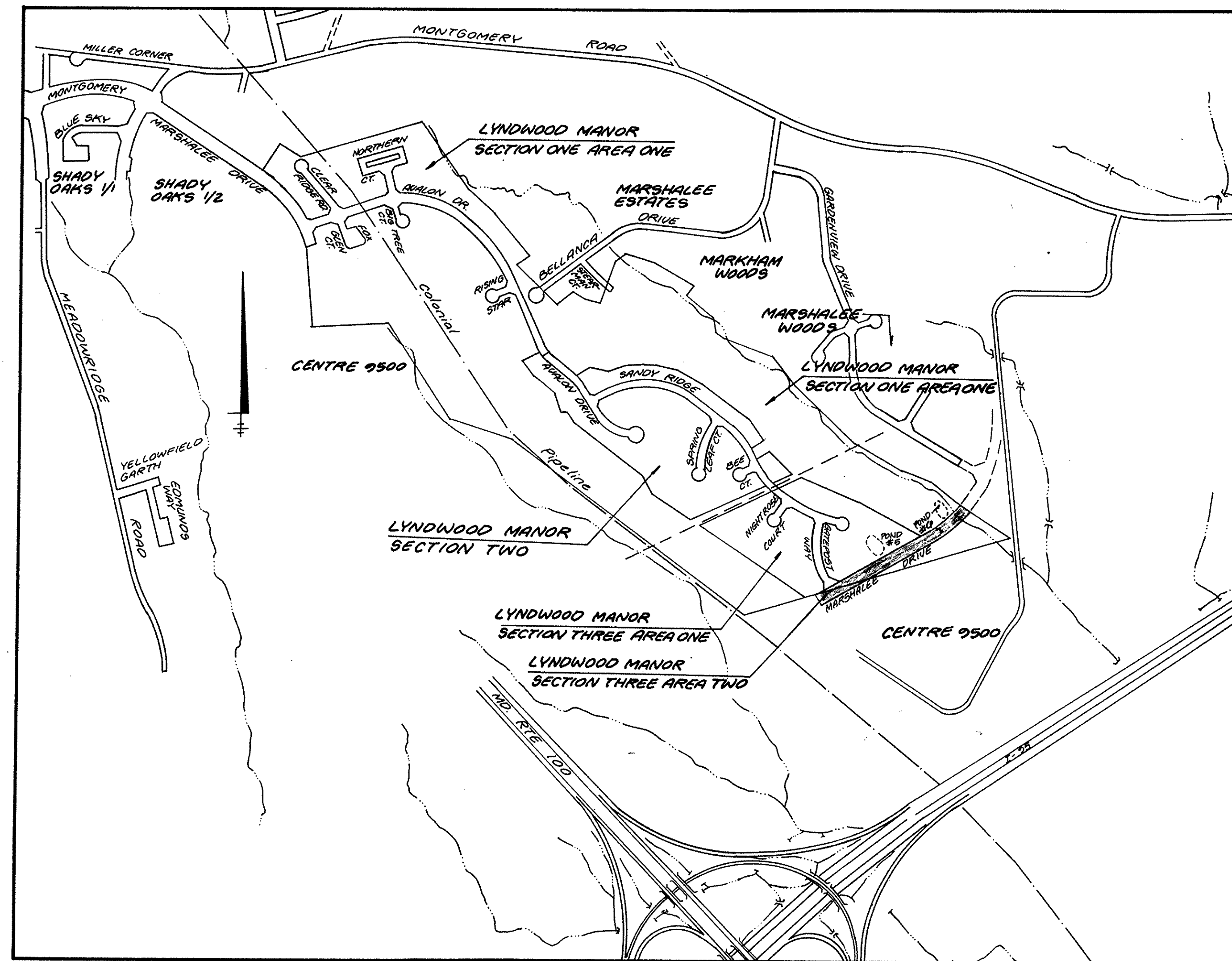


INDEX OF SHEETS	
SHEET No.	TITLE
1	TITLE SHEET
2	PLAN & PROFILE - MARSHALEE DRIVE & GATEPOST WAY
3	PLAN & PROFILE - MARSHALEE DRIVE
4	ROAD DETAILS
5	GRADING & SEDIMENT AND EROSION CONTROL PLAN
6	GRADING & SEDIMENT AND EROSION CONTROL DETAILS
7	DRAINAGE AREA MAP
8	STORM DRAIN PROFILES
9	STORMWATER MANAGEMENT PLAN + DETAILS
10	STREAM CROSSING CULVERT PLAN + DETAILS
11	LANDSCAPE PLAN



LOCATION MAP
Scale: 1" = 600'

BENCHMARK

Ho. Co. Mon. # 2644004 El. 402.135

Ho. Co. Mon. # 2644005 El. 416.981

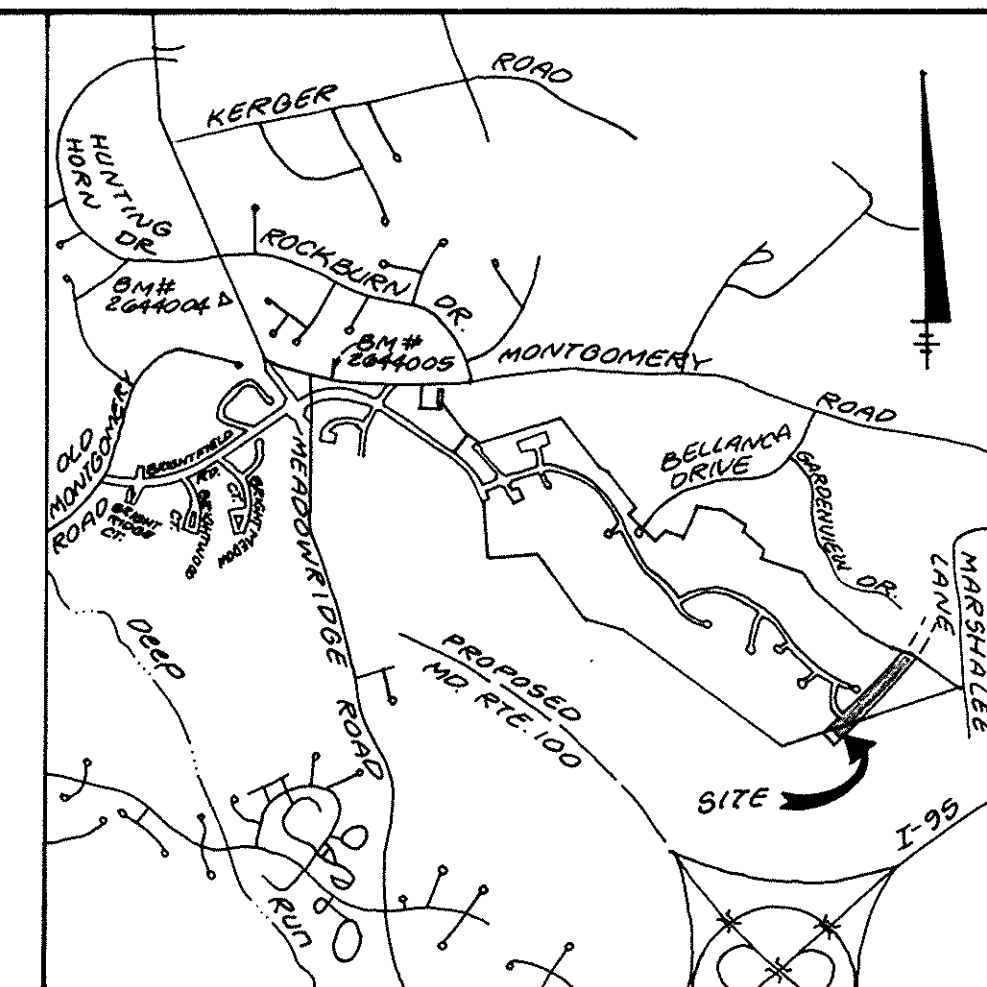
DESCRIPTION

Ho. Co. Mon. # 2644005 El. 416.981

Concrete Monument .2' Below Surface
South Side Montgomery Road East
Of Meadow Ridge Road.

Ho. Co. Mon. # 2644004 El. 402.135

Concrete Monument .1' Below Surface
SW Corner Of Intersection Rte. 103 and
Old Montgomery Road.



VICINITY MAP
Scale: 1" = 2000'

NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County, Volume IV.
- The contractor shall notify the Department of Public Works/Bureau of Construction Inspection Division at (410) 313-1600 - at least twenty-four (24) hours prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work.
- Project background:
Location: Elkridge, Tax Map 37, Parcel 38, P/O 80, 529, 542, 640, 643
Zoning: RSC (Residential: Single Cluster)
SUBA Ref: ZB 877 R&M, PB 284, RES 100
Election District: 14
Section/Area: Three/Two
Total Tract Area: 150.43 Ac. plus/minus
Section/Area: 2.182 Ac. plus/minus
No. of Proposed Lots: 0
Previous Submittals: WP93-23, F91-125, S93-02, P93-11, SDP93-75, SDP93-105, F94-27, F94-28, F94-29
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- Street light placement and the type of fixture and pole shall be in accordance with the Howard County Design Manual, Volume III (1993) and as modified by Guidelines for Street Lights in Residential Developments (June 1993).
- Storm drain trenches within the public road right-of-way shall be backfilled and compacted in accordance with the Howard County Standard Specifications and Details, Design Manual Volume IV.
- Any damage to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractor's expense.
- The existing utilities shown hereon are located from field surveys and construction drawings of record. The approximate location of existing utilities are shown for the contractor's information and convenience. The contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the contractor shall take all necessary precautions to protect all existing utilities and maintain uninterrupted service.
- The topography shown hereon is compiled from photogrammetric aerial survey dated March 16, 1986 by Dewberry & Davis, supplemented with field run data prepared by Land Design Engineering, Inc., June 1992.
- Horizontal and vertical datums are related to the Maryland State Plane Coordinate system as projected from Howard County Control Stations No. 2644004 and No. 2644005 (MAD 27).
- Public water and public sewer are available to the site by means of extensions:
Water: Contract No. 14-3373-D
Sewer: Contract No. 14-3373-D
- Permanent quantity management is by detention. Quality management is by extended detention. Pond #9 is to be a public facility.
- Wetlands delineation by Exploration Research, Inc. dated 1992, approved by United States Army Corps of Engineers June, 1992.
- Noise study compiled by Land Design Engineering, Inc. as part of P93-11 approval, December 31, 1991.
- Floodplain analyzed by Land Design Engineering, Inc. December, 1992 based on field run data from 1992 and 1993 (P93-11).
- Traffic study compiled by Lee Cunningham & Associates, Inc. dated November, 1992 as part of S93-02 approval, and F94-26.
- Geotechnical reports compiled by Hills Carnes for existing Pond #6 dated March 23, 1994. Additional borings dated June 1, 1994.
- Waiver Petition WP93-29 for roads to exceed 1200' Section 16.113(c)(10) approved December 23, 1992. Waiver request WP93-86 to waive Section 16.115(c)(2) to provide 20' minimum frontage for lot areas under 40,000 square feet; waive Section 16.115(b) to front lots on a public or private road not exceeding 200' section 16.115C, (that no more than two (2) pipestem lots may have adjoining driveways; Section 16.116C, grading adjacent to wetlands shall not be permitted, approved March 18, 1993.
- All hydraulic data is for the 10-year storm unless otherwise noted.
- All existing grades are from survey data March 16, 1986, or proposed grades shown on previous Final Plans.
- 95% compaction in fill areas shall be determined by ASHTO T-180.
- Sidewalks and sidewalk ramps shall be designed in accordance with current ADA requirements.
- 401 Permit # RP 91-00458-7, exp. Aug. 1, 1995
404 Permit # 92-WA-0313, exp. July 29, 1995
- A Geotechnical Engineer must be present during the construction of the proposed culvert crossing at station 87+60 ± Marshalee Drive. See construction details on sheet 10.

ROAD & STORM DRAIN CONSTRUCTION PLANS

LYNDWOOD MANOR

SECTION THREE AREA TWO

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Bruce D. Burton
Signature of Engineer
5/22/95
Date

DEVELOPER'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 Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

H.N.
Signature of Developer
3/21/94
Date

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

U.S. Soil Conservation Service
Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District
Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

Chief, Land Development Division
6/16/95
Date

Chief, Bureau of Engineering
6/16/95
Date

Chief, Bureau of Highways
6-6-95
Date

APPROVED: Department of Planning and Zoning.

Chief, Division of Land Development and Research
6/22/95
Date

LAND DESIGN ENGINEERING, INC.

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
(410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED LDE
DRAWN WTJ/AL/SD
CHECKED RM
DATE 12/94

TITLE SHEET
LYNDWOOD MANOR
SECTION THREE AREA TWO
P/O Marshalee Drive R/W, a resubdivision of Lyndwood Manor Section 1 Area 1, 1st Election District, 9500 Rte. 103, Tax Map 37, Part of Parcels 64, 3, 38, 640

SCALE AS SHOWN
DRAWING 1 of 11
JOB No. 92-176-7
FILE No. F94-910

OWNER/Developer
100 INVESTMENT LIMITED PARTNERSHIP
8835-P Columbia 100 Parkway
Columbia, Maryland 21045 (410) 730-0610

F-94-96

17061

CENTERLINE CURVE DATA						
NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
Future Marshalee Drive 66+40.85 TO 75+18.29	990.00'	40°51'31"	671.40'	393.26'	663.20'	N 79°32'21"E

CURB LEGEND

7" Std. Curb and Gutter
5" Std. Bituminous Curb

STRIPING LEGEND

D4, Double Yellow 4"

Street Light Legend						
Street Name	Symbol	Centerline Station	Offset	Lamp Type	Post Type	Pole Type
Marshalee Drive	---	78+81	* LT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	80+45	* RT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	83+75	* LT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	87+00	* RT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole

* All street lights shall be offset 4' behind curb, see detail sheet 4

APPROVED: Department of Planning and Zoning

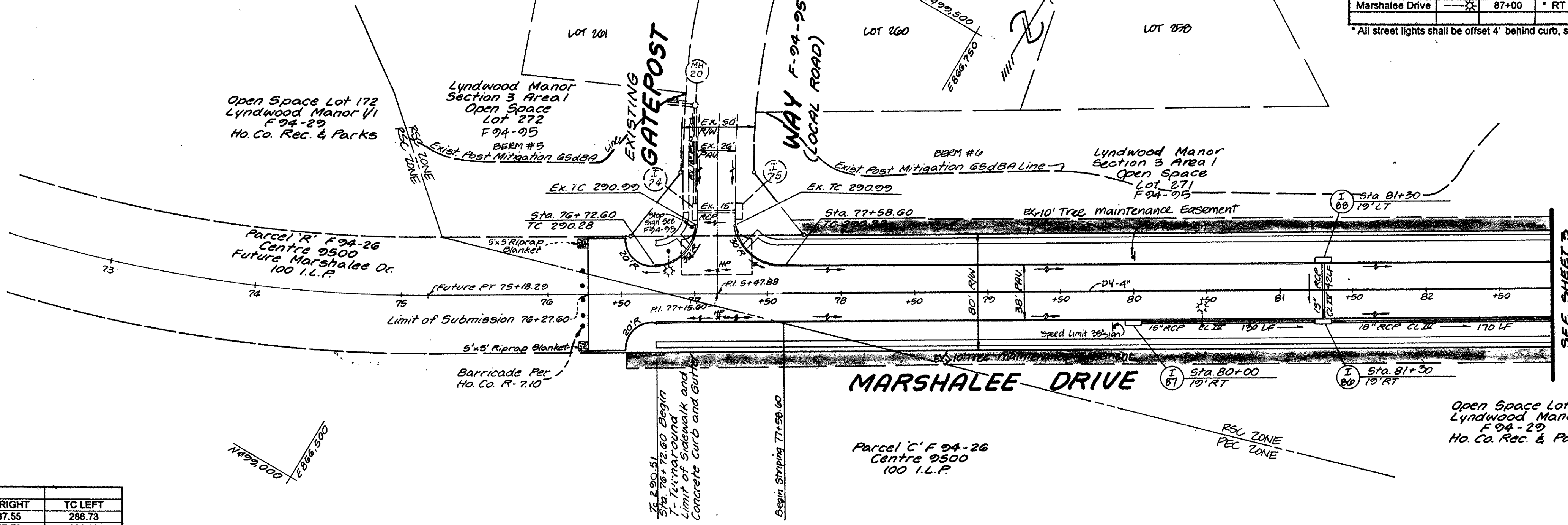
Jim Swinomy 6/22/95
Chief, Division of Land Development and Research

APPROVED: Department of Public Works for Storm Drainage Systems and Roads

Chief Land Development Division 6/16/95
Date

Chief, Bureau of Engineering 6/16/95
Date

Chief, Bureau of Highways 6-6-95
Date

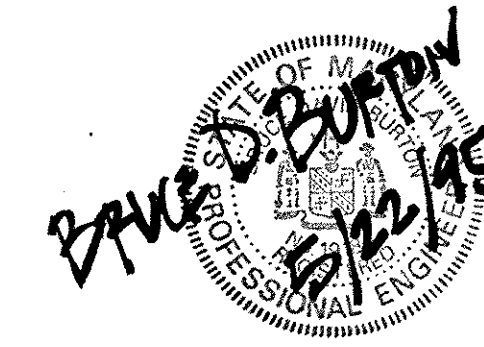


Centerline Station	Centerline Offset	Top Elevation	Top Width
76+90	83' Left	292.0	2.0'
76+69	89' Left	299.0	2.0'
76+57	85' Left	303.0	2.0'
76+07	85' Left	303.0	2.0'
75+57	88' Left	299.0	2.0'
74+93	90' Left	298.0	2.0'
BERM #6			
82+15	62' Left	282.0	2.0'
81+15	61' Left	284.0	2.0'
80+27	85' Left	296.0	2.0'
79+82	85' Left	297.0	2.0'
78+77	81' Left	301.0	2.0'
78+00	78' Left	301.0	2.0'

STATION	CL ELEVATION	TC RIGHT	TC LEFT
74+88.29	286.57	287.55	286.73
74+75	286.77	287.73	286.93
75+00	287.45	288.35	287.61
75+25	288.06	288.90	288.22
75+50	288.59	289.36	288.75
75+75	289.05	289.76	289.21
76+00	289.43	290.08	289.59
76+18.29	289.67	290.27	289.83
76+25	289.74	290.23	289.90
76+50	289.98	290.42	290.14
76+75	290.14	290.52	290.30
77+00	290.22	290.54	290.38
77+25	290.23	290.49	290.39
77+50	290.16	290.36	290.32
77+88.29	290.07	290.23	290.23

Note: A minimum spacing of 20' shall be maintained between any street light and any tree.

