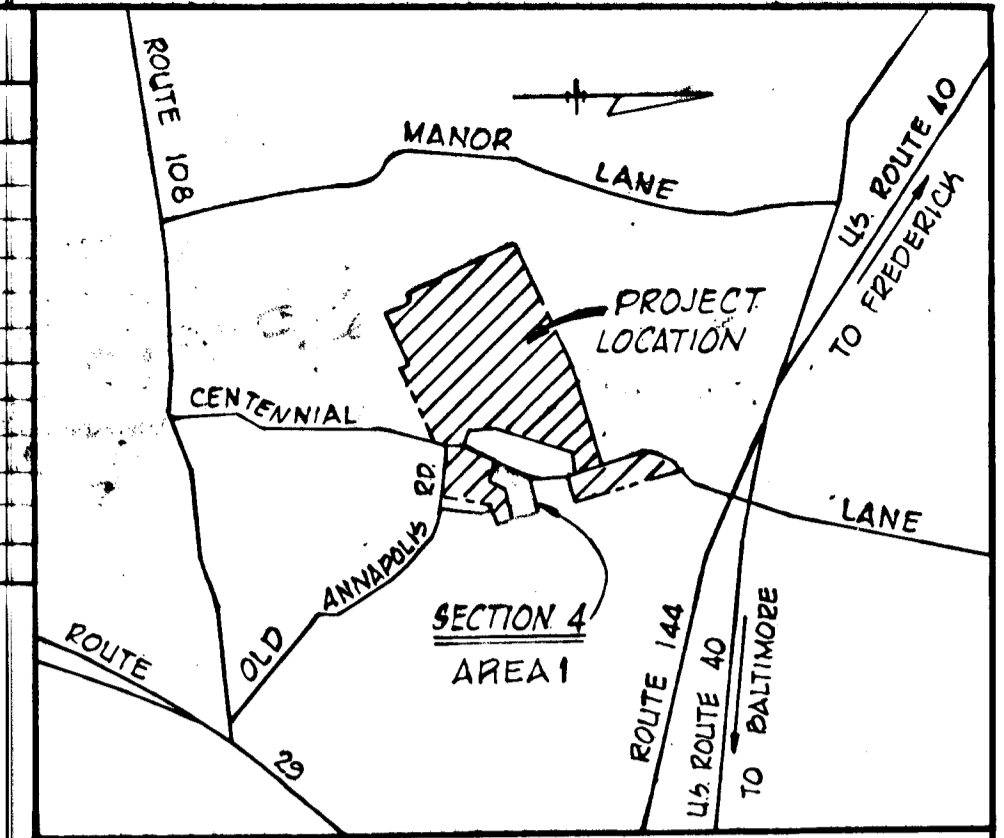
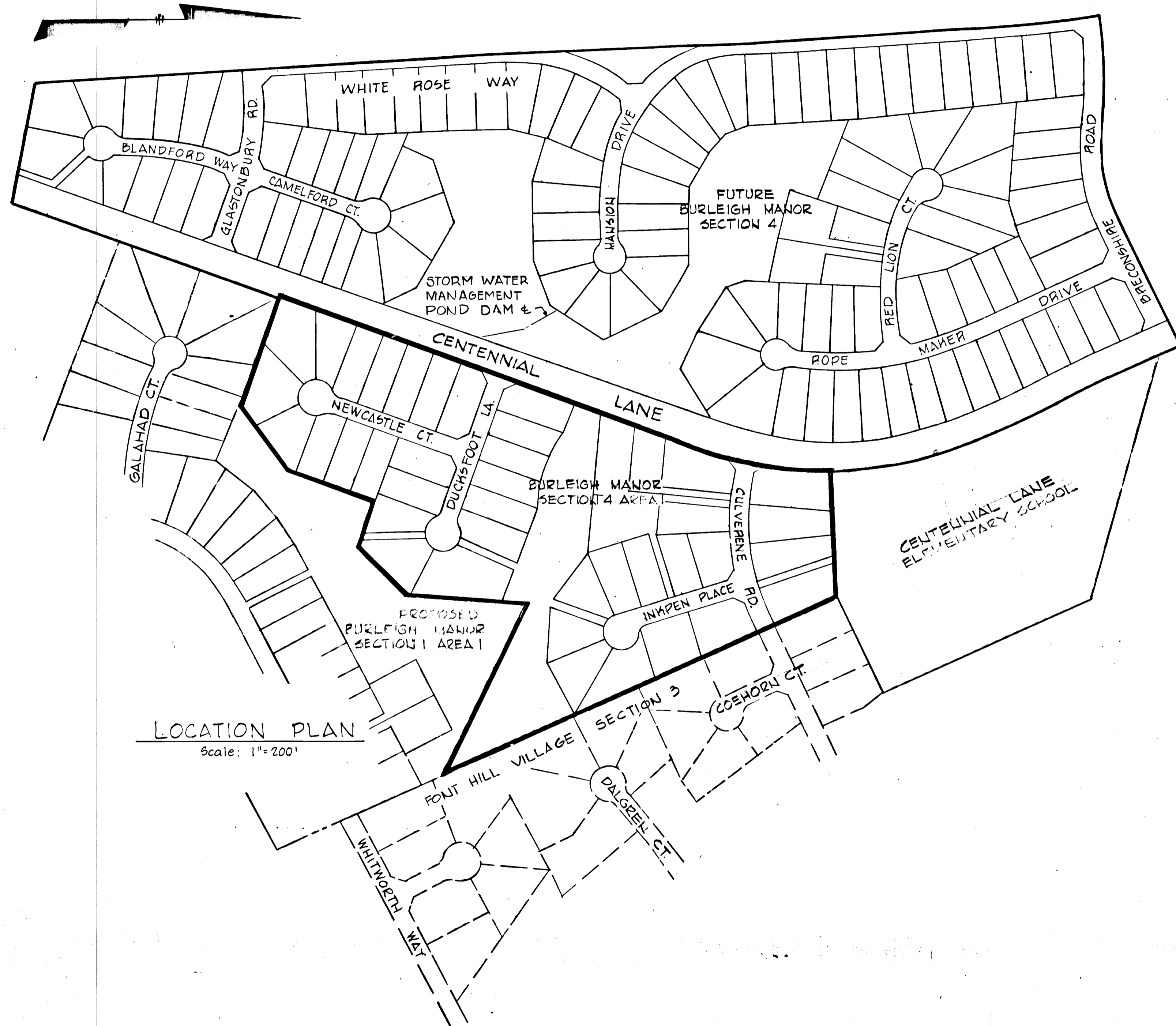


SHEET INDEX	
SHEET NO	DESCRIPTION
1.	Cover Sheet
2.	Plan & Profile, Ducks Foot Lane & Newcastle Court
3.	Plan & Profile, Culverene Road & Inkpen Place
4.	Centennial Lane Improvements
5.	Centennial Lane Improvements
6.	Storm Drain Profiles
7.	Road & Drain Details
8.	Drain & Storm Water Management Details
9.	Drainage Area Map
10.	Storm Water Management Pond
11.	Sediment Control Plan
12.	Sediment Control Details



VICINITY MAP
Scale: 1" = 1/2 Mile



LOCATION PLAN
Scale: 1" = 200'

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 35' radius unless otherwise noted.
- Storm drain trenches within road rights-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 contractors operations shall be repaired immediately at the contractors 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 days strength of 3500 p.s.i.
- Traffic control devices and installation shall be in accordance with Manual on Uniform Traffic Control Devices, 1971 Revised Edition.
- Poly Filter X (filter cloth blanket) or equal shall be placed under all storm rip-rap.
- Rip-rap at outfalls shall be unpaved unless otherwise noted.
- All horizontal and vertical controls are based on Maryland State Datum.
- Seed and mulch all disturbed areas.

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

DEPARTMENT OF PUBLIC WORKS
W. O. Albert
CHIEF, BUREAU OF ENGINEERING DATE 8-13-79
OFFICE OF PLANNING AND ZONING
R. J. Jones
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 8/3/79

OWNER AND DEVELOPER
COSTAIN WASHINGTON INC.
10710 LEE HIGHWAY SUITE 201
FAIRFAX, VIRGINIA 22030

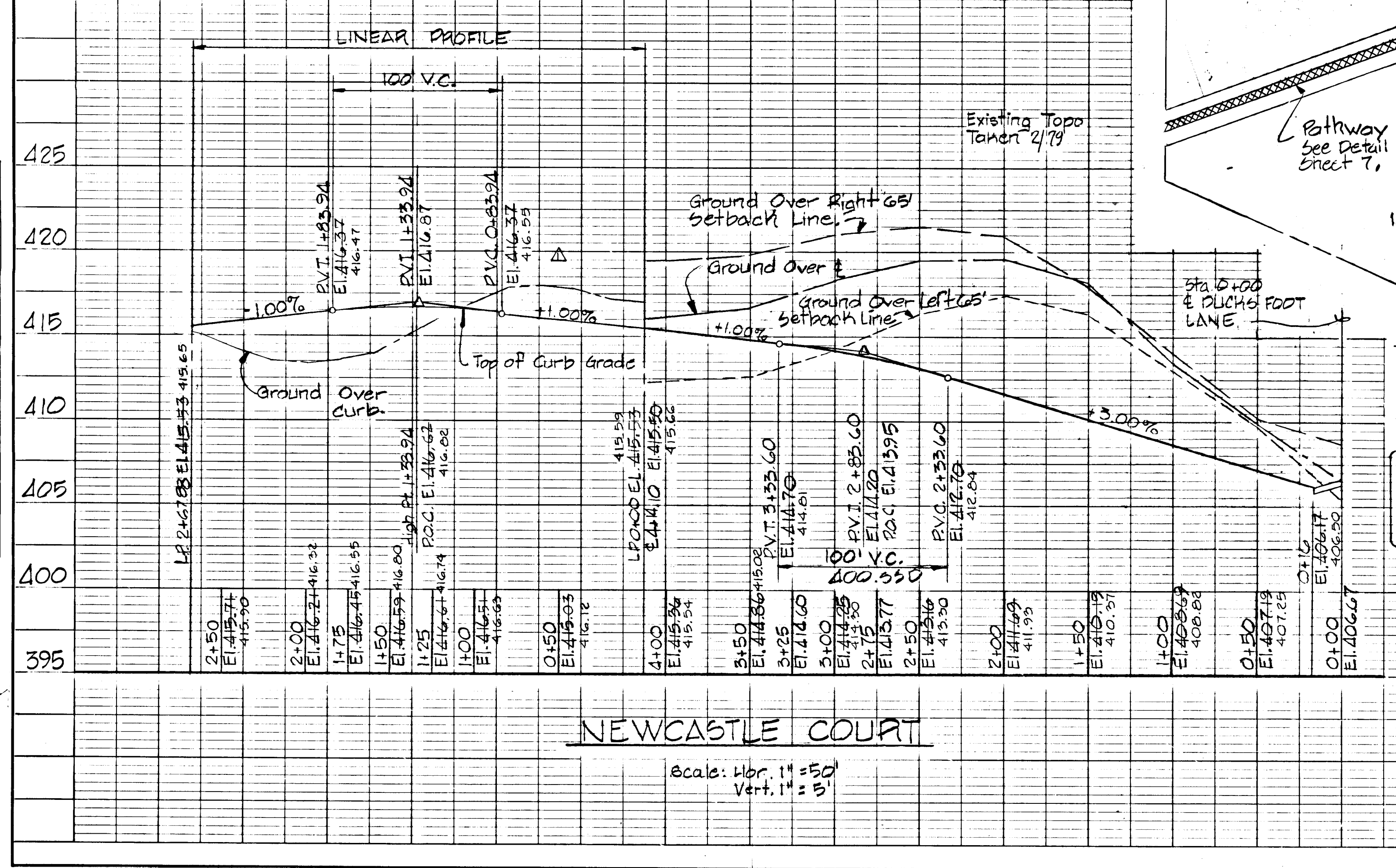
BURLEIGH MANOR
SECTION 4 AREA 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
Scale: As Shown Date: 3-23-79

No.	Type	Location	Inv.In.	Inv.Out.	Top El.	Remarks
5-1	Type "A"	See Plan	399.34	-	-	See Detail Sheet 8
I-1	A-5	Sta. 43.92 from E Bulb	399.34	399.32	399.32	Ho. Co. Pg 119-A, W=2'-6"
WH1	Shallow	Sta. 2+38.60 Ducks Foot Lane,	407.94	407.96	407.96	See Detail Sheet 12
I-2	A-5 w/deflectors	Sta. 0+54.17 Newcastle Ct. 18'W Lt	403.94	403.96	403.96	Ho. Co. Standard, Drw 64-A
I-3	A-5 w/deflectors	Sta. 0+54.17 Newcastle Ct. 18'W Rt	403.94	403.96	403.96	Ho. Co. Standard, Drw 64-A
I-4	A-5 w/deflectors	Sta. 1+95.00 Newcastle Ct. 18'W Rt	407.94	407.96	407.96	Ho. Co. Standard, Drw 64-A

Note: For type "A" Inlets See detail Sheet 7.

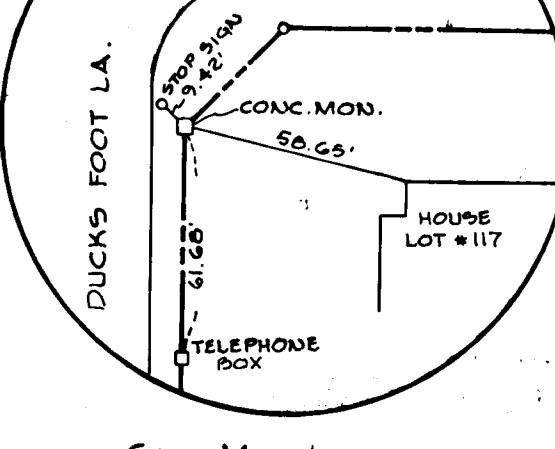
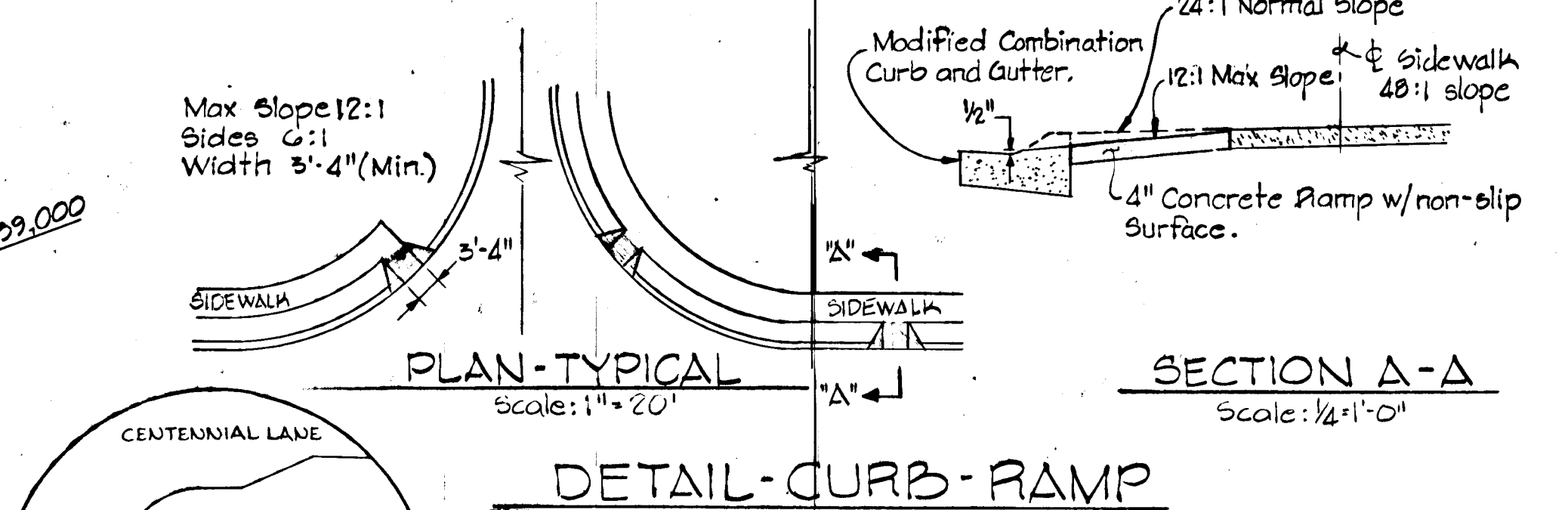
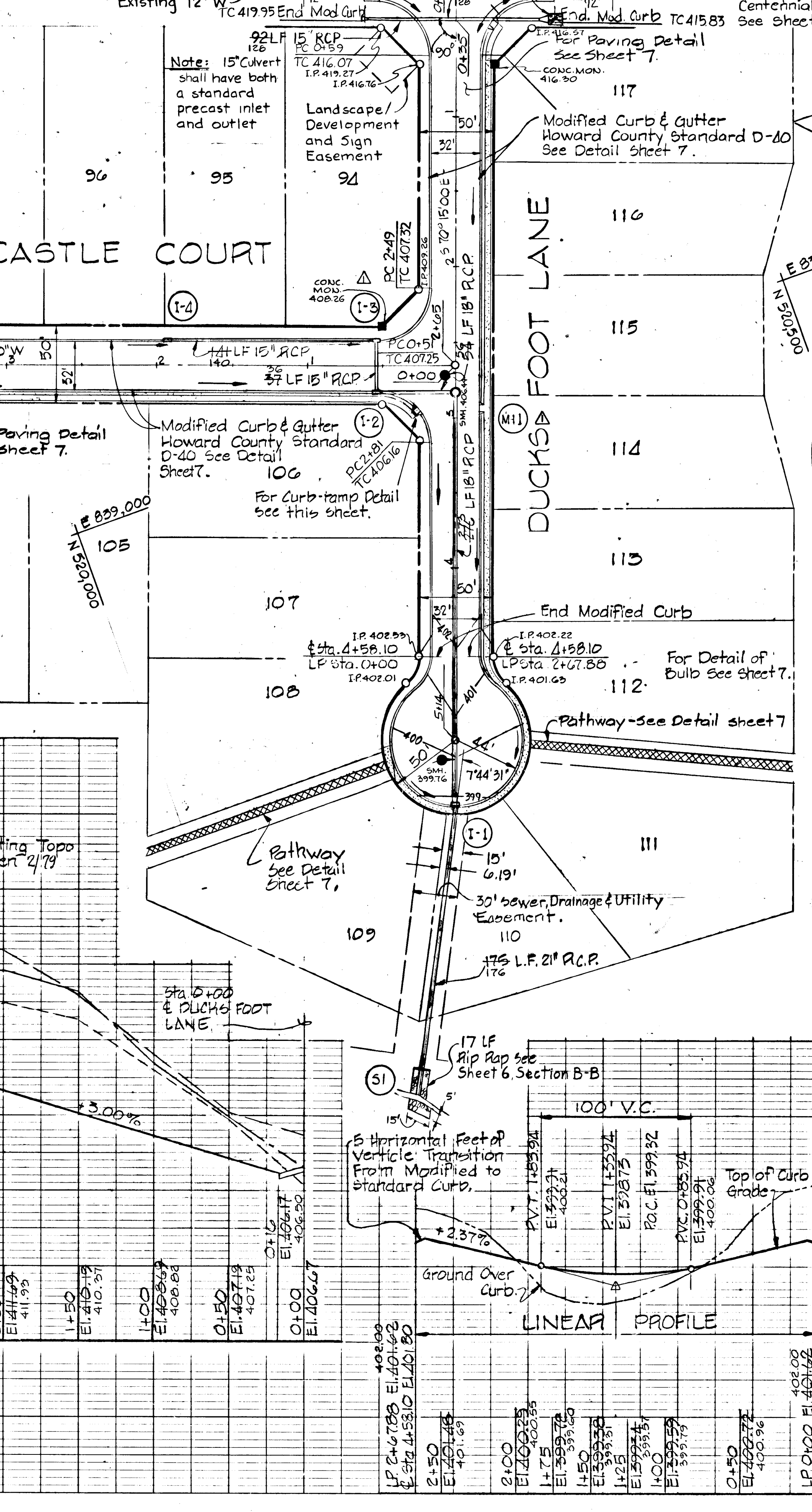
DATE	
BY	
REVISION	
NO.	

No.	Date	Revision
1	11/21/79	Revised profile, Added PC, PT dimensions



DATE	
BY	
REVISION	
NO.	

CENTENNIAL LANE



CONC. MON. LOCATION
NO SCALE

REV.	DATE	REMARKS
1	10/10/80	Extend 15" RCP total 30'
2	1/18/80	Standard Manhole changed to 3 shallow type

DEVELOPER
COSTAIN WASHINGTON INC.
10710 LEE HIGHWAY SUITE 201
FAIRFAX, VIRGINIA 22030

DEPARTMENT OF PUBLIC WORKS
W. J. F. ... 8-13-79
CHIEF, BUREAU OF ENGINEERING DATE

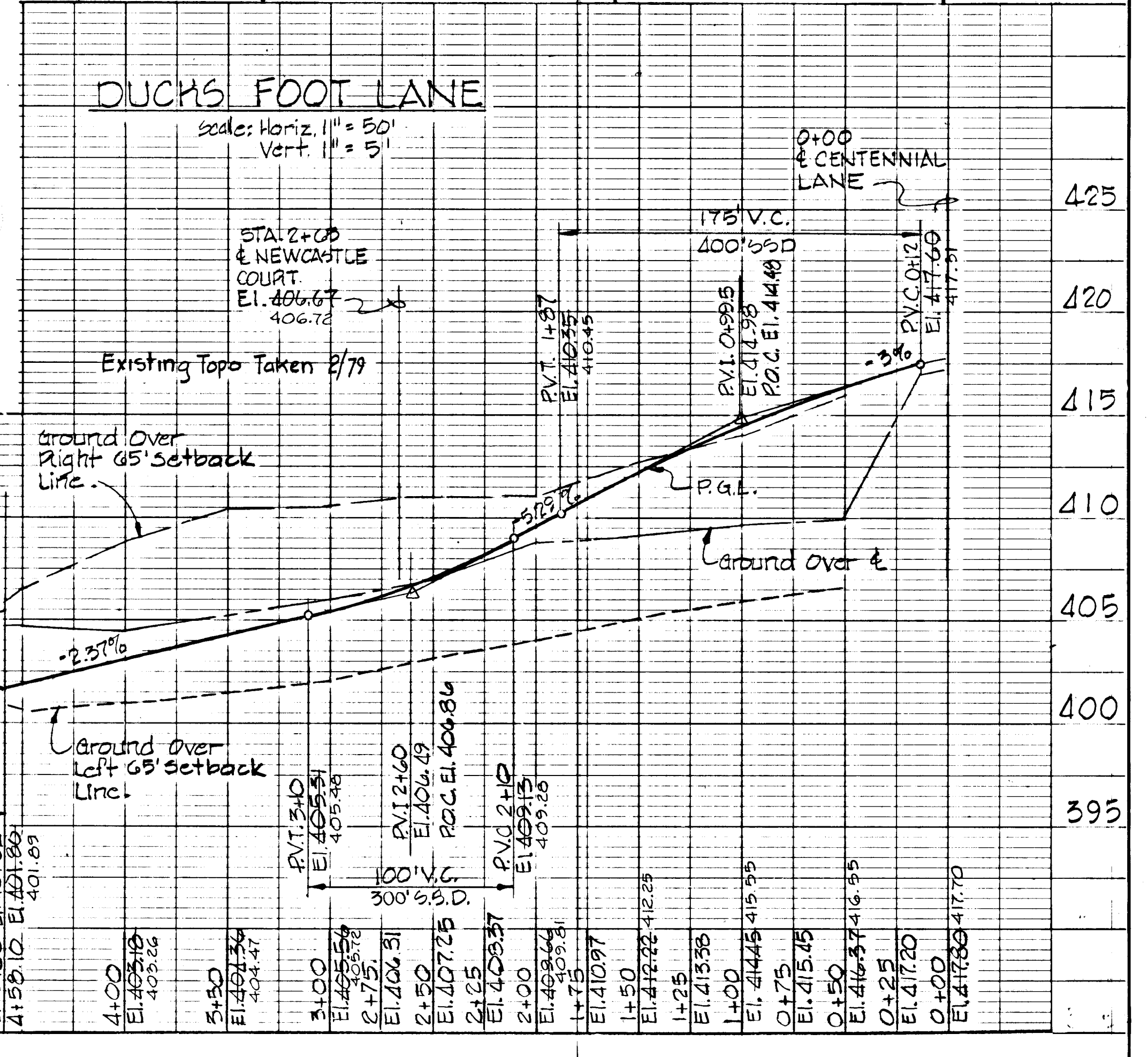
OFFICE OF PLANNING AND ZONING
... 8/13/79
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

BURLEIGH MANOR
SECTION 4 AREA 1
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
DUCKS FOOT LANE, NEWCASTLE CT. PLAN & PROFILE

SCALE: AS SHOWN DATE: MAR. 23, 1979

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

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



For Details of Improvements to Centennial Lane See Sheets 445.

