

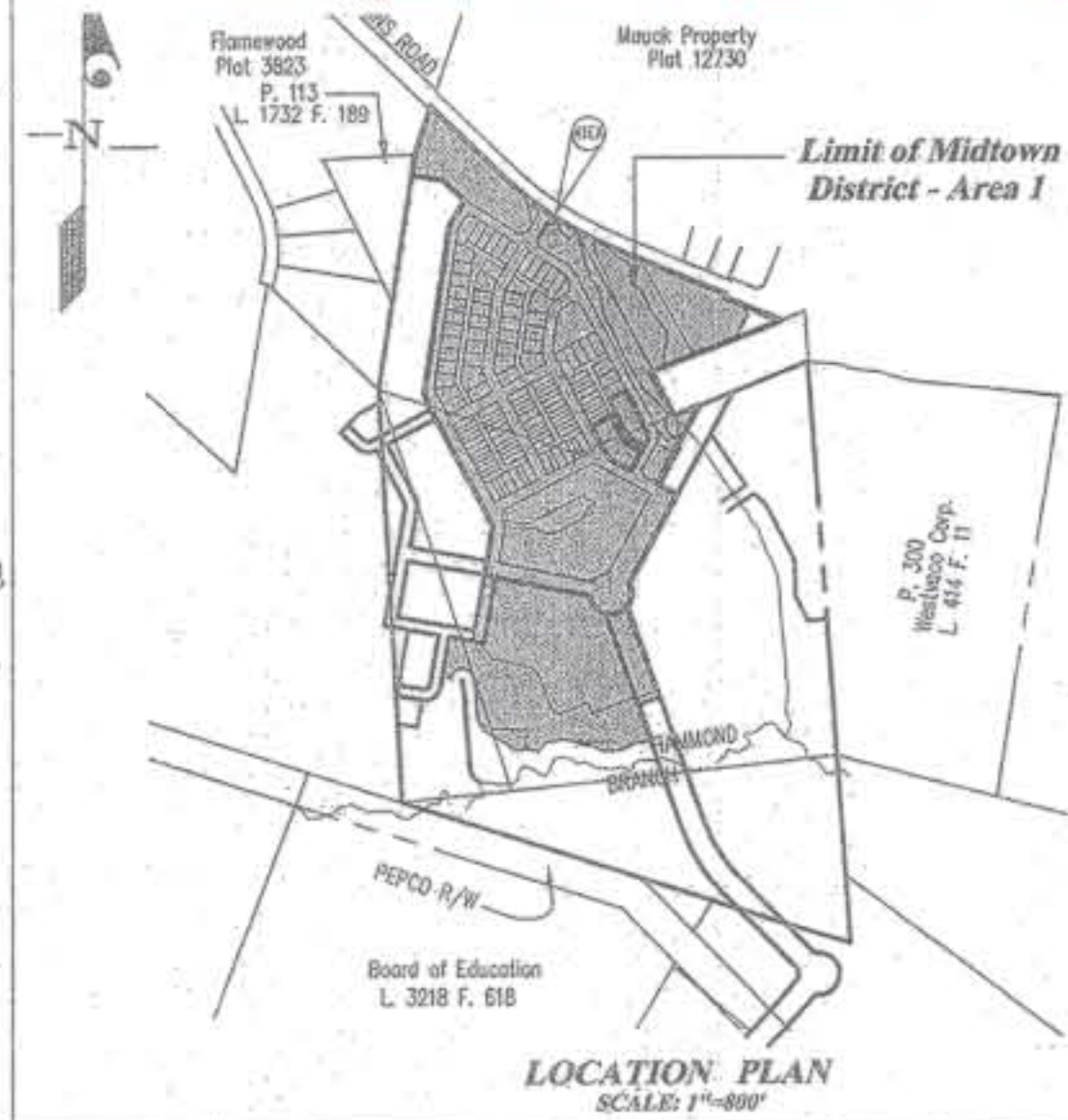
CONSTRUCTION PLAN MAPLE LAWN FARMS

Midtown District - Area 1 Lots 1 thru 120, Open Space Lots 121 thru 127, Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'

ASBUILTS

- General Notes:**
- Zoning: Site is being developed under MXD-3 regulations, per ZB995M, approved on 2/8/01. Underlying Zoning is RR-DEO.
 - The previous Department of Planning and Zoning file numbers: S-01-17, ZB-995M, P-03-51, WP-01-111, WP-02-54, WP-03-02, P-02-12, P-03-01, F-03-07 and F-03-90, as well as F-03-10.
 - 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 on August 20, 2001.
 - All roads in this development are public. All areas indicated as alley will be private.
 - Site Analysis**
Gross Site Area: 507.9 Acres ±
Total Area of Phase 2: 37.43 Acres ±
Area of Open Space: 15.75 Acres ±
Area of 100 Year Floodplain in Phase Two: 2.38 Acres ±
Area of Roadway (Public): 9.02 Acres ±
Area of Roadway (Private): 1.60 Acres ±
Area of Buildable Lots: 5.79 Acres ±
Area of Non-Buildable Lots: 1.19 Acres ±
Number of Lots: 55 SFD, 65 SFA, 7 Open Space Lots, 5 Common Open Areas, and 3 Non-Buildable Parcels
 - Open Space Requirements:**
Minimum Open Space Requirement for Project is 35%.
Total Open Space Provided: 13.10 Acres ± (35%)
Total Open Space Required: 13.75 Acres ± (42%)
Recreational Open Space Provided: 1.31 Acres (10%)
Recreational Open Space Required: 1.55 Acres (42%)
The excess open space area may be used to fulfill the minimum open space requirement for future phases.
 - Soils data was taken from the Soil Survey of Howard County, Maryland issued July 1982.
 - Topography indicated was taken from aerial topography prepared during March 1997 by SDI.
 - Boundary information shown is based upon a field survey prepared by Guttschick, Little, and Weber, P.A. on or about June, 2001.
 - Wellhead 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-WF-0344/200165421.
 - The 100-year flood plain limits were determined by the floodplain study prepared by Guttschick, Little and Weber, P.A. as part of F-03-01.
 - Horizontal and vertical datum is based on Howard County Station 41E4 and 41E8.
 - Existing utilities were taken from available Howard County records.
 - Public water and sewer to be utilized:
Existing Water Contract Number: 44-1605
Existing Sewer Contract Number: 20-3506
 - Traffic Study was prepared and submitted as part of S-01-17, which was signed by the Planning Board on August 6, 2001.
 - Sediment and erosion control measures have been provided in accordance with the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control Manual.
 - Parking requirements will be determined and provided at the Site Development Plan stages.
 - Street trees have been provided per the Comprehensive Sketch Plan criteria under this Final Plan submission.
 - All buffering and other landscaping requirements/features will be shown at the Site Development Plan stages 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. "50' buffer, Residential" = "75' buffer"). All uses adjoining an intermittent stream = 50' buffer.
 - Stormwater management to be provided at an on-site facility. The facility will be Type-2 wet pond. The permanent pond will provide the water quality treatment volume for the 1 year storm quantity management will be provided utilizing extended detention. The recharge requirements will be provided in a facility on Open Space Lot 125. The recharge facility is being constructed under E-01-10. No non-structural practices are proposed under this Final Plan. The pond will be publicly owned and maintained. The recharge facility on Open Space Lot 125 will be privately owned and maintained by the Community Homeowners 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.
 - As stated in the Decision and Order for this plan, the Planning Board shall review and approve site development plans for all single family detached 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 final zoning restrictions enacted by the Zoning Board on page 22-23 of its decision on the PDP are met consistent with the requirements of Section 127.4.4.2 of the Zoning Regulations.
 - No grading, removal of vegetative cover or trees, or placement of new structures is permitted within limits of wetlands, streams or their required buffers, and 100 year flood plain areas, except as permitted under WP-02-54 and WP-03-02.
 - 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.
 - The transportation and transit design will be implemented as outlined in the Petitioner's Exhibit 25 as submitted as part of ZB-995M. Location and number of bus stops within the limits of this phase will be determined at Final Plan Stage. Any shelters will be provided at Site Development Plan Stage for the development adjacent to that structure so that architectural and landscape features can be coordinated.

- A Noise Study was prepared by Wilman & Associates for S-01-17, which was signed by the Planning Board on August 8, 2001.
- There will be no moderate income housing units proposed under this phase of residential development, but are proposed for Phase I (Annual Phase IV).
- For soil types, descriptions and limitations, see S-01-17. Limits of soil groups can be found on sheet 34.
- Minimum tree quantities and preferred spacing are as follows:
Maple Lawn Blvd. & larger blvd. 1 tree per 40 linear feet, both sides;
All other streets: 1 tree per 30 linear feet, both sides;
Private Alleys: No trees required.
These are only minimum standards. Trees should be placed to align where possible with lot lines and existing walls of units so as to avoid blocking the fronts and/or doors and windows of units. Streetscape plantings for Liberty Street, President Street and Harrison Street adjacent to Open Space Lot 125 will be provided on the Site Development Plan for said lot.
- Sidewalks and ramps will be constructed in accordance with ADA requirements.
- The radius for curb filets at the road intersections is 20'. The radius for curb filets within the median island and parking area is 5'. All other curb radii are called out on the Road Construction Plans.
- Vehicle ingress and egress to Johns Hopkins Road and along the proposed Maple Lawn Blvd. extension through the subdivision is restricted, except at the various points of access to be approved by the Department of Planning and Zoning. The conditions of WP-01-111, which was granted on May 2, 2001 allow the following:
1. Additional points along the Maple Lawn Blvd. other than those permitted by Section 16.119(c)(1), are subject to further analysis and approvals at later plan stages, and;
2. Residential lots may 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.
- The storm drains shown within Common Open Areas 128 through 132 are private. They will be privately owned and maintained by the Community Homeowners Association, public ownership and responsibility ends at the right of way line.
- All buildable lots shown herein shall have one (1) foot wide public easement adjacent to the Public Road Right of Way, for the purpose of sidewalk maintenance, water house connection and sewer house connection.
- The pathway shown from the intersection of Midtown Road and Duke Street, through Open Space Lot 122 is to be continued under SFP 03-140 and will be constructed with the Maple Lawn Boulevard connection to Johns Hopkins Road. The remaining 100' +/- of sidewalk along Johns Hopkins Road to connect to the sidewalk constructed under Capital Project #J-4171 will be constructed with the Maple Lawn Boulevard plans. This pathway is being provided in lieu of the Johns Hopkins Road sidewalk system. The pathway alignment was determined to be an essential disturbance within the wetlands buffer and floodplain area by the Department of Planning and Zoning in accordance with Section 16.119(c) of the Subdivision Regulations.
- The SWM outlet pipe and rip-rap channel located within the 100 year flood plain limits was determined allowable by DPZ based on approved P-03-01 as a safe method to protect the flood plain from the outflow from the SWM facility in accordance with Section 16.119(c)(2) of the Subdivision and Land Development Regulations.



LOCATION PLAN
SCALE: 1"=800'

SHEET INDEX

1. COVER SHEET	2. S.W.M. DRAINAGE AREA MAP FOR TEMP. BASIN
3. S.W.M. DRAINAGE AREA MAP FOR PERMANENT	4. S.W.M. DRAINAGE AREA MAP FOR PERMANENT
5. S.W.M. DRAINAGE AREA MAP FOR PERMANENT	6. S.W.M. DRAINAGE AREA MAP FOR PERMANENT
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51. S.W.M. DRAINAGE AREA MAP FOR PERMANENT	52. S.W.M. DRAINAGE AREA MAP FOR PERMANENT
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59. S.W.M. DRAINAGE AREA MAP FOR PERMANENT	60. S.W.M. DRAINAGE AREA MAP FOR PERMANENT

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
⊕	PROP. TOP OF CURB ELEVATION
⊕	PROPOSED STREET TREES
	AREA OF TEXTURED PAVEMENT
	STRIPED AREA
	EROSION CONTROL MATTING
	PROPOSED SIDEWALK
⊕	NUMBER OF PARKING SPACES
=====	PROP. BARRICADE
⊕	STREET LIGHTS
⊕	STRUCTURE NUMBER
-----	400'----- EXISTING CONTOUR
-----	PROP. CONTOUR
-----	EXISTING TREE LINE
-----	WETLAND
-----	WETLAND BUFFER
-----	BOTTOM OF STREAM
-----	STREAM BUFFER
-----	100 YEAR FLOODPLAIN
-----	CENTRELINE OF STREAM
-----	STEEP SLOPES

NOTE: ROAD NAME CHANGES
Due to the name change from Santer Road to Maple Lawn Boulevard, there may be residual locations in the plans still referring to Santer Road. All such references to proposed Santer Road shall be considered to mean Maple Lawn Boulevard. Furthermore, any references in Comprehensive Sketch Plan Criteria to Santer Road, shall apply to the new name.

SUMMARY OF MINIMUM SETBACKS FOR RESIDENTIAL LAND USE AREAS PER APPROVED PDP AND CSP DEVELOPMENT CRITERIA

- THE FOLLOWING MINIMUM STRUCTURE SETBACKS SHALL APPLY FOR STRUCTURES FROM THE PROJECT BOUNDARY:
- 50-FOOT MINIMUM OPEN SPACE BUFFER ADJACENT TO EXISTING RESIDENTIAL COMMUNITIES.
 - 100-FOOT MINIMUM SETBACK FOR RESIDENTIAL UNITS FROM JOHNS HOPKINS ROAD.
 - 50-FOOT MINIMUM SETBACK FOR COMMERCIAL BUILDINGS FROM JOHNS HOPKINS ROAD AND A 20-FOOT MINIMUM SETBACK FOR PARKING FROM JOHNS HOPKINS ROAD.

STRUCTURE SETBACKS

The minimum required setbacks for SINGLE FAMILY DETACHED structures shall be as follows:

Lot Type	Minimum Front Setback	Minimum Side Setback	Minimum Rear Setback	
			To Principal Structure	To Rear Garage (Attached or Detached) or to Accessory Structure
Cottage	10'	4' except for garage which may be 0'	20'	3'
Manor	12'	6' except for garage which may be 0'	20'	3'
Villa	12'	6' except for garage which may be 0'	20'	3'
Estate	20'	20' except for garage which may be 10'	20'	20'

- A ZERO LOT LINE DWELLING UNIT MAY BE LOCATED ON ANY PROPERTY LINE WHICH IS NOT A STREET RIGHT-OF-WAY PROVIDED THAT (1) NO PART OF THE DWELLING SHALL ENCRUSH INTO THE ADJOINING LOT; (2) AN ACCESS EASEMENT FOR THE PURPOSE OF MAINTENANCE TO THE SIDE OF THE STRUCTURE SHALL BE INCLUDED IN THE DEED WHERE APPROPRIATE. SPACING BETWEEN DWELLING UNITS SHALL BE A MINIMUM OF 6'. GARAGES HOWEVER, MAY ADJON ALONG THE PROPERTY LINE, PROVIDED THEY COMPLY WITH ALL BUILDING AND FIRE CODE REGULATIONS.
- OPEN DECKS MUST BE A MINIMUM OF 10' FROM REAR PROPERTY LINE, AND ARE SUBJECT TO SIDE YARD SETBACKS.
- FACING ACCESSORY STRUCTURES AND DETACHED GARAGES (ACROSS AN ALLEY/LANE R.O.W.) SHALL BE 30' APART.
- STRUCTURES MAY BE LOCATED ANYWHERE WITHIN SUCH SETBACK AREAS IN ACCORDANCE WITH A SITE DEVELOPMENT PLAN APPROVED BY HOWARD COUNTY PLANNING BOARD.

- ### EXCEPTIONS TO FRONT SETBACK REQUIREMENTS:
- EXCEPT FOR THE FOLLOWING, SECTION 128A.1 APPLIES:
- PORCHES MAY ENCRUSH INTO THE FRONT YARD TO WITHIN 2' FROM THE PROPERTY LINE OR RIGHT-OF-WAY FOR COTTAGES, MANORS, VILLAS; TO WITHIN 12' FOR ESTATES. PORCHES MAY ENCRUSH INTO THE SIDE YARD OF CORNER LOTS TO WITHIN 2' FROM RIGHT-OF-WAY FOR COTTAGES, MANORS, AND VILLAS; TO WITHIN 12' FOR ESTATES. WHERE A SIDE YARD ADJON AN OPEN SPACE OR PASSAGE, PORCHES MAY ENCRUSH TO WITHIN 1' FROM SIDE PROPERTY LINE FOR COTTAGES, MANORS, AND VILLAS; TO WITHIN 12' FOR ESTATES.
 - STOOPS AND STEPS MAY ENCRUSH INTO THE FRONT AND SIDE YARDS TO WITHIN 1' FROM THE FRONT PROPERTY LINE.
 - GARDEN WALLS, FENCES, PEERS, GATES AND SIMILAR ORNAMENTS MAY BE BUILT IN THE FRONT AND SIDE YARDS NOT CLOSER THAN 1' FROM THE FRONT PROPERTY LINE; NOT GREATER THAN 48" IN HEIGHT ALONG THE FRONT PROPERTY LINE AND NOT GREATER THAN 72" ALONG THE SIDE AND REAR PROPERTY LINES.

- ### ACCESS
- PERMANENT ACCESS TO LOTS MAY BE PROVIDED BY MEANS OF ALLEYS, USING PERPETUAL RECIPROCAL EASEMENTS.
- ### BUILDING HEIGHT
- MAXIMUM BUILDING HEIGHT IN THE OTHER RESIDENTIAL LAND USE AREAS SHALL BE 50' FOR ATTACHED, SEMI-DETACHED, OR TWO-FAMILY DWELLING UNITS, AND 40' FOR LIVE-WORK UNITS AND APARTMENTS. IN EACH CASE THE BUILDING HEIGHT IS MEASURED FROM THE HIGHEST POINT OF THE ROOF HEIGHT TO THE HIGHEST ADJOINING GROUND ELEVATION ADJACENT TO THE BUILDING, EXCEPT AS OTHERWISE APPROVED ON A SITE DEVELOPMENT PLAN BY THE HOWARD COUNTY PLANNING BOARD.
- ### COVERAGE
- LOT COVERAGE FOR ESTATE LOTS SHALL NOT EXCEED 50 PERCENT, INCLUDING PRINCIPAL AND ACCESSORY STRUCTURES BUT NOT INCLUDING SIDEWALKS, PAVED PARKING AREAS, DRIVEWAYS, PORCHES, STAIRS, STEPS, DECKS, PATIOS, IN-GROUND POOLS, LANDSCAPING AND SIMILAR STRUCTURES.
- ### PARKING
- NO LESS THAN TWO PARKING SPACES SHALL BE PROVIDED FOR EACH SINGLE FAMILY DETACHED DWELLING UNIT. SUCH SPACES MAY CONSIST OF GARAGE, DRIVEWAY AND/OR SIMILAR OFF-STREET PARKING SPACES. VISITOR PARKING AND OVERFLOW PARKING MAY BE ACCOMMODATED AS ON-STREET PARKING WITHIN THE PUBLIC RIGHT-OF-WAY.

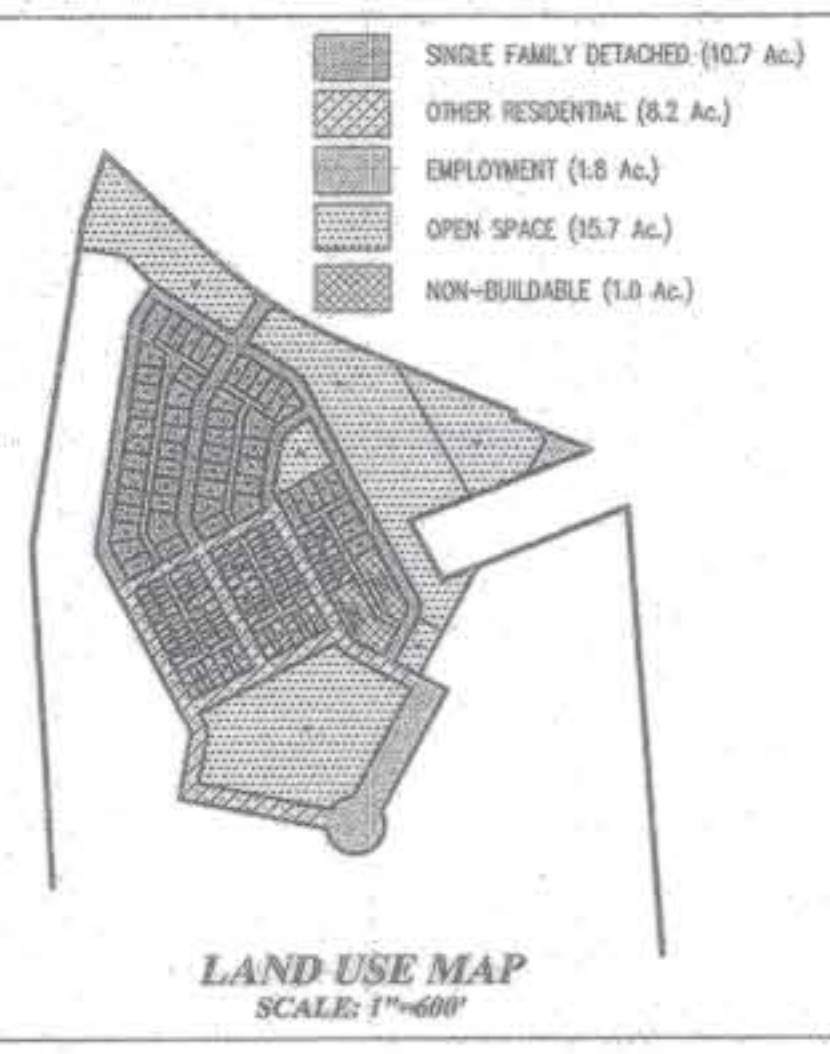
Lot Information

Lot Type	Lots	Minimum Lot Size	Min. Lot Width at Front BFL
Cottage	14-19, 38-42, 48-52	3,600 Square Feet	34'
Manor	1-13, 20-37, 43-47, 53-55	4,000 Square Feet	48'
Villa		5,400 Square Feet	54'
Estate		20,000 Square Feet	120' *
Townhouse	56-120		

* except for lots identified on a CSP which shall not be less than 100' at front lot type shall be designated on Final Plats for all Single Family Detached area be located as shown on this plan.

OVERALL DEVELOPMENT TRACKING CHART

PHASE	REF. NO.	GROSS ACREAGE	NON-BUILDABLE ACREAGE	S.F.D. AC. (%)	O.R. AC. (%)	EMP. AC. (%)	O.S. AC. (%)	PUB. RD. ACREAGE	PRIV. RD. ACREAGE	STD. UNITS	O.R. UNITS (APT./S.F.A.)	S.F.D. DENSITY	O.R. DENSITY	EMP. BLDG. AREA	EMP. F.A.R.
1	F-03-07	91.88		30.83 (90.3)	21.15 (40.7)	4.38									
2	F-03-90	37.43	1.19 (3.1)	10.84 (29.0)	8.08 (21.6)	1.56 (4.2)	16.75 (42.1)	0.02	1.88	65	65	52/AC	79/AC		
TOTAL		89.41	1.19 ACRES	10.84	8.08	32.39	36.90 (41.3)	13.40	1.68	65	65				
OVERALL DENSITY TABULATION				PROPOSED ALLOWED	LAND USE ACREAGES	PROPOSED ALLOWED	MAX. RES. UNITS ALLOWED	S-01-17							
OVERALL S.F.D./GROSS ACRE				5.2/AC	2.8 UNITS/AC	SINGLE FAMILY DETACHED (S.F.D.)	10.84	198.3	SINGLE FAMILY DETACHED (S.F.D.)	485	(43.50)				
OVERALL O.R./GROSS ACRE				7.9/AC	14.0 UNITS/AC	OTHER RESIDENTIAL (O.R.)	8.08	33.0	APARTMENTS (O.R.)	238	(21.15)				
OVERALL EMPLOYMENT F.A.R.						EMPLOYMENT	32.39	77.1	SINGLE FAMILY ATTACHED (O.R.)	385	(33.48)				
OVERALL S.F.D./O.R. DENSITY				1.4/AC	2.2 UNITS/AC	OPEN SPACE	36.90	179.5	TOTAL	723	(81.13)				
						TOTAL	88.22 AC.	507.9 AC.							



STRUCTURE SETBACKS

The minimum required setbacks for OTHER RESIDENTIAL structures shall be as follows:

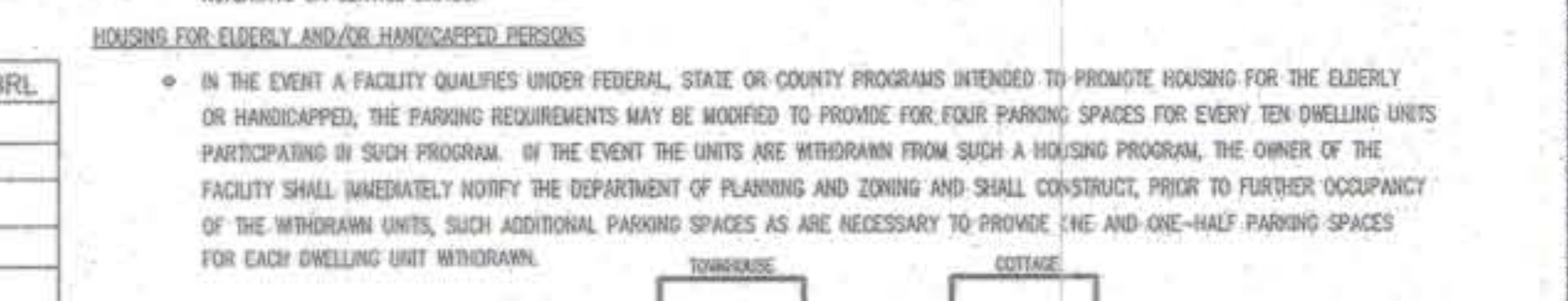
Lot Type	Minimum Front Setback	Minimum Side Setback	Minimum Rear Setback	
			To Principal Structure	To Rear Garage (Attached or Detached) or to Accessory Structure
Single-Family Attached	0'	0'	20'	3'
Live-Work	0'	0'	20'	3'
Semi-detached	10'	4' except for garage which may be 0'	20'	3'
Two-Family	10'	4' except for garage which may be 0'	20'	3'
Apartment	10'	10' except for garage which may be 0'	20'	3'

- OPEN DECKS MUST BE A MINIMUM OF 10' FROM REAR PROPERTY LINE, AND ARE SUBJECT TO SIDE YARD SETBACKS.
- FACING ACCESSORY STRUCTURES AND DETACHED GARAGES (ACROSS AN ALLEY/LANE R.O.W.) SHALL BE 30' APART.
- BETWEEN APARTMENT BUILDINGS, THE MINIMUM SETBACK DISTANCES SHALL BE 30' FRONT TO FRONT, 50' BACK TO BACK, 50' FRONT TO BACK AND 15' FOR ALL OTHER CONDITIONS. BETWEEN SINGLE-FAMILY ATTACHED BUILDINGS, THE MINIMUM SETBACK DISTANCES SHALL BE 30' FRONT TO FRONT, 50' BACK TO BACK, 50' BACK TO FRONT AND 10' FOR ALL OTHER CONDITIONS.
- STRUCTURES MAY BE LOCATED ANYWHERE WITHIN SUCH SETBACK AREAS IN ACCORDANCE WITH A SITE DEVELOPMENT PLAN APPROVED BY HOWARD COUNTY PLANNING BOARD.

- ### EXCEPTIONS TO FRONT SETBACK REQUIREMENTS:
- EXCEPT FOR THE FOLLOWING, SECTION 128A.1 APPLIES:
- PORCHES MAY ENCRUSH INTO THE FRONT YARD TO WITHIN 2' FROM THE PROPERTY LINE OR RIGHT-OF-WAY FOR ALL OTHER RESIDENTIAL LOT TYPES.
 - STOOPS AND STEPS MAY ENCRUSH INTO THE FRONT AND SIDE YARDS TO WITHIN 1' FROM THE FRONT PROPERTY LINE FOR ALL OTHER RESIDENTIAL TYPES.
 - GARDEN WALLS, FENCES, PEERS, GATES AND SIMILAR ORNAMENTS MAY BE BUILT IN THE FRONT AND SIDE YARDS NOT CLOSER THAN 1' FROM THE FRONT PROPERTY LINE; NOT GREATER THAN 48" IN HEIGHT ALONG THE FRONT PROPERTY LINE AND NOT GREATER THAN 72" ALONG THE SIDE AND REAR PROPERTY LINES.