PLAN
1" = 50'



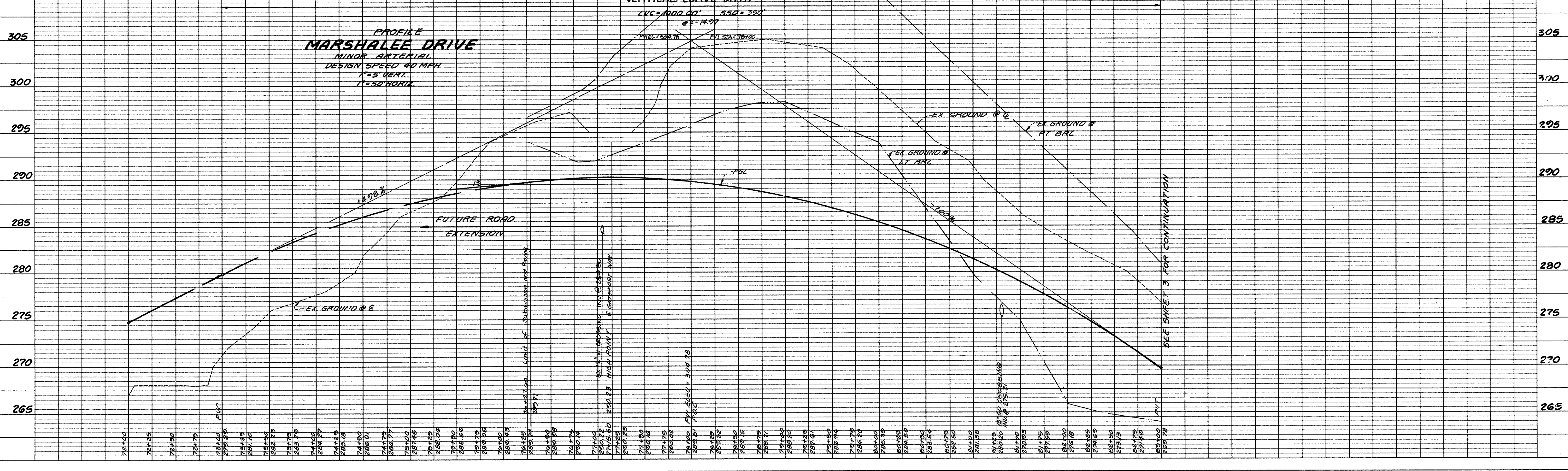
LAND DESIGN ENGINEERING, INC.
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
(410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED TO	ROAD CONSTRUCTION PLANS MARSHALEE DRIVE	SCALE AS SHOWN
DRAWN BY	LYNDWOOD MANOR	DRAWING 2 of 11
CHECKED BY	Tax Map 37 Part of Parcels 643, 38, 640 1st Election District Howard County, MD S 93-02, P 93-11 F-94-26, F-94-29	JOB NO. 92-176.7
DATE	12-94	FILE NO. F94-90

Owner: DEVELOPER
100 INVESTMENT LIMITED PARTNERSHIP
8809-P Columbia 100 Parkway
Columbia, Maryland 21045 (410) 730-0810

VERTICAL CURVE DATA

LVC = 1000.00' 550' ± 350'
e = -14.97'
PVI STA = 76.322
PVI ELEV = 289.76



HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
NATIONAL PRINTING
PRINTED IN U.S.A.

1701

CENTERLINE CURVE DATA

NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
MARSHALEE DRIVE 85+29.03 TO 88+14.53	741.00'	18°39'46"	215.50'	108.52'	214.74'	N50°16'42"E
FUTURE MARSHALEE DR. 88+14.53 TO 93+29.03	741.00'	42°52'31"	554.50'	290.96'	541.65'	N21°00'33"E

LEGEND
--- Limit of Reinforced Slope

SUPERELEVATION TABLE

STATION	CL ELEVATION	TC RIGHT	TC LEFT
83+49.03	266.35	266.51	266.51
83+50	266.28	266.44	266.44
83+75	264.57	264.79	264.73
84+00	262.95	263.23	263.11
84+25	261.41	261.74	261.57
84+50	259.98	260.38	260.12
84+75	258.59	259.04	258.75
84+98.03	257.36	257.96	257.52
85+00	257.31	257.91	257.47
85+25	256.11	256.78	256.27
85+50	254.99	255.72	255.15
85+75	253.97	254.76	254.13
86+00	253.02	253.88	253.18
86+25	252.16	253.08	252.32
86+49.03	251.42	252.40	251.58

APPROVED: Department of Planning and Zoning.

Jim Jaraman 6/22/95
Chief, Division of Land Development and Research.

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.
[Signature] 6/16/95
Chief, Land Development Division.

[Signature] 6/16/95
Chief, Bureau of Engineering

Andrew M. Daniels 6-6-95
Chief, Bureau of Highways #3

Street Light Legend

Street Name	Symbol	Centerline	Offset	Lamp Type	Post Type	Pole Type
Marshalee Drive	---	76+81	* LT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	80+45	* RT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	83+75	* LT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole
Marshalee Drive	---	87+00	* RT	150 Watt HPS	Pendant Fixture	30' Galvanized Steel Pole

* All street lights shall be offset 4' behind curb, see detail Sheet 4

12" X 11" UNDERPASS DATA

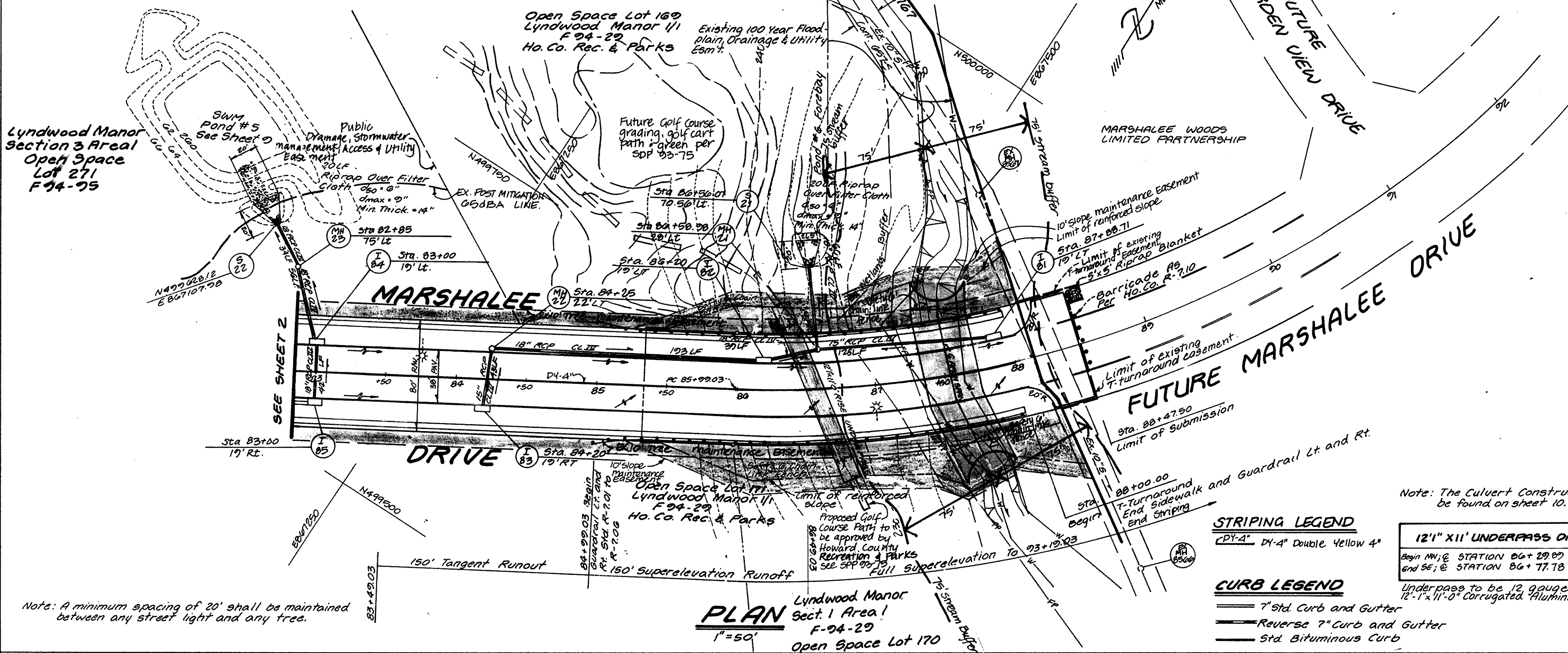
Begin MI;E STATION 86+29.07 G.S. 36LT
End SE;E STATION 86+77.78 G.S. 00'RT

Underpass to be 12 gauge aluminum 12'-1'-11"-0" Corrugated Aluminum Pipe Arch

Note:
1) For Street Locations See Sheet 11
2) For Storm Drain Profiles and Structure Schedules See Sheet 6
3) Sidewalks and Ramps shall be in accordance with ADA requirements.

STRIPING LEGEND
2'-4" 2'-4" Double Yellow 4"

CURB LEGEND
7" Std Curb and Gutter
Reverse 7" Curb and Gutter
Std Bituminous Curb

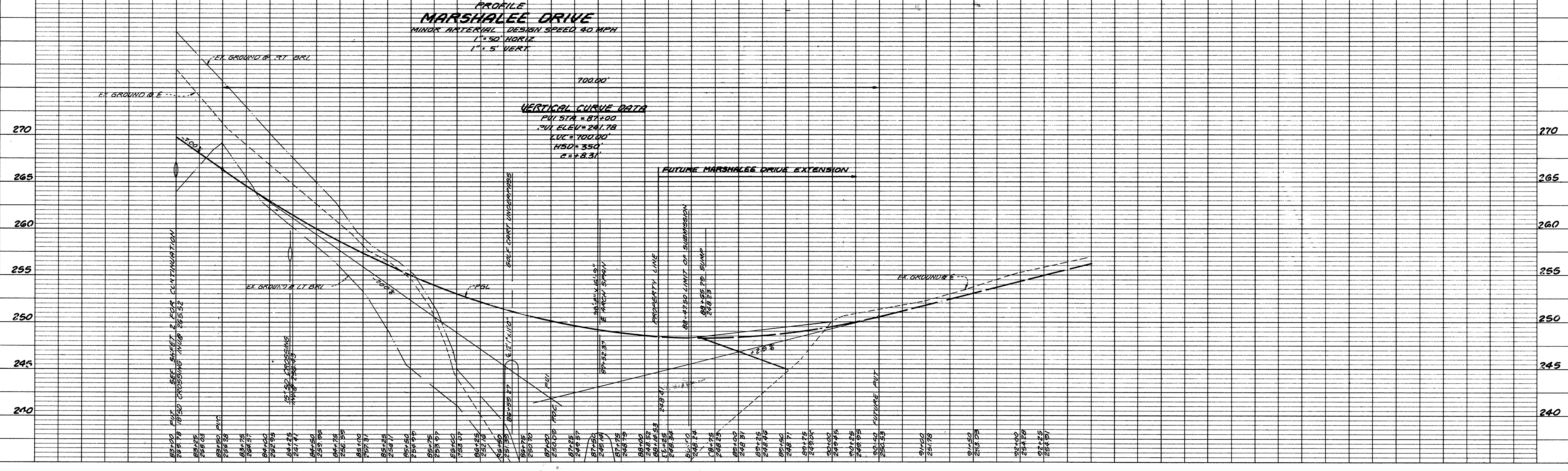


Note: A minimum spacing of 20' shall be maintained between any street light and any tree.

