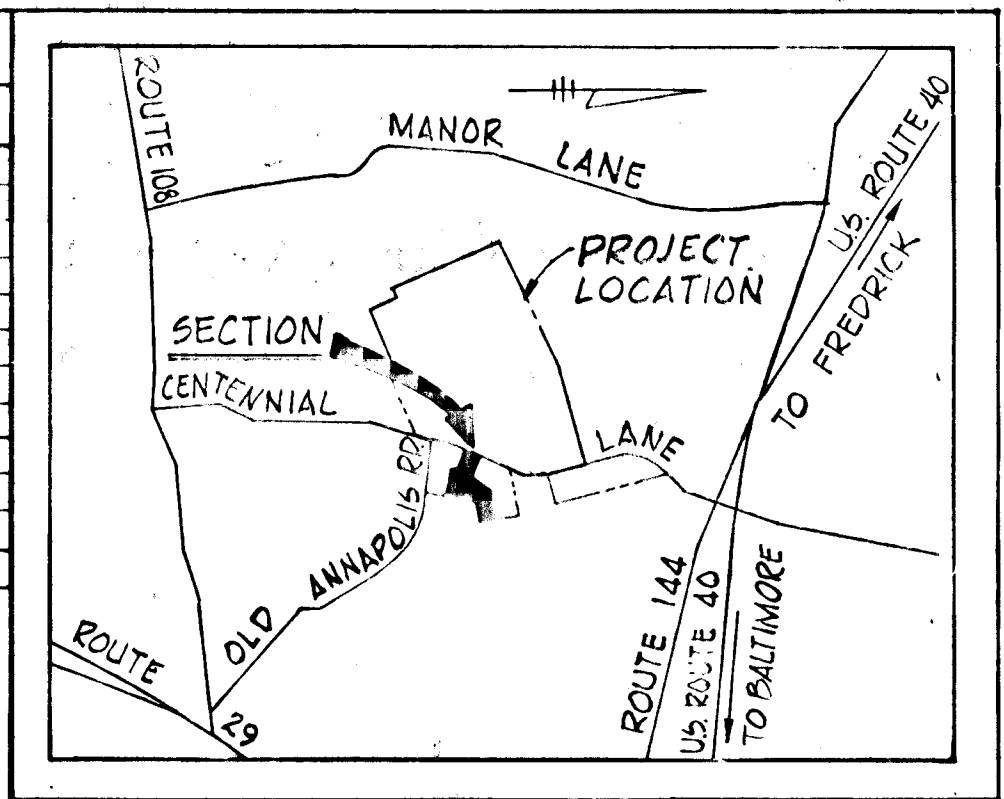
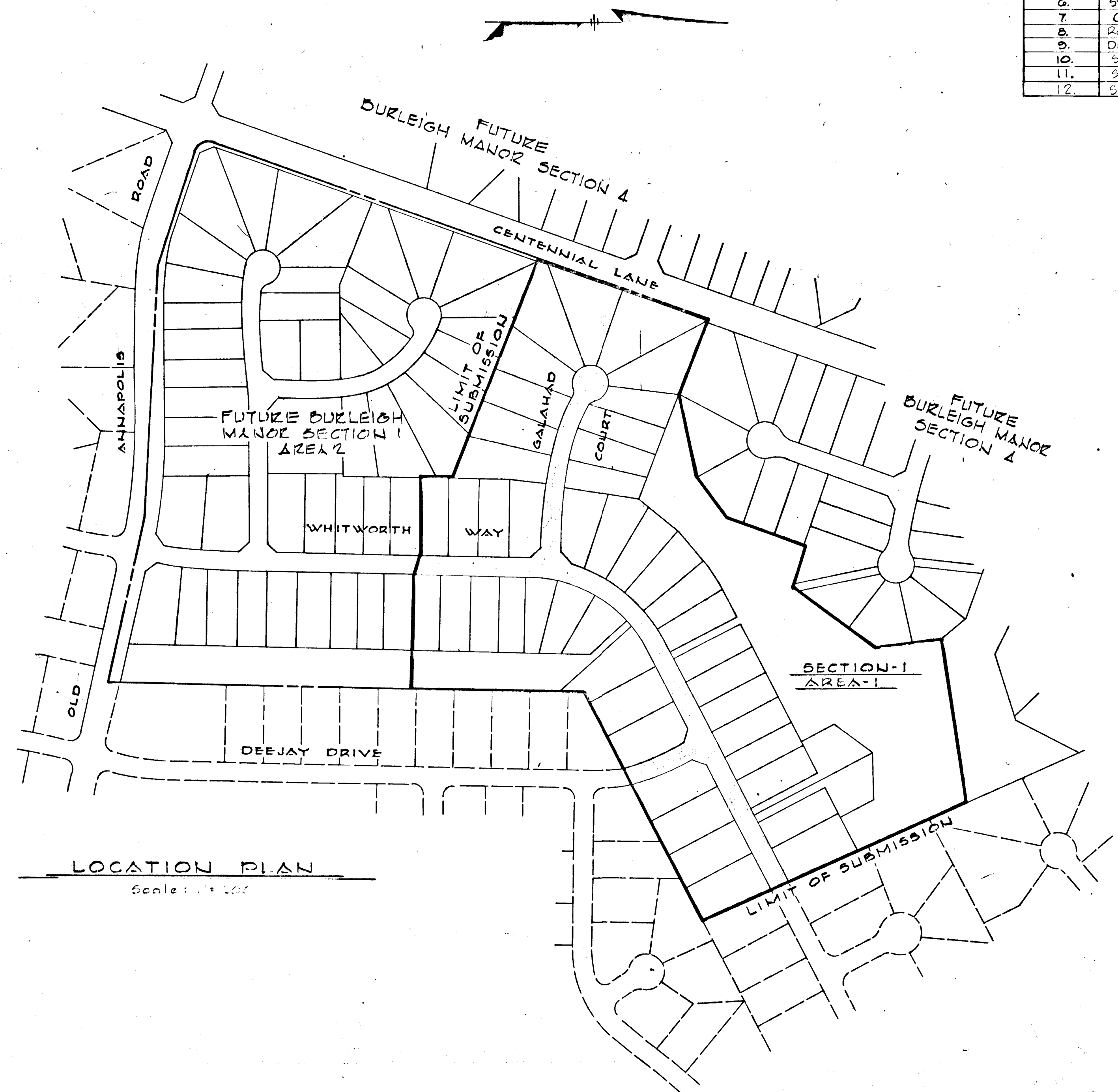


SHEET INDEX	
SHEET NO.	DESCRIPTION
1.	Cover Sheet
2.	Plan & Profile - Whitworth Way & DeeJay Dr.
3.	Plan & Profile - Whitworth Way
4.	Plan & Profile - Galahad Court
5.	Storm Drain Profiles
6.	Storm Drain Profiles & Details
7.	Centennial Lane Improvements
8.	Roadway & Storm Drain Details
9.	Drainage Area Map
10.	Storm Water Management Plan & Details
11.	Storm Water Management Details
12.	Sediment Control Plan & Details



VICINITY MAP  
Scale: 1" = 1/2 Mile



LOCATION PLAN  
Scale: 1" = 50'

GENERAL NOTES

- All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
- All utility companies shall be notified 24 hours in advance of construction.
- Streets are designed for traffic speed of 25 m.p.h. in accordance with AASHTO standards.
- All inlets shall be Howard County Standards unless otherwise noted.
- All street curb returns shall have a 25' radius unless otherwise noted.
- Storm drain trenches within road right-of-way shall be backfilled and compacted in accordance with Howard County Road Construction Code and Standard Specifications.
- Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage due to contractor's operations shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities where directed by the engineer a minimum of two weeks in advance of construction operations.
- All reinforced concrete for storm drain structures shall have a minimum 28 day strength of 3000 p.s.i.
- Traffic control devices and installation shall be in accordance with the Manual on Uniform Traffic Control Devices, 1971 Revised Edition.
- Poly Filter X (filter cloth blanket) or equal shall be placed under all stone rip-rap.
- Rip-rap at outfalls shall be unpeaved unless otherwise noted.
- All horizontal and vertical controls are based on Maryland State Datum.
- Seed and mulch all disturbed areas.
- Lots 47 thru 53 are non buildable until the drainage pipes from I-6 to S-3 and the proposed grading at lots 47 thru 53, as shown on the Construction Plans under F-79-93, are completed by the Developer and accepted by the County.

This plan has been reviewed by the Howard Soil Conservation District and meets the technical requirements for small pond construction. <i>W. J. Smith</i> 3/17/79 Howard Soil Conservation District	This plan for small pond construction meets the requirements of the Howard Soil Conservation District. Approved <i>Robert W. Zielh</i> 3/19/79 Howard Soil Conservation District
Plan Number	

**CERTIFICATION BY THE DEVELOPER**

I certify that all development and/or construction of this pond will be done according to this plan. I also authorize periodic on-site inspection by Howard Soil Conservation District or their authorized agents as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District. I will authorize a registered professional engineer to supply the Howard Soil Conservation office with an as-built plan of this pond within 30 days of the ponds completion.

*W. J. Smith* 3-17-79  
Date

**CERTIFICATION BY THE ENGINEER**

I certify that this plan for small pond construction 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.

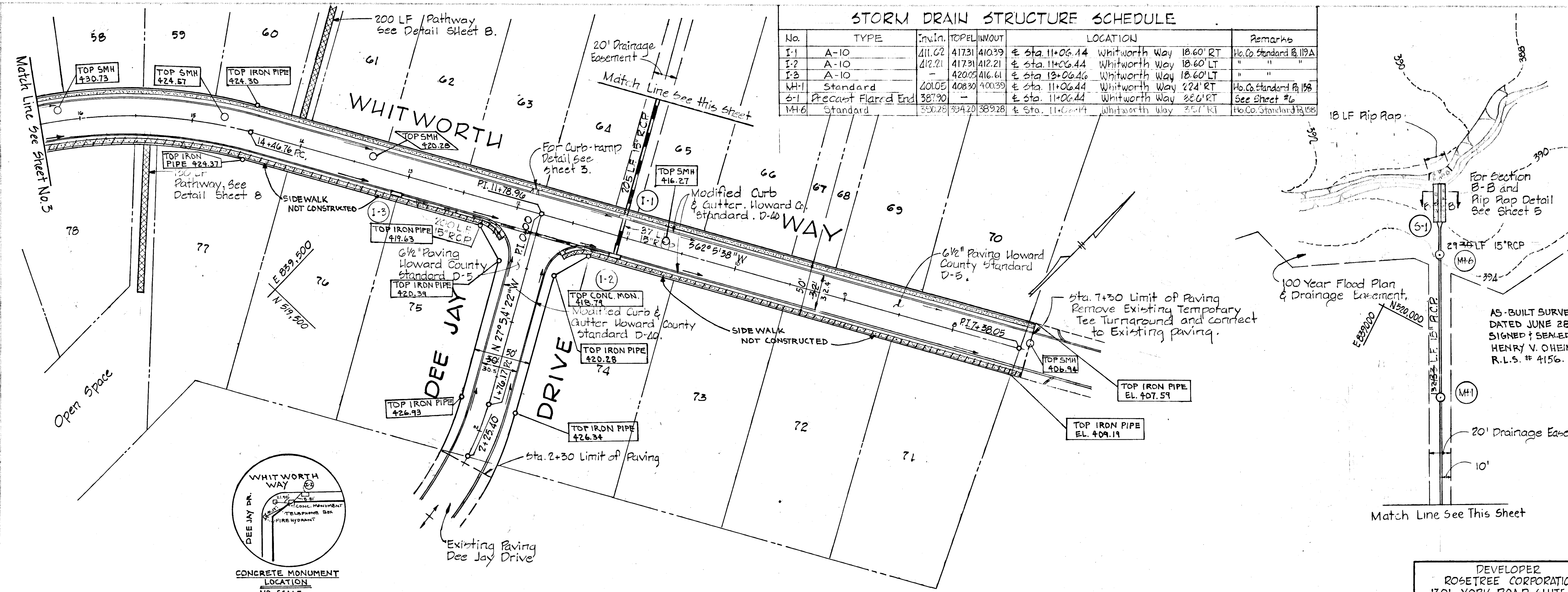
*Kenneth A. McCord* 11-2-78  
Date

WHITMAN REQUARDT, AND ASSOCIATES  
ENGINEERS  
BALTIMORE, MARYLAND  
*Kenneth A. McCord*  
KENNETH A. McCORD  
Registered Engineer  
No. 1974

DEPARTMENT OF PUBLIC WORKS  
*W. J. Smith* 3-15-79  
DATE  
CHIEF, BUREAU OF ENGINEERING  
OFFICE OF PLANNING AND ZONING  
*W. J. Smith* 3-8-79  
DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT

PROJECT TITLE  
BURLEIGH MANOR  
SECTION-1 AREA-1  
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
Scale: As Shown Date: Nov. 3, 1978

OWNER & DEVELOPER  
ROSETREE CORPORATION  
1301 YORK ROAD  
SUITE 204  
LUTHERVILLE, MARYLAND 21093



DEPARTMENT OF PUBLIC WORKS  
*W.O. Lambert* 3-15-79  
 CHIEF, BUREAU OF ENGINEERING DATE  
 OFFICE OF PLANNING AND ZONING  
*John W. Muehlen* 3-8-79  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

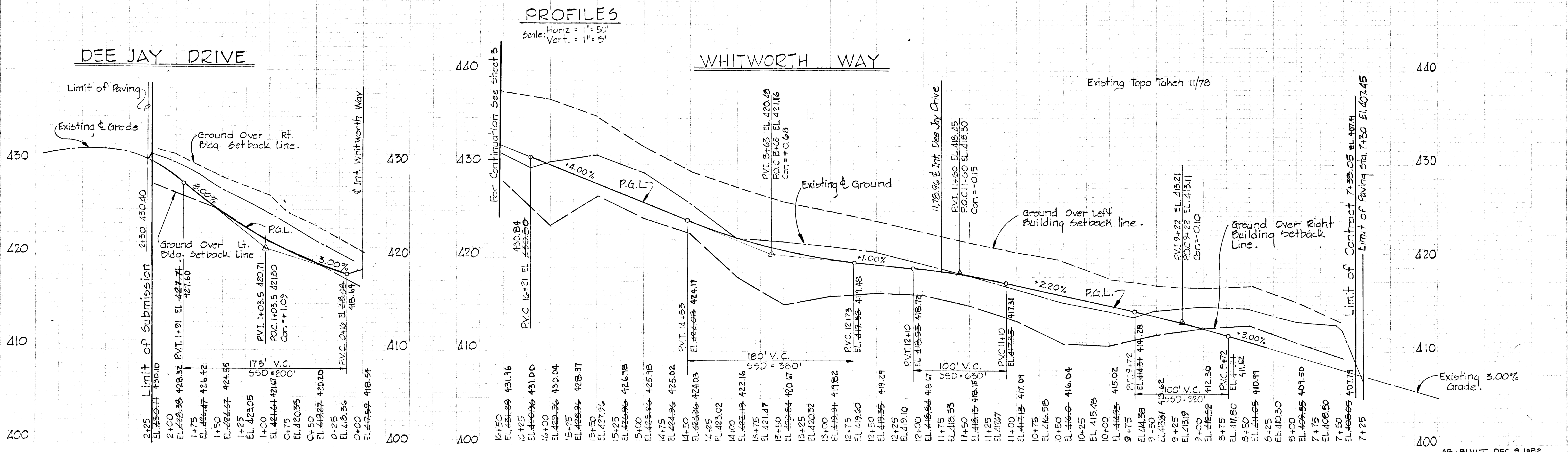
**§ CURVE DATA**  
 P.C. 14+46.76 TO P.O.C. 18+26.91  
 Whitworth Way  
 $\Delta = 54^{\circ} 27' 6''$   
 $R = 100.00'$   
 $\Delta = 380.14'$   
 $T = 205.80'$   
 $CH = 366.00'$   
 $Brg = 53^{\circ} 4' 52'' 5'' W$

**§ CURVE DATA**  
 P.C. 1476.17 TO P.O.C. 2+25.40  
 Dee Jay Drive  
 $\Delta = 12^{\circ} 32' 11''$   
 $R = 225.00'$   
 $\Delta = 49.23'$   
 $T = 24.71'$   
 $CH = 49.13'$   
 $Brg = N 21^{\circ} 38' 16'' W$

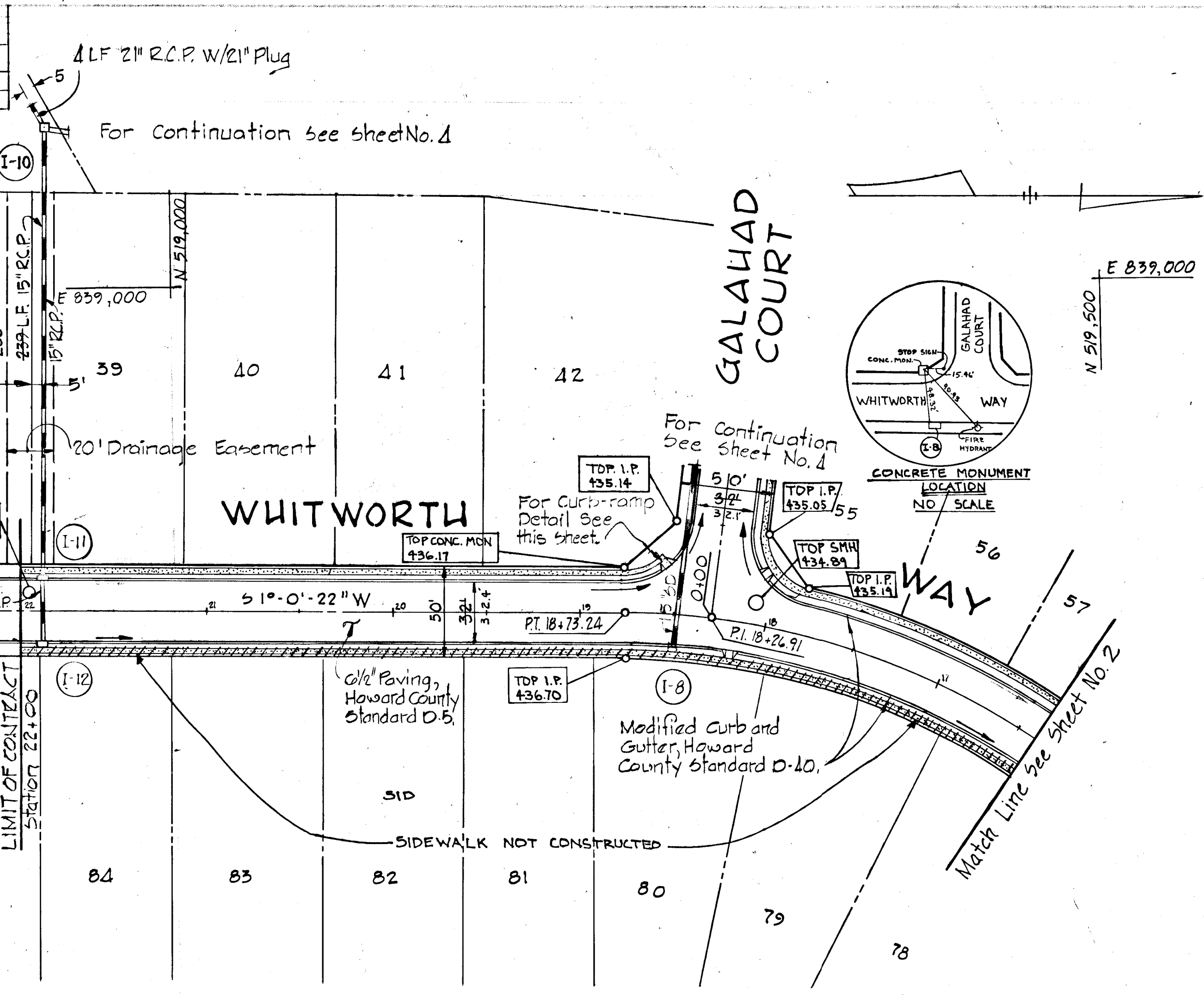
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**BURLEIGH MANOR**  
 SECTION 1 AREA 1  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 WHITWORTH & DEE JAY, PLAN & PROFILE  
 SCALE: AS SHOWN DATE: Nov. 3, 1978  
 WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

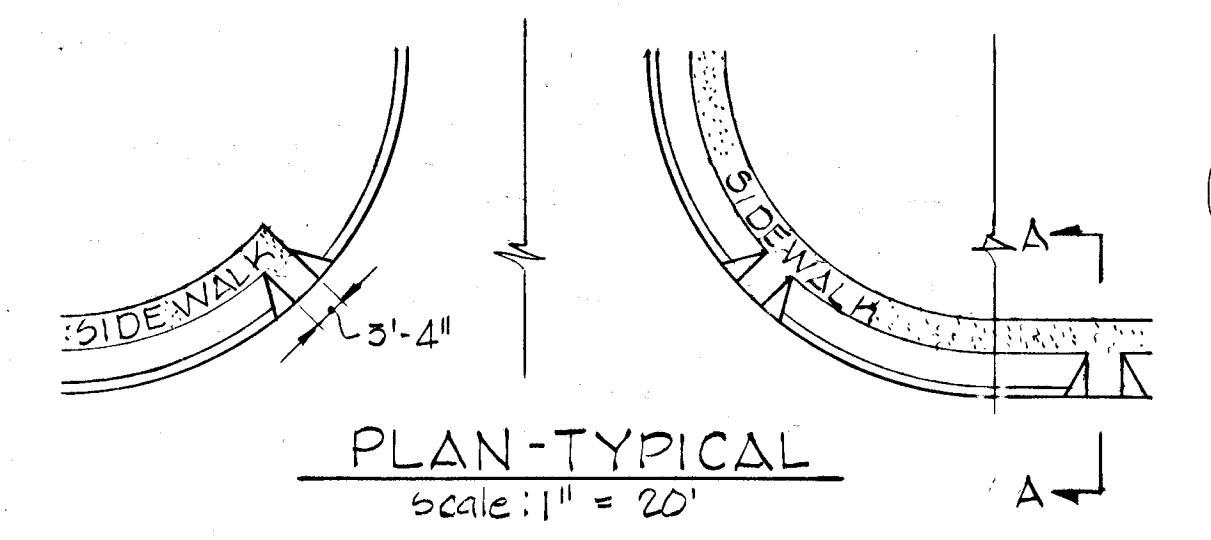
*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974



STORM DRAIN STRUCTURE SCHEDULE			
NO.	TYPE	TOP EL. INV. OUT.	LOCATION
I-11	A-5 w/ Deflectors	439.55/435.16	Sta 21+83.82 Whitworth Way 18.60 RT
I-12	A-5 w/ Deflectors	439.55/435.85	Sta 21+83.82 Whitworth Way 18.60 LT



C CURVE DATA		C CURVE DATA	
PC. 14+46.76	TO POC. 18+26.91	POC. 18+26.91	TO P.T. 18+75.24
$\Delta = 54^\circ 27' 6''$	$R = 400.00$	$\Delta = 6^\circ 38' 11''$	$R = 400.00$
$A = 380.14'$	$T = 205.80'$	$A = 46.33'$	$T = 23.19'$
$CH = 366.00'$	$Brg = 53.4^\circ 52' 5'' W$	$CH = 46.30'$	$Brg = 5^\circ 19' 27'' W$



