

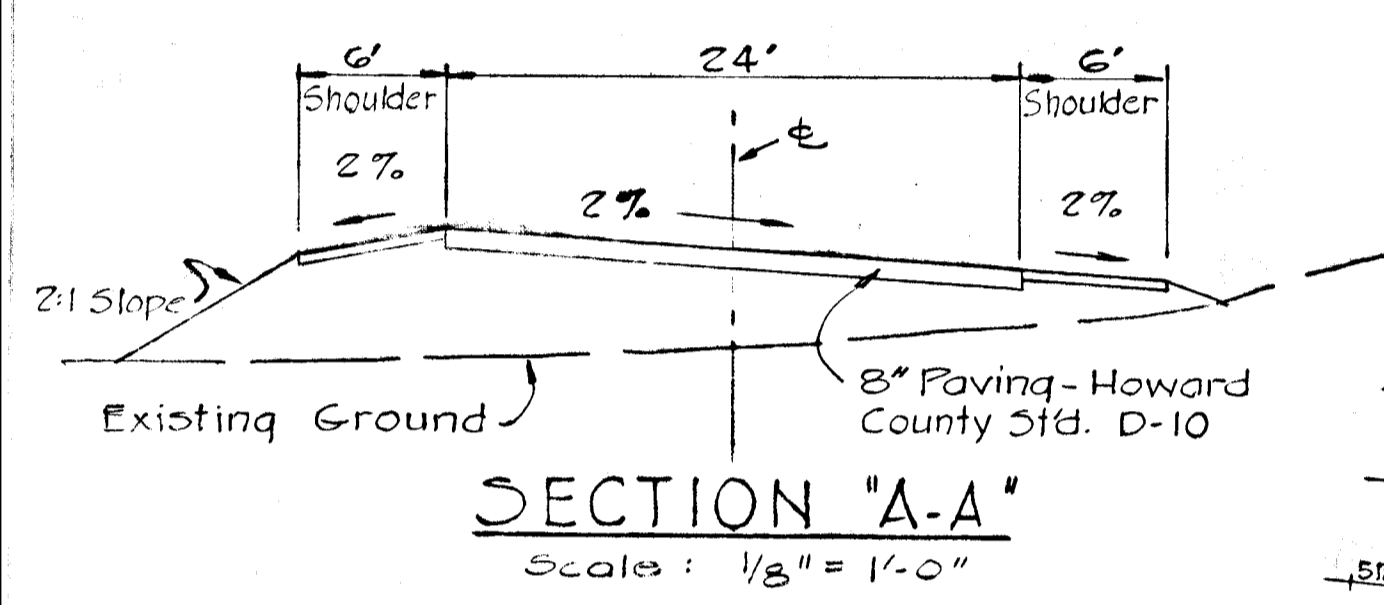
Note:
 For Storm Drain Profiles
 See Sheet 24 and 36 of 45.

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION I AREA I		
PROJECT TITLE PLAN AND PROFILE SHAKER DRIVE STA. 0+00 TO STA. 5+00		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REARDON & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

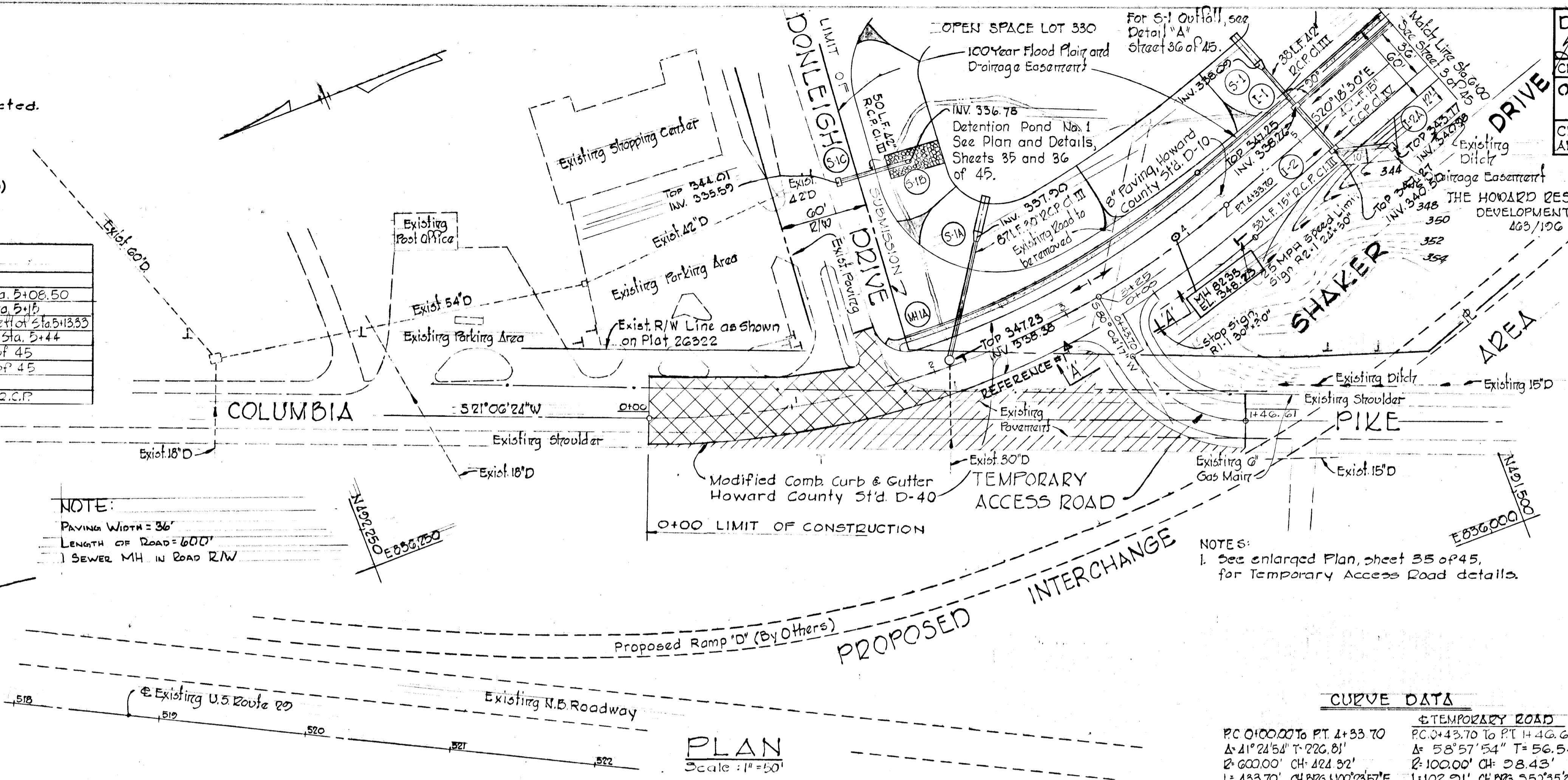
- LEGEND**
- Temporary 24' wide connection to old Columbia Pike (to be removed when Proposed Ramp (By Others) is constructed).
 - Paving and shoulders to be removed and grading provided for positive drainage.
 - Provide 1/2' Bituminous concrete surface in this area (See Howard County Std D-10)

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INVERT ELEV.	LOCATION
I-1	Std. A-5 Inlet width: 4'-4"	347.16	338.15	± Inlet 203.7' Left of Sta. 5+06.50
I-2	Std. A-5 Inlet width: 25"	347.16	339.26	± Inlet 19.42 Right of Sta. 5+10
S-1	Std. 42" End Section	343.83	338.00	± End Section 58.00 Left of Sta. 5+13.35
I-2A	Std. Class Inlet width: 25"	343.83	339.50	± Inlet 43.25 Right of Sta. 5+44
M-1A	Std. Manhole	348.00	338.27	See Plan Sheet 35 of 45
S-1A	Std. 30" Conc. End Section	344.13	339.00	See Plan, sheet 35 of 45
S-1C	Type C Inlet (Modified)	344.13	334.91	Constr. @ end Ex. 42" R.C.P.

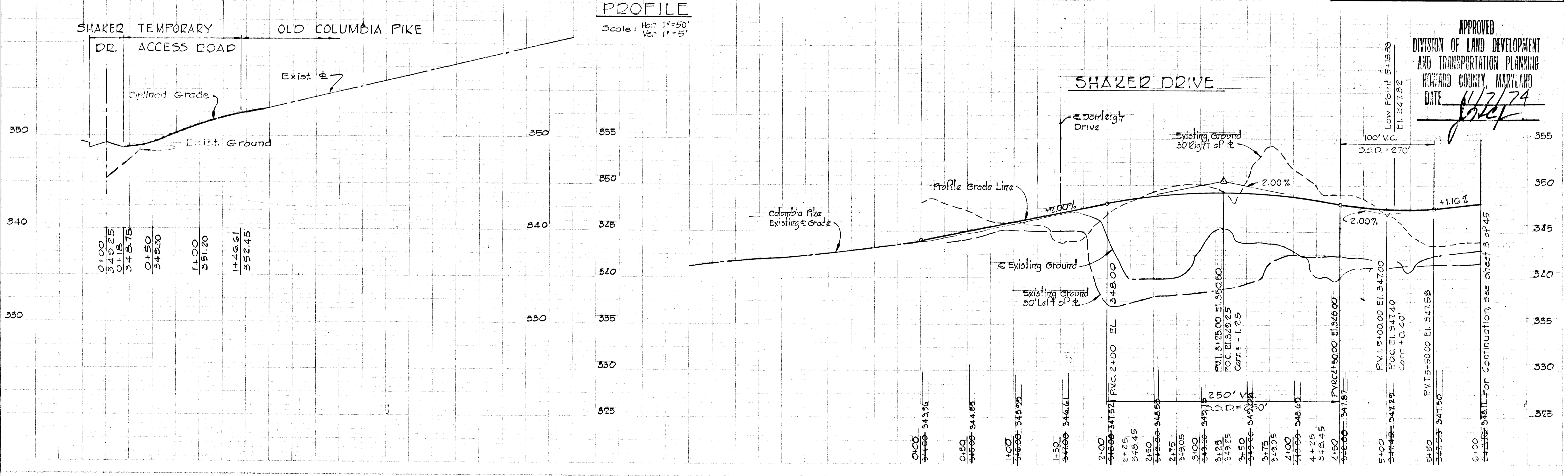


NOTE:
 PAVING WIDTH = 36'
 LENGTH OF ROAD = 600'
 1 SEWER MH IN ROAD R/W



CURVE DATA

PC	PT	Δ	T	Δ	T	Δ	T
0100.00%	PT 4+33.70	41°24'54"	222.81'	43°57'54"	56.54'	100.00'	CH: 424.92'
0200.00'	CH: 424.92'	43°57'54"	56.54'	100.00'	CH: 58.43'	102.01'	CH: 283.553525'
L: 433.70'	CH: 283.553525'						



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/27/74
John

CURVE DATA

PC 7+23.01 To PCC 9+05.00	PCC 9+05.00 To W/over Way
Δ=02°47'01" T=136.05'	Δ=33°13'41" T=367.04'
R=550.58' CH=272.03'	R=1015.92' CH=600.30'
L=272.05' CB=26.52121201°E	L=704.12' CB=6.54757222°E

W/over Way To P.I. 17+49.15
 Δ=02°46'03" T=124.54'
 R=1015.92' CH=49.07'
 L=49.07' CB=6.5661215°E

Note:
 For Storm Drain Profiles,
 See Sheet 24 of 41

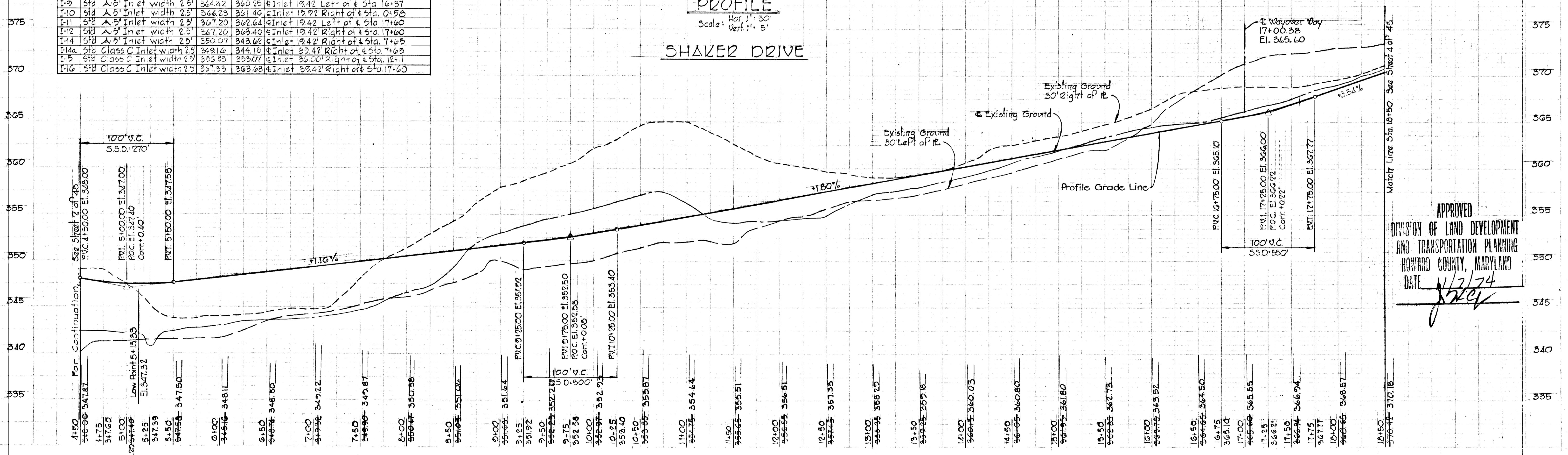
NOTE:
 For storm drains and paving
 in common open area Lots
 216 & 217. See Supplement
 to Road Construction Plans,
 dated 8/10/77, Sheet 1 of 18.

OPEN SPACE
 LOT 330

NOTE:
 PAVING WIDTH=36'
 LENGTH OF ROAD=1,250'
 6 SEWER MH'S IN ROAD R/W

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV	INVERT ELEV	LOCATION
I-3	Std A-5' Inlet width 4'-4"	350.07	341.64	Inlet 20.34' Left of Sta. 7+65
I-4	Std A-5' Inlet width 3'-8"	352.02	343.04	Inlet 20.00' Left of Sta. 9+25
I-4a	Std A-5' Inlet width 2'-5"	352.69	350.26	Inlet 19.42' Right of Sta. 9+25
M-4	Type B Manhole	356.71	352.14	Manhole 22' Left of Sta. 12+11
I-7	Std A-5' Inlet width 2'-5"	359.30	355.14	Inlet 19.42' Left of Sta. 13+53
I-8	Std A-5' Inlet width 2'-5"	359.30	355.82	Inlet 19.42' Right of Sta. 13+53
I-9	Std A-5' Inlet width 2'-5"	364.42	360.25	Inlet 19.42' Left of Sta. 16+37
I-10	Std A-5' Inlet width 2'-5"	366.23	361.40	Inlet 19.92' Right of Sta. 0+58
I-11	Std A-5' Inlet width 2'-5"	367.20	362.64	Inlet 19.42' Left of Sta. 17+60
I-12	Std A-5' Inlet width 2'-5"	367.20	363.40	Inlet 19.42' Right of Sta. 17+60
I-14	Std A-5' Inlet width 2'-5"	350.07	343.62	Inlet 19.42' Right of Sta. 7+65
I-14a	Std Class C Inlet width 2'-5"	349.16	344.16	Inlet 33.42' Right of Sta. 7+65
I-15	Std Class C Inlet width 2'-5"	356.83	353.07	Inlet 36.00' Right of Sta. 12+11
I-16	Std Class C Inlet width 2'-5"	367.33	363.68	Inlet 39.42' Right of Sta. 17+60



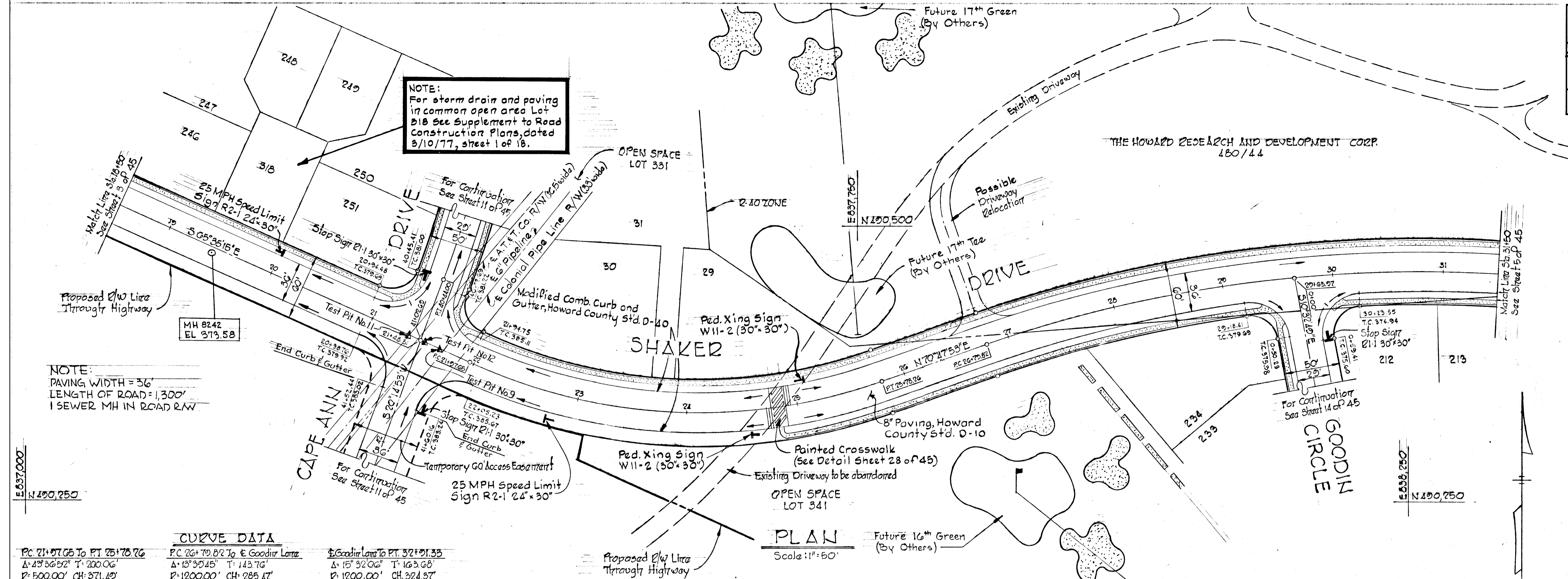
PLAN
 Scale: 1"=50'

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

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PLAN AND PROFILE SHAKER DRIVE STA. 5+00 TO STA. 18+50		
SCALE: AS SHOWN DATE: 11-15-74		
WHITMAN, REARD & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

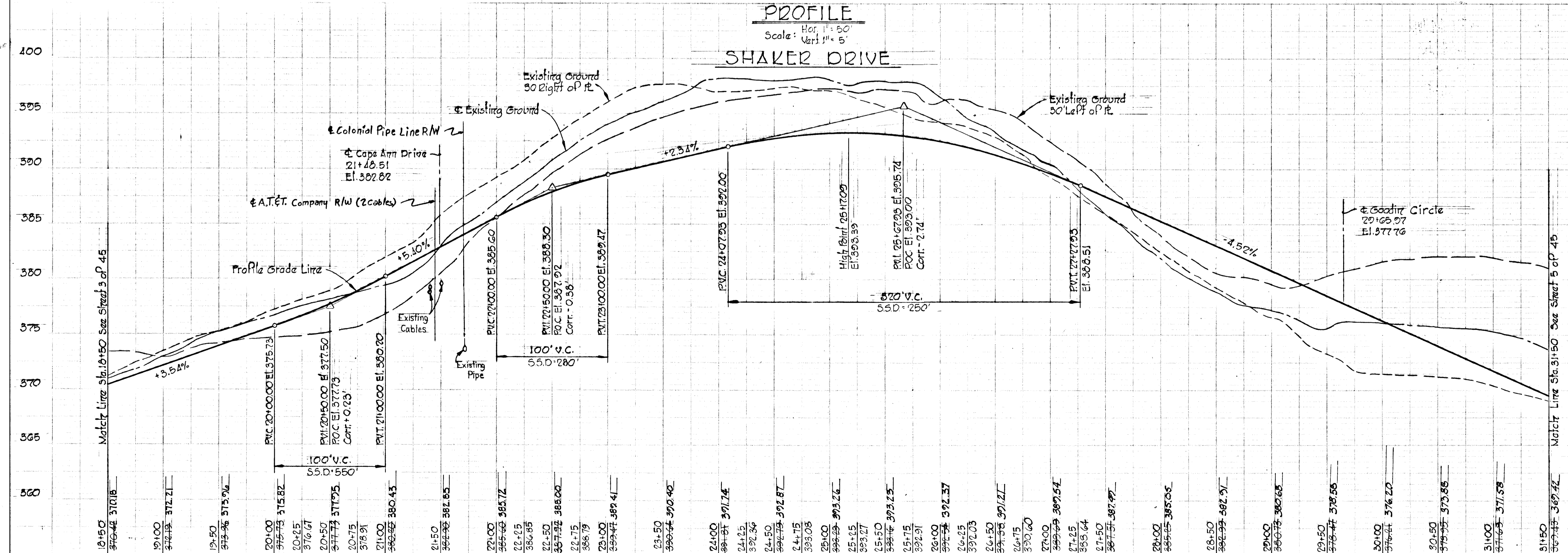
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/27/74
JAC

LEGEND
 ▲ Existing Utility Test Pit



NOTE: PAVING WIDTH = 36' LENGTH OF ROAD = 1,300' I SEWER MH IN ROAD R/W

CURVE DATA			
PC 21+97.05 To PT 25+73.76	PC 20+79.02 To E Goodin Lane	E Goodin Lane To PT 32+91.33	
Δ: 43°36'52" T: 220.06'	Δ: 13°39'45" T: 143.76'	Δ: 15°32'02" T: 163.68'	
R: 500.00' CH: 371.12'	R: 1200.00' CH: 285.17'	R: 1200.00' CH: 324.37'	
L: 360.61' CH: 826.587°23'41"E	L: 286.15' CH: 826.177°37'45"E	L: 325.36' CH: 826.587°46'19"E	



Rev. No.	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PLAN AND PROFILE SHAKER DRIVE STA. 18+50 TO STA. 31+50
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 11/27/74
[Signature]

CURVE DATA

Goodwin Lane To Pt. 32+01.33 Δ: 15°32'06" T: 103.68' L: 1200.00' CH: 324.37' L: 325.36' CH: 265.67' Δ: 10°19'E	P.C. 33+72.68 To Pt. 35+13.81 Δ: 12°56'44" T: 136.14' L: 1200.00' CH: 270.55' L: 271.13' CH: 205.56' Δ: 28°38'E
P.C. 40+15.15 To Fair Beauty Δ: 22°29'59" T: 113.35' L: 570.00' CH: 222.40' L: 223.83' CH: 205.56' Δ: 20°0'E	Fair Beauty To Fair Beauty Δ: 43°21'41" T: 226.61' L: 570.00' CH: 121.15' L: 431.35' CH: 205.56' Δ: 11°E

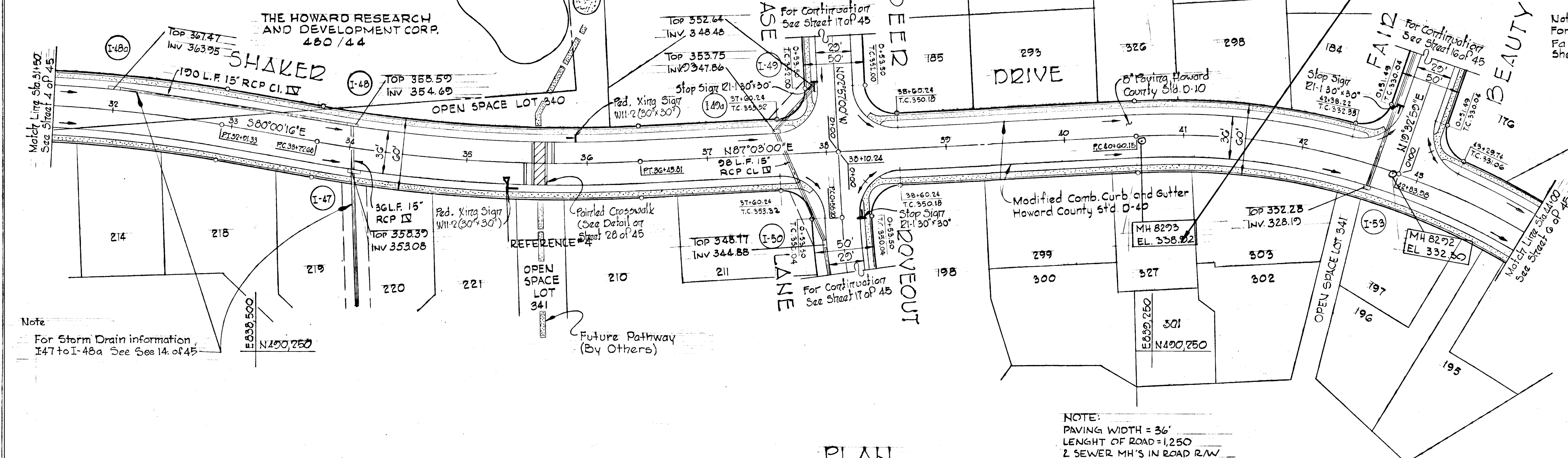
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
450 / 44

Future 10th Great (By Others)

Note:
For Storm Drain Information
Shaker Drive, Roveout Lane
and Deer Chase see
Sheet 17 of 45

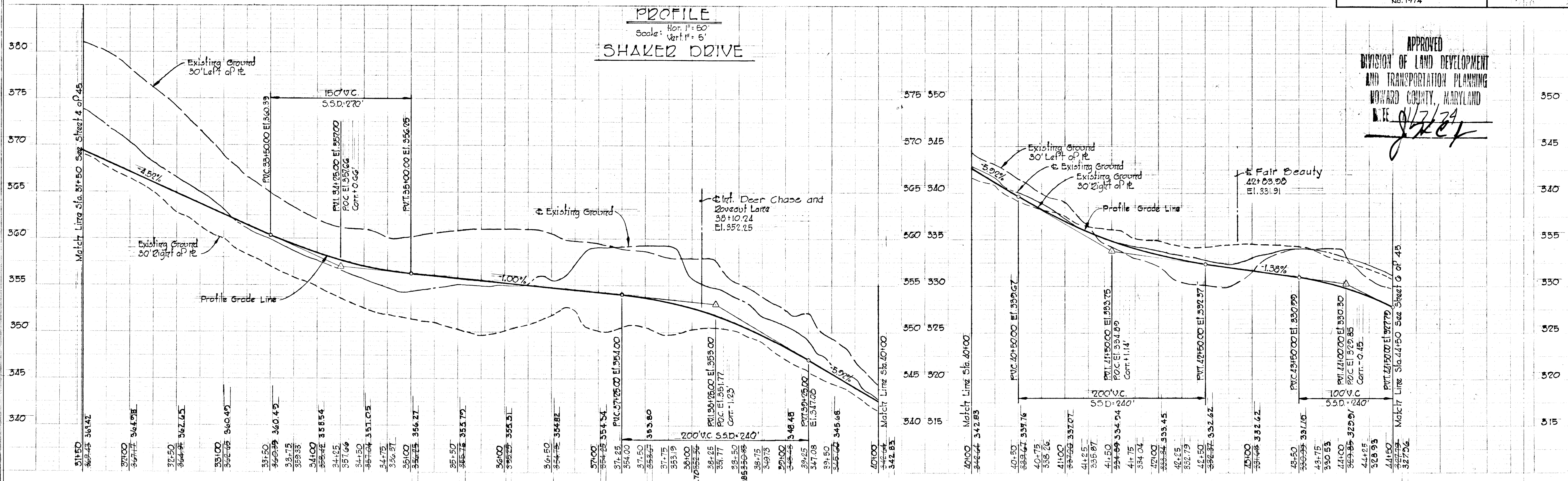
NOTE:
For storm drains and paving
in common Open Area Lots
326 and 327 see Supplement
to Road Construction Plans,
dated 8/10/77, sheet 2 of 18.

DEPARTMENT OF PUBLIC WORKS
D. M. McLeod 5/27/75
CHIEF, BUREAU OF HIGHWAYS
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



Note:
For Storm Drain Information
Fair Beauty see
Sheet 16 of 45.

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PLAN AND PROFILE SHAKER DRIVE STA. 31+50 TO STA. 44+00		
SCALE: AS SHOWN DATE: 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McLeod KENNETH A. McLEOD Registered Engineer No. 1974		

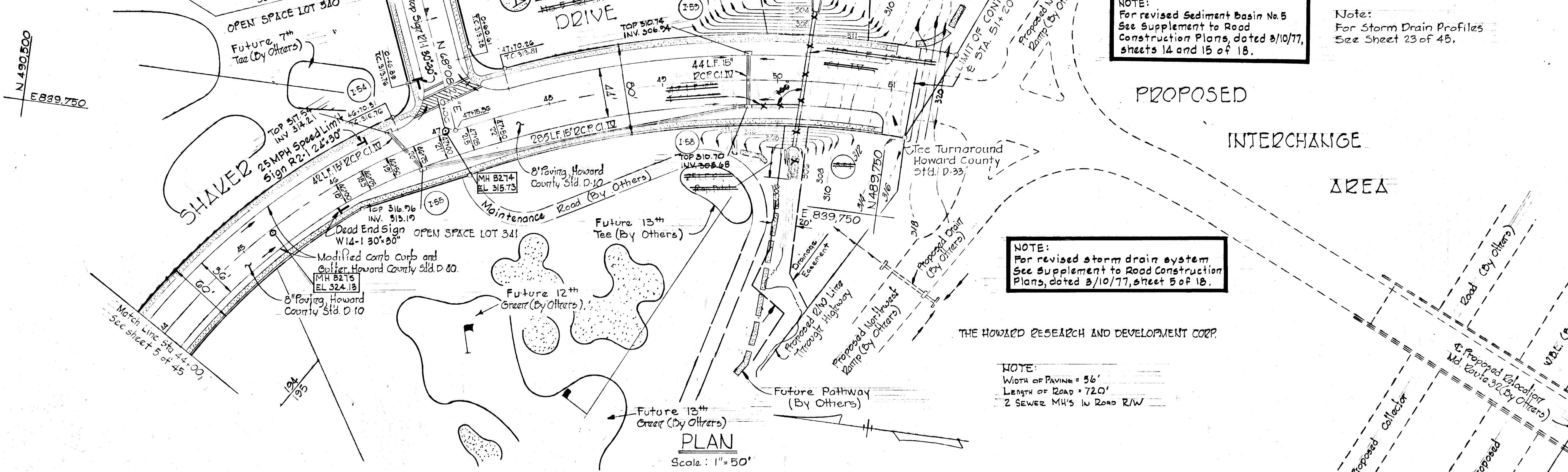


CURVE DATA
 FAIR BEAUTY TO CARLINDA AVENUE
 $\Delta = 43^{\circ}21'41''$ $T = 226.61$
 $R = 570.00$ $Ch = 421.15$
 $L = 431.38$ $Ch Brg = 648^{\circ}46'11''E$
 CARLINDA AVENUE to 34+36.39
 $\Delta = 30^{\circ}11'53''$ $T = 215.52$
 $R = 798.81$ $Ch = 416.16$
 $L = 421.02$ $Ch Brg = 611^{\circ}59'23''E$

STORM DRAIN STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV	INV ELEV	LOCATION
1-54	5/8" A-5 Inlet width 2'5"	317.20	313.80	Inlet 19.25 Left of Sta. 46+00.00
1-55	5/8" A-5 Inlet width 2'5"	316.73	312.81	Inlet 21.42 Right of Sta. 46+75.00
1-56	5/8" A-5 Inlet width 2'5"	310.51	305.55	Inlet 23.42 Right of Sta. 49+75.00
1-57	5/8" A-5 Inlet width 2'5"	310.51	306.50	Inlet 23.42 Left of Sta. 49+75.00

DEPARTMENT OF PUBLIC WORKS
J. H. Ireland 5/27/75
 CHIEF BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

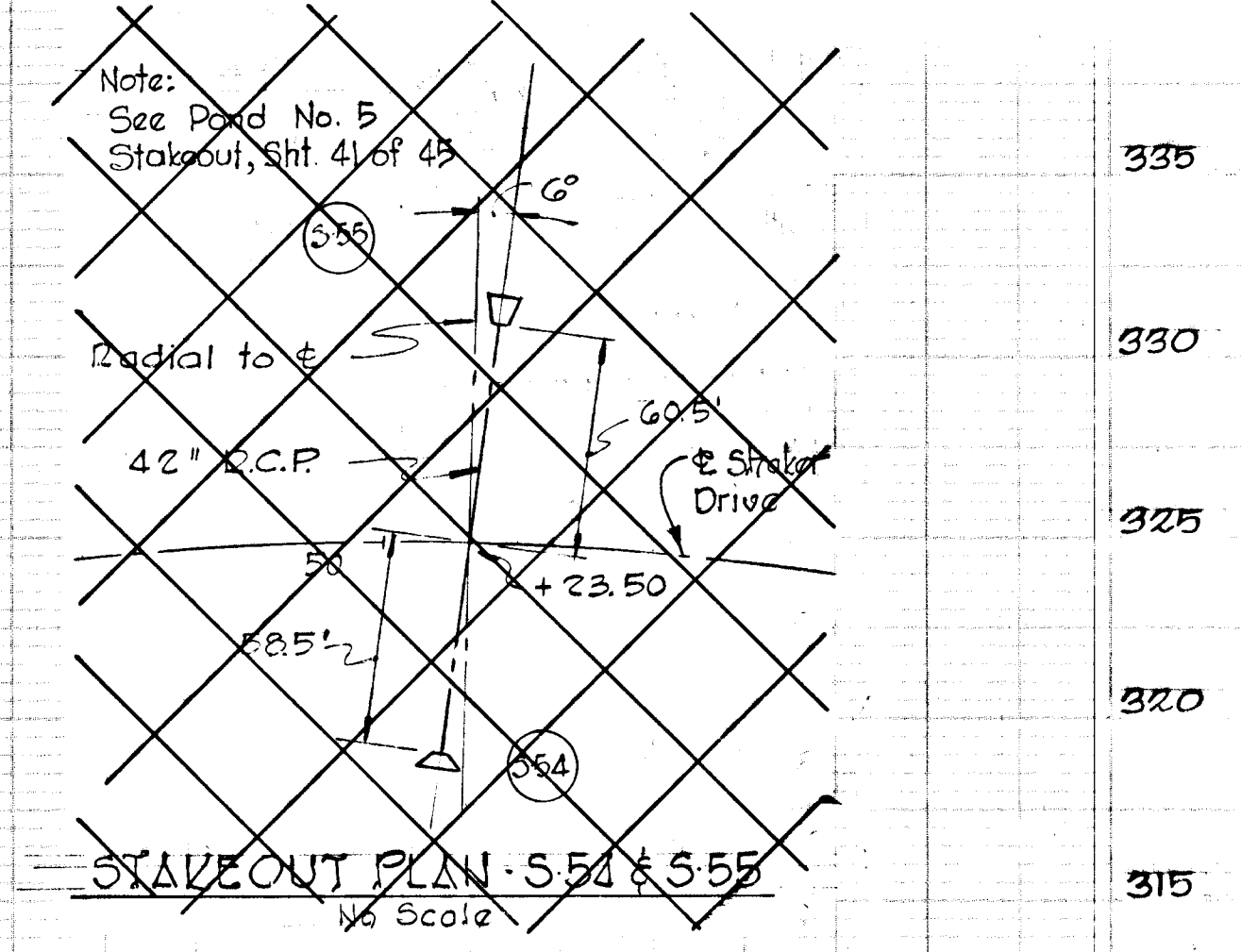
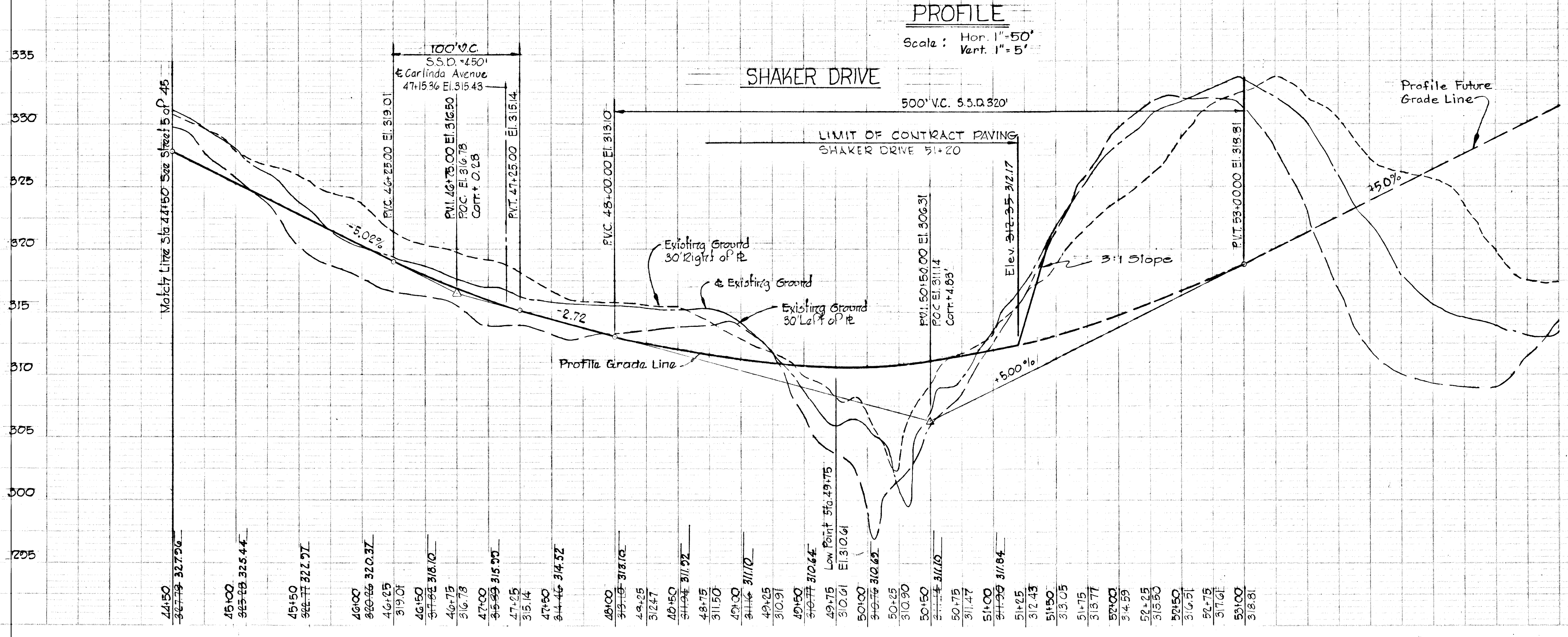
PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
 SECTION I AREA I

PROJECT TITLE
PLAN AND PROFILE
SHAKER DRIVE

SCALE AS SHOWN DATE: 11/15/74

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. H. Ireland

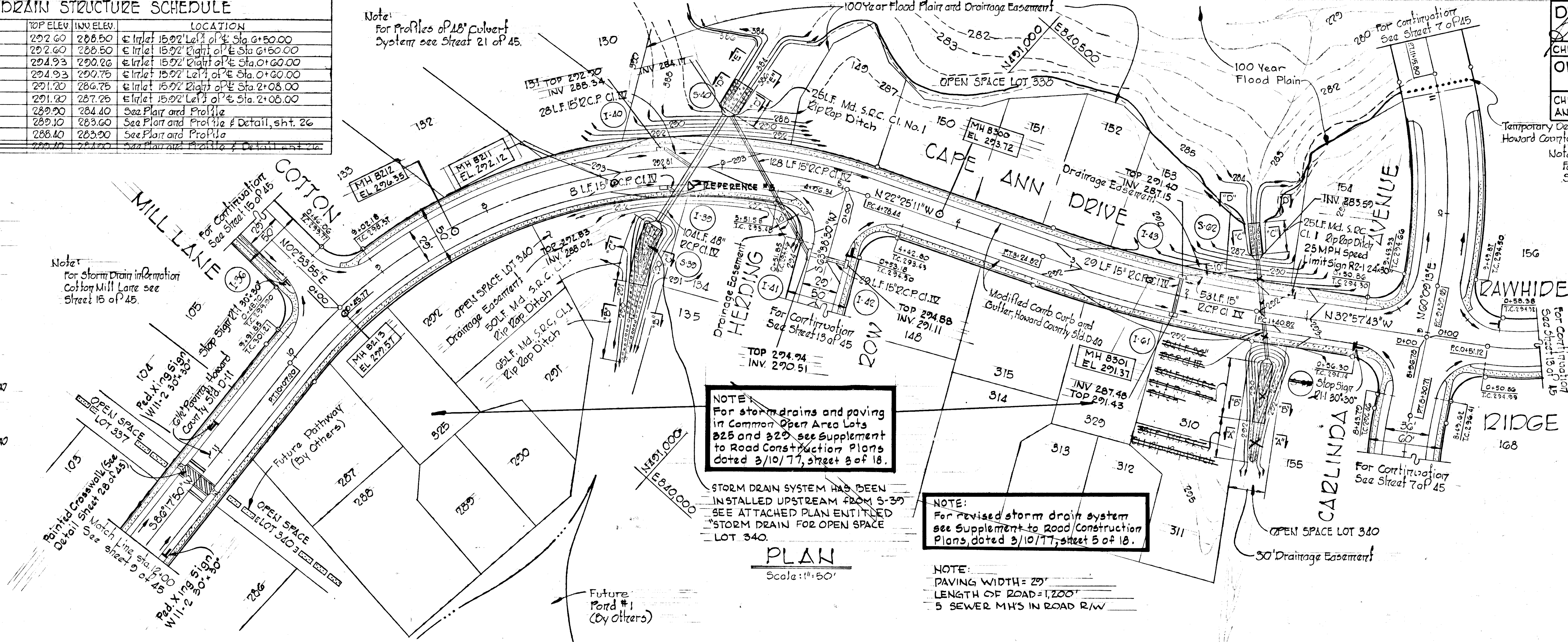
NO	TYPE	TOP ELEV	INV ELEV	LOCATION
139	5' dia. A-5 Inlet width 2.5'	292.60	288.50	inlet 15.02' left of Sta. 0+50.00
140	5' dia. A-5 Inlet width 2.5'	292.60	288.50	inlet 15.92' right of Sta. 0+50.00
141	3' dia. A-10 Inlet width 2.5'	290.26	290.26	inlet 15.92' right of Sta. 0+60.00
142	3' dia. A-5 Inlet width 2.5'	294.93	290.26	inlet 15.92' left of Sta. 0+60.00
143	3' dia. A-5 Inlet width 2.5'	291.20	286.26	inlet 15.92' left of Sta. 2+08.00
144	3' dia. A-5 Inlet width 2.5'	291.20	287.26	inlet 15.92' left of Sta. 2+08.00
145	3' dia. 48" Type 'A' Headwall	289.90	284.40	See Plan and Profile
146	Special Headwall	289.10	283.60	See Plan and Profile & Detail, sht. 26
147	5' dia. 36" Type 'A' Headwall	288.40	283.90	See Plan and Profile

Note:
For Profiles of 48" Culvert System see Sheet 21 of 45.

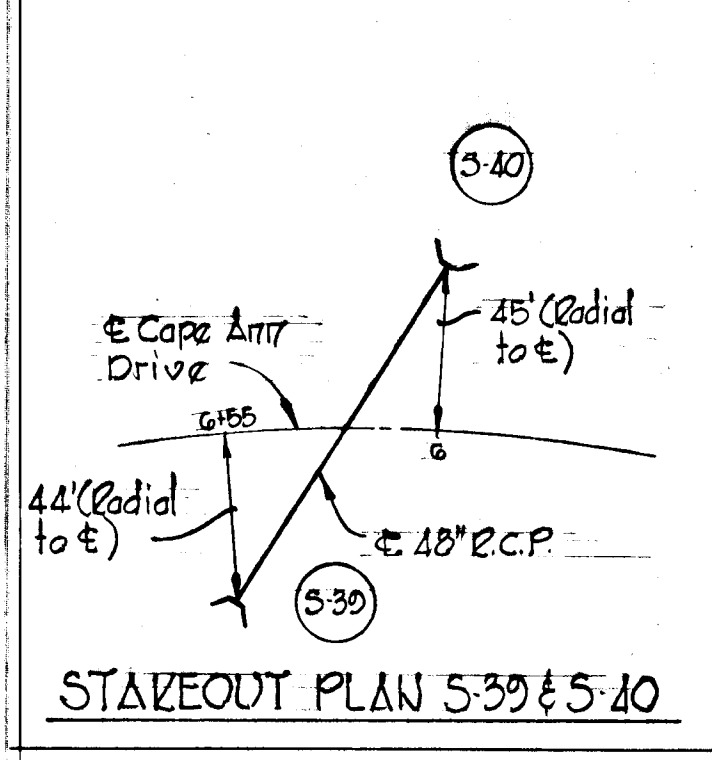
DEPARTMENT OF PUBLIC WORKS
S. H. McLeod 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

Temporary Dead End Barricade see Howard County Sld Detail 109 Page 164
 Note:
For Profiles of 36" Culvert System see Sheet 20 of 45.

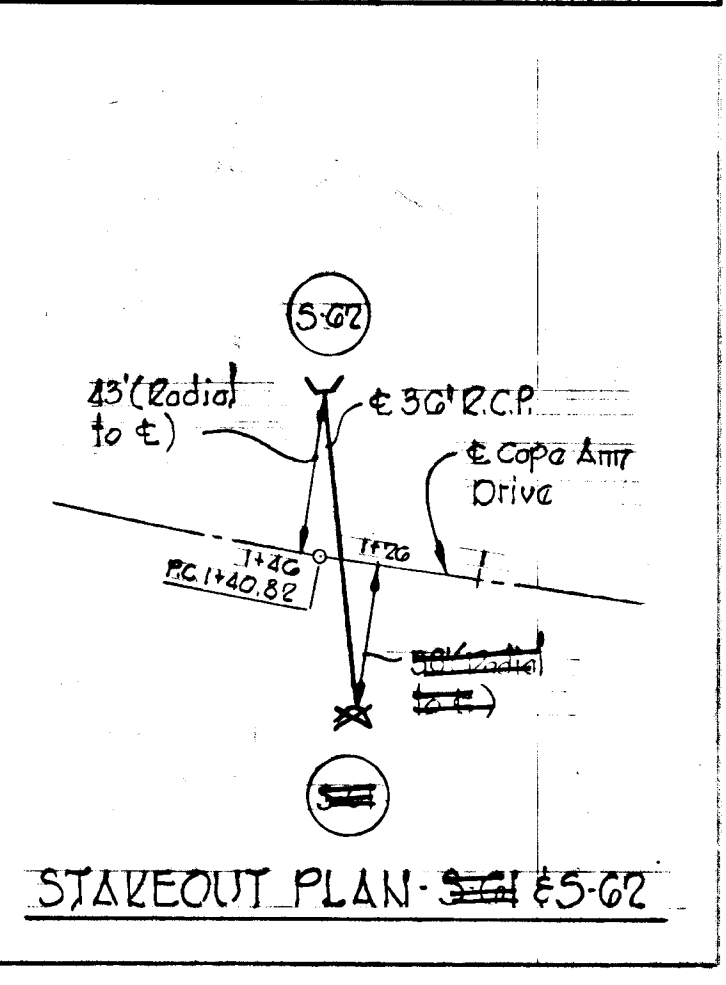
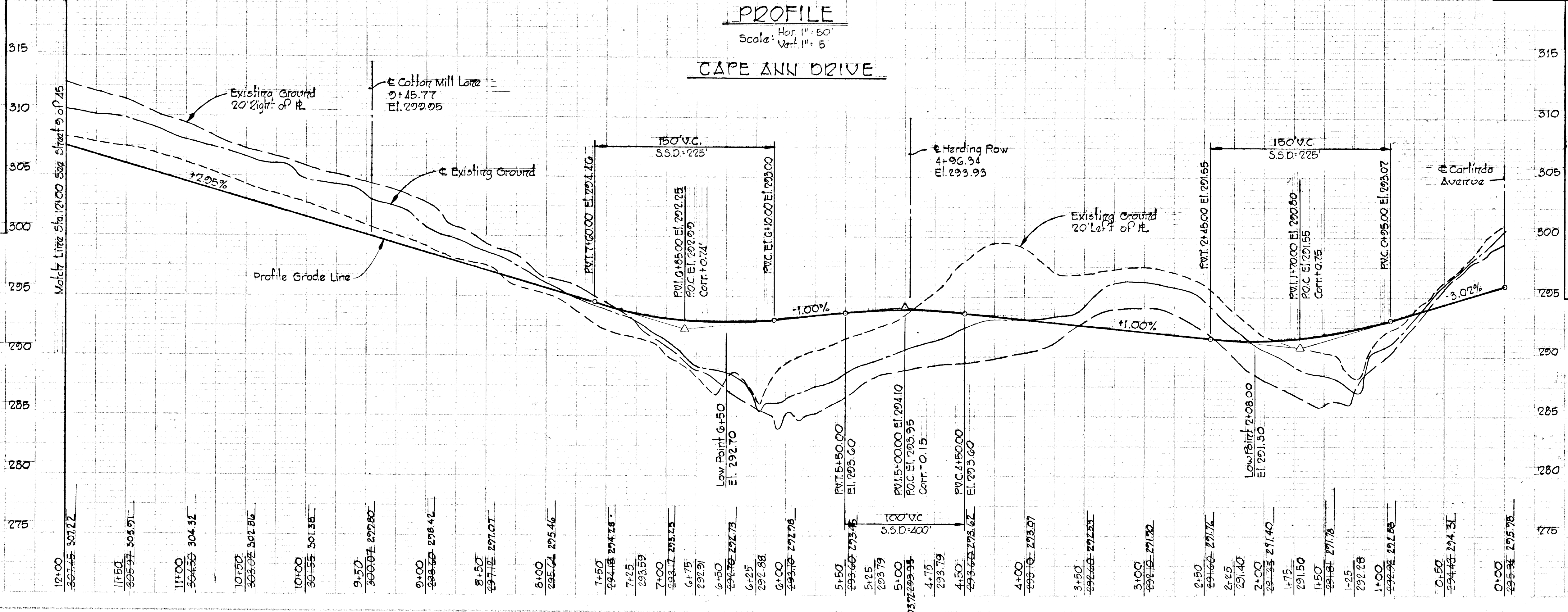
CURVE DATA
 PC 1+40.82 to PT 3+24.82
 Δ: 107°32'32" T: 92.26'
 R: 1000.00' CH: 183.74'
 L: 184.00' CHBOL: N22°11'27"W
 PC 4+78.44 to Harding Row
 Δ: 72°24'45" T: 8.95'
 R: 125.00' CH: 17.89'
 L: 17.90' CHBOL: N23°37'30"W
 E Harding Row to Cotton Mill La.
 Δ: 93°35'22" T: 218.30'
 R: 125.00' CH: 128.78'
 L: 442.43' CHBOL: N89°07'37"W
 E Cotton Mill La to PT 10+07.20
 Δ: 08°16'50" T: 30.77'
 R: 125.00' CH: 61.37'
 L: 61.45' CHBOL: N89°33'14"W



Rev. Date	Rev. No	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PLAN AND PROFILE CAPE ANN DRIVE STA. 0+00 TO STA. 12+00
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974



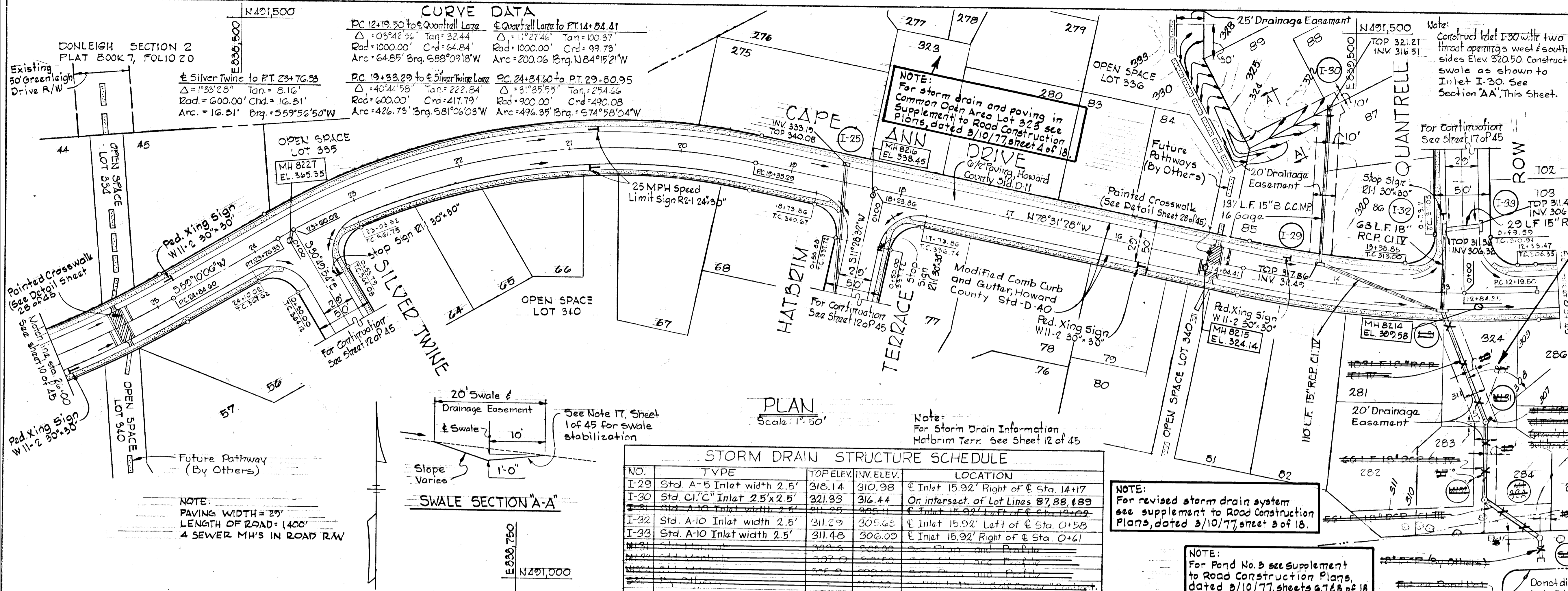
PROFILE
 Scale: Hor. 1" = 50'
 Vert. 1" = 5'



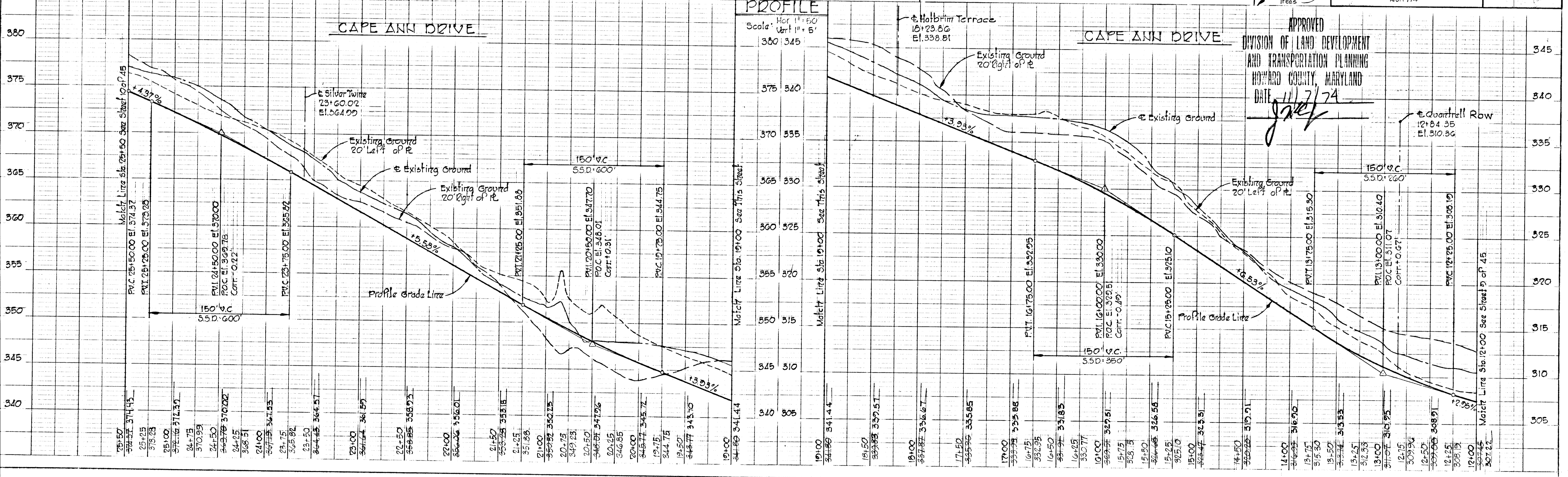
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/27/74
[Signature]

NO.	DATE	BY

NO.	DATE	BY



STORM DRAIN STRUCTURE SCHEDULE			
NO.	TYPE	TOP ELEV.	INV. ELEV.
I-29	Std. A-5 Inlet width 2.5'	318.14	310.98
I-30	Std. C-1 Inlet 2.5' x 2.5'	321.33	316.44
I-32	Std. A-10 Inlet width 2.5'	311.29	309.65
I-33	Std. A-10 Inlet width 2.5'	311.48	306.09



DEPARTMENT OF PUBLIC WORKS
D. P. McNeel 5/27/75
 CHIEF BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

Note: For Storm Drain Profiles See Sheet 12 of 45.

Note: For storm drain and paving in Common Open Area Lot 324 see Supplement to Road Construction Plans, dated 3/10/77, sheet 3 of 18.

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
 SECTION I AREA I

PROJECT TITLE
PLAN AND PROFILE
CAPE ANN DRIVE
STA. 12+00 TO STA. 26+00

SCALE: AS SHOWN DATE: 11/15/74

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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

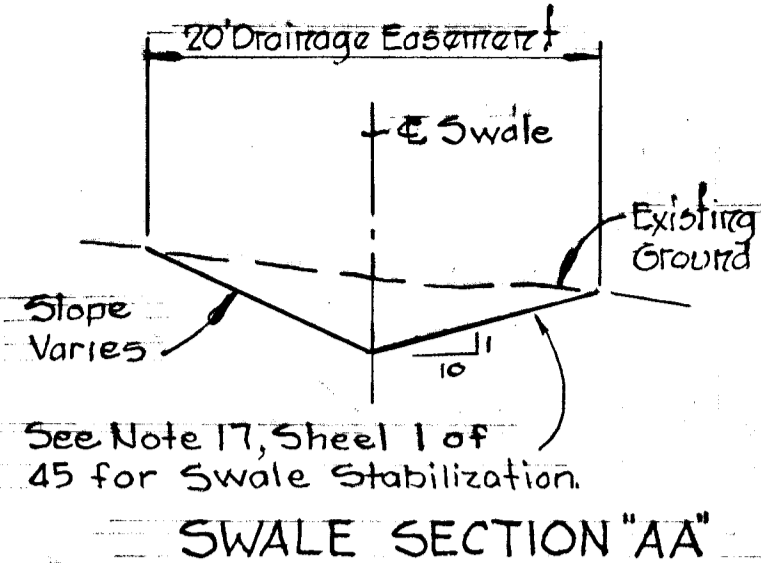
CURVE DATA
 PC 24+84.60 to PT 29+30.95 PC 31+74.45 to PT 36+57.79
 $\Delta = 31^{\circ}35'55''$ $\Delta = 35^{\circ}2'35''$
 Rad = 900.00' Crd = 490.08' Rad = 325.00' Crd = 440.01'
 Arc = 496.35' Brg = 574^{\circ}50'04''W Arc = 483.34' Brg = 548^{\circ}09'44''W

NOTE:
 For revised Pond No. 2 see supplement to Road Construction Plans dated 3/10/77 sheets 11 and 12 of 18.

DONLEIGH SECTION 1 Plat Book 6, Folio 90

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING

LEGEND
 Existing Utility Test Pit

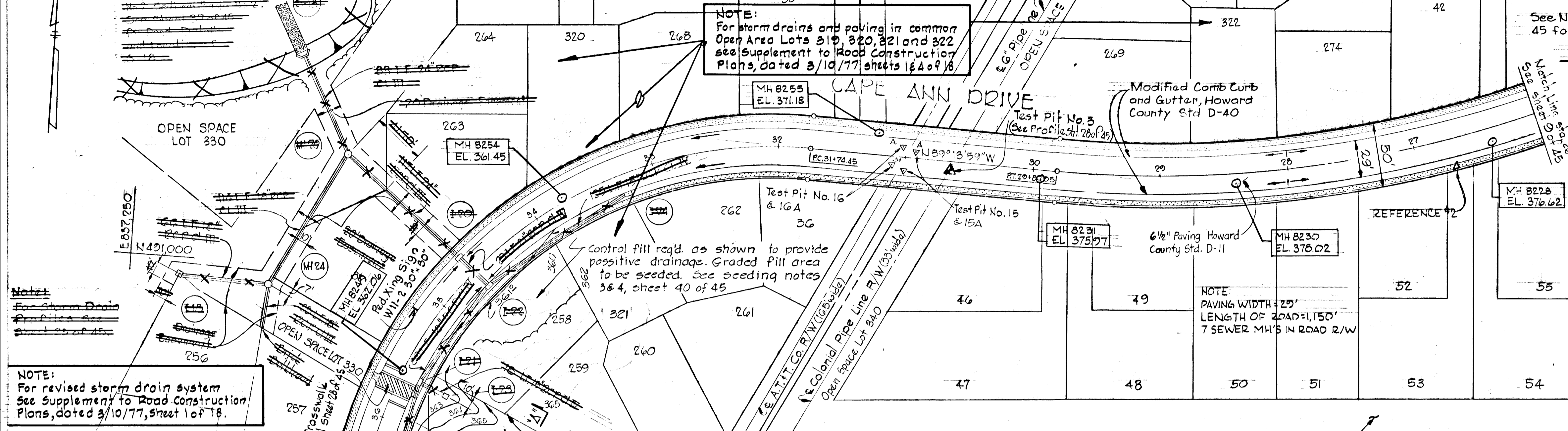


SWALE SECTION "AA"

EXISTING UTILITY TEST PIT RESULTS

NO.	UTILITY	TOP ELEVATION
1	6" Colonial Pipe	373.49
2	6" Colonial Pipe	372.25
3	6" Colonial Pipe	373.42
4	A.T.&T. Cable (2)	372.66
5	A.T.&T. Cable (1)	372.62
6	A.T.&T. Cable (1)	370.80
7	A.T.&T. Cable (2)	370.48
8	Colonial Pipe	373.87
9	Colonial Pipe	373.88
10	Colonial Pipe	376.39
11	A.T.&T. Cable (2)	379.40
12	A.T.&T. Cable (1)	379.70
13	A.T.&T. Cable (2)	378.74
14	A.T.&T. Cable (1)	379.33
15	A.T.&T. Cable (1)	369.14
15A	A.T.&T. Cable (1)	369.32
16	A.T.&T. Cable (2)	368.82
16A	A.T.&T. Cable (2)	368.65

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PLAN AND PROFILE CAPE ANN DRIVE STA. 26+00 TO STA. 36+77
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202



NOTE:
 For revised storm drain system see Supplement to Road Construction Plans, dated 3/10/77, sheet 1 of 18.

PLAN
 Scale: 1" = 50'

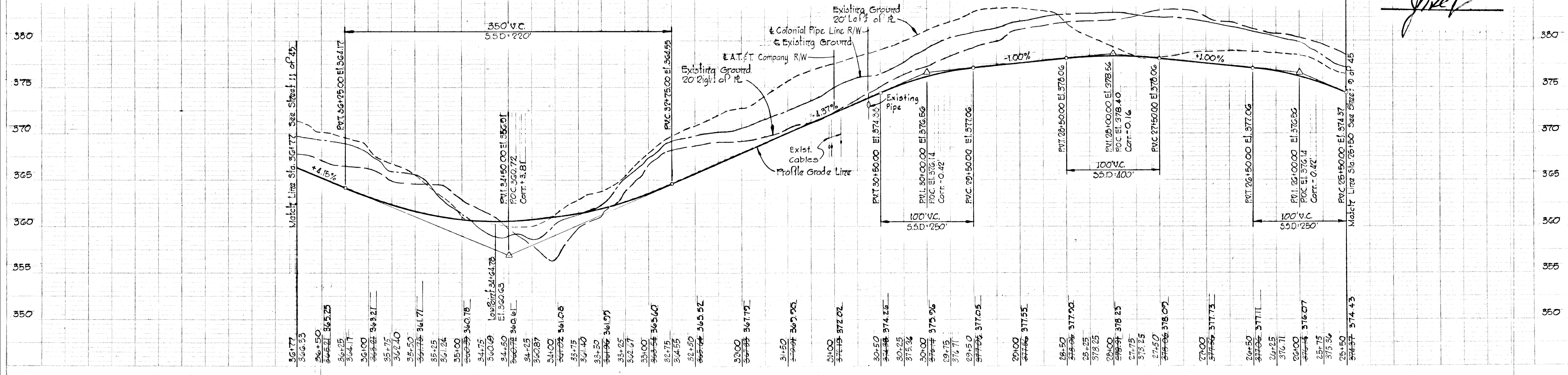
PROFILE
 Hor. 1" = 50'
 Vert. 1" = 5'

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	DEPTH	DIAMETER	LOCATION
1-18	518 Class C Inlet	25" x 25"	350.00	See Plan and Profile
1-19	518 A-5 Inlet	width 25"	367.82	Inlet 15' 02" East of Sta. 37+12
1-20	518 A-5 Inlet	width 25"	367.39	Inlet 15' 02" East of Sta. 37+00
1-21	518 A-5 Inlet	width 25"	367.02	Inlet 16' 02" East of Sta. 37+78
1-22	518 A-5 Inlet	width 25"	367.15	Inlet 15' 02" East of Sta. 37+26
1-23	518 A-5 Inlet	width 25"	367.88	Inlet 16' 02" East of Sta. 37+64
1-24	518 A-5 Inlet	width 25"	367.65	Inlet 15' 02" East of Sta. 37+78
MH 8228	Standard Manhole		370.61	See Plan and Profile
MH 8239	Standard Manhole		362.00	See Plan and Profile
5-18	A-5 Inlet	25" x 25"	350.00	See Sheet 2 and 3 of 45.

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

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 11/17/74
McCord

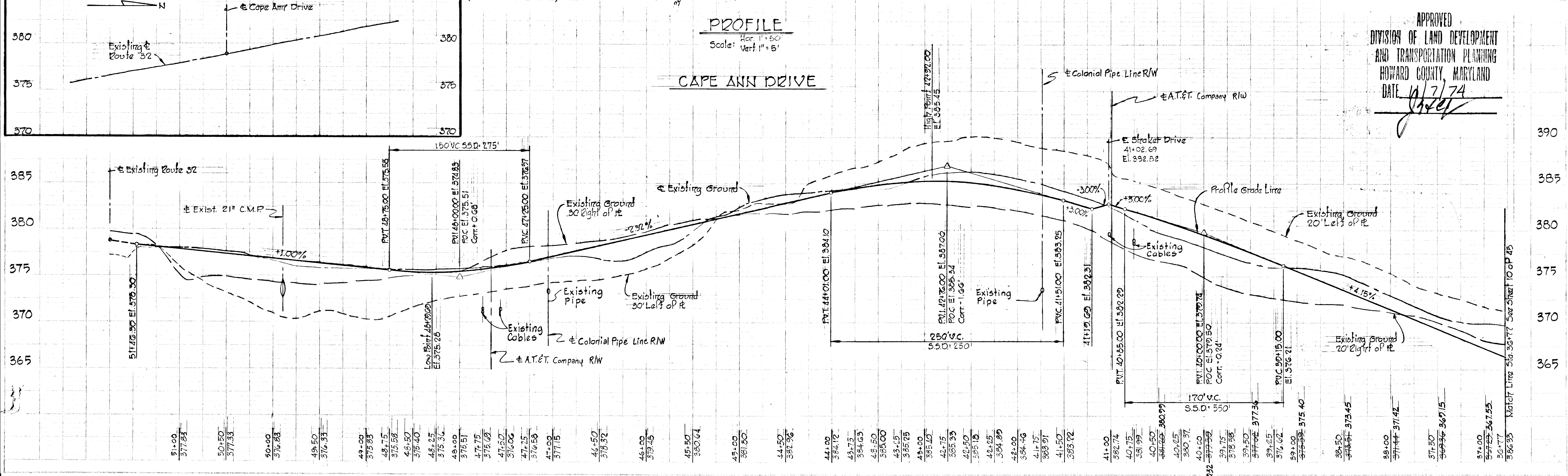
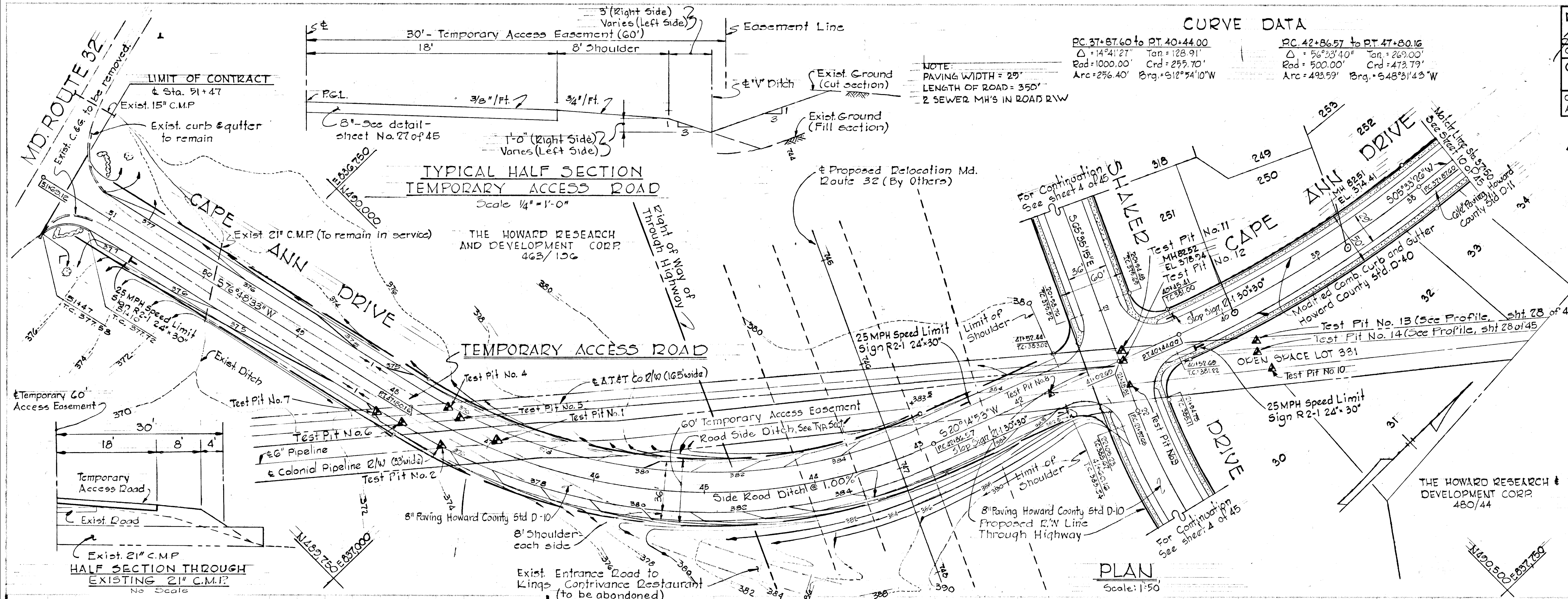


CURVE DATA

PC 37+87.60 to PT 40+44.00 $\Delta = 14^{\circ}41'27''$ Tan = 128.91 Rad = 1000.00' Crd = 277.70' Arc = 256.40' Brg. = S12^{\circ}54'10"W	PC 42+86.57 to PT 47+80.16 $\Delta = 56^{\circ}33'40''$ Tan = 269.00 Rad = 500.00' Crd = 473.79' Arc = 493.59' Brg. = S48^{\circ}31'43"W
--	---

LEGEND
 ▲ Existing Utility Test Pit
 (See sheet 10 of 45 for schedule of Elevations.)

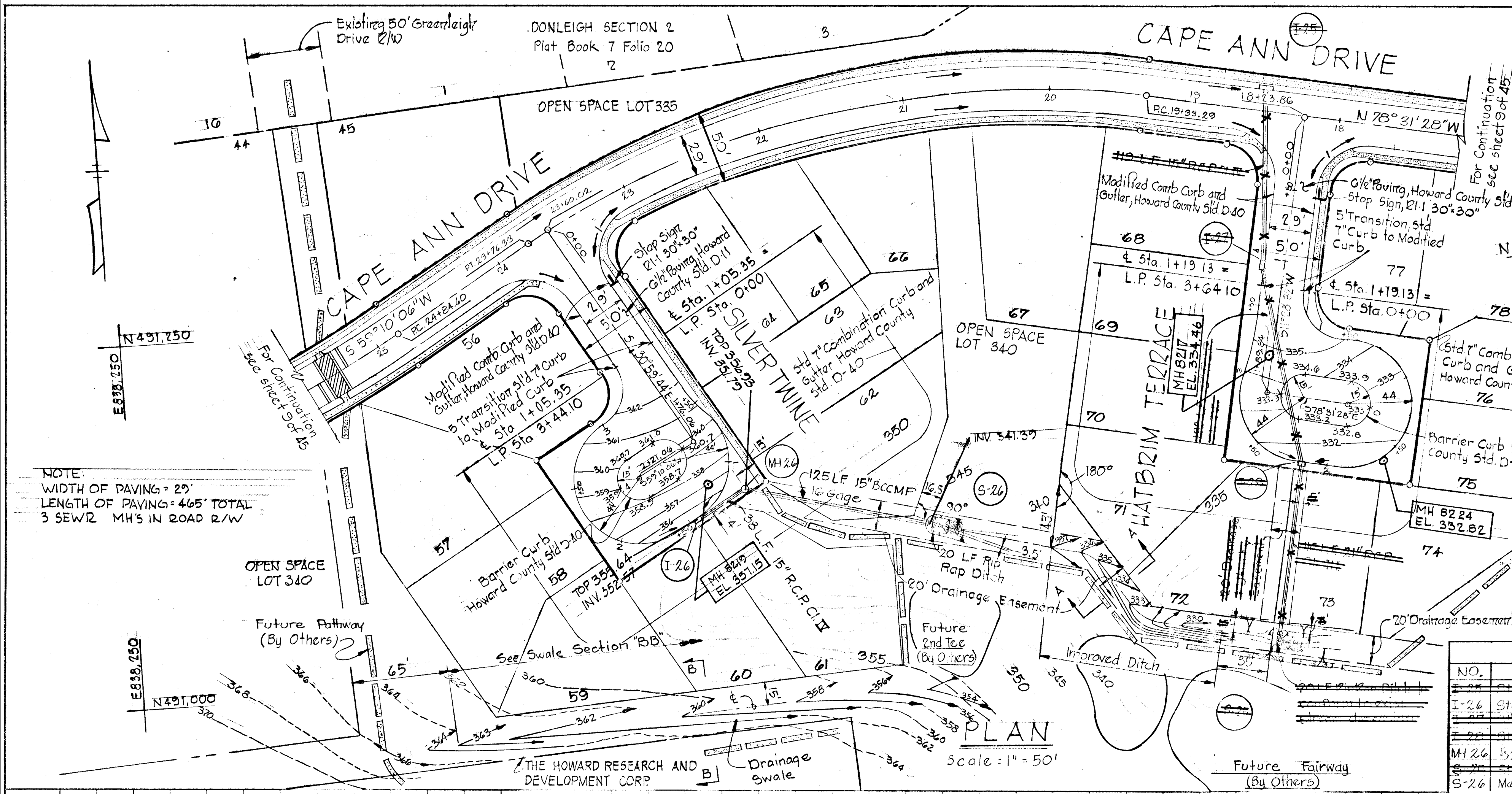
Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PLAN AND PROFILE CAPE ANN DRIVE STA. 36+77 TO STA. 51+70.63		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REQUART & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCord KENNETH A. MCCORD Registered Engineer No. 1974		



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 6/7/74
J. J. J.

