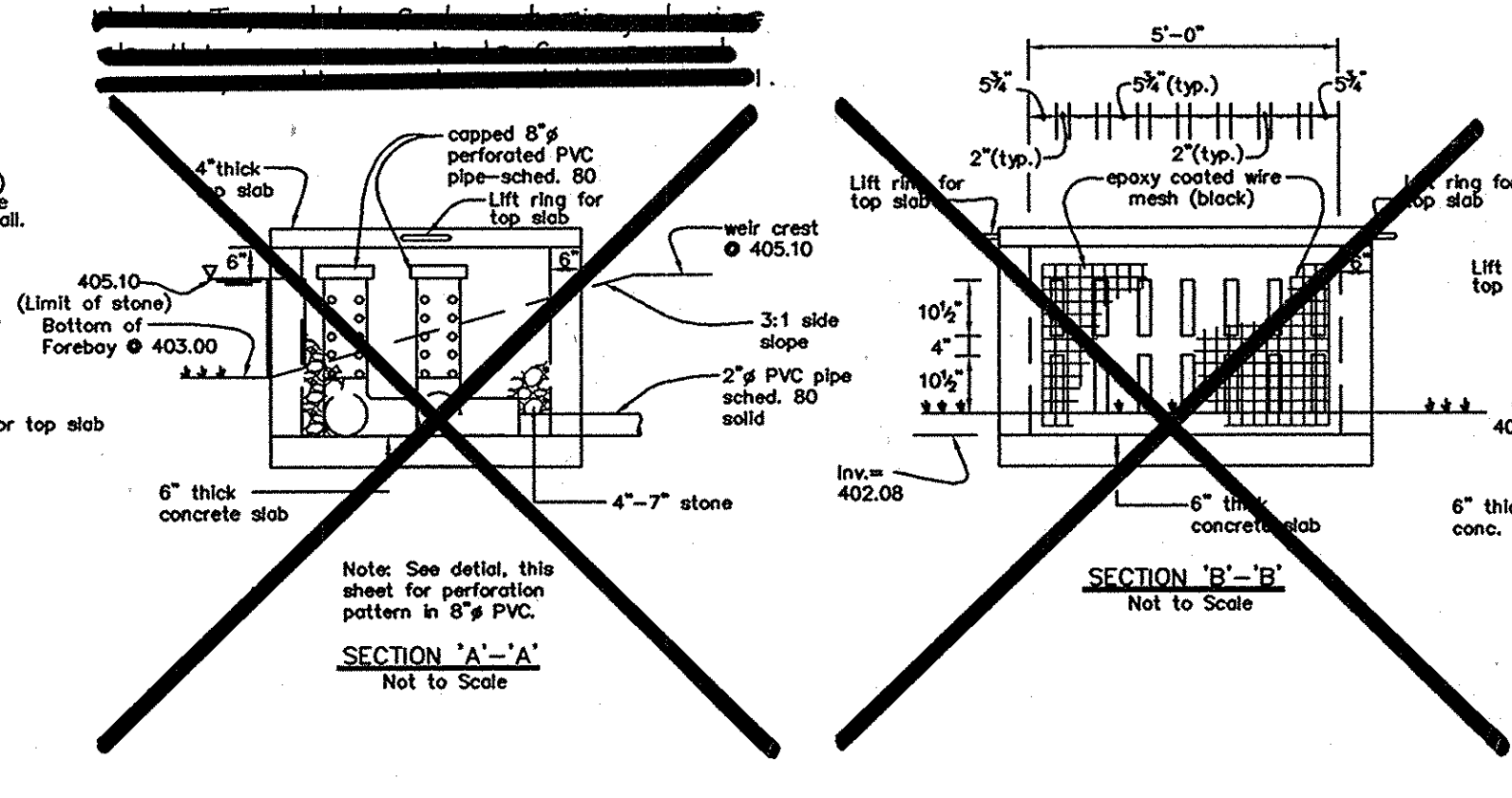
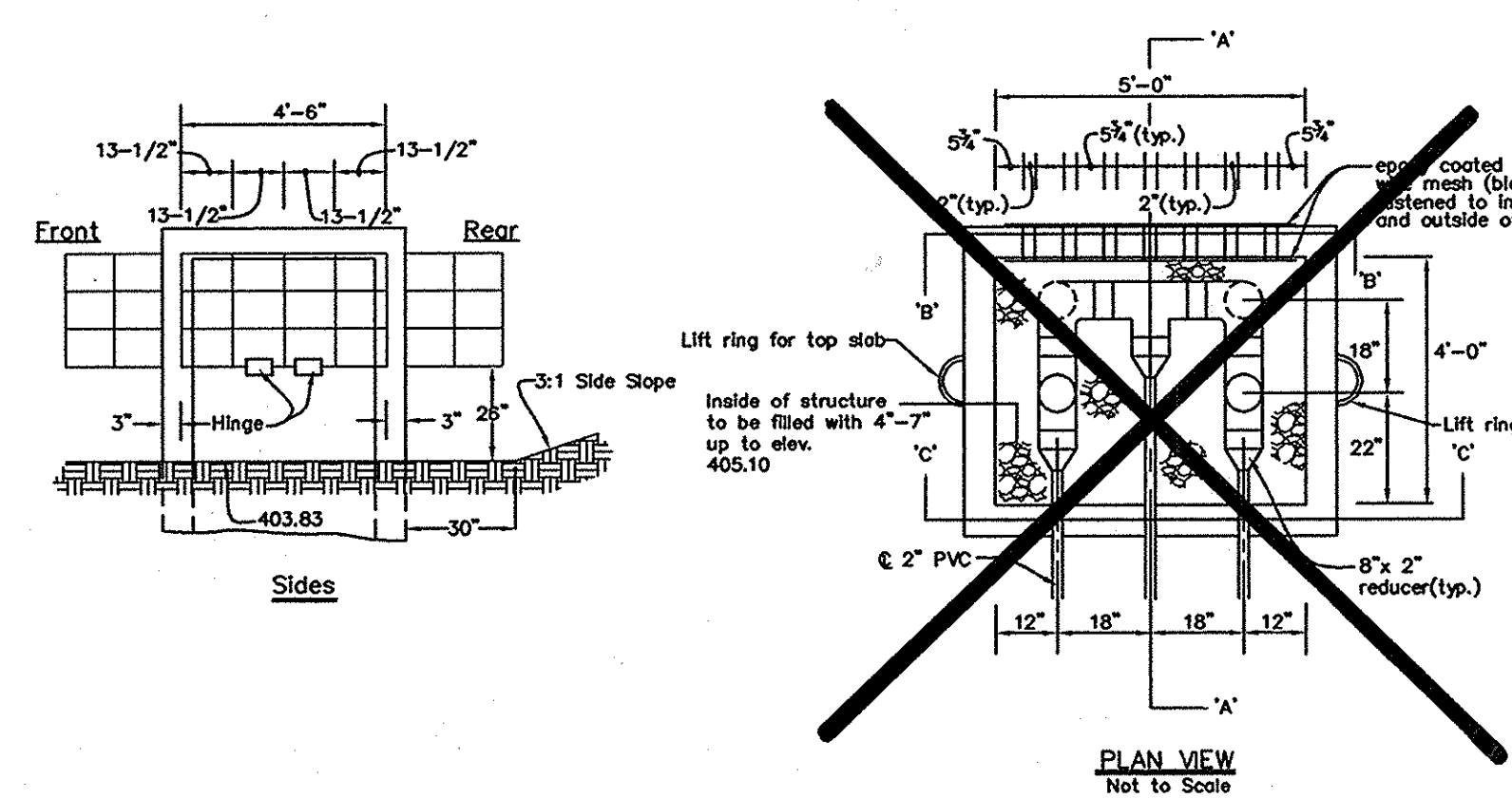
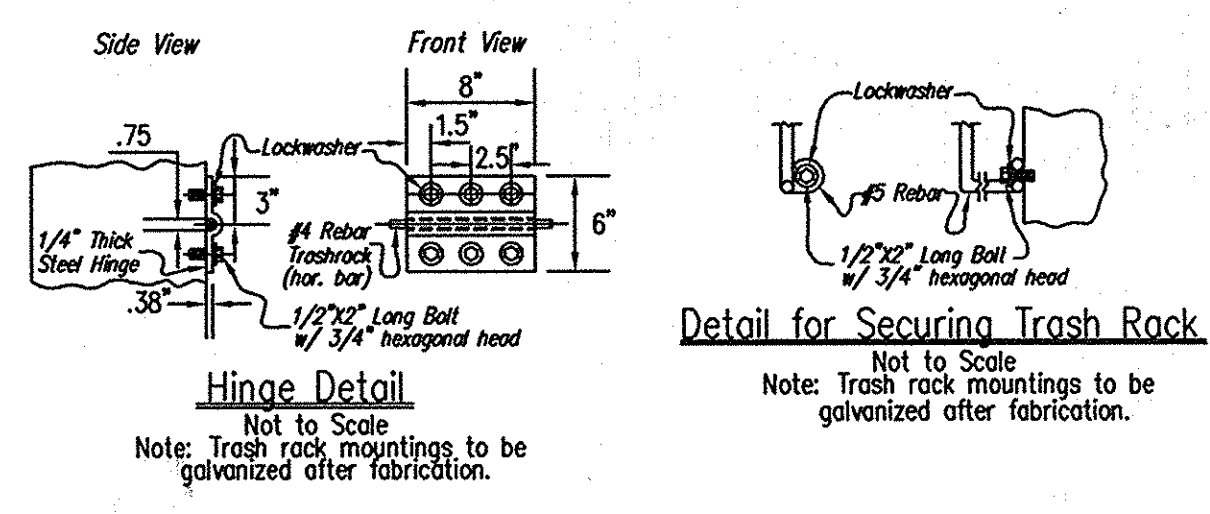
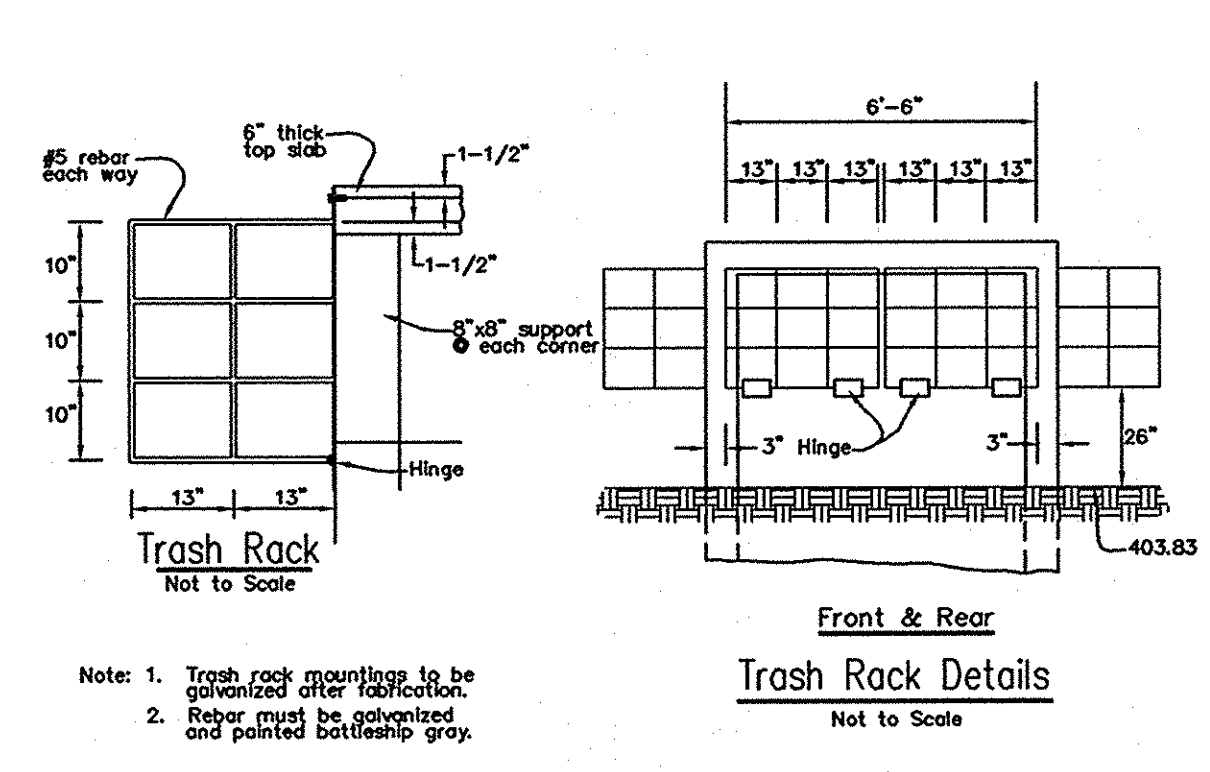
DEVELOPER'S/BUILDER'S CERTIFICATE  
"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training 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]* 1-27-03  
Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE  
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."  
*[Signature]* 1-27-03  
Engineer's Signature Date

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
*[Signature]* 2/4/03  
Howard Soil Conservation District Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.  
*[Signature]* 2/4/03  
Natural Resources Conservation Service Date

COUNTY FILE # F 03-07



**DEVELOPER'S/BUILDER'S CERTIFICATE**

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer/Builder: \_\_\_\_\_ 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 Development: \_\_\_\_\_ Date: 3/7/03

Chief, Development Engineering Division: \_\_\_\_\_ Date: 3/10/03

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

Signature: \_\_\_\_\_ Date: 2/11/03  
 Natural Resources Conservation Service

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

DATE	REVISION	BY	APP'R.
1/30/03	Revise underdrain profile to reflect anticipated utility location/inverts on to force site plan.	JAU	
1/18/03	Remove draw down details & added dewatering device detail		

PREPARED FOR:  
 G & R Maple Lawn, Inc., et. al.  
 Suite 410, Woodhams Center  
 1829 Rostenham Road  
 Baltimore, MD 21208  
 Attn: Charles Ottaviano  
 410-844-8400

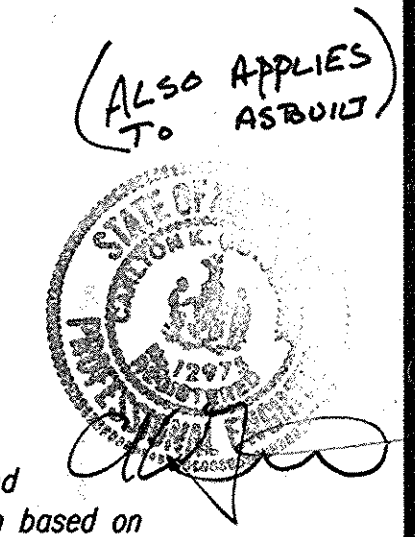
**STORMWATER MANAGEMENT FACILITY DETAILS**

**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

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

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



HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-0-3	1	14"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	4-6-0-6	2	8"	Groundwater encountered at 11.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	3-4-6-6	3	20"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-4-4-4	4	14"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-4-7-6	5	12"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	3-2-4-4	6	20"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-2-2	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	4-4-4-4	2	8"	Groundwater encountered at 7.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	3-3-4-4	3	12"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-3-4-4	4	14"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-4-7-6	5	24"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	7-11-6-7	6	18"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	3-3-4-4	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	4-4-6-7	2	20"	Groundwater encountered at 11.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	4-3-3-2	3	14"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-3-4-4	4	18"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-3-4-4	5	14"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	5-6-9-13	6	24"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	9-15-15-14	7	18"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	13-20-10-7	8	18"	
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D				
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D				
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D				
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D				

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	9-3-3-4	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	5-8-1-0	2	12"	No groundwater encountered while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	6-6-7-3	3	18"	Cased in at 15.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-2-6-5	4	24"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-2-6-6	5	24"	Backfilled after 24 hours
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	3-4-6-6	6	20"	

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	1-2-3-4	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	3-3-4-4	2	18"	Groundwater encountered at 11.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	3-4-4-4	3	16"	Cased in at 11.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-2-3-2	4	12"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	2-1-3-3	5	24"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	6-6-7-7	6	12"	

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-3-3	1	18"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	2-3-4-2	2	14"	Groundwater encountered at 13.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	2-3-5-5	3	20"	Cased in at 11.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-3-4-4	4	14"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-3-4-4	5	18"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	6-6-10-12	6	14"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-2-2	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	4-4-4-4	2	8"	Groundwater encountered at 13.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	3-3-4-4	3	12"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-3-4-4	4	14"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-4-7-6	5	24"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	7-11-6-7	6	18"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-3-4	1	18"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	4-7-6-6	2	11"	
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	4-4-4-4	3	20"	
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	3-4-4-4	4	12"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-2-3-2	5	20"	Quartz layer 12.0-14.0'
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	3-8-7-11	6	18"	

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-3-3	1	18"	Topsoil
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	2-3-3-3	2	10"	Groundwater encountered at 7.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	2-3-3-3	3	20"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	12-7-9-10	4	12"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-3-7-6	5	14"	Backfilled after 24 hours
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	6-6-8-11	6	20"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	1-2-4-6	1	12"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	2-5-4-7	2	18"	No groundwater encountered while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	3-6-6-6	3	20"	Cased in at 11.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	4-7-9-10	4	12"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	3-3-7-6	5	18"	
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	6-6-8-11	6	20"	Backfilled after 24 hours

Bottom of Hole at 17.7'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION Page 1 of 2

Project Name: Maples Farm Location: Scaggsville, Maryland

Soil Blows: 1-18

ELEV.	SOIL DESCRIPTION	DEPTH (FT)	SCALE	CON.	BLOW'S	NO.	REC.	BORING & SAMPLING NOTES
14.0	Reddish brown, moist, silty clay with fine sand (ML)	0.0	1.0	D	2-3-3-3	1	18"	
13.0	Reddish brown, moist, silty clay with fine sand (ML)	1.0	1.0	D	1-2-1-0	2	20"	Groundwater encountered at 13.7' while drilling
12.0	Reddish brown, moist, silty clay with fine sand (ML)	2.0	1.0	D	2-3-4-4	3	12"	Cased in at 6.7' at Completion
11.0	Reddish brown, moist, silty clay with fine sand (ML)	3.0	1.0	D	2-3-6-6	4	12"	
10.0	Reddish brown, moist, silty clay with fine sand (ML)	4.0	1.0	D	2-3-4-4	5	14"	Backfilled after 24 hours
9.0	Reddish brown, moist, silty clay with fine sand (ML)	5.0	1.0	D	2-3-6-7	6	18"	

Bottom of Hole at 17.7'

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.

