

COLUMBIA

HOWARD COUNTY, MARYLAND 6th ELECTION DISTRICT CONSTRUCTION PLANS

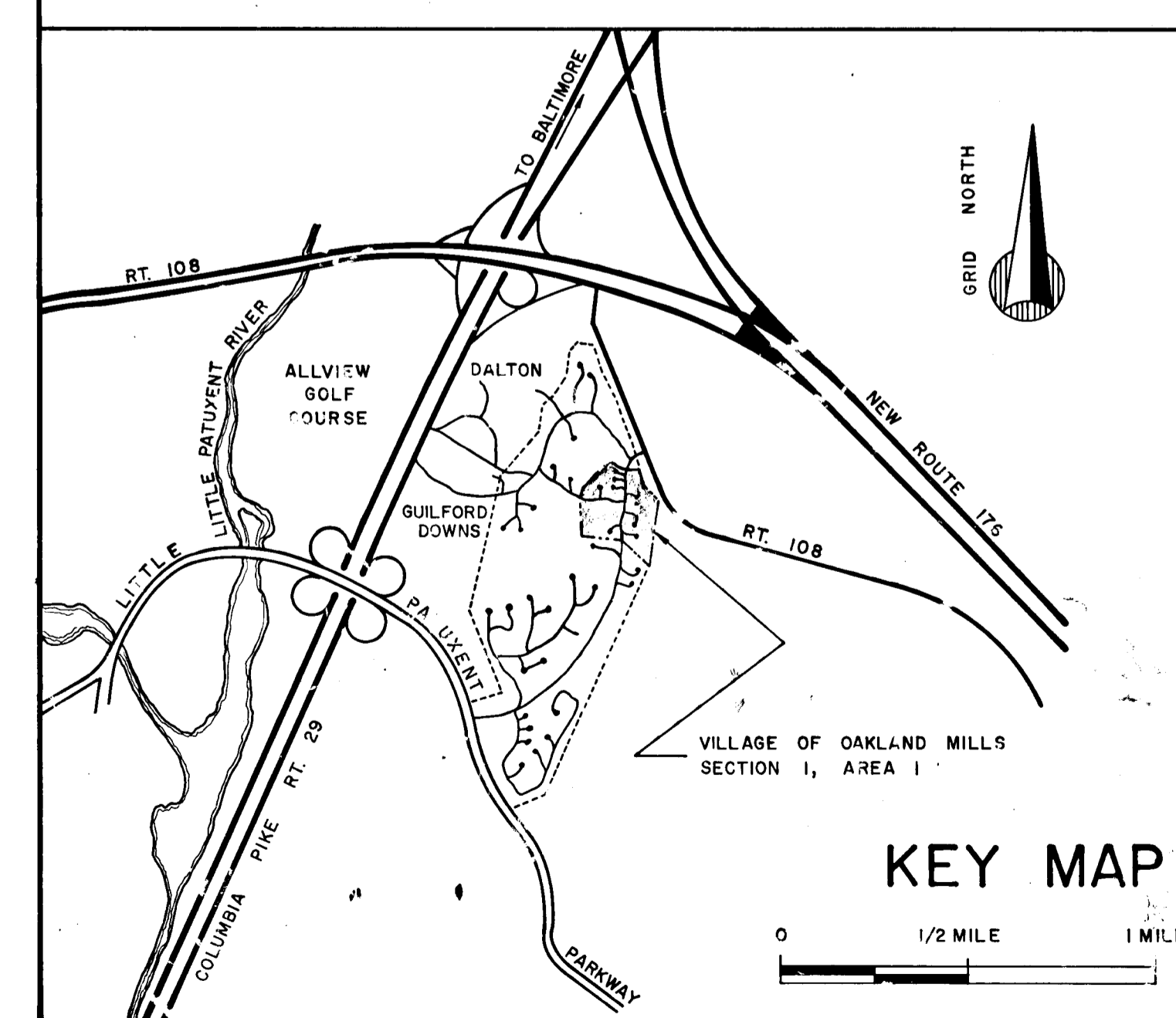
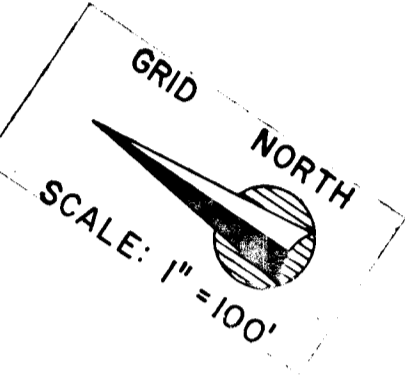
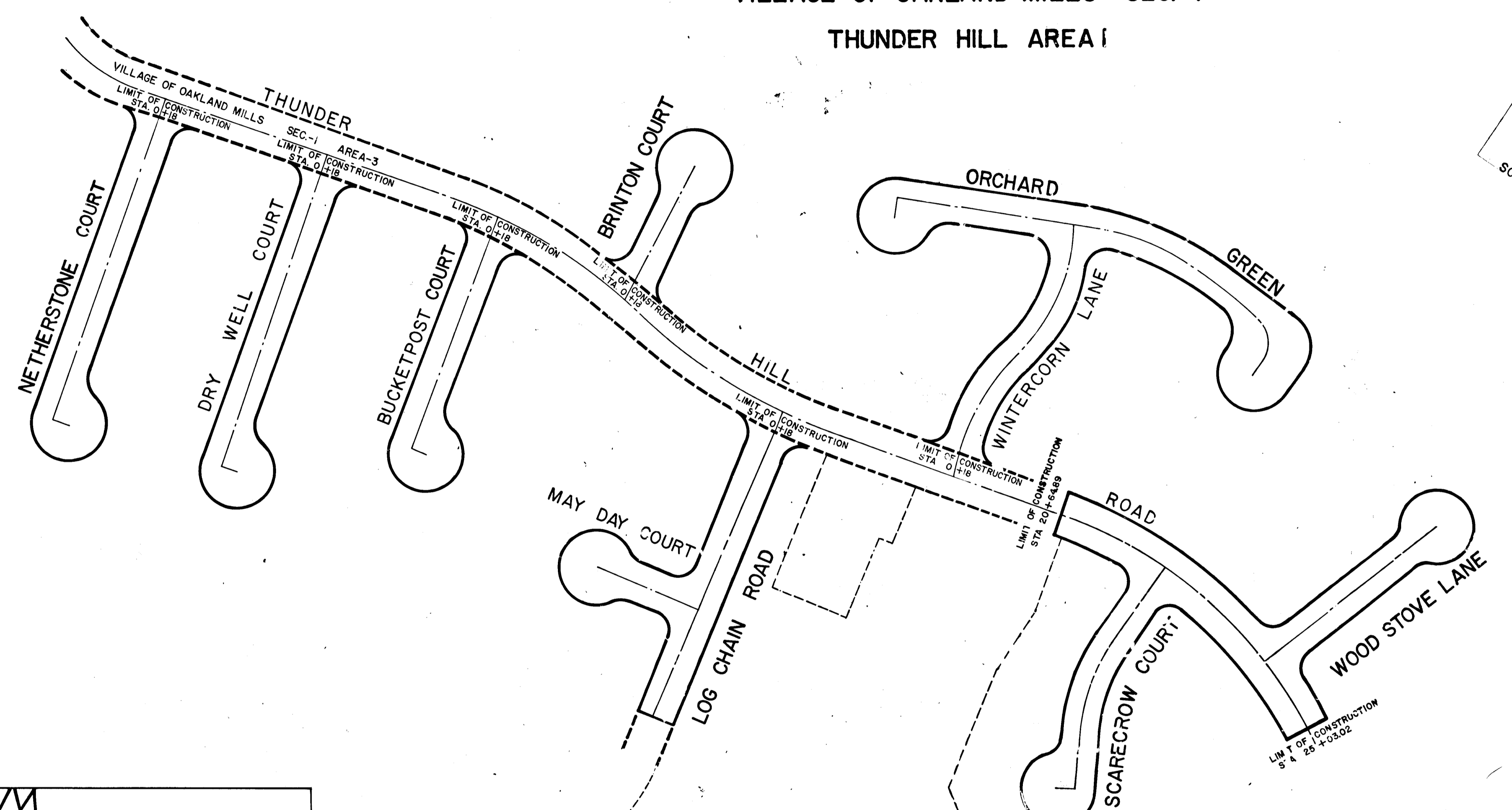
VILLAGE OF OAKLAND MILLS SEC. I
THUNDER HILL AREA I

NOTES:

1. THUNDER HILL ROAD IS DESIGNED FOR 35 M.P.H. TRAFFIC SPEED. ALL OTHER ROADS ARE DESIGNED FOR 25 M.P.H. TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS' STANDARDS.

2. ALL DETAILS ARE FROM "ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS" ISSUED OR APPROVED BY THE COUNTY COMMISSIONERS OR THE HOWARD COUNTY ROAD DEPARTMENT.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	DRAINAGE MAP
3.	PLAN & PROFILE SHEETS
4.	THUNDER HILL ROAD
5.	NETHERSTONE COURT
6.	DRY WELL COURT, BUCKETPOST COURT
7.	LOG CHAIN ROAD
8.	MAY DAY COURT
9.	WOOD STOVE LANE
10.	SCARECROW COURT
11.	WINTERCORN LANE, EASEMENT "H"
12.	ORCHARD GREEN
13.	DRAINAGE DETAILS
14.	ROAD CONSTRUCTION DETAILS



ESTIMATE OF QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY

APPROVED HOWARD COUNTY PLANNING COMM

J. H. Lawson 9-25-68
CHIEF ENGINEER DATE

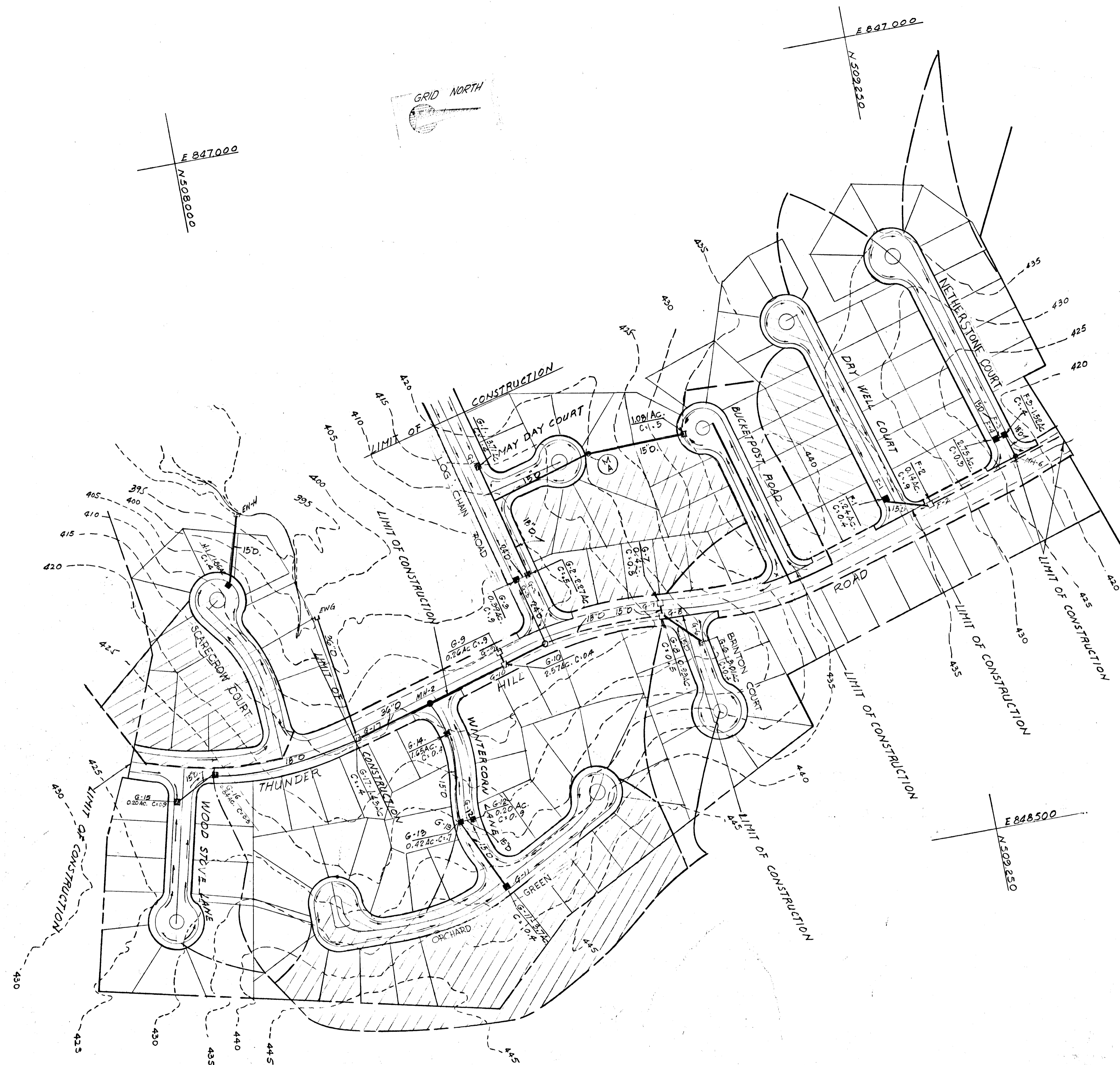
APPROVED HOWARD COUNTY ROADS DEPT
Donald H. McLeod 8-28-68
ROADS SUPERINTENDENT DATE

APPROVED HOWARD COUNTY METROPOLITAN COMM
J. H. Lawson 9-25-68
CHIEF ENGINEER DATE

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

RICHARD P. BROWNE, P.E. & L.S.
LIC. NO. 5238 STATE MD.

OWNER & DEVELOPER
THE HOWARD RESEARCH AND DEVELOPMENT CORP
THE VILLAGE OF CROSS KEYS
BALTIMORE, MARYLAND



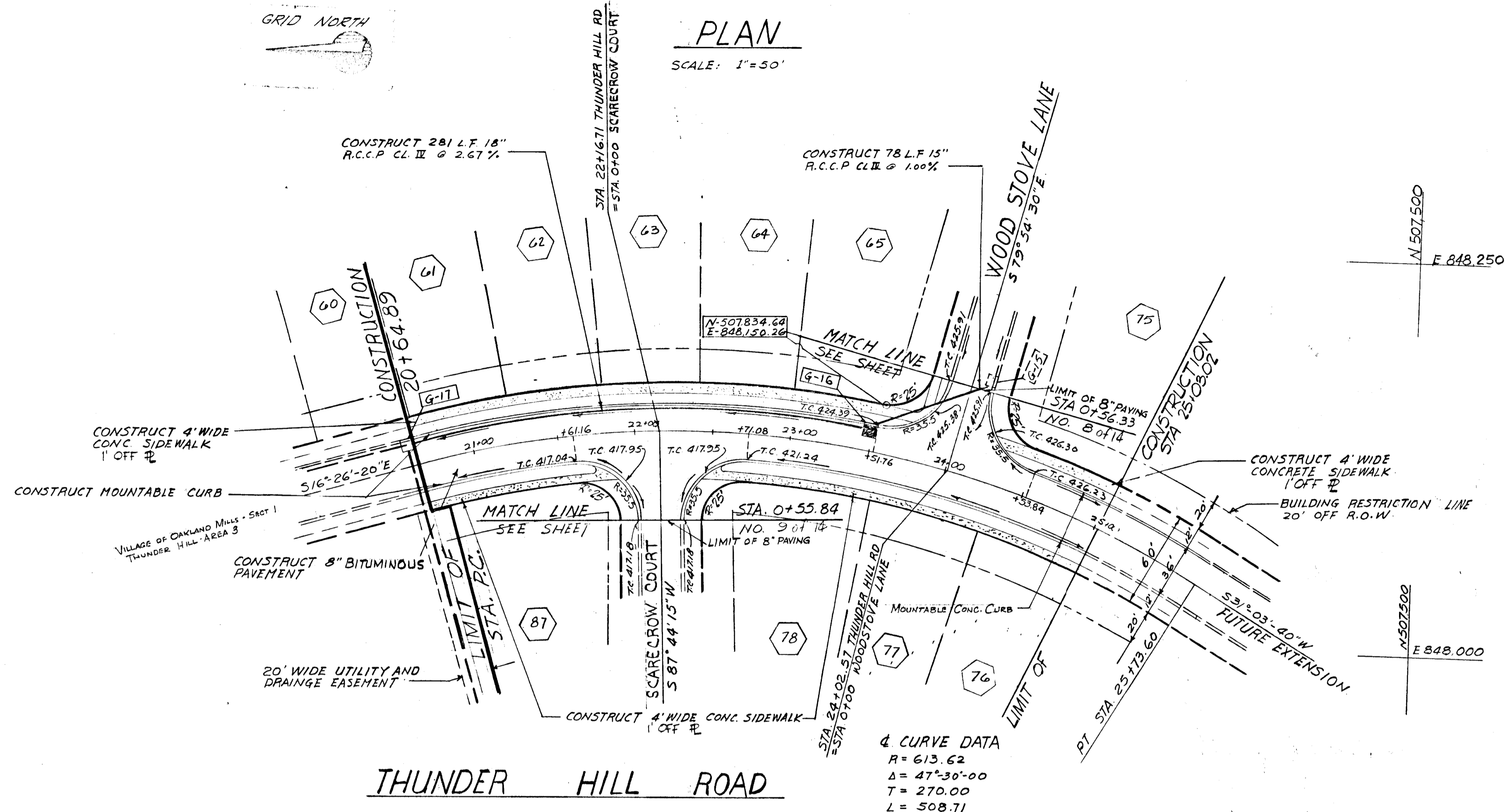
APPROVED
 PLANNING COMMISSION
 OF HOWARD COUNTY
 DATE SEP 25 1968
 JWC

BROWNE-PANDULLO & ASSOCIATES ENGINEERS COLUMBIA, MARYLAND		
Rev Date	Rev No	Revision Description
COLUMBIA		
M ^{ARYLAND} DISTRICT - HOWARD COUNTY		
OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210		
PROJECT AREA VILLAGE OF OAKLAND MILLS SEC 1 - THUNDER HILL - AREA 1		
PROJECT TITLE DRAINAGE MAP		
Des By C.Y.	Scale 1" = 100'	Dwg No 2 OF 14
Drn By C.Y.	Date 4-8-68	C.C.F. No
Chk By JWC	Approved	

GRID NORTH

PLAN

SCALE: 1"=50'



4 CURVE DATA
 R = 613.62
 Δ = 47°30'00"
 T = 270.00
 L = 508.71

STORM DRAINAGE STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	CO. ELEV.	REMARKS
G-16	STD. 8 COMB. INLET (DOUBLE GR)	STA 23+44.76 18 LT	419.52	418.00	424.39	SEE H.C. S. 18 PAGE DRWG. 99 P. 154

APPROVED
 PLANNING COMMISSION
 OF HOWARD COUNTY
 DATE SEP 25 1968
JNC

BROWNE-PANDULLO & ASSOCIATES
 ENGINEERS
 COLUMBIA, MARYLAND

Rev. Date: Rev. No: Revision Description:

COLUMBIA
 MARYLAND
 6TH ELECTION DISTRICT - HOWARD COUNTY

HOWARD RESEARCH AND DEVELOPMENT CORP.
 THE VILLAGE OF OAKLAND MILLS - BALTIMORE, MARYLAND 21210

VILLAGE OF OAKLAND MILLS - SECT 1 - THUNDER HILL - AREA 1
 PLAN & PROFILE
 THUNDER HILL ROAD

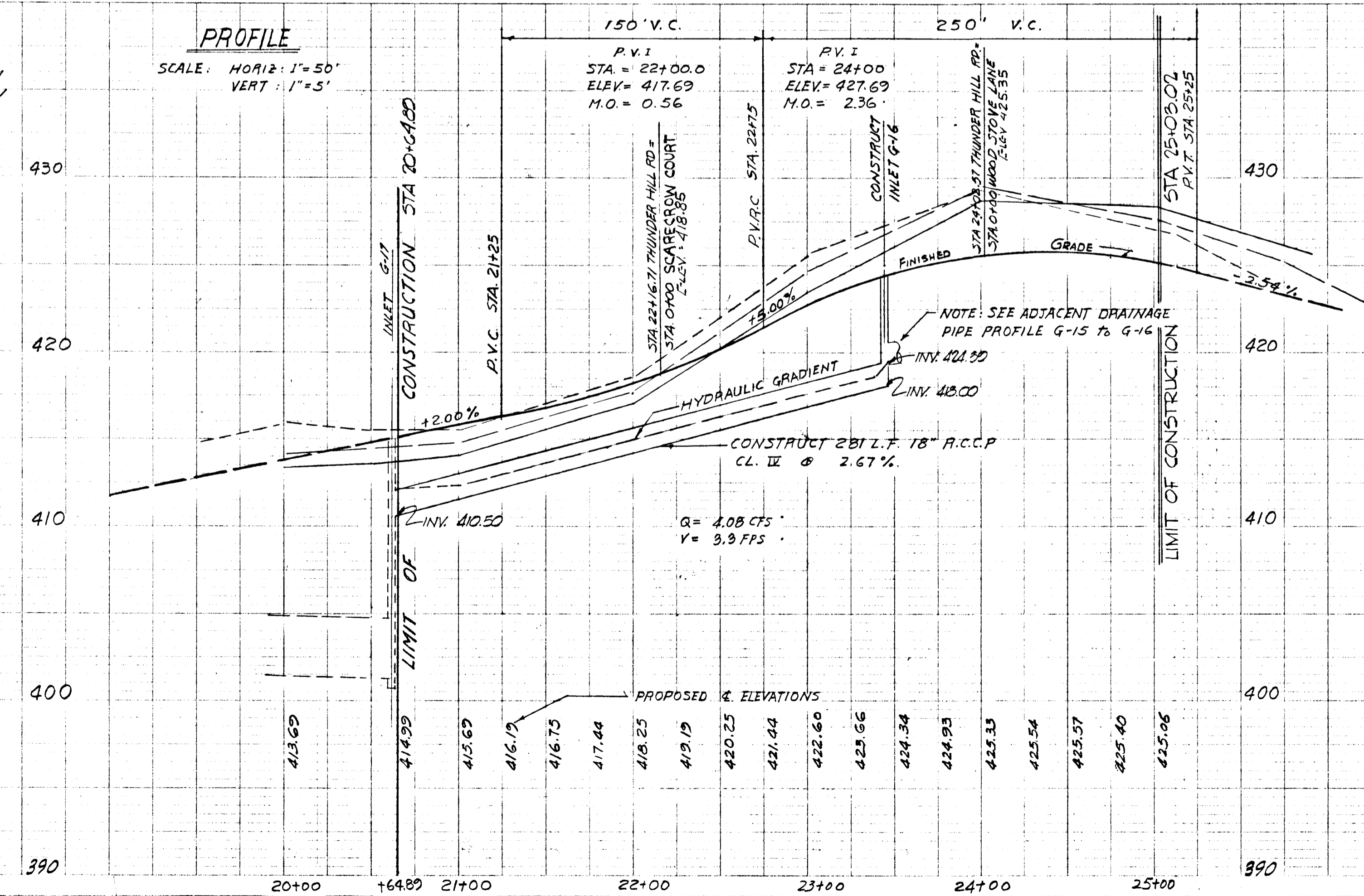
Des. By: C.Y. Date: AS SHOWN Draw No: 3 OF 14
 Dim. By: C.Y. Date: APRIL 23, 1968 C.C.F. No:
 Chk. By: WJK Approved:

LEGEND

- EXIST. GROUND 20' RT. R.O.W.
- EXIST. GROUND 20' LT. R.O.W.
- EXIST. GROUND ON C.
- FINISHED & GRADE

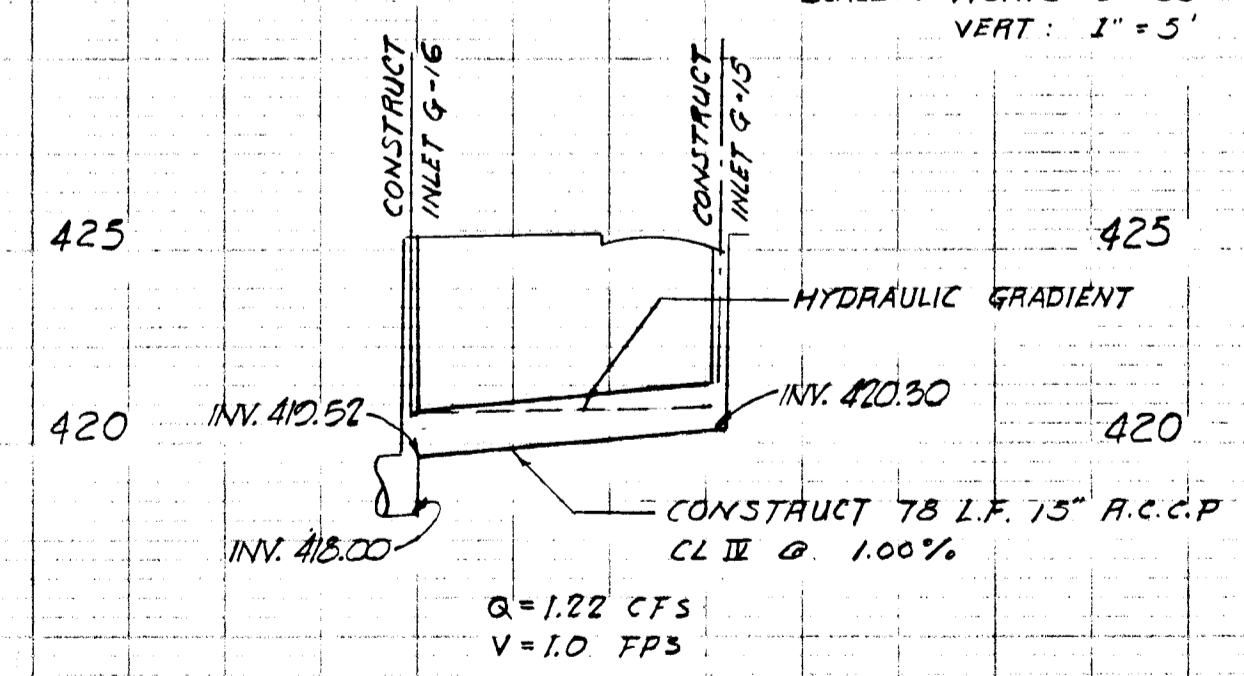
PROFILE

SCALE: HORIZ: 1"=50'
 VERT: 1"=5'

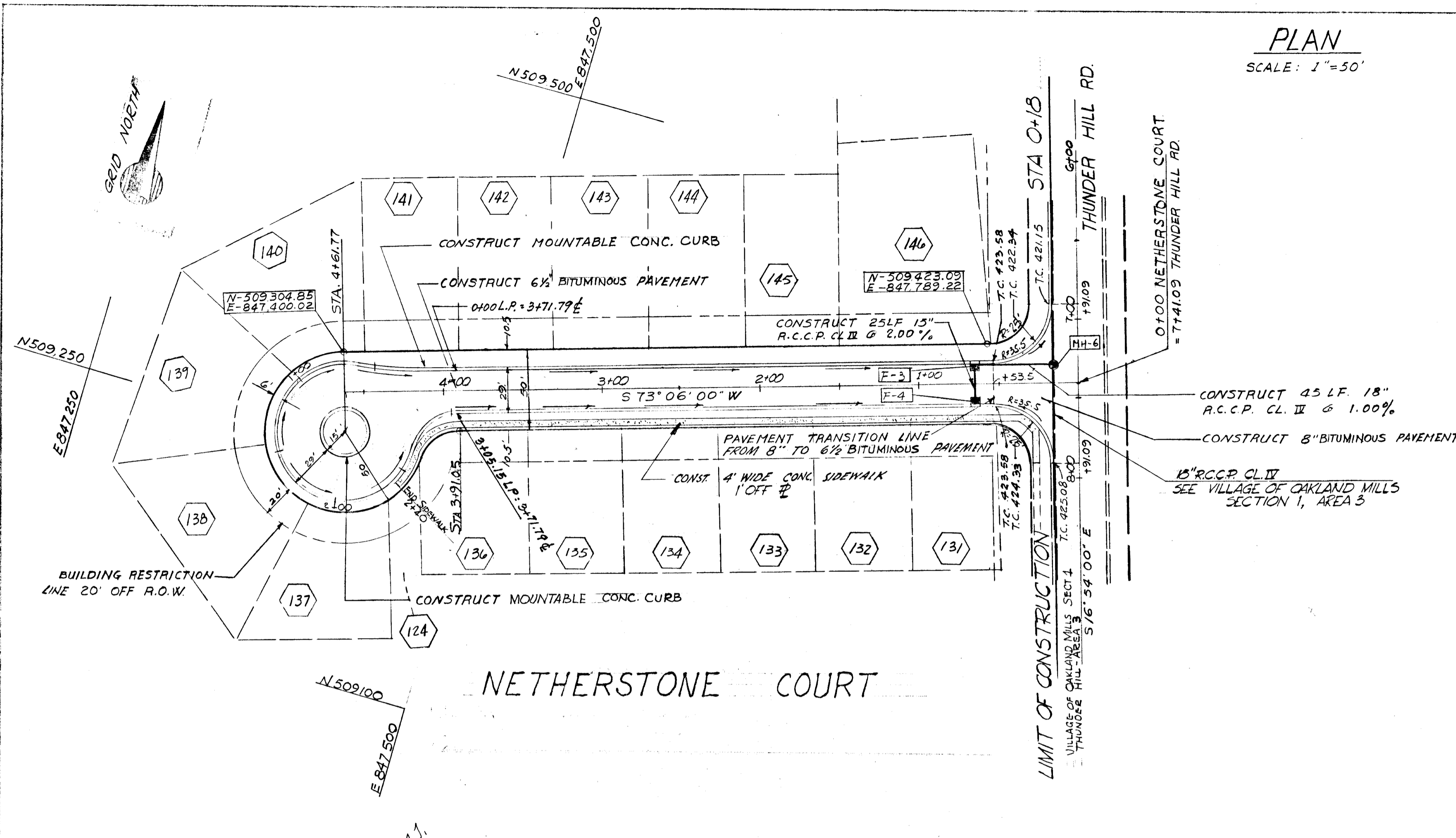


DRAINAGE PROFILE G-15 TO G-16

SCALE: HORIZ: 1"=50'
 VERT: 1"=5'



PLAN
SCALE: 1"=50'



NO.	TYPE	LOCATION	INV. IN	INV. OUT	C.C.F. ELEV.	REMARKS
F-3	STD. 8" COMB. INLET (16" ROTE)	STA 0+65.00 14.5 RT	419.05	418.80	424.06	SEE HO. CO. STD. DR. 77 9/164
F-4	MODEL S' COMB. SINGLE RGT.	STA 0+65.00 14.5 LT	419.90	419.90	424.06	SEE DETAIL 12 OF 14
M#6	STANDARD MANHOLE	STA 7+26.37 14' RT	418.35	418.15		

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE SEP 25 1968
[Signature]

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

74 AUG 68 #1 REVISED CUL. DE SAC PLAN & PROFILE

Rev Date Rev No Revision Description

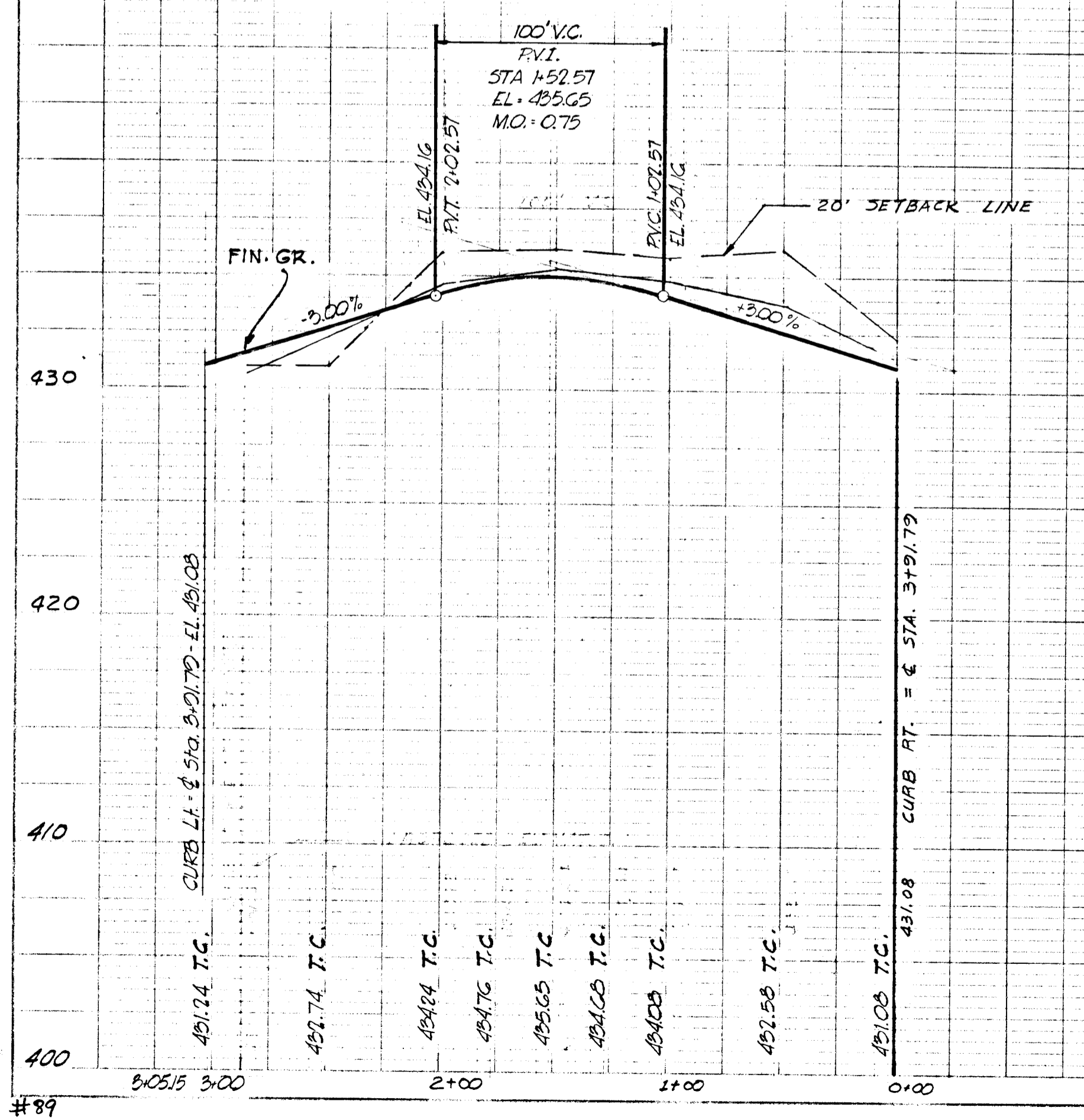
COLUMBIA
M. A. R. Y. L. A. N. D.
6TH ELECTION DISTRICT - HOWARD COUNTY
HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA
VILLAGE OF OAKLAND MILLS
SECT 1 - THUNDER HILL - AREA 1

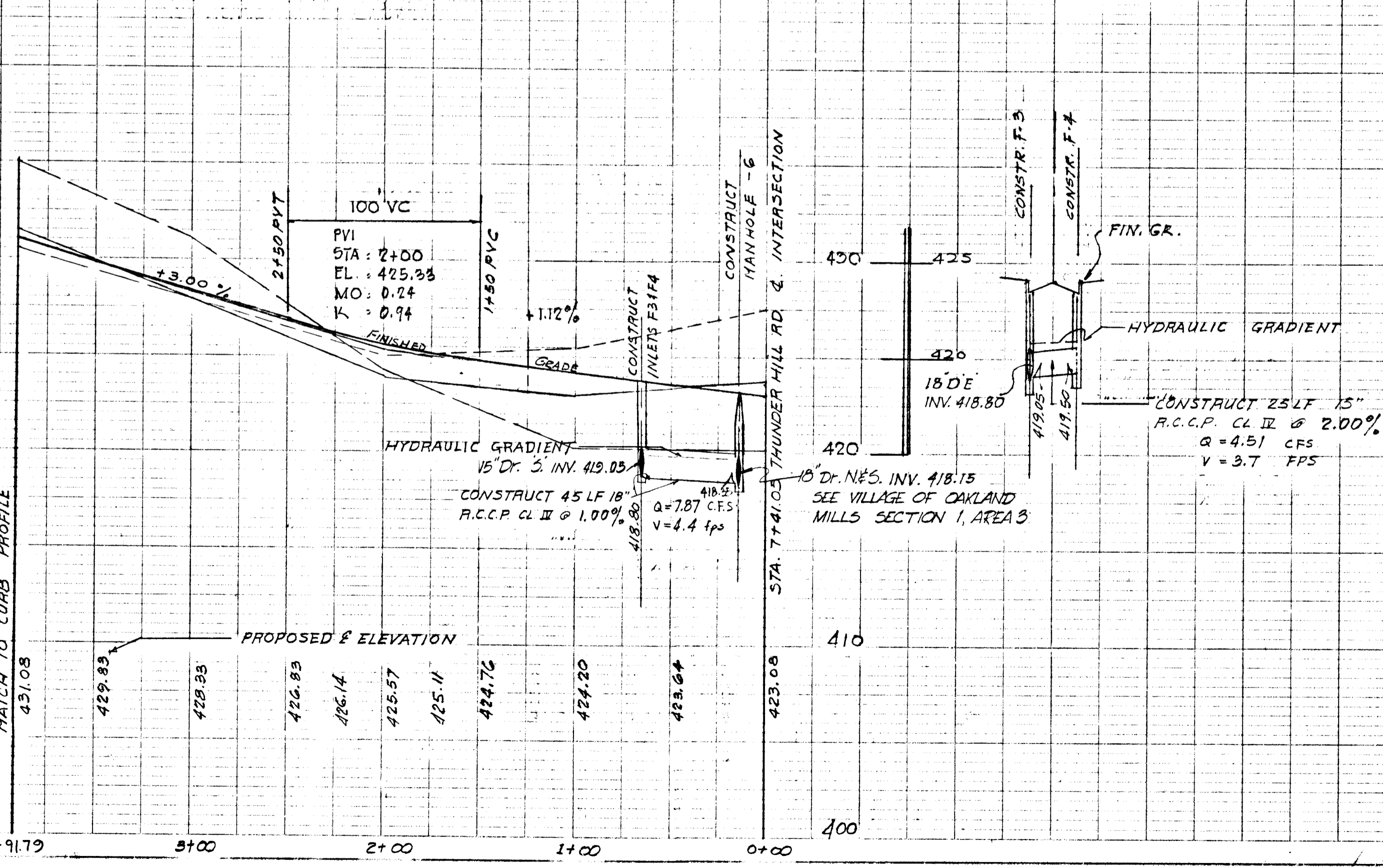
PROJECT TITLE
PLAN & PROFILE
NETHERSTONE COURT

Des By C.Y. Scale AS SHOWN Draw No 4 OF 14
Dra By C.Y. Date APRIL 23, 1968 C.C.F. No
Chk By W.K. Approved

CUL-DE-SAC CURB PROFILE



PROFILE



LEGEND

- EXIST. GROUND 20' RT. R.O.W.
- EXIST. GROUND 20' LT. R.O.W.
- EXIST. GROUND ON E.
- FINISHED & GRADE

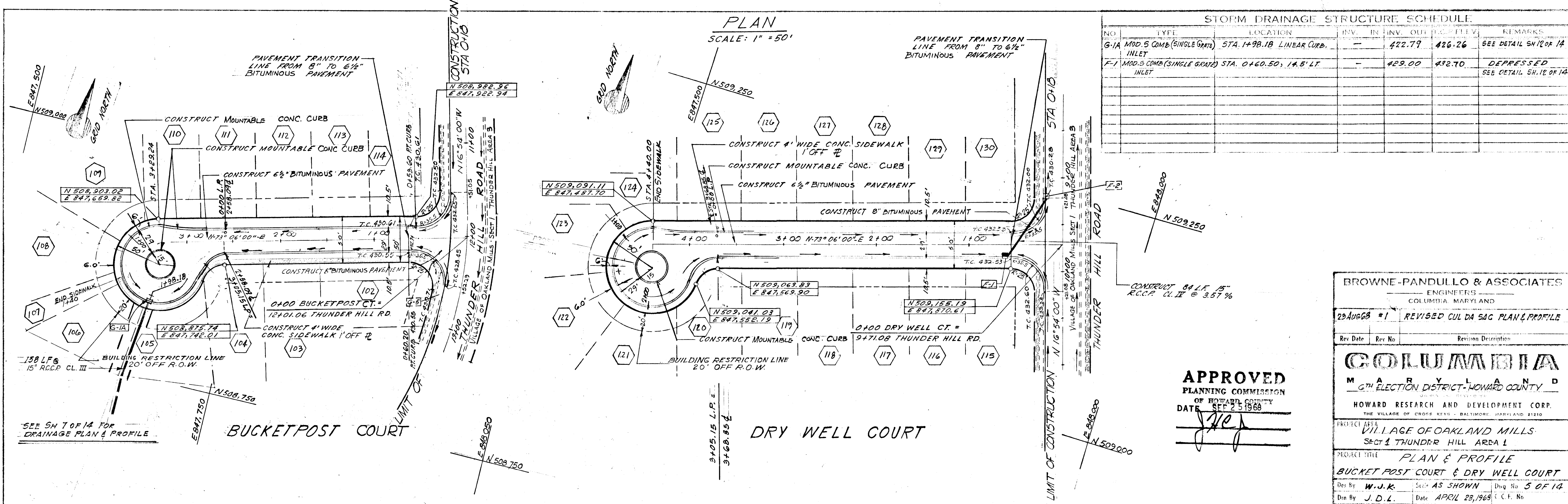
PLAN

SCALE: 1" = 50'

PAVEMENT TRANSITION
LINE FROM 8" TO 6 1/2"
BITUMINOUS PAVEMENT

STORM DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	REMARKS
G-1A	MOD. S COMB. (SINGLE GRATE)	STA. 1+98.18 LINEAR CURB.	-	422.79	426.26 SEE DETAIL SH. 12 OF 14
F-1	MOD. S COMB. (SINGLE GRATE)	STA. 0+60.50, 14.5' LT.	-	429.00	432.70 DEPRESSED SEE DETAIL SH. 12 OF 14



PLAN
 NOTE BOOK
 NO.

