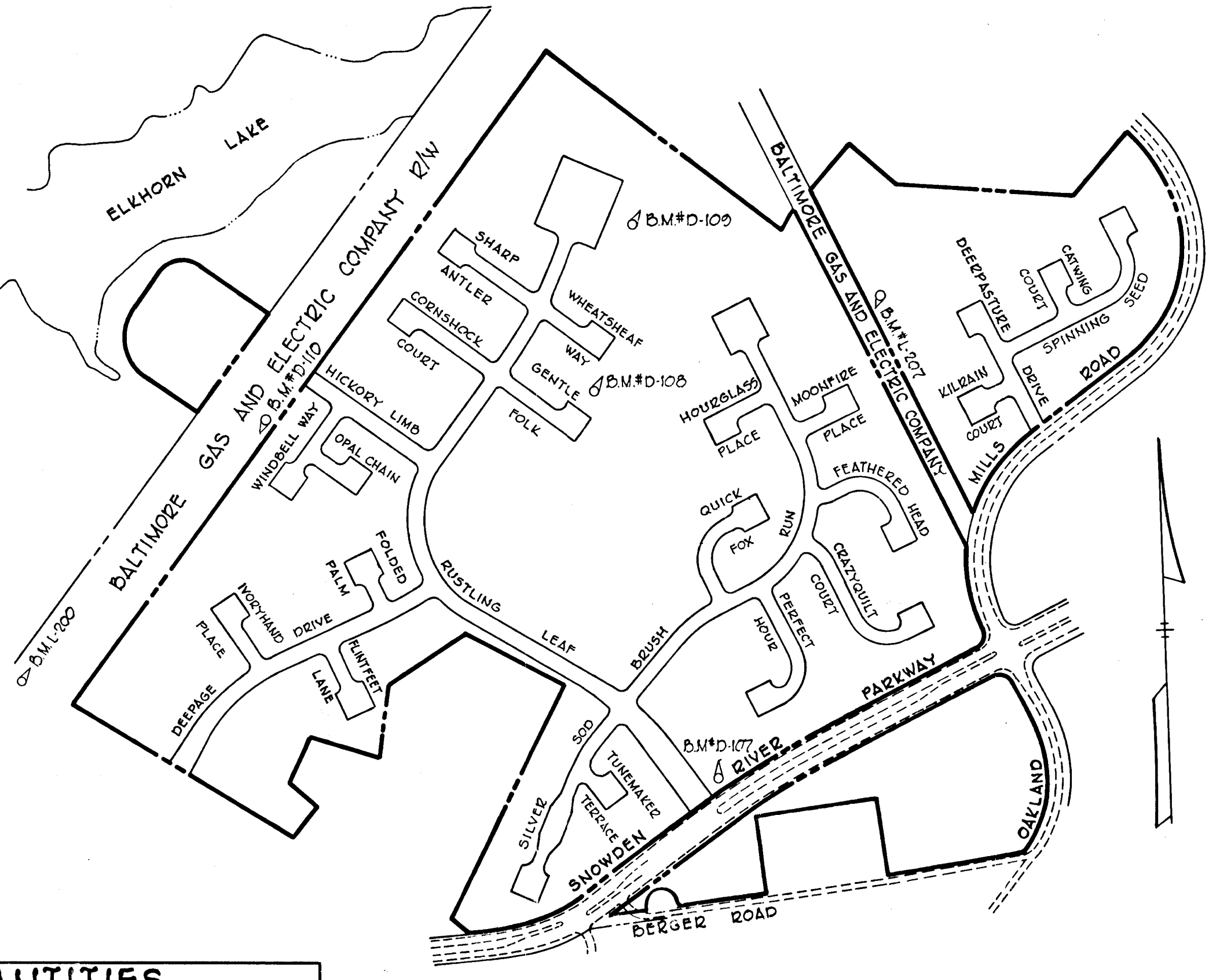
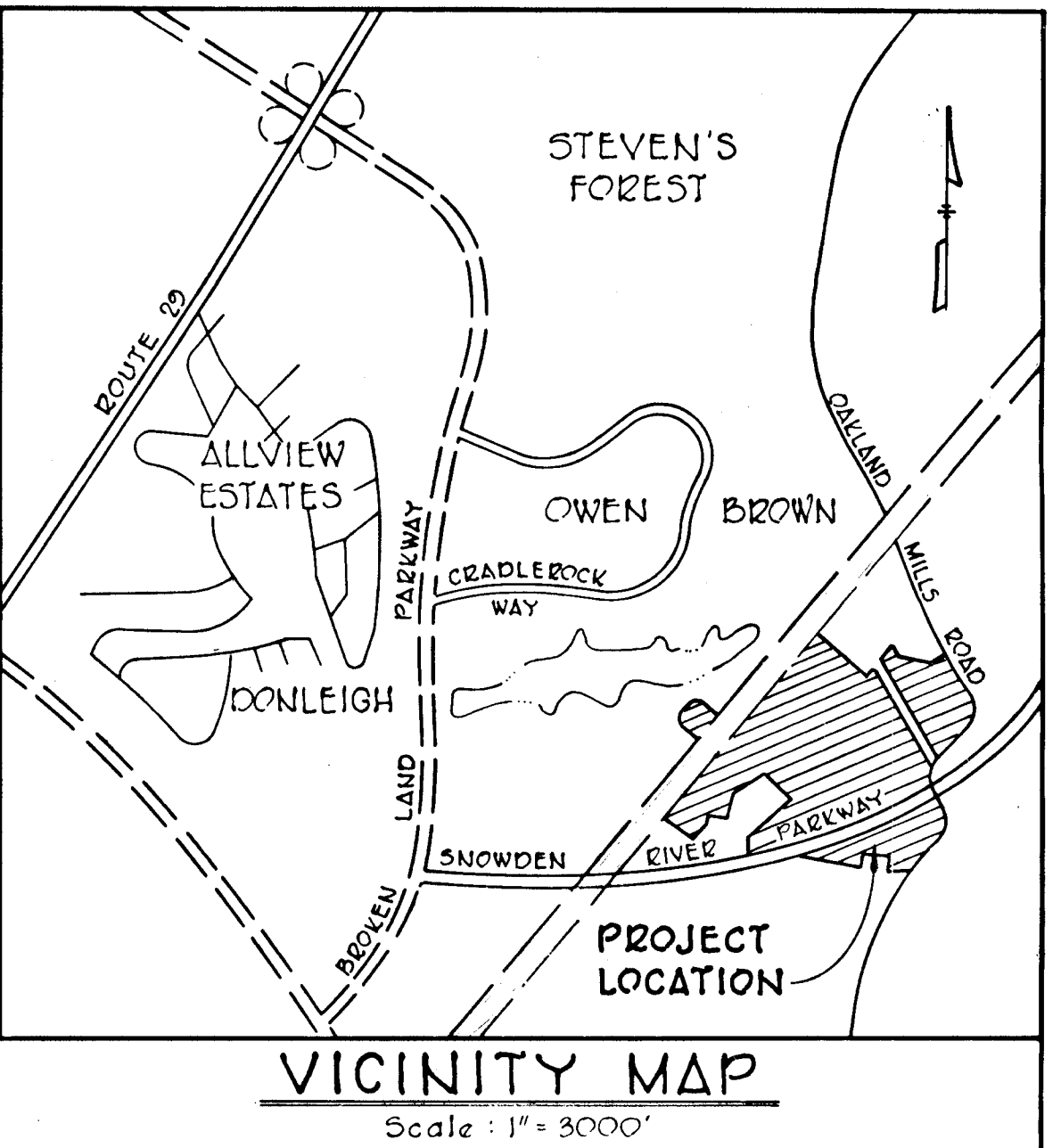


SHEET INDEX	
SHEET NO.	DESCRIPTION
1.	Title Sheet
2.	Rustling Leaf 0+00 to 11+00
3.	" " 11+00 to 23+00
4.	" " 23+00 to 34+30.80
5.	Ivoryhaz Place and Deepage Drive 6+30 to 12+00
6.	Folded Palm and Deepage Drive 12+00 to 17+83.67
7.	Flirtleaf Lane and Hickory Limb
8.	Windbell Way and Opal Chain
9.	Cornstock Court and Gentle Folk
10.	Sharp Antler, Wheatshaf Way and Moorfire Place
11.	Brush Run 0+00 to 13+50
12.	" " 13+50 to 20+26.92 and Hourglass Place
13.	Quick Fox and Perfect Hour
14.	Feathered Head and Crazyquilt Court
15.	Silver Sod and Turmarket Terrace
16.	Deerpasture Drive and Kilrain Court
17.	Spinning Seed
18.	Catwing Court
19.	Berger Road
20+21	Roadway Details
22.	Drainage Area Map
23.	" " " " " "
24.	Storm Drain Profiles - Rustling Leaf, Deepage Drive, Folded Palm, Flirtleaf Lane
25.	" " " " " " - Deepage Drive, Oakland Mills Road, Spinning Seed
26.	" " " " " " - Turmarket Terrace, Rustling Leaf, Silver Sod, Brush Run
27.	" " " " " " - Brush Run, Crazyquilt Court, Hourglass Place, Feathered Head
28.	" " " " " " - Rustling Leaf, Cornstock Court, Wheatshaf Way, Hickory Limb
29.	" " " " " " - Oakland Mills Road, Catwing Court, Spinning Seed
30.	" " " " " " - Quick Fox, Ivoryhaz Place, Perfect Hour, Kilrain Court, Deerpasture Drive
31.	" " " " " " - Rustling Leaf, Windbell Way, Sharp Antler, Moorfire Place, Gentle Folk
32.	Sediment Control
33.	" " " " " " - Ponds # 2 and #3
34.	" " " " " " - Pond #4
35.	Storm Drain Details
36.	" " " " " "
37.	" " " " " "
38.	" " " " " "
39.	" " " " " "

COLUMBIA

HOWARD COUNTY, MARYLAND
6TH ELECTION DISTRICT

ROAD CONSTRUCTION PLANS VILLAGE OF OWEN BROWN SECTION 2 AREA 3



RECORDED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE: MAY 24 1973
JSC

ESTIMATE OF QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITIES
1a	Bit Conc. Resurface (Berger Road) Avg. Thr. 3"	S.Y.	670
2a	Bit Conc. Binder Course 5" Thr	S.Y.	1,280
1	Bit. Conc. Surface Course 1 1/2" Th.	S.Y.	50,324
2	Bit. Conc. Binder Course 1 1/2" Th.	S.Y.	13,233
3	Bit Conc. Base Course 5" Th.	S.Y.	50,324
4	Sid. 7" Comb. Curb and Gutter	L.F.	6,464
5	Reverse 7" Comb. Curb and Gutter	L.F.	1,135
6	Modified Comb. Curb and Gutter	L.F.	22,615
7	Barrier Curb	L.F.	2,985
8	Placing Topsoil 4" in Roadway, 2" on slopes	S.Y.	6,500
9	Unclassified Excavation (Roadway)	C.Y.	127,070
10	Concrete Sidewalk 4" Th.	L.F.	10,540
11	Sid. A-5 Inlet	EA.	43
12	Sid. A-10 Inlet	EA.	17
13	Special A-B Inlet	EA.	1
14	Special "K" Inlet	EA.	6
15	Sid. Manhole	EA.	35
16	Type "B" Shallow Manhole	EA.	8
17	Special Manhole	EA.	6
18	18" R.C.P. CL IV	L.F.	2,761
19	18" R.C.P. CL IV	L.F.	400
20	Transition Curb of "A" Inlets	L.F.	1,327
21	24" R.C.P. CL IV	L.F.	708
22	27" R.C.P. CL IV	L.F.	350
23	30" R.C.P. CL IV	L.F.	52
24	48" R.C.P. CL IV	L.F.	137
25	15" B.C.C.M.P. 1G Gage	L.F.	2,304
26	18" B.C.C.M.P. 1G Gage	L.F.	134
27	21" B.C.C.M.P. 1G Gage	L.F.	66
28	24" B.C.C.M.P. 14 Gage	L.F.	401
29	30" B.C.C.M.P. 14 Gage	L.F.	132
30	42" B.C.C.M.P. 12 Gage	L.F.	123
31	48" B.C.C.M.P. 12 Gage	L.F.	268
32	15" R.C.P. CL III	L.F.	205
33	18" R.C.P. CL III	L.F.	992
34	21" R.C.P. CL III	L.F.	299
35	24" R.C.P. CL III	L.F.	81
36	27" R.C.P. CL III	L.F.	278
37	54" R.C.P. CL III	L.F.	52
38	Sid. Type "A" Headwall	EA.	3
39	Sid. Type "C" Endwall	EA.	5
40	A-42 Headwall	EA.	1
41	Modified A-48 Headwall	EA.	1
42	A-54 Headwall	EA.	1
43	15" B.C.C.M.P. End Section	EA.	0
44	18" B.C.C.M.P. End Section	EA.	1
45	21" B.C.C.M.P. End Section	EA.	1

* Item 20 not listed on individual streets.

ESTIMATE OF QUANTITIES			
47	Earth Excavation - Drainage Ditches	C.Y.	236
48	Concrete Paving - Drainage Ditches	S.Y.	233
49	Sod - Drainage Ditches	S.Y.	656
50	Zip Cap Paving	S.Y.	54
51	16.5" Paving - Snowden River Crossover	S.Y.	525

SEDIMENT CONTROL			
52	15" C.M.P. 1G Gage	L.F.	45
53	21" C.M.P. 12 Gage	L.F.	50
54	30" C.M.P. 12 Gage	L.F.	7
55	36" C.M.P. 12 Gage	L.F.	196
56	48" C.M.P. 12 Gage	L.F.	15
57	Earth Excavation, including stripping	C.Y.	1,548
58	Earth Embankment	C.Y.	6,705
59	Anti-Vortex and Trash Rack	EA.	3

LOCATION PLAN
Scale: 1" = 400'

CERTIFICATION BY THE DEVELOPER
"I certify that all development and/or construction will be done according to this plan of development and plan for Erosion and Sediment Control, and I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary." Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

Signature of Developer: Charles E. Williams Date: 5/24/73
Signature of U.S. Soil Conservation District: Richard W. Wickham Date: 5-24-73

This development plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

GENERAL NOTES

- All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
- All utility companies shall be notified 24 hours in advance of construction.
- Collector Streets and minor streets are designed for 35 and 30 M.P.H. traffic speed respectively in accordance with AASHTO standards.
- Drainage structures shall be installed in all storm drain stubs.
- All inlets shall be in accordance with Howard County S.D.S. as located below.
- All street curb returns shall have a 35.5' radii unless otherwise noted.
- Storm drain trenches within road rights-of-way shall be backfilled and compacted in accordance with Howard County Road Code.
- Approximate location of existing utilities are shown. The Contractor shall take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to contractor's operations shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities, where directed by the Engineer, a minimum of two weeks in advance of construction operations.
- Temporary, compacted, 18" high Earth Fill Diversion Barms should be constructed above the top of fill slopes on the ROW concurrently with the initial grading and directed to undisturbed sod areas at the end of each day.
- All swales shall be sodded and topped and all slopes shall be seeded or sodded in conjunction with the Howard County Soil Conservation District and the Howard County Planning Board Standards entitled "Standards and Specifications For Soil Erosion and Sediment Control in Urbanizing Areas".
- Contractor to notify the Howard County Soil Conservation District at least three days before starting work shown on these drawings.
- All disturbed slope areas to be stabilized as soon as grading is completed.
- On all fills in sump areas, Reliance Plastic & Chemical Company "Flexible Tube Down Drains and Pans", or approved equal, shall be used.
- All Reinforced Concrete for storm drain structures shall have minimum 28 day strength of 3000 p.s.i.
- Sid. 7" Comb. curb and gutter is required in all sumped Out De Sacs, at "A" inlets and in Rustling Leaf Station 0+00 to 4+00, see drawings for limits. Reverse 7" Comb. curb and gutter is required in the median strip in Rustling Leaf and Silver Sod. Barrier curb is required on all islands within all Out De Sacs. All other curb and gutter required shall be modified curb and gutter.

BENCH MARKS

- Bench Mark #D-107 Elev. 378.06
2.2 Spike in 24" Tree 100' Right of P.L. Station 1+00 Rustling Leaf.
- Bench Mark #D-108 Elev. 344.89
2.2 Spike in 15" Walnut 150' ± NNE of P.L. Station 3+40.00 Gentle Folk.
- Bench Mark #D-109 Elev. 337.94
2.2 Spike in 24" Oak 200' ± Right of P.L. Station 28+41.64 Rustling Leaf.
- Bench Mark #L-200 Elev. 358.97
Plate Bolt X-marked Southwest corner Gas and Electric Tower #25
- Bench Mark #L-207 Elev. 344.78
A Mark on top bolt west side Gas and Electric Tower #425439.
- Bench Mark #D-110 Elev. 357.31
X cut in bolt on Northeast corner Gas and Electric Tower #27 (Not Tower #27E)
- * Non standard inlets:
Special "K" Inlet (Street/Structure) - G/1-7, 9/1-15, 15/1-17, 15/1-18, 17/1-16, 15/1-18, 15/1-18.
Special A-5 Inlet (Street/Structure) - 11/1-48.

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202
Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
NO. 1974

DEPARTMENT OF PUBLIC WORKS
W. O. F. Albert 5-25-73
CHIEF, BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
Richard W. Wickham 5/24/73
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

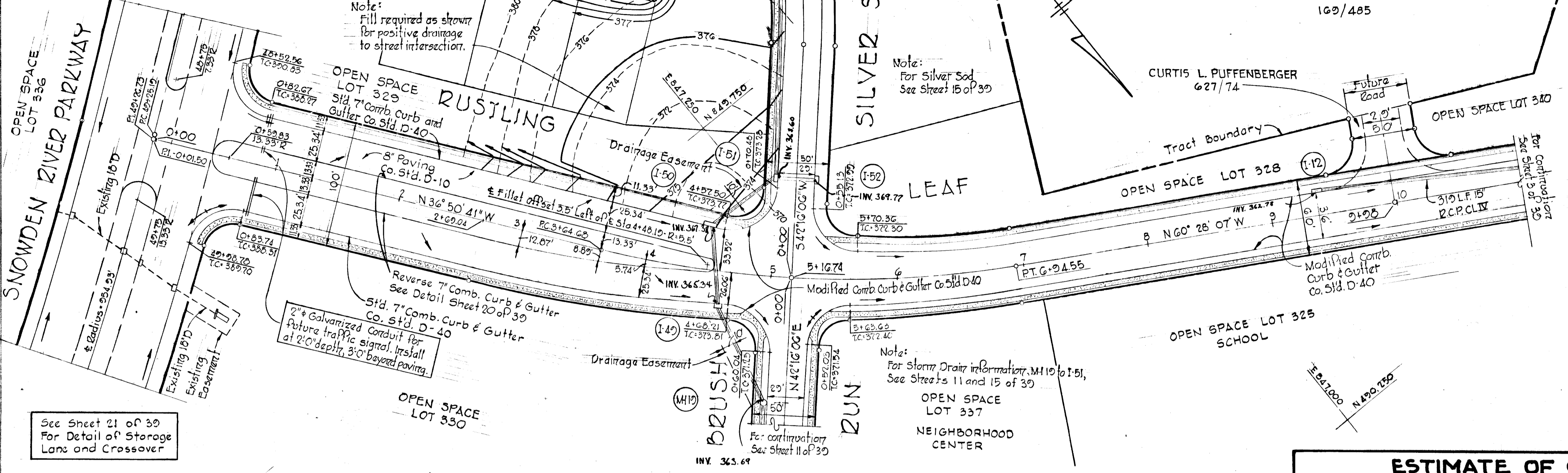
OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
COLUMBIA, MARYLAND

CURVE DATA
 PC 5+04.68 to El. 74.51 to PT. 6+02.55
 Δ = 10° 53' 26" Tan = 76.22' Δ = 12° 44' 06" Tan = 82.22'
 R = 600.00' Chd. = 151.83' R = 600.00' Chd. = 172.45'
 Arc = 152.06' Chd. Drg. N 42° 17' 27" W Arc = 177.81' Chd. Drg. N 54° 05' 57" W

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-12	Std. A-B Inlet width = 2.5	367.11	362.54	E. 171' 10" 42' Left of Sta. 9+41.50

DEPARTMENT OF PUBLIC WORKS
 W. Puffenberger
 CHIEF, BUREAU OF HIGHWAYS
 OFFICE OF PLANNING AND ZONING
 DATE 5-25-73
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 DATE



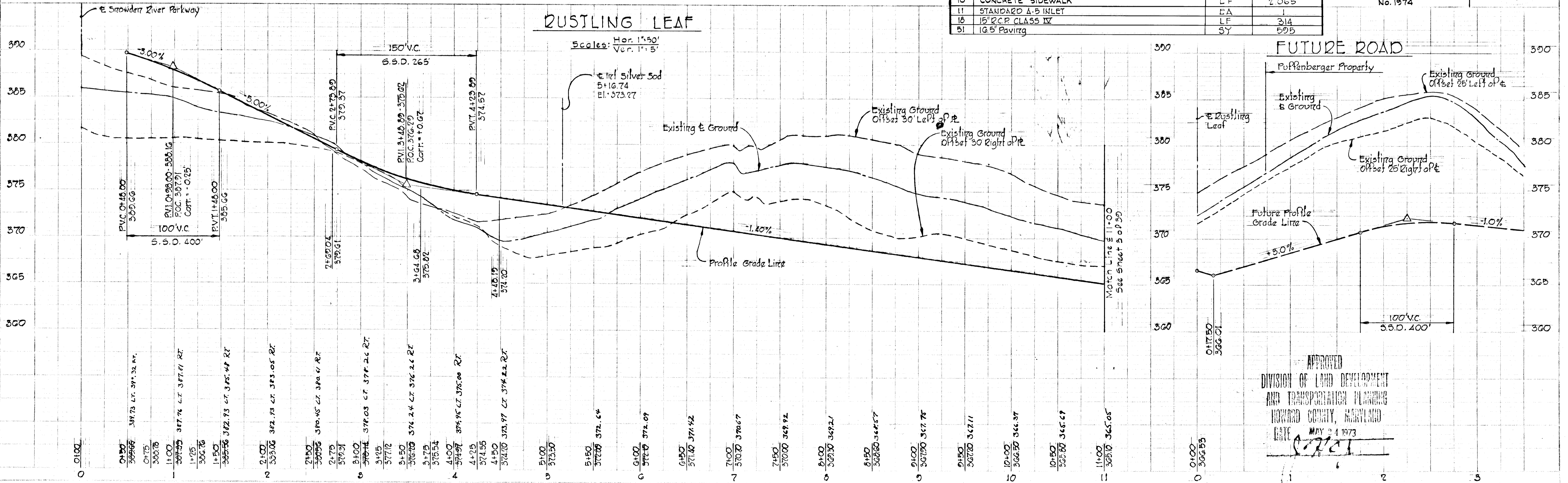
NOTES:
 1. For Storm Drain Profiles See Sheets 24 and 26 of 30.

ESTIMATE OF QUANTITIES

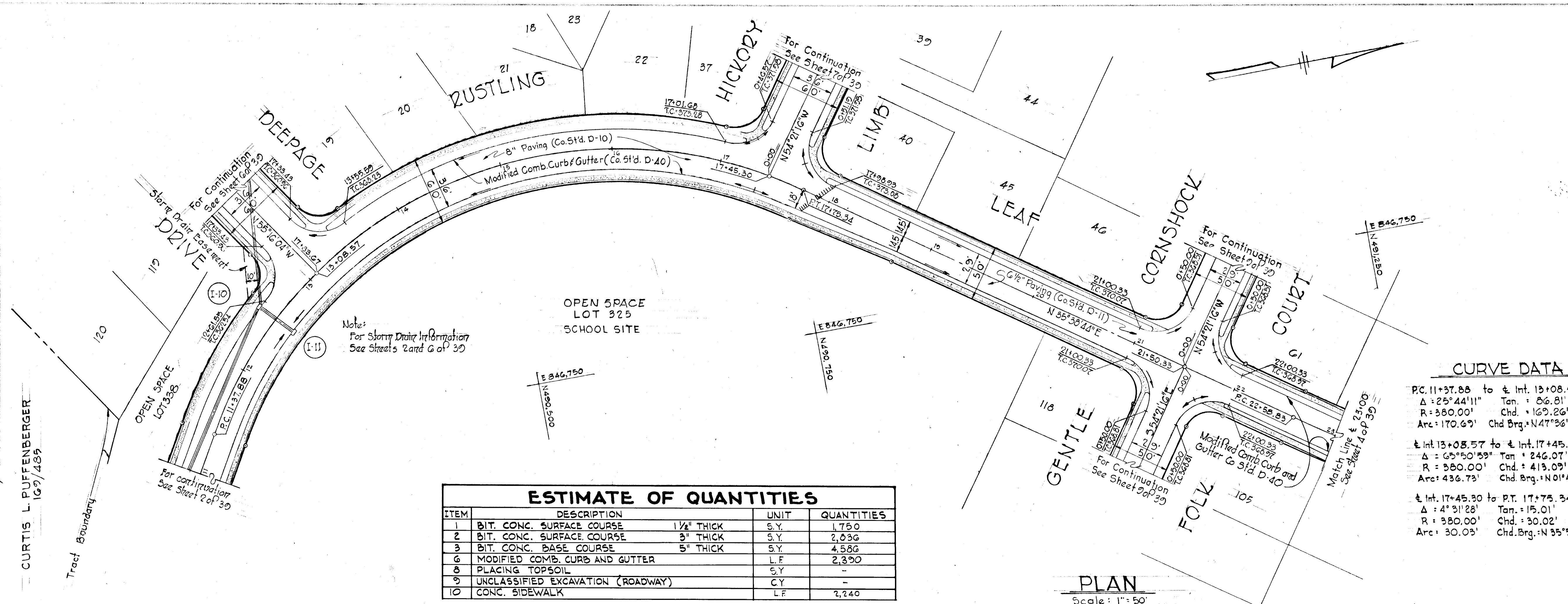
ITEM	DESCRIPTION	UNIT	QUANTITIES
2	BIT. CONC. SURFACE COURSE 3" THK.	SY	4,731
3	BIT. CONC. BASE COURSE 5" THK.	SY	4,731
4	STD 7" COMB. CURB AND GUTTER	LF	1,163
5	REVERSE 7" COMB. CURB AND GUTTER	LF	635
6	MODIFIED COMB. CURB AND GUTTER	LF	1,301
8	PLACING TOPSOIL	CY	---
9	UNCLASSIFIED EXCAVATION (ROADWAY)	CY	---
10	CONCRETE SIDEWALK	LF	2,065
11	STANDARD A-B INLET	EA	1
16	15" RCP CLASS IV	LF	314
51	16" PAVING	SY	505

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 OWEN BROWN
 SECTION 2, AREA 3
 PROJECT TITLE
PLAN AND PROFILE
RUSTLING LEAF
 STA. 0+00 TO STA. 11+00
 SCALE: As Shown DATE: 4/30/73
 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 MAY 24 1973



ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" THICK	S.Y.	1,750
2	BIT. CONC. SURFACE COURSE 3" THICK	S.Y.	2,036
3	BIT. CONC. BASE COURSE 5" THICK	S.Y.	4,586
4	MODIFIED COMB. CURB AND GUTTER	L.F.	2,390
5	PLACING TOPSOIL	S.Y.	-
6	UNCLASSIFIED EXCAVATION (ROADWAY)	CY	-
7	CONC. SIDEWALK	L.F.	2,240

CURVE DATA

PC: 11+37.88	to	± Int. 13+08.57
Δ: 25°44'11"	Tan: 86.81'	
R: 380.00'	Chd.: 169.26'	
Arc: 170.69'	Chd. Brg.: N47°36'02"W	
± Int. 13+08.57	to	± Int. 17+45.30
Δ: 65°50'59"	Tan: 246.07'	
R: 380.00'	Chd.: 413.09'	
Arc: 436.73'	Chd. Brg.: N01°45'26"W	
± Int. 17+45.30	to	P.T. 17+75.34
Δ: 4°31'28"	Tan: 15.01'	
R: 980.00'	Chd.: 30.02'	
Arc: 30.05'	Chd. Brg.: N 55°38'44"E	

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

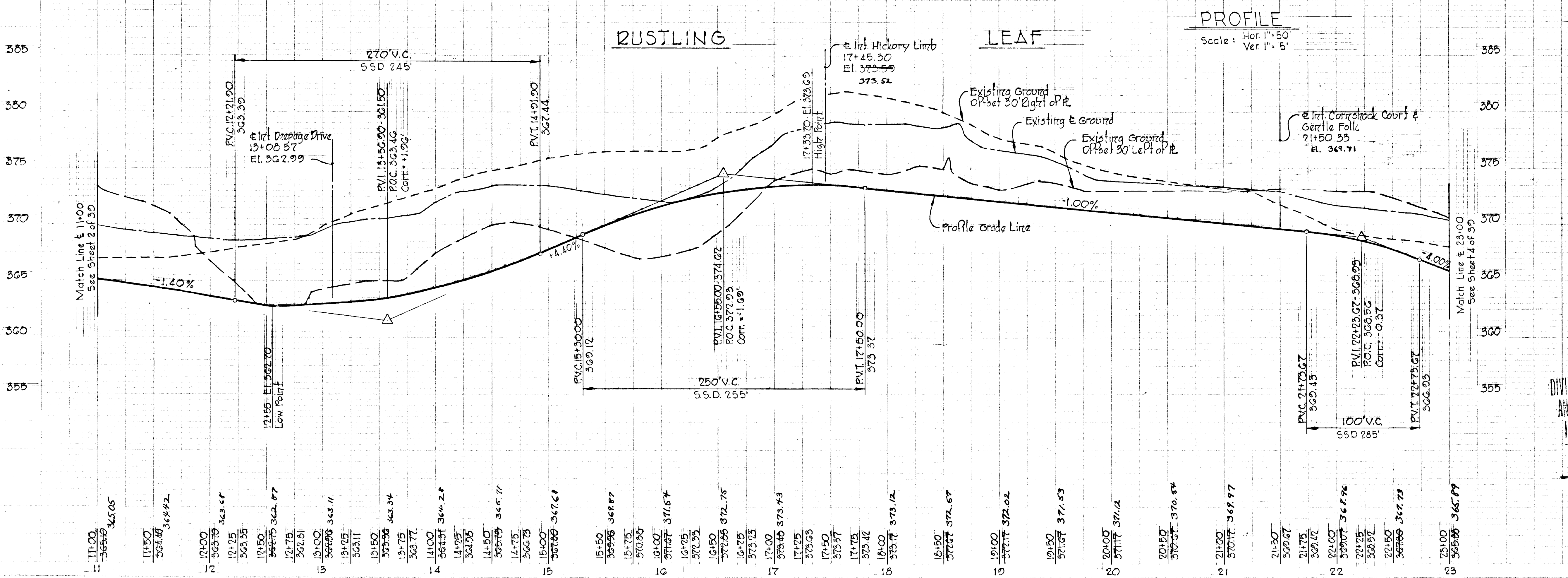
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
**PLAN AND PROFILE
 RUSTLING LEAF
 STA. 11+00 TO STA. 23+00**

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARD & 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: MAY 24 1973
[Signature]

CURVE DATA

Int. 24+36.06 to PT 25+11.64
 $\Delta = 02^{\circ}19'49''$ Tan = 37.81'
 $R = 1000.00'$ Chd. = 75.56'
 Arc = 75.56' Chd. Brg. N23°19'34"E

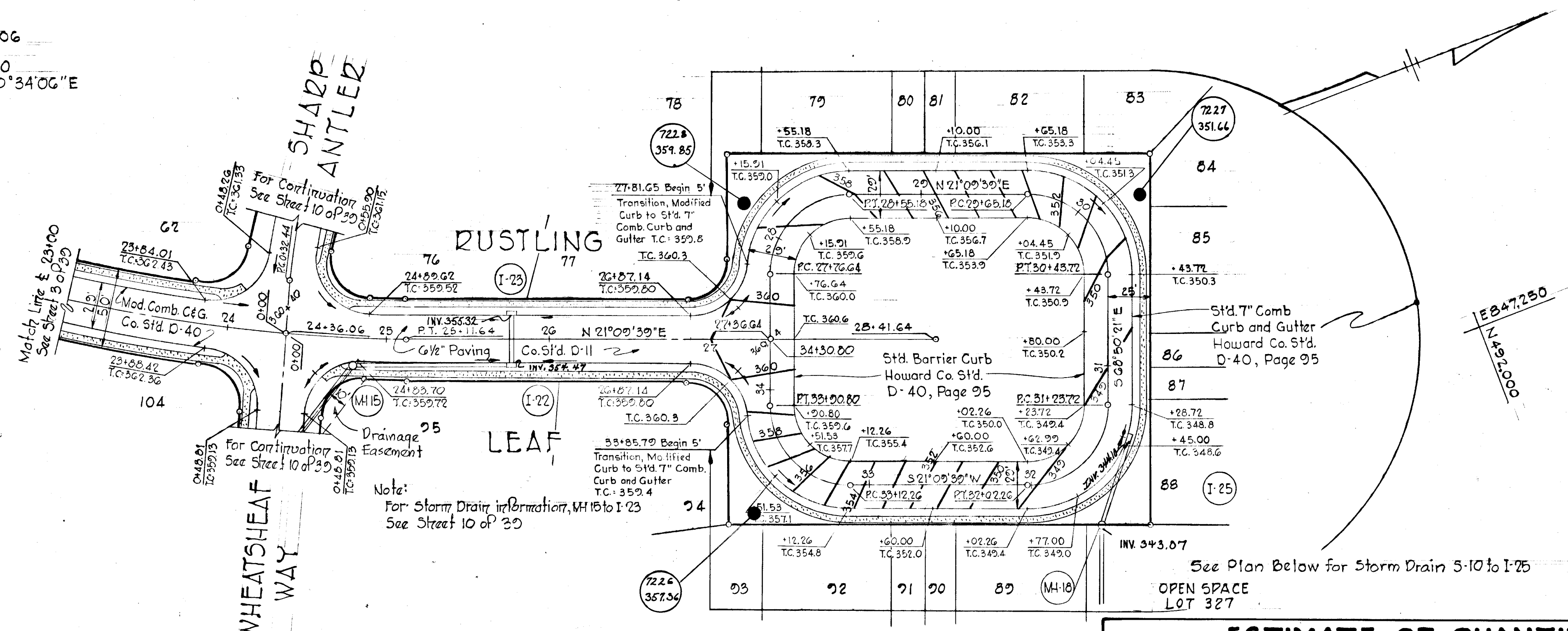
P.C. 22+58.83 to Int. 24+36.06
 $\Delta = 10^{\circ}09'16''$ Tan = 88.85'
 $R = 1000.00'$ Chd. = 177.00'
 Arc = 177.23' Chd. Brg. = N30°34'06"E

PC 27+76.64 to PT 28+55.15
 $\Delta = 90^{\circ}00'00''$ Tan = 50.00'
 $R = 50.00'$ Chd. = 70.71'
 Arc = 78.54' Chd. Brg. N23°50'21"W

PT 29+05.15 to PT 30+43.72
 $\Delta = 90^{\circ}00'00''$ Tan = 50.00'
 $R = 50.00'$ Chd. = 70.71'
 Arc = 78.54' Chd. Brg. N23°50'21"W

PC 31+73.72 to PT 32+02.76
 $\Delta = 90^{\circ}00'00''$ Tan = 50.00'
 $R = 50.00'$ Chd. = 70.71'
 Arc = 78.54' Chd. Brg. S23°50'21"E

PC 33+12.76 to PT 33+50.80
 $\Delta = 90^{\circ}00'00''$ Tan = 50.00'
 $R = 50.00'$ Chd. = 70.71'
 Arc = 78.54' Chd. Brg. S23°50'21"W



PLAN
 Scale: 1" = 50'

STORM DRAIN STRUCTURE SCHEDULE

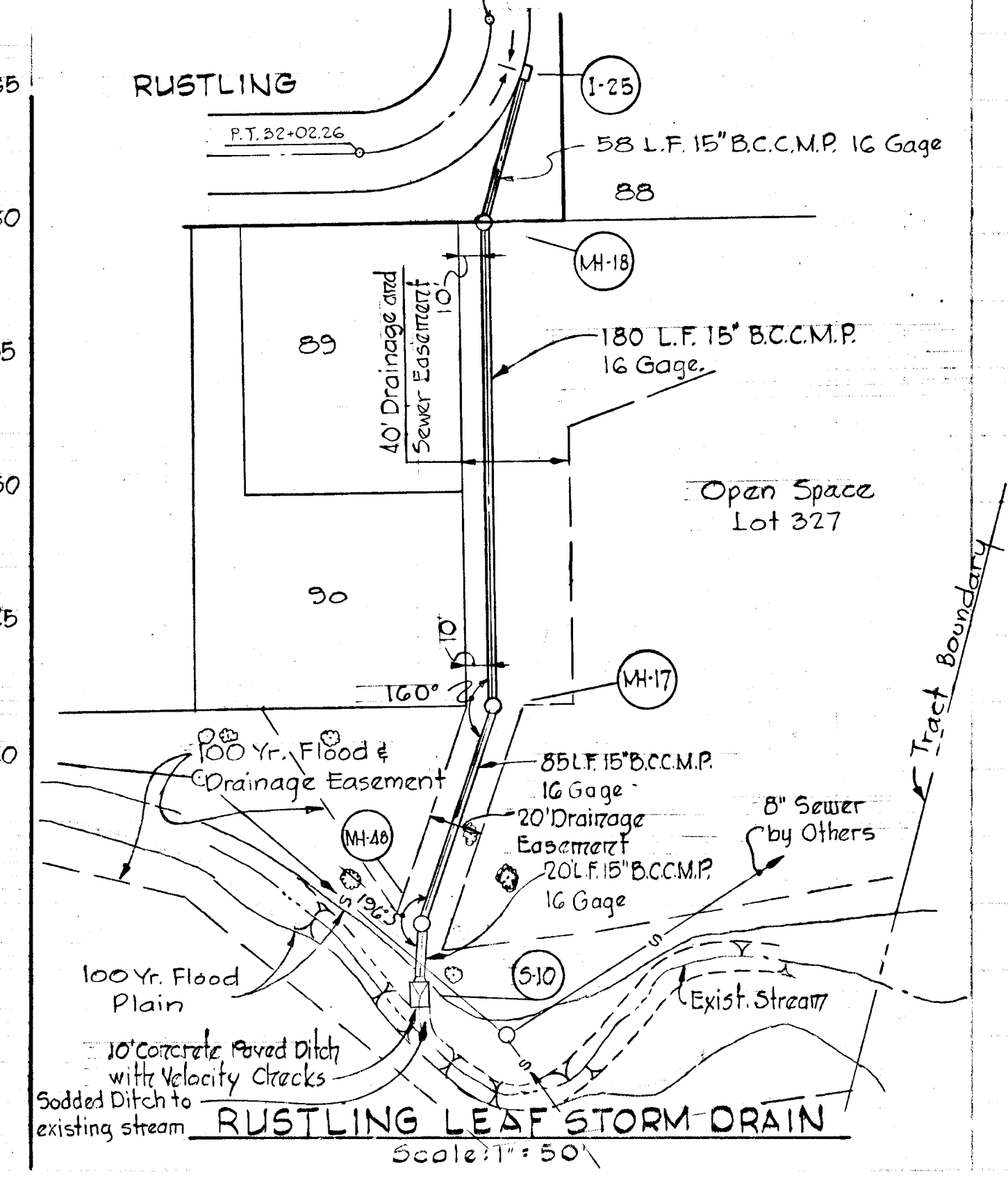
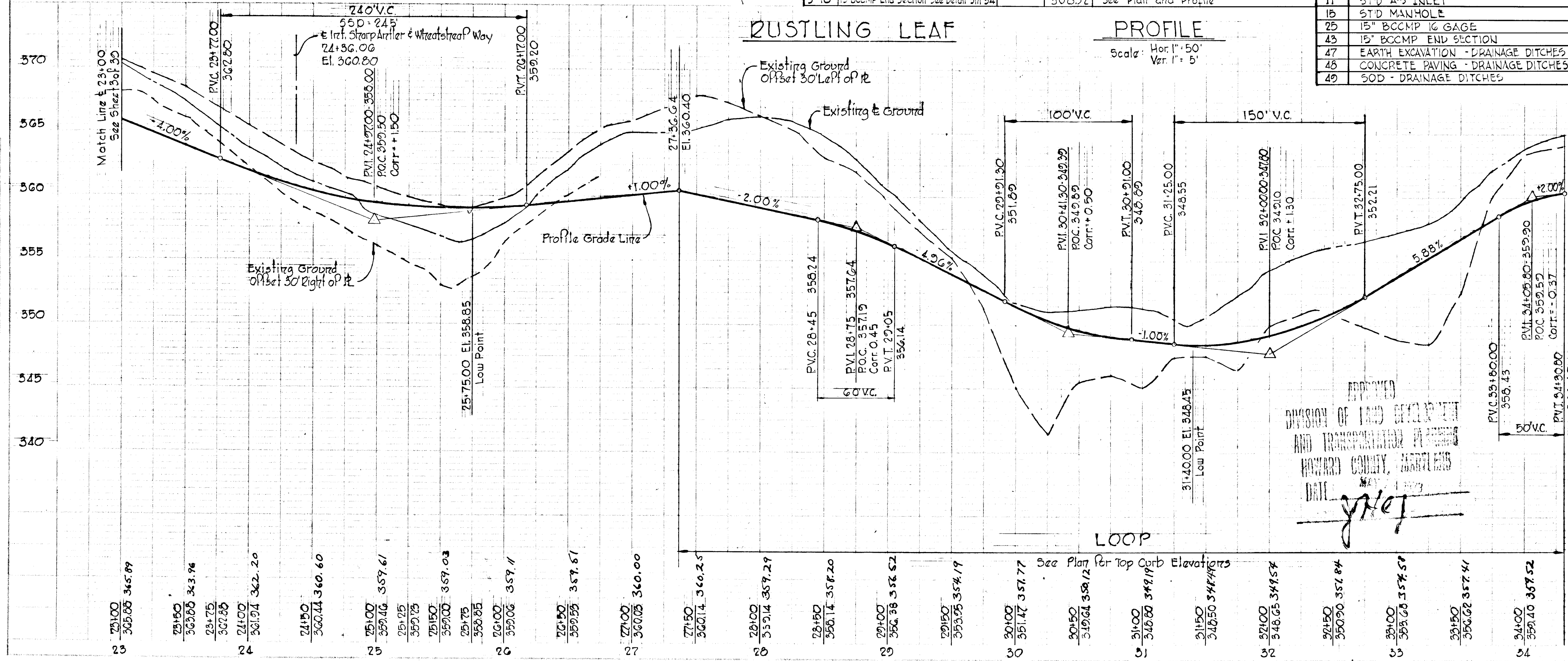
No.	TYPE	Top Elev.	Invt. Elev.	LOCATION
I-23	Std 'A-5' Inlet width=2.5'	348.55	344.00	at Inlet 15.79' Left of Sta. 31+40
M-17	Std Manhole	340.50	332.34	See Plan and Profile
M-18	Std Manhole	349.60	343.22	See Plan and Profile
M-48	Std Manhole	316.50	309.00	See Plan and Profile
5-10	15" BCCMP End Section	-	308.22	See Plan and Profile

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" Thk.	S.Y.	3,631
2	BIT. CONC. BASE COURSE 5" Thk.	S.Y.	3,631
3	STD 7" COMB. CURB AND GUTTER	LF	677
4	MODIFIED COMB. CURB AND GUTTER	LF	861
5	PLACING TOPSOIL	S.Y.	-
6	UNCLASSIFIED EXCAVATION (ROADWAY)	C.Y.	-
7	CONCRETE SIDEWALK	LF	1,525
8	BARRIER CURB	LF	600
9	STD A-5 INLET	EA.	1
10	STD MANHOLE	EA.	3
11	15" BCCMP 16 GAGE	LF	343
12	15" BCCMP END SECTION	EA.	1
13	EARTH EXCAVATION - DRAINAGE DITCHES	C.Y.	4
14	CONCRETE PAVING - DRAINAGE DITCHES	S.Y.	7
15	SOD - DRAINAGE DITCHES	S.Y.	8

NOTE:
 1. For Storm Drain Profile, See Sheet 31 of 30
 2. Contractor must obtain driveway locations for lots 78 thru 83 from builder in order to construct typical driveway entrances as per County Standard D-34.

PROFILE
 Scale: Hor 1" = 50'
 Ver 1" = 5'

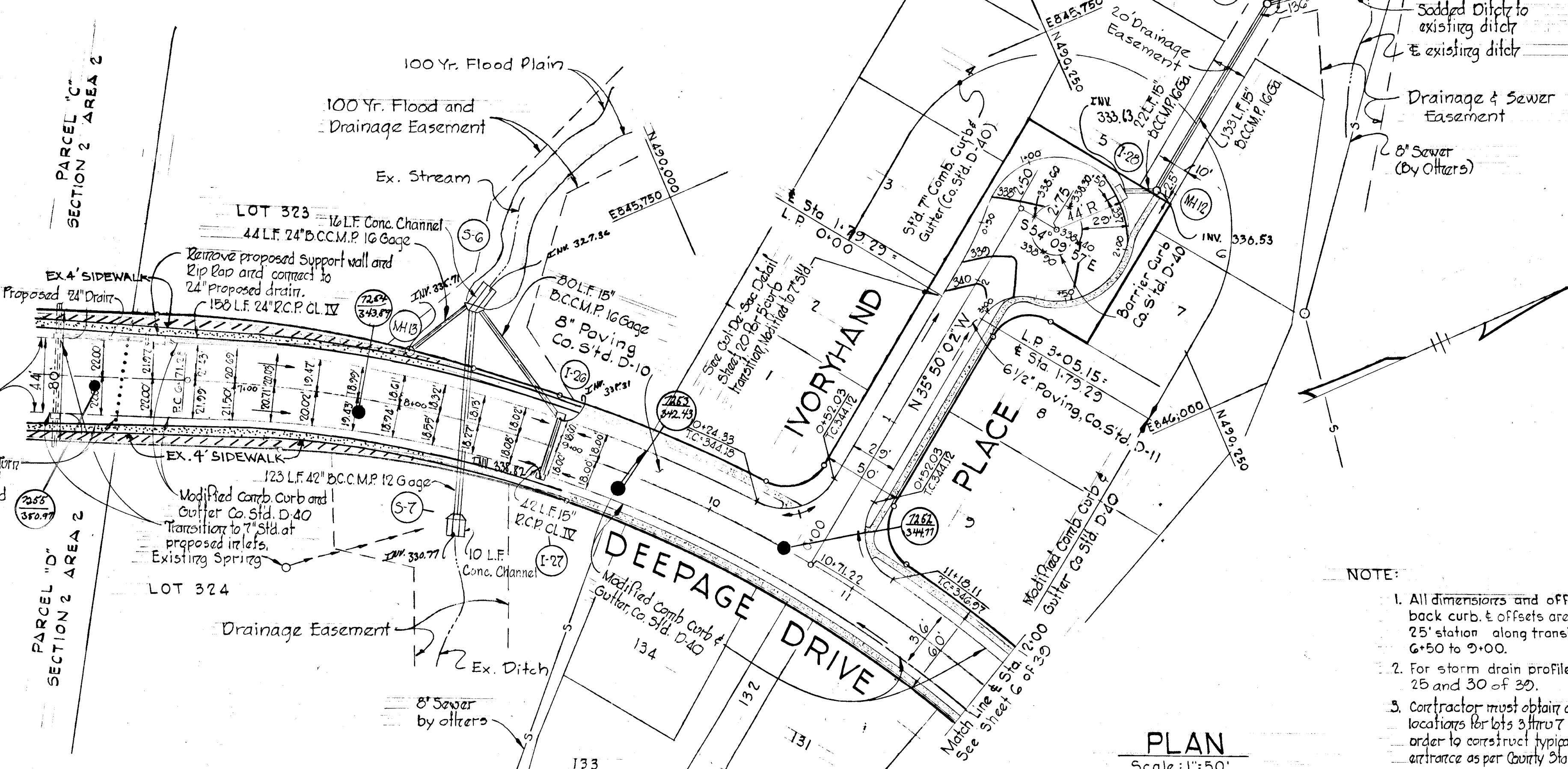


Kenneth A. Mc Cord
 KENNETH A. MC CORD
 Registered Engineer
 No. 1974

ESTIMATE OF QUANTITIES				
ITEM	DESCRIPTION	UNIT	QUANTITIES	
1	BIT. CONC. SURFACE COURSE 1 1/2" THK.	SY	1,010	
2	BIT. CONC. SURFACE COURSE 3" THK.	SY	2,250	
3	BIT. CONC. BASE COURSE 5" THK.	SY	3,260	
4	STD 7" COMB. CURB AND GUTTER	LF	278	
5	MODIFIED COMB. CURB AND GUTTER	LF	1,355	
6	BARRIER CURB	LF	98	
7	PLACING TOPSOIL	SY		
9	UNCLASSIFIED EXCAVATION (ROADWAY)	CY		
10	CONCRETE SIDEWALK	LF	1,375	
11	STD A-5 INLET	EA.	2	
12	STD A-10 INLET	EA.	1	
13	STD MANHOLE	EA.	3	
14	15" R.C.P. CL. III	LF	39	
21	24" R.C.P. CL. III	LF	106	
25	15" BCCMP 16 GAGE	LF	264	
26	24" BCCMP 14 GAGE	LF	42	
30	42" BCCMP 16 GAGE	LF	123	
40	A-42" HEADWALL	EA.	1	
41	MODIFIED A-48" HEADWALL	EA.	1	
43	15" BCCMP END SECTION	EA.	1	
47	EARTH EXCAVATION - DRAINAGE DITCHES	CY	4	
48	CONCRETE PAVING - DRAINAGE DITCHES	SY	37	
49	SOD - DRAINAGE DITCHES	SY	7	

STORM DRAIN STRUCTURE SCHEDULE				
No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
1-26	Std. A-5 Inlet width 2'5"	342.53	338.33	Ex. Inlet 19.25' Left of E. Sta. 8+00
1-27	Std. A-5 Inlet width 2'5"	342.53	338.75	Ex. Inlet 19.25' Right of E. Sta. 8+00
1-28	Std. A-10 Inlet width 2'5"	337.30	333.60	Ex. Inlet 1.25' Left of L.P. Sta. 11+65
MH-15	Std. Manhole	344.00	336.13	Ex. MH 34.02' Left of E. Sta. 8+00
S-6	Mod. A-48 Headwall See Detail Sheet 26	338.40	327.50	Ex. Endwall 66' Left of E. Sta. 8+00
S-7	A-42 Headwall See Detail Sheet 25	338.73	330.73	Ex. Headwall 66' Right of E. Sta. 8+55
MH-11	Std. Manhole	321.50	315.27	See Plan and Profile
MH-12	Std. Manhole	336.00	330.36	See Plan and Profile
S-5	15" BCCMP End Section See Detail Sheet 25		315.10	See Plan and Profile

CURVE DATA			
PC: 6+71.28	to Int: 10+71.22	Int: 10+71.22	to PT: 12+20.41
Δ: 28°38'36"	Tan: 204.24'	Δ: 10°41'08"	Tan: 74.82'
R: 800.00'	Chd.: 325.79'	R: 800.00'	Chd.: 148.28'
Arc: 329.34'	Chd. Brg: 53°50'39"W	Arc: 142.20'	Chd. Brg: 55°30'32"W



- NOTE:
- All dimensions and offsets are to the back curb. & offsets are given every 25' station along transition from 6+50 to 9+00.
 - For storm drain profiles see sheets 25 and 30 of 30.
 - Contractor must obtain driveway locations for lots 131 thru 134 from builder in order to construct typical driveway entrance as per County Standard D-34.

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

2/7/83	1	SIDEWALKS RELOCATED
Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNERS AND DEVELOPERS
 THE HOWARD RESEARCH AND DEVELOPMENT CORP

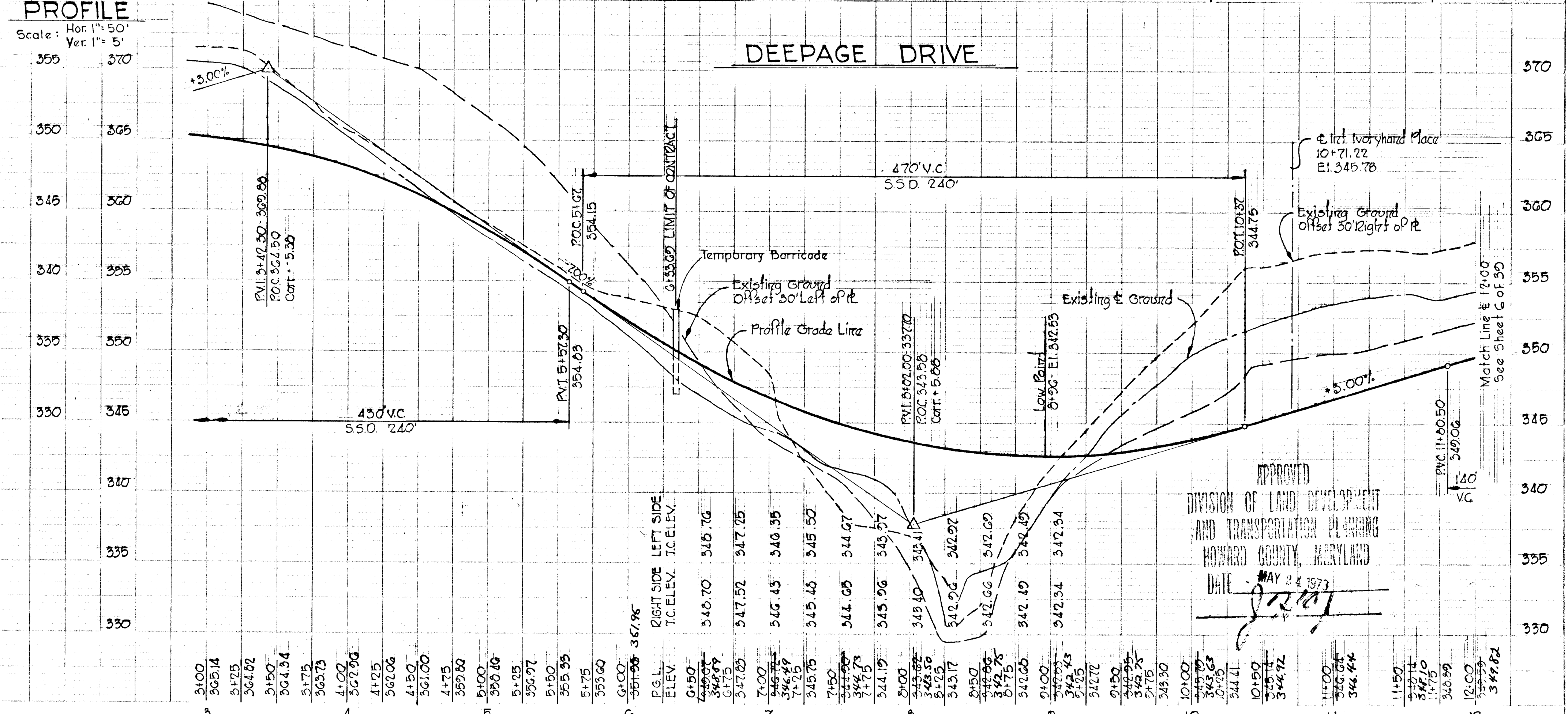
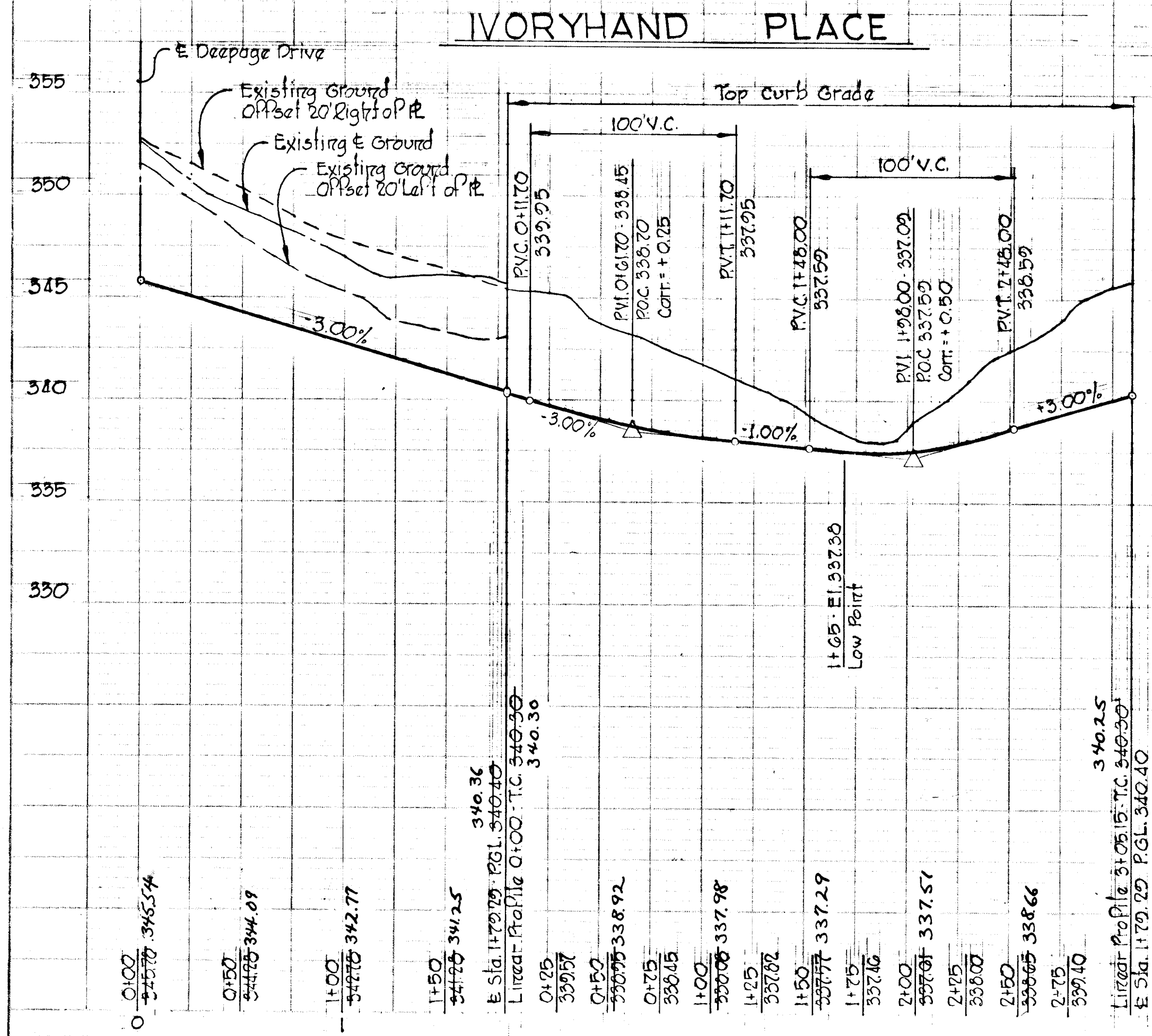
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
PLAN AND PROFILE
IVORYHAND PLACE
DEEPAE DRIVE STA. 6+50 TO 12+00

Scale: As Shown Date: 4/30/73

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: MAY 24 1973

ESTIMATE OF QUANTITIES				
ITEM	DESCRIPTION	UNIT	QUANTITIES	
1	BIT. CONC. SURFACE COURSE	1 1/2" Thk.	SY	775
2	BIT. CONC. SURFACE COURSE	3" Thk.	SY	2,236
3	BIT. CONC. BASE COURSE	5" Thk.	SY	3,011
6	MODIFIED COMB. CURB AND GUTTER	LF		1,366
7	BARRIER CURB	LF		25
8	PLACING TOPSOIL	SY		-
9	UNCLASSIFIED EXCAVATION (ROADWAY)	CY		-
10	CONCRETE SIDEWALK	LF		1,180
11	Std 'A-5' Inlet	EA		8
12	Std 'A-10' Inlet	EA		2
15	Std Manhole	EA		4
14	Special 'K' Inlet	EA		1
32	15" R.C.P. CL III	LF		61
18	15" R.C.P. CL IV	LF		326
19	18" R.C.P. CL IV	LF		146
21	24" R.C.P. CL IV	LF		109
26	24" BCCMP 14 Gage	LF		261
29	30" BCCMP 14 Gage	LF		23
40	30" BCCMP End Section	EA		1
47	Earth Excavation - Drainage Ditches	CY		14
48	Concrete Paving - Drainage Ditches	SY		14
49	Sod - Drainage Ditches	SY		35

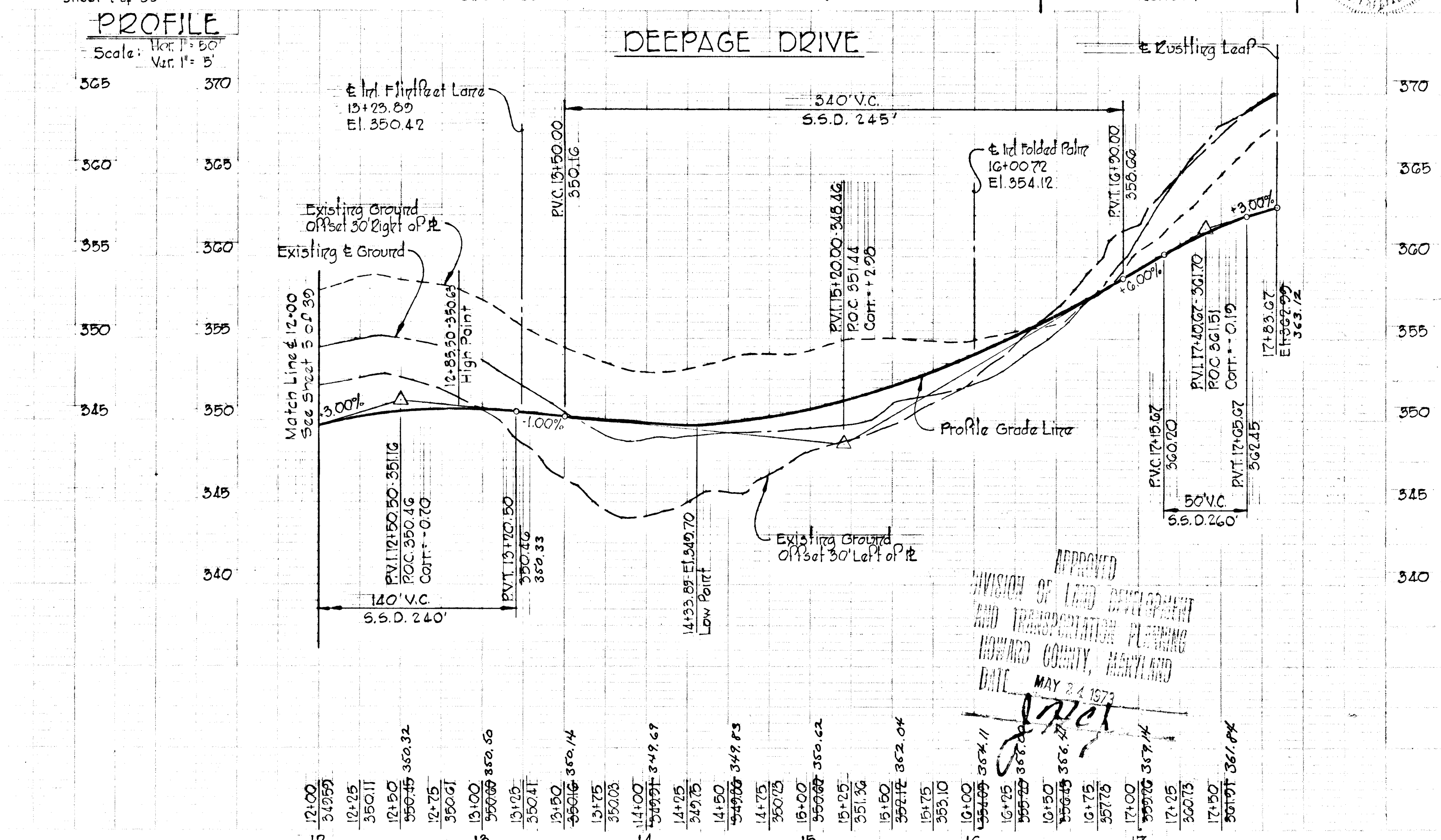
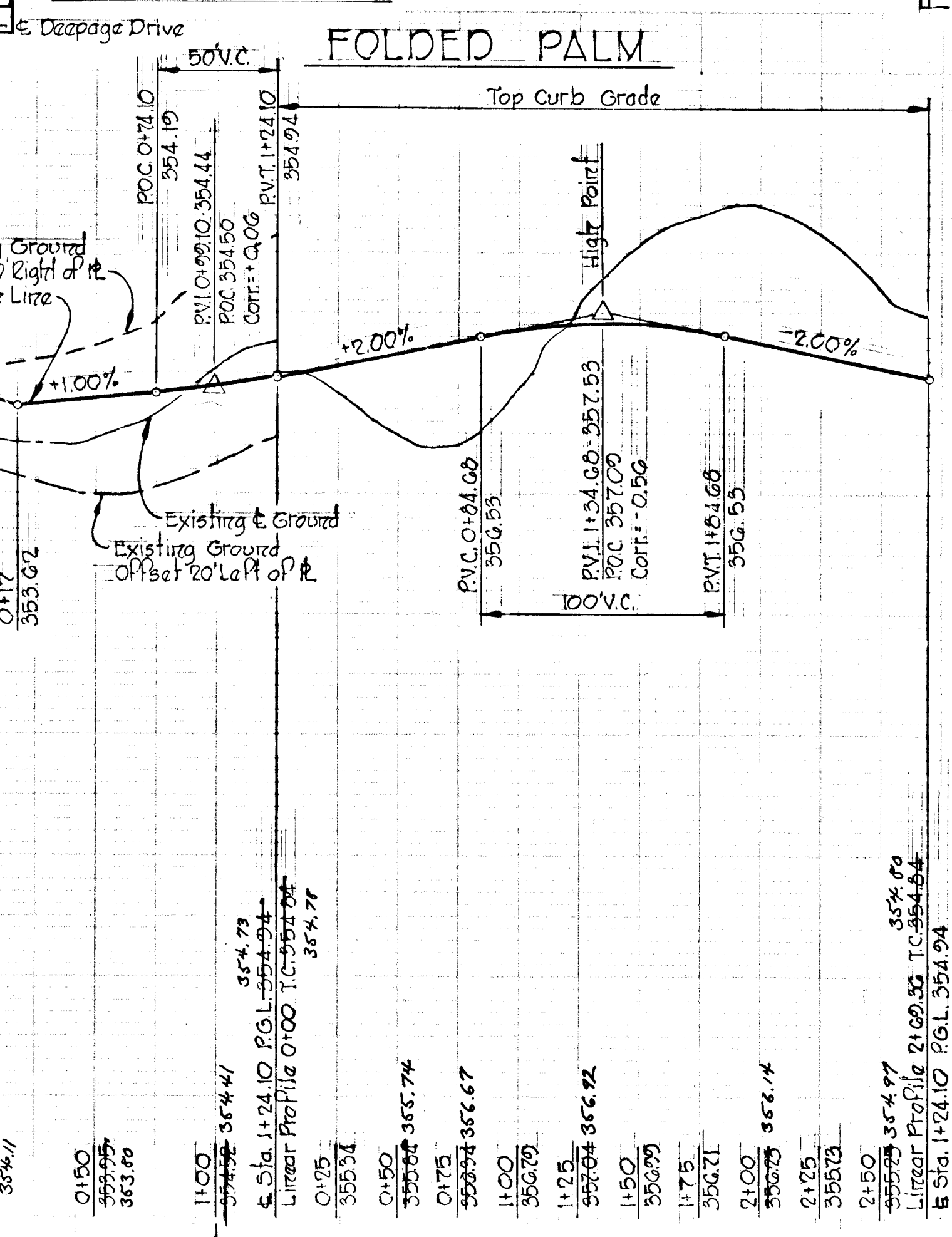
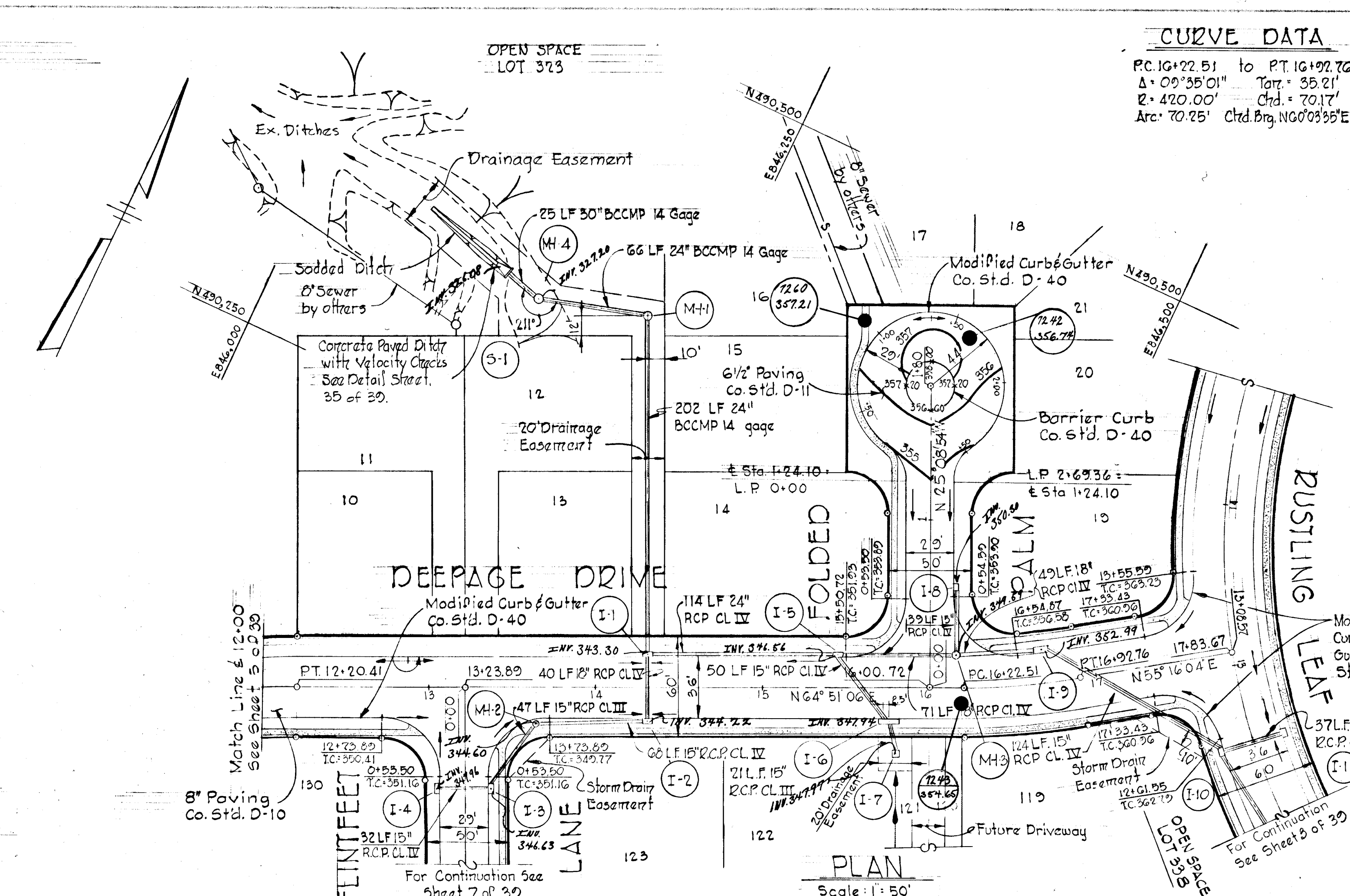
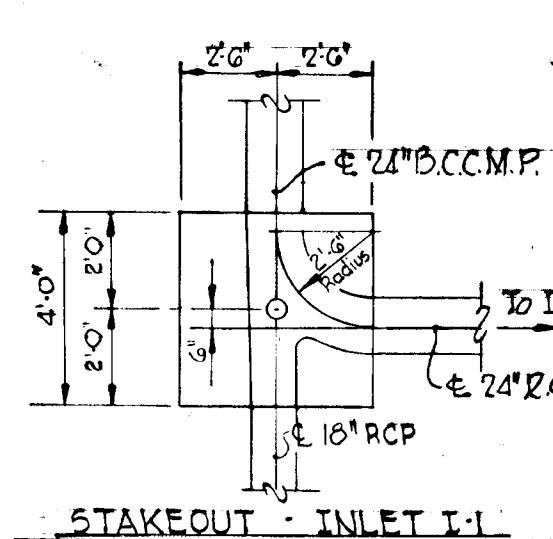
NOTES:
1. For Storm Drain Profiles See Sheet 24 of 39.