CURVE DATA
 M4 TO M3

No.	Type	Location	Inv In	In Out	Top El.	Remarks
I-5	A-5 w/ Deflectors	Sta. 0+62.20 Inkpen Pl., 18.60 Left	422.55	422.55	422.55	See Detail Sheet 7
I-6	A-5 w/ Deflectors	Sta. 0+62.20 Inkpen Pl., 18.60 Right	422.55	422.55	422.55	"
I-7	A-5 w/ Deflectors	Sta. 7+14.89 Culverene Rd., 18.00 Lt	-	422.55	422.55	"
I-8	Class "C" Type D	Sta. 5+30.54 Culverene Rd., 10' Pt.	422.55	422.55	422.55	Ho. Co. Std. 64-C, P. 119-C
I-9	Class "C" Type D	Sta. 5+30.54 Culverene Rd., 21' Pt.	422.55	422.55	422.55	Ho. Co. Std. 64-C, P. 119-C
I-10	Class "C" Type D	@ Ex. East Culvert Headwall	422.55	422.55	422.55	See Detail Sheet 8
M2	See Detail	Sta. 5+30.54 Culverene Rd., 17.17 Rt.	422.55	422.55	422.55	See Detail Sheet 8
M3	Standard	Sta. 6+54.35 Culverene Rd., 22' Pt.	422.55	422.55	422.55	Ho. Co. Std. D-103 P. 158
M4	Standard	Sta. 9+82.42 Culverene Rd., 22' Pt.	422.55	422.55	422.55	Ho. Co. Std. D-103 P. 158

Curve Data

P.T. 9+53.32 to P.O.C. 6+53.65
 Culverene Rd.
 Rad. 610.00
 Arc. 299.67
 Tan. 152.92
 Δ 28°08'50"
 Crd. 296.66
 Br. S87°15'14"W

Curve Data

P.O.C. 6+53.65 to P.C. 5+78.22
 Culverene Rd.
 Rad. 610.00'
 Arc. 78.43'
 Tan. 35.27'
 Δ 7°22'00"
 Crd. 78.38'
 Br. S69°29'49"W

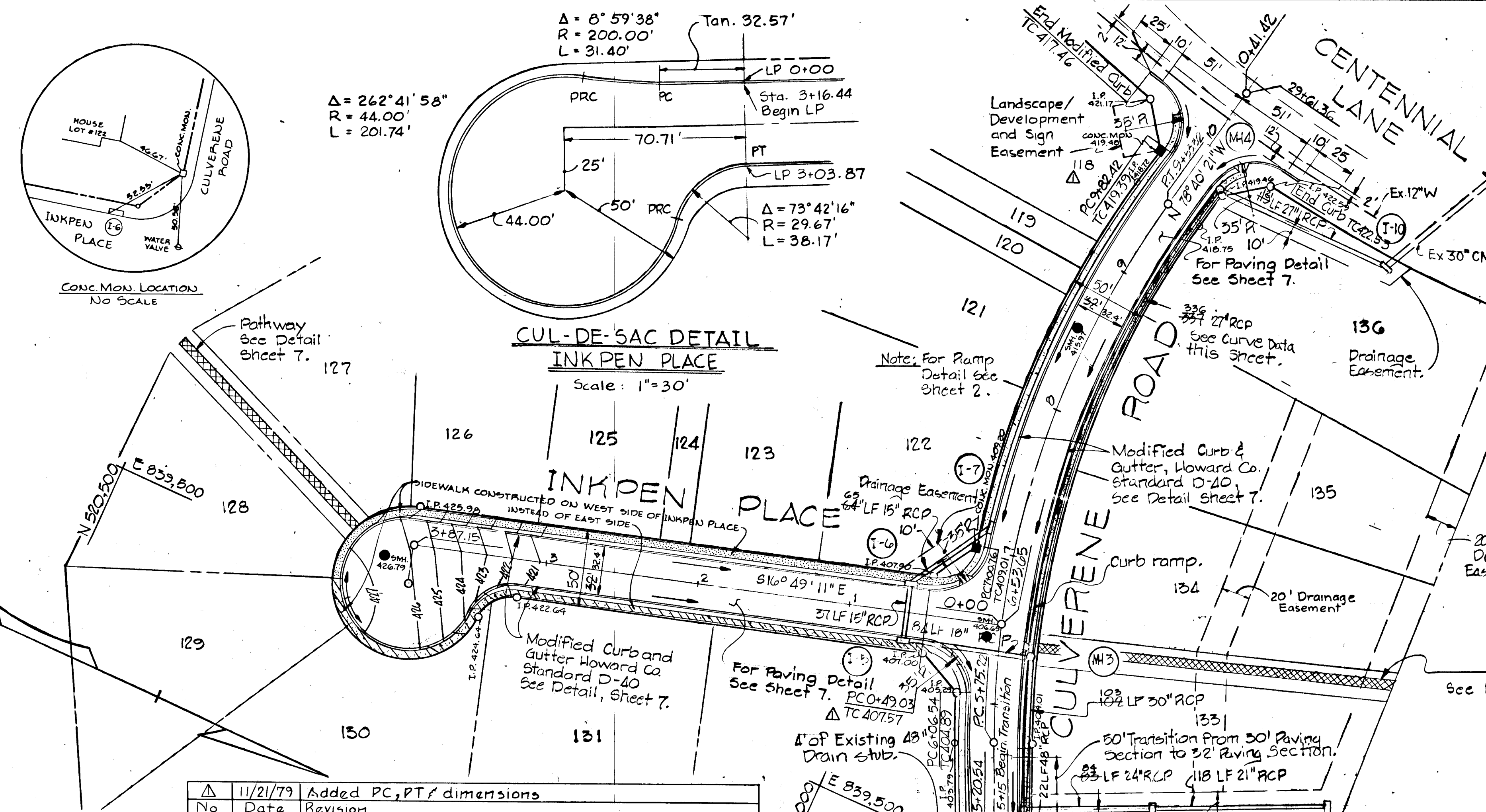
BURLEIGH MANOR
 SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 CULVERENE RD. & INKPEN PLACE, PLAN & PROFILE
 SCALE: AS SHOWN DATE: MAR. 1982

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

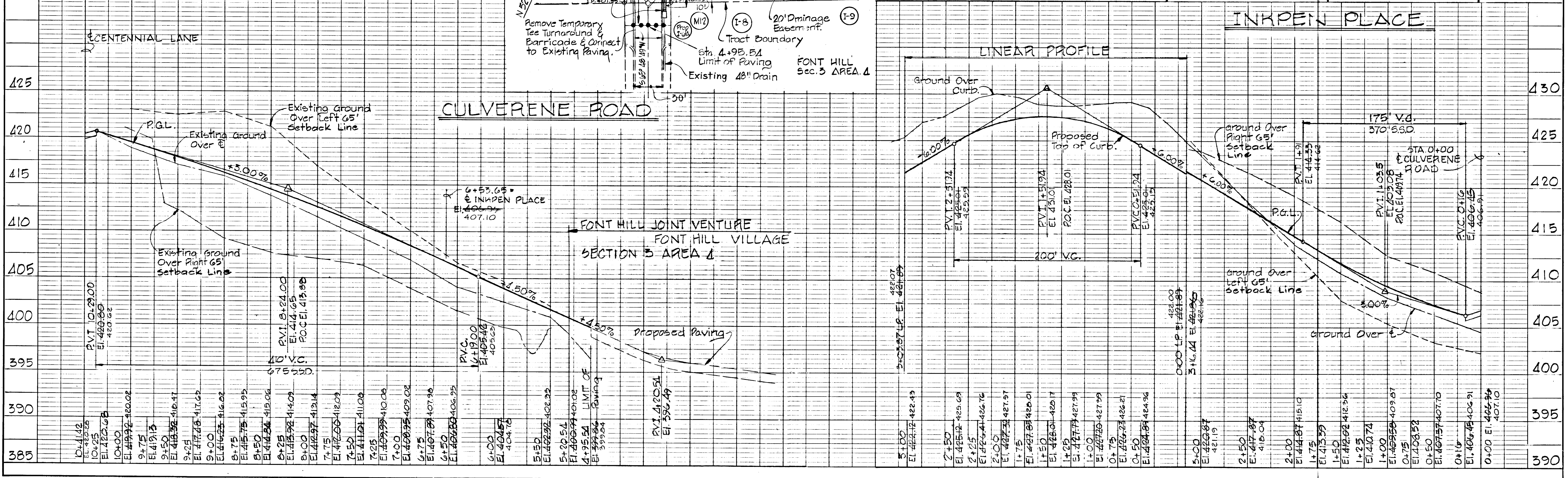
Kenneth McLeod
 WENNETH A. McCORD
 Registered Engineer
 No. 1974

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

Note: Segment of 30' Paving in Font Hill is 30' Back of Curb to Back of Curb.



No.	Date	Revision
1	11/21/79	Added PC, PT, dimensions

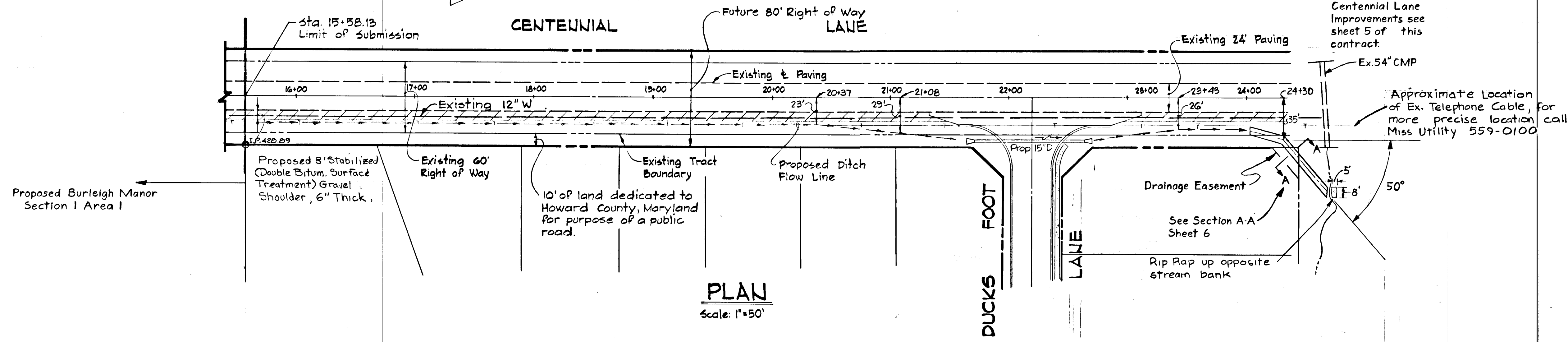


F-79-161

PLAN
 SURVEILLED
 NOTE BOOK
 ALIGNMENT CHECKED
 REF. OF WAY CHECKED

PROFILE
 SURVEILLED
 NOTE BOOK
 GRADES CHECKED
 B. M. V. NOTED
 SLOPE SOLUTIONS CHECKED

Note: Sidewalks along Centennial Lane are not required as per Variance Petition -79-11.



PLAN
 Scale: 1"=50'

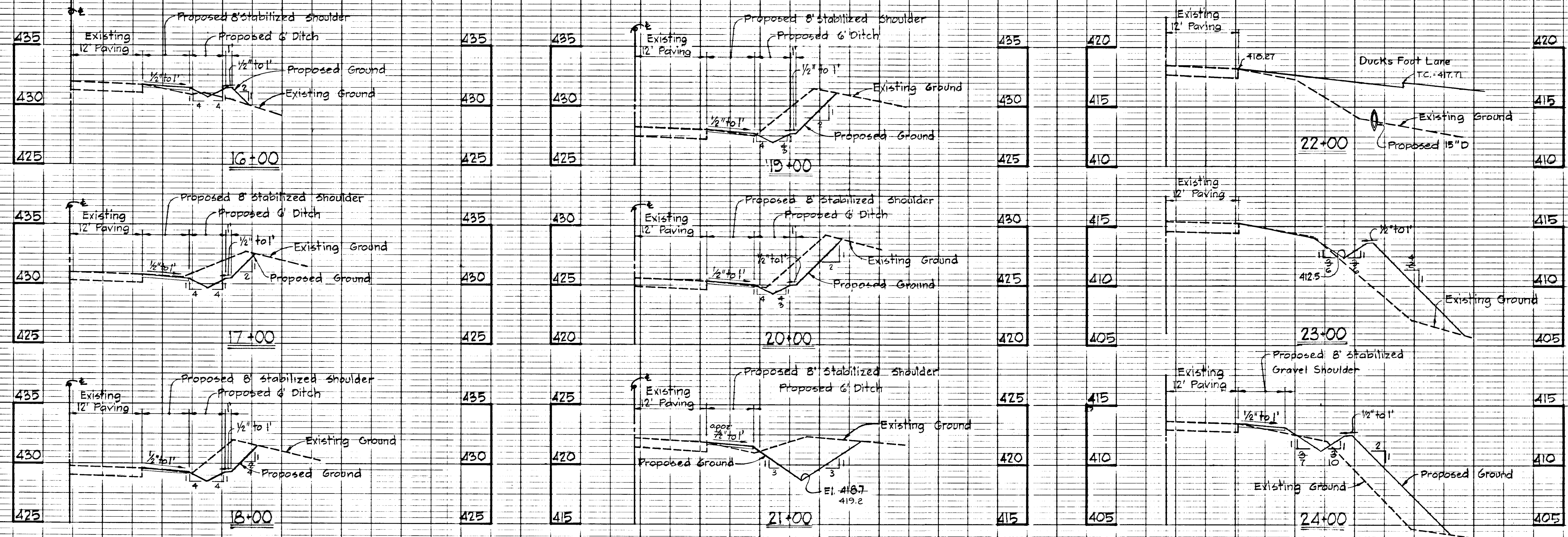
Note: Jute mat or equal is to be placed over the Centennial Lane swale daily. See Permanent seeding note #4, sheet 12

"AS BUILT" SURVEY DATED JUNE 28, 1982
 SIGNED AND SEALED BY
 HENRY V. OHEIM, PEG. NO. 4156

BURLEIGH MANOR
 SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, M.D.
 CENTENNIAL LANE IMPROVEMENTS PLAN & SECTION
 SCALE: AS SHOWN DATE: MAR. 23, 1979
 WHITMAN REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

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



CROSS SECTIONS-CENTENNIAL LANE
 Scale: Hor. 1"=10'
 Vert. 1"=5'

DATE
 BY
 CHECKED
 NO. 1
 PLAN
 NOTE BOOK
 NO.

DATE
 BY
 CHECKED
 NO. 1
 PROFILE
 NOTE BOOK
 NO.

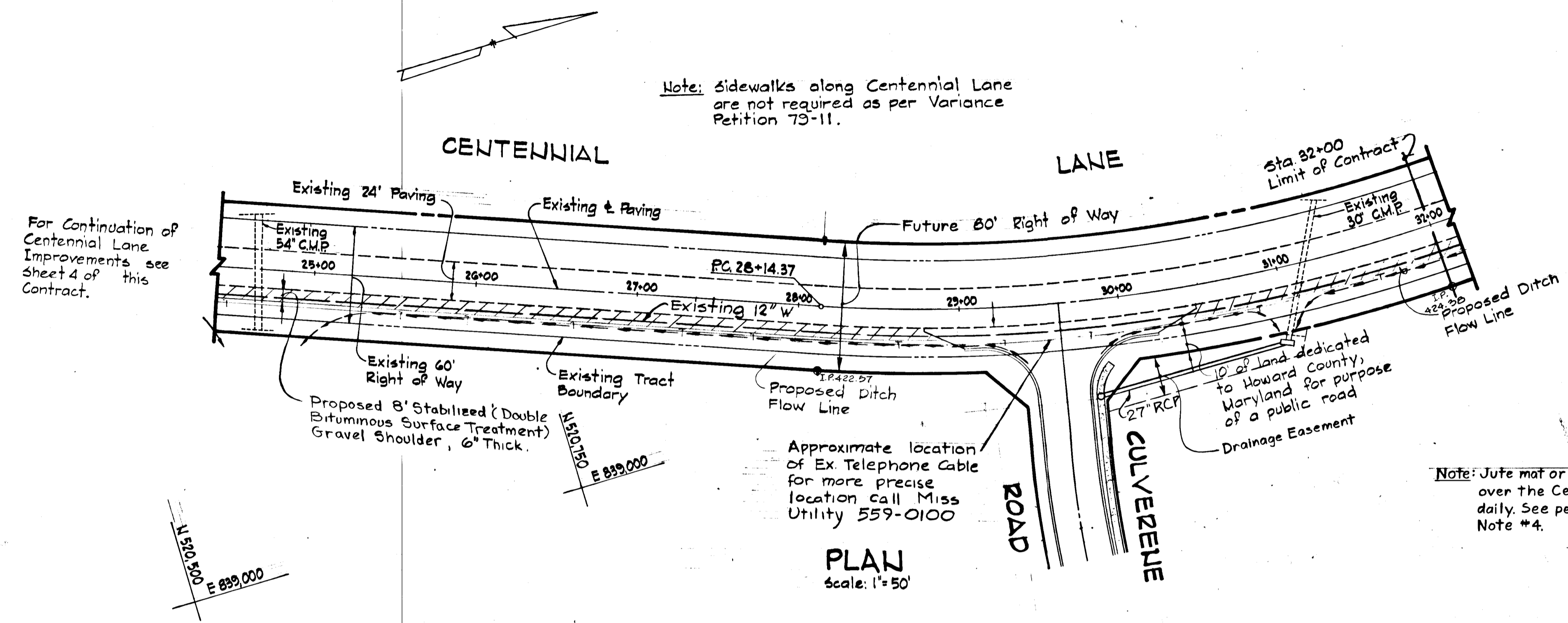
F79-761

E 898,500
N 50° 30' 00"

DEPARTMENT OF PUBLIC WORKS
W. O. Albert 8-13-79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
S. Kessler (acting chief) 8/3/79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE
 BY
 SURVEYED
 PLOTTED
 NOTE BOOK
 NO. OF WAY CHECKED
 NO.

DATE
 BY
 SURVEYED
 PLOTTED
 NOTE BOOK
 NO. OF NOTED
 NO. OF STRUCTURE LOCATIONS CHECKED

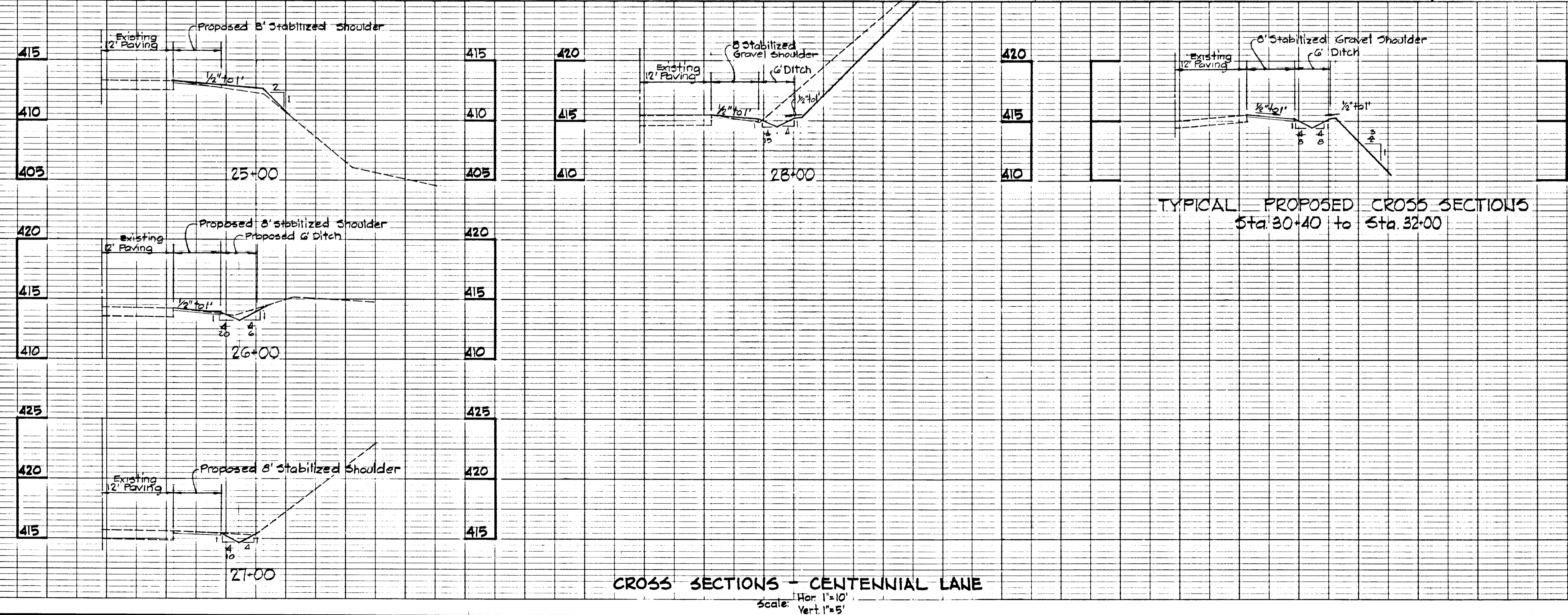


"AS BUILT" SURVEY DATED JUNE 28, 1962
 SIGNED & SEALED BY
 HENRY V. OHEIM - REG. NO. 4156

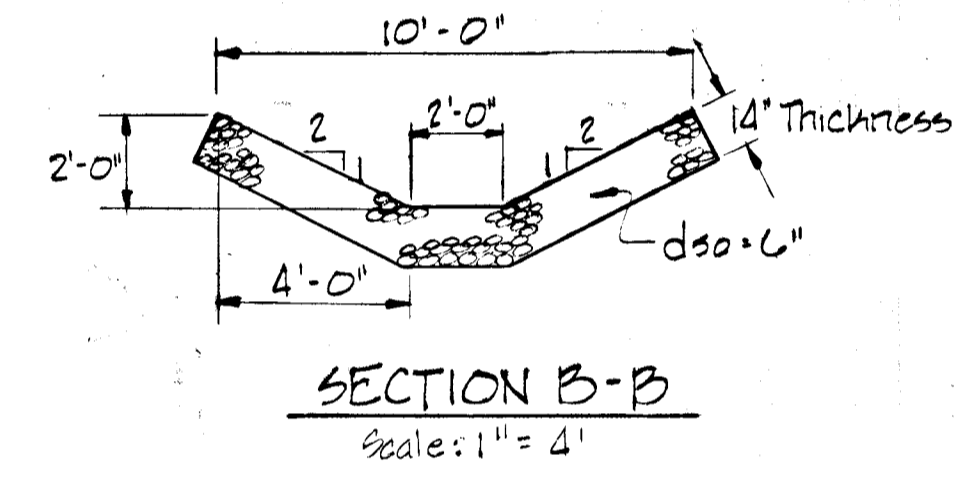
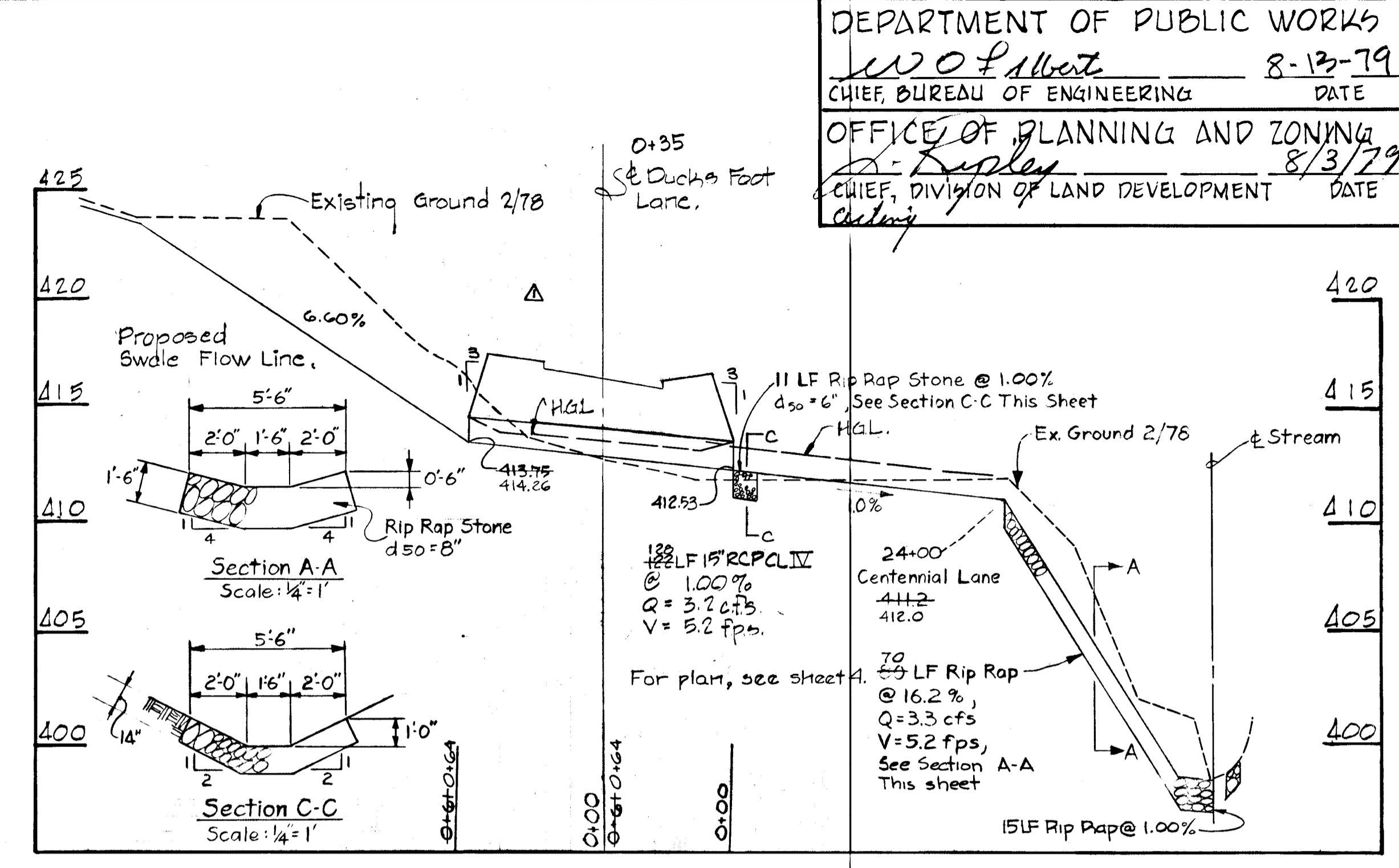
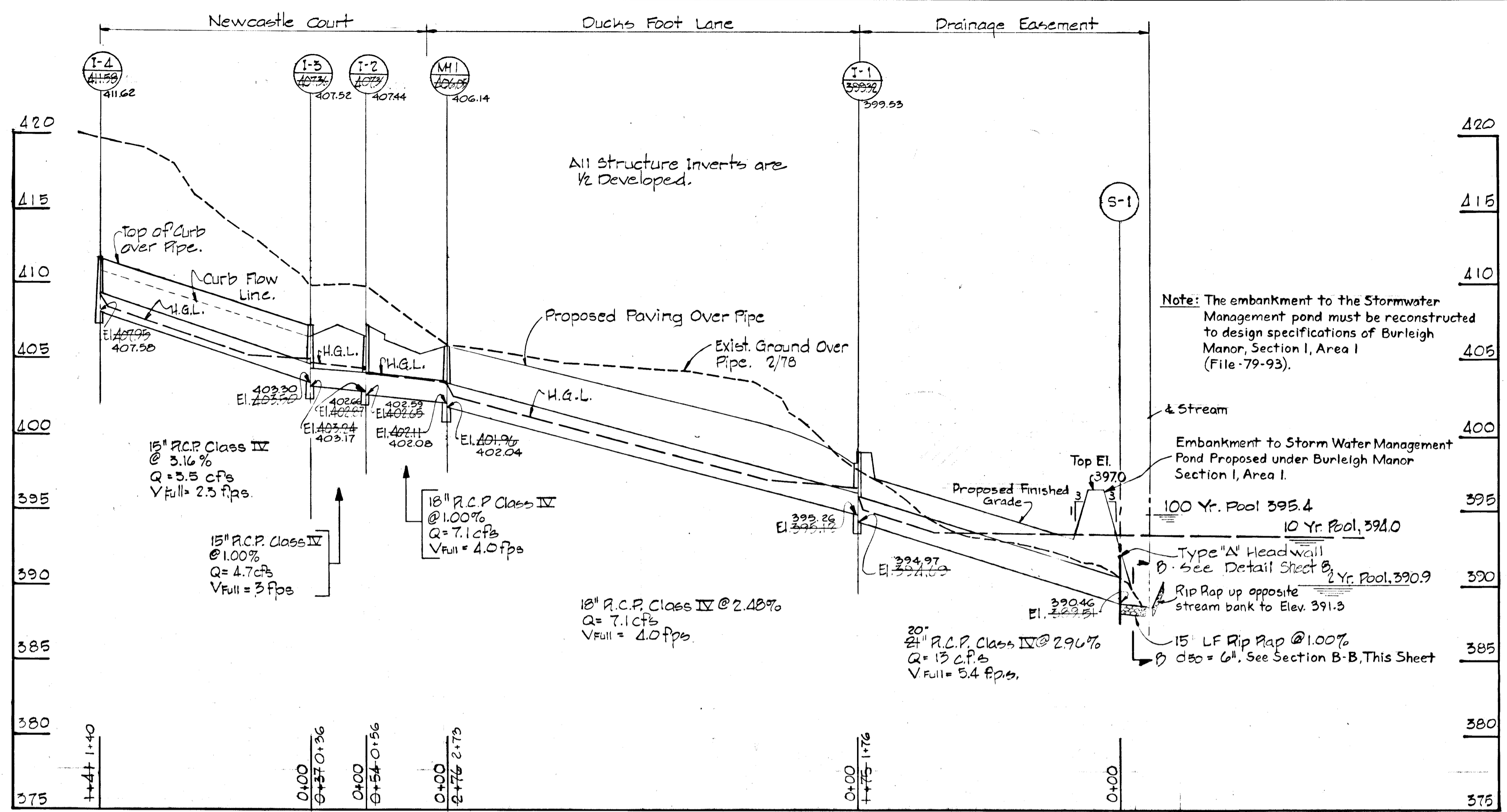
BURLEIGH MANOR
 SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, M.D.
 CENTENNIAL LANE IMPROVEMENTS PLAN & SECTIONS
 SCALE: AS SHOWN DATE: MAR. 12, 1979
 WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