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

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

Signature of Developer/Builder: [Signature] Date: 1-27-03

Signature of Howard Soil Conservation District: [Signature] Date: 2/11/03

Signature of Natural Resources Conservation Service: [Signature] Date: 2/11/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 2-25-03  
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 [Signature] 2/2/03  
 Chief, Development Engineering Division



GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK, BURTONTOWN, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 301-421-4186

PREPARED FOR: G & R Maple Lawn, Inc., et al. Suite 410, Woodholme Center 1829 Reisterstown Road, Baltimore, MD 21288  
 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)

SCALE: AS SHOWN ZONING: MXD-3 G. L. W. FILE NO.: 96079  
 DATE: JANUARY 2003 TAX MAP - GRID: 41: 21 & 22 SHEET: 27 OF 34  
 46: 3 & 4

COUNTY FILE # F 03-07  
 HOWARD COUNTY, MARYLAND

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.

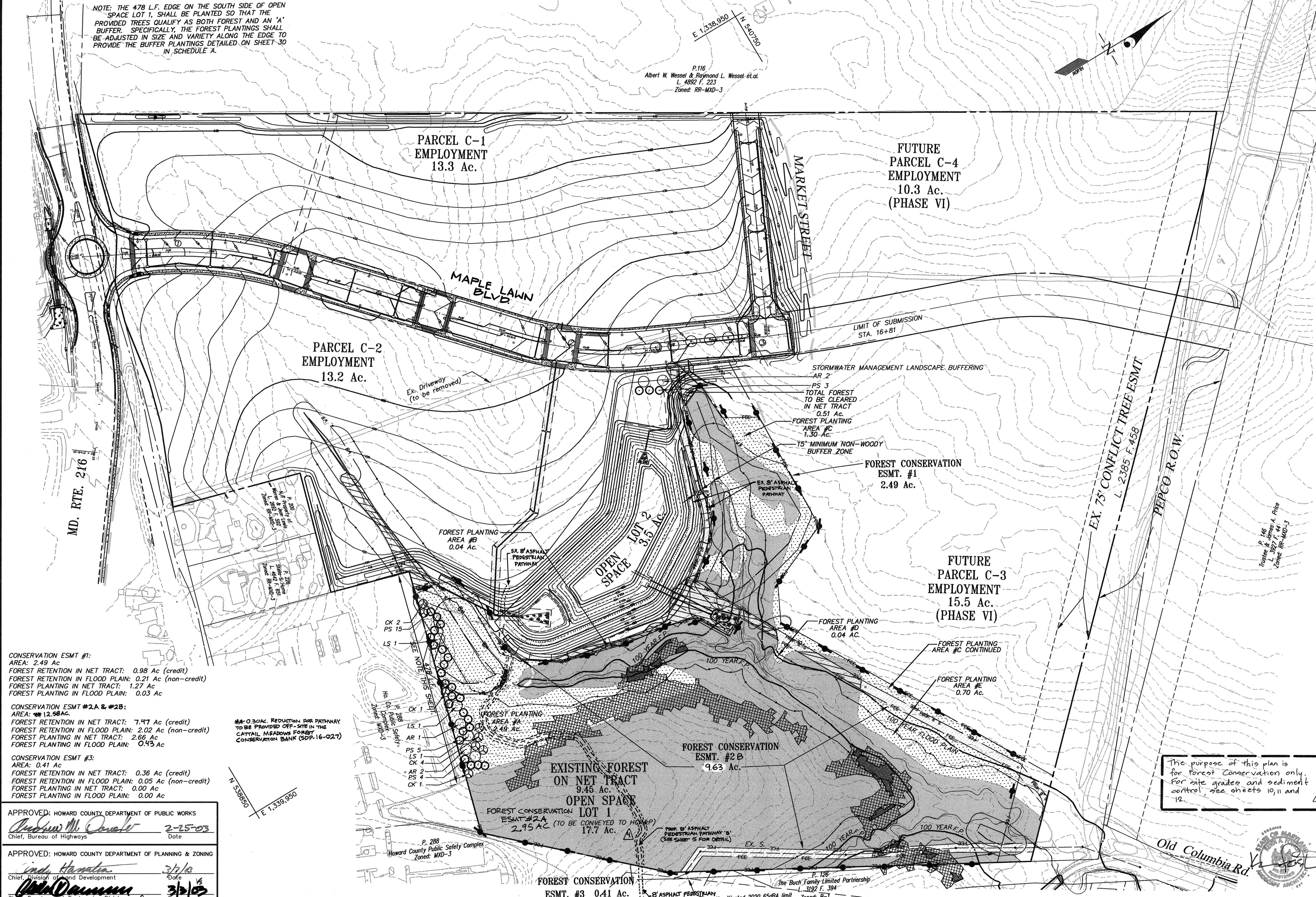
P.116  
Albert W. Wessel & Raymond L. Wessel et al.  
L. 4892 F. 223  
Zoned: RR-MXD-3

**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



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 #2A & #2B:  
AREA: 12.98 Ac  
FOREST RETENTION IN NET TRACT: 7.47 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: 0.43 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

\*0.30 AC. REDUCTION FOR PATHWAY TO BE PROVIDED OFF-SITE IN THE CATTAIL MEADOWS FOREST CONSERVATION BANK (SDP.16-027)

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Orsini* 2-25-03  
Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Indy Hamilton* 3/1/03  
Chief, Division of Land Development Date

*John O'Donnovan* 3/1/03  
Chief, Development Engineering Division Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-988-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
01/24/2003	Added note to describe purpose of plan and limit its use.	JAV	
02/26/03	REDLINE TO ILLUSTRATE A PATHWAY THROUGH HC OPEN SPACE LOT 1	R.H.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

**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)  
HOWARD COUNTY, MARYLAND

SCALE	ZONING	C. 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

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\finals\96079FFC.DWG 01/24/2003 09:46:55 AM EST

## FOREST CONSERVATION WORKSHEET

### SITE DATA

GROSS SITE AREA - PHASE 1	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.

PHASE NO.	GROSS AC.	FLOODPLAIN AC.	NET TRACT AREA	EXG FOREST IN AC.	FOREST CLEARED	FOREST RETAINED	EXCESS RETENTION	REF/AFF. REQUIRED	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 RETENTION 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)

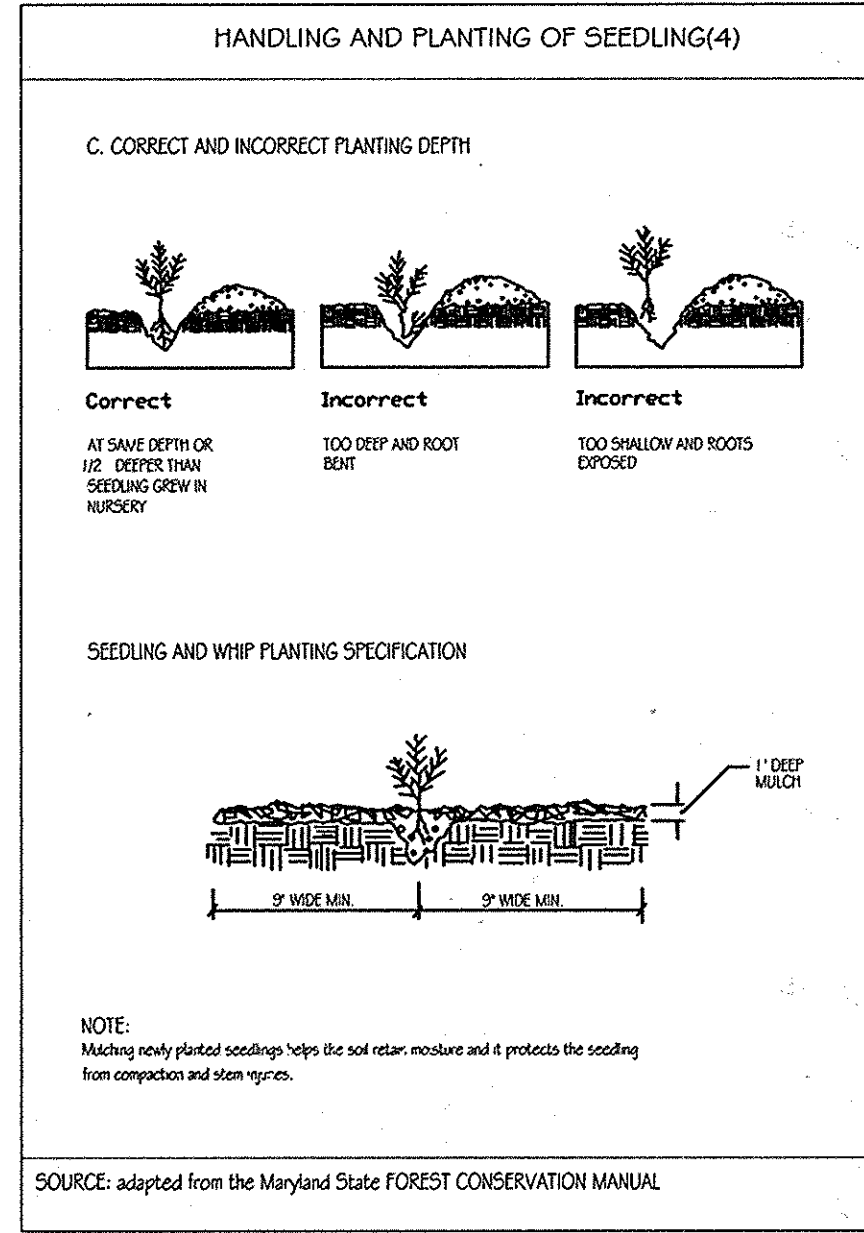
Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement in the amount of \$171,739.00. (\$77,824+\$93,915)

TASKS	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TRANSPLANT OF 2" DBH OR GREATER												
PLANTING SEEDLINGS, WHIPS												
MINIMUM MONITORING		*	*	*	*	*	*	*	*	*	*	*
FERTILIZER (+ OF NEEDED)												
WATER **												
PRUNING												

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. The calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

SOURCE: adapted from the Maryland State FOREST CONSERVATION MANUAL



### NOTES:

- 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.
- ALL 1" AND 2" CAL. TREES SHALL BE B&B OR CONTAINER GROWN.
- 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.
- 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.
- 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.

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

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 TULIFERA/TULIP TREE	15	12			7
PLATANUS OCCIDENTALIS/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				

\*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

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

## CONSTRUCTION PERIOD PROTECTION PROGRAM

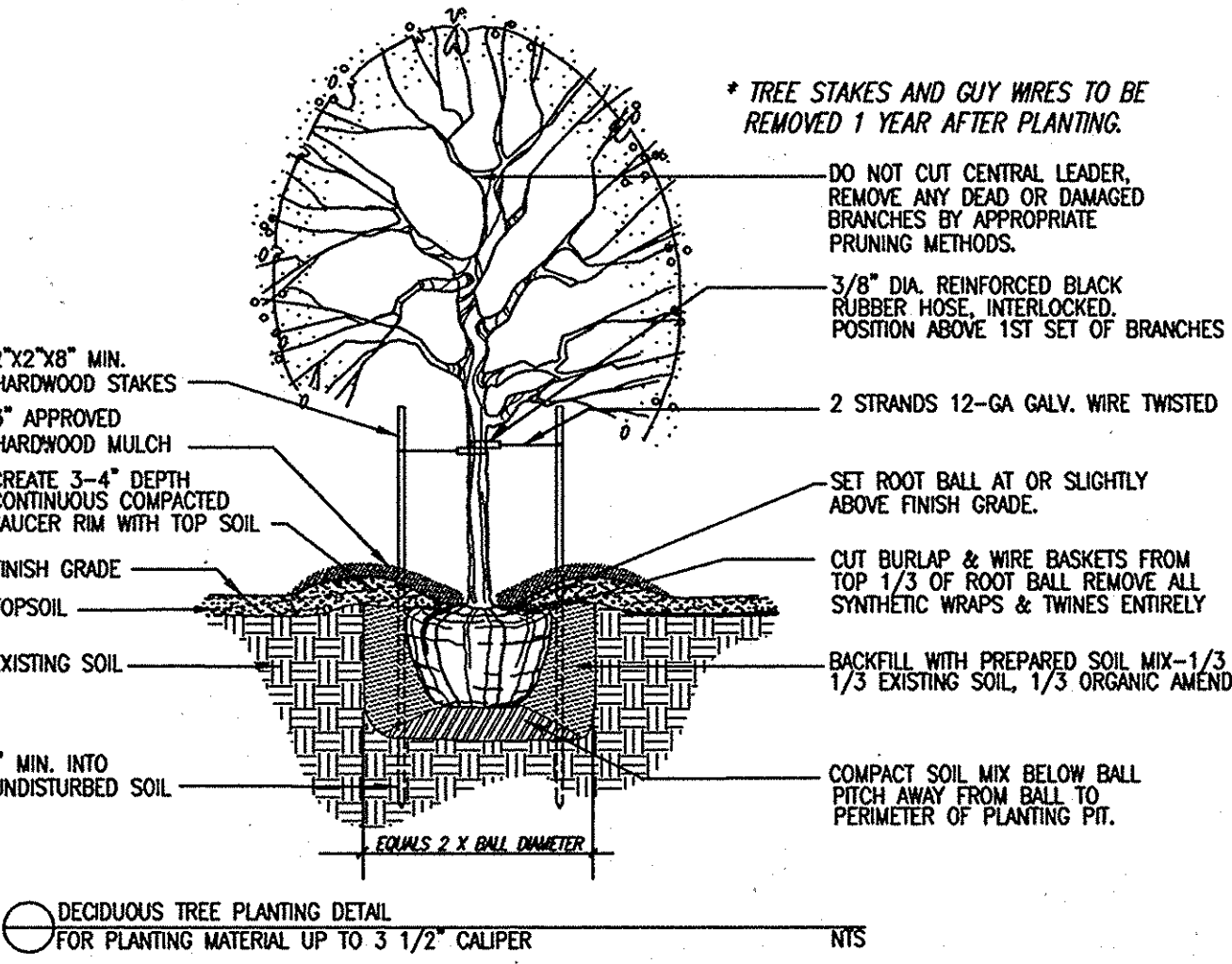
- The limit of forest retention shall be staked and flagged.
- A pre-construction meeting at the site should be held to confirm the limits of clearing specified. The meeting should include the owner or the owner's representative, the on-site foreman in charge of land disturbance, the environmental consultant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

## FOREST CONSERVATION PROGRAM SEQUENCE

- OBTAIN ALL NECESSARY PERMITS.
- STAKEOUT LIMITS OF DISTURBANCE.
- FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE LIMITS OF GRADING AND CONSTRUCTION.
- 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.
- COMMENCE SITE CONSTRUCTION.
- ONCE THE SOIL IS STABILIZED AND GRADING HAS BEEN COMPLETED, REMOVE TREE PROTECTION FENCE, BUT SIGNS ARE REQUIRED TO REMAIN.
- INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
- POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN.).
- FINAL INSPECTION AND CERTIFICATION FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATION.