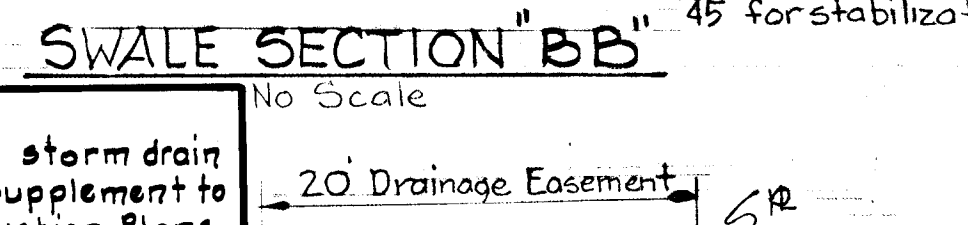
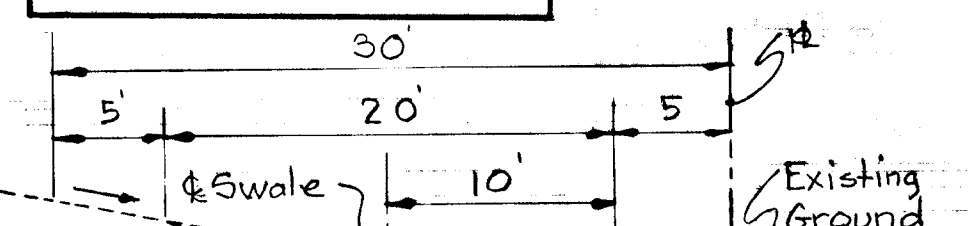
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BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	

DATE	
BY	
REVISIONS	
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REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	



Note:
For Storm Drain Profiles
See Street 22 of 45.

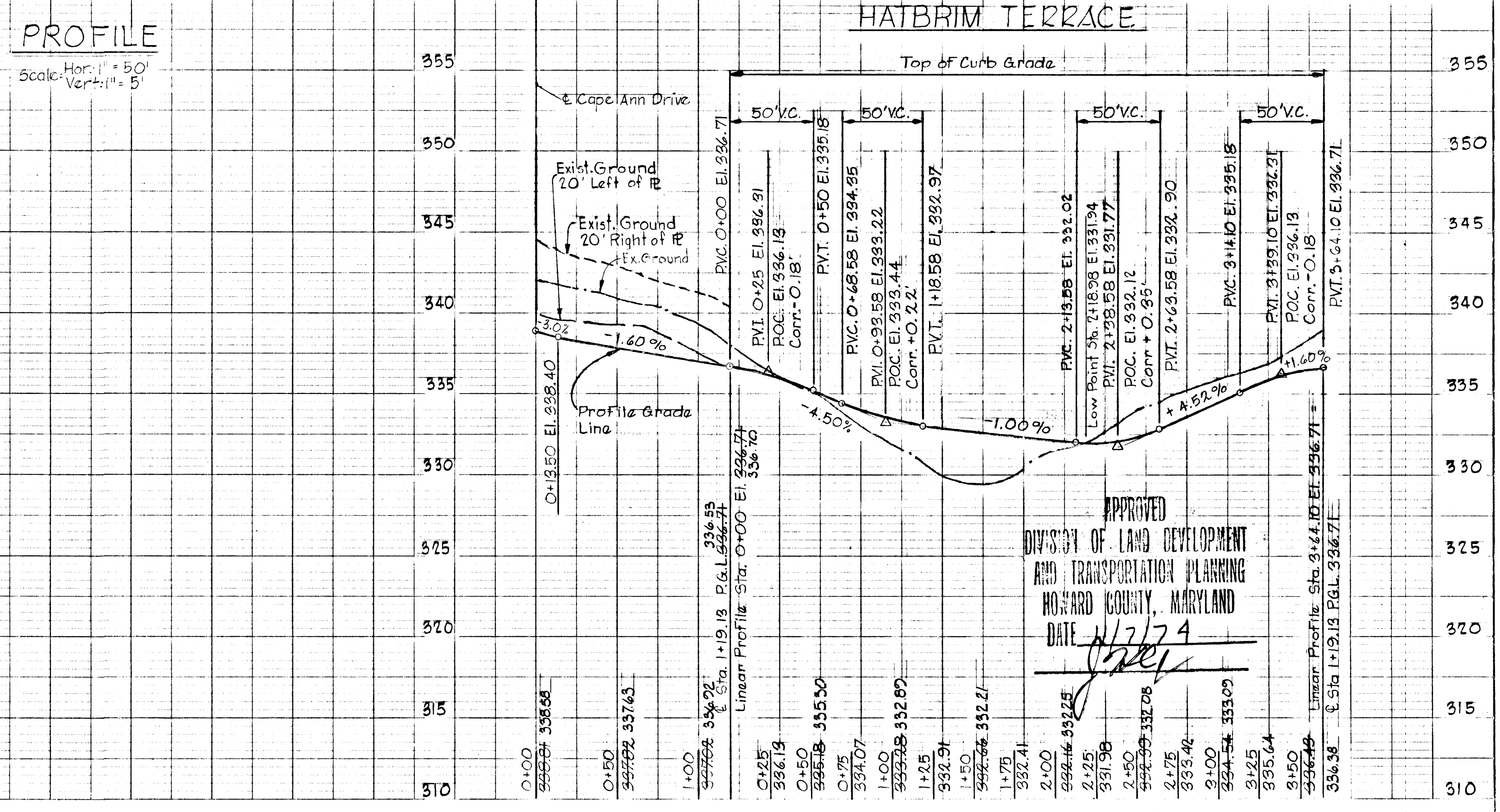
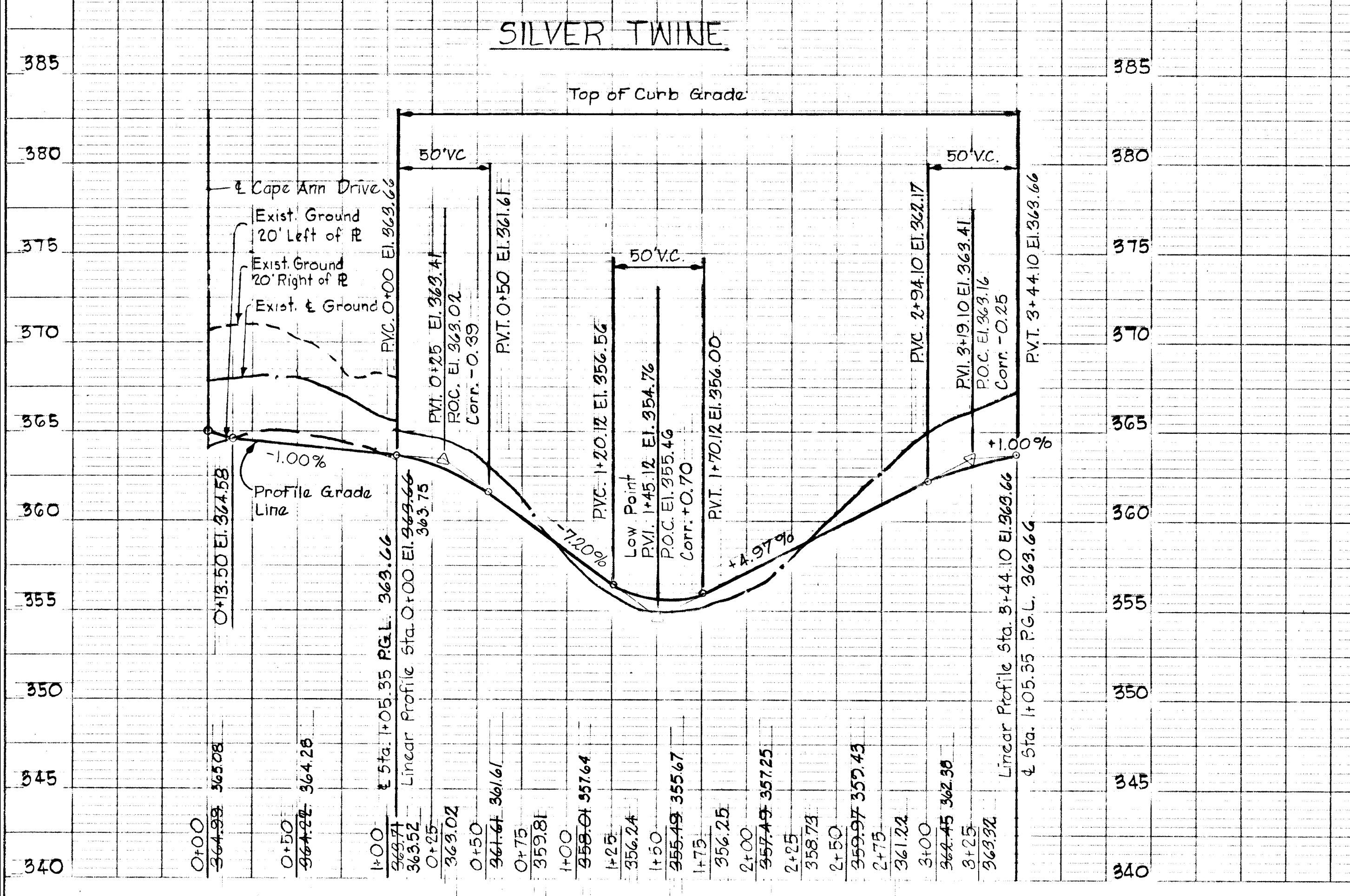
NOTE:
For Cul-De-Sac
Curve Data, See
Sheet 28 of 45



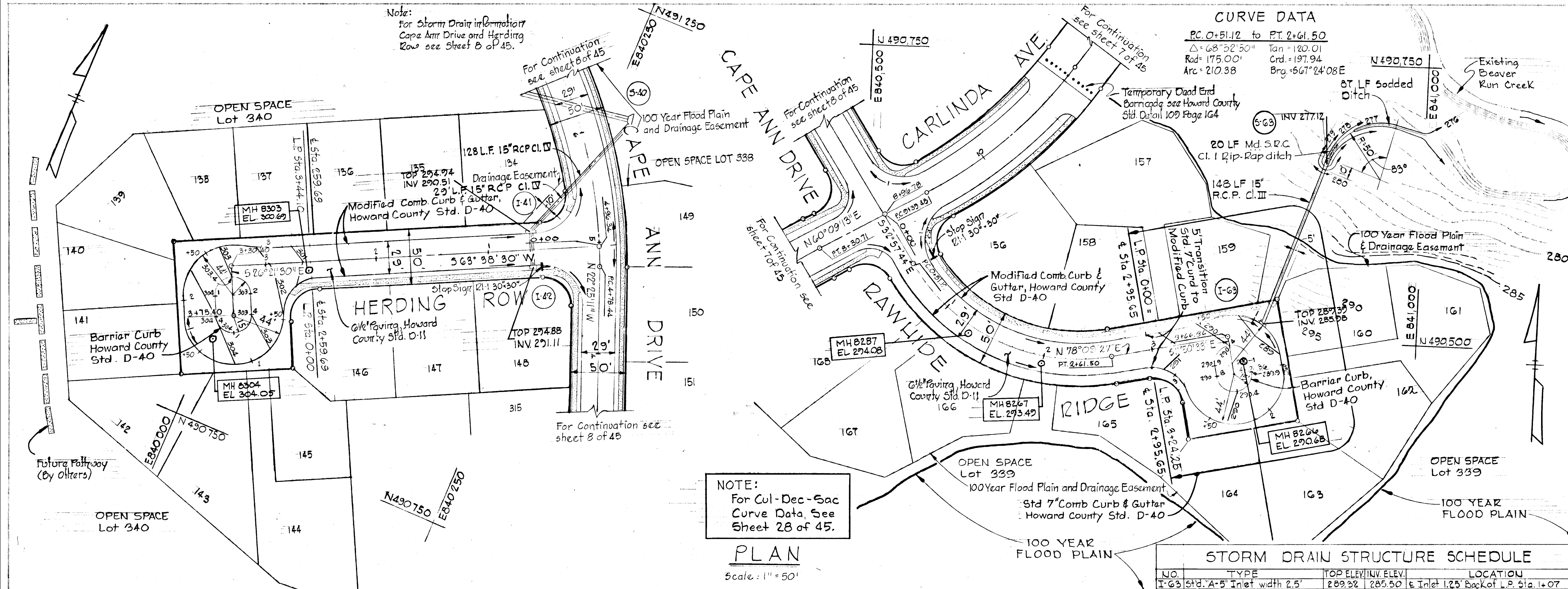
NO.	TYPE	TOP ELEV.	INVERT ELEV.	LOCATION
I-24	Std. A-5 Inlet width 2.5'	355.46	352.03	Inlet 1.25' back of L.P. Sta. 1+45.12
MH 26	Type I Manhole	357.00	351.49	See Plan and Profile
S-26	Metal End Section		341.20	See Plan and Profile

DEPARTMENT OF PUBLIC WORKS
G. W. Mehlend 5/27/75
 CHIEF, BUREAU OF HIGHWAYS
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION I, AREA 1
		PROJECT TITLE PLAN AND PROFILE SILVER TWINE HATBRIM TERRACE
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REARDOT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. MeCORD</i> KENNETH A. MECORD Registered Engineer No. 1974



NOTE:
 For Storm Drain Profiles
 See Sheet 20 of 45.



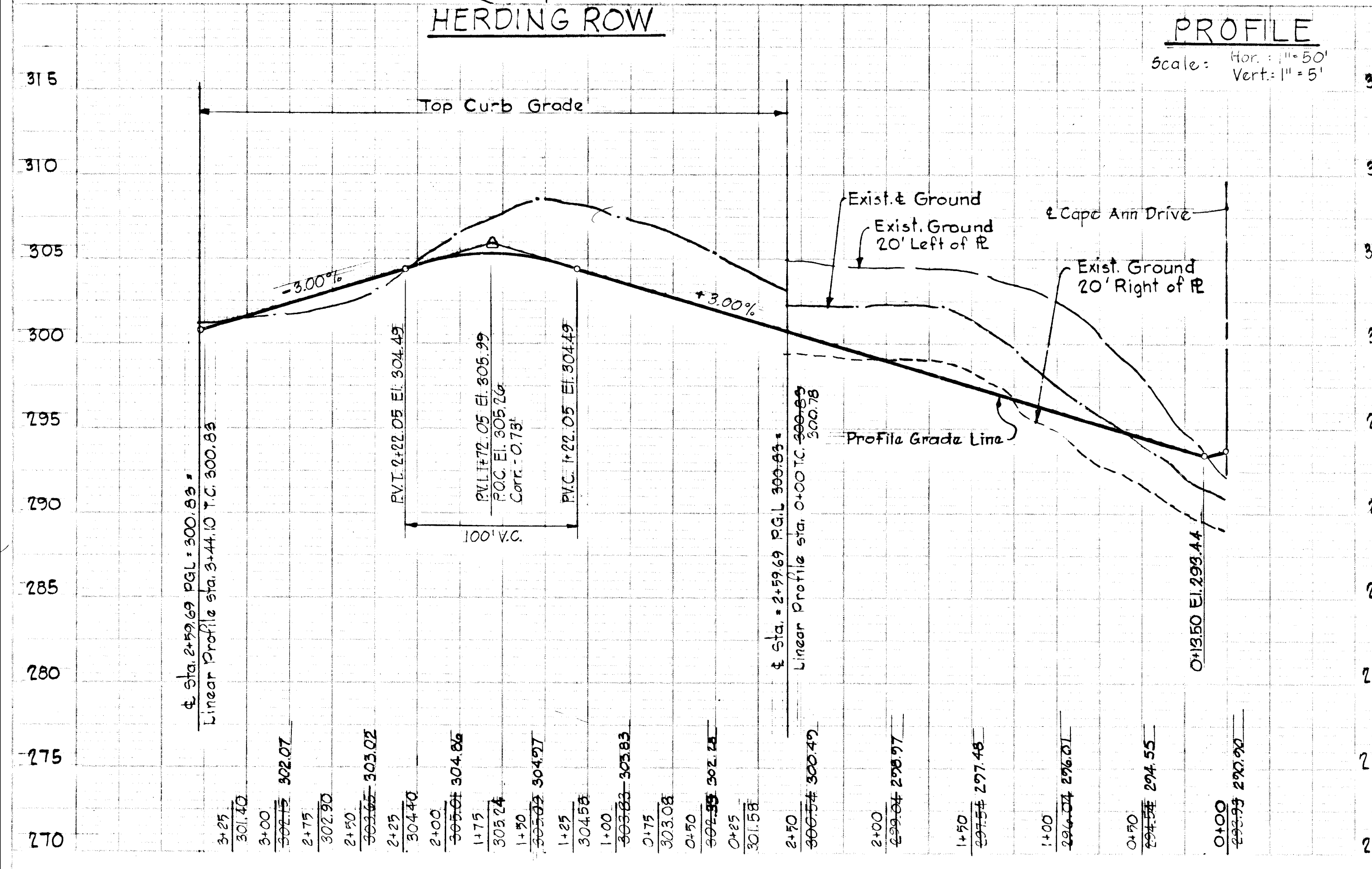
NOTE:
 For Cul-De-Sac
 Curve Data, See
 Sheet 28 of 45.

PLAN
 Scale: 1" = 50'

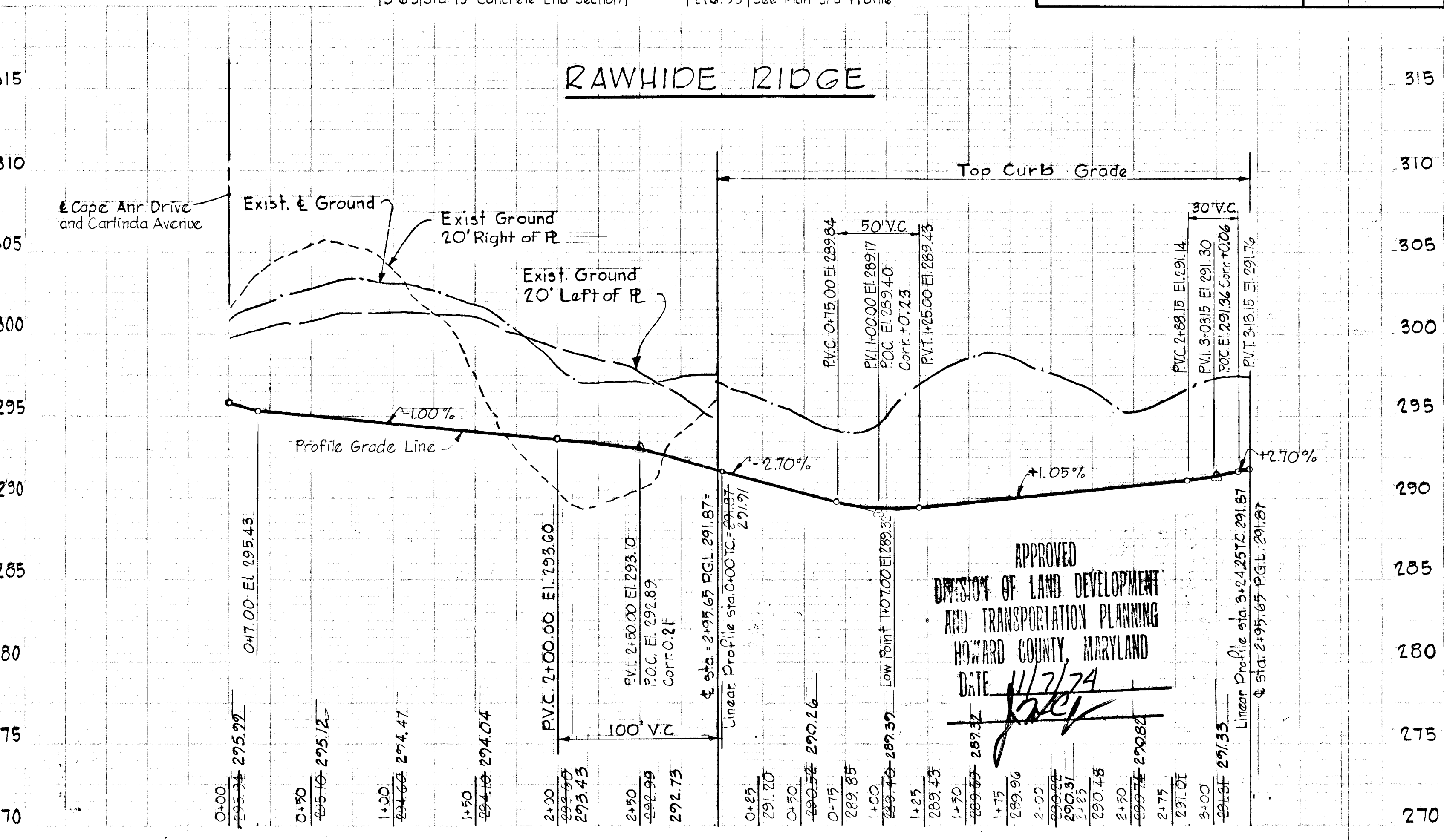
Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PLAN AND PROFILE RAWHIDE RIDGE AND HERDING ROW
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REQUARD & ASSOCIATES ENGINEERS BALTIMORE MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INLET ELEV.	LOCATION
1-63	Std. A-5 Inlet width 2.5'	289.92	285.50	at Inlet 1.25' Back of L.P. Sta. 1+07
5-63	Std. 15 Concrete End Section		276.95	See Plan and Profile



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

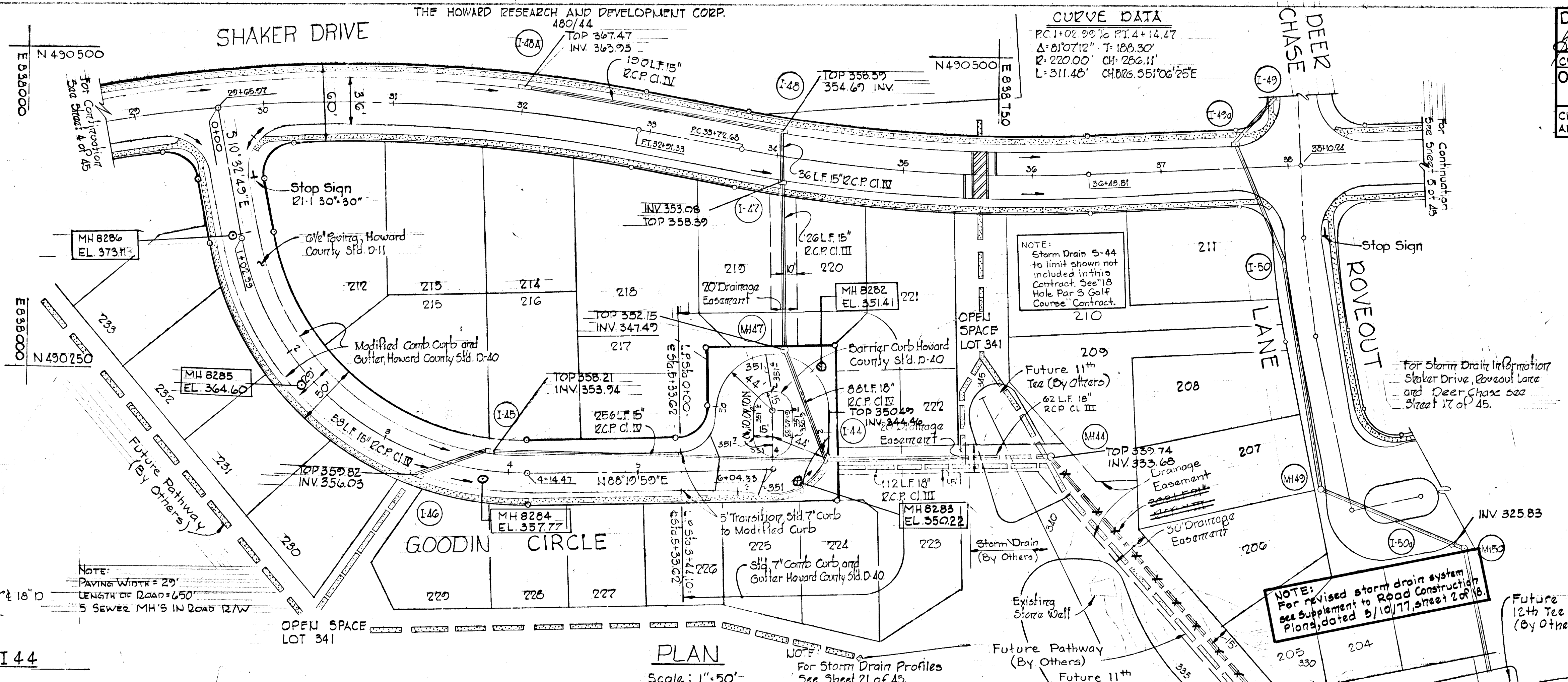
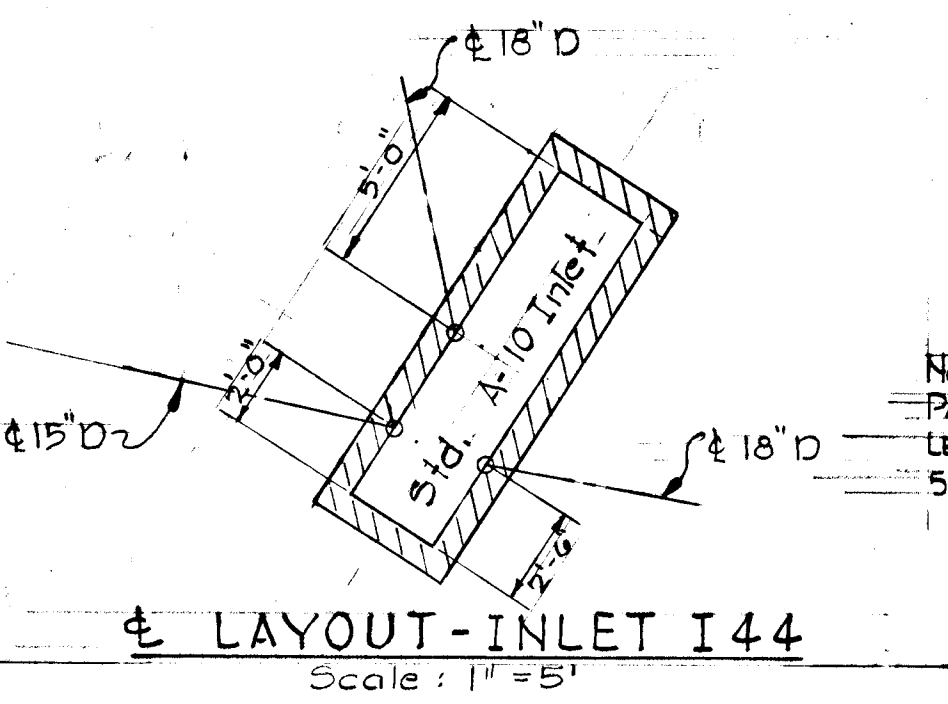


APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 11/27/74
[Signature]

CURVE DATA
 PC: 1+02.99 TO PT. 1+14.47
 Δ: 81°07'12" T: 188.30'
 R: 220.00' CH: 226.11'
 L: 311.48' CB: 6.951° 25'E

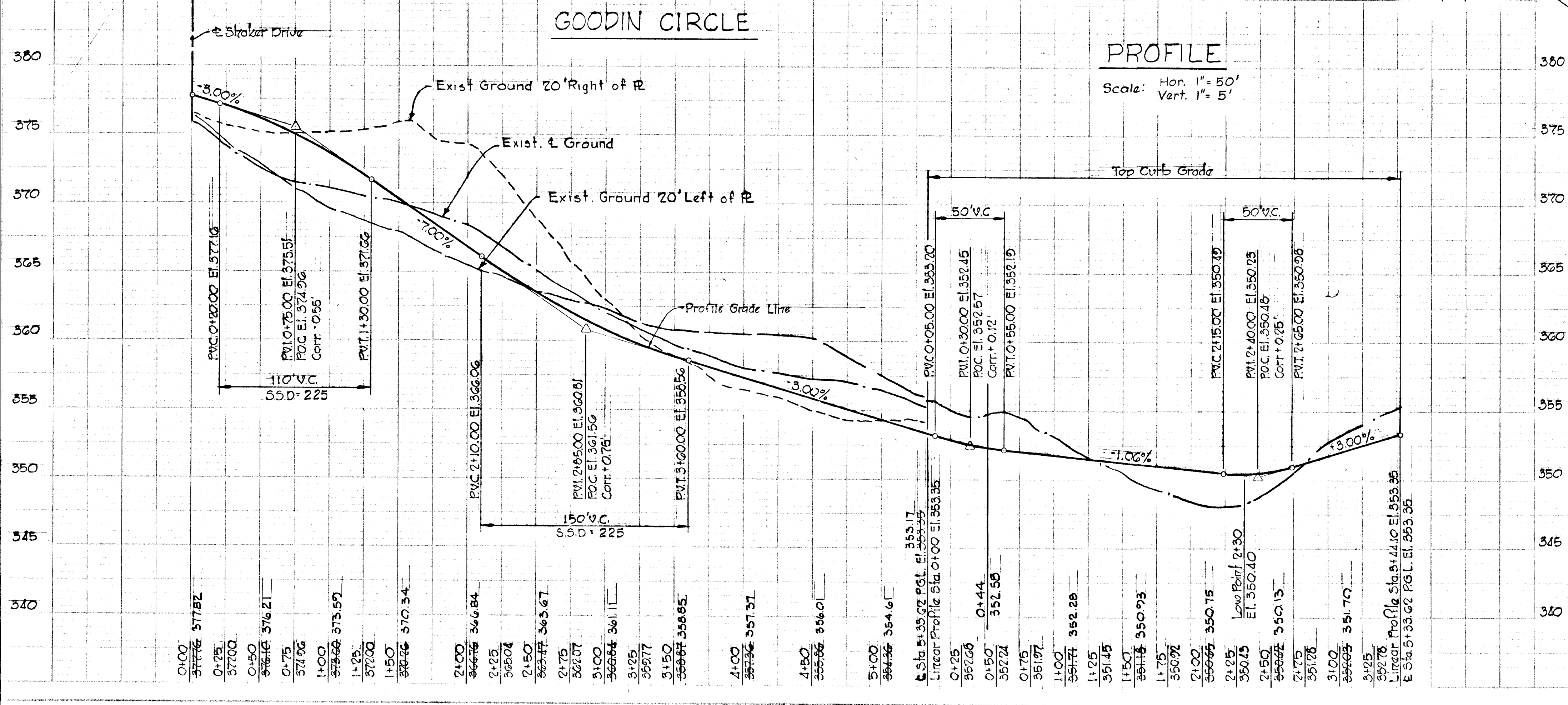
DEPARTMENT OF PUBLIC WORKS
S. H. McLeod 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE:
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE:

NOTE:
 For Cul-De-Sac Curve Data, See Sheet 28 of 45.



NOTE:
 For revised storm drain system see Supplement to Road Construction Plans, dated 5/10/77, sheet 2 of 18.

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PLAN AND PROFILE GOODIN CIRCLE		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REARDY & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

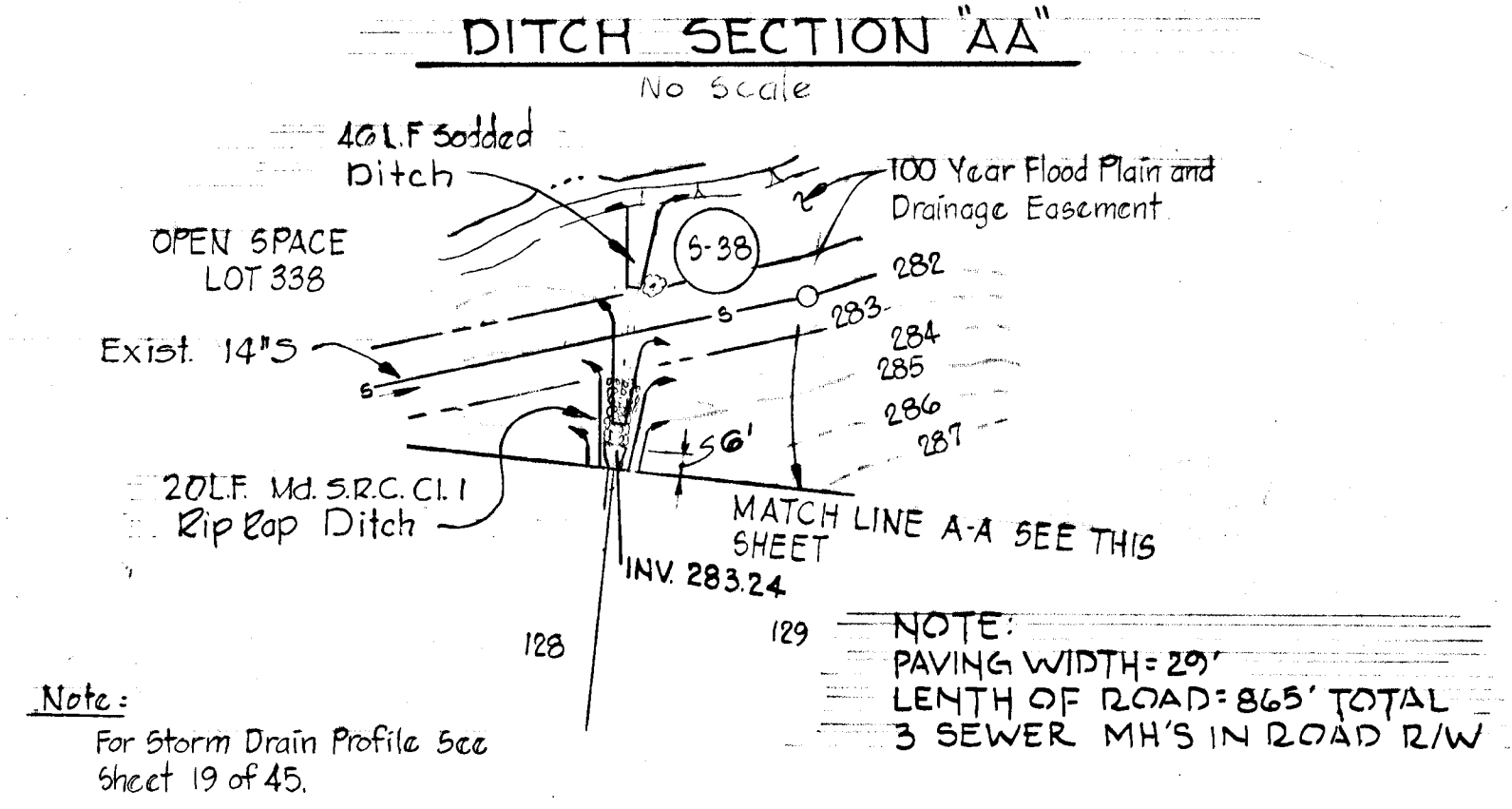
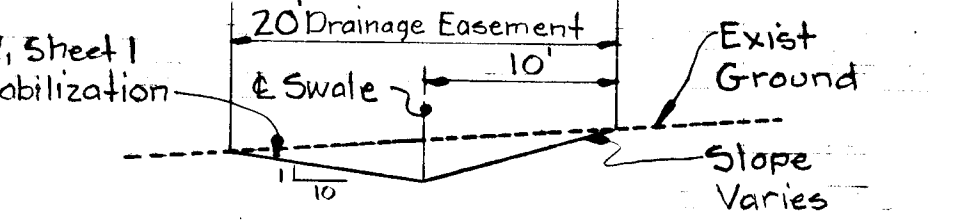
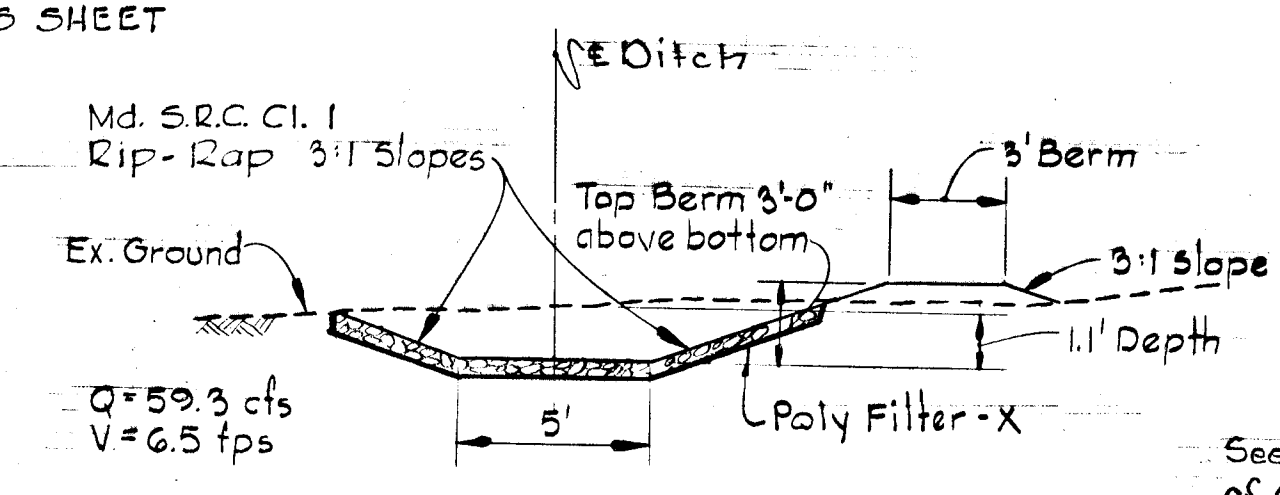
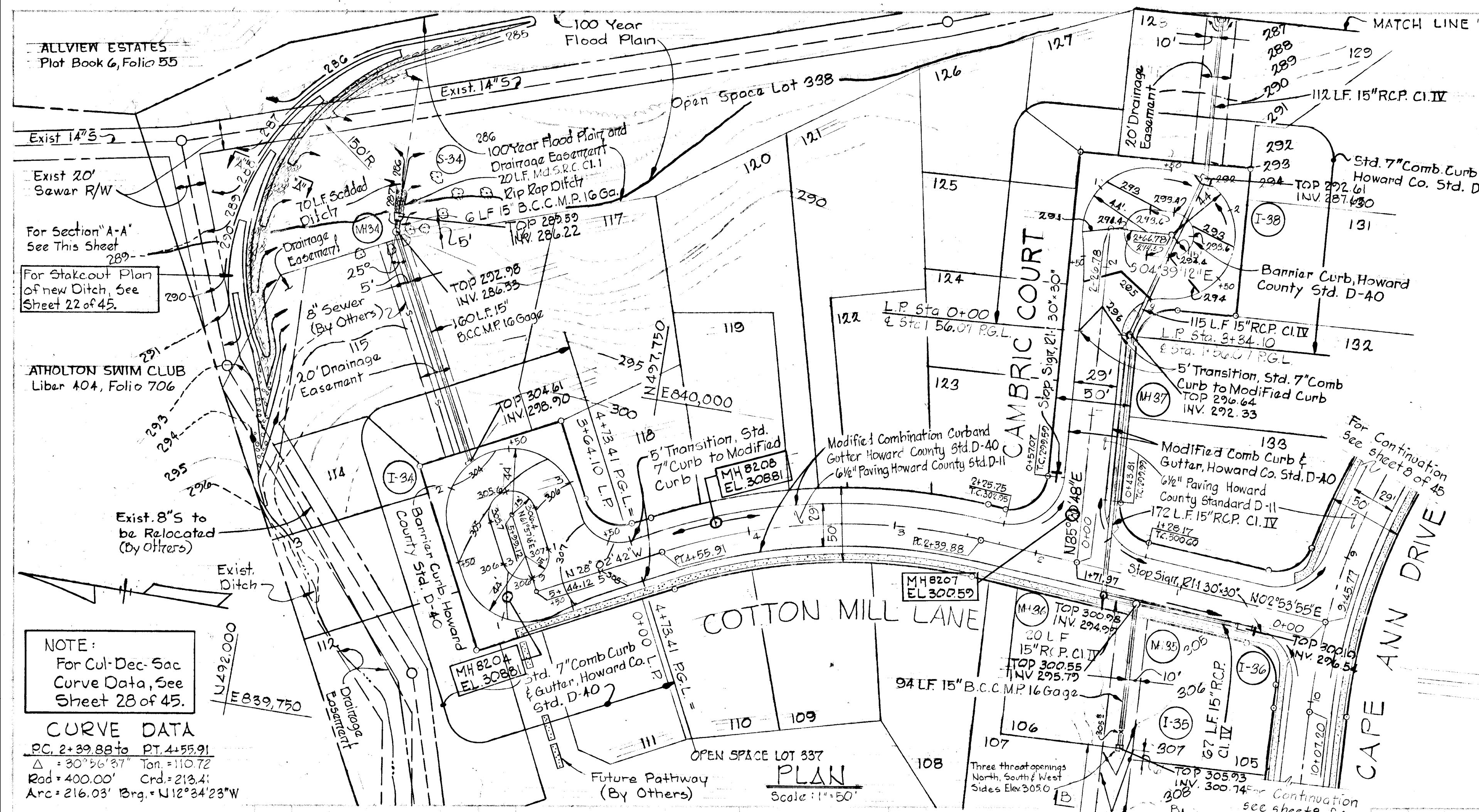


No.	TYPE	TOP ELEV.	INVERT ELEV.	LOCATION
MH-44	Manhole (By Others)	343.00	333.25	See Plan and Profile
I-44	Sta. A-10 Inlet width = 2.5'	350.40	344.25	± Inlet 1.25' Back of L.P. Sta. 2+21.00
I-45	Sta. A-5 Inlet width = 2.5'	357.94	353.50	± Inlet 15.92' Left of ± Sta. 3+84.00
I-46	Sta. A-5 Inlet width = 2.5'	359.50	355.20	± Inlet 15.92' Right of ± Sta. 3+82.50
MH-47	Type 'B' Manhole	351.60	347.00	± MH 4.00' Back of L.P. Sta. 1+24.00
I-47	Sta. A-5 Inlet width = 2.5'	353.21	352.50	± Inlet 19.42' Right of ± Sta. 3+07.00
I-48	Sta. A-5 Inlet width = 2.5'	358.42	354.25	± Inlet 19.42' Left of ± Sta. 3+00.00
I-49A	Sta. A-5 Inlet width = 2.5'	367.17	363.25	± Inlet 19.42' Left of ± Sta. 3+00.00

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 4/7/74
J. J. [Signature]

ALLVIEW ESTATES
Plot Book 6, Folio 55

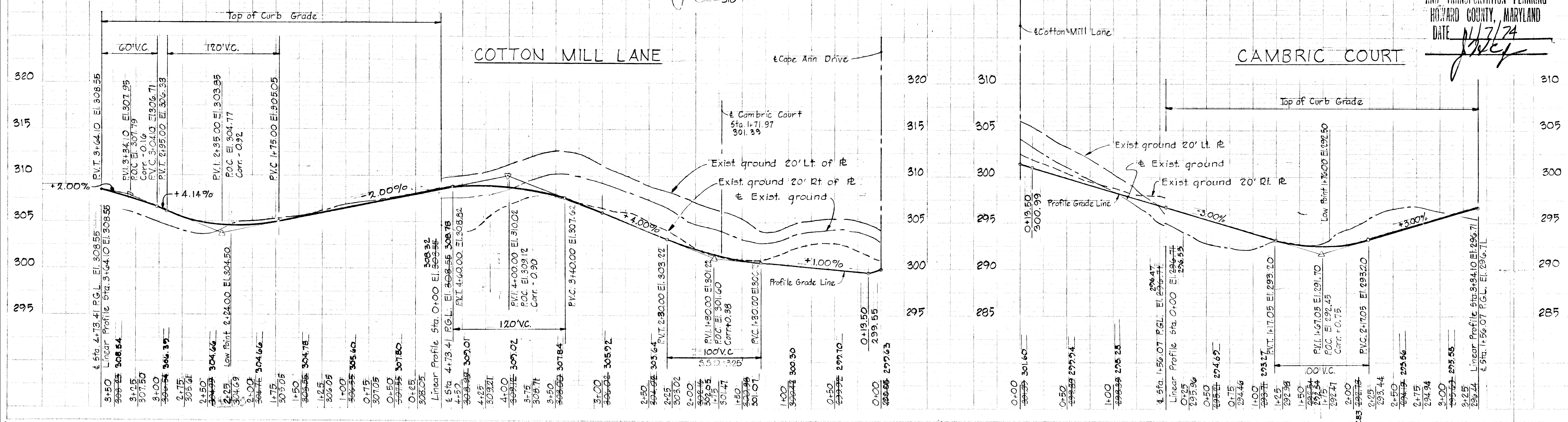
DEPARTMENT OF PUBLIC WORKS
Kenneth A. McCord 5/27/75
CHIEF, BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



NOTE:
For Cul-De-Sac Curve Data, See Sheet 28 of 45.

CURVE DATA
PC, 2+39.88 to PT, 4+55.91
Δ = 30° 26' 31" Tan = 110.72
Rad = 400.00' Crd = 213.41
Arc = 216.03' Brg. = N12°34'23"W

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



Rev. Date Rev. No. Revision Description

COLUMBIA
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT

PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
SECTION 1 AREA 1

PROJECT TITLE
PLAN AND PROFILE
CAMBRIC COURT
AND COTTON MILL LANE

SCALE: AS SHOWN DATE: 11/15/74

WHITMAN, REARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

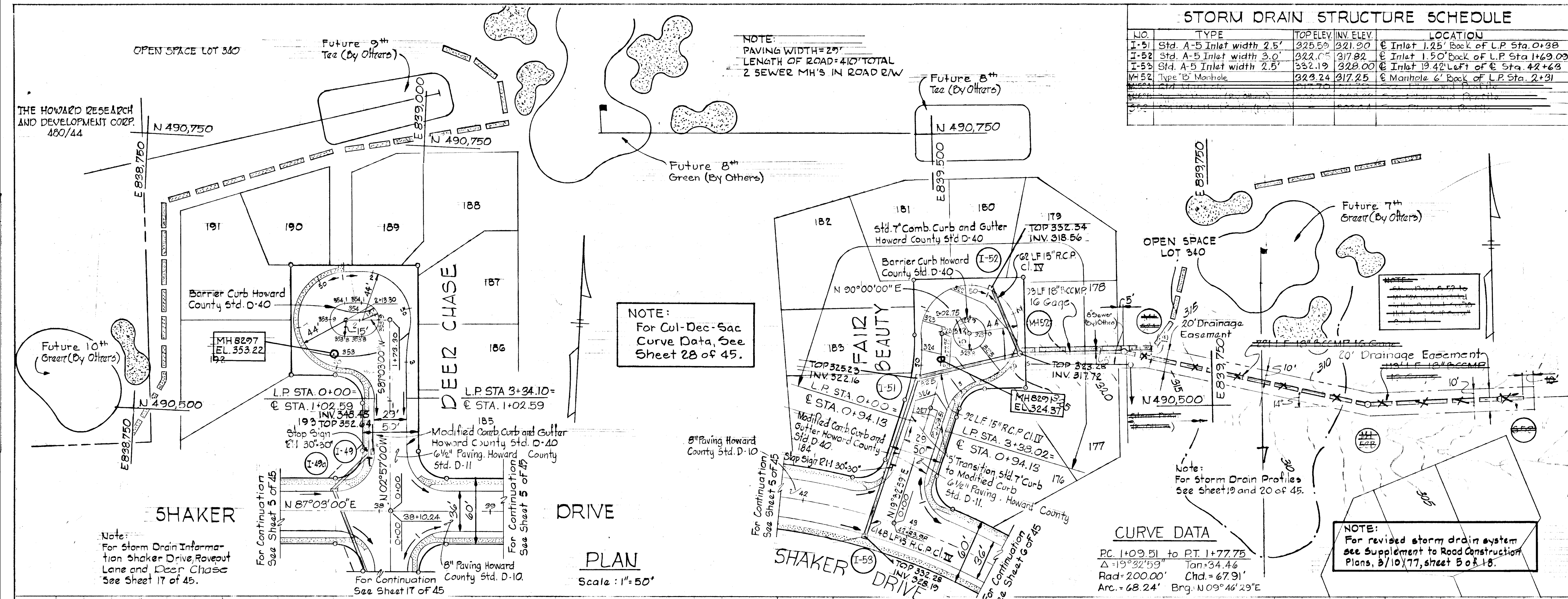
Kenneth A. McCord
KENNETH A. MCCORD
Registered Engineer
No. 1974

APPROVED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE 5/27/75
[Signature]

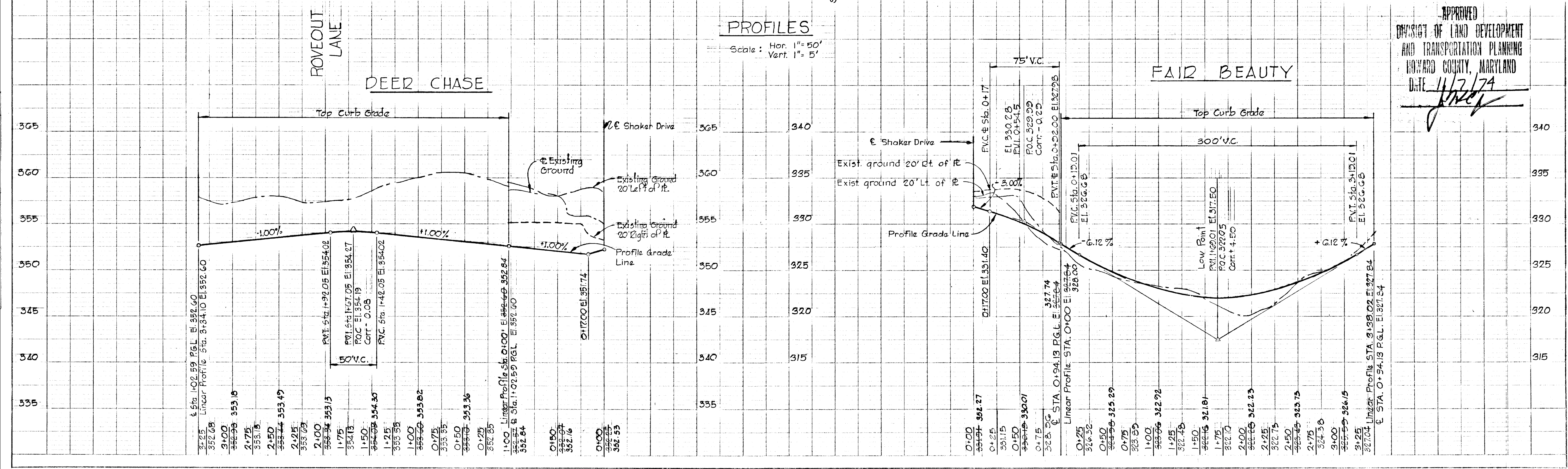
NOTE:
 PAVING WIDTH=27'
 LENGTH OF ROAD=410' TOTAL
 2 SEWER MH'S IN ROAD 2/W

STORM DRAIN STRUCTURE SCHEDULE				
NO.	TYPE	TOPELEV.	INV. ELEV.	LOCATION
I-51	Std. A-5 Inlet width 2.5'	325.50	321.20	€ Inlet 1.25' Back of L.P. Sta. 0+38
I-52	Std. A-5 Inlet width 3.0'	322.05	317.82	€ Inlet 1.50' Back of L.P. Sta. 1+69.09
I-53	Std. A-5 Inlet width 2.5'	322.19	328.00	€ Inlet 19.42' Left of € Sta. 42+68
M-52	Type 'B' Manhole	323.24	317.25	€ Manhole 6' Back of L.P. Sta. 2+81

DEPARTMENT OF PUBLIC WORKS
J. H. McLeod 5/27/75
 CHIEF BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PLAN AND PROFILE DEER CHASE AND FAIR BEAUTY
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McLeod</i> KENNETH A. MCCORD Registered Engineer No. 1974



APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 4/7/74
J. H. McLeod

PLAN
 NOTE BOOK
 NO. 1

PROFILES
 NOTE BOOK
 NO. 1

CURVE DATA

PC: 1+40.14 To PT: 2+88.44
 $\Delta: 26^{\circ}08'37''$ T: 75.46'
 R: 325.00' CH: 147.01'
 L: 148.90' CH.BRG: N 14°58'23"W

OPEN SPACE
LOT 337

STORM DRAIN STRUCTURE SCHEDULE

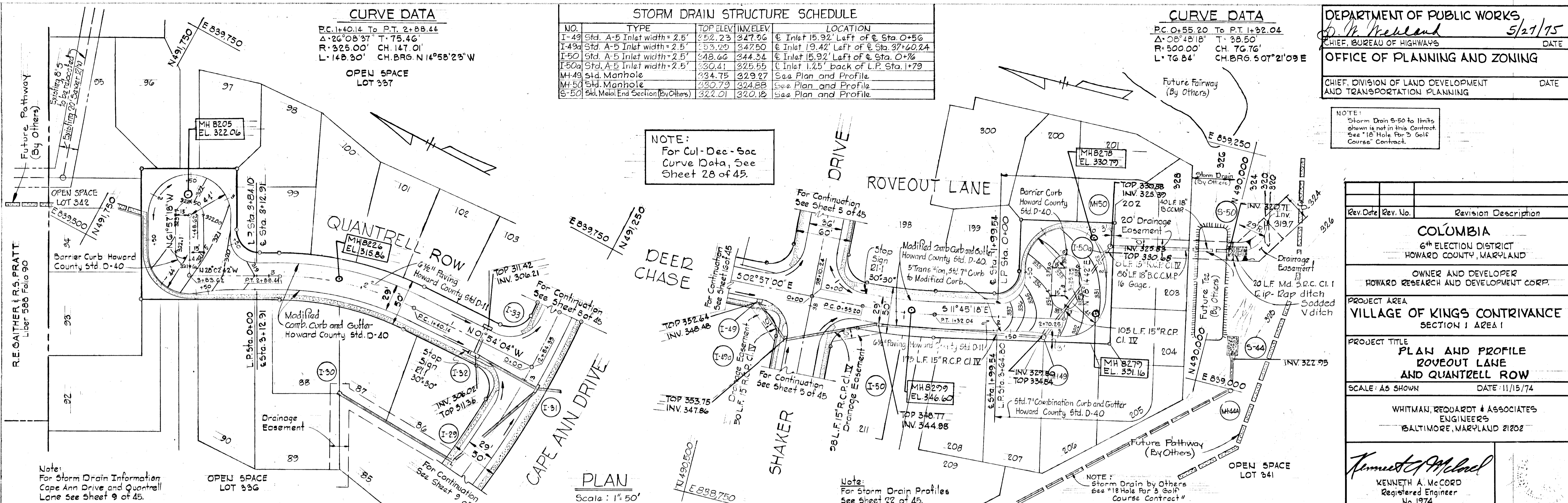
NO.	TYPE	TOP ELEV.	INVELEV.	LOCATION
I-49	Std. A-5 Inlet width=2.5'	327.23	347.36	@ Inlet 15.92' Left of @ Sta. 0+56
I-49a	Std. A-5 Inlet width=2.5'	323.20	347.50	@ Inlet 19.42' Left of @ Sta. 37+60.24
I-50	Std. A-5 Inlet width=2.5'	348.66	344.34	@ Inlet 15.92' Left of @ Sta. 0+76
I-50a	Std. A-5 Inlet width=2.5'	330.41	325.55	@ Inlet 1.25' back of L.P. Sta. 1+79
MH-49	Std. Manhole	334.75	329.27	See Plan and Profile
MH-50	Std. Manhole	330.79	324.88	See Plan and Profile
S-50	Std. Metal End Section (By Others)	322.01	320.18	See Plan and Profile

CURVE DATA

PC: 0+55.20 To PT: 1+32.04
 $\Delta: 08^{\circ}48'18''$ T: 38.50'
 R: 500.00' CH: 76.76'
 L: 76.84' CH.BRG: S 07°21'09"E

DEPARTMENT OF PUBLIC WORKS
 5/21/75
 CHIEF, BUREAU OF HIGHWAYS
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING

NOTE:
 Storm Drain S-50 to limits shown is not in this Contract. See "18 Hole For 3 Golf Course" Contract.



NOTE:
 For Cul-De-Sac Curve Data, See Sheet 28 of 45.

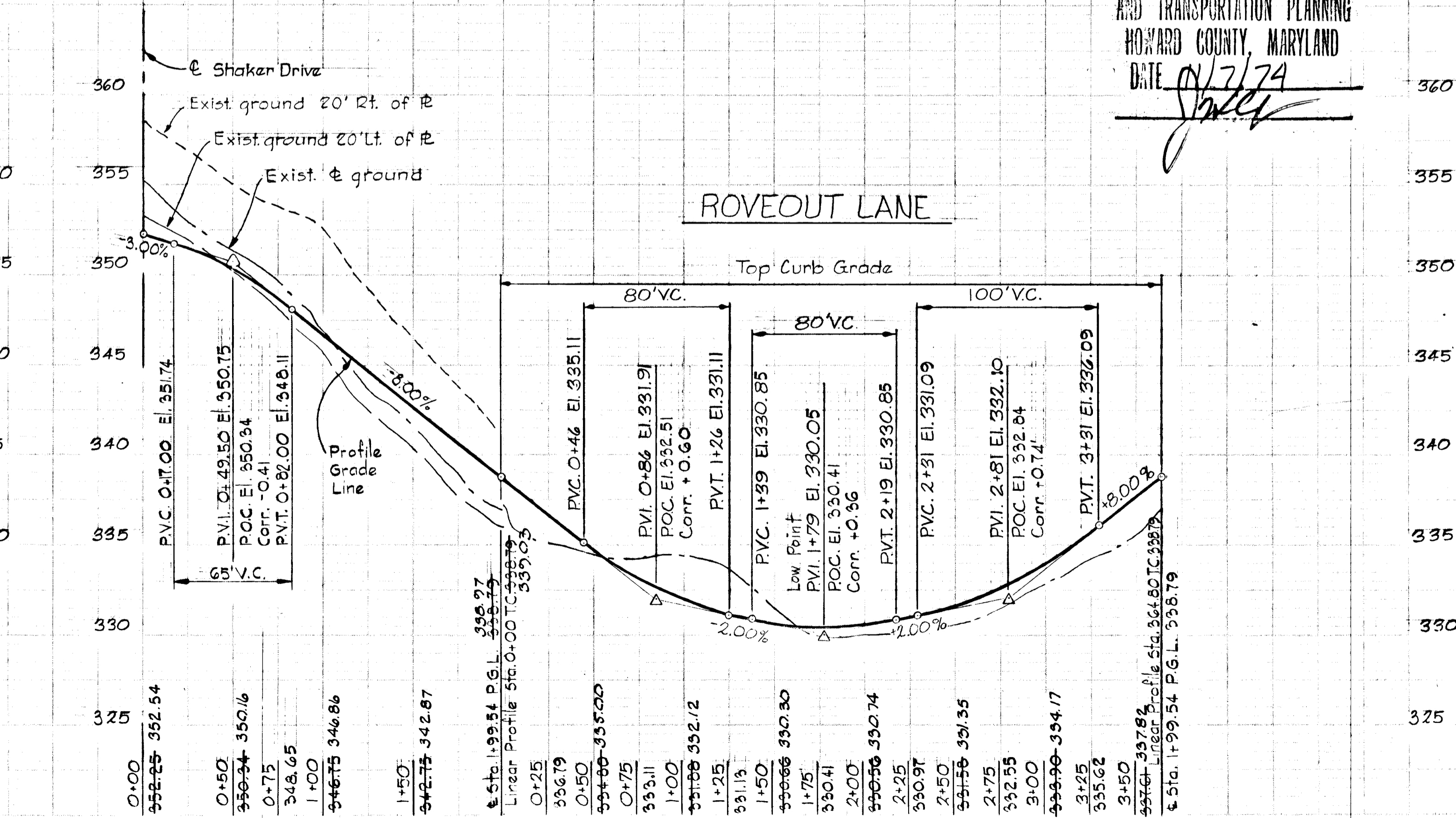
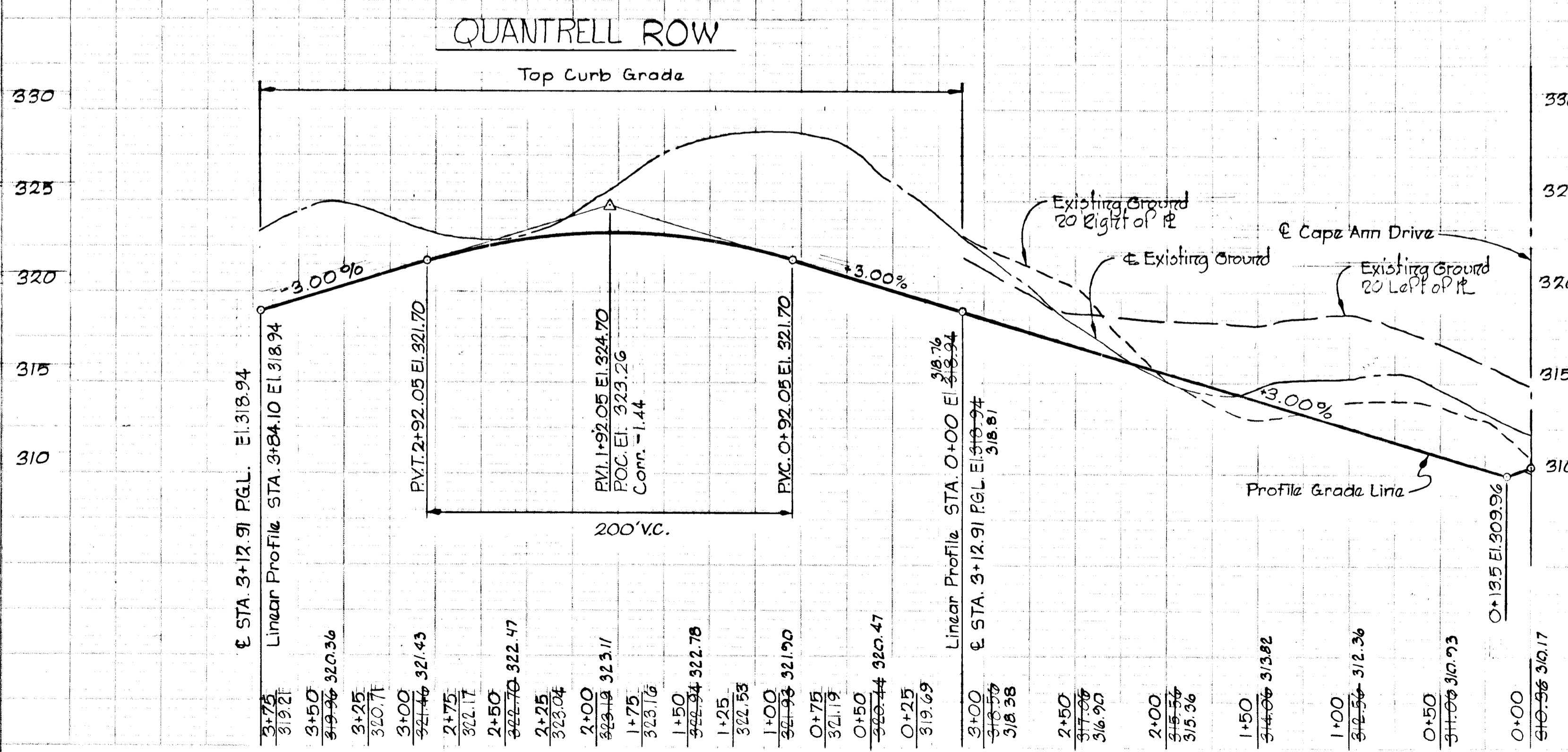
NOTE:
 For Storm Drain Profiles See Sheet 22 of 45.

NOTE:
 Storm Drain by Others See "18 Hole For 3 Golf Course" Contract

PLAN
 Scale: 1" = 50'

PROFILES

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



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 5/21/74
 [Signature]

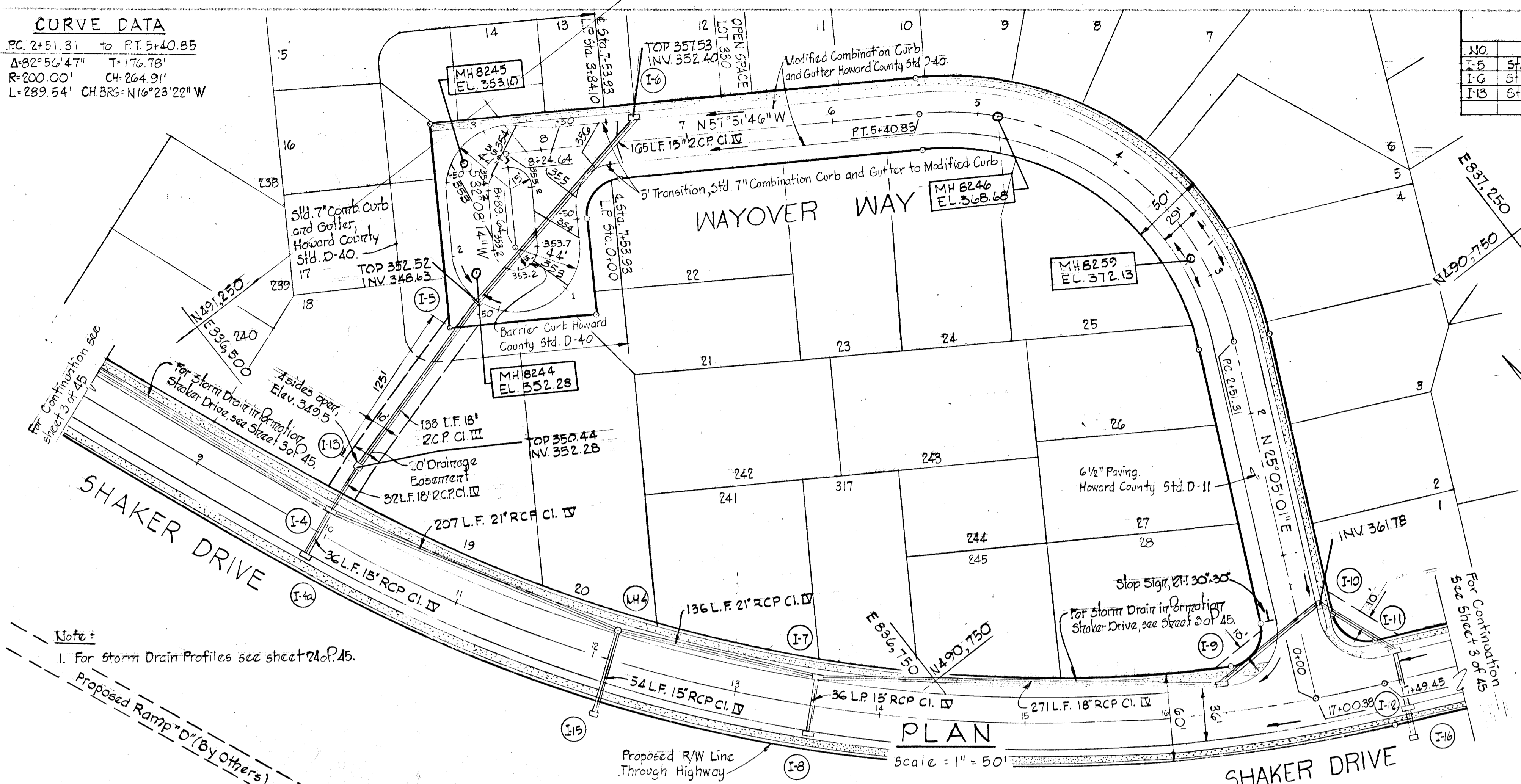
CURVE DATA

PC 2+51.31 to PT 5+40.85
 $\Delta = 82^\circ 54' 47''$ T = 176.78'
 R = 200.00' CH = 264.91'
 L = 289.54' CH BRG = N16°23'22" W

STORM DRAIN STRUCTURE SCHEDULE

NO.	TYPE	TOP ELEV.	INV. ELEV.	LOCATION
I-5	Std. A-5 Inlet width 2'	352.6	348.60	Inlet 1.25' Back L.P. Sta. 1+65.00
I-6	Std. A-5 Inlet width 2'	357.62	352.32	Inlet 14.92' Right of Way Sta. 7+35.00
I-13	Std. Class C Inlet width 2'	350.33	345.54	See Plan and Profile

DEPARTMENT OF PUBLIC WORKS
 D. W. McLeod 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



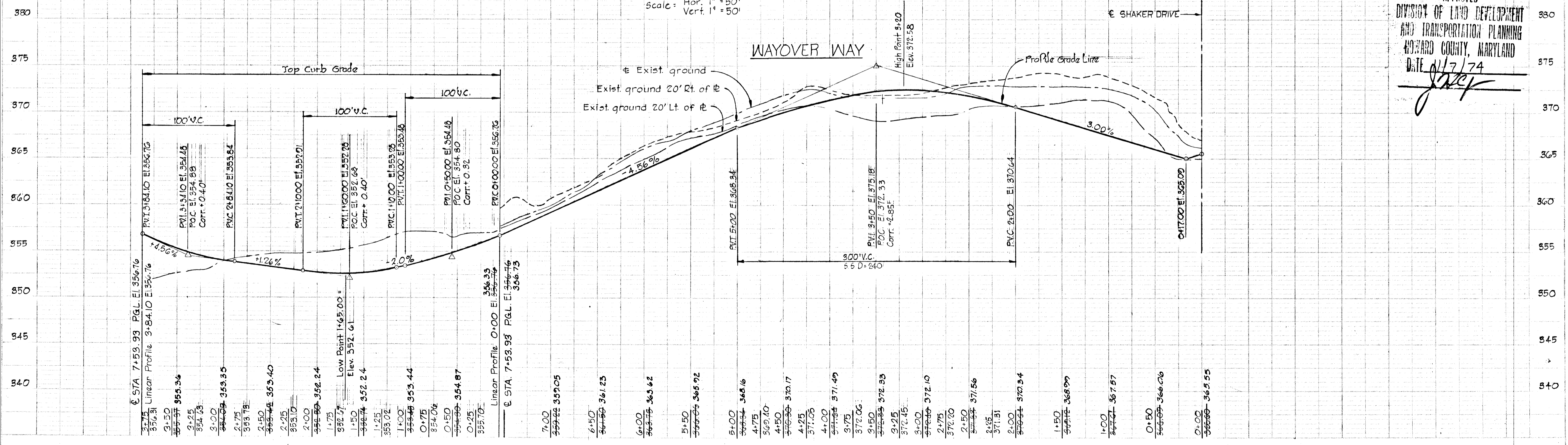
NOTE:
 For Cut-Dec-Sac Curve Data. See Sheet 28 of 45.

