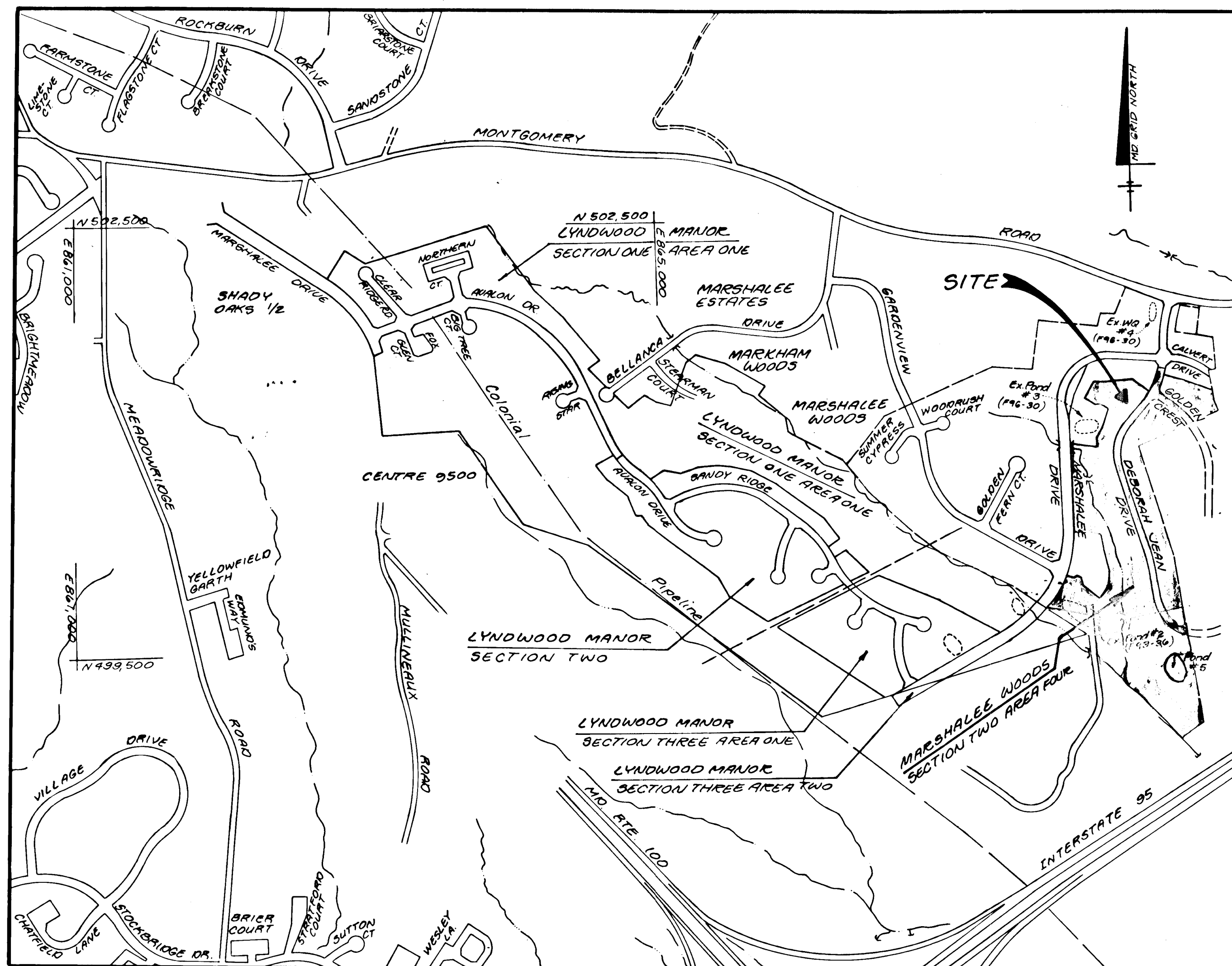


INDEX OF SHEETS	
No.	TITLE
1	COVER SHEET
2	DEBORAH JEAN PLAN & PROFILE
3	DEBORAH JEAN PLAN & PROFILE
4	GOLDEN CREST PLAN & PROFILE
5	ROAD DETAILS
6	STORM DRAIN PROFILES
7	STORM DRAIN PROFILES
8	GRADING SEDIMENT CONTROL PLAN
9	GRADING SEDIMENT CONTROL PLAN
10	GRADING & SEDIMENT DETAILS
11	DRAINAGE AREA MAP
12	DRAINAGE AREA MAP
13	LANDSCAPE PLAN
14	LANDSCAPE PLAN
15	SWM DETAILS

BENCHMARKS:

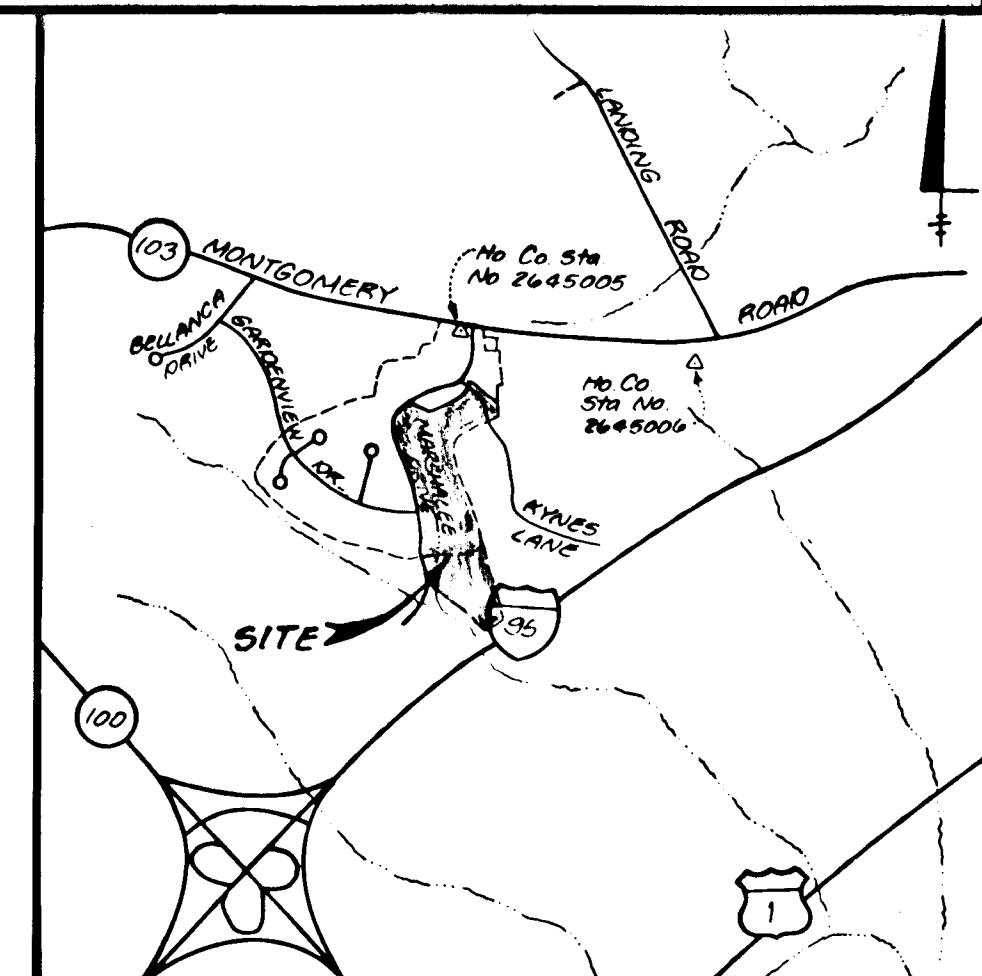
Ho. Co. Monument # 2645005
 ELEV. 291.929
 Description: Concrete Monument 0.3 ft.
 below surface at top of bank

Ho. Co. Monument # 2645006
 ELEV. N/A
 Description: Concrete Monument 0.2 ft.
 below surface at top of bank



LOCATION MAP

Scale: 1" = 600'



VICINITY MAP

Scale: 1" = 2,000'

GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County Design Manual Vol. IV plus MSHA Standards and Specifications, if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection at (410) 313-1880 at least five (5) working days 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: Elkrige, Tax Map: 37, Parcels: 593 & 656
 Zoning: R-20
 Section / Area, Lots: 2/4, 107-89-97, 101-103, 106-126, and 138-141 & 142
 Election District: 1st
 Total Area: 22.20 Ac. plus/minus
 Previous Submittals: SR8-86, SR9-90, P90-28, WP91-190, WP 94-90, P92-17, F93-36, P94-07, F95-19, F95-182, F96-30, F97-104
- 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.
- Any damage caused by the contractor 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, compiled by Photogrammetric Services, Inc. (March 16, 1989), and post-graded conditions in accordance with F95-19 and F95-182, F96-30 and Colver Ridge (F94-54).
- Horizontal and vertical datums are related to the Maryland State Plane Coordinate System as projected from Howard County control stations No. 2645005 and No. 2645006 (NAD 27).
- All hydraulic data is for the 10-year storm unless otherwise noted.
- Sidewalks and ramps shall be in conformance with the current ADA requirements.
- See sheet 10 for construction sequence.
- 95% compaction in all fill areas shall be determined by AASHTO T-180. Quantity Management is by Detention.
- Stormwater management is provided in the Pond #5. Quality Management is by Extended Detention.
- Street Light placement and the type of fixture and pole selected shall be in accordance with the Howard County Design Manual, Volume II (1993) and as modified by "Guidelines for street lights in Residential Developments (June 1993)".
- Wetlands delineation by Exploration Research, Inc. July 1988 and February 1989 and Dennis J. LaBare, M.S. & Associates July, 1990.
- Floodplain analyzed by Land Design Engineering, Inc. based on field run data and approved as part of P94-07.
- Noise Study compiled by Land Design Engineering, Inc. as part of P94-07 approval.
- Geotechnical Reports compiled by Hillis-Carnes Engineering Associates, Inc. dated August 24, 1994.
- Waivers
 16.116(a)(3) To not require a usable yard of 25 feet minimum between the 75' stream buffer and the rear of the proposed units on Lots 87-90 (New Lot #'s are 110-113) Granted 1/23/95
 WP # 24-90
- Uncontrolled impervious areas on Lots 106-121 shall have dry wells in place to provide water quality. Dry Wells are sized per Detail on sheet 5 of 15. Proposed dry wells shall be privately maintained by individual lot owners. The proposed dry wells shall be constructed at the site development plan stage.
- The Forest Conservation Easement (FCE) has been established to fulfill the requirements of Section 14.1200 of the Howard County Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement except as shown on the approved road construction drawing or site development plan. However, forest management practices as defined by the deed of Forest Conservation Easement are allowed.
- Traffic study compiled by Lee Cunningham and Associates, Inc. Approved as part of P94-07.
- Cruciforms located adjacent to storm drain inlets shall meet Howard County, Volume II, Section 16.3.02 for concrete curb and gutter.
- The existing private road (Kyles Lane) to the Poppye's property existing on the eastern lot lines of lot 107 and 92 shall be abandoned on completion of construction of roadway road 900000 (Golden Crest).
- The Recreation Open Space shown as part of lot 128 and the Contiguous Edge shall be maintained by the Community Owned Homeowners Association.

ROAD & STORM DRAIN CONSTRUCTION PLANS

MARSHALEE WOODS

SECTION TWO AREA FOUR

1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

LDE	REVISION	REVISION DESCRIPTION	DATE
BY	NUMBER	DESCRIPTION	DATE
		REVISE Lot#s in TITLE BLOCK &	4-28-97

ENGINEER'S CERTIFICATE

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



Bruce D. Burton
 Signature of Engineer
 Bruce D. Burton
 Date: 7/23/96

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 or their Authorized Agents, as are deemed necessary."

John L. Lavin, Jr.
 Signature of Developer
 Date: 1/23/95

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

O.C. Westfall
 Natural Resources Conservation Date Service

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

John L. Lavin, Jr.
 Howard Soil Conservation District Date

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

Andrew M. Danek
 Chief, Division of Engineering

Andrew M. Danek
 Chief, Bureau of Highways Date

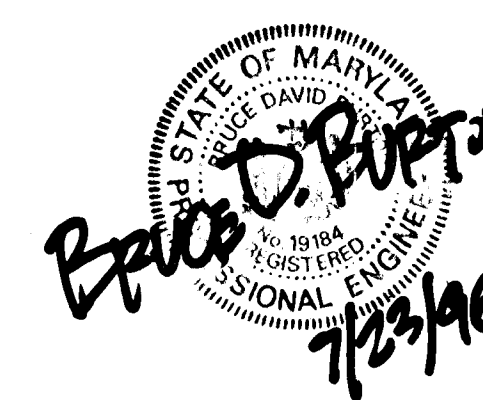
APPROVED: Department of Planning and Zoning

William D. Drummer
 Engineering Division

Richard Blood
 Chief, Division of Land Development and Research

LDE, INC.

9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)



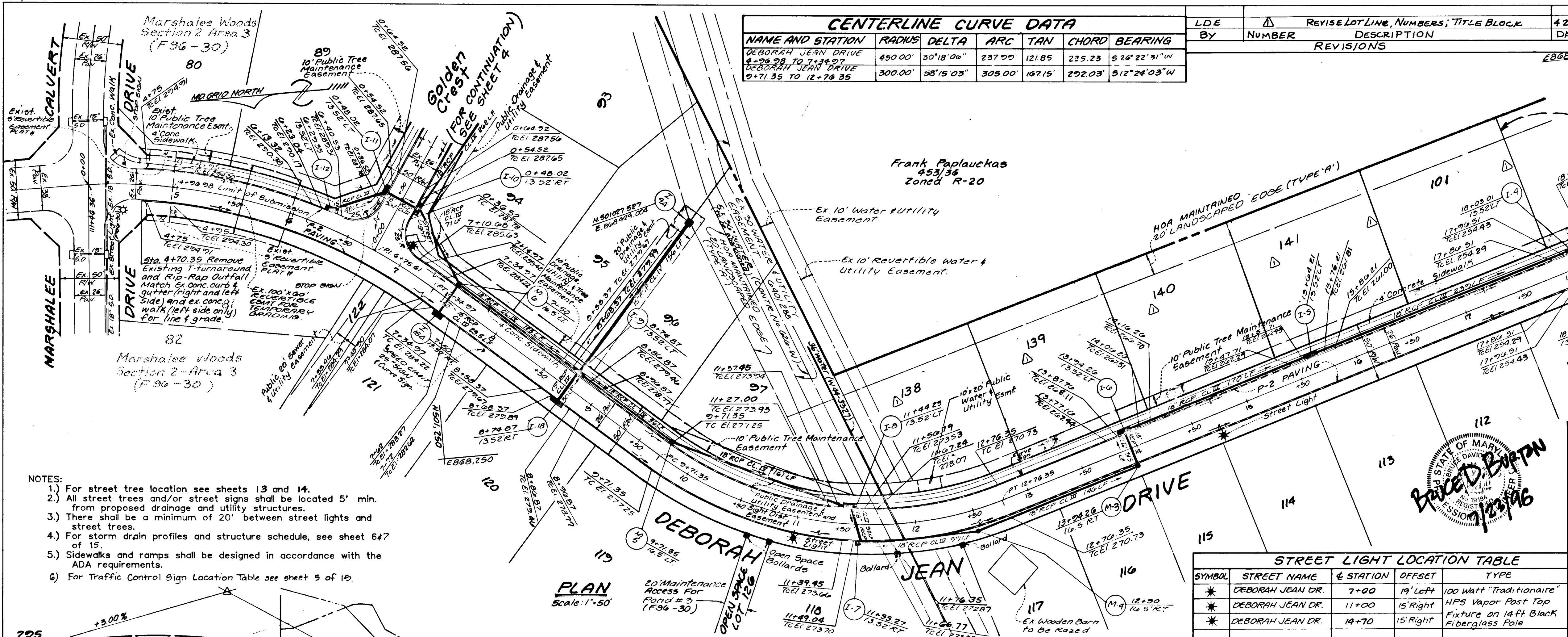
DESIGNED		SCALE	
T.D./E.D.S.	AS SHOWN		
W.J.	1 of 15	DRAWING	
MARSHALEE WOODS Section 2 - Area Four Lot 89-97, 101-103, 106-126 & 138-141 & 142 Tax Map 37 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND Previous Submittals: SR8-86, SR9-19, P92-17, P94-07		JOB NO. 95-022.3	
DATE: April 1996		FILE NO. F96-62	

1667

1667

PLAN SHEET NO. 1667

PROFILE SHEET NO. 1667



NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
DEBORAH JEAN DRIVE +71.35 TO +74.27	450.00	30°18'06"	237.50'	121.85	235.23	52°22'31"W
DEBORAH JEAN DRIVE +71.35 TO +74.35	300.00	38°15'03"	303.00'	167.15'	292.03'	51°24'03"W

LDE	REVISE LOT LINE, NUMBERS, TITLE BLOCK	DATE
BY	NUMBER DESCRIPTION	DATE

CURB LEGEND
 - 7' Std Comb Curb and Gutter
 - Modified Curb & Gutter

- NOTES:
- For street tree location see sheets 13 and 14.
 - All street trees and/or street signs shall be located 5' min. from proposed drainage and utility structures.
 - There shall be a minimum of 20' between street lights and street trees.
 - For storm drain profiles and structure schedule, see sheet 647 of 15.
 - Sidewalks and ramps shall be designed in accordance with the ADA requirements.
 - For Traffic Control Sign Location Table see sheet 5 of 15.

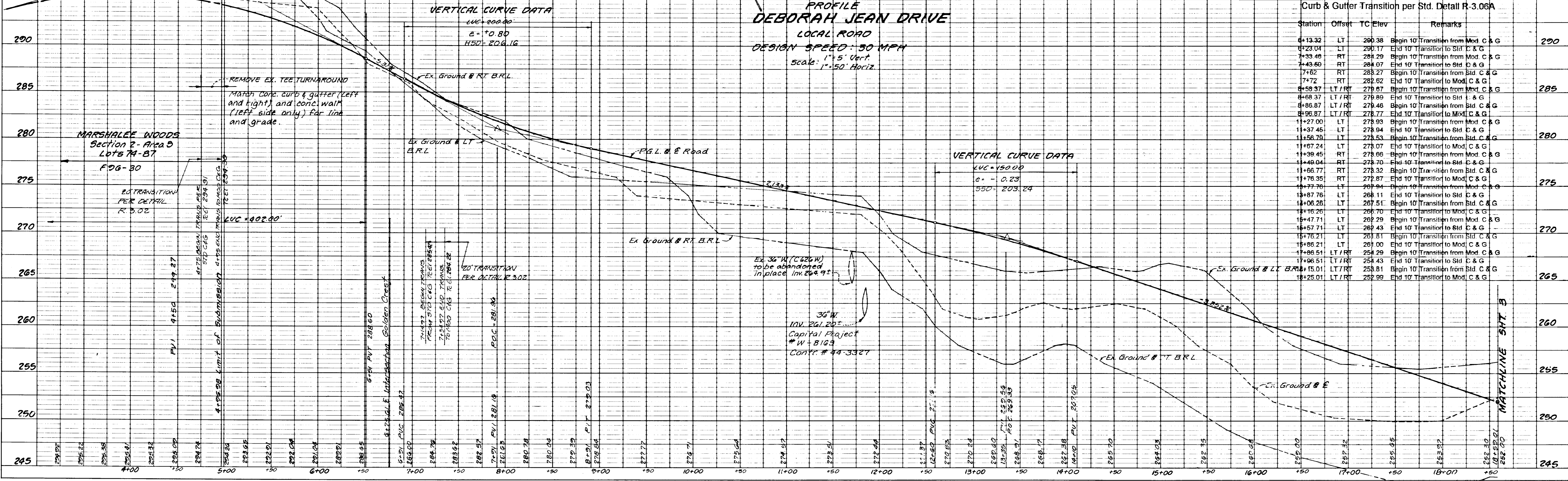
APPROVED Department of Planning and Zoning
Richard Blood 9/6/96 Date
 Chief, Division of Land Development and Research
 APPROVED Department of Public Works for Storm Drainage Systems and Roads
William Daniels 8-6-96 Date
 Chief, Bureau of Highways

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED	TOLES	DRAWN	CHECKED	DATE
	WJ	BDB	June 1996	

ROAD CONSTRUCTION PLANS
 DEBORAH JEAN DRIVE
 +74.35 TO +18+59.01
 MARSHALEE WOODS
 SECTION TWO AREA FOUR
 Lot 89-97, 101-103, 106-126 & 138-141 & 142
 1st Election District Howard County, Md.

SCALE: As Shown
 DRAWING: 2 of 15
 JOB NO: 95-022.3
 FILE NO: F 96-02



STREET LIGHT LOCATION TABLE			
SYMBOL	STREET NAME	Q STR.	TYPE
*	DEBORAH JEAN DRIVE	19+51	15' RIGHT
*	DEBORAH JEAN DRIVE	23+20	15' RIGHT

CENTERLINE CURVE DATA					
NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD BEARING
DEBORAH JEAN DRIVE 18+50.01 TO 20+44.00	1100.00	09°38'08"	184.99'	92.71'	511°54'24"E
DEBORAH JEAN DRIVE 22+11.00 TO 25+00	316.00'	52°25'02"	228.91'	105.44'	278.95' 5.93°16'51"E
FUTURE DEB JEAN DRIVE 25+00 TO FUT 27+60	316.00'	47°08'35"	200.00'	187.87'	252.75' 3.89°02'09"E

NOISE BERM CONSTRUCTION TABLE				
Location	E. Station	Offset	Elevation	Top Width
Lot 10B	22+50	142' LT	256.01 (Top)	20' H
"	22+75	118' LT	256.0	5' H
"	22+85	110' LT	260.0 (Top)	5' H
"	23+10	85' LT	260.0 (Top)	5' H
"	23+32	55' LT	248.0	5' H
Lot 10a	22+95	40' RT	246.0 (Top)	32' H
"	"	40' RT	254.0 (Top)	5' H
"	"	128' RT	236.0	-
"	"	175' RT	228.0 (Top)	-

- NOTES:
- For street tree location see sheets 13 and 14.
 - All street trees and/or street signs shall be located 5' min. from proposed drainage and utility structures.
 - There shall be a minimum of 20' between street lights and street trees.
 - For storm drain profiles and structure schedule, see sheet 647 of 15.
 - Sidewalks and ramps shall be designed in accordance with the ADA requirements.

For Traffic Control Sign Location Table, see sheet 5 of 15.

Curb & Gutter Transition per Std. Detail R-3.06A			
Station	Offset	TC Elev	Remarks
18+97.94	LT	250.62	Begin 10' Transition from Mod. C & G
19+07.82	LT	250.53	End 10' Transition to Std. C & G
19+28.11	LT	249.92	Begin 10' Transition from Std. C & G
19+35.99	LT	249.35	End 10' Transition to Mod. C & G
19+80	LT	247.91	Begin 10' Transition from Mod. C & G
20+00	LT	247.58	End 10' Transition to Std. C & G
20+34.73	LT	246.77	Begin 10' Transition from Std. C & G
20+44.00	LT	246.35	End 10' Transition to Mod. C & G
21+09.08	LT	245.30	Begin 10' Transition from Mod. C & G
21+19.08	LT	245.39	End 10' Transition to Std. C & G
21+47.58	LT	245.09	Begin 10' Transition from Std. C & G
21+47.58	LT	244.70	End 10' Transition to Mod. C & G
21+19.69	LT	243.92	Begin 10' Transition from Mod. C & G
22+30.13	LT	244.13	End 10' Transition to Std. C & G
22+43.67	LT	244.13	Begin 10' Transition from Std. C & G
22+54.11	LT	243.92	End 10' Transition to Mod. C & G
22+21.06	RT	243.92	Begin 10' Transition from Mod. C & G
22+30.65	RT	244.13	End 10' Transition to Std. C & G
22+43.15	RT	244.13	Begin 10' Transition from Std. C & G
22+52.74	RT	243.92	End 10' Transition to Mod. C & G

APPROVED: Department of Planning and Zoning
Richard Blood 4/6/96
 Chief, Division of Land Development and TC Research

APPROVED: Engineering Division
John Dammann 8/6/96
 Chief, Engineering Division

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
Andrew M. Decker 8-6-96
 Chief, Bureau of Highways

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

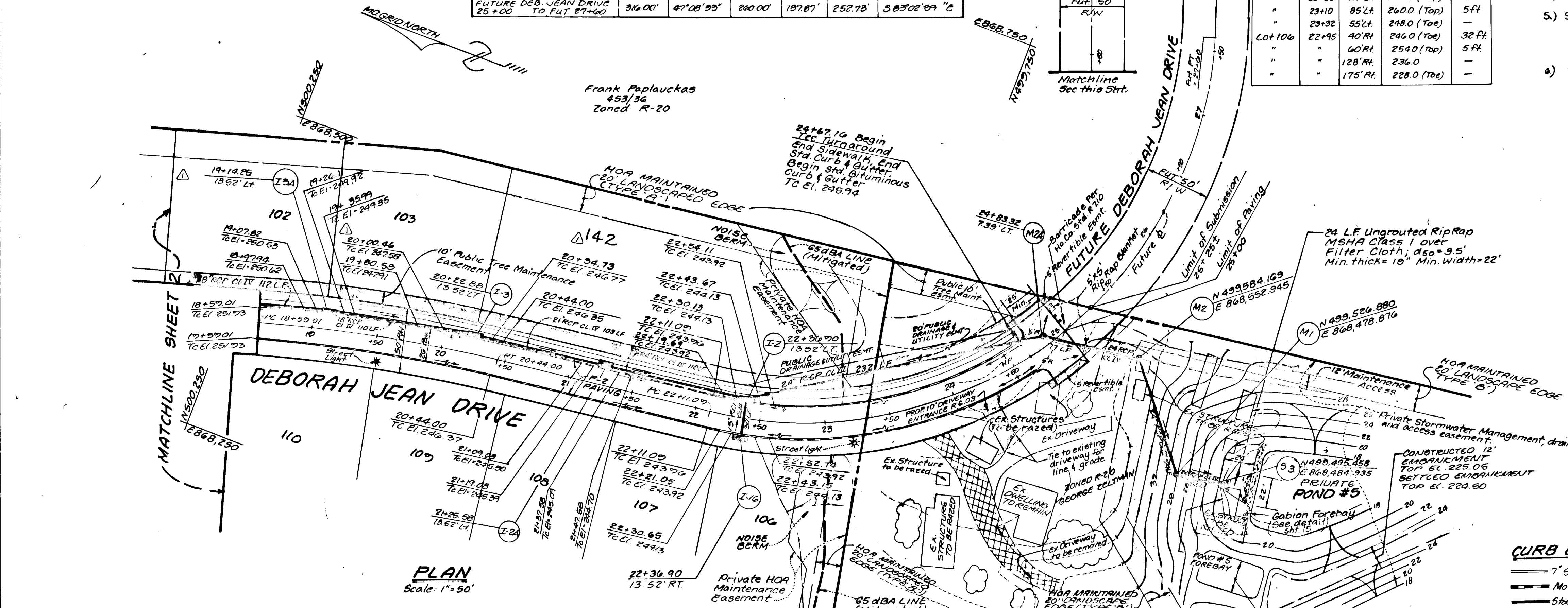
DESIGNED	SCALE
T/ES	AS SHOWN
DRAWN	JOB NO
WJ	95-022.3
CHECKED	FILE NO
B.O.B.	F 96-02
DATE	
June 1996	

ROAD CONSTRUCTION PLANS
 DEBORAH JEAN DRIVE

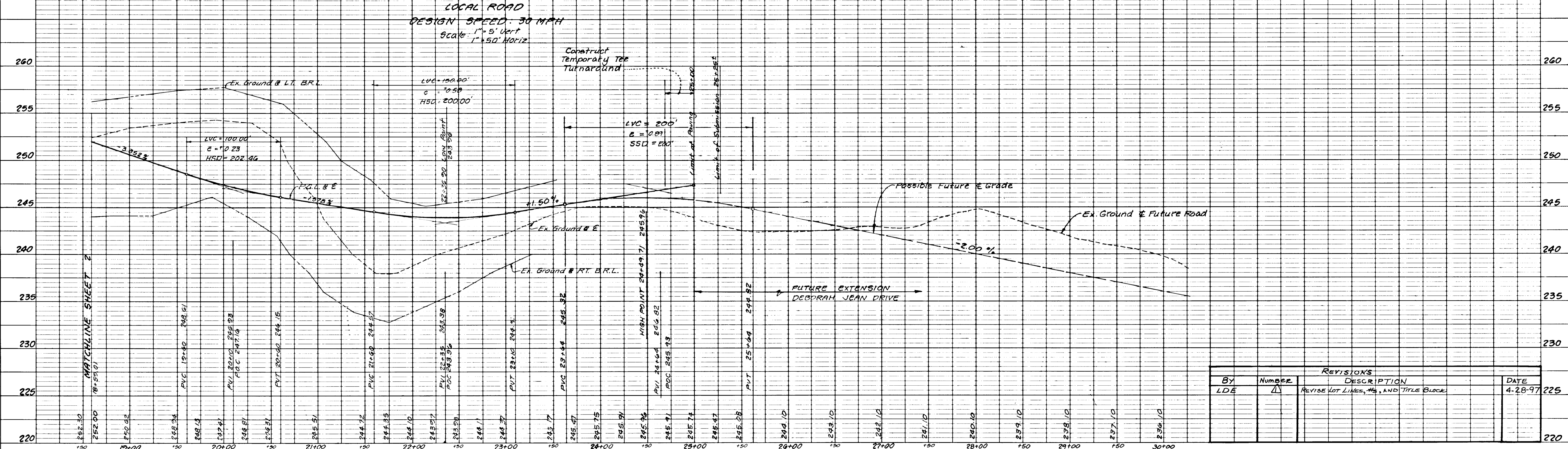
MARSHALEE WOODS
 SECTION TWO AREA FOUR

Lot 89-97, 101-103, 106-126 & 138-141 #142
 1st Election District Howard County, Md.