## GENERAL NOTES

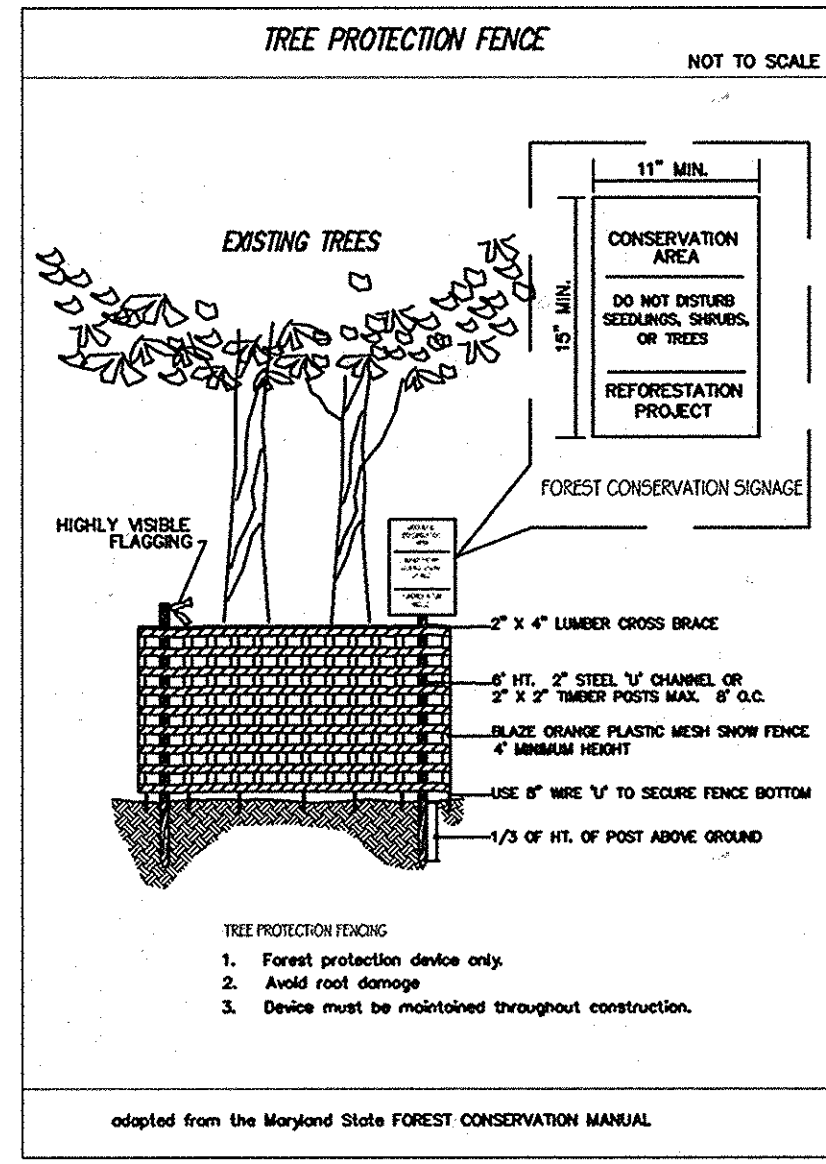
- This reforestation plan is provided in accordance with the requirements of Subtitle 12 "Forest Conservation" of the Howard County Code.
- Implementation of this plan must be performed by a contractor that is knowledgeable and experienced in afforestation/reforestation techniques and practices.
- The owner is responsible for a 2-year (min.) post-construction maintenance period which involves activities necessary to ensure survival and growth of the conservation area. Two 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.
- 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.
- The contractor is responsible for the location of any existing utilities. The repair of any utilities damaged by the contractor shall be at the contractor's expense.
- Street trees provided at Final Plan Stage. Landscape and Buffering requirements to be provided at Site Plan Stage.
- 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.
- The forest conservation easements shown on this plan will be established to fulfill the requirements of the Forest Conservation Program. No clearing, grading or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.
- The bearing and distances of the forest conservation easements can be seen on the recorded final subdivision plat. COUNTY FILE # F 03-07



FINAL FOREST CONSERVATION PLAN NOTES, SCHEDULES and DETAILS		
SCALE	ZONING	G. L. W. FILE NO.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 48: 3 & 4	29 OF 34

ELECTION DISTRICT No. 2 HOWARD COUNTY, MARYLAND

FOREST CONSERVATION ESMT	1	2	3	TOTAL
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
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
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
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



- NOTES:
- 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.
  - 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.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

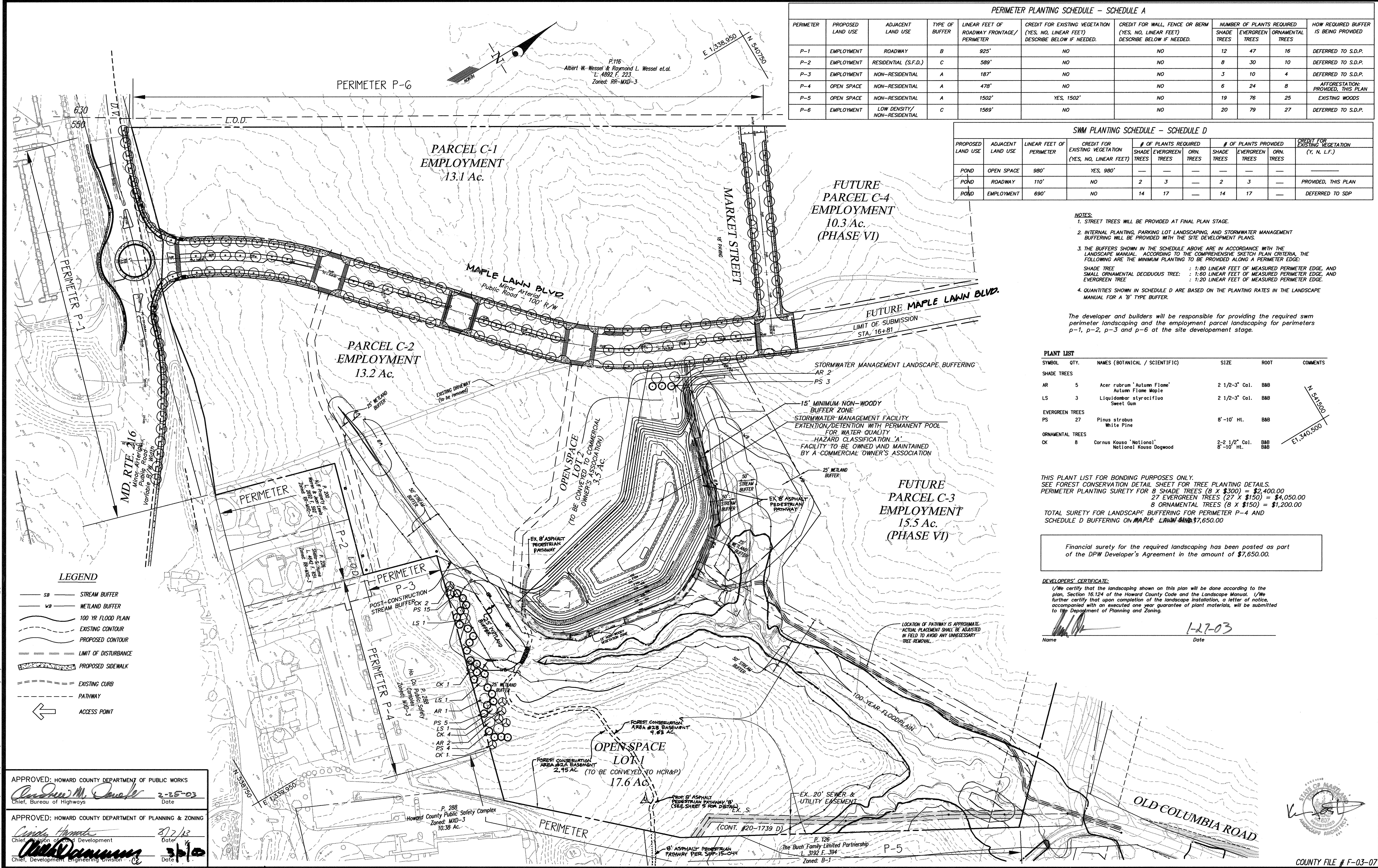
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* 2-25-03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*[Signature]* 3/1/03  
 Chief, Division of Land Development Date  
*[Signature]* 3/1/03  
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 230 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. LMM	DRN. LMM	CHK. CKG	DATE	REVISION	BY	APPR.

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



**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	1589'	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:**
- STREET TREES WILL BE PROVIDED AT FINAL PLAN STAGE.
  - INTERNAL PLANTING, PARKING LOT LANDSCAPING, AND STORMWATER MANAGEMENT BUFFERING WILL BE PROVIDED WITH THE SITE DEVELOPMENT PLANS.
  - 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.
  - 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 development stage.

**PLANT LIST**

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

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: \_\_\_\_\_ Date: 1-27-03

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Donahue* 2-25-03  
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Charles H. Hovde* 2/2/03  
 Chief, Division of Land Development Date

*Chris Dammann* 2/10  
 Chief, Development Engineering Division Date

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

DATE	REVISION	BY	APP'R.
04/26/18	REDLINE TO ILLUSTRATE A PATHWAY THROUGH H.C. OPEN SPACE LOT 1	R.H.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

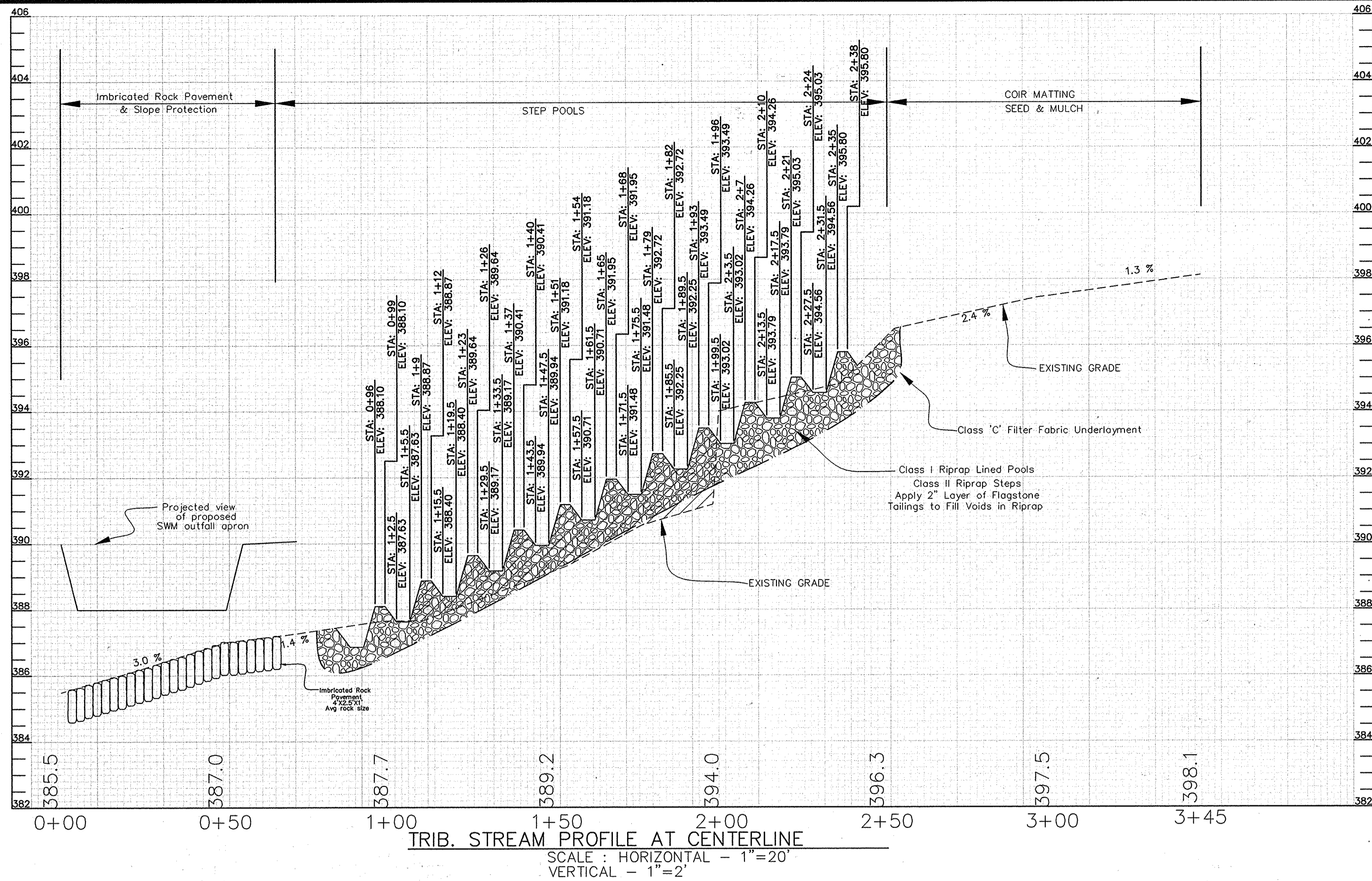
**FINAL PERIMETER LANDSCAPING PLAN**

**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

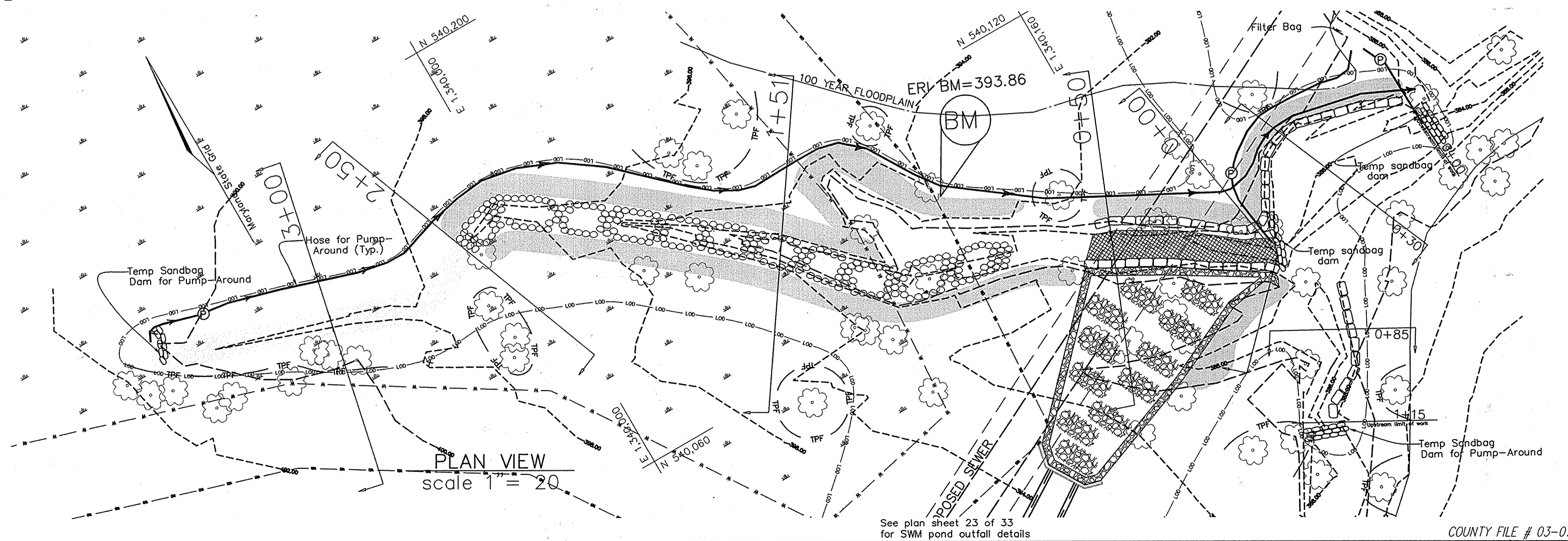
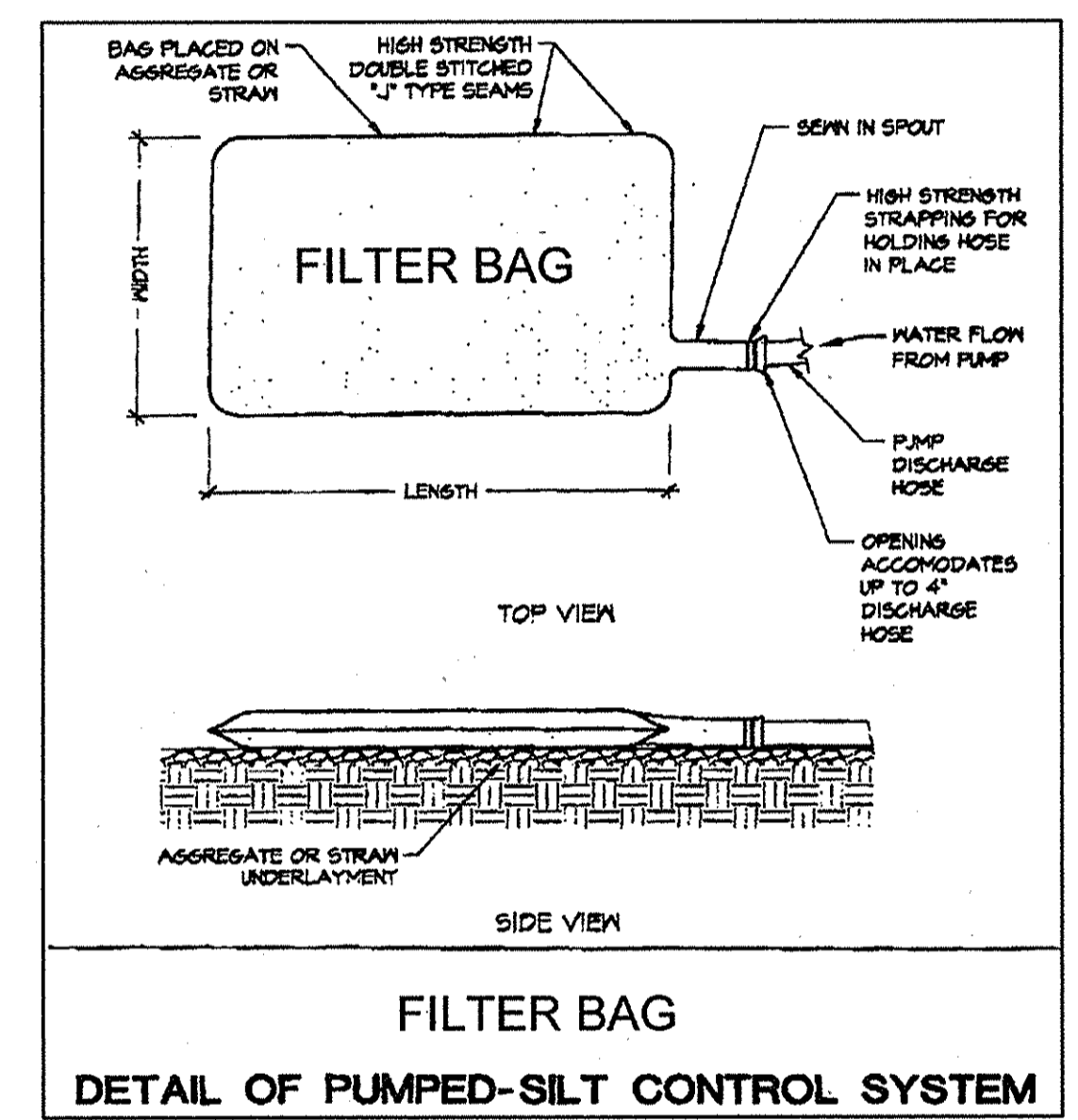
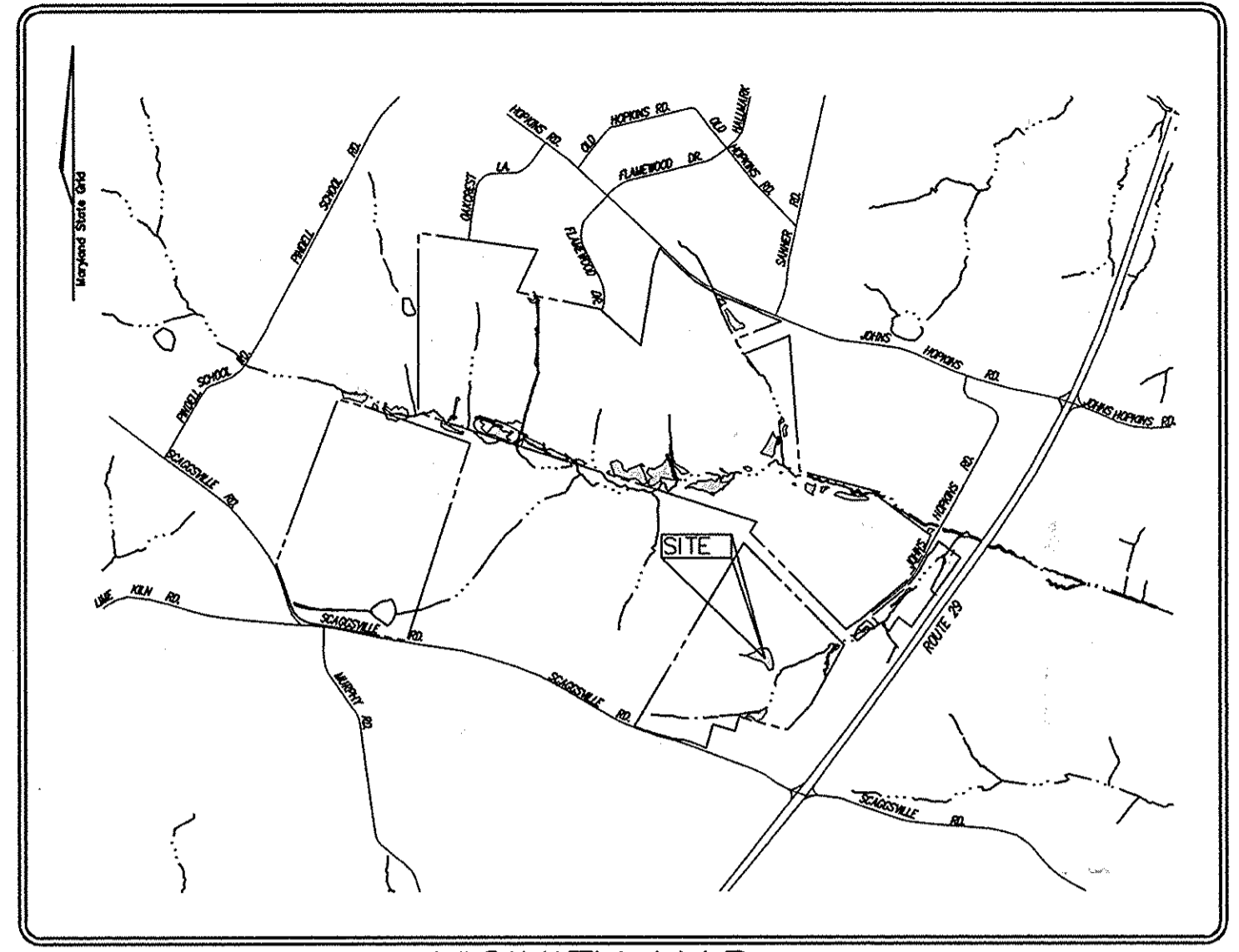
SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
JANUARY 2003	41: 21 & 22 46: 3 & 4	30 OF 34