DEPARTMENT OF PUBLIC WORKS  
 W. J. Silbert 3-15-79  
 CHIEF, BUREAU OF ENGINEERING DATE  
 OFFICE OF PLANNING AND ZONING  
 John W. Muehlman 3-8-79  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

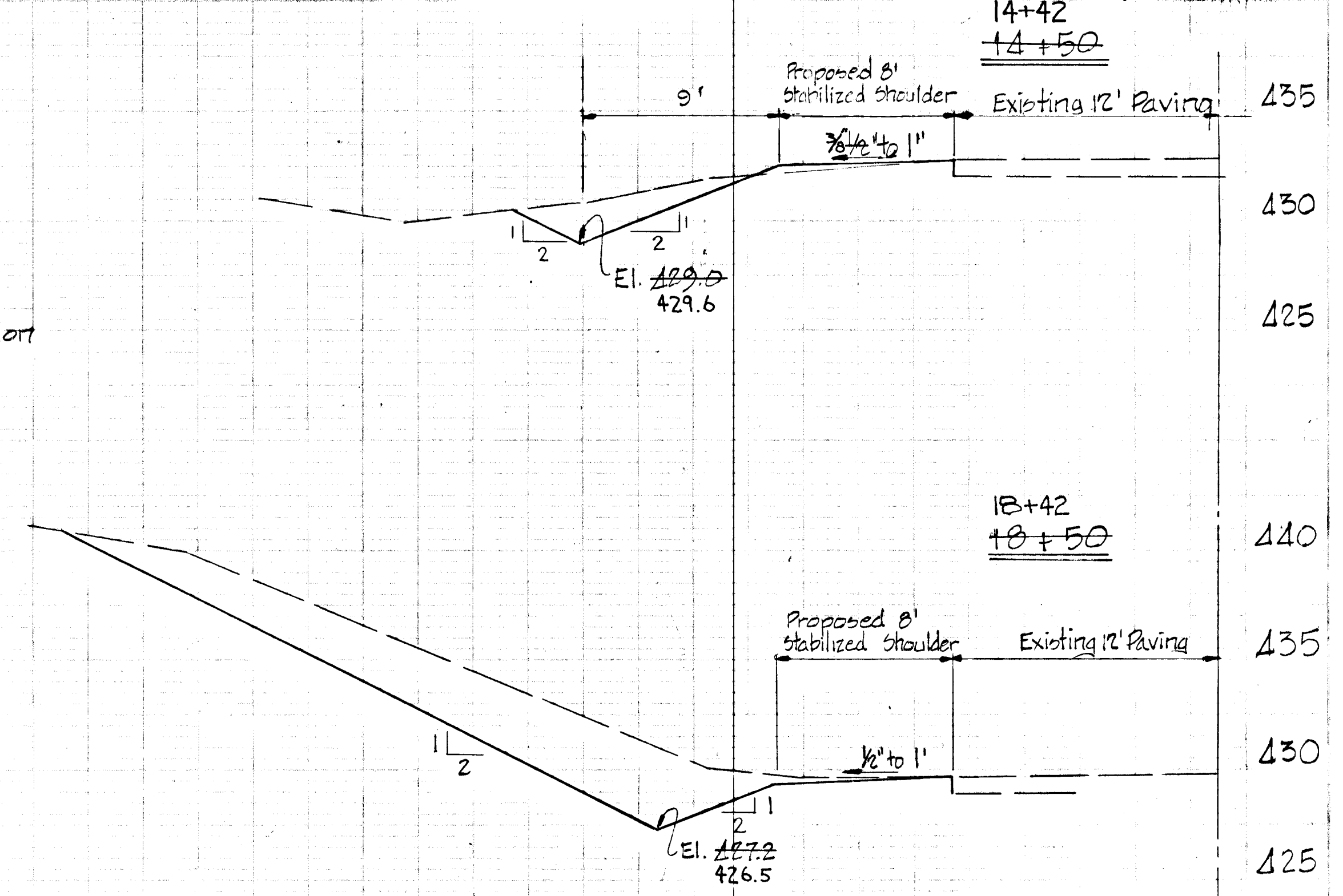
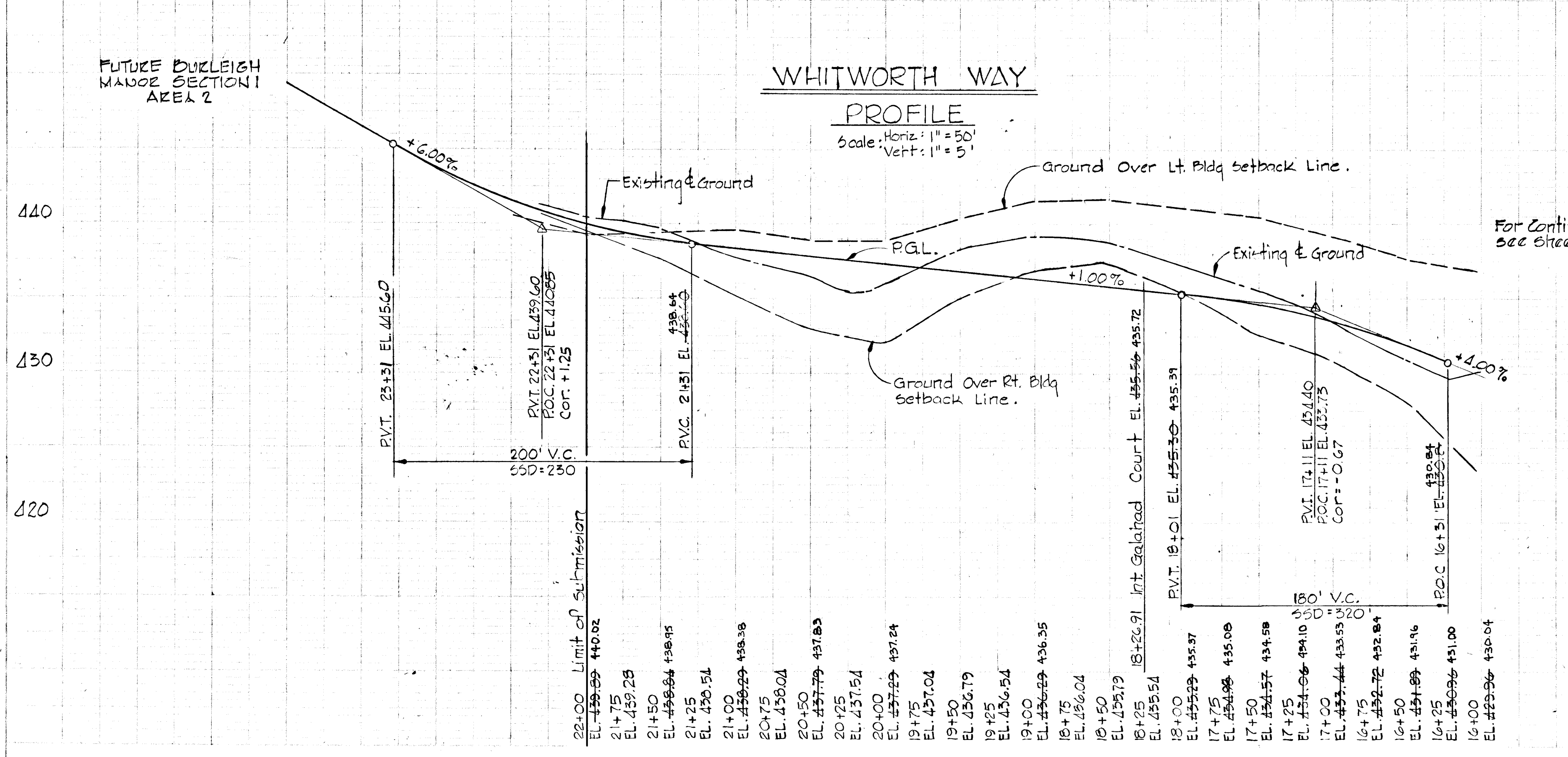
FUTURE BURLEIGH MANOR SECTION 1 AREA 2

AS BUILT SURVEY DATA DATED JUNE 28, 1982  
 SIGNED & SEALED BY HENRY V. OHEIM, MO. R.L.S. # 4156.

PROJECT TITLE  
 BURLEIGH MANOR SECTION 1 AREA 1  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 WHITWORTH PLAN & PROFILE  
 SCALE: AS SHOWN DATE: Nov. 3, 1978  
 WHITMAN, REQUARDT & ASSOCIATES ENGINEERS  
 BALTIMORE, MARYLAND 21202

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974

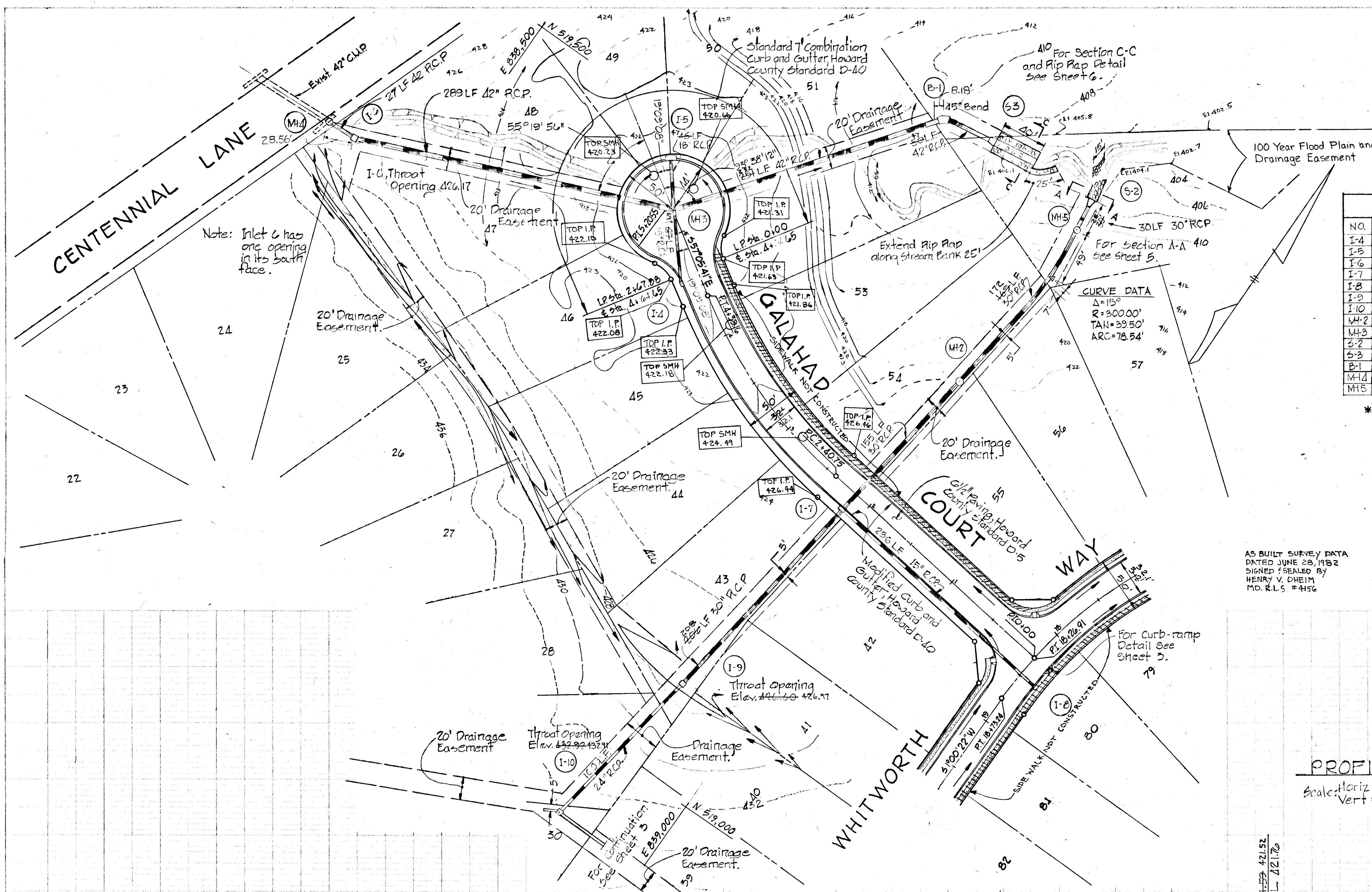


CROSS SECTIONS, WEST SIDE CENTENNIAL LANE

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

Note: see sheet 6 of 12 for PLAN & DETAILS

# 721



**¢ CURVE DATA**

P.C. 2+40.75 TO P.C. 4+39.16  
 $\Delta = 25^\circ 15' 46''$   
 $R = 150.00$   
 $A = 198.114$   
 $T = 100.8$   
 $CH = 196.81$   
 $Btg = N 69^\circ 45' 54'' W$

STORM DRAIN STRUCTURE SCHEDULE				
NO.	TYPE	TOP EL.	INV. OUT	REMARKS
I-4	A-5	421.90	418.25	Sta. 4+54.65 Galahad Ct. 18.60 LT.
I-5	Sump A-5	420.35	416.52	"
I-6	Class "C", Type D	427.00	419.40	See Plan
I-7	A-5 w/ bell-tops	427.73	420.63	Sta. 2+17.08 Galahad Court 18.60 LT.
I-8	A-5	425.78	432.20	Sta. 18+45.82 Whitworth Way 18.60 LT.
I-9	Class "C", Type D	427.42	422.10	Sta. 2+17.08 Galahad Court 230' LT.
I-10	Class "C", Type D	423.77	428.45	Sta. 2+17.08 Galahad Court 388' LT.
MH-2	Standard	421.80	415.53	Sta. 2+17.08 Galahad Court 137' RT.
MH-3	See Detail	421.20	412.28	See Plan
B-2	Precast Flared End	-	401.90	See Plan
B-3	Precast Flared End	-	403.37	See Plan
B-1	A-5	-	404.25	See Plan
MH-4	See Detail	424.25	425.80	See Plan, at Ex. Headwall
MH-5	Standard	403.70	402.20	See Plan

\* Howard Co. Standard Drw. G4-a, Page 119A, W=2'-6"  
 See Plan & Details Sheet B.  
 + 19°05'08" Clockwise From  
 Extended ¢ G 45.92 From ¢ of Bolt.

AS BUILT SURVEY DATA  
 DATED JUNE 28, 1982  
 SIGNED & SEALED BY  
 HENRY V. DHEIM  
 MD. R.L.S. #456

DEVELOPER  
 ROBOTREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 BALTIMORE, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
*W.D. Gilbert* 3-15-79  
 CHIEF, BUREAU OF ENGINEERING DATE  
 OFFICE OF PLANNING AND ZONING  
*John W. Muehlen* 3-8-79  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

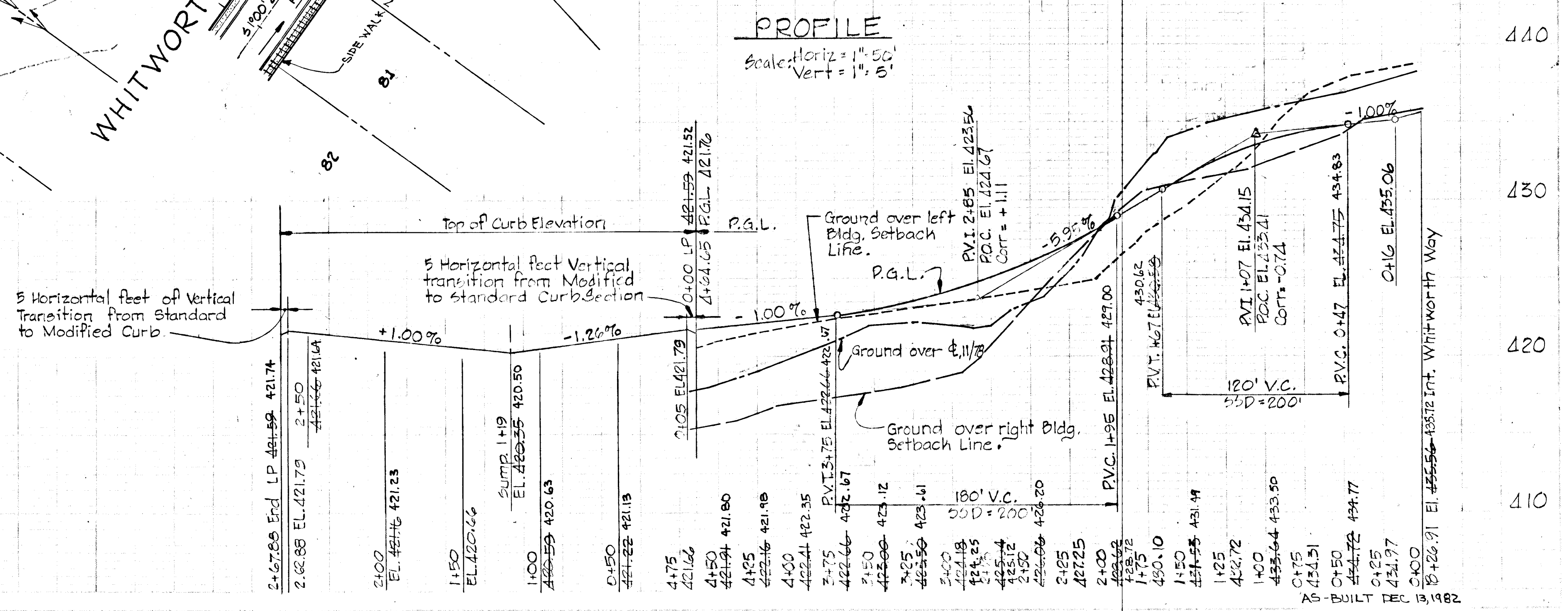
PROJECT TITLE  
**BURLEIGH MANOR**  
 SECTION 1 AREA 1  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 GALAHAD COURT PLAN & PROFILE  
 SCALE: AS SHOWN DATE: Nov. 3, 1978  
 WHITMAN REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