NOTE:
 PAVING WIDTH = 29'
 LENGTH OF ROAD = 890'
 4 SEWER MHS IN ROAD ROW

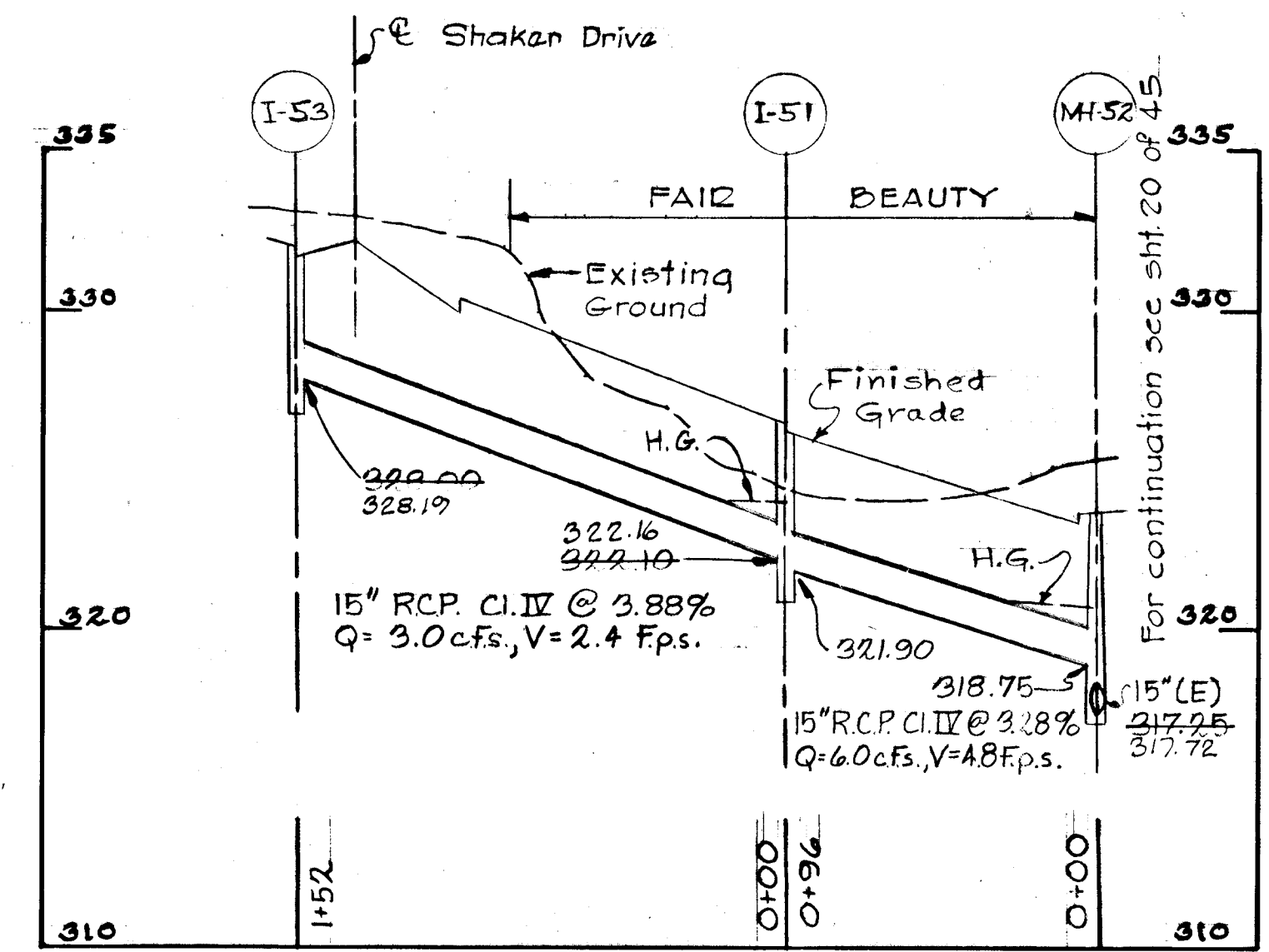
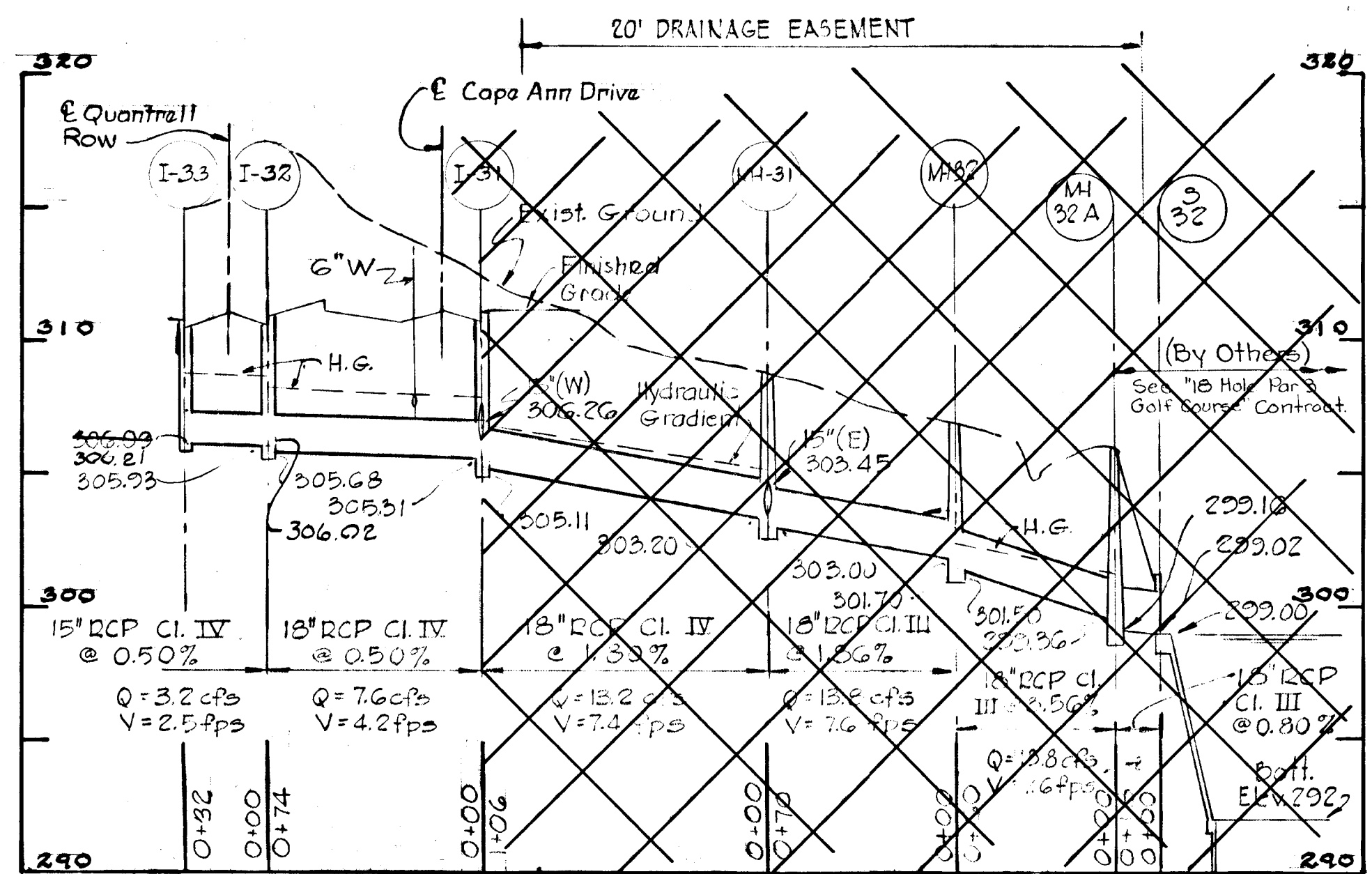
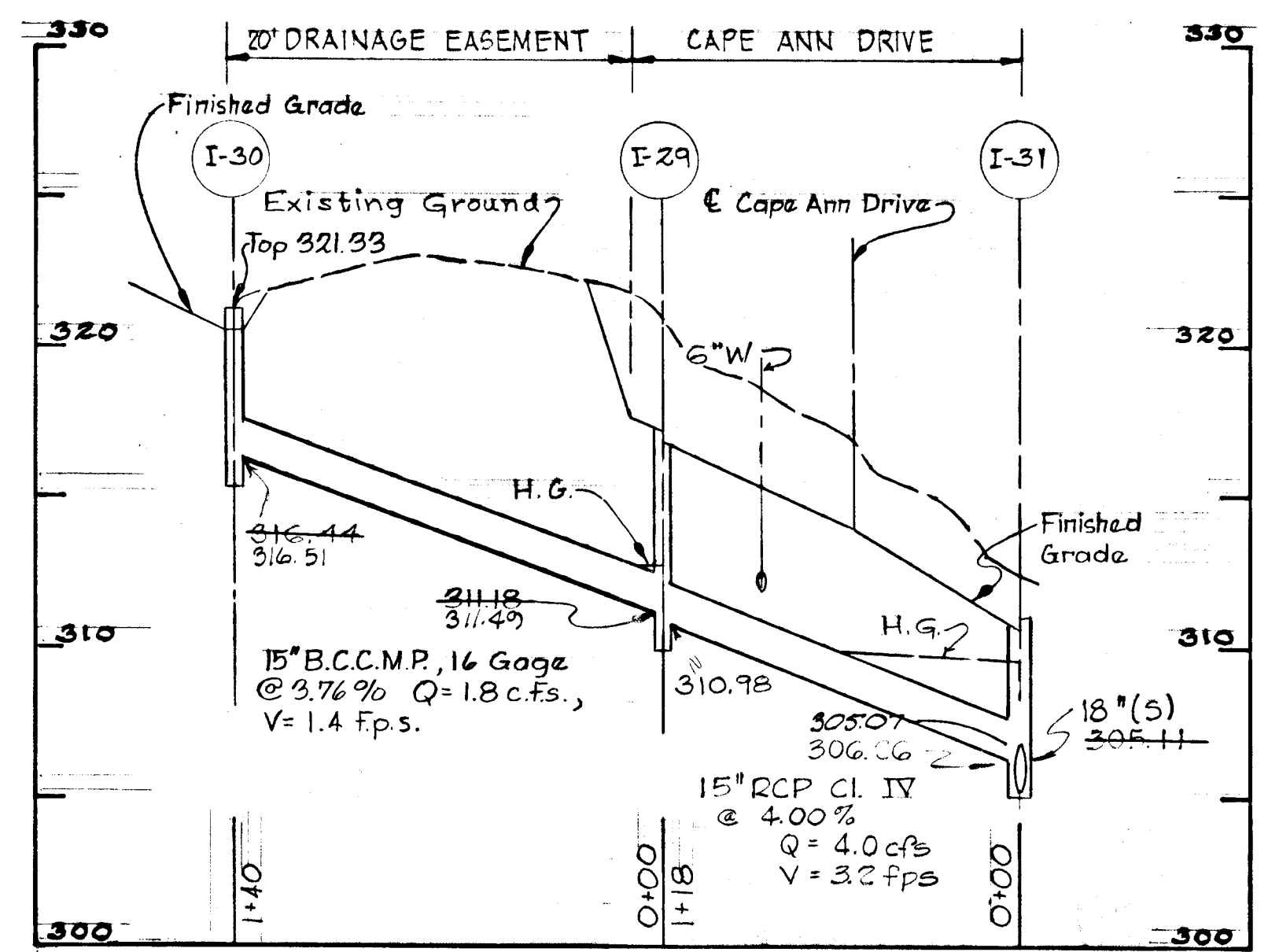
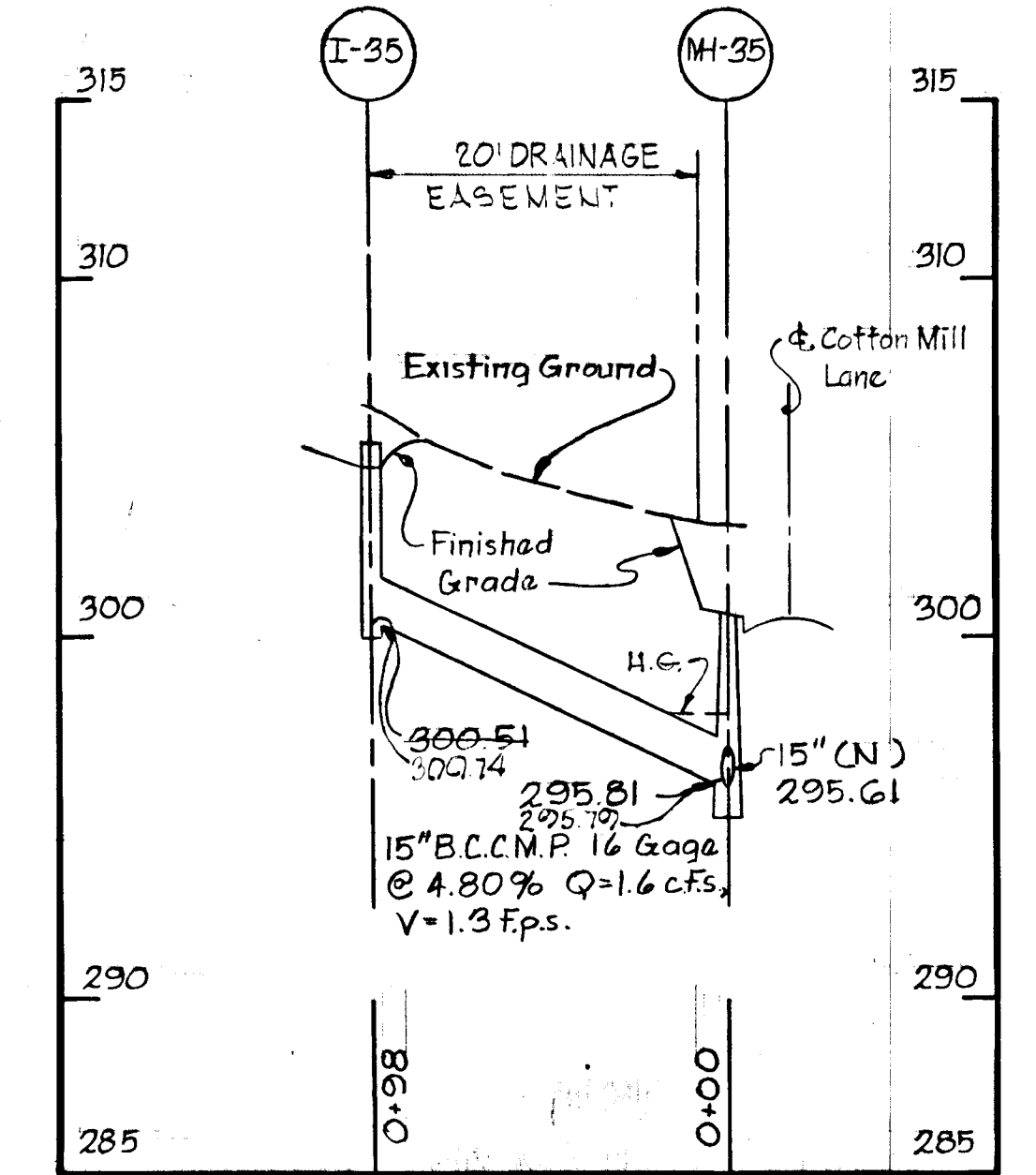
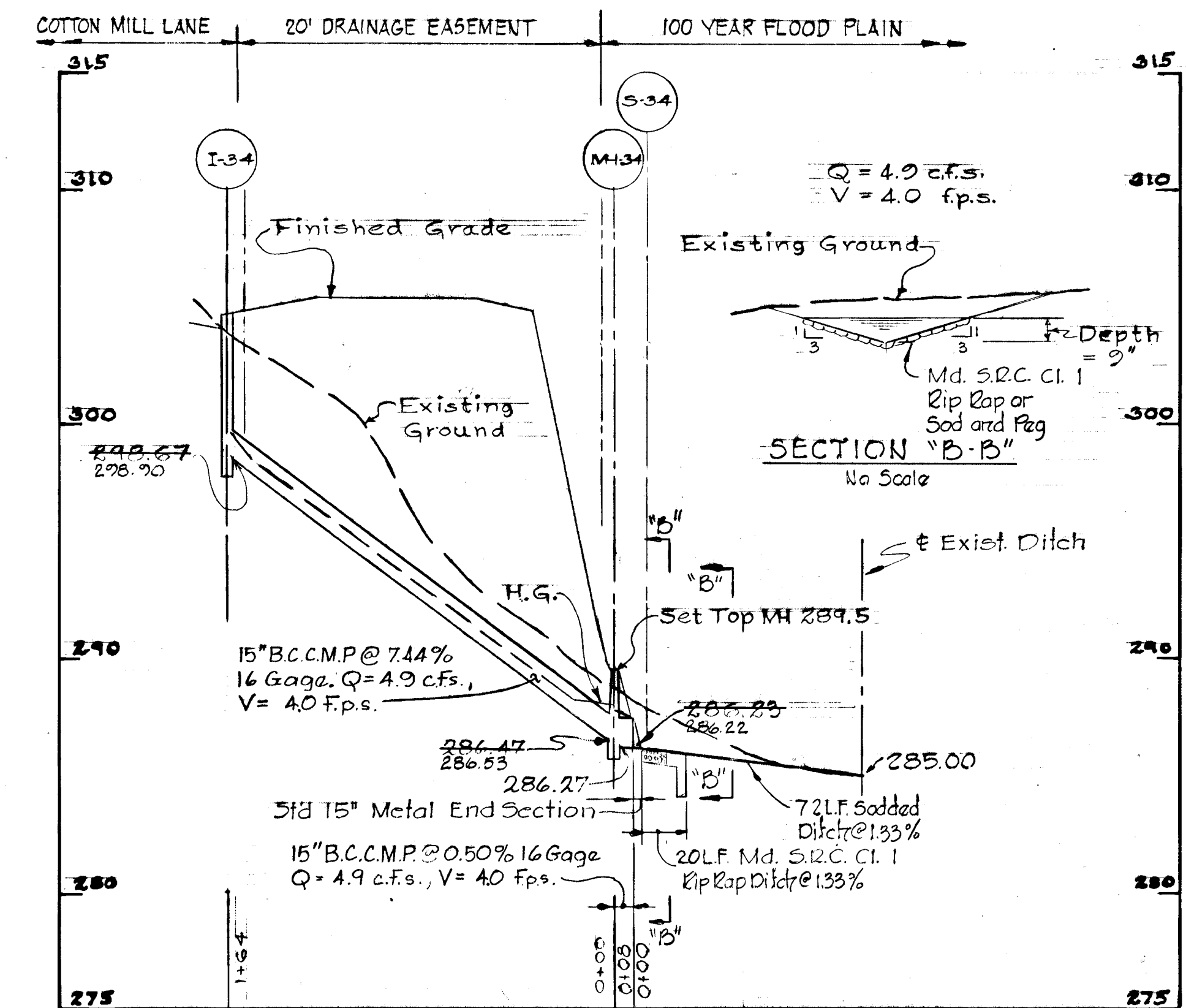
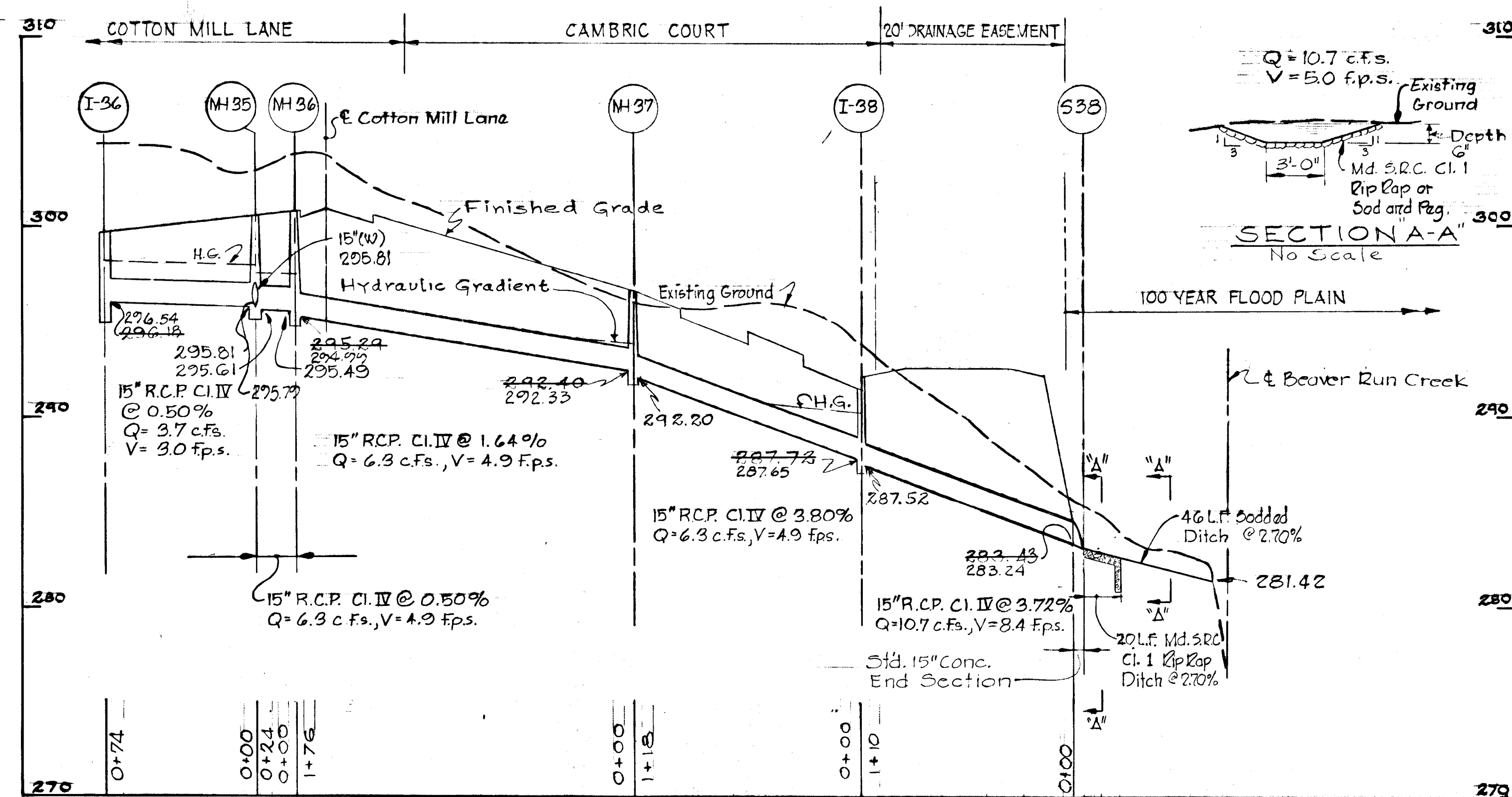
Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PLAN AND PROFILE WAYOVER WAY		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
 KENNETH A. MCCORD Registered Engineer No. 1974		

PROFILE

Scale: Hor. 1" = 50'
 Vert. 1" = 50'



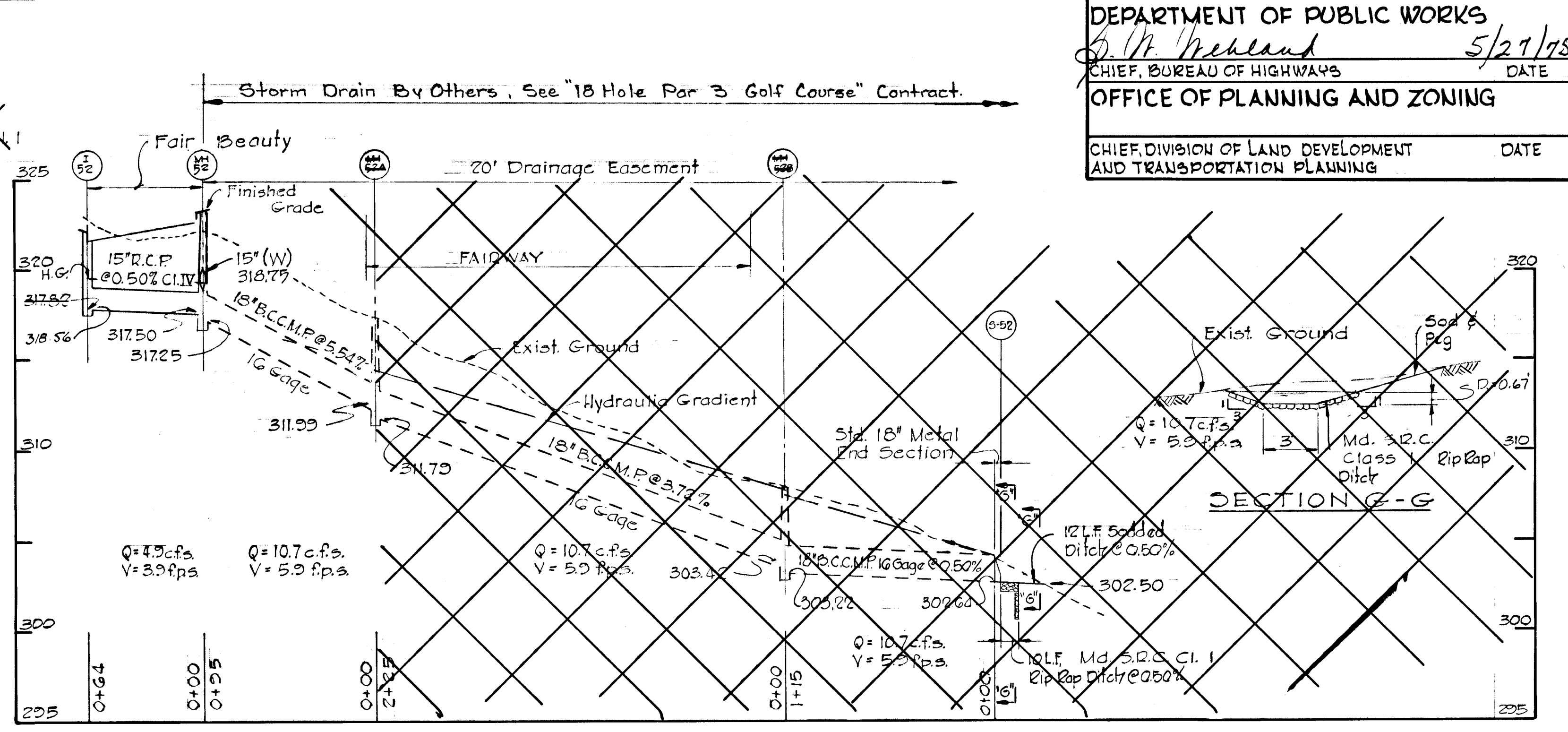
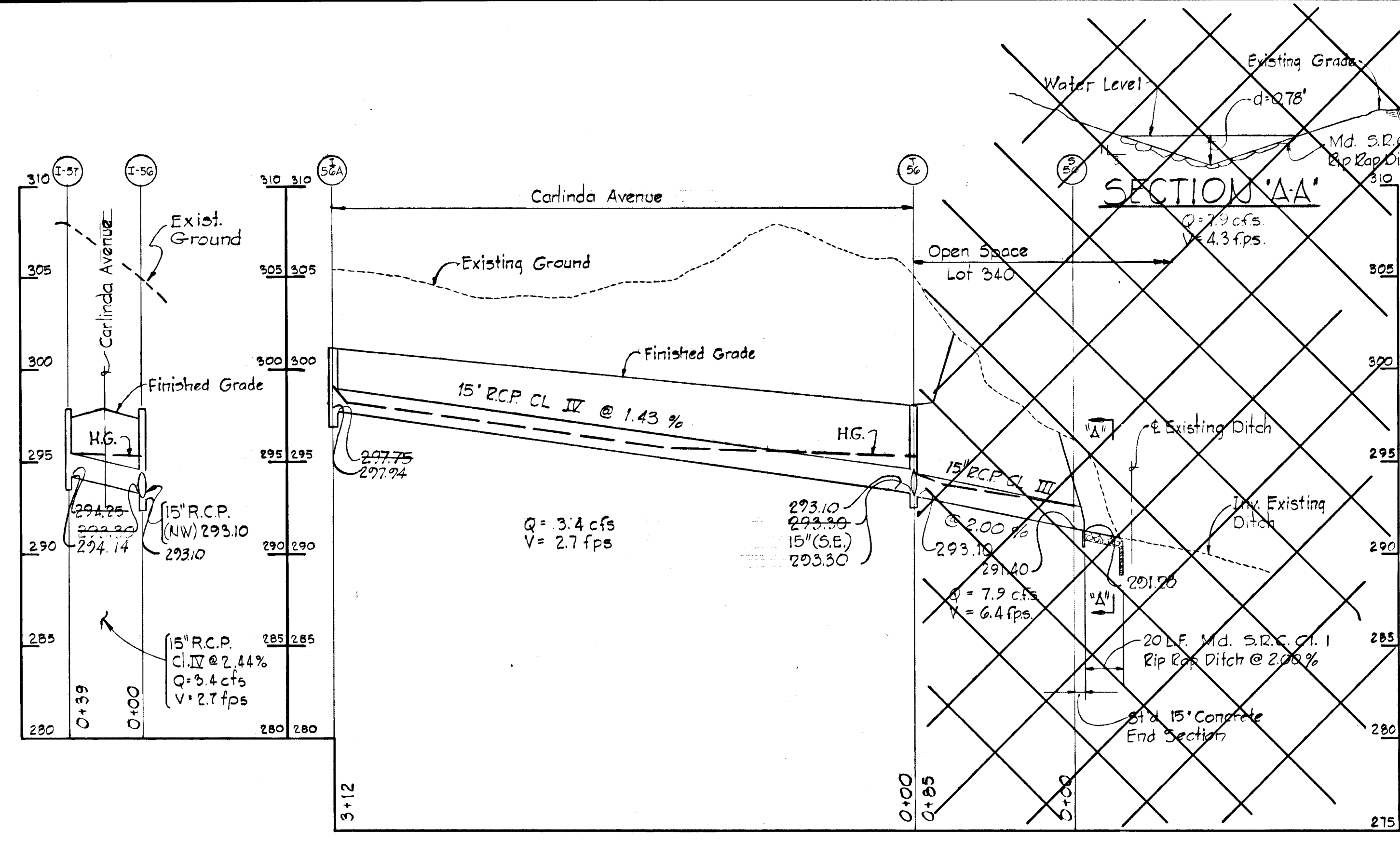
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74



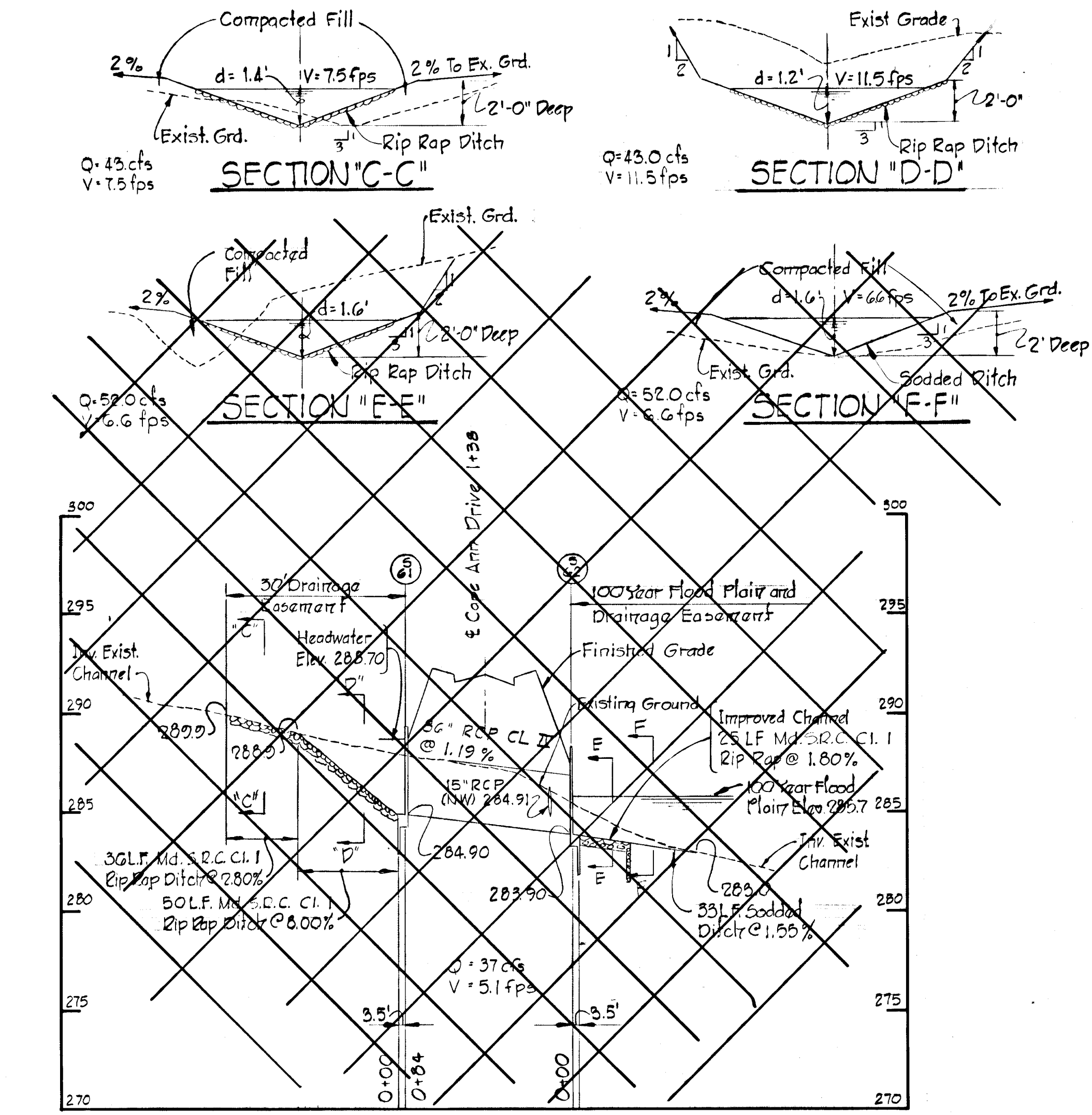
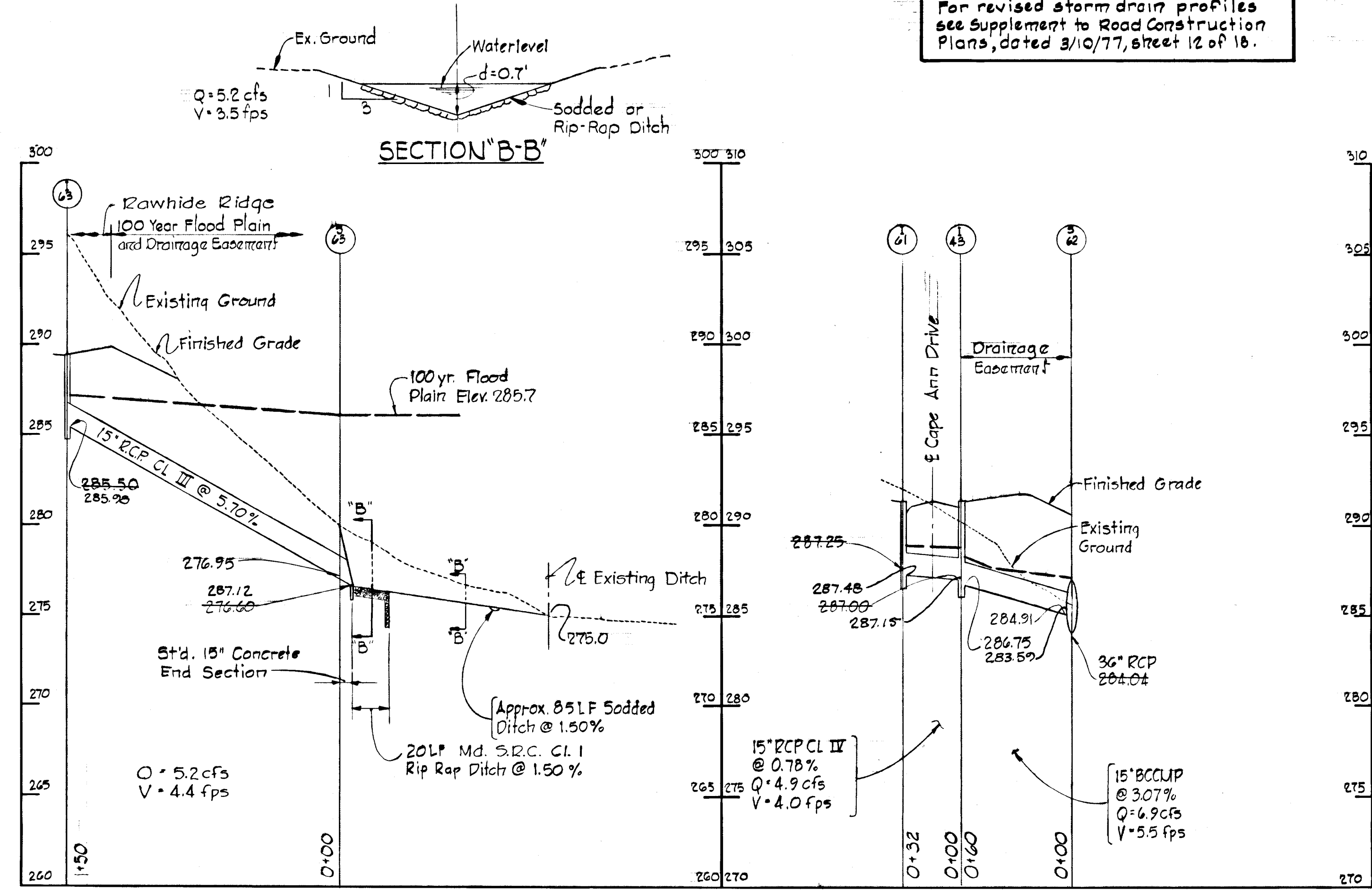
NOTE:
 For revised storm drain profile
 see Supplement to Road Construction
 Plans, dated 5/10/77, sheet 13 of 18.

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
 J. W. [Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 & 2 & 3		
PROJECT TITLE STORM DRAIN PROFILES CAMBRIC COURT, COTTON MILL LANE, CAPE ANN DRIVE, QUANTRELL ROW AND FAIR BEAUTY		
SCALE: HOR: 1"=50' VERT: 1"=5' DATE: 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCord Registered Engineer No. 1974		

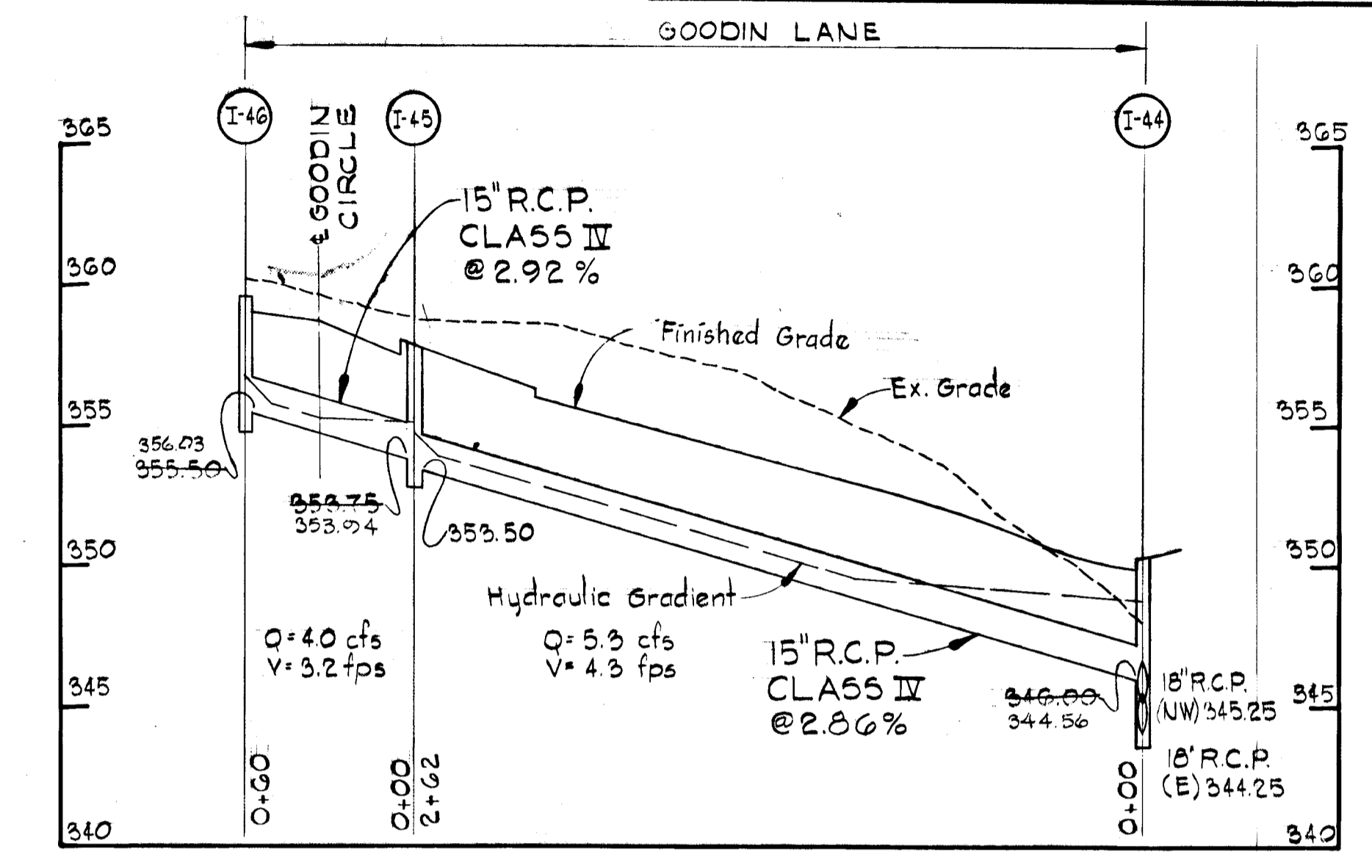
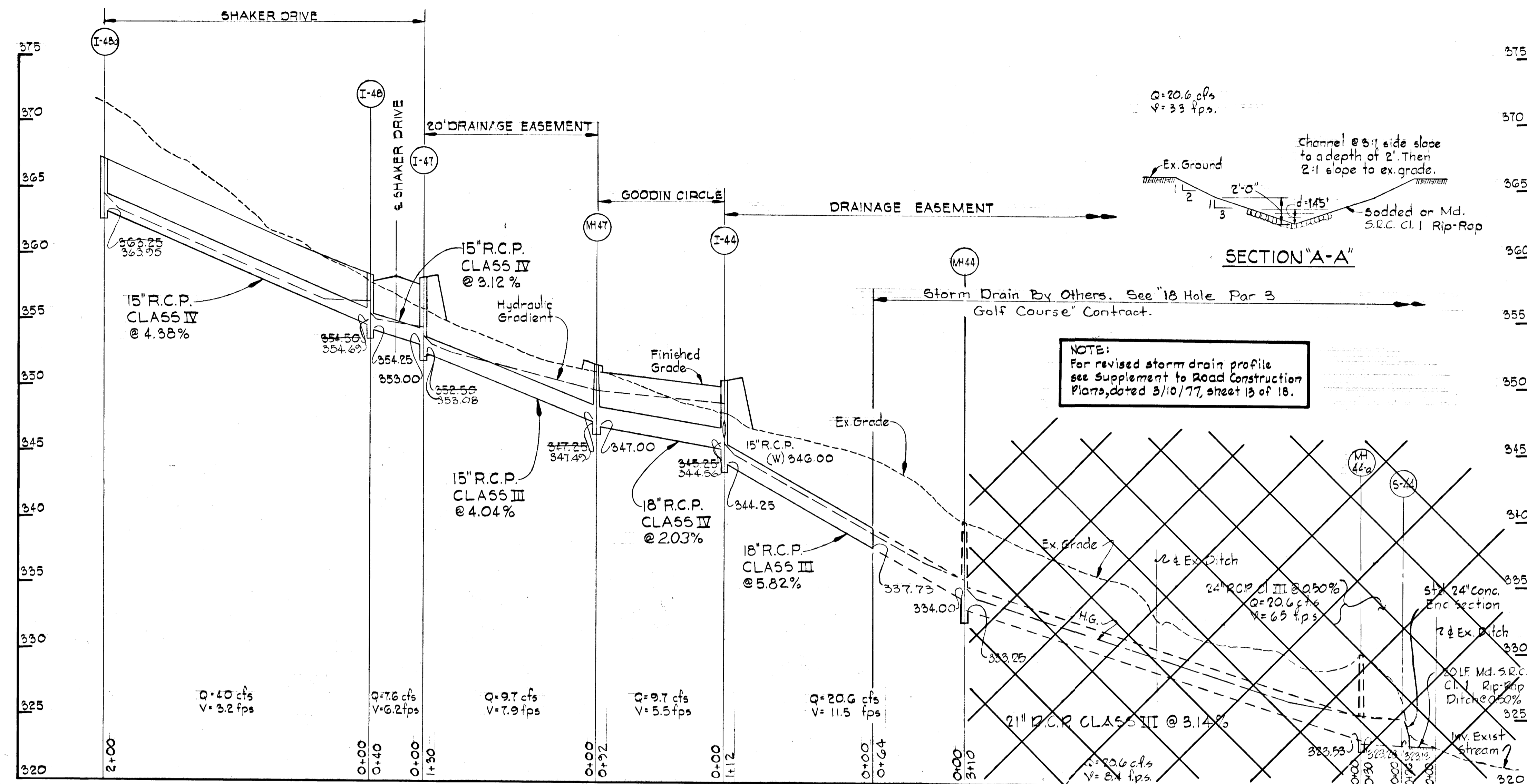


NOTE:
 For revised storm drain profiles see Supplement to Road Construction Plans, dated 3/10/77, sheet 12 of 16.



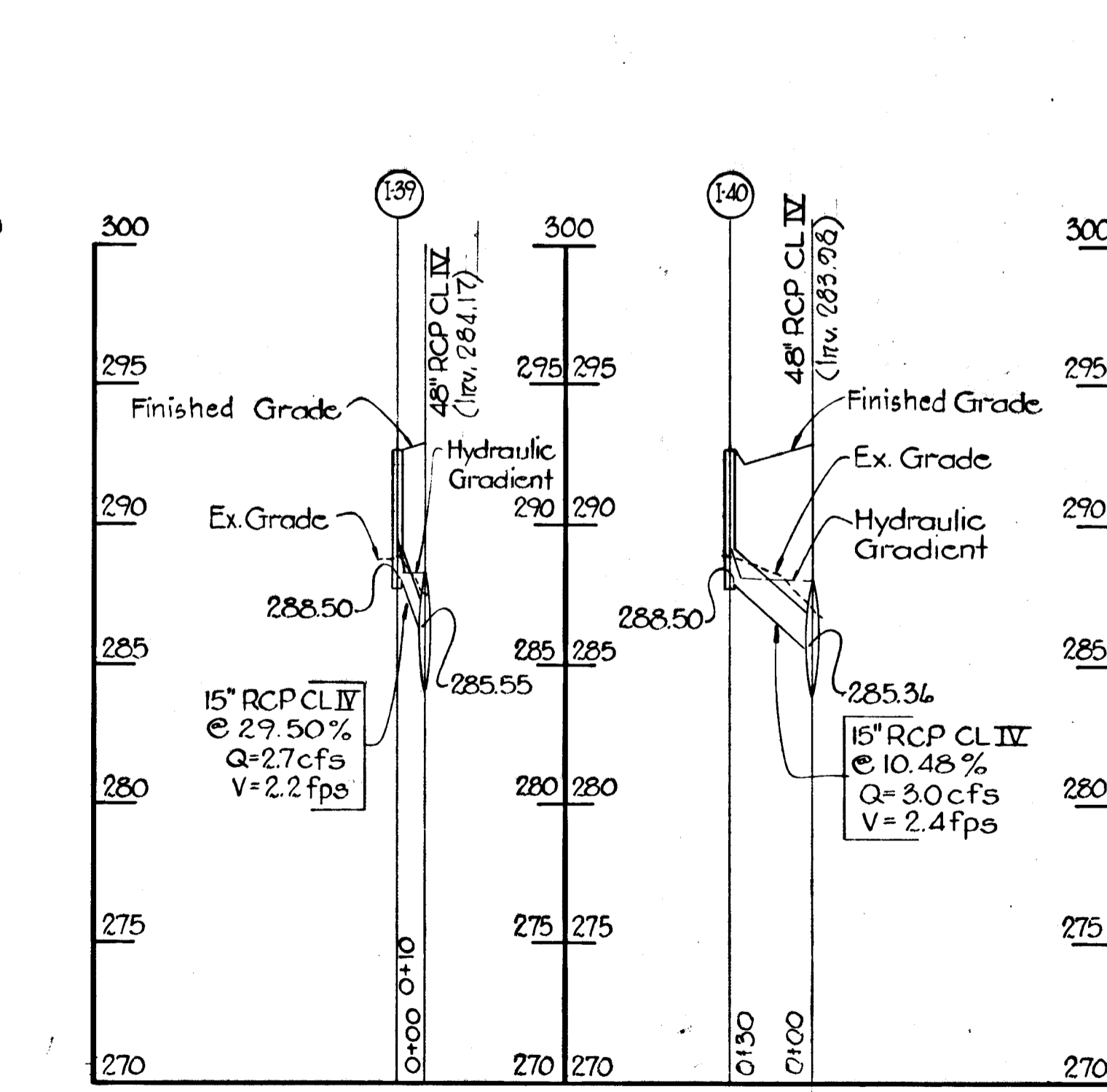
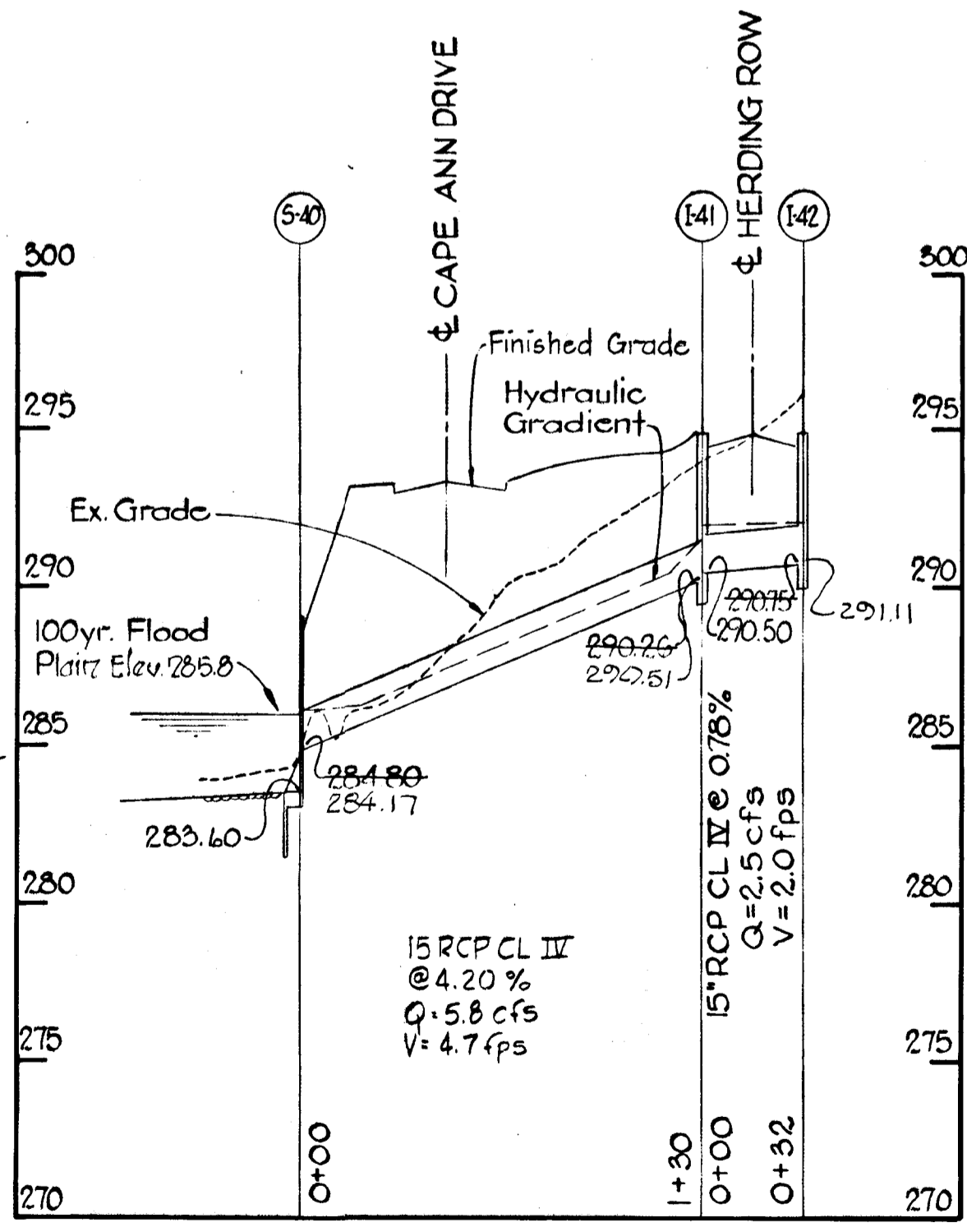
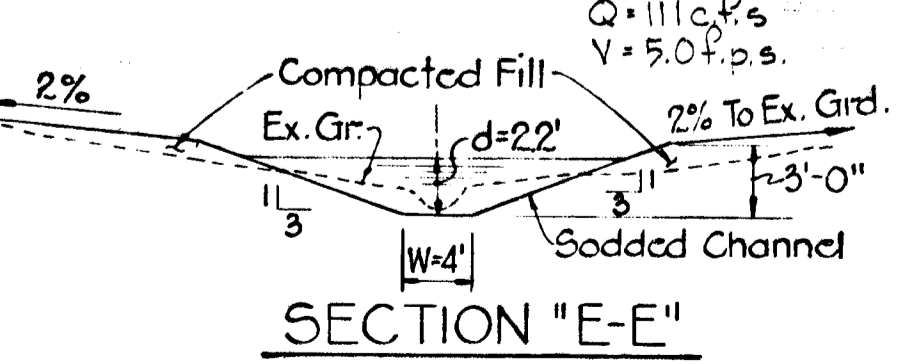
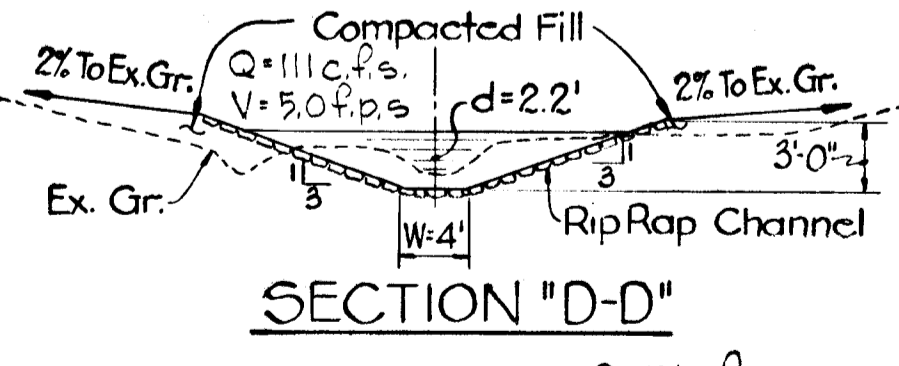
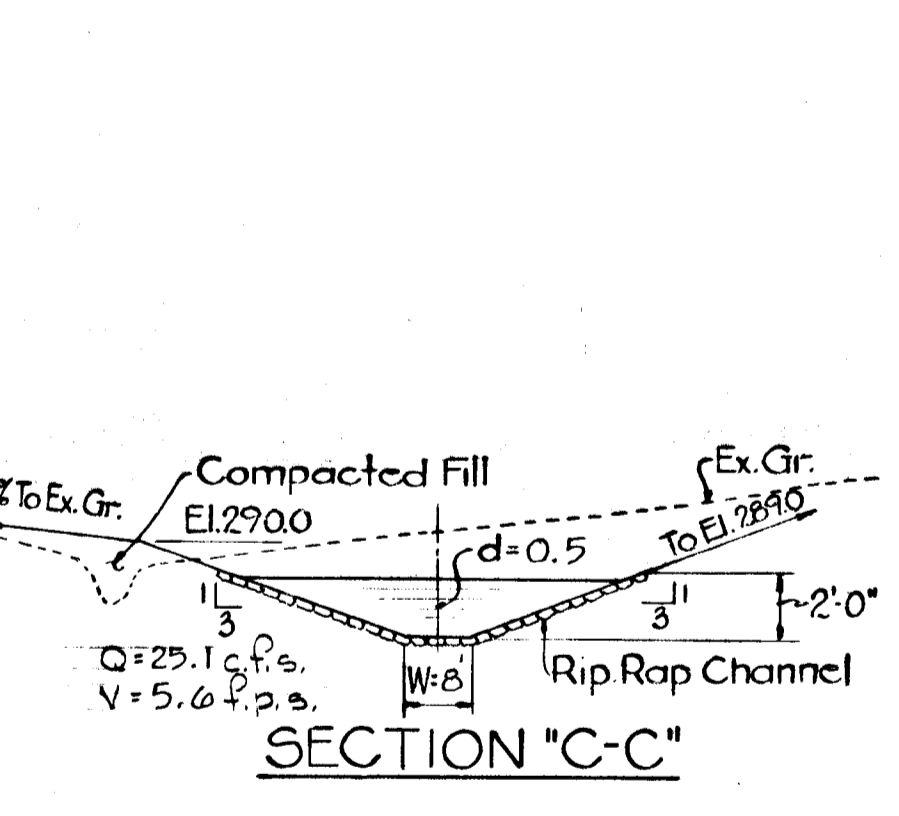
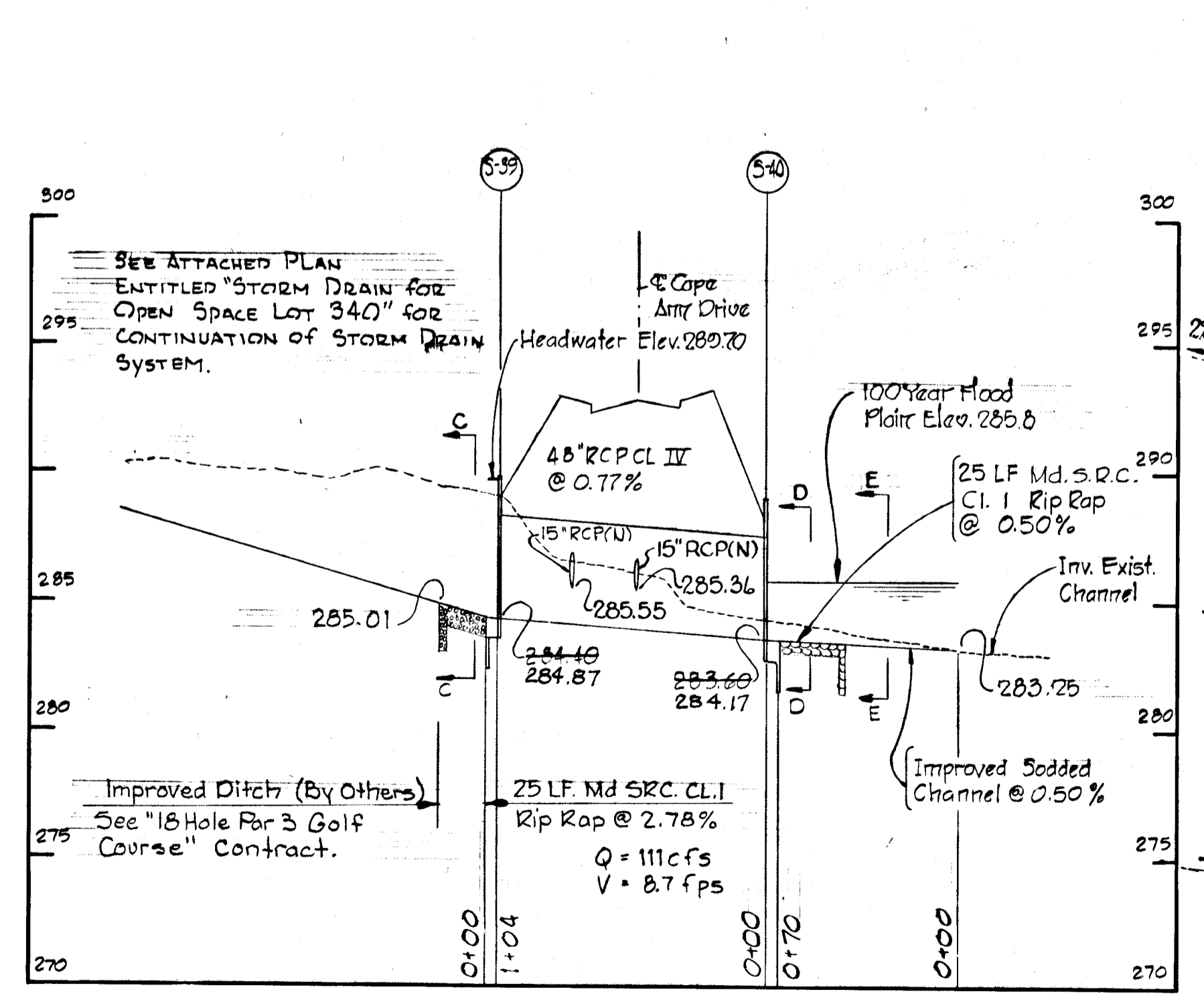
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 4/7/74
[Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE STORM DRAIN PROFILES CARLINDA AVENUE, RAWHIDE RIDGE AND CAPE ANN DRIVE		
SCALE: HOR 1"=50' VERT. 1"=5' DATE 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

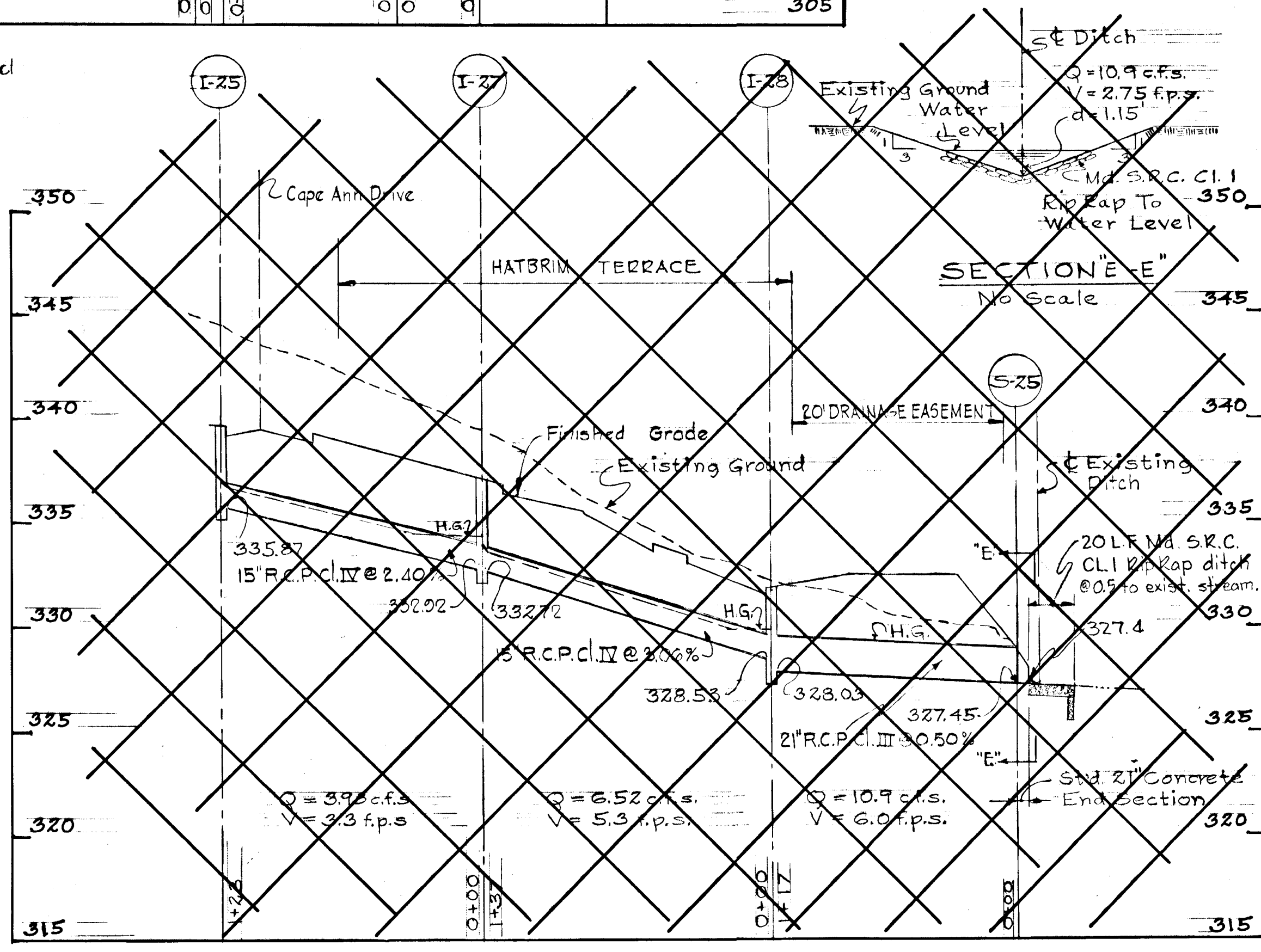
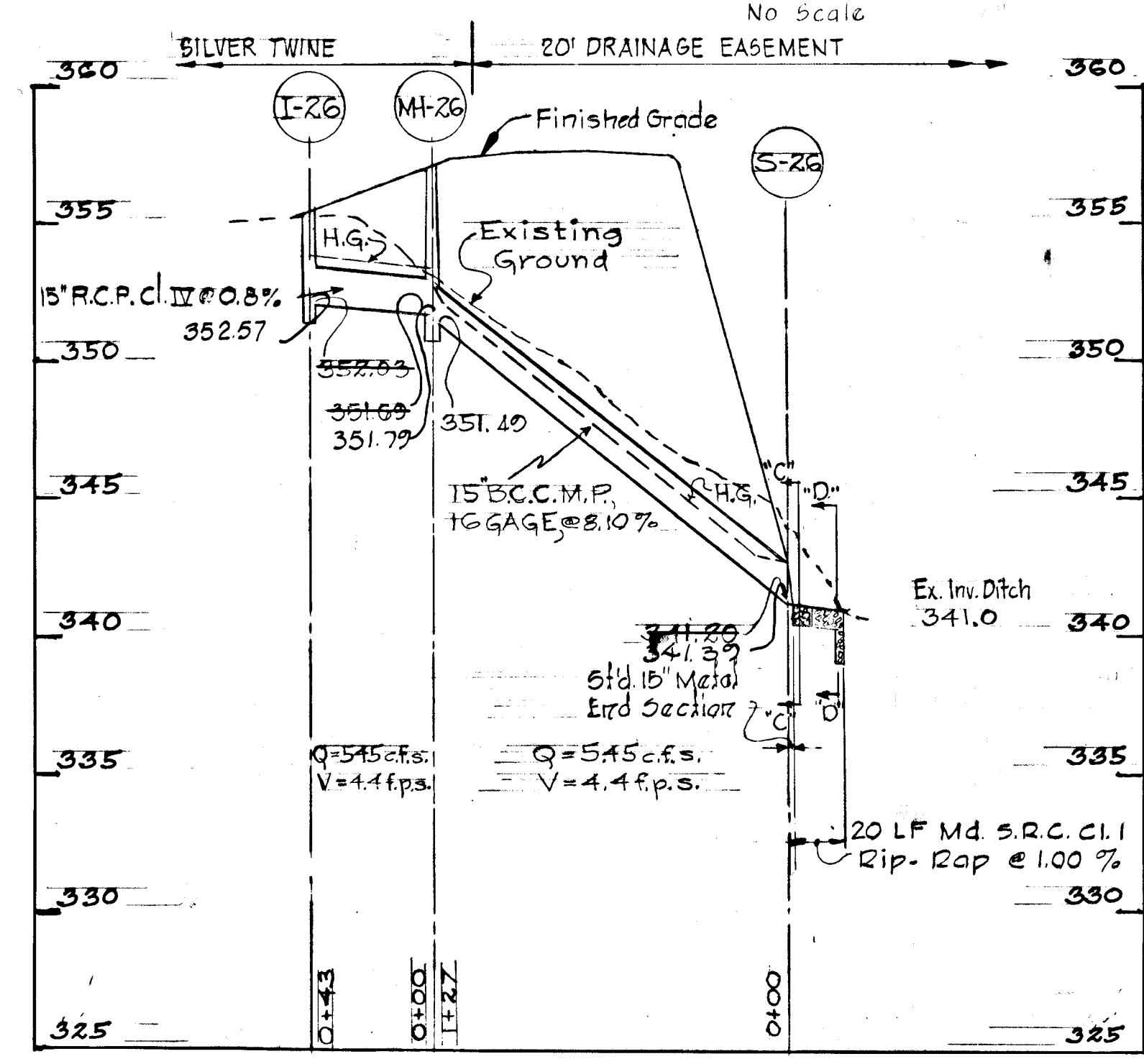
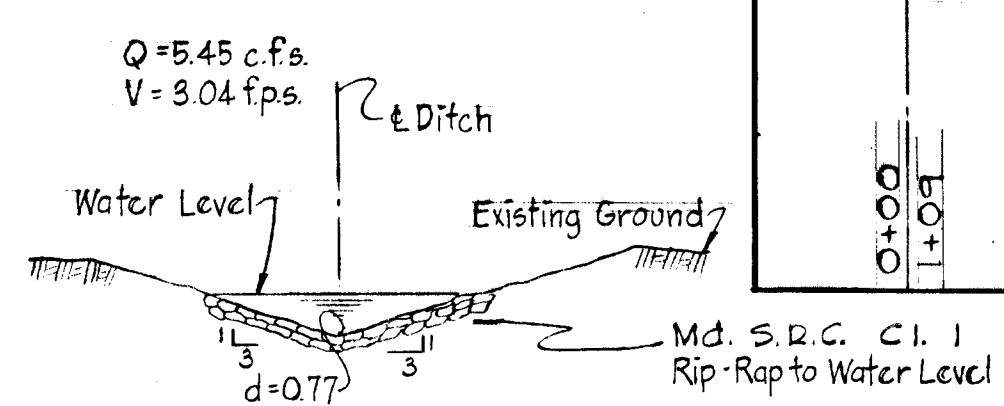
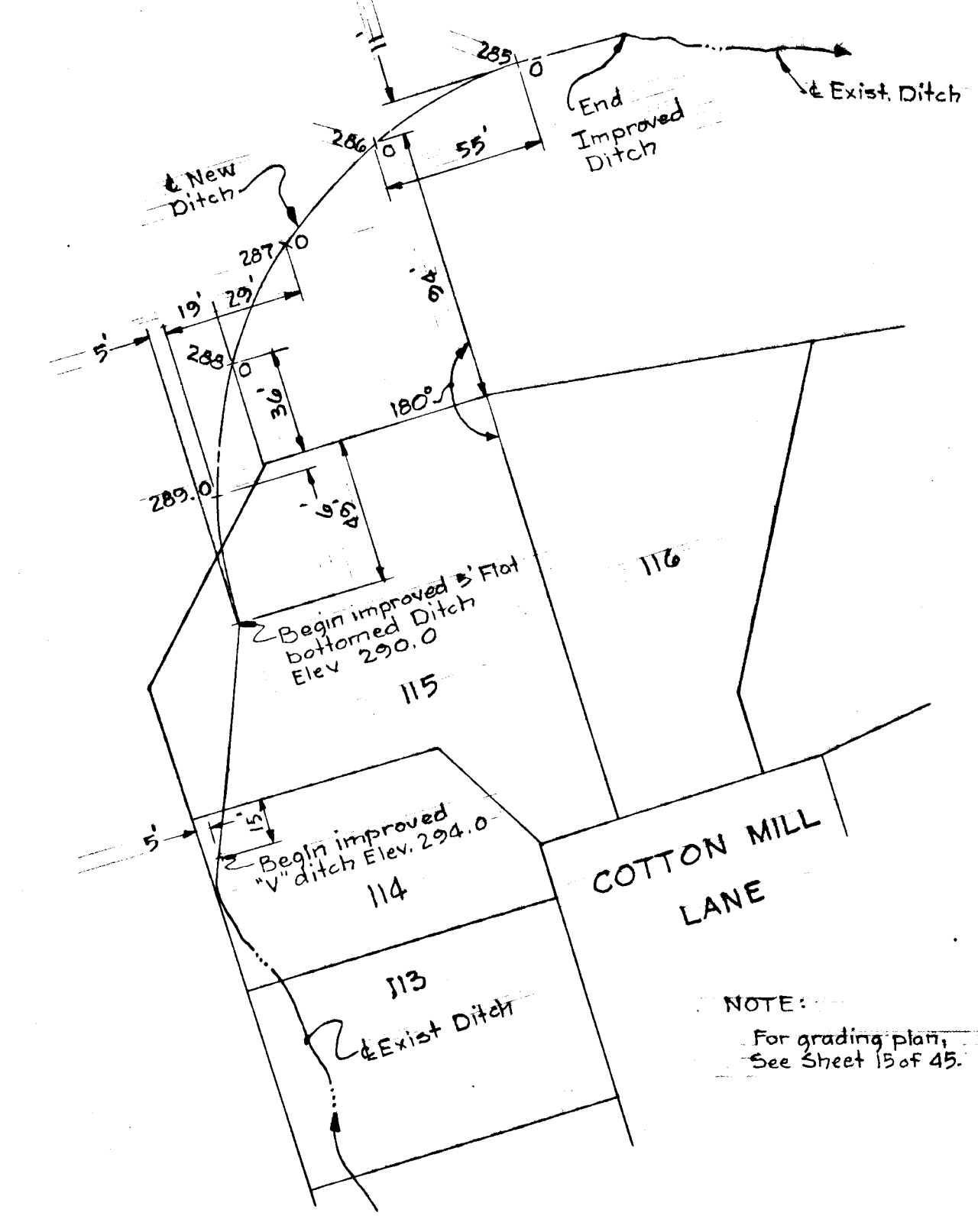
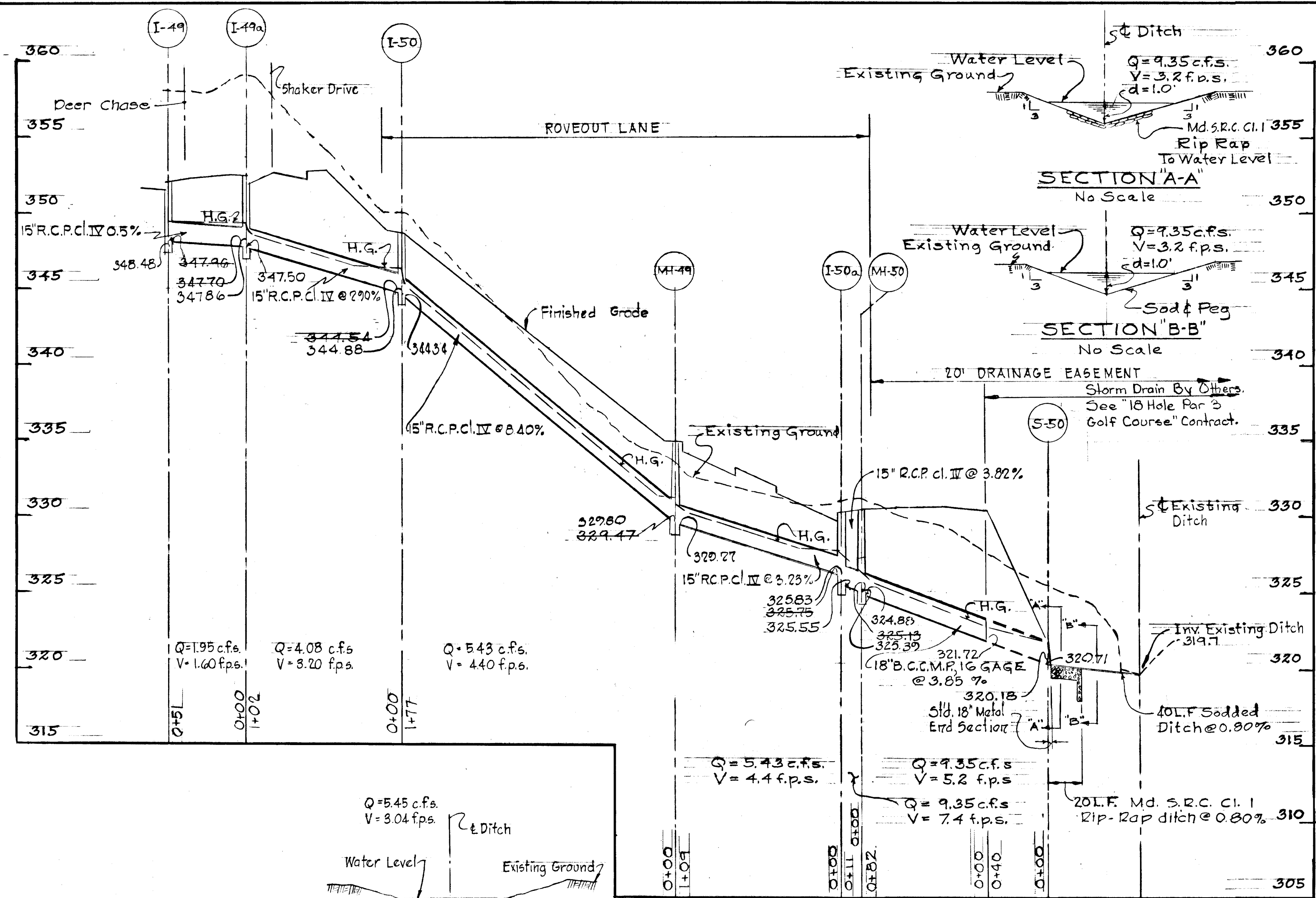


NOTE:
 For revised storm drain profile see Supplement to Road Construction Plans, dated 3/10/77, sheet 13 of 18.

