REVISIONS

COLUMBIA

HOWARD COUNTY, MARYLAND

CONSTRUCTION PLANS

VILLAGE OF HARPER'S CHOICE SECTION Nº 1

LONGFELLOW AREA Nº 2

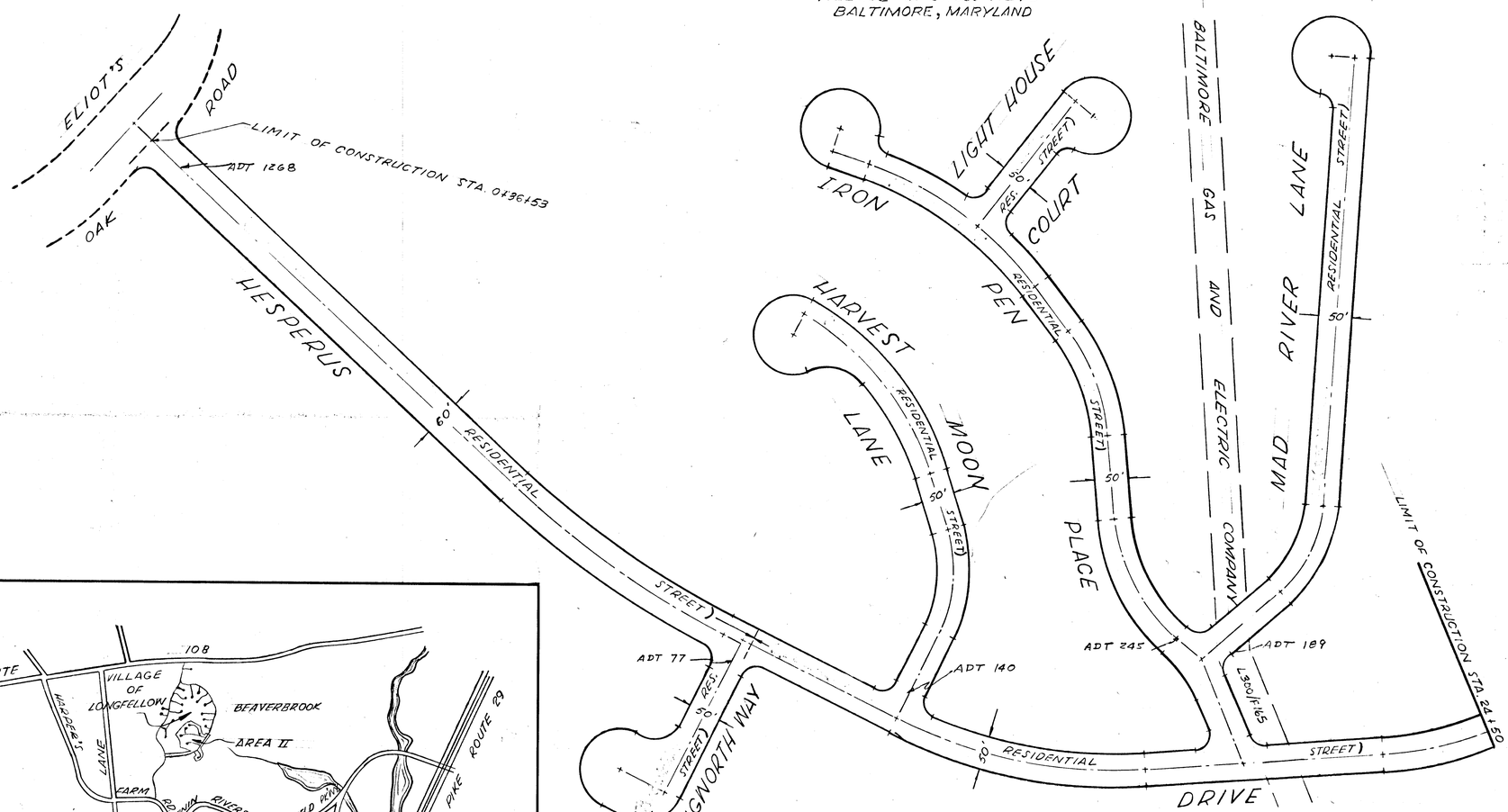
ELECTION DISTRICT 5

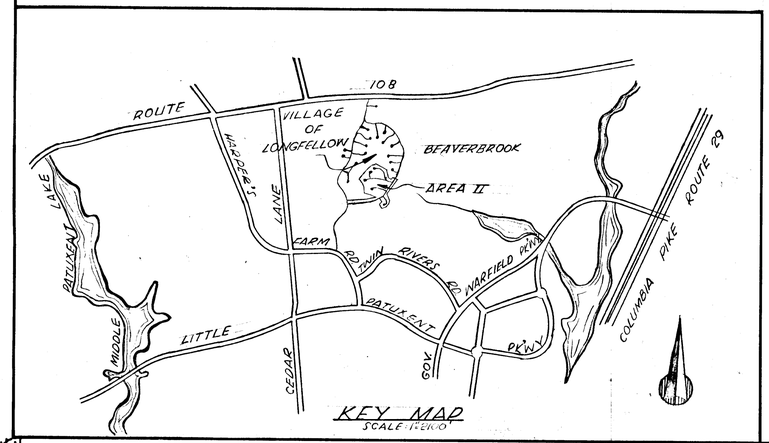
DATE: JUNE 9, 1967

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

SHEET INDEX	
SHEET NO.	DESCRIPTION
1.	PLAN & PROFILE - HESPERUS DRIVE
2.	PLAN & PROFILE - HESPERUS DR. & KILLINGWORTH WAY
3.	PLAN & PROFILE - HESPERUS DRIVE
4.	PLAN & PROFILE - HARVEST MOON LANE
5.	PLAN & PROFILE - IRON PEN PLACE
6.	PLAN & PROFILE - IRON PEN PLACE & LIGHT HOUSE CT.
7.	PLAN & PROFILE - MAD RIVER LANE
8, 9, 10, 11	CROSS SECTIONS - HESPERUS DRIVE
12.	CROSS SECTIONS - HARVEST MOON LANE
13, 14.	CROSS SECTIONS - IRON PEN PL. & LIGHT HOUSE CT.
15, 16.	CROSS SECTIONS - MAD RIVER LA. & KILLINGWORTH WAY
17, 18, 19	CONSTRUCTION DETAILS

SCALE: 1" = 100'





KEY MAP
SCALE: 1" = 2000'

NOTES:

1. HESPERUS DRIVE IS DESIGNED FOR 30 M.P.H. TRAFFIC SPEED. ALL OTHER ROADS ARE DESIGNED FOR 20 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 OF HOWARD COUNTY ROAD DEPARTMENT.

APPROVED BY