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Finals\96079PFL.DWG 01/24/2003 09:13:00 AM EST



**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, overlaid 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.



- 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
  - Pump and Pipe for Pump-Around

**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: *[Signature]* DATE: 1-27-03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE: 2/16/03

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

HOWARD SCD SIGNATURE: *[Signature]* DATE: 2/16/03

**EXPLORATION RESEARCH, INC.**  
 ENVIRONMENTAL CONSULTANTS  
 LANDSCAPE ARCHITECTS  
 3510 FOREST STREET  
 BELLEVILLE CITY, MARYLAND 21043  
 TEL: (410) 760-1100 FAX: (410) 760-7850

**ENGINEERS CERTIFICATE**

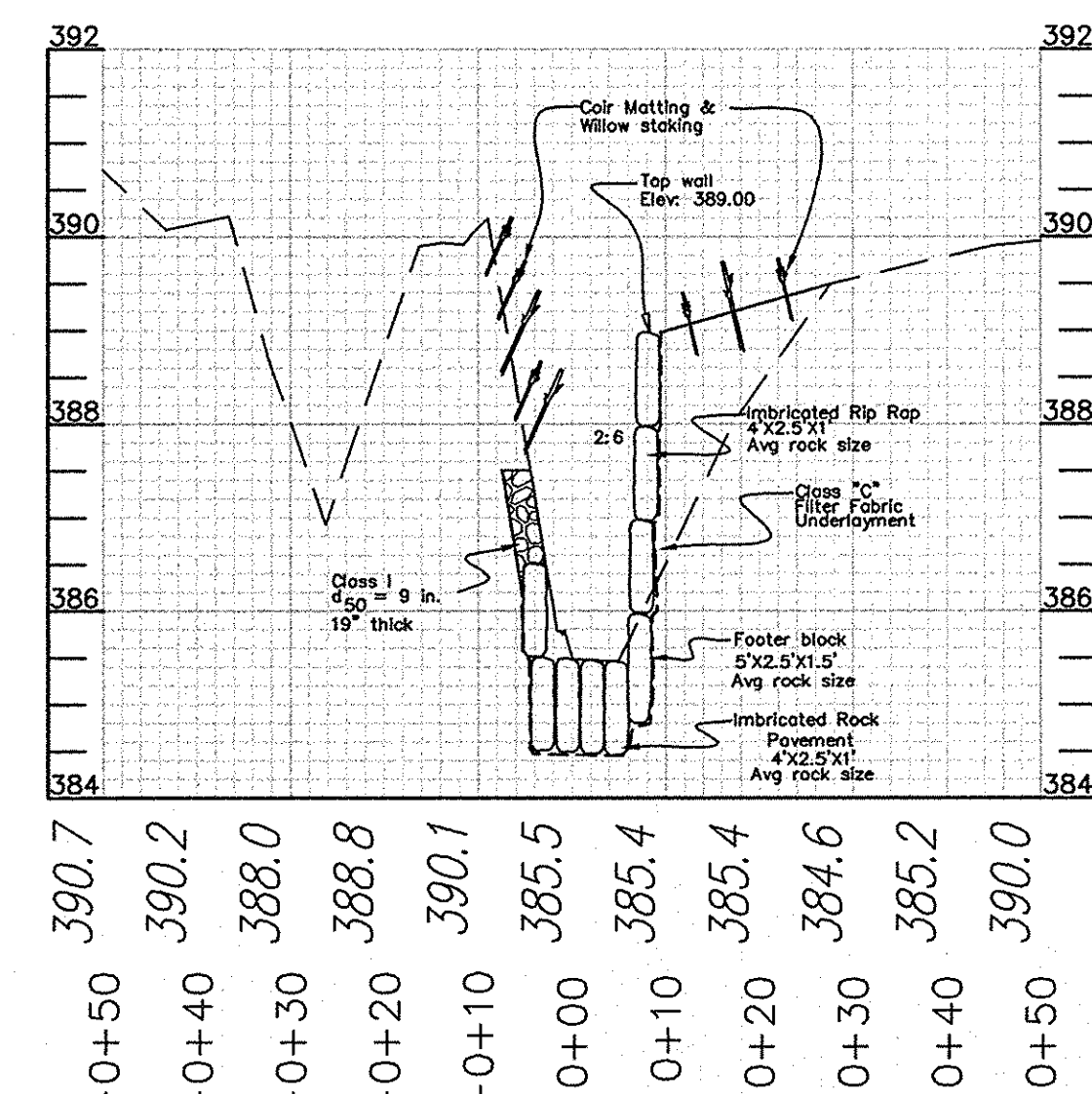
I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: *Zacharia Y. Fisch* DATE: 1/27/03

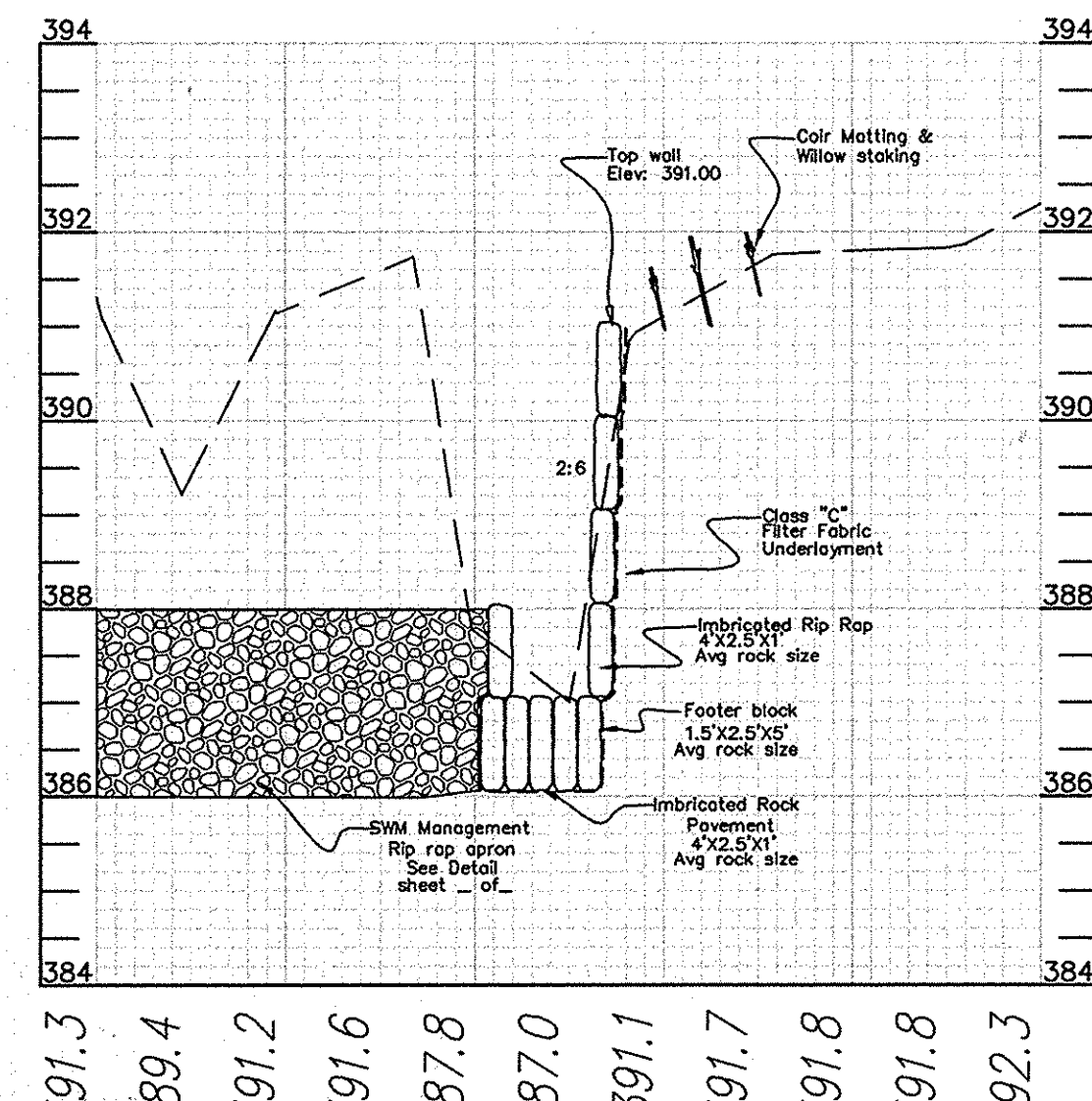
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways: *[Signature]* DATE: 2-25-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *[Signature]* DATE: 3/7/03  
 Chief, Division of Land Development: *[Signature]* DATE: 3/13/03  
 Chief, Development Engineering Division: *[Signature]* DATE: 3/13/03

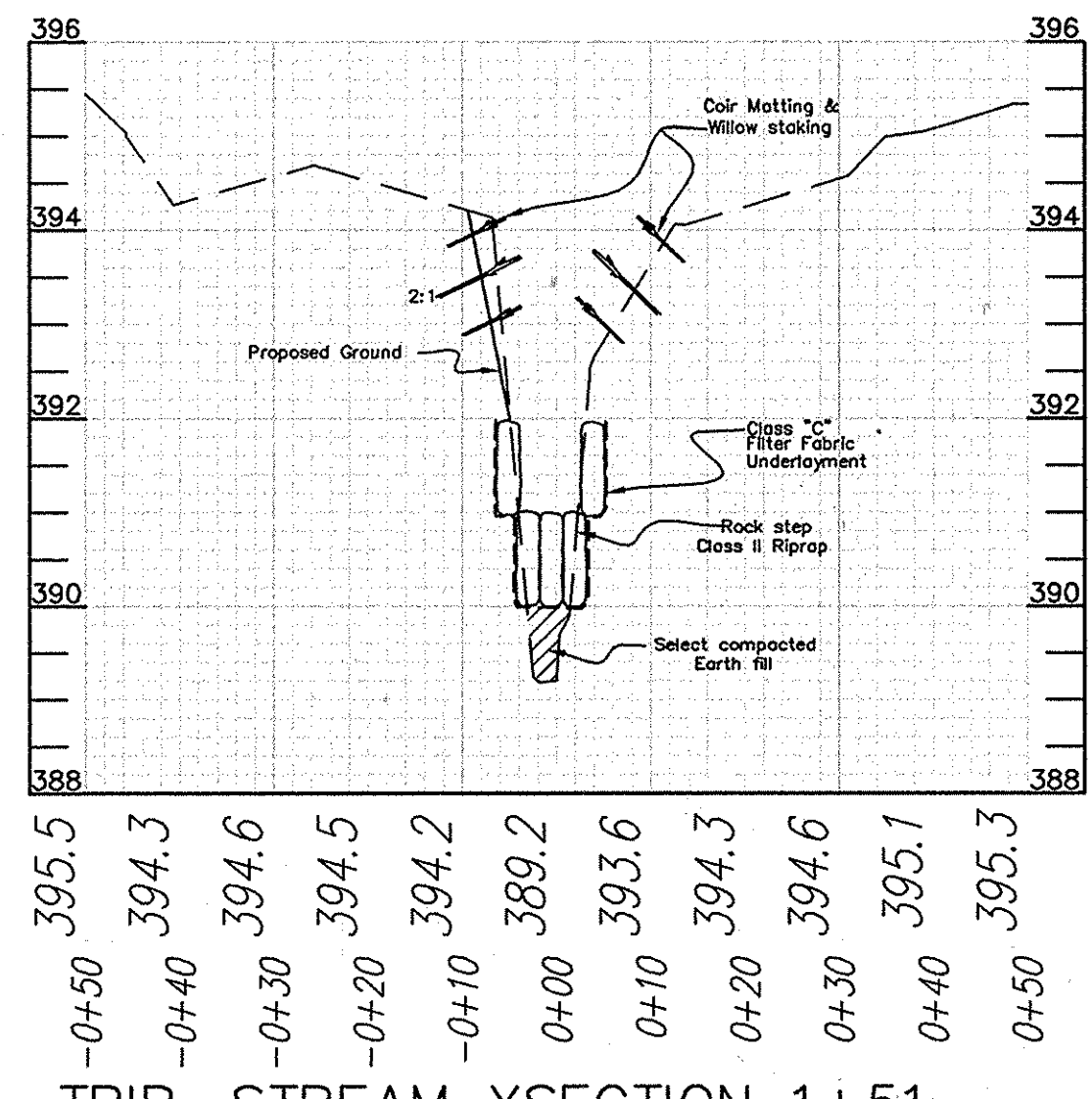
<b>FSH Associates</b> Engineers Planners Surveyors 5318 Forrest Street Ellicott City, MD 21043 Tel: 410-750-2251 Fax: 410-750-7350 E-mail: FSHAssociates@cs.com		PREPARED FOR: G&R Maple Lawn Inc., Et Al Suite 410 Woodholme Center 1829 Reisterstown Road Baltimore, Maryland 21208		Stream Channel Mitigation and Sediment Control Plan <b>MAPLE LAWN FARMS</b> APPLICATION TRACKING NO. 01-NT-0344 / 200165421 USACE Permit #: CENAB-OP-RMS (Maple Lawn Farms/RD/XING, PARKING AREA AND UTILITY LINE) 01-65421-5 HOWARD COUNTY, MARYLAND		SCALE AS SHOWN	ZONING RRMXD	G. L. W. FILE NO. 96079
DATE JANUARY 2003		TAX MAP - GRID 0041 - 0021		SHEET 31 OF 34				