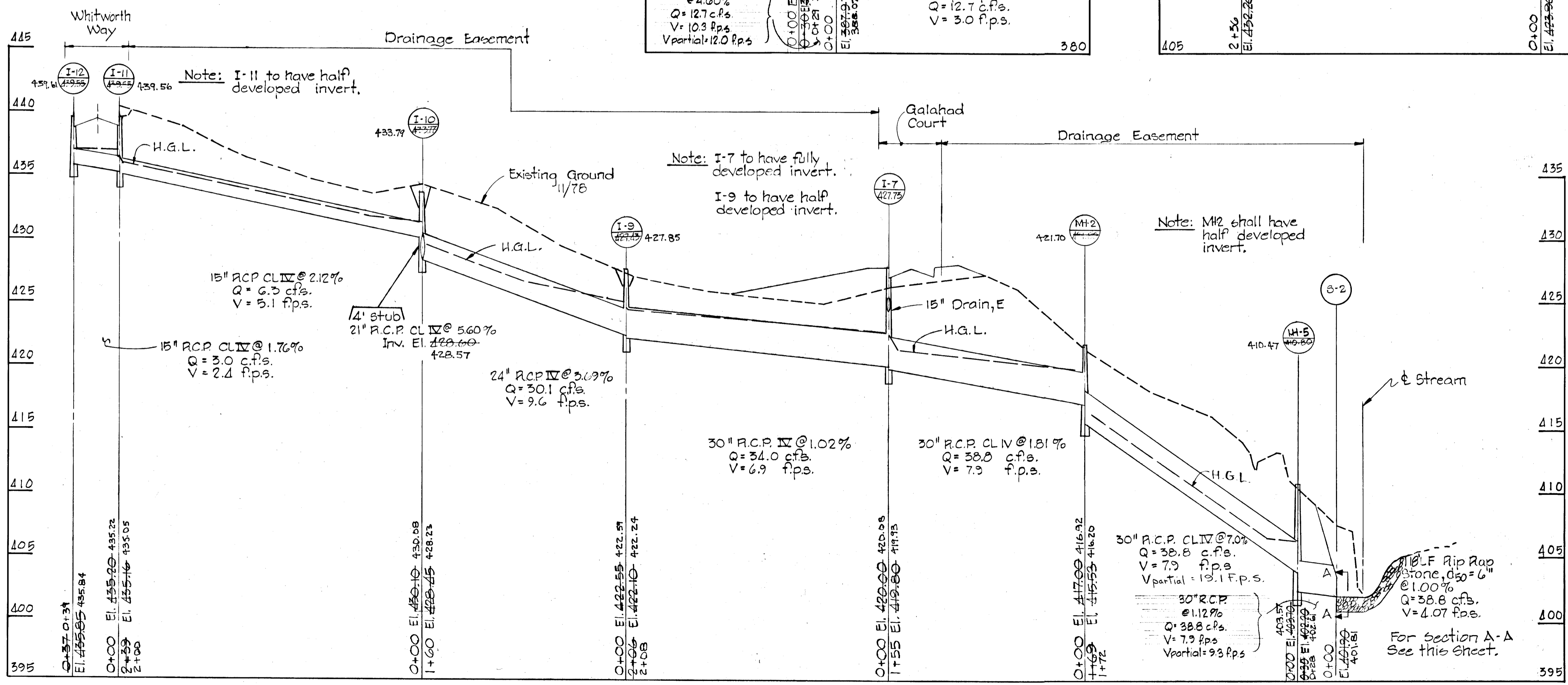
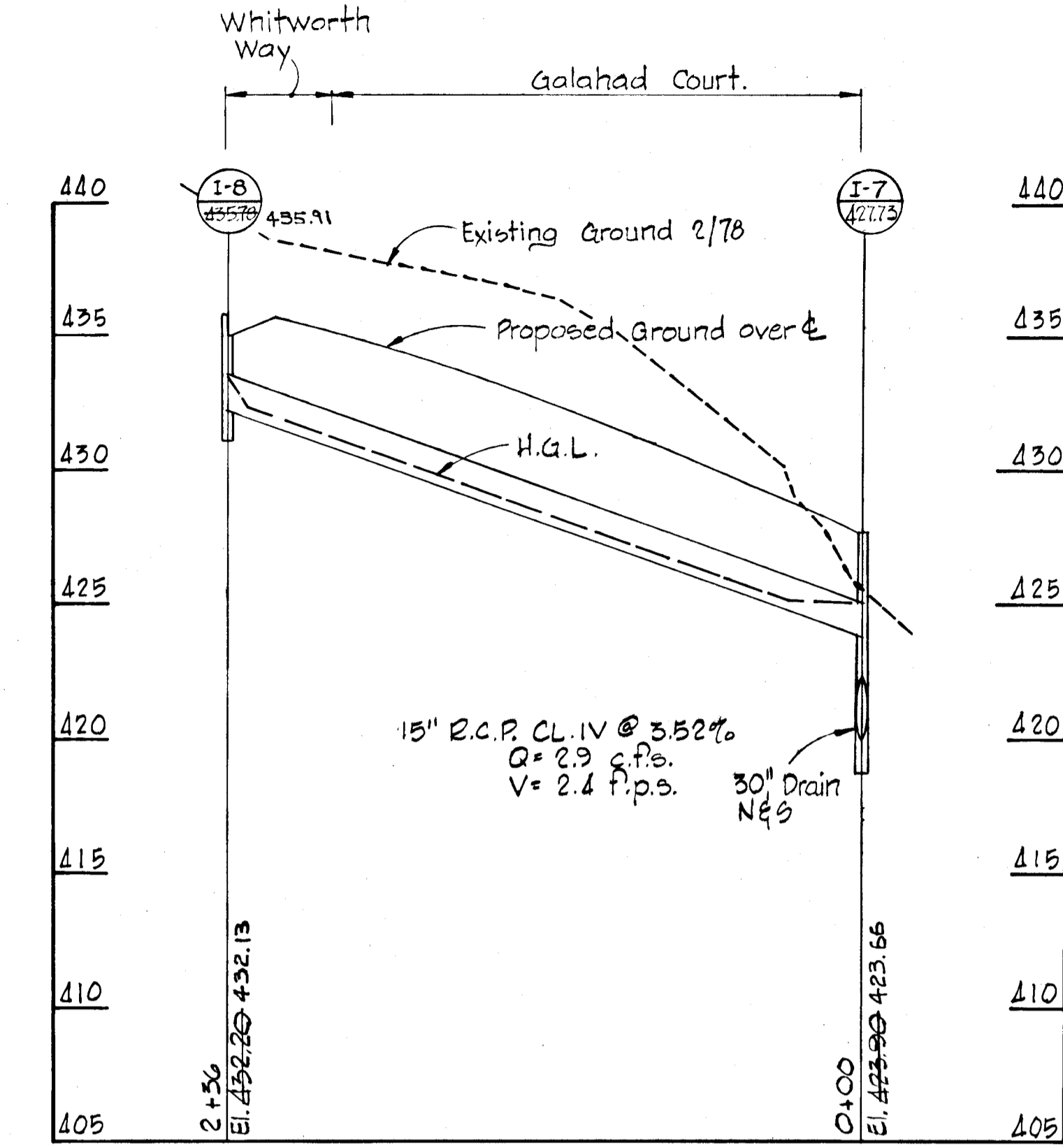
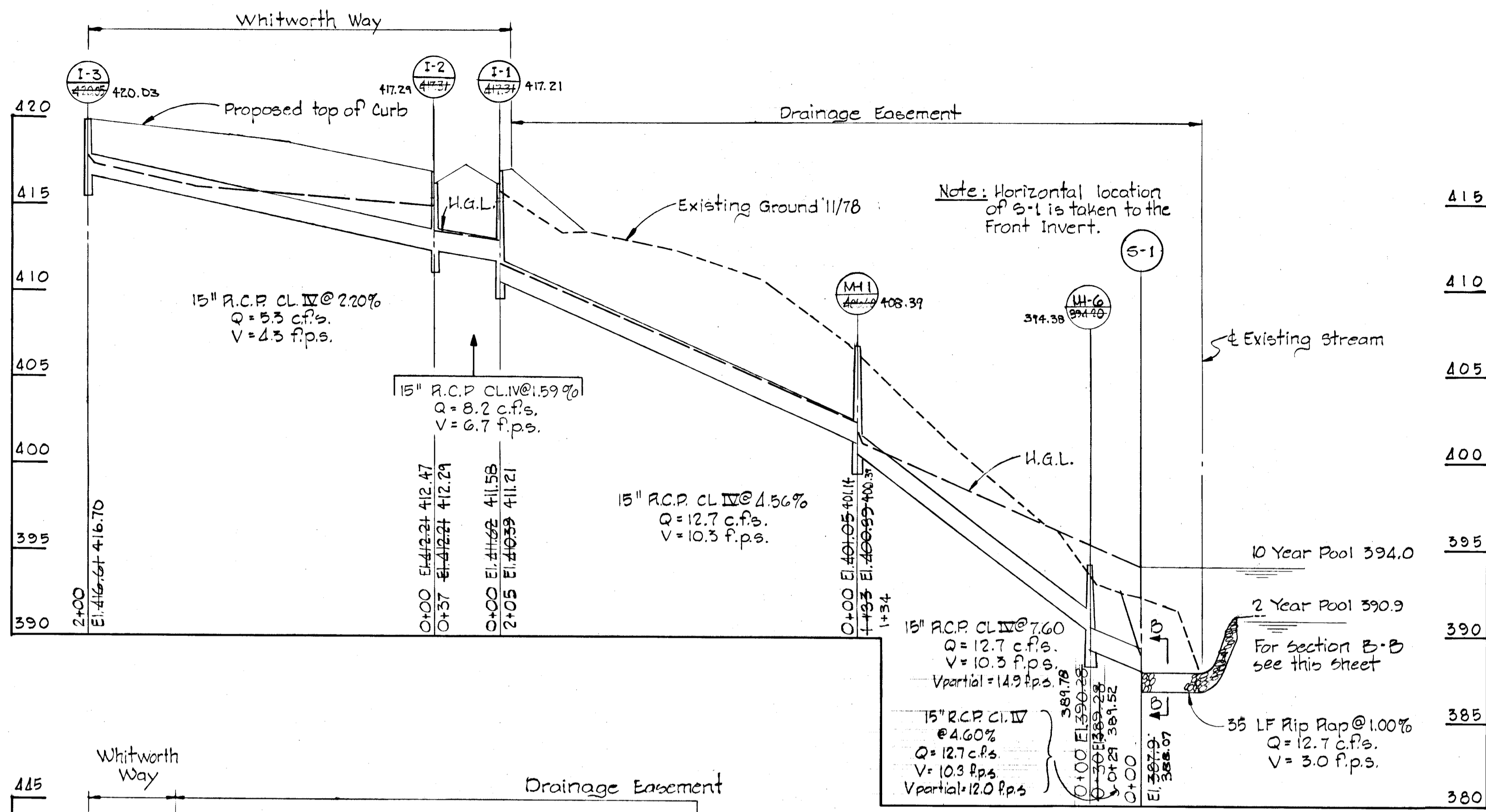
*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974

**GALAHAD COURT**

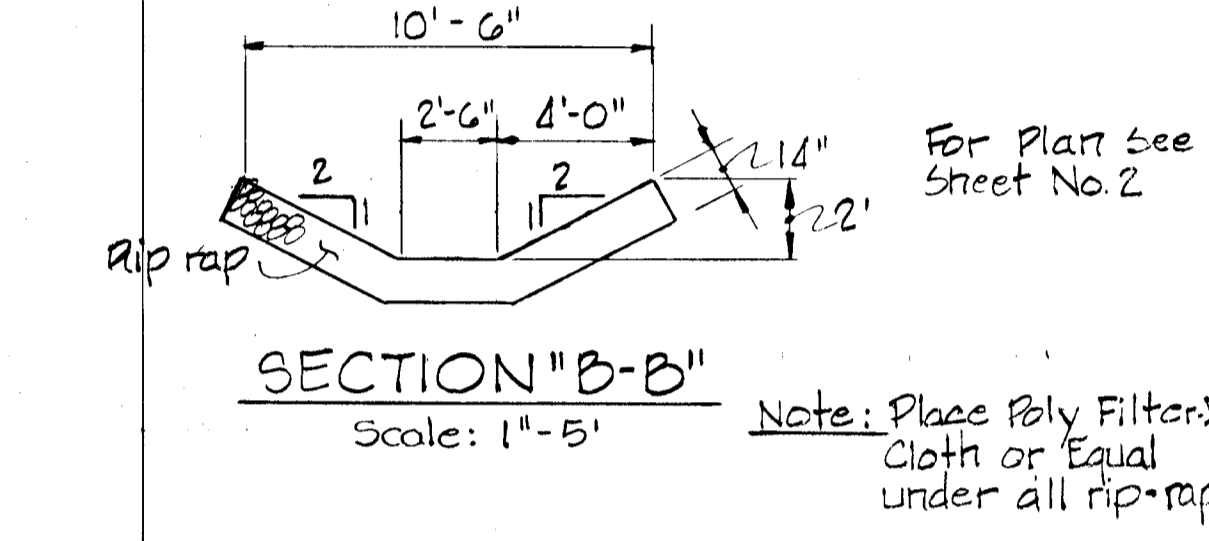
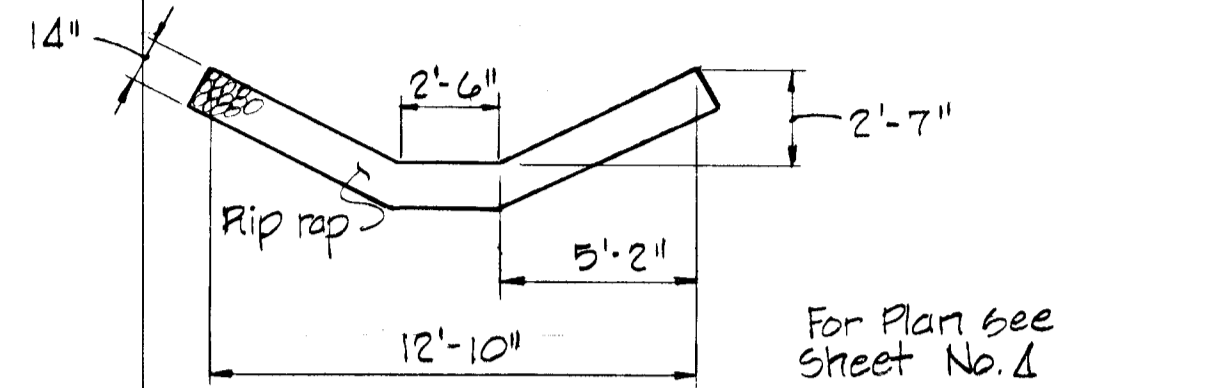
**PROFILE**

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





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



CERTIFICATION BY THE DEVELOPER  
 "I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ASE DEEMED NECESSARY."  
*Stewart J. Greenebaum* 2/27/79  
 Stewart J. Greenebaum Date

CERTIFICATION BY THE ENGINEER  
 "I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
*Kenneth A. Mc Cord* 2-28-79  
 Kenneth A. Mc Cord, P.E. 1974 Date

Reviewed for Howard Soil Conservation District and meets technical requirements.  
*Wendell Bonbrake* Date: 3-9-79  
 Signature  
 U.S. Soil Conservation Service

This development plan is approved for soil Erosion and Sediment Control by the Howard Soil Conservation District.  
 Approved: *Robert W. Ziehm* Date: 3/9/79  
 Howard S.C.D.

BURLEIGH MANOR  
 SECTION I AREA I  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 STORM DRAIN PROFILES & DETAILS  
 Scale: AS SHOWN DATE: Nov. 3, 1978

WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202  
*Kenneth A. Mc Cord*  
 KENNETH A. MC CORD  
 Registered Engineer  
 No. 1974

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

AS BUILT SURVEY DATA DATED JUNE 28, 1982, SIGNED & SEALED BY HENRY V. OHEIM, M.D.E.L.S. #456

CERTIFICATION BY THE DEVELOPER

"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."  
*Stewart J. Greenebaum* 2/23/79  
 DATE

CERTIFICATION BY THE ENGINEER

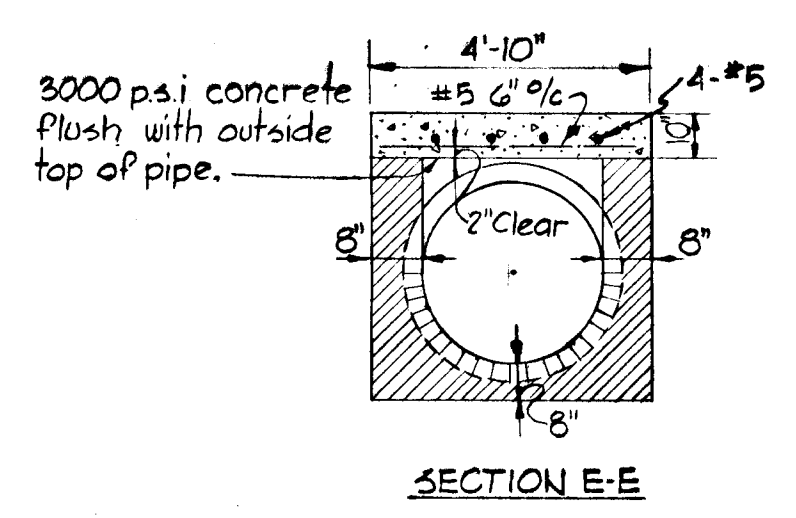
"I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
*Kenneth A. McCord* 2-23-79  
 DATE

Reviewed for Howard Soil Conservation District and meets technical requirements

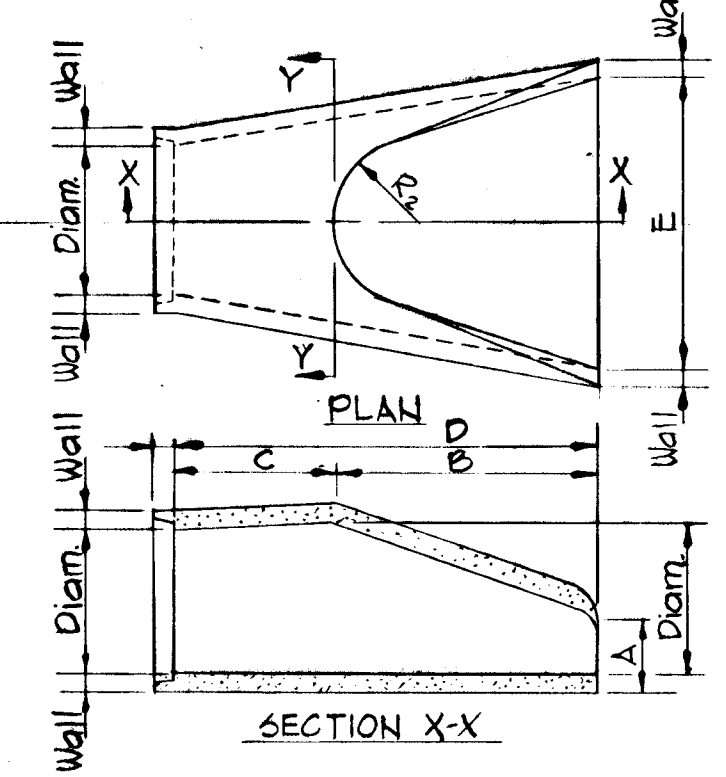
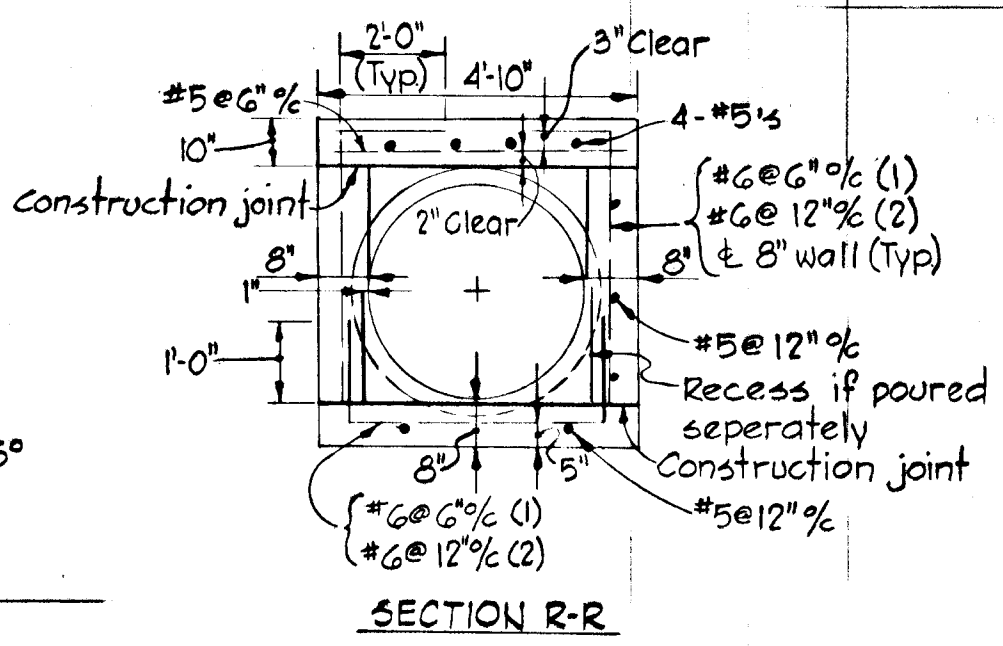
*Wendell B. Smith* Date: 3-7-79  
 Signature  
 U.S. Soil Conservation Service

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

Approved: *Robert W. Zehner* Date: 3/9/79  
 Howard S.C.D.

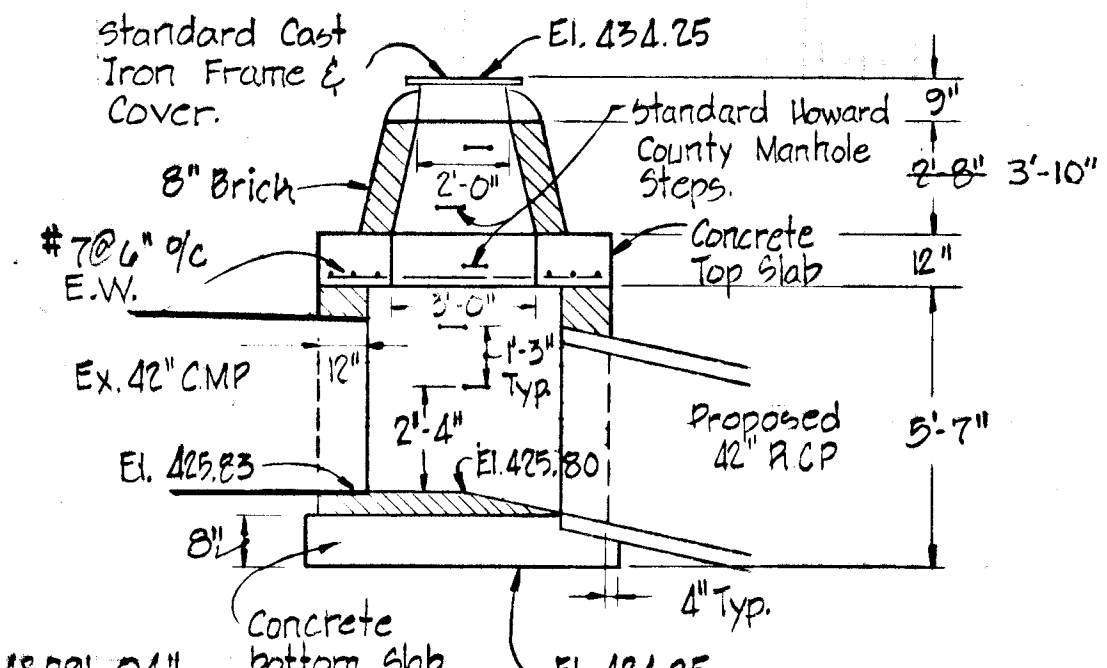
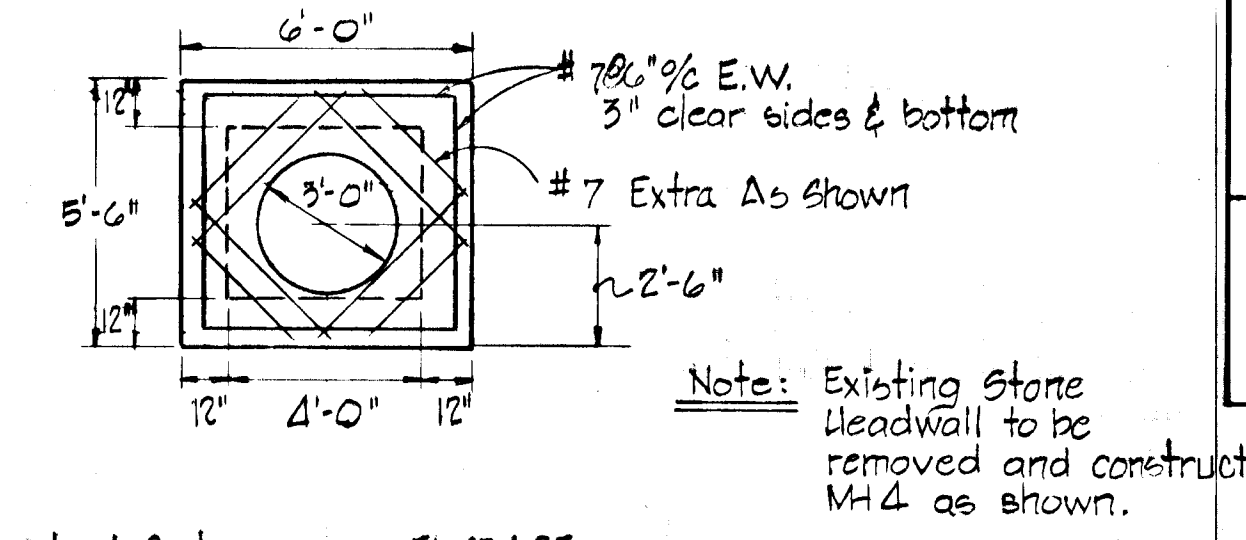
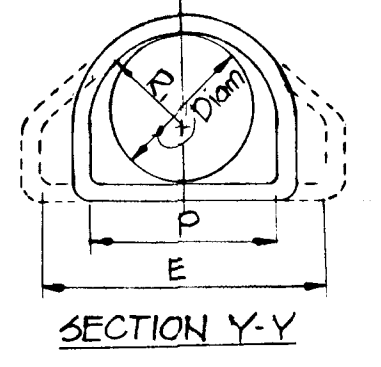


Notes:  
 1. Material Walls and bottom shall be brick or plain concrete, see Section E-E (where 12" thickness is required, 8" Reinforced Concrete may be substituted, see Section R-R).

