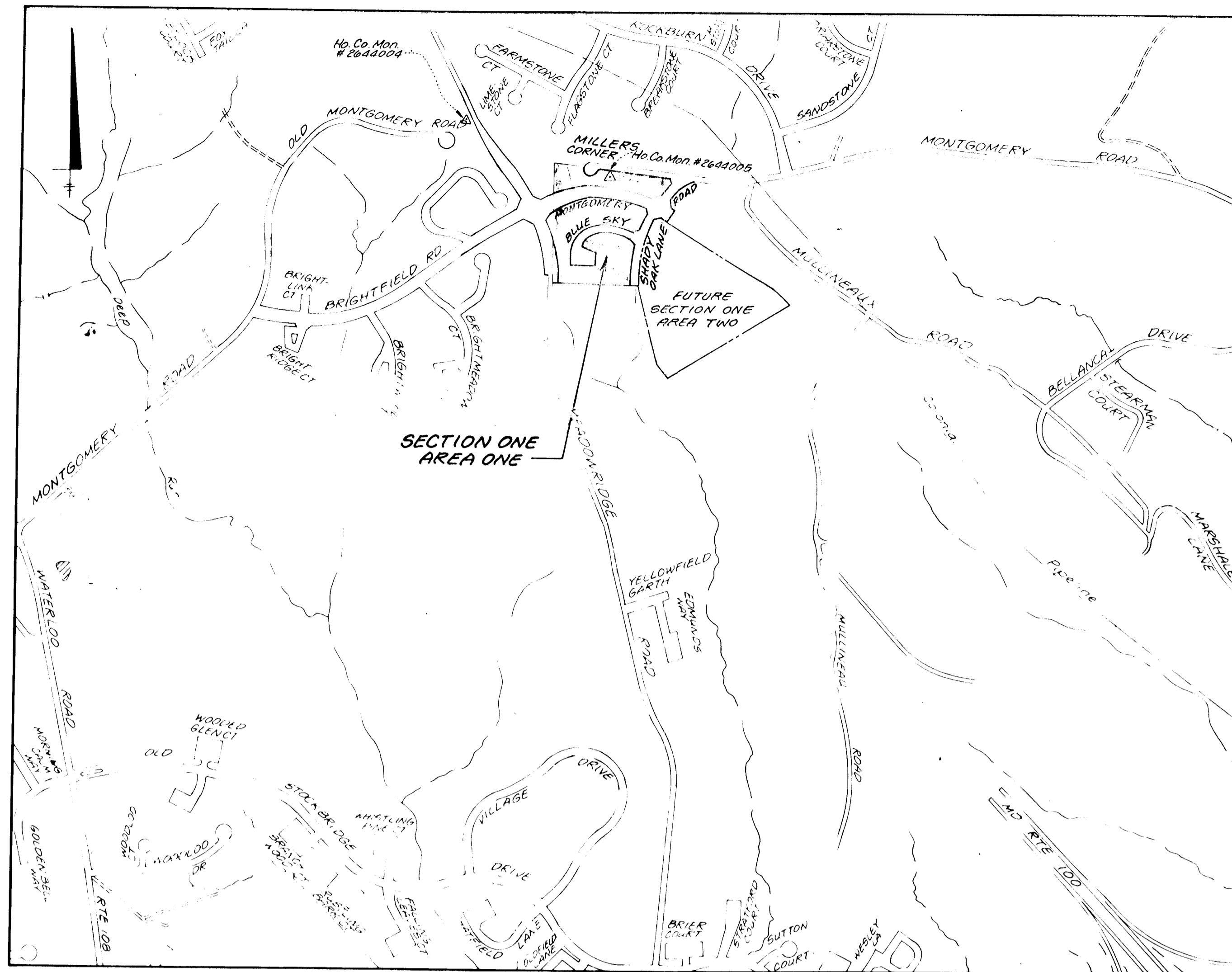


INDEX OF SHEETS	
SHEET No.	TITLE
1	TITLE SHEET
2	PLAN & PROFILE - SHADY OAK LANE
3	PLAN & PROFILE - BLUE SKY
4	ROAD DETAILS
5	STORM DRAIN PROFILES/STRUCTURE SCHEDULE
6	DRAINAGE AREA MAP
7	DRAINAGE AREA MAP
8	GRADING AND SEDIMENT CONTROL PLAN
9	GRADING AND SEDIMENT CONTROL PLAN
10	GRADING & SEDIMENT CONTROL PLAN/POND CONVERSION
11	SEDIMENT CONTROL DETAILS AND NOTES
12	LANDSCAPE AND STREET TREE PLAN
13	TRAFFIC SIGNALIZATION PLAN
14	GRADING & SEDIMENT CONTROL DETAILS & NOTES

GENERAL NOTES: (Cont'd)

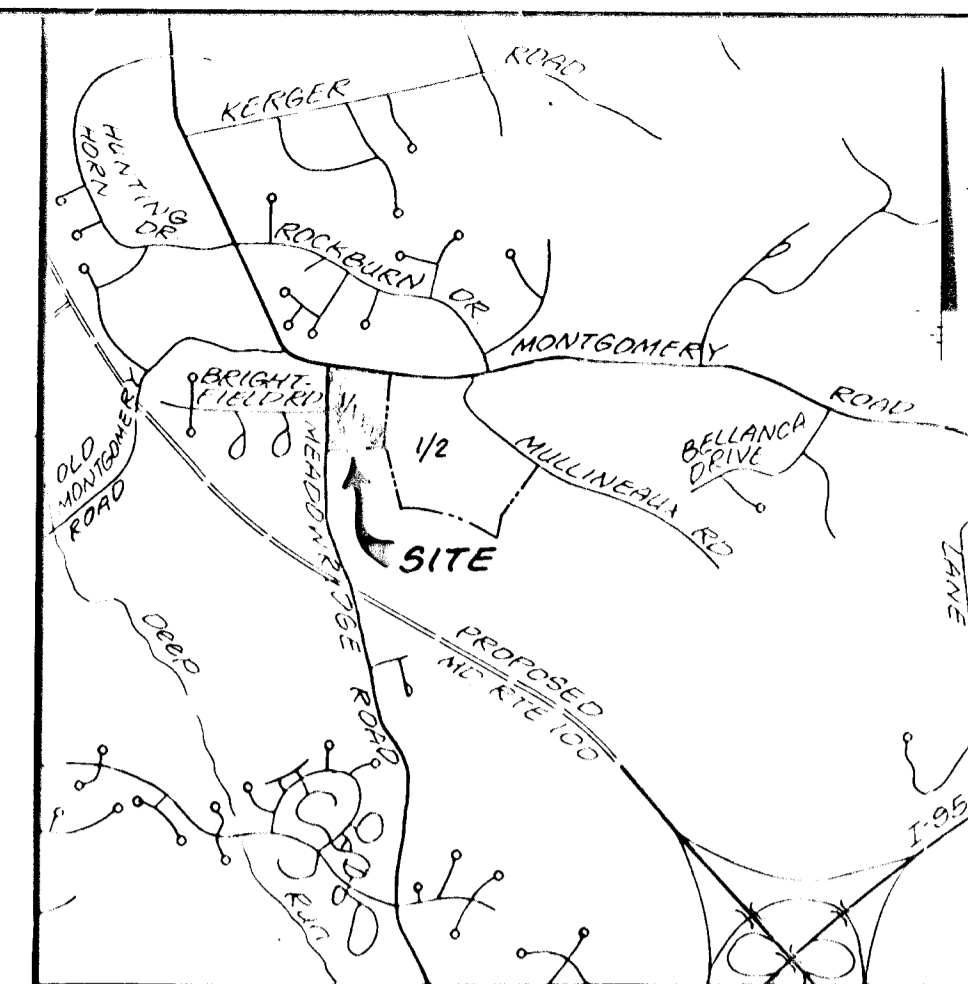
- 20. Existing grades shown on this plan reflect the post-graded condition in accordance with SDP 93-105.
- 21. This plan is subject to WP 91-33. The Planning Director granted approval on November 13, 1990 to waive Section 16.119A, Sketch Plan Procedures, subject to conditions; subject to WP 93-29, the Planning Director granted approval on December 29, 1992 to waive Section 16.119 (c)(10) for roads to exceed 1200 feet, subject to WP 93-86 the Planning Director granted approval on March 18, 1993 to waive Section 16.115B2 to provide 20 feet minimum frontage for lot areas under 40,000 square feet, waive Section 16.115B to front lots on a public or private road not exceeding 200 feet, waive Section 16.115C that no more than two adjacent lots may have adjoining driveways, waive Section 16.116C to allow grading adjacent to wetlands, subject to conditions.
- 22. 95% Compaction in all fill areas shall be determined as AASHTO T-180.
- 23. Sidewalks and sidewalk ramps shall be in conformance with current ADA requirements.
- 24. The Mass Grading Plan for Shady Oaks under SDP 93-105 must be approved prior to approval of this plan.
- 25. WP 94-118. To waive Section 16.123(a)(2) to permit grading to be performed under a valid permit without an approved site development plan and 16.125(2) to permit the issuance of a grading permit prior to the approval of a site development plan for residential development, denied July 28, 1994.
- 26. WP 94-110. To waive Section 16.119(f)(2) to permit a shared residential driveway that will serve two existing SPD dwellings on parcels 32 and 33 to have direct access to a minor arterial highway (Marshall Drive) for a limited duration, denied August 17, 1994.



LOCATION MAP
Scale 1" = 400'

BENCH MARKS
 *2644005 E1 416.281
 *2644004 E1 402.135

PARKING TABULATION: Single Family Attached - 53 Units
 Parking Proposed: 123 Spaces
 A. Garage Units: 36 Units x 2 Spaces = 72 Spaces
 (1 Space in garage, 1 Space in driveway)
 B. Court Parking: 51 Spaces
 C. Parking Ratio (Spaces/Unit) 123/53 = 2.32



VICINITY MAP
Scale 1" = 2000'

GENERAL NOTES:

- 1. All construction shall be in accordance with the latest standards and specifications of Howard County Design Manual Volume IV.
- 2. The contractor shall notify the Department of Public Works/Construction Inspection Division at (410) 313-1850 at least five (5) working days prior to the start of work.
- 3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hours prior to any excavation work.
- 4. Project Background:
 Location: Elkridge, Tax Map: 37, Parcel: 643
 Zoning: RSC (Residential: Single Cluster)
 ZB/BA Ref: ZB 877 R & M, PB 284, RES 188
 Election District: 1st
 Section/Area: One/One
 Total Tract Area: 49.85 Ac. plus/minus
 Section/Area: 10.48 Ac. plus/minus
 Number of Proposed Lots: 56 (54 SFA, 2 OS)
 Previous Submittals: WP91-33, F91-125, S93-02, P93-11, SDP93-105, WP 93-29, WP 93-86
- 5. 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.
- 6. Light poles and fixtures for street lights shall be in accordance with the latest Howard County Design Manual, Volume III, Roads and Bridges.
- 7. 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.
- 8. Any damage to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractors expense.
- 9. 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 contractors 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.
- 10. The topography shown hereon is compiled from the Howard County photogrammetric aerial survey, supplemented with field run data prepared by Land Design Engineering, Inc. June, 1992.
- 11. 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 (NAD 27).
- 12. Public water and public sewer will be available to the site by means of future extensions.
 Water: Contract No. 14-3314-D
 Sewer: Contract No. 14-3314-D
- 13. Temporary stormwater management will be provided by detention (SDP 93-105). See stormwater management computations for conversion to permanent facility included in SDP 93-105. Permanent stormwater management to be provided by retention and detention (F94-27).
- 14. Wetlands delineation by Exploration Research, Inc. dated 1992, approved by U.S.A.C.E. June, 1992. Pond conversion will be provided by Developer Agreement for F94-27.
- 15. Noise study compiled by Land Design Engineering, Inc. as part of P93-11 approved December 31, 1992.
- 16. Floodplain analyzed by Land Design Engineering, Inc. February, 1993 based on field run data from 1992 and 1993 (P93-11), approved December 31, 1992.
- 17. Traffic study compiled by Lee Cunningham & Associates, Inc. dated November, 1992 as part of S93-02 approved December 31, 1992.
- 18. Geotechnical report compiled by Geo-Technical Associates, Inc. dated December 30, 1992 and May 3, 1993, as part of P93-11 and SDP 93-105.
- 19. The Sediment Basin/Pond reviewed and approved under SDP 93-105 shall be fully functional prior to commencement of work for this plan (F94-27).

ROAD & STORM DRAIN CONSTRUCTION PLANS

SHADY OAKS

SECTION ONE AREA ONE

1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

OPERATION, MAINTENANCE AND INSPECTION

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, 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.

AS-BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meets the approved plans and specifications.

Signature _____ PE No. _____
 Date _____

DEVELOPER'S CERTIFICATE
 "I certify that all development and/or construction will be done according to these plans, and that any responsible persons 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 the Howard Soil Conservation District."

Signature of Developer: I.W. N Date: 9/16/94

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: Bruce D. Burton Date: 9/6/94

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
[Signature] Chief, Land Development Division
 U.S. Soil Conservation Service Date: 9/16/94

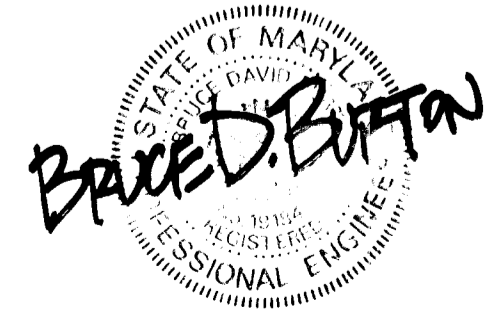
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature] Chief, Bureau of Engineering Date: 9/15/94

Signature: [Signature] Date: 9-15-94

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
[Signature] Chief, Land Development Division Date: 9/21/94

APPROVED: Department of Planning and Zoning
[Signature] Chief, Division of Land Development and Research Date: 9/23/94

No.	Description	Date
1	Revise lots, #5 and title block	6/95



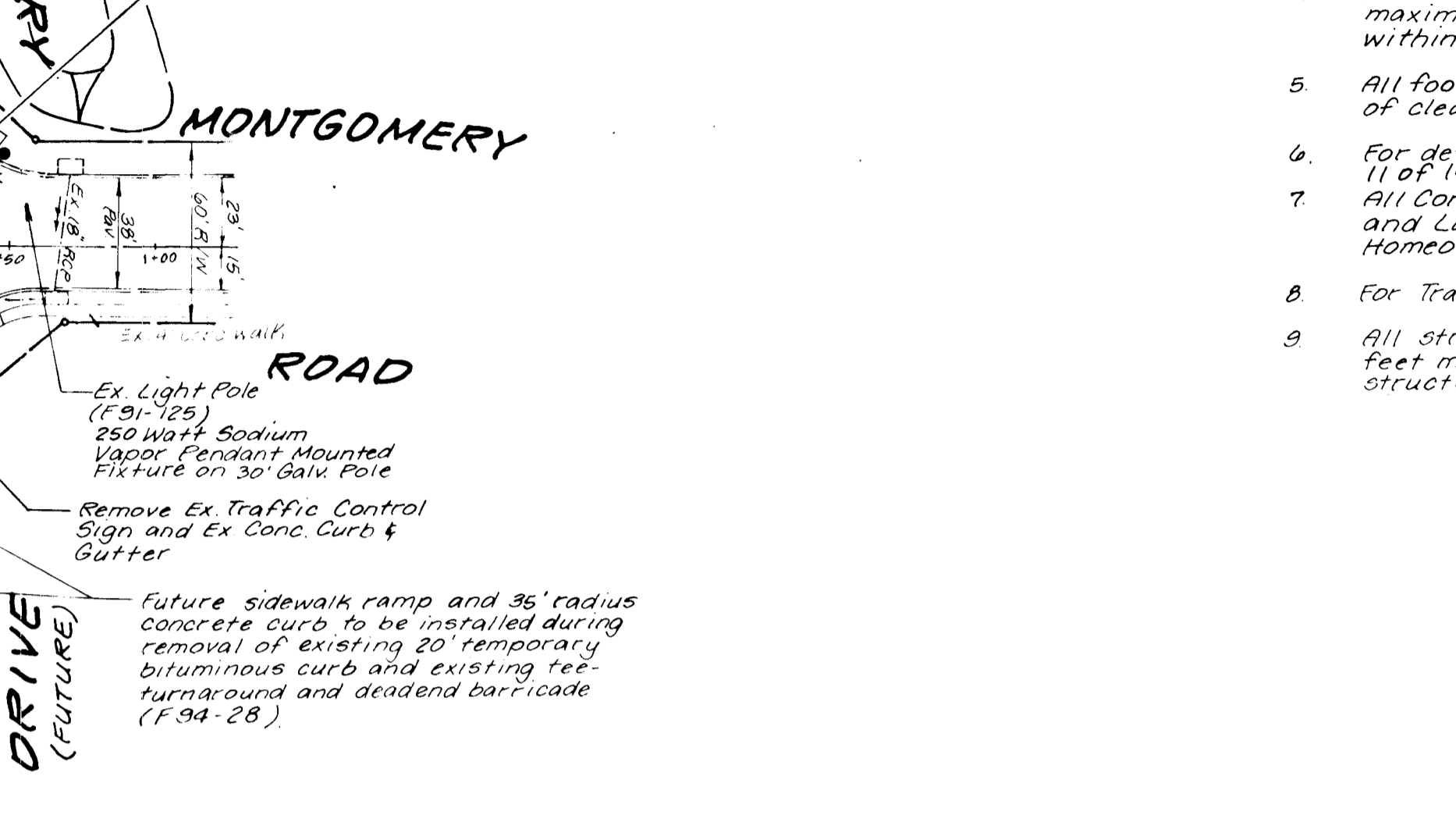
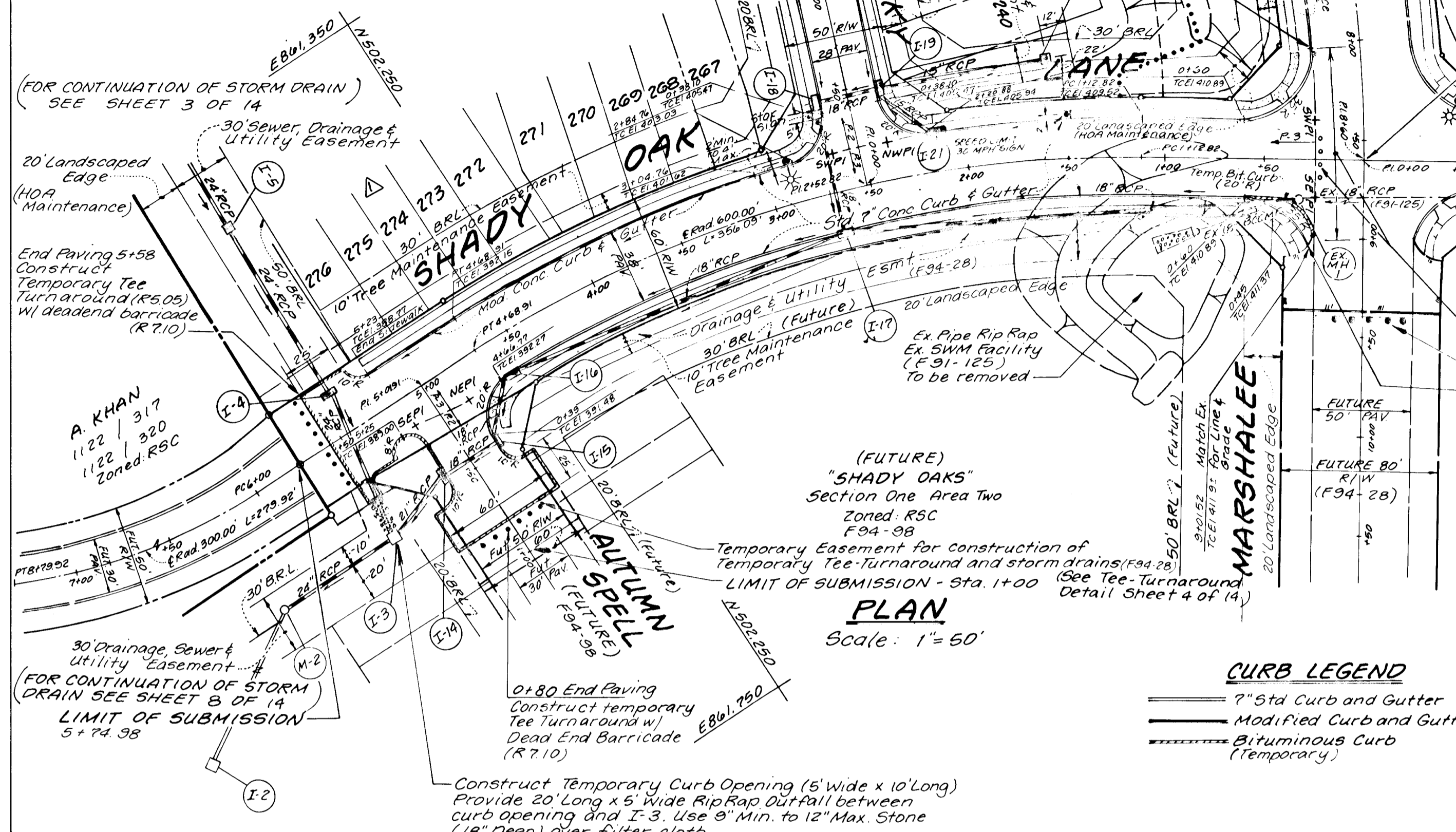
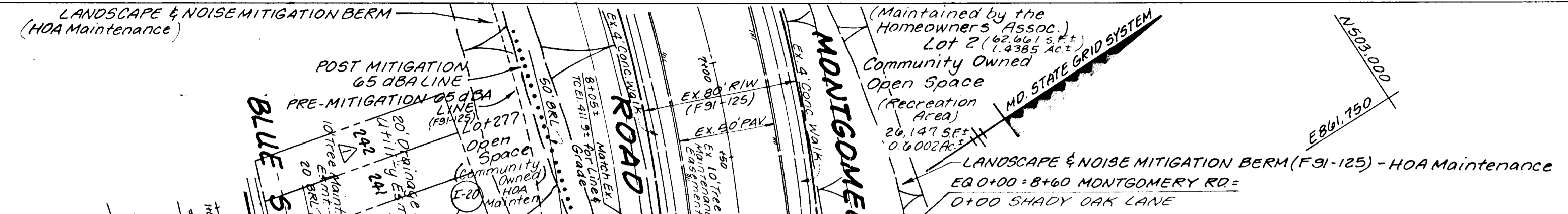
LAND DESIGN ENGINEERING, INC.

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

Designed: BDB	TITLE SHEET SHADY OAKS SECTION ONE AREA ONE Δ LOT 15 THRU LOT 22, 32-39, 240-277 Tax Map 37 Part of Parcel 643 1st Election District Howard County, MD Previous Submittals: ZB877 R & M, WP91-33, F91-125, RES 188, S93-02, PB284, F93-11, SDP93-105	Scale: AS SHOWN
Drawn: KBW		Sheet 1 of 14
Checked: BDB		LDL Job No. 92-176.1
Date: Aug 1993		File No.
		100 INVESTMENT LIMITED PARTNERSHIP 8835-F Columbia 100 Parkway Columbia, MD, 21046 Phone: (410) 730-0810

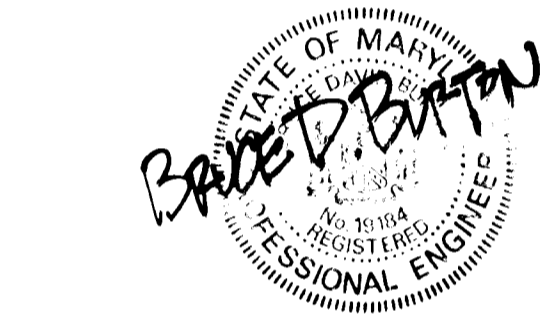
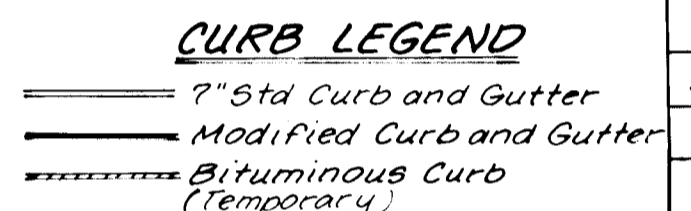
1707

E CURVE DATA					
NO.	RADIUS	LENGTH	DELTA	TAN	LCB CHORD
1	600.00'	354.09'	34°00'15"	183.46'	516'49.25' E 350.89'



SYMBOL	STREET NAME	E STATION	OFFSET	TYPE
☼	Shady Oak Ln	2+88	25' Right	150 Watt High Pressure Sodium Vapor Cobra Style Fixture mounted at 25' on a Galvanized Steel Pole

SYMBOL	STREET NAME	E STATION	OFFSET	TYPE
■	Shady Oak Ln	1+50	21' Right	R2-1 SPEED LIMIT 30MPH Sign 24x30 Rectangular
■	Blue Sky	0+35	16' Left	R1-1 STOP Sign 30x30 Octagonal



- NOTES**
- For street tree locations, see Sheet 12 of 14.
 - For storm drain profiles and structure schedule, see Sheet 5 of 14. See Structure Schedule for storm drain locations.
 - Existing grades shown on this plan reflect the post-graded condition in accordance with SDP 93-105.
 - All street lights shall be located 2 feet minimum to 4 feet maximum behind the curb. No trees shall be located within 20 feet of any street light. See detail sheet 4 of 14.
 - All footings of proposed units shall be a minimum of 2 feet of clearance from the drainage easement line.
 - For details of Noise Berm construction, see sheet 8 and 11 of 14.
 - All Community Owned Open Space Lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
 - For Traffic Signal Location See Sheet 13 of 14.
 - All street lights and/or street signs shall be located 5 feet minimum from proposed drainage and utility structures.

APPROVED: Department of Planning and Zoning
 Date: 9/23/94
 Chief, Land Development and Research

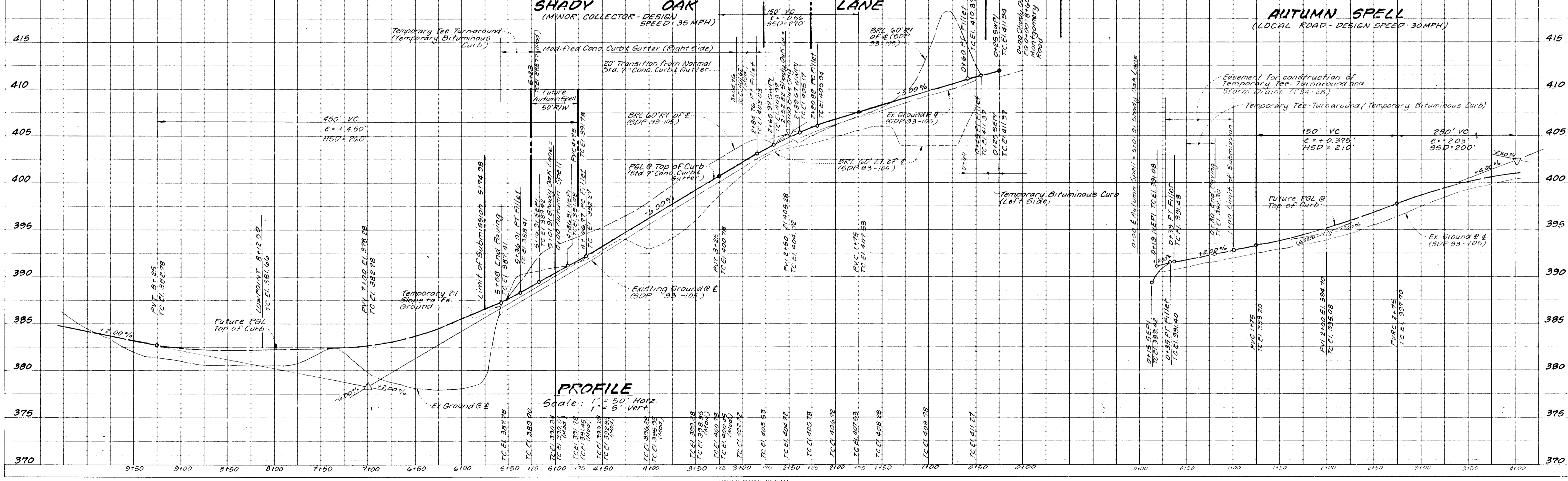
APPROVED: Department of Public Works for Storm Drainage Systems and Roads
 Date: 9/23/94
 Chief, Land Development Division

APPROVED: Bureau of Engineering
 Date: 9-15-94
 Chief, Bureau of Engineering

REVISIONS	
NO.	REVISION

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

Designed BDB	PLAN AND PROFILE SHADY OAK LANE	Scale: As Shown
Drawn KBW	SHADY OAKS SECTION ONE AREA ONE LOT 15 THRU LOT 22, 32-39, 240-277 Tax Map 37 Part of Parcel 643 1st Election District Howard County, MD Previous Submittals: ZB877 R+M, WP31-33, F91-125 RES 188, 593-02, PB284, P93-11, SDP 93-105	Sheet 2 of 14
Checked BDB	Owner / Developer 100 INVESTMENT LIMITED PARTNERSHIP 8835 - F Columbia 100 Parkway Columbia, MD 21045 Phone: (410) 730-0810	LDE Job No 92-176.1
Date Aug 1993		File No