- ### ACCESS
- PERMANENT ACCESS TO LOTS MAY BE PROVIDED BY MEANS OF ALLEYS, USING PERPETUAL RECIPROCAL EASEMENTS.
- ### BUILDING HEIGHT
- MAXIMUM BUILDING HEIGHT IN THE OTHER RESIDENTIAL LAND USE AREAS SHALL BE 50' FOR ATTACHED, SEMI-DETACHED, OR TWO-FAMILY DWELLING UNITS, AND 40' FOR LIVE-WORK UNITS AND APARTMENTS. IN EACH CASE THE BUILDING HEIGHT IS MEASURED FROM THE HIGHEST POINT OF THE ROOF HEIGHT TO THE HIGHEST ADJOINING GROUND ELEVATION ADJACENT TO THE BUILDING, EXCEPT AS OTHERWISE APPROVED ON A SITE DEVELOPMENT PLAN BY THE HOWARD COUNTY PLANNING BOARD.
- ### COVERAGE
- NO COVERAGE REQUIREMENTS ARE IMPOSED IN OTHER RESIDENTIAL LAND USE AREAS.
- ### PARKING
- NO LESS THAN TWO PARKING SPACES SHALL BE PROVIDED FOR EACH SINGLE FAMILY ATTACHED, LIVE-WORK, SEMI-DETACHED, AND TWO-FAMILY DWELLING UNIT. NO LESS THAN ONE AND ONE-HALF PARKING SPACES SHALL BE PROVIDED FOR EACH APARTMENT UNIT. SUCH SPACES MAY CONSIST OF GARAGE, DRIVEWAY AND/OR SIMILAR OFF-STREET PARKING SPACES. SUCH PARKING SHALL BE PROVIDED IN PROXIMITY TO SUCH DWELLING UNIT AND MAY BE INCLUDED AS PART OF A COMMON PARKING AREA PROVIDED FOR RESIDENTS, TENANTS, AND GUESTS. PRINCIPAL STRUCTURES SHALL BE NO CLOSER THAN 15' TO THE CURB OF SUCH PARKING AREAS. VISITOR PARKING AND OVERFLOW PARKING MAY BE ACCOMMODATED AS ON-STREET AND PARALLEL PARKING WITHIN THE PUBLIC RIGHT-OF-WAY.
 - SUCH PARKING AREAS MAY BE PARALLEL SPACES LOCATED ON PARALLEL AREAS IN AND/OR ADJACENT TO PUBLICLY MAINTAINED ROADWAYS, ADJACENT TO PUBLIC OR PRIVATE SERVICE DRIVES OR ORIENTED DIAGONALLY OR AT RIGHT ANGLES TO SUCH ROADWAYS OR SERVICE DRIVES.

- ### HOUSING FOR ELDERLY AND/OR HANDICAPPED PERSONS
- IN THE EVENT A FACILITY QUALIFIES UNDER FEDERAL, STATE OR COUNTY PROGRAMS INTENDED TO PROMOTE HOUSING FOR THE ELDERLY OR HANDICAPPED, THE PARKING REQUIREMENTS MAY BE MODIFIED TO PROVIDE FOR FOUR PARKING SPACES FOR EVERY TEN DWELLING UNITS PARTICIPATING IN SUCH PROGRAM. IF THE EVENT THE UNITS ARE WITHDRAWN FROM SUCH A HOUSING PROGRAM, THE OWNER OF THE FACILITY SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF PLANNING AND ZONING AND SHALL CONSTRUCT, PRIOR TO FURTHER OCCUPANCY OF THE WITHDRAWN UNITS, SUCH ADDITIONAL PARKING SPACES AS ARE NECESSARY TO PROVIDE ONE AND ONE-HALF PARKING SPACES FOR EACH DWELLING UNIT WITHDRAWN.



PROFESSIONAL CERTIFICATION
I hereby certify that these documents 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. 12475, Expiration Date, May 26, 2016.

3/2/15

HOWARD COUNTY, MARYLAND

THE LIMITS OF THIS FINAL PLAN COVERS ALL THE DEVELOPMENT PROPOSED BY S-01-17 AS ANNUAL PHASE 2 (ALLOCATION YEAR 2005) WHICH IS ALSO THE 120 RESIDENTIAL UNITS ALLOWED BY PDP PHASE 1/STAGE 1.

ASBUILTS

ASBUILTS SHEET 1 OF 5
COUNTY FILE # F 03-090

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Pendergast 5-8-03
Chief, Bureau of Highways Date

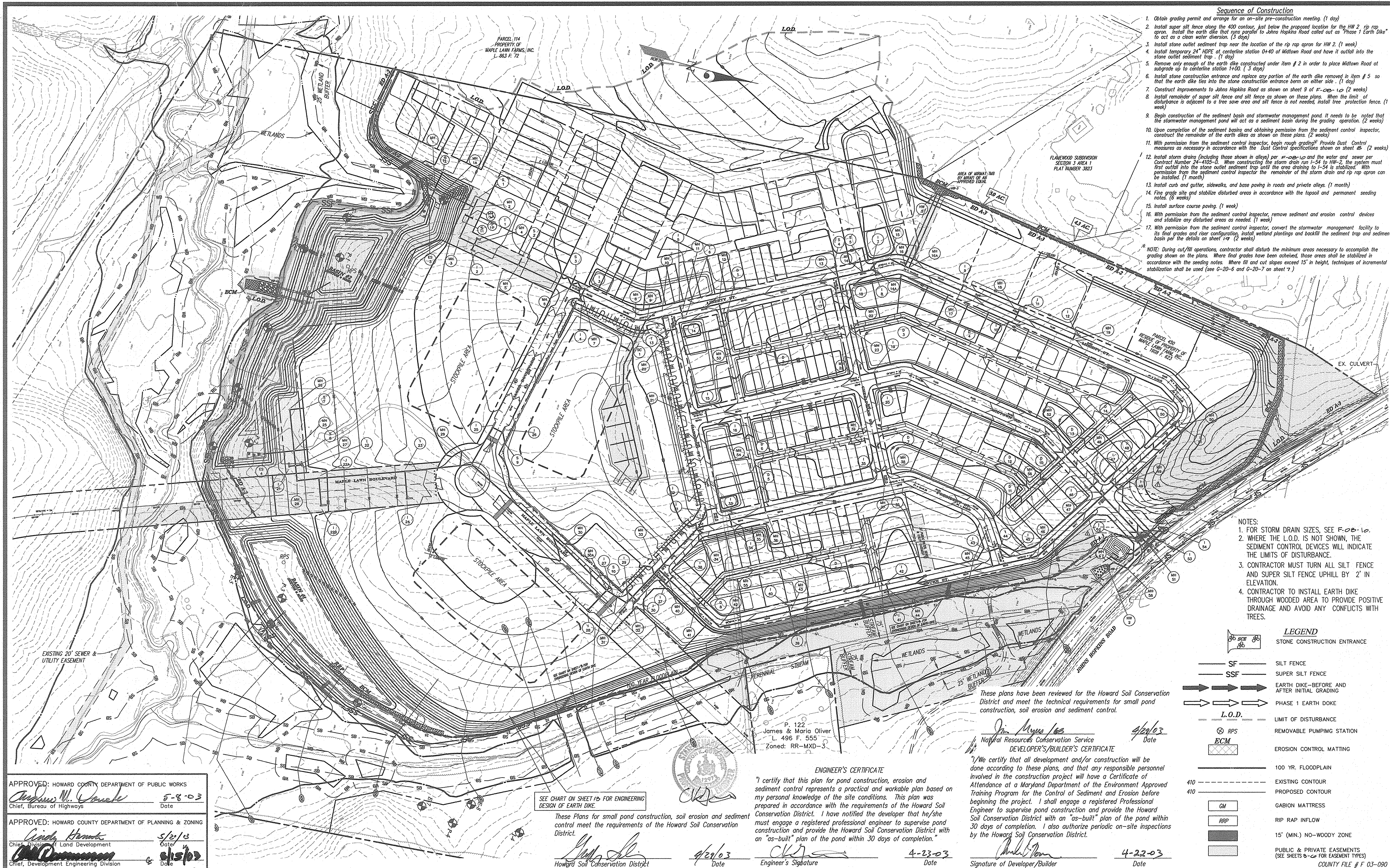
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Candice Hamilton 5/24/03
Chief, Division of Land Development Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Deane 5/15/03
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 200 - BURTOWNSVILLE OFFICE PARK
BURTOWNSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALI: 410-860-1820 DC/VA: 301-589-2524 FAX: 301-421-4186

NO.	DESCRIPTION	DATE	REVISION	BY	APPR.
0-11-01	Removed sheets from sheet index pertaining to 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108,				

L:\CADD\DRAWINGS\02001\PHASE 2 (02001)\FINALS\ph2sc13-17.dwg 04/23/2003 08:29:10 PM EDT



- Sequence of Construction**
1. Obtain grading permit and arrange for an on-site pre-construction meeting. (1 day)
 2. Install super silt fence along the 400 contour, just below the proposed location for the HW 2 rip rap apron. Install the earth dike that runs parallel to Johns Hopkins Road called out as "Phase 1 Earth Dike" to act as a clean water diversion. (3 days)
 3. Install stone outlet sediment trap near the location of the rip rap apron for HW 2. (1 week)
 4. Install temporary 24" HDPE at centerline station 0+40 of Midtown Road and have it cutfall into the stone outlet sediment trap. (1 day)
 5. Remove only enough of the earth dike constructed under item # 2 in order to place Midtown Road at subgrade up to centerline station 1+00. (3 days)
 6. Install stone construction entrance and replace any portion of the earth dike removed in item # 5 so that the earth dike lies into the stone construction entrance from an uphill side. (1 day)
 7. Construct improvements to Johns Hopkins Road as shown on sheet 9 of F-03-10 (2 weeks)
 8. Install remainder of super silt fence and silt fence as shown on these plans. When the limit of disturbance is adjacent to a tree save area and silt fence is not needed, install tree protection fence. (1 week)
 9. Begin construction of the sediment basin and stormwater management pond. It needs to be noted that the stormwater management pond will act as a sediment basin during the grading operation. (2 weeks)
 10. Upon completion of the sediment basins and obtaining permission from the sediment control inspector, construct the remainder of the earth dikes as shown on these plans. (2 weeks)
 11. With permission from the sediment control inspector, begin rough grading. Provide Dust Control measures as necessary in accordance with the Dust Control specifications shown on sheet 8B (2 weeks)
 12. Install storm drains (including those shown in alleys) per F-03-10 and the water and sewer per Contract Number 24-4105-D. When constructing the storm drain run 1-54 to HW-2, the system must first outfall into the stone outlet sediment trap until the area draining to 1-54 is stabilized. With permission from the sediment control inspector the remainder of the storm drain and rip rap apron can be installed. (1 month)
 13. Install curb and gutter, sidewalks, and base paving in roads and private alleys. (1 month)
 14. Fine grade site and stabilize disturbed areas in accordance with the topsoil and permanent seeding notes. (6 weeks)
 15. Install surface course paving. (1 week)
 16. With permission from the sediment control inspector, remove sediment and erosion control devices and stabilize any disturbed areas as needed. (1 week)
 17. With permission from the sediment control inspector, convert the stormwater management pond to its final grades and riser configuration, install wetland plantings and backfill the sediment trap and sediment basin per the details on sheet 19 (2 weeks)
- NOTE:** During cut/fill operations, contractor shall disturb the minimum areas necessary to accomplish the grading shown on the plans. Where final grades have been achieved, those areas shall be stabilized in accordance with the seeding notes. Where fill and cut slopes exceed 15' in height, techniques of incremental stabilization shall be used (see G-20-6 and G-20-7 on sheet 7)

- NOTES:**
1. FOR STORM DRAIN SIZES, SEE F-03-10.
 2. WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
 3. CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.
 4. CONTRACTOR TO INSTALL EARTH DIKE THROUGH WOODED AREA TO PROVIDE POSITIVE DRAINAGE AND AVOID ANY CONFLICTS WITH TREES.

LEGEND

- STONE CONSTRUCTION ENTRANCE
- SILT FENCE
- SUPER SILT FENCE
- EARTH DIKE - BEFORE AND AFTER INITIAL GRADING
- PHASE 1 EARTH DIKE
- LIMIT OF DISTURBANCE
- REMOVABLE PUMPING STATION
- EROSION CONTROL MATTING
- 100 YR. FLOODPLAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- GABION MATTRESS
- RIP RAP INFLOW
- 15' (MIN.) NO-WOODY ZONE
- PUBLIC & PRIVATE EASEMENTS (SEE SHEETS 8-10 FOR EASEMENT TYPES)

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 M.../as 4/29/03
 Natural Resources Conservation Service
 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

P. 122
 James & Maria Oliver
 L. 496 F. 555
 Zoned: RR-MXD-3

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."
CKJ 4/23/03
 Howard Soil Conservation District Date Engineer's Signature

SEE CHART ON SHEET 13 FOR ENGINEERING DESIGN OF EARTH DIKE.
 These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Jim M.../as 4/23/03
 Howard Soil Conservation District Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Douch 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy Hamrick 5/21/03
 Chief, Division of Land Development Date

Chris... 5/15/03
 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 BALT: 410-850-1820 DC/VA: 301-959-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
11/12/03	Added storm drain runs S-10 to M1 2A, S-11 to M1 2A, and S-12 to M1 1, and revise forest conservation area #4 & #5 easement.	JAR	

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

SEDIMENT CONTROL OVERVIEW PLAN
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	15,16,21 & 22	2 OF 19

- NOTES:
1. FOR STORM DRAIN SIZES, SEE F-08-10.
 2. WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
 3. CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.



SEE SHEET 6 FOR CONTINUATION

SEE SHEET 6 FOR CONTINUATION

SEE SHEET 4 FOR CONTINUATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. O'Connell 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris H. ... 5/8/03
 Chief, Division of Land Development Date

Chris H. ... 5/8/03
 Chief, Development Engineering Division Date

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature] 4/26/03
 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] 4/26/03
 Natural Resources Conservation Service 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] 4-22-03
 Engineer's Signature Date

DEVELOPER'S/BUILDER'S CERTIFICATE
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[Signature] 4-22-03
 Signature of Developer/Builder Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-850-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
12/1/03	Revise forest conservation area #4 & #5 easement.	JAK	
10/13/04	Added note to see sheet 9 for Johns Hopkins Rd. Improvements.	P.E.V.	

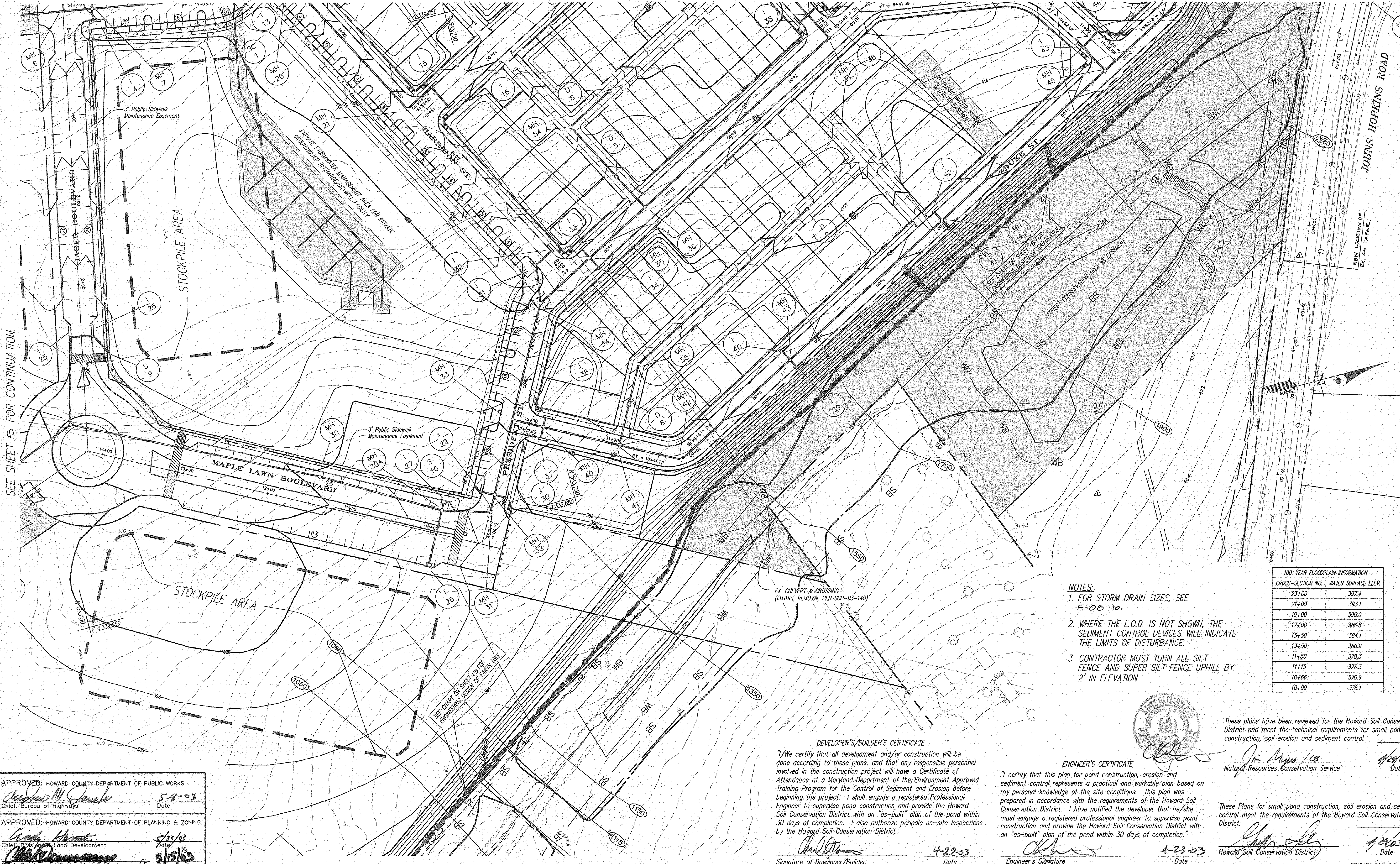
PREPARED FOR:
 G & R Maple Lawn, Inc., et. al.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD, 21208
 Attn: Charlie O'Donovan
 410-484-8400

SEDIMENT CONTROL PLAN
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C' HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	15,16,21 & 22	3 OF 10

COUNTY FILE # F 03-090

SEE SHEET 3 FOR CONTINUATION



SEE SHEET 5 FOR CONTINUATION

- NOTES:**
- FOR STORM DRAIN SIZES, SEE F-08-10.
 - WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
 - CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.

100-YEAR FLOODPLAIN INFORMATION	
CROSS-SECTION NO.	WATER SURFACE ELEV.
23+00	397.4
21+00	393.1
19+00	390.0
17+00	386.8
15+50	384.1
13+50	380.9
11+50	378.3
11+15	378.3
10+66	376.9
10+00	376.1

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Stephen M. Jankovics 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy Korman 5/20/03
 Chief, Division of Land Development Date

Mike Donovan 5/15/03
 Chief, Development Engineering Division 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.

Charlie O'Donovan 4-22-03
 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."

Jim Meyer 4-23-03
 Engineer's Signature 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.

Jim Meyer 4/29/03
 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.

Mike Donovan 4/29/03
 Howard Soil Conservation District Date

COUNTY FILE # F-03-090

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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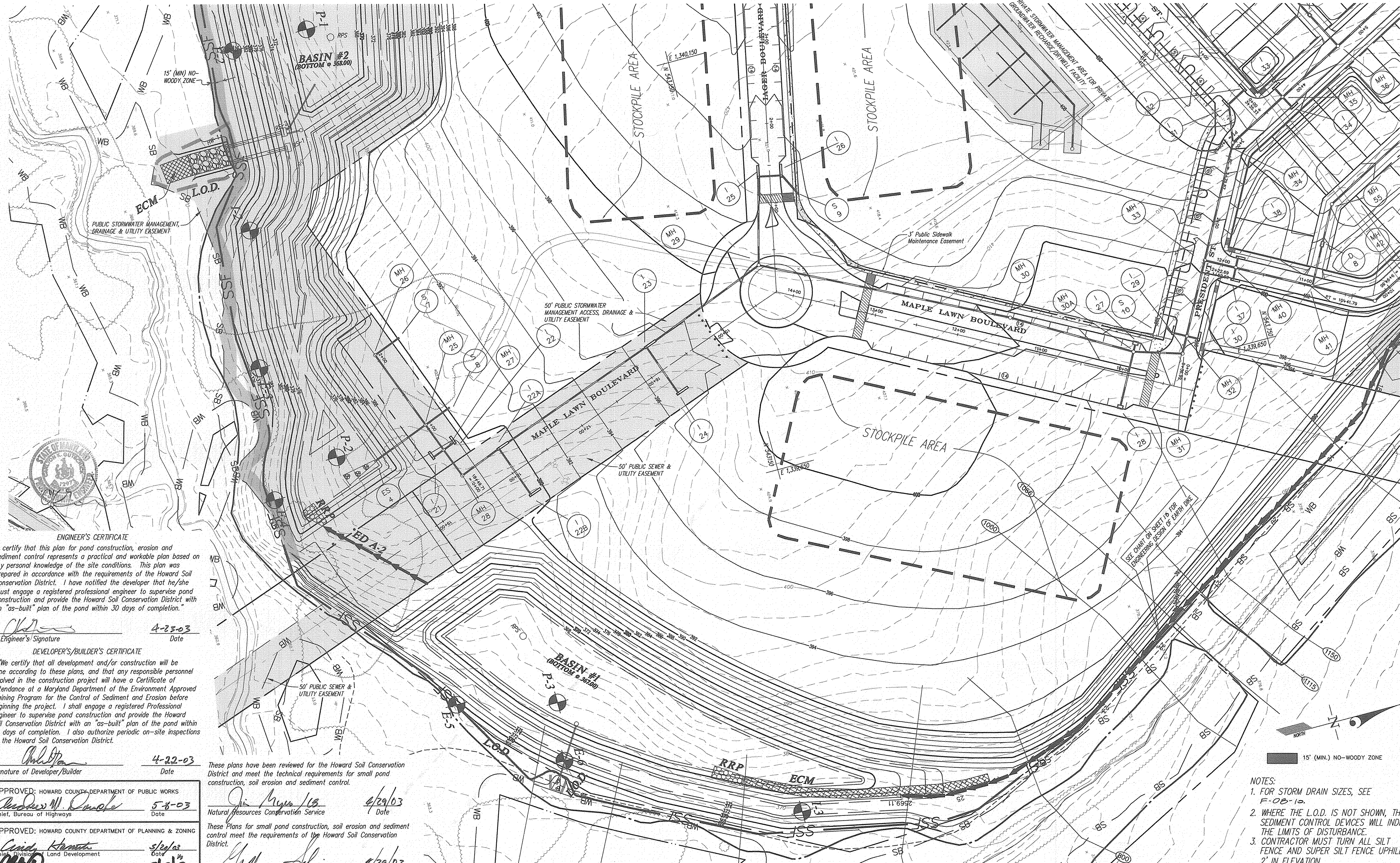
DATE	REVISION	BY	APPR.
12/23/03	Revised limits of existing guardrail and existing contours to reflect grades established after construction shown on SDP 03-140. Relocate guardrail taper.	JAU	

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

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 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=50'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR., 2003	41; 15,16,21 & 22	4 OF 15

SEE SHEET 6 FOR CONTINUATION



SEE SHEET 4 FOR CONTINUATION

ENGINEER'S CERTIFICATE

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[Signature] 4-23-03
 Engineer's Signature Date

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[Signature] 4-22-03
 Signature of Developer/Builder 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] 4/29/03
 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.

[Signature] 4/29/03
 Howard Soil Conservation District Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 5/2/03
 Chief, Division of Land Development Date
[Signature] 5/2/03
 Chief, Development Engineering Division Date

- NOTES:**
- FOR STORM DRAIN SIZES, SEE F-08-10.
 - WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
 - CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.

15' (MIN.) NO-WOODY ZONE

COUNTY FILE # F 03-090

GLWGUTSCHICK LITTLE & WEBER, P.A.
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 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VL: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
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 1829 Reisterstown Road
 Baltimore, MD, 21208
 Attn: Charlie O'Donovan
 410-484-8400

SEDIMENT CONTROL PLAN
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C' HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	15,16,21 & 22	5 OF 19

DATE	REVISION	BY	APPR.

ELECTION DISTRICT No. 5

DEVELOPER'S/BUILDER'S CERTIFICATE

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[Signature]
Signature of Developer/Builder
4-22-03
Date

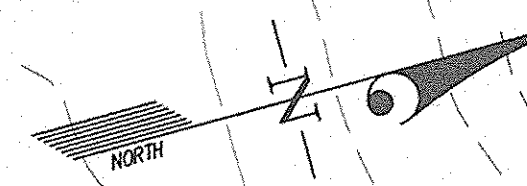
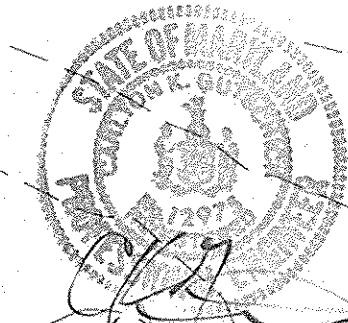
ENGINEER'S CERTIFICATE

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[Signature]
Engineer's Signature
4-23-03
Date
These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature]
Howard Soil Conservation District
4/29/03
Date

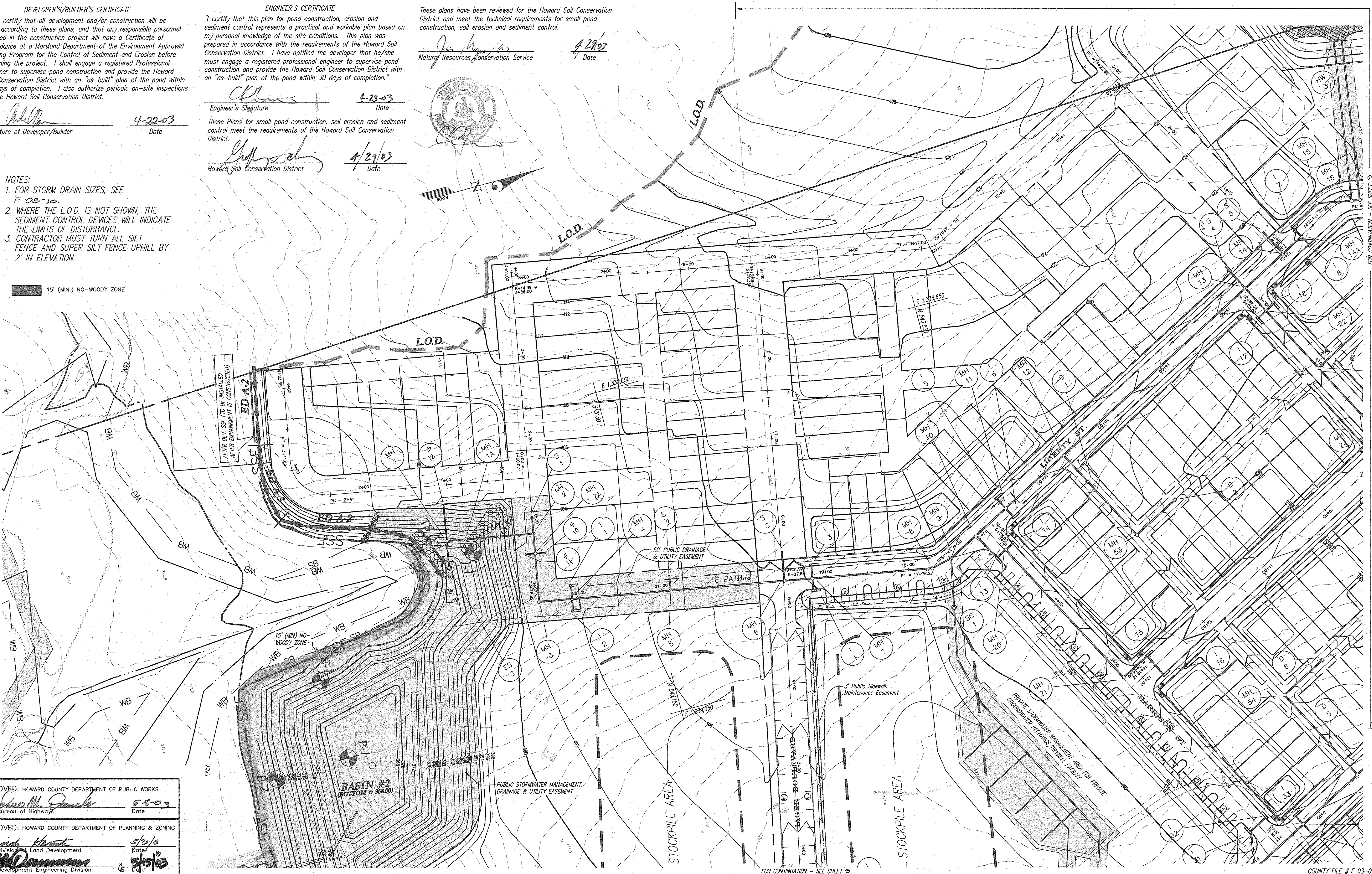
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[Signature]
Natural Resources Conservation Service
4/29/03
Date



- NOTES:**
- FOR STORM DRAIN SIZES, SEE F-08-10.
 - WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.
 - CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.

15' (MIN.) NO-WOODY ZONE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
Chief, Bureau of Highways
5/8/03
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature]
Chief, Division of Land Development
5/2/03
Date
[Signature]
Chief, Development Engineering Division
5/15/03
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

11/12/02	Added storm drain runs 9-12 to MH1, 9-10 to MH2A, and 9-11 to MH2A.	JAIL	
DATE	REVISION	BY	APPR.