CURVE DATA
P.C. 16+22.51 to P.T. 16+02.76
Δ = 0°35'01" Tot. = 35.21'
R = 420.00' Chd. = 70.17'
Arc = 70.25' Chd. Org. NG 0°03'35"E

DEPARTMENT OF PUBLIC WORKS
W. F. West 5-25-73
CHIEF, BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

Note: For 30" BCCMP End Section, See Detail sheet 35 of 39

STORM DRAIN STRUCTURE SCHEDULE			
No.	TYPE	Top Elev.	Inv. Elev.
I-1	Std A-5 Inlet width = 4.0'	349.70	343.37
I-2	Std A-5 Inlet width = 2.5'	349.70	344.18
I-3	Std A-5 Inlet width = 2.5'	351.60	346.60
I-4	Std A-5 Inlet width = 2.5'	351.60	347.95
I-5	Std A-5 Inlet width = 3.0'	351.95	346.20
I-6	Std A-10 Inlet width = 2.5'	353.00	347.70
I-7	Special 'K' Inlet See Detail sheet 39	352.50	346.22
I-8	Std A-5 Inlet width = 2.5'	354.15	350.48
I-9	Std A-10 Inlet width = 3.0'	357.50	351.86
I-10	Std A-5 Inlet width = 3.5'	362.70	357.56
I-11	Std A-5 Inlet width = 2.5'	362.70	358.23
MH-1	Std Manhole	344.00	338.42
MH-2	Std Manhole	349.25	344.52
MH-3	Std Manhole	354.40	348.47
MH-4	Std Manhole	334.00	325.15
S-1	Std C Sidewalk	328.60	325.10



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 OWEN BROWN
SECTION 2, AREA 3

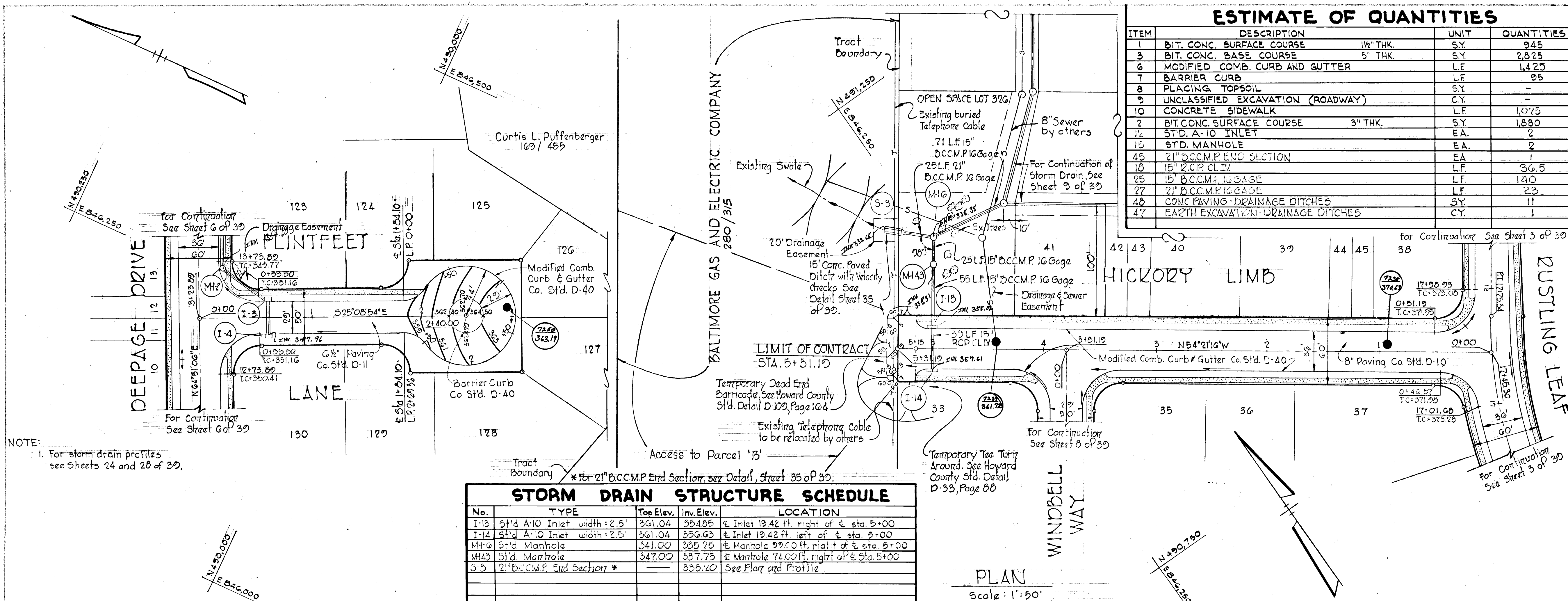
PROJECT TITLE
**PLAN AND PROFILE
FOLDED PALM
DEEPAGE DRIVE STA. 12+00 TO 17+85.67**

SCALE: As Shown DATE: 4/30/73

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 MAY 24 1973



ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" THK.	SY.	945
3	BIT. CONC. BASE COURSE 5" THK.	SY.	2,825
6	MODIFIED COMB. CURB AND GUTTER	LF	1,425
7	BARRIER CURB	LF	95
8	PLACING TOPSOIL	SY.	-
9	UNCLASSIFIED EXCAVATION (ROADWAY)	CY.	-
10	CONCRETE SIDEWALK	LF	1,075
2	BIT CONC SURFACE COURSE 3" THK.	SY.	1,880
14	STD. A-10 INLET	E.A.	2
15	STD. MANHOLE	E.A.	2
45	21" D.C.C.M.P. END SECTION	E.A.	1
16	15" R.C.P. CL IV	LF	36.5
25	16" D.C.C.M.P. 16 GAGE	LF	140
27	21" D.C.C.M.P. 16 GAGE	LF	23
48	CONC PAVING - DRAINAGE DITCHES	SY.	1
47	EARTH EXCAVATION - DRAINAGE DITCHES	CY.	1

DEPARTMENT OF PUBLIC WORKS
 W.O. Fallick 5-25-73
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

NOTE:
 1. For storm drain profiles see Sheets 24 and 28 of 39.

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-13	Std A-10 Inlet width: 2.5'	361.04	354.05	E Inlet 19.42 ft. right of & Sta. 5+00
I-14	Std A-10 Inlet width: 2.5'	361.04	356.03	E Inlet 19.42 ft. left of & Sta. 5+00
MH-2	Std Manhole	341.00	335.25	E Manhole 99.00 ft. right of & Sta. 5+00
MH-3	Std Manhole	347.00	337.75	E Manhole 74.00 ft. right of & Sta. 5+00
S-3	21" D.C.C.M.P. End Section *		355.20	See Plan and Profile

Rev. Date Rev. No. Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

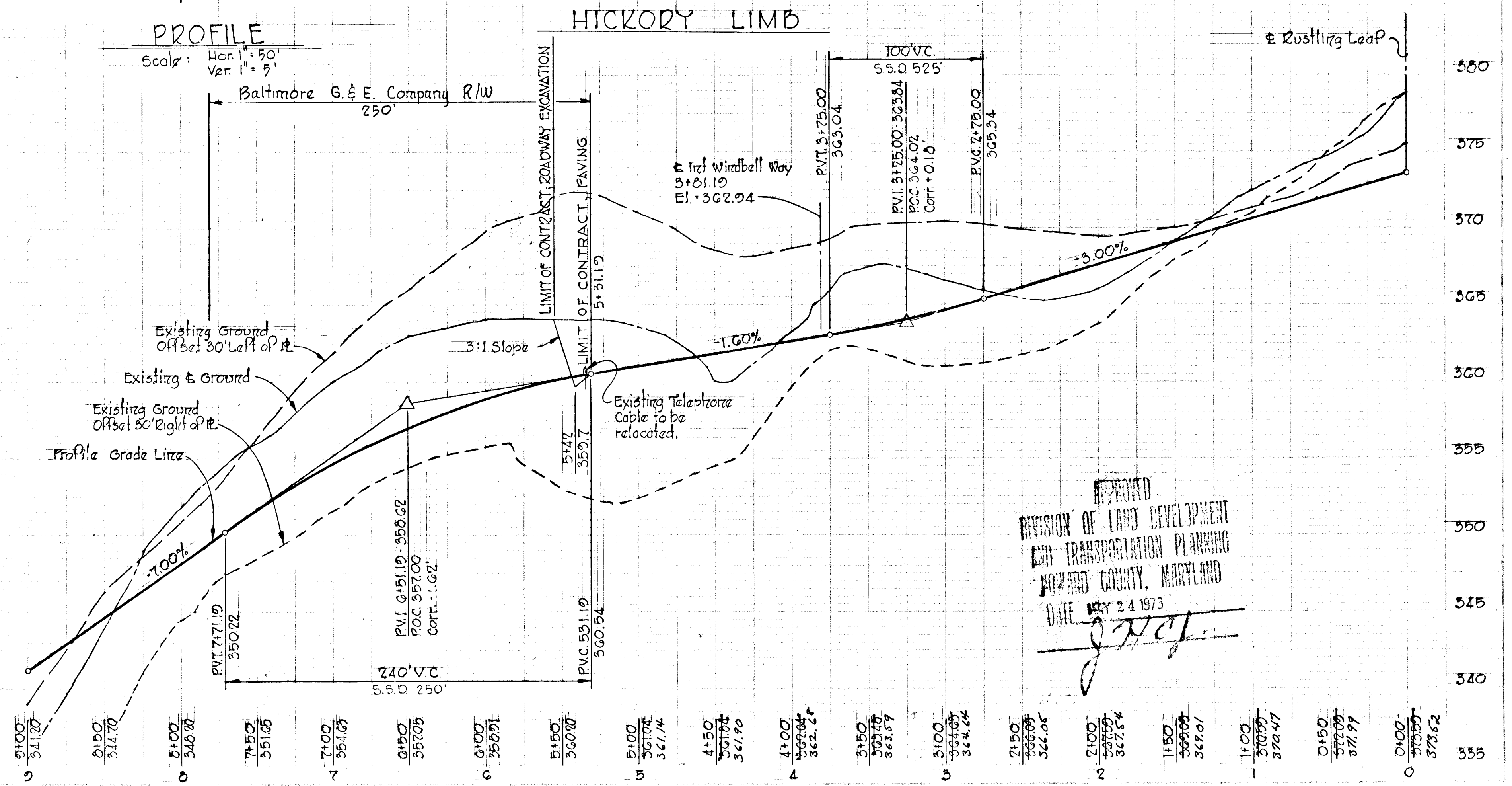
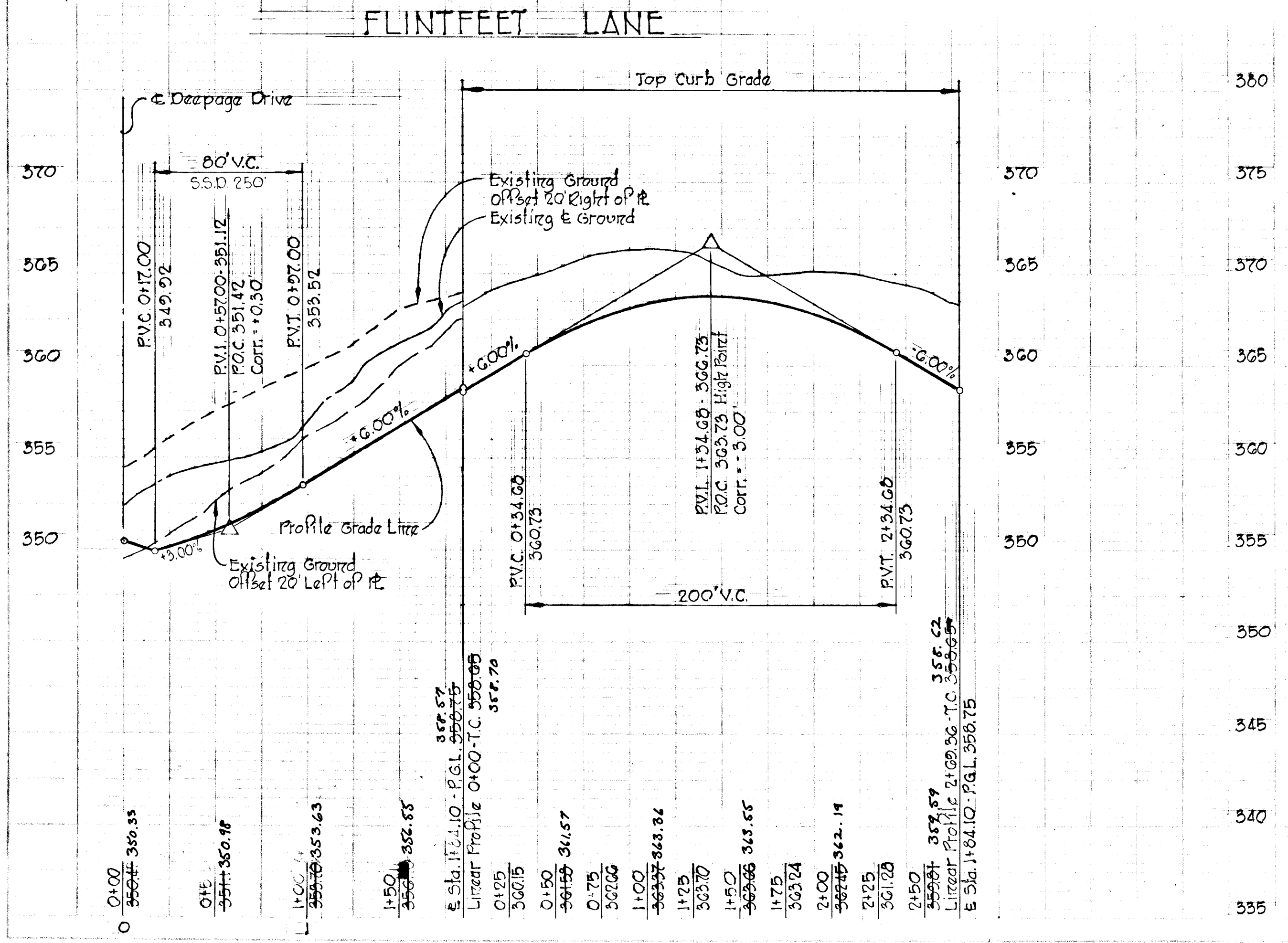
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
**PLAN AND PROFILE
 FLINTFEET LANE
 HICKORY LIMB**

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUART & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



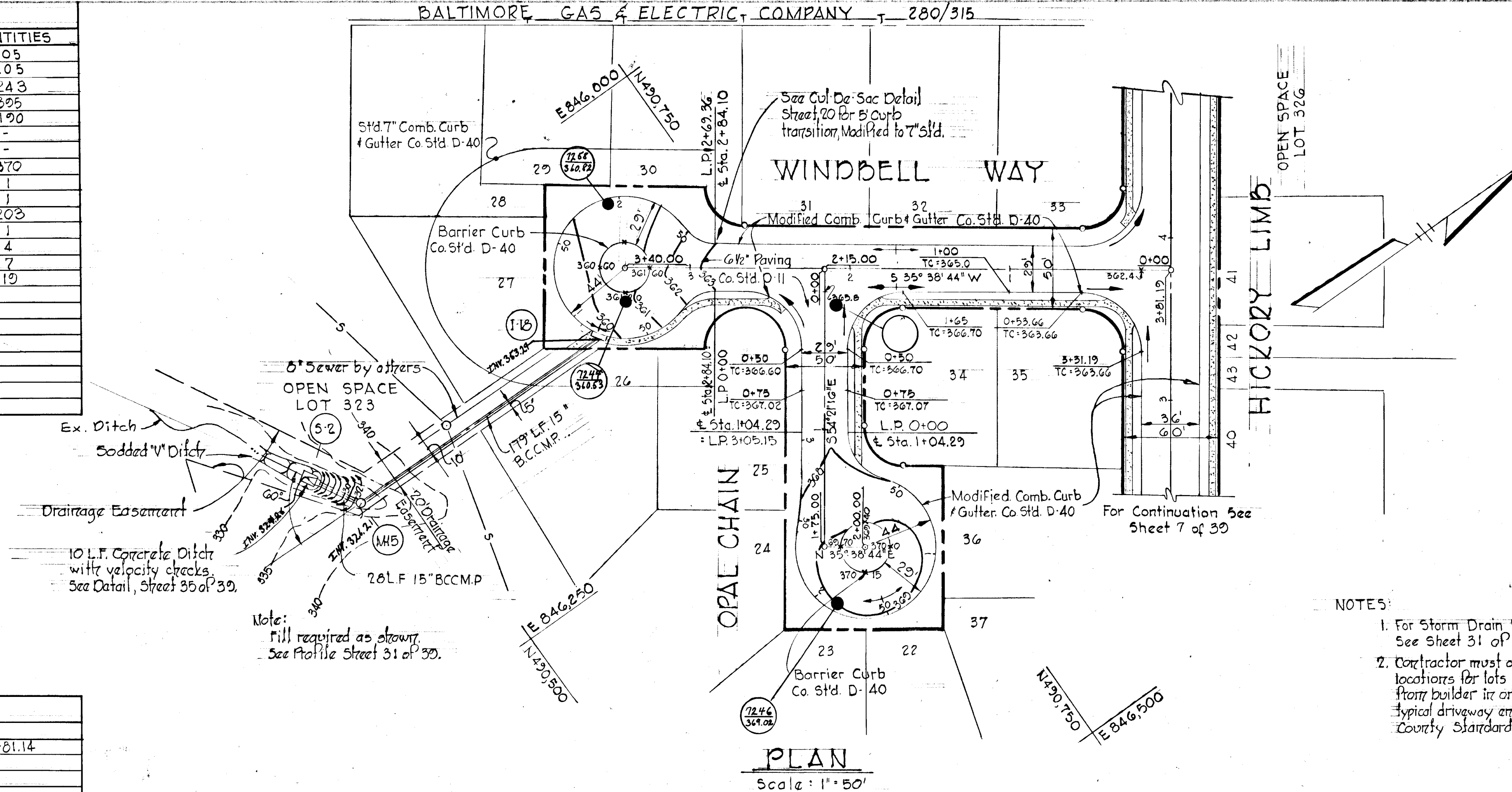
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Thk.	S.Y.	2,205
3	Bituminous Concrete Base Course 5" Thk.	S.Y.	2,205
4	Std. 7" Comb. Curb and Gutter	L.F.	243
6	Modified Comb. Curb and Gutter	L.F.	295
7	Barrier Curb	L.F.	190
8	Placing Topsoil	S.Y.	-
9	Unclassified Excavation (Roadway)	C.Y.	-
10	Concrete Sidewalk	L.F.	370
12	Std. A-10 Inlet	EA.	1
15	Std. Manhole	EA.	1
25	15" B.C.C.M.P. 16' Gage	L.F.	203
43	15" B.C.C.M.P. End Section	EA.	1
47	Earth Excavation - Drainage Ditch	C.Y.	4
48	Conc. Paving - Drainage Ditch	S.Y.	7
49	Sod - Drainage Ditch	S.Y.	19

STORM DRAIN STRUCTURE SCHEDULE

ITEM	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-15	Std. A-10 Inlet width = 2.5'	332.35	323.19	E. Inlet 120' back of L.P. Sta. 0+81.14
MH-5	Std. Manhole	332.33	324.49	See Plan and Profile
S-2	15" B.C.C.M.P. End Section (See Det. Sh. 25)	225.00	224.35	See Plan and Profile



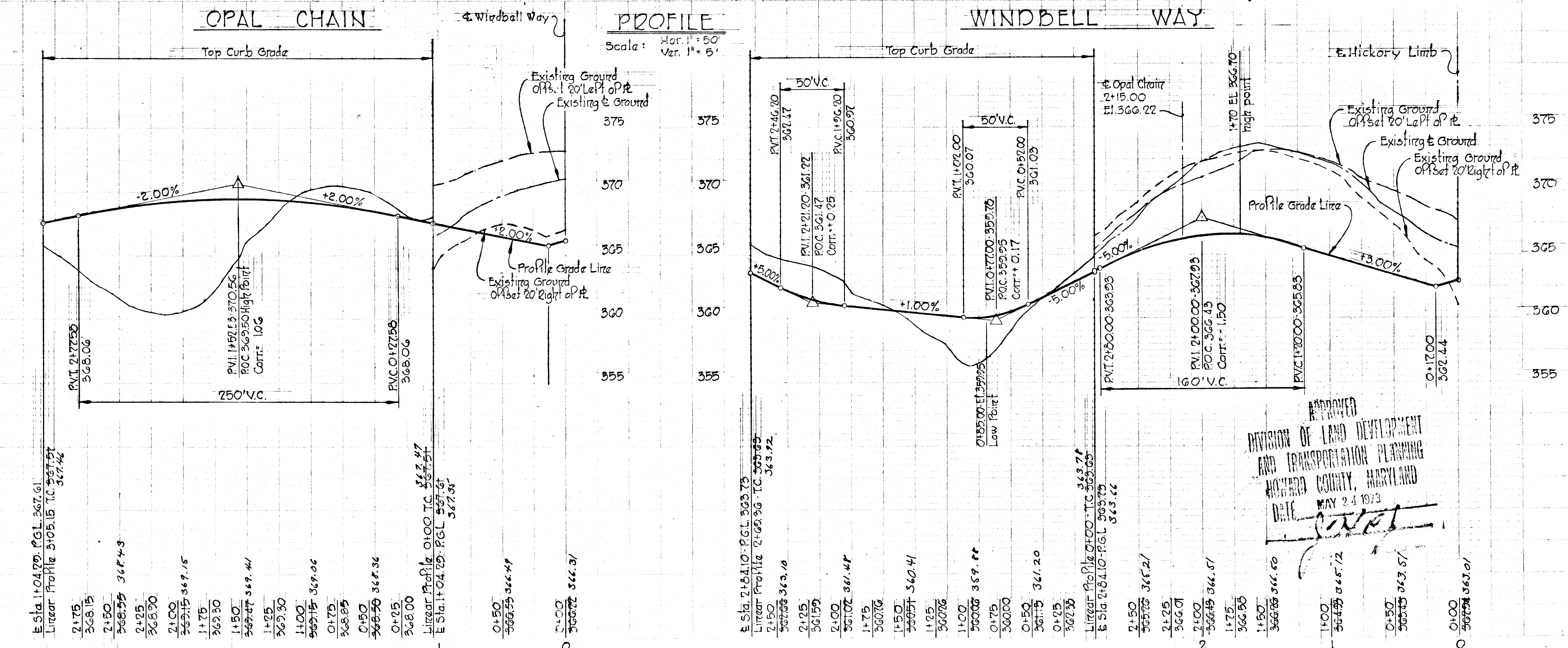
PLAN
Scale: 1" = 50'

- NOTES:**
1. For Storm Drain Profile See Sheet 31 of P. 39.
 2. Contractor must obtain driveway locations for lots 26 thru 30 from builder in order to construct typical driveway entrances as per County Standard D-34.

DEPARTMENT OF PUBLIC WORKS
 W. O. Falbert 5-21-73
 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		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE		
PLAN AND PROFILE WINDBELL WAY AND OPAL CHAIN		
SCALE: As Shown		DATE: 4/30/73
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		

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

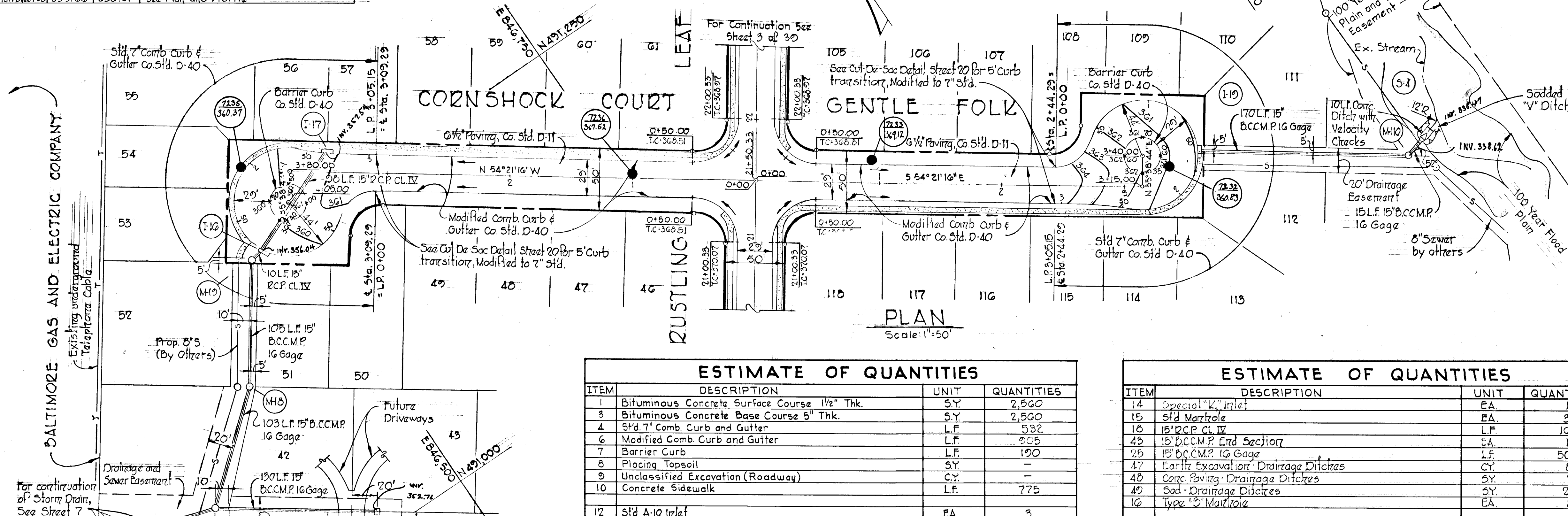


APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
[Signature]

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-15	Special "K" Inlet, See Detail Sheet 36	357.50	352.33	See Plan and Profile
I-16	Std A-10 Inlet width = 2'5"	359.00	355.74	inlet 1.25' back of Linear Profile Sta. 1+15
I-17	Std A-10 Inlet width = 2'5"	361.40	357.41	inlet 1.25' back of Linear Profile Sta. 2+07
M-7	Std Manhole	350.00	341.63	See Plan and Profile
M-8	Std Manhole	360.00	352.01	See Plan and Profile
M-9	Type B Manhole, See Detail Sheet 35	359.00	355.02	See Plan and Profile
I-19	Std A-10 Inlet width = 2'5"	360.40	353.44	inlet 1.25' back of Linear Profile Sta. 1+03.00
M-10	Std Manhole	344.00	338.48	See Plan and Profile
S-4	Metal End Section, See Detail Sheet 38	339.00	335.41	See Plan and Profile

- Notes:
- For Storm Drain Profiles, See Sheets 20 and 21 of 39
 - Contractor must obtain driveway locations for lots 50 thru 57 and 100 thru 115 from Builder in order to construct typical driveway entrance as per County Standard D-34.

DEPARTMENT OF PUBLIC WORKS
W. O. Albert 5-27-73
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



PLAN
 REVISIONS:
 1. DATE: 4/30/73
 BY: [Signature]
 CHECKED: [Signature]
 APPROVED: [Signature]
 TITLE: [Blank]
 PROJECT: [Blank]
 SHEET: [Blank] OF [Blank]

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Thk.	S.Y.	2,500
2	Bituminous Concrete Base Course 5" Thk.	S.Y.	2,500
3	Std. 7" Comb. Curb and Gutter	L.F.	532
4	Modified Comb. Curb and Gutter	L.F.	205
5	Barrier Curb	L.F.	120
6	Placing Topsoil	S.Y.	-
7	Unclassified Excavation (Roadway)	C.Y.	-
8	Concrete Sidewalk	L.F.	775
9	Std A-10 Inlet	EA	3

ITEM	DESCRIPTION	UNIT	QUANTITIES
14	Special "K" Inlet	EA	1
15	Std Manhole	EA	3
16	15" RCP CL IV	L.F.	102.5
17	15" BCCMP End Section	EA	1
18	15" BCCMP 16 Gage	L.F.	507
19	Earthy Excavation - Drainage Ditches	C.Y.	6
20	Comp. Paving - Drainage Ditches	S.Y.	7
21	Sod - Drainage Ditches	S.Y.	21
22	Type B Manhole	EA	1

Rev. Date Rev. No. Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

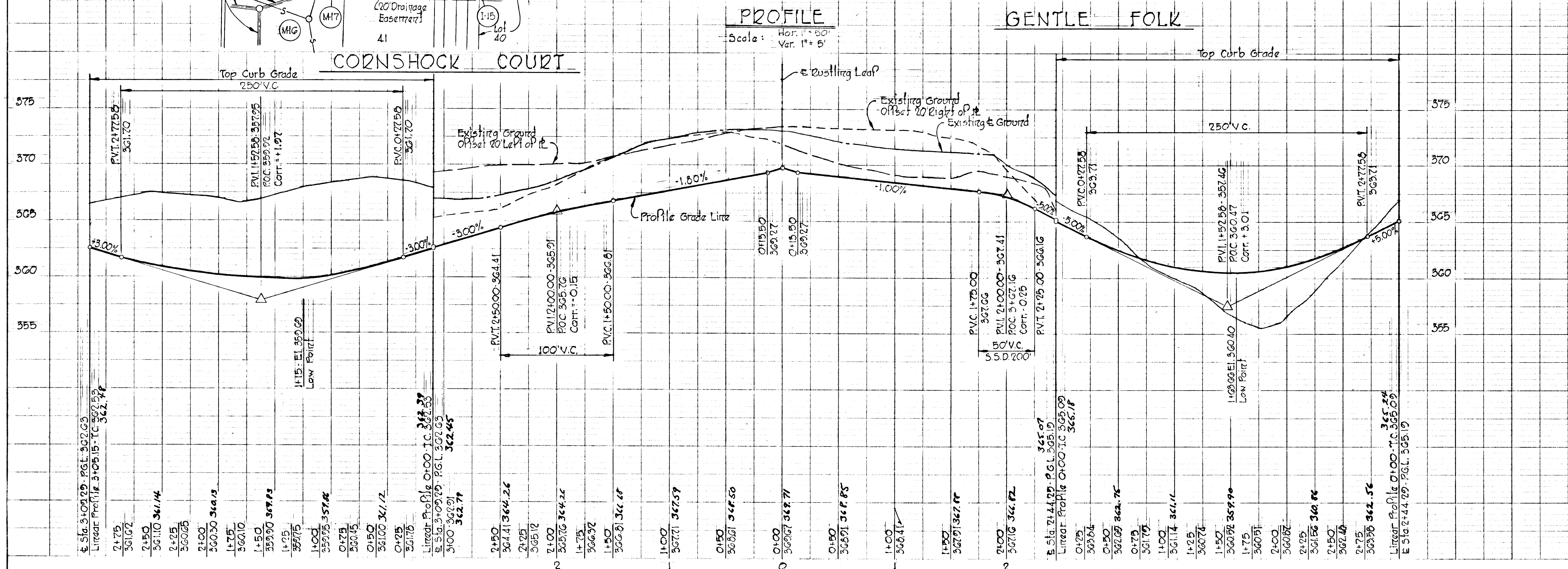
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
PLAN AND PROFILE
CORNSHOCK COURT AND
GENTLE FOLK

SCALE = As Shown DATE: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



PROFILE
 REVISIONS:
 1. DATE: [Blank]
 BY: [Blank]
 CHECKED: [Blank]
 APPROVED: [Blank]
 TITLE: [Blank]
 PROJECT: [Blank]
 SHEET: [Blank] OF [Blank]

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: MAY 23 1973
[Signature]

STORM DRAIN STRUCTURE SCHEDULE

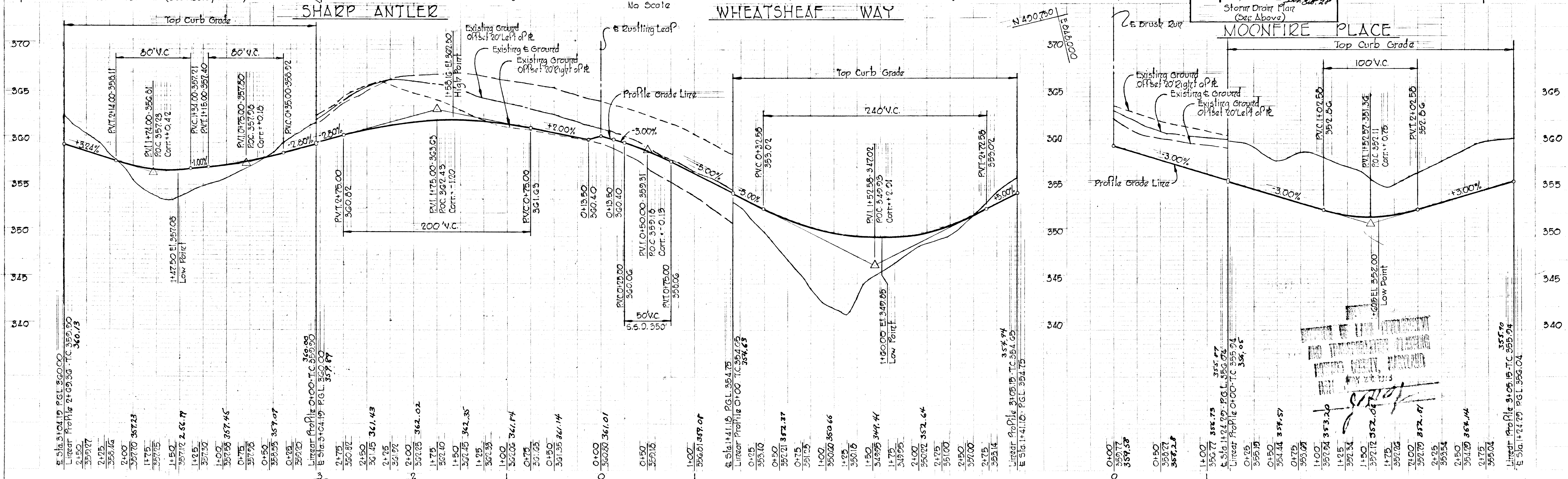
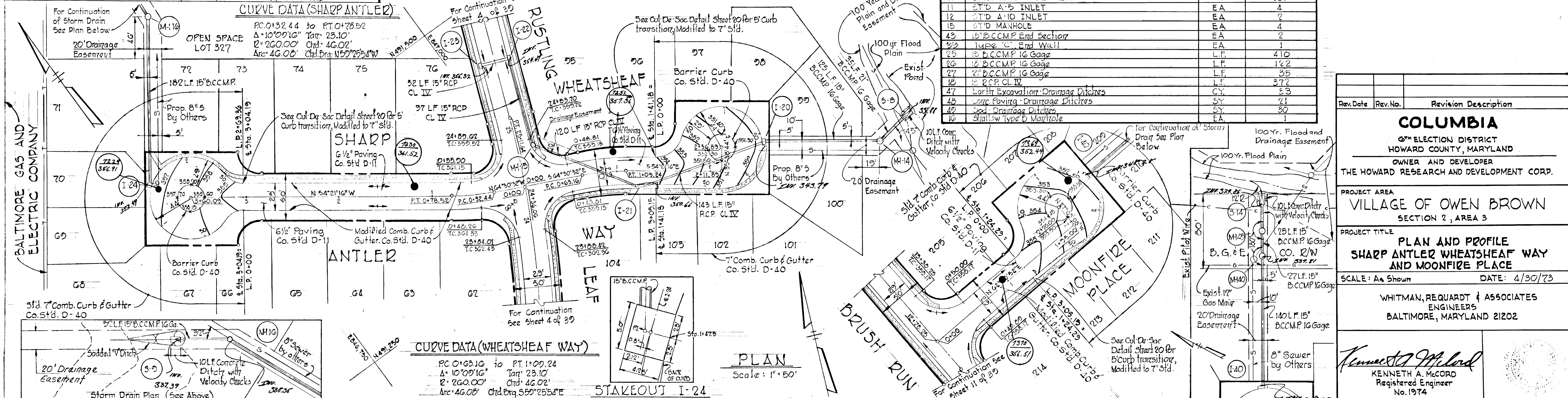
No.	TYPE	Top Elev.	Inv. Elev.	LOCATION	No.	Type	Top Elev.	Inv. Elev.	LOCATION
I-20	Std A-5 Inlet width = 2.5'	344.00	344.00	Inlet 1.25' back of Linear Profile Sta 340.00	MH-14	Std Manhole	340.40	331.97	See Plan & Profile
I-21	Std A-10 Inlet width = 2.5'	355.82	350.47	Inlet 15.92' right of Sta. 1+21.85	MH-15	Std Manhole	357.72	352.82	Manhole 18.0' right of Sta 24+79
I-22	Std A-5 Inlet width = 2.5'	358.82	354.22	Inlet 15.92' right of Sta. 25+75	MH-16	Std Manhole	346.10	339.17	See Plan and Profile
I-23	Std A-5 Inlet width = 2.5'	358.85	354.85	Inlet 5.92' left of Sta. 25+75	MH-17	Type "C" End Wall	334.20	331.70	See Plan and Profile
I-24	Std A-5 Inlet width = 4.0'	357.00	352.02	Inlet 1.25' back of Linear Profile Sta 1+07.38	MH-18	Manhole End Section See Detail Sheet 38	339.16	337.91	See Plan and Profile
I-40	Std A-10 Inlet width = 2.5'	352.00	346.02	Inlet 1.25' back of Linear Profile Sta 1+07.38	MH-14	Manhole End Section See Detail Sheet 38	331.25	330.00	See Plan and Profile
MH-10	Type "B" Shallow	344.3	336.43	See Plan and Profile					
MH-15	Std. Manhole	338.0	330.20	See Plan and Profile					

Notes:
 1. For Storm Drain Profiles See Sheets 28 and 31 of 39.
 2. Contractor must obtain driveway locations for lots 73, 97 thru 103, 206 thru 213 from builder in order to construct typical driveway entrance as per County Standard D-34.

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" Thk.	S Y	3,070
3	BIT. CONC. BASE COURSE 5" Thk.	S Y	3,070
4	STD. 7" COMB. CURB AND GUTTER	L F	808
6	MODIFIED COMB. CURB AND GUTTER	L F	816
7	BARRIER CURB	L F	180
8	PLACING TOPSOIL	S Y	---
9	UNCLASSIFIED EXCAVATION (ROADWAY)	C Y	---
10	CONCRETE SIDEWALK	L F	780
11	STD A-5 INLET	EA	4
12	STD A-10 INLET	EA	2
15	STD MANHOLE	EA	4
43	18" BCCMP End Section	EA	2
47	Type "C" End Wall	EA	1
25	18" BCCMP 16 Gage	L F	410
26	18" BCCMP 16 Gage	L F	122
27	2" BCCMP 16 Gage	L F	35
18	18" RCP CL IV	L F	372
47	Earth Excavation - Drainage Ditches	C Y	53
48	Gravel Paving - Drainage Ditches	S Y	21
49	Seed Drainage Ditches	S Y	30
16	Shallow Type B Manhole	EA	1

DEPARTMENT OF PUBLIC WORKS
Wolbert 5-25-73
 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
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
**PLAN AND PROFILE
 SHARP ANTLER WHEATSHEAF WAY
 AND MOONFIRE PLACE**

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Th.	SY	4,480
2	Bituminous Concrete Base Course 5" Th.	SY	4,480
3	Modified Combination Curb and Gutter	LF	2,576
4	Placing (topsoil)	SY	-
5	Unclassified Excavation (Roadway)	CY	-
6	Concrete Sidewalk	LF	2,430
7	Std. A-5 Inlet	EA	5
8	Special A-5 Inlet	EA	1
9	Std. Manholes	EA	3
10	Type A Headwall	EA	2
11	15" RCP CL III	LF	363.5
12	24" RCP CL III	LF	61
13	24" RCP CL IV	LF	273
14	36" RCP CL IV	LF	52
15	Barth Excavator-Drainage Ditches	CY	2
16	Core Paving-Drainage Ditches	SY	30

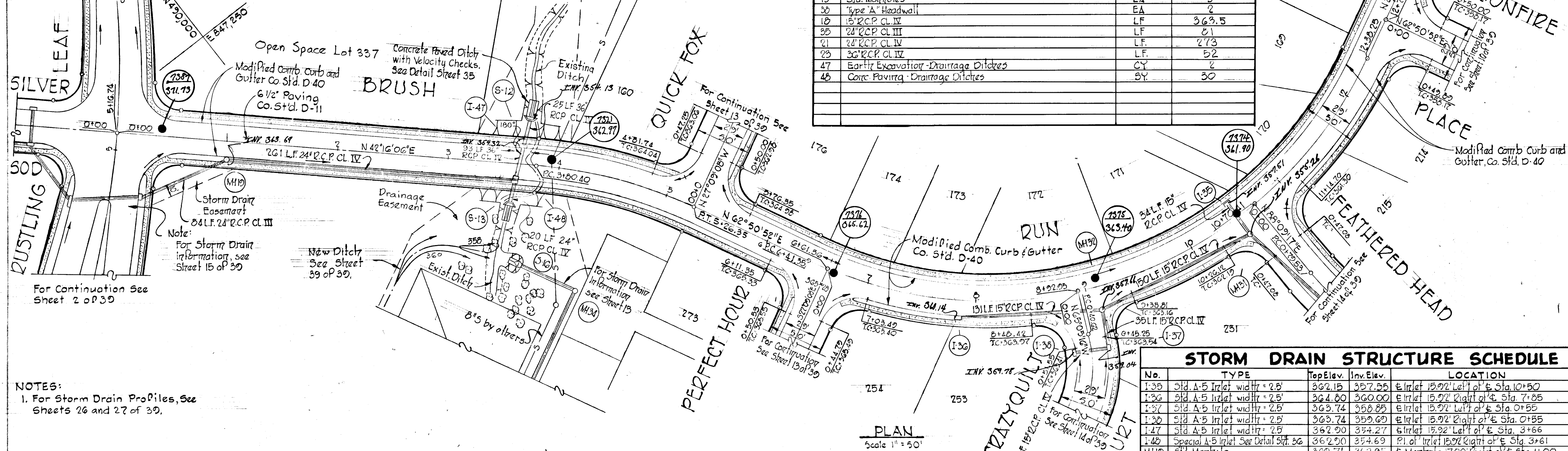
CURVE DATA

PC 3+80.40 to PT Int. 5+12.35
 $\Delta = 20^\circ 34' 46''$ Tan. = 73.77
 $R = 406.34'$ Chd. = 145.17'
 Arc = 145.95' Chd. Brg. N57°32'29"E

PC 0+21.35 to PT Int. 6+13.36
 $\Delta = 03^\circ 01' 01''$ Tan. = 10.01
 $R = 380.00'$ Chd. = 70.01'
 Arc = 20.01' Chd. Brg. N61°20'27"E

PC Int. 6+13.36 to PT Int. 10+70.41
 $\Delta = 34^\circ 55' 07''$ Tan. = 119.52
 $R = 380.00'$ Chd. = 226.02'
 Arc = 231.59' Chd. Brg. N42°22'18"E

PC Int. 10+70.41 to PT Int. 38.25
 $\Delta = 25^\circ 18' 24''$ Tan. = 85.31
 $R = 380.00'$ Chd. = 166.46'
 Arc = 167.84' Chd. Brg. N14°29'56"W

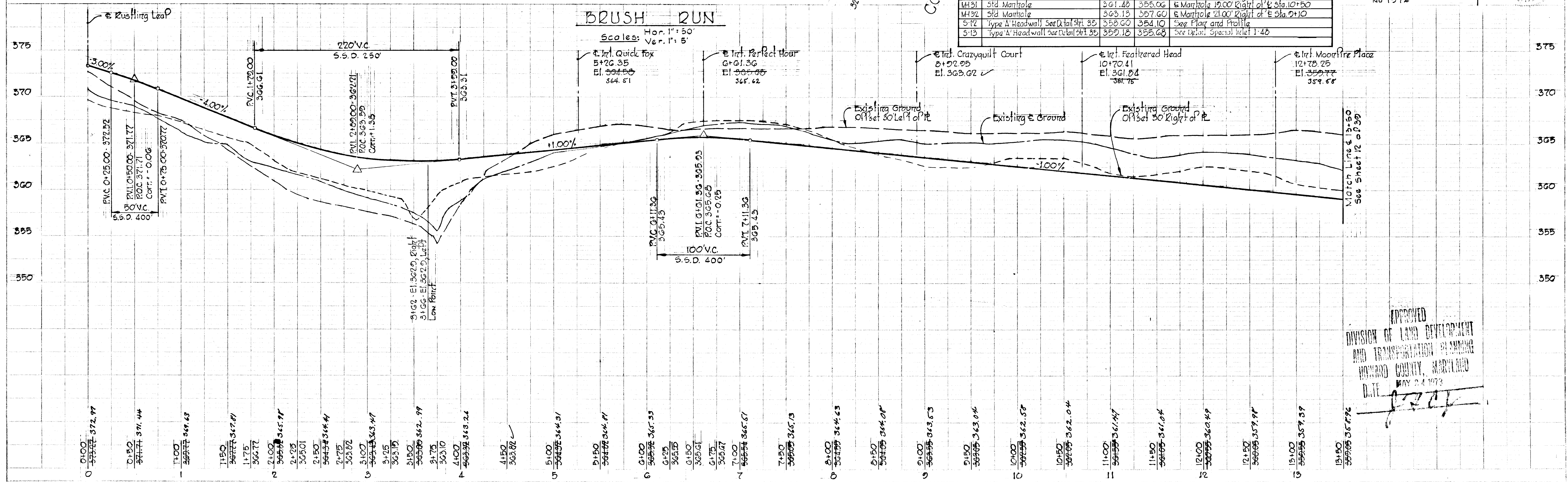


NOTES:
 1. For Storm Drain Profiles, See Sheets 26 and 27 of 39.

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
1-35	Std. A-5 Inlet width = 2.5	362.15	357.55	Inlet 15.02' Left of E. Sta. 10+50
1-36	Std. A-5 Inlet width = 2.5	364.80	360.00	Inlet 15.92' Right of E. Sta. 7+85
1-37	Std. A-5 Inlet width = 2.5	365.74	359.89	Inlet 15.92' Left of E. Sta. 0+55
1-38	Std. A-5 Inlet width = 2.5	365.74	359.69	Inlet 15.92' Right of E. Sta. 0+55
1-47	Std. A-5 Inlet width = 2.5	362.90	354.27	Inlet 15.92' Left of E. Sta. 3+66
1-48	Special A-5 Inlet See Detail Sheet 36	362.90	354.69	Pl. of Inlet 15.92' Right of E. Sta. 3+61
MH19	Std. Manhole	369.71	362.95	E. Manhole 17.00' Right of E. Sta. 1+00
MH21	Std. Manhole	361.48	355.06	E. Manhole 12.00' Right of E. Sta. 10+50
MH22	Std. Manhole	363.13	357.60	E. Manhole 21.00' Right of E. Sta. 9+10
S-12	Type A Headwall See Detail Sheet 35	358.60	354.10	See Plan and Profile
S-13	Type A Headwall See Detail Sheet 35	359.18	355.68	See Detail, Special Inlet 1-48

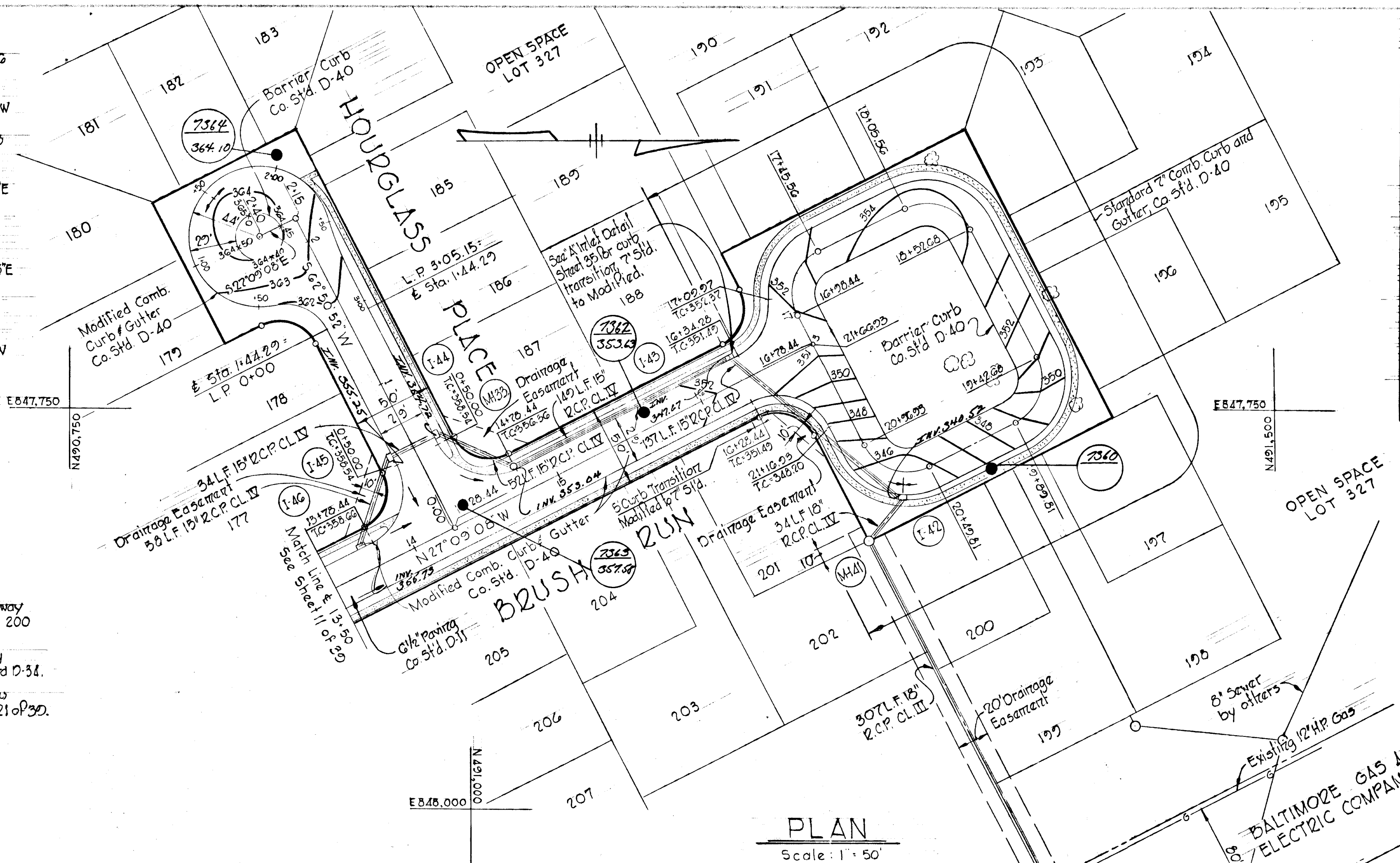
Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974



APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE *5/24/73*

CURVE DATA

PC 16+26.44 to PT 17+45.56	$\Delta = 90^{\circ}00'00''$	Tan: 30.00'
$R = 30.00'$	Chd: 42.43'	
Arc: 47.12'	Chd. Brg. N 72°09'08" W	
PC 18+05.56 to PT 19+07.65	$\Delta = 90^{\circ}00'00''$	Tan: 30.00'
$R = 30.00'$	Chd: 42.43'	
Arc: 47.12'	Chd. Brg. N 17°50'08" E	
PC 19+42.65 to PT 20+02.93	$\Delta = 90^{\circ}00'00''$	Tan: 30.00'
$R = 30.00'$	Chd: 42.43'	
Arc: 47.12'	Chd. Brg. S 17°50'08" W	



- NOTES:**
- For Storm Drain Profile, See Sheet 27 of 39.
 - Contractor must obtain driveway locations for lots 189 thru 200 from builder in order to construct typical driveway entrance as per County Standard D-34.
 - For Typical Half Section thru Brush Run Loop see Sheet 21 of 39.

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Th.	S Y	3,490
3	Bituminous Concrete Base Course 7" Th.	S Y	3,490
4	Standard 7" Comb. Curb and Gutter	L F	578
6	Modified Comb. Curb and Gutter	L F	1,115
7	Barrier Curb	L F	420
9	Placing Topsoil	S Y	-
9	Unclassified Excavation (Roadway)	C Y	-
10	Concrete Sidewalk	L F	1,510
11	Sid. A-5 Inlet	EA	5
15	Sid. Manhole	EA	3
16	Type B Shallow Manhole	EA	1
20	Type C Inlet	EA	1
16	18" RCP CL IV	L F	417
19	18" RCP CL IV	L F	34
23	18" RCP CL III	L F	353
26	18" BCCMP IG Gage	L F	12
27	21" BCCMP IG Gage	L F	10
47	Earth Excavation - Drainage Ditches	C Y	7
48	Conc. Paving - Drainage Ditches	S Y	7
49	Sod - Drainage Ditches	S Y	3

DEPARTMENT OF PUBLIC WORKS
W. O. Galbraith 5-25-73
 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 DEVELOPERS
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
PLAN AND PROFILE
HOURLASS PLACE
BRUSH RUN STA. 15+50 TO STA. 17+28.44

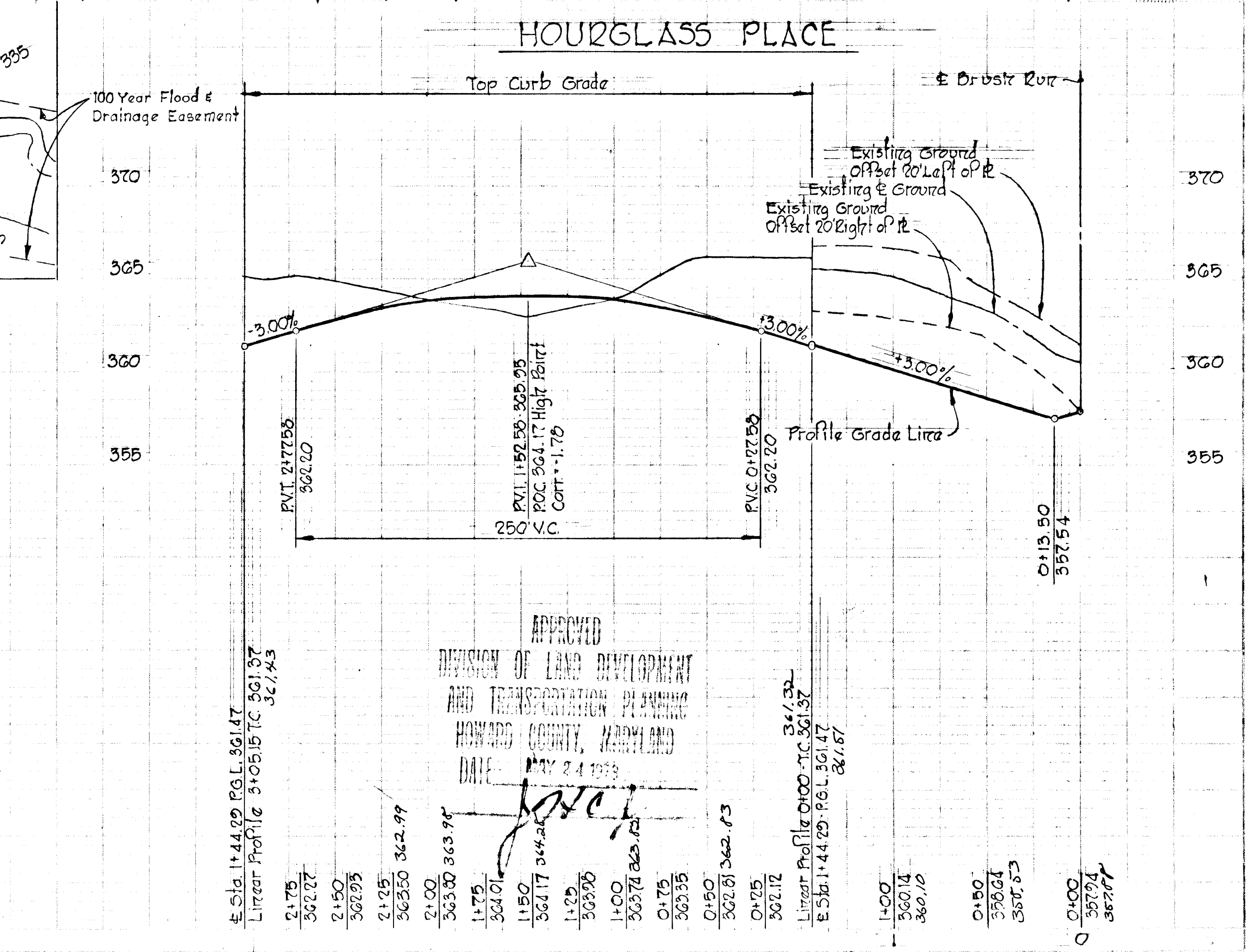
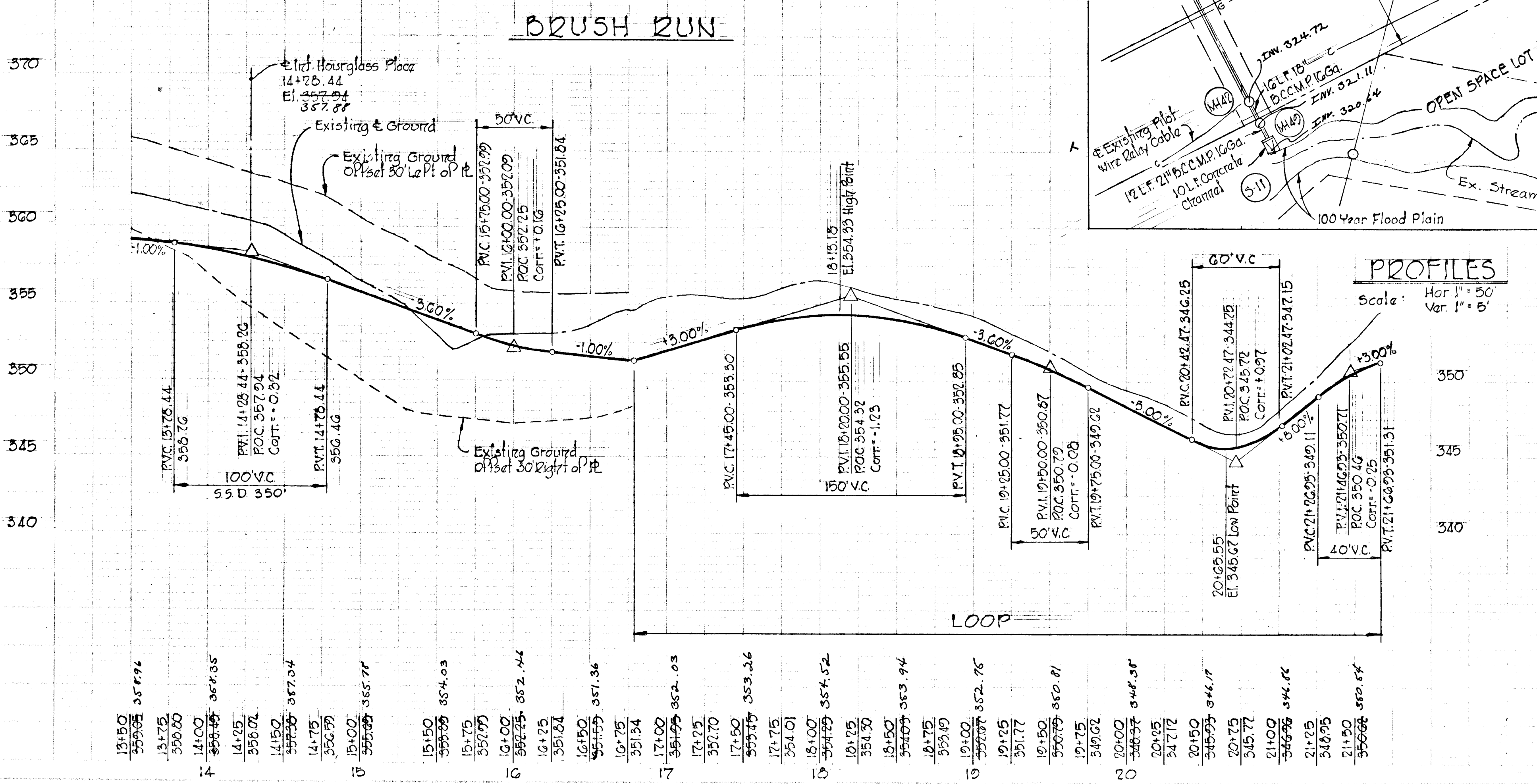
Scale: As Shown Date: 4/30/73

WHITMAN, REQUARD & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

STORM DRAIN STRUCTURE SCHEDULE

ITEM	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-42	Sid. A-5 Inlet width 2.5'	345.57	339.75	at Inlet 125' back of L.P. Sta. 20+05.55
I-43	Sid. A-5 Inlet width 2.5'	351.49	347.69	at Inlet 15.75' left of Sta. 16+20
I-44	Sid. A-5 Inlet width 2.5'	350.92	354.54	at Inlet 15.75' right of Sta. 0+56
I-45	Sid. A-5 Inlet width 2.5'	358.92	355.11	at Inlet 15.75' left of Sta. 0+56
I-46	Sid. A-5 Inlet width 2.5'	358.92	352.60	at Inlet 15.75' left of Sta. 13+72
MH-35	Type B Shallow Manhole	356.42	352.36	at MH 16.5' left of Sta. 14+70
MH-41	Standard Manhole	346.40	336.48	See Plan and Profile
MH-42	Standard Manhole	332.80	325.30	See Plan and Profile
B-11	Standard C Endwall	323.14	320.64	See Plan and Profile
MH-49	Standard Manhole	330.00	320.90	See Plan and Profile

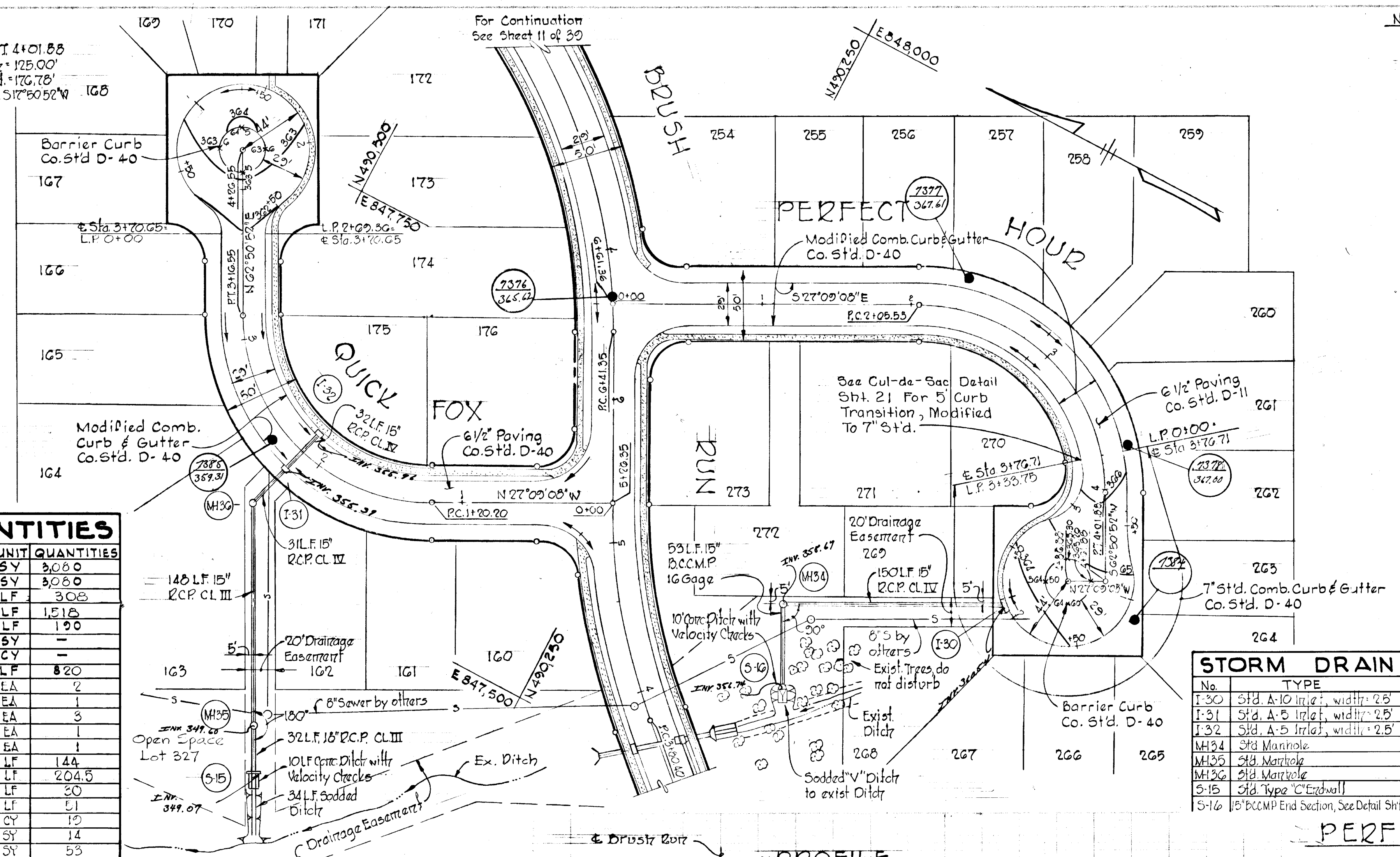
Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974



APPROVED
 DEPARTMENT OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: MAY 24 1973
JOYCE

CURVE DATA

PC: 1+20.20 to PT: 3+16.55	PC: 2+05.53 to PT: 4+01.55
$\Delta = 90^{\circ}00'00''$ $Tan = 125.00'$	$\Delta = 90^{\circ}00'00''$ $Tan = 125.00'$
$R = 125.00'$ $Chd = 176.78'$	$R = 125.00'$ $Chd = 176.78'$
$Arc = 196.35'$ $Chd. Brg. S17^{\circ}50'52''W$	$Arc = 196.35'$ $Chd. Brg. S17^{\circ}50'52''W$



- NOTE:**
- For Storm Drain Profiles See Sheet 30 of 39.
 - Perfect Hour is not a Standard Cul de Sac See Detail Sheet 21 of 39.
 - Contractor must obtain driveway locations for lots 262 thru 269 from builder in order to construct typical driveway entrance per County Standard D-34.