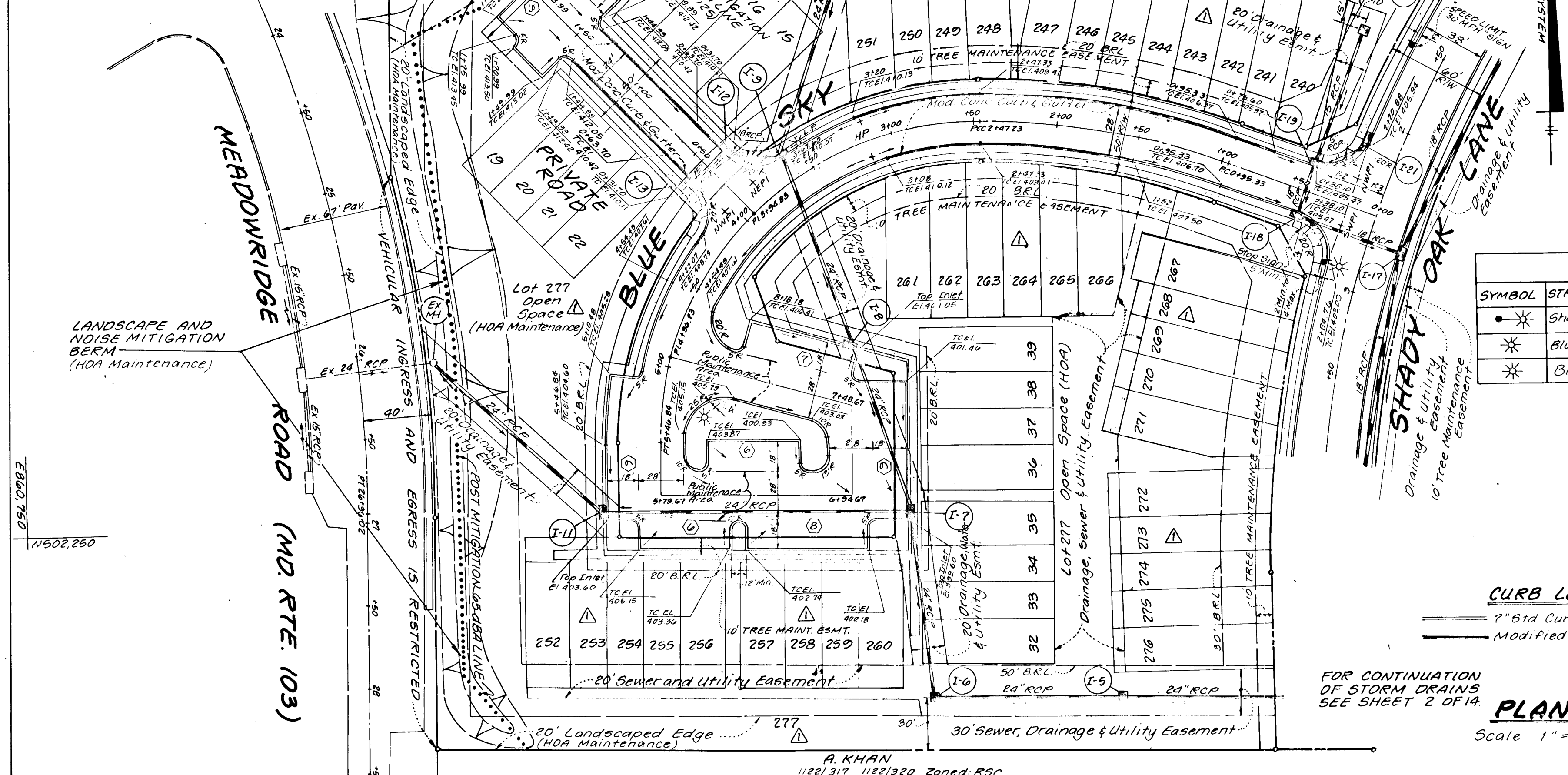


PROFILE
 Scale: 1" = 50' Horiz, 1" = 5' Vert

17011

± CURVE DATA

NO.	RADIUS	LENGTH	DELTA	TAN	LCB	CHORD
2	453.00'	151.90'	19°12'45"	76.07'	N79°08'59"W 151.19'	
3	190.00'	299.62'	90°21'04"	191.20'	S46°04'04"W 269.52'	



NOTES

- For street tree locations, see Sheet 12 of 14.
- For storm drain profiles and structure schedule, see Sheet 5 of 14. See Structure Schedule for storm drain locations.
- Existing grades shown on this plan reflect the post-graded condition in accordance with SDP 93-105.
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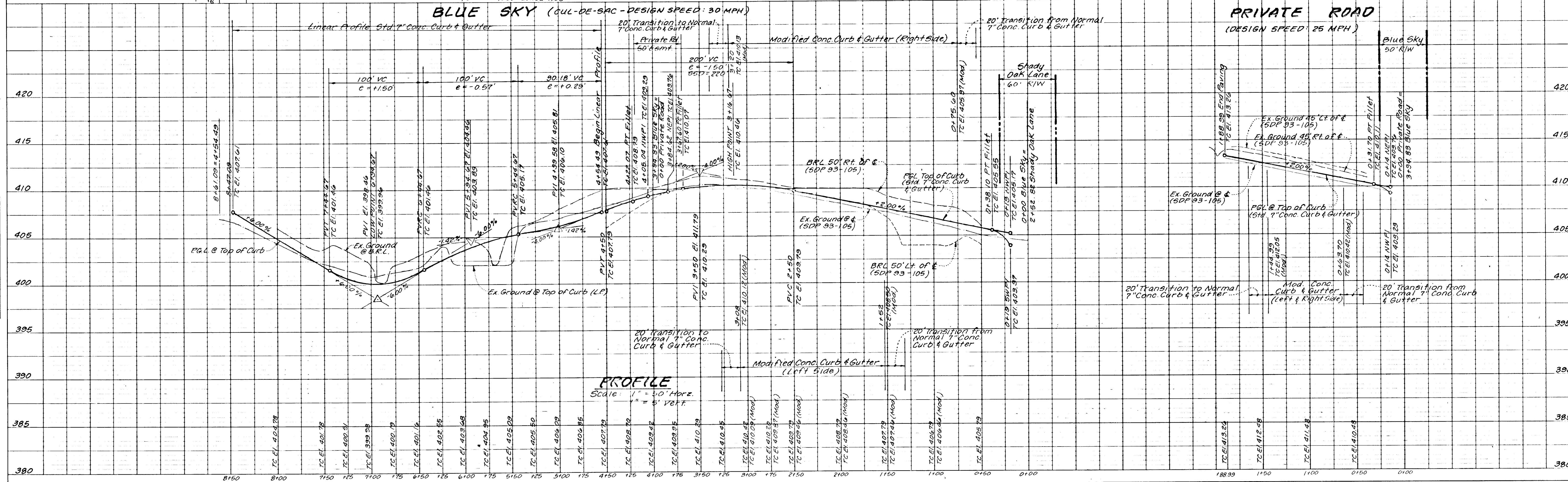
APPROVED: Department of Planning and Zoning
Anna J. Murray 9/23/94
 Chief, Division of Land Development and Research

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
Walter Long 9/23/94
 Chief, Division of Storm Drainage Systems and Roads

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
C.E. Enters 9/23/94
 Chief, Bureau of Engineering

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
Andrew M. Dwyer 9-15-94
 Chief, Bureau of Highways