OWNER: DEVELOPER
 MARSHALEE WOODS LIMITED PARTNERSHIP
 8835 Columbia, 100 Parkway Unit 10
 Columbia, Maryland 21045 (410) 730-0810



PROFILE
 DEBORAH JEAN DRIVE
 LOCAL ROAD
 DESIGN SPEED - 30 MPH
 Scale: 1" = 5' Vert
 1" = 50' Horiz

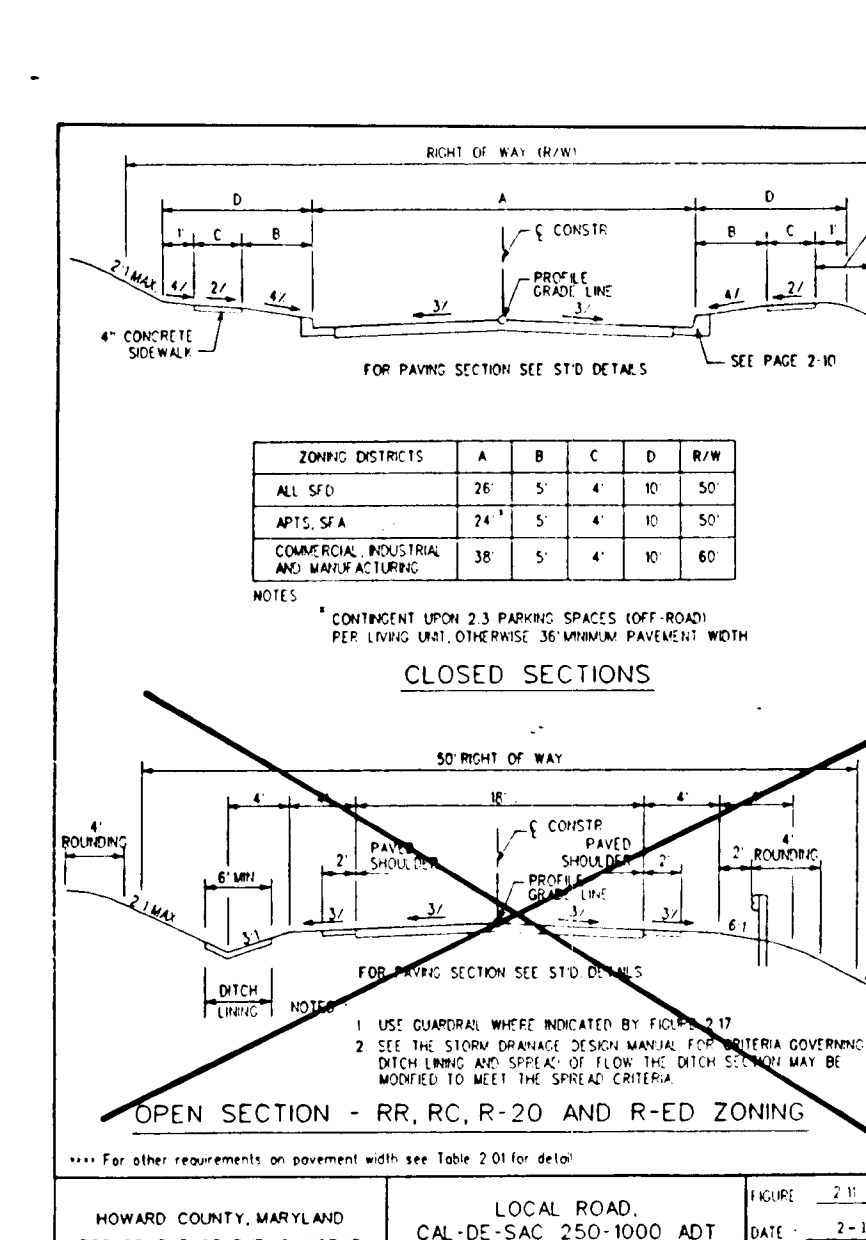
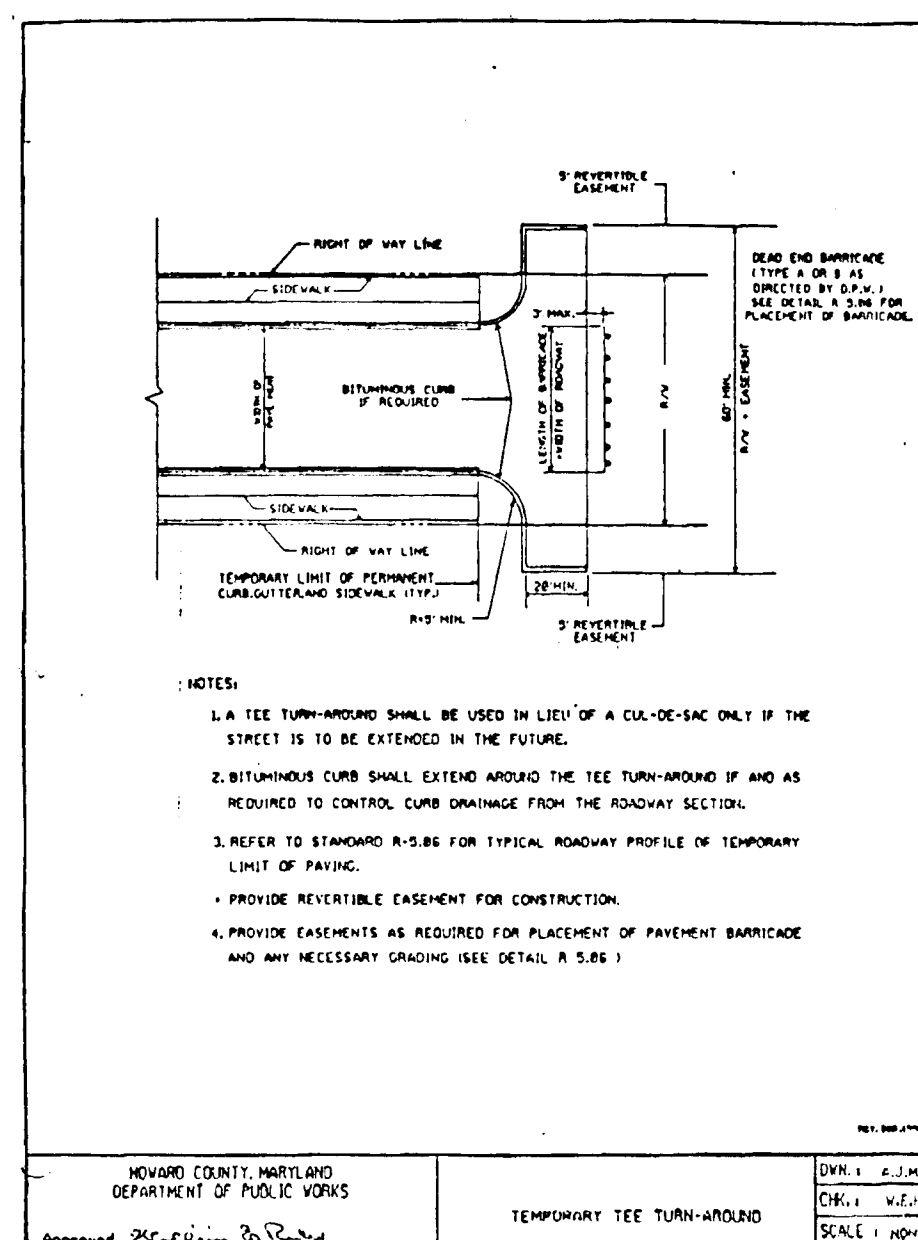
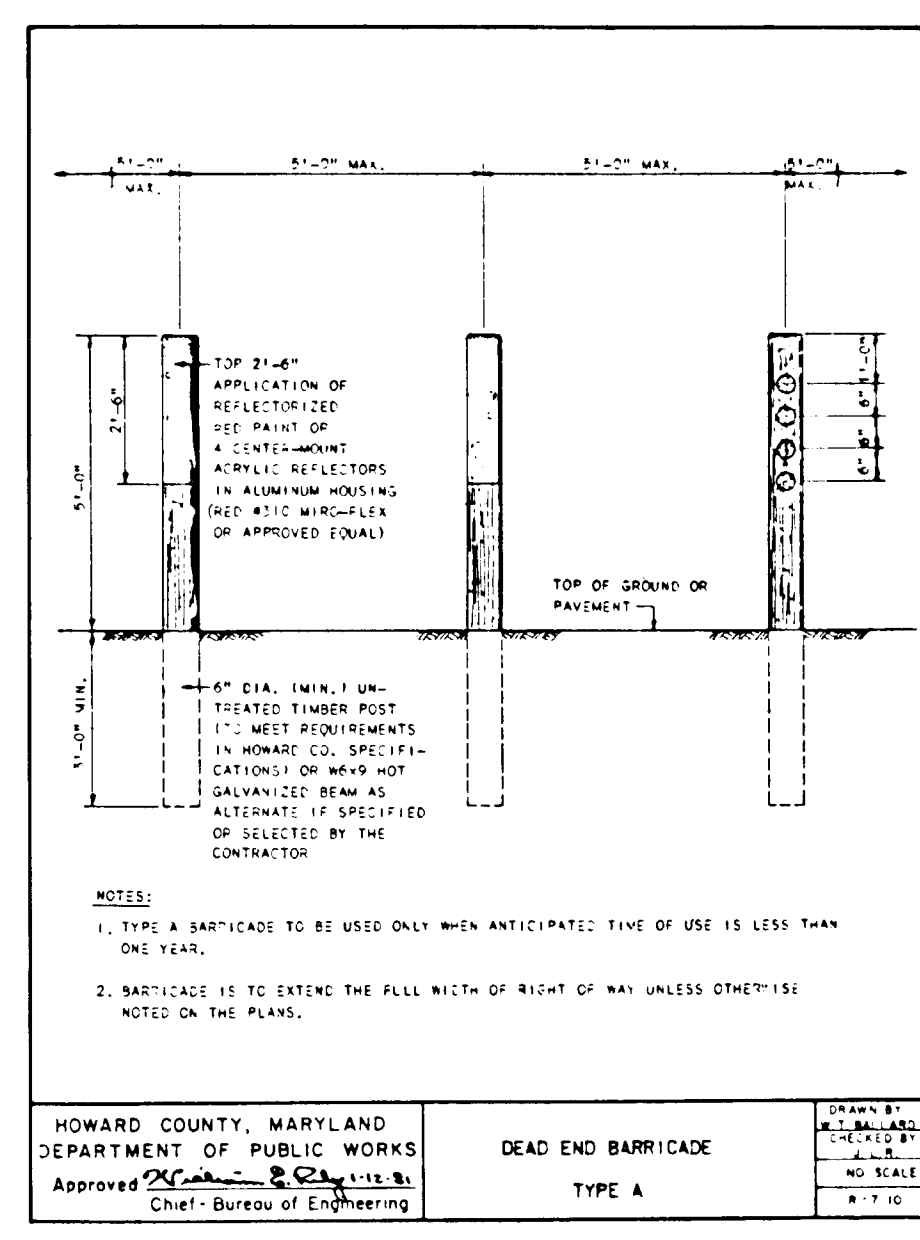
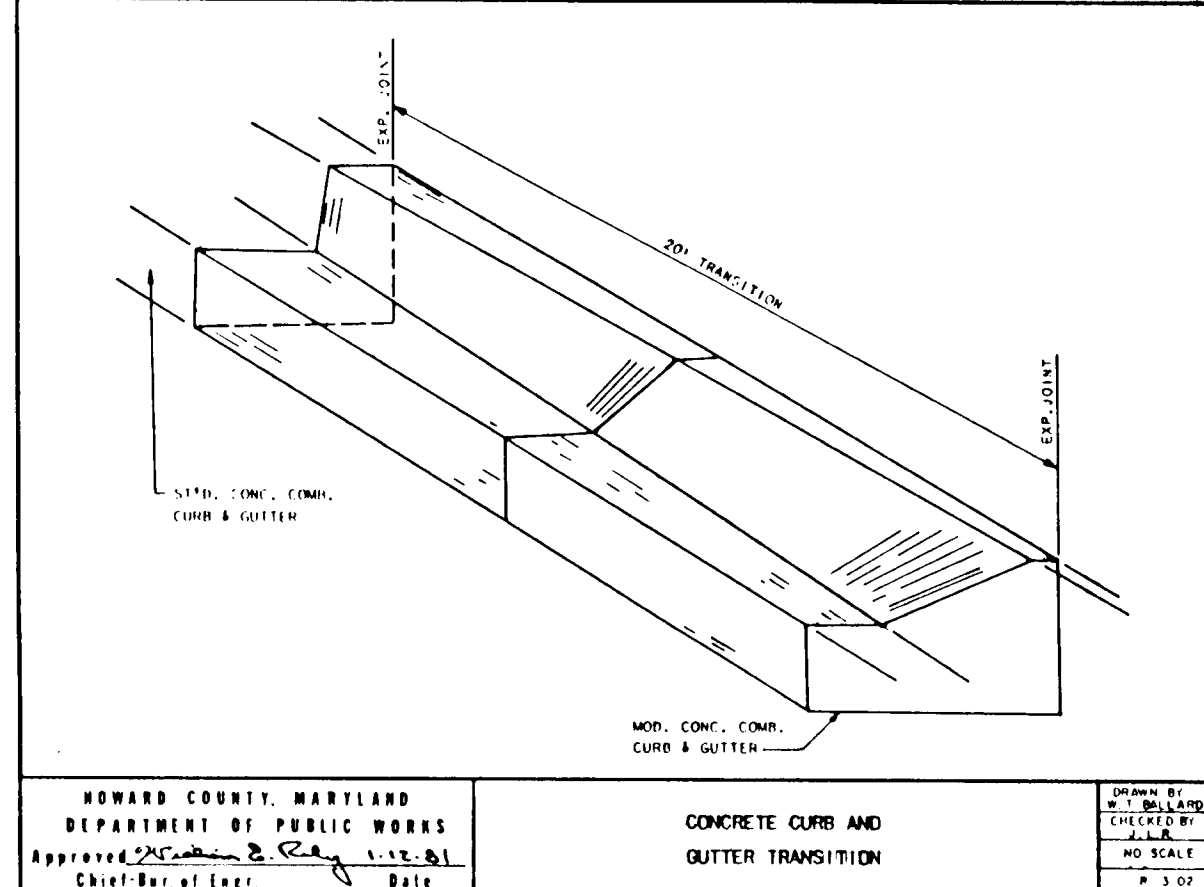
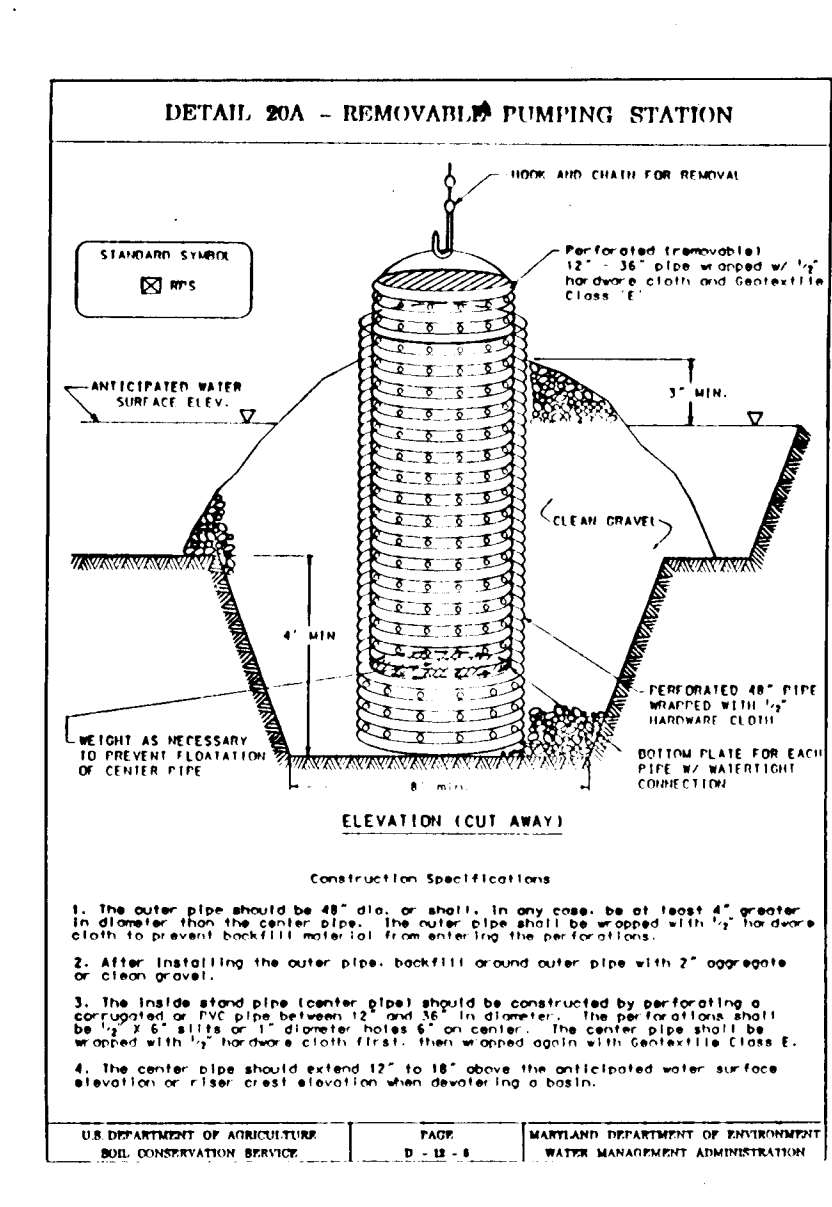
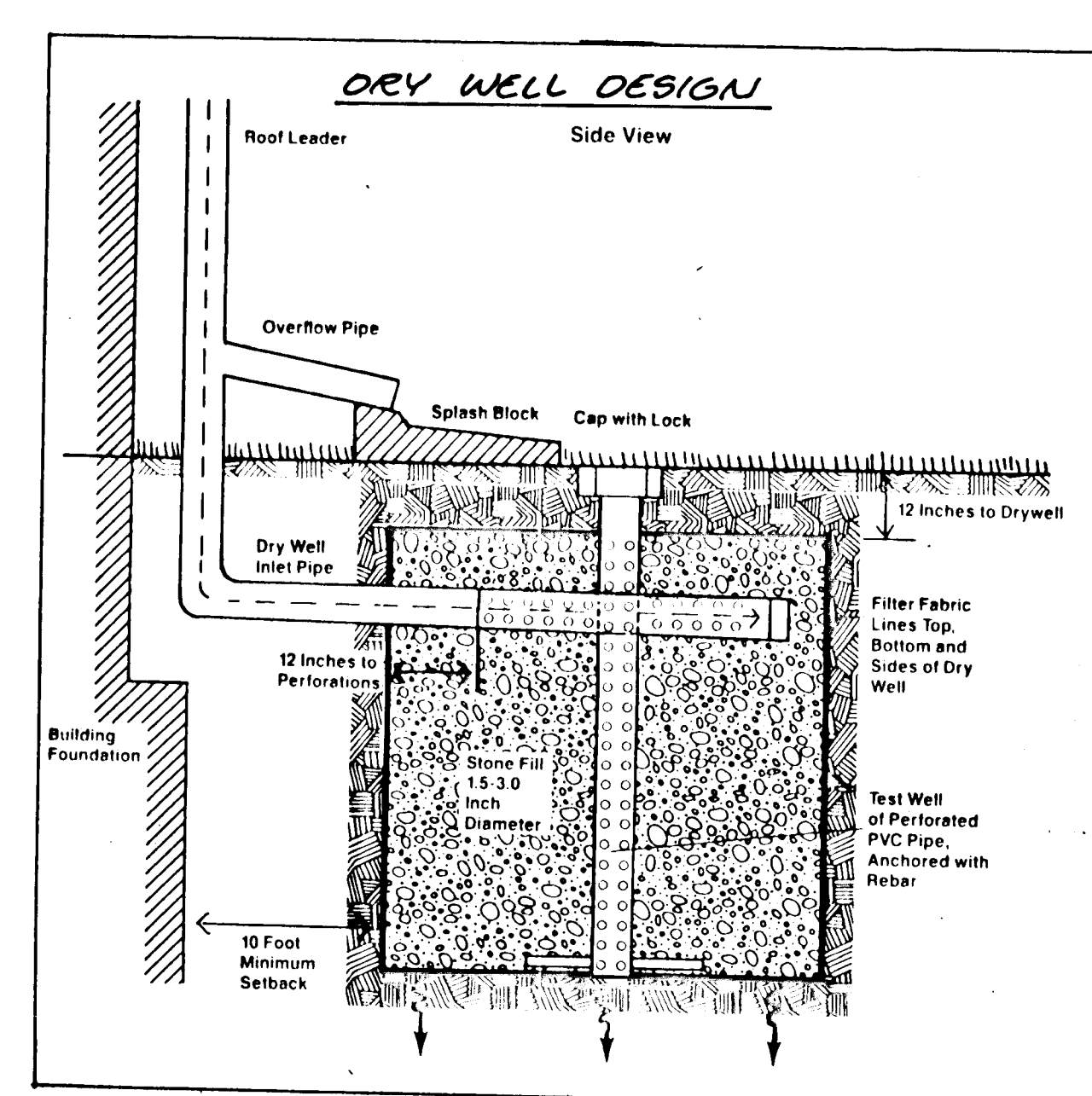
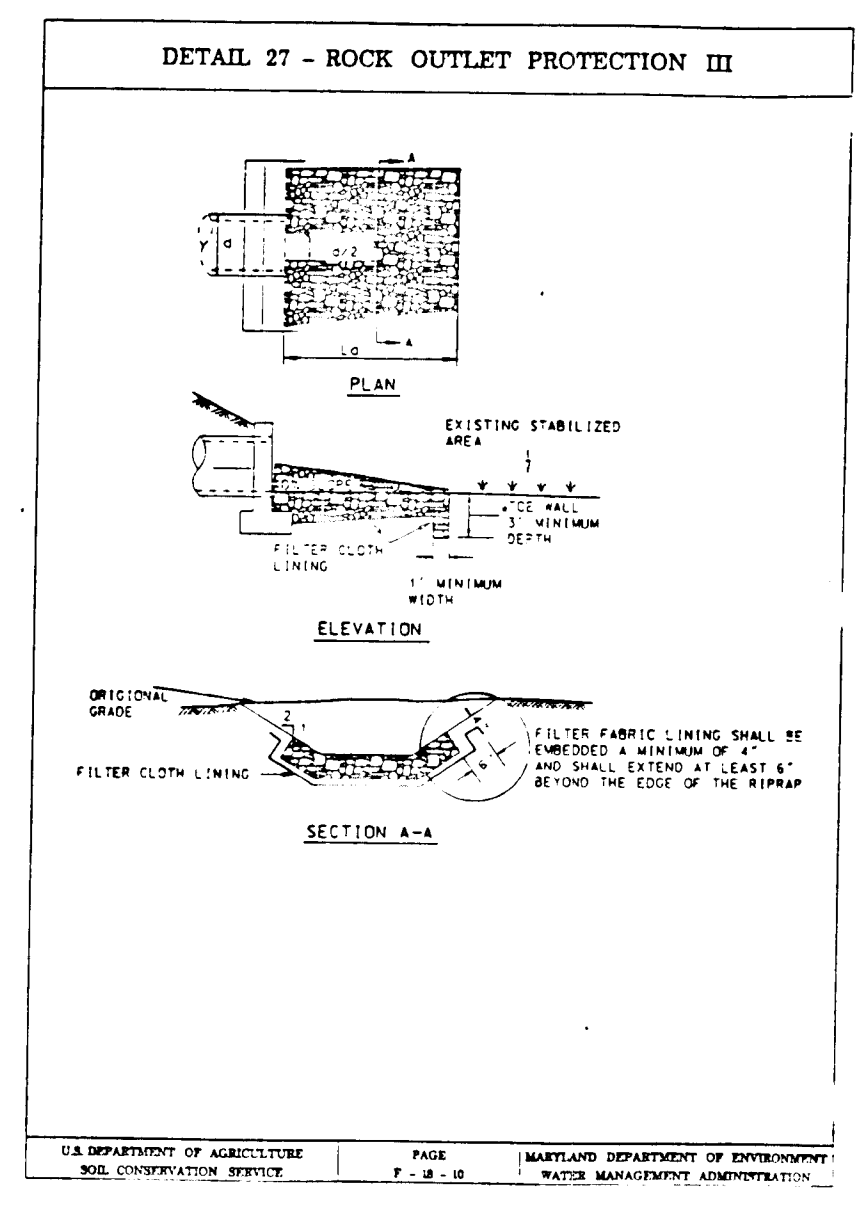
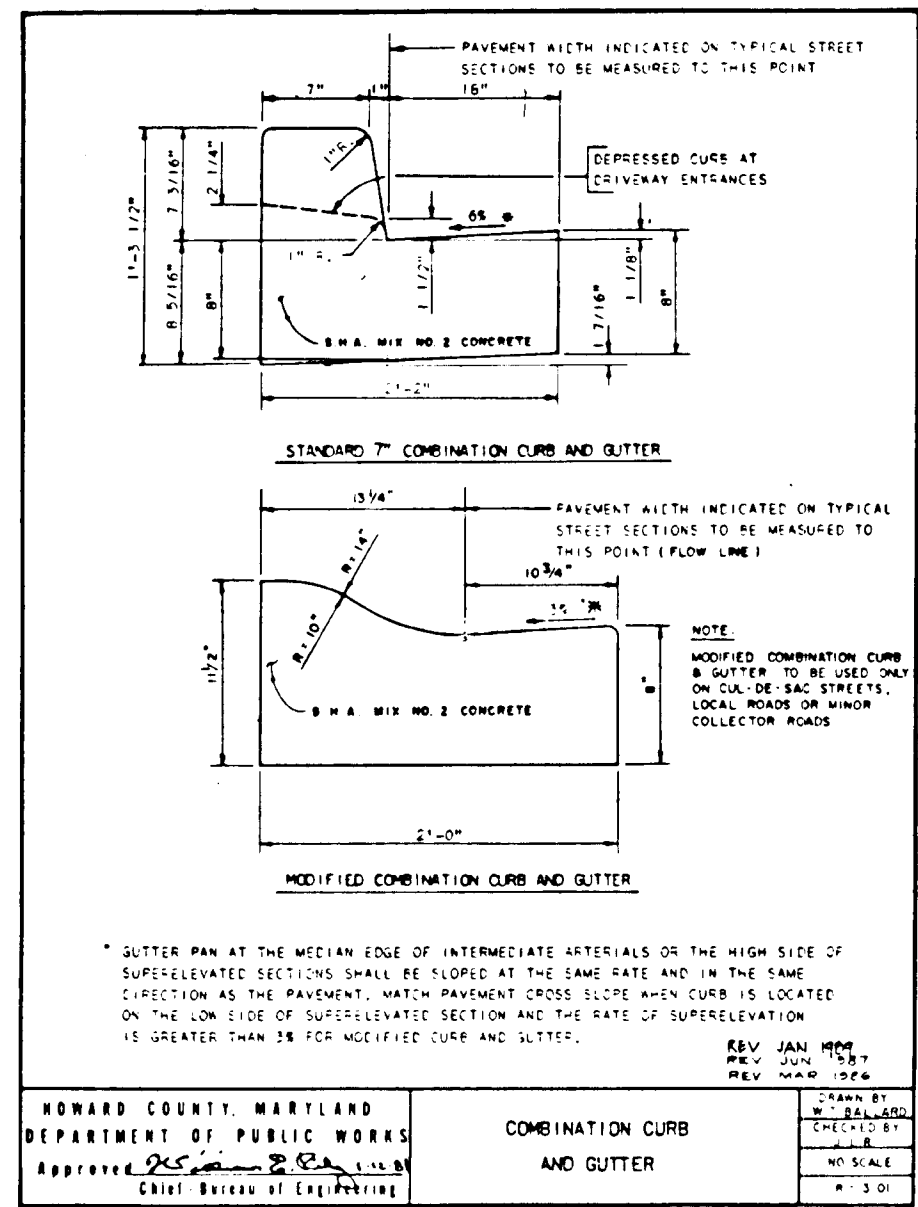
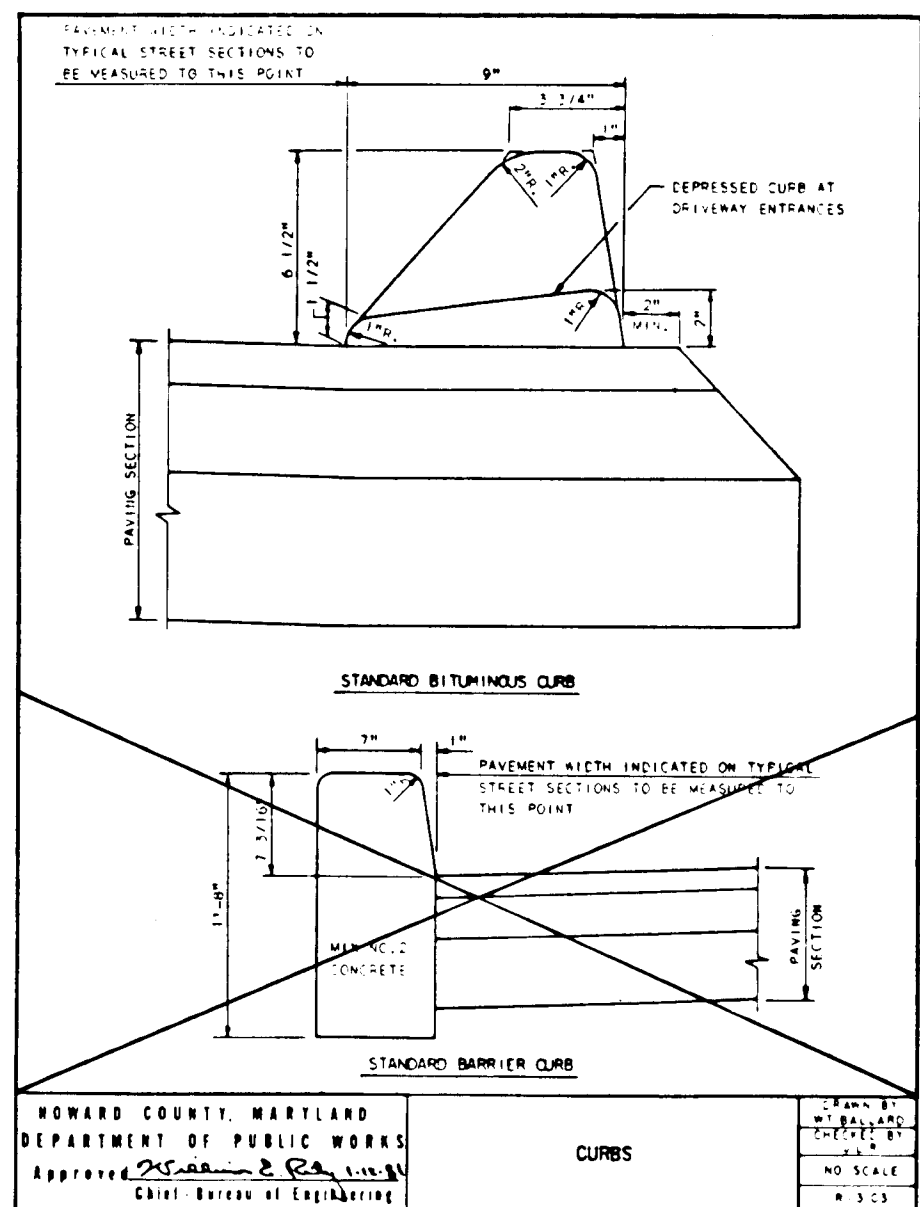


REVISIONS			
By	Number	DESCRIPTION	DATE
LDE	1	REVISE LOT LINES, #s, AND TITLE BLOCK	4-28-97
	225		

1667

Note: Micaceous soil subgrade requires the use of either of the aggregate base pavement sections as shown on the pavement sections tables. The typical sections should reflect the above requirements.