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

23 AUG 68 #1 REVISED CUL-DE-SAC PLAN & PROFILE

Rev. Date	Rev. No.	Revision Description
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COLUMBIA
M A R Y L A N D
6TH ELECTION DISTRICT - HOWARD COUNTY

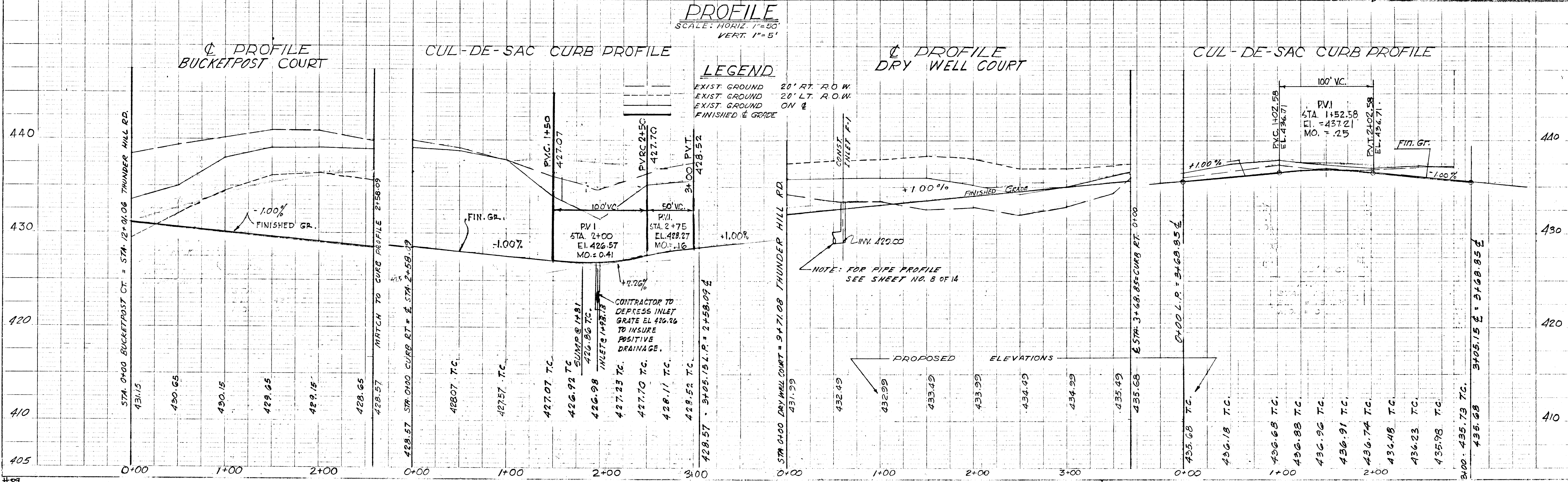
HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21220

PROJECT SITE: VILLAGE OF OAKLAND MILLS
SECT 1 THUNDER HILL AREA I

PROJECT TITLE: PLAN & PROFILE
BUCKET POST COURT & DRY WELL COURT

Des. By: W.J.K. Scale: AS SHOWN Draw. No. 5 OF 14
 Dir. By: J.D.L. Date: APRIL 23, 1968 C.F. No.
 Ck. By: W.J.K. Approved

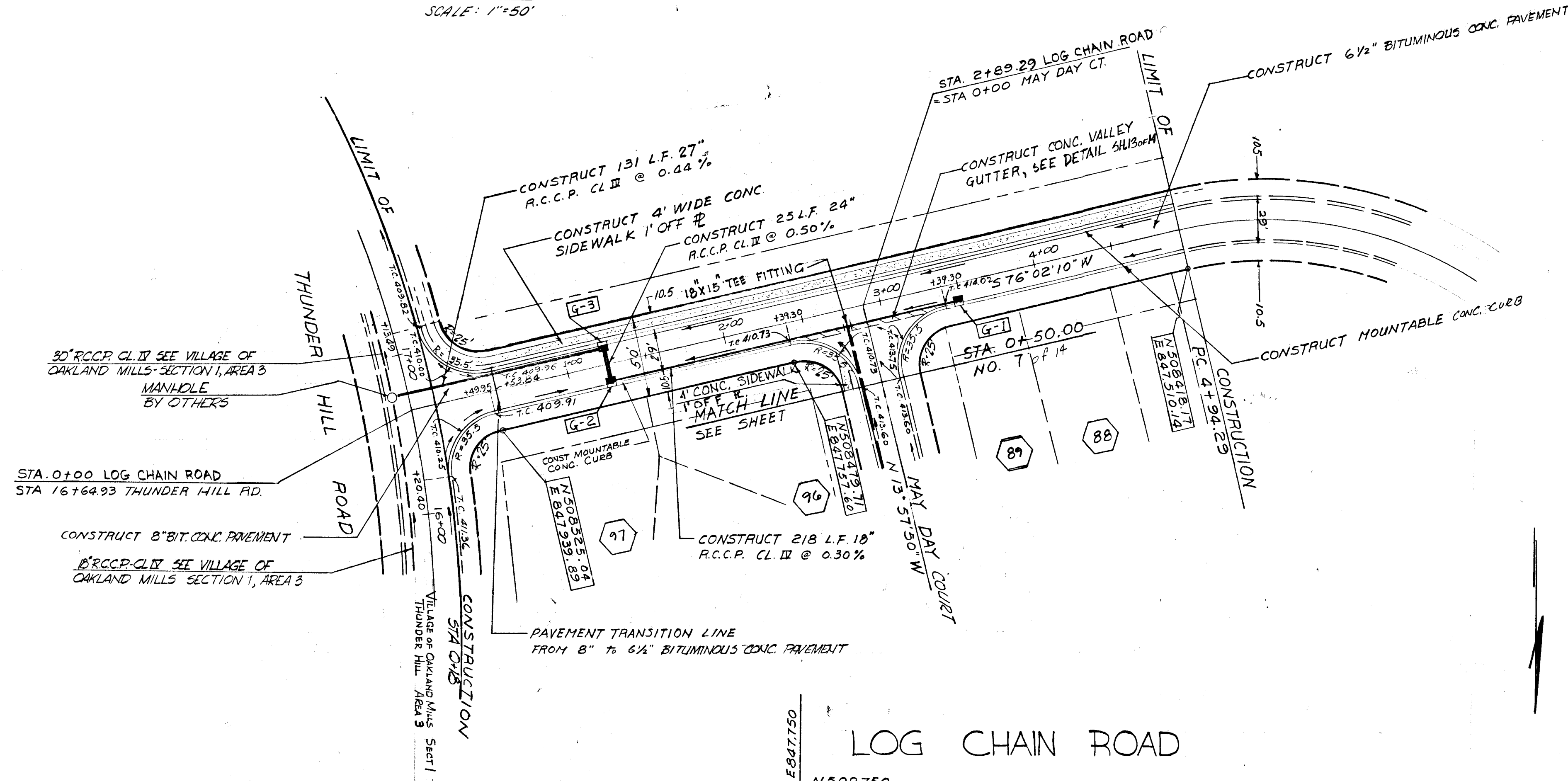
APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE SEP 25 1968



PROFILE
 NOTE BOOK
 NO.

FILE NO. 1923

PLAN
SCALE: 1"=50'



STORM DRAINAGE STRUCTURE SCHEDULE							
NO.	TYPE	LOCATION	INV. IN	INV. OUT	I.C.P. ELEV.	REMARKS	
G-1	STD 5 COMB. INLET (18" GRATE)	STA. 3+48.00	14.5' RT.	405.80	414.80	HO. CO. STD. DWG. 99 PAGE 15A.	
G-2	MOD. S. COMB. SINGLE GRATE	STA. 1+25.00	14.5' RT.	405.28	404.78	409.83	SEE DETAIL
G-3	MOD. S. COMB. SINGLE GRATE	STA. 1+25.00	14.5' LT.	404.65	404.40	409.83	SH. 12 OF 14

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

Rev. Date: Rev. No: Revision Description:

COLUMBIA
M A R Y L A N D
COLLECTION DISTRICT - HOWARD COUNTY

HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF OAKLAND MILLS - BALTIMORE, MARYLAND 21210

PROJECT AREA:
VILLAGE OF OAKLAND MILLS
SEC. 1 - THUNDER HILL - AREA 1

PROJECT TITLE:
PLAN & PROFILE
LOG CHAIN ROAD

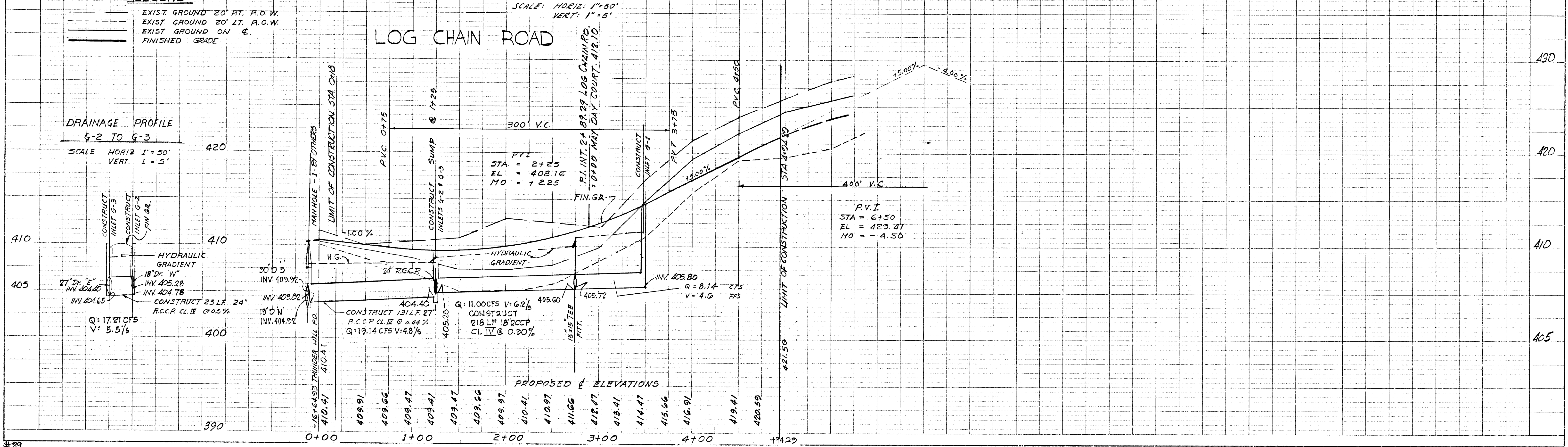
Des. By: C. Y. Scale: AS SHOWN Dwg. No: 6 OF 14
 Dir. By: C. Y. Date: APRIL 23, 1968 C.C.F. No:
 Chk. By: WJK Approved:

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE: SEP 25 1968
[Signature]

LEGEND

--- EXIST. GROUND 20' FT. F.O.W.
 --- EXIST. GROUND 20' LT. F.O.W.
 --- EXIST. GROUND ON &
 --- FINISHED GRADE

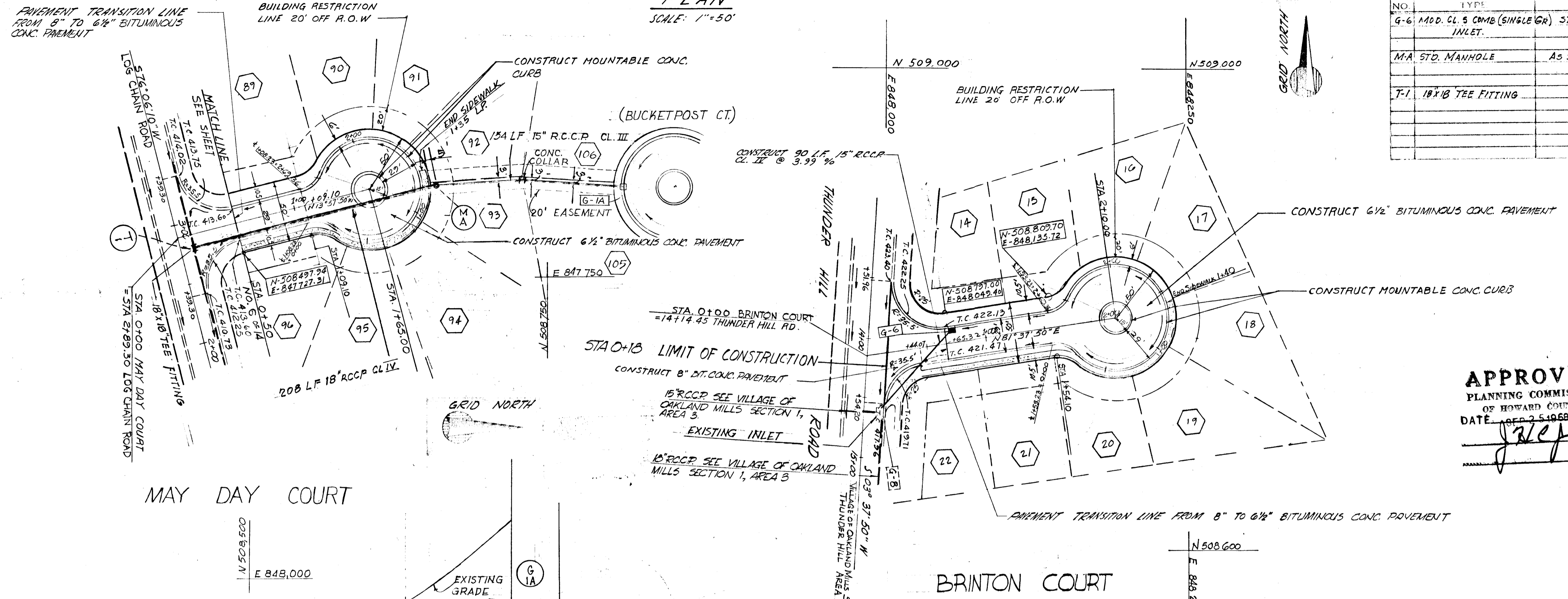
PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



PLAN
NOTES:
1. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3
2. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3
3. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3

PROFILE
NOTES:
1. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3
2. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3
3. SEE VILLAGE OF OAKLAND MILLS SECTION 1, AREA 3

PLAN
SCALE: 1"=50'



STORM DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	PIPE ELEV.	REMARKS
G-6	M.D. CL. 5 COMB (SINGLE GR) INLET	STA 0+73.32 14.5' LT		416.30	422.73	SEE DETAIL SH 12 OF 14
M-A	STD. MANHOLE	AS SHOWN				HO. CO. DETAILS DRWG. C.D.P. PAGE 15B
T-1	18" X 18" TEE FITTING					SEE DETAIL SH 14 OF 14

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE: APR 25 1968
[Signature]

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

8-24-68 / 1
Rev. Date Rev. No. CUL-DE-SAC CURB IN PLAN & PROFILE
Reason for Change: Resubmission

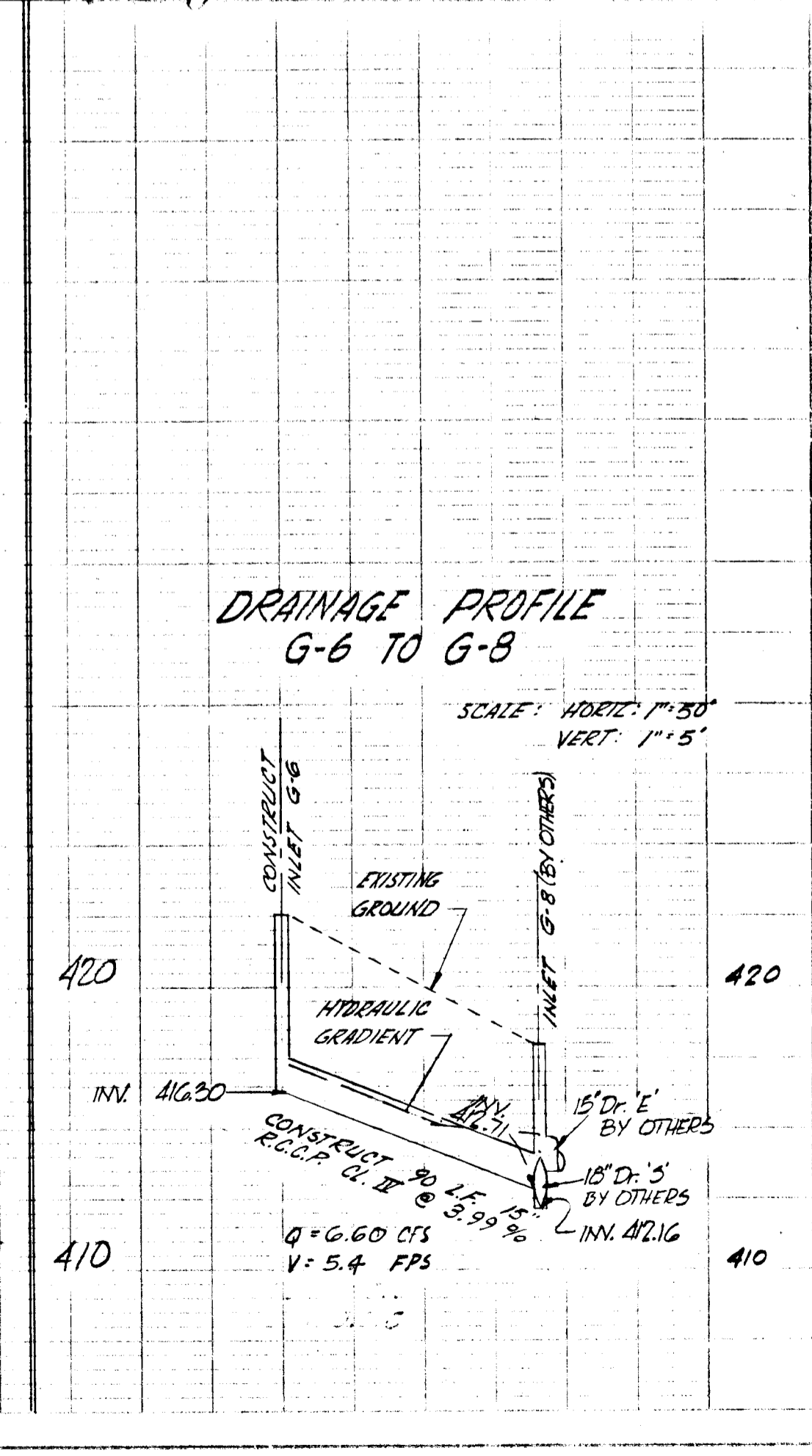
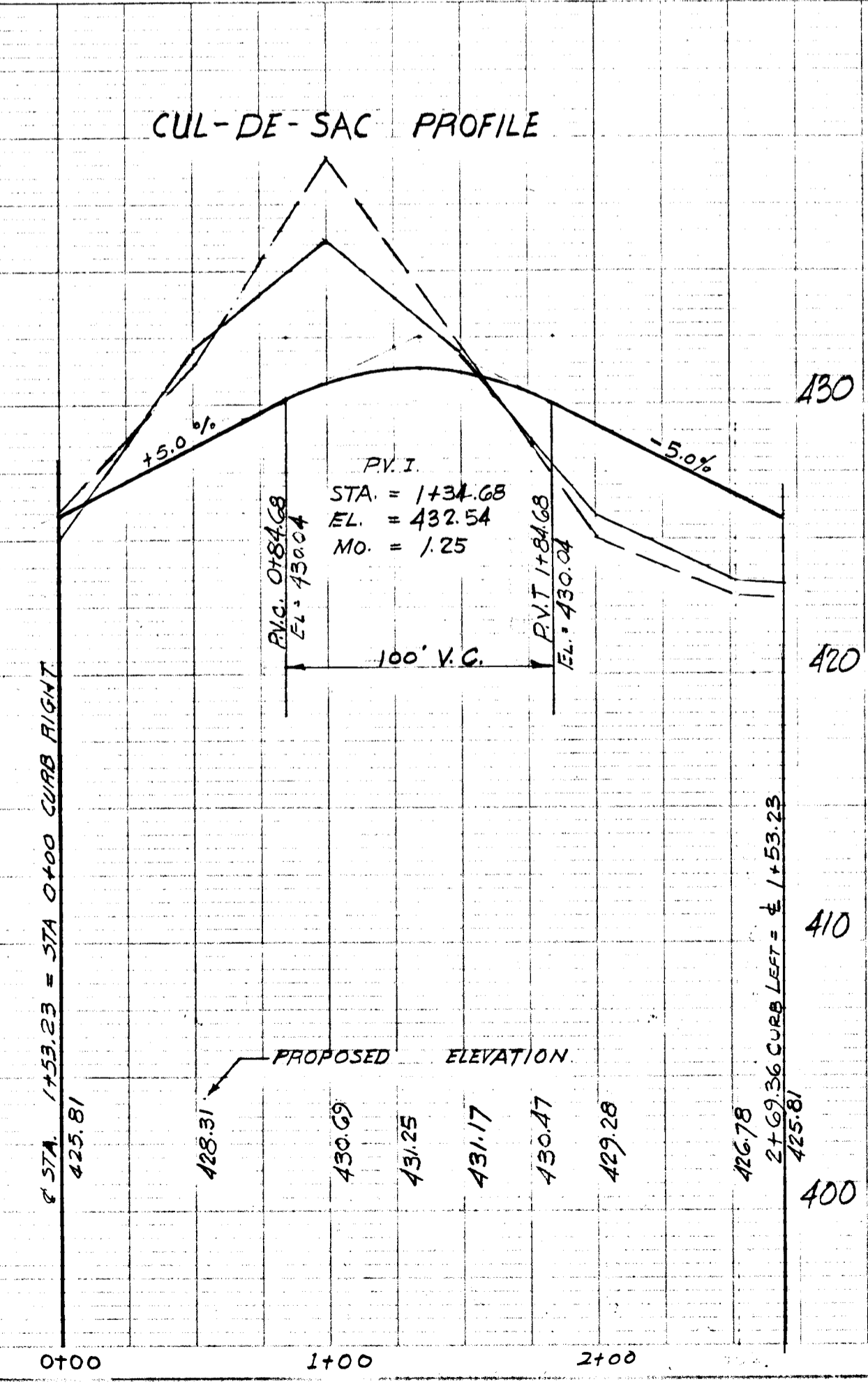
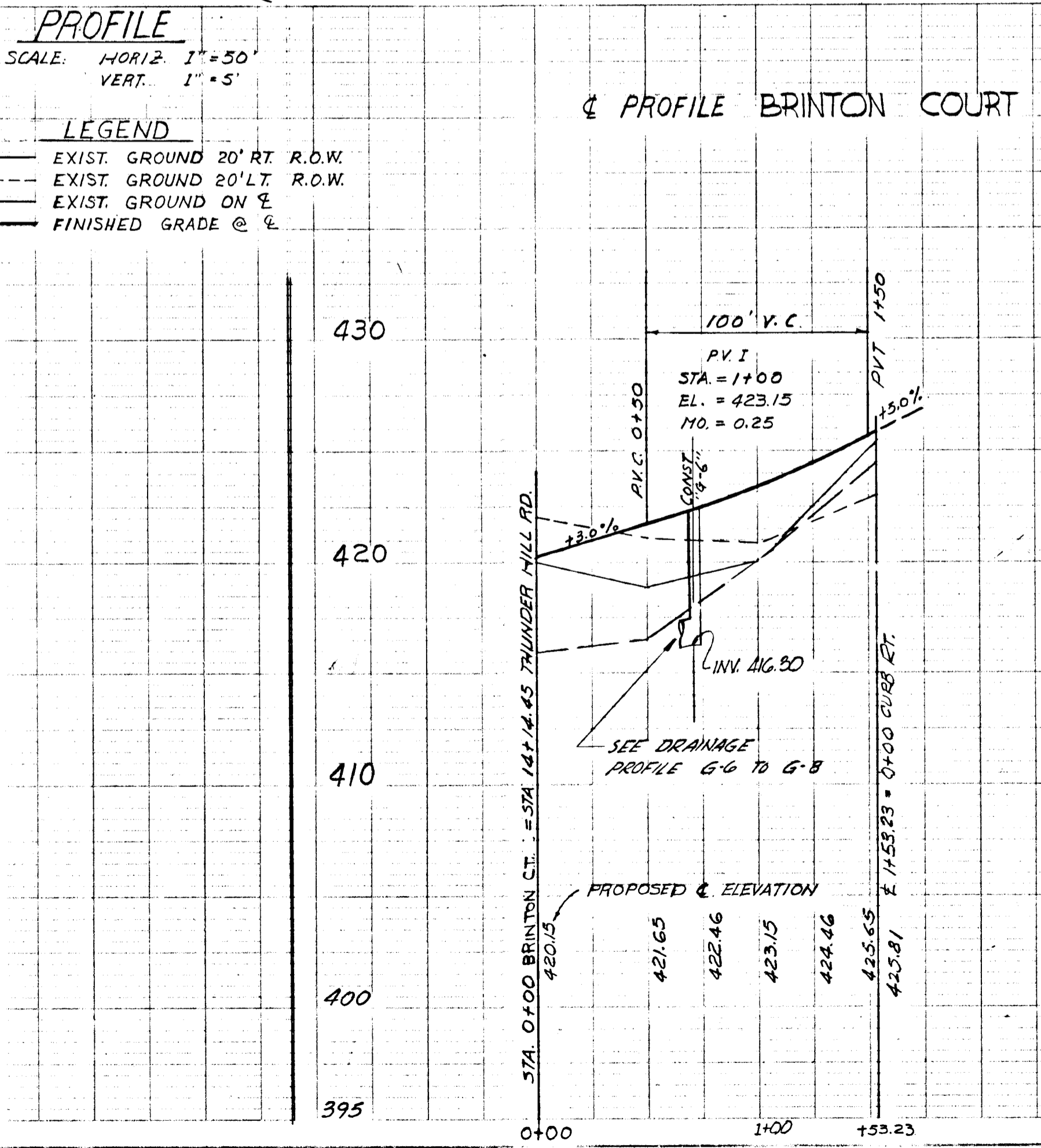
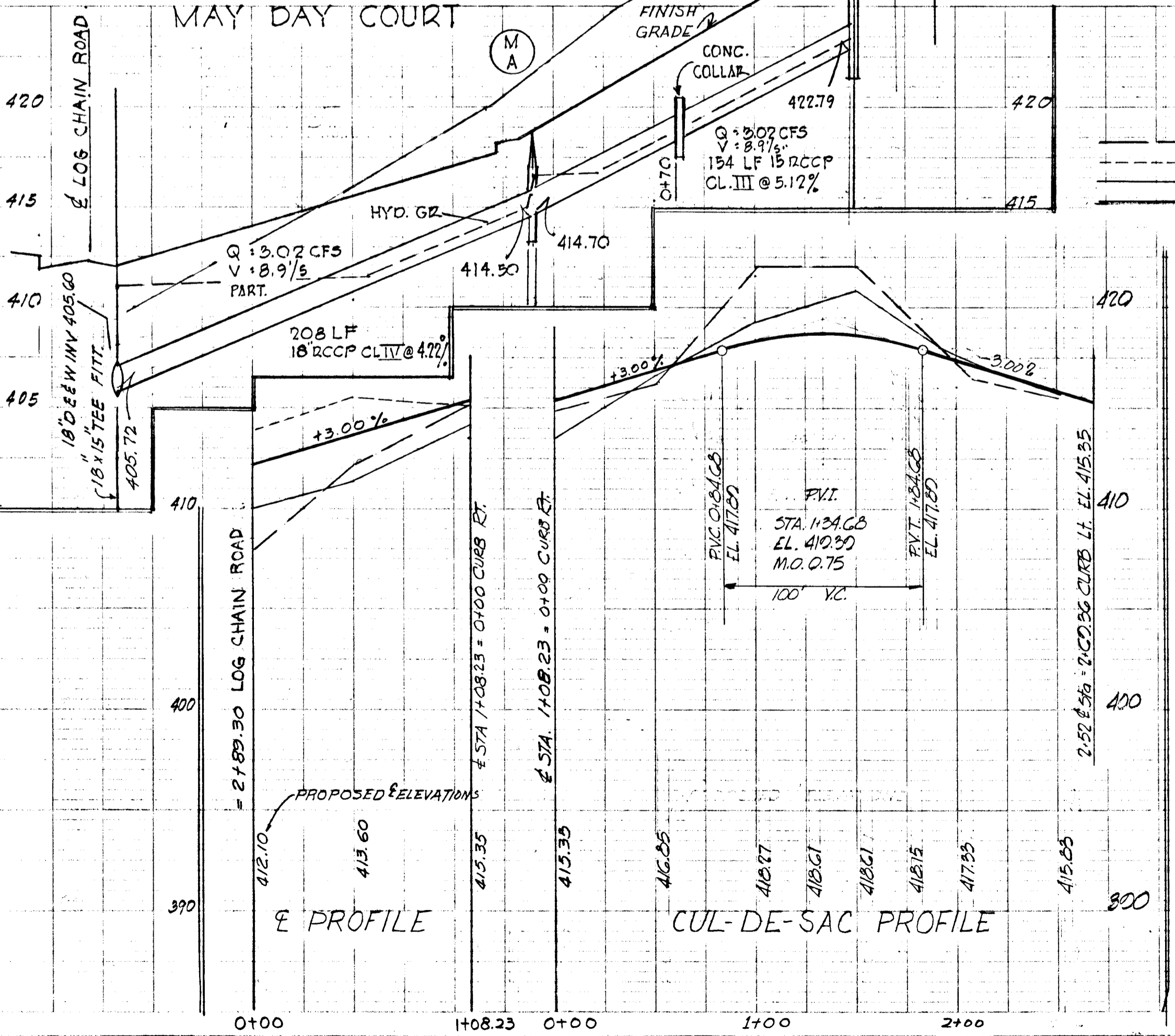
COLUMBIA
MARYLAND
6TH ELECTION DISTRICT - HOWARD COUNTY

HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEY - BY TIMORE, MARYLAND 21210

PROJECT AREA
**VILLAGE OF OAKLAND MILLS
SEC. 1 - THUNDER HILL - AREA 1**

PROJECT TITLE
**PLAN & PROFILE
MAY DAY COURT & BRINTON COURT**

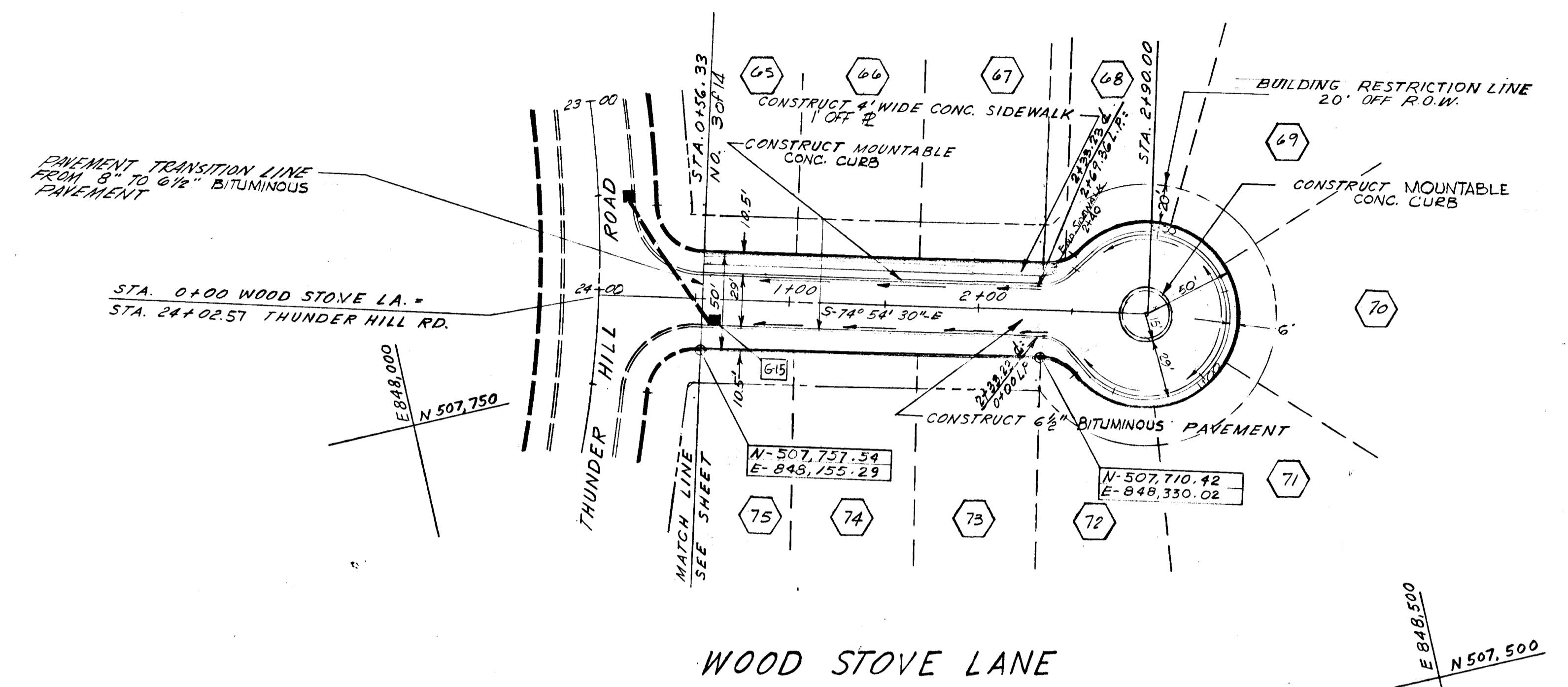
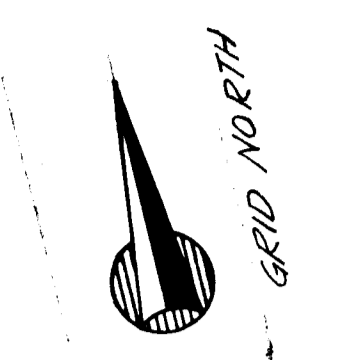
Des. By: C.Y. Scale: AS SHOWN Dwg. No. 7 OF 14
Dia. By: C.Y. Date: APRIL 23, 1968 C.C.F. No.
Chk. By: *[Signature]* Approved



PLAN

SCALE: 1" = 50'

STORM DRAINAGE STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	C.P. ELEV.	REMARKS
G-15	MOD. 5" COMB. (SINGLE GRATE) INLET	STA. 0+63.93, 14.5' RT	-	420.30	426.31	SEE DETAIL SH 12 OF 14



APPROVED
 PLANNING COMMISSION
 OF HOWARD COUNTY
 DATE: SEP 25 1968

BROWNE-PANDULLO & ASSOCIATES
 ENGINEERS
 COLUMBIA, MARYLAND

6-24-68 / 1 / CUL-DE-SAC CURB IN PLAN & PROFILE
 Rev. Date / Rev. No. / Revision: Detention

COLUMBIA
 MARYLAND
 5TH ELECTION DISTRICT - HOWARD COUNTY
 HOWARD RESEARCH AND DEVELOPMENT CORP.
 THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF OAKLAND MILLS
 SECT 1 THUNDER HILL - AREA 1

PROJECT TITLE: PLAN & PROFILE
 WOOD STOVE LANE

Des. By: W.J.K. / Scale: AS SHOWN / Drawing No: B OF 14
 Dwn. By: F.A.S. / Date: APRIL 23, 1968 / C.C.F. No.
 Chk. By: W.J.K. / Approved

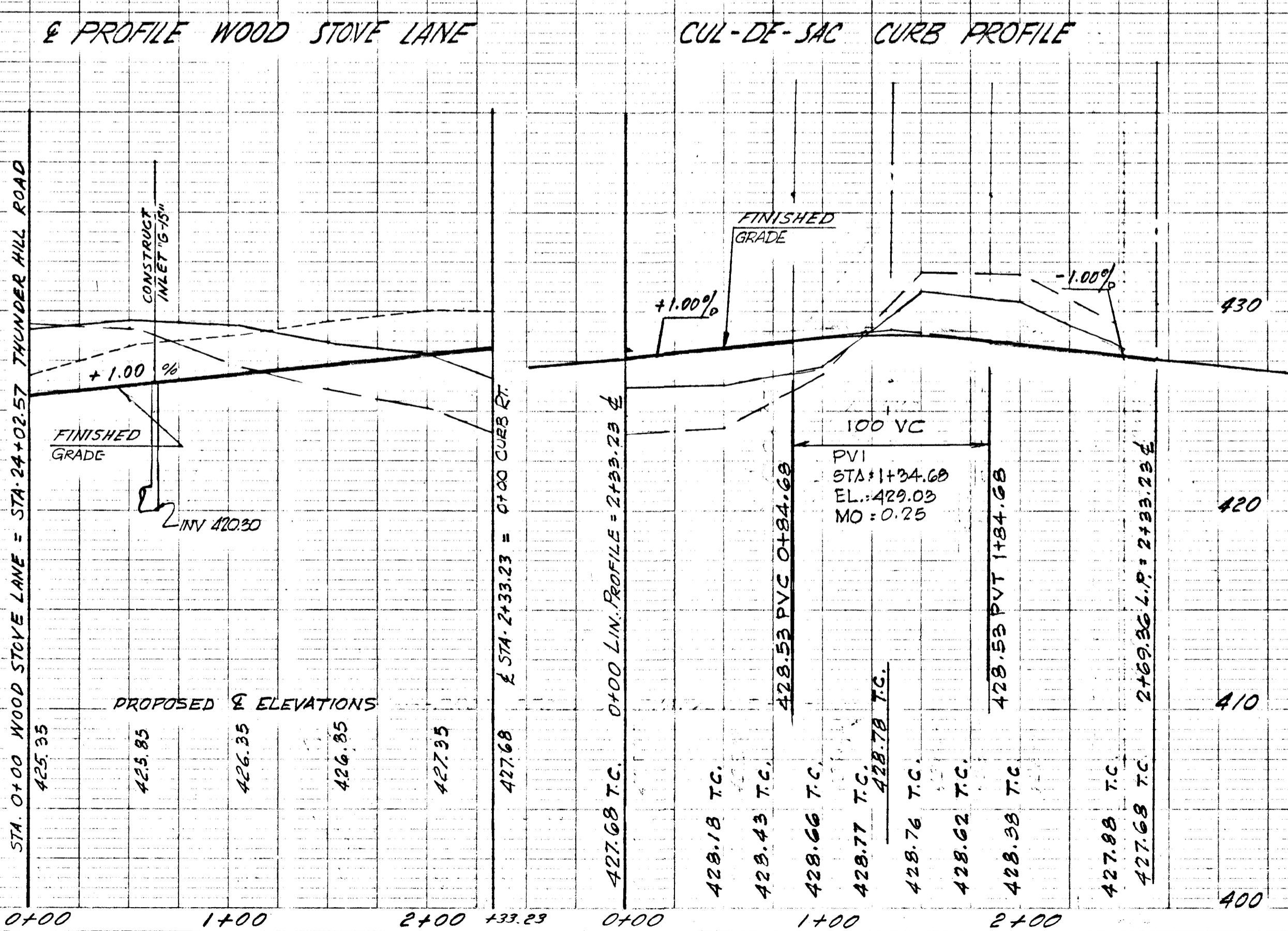
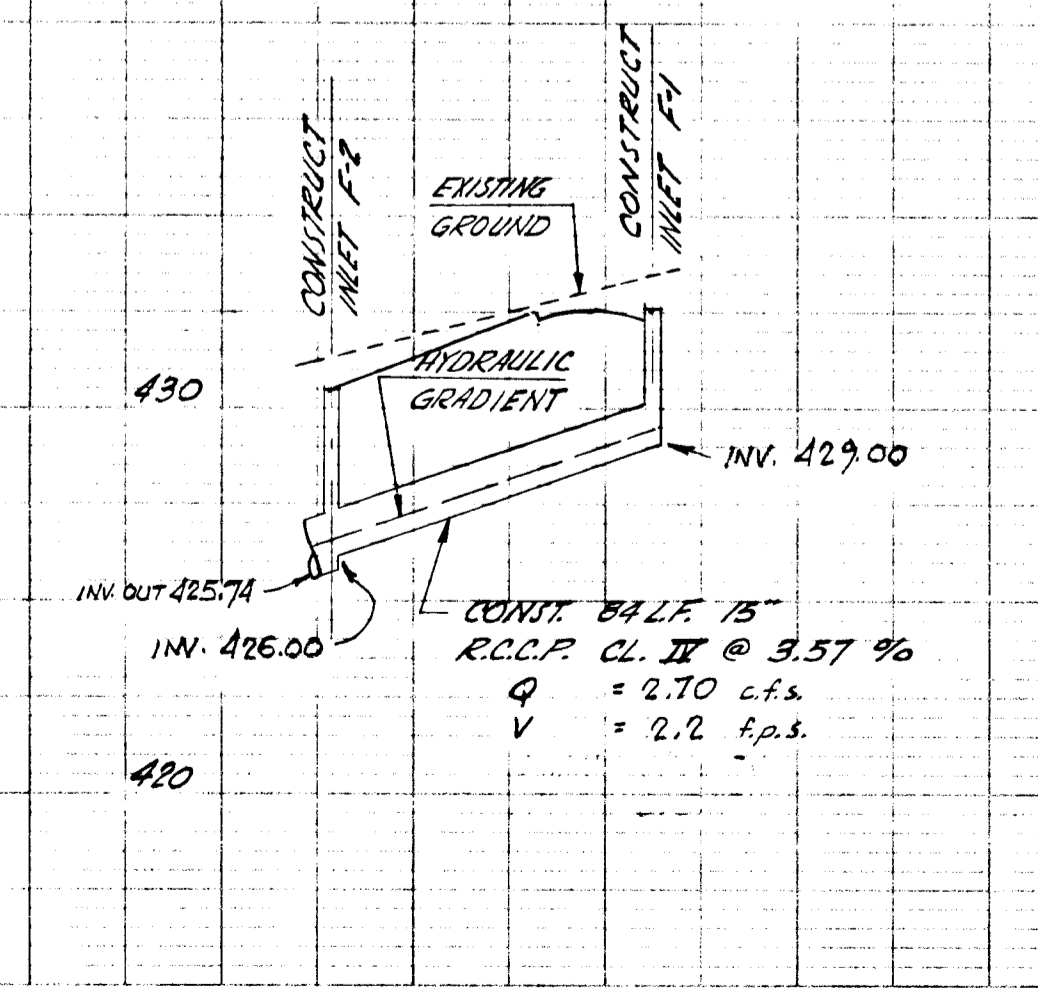
PROFILE

SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'

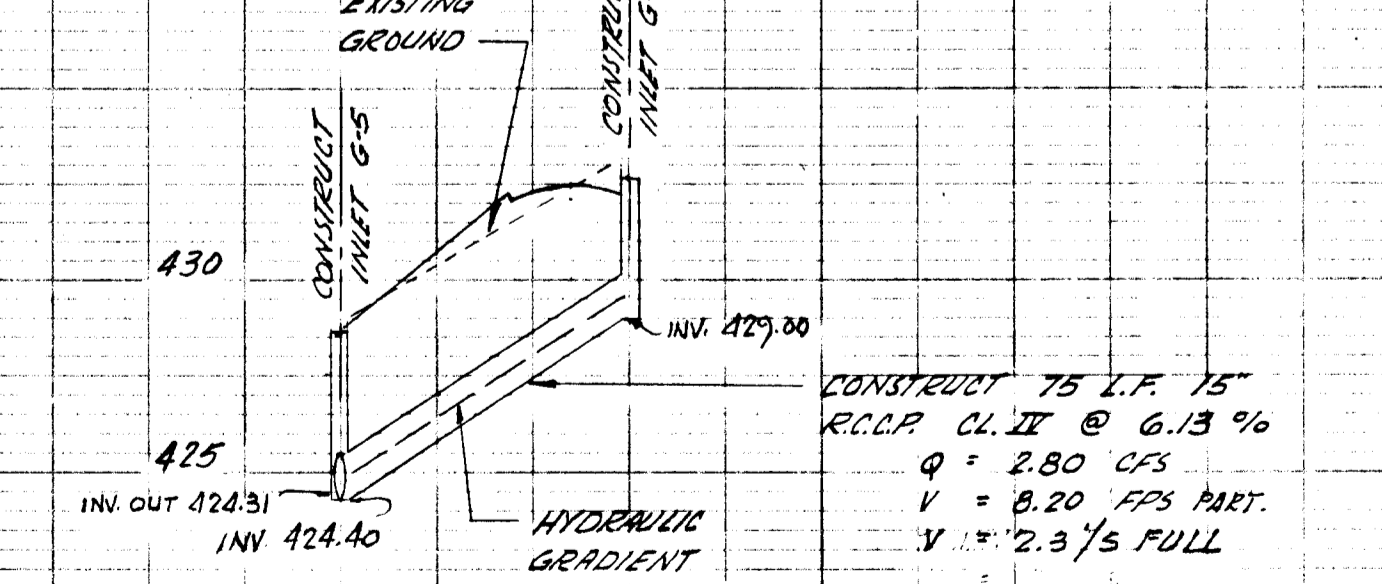
LEGEND

EXIST. GROUND 20' RT. R.O.W.
 EXIST. GROUND 20' LT. R.O.W.
 EXIST. GROUND ON & FINISHED & GRADE

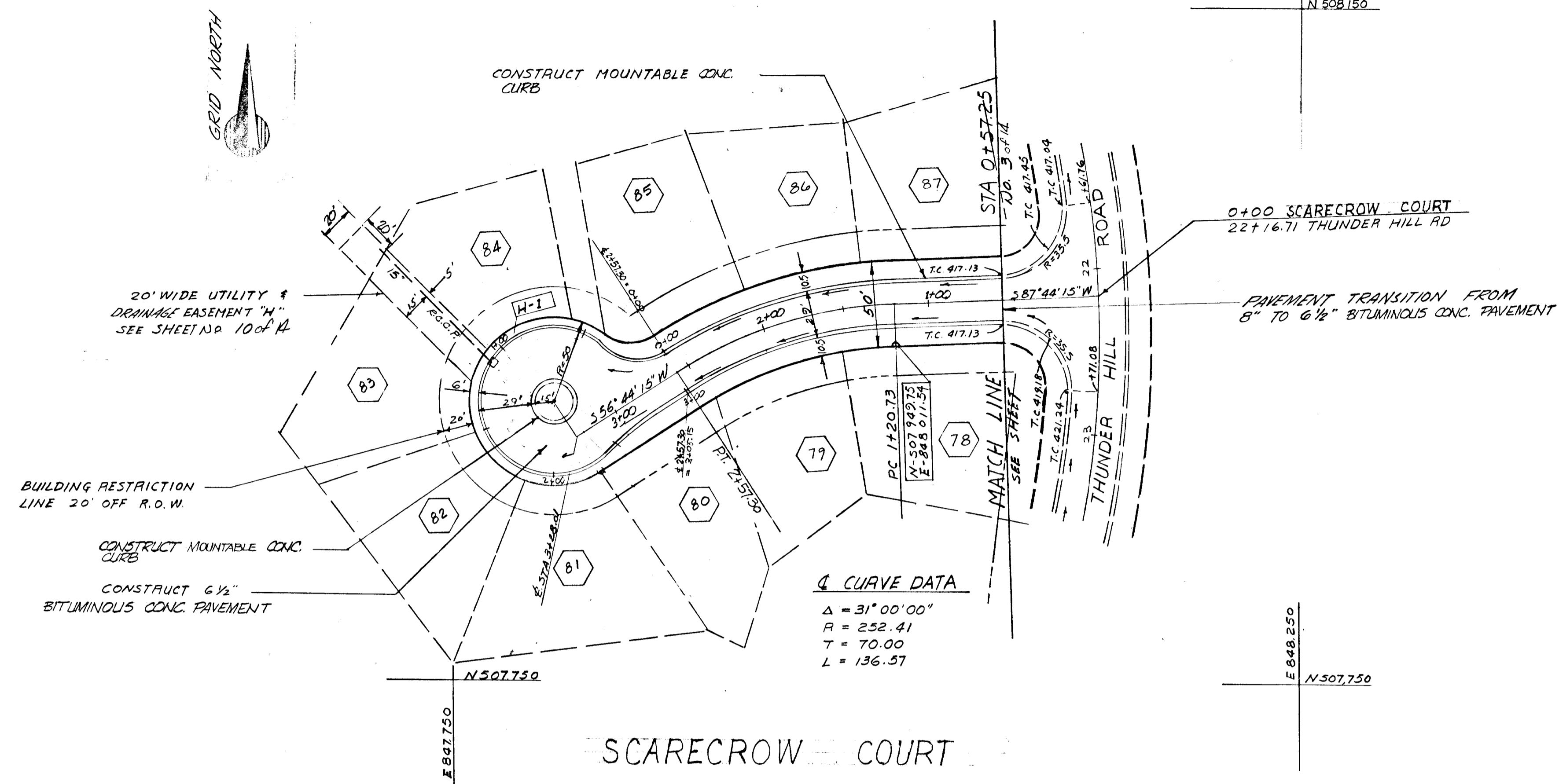
SEE SHEET 5 OF 14
DRAINAGE PROFILE F-1 TO F-2
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'