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



F-79-161



CERTIFICATION BY THE DEVELOPER

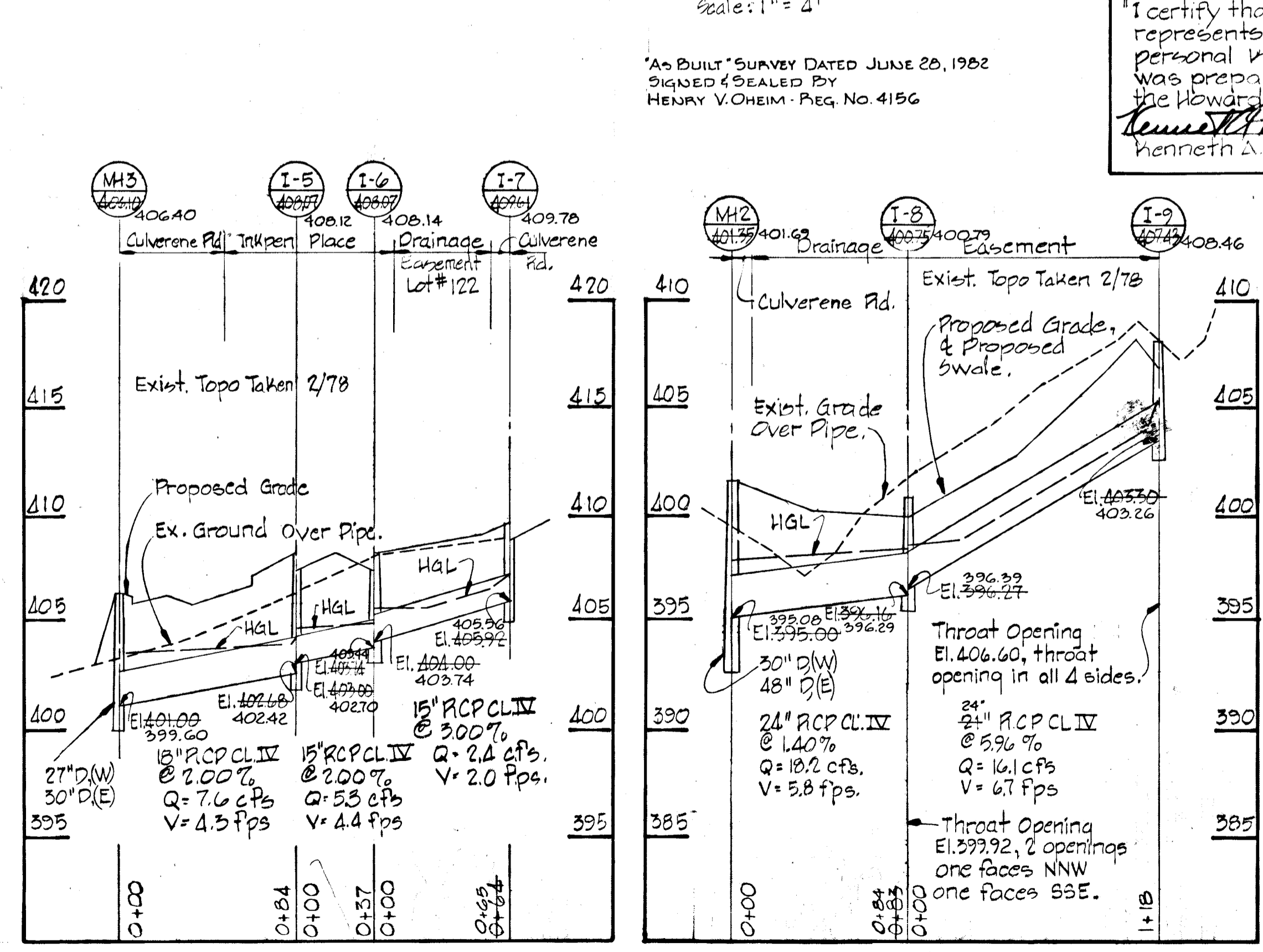
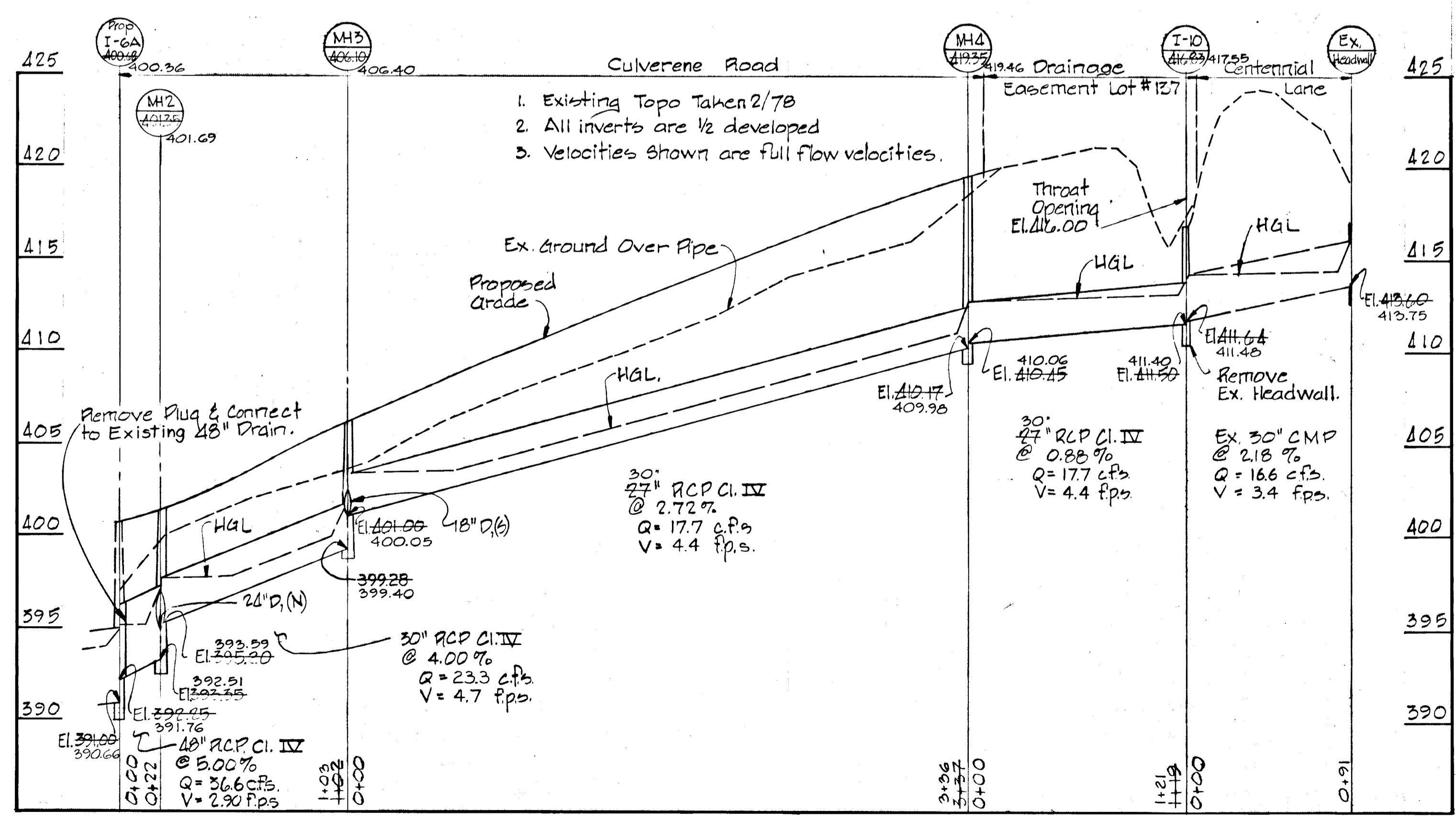
"We certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control and we also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary."

Michael E. McGuire 7-12-79
 Manager, Land Development 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 3-23-79
 Kenneth A. McCord Date



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

Robert W. Zehm 7/27/79
 Approved: Howard S.C.D. Date

Reviewed for Howard Soil Conservation District and meets technical requirements.

Winston Bonifant Date: 7/27/79
 US. Soil Conservation Service

BURLEIGH MANOR SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 STORM DRAIN PROFILES

SCALE: AS SHOWN DATE: 3-23-79

WHITMAN, REARDY & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202

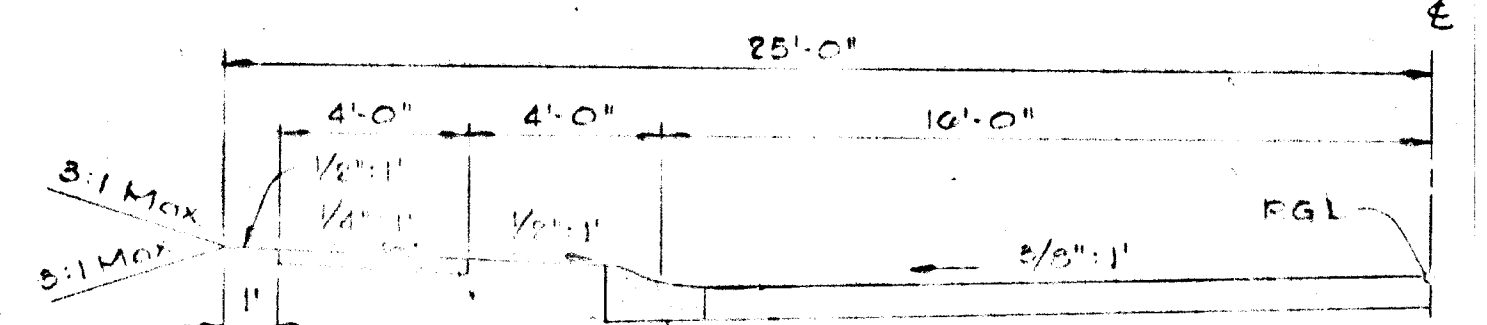
PROFILES
 Scale: Horiz. 1" = 50'
 Vert. 1" = 5'

REVISIONS	
101010	Extend 15" RCP total 50'

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

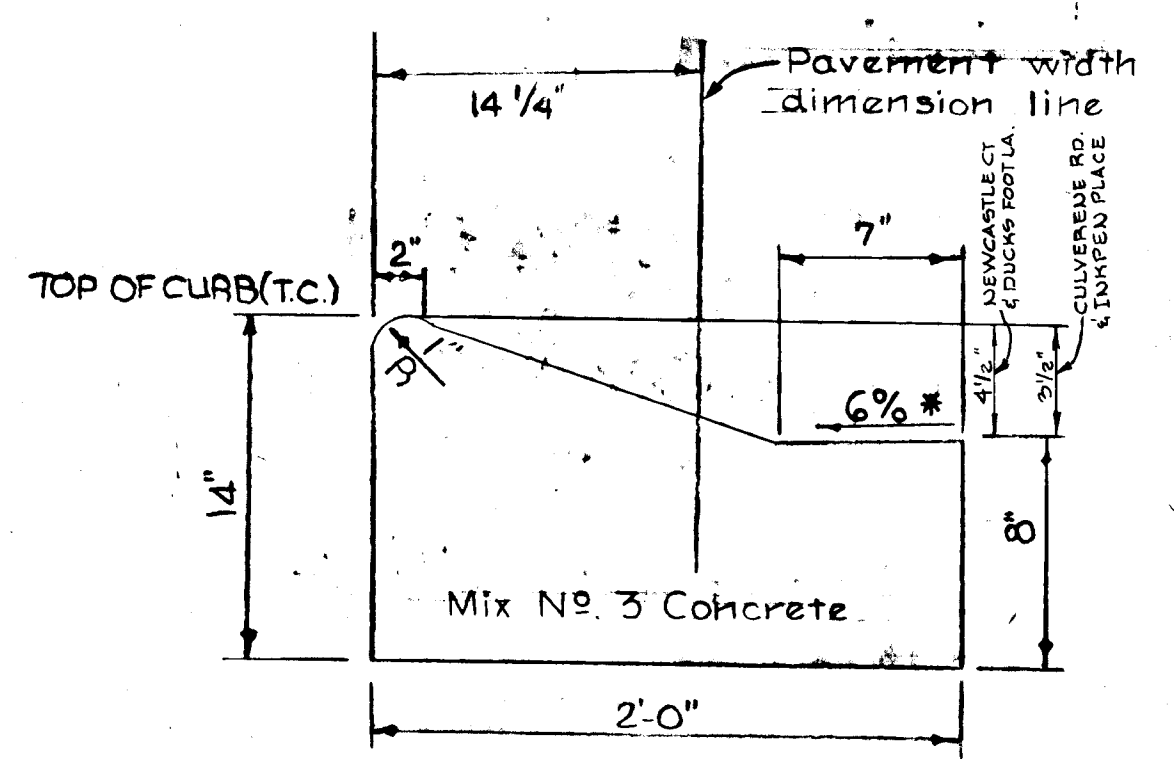
Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974

Note:
 All roads are designed for 25 MPH. Speed limit

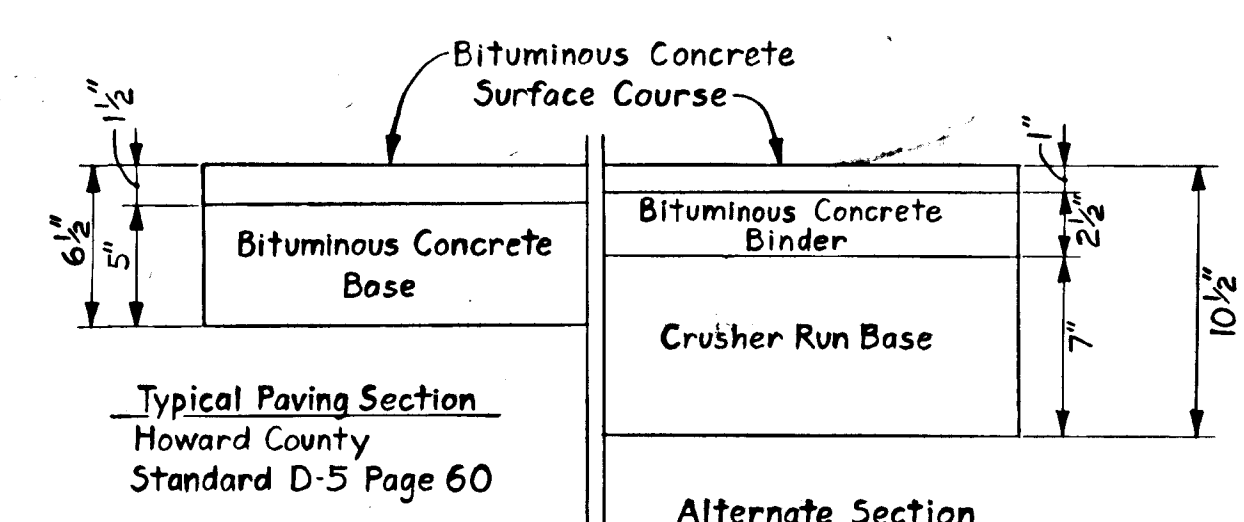


Note:
 Sidewalk to be constructed in accordance with Article C-55 of the Howard County Local Construction Code and Specifications.
 Howard County Modified Combination Curb and Gutter see this sheet

50' ROW HALF SECTION AND 82' LAVING APPLICABLE TO:
 DUCKS FOOT LANE
 NEW CASTLE COURT
 CULVERNE ROAD
 INKPEN PLACE



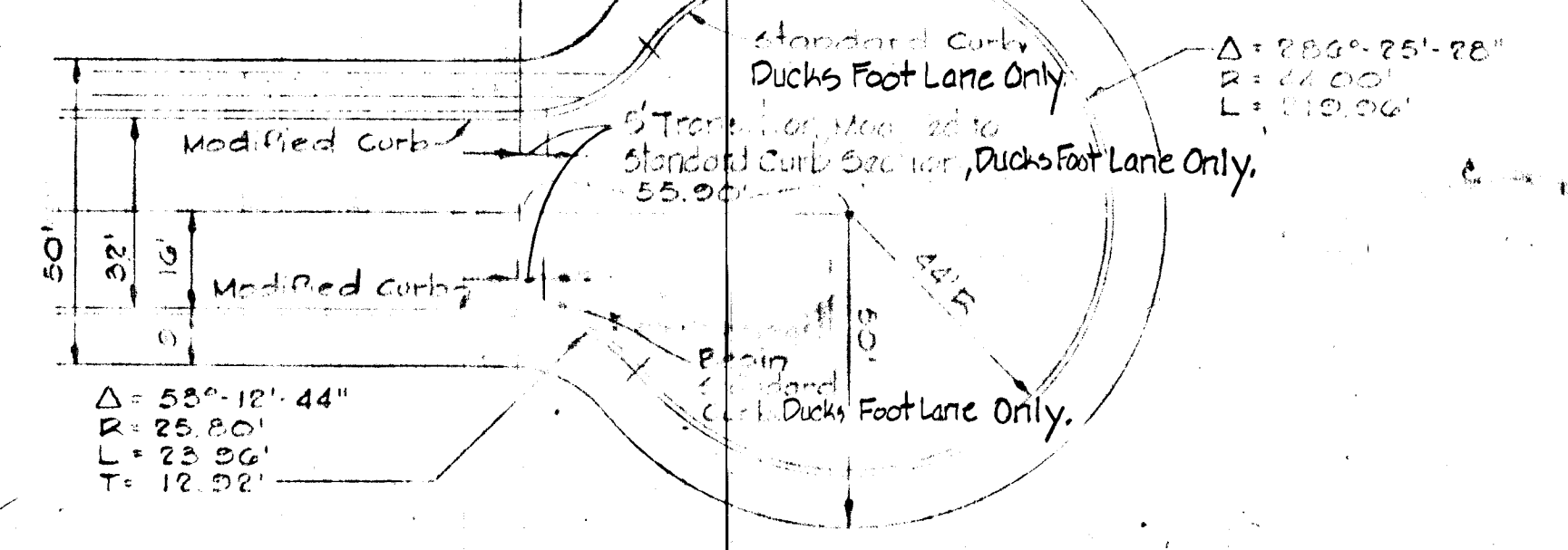
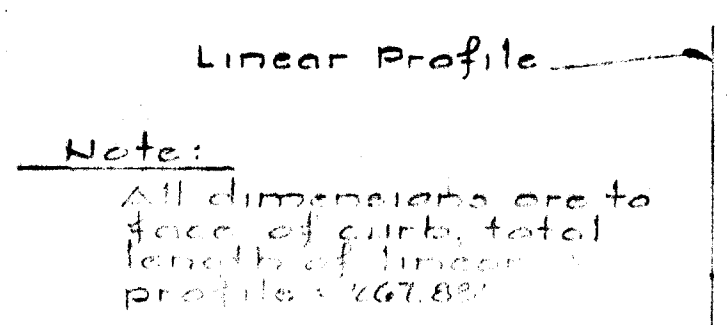
* Gutter pan at the median edge of intermediate arterials or the high side of superelevated sections shall be sloped at the same rate as the pavement.