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE: 5-25-73
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE:

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" Thk.	SY	3,080
3	BIT. CONC. BASE COURSE 5" Thk.	SY	3,080
4	STD 7" COMB. CURB AND GUTTER	LF	3,080
6	MODIFIED COMB. CURB AND GUTTER	LF	1,518
7	BARRIER CURB	LF	1,190
8	PLACING TOPSOIL	SY	-
9	UNCLASSIFIED EXCAVATION (ROADWAY)	CY	-
10	CONCRETE SIDEWALK	LF	820
11	STD. A-5 INLET	EA	2
12	STD. A-10 INLET	EA	1
15	STD. MANHOLES	EA	3
30	STD. TYPE C/MANHOLE	EA	1
43	15" D.C.C.M.P. END SECTION	EA	1
32	18" RCP CL III	LF	144
10	15" RCP CL IV	LF	204.5
33	18" RCP CL III	LF	30
25	15" D.C.C.M.P. IG GAGE	LF	51
47	EARTH EXCAVATION DRAINAGE DITCHES	CY	10
48	CONC. PAVING DRAINAGE DITCHES	SY	14
49	SOD. DRAINAGE DITCHES	SY	53

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-30	Std. A-10 Inlet, width 2.5'	363.86	360.50	At Inlet 125' Left L.P. Sta. 2+14.00
I-31	Std. A-5 Inlet, width 2.5'	362.44	355.37	At Inlet 107' Left L.P. Sta. 2+14
I-32	Std. A-5 Inlet, width 2.5'	359.44	355.75	At Inlet 107' Right L.P. Sta. 2+14
MH34	Std Manhole	365.00	358.57	See Plan and Profile
MH35	Std Manhole	364.00	349.47	See Plan and Profile
MH36	Std Manhole	364.00	354.45	See Plan and Profile
S-15	Std Type C Endwall	351.46	349.21	See Plan and Profile
S-16	15" D.C.C.M.P. End Section, See Detail Sheet 25	-	356.98	See Plan and Profile

Rev. Date Rev. No. Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

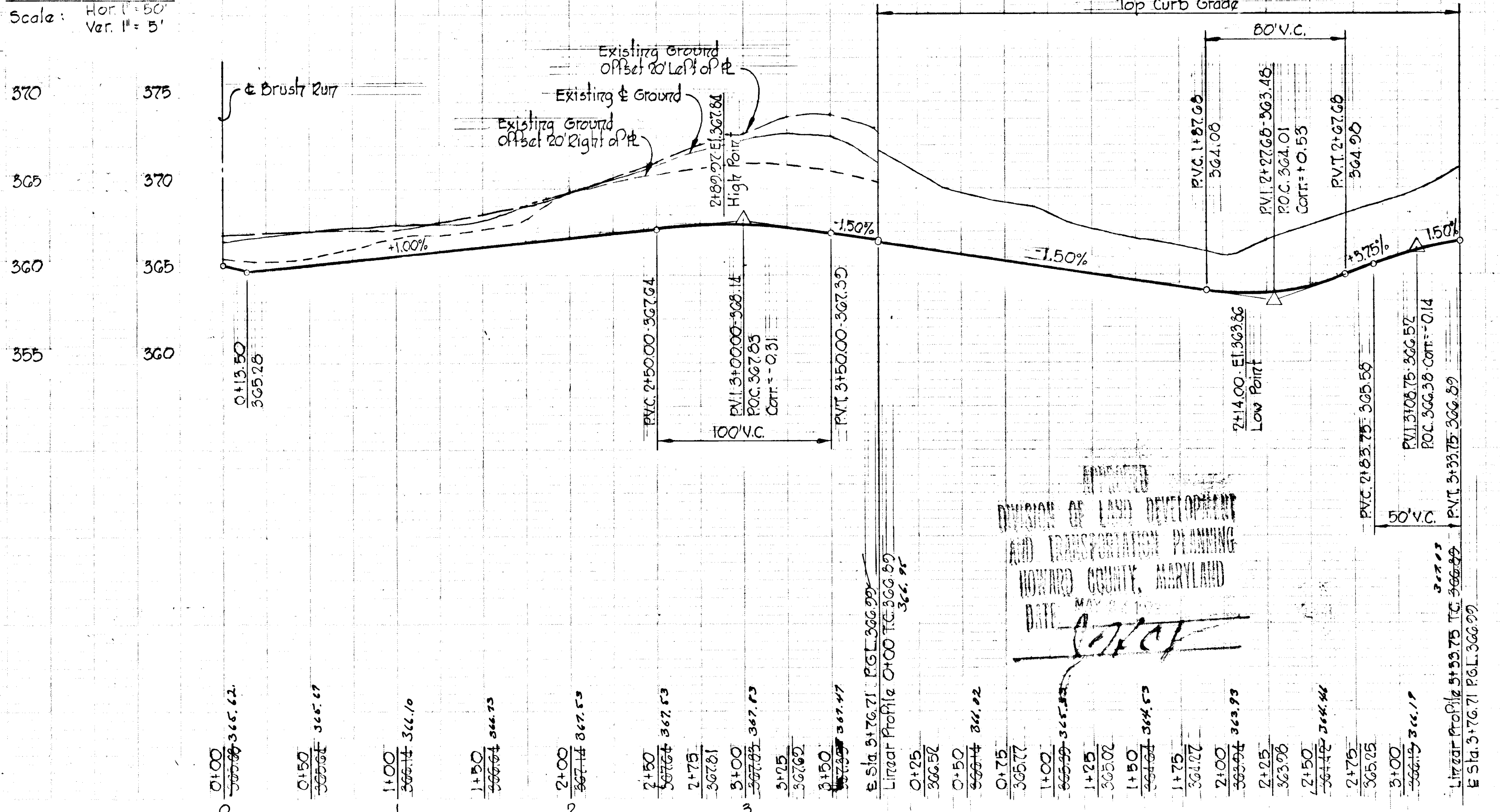
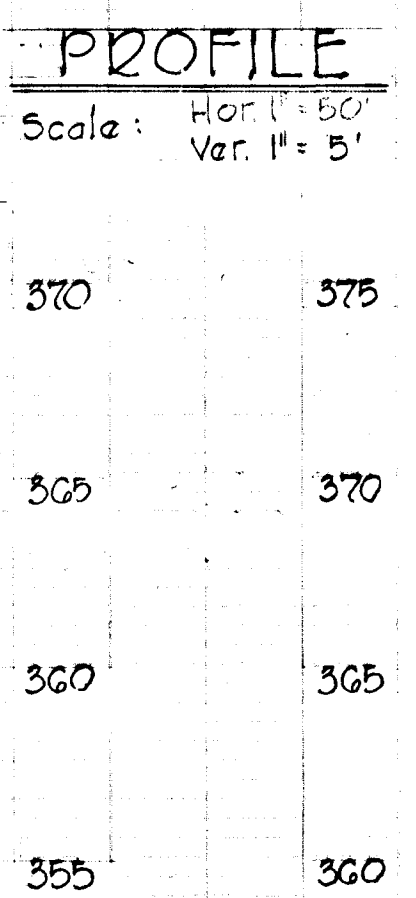
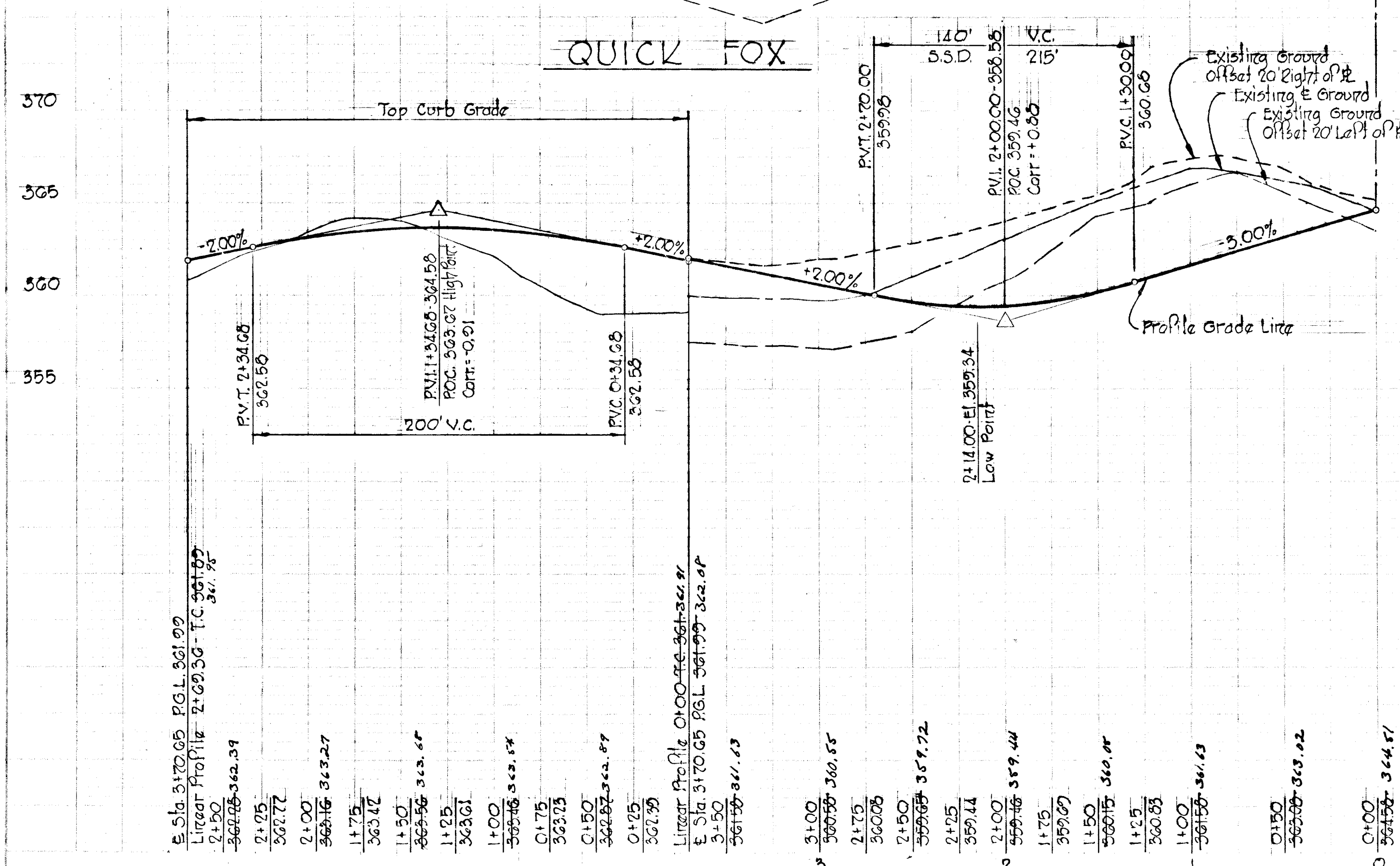
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
PLAN AND PROFILE PERFECT HOUR AND QUICK FOX

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



DEPARTMENT OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
[Signature]

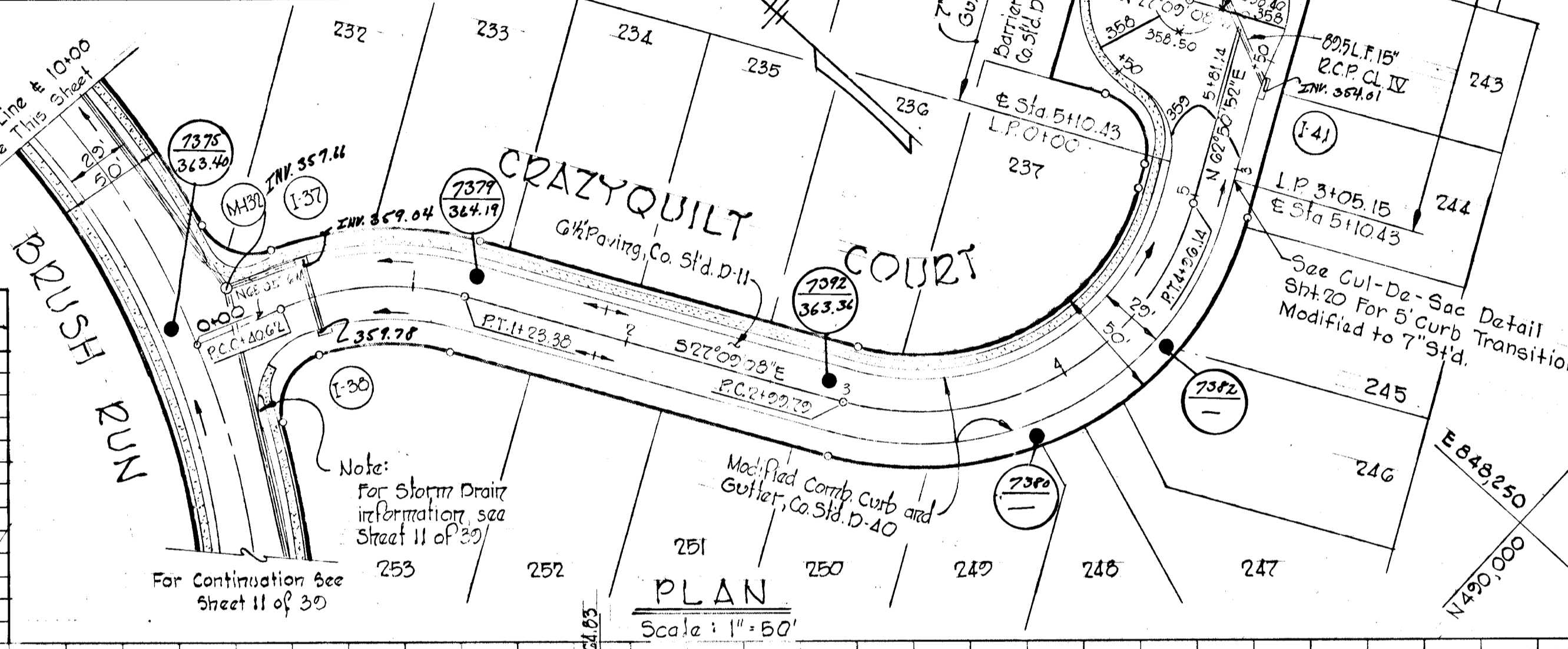
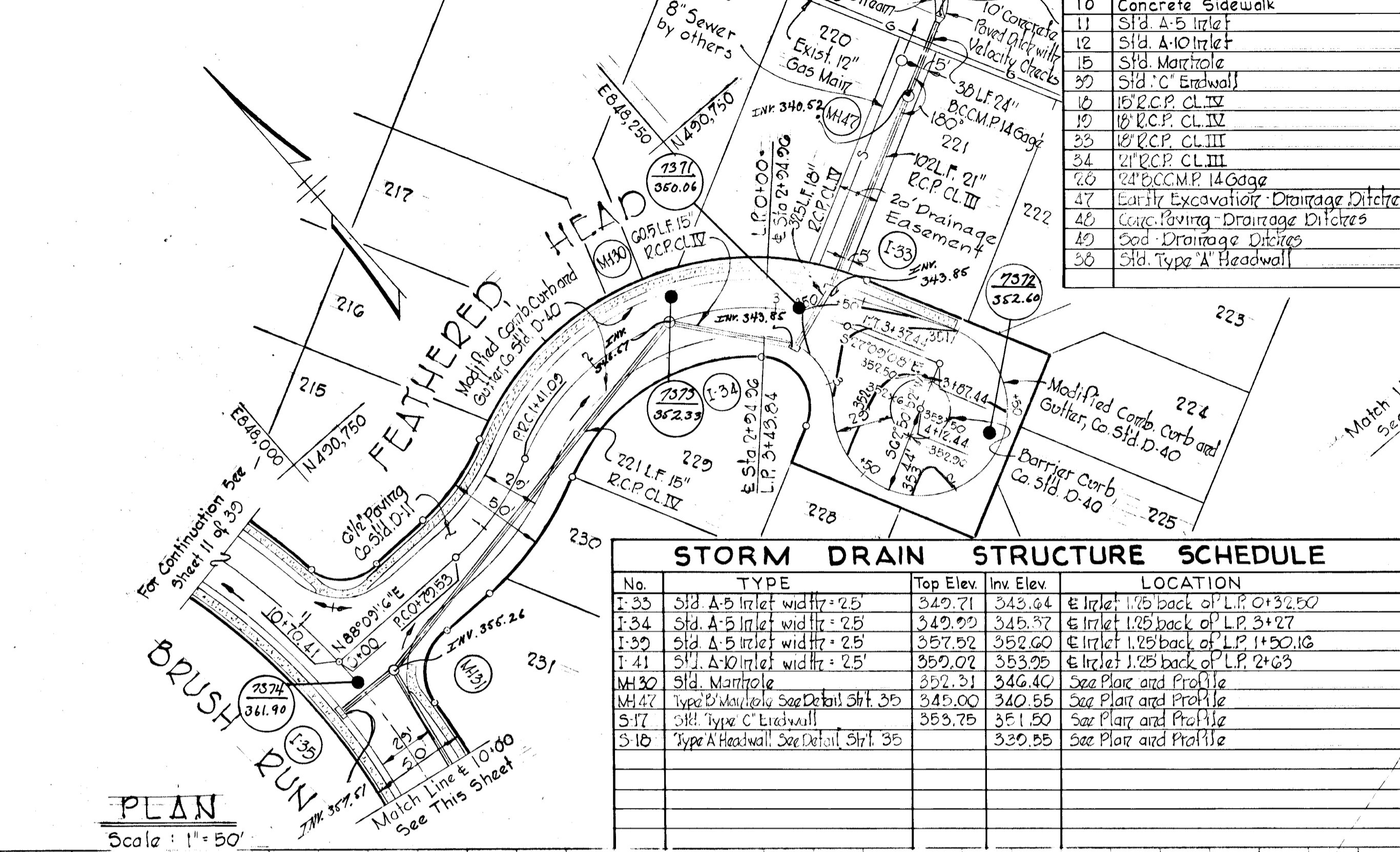
CURVE DATA
 PC 0+79.53 to PTC 1+41.09
 Δ = 25°18'24" Tan = 31.29' R = 139.37' Chd. = 61.06' Arc = 61.56'
 PRC 1+41.09 to PT 3+37.44
 Δ = 90°00'00" Tan = 125.00' R = 125.00' Chd. = 176.78' Arc = 196.35'
 Notes:
 1. For Storm Drain Profiles, See Sheet 27 of 39.

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Thk.	S.Y.	3,240
3	Bituminous Concrete Base Course 5" Thk.	S.Y.	3,240
4	5'x7" Comb. Curb and Gutter	L.F.	259
6	Modified Comb. Curb and Gutter	L.F.	1,473
7	Barrier Comb.	L.F.	190
8	Placing Topsoil	S.Y.	-
9	Unclassified Excavation (Roadway)	C.Y.	-
10	Concrete Sidewalk	S.F.	295.0
11	5'x5" A-5 Inlet	EA.	3
12	5'x5" A-10 Inlet	EA.	1
15	5'x5" Manhole	EA.	2
20	5'x5" C' Endwall	EA.	2
16	18" R.C.P. CL IV	L.F.	3.71
19	18" R.C.P. CL IV	L.F.	22.5
23	18" R.C.P. CL III	L.F.	124
34	18" R.C.P. CL III	L.F.	102
20	18" R.C.P. 14 Gage	L.F.	38
47	Earth Excavation - Drainage Ditches	C.Y.	13
48	Gravel Filling - Drainage Ditches	S.Y.	36
49	Good - Drainage Ditches	S.Y.	32
50	5'x5" Type 'A' Headwall	EA.	-

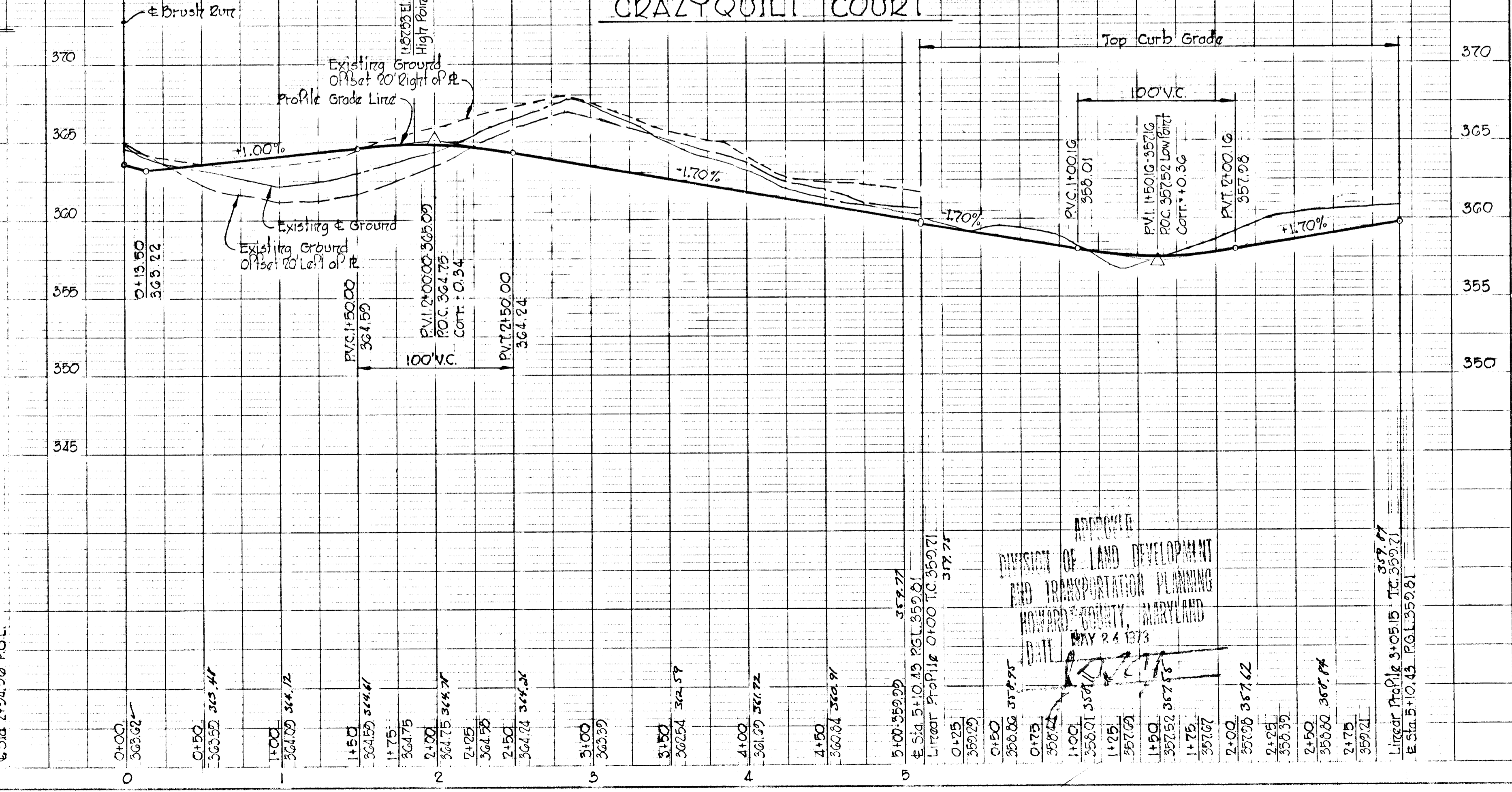
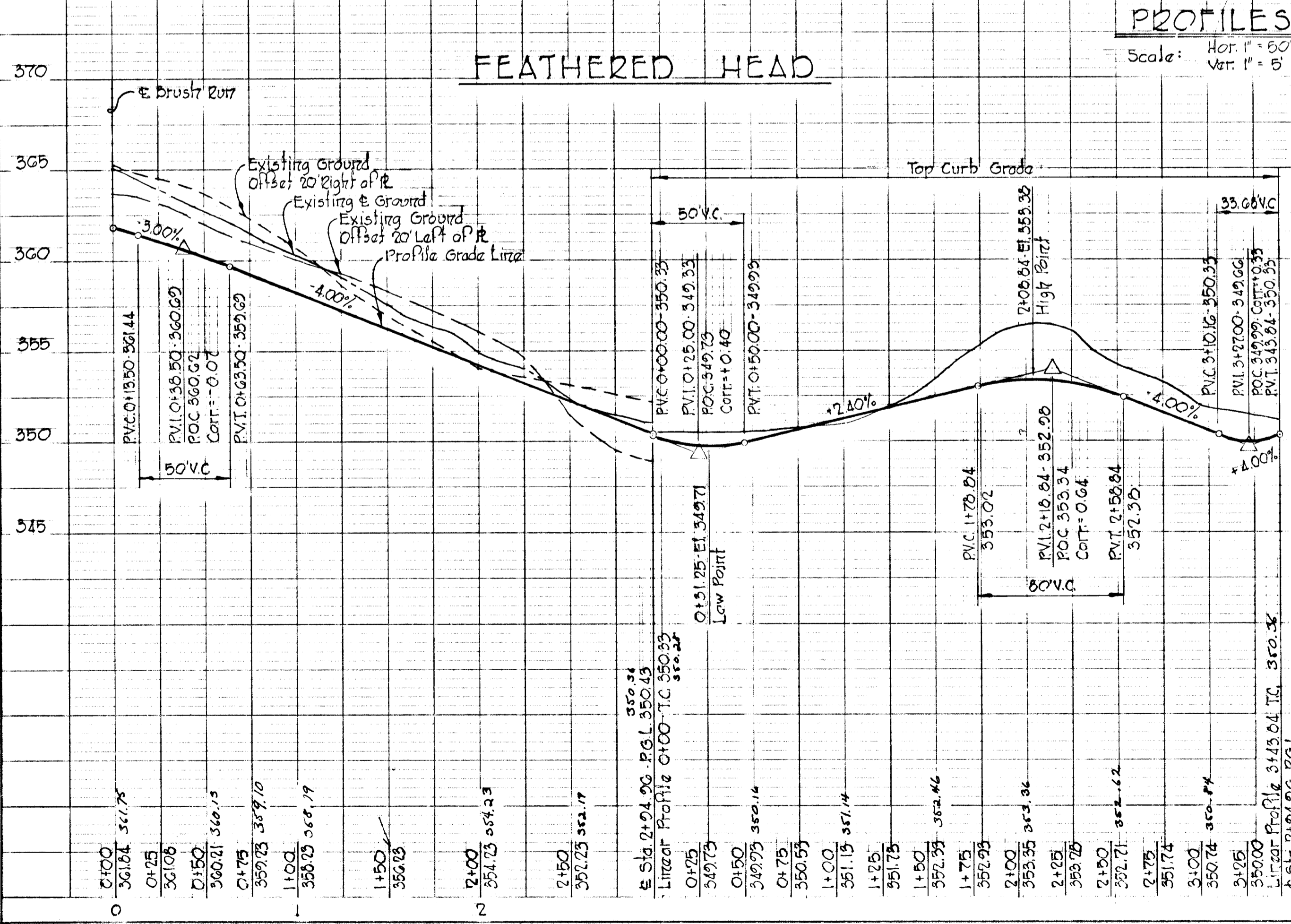
CURVE DATA
 PC 0+40.02 to P.T. 1+23.30
 Δ = 37°50'07" Tan = 42.92' R = 125.00' Chd. = 61.92' Arc = 82.76' Chd. Brg. S 46°07'12"E
 PC 2+99.70 to P.T. 4+26.14
 Δ = 90°00'00" Tan = 125.00' R = 125.00' Chd. = 176.78' Arc = 196.35' Chd. Brg. S 72°09'08"E
 Notes:
 Contractor must obtain driveway locations for lots 238 thru 244 from builder in order to construct typical driveway entrance as per County Standard D-34.

DEPARTMENT OF PUBLIC WORKS
 W. O. Falbert 5-25-73
 CHIEF, BUREAU OF HIGHWAYS DATE
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE



STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inn. Elev.	LOCATION
I-33	5'x5" A-5 Inlet width = 25"	349.71	345.64	at Inlet 1.25' back of L.P. 0+32.50
I-34	5'x5" A-5 Inlet width = 25"	349.72	345.37	at Inlet 1.25' back of L.P. 3+27
I-39	5'x5" A-5 Inlet width = 25"	357.92	352.60	at Inlet 1.25' back of L.P. 1+50.18
I-41	5'x5" A-10 Inlet width = 25"	359.02	353.99	at Inlet 1.25' back of L.P. 2+63
MH 30	5'x5" Manhole	352.31	346.40	See Plan and Profile
MH 47	Type B Manhole See Detail Sht. 39	345.00	340.55	See Plan and Profile
S-17	5'x5" Type 'C' Endwall	355.75	351.50	See Plan and Profile
S-18	Type 'A' Headwall See Detail Sht. 35	345.00	339.55	See Plan and Profile



COLUMBIA
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
 VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
 PLAN AND PROFILE
 CRAZYQUILT COURT
 AND FEATHERED HEAD

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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

STORM DRAIN STRUCTURE SCHEDULE

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION	No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
1-49	Std. A-5 Inlet width: 25"	373.94	369.45	Inlet 27.75 Right of E. Sta. 4+60	1-50	Std. A-5 Inlet width: 25"	376.00	374.31	Inlet 125' back of L.P. Sta. 2+02
1-50	Std. A-10 Inlet width: 25"	374.14	367.30	Inlet 36.05 Left of E. Sta. 4+40	MH20	Type B Manhole See Detail Sht. 35	376.45	370.80	Manhole 160' Left of E. Sta. 0+00
1-51	Std. A-5 Inlet width: 25"	373.02	368.60	Inlet 15.92 Left of E. Sta. 0+70	MH21	Type B Manhole See Detail Sht. 35	370.65	374.70	See Plan and Profile
1-52	Std. A-5 Inlet width: 25"	373.02	369.66	Inlet 15.92 Right of E. Sta. 0+70	MH22	Type B Manhole See Detail Sht. 35	370.00	366.50	See Plan and Profile
1-53	Std. A-10 Inlet width: 25"	373.30	370.28	Inlet 15.92 Left of E. Sta. 4+04	1-57	Special V Inlet See Detail Sht. 36	368.00	361.61	See Plan and Profile
1-54	Std. A-10 Inlet width: 25"	373.30	375.64	Inlet 15.92 Right of E. Sta. 4+04	1-58	Special V Inlet See Detail Sht. 36	369.00	365.55	See Plan and Profile
1-55	Std. A-5 Inlet width: 25"	377.76	373.66	Inlet 15.92 Left of E. Sta. 0+65					

NOTES
1. For Storm Drain Profiles, See Sheet 26 of 30.

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

CURVE DATA
 P.C.T. 1+54.31 to E.I. 2+07.81 $\Delta = 12^\circ 35' 22''$ $T = 41.92'$ $R = 380.00'$ $C = 83.33'$ $Arc = 83.50'$
 E.I. 2+07.81 to P.T. 2+55.15 $\Delta = 04^\circ 02' 22''$ $T = 13.68'$ $R = 360.00'$ $C = 27.34'$ $Arc = 27.34'$

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 OWEN BROWN
SECTION 2, AREA 3

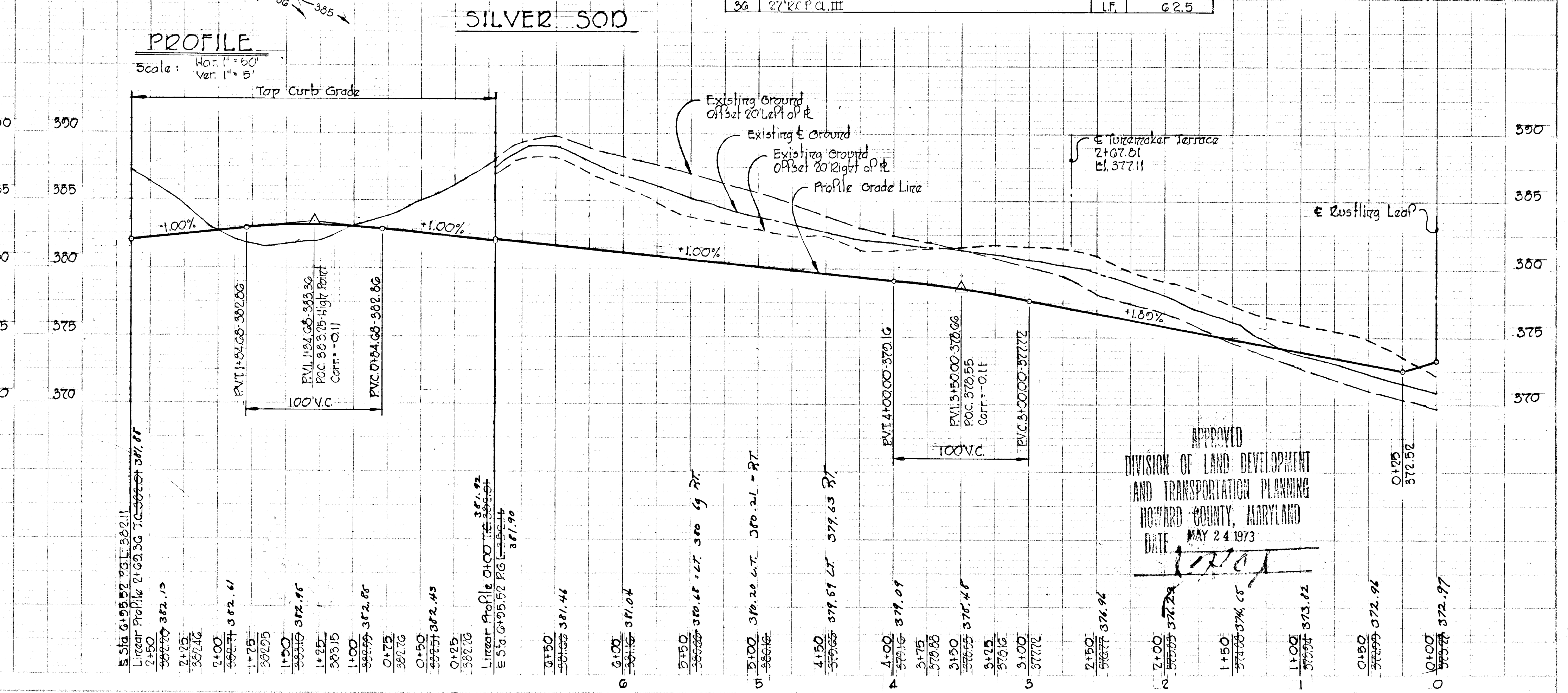
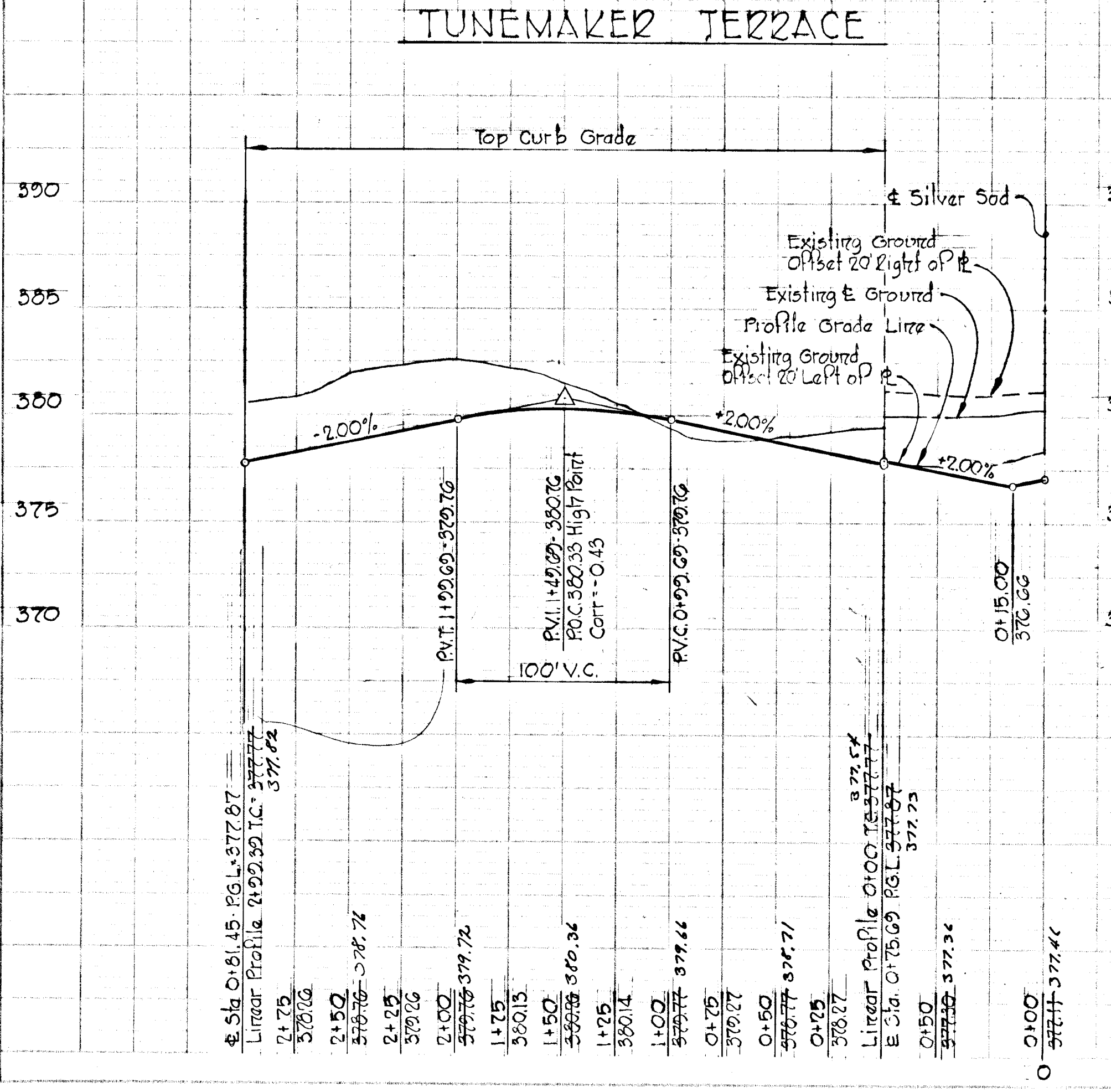
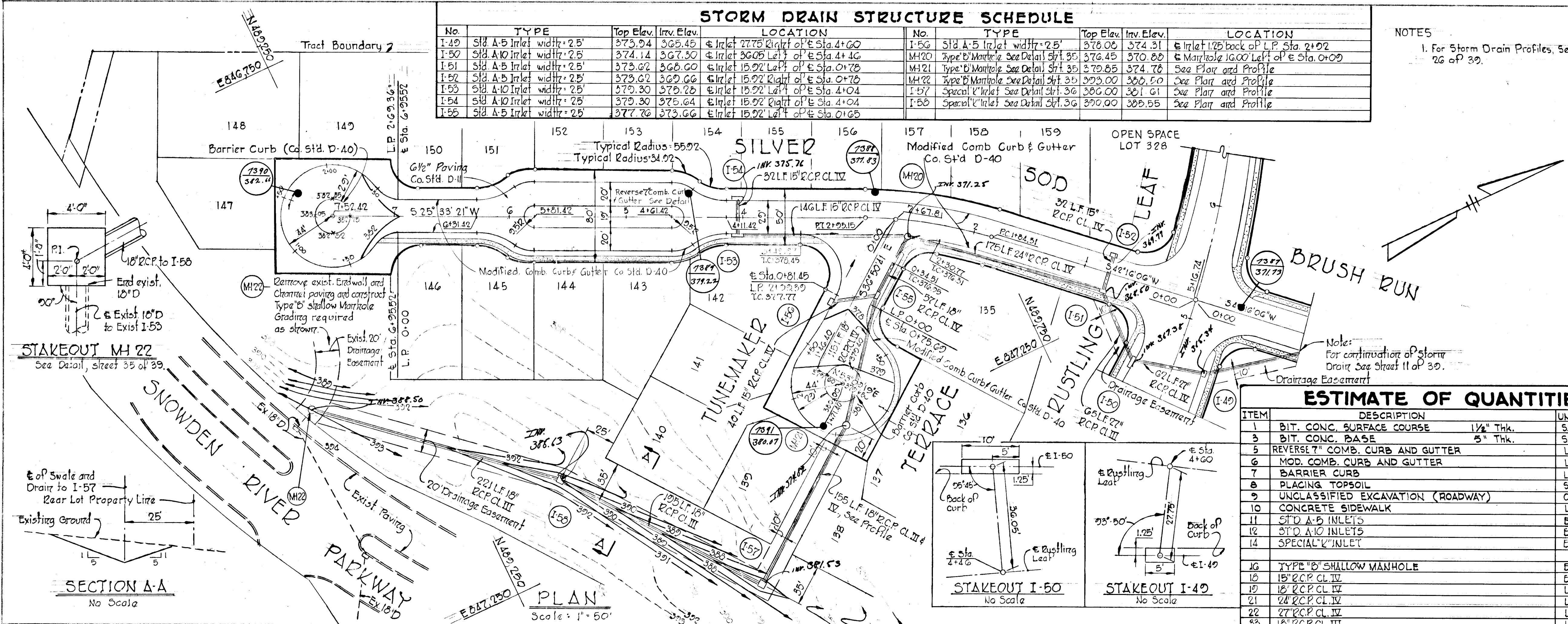
PROJECT TITLE
**PLAN AND PROFILE
SILVER SOD
AND TUNEMAKER TERRACE**

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	BIT. CONC. SURFACE COURSE 1 1/2" Thk.	SY	3,526
2	BIT. CONC. BASE 5" Thk.	SY	3,526
3	REVERSE 7" COMB. CURB AND GUTTER	LF	300
4	MOD. COMB. CURB AND GUTTER	LF	1,748
5	BARRIER CURB	LF	190
6	PLACING TOPSOIL	SY	
7	UNCLASSIFIED EXCAVATION (ROADWAY)	CY	
8	CONCRETE SIDEWALK	LF	775
9	STD. A-5 INLETS	EA	5
10	STD. A-10 INLETS	EA	3
11	SPECIAL "V" INLET	EA	2
12	TYPE "B" SHALLOW MANHOLE	EA	3
13	15" RCP CL. IV	EA	235.5
14	18" RCP CL. IV	LF	191
15	24" RCP CL. IV	LF	170.5
16	27" RCP CL. IV	LF	52.5
17	18" RCP CL. III	LF	534.5
18	27" RCP CL. III	LF	62.5



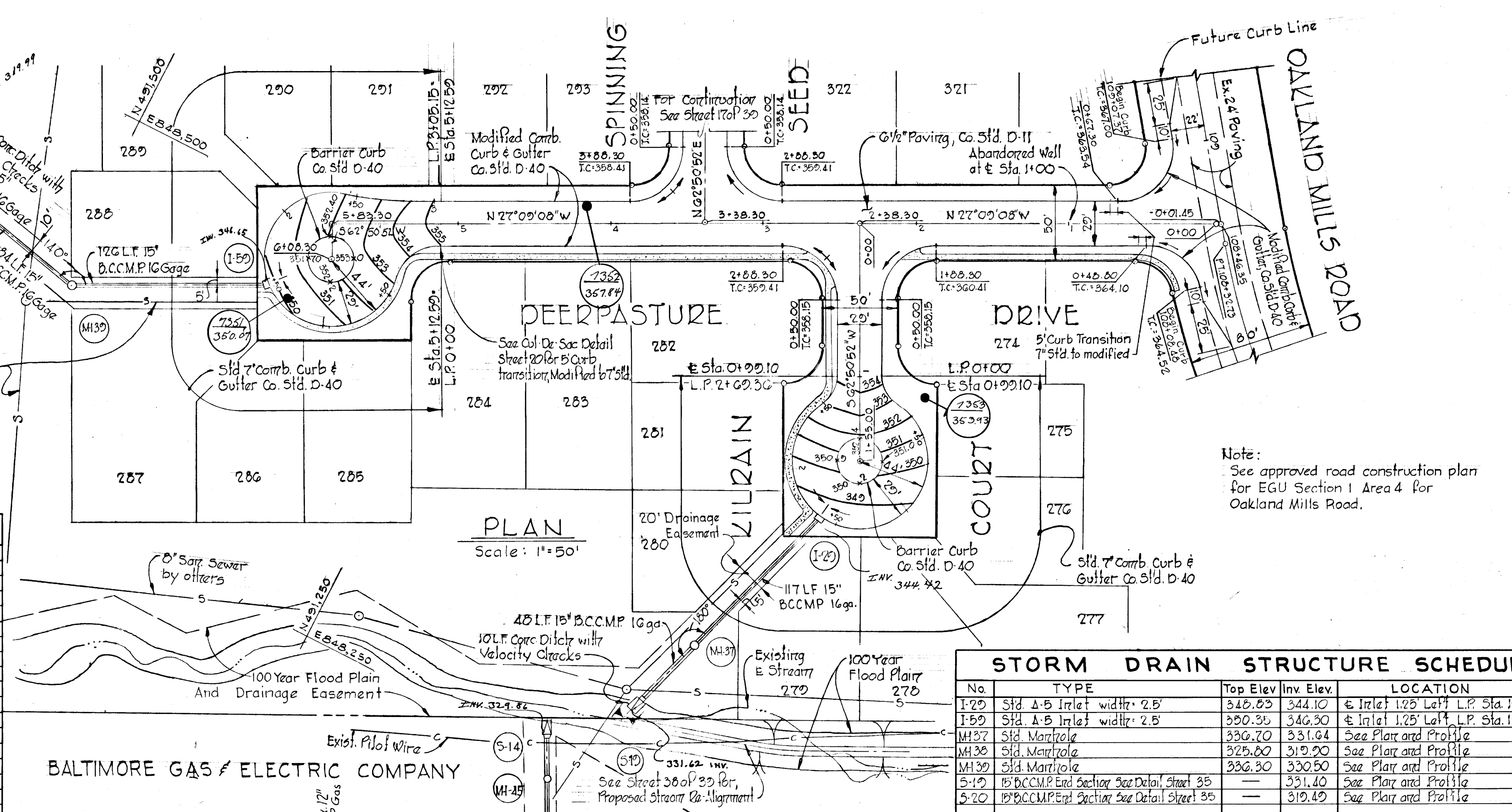
APPROVED
DIVISION OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE: MAY 24 1973

CHRIST EPISCOPAL CHURCH
409/624

DEPARTMENT OF PUBLIC WORKS
W. O. Lambert 5-25-73
CHIEF, BUREAU OF HIGHWAYS
OFFICE OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

NOTES:
1. For Storm Drain Profiles, See Sheet 30 of 39
2. Contractor must obtain driveway locations for lots 275 thru 281, lots 285 thru 291 from builder in order to construct typical driveway entrance as per County Standard D-34.

ITEM	DESCRIPTION	UNIT	QUANTITIES
1	Bituminous Concrete Surface Course 1 1/2" Thk.	SY	3,220
3	Bituminous Concrete Base Course 5" Thk.	SY	3,220
4	Std. 7" Comb. Curb and Gutter	LF	530
6	Modified Comb. Curb and Gutter	LF	1,150
7	Barrier Curb	LF	120
8	Placing Topsoil	SY	-
9	Unclassified Excavation (Roadway)	CY	-
10	Concrete Sidewalk	LF	750
11	Std. A-B Inlet	EA	2
15	Std. Manholes	EA	3
25	15" B.C.C.M.P. End Section	EA	2
26	15" B.C.C.M.P. 10 Gage	LF	402
47	Earth Excavation - Drainage Ditches	CY	684
48	Comp. Paving - Drainage Ditches	SY	14
49	Sod. Drainage Ditches	SY	547
50	Rip-Rap Paving	SY	54



Note:
See approved road construction plan for EGU Section 1, Area 4 for Oakland Mills Road.

No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
1-20	Std. A-B Inlet width 2.5'	345.03	344.10	± Inlet 125' Left L.P. Sta. 1+61.40
1-50	Std. A-B Inlet width 2.5'	350.35	346.30	± Inlet 125' Left L.P. Sta. 1+50.10
MH 37	Std. Manhole	336.70	331.64	See Plan and Profile
MH 38	Std. Manhole	325.00	319.20	See Plan and Profile
MH 39	Std. Manhole	326.30	330.50	See Plan and Profile
5-10	15" B.C.C.M.P. End Section See Detail Sheet 35	-	331.40	See Plan and Profile
5-20	15" B.C.C.M.P. End Section See Detail Sheet 35	-	319.40	See Plan and Profile

COLUMBIA
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.

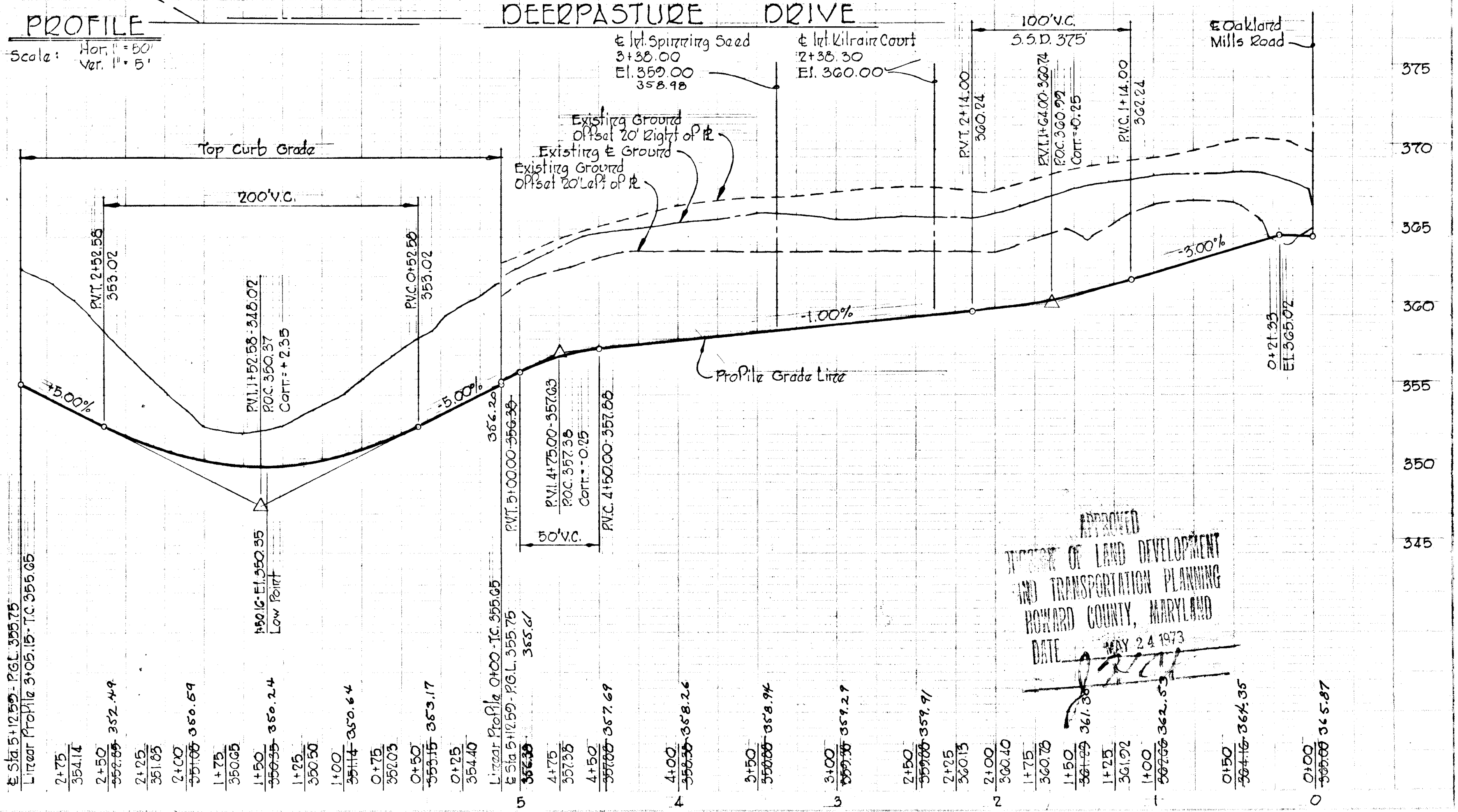
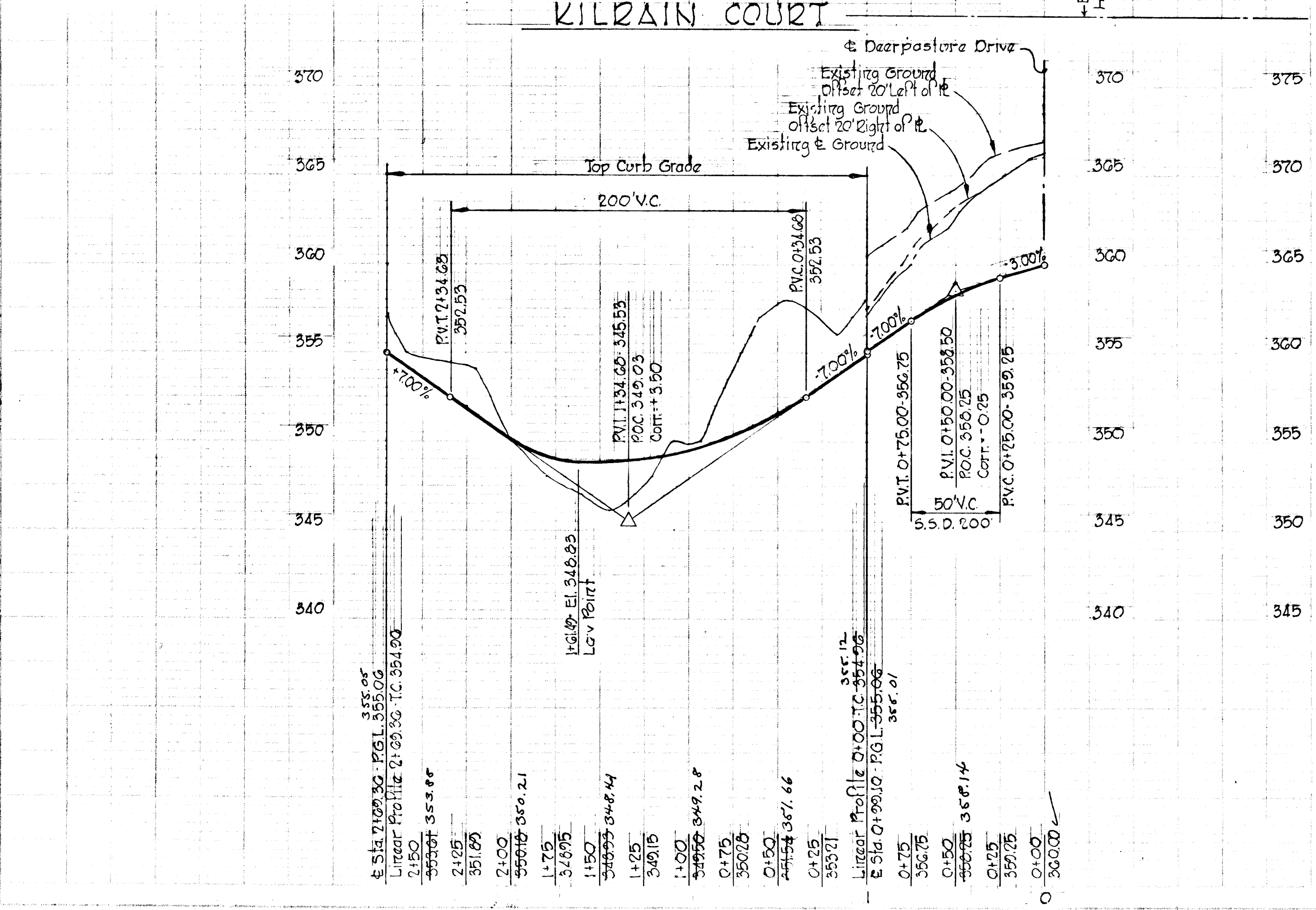
PROJECT AREA
VILLAGE OF OWEN BROWN
SECTION 2, AREA 3

PROJECT TITLE
**PLAN AND PROFILE
DEERPASTURE DRIVE
AND KILRAIN COURT**

SCALE: As Shown DATE: 4/30/73

WHITMAN, REQUARD & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

Kenneth A. Mc Cord
KENNETH A. MC CORD
Registered Engineer
No. 1974



APPROVED
OFFICE OF LAND DEVELOPMENT
AND TRANSPORTATION PLANNING
HOWARD COUNTY, MARYLAND
DATE: MAY 24 1973

STORM DRAIN STRUCTURE SCHEDULE				
No.	TYPE	Top Elev.	Inv. Elev.	LOCATION
I-64	Std A-B Inlet, width: 3.0'	347.95	338.42	Inlet 150' Left L.P. Sta. 1+15
I-65	Std A-B Inlet, width: 3.0'	348.09	340.72	Inlet 150' Left L.P. Sta. 1+53
I-66	Special "K" See Detail Sheet 37	353.68	346.68	Inlet 150.00 Right of Sta. G+51.35
I-67	Std A-B Inlet, width: 3.0'	353.55	353.10	Inlet 23.50 Left of Sta. 1+50
MH27	Special MH See Detail Sheet 37	342.90	333.56	See Plan and Profile
MH28	Special MH See Detail Sheet 37	347.50	337.66	See Plan and Profile
MH29	Special MH See Detail Sheet 37	342.44	336.29	See Detail Sheet 38
MH44	Special MH See Detail Sheet 37	342.60	341.50	See Plan and Profile
MH46	Special MH See Detail Sheet 38	357.44	350.44	See Plan and Profile
S-22	A-B Headwall See Detail Sheet 35	332.22	332.22	See Plan and Profile

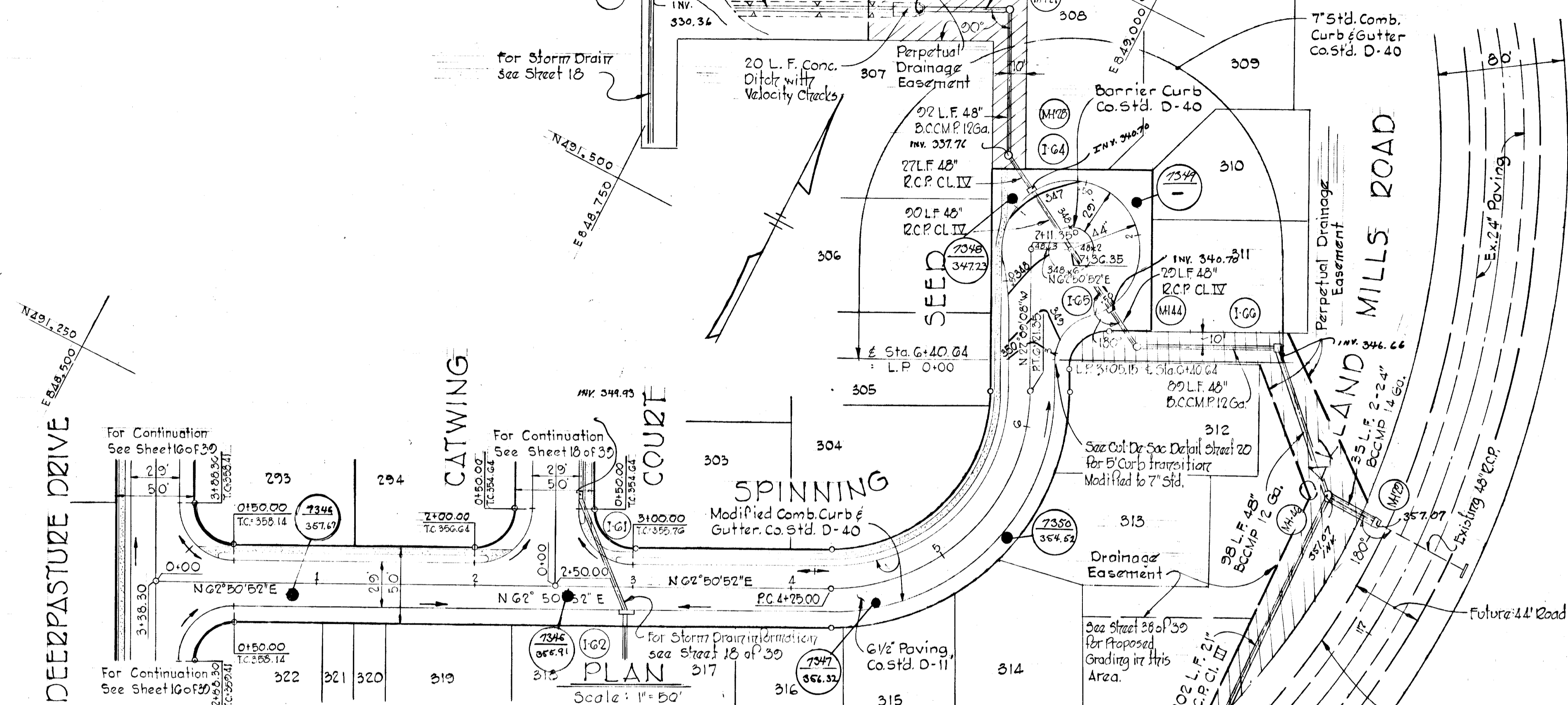
* Provide brick or edge channel and bench to crown of pipe.
 ** Top shall be set to existing grade. To be adjusted to future curb grade with widening of Oakland Mills Road.

NOTES:
 1. For Storm Drain Profile See Sheet 25 of 30.
 2. Contractor must obtain driveway locations for lots 308 thru 311 from builder to construct typical driveway entrance as per County Standard D-34.