PLAN
 SURVEYED BY: _____ DATE: _____
 CHECKED BY: _____
 NOTE BOOK NO. _____
 BY: _____



PROFILE
 SURVEYED BY: _____ DATE: _____
 CHECKED BY: _____
 NOTE BOOK NO. _____
 BY: _____

REVISIONS

No.	Description	Date
1	Revise lots #5 and title block	8-31-94

PAVED BORTON
 PROFESSIONAL ENGINEER

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: BDB
 Scale: As Shown

Drawn: KBW
 Sheet: 3 of 14

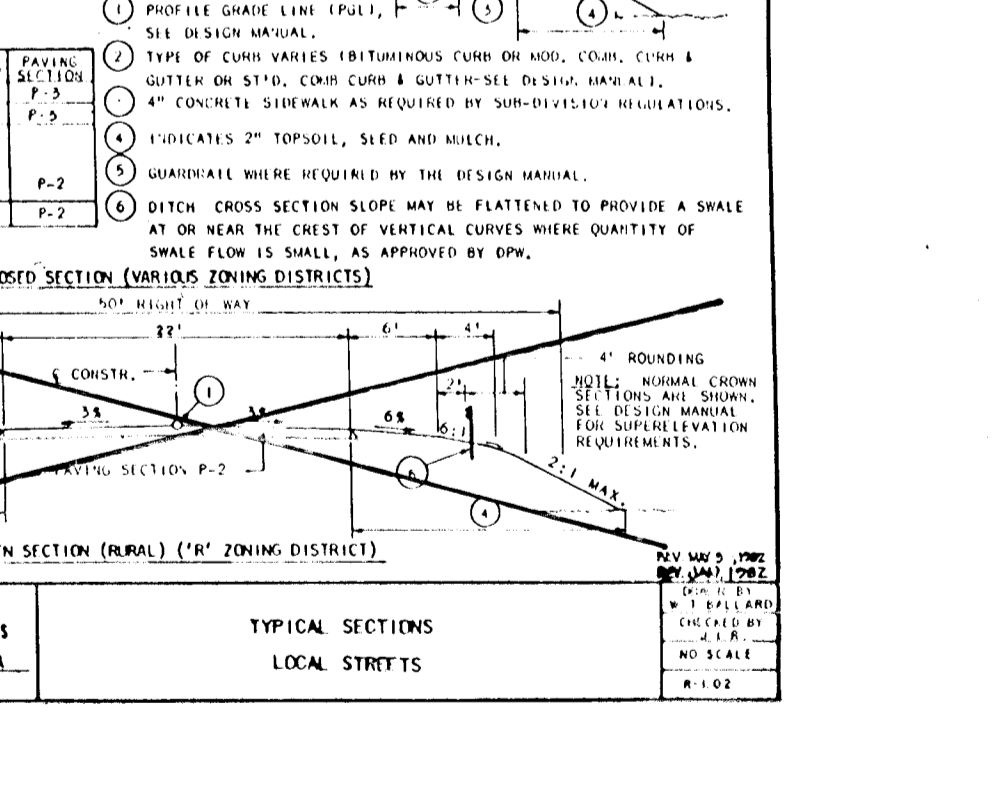
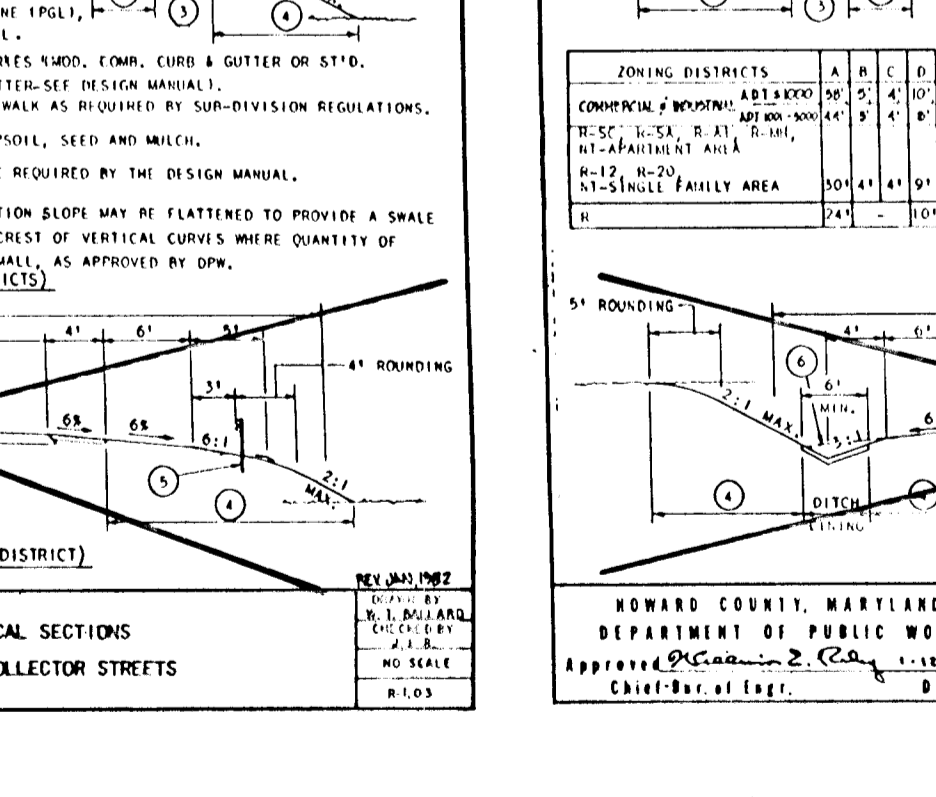
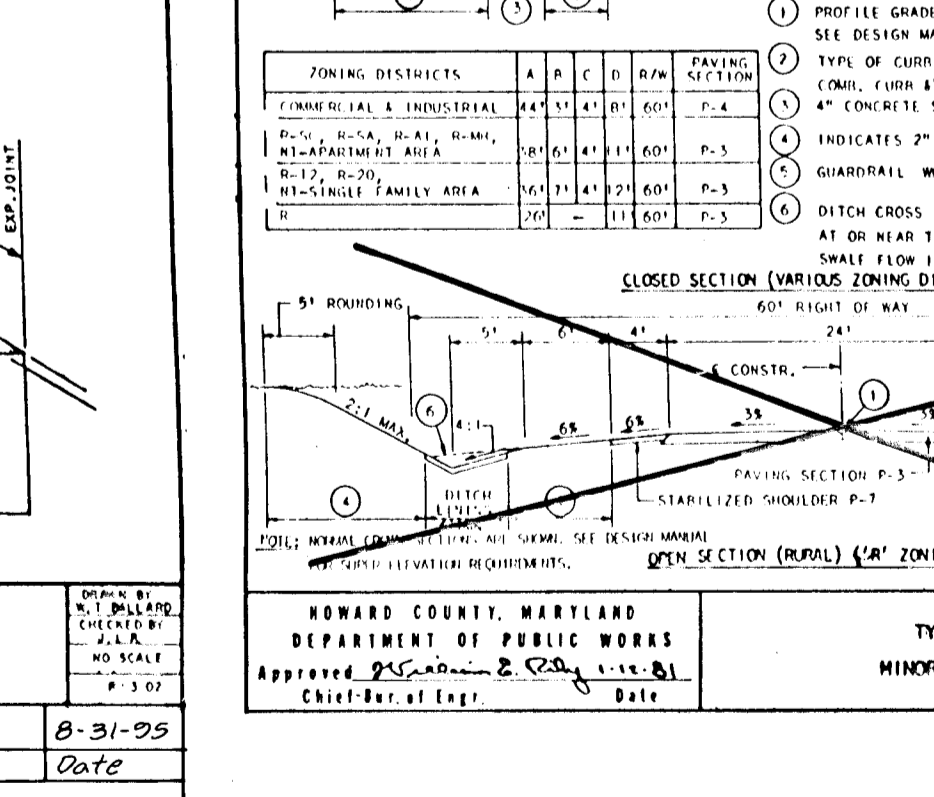
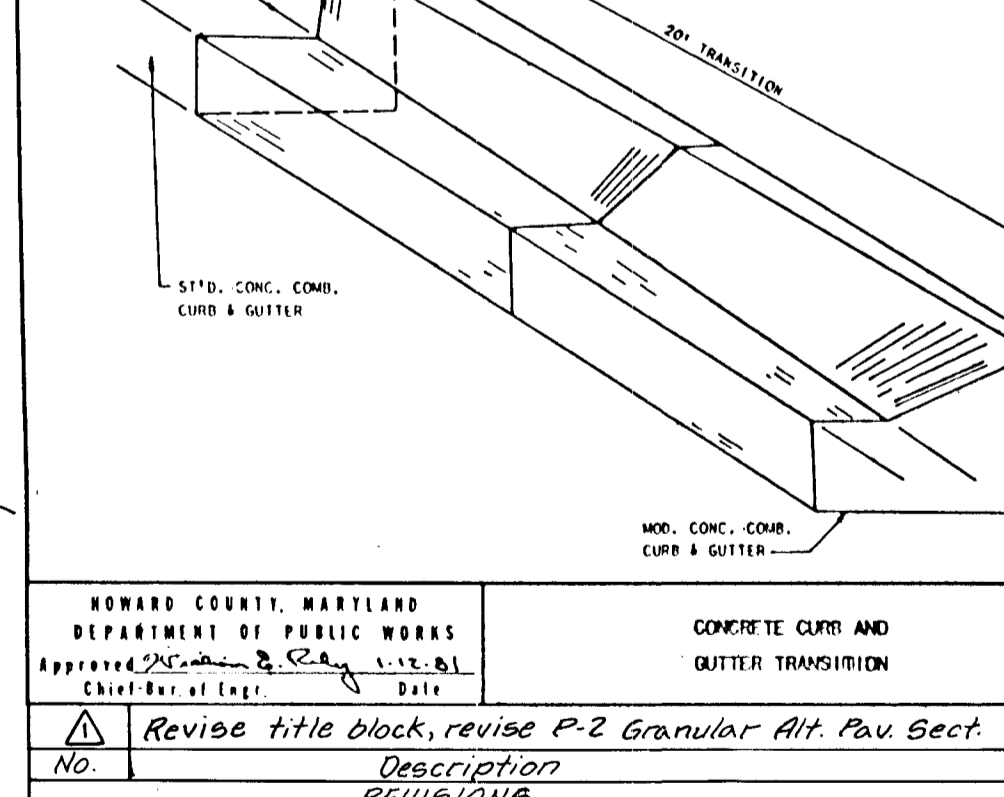
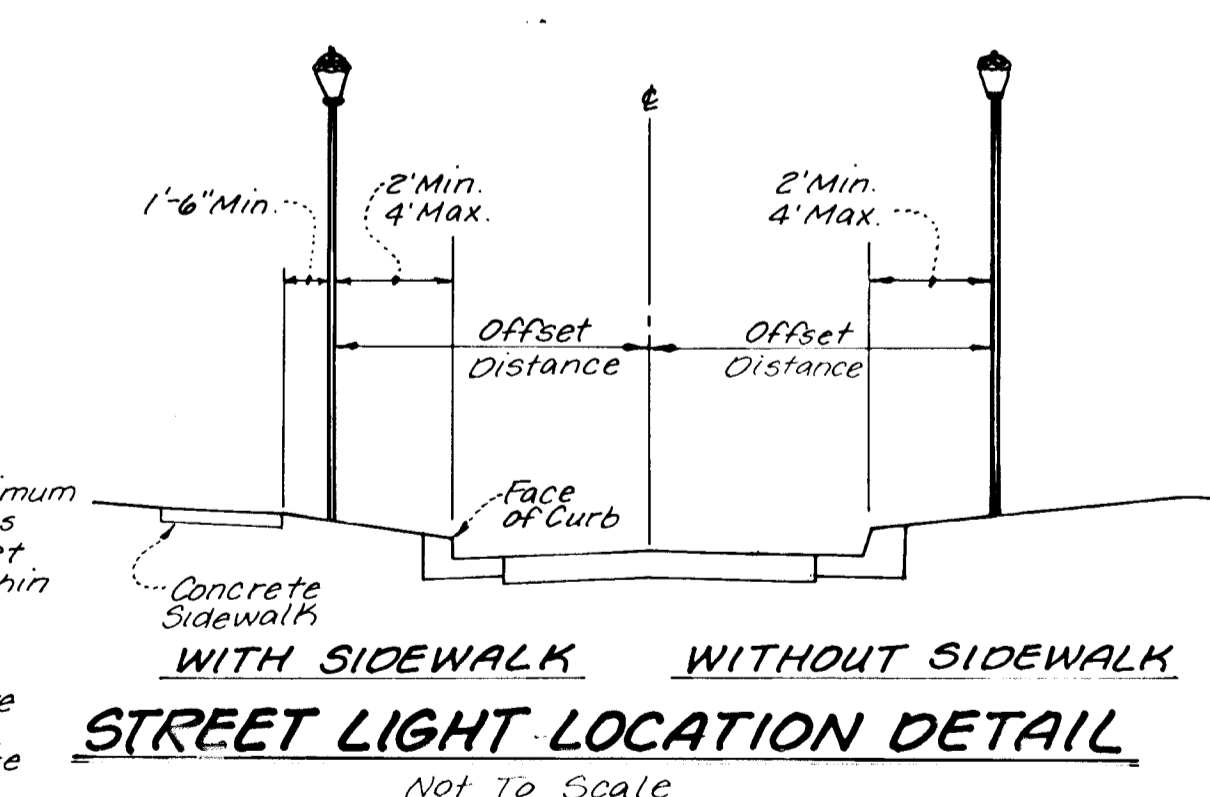
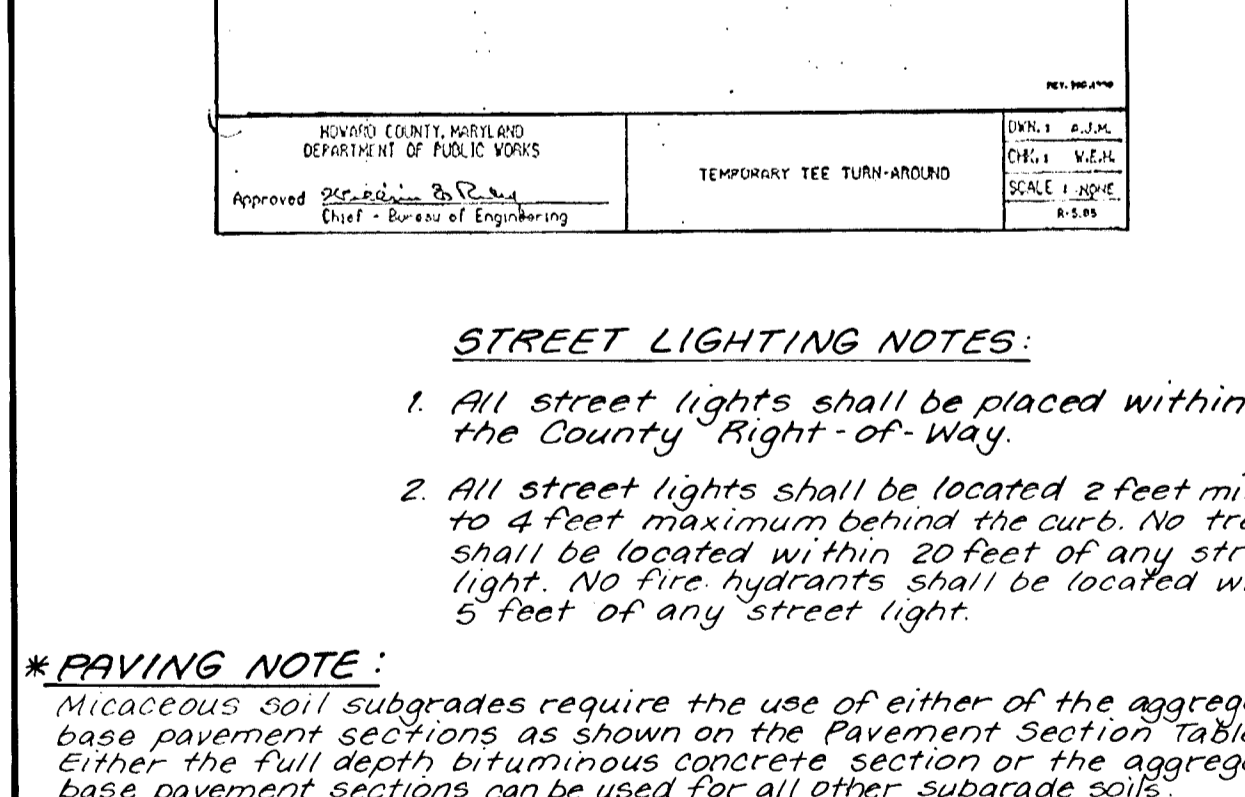
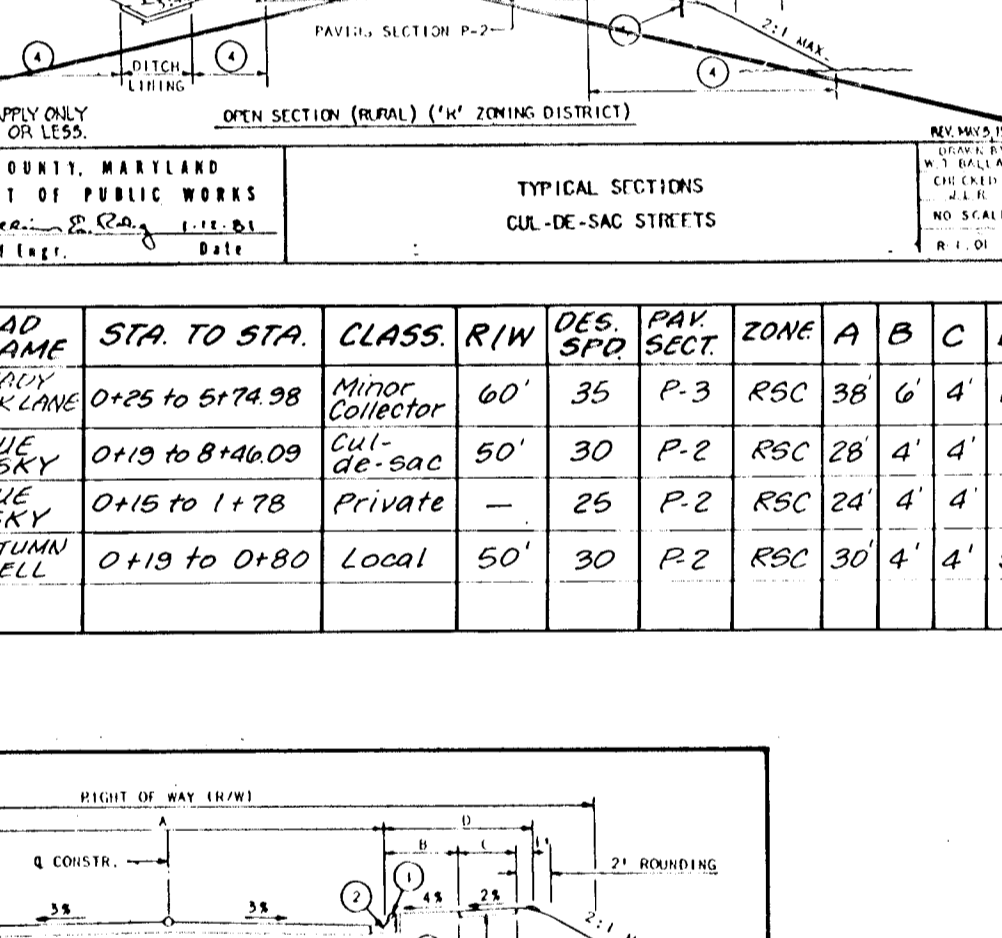
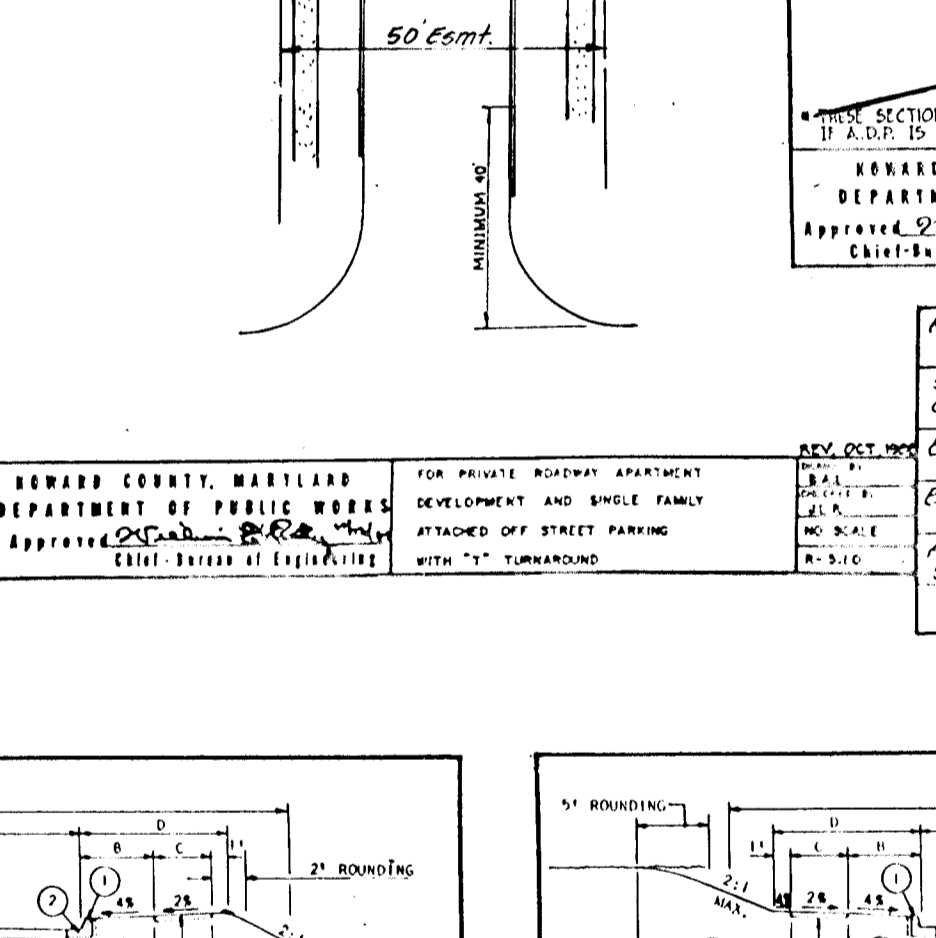
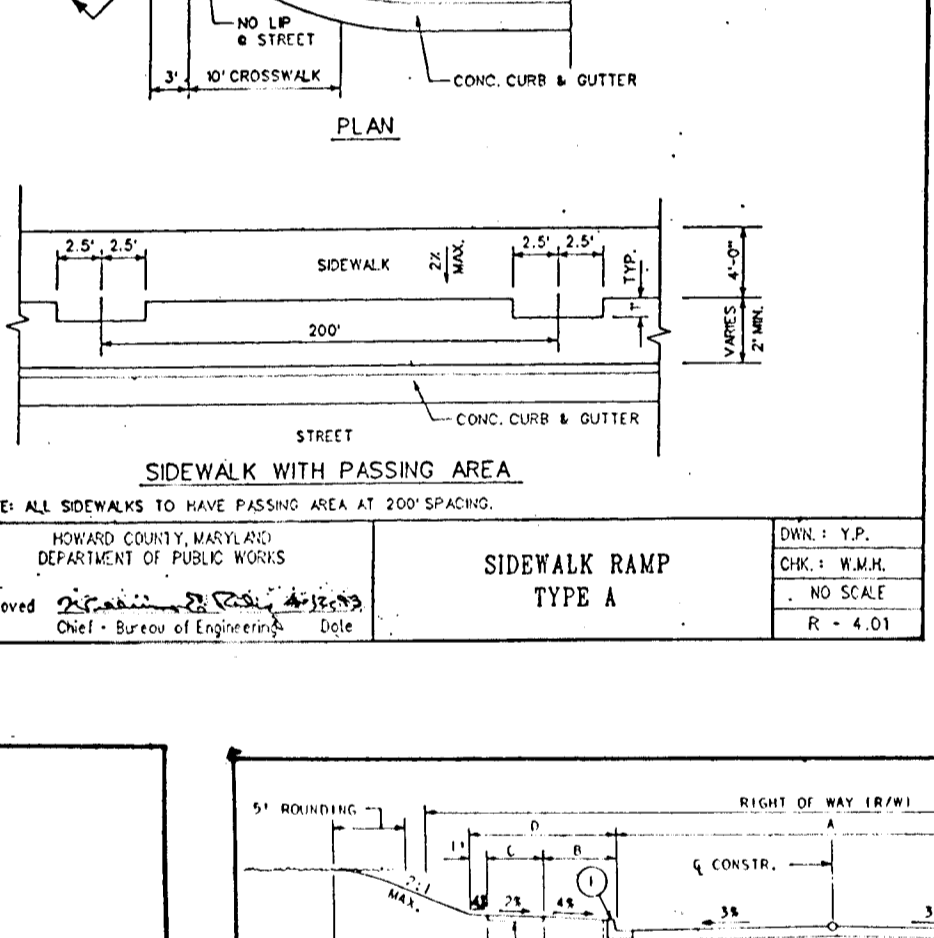
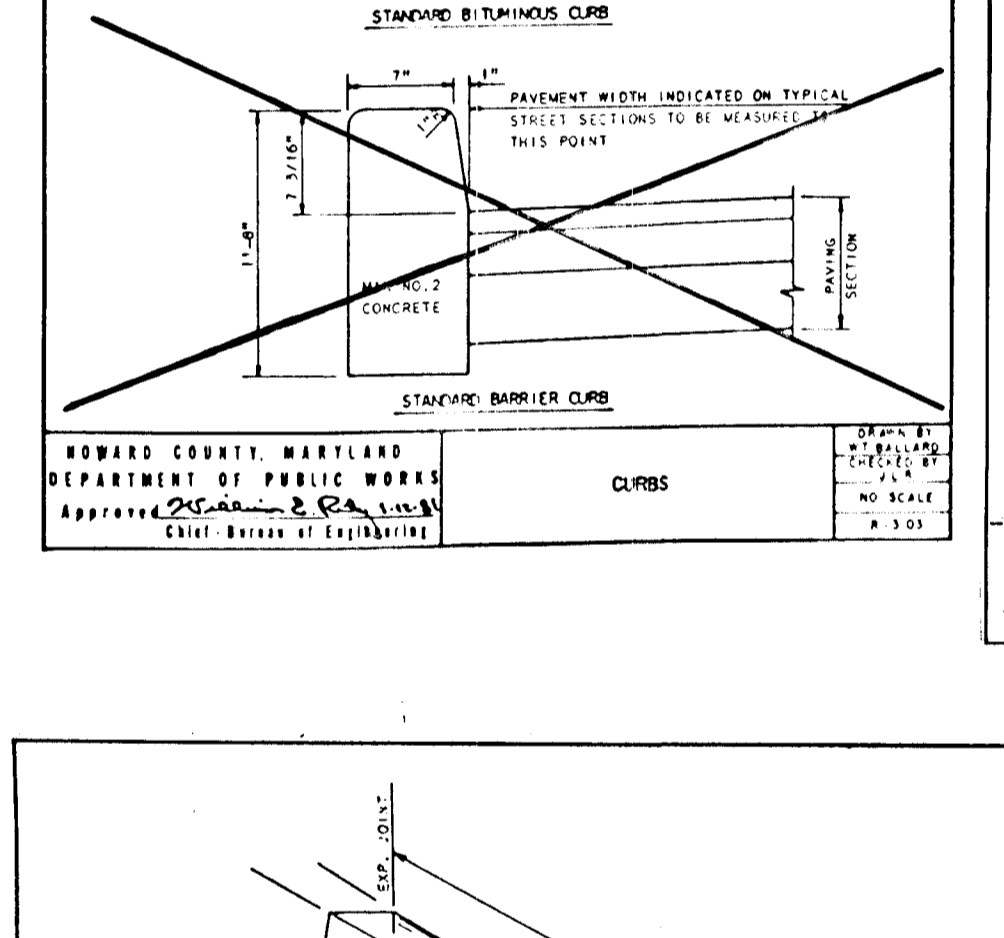
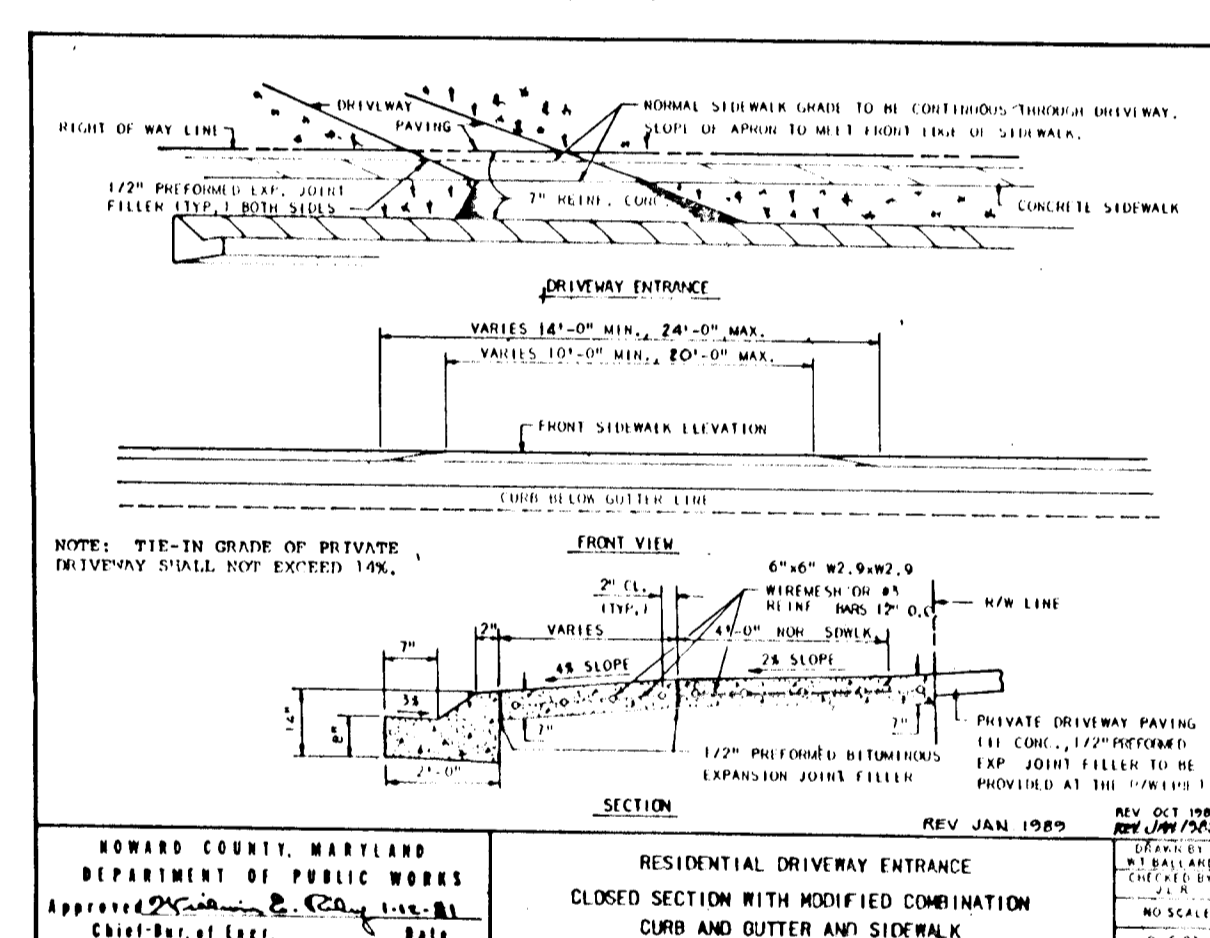
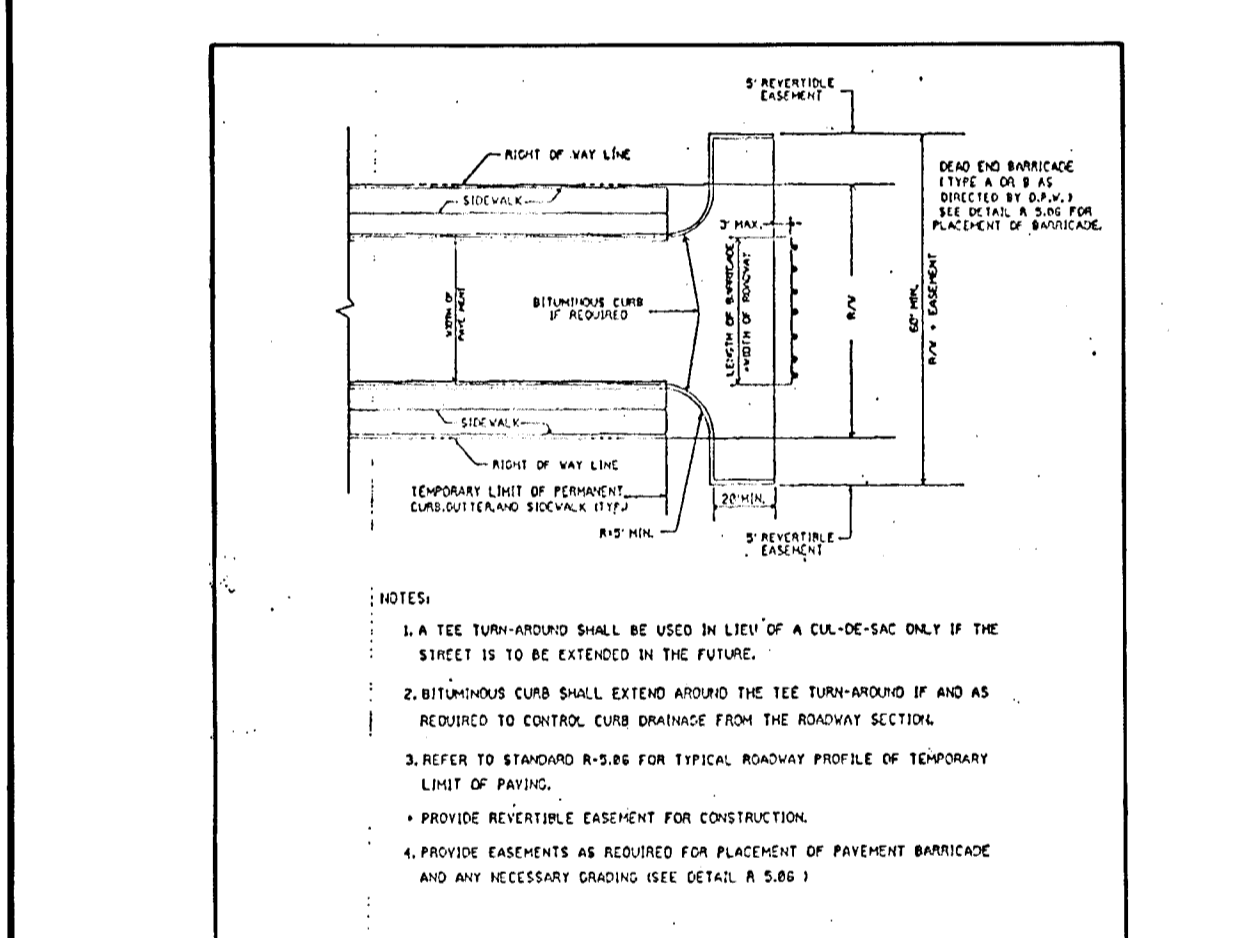
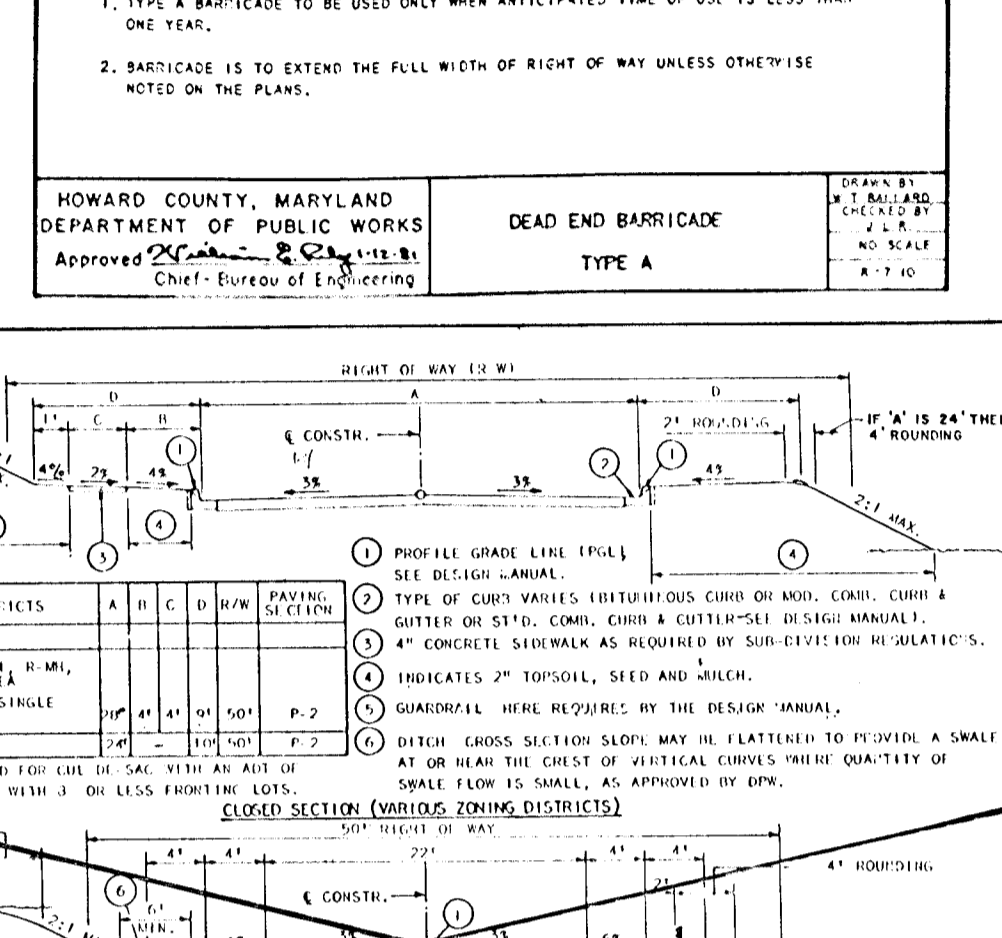
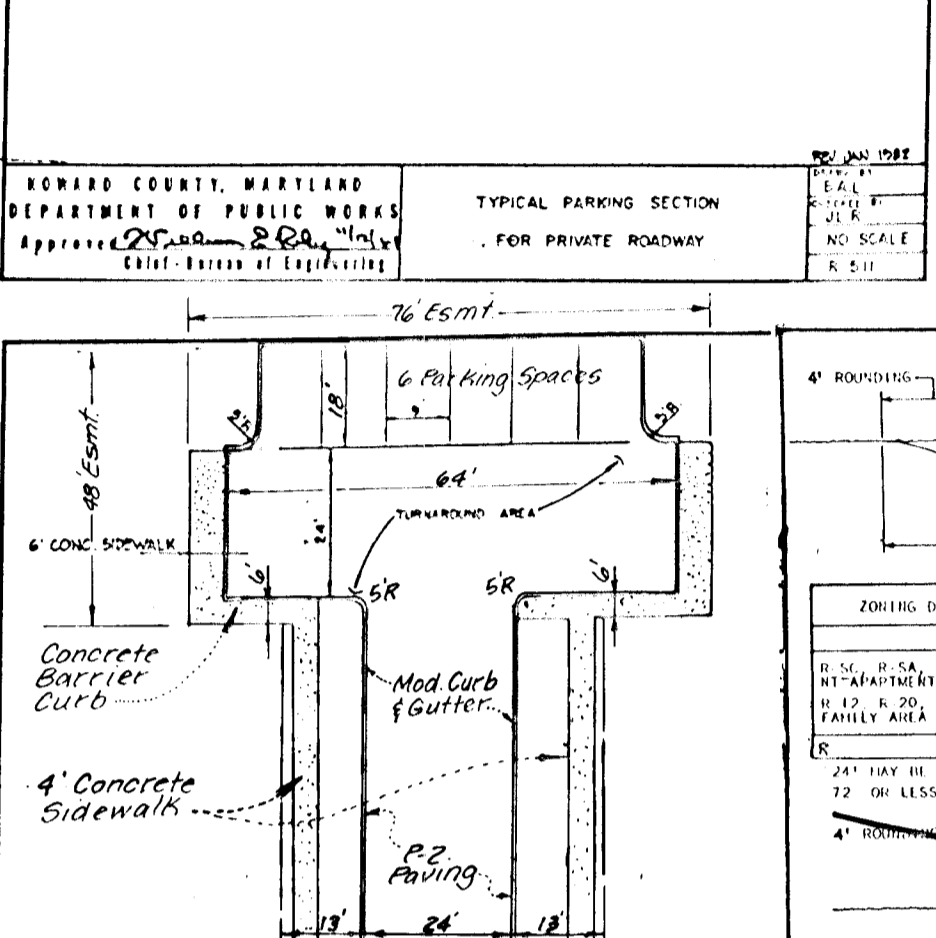
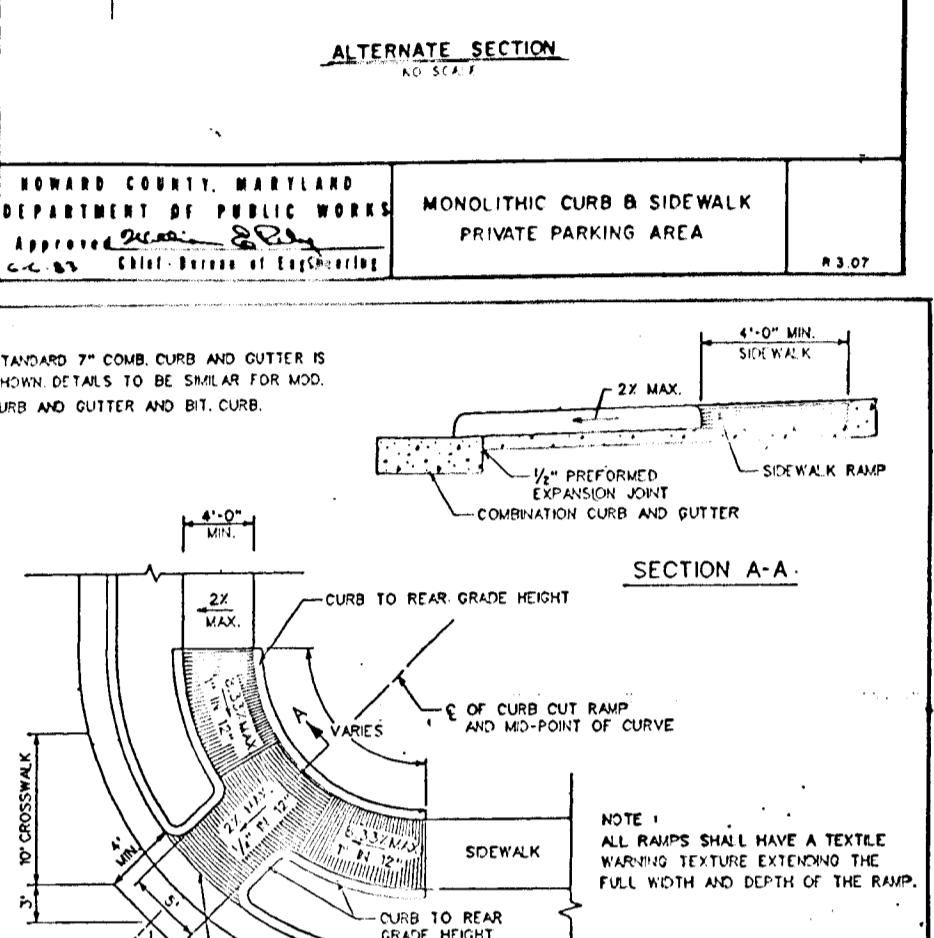
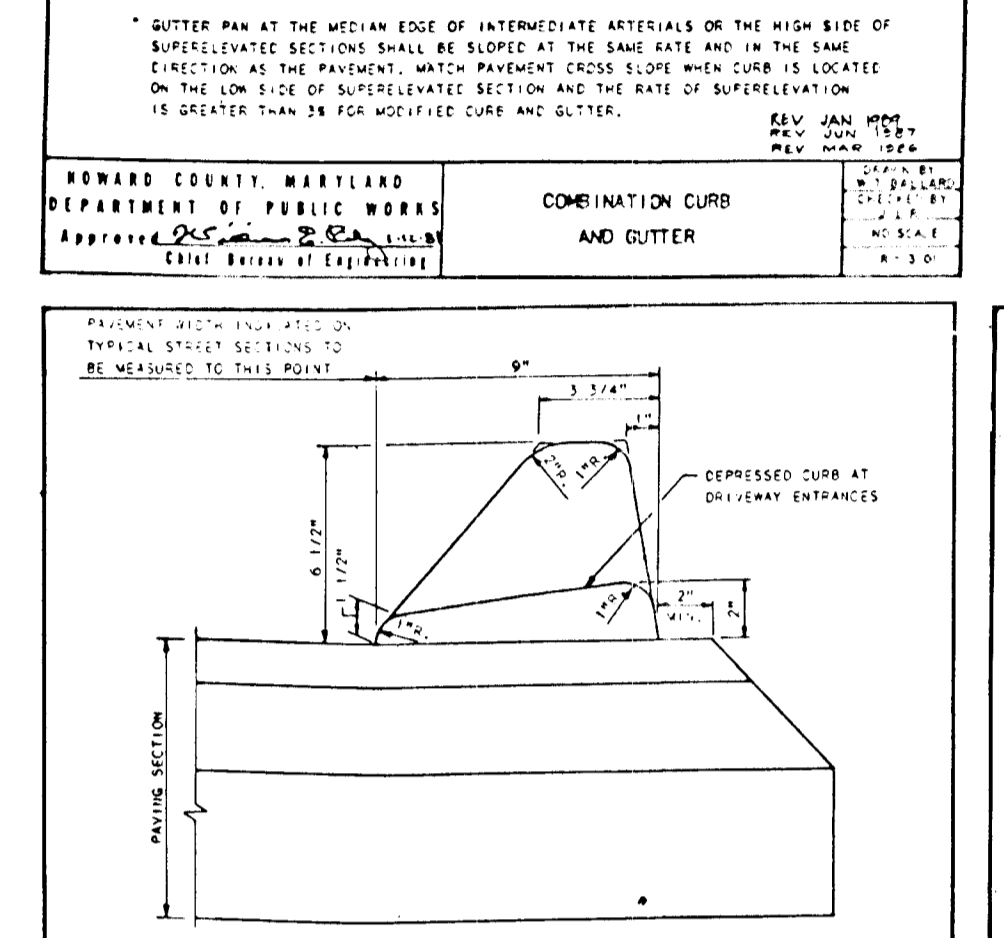
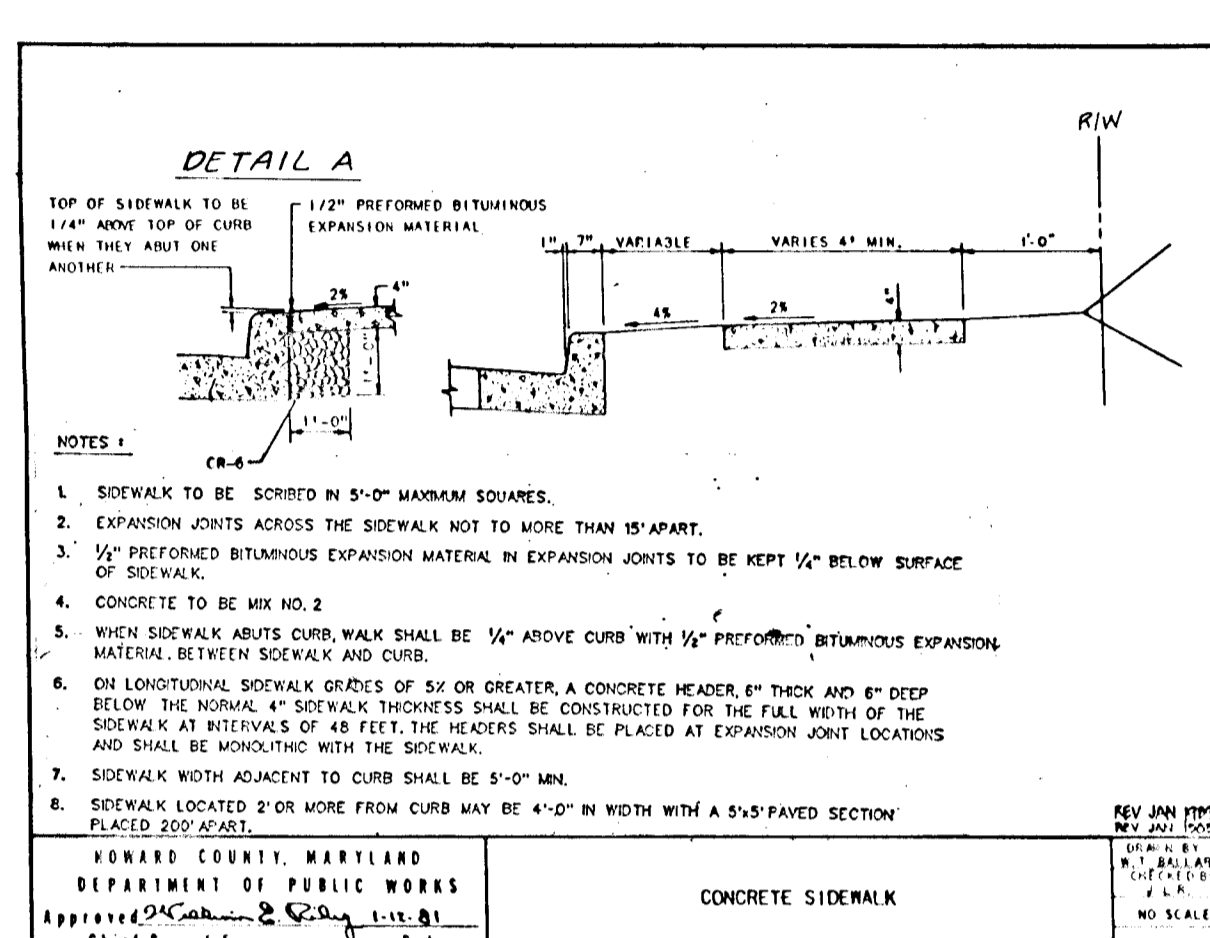
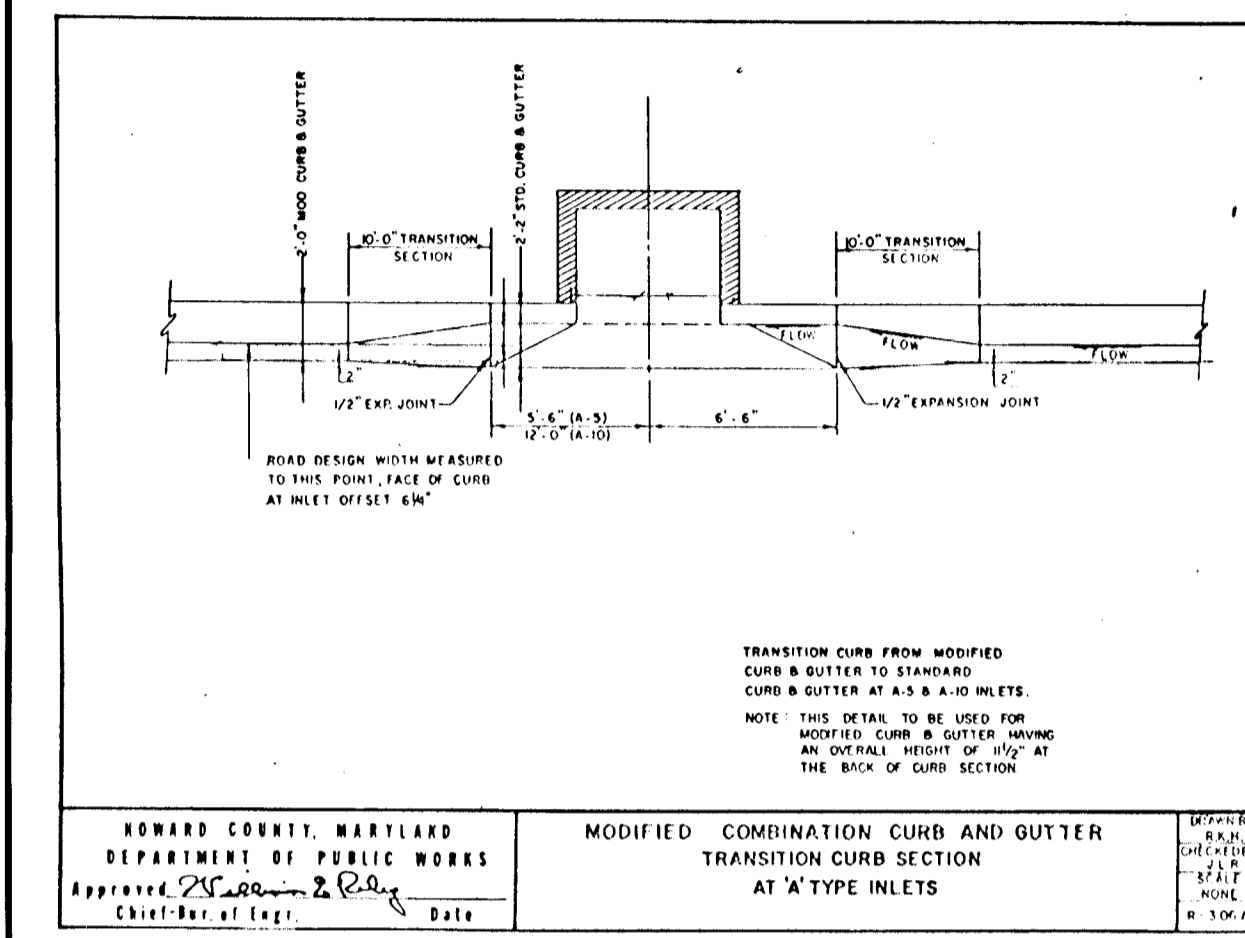
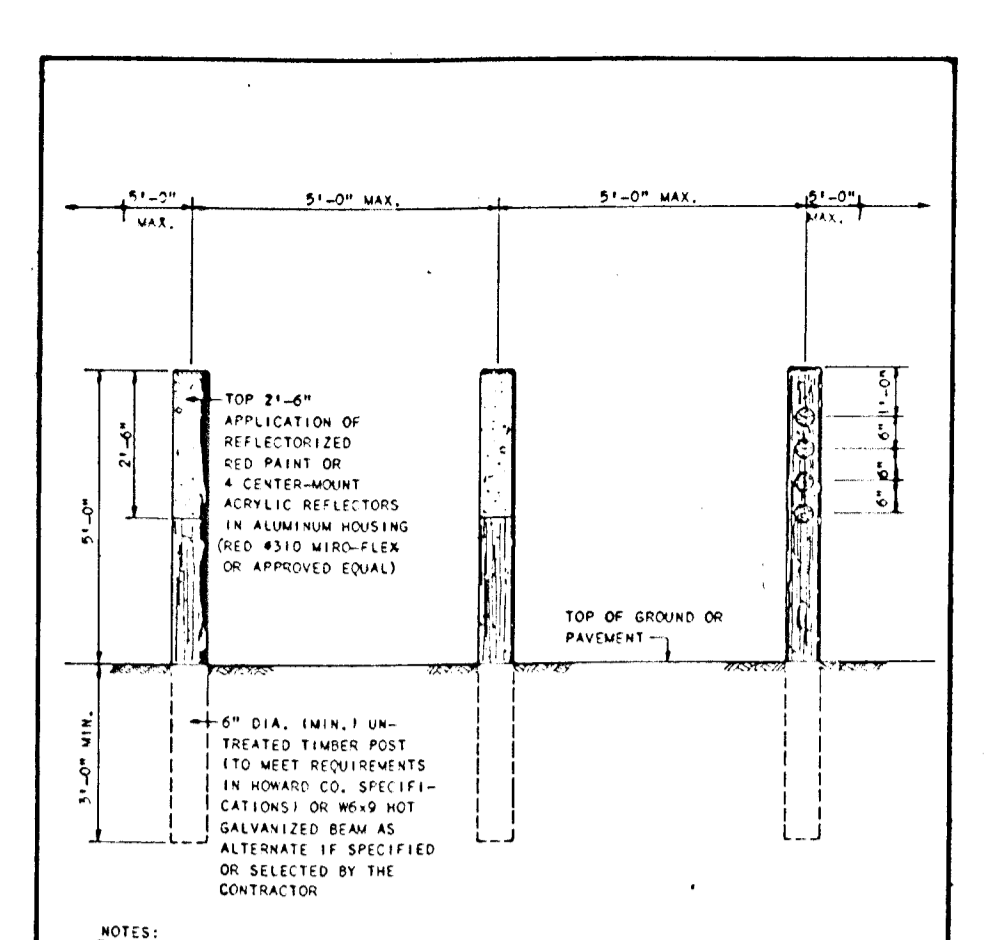
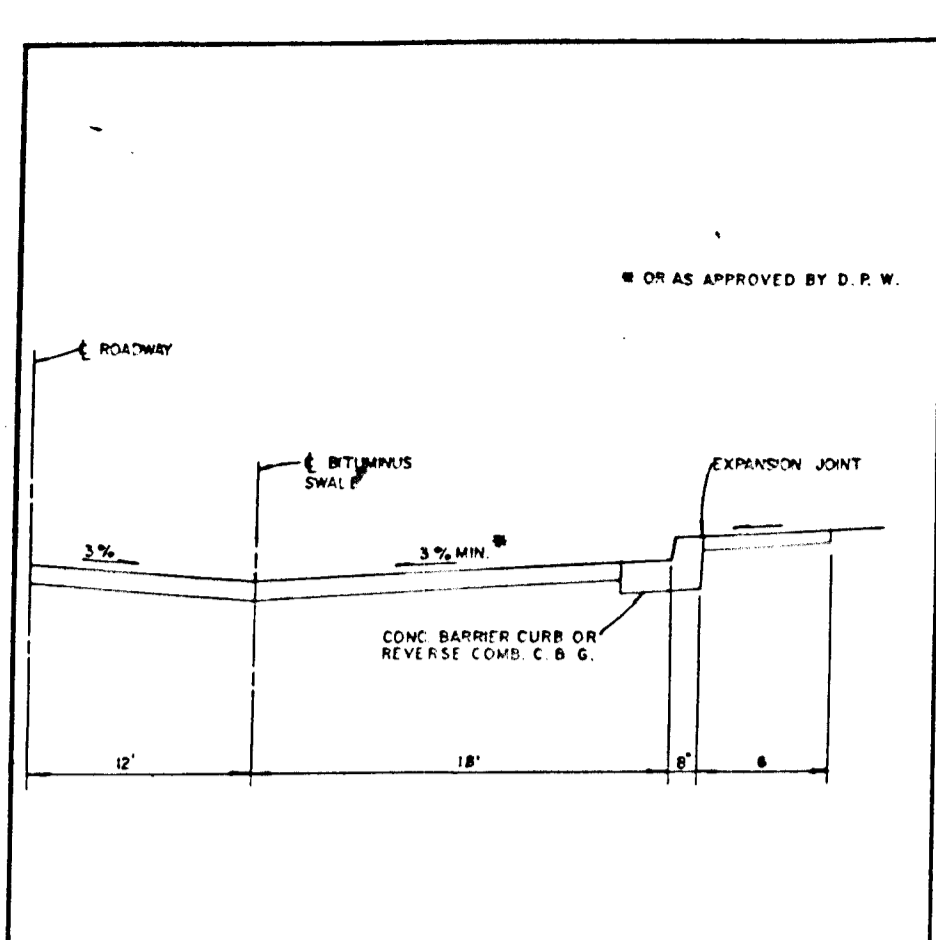
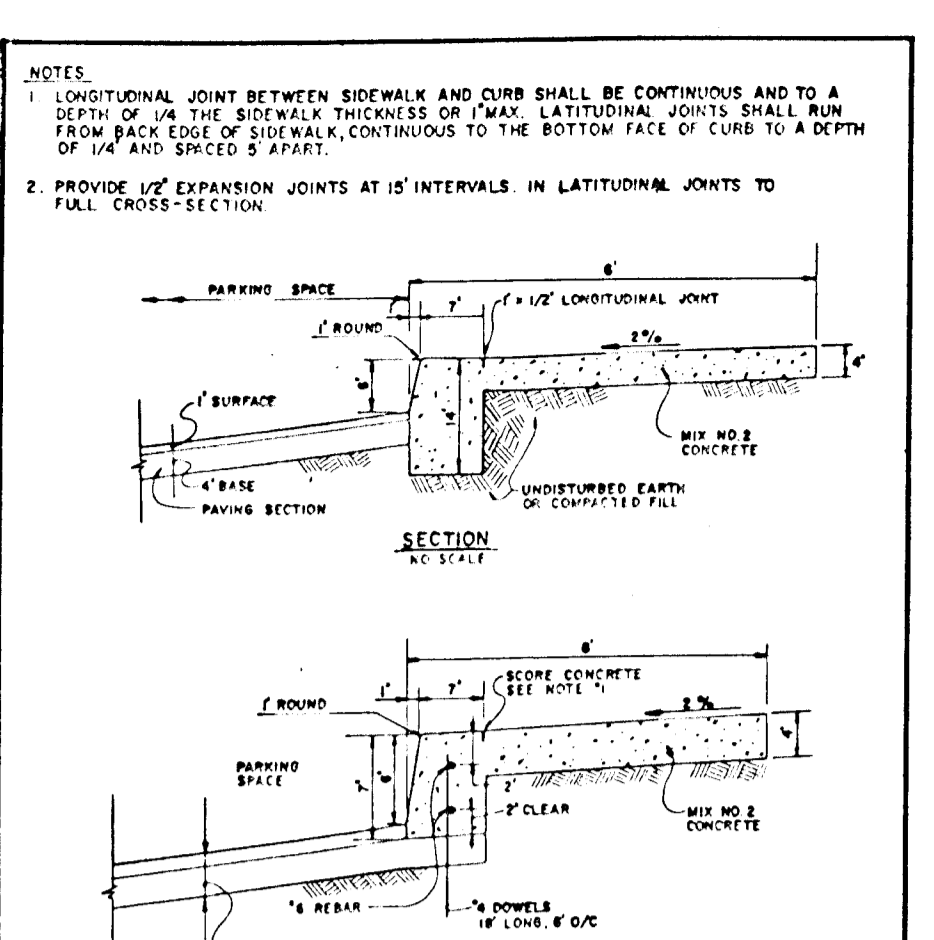
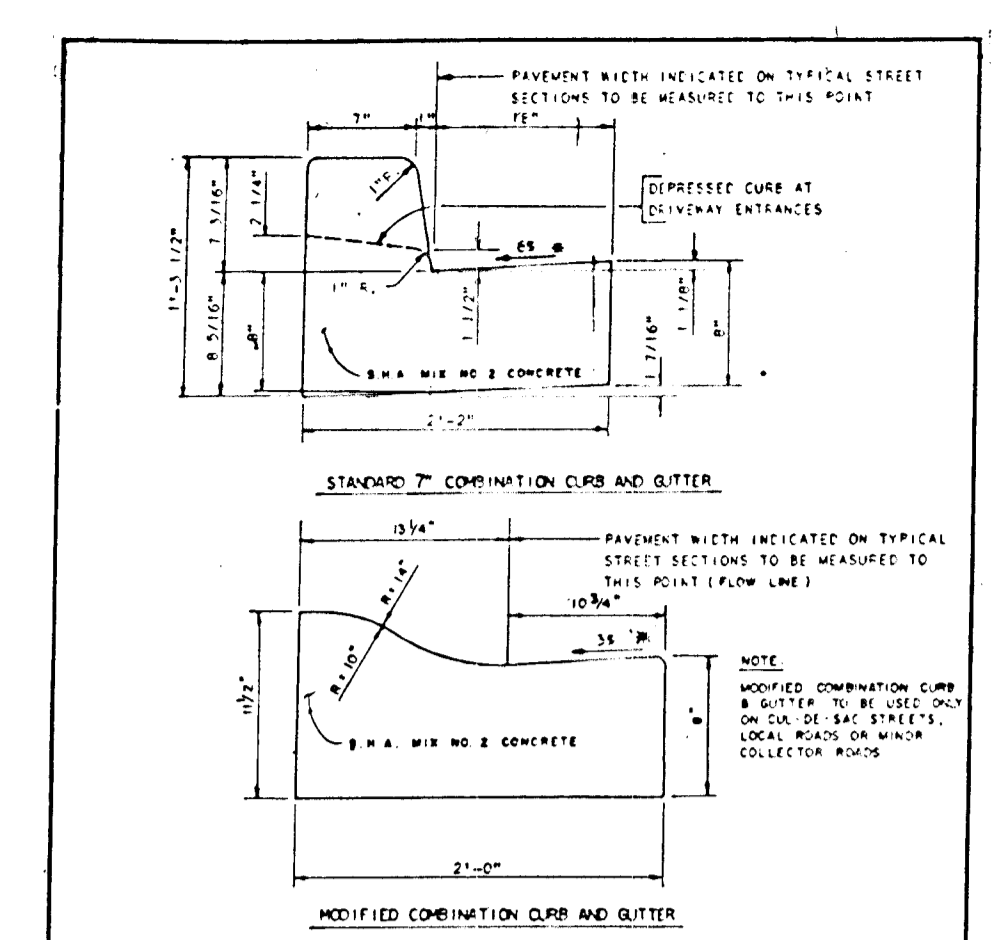
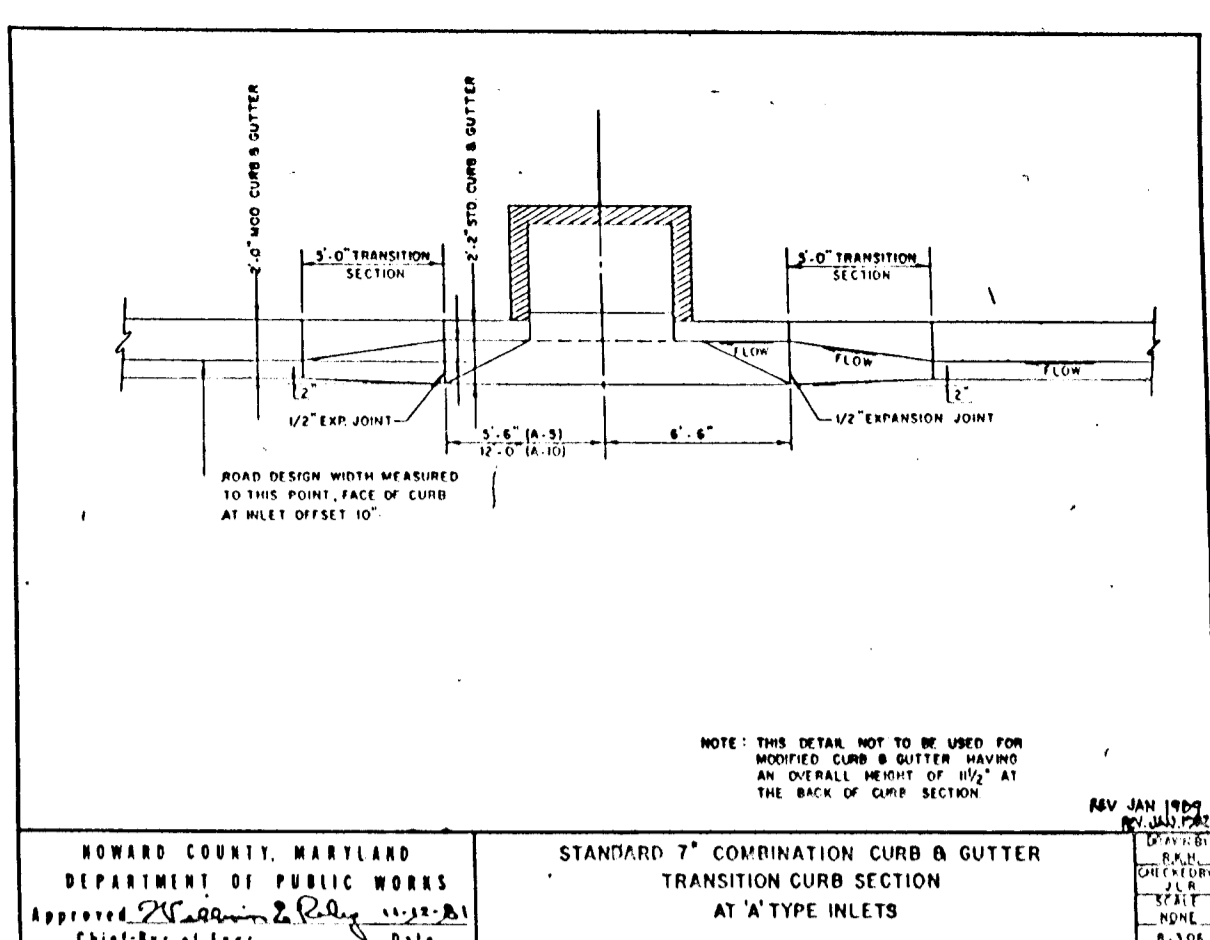
Checked: BDB
 LOE Job No: 92-176.1