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	FULL DEPTH BIT. CONC. ALTERNATE	PAVEMENT MATERIALS	GRAVEL BASE ALTERNATES
P-1	INDUSTRIAL AND COMMERCIAL TRAVELWAYS WITH HEAVY TRUCKS	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-2	LOCAL DRIVE OR BAY DRIVE ALLEYS AND PRIVATE ROADS SERVING INDUSTRIAL TRAVELWAYS AND COMMERCIAL TRAVELWAYS WITH HEAVY TRUCKS	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-3	INDUSTRIAL ZONES, COMMERCIAL ZONES, LOCAL DRIVE OR BAY DRIVE ALLEYS AND PRIVATE ROADS SERVING INDUSTRIAL TRAVELWAYS AND COMMERCIAL TRAVELWAYS WITH HEAVY TRUCKS	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-4	INDUSTRIAL ZONES, COMMERCIAL ZONES, LOCAL DRIVE OR BAY DRIVE ALLEYS AND PRIVATE ROADS SERVING INDUSTRIAL TRAVELWAYS AND COMMERCIAL TRAVELWAYS WITH HEAVY TRUCKS	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE	17" BIT. CONC. SURFACE 4" BIT. CONC. BASE



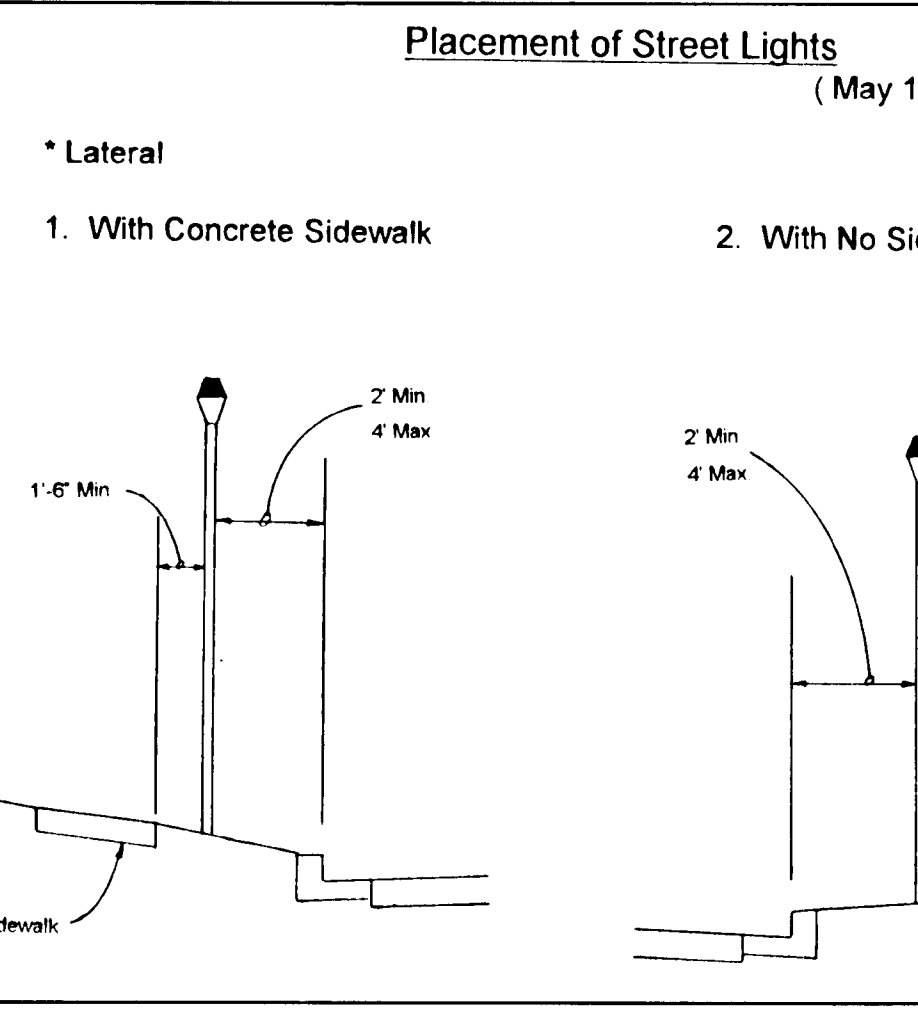
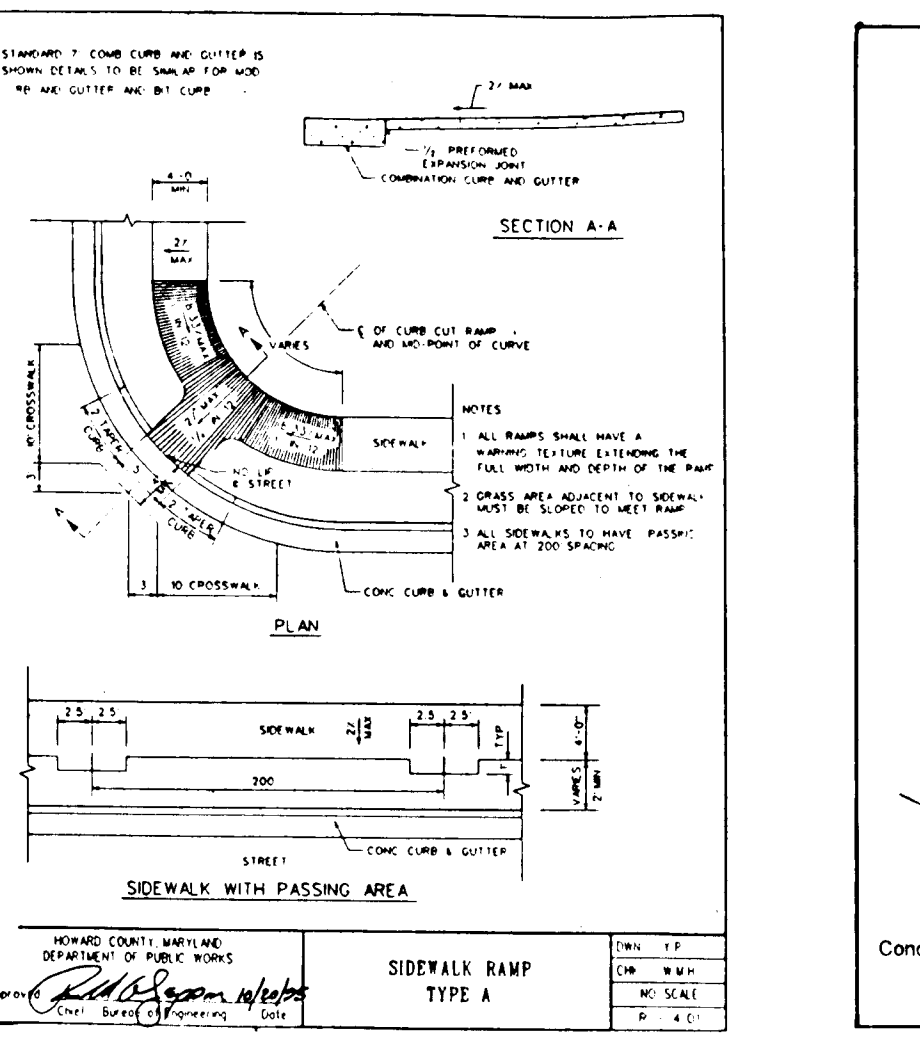
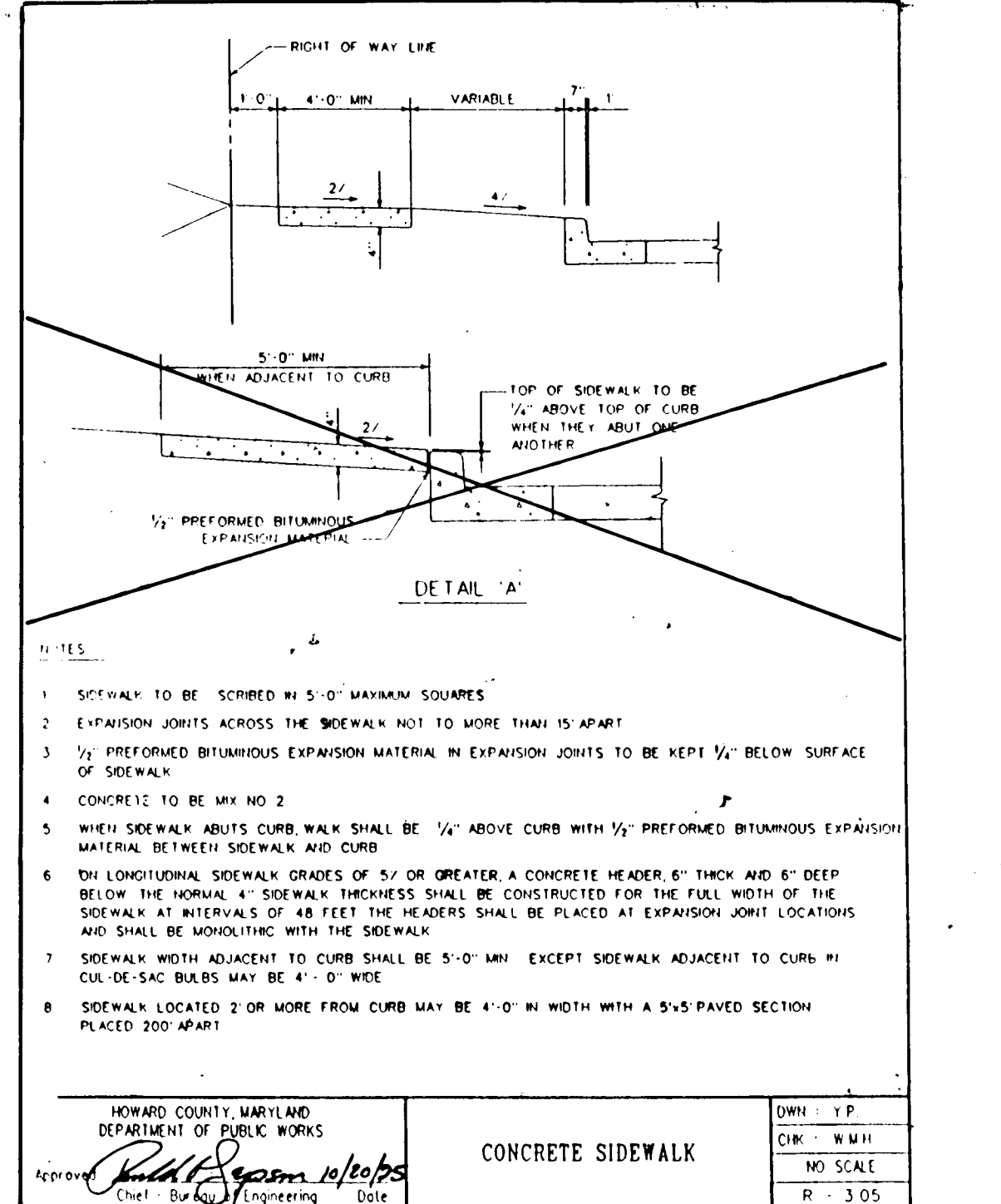
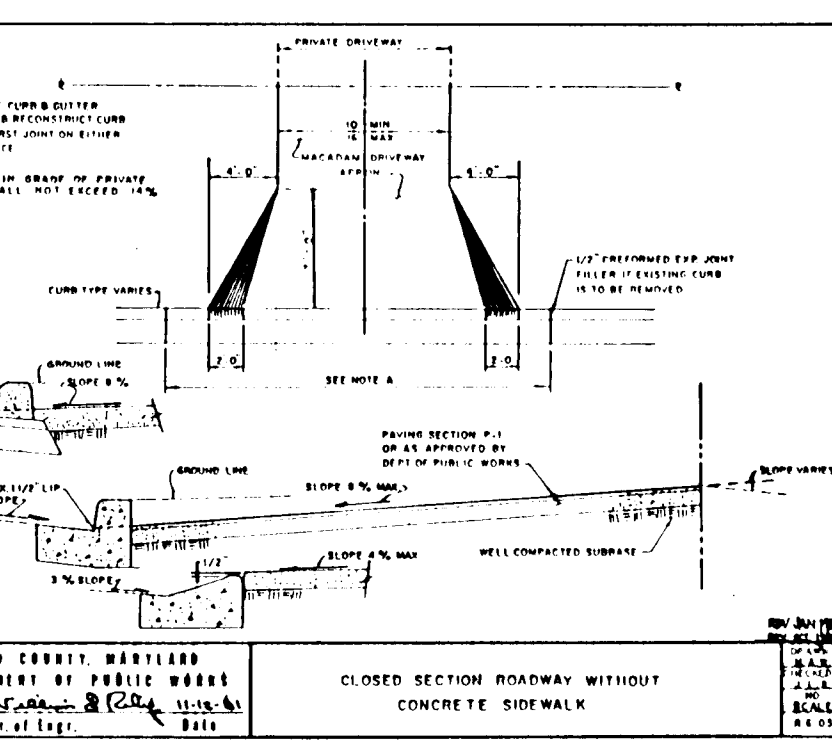
Dry Well Computations

Single Family Detached Average House Size = 40' x 60' = 2400 sq. ft.
 Single Family Detached Average Driveway Size = 20' x 30' = 600 sq. ft.
 3000 sq. ft. x 1/2" = 125.0 ft³
 Required Storage = 125 ft³ / .40 Void Ratio = 312.5 ft³

Using 4' deep DRY WELL: Use 1 Dry Well = 9.0' x 9.0' x 4' = 324 ft³
 Use 2 Dry Wells = 6.5' x 6.5' x 4' = 338 ft³

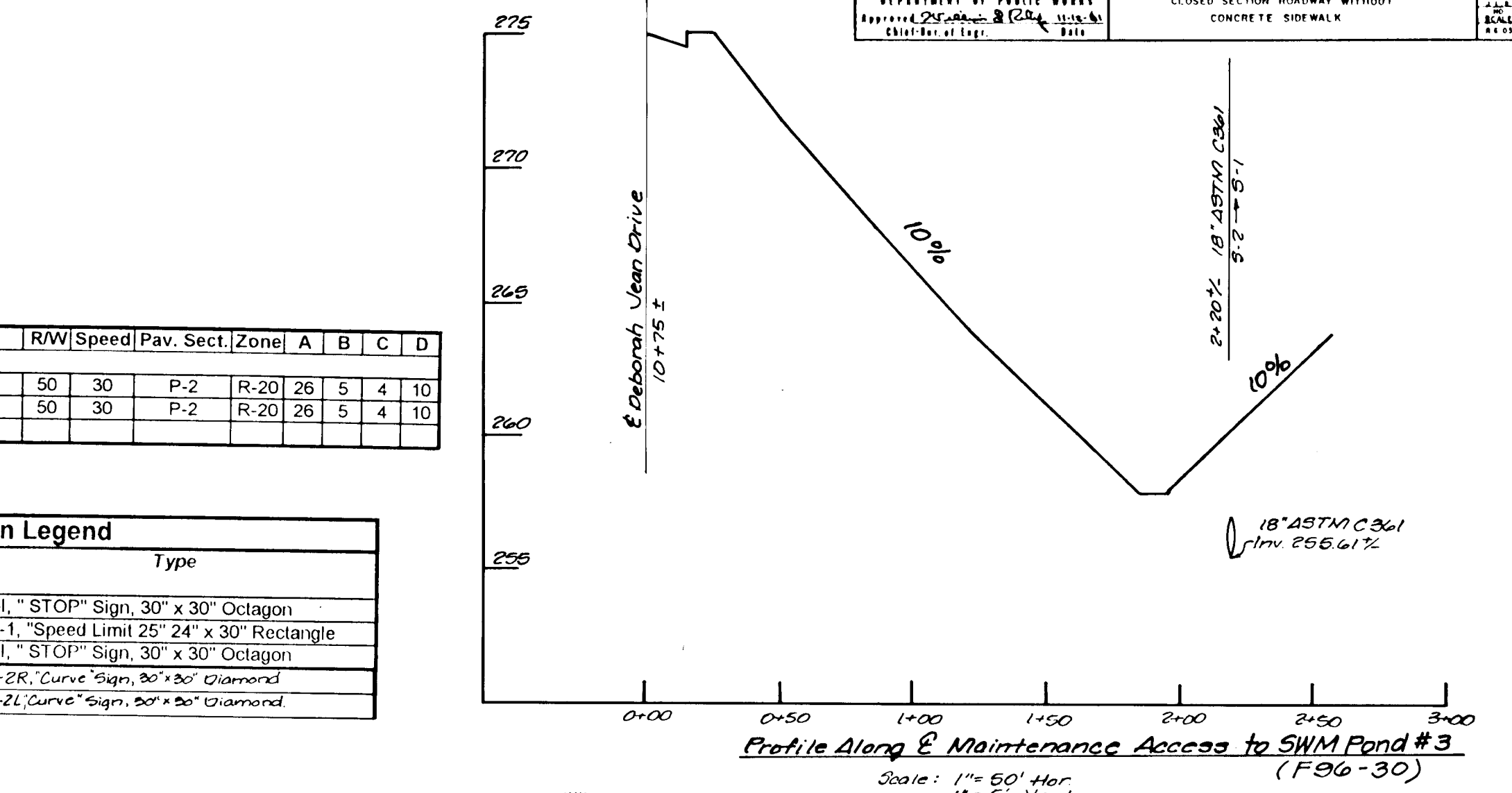
Dry Wells are required on Lots 106 - 121

NOTE: Water Quality Facilities must be sized according to Maryland Standards and Specifications for Infiltration Practices



Road Name	Station to Station	Class.	R/W	Speed	Pav. Sect.	Zone	A	B	C	D
Deborah Jean Drive	4+98.98 - 25+00	Local	50	30	P-2	R-20	26	5	4	10
Golden Crest	0+00 - 3+25.24	Local	50	30	P-2	R-20	26	5	4	10

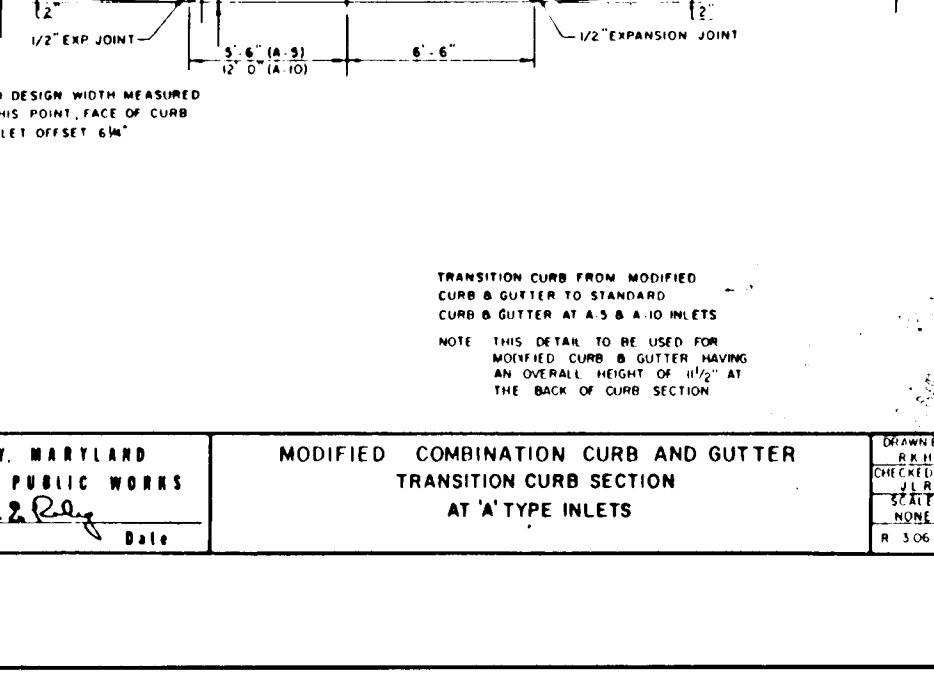
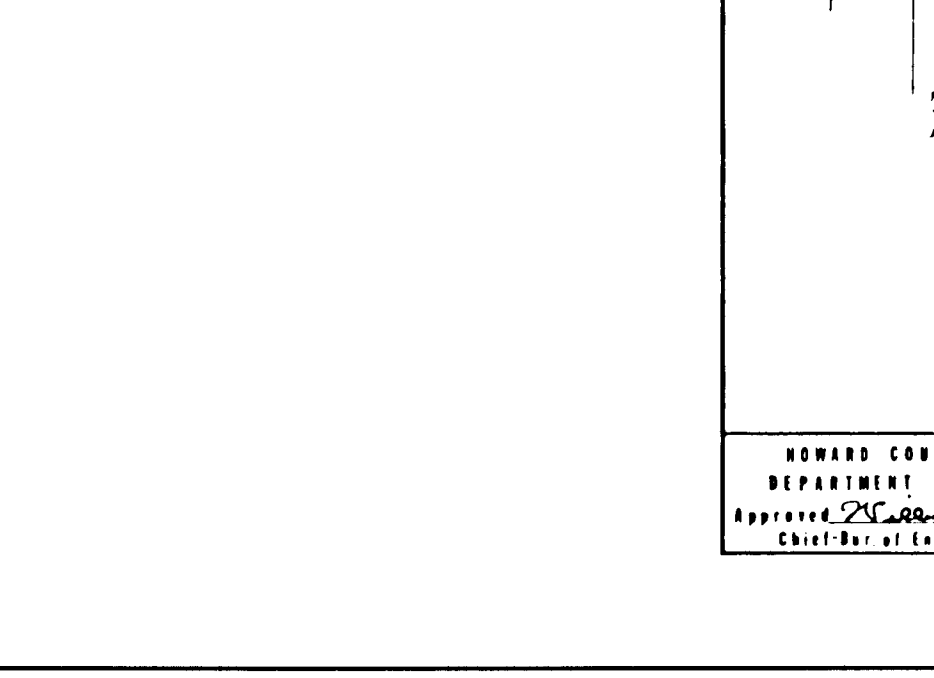
Symbol	Street Name	Centerline Station	Offset	Type
■	Deborah Jean Drive	4+55	18' LT.	R-1, "STOP" Sign, 30' x 30' Octagon
■	Deborah Jean Drive	8+00	16' RT.	R-2, "Speed Limit 25' 24' x 30' Rectangle
■	Golden Crest	0+35	16' RT.	R-1, "STOP" Sign, 30' x 30' Octagon
■	Deborah Jean Drive	15+00	16' LT.	W-2R, "Curve" Sign, 50' x 30' Diamond
■	Deborah Jean Drive	8+00	16' RT.	W-2L, "Curve" Sign, 50' x 30' Diamond



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/6/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 [Signature] 8/1/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.
 [Signature] 8-6-96
 CHIEF, BUREAU OF HIGHWAYS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
 [Signature] 8/15/96
 NATURAL RESOURCE CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 8/15/96
 HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE
 "I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 [Signature] 7/23/96
 SIGNATURE OF ENGINEER
 DEVELOPER'S CERTIFICATE
 "I HAVE CERTIFIED 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 OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY."
 [Signature] 10/24/95
 SIGNATURE OF DEVELOPER



STATE OF MARYLAND
 DEPARTMENT OF ENVIRONMENTAL & NATURAL RESOURCES
 [Signature] 7/23/96
 REGIONAL ENGINEER

REVISIONS	DESCRIPTION	DATE
BY [Signature]	#1 REVISED TITLE BLOCK	4-28-97

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

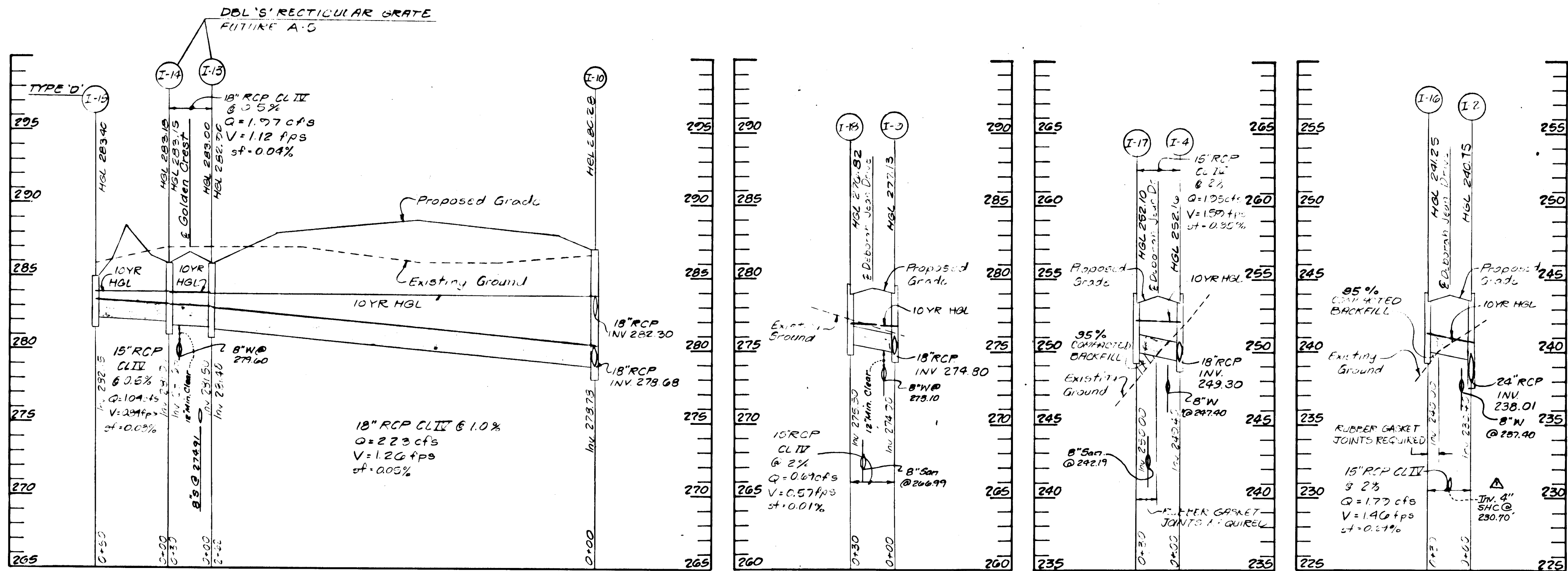
ROAD DETAILS

DESIGNED: E.D.S.
 DRAWN: W.J.
 CHECKED: B.D.B.
 DATE: June 1996

SCALE: As Shown
 DRAWING: 5 of 15
 JOB NO.: 95-022.3
 FILE NO.: F96-62

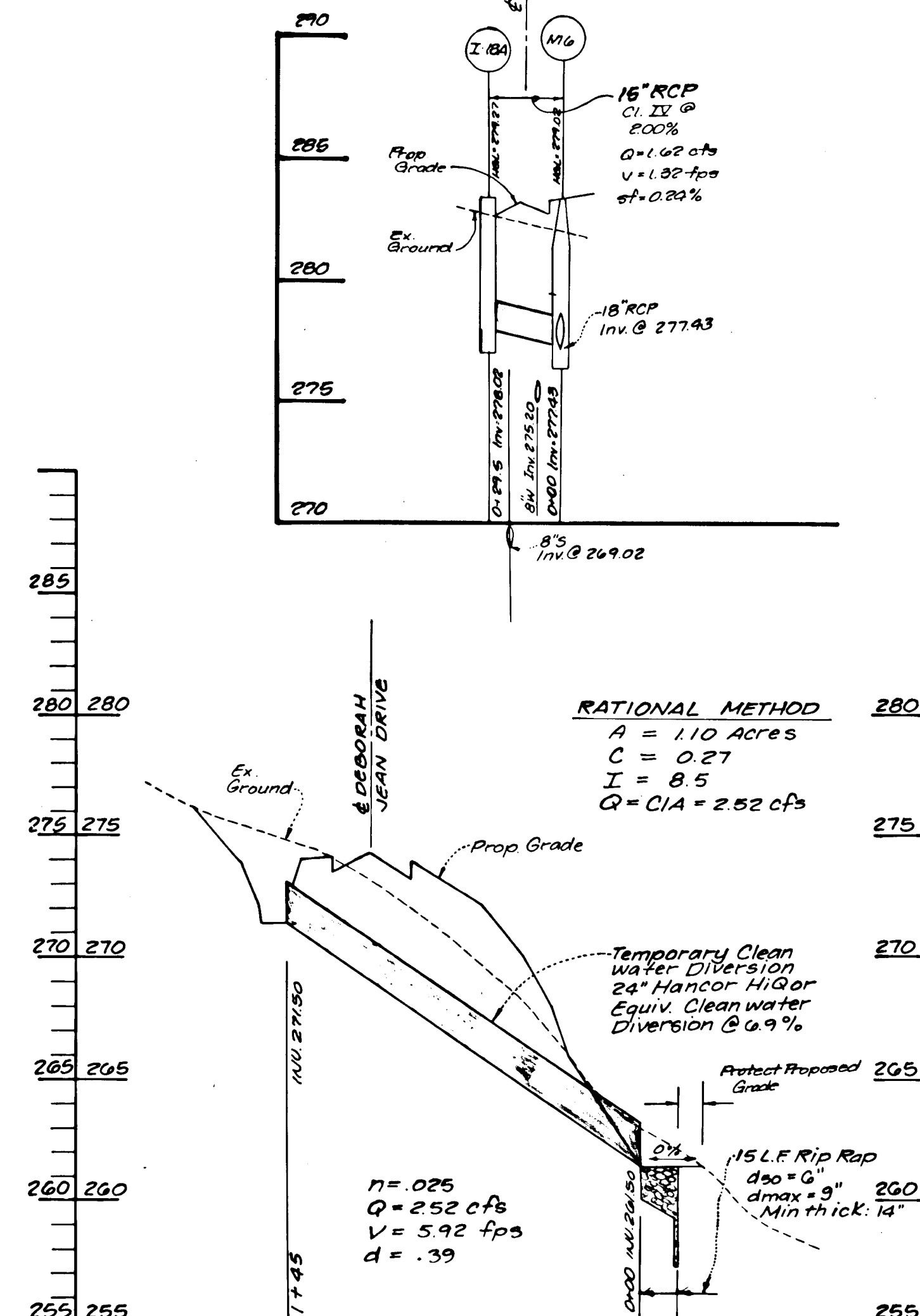
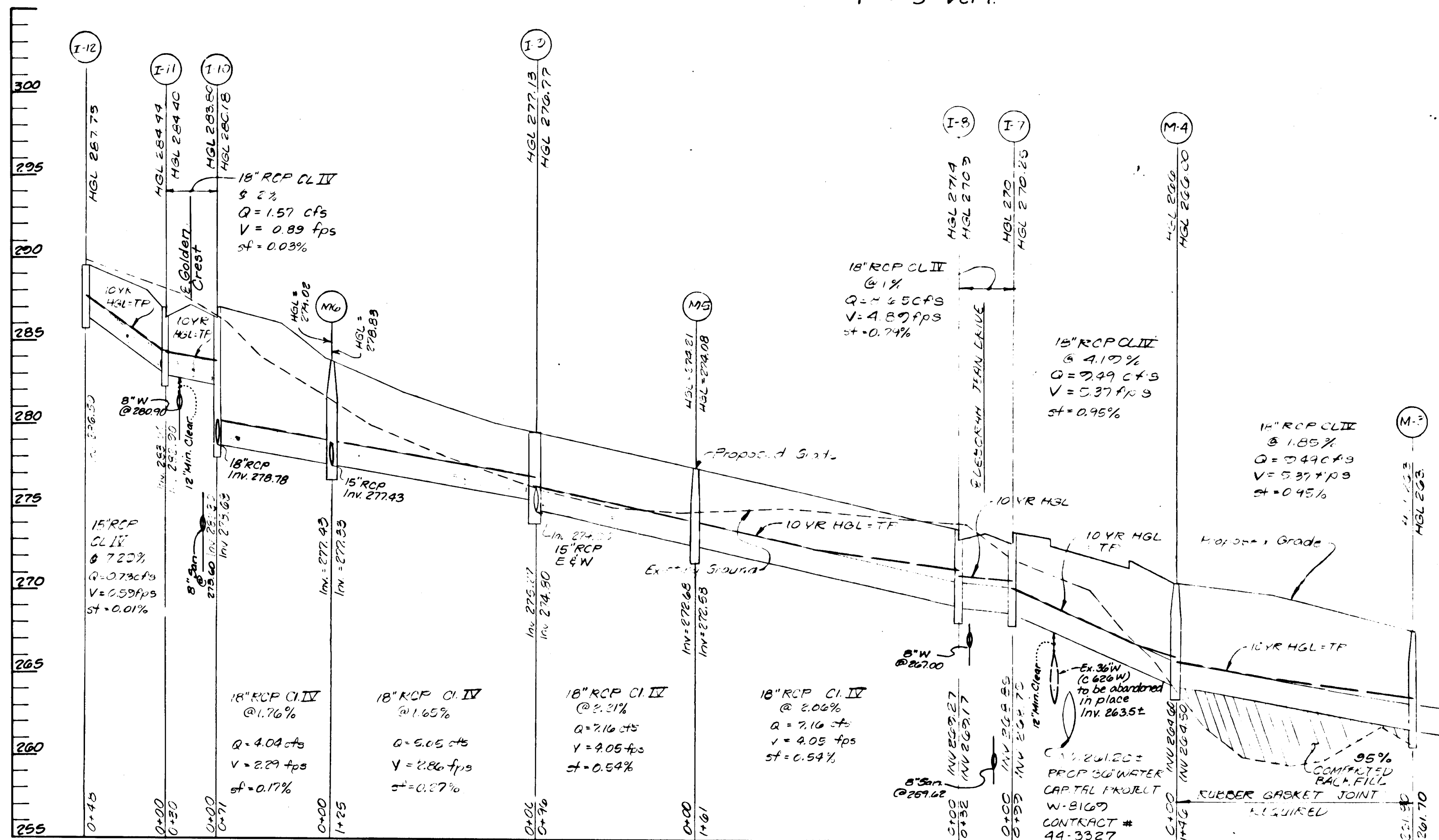
MARSHALEE WOODS
 Section Two - Area Four
 Lot 89-97, 101-103, 106-126 & 138-141 & 142
 Tax Map 37
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 Parcels 92, 592 and 60-591
 Owner/Developer: Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway, Unit P
 Columbia, Maryland 21045
 (410) 730-0810