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 4/7/74
J. W. McLeod



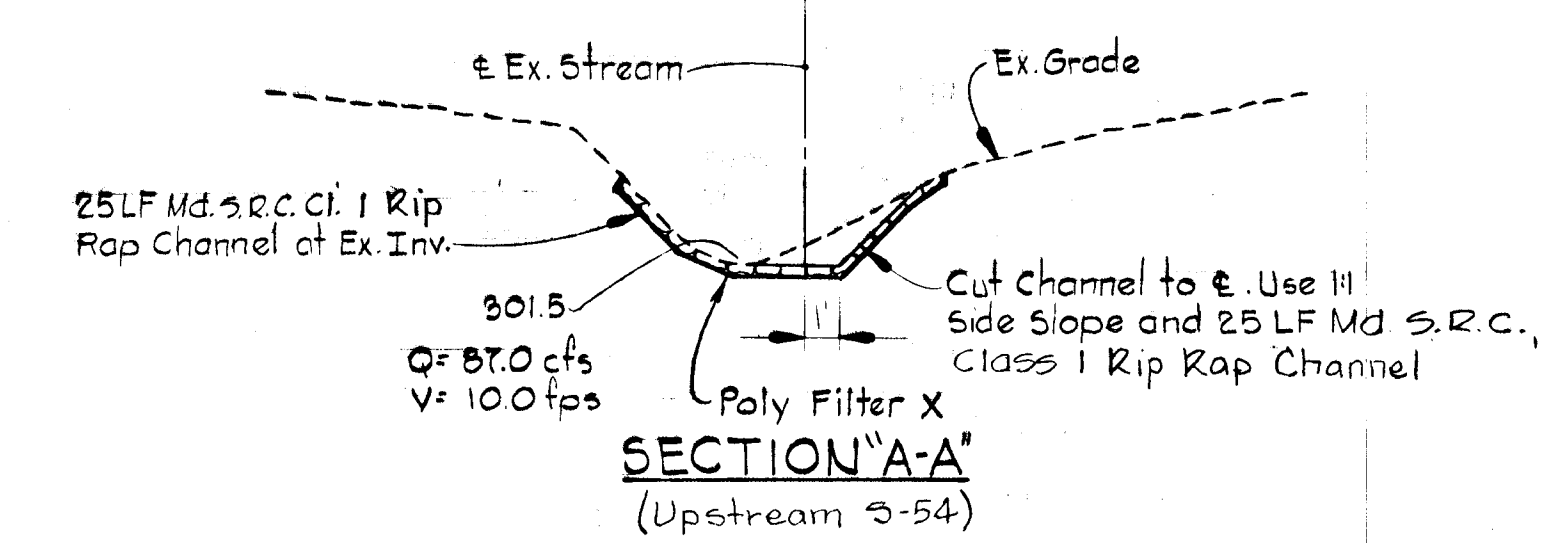
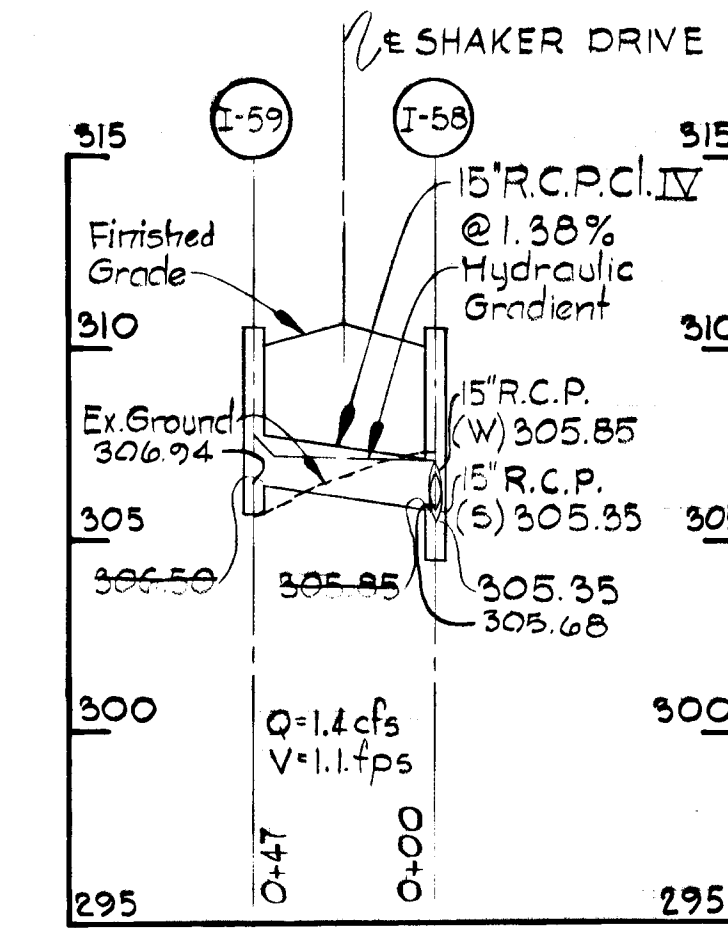
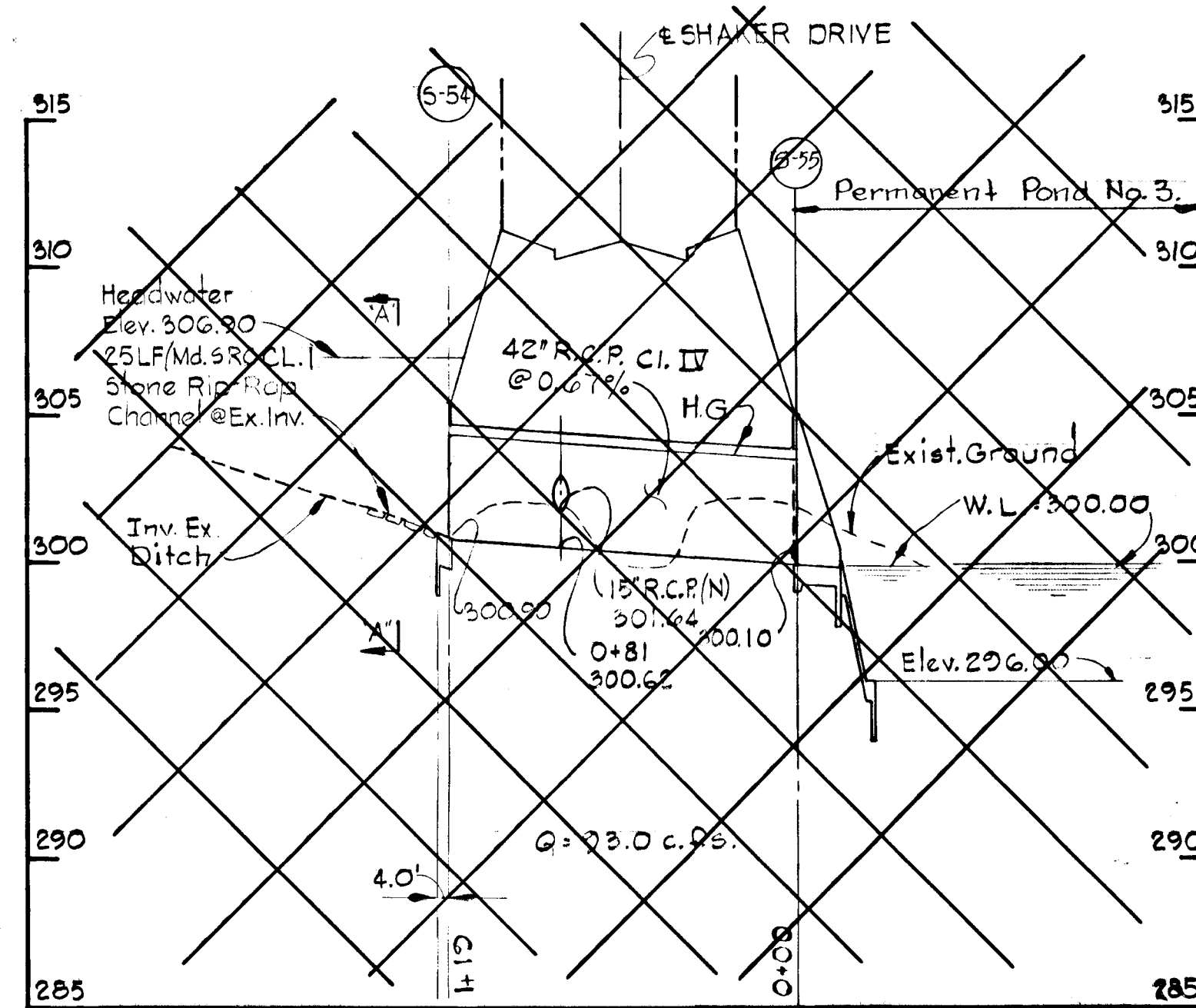
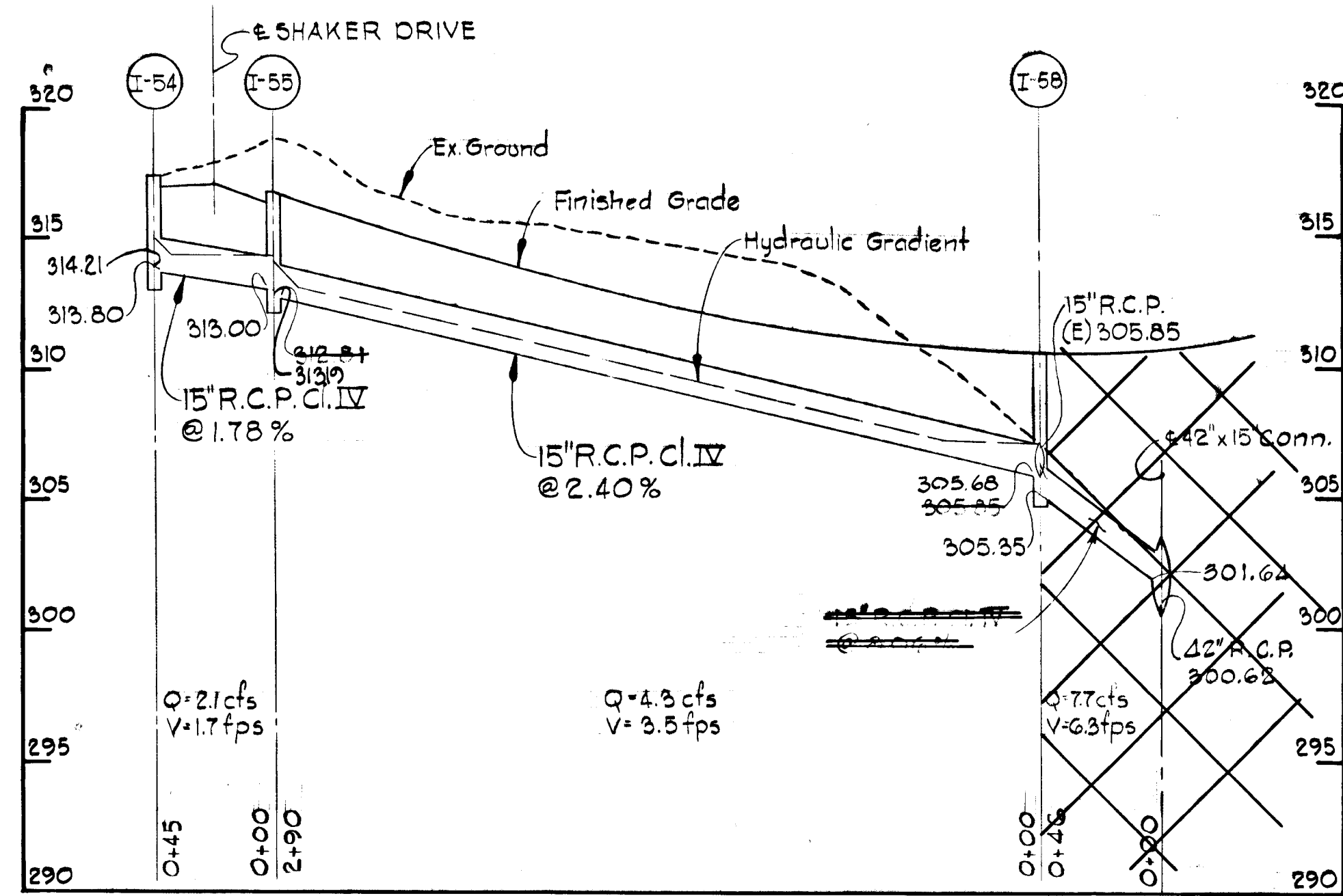
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE STORM DRAIN PROFILES SHAKER DRIVE, GOODIN CIRCLE CAPE ANN DRIVE AND HERDING ROW		
SCALE: HOR 1"=60' VERT 1"=5' DATE: 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McLeod</i> KENNETH A. McLEOD Registered Engineer No. 1974		



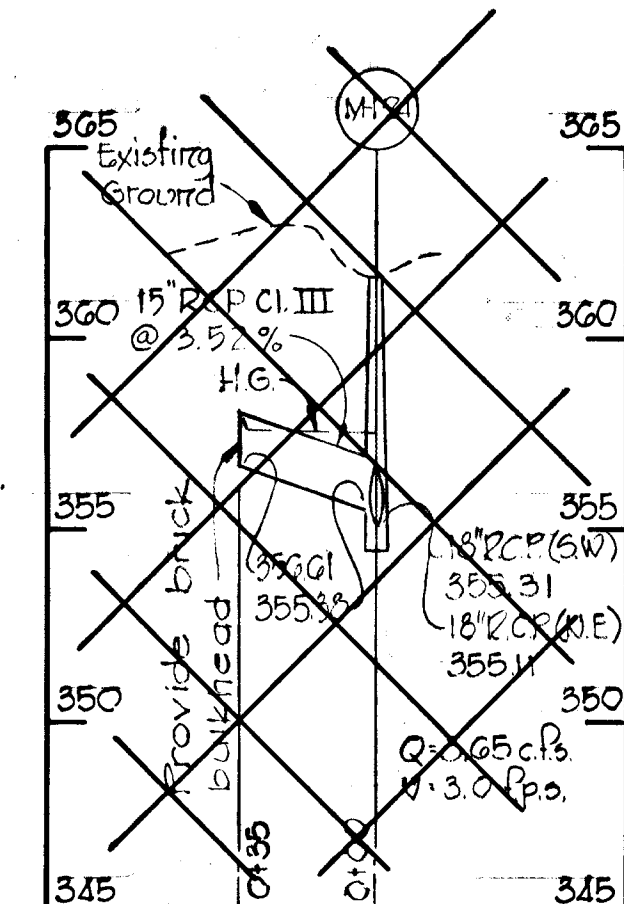
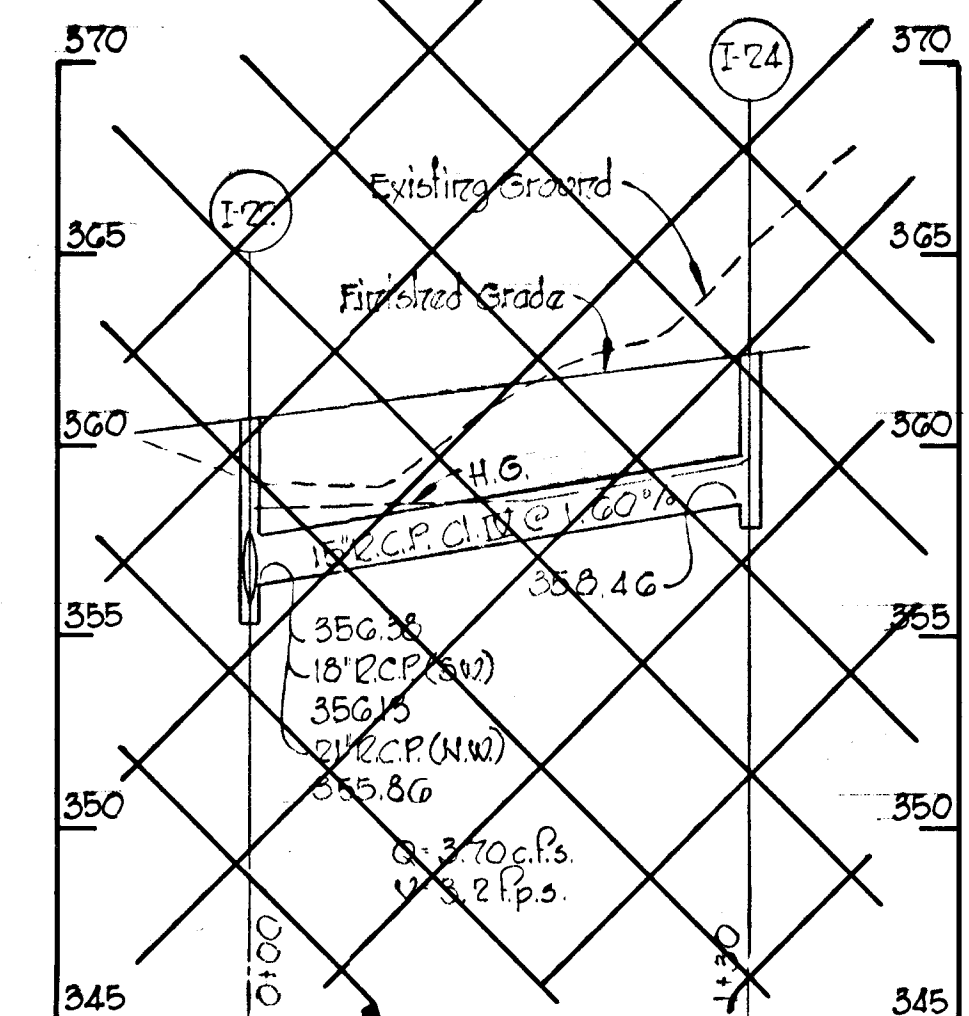
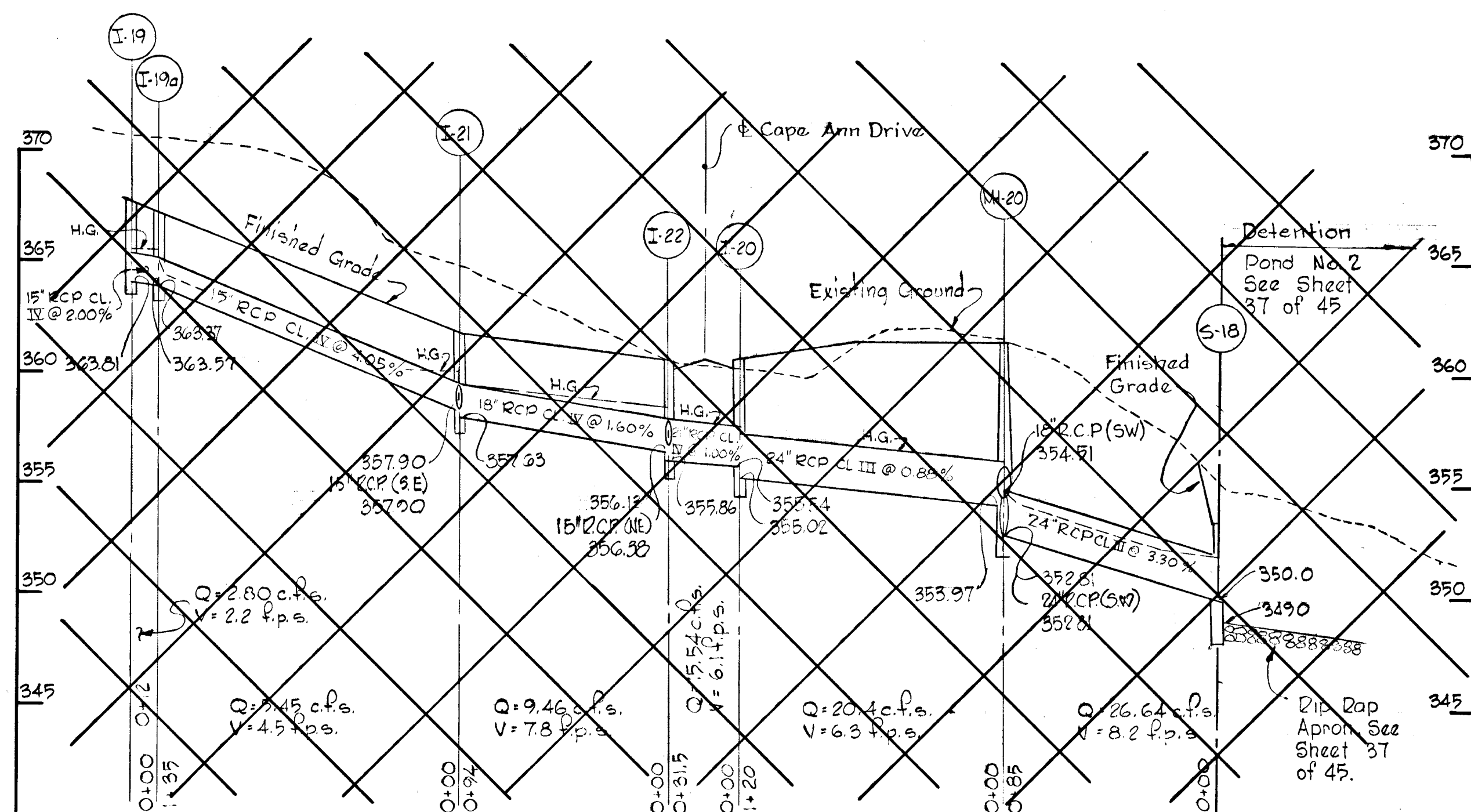
NOTE:
For revised storm drain profile see Supplement to Road Construction Plans, dated 5/10/77, sheet 13 of 18.

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/21/74
J. H. McLeod

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE STORM DRAIN PROFILES SILVER TWINE, HATBRIM TERRACE DEER CHASE AND ROVEOUT LANE		
SCALE: HOR. 1" = 50' VERT. 1" = 5' DATE: 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

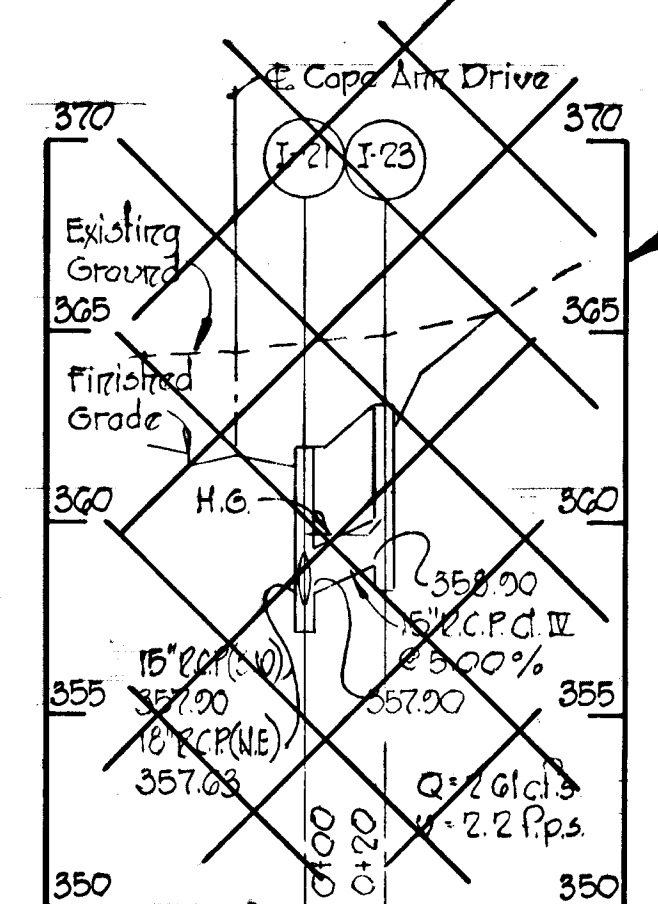
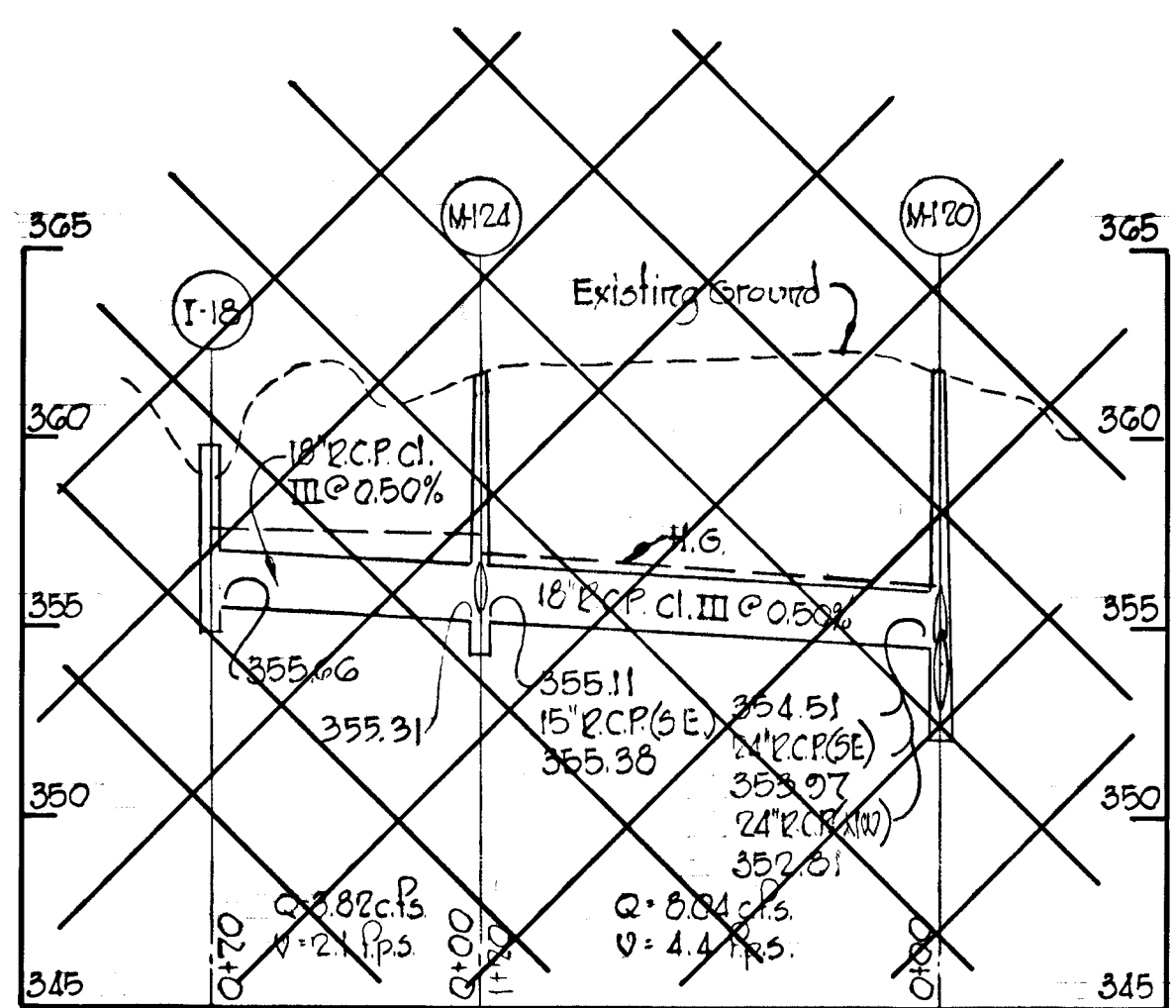


DEPARTMENT OF PUBLIC WORKS
Kenneth A. McCord 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



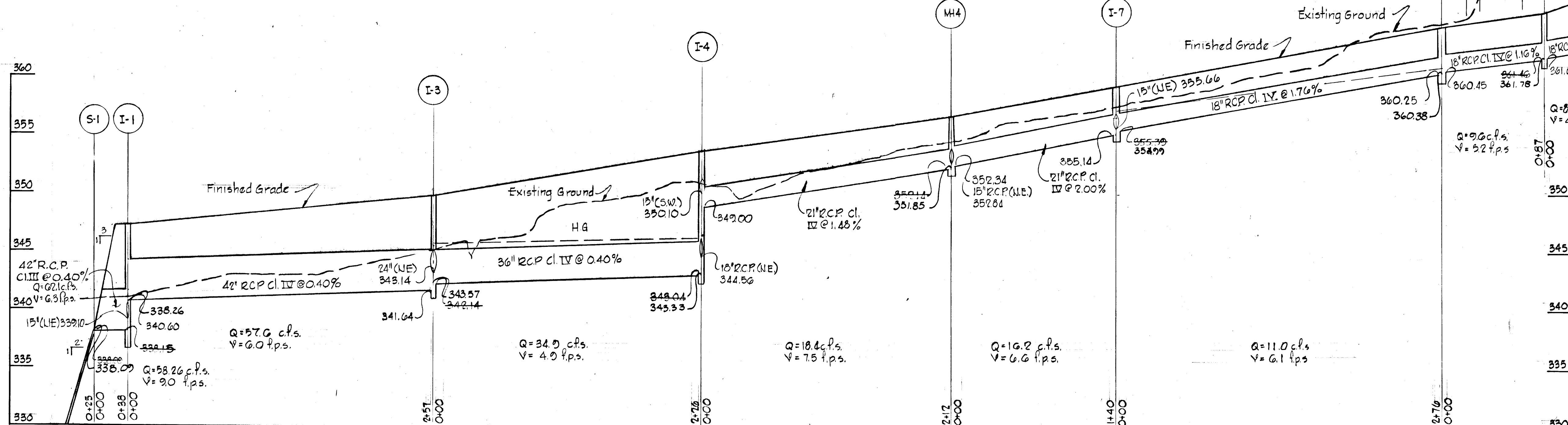
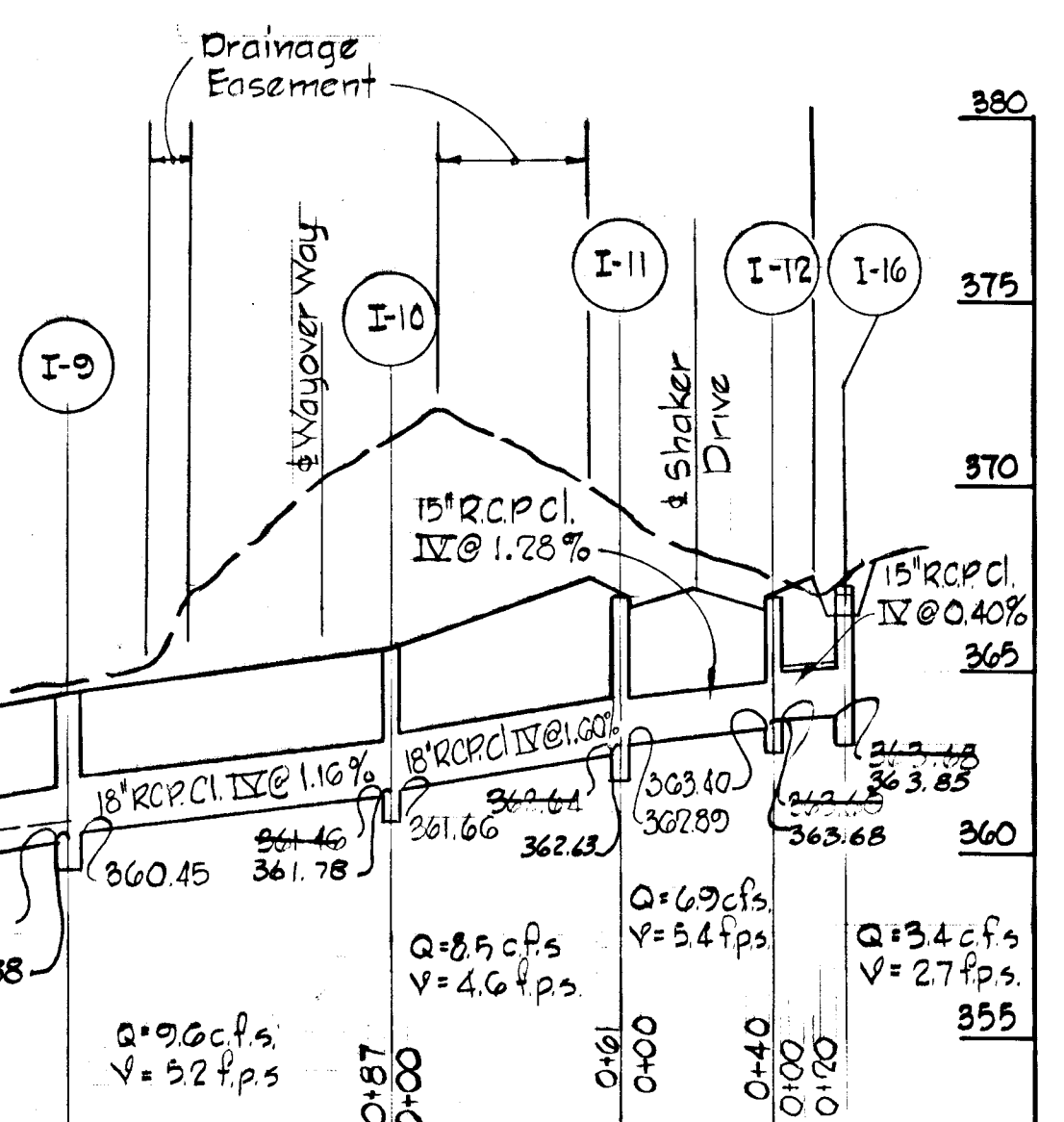
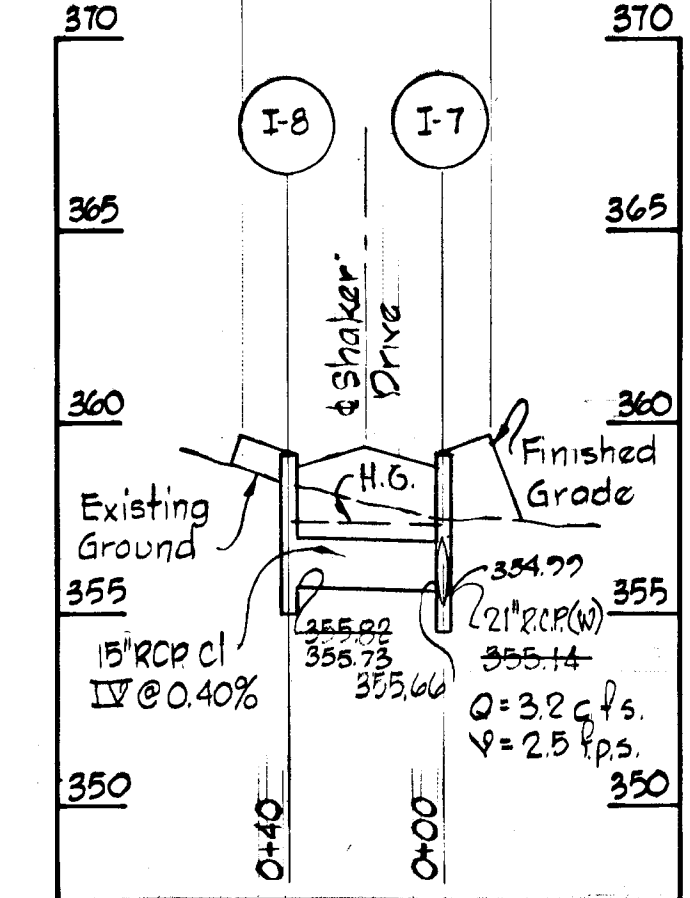
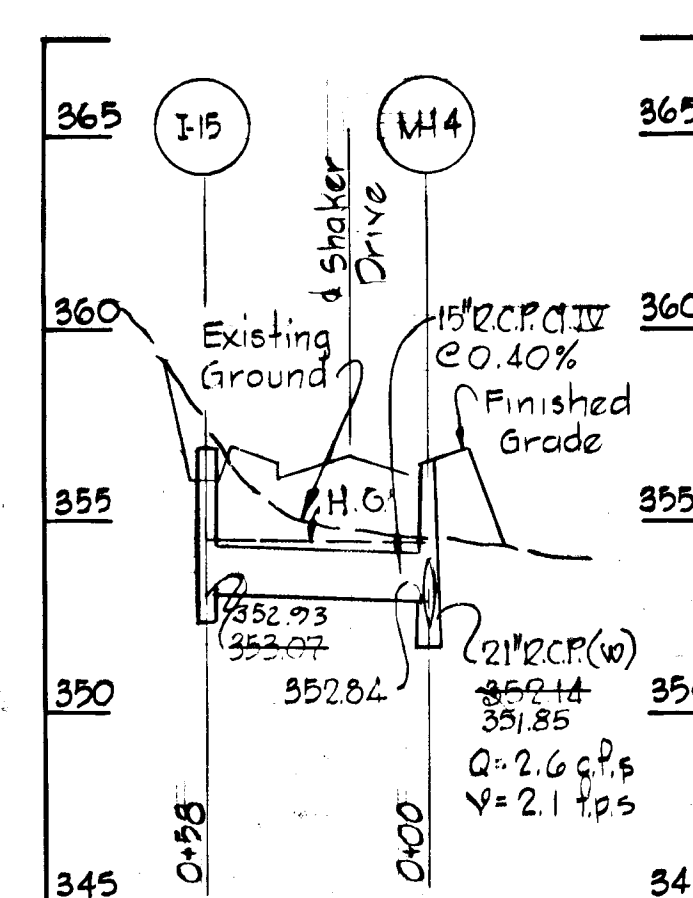
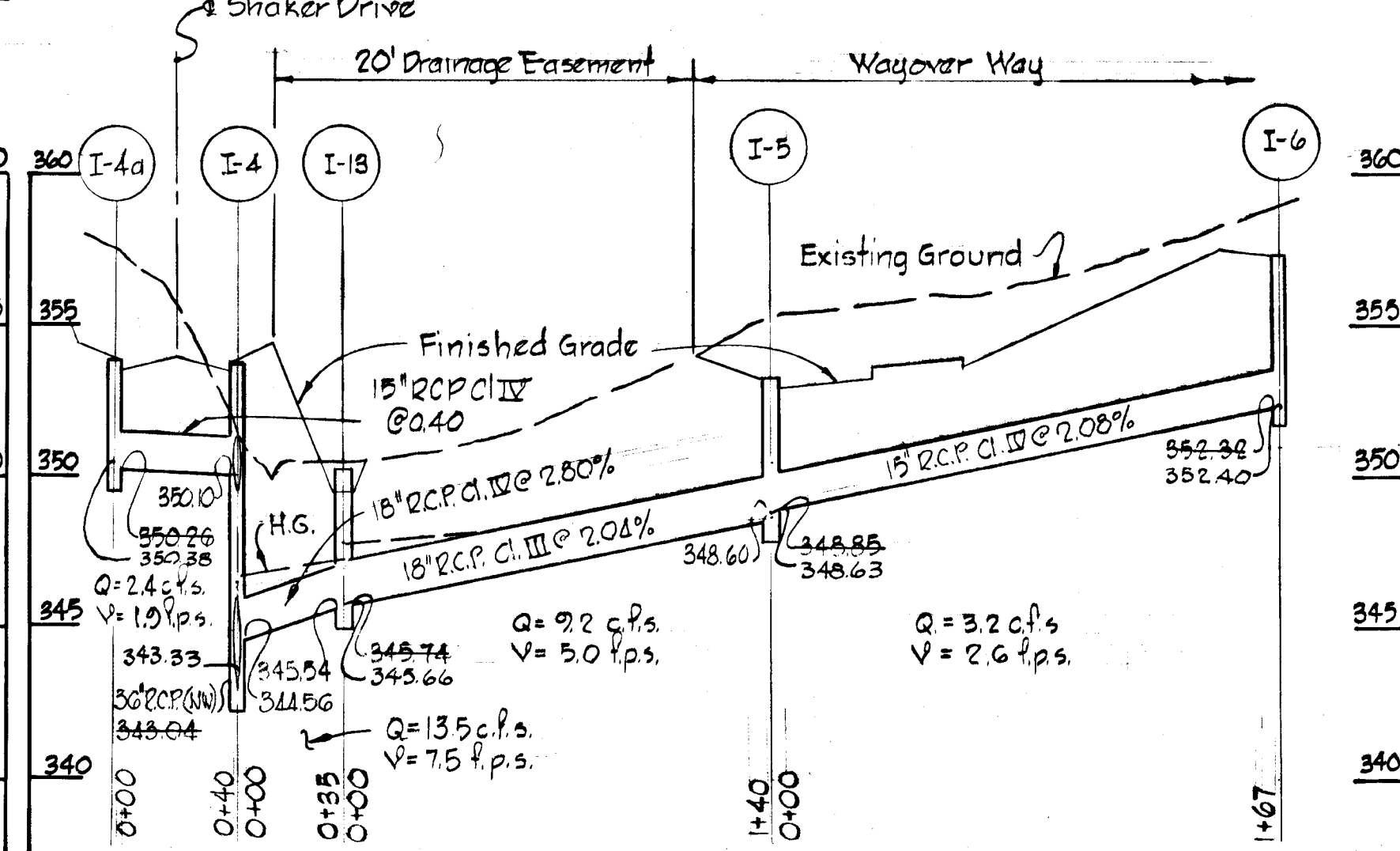
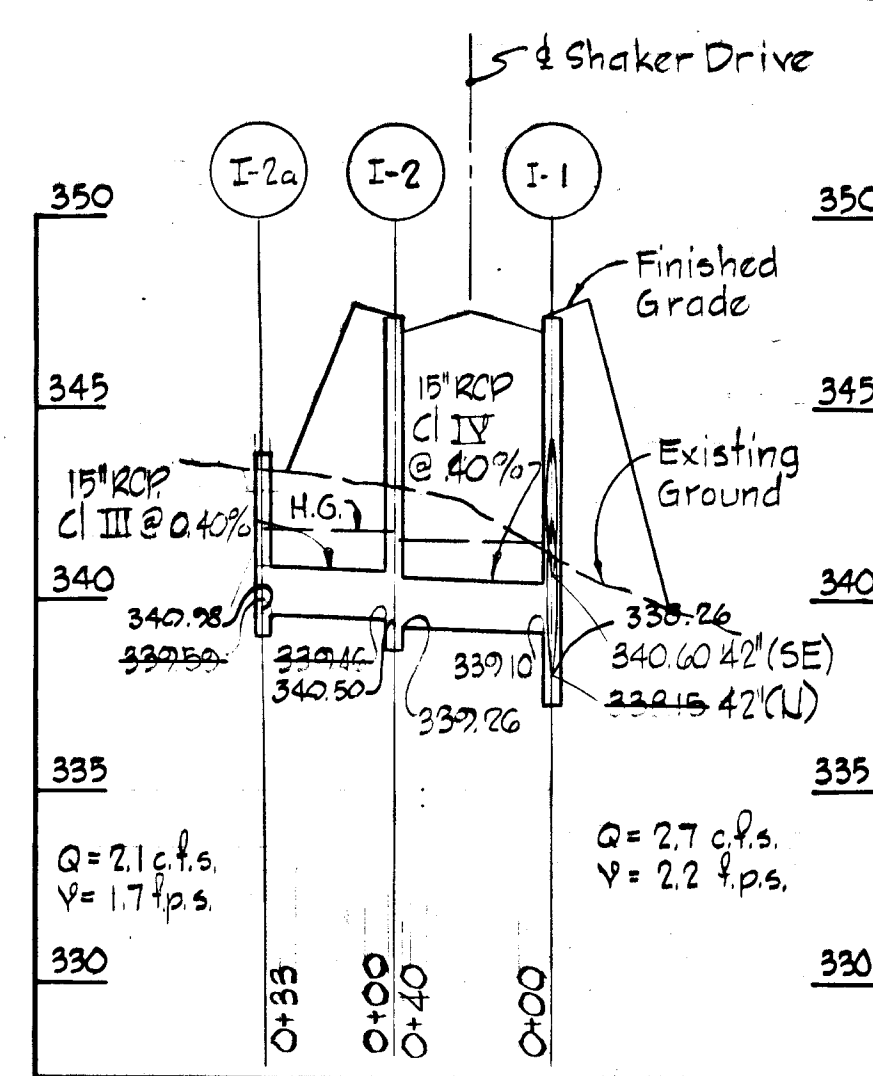
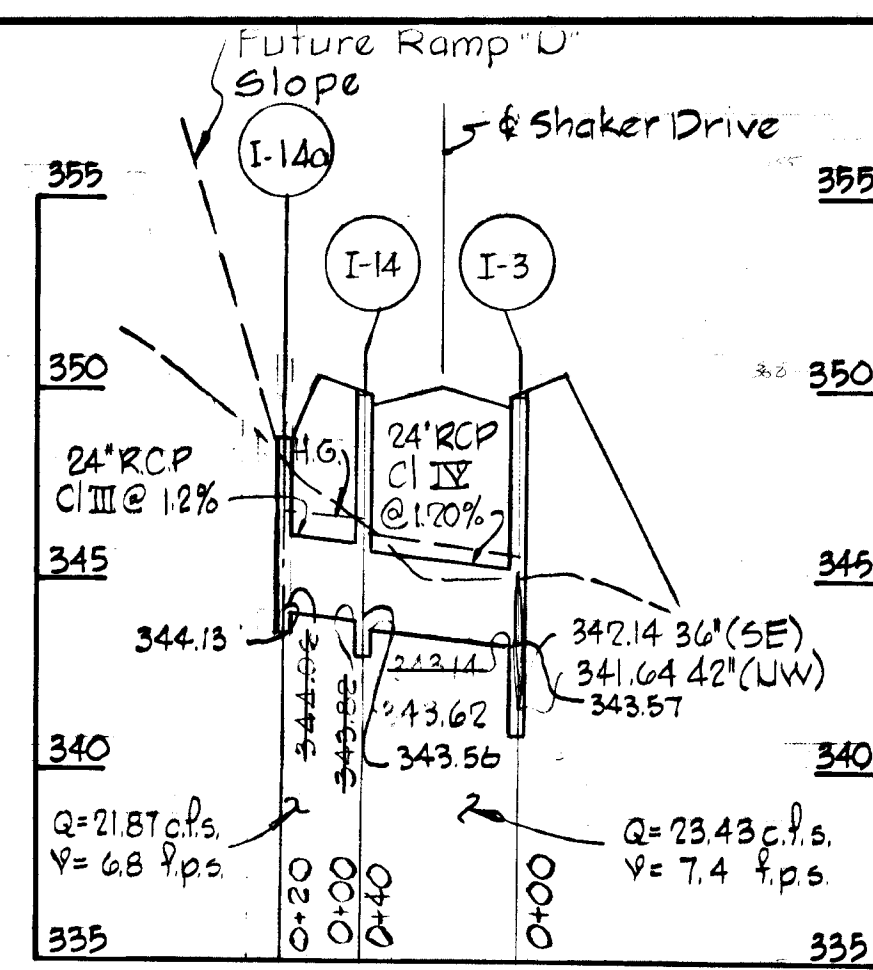
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. McCord

NOTE:
 For revised storm drain profiles, see Supplement to Road Construction Plans, dated 8/10/77, sheet 13 of 18.

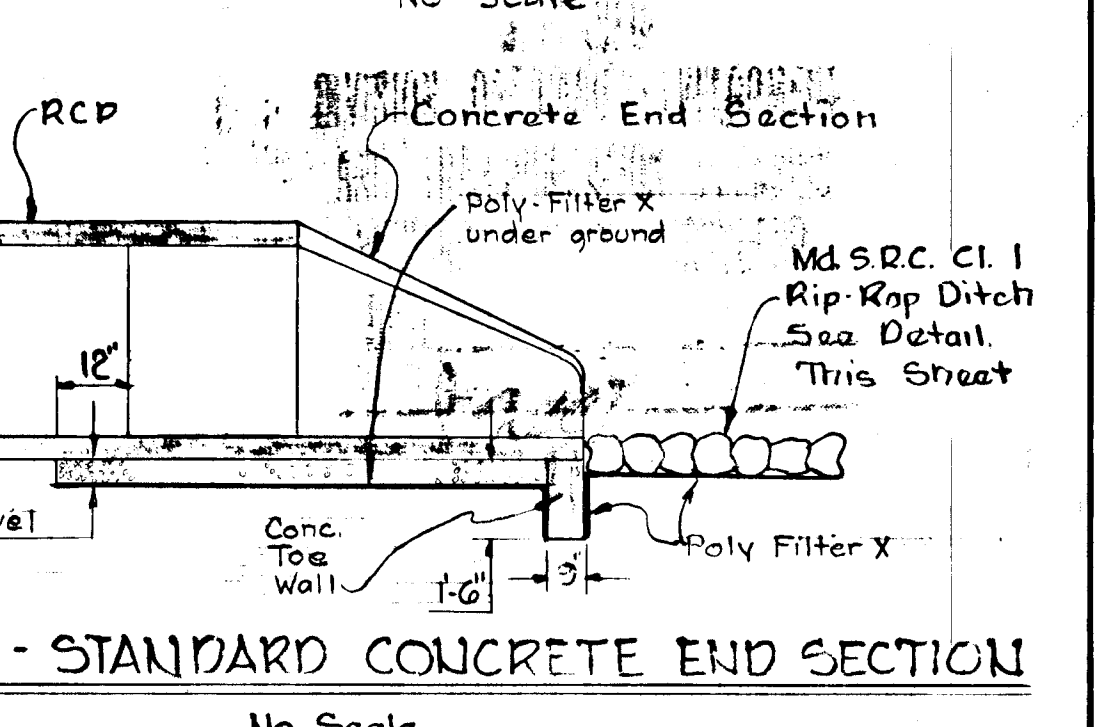
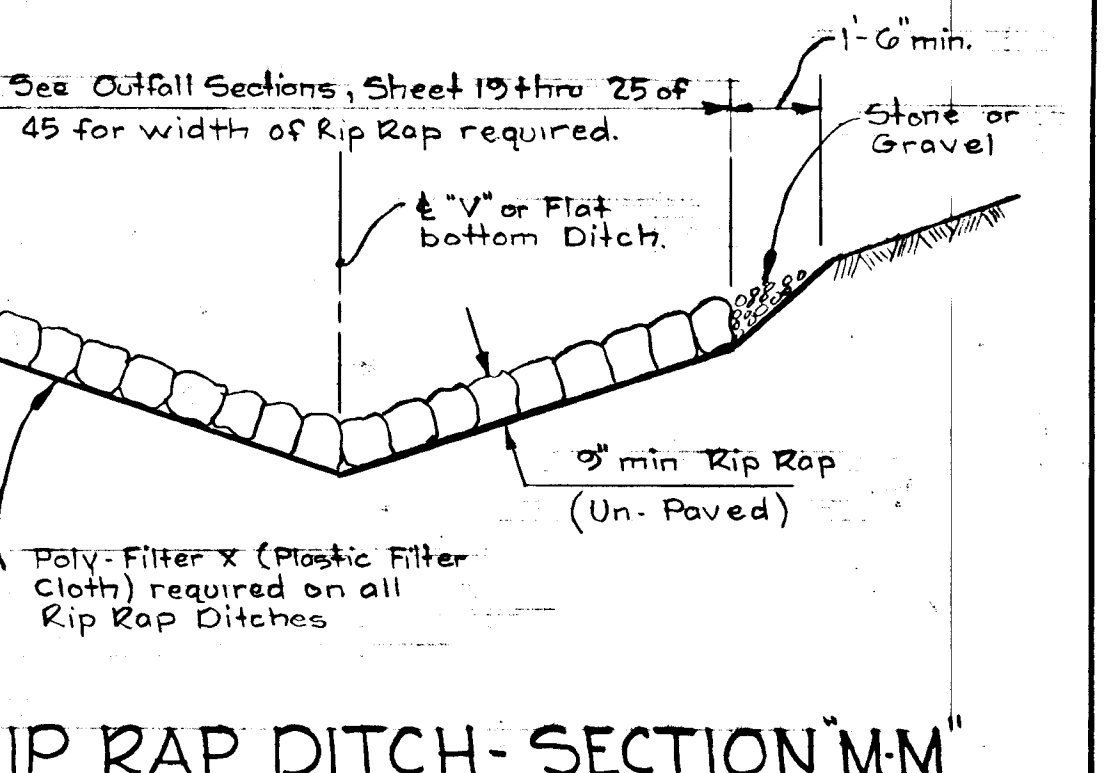
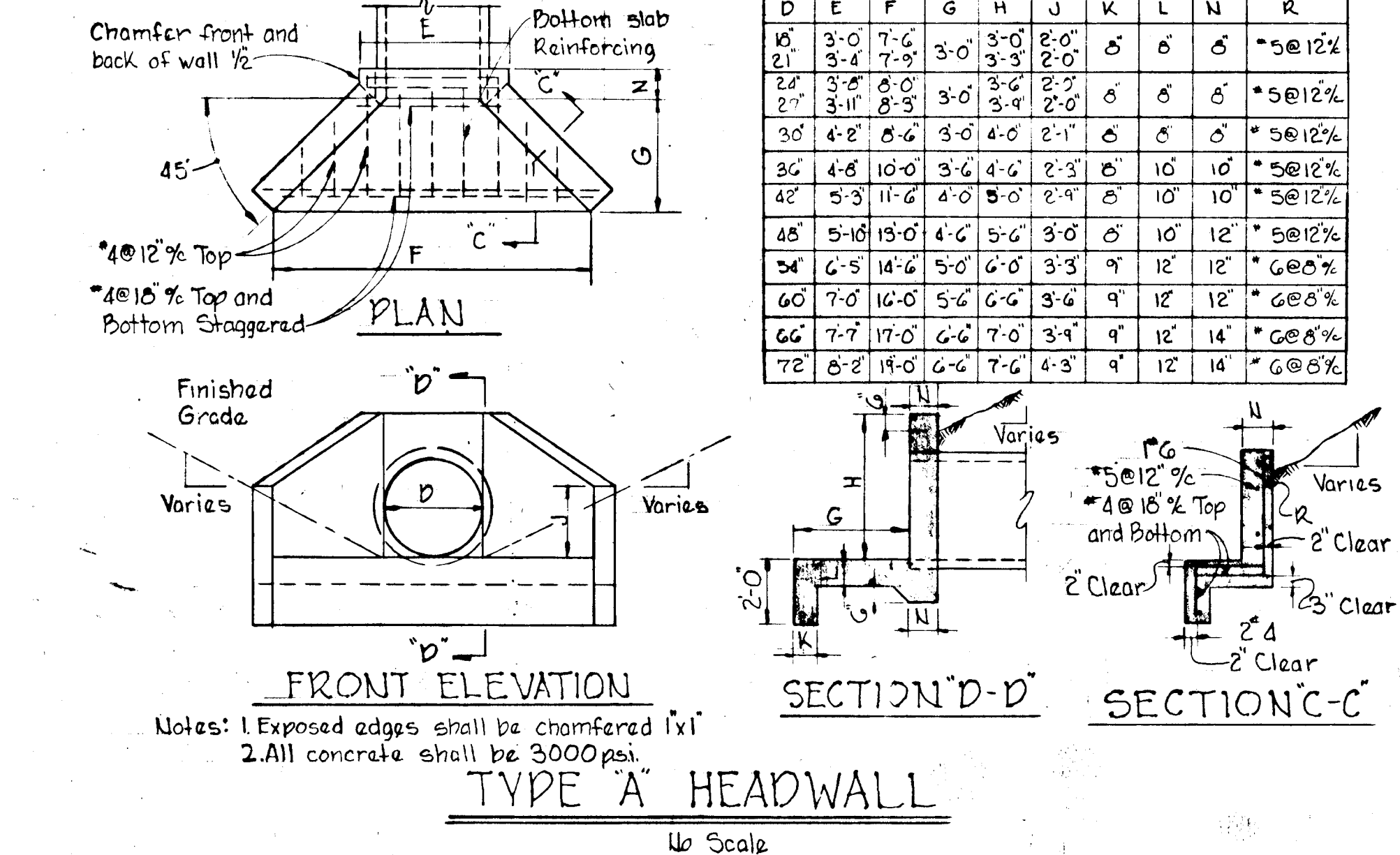
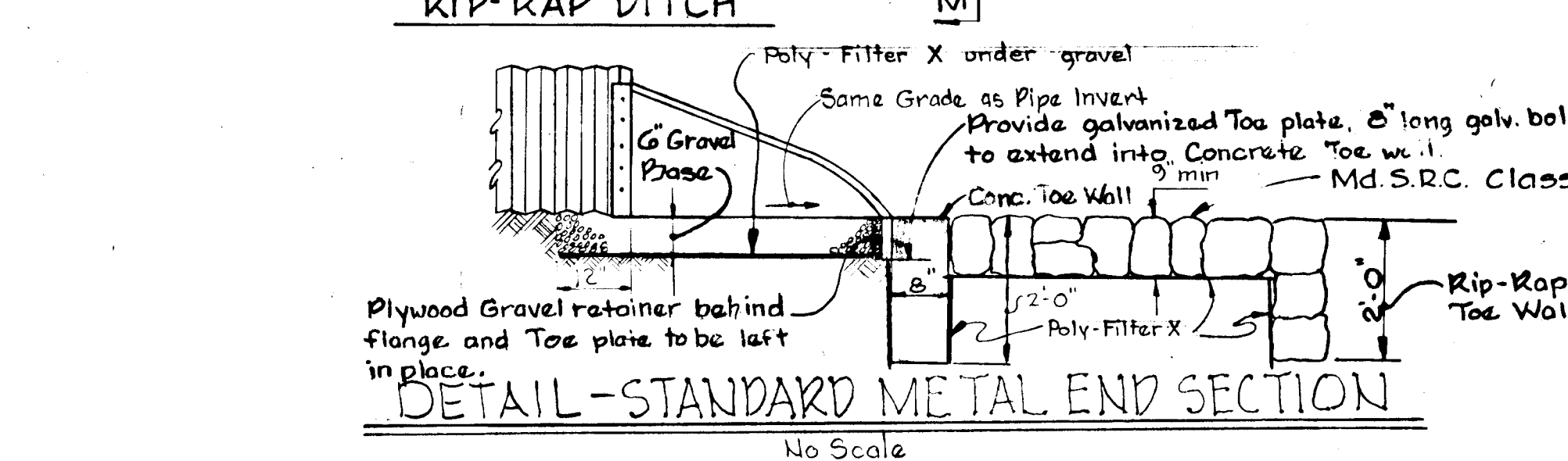
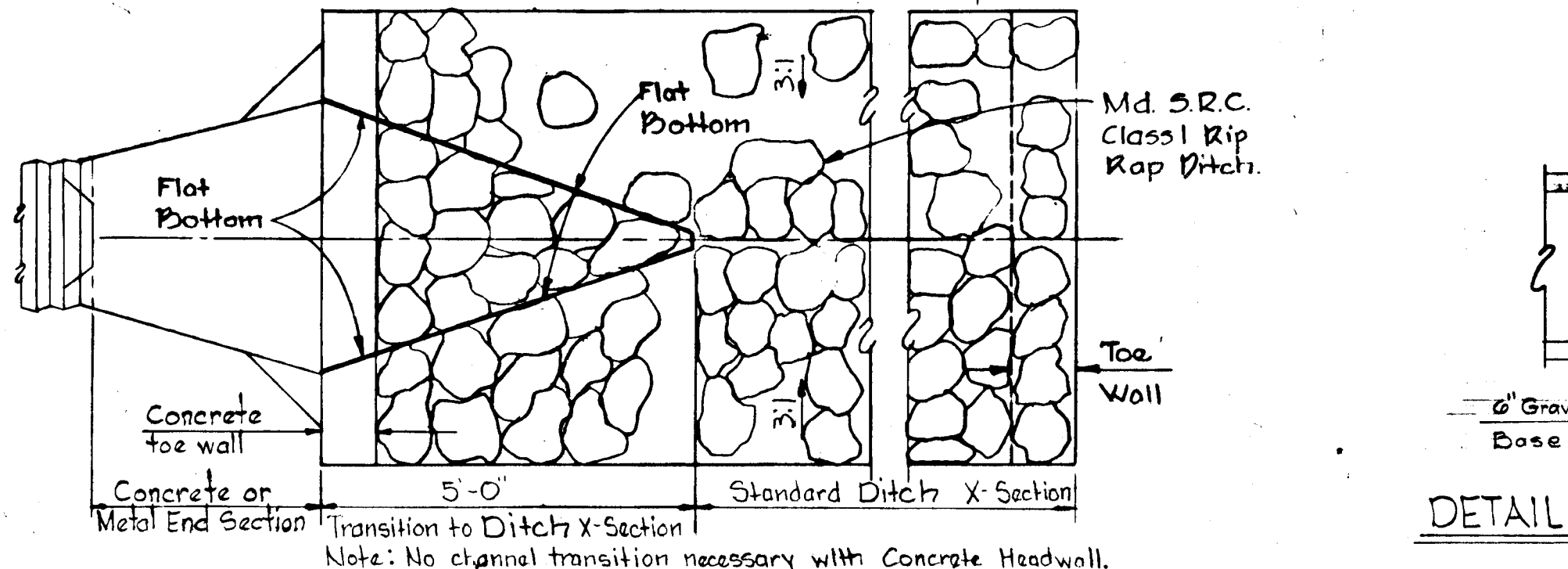
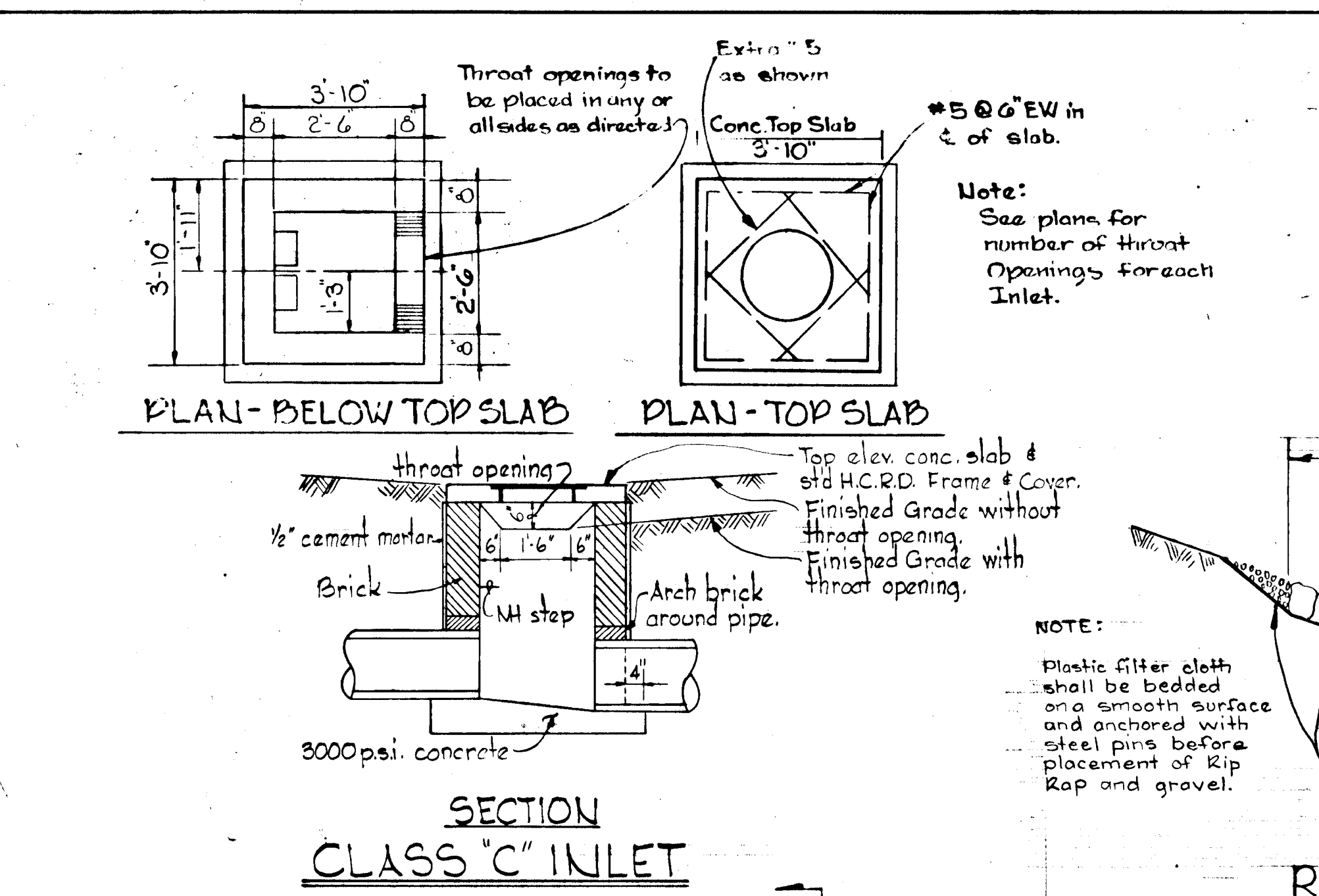
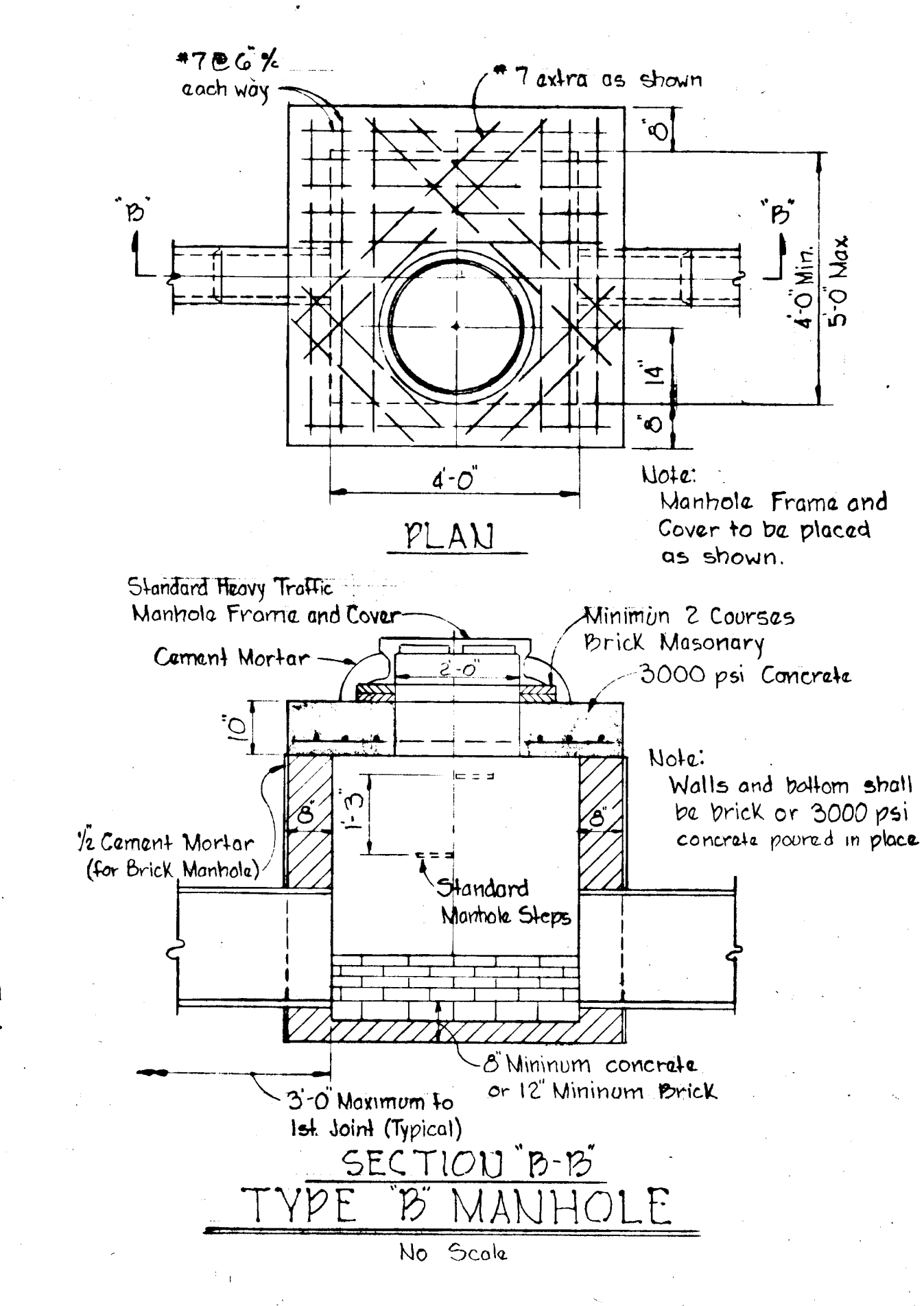
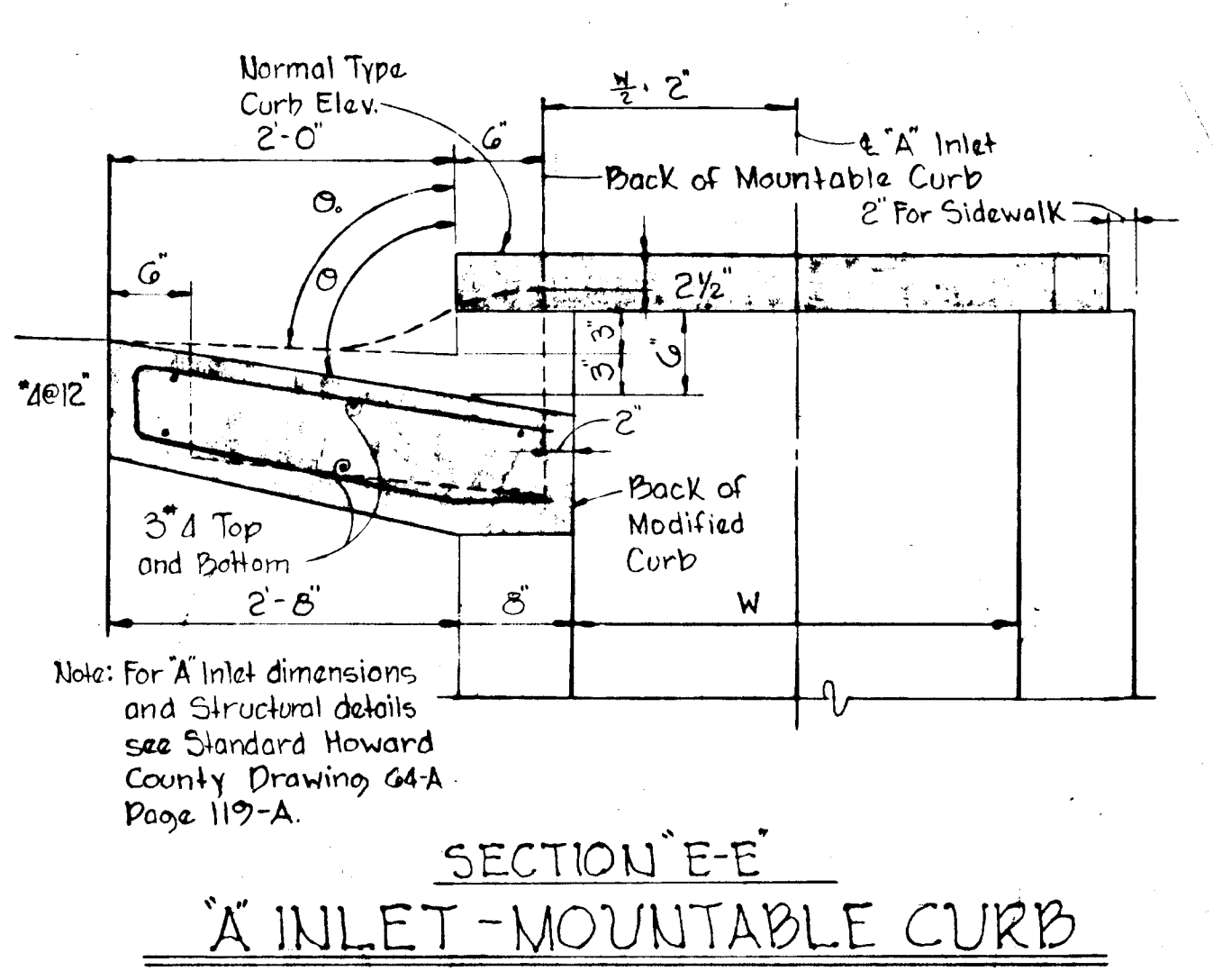
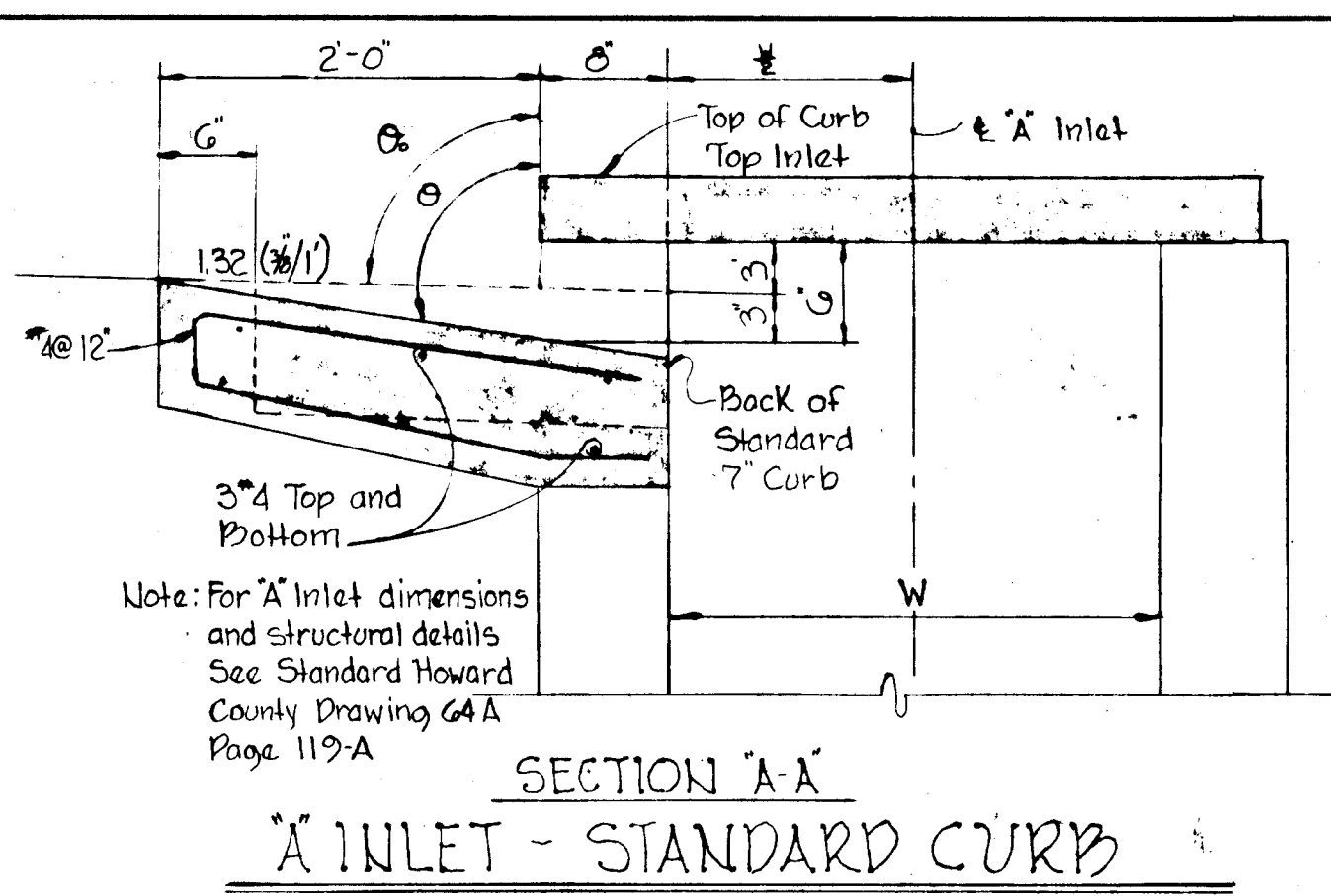
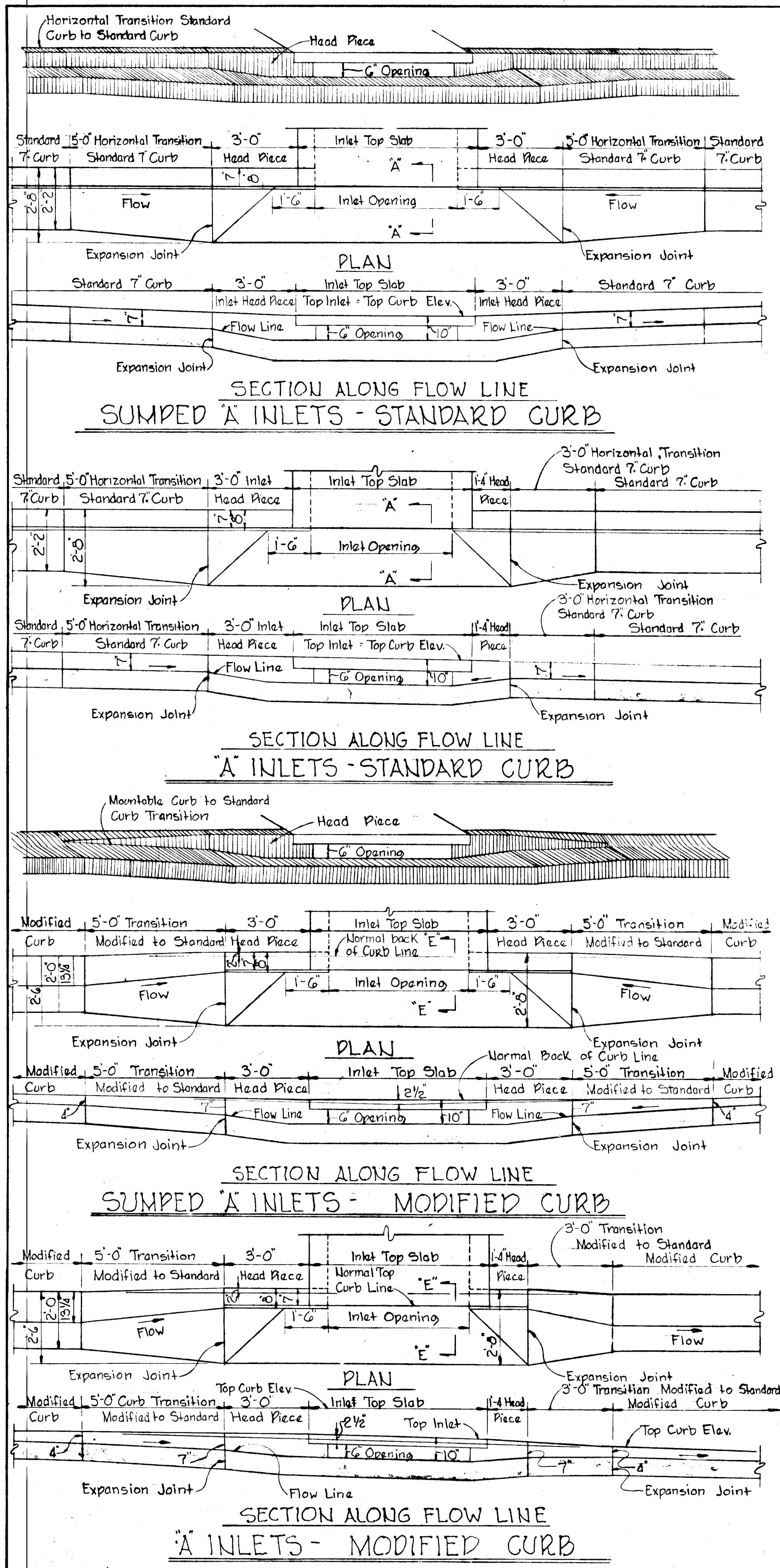


Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH & DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE STORM DRAIN PROFILES SHAKER DRIVE AND CAPE ANN DRIVE		
SCALE: HOR. 1"=50' VERT. 1"=5' DATE: 11/15/74		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
[Signature]

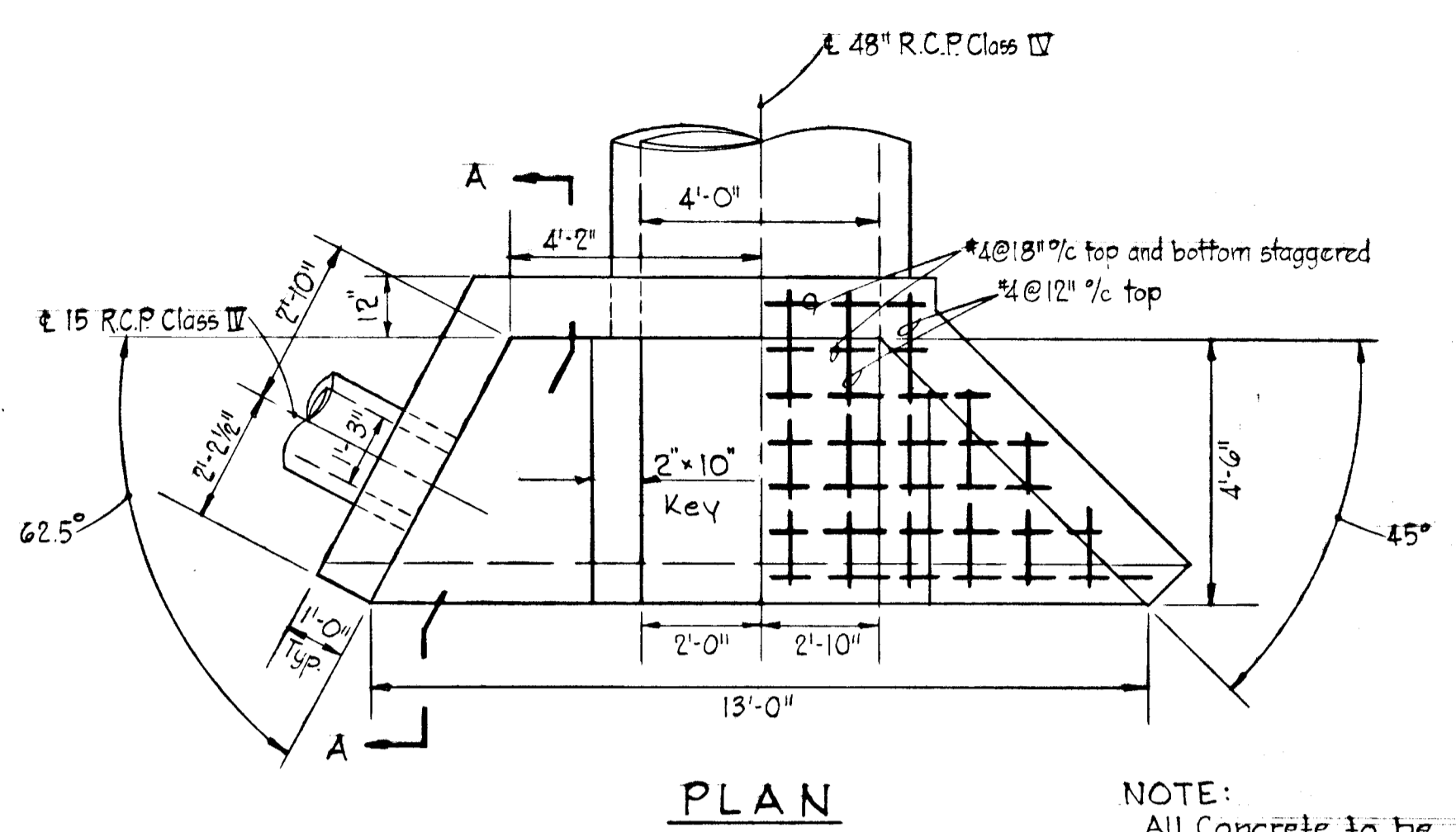


Rev. Date	Rev. No.	Revision Description
		COLUMBIA
		6 th ELECTION DISTRICT
		HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER
		HOWARD RESEARCH AND DEVELOPMENT CORP
		PROJECT AREA
		VILLAGE OF KINGS CONTRIVANCE
		SECTION 1 AREA 1
		PROJECT TITLE
		STORM DRAIN PROFILES
		SHAKER DRIVE
		AND WAYOVER WAY
		SCALE: HOR. 1"=50' VERT. 1"=5'
		DATE 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES
		ENGINEERS
		BALTIMORE, MARYLAND 21202
		<i>[Signature]</i>
		KENNETH A. MCGORD
		Registered Engineer
		No 1974



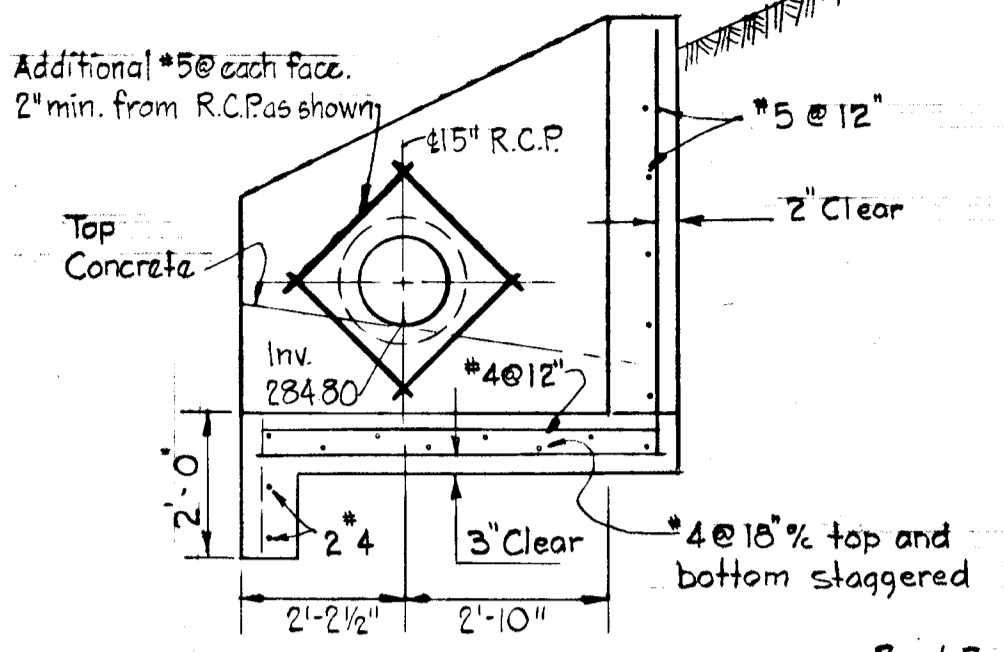
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
[Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
3 RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF KINGS CONTRIVANCE		
SECTION I, AREA 1		
PROJECT TITLE		
STORM DRAIN DETAILS		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REIGARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>[Signature]</i> KENNETH A. McCOY Registered Engineer No. 1974		

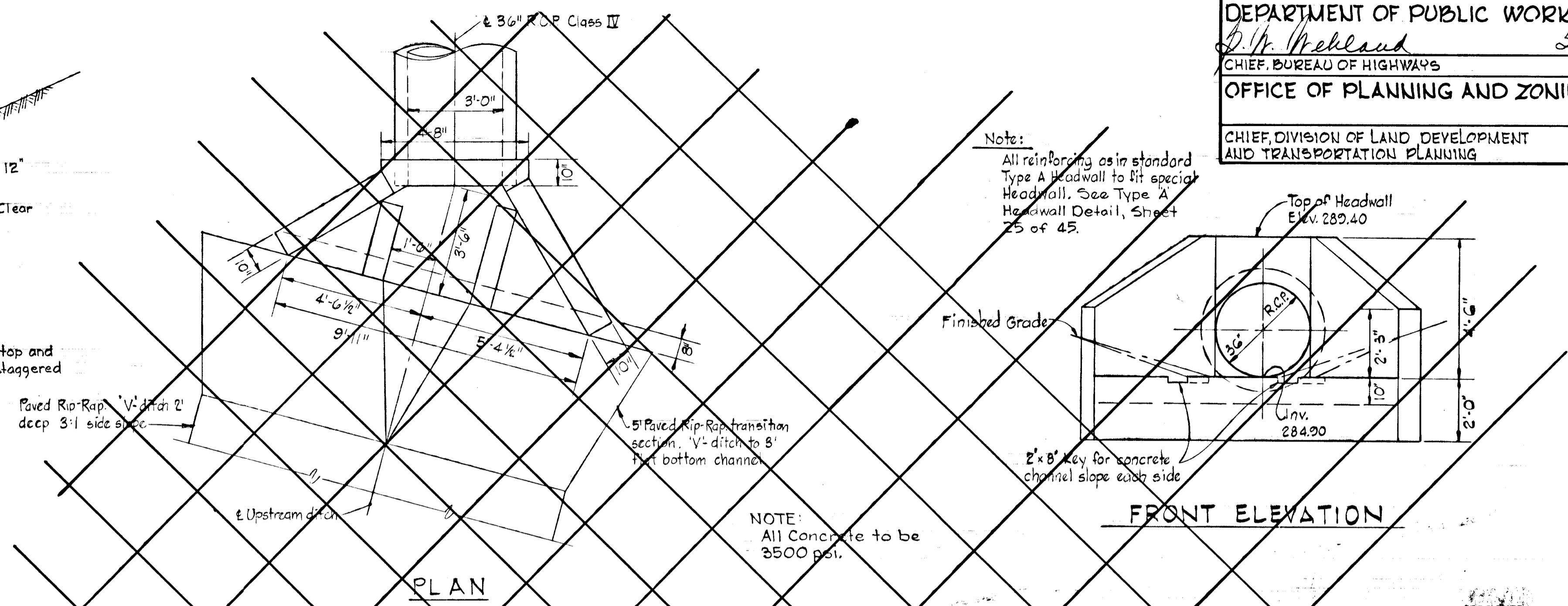


PLAN

NOTE:
 All Concrete to be
 3500 psi.