Date: Aug. 1993
 File No: _____

Owner/Developer:
 100 INVESTMENT LIMITED PARTNERSHIP
 8835-P Columbia 100 Parkway
 Columbia, MD 21045 Phone: (410) 730-0810

17011

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS	CONCRETE BASE ALTERNATES
P-1	TRAVELWAYS, BAYS, APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE	4" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-2	RESIDENTIAL ZONES, SOCIAL CLUBS, BAY STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-3	RESIDENTIAL ZONES, BAY STS. AND WALKS, COLLECTOR STREETS, INDUSTRIAL ZONES, TRAVELWAYS, APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE
P-4	TRAVELWAYS, BAYS, APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH HEAVY TRUCKS	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4" BIT. CONC. BASE



DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment 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 certain on-site inspections by the Howard Soil Conservation District."

Signature of Developer: *W.L.N.* Date: *9/6/94*

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: *Bruce D. Burton* Date: *9/6/94*

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

Signature: *John R. Phelan* Date: *9/6/94*

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

Signature: *S. S. ...* Date: *9/22/94*

APPROVED: Department of Planning and Zoning.

Signature: *Jane ...* Date: *7/23/94*

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)

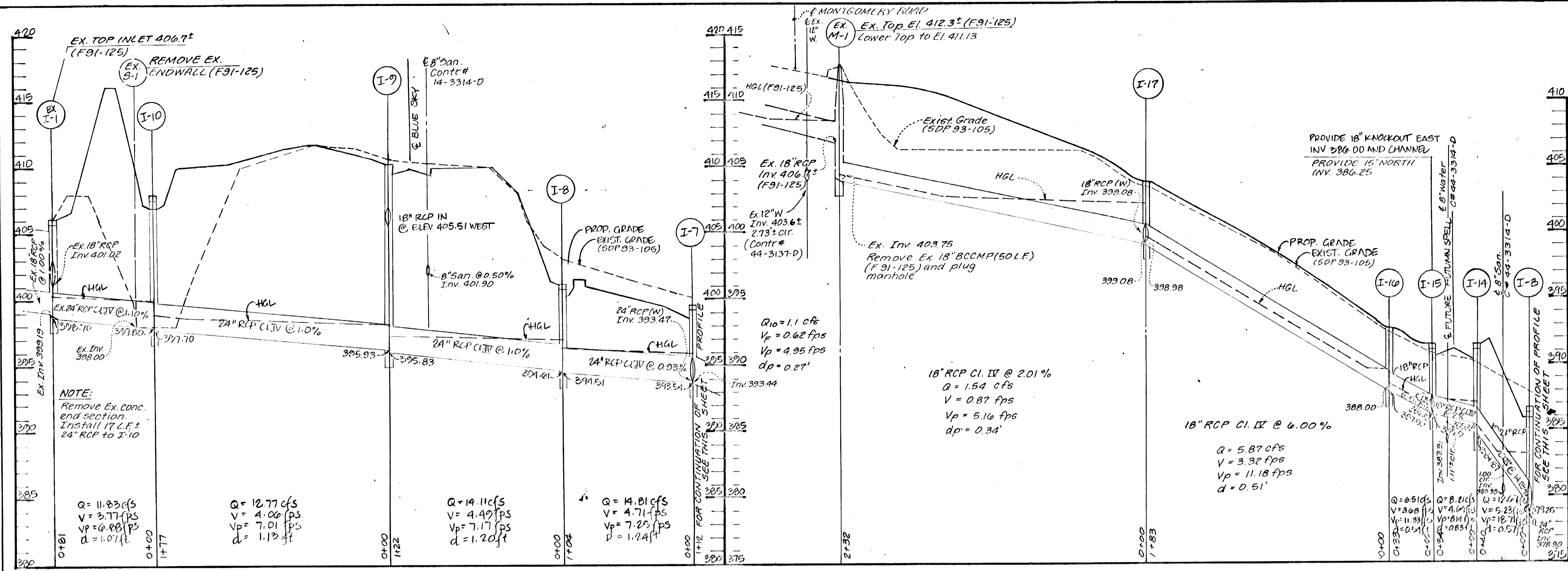
Designed: *B.D.B.* Scale: *As Shown*

Drawn: *K.B.W.* Sheet: *4 of 14*

Checked: *B.D.B.* LDE Job No: *92-176.1*

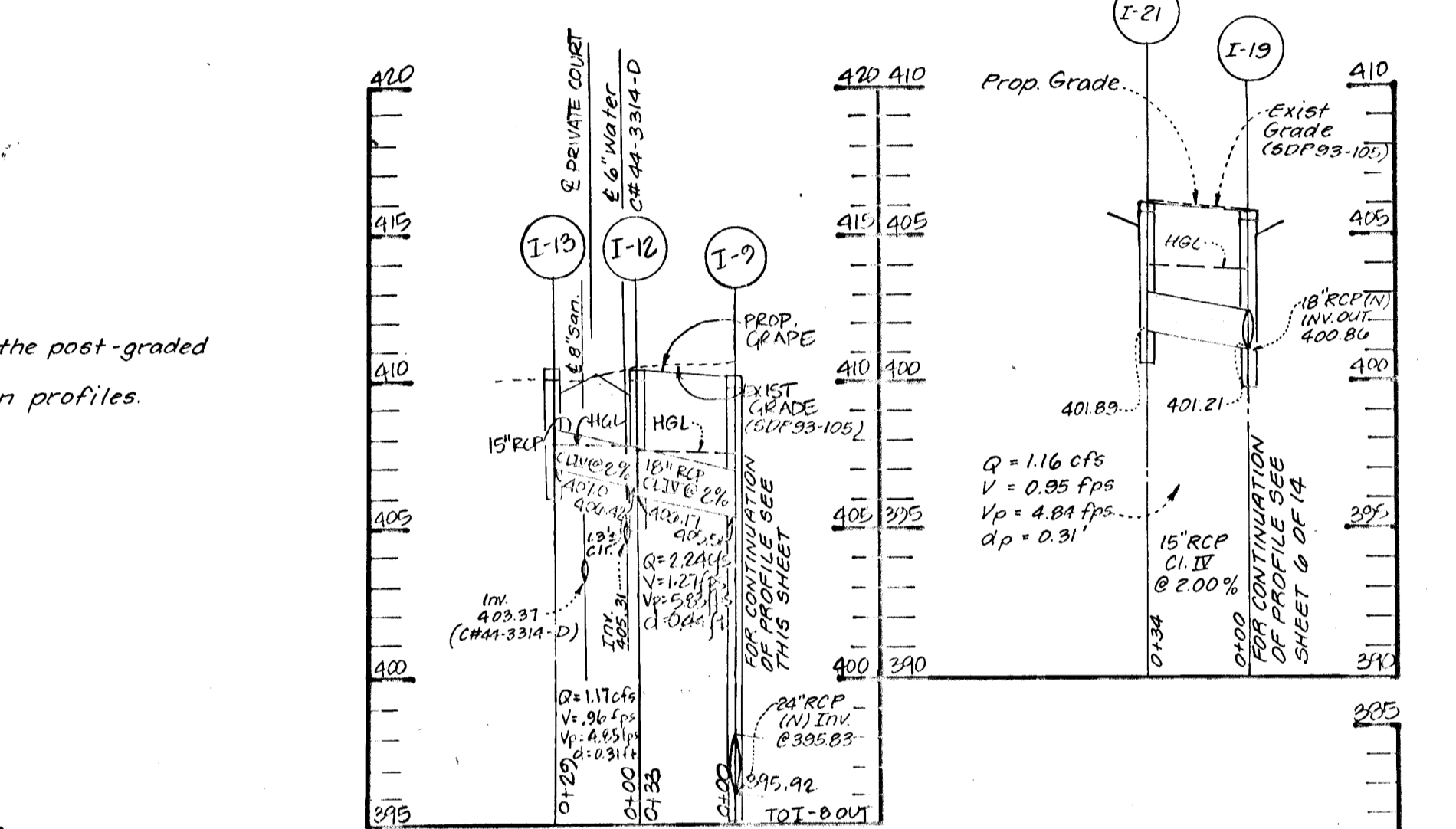
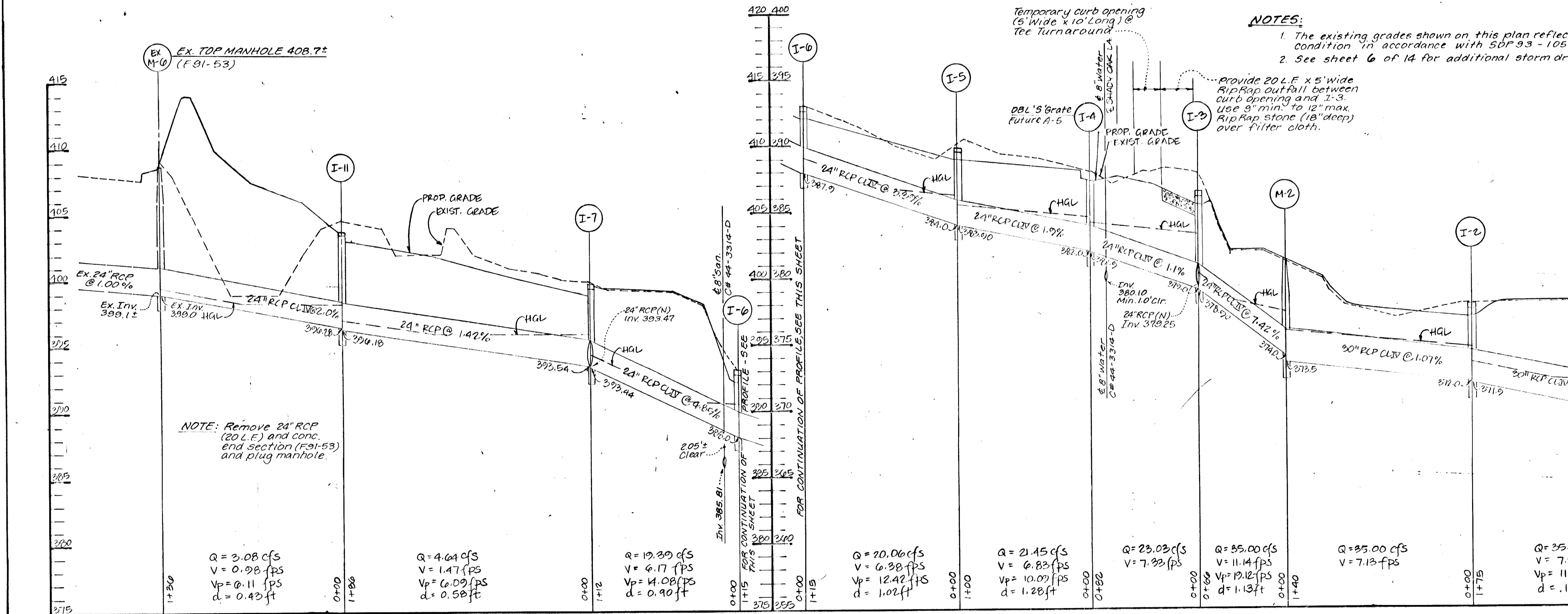
Date: *Aug 1993* File No: *100 INVESTMENT LIMITED PARTNERSHIP*

1707



STRUCTURE SCHEDULE									
NO	TYPE	INV. IN	INV. OUT	TOP UPPER	ELEVATION LOWER	REMARKS	LOCATION/ADDITIONAL REMARKS		
I-1	D	368.20	368.20	373.85	373.85	S.D. 4.29 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-2	D	372.00	371.90	377.65	377.65	S.D. 4.30 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-3	D	379.00	378.90	384.55	384.55	S.D. 4.31 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-4	DOUBLE TEE 15"	382.00	381.90	387.64	387.64	S.D. 4.32	5+42.5 SHADY OAK LANE 19' RT		
I-5	D	384.00	383.90	389.85	389.85	S.D. 4.33 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-6	D	388.00	387.90	393.85	393.85	S.D. 4.34 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-7	A-5	393.54	393.44	399.15	399.00	S.D. 4.01	SOUTH WEST CORNER PAVING LOT		
I-8	A-5	394.01	393.91	401.25	401.25	S.D. 4.01	7+18.35 BLUE SKY 14' RT		
I-9	A-5	395.92	395.82	401.19	401.10	S.D. 4.01	8+09.10 BLUE SKY 14' RT		
I-10	D	397.85	397.75	401.85	401.85	S.D. 4.01 MODIFIED	SEE PLAN / SHADY OAK LANE 19' RT		
I-11	A-5	398.28	398.18	402.85	402.80	S.D. 4.01	SOUTH WEST CORNER PAVING LOT		
I-12	A-5	400.42	400.32	407.00	407.00	S.D. 4.01	0+21.20 BLUE SKY (PAVING LOT)		
I-13	A-5	401.00	400.90	407.00	407.00	S.D. 4.01	0+21.20 BLUE SKY (PAVING LOT)		
I-14	A-5	395.22	394.97	391.65	391.65	S.D. 4.01	0+44.50 RAININ SHALL 15' RT		
I-15	A-5 (4'-0" Wide Box)	386.00	385.90	391.65	391.52	S.D. 4.01	0+44.50 RAININ SHALL 15' RT		
I-16	A-10	386.00	385.90	391.65	391.52	S.D. 4.02	4+10.21 SHADY OAK LANE 19' RT		
I-17	A-5	399.08	398.98	403.68	403.68	S.D. 4.01	2+70 SHADY OAK LANE 19' RT		
I-18	A-10	400.30	400.20	405.80	405.60	S.D. 4.02	0+10.10 BLUE SKY 14' LT		
I-19	A-10	401.21	400.81	405.82	405.60	S.D. 4.02	0+40.10 BLUE SKY 14' RT		
I-20	D	402.61	402.61	407.85	407.85	S.D. 4.11 (S.D. 4.02) MOD.	SEE PLAN / SHADY OAK LANE 19' RT		
M-1	STANDARD MANHOLE	383.95	383.85	378.50	378.50	G. 5.13	SEE PLAN / SHADY OAK LANE 19' RT		
M-2	STANDARD MANHOLE	384.00	383.90	381.50	381.50	G. 5.13	SEE PLAN / SHADY OAK LANE 19' RT		
S-1	CONCRETE ENDSEWER	381.00	381.00	385.00	385.00	G. 5.11	SEE PLAN / SHADY OAK LANE 19' RT		
I-21	A-10	401.83	401.73	406.28	406.03	S.D. 4.02	2+18.80 SHADY OAK LANE 19' RT		

* I-4 TO BE MODIFIED TO STD A-5 INLET UPON EXTENSION OF SHADY OAK LANE UPON DEVELOPMENT OF THE KHAN PROPERTY.



DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Erosion and Sedimentation 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 inspections by the Howard Soil Conservation District."

Signature of Developer: *W.E.W.* Date: 9/16/94

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: *BRUCE D. BURTON* Date: 9/6/94

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

Signature: *John R. Rhetam* Date: 9/1/94

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

Signature: *Charles M. Donohue* Date: 9-15-94

APPROVED: Department of Planning and Zoning

Signature: *Ann Zummary* Date: 9/23/94

LAND DESIGN ENGINEERING, INC.