16667



STORM DRAIN PROFILES

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



STRUCTURE SCHEDULE										
Inlet No.	Type	Inv. In	Inv. Out	Upper	Lower	Detail	Location			
I-2	A-10	238.26	238.01	244.13	SD 4.02	22 + 36.90	Deborah Jean Drive 13.52' LT			
I-2A	A-10	239.91	239.66	245.37	245.2	SD 4.02	21 + 25.58 Deborah Jean Drive 13.52' LT			
I-3	A-10	241.70	241.45	247.15	246.9	SD 4.02	20 + 22.88 Deborah Jean Drive 13.52' LT			
I-3A	A-10	245.47	245.37	250.50	250.13	SD 4.02	19 + 14.25 Deborah Jean Drive 13.52' LT			
I-4	A-10	250.00	249.30	254.23	253.86	SD 4.02	18 + 03.01 Deborah Jean Drive 13.52' LT			
I-5	A-10	257.60	257.50	262.23	261.86	SD 4.02	15 + 64.21 Deborah Jean Drive 13.52' LT			
I-6	A-10	261.40	261.00	267.91	267.55	SD 4.02	13 + 94.26 Deborah Jean Drive 13.52' LT			
I-7	A-10	268.85	268.75	273.68	273.45	SD 4.02	11 + 55.27 Deborah Jean Drive 13.52' RT			
I-8	A-10	269.27	269.17	273.92	273.68	SD 4.02	11 + 44.25 Deborah Jean Drive 13.52' LT			
I-9	A-10	275.27	274.80	279.70	279.44	SD 4.02	8 + 74.87 Deborah Jean Drive 13.52' LT			
I-9A	"D"	275.68	280.33	SD 4.39			N 501027.527 E 868429.004 Weir @ 279.50 : All 4 Sides			
I-10	A-10	282.30	278.68	287.64	287.48	SD 4.02	0 + 48.02 Golden Crest 13.52' RT			
I-11	A-10	283.00	282.90	287.64	287.48	SD 4.02	0 + 48.02 Golden Crest 13.52' LT			
I-12	A-10	286.50	286.50	290.13	289.60	SD 4.02	6 + 29.35 Deborah Jean Drive 13.52' LT			
I-13	Dbl. S **	281.60	281.40	286.31	286.11	SD 4.23	3 + 16.99 Golden Crest 13.52' LT			
I-14	Dbl. S **	281.90	281.65	286.31	286.11	SD 4.23	3 + 16.99 Golden Crest 13.52' LT			
I-15	"D"	282.15	285.83	SD 4.39			N 501109.282 E 868731.382 Weir @ 285.00 : All 4 Sides			
I-16	A-10	240.00	244.13	SD 4.02			22 + 36.90 Deborah Jean Drive 13.52' RT			
I-17	A-10	250.00	254.23	253.86	SD 4.02		18 + 03.01 Deborah Jean Drive 13.52' RT			
I-18	A-10	275.50	279.70	279.44	SD 4.02		8 + 74.87 Deborah Jean Drive 13.52' RT			
I-18A	A-10	278.02	284.03	283.55	SD 4.02		7 + 50 Deborah Jean Drive 13.52' RT			
M-1	Std. Manhole	217.76	217.66	228.00	G 5.12	N 499526.880	E 868478.876			
M-2	Std. Manhole	227.60	227.50	238.00	G 5.12	N 499584.169	E 86852.945			
M-2A	Std. Manhole	235.69	234.61	245.64	G 5.12	24 + 83.32 Deborah Jean Drive 7.39' LT				
M-3	Std. Manhole	261.80	261.70	267.86	G 5.12	13 + 94.26 Deborah Jean Drive 16.5' RT				
M-4	Std. Manhole	264.60	264.50	271.67	G 5.12	12 + 50 Deborah Jean Drive 16.5' LT				
M-5	Std. Manhole	272.68	272.58	277.30	G 5.12	9 + 71.35 Deborah Jean Drive 16.5' LT				
M-6	Std. Manhole	277.43	277.33	283.60	G 5.12	7 + 50 Deborah Jean Drive 16.5' LT				
M-A	Std. Manhole	215.46	215.36	225.20	G 5.12	N 499264.830	E 868592.475			
S-1	Type C Endwall	215.20	215.20	217.95	SD 5.21	N 499232.853	E 868578.246			
S-2	See Detail	216.00	215.20	222.23	Sheet 15	N 499348.846	E 868560.205			
S-3	Type C Endwall	217.50	217.50	220.25	SD 5.21	N 499495.458	E 868484.935			

** To Be Modified To Std. A-5 Inlet Upon Extension of Pappalukas Way Upon Development of the Pappalukas Property

1667

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 2/6/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 [Signature] 8/14/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.
 [Signature] 8-6-96
 CHIEF, BUREAU OF HIGHWAYS

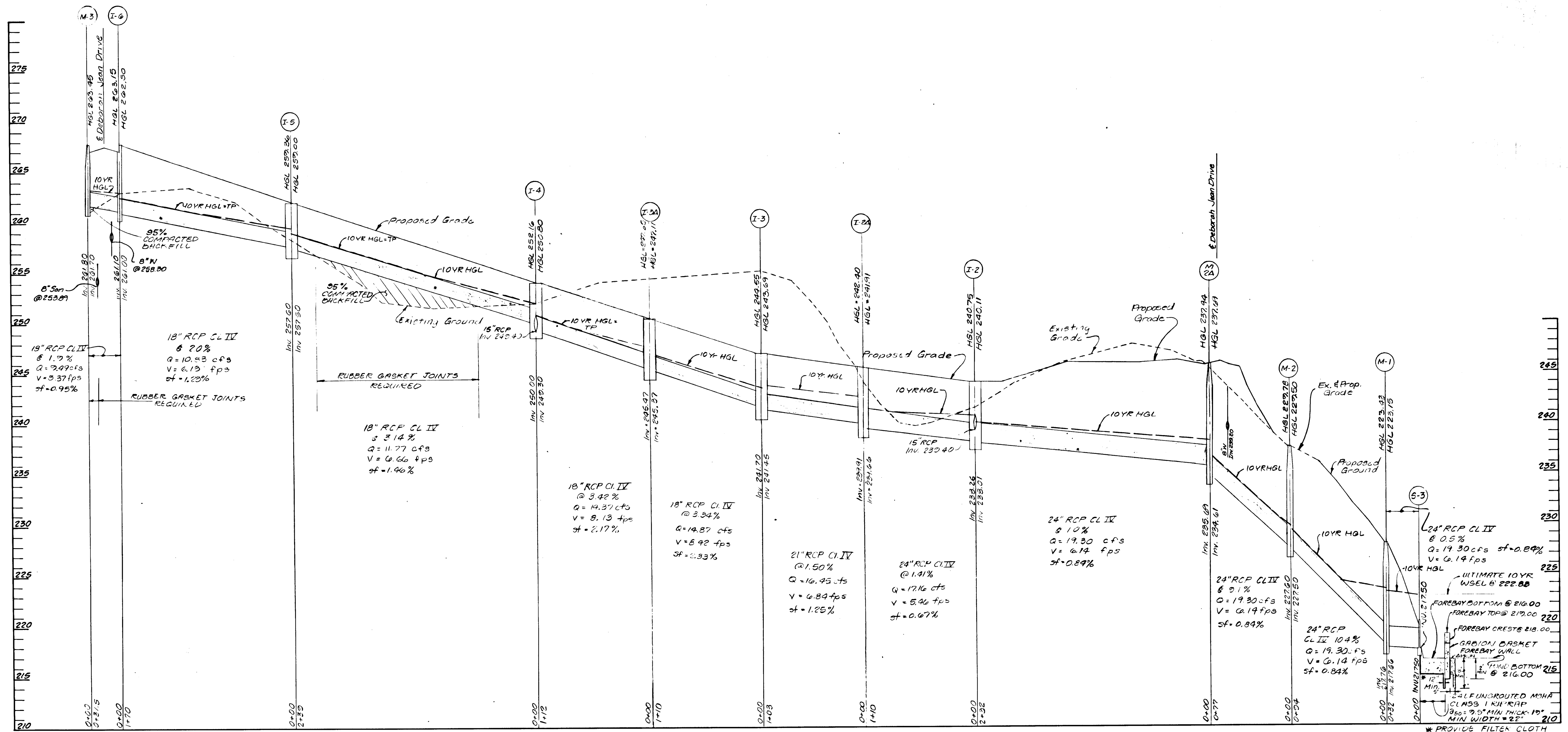
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.
 [Signature] 8/16/96
 NATURAL RESOURCE CONSERVATION SERVICE
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 8/16/96
 HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THESE PLANS AND DESIGN 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 REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 7/23/96
 SIGNATURE OF ENGINEER DATE
DEVELOPER'S CERTIFICATE
 I HEREBY 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 OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.
 [Signature] 7/23/96
 SIGNATURE OF DEVELOPER DATE

511 SHEET 7
 250
 245
 240

PROFILE: TEMPORARY 24" PIPE
 (E STA. 11+60 DEBORAH JEAN DRIVE)
 SCALE: 1" = 50' Horz.; 1" = 5' VERT.
 [Signature] 7/23/96
 STATE OF MARYLAND PROFESSIONAL ENGINEER

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)
STORM DRAIN PROFILES
 SCALE 1" = 5' V.
 1" = 50' H.
MARSHALEE WOODS
 Section Two - Area Four
 6 of 15
 CHECKED: Lot 89-97, 101-103, 106-126, 137-141 & 142
 Tax Map 37 Parcels 92, 93 and 90-91
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 JOB NO. 95-022.3
 DATE June 1996
 FILE NO. F96-62
 Owner/Developer: Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway, Unit P
 Columbia, Maryland 21045
 (410) 750-0810



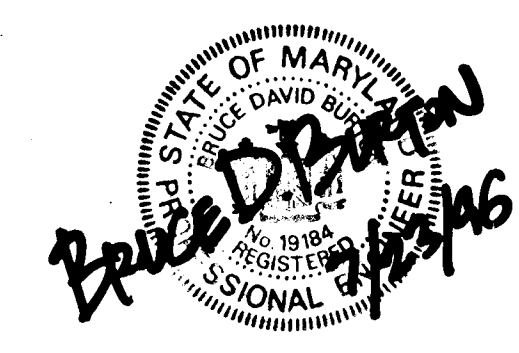
STORM DRAIN PROFILES

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

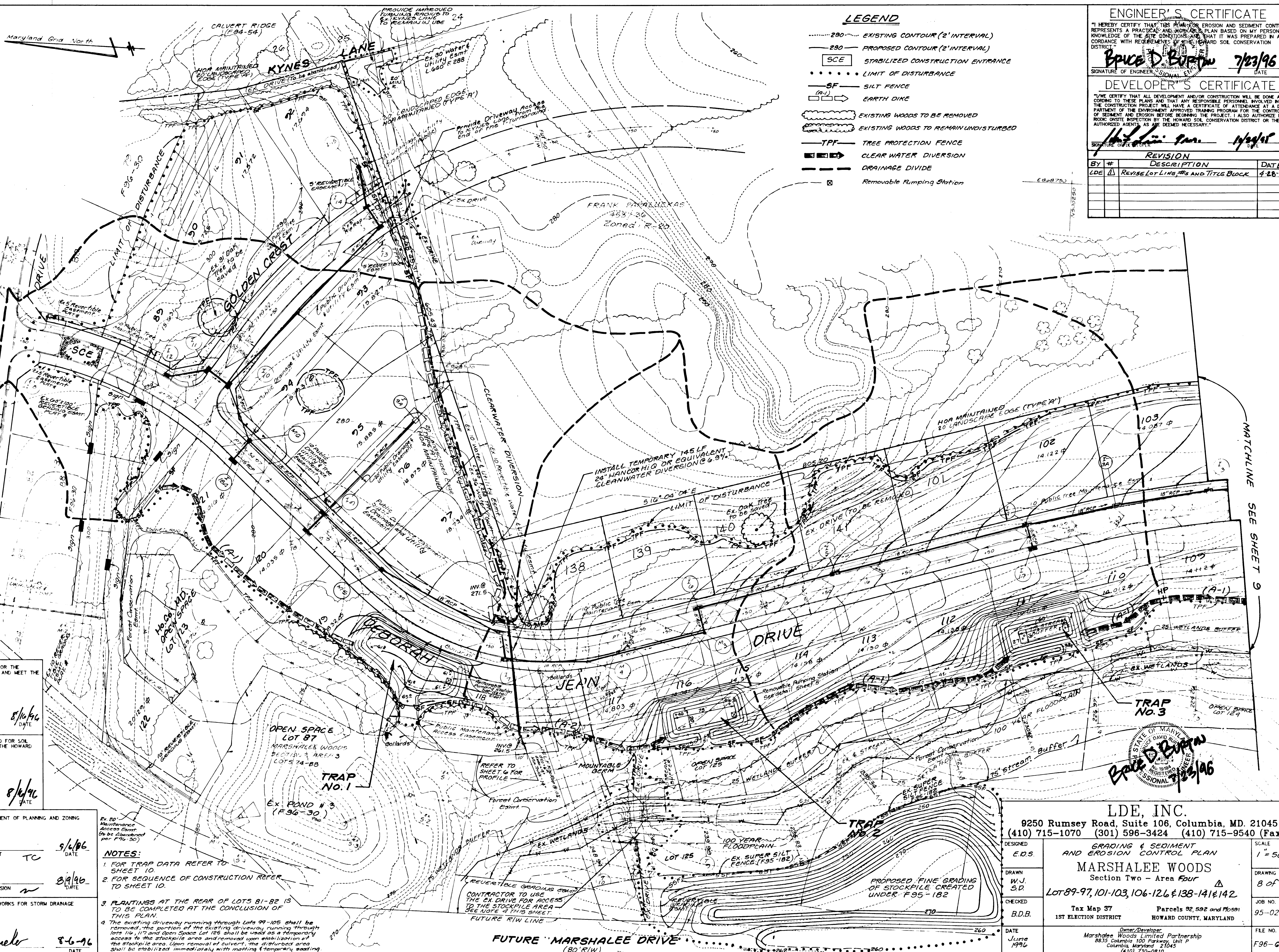
* PROVIDE FILTER CLOTH UNDER RISE/STEP APRON AND FOREBAY GABIONS

1667

APPROVED DEPARTMENT OF ENVIRONMENT & PLANNING <i>Richard Blood</i> 3/6/96 <i>Chad Dammicus</i> 6/16/96 APPROVED DEPARTMENT OF PUBLIC WORKS <i>Andrew M. Donolo</i> 8-6-96	THIS PLAN HAS BEEN REVIEWED FOR THE HEALTH, SAFETY AND WELFARE OF THE COMMUNITY AND MEETS THE REQUIREMENTS OF THE HEALTH, SAFETY AND WELFARE ACT. <i>J.G. Curtis</i> /GS 8/16/96 SERVICE	STATE OF MARYLAND DEPARTMENT OF ENVIRONMENT & PLANNING REGISTERED PROFESSIONAL ENGINEER <i>Eric D. Burton</i> 7/23/96
APPROVED DEPARTMENT OF ENVIRONMENT & PLANNING <i>Andrew M. Donolo</i> 8-6-96	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. <i>[Signature]</i> 8/16/96	REGISTERED PROFESSIONAL ENGINEER STATE OF MARYLAND DEPARTMENT OF ENVIRONMENT & PLANNING <i>[Signature]</i> 1/24/96



LDE	REVISION	REVISION DESCRIPTION	DATE
BY	NUMBER	DESCRIPTION	DATE
9250 Rumsey Road, Suite 106, Columbia, MD 21045 (410) 715-1070 (301) 596-3424 (410) 715-9541 (Fax)			
EDS		MAR. HALEE WOOD	1" = 5' V 1" = 50' H
WU		Section Two - Area Four	7 of 15
R.D.B.		LOT 89-97, 101-103, 106-126, 138-141, 142	95-0223
June 1996		Tax Map 37 1ST ELECTION DISTRICT	F96-62



LEGEND

- 2'00' EXISTING CONTOUR (2' INTERVAL)
- 2'00' PROPOSED CONTOUR (2' INTERVAL)
- [SCE] STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- [SF] SILT FENCE
- [E-D] EARTH DIKE
- [W-R] EXISTING WOODS TO BE REMOVED
- [W-M] EXISTING WOODS TO REMAIN UNDISTURBED
- [TPF] TREE PROTECTION FENCE
- [CWD] CLEAR WATER DIVERSION
- [D-D] DRAINAGE DIVIDE
- [RFS] Removable Pumping Station

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS 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 REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Bruce D. Burton 7/23/96
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

"I HAVE CERTIFIED 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY."

Richard Blood 7/23/96
SIGNATURE OF DEVELOPER DATE

REVISION

BY	#	DESCRIPTION	DATE
LDE	1	REVISE LOT LINES AND TITLE BLOCK	4-28-97

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

J.G. Wadsworth 8/16/96
NATURAL RESOURCE CONSERVATION SERVICE DATE

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

Richard Blood 8/16/96
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/6/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH TC DATE

Allen Dammann 8/19/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Danelo 8-6-96
CHIEF, BUREAU OF HIGHWAYS DATE

NOTES:

1. FOR TRAP DATA REFER TO SHEET 10.
2. FOR SEQUENCE OF CONSTRUCTION REFER TO SHEET 10.
3. PLANTINGS AT THE REAR OF LOTS 81-82 IS TO BE COMPLETED AT THE CONCLUSION OF THIS PLAN.
4. THE EXISTING DRIVEWAY RUNNING THROUGH LOTS 99-105 SHALL BE REMOVED. THE PORTION OF THE EXISTING DRIVEWAY RUNNING THROUGH LOTS 106, 107 AND OPEN SPACE LOT 125 SHALL BE USED AS A TEMPORARY ACCESS TO THE STOCKPILE AREA AND REMOVED UPON STABILIZATION OF THE STOCKPILE AREA. UPON REMOVAL OF CULVERT, THE DISTURBED AREA SHALL BE STABILIZED IMMEDIATELY WITH MATTING & TEMPORARY SEEDING.

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

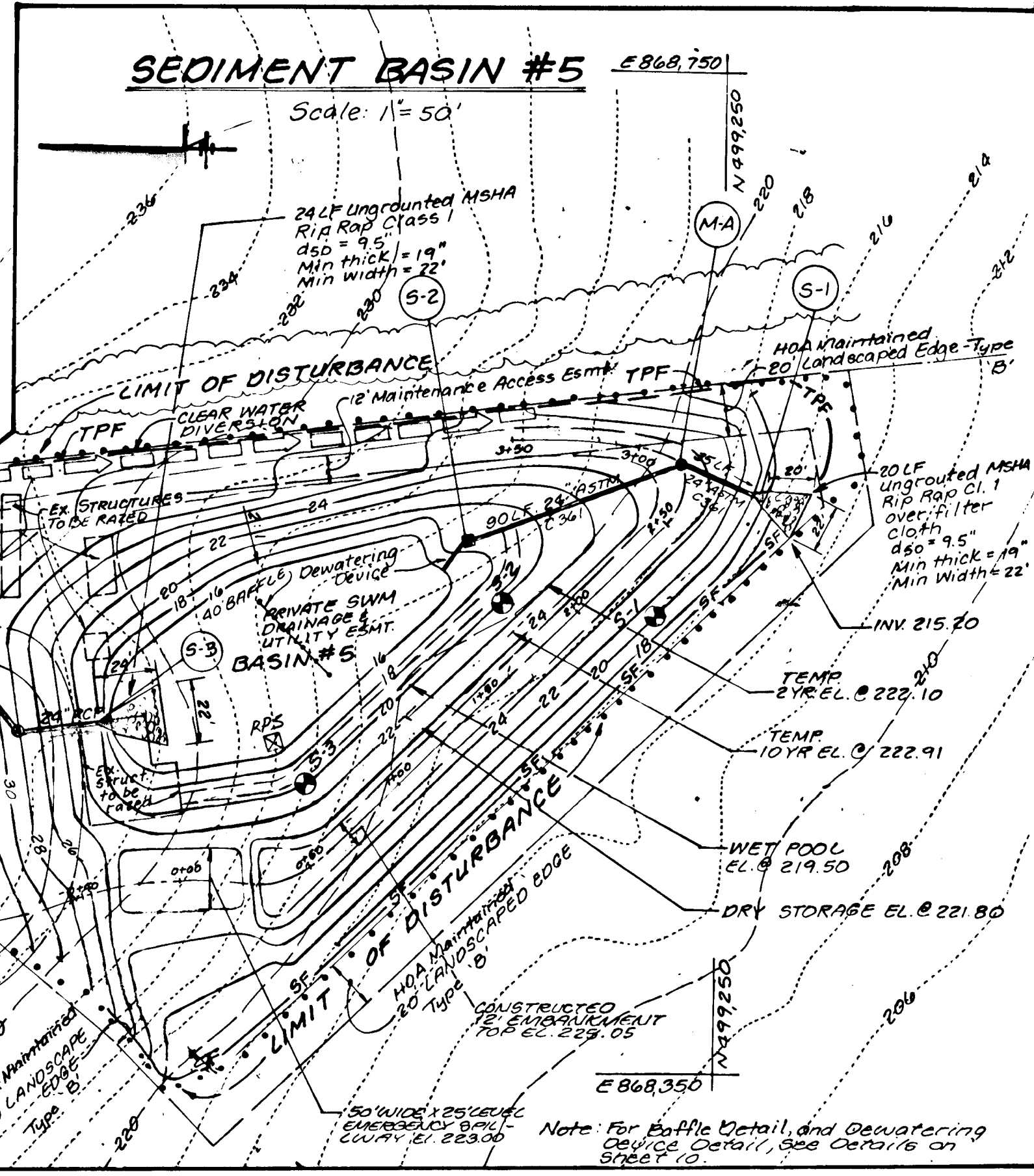
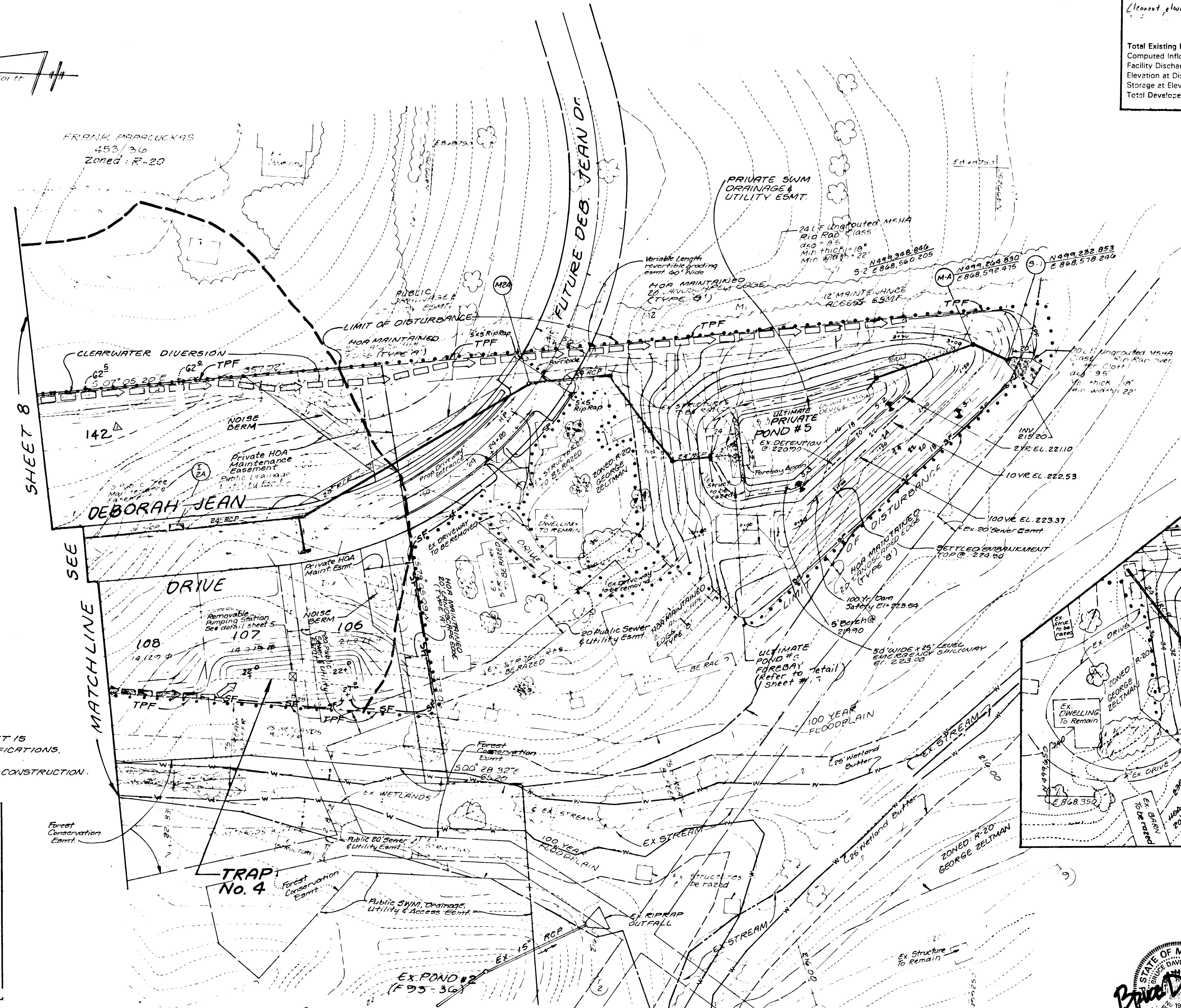
DESIGNED E.D.S.	GRAVING & SEDIMENT AND EROSION CONTROL PLAN	SCALE 1" = 50'
DRAWN W.J. SD	MARSHALEE WOODS Section Two - Area Four	DRAWING 8 OF 15
CHECKED B.D.B.	Lot 89-97, 101-103, 106-126 & 138-141 & 142	JOB NO. 95-022.3
DATE June 1996	Tax Map 37 1ST ELECTION DISTRICT	FILE NO. F96-62
	Parcels 92, 592 and 106591 HOWARD COUNTY, MARYLAND	
	Owner/Developer Marshalee Woods Limited Partnership 2835 Columbia 100 Parkway Columbia, Maryland 21045 (410) 730-0810	

1667

BASIN SUMMARY TABLE	
Sediment Basin #5	
Hazard Classification "A"	
Drainage Area = 19.04 Acres	
Sediment Storage Volume Required = 34272 cu.ft.	
Sediment Storage Volume Provided = 35025 cu.ft.	
Minimum flow = 218.3	
Minimum flow = 4.8' from Top	
Basin #5	
2 Year 10 Year	
Total Existing Flow	(cfs) 3.40 24.20
Computed Inflow	(cfs) 37.50 80.30
Facility Discharge	(cfs) 3.40 67.10
Elevation at Discharge	222.48 223.49
Storage at Elevation	(ACFT) 1.86 2.34
Total Developed Flow	(cfs) 3.40 67.10

- LEGEND**
- 342 --- EXISTING CONTOUR (2' INTERVAL)
 - 342 --- PROPOSED CONTOUR (2' INTERVAL)
 - [SCE] STABILIZED CONSTRUCTION ENTRANCE
 - LIMIT OF DISTURBANCE
 - SF --- 2 Year 10 Year
 - [EARTH DIKE]
 - [WOODS]
 - [WOODS]
 - TPF --- TREE PROTECTION FENCE
 - [CLEARWATER DIVERSION]
 - DRAINAGE DIVIDE
 - [PUMPING STATION]

- NOTES**
1. For trap data, refer to sheet 10.
 2. For pond #5 details, refer to sheet 15.
 3. For soil borings and MD 37B specifications, refer to sheet 10.
 4. Refer to sheet 10 for sequence of construction.
- NOTES**
1. Topsoil shall be removed from the existing site and stored in a pile to be used on-site as specified in the following specifications. Typically, the depth of topsoil to be salvaged for a given site shall be found in the representative soil profile station in the Soil Survey published by USDA, NCS in cooperation with Maryland Agricultural Experiment Station.
 2. Topsoil Specifications: Soil to be used as topsoil must meet the following:
 - a. Topsoil shall be a fine, sandy loam, clay loam, silty loam, sandy clay loam, heavy sand, or other soil type as recommended by an approved soil scientist and approved by the appropriate approval authority. Topsoil shall not be a mixture of existing topsoil and other soil materials less than 75% by volume of fines, where the coarse fragments, gravel, silt, sand, or other materials are less than 1% in diameter.
 - b. Topsoil must be free of plants or plant parts such as bracken fern, smartweed, johnsongrass, and other weeds, or other plants as specified.
 - c. Where the topsoil is other than highly erodible or composed of heavy clay, ground limestone shall be applied at the rate of 4.0 tons per acre (2000 pounds per 1000 square feet) prior to the placement of topsoil. Limestone shall be distributed uniformly over the disposal area and worked into the soil in conjunction with tillage operations as described in the following procedures.
 3. For sites having disturbed areas over 5 acres:
 - a. On soil meeting Topsoil specifications, obtain test results defining texture and fine sediment content by using the soil test procedure with the following:
 - i. pH for topsoil shall be between 6.0 and 7.5. If the test soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - ii. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - iii. Topsoil having salinity salt content greater than 500 parts per million shall not be used.
 - iv. The soil used shall be placed on soil which has been treated with soil conditioners or fertilizers and for weed control and soil-bait time has elapsed (14 days into the present) of phytotoxic materials.
 - b. Topsoil shall be uniformly distributed to a depth of 4" to 6" and lightly compacted to a minimum thickness of 1". Spreading shall be performed in a manner that avoids soil erosion or compaction with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from spreading or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - c. Topsoil shall not be placed while the soil is saturated or in a loose or muddy condition, when the soil is excessively wet or in a condition that may obstruct or impede the proper grading and seedling preparation.
 4. Alternative for Prevention Soiling: Instead of applying the full amount of lime and commercial fertilizer, approved topsoil and amendments may be used for sites having disturbed areas over 5 acres shall conform to the following requirements:
 - a. Computed charge shall be supplied by an engineer from a permit or permit that are provided for the use of topsoil of the composition of the proposed site by the Maryland Department of the Environment under COMAR 26.01.05.
 - b. Computed charge 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 nutrient data and soil test requirements, the appropriate conditions must be added to meet the requirements prior to use.
 - c. Computed charge shall be applied at a rate of 1.000,000 square feet.
 - d. Computed charge shall be amended with a potassium fertilizer applied at the rate of 4.0/1,000 square feet, and 1.5 the annual lime application rate.
- References: Odorous Specifications, Soil Preparation and Seeding, MDWA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, March 1993.