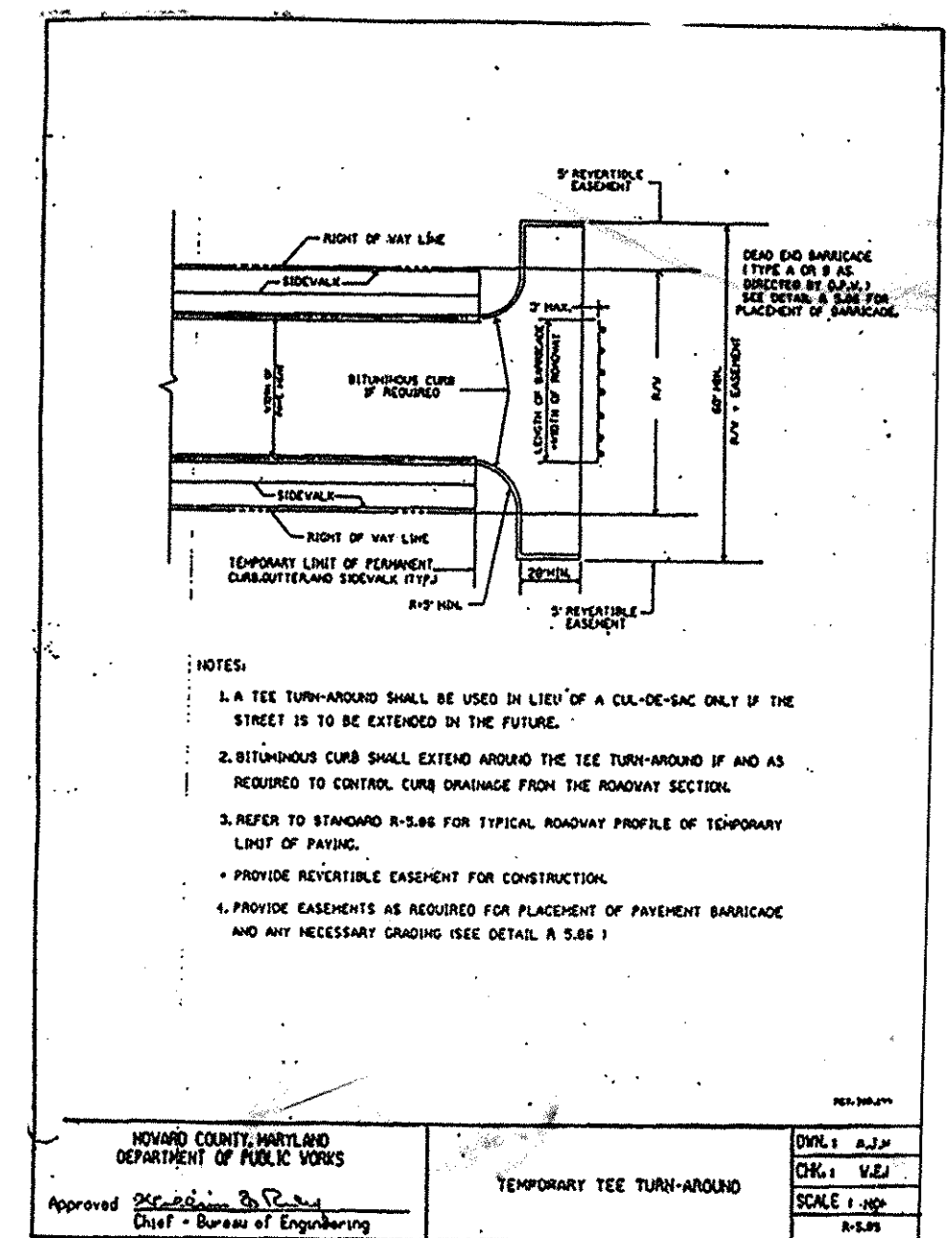
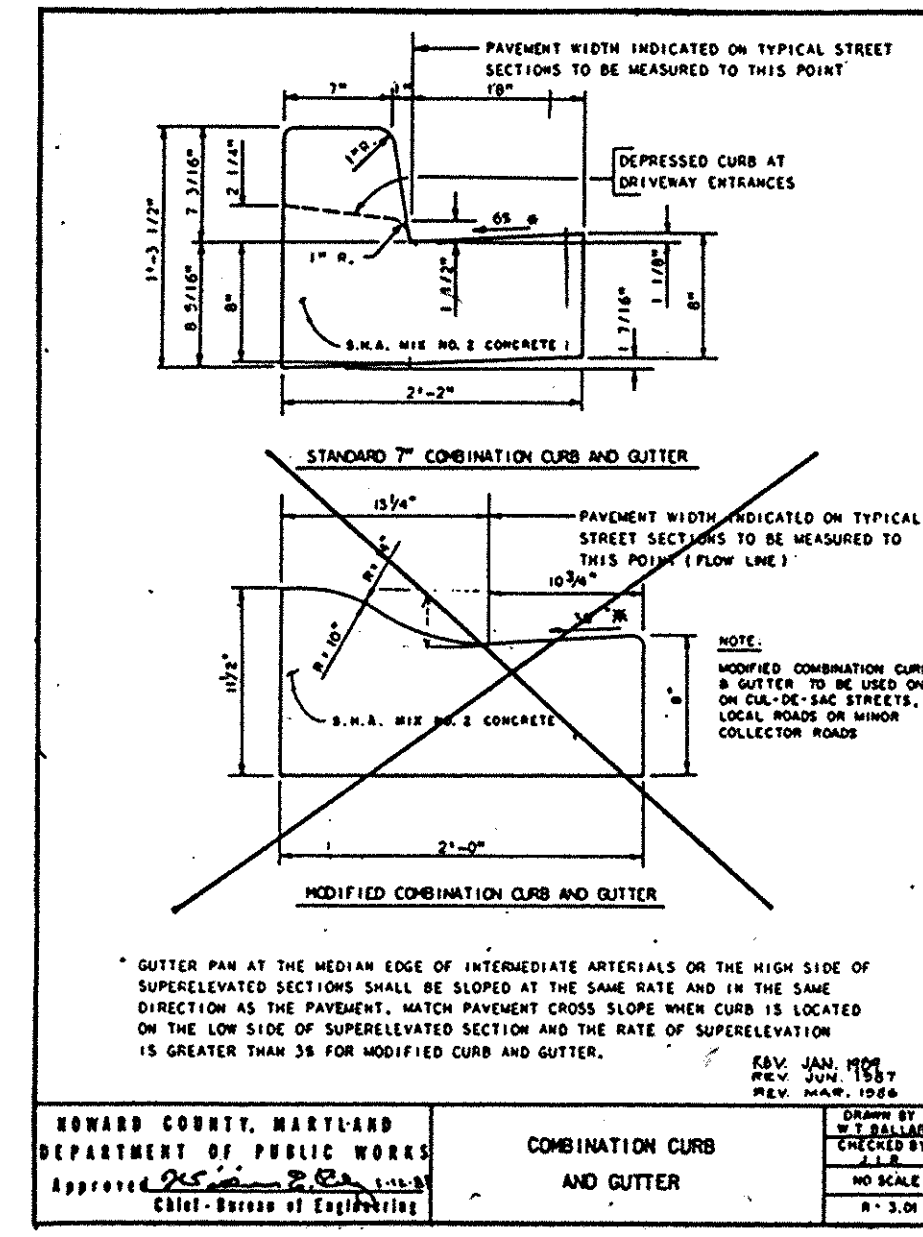
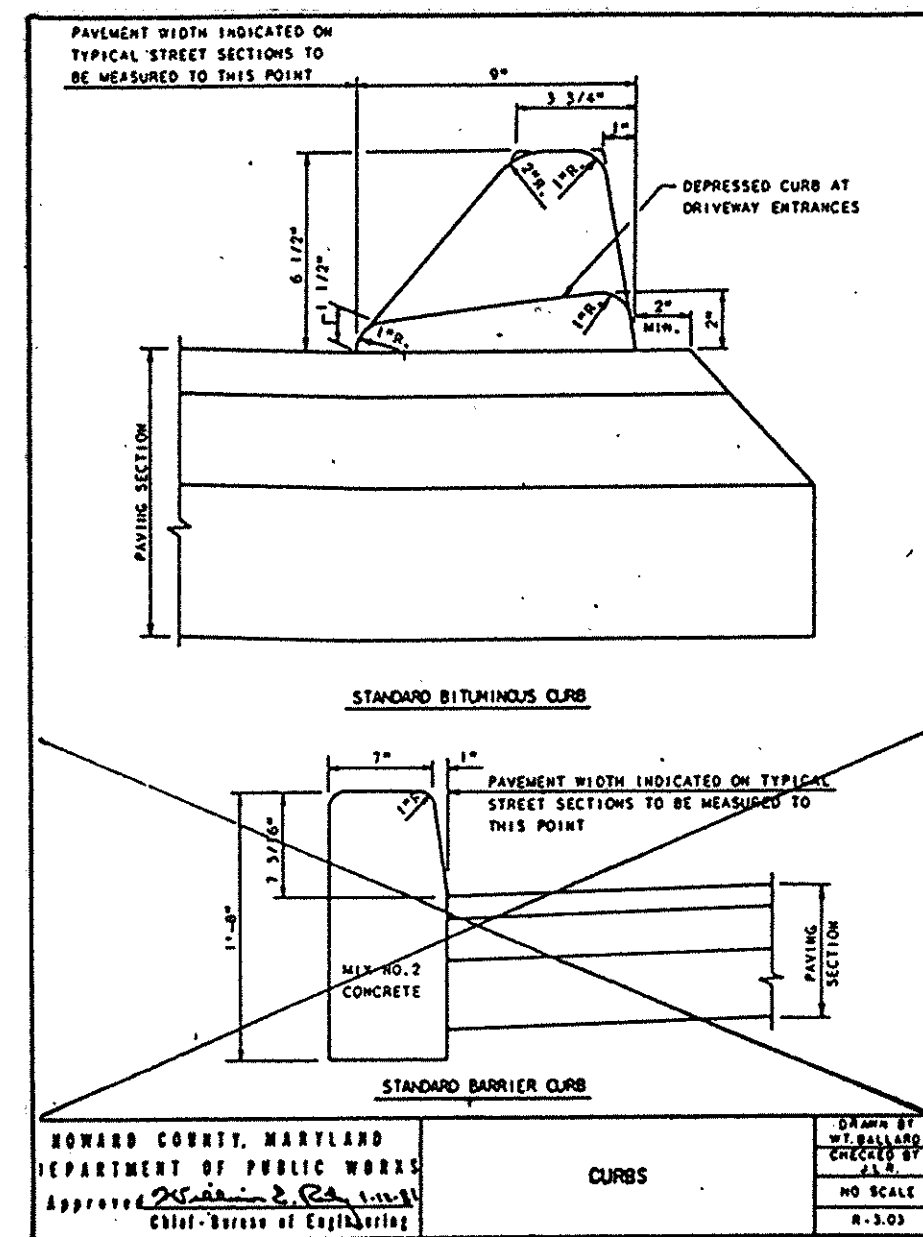
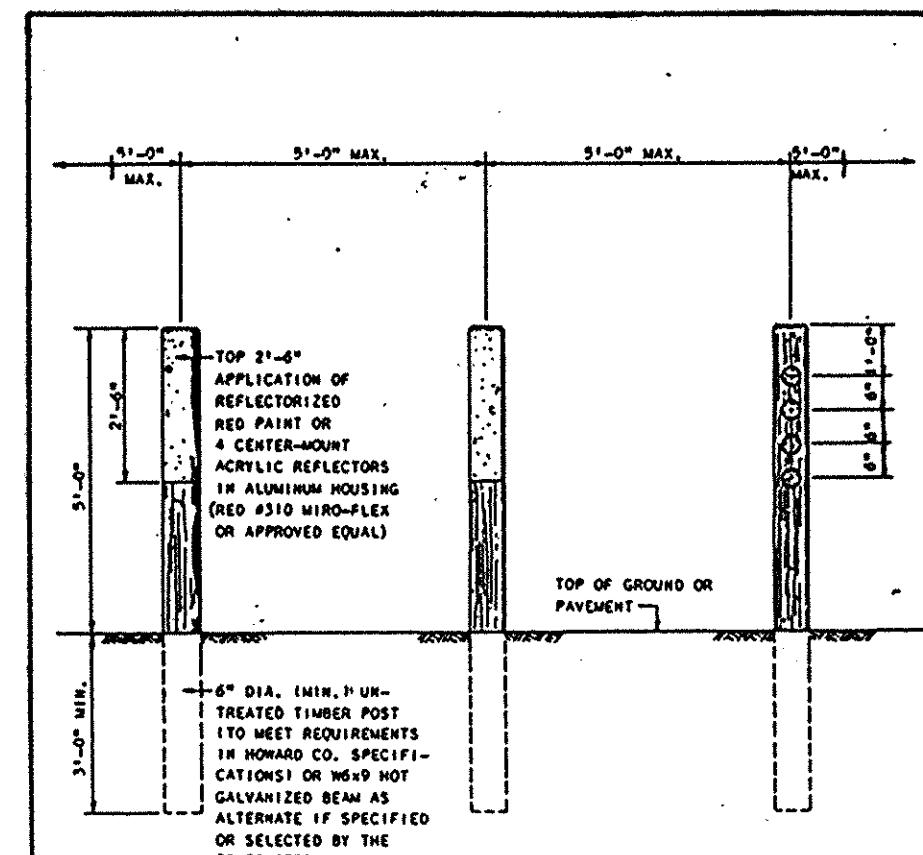
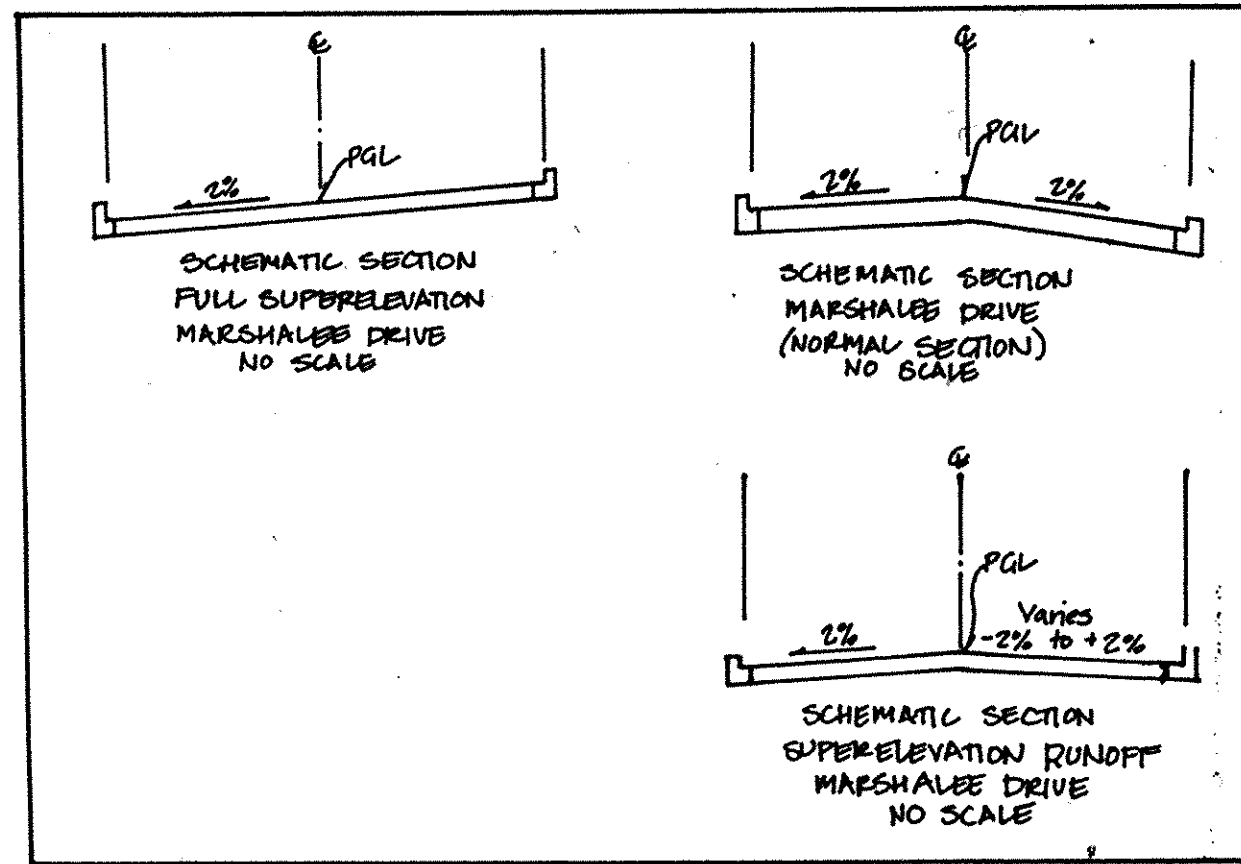
PLAN
Sect. 1 Area!
F-94-29
Open Space Lot 170

PLAN
DATE: _____
BY: _____
CHECKED: _____
DATE: _____
NO. _____

PROFILE
DATE: _____
BY: _____
CHECKED: _____
DATE: _____
NO. _____



1708

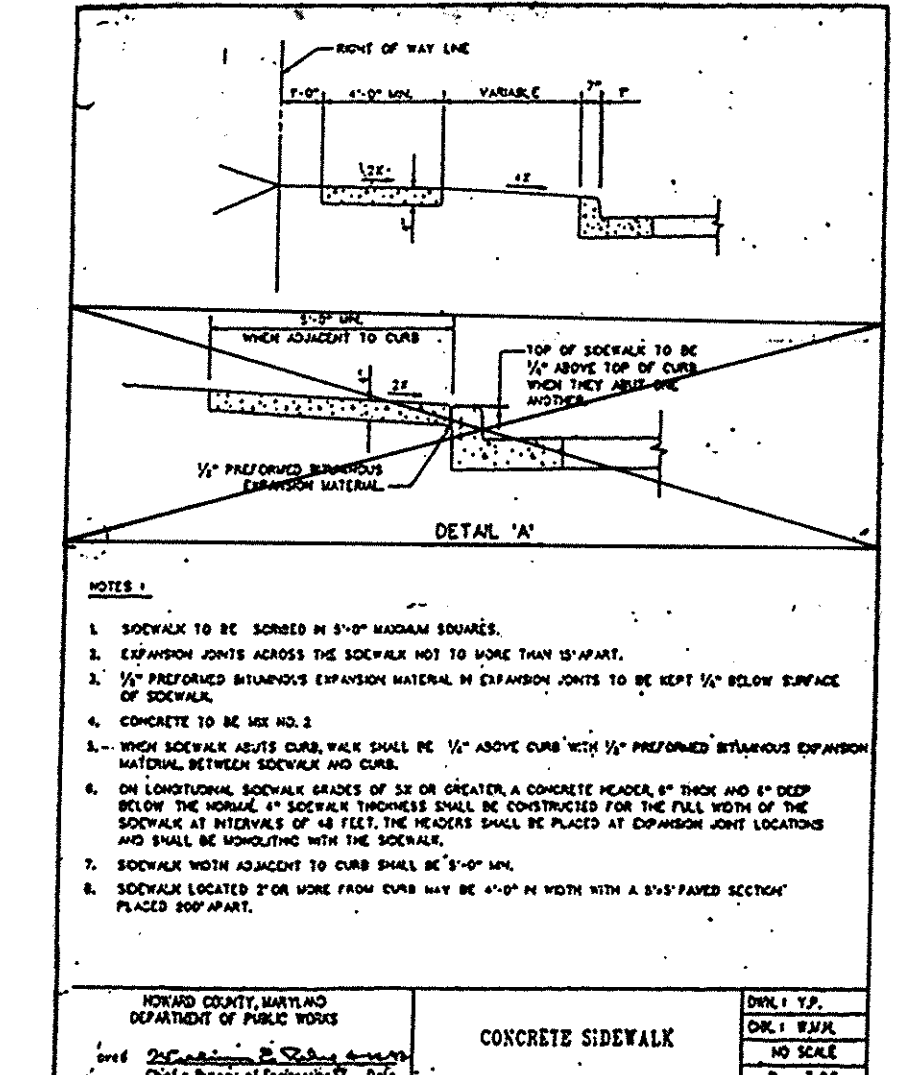
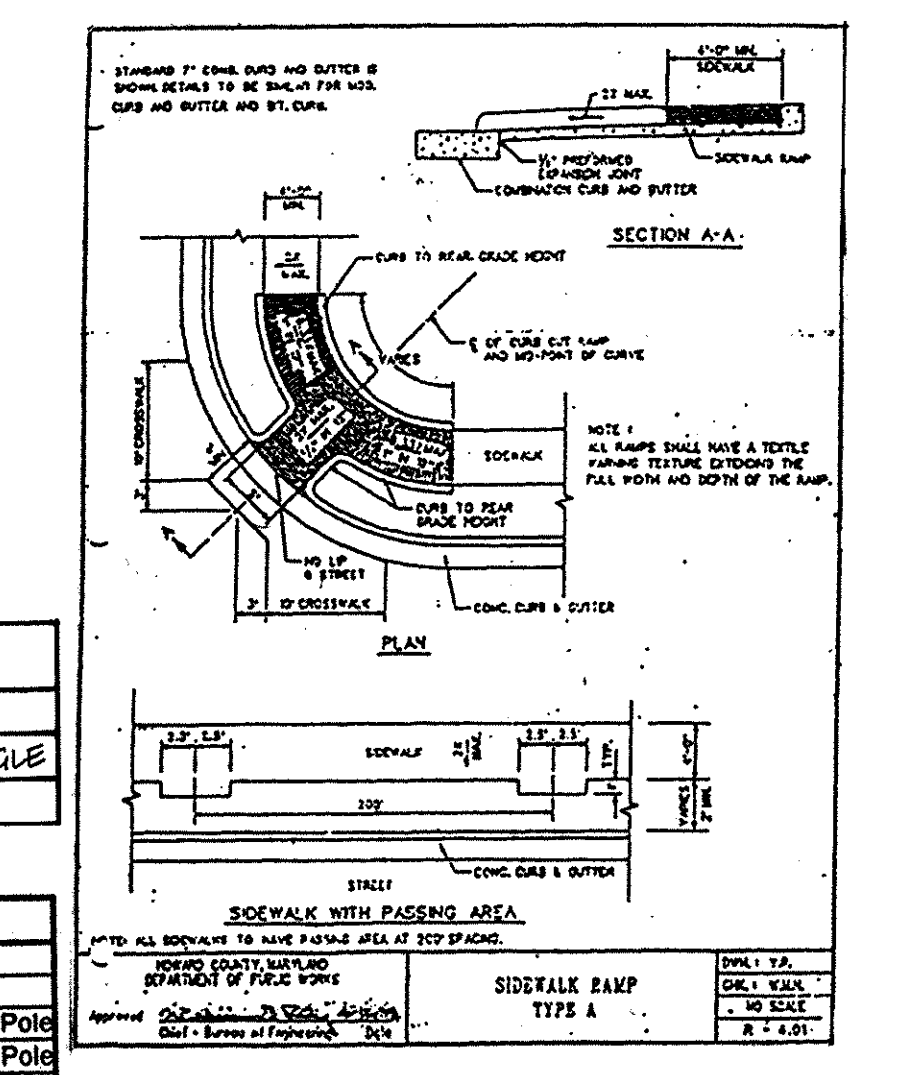
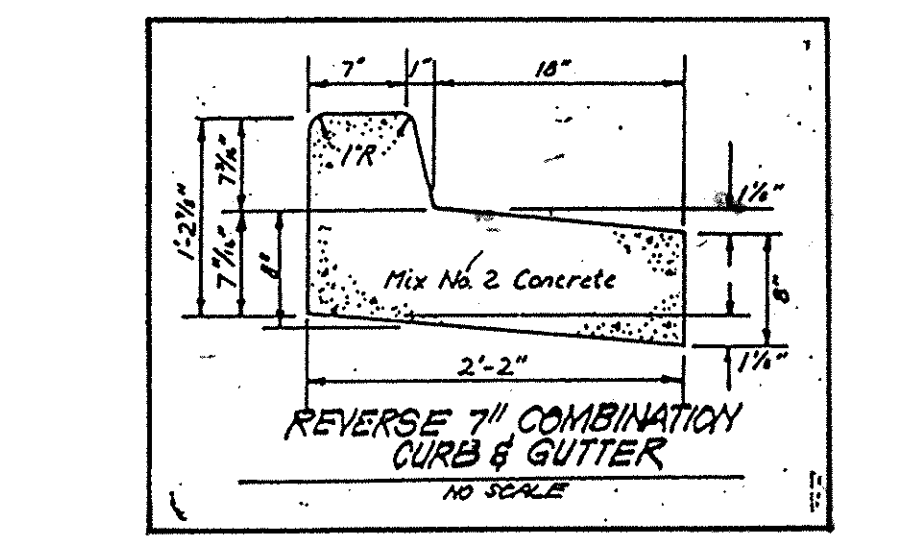
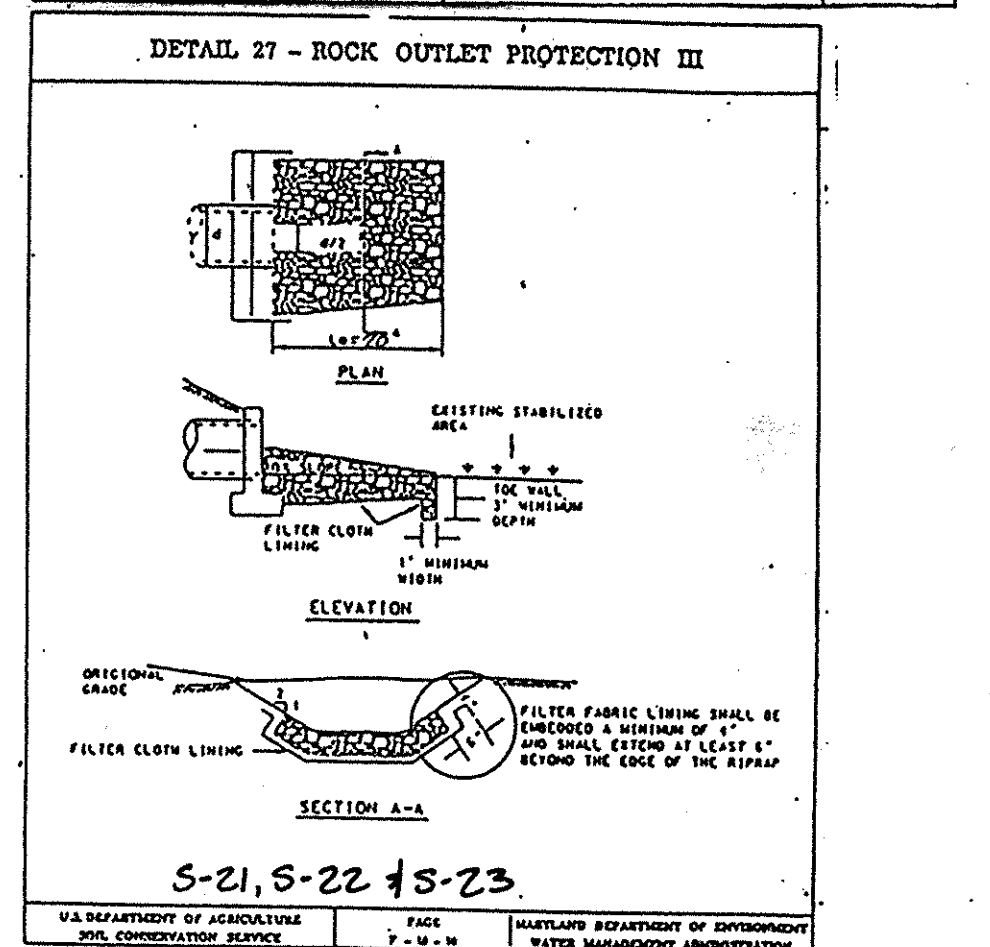


SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	GRANULAR BASE ALTERNATES
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. 4" 1/2" 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 2" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE 12 COURSES OF 4" CONC. GRADE STABILIZED AGGREGATE BASE COURSE
P-6	ALL ZONES INTERMEDIATE ARTERIAL	1 1/2" BIT. CONC. SURFACE 2" BIT. CONC. BASE 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE 3" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE 12 COURSES OF 4" CONC. GRADE STABILIZED AGGREGATE BASE COURSE
P-7	STABILIZED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS	DOUBLE BIT. SURFACE TREATMENT 6" CHANGED RUN BASE COURSE OR 4 1/2" CONC. GRADE STABILIZED AGGREGATE BASE COURSE	DOUBLE BIT. SURFACE TREATMENT 6" CHANGED RUN BASE COURSE OR 4 1/2" CONC. GRADE STABILIZED AGGREGATE BASE COURSE
P-8	PAVED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS SUPER-ELEVATION ADJUSTMENTS (NOTE: THIS SECTION MAY BE BASED IN FULL OR PARTIAL CONCRETE SURFACE IN OFF SITE, FINELY MAINTAINED LANE ONLY)	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 3" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE OR 3" CONC. GRADE STABILIZED AGGREGATE BASE COURSE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	GRANULAR BASE ALTERNATES
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. 4" 1/2" 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 2" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE 12 COURSES OF 4" CONC. GRADE STABILIZED AGGREGATE BASE COURSE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	GRANULAR BASE ALTERNATES
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. 4" 1/2" 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 2" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE 12 COURSES OF 4" CONC. GRADE STABILIZED AGGREGATE BASE COURSE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVING MATERIALS	GRANULAR BASE ALTERNATES
P-5	COMMERCIAL-INDUSTRIAL ZONES MAJOR COLLECTOR ALL ZONES MINOR ARTERIAL	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. 4" 1/2" 3" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 2" BIT. CONC. BASE 6" CHANGED RUN BASE COURSE 12 COURSES OF 4" CONC. GRADE STABILIZED AGGREGATE BASE COURSE



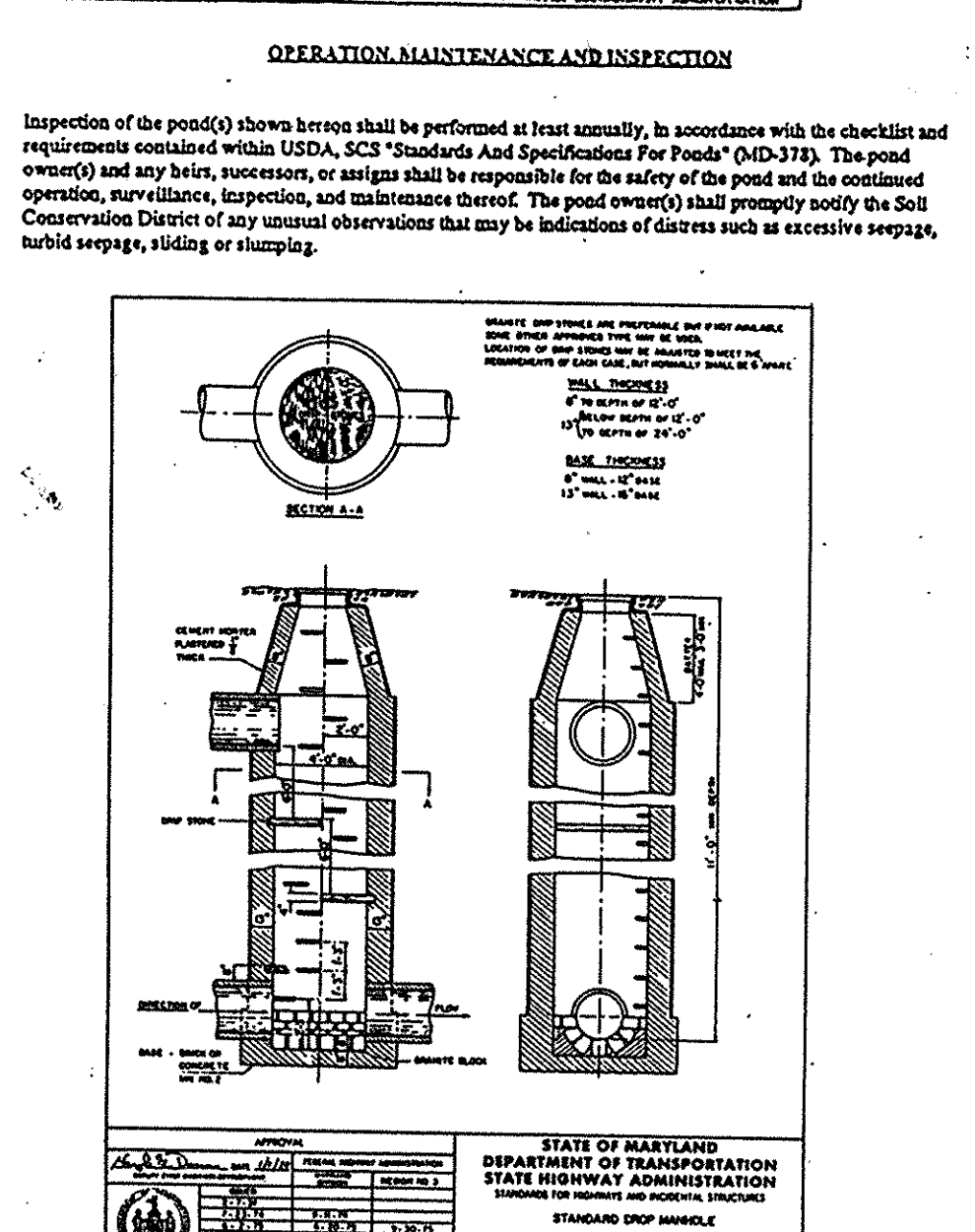
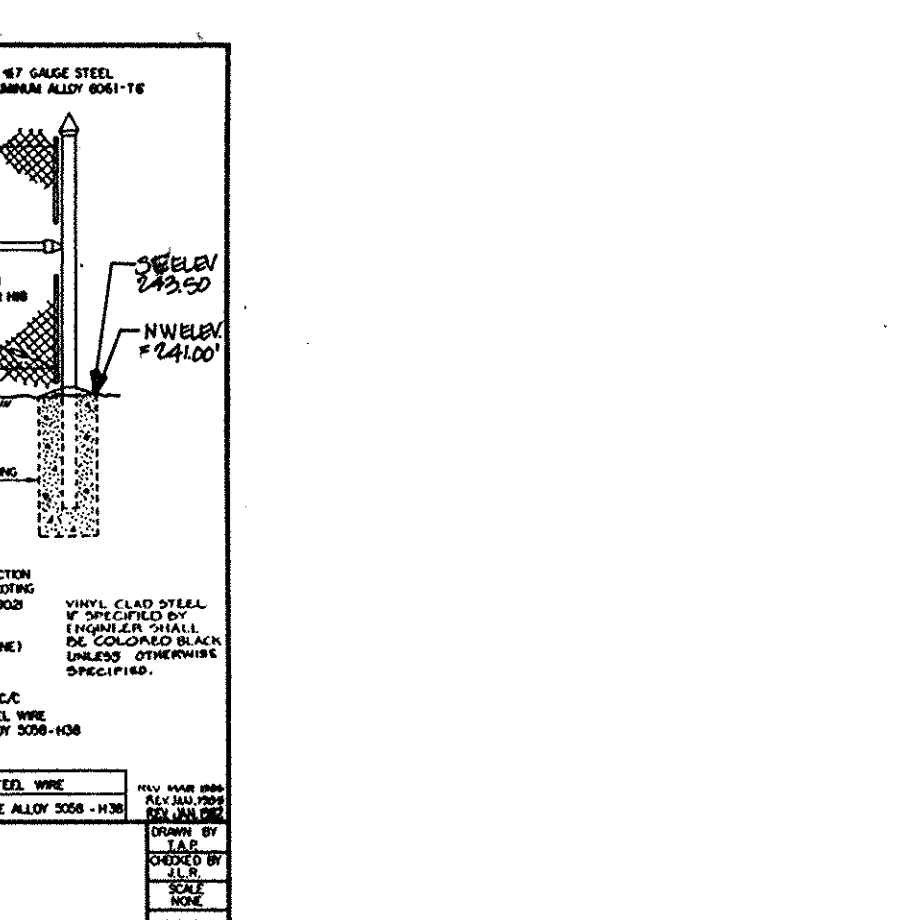
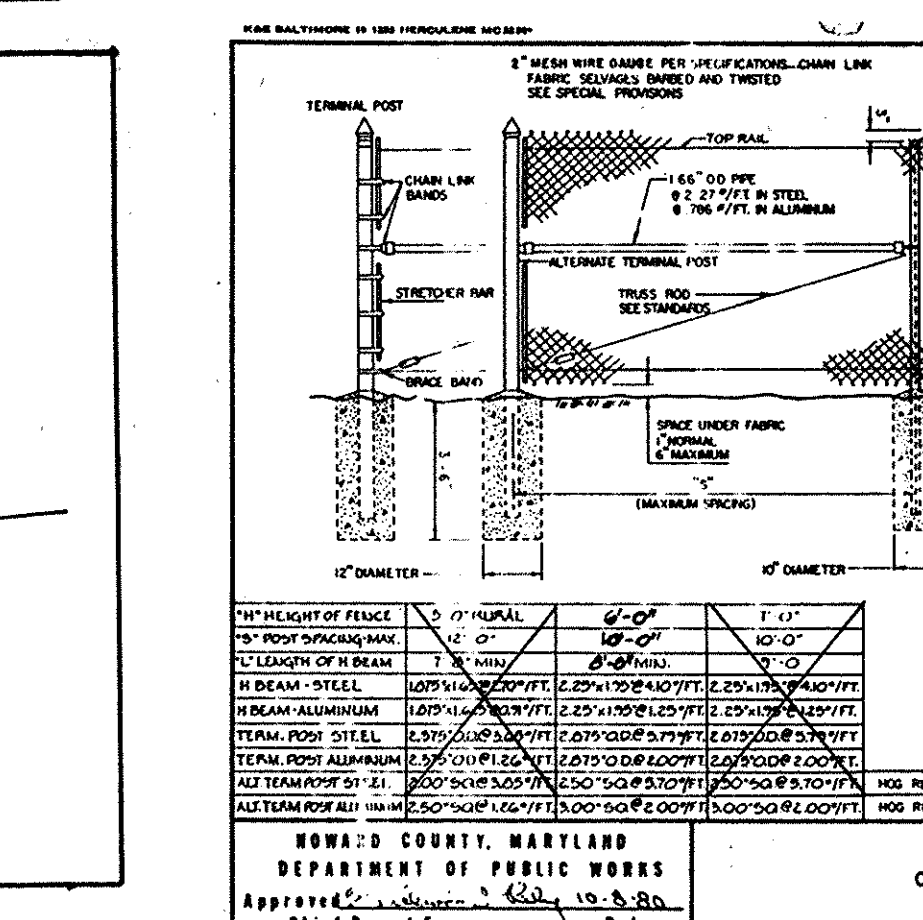
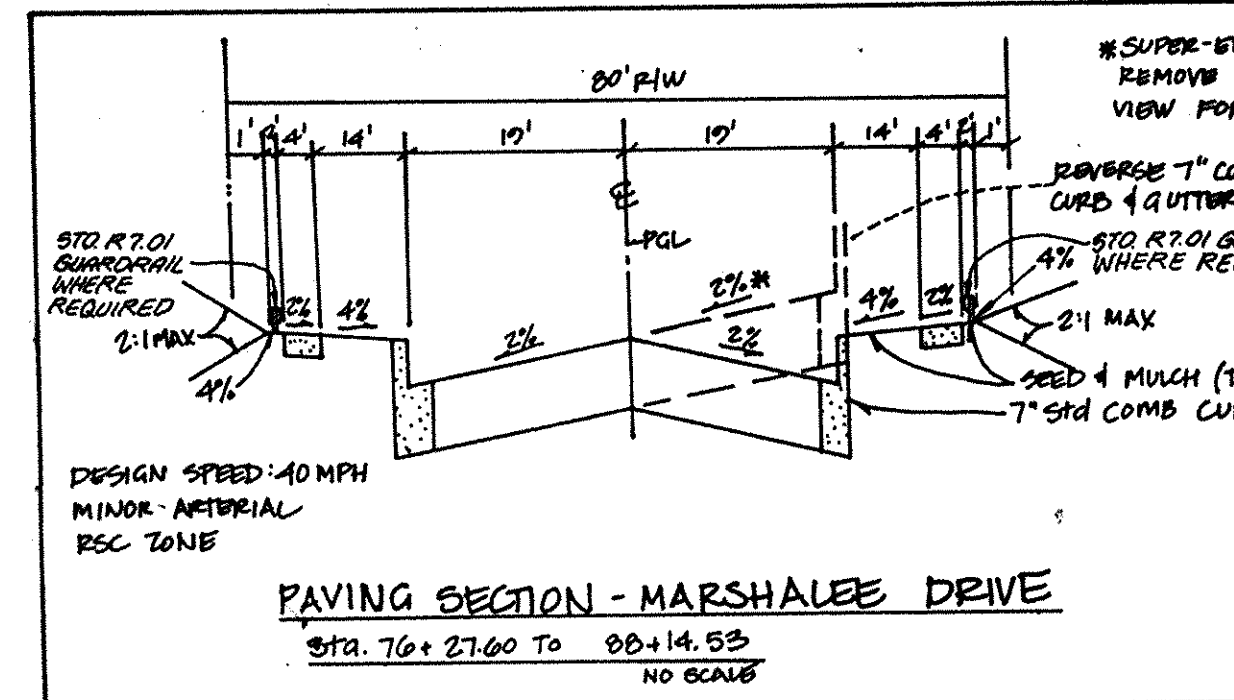
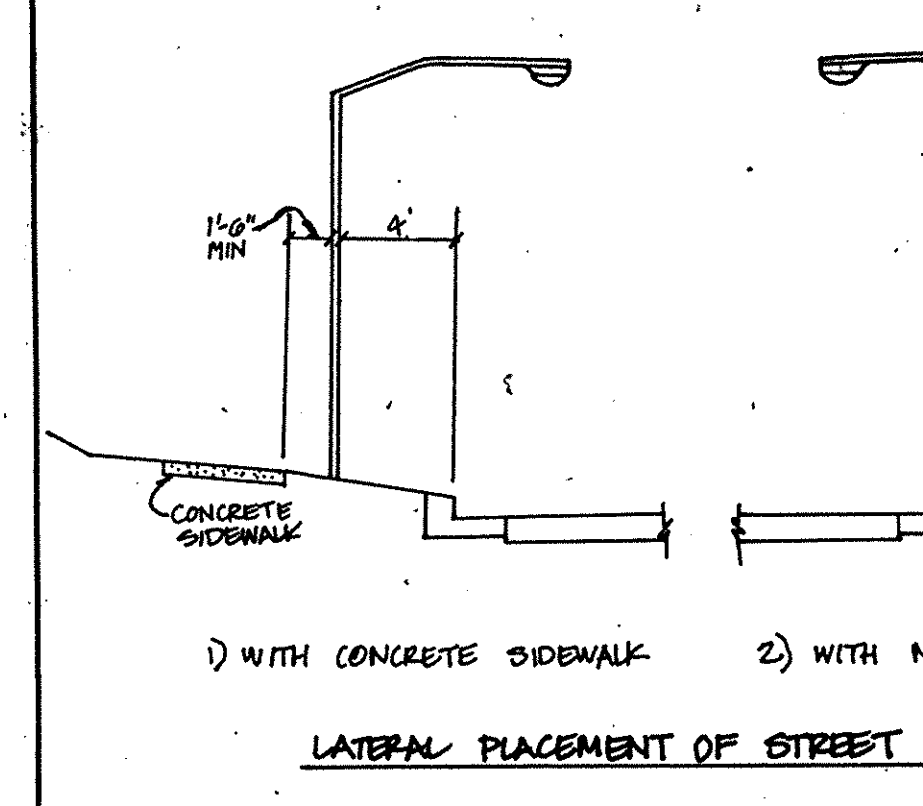
Note: Micaceous soils subgrades require the use of either of the aggregate base pavement sections as shown on the pavement aggregate tables. Either the full depth bituminous concrete section or the aggregate base pavement sections can be used for all other subgrade soils.

ROAD NAME	SYMBOL	LOCATION	OFFSET	TYPE
Marshall Drive	4	76+85	23 RT	RC-1 SPEED LIMIT 85 SIGN, 24" X 30" RECTANGLE
Marshall Drive	4	80+00	13 LT	WE-2 SIDE ROAD SIGN, 30" X 30" DIAMOND

Note: STOP SIGN ON GATEPOST WAY & MARSHALEE DRIVE TO BE PROVIDED ON PD-2-05.

Street Name	Symbol	Centerline Station	Offset	Lamp Type	Post Type	Pole Type
Marshall Drive	---	76+81	---	LT	150 Watt HPS Pendant Fixture	30' Galvanized Steel Pole
Marshall Drive	---	80+45	---	RT	150 Watt HPS Pendant Fixture	30' Galvanized Steel Pole
Marshall Drive	---	83+75	---	LT	150 Watt HPS Pendant Fixture	30' Galvanized Steel Pole
Marshall Drive	---	87+00	---	RT	150 Watt HPS Pendant Fixture	30' Galvanized Steel Pole

* All street lights shall be offset 4' behind curb; see detail Sheet 4



ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Bruce D. Burton
Signature of Engineer
5/22/95
Date

DEVELOPER'S CERTIFICATE

I certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

W.L. N.
Signature of Developer
3/2/94
Date

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

Robert Ziehm
U.S. Soil Conservation Service
5/20/95
Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Robert Ziehm
Howard Soil Conservation District
5/20/95
Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

Robert Ziehm
Chief, Land Development Division
6/16/95
Date

APPROVED: Department of Planning and Zoning.

Quinn J. J. J.
Chief, Division of Land Development and Research
6/22/95
Date

LAND DESIGN ENGINEERING, INC.