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

SEDIMENT CONTROL PLAN
MAPLE LAWN FARMS
Midtown District - Area 1
Lots 1 thru 120, Open Space Lots 121 thru 127,
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HOWARD COUNTY, MARYLAND

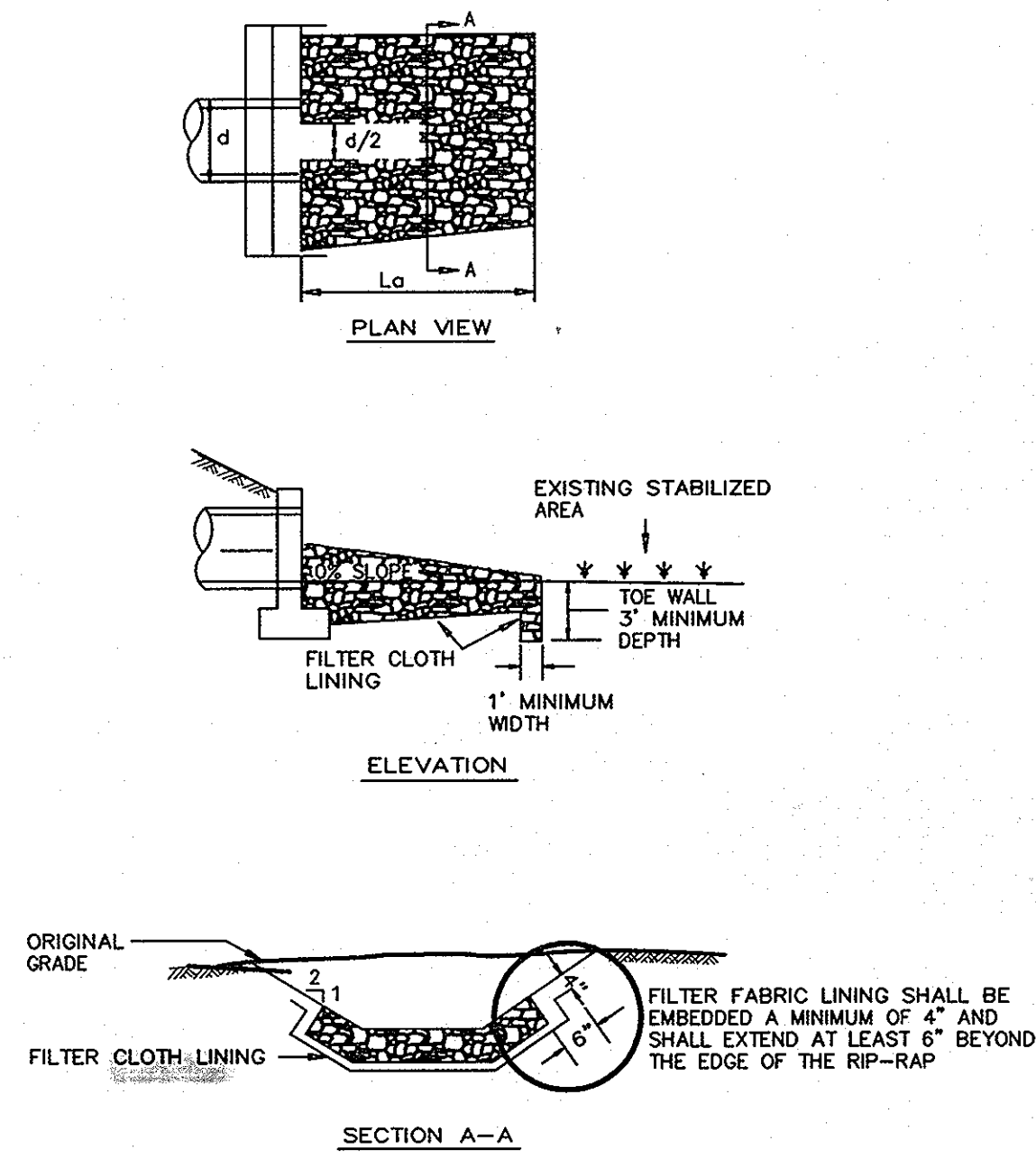
SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR., 2003	41: 15,16,21 & 22	6 OF 10

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FOR CONTINUATION - SEE SHEET 9

COUNTY FILE # F 03-090

DETAIL 27 - ROCK OUTLET PROTECTION III



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

Construction Specifications

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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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 4-23-03
Date

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Signature 4-22-03
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

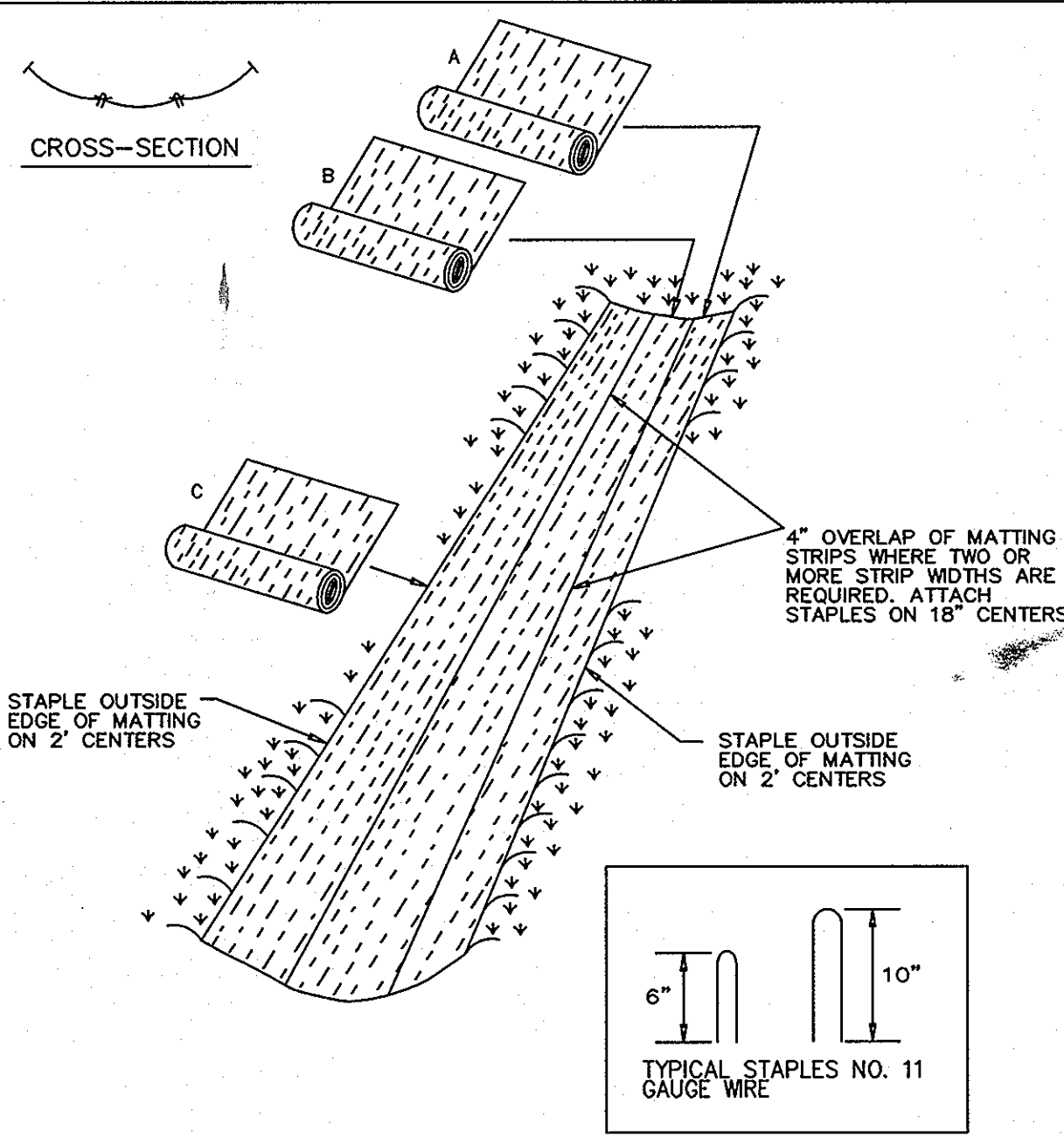
Signature 5-8-03
Date

HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Signature 5/2/03
Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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BURTNSVILLE, MARYLAND 20868
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

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

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Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

Incremental Stabilization - Cut Slopes

- All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
- Construction sequence (Refer to Figure 3 below):
 - Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 - Perform phase 1 excavation, dress, and stabilize.
 - Perform phase 2 excavation, dress, and stabilize. Oversoiled phase 1 areas as necessary.
 - Perform final phase excavation, dress, and stabilize. Oversoiled previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

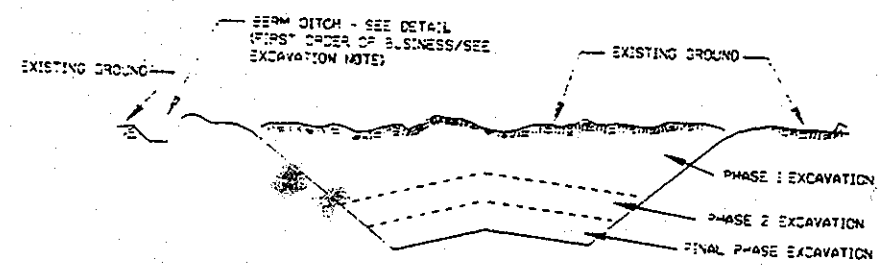
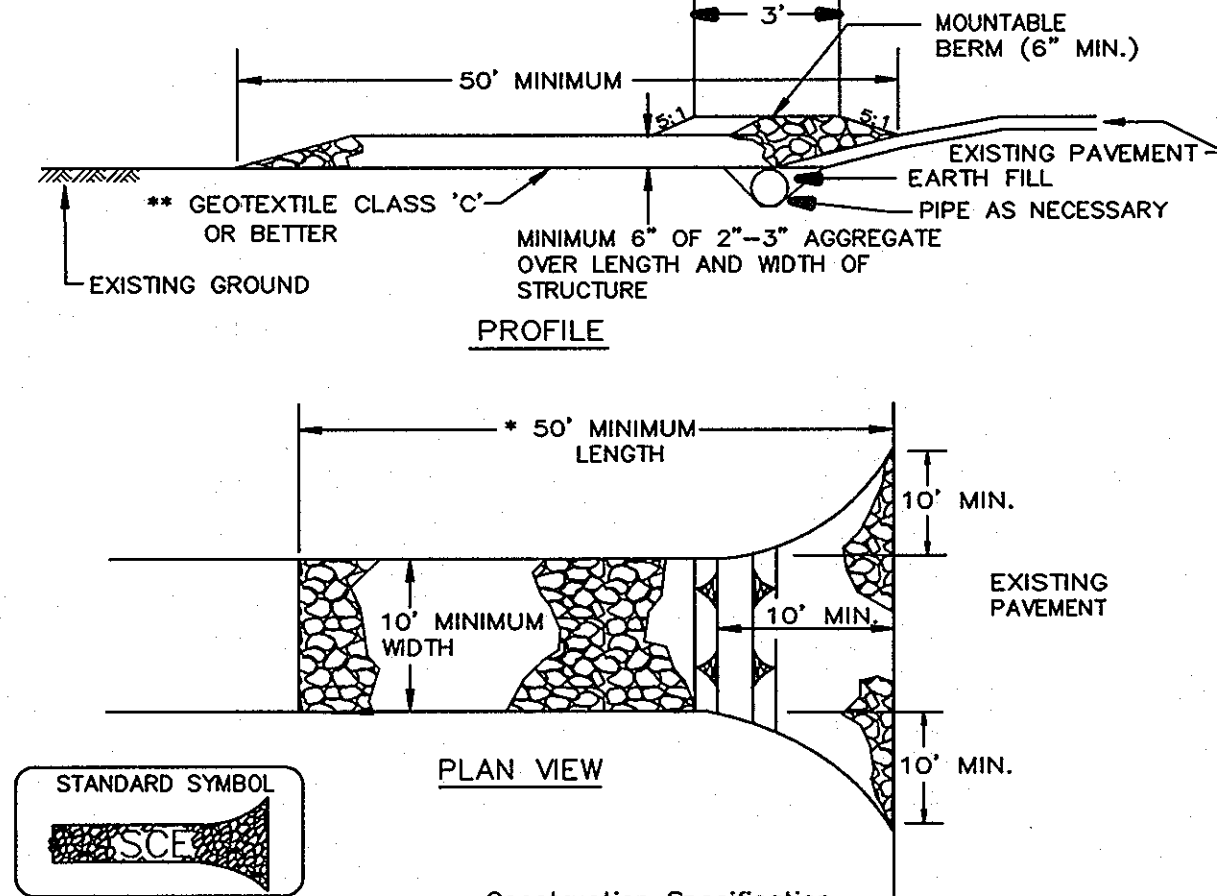


Figure 4 Incremental Stabilization - Cut

G-20-6

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DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

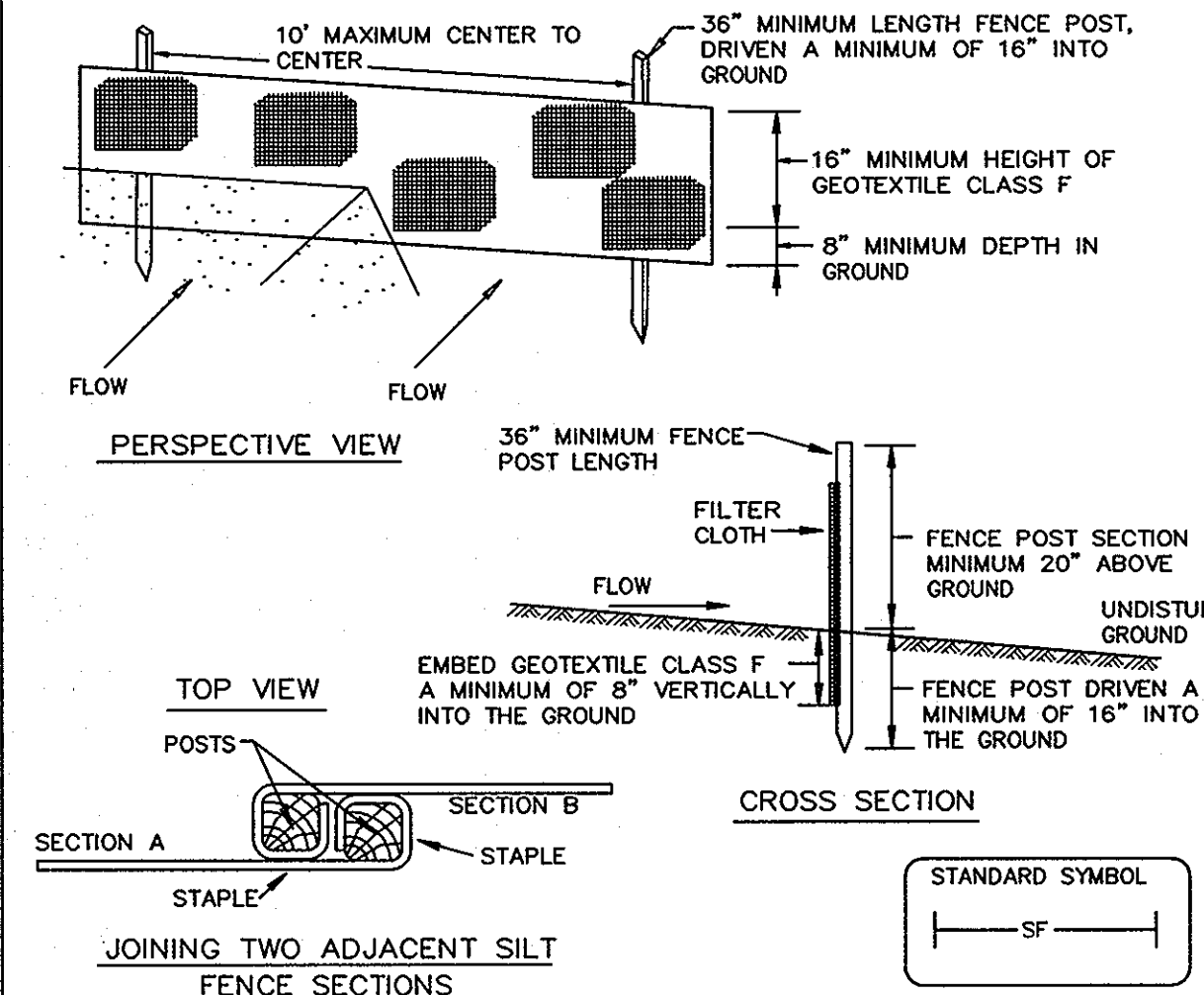


Construction Specification

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

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DETAIL 22 - SILT FENCE



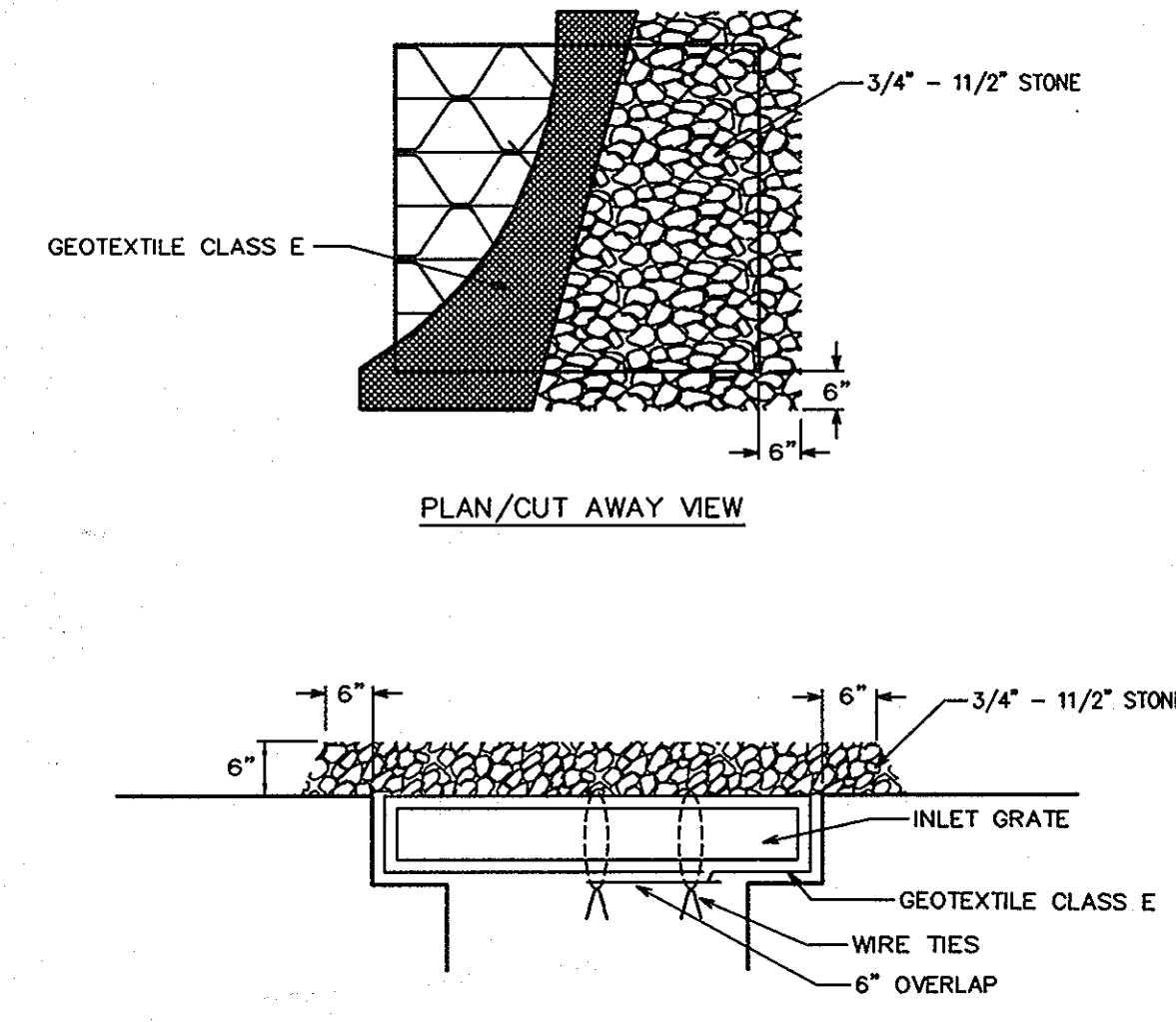
Construction Specifications

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

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft 7/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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DETAIL 23B - AT GRADE INLET PROTECTION



Construction Specifications

- Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.
- Place 3/4" to 1 1/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

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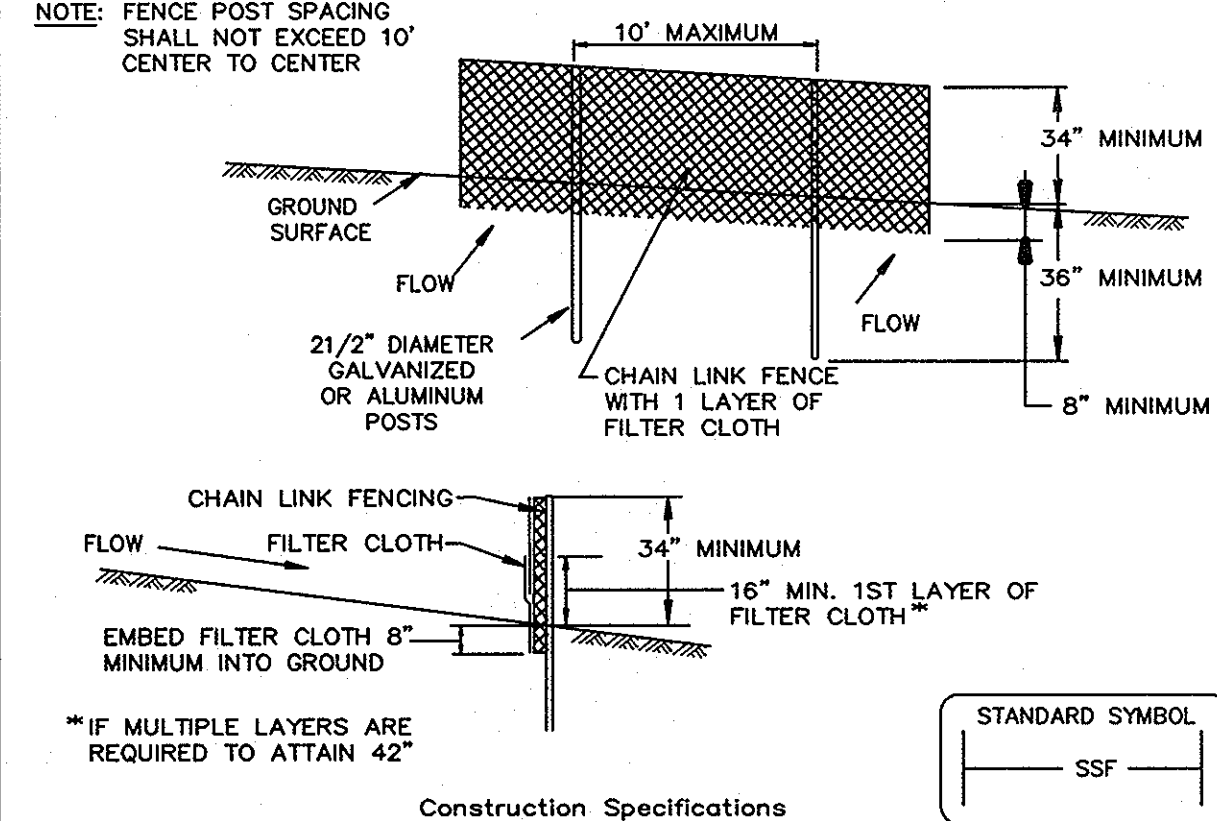
These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Signature 4/29/03
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.

Signature 4/29/03
Date

DETAIL 33 - SUPER SILT FENCE



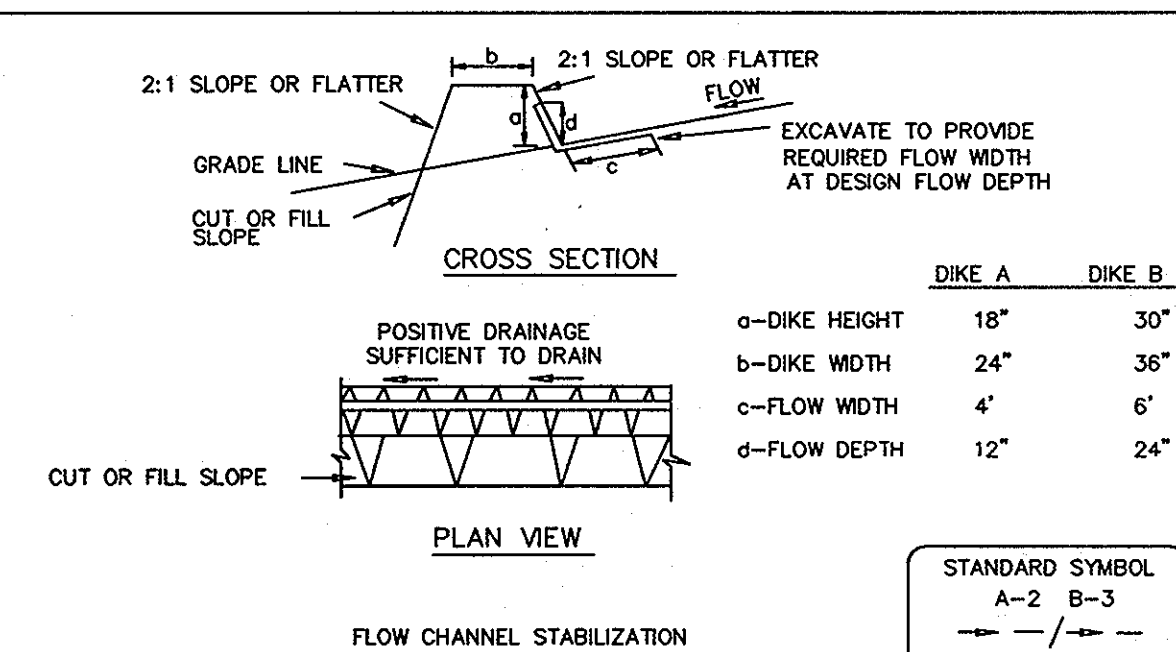
Construction Specifications

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

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DETAIL 1 - EARTH DIKE



Construction Specifications

- 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 objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