SUMMARY TABLE	
Ultimate Private Pond #5	
Hazard Classification "A"	
Drainage Area = 19.04 Acres	
Water Quality Management - Extended Detention	
Water Quantity Management - Detention	
SWM POND	
	2 Year 10 Year 100 Year
Total Existing Flow	(cfs) 26.70 123.80 269.20
Unmanaged Flow	(cfs) 24.50 78.50 149.70
Acceptable Release	(cfs) 2.20 45.30 119.50
Computed Inflow	(cfs) 30.00 64.30 104.00
Facility Discharge	(cfs) 4.80 34.90 92.10
Elevation at Discharge	221.10 222.53 223.37
Storage at Elevation	(ACFT) 1.13 1.67 2.04
Total Developed Flow	(cfs) 26.00 122.40 344.30

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/6/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

John Dammann 8/1/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Daniels 8-6-96
 CHIEF, BUREAU OF HIGHWAYS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

J.G. W. Hill / G.S. 8/16/96
 NATURAL RESOURCE CONSERVATION SERVICE

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

Yuh S. Liu 8/16/96
 HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE

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

Bruce D. Burton 7/23/96
 SIGNATURE OF ENGINEER

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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Mark L. ... 10/20/95
 SIGNATURE OF DEVELOPER

OPERATION AND MAINTENANCE SCHEDULE

OF HOME OWNERS ASSOCIATION OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY EXTENDED DETENTION POND

HOME OWNERS ASSOCIATION'S MAINTENANCE RESPONSIBILITIES:

1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
2. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

REVISIONS

NO.	REVISION	DATE
1	REVISE LOT LINES, #S AND TITLE BLOCK	4-28-97

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

MARSHALEE WOODS
 Section Two - Area Four
 Lot 89-97, 101-103, 106-126 & 138-141 & 142

Tax Map 37
 1ST ELECTION DISTRICT

Owner/Developer:
 Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway, Unit P
 Columbia, Maryland 21045
 (410) 730-0810

SCALE: 1" = 50'
 DRAWING: 9 of 15
 JOB NO.: 95-022.3
 FILE NO.: F96-62

1667

**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. (880-3455)
- 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 "MARYLAND STANDARDS 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 calendar days 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 shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS 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 dates do not allow for proper germination and establishment of grasses. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	22.2	Acres
Area to be roofed or paved	17.9	Acres
Area to be vegetatively stabilized	13.4	Acres
Total Cut	50,000	Cu. Yds.
Off-site Fill	50,000	Cu. Yds.
- 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.
- All sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to 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.

SEEDBED 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
- PREFERRED** -- Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq. sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000sq. ft.)
 - ACCEPTABLE** -- Apply 2 tons per acre dolomitic limestone (92 lbs/1000sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000sq. 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/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (0.5 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 15 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 per acre Kentucky 31 Tall Fescue and mulch 2 tons / acre well anchored straw.

MULCHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. 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 redistributed where a short-term vegetative cover is needed.

SEEDBED PREPARATION: -- Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.

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

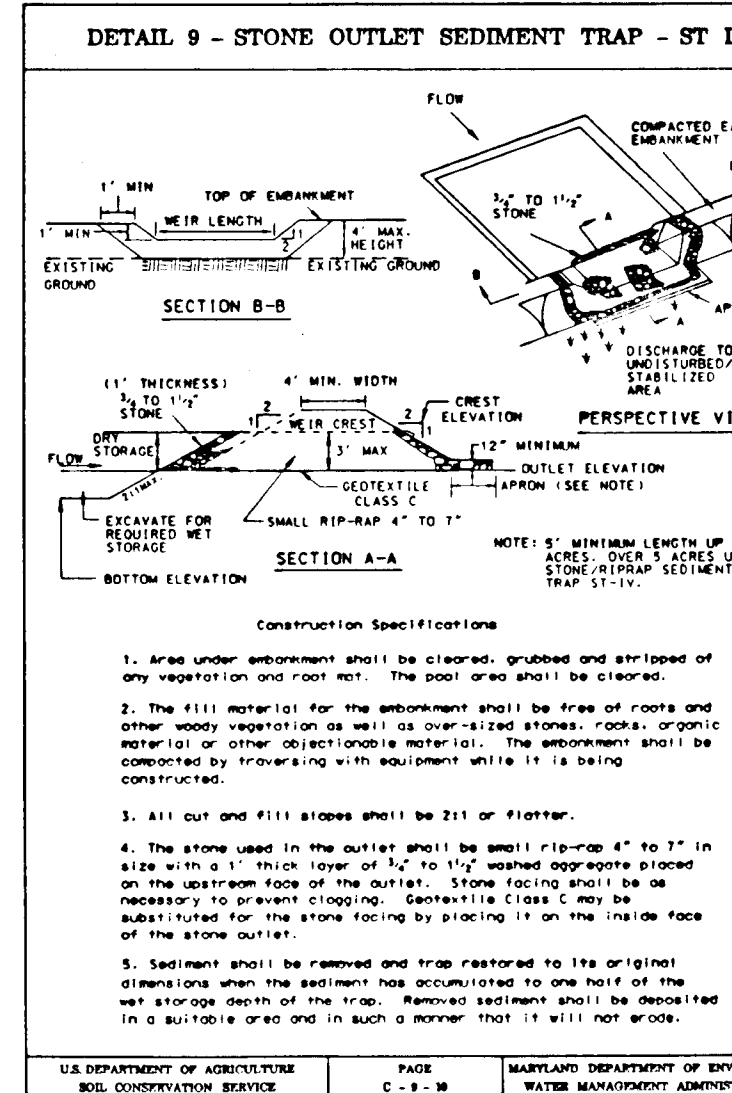
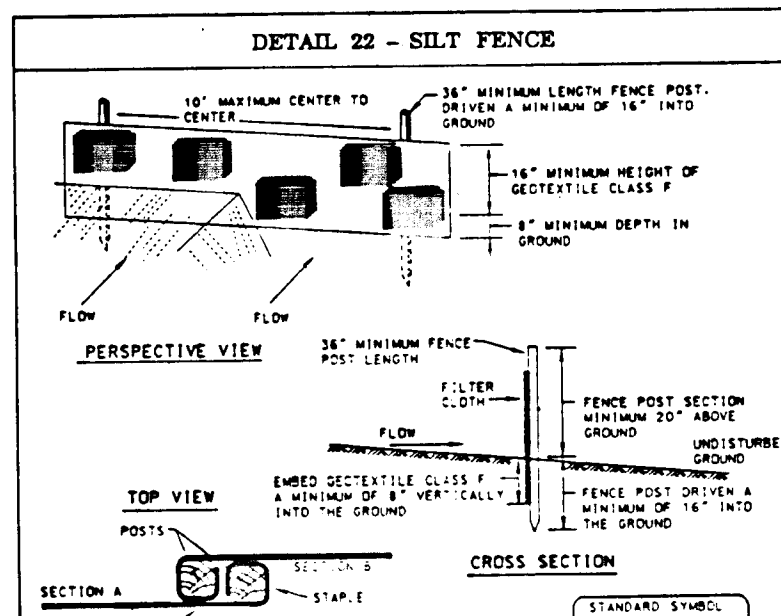
SEEDING -- For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs/1000sq. ft.). For the period November 16 thru February 28, 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/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

Trap No.	Max. Area Acres	Stor. Vol. cu. ft.	Stor. Elev. ft.	Stor. Depth ft.	Stor. Dia. ft.	Stor. Length ft.	Bottom Elev. ft.	Clean Elev. ft.	Elev. Top ft.	Trap Size	Type
1	4.30	17640	18375	265	4	20	261	262.3	265	266	See Plan S.T.II
2	2.90	10440	12970	251	5	12	246	247.5	251	252	S.T.II
3	4.20	15120	16020	233	6	18	227	229.2	233	234	15' x 60' S.T.II
4	3.50	12600	12506	227	5	14	222	224.0	227	228	See Plan S.T.II

Notes:
1. Refer to sheet 9 for Trap Specifications
2. Refer to sheet 5 for Removable Pumping Station Detail.

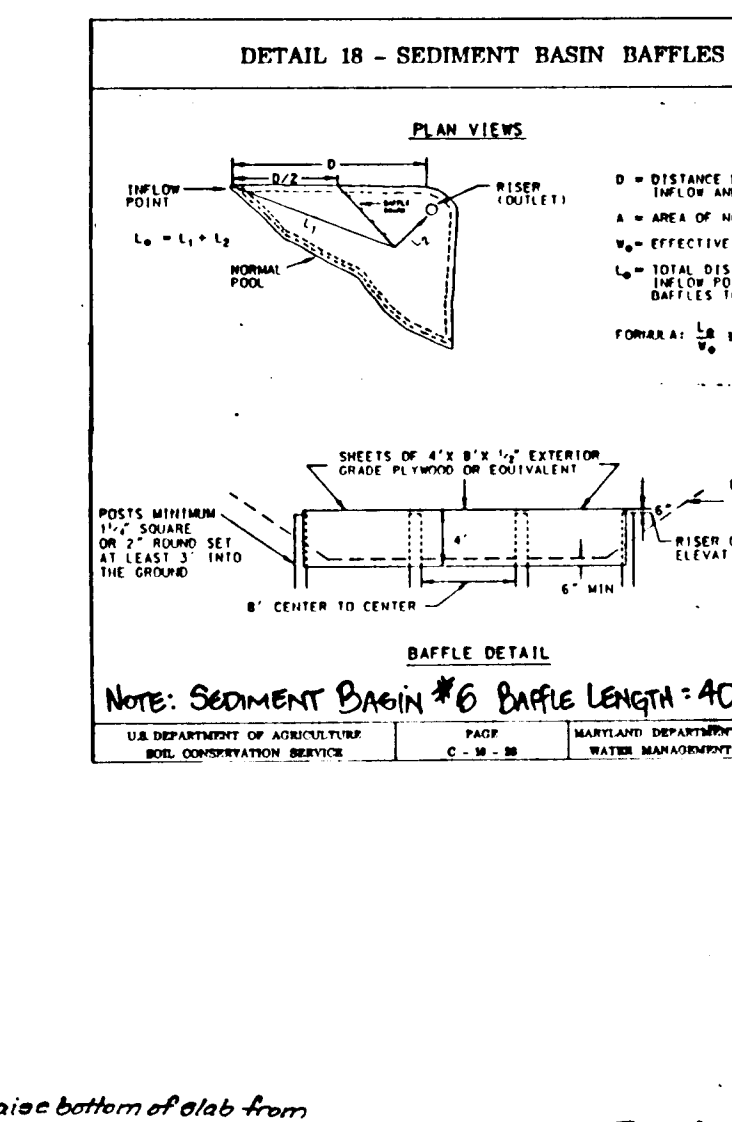
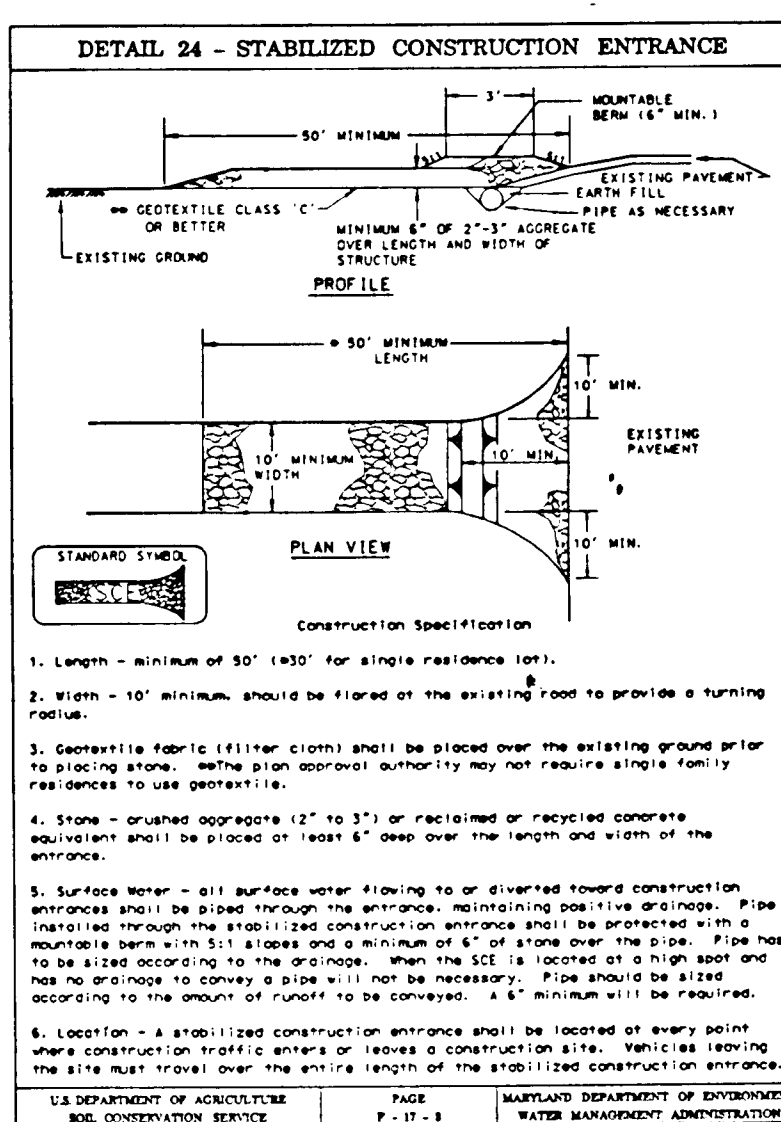


RECORD OF SOIL EXPLORATION

DATE	SOIL DESCRIPTION	DEPTH (FEET)	SCALE	BLINDS	NO.	REMARKS
10/10/96	Topsoil	0-12	1:1	1	1	12-15" 100% Organic
10/10/96	Subsoil	12-18	1:1	1	2	18-24" 100% Organic
10/10/96	Subsoil	18-24	1:1	1	3	24-30" 100% Organic
10/10/96	Subsoil	24-30	1:1	1	4	30-36" 100% Organic
10/10/96	Subsoil	30-36	1:1	1	5	36-42" 100% Organic
10/10/96	Subsoil	42-48	1:1	1	6	42-48" 100% Organic
10/10/96	Subsoil	48-54	1:1	1	7	48-54" 100% Organic
10/10/96	Subsoil	54-60	1:1	1	8	54-60" 100% Organic
10/10/96	Subsoil	60-66	1:1	1	9	60-66" 100% Organic
10/10/96	Subsoil	66-72	1:1	1	10	66-72" 100% Organic
10/10/96	Subsoil	72-78	1:1	1	11	72-78" 100% Organic
10/10/96	Subsoil	78-84	1:1	1	12	78-84" 100% Organic
10/10/96	Subsoil	84-90	1:1	1	13	84-90" 100% Organic
10/10/96	Subsoil	90-96	1:1	1	14	90-96" 100% Organic
10/10/96	Subsoil	96-102	1:1	1	15	96-102" 100% Organic

RECORD OF SOIL EXPLORATION

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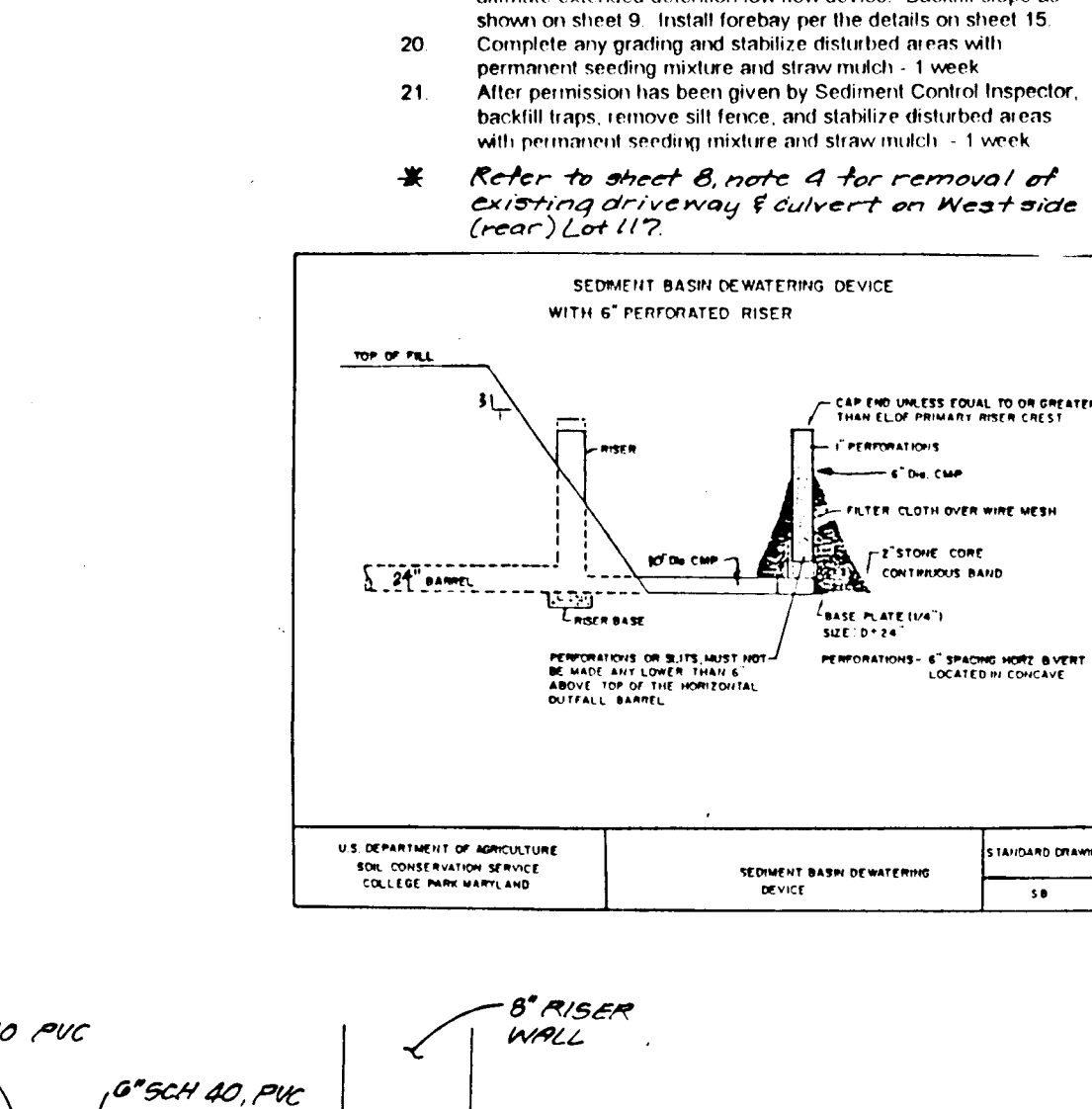
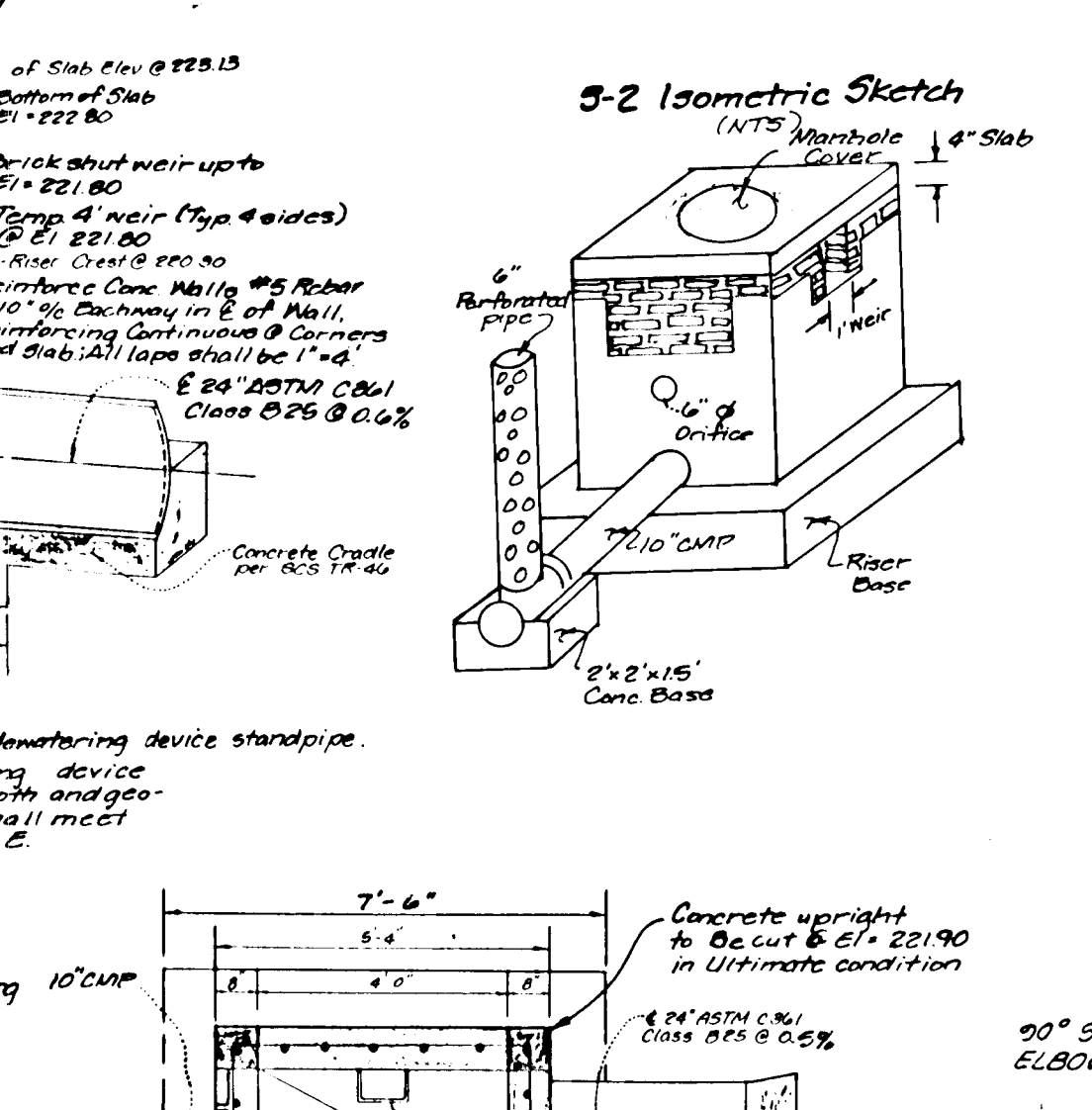
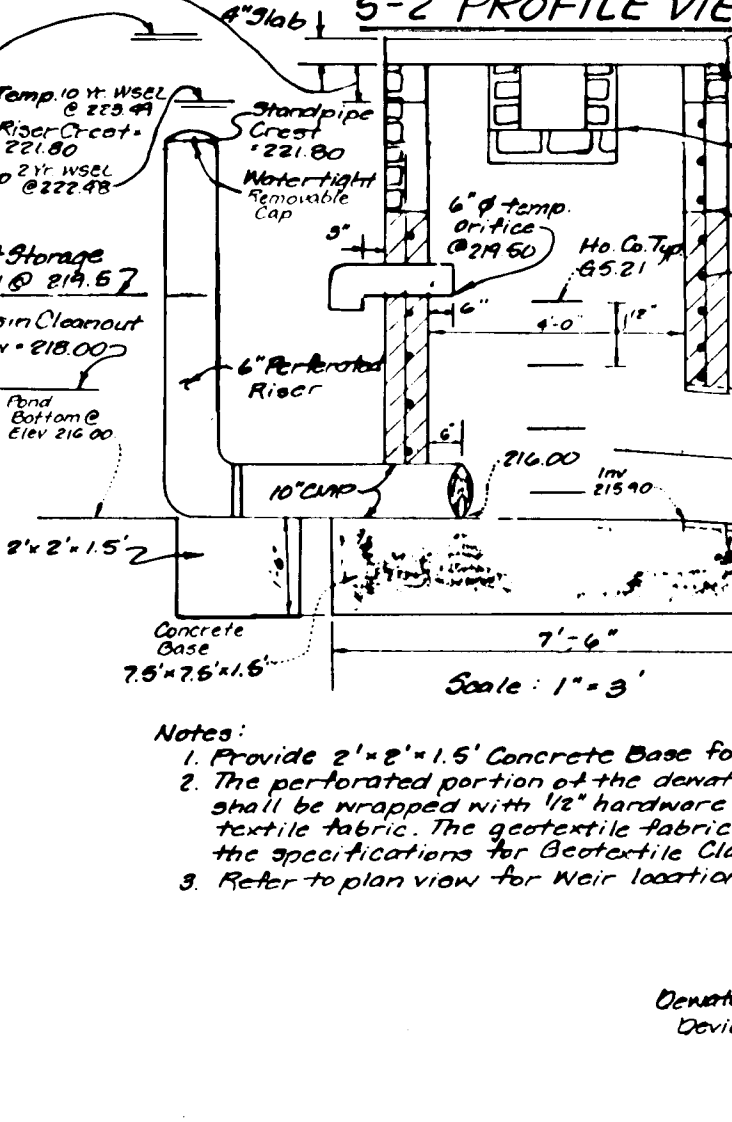
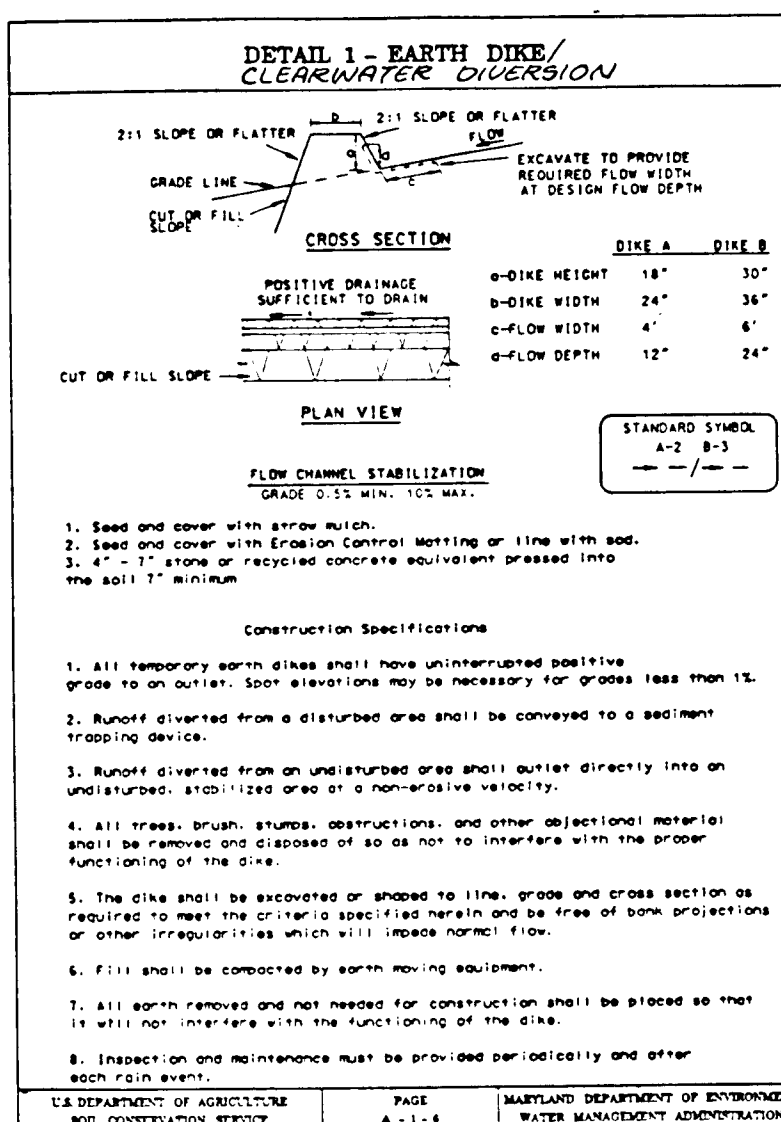


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10/10/96	Subsoil	90-96	1:1	1	14	90-96" 100% Organic
10/10/96	Subsoil	96-102	1:1	1	15	96-102" 100% Organic

CONSTRUCTION SEQUENCE

- Obtain Grading Permit - 1 day
- Install stabilized construction entrance - 1 day
- Stake out limits of disturbance - 2 days
- Install tree protection fence and temporary pipe where shown hereon - 2 days
- Install silt fence at limit of disturbance where shown - 2 days
- Construct Basin #5 to M3178 specifications. Construct #2 to the specifications on sheet 10, construct Basin #5 per the plan view detail on sheet 9 - 2 weeks
- Install utilities from S-3 to S-2 - 1 week
- Install traps and remaining perimeter controls - 2 weeks
- The contractor shall maintain access to the Zeffman Properties at all times.
- Clear and grub site - 1 week
- Sediment shall be removed from the sediment traps and basin when the cleared elevation has been reached - 1 week
- The contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon at all times.
- The sediment traps and basin shall be dewatered by pumping the accumulated sediment from the trap shall be placed up grade from the traps and basin in such a manner as not to interfere with construction operations or cause erosion down grade from the trap - 1 day
- Grate site after permission is granted by Sediment Control Inspector - 2 weeks
- After permission has been given by Sediment Control Inspector, install utilities and remove temporary pipe - 3 weeks
- Repair diversion dikes damaged by utility installation and stabilize with permanent seeding mixture and straw mulch - 1 Day
- Install curb and gutter and paving - 2 weeks
- Install sidewalks - 2 weeks
- After permission has been given by Sediment Control Inspector, convert Basin #5 into Pond #5. Convert riser from the temporary riser to the permanent riser per the details on sheet 15.
- Remove the temporary backwork down to the ultimate elevation; replace temporary dewatering device with the ultimate extended detention low flow device. Backfill slope as shown on sheet 9. Install foray per the details on sheet 15
- Complete any grading and stabilize disturbed areas with permanent seeding mixture and straw mulch - 1 week
- After permission has been given by Sediment Control Inspector, backfill traps, remove silt fence, and stabilize disturbed areas with permanent seeding mixture and straw mulch - 1 week
- Refer to sheet 6 note 4 for removal of existing driveway & convert on West side (near) Lot 17.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blount 8/6/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Andrew McDaniel 8-6-96
CHIEF, BUREAU OF HIGHWAYS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

D.G. Wadell, Inc. 8/6/96
NATURAL RESOURCE CONSERVATION SERVICE

John Ad... 8/10/96
HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE

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

BRUCE D. BURTON 7/23/96
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

I HEREBY 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 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 ON THEIR OWN DEDICATED NECESSARY.

BRUCE D. BURTON 10/24/96
SIGNATURE OF DEVELOPER DATE

REVISIONS

NO.	DESCRIPTION	DATE
1	REVISE TITLE BLOCK	4-23-97

LDE, INC.