ESTIMATE OF QUANTITIES				
ITEM	DESCRIPTION	UNIT	QUANTITIES	
1	BIT. CONC. SURFACE COURSE 1 1/2" Thk.	S.Y.	2,470	
3	BIT. CONC. BASE COURSE 5" Thk.	S.Y.	2,470	
4	STD 7" COMB. CURB AND GUTTER	L.F.	268	
6	MODIFIED COMB. CURB AND GUTTER	L.F.	1,168	
7	BARRIER CURB	L.F.	95	
8	PLACING TOPSOIL	S.Y.	-	
9	UNCLASSIFIED EXCAVATION (ROADWAY)	C.Y.	-	
10	CONCRETE SIDEWALK	L.F.	660	
11	STD A-B INLETS	EA	3	
14	SPECIAL "K" INLET	EA	1	
17	SPECIAL MANHOLES	EA	5	
34	21" R.C.P. CL III	L.F.	196.5	
37	54" R.C.P. CL III	L.F.	52	
24	48" R.C.P. CL IV	L.F.	137	
42	A-B HEADWALL	EA	1	
28	24" B.C.C.M.P. 12 Gage	L.F.	70	
31	48" B.C.C.M.P. 12 Gage	L.F.	228	
47	EARTH EXCAVATION - DRAINAGE DITCHES	C.Y.	140	
48	CONC. PAVING - DRAINAGE DITCHES	S.Y.	19	
49	SOD - DRAINAGE DITCHES	S.Y.	27	

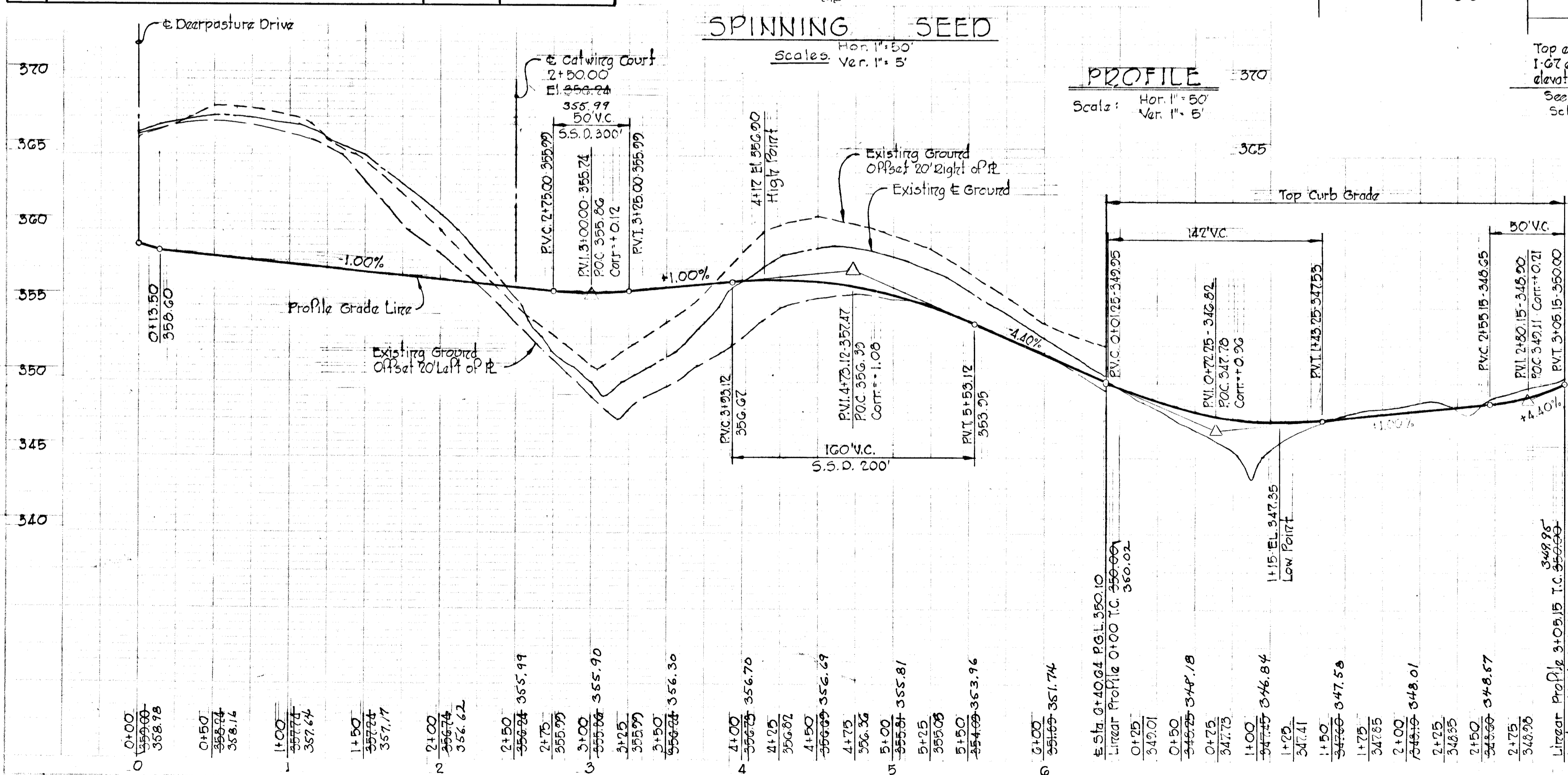
CURVE DATA	
PC 4+25.00	PT 6+21.35
Δ = 90°00'00"	Tan = 125.00'
R = 125.00'	Chd = 176.78'
Arc = 196.35'	Chd Brn = 175°50'52"E

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



SPINNING SEED
 Scale: Hor. 1" = 50'
 Ver. 1" = 5'

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



Rev. Date Rev. No. Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

OWNERS AND DEVELOPERS
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

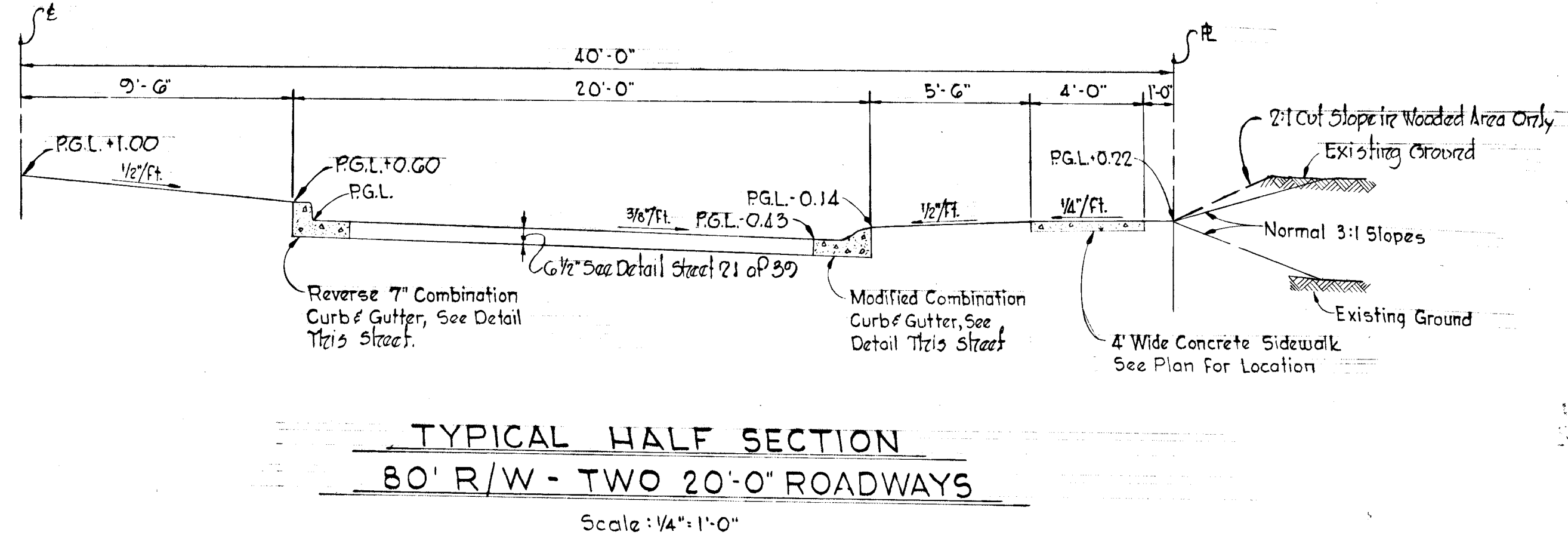
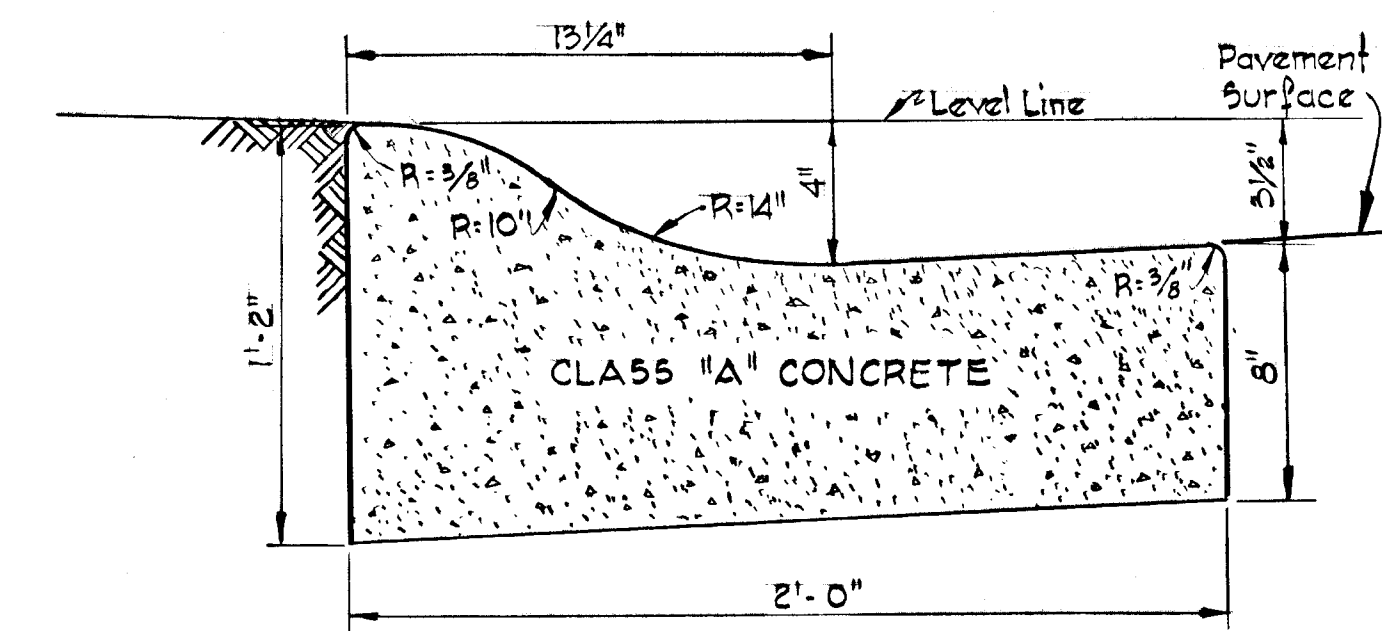
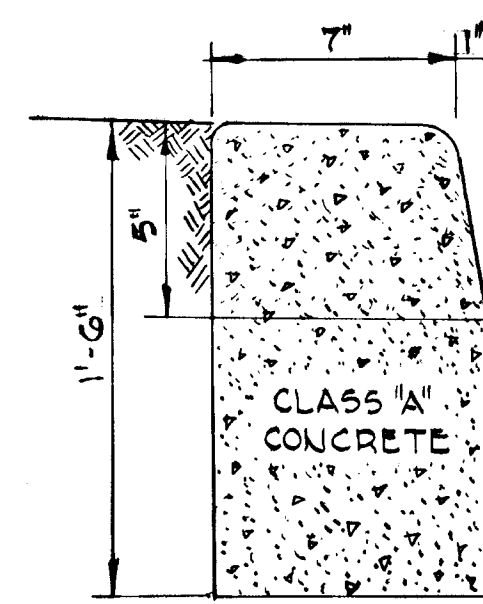
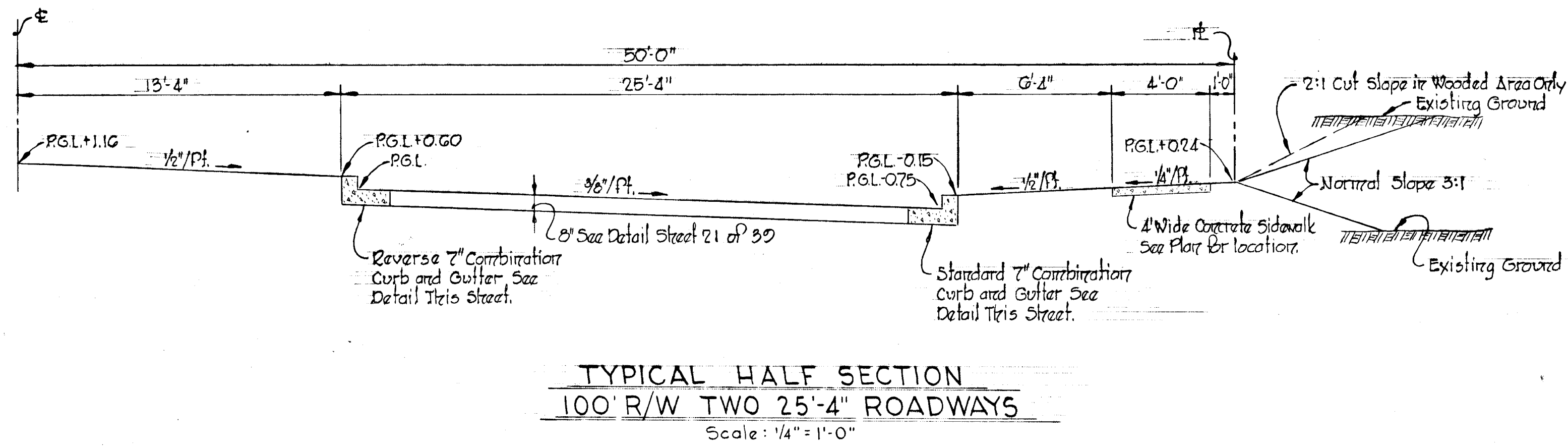
PROJECT TITLE
PLAN AND PROFILE SPINNING SEED

Scale: As Shown Date: 4-30-73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

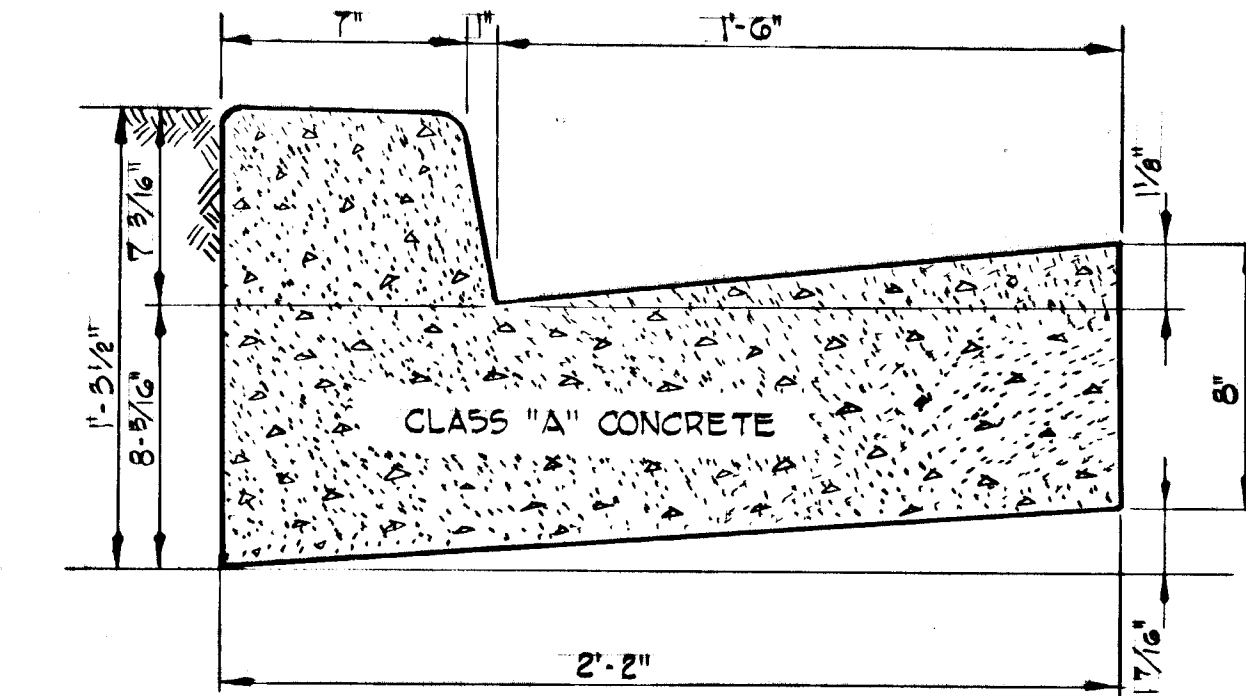
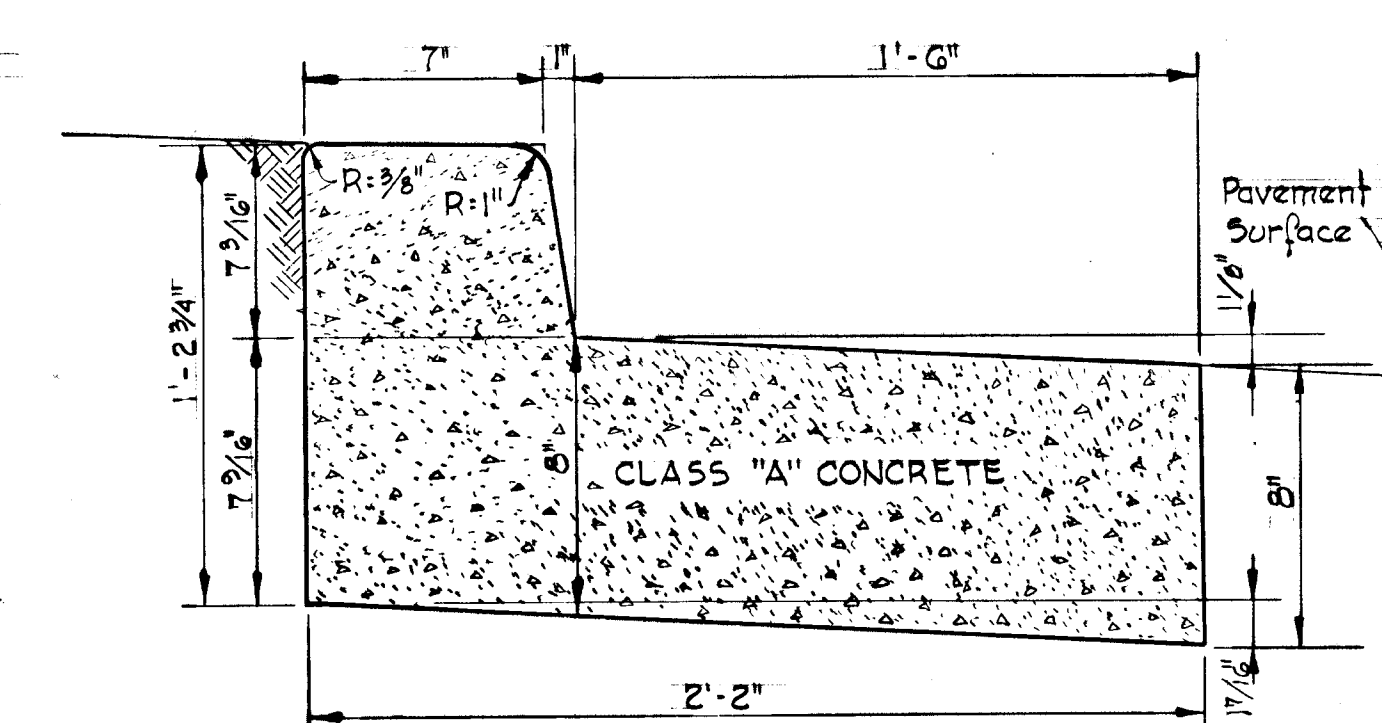
Kenneth A. McCord
 KENNETH A. McCORD
 Registered Engineer
 No. 1974

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: MAY 24 1973
J.M.C.



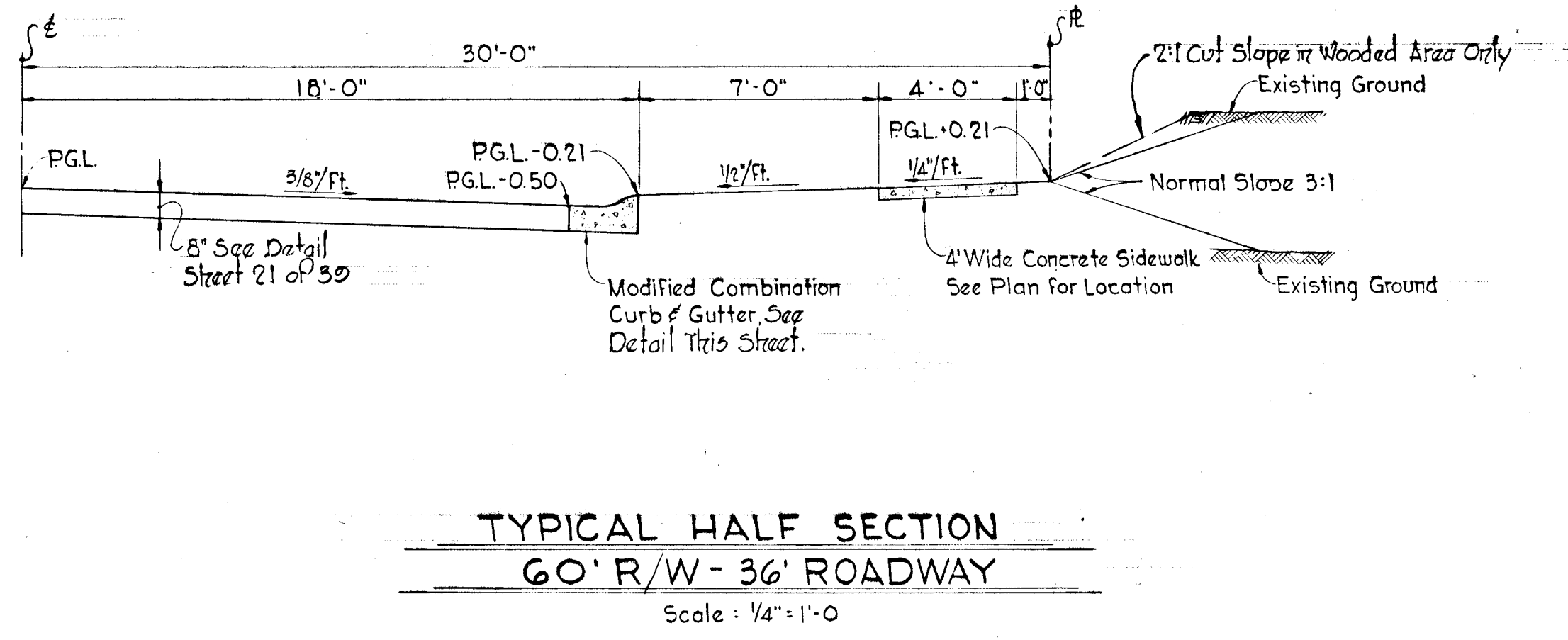
STANDARD BARRIER CURB
No Scale

MODIFIED COMBINATION CURB & GUTTER
No Scale

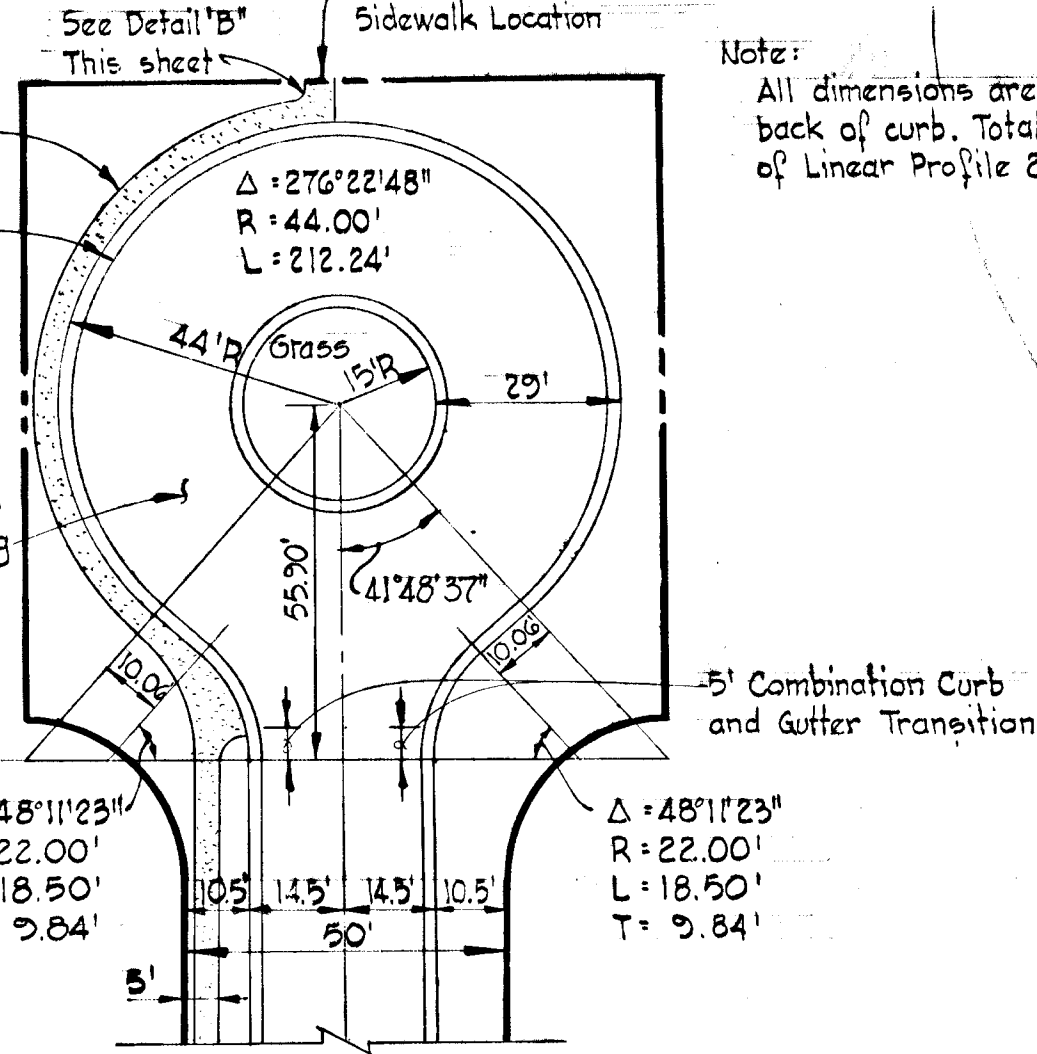
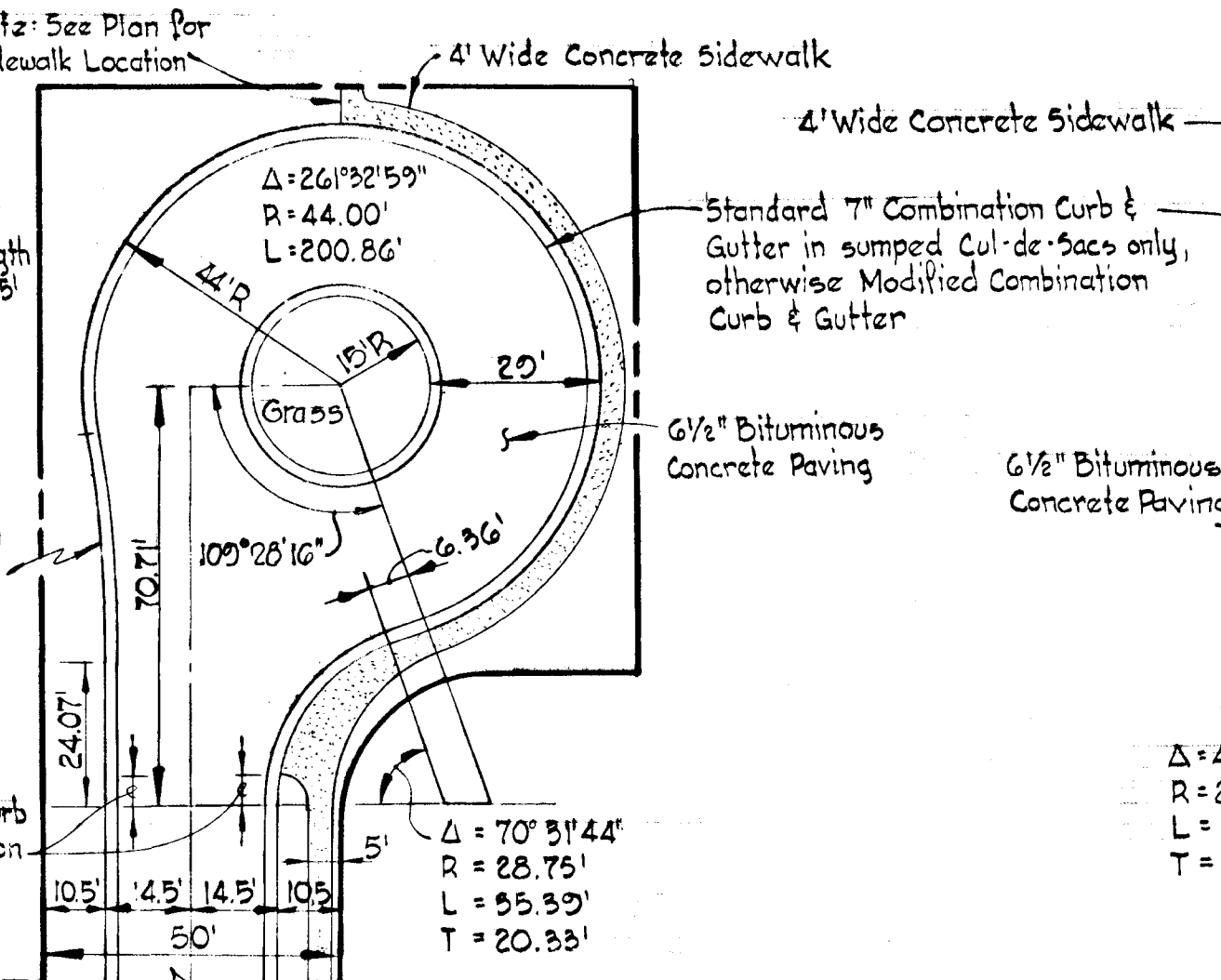


REVERSE 7" COMBINATION CURB & GUTTER
No Scale

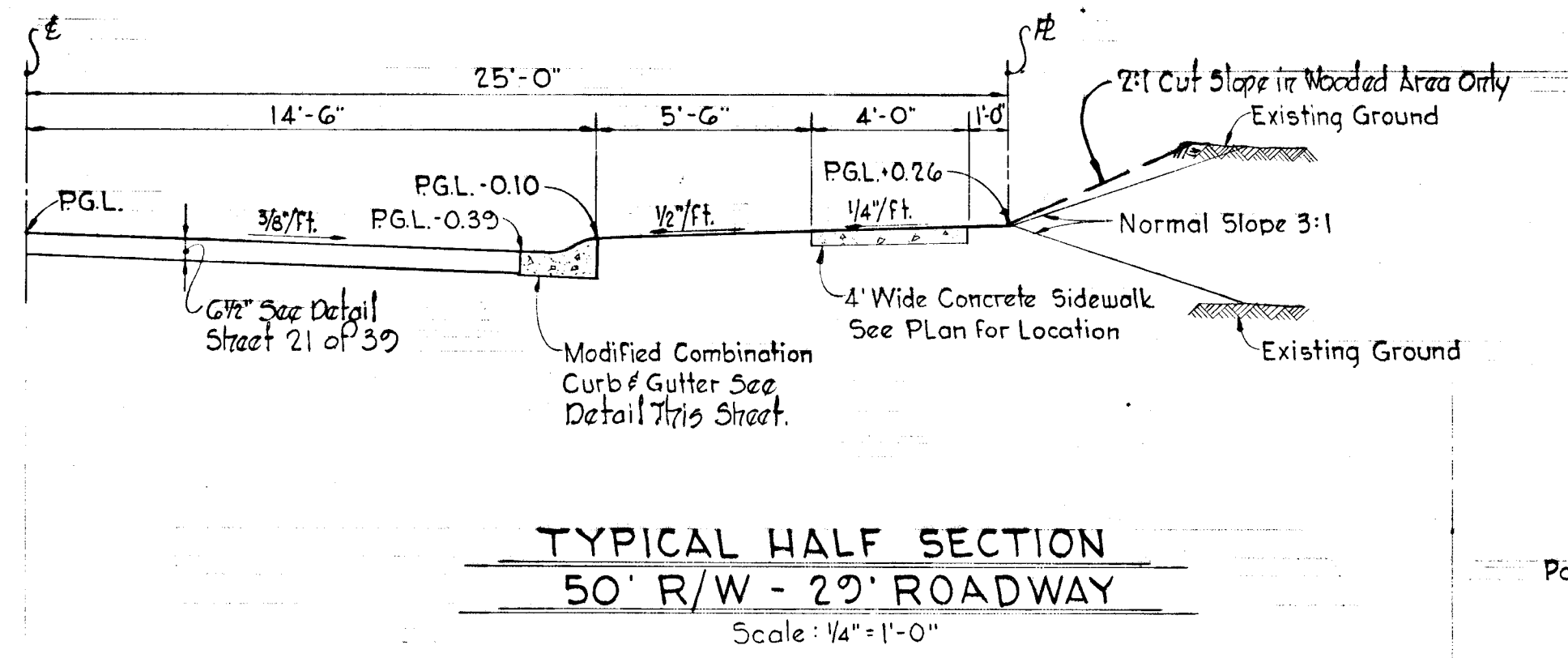
STANDARD 7" COMBINATION CURB & GUTTER
No Scale



Note: All dimensions are to back of curb. Total length of Linear Profile 305.15'

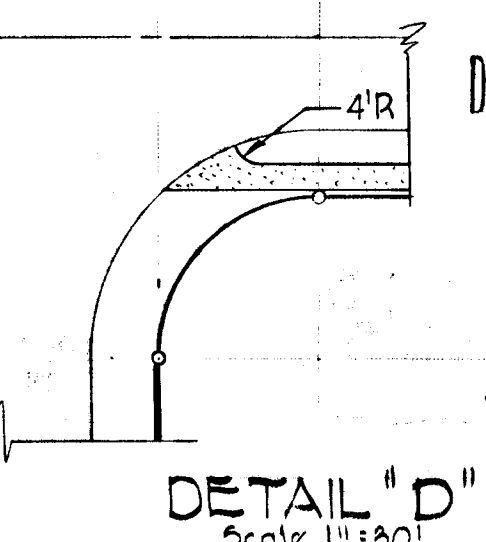
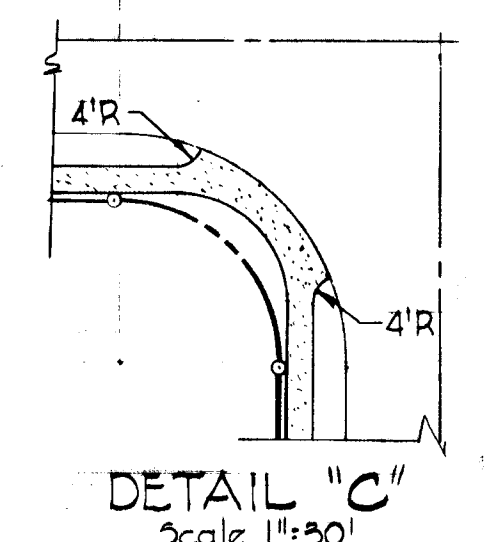
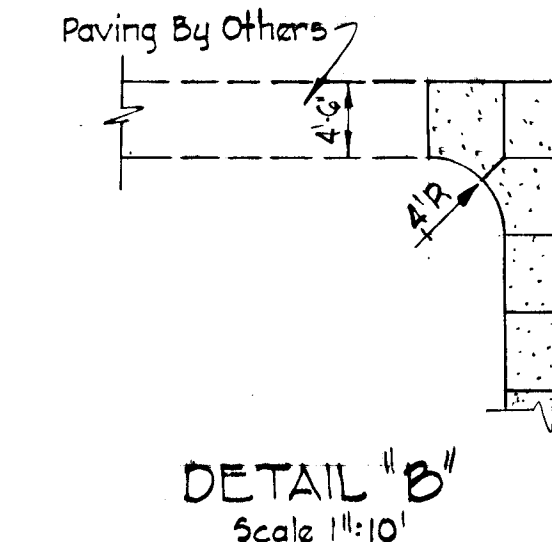
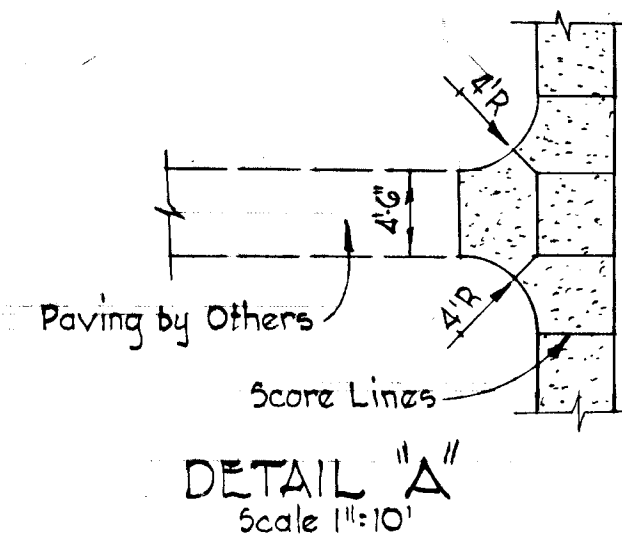


Note: All dimensions are to the back of curb. Total length of Linear Profile 269.96'



TYPICAL OFFSET CUL-DE-SAC DETAIL
Scale 1" = 30'

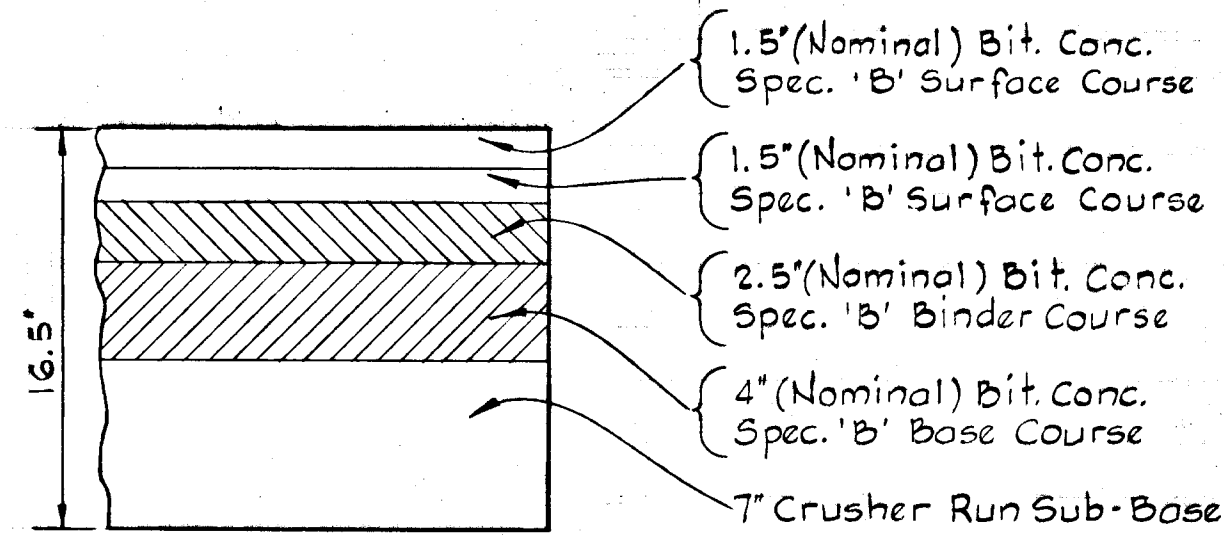
TYPICAL CUL-DE-SAC DETAIL
Scale 1" = 30'



SIDEWALK DETAILS

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE *MAY 24 1973*

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 OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE ROADWAY DETAILS		
Scale: As Shown		Date: 4/30/73
WHITMAN, REQUARD & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		



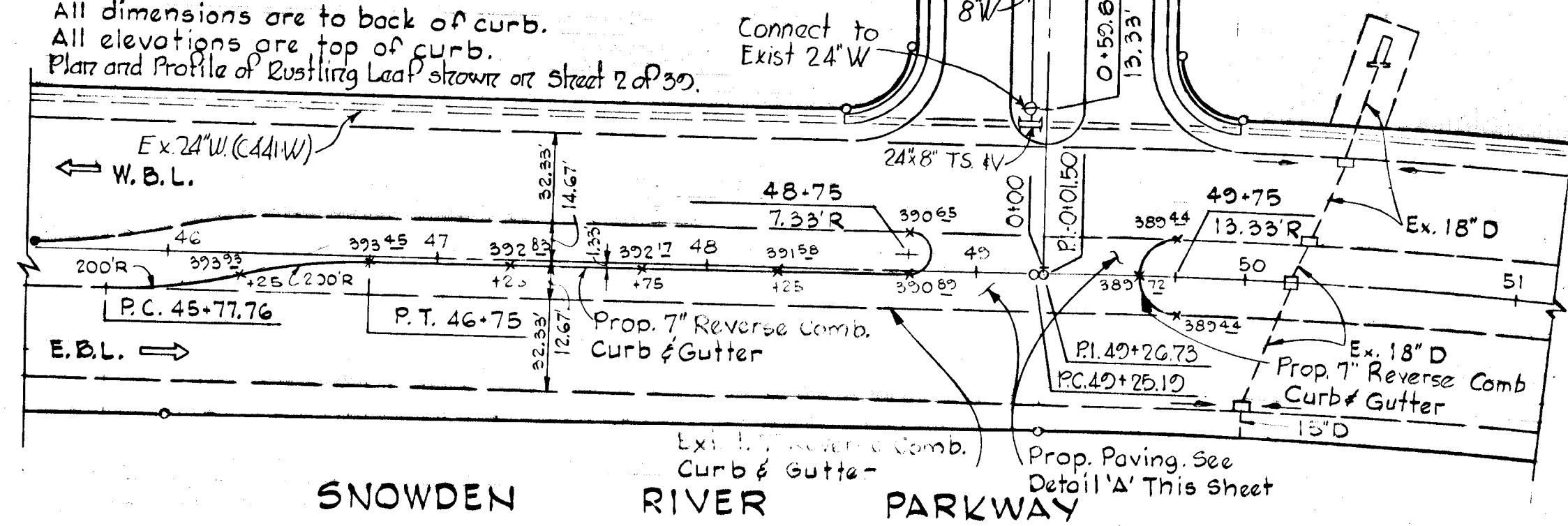
Howard County Std., D-9, P-64

PAVING DETAIL 'A'

Scale: 1 1/2" = 1'-0"

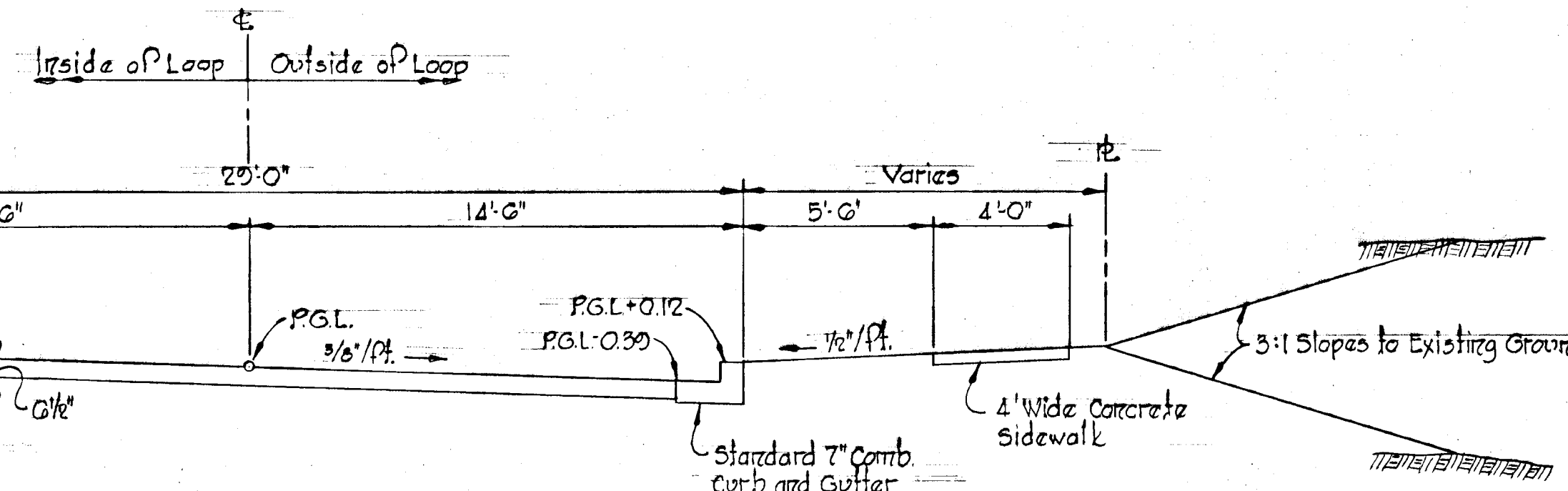
NOTE:

All dimensions are to back of curb.
 All elevations are top of curb.
 Plan and Profile of Rustling Leaf shown on Sheet 2 of 30.



**INTERSECTION DETAIL
 SNOWDEN RIVER PARKWAY & RUSTLING LEAF**

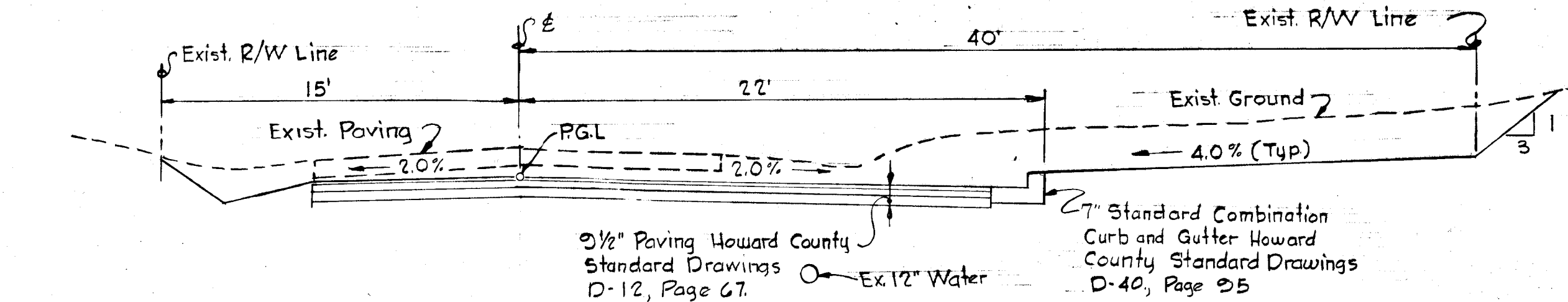
Scale: 1" = 50'



PAVING SECTION

End Loops of Rustling Leaf and Brush Run

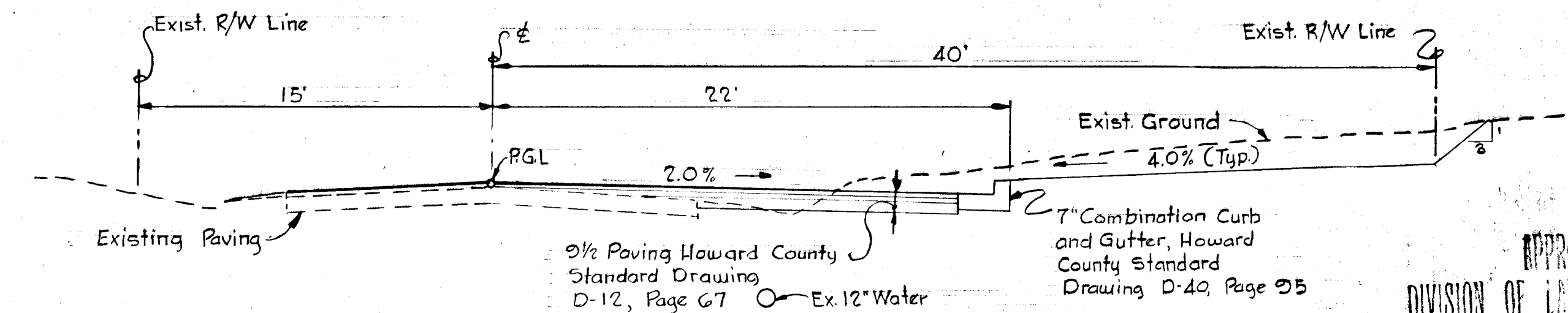
Scale: 1/4" = 1'-0"



BERGER ROAD PAVING SECTION

Scale: 1" = 5'

See Sheet 19 of 39 for limits of construction



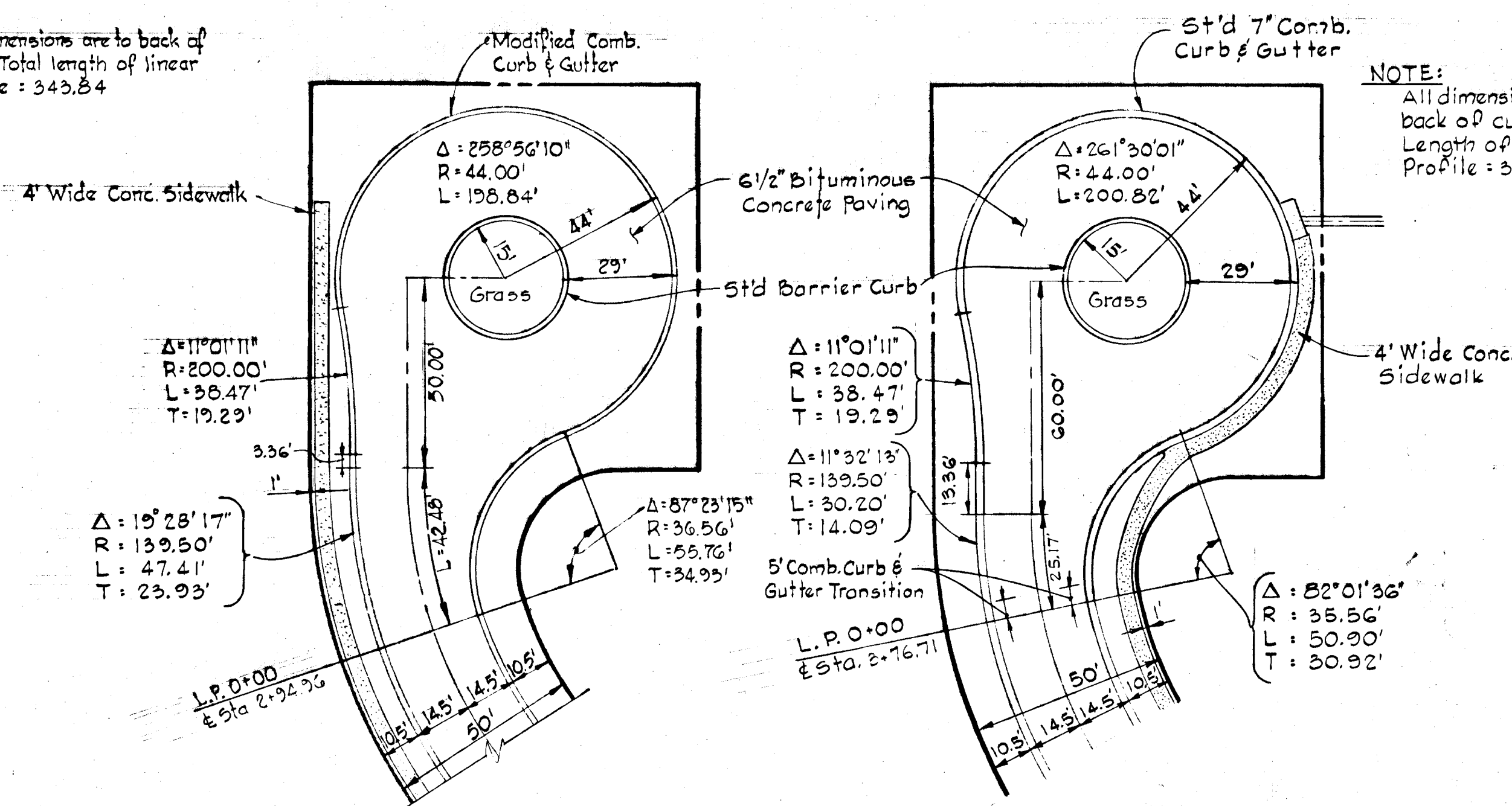
BERGER ROAD PAVING SECTION

Scale: 1" = 5'

See Sheet 19 of 39 for limits of construction

APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
 [Signature]

Note: All dimensions are to back of curb. Total length of linear Profile = 343.84



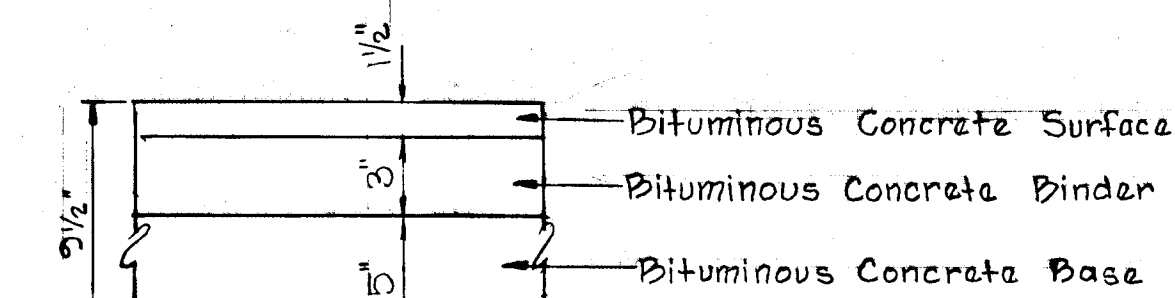
**CUL-DE-SAC DETAIL
 FEATHERED HEAD**

No Scale

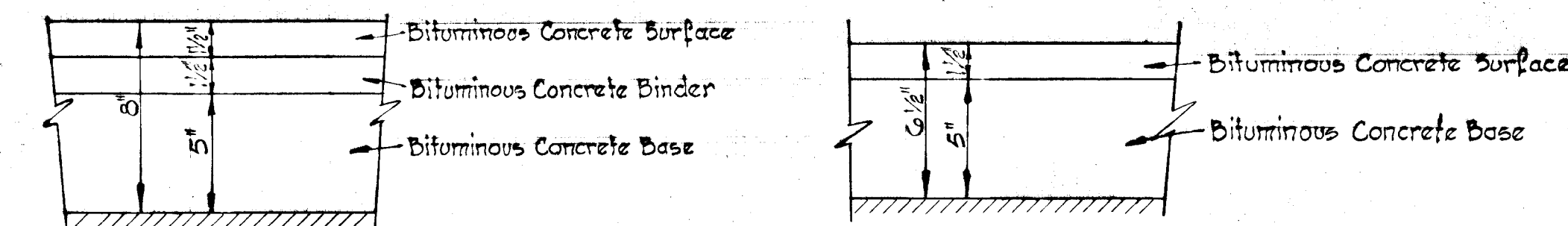
**CUL-DE-SAC DETAIL
 PERFECT HOUR**

No Scale

NOTE: All dimensions are to back of curb. Total Length of Linear Profile = 333.75'



Howard County Std. D-12, Page 67



Howard County Standard Drawing D-10 page 65

Howard County Standard Drawing D-11 page 66

Notes

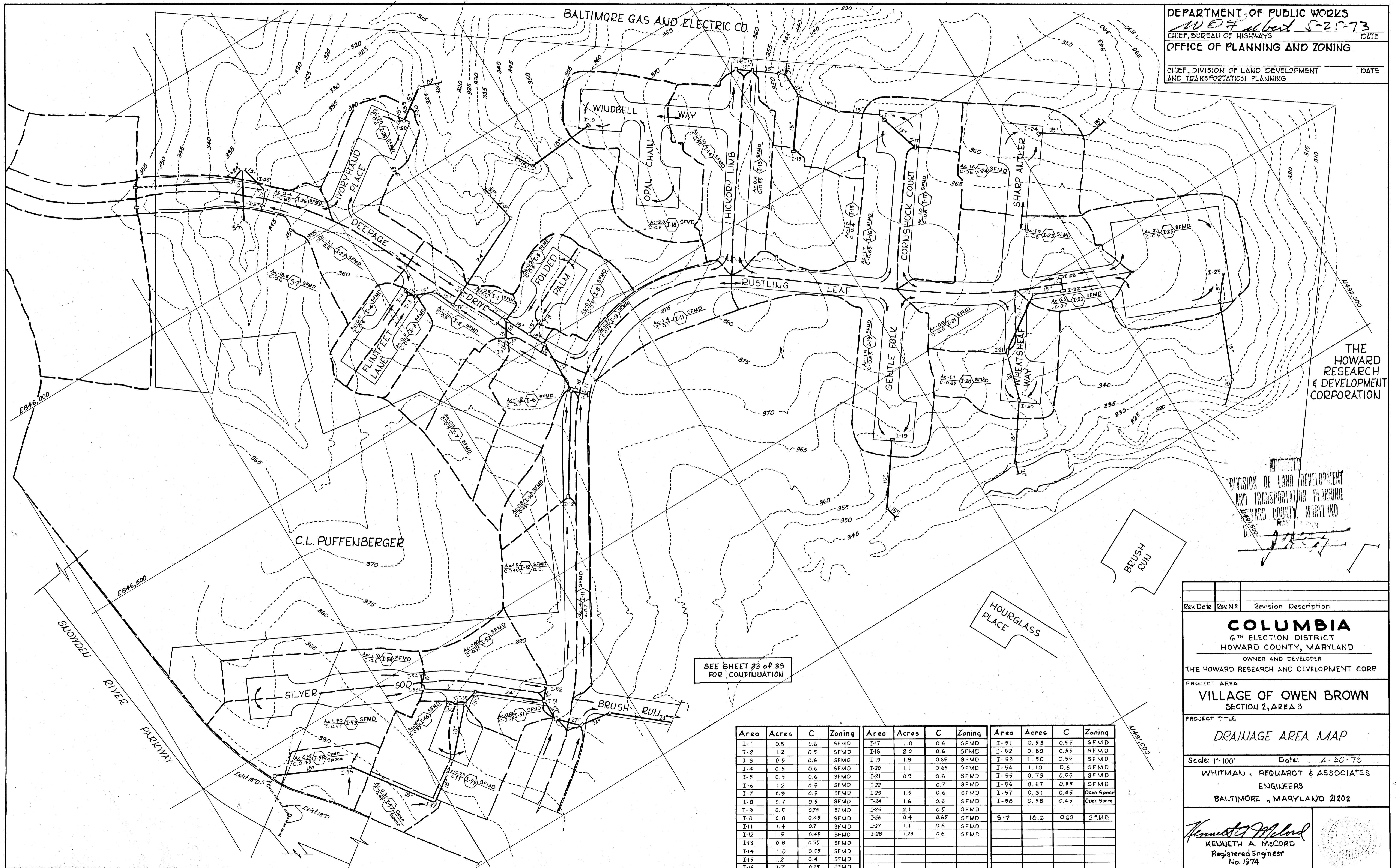
1. Base will be primed in accordance with C-30-3 as provided in the Howard County Road Construction Code and Standard Specifications.

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

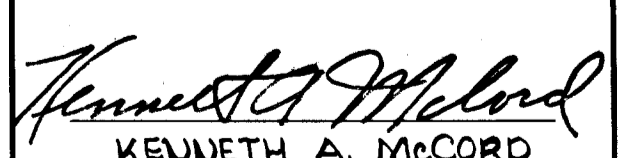
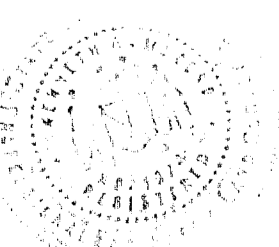
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
8TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF OWEN BROWN		
SECTION 2, AREA 3		
PROJECT TITLE		
ROADWAY DETAILS		
Scale: As Shown Date: 4-30-73		
WHITMAN, REQUARTZ & ASSOCIATES ENGINEERS		
BALTIMORE, MARYLAND 21202		
[Signature] KENNETH A. McCOYD Registered Engineer No. 1974		[Seal]



THE HOWARD RESEARCH & DEVELOPMENT CORPORATION

DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND

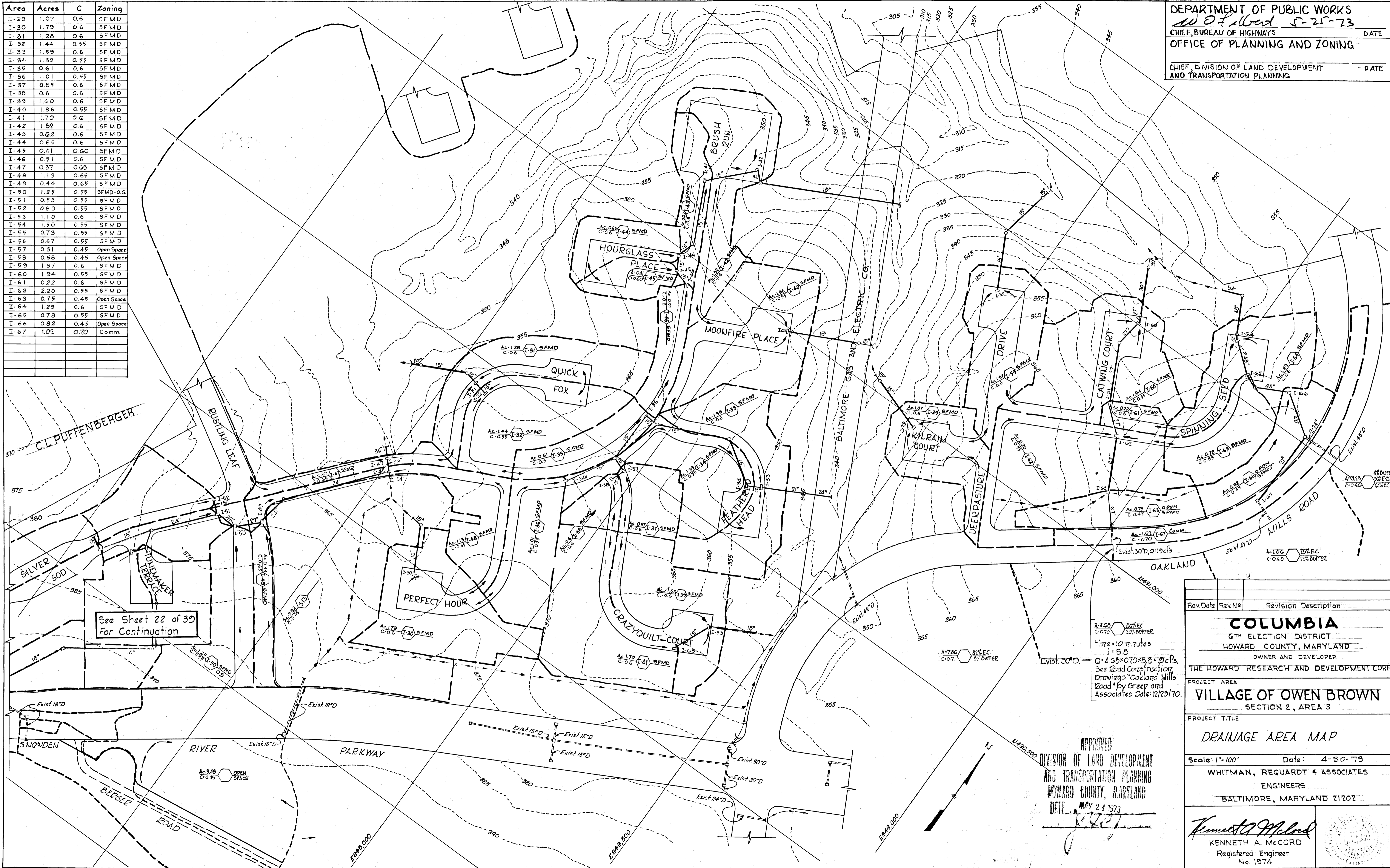
SEE SHEET 23 OF 39 FOR CONTINUATION

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 OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE DRAINAGE AREA MAP		
Scale: 1"=100'		Date: 4-30-73
WHITMAN, REQUART & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
 KENNETH A. McCORD Registered Engineer No. 1974		

Area	Acres	C	Zoning	Area	Acres	C	Zoning	Area	Acres	C	Zoning
I-1	0.5	0.6	SFMD	I-17	1.0	0.6	SFMD	I-51	0.53	0.55	SFMD
I-2	1.2	0.5	SFMD	I-18	2.0	0.6	SFMD	I-52	0.80	0.55	SFMD
I-3	0.5	0.6	SFMD	I-19	1.9	0.65	SFMD	I-53	1.90	0.55	SFMD
I-4	0.5	0.6	SFMD	I-20	1.1	0.65	SFMD	I-54	1.10	0.6	SFMD
I-5	0.5	0.6	SFMD	I-21	0.9	0.6	SFMD	I-55	0.73	0.55	SFMD
I-6	1.2	0.5	SFMD	I-22		0.7	SFMD	I-56	0.67	0.55	SFMD
I-7	0.9	0.5	SFMD	I-23	1.5	0.6	SFMD	I-57	0.31	0.45	Open Space
I-8	0.7	0.5	SFMD	I-24	1.6	0.6	SFMD	I-58	0.58	0.45	Open Space
I-9	0.5	0.75	SFMD	I-25	2.1	0.5	SFMD				
I-10	0.8	0.45	SFMD	I-26	0.4	0.65	SFMD	S-7	10.6	0.60	S.F.M.D.
I-11	1.4	0.7	SFMD	I-27	1.1	0.6	SFMD				
I-12	1.5	0.45	SFMD	I-28	1.28	0.6	SFMD				
I-13	0.8	0.55	SFMD								
I-14	1.10	0.55	SFMD								
I-15	1.2	0.4	SFMD								
I-16	1.7	0.65	SFMD								

Area	Acres	C	Zoning
I-29	1.07	0.6	SFMD
I-30	1.79	0.6	SFMD
I-31	1.28	0.6	SFMD
I-32	1.44	0.55	SFMD
I-33	1.59	0.6	SFMD
I-34	1.39	0.55	SFMD
I-35	0.61	0.6	SFMD
I-36	1.01	0.55	SFMD
I-37	0.85	0.6	SFMD
I-38	0.6	0.6	SFMD
I-39	1.60	0.6	SFMD
I-40	1.96	0.55	SFMD
I-41	1.70	0.6	SFMD
I-42	1.52	0.6	SFMD
I-43	0.62	0.6	SFMD
I-44	0.65	0.6	SFMD
I-45	0.41	0.60	SFMD
I-46	0.51	0.6	SFMD
I-47	0.37	0.65	SFMD
I-48	1.13	0.65	SFMD
I-49	0.44	0.65	SFMD
I-50	1.27	0.55	SFMD-O.S
I-51	0.53	0.55	SFMD
I-52	0.80	0.55	SFMD
I-53	1.10	0.6	SFMD
I-54	1.50	0.55	SFMD
I-55	0.73	0.55	SFMD
I-56	0.67	0.55	SFMD
I-57	0.31	0.45	Open Space
I-58	0.58	0.45	Open Space
I-59	1.37	0.6	SFMD
I-60	1.94	0.55	SFMD
I-61	0.22	0.6	SFMD
I-62	2.20	0.55	SFMD
I-63	0.75	0.45	Open Space
I-64	1.29	0.6	SFMD
I-65	0.78	0.55	SFMD
I-66	0.82	0.45	Open Space
I-67	1.02	0.70	Comm.