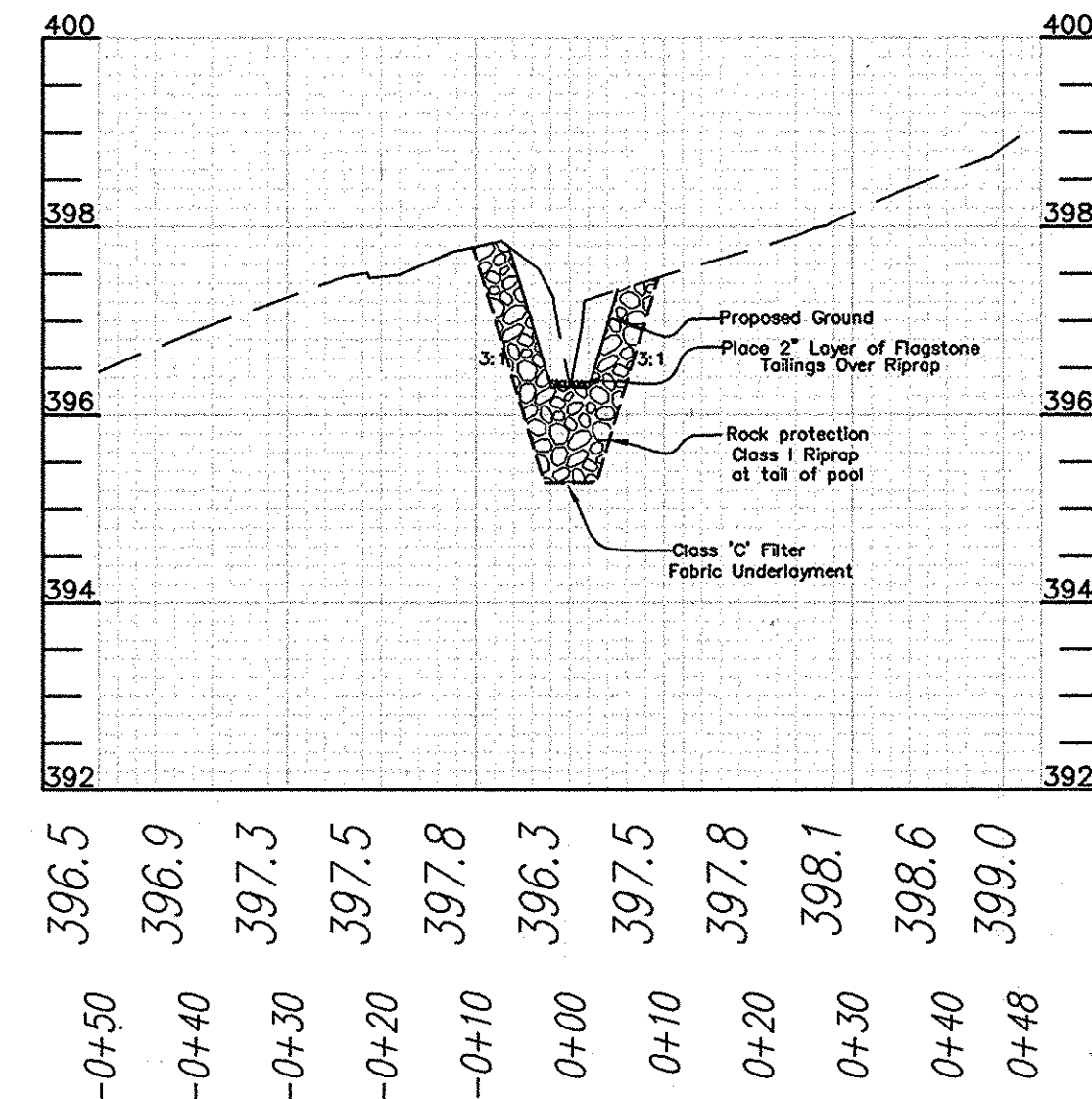
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SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=2'



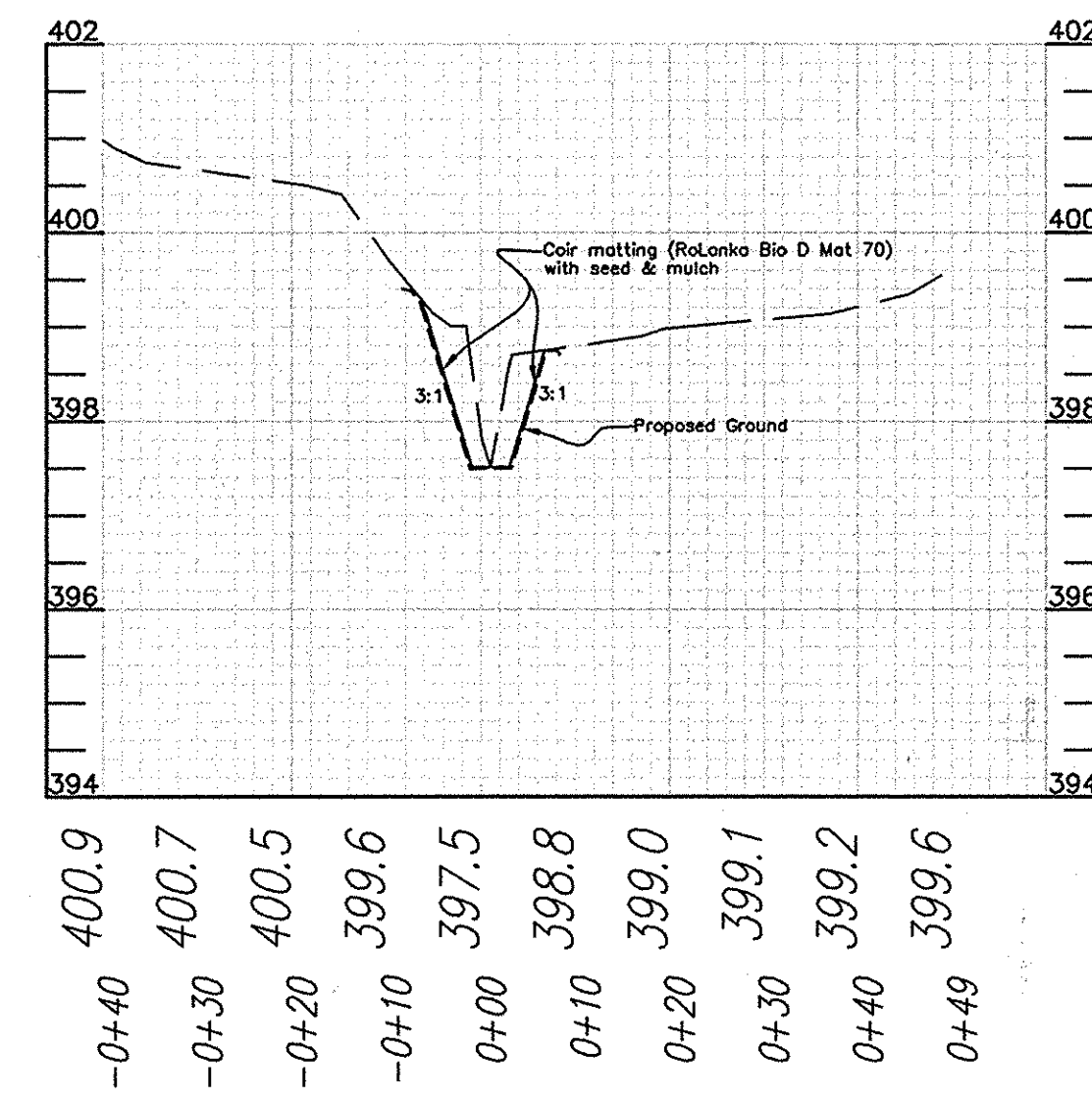
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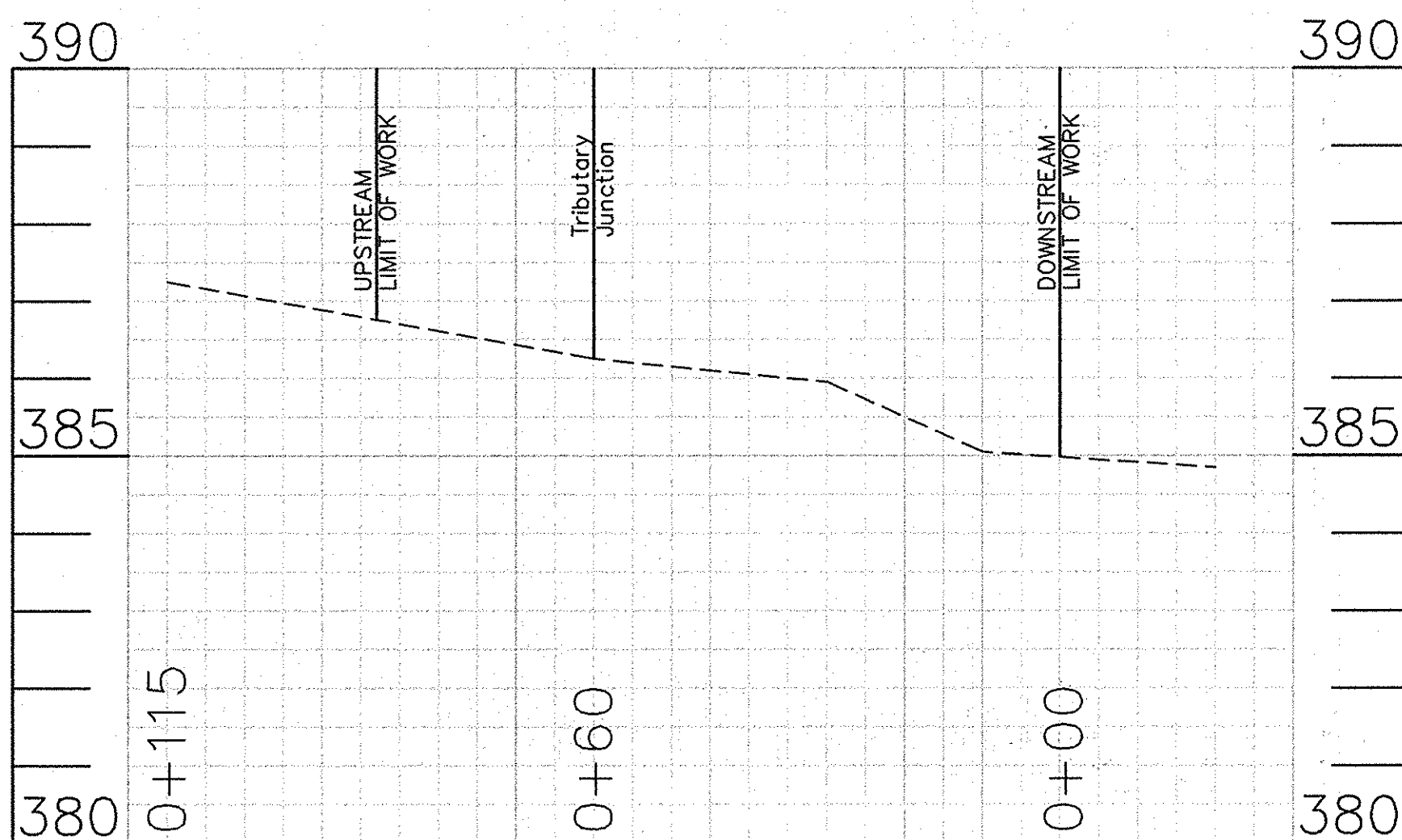
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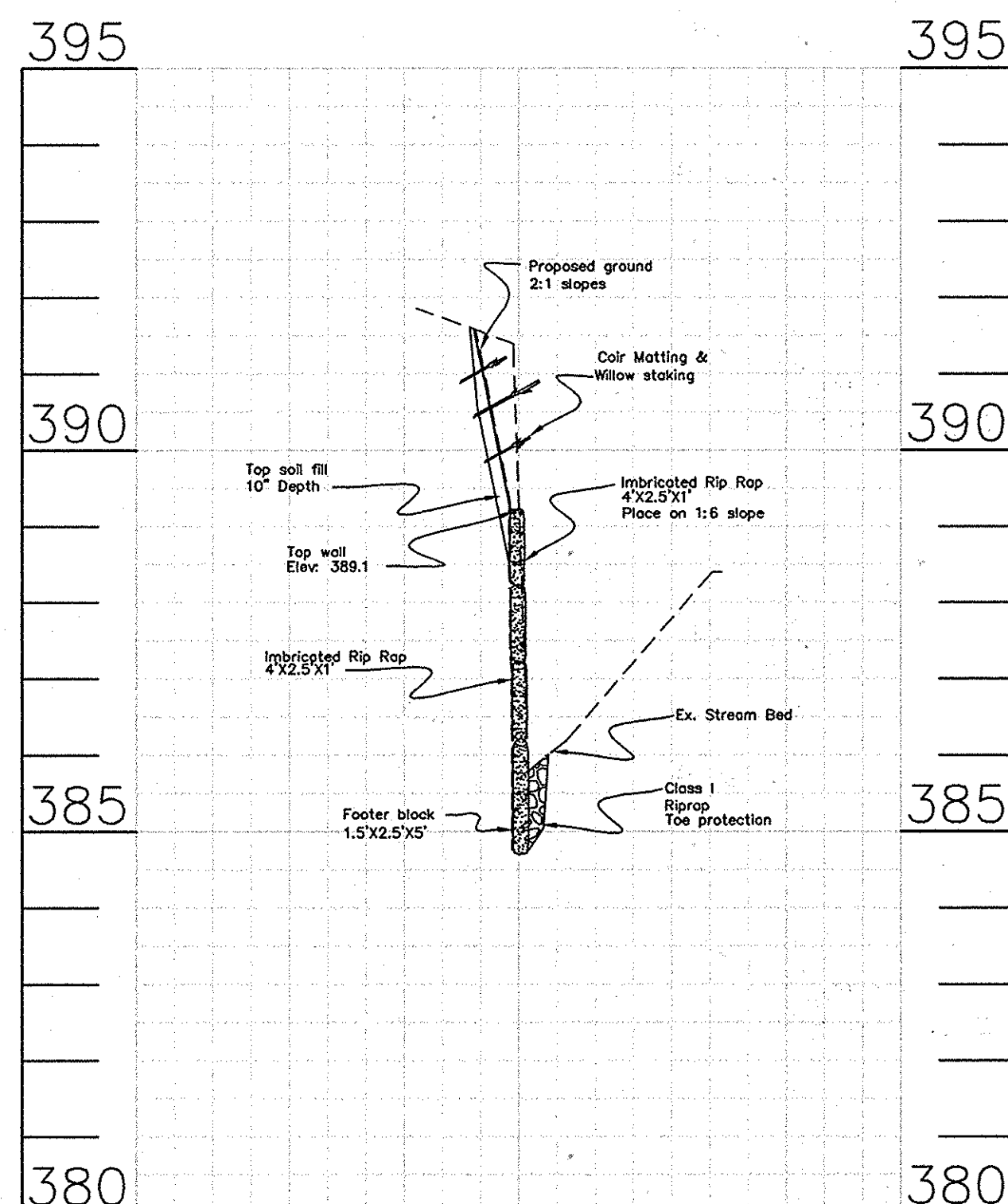
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VERTICAL - 1"=2'



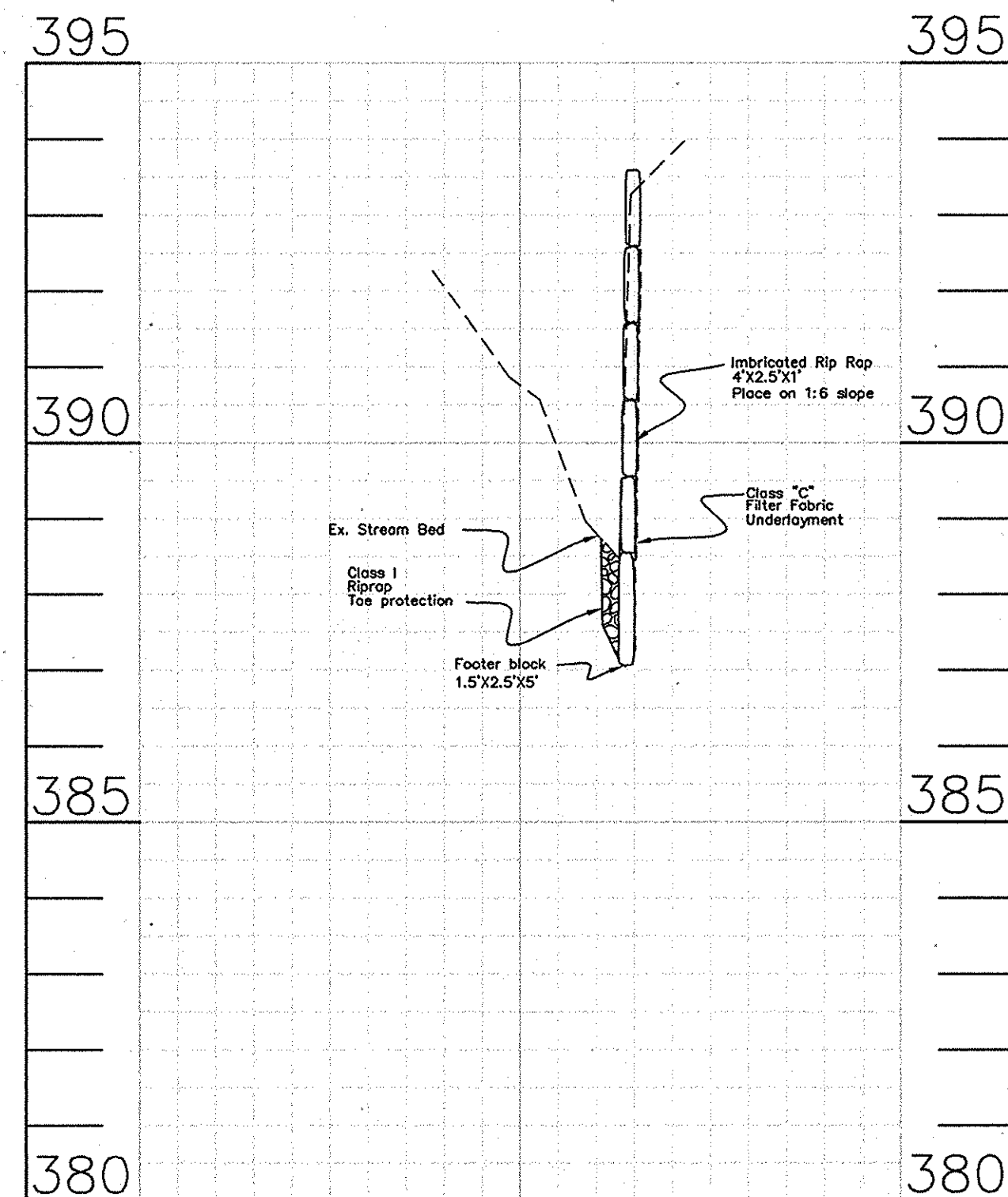
TRIB. STREAM X-SECTION 3+00  
SCALE: HORIZONTAL - 1"=20'  
VERTICAL - 1"=2'