8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045
 (410) 715-1070 (Hollo) (301) 586-3424 (Wash.) (410) 715-0681 (Fax)

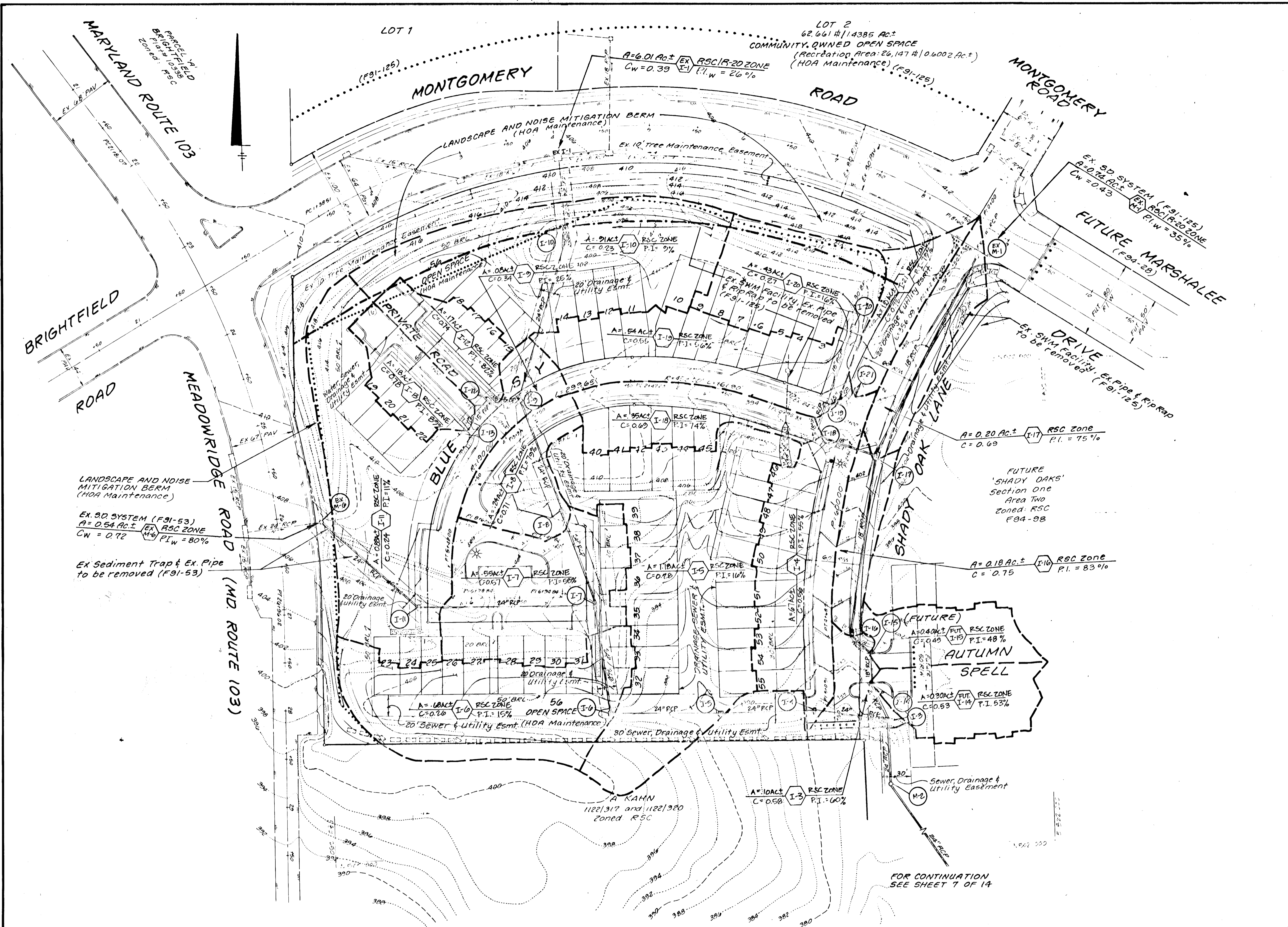
Designed: EBB
 Drawn: KBW
 Checked: BDB
 Date: Aug 1993

STORM DRAIN PROFILES
SHADY OAKS
 SECTION ONE AREA ONE
 LOT 1 Thru LOT 56
 Tax Map 37 Part of Parcel G43
 1st Election District Howard County, MD
 Previous Submittals: 28877R&M WR91-33 F91-125, RES 188, 333-02, FB284, F93-11

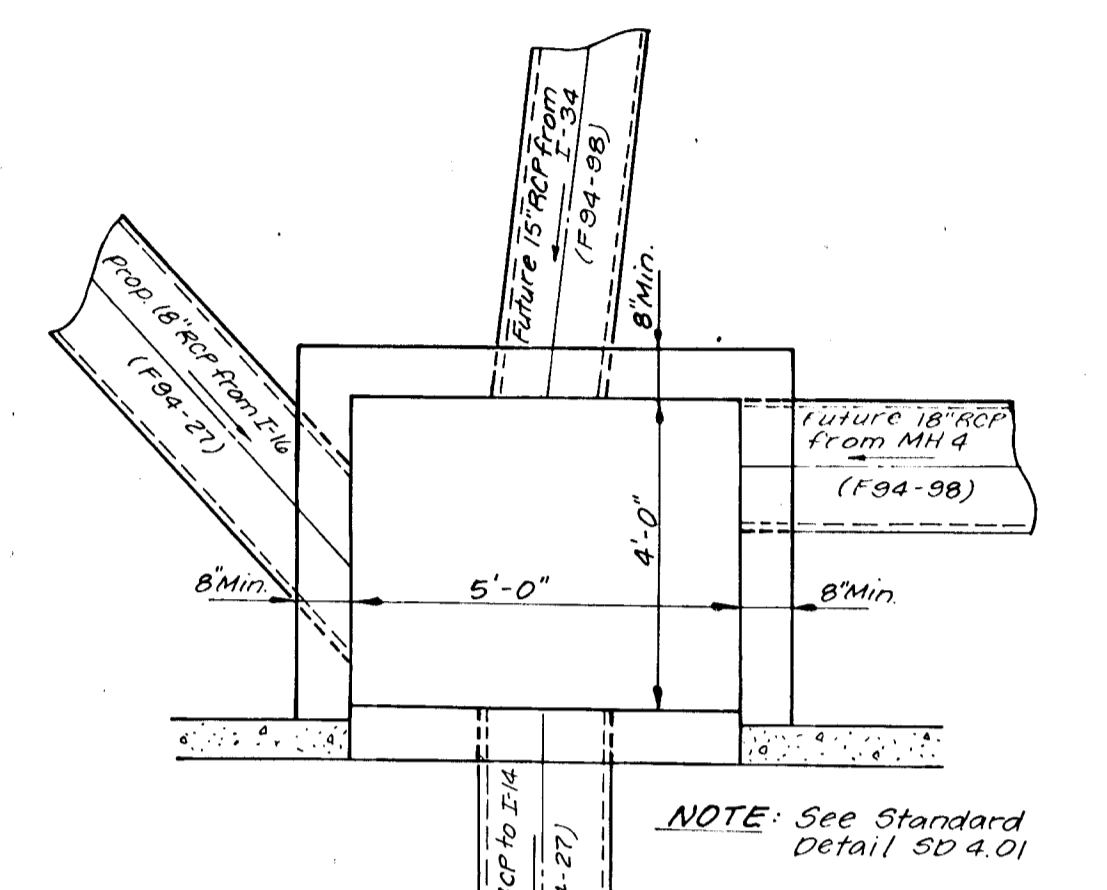
Scale: 1"=50' H, 1"=60' V
 Sheet: 5 of 14
 LDE Job No: 92-176-1
 File No: 100 INVESTMENT LIMITED PARTNERSHIP, 8835 Columbia 100 Parkway, Columbia, MD 21045 Phone: (410) 730-0810

Signature: *BRUCE D. BURTON*

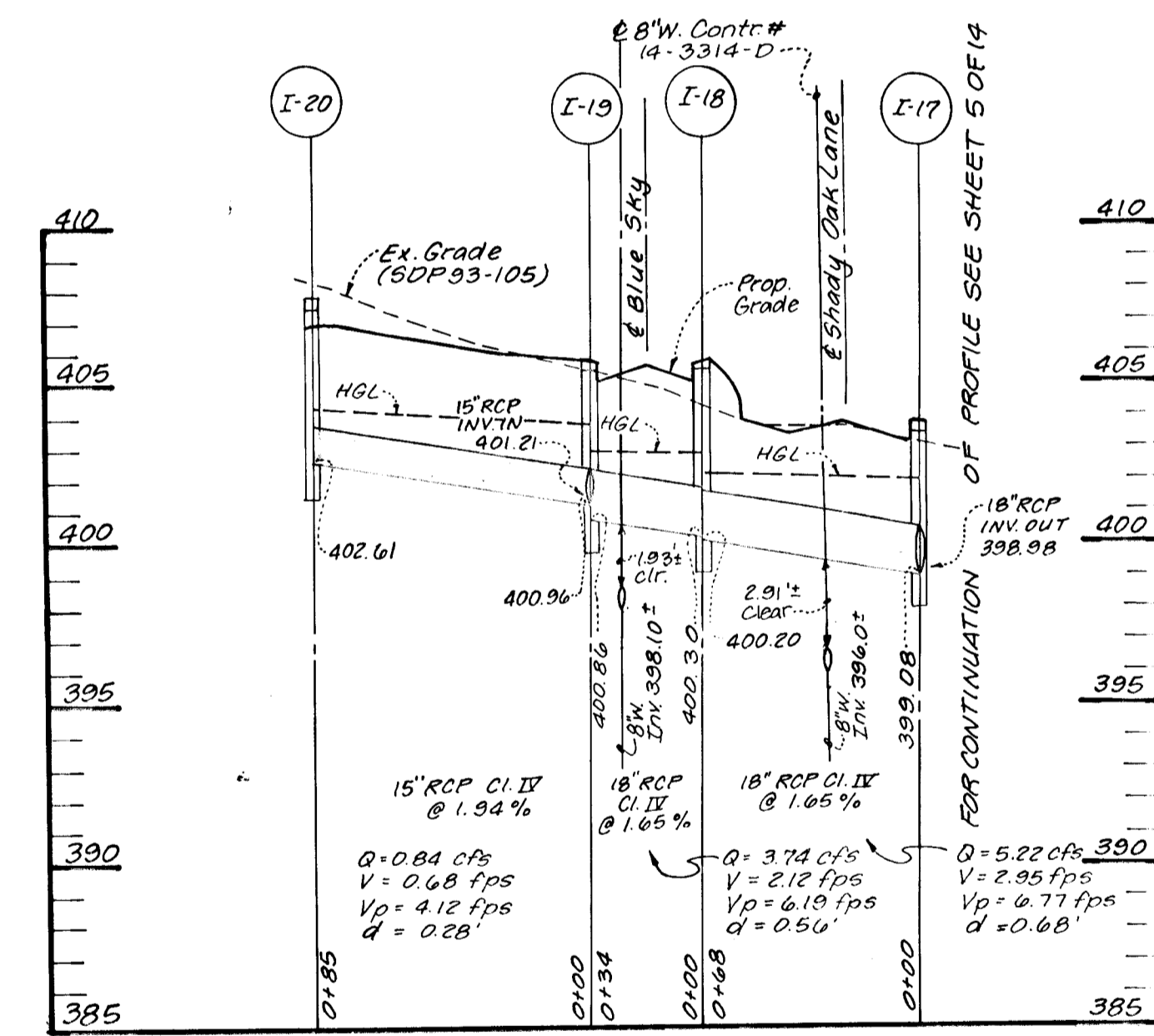
1707



- NOTES:**
- The existing grades shown on this plan reflect the post-graded condition in accordance with SDP 93-105.
 - See sheet 5 of 14 for additional storm drain profiles.
 - Denotes Post Mitigation 65 dBA Line.
 - Denotes Pre-Mitigation 65 dBA Line (F91-125).
 - Denotes Drainage Divides.
 - For details of noise berm construction, see sheet 8 and 11 of 14.
 - All Community Owned Open Space Lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
 - Grading within proposed Lot 1 shall be performed in accordance with the Grading Plan approved under F91-125.



STRUCTURE DETAIL INLET I-15
(F94-27)
Not To Scale



STORM DRAIN PROFILE
Scale: 1" = 50' H
1" = 5' V

FOR CONTINUATION SEE SHEET 7 OF 14

DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a 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 inspections by the Howard Soil Conservation District."

Signature of Developer: *J.W.T.* Date: 9/6/94

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 requirements of the Howard Soil Conservation District. I have reviewed the drawings, and I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: *Bruce D. Burton* Date: 9/6/94

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

Signature: *Jatonia P. Goff* Date: 9/6/94

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

Signature: *John P. Roberts* Date: 9/6/94

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

Signature: *[Signature]* Date: 9/22/94

Signature: *C.E. Zuber*, acting Chief, Bureau of Planning Date: 9/22/94

Signature: *Andrew M. Ducker* Date: 9-15-99

APPROVED: Department of Planning and Zoning

Signature: *Gina Stummans* Date: 9/23/94



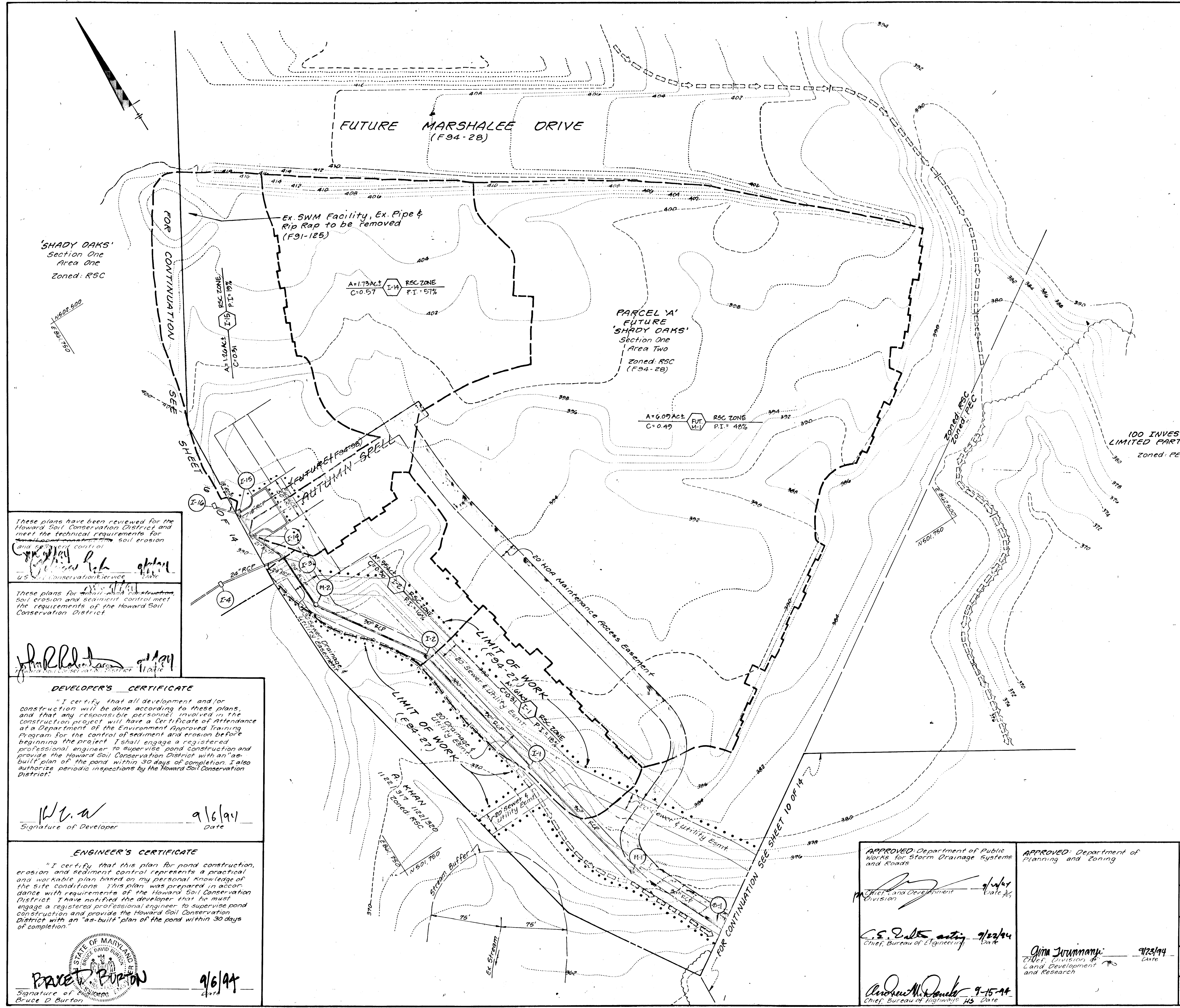
LAND DESIGN ENGINEERING, INC.

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

Designed 808	DRAINAGE AREA MAP SHADY OAKS SECTION ONE AREA ONE LOT 1 Thru LOT 56	Scale 1" = 50'
Drawn KBW	Tax Map 37 Part of Parcel 643 1st Election District Howard County, MD	Sheet 6 of 14
Checked 808	Previous Submittals: ZB877 RLM, WPA 33, F91-125, RES 188, S93-02, PB284, F93-11, SDP93-105	LDE Job No 92-176-1
Date Aug 1993	100 INVESTMENT LIMITED PARTNERSHIP 8835 P. Columbia 100 Parkway Columbia, MD 21045 Phone: (410) 730-0810	File No

1707

NOTES:
 1. The existing grades shown on this plan reflect the post-graded condition in accordance with SDP-93-105.



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

[Signature]
 U.S. Conservation Service

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

[Signature]
 Howard Soil Conservation District

DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a 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 inspections by the Howard Soil Conservation District."

[Signature] 9/6/94
 Signature of Developer Date

ENGINEER'S CERTIFICATE

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

[Signature] 9/6/94
 Signature of Engineer Date

[Seal]
 BRUCE D. BURTON
 PROFESSIONAL ENGINEER

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

[Signature] 9/24/94
 Chief, Bureau of Engineering

[Signature] 9-15-94
 Chief, Bureau of Highways

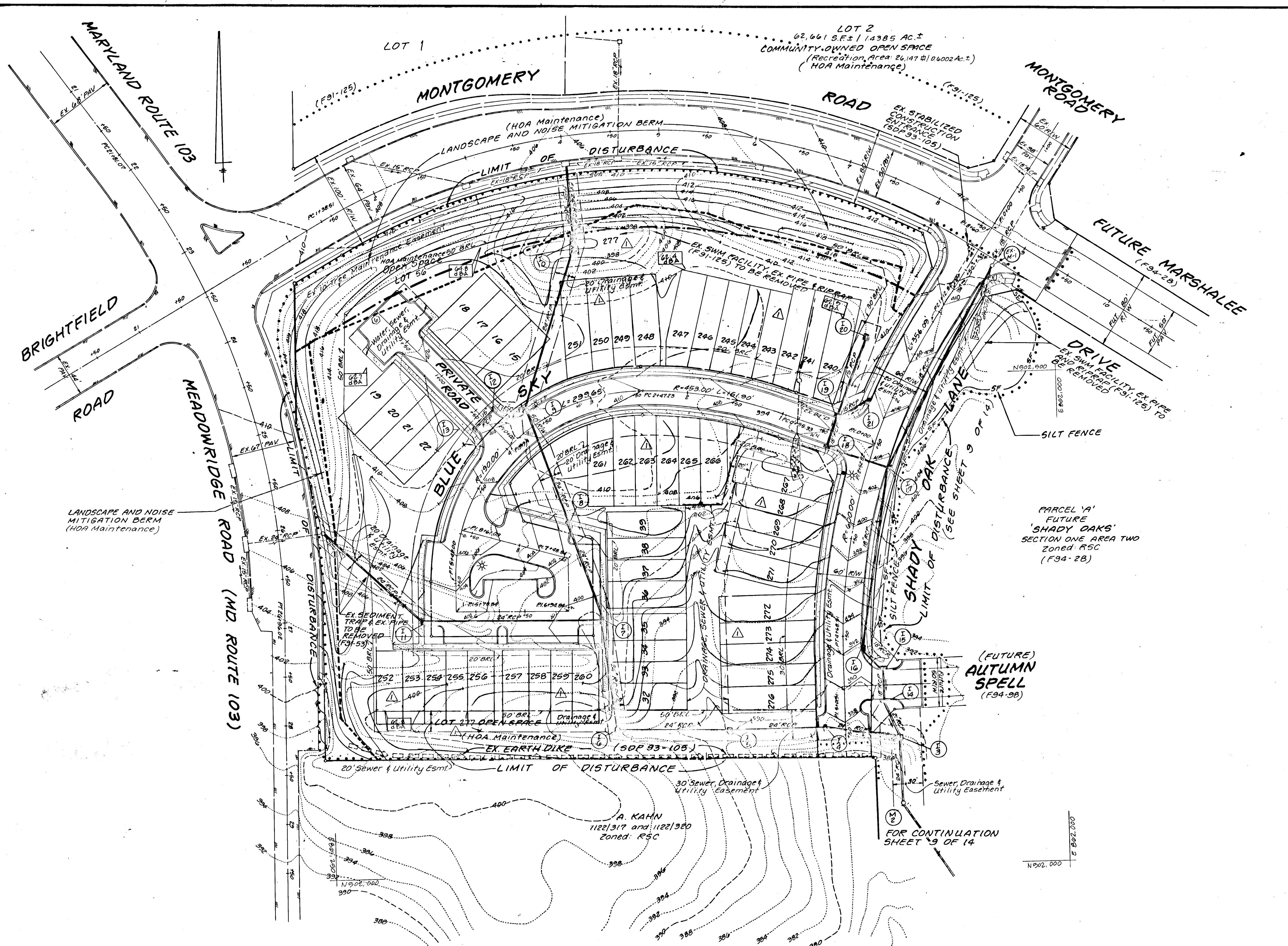
APPROVED: Department of Planning and Zoning

[Signature] 9/23/94
 Chief, Division of Land Development and Research

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 E.D.S.	DRAINAGE AREA MAP SHADY OAKS SECTION ONE AREA ONE LOT 1 THRU LOT 56	Scale 1" = 50'
Drawn K.B.W.	Tax Map 37 Part of Parcel 643 1st Election District Howard County, MD	Sheet 7 of 14
Checked B.D.B.	Previous Submittals ZBATTM W91-33 F91-125 REG 188, 593-02 PB 284, F93-11, SDP93-105	IDE Job No 92-176-1
Date Aug 1993	Owner: Developer 100 INVESTMENT LIMITED PARTNERSHIP 8835 P Columbia 100 Parkway Columbia, MD 21045 Phone (410) 730-0810	File No



1707



- NOTES:**
- The existing grades shown reflect the post-graded condition in accordance with SDP 93-105.
 - Denotes Post Mitigation 65 dBA Line.
 - Denotes Pre-Mitigation 65 dBA Line (F91-125).
 - For details of Noise Berm construction, see sheet 11 of 14.
 - All Community Owned Open Space Lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
 - Grading within proposed Lot 1 shall be performed in accordance with the Grading Plan approved under F91-125.
 - The Sediment Basin/Pond reviewed and approved under SDP 93-105 shall be fully functional prior to commencement of work for this plan (SDP 93-105).
 - For details of noise berm construction, see sheet 11 of 14.

CONSTRUCTION SEQUENCE

- Obtain grading permit.
- Inspect controls installed under SDP-93-105 and make any necessary repairs or maintenance prior to beginning any work shown hereon.
- Install silt fence at limit of disturbance where shown hereon or as directed by sediment control inspector.
- Grade site to subgrade elevation.
- Backfill existing stormwater management facility F91-125 and existing sediment basin F91-53.
- Install utilities.
- Repair diversion dikes damaged by utility installation and stabilize with permanent seeding mixture and straw mulch.
- Sediment shall be removed from the sediment basin when the cleanout elevation has been reached.
- The contractor shall inspect and provide necessary maintenance on the sediment and erosion control structures shown hereon after each rainfall and on a daily basis.
- The sediment basin shall be dewatered by pumping. The accumulated sediment from the basin shall be placed up grade from the basin in such a manner as not to interfere with construction operations or cause erosion down grade from the basin.
- Remove sediment from roadways and dress stabilized construction entrance as required.
- Install gravel base course and install concrete curb and gutter. Apply prime coat to gravel base course and lay bituminous paving courses.
- Fine grade site and stabilize with permanent seeding mixture and straw mulch. Install driveway aprons and sidewalks.
- After all upgrade areas from the sediment basin have been stabilized and permission has been given by the sediment control inspector, begin conversion of temporary sediment basin to permanent stormwater management facility.
- Fine grade sediment basin to permanent stormwater management facility specifications. Remove brick work from structure. Cut 8" gate valve handle to 4.2'. Replace 4" concrete slab structure top at bottom elevation = 356.5. Remove brick office or punch knockout open at invert elevation 353.0. Stabilize disturbed areas with permanent seeding mixture and straw mulch.
- After permission has been given by sediment control inspector, remove silt fence and stabilize disturbed areas with permanent seeding mixture and straw mulch.

No.	Revise lots, #'s and title block	Date
		8-31-99

REVISION

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 BDB	GRADING & SEDIMENT AND EROSION CONTROL PLAN	Scale: 1" = 50'
Drawn K&W	SHADY OAKS SECTION ONE AREA ONE LOT 15 Thru LOT 22, 32-39, 240-277 Tax Map 37 Part of Parcel G43	Sheet 8 of 14
Checked BDB	1st Election District Howard County, MD Previous Submittals: ZB877 R4M, WP91-33, F91-125, R25 188, 933-02, P8284, F93-11, SDP 93-105	LDE Job No. 92-176.1
Date: Aug. 1999	Owner/Developer: 100 INVESTMENT LIMITED PARTNERSHIP 8835-P Columbia 100 Parkway Columbia, MD 21045 Phone: (410) 730-0810	File No.

DEVELOPER'S CERTIFICATE

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

[Signature]
Signature of Developer
Date: 9/6/94

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

[Signature]
Signature of Engineer
Bruce D. Burton
Date: 9/6/94

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
[Signature] 9/8/94
Date
U.S. Soil Conservation Service

These plans for *[Signature]* construction soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature] 9/8/94
Date
Howard Soil Conservation District

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

[Signature] 9/23/94
Date
Chief, Land Development Division

[Signature] 9/23/94
Date
Chief, Bureau of Engineering

APPROVED: Department of Planning and Zoning

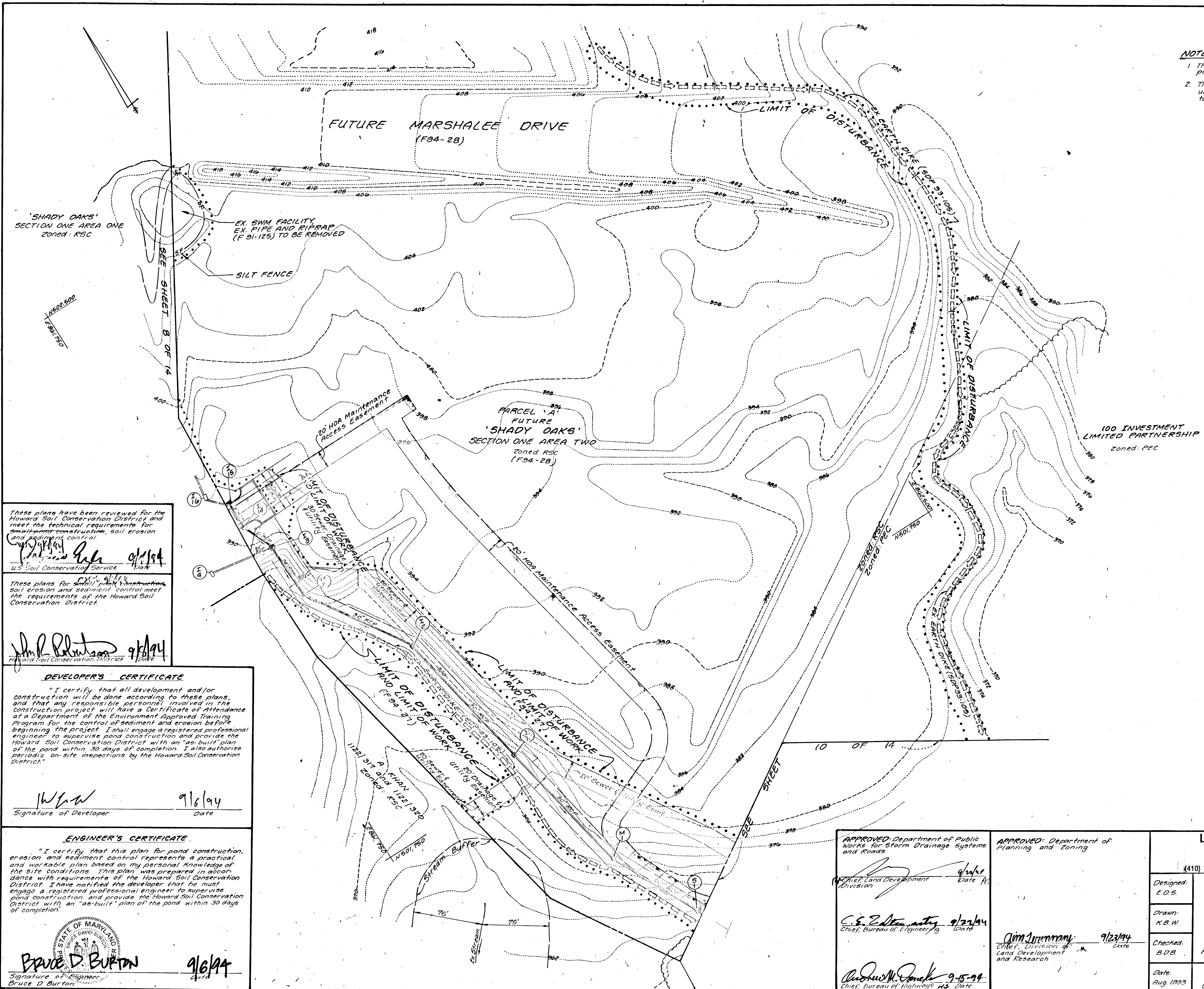
[Signature] 9/23/94
Date
Chief, Division of Land Development and Research

[Signature] 9-15-94
Date
Chief, Bureau of Highways



1707

NOTES:
 1. The existing grades shown on this plan reflect the post-graded condition in accordance with SDP 93-105.
 2. The Sediment Basin/Pond reviewed and approved under SDP 93-105 shall be fully functional prior to commencement of work for this plan (F94-27).