HOWARD COUNTY PLANNING COMMISSION — SENIOR ENGINEER — DATE 11-13-67

HOWARD COUNTY ROADS DEPT. — ROAD SUPT. — DATE 11-9-67

HOWARD COUNTY METROPOLITAN COMM. — CHIEF ENGINEER — DATE 11-9-67

ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
1.	BIT. CONC. SURFACE COURSE 1½" T.K.	S.Y.	3,500
2.	BIT. CONC. BINDER COURSE 1½" T.K.	S.Y.	4,500
3.	BIT. CONC. BASE COURSE 3" T.K.	S.Y.	16,200
4.	MODIFIED 3" COMB., SINGLE INLET	EA.	16
5.	3" COMB. DOUBLE INLET	EA.	3
6.	STANDARD E.A. INLET	EA.	3
7.	TYPE "C" HEADWALL	EA.	5
8.	MODIFIED TYPE "C" HEADWALL	EA.	1
9.	TYPE "F" HEADWALL	EA.	1
10.	15" R.C.C.P., A.S.T.M.-C-76-64T-CL. IV	L.F.	1050
11.	18" R.C.C.P., A.S.T.M.-C-76-64T-CL. IV	L.F.	537
12.	21" R.C.C.P., A.S.T.M.-C-76-64T-CL. IV	L.F.	290
13.	24" R.C.C.P., A.S.T.M.-C-76-64T-CL. IV	L.F.	380
14.	54" R.C.C.P., A.S.T.M.-C-76-64T-CL. IV	L.F.	66
15.	CONC. MOUNTABLE CURB	L.F.	12,400
16.	CONC. VERTICAL CURB	L.F.	1050
17.	EARTH EXCAVATION (ROADWAY)	C.Y.	19,970
18.	EARTH EXCAVATION (MAIN LINE)	L.F.	890
19.	PLACING OF TOPSOIL 4" THICK	S.Y.	36050
20.	CONC. SIDEWALK 4" THICK	S.F.	28,350
21.	CONC. SIDEWALK 6" THICK	S.F.	2,750