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**

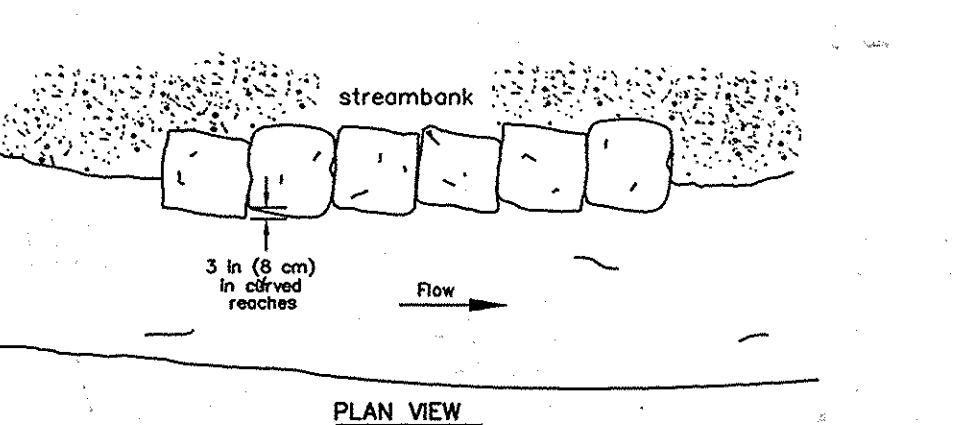
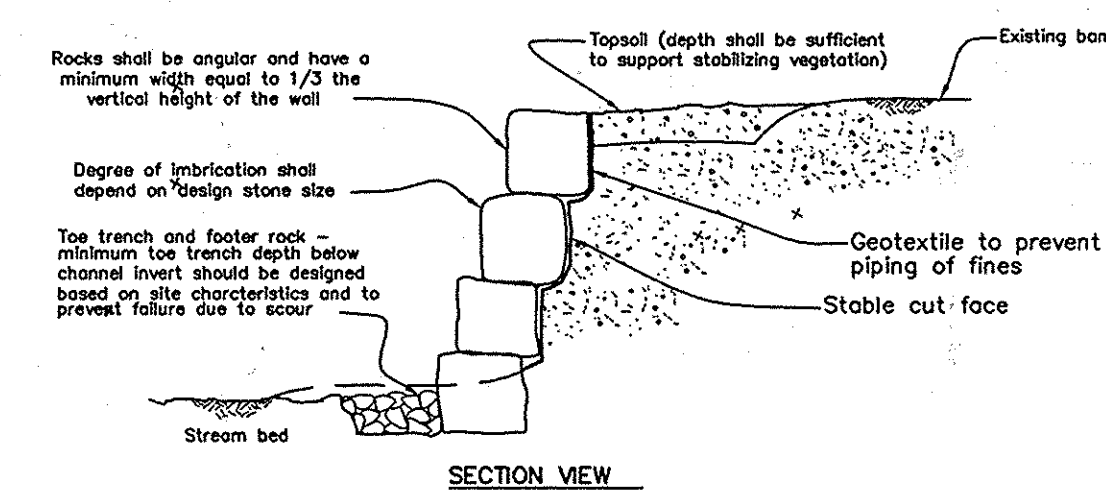
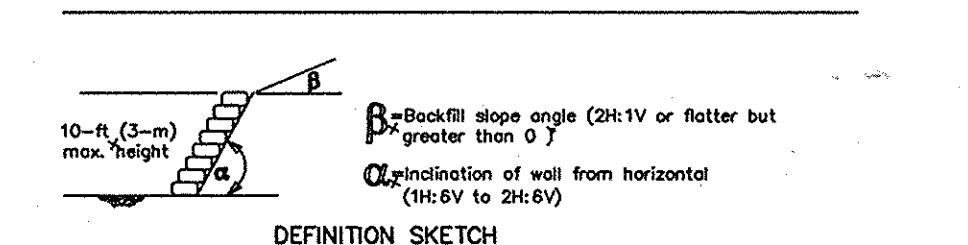
Materials for imbricated riprap construction and installation should meet the following requirements:  
-Filters: Synthetic filter fabric may be used cautiously based on the 1994 MD Standards and Specifications for Soil Erosion and Sediment Control. Whenever possible, however, granular filters with a 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 Percent Less Than	Grading Specifications U.S. Standard Sieve Size
100	2.5 in. (64 mm)
95-100	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).

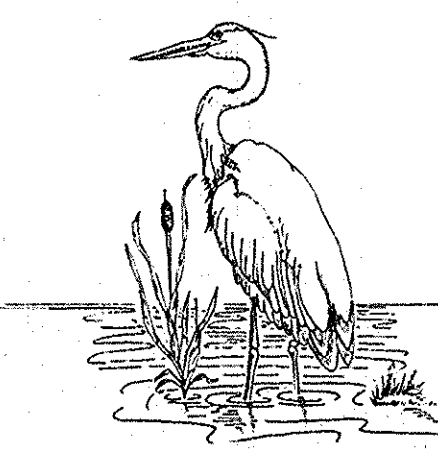
**DETAIL: IMBRICATED RIPRAP**



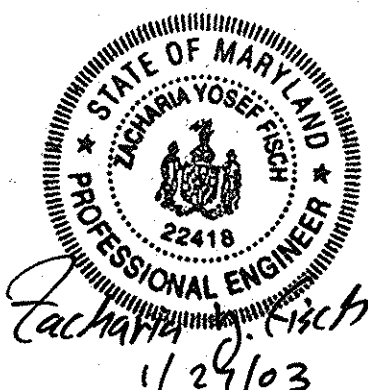
**SLOPE STABILIZATION & PROTECTION**

COUNTY FILE # 03-07

**ENGINEERS CERTIFICATE**  
I HEREBY CERTIFY THAT THIS PLAN FOR 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 AM A REGISTERED PROFESSIONAL ENGINEER IN THE DISTRICT OF COLUMBIA AND THE STATE OF MARYLAND.  
*Zacharia Y. Fisch* 1/27/03  
SIGNATURE OF ENGINEER DATE  
ZACHARIA Y. FISCH  
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Zacharia Y. Fisch* 2-25-03  
Chief, Bureau of Highways Date  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Zacharia Y. Fisch* 2/27/03  
Chief, Development Engineering Division Date



**EXPLORATION RESEARCH, INC.**  
ENVIRONMENTAL CONSULTANTS  
LANDSCAPE ARCHITECTS  
8518 FOREST STREET  
ELICOTT CITY, MARYLAND 21043  
TEL: (410) 760-1150 FAX: (410) 760-7350



**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.  
*Zacharia Y. Fisch* 1-27-03  
SIGNATURE OF DEVELOPER 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  
*Zacharia Y. Fisch* 2/16/03  
DATE  
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*Zacharia Y. Fisch* 2/16/03  
DATE  
HOWARD SOIL CONSERVATION DISTRICT

**MGWC 2.2 IMBRICATED RIPRAP**

**INSTALLATION GUIDELINES**

- 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.
  - 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.
  - 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.
  - 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).
  - 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.
  - 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.

**FSH Associates**  
Engineers Planners Surveyors  
8318 Forest Street Elicott City, MD 21043  
Tel: 410-760-2251 Fax: 410-760-7350  
E-mail: FSHAssociates@cs.com

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-NI-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

NO.	DATE	REVISION	BY	APPR.
1				



**BEST MANAGEMENT PRACTICES**

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

- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN.
- 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 FLOODPLAIN.
- 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.
- 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.
- REPAIR AND MAINTAIN ANY SERVICABLE 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.
- RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
- 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.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
- TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM  
USE 1 WATERS: IN STREAM WORK SHALL BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
- 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**

- Riprap areas may be planted as soon as reasonable to do so. Late winter-early spring plantings are preferred. Earliest plantings date 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.
- 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 Hollis, N.Y. 11423 or approved equal.
- Plant material will be planted in accordance with the Planting Distribution Diagram, Planting Details and plant schedule.
- 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.
- 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.
- 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 watering operation should allow for watering during installation to completely soak backfill material.
- Planting holes should be excavated to a minimum diameter of 2.5 to 3 times the diameter of the root ball or container. Mechanical angling is preferred with scarfification of the sides of each hole.
- Mulch shall be applied in accordance with the diagram provided and shall consist of composted, shredded hardwood bark mulch, free of wood alcohol.
- One hundred per cent (100%) survival of riprap buffer plantings shall be guaranteed for one (1) year. Replacement plantings shall be provided after first year's growing season.

**CONSTRUCTION NOTES/SPECIFICATIONS**

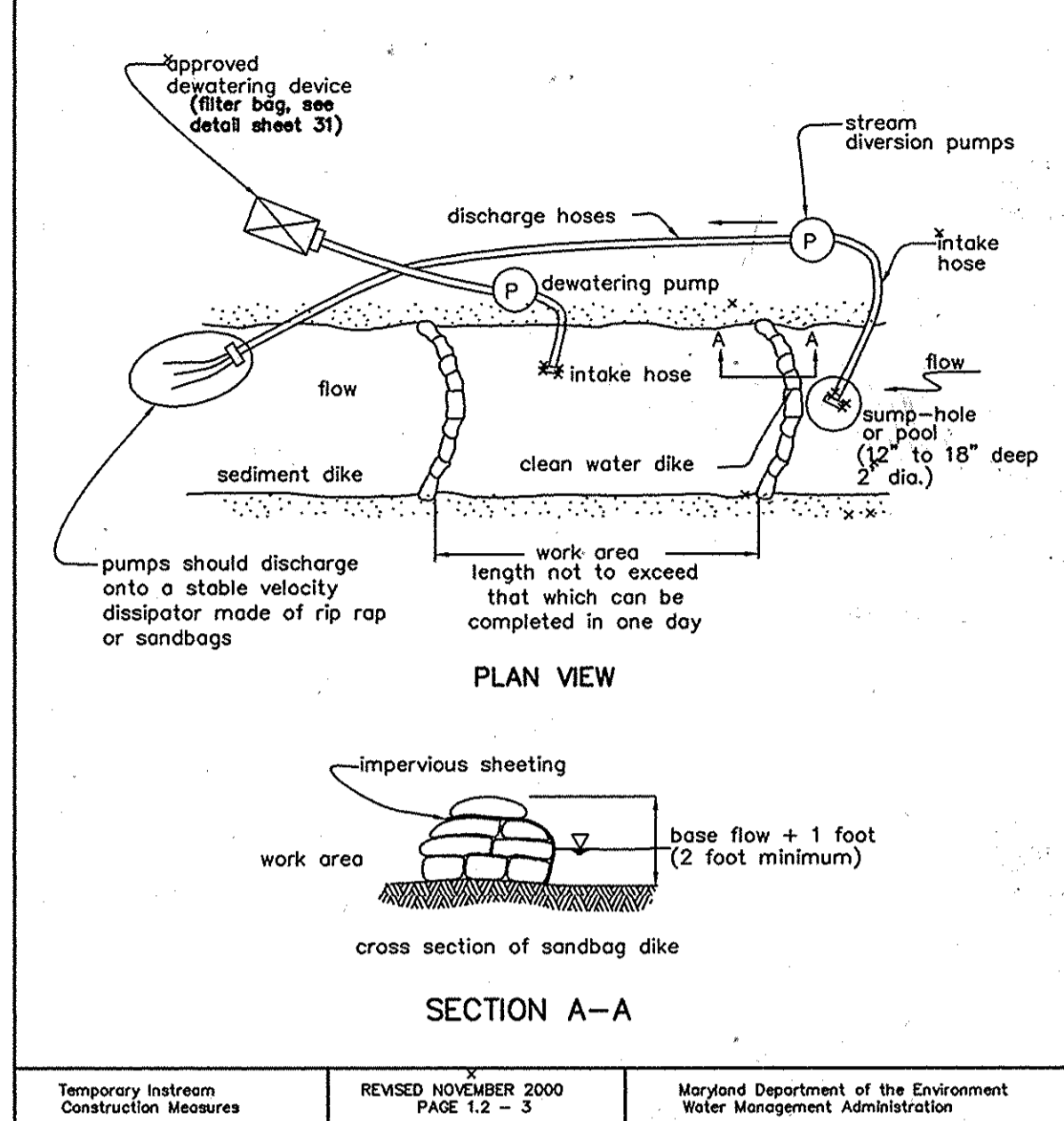
- The contractor shall install appropriate sediment and erosion control devices before project. All work to be performed at the direction of the stream restoration specialist and these drawings.
- The foundation area shall be cleared of trees, stumps, roots, sod, loose rock, or other objectionable material.
- 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.
- No abrupt deviations from the design grade or horizontal alignment shall be permitted unless authorized by the ERI Stream Restoration Specialist.
- Filter, bedding, and rock rip-rap shall be placed to line and grade in the manner specified.
- 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.
- Filter cloth shall be placed beneath rip-rap where indicated. The filter cloth shall consist of either woven or non-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.
- All boulders shall be well graded selected Class III Rip-rap boulders, natural in color and pre-approved by the Stream Restoration Specialist.
- 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.
- The rock or gravel shall conform to the specified grading limits when installed.
- Geotextile shall be protected from punching, cutting, or tearing. Any damage other than on 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.
- Stones 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.
- 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:

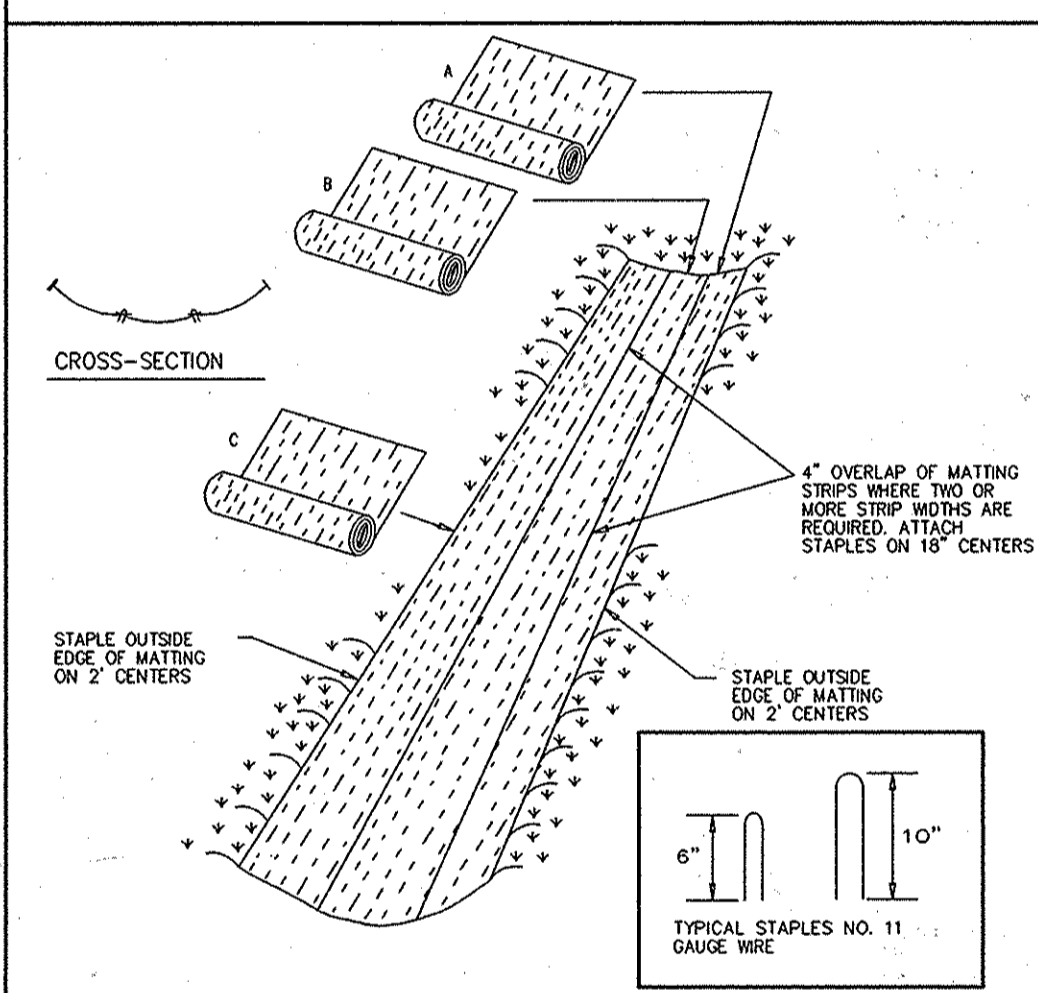
- Construction activities including the installation of erosion and sediment control measures shall not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities shall be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and shall repair the damage at his/her own expense to the county's satisfaction.
- 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.
- 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.
- 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.
- 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 this 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.
- 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.
- Water from the work area shall be pumped to sediment filtering measure such as a sediment bag. The measure shall be located such that the water drains back into the channel below the downstream sandbag dike.
- Traversing a channel reach with equipment where no work is proposed should be avoided. If equipment has to traverse 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.
- All stream restoration measures shall be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-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.
- 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.
- 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 stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
- 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.
- The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approved their removal.
- After construction, all disturbed areas shall be regraded and revegetated as per the planting plan.