These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for smallpond construction, soil erosion and sediment control.
[Signature] 9/1/94
 U.S. Soil Conservation Service Date

These plans for smallpond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature] 9/1/94
 Howard Soil Conservation District Date

DEVELOPER'S CERTIFICATE
 "I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the control of sediment and erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic, on-site inspections by the Howard Soil Conservation District."
[Signature] 9/6/94
 Signature of Developer Date

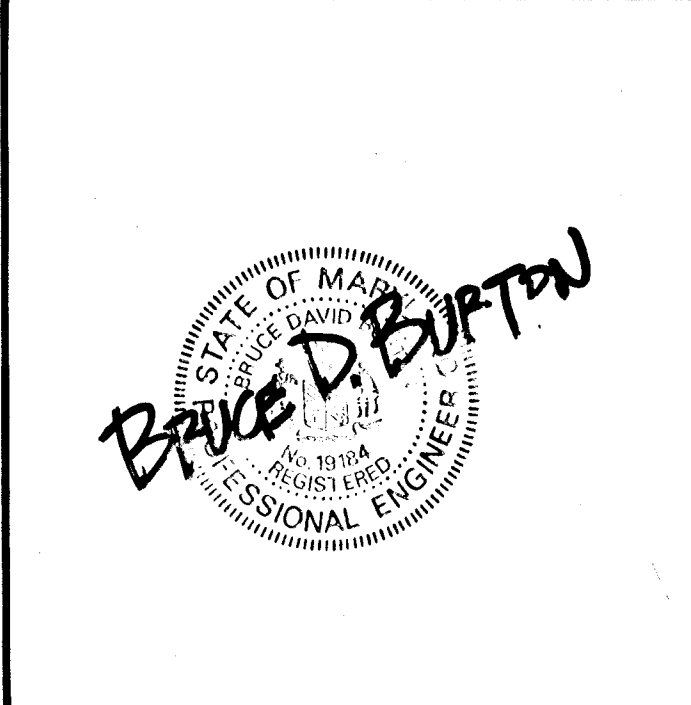
ENGINEER'S CERTIFICATE
 "I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
[Signature] 9/6/94
 Signature of Engineer Date

APPROVED: Department of Public Works for Storm Drainage Systems and Roads
[Signature] 9/23/94
 Chief, Land Development Division Date

[Signature] 9/23/94
 Chief, Bureau of Engineering Date

[Signature] 9-15-94
 Chief, Bureau of Highway #3 Date

APPROVED: Department of Planning and Zoning
[Signature] 9/23/94
 Chief, Division of Land Development and Research Date

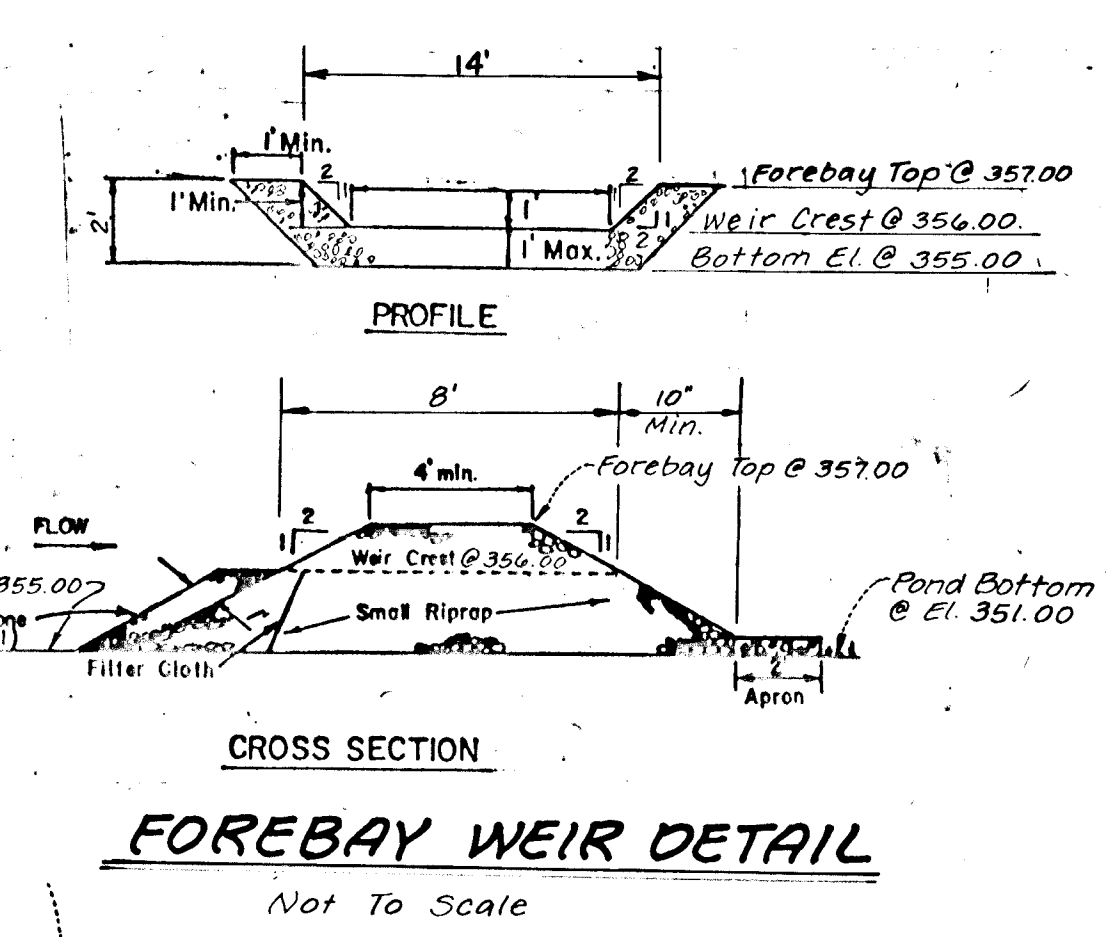
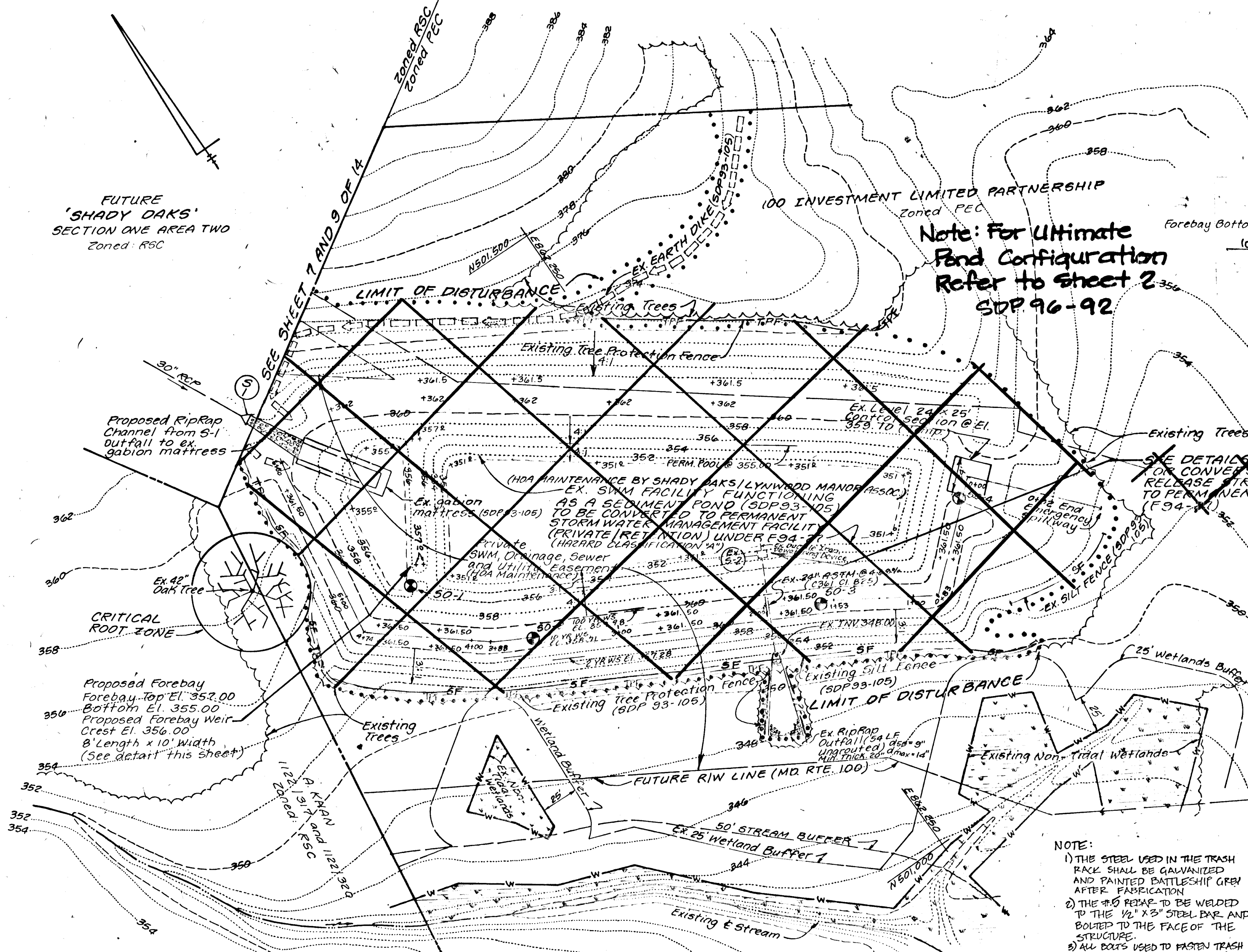


LAND DESIGN ENGINEERING, INC.		
8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045 (410) 715-1070 (Balto.) (301) 596-3424 (Wash.) (410) 715-0681 (Fax)		
Designed: E.D.S.	GRADING & SEDIMENT AND EROSION CONTROL PLAN SHADY OAKS SECTION ONE AREA ONE LOT 1 THRU LOT 56 Tax Map 37 Part of Parcel G43 1st Election District Howard County, MD Previous Submittals: ZBBTRR & M, W91-33, F91-125, R25 188, 593-02, P8284, F93-11	Scale: 1" = 50'
Drawn: K.B.W.		Sheet 3 of 14
Checked: B.D.B.		LDE Job No 92-176-1
Date: Aug. 1993	100 INVESTMENT LIMITED PARTNERSHIP 8835 P. Columbia 100 Parkway Columbia, MD, 21045 Phone: (410) 730-0810	File No.

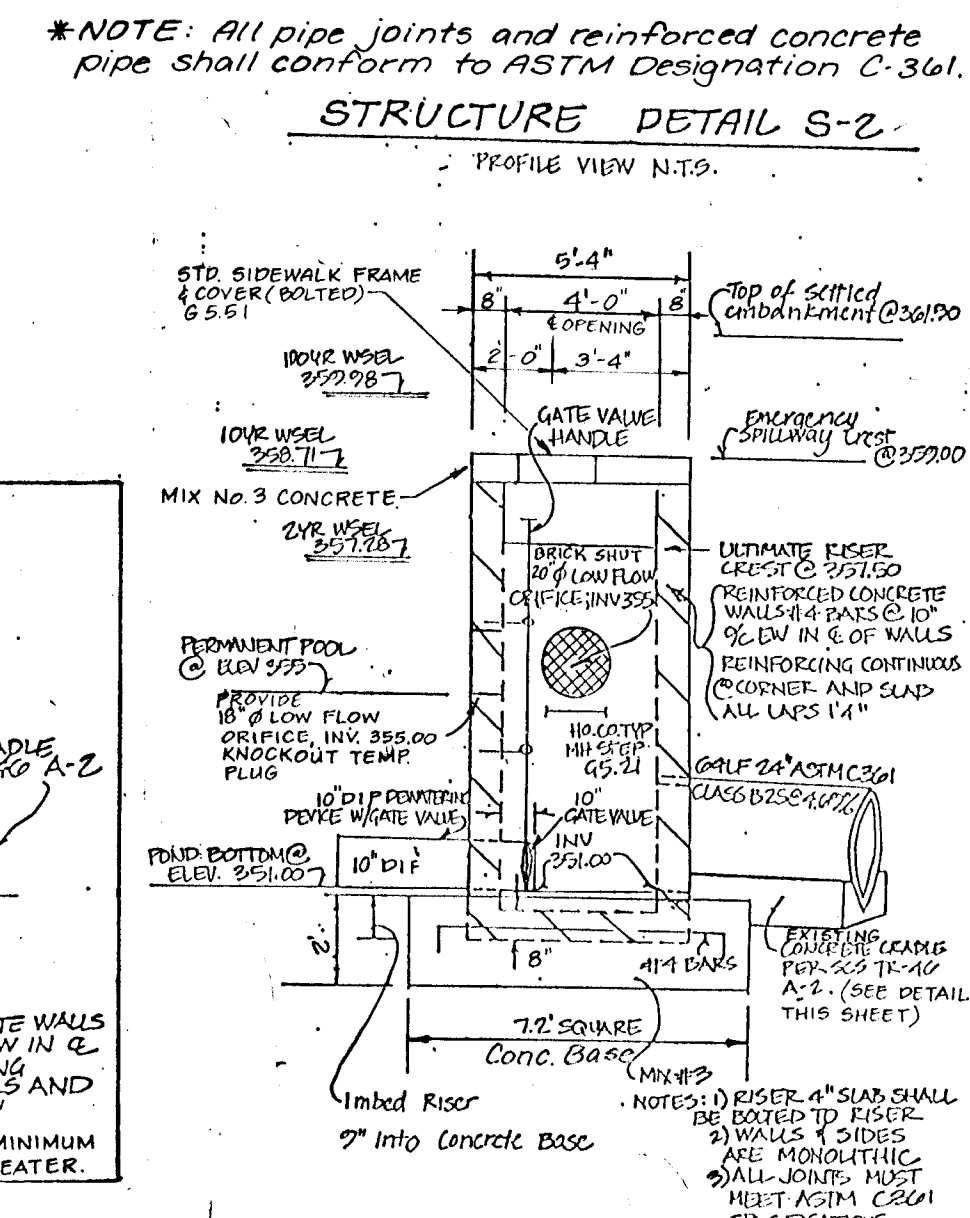
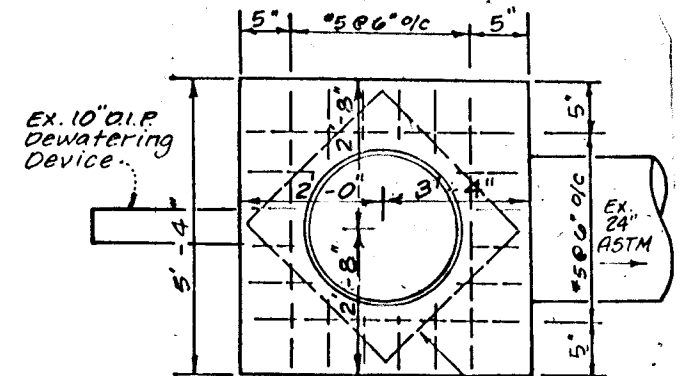
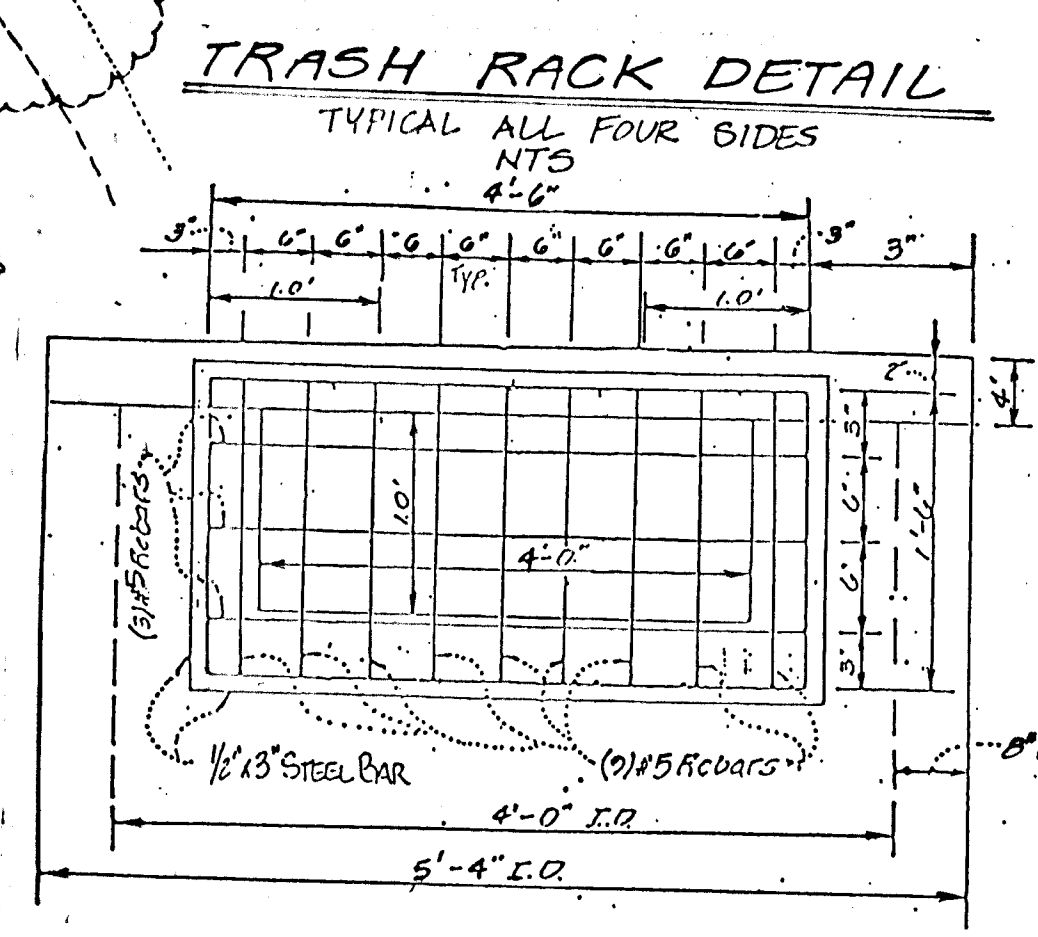
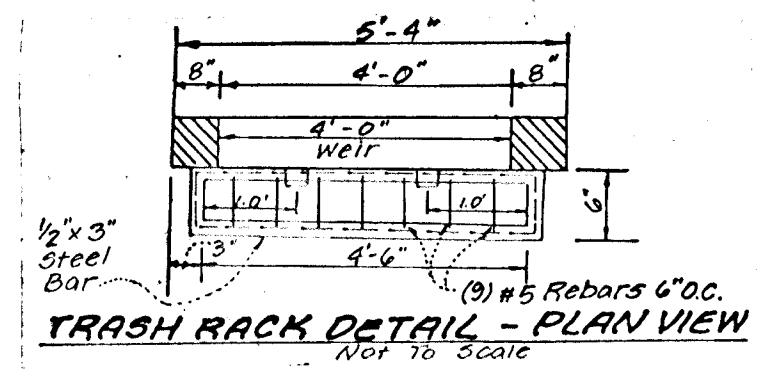
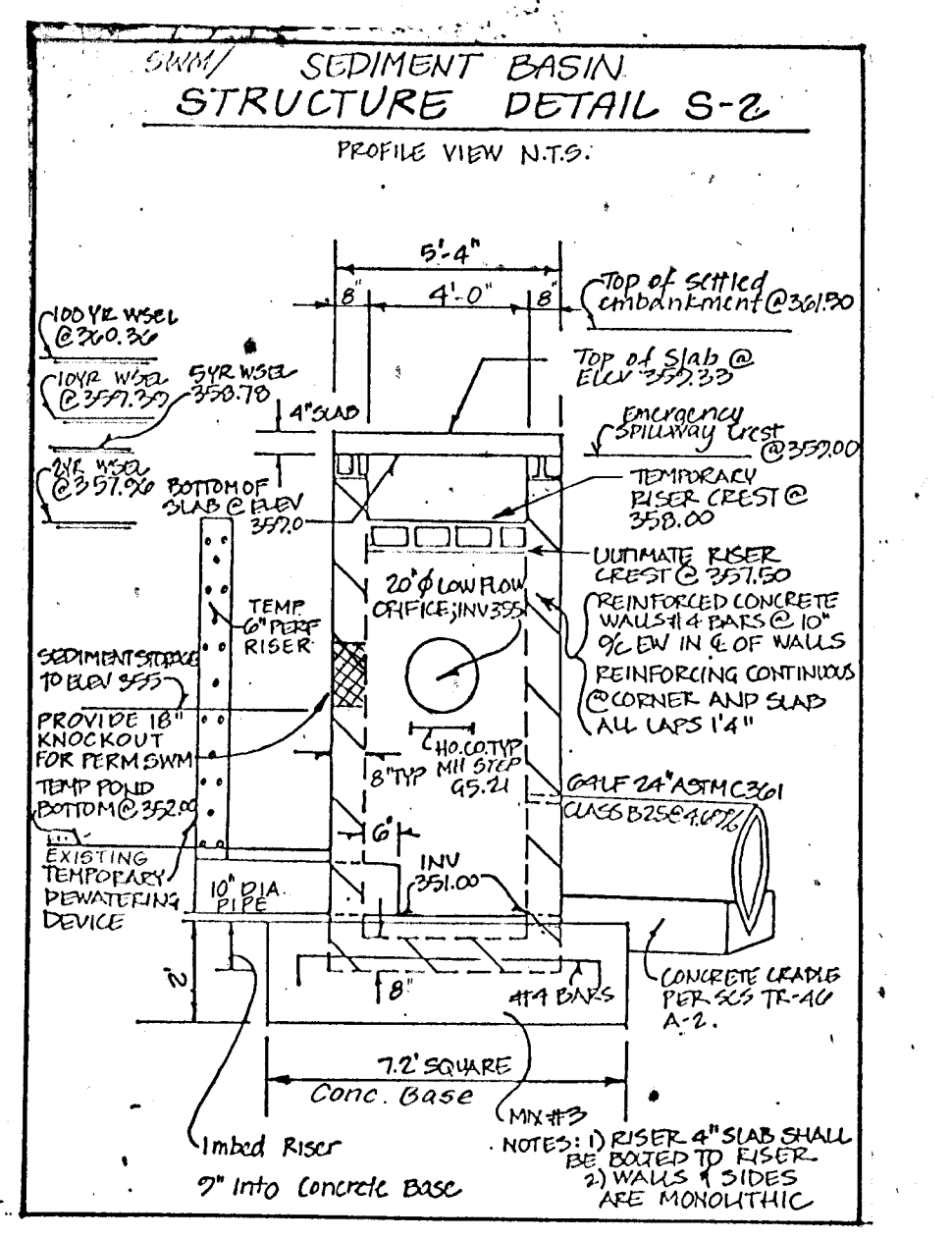
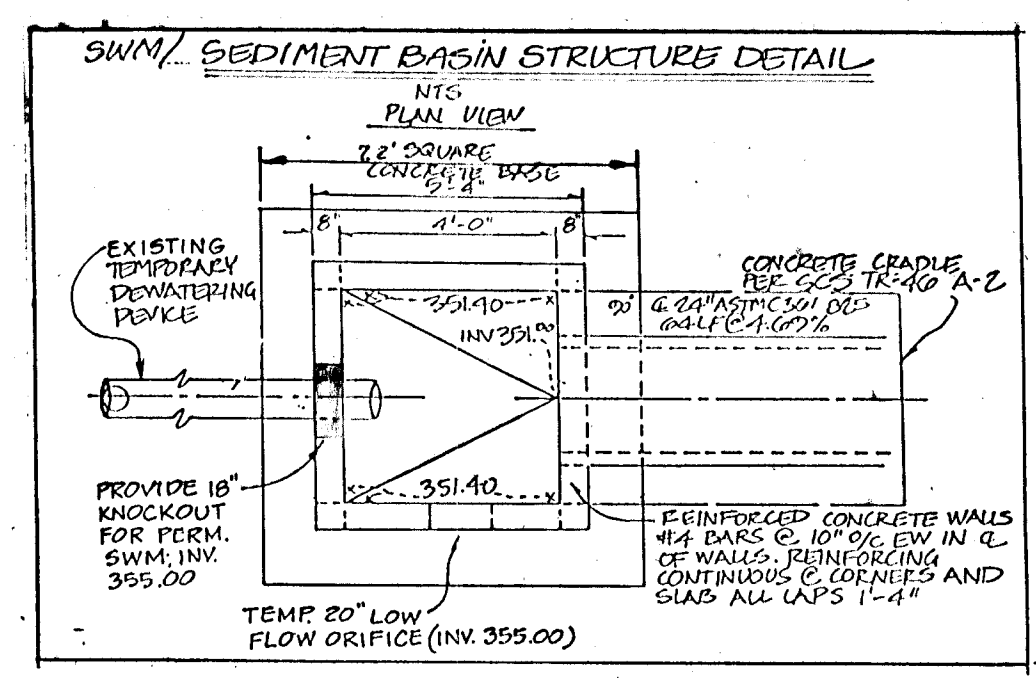
1707

FUTURE 'SHADY OAKS' SECTION ONE AREA TWO Zoned R5C

100 INVESTMENT LIMITED PARTNERSHIP Zoned PEC
 Note: For Ultimate Pond Configuration Refer to Sheet 2 SPP 96-92



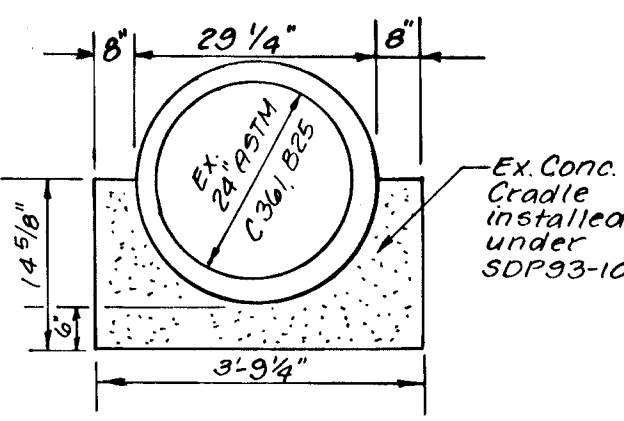
- NOTES:
- The existing grades shown on this plan reflect the post-graded condition in accordance with SPP 93-105.
 - The Sediment Basin Pond reviewed and approved under SPP-93-105 shall be fully functional prior to commencement of work for this plan.
 - The stormwater management, drainage, sewer and utility easement will be privately maintained by the Homeowners' Association.
 - See sheet 14 of 14 for additional details.



SUMMARY TABLE

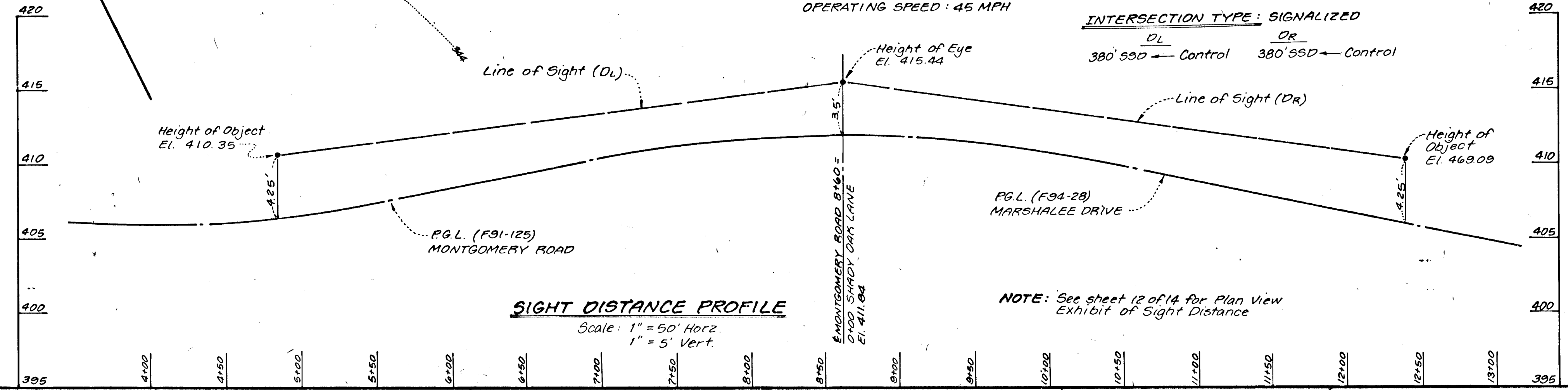
Drainage Area = 33 Acres
 Top of Facility @ Elev. 361.50
 Invert of Facility @ Elev. 351.00

	SWM Facility		
	2 YEAR	10 YEAR	100 YEAR
Acceptable Release (cfs)	10.50	46.30	106.40
Computed Inflow (cfs)	58.80	118.60	187.30
Facility Discharge (cfs)	10.50	46.30	106.40
Elevation at Discharge	357.28	358.71	359.08
Storage at Elevation (ACFT)	1.91	3.34	4.75

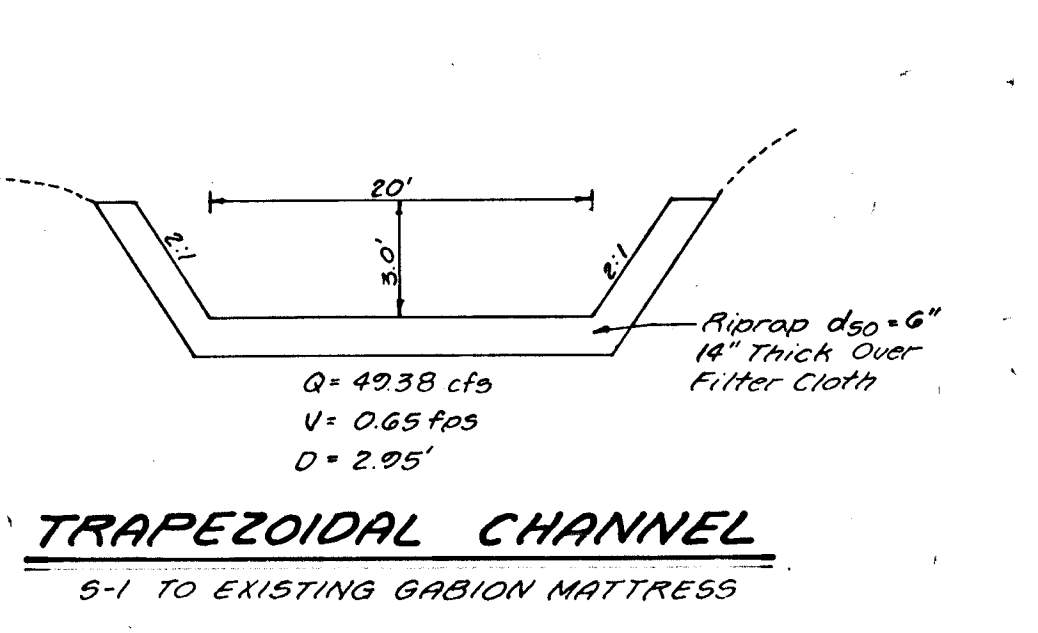


MONTGOMERY ROAD
 (MINOR ARTERIAL / DESIGN SPEED: 40 MPH
 OPERATING SPEED: 45 MPH)

INTERSECTION TYPE: SIGNALIZED
 DL 380' SSD - Control OR 380' SSD - Control



PERMANENT SWM (F94-27) POND CONVERSION
 ULTIMATE STRUCTURE DETAIL
 MODIFIED POURED IN PLACE TYPE 'D' INLET



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

Signature of Developer: *WZ.W* Date: 9/6/94

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

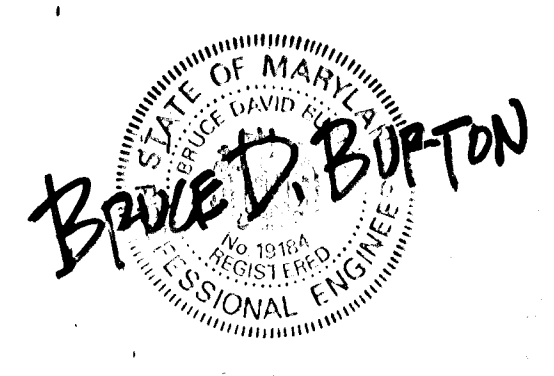
Signature of Engineer: *Bruce D. Burton* Date: 9/6/94

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

Signature of District Engineer: *John R. Roberts* Date: 9/16/94

APPROVED: Department of Public Works for Storm Drainage Systems and Roads.
 Signature: *C.E. Patton* Date: 9/25/94

APPROVED: Department of Planning and Zoning.
 Signature: *Jim Jurney* Date: 9/23/94