9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED: GRADING & SEDIMENT AND EROSION CONTROL DETAILS
SCALE: As Shown

DRAWN: MARSHALEE WOODS
Section Two - Area Four
DRAWING NO. 10 of 15

CHECKED: Lot 89-97, 101-103, 106-126 & 138-141 & 142
JOB NO. 95-022.3

Tax Map 37
1ST ELECTION DISTRICT
Parcels 52, 692 and 751
HOWARD COUNTY, MARYLAND

DATE: June 1996
FILE NO. F96-62

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

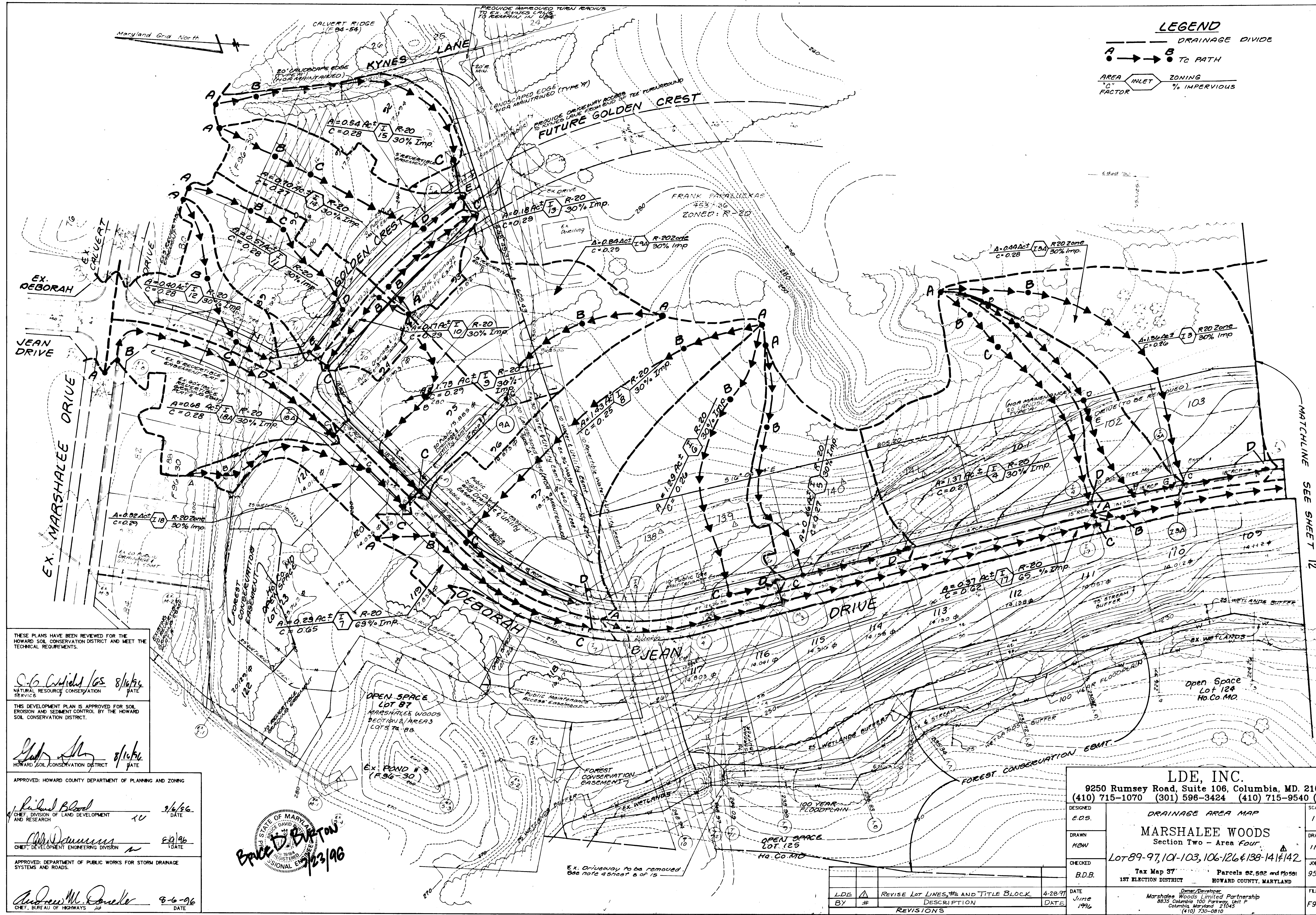
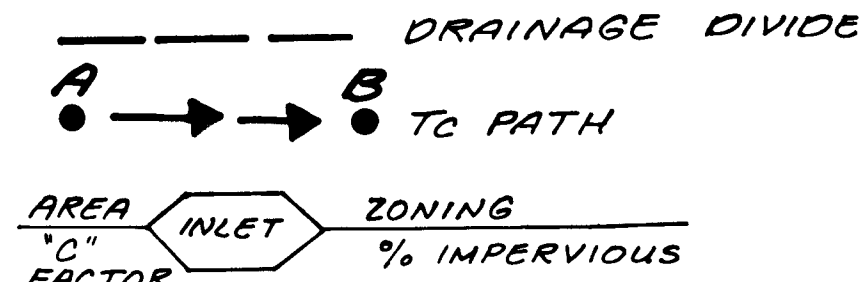
Richard Blount 8/6/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Andrew McDaniel 8-6-96
CHIEF, BUREAU OF HIGHWAYS

1667

F96-62

LEGEND



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

S.G. Coakley 8/16/94
 NATURAL RESOURCE CONSERVATION SERVICE

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

Shirley 8/16/94
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/6/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

John 8/19/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Donelle 8-6-96
 CHIEF, BUREAU OF HIGHWAYS

Eric D. Burton 8/23/96
 REGISTERED PROFESSIONAL ENGINEER

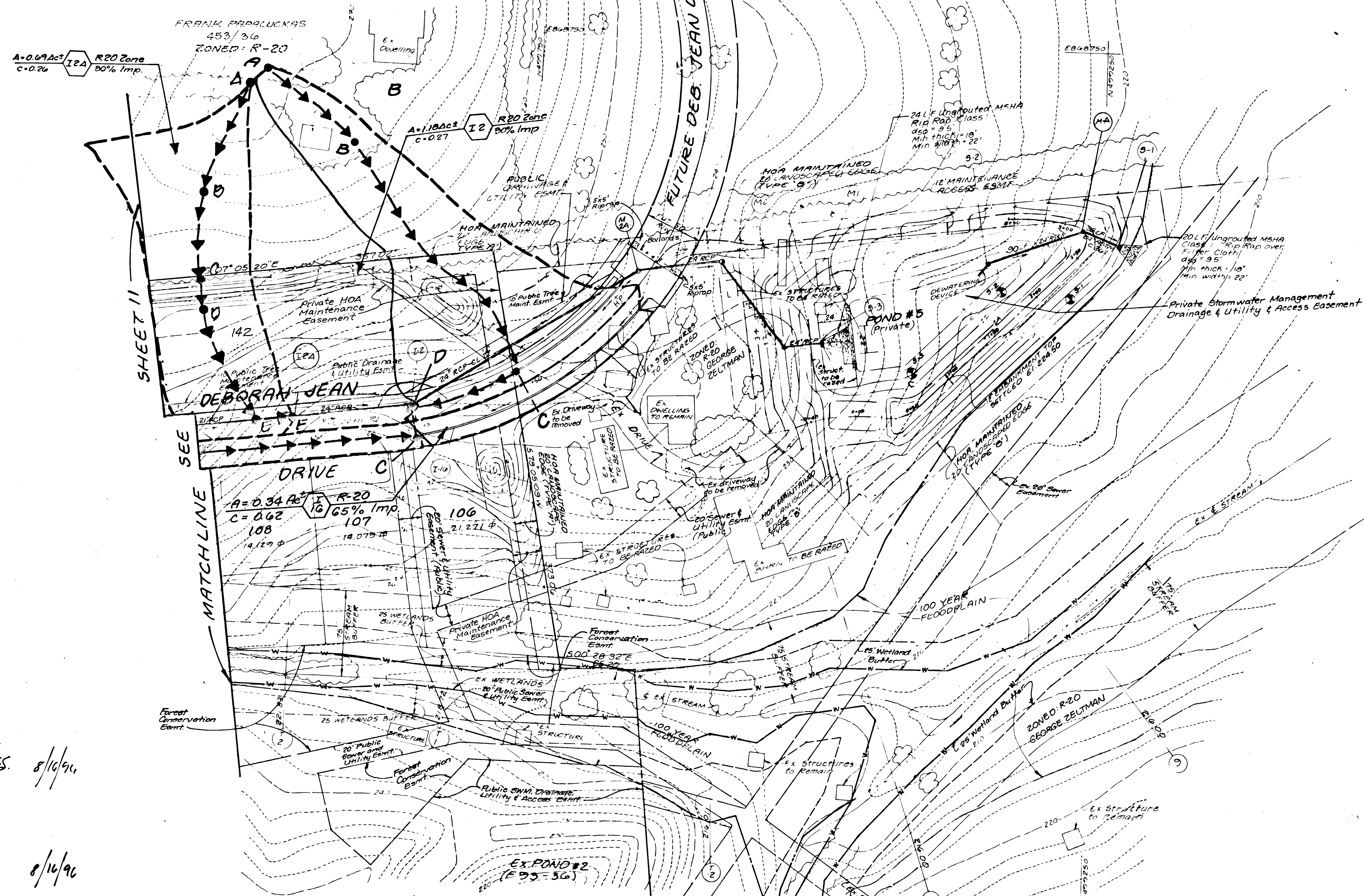
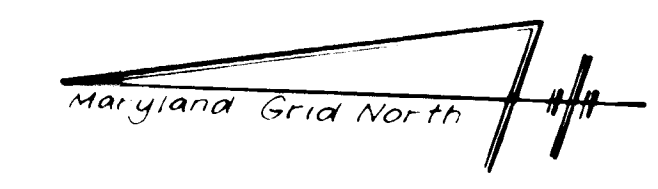
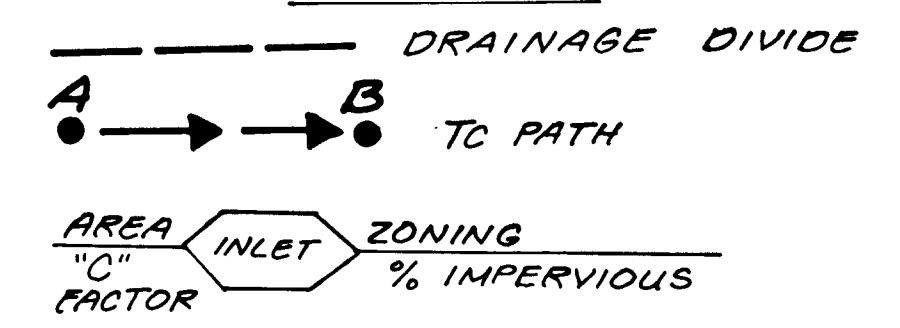
LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 598-3424 (410) 715-9540 (Fax)

DESIGNED E.D.S.	DRAINAGE AREA MAP	SCALE 1" = 50'
DRAWN H.W.	MARSHALEE WOODS Section Two - Area Four	DRAWING 11 OF 15
CHECKED B.D.B.	Lot 89-97, 101-103, 106-126 & 138-141 & 142	JOB NO. 95-022
	Tax Map 37 1ST ELECTION DISTRICT	FILE NO. F96-62
	Parcels 02, 592 and 710501 HOWARD COUNTY, MARYLAND	
	Owner/Developer Marshalee Woods Limited Partnership 8835 Columbia 100 Parkway, Unit P Columbia, Maryland 21045 (410) 730-0810	

LDE	BY	#	REVISIONS	DATE
Δ			REVISE LOT LINES, #S AND TITLE BLOCK DESCRIPTION	4-28-97
				June 1996

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LEGEND



J.G. Wolford/CS 8/16/96
 K.H. Aly 8/16/96

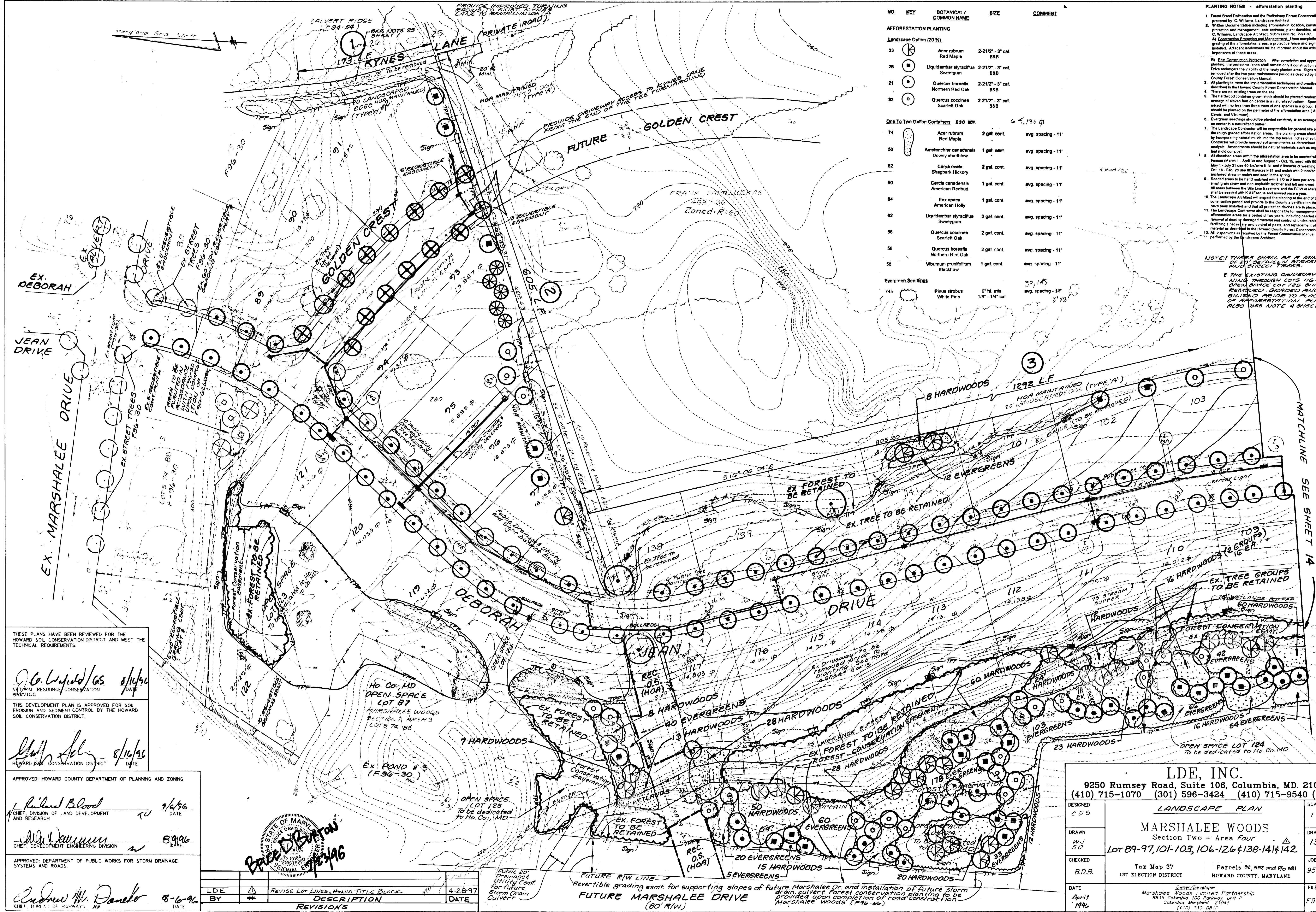
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING Richard Blood 8/16/96 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH Date	THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS. J.G. Wolford/CS 8/16/96 NATURAL RESOURCE CONSERVATION SERVICE Date
APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS. Andrew M. Daniels 8-16-96 CHIEF, BUREAU OF HIGHWAYS Date	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. K.H. Aly 8/16/96 HOWARD SOIL CONSERVATION DISTRICT Date

LDE	BY	REVISIONS	DATE
Δ	#s	REVISE LOT LINES, #S AND TITLE BLOCK DESCRIPTION	4-28-97
LDE, INC. 9250 Rumsey Road, Suite 106, Columbia, MD. 21045 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)			
DESIGNED	E.D.S.	DRAINAGE AREA MAP	SCALE 1"=50'
DRAWN	K.B.W.	MARSHALEE WOODS Section Two - Area Four	DRAWING 12 of 15
CHECKED	B.D.B.	Tax Map 37 Parcels 92, 992 and 176 991 1ST ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	JOB NO. 95-022.3
DATE	June 1996	Owner/Developer: Marshalee Woods Limited Partnership 8835 Columbia 100 Parkway, Unit P Columbia, Maryland 21045 (410) 730-0810	FILE NO. F96-62



1667

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NO.	KEY	BOTANICAL / COMMON NAME	SIZE	COMMENT
LANDSCAPE OPTION (20%)				
33	(Symbol)	Acer rubrum Red Maple	2-2 1/2" - 3" cal. B&B	
26	(Symbol)	Liquidambar styraciflua Sweetgum	2-2 1/2" - 3" cal. B&B	
21	(Symbol)	Quercus borealis Northern Red Oak	2-2 1/2" - 3" cal. B&B	
33	(Symbol)	Quercus coccinea Scarlett Oak	2-2 1/2" - 3" cal. B&B	
ONE TO TWO GALLON CONTAINERS 530 W.P.				
74	(Symbol)	Acer rubrum Red Maple	2 gal. cont.	avg. spacing - 11'
50	(Symbol)	Amelanchier canadensis Downy shadbowl	1 gal. cont.	avg. spacing - 11'
62	(Symbol)	Carya ovata Shagbark Hickory	2 gal. cont.	avg. spacing - 11'
50	(Symbol)	Cercis canadensis American Redbud	1 gal. cont.	avg. spacing - 11'
64	(Symbol)	Ilex opaca American Holly	1 gal. cont.	avg. spacing - 11'
62	(Symbol)	Liquidambar styraciflua Sweetgum	2 gal. cont.	avg. spacing - 11'
56	(Symbol)	Quercus coccinea Scarlett Oak	2 gal. cont.	avg. spacing - 11'
56	(Symbol)	Quercus borealis Northern Red Oak	2 gal. cont.	avg. spacing - 11'
56	(Symbol)	Viburnum prunifolium Blackhaw	1 gal. cont.	avg. spacing - 11'
EVERGREEN SEEDLINGS				
745	(Symbol)	Pinus strobus White Pine	6" ht. min 110" - 114" cal.	avg. spacing - 11'

PLANTING NOTES - afforestation planting

- Forest Stand Definition and the Primary Forest Conservation Plan prepared by C. Williams, Landscape Architect.
- Written Documentation including afforestation location, construction protection and management, cost estimate, plant details, etc. prepared by C. Williams, Landscape Architect, Submission No. F-96-07.
- A) Construction Protection and Management.** Upon completion of the rough grading of the afforestation areas, a protective fence and signs will be installed. Adjacent landowners will be informed about the existence and importance of these areas.
- B) Final Construction Protection.** After completion and approval of planting, the protective fence shall remain only if construction of Marshalee Drive endangers the viability of the newly planted area. Signs will be removed after the two year maintenance period as directed by the Howard County Forest Conservation Manual.
- All planting to meet the implementation techniques and practices as described in the Howard County Forest Conservation Manual.
- There are no existing trees on the site.
- The harvested container grown stock should be planted randomly at an average of seven feet on center in a naturalized pattern. Species should be mixed with no less than three trees of one species in a group. Edge species should be planted on the perimeter of the afforestation area (Amenchur, Cereia, and Viburnum).
- Evergreen seedlings should be planted randomly at an average of eight feet on center in a naturalized pattern.
- The Landscape Contractor will be responsible for general site preparation of the rough graded afforestation areas. The planting area should be treated by incorporating natural mulch into the top twelve inches of soil. The Contractor will provide needed soil amendments as determined by a soil analysis. Amendments should be natural materials such as organic mulch or leaf mold compost.
- All disturbed areas within the afforestation area to be seeded with K-31 Tall Fescue (March 1, April 20 and August 1, Oct. 15, seed with 60 balars, May 1 - July 31 use 60 balars K-31 and 2 balars of weeping lovegrass; Oct. 18, Feb. 28 use 60 balars K-31 and much with 2 tons/acre well anchored straw or mulch and seed in the spring.
- Seeded areas to be hand mulched with 1 1/2 to 2 tons per acre of untreated and light straw and non asphaltic fertilizer and left unworked.
- All areas between the Site Line Easement and the ROW of Marshalee Drive shall be seeded with K-31 Fescue and mowed once a year.
- The Landscape Architect will inspect the planting at the end of the construction period and provide to the County a certification that all planting has been installed and that all protection devices are in place.
- The Landscape Contractor shall be responsible for management of afforestation areas for a period of two years, including needed watering, removal of dead or damaged material and control of undesirable species, fertilizing if necessary and control of pests, and replacement of plant material as directed in the Howard County Forest Conservation Manual.
- All inspections as required by the Forest Conservation Manual shall be performed by the Landscape Architect.

NOTE: THERE SHALL BE A MINIMUM OF 20 FEET BETWEEN STREET LIGHTS AND AFFORESTATION PLANTING. ALSO SEE NOTE 4 SHEET 0815.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

C.G. Wajid/GS 8/14/96
NATURAL RESOURCE CONSERVATION SERVICE

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

Glenn J. Jolly 8/14/96
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/6/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Mr. Dammun 8/9/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION

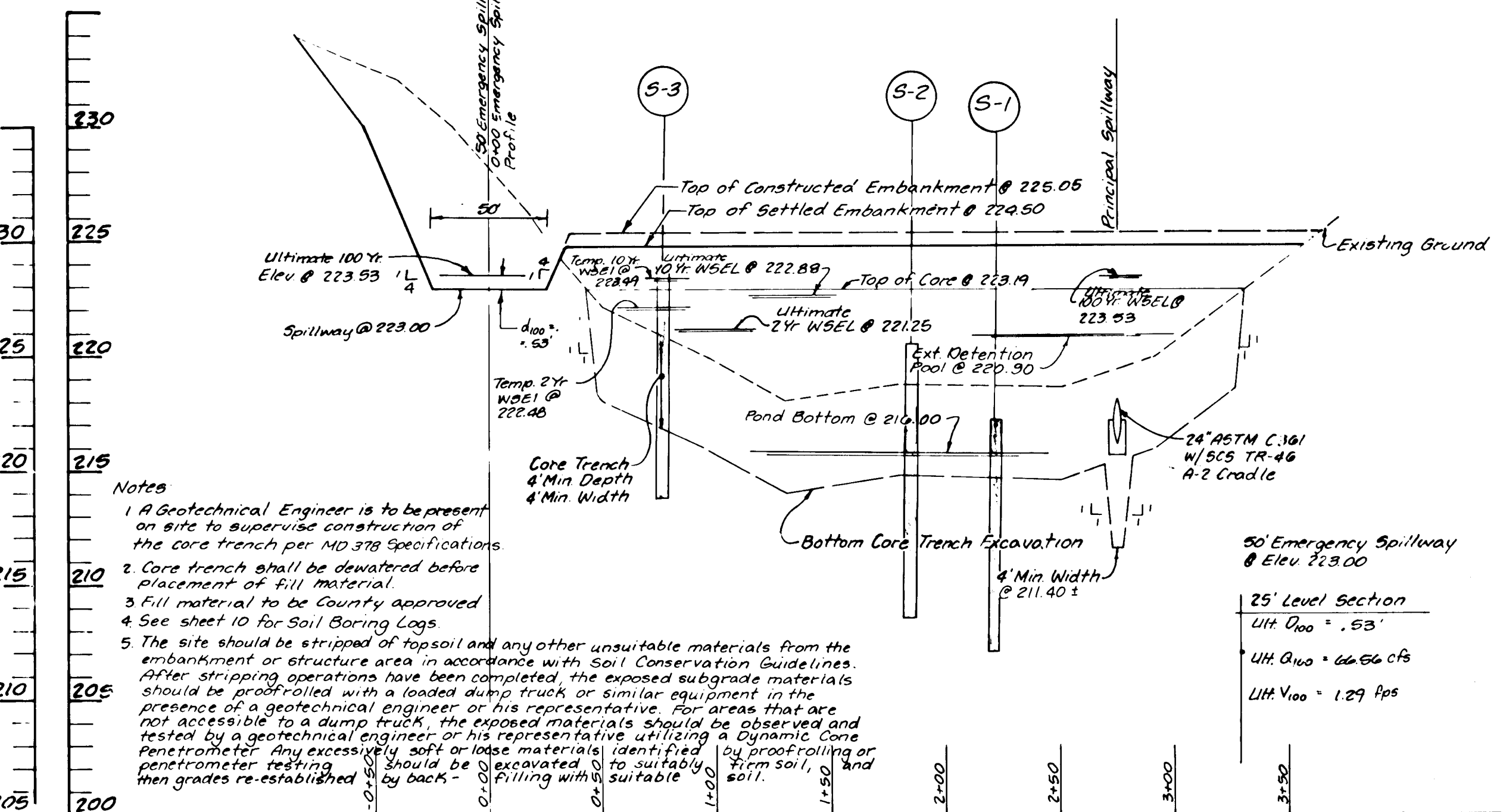
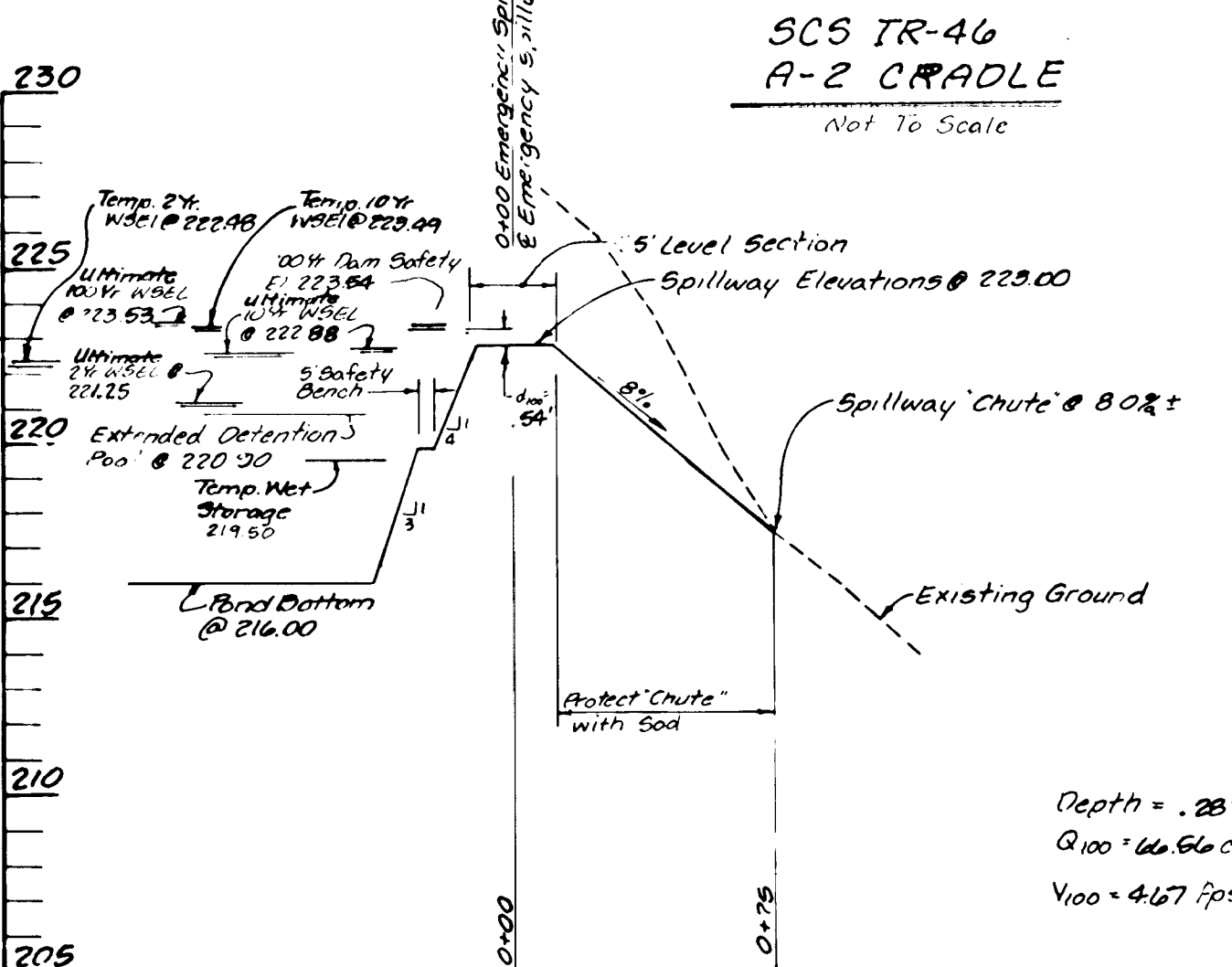
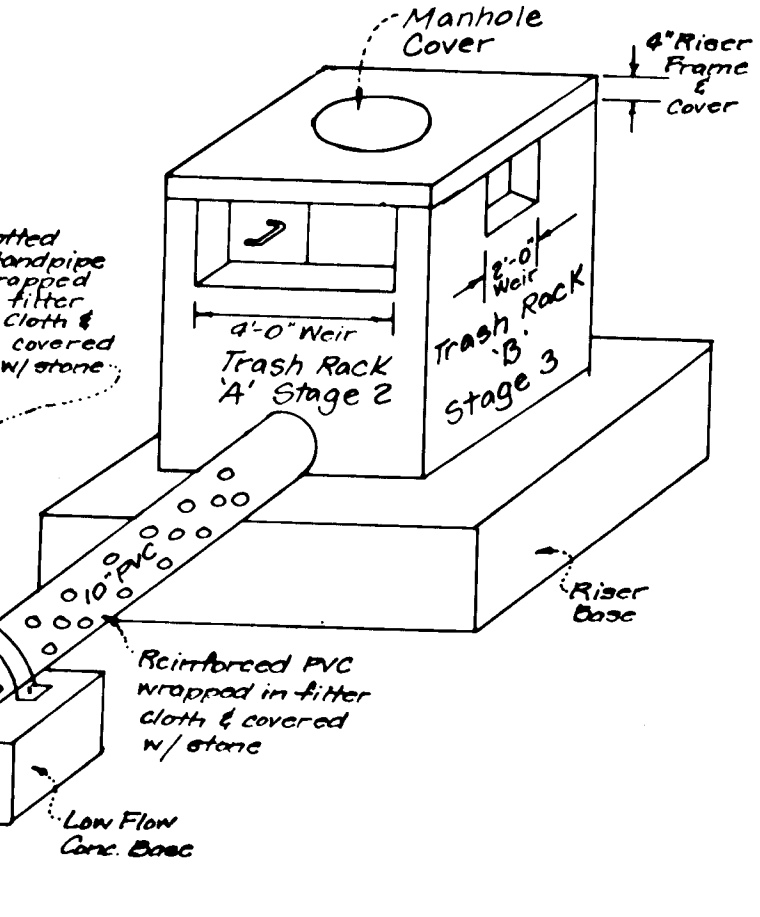
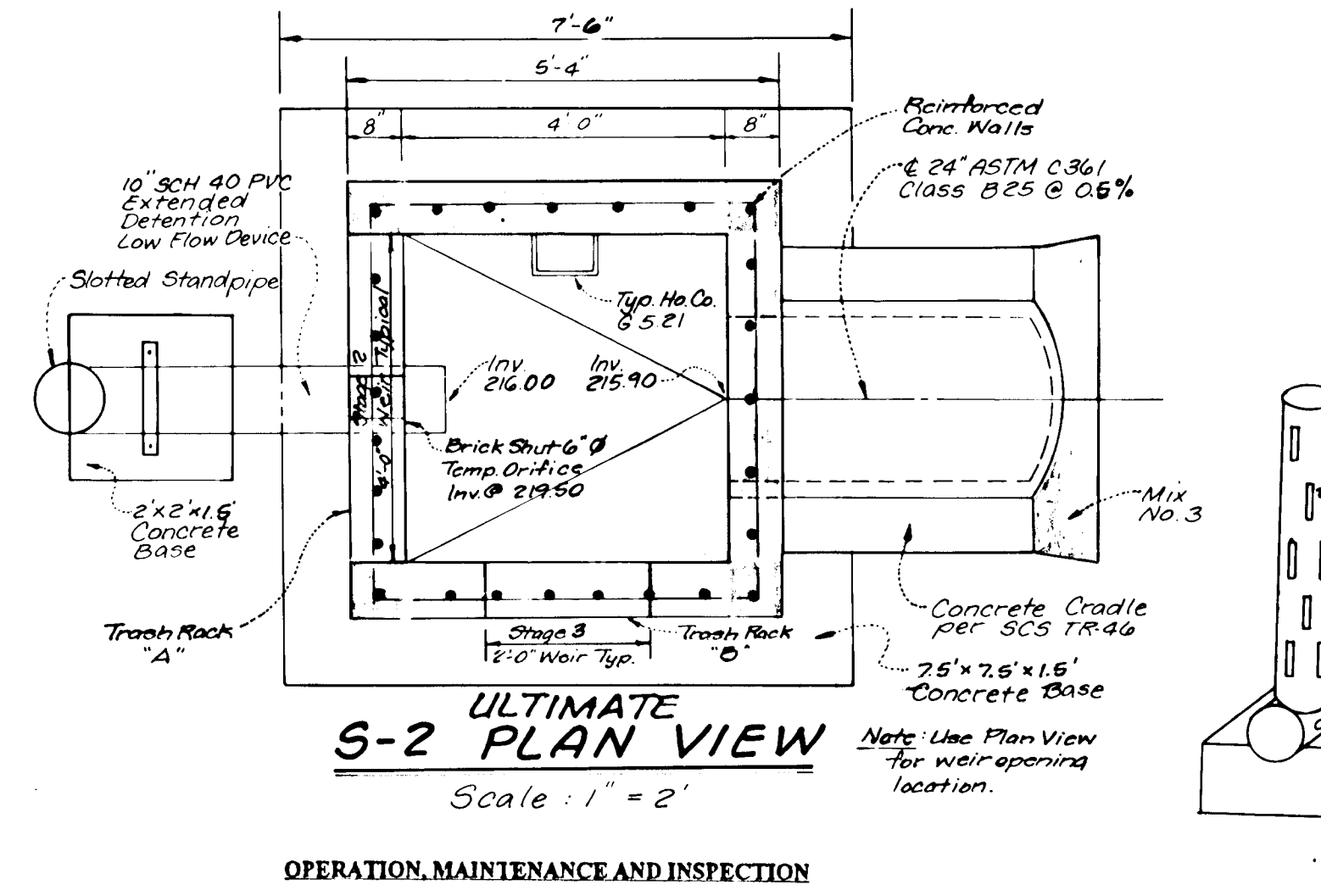
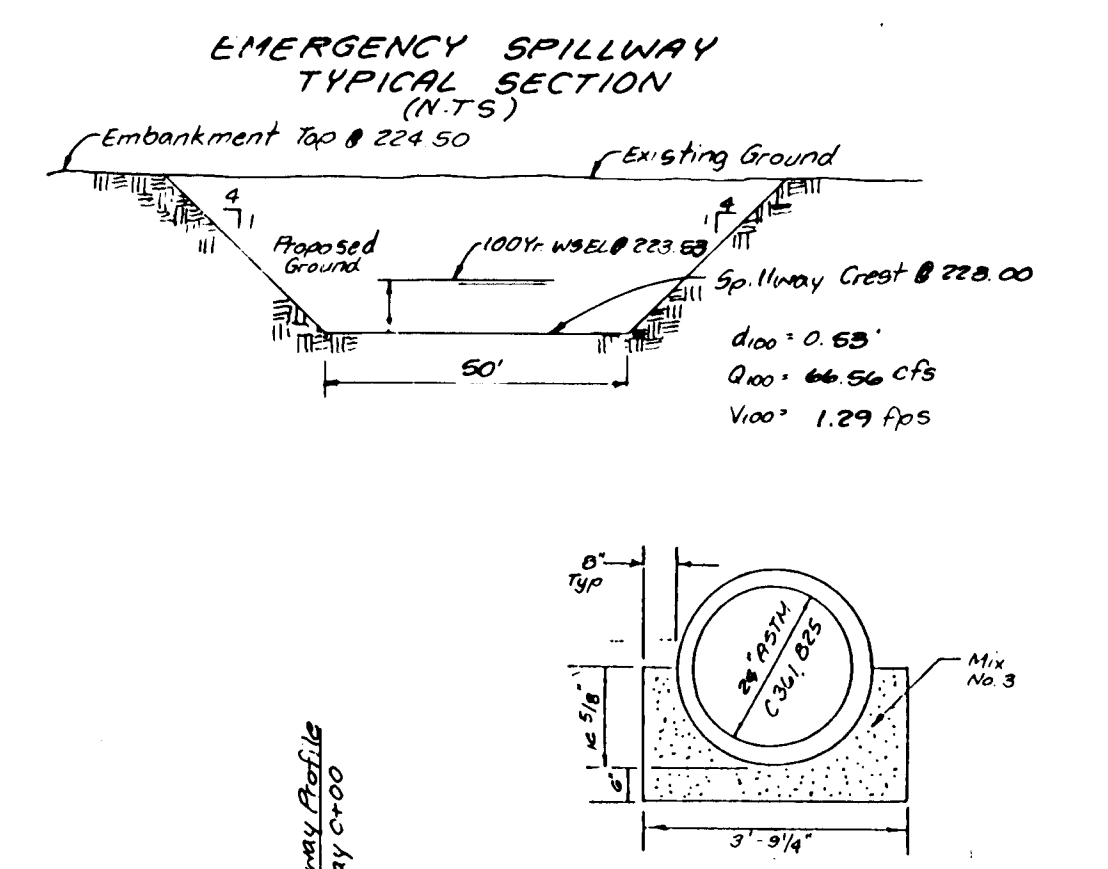
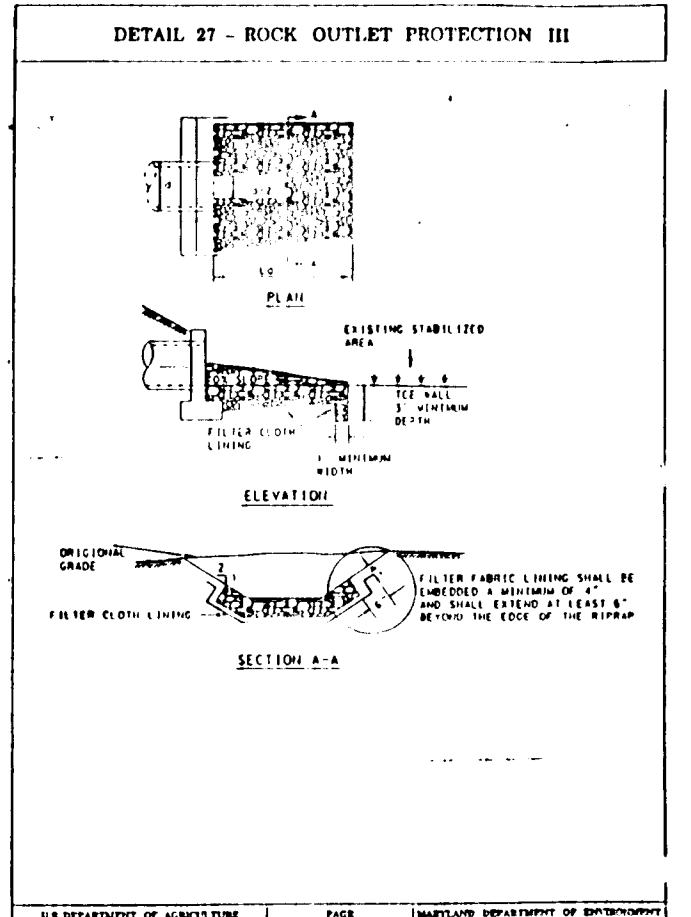
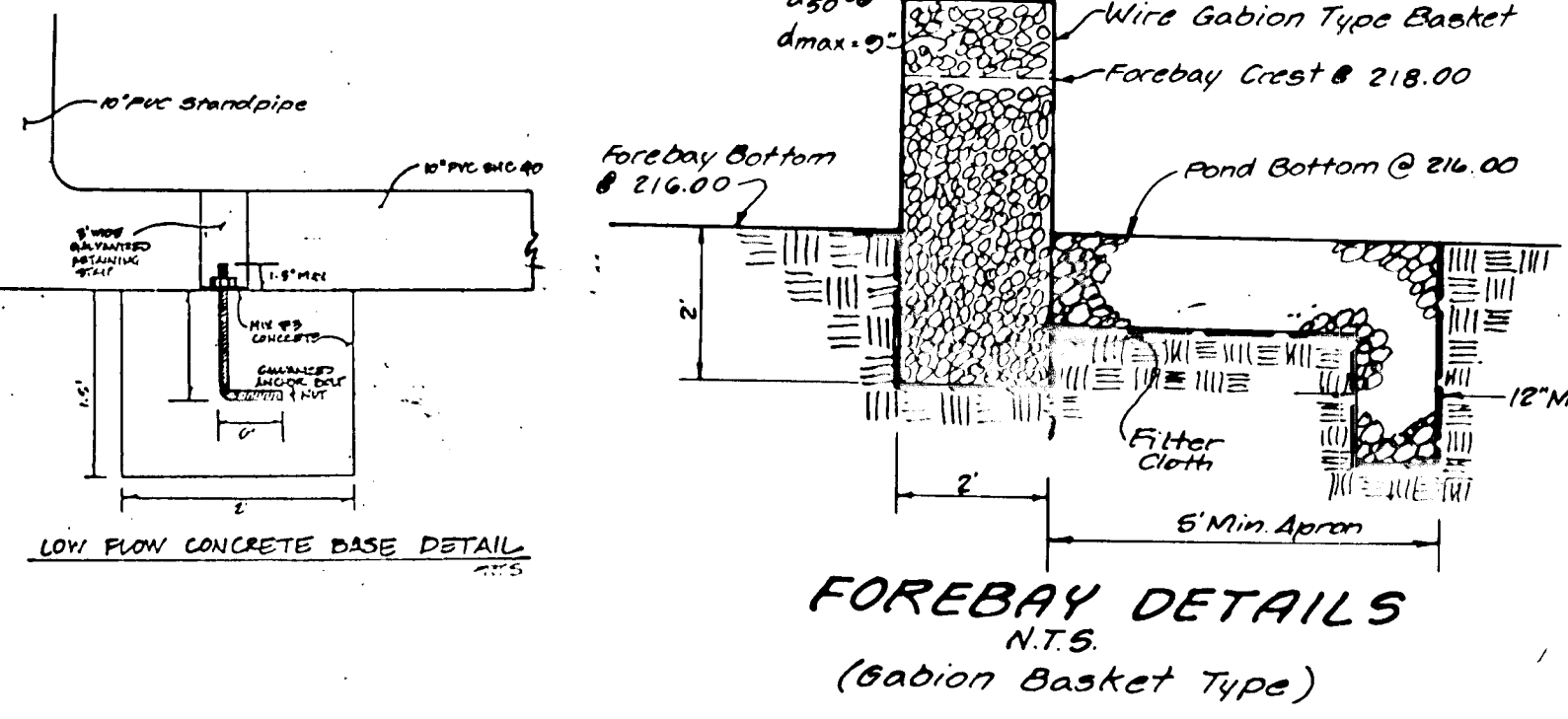
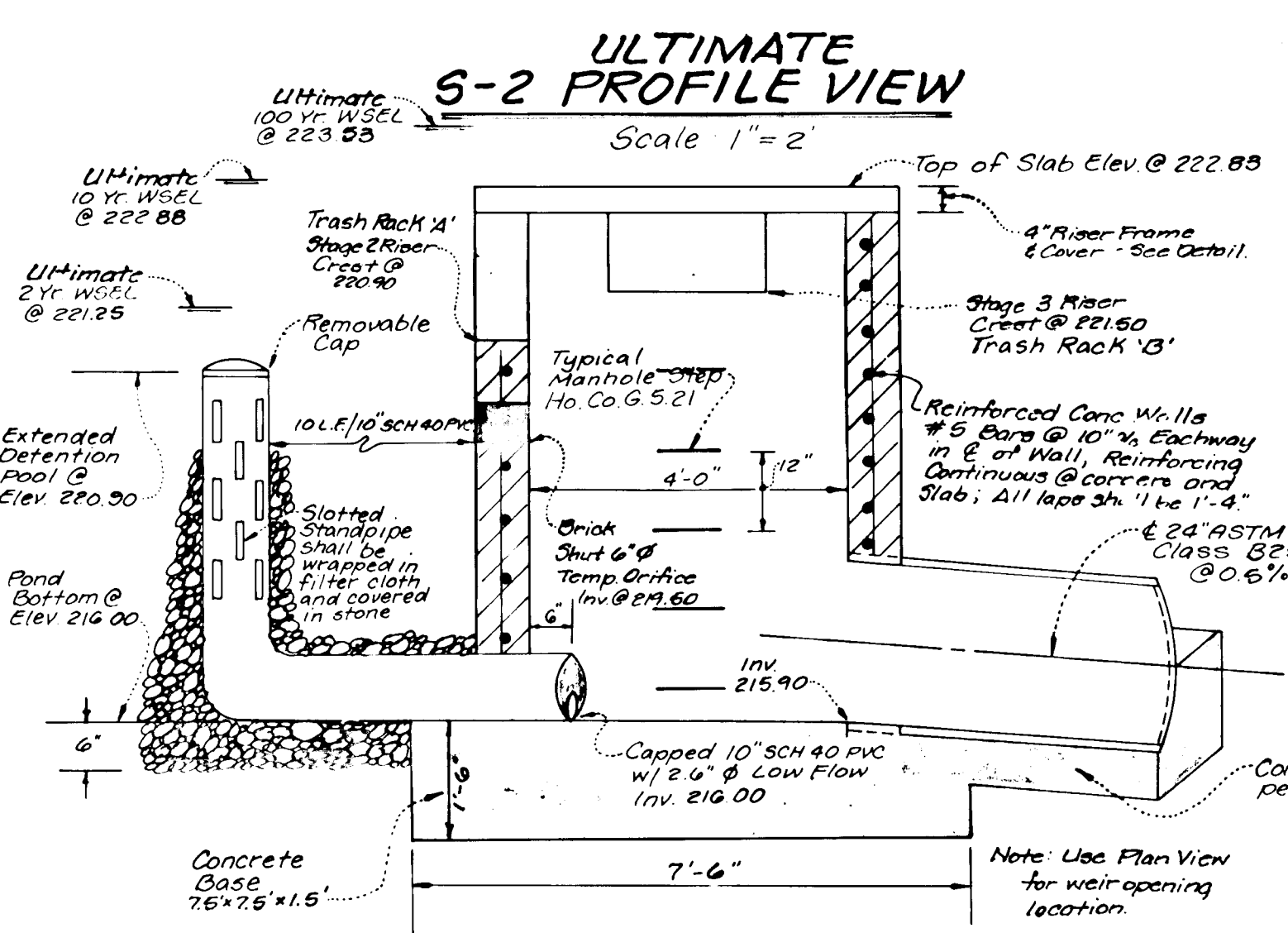
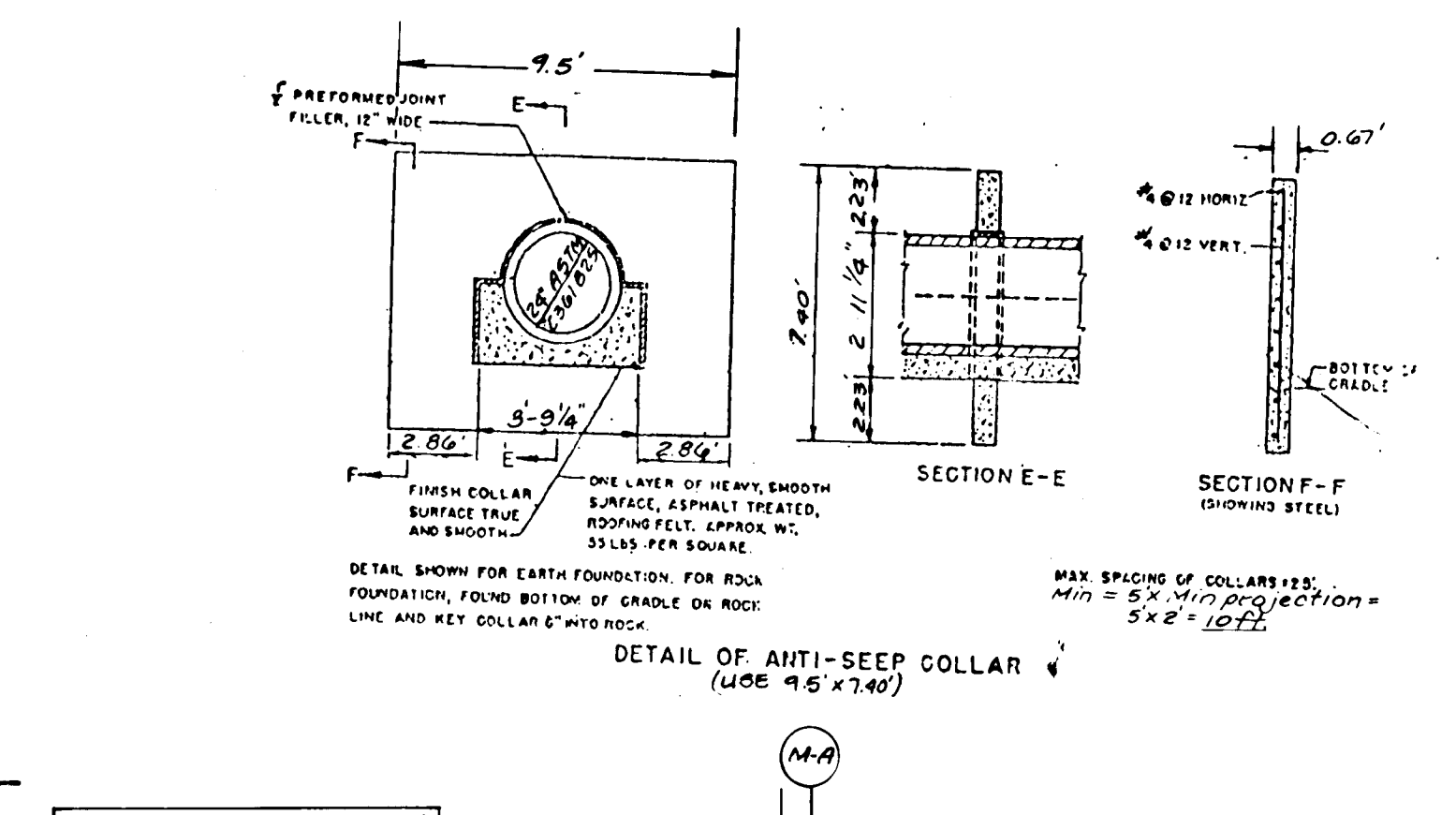
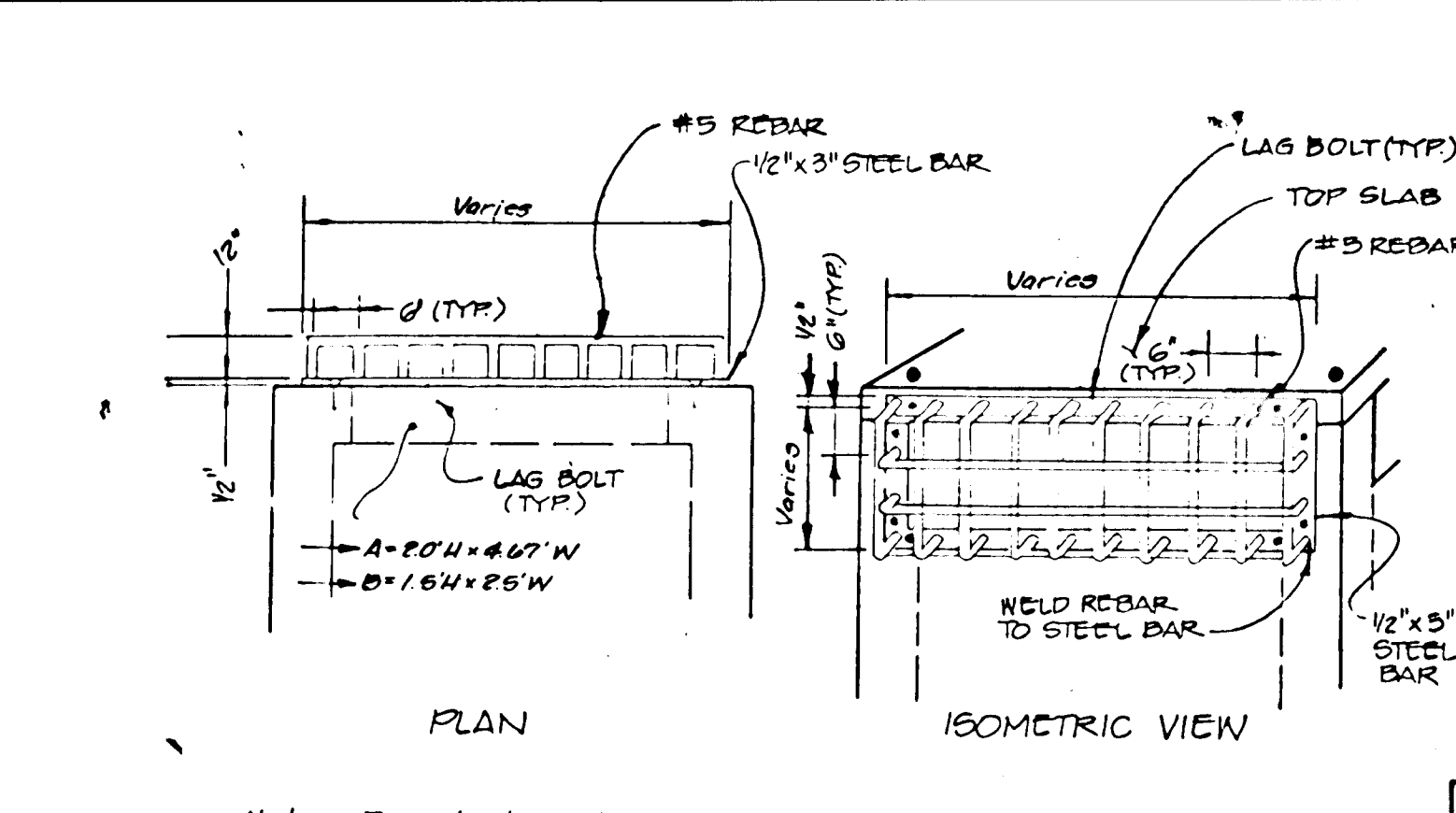
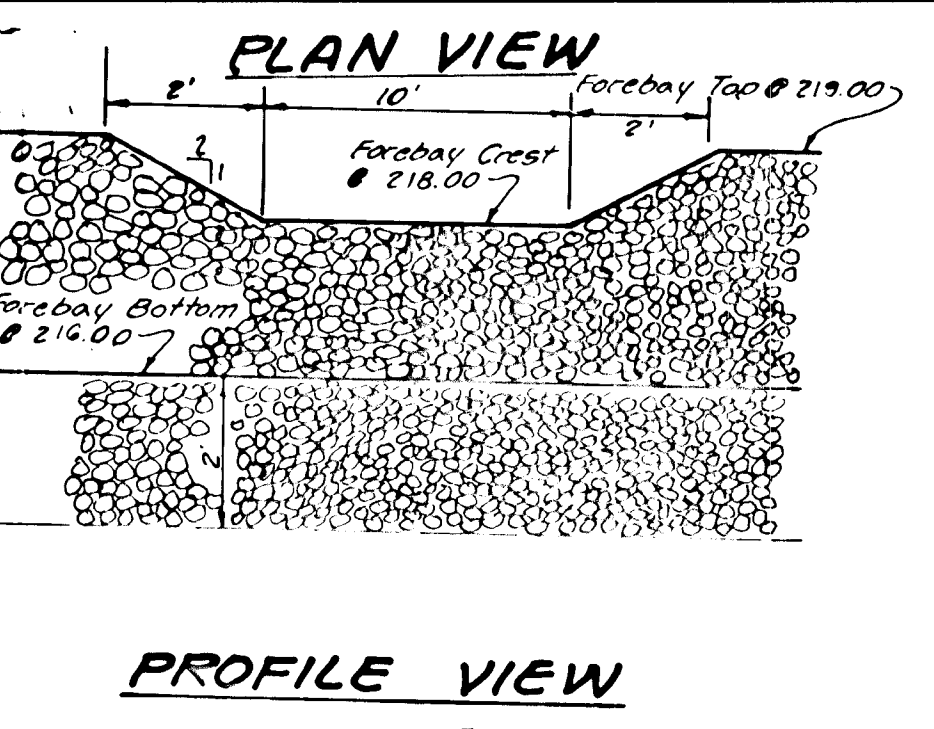
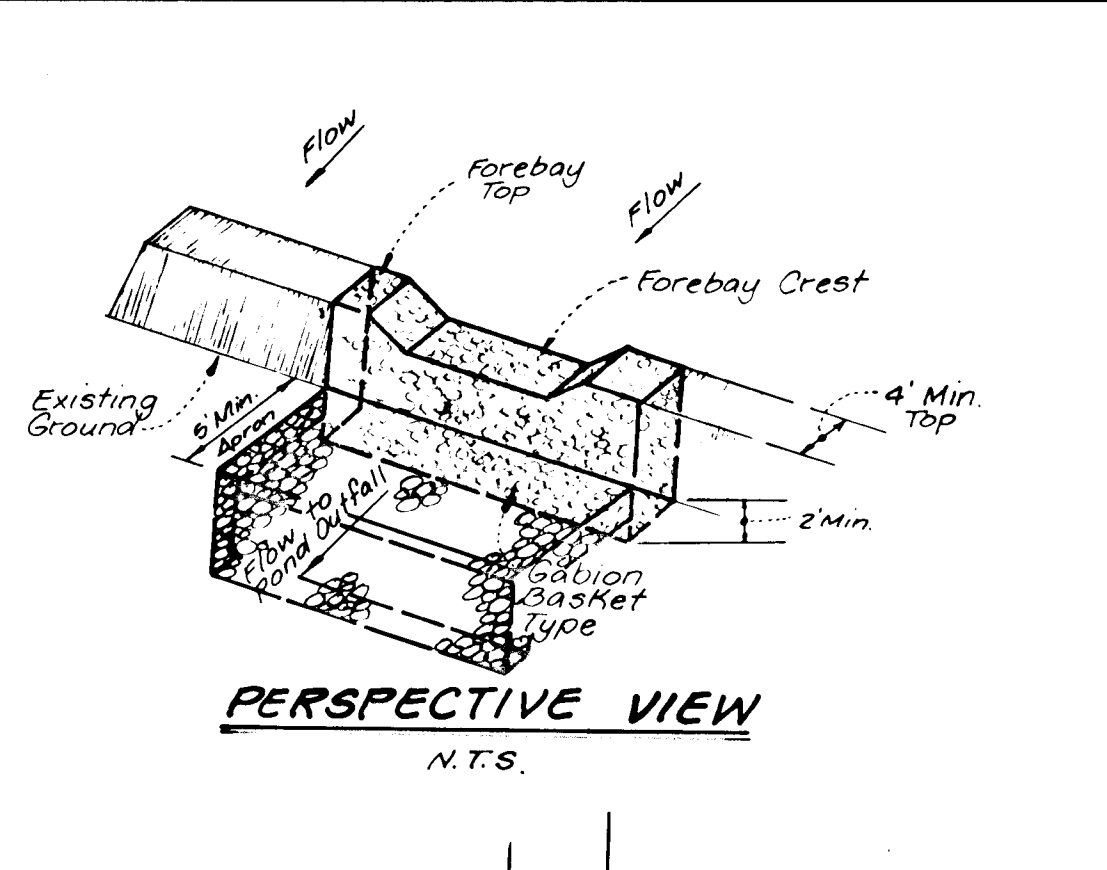
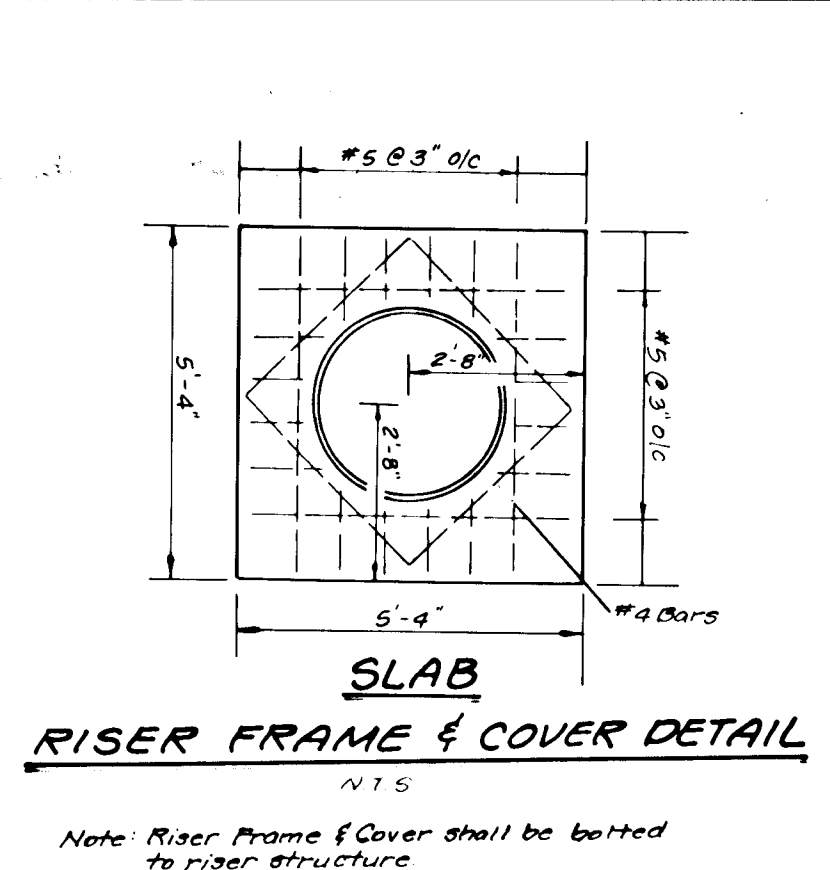
APPROVED: DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEMS AND ROADS.

Andrew M. Danek 8-6-96
CHIEF, BUREAU OF HIGHWAYS

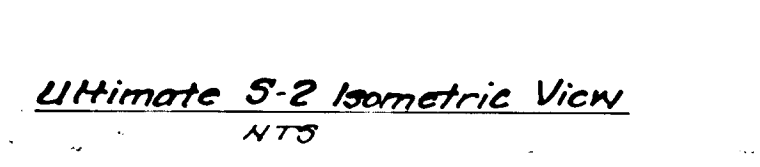
NO.	BY	REVISIONS	DATE
1	LDE	REVISE LOT LINES, H&M AND TITLE BLOCK	4-28-97
2	##	DESCRIPTION	

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED EDS	LANDSCAPE PLAN		SCALE 1" = 50'
DRAWN WJ SO	MARSHALEE WOODS Section Two - Area Four Lot 89-97, 101-103, 106-126 & 138-141 & 142		DRAWING 13 of 15
CHECKED B.D.B.	Tax Map 37 1ST ELECTION DISTRICT	Parcels 92, 98 and 106 591 HOWARD COUNTY, MARYLAND	JOB NO. 95-022
DATE April 1996	Sponsor/Developer: Marshalee Woods Land Partnership 8815 Columbia 100 Parkway, Unit P Columbia, Maryland 21045 (410) 715-0810		FILE NO. F96-62



Inspection of the pond(s) shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards And Specifications For Ponds (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.



REVISIONS		
BY	DESCRIPTION	DATE
LDE	REVISE TITLE BLOCK	4-28-97

Approved: Howard County Department of Planning and Zoning
 Chief, Division of Land Development and Research
 Approved: Department of Public Works for Storm Drainage Systems and Roads
 Chief, Bureau of Highways

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.
 Natural Resource Conservation Service
 This development plan is approved for soil erosion and sediment control 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.

BRUCE D. BURTON
 Signature of Engineer
 7/23/96

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 periodic on-site inspections by Howard Soil Conservation District.