**DETAIL 1.2: PUMP-AROUND PRACTICE**



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. Slope the 4" overlap in the channel center using 18" spacing between staples.  
3. Before sloping the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.  
4. Slopes 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".  
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 key-in.  
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

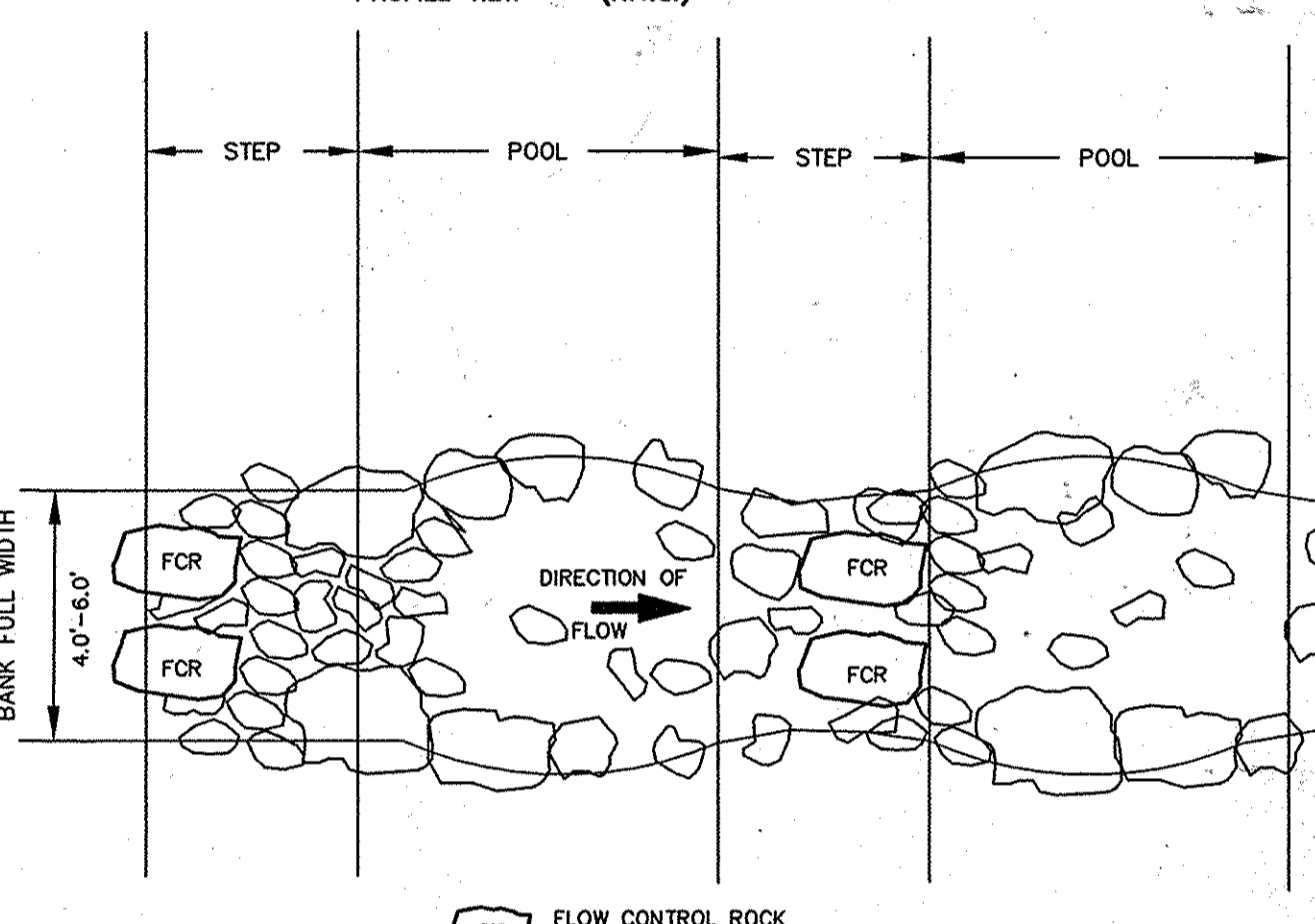
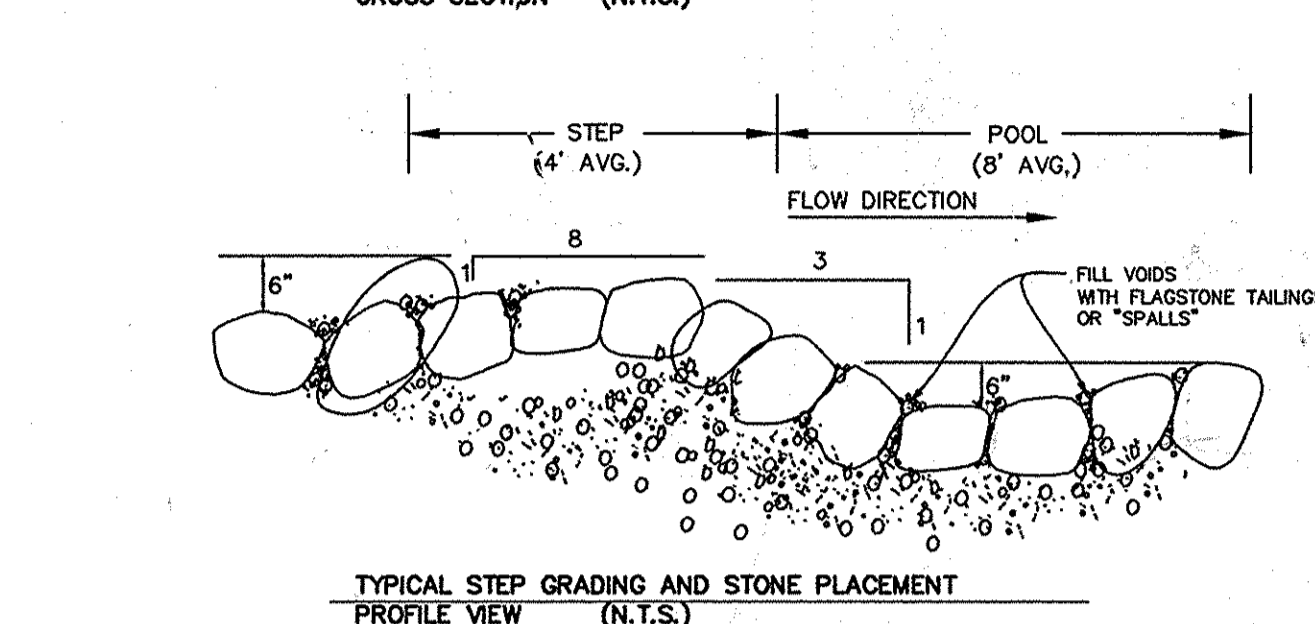
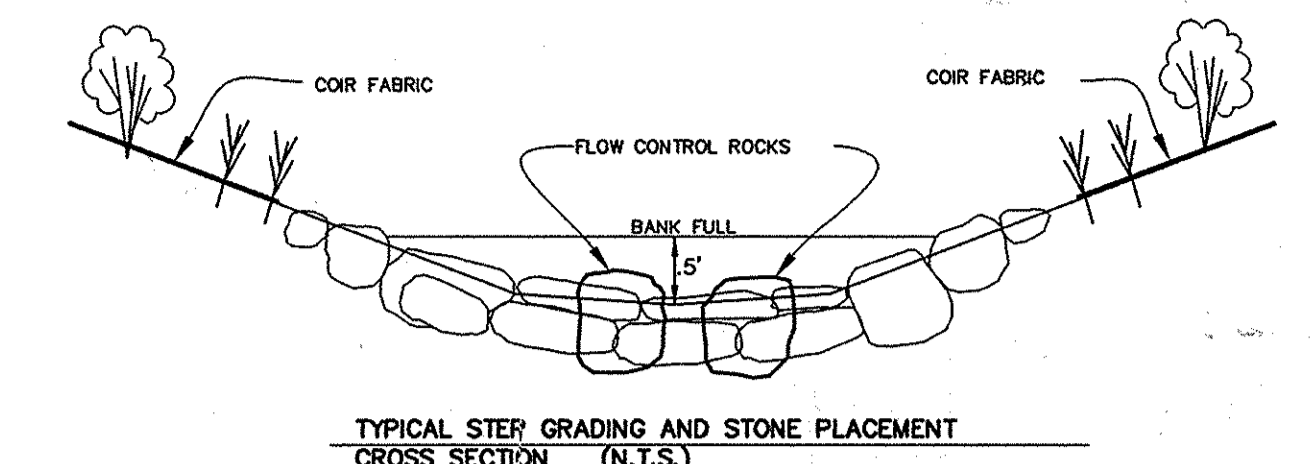
**MGWC 3.9: STEP POOLS**

**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**

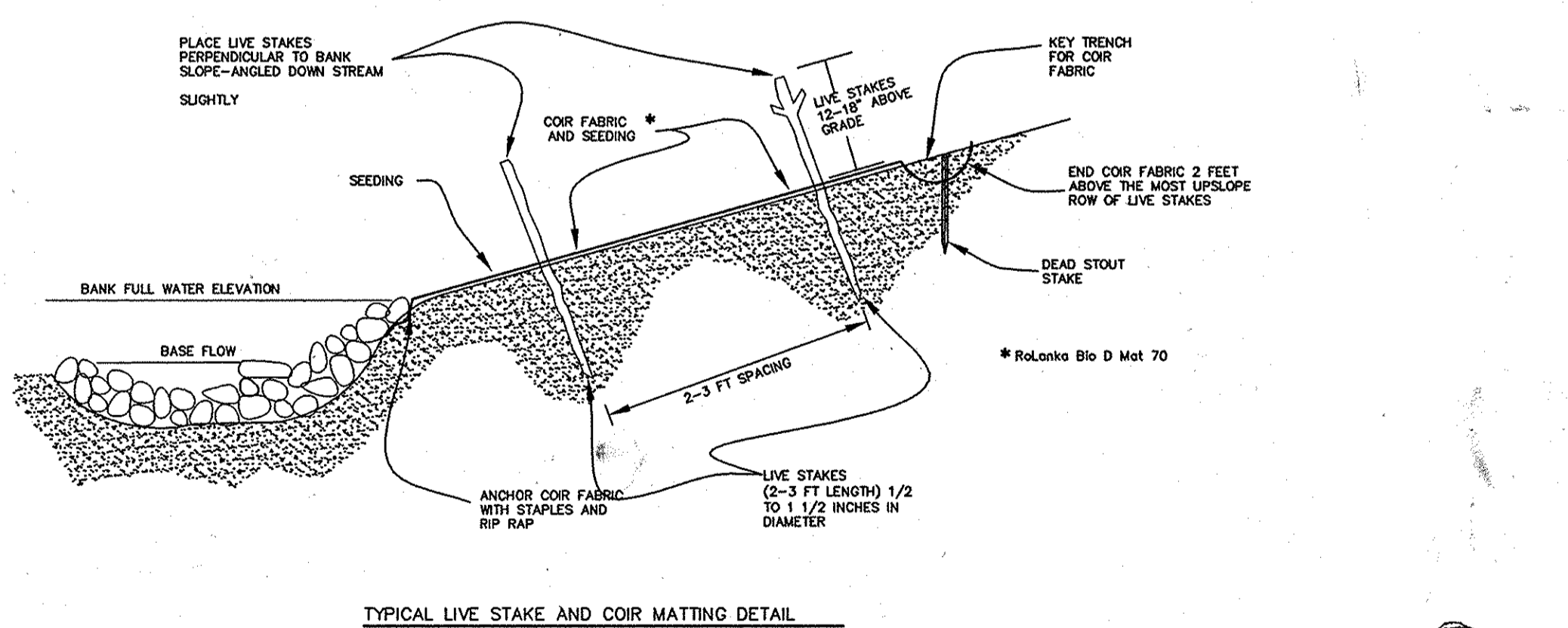
- The stream should be redirected by an approved temporary stream diversion (See Section 1: Temporary Instream Construction Measures, Maryland's Guidelines to Waterway Construction), the construction area should be dewatered, and any disturbed banks should be stabilized.
- Step-pool units should be designed 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.
- 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.
- 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 ( $1 < \frac{H}{L} / S < 2$ ). Typical spacings for step pools and cascades are provided in Detail 3.9(b) relating to alluvial channel morphologies.
- 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.
- 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.



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)

**MATERIAL SPECIFICATIONS AND INSTALLATION GUIDELINES FOR LIVE STAKING**

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

**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
OENICUM RAMOSUM	BROWN TOP MILLET	9	10	SUMMER SEED

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

**ENGINEERS CERTIFICATE**  
I HEREBY CERTIFY THAT THIS PLAN FOR 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, RECOMMENDED PROFESSIONAL ENGINEER, AND THE HOWARD SOIL CONSERVATION DISTRICT. THIS PLAN WAS REVIEWED AND APPROVED BY THE DISTRICT WITHIN 30 DAYS OF COMPLETION.  
Signature of Engineer: ZACHARIA Y. FISCH  
Date: 1/27/03

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

**APPROVED, HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**  
Signature: Chief, Development Engineering Division  
Date: 3/10/03

**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THE DEVELOPMENT AND/OR CONSTRUCTION RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING CONSTRUCTION. THIS PROJECT IS SUPERVISED BY 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: [Signature]  
Date: 1-27-03

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
Signature: [Signature]  
Date: 2/11/03  
Signature: [Signature]  
Date: 2/4/03

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

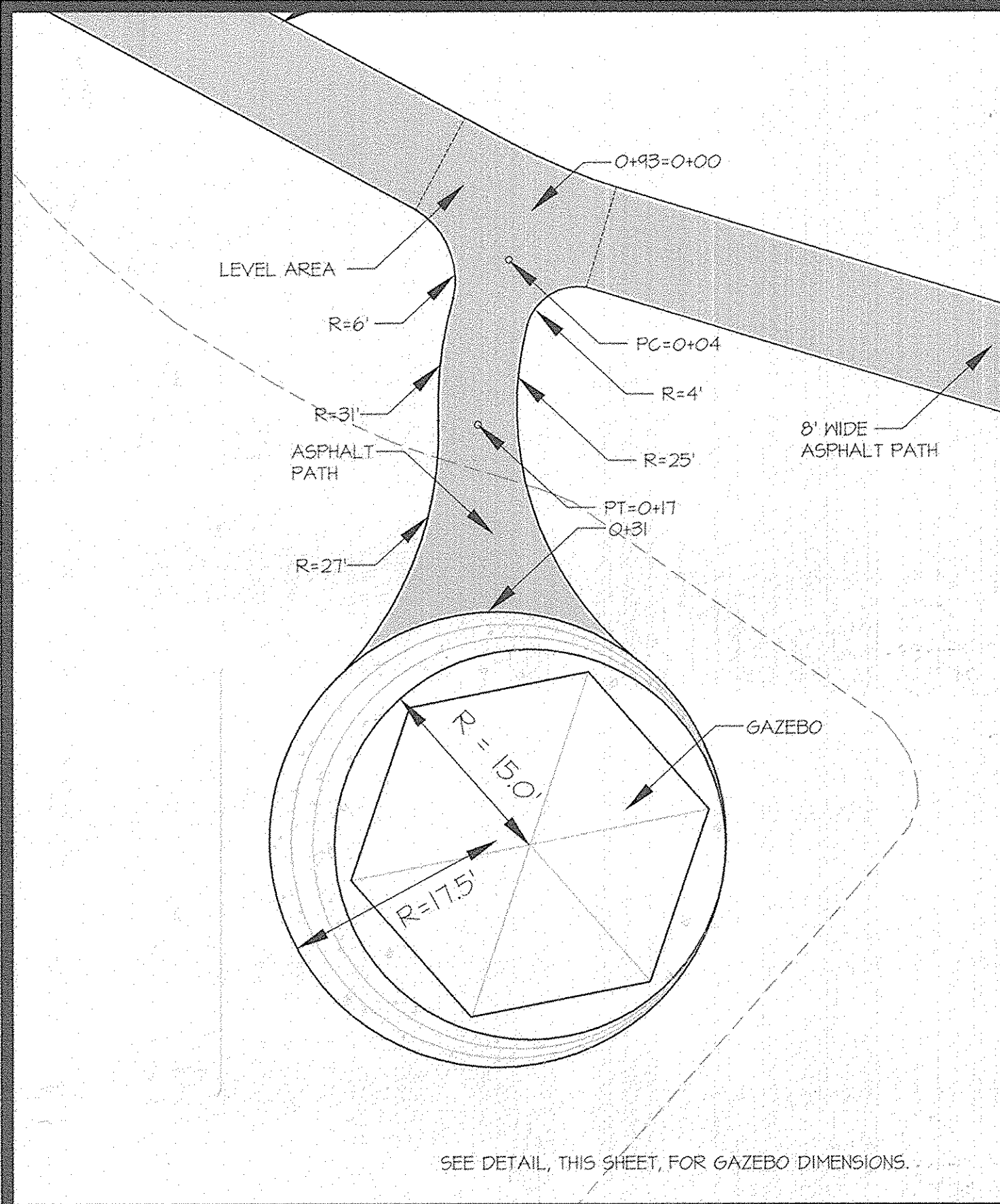
DES. SLH	DRN. SLH	CHK. SLH	DATE	REVISION	BY	APPR.