DEPARTMENT OF PUBLIC WORKS
W. O. Albert 5-25-73
 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
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

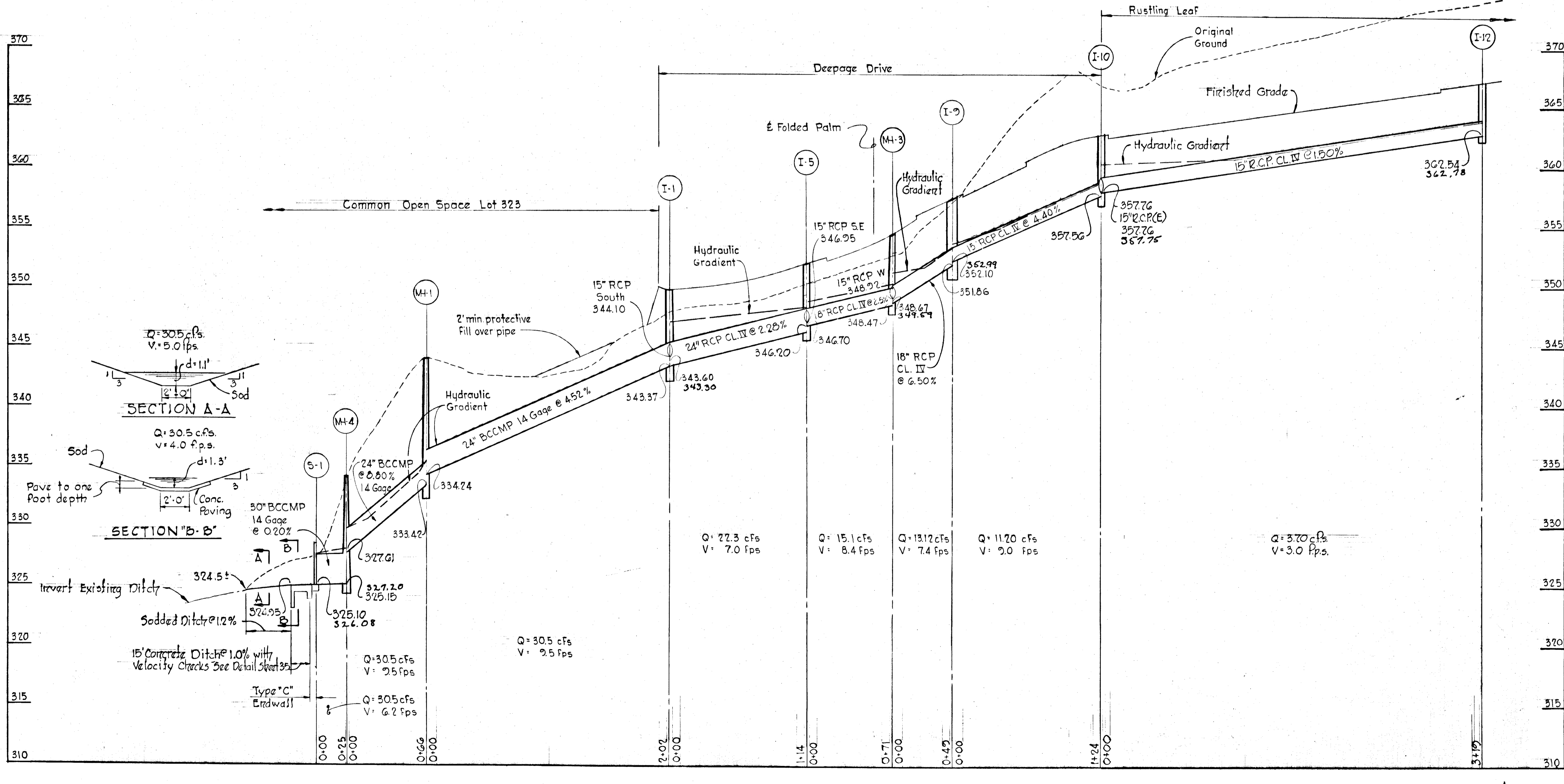
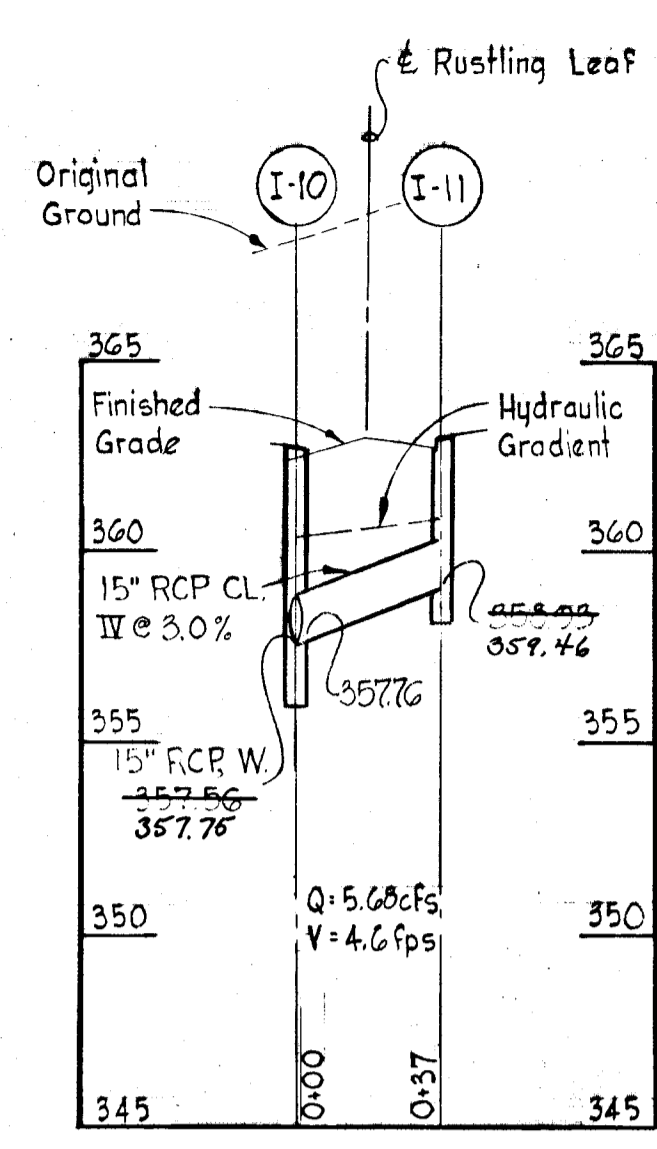
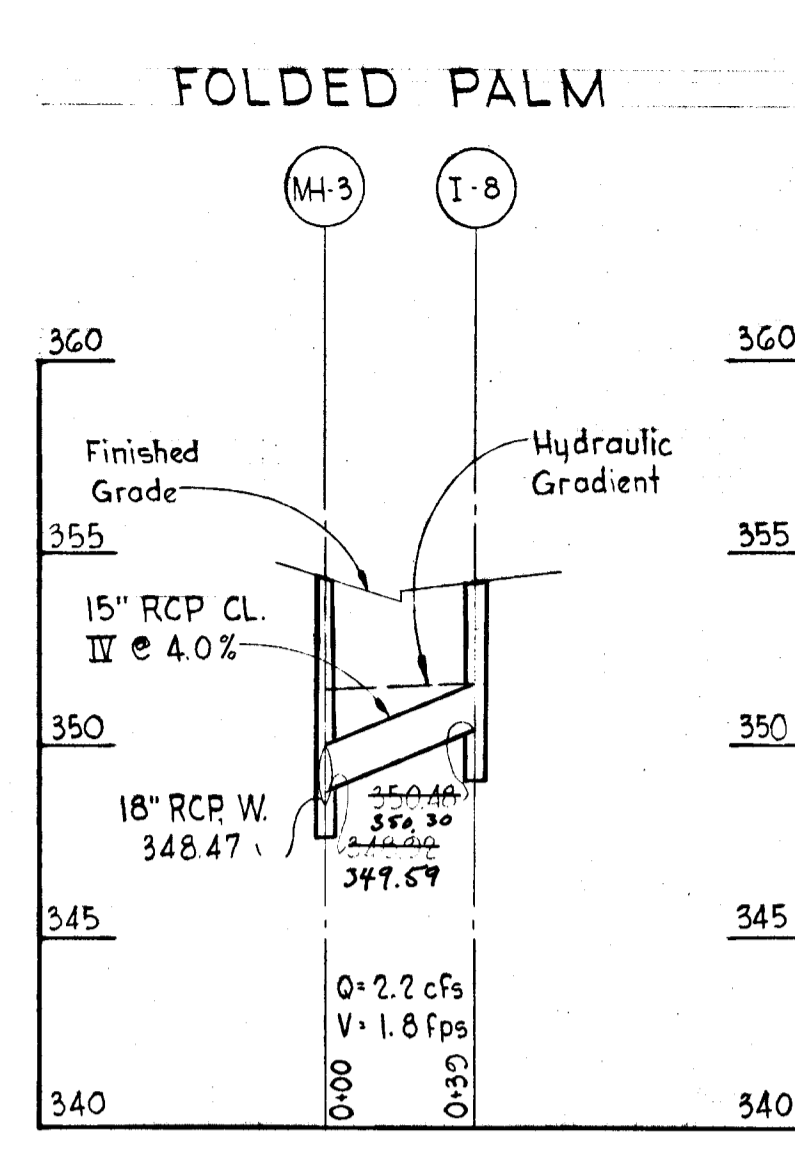
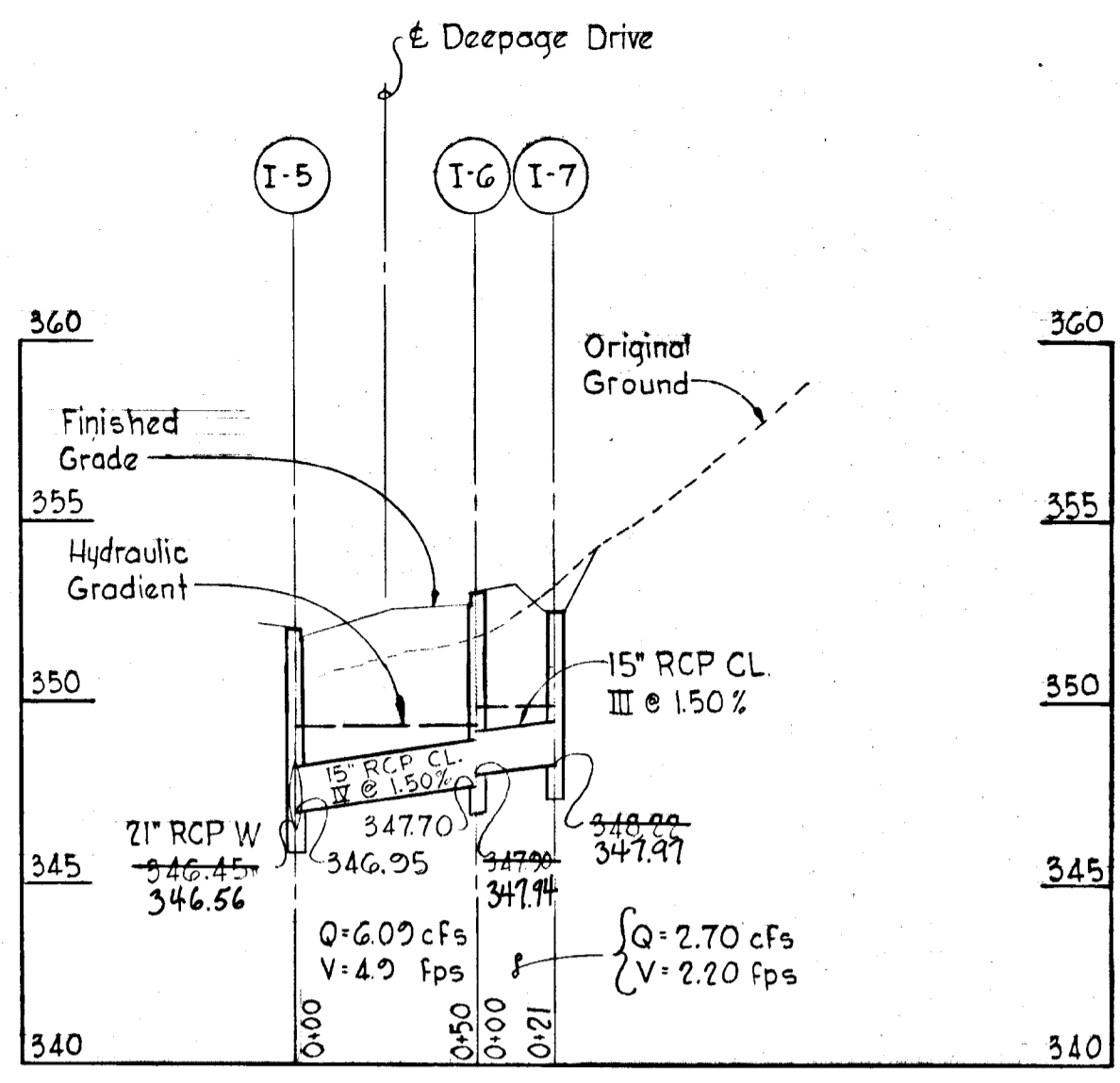
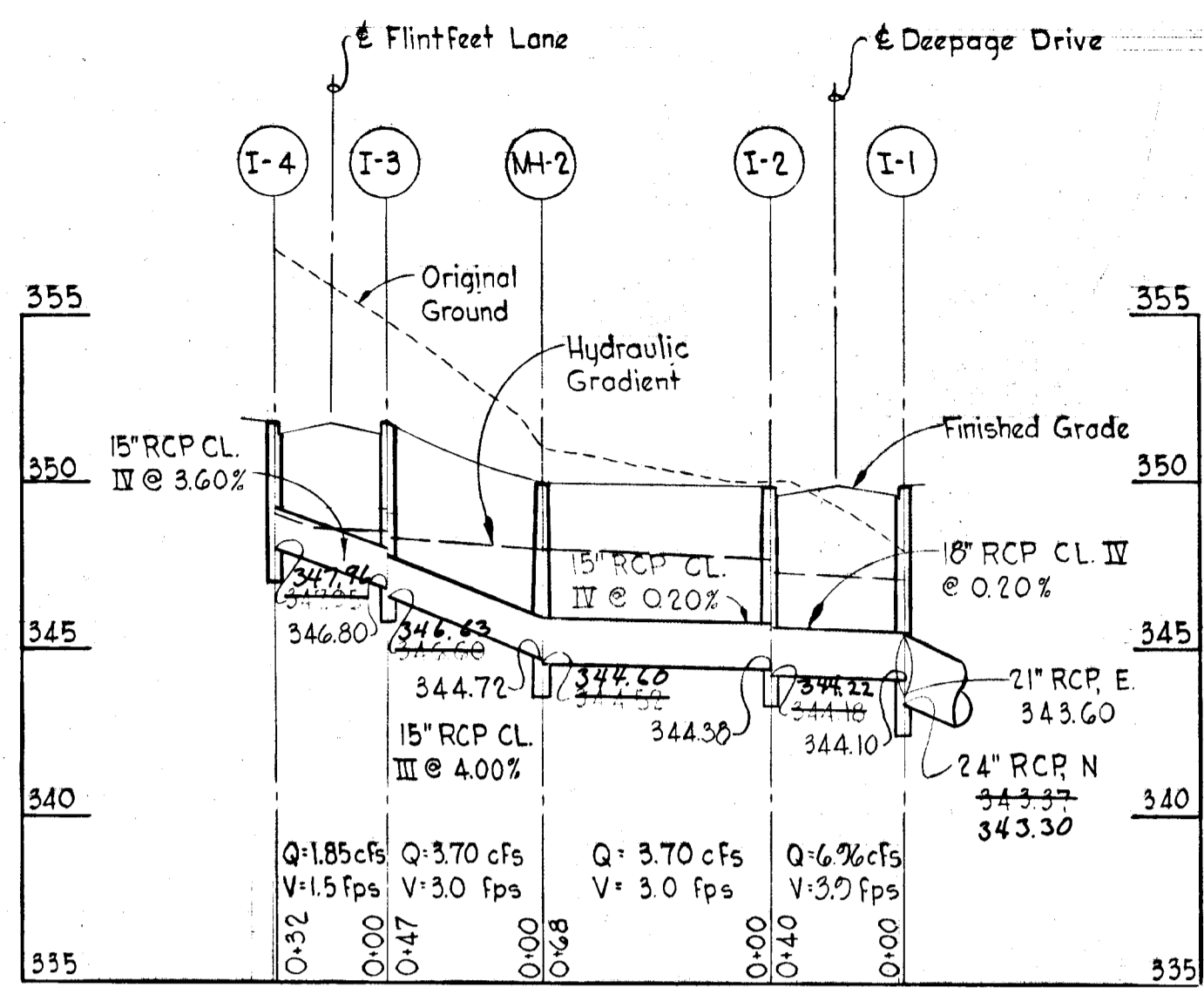
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
DRAINAGE AREA MAP

Scale: 1" = 100' Date: 4-30-73
 WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

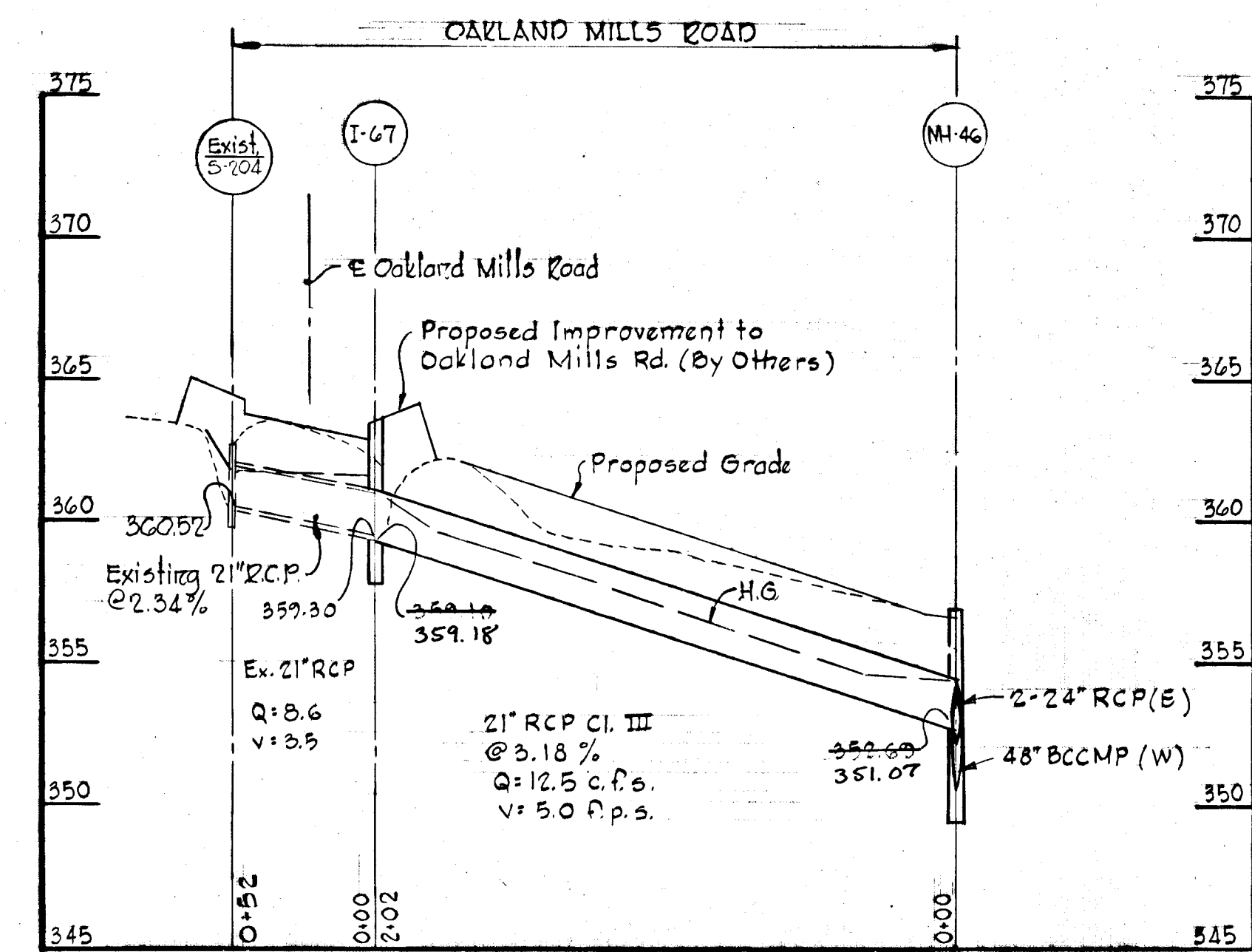
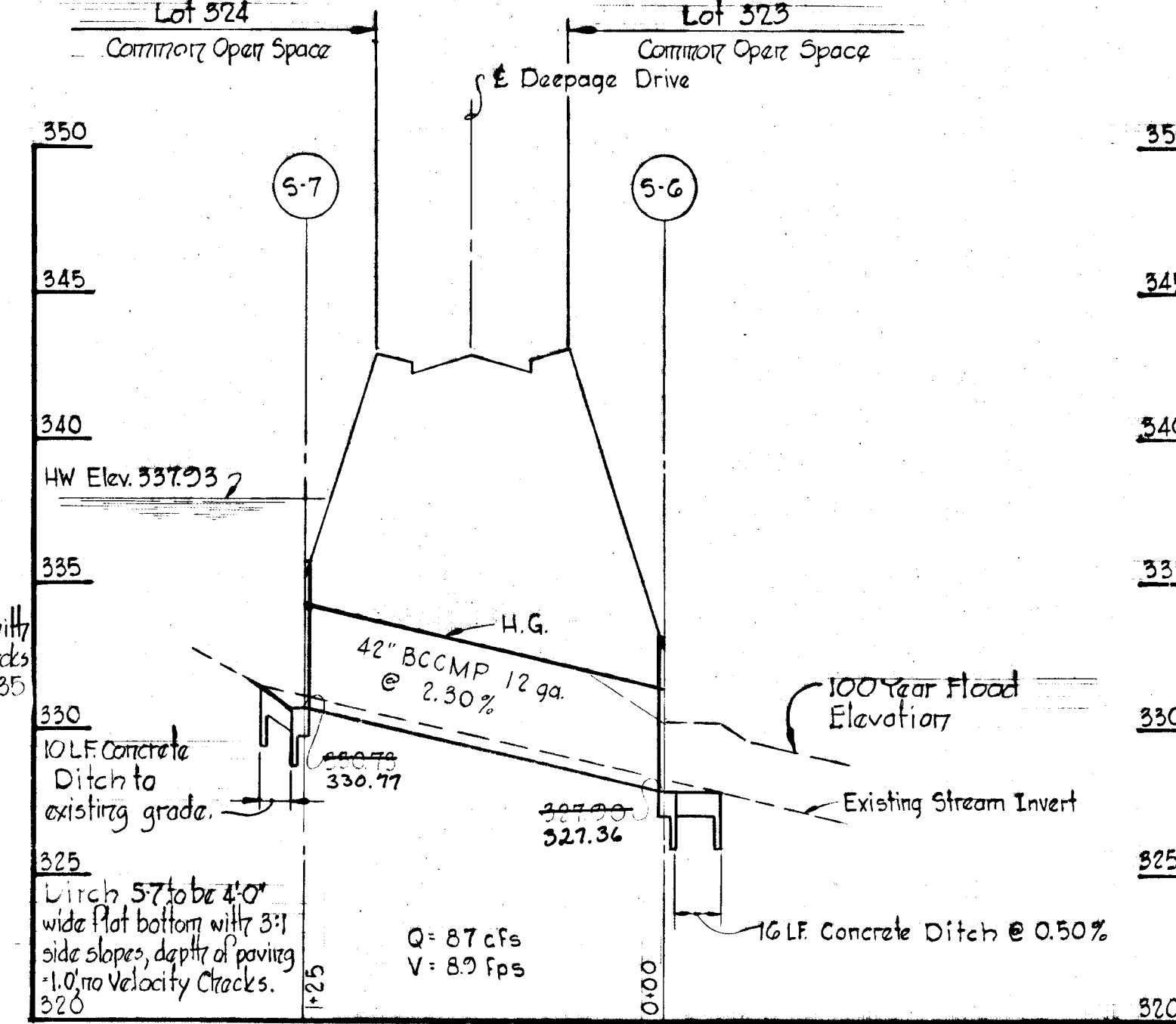
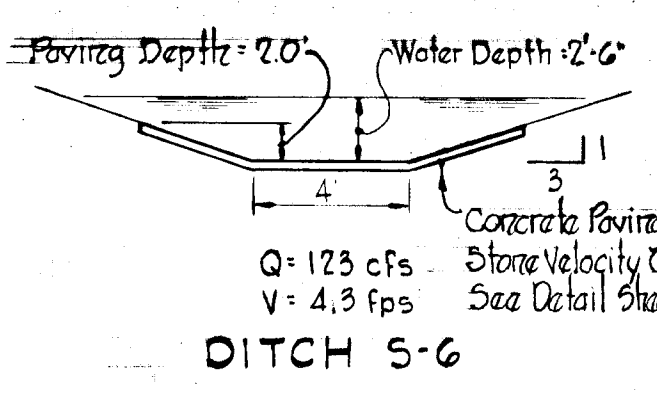
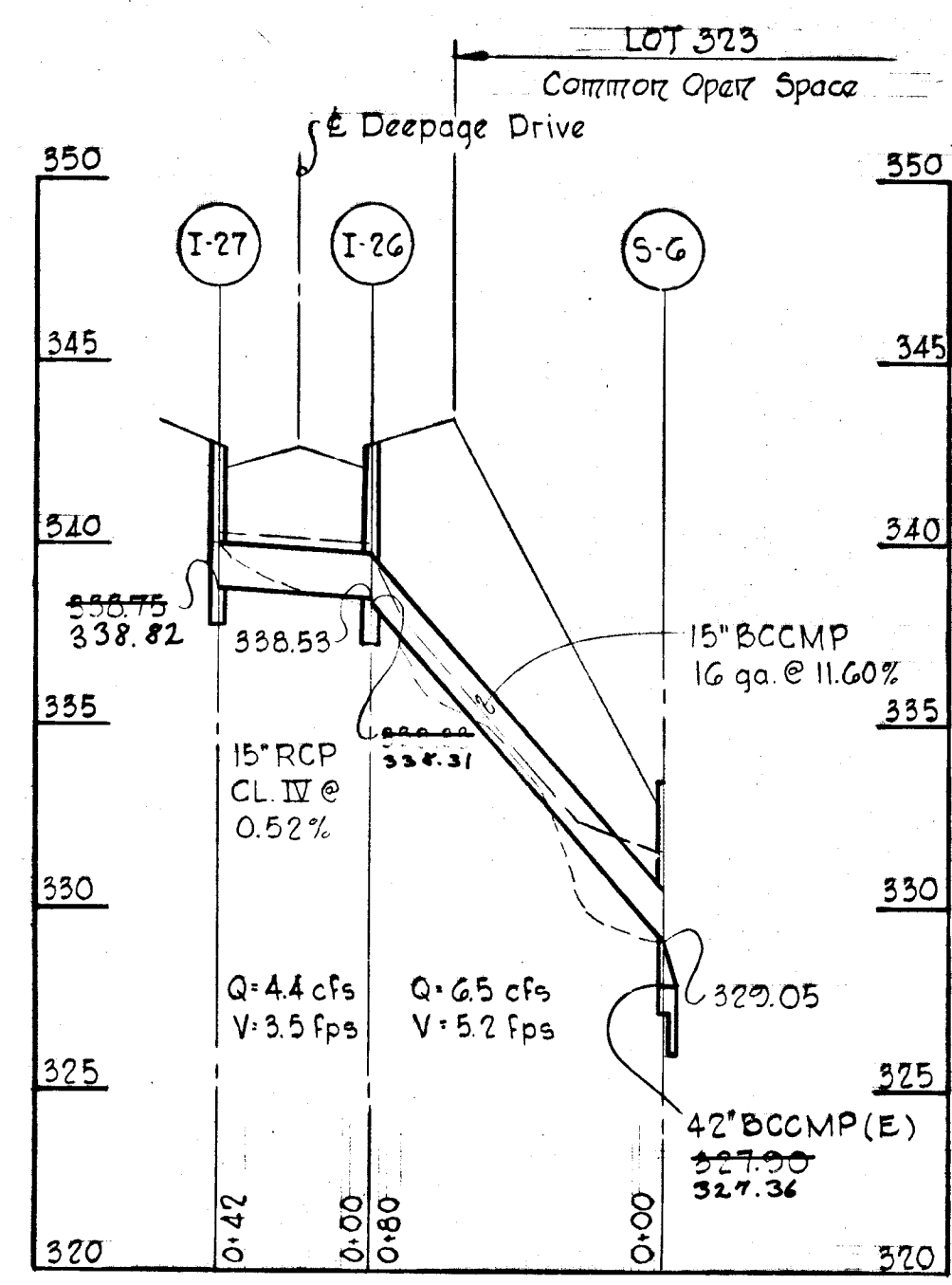
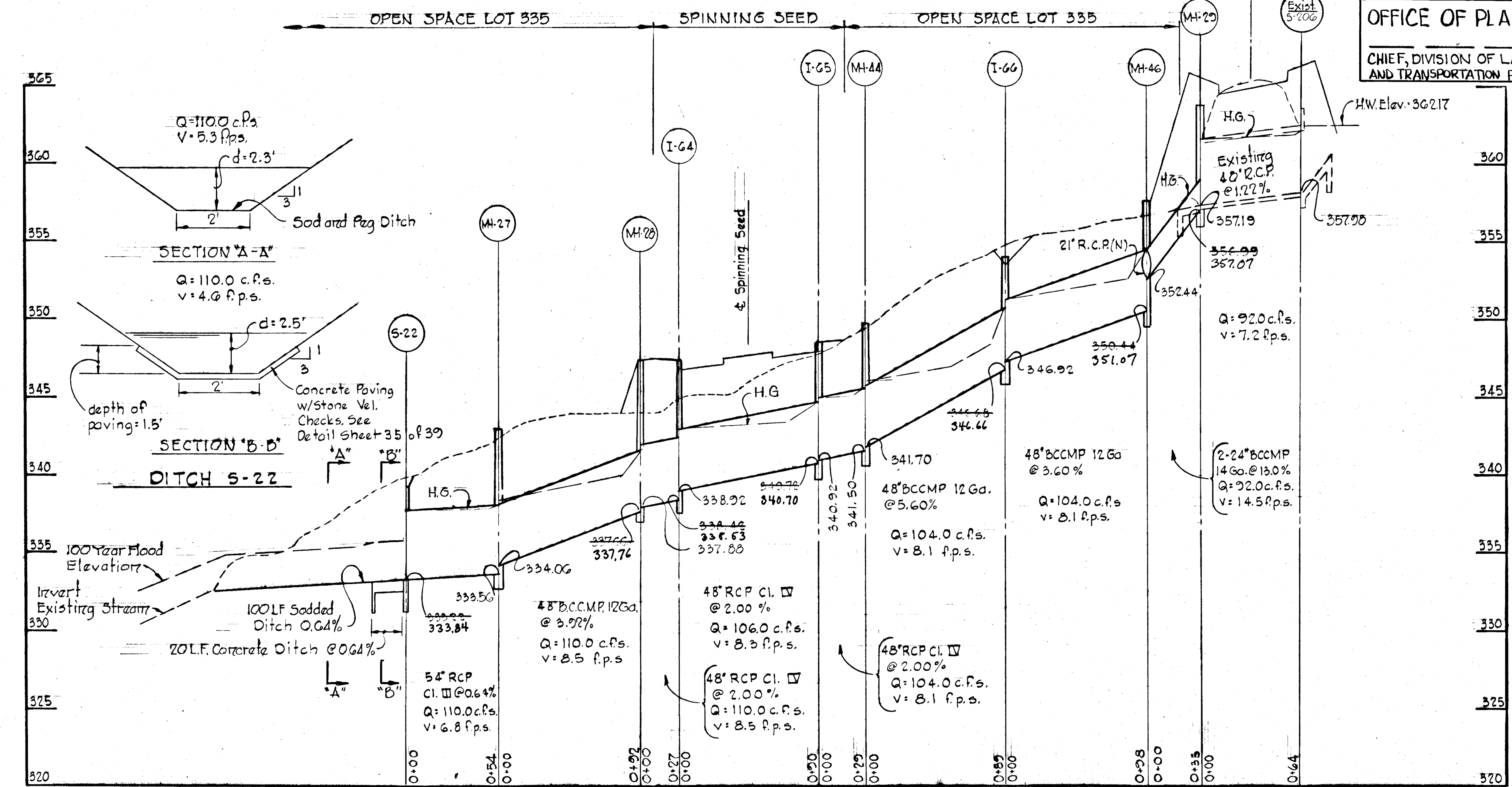
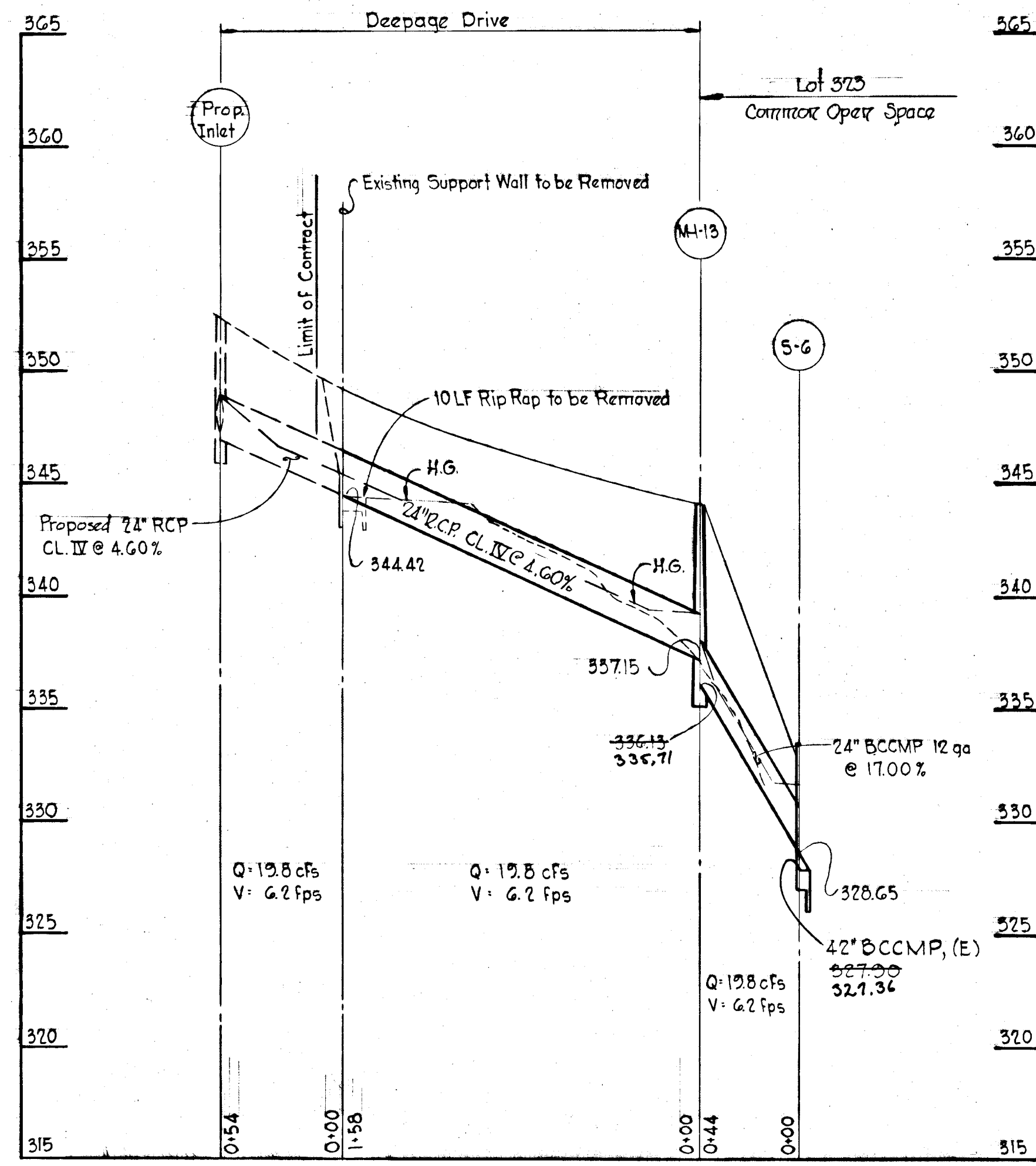
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
Kenneth A. McCord

Kenneth A. McCord
 Registered Engineer
 No. 1974



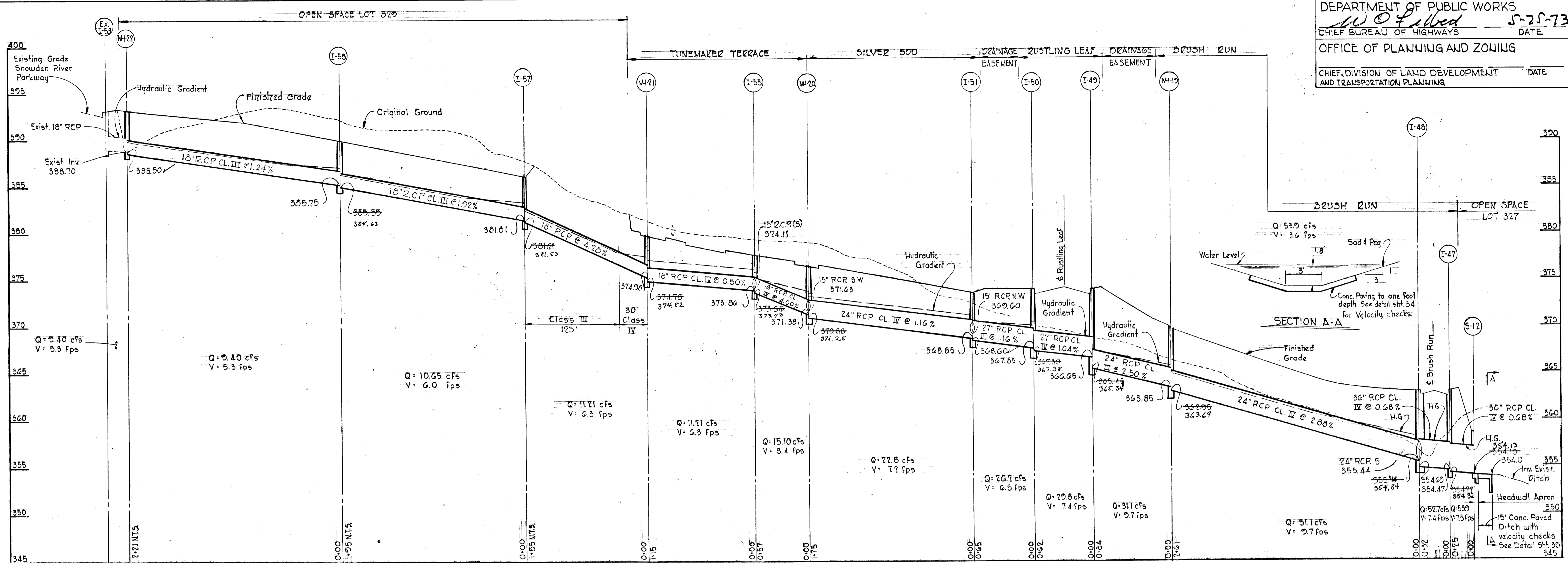
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: MAY 24 1973
[Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT		
HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF OWEN BROWN		
SECTION 2, AREA 3		
PROJECT TITLE		
STORM DRAIN PROFILES		
RUSTLING LEAF, DEEPAGE DRIVE,		
FOLDED PALM AND FLINTFEET LANE		
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4-30-73		
WHITMAN, REQUARDT & ASSOCIATES		
ENGINEERS		
BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974		

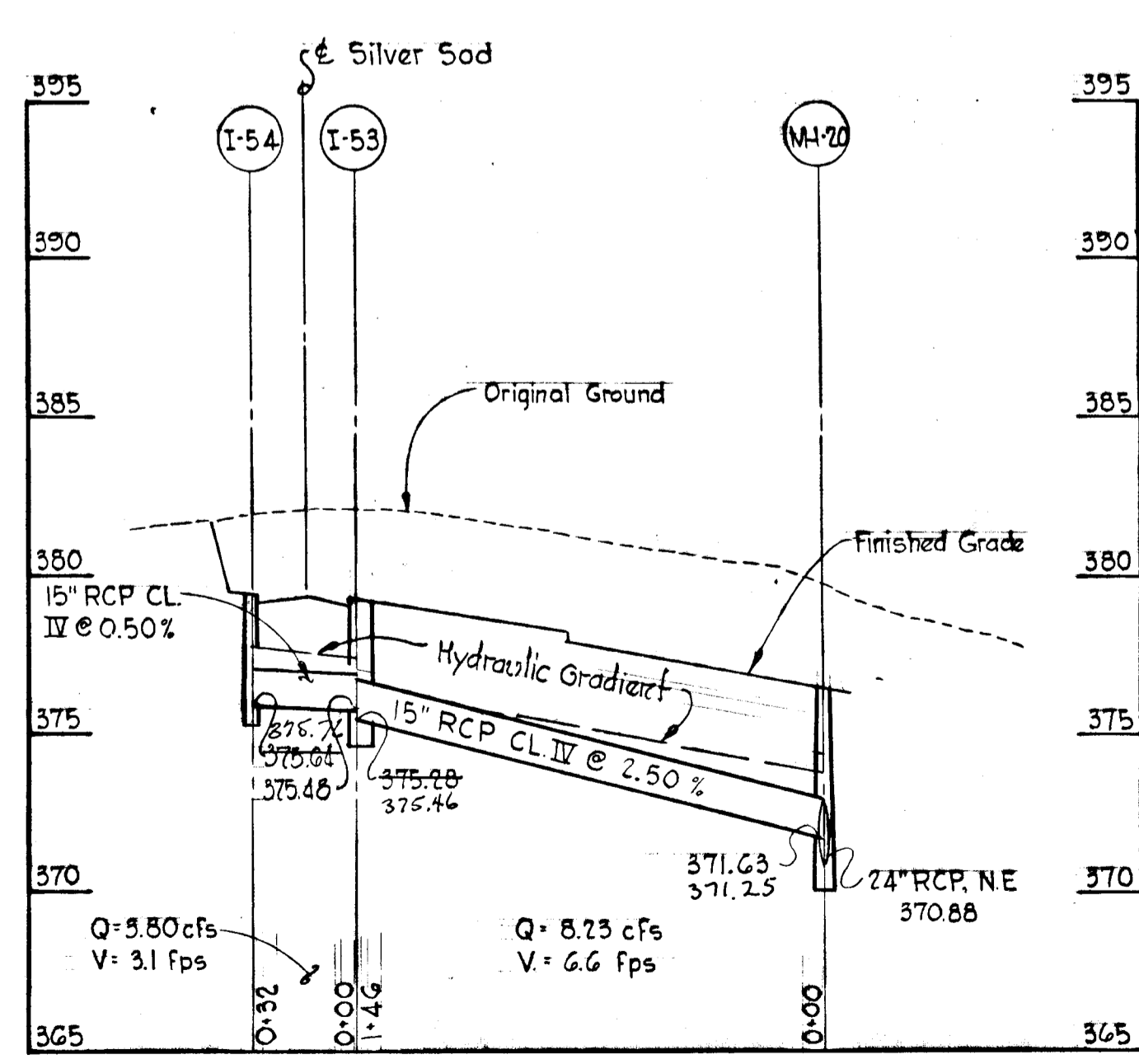


APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE *5/25/73*

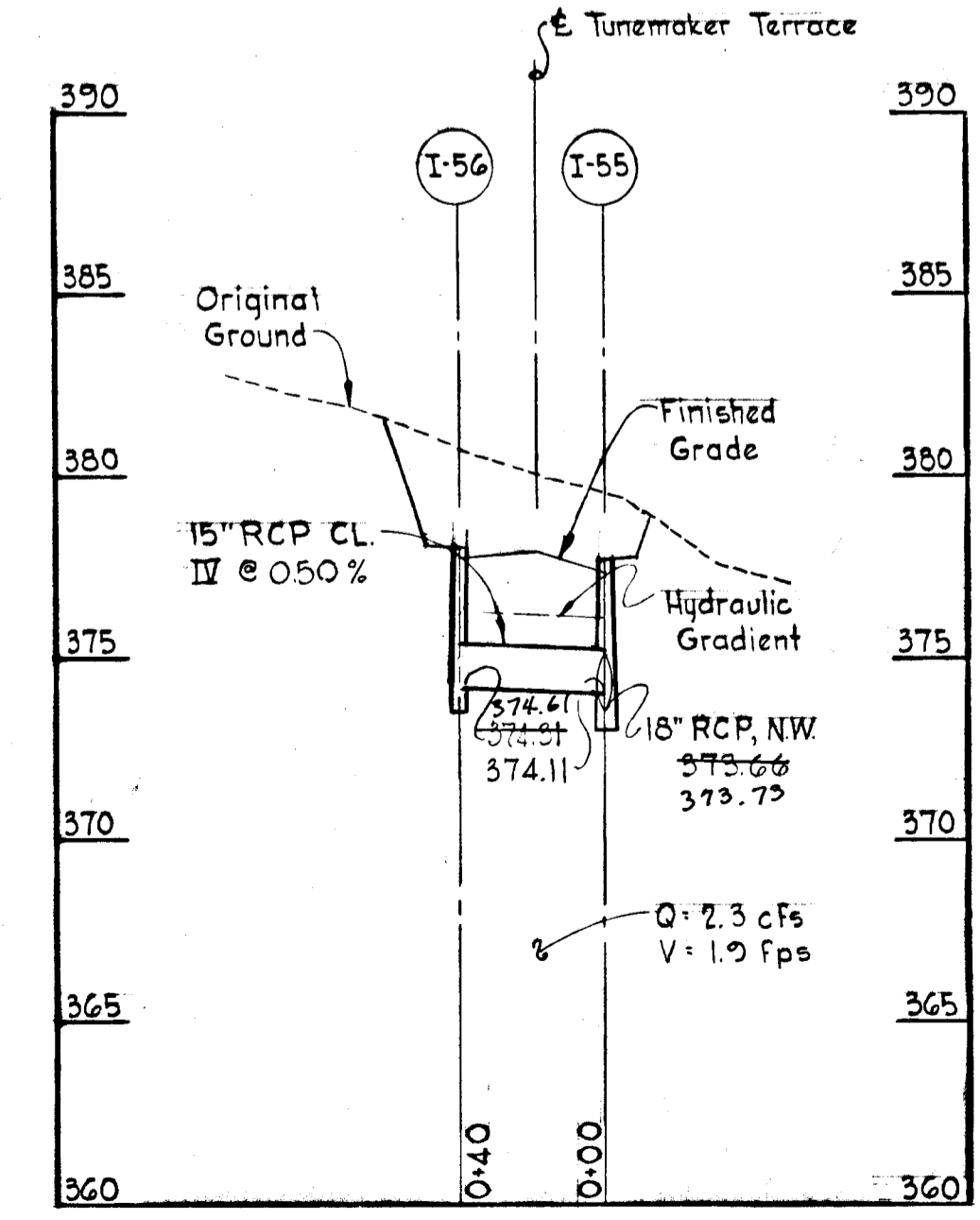
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE STORM DRAIN PROFILES DEEPPAGE DRIVE, OAKLAND MILLS ROAD AND SPINNING SEED		
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4-30-73		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		



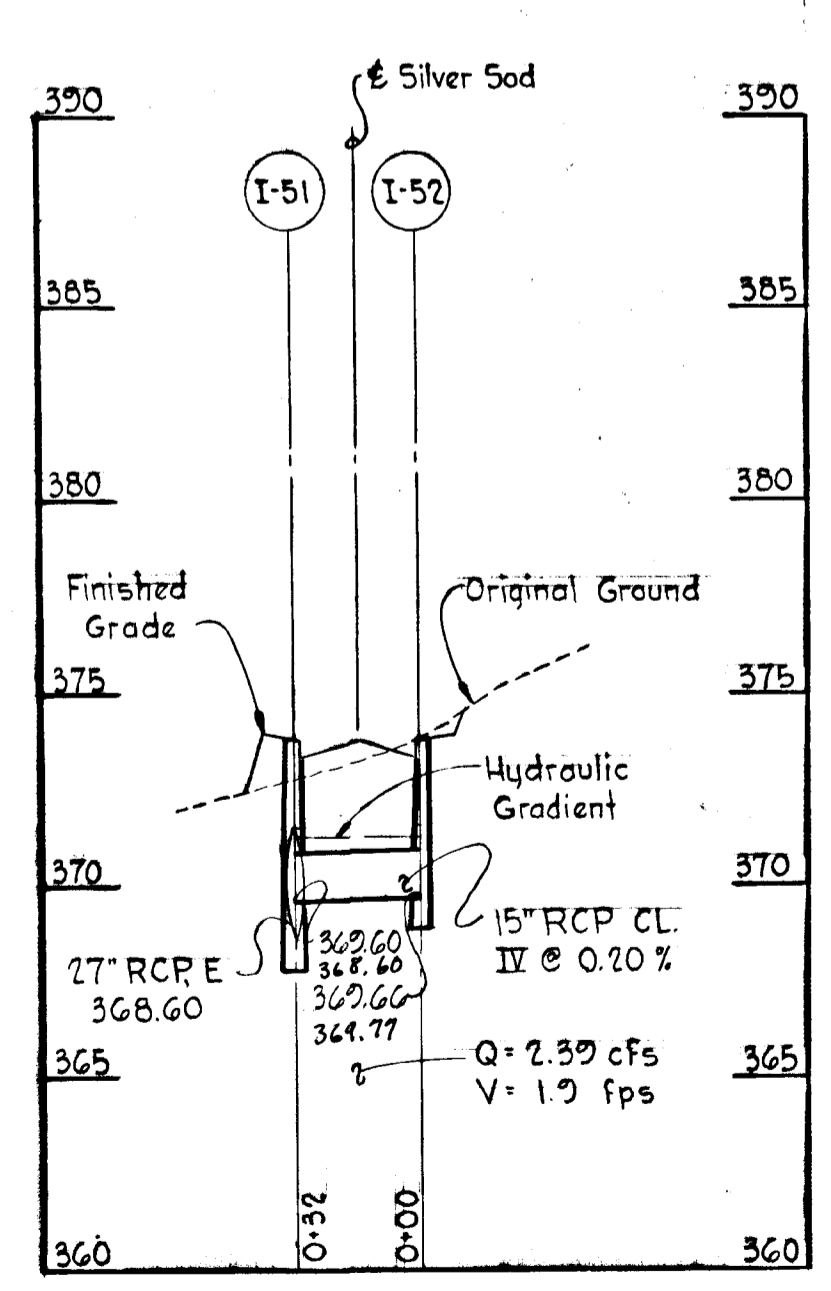
Brush Run to Silver Sod



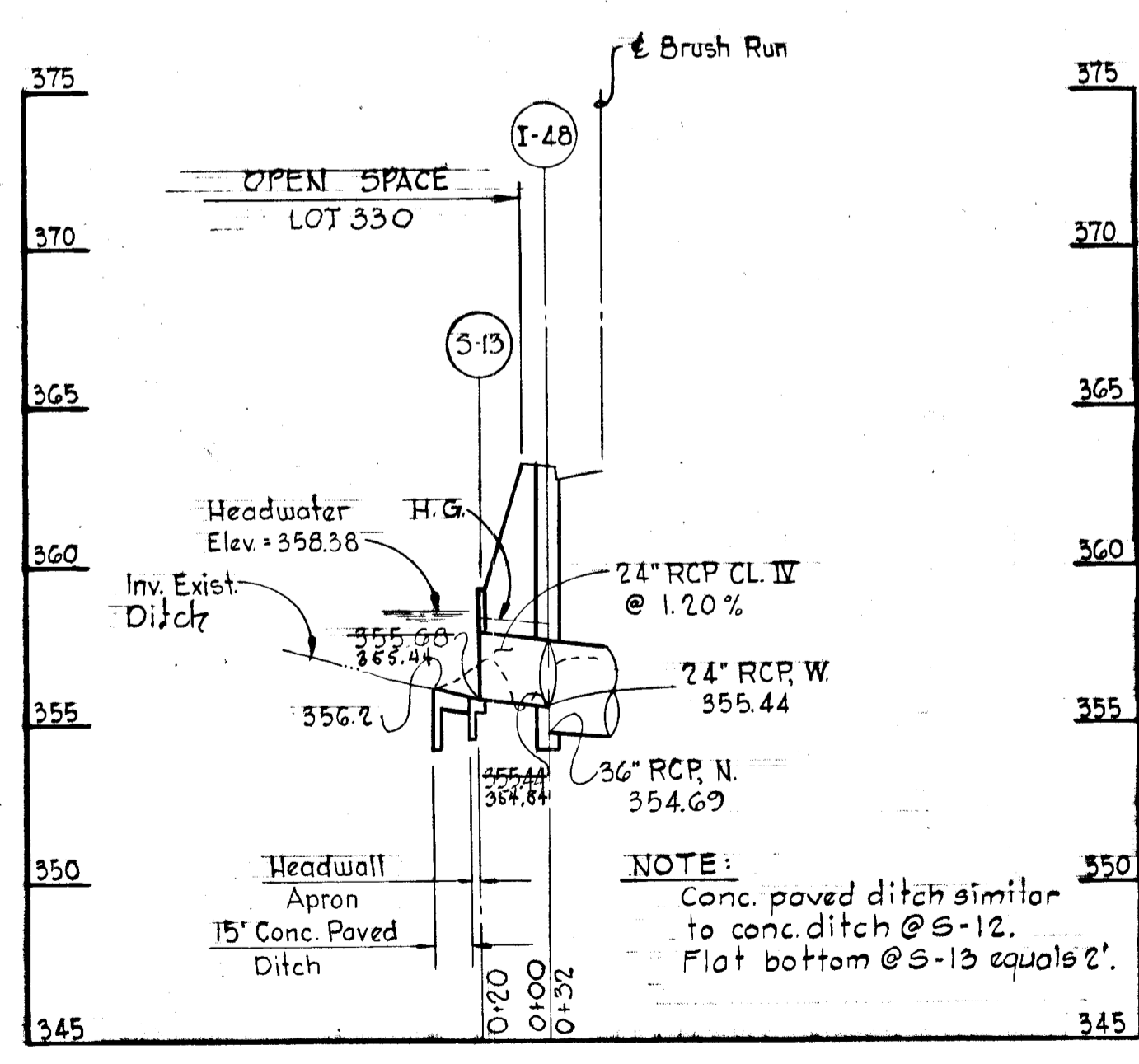
Silver Sod



Tunemaker Terrace



Silver Sod



Brush Run

DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

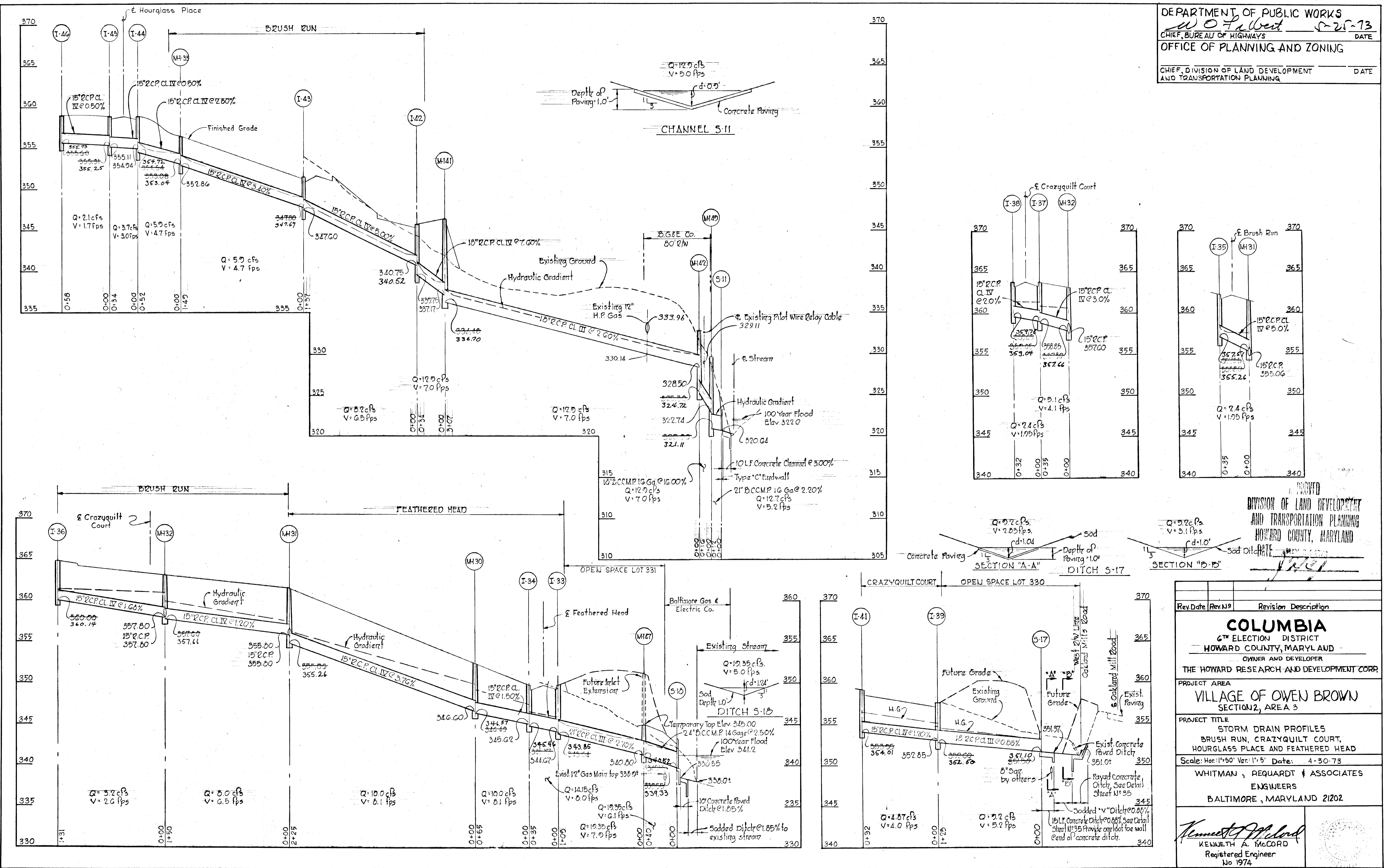
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
STORM DRAIN PROFILES
 TUNEMAKER TERRACE, RUSTLING LEAF,
 SILVER SOD AND BRUSH RUN