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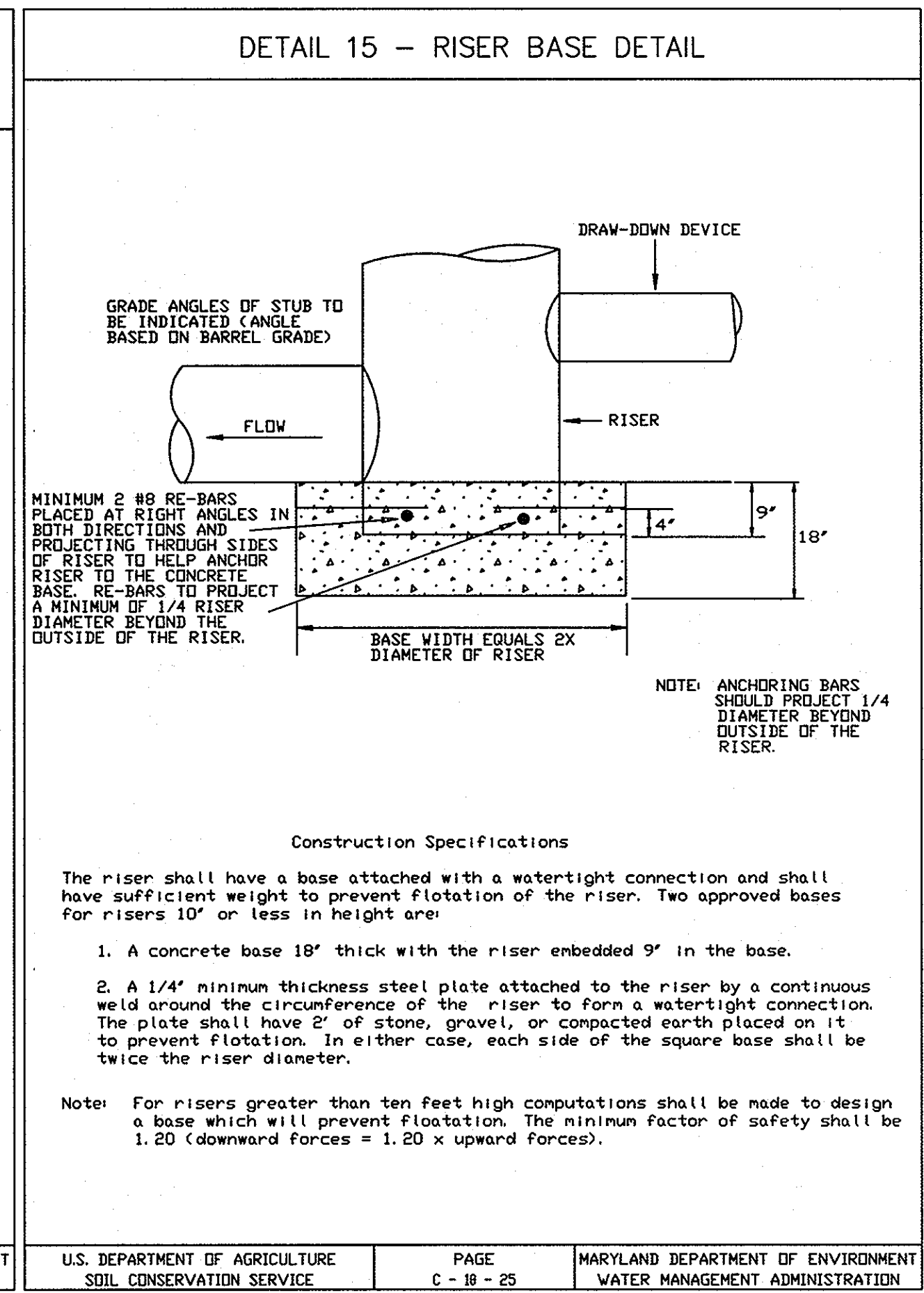
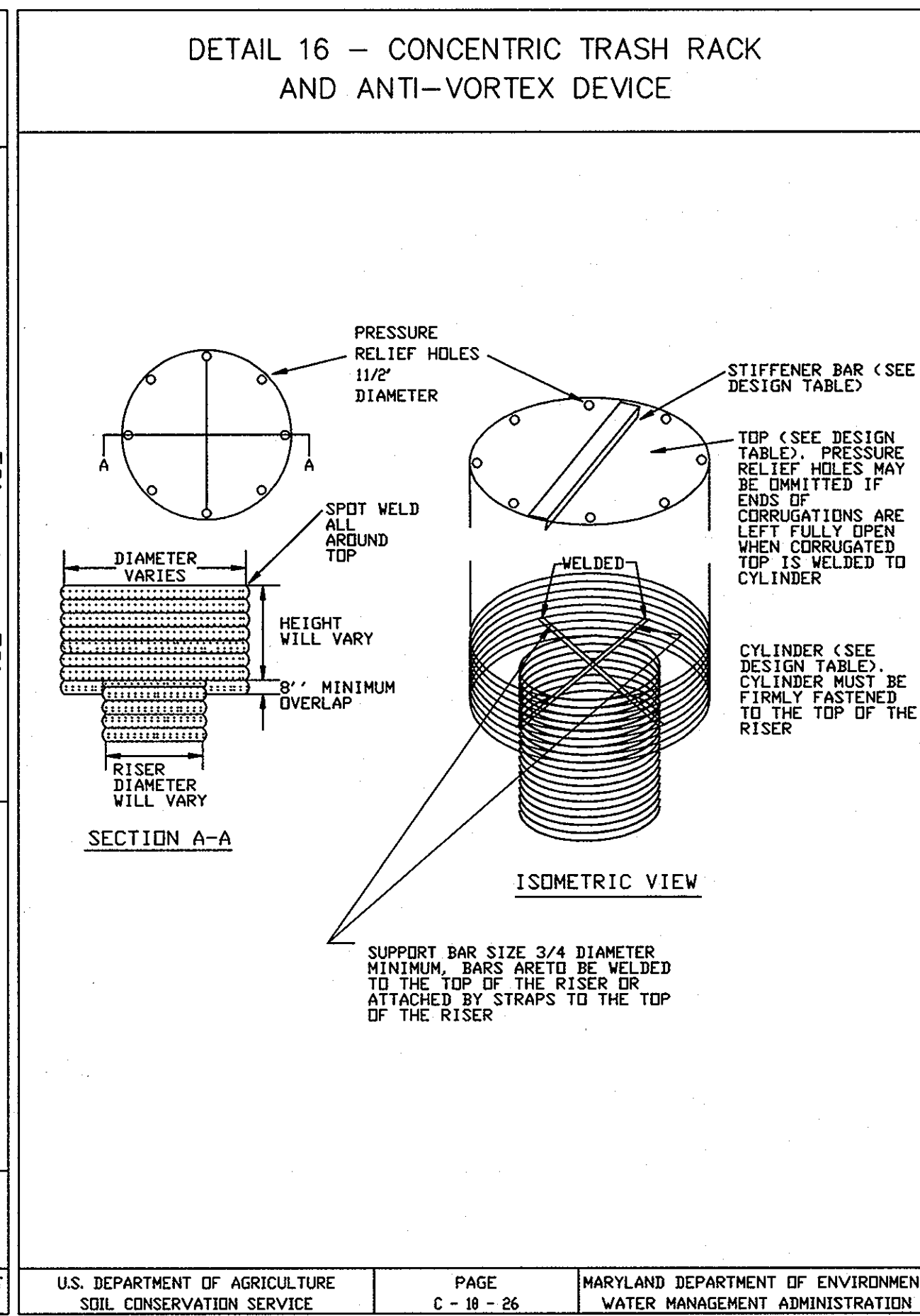
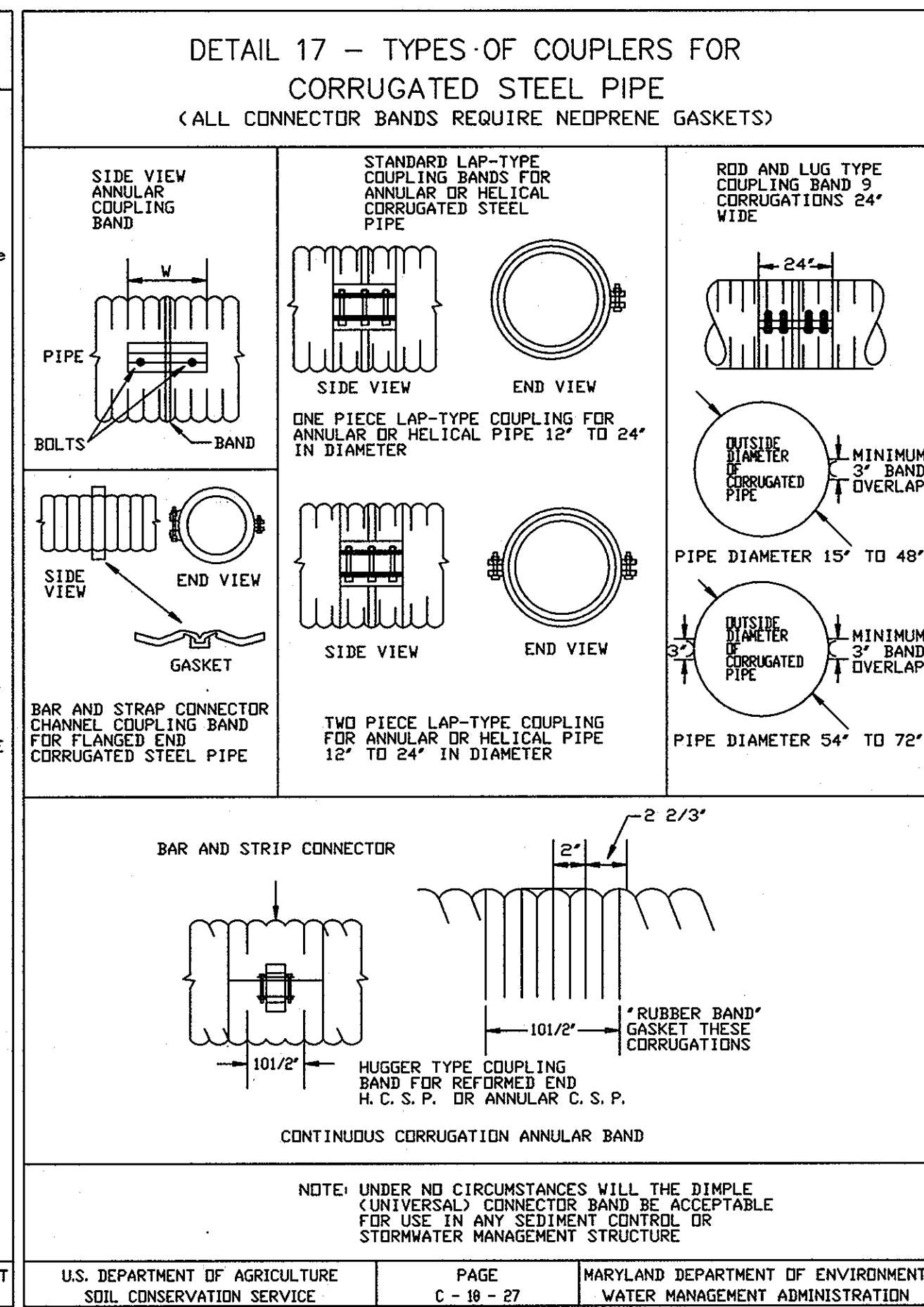
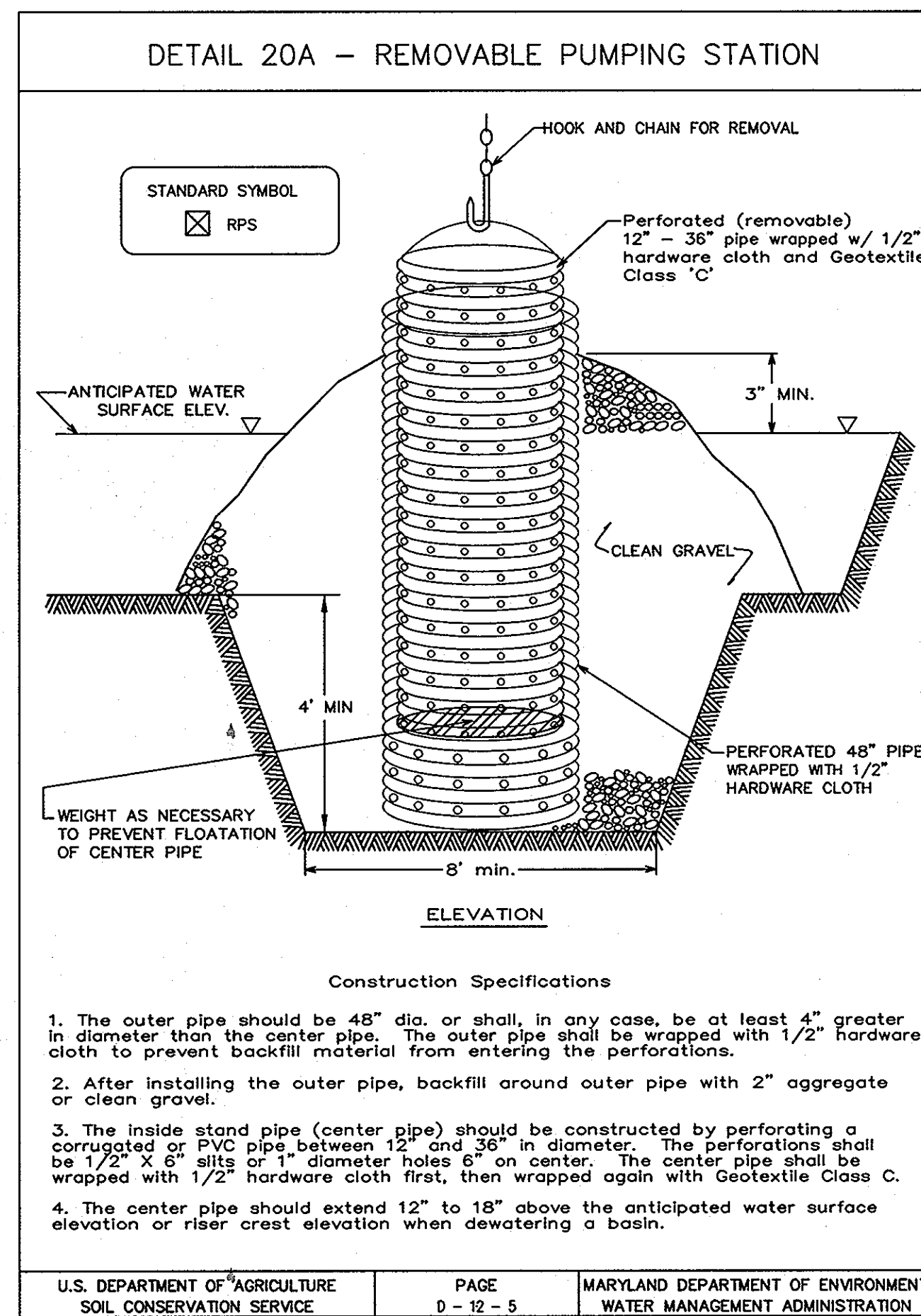
COUNTY FILE # F 03-090

SEDIMENT CONTROL DETAILS

MAPLE LAWN FARMS
Midtown District - Area 1
Lots 1 thru 120, Open Space Lots 121 thru 127,
Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
P. 121 (L. 4213 F. 95), P. 450 (L. 1908 F. 623), P. 205 (L. 894 F. 596)

SCALE	ZONING	G. L. W. File No.
NO SCALE	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	41: 21 & 22 46: 3 & 4	7 OF 10

F-03-90



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.

Jin Myers / OS
Natural Resources Conservation Service
4/21/03
Date

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

William J. ...
Howard Soil Conservation District
4/21/03
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

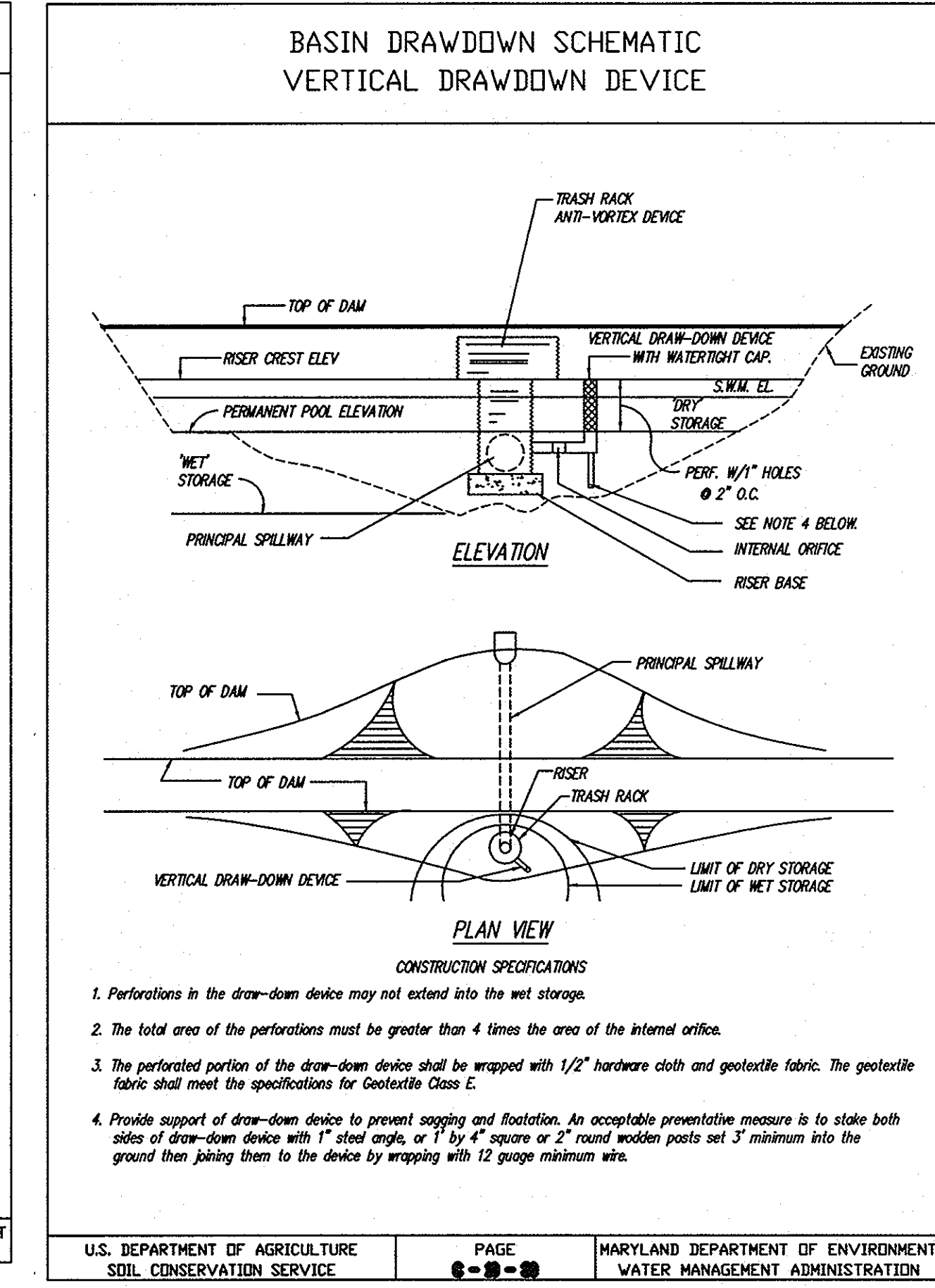
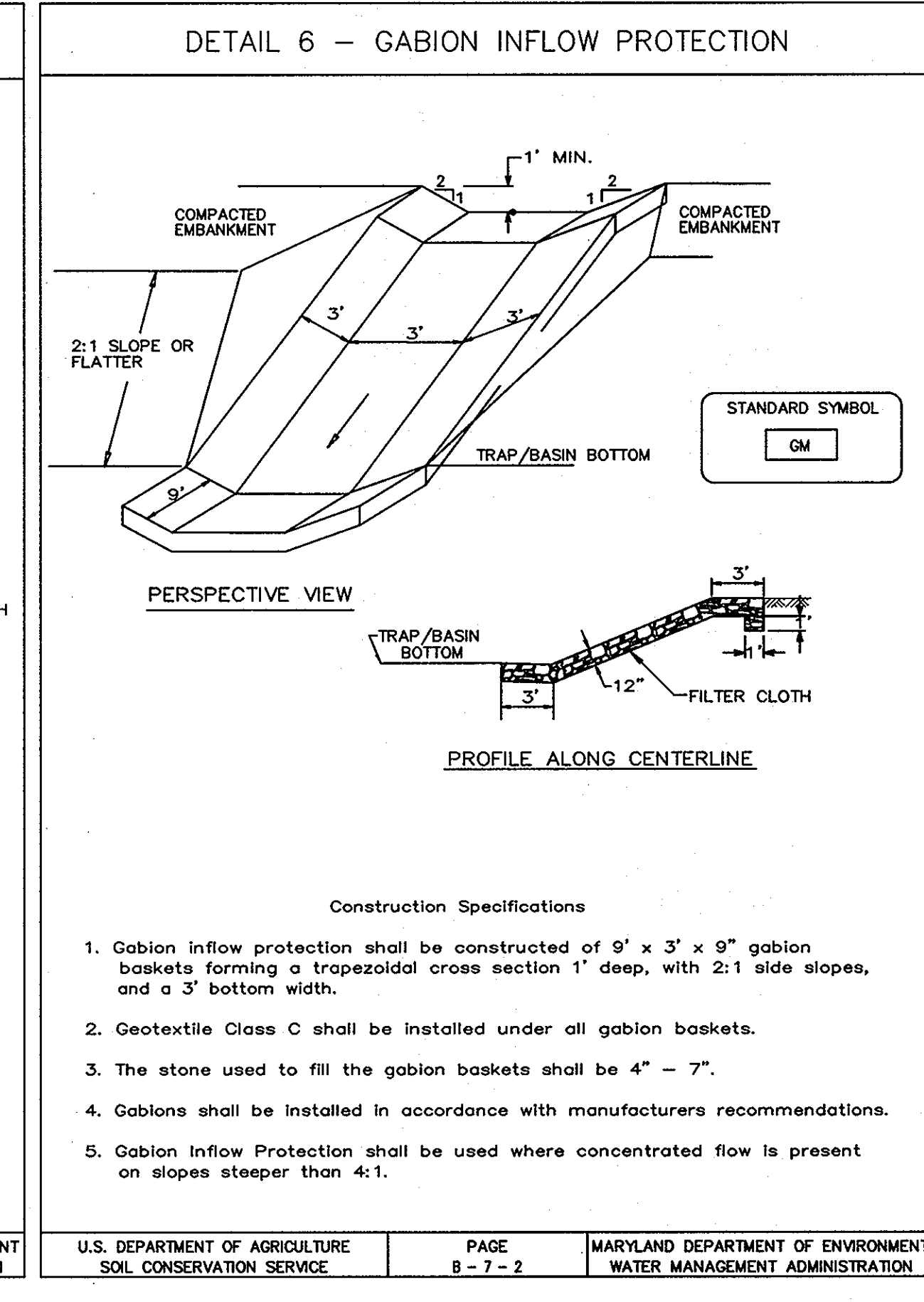
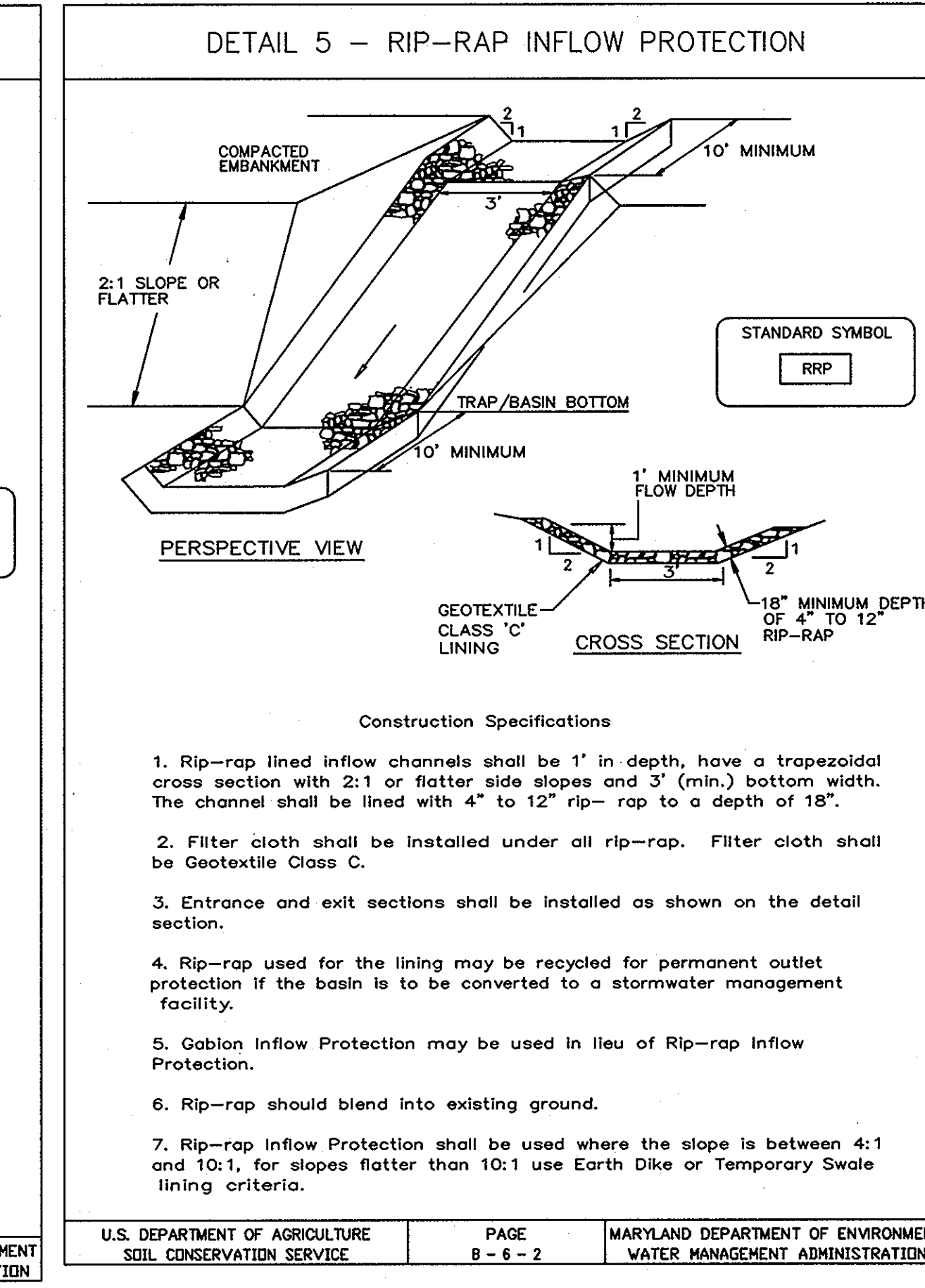
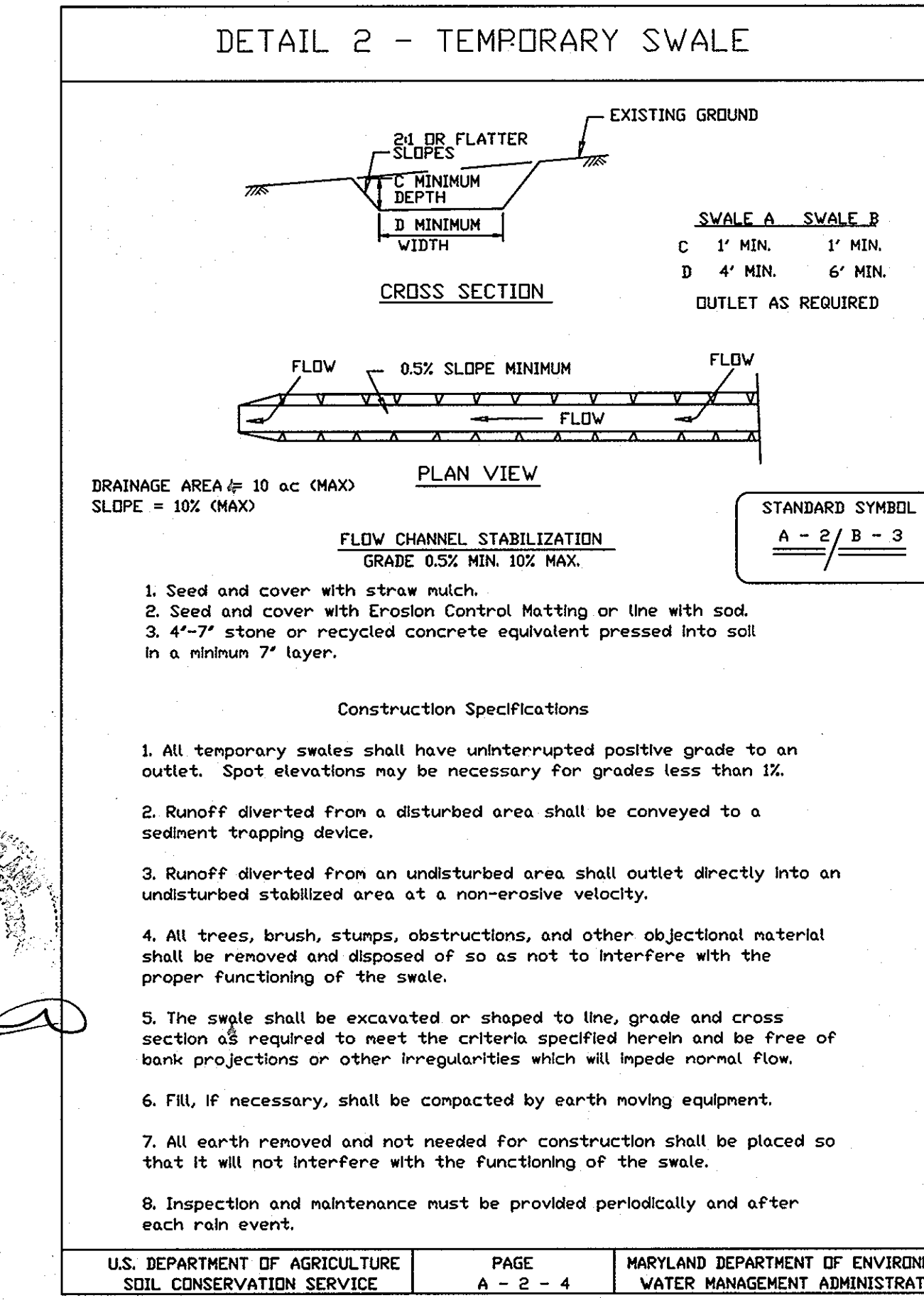
"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and 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.

William J. ...
Signature of Developer/Builder
4-22-03
Date

ENGINEER'S CERTIFICATE

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

William J. ...
Engineer's Signature
4-23-03
Date



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Dawick
Chief, Bureau of Highways
5-8-03
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Hamstra
Chief, Division of Planning and Development
5/2/03
Date

William J. ...
Chief, Development Engineering Division
5/13/03
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: 301-989-2524 FAX: 301-421-4186

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PREPARED FOR:	SEDIMENT CONTROL DETAILS	SCALE	ZONING	G. L. W. FILE NO.
G & R Maple Lawn, Inc., et. al. Suite 410, Woodholme Center 1829 Reisterstown Road Baltimore, MD, 21208 Attn: Charlie O'Donovan 410-484-8400	MAPLE LAWN FARMS Midtown District - Area 1 Lots 1 thru 120, Open Space Lots 121 thru 127, Common Open Areas 128 thru 132 and Parcels A, B & C P. 121 (L. 423 P. 59), P. 452 (L. 1508 P. 623), P. 205 (L. 604 P. 590)	NO SCALE	MXD-3	02001
ELECTION DISTRICT No. 5	HOWARD COUNTY, MARYLAND	DATE	TAX MAP - GRID	SHEET
		APR., 2003	41: 21 & 22 46: 3 & 4	8 OF 10

COUNTY FILE # 03-090

SEDIMENT CONTROL NOTES

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

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

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

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 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 2) : 37.43 Acres
Area Disturbed : 75.20 Acres
Area to be roofed or paved : 5.0 Acres
Area to be vegetatively stabilized : 70.20 Acres
Total Cut : 571,000 Cu. Yds.
Total Fill : 487,000 Cu. Yds.
Off-site waste/borrow area location: 84,000 Cu. Yds. going to on-site area on east side of stream (see SDP 03-140)

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

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

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

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

PERMANENT SEEDING NOTES

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

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

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

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

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

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 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.

TEMPORARY SEEDING NOTES

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

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

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

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of 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 containing supplied of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

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

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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

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

IV. For sites having disturbed areas under 5 acres:
I. Place topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

II. For sites having disturbed areas over 5 acres:
I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
d. No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.

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

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

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

II. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
III. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water.

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

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

- I. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be 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.
d. 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.

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

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. 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 retreatment.