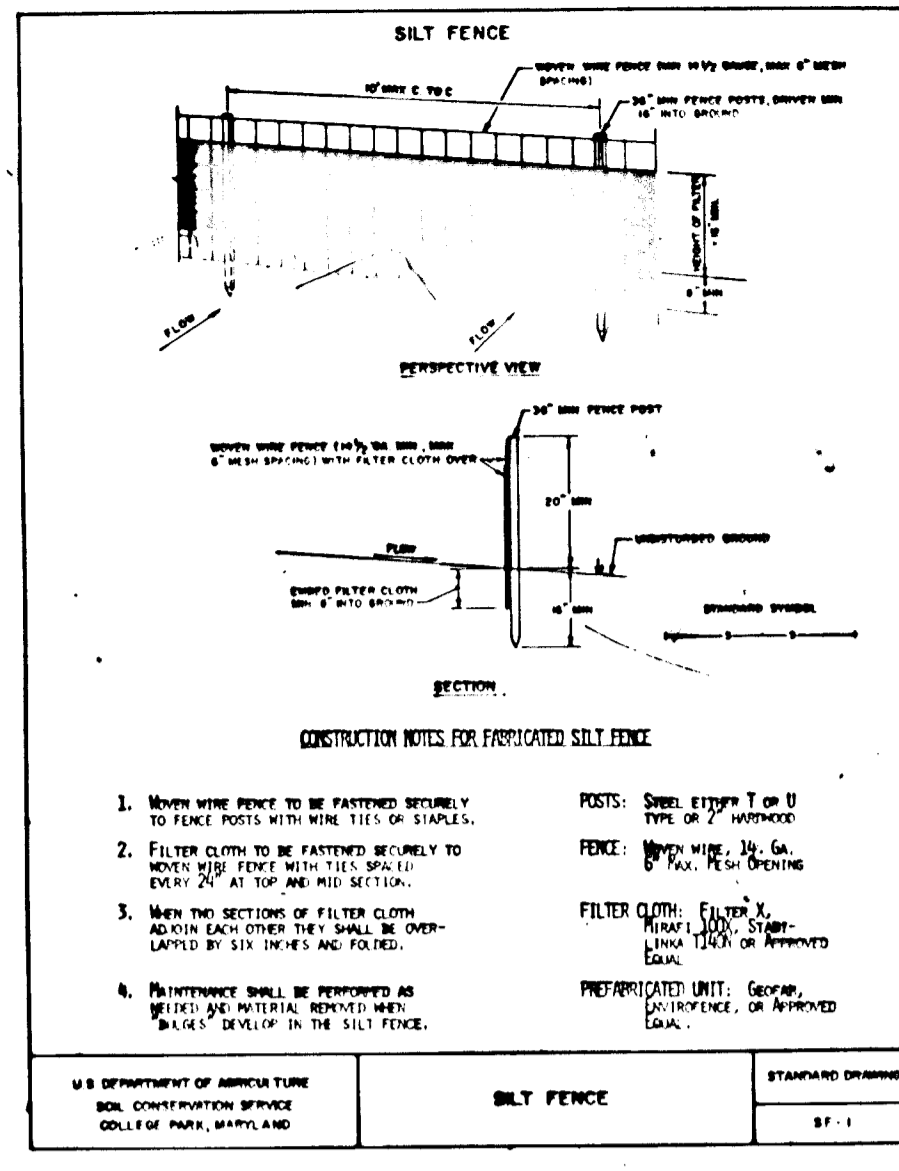
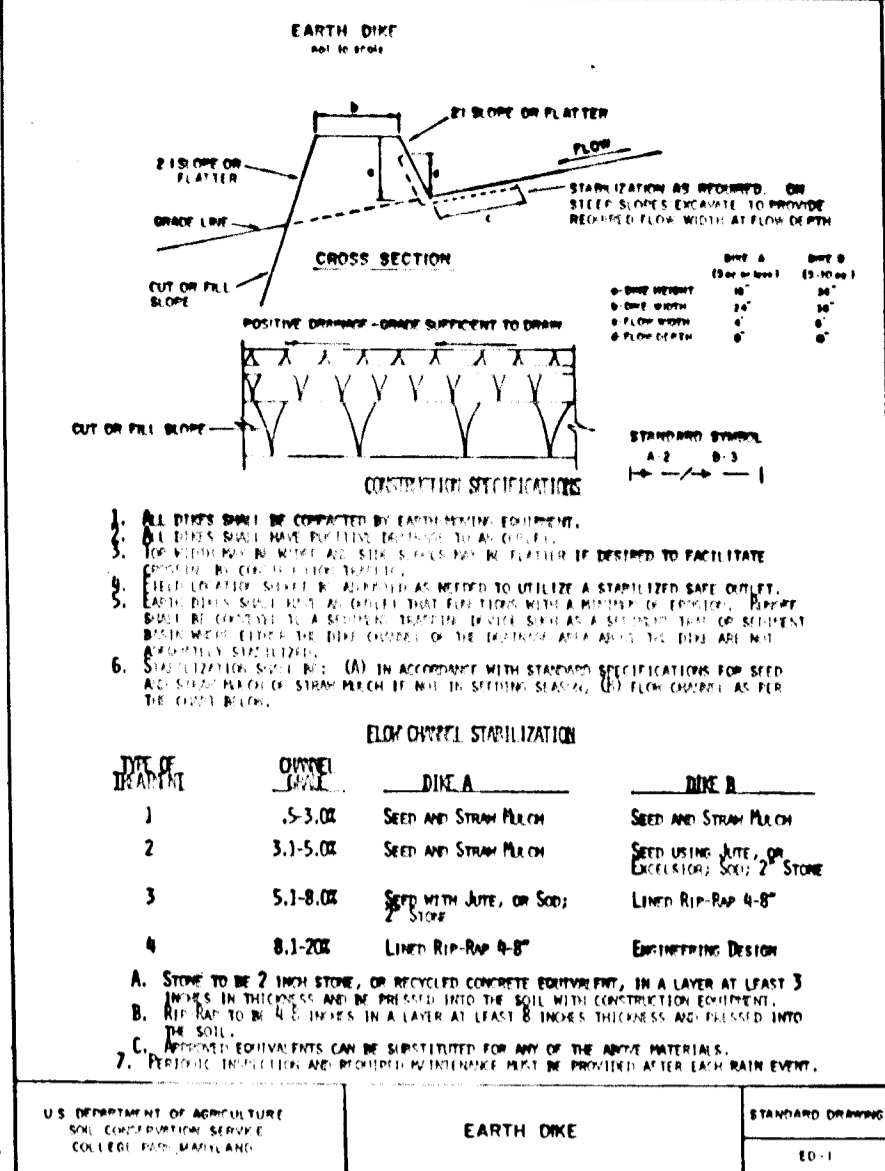


Revision		Description	
1	9/16/94	Pond Removal / Note Addition	

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: E.O.S.	GRADING & SEDIMENT AND EROSION CONTROL PLAN	Scale: 1" = 50'
Drawn: KBW	SECTION ONE AREA ONE LOT 1 THRU LOT 56	Sheet 10 of 14
Checked: B.O.B.	Tax Map 37 Part of Parcel G43 1st Election District Howard County, MD Previous Submittals: ZBBTRFM WP91-33 F91-125, RES188, 593-02, PB284, F93-11, SDR93-105	LDE Job No. 82-176-1
Date: Aug. 1993	Owner / Developer: 100 INVESTMENT LIMITED PARTNERSHIP 8835 P. Columbia 100 Parkway Columbia, MD 21045 Phone: (410) 730-0810	File No.

1707



NOTES:

- The existing grades shown on this plan reflect the post-graded condition in accordance with F-91-125.
- See sheet 12 of 14 for Planting Notes and Details.
- All Community Open Space Lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowners Association.
- Grading within proposed Lot 1 shall be performed in accordance with the Grading Plan approved under F-91-125.

ELONGATED STABILIZATION

DATE	DEPTH	DRAINAGE	TYPE
1	5-3-00	SEEP AND STORM FLOW	SEEP AND STORM FLOW
2	5-3-00	SEEP AND STORM FLOW	SEEP AND STORM FLOW
3	5-3-00	SEEP AND STORM FLOW	SEEP AND STORM FLOW
4	5-3-00	SEEP AND STORM FLOW	SEEP AND STORM FLOW

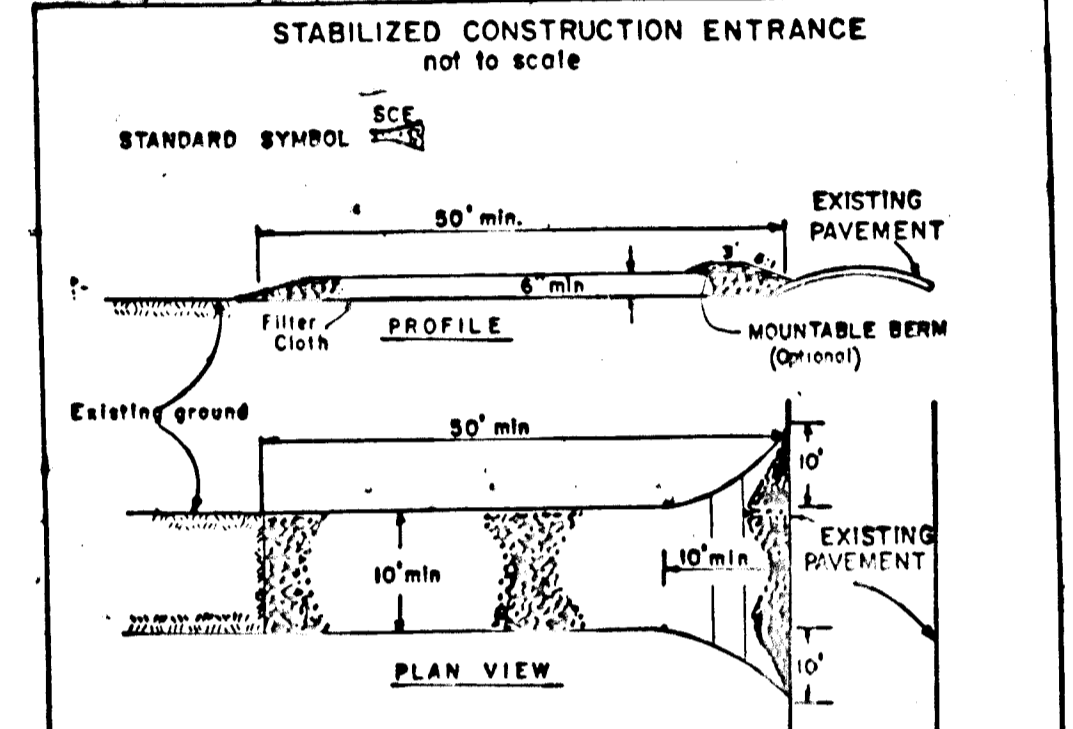
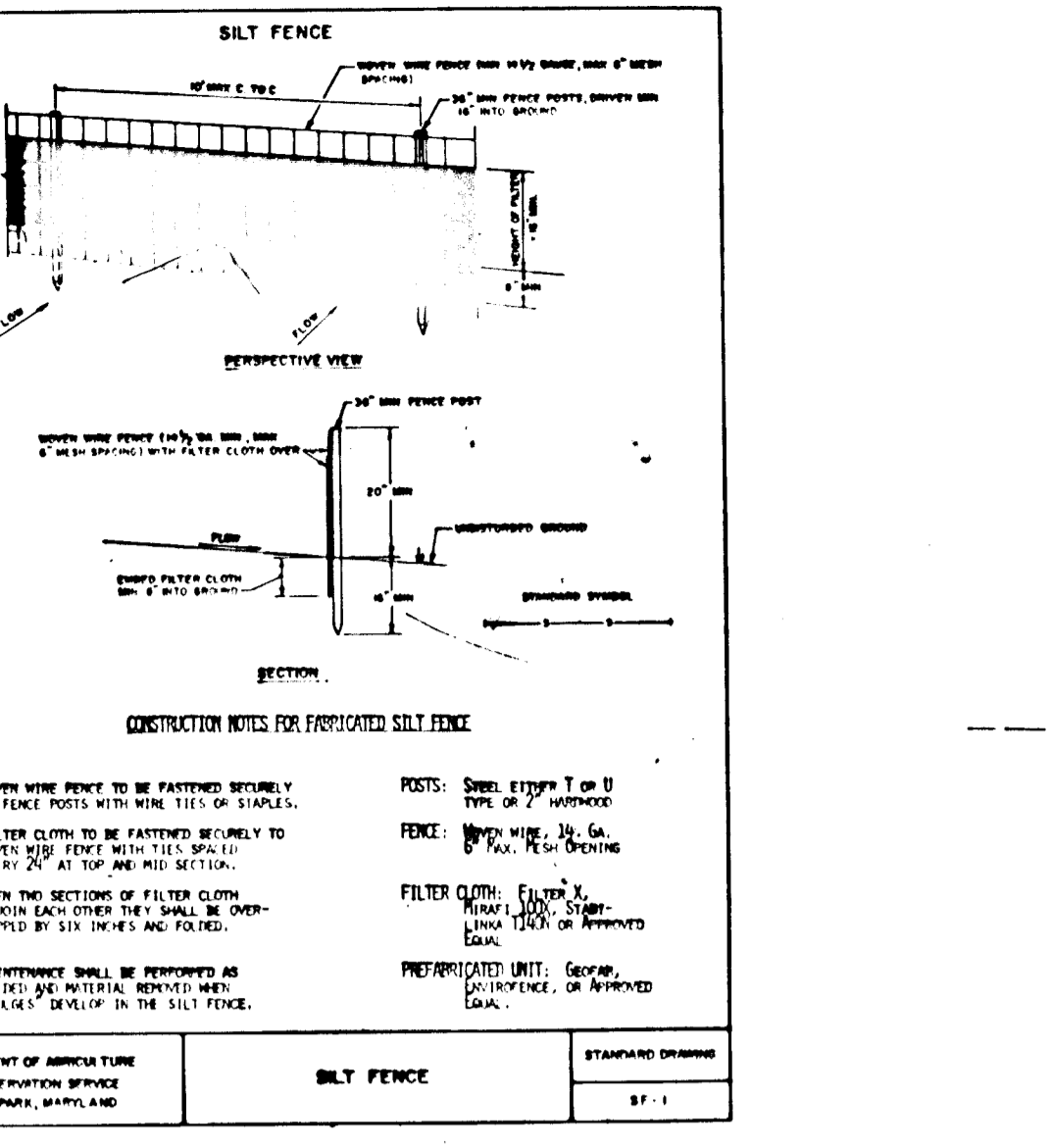
STABILIZED CONSTRUCTION ENTRANCE
not to scale

CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or recycled or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where inlets or access occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
- Surface Meter - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slope will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any means used to trap sediment. All sediment spilled, scraped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.

SHADY OAKS SECTION 1 AREA 1 NOISE BERM CONSTRUCTION TABLE

Centerline Station	Centerline Offset	Top Elevation	Top Width
1115	66' right	419.0	8'
1165	64' right	418.0	8'
2100	64' right	417.0	8'
2185	64' right	416.0	6'
4550	64' right	416.0	6'
5105	80' right	416.0	10'
6145	100' right	418.0	14'
7430	92' right	419.0	10'
7445	75' right	418.0	10'
8100	105' right	412.0	10'
8100	135' right	410.0	8'
25130	52' left	418.0	6'
25180	52' left	416.0	8'
26555	52' left	411.0	8'
27100	52' left	409.0	8'
27450	52' left	407.0	8'
27495	54' left	406.0	6'
28125	82' left	404.0	6'
28130	92' left	402.0	6'
28430	108' left	401.0	6'



PLANT LIST:

NO.	KEY	QUAN.	PLANT NAMES	SIZE	COND.	REMARKS
1	(Symbol)	35	SERBIAN SPRUCE FICIA OMORIKA	4-8" HT.	B&B	12'-15' O.C.
2	(Symbol)	32	RED PINE PINUS RESINOSA	4-8" HT.	B&B	12'-15' O.C.
3	(Symbol)	23	BLOODGOOD LONDON PLANE PLATANUS X ACERIFOLIA 'BLOODGOOD'	2 1/2-3" CAL.	B&B	
4	(Symbol)	25	SAWTOOTH OAK QUERCUS ACUTISSIMA	2 1/2-3" CAL.	B&B	

NOTES:

- See Grading & Sediment and Erosion Control Plan for exact height, location and stabilization of noise berm. (Sheet B of 14).
- Noise berm to be maintained by Homeowners Association.

DEVELOPER'S CERTIFICATE

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

Signature of Developer: *W. J. N.* Date: 9/6/94

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 requirements of the Howard Soil Conservation District. I have advised the developer that he must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion."

Signature of Engineer: *Bruce D. Burton* Date: 9/6/94

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

John R. Peltz 9/1/94
Chief, Bureau of Engineering

APPROVED: Department of Planning and Zoning

John R. Peltz 9/1/94
Chief, Bureau of Engineering

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

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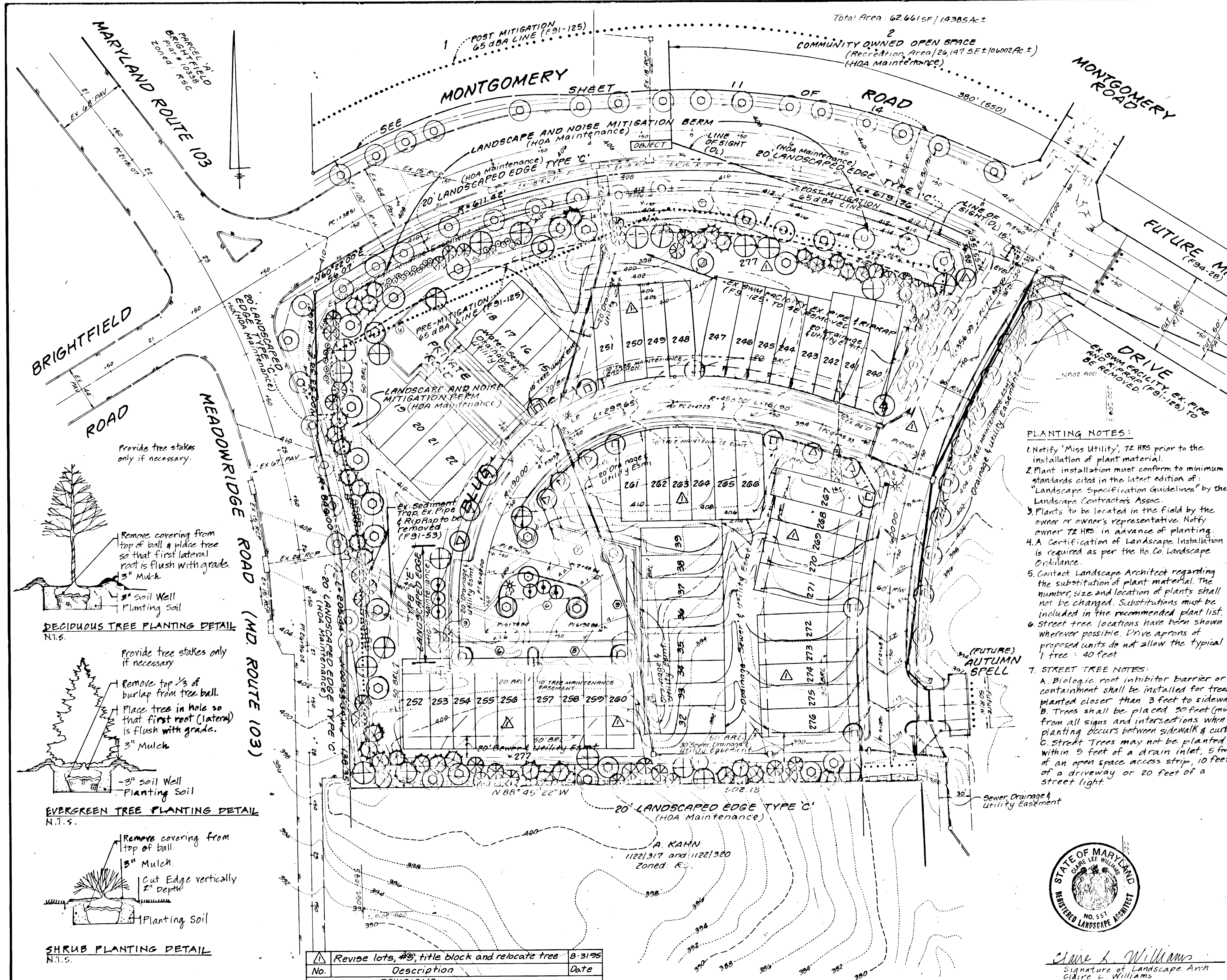
John R. Peltz 9/1/94
Chief, Bureau of Engineering

APPROVED: Department of Planning and Zoning

John R. Peltz 9/1/94
Chief, Bureau of Engineering

APPROVED: Department of Planning and Zoning

John R. Peltz 9/1/94
Chief, Bureau of Engineering



- NOTES:**
- The existing grades shown on this plan reflect the post-graded condition in accordance with 50P.93.105.
 - Denotes Post Mitigation 65 dBA Line
 - Denotes Pre-Mitigation 65 dBA Line (F91-125)
 - For details of noise berm construction, see sheet B and 11 of 14.
 - All Community Owned Open Space Lots, Recreation Areas and Landscaped Edges shall be maintained by the Homeowner's Association.
 - Grading within proposed Lot 1 shall be performed in accordance with the Grading Plan approved under F91-125.

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Adjusted to Hardscape	Adjusted to Perimeter Proportions
Landscape Type	C 1 E	C
Linear Feet of Hardscape Footing/Perimeter	1488 LF	500 LF
Credits for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NO	NO
Credits for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	NO	NO
Number of Plants Required	29	12
Shade Trees	4	2
Evergreen Trees	25	10
Shrubs	0	0
Number of Plants Provided	28	12
Shade Trees	50	25
Other Trees (2:1 substitution)	50	25
Shrubs (10:1 substitution)	50	25
(Describe the plant substitution credits below if needed)	NA	

* Landscaping to be completed under F94-27 by Developer (HOA Maintenance)

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING
BLUE SKY PARKING COURTS

Number of Parking Spaces	51 SPACES
Number of Trees Required	5 TREES
Number of Trees Provided	9 SHADE 6 ORNAMENTAL
Other Trees (2:1 substitution)	

* Landscaping to be completed under Future Site Development Plan by Builder (HOA Maintenance)

SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of Dwelling Units	10 APTS
Number of Trees Required (1 DU SFA; 1.3 DU APTS)	COMPLETED ON THE SITE DEVELOPMENT PLAN
Number of Trees Provided	
Shade Trees	
Other Trees (2:1 substitution)	

* Landscaping to be completed under Future Site Development Plan by Builder (HOA Maintenance)

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	70 BF
Number of Trees Required	COMPLETED ON THE SITE PARCEL
Shade Trees	
Evergreen Trees	
Credits for Existing Vegetation (No, Yes and %)	
Credits for Other Landscaping (No, Yes and %)	
Number of Trees Provided	
Shade Trees	
Evergreen Trees	
Other Trees (2:1 substitution)	

* Landscaping to be completed under F94-98 by Developer (HOA Maintenance) Any existing trees removed during future construction of the Parcel to be replaced under future SDP by PEG Parcel Developer

- PLANTING NOTES:**
- Notify 'Miss Utility', 72 HRS prior to the installation of plant material.
 - Plant installation must conform to minimum standards cited in the latest edition of: "Landscape Specification Guidelines" by the Landscape Contractors Assoc.
 - Plants to be located in the field by the owner or owner's representative. Notify owner 72 HRS in advance of planting.
 - A Certification of Landscape Installation is required as per the Ho. Co. Landscape Ordinance.
 - Contact Landscape Architect regarding the substitution of plant material. The number, size and location of plants shall not be changed. Substitutions must be included in the recommended plant list.
 - Street tree locations have been shown wherever possible. Drive aprons of proposed units do not allow the typical 1' tree = 40' feet.
- T. STREET TREE NOTES:**
- Biologic root inhibitor barrier or containment shall be installed for trees planted closer than 3 feet to sidewalk.
 - Trees shall be placed 30 feet (min) from all signs and intersections when planting occurs between sidewalk & curb.
 - Street Trees may not be planted within 5 feet of a drain inlet, 5 feet of an open space access strip, 10 feet of a driveway or 20 feet of a street light.

PLANT LIST

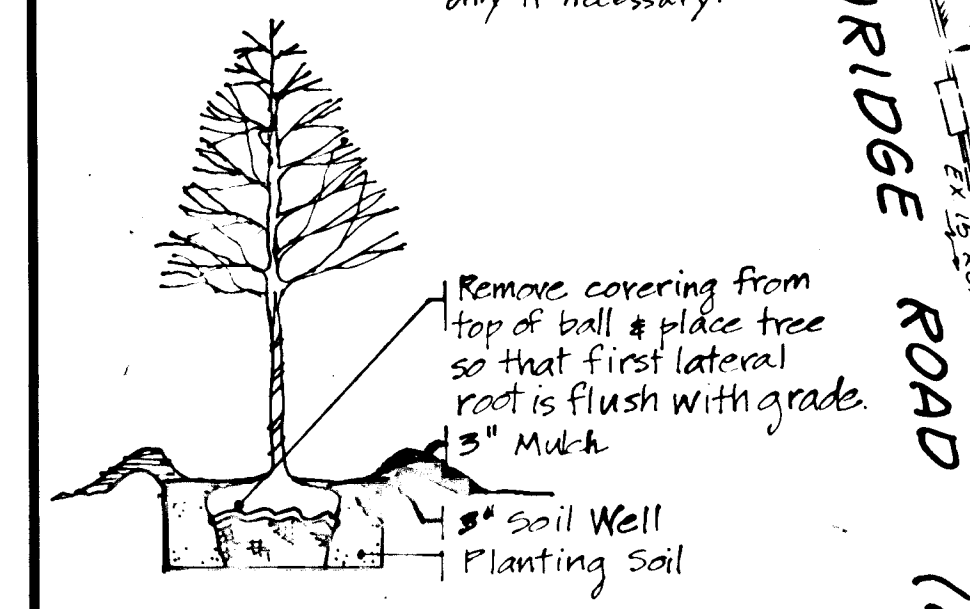
INCLUDES: STREET TREES, PARKING LOT INTERNAL, PERIMETER LANDSCAPE

NO.	KEY	QUAN.	PLANT NAMES	SIZE	COND.	REMARKS
1.	(Symbol)	41	SERBIAN SPRUCE PICEA OMORIKA	6'-8' HT.	B&B	12'-15' O.C.
2.	(Symbol)	34	RED PINE PINUS RESINOSA	6'-8' HT.	B&B	12'-15' O.C.
3.	(Symbol)	29	BLOODGOOD LONDON PLANE PLATANUS X ACERIFOLIA 'BLOODGOOD'	2 1/2'-5' CAL.	B&B	
4.	(Symbol)	6	KWANZAN CHERRY PRUNUS SEKKULATA 'KWANZAN'	2 1/2'-3' CAL.	B&B	
5.	(Symbol)	18	REDSPIRE PEAR PYRUS CALLERYANA 'REDSPIRE' [Landed Tree - County Maintenance]	2 1/2' CAL.	B&B	40' O.C.
6.	(Symbol)	23	SAWTOOTH OAK QUERCUS ACUTISSIMA	2'-3' CAL.	B&B	
7.	(Symbol)	13	REGENT JAPANESE PAGODA TREE SOPHORA JAPONICA 'REGENT' [Landed Tree - County Maintenance]	2 1/2" CAL.	B&B	40' O.C.
8.	(Symbol)	30	SKIP CHERRY LAUREL PRUNUS LAUROCERASUS 'SKIPIENSIS'	2'-3' HT.	B&B	4' O.C.
9.	(Symbol)	20	BLACKHAW VIBURNUM VIBURNUM PRUNIFOLIUM	2 1/2'-3' HT.	B&B	4' O.C.

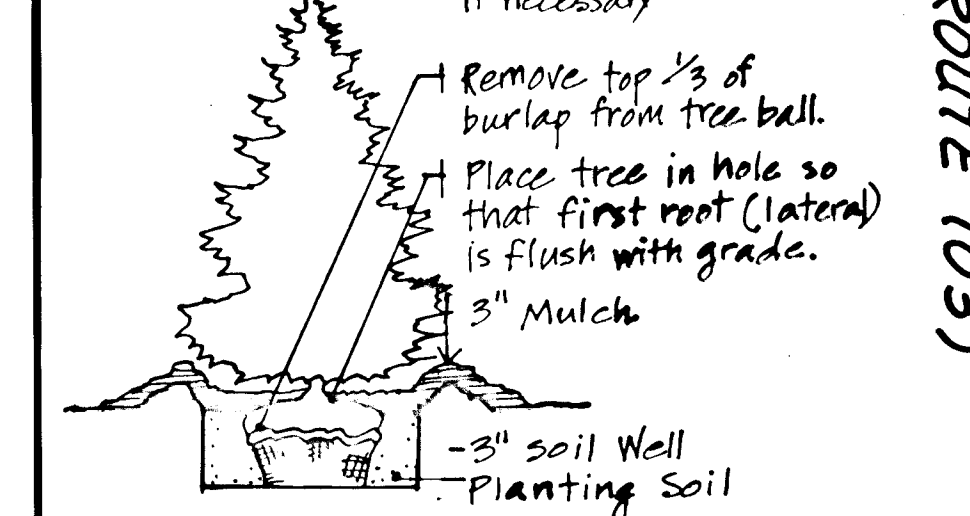
(Symbol) STREET TREES APPROVED IN EARLIER SUBMISSION (F91-125) (HOWARD COUNTY MAINTENANCE)

- NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$ 22,200.00.

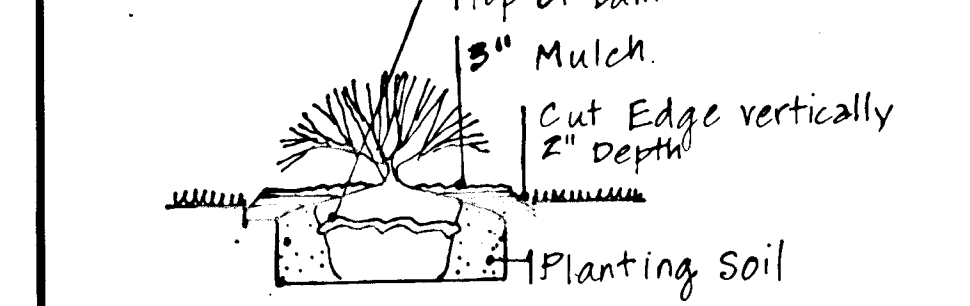
Provide tree stakes only if necessary.



Provide tree stakes only if necessary.



Remove covering from top of ball.



No.	Description	Date
1	Revise lots, #5, title block and relocate tree	8-31-94

DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the control of sediment and erosion before beginning the project. I shall advise the Howard Soil Conservation District of any construction activities within 30 days of completion. I do not authorize periodic on-site inspections by the Howard Soil Conservation District."