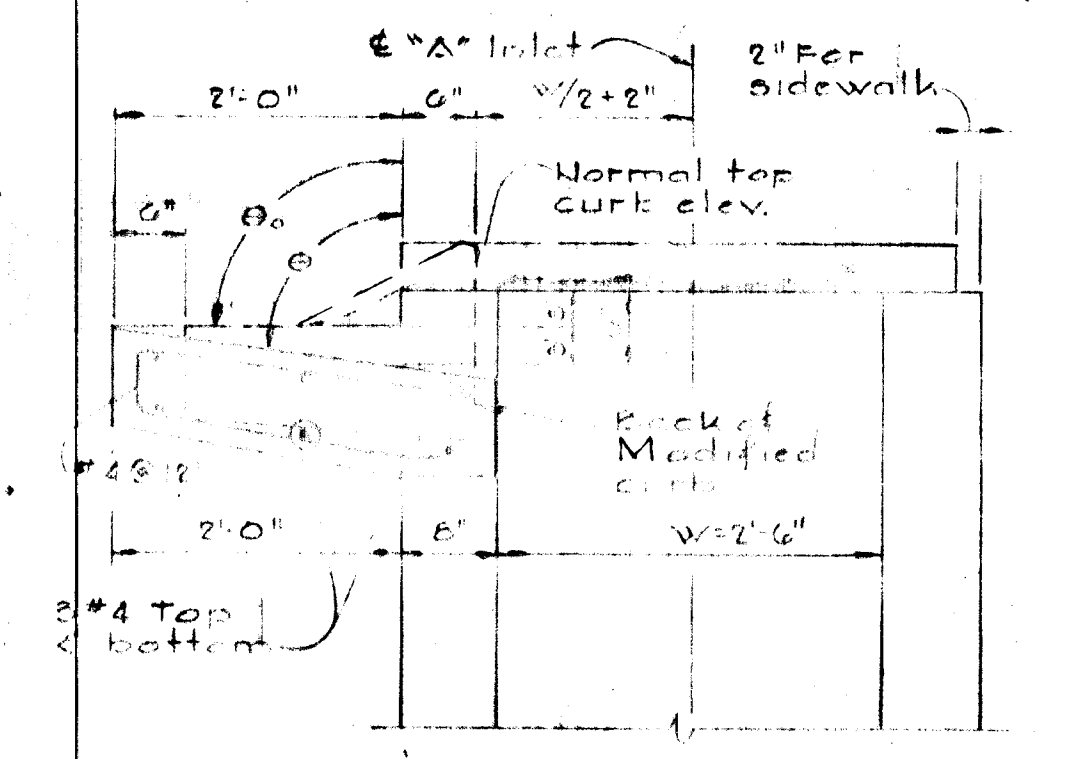
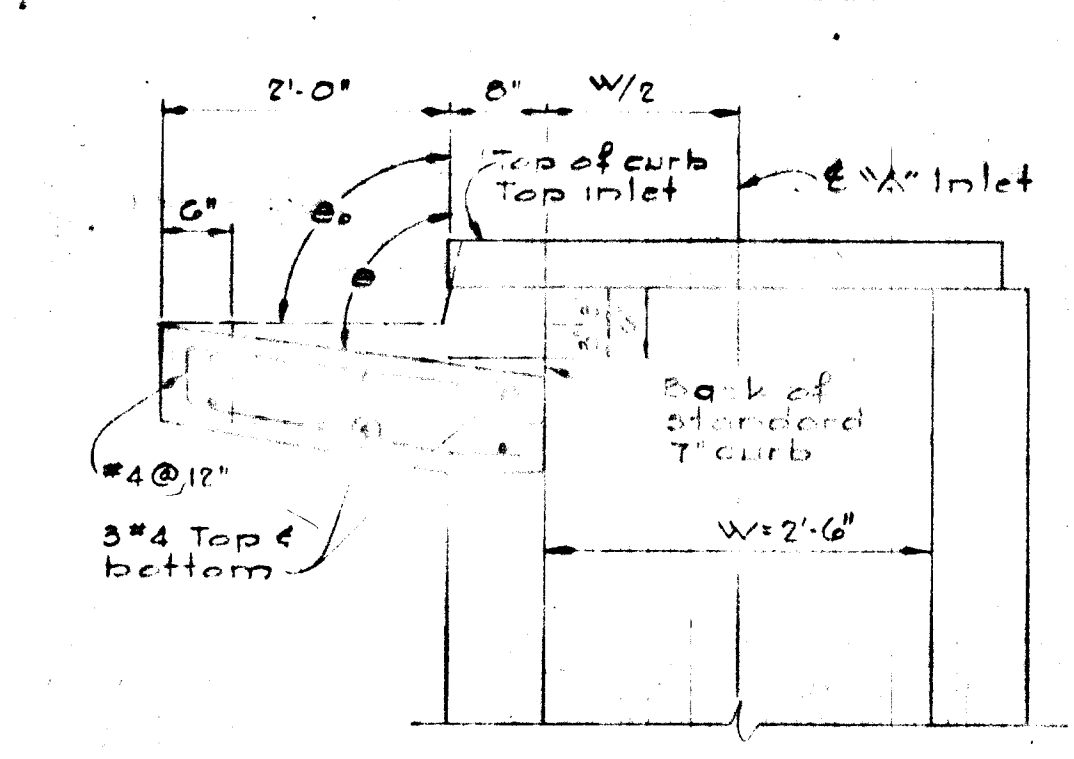
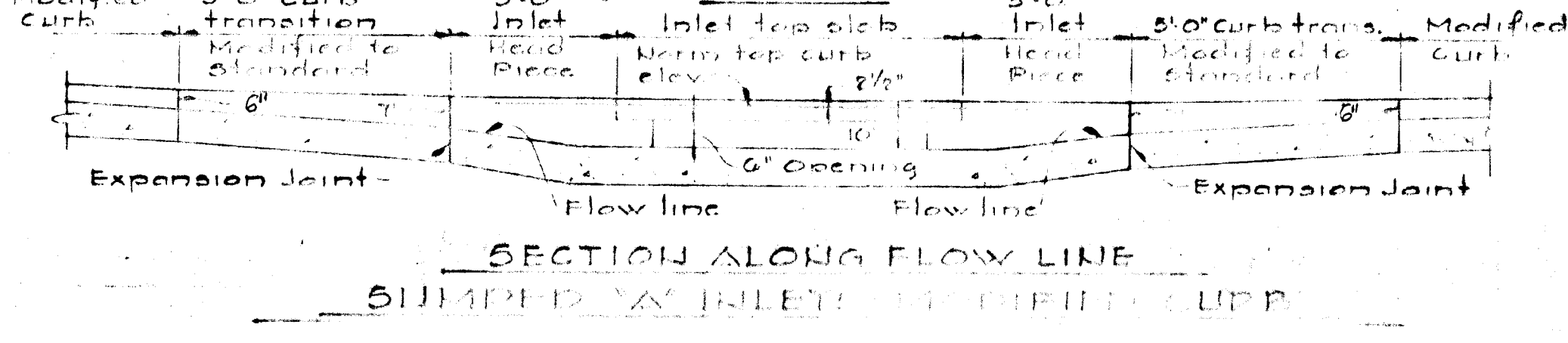
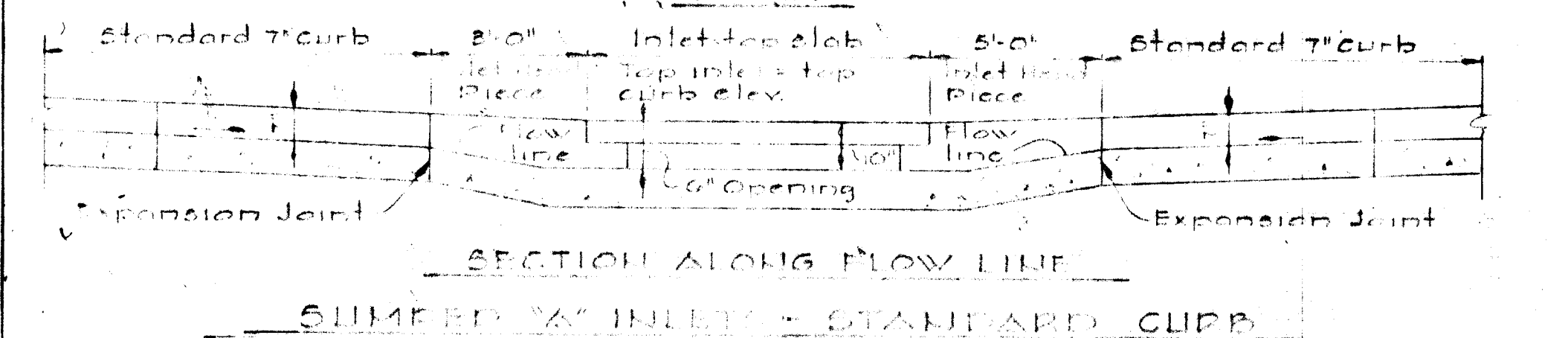
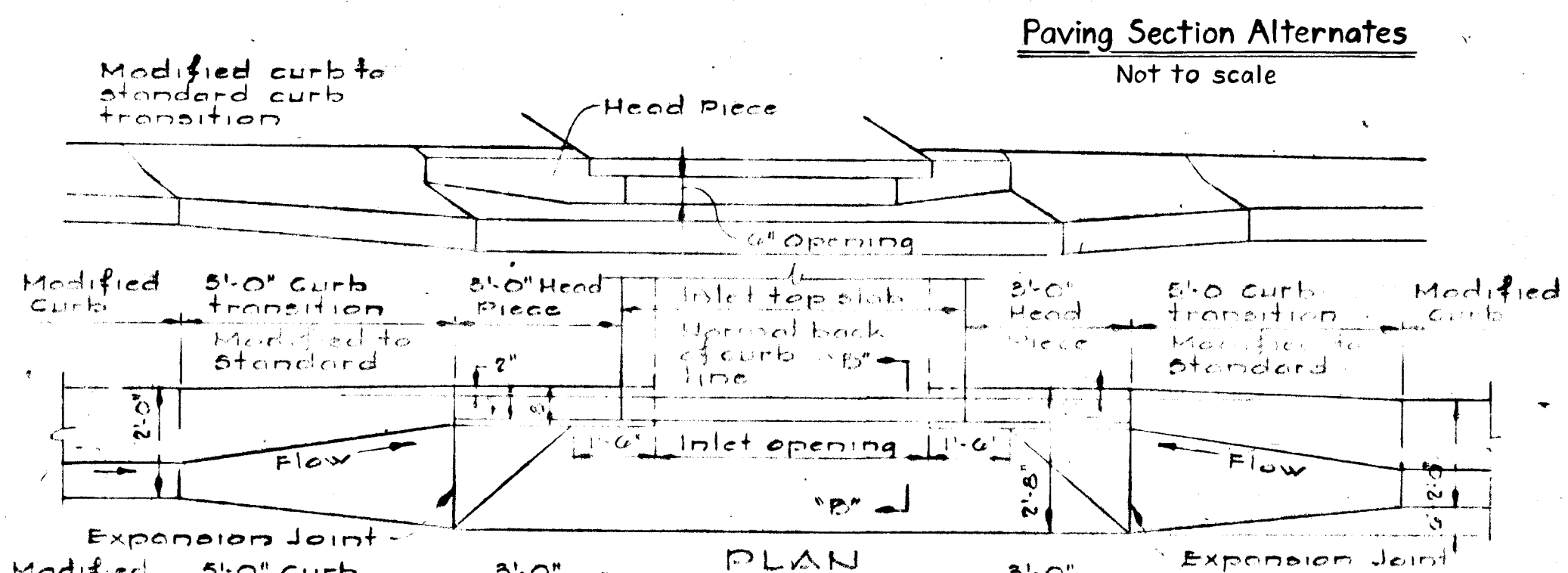
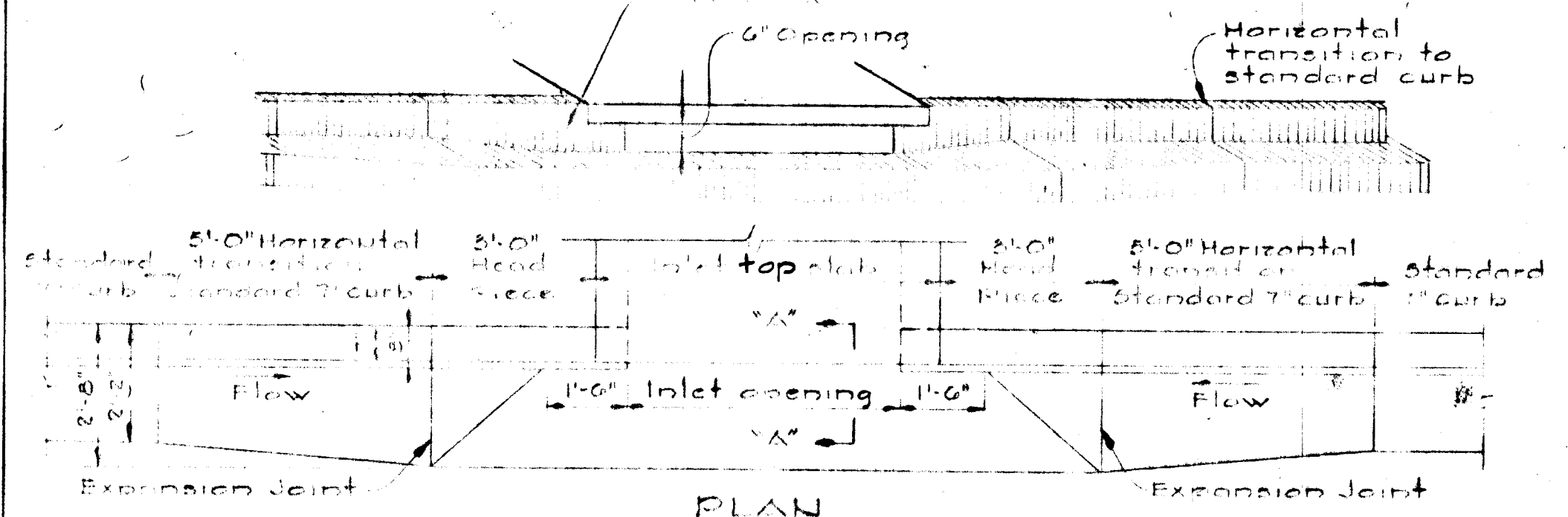
Notes for Section D-5
 1) Base will be primed in accordance with C-30.3 as provided in the Howard County Road Construction Code and Standard Specifications.
 2) Tack Coat is required in accordance with section C-31.4 of the Howard County Road Construction Code and Standard Specifications.

Alternate Section
 Howard County Std. D-4 page 59

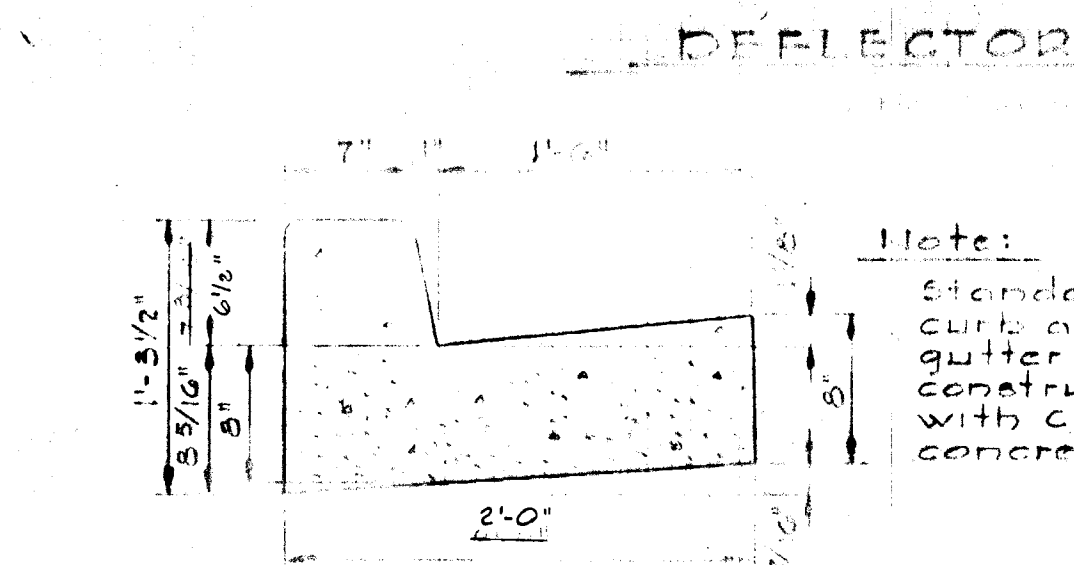
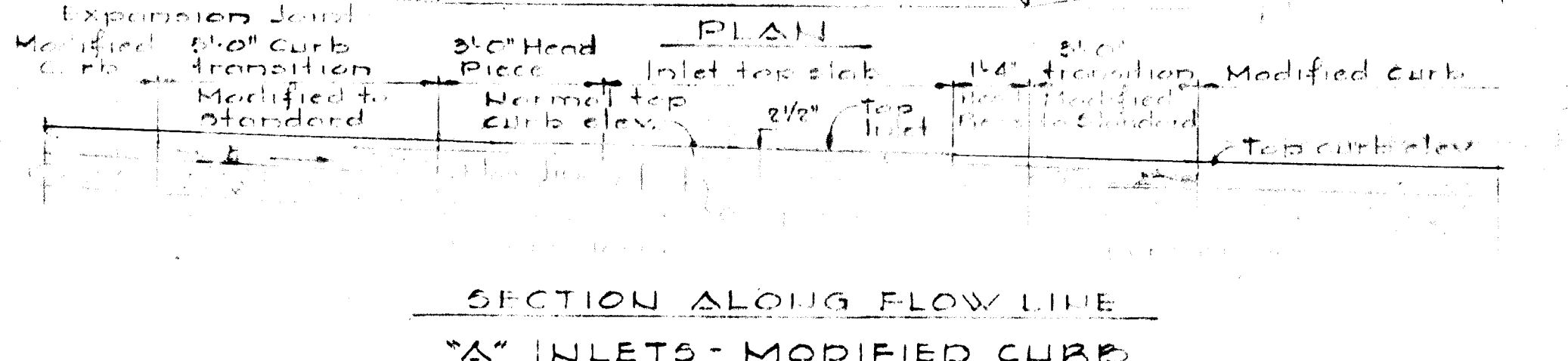
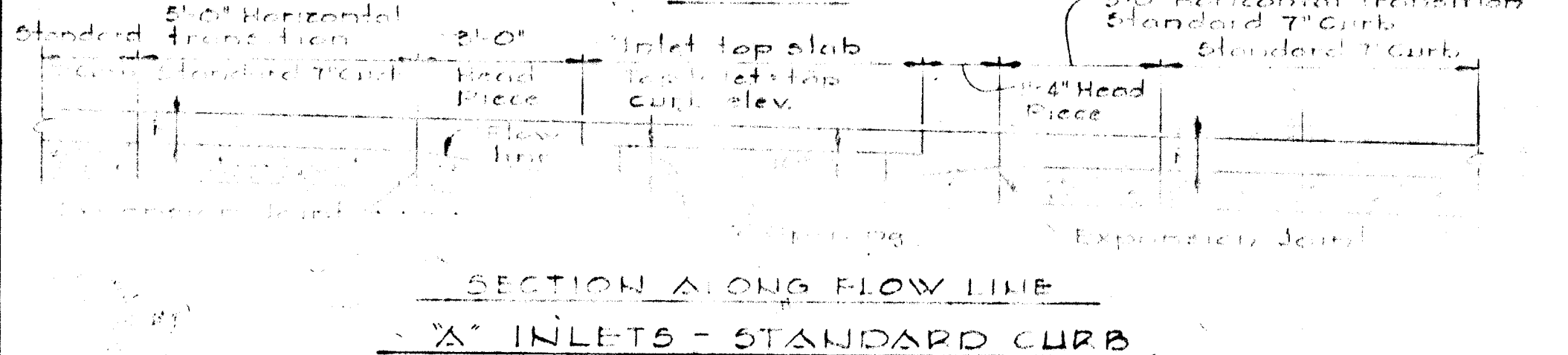
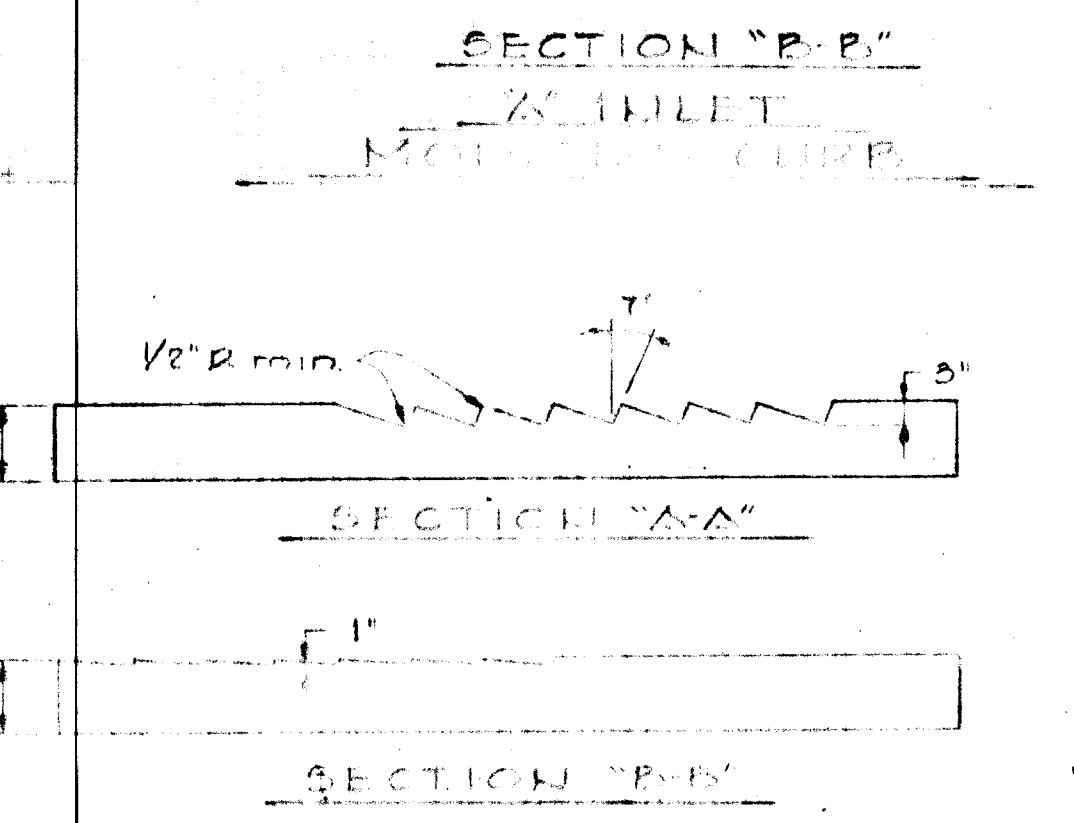
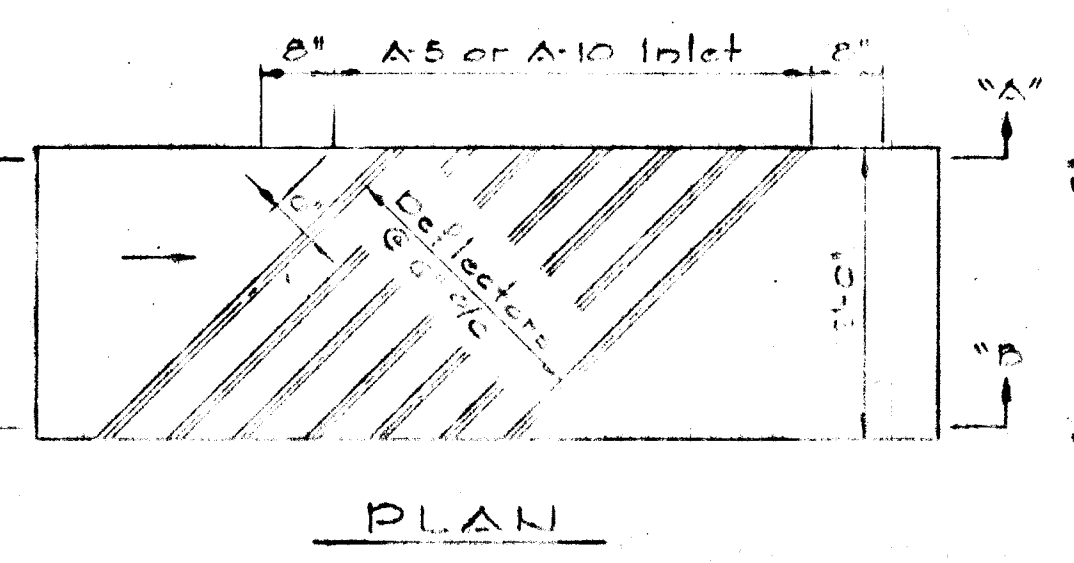
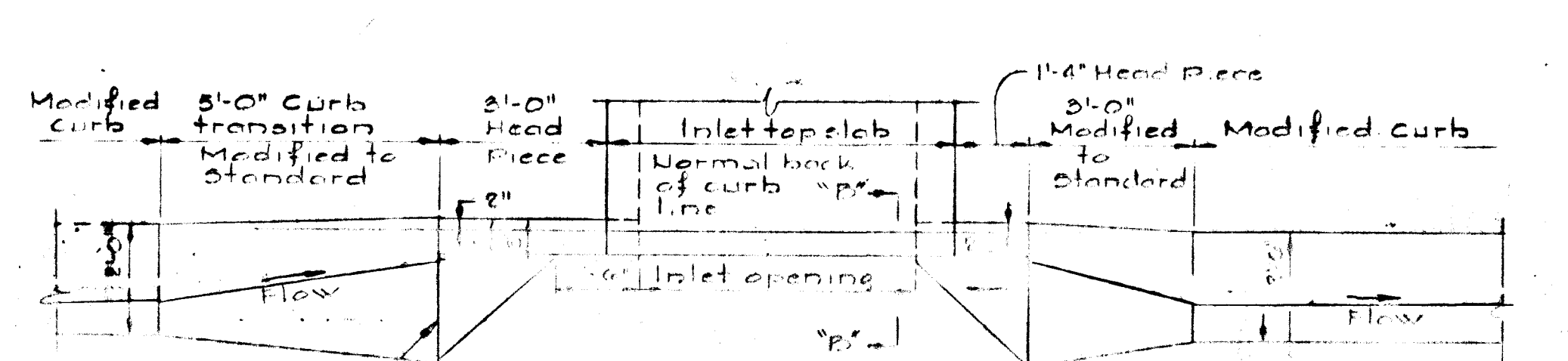
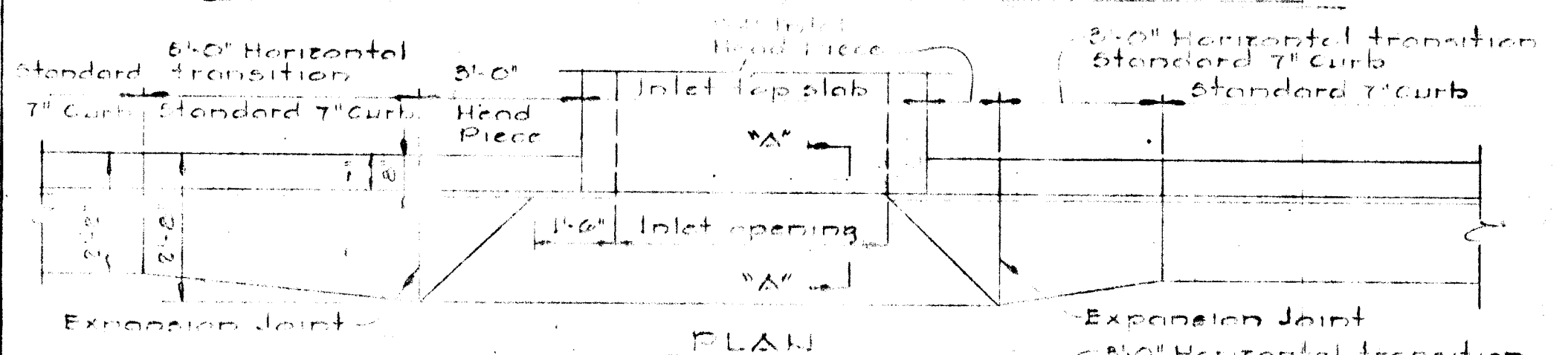
Notes for either Section D-4 or D-5
 1) All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
 2) Only one of the paving Sections shown shall be used for the road construction proposed under this submission.