Scale: Horizontal 1"=50', Vertical 1"=5' Date: 4-30-73

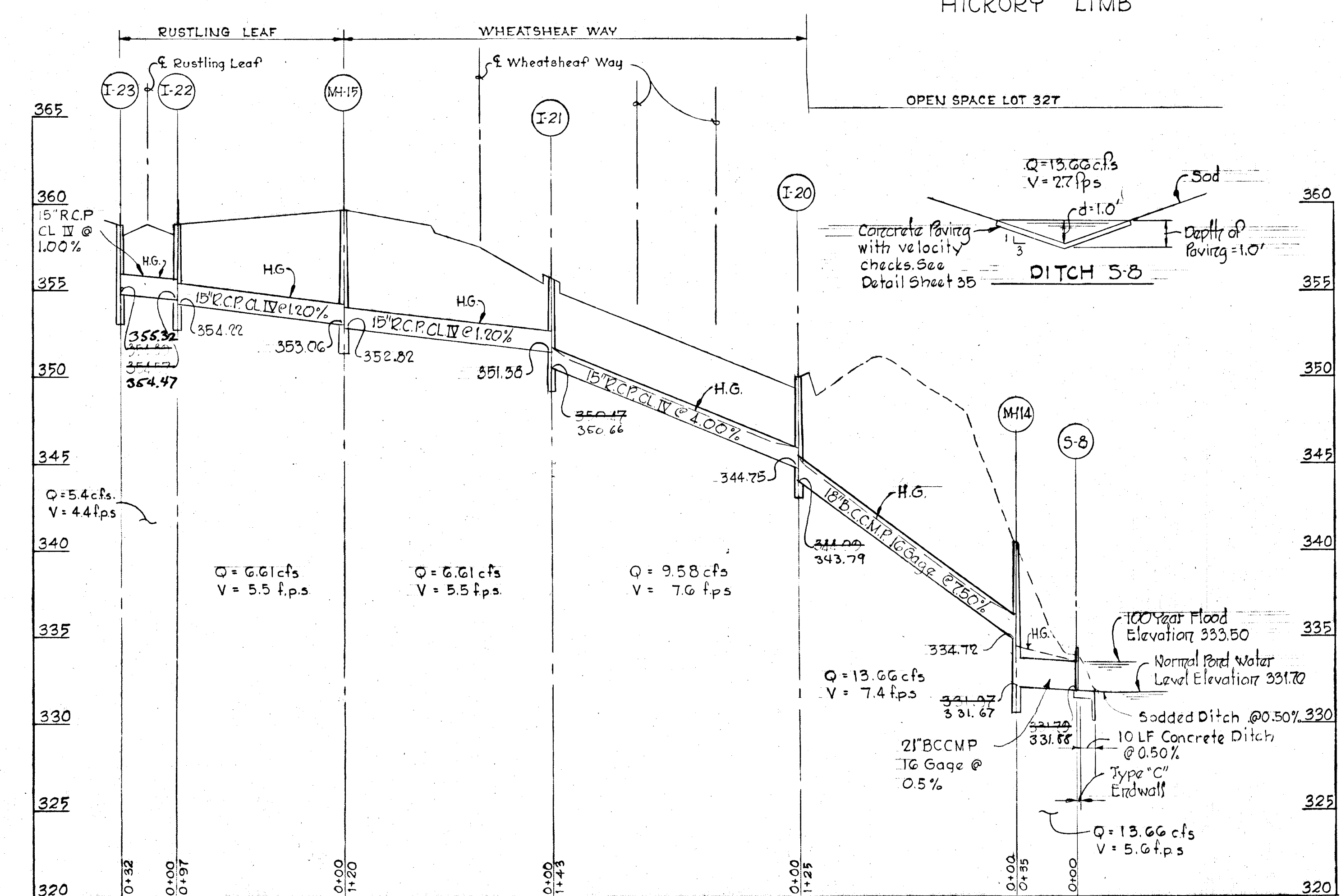
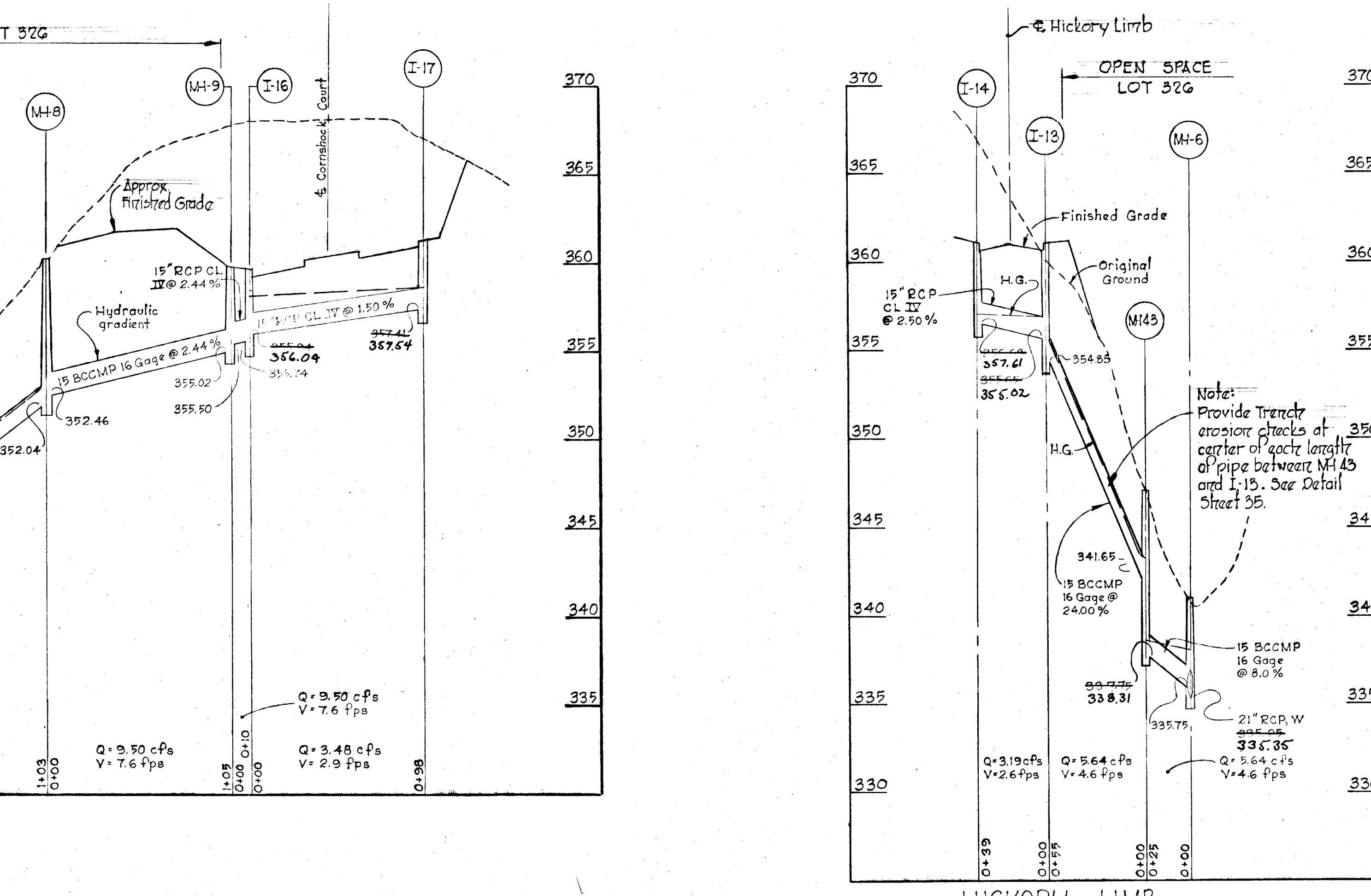
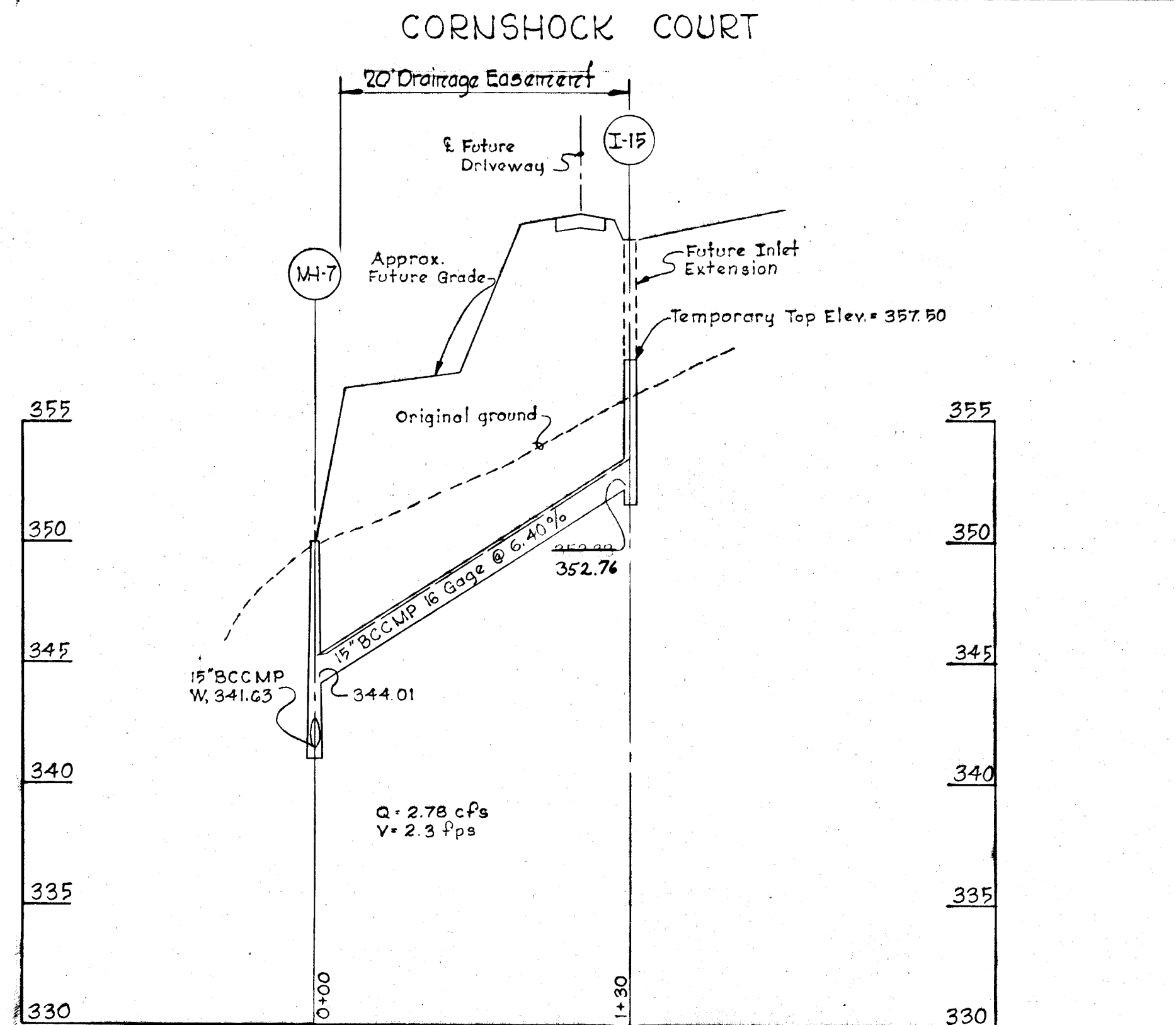
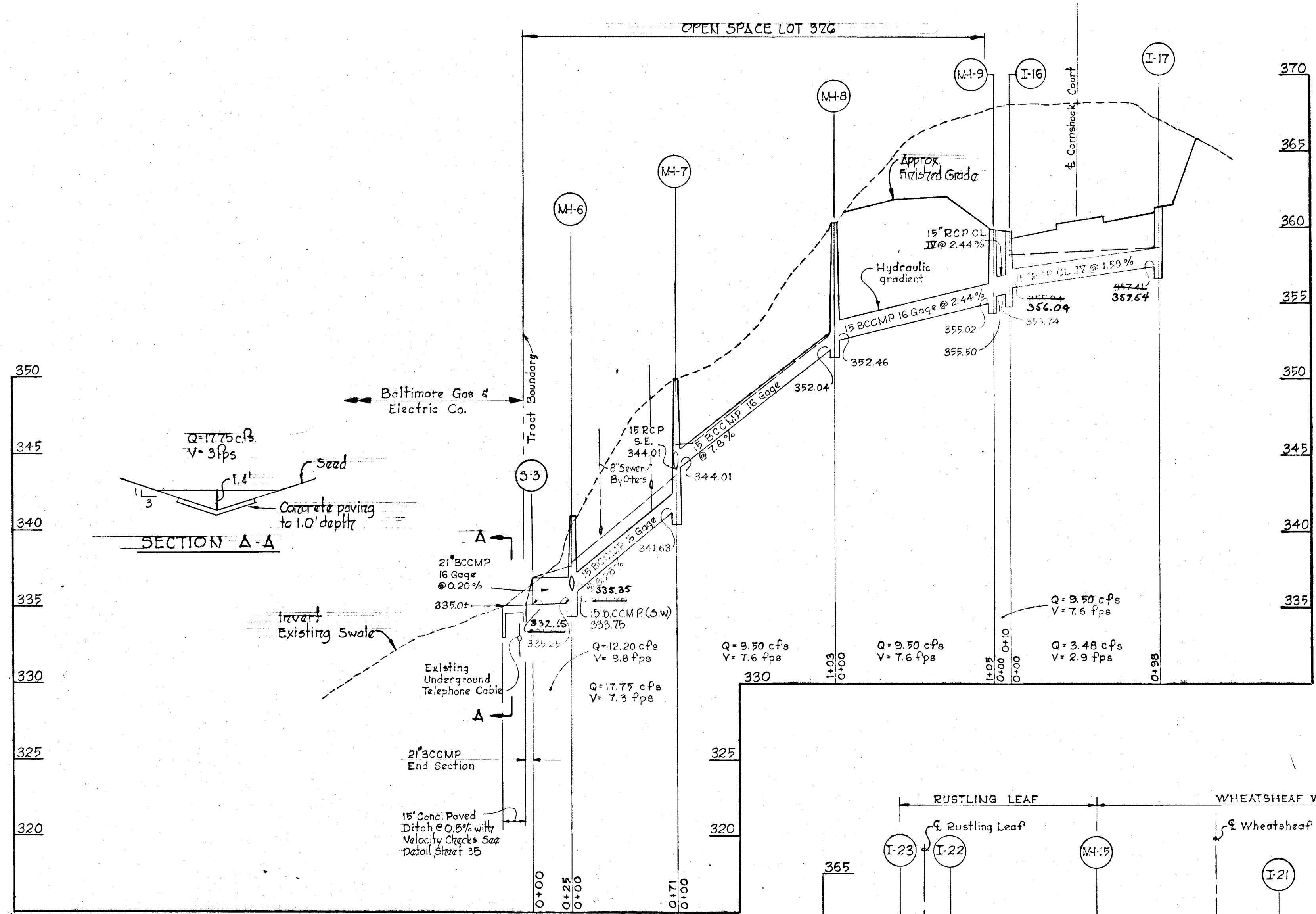
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



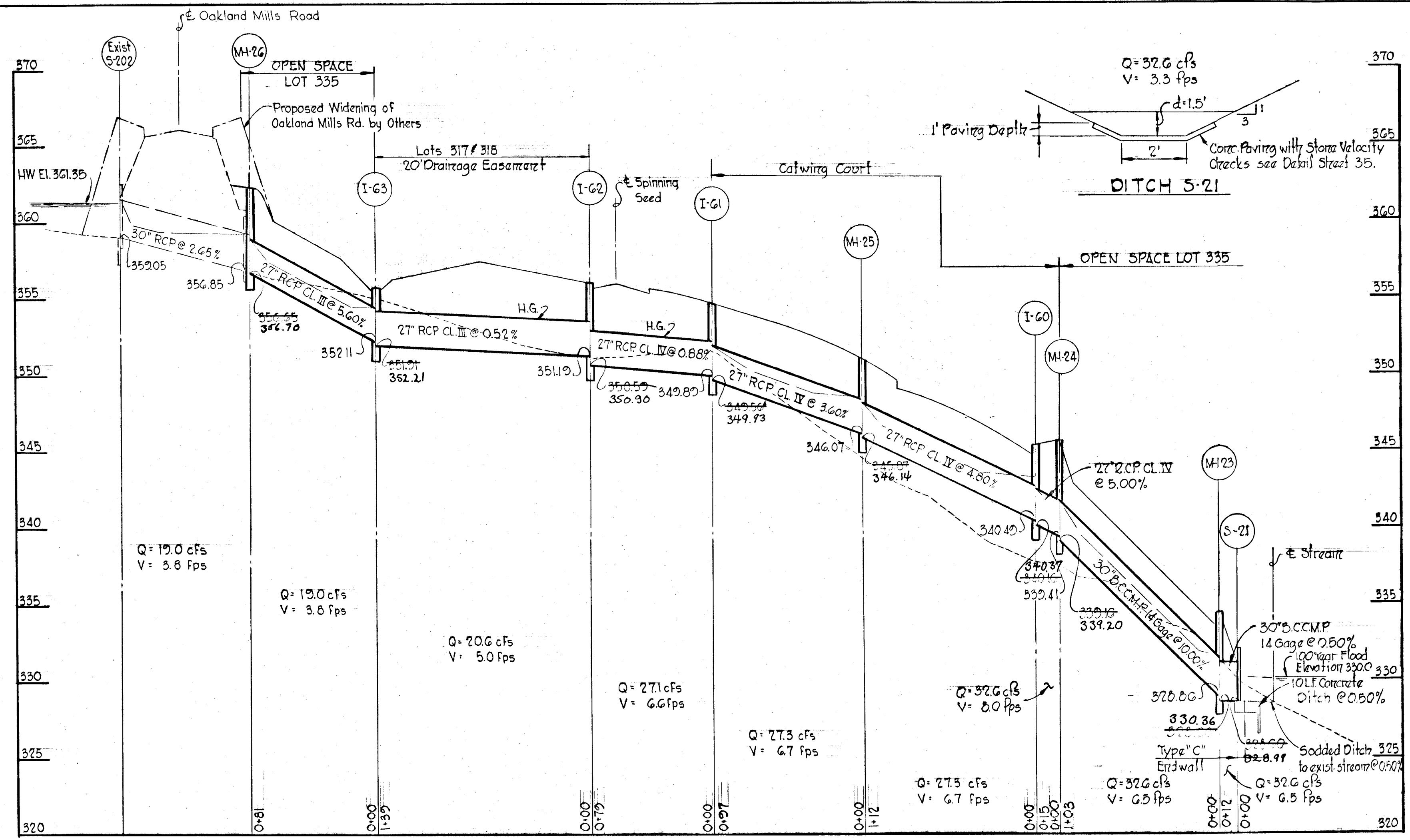
PROVIDED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE

Rev.	Date	Rev. No.	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.			
PROJECT AREA			
VILLAGE OF OWEN BROWN SECTION 2, AREA 3			
PROJECT TITLE			
STORM DRAIN PROFILES BRUSH RUN, CRAZYQUILT COURT, HOURGLASS PLACE AND FEATHERED HEAD			
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4-30-73			
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202			
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No. 1974			



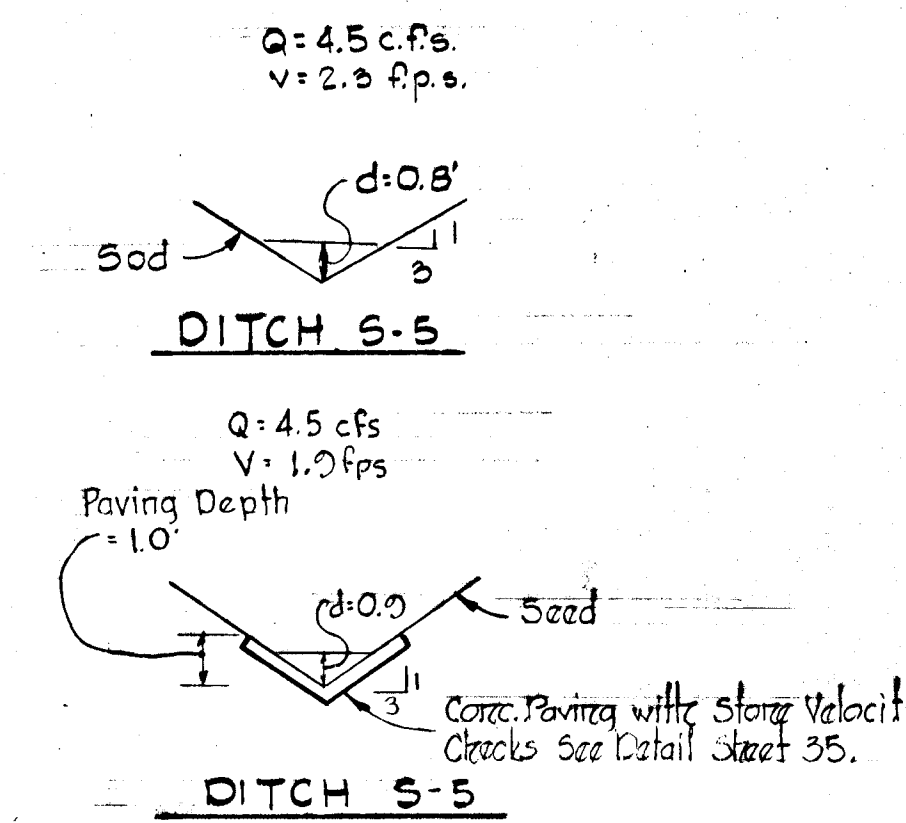
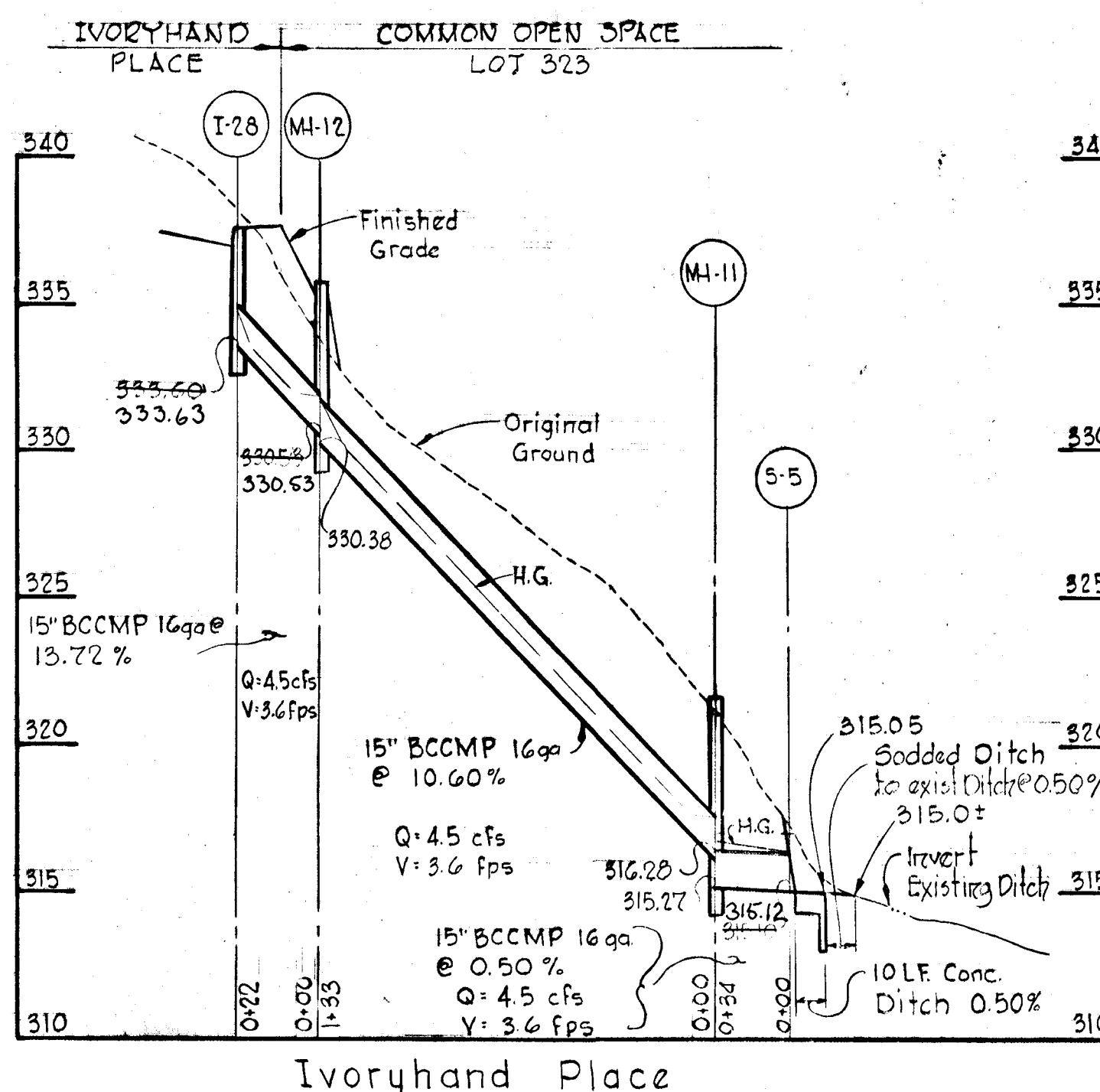
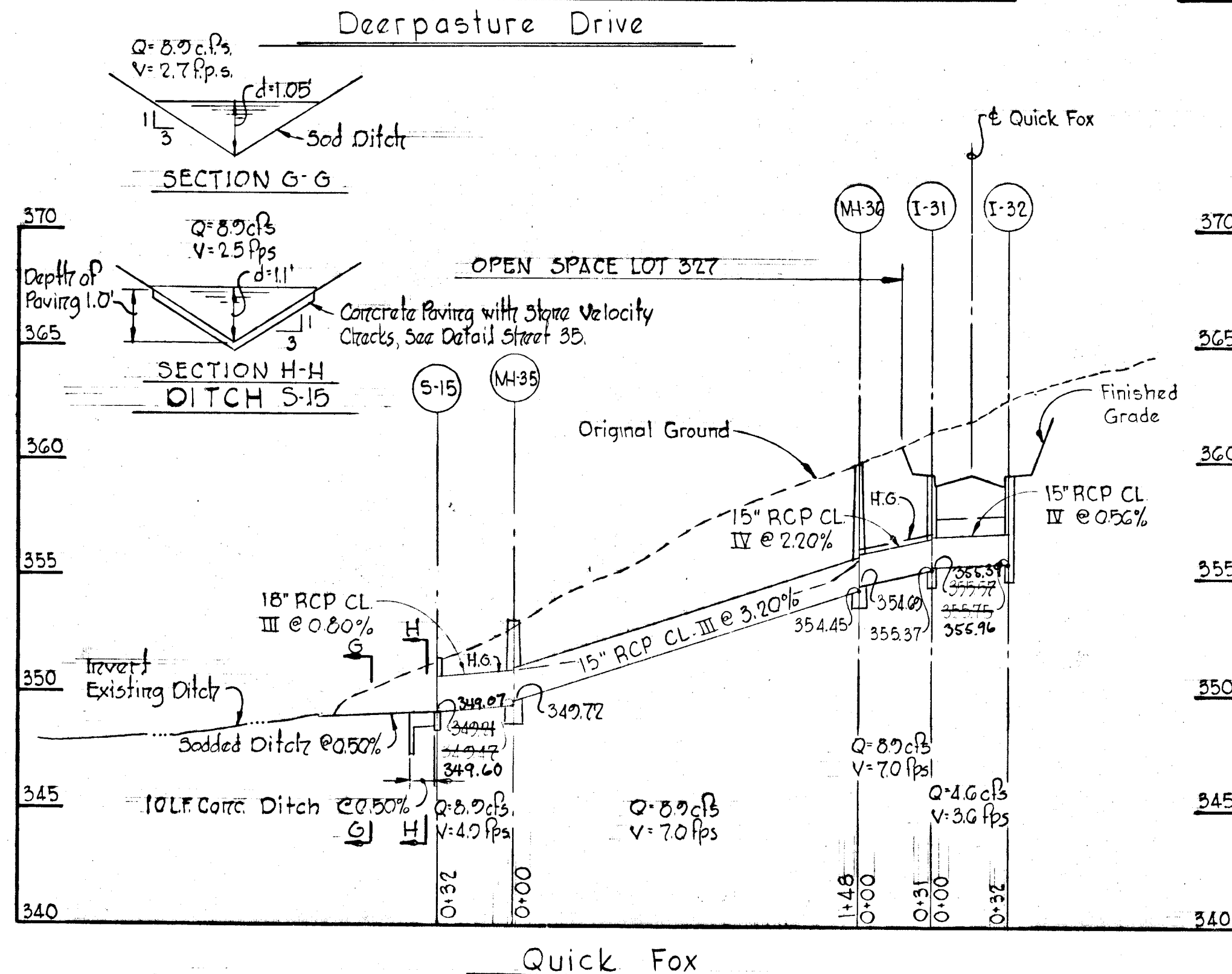
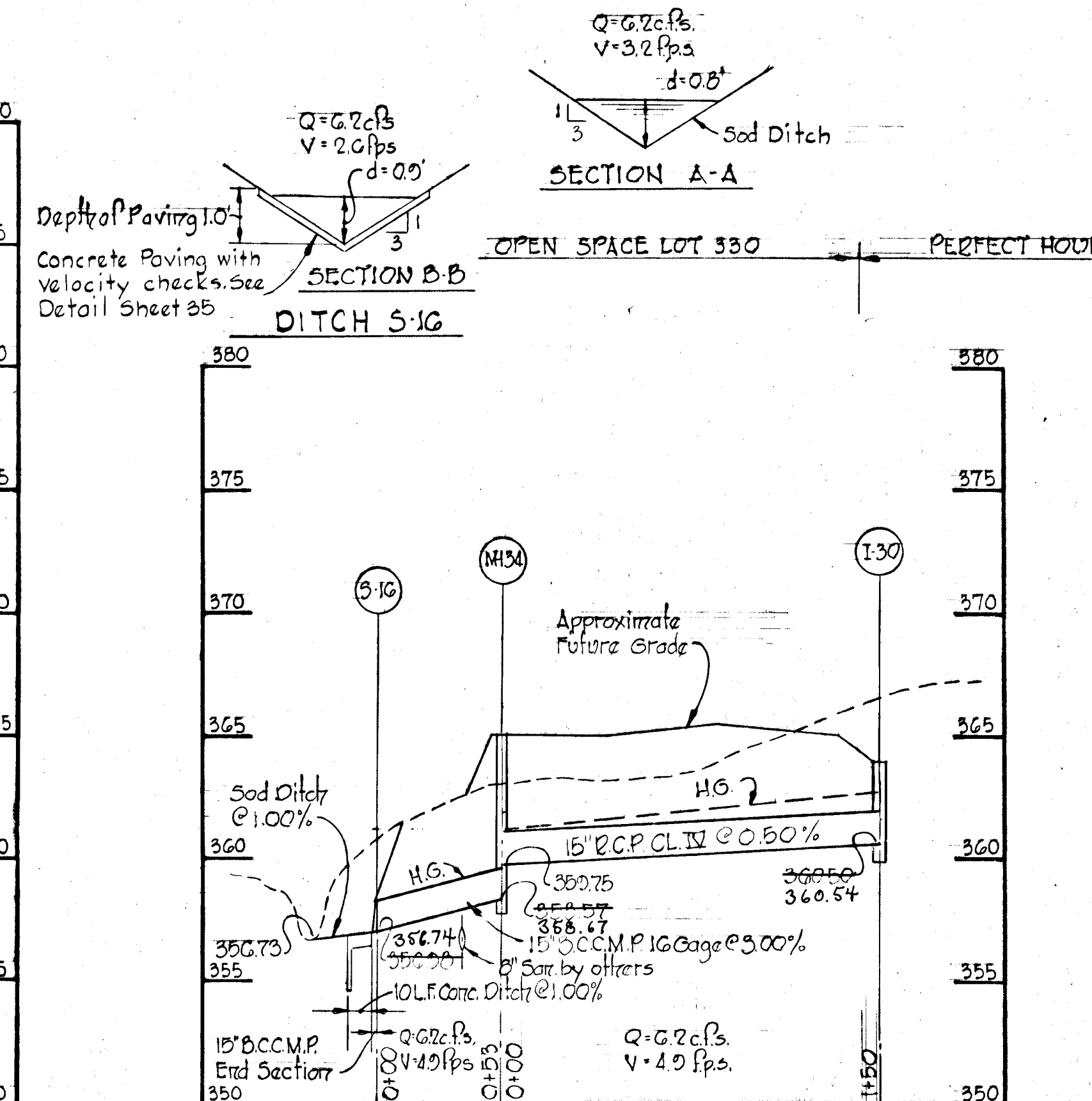
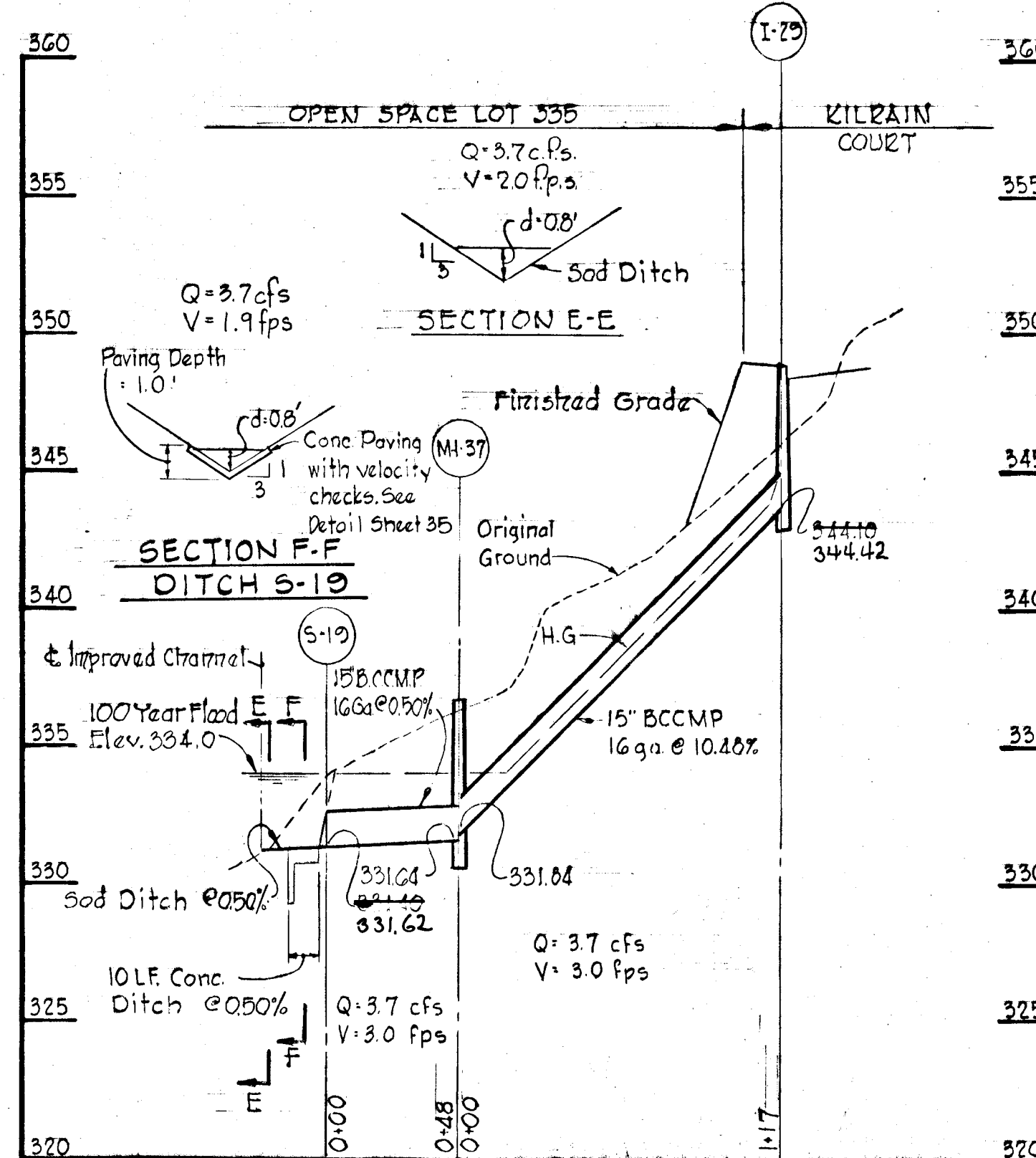
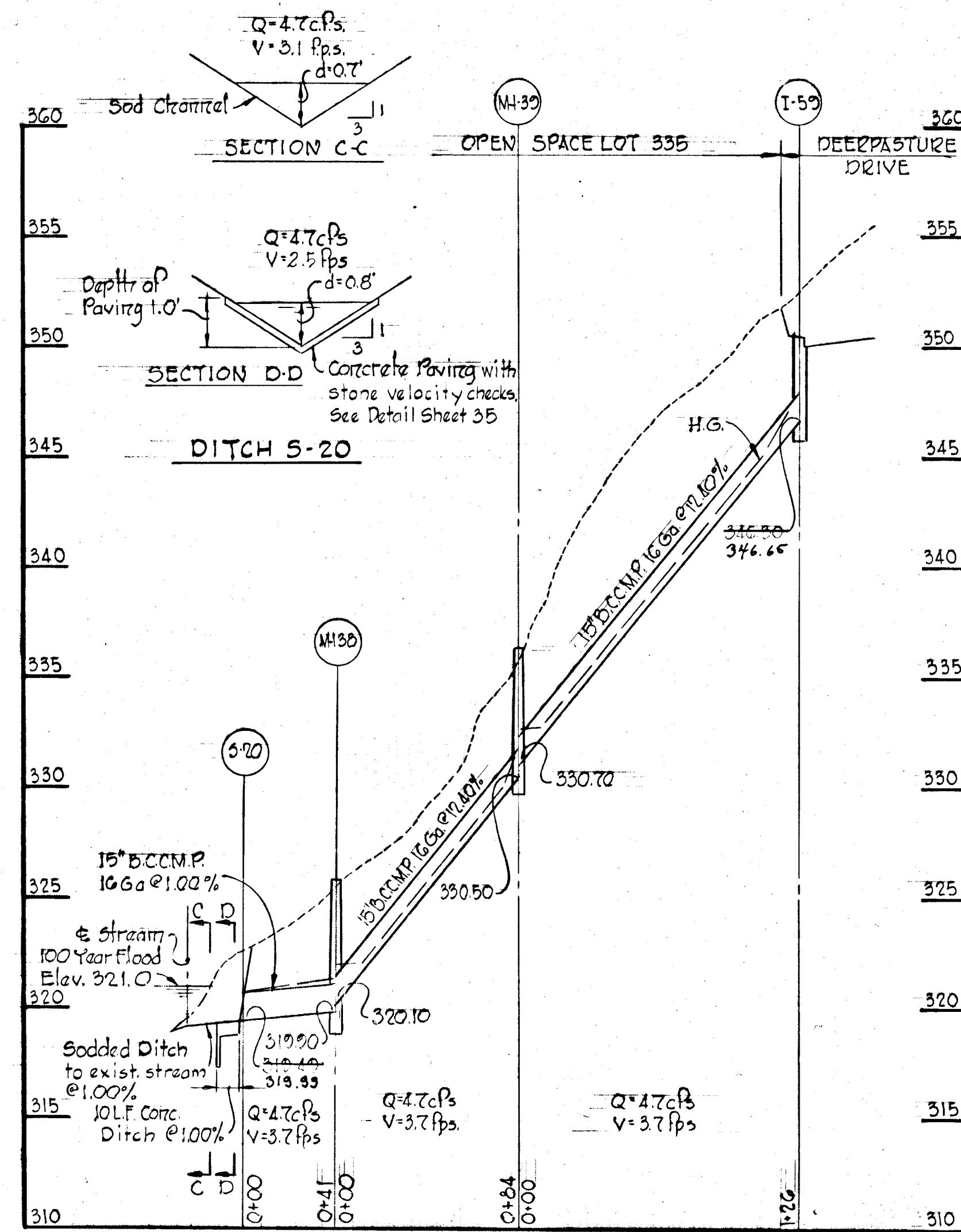
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973

Rev Date	Rev No	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE STORM DRAIN PROFILES RUSTLING LEAF, CORNSHOCK COURT WHEATSHEAF WAY AND HICKORY LIMB		
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4-30-73		
WHITMAN, REQUARD & ASSOCIATES ENGINEERS		
BALTIMORE, MARYLAND 21202		
Kenneth A. McCord KENNETH A. MCCORD Registered Engineer No 1974		



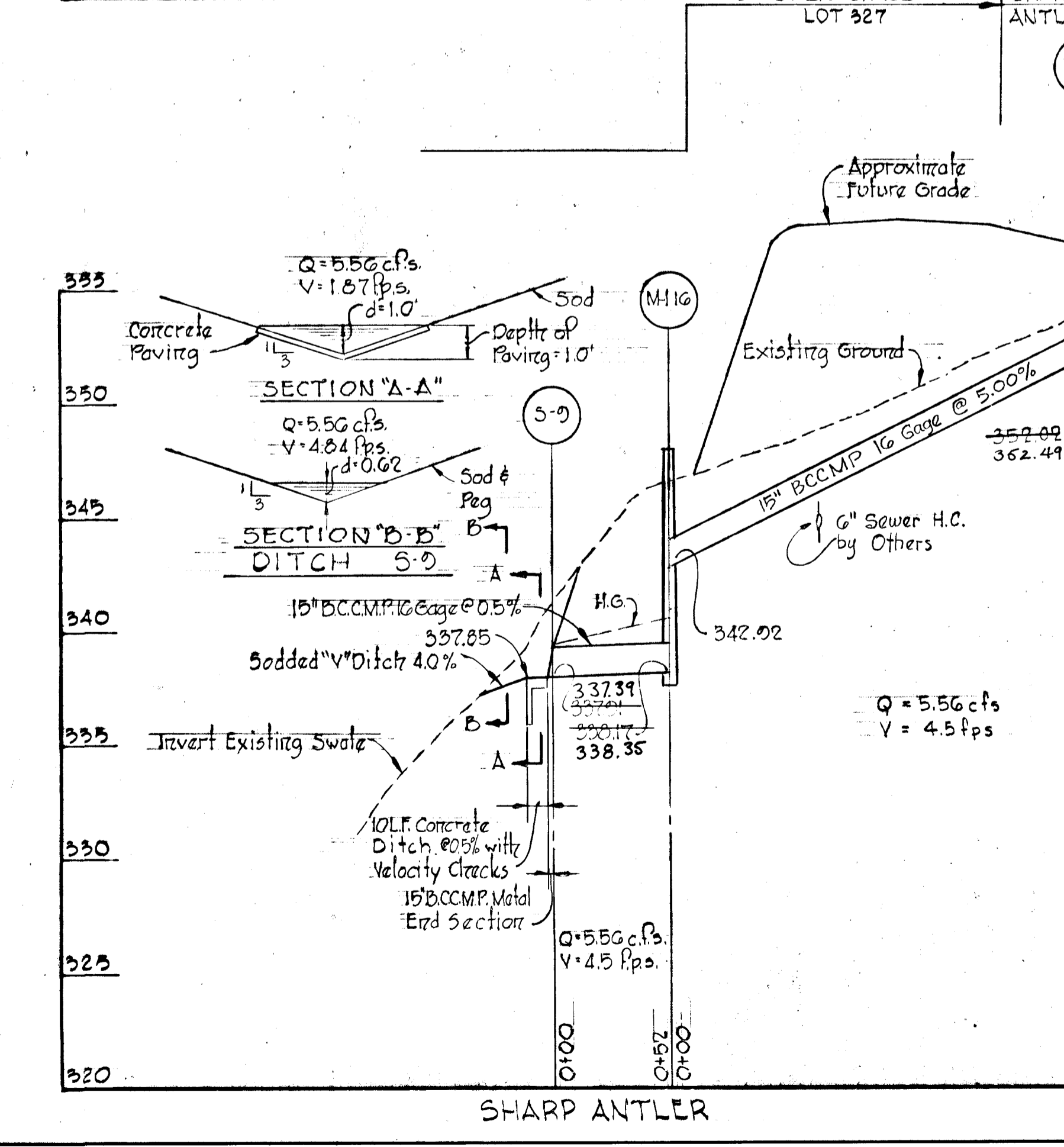
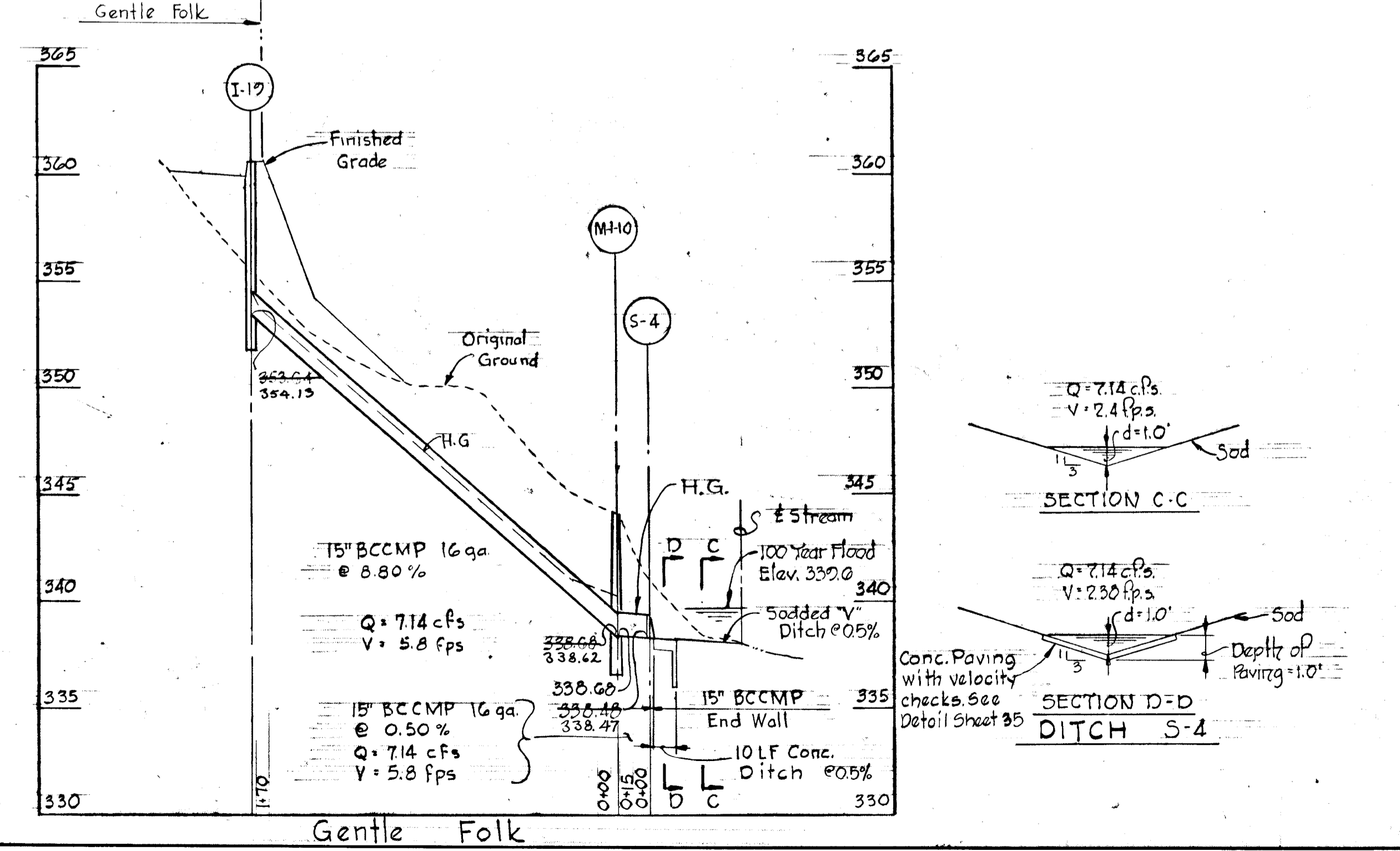
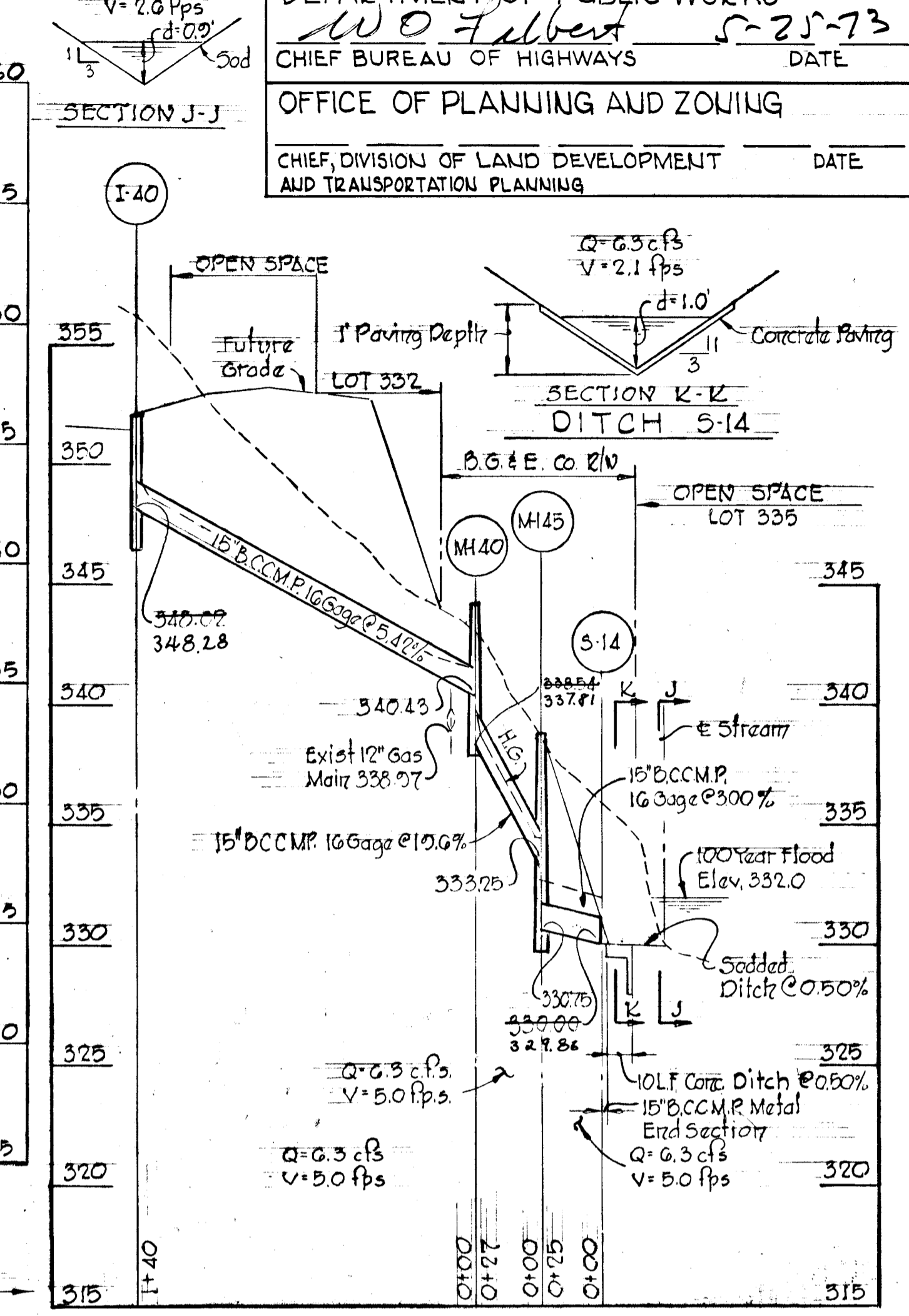
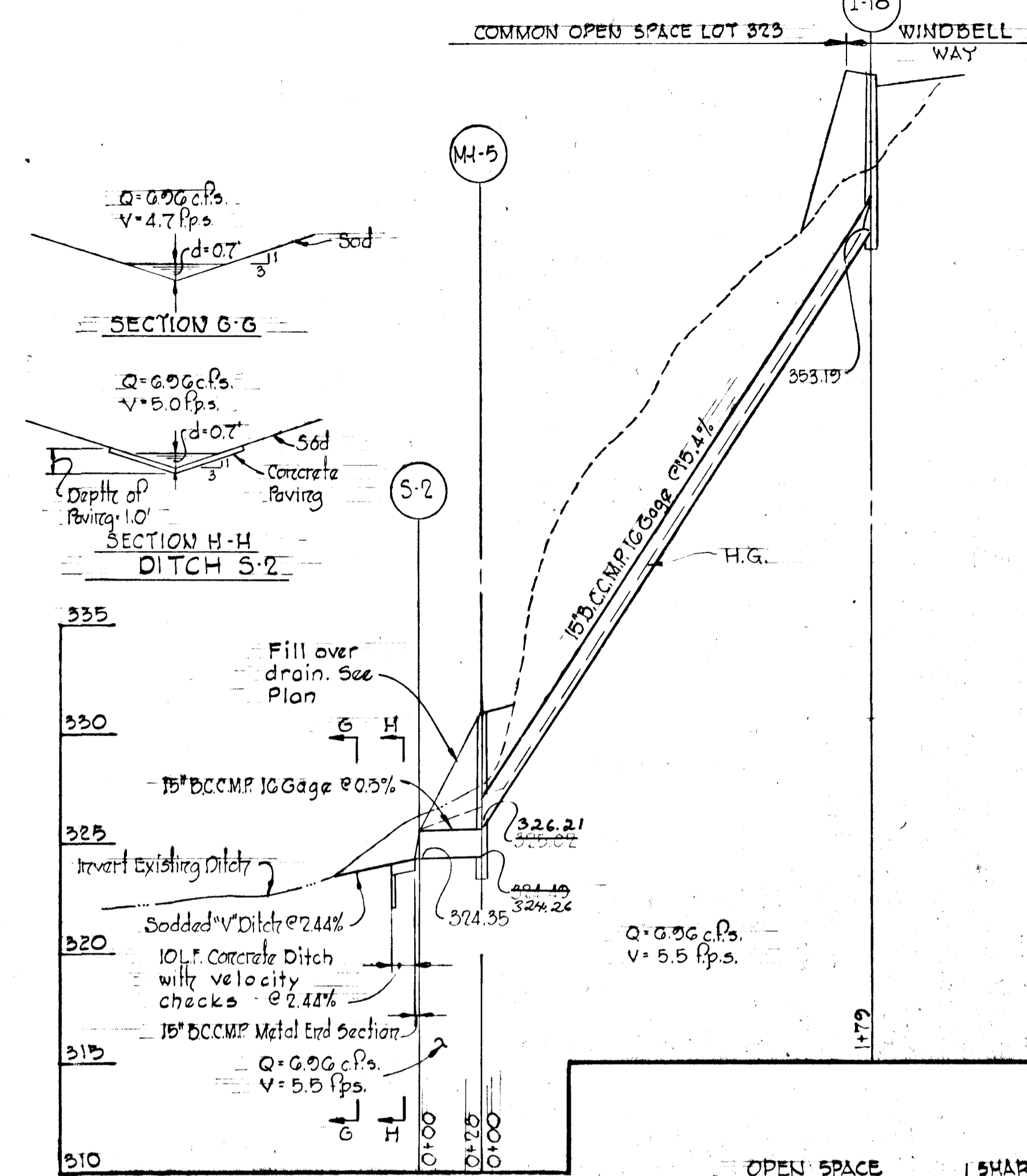
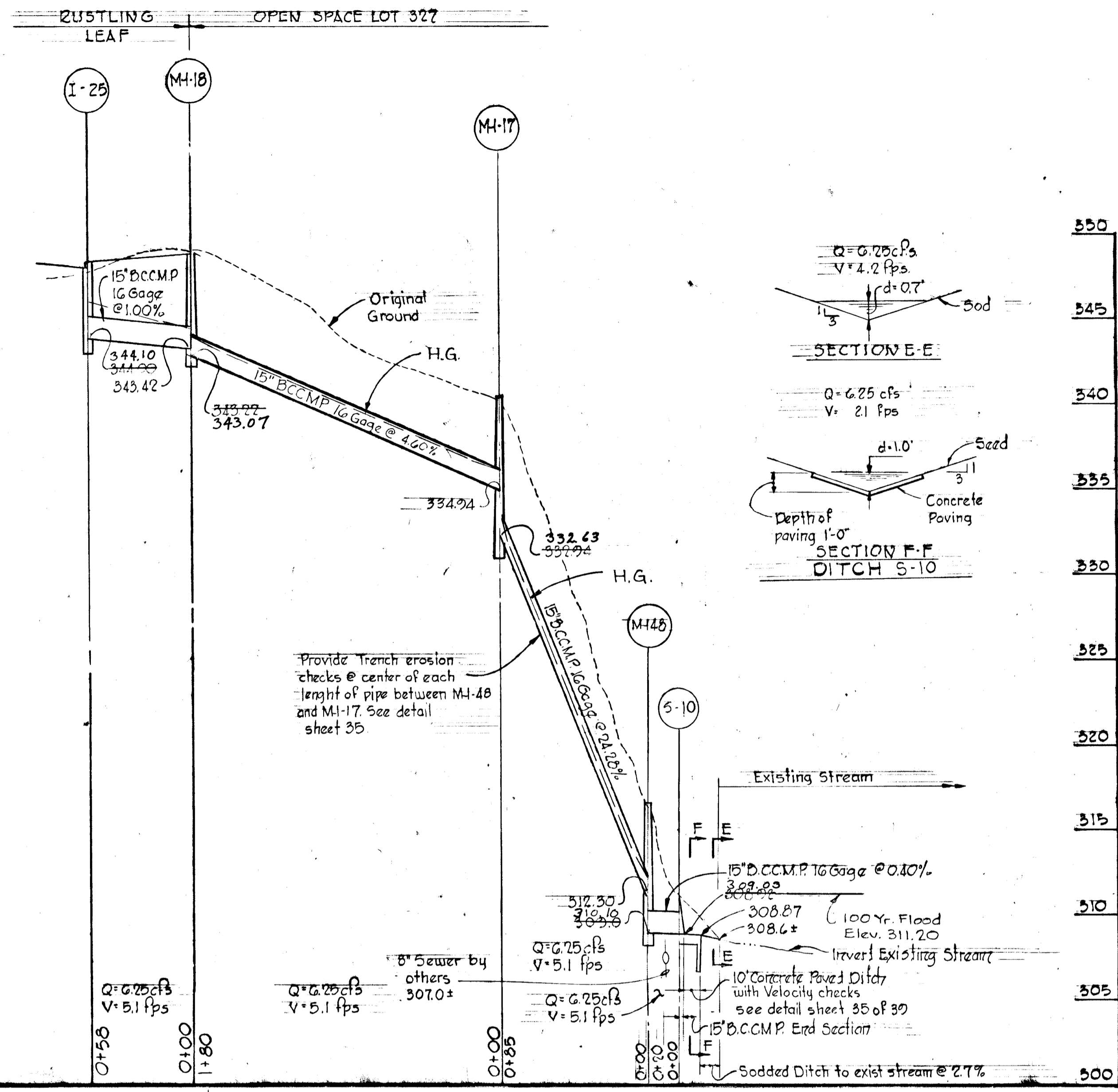
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
J. J. [Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE STORM DRAIN PROFILES OAKLAND MILLS ROAD, CATWING COURT SPINNING SEED		
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4-30-73		
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 MAY 24 1973
[Signature]

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF OWEN BROWL SECTION 2, AREA 3		
PROJECT TITLE		
QUICK FOX, IVORYHAND PLACE, PERFECT HOUR KILRAIN COURT AND DEERPASTURE DRIVE		
Scale: Hor: 1"=50' Ver: 1"=5' Date: 4/30/73		
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
<i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No 1974		



DEPARTMENT OF PUBLIC WORKS
W. O. Fulbert 5-25-73
 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
 MAY 24 1973
 DATE
J. J. [Signature]

Rev. Date	Rev. No.	Revision Description

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP.

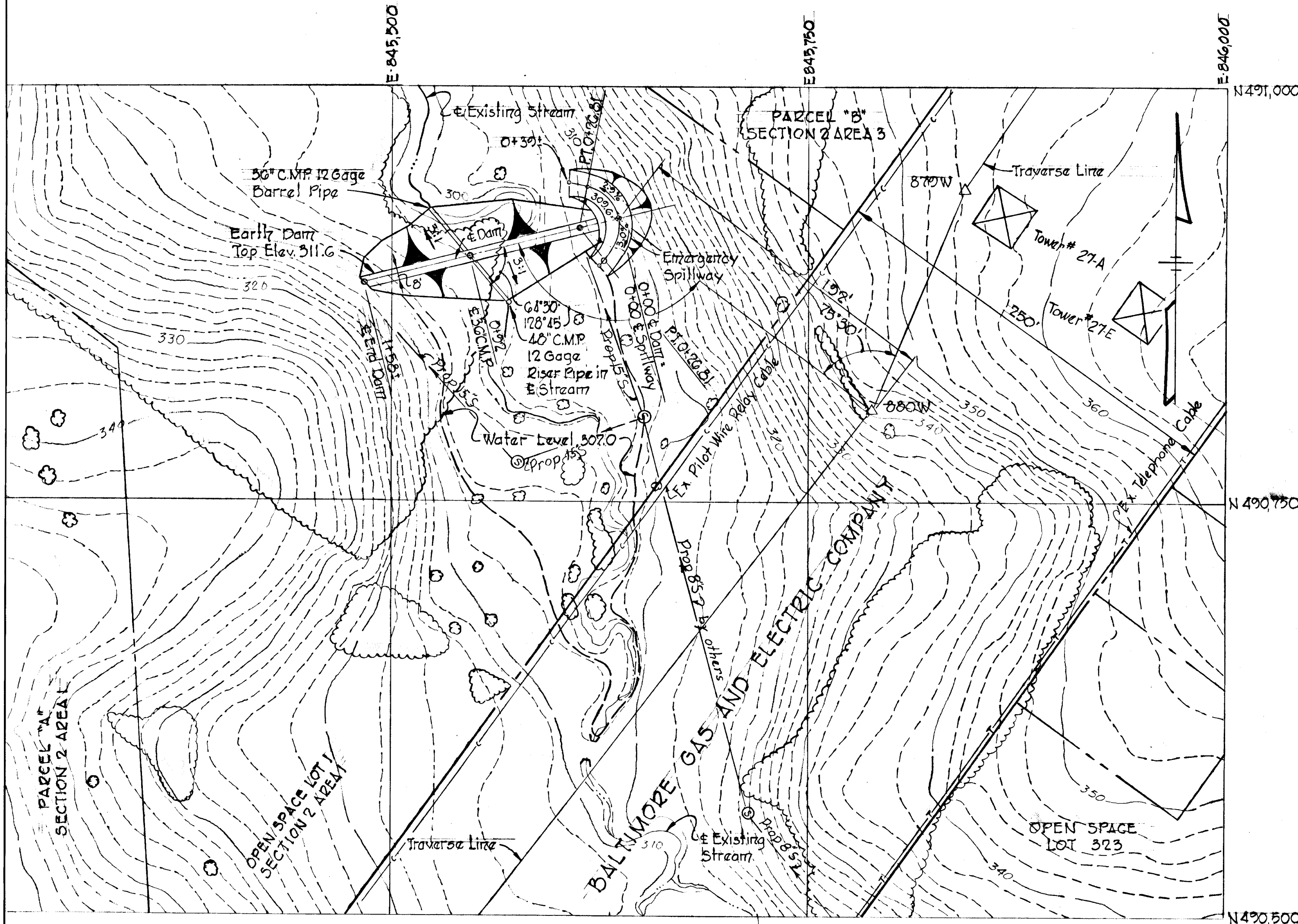
PROJECT AREA
VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

PROJECT TITLE
STORM DRAIN PROFILES
 RUSTLING LEAF, WINDBELL WAY,
 SHARP ANTLER, MOONFIRE PLACE AND GENTLE FOLK

Scale: Hor: 1"=50' Ver: 1"=5' Date: 4/30/73

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

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



PLAN
 Scale: 1" = 50'

EMERGENCY SPILLWAY CURVE DATA

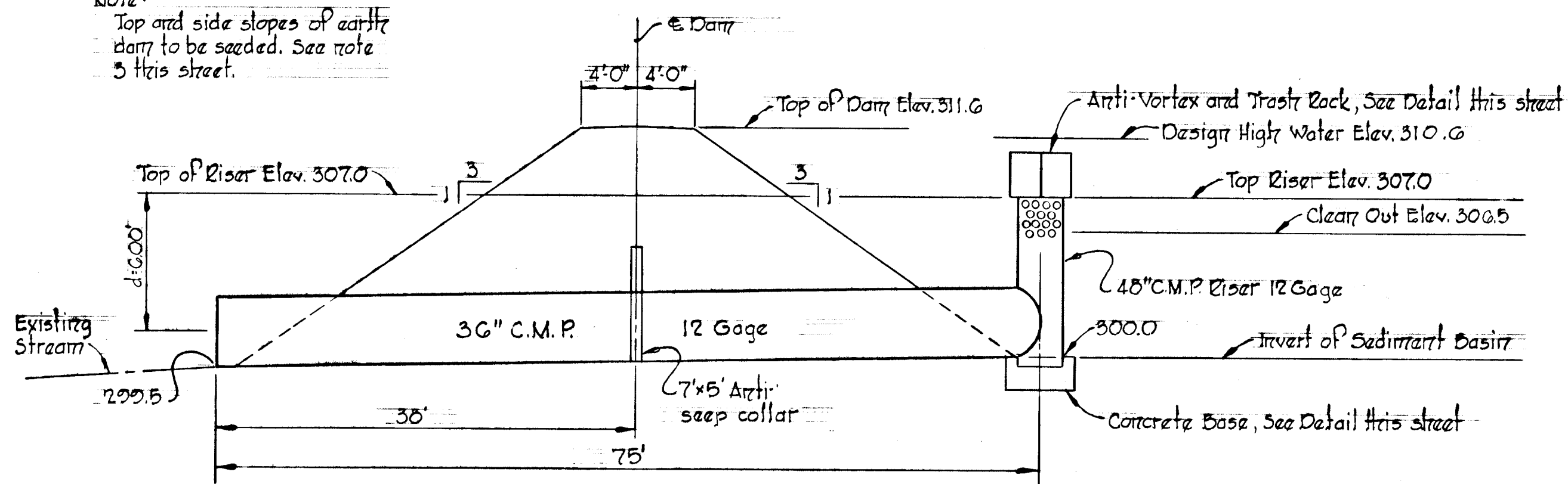
$\Delta = 150^{\circ}00'00''$
 $R = 25.00'$
 $Tang = 53.02'$
 $Arc = 56.72'$

SEDIMENT CONTROL NOTES

- All sediment controls must be constructed prior to any grading.
- No temporary sediment control structure may be removed or destroyed without approval of the Howard County Soil Conservation District.
- All areas to be seeded shall receive the following mixture: annual ryegrass (20%), Kentucky blue grass (20%) and Kentucky 31 fescue (60%) at the rate of 200#/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 top soil surface area at the rate of 1/4 Ton/Acre (60#/1000#) commercial fertilizer (5-10-10) at the rate of 3/4 Ton/Acre (35#/1000#) superphosphate at the rate of 600#/Acre (15#/1000#).
- All inlet openings shall be temporarily sealed with plywood during construction and prior to roadway paving.
- Prior to starting grading, the Contractor shall give 24 hours notice to the Howard Soil Conservation District and the Howard County Bureau of Licenses, inspections and permits.
- All earthwork stockpiles that will not be undisturbed for 3 weeks or longer, shall immediately after piling, be fertilized, limed and seeded with annual ryegrass at the rate of 1#/1000#.

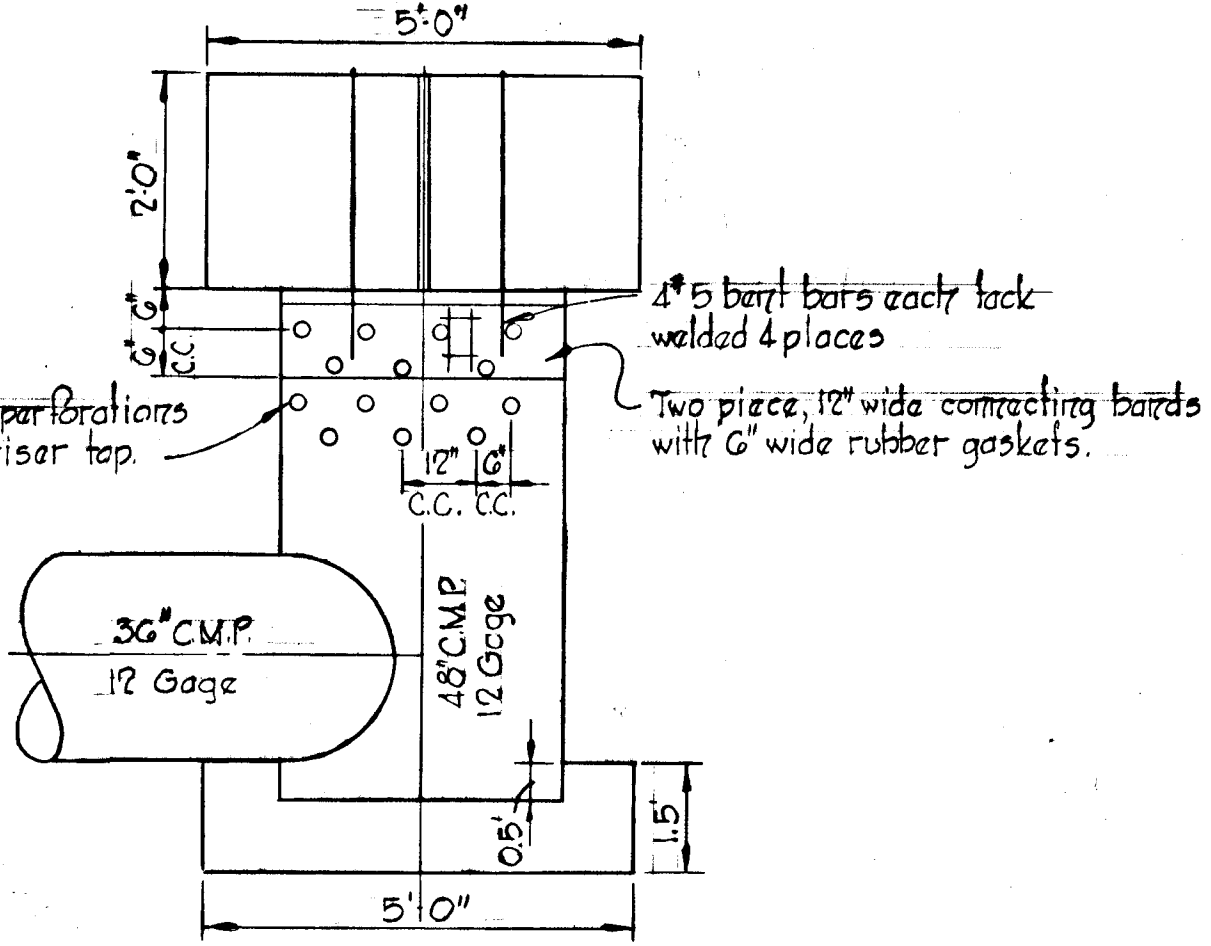
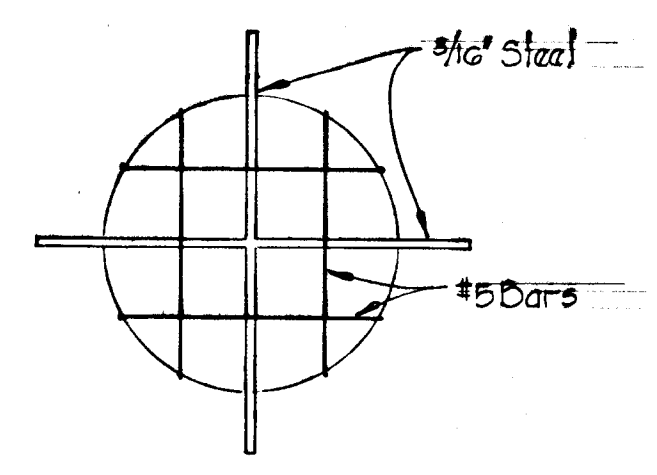
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
[Signature]

Note:
 Top and side slopes of earth dam to be seeded. See note 5 this sheet.