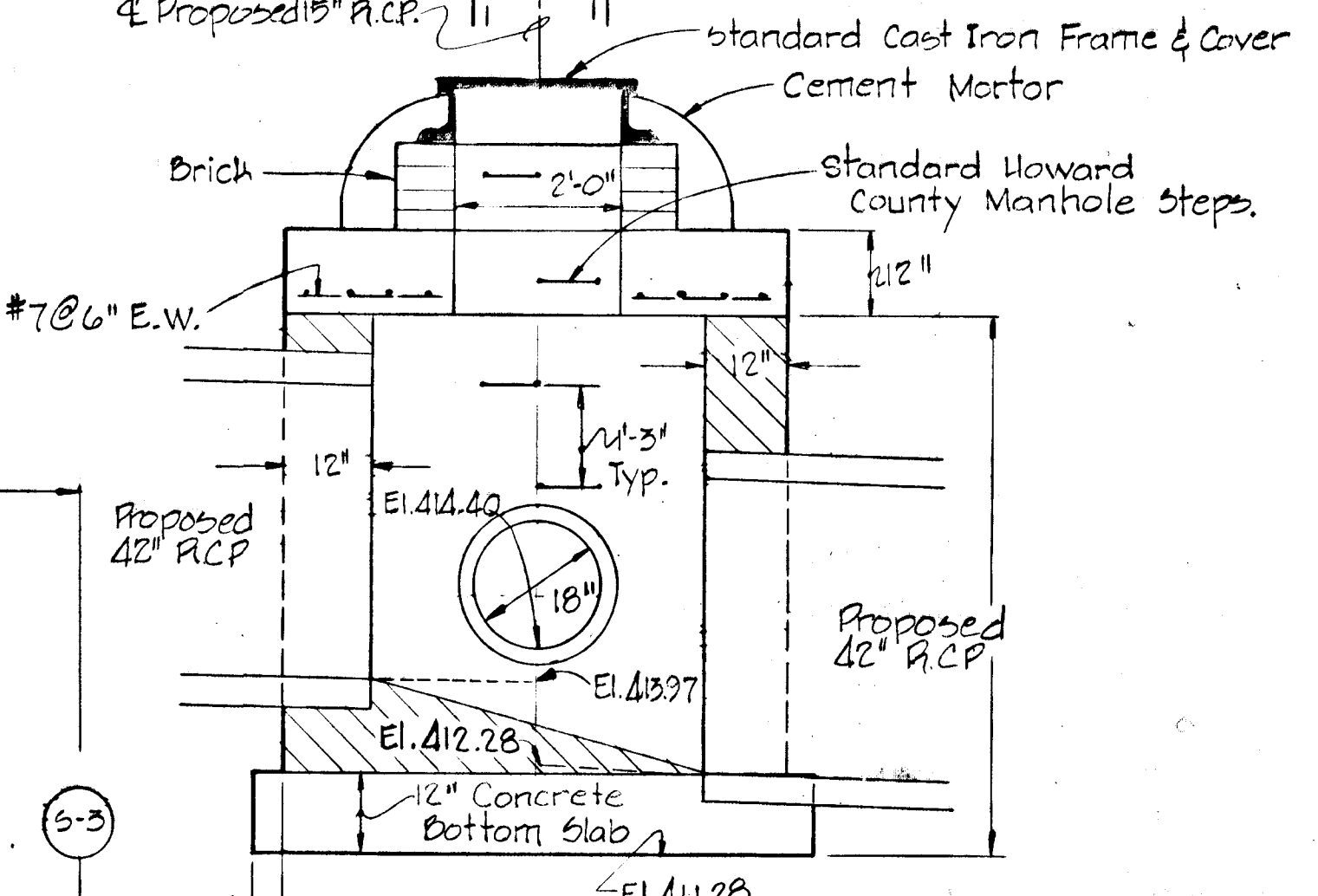
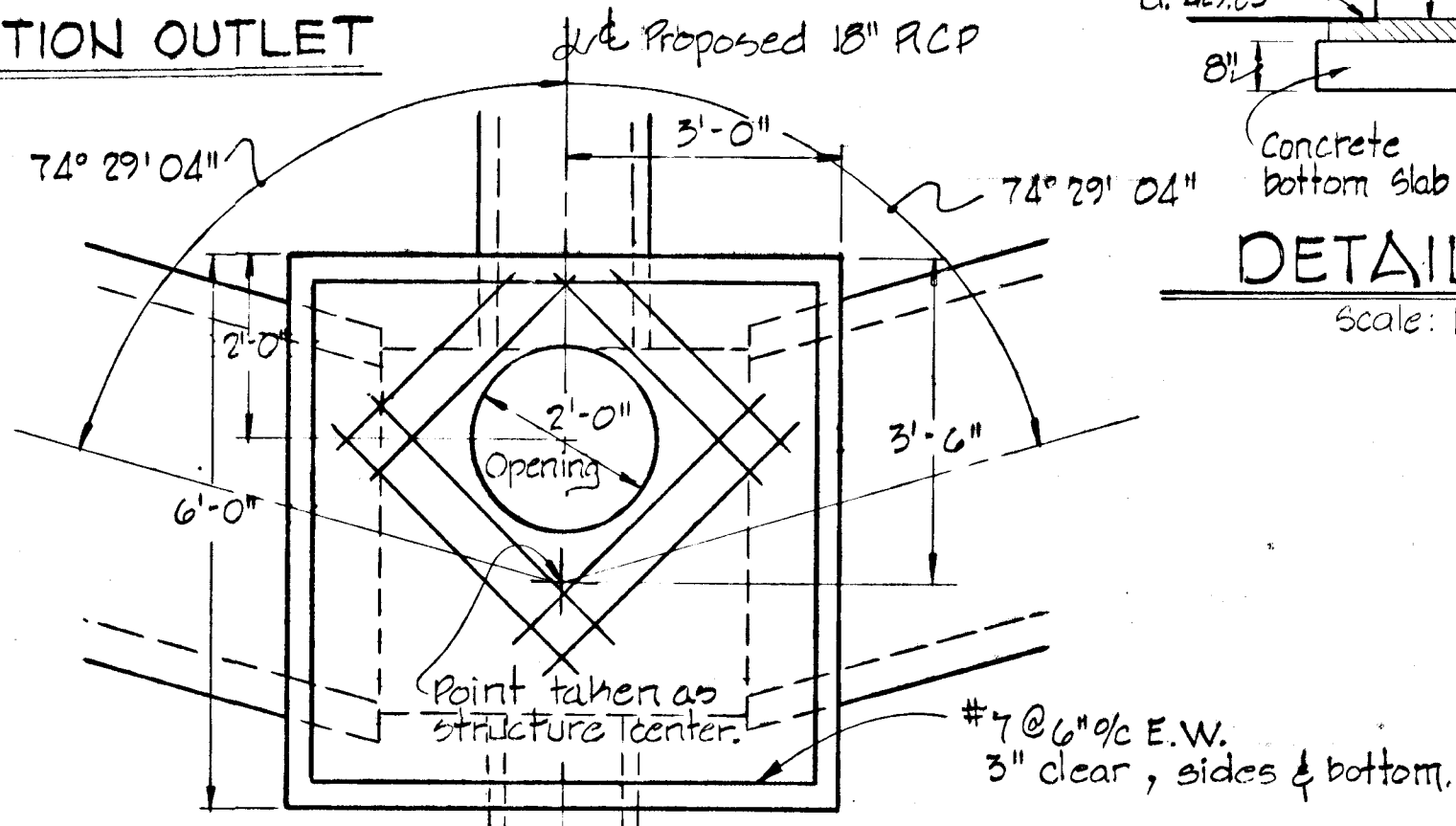


Diam	Wall	A	B	C	D	E	P	R <sub>1</sub>	R <sub>2</sub>	T
*15	2 1/4	6	27	46	73	80	24 3/4	12 1/2	11	2
30	3 1/2	12	54	93 3/4	146	160	49 1/2	24 3/4	22	4
42	4 1/2	21	83	135 3/4	219 3/4	240	74 1/4	37 1/4	33	6

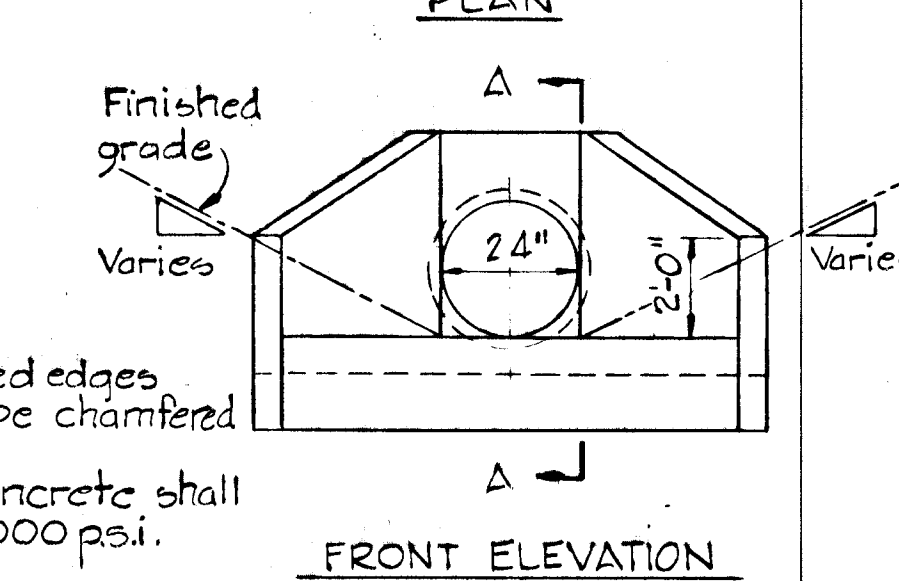
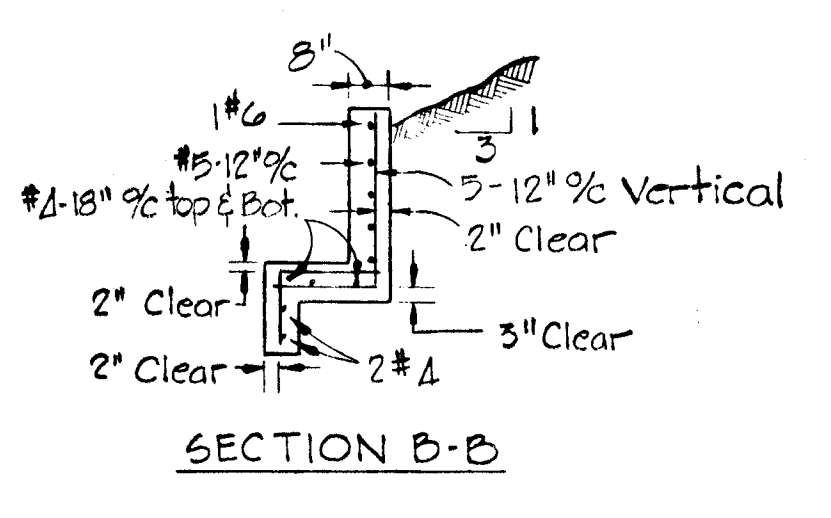
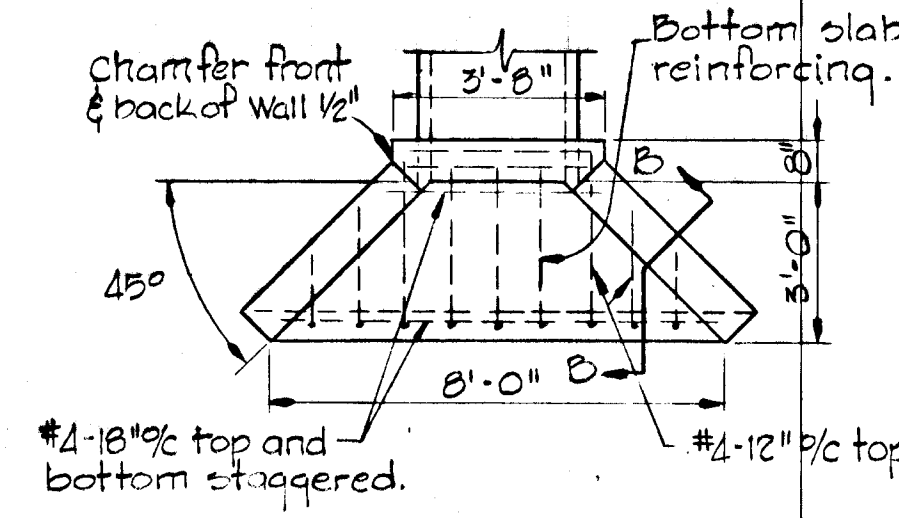
All dimensions in inches  
 \*15" Diameter Flared End section-Inlet is same as Outlet, except end detail is a spigot.



DETAIL MH-4  
 Scale: 1" = 4'

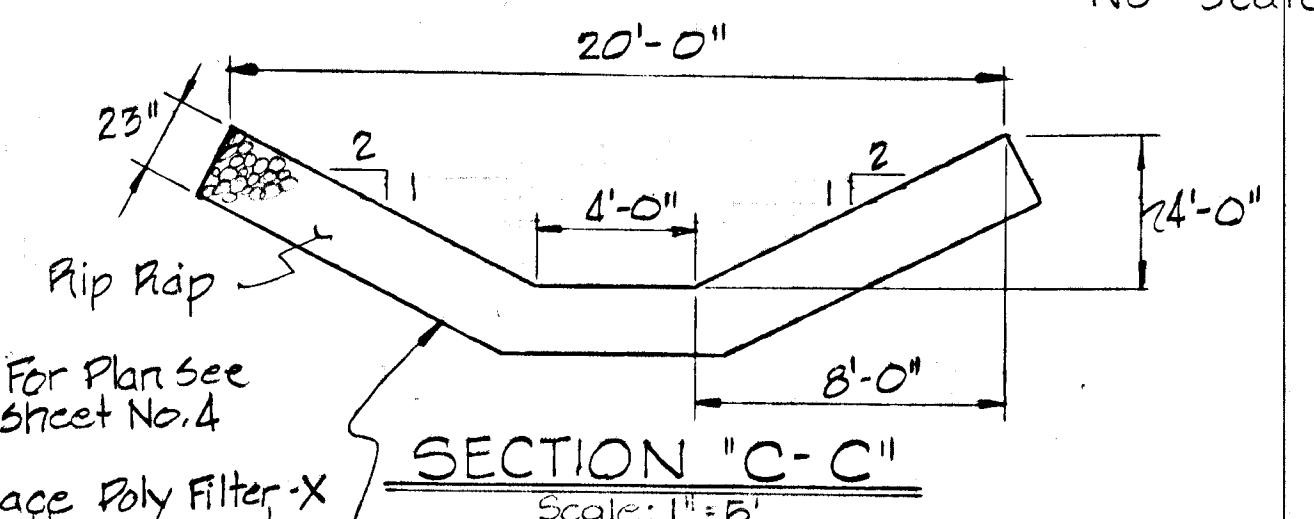


DETAIL MH-3  
 Not to Scale



TYPE "A" HEADWALL  
 No Scale

Notes:  
 1. Exposed edges shall be chamfered 1" x 1".  
 2. All concrete shall be 3000 p.s.i.



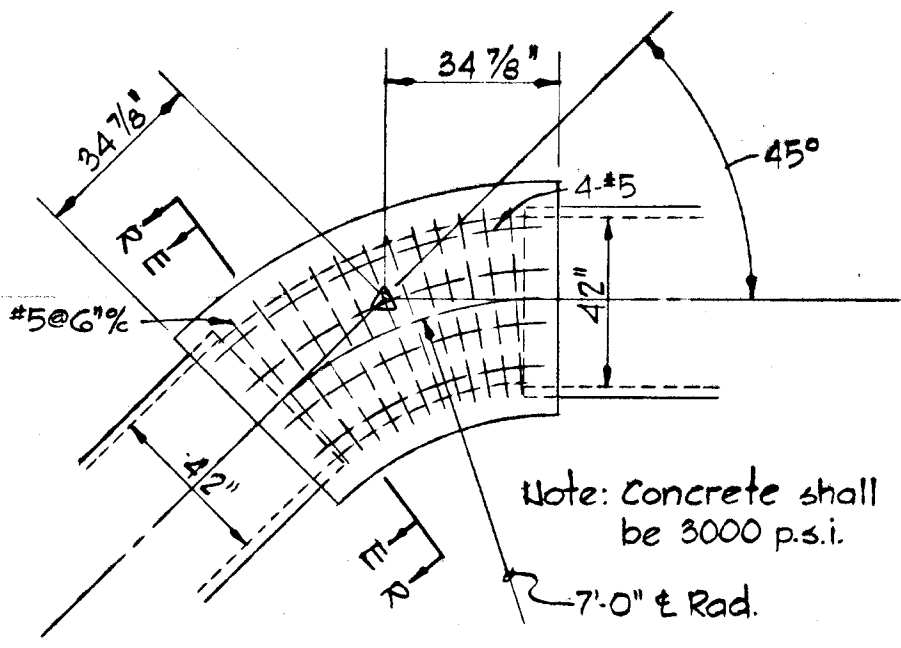
Place Poly Filter Cloth or equal under all rip-rap.

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

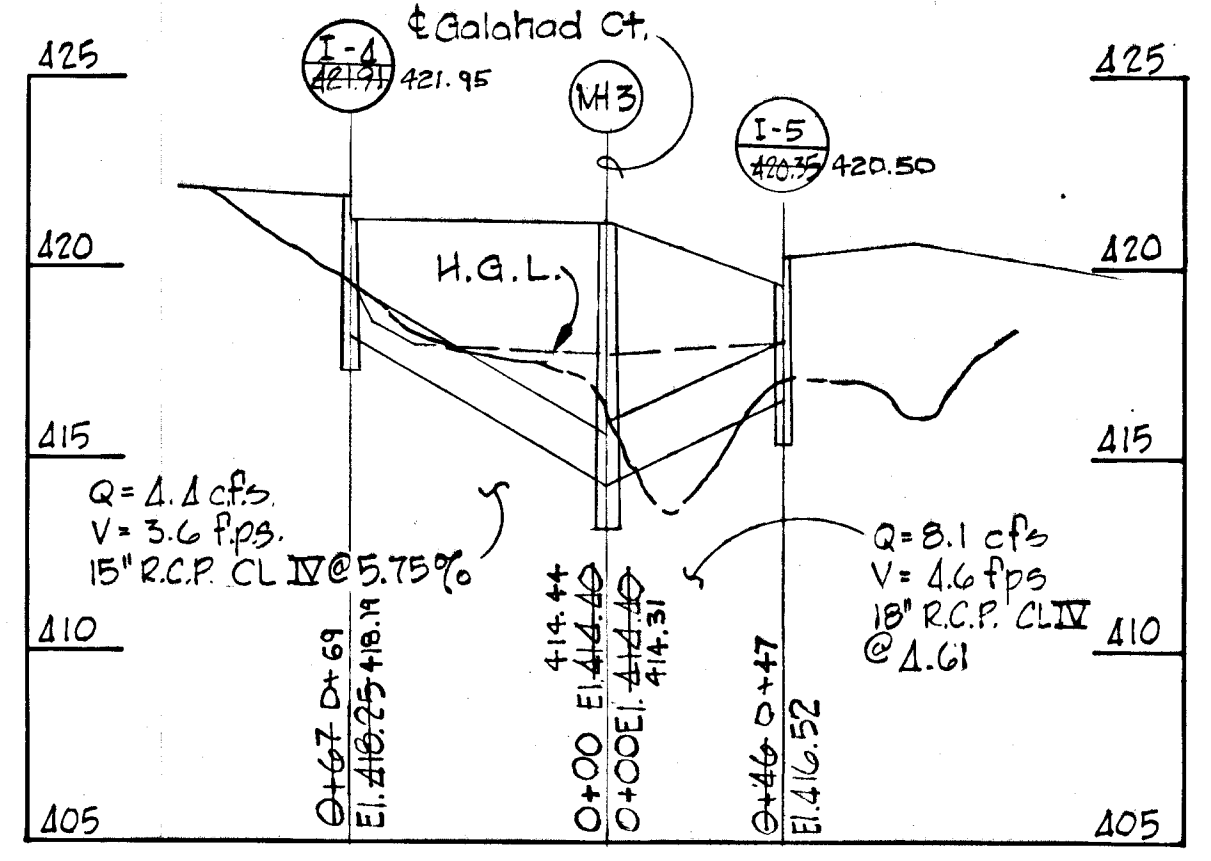
PROJECT TITLE  
 BURLEIGH MANOR  
 SECTION 1 AREA 1  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 STORM DRAIN PROFILES & DETAILS  
 SCALE: AS SHOWN DATE: Nov 3, 1978

WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

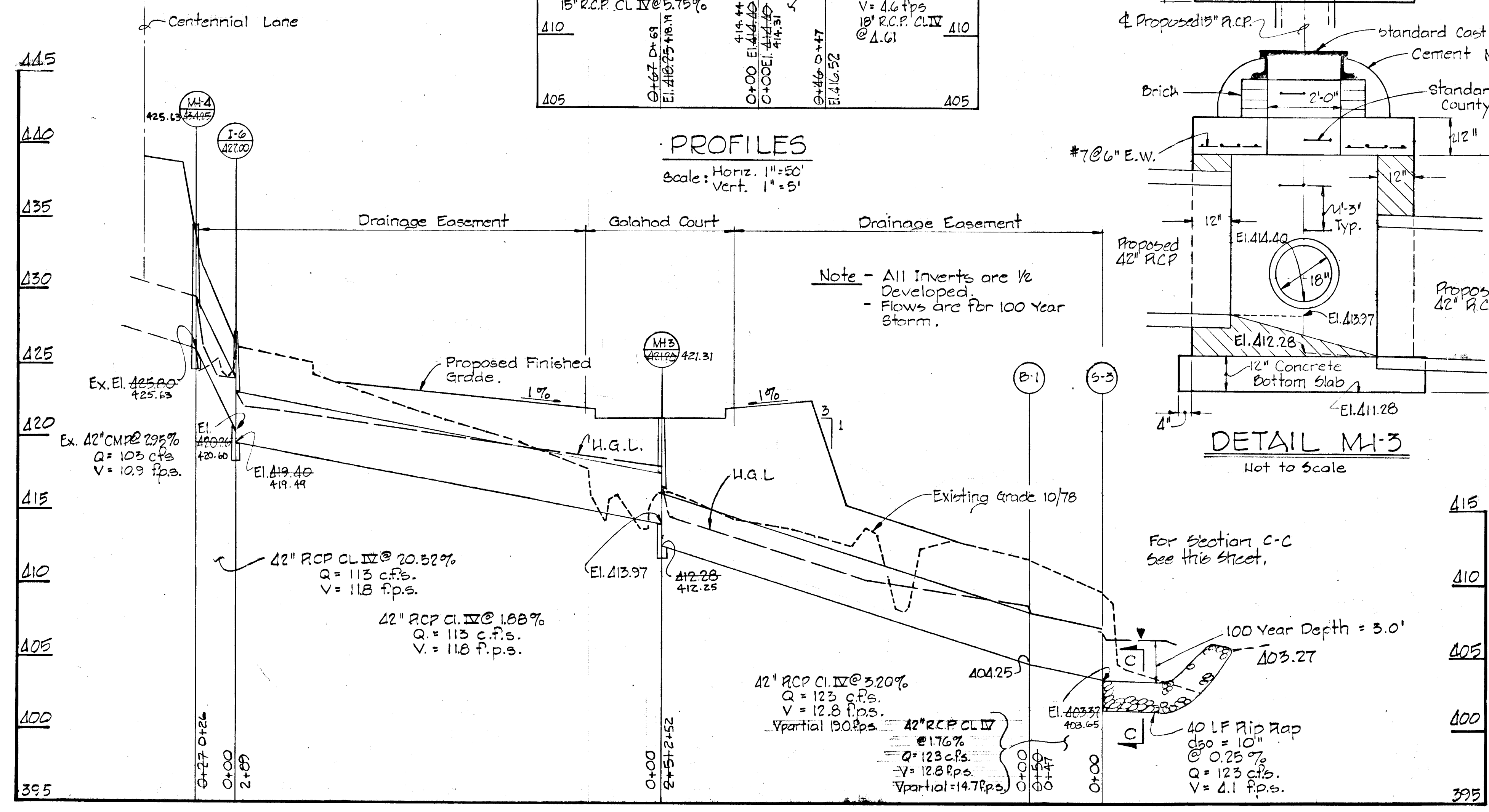
*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974



DETAIL - 45° BEND



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



Note - All Inverts are 1/2 Developed.  
 - Flows are for 100 Year Storm.

For Section C-C see this sheet.