1/1/96
 Signature of Developer
 1/1/96

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

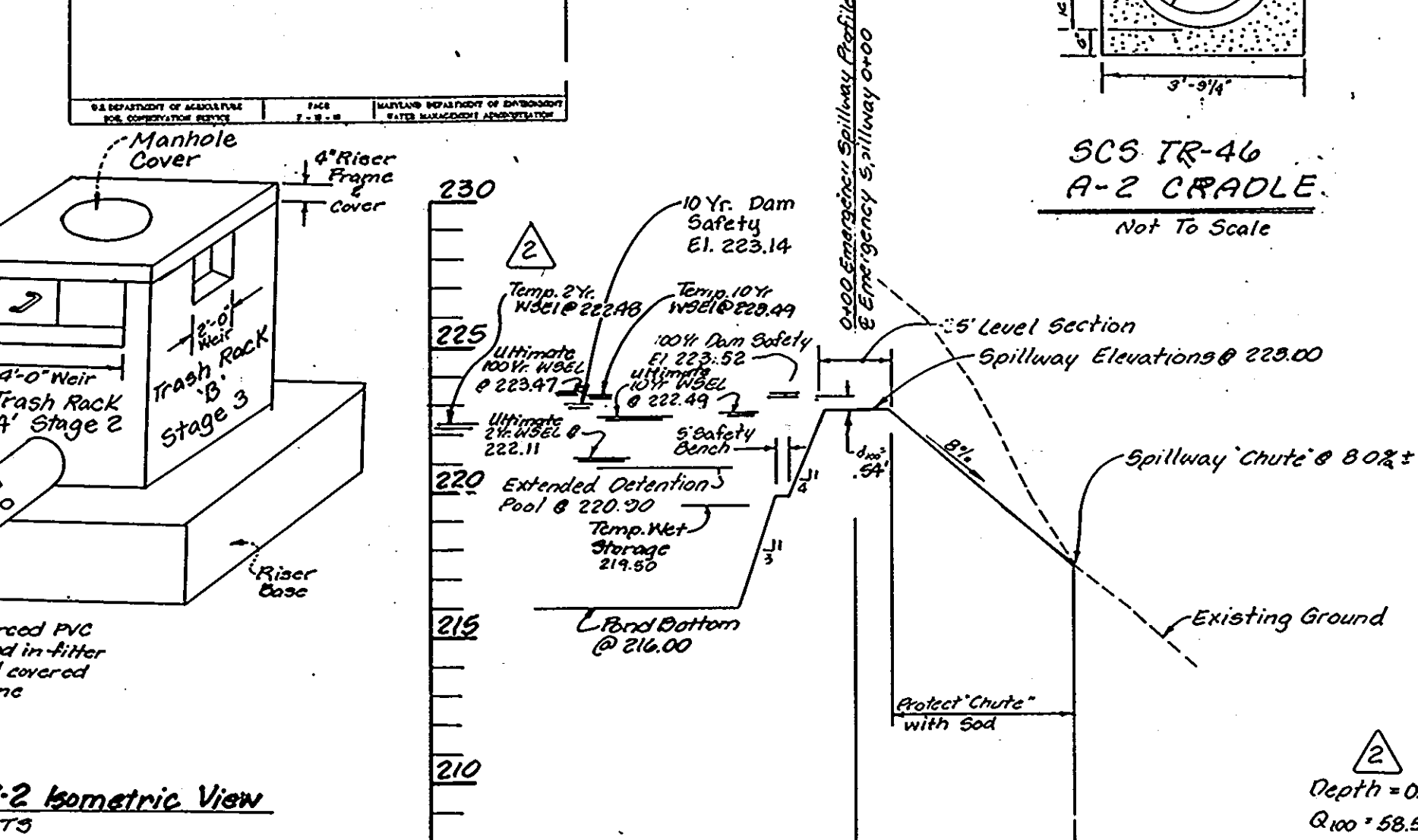
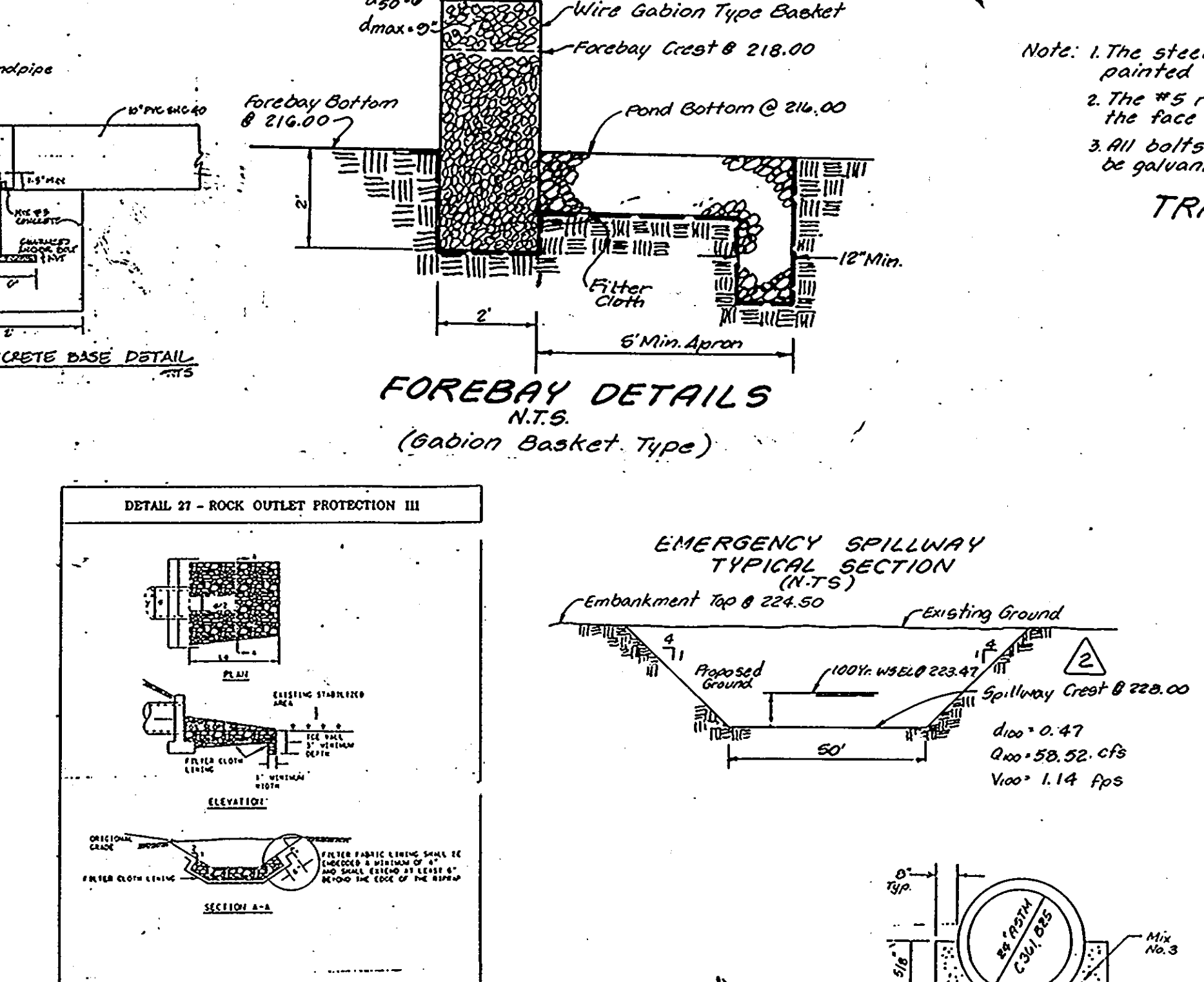
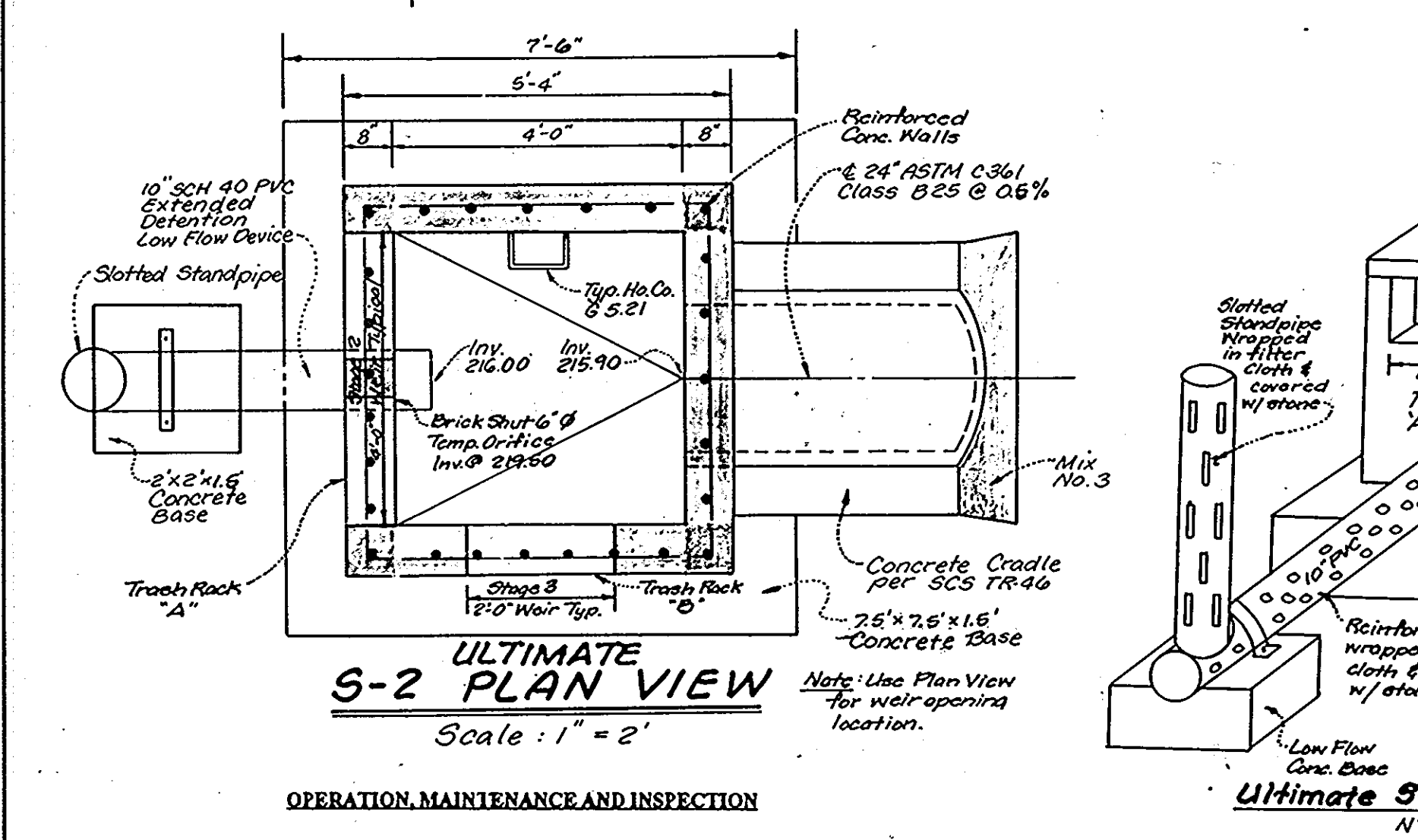
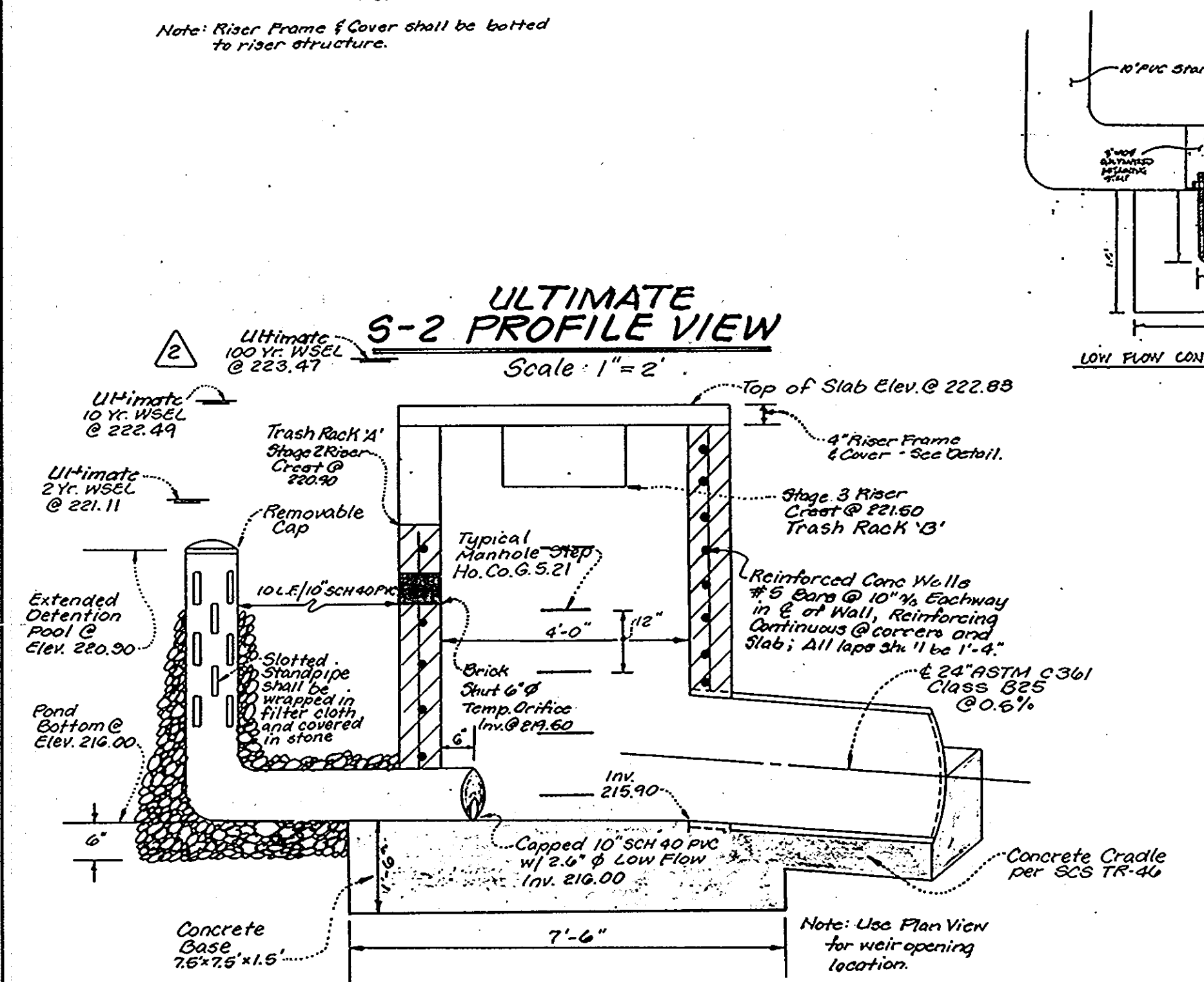
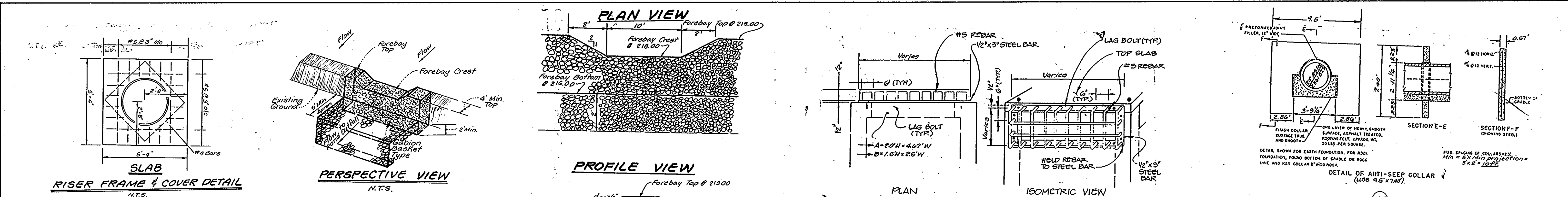
DESIGNED E.D.S.
DRAWN W.A.U.
CHECKED B.D.B.
DATE June 1996

SCALE As Shown
DRAWING 15 of 15
FILE NO. 95-022
DATE F96-62

STORMWATER MANAGEMENT DETAILS
MARSHALEE WOODS
 Section Two - Area Four
 Lot 89-97, 101-103, 106-126 & 139-14 & 142
 Tax Map 37
 1ST ELECTION DISTRICT
 Parcels 42, 542 and Plo 591
 HOWARD COUNTY, MARYLAND

Owner/Developer:
 Marshalee Woods Limited Partnership
 8835 Columbia 100 Parkway, Unit P
 Columbia, Maryland 21045 (410) 730-0810

1697



Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications For Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

REVISIONS

NO	BY	DATE	DESCRIPTION
1	LDE	2/2004	Revise Pond Details per Capital Project J4136

Approved: Howard County Department of Planning and Zoning
 Chief, Planning and Zoning Division
 Approved: Department of Public Works for Storm Drainage Systems and Roads
 Chief, Bureau of Highways

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.
 Natural Resource Conservation Service
 This development plan is approved for soil erosion and sediment control 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.

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 periodic on-site inspections by Howard Soil Conservation District.

REVISIONS

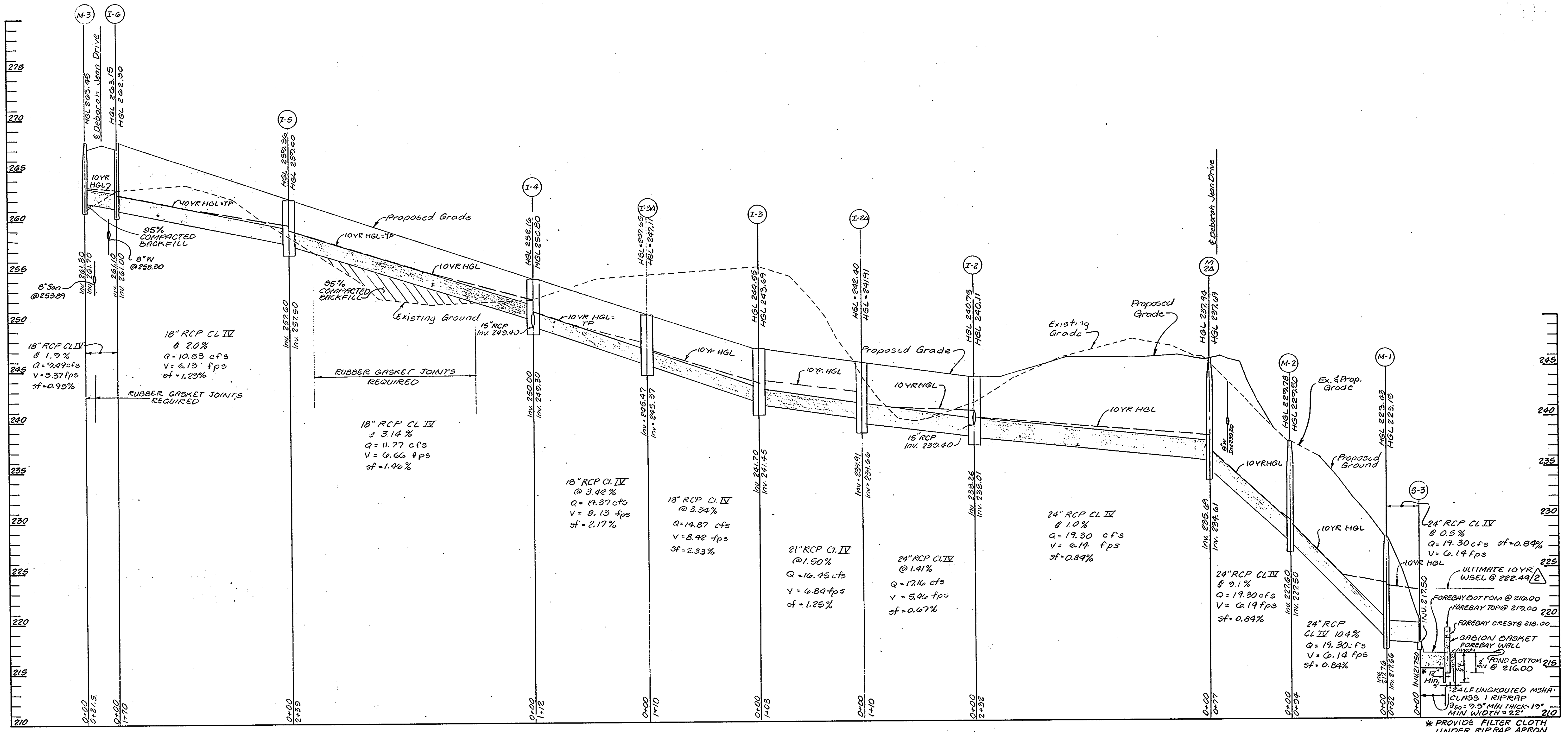
BY	#	DESCRIPTION	DATE
LDE	1	REVISE TITLE BLOCK	4-28-97

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED: E.D.S.
DRAWN: W.A.J.
CHECKED: B.D.B.
DATE: June 1996

SCALE: As Shown
DRAWING: 15 of 15
JOB NO.: 95-022.3
FILE NO.: F96-62

1667



STORM DRAIN PROFILES

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

* PROVIDE FILTER CLOTH UNDER RIPRAP APRON AND FOREBAY GABIONS

1667

APPROVED HOVARD COUNTY DEPARTMENT OF PLANNING AND ZONING Richard Blood 9/6/96 Chief, Department of Planning and Zoning	THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS. J.G. Grapels/GS 8/16/96 District Resource Conservation Service	ENGINEER OF MARYLAND I HEREBY CERTIFY THAT THE DESIGN AND LEGUMENT CONTROL REPRESENT A PRACTICAL AND FEASIBLE DESIGN FOR THE PROJECT AS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL ENGINEERING ACT. Bruce D. Borstein 7/23/96 Signature of Engineer
APPROVED DEPARTMENT OF PUBLIC WORKS FOR STORM DRAINAGE SYSTEM AND ROAD Andrew M. Daniels 8-6-96 Chief, Bureau of Highway	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. [Signature] 8/16/96 HOWARD SOIL CONSERVATION DISTRICT	DEVELOPER'S CERTIFICATE I HAVE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY. [Signature] 1/24/98 Signature of Developer



BY	NUMBER	DESCRIPTION	DATE
LDE	1	Revise 10yr. WSEL per Capital Project J4136	2/2004
LDE	2	REVISE TITLE BLOCK	4-28-97

REVISIONS
LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD, 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED	EDS	SCALE	1" = 5' V.
DRAWN	MJ	SCALE	1" = 50' H
CHECKED	B.D.B.	TITLE	7 OF 15
DATE	June 1996	PROJECT	LOT 89-97, 101-103, 106-126, 138-141, 142
		TAX MAP	37
		PARCELS	92, 992 and P2591
		DISTRICT	1ST ELECTION DISTRICT
		COUNTY	HOWARD COUNTY, MARYLAND
		FILE NO.	95-0223
		PROJECT	Marshall Woods, Limited Partnership 3900 Columbia 100 Parkway, Unit P Columbia, Maryland 21045 (410) 730-0811
		FILE NO.	F96-62

SYMBOL	STREET NAME	Q STA.	OFFSET	TYPE
*	DEBORAH JEAN DRIVE	19+51	15' RIGHT	100 WATT TRANSITIONAIRE'S 11/3 WARE ROOM TOP FINISHES ON 14 FT. BLACK FIBERGLASS POLE
*	DEBORAH JEAN DRIVE	23+20	15' RIGHT	

NAME AND STATION	RADIUS	DELTA	ARC	TAN	CHORD	BEARING
DEBORAH JEAN DRIVE 18+59.01 TO 20+44.50	1100.00'	50°38'08"	184.92'	92.71	184.77'	S 11°54'24" E
DEBORAH JEAN DRIVE 22+11.02 TO 25+00	316.00'	50°25'02"	228.71'	155.44'	278.76'	S 59°16'51" E
FUTURE DEB. JEAN DRIVE 25+00 TO 27+50	316.00'	47°08'59"	240.00'	187.87'	262.78'	S 83°08'29" W

Location	E Station	Offset	Elevation	Top Width
Lot 10B	22+50	142' Lt.	256.0 (Top)	—
"	22+75	118' Lt.	256.0	20ft.
"	22+85	110' Lt.	260.0 (Top)	5ft.
"	23+10	85' Lt.	260.0 (Top)	5ft.
"	23+32	55' Lt.	248.0 (Top)	—
Lot 10C	22+95	40' Rt.	246.0 (Top)	32ft.
"	"	60' Rt.	254.0 (Top)	5ft.
"	"	128' Rt.	236.0	—
"	"	175' Rt.	228.0 (Top)	—

- NOTES:
- For street tree location see sheets 13 and 14.
 - All street trees and/or street signs shall be located 5' min. from proposed drainage and utility structures.
 - There shall be a minimum of 20' between street lights and street trees.
 - For storm drain profiles and structure schedule, see sheet 617 of 15.
 - Sidewalks and ramps shall be designed in accordance with the ADA requirements.

APPROVED: Department of Planning and Zoning.
Richard Blouel 4/6/96
 Chief, Division of Land Development and TC Research.

John Dammann 8/2/96
 Chief, Development Engineering Division

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

Richard M. Daulton 8-6-96
 Chief, Bureau of Highways

Curb & Gutter Transition per Std. Detail R-3.06A

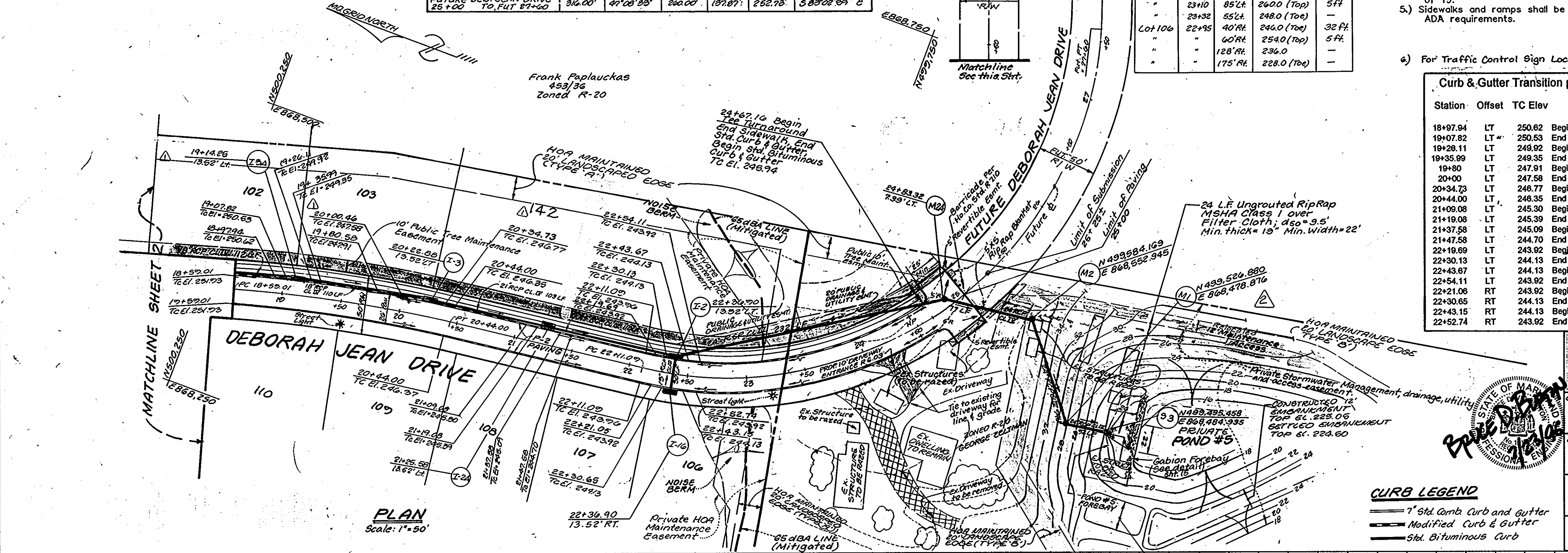
Station	Offset	TC Elev	Remarks
18+97.94	LT	250.62	Begin 10' Transition from Mod. C & G
19+07.82	LT	250.53	End 10' Transition to Std. C & G
19+28.11	LT	249.92	Begin 10' Transition from Std. C & G
19+35.99	LT	249.35	End 10' Transition to Mod. C & G
19+80	LT	247.91	Begin 10' Transition from Mod. C & G
20+00	LT	247.58	End 10' Transition to Std. C & G
20+34.73	LT	246.77	Begin 10' Transition from Std. C & G
20+44.00	LT	246.35	End 10' Transition to Mod. C & G
21+09.08	LT	245.30	Begin 10' Transition from Mod. C & G
21+19.08	LT	245.39	End 10' Transition to Std. C & G
21+37.59	LT	245.09	Begin 10' Transition from Std. C & G
21+47.58	LT	244.70	End 10' Transition to Mod. C & G
22+19.69	LT	243.92	Begin 10' Transition from Mod. C & G
22+30.13	LT	244.13	End 10' Transition to Std. C & G
22+43.67	LT	244.13	Begin 10' Transition from Std. C & G
22+54.11	LT	243.92	End 10' Transition to Mod. C & G
22+21.06	RT	243.92	Begin 10' Transition from Mod. C & G
22+30.65	RT	244.13	End 10' Transition to Std. C & G
22+43.15	RT	244.13	Begin 10' Transition from Std. C & G
22+52.74	RT	243.92	End 10' Transition to Mod. C & G

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

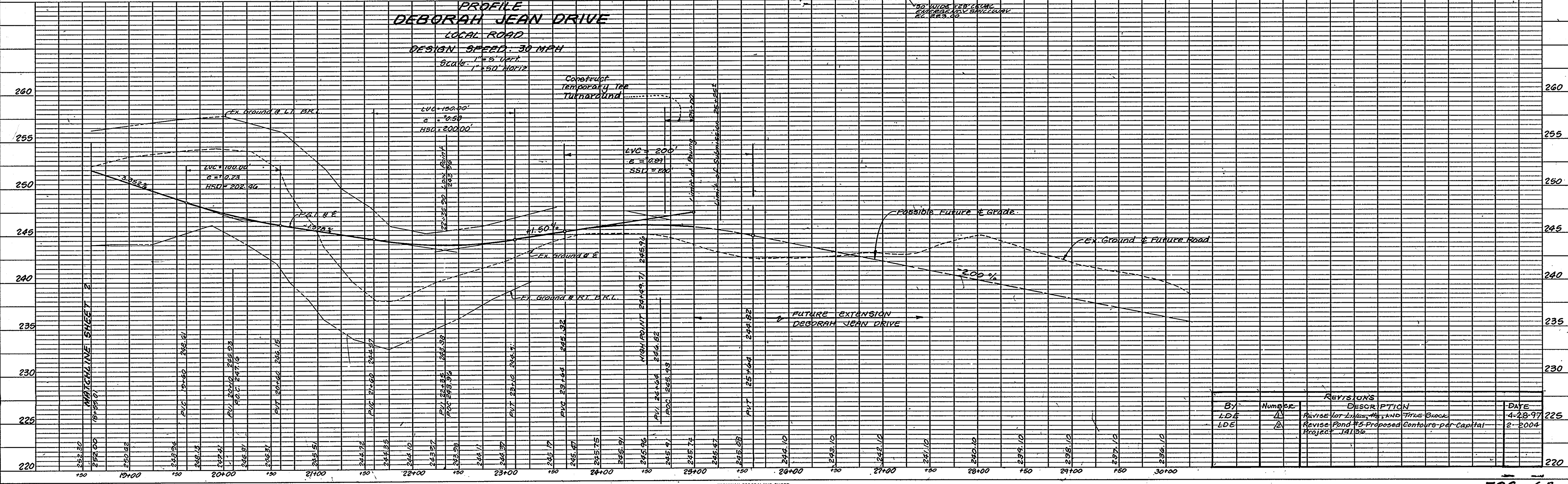
DESIGNED	SCALE
TOLES	AS SHOWN
DRAWN	DRAWING
WJ	3 OF 15
CHECKED	JOB NO.
B.O.B.	95-022.3
DATE	FILE NO.
June 1996	F 96-62

ROAD CONSTRUCTION PLANS
 DEBORAH JEAN DRIVE
 MARSHALEE WOODS
 SECTION TWO AREA FOUR
 Lot 89-97, 101-103, 106-126 & 138-141 & 142
 1st Election District Howard County, Md.
 OWNER: DEVELOPER
 MARSHALEE WOODS LIMITED PARTNERSHIP
 8835 Columbia, 100 Parkway Unit P
 Columbia, Maryland 21045 (410) 730-0810

CURB LEGEND
 — 7" Std. Comb Curb and Gutter
 — Modified Curb & Gutter
 — Std. Bituminous Curb



PROFILE
 DEBORAH JEAN DRIVE
 LOCAL ROAD
 DESIGN SPEED: 30 MPH
 Scale: 1" = 5' VERT
 1" = 50' HORIZ



BY	NUMBER	DESCRIPTION	DATE
LDE	1	Revise for Lines, #5, and Title Block	4-28-97
LDE	2	Revise Pond #5 Proposed Contours per Capital Project 1A1316	2-2004

1667