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
(410) 715-1070 (Balt.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

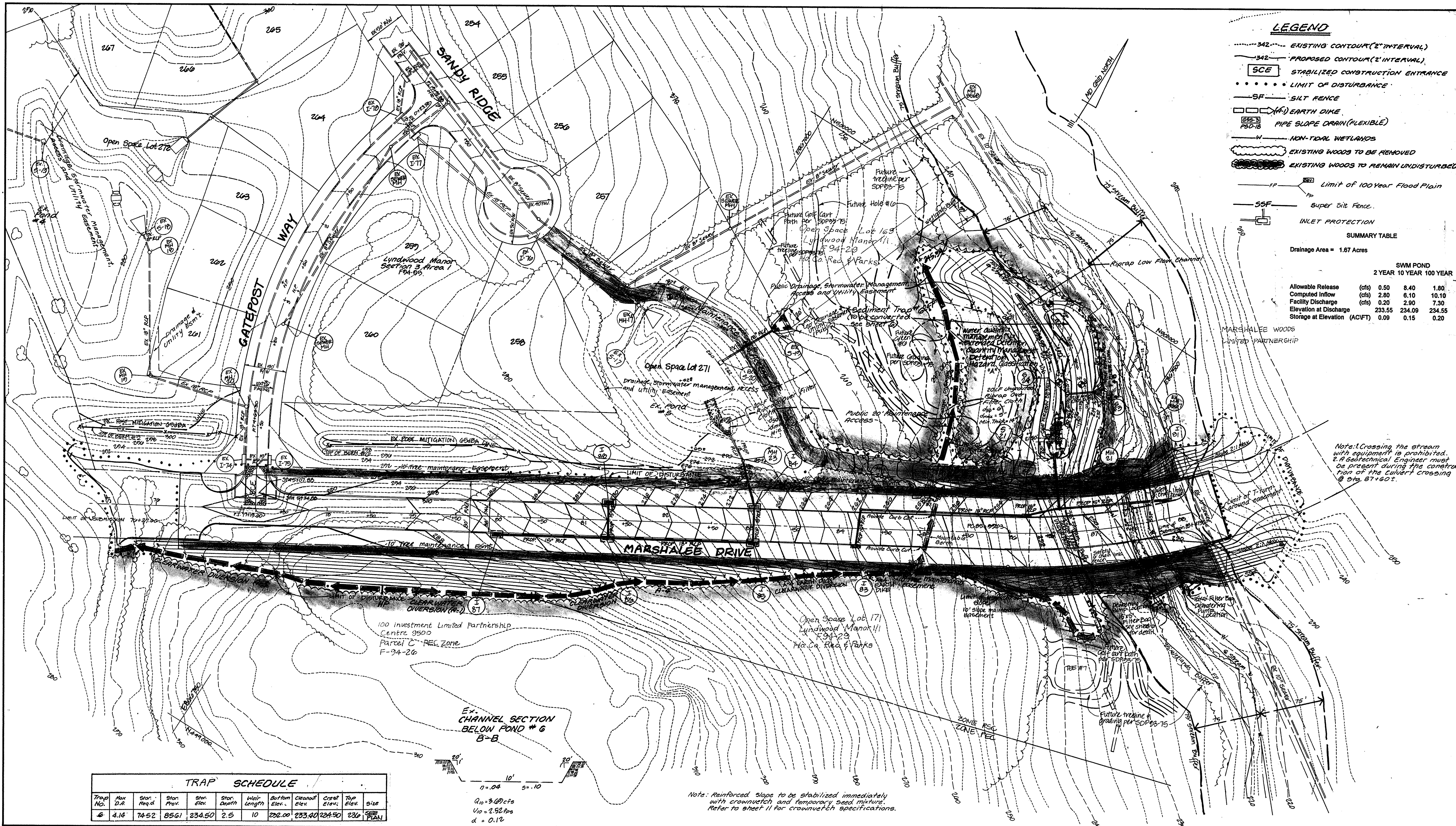
DESIGNED: GL
DRAWN: GL
CHECKED: RM
DATE: 12/94

SCALE: AS SHOWN
DRAWING: 4 of 11
JOB No.: 92-176-7
FILE No.: F9A-96

LYNDWOOD MANOR
SECTION THREE AREA TWO
Tax Map 37 Part of Parcels 643, 38, 640
1st Election District Howard County, MD

Owner/Developer
100 INVESTMENT LIMITED PARTNERSHIP
8835-F Columbia 100 Parkway
Columbia, Maryland 21045 (410) 730-0810

F-94-96



LEGEND

- 342 --- EXISTING CONTOUR (2' INTERVAL)
- - - 342 - - - PROPOSED CONTOUR (2' INTERVAL)
- [SCE] STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- SF - SILT FENCE
- [] (H-1) EARTH DIKE
- [] (H-3) PIPE SLOPE DRAIN (FLEXIBLE)
- W - NON-TIDAL WETLANDS
- [] EXISTING WOODS TO BE REMOVED
- [] EXISTING WOODS TO REMAIN UNDISTURBED
- FF - Limit of 100 Year Flood Plain
- SSF - Super Silt Fence
- [] INLET PROTECTION

SUMMARY TABLE

Drainage Area = 1.67 Acres

		2 YEAR	10 YEAR	100 YEAR
Allowable Release	(cfs)	0.50	8.40	1.80
Computed Inflow	(cfs)	2.80	6.10	10.10
Facility Discharge	(cfs)	0.20	2.90	7.30
Elevation at Discharge		233.55	234.09	234.55
Storage at Elevation (AC/FT)		0.09	0.15	0.20

Note: 1. Crossing the stream with equipment is prohibited.
2. A Geotechnical Engineer must be present during the construction of the culvert crossing @ Sta. 87+00.

TRAP SCHEDULE

Trap No.	Max D.A.	Start Req'd	Start Prov.	Start Elev.	Water Depth	Water Length	Bottom Elev.	Crest Elev.	Top Elev.	Size
6	4.14	74.52	85.61	234.50	2.5	10	232.00	233.40	234.50	236" PLAN

Note: Reinforced slope to be stabilized immediately with crownweat and temporary seed mixture. Refer to sheet 11 for crownweat specifications.

ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. 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.

Prave D. Burton
Signature of Engineer
Date: 5/22/95

DEVELOPER'S CERTIFICATE

I/we certify that all development and 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 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 Howard Soil Conservation District.

W. N.
Signature of Developer
Date: 3/21/94

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

Patricia E. Stokols
U.S. Soil Conservation District
Date: 5/16/95

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Robert W. Zehm
Howard Soil Conservation District
Date: 5/16/95

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

Paula Person
Chief, Bureau of Engineering
Date: 6/16/95

Andrew M. Dwyer
Chief, Bureau of Highways
Date: 6-6-95

APPROVED: Department of Planning and Zoning.

Oliver J. Summary
Chief, Division of Land Development and Research
Date: 6/22/95

LAND DESIGN ENGINEERING, INC.

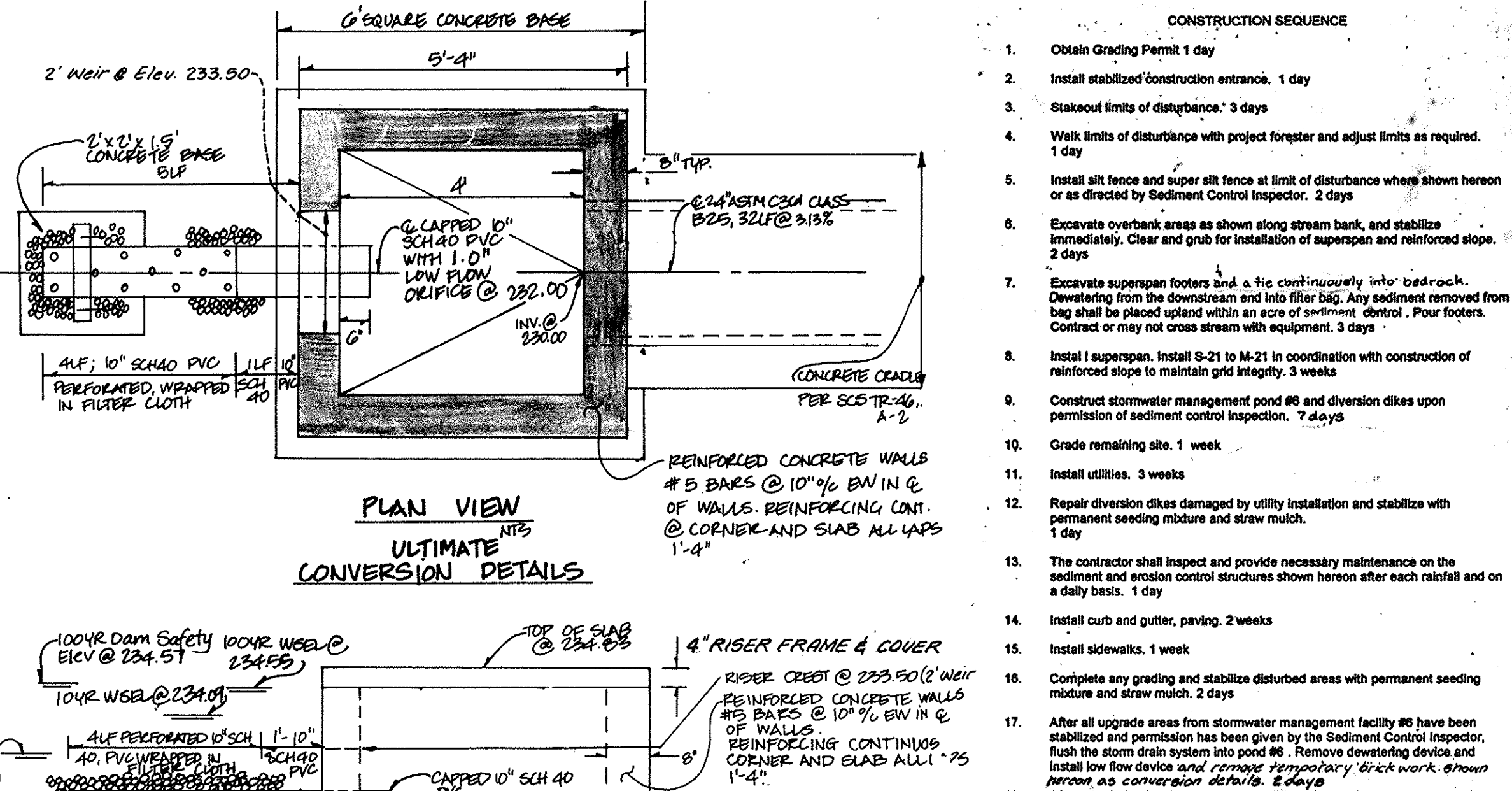
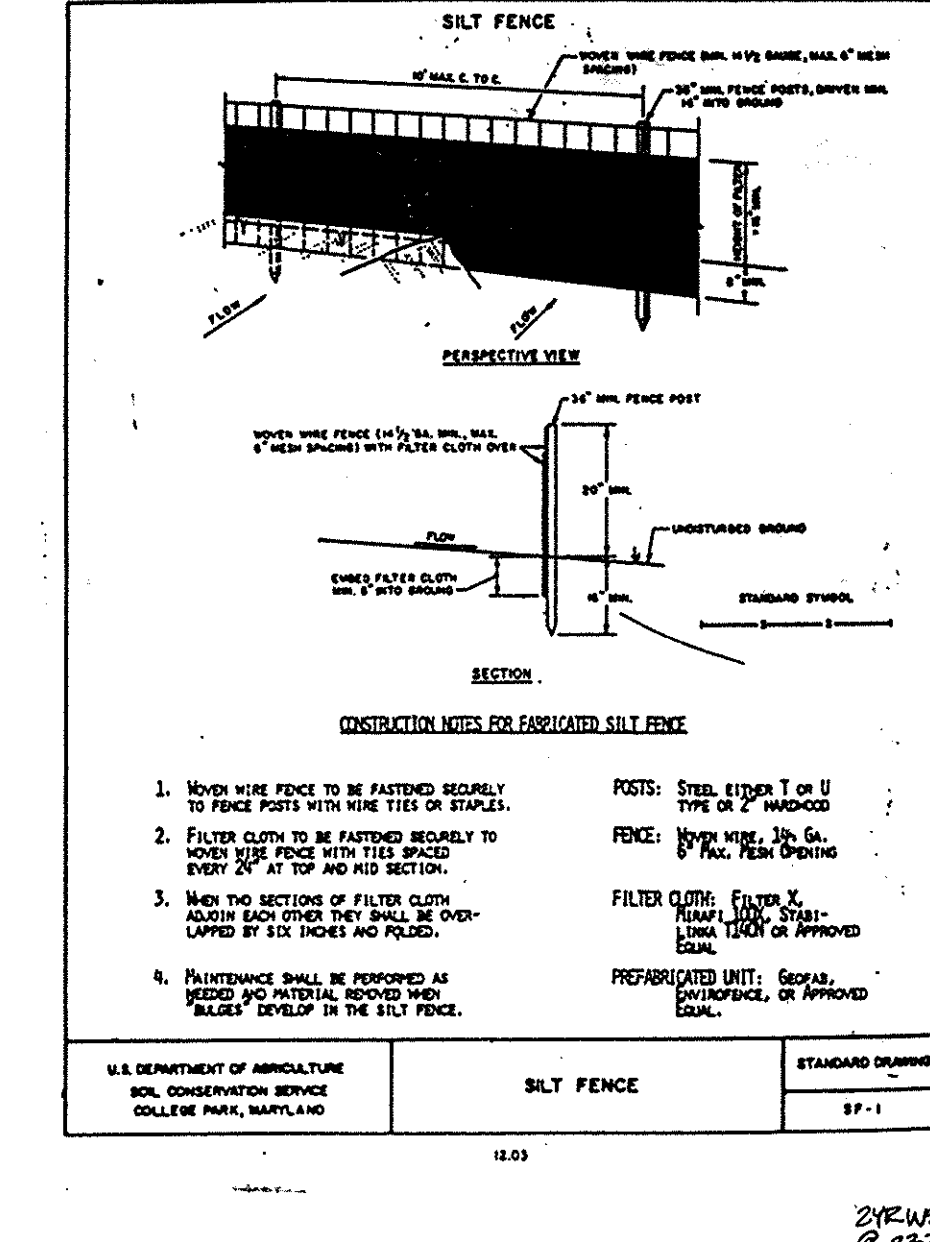
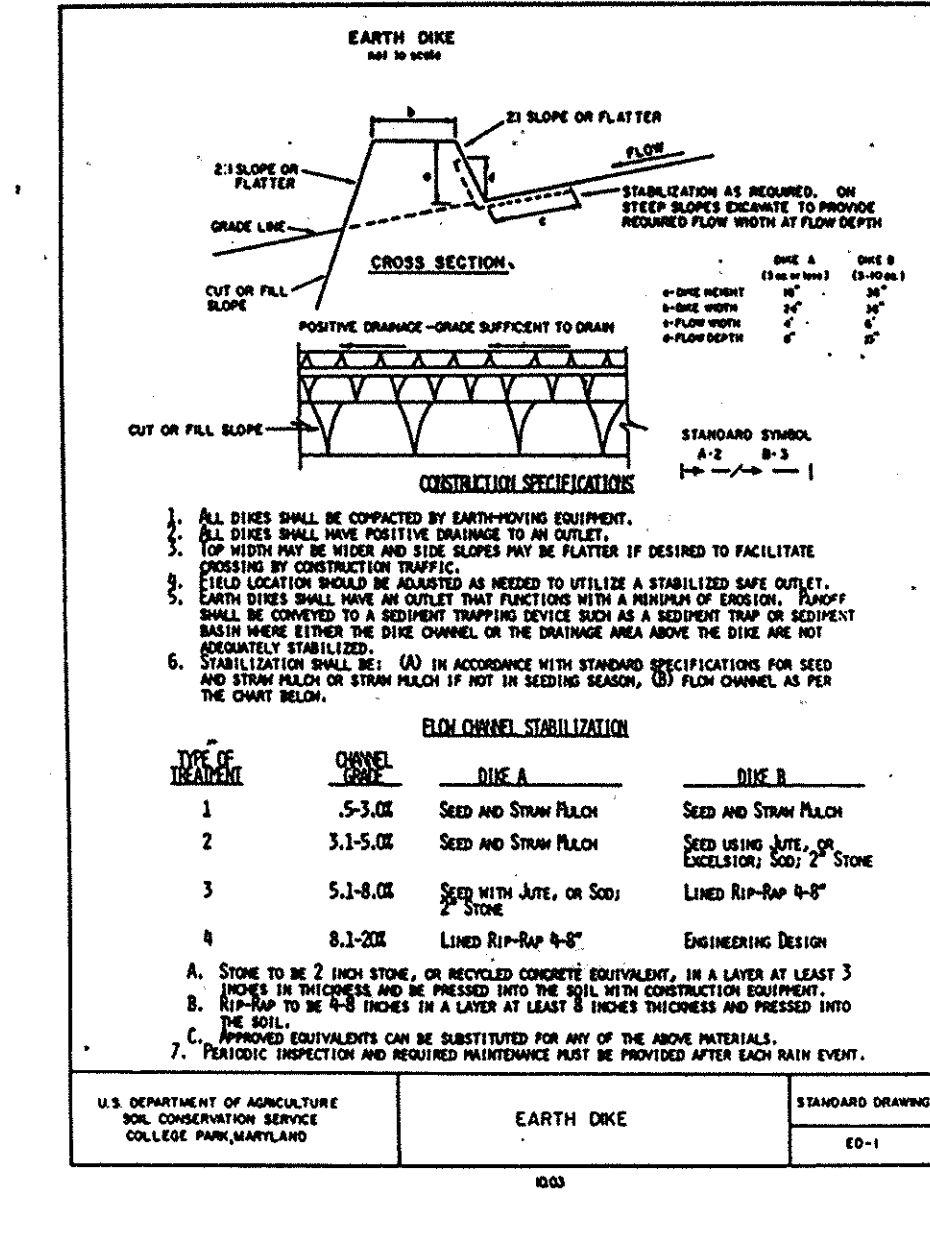
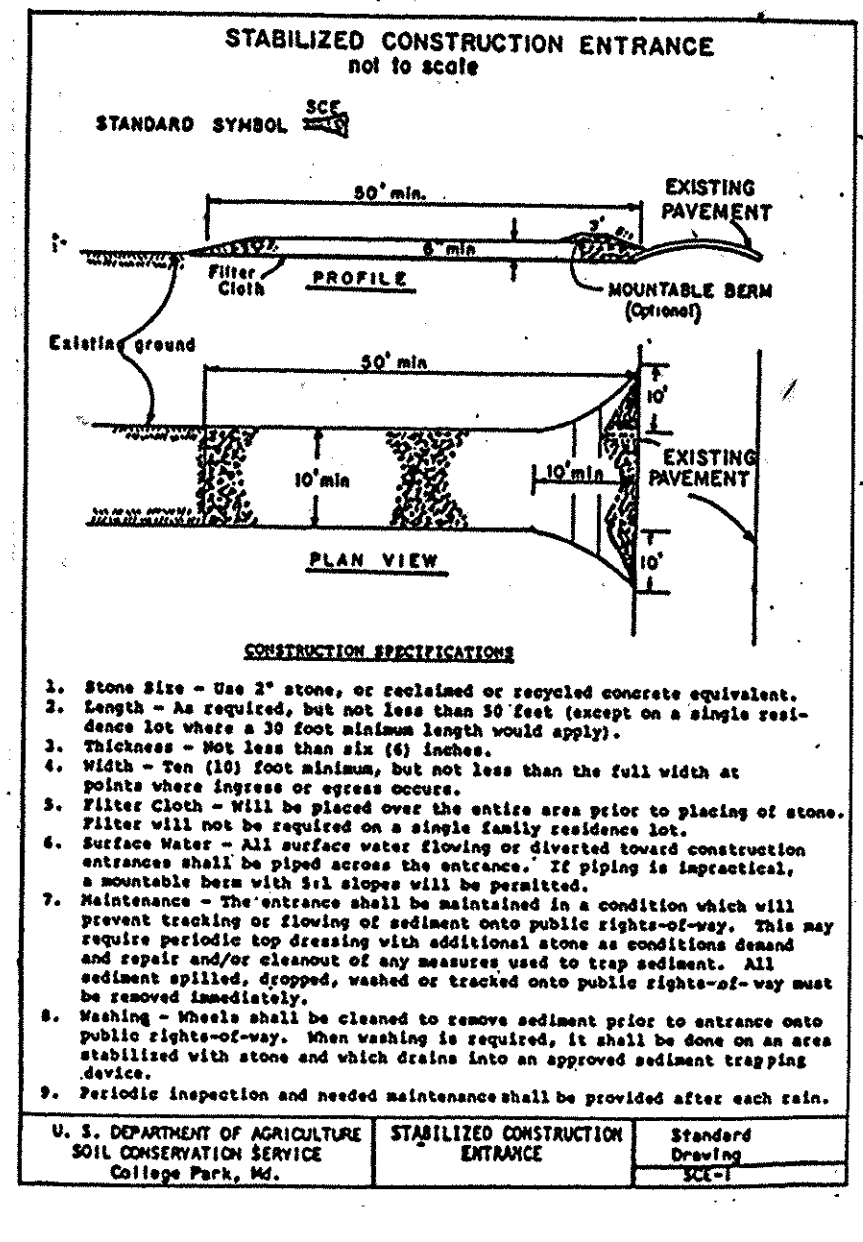
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
(410) 715-1070 (Balt.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED TDES	GRADING & SEDIMENT AND EROSION CONTROL PLAN LYNDWOOD MANOR SECTION THREE AREA TWO Tax Map 37 Part of Parcels # 43, 38, 640 1st Election District Howard County, MD.	SCALE 1" = 50'	
DRAWN GL		DRAWING 5 of 11	
CHECKED RM		JOB No. 92-170-7	
DATE 12/94		OWNER / Developer 100 INVESTMENT LIMITED PARTNERSHIP 8835-P Columbia 100 Parkway Columbia, Maryland 21045 (410) 730-0810	FILE No. F94-96