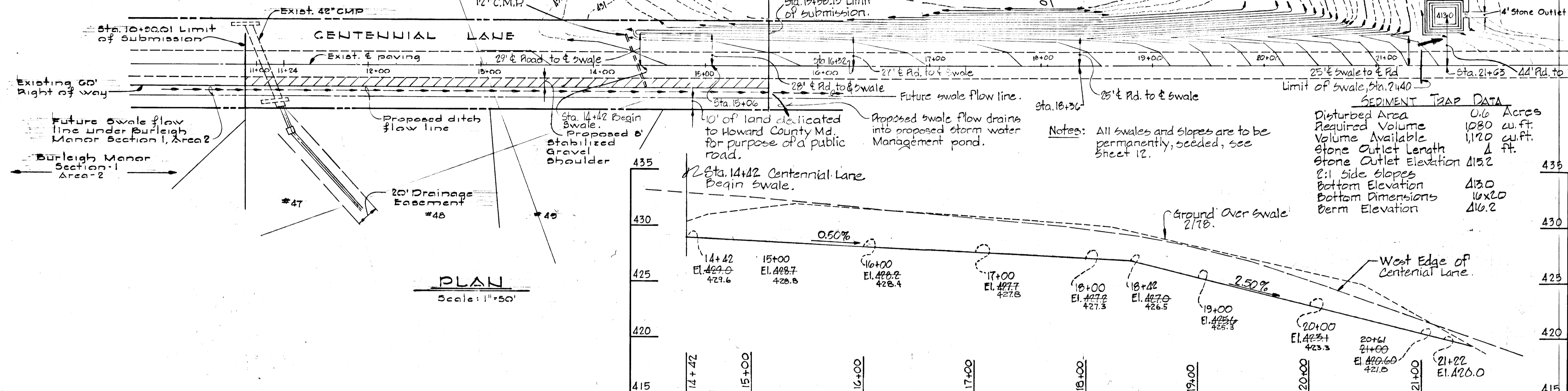
AS BUILT SURVEY DATA DATED JUNE 28, 1982 SIGNED & SEALED BY HENRY V. OHEIM M.D.R.L.S. 4156

#721

**Note: East Side Centennial Lane**  
 For sediment control the proposed swale flow and the remaining graded area drains naturally into the Storm Water Management Pond, see Sheets 10 & 11 for construction details.

**Note:** For typical cross sections of work to be done to West shoulder Centennial Lane see Sheet 3.

For bediment Trap Details see Sheet 12 of 12.



**SEDIMENT TRAP DATA**

Disturbed Area	0.6	Acres
Required Volume	1080	cu. ft.
Volume Available	1,120	cu. ft.
Stone Outlet Length	1	ft.
Stone Outlet Elevation	415.2	
2:1 Side Slopes		
Bottom Elevation	413.0	
Bottom Dimensions	16x20	
Perm Elevation	416.2	

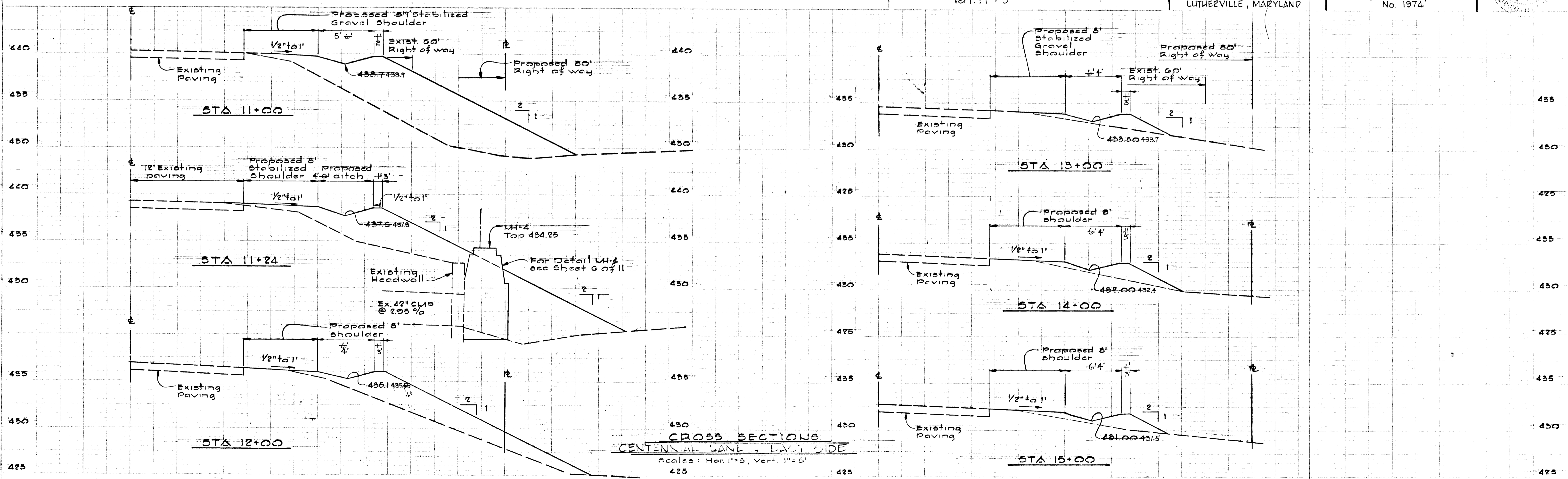
AS-BUILT SURVEY DATA DATED JUNE 28, 1982, SIGNED & SEALED BY HENRY V. OHEIM MD. R.L.S. #4156

**BURLEIGH MANOR SECTION 1 AREA 1**  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 CENTENNIAL LANE IMPROVEMENTS  
 SCALE: AS SHOWN DATE Nov. 3, 1978  
 WHITMAN REQUARDT & ASSOCIATES ENGINEERS  
 BALTIMORE, MARYLAND 21202

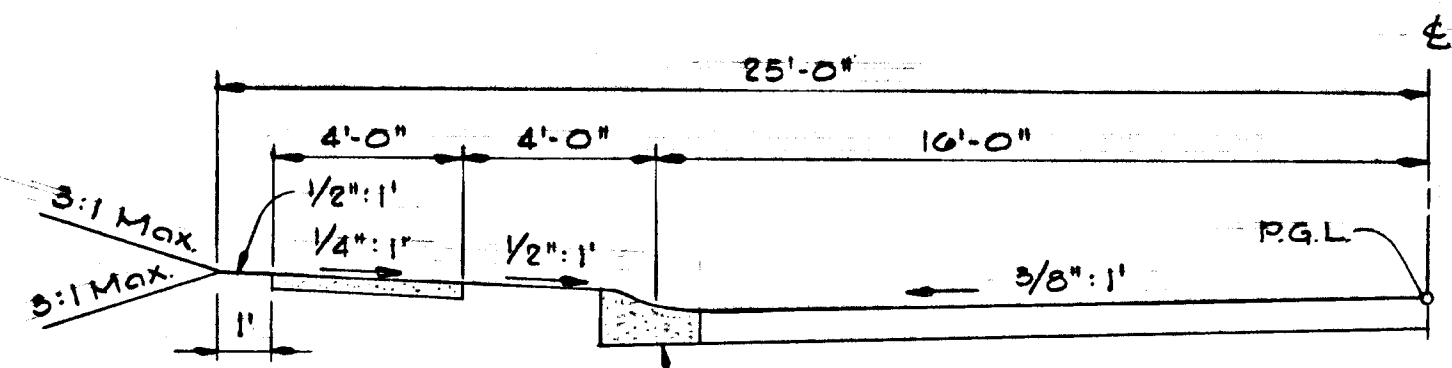
**PROFILE CENTENNIAL LANE WEST SWALE FLOWLINE**  
 Scale: Horiz: 1"=50' Vert: 1"=5'

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974



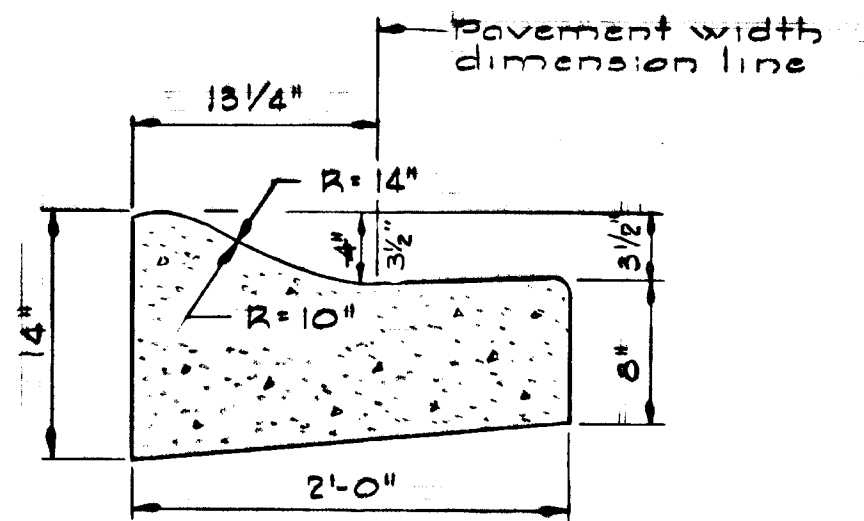
Note:  
 All roads are designed for 25 M.P.H. speed limit.



Note:  
 Sidewalk to be constructed in accordance with Article C-35 of the Howard County Road Construction Code and Specifications.  
 Howard County Modified Combination Curb and Gutter, see Drawing D-40, Page 95.

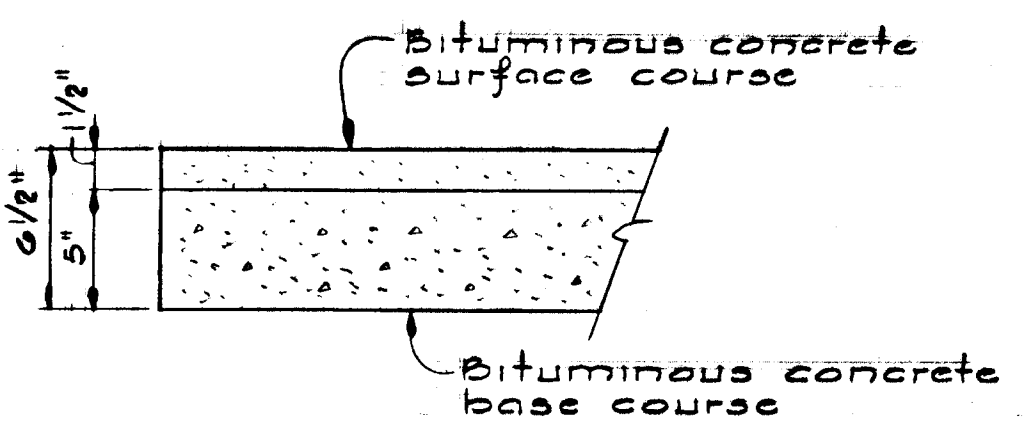
**50' ROW TYPICAL HALF SECTION - 32' PAVING**  
 RESIDENTIAL TRAFFICWAY R-20  
 Scale: 1/4" = 1'-0"

50' ROW HALF SECTION AND 32' PAVING APPLIES TO:  
 WHITWORTH WAY  
 GALAHAD COURT



Note:  
 Curb and gutter to be constructed with class A concrete.

**MODIFIED COMBINATION CURB & GUTTER**  
 No Scale

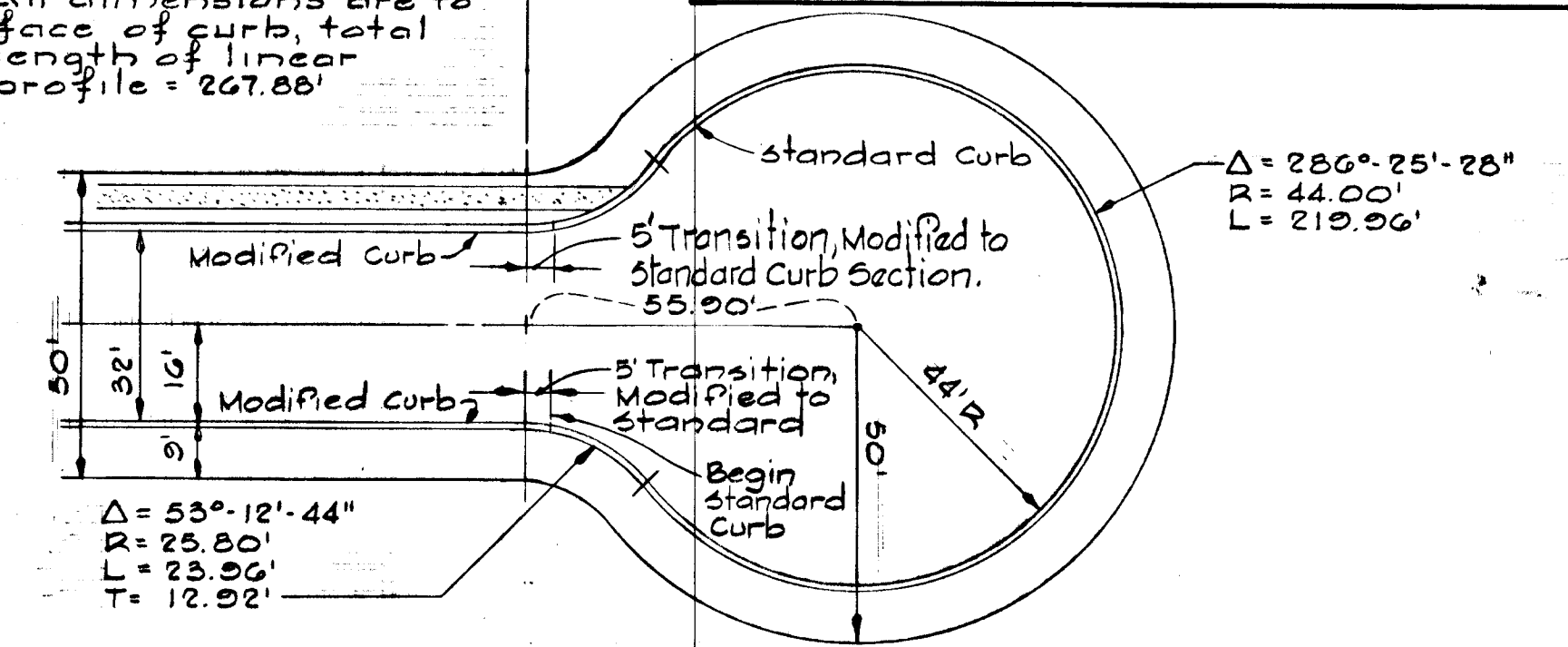


Notes:  
 1. See Howard County Standard Drawing D-5, Page 60.  
 2. Base will be primed in accordance with C-30-3 as provided in the Howard County Road Construction Code and Standard Specifications.  
 3. A tack coat is required in accordance with C-31-4 of the Howard County Road Construction Code and Standard Specifications.

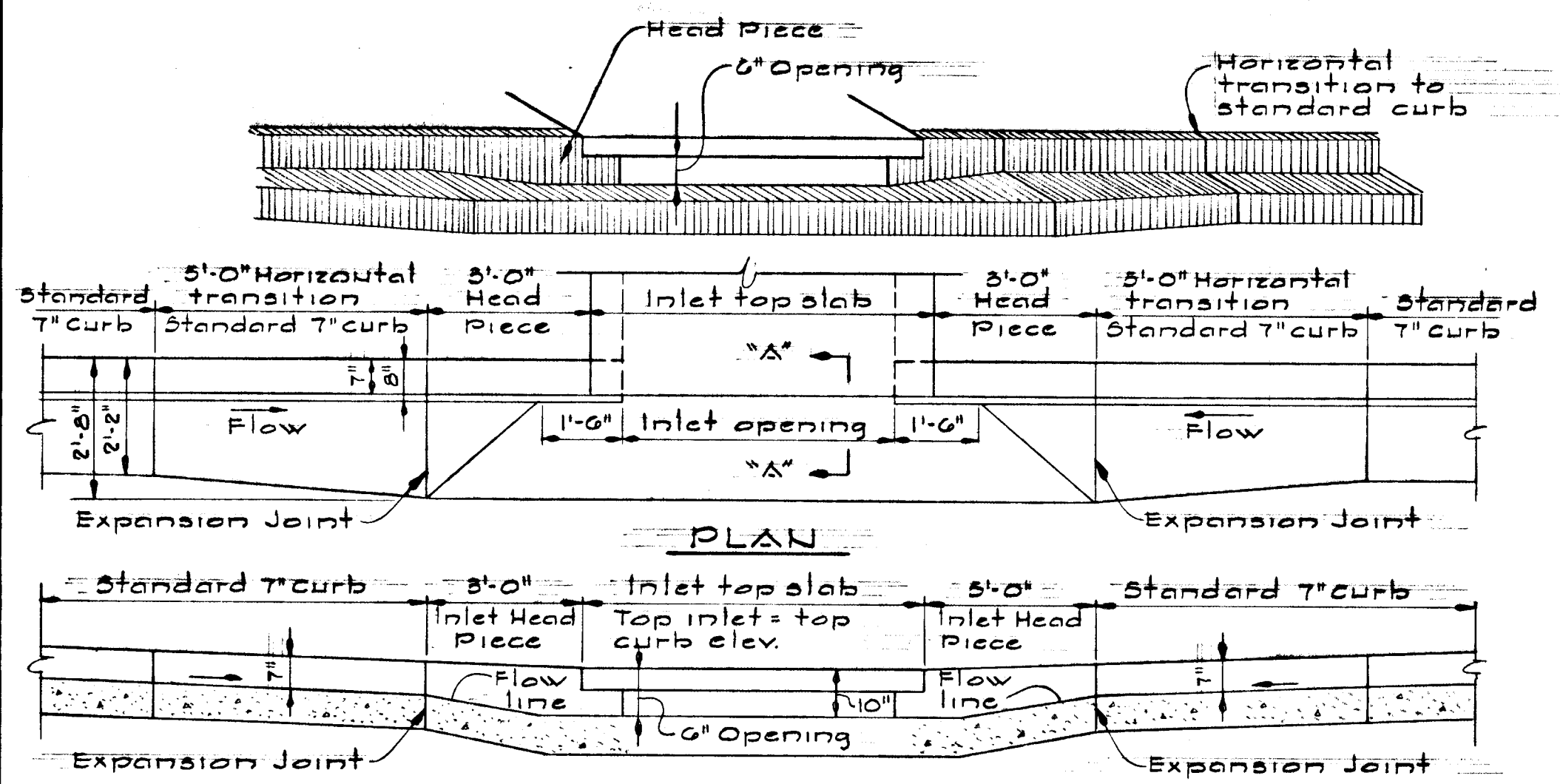
**TYPICAL PAVING SECTION**  
 No Scale

Linear Profile

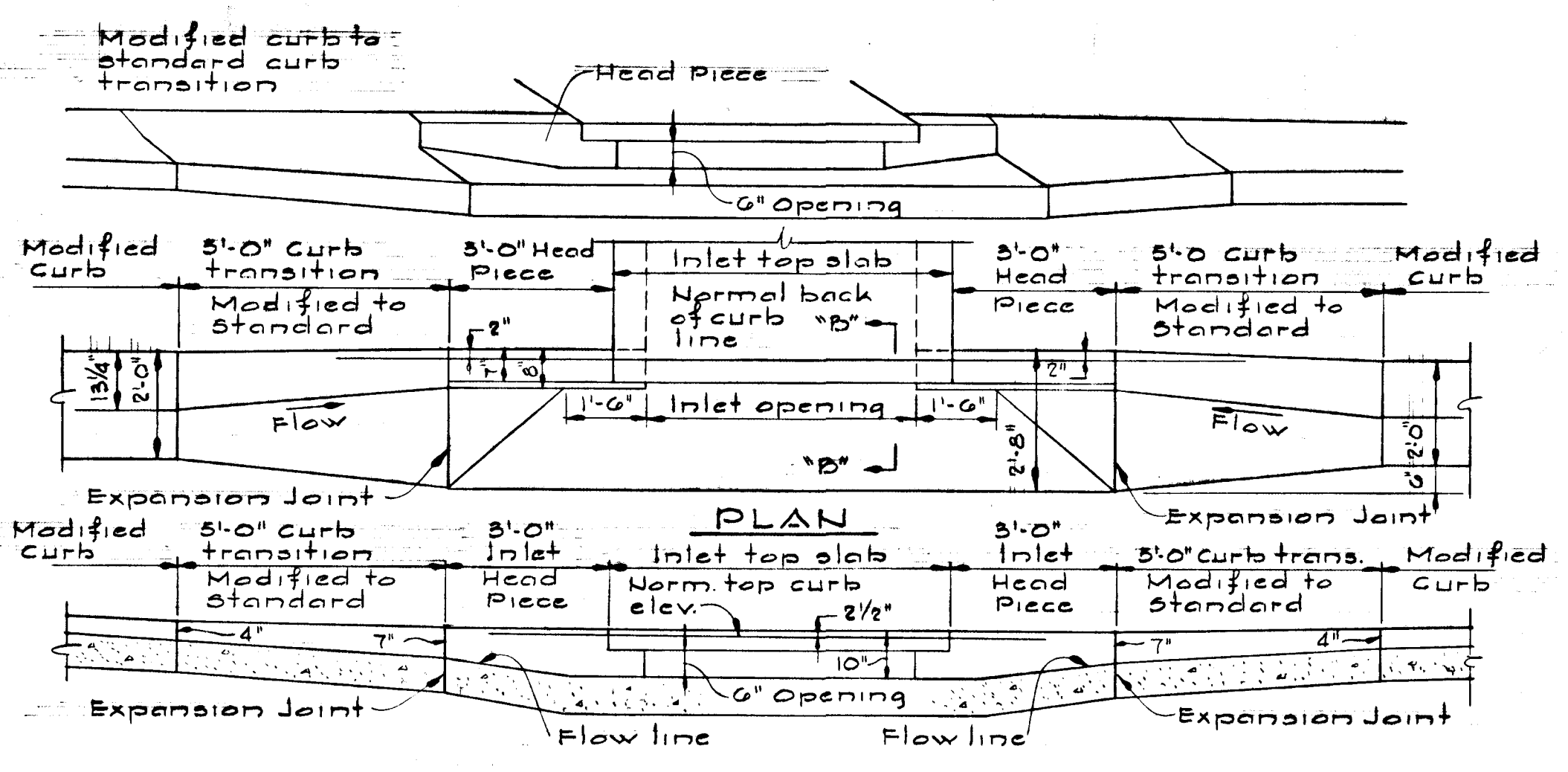
Note:  
 All dimensions are to face of curb, total length of linear profile = 267.88'