Permanent Methods

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

Construction Specifications

1. Site Preparation: Perimeter sediment control devices must be installed prior to clearing and grubbing. Areas where the embankment is to be placed shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots or other objectionable material. The pool area shall not be cleared until completion of the dam embankment unless the pool area is to be used for borrow. In order to facilitate clean-out and restoration, the pool area (measured at the top of the pipe spillway) shall be cleared of all brush, trees, and other objectionable materials.

2. Cut-off Trench: A cut-off trench shall be excavated along the exterior of earth fill embankments. The minimum depth shall be four feet. The cut-off trench shall extend up both abutments to the river crest elevation. The minimum bottom width shall be two feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for the embankment. The trench shall be dewatered during the backfilling-compaction operation. For dewatering see Section D.

3. Embankment: The fill material shall be taken from approved areas shown on the plans. It shall be clean mineral soil free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively previous materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) or organic materials (Unified Soil Classes OL and OH) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed in six-inch to eight-inch thick consecutive lifts over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.

4. Principal Spillway: Steel risers shall be securely attached to the barrel or barrel stub by welding the full circumference making a watertight structural connection. Concrete risers shall be poured with the principal spillway in place or prevent with voids around the principal spillway filled with concrete or shrink proof grout for watertight connection. The barrel stub must be attached to the riser at the same percent (angle) of grade as the outlet conduit. The connection between the riser and the riser base shall be watertight. All connections between barrel sections must be achieved by approved watertight band assemblies. The barrel and riser shall be placed on a firm, smooth foundation of impervious soil as the embankment is constructed. Breaching the embankment to install the barrel is unacceptable. Previous materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-slope collars. The fill material around the pipe spillway shall be placed in four inch lifts and hand compacted under and around the pipe to at least the same density as the adjacent embankment. A depth of 1.5 times the pipe diameter (min.) shall be backfilled over the principal spillway and hand compacted before crossing it with construction equipment.

5. Emergency Spillway: The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of +/- 0.2 feet.

6. Vegetative Treatment: Stabilize the embankment in accordance with the appropriate vegetative Standard and Specifications immediately following construction. In no case shall the embankment remain unstabilized for more than seven (7) days. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon basin completion and monitored and maintained erosion free during the life of the basin.

7. Safety: Local requirements concerning fencing and signs shall be met, warning the public of hazards of soft sediment and floodwater.

8. Maintenance: Repair all damage caused by soil erosion and construction equipment at or before the end of each working day. Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser as shown on the plans. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or floodplain. Disposal areas must be stabilized.

9. Final Disposal: When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and remaining sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed and safely disposed of and the basin shall be backfilled with a structural fill. When the basin area is to remain open space, the pond may be pumped dry (using methods in Section D - Dewatering), graded, and back filled.

10. Conversion to Stormwater Management Structure: After permanent stabilization of all disturbed contributory drainage areas, temporary sediment basins, if initially built and certified to meet permanent standards, may be converted to permanent stormwater management structures. To convert the basin from temporary to permanent use, the outlet structure must be modified in accordance with approved stormwater management design plans. Additional grading may also be necessary to provide the required storage volume in the basin. Conversion can only take place after all disturbed areas have been permanently stabilized to the satisfaction of the inspection authority and storm drains have been flushed.

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: 4-22-03

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: 4-23-03

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

Signature: [Signature] Date: 4/29/03
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: 4/29/03
Natural Resources Conservation Service

COUNTY FILE # F 03-090

SEDIMENT CONTROL DETAILS

MAPLE LAWN FARMS
Midtown District - Area I
Lots 1 thru 120, Open Space Lots 121 thru 127,
Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
P. 121 (L. 4213 F. 95), P. 450 (L. 1908 F. 623), P. 205 (L. 894 F. 596)

Table with columns: SCALE, ZONING, G. L. W. FILE No., DATE, TAX MAP - GRID, SHEET. Values: NO SCALE, MXD-3, 02001, APR, 2003, 41: 21 & 22, 46: 3 & 4, D OF 1D

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways: [Signature] Date: 5-8-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Development: [Signature] Date: 5/20/03
Chief, Development Engineering Division: [Signature] Date: 5/20/03

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 FAX: 410-880-1820

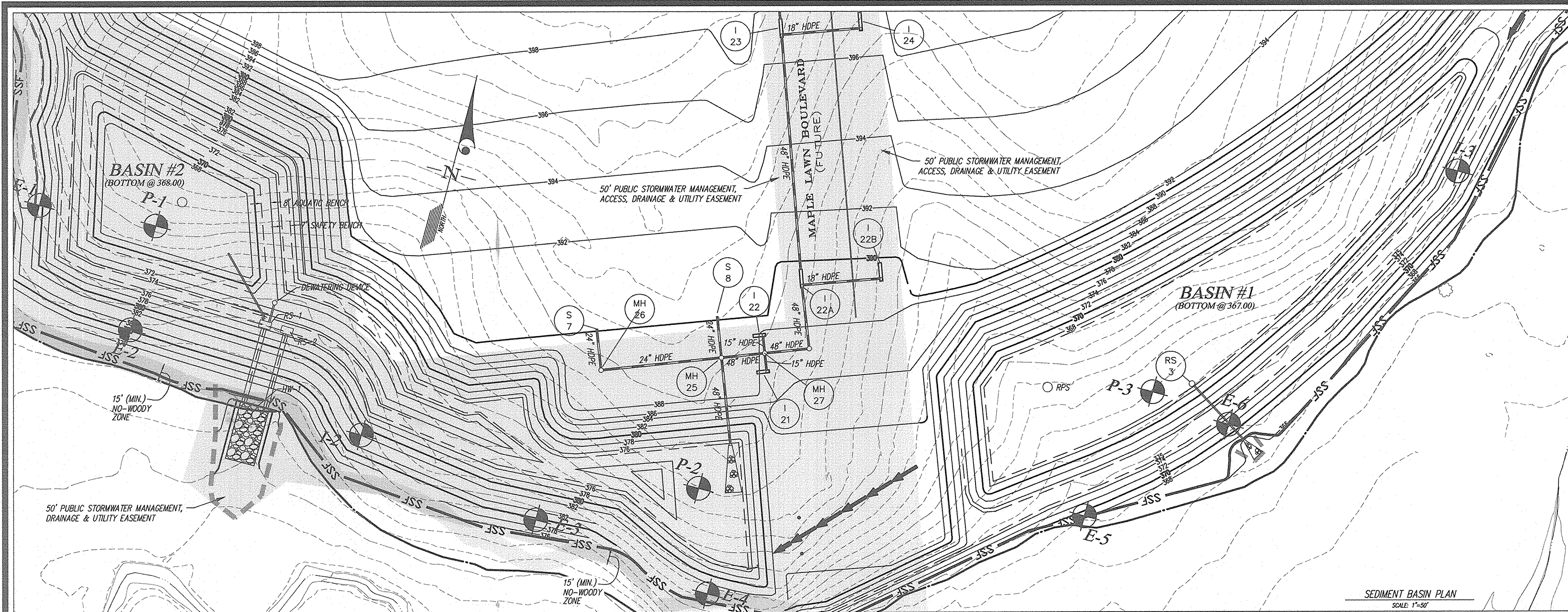
02001\ph2\FINALS\PH2SCD20.dwg DES. DEV DRN. JAU CHK. DEV

PREPARED FOR:

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

ELECTION DISTRICT No. 5

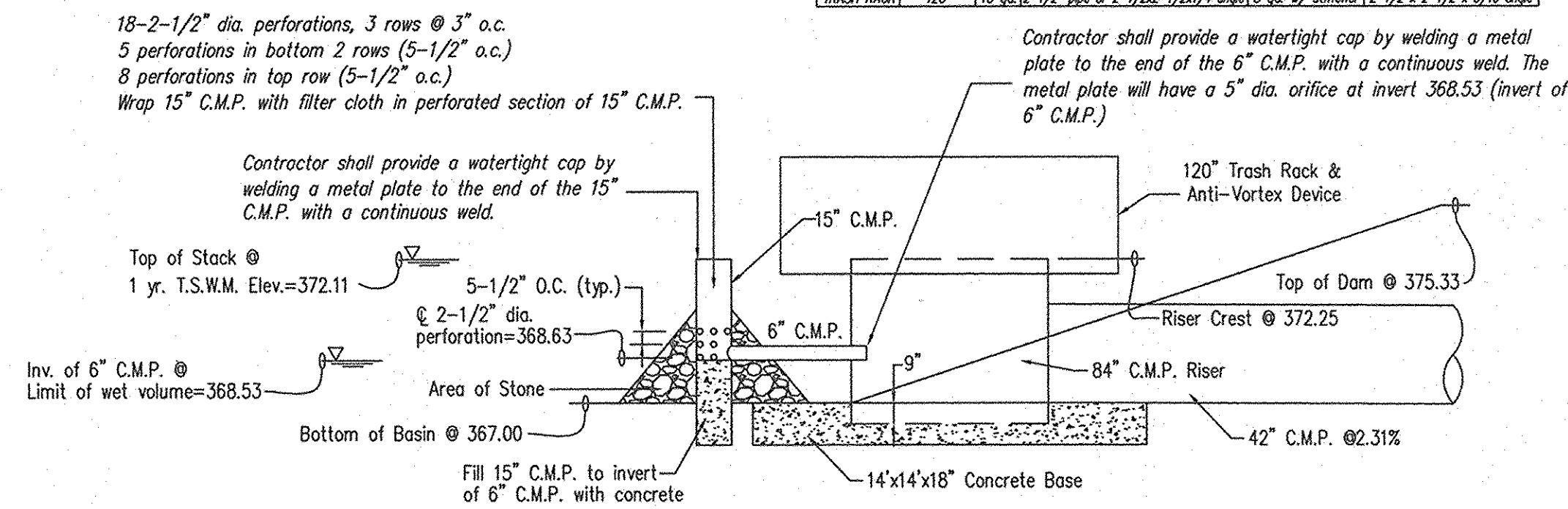
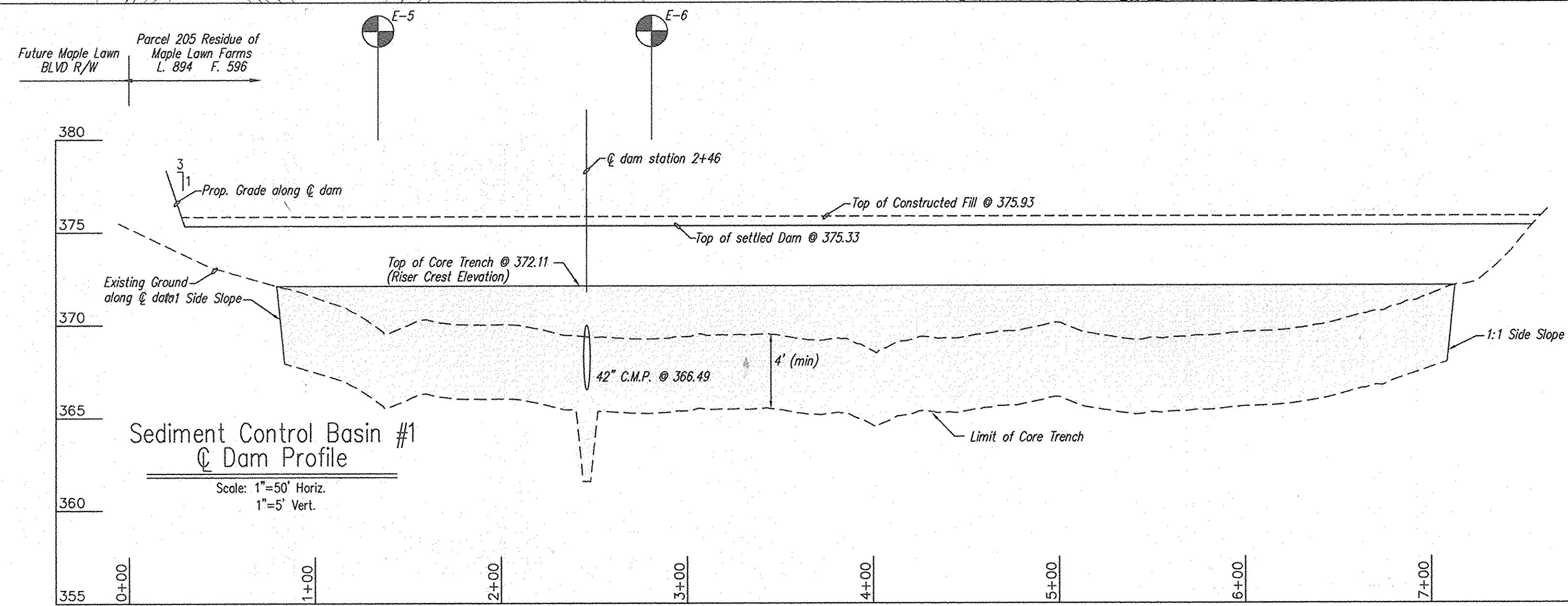
HOWARD COUNTY, MARYLAND



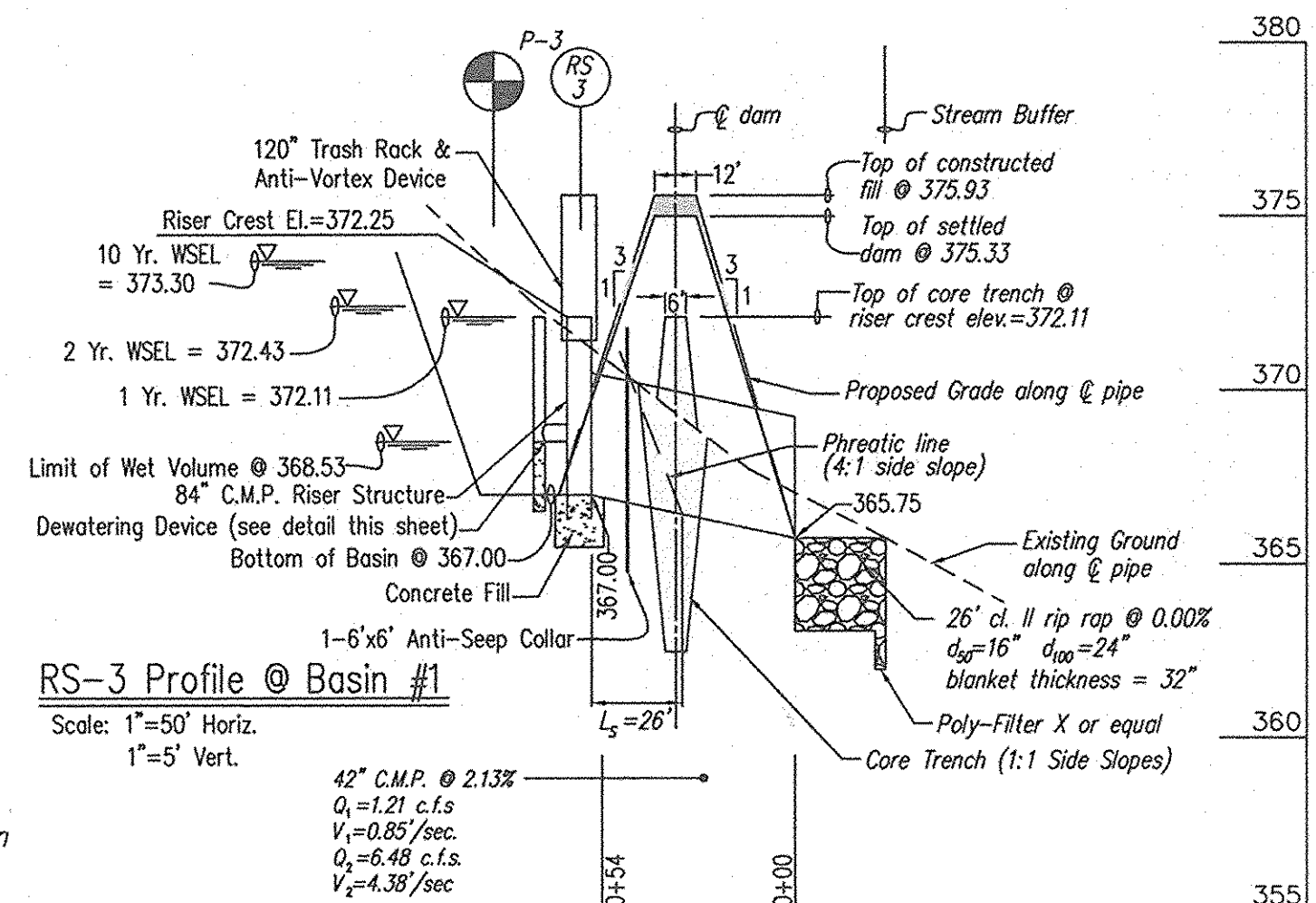
SEDIMENT BASIN INFORMATION	BASIN #1	BASIN #2
PRE-DEVELOPMENT DRAINAGE AREA	30.2 ACRES	84.2 ACRES
POST-DEVELOPMENT DRAINAGE AREA	30.2 ACRES	84.2 ACRES
TOTAL STORAGE REQUIRED (NET VOLUME & 1 YR. TSWM)	209,716 C.F.	541,487 C.F.
TOTAL STORAGE PROVIDED	209,716 C.F.	541,487 C.F.
RISER DIAMETER (CIRCUMFERENCE)	84"	2-10' x 6'
BARREL SIZE	42" CMP	2-48" RCP
RISER CREST ELEVATION	372.25	378.90
OUTLET ELEVATION (LIMIT OF WET VOLUME)	368.53	375.20
CLEANOUT ELEVATION	367.77	371.60
BOTTOM ELEVATION	367.00	368.00
BOTTOM DIMENSIONS	VARIES	VARIES
PRE-DEVELOPMENT 1 YEAR DISCHARGE	1.31 CFS	5.46 CFS
POST-DEVELOPMENT 1 YEAR DISCHARGE (UNMANAGED)	62.91 CFS	119.32 CFS
POST-DEVELOPMENT 1 YEAR DISCHARGE (MANAGED)	1.21 CFS @ 372.11	5.33 CFS @ 379.03
WET VOLUME REQUIRED	54,360 CF	151,560 CF
WET VOLUME PROVIDED	54,360 CF @ 368.53	151,560 CF @ 375.20
DRY VOLUME REQUIRED	155,356 CF	389,927 CF
DRY VOLUME PROVIDED	155,356 CF @ 372.11	389,927 CF @ 379.03

SEDIMENT BASIN INFORMATION	STONE OUTLET SEDIMENT TRAP
PRE-DEVELOPMENT DRAINAGE AREA	0.7 ACRES
POST-DEVELOPMENT DRAINAGE AREA	0.7 ACRES
TOTAL STORAGE REQUIRED (NET VOLUME & 1 YR. TSWM)	2,520 C.F.
TOTAL STORAGE PROVIDED	4,864 C.F.
WEIR CREST ELEVATION (LIMIT OF DRY VOLUME)	407.00
WEIR LENGTH	5'
BOTTOM OF STONE @	405.00
OUTLET ELEVATION (LIMIT OF WET VOLUME)	402.50
CLEANOUT ELEVATION	400.00
BOTTOM ELEVATION	400.00
BOTTOM DIMENSIONS	6'x17'
WET VOLUME REQUIRED	1,260 C.F.
WET VOLUME PROVIDED	2,506 C.F.
DRY VOLUME REQUIRED	1,260 C.F.
DRY VOLUME PROVIDED	2,506 C.F.

SEDIMENT BASIN PLAN
SCALE 1"=50'



Dewatering Device Detail-Basin #1
Scale: 1"=5'



RS-3 Profile @ Basin #1
Scale: 1"=50' Horiz, 1"=5' Vert.

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: 5-8-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 5/20/03

Signature of Developer/Builder: [Signature] Date: 4-22-03

Engineer's Signature: [Signature] Date: 4-23-03

Howard Soil Conservation District: [Signature] Date: 4/23/03

Natural Resources Conservation Service: [Signature] Date: 4/29/03

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 FAX: 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

SEDIMENT CONTROL DETAILS
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 P. 121 (L. 4213 R. 53), P. 452 (L. 1908 R. 23), P. 215 (L. 894 R. 599)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR., 2003	41: 21 & 22 46: 3 & 4	10 OF 10

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Stormwater Management Summary for Facility Along the Hammond Branch
 Drainage Area=84.2 Acres or 0.1316 Sq. Miles
 Curve Number=80 Time of Concentration=0.45 Hours
 Water Quality Volume Required: 94,090 c.f. Provided: 99,485 c.f.
 Recharge Volume Required: 30,056 c.f. Provided: 32,644 c.f.
 Channel Protection Volume Required: 205,107 c.f. Provided: 205,107 c.f.
 1 Year Discharge = 2.89 c.f.s.
 100 Year Discharge = 332.42 c.f.s.

- The facility will be publicly owned and maintained. An open space lot is being conveyed to the County.
- The facility will be a P-2 wet pond with extended detention.
- The facility has an 'A' classification.
- A facility on Open Space Lot 125 will provide the recharge volume utilizing an infiltration trench.

POND SUMMARY

Before	Unmanaged	Managed
FINAL SWM @ POND		
1 YR 5.46 c.f.s.	68.91 c.f.s.	2.89 c.f.s. @ 378.92
2 YR 17.26 c.f.s.	102.88 c.f.s.	22.12 c.f.s. @ 379.10
10 YR 80.56 c.f.s.	221.24 c.f.s.	202.87 c.f.s. @ 379.91
100 YR 175.49 c.f.s.	359.11 c.f.s.	332.42 c.f.s. @ 380.33
TEMPORARY SWM @ POND		
1 YR 5.46 c.f.s.	119.32 c.f.s.	5.33 c.f.s. @ 379.03
2 YR 17.26 c.f.s.	158.83 c.f.s.	36.21 c.f.s. @ 379.41
10 YR 80.56 c.f.s.	295.55 c.f.s.	243.51 c.f.s. @ 380.28
TEMPORARY SWM @ BASIN		
1 YR 1.31 c.f.s.	62.91 c.f.s.	1.21 c.f.s. @ 372.11
2 YR 5.11 c.f.s.	81.18 c.f.s.	6.48 c.f.s. @ 372.43
10 YR 30.20 c.f.s.	138.47 c.f.s.	74.11 c.f.s. @ 373.30



LEGEND

HYDROLOGIC SOIL GROUP

▨ C' SOIL ▩ D' SOIL

NOTE: REMAINDER OF DRAINAGE AREA TO POND IS 'B' SOIL.

— Tc — Time of Concentration Path (Pre & Post Development)

- - - - - Time of Concentration Path (Pre-Development)

- > - > - Time of Concentration Path (Post Development)

- - - - - Limit of Drainage to SWM Pond (Pre & Post Development)

⊙ A Before & After Development Tc Segment

⊙ D Before Development Tc Segment

⊙ D After Development Tc Segment

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Dangle 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Haney 5/8/03
 Chief, Division Land Development Date

Charles M. ... 5/8/03
 Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 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.

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

DRAINAGE AREA MAP - STORMWATER MANAGEMENT

MAPLE LAWN FARMS
 Midtown District
 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'

ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND

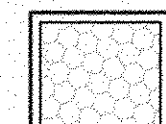

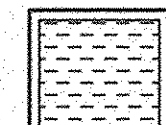


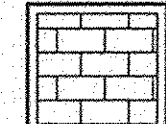

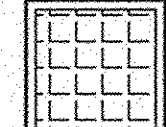
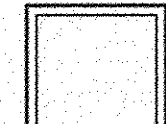
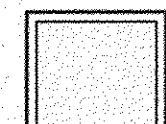
SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	41: 15,16,21 & 22	11 OF 19

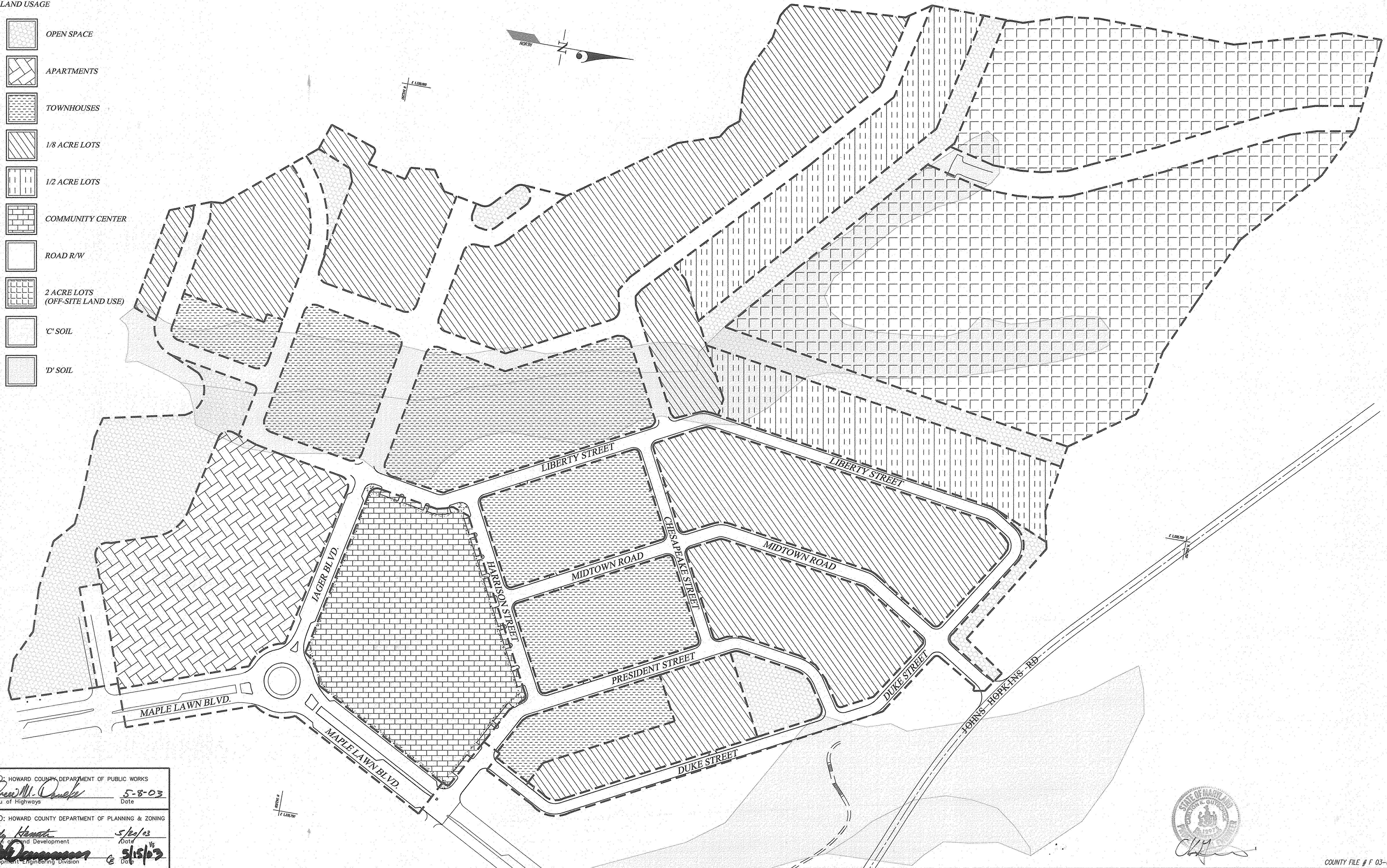
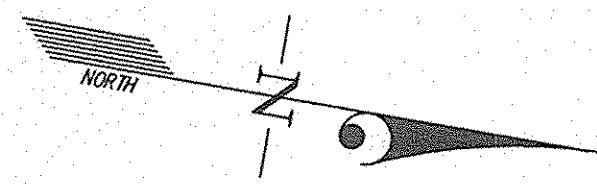
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COUNTY FILE # F 03-090

LEGEND

LAND USAGE

-  OPEN SPACE
-  APARTMENTS
-  TOWNHOUSES
-  1/8 ACRE LOTS
-  1/2 ACRE LOTS
-  COMMUNITY CENTER
-  ROAD R/W
-  2 ACRE LOTS
(OFF-SITE LAND USE)
-  'C' SOIL
-  'D' SOIL



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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. O'Neil 5-8-03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamach 5/20/03
 Chief, Division of Land Development Date

Chris Damann 5/15/03
 Chief, Development Engineering Division Date



GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWNE OFFICE PARK
 BURTONTOWNE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-589-2524 FAX: 301-421-4188

DATE	REVISION	BY	APPR.