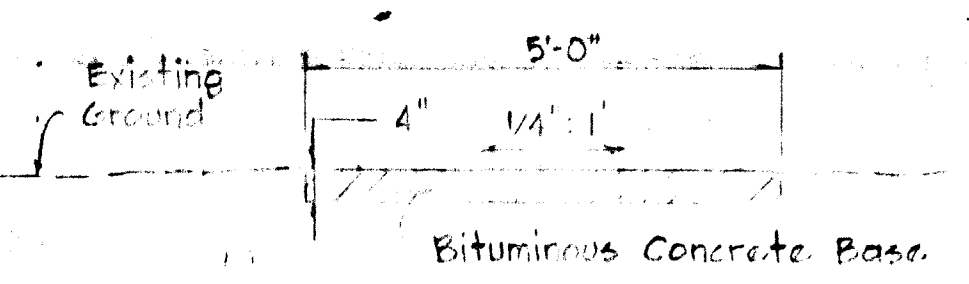
CUL-DE-SAC DETAIL FOR DUCKS FOOT LANE & NEW CASTLE COURT
 Scale: 1/4" = 1'-0"



Note:
 For "A" Inlet dimensions and structural details see Standard Howard County Drawing 64-A page 110-A



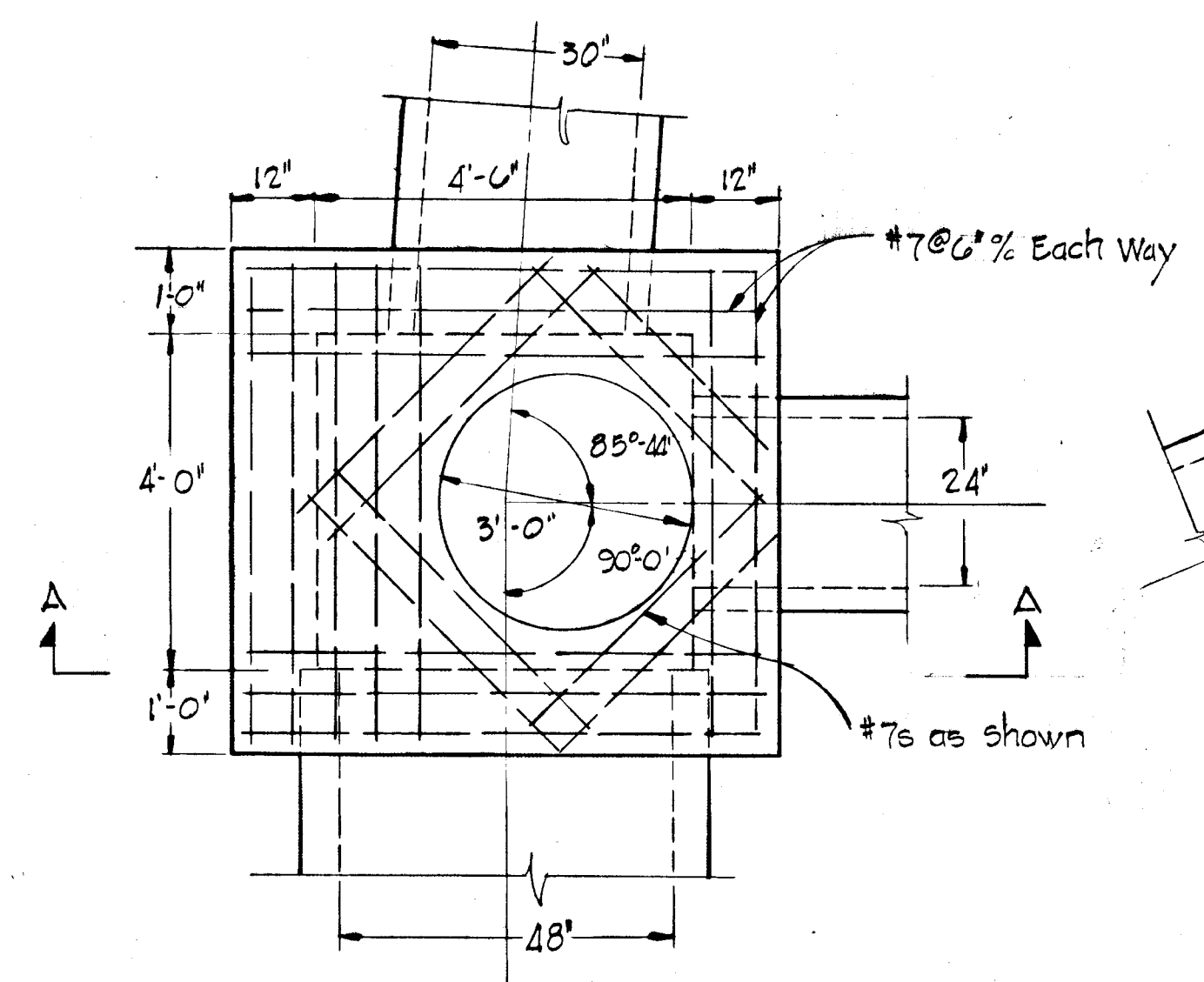
As Built SURVEY DATED JUNE 28, 1982 SIGNED & SEALED BY HENRY V. OHEIM Reg. No. 4156
 PURCHASER: MANOR SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY MARYLAND
 ROADWAY & STORM DRAIN DETAILS
 DATE: 3-23-79
 BARTHOLOMEW, MARYLAND 1982



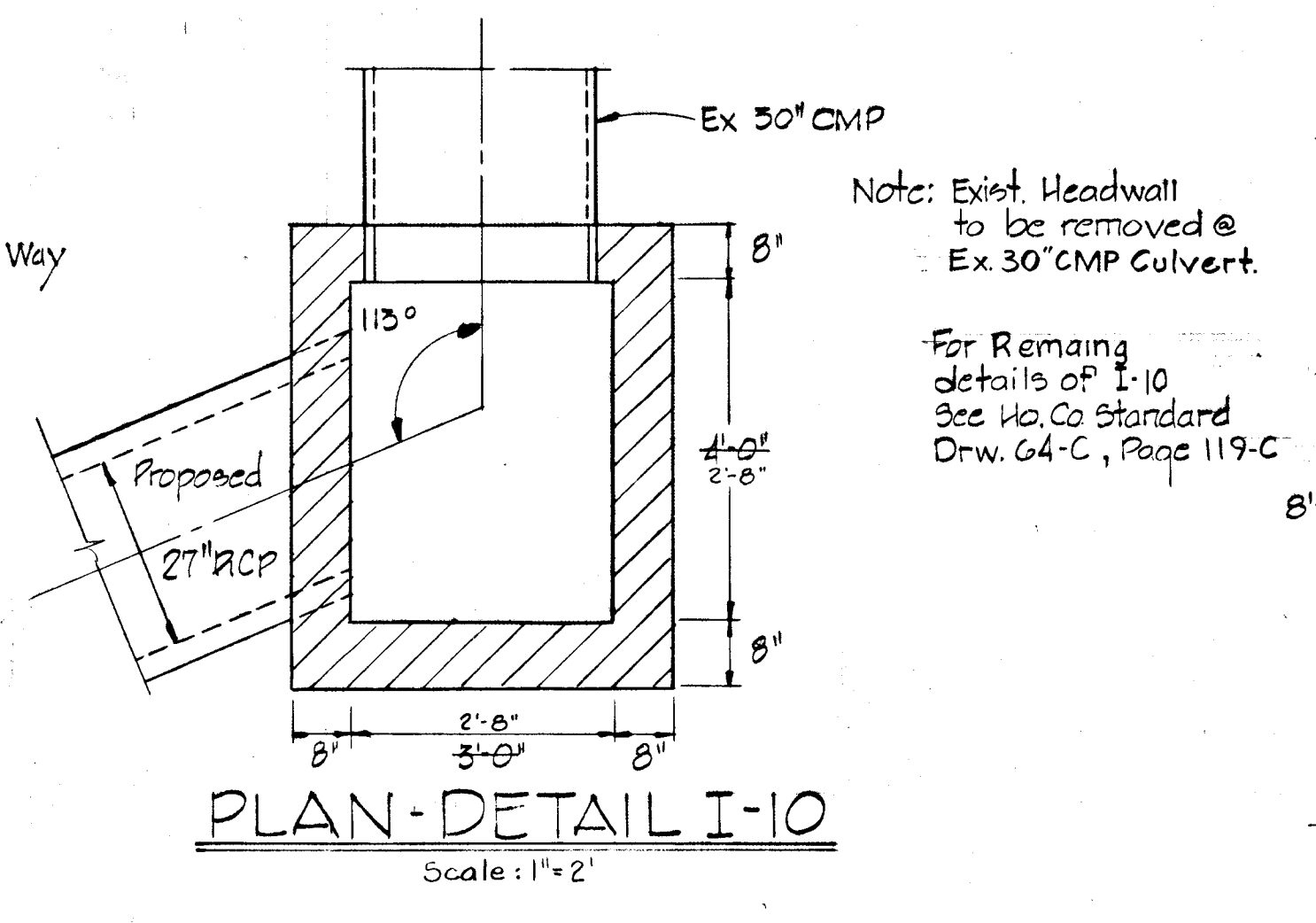
DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

Registered Engineer
 No. 1578

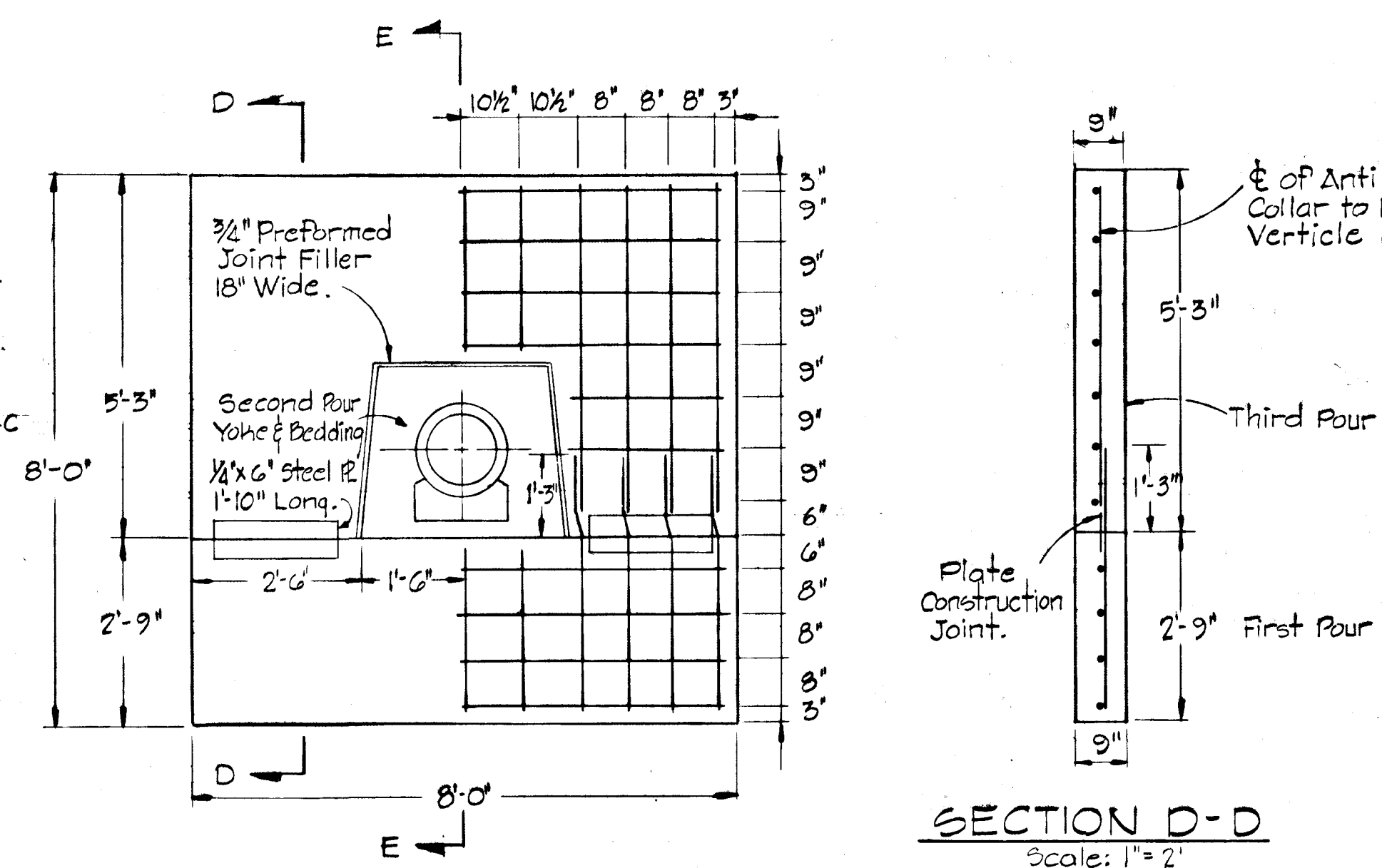
8-13-79
 DATE
 8/3/79
 DATE



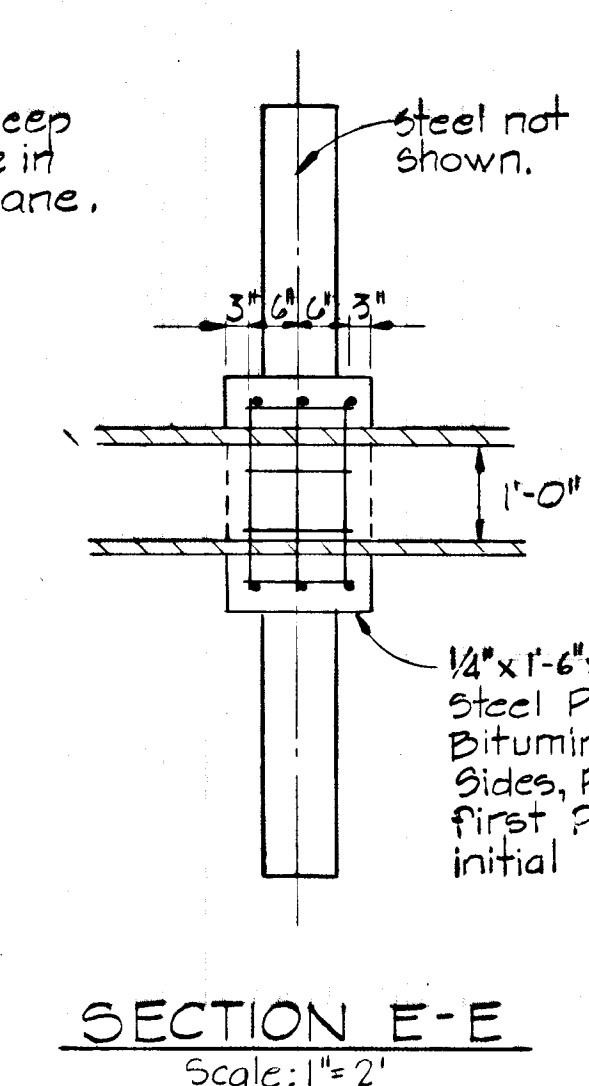
PLAN-DETAIL MH 2
 Scale: 1"=2'



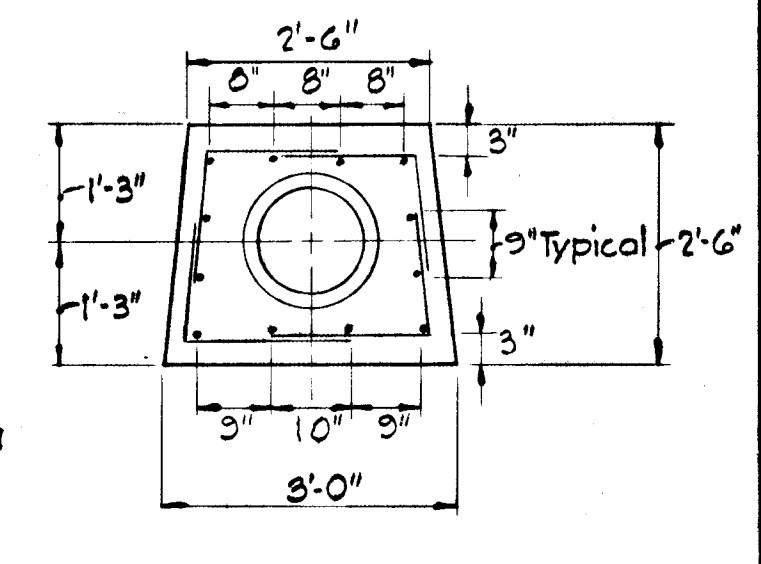
PLAN-DETAIL I-10
 Scale: 1"=2'



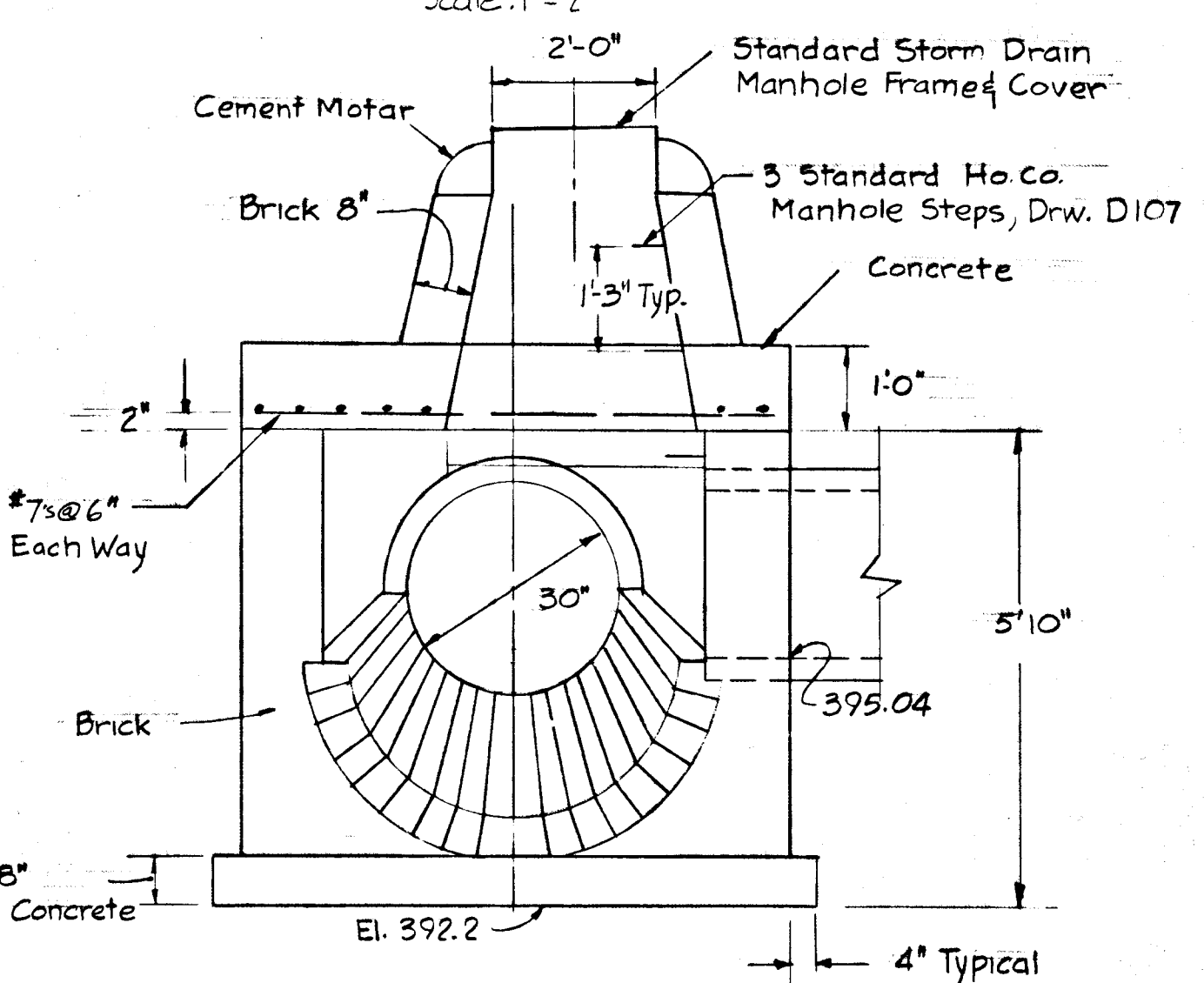
DETAIL OF ANTI SEEP COLLAR
 Scale: 1"=2'



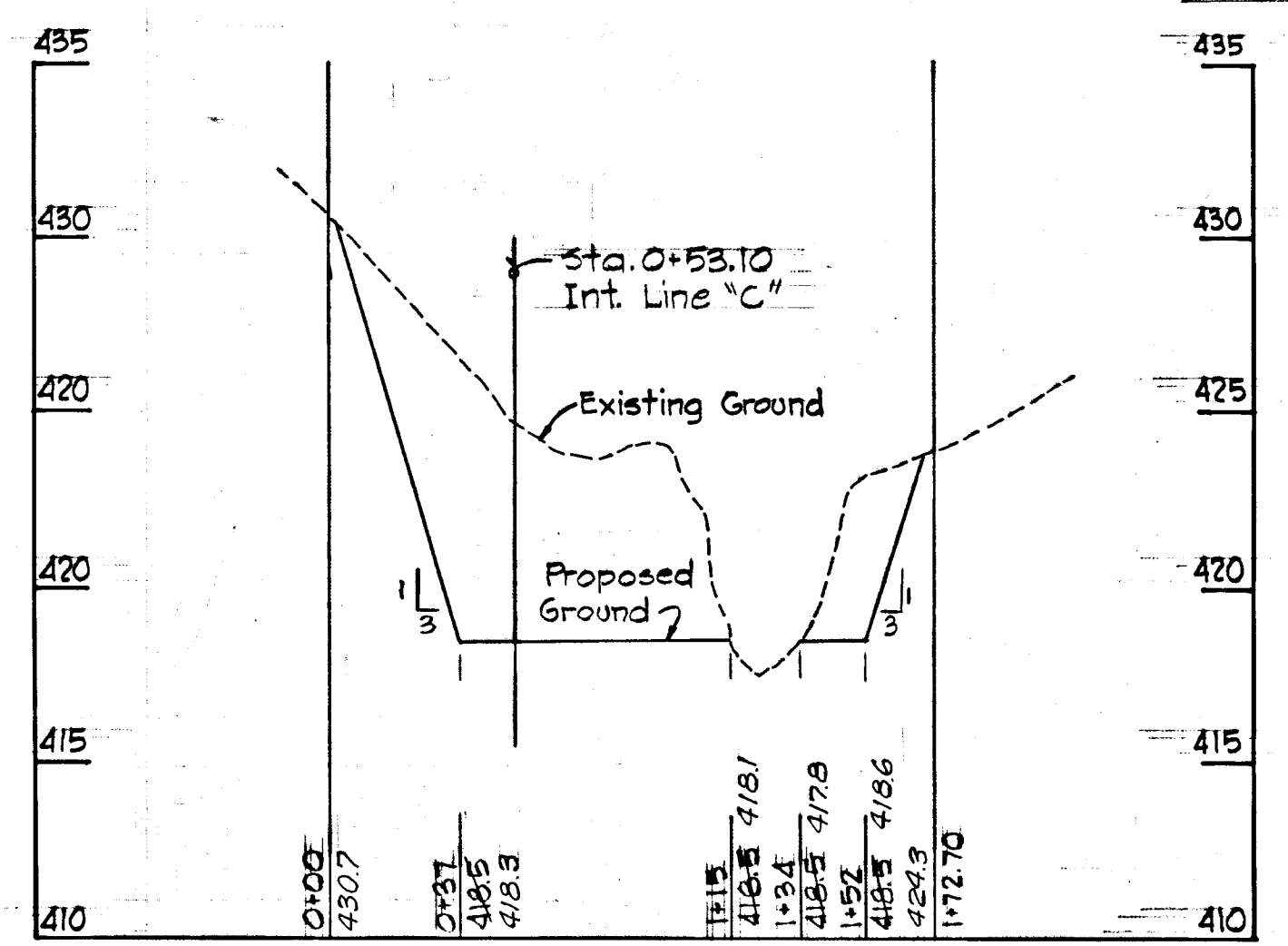
SECTION E-E
 Scale: 1"=2'



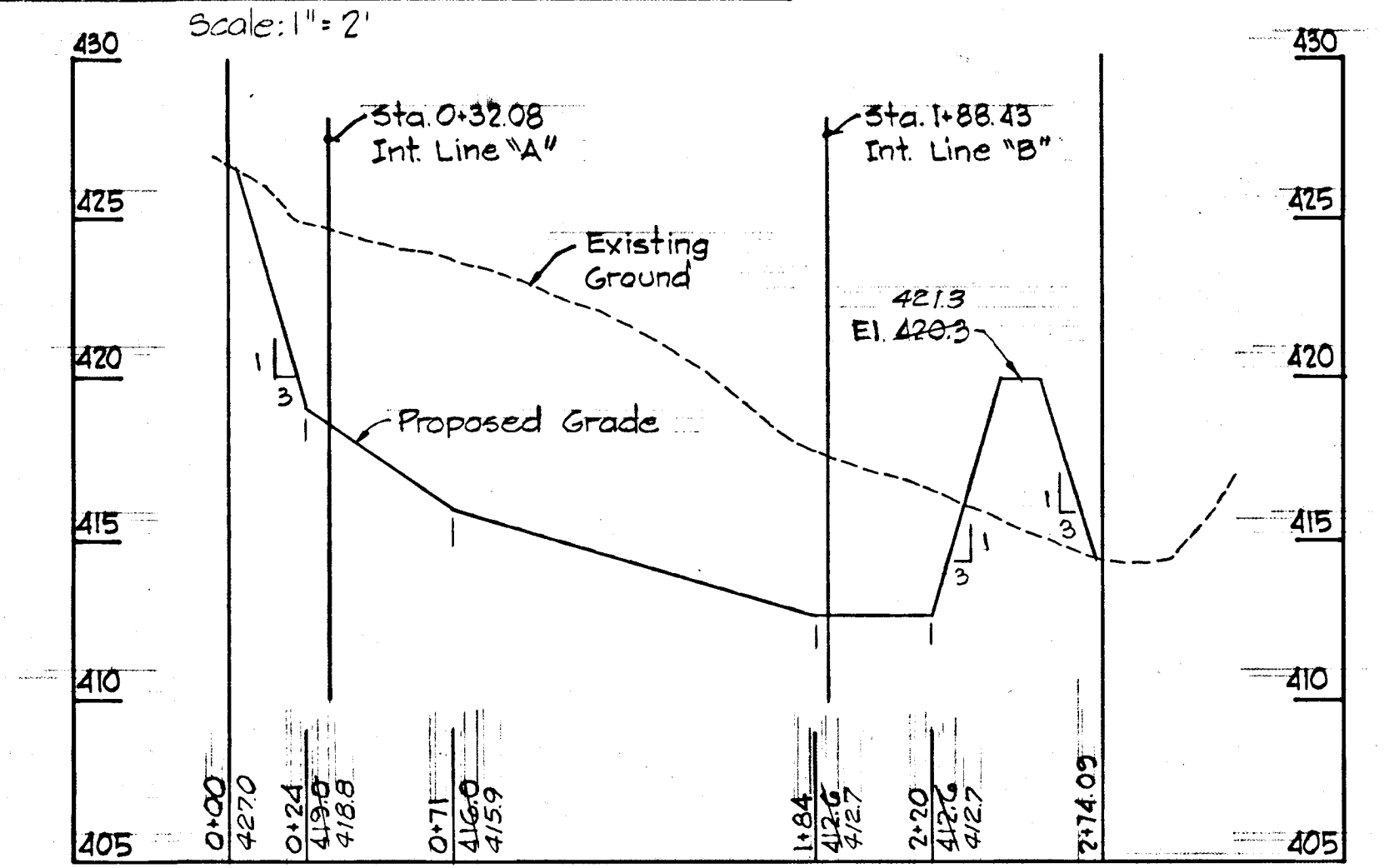
DETAIL ANTI-SEEP COLLAR YOKE
 Scale: 1"=2'