Signature of Developer: *W.L.W.* Date: 9/6/94

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 requirements of the Howard Soil Conservation District. I have notified the developer that he must prepare a 143-foot erosion and sediment control pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer: *Bruce D. Burton* Date: 9/6/94

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

Signature: *John R. Roberts* Date: 9/1/94

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

Signature: *E. E. ...* Date: 9/22/94

Signature: *Andrew M. ...* Date: 9-15-94

APPROVED: Department of Planning and Zoning

Signature: *Quin ...* Date: 9/23/94

LAND DESIGN ENGINEERING, INC.

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

Designed: C.W. Scale: 1" = 50'

Drawn: KBW Sheet: 12 of 14

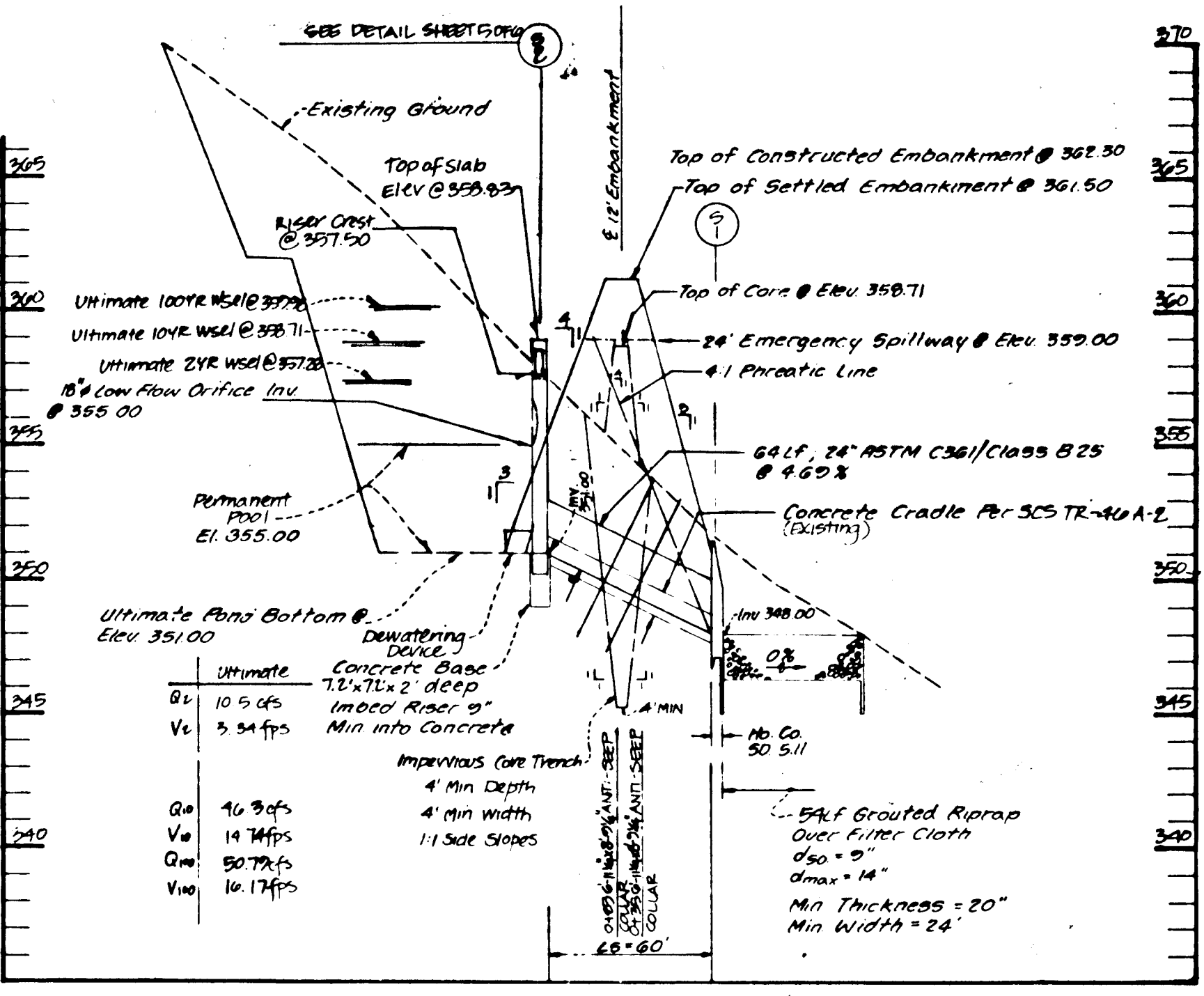
Checked: BDB LDF Job No: 92-176-1

Date: Aug 1993 File No: 100 INVESTMENT LIMITED PARTNERSHIP
8835-P Columbia 100 Parkway
Columbia, MD 21045 Phone: (410) 730-0802

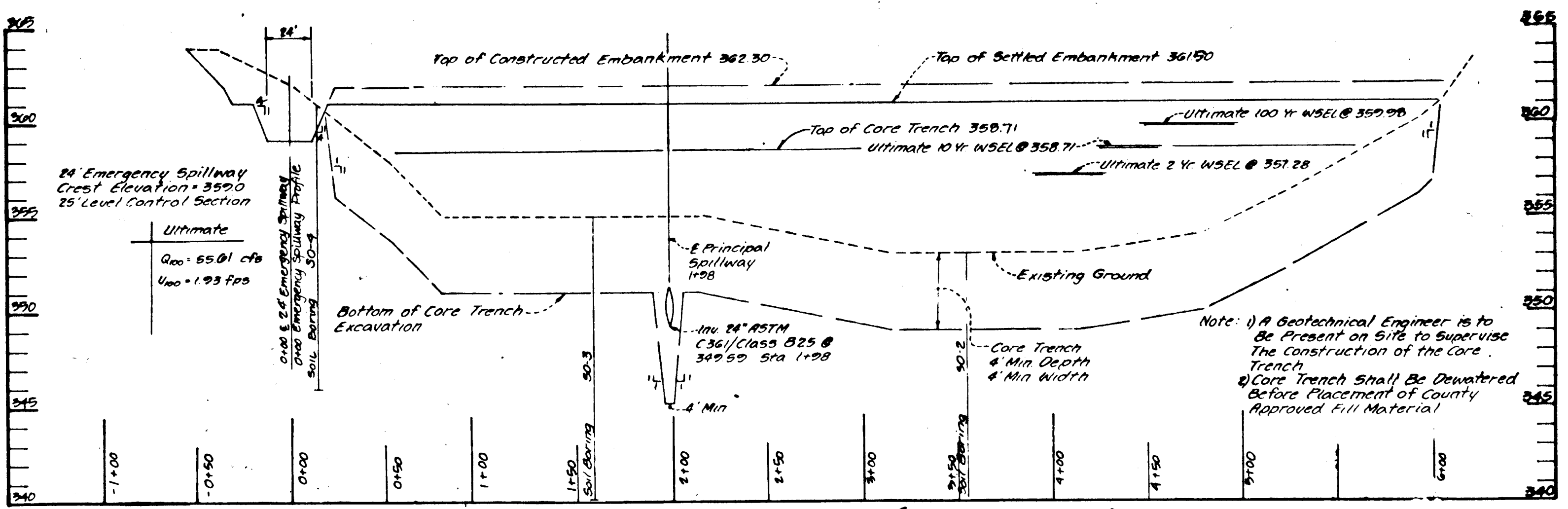
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HYDRAULIC MANAGEMENT NOTES

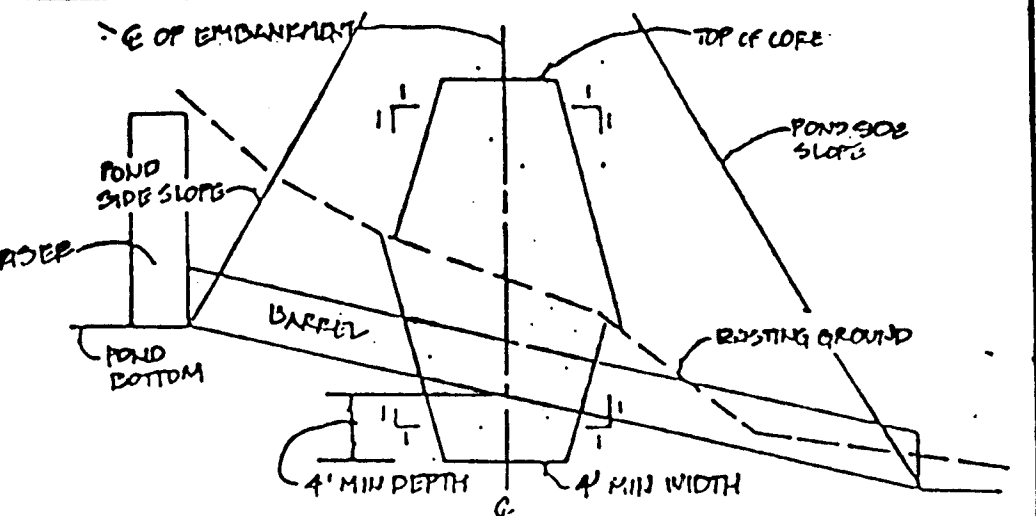
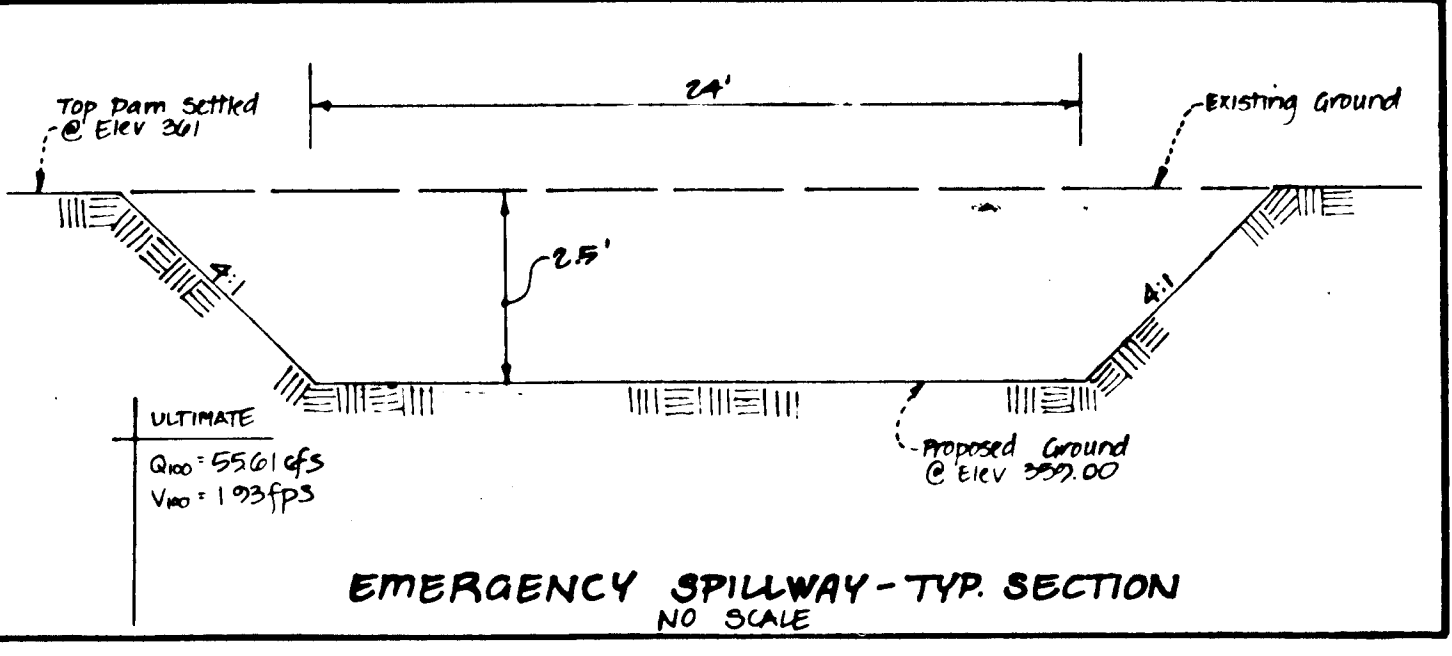
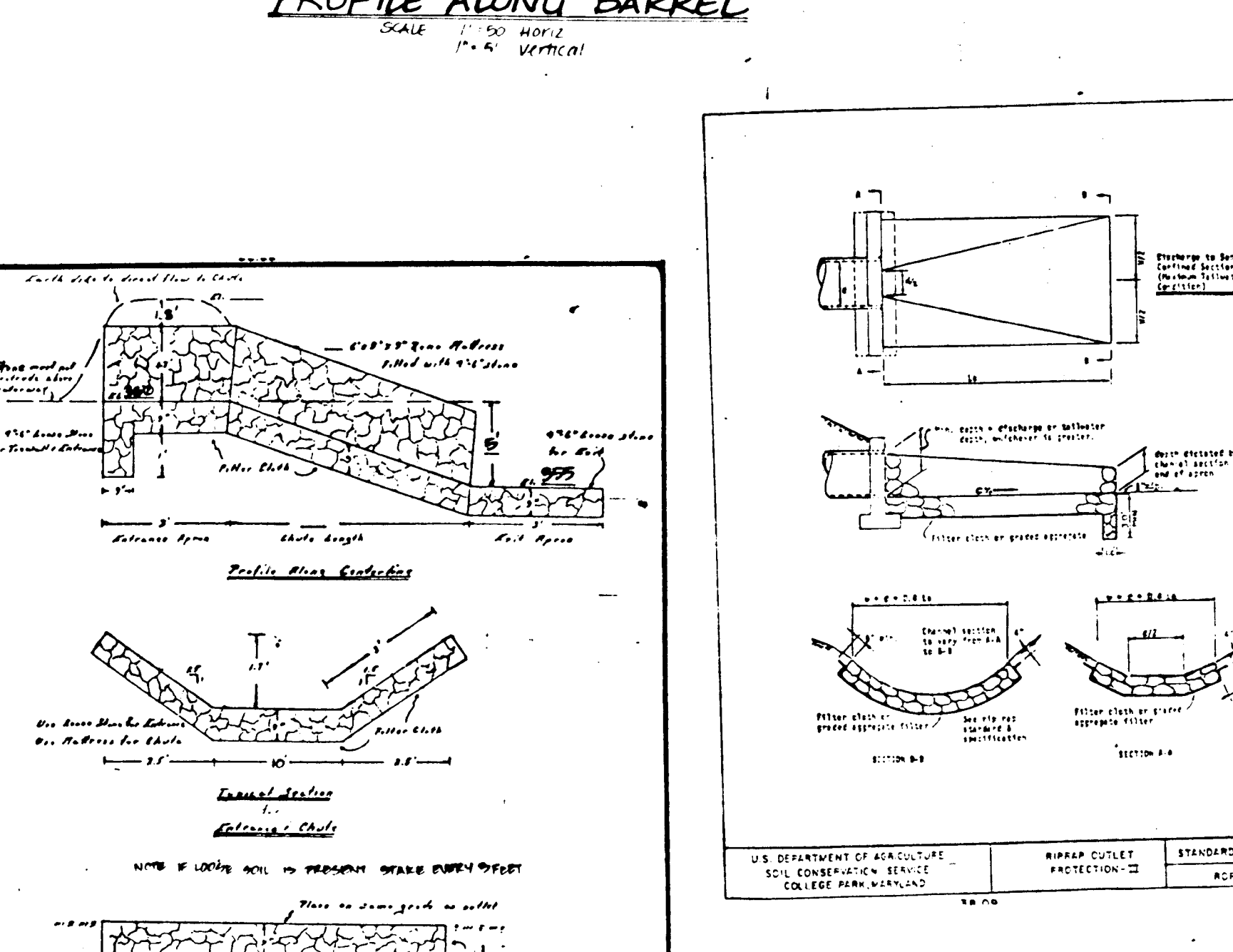
Specifications: These specifications are applicable to all ponds... Specifications: Areas designated for bottom areas, embankments and structures shall be cleared...



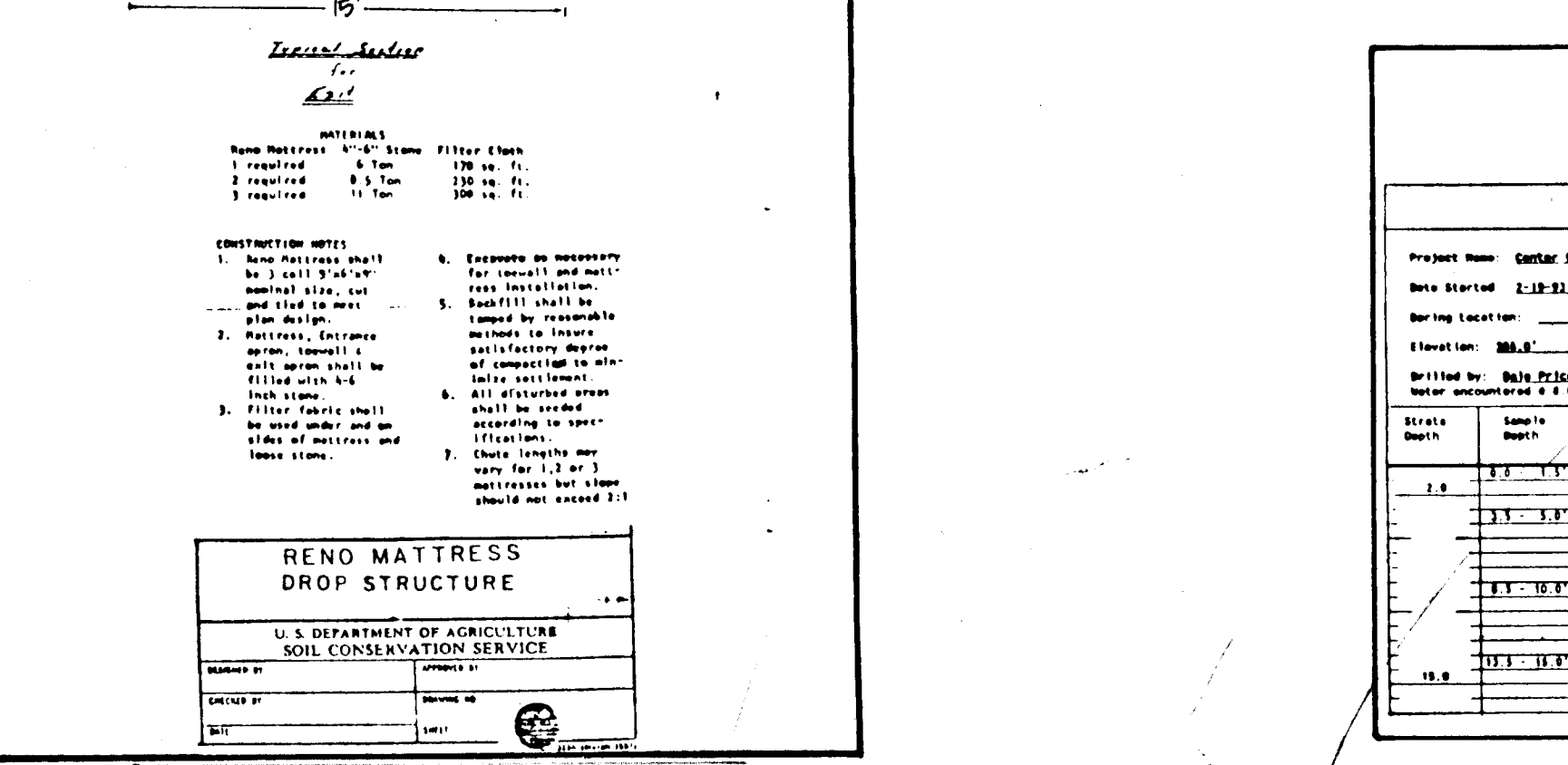
PROFILE ALONG BARREL SCALE 1" = 50' HORIZ 1" = 5' VERT



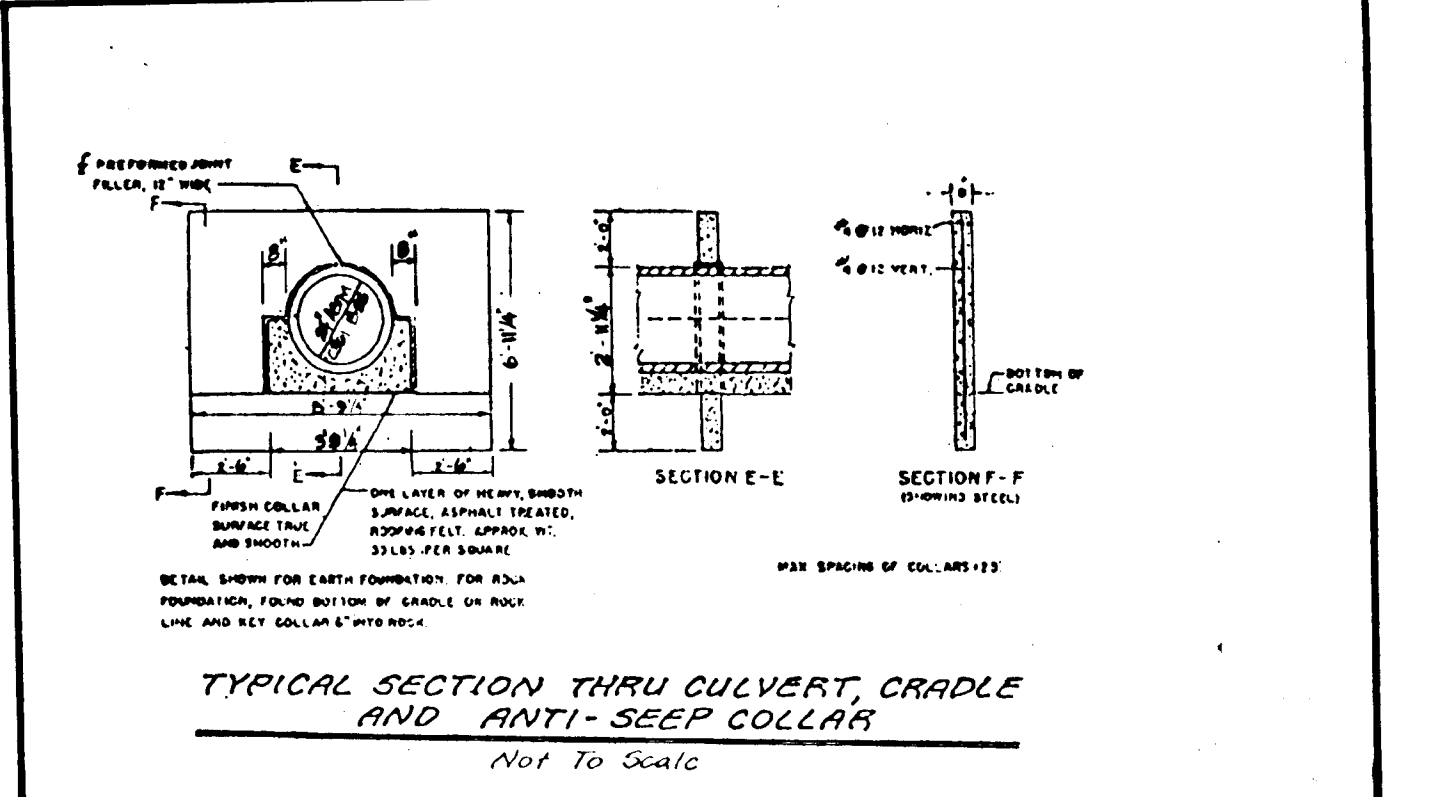
PROFILE ALONG E OF EMBANKMENT (SWM FACILITY) Scale: 1" = 5' Vert. 1" = 50' Horiz.



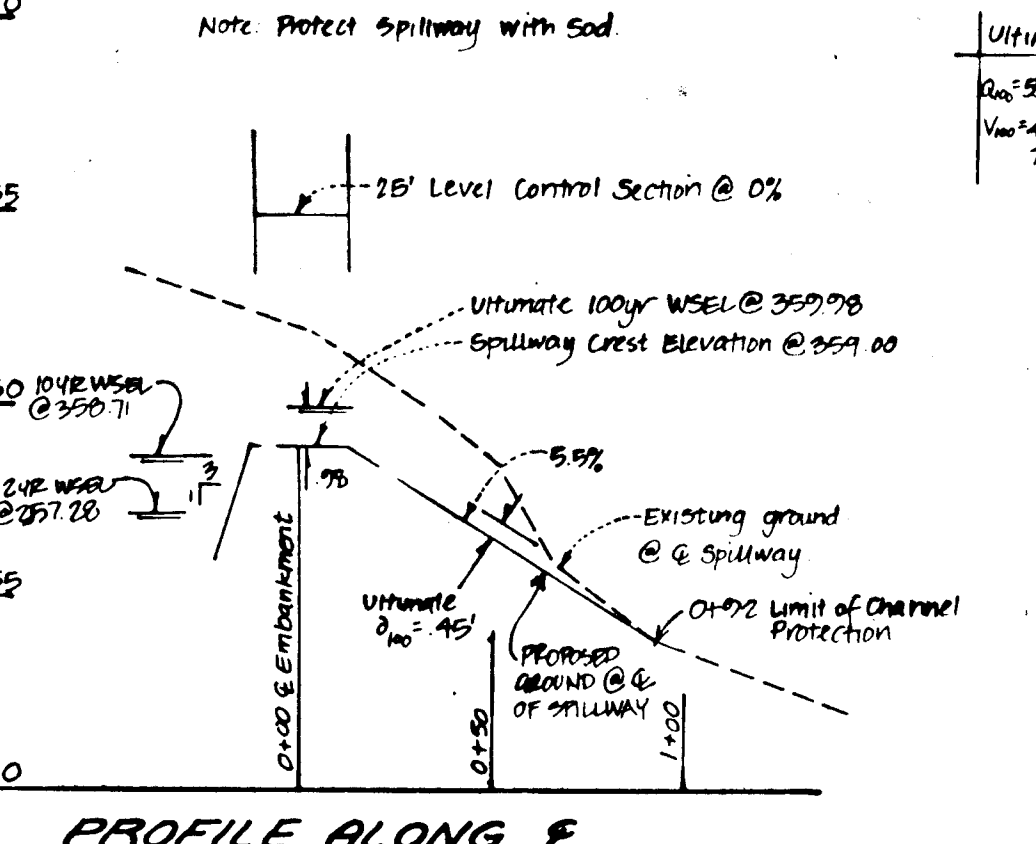
CORE TRENCH TYP. SECTION No Scale. NOTE: County Approved Material* is to be used for core trench...



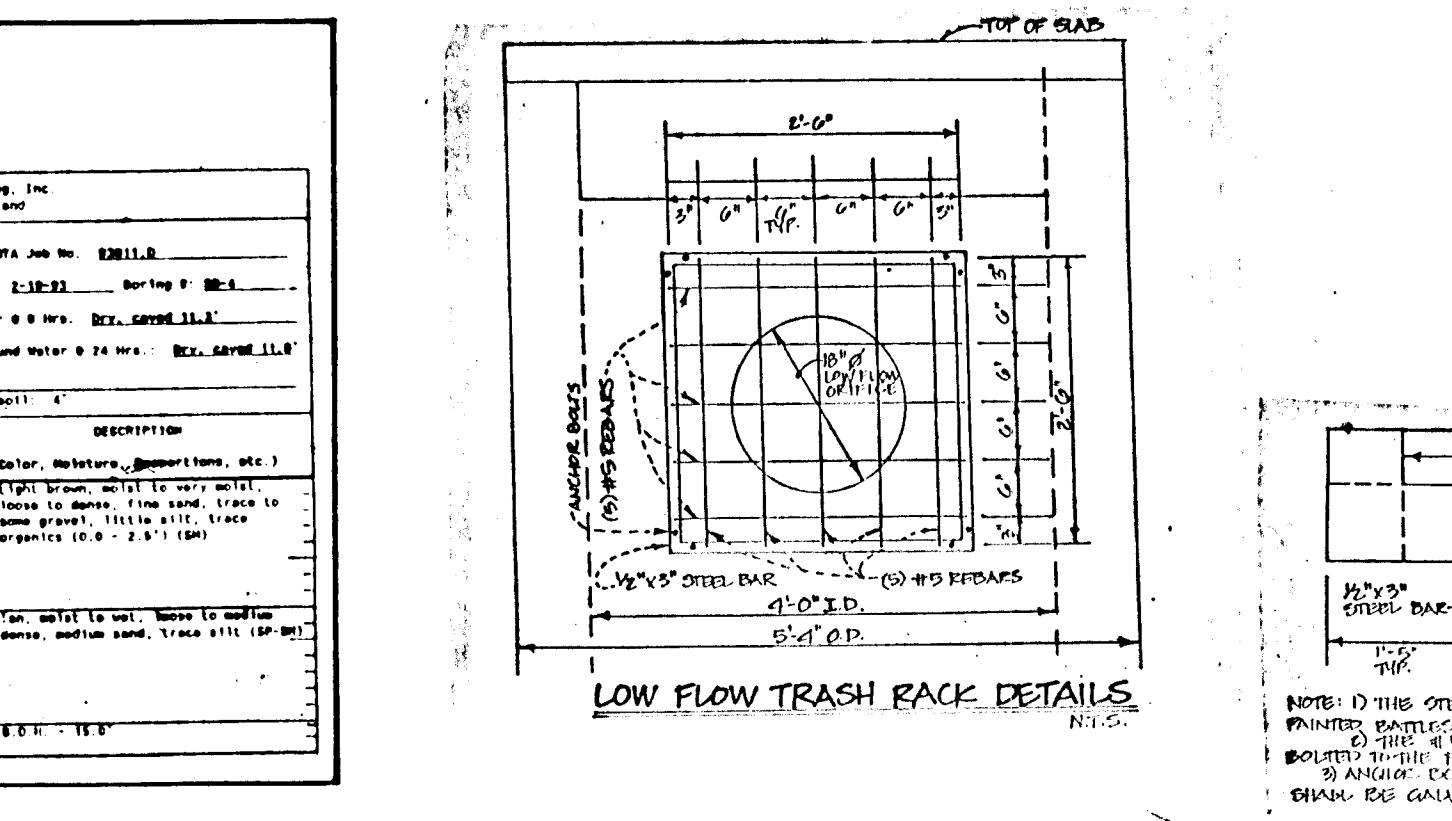
SOIL BORING LOGS



TYPICAL SECTION THRU CULVERT, CRADLE AND ANTI-SLEEP COLLAR Not to Scale



PROFILE ALONG E EMERGENCY SPILLWAY Scale: 1" = 50' HORIZ 1" = 5' VERT



LOW FLOW TRASH RACK DETAILS No Scale

DEVELOPER'S CERTIFICATE: I certify that all development and/or construction shall be done according to these plans...

ENGINEER'S CERTIFICATE: I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan...

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

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

LAND DESIGN ENGINEERING, INC. 8835 Columbia 100 Parkway, Unit N, Columbia, MD 21045. Includes contact info and project details.

17011