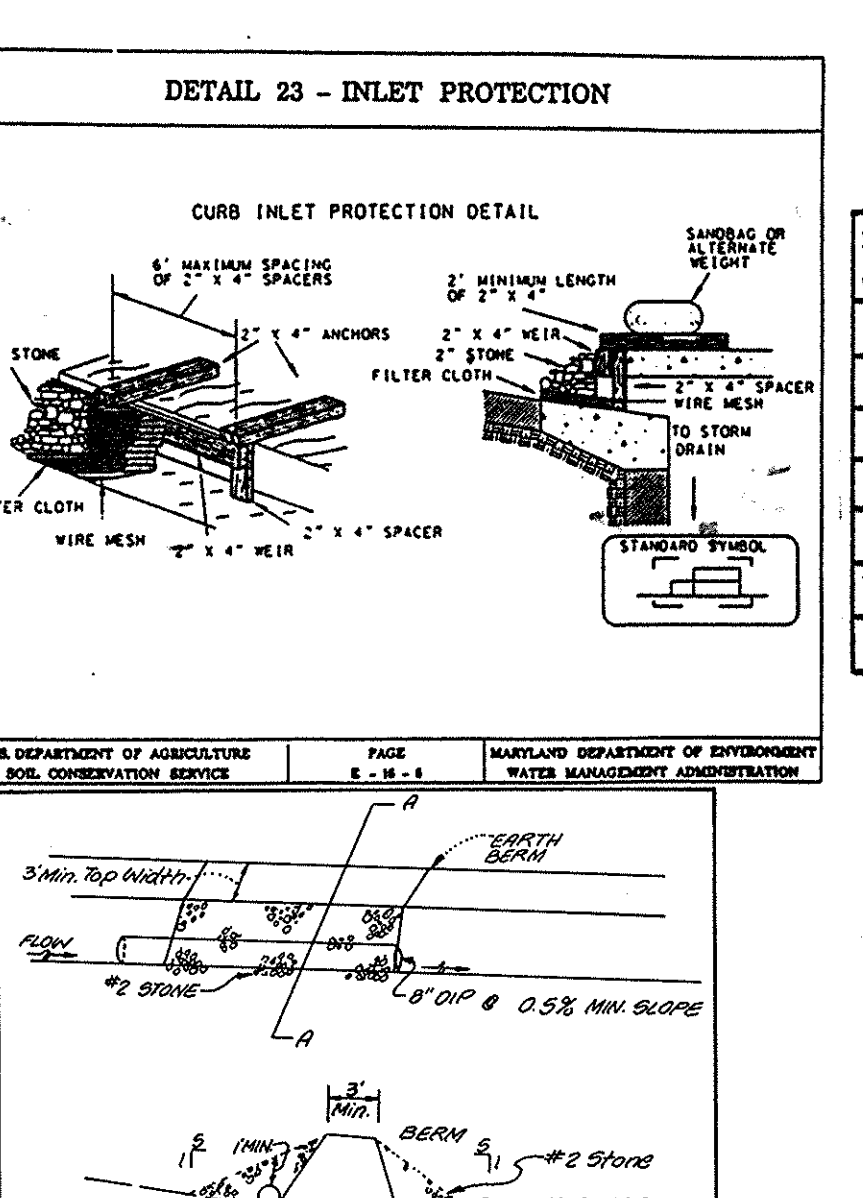
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- HOWARD SOIL CONSERVATION DISTRICT**
STANDARD SEDIMENT CONTROL NOTES
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction, (201-789).
 - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "HARVARD STRONGS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
 - Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within a 7 day period for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
 - All sediment traps/basins must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY CODE, Storm Drainage.
 - All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 HARVARD STRONGS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. For permanent seeding (Sec. 51), and (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding does not allow for proper permission and establishment of vegetation.
 - All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
 - Site Analysis:
Total Area of Site: 2.2 Acres
Area Disturbed: 2.2 Acres
Area to be seeded or paved: 2.2 Acres
Area to be vegetatively stabilized: 2.2 Acres
Total Cut: 25,000 Cu. Yds.
Total Fill: 25,000 Cu. Yds.
Offsite waste/borrow area location: _____
 - Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
 - On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other handling grading operation permits may not be authorized until this initial approval by the inspection agency is received.
 - Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.



- HOWARD SOIL CONSERVATION DISTRICT**
PERMANENT SEEDING NOTES
- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Soil Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- PREPARATION:** Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 60 lbs per acre super phosphate (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre straw mulch (10 lbs/1000 sq. ft.).
 - SEEDING:** Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 100 lbs per acre straw mulch (22 lbs/1000 sq. ft.) before seeding. Harrow or disk 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 per acre of annual ryegrass (1.4 lbs/1000 sq. ft.). For the period May 1 thru August 14, seed with 1 lb per acre of weeping lovegrass (1.07 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 seed.
- Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted wood grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq. ft.) of available mulch on flat areas. On slopes 6 feet or higher, use 340 gallons per acre (6 gal/1000 sq. ft.) for anchoring.
- Maintenance:** Inspect all seeding areas and make needed repairs, replacements and reseedings.
- TEMPORARY SEEDING NOTES**
- Apply to graded or cleared areas likely to be restructured where a short-term vegetative cover is needed.
- Soil Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.
- Soil Amendments:** Apply 400 lbs per acre straw mulch (10 lbs/1000 sq. ft.).
- Seeding:** For periods March 1 thru April 30 and from August 15 thru October 15, seed with 2 lbs per acre of annual ryegrass (1.4 lbs/1000 sq. ft.). For the period May 1 thru August 14, seed with 1 lb per acre of weeping lovegrass (1.07 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 seed.
- Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted wood grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gal per acre (5 gal/1000 sq. ft.) of available mulch on flat areas. On slopes 6 feet or higher, use 340 gal per acre (6 gal/1000 sq. ft.) for anchoring.
- Refer to the 1983 HARVARD STRONGS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

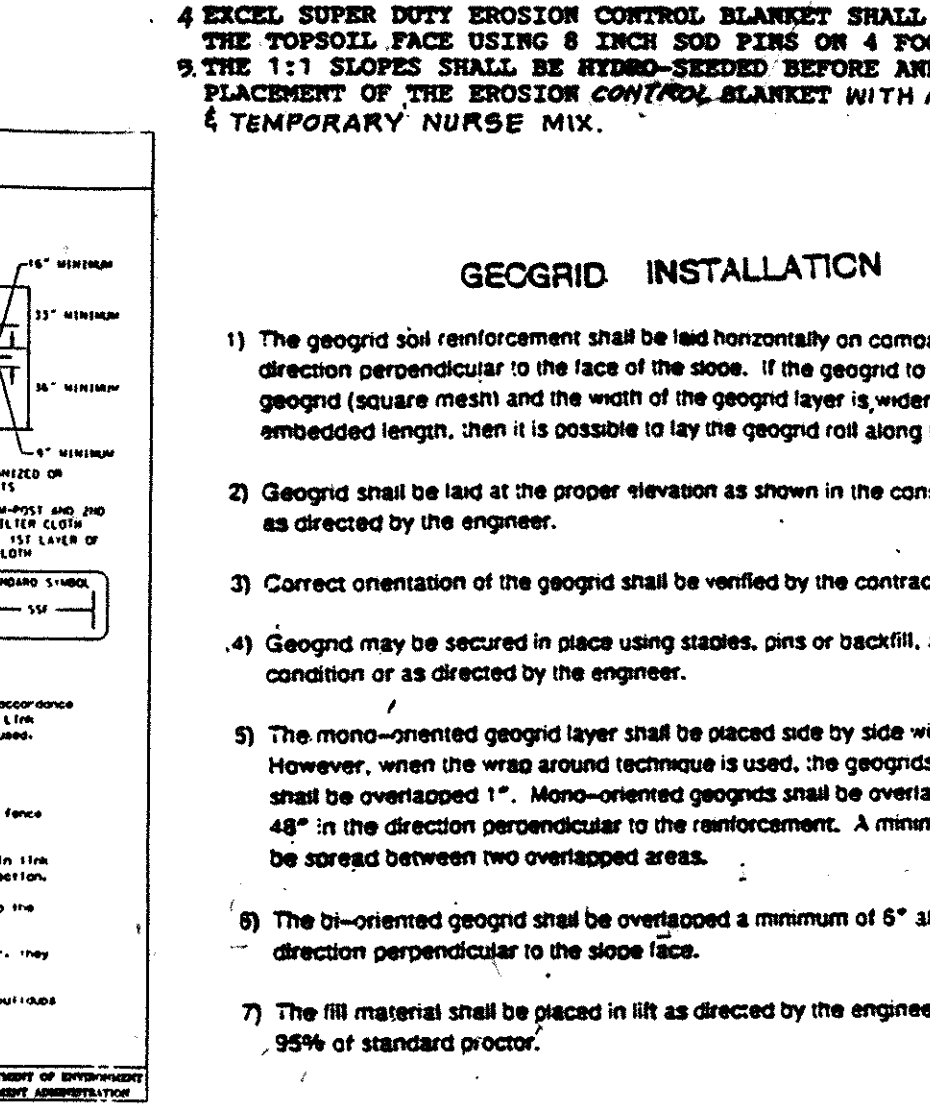
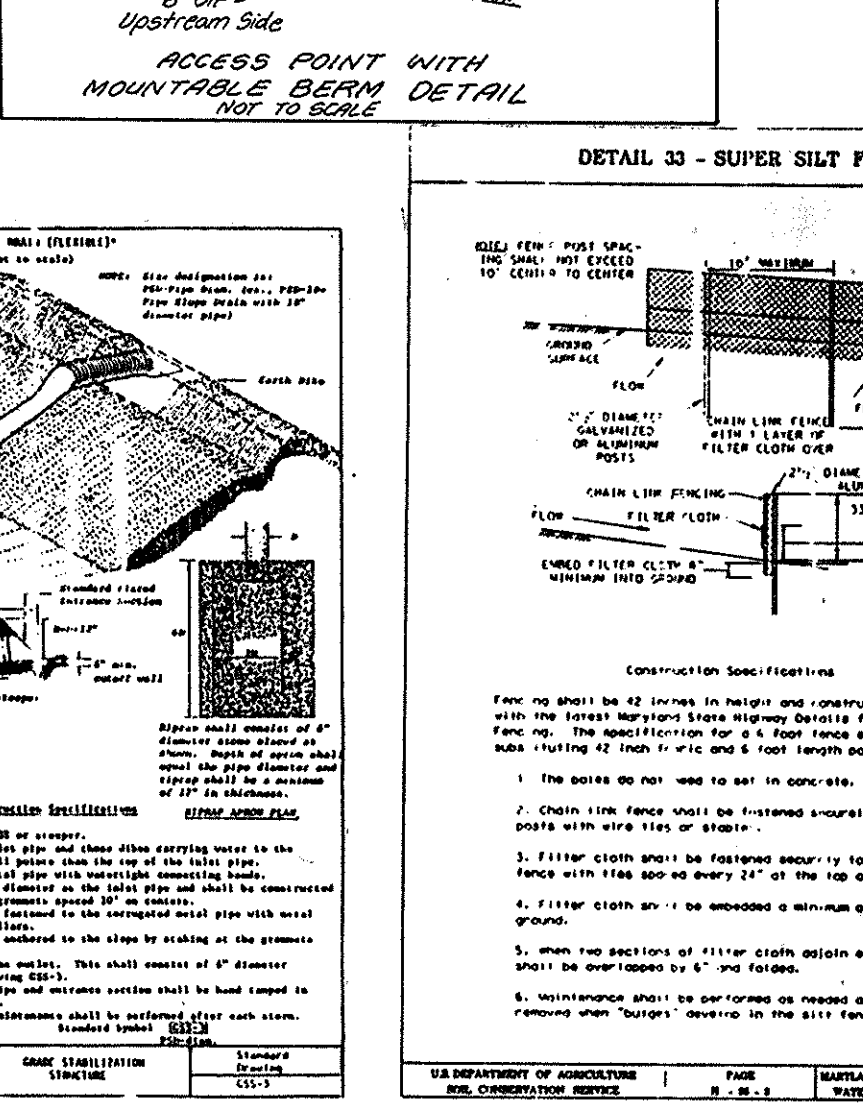
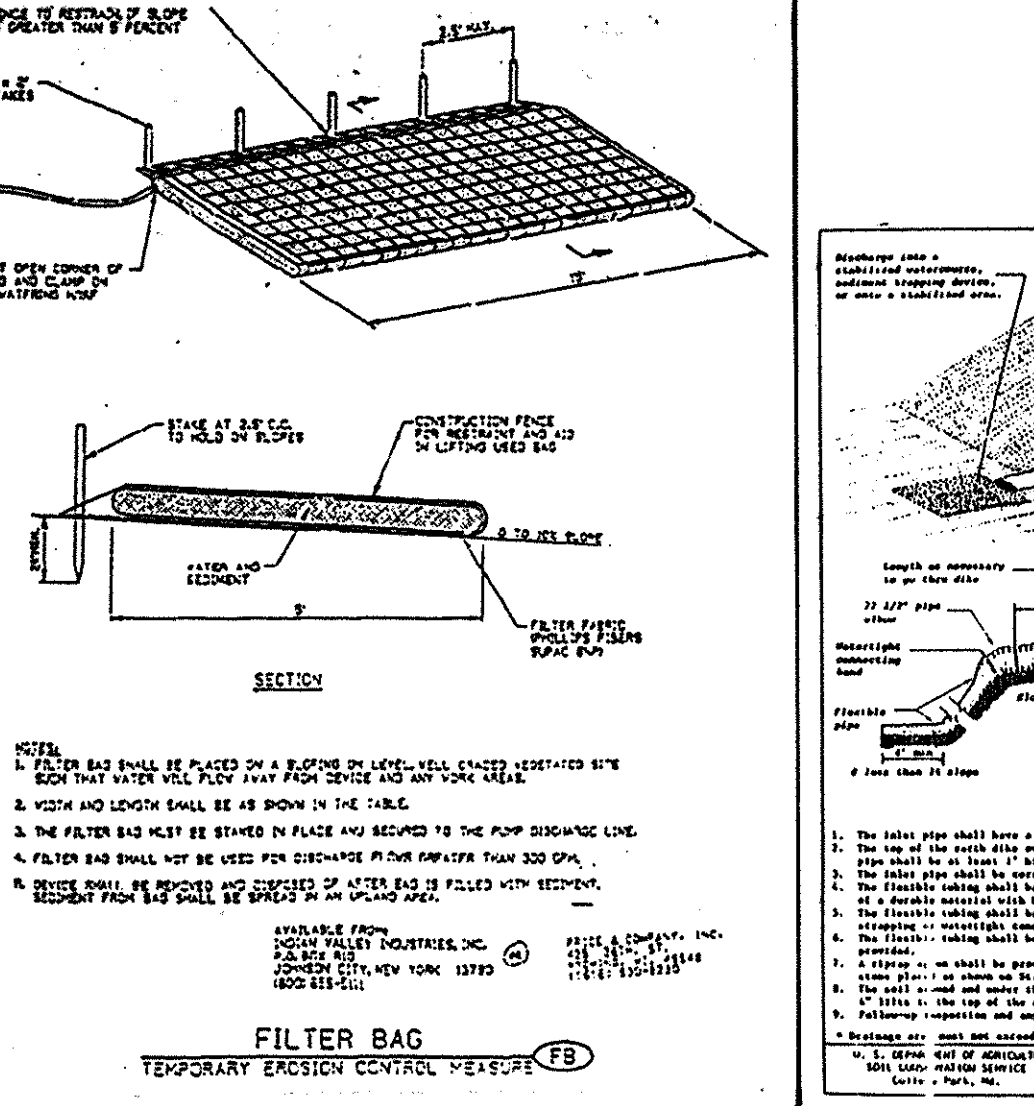
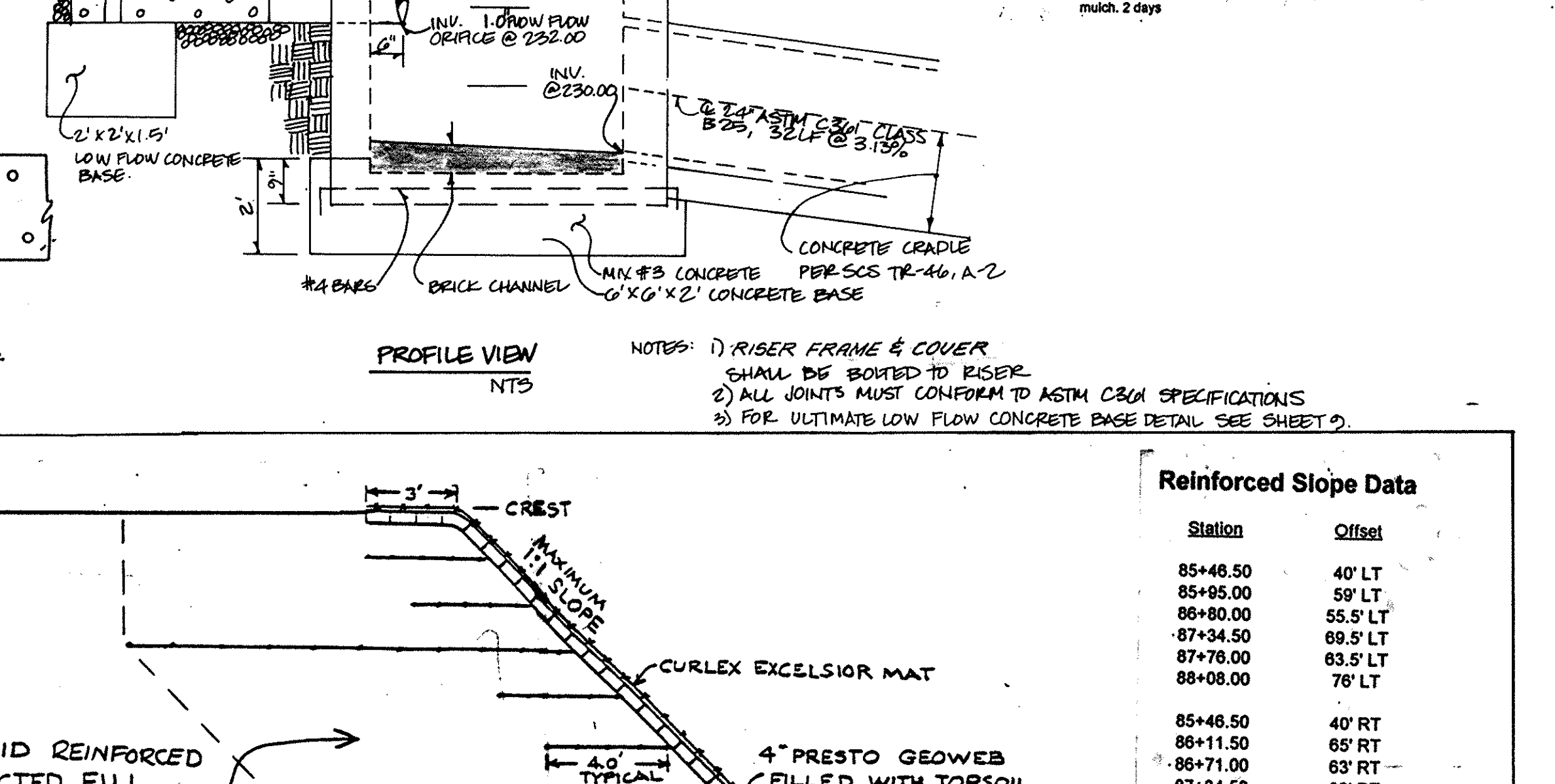
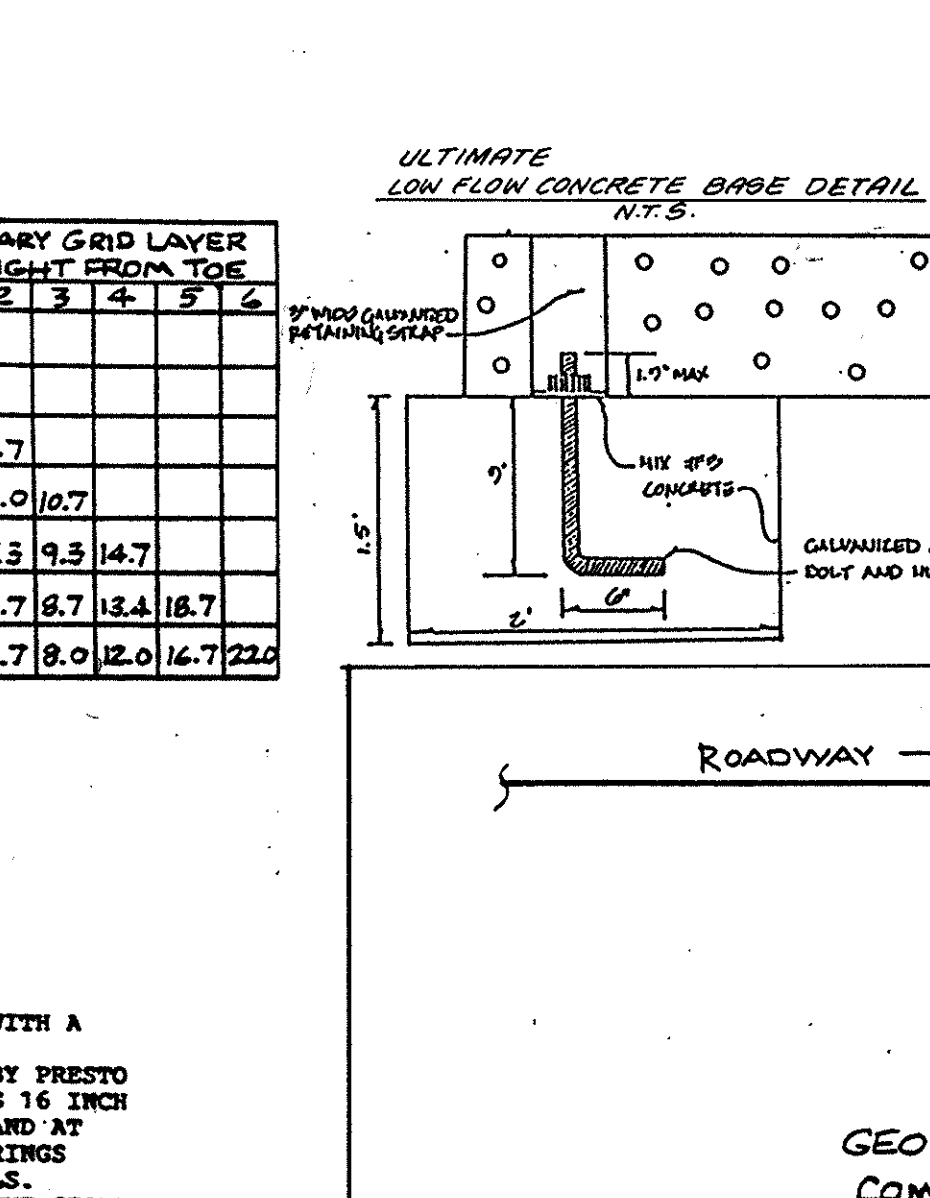