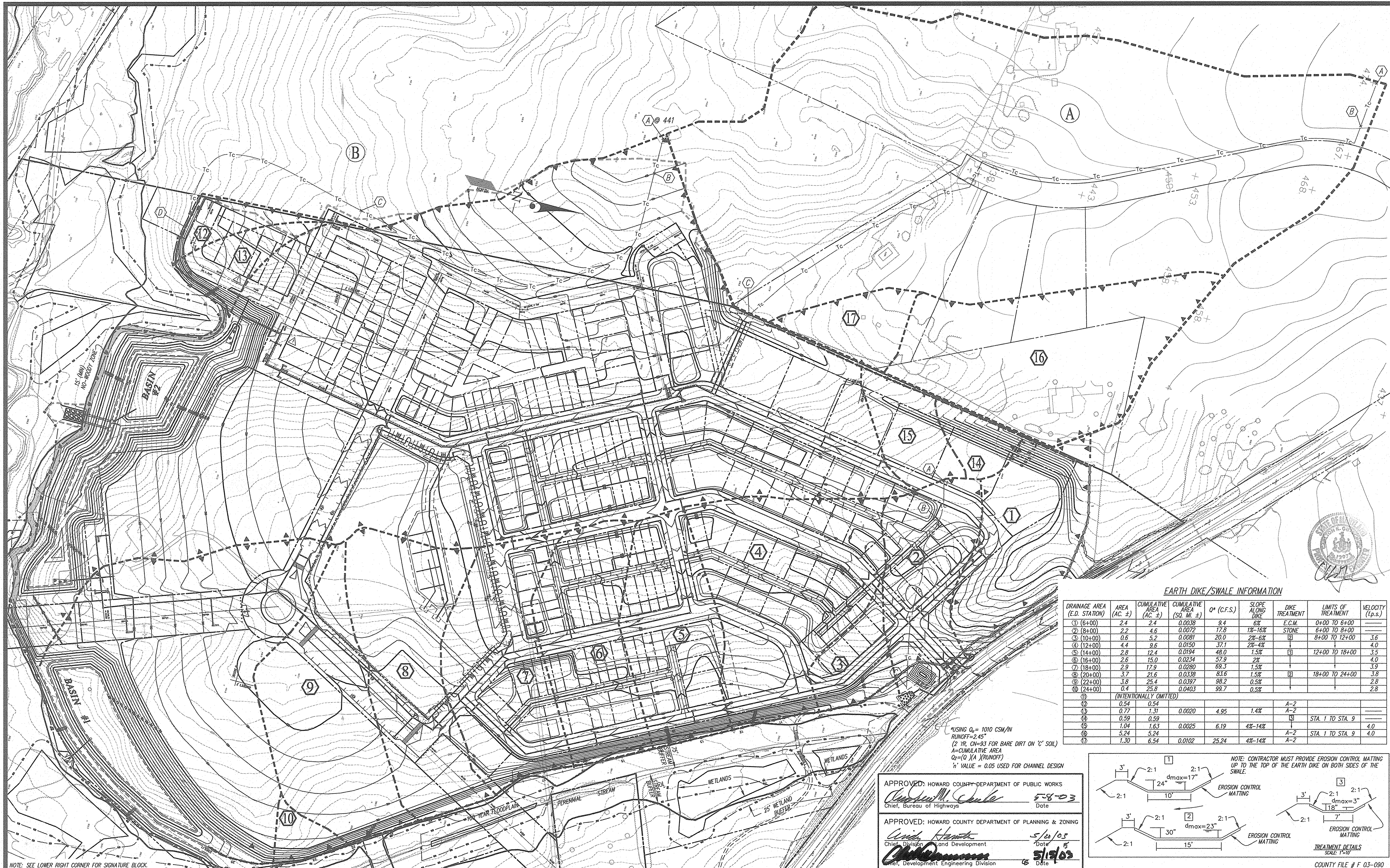
PREPARED FOR:
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 Suite 410, Woodholme Center
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 Attn: Charlie O'Donovan
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LAND USE PLAN FOR SWM DESIGN
MAPLE LAWN FARMS
 Midtown District
 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	41: 15,16,21 & 22	12 OF 12

COUNTY FILE # F 03-090

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EARTH DIKE/SWALE INFORMATION

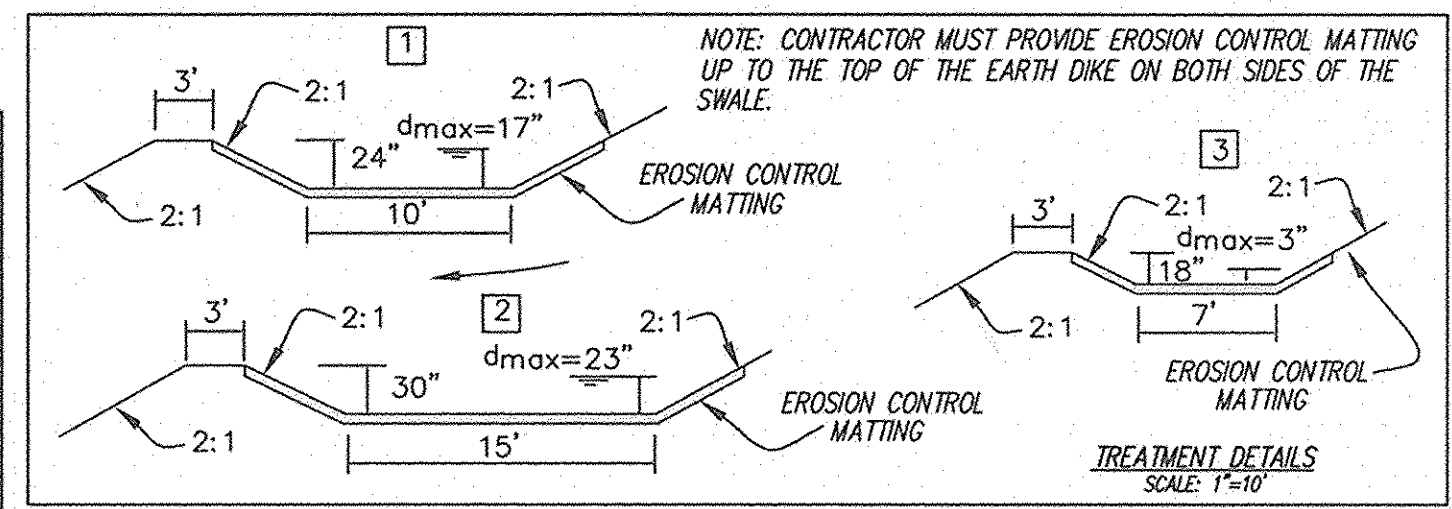
DRAINAGE AREA (E.D. STATION)	AREA (AC. ±)	CUMULATIVE AREA (AC. ±)	CUMULATIVE AREA (SQ. MI. ±)	Q* (C.F.S.)	SLOPE ALONG DIKE	DIKE TREATMENT	LIMITS OF TREATMENT	VELOCITY (f.p.s.)
① (6+00)	2.4	2.4	0.0038	9.4	6%	E.C.M.	0+00 TO 6+00	—
② (8+00)	2.2	4.6	0.0072	17.8	12%-16%	STONE	6+00 TO 8+00	—
③ (10+00)	0.6	5.2	0.0081	20.0	2%-6%	②	8+00 TO 12+00	3.6
④ (12+00)	4.4	9.6	0.0150	37.1	2%-4%	①	—	4.0
⑤ (14+00)	2.8	12.4	0.0194	48.0	1.5%	①	12+00 TO 18+00	3.5
⑥ (16+00)	2.6	15.0	0.0234	57.9	2%	—	—	4.0
⑦ (18+00)	2.9	17.9	0.0280	69.3	1.5%	—	—	3.9
⑧ (20+00)	3.7	21.6	0.0338	83.6	1.5%	②	18+00 TO 24+00	3.8
⑨ (22+00)	3.8	25.4	0.0397	98.2	0.5%	—	—	2.8
⑩ (24+00)	0.4	25.8	0.0403	99.7	0.5%	—	—	2.8
⑪ (INTENTIONALLY OMITTED)								
⑫	0.54	0.54	—	—	—	A-2	—	—
⑬	0.77	1.31	0.0020	4.95	1.4%	A-2	—	—
⑭	0.59	0.59	—	—	—	③	STA. 1 TO STA. 9	—
⑮	1.04	1.63	0.0025	6.19	4%-14%	—	—	4.0
⑯	5.24	5.24	—	—	—	A-2	STA. 1 TO STA. 9	4.0
⑰	1.30	6.54	0.0102	25.24	4%-14%	A-2	—	—

*USING $Q_p = 1010 \text{ CSM/IN}$
 RUNOFF=2.45"
 (2 YR. CN=93 FOR BARE DIRT ON 'C' SOIL)
 A=CUMULATIVE AREA
 $Q_c = (Q) \times (\text{RUNOFF})$
 'n' VALUE = 0.05 USED FOR CHANNEL DESIGN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Charles M. Sule 5/8/03
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Hanley 5/28/03
 Chief, Division of Land Development Date

Charles M. Sule 5/19/03
 Chief, Development Engineering Division Date



NOTE: SEE LOWER RIGHT CORNER FOR SIGNATURE BLOCK.

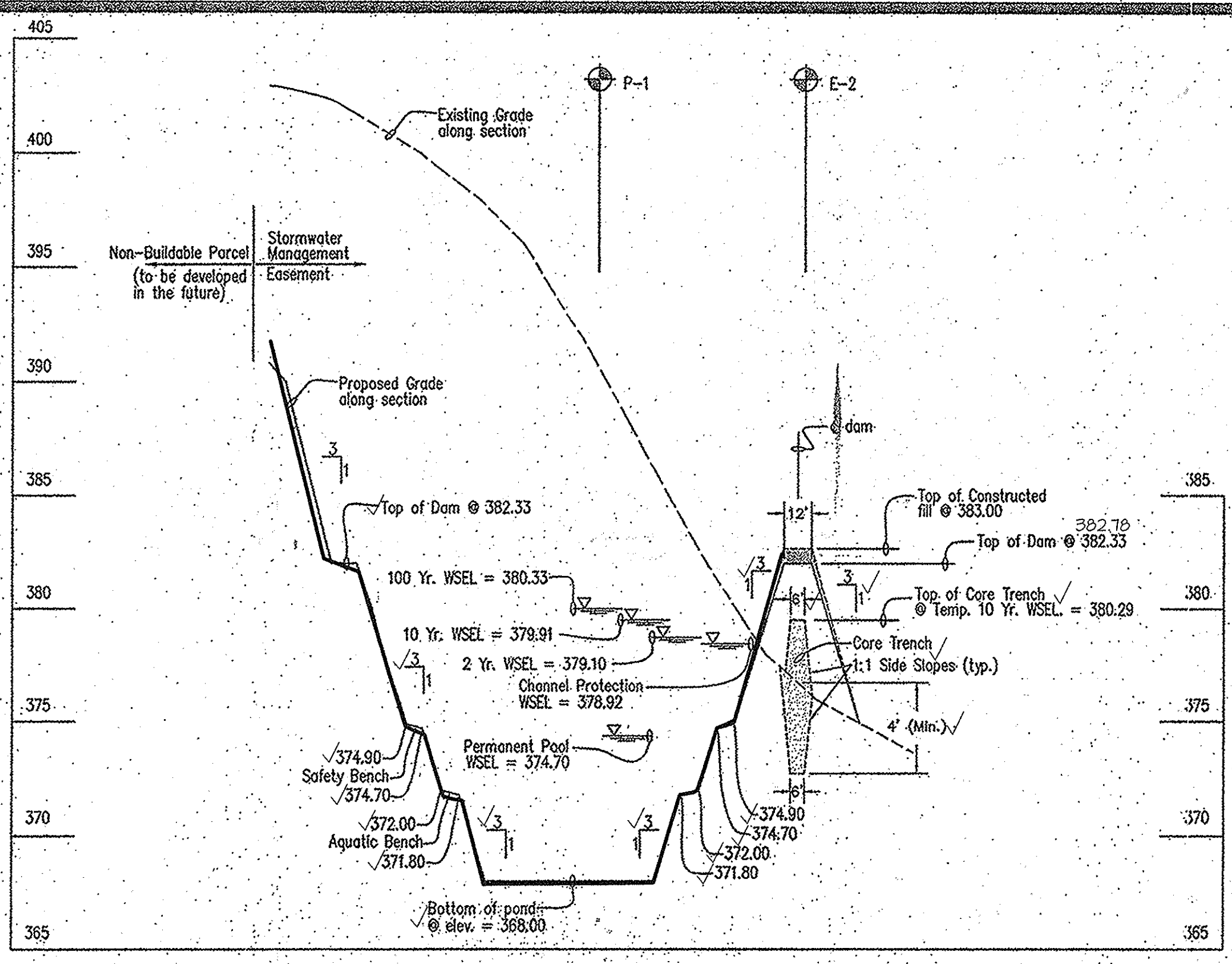
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 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
12/1/03	Added storm drain runs near outfall into SWM facility.	D.E.V.	

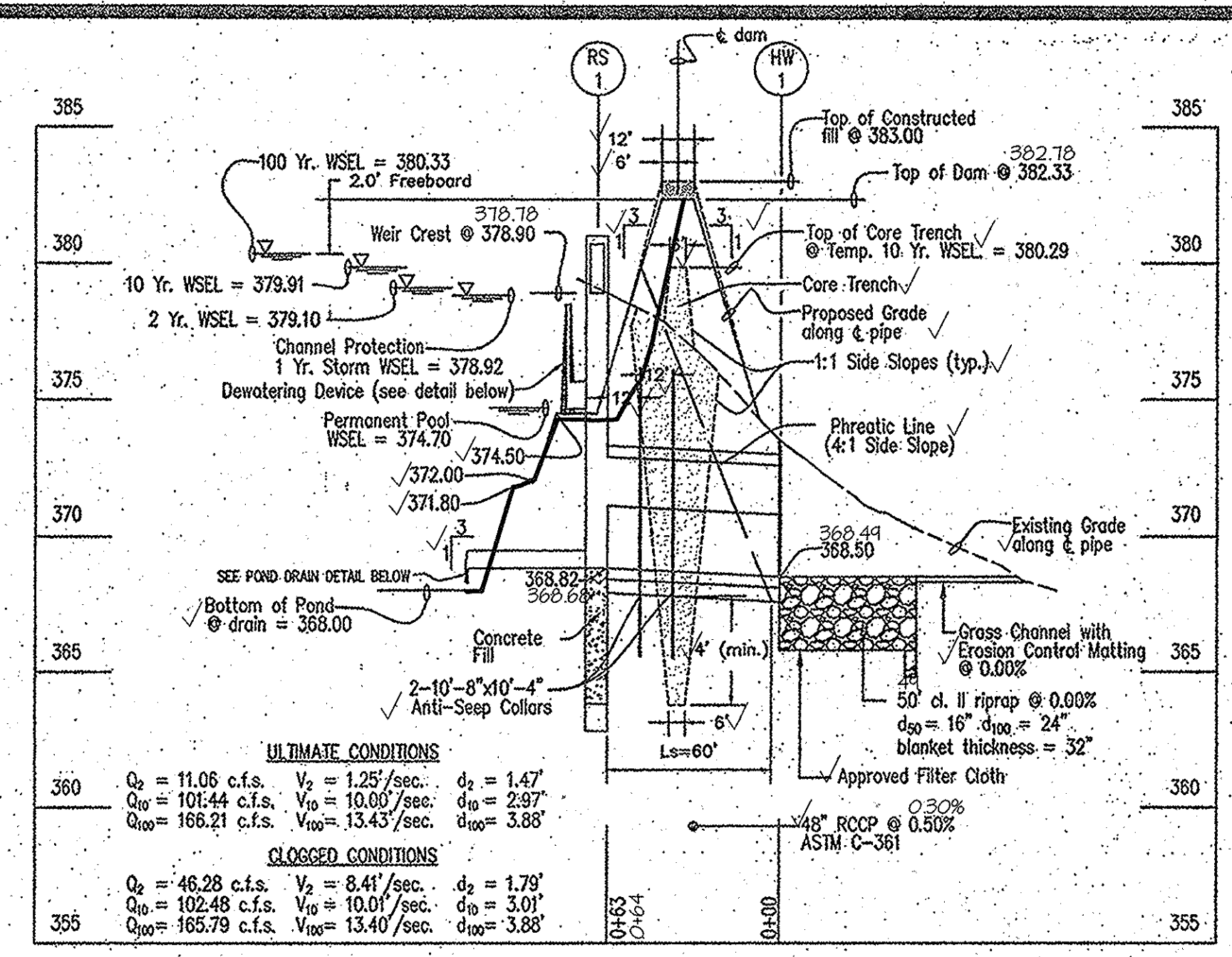
PREPARED FOR:
 G & R Maple Lawn, Inc., et. al.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD. 21208
 Attn: Charlie O'Donovan
 410-484-8400

DRAINAGE AREA MAP FOR TEMPORARY S.W.M. AND EARTH DIKES
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127,
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 HOWARD COUNTY, MARYLAND

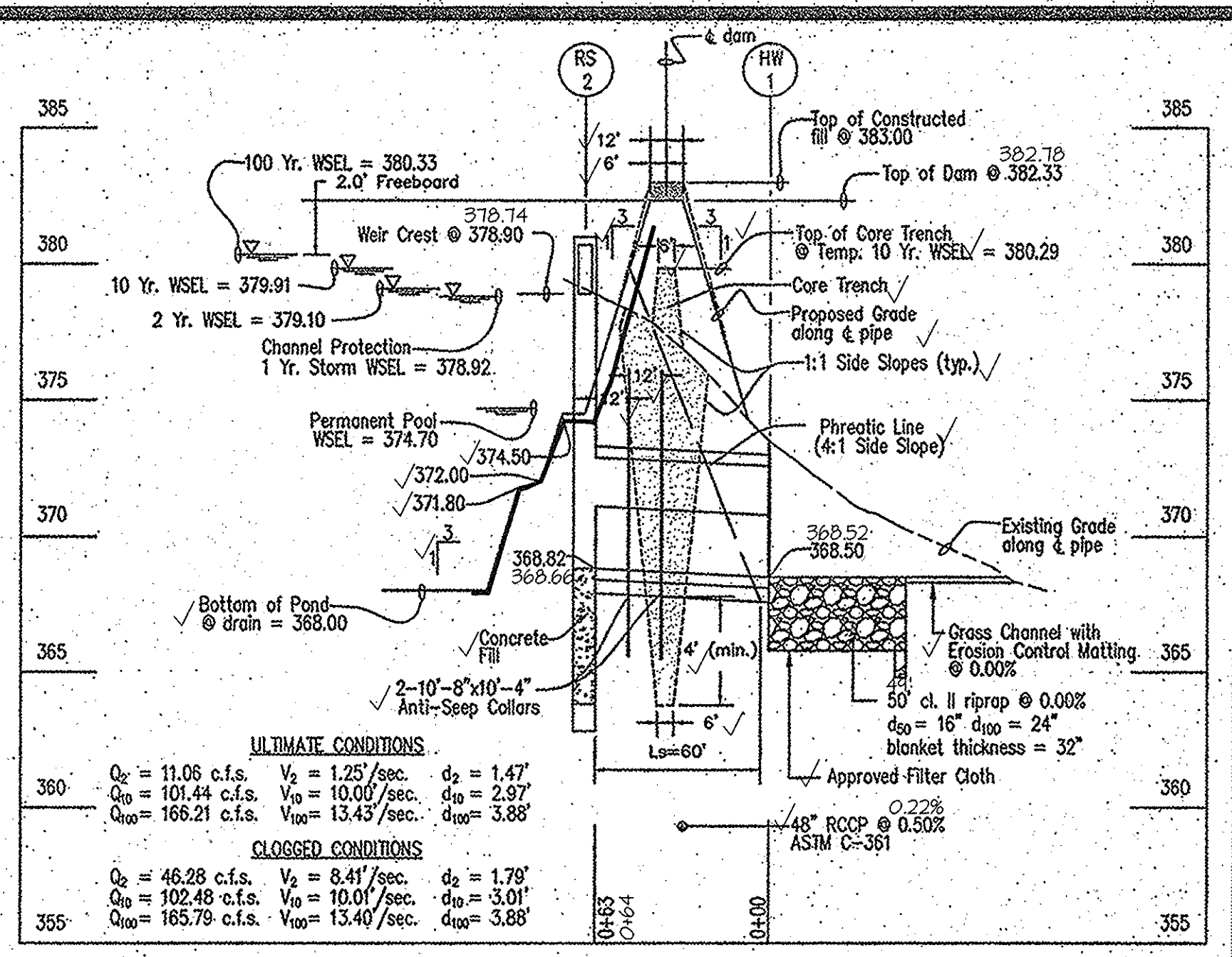
SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	02001
DATE	TAX MAP - GRID	SHEET
APR, 2003	41: 15,16,21 & 22	13 OF 19



Profile Main Pond
Scale: 1"=50' Horiz.
1"=5' Vert.

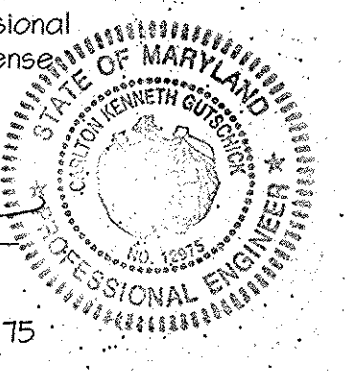


Profile along Principal Spillway out of RS-1
Scale: 1"=50' Horiz.
1"=5' Vert.

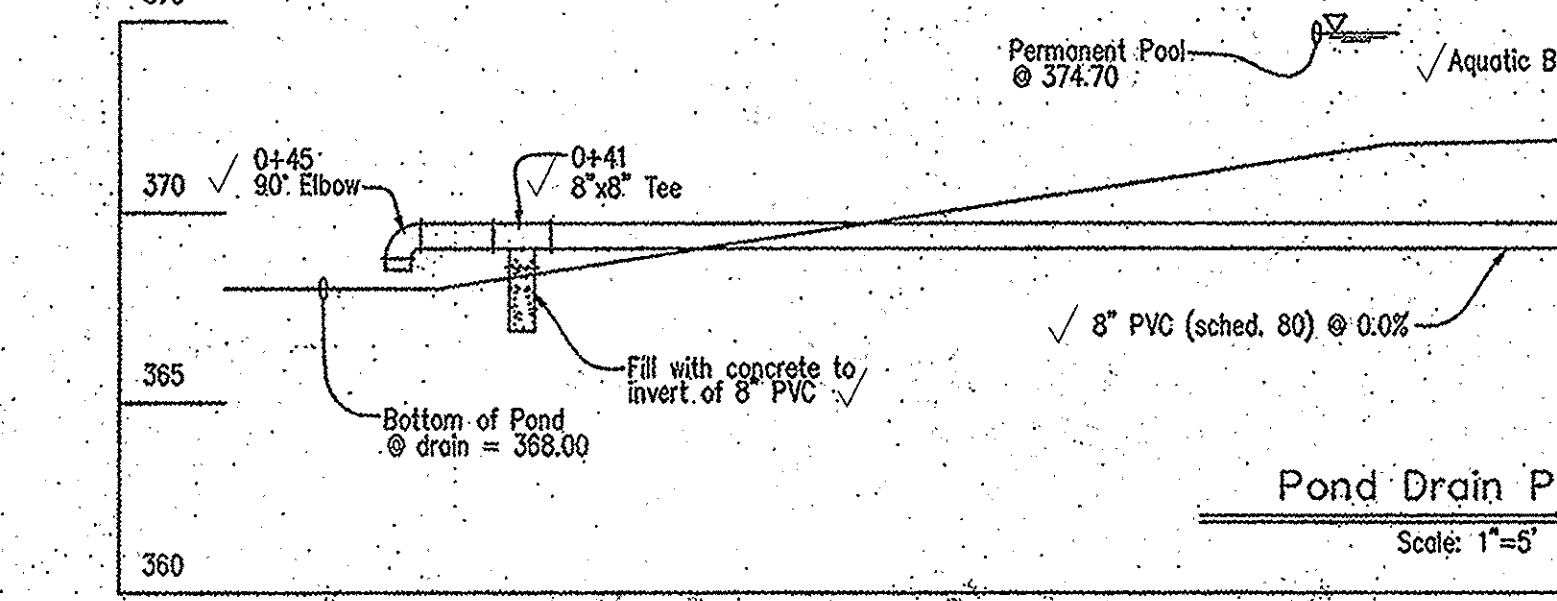


Profile along Principal Spillway out of RS-2
Scale: 1"=50' Horiz.
1"=5' Vert.

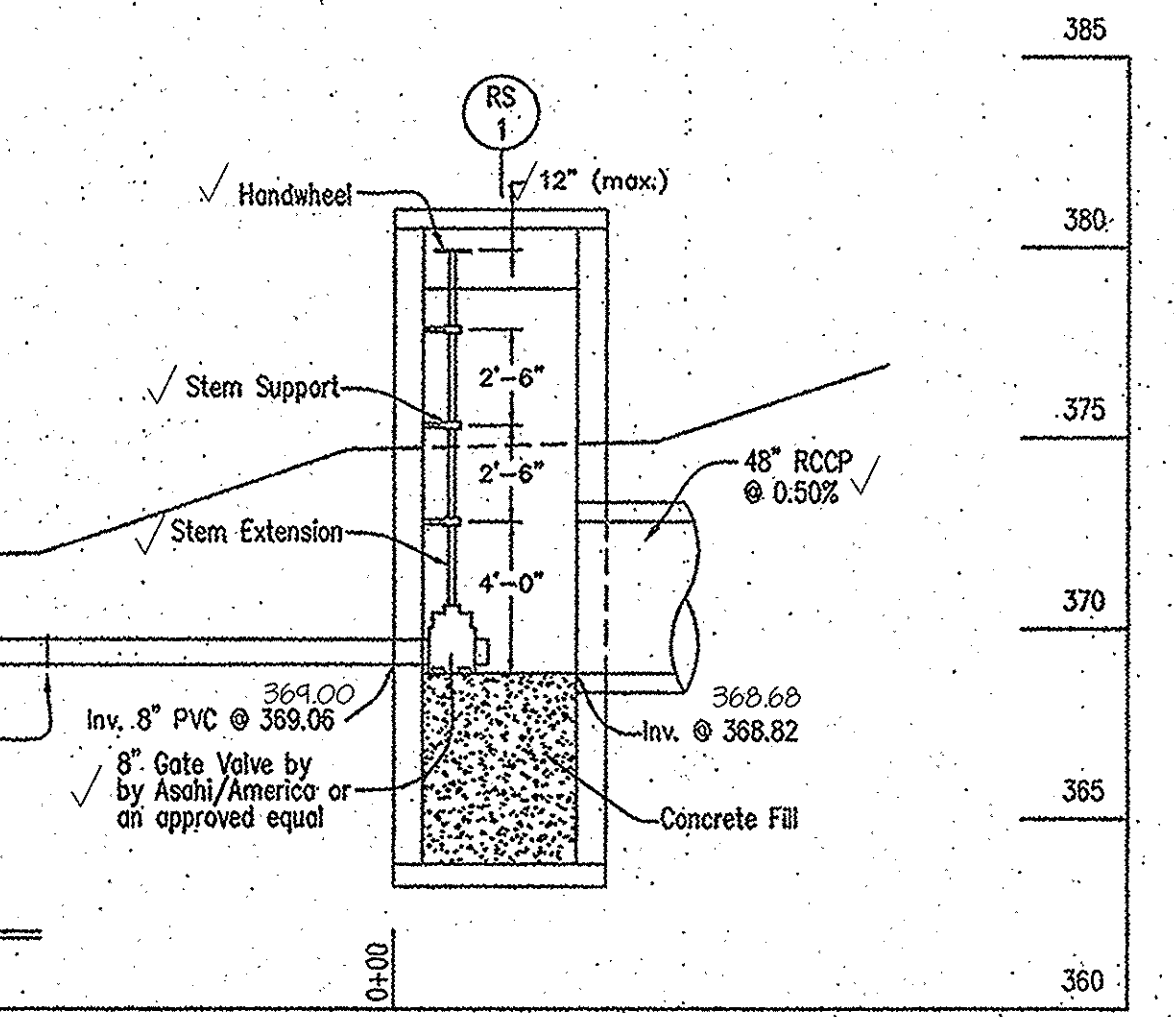
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 12475, Expiration Date: May 26 2016.