STATE OF MARYLAND — RICHARD P. BROWNE — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

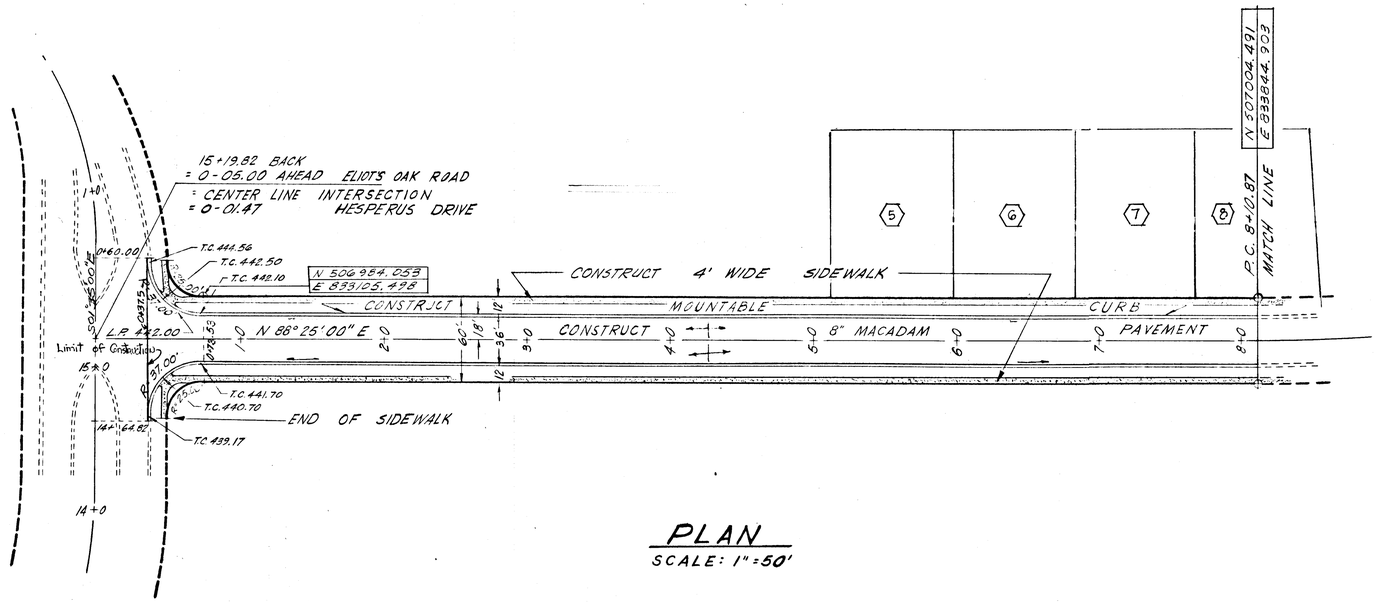
RICHARD P. BROWNE, P.E. & L.S.
LIC. No. 5238 STATE MARYLAND

Browne-Pandullo & Associates
ENGINEERS · PLANNERS · SURVEYORS
COLUMBIA, MARYLAND

DATE: JUNE 9, 1967
DRAWN BY: W.C.S.
CHECKED BY: W.R.