SECTION A-A

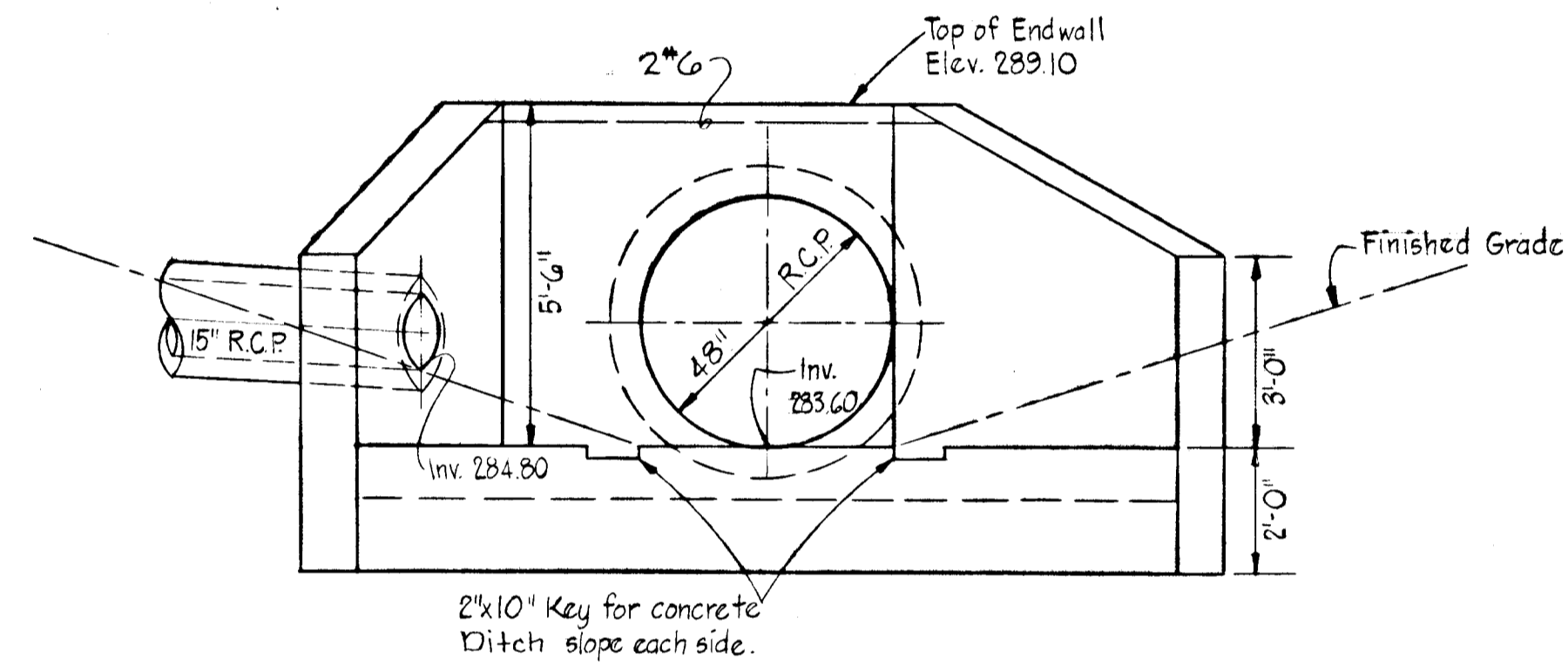


PLAN

FRONT ELEVATION

NOTE:
 All Concrete to be
 3500 psi.

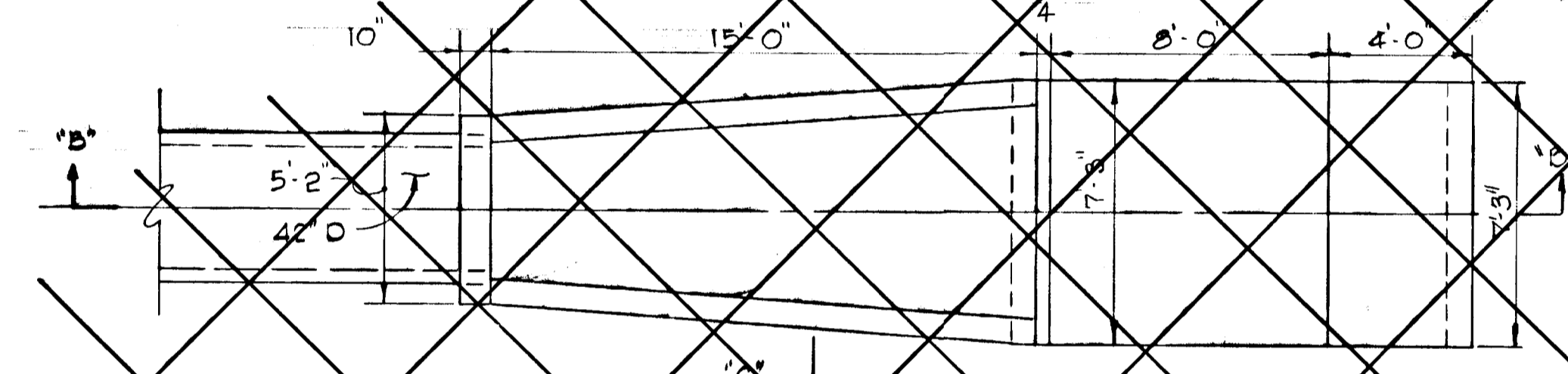
SPECIAL HEADWALL S-31



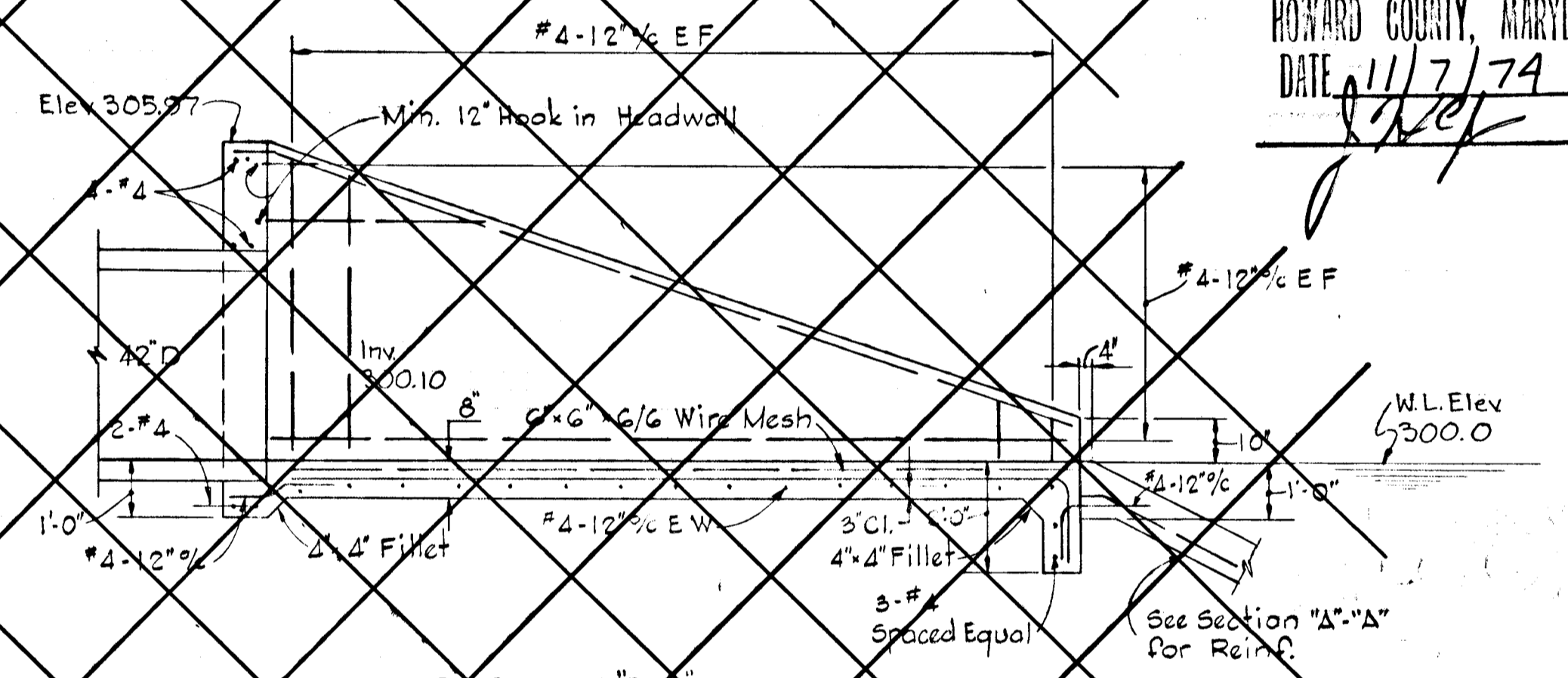
FRONT ELEVATION

SPECIAL HEADWALL S-40

Scale: 3/8" = 1'-0"

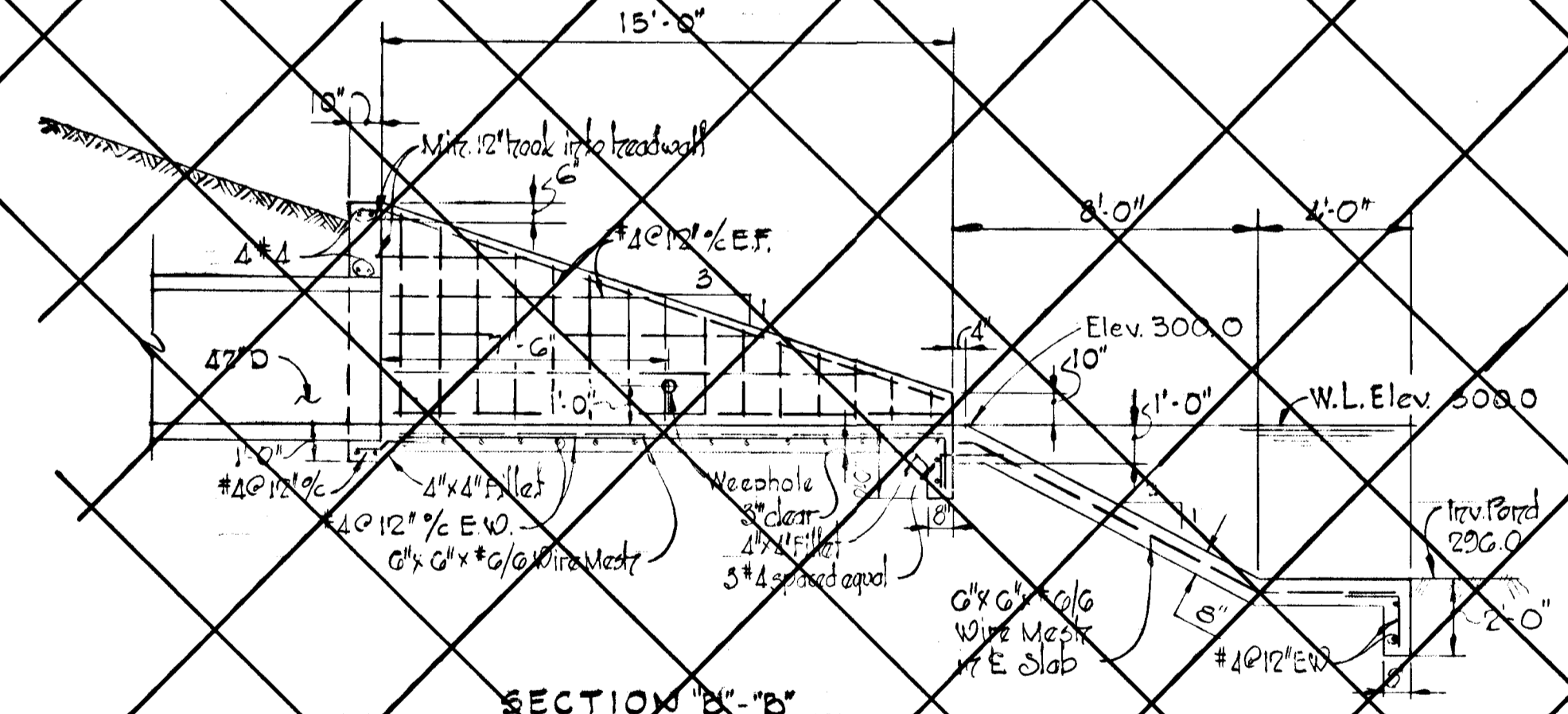


PLAN
 Scale: 1/4" = 1'-0"



SECTION B-B
 Scale: 3/8" = 1'-0"

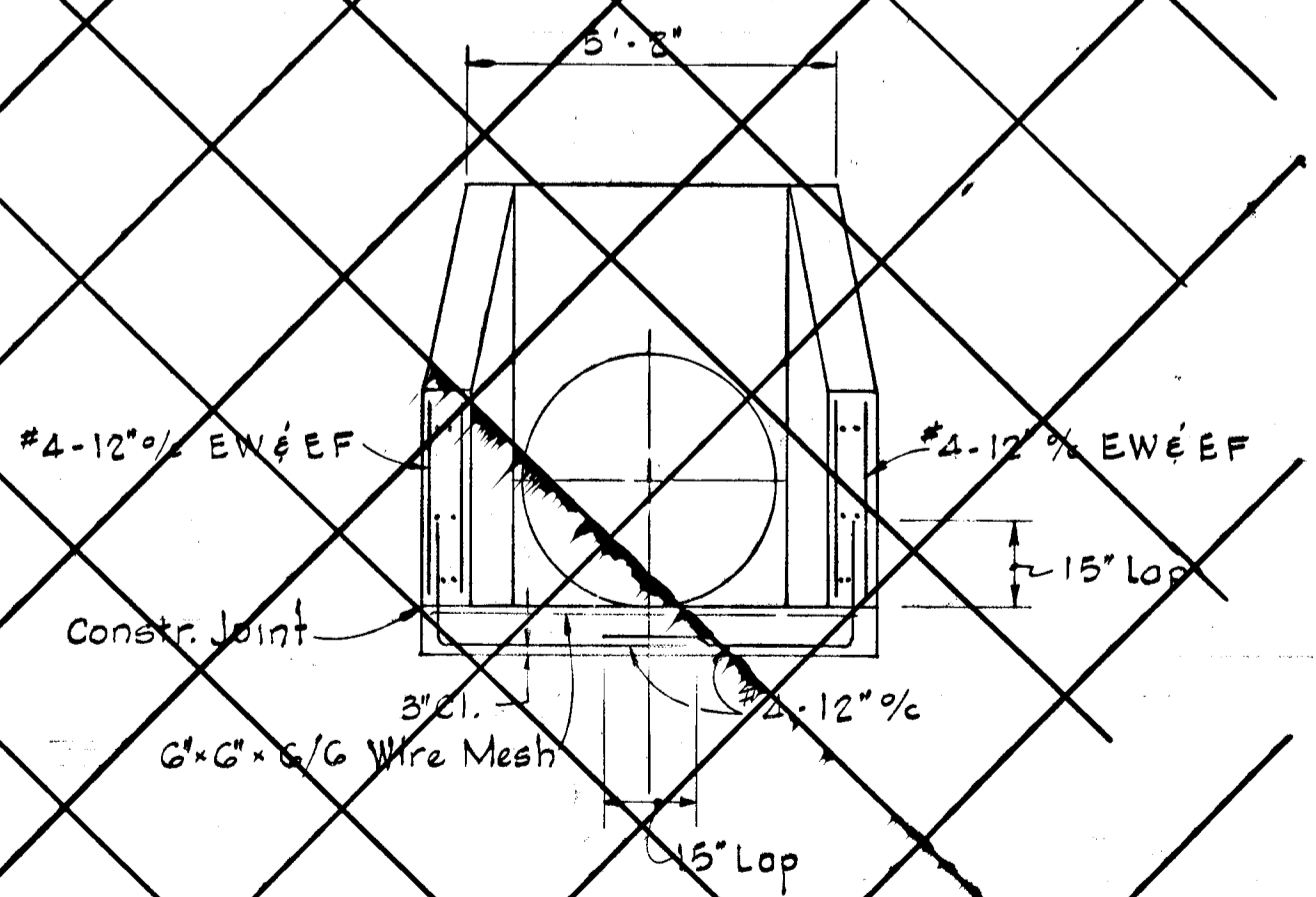
NOTE:
 1. Steel to be 2" clear unless otherwise noted.
 2. All concrete to be 3000 psi.



SECTION B'-B'
 Scale: 1/4" = 1'-0"

DETAILS - STRUCTURE S-55

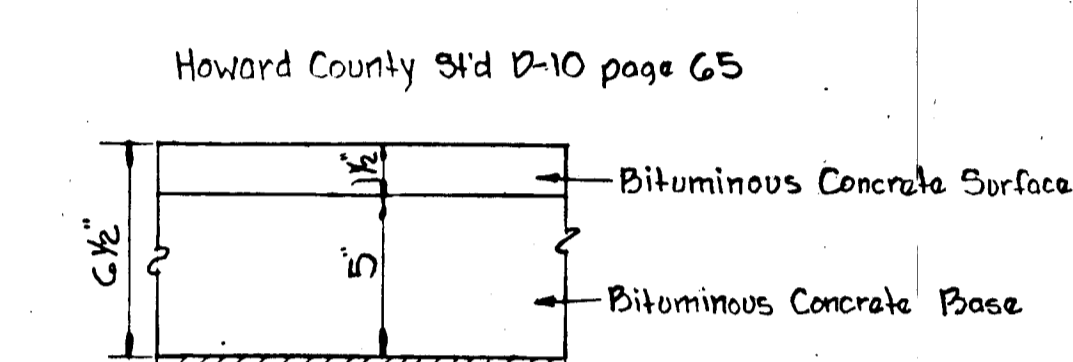
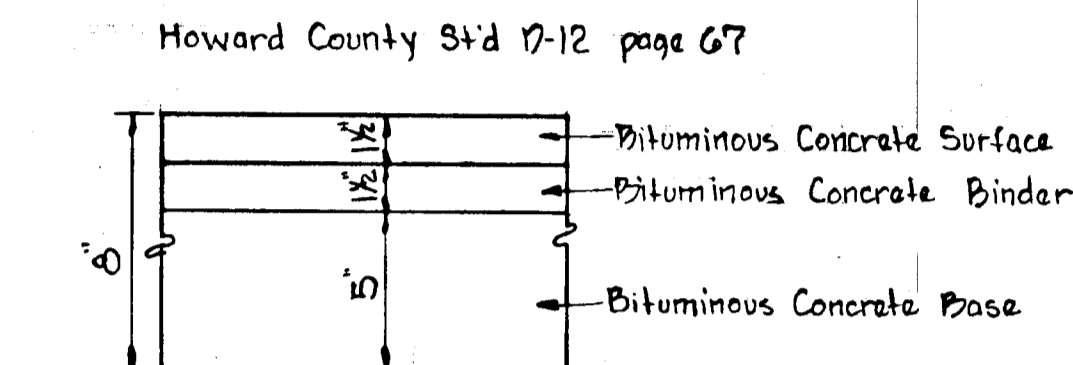
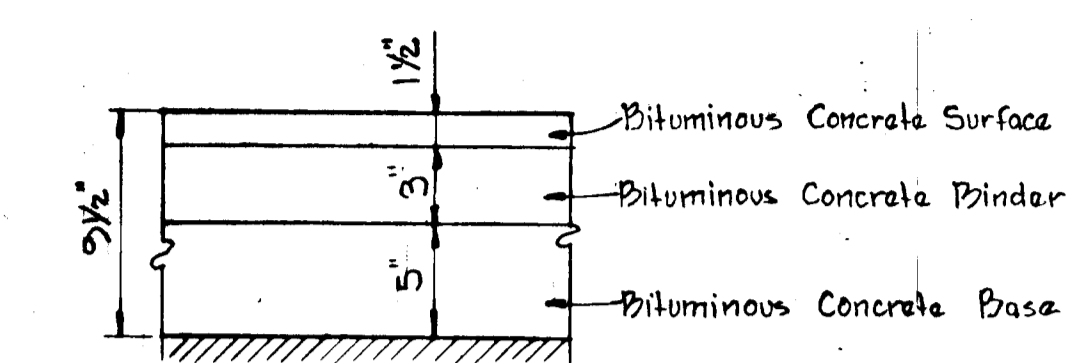
Scale: AS SHOWN



SECTION C-C
 Scale: 3/8" = 1'-0"

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
 J. H. [Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE STORM DRAIN DETAILS		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REQUARD & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McLeod KENNETH A. McLEOD Registered Engineer No. 1974		



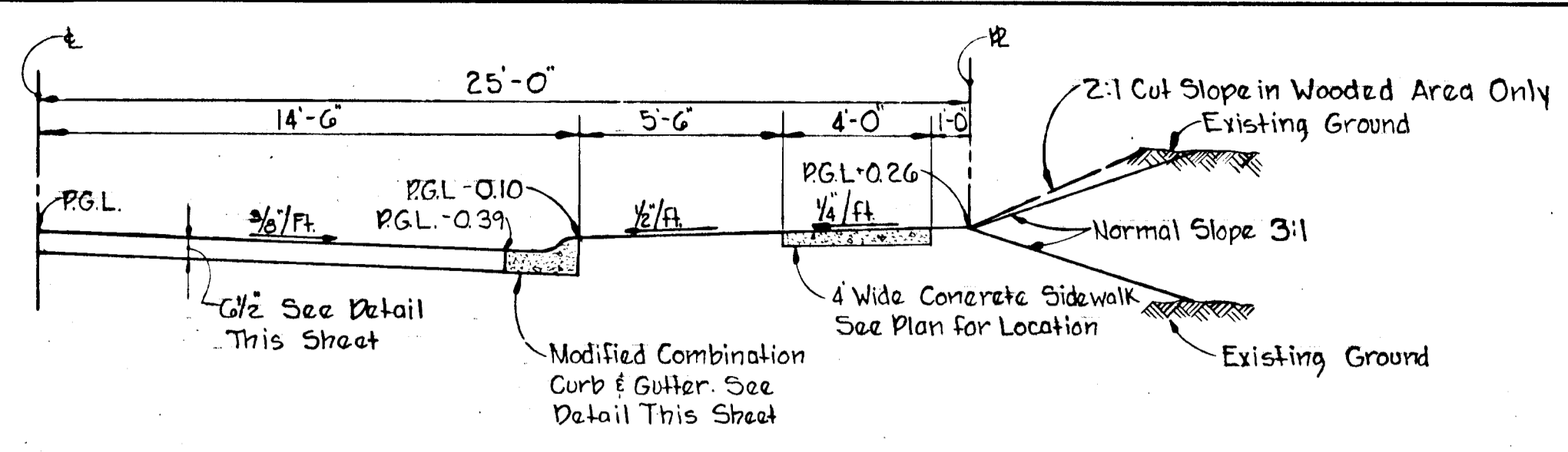
Howard County Std D-12 page 67
 Howard County Std D-10 page 65
 Howard County Std D-11 page 66

- NOTES**
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.

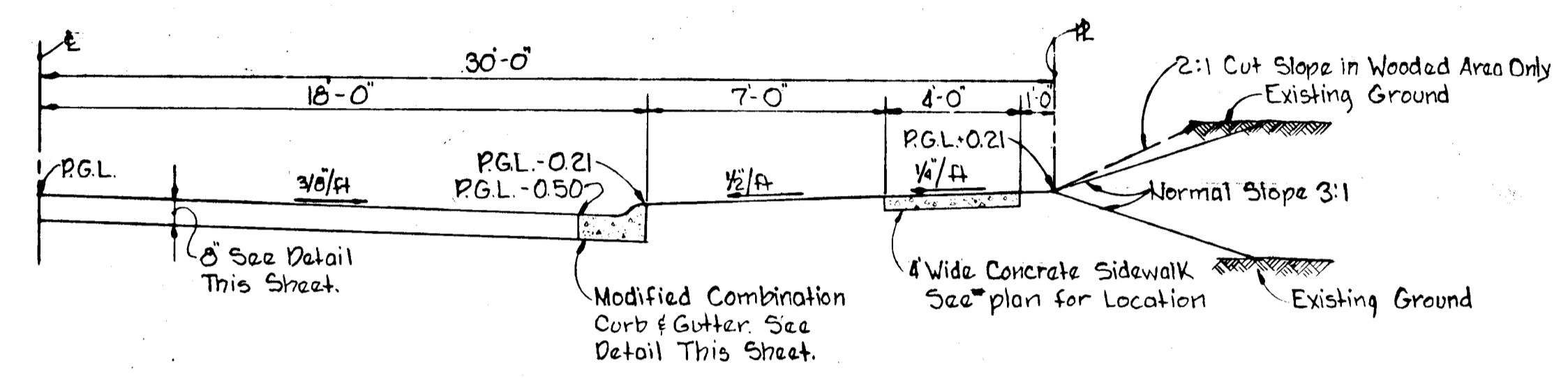
TYPICAL PAVING SECTIONS

No Scale
 DEPARTMENT OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: 11/17/74
 2/20/74

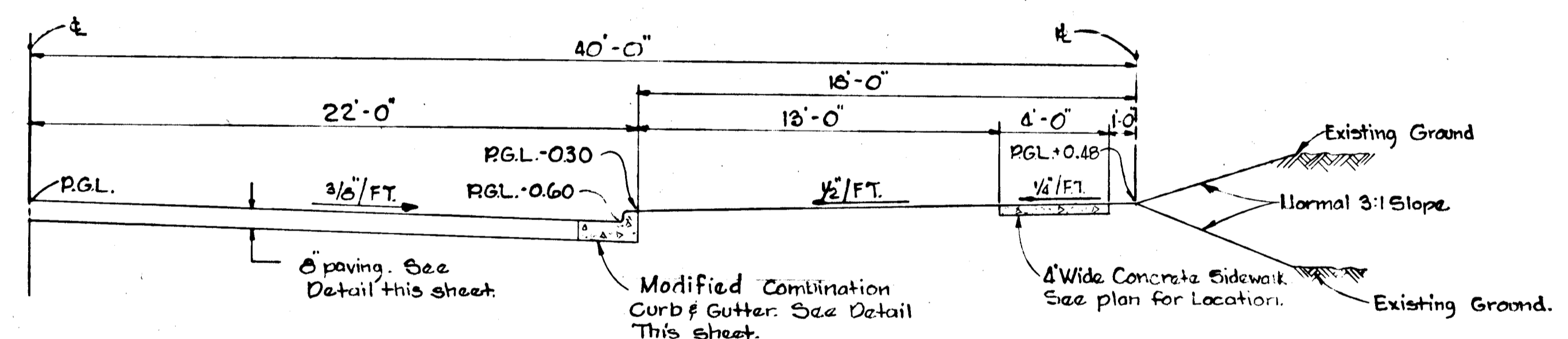
Rev. Date	Rev. No.	Revision Description
COLUMBIA ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION I AREA I PROJECT TITLE ROADWAY DETAILS SCALE: AS SHOWN DATE: 11/15/74 WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202 Kenneth A. McCord KENNETH A. McCORD Registered Engineer No. 1974		



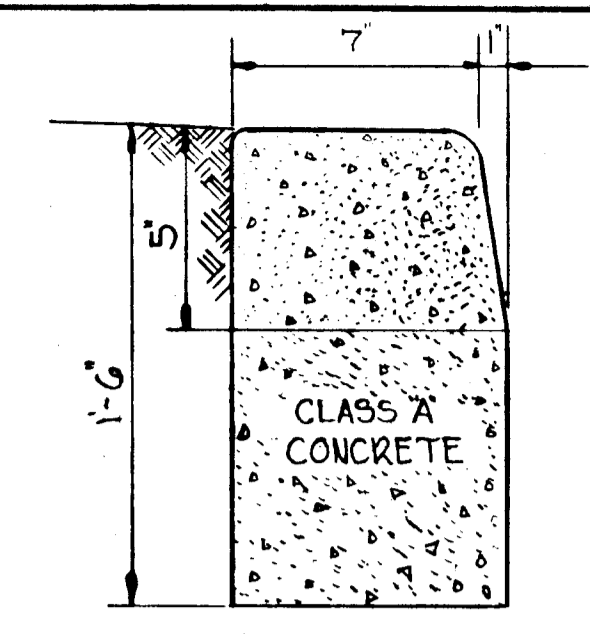
TYPICAL HALF SECTION
 50' R/W - 29' ROADWAY
 Scale: 1/4" = 1'-0"



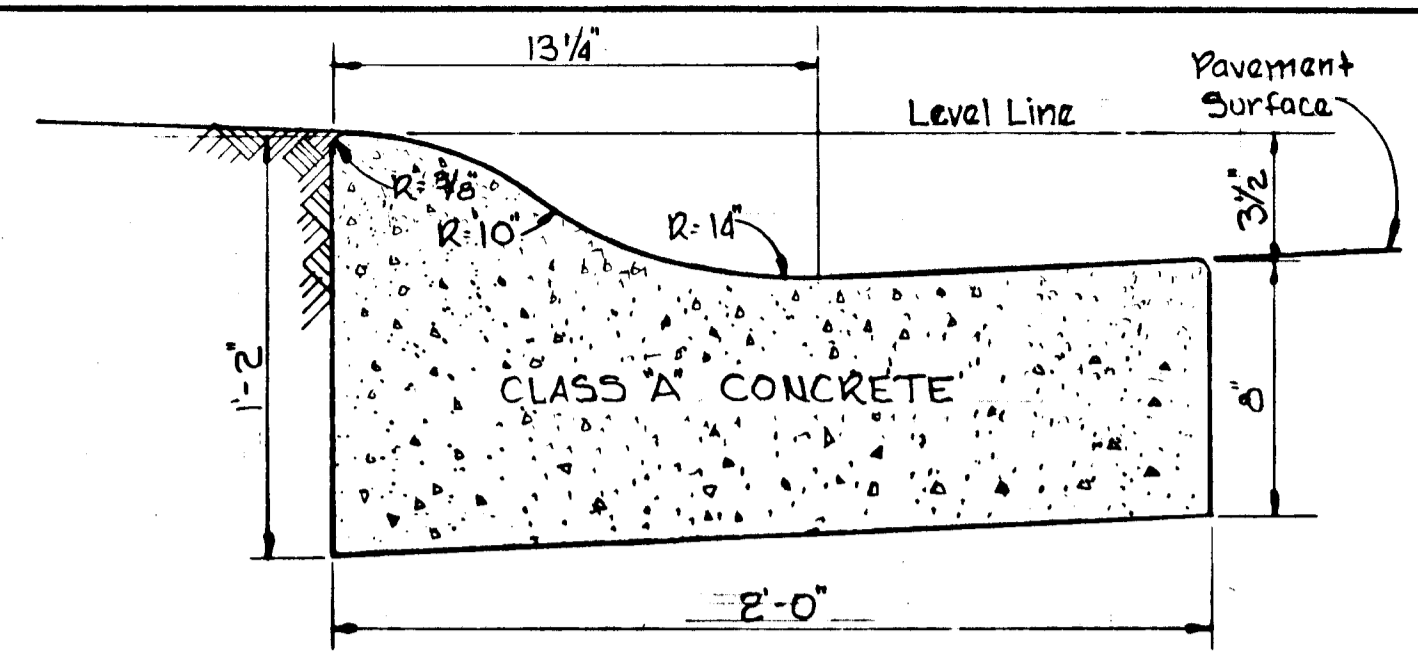
TYPICAL HALF SECTION
 60' R/W - 36' ROADWAY
 Scale: 1/4" = 1'-0"



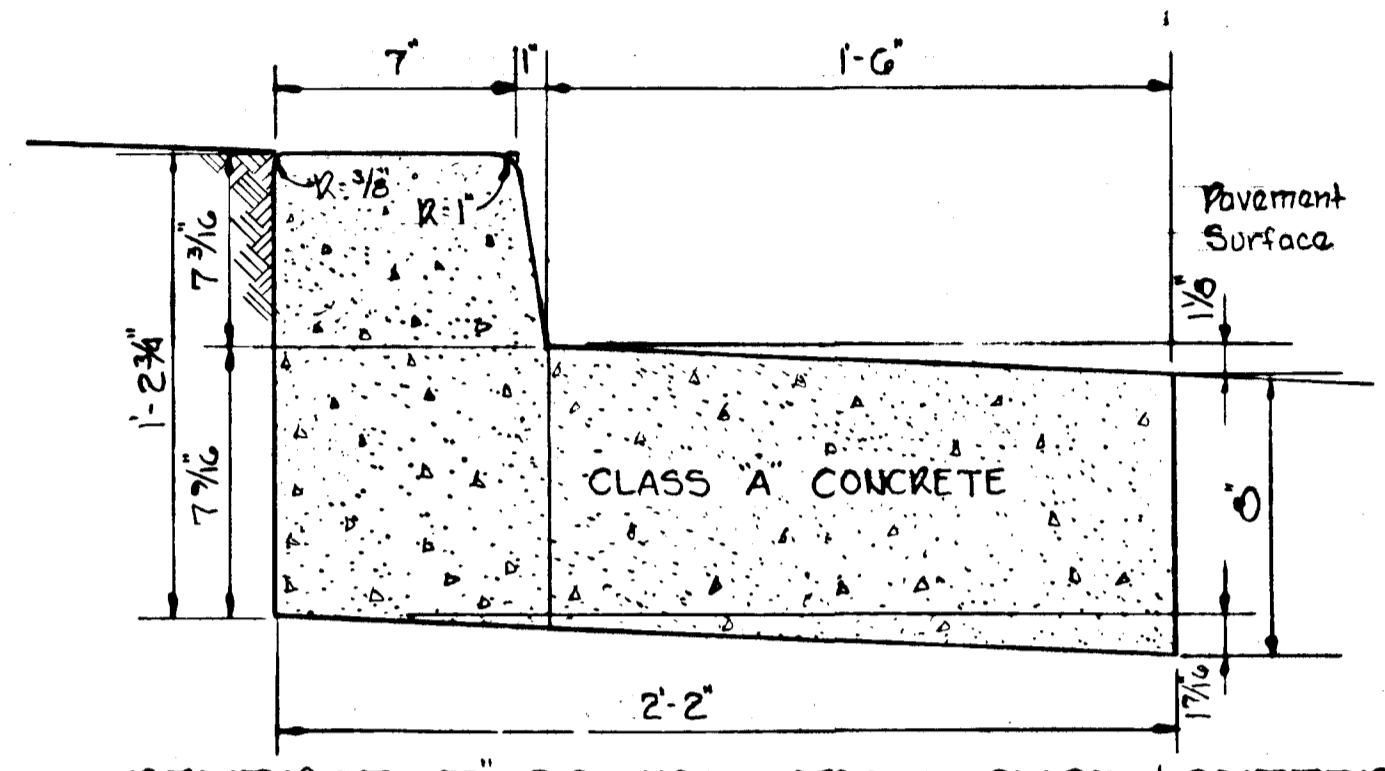
TYPICAL HALF SECTION
 80' R/W - 44' ROADWAY
 Scale: 1/4" = 1'-0"



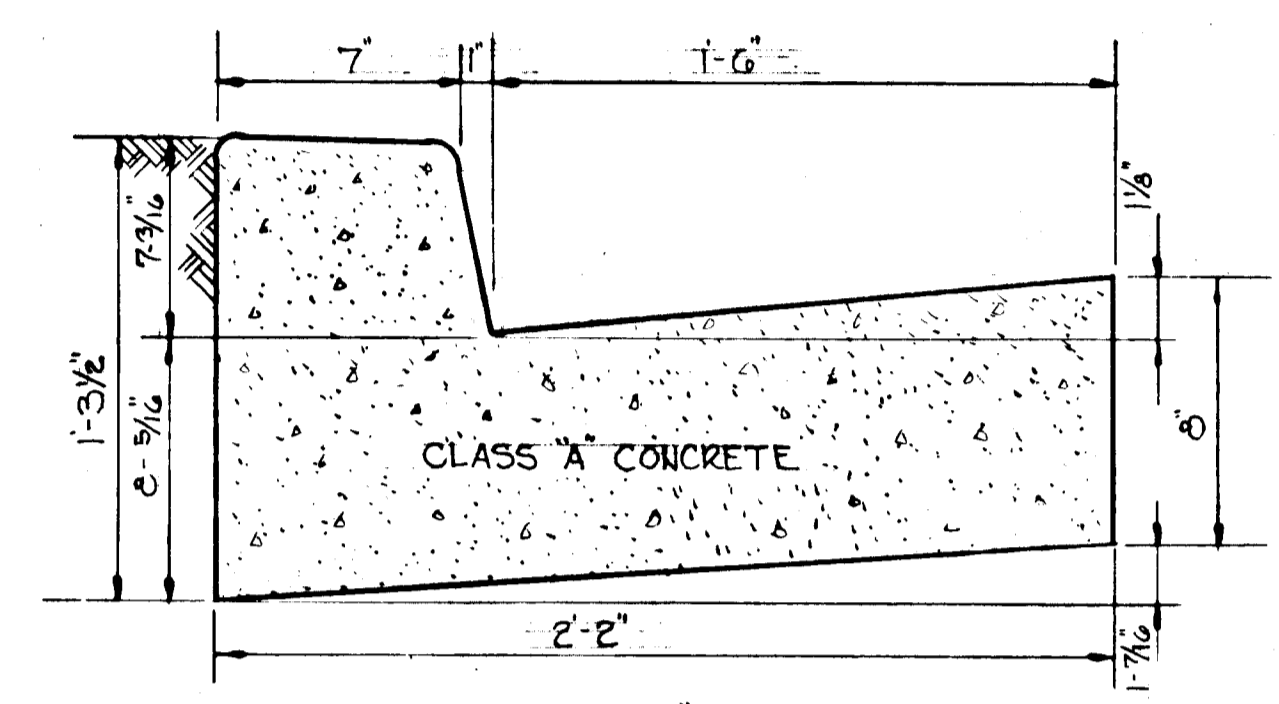
STANDARD BARRIER CURB
 No Scale



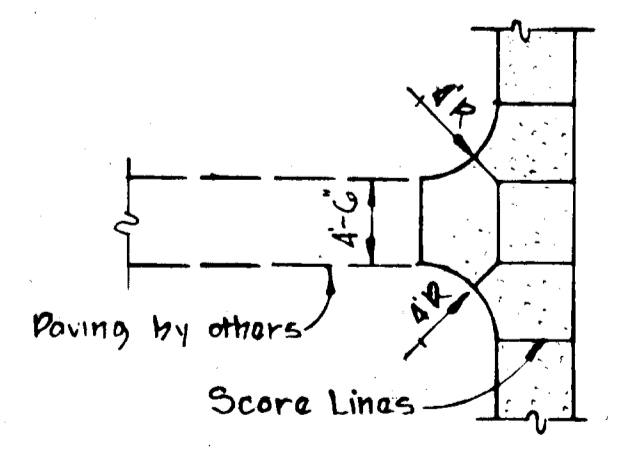
MODIFIED COMBINATION CURB & GUTTER
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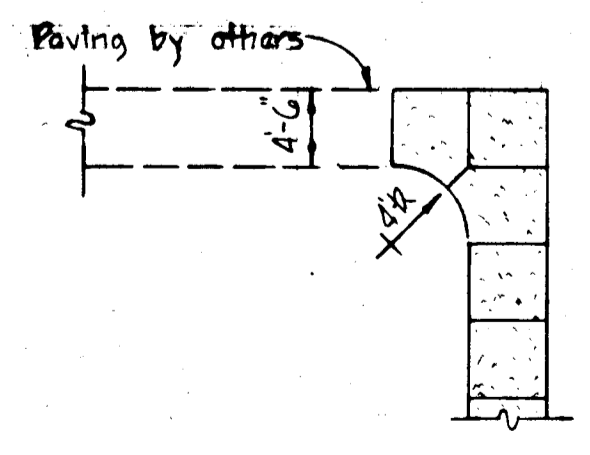
REVERSE 7' COMBINATION CURB & GUTTER
 No Scale



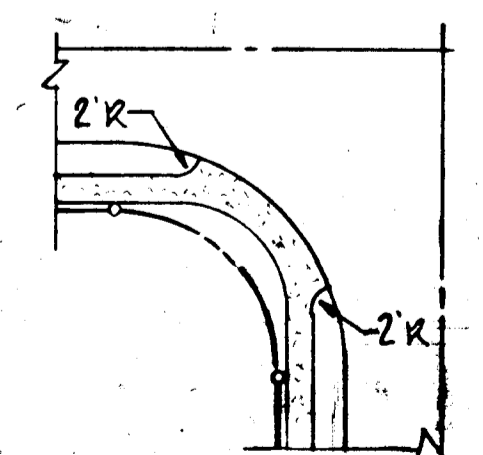
STANDARD 7' COMBINATION CURB & GUTTER
 No Scale



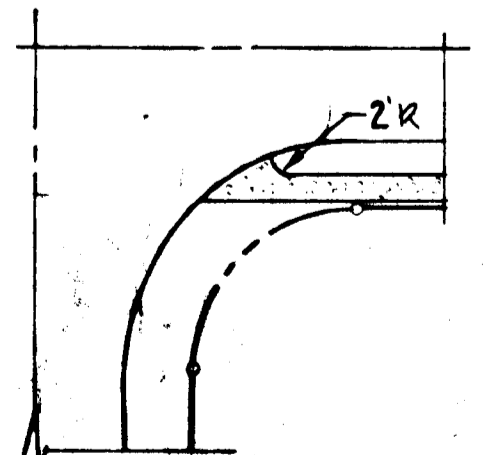
DETAIL "A"
 Scale: 1" = 10'



DETAIL "B"
 Scale: 1" = 10'

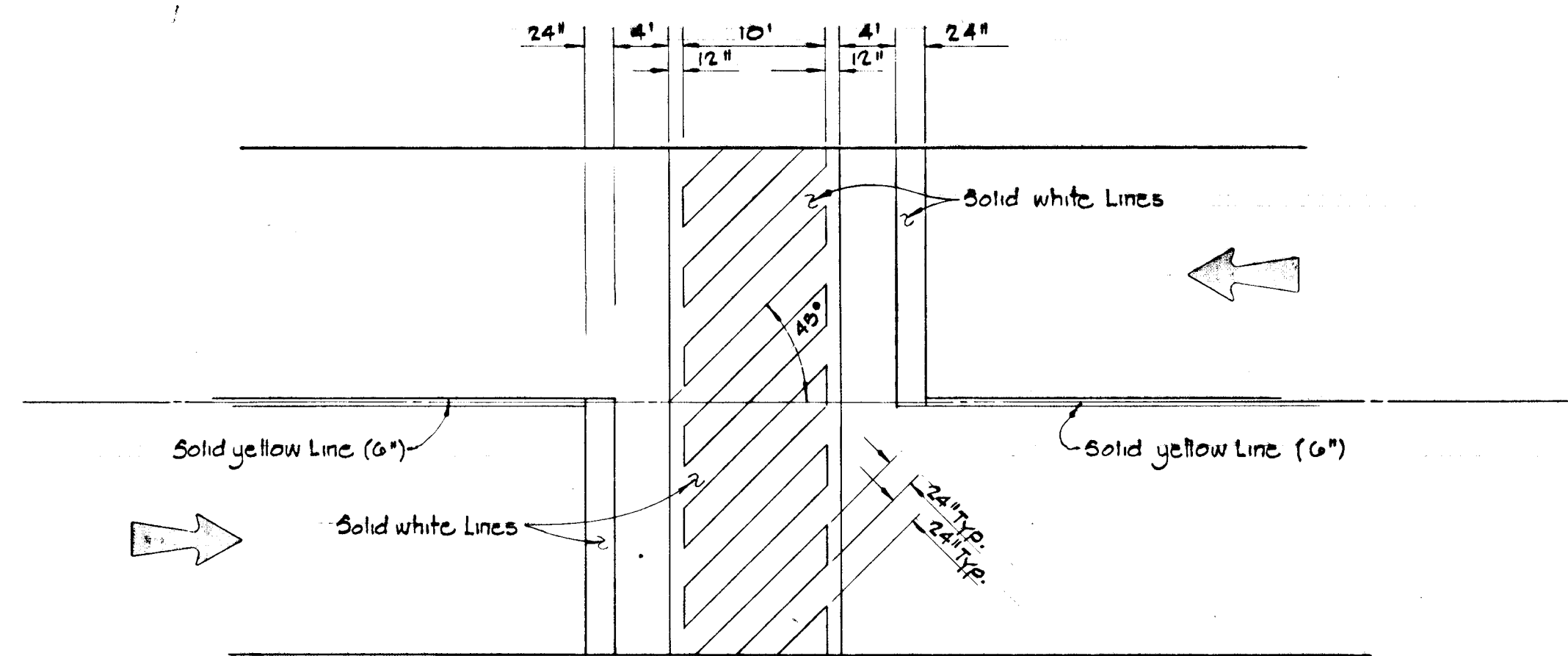


DETAIL "C"
 Scale: 1" = 30'



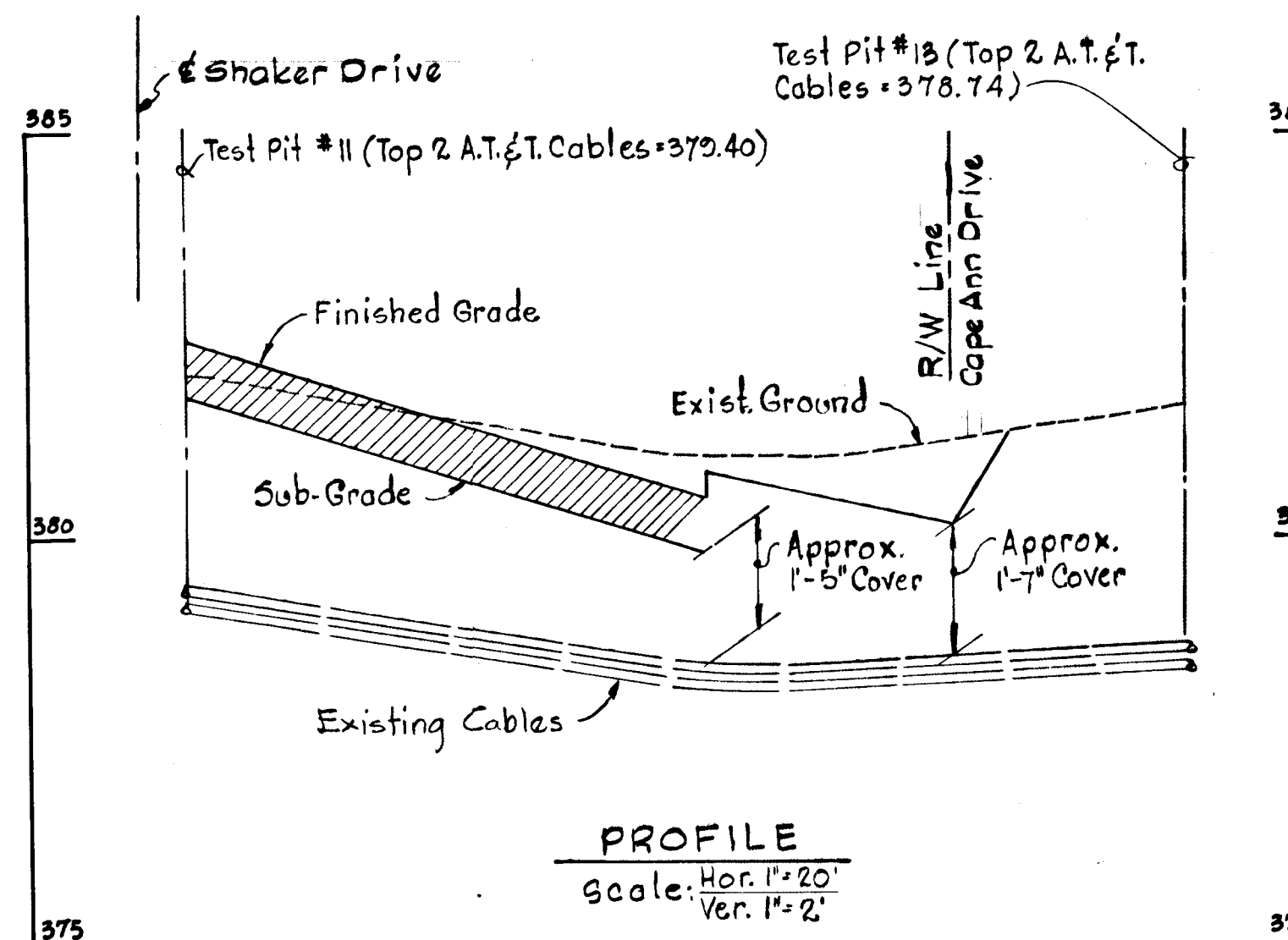
DETAIL "D"
 Scale: 1" = 30'

SIDEWALK DETAILS

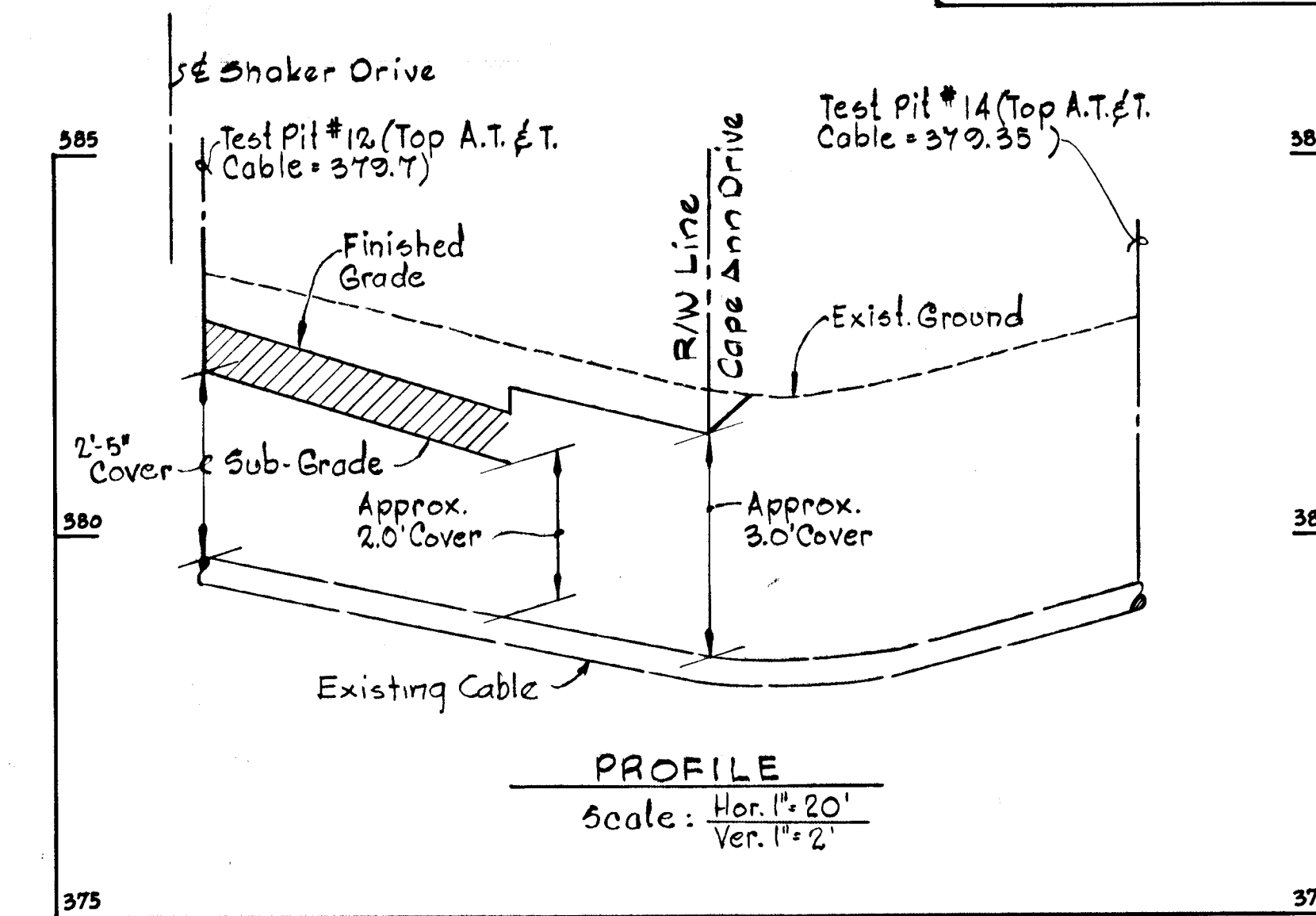


CROSSWALK and STOP LINES DETAIL

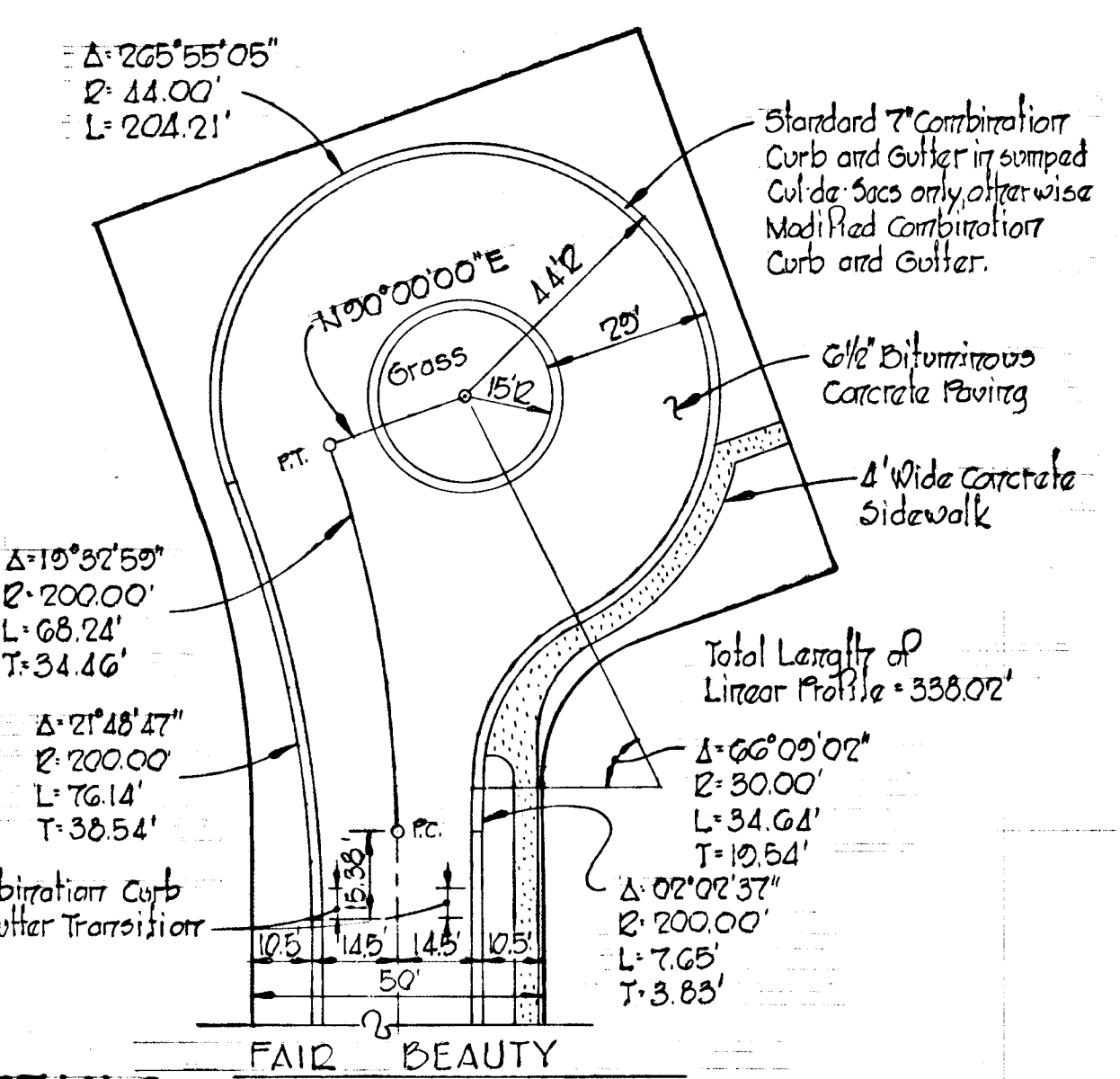
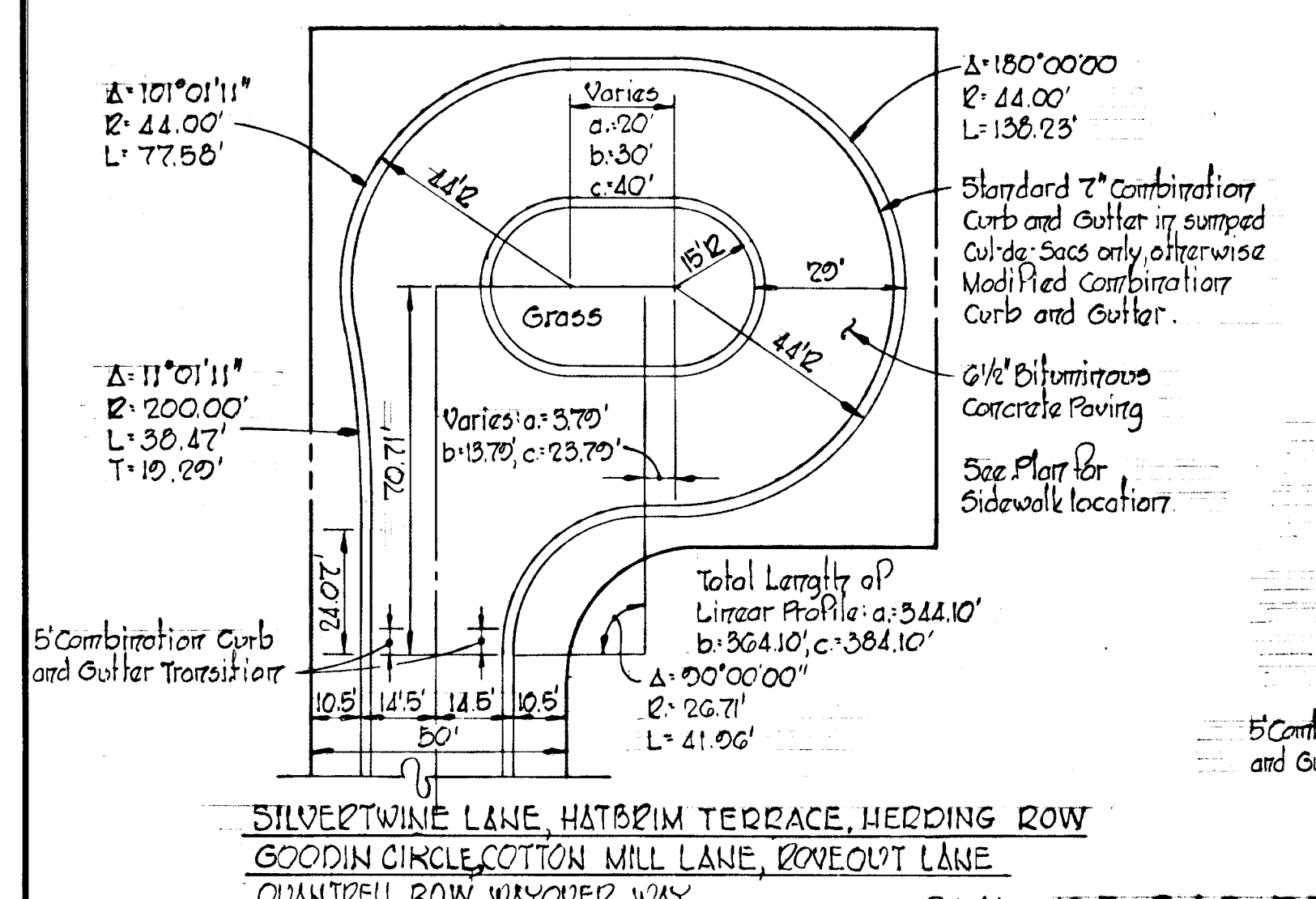
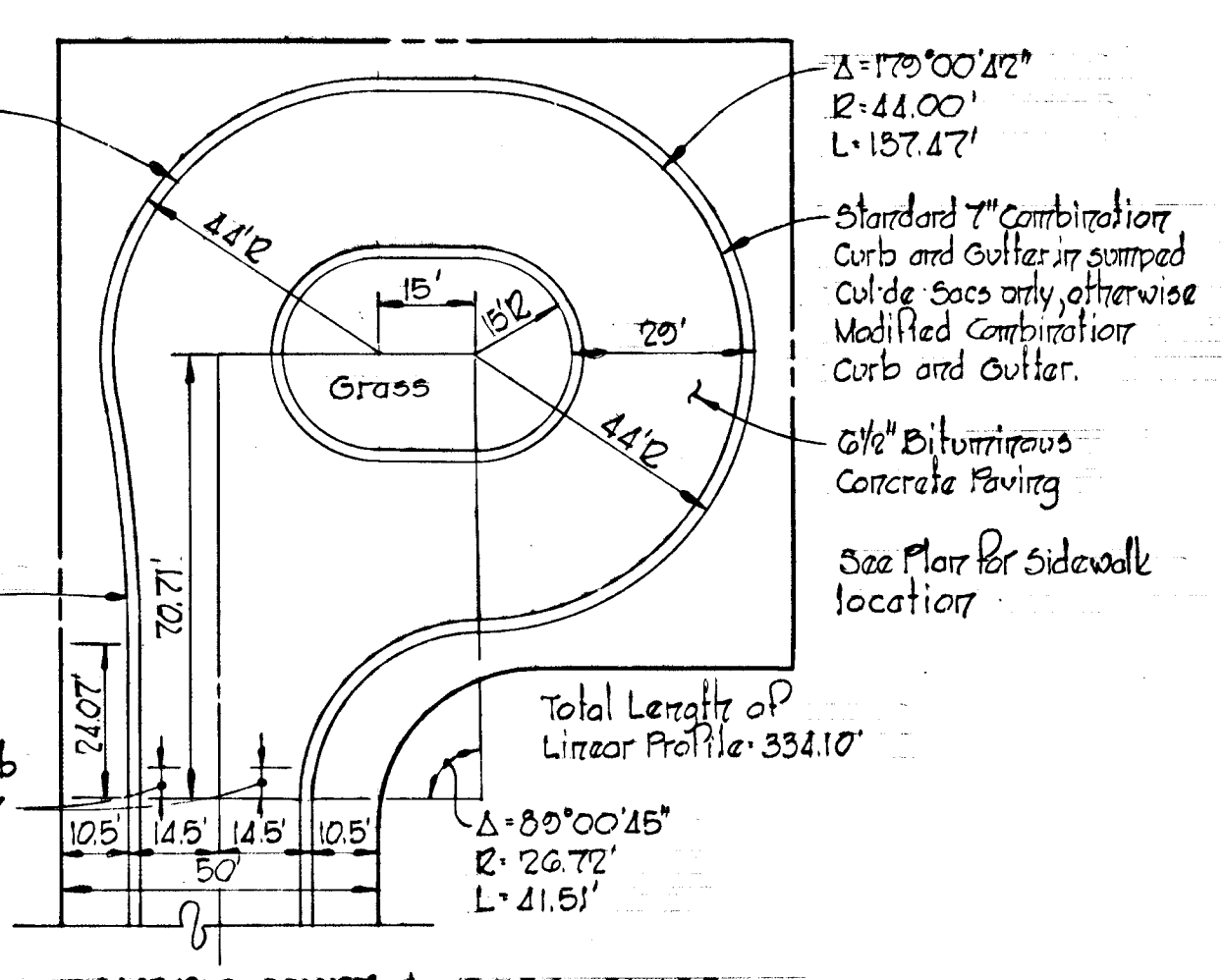
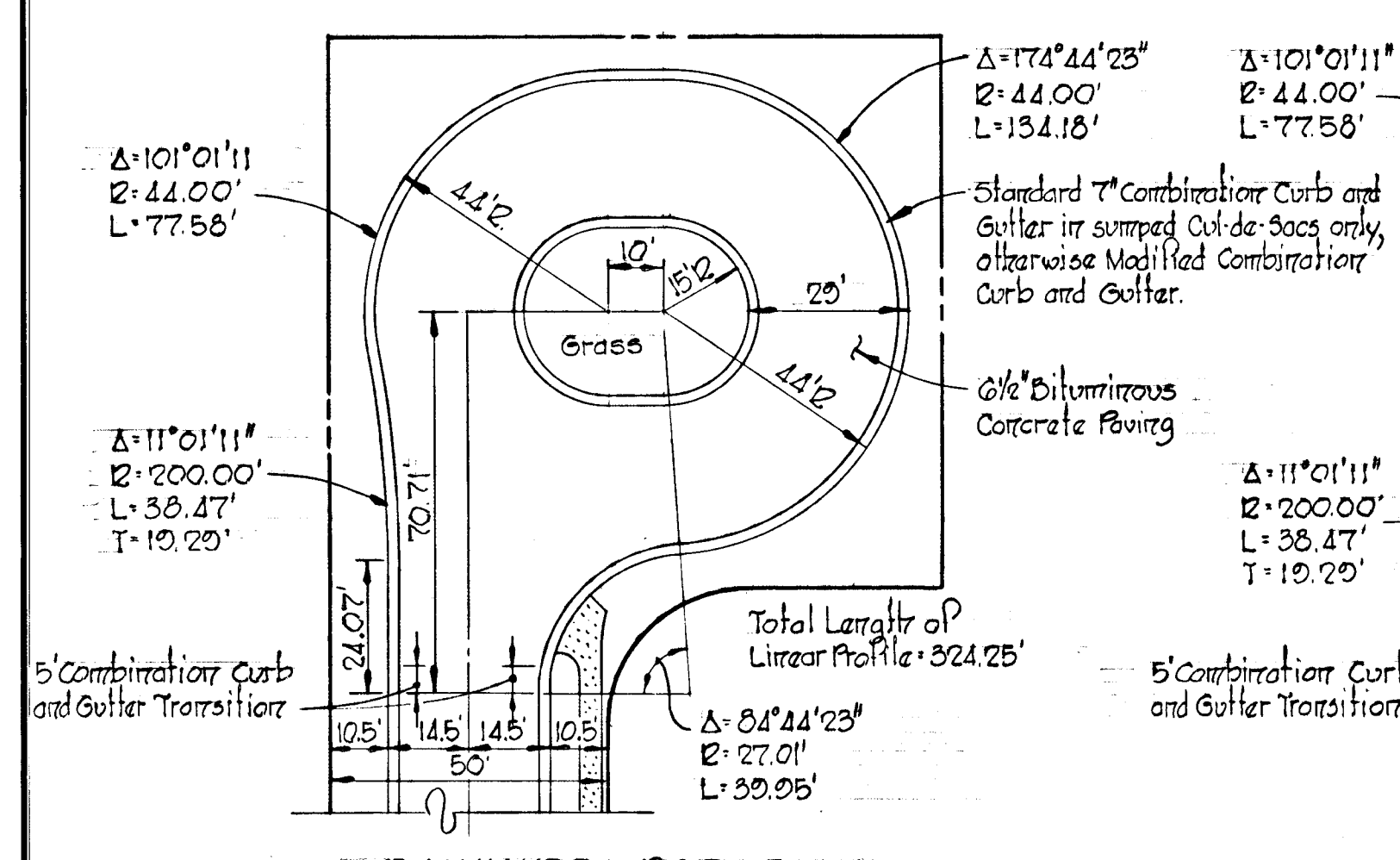
SCALE: 1" = 10'



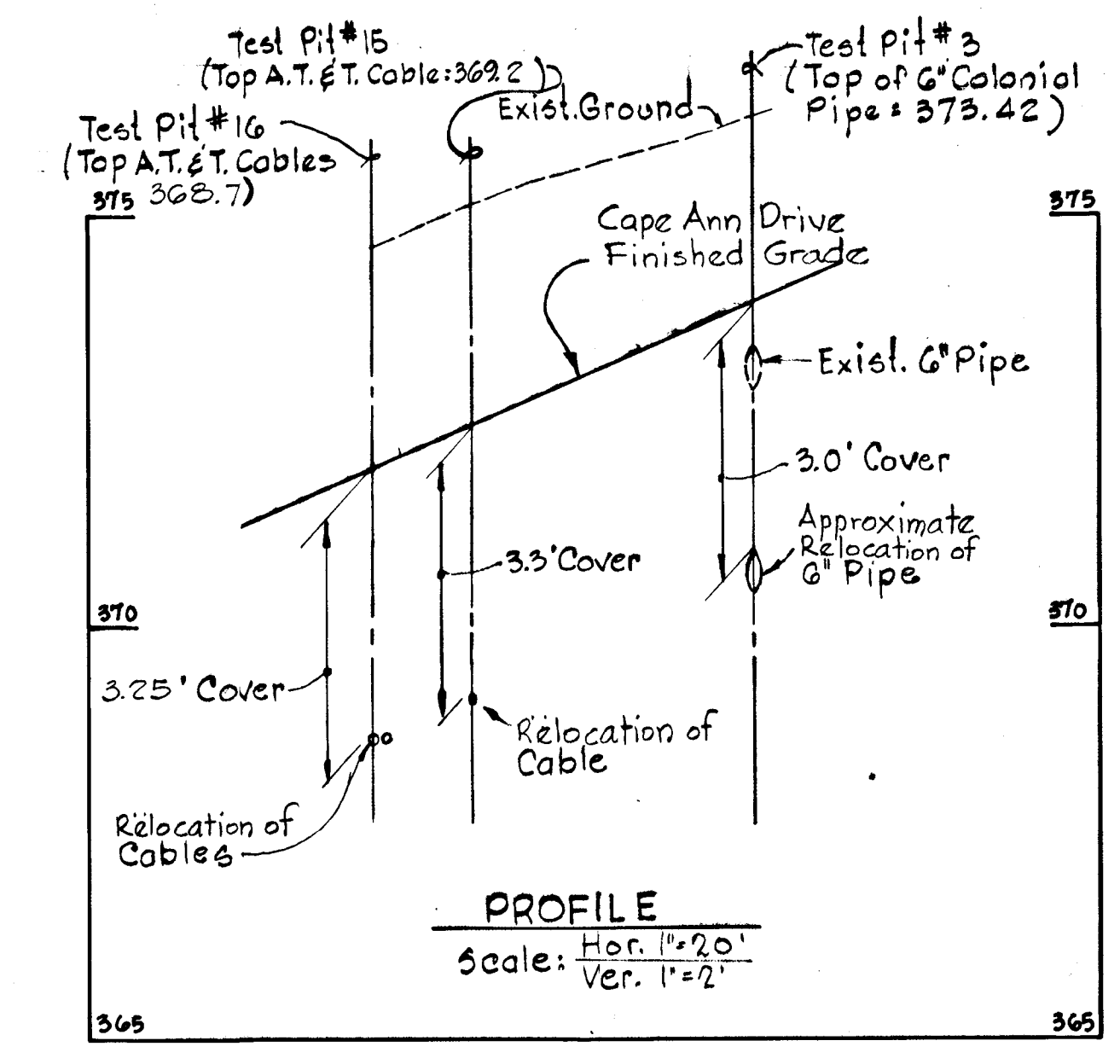
PROFILE
 Scale: Hor. 1" = 20'
 Ver. 1" = 2'



PROFILE
 Scale: Hor. 1" = 20'
 Ver. 1" = 2'



CUL-DE-SAC DETAILS
 Scale: 1" = 30'



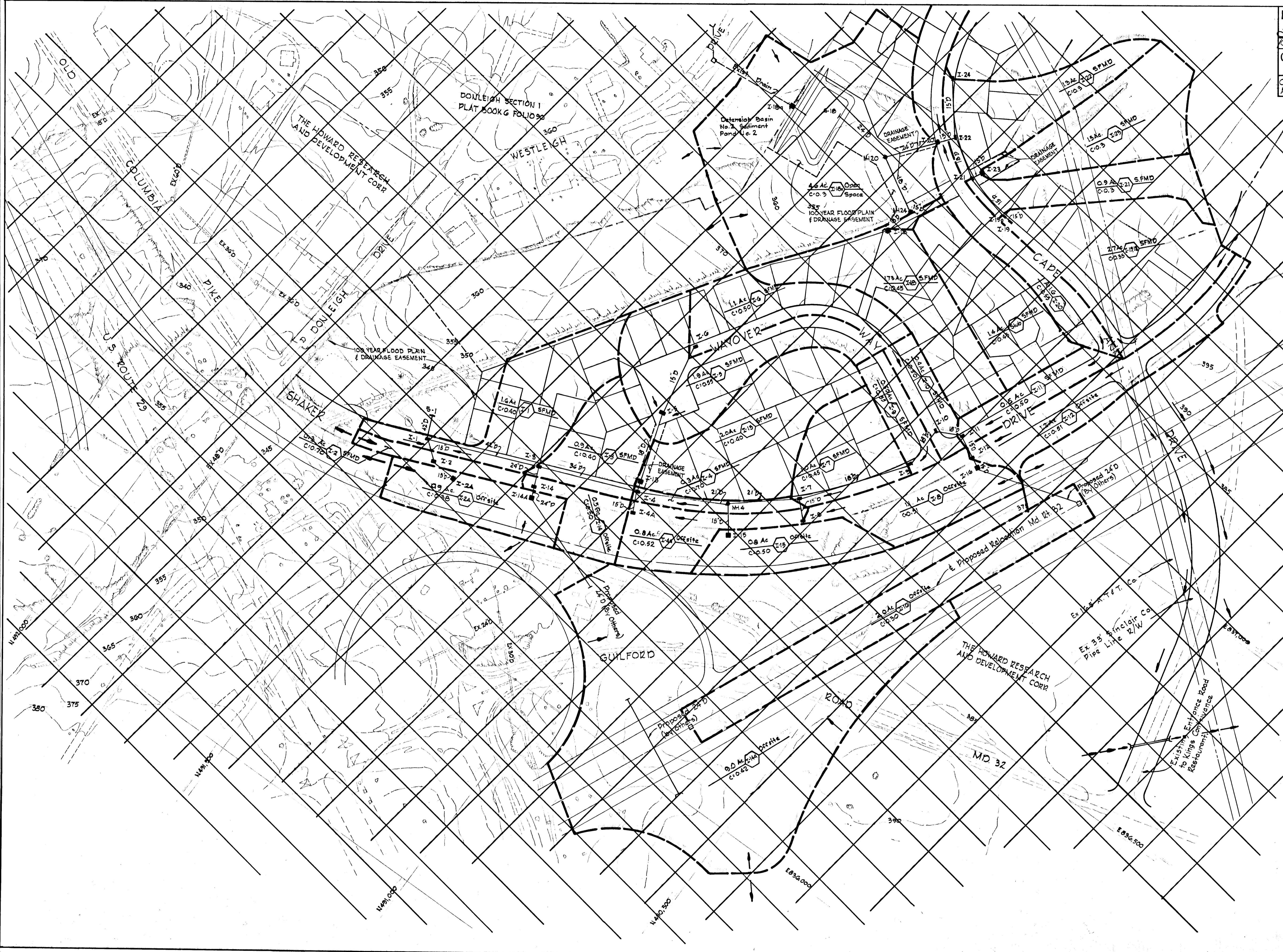
PROFILE
 Scale: Hor. 1" = 20'
 Ver. 1" = 2'

ROAD CROSSINGS-COLONIAL PIPE LINE AND A.T. & T. CABLES
 Scale: As Shown

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 5/17/74
James

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE
		PROJECT TITLE ROADWAY DETAILS
		SCALE: AS SHOWN DATE: 11/15/74
		WHITMAN, REARDY & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McLeod</i> KENNETH A. McLEOD Registered Engineer No. 1974

For revised Drainage Area Map, see Supplement to Road Construction Plans, dated 9/10/77, sheet 16 of 18.