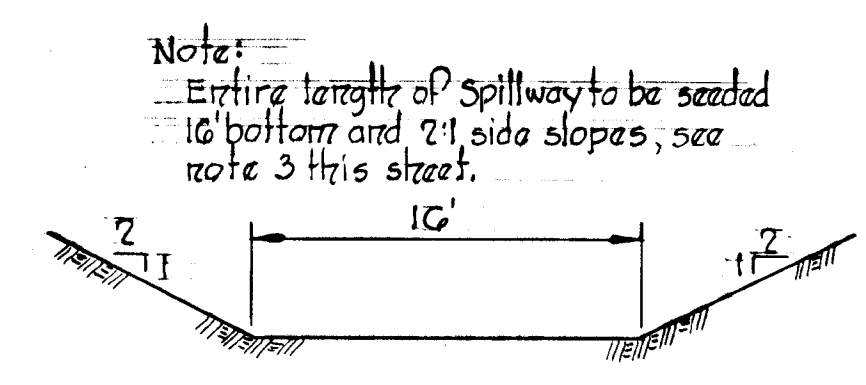


CROSS SECTION THRU DAM
 No Scale

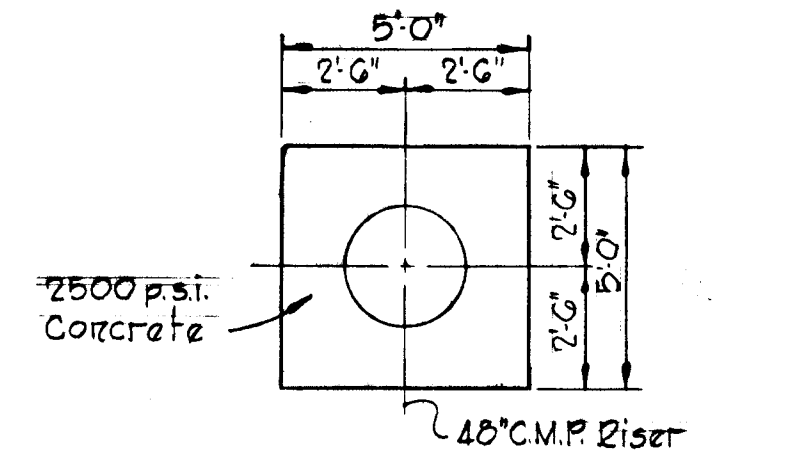
Notes:
 1. 1420 cubic yards of suitable material is required for earth dam embankment.
 2. Emergency spillway and stripping under dam excavation - 300 cubic yards.



DETAIL ANTI-VORTEX AND TRASH RACK
 No Scale

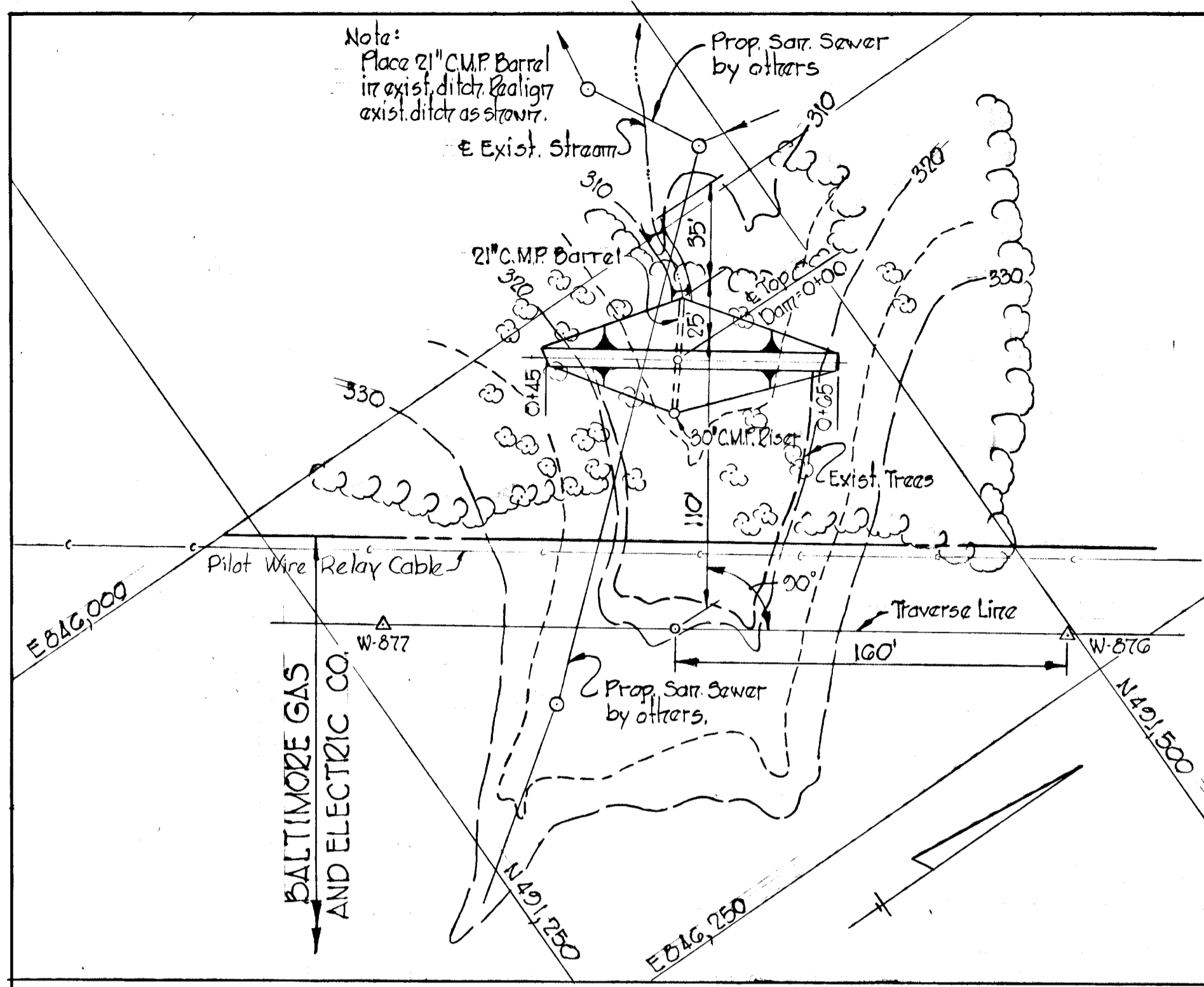


SECTIONS EMERGENCY SPILLWAY
 No Scale



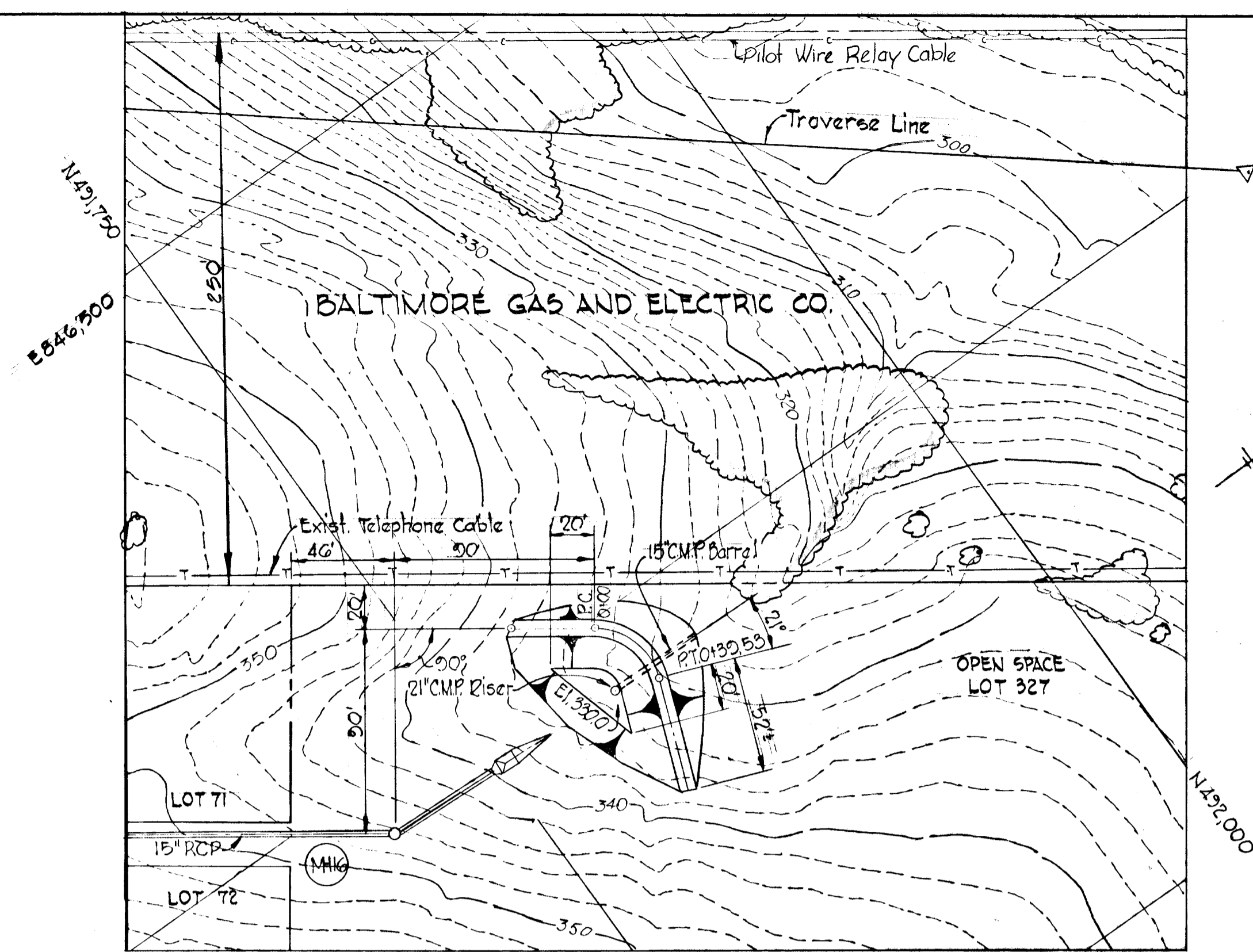
RISER PIPE BASE
 Scale: 1/4" = 1'-0"

Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER		
THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA		
VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE		
SEDIMENT CONTROL POND No. 1		
Scale: As Shown		Date: 4/30/73
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS		
BALTIMORE, MARYLAND 21202		
CERTIFICATION BY THE ENGINEER I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. <i>Kenneth A. McCord</i> Signature of Engineer		DATE 2-22-73 D. E.
<i>Kenneth A. McCord</i> KENNETH A. McCORD Registered Engineer No. 1974		



PLAN - POND # 2
Scale: 1" = 50'

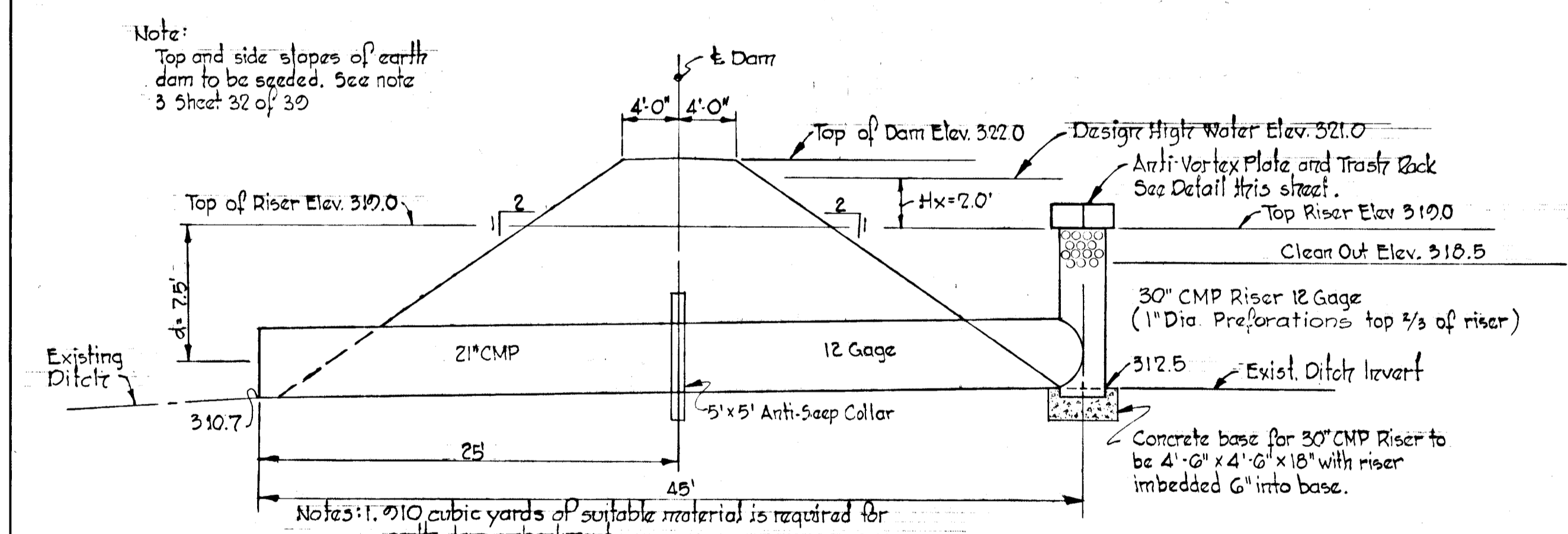
SEE SHEET 32 FOR
SEDIMENT CONTROL NOTES



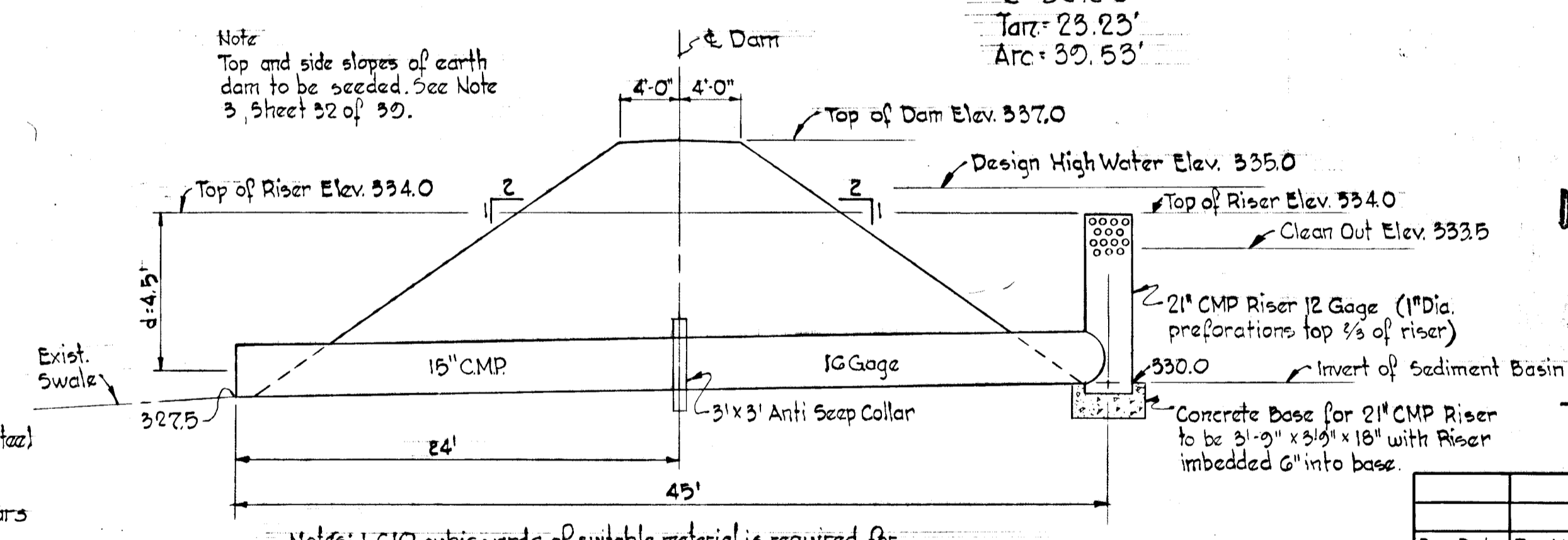
PLAN POND #3
Scale: 1" = 50'

DAM CURVE DATA

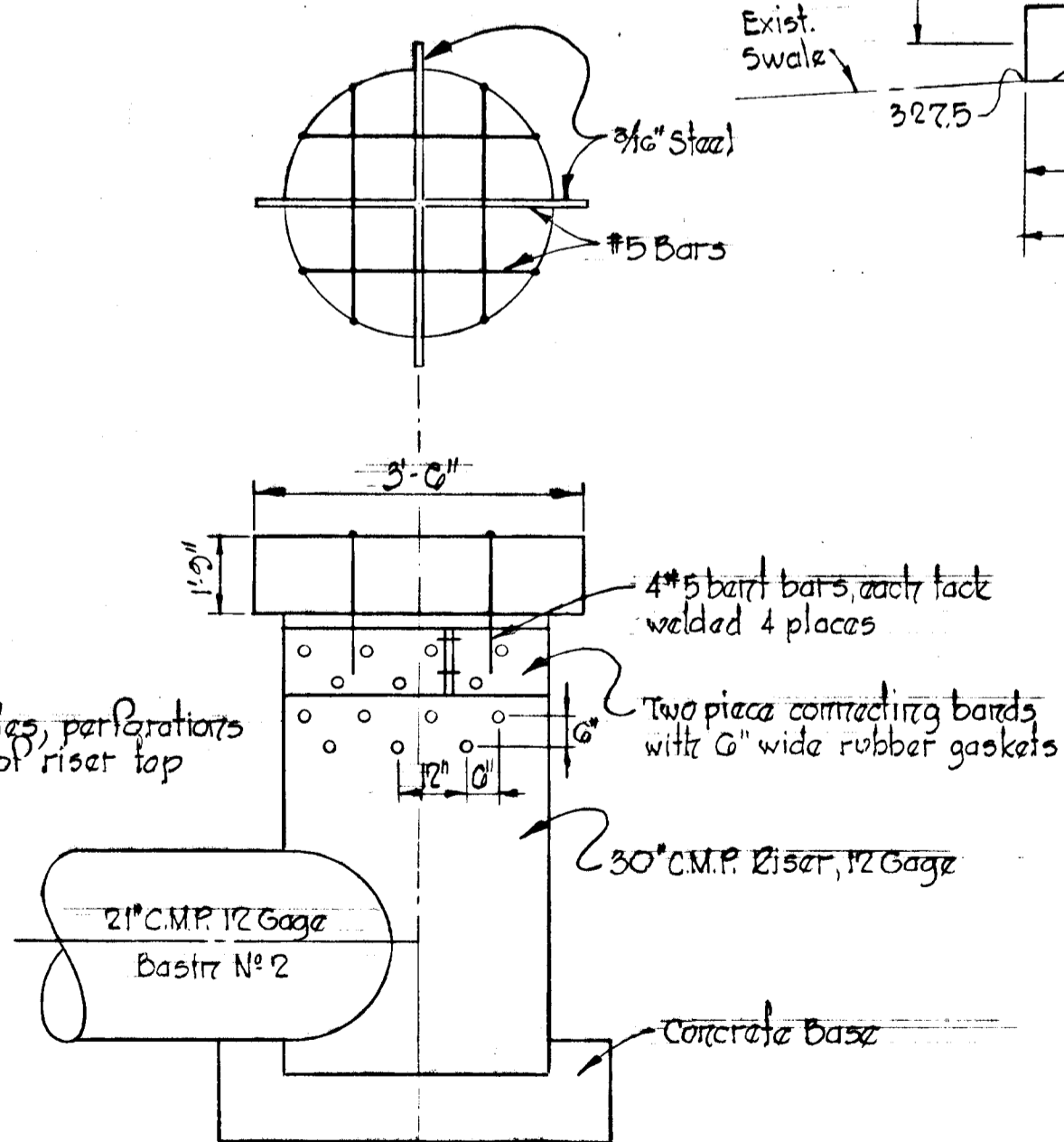
$\Delta = 75^{\circ} 30' 00''$
 $R = 30.00'$
 $Tang = 23.23'$
 $Arc = 30.53'$



CROSS SECTION THRU DAM
No Scale



CROSS SECTION THRU DAM
Scale: 1" = 50'



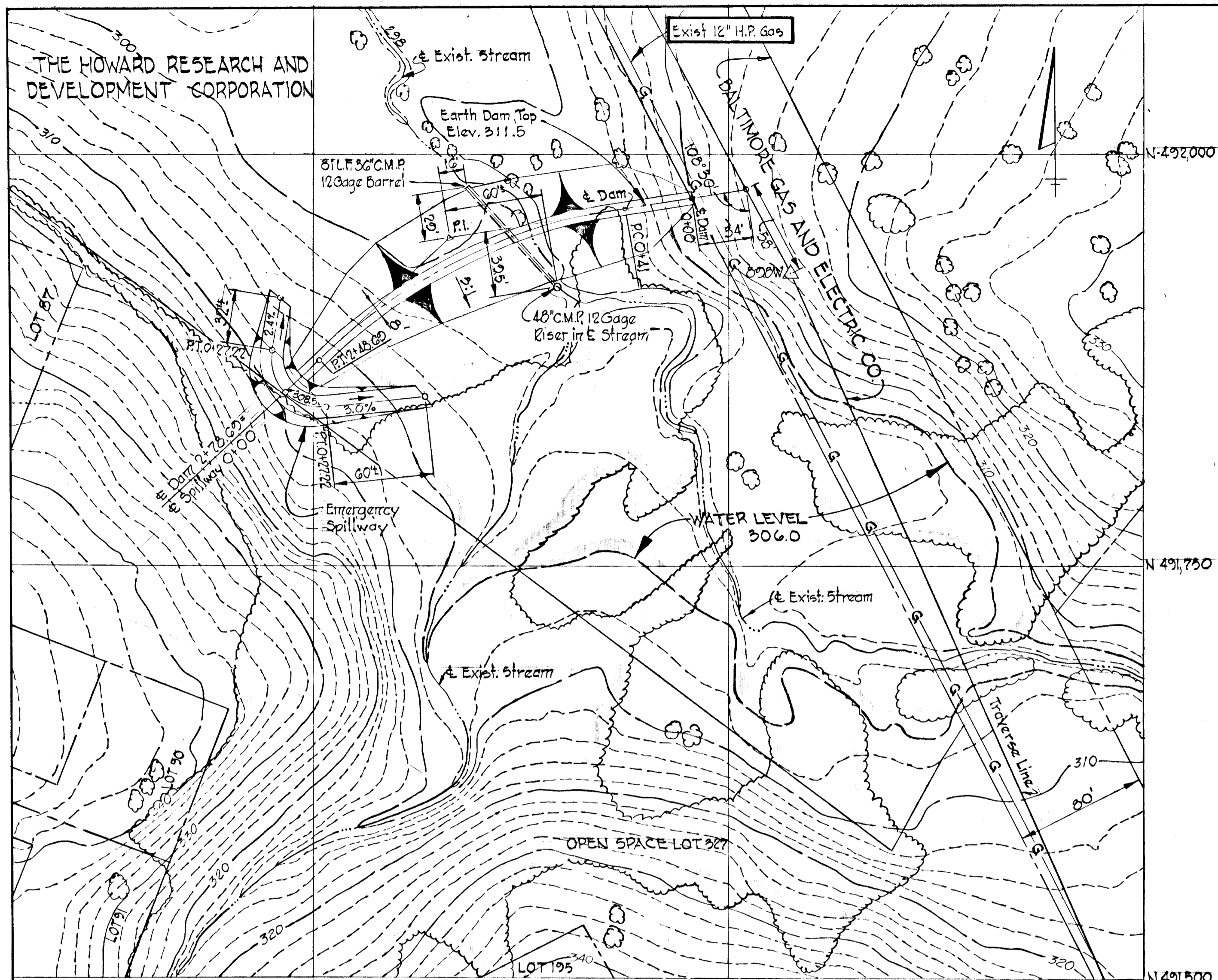
DETAIL ANTI-VORTEX
AND TRASH RACK
(POND #2)
No Scale

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

DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE: MAY 24 1973

Rev Date	Rev No	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE SEDIMENT CONTROL POND No. 2 & No. 3		
Scale: As Shown Date: 4/30/73 WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Signature of Engineer <i>Kenneth A. McCord</i>		Date 2/26/73

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



EMERGENCY SPILLWAY CURVE DATA

Δ = 104°00'00"
R = 30.00'
Tang = 38.40'
Arc = 54.45'

PLAN

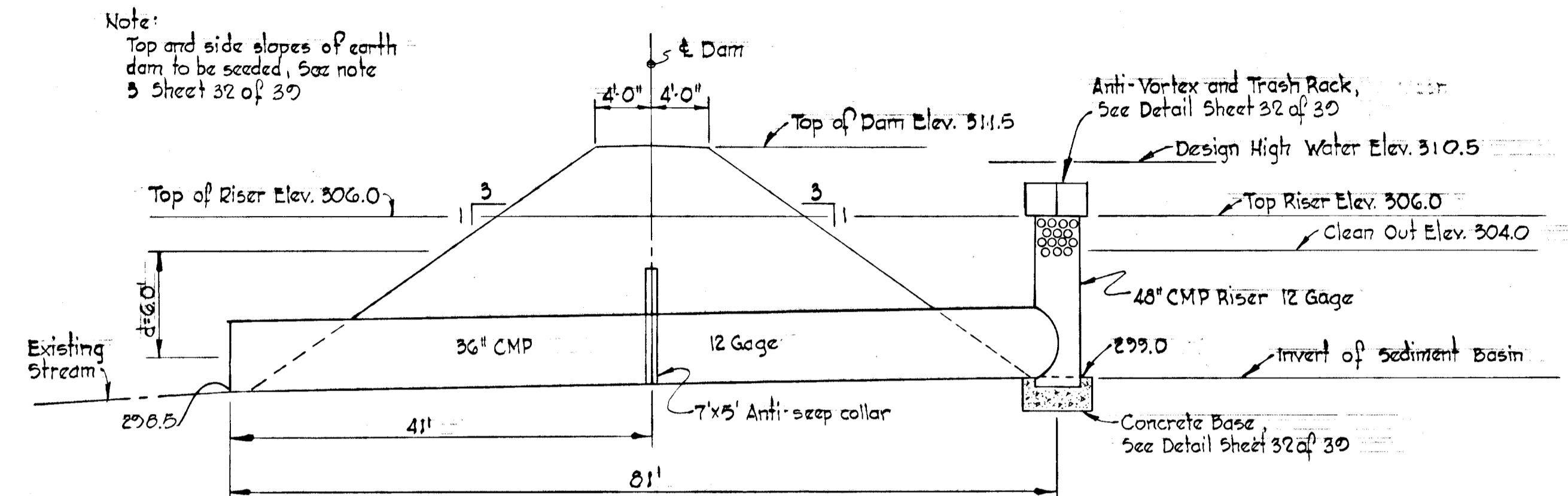
Scale 1" = 50'

DAM CURVE DATA

Δ = 34°00'00"
R = 350.00'
Tang = 107.01'
Arc = 207.60'

SEE SHEET 32 FOR SEDIMENT CONTROL NOTES

DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE 5-21-73
 OFFICE OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING DATE

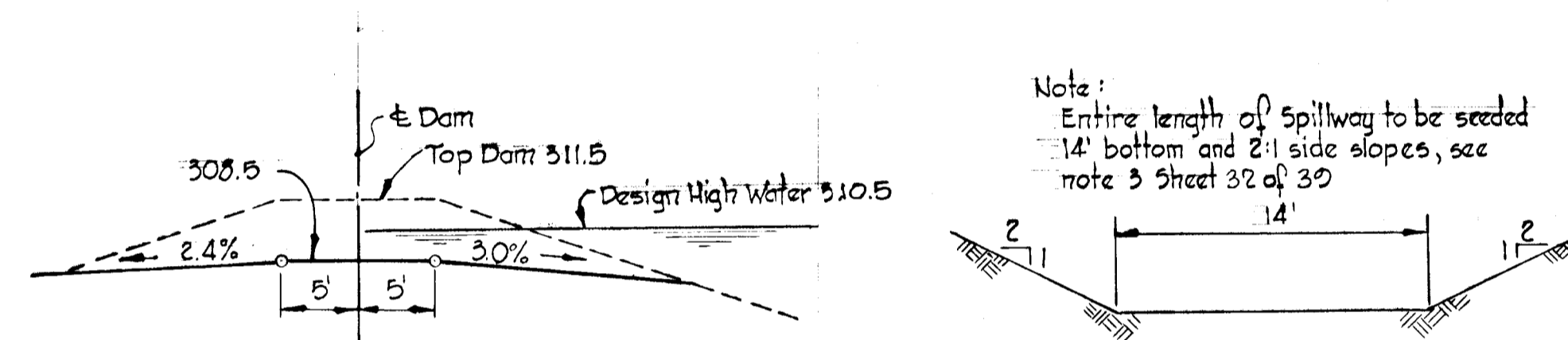


Note:
 Top and side slopes of earth dam to be seeded, see note 3 Sheet 32 of 30

- Notes:
- 3765 cubic yards of suitable material is required for earth dam embankment.
 - Emergency Spillway and stripping under dam excavation = 735 cubic yards.

CROSS SECTION THRU DAM

No Scale



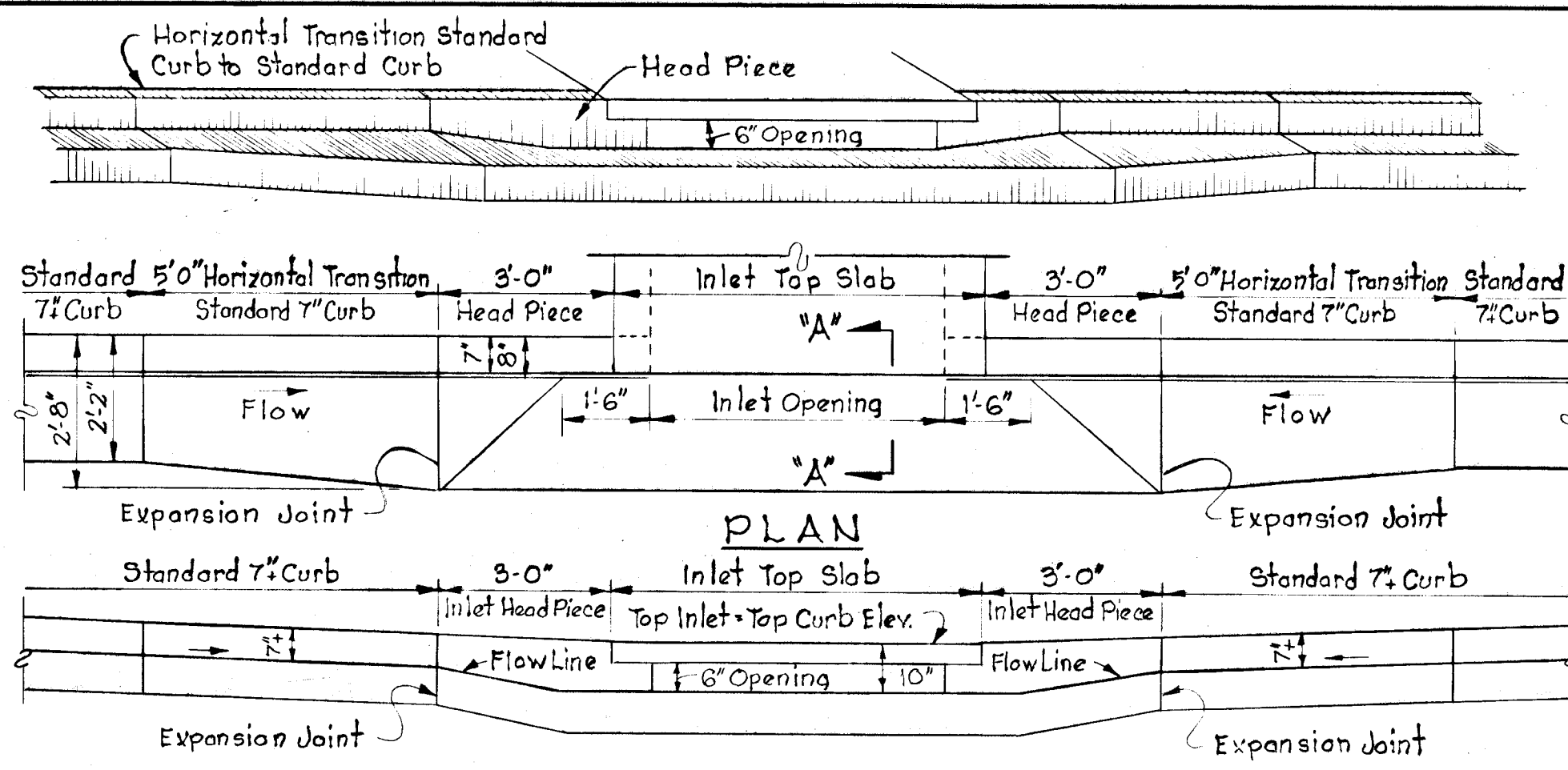
Note:
 Entire length of Spillway to be seeded 14' bottom and 2:1 side slopes, see note 3 Sheet 32 of 30

SECTIONS EMERGENCY SPILLWAY

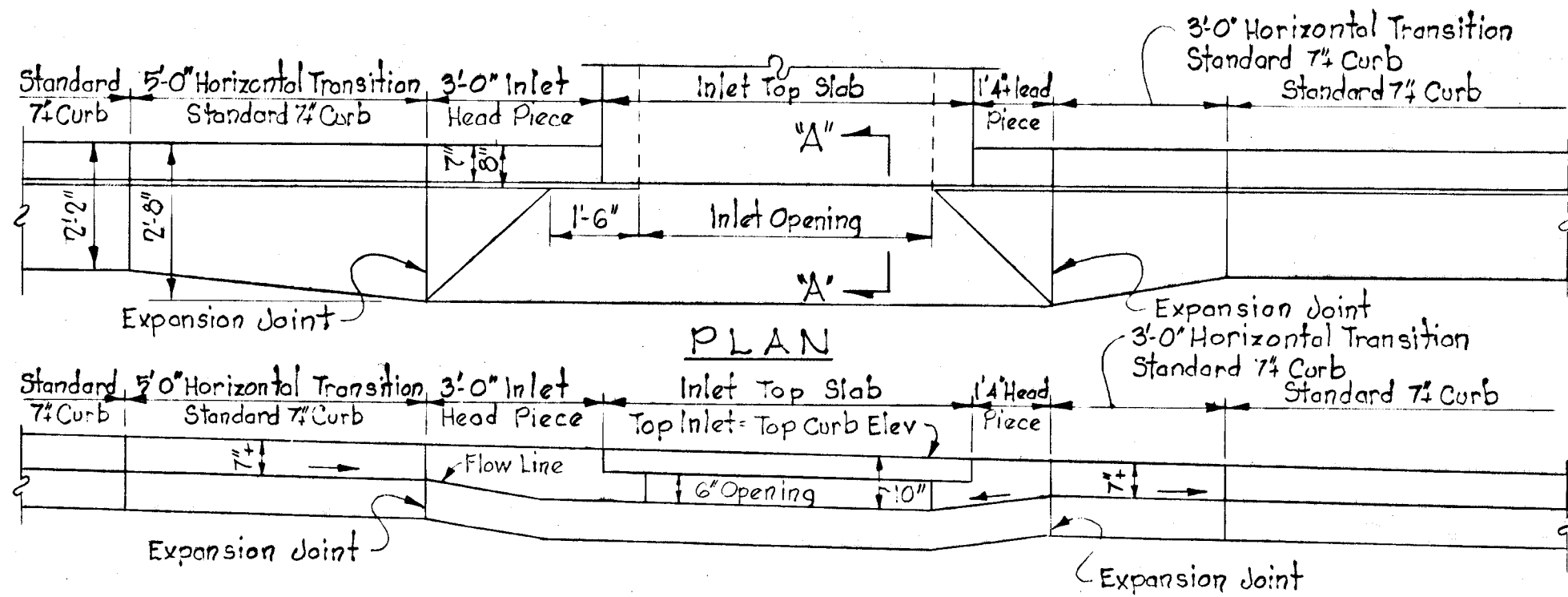
No Scale

APPROVED
 DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973

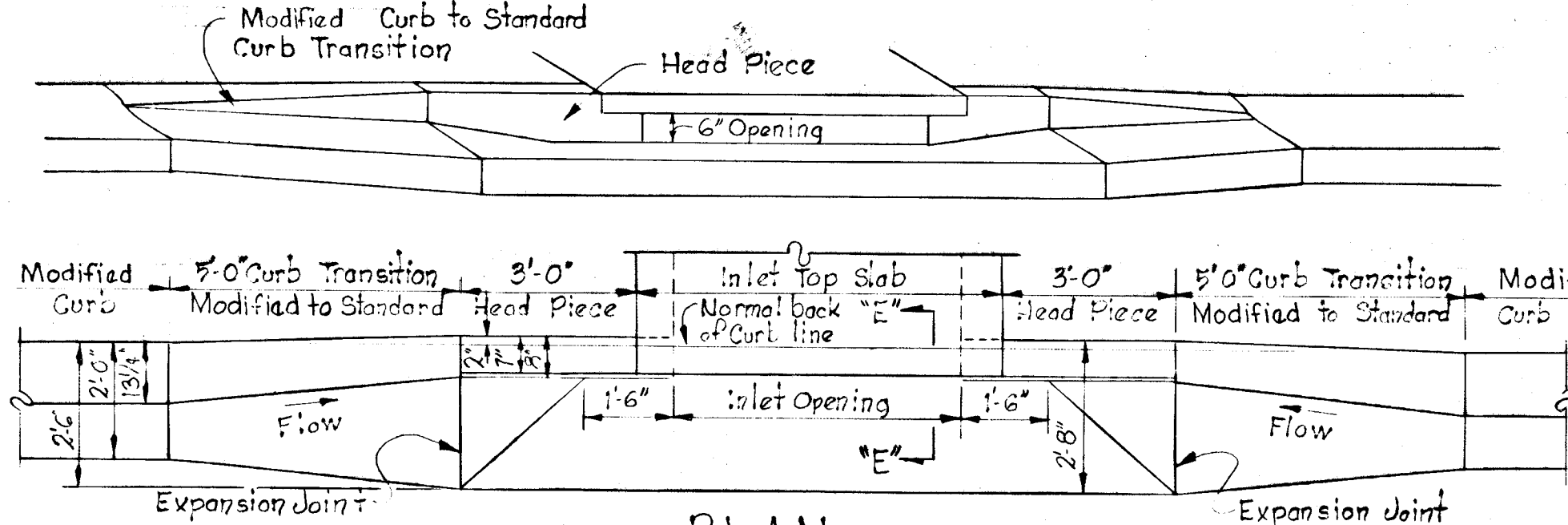
Rev. Date	Rev. No.	Revision Description
COLUMBIA		
6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE SEDIMENT CONTROL POND No. 4		
Scale: As Shown		Date: 4-30-73
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
I certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. <i>Kenneth A. McCord</i> Signature of Engineer		2/26/73 Date
KENNETH A. McCORD Registered Engineer No. 1974		



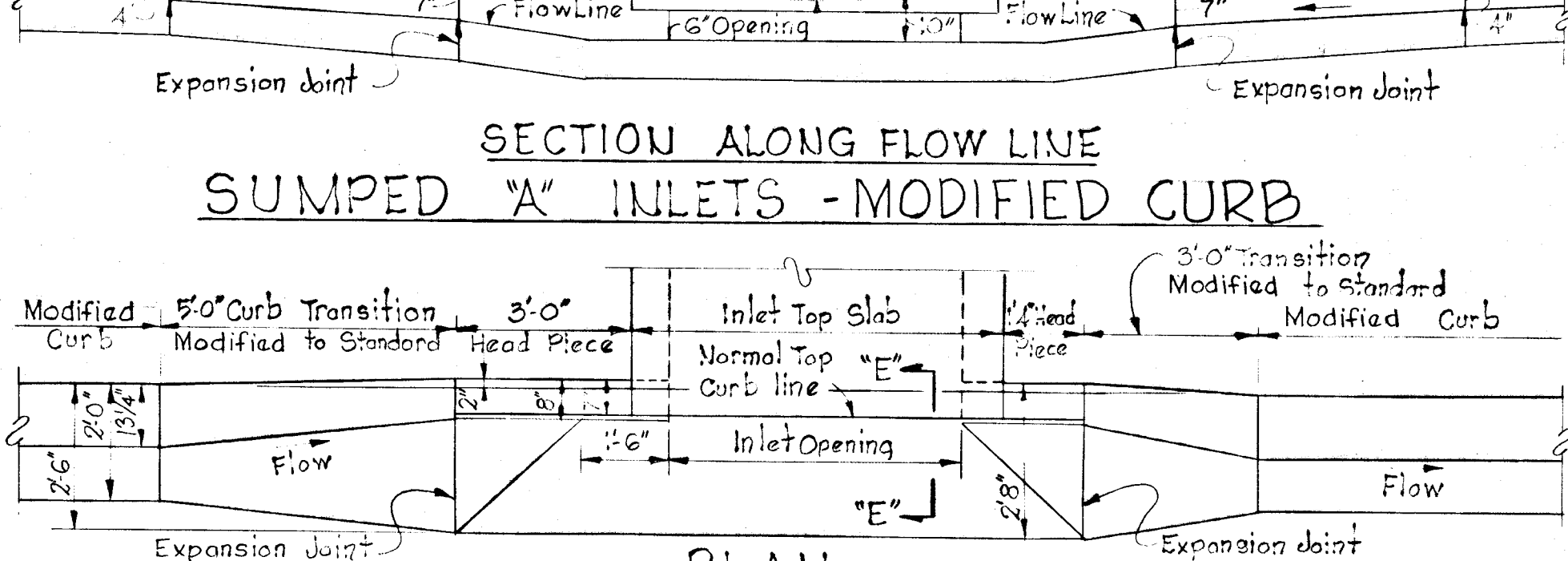
SECTION ALONG FLOW LINE
SUMPED "A" INLETS - STANDARD CURB



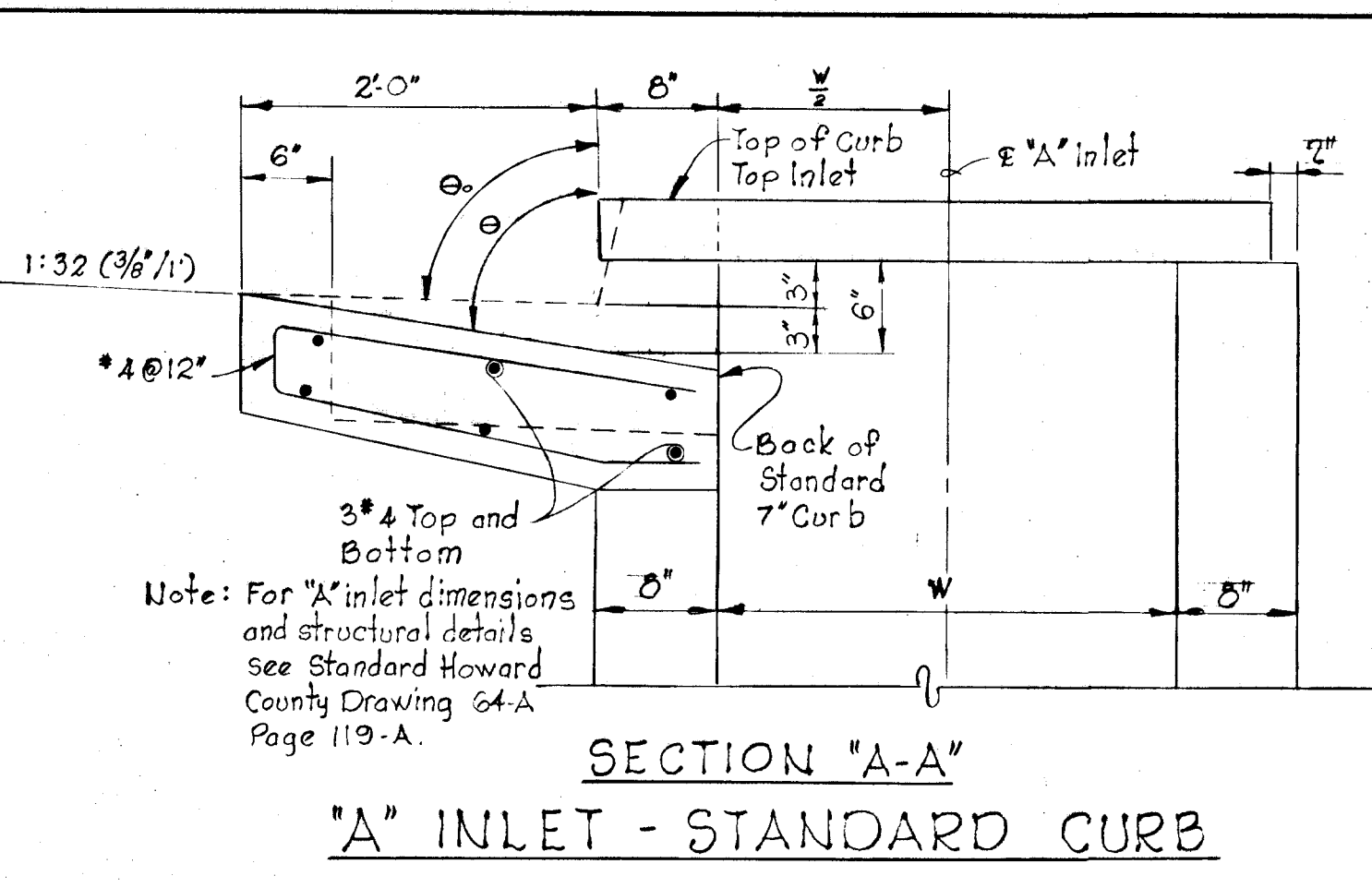
SECTION ALONG FLOW LINE
"A" INLETS - STANDARD CURB



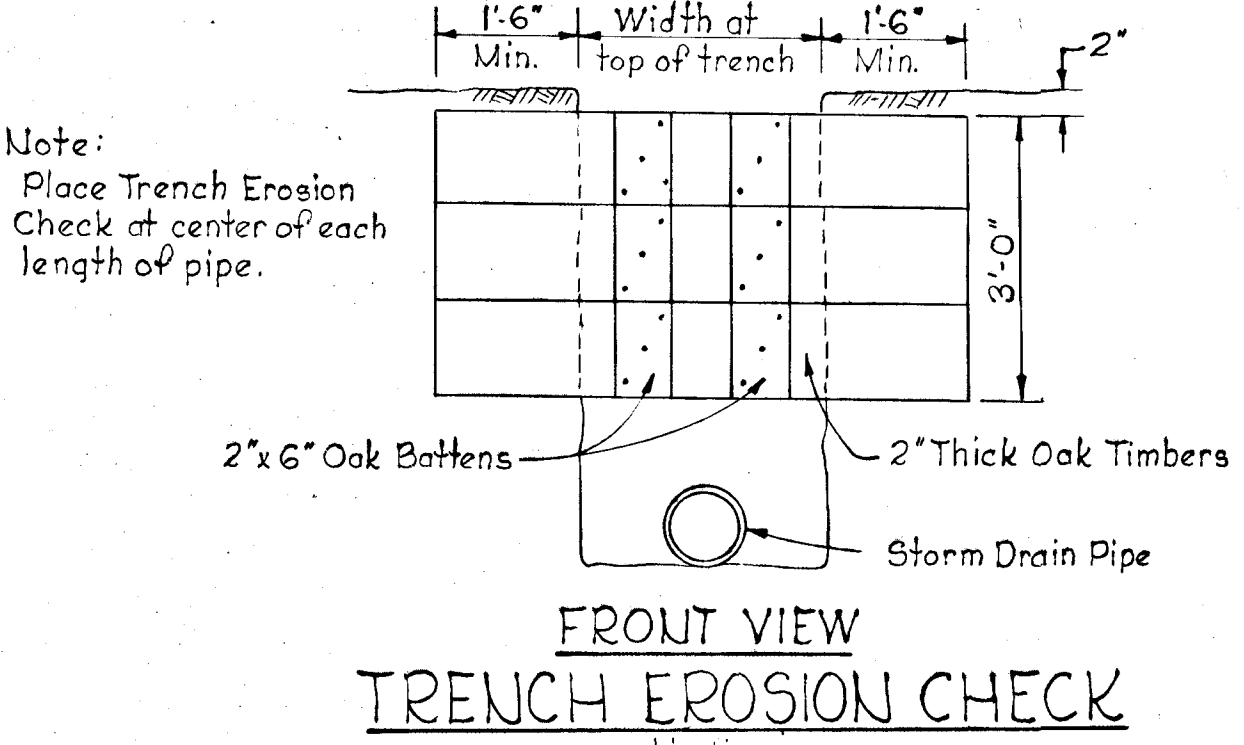
SECTION ALONG FLOW LINE
SUMPED "A" INLETS - MODIFIED CURB



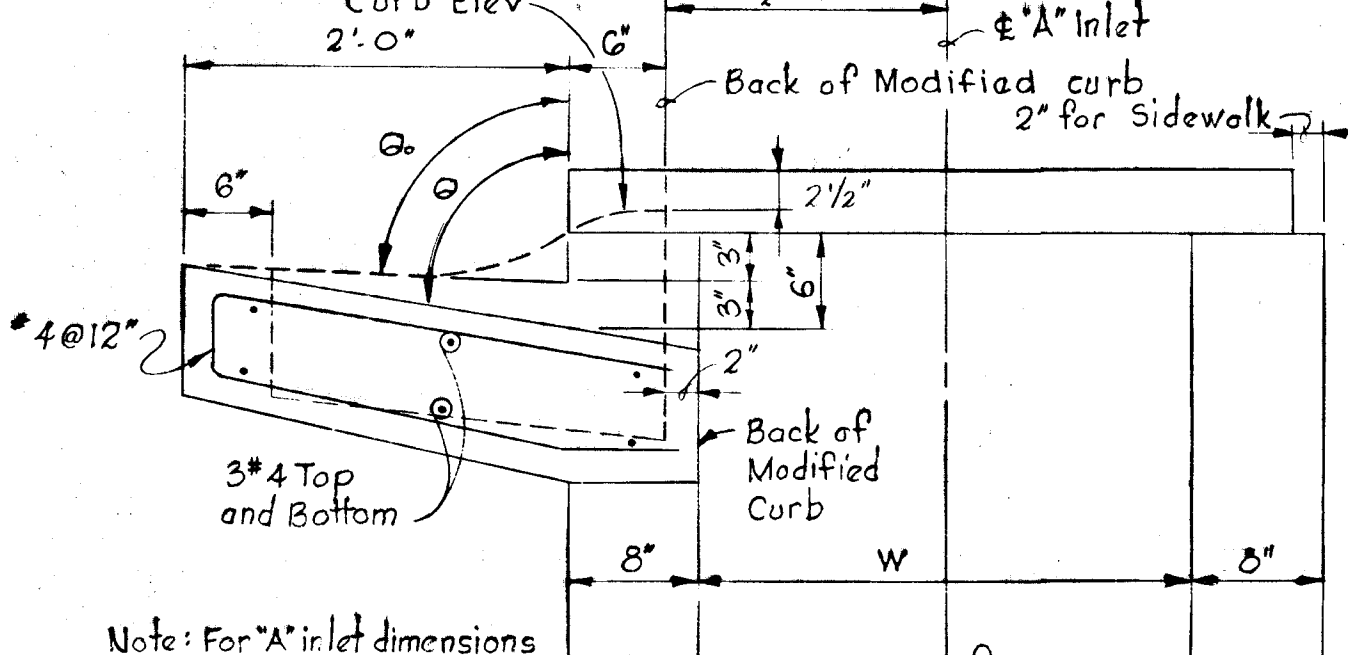
SECTION ALONG FLOW LINE
"A" INLETS - MODIFIED CURB