GEO-GRID PLACEMENT TABLE

SLOPE HEIGHT CREST TO TOE	NO. OF PRIMARY GEOGRIDS LAYERS	MAX. NO. OF INTER. GEO-GRID LAYERS	PRIMARY GRID LAY. GRID LING.	PRIMARY GRID LAYER HEIGHT FROM TOE
0' TO 4'	0	2	-	1, 2, 3, 4, 5, 6
4' TO 8'	1	2	6'	2.0
8' TO 12'	2	3	8'	2.0, 6.7
12' TO 16'	3	5	11'	2.0, 6.0, 10.7
16' TO 20'	4	7	14'	2.0, 5.3, 9.3, 14.7
20' TO 24'	5	9	17'	2.0, 4.7, 8.7, 13.4, 18.7
24' TO 28'	6	11	19'	2.0, 4.7, 8.0, 12.0, 16.7, 22.0

1:1 SLOPE FACE SPECIFICATIONS

- SLOPE FACE SHALL BE TRIMMED AND SURFACE COMPACTED WITH A GRADE-ALL BUCKET.
- 4 INCH DEEP GEO-WEBS SLOPE PROTECTION MANUFACTURED BY PRESTO SHALL BE SECURED TO THE ENTIRE 1:1 SLOPE FACE USING 16 INCH LONG HOOKED END #3 BAR ON 4 FOOT SPACING EACH WAY AND AT EACH CELL ALONG THE CREST OF THE SLOPE. BRASS HOG RINGS SHALL BE USED TO SECURE BUTTING GEOWEB SECTIONS CELLS.
- QUALITY TOP SOIL SHALL BE USED TO COMPLETELY FILL THE GEOWEB CELLS FOR A COMPACTED DEPTH OF 4 INCHES.
- EXCEL SUPER DUTY EROSION CONTROL BLANKET SHALL BE SECURED TO THE TOPSOIL FACE USING 8 INCH SOD PINS ON 4 FOOT SPACING.
- THE 1:1 SLOPE SHALL BE REINFORCED BEFORE AND AFTER PLACEMENT OF THE EROSION CONTROL BLANKET WITH A CROWN VETCH & TEMPORARY NURSE MIX.



ENGINEER'S CERTIFICATE

I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

BRUCE D. BRYANT 5/22/95
Signature of Engineer Date

DEVELOPER'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 Department of the Environment & Planning program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

W. N. W. 3/21/94
Signature of Developer Date

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

Robert Zelman 5/30/95
Howard Soil Conservation District Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

Robert Zelman 6/16/95
Chief, Bureau of Engineering Date

APPROVED: Department of Planning and Zoning.

Anna Shumway 6/22/95
Chief, Division of Land Development and Research Date

LAND DESIGN ENGINEERING, INC.

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GRADING & SEDIMENT AND EROSION CONTROL DETAIL

LYNDWOOD MANOR
SECTION THREE AREA TWO
Tax Map 37 Part of Parcels 643, 38, 640
1st Election District Howard County, MD

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100 INVESTMENT LIMITED PARTNERSHIP
8835 P. Columbia 100 Parkway
Columbia, Maryland 21045 (410) 730-0810

DESIGNED ES SCALE AS SHOWN
DRAWN G/L/W/T DRAWING 6 of 11
CHECKED RM JOB No. 72-1767
DATE 12/94 FILE No. F94-910

F-94-910

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SPECIFICATIONS

These specifications are applicable to all ponds within the scope of the Standard Specifications for Construction and Materials, Section 606, M.D. 2-221. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stumped of topsoil. All trees, vegetation, rocks and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When spotted, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material: The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" in size or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment design and construction as supervised by a geotechnical engineer.

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining material. This fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tamper or other manually directed compaction equipment. The material needs to be completely air spaced under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining material. This fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tamper or other manually directed compaction equipment. The material needs to be completely air spaced under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Compacted Metal Pipe - All of the following criteria shall apply for compacted metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with water tight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nepon, Plast-Coat, Blac-Rad, and Ben-Culoy. Coated compacted steel pipe shall meet the requirements of AASHTO M-245 and M-246.
2. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
3. Backfilling shall conform to "Structure Backfill".
4. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding to the same length. The bedding shall consist of high strength concrete placed under the pipe and up the sides of the pipe to at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be laid. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 606, M.D. 2-221.

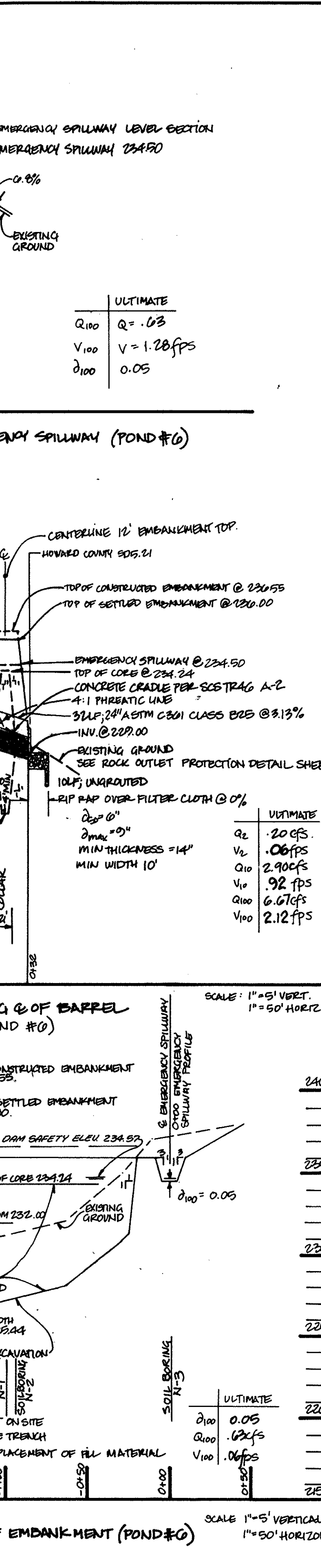
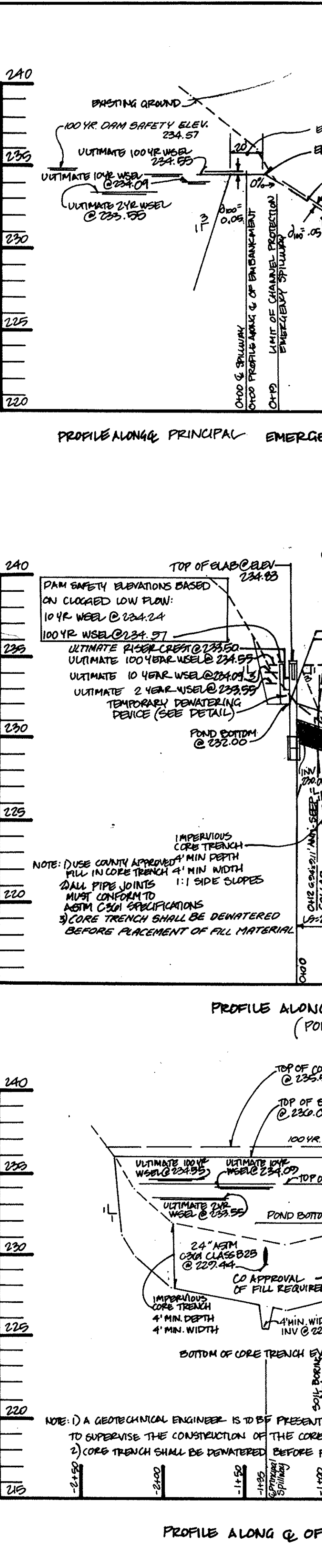
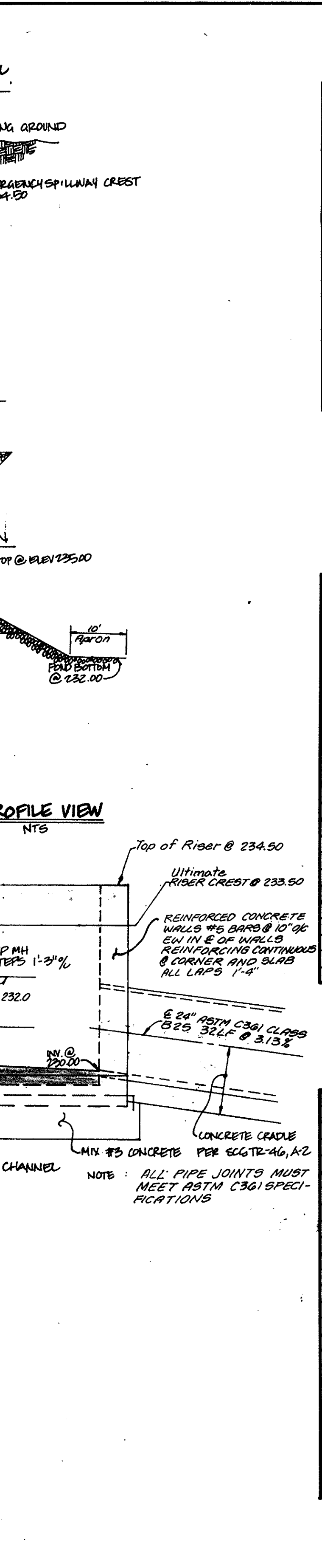
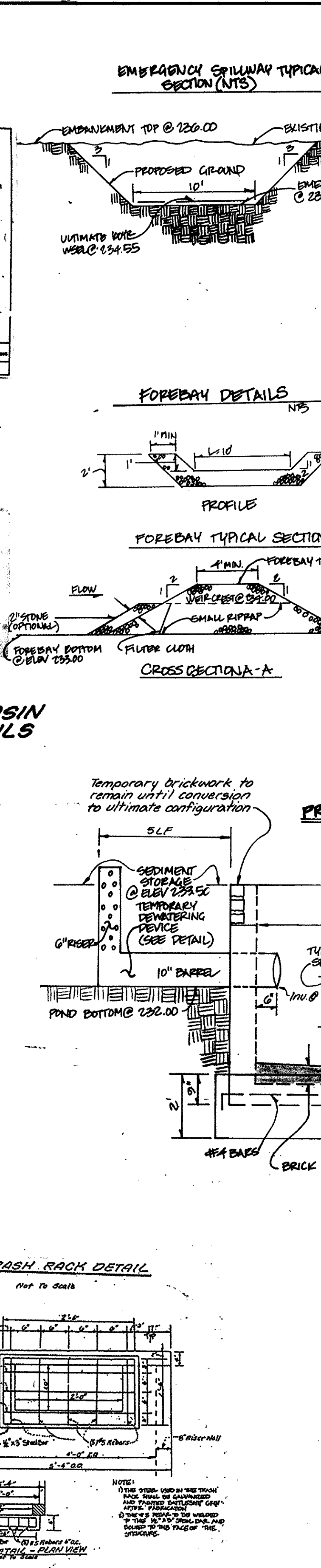
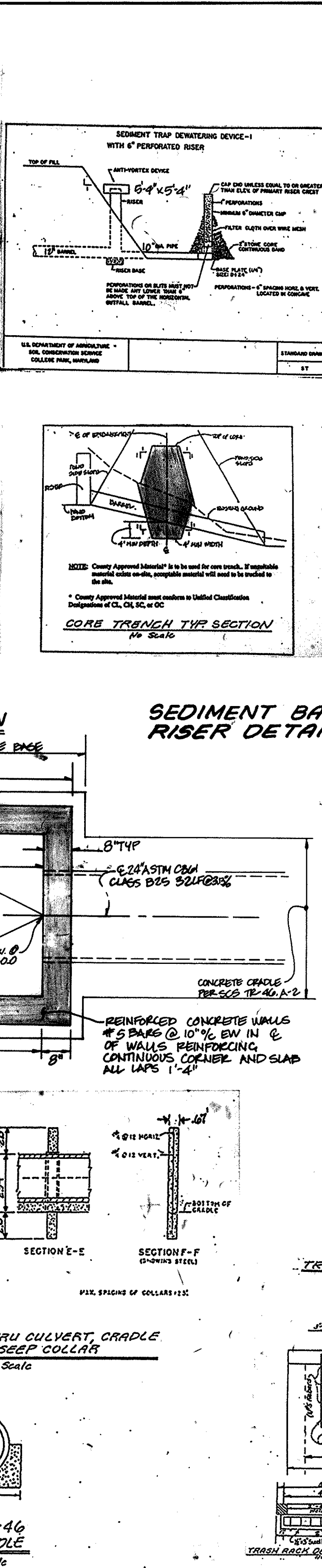
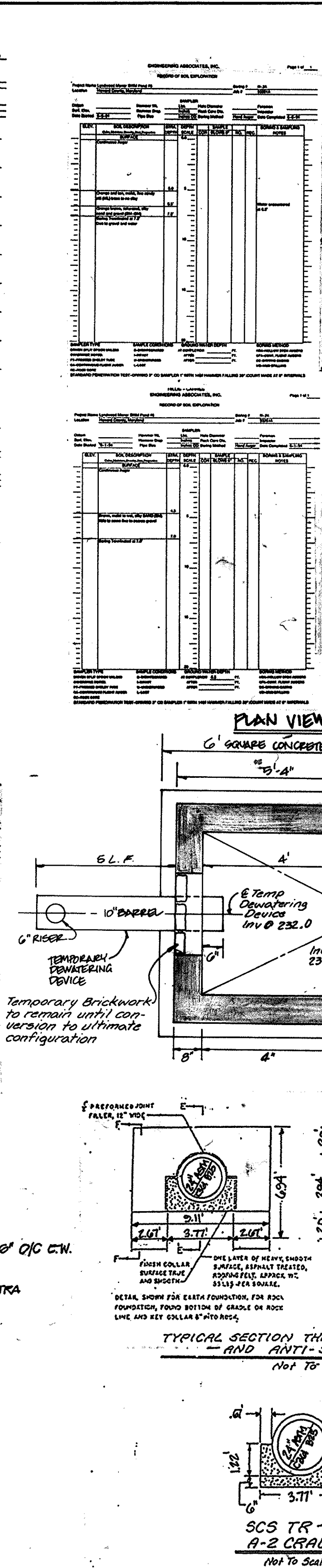
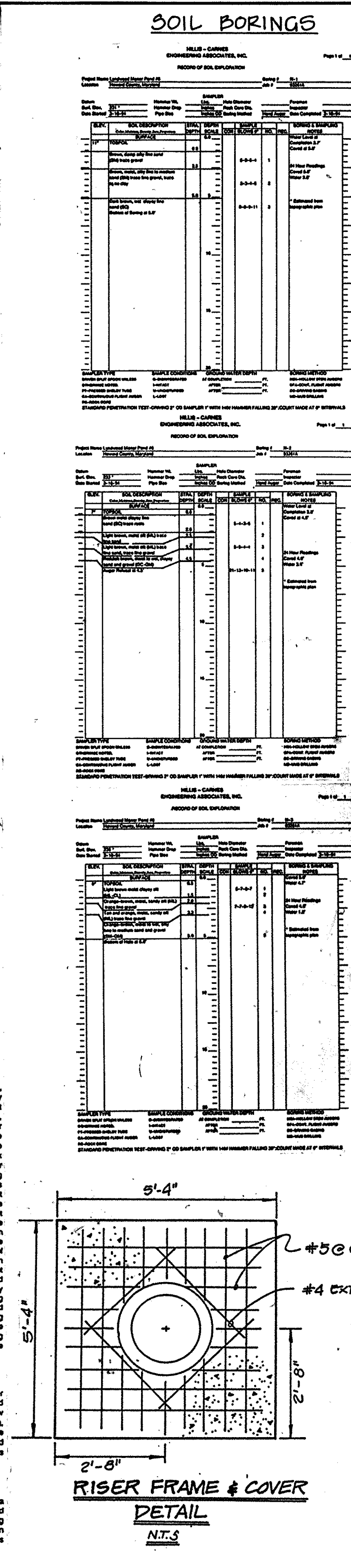
Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 606.