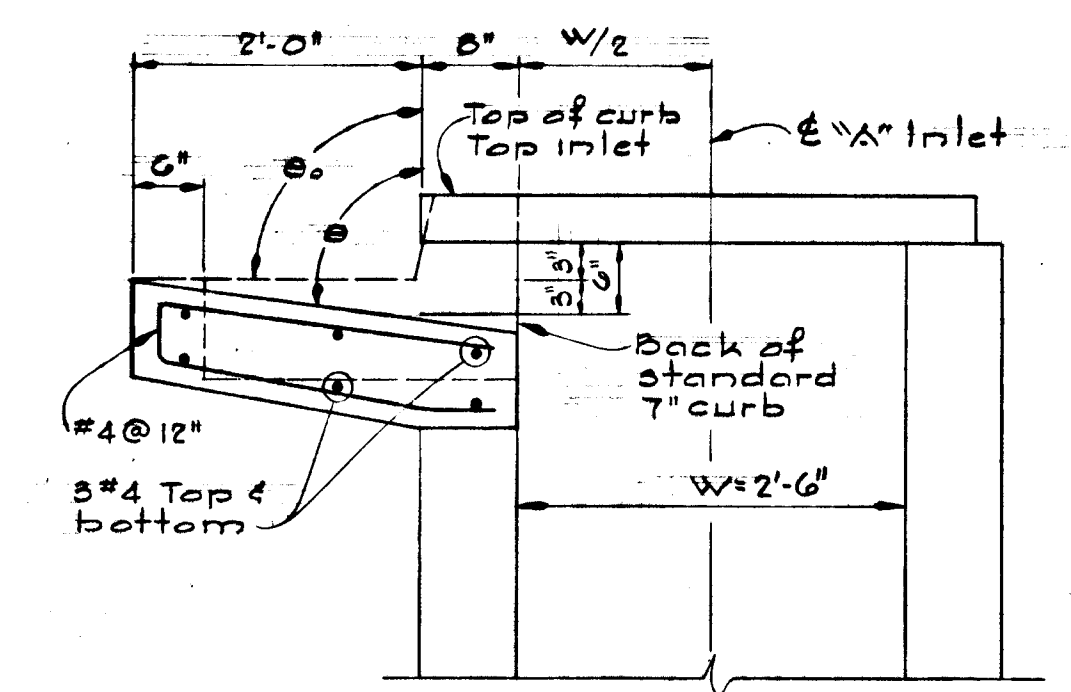
**CUL-DE-SAC DETAIL FOR GALAHAD COURT**  
 Scale: 1" = 30'



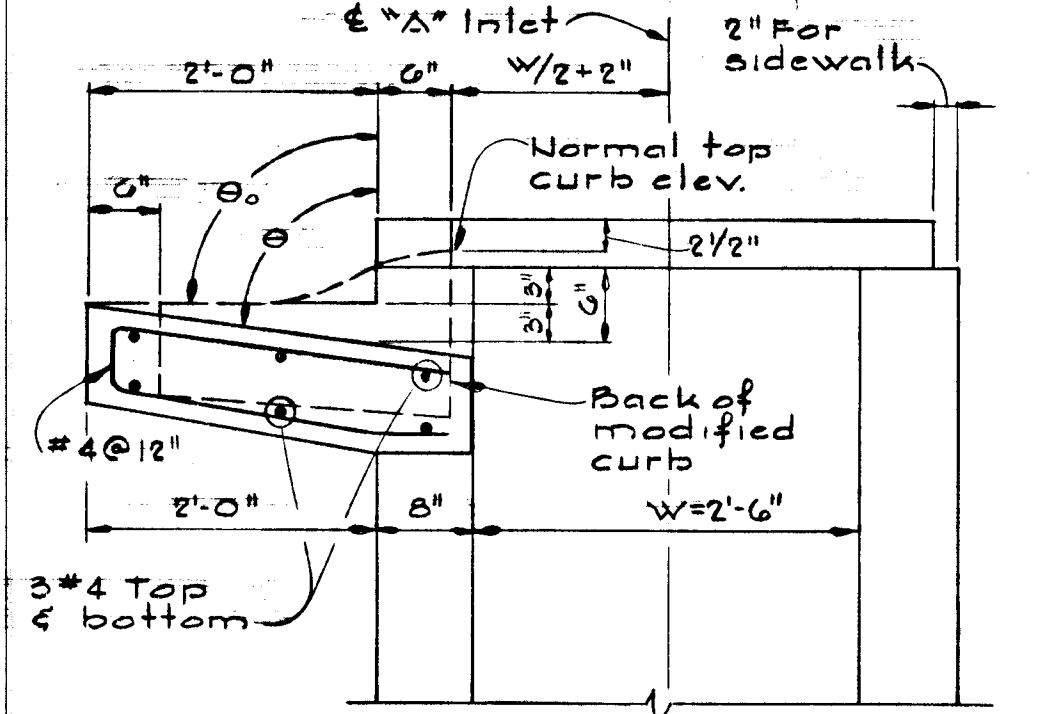
**SECTION ALONG FLOW LINE - SUMPED 'A' INLETS - STANDARD CURB**



**SECTION ALONG FLOW LINE - SUMPED 'A' INLETS - MODIFIED CURB**

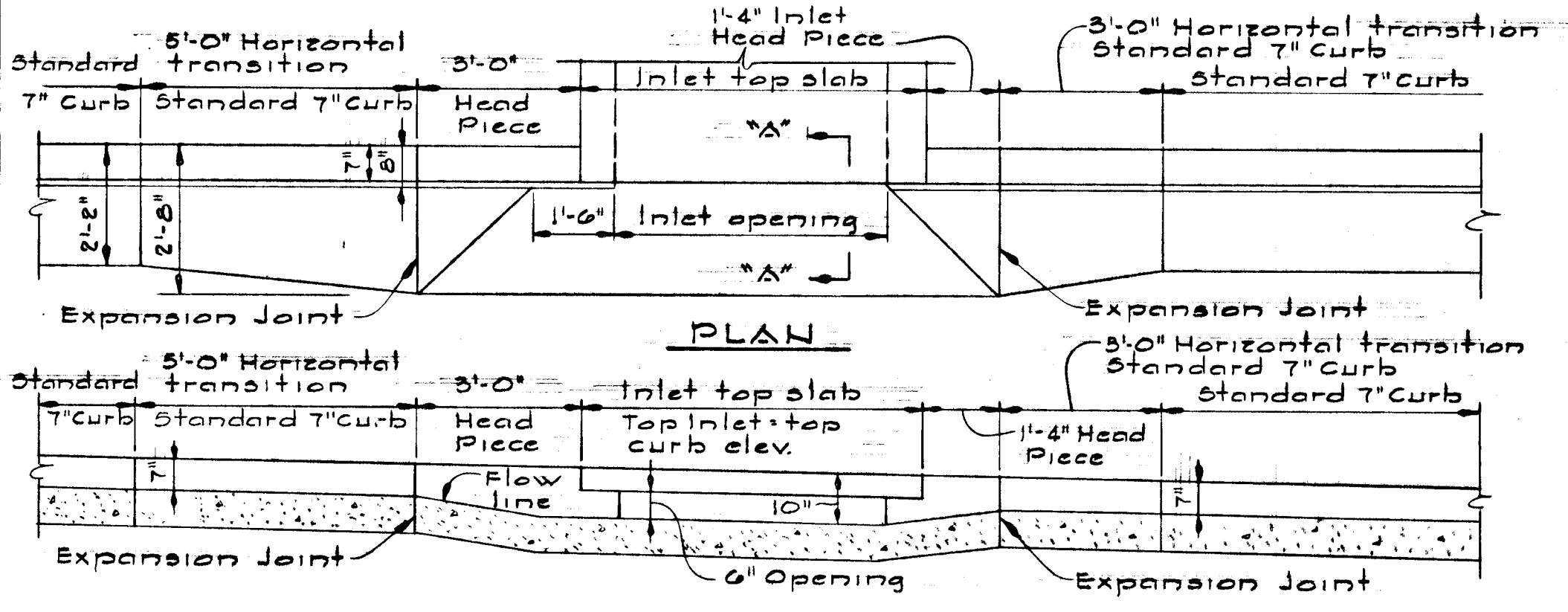


**SECTION 'A-A' 'A' INLET - STANDARD CURB**

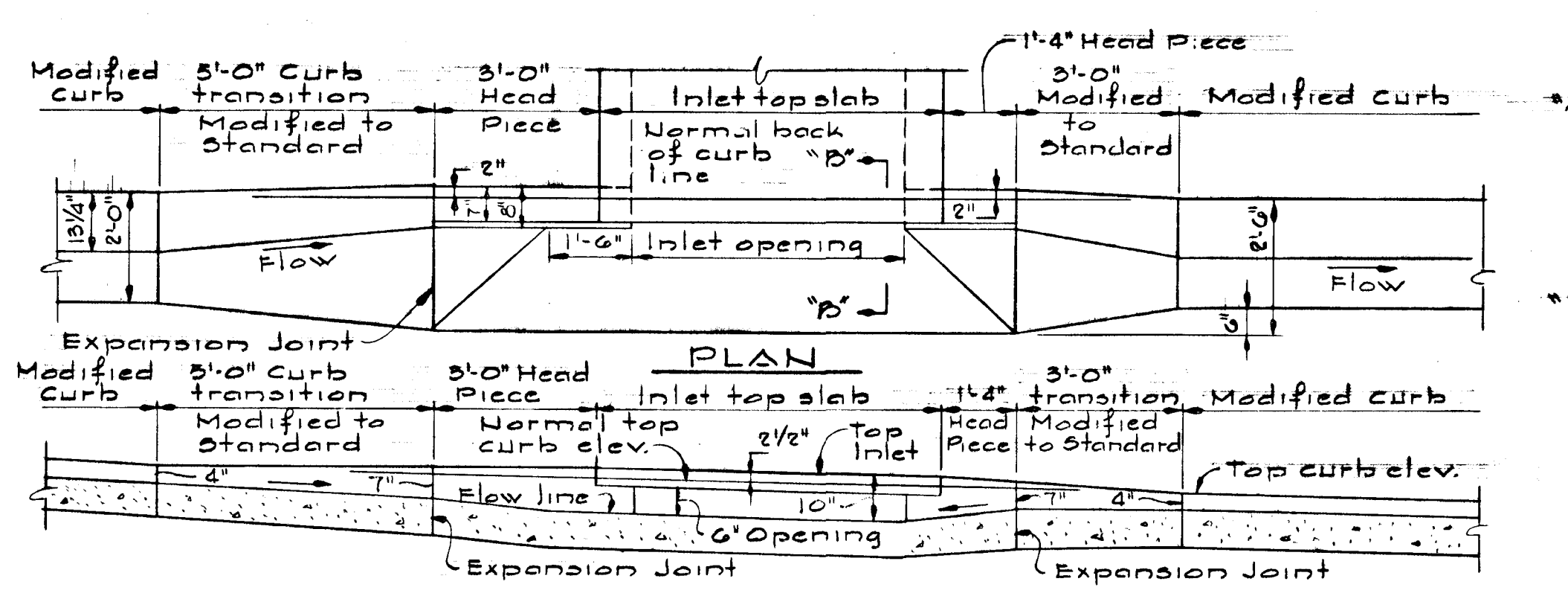


**SECTION 'B-B' 'A' INLET - MODIFIED CURB**

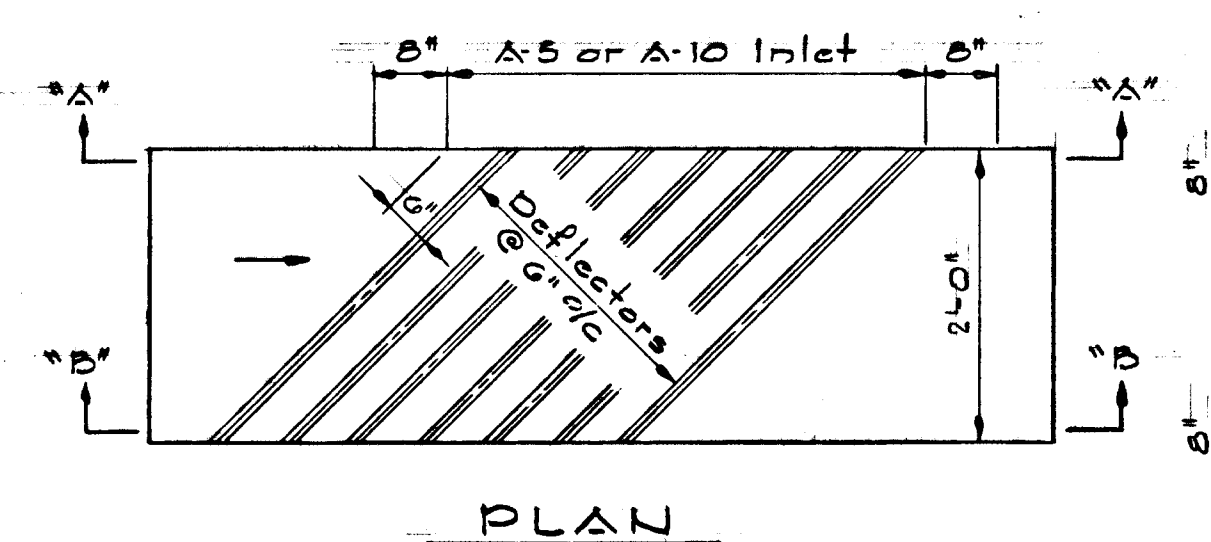
Note:  
 For 'A' Inlet dimensions and structural details, see Standard Howard County Drawing G4-A page 119-A.



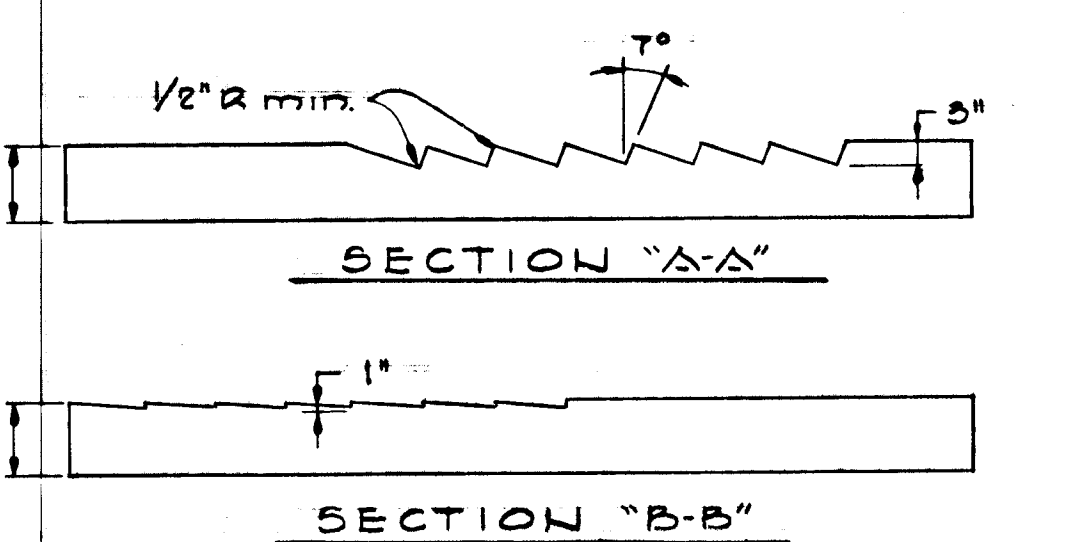
**SECTION ALONG FLOW LINE 'A' INLETS - STANDARD CURB**



**SECTION ALONG FLOW LINE 'A' INLETS - MODIFIED CURB**

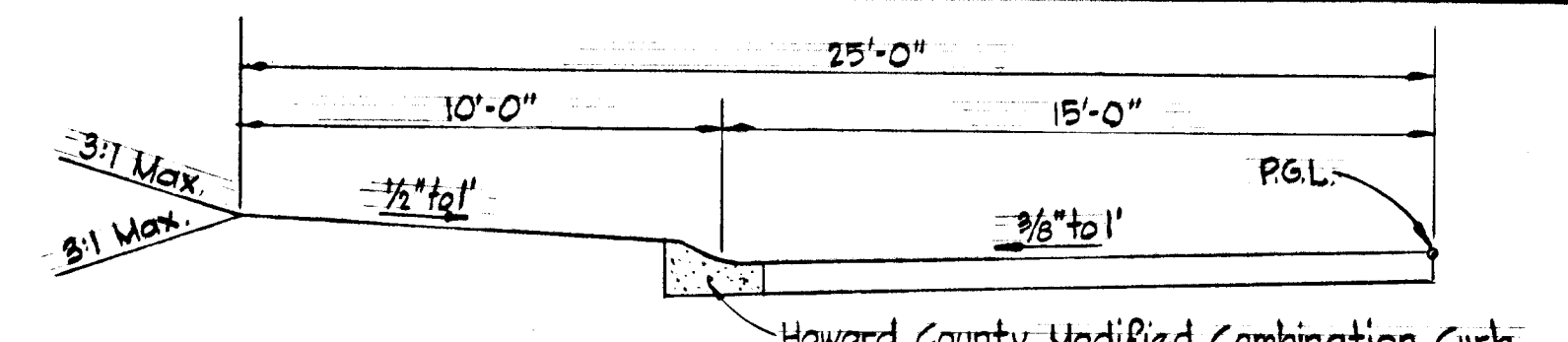


**DEFLECTOR DETAIL**  
 No Scale



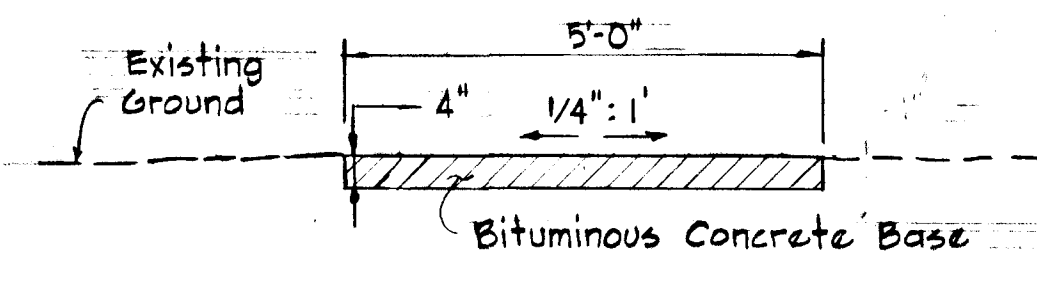
**SECTION 'A-A' and 'B-B'**

AS BUILT SURVEY DATA DATED JUNE 23, 1982, SIGNED & SEALED BY HENRY V. OHEIM P.D.R. L.S. #4156

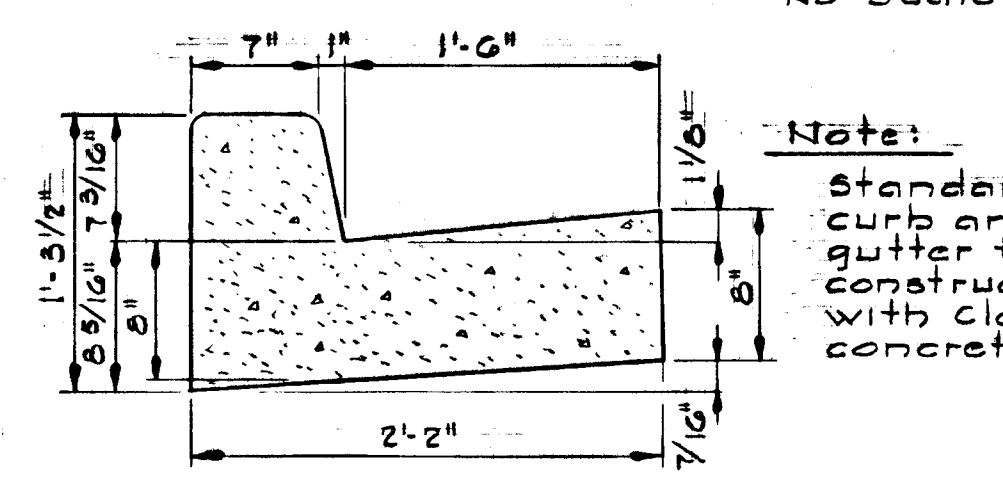


**50' ROW TYPICAL HALF SECTION - 30' PAVING**  
 RESIDENTIAL TRAFFICWAY R-20  
 Scale: 1/4" = 1'-0"

50' ROW HALF SECTION AND 30' PAVING APPLIES TO:  
 DEE JAY DRIVE



**PATHWAY DETAIL**  
 No Scale



**STANDARD 7" COMBINATION CURB & GUTTER**  
 No Scale

Note:  
 Standard curb and gutter to be constructed with class A concrete.

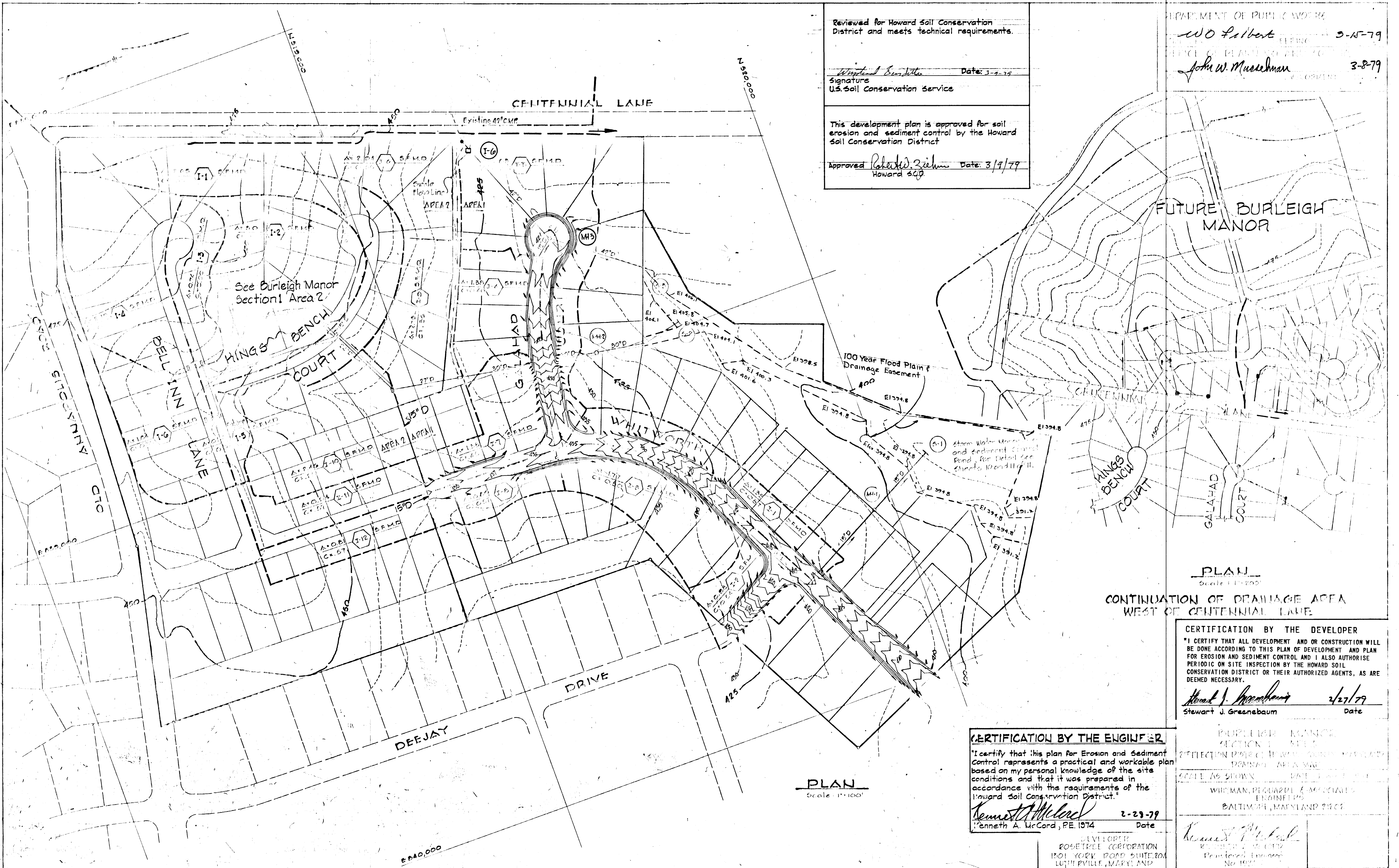
DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

PROJECT TITLE  
**BURLEIGH MANOR SECTION I AREA I**  
 2<sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY MARYLAND  
 ROADWAY & STORM DRAIN DETAILS  
 SCALE: AS SHOWN DATE: Nov. 3, 1978

WHITMAN, REQUART & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

*Kenneth A. McCord*  
 KENNETH A. McCORD  
 Registered Engineer  
 No. 1974





Reviewed for Howard Soil Conservation District and meets technical requirements.