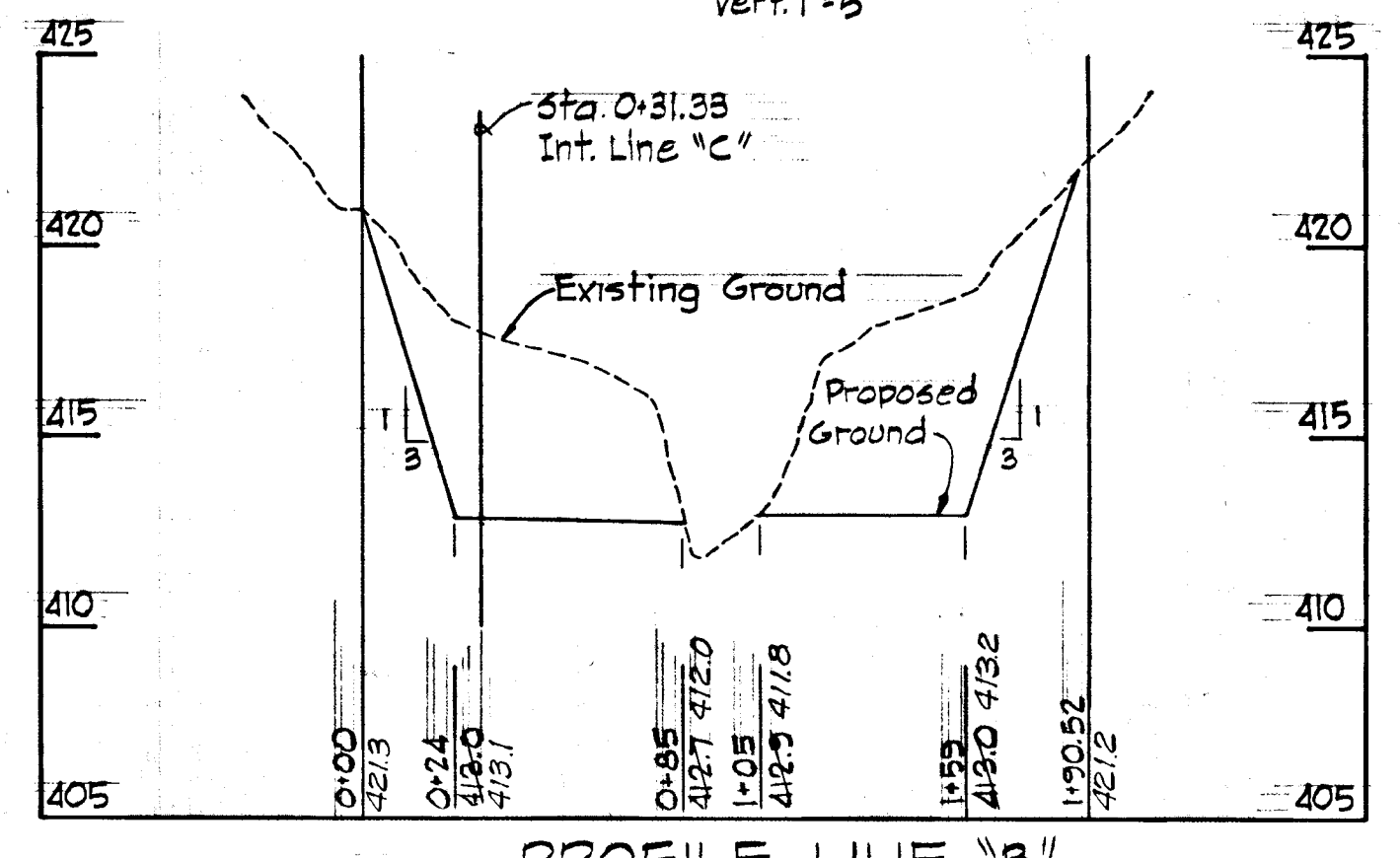
SECTION A-A
 Scale: 1"=2'



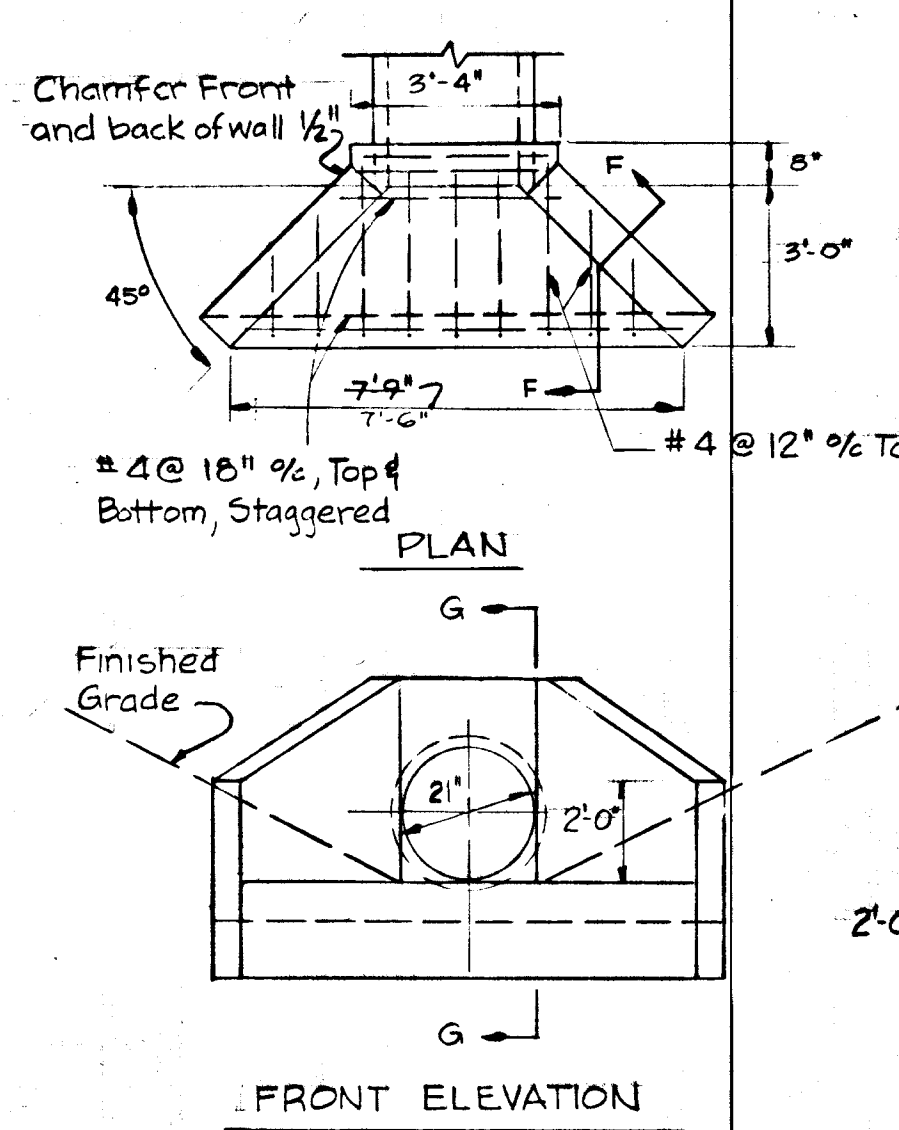
PROFILE LINE "A"
 Scale: Hor. 1"=50', Vert. 1"=5'



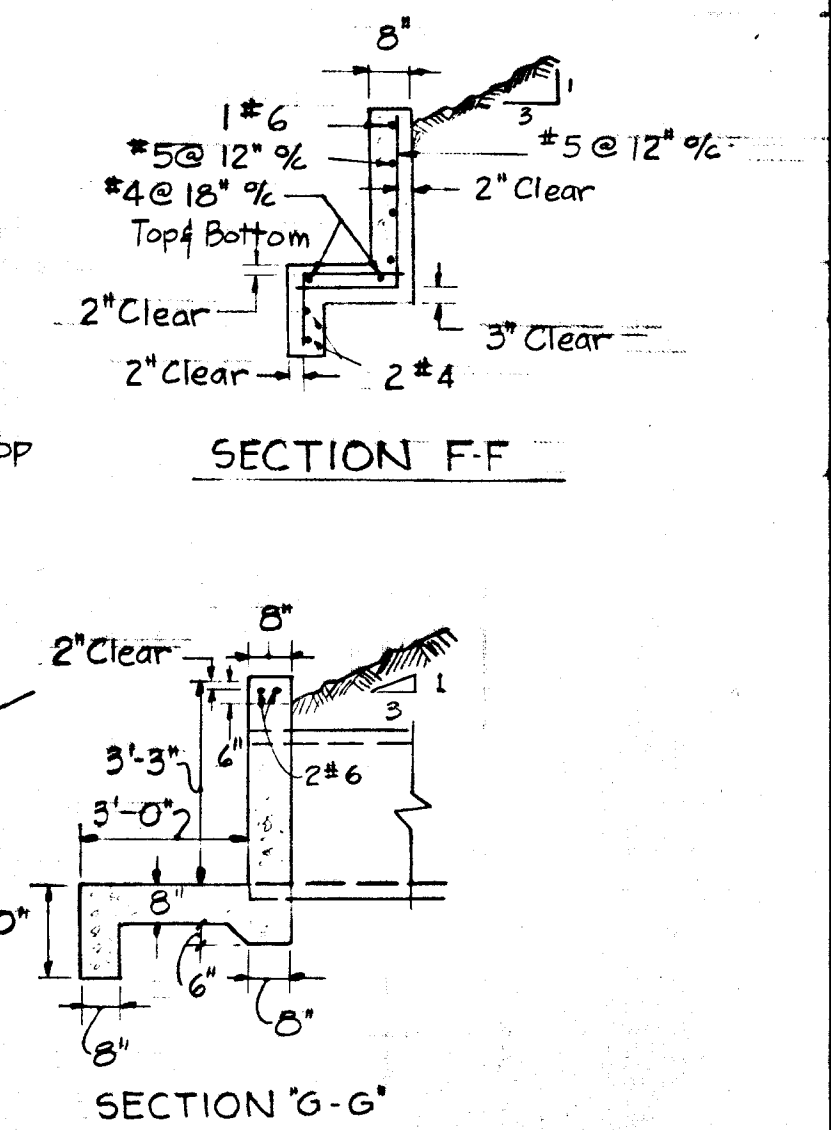
PROFILE LINE "C"
 Scale: Hor. 1"=50', Vert. 1"=5'



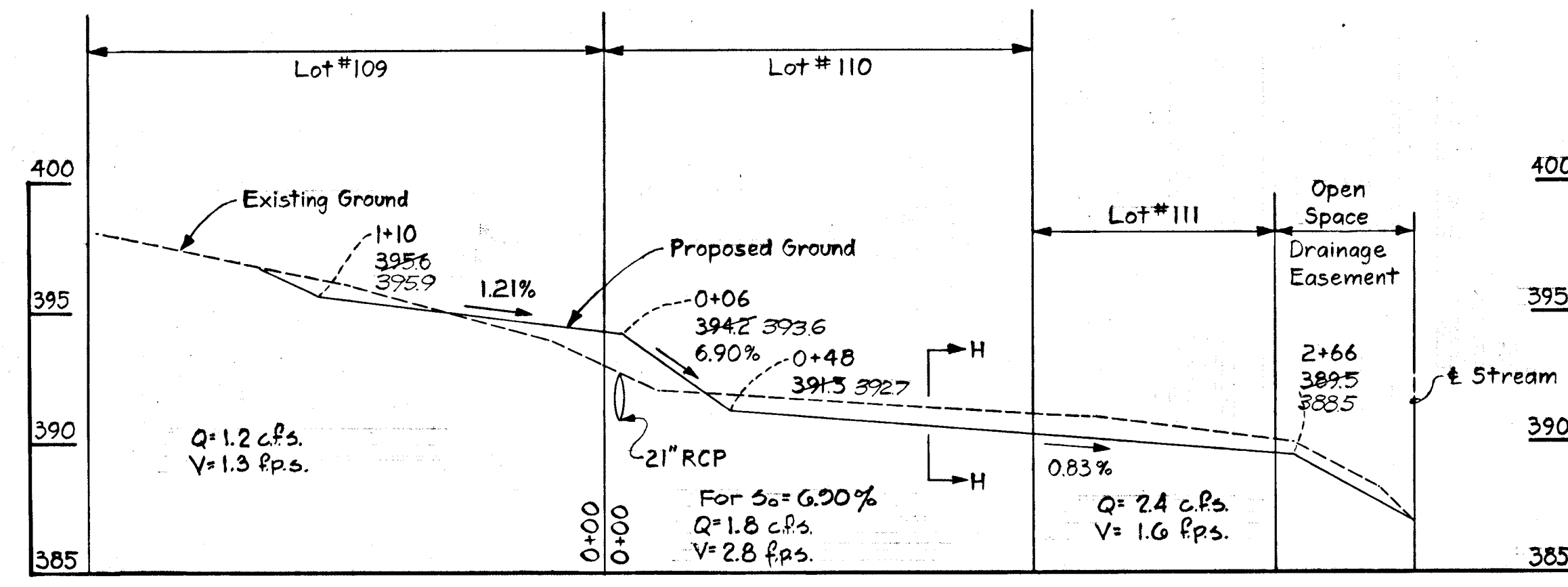
PROFILE LINE "B"
 Scale: Hor. 1"=50', Vert. 1"=5'



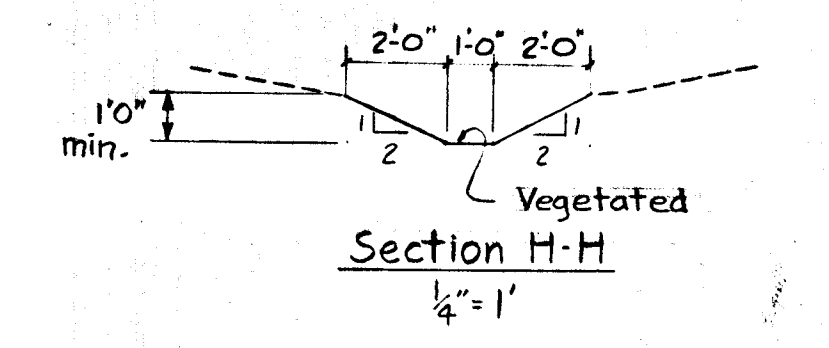
TYPE "A" HEADWALL
 Not To Scale



SECTION "G-G"



Profile of Swale
 Behind lots 109-111
 Scale: Hor. 1"=50', Vert. 1"=5'



Section H-H
 1/4"=1'

THIS PLAN HAS BEEN REVIEWED BY THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.
 APPROVED: *Robert Z. Zelen* 7/27/79
 HOWARD S.C.D. DATE
 PLAN NUMBER

CERTIFICATION BY THE DEVELOPER
 WE CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION OF THIS POND WILL BE DONE ACCORDING TO THIS PLAN. WE 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. WE 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.
 JOHN DEGRUIT BRANCH MANAGER
 MICHAEL MCGUIRE MANAGER, LAND DEVELOPMENT
 7-12-79 DATE

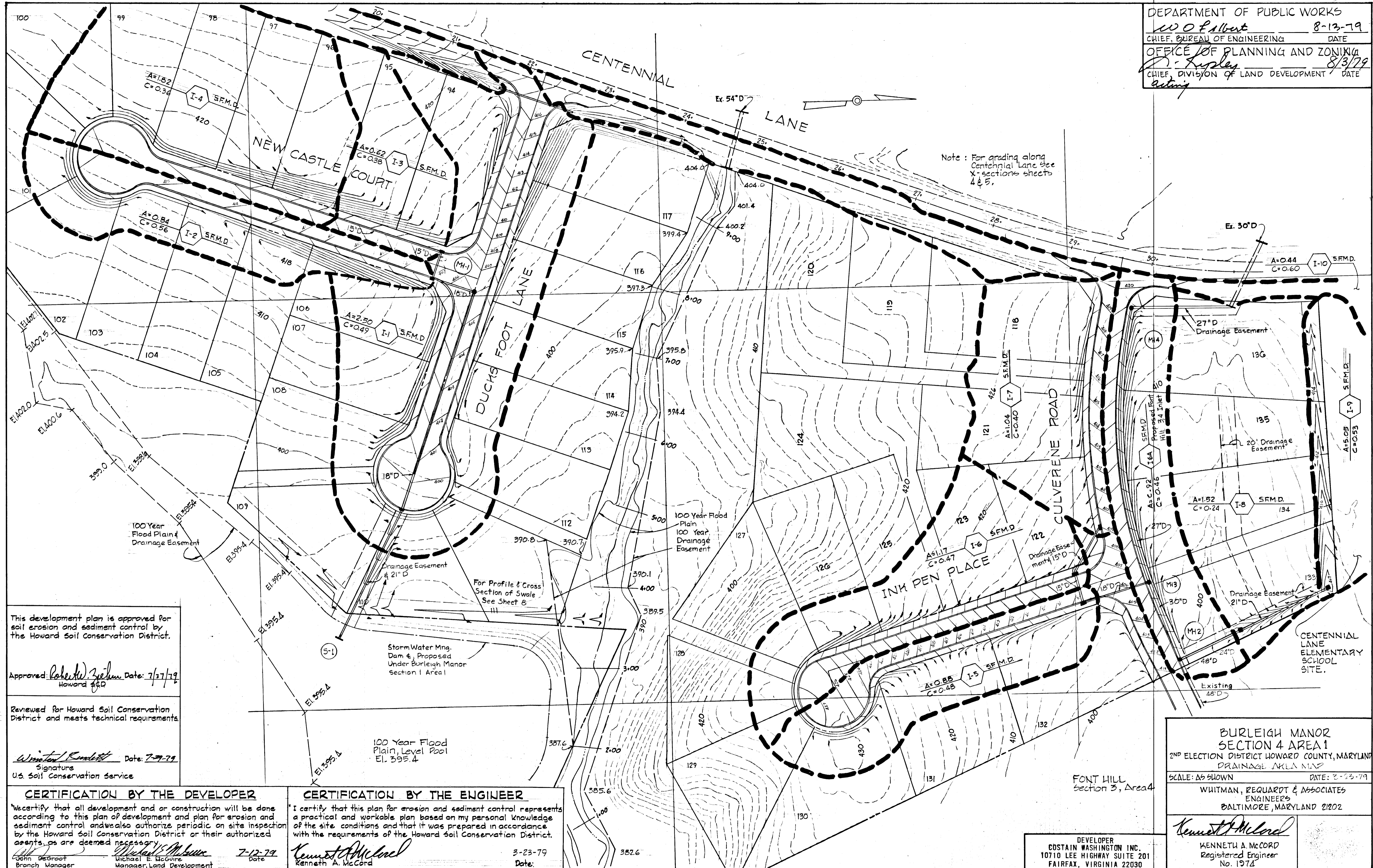
CERTIFICATION BY THE ENGINEER
 I CERTIFY THAT THIS PLAN FOR SMALL POND CONSTRUCTION REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 KENNETH A. MCCORD P.E. 1974
 3-23-79 DATE

AS BUILT SURVEY DATED JUNE 26, 1982 SIGNED & SEALED BY HENRY V. CHEMIS REG. NO. 4156

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

BURLEIGH MANOR SECTION 4 AREA 1
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 STORM DRAIN PROFILES & DETAIL
 SCALE: AS SHOWN DATE: 3-23-79
 WHITMAN REARDT & ASSOCIATES ENGINEERS
 BALTIMORE, MARYLAND 21202
 KENNETH A. MCCORD Registered Engineer No. 1974

DEPARTMENT OF PUBLIC WORKS
W. O. Silbert 8-13-79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
D. K. Kopy 8/3/79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Esting



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

Approved: *Robert W. Zelman* Date: 7-27-79
 Howard SCD

Reviewed for Howard Soil Conservation District and meets technical requirements.

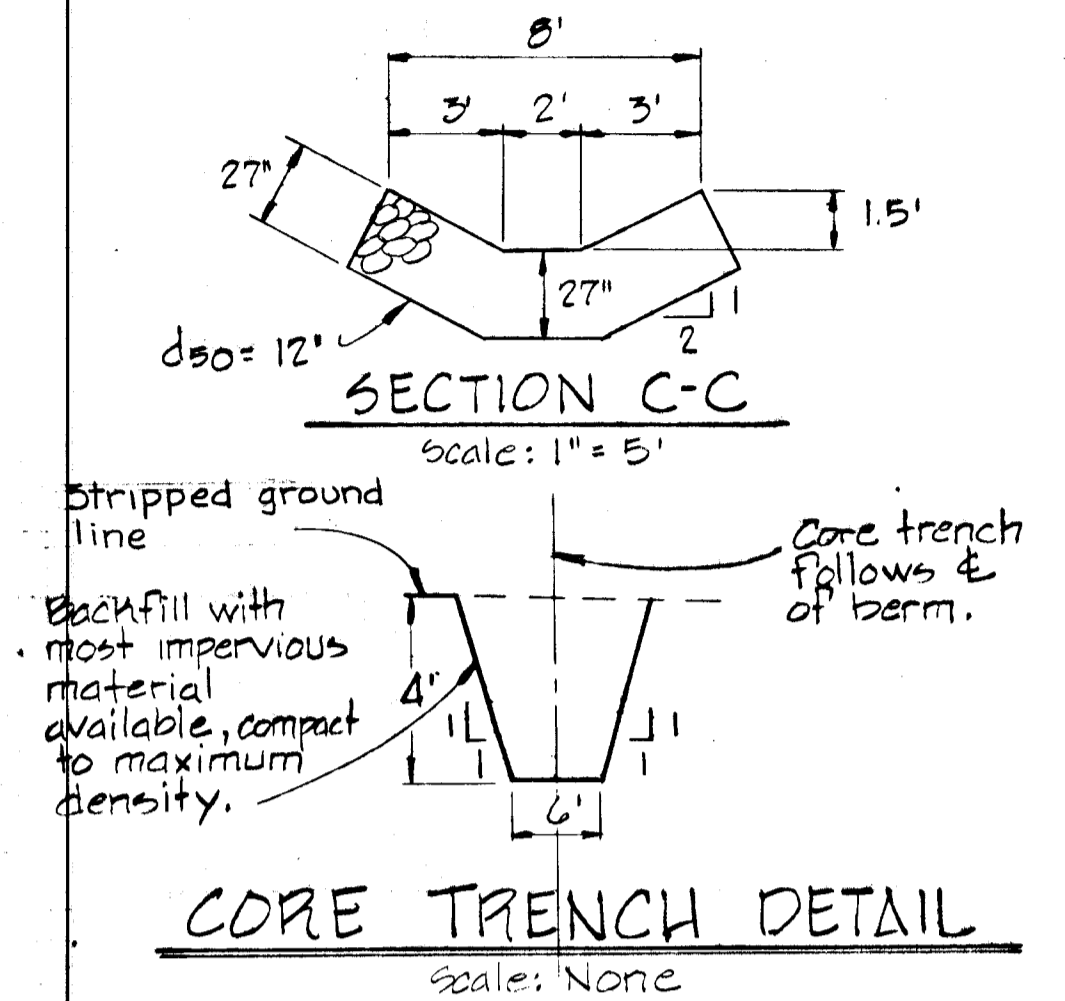
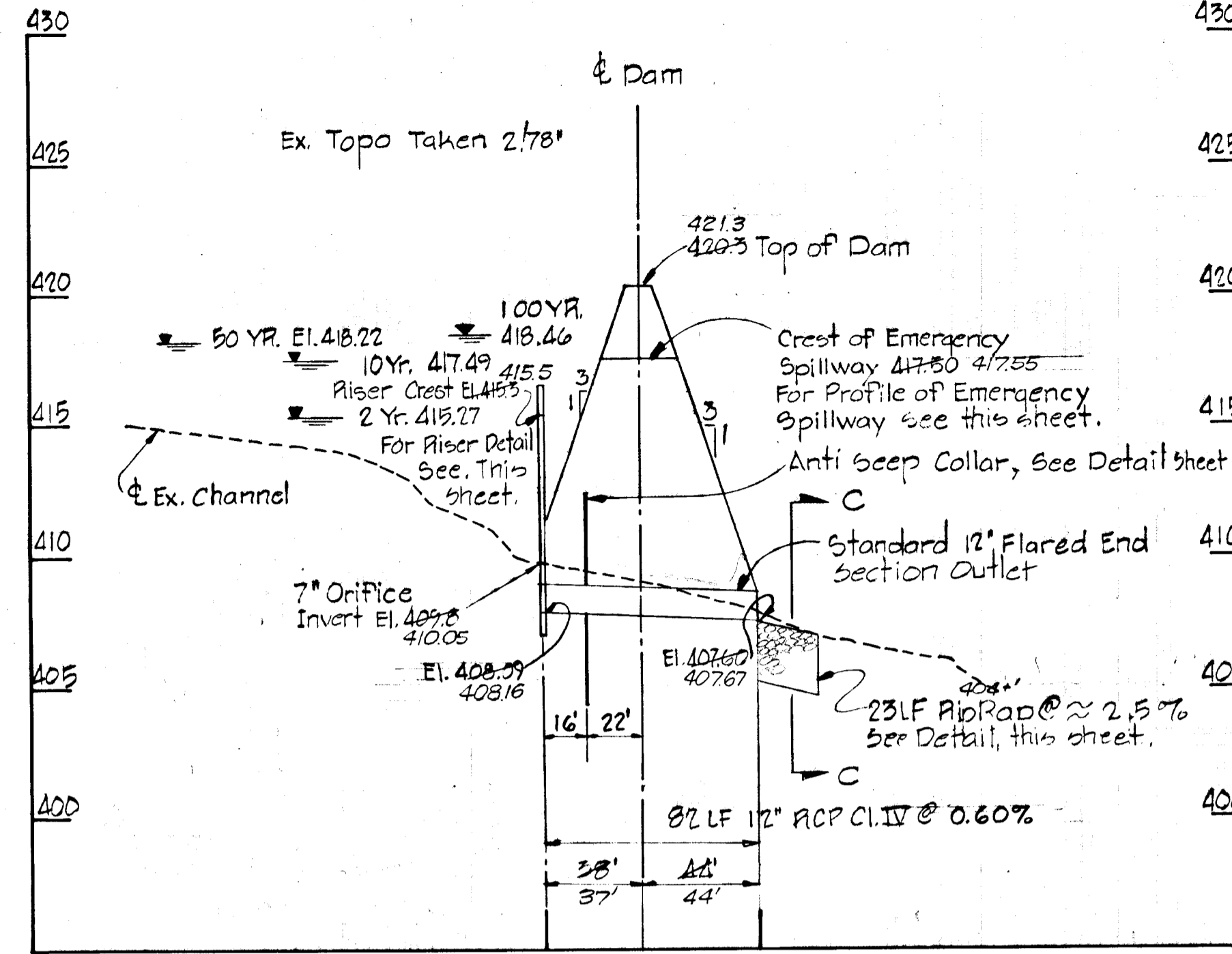
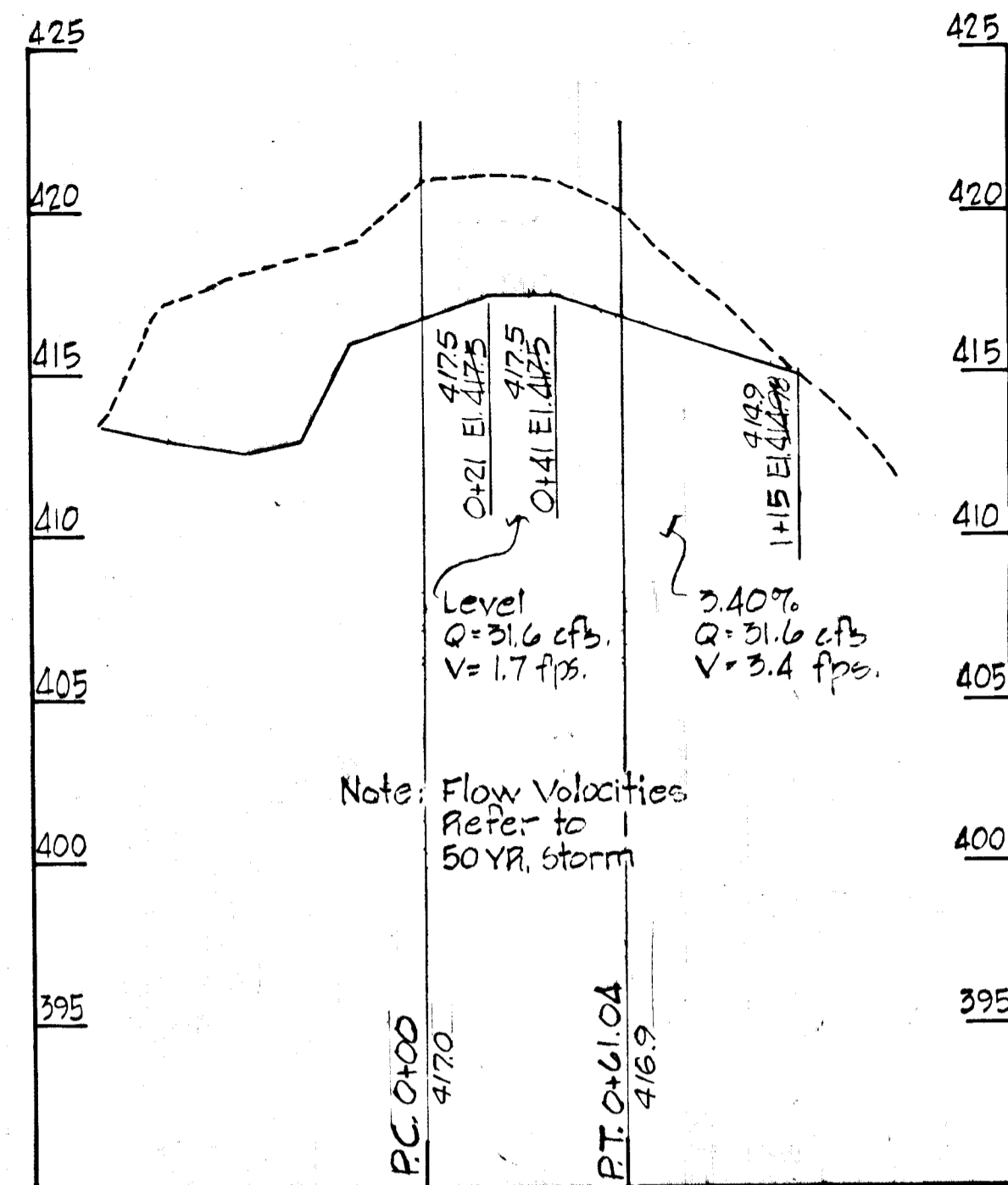
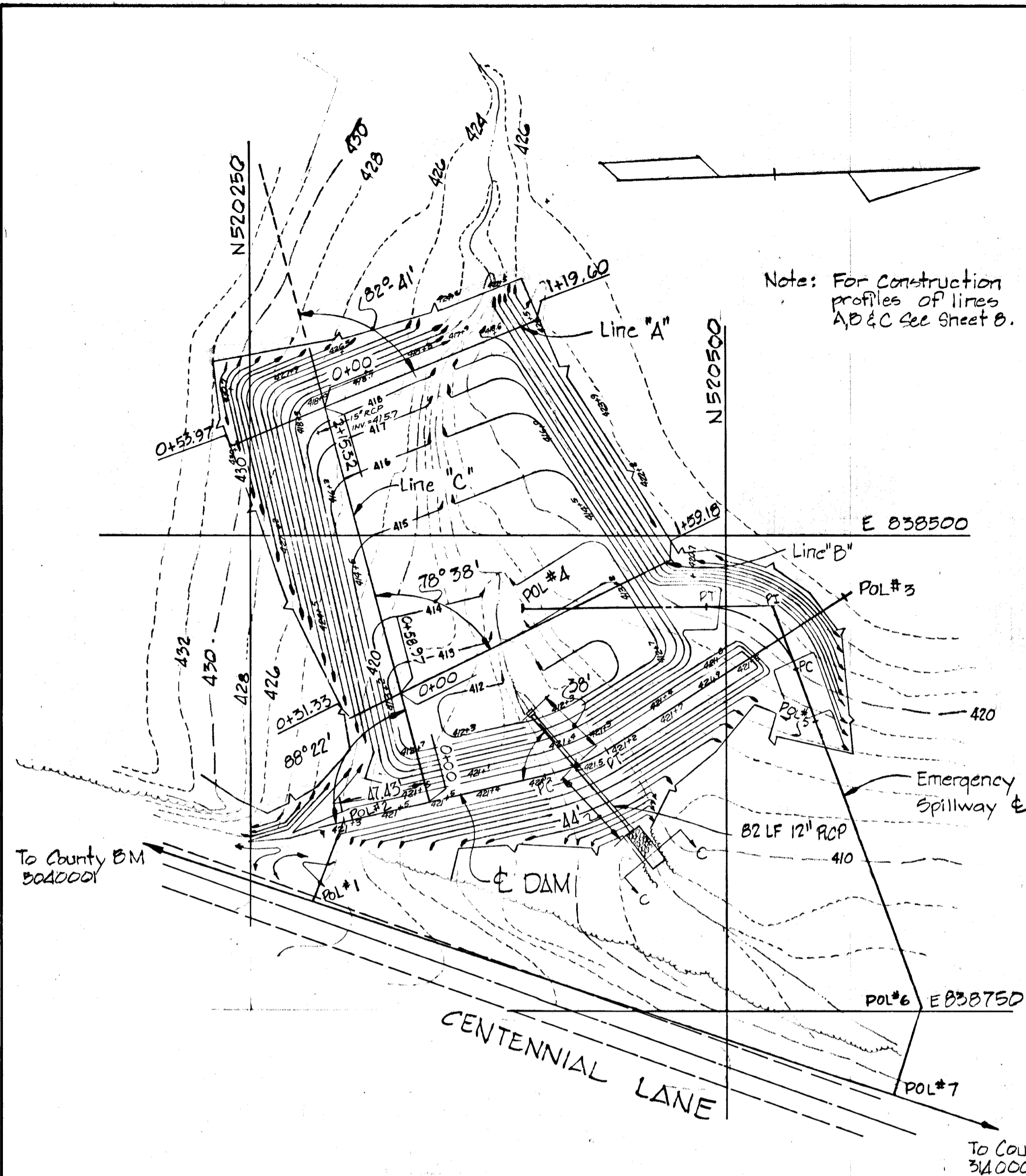
Wm. R. Kumbert Date: 7-29-79
 Signature
 US Soil Conservation Service