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

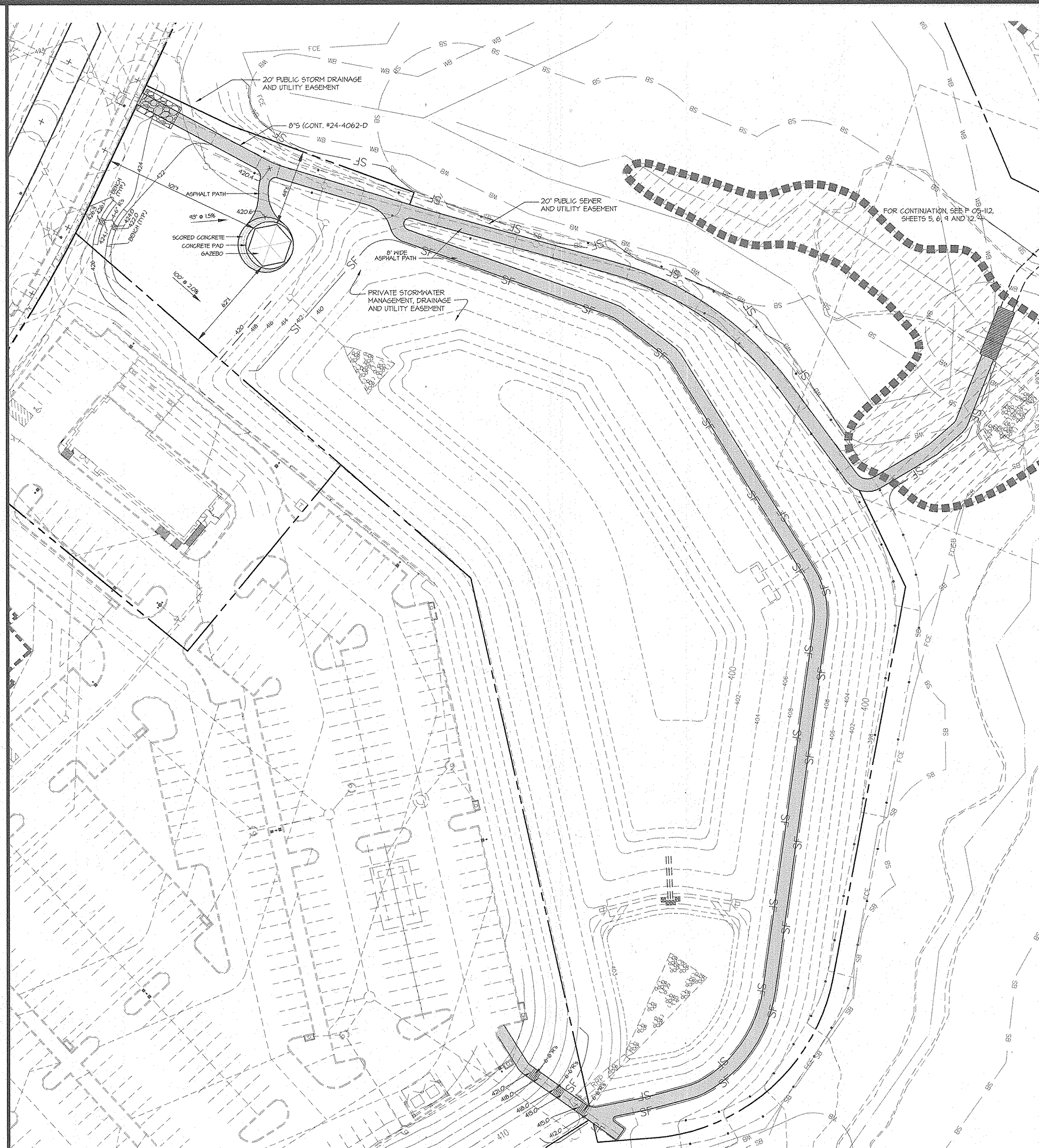
Phase II Stream Channel Mitigation and Sediment Control Plan  
MAPLE LAWN FARMS  
APPLICATION TRACKING NO. 01-NI-0344 / 200165421  
USACE Permit #: CENAB-OP-RMS (Maple Lawn Farms/RDING, PARKING AREA AND UTILITY LINE) 01-65421-5  
HOWARD COUNTY, MARYLAND

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

STATE OF MARYLAND  
Professional Engineer  
Exploration Research, Inc.  
Environmental Consultants  
Landscape Architects  
8318 Forest Street  
Ellicott City, Maryland 21043  
Tel: (410) 750-1150 Fax: (410) 750-1150  
COUNTY FILE # 03-07

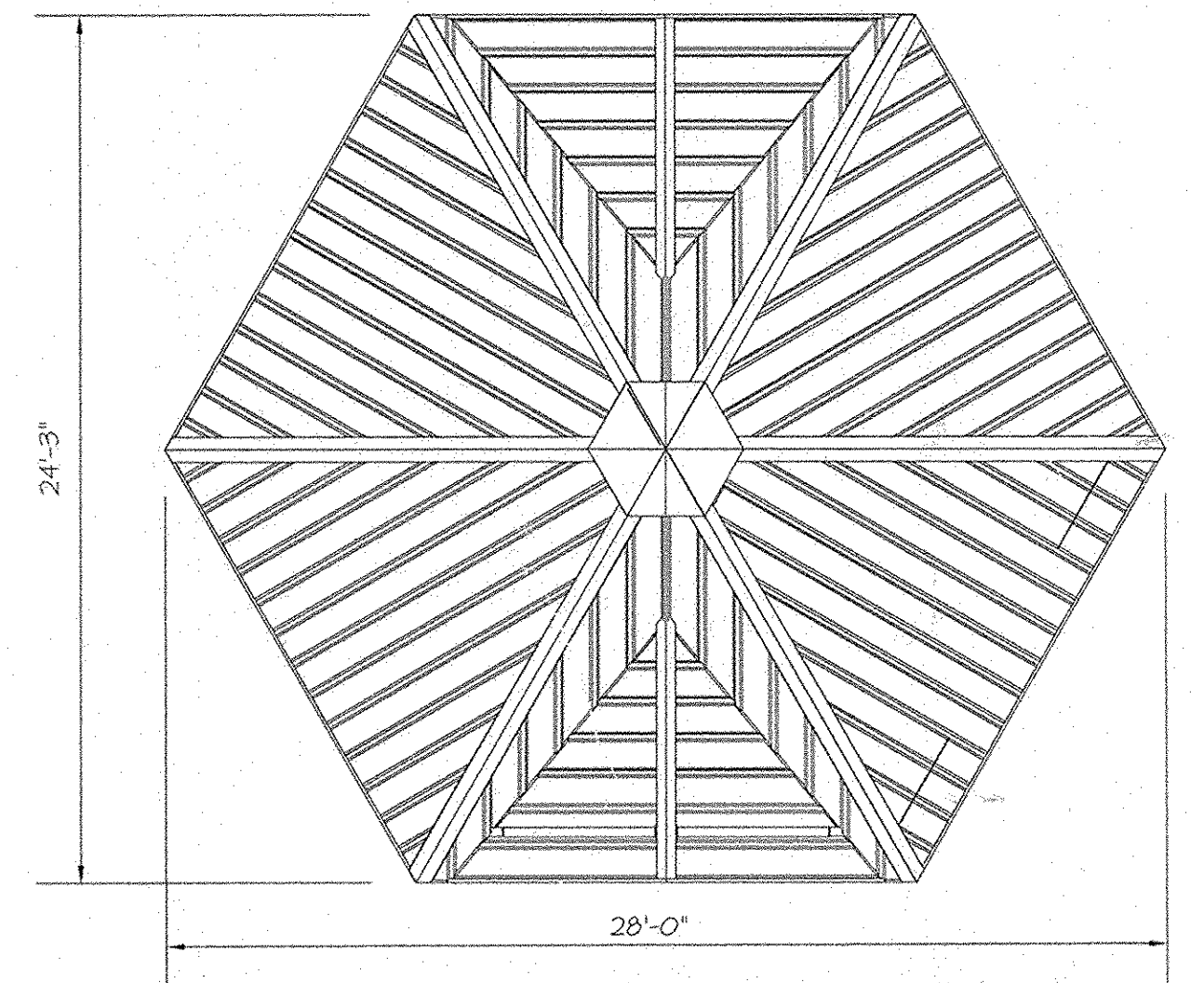


AMENITY AREA LANDSCAPE PLAN SCALE: 1" = 10'

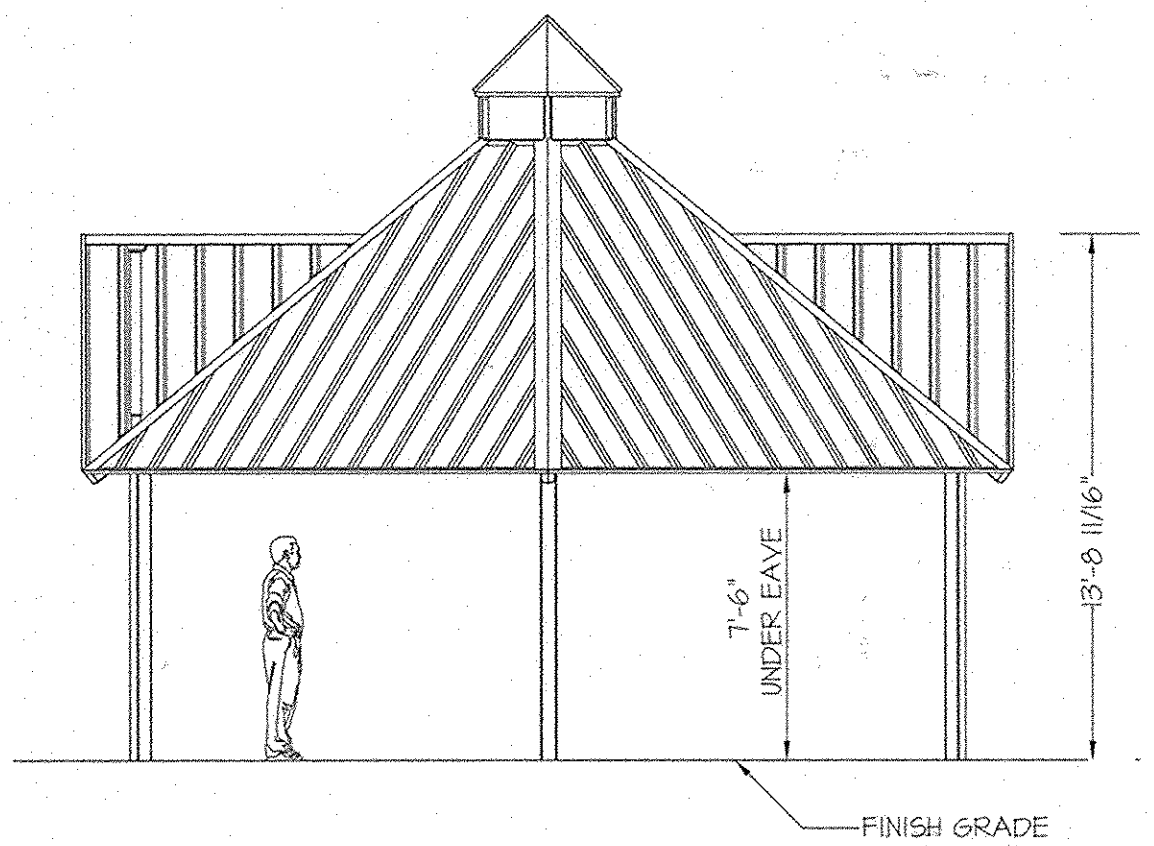
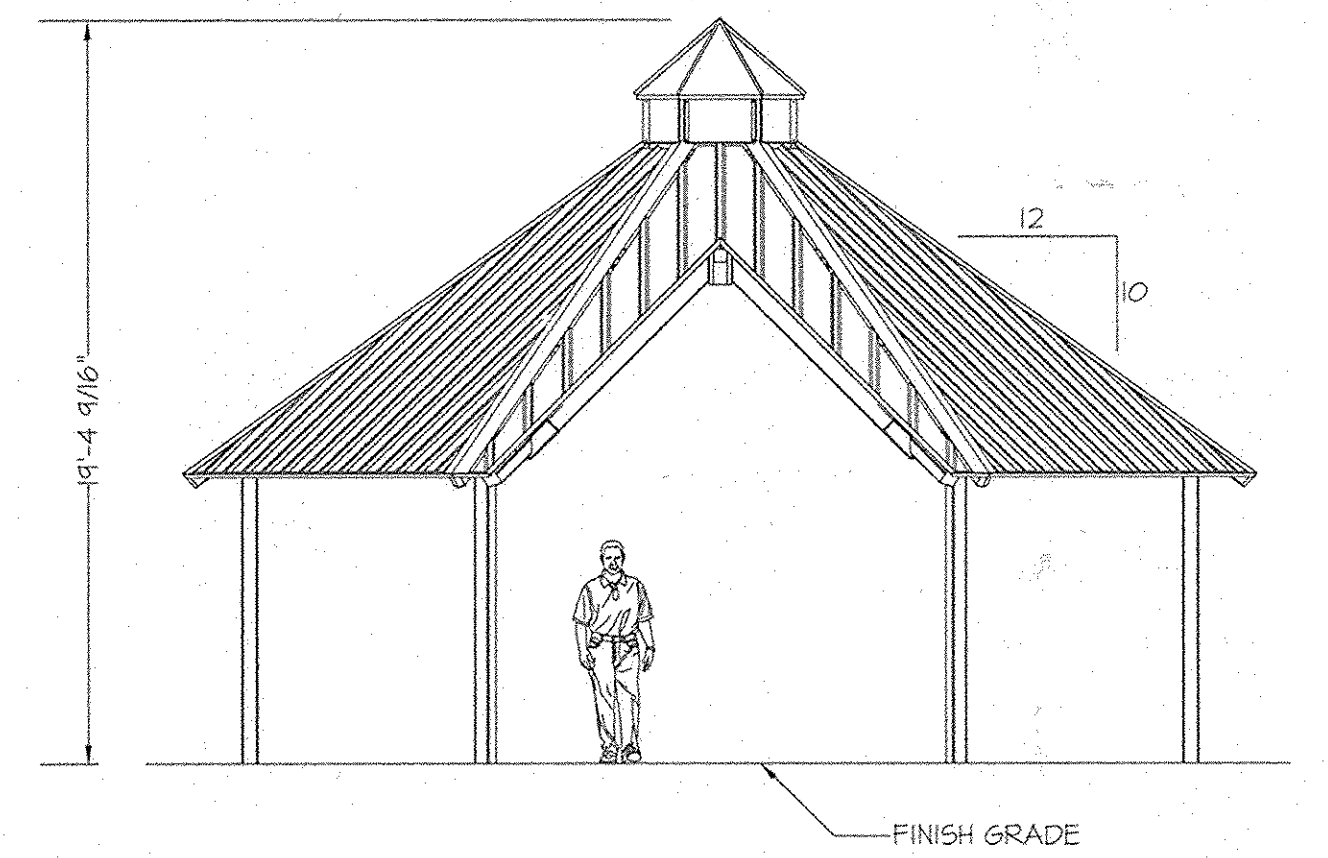


AMENITY AREA GRADING PLAN SCALE: 1" = 40'

- 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.



GAZEBO PLAN VIEW SCALE: 1" = 5'



GAZEBO ELEVATION VIEW SCALE: 1" = 5'

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

**BUILDER'S CERTIFICATE**  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HESCD."  
*Subh B. v. Pras* 10/1/14  
 SIGNATURE OF DEVELOPER/BUILDER DATE

**ENGINEER'S CERTIFICATE**  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*CKW* 10/1/14  
 SIGNATURE OF ENGINEER DATE

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*M. Munnier* 10/15/2014  
 Chief, Bureau of Highways DATE

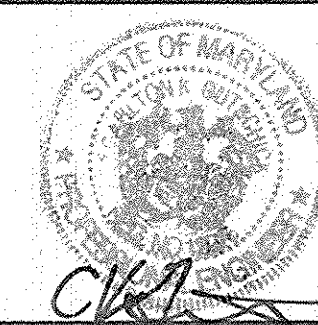
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Kathleen D. ...* 10/23/14  
 Chief, Division of Land Development DATE  
*Chad ...* 10-22-14  
 Chief, Development Engineering Division DATE

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
 BURTONSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

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

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. 12875  
 EXPIRATION DATE: MAY 26, 2016  
 10/1/14 *CKW*



ELECTION DISTRICT No. 5

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

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

HOWARD COUNTY, MARYLAND