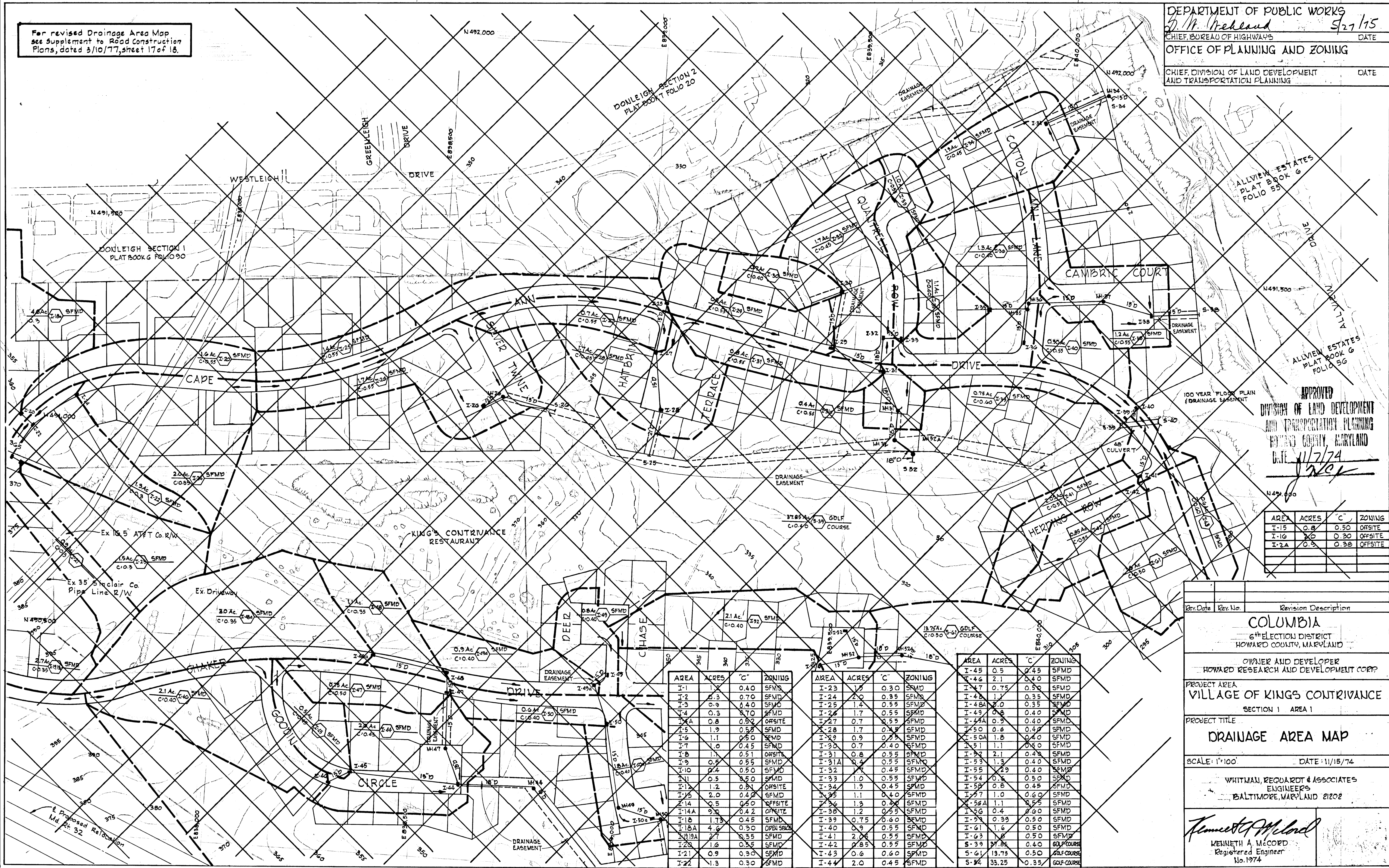


APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/17/74
JACK

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE DRAINAGE AREA MAP
		SCALE: 1"=100' DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McLeod</i> KENNETH A. McLEOD Registered Engineer No. 1974

For revised Drainage Area Map see Supplement to Road Construction Plans, dated 3/10/77, sheet 17 of 18.

DEPARTMENT OF PUBLIC WORKS
J. H. McLeod 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. H. McLeod

AREA	ACRES	"C"	ZONING
I-15	0.8	0.30	OFFSITE
I-16	0.0	0.30	OFFSITE
I-2A	0.5	0.38	OFFSITE

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
 SECTION 1 AREA 1

PROJECT TITLE
DRAINAGE AREA MAP

SCALE: 1"=100' DATE: 11/15/74

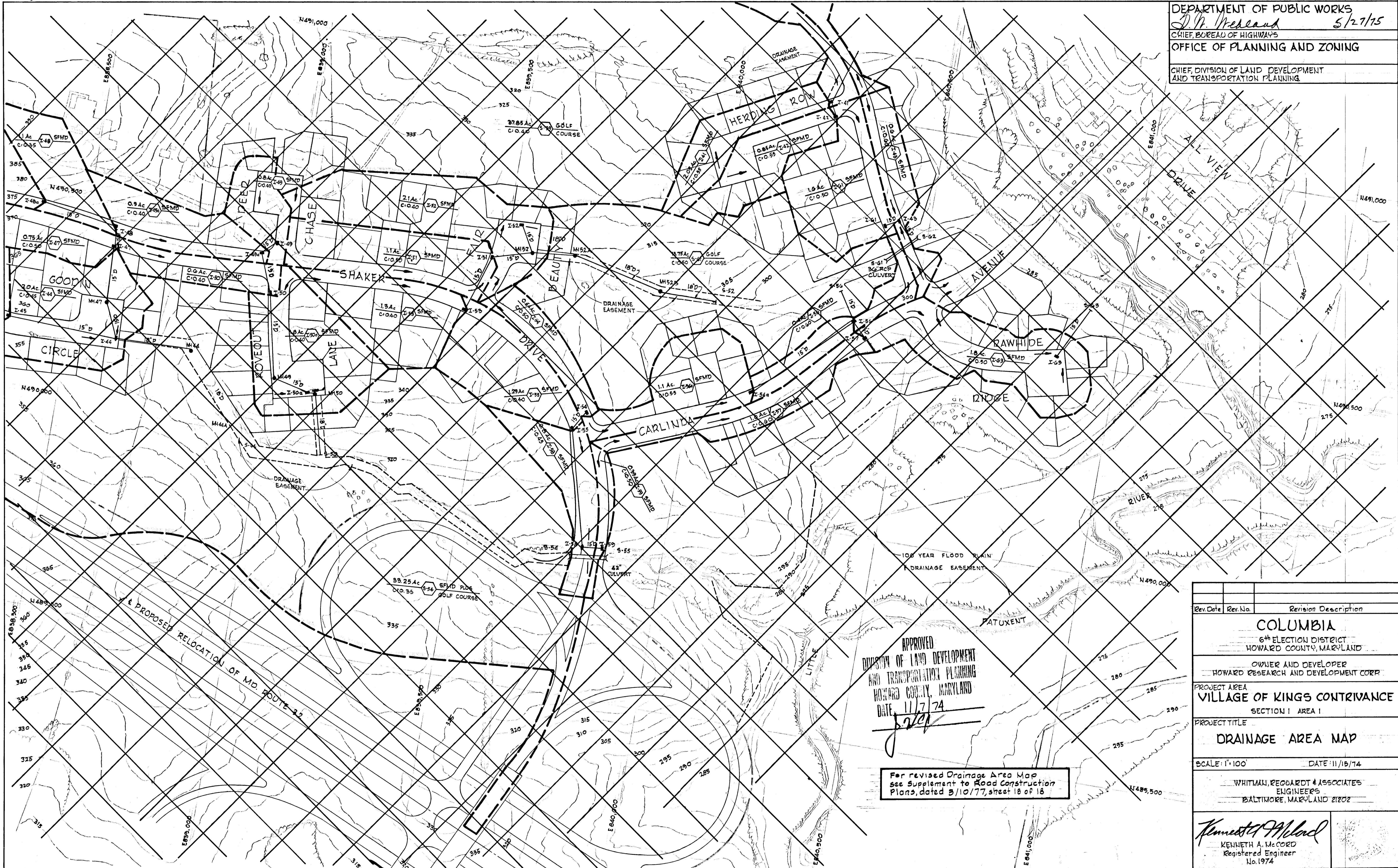
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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

AREA	ACRES	"C"	ZONING
I-1	1.0	0.40	SFMD
I-2	2.3	0.70	SFMD
I-3	0.9	0.40	SFMD
I-4	0.3	0.70	SFMD
I-5A	0.8	0.50	OFFSITE
I-5	1.1	0.55	SFMD
I-6	1.9	0.50	SFMD
I-7	1.0	0.45	SFMD
I-8	1.1	0.51	OFFSITE
I-9	0.9	0.55	SFMD
I-10	0.4	0.50	SFMD
I-11	0.5	0.50	SFMD
I-12	1.2	0.51	OFFSITE
I-13	2.0	0.40	SFMD
I-14A	9.5	0.42	OFFSITE
I-14B	1.75	0.45	SFMD
I-18A	4.6	0.30	OFFSITE
I-19A	2.7	0.35	SFMD
I-20	1.6	0.35	SFMD
I-21	0.9	0.30	SFMD
I-22	1.3	0.30	SFMD

AREA	ACRES	"C"	ZONING
I-23	1.5	0.30	SFMD
I-24	2.0	0.35	SFMD
I-25	1.4	0.55	SFMD
I-26	1.7	0.55	SFMD
I-27	0.7	0.55	SFMD
I-28	1.7	0.45	SFMD
I-29	0.9	0.55	SFMD
I-30	0.7	0.40	SFMD
I-31	0.8	0.55	SFMD
I-31A	0.4	0.55	SFMD
I-32	1.9	0.45	SFMD
I-33	1.0	0.55	SFMD
I-34	1.9	0.45	SFMD
I-35	1.1	0.40	SFMD
I-36	1.3	0.40	SFMD
I-38	1.2	0.55	SFMD
I-39	0.75	0.60	SFMD
I-40	0.9	0.55	SFMD
I-41	2.05	0.55	SFMD
I-42	0.85	0.55	SFMD
I-43	0.6	0.60	SFMD
I-44	2.0	0.45	SFMD

AREA	ACRES	"C"	ZONING
I-45	0.5	0.45	SFMD
I-46	2.1	0.40	SFMD
I-47	0.75	0.50	SFMD
I-48A	1.1	0.35	SFMD
I-48B	2.0	0.35	SFMD
I-49	0.6	0.40	SFMD
I-49A	0.9	0.40	SFMD
I-50	0.6	0.42	SFMD
I-50A	1.8	0.40	SFMD
I-51	1.1	0.50	SFMD
I-52	2.1	0.45	SFMD
I-53	1.3	0.40	SFMD
I-55	2.9	0.40	SFMD
I-54	0.5	0.50	SFMD
I-58	0.6	0.45	SFMD
I-57	1.0	0.60	SFMD
I-56A	1.1	0.55	SFMD
I-56	0.4	0.60	SFMD
I-59	0.39	0.50	SFMD
I-61	1.6	0.50	SFMD
I-63	1.6	0.50	SFMD
S-39	37.85	0.40	GOLF COURSE
S-61	13.75	0.50	GOLF COURSE
S-34	33.25	0.35	GOLF COURSE

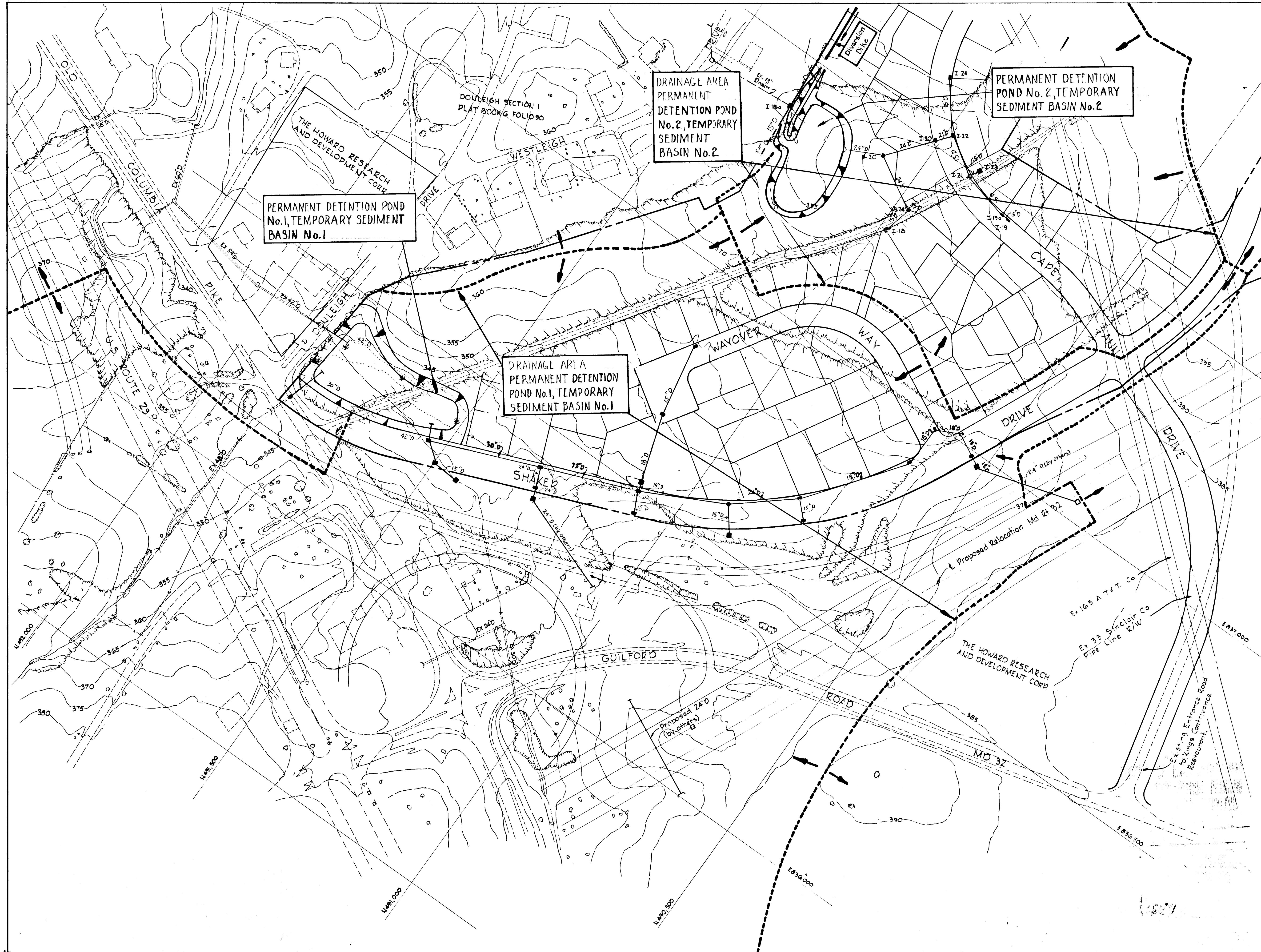


APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J.P. McLeod

For revised Drainage Area Map
 see Supplement to Road Construction
 Plans, dated 3/10/77, sheet 16 of 16

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION I AREA I		
PROJECT TITLE DRAINAGE AREA MAP		
SCALE: 1"=100'		DATE: 11/15/74
WHITMAN, REARDORF & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		

DEPARTMENT OF PUBLIC WORKS
S. N. Ireland 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



APPROVED
 DEPARTMENT OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. J. [Signature]

Note: (Sediment Control)
 All Storm Drain Inlets shall be capped and remain capped until their respective watersheds are stabilized. See Roadway Inlet Detail, Sheet 40. All dikes and swales shall be stabilized immediately after construction of same, see Sediment Control Notes Sheet 40.

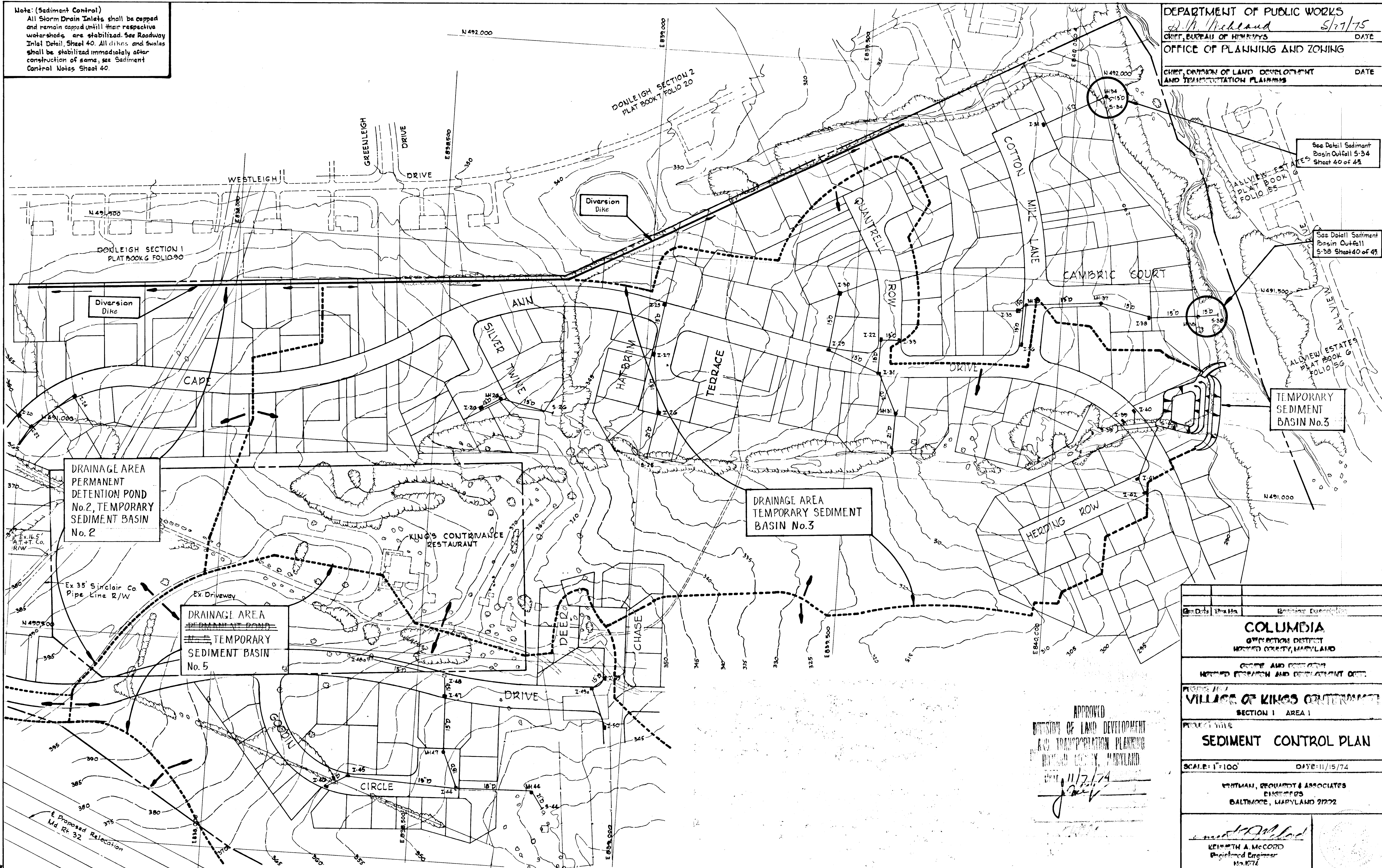
Rev. Date	Rev. No.	Revision Description
COLUMBIA GMELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1 PROJECT TITLE SEDIMENT CONTROL PLAN		
SCALE: 1"=100'		DATE: 11/15/74
WHITMAN, DEQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>[Signature]</i> KENNETH A. McCORD Registered Engineer No. 1974		

Note: (Sediment Control)
 All Storm Drain Inlets shall be capped and remain capped until their respective watersheds are stabilized. See Roadway Inlet Detail Sheet 40. All dikes and swales shall be stabilized immediately after construction of same, see Sediment Control Notes Sheet 40.

DEPARTMENT OF PUBLIC WORKS
D.M. McLeod 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

See Detail Sediment Basin Outfall S-34 Sheet 40 of 49

See Detail Sediment Basin Outfall S-38 Sheet 40 of 49

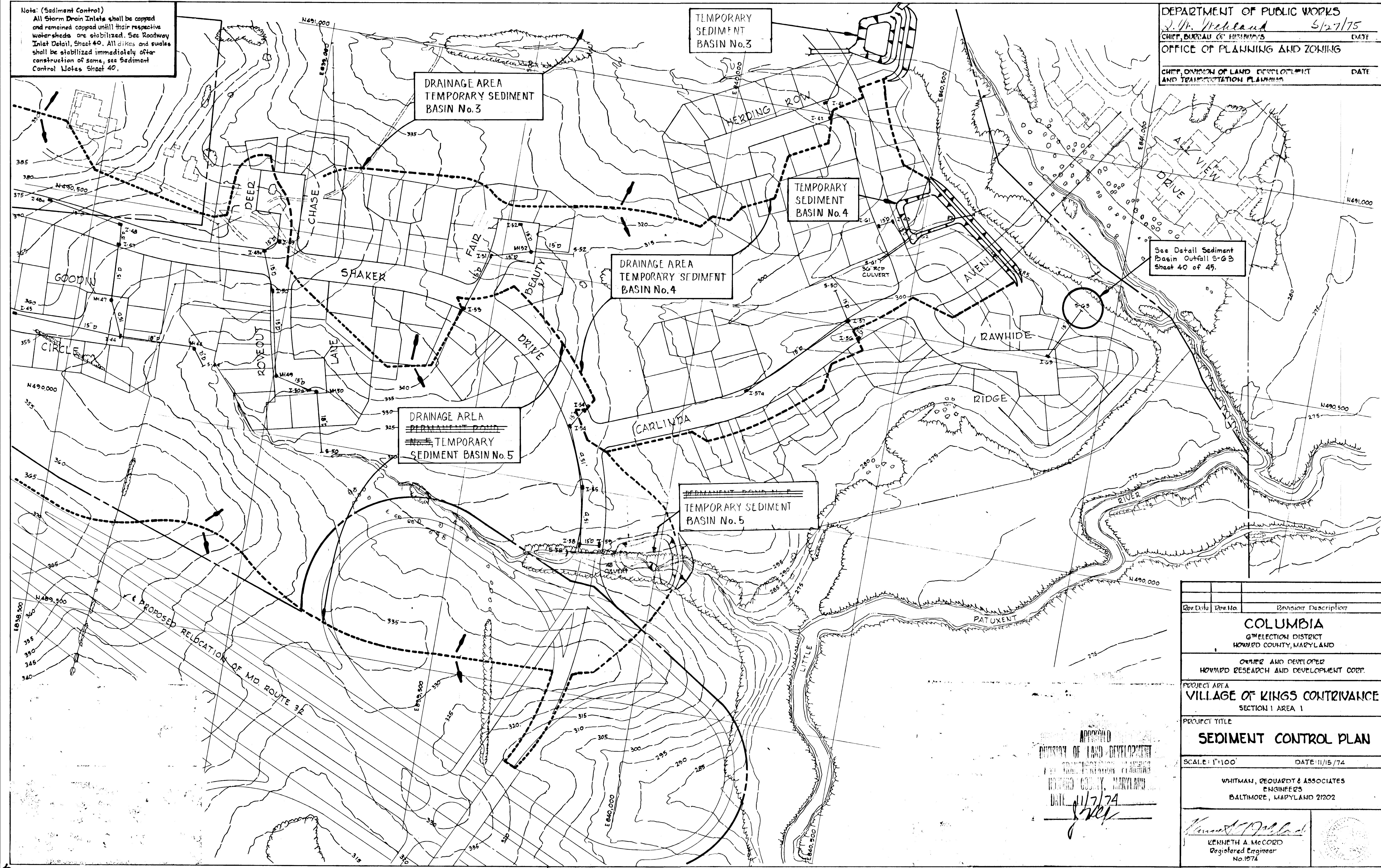


Dist.	Plan No.	Basin Description
COLUMBIA CONCRETE DISTRICT HOTTED CREEK, MARYLAND		
ENGINE AND ARCHITECT HOTTED RESEARCH AND DEVELOPMENT CO.		
PROJECT NO. 1 VILLAGE OF KINGS CONTRAVENT SECTION 1 AREA 1		
PROJECT TITLE SEDIMENT CONTROL PLAN		
SCALE: 1"=100'		DATE: 11/15/74
WHITMAN, BOURNARD & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>D.M. McLeod</i> KENNETH A. MCCORD Registered Engineer No. 1772		

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOTTED COUNTY, MARYLAND
 DATE: 11/7/74
[Signature]

Note: (Sediment Control)
 All Storm Drain Inlets shall be capped and remained capped until their respective watersheds are stabilized. See Roadway Inlet Detail, Sheet 40. All dikes and swales shall be stabilized immediately after construction of same, see Sediment Control Notes Sheet 40.

DEPARTMENT OF PUBLIC WORKS
S. W. Ireland 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



See Detail Sediment Basin Outfall S-63 Sheet 40 of 45.

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
GMELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE SEDIMENT CONTROL PLAN		
SCALE: 1"=100'		DATE: 11/15/74
WHITMAN, DEQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>S. W. Ireland</i> KENNETH A. MCCORD Registered Engineer No. 1074		

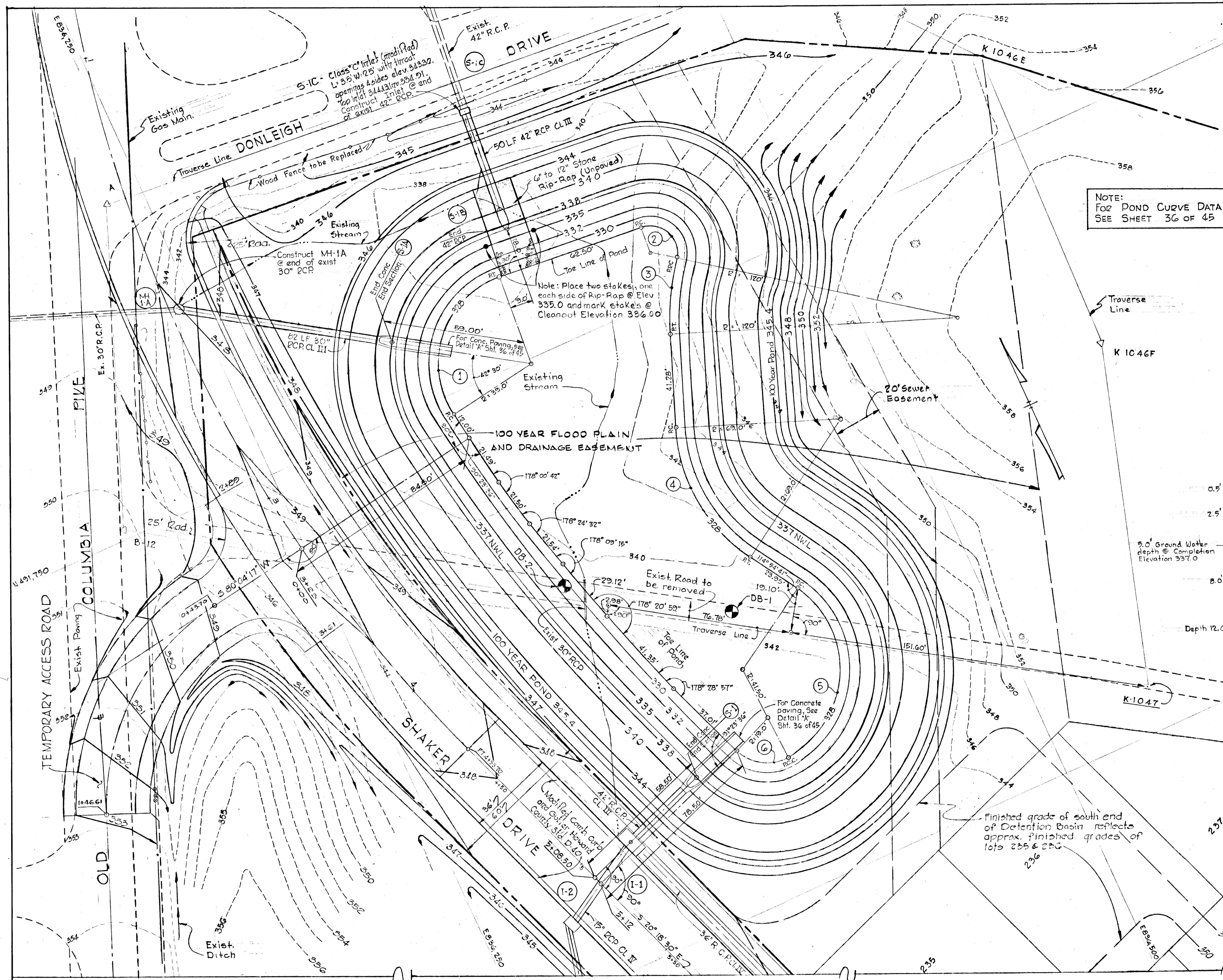
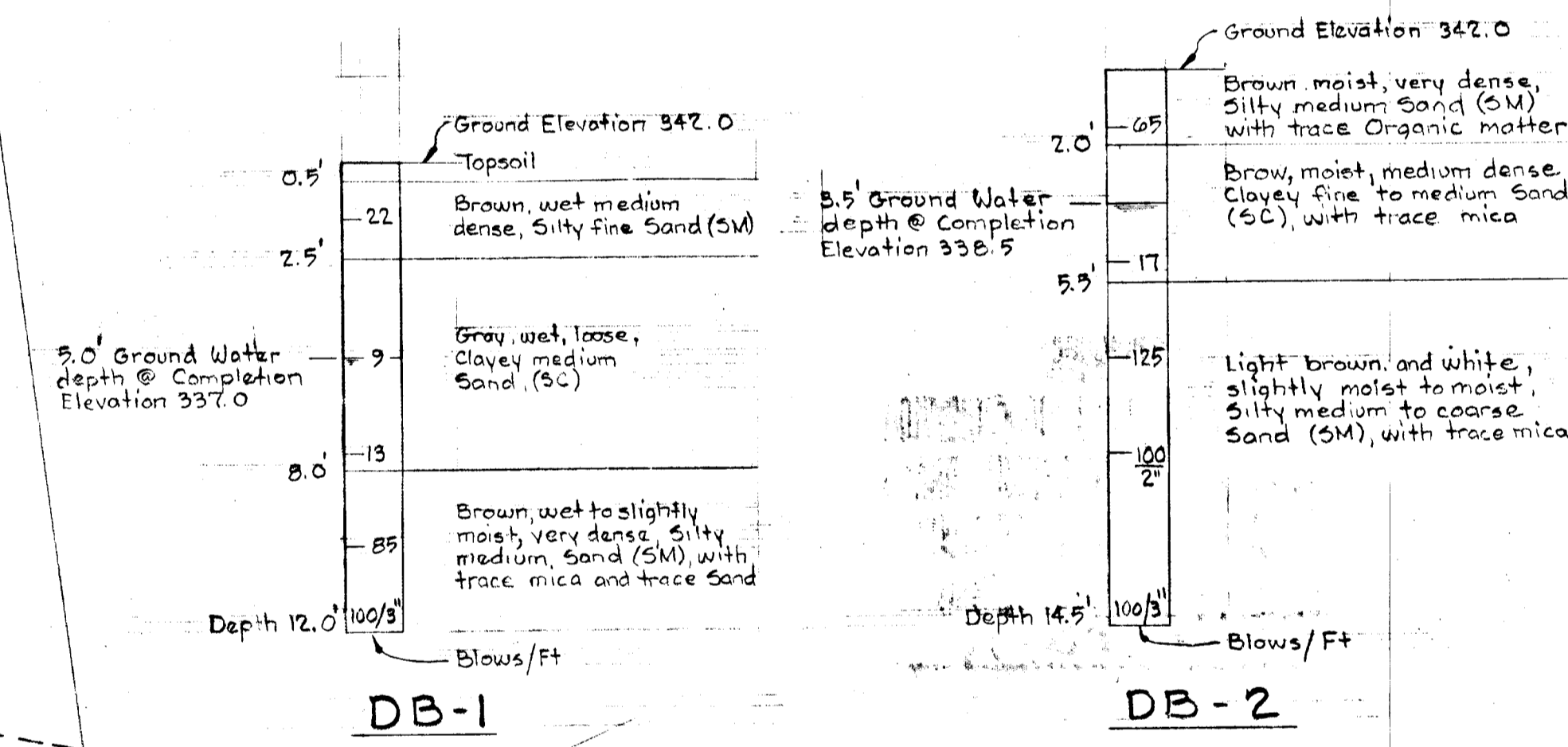
APPROVED
 DIVISION OF LAND DEVELOPMENT
 OFFICE OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 DATE: 11/7/74
[Signature]

SPECIAL NOTES

1. Detention Pond No. 1 shall function initially as a Sediment Basin.
2. The owner shall submit an initial "AS BUILT" drawing of Detention Pond No. 1 to the Howard Soil Conservation District Office in Ellicott City, Maryland.
3. Final Cleanout and refurbishing of Detention Pond No. 1 shall be done strictly to the lines and grades as shown on these drawings. Any damages to the Pond shall be reconstructed according to these drawings and specifications.
4. Detention Pond No. 1 shall be stabilized from Elev. 337.0 to Elev. 354.0. See Permanent Seeding Notes, Sheet 40 of 45. Stabilization shall be repeated where necessary after final cleanout.
5. Upon Completion of final cleanout, refurbishing, reconstruction, etc., the Owner shall submit a final "AS BUILT" drawing of Detention Pond No. 1 to the Howard Soil Conservation District Office, Ellicott City, Maryland.
6. The initial and final "AS BUILTS" shall include all the Pond work as shown and specified on these drawings.
 1. See "POND SPECIFICATIONS", Sheet 45 of 45.
 2. Detention Pond excavation equals 11,500 cubic yards.
 3. Program cleanout of Basin at elev. 336.00 approximately once every 9 months.

NOTE:
 FOR POND CURVE DATA
 SEE SHEET 36 OF 45

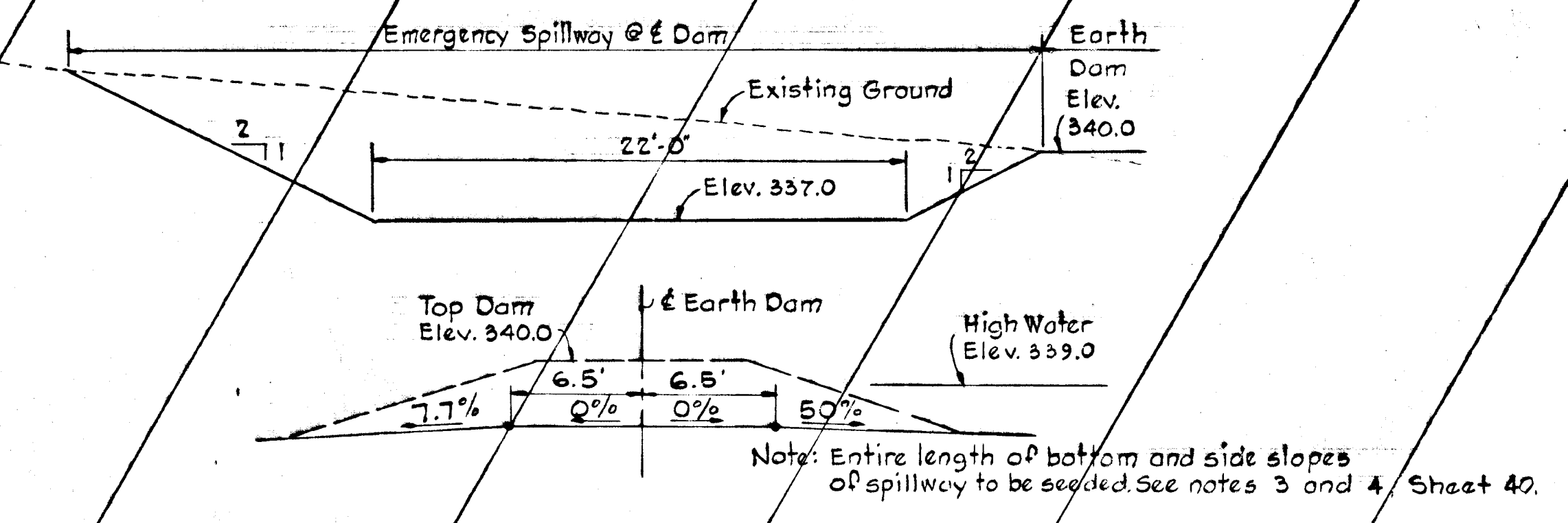
SOIL BORINGS



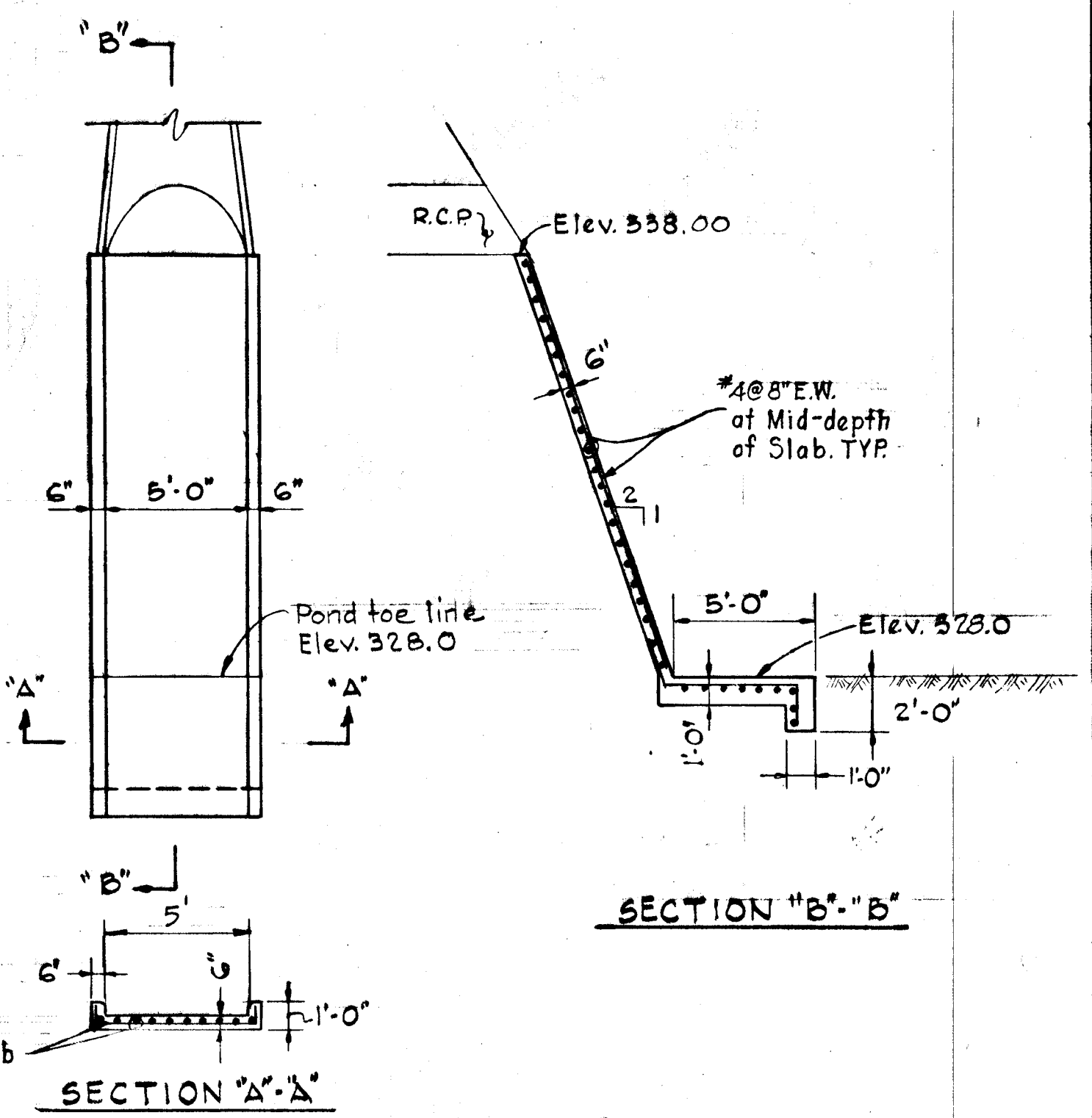
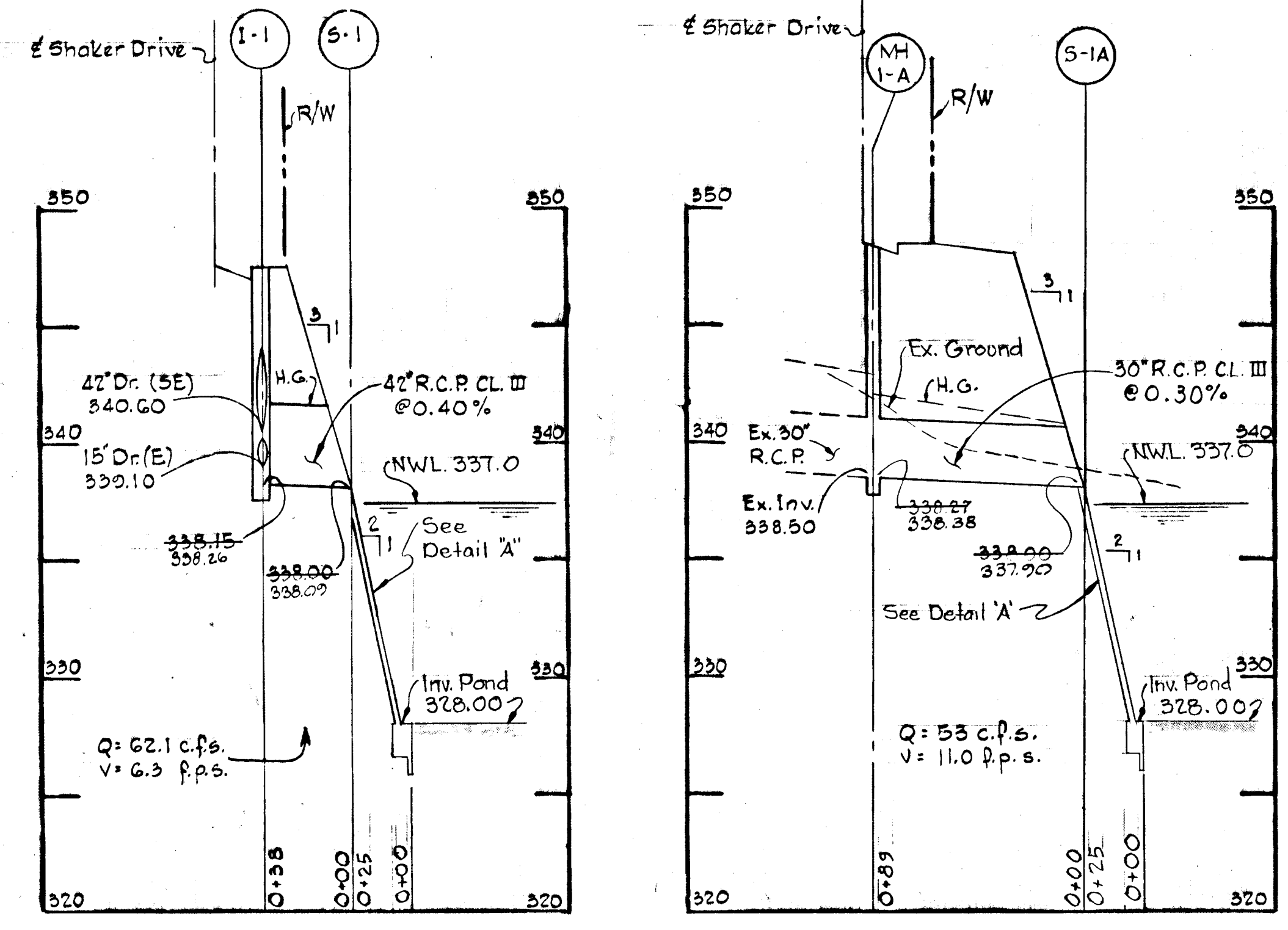
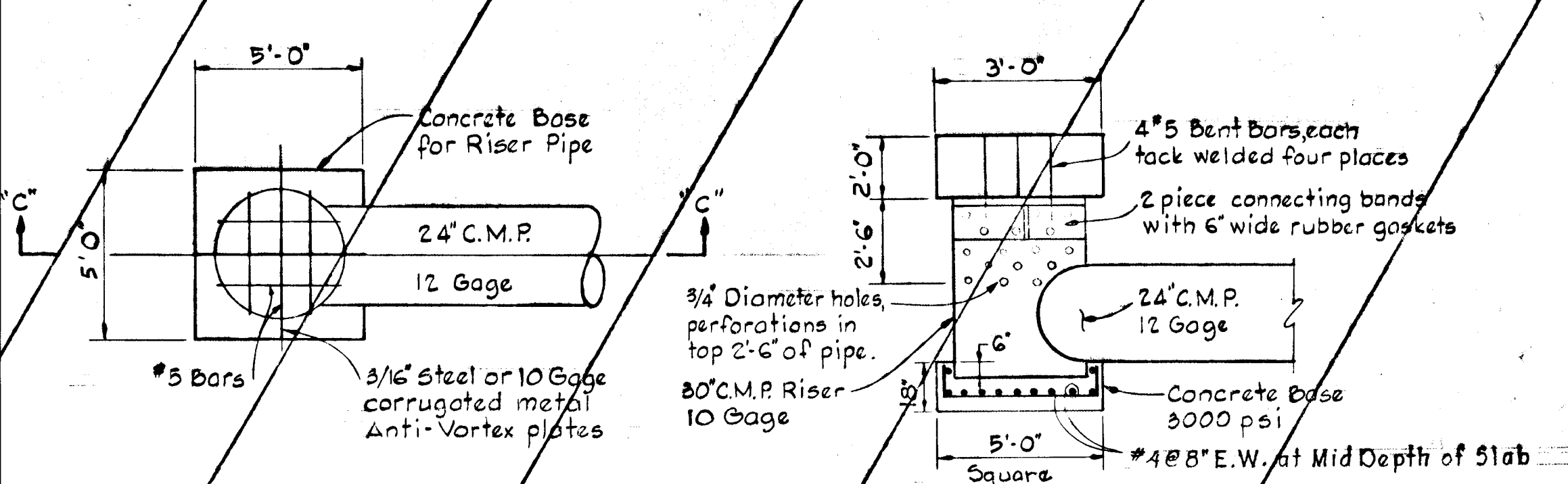
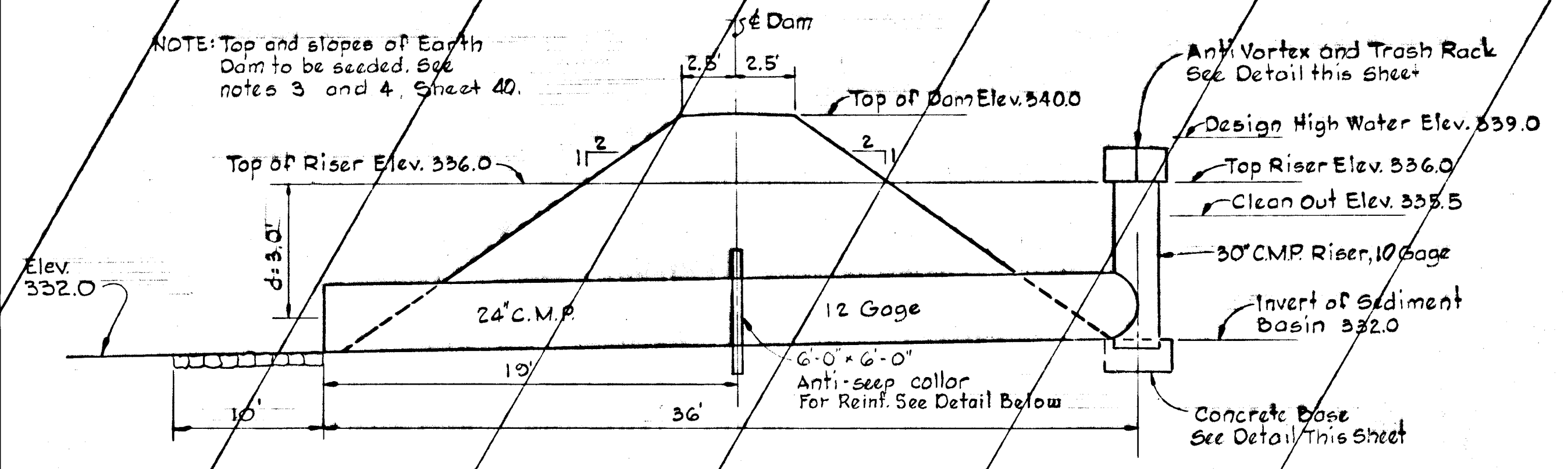
PLAN
 Scale: 1" = 20'

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 5/17/74
[Signature]

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE PERMANENT DETENTION POND No. 1 TEMPORARY SEDIMENT BASIN No. 1
		SCALE: As Shown DATE: 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974

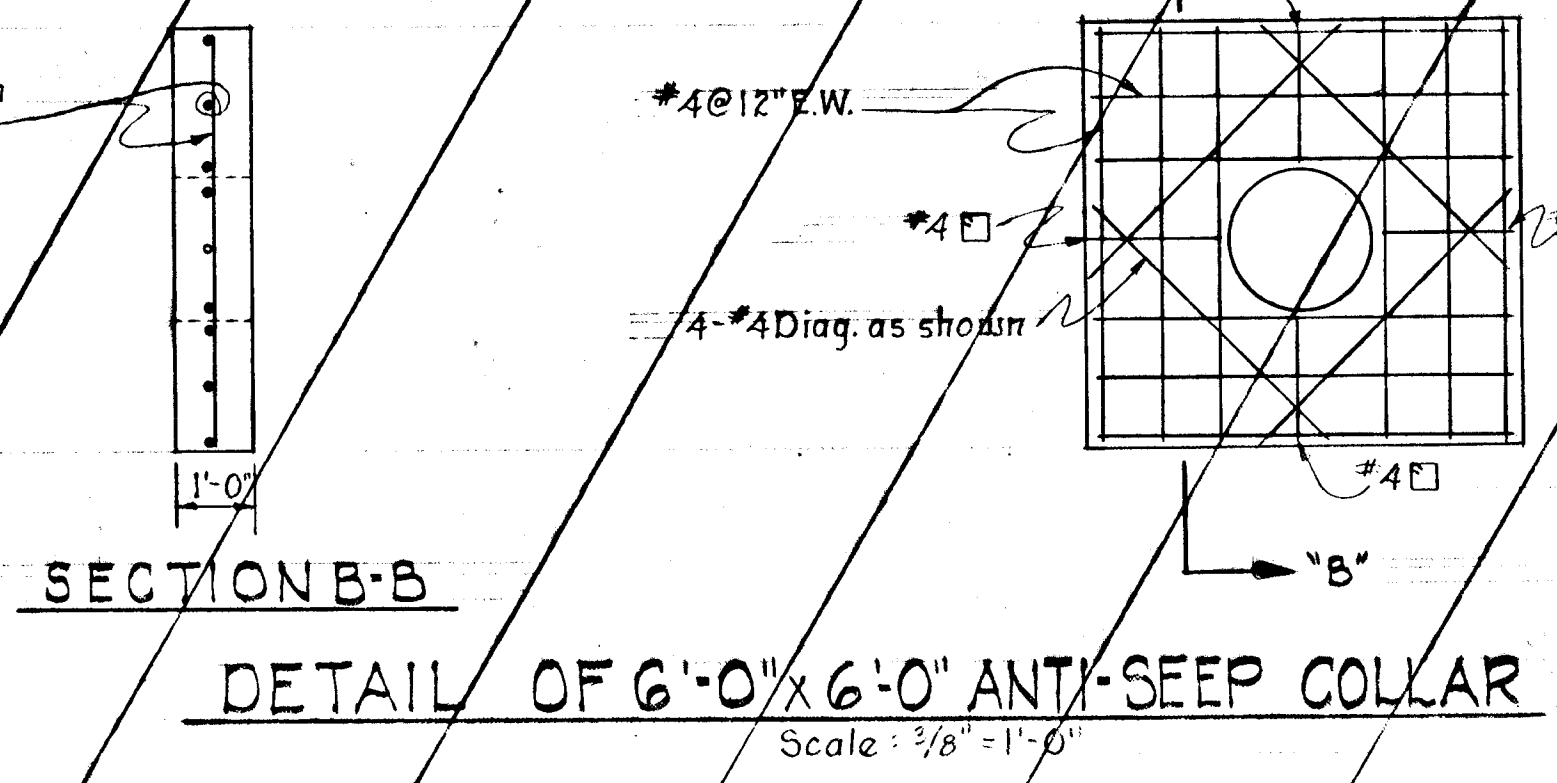
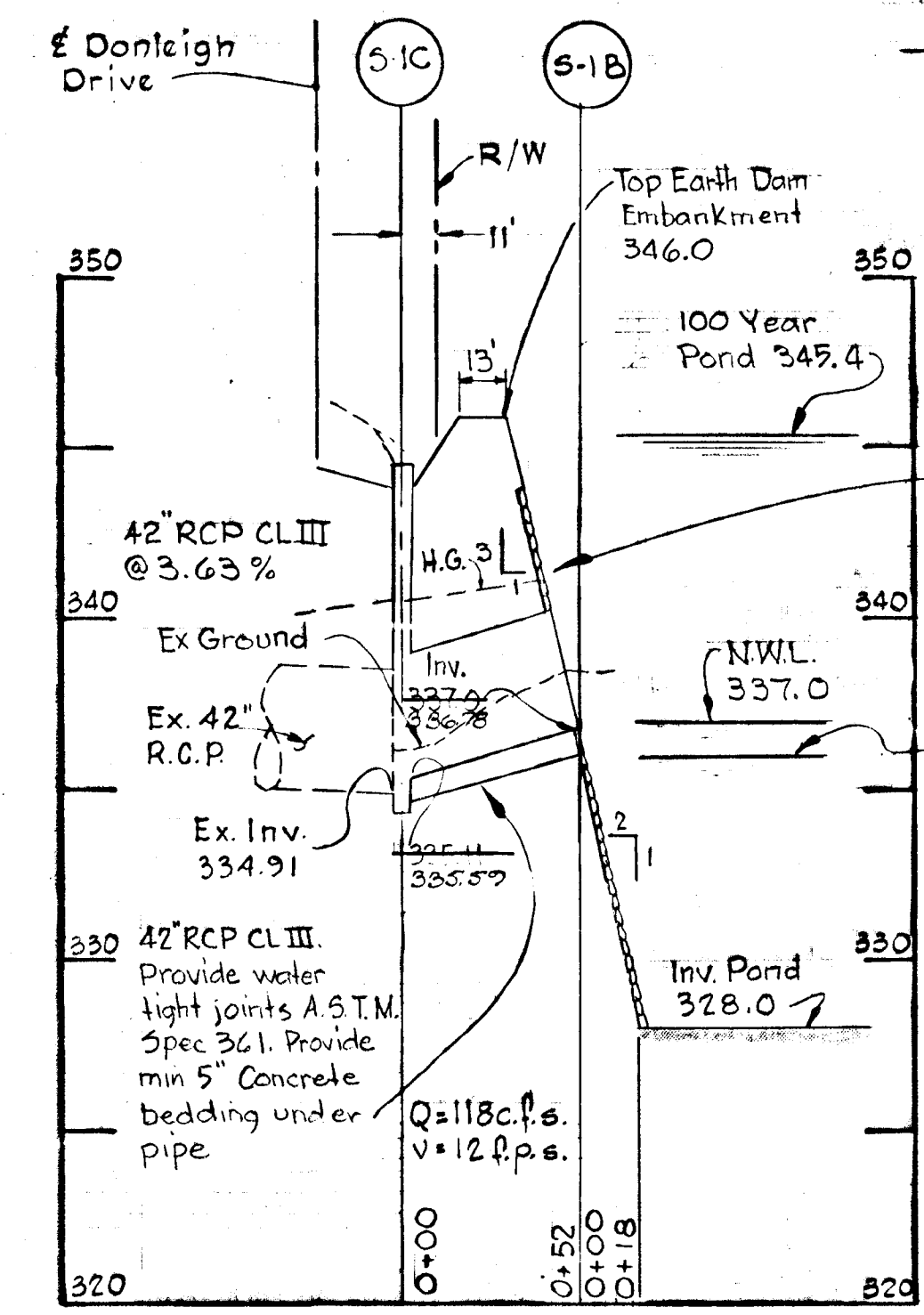


NOT INCLUDED IN THIS CONTRACT



POND CURVE DATA

CURVE	Δ	R	T	L	Ch	Ch Brng
①	104° 25' 0"	39.00'	50.23'	71.07'	61.64'	N. 42° 10' 47" E
②	122° 15' 00"	11.50'	20.85'	24.54'	20.14'	S. 24° 23' 13" E
③	15° 30' 00"	120.00'	16.33'	32.46'	32.36'	S. 28° 53' 17" E
④	53° 15' 00"	69.00'	34.59'	64.13'	61.84'	S. 5° 23' 23" E
⑤	119° 30' 00"	41.50'	71.16'	86.56'	71.70'	S. 27° 44' 07" W
⑥	72° 12' 23"	19.00'	13.86'	23.94'	22.33'	N. 55° 24' 41" W



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. J. J.

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
 SECTION 1 AREA 1

PROJECT TITLE
**PERMANENT DETENTION POND No. 1
 TEMPORARY SEDIMENT BASIN No. 1**

SCALE: AS SHOWN DATE: 11/15/74

WHITMAN, REQUART & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

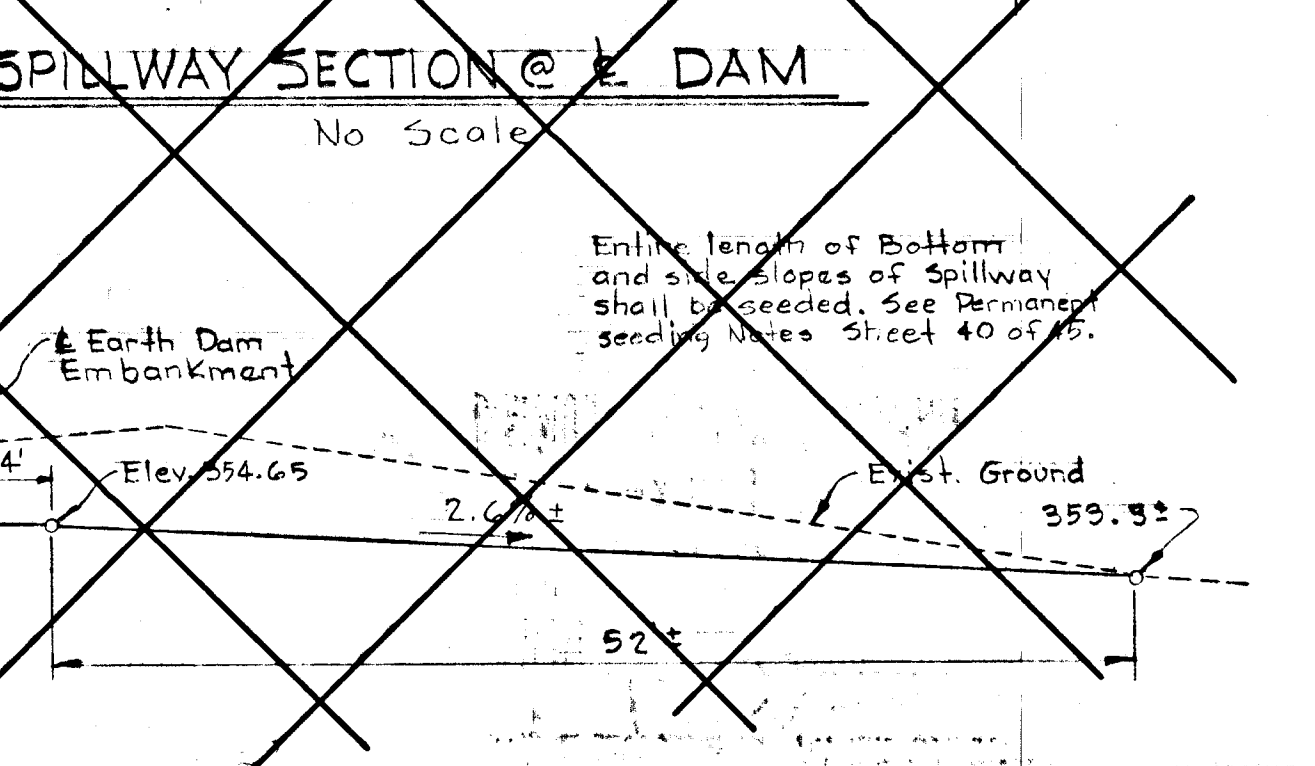
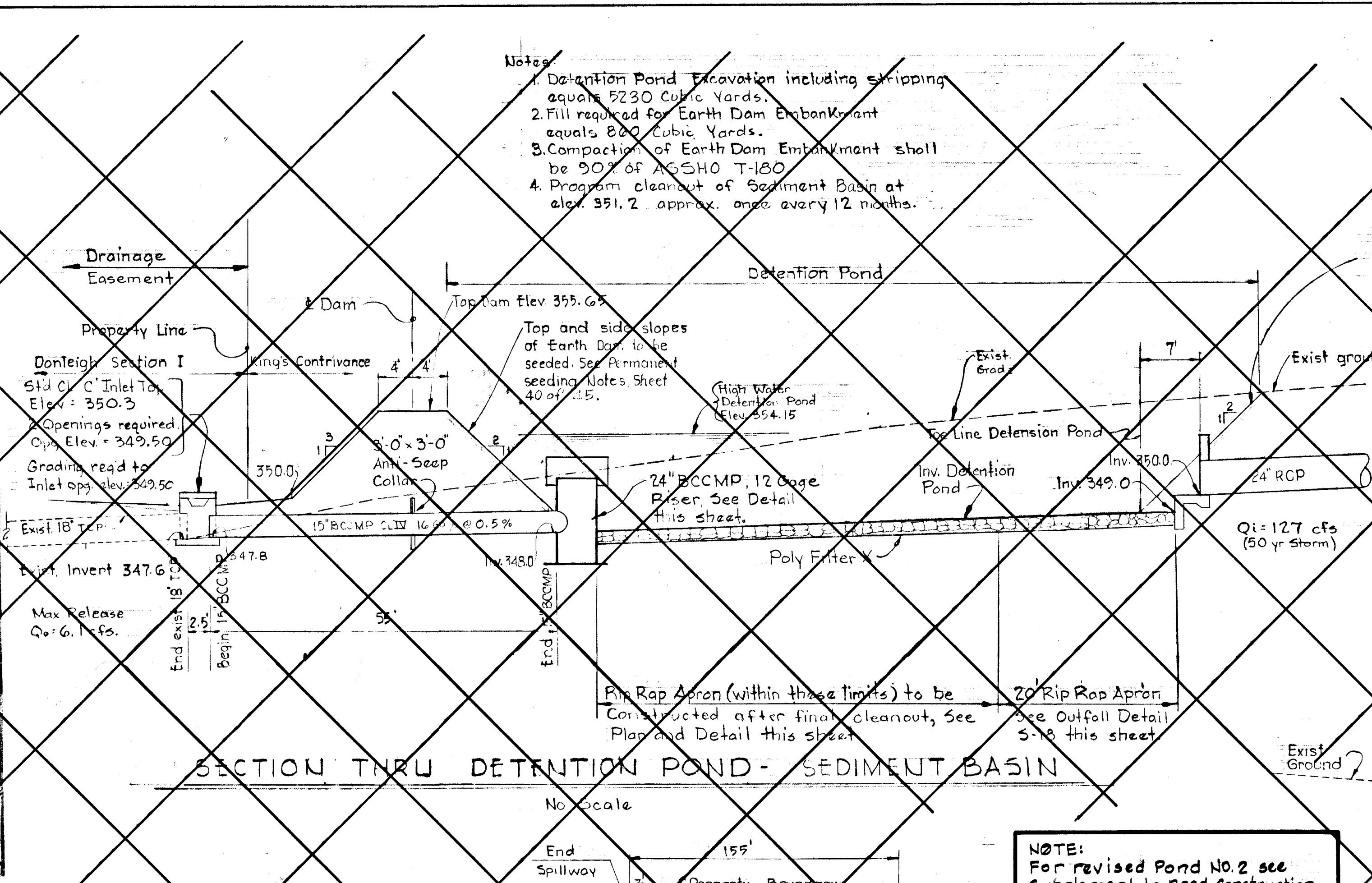
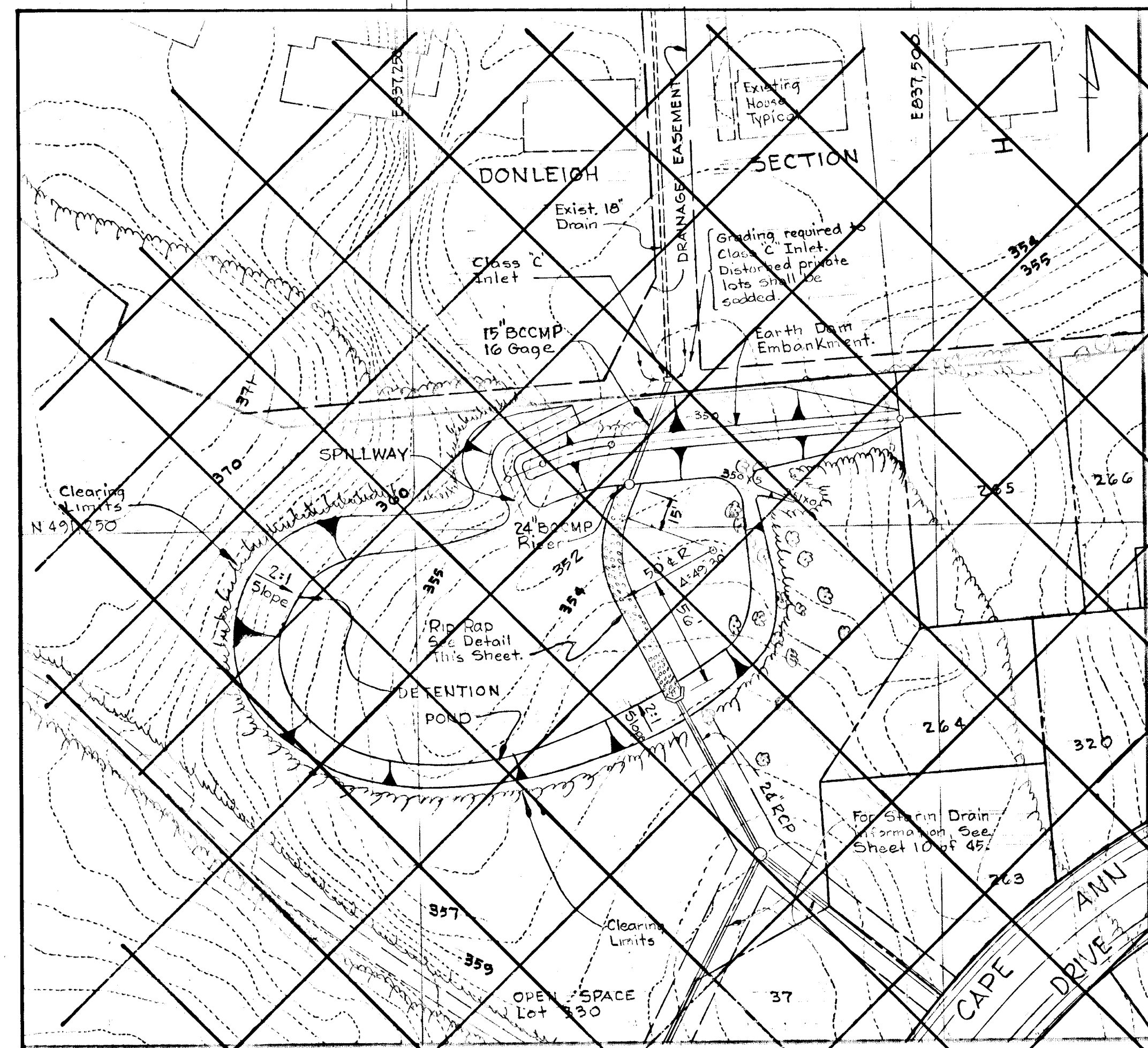
Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

- Notes
1. Detention Pond Excavation including stripping equals 5230 Cubic Yards.
 2. Fill required for Earth Dam Embankment equals 800 Cubic Yards.
 3. Compaction of Earth Dam Embankment shall be 90% of AASHO T-100.
 4. Program cleanup of Sediment Basin at elev. 351.2 approx. once every 12 months.