CERTIFICATION BY THE DEVELOPER
 We certify that all development and or construction will be done according to this plan of development and plan for erosion and sediment control and we also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.
Michael E. McGuire 7-12-79
 Manager, Land Development 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 3-23-79
 Registered Engineer Date

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

BURLEIGH MANOR SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DRAINAGE AREA MAP
 SCALE: AS SHOWN DATE: 8-23-79
 WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202
Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

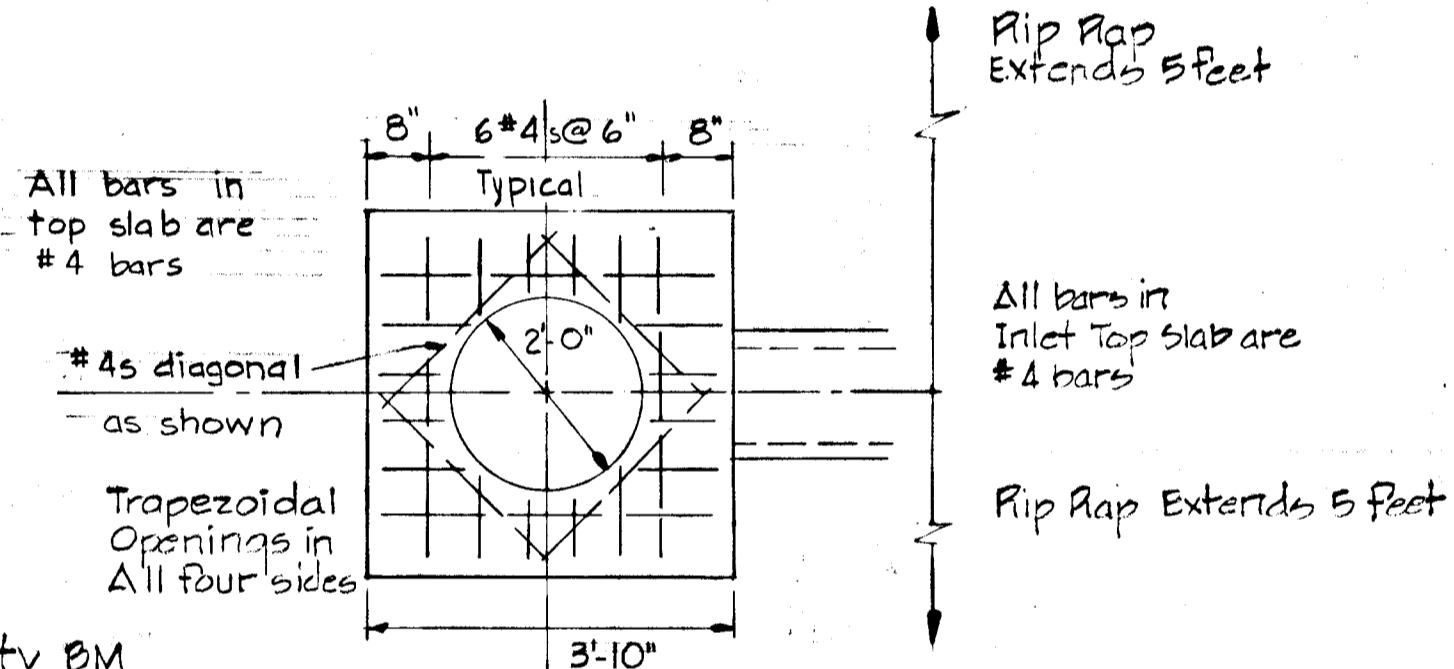
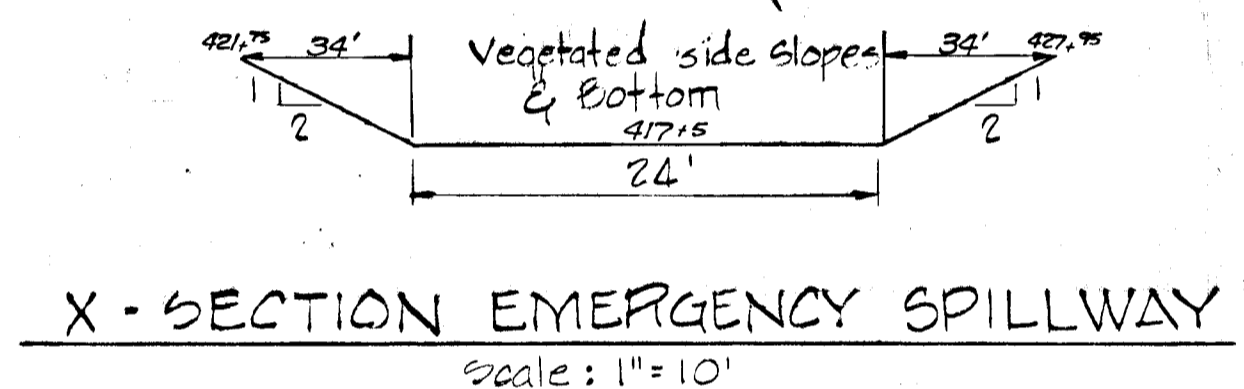


PROFILE EMERGENCY SPILLWAY
 Scale: Horiz. 1" = 50'
 Vert. 1" = 5'

PROFILE PRINCIPLE SPILLWAY
 Scale: Horiz. 1" = 50'
 Vert. 1" = 5'

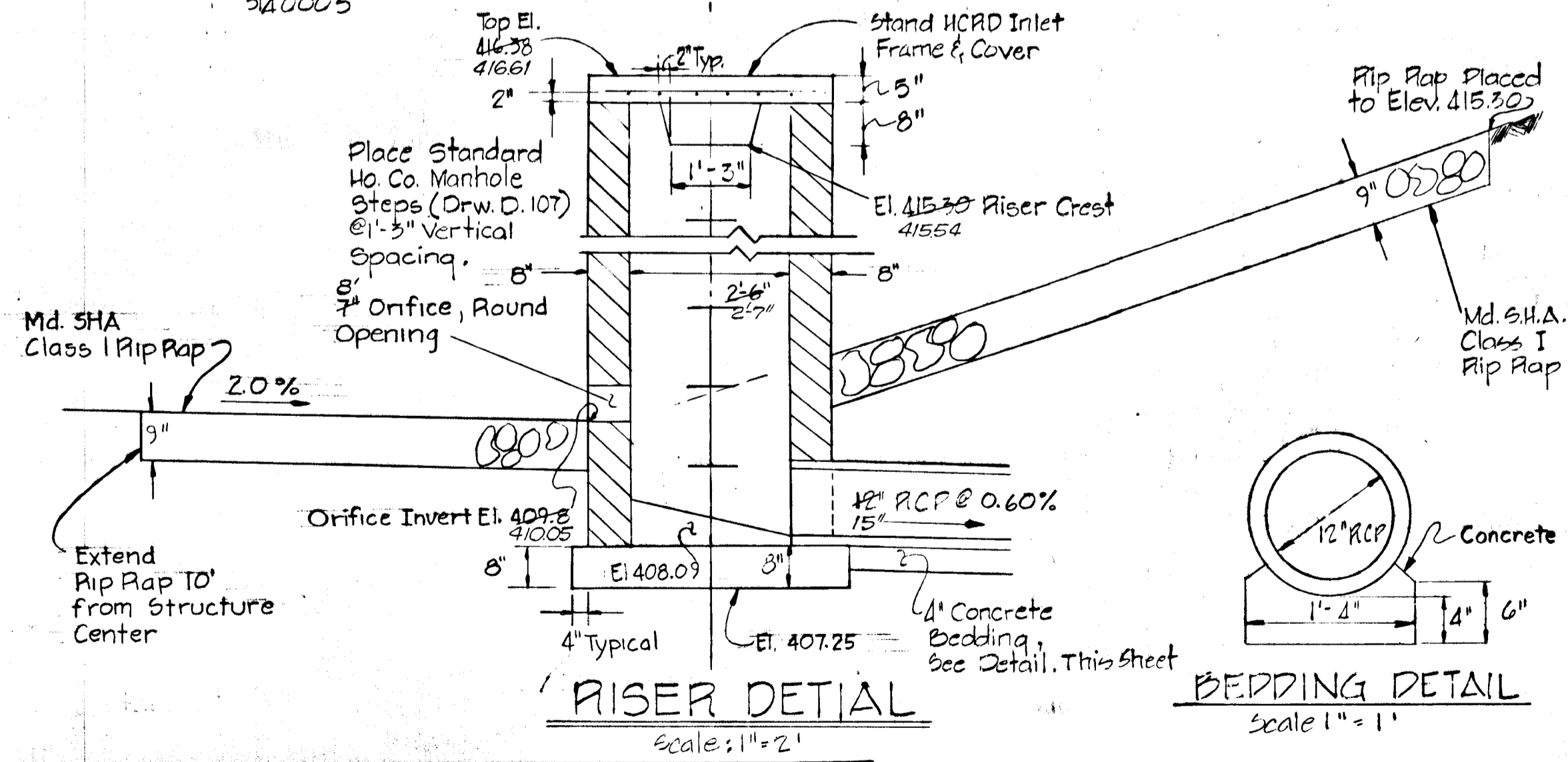
STAKEOUT DATA

B.S.	Instrument	F.S.	Distance	Clockwise Angle
3040001	3140003	POL #1	1009.22'	0° 0' 00"
3140003	POL #1	POL #2	45.06	270° 0' 00"
POL #1	POL #2	PC	109.31	238° 2' 48"
POL #1	POL #2	PI	127.35	238° 2' 48"
POL #2	PI	PT	17.84'	160° 43' 7"
POL #2	PI	POL #3	165.90'	160° 43' 7"
PI	POL #3	POL #5	68.86	315° 38' 41"
POL #3	POL #5	POL #6	159.63	146° 45' 6"
POL #5	POL #6	POL #7	48.93	218° 50' 19"
POL #6	POL #7	3140005	690.48	90° 0' 00"



STORM WATER MANAGEMENT DATA

Storm	Peak Inflow	Release	Storage	Peak Elev
2 Yr.	20 cfs	2 cfs	34,900 ft ³	415.27
10 Yr.	51 cfs	9.4 cfs	30,200 ft ³	417.49
50 Yr.	80 cfs	41 cfs	113,000 ft ³	418.22
100 Yr.	97 cfs	63 cfs	121,000 ft ³	418.46



EMERGENCY SPILLWAY STAKEOUT DATA

B.S.	Instrument	F.S.	Distance	Clockwise Angle
3040001	3140003	POL #7	690.48'	0° 0' 00"
3140003	POL #7	POL #6	48.93'	270° 0' 00"
POL #7	POL #6	POL #5	159.63'	141° 9' 42"
POL #7	POL #6	PC	189.63'	141° 9' 42"
POL #7	POL #6	PI	224.61'	141° 9' 42"
POL #5	PI	PT	31.98'	110° 2' 55"
POL #5	PI	POL #4	132.00'	110° 2' 55"
PI	POL #4	PC & DAM	87.97'	81° 44' 39"

CURVE DATA: EMERG. SPILLWAY

CRD : 57.32	DR : N34° 58' 33" E
ARC : 61.04	DEL : 69° 37' 5"
RAD : 50.00	TAN : 34.98'

CURVE DATA: DAM

CRD : 35.17'	DR : N22° 48' 14" W
ARC : 35.34'	DEL : 19° 16' 53"
RAD : 103.00'	TAN : 17.84'

- 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 p.67
 - Pond & Spillway Excavation, including 1' stripping under fill: 6,500 cu. yds.
 - Dam and core trench fill volume: w/ stripping @ 1% shrinkage: 2650 cu. yds.
 - Area of Tree Clearance: 1.4 Ac
 - Borrow fill for construction of the earth embankment may be taken from the Pond Excavation.
 - Earth sections shall be compacted to at least 95% of the optimum density.
 - Stripping under fill shall be a minimum of 1'.

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

Wendell R. Smith 7-29-79
 U.S. SOIL CONSERVATION DISTRICT DATE

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

APPROVED: *Robert J. Zacher* 7/27/79
 HOWARD S.C.D. DATE

PLAN NUMBER _____

CERTIFICATION BY THE DEVELOPER

WE CERTIFY THAT ALL DEVELOPMENT AND OR CONSTRUCTION OF THIS POND WILL BE DONE ACCORDING TO THIS PLAN. WE 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. WE 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.

John DeGroot
 JOHN DEGROOT
 BRANCH MANAGER

Michael E. McGuire
 MICHAEL E. MCGUIRE
 MANAGER, LAND DEVELOPMENT

7-12-79
 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
 KENNETH A. MCCORD P.E. 1974

3-23-79
 DATE

AS-BUILT SURVEY VERIFIED JULY 31, 1981
 BY HENRY J. OHEIM, MD. REG. LAND SURVEYOR No. 4156

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

PROJECT TITLE
 BURLEIGH MANOR
 SECTION 4 AREA 1
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 STORM WATER MANAGEMENT FUND

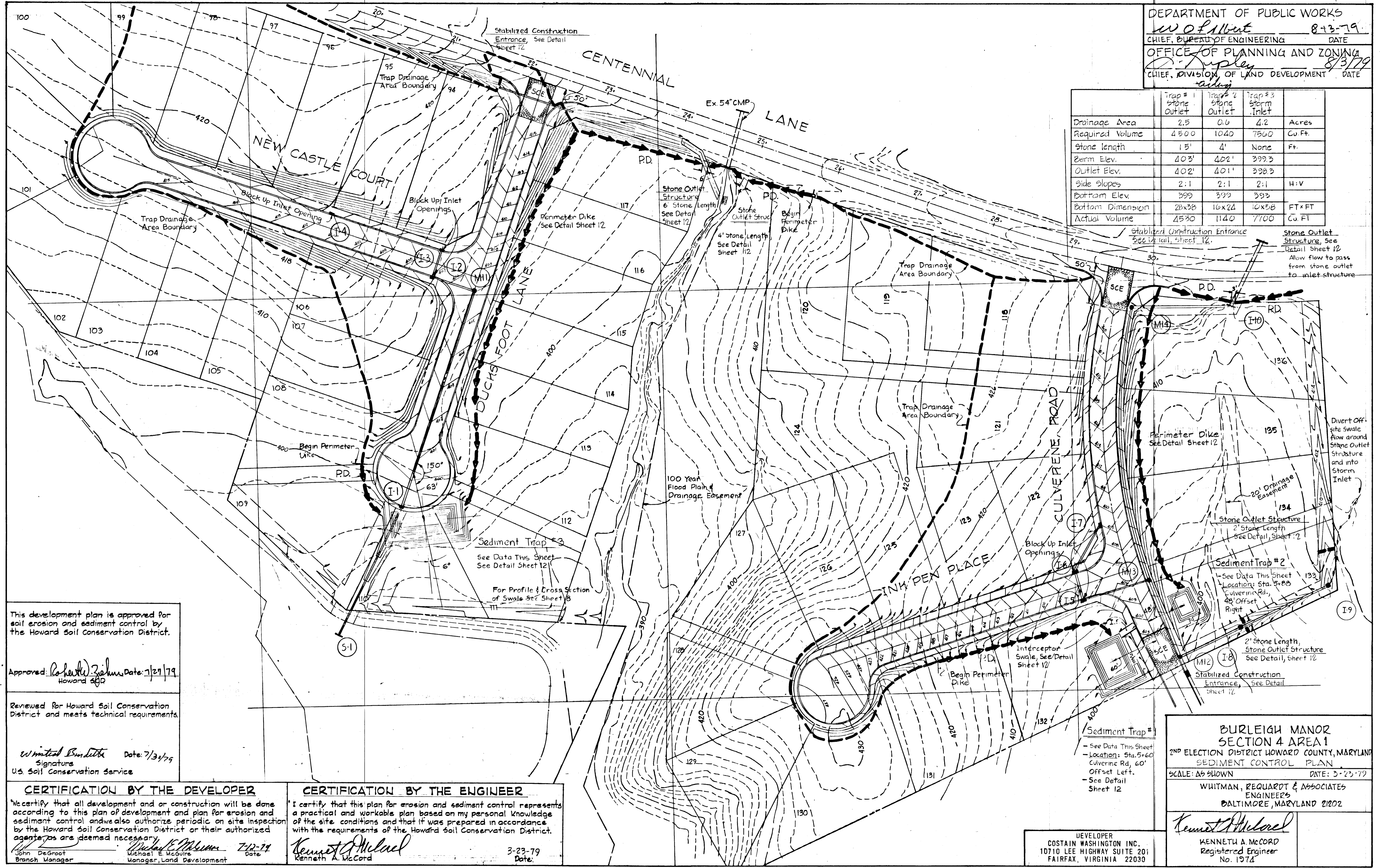
SCALE: AS SHOWN DATE: 3-23-79

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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

DEPARTMENT OF PUBLIC WORKS
W. O. Albert 8-13-79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
D. Ripley 8/3/79
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

	Trap #1 Stone Outlet	Trap #2 Stone Outlet	Trap #3 Storm Inlet	
Drainage Area	2.5	0.6	4.2	Acres
Required Volume	4500	1040	7560	Cu Ft.
Stone length	15'	4'	None	Ft.
Berm Elev.	403'	402'	399.3	
Outlet Elev.	402'	401'	398.3	
Side Slopes	2:1	2:1	2:1	H:V
Bottom Elev.	399	399	393	
Bottom Dimension	28x38	10x24	10x58	FTxFT
Actual Volume	4530	1140	7700	Cu Ft.



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

Approved: *Robert W. Zehner* Date: 7/27/79
Howard SCD

Reviewed for Howard Soil Conservation District and meets technical requirements.

Wendell B. Smith Date: 7/30/79
Signature
US Soil Conservation Service

CERTIFICATION BY THE DEVELOPER
 We certify that all development and or construction will be done according to this plan of development and plan for erosion and sediment control and we also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized agents as are deemed necessary.
John DeGroot 7-12-79
Branch Manager Date
Michael E. McGuire
Manager, Land Development

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 3-23-79
Kenneth A. McCord Date

BURLEIGH MANOR SECTION 4 AREA 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SEDIMENT CONTROL PLAN
 SCALE: AS SHOWN DATE: 3-23-79
 WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202
Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

DEVELOPER
 COSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

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 465-5000X365 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".

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 80lbs./ACRE OF THE FOLLOWING: KENTUCKY 31 TALL FESCUE-60lbs./ACRE AND KOREAN LESPEDEZA (SCARIFY AND INOCULATE) 20lbs./ACRE, IMMEDIATELY AFTER CONSTRUCTION. SOW WITH MECHANICAL SPREADER, RAKE MINIMUM TWO (2) PASSES WITH "YORK RAKE", COVER AND COMPACT WITH CULTIPACKER.
4. SURFACE PREPARATION TO INCLUDE GROUND LIME/STONE OVER TOPSOIL SURFACE AREA AT THE RATE OF ONE TON/ACRE (50lbs./1000 S.F.) COMMERCIAL FERTILIZER (10-10-10) AT THE RATE OF TWO TONS/ACRE. ANCHOR WITH ASPHALT AT THE RATE OF 400 GALLONS/ACRE. DRAINAGE SWALES AND DITCHES SHALL BE MULCHED AND COVERED WITH A PREFERRED 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 40lbs./1000 S.F.) AND CROWN VETCH (SCARIFY AND INOCULATE) 15lbs./ACRE.