SEE SHEET 5 OF 14
DRAINAGE PROFILE G-4 TO G-5
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'



PLAN
SCALE: 1" = 50'



Q CURVE DATA
 $\Delta = 31^{\circ}00'00''$
 $R = 252.41$
 $T = 70.00$
 $L = 136.57$

STORM DRAINAGE STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	INV. IN	INV. OUT	T.C.P. ELEV.	REMARKS
H-1	HOD. CC'S CONC. (SINGLE BR) INLET	STA 1+05.91, CONC. STA.		404.00	408.74	SEE DETAIL 12 OF 14 TOP OF GRATE EL. 407.99

BROWNE-PANDULLO & ASSOCIATES
 ENGINEERS
 COLUMBIA, MARYLAND

8-24-68 1
 Rev. Date Rev. No. CUL-DE-SAC CURB IN PLAN & PROFILE
 Revision Description

COLUMBIA
 MARYLAND
 6TH ELECTION DISTRICT - HOWARD COUNTY
 HOWARD RESEARCH AND DEVELOPMENT CORP.
 THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA
 VILLAGE OF OAKLAND MILLS
 SEC. 1 - THUNDER HILL - AREA 1

PROJECT TITLE
 PLAN & PROFILE
 SCARECROW COURT

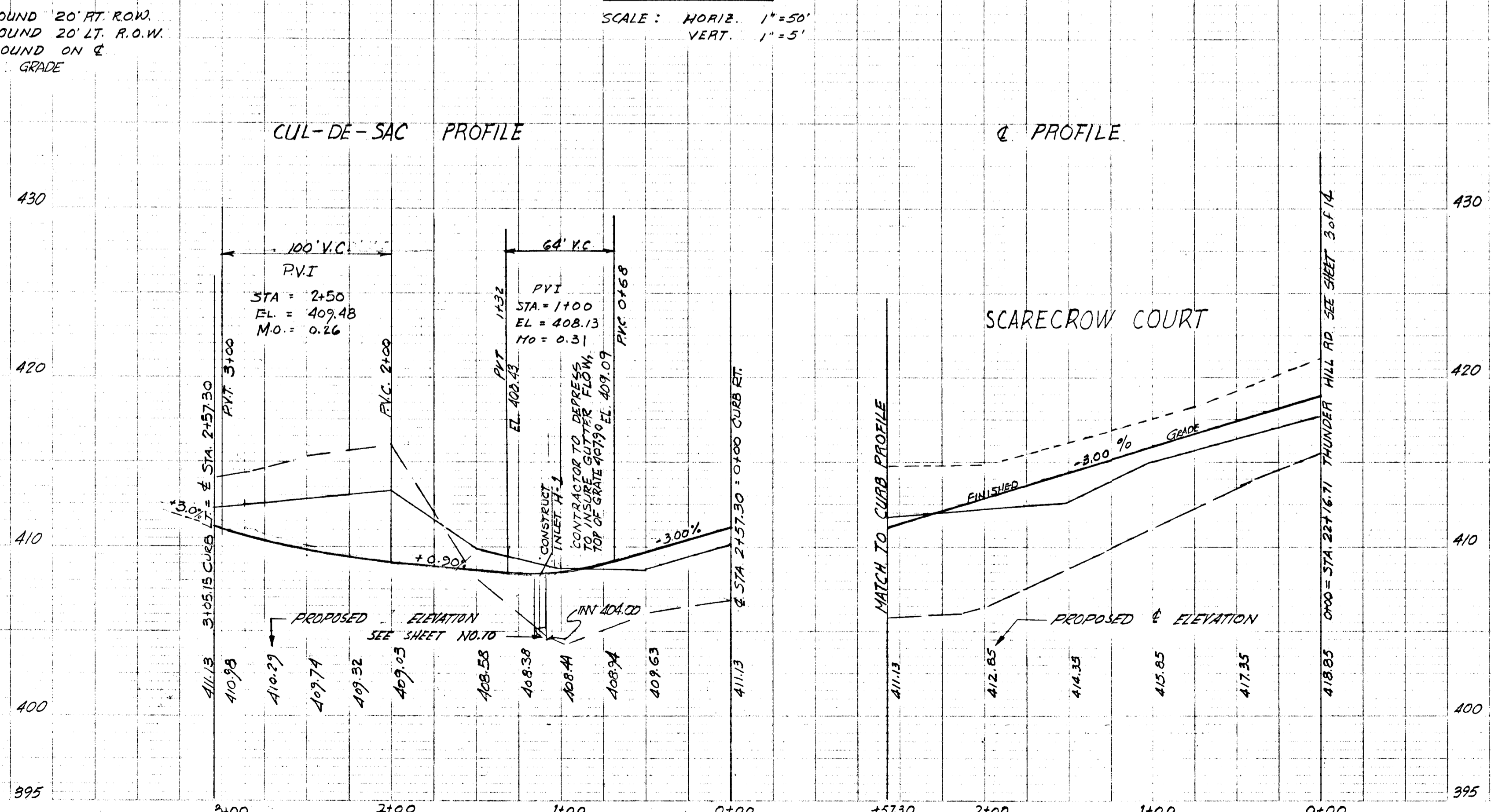
Des. By C.Y. Scale AS SHOWN Draw No 9 OF 14
 Dwn. By C.Y. Date APRIL 23, 1968 C.C.F. No
 Chk. By WJK Approved

APPROVED
 PLANNING COMMISSION
 OF HOWARD COUNTY
 DATE SEP 25 1968
[Signature]

LEGEND

- EXIST. GROUND 20' FT. ROW.
- - - EXIST. GROUND 20' LT. R.O.W.
- EXIST. GROUND ON Q
- FINISHED GRADE

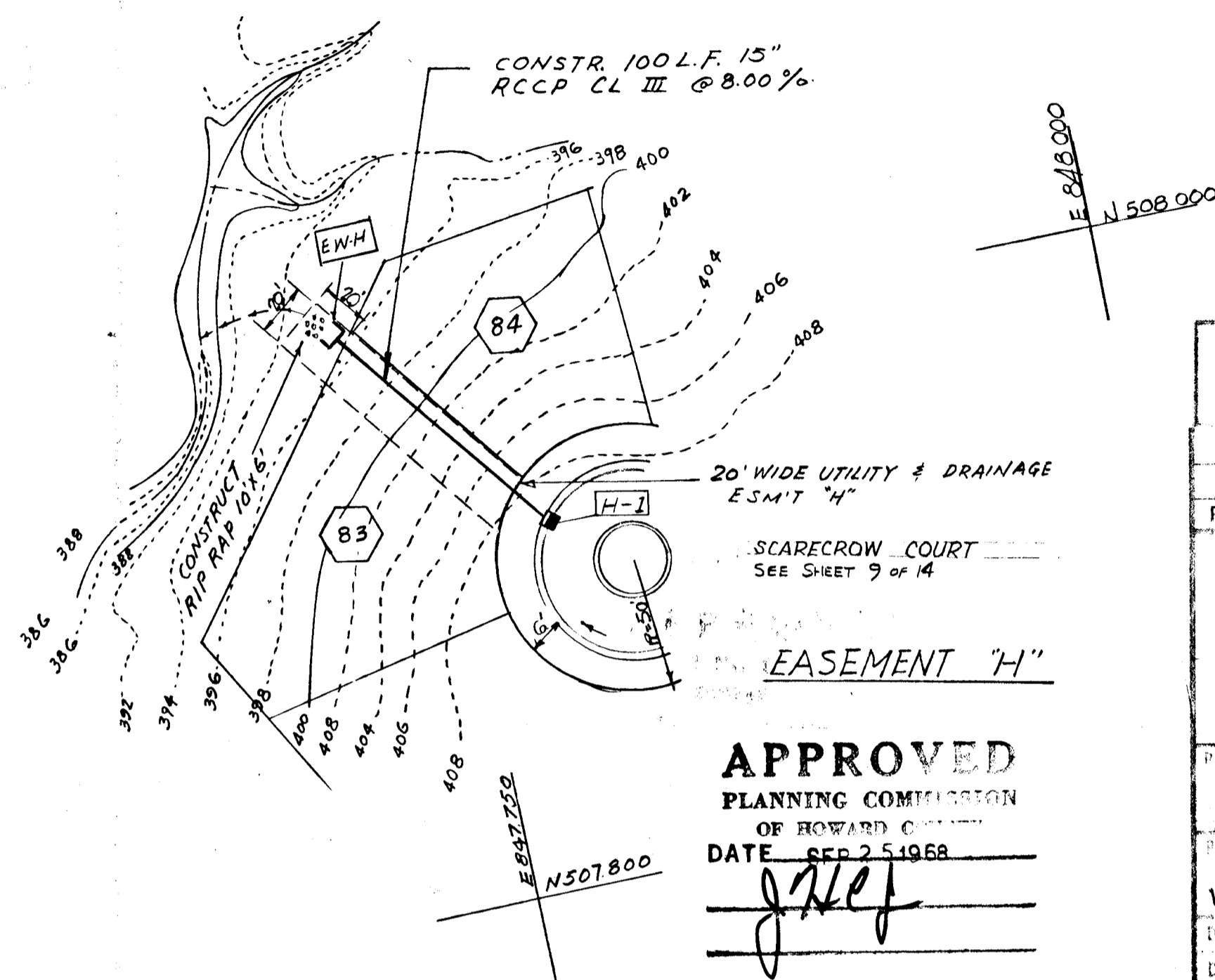
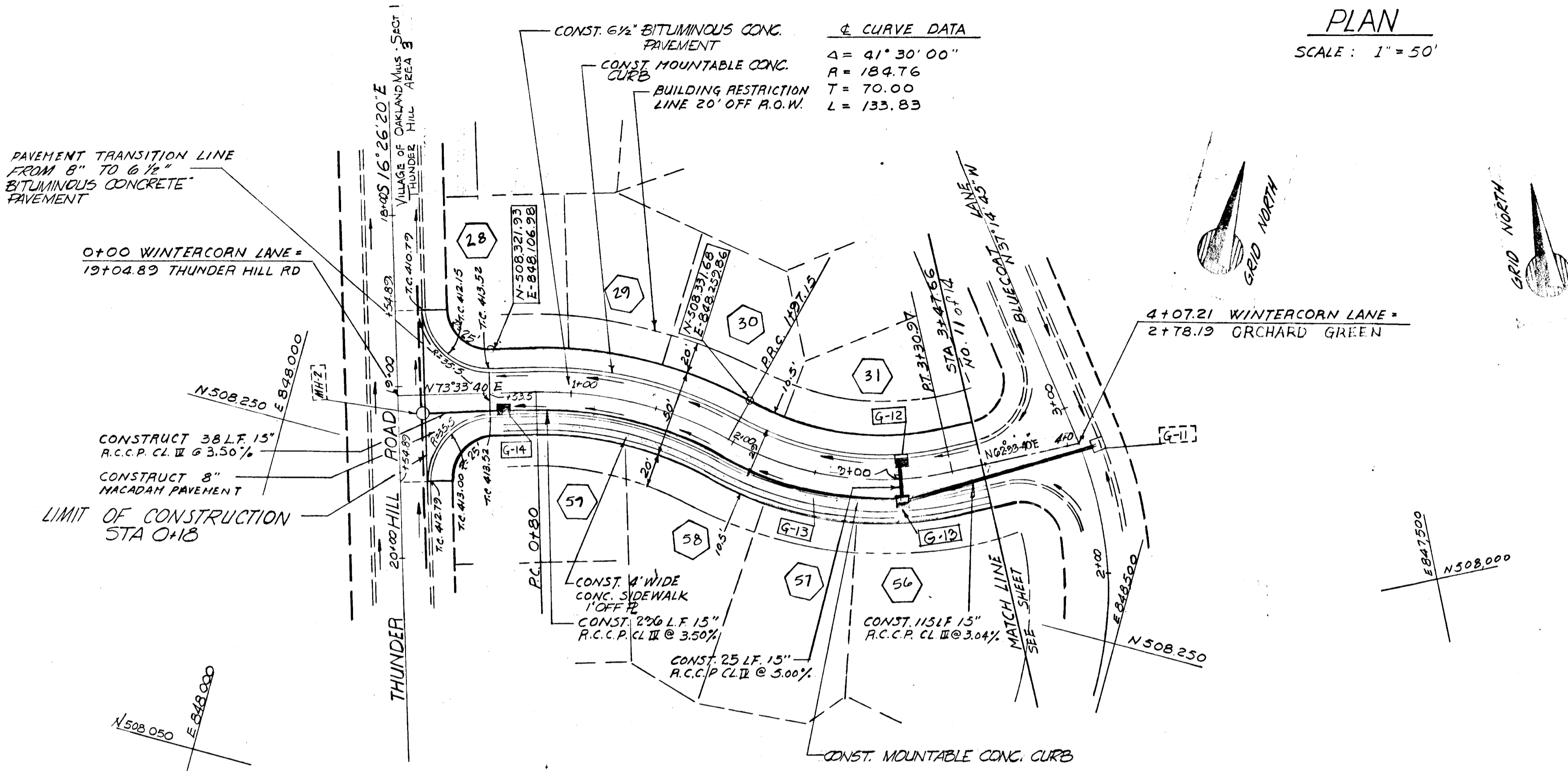
PROFILE
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'



STORM DRAINAGE STRUCTURE SCHEDULE							
NO.	TYPE	LOCATION	INV. IN	INV. OUT	COLLECTOR	REMARKS	
G-12	MOD. CL. 3" CORR. SINGLE GRATE	STA. 3+00	14.5' LT.	422.95	427.19	DEPRESSED "	
G-13	MOD. CL. 3" CORR. SINGLE GRATE	STA. 3+00	14.5' RT.	420.80	427.19	DEPRESSED "	SEE DETAIL 12 OF 14
G-14	MOD. CL. 3" CORR. SINGLE GRATE	STA. 0+60.50	14.5' RT.	409.35	413.72	DEPRESSED "	
	EW-H Type "G" ENDWALL	AS SHOWN		396.00		SEE DETAIL SH. 12 OF 14	

PLAN

SCALE: 1" = 50'



BROWNE-PANDULLO & ASSOCIATES
 ENGINEERS
 COLUMBIA, MARYLAND

Rev. Date: Rev. No.: Revision Description:

COLUMBIA
 6TH ELECTION DISTRICT - HOWARD COUNTY
 HOWARD RESEARCH AND DEVELOPMENT CORP.
 THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA:
VILLAGE OF OAKLAND MILLS
SEC 1 - THUNDER HILL - AREA 1

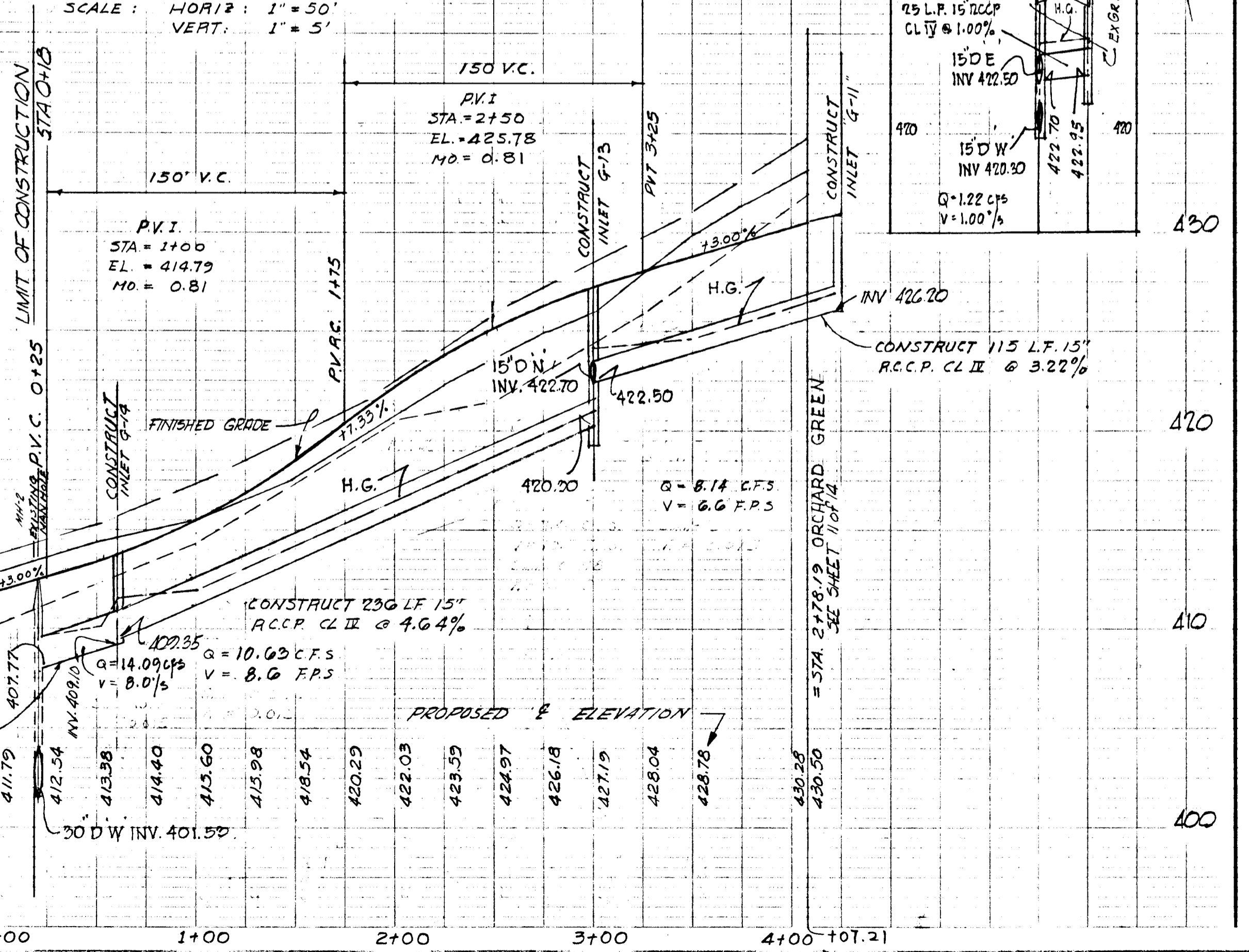
PROJECT TITLE:
PLAN & PROFILE
WINTERCORN LA. & EASEMENT "H"

Des. By: C. Y. Scale: AS SHOWN Draw No: 10 OF 14
 Div. By: C. Y. Date: APRIL 23, 1968 C.C.T. No.
 Chk. By: JPK Approved:

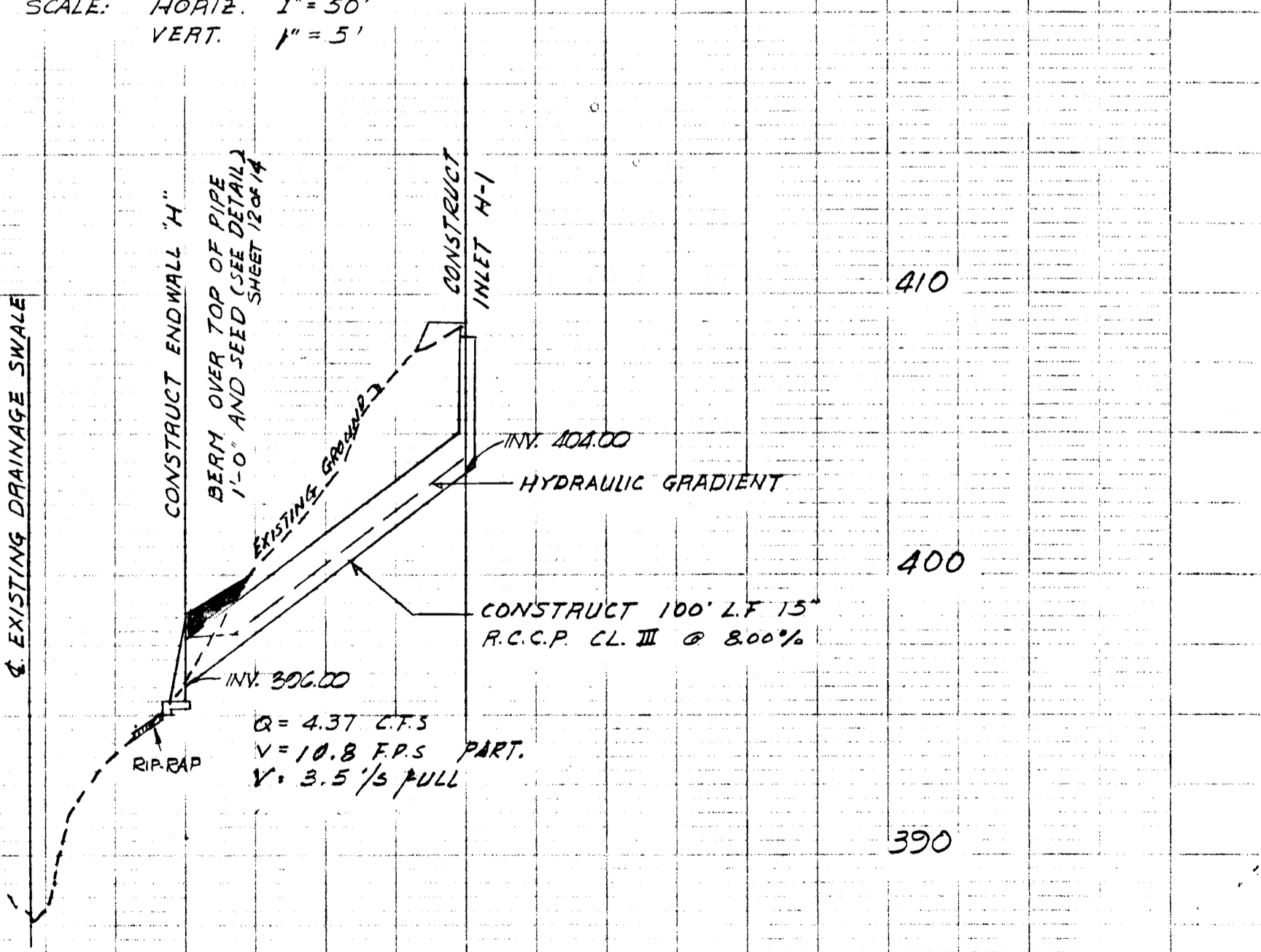
LEGEND

- EXIST. GROUND 20' RT. R.O.W.
- EXIST. GROUND 20' LT. R.O.W.
- EXIST. GROUND ON FINISHED GRADE

PROFILE WINTERCORN LANE



PROFILE EASEMENT "H"