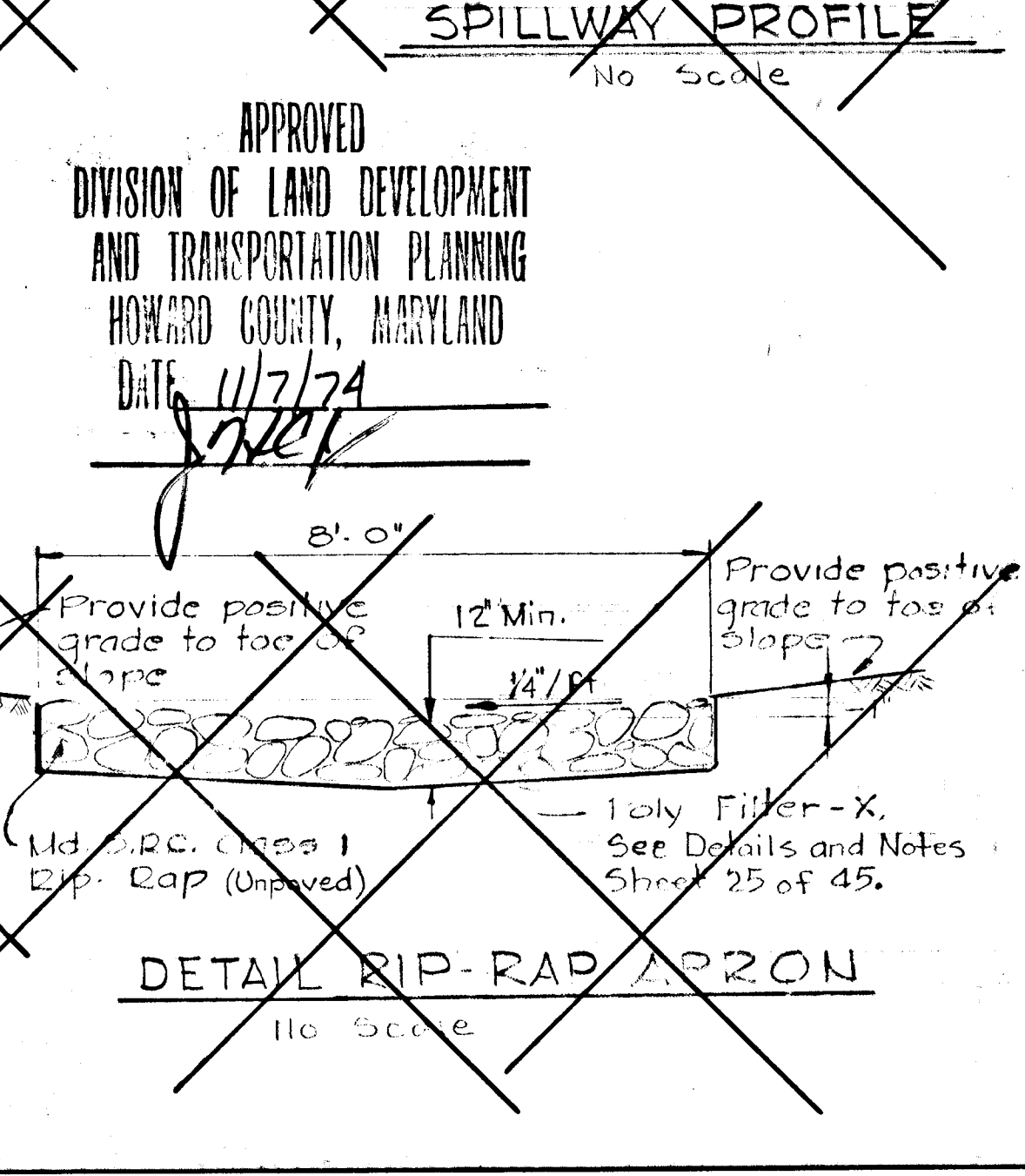
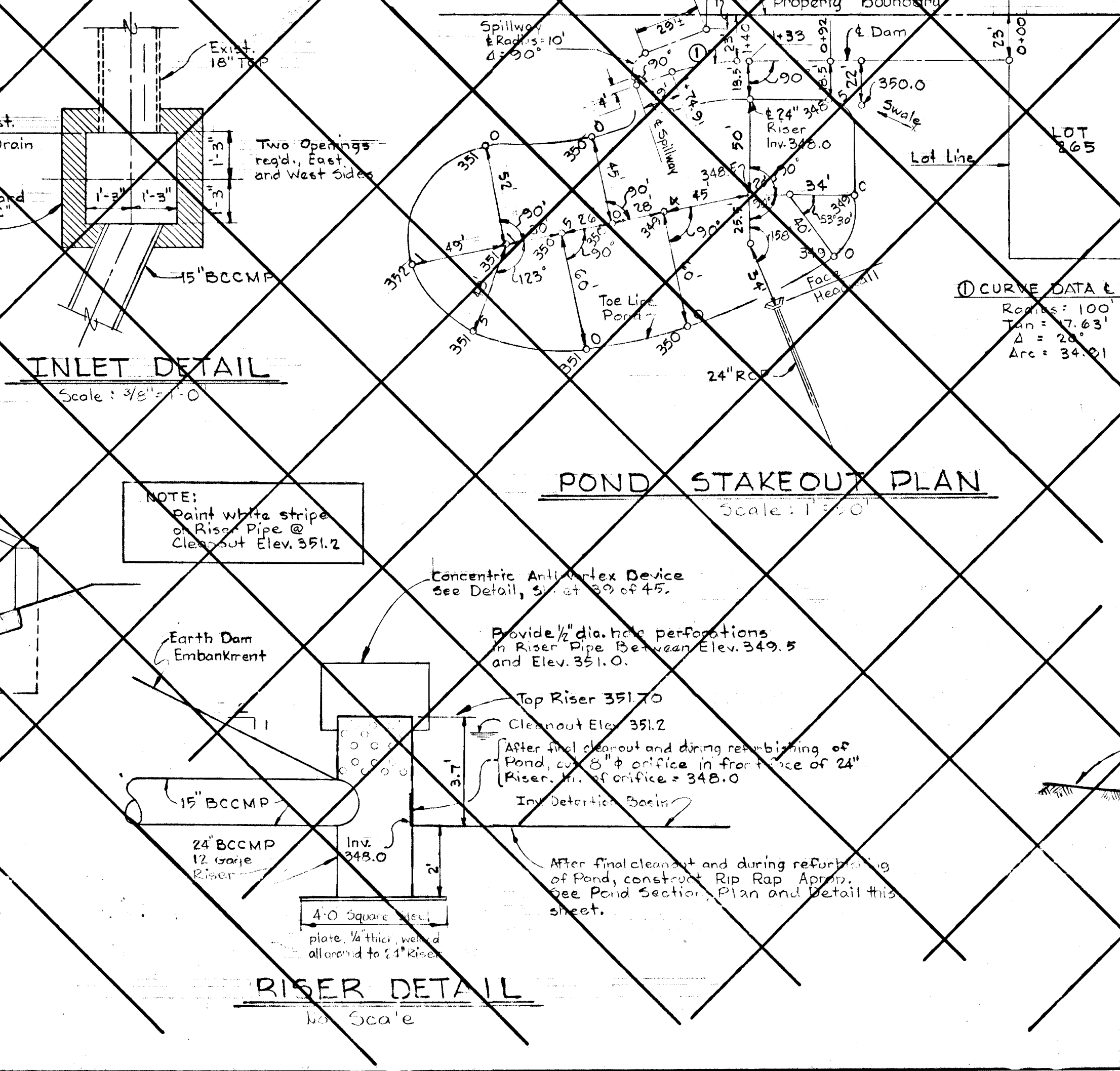
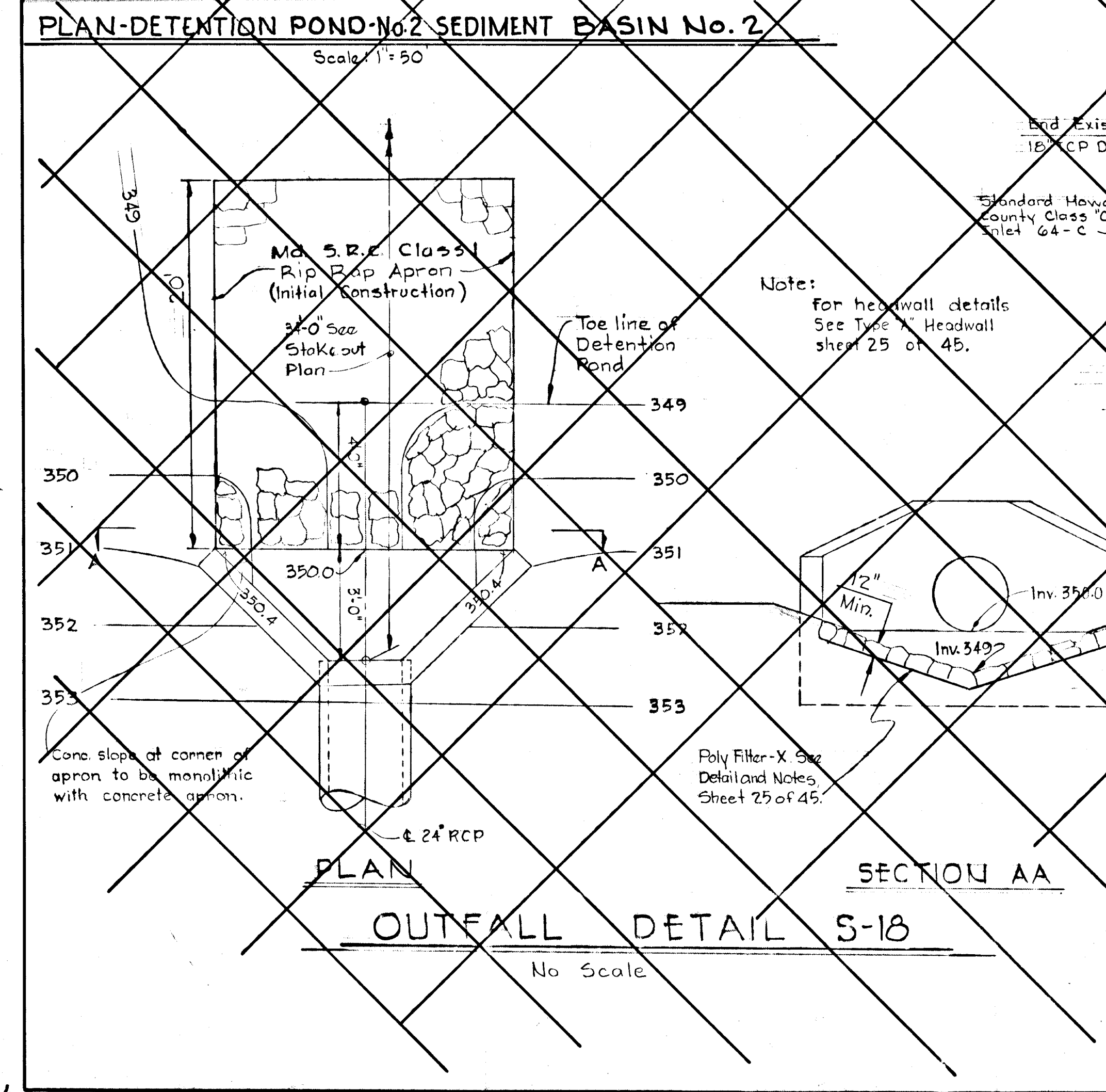
Side Slopes of Detention Pond to be seeded. See Permanent Seeding Notes, Sheet 40 of 45.

SPECIAL NOTES

1. Detention Pond No. 2 shall function initially as a Sediment Basin.
2. The Owner shall submit an initial "AS BUILT" drawing of the Detention Pond to the Howard Soil Conservation District Office in Ellicott City, Maryland.
3. The initial "AS BUILT" shall include all the work as shown and specified on this drawing, except the 2' apron and limits of Rip Rap shown on the Pond section.
4. Final cleanup and refurbishing of Detention Pond No. 2 shall be done strictly to the lines and grades as shown on these drawings. Damages to the Pond shall be reconstructed according to these plans and specifications.
5. Bottom and side slopes of Pond shall be seeded after refurbishing. See Permanent Seeding Notes, sheet 40 of 45.
6. Upon completion of final cleanup, refurbishing, reconstruction, etc., the Owner shall submit a final "AS BUILT" of Detention Pond No. 2 to the Howard Soil Conservation District Office in Ellicott City, Maryland.
7. See "POND SPECIFICATIONS", Sheet 45 of 45.

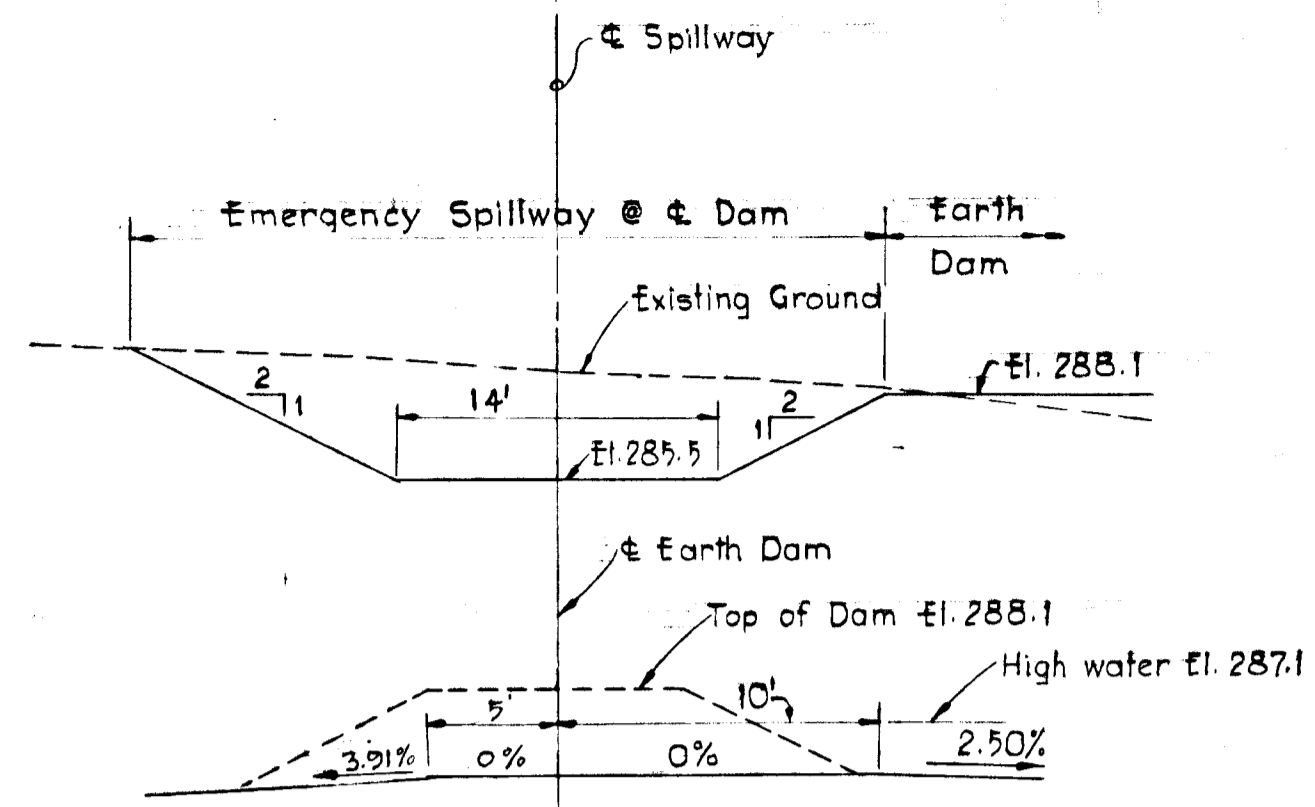
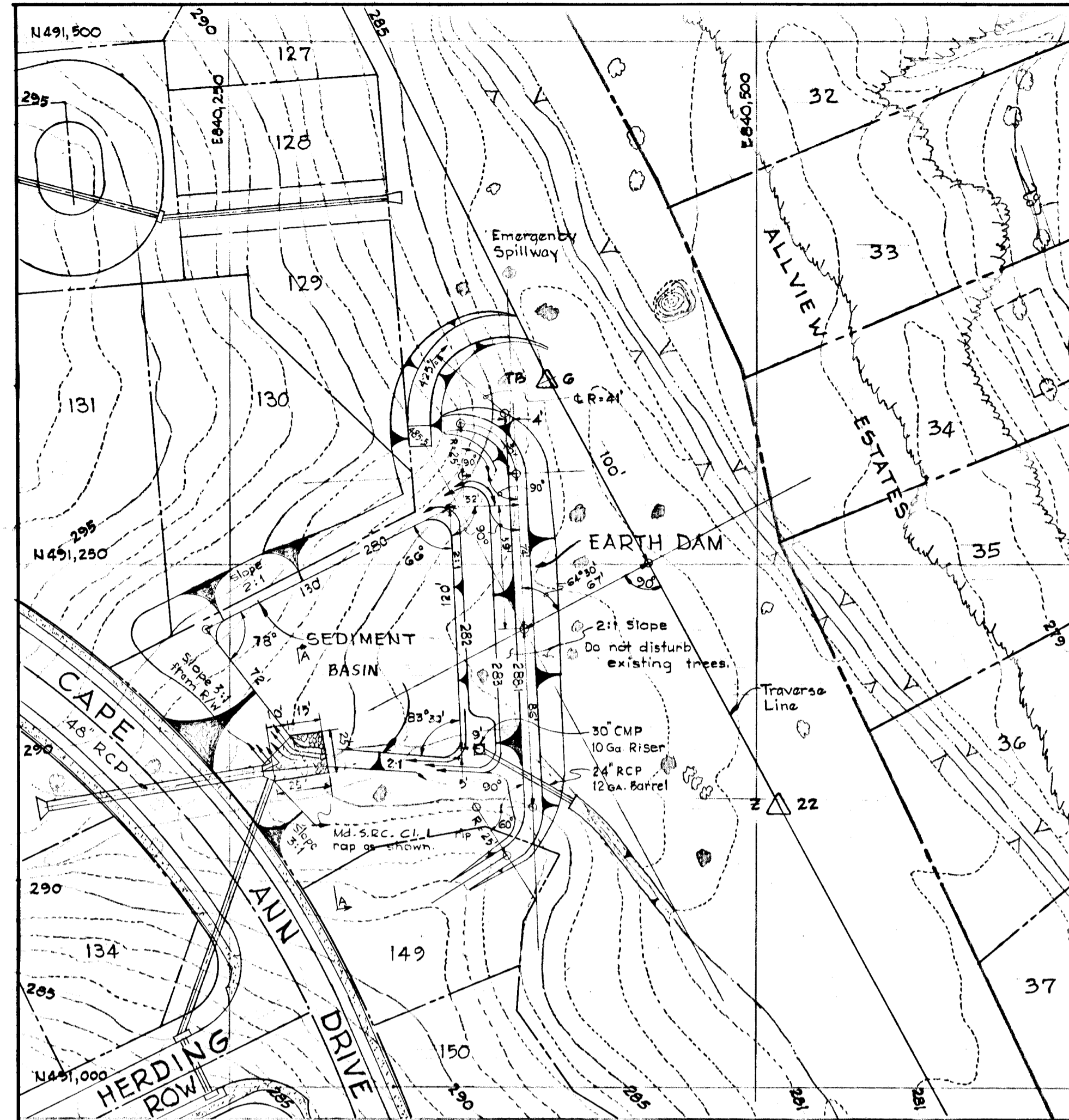


NOTE:
 For revised Pond No. 2 see Supplement to Road Construction Plans, dated 5/10/77 sheets 11 & 12 of 18.

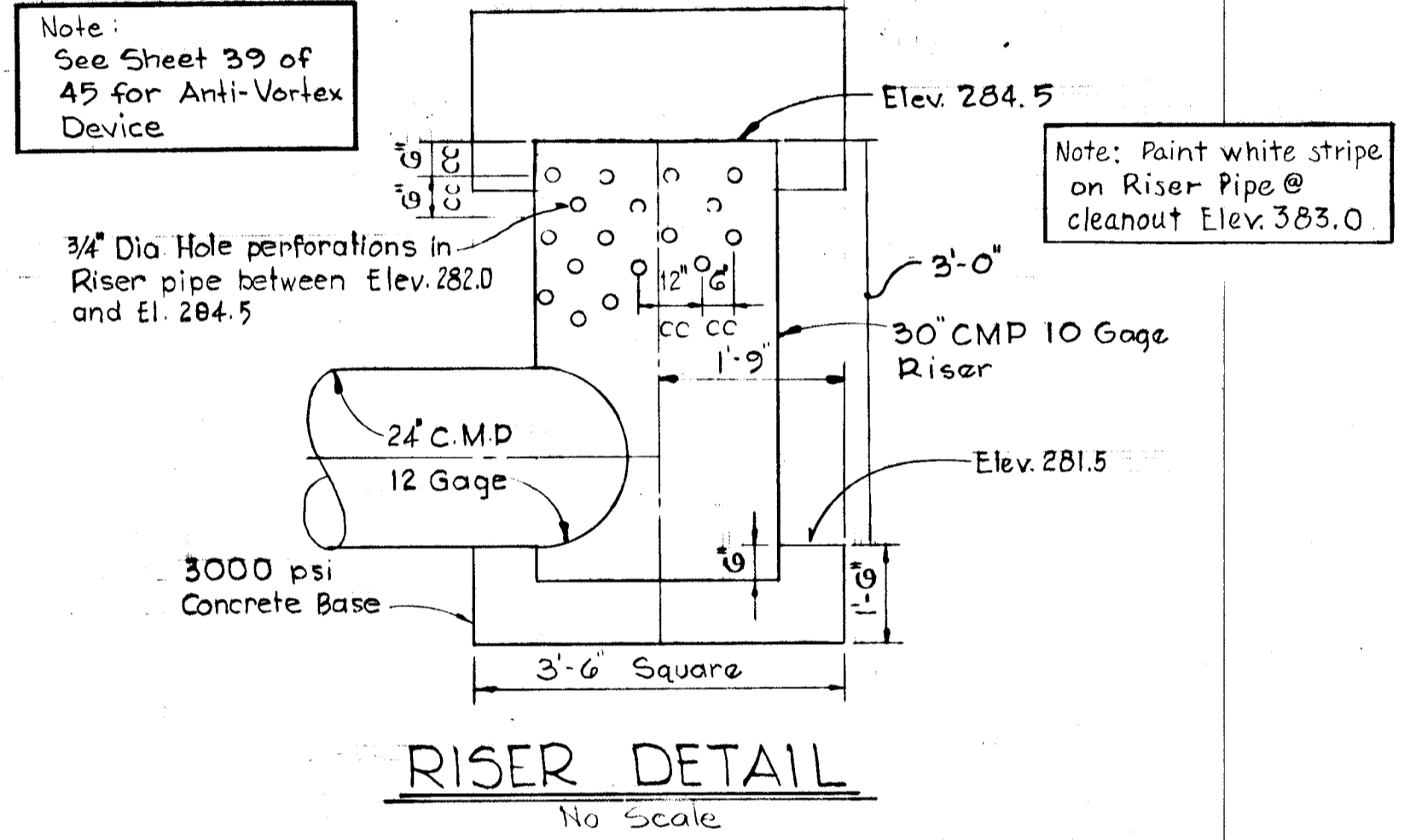


APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. McLeod

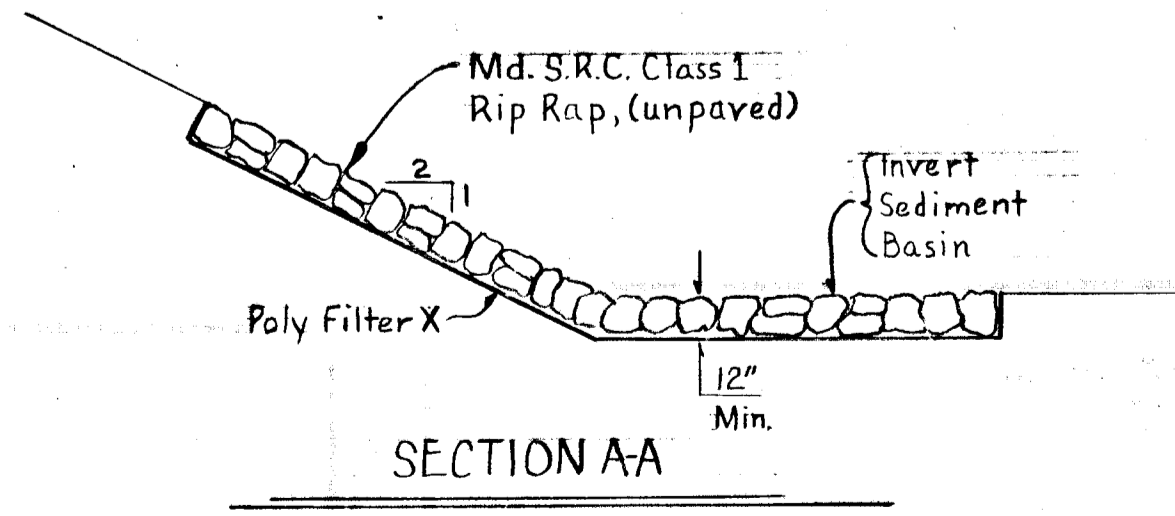
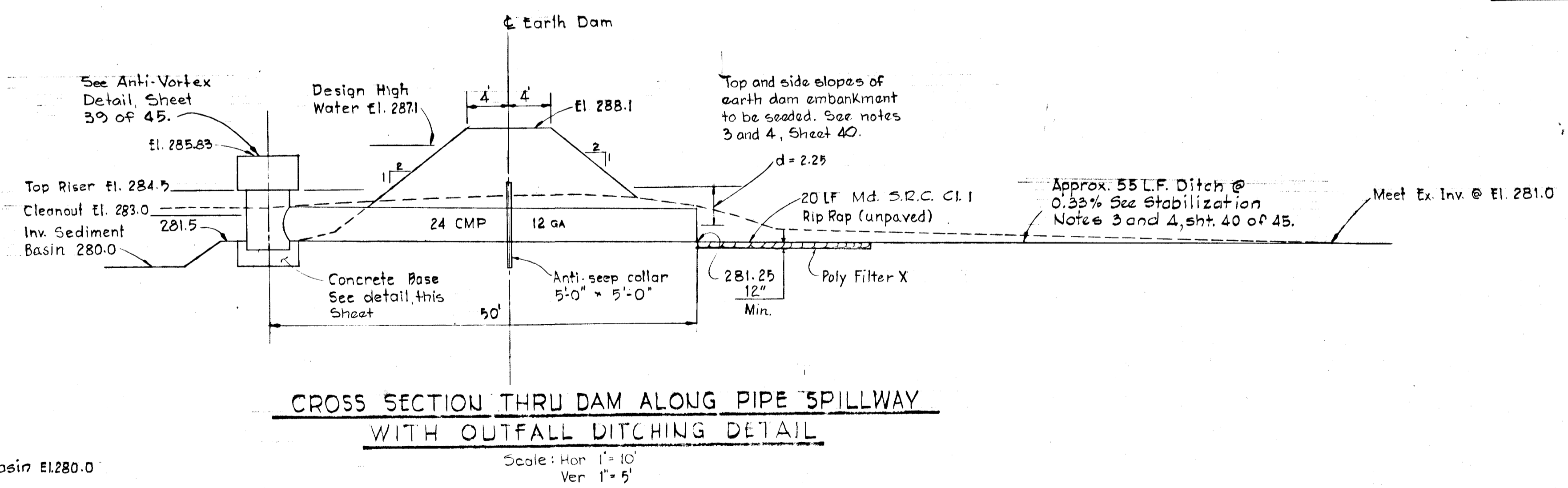
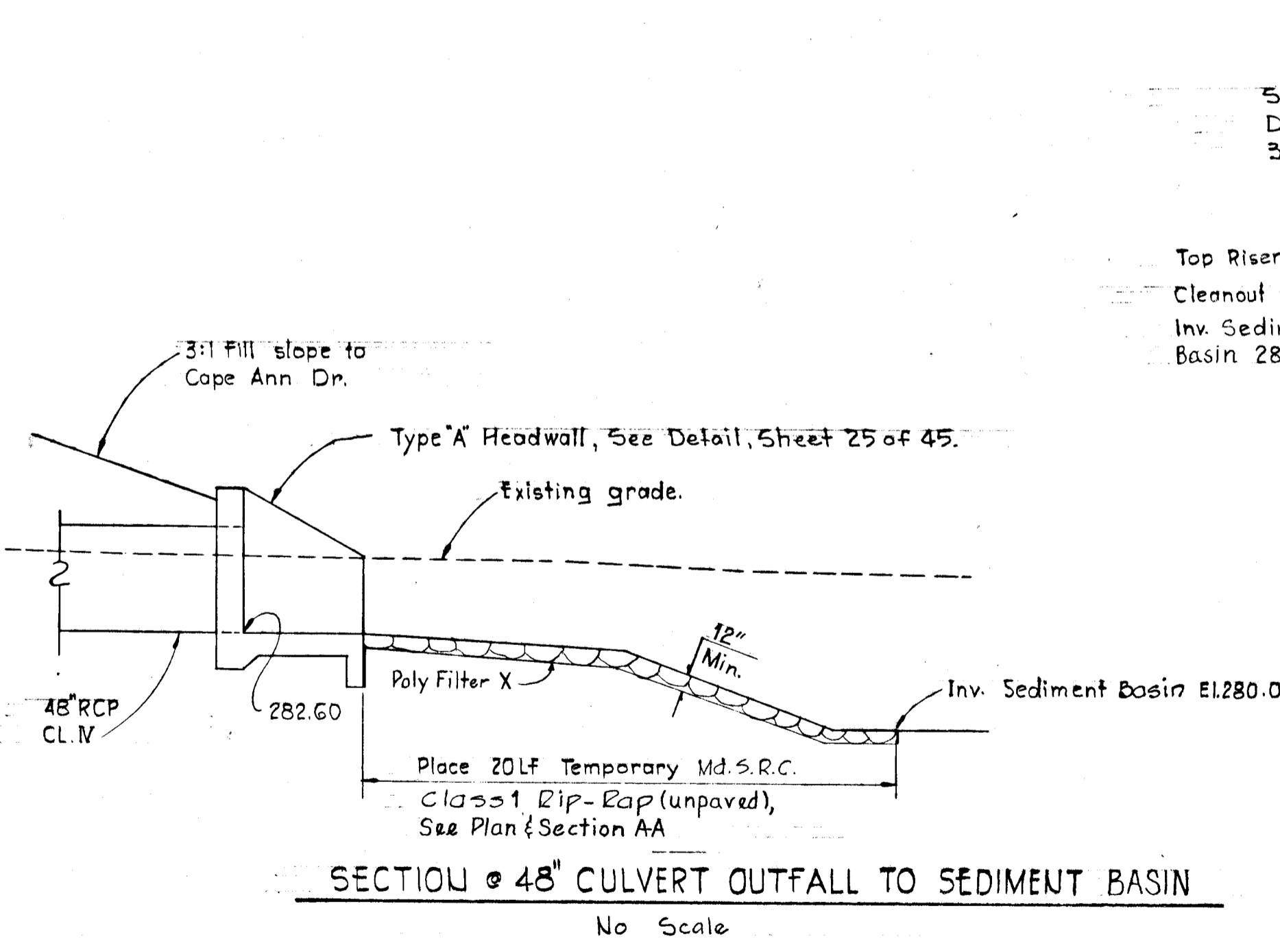
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6th ELECTION DISTRICT		
HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER		
HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF KINGS CONTRIVANCE		
SECTION 1 AREA 1		
PROJECT TITLE		
PERMANENT DETENTION POND No. 2		
TEMPORARY SEDIMENT BASIN No. 2		
SCALE: As Shown		DATE: 11/15/74
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McLeod</i> KENNETH A. MCCORD Registered Engineer No. 1974		



- Notes:
1. Sediment Basin excavation including stripping equals 2240 cubic yards.
 2. Fill required for earth Dam embankment equals 910 cubic yards.
 3. Program cleanout of Sediment Basin at elev. 283.0 approximately once every 5.5 months.
 4. Compaction of earth embankment shall be 90% of ASSHO T-180.

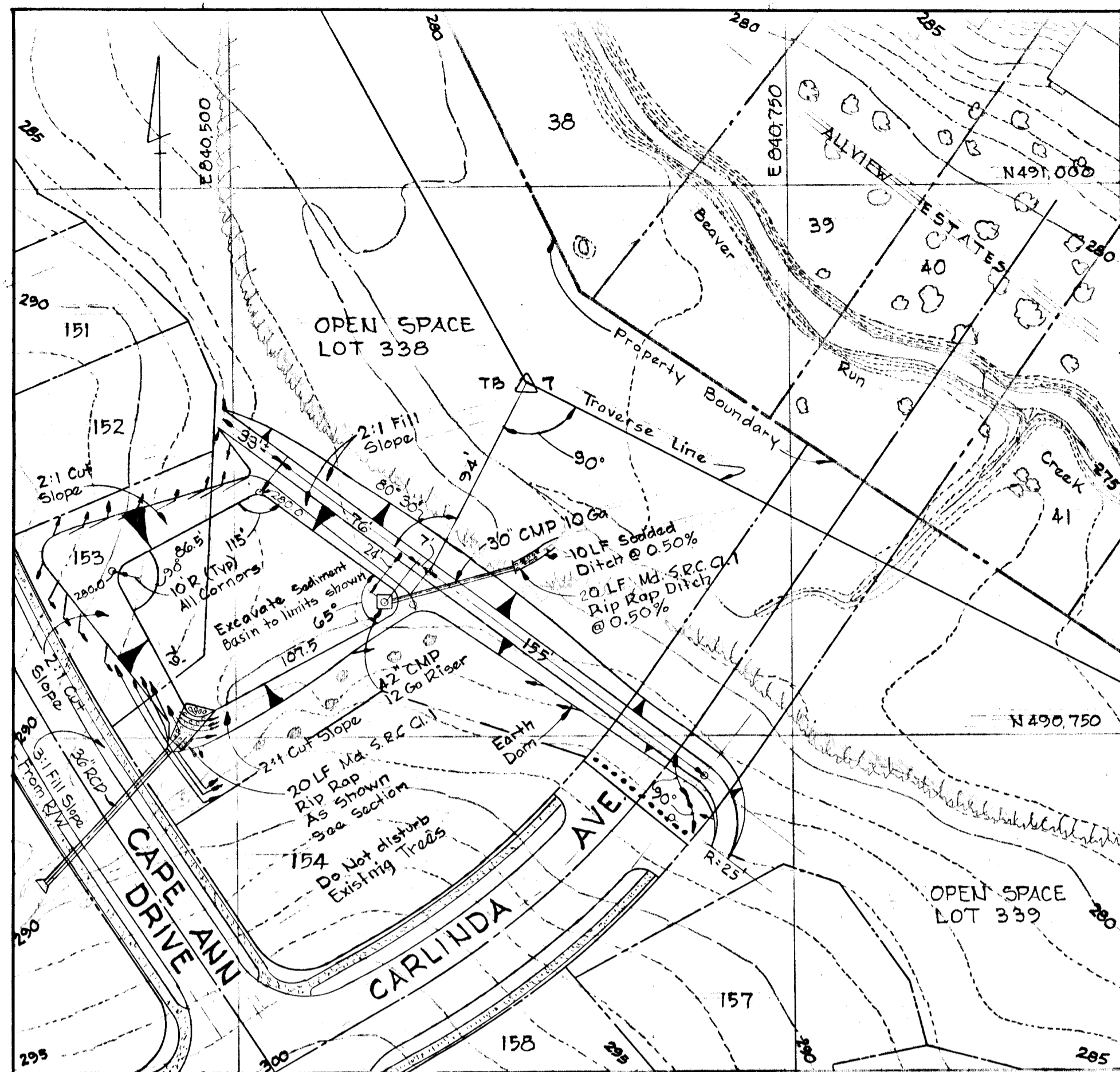


PLAN-TEMPORARY SEDIMENT BASIN No. 3
 Scale: 1" = 50'

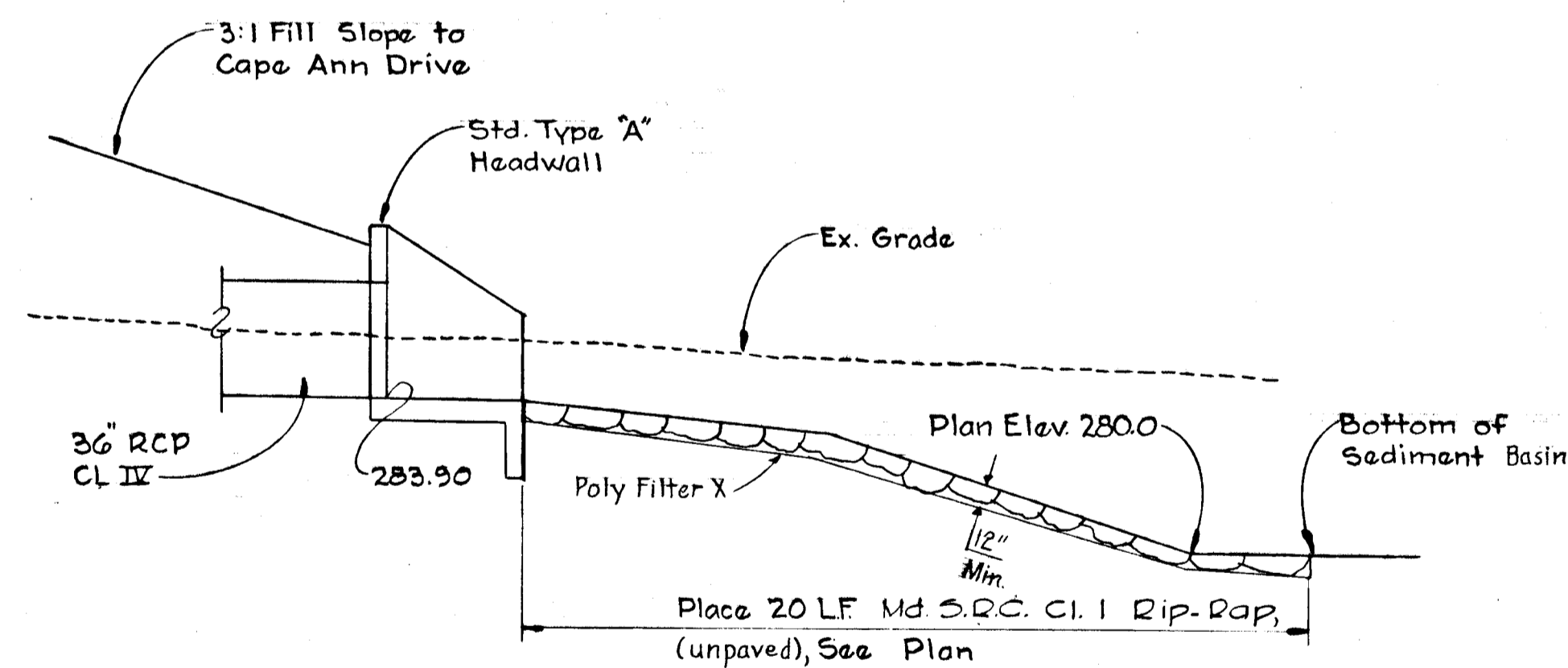


APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 5/27/75
[Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE TEMPORARY SEDIMENT BASIN No. 3		
SCALE: As Shown	DATE: 11/15/74	
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>[Signature]</i> KENNETH A. McCORD Registered Engineer No. 1974		

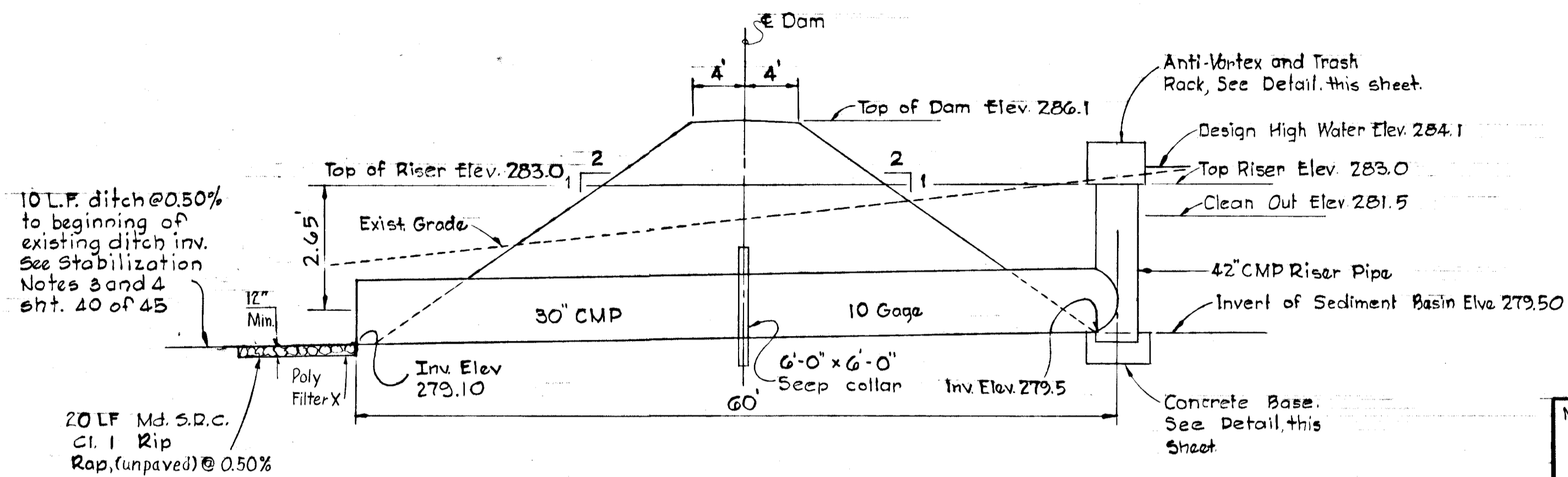


PLAN-TEMPORARY SEDIMENT BASIN No. 4
 Scale: 1"=50'



SECTION ALONG BASIN INLET
 No Scale

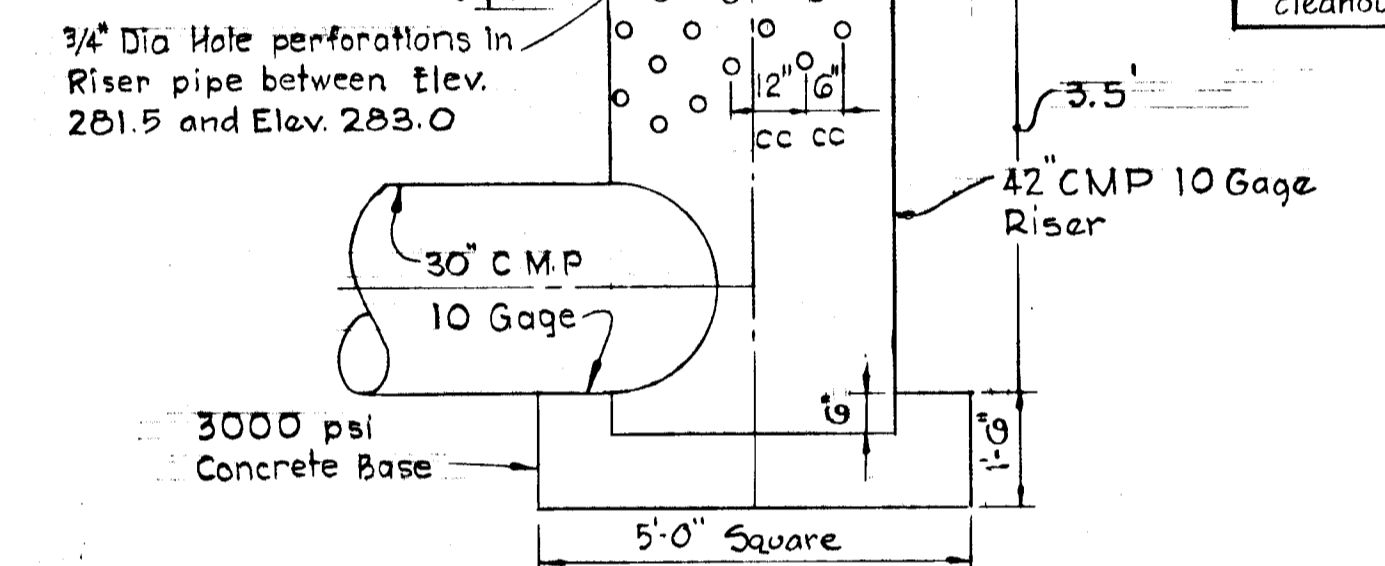
Note:
 Top and sides slopes of earth Dam to be seeded. See notes 3 and 4 Sheet 40 of 45.



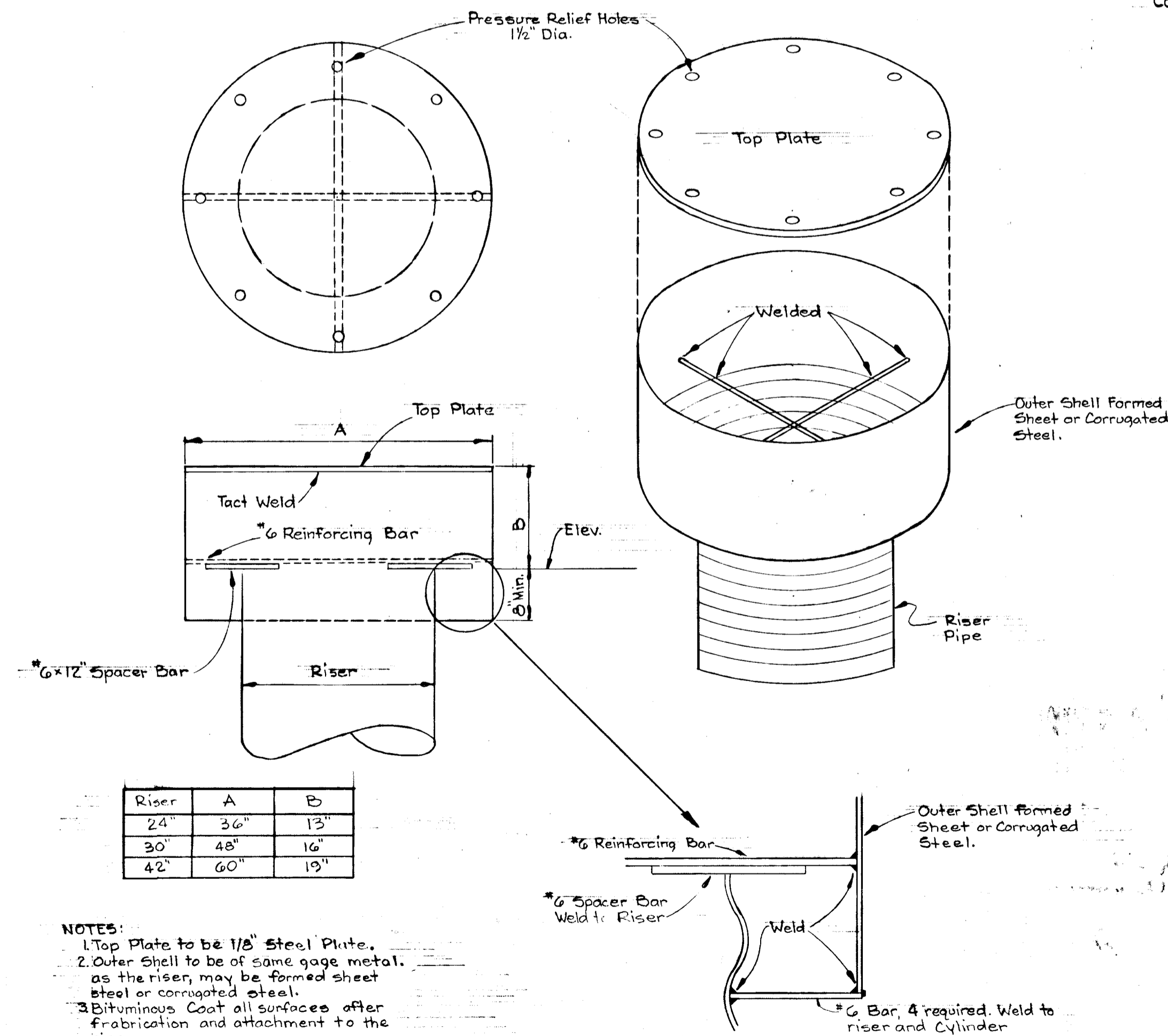
CROSS SECTION THRU DAM
 No Scale

1. Sediment Basin excavation including stripping equals 1000 cubic yards.
2. Fill required for Earth Dam embankment equals 870 Cubic Yards.
3. Program Cleanout of Sediment Basin at elev. 281.5 approximately once every 6 months.
4. Compaction of Earth Embankment shall be 90% of AASHTO T-180.

Note:
 See Detail below for Anti-Vortex Device



RISER DETAIL
 No Scale



NOTES:
 1. Top Plate to be 1/8" Steel Plate.
 2. Outer Shell to be of same gage metal as the riser, may be formed sheet steel or corrugated steel.
 3. Bituminous Coat all surfaces after fabrication and attachment to the riser.

ANTI-VORTEX DEVICE AND TRASH RACK
 No Scale

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 HOWARD COUNTY, MARYLAND
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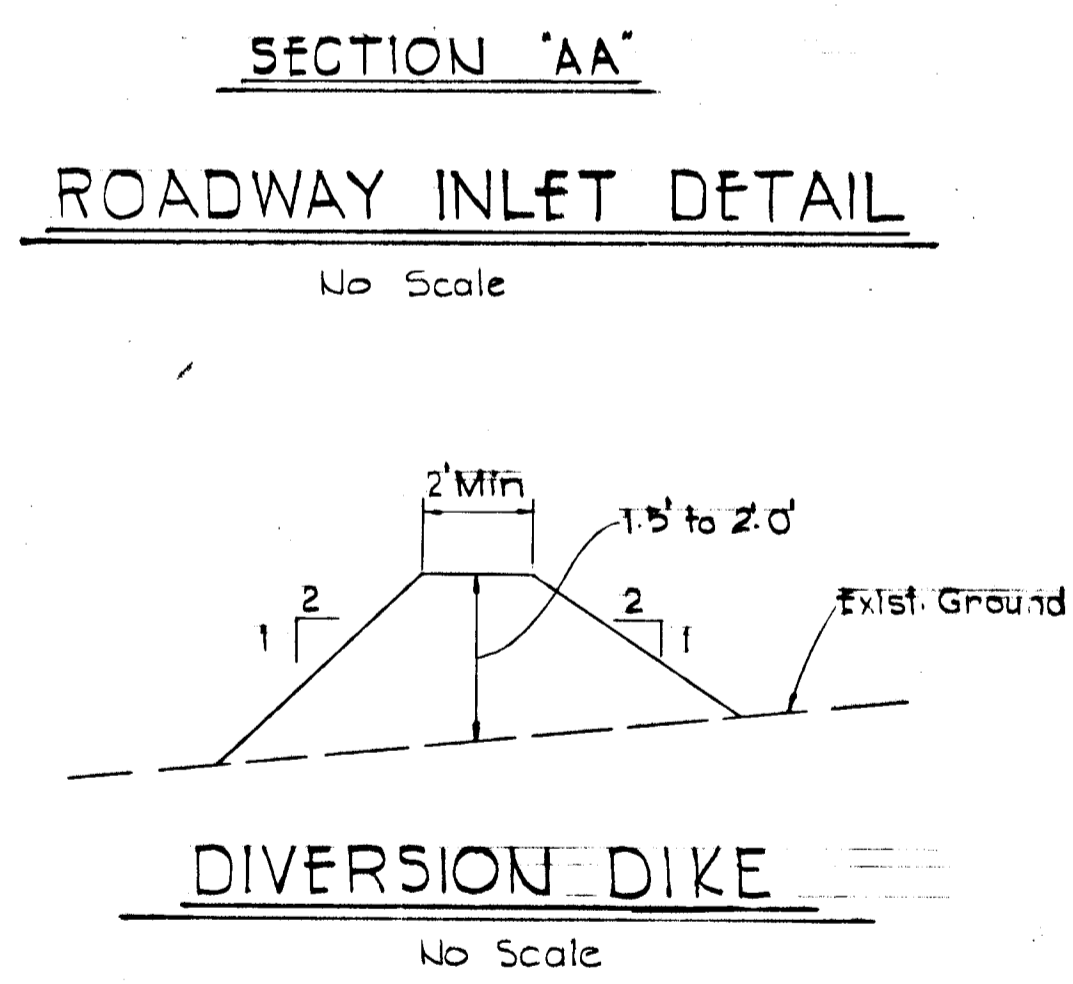
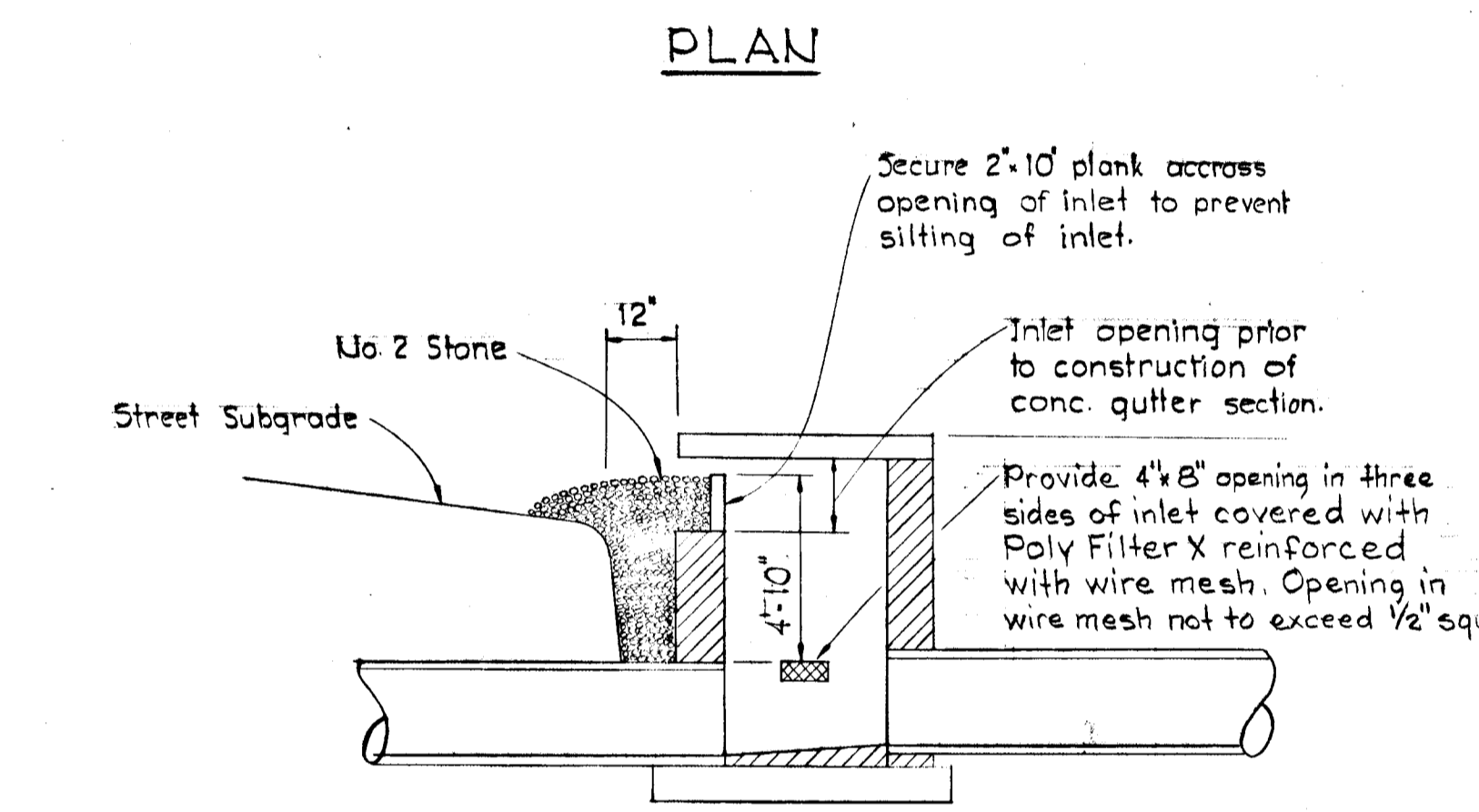
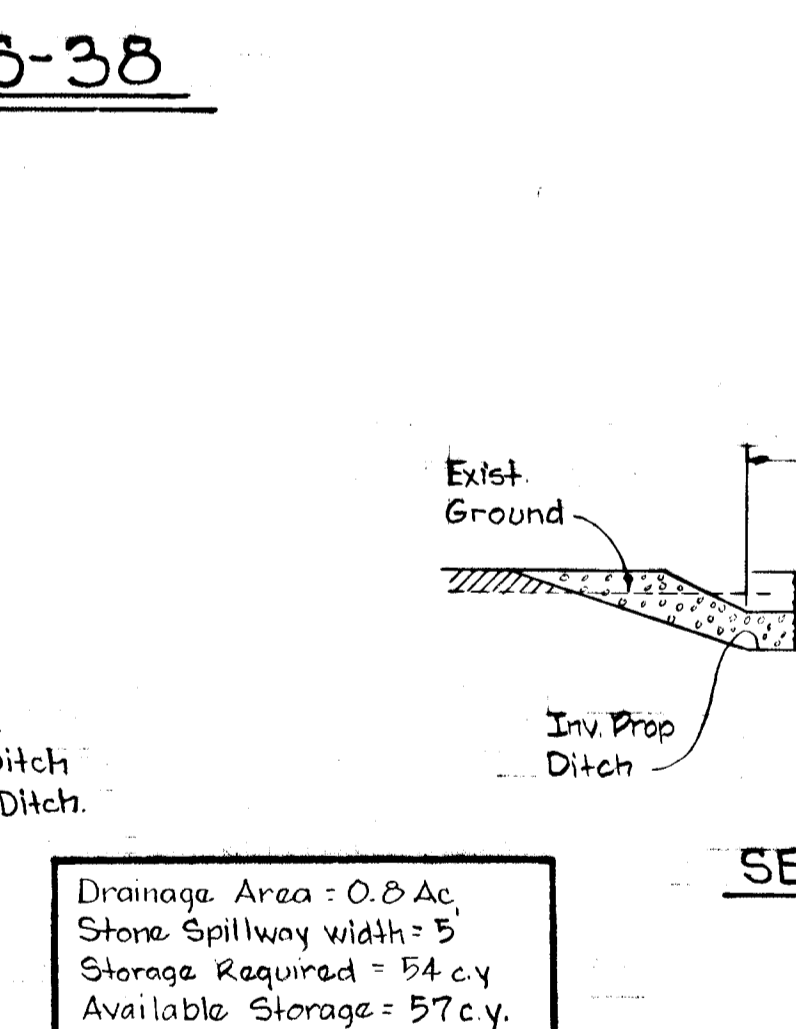
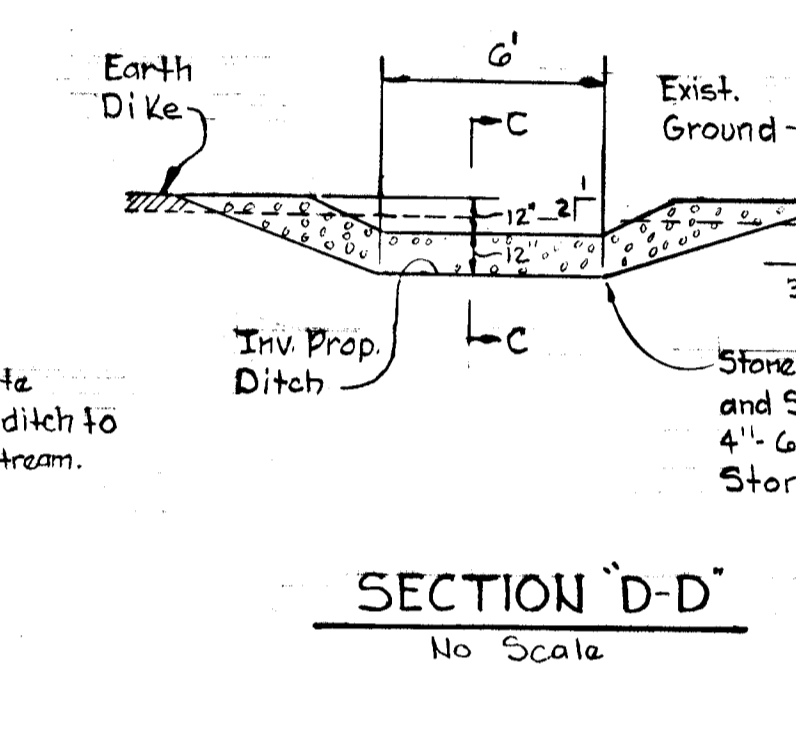
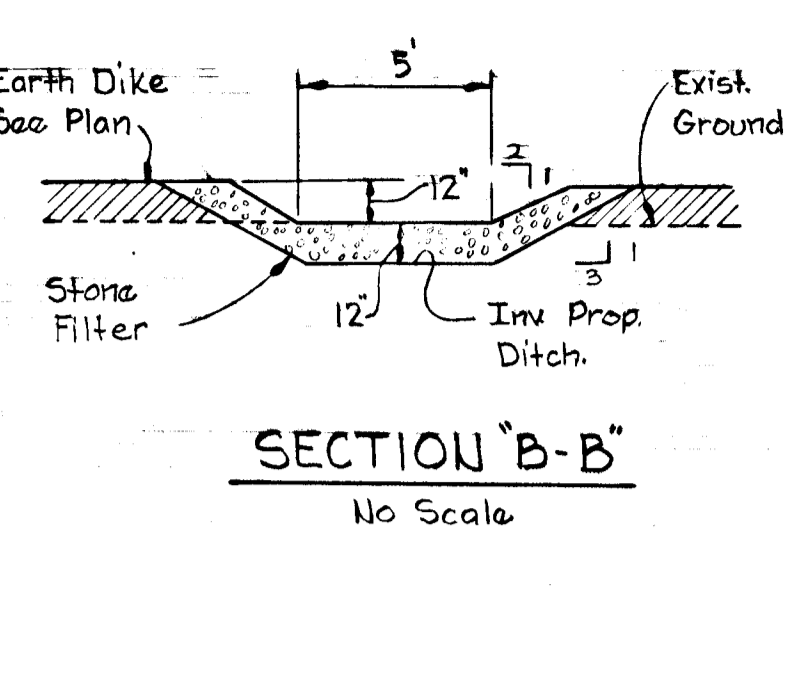
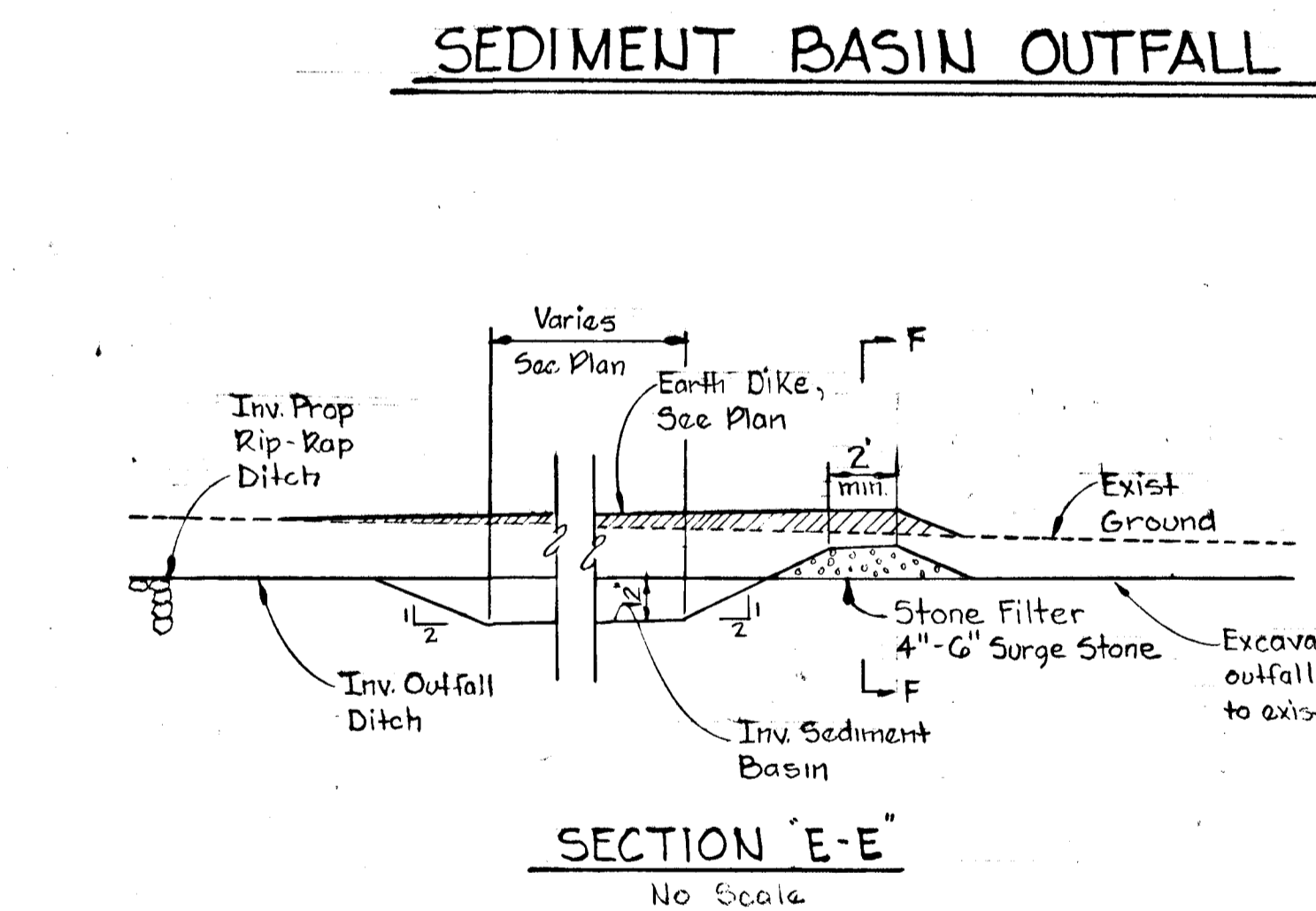
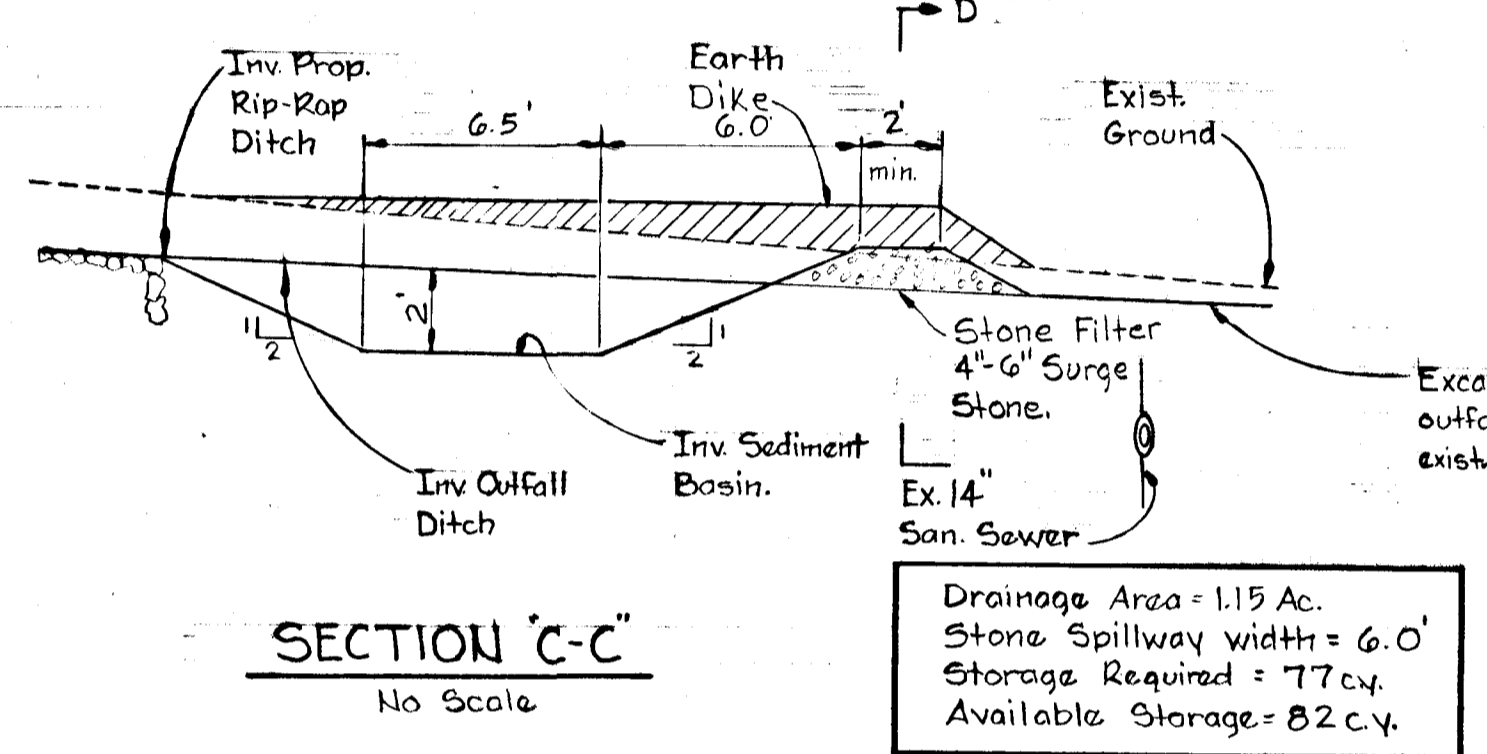
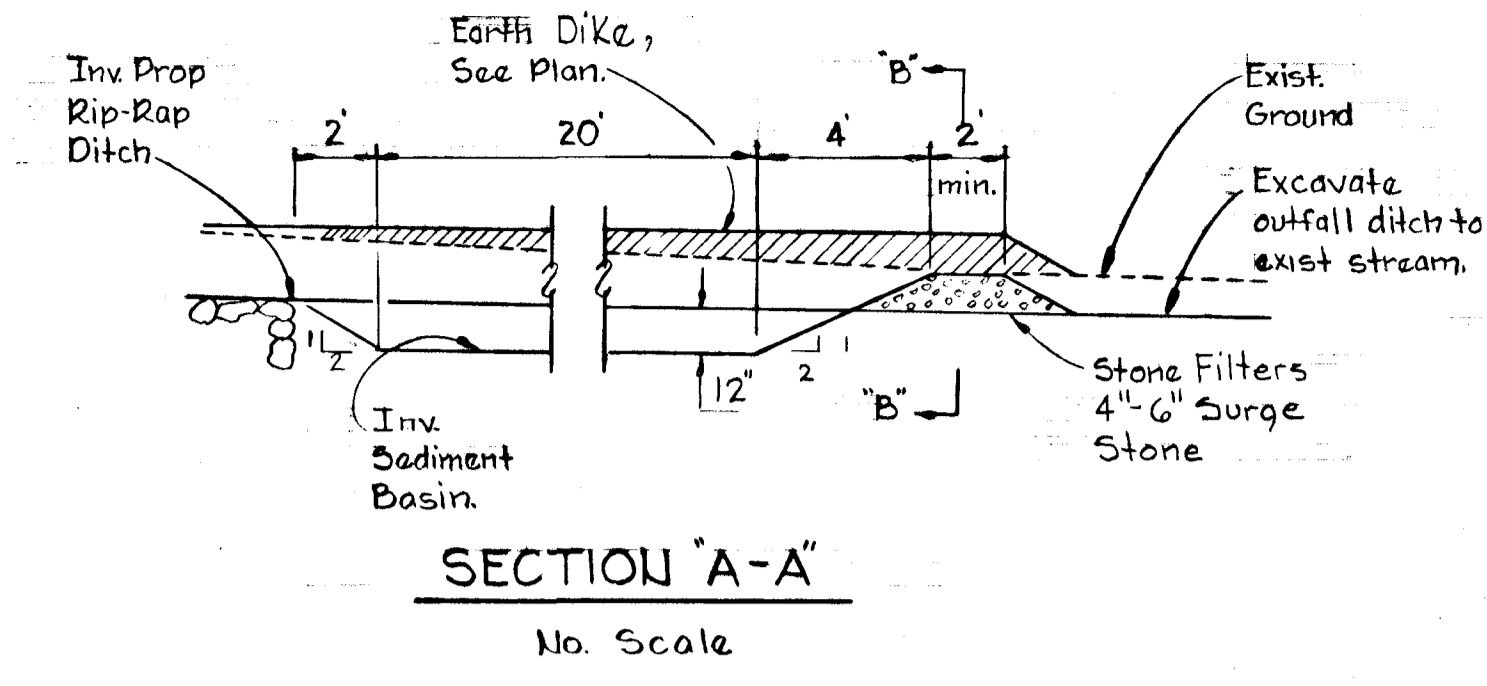
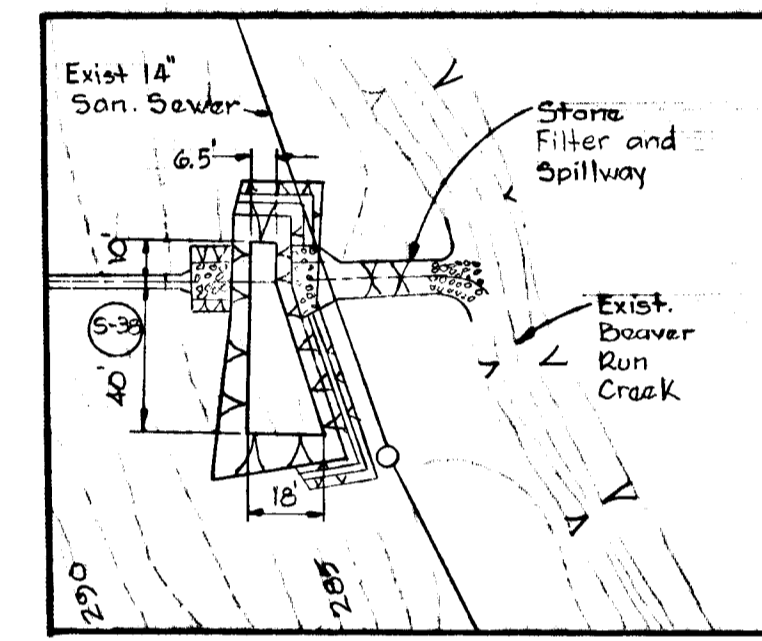
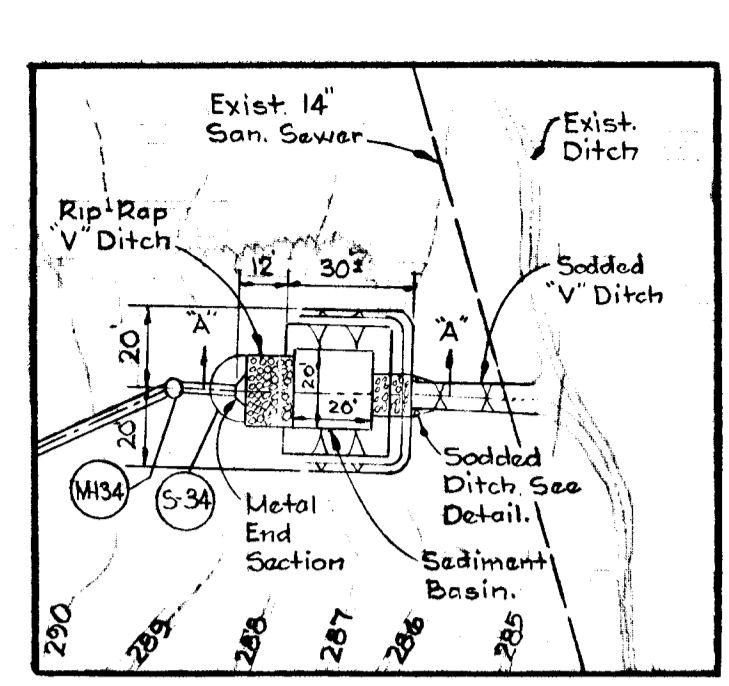
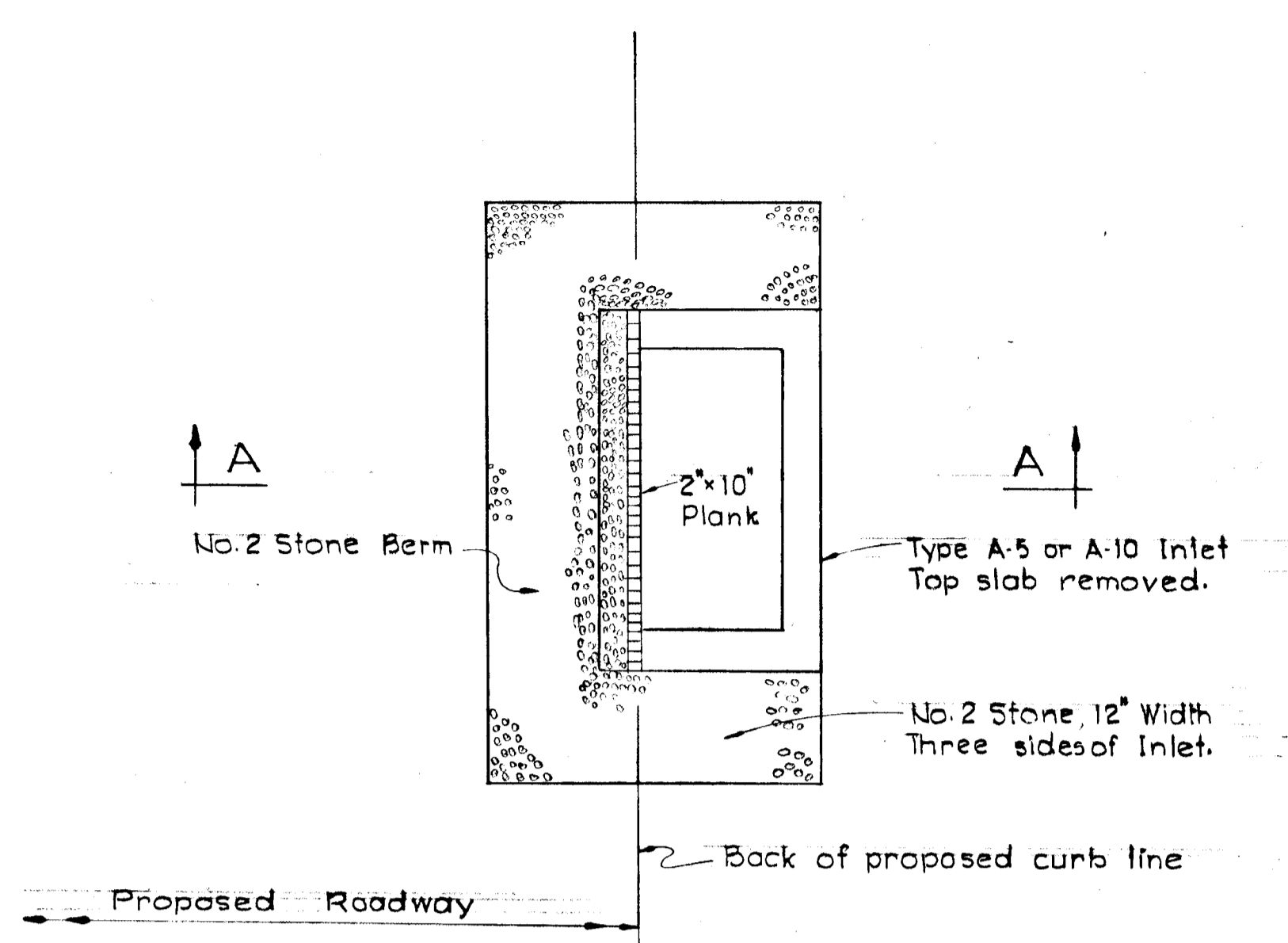
Rev. Date	Rev. No.	Revision Description
COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE TEMPORARY SEDIMENT BASIN No. 4.		
SCALE: As Shown		DATE: 11/15/74
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McLeod</i> KENNETH A. McLEOD Registered Engineer No. 1974		

SEDIMENT CONTROL NOTES

- All sediment control measures must be constructed and stabilized prior to any other grading.
- No temporary sediment control structure may be removed or destroyed without approval of the Howard County Soil Conservation District.
- All disturbed areas are to be seeded and shall receive the following mixture: annual rye grass (20%), Kentucky blue grass (20%) and Kentucky "31" fescue (60%) at the rate of 200 lbs/Acre. Sow with mechanical spreader rake minimum of 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 1 1/2 Ton/Acre (60 lbs/1000²) commercial fertilizer (5-10-10) at the rate of 3/4 tons/Acre (35 lbs/1000²) superphosphate at the rate of 600 lbs/Acre. (15 lbs/1000²).
- Mulch areas with straw @ rate of 75#/1000 s.f. or 1.5 tons/Acre. Anchor with asphalt @ rate of 480 gallons/Acre.
- Prior to starting grading the contractor shall give 24 hrs notice to the Howard Soil Conservation District and the Howard County Bureau of Licenses Inspections and Permits.
- All earthwork stockpiles that will not be disturbed for 6 months or longer shall immediately after piling be fertilized, limed and seeded with annual Rye grass at the rate of 1#/1000².
- All storm drain inlets shall be capped and remain capped until their respective watersheds are stabilized.
- All Dikes and drainage swales shall be stabilized immediately after construction of same. See General Note 16, Sheet 1, seeding notes 3 and 4 and "Permanent Seeding" this sheet.
- For sediment pond drainage areas, See Sheet 45 of 45.