SEQUENCE OF CONSTRUCTION

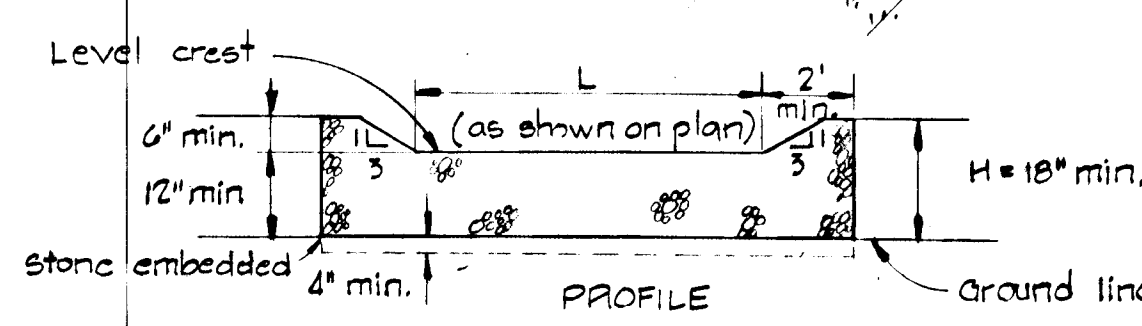
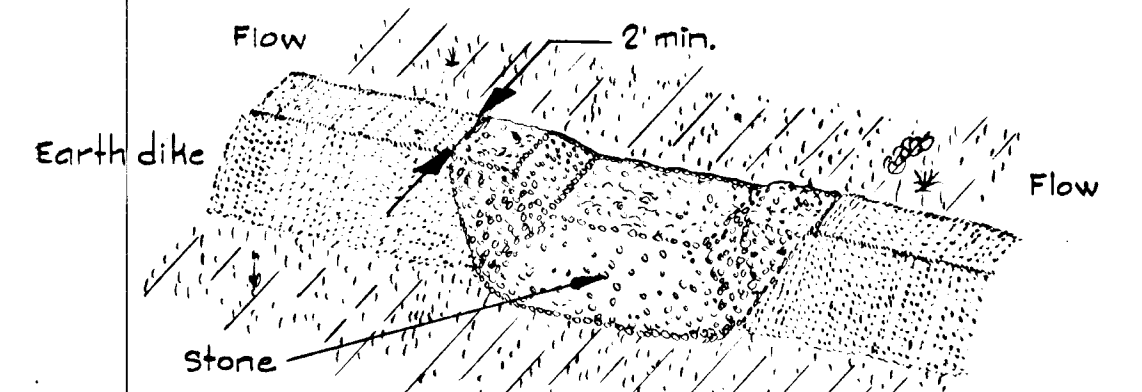
1. OBTAIN GRADING PERMIT.
2. CLEAR AND GRUB WOODED AREAS.
3. CONSTRUCT DIVERSION DIKES ALONG PROPOSED ROADWAYS AND AT SEDIMENT TRAPS.
4. STRIP AND GRADE ROADS AND SEED TOPSOIL STOCKPILE.
5. INSTALL STORM DRAIN PIPES. PLACE POLY FILTER OR CLOTH AROUND END OF DOWNSTREAM PIPE AT ALL INLET AND MANHOLE LOCATIONS PRIOR TO LAYING UPSTREAM PIPE. SEE DETAIL 'A', THIS SHEET.
6. BUILD INLETS AND MANHOLES AND INSTALL WOOD PLANKING AND STONE FILTERS AT INLETS TO COMPLETE SEDIMENT TRAP CONSTRUCTION. BLOCK INLETS AS NOTED.
7. CONSTRUCT ALL UTILITIES.
8. FINE GRADE ROADS, CONSTRUCT CURB AND GUTTER AND SEED ALL DISTURBED AREAS AS PER SPECIFICATIONS THIS SHEET.
9. REMOVE SEDIMENT TRAPS, FINISH CURB AND GUTTER AND PAVE ROADS.
10. REMOVE DIVERSION DIKES AFTER CONSTRUCTION IS COMPLETE AND GRASS IS ESTABLISHED.

LAWN SEEDING NOTES

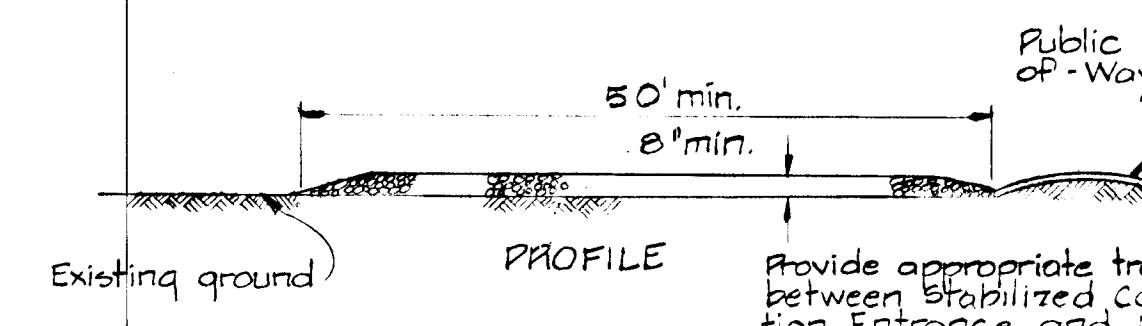
1. ALL SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED AND STABILIZED ACCORDING TO NOTE 3 PRIOR TO ANY OTHER GRADING ON SITE.
2. NO TEMPORARY SEDIMENT CONTROL STRUCTURE MAY BE REMOVED OR DESTROYED WITHOUT APPROVAL OF THE HOWARD SOIL CONSERVATION DISTRICT.
3. ALL LAWN AREAS TO BE SEEDED AT THE RATE OF 113lbs./ACRE (3lbs./1000 S.F.) OF THE FOLLOWING: CERTIFIED BLUEGRASS - 65 1/2 lbs./ACRE (1 1/2 lbs./1000 S.F.) AND CREEPING RED FESCUE - 65 1/2 lbs./ACRE (1 1/2 lbs./1000 S.F.) 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 LIME/STONE OVER TOPSOIL SURFACE AREA AT THE RATE OF ONE TON/ACRE (50lbs./1000 S.F.) COMMERCIAL FERTILIZER (10-10-10) AT THE RATE OF 1000lbs./ACRE. MULCH AREAS WITH STRAW AT THE RATE OF 50lbs./ACRE OR ONE TON/ACRE. ANCHOR WITH ASPHALT AT THE RATE OF 400 GALLONS/ACRE.

SODDING NOTES

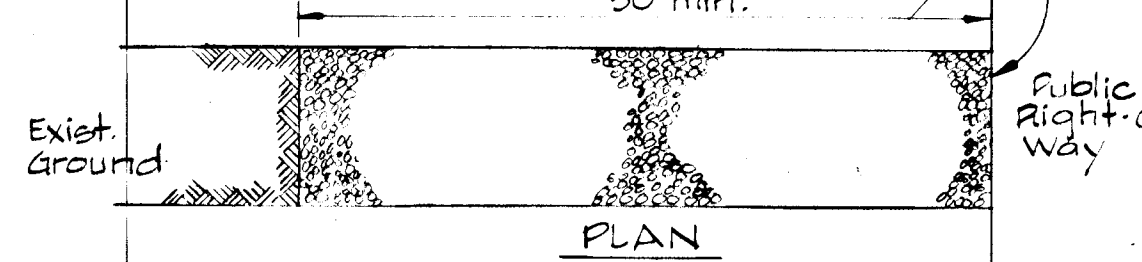
1. APPLY 10-10-10 FERTILIZER @ 1000lbs./ACRE (25lbs./1000 S.F.)
2. APPLY GROUND AGRICULTURAL LIMESTONE @ 2000lbs./ACRE (50lbs./1000 S.F.)
3. INCORPORATE BOTH LIME AND FERTILIZER INTO SOIL BY DISCING. FIRM UP AFTER INCORPORATION.
4. LAY SOD TO A TIGHT FIT. ROLL TO ENSURE CONTACT WITH UNDERLYING SOIL. WATER IS NECESSARY FOR 1ST 2 WEEKS (IN SUMMER) TO ENSURE ESTABLISHMENT.



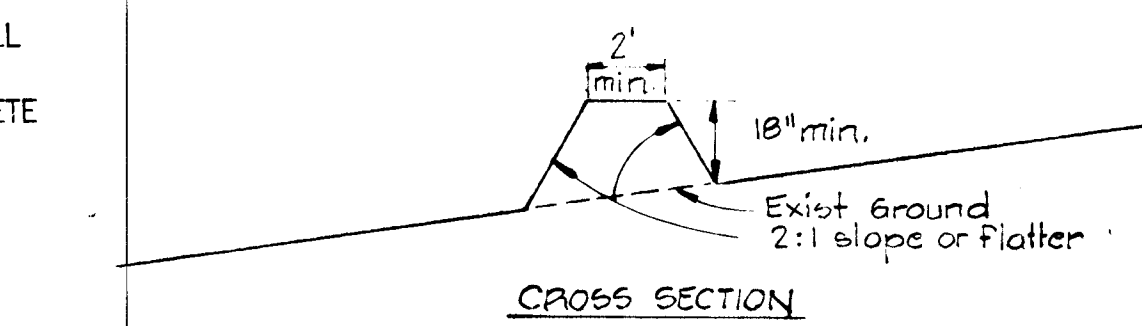
STONE OUTLET STRUCTURE
Not to Scale



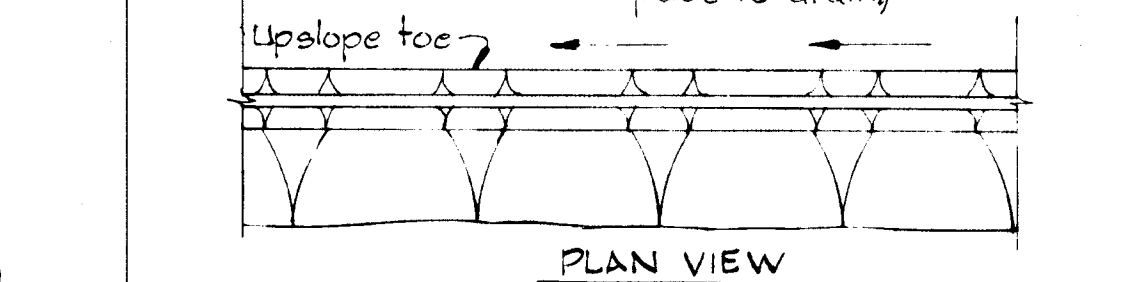
STABILIZED CONSTRUCTION ENTRANCE
Not to Scale



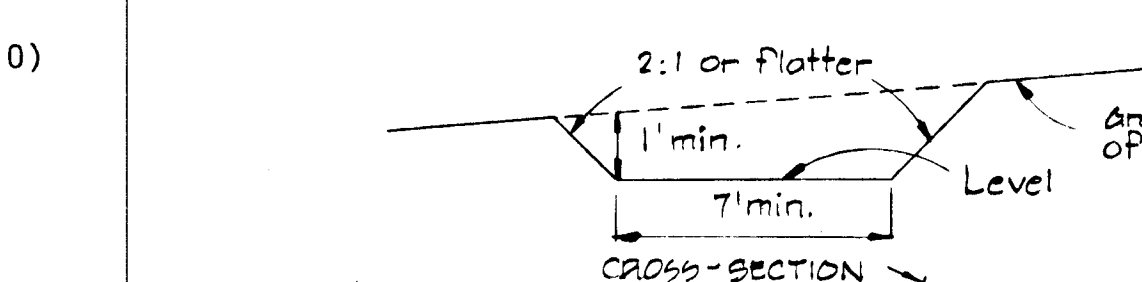
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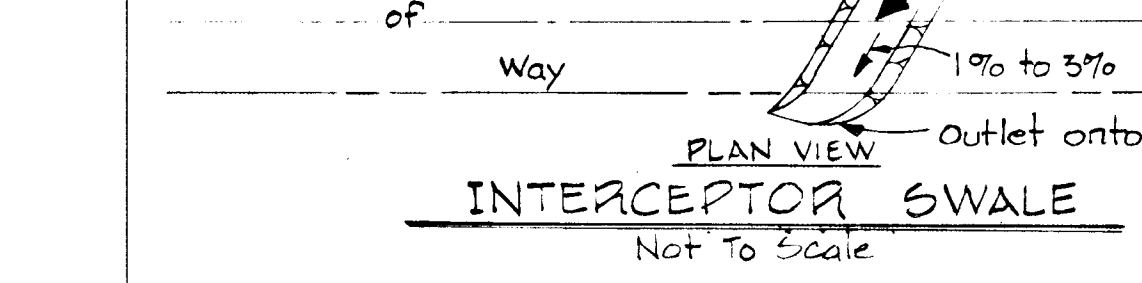
CROSS SECTION



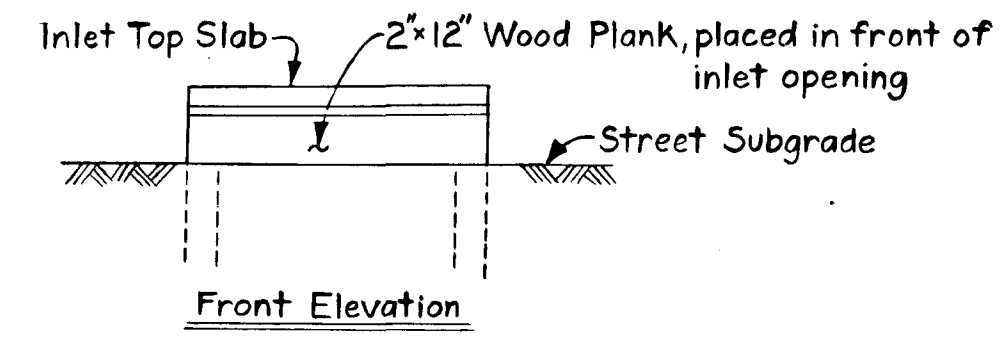
PERIMETER DIKE
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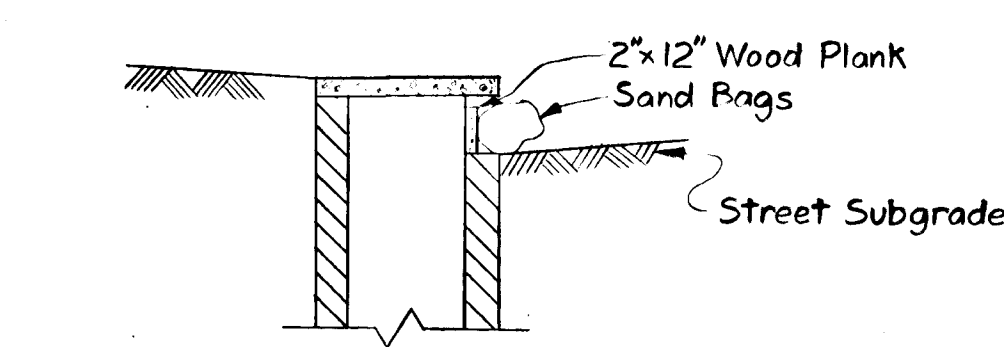
CROSS-SECTION



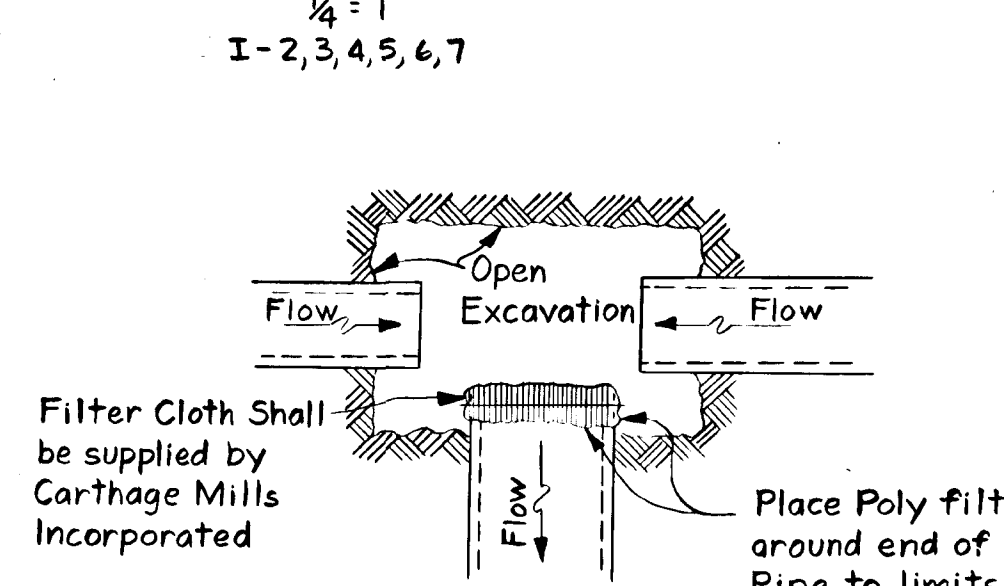
INTERCEPTOR SWALE
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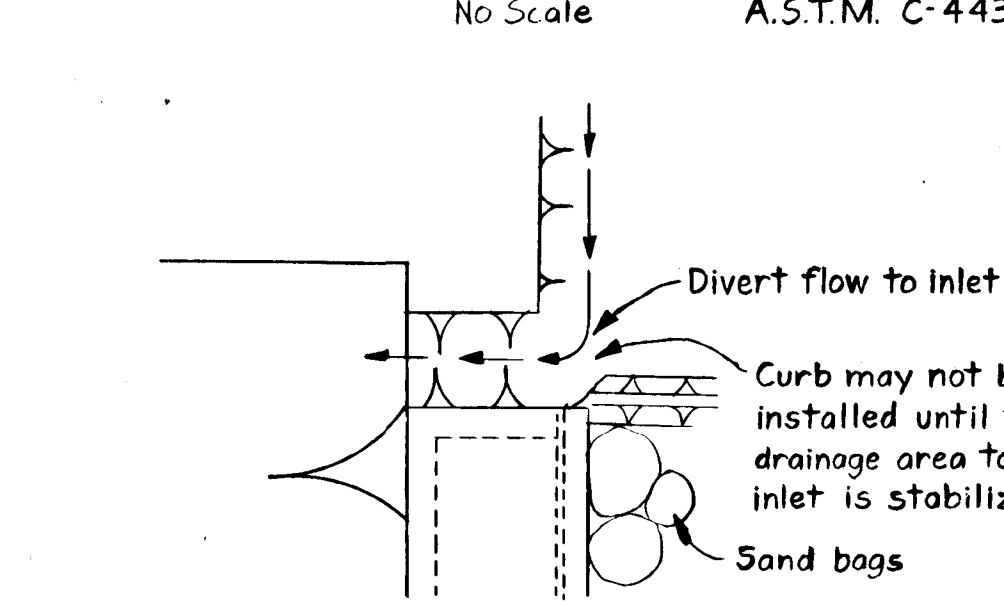
Front Elevation



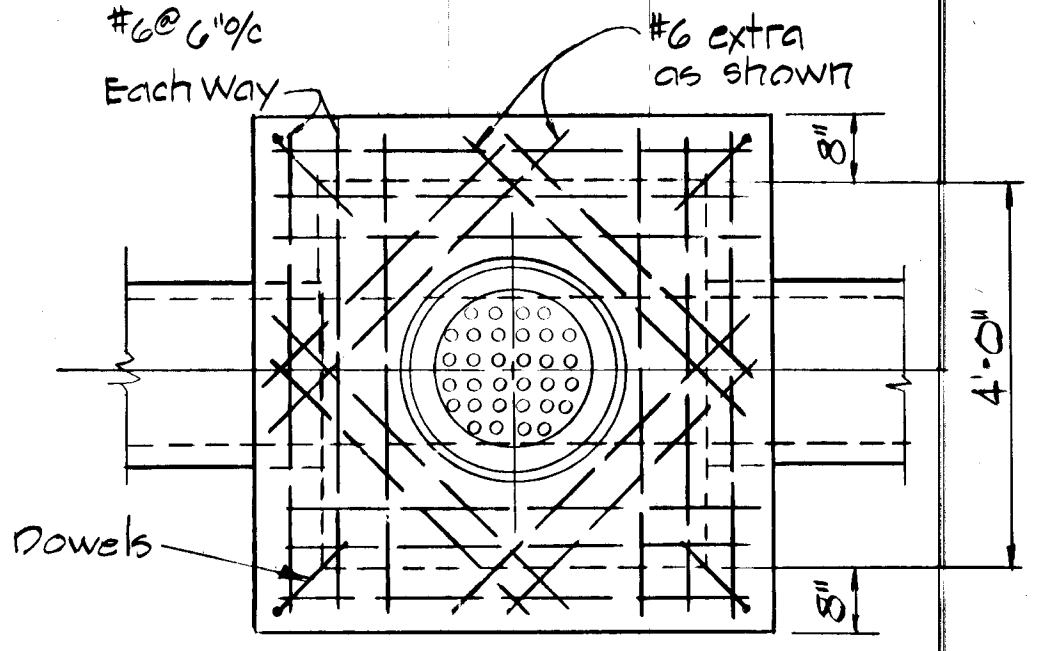
Detail - Blocked Inlets
1/4" = 1'



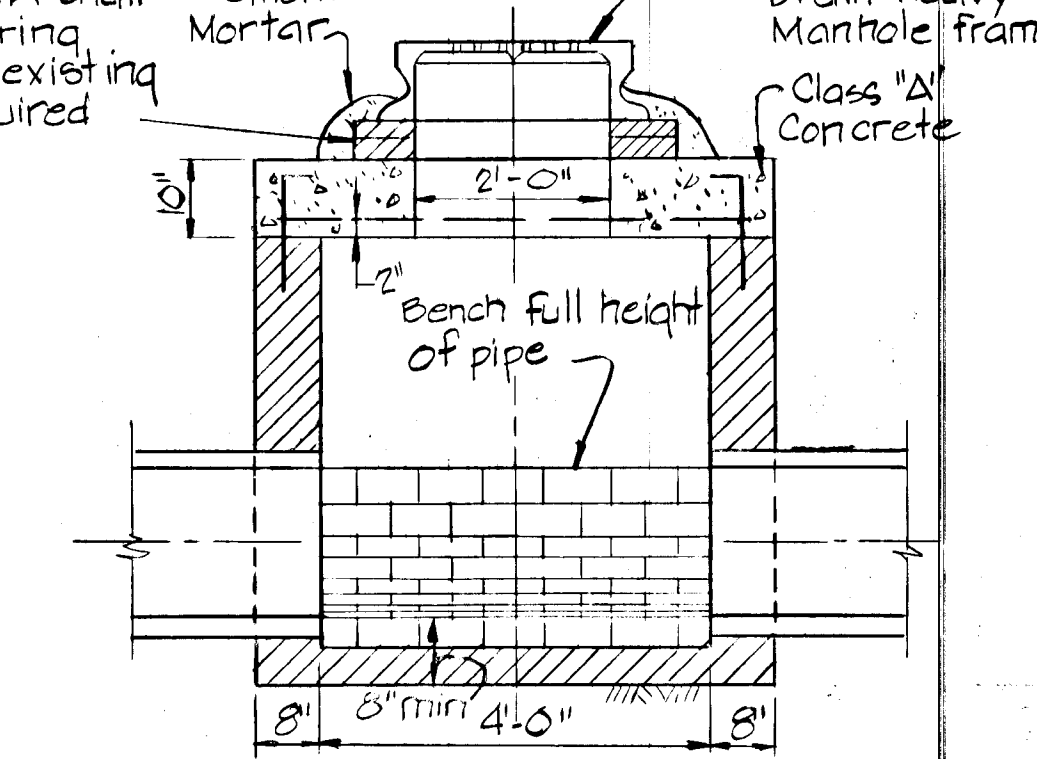
Detail 'A'
No Scale



Detail Sediment Trap #3
1/4" = 1'



PLAN



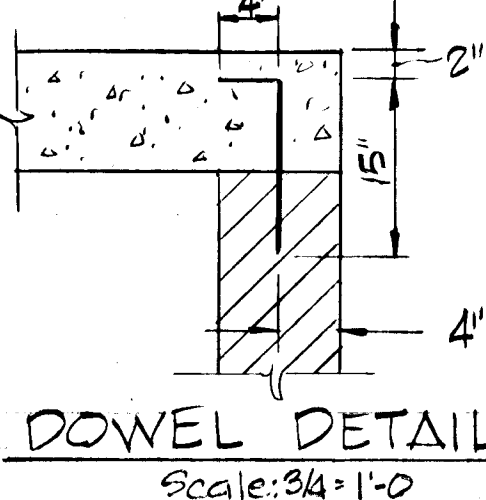
SECTION

TYPE "B" MANHOLE (SHALLOW)
No Scale

DEPARTMENT OF PUBLIC WORKS
 W. O. Fallant 8-13-79
 CHIEF, BUREAU OF ENGINEERING DATE
 OFFICE OF PLANNING AND ZONING
 Chief, Division of Land Development 8/3/79
 [Signature]

Note:
 MH Frame & Cover
 to be centered in
 MH as shown.

Walls, bottom slab and
 invert shall be brick or
 plan class "A" concrete
 poured in place



DOWEL DETAIL
Scale: 3/4" = 1'-0"

REV.	DATE	REMARKS
1	1/18/80	Standard Manhole changed to 4' dia. 4' deep

BURLEIGH MANOR
 SECTION 4 AREA I
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SEDIMENT CONTROL DETAILS

SCALE: AS SHOWN DATE: 3-23-79

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

[Signature]
 KENNETH A. McCORD
 Registered Engineer
 No 1974

AS BUILT SURVEY DATED JUNE 20, 1982
 SIGNED & SEALED BY
 HENRY V. OHEIM Reg. No. 4156

DEVELOPER
 CUSTAIN WASHINGTON INC.
 10710 LEE HIGHWAY SUITE 201
 FAIRFAX, VIRGINIA 22030

As BUILT Nov. 1982

REVIEWED FOR HOWARD S.C.D. AND MEETS
 TECHNICAL REQUIREMENTS
 [Signature] DATE: 7-30-79
 U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR
 SOIL EROSION AND SEDIMENT CONTROL BY
 THE HOWARD SOIL CONSERVATION DISTRICT
 APPROVED: [Signature] DATE: 7/27/79
 HOWARD S.C.D.

CERTIFICATION BY THE DEVELOPER
 WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND WE ALSO AUTHORIZE PERIODIC ON SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.
 [Signature] 7-12-79
 JOHN DEGRAZIO BRANCH MANAGER
 [Signature] MICHAEL E. MCGUIRE
 MANAGER, LAND DEVELOPMENT

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."
 [Signature] 3-23-79
 KENNETH A. McCORD, P.E. 1974