*Wendell B. Smith* Date: 3-1-79  
 Signature  
 U.S. Soil Conservation Service

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

Approved *Robert W. Zahn* Date: 3/9/79  
 Howard S.C.D.

DEPARTMENT OF PUBLIC WORKS

*W.O. Falbert* 3-15-79  
 ENGINEER

*John W. Mueselman* 3-8-79  
 SUPERVISOR

**PLAN**  
 Scale: 1"=100'

**CONTINUATION OF DRAINAGE AREA WEST OF CENTENNIAL LANE**

**CERTIFICATION BY THE DEVELOPER**

"I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND I ALSO AUTHORISE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

*Stewart J. Greenbaum* 2/27/79  
 Stewart J. Greenbaum Date

**CERTIFICATION BY THE ENGINEER**

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

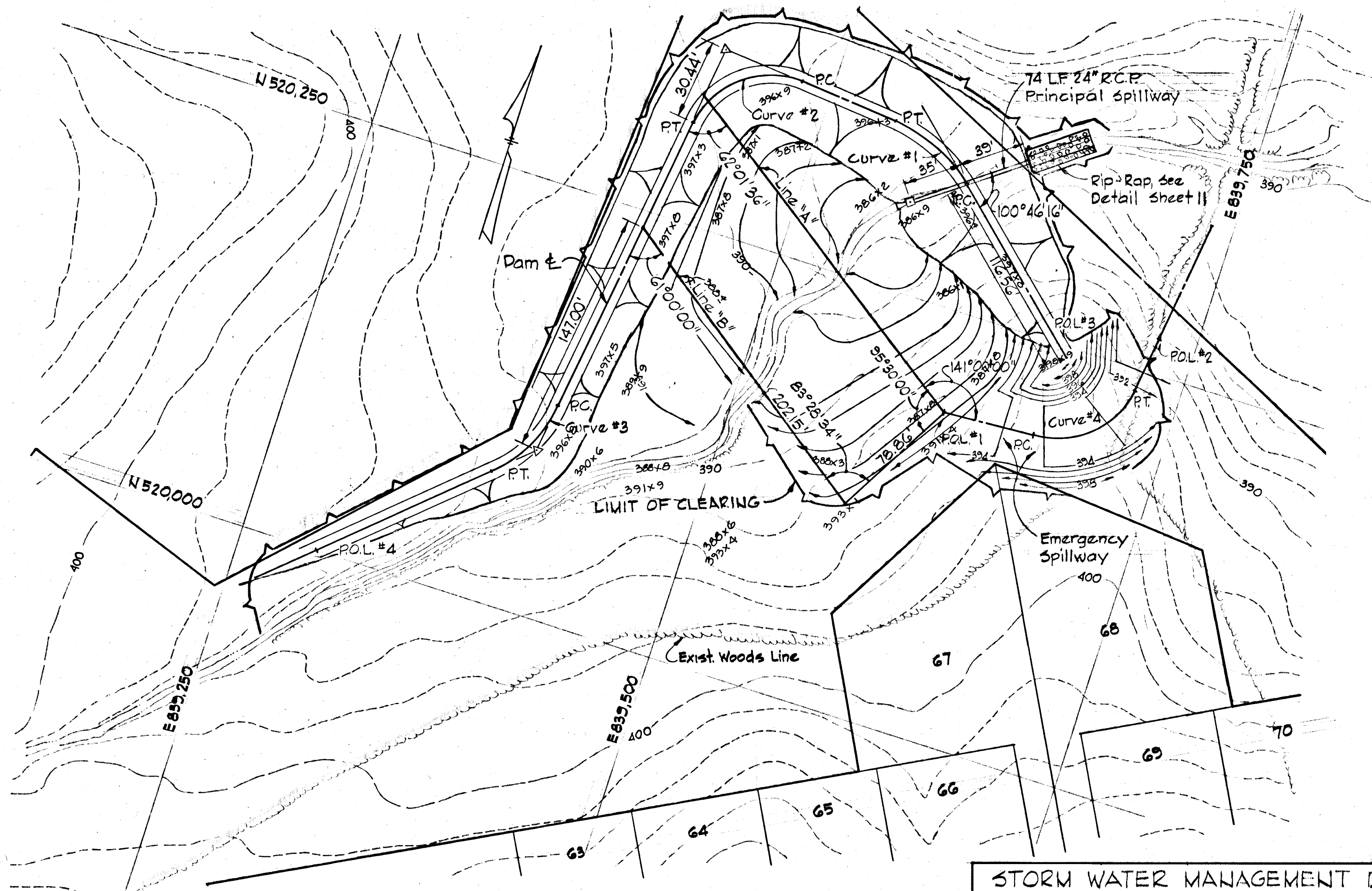
*Kenneth A. McCord* 2-29-79  
 Kenneth A. McCord, P.E. 1974 Date

BURLEIGH MANOR SECTION 1 AREA 2  
 REFLECTION PLAN OF HOWARD SOIL CONSERVATION DISTRICT  
 DRAINAGE AREA MAP  
 SCALE AS SHOWN DATE 3-1-79

WHYMAN, PIGUARDE & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

*Kenneth A. McCord*  
 Kenneth A. McCord  
 Registered Engineer  
 No. 1974

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND 21042



**PLAN**  
 Scale: 1"=50'

**DAM & DATA**

POL #3	N 520,244	E 839,677
POL #3 to PC	117.36'	N 47°45'09"W
PC to PT	CRD 56.74'	BR N 66°07'34"W
Curve #1	ARC 57.72'	DEL 36°44'50"
	RAD 90.00'	TAN 29.89'
PT to PC	57.41'	N 84°29'59"W
PC to PT	CRD 69.50'	BR 551°28'31"W
Curve #2	ARC 76.84'	DEL 88°03'01"
	RAD 50.00'	TAN 48.33'
PT to PC	184.47'	S 7°27'01"W
PC to PT	CRD 55.23'	BR S 27°38'32"W
Curve #3	ARC 56.39'	DEL 40°23'02"
	RAD 80.00'	TAN 29.42'
PT to POL #4	113.59'	S 47°50'03"W
POL #4	N 520,000	E 839,293

**EMERGENCY SPILLWAY & DATA**

POL #1	N 520,190	E 839,620
POL #1 to PC	54.48'	N 86°25'25"E
PC to PT	CRD 64.06'	BR S 46°25'19"W
Curve #4	ARC 69.53'	DEL 79°40'12"
	RAD 50.00'	TAN 41.71'
PT to POL #2	34.82'	N 6°45'13"E
POL #2	N 520,272	E 839,725

**STORM WATER MANAGEMENT DATA**

	PEAK INFLOW	RELEASE	STORAGE	PEAK ELEV.
2 Year Storm	62 c.f.s.	14.3 c.f.s.	85,000 Ft <sup>3</sup>	390.9
10 Year Storm	151 c.f.s.	53.2 c.f.s.	222,000 Ft <sup>3</sup>	394.0
50 Year Storm	229 c.f.s.	124 c.f.s.	281,000 Ft <sup>3</sup>	395.0
100 Year Storm	268 c.f.s.	183 c.f.s.	306,000 Ft <sup>3</sup>	395.4

**SEDIMENT CONTROL DATA**

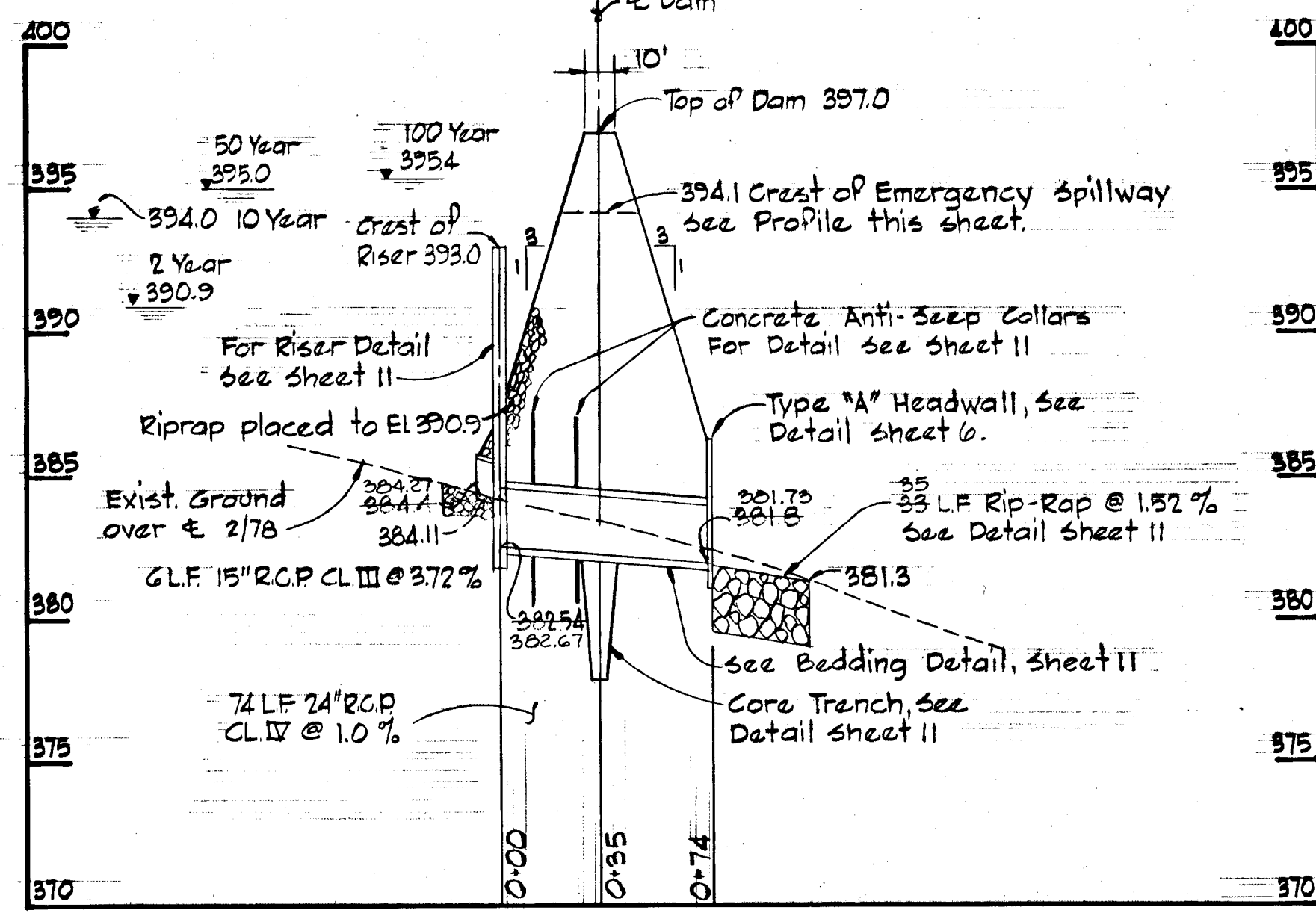
Drainage Area	85.6 Acres
Sediment Volume Required	5800 yds <sup>3</sup>
Sediment Volume Available	6300 yds <sup>3</sup>
Clean-out Elevation	391.5

- NOTES**
- All work shall be performed in accordance with the "Storm Water Management Pond Design Manual, Maryland Association of Soil Conservation Districts," construction specifications, starting page 6-7.
  - The pond shall function initially as a sediment basin. The pond shall be constructed prior to any construction work within the drainage area.
  - Pond and spillway excavation 2100 yds<sup>3</sup>  
 Dam fill volume 5200 yds<sup>3</sup>  
 Core trench volume 820 yds<sup>3</sup>
  - Area of tree clearance 1.68 Acres
  - Borrow fill for construction of the earth embankment may be taken from roadway cut sections.
  - Earth sections shall be compacted to at least 95% of the optimum density.

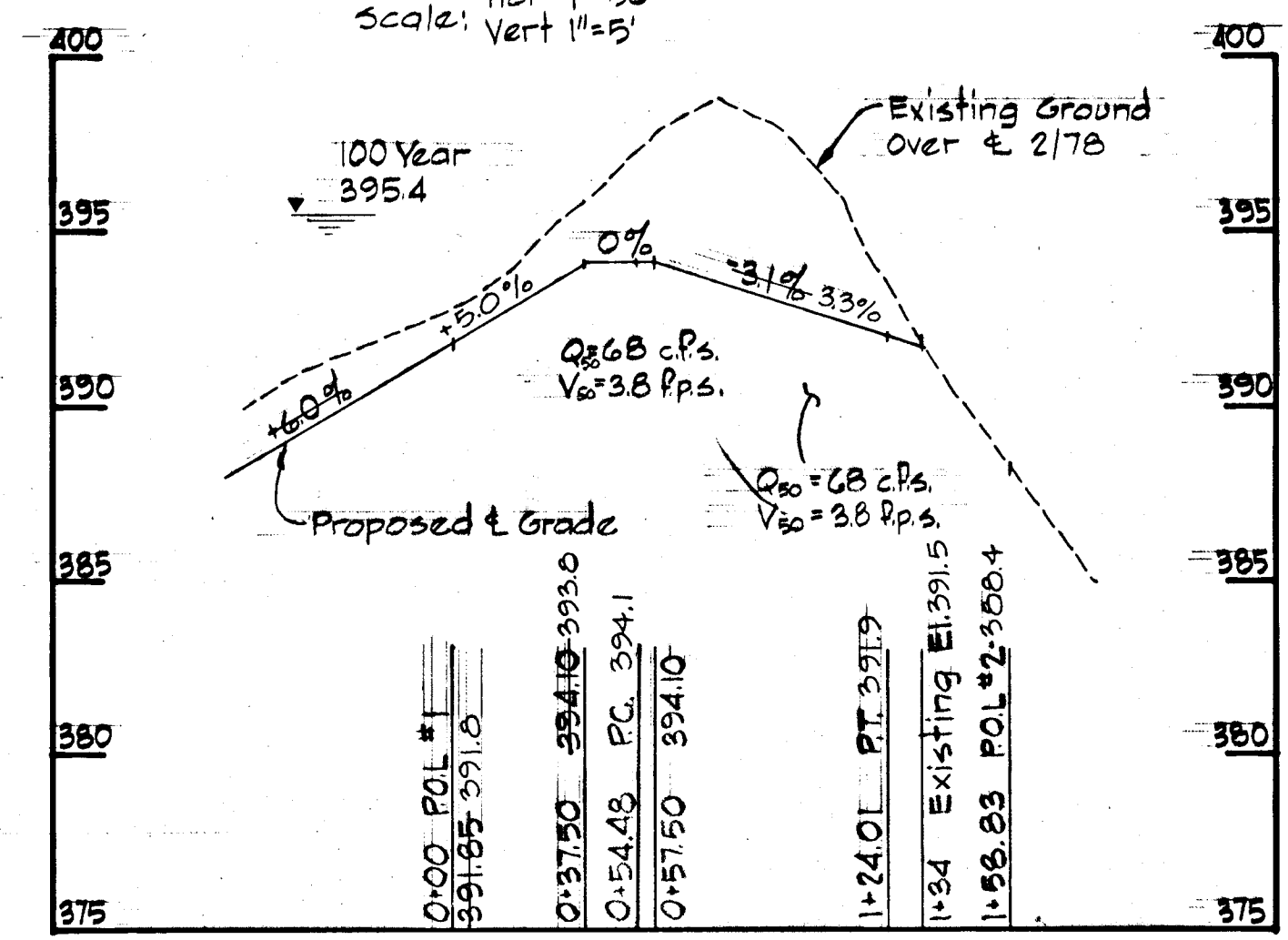
- Pond Restoration:  
 Refurbishing of the ponds shall be done after all construction (Areas 1 and 2) is completed and grass is established within the pond drainage areas. Refurbishing of the ponds shall include the removal of all sediment; the restoration of the ponds to the lines and grades as shown on the Plans; the replacement of all filter cloth and rip rap stone where necessary; removal of temporary block on 15' inlet section; permanent reseeding of all the disturbed graded surfaces and the cleaning of the principal spillways and outfall ditches.  
 A portion of the removed sediment may be placed behind lots G2-G5 and then permanently seeded (see permanent seeding notes sheet 12). Or a portion of the removed sediment shall be placed at an approved site, protected by standard sediment control provision. In either case the disposition of sediment shall be approved by the Howard Soil Conservation District.
- After the ponds are completely refurbished the owner shall submit "As-Built" drawings to the Howard county soil conservation District.

\* Inlet to riser shall be temporarily blocked. Initial permanent seeding shall be applied to all cut and fill embankments from toe to top of slope and top elevation at the earth dam construction. The invert of the pond shall be permanently seeded after the ponds are refurbished. Rip rap within the pond is to be placed during refurbishing.

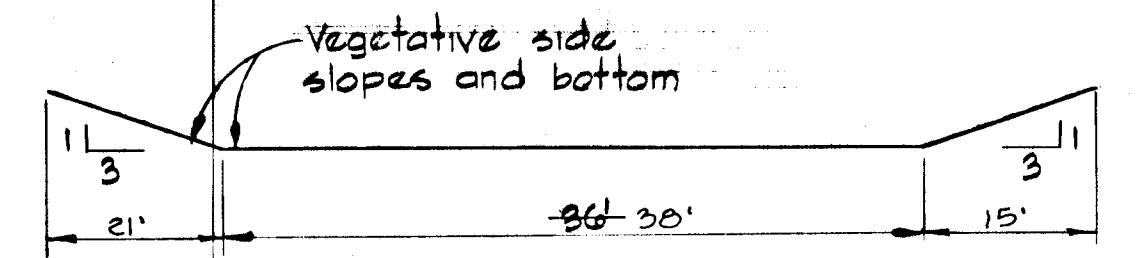
+ All water within sediment basin shall be pumped out prior to removal of temporary block in 15' Inlet Section of Riser



**PROFILE PRINCIPAL SPILLWAY**  
 Scale: Hor 1"=50', Vert 1"=5'



**PROFILE EMERGENCY SPILLWAY**  
 Scale: Hor 1"=50', Vert 1"=5'



**CROSS SECTION EMERGENCY SPILLWAY**  
 Scale: 1"=10'

As BUILT SURVEY DATED JULY 1, 1981  
 SIGNED & SEALED BY  
 HENRY OHEIM - REG. NO. 4156

THIS PLAN HAS BEEN REVIEWED BY THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

*William B. Smith* 3/9/79  
 U.S. SOIL CONSERVATION DISTRICT DATE

THIS PLAN FOR SMALL POND CONSTRUCTION MEETS THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert W. Zelnick* 3/9/79  
 HOWARD S.D.D. DATE

PLAN NUMBER \_\_\_\_\_

**CERTIFICATION BY THE DEVELOPER**

I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION OF THIS POND WILL BE DONE ACCORDING TO THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL AUTHORIZE A REGISTERED PROFESSIONAL ENGINEER TO SUPPLY THE HOWARD SOIL CONSERVATION OFFICE WITH AN AS-BUILT PLAN OF THIS POND WITHIN 30 DAYS OF THE PONDS COMPLETION.

*Stewart J. Greenebaum* 2/16/79  
 STEWART J. GREENEBAUM DATE

**CERTIFICATION BY THE ENGINEER**

I CERTIFY THAT THIS PLAN FOR SMALL POND CONSTRUCTION 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.