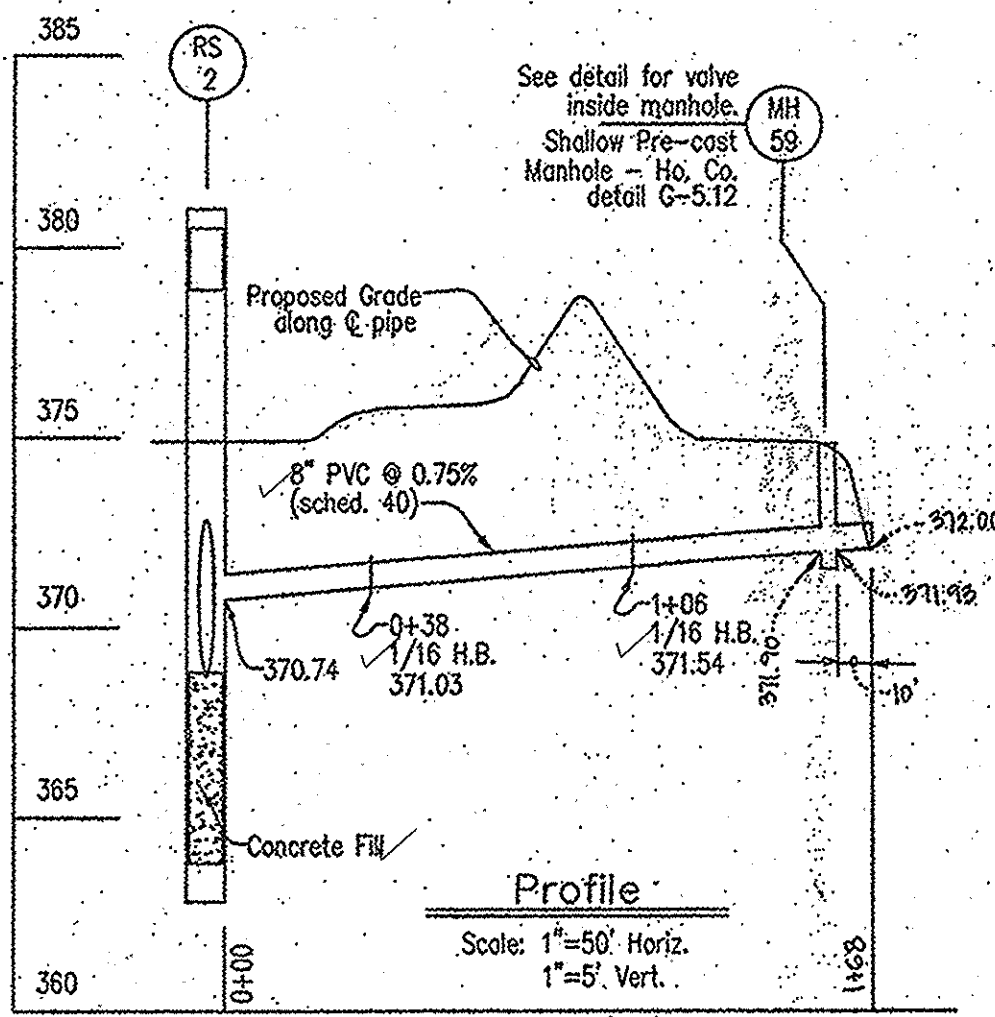
Date: 3/27/15
Carl K. Gutschick
Professional Engineer
Maryland Reg. No. 12475



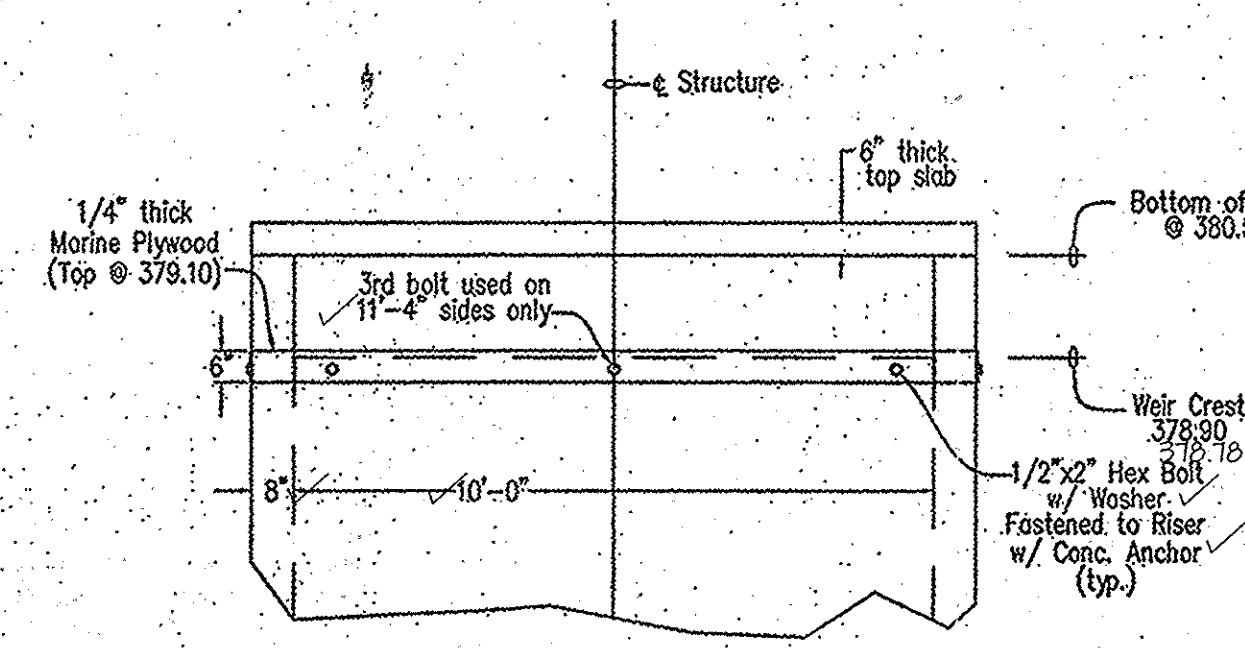
Pond Drain Profile
Scale: 1"=5'



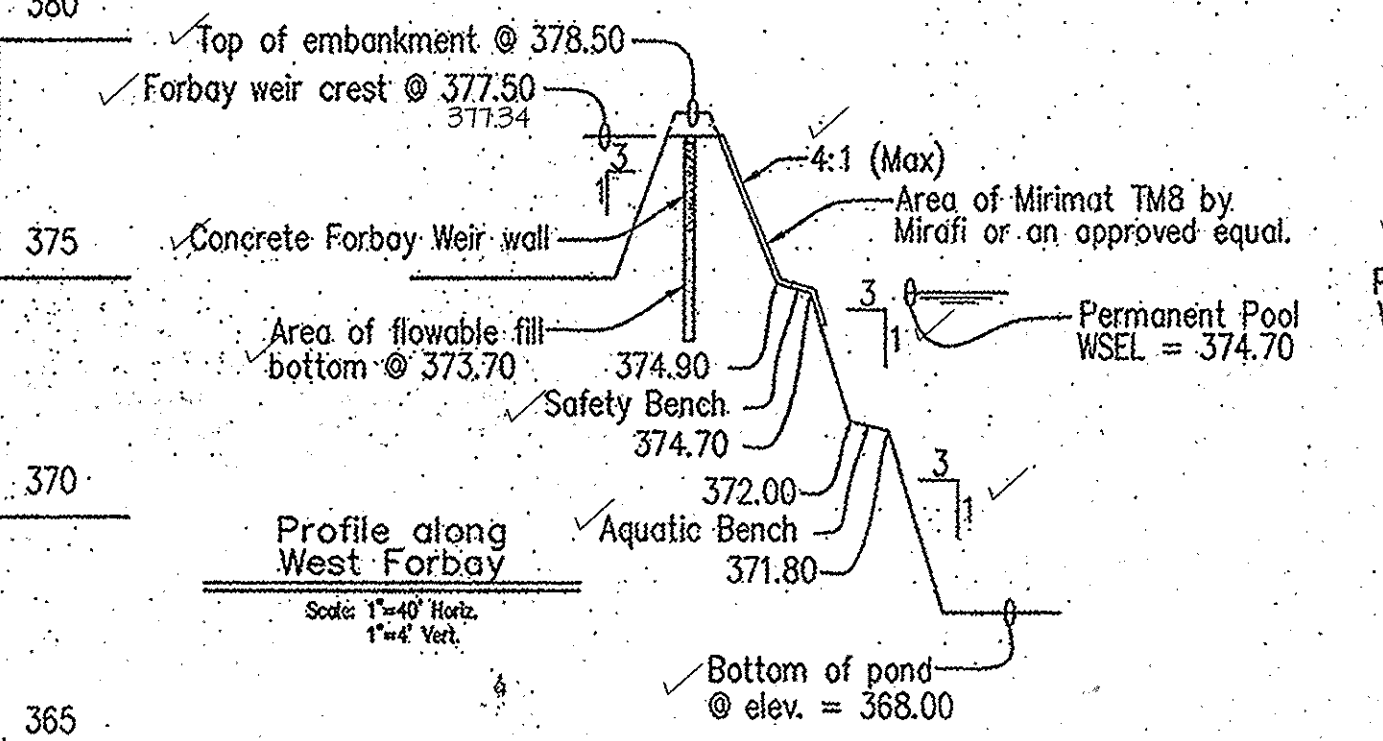
Dewatering Device Detail
Scale: 1"=8'



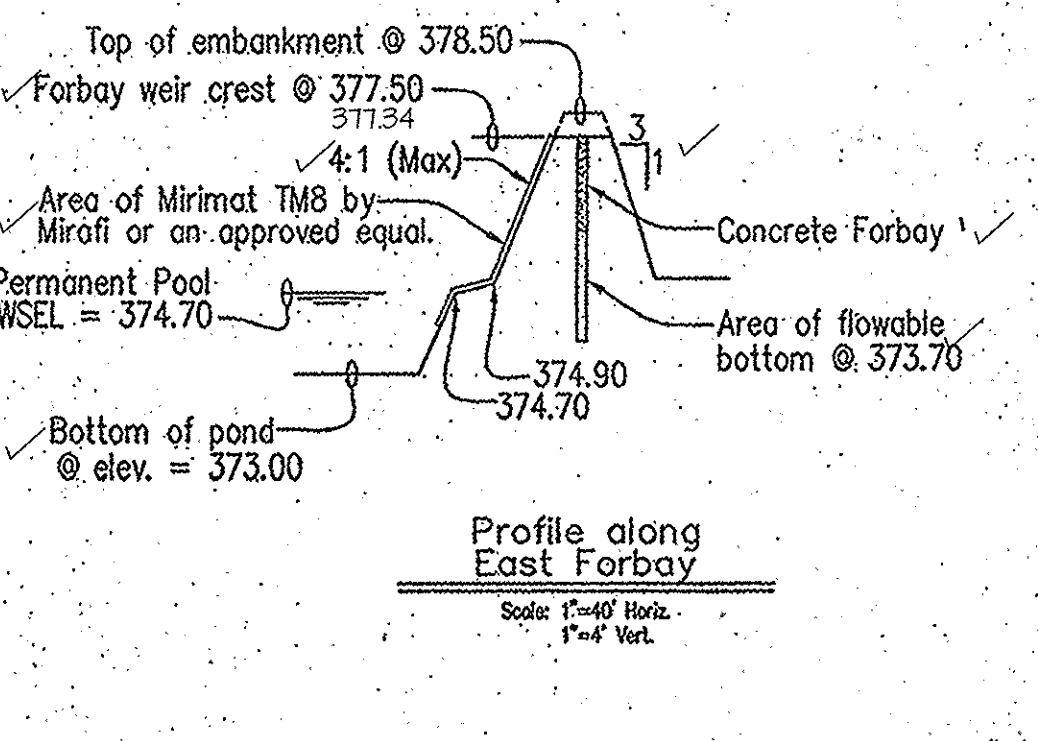
Profile
Scale: 1"=50' Horiz.
1"=5' Vert.



Modification to Riser for Sediment Control
Scale: 1"=3' Horiz.



Profile along West Forbay
Scale: 1"=40' Horiz.
1"=4' Vert.



Profile along East Forbay
Scale: 1"=40' Horiz.
1"=4' Vert.

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: 4-22-03

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.

Signature of Natural Resources Conservation Service: [Signature]
Date: 4/29/03

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 stored prior to the placement of fill. These stripping operations should be performed in a manner consistent with good erosion and sediment control practices and in accordance with Soil Conservation Guidelines.
After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by profiling 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 65 ft below existing surface grades. It is possible that groundwater may have an effect on the proposed construction, particularly during the excavation for and construction of a core trench.
Any water infiltration resulting from a shallow interception of the groundwater table, surface run-off, or perched water, if not too extensive, should be able to be controlled by means of sump pit and pump, or by gravity-draining procedures provided that the groundwater level must only be lowered by a depth of 1/2 ft to 2 ft. If the groundwater cannot be lowered by more than 1/2 ft to 2 ft, or if lesser amounts of water cannot be suitably lowered by pumping, then the use of a more extensive dewatering system such as deep wells or well points will be required.
Excavation for the core trench may require dewatering. It may be necessary to provide a "fluid mat" to plug the water flow into the excavation. An uncompacted bridge lift is not recommended since this will not provide sufficient foundation support for the embankment and would also provide a path of water flow.

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

Fill Placement and Compaction
All fill materials must be placed and compacted in accordance with MD SCS 378 specifications. In particular, fill materials should be placed in relatively horizontal loose lifts of 5-inch maximum thickness and should be compacted to dry densities of at least 95 percent of the Standard Proctor maximum dry density.
(ASTM D-698). Moisture contents should be maintained within ±2 percent of optimum moisture content, and preferably between optimum moisture content and +2 percent of optimum moisture content.
An experienced soils technician under the direction of a Geotechnical Engineer should perform field density tests on the embankment fill, as necessary, to verify that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer should be contacted for advice, as modifications to the compaction procedures may be appropriate.

Cut-off Trench Construction
A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankment fill, as necessary, to verify that adequate compaction is achieved. If any compaction problems are encountered during construction, the Geotechnical Engineer should be contacted for advice, as modifications to the compaction procedures may be appropriate.
It is our professional opinion that in addition to the soil materials described above a fine-grained soil, including Silt (M) with a plasticity index of 10 or more can be utilized for the center of the embankment and core trench.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
Chief, Bureau of Highways
Date: 5-8-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature]
Chief, Development Engineering Division
Date: 5/2/03

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.

Signature of Engineer: [Signature]
Date: 4-23-03

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

Signature of Howard Soil Conservation District: [Signature]
Date: 4/29/03

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 220 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
12/1/02	1. Revised profile MH 59 to 102.2		

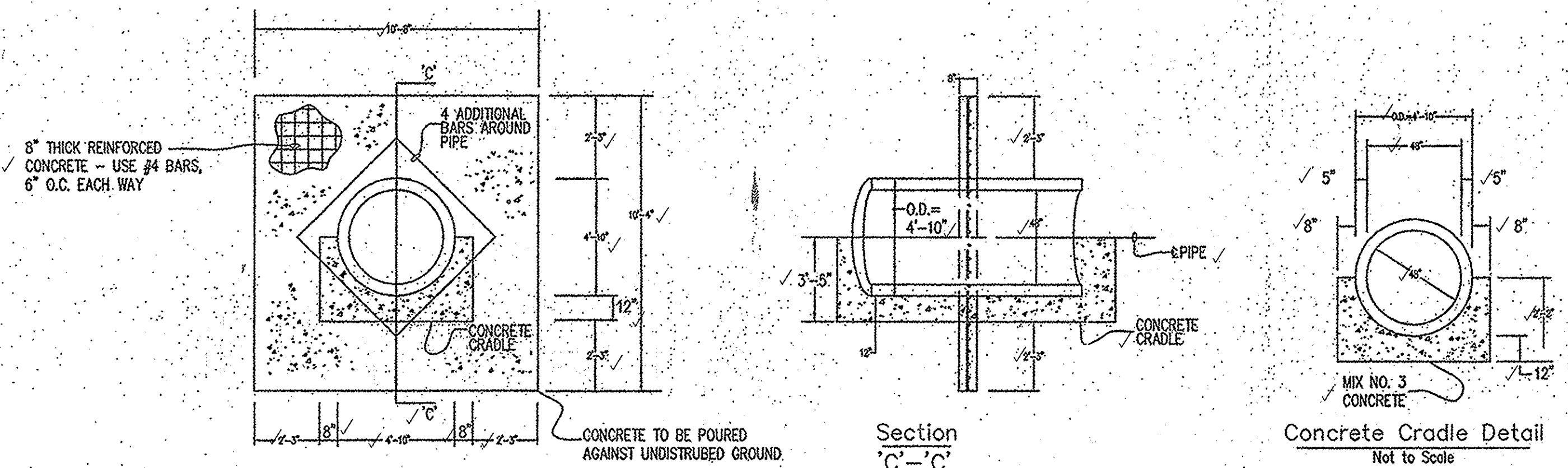
PREPARED FOR:
G & R Maple Lawn, Inc., et al.
Suite 410, Woodhome Center
1829 Rosterstown Road
Baltimore, MD, 21208
Attn: Charlie O'Donovan
410-484-8400

S.W.M. PROFILES/DETAILS
MAPLE LAWN FARMS
Midtown District - Area 1
Lots 1 thru 120, Open Space Lots 121 thru 127,
Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
P. 121 (L. 421 & 20), P. 430 (L. 1908 & 620), P. 205 (L. 894 & 590)

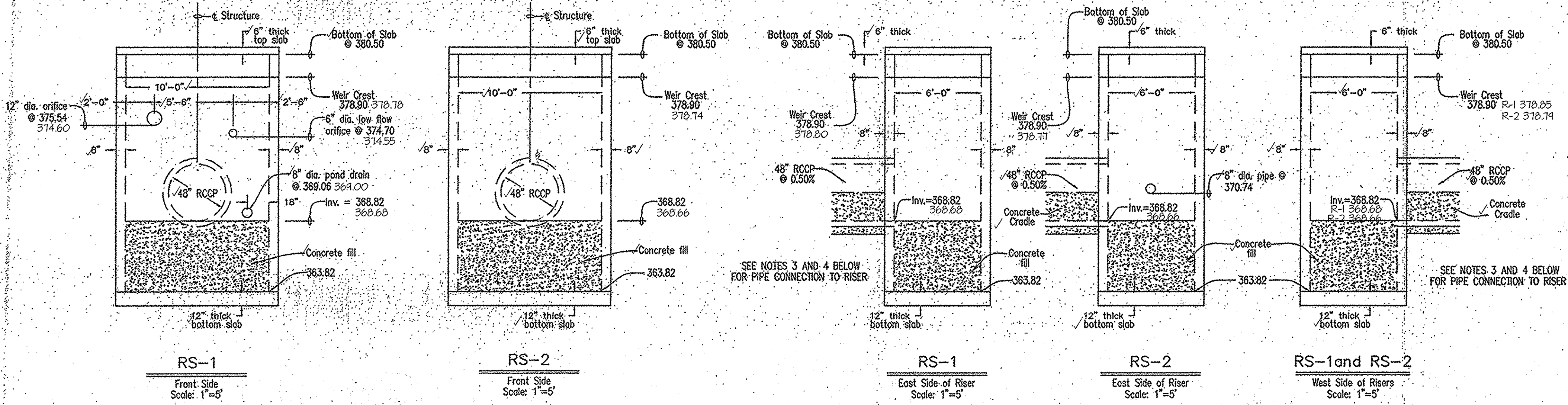
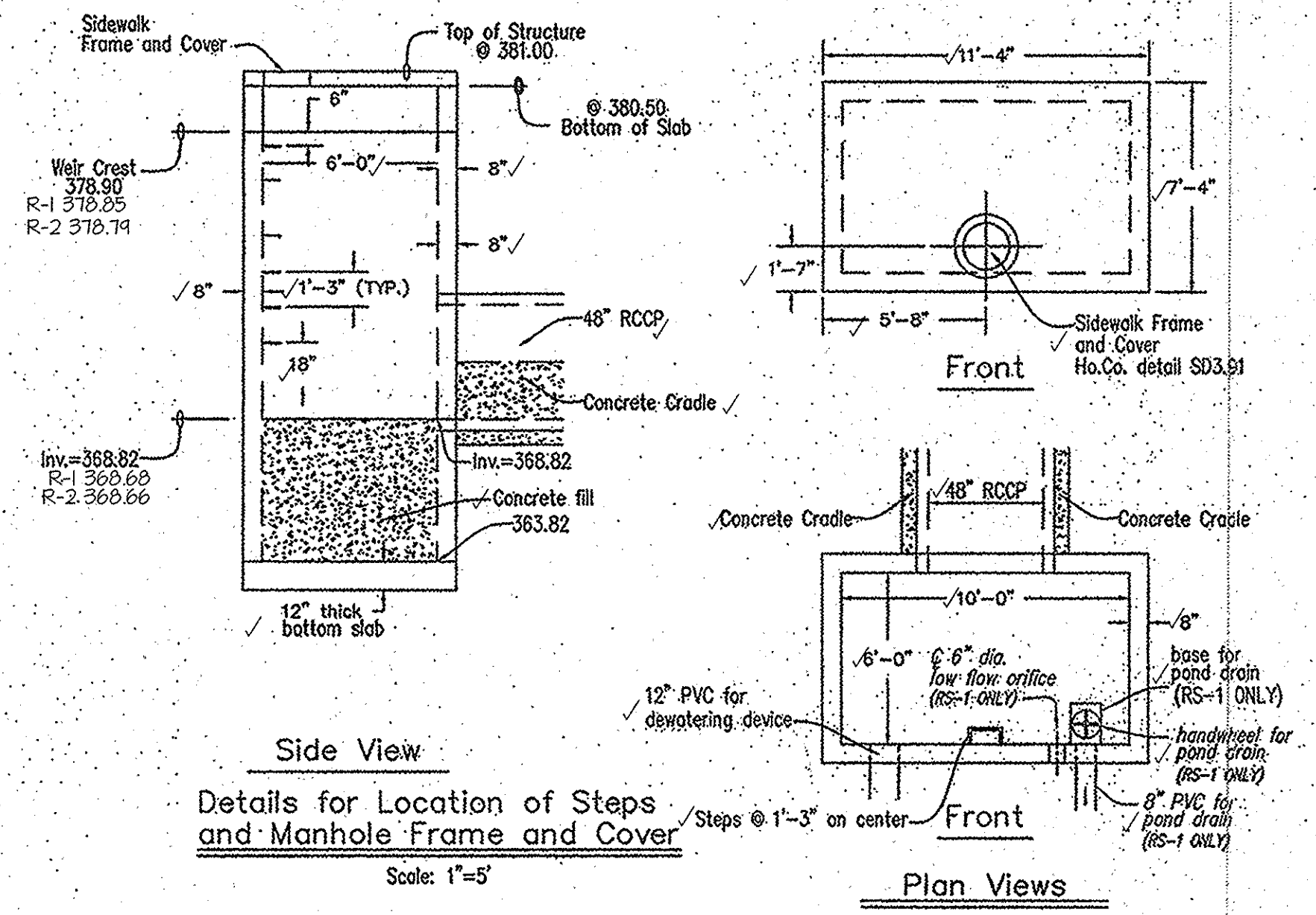
ASBUILTS SHEET 3 OF 5
COUNTY FILE # F. 03-090
SCALE: AS SHOWN
ZONING: MXD-3
FILE NO.: 02001
DATE: OCT 2014
TAX MAP - GRID: 15, 16, 21 & 22
SHEET: 18 OF 19
HOWARD COUNTY, MARYLAND
ASBUILTS F-03-90

L:\CAD\DRAWINGS\02001\PHASE 2 (02001)\FINAL\PH25W36-39.DWG 04/24/2003 08:22:21 AM EDT

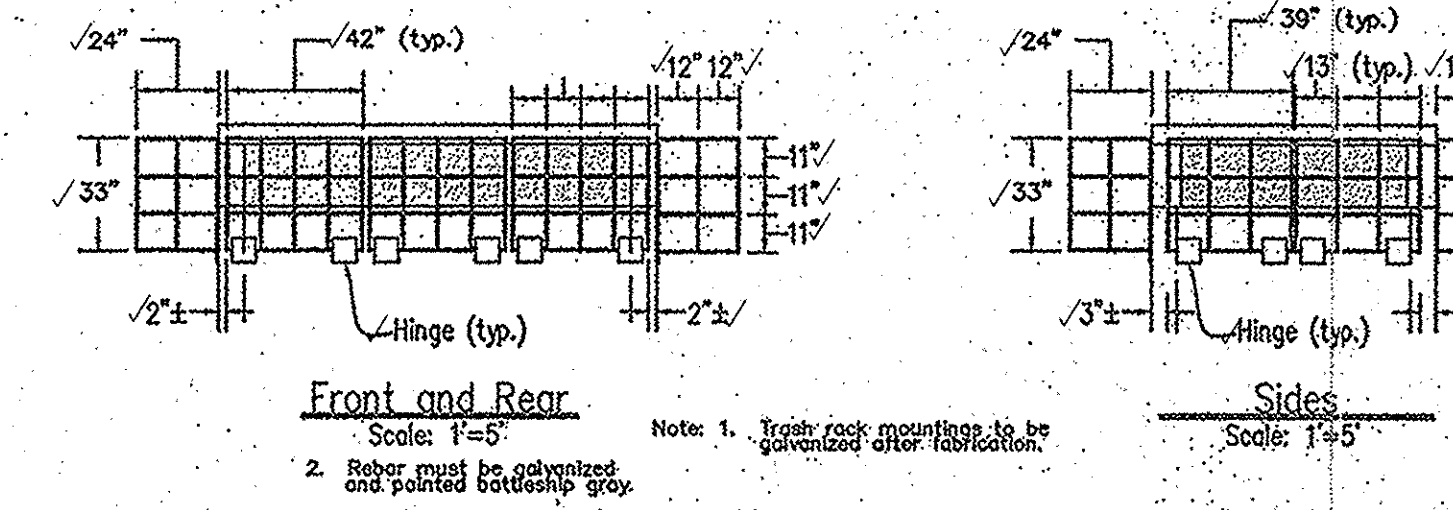
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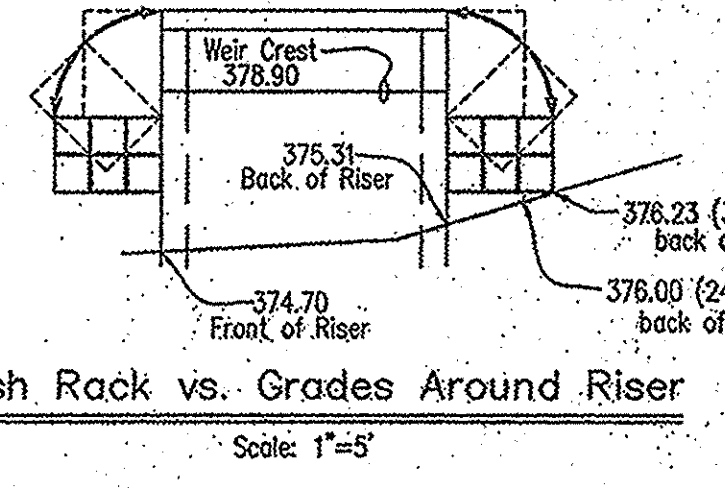
- POUR CONCRETE TO UNDISTURBED EARTH.
- REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.