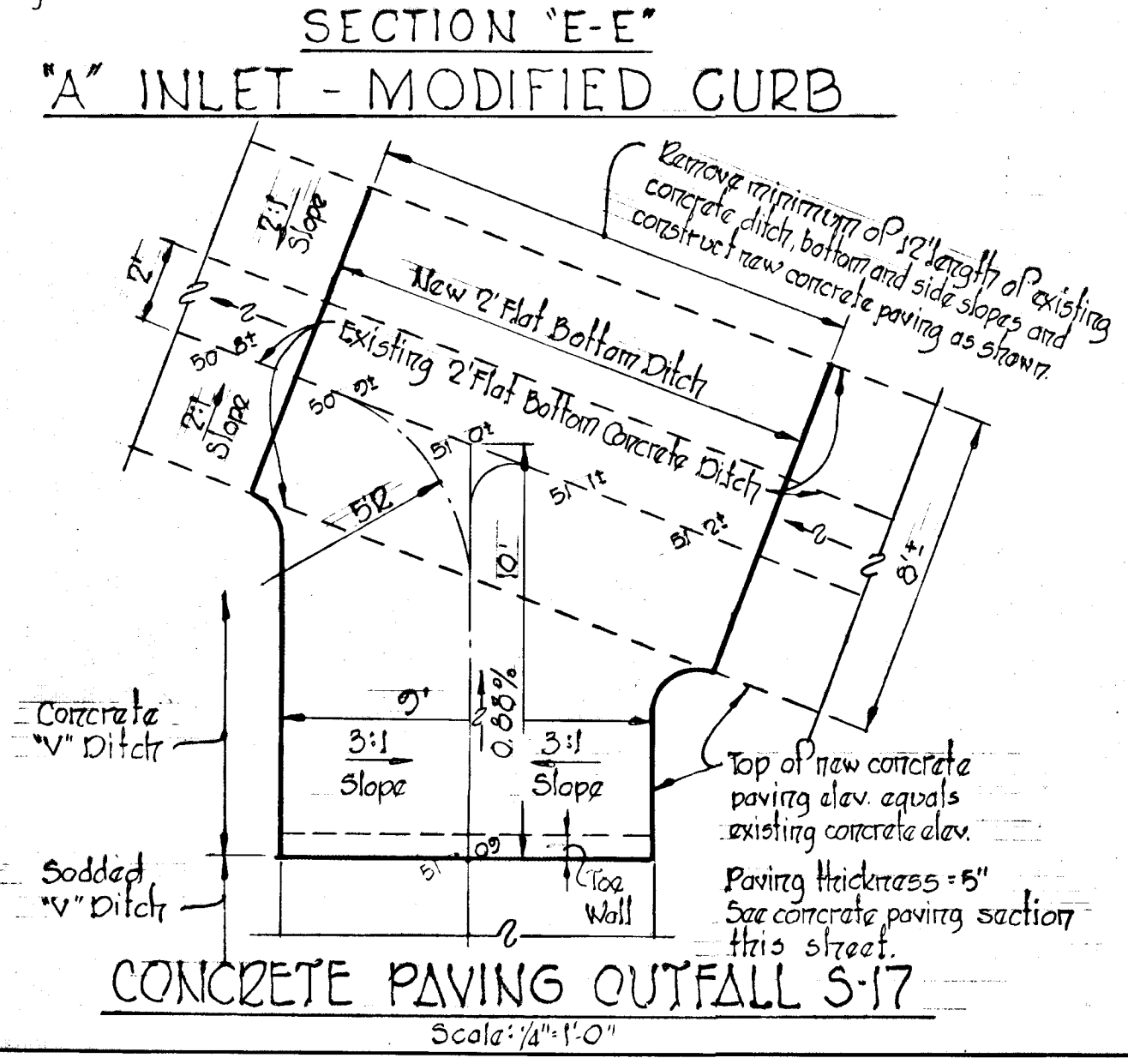
SECTION "A-A"
"A" INLET - STANDARD CURB



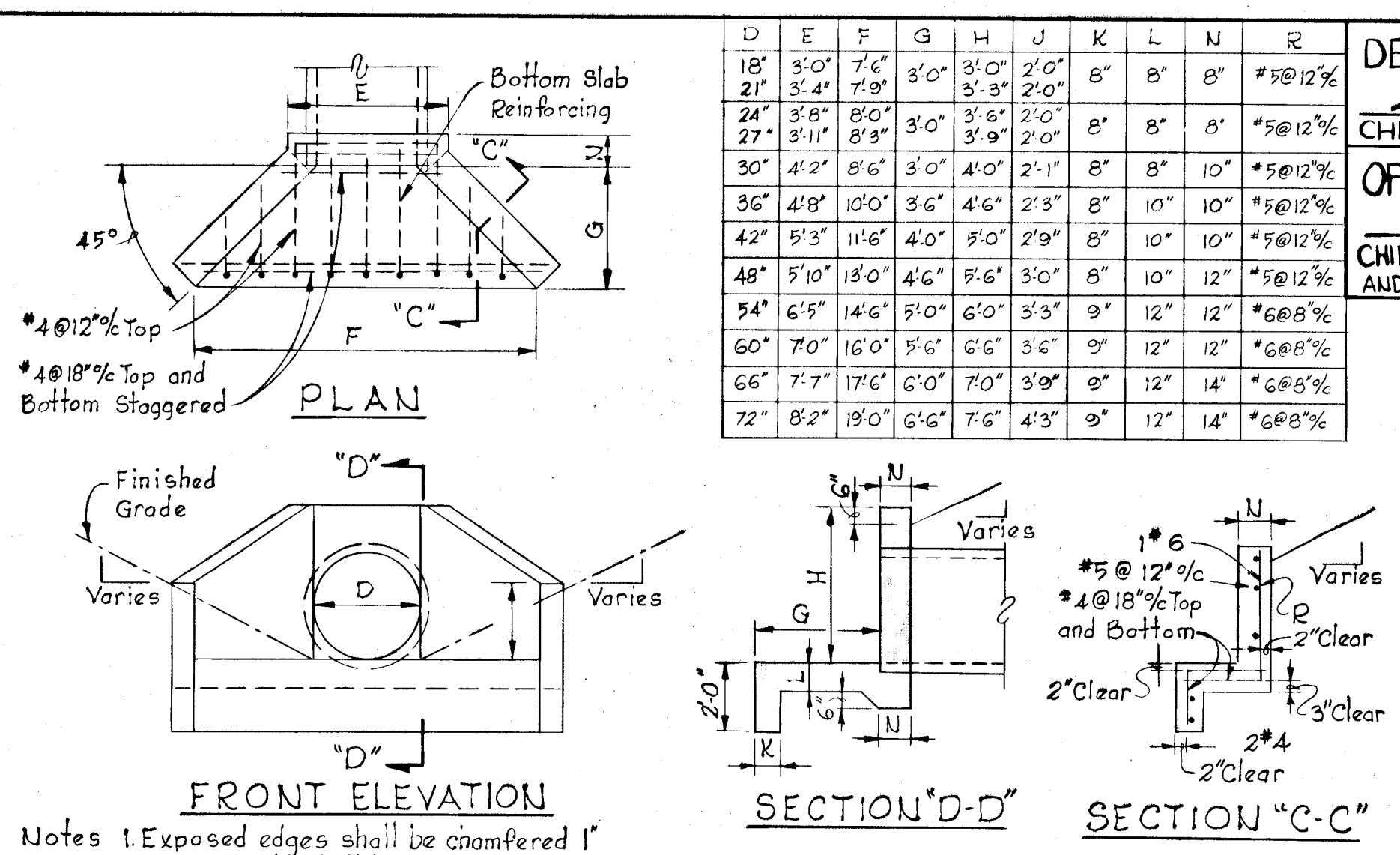
FRONT VIEW
TRENCH EROSION CHECK



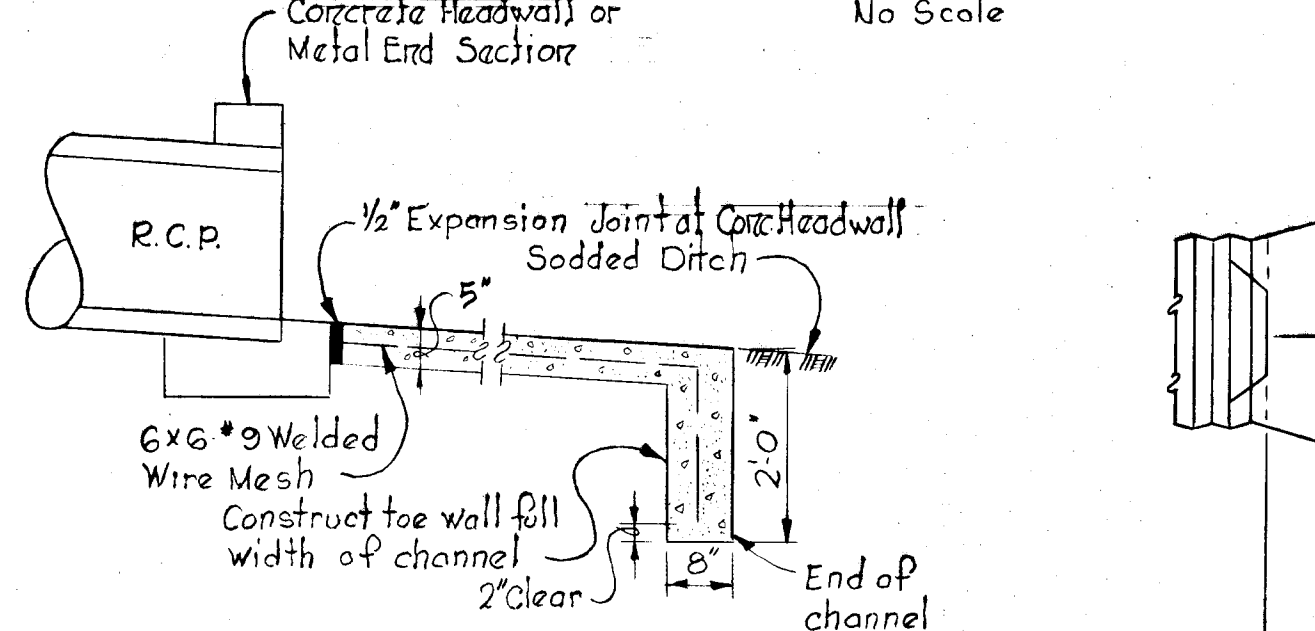
SECTION "E-E"
"A" INLET - MODIFIED CURB



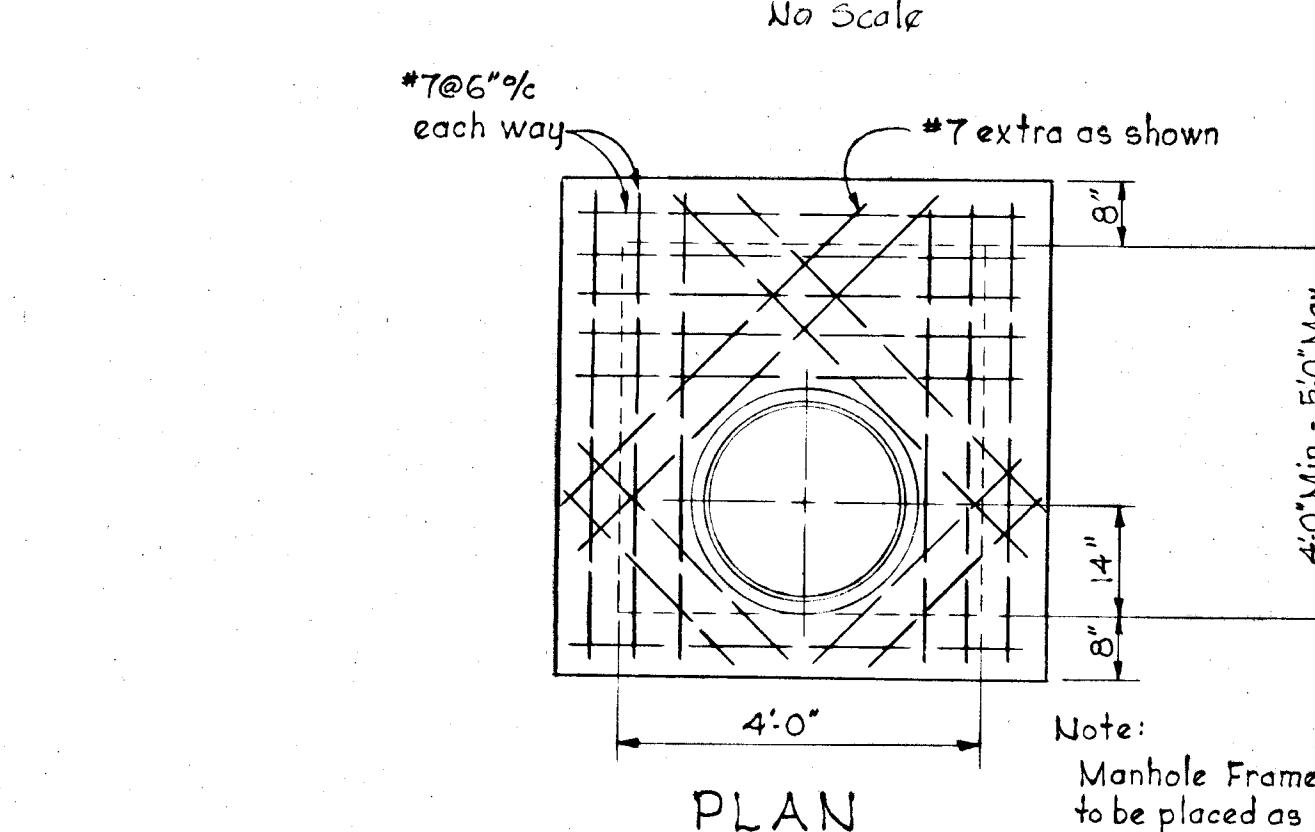
CONCRETE PAVING OUTFALL 5:17



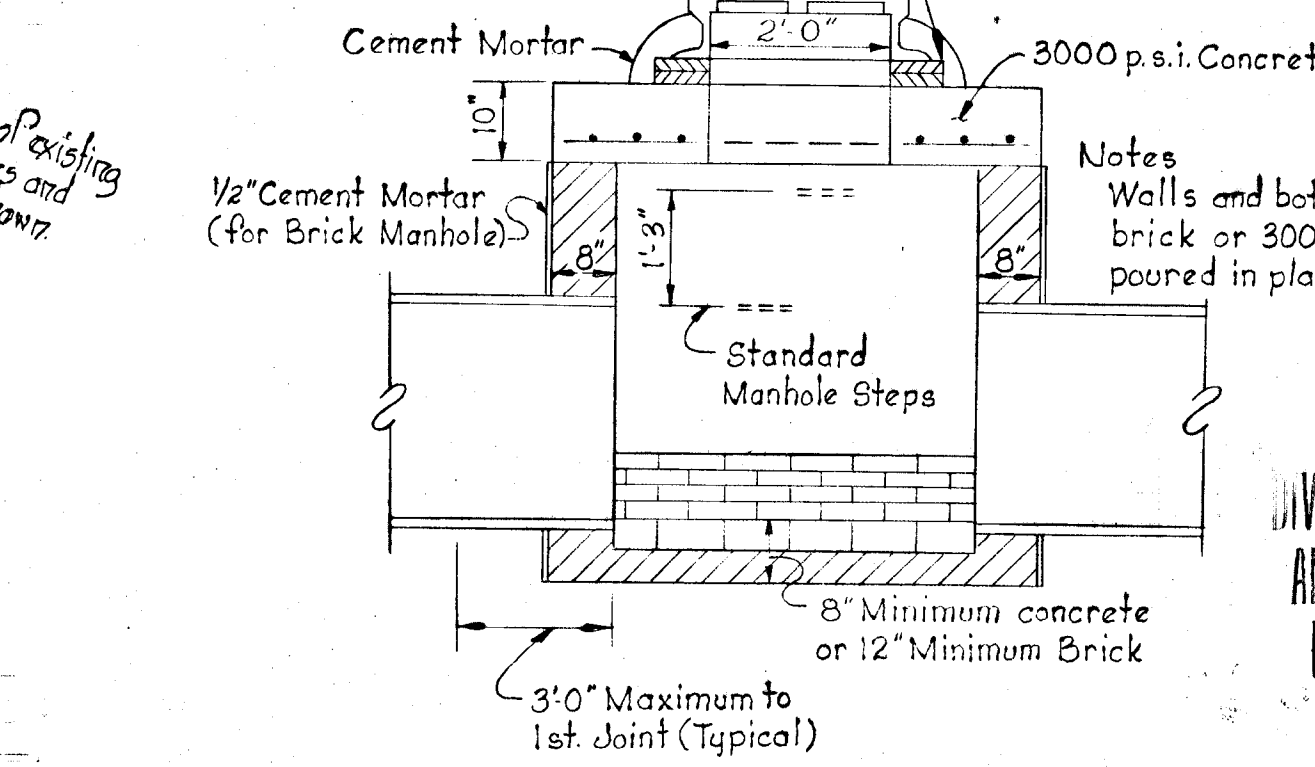
TYPE "A" HEADWALL



TYPICAL OUTLET PAVING



PLAN

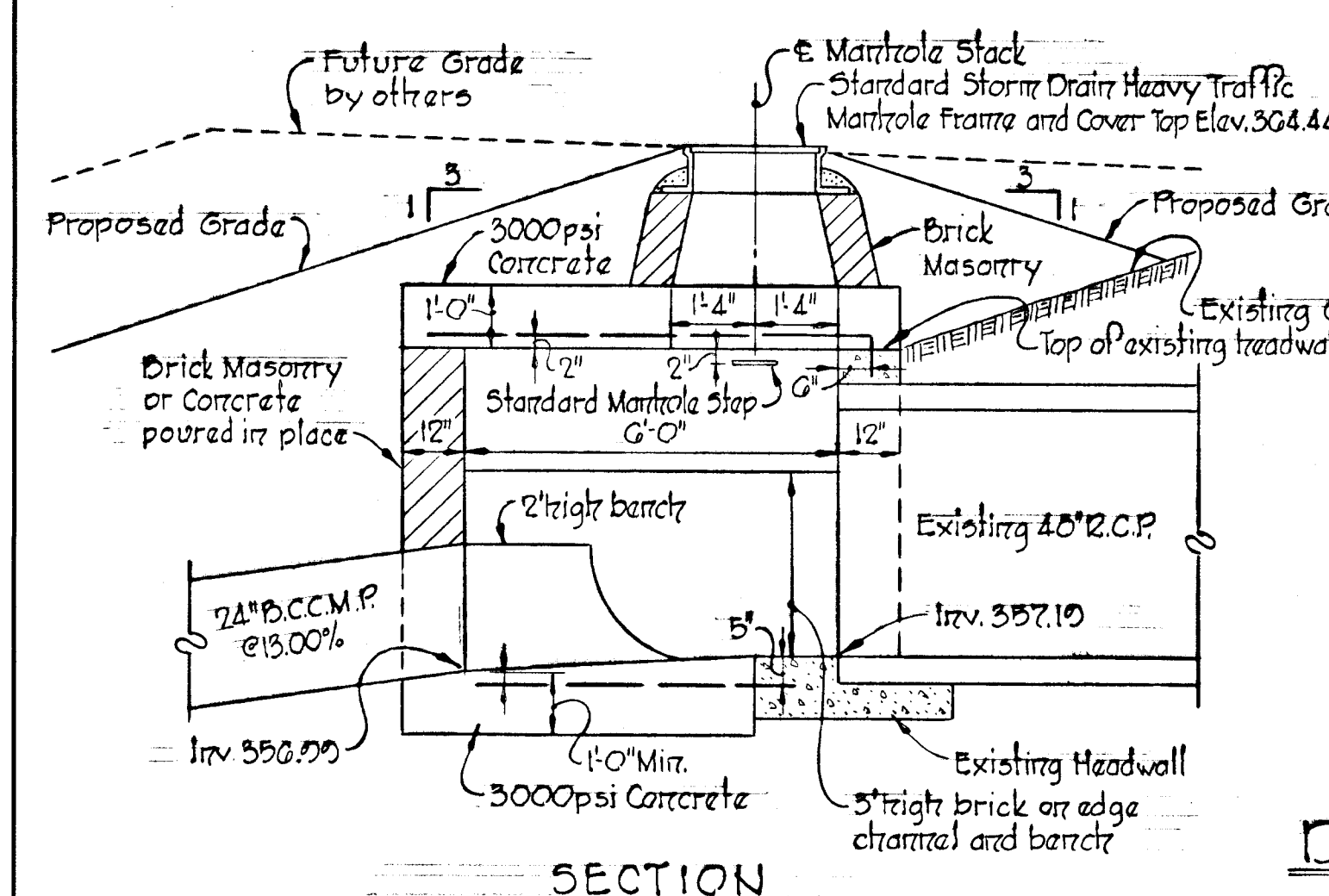
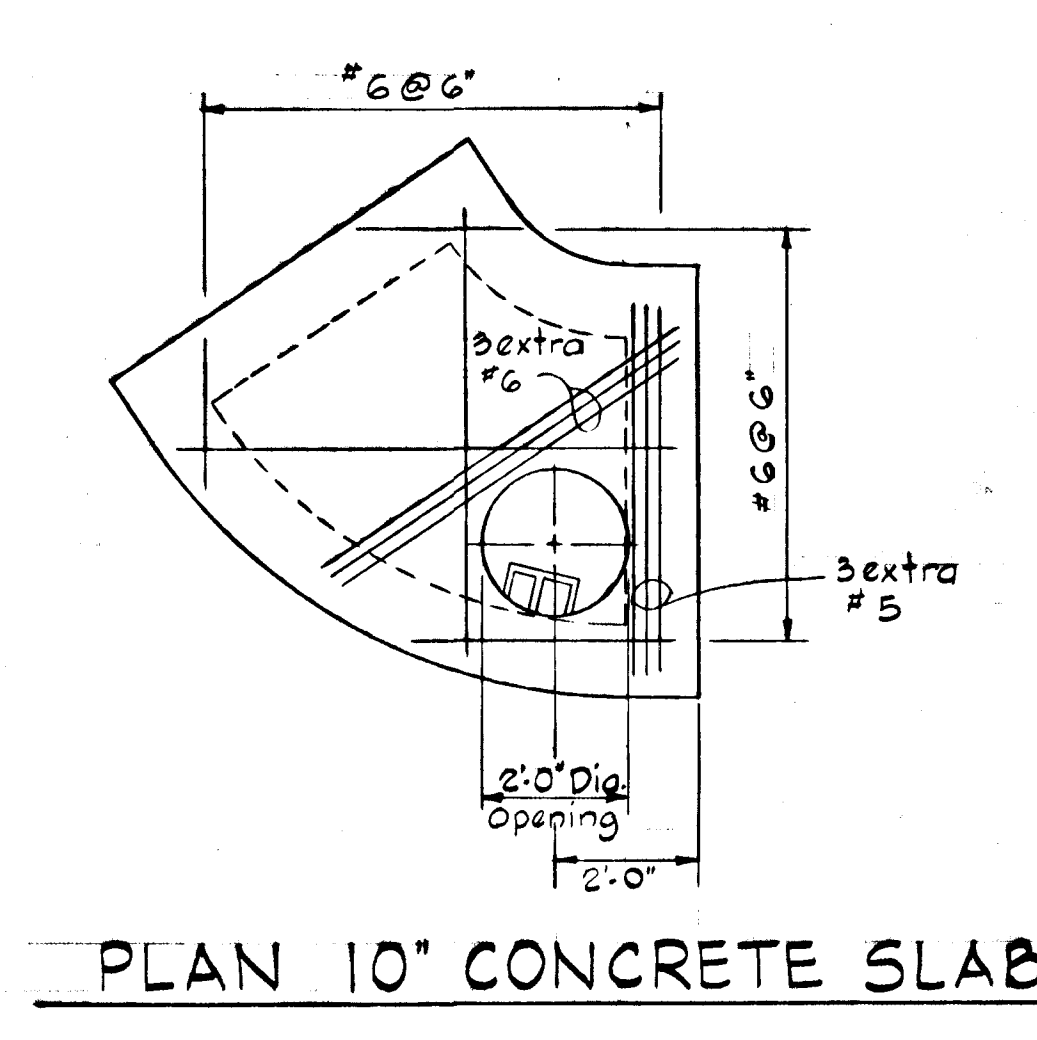
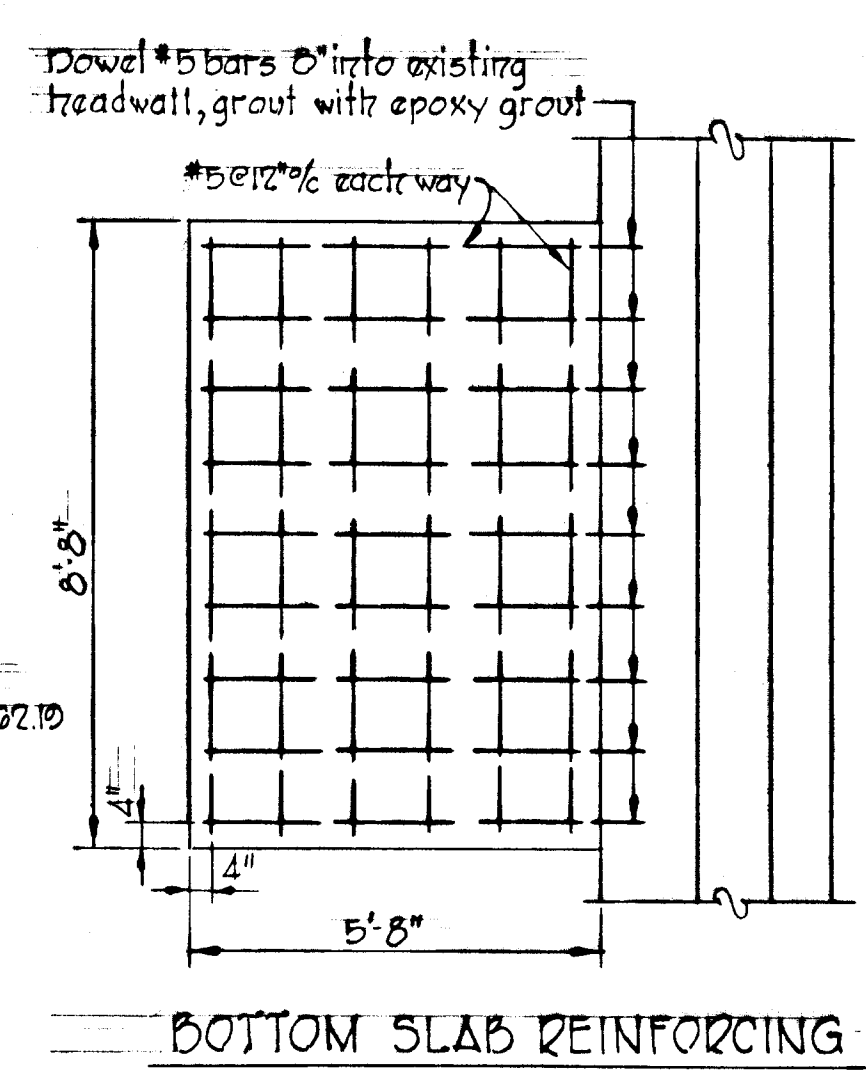
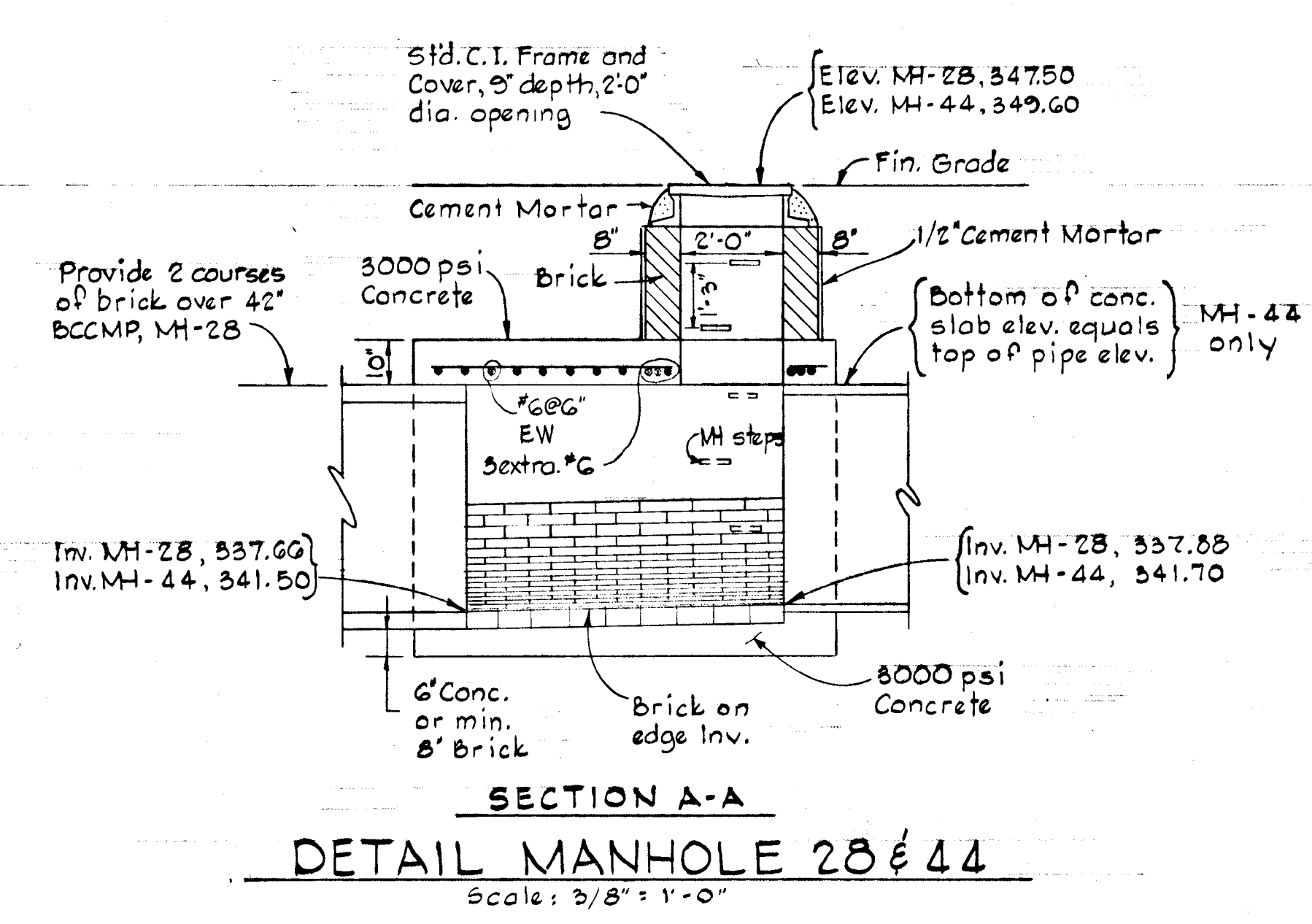
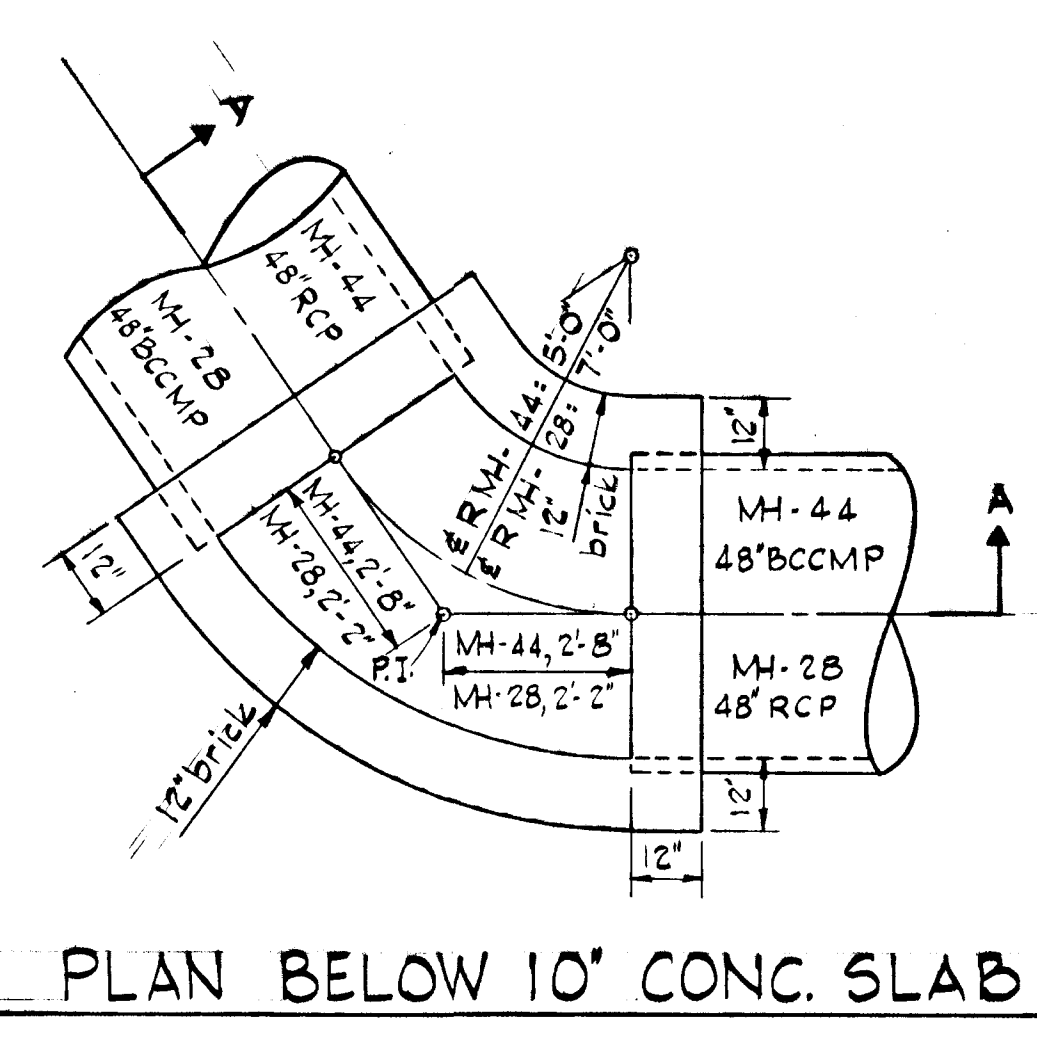
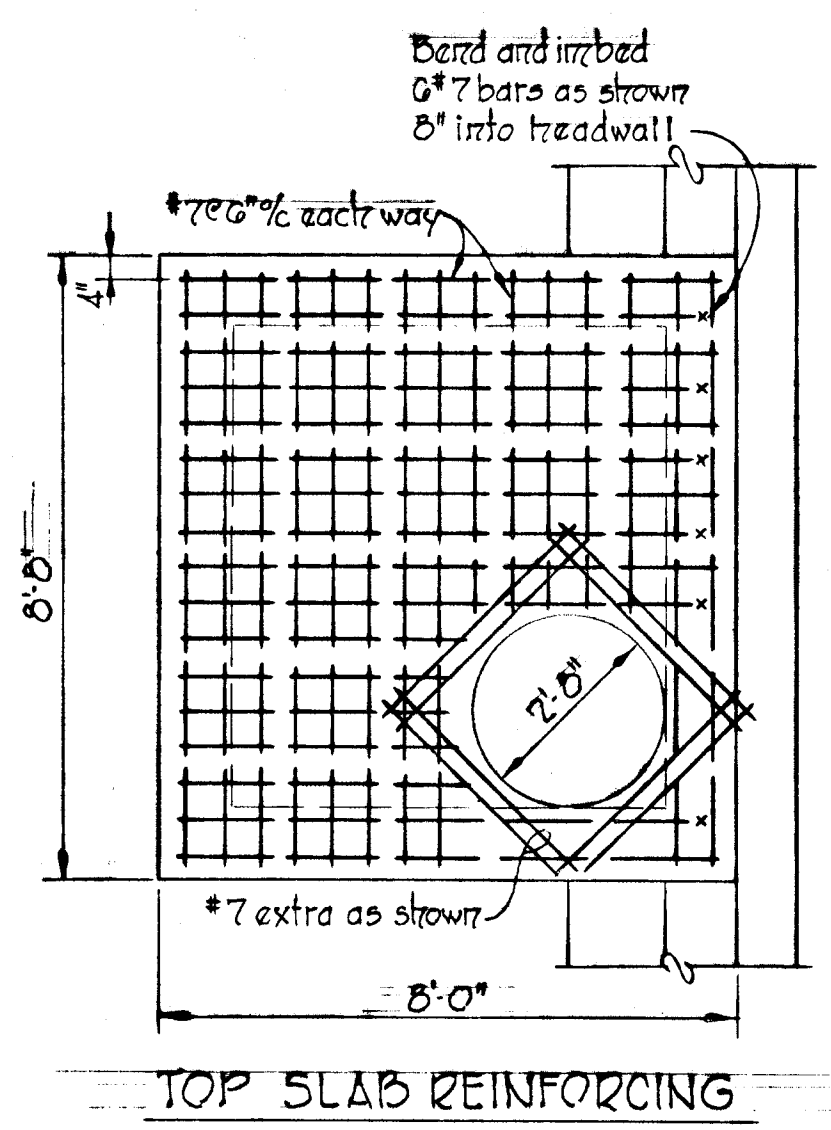
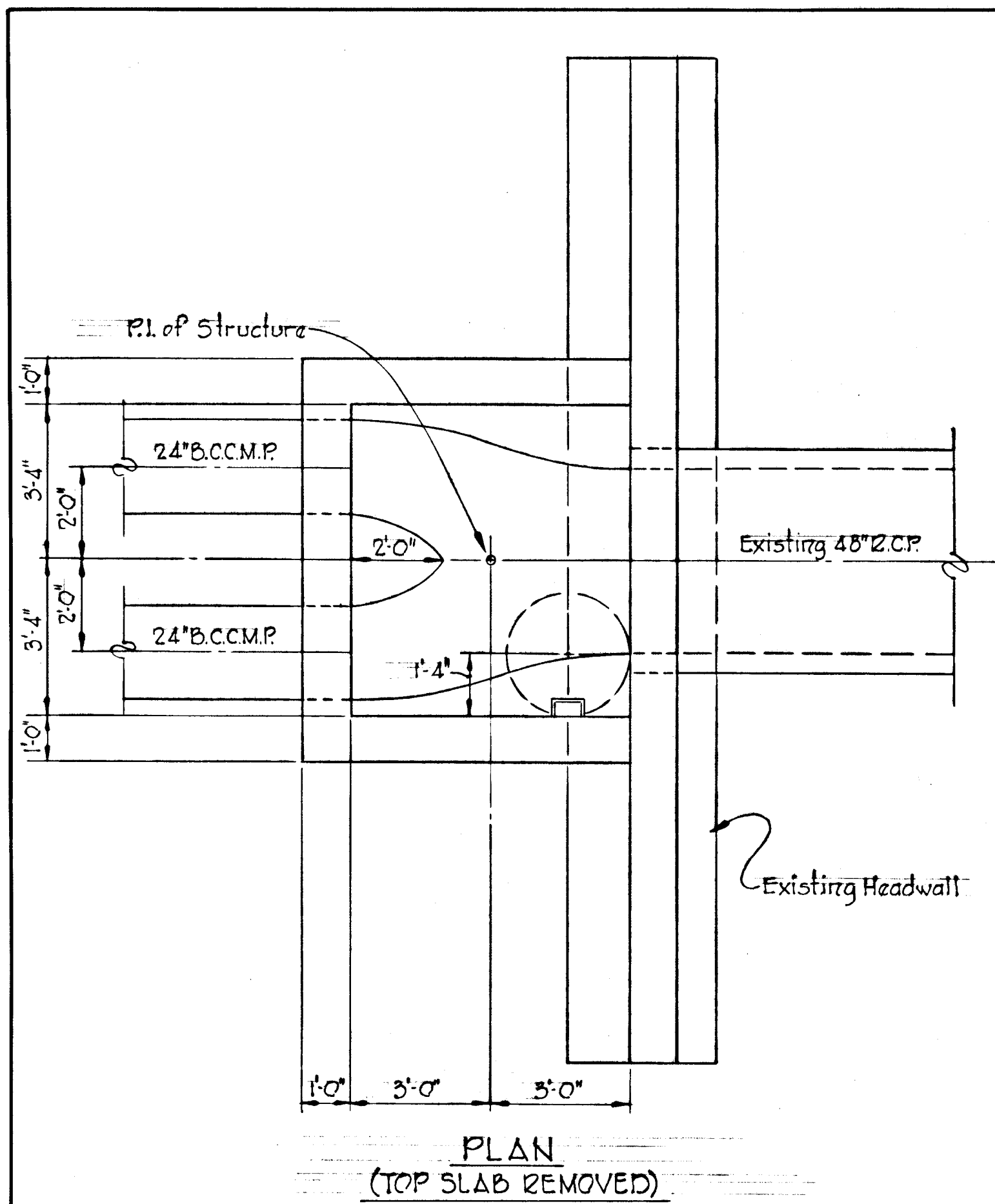


SECTION
TYPE "B" MANHOLE

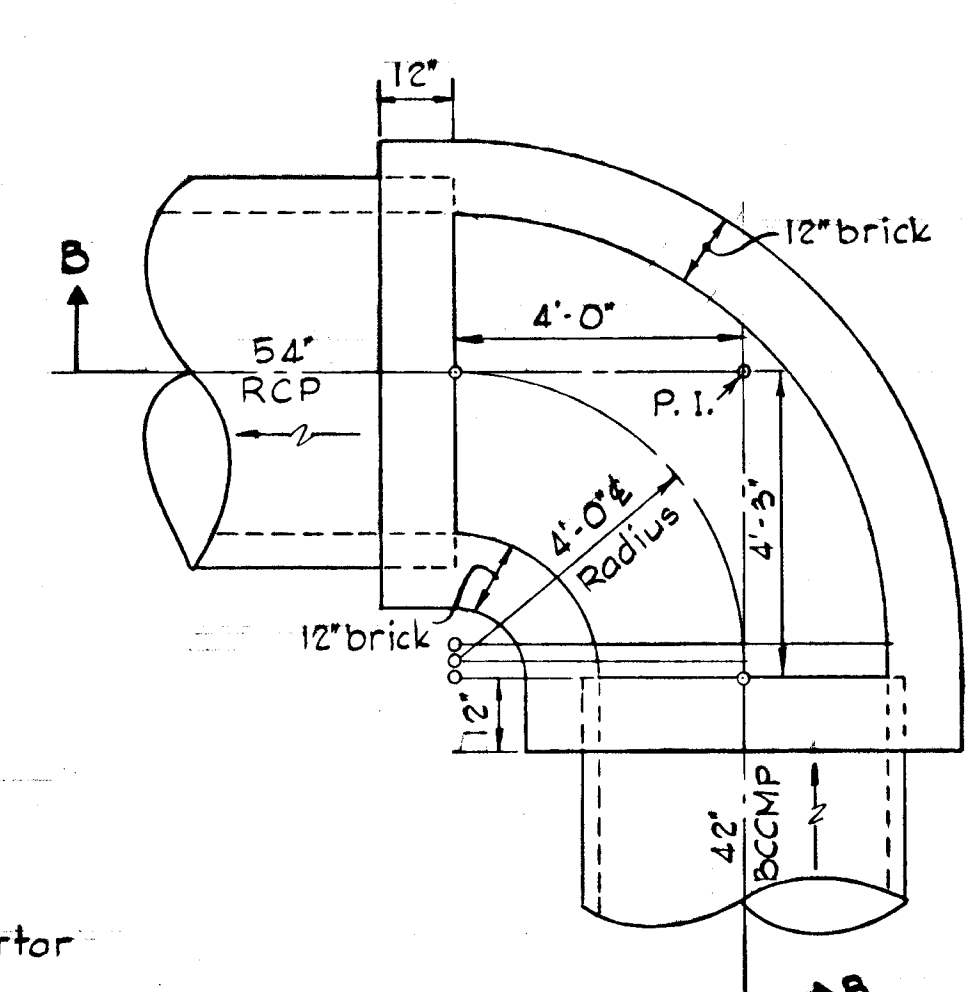
D	E	F	G	H	J	K	L	N	R
18'	3'0"	7'6"	3'0"	3'0"	2'0"	8'	8'	8'	#5@12"
21'	3'4"	7'9"	3'0"	3'0"	2'0"	8'	8'	8'	#5@12"
24'	3'8"	8'0"	3'0"	3'6"	2'0"	8'	8'	8'	#5@12"
27'	3'11"	8'3"	3'0"	3'9"	2'0"	8'	8'	10'	#5@12"
30'	4'2"	8'6"	3'0"	4'0"	2'1"	8'	8'	10'	#5@12"
36'	4'8"	10'0"	3'6"	4'6"	2'3"	8'	10'	10'	#5@12"
42'	5'3"	11'6"	4'0"	5'0"	2'9"	8'	10'	10'	#5@12"
48'	5'10"	13'0"	4'6"	5'6"	3'0"	8'	10'	12'	#5@12"
54'	6'5"	14'6"	5'0"	6'0"	3'3"	9'	12'	12'	#6@8"
60'	7'0"	16'0"	5'6"	6'6"	3'6"	9'	12'	12'	#6@8"
66'	7'7"	17'6"	6'0"	7'0"	3'9"	9'	12'	14'	#6@8"
72'	8'2"	19'0"	6'6"	7'6"	4'3"	9'	12'	14'	#6@8"

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

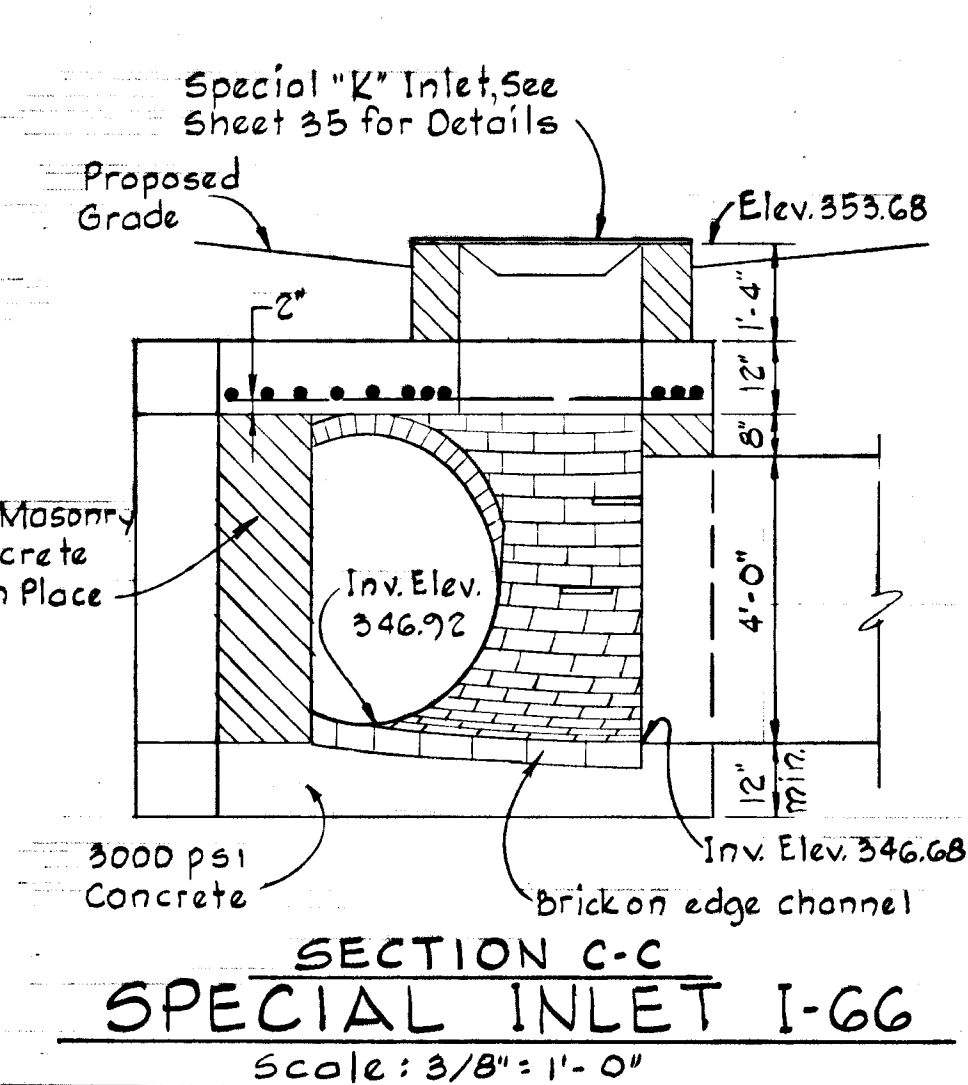
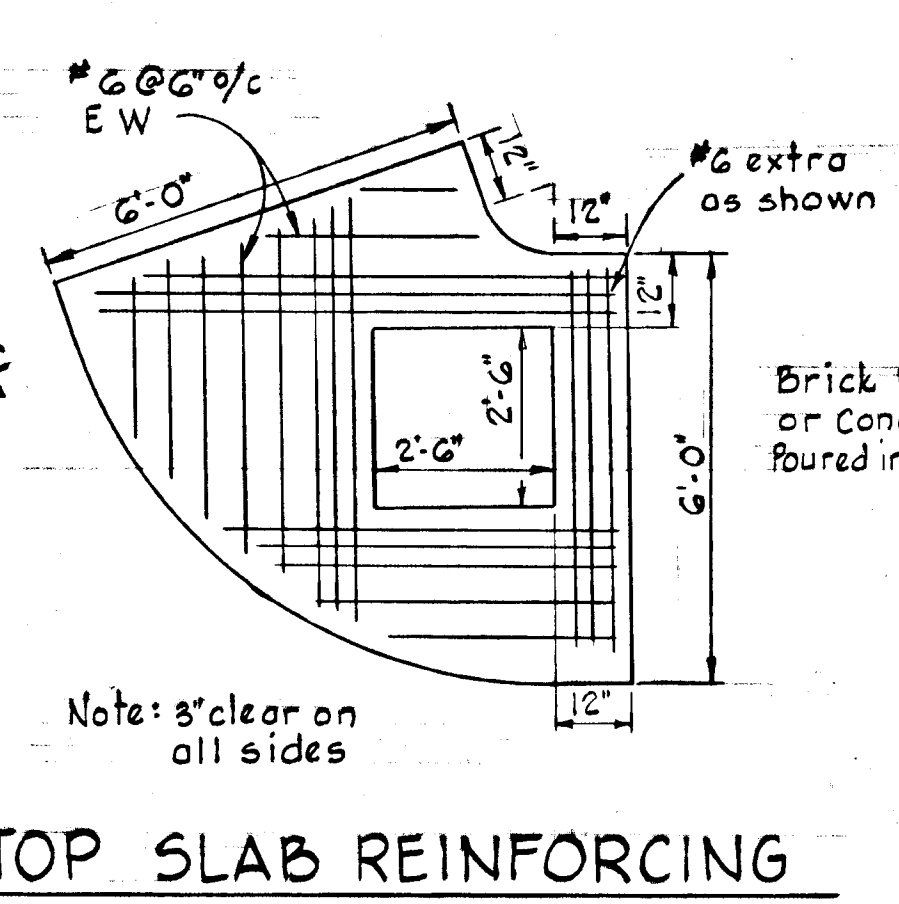
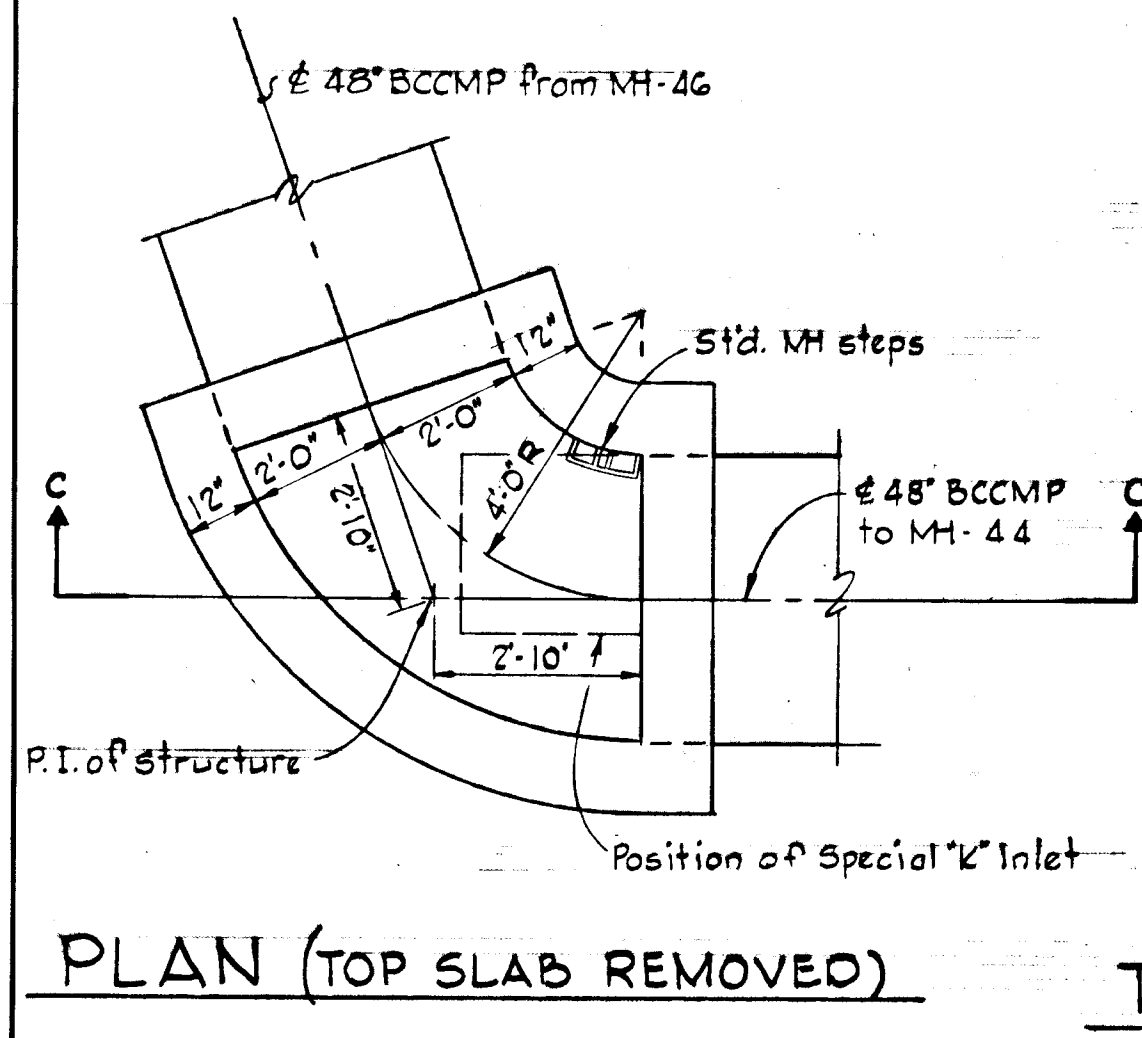
Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE STORM DRAIN DETAILS		
Scale: As Shown		Date: 4-30-73
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Approved DIVISION OF LAND DEVELOPMENT AND TRANSPORTATION PLANNING HOWARD COUNTY, MARYLAND DATE: MAY 24 1973 <i>J. N. C.</i>		Registered Engineer No 1974



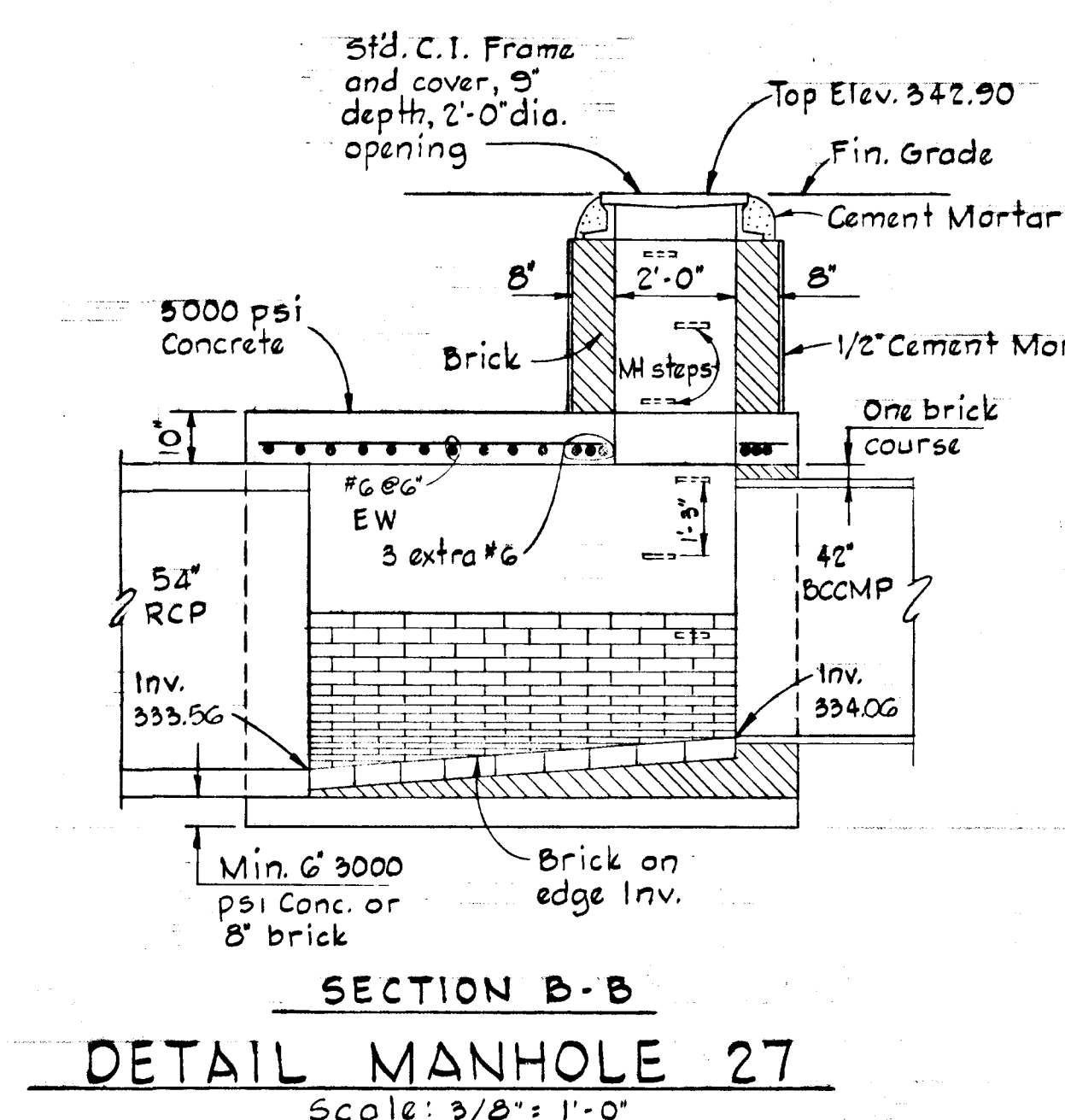
DETAIL - MANHOLE 29
 Scale: 3/8" = 1'-0"



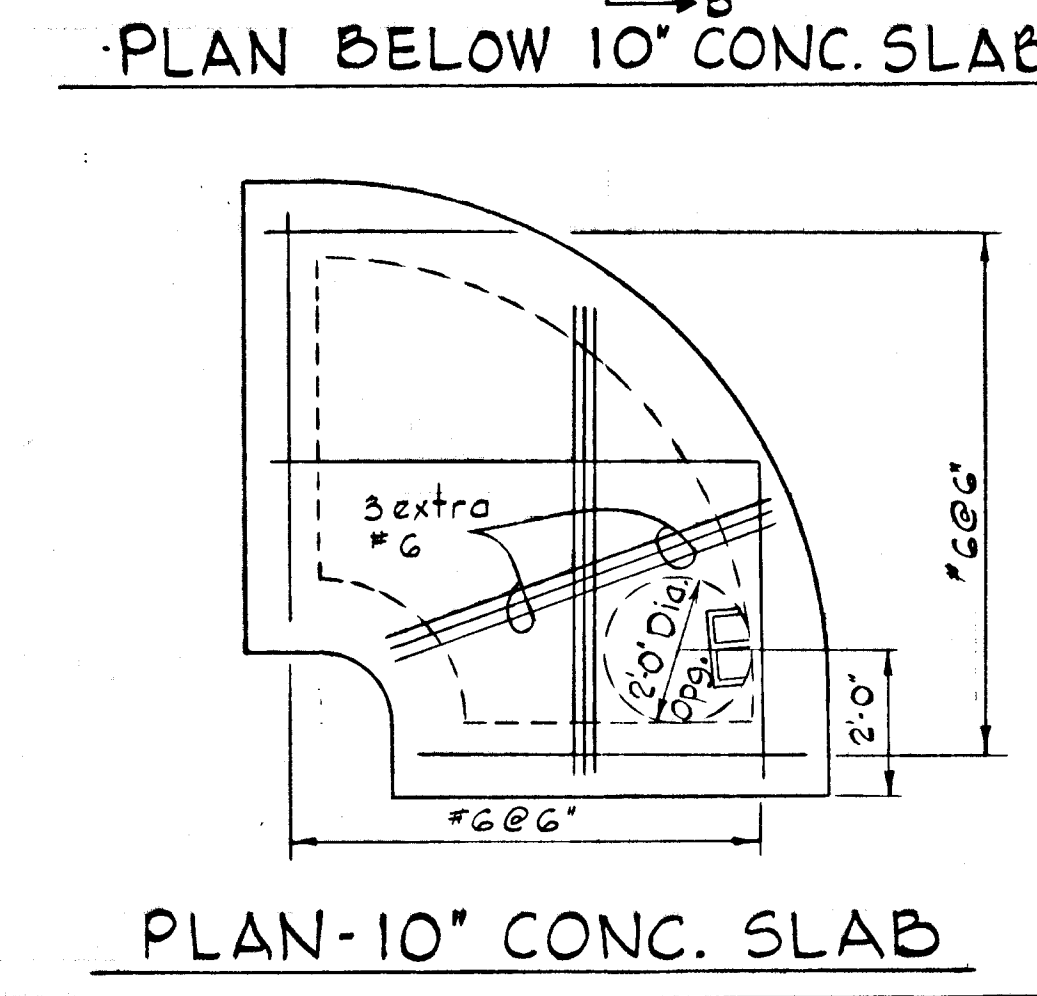
APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
[Signature]



SECTION C-C
 SPECIAL INLET I-66
 Scale: 3/8" = 1'-0"



SECTION B-B
 DETAIL MANHOLE 27
 Scale: 3/8" = 1'-0"



RevDate	RevNo	Revision Description

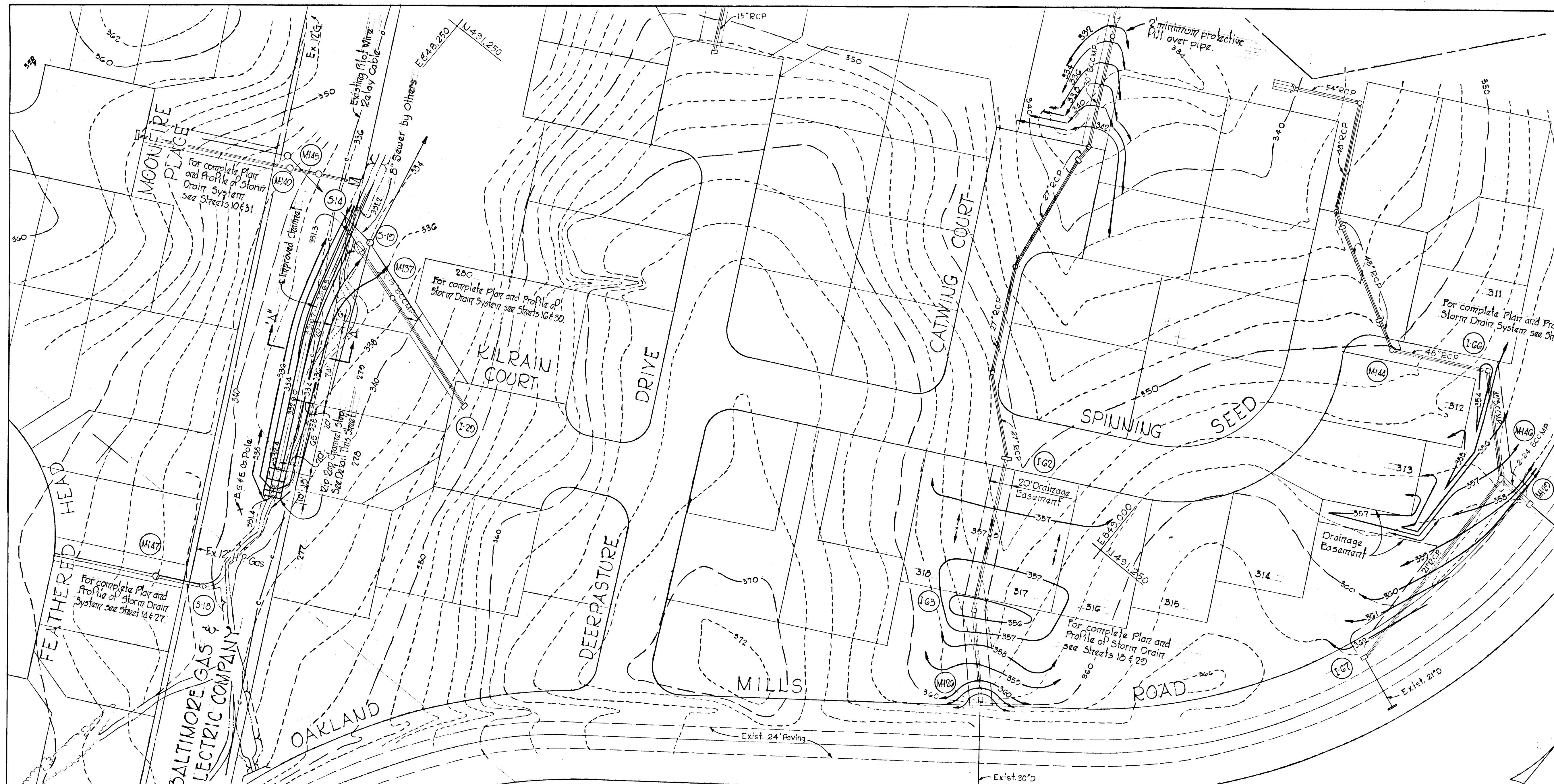
COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 THE HOWARD RESEARCH AND DEVELOPMENT CORP

PROJECT AREA
 VILLAGE OF OWEN BROWN
 SECTION 2, AREA 3

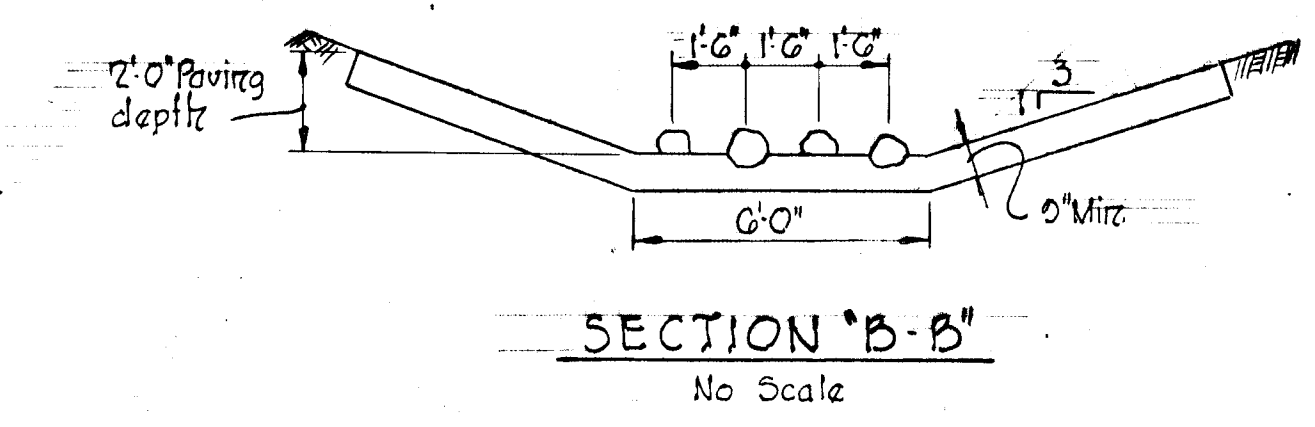
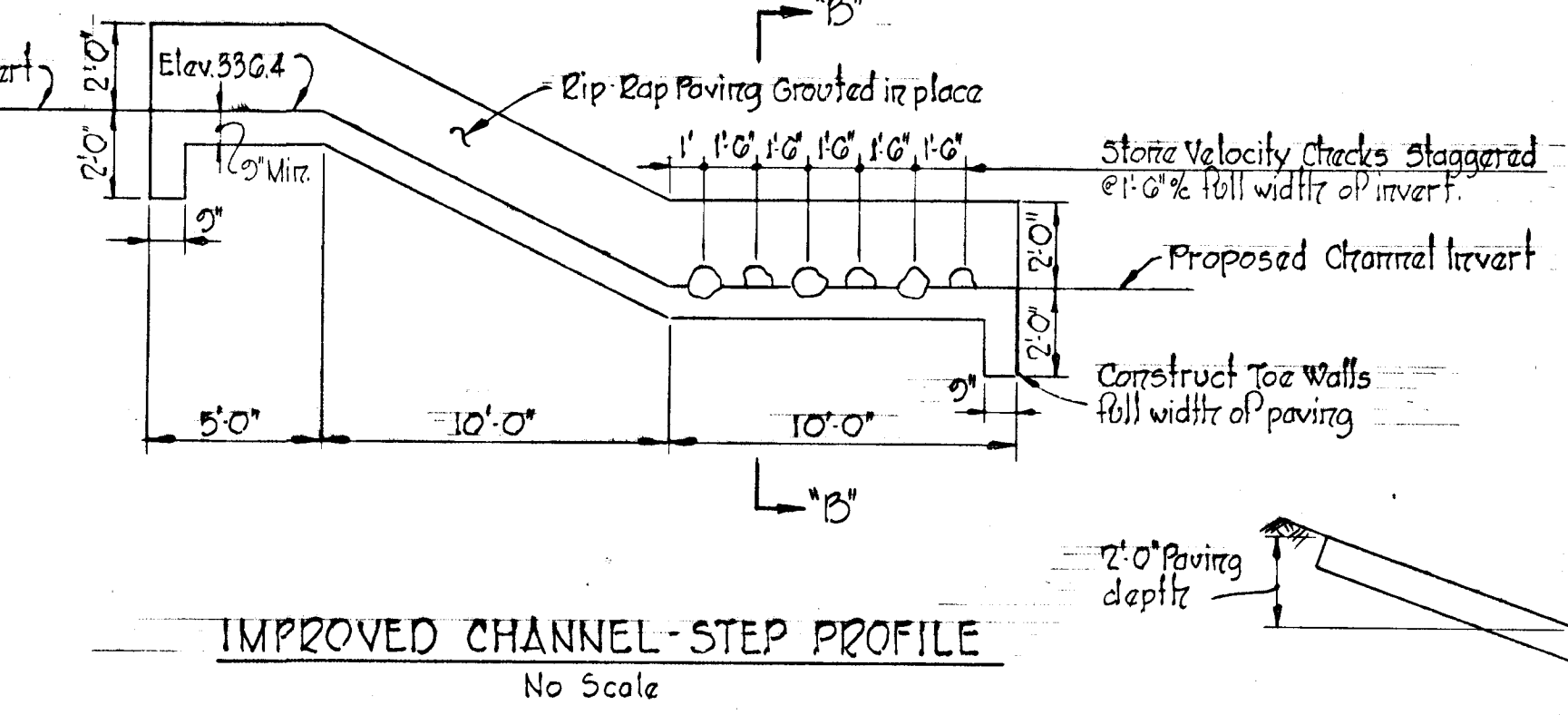
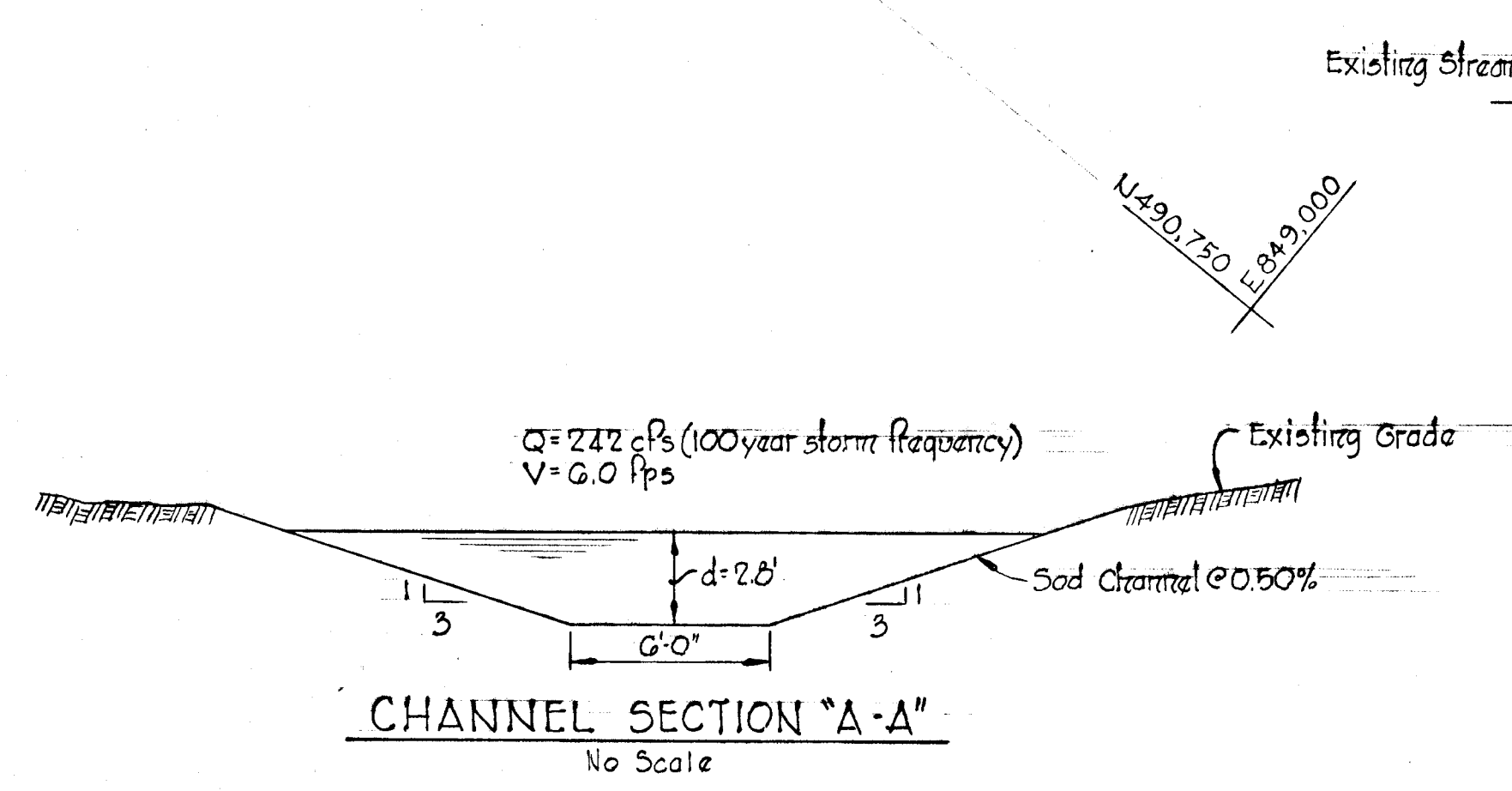
PROJECT TITLE
STORM DRAIN DETAILS

Scale: As Shown Date: 4/30/73
 WHITMAN, REARD & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

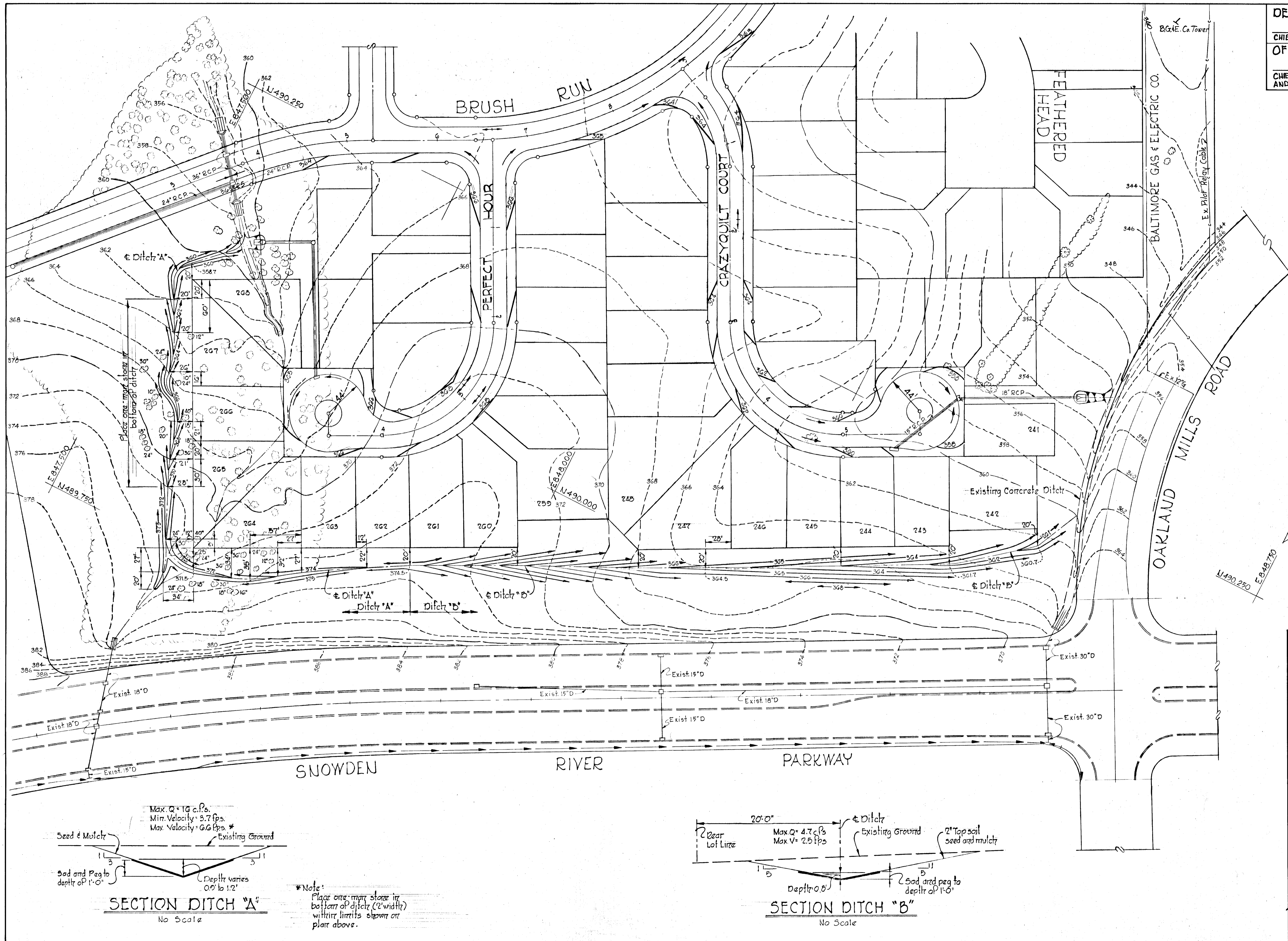
Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No 1974



APPROVED
 DIVISION OF LAND DEVELOPMENT
 AND TRANSPORTATION PLANNING
 HOWARD COUNTY, MARYLAND
 DATE MAY 24 1973
 J. J. [Signature]

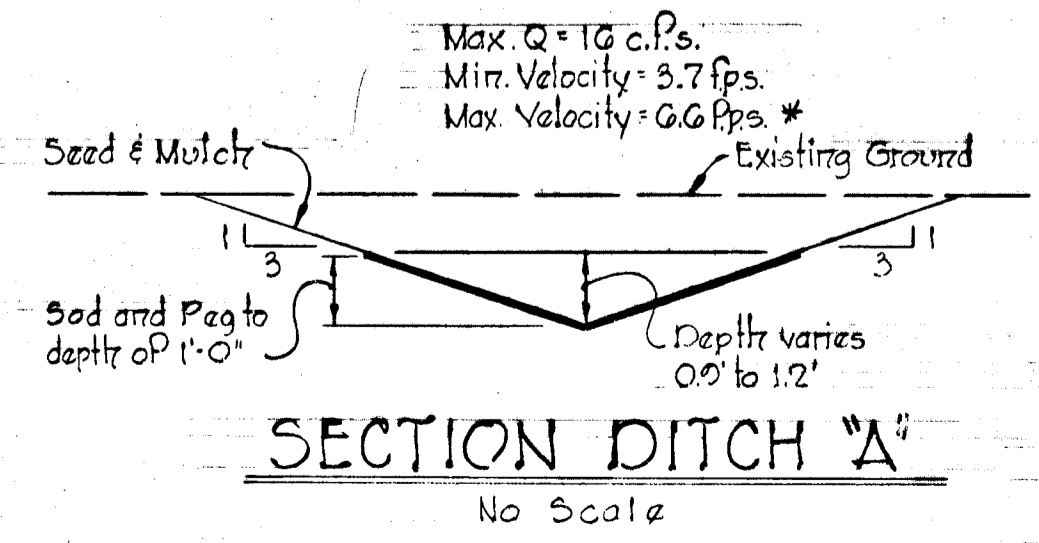


Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE DRAINAGE DETAILS		
Scale: 1" = 50'		Date: 4/30/73
WHITMAN, REQUARDT & ASSOCIATES 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 MAY 24 1973
 J. R. C.

Rev. Date	Rev. No.	Revision Description
COLUMBIA 6 TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP.		
PROJECT AREA VILLAGE OF OWEN BROWN SECTION 2, AREA 3		
PROJECT TITLE DRAINAGE DETAILS		
Scale: 1"=50'		Date: 4/30/73
WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202		
Kenneth A. McCord KENNETH A. MCCORD Registered Engineer No 1574		



*Note:
 Place one rear stone in bottom of ditch (2' width) within limits shown on plan above.