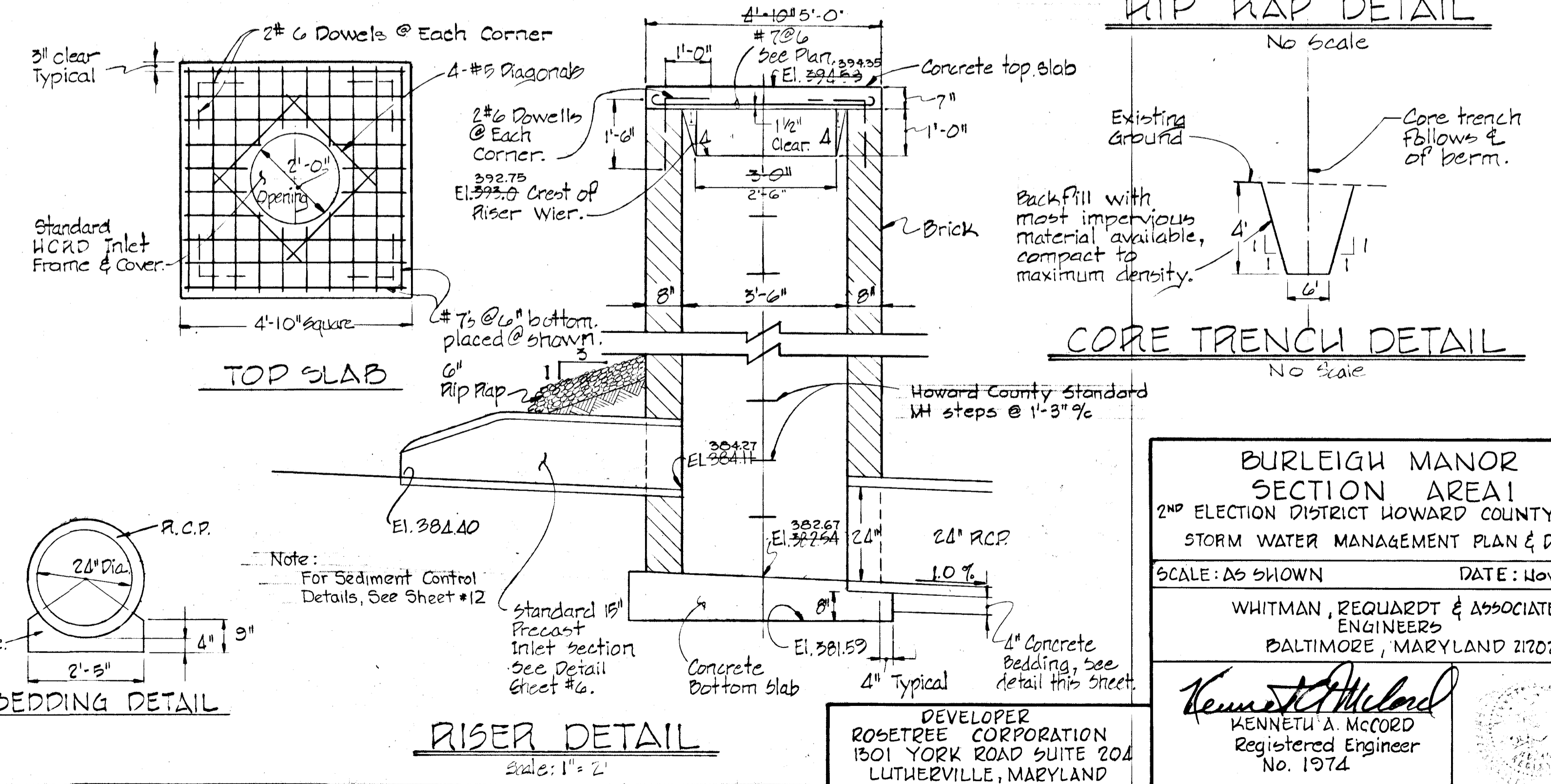
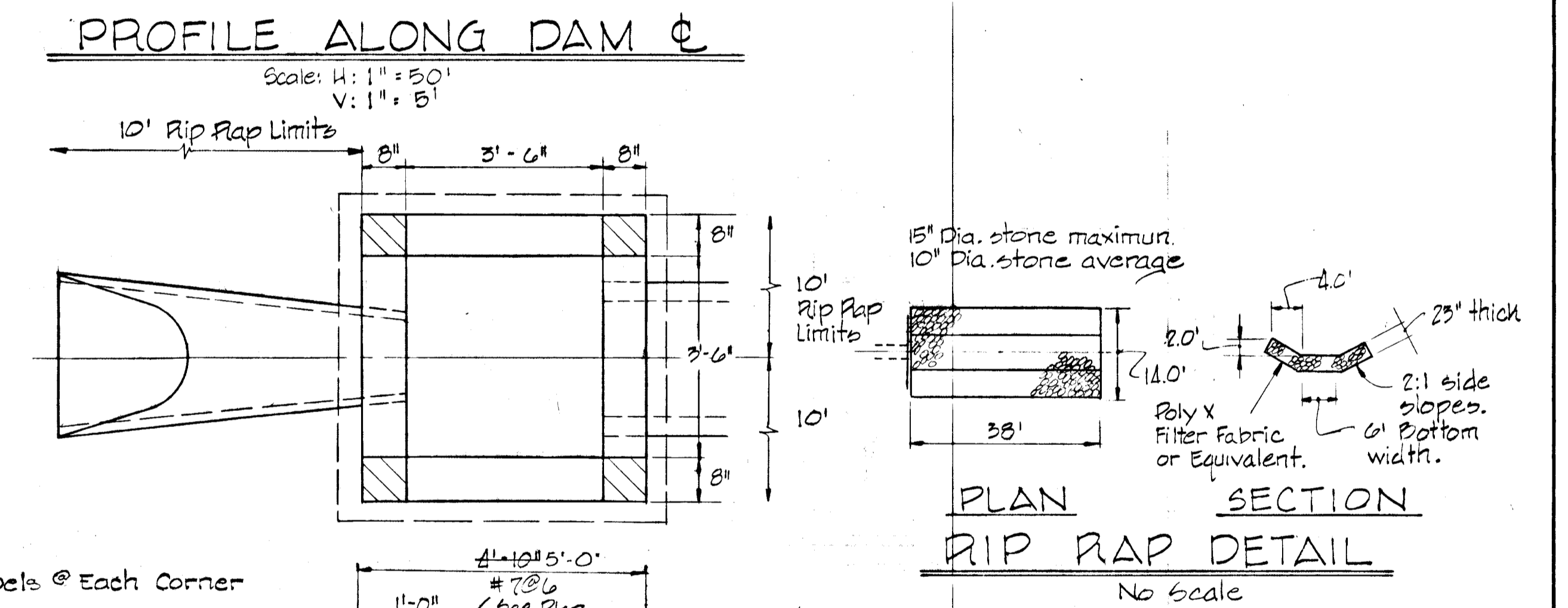
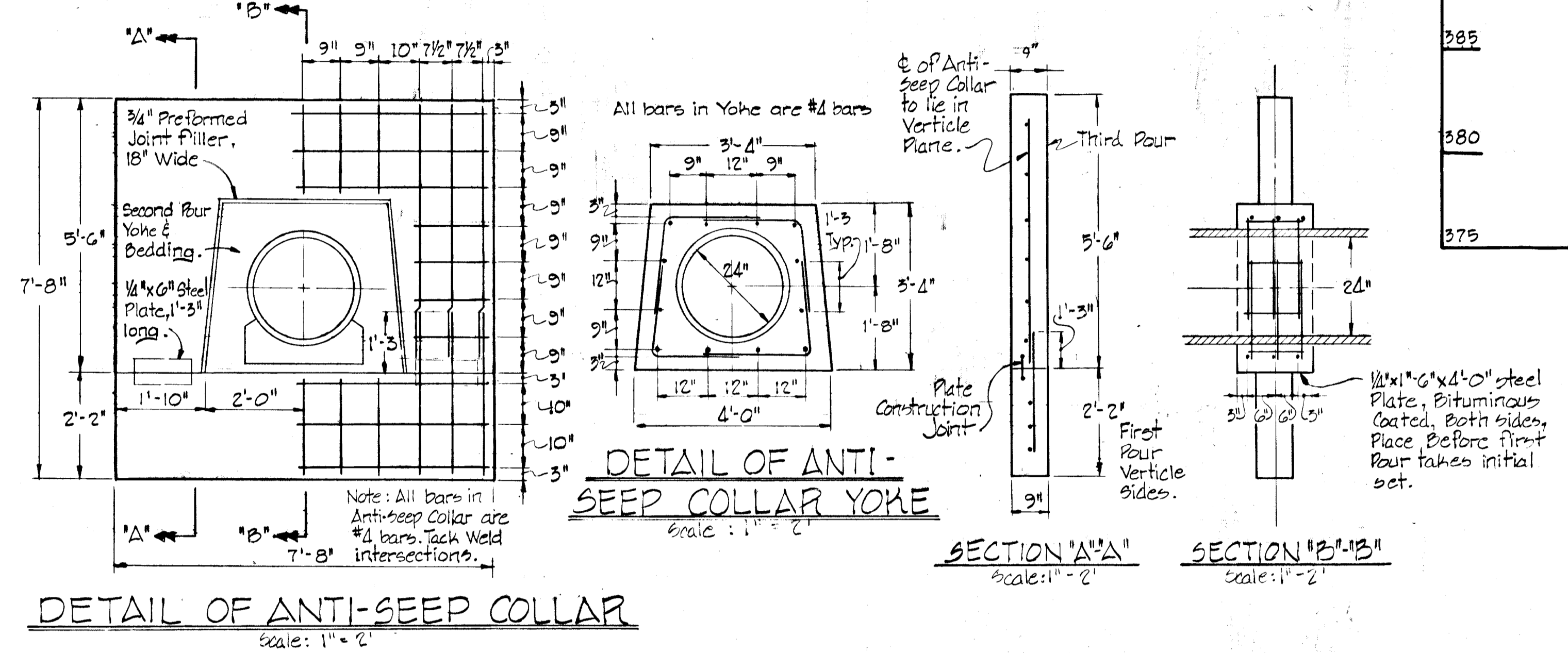
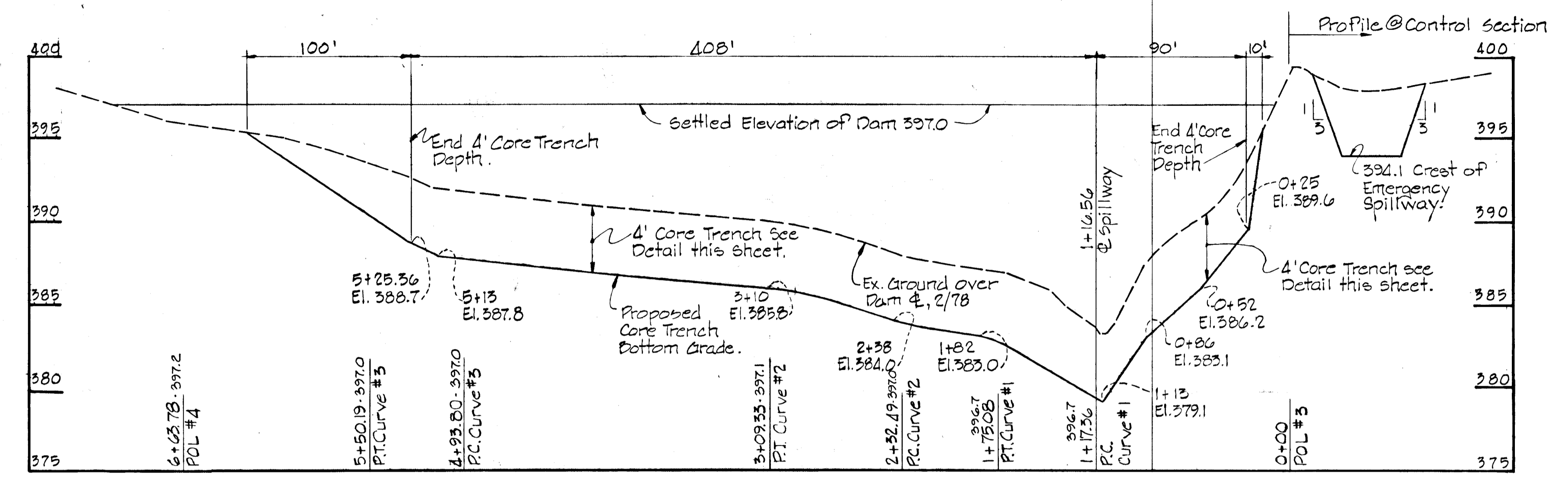
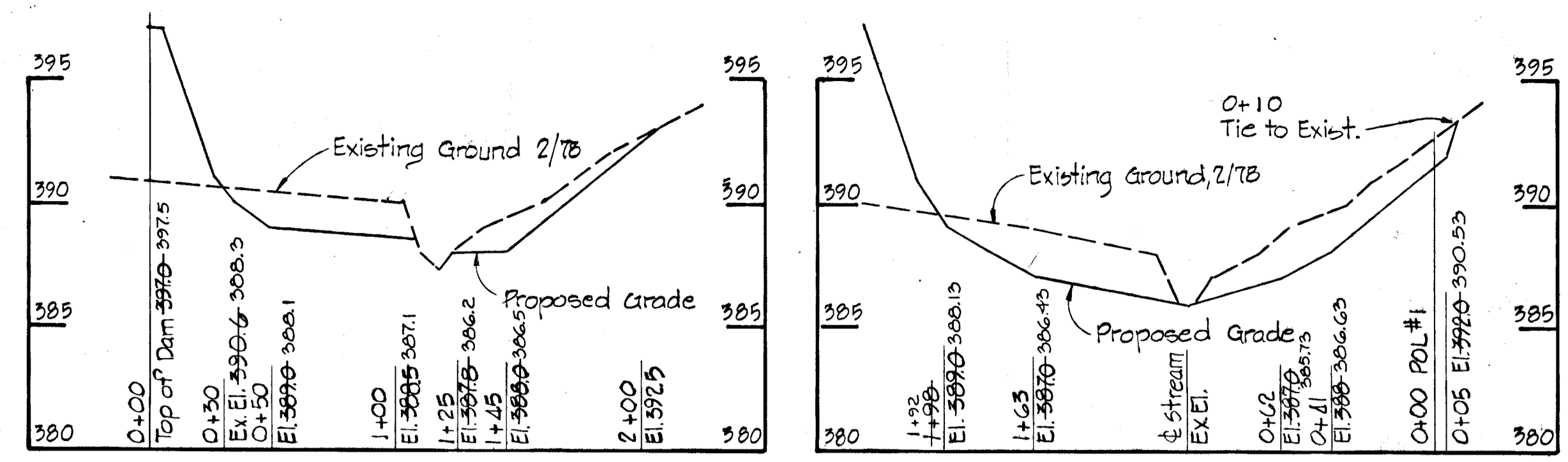
*Kenneth A. McCord* 11/3/78  
 KENNETH A. MCCORD P.E. 1974 DATE

REVISED EMERGENCY SPILLWAY AUGUST 3, 1981  
 PROJECT TITLE  
**BURLEIGH MANOR SECTION 1 AREA 1**  
 2<sup>ND</sup> ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
**STORM WATER MANAGEMENT PLAN & DETAILS**

SCALE: AS SHOWN DATE: Nov 3, 1978  
 WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 204  
 LUTHERVILLE, MARYLAND

*Kenneth A. McCord*  
 KENNETH A. MCCORD  
 REGISTERED ENGINEER  
 NO. 1974



THIS PLAN HAS BEEN REVIEWED BY THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.

*Wm. J. Benditt* 3/9/79  
 U.S. SOIL CONSERVATION DISTRICT

THIS PLAN FOR SMALL POND CONSTRUCTION MEETS THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert J. Zichner*  
 HOWARD S.C.D. DATE  
 PLAN NUMBER

AS BUILT SURVEY DATED JULY 1, 1981  
 SIGNED & SEALED BY  
 HENRY OHEIM - REG. NO. 4156

**CERTIFICATION BY THE DEVELOPER**

I CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION OF THIS POND WILL BE DONE ACCORDING TO THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY. DEVIATION FROM THIS PLAN WILL NOT BE MADE UNLESS AUTHORIZED BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL AUTHORIZE A REGISTERED PROFESSIONAL ENGINEER TO SUPPLY THE HOWARD SOIL CONSERVATION OFFICE WITH AN AS-BUILT PLAN OF THIS POND WITHIN 30 DAYS OF THE POND'S COMPLETION.

*Stewart J. Grenebaum* 2/16/79  
 STEWART J. GREENEBaum DATE

**CERTIFICATION BY THE ENGINEER**

I CERTIFY THAT THIS PLAN FOR SMALL POND CONSTRUCTION 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.

*Kenneth A. McCord* 11/3/78  
 KENNETH A. MCCORD P.E. 1974 DATE

**BURLEIGH MANOR SECTION AREA I**  
 2<sup>ND</sup> ELECTION DISTRICT HOWARD COUNTY, MD.  
 STORM WATER MANAGEMENT PLAN & DETAILS  
 SCALE: AS SHOWN DATE: Nov. 3, 1978

WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202

*Kenneth A. McCord*  
 DEVELOPER  
 ROSETREE CORPORATION  
 1301 YORK ROAD SUITE 202  
 LUTHERVILLE, MARYLAND

*Kenneth A. McCord*  
 KENNETH A. MCCORD  
 Registered Engineer  
 No. 1974

**SODDING NOTES**

1. Apply 10-10-10 Fertilizer @ 1000 lbs./acre (25 lbs./1000 sq)
2. Apply Ground Agricultural Limestone @ 2000 lbs./acre (50 lbs./1000 sq)
3. Incorporate both lime and fertilizer into soil by discing. Firm up after incorporation.
4. Lay sod to a tight fit. Roll to ensure contact with underlying soil. Water is necessary for 1st 2 weeks (in summer) to ensure establishment.

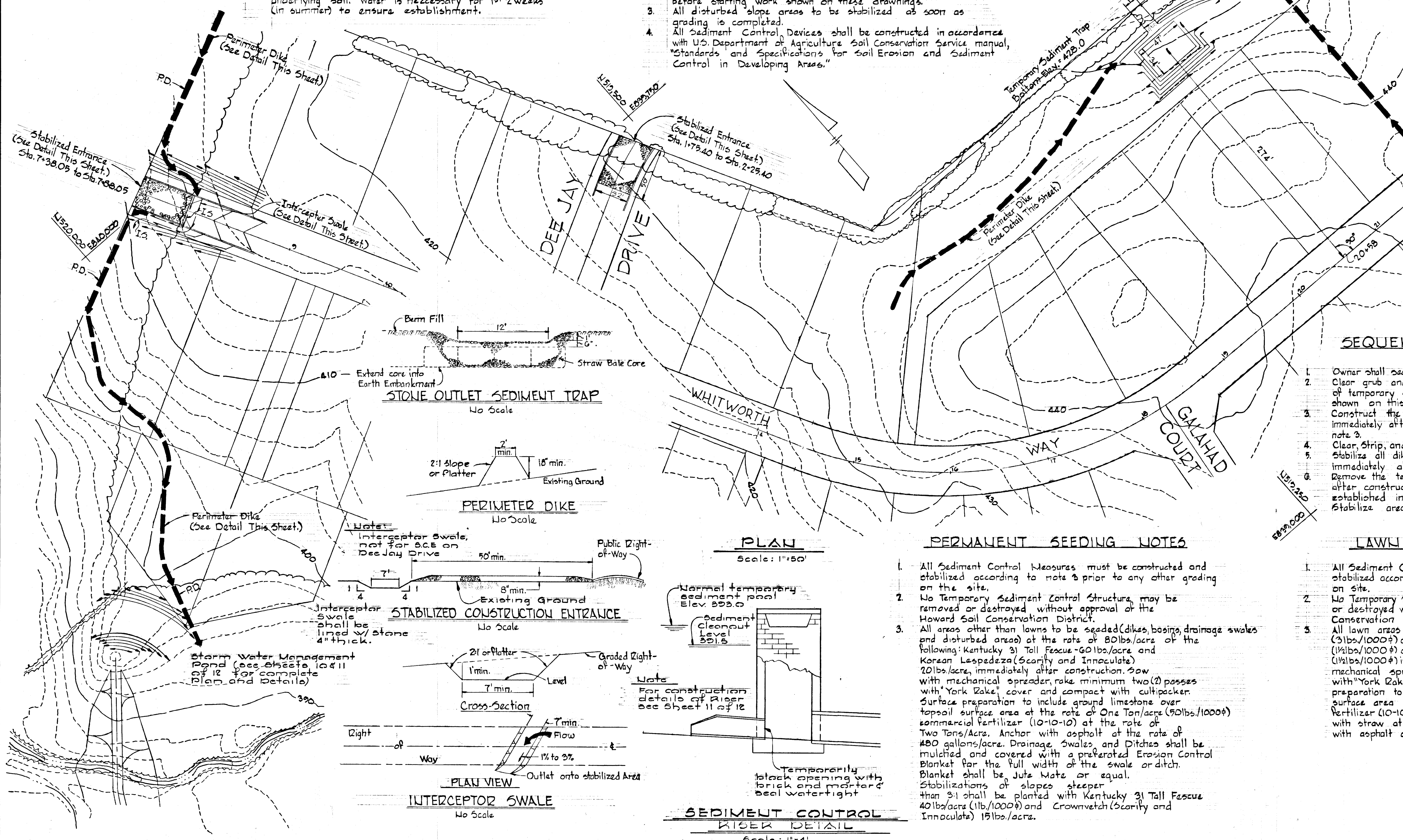
**GENERAL NOTES**

1. Temporary, compacted, 18" High Earth Fill Diversion Dikes shall be constructed above the lips of Fill Slopes, concurrently with the initial grading and directed to undisturbed sod areas at the end of each day.
2. Contractor to notify the Howard County Bureau of Inspection and permits 469-3000x365 at least 3 days before starting work shown on these drawings.
3. All disturbed slope areas to be stabilized as soon as grading is completed.
4. All Sediment Control Devices shall be constructed in accordance with U.S. Department of Agriculture Soil Conservation Service manual, "Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas."

**SEDIMENT TRAP**

Drainage Area = 2.0 Acres  
 Volume Required = 35504<sup>3</sup>  
 Volume Available = 35804<sup>3</sup>

DEPARTMENT OF PUBLIC WORKS  
 W. F. Gilbert 3-15-79  
 CHIEF, BUREAU OF ENGINEERING DATE  
 OFFICE OF PLANNING AND ZONING  
 John W. Muschman 3-8-79  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



**SEQUENCE OF CONSTRUCTION**

1. Owner shall secure a grading permit prior to any grading.
2. Clear grub and strip the areas required for the construction of temporary sediment traps and construct dikes as shown on this plan.
3. Construct the temporary sediment trap and basin, and stabilize immediately after completion according to permanent seeding note 3.
4. Clear, Strip, and Grade the site as required.
5. Stabilize all dikes, slopes and swales as required immediately after grading is completed.
6. Remove the temporary sediment trap and diversion dike after construction site is complete and grass is established in the contributing drainage area. Stabilize areas where temporary facilities are removed.

**LAWN SEEDING NOTES**

1. All Sediment Control Measures must be constructed and stabilized according to note 3 prior to any other grading on site.
2. No Temporary Sediment Control Structure may be removed or destroyed without approval of the Howard Soil Conservation District.
3. All lawn areas to be seeded at the rate of 113 lbs./acre (3 lbs./1000 sq) of the following: Certified Bluegrass - 65 1/2 lbs./acre (1 1/2 lbs./1000 sq) and Creeping Red Fescue - 69 1/2 lbs./acre (1 1/2 lbs./1000 sq) immediately after construction. Sow with a mechanical spreader, rake minimum two (2) passes with "York Rake", cover and compact with cultipacker surface preparation to include ground limestone over topsoil surface area at the rate of One Ton/acre (90#/1000 sq) commercial fertilizer (10-10-10) at the rate of 1000 lbs./acre. Mulch areas with straw at the rate of 30 lbs./acre or One Ton/acre. Anchor with asphalt at the rate of 480 gallons/acre.

**PERMANENT SEEDING NOTES**

1. All Sediment Control Measures must be constructed and stabilized according to note 3 prior to any other grading on the site.
2. No Temporary Sediment Control Structure may be removed or destroyed without approval of the Howard Soil Conservation District.
3. All areas other than lawns to be seeded (dikes, basins, drainage swales and disturbed areas) at the rate of 80 lbs./acre of the following: Kentucky 31 Tall Fescue - 60 lbs./acre and Korean Lespedeza (Scarify and Inoculate) 20 lbs./acre, immediately after construction. Sow with mechanical spreader, rake minimum two (2) passes with "York Rake", cover and compact with cultipacker. Surface preparation to include ground limestone over topsoil surface area at the rate of One Ton/acre (90#/1000 sq) commercial fertilizer (10-10-10) at the rate of Two Tons/Acre. Anchor with asphalt at the rate of 480 gallons/acre. Drainage Swales and Ditches shall be mulched and covered with a prepared Erosion Control Blanket for the full width of the swale or ditch. Blanket shall be Jute Mat or equal. Stabilizations of slopes steeper than 3:1 shall be planted with Kentucky 31 Tall Fescue 40 lbs./acre (1 lb./1000 sq) and Crownvetch (Scarify and Inoculate) 15 lbs./acre.

Reviewed for Howard S.C.D. and meets Technical Requirements  
 Wm. J. Greenbaum Date 3/19/79  
 Signature U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 Approved Robert W. Zelman Date 3/9/79  
 Howard S.C.D.

**CERTIFICATION BY THE DEVELOPER**  
 "I certify that all development and or construction will be done according to this plan of development and plan for Erosion and Sediment Control and I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."  
 Stewart J. Greenbaum Date 2/27/79

**CERTIFICATION BY THE ENGINEER**  
 "I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
 Kenneth A. McCord PE 1974 Date 11-17-78

DEVELOPER  
 ROSETREE CORPORATION  
 1501 YORK ROAD SUITE 201  
 LUTHERVILLE, MARYLAND

PROJECT TITLE  
 BURLEIGH MANOR  
 SECTION 1 AREA 1  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SEDIMENT CONTROL PLAN & DETAILS  
 SCALE: AS SHOWN DATE: Nov 3, 1978  
 WHITMAN, REQUARDT & ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21202  
 Kenneth A. McCord  
 KENNETH A. McCord  
 Registered Engineer  
 No. 1974