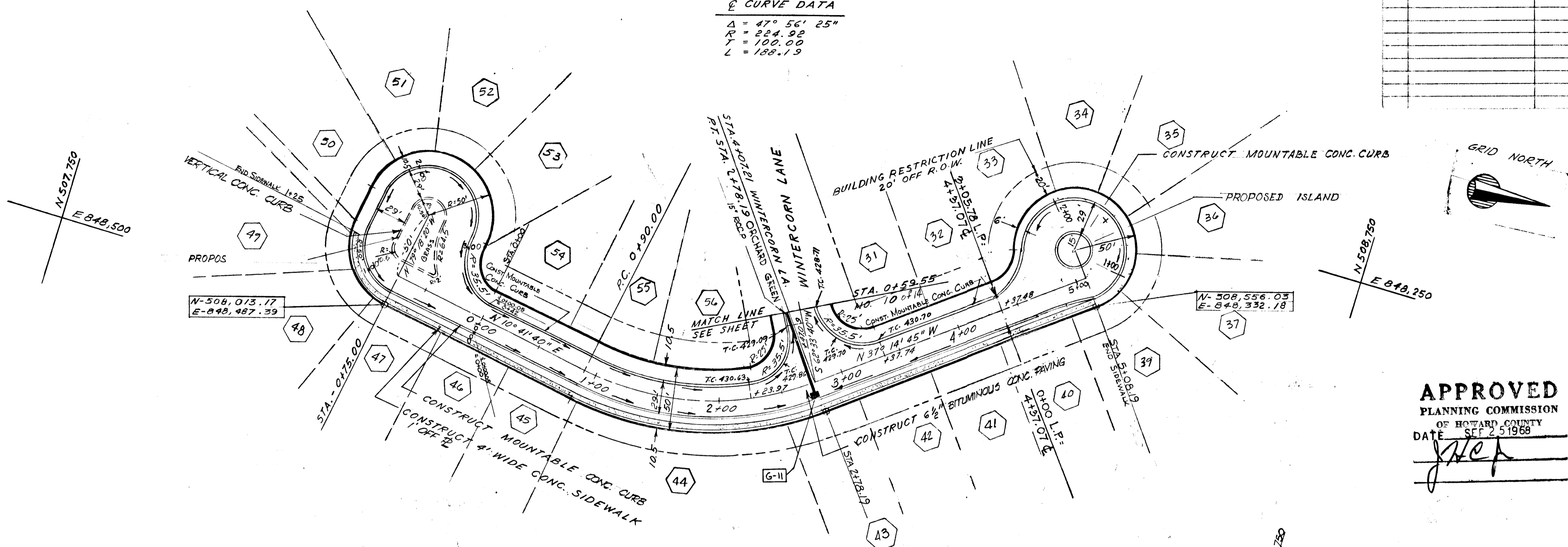
PLAN
SCALE: 1" = 50'

Q CURVE DATA

Δ	= 47° 56' 25"
R	= 224.98
T	= 100.00
L	= 188.19

STORM DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INV. IN	INV. OUT	DEPTH	REMARKS
G-11	6" MOD. 'S' COMB. (SINGLE GRF) INLET	STA. 2+75.00, 14.5' RT.	-	426.20	430.83	SEE DETAIL 94.12 OF 14



APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE: SEP 25 1968
[Signature]

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

28 AUG 68 #1 REVISED CUL DA SAC PLAN & PROFILE

Rev Date: Rev No: Revision Description:

COLUMBIA
MARYLAND
7th ELECTION DISTRICT - HOWARD COUNTY

HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA:
VILLAGE OF OAKLAND MILLS
SEC 1 - THUNDER HILL - AREA 1

PROJECT TITLE:
PLAN & PROFILE
ORCHARD GREEN

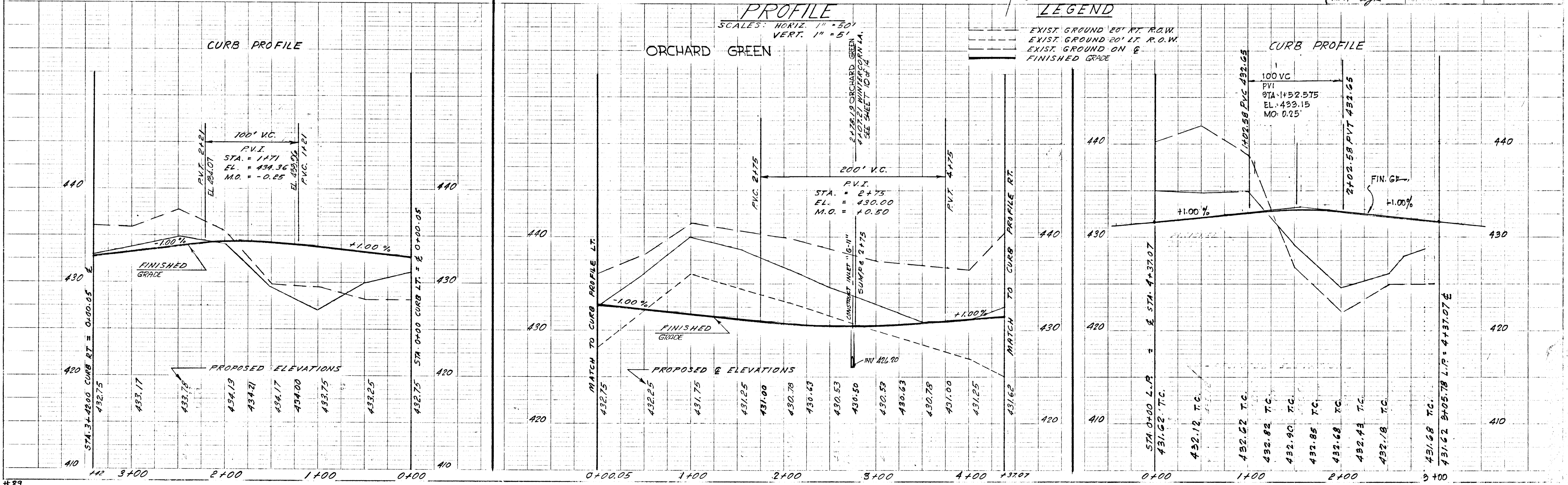
Des. By: W.J.K. Scale: AS SHOWN Draw No: 11 OF 14
Dir. By: F.A.S. Date: APRIL 23, 1968 C.C.F. No.
Chk. By: WJK Approved

ORCHARD GREEN

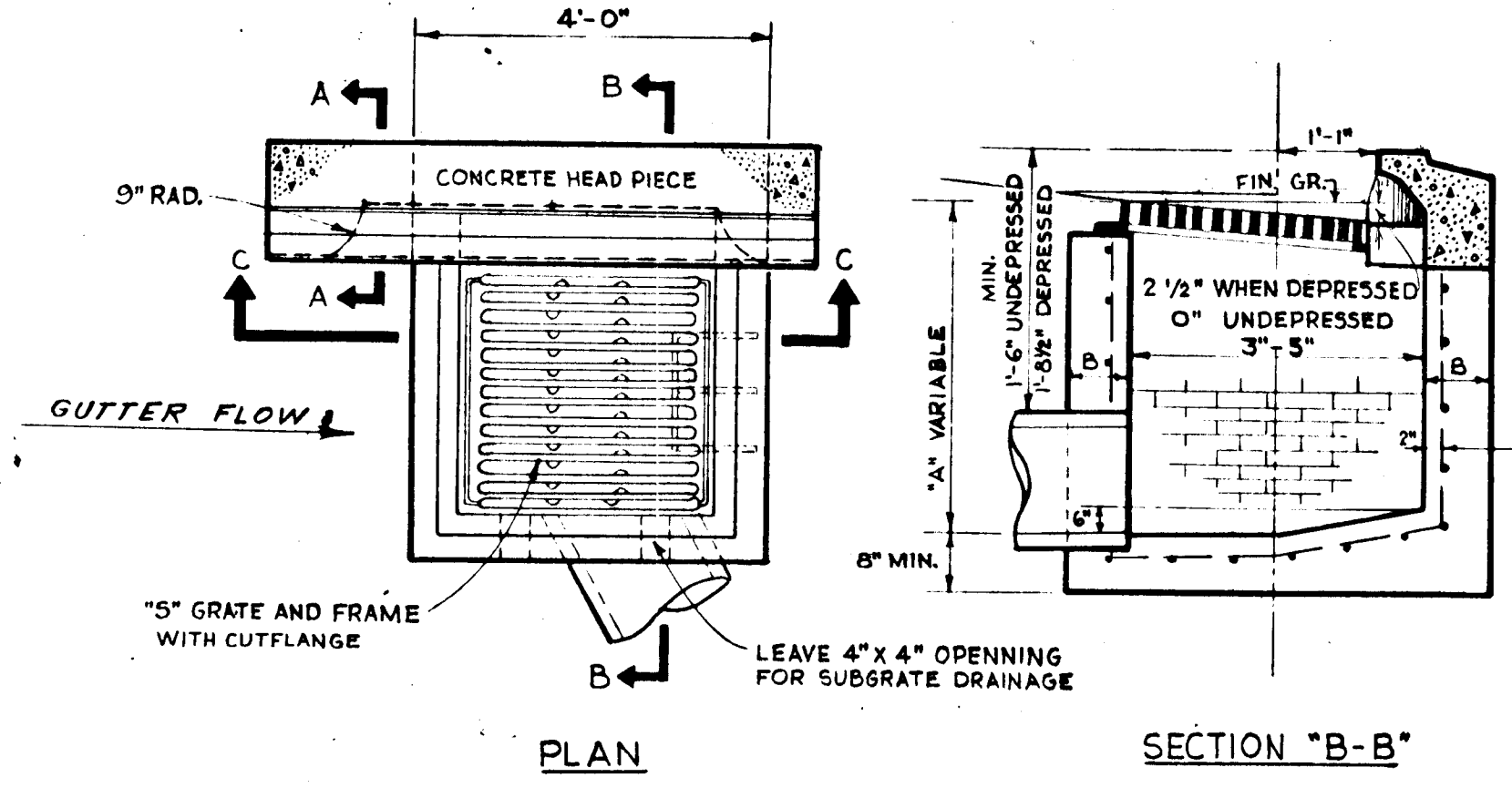
PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

LEGEND

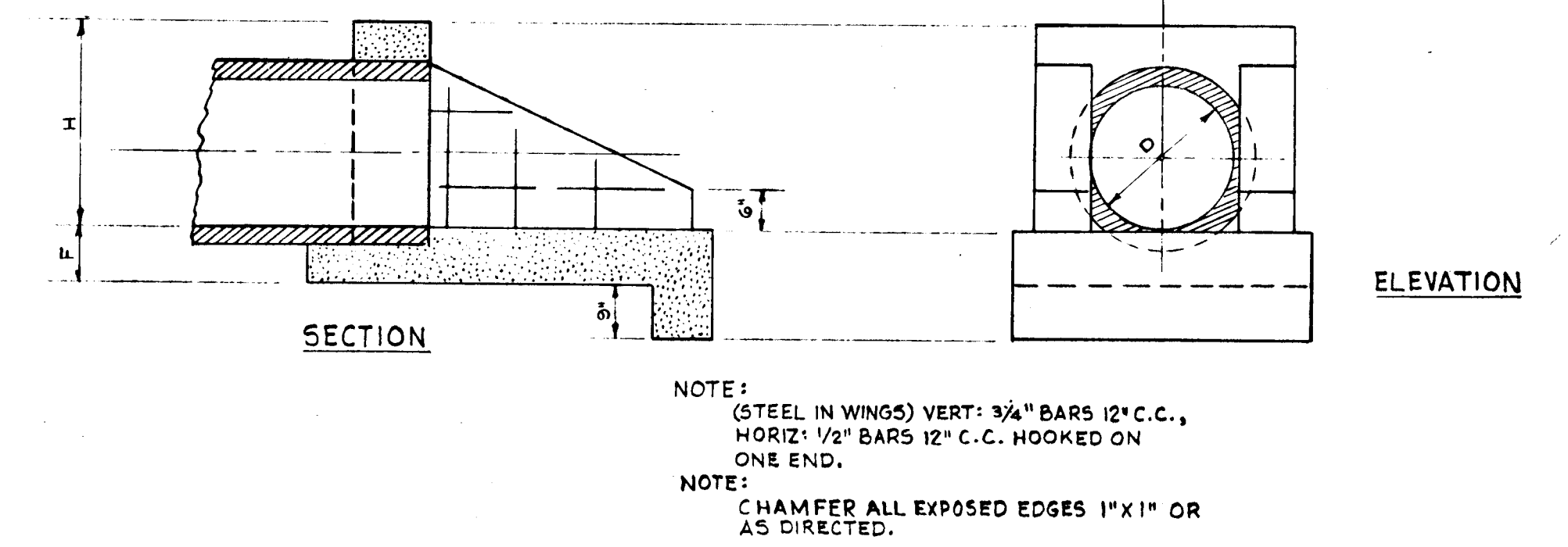
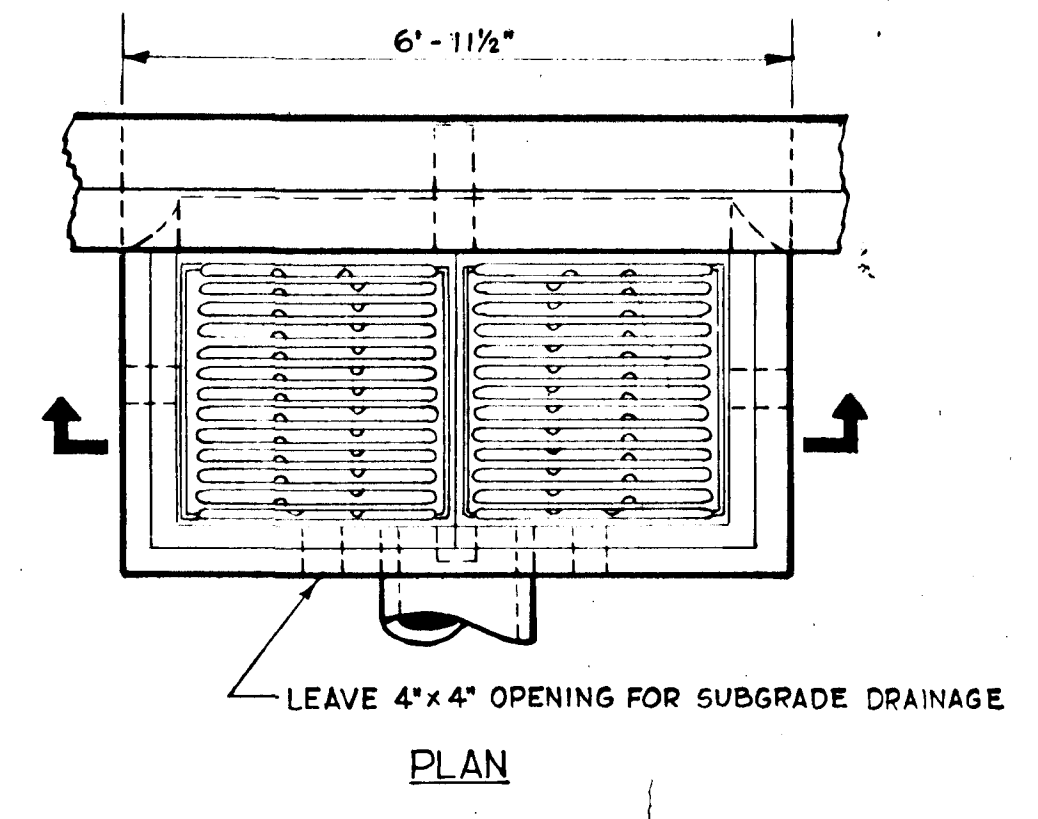
EXIST. GROUND 20' RT. R.O.W.
EXIST. GROUND 20' LT. R.O.W.
EXIST. GROUND ON Q
FINISHED GRADE



#89

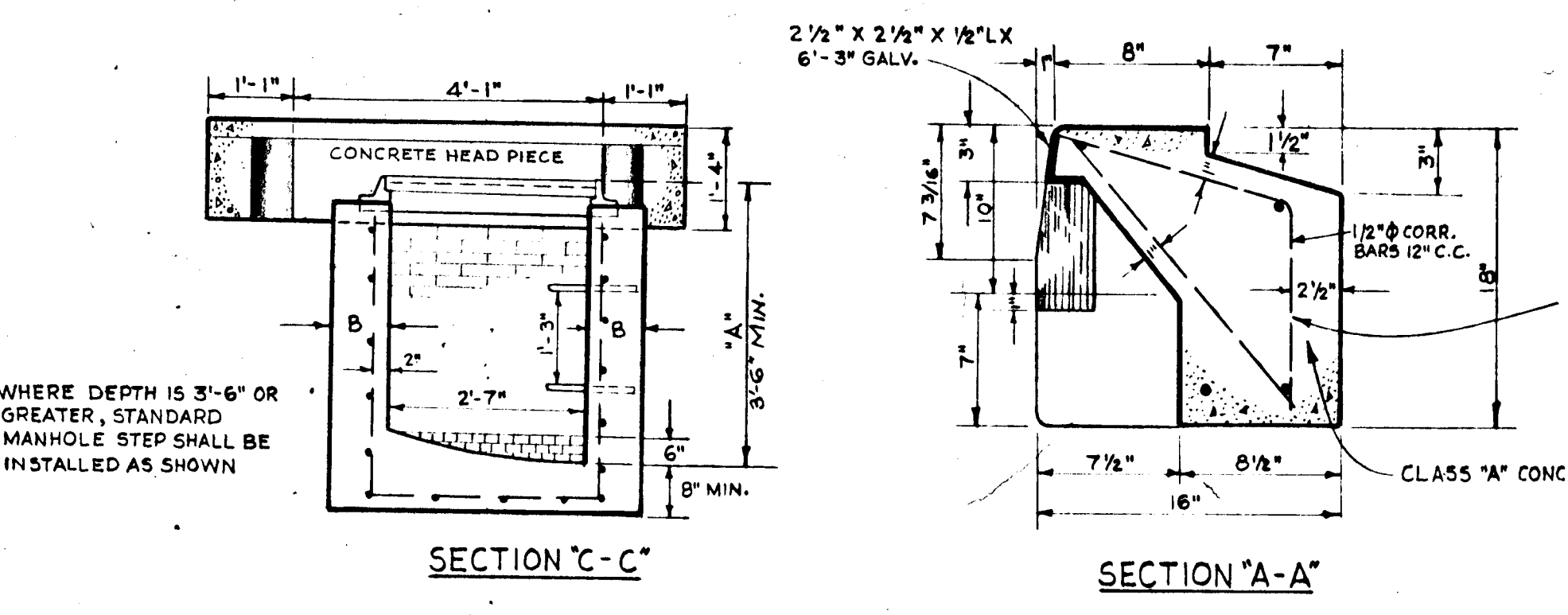


- NOTES:
1. INLETS MAY BE CONSTRUCTED OF REINFORCED CONCRETE OR BRICK. SIZE, TYPE & DIRECTION OF INLET CONNECTION WILL VARY TO SUIT CONDITIONS
 2. THE INVERT SHALL BE BRICK OR PLAIN, CLASS "A" CONCRETE.
 3. $B = 8"$ WHERE A IS 7' OR LESS
 4. $B = 12"$ WHERE A IS 7' TO 11'
 5. TOP 4" OF WALLS SHALL BE MASONRY. ADDITIONAL BRICK SHALL BE USED TO BRING THE RATE TO EXISTING GRADE IF REQUIRED
 6. REINFORCEMENT REQUIRED ON OUTSIDE, AS WELL AS ON INSIDE, OF WALLS BELOW 7'-0" WHEN A IS GREATER THAN 7'-0". SPACING, SAME AS FOR INSIDE OF WALL.
 7. PLACE 1/4" EXPANSION MATERIAL OF THE SAME TYPE APPROVED FOR PAVEMENT BETWEEN THE FRAME AND ABUTTING RIGID PAVEMENT, & BETWEEN ENDS OF INLET CURB & NORMAL CURB.