SEE NOTES 3 AND 4 BELOW FOR PIPE CONNECTION TO RISER

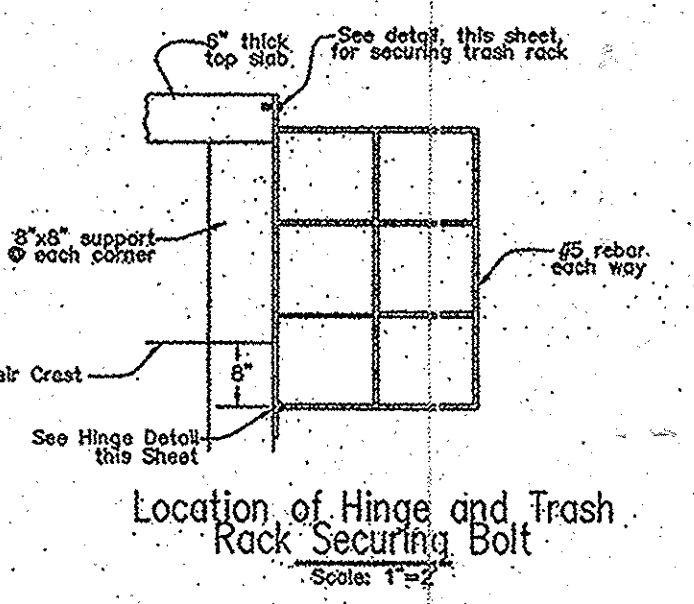
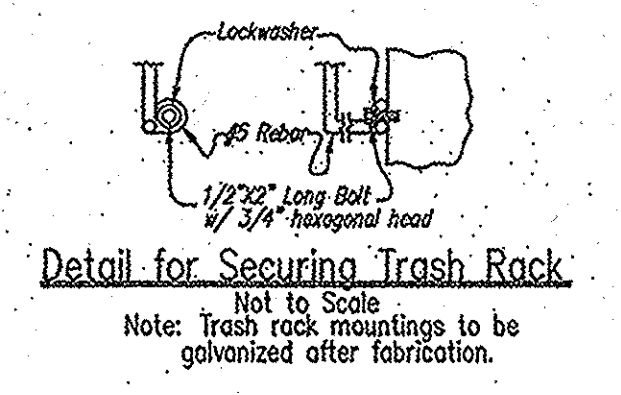
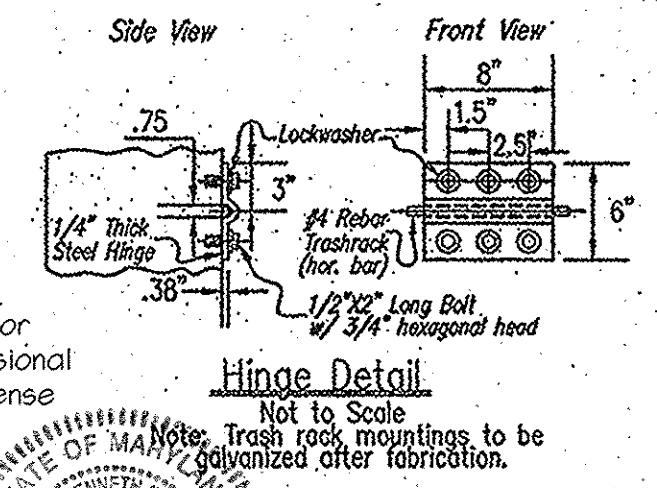
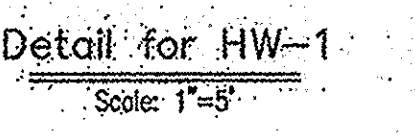
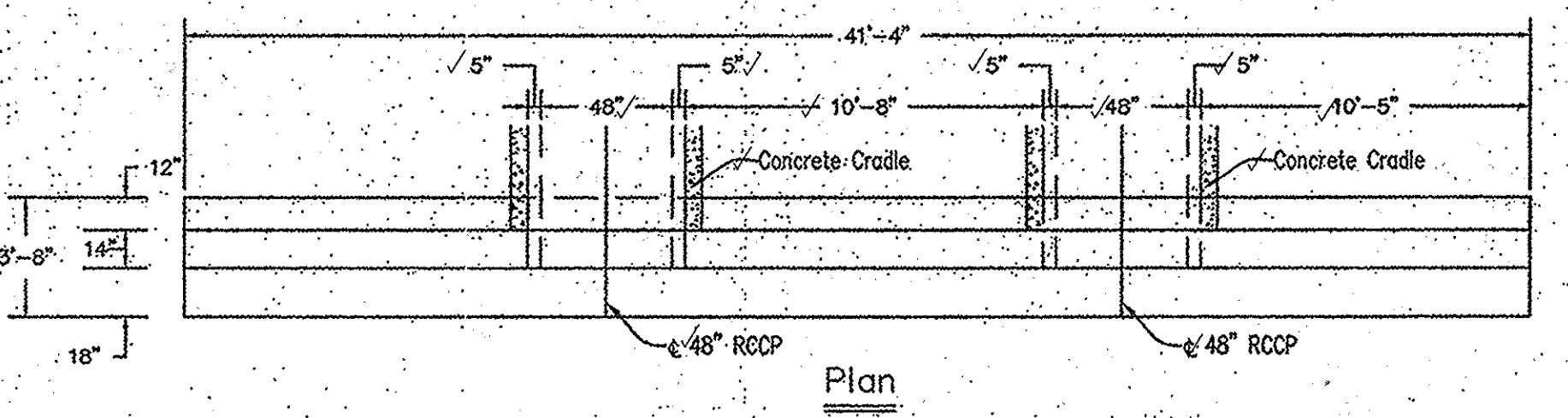
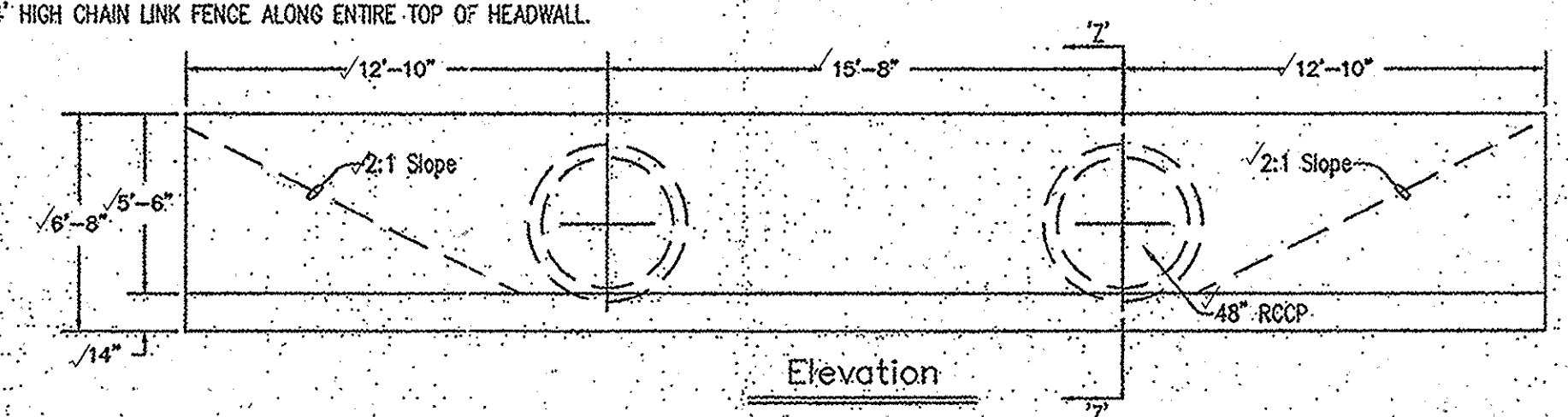
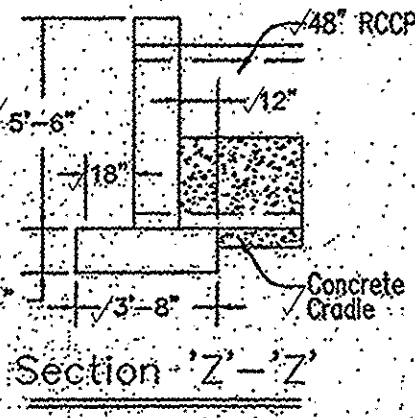
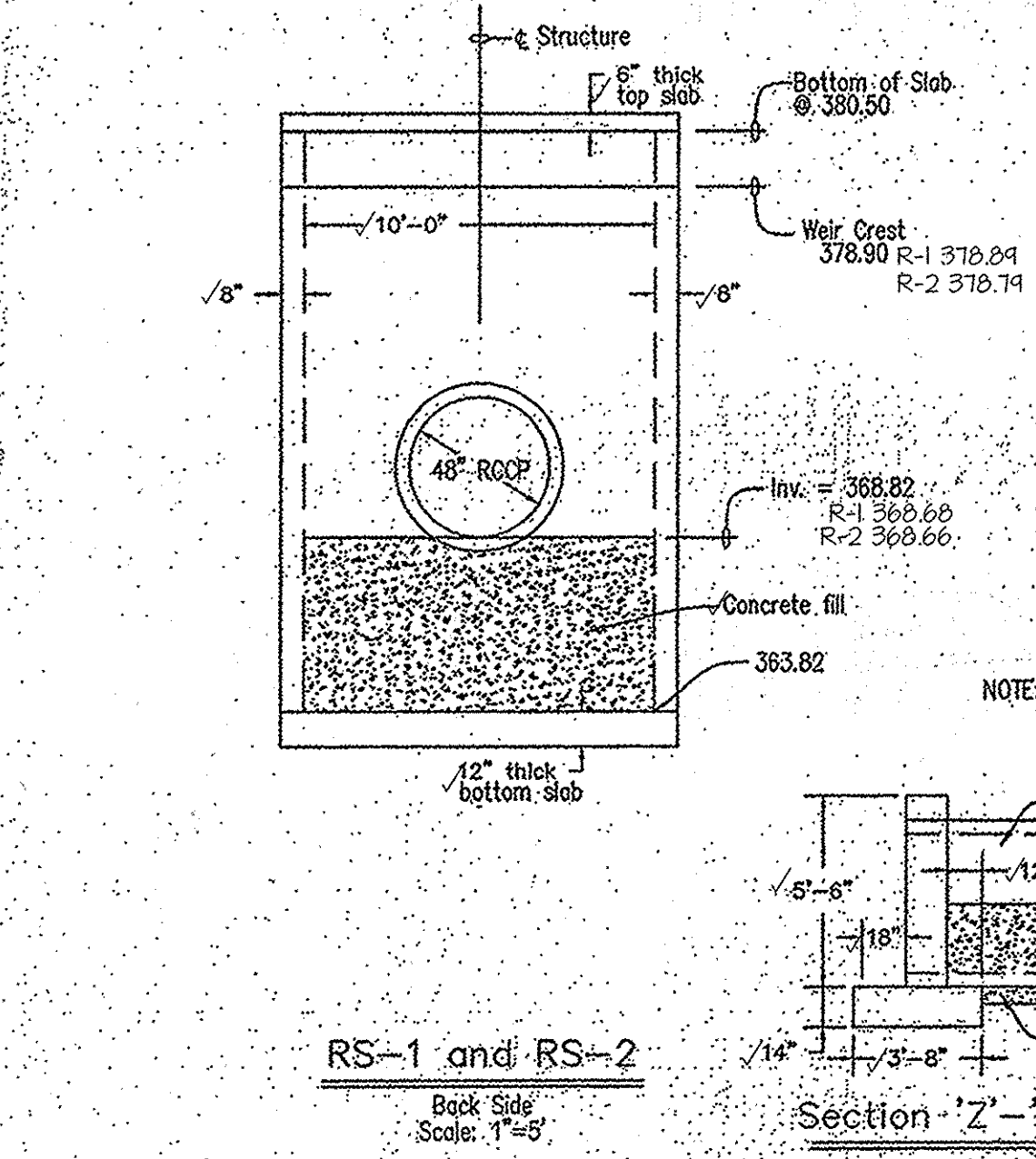


- Trash rack mountings to be galvanized after fabrication.
- Rebar must be galvanized and pointed end sharp.



- 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 48" RCCP'S.
- THE FIRST PIPE JOINT MUST BE WITHIN FOUR FEET OF THE RISER STRUCTURE.
- CONTRACTOR MUST USE A MASTIC GROUT WHERE THE 48" RCCP CONNECTS TO THE RISER.
- DURING CONSTRUCTION THE CONTRACTOR MUST BLOCK THE 6-1/2" DIAMETER ORIFICE AND CONNECT THE DEWATERING DEVICE TO THE 12" DIAMETER ORIFICE. AFTER CONVERTING TO THE STORMWATER MANAGEMENT FACILITY, THE CONTRACTOR MUST BLOCK THE 12" DIAMETER ORIFICE AND OPEN THE 6" DIAMETER ORIFICE.

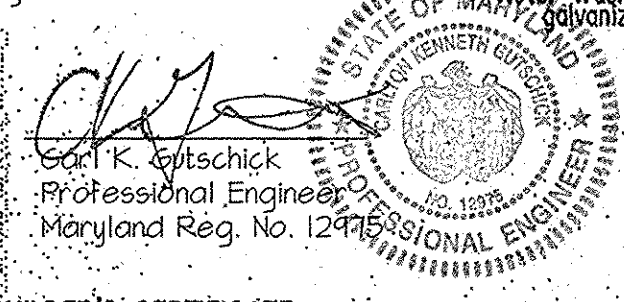
NOTE: CONTRACTOR TO PROVIDE 4' HIGH CHAIN LINK FENCE ALONG ENTIRE TOP OF HEADWALL.



PROFESSIONAL CERTIFICATION

I hereby certify that these documents 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. 12475, Expiration Date: May 26 2016.

3/22/15
Date



DEVELOPER'S/BUILDER'S CERTIFICATE

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

Signature of Developer/Builder
Date: 4-22-03

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: 4-23-03

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

Signature of Howard Soil Conservation District
Date: 4/20/03

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.

Signature of Natural Resources Conservation Service
Date: 4/20/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date: 5-8-03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development
Date: 5/21/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Development Engineering Division
Date: 5/15/03

GLWGutschick Little & Weber, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 200 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20886
TEL: 301-421-0024 BALR: 410-680-1820 DC/VA: 501-988-2524 FAX: 301-421-4195

NO.	DATE	REVISION	BY	APPR.

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

ELECTION DISTRICT No. 5

S.W.M. PROFILES/DETAILS
MAPLE LAWN FARMS
Midtown District - Area 1
Lots 1 thru 120, Open Space Lots 121 thru 127,
Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
P. 121 (L. 423 P. 25), P. 453 (L. 1908 P. 623), P. 205 (L. 894 P. 595)

SCALE	AS SHOWN	DATE	TAX MAP - GRID	SHEET
AS SHOWN	MXD-3	OCT. 2014	41	10 OF 10
		APR. 2003	15, 16, 21 & 22	

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-1
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	1-1.3	1	10'	10' Topsoil
	Orange brown, moist, soft to stiff to medium dense silty sand and mica (ML)				D	2-4.9	2	9'	
					D	2-2.4	3	9'	
					D	3-3.3	4	15'	
375.8	Fine, black, moist, loose to medium dense micaceous silty sand, trace dehydrated rock fragments (SM)				D	3-4.4	5	15'	Caved in at 12.3' at Completion
					D	4-4.9	6	18'	Groundwater encountered at 13.0' while drilling
367.8	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 03-29-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-2
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	1-1.3	1	10'	10' Topsoil
	Brown, moist, loose, silty fine sand trace mica trace roots (FS)				D	2-1.2	2	15'	
					D	2-3.3	3	15'	
					D	3-10-12	4	12'	
					D	10-12-17	5	14'	
368.8	1st brown, moist, very dense dehydrated rock (SM)				D	22-40-33	6	18'	Caved in at 12.0' at Completion
367.8	Bottom of Test Hole at 15.0'								Backfilled after 24 hours

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 03-29-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-3
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	1-1.3	1	10'	10' Topsoil
	Brown, moist, loose, silty fine sand trace mica trace roots (FS)				D	1-3-3	1	13'	
					D	4-5-10	2	16'	No groundwater encountered while drilling
					D	6-10-12	3	18'	
					D	6-7-8	4	12'	
					D	4-8-8	5	13'	
					D	5-10-10	6	15'	Caved in at 10.5' at Completion
367.8	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 03-29-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-4
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	1-1.3	1	10'	10' Topsoil
	Brown, moist, loose, silty fine sand, trace mica and trace gravel (SM)				D	1-2-4	1	10'	
					D	5-6	2	6'	No groundwater encountered while drilling
					D	5-10	3	NR	Caved in at 5.0' at Completion
					D	5-10	4	3'	
					D	5-10	5	NR	
					D	5-10	6	NR	
367.8	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-5
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	1-1.3	1	10'	10' Topsoil
	Brown, moist, very loose, silty sand, trace mica and trace gravel (SM)				D	1-3-2	1	18'	
					D	1-2-2	2	18'	
					D	5-12-13	3	15'	
					D	2-2-2	4	15'	
					D	10-15-43	4	15'	Caved in at 6.5' at Completion
					D	2-8-8	5	13'	Hard drilling at 9.0'
					D	6-8-11	6	10'	Set pipe at 9.0'
367.8	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: E-6
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
372.8	Surface	0.0	0.0	1.0	D	2-3-2	1	11'	12' Topsoil
	Orange tan, moist, loose, sandy silt (ML)				D	2-4-6	2	14'	
					D	3-4-4	3	16'	
					D	10-15-43	4	15'	Caved in at 6.5' at Completion
					D	2-8-8	5	5'	Set pipe at 9.0'
366.1	Dehydrated Rock				D	50"	5	5'	
	Auger Refusal at 10.5' Bottom of Test Hole at 10.5'								
367.8	Bottom of Test Hole at 15.0'								Backfilled after 24 hours

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 05-29-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-1
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
371.0	Surface	0.0	0.0	1.0	D	2-1-2	1	11'	11' Topsoil
	Moist brown, moist, very soft micaceous silt (FI)				D	2-1-2	2	11'	
					D	3-8-8	3	9'	
					D	5-10	4	15'	Caved in at 4.0' at Completion
					D	7.0	5	NR	
					D	10.0	6	NR	
					D	15.0	7	NR	
364.0	Bottom of Test Hole at 7.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 03-29-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-2
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
366.6	Surface	0.0	0.0	1.0	D	2-4-4	1	5'	5' Topsoil
	Brown, moist, soft, silty fine sand and organic (FI)				D	13-19-28	2	18'	No groundwater encountered while drilling
					D	16-21-32	3	17'	
					D	3-35-31	4	13'	
					D	5-10	5	5'	Caved in at 10.5' at Completion
					D	5-10	6	NR	
					D	5-10	7	NR	
366.6	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-3
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
371.0	Surface	0.0	0.0	1.0	D	2-2-2	1	11'	11' Topsoil
	Brown, moist, soft, silty fine sand and organic (FI)				D	3-7-7	2	17'	
					D	3-6-6	3	11'	
					D	3-5-5	4	11'	
					D	4-5-6	5	18'	
					D	6-9-10	6	17'	
					D	6-17-22	7	18'	
					D	5-5-4	8	17'	
361.6	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-4
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
371.0	Surface	0.0	0.0	1.0	D	3-0-0	1	11'	11' Topsoil
	Moist brown, speckled brown and tan, moist, medium dense to loose to medium dense silty sand, some mica, trace to thin dehydrated rock (SM)				D	4-6-7	2	18'	
					D	6-10-22	3	17'	
					D	6-17-22	4	18'	
					D	6-10-22	5	17'	
					D	6-17-22	6	18'	
					D	6-10-22	7	17'	
					D	6-10-22	8	17'	
361.6	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-5
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
371.0	Surface	0.0	0.0	1.0	D	3-0-0	1	11'	11' Topsoil
	Moist brown, speckled brown and tan, moist, medium dense to loose to medium dense silty sand, some mica, trace to thin dehydrated rock (SM)				D	4-6-7	2	18'	
					D	6-10-22	3	17'	
					D	6-17-22	4	18'	
					D	6-10-22	5	17'	
					D	6-17-22	6	18'	
					D	6-10-22	7	17'	
					D	6-10-22	8	17'	
361.6	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION

Project Name: Maple Lawn Farms - Midtown District
Location: Howard County, Maryland

Boring Number: P-6
Job #: 010658

ELEV.	SOIL DESCRIPTION	STRATA DEPTH	DEPTH	SCALE	CON.	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
371.0	Surface	0.0	0.0	1.0	D	3-0-0	1	11'	11' Topsoil
	Moist brown, speckled brown and tan, moist, medium dense to loose to medium dense silty sand, some mica, trace to thin dehydrated rock (SM)				D	4-6-7	2	18'	
					D	6-10-22	3	17'	
					D	6-17-22	4	18'	
					D	6-10-22	5	17'	
					D	6-17-22	6	18'	
					D	6-10-22	7	17'	
					D	6-10-22	8	17'	
361.6	Bottom of Test Hole at 15.0'								

SAMPLER TYPE: 140 Lbs. Hammer Wt., 30" Hammer Drop, 2.5" Pipe Size, 4" Hole Diameter, Rock Core Dia. Boring Method: HSA

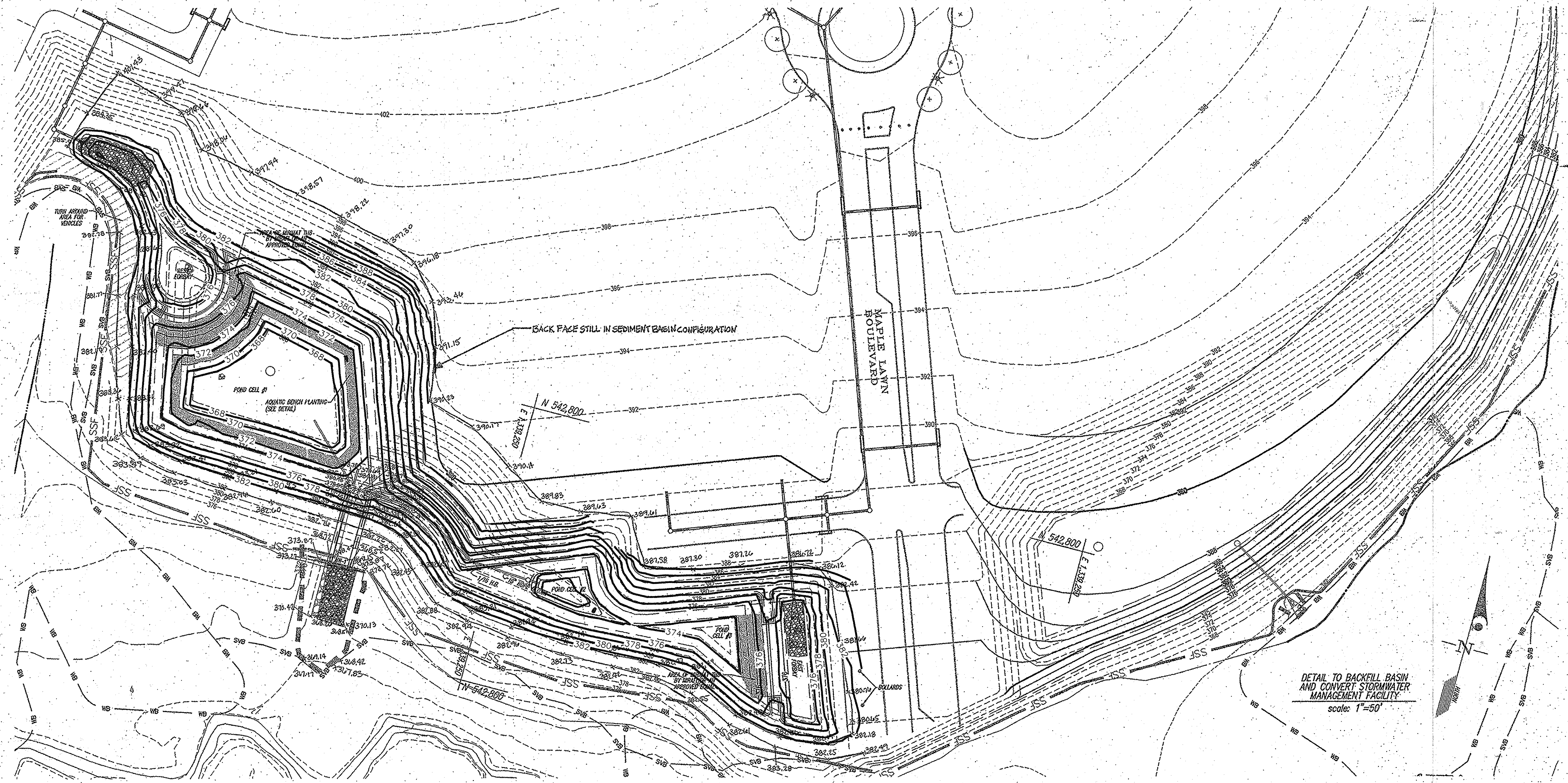
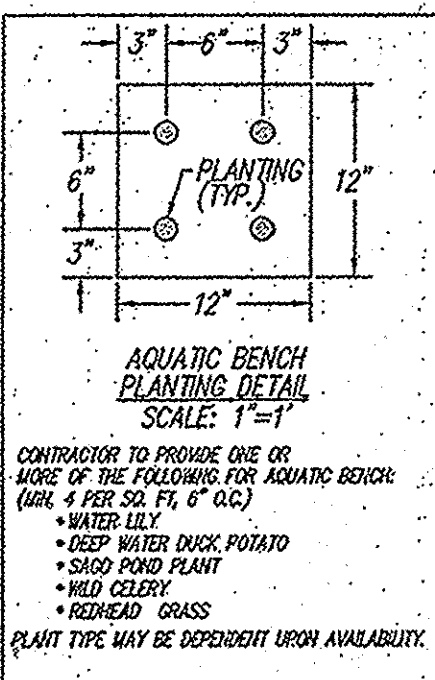
FOREMAN: Harry Hines
INSPECTOR: Completed 04-23-02

GROUND WATER DEPTH: AT COMPLETION 0.0 FT., AFTER 24 HRS. 0.0 FT.

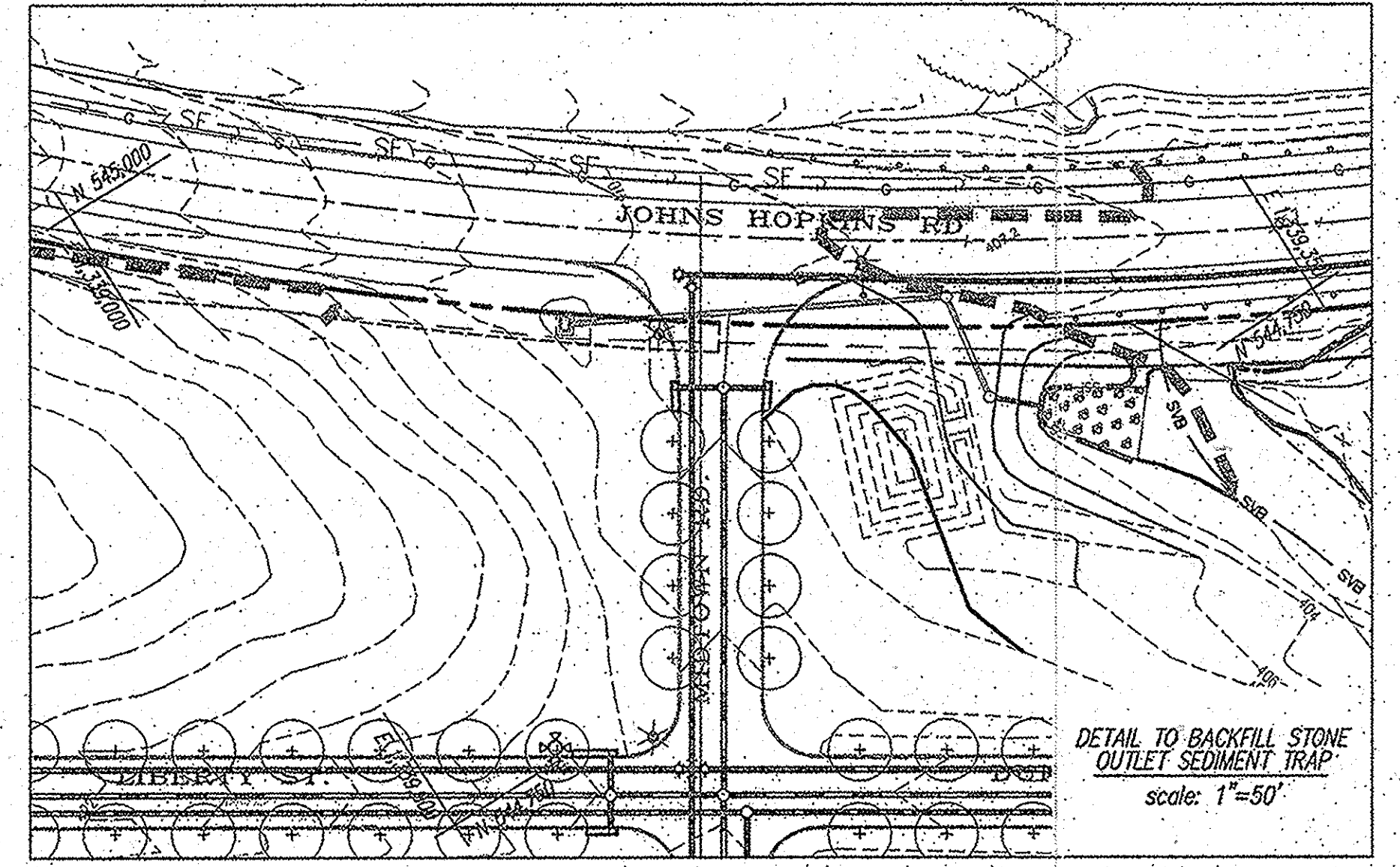
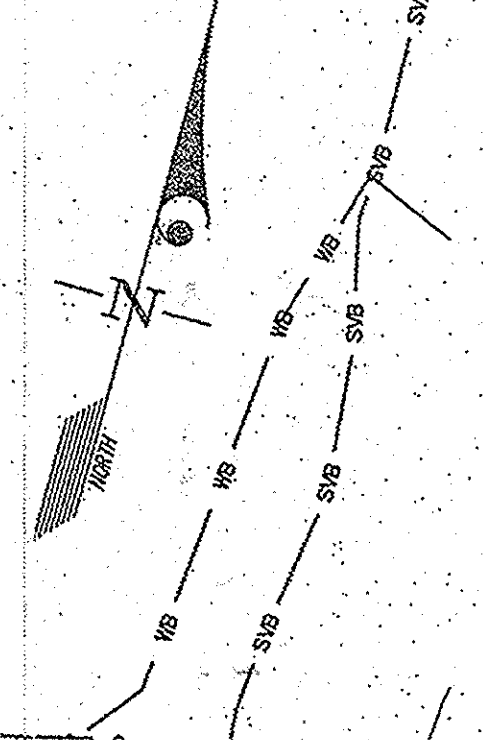
BORING METHOD: HSA-HOLLOW STEM AUGERS, CFA-CONT. FLIGHT AUGERS, OC-CORING CASING, MC-MUD DRILLING

Operations And Maintenance Schedule For Privately Owned And Maintained Stormceptor Water Quality Device

- The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Storm



DETAIL TO BACKFILL BASIN AND CONVERT STORMWATER MANAGEMENT FACILITY
 scale: 1"=50'



DETAIL TO BACKFILL STONE OUTLET SEDIMENT TRAP
 scale: 1"=50'

PROFESSIONAL CERTIFICATION
 I hereby certify that these documents 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. 12475; Expiration Date: May 26 2016.

8/22/15
 Date
 K. Gutschick
 Professional Engineer
 License No. 12475

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 5-8-03
 Date

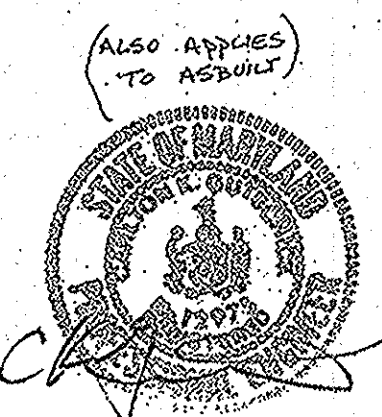
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development
 Date: 05/20/03

Chief, Development Engineering Division
 Date: 5/15/03

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3000 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20868
 TEL: 301-421-4024 BALTE 410-880-1820 DC/VA 301-888-2524 FAX: 301-421-4186

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

Signature of Developer/Builder
 Date: 4-22-03



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: 4-23-03

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.

Signature
 Date: 4/29/03
 Natural Resources Conservation Service

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

Signature
 Date: 4/29/03
 Howard Soil Conservation District

02001\ph2\finals\ph2scd41.dwg DES. DEV. DRN. AI/AL CHK. DEV.

DATE	REVISION	BY	APP'R.

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

STORM WATER MANAGEMENT - POND CONVERSION
MAPLE LAWN FARMS
 Midtown District - Area 1
 Lots 1 thru 120, Open Space Lots 121 thru 127
 Common Open Areas 128 thru 132 and Parcels 'A', 'B' & 'C'
 P. 121 (L. 493 F. 53), P. 493 (L. 128 F. 623), P. 245 (L. 894 F. 590)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	02001
DATE: 04/29/2014	TAX MAP - GRID: 41: 21 & 22	SHEET: 19 OF 19
APR., 2003	46: 3 & 4	

ASBUILTS SHEET 5 OF 5
 COUNTY FILE #F-03-090

F-03-90 ASBUILTS

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