The Riprap shall be placed in a single layer and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. The riprap shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 611.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct



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 engaged 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.

BRUCE D. BURTON 5/22/95
Signature of Engineer Date

DEVELOPER'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 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 the contractor to site inspections by Howard Soil Conservation District.

W.F.N. 3/21/94
Signature of Developer Date

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

Robert W. Zilmer 5/30/95
Howard Soil Conservation District Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.

Richard Egan 6/16/95
Chief, Bureau of Engineering Date

APPROVED: Department of Planning and Zoning.

Uma Jermann 6/22/95
Chief, Division of Land Development and Research Date

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DESIGNED ES	STORMWATER MANAGEMENT DETAILS	SCALE AS SHOWN
DRAWN GL	LYNDWOOD MANOR	DRAWING 9 of 11
CHECKED RM	SECTION THREE AREA TWO	JOB No. 92-170-7
DATE 12/94	Tax Map 37 Part of Parcels 643,38,640 1st Election District Howard County, MD.	FILE No. F04-90

OWNER/Developer:
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Columbia, Maryland 21045 (410) 730-0810

F-94-96

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NOTE: PLANT LIST IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE. IF DISCREPANCIES EXIST, REFER TO DWG.

No	Key	Quan.	Plant Name	Size	Cond.	Remarks
1	⊕	10	Acer rubrum 'Red Sunset' Red Sunset Red Maple	2.5-3" CAL	B&B	FULL 40' O.C.
2	⊕	13	Crataegus viridis 'Winter King' Winter King Hawthorn	1.5-2" CAL	B&B	FULL 20' O.C.
3	⊕	17	Cedrus deodora Deodar Cedar	6-8" CAL	B&B	12'-15' O.C.
4	⊕	13	Fraxinus pennsylvanica 'Marshalls' Seedless' Marshalls' Seedless Green Ash	2.5-3" CAL	B&B	FULL 40' O.C.
5	⊕	65	Forsythia suspensa var 'sieboldii' Siebold Weeping Forsythia	2-2.5' HT.	B&B	4' O.C.
6	⊕	17	Pinus strobus Eastern White Pine	6-8" HT.	B&B	10-15' O.C.
7	⊕	15	Platanus x acerifolia 'Columbia' Columbia London Plane	2.5-3" CAL	B&B	FULL 40' O.C.
8	⊕		Prunus sargentii Sargent Cherry	2.5-3" CAL	B&B	FULL 30' O.C.
9	⊕	21	Prunus yedoensis Yoshino Cherry	1.5-2" CAL	B&B	
10	⊕	5	Quercus palustris 'Sovereign' 'Sovereign' Pin Oak	2.5-3" CAL	B&B	FULL 40' O.C.
11	⊕	14	Quercus rubra Northern Red Oak	2.5-3" CAL	B&B	FULL 40' O.C.
12	⊕	45	Rhus copallina Flameleaf Sumac	18- 24" HT	CONT	4' O.C.
13	⊕		Viburnum dentatum Arrowwood Viburnum	2-2.5' HT.	B&B or CONT.	5' O.C.

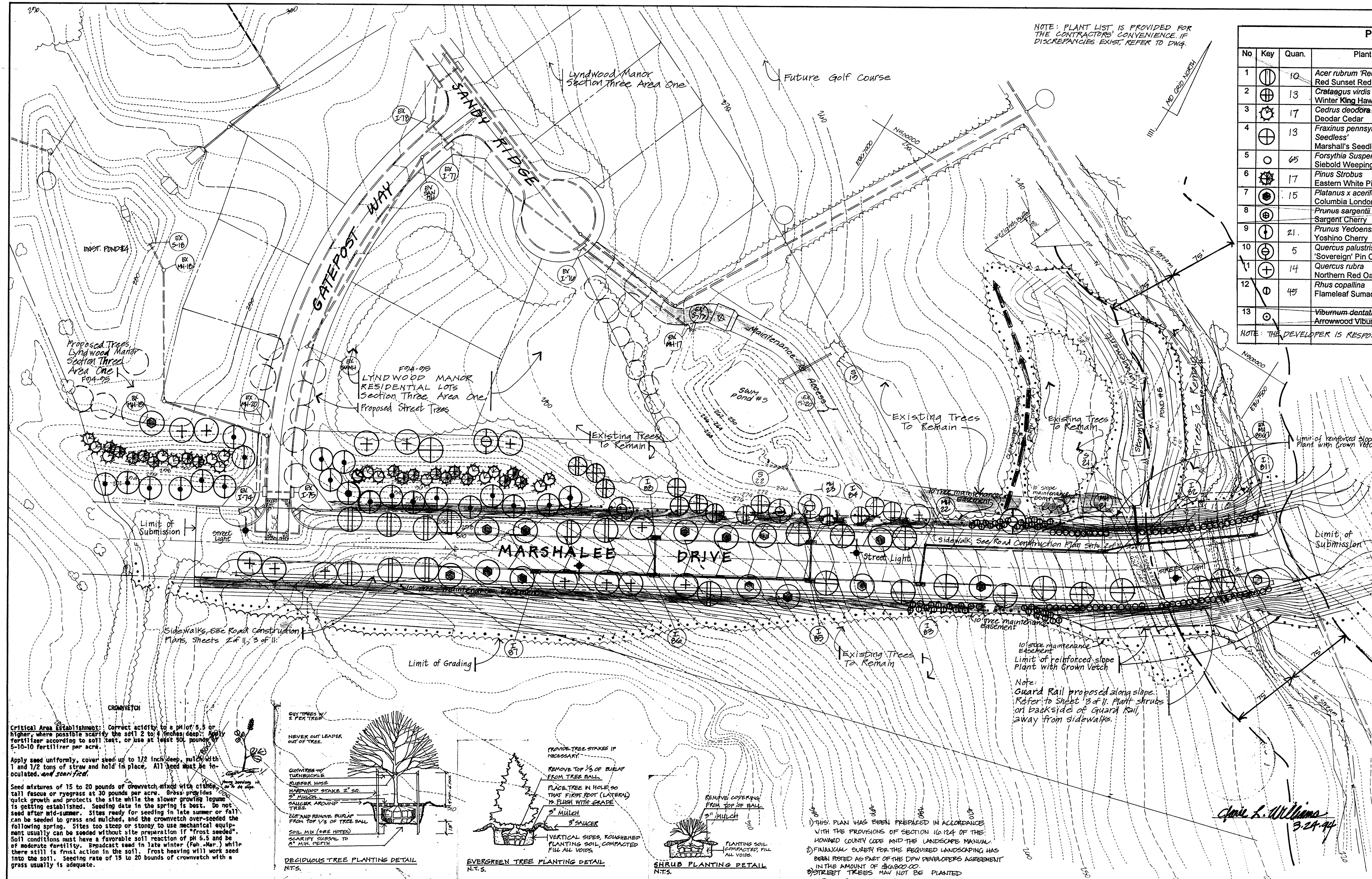
NOTE: THE DEVELOPER IS RESPONSIBLE FOR ALL REQ'D PLANTING.

NOTE: This schedule and plan shown on Lyndwood Manor Section Three Area One.

Category	Req'd	Substituted	Remarks
Linear Feet of Roadway	916.56'		
Linear Feet of Existing Vegetation (Yes, No, Linear Feet)	NO		
Cost for Wall, Fence or Berm (Yes, No, Linear Feet)	NO		
Number of Plants Required (Shade Trees, Street Trees, Shrubs)	23 Shade Trees 15 Shrubs		
Number of Plants Provided (Shade Trees, Street Trees, Shrubs)	13 Shade Trees 9 Street Trees 10 Shrubs		

Substitution Credits:
 13 Shade Trees = 4 Trees / 28 Ornamentals = 11 Trees + 13 Shade Trees = 24 Trees.
 10 Ornamentals substituted for 11 Evergreens.

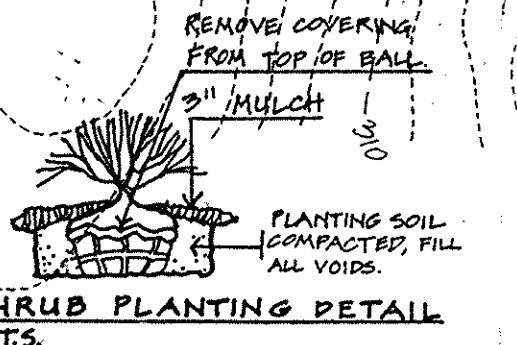
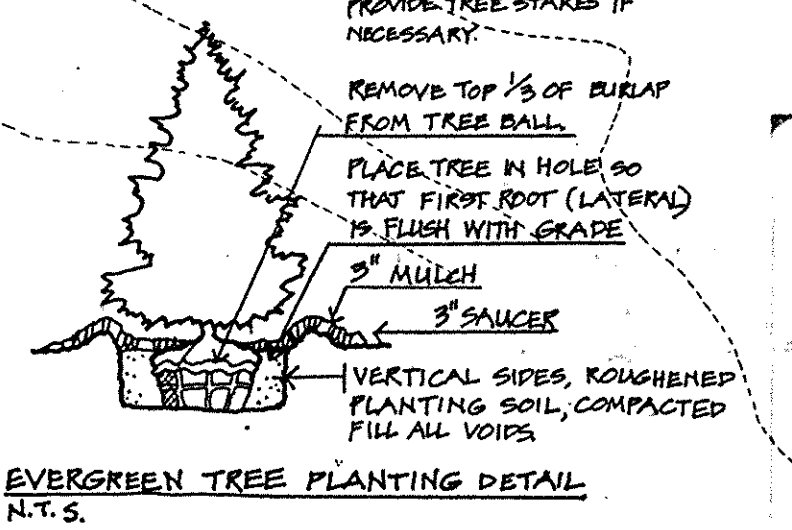
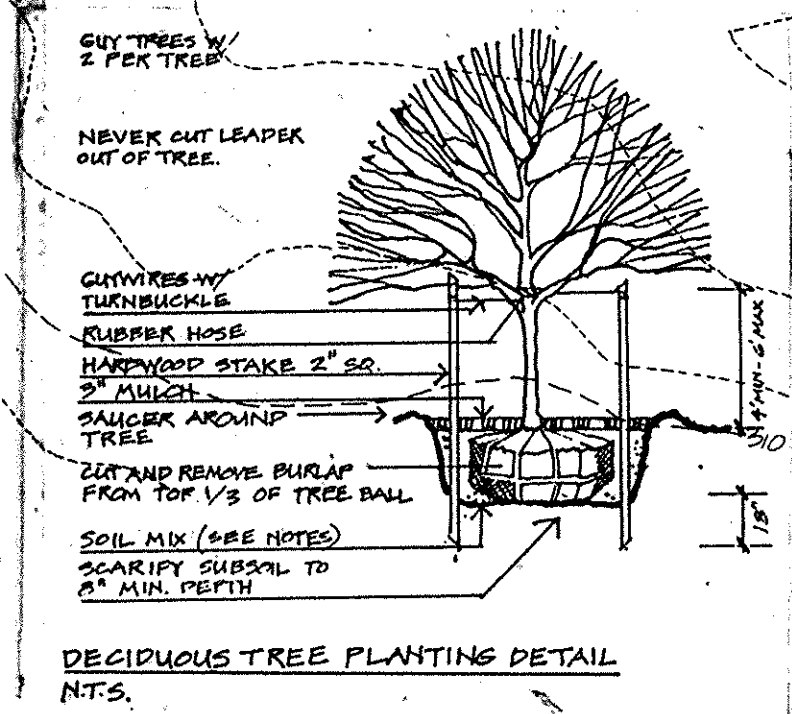
PLANTING NOTES:
 GENERAL:
 1. All plants shall be installed 72 hours prior to the installation of all plant material.
 2. Plant installation must conform to the minimum standards listed in the latest edition of Landscape Specification Guide Lines, published by the Landscape Contractors Association.
 3. Plants to be located in the field by the owner or the owner's representative. Notify owner 72 hrs. in advance of planting.
 4. A Certificate of Landscape Installation is required as per the Howard County Landscape Ordinance.
 5. Contact Landscape Architect regarding the substitution of plant material.
 6. The number, size and location of plants shall not be changed. Substitutions must be included in the recommended plant list as per Howard County Landscape Ordinance.
 7. Street tree locations have been shown wherever possible. Drive aprons of proposed units may not allow a traditional placement of trees.
 8. Biologic root inhibitor barrier or containment shall be installed for trees planned closer than 3 feet to sidewalk.
 9. Trees shall be placed 30 feet (min.) from all signs and intersections when planting occurs between sidewalk and curb.
 10. Street trees may not be planted within 5 feet of a drain inlet.
 11. Street tree planting must conform to the Substitution and Planting Manual of Howard County.
 12. Half and half burlapped plant material shall not be accepted if ball is cracked or broken before or during planting. Protect all plants from drying by either sun or wind.
 13. Tree pits shall be backfilled with 60% topsoil, 25% peat and 15% sand with one pound of 10-10-10 fertilizer per pit.
 14. Topsoil shall be sandy loam soil, free from noxious weeds or grasses, roots, stumps, stones, sticks, etc. Post must shall be commercial with pH 4.5 to 5.5, free of woody material or harmful minerals.
 15. All plants shall be watered at planting with weekly watering thereafter for the first 80 days. Watering shall continue bi-weekly if necessary to maintain plants in a healthy condition. Fertilizer shall be applied with watering to insure a healthy plant.
 16. Maintenance shall be an ongoing matter. Streets and sidewalks shall be swept clean. All rejected or dead materials shall be immediately removed from the site.
 MAINTENANCE AND GUARANTEES:
 17. Plant material to be alive and healthy at the time of the guarantee period as defined per the Howard County Landscape Ordinance.
 18. Maintenance shall begin immediately after planting and continue through the guarantee period.
 19. Maintenance consists of pruning, watering, weeding, re-mulching, rebackfilling plants in proper grades as needed and replacing guards and stakes as needed.



Critical Area Establishment: Correct acidity to a pH of 5.5 or higher, where possible scarify the soil 2 to 4 inches deep. Apply fertilizer according to soil test, or use at least 50 pounds 5-10-10 fertilizer per acre.

Apply seed uniformly, cover seed up to 1/2 inch deep, mulch with 1 and 1/2 tons of straw and hold in place. All seed must be inoculated with *Scarfia*.

Seed mixtures of 15 to 20 pounds of crownvetch mixed with either tall fescue or regrass at 30 pounds per acre. Grasses promote quick growth and protects the site while the slower growing legume is getting established. Seeding date in the spring is best. Do not seed after mid-summer. Sites ready for seeding in late summer or fall can be seeded to grass and mulched, and the crownvetch over-seeded the following spring. Sites too steep or stony to use mechanical equipment usually can be seeded without site preparation if "frost seeded". Soil conditions must have a favorable soil reaction of pH 5.5 and be of moderate fertility. Broadcast seed in late winter (Feb.-Mar.) while there still is frost action in the soil. Frost heaving will work seed into the soil. Seeding rate of 15 to 20 pounds of crownvetch with a grass usually is adequate.



1) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.02A OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
 2) FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$10,000.00.
 3) STREET TREES MAY NOT BE PLANTED WITHIN 20 FEET OF ANY STREET LIGHT.

ENGINEER'S CERTIFICATE
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Bruce D. Bowman 5/22/95
 Signature of Engineer Date

DEVELOPER'S CERTIFICATE
 I/we certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a certificate of Attendance of a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

W.F.N. 3/21/94
 Signature of Developer Date

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

Robert W. Ziehm 5/30/95
 Chief, Bureau of Engineering Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads

Andrew M. Demler 6-6-95
 Chief, Bureau of Highways Date

APPROVED: Department of Planning and Zoning

Jim Jorjman 6/22/95
 Chief, Division of Land Development and Research Date

Bruce D. Bowman 5/22/95
 Signature of Engineer

LAND DESIGN ENGINEERING, INC.
 8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
 (410) 715-1070 (Baltimore) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)

DESIGNED: [Signature]
 DRAWN: [Signature]
 CHECKED: [Signature]
 DATE: 12/94

LANDSCAPE PLAN
LYNDWOOD MANOR
 SECTION THREE AREA TWO
 Tax Map 37 Part of Parcels 043,38,640
 1st Election District Howard County, MD
 593-02, P 93-11

SCALE: 1" = 50'
 DRAWING: 11 of 11
 JOB No: 92-176-7
 FILE No: P74-06

OWNER / DEVELOPER:
100 INVESTMENT LIMITED PARTNERSHIP
 8835 P. Columbia 100 Parkway
 Columbia, Maryland 21045 (410) 730-0810
 F-94-96

1708