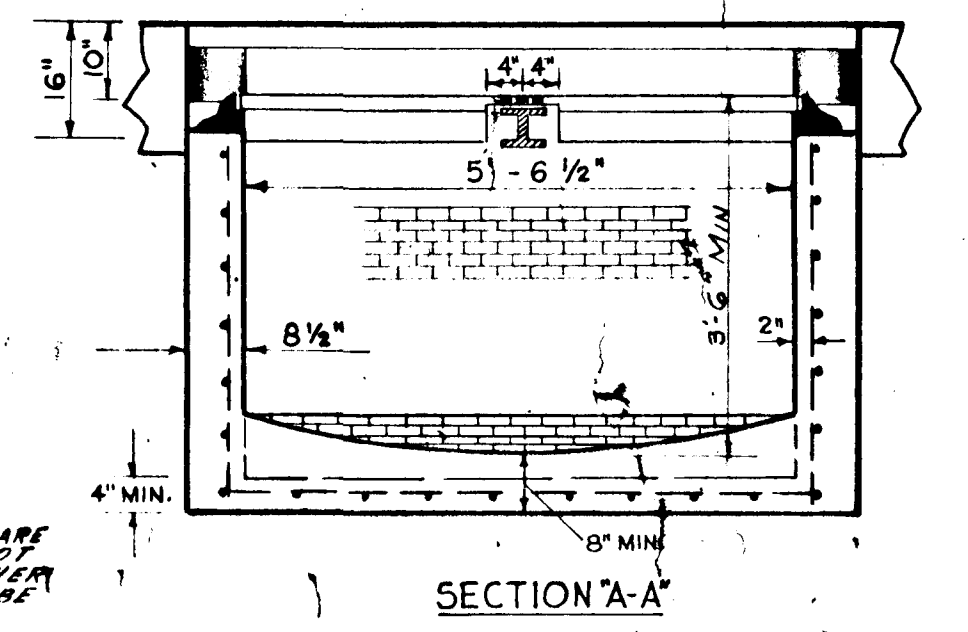


SLOPE 2:1

OPENING D	DIMENSIONS FOR CONCRETE						QUANTITIES	
	L	B	F	H	W	K	1. ENDWALL CONC. CU.YDS.	2. WINGS STEEL LBS.
12"	0.79	2'-0"	9"	9"	11"	14"	0.36	34
15"	1.23	2'-3"	9"	9"	11"	14"	0.47	37
16"	1.39	2'-4"	9"	9"	11"	14"	0.50	38
18"	1.78	2'-4"	9"	9"	2'-2"	2'-4"	0.61	53
24"	3.14	3'-4"	12"	9"	2'-0"	3'-4"	1.17	71
30"	4.91	4'-0"	12"	9"	3'-4"	4'-1"	1.62	91
36"	7.07	4'-6"	12"	9"	3'-10"	5'-0"	2.12	116
42"	9.62	5'-4"	12"	9"	4'-5"	6'-0"	3.15	141
48"	12.57	6'-0"	12"	9"	4'-11"	7'-0"	3.88	174



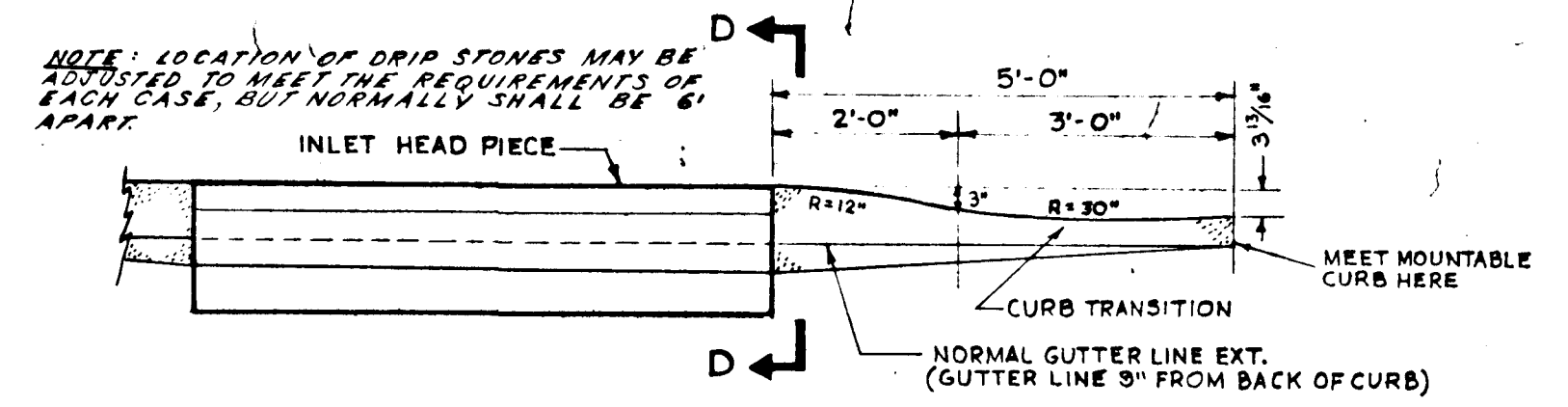
ALL LONGITUDINAL BARS 6' LONG
1/2" CORR. ANCHOR BARS, 24" C.C.
FASTEN TO ANGLE WITH 1/4" FILLET
WELD ALL AROUND BEFORE
GALVANIZING



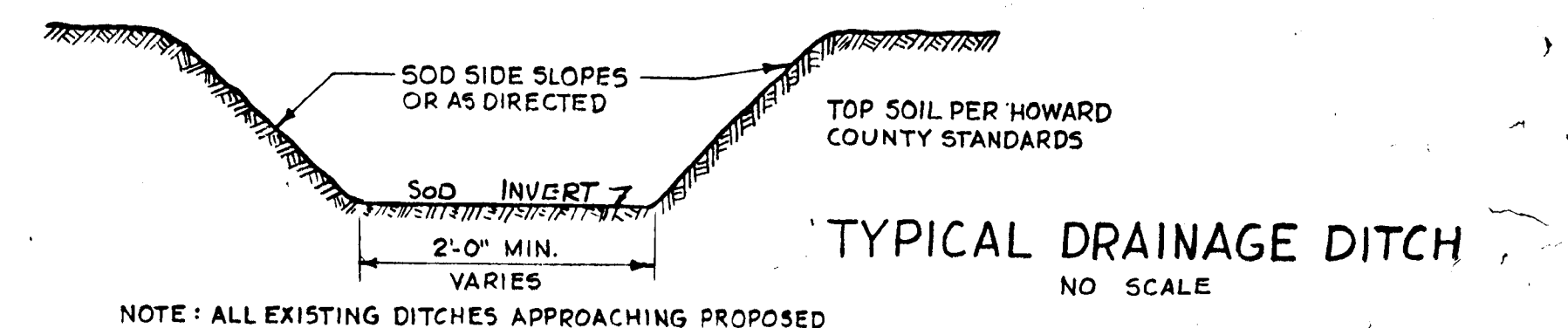
STANDARD TYPE "G" ENDWALL
NO SCALE

MODIFIED CLASS "S" COMBINATION INLET DETAIL
(SINGLE GRATE)
NO SCALE

STANDARD CLASS "S" COMBINATION INLET
(DOUBLE GRATE)
NO SCALE

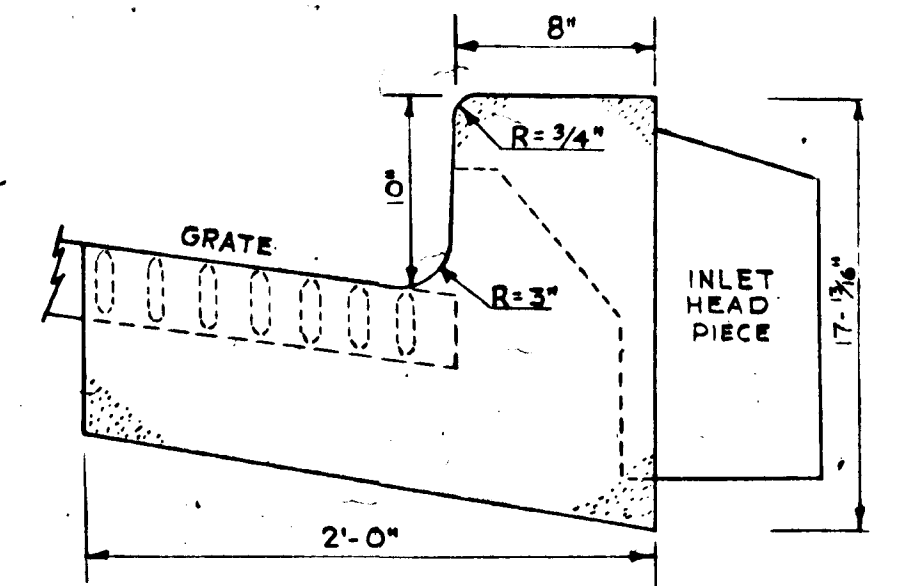


DETAIL OF MOUNTABLE CURB TRANSITION TO INLET CURB PIECE
NO SCALE

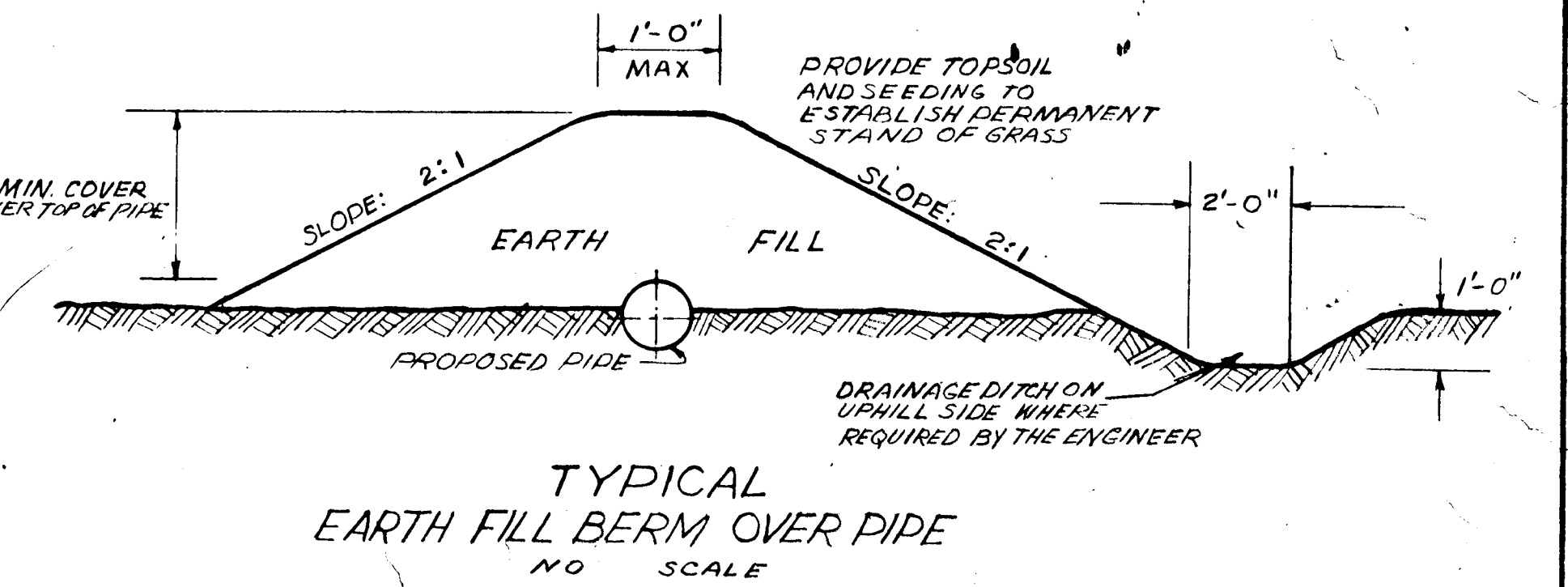


NOTE: ALL EXISTING DITCHES APPROACHING PROPOSED ENDWALLS SHALL BE TRIMMED IN ACCORDANCE WITH ARTICLE C-6 OF THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND STANDARD SPECIFICATIONS.

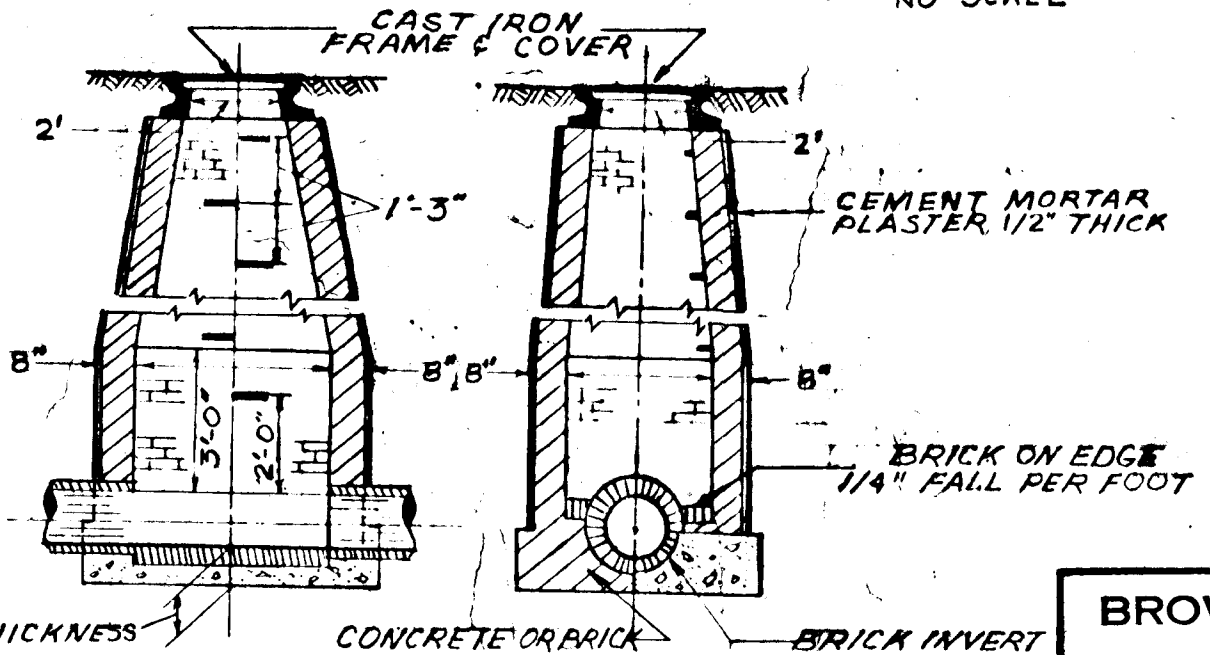
TYPICAL DRAINAGE DITCH
NO SCALE



APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE SEP 25 1968
[Signature]



TYPICAL EARTH FILL BERM OVER PIPE
NO SCALE



STANDARD MANHOLE DETAIL
NO SCALE

MANHOLE BASE THICKNESS
8" WALL - 12" BASE
12" WALL - 15" BASE

MANHOLE WALL THICKNESS
8" TO A DEPTH OF 12"
12" BELOW DEPTH OF 12"
TO DEPTH OF 24"

BENCH HEIGHT ABOVE OUTGOING PIPE INVERT
STORM WATER 0.5 D

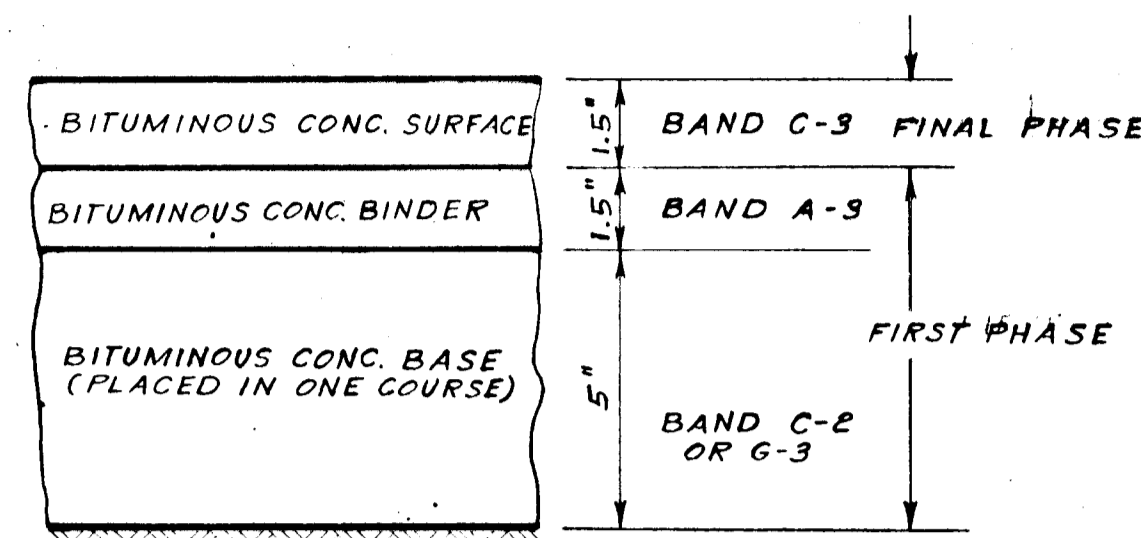
BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

COLUMBIA
MARYLAND
OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA
VILLAGE OF OAKLAND MILLS
SEC. 1 - THUNDER HILL - AREA 1

PROJECT TITLE
DRAINAGE DETAILS

Des By W.J.K. Scale A5 SHOWN Dwg No 1/6 OF 1
Dwn By W.J.K. Date APRIL 23, 1968 C.C.F. No
Chk By W.J.K. Approved

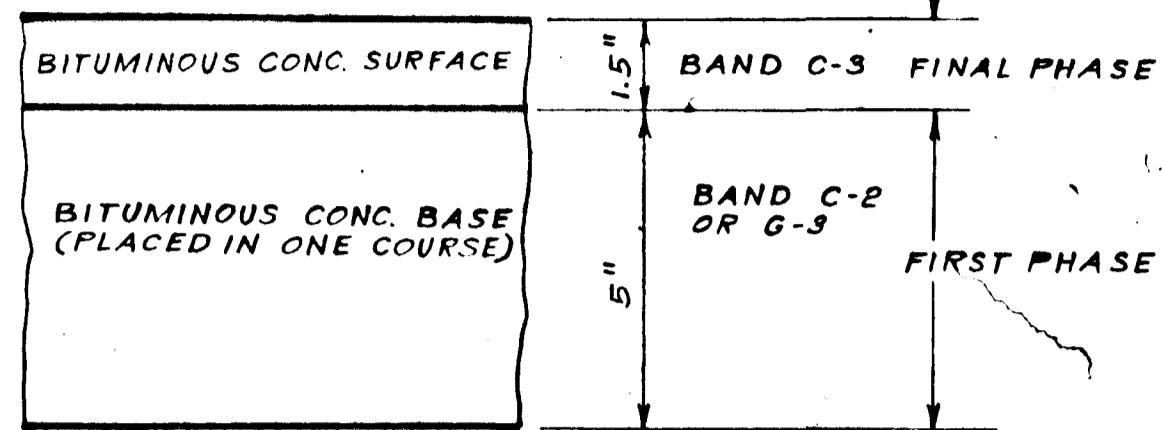


CLEARING & GRADING — ARTICLE C-1
 SUBGRADE — ARTICLE C-2
 BASE COURSE — ARTICLE C-31 OR C-33
 BINDER COURSE — ARTICLE C-31
 SURFACE COURSE — ARTICLE C-31

NOTE: PAVEMENT TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE & SPECIFICATIONS

ARTERIAL RESIDENTIAL STREET

NO SCALE
 D-113 PAGE 165 C

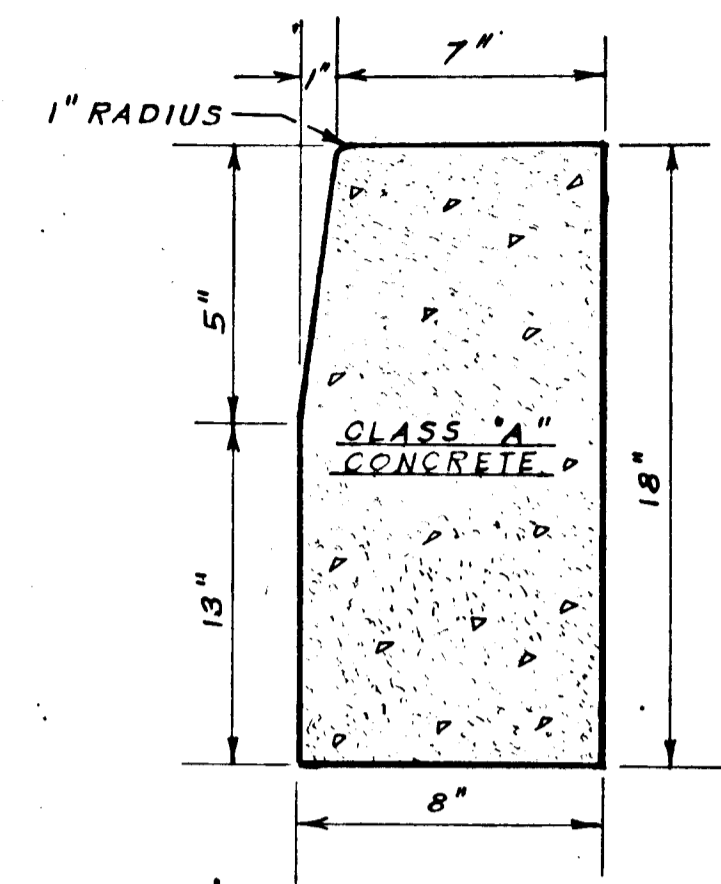


CLEARING & GRADING — ARTICLE C-1
 SUBGRADE — ARTICLE C-2
 BASE COURSE — ARTICLE C-31 OR C-33
 SURFACE COURSE — ARTICLE C-31

NOTE: PAVEMENT TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE & SPECIFICATIONS

LOCAL RESIDENTIAL STREET

NO SCALE
 D-114 PAGE 165 D

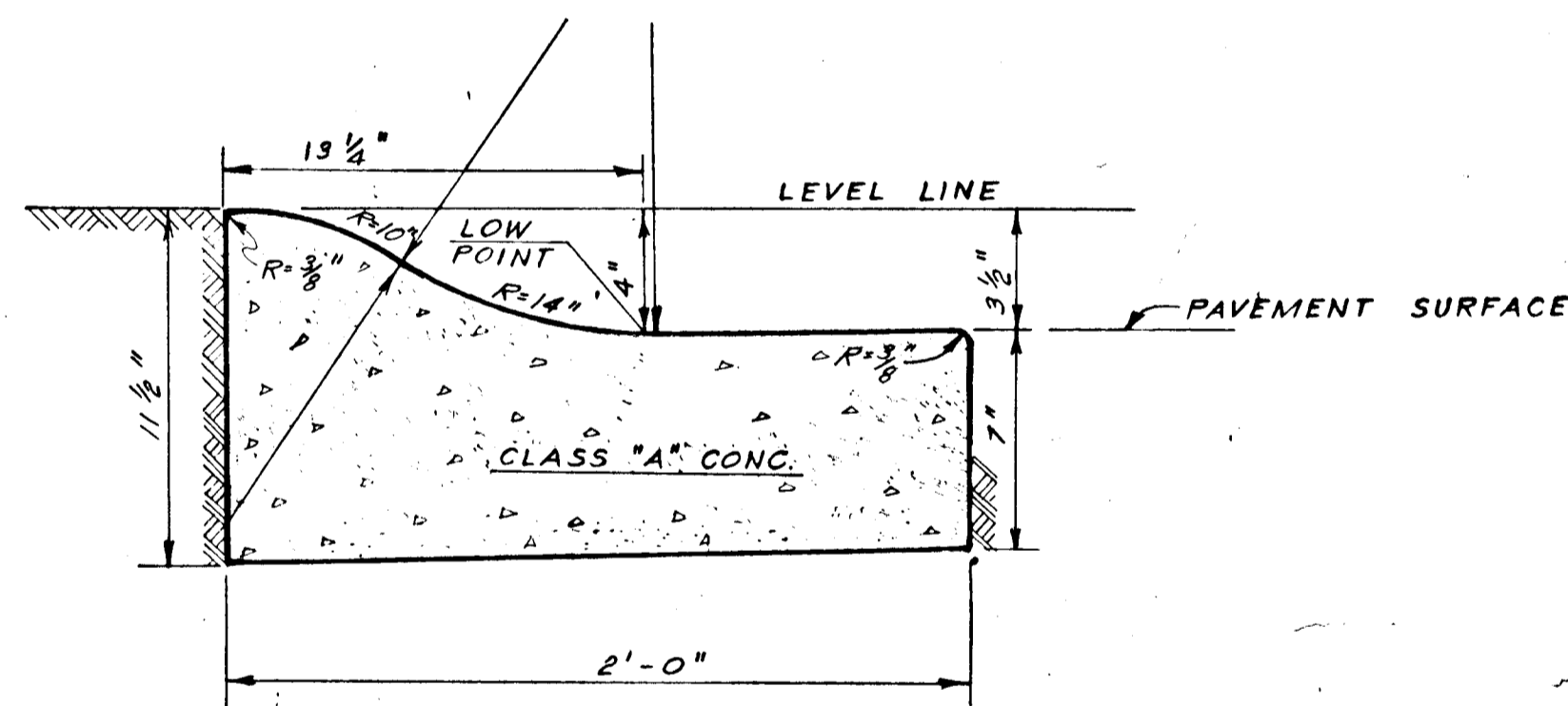


VERTICAL CURB

NO SCALE

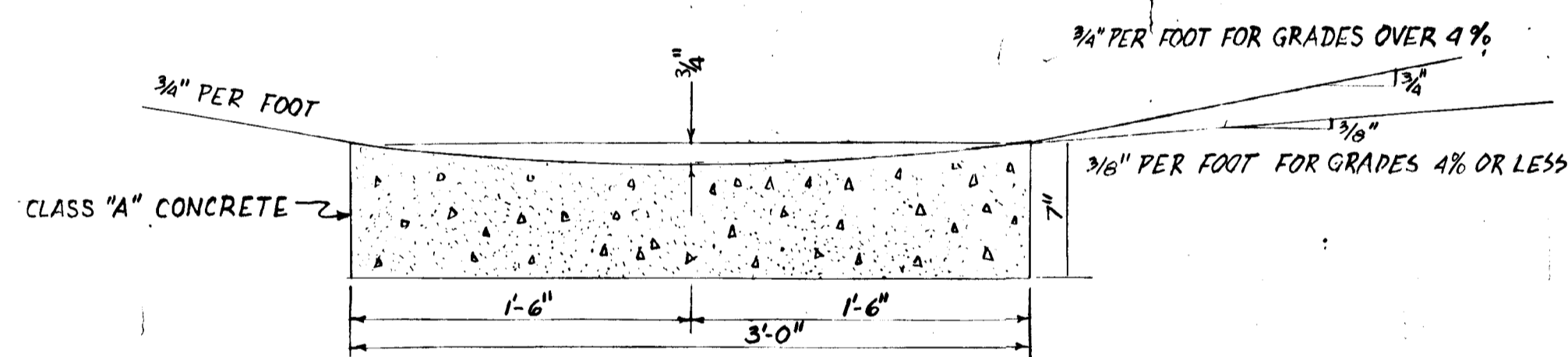
APPROVED
 PLANNING COMMISSION
 OF HOWARD COUNTY
 DATE SEP 25 1968
J. H. [Signature]