PERMANENT SEEDING

Lime: 2 Tons/Acre agricultural ground limestone
 Fertilizer: 1000 lbs/Acre (5-10-10)
 Seeding: 100 lbs/Acre of the following:
 20% Kentucky Blue Grass
 20% Merion Blue Grass
 55% Creeping Red Fescue
 5% Redtop
 Mulch required, See Note 4 above.
 Stabilization of slopes steeper than 3:1 shall be planted with crownvetch including 15 lbs/Acre (0.34 lb/1000²) Kentucky 31 tall fescue 40 lbs/Acre (1 lb/1000²)



Note:
 Diversion Dikes shall be stabilized.
 See notes 3 and 4 This Sheet.

4" to 6" stone is required for the stone filters for Sediment Basins S-34, S-38 and S-63.

Drainage Area = 1.15 Ac.
 Stone Spillway width = 6.0'
 Storage Required = 77 c.y.
 Available Storage = 82 c.y.

Drainage Area = 0.8 Ac.
 Stone Spillway width = 5'
 Storage Required = 54 c.y.
 Available Storage = 57 c.y.

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 HOWARD COUNTY, MARYLAND
 DATE 11/27/74
J. J. J.

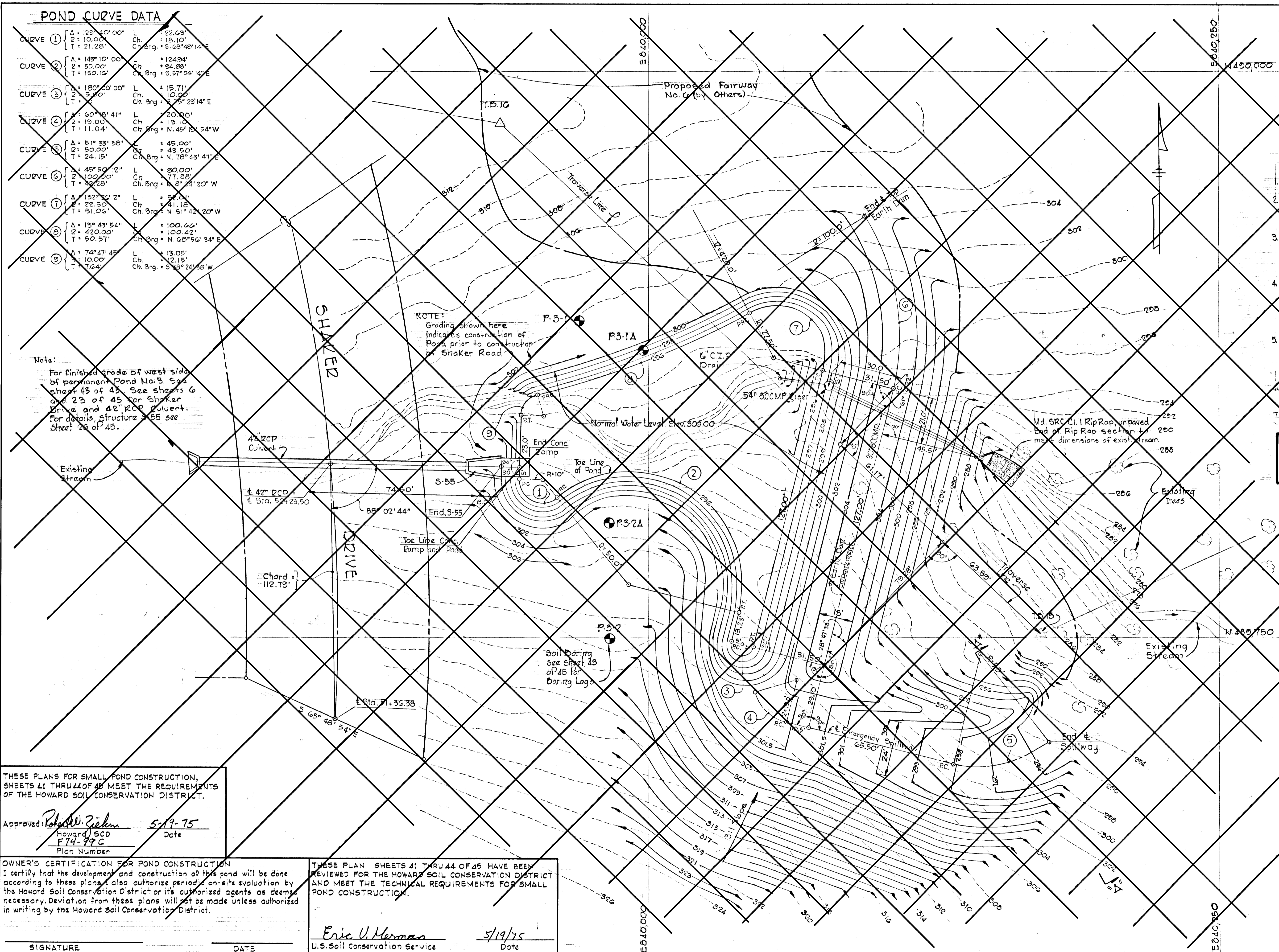
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 th ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE SEDIMENT CONTROL DETAILS		
SCALE: As Shown		DATE: 11/15/74
WHITMAN REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

POND CURVE DATA

CURVE ①	Δ = 129° 40' 00"	L = 22.63'	Ch. = 18.10'	Ch. Brg. = S. 69° 49' 14" E
CURVE ②	Δ = 143° 10' 00"	L = 124.94'	Ch. = 94.88'	Ch. Brg. = S. 57° 04' 14" E
CURVE ③	Δ = 180° 00' 00"	L = 15.71'	Ch. = 10.00'	Ch. Brg. = S. 75° 29' 14" E
CURVE ④	Δ = 60° 18' 41"	L = 20.00'	Ch. = 19.10'	Ch. Brg. = N. 45° 18' 54" W
CURVE ⑤	Δ = 51° 33' 58"	L = 45.00'	Ch. = 43.50'	Ch. Brg. = N. 78° 43' 41" E
CURVE ⑥	Δ = 45° 50' 12"	L = 80.00'	Ch. = 77.88'	Ch. Brg. = N. 67° 24' 20" W
CURVE ⑦	Δ = 132° 30' 21"	L = 52.00'	Ch. = 41.18'	Ch. Brg. = N. 51° 42' 20" W
CURVE ⑧	Δ = 133° 43' 54"	L = 100.66'	Ch. = 100.42'	Ch. Brg. = N. 68° 56' 34" E
CURVE ⑨	Δ = 74° 47' 45"	L = 13.05'	Ch. = 12.15'	Ch. Brg. = S. 88° 24' 18" W

Note:
For finished grade of west side of permanent Pond No. 5, see sheet 43 of 45. See sheets 6 and 23 of 45 for Shaker Drive and 42" RCP Culvert. For details, structure 555 see sheet 26 of 45.

NOTE:
Grading shown here indicates construction of Pond prior to construction of Shaker Road



DEPARTMENT OF PUBLIC WORKS
B. H. Ireland 5/27/75
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

- SPECIAL NOTES**
1. Permanent Pond No. 5 shall function initially as a sediment basin.
 2. The Owner shall submit an initial "AS BUILT" drawing of the completed pond to the Howard Soil Conservation District office in Ellicott City, Maryland.
 3. Program cleanout of the pond (sediment basin) at Elev. 298.3 approximately once every 36 months. The impervious fill material lining must not be disturbed during these scheduled cleanouts.
 4. Final cleanout and refurbishing of permanent pond No. 5 shall be done strictly to the lines and grades as shown on these drawings. Any damage to the pond, including the impervious fill lining shall be reconstructed according to these plans and specifications.
 5. Upon completion of final cleanout, refurbishing, reconstruction etc., the Owner shall submit a final "AS BUILT" drawing of permanent pond No. 5 to the Howard Soil Conservation District office in Ellicott City, Maryland.
 6. The initial and final "AS BUILT" shall include all the Pond work as shown and specified on these drawings.
 7. See "POND SPECIFICATIONS", Sheet 45 of 45.

For revisions of Permanent Pond No. 5 to strictly a Temporary Sediment Basin see Supplement to Road Construction Plans, dated 3/10/77, sheets 14 & 15 of 18.

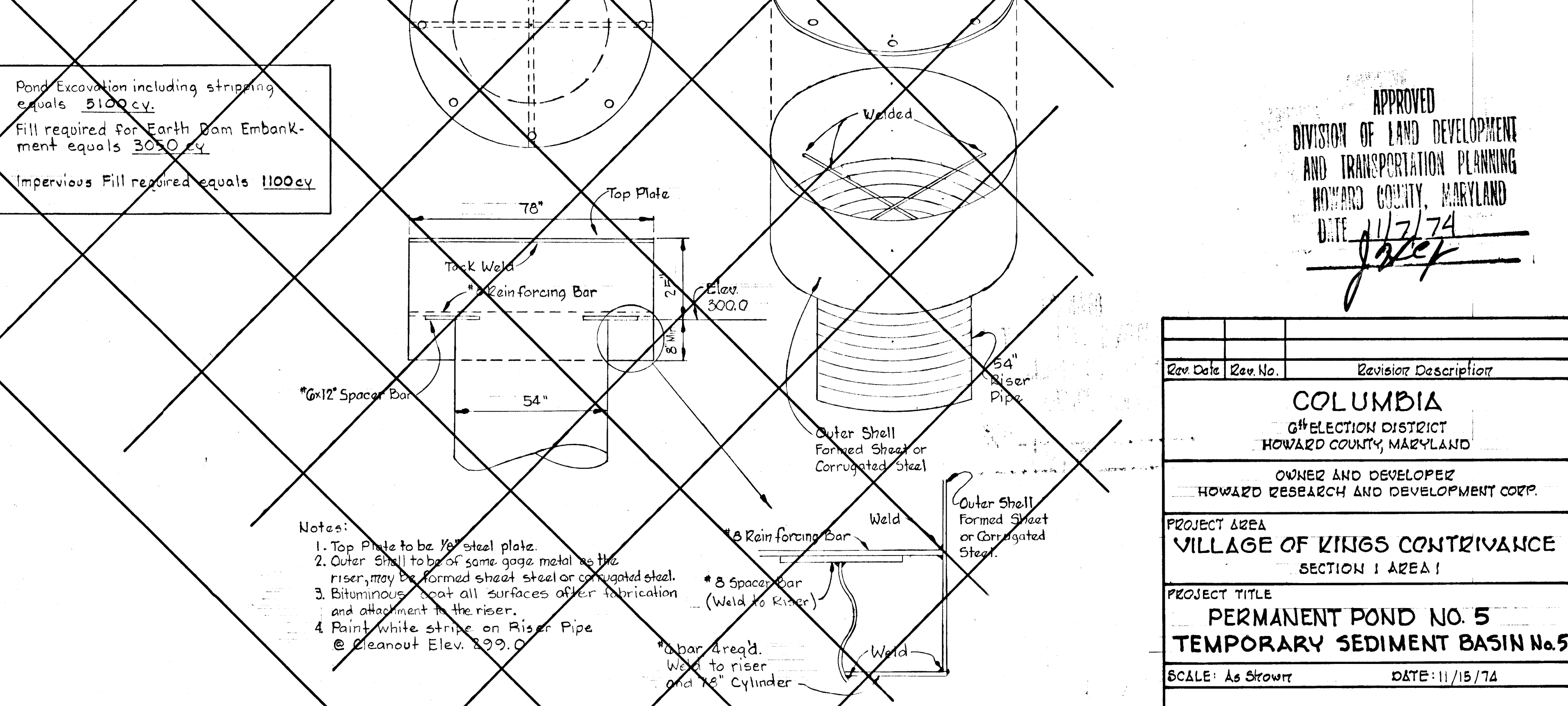
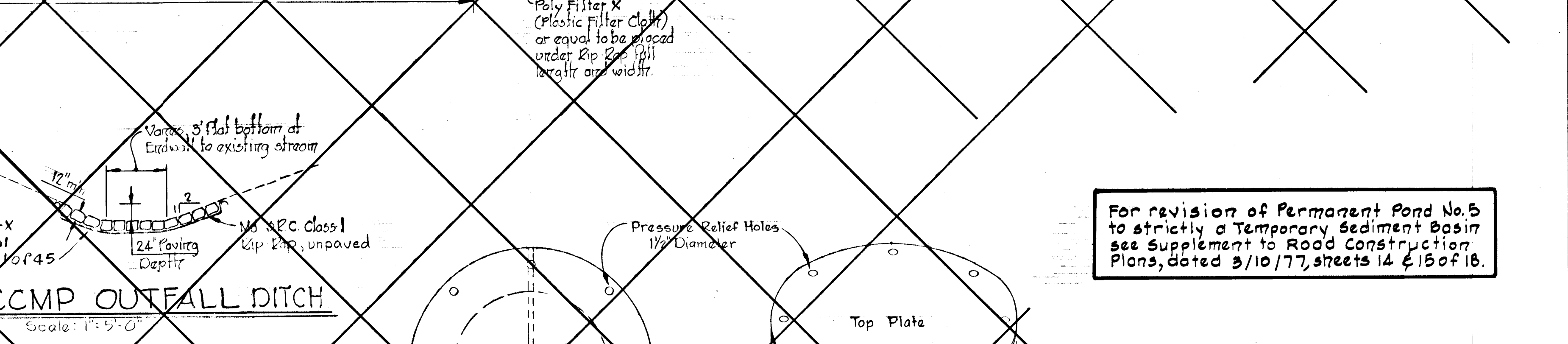
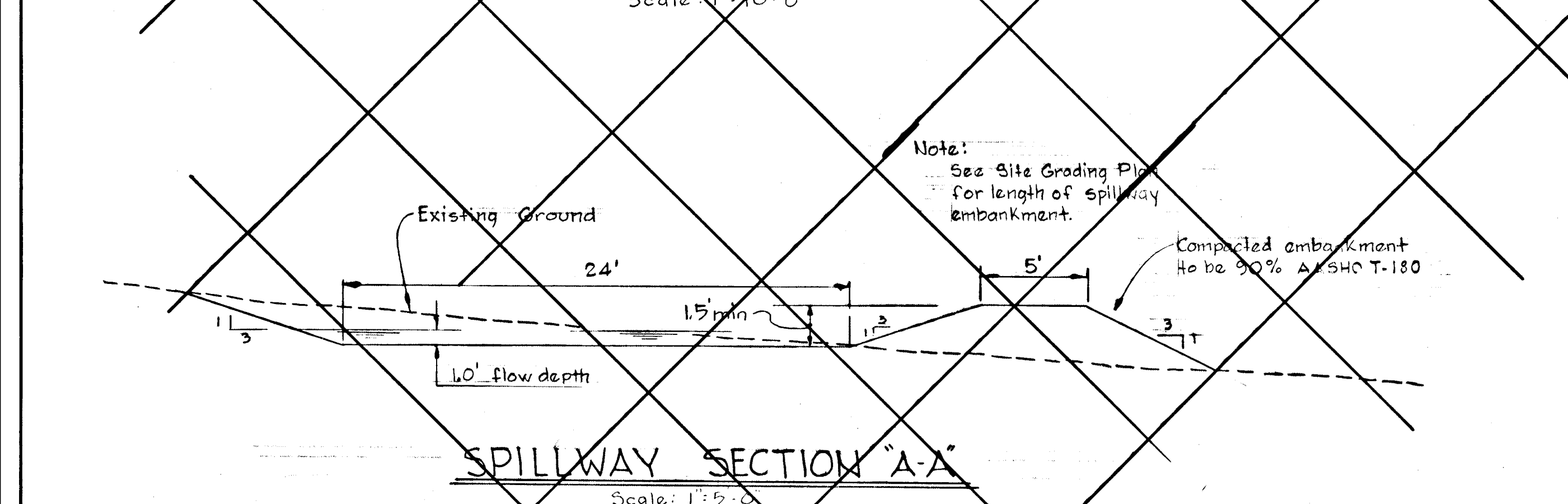
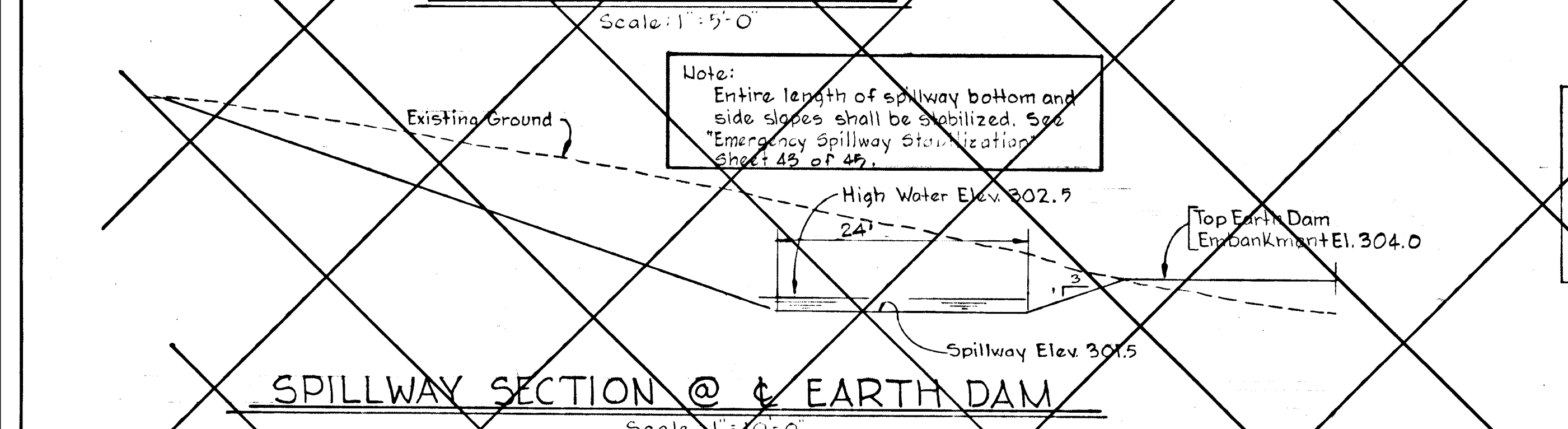
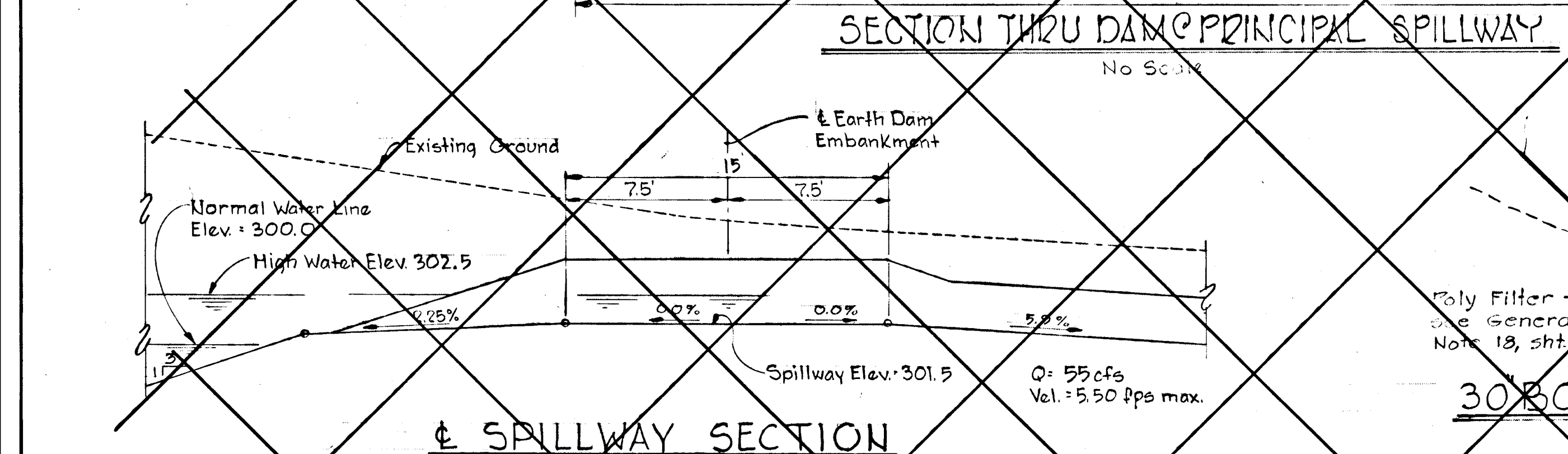
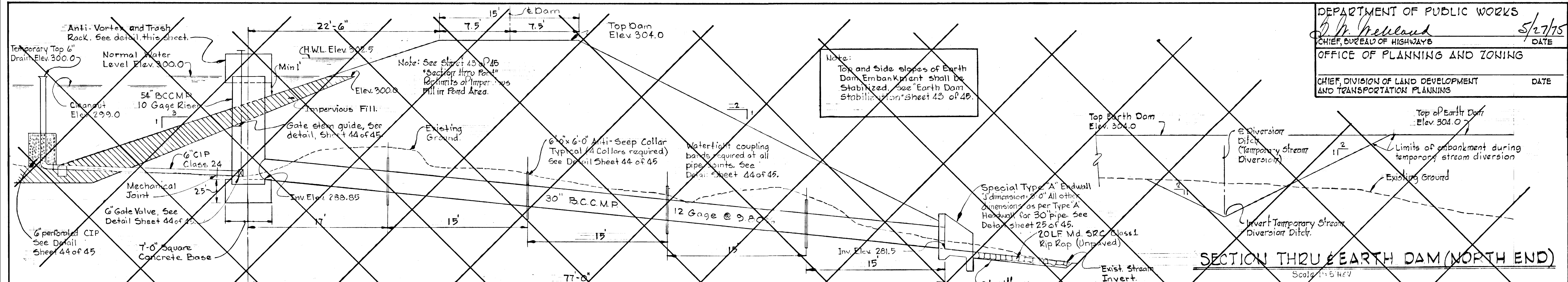
APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 4/17/74
J. J. [Signature]

THESE PLANS FOR SMALL POND CONSTRUCTION, SHEETS 41 THRU 44 OF 45 MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Approved: *Robert W. Ziehm* 5-19-75
 Howard SCD Date
 F74-99C
 Plan Number

OWNER'S CERTIFICATION FOR POND CONSTRUCTION
 I certify that the development and construction of this pond will be done according to these plans, also authorize periodic on-site evaluation by the Howard Soil Conservation District or its authorized agents as deemed necessary. Deviation from these plans will not be made unless authorized in writing by the Howard Soil Conservation District.
 SIGNATURE _____ DATE _____

THESE PLAN SHEETS 41 THRU 44 OF 45 HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION.
Eric U. Herman 5/19/75
 U.S. Soil Conservation Service Date

Rev. Date	Rev. No.	Reviser	Description
COLUMBIA ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.			
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1			
PROJECT TITLE PERMANENT POND NO. 5 TEMPORARY SEDIMENT BASIN No. 5			
SCALE: 1" = 20'		DATE: 11/15/74	
WHITMAN, REQUIAZOT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202			
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1074			

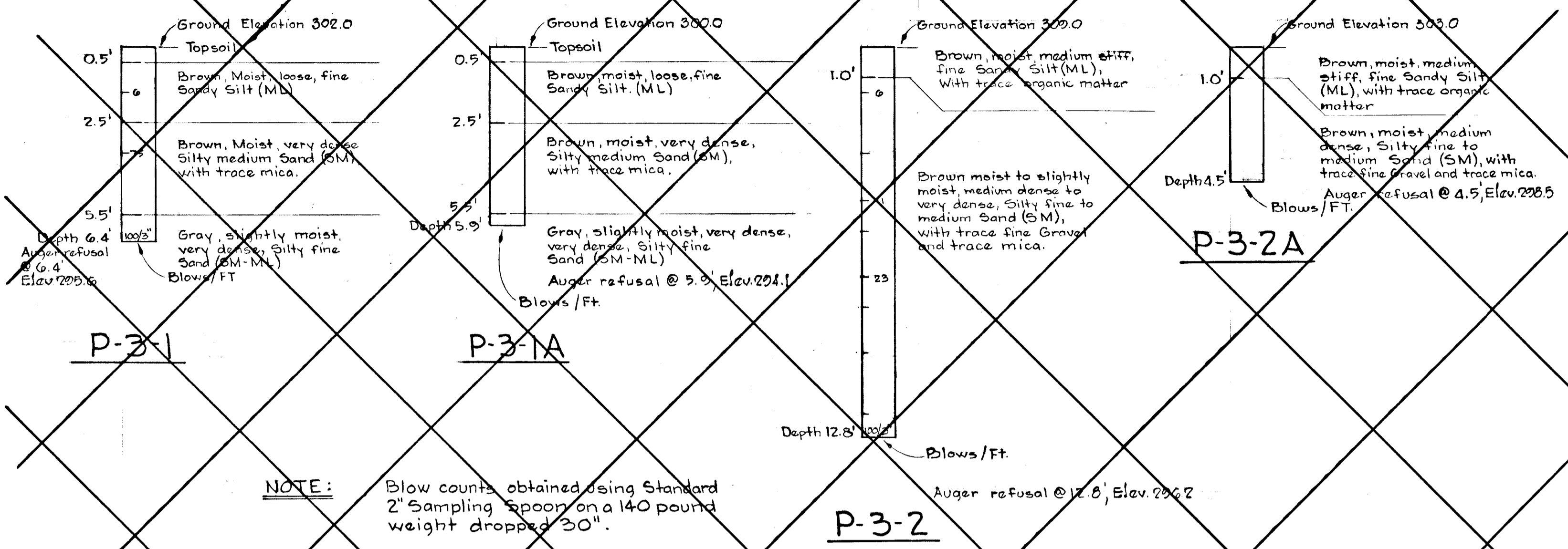


For revision of Permanent Pond No. 5 to strictly a Temporary Sediment Basin see Supplement to Road Construction Plans, dated 3/10/77, sheets 14 & 15 of 18.

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/17/74
 J. J. J.

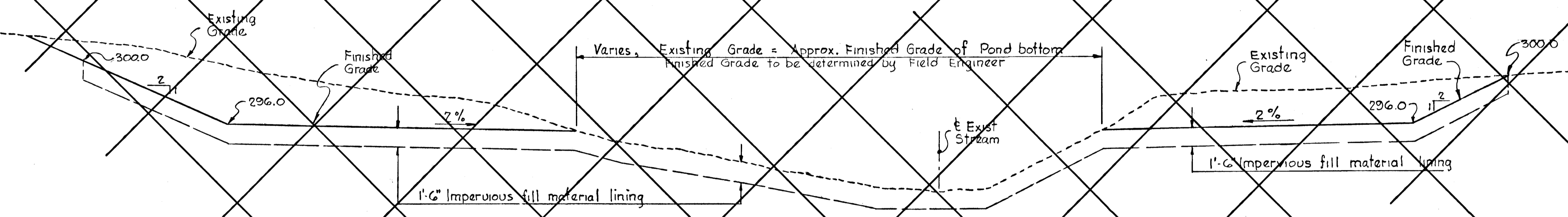
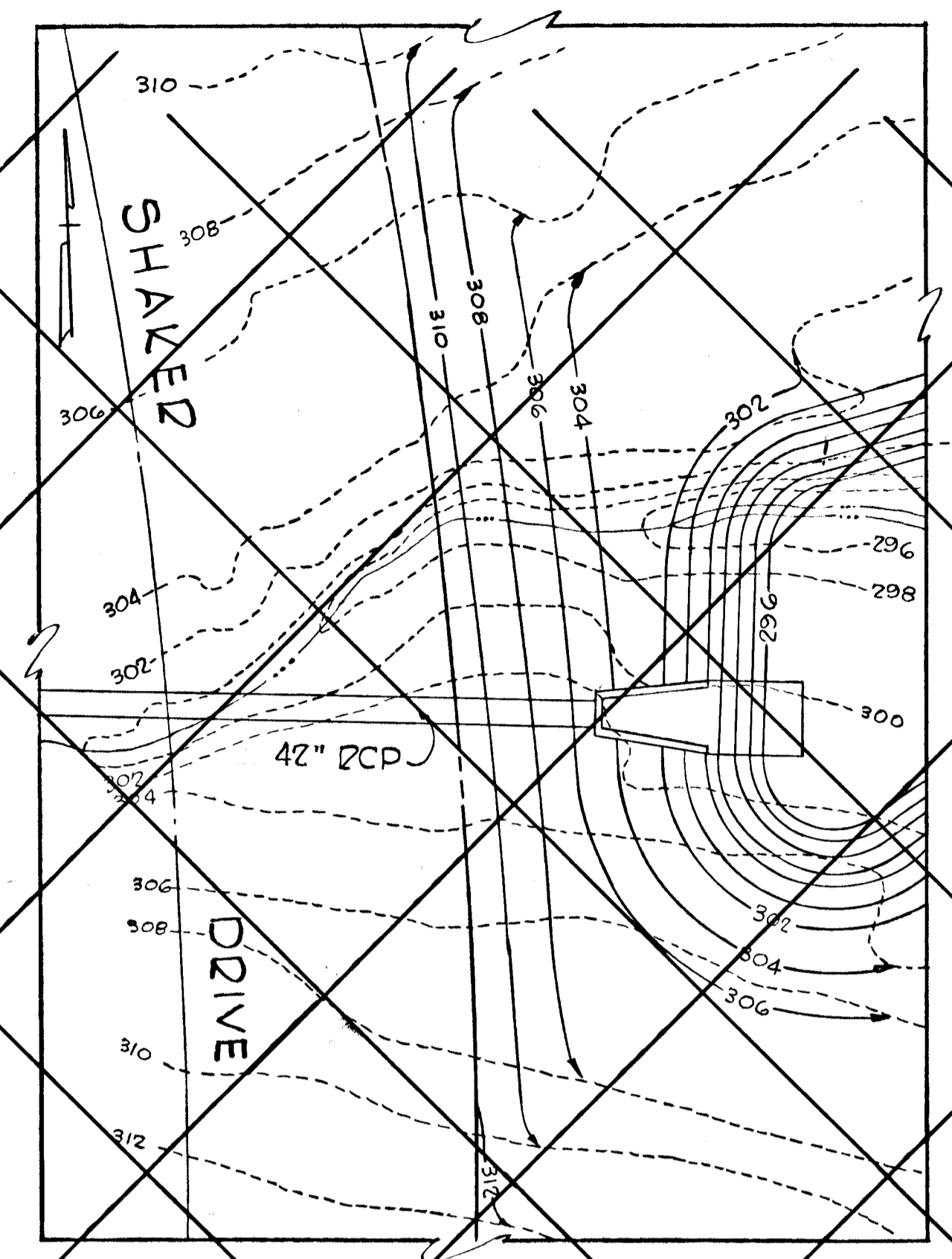
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
G1ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1		
PROJECT TITLE PERMANENT POND NO. 5 TEMPORARY SEDIMENT BASIN No. 5		
SCALE: As Shown		DATE: 11/15/74
WHITMAN, REQUIZDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCORD KENNETH A. McCORD Registered Engineer No. 1074		

SOIL BORINGS



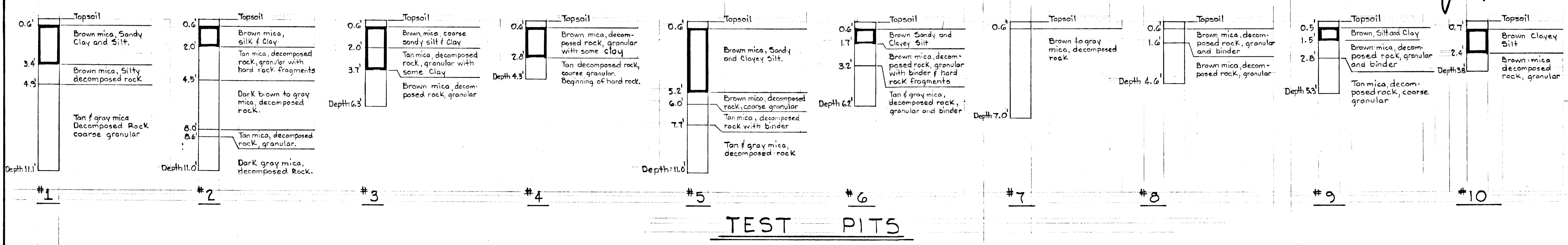
NOTE: Blow counts obtained using Standard 2" Sampling Spoon on a 140 pound weight dropped 30".

For revision of Permanent Pond No. 5 to strictly a Temporary Sediment Basin see Supplement to Road Construction Plans, dated 3/10/77, sheets 14 & 15 of 18.



SECTION THRU POND
 Scale: 1" = 5'-0"

NOTE: For Test Pit Locations See Sheet 44 of 45.



TEST PITS

EARTH DAM STABILIZATION

- Permanent Seeding
 - Ground Limestone - 52 lbs per 1000 S.F.
 - Seed shall be Kentucky 31 tall fescue - 125 lbs per 1000 S.F., Korean lespedeza (unhulled) 100 lbs per 1000 S.F.
 - Fertilizer (10-10-10) - 11.5 lbs per 1000 S.F.
- Topsoil to be spread a minimum of 4 inches in depth, fertilizer and limestone to be disced into upper 3 inches then fine grade and seed. Straw mulch to be placed at rate of 11.5 lbs per 1000 S.F. Hydro seed method for seeding shall be used.

EMERGENCY SPILLWAY STABILIZATION

- Graded and Pegged Area - full width of bottom and 5 foot width each side slope.
 - Ground Limestone - 46 lbs per 1000 S.F.
 - Fertilizer (10-10-10) - 11.5 lbs per 1,000 S.F.
 - Seed Kentucky 31 tall fescue.
- Permanent Seeding - Remainder of Side Slopes See notes and 2 under EARTH DAM STABILIZATION.

IMPERVIOUS FILL

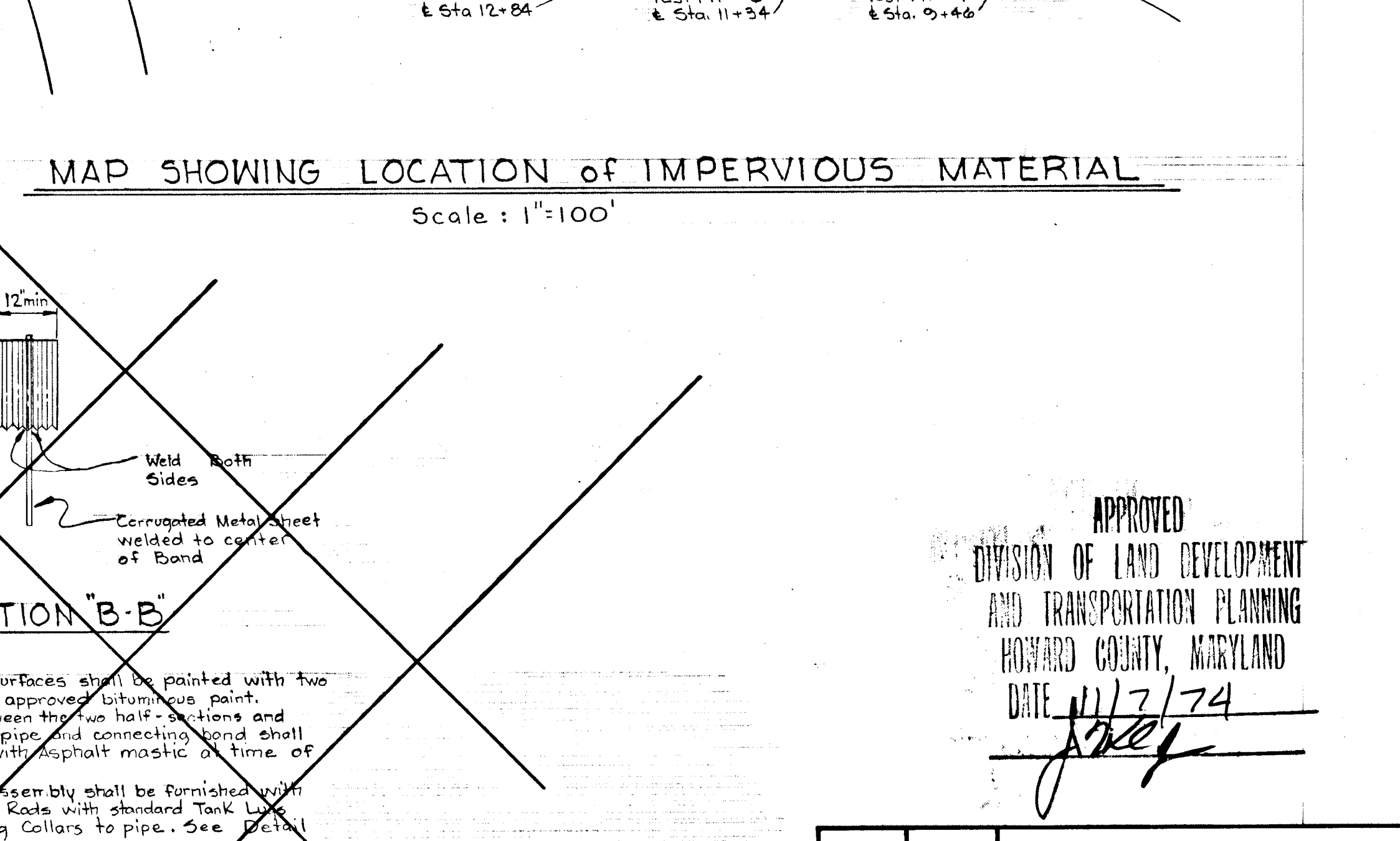
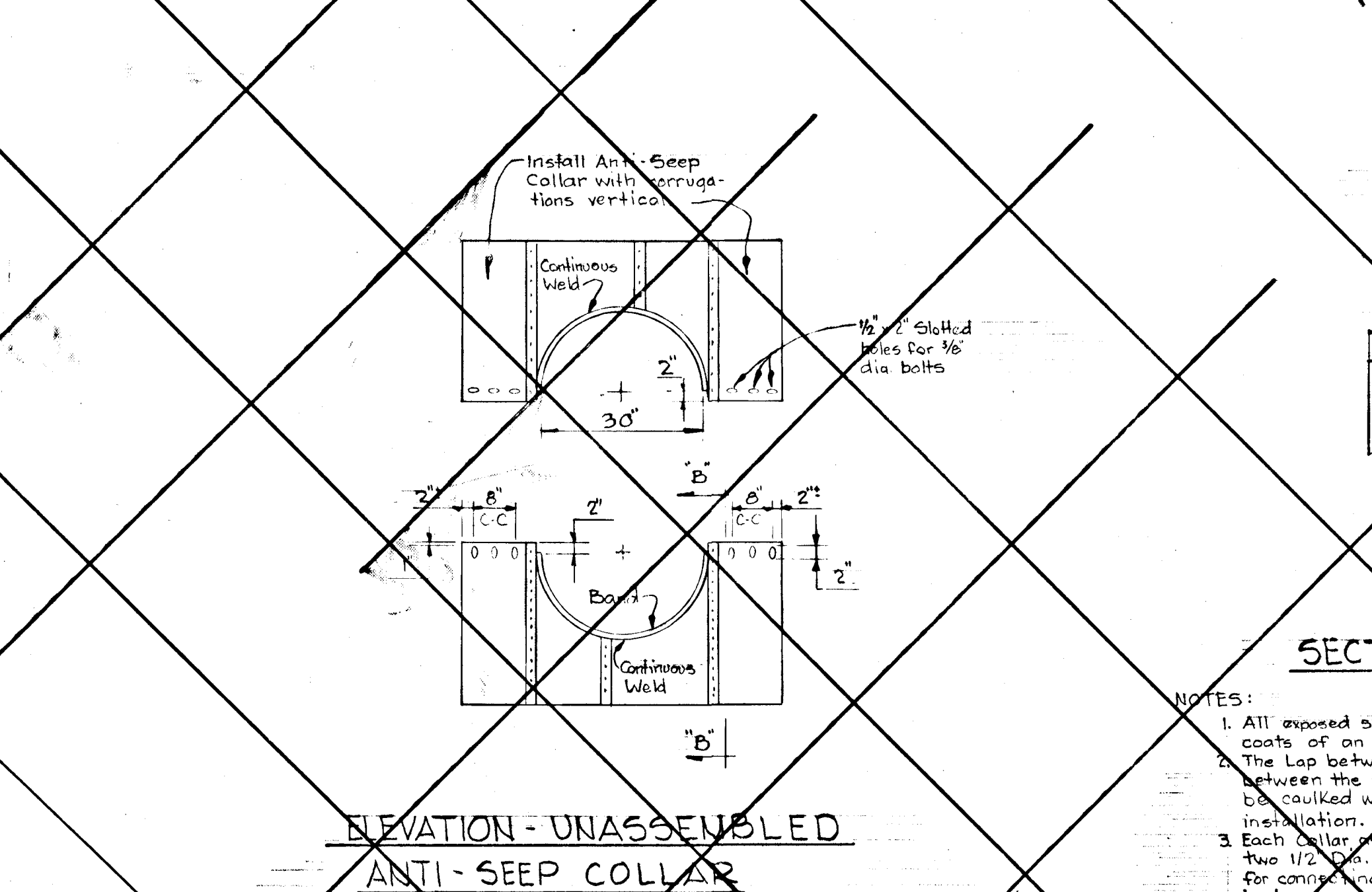
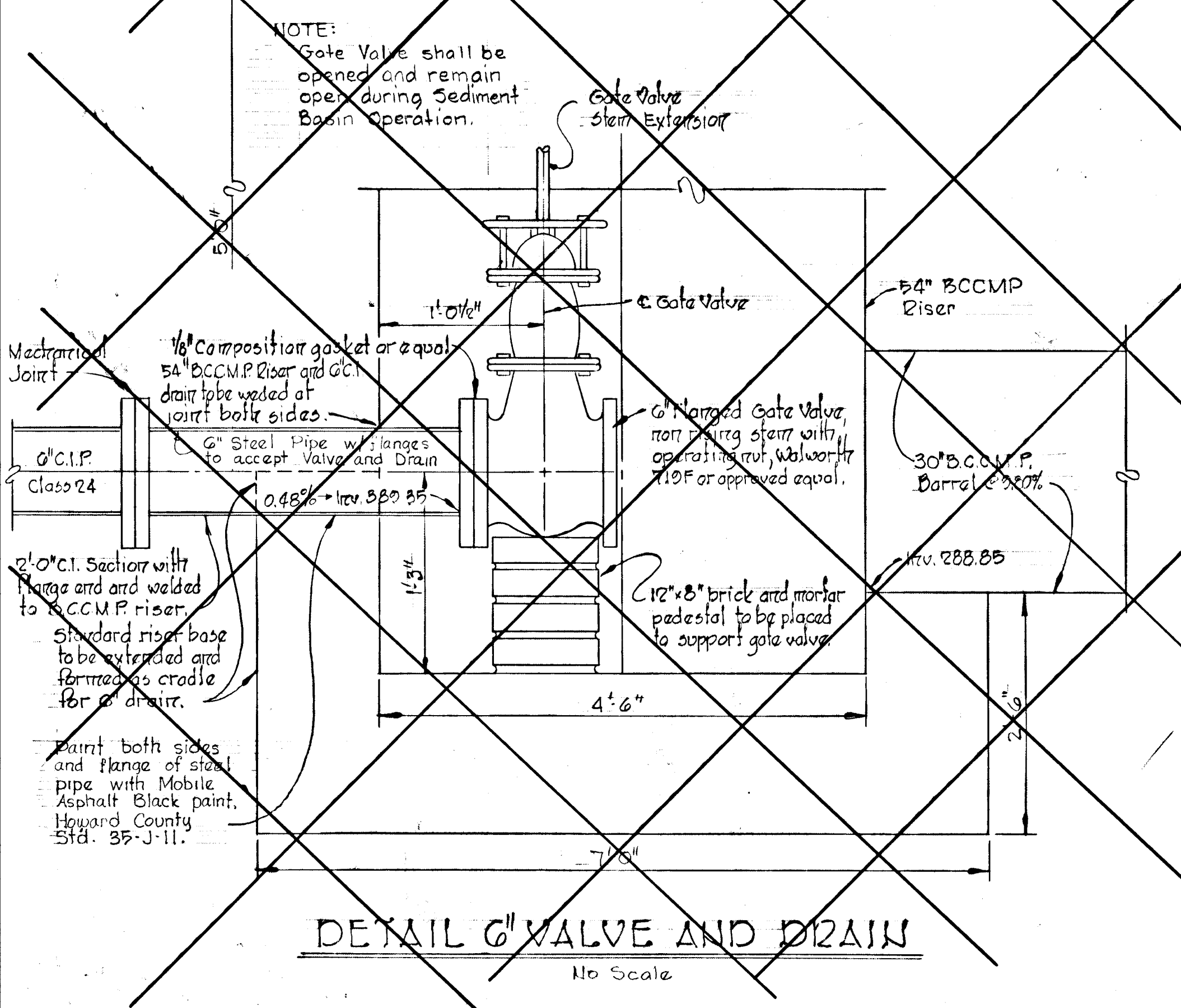
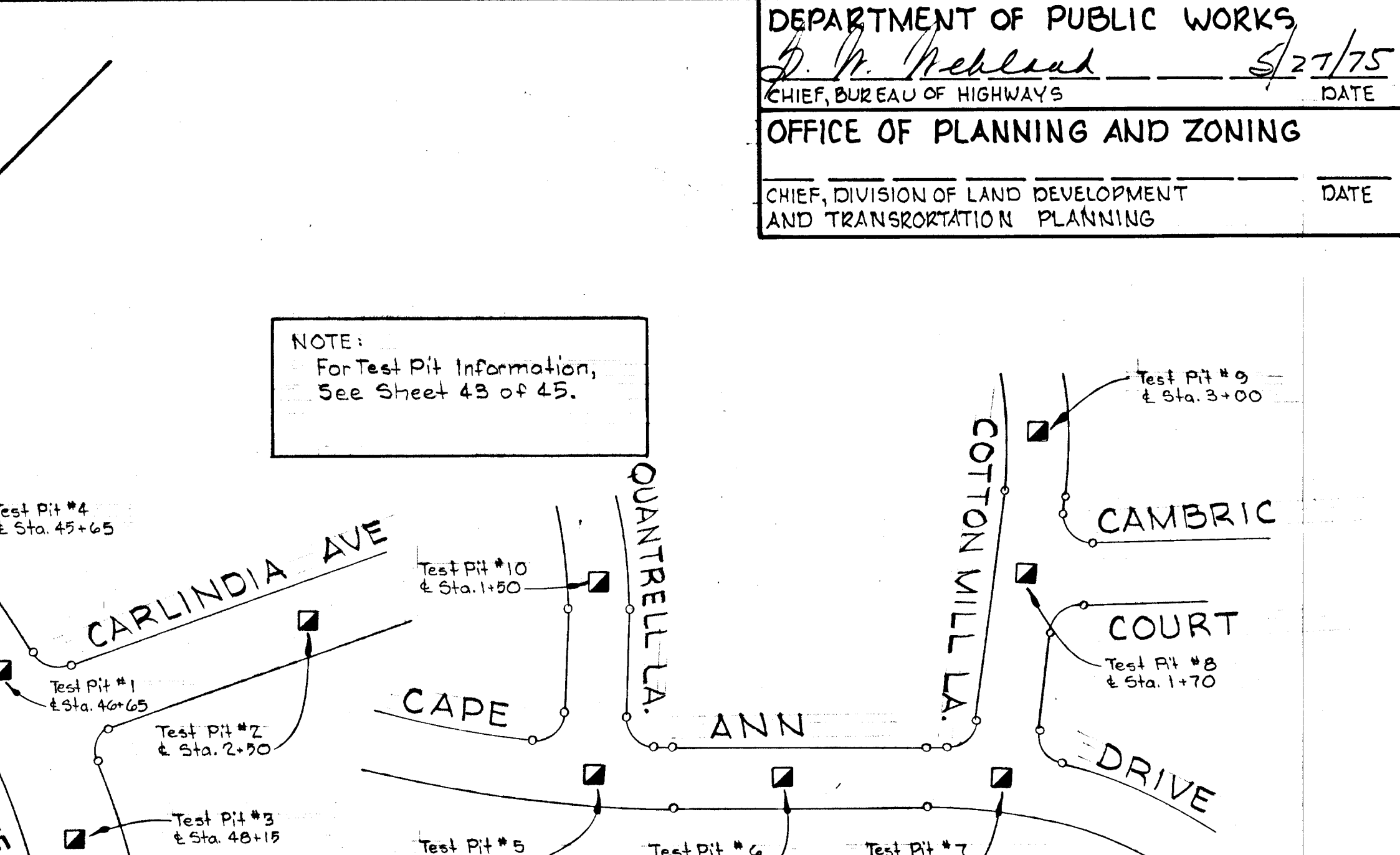
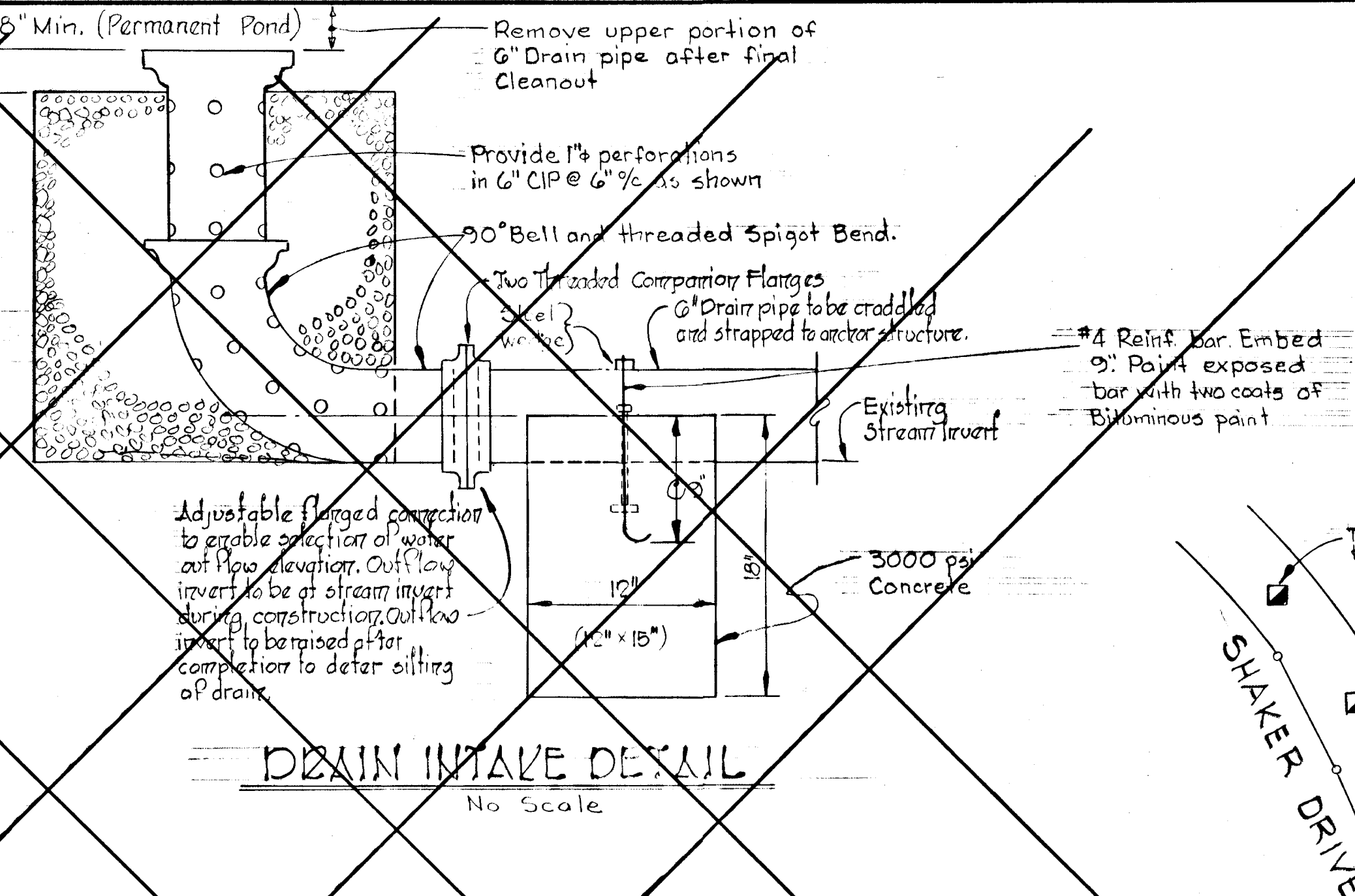
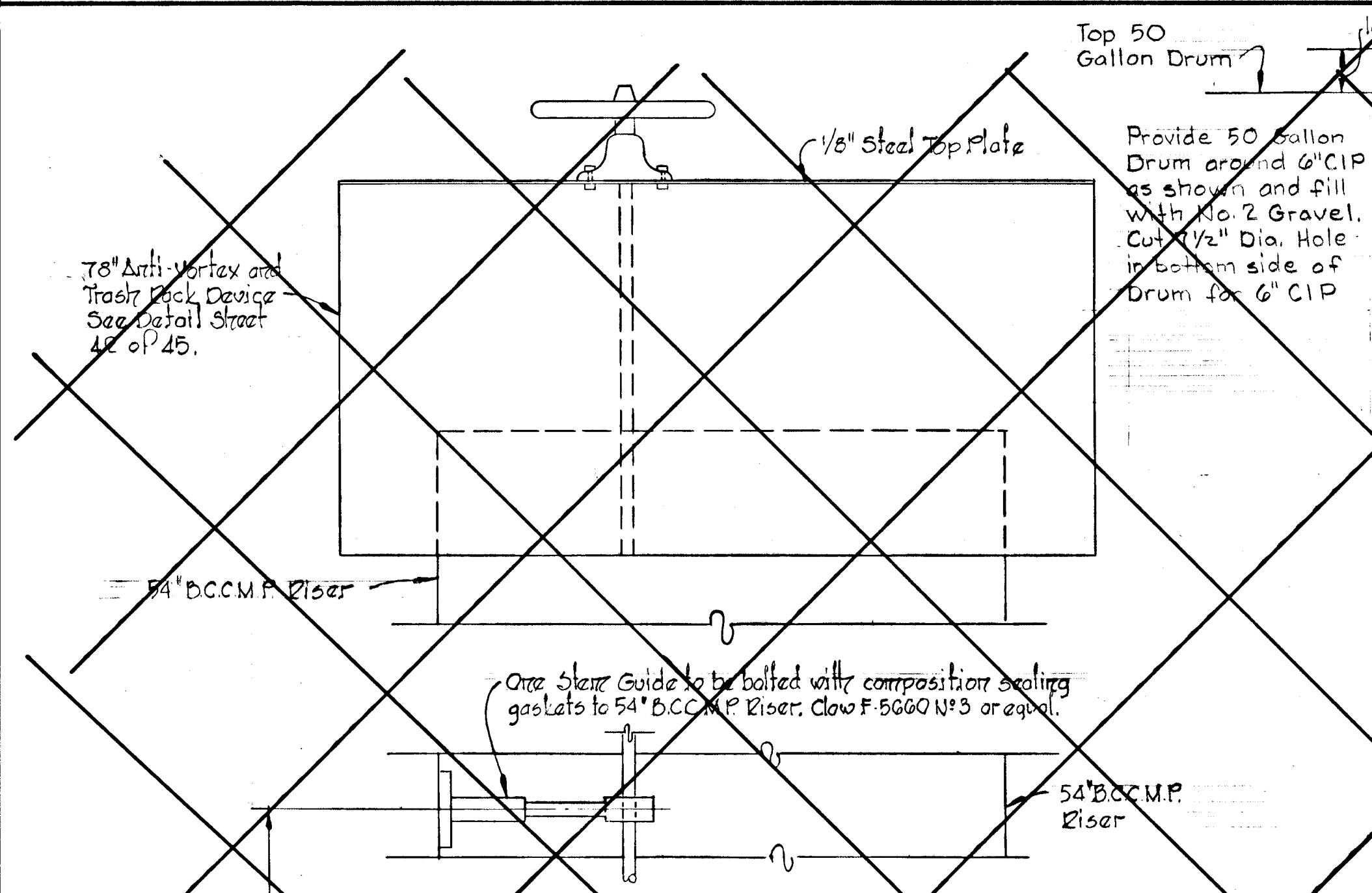
- Impervious fill material shall be obtained from specified areas. See Map and Test Pit Logs This sheet and sheet 44 of 45.
- Impervious fill material shall be placed on entire bottom of pond and full perimeter of inside slopes to Elev. 300.0.
- Impervious fill material shall be placed in 6" compacted layers to 90% of ASSHTO T-180.
- Moisture content of impervious fill material shall be within the range of 1% below optimum moisture to 3% above optimum moisture.

EARTH DAM EMBANKMENT

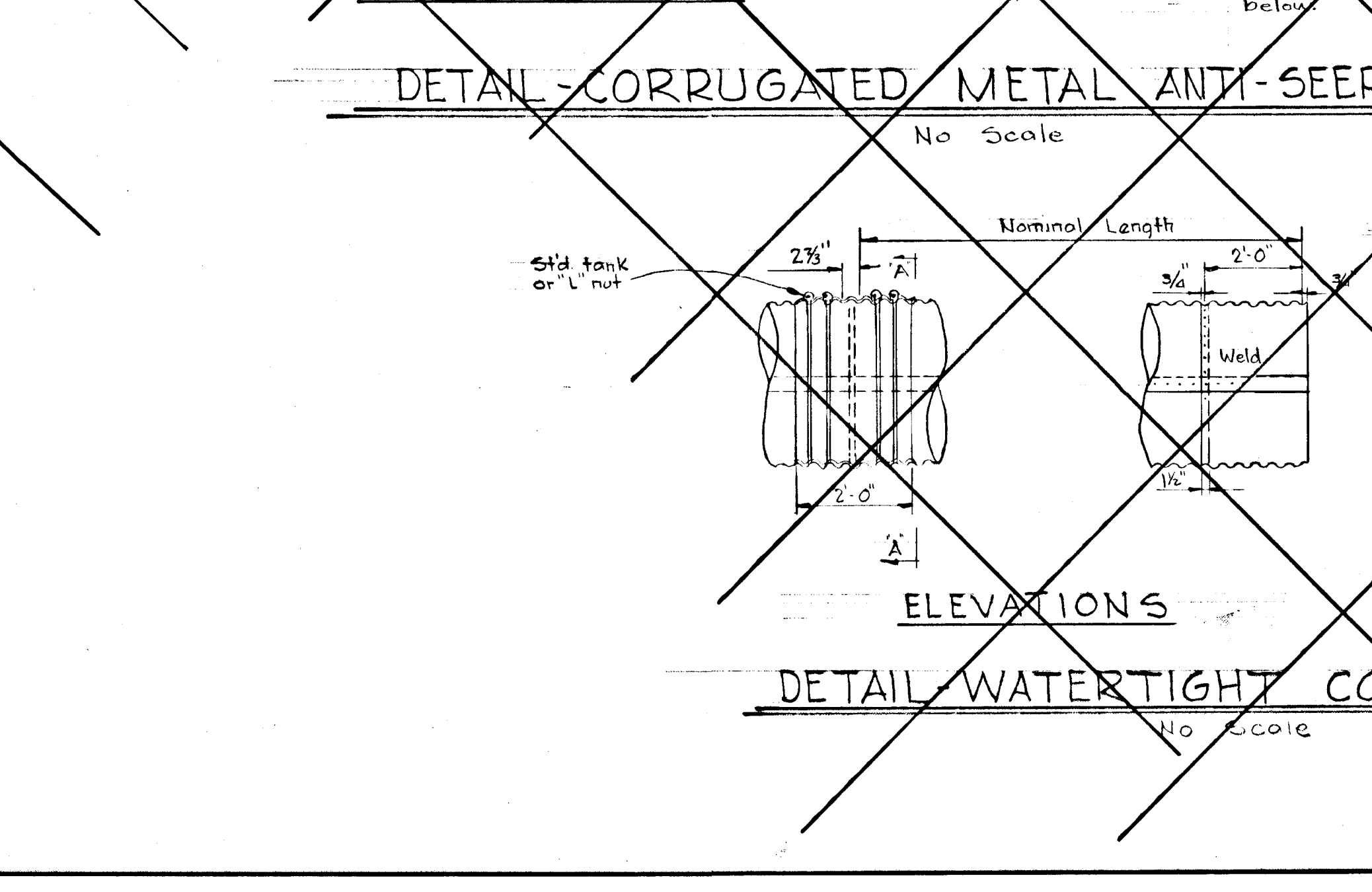
- Suitable material from the pond excavation may be used for the embankment, except where impervious material is required.
- Suitable material shall be placed in 8" compacted layers to 90% of ASSHTO T-180.
- Moisture content of the suitable material shall be within the range of 2% below optimum moisture to 2% above optimum moisture.
- See "POND SPECIFICATIONS" Sheet 45 of 45.

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J.M. McLeod

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 th ELECTION DISTRICT		
HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER		
HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF KINGS CONTRIVANCE		
SECTION 1 AREA 1		
PROJECT TITLE		
PERMANENT POND NO. 5		
TEMPORARY SEDIMENT BASIN No. 5		
SCALE: AS SHOWN		DATE: 11/15/74
WHITMAN, REQUARDT & ASSOCIATES		
ENGINEERS		
BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i>		
KENNETH A. McCORD		
Registered Engineer		
No. 1974		



For revision of Permanent Pond No. 5 to strictly a Temporary Sediment Basin see Supplement to Road Construction Plans, dated 5/10/77, streets 14 & 15 of 18.



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
J. McLeod

Rev. No.	Rev. Date	Revision Description

COLUMBIA
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

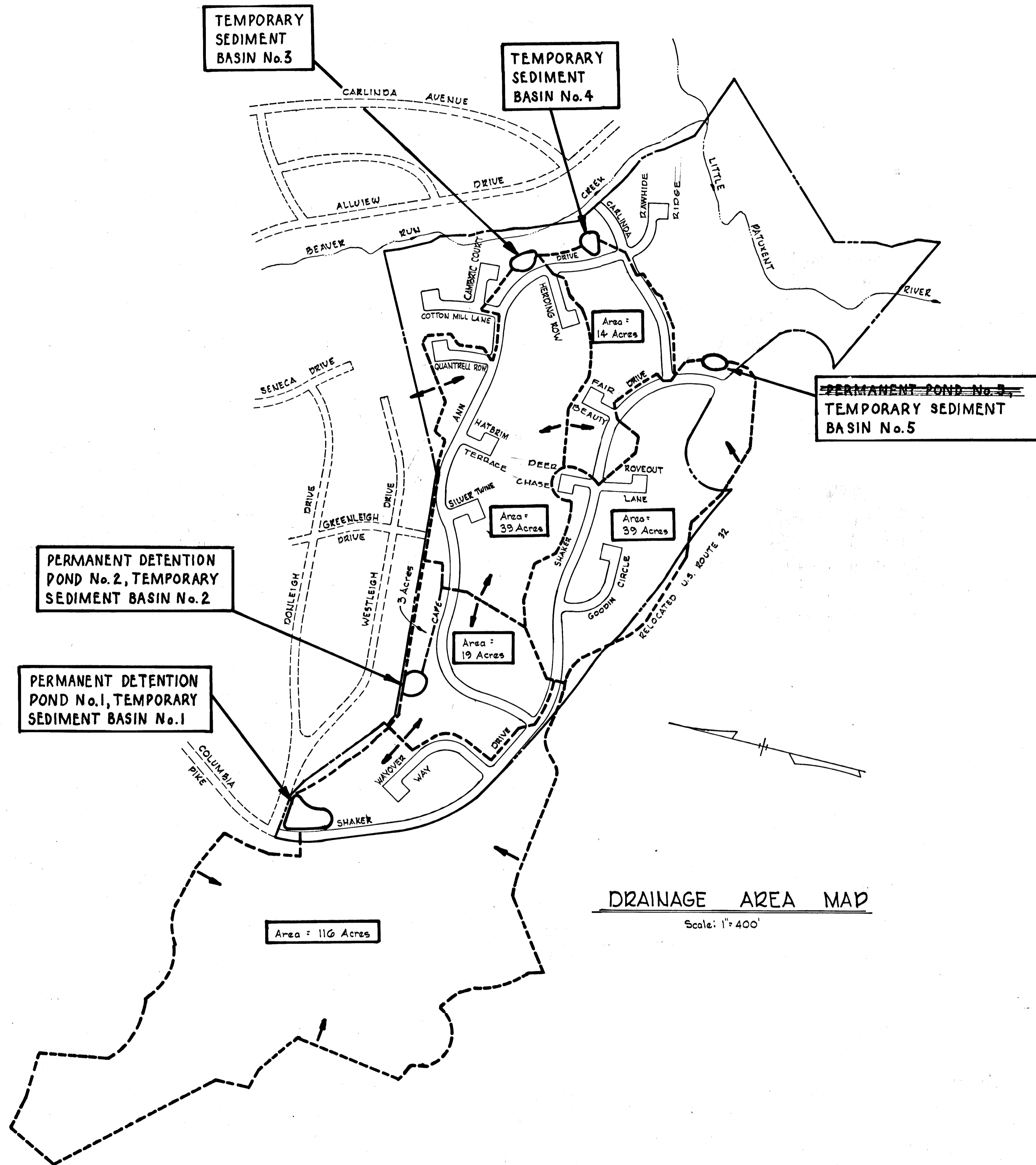
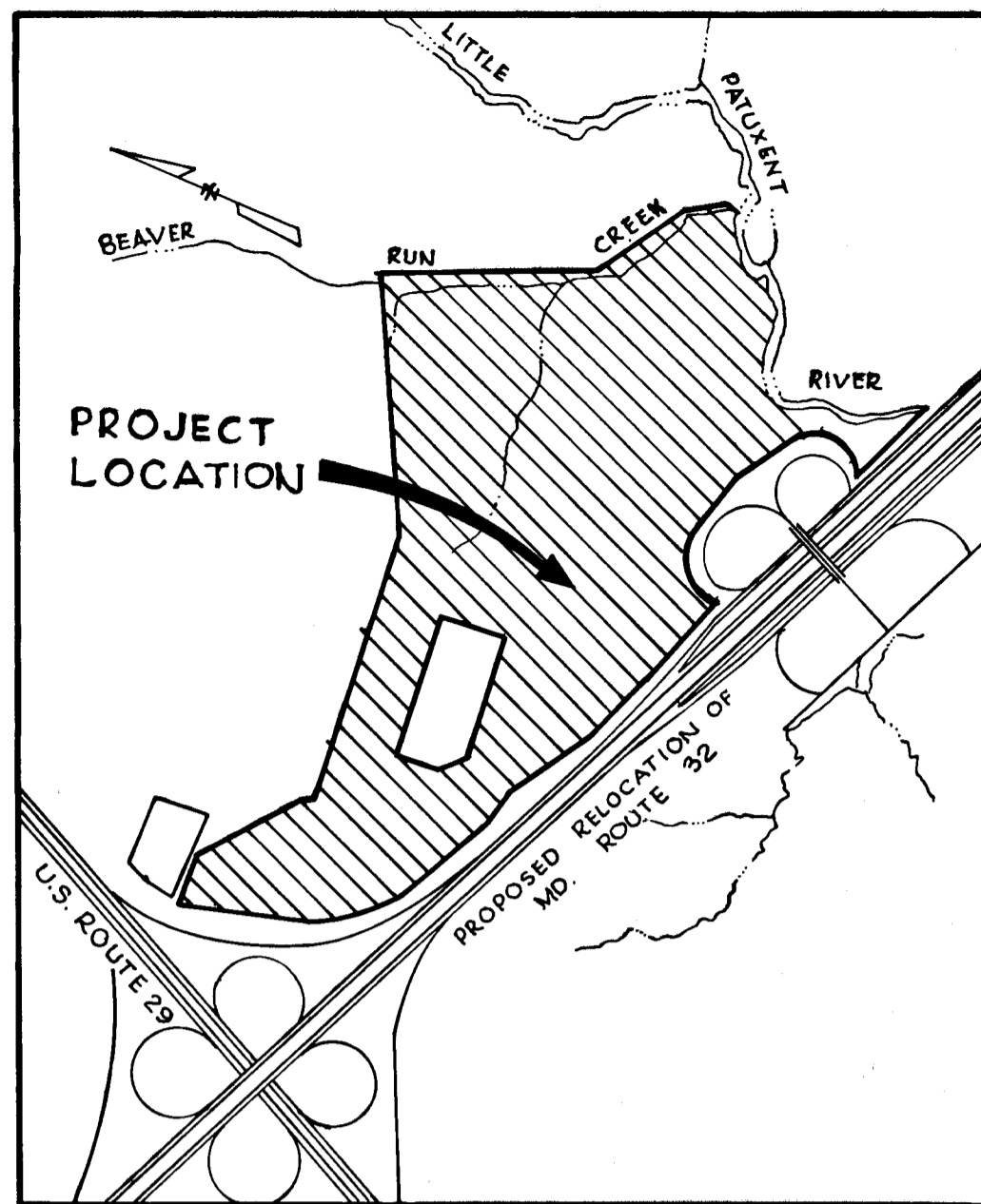
PROJECT AREA
VILLAGE OF KINGS CONTRIVANCE
 SECTION I AREA I

PROJECT TITLE
PERMANENT POND NO. 5
TEMPORARY SEDIMENT BASIN No. 5

SCALE: As Shown Date: 11/15/74

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



POND SPECIFICATIONS

1. Area under the embankment shall be cleared and grubbed to remove all trees, vegetation, roots or other objectionable material, and topsoil stripped.
2. The fill material shall be taken from the designated borrow area or areas and from the pond excavation. It shall be free from roots, stumps, wood, rubbish, oversized stones, frozen or other objectionable materials. The fill height all along the length of the embankment shall be increased by 10%.
3. Fill materials shall be placed in 8" maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.
4. The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment. The compaction shall be achieved by a minimum of six complete passes of a sheepfoot or a vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling.
5. Backfill around structures shall be placed in horizontal layers not to exceed four (4) inches in thickness and compacted by hand tampers or other compaction equipment. At no time during the backfilling operation shall construction equipment be allowed to operate closer than four (4) feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four (24) inches or greater over the structure or pipe.
6. The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or other unsuitable soil is encountered under the pipe, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
7. Concrete shall have a minimum of 6 bags of cement per cubic yard and water content not to exceed 6 gallons per bag of cement. Slump shall range 3"-4". All concrete shall be transit mix.

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE 11/7/74
[Signature]

Rev. Date	Rev. No.	Revision Description
		COLUMBIA 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP
		PROJECT AREA VILLAGE OF KINGS CONTRIVANCE SECTION 1 AREA 1
		PROJECT TITLE SEDIMENT CONTROL DRAINAGE AREA MAP
		SCALE As Shown DATE 11/15/74
		WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202
		<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974