PAVEMENT SECTION



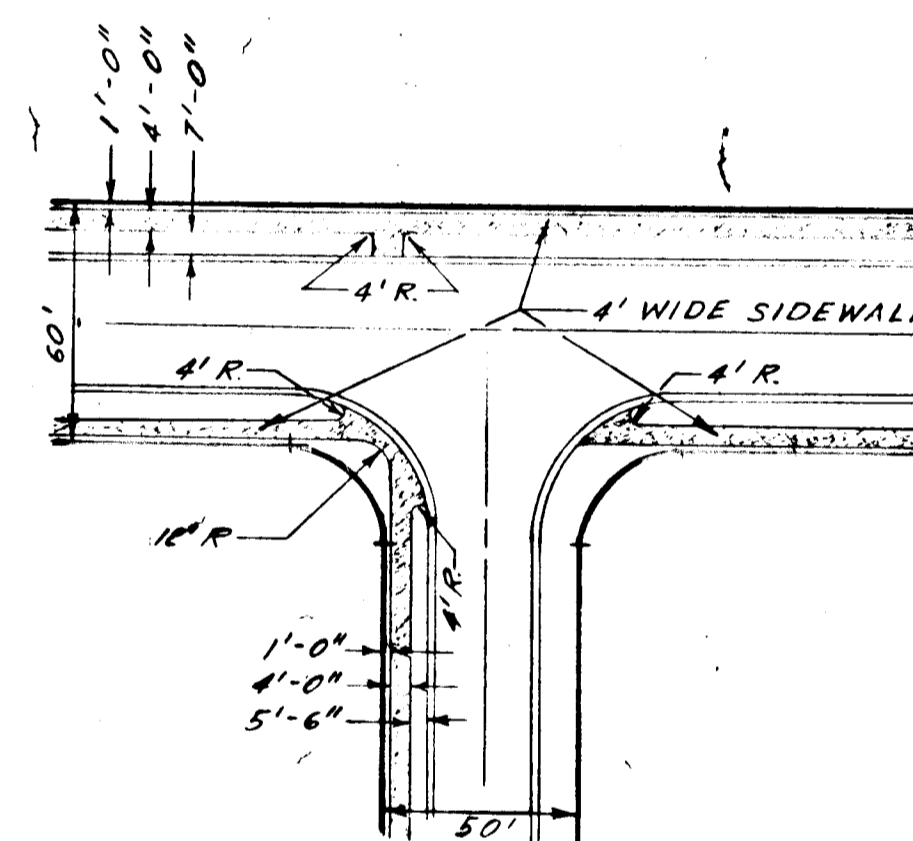
MOUNTABLE CURB & GUTTER

NO SCALE



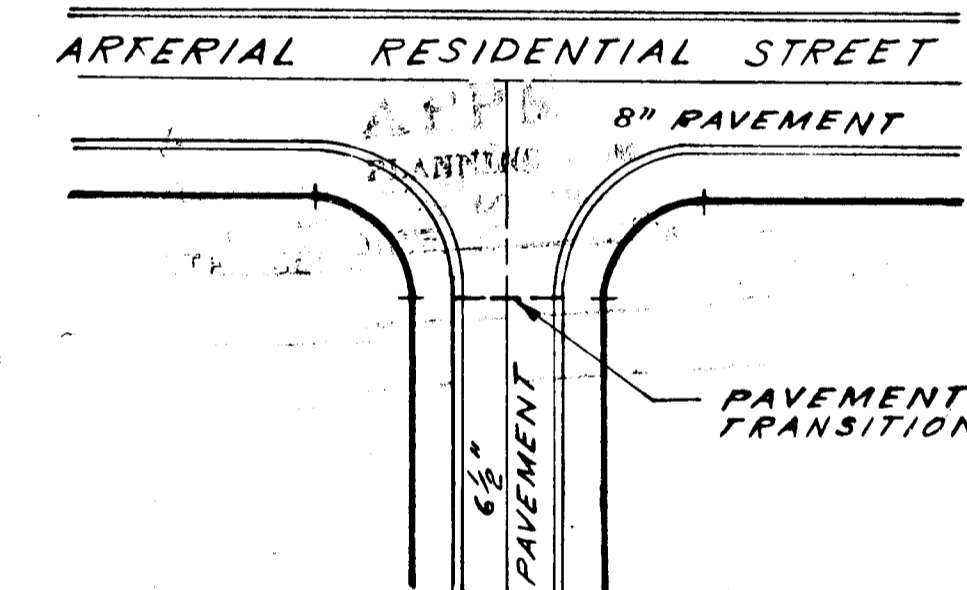
TYPICAL CONCRETE VALLEY GUTTER CROSS SECTION

NO SCALE



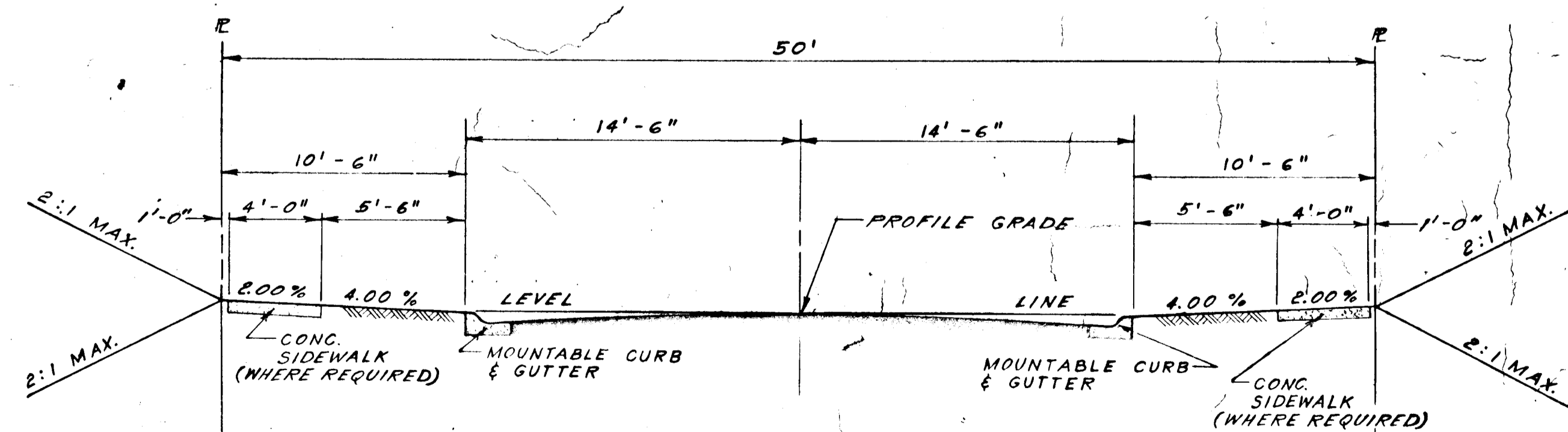
TYPICAL SIDEWALK DETAIL AT INTERSECTIONS

NO SCALE



TYPICAL PAVEMENT TRANSITION DETAIL

NO SCALE



50' R.O.W. TYPICAL SECTION

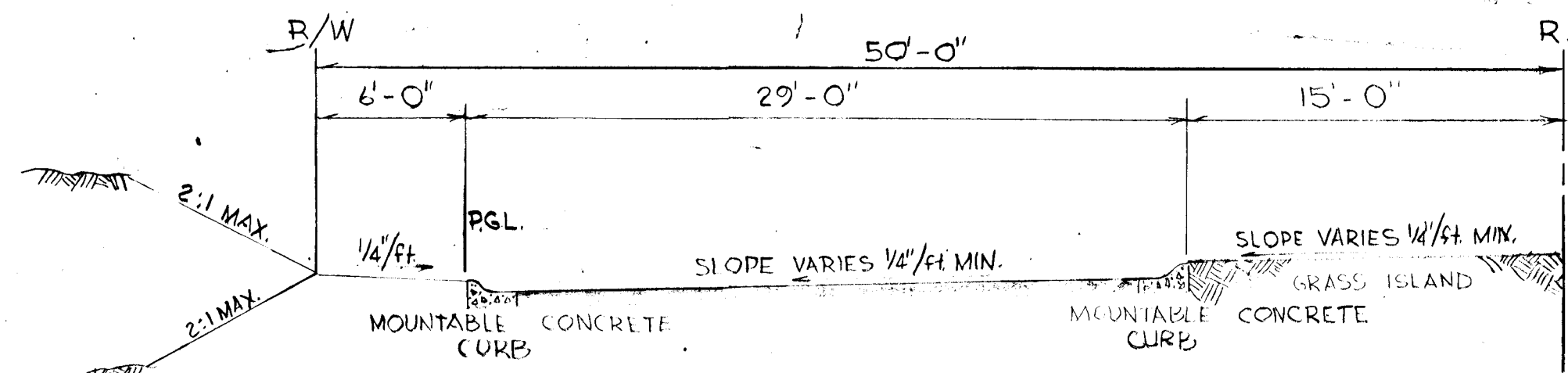
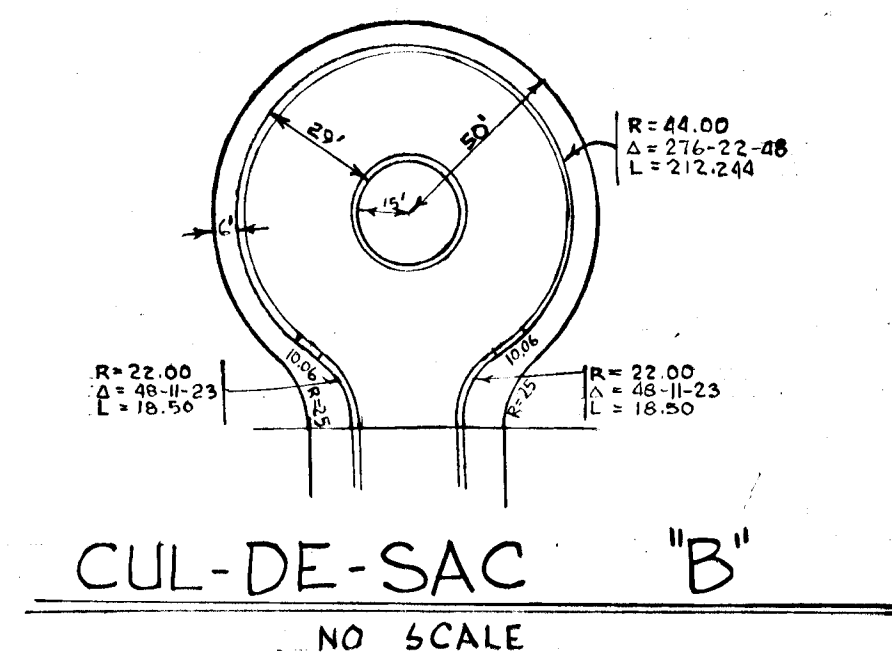
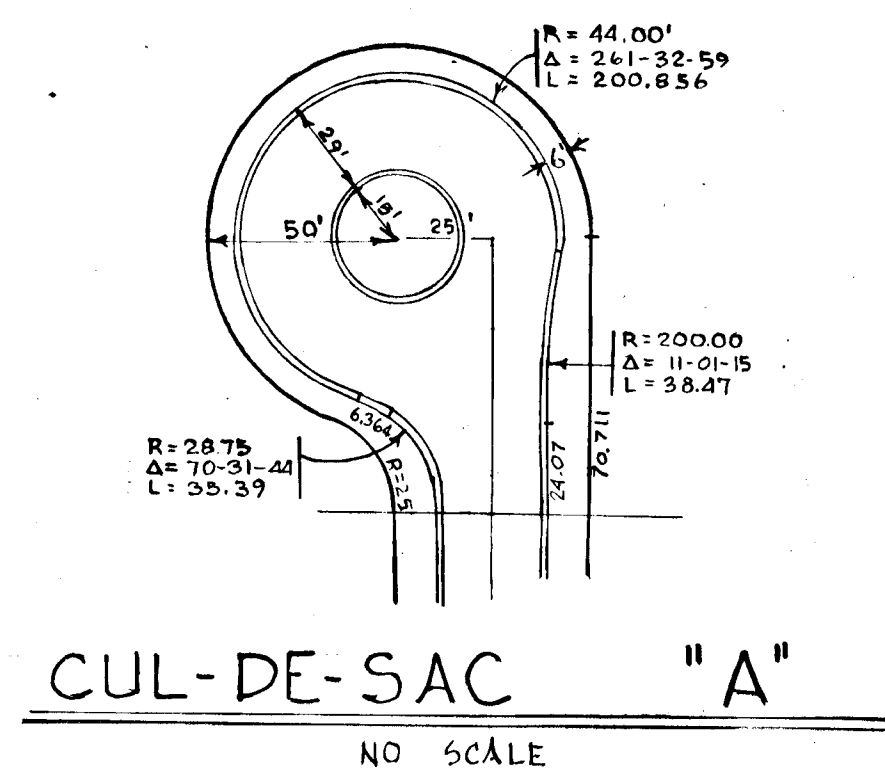
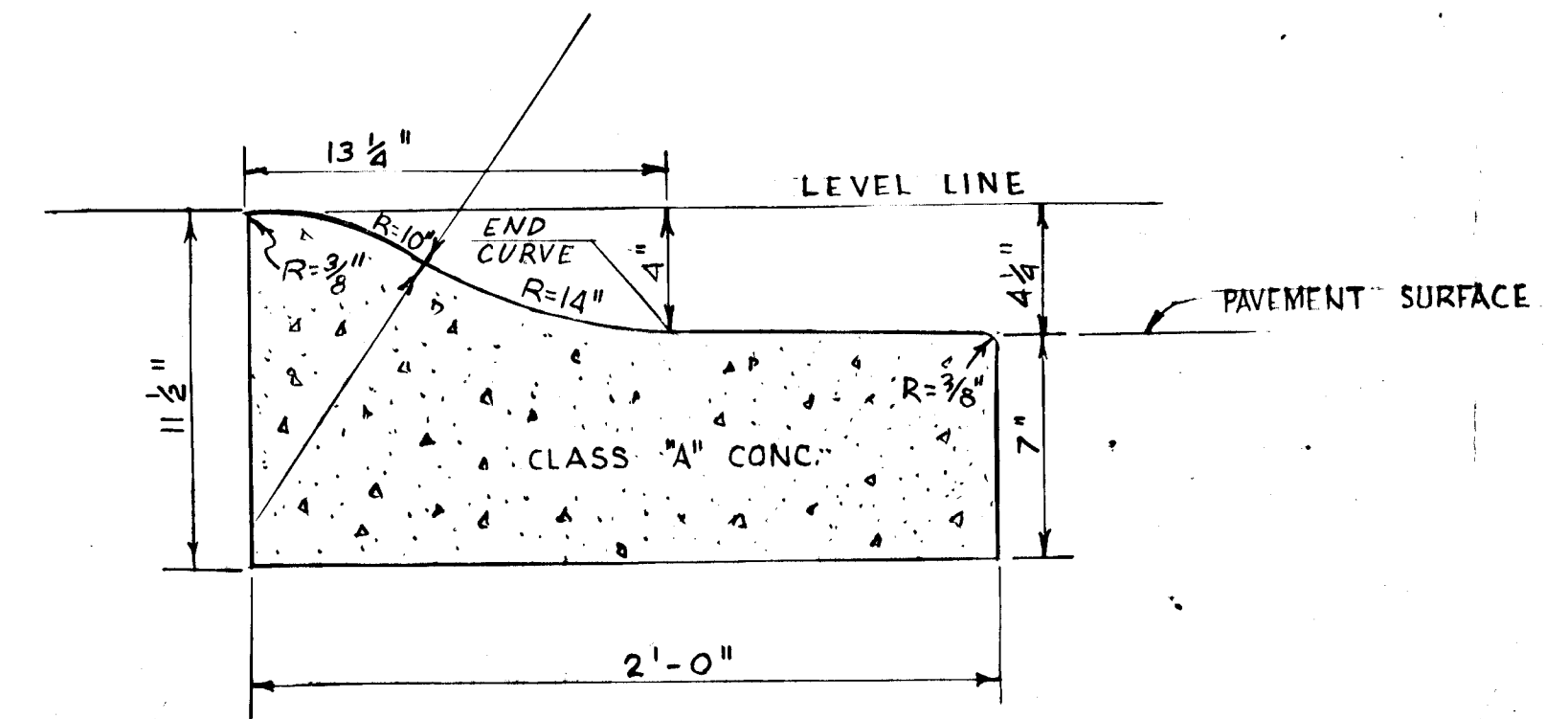
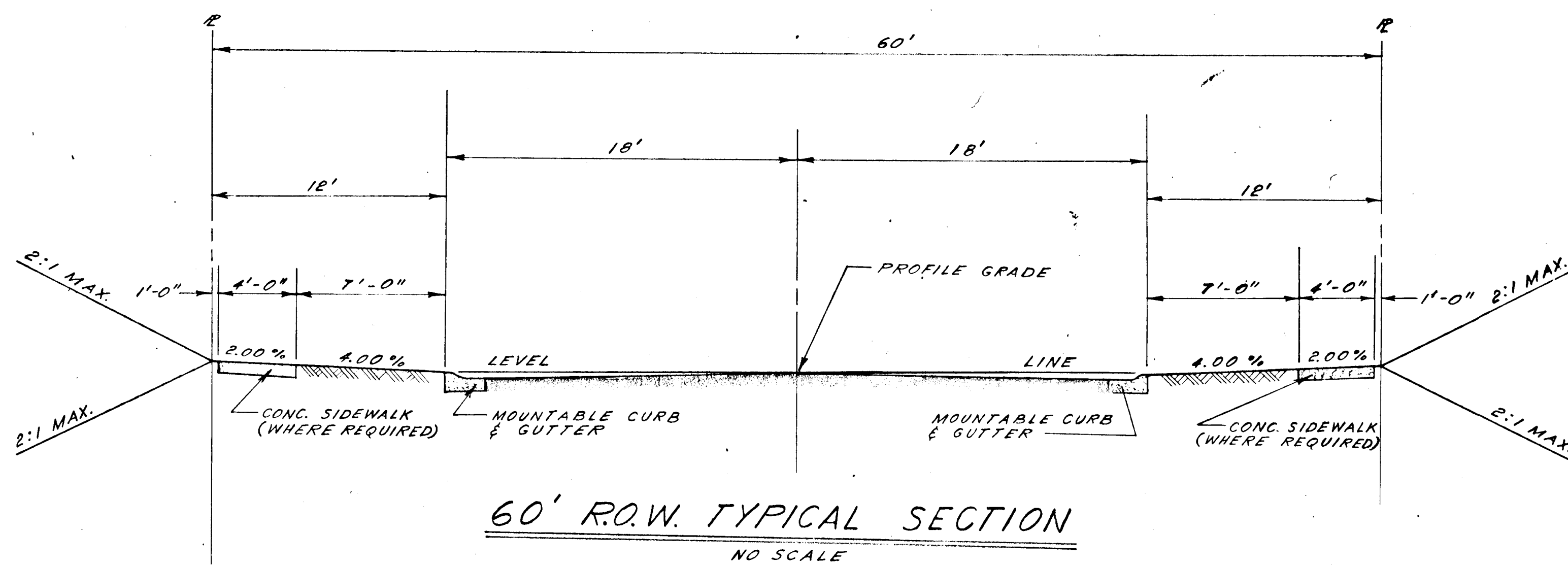
NO SCALE

BROWNE-PANDULLO & ASSOCIATES
 ENGINEERS
 COLUMBIA, MARYLAND

COLUMBIA
 MARYLAND
 6TH ELECTION DISTRICT - HOWARD COUNTY
 OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.
 THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA
VILLAGE OF OAKLAND MILLS
 SEC. 1 - THUNDER HILL - AREA 1
 PROJECT TITLE
ROADWAY DETAILS
 Des By W. J. K. Scale AS SHOWN Dwg. No. 13 of 14
 Dwn By F. A. S. Date APRIL 23, 1968 C.C.F. No.
 Chk By WJK Approved

FILE No. 1923



APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE SEE 2-1968
J.W.C.

BROWNE-PANDULLO & ASSOCIATES
ENGINEERS
COLUMBIA, MARYLAND

COLUMBIA
MARYLAND
7TH ELECTION DISTRICT - HOWARD COUNTY
OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.
THE VILLAGE OF CROSS KEYS - BALTIMORE, MARYLAND 21210

PROJECT AREA VILLAGE OF OAKLAND MILLS SEC. 1 - THUNDER HILL - AREA 1		
PROJECT TITLE ROADWAY DETAILS		
Des By <i>W.J.K.</i>	Scale <i>AS SHOWN</i>	Dwg No <i>14 01 14</i>
Drn By <i>F.A.S.</i>	Date <i>APRIL 23, 1968</i>	C.C.F. No
Chk By <i>WJK</i>	Approved	

FILE No. 1923

F-68-43