FILE Nº 1164

F-67-33



PLAN
SCALE: 1" = 50'

NOTES:
1. ALL DIMENSION AND CURVE DATA FOR THE CURB LINES ARE TO THE BACK OF THE CURB
2. T.C. IS THE ABBREVIATION FOR TOP OF CURB

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE NOV 1 7 1967

STATE OF MARYLAND
RICHARD P. BROWNE
No. 5238
REGISTERED
PROFESSIONAL ENGINEER AND LAND SURVEYOR

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

Rev Date	Rev No	Revision Description

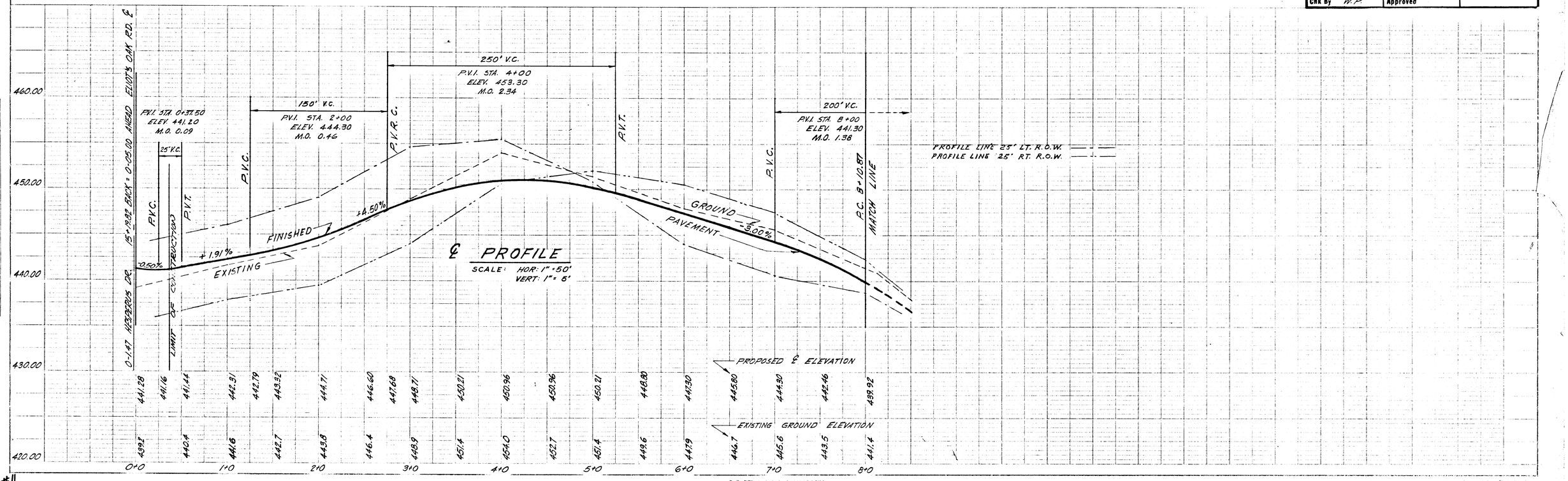
COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA
VILLAGE OF HARPER'S CHOICE SEC. No 1
LONGFELLOW AREA No 2

PROJECT TITLE
PLAN & PROFILE
HESPERUS DRIVE

Des By	W.P.	Scale AS SHOWN	Dwg No 1 OF 19
Drn By	J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By	W.P.	Approved	



℄ PROFILE
SCALE: HOR: 1" = 50'
VERT: 1" = 5'

#11

RK PAUL S. FRANKFORD ENGINEERING & SURVEYING CO.
48 7008 ALBANENE MAPPING PAPER 21550

FILE No 1764
F-67-33

STORM DRAINAGE STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN.	INV. OUT	T.C.P. ELEV.	REMARKS
I-1	MOD. S - COMB. SINGLE GRATE	SEE PLAN		395.50	400.49	DEPRESSED
I-2	MOD. S - COMB. SINGLE GRATE	11+86.50 - 0.5' RT.		428.50	408.45	DEPRESSED
I-3	MOD. S - COMB. SINGLE GRATE	0+53.50 - 14.5' RT.	400.86	400.80	404.90	DEPRESSED
I-4	MOD. S - COMB. SINGLE GRATE	12+97.33 14.5' LT.	15"= 396.00	392.15	400.87	DEPRESSED
			24"= 392.19			
MH-1	STANDARD	15+23 - 12.83' FROM ℄	15"= 385.10	384.35		
			21"= 384.60			
HW-1	"G"	SEE PLAN		386.50		
HW-2	"F"	12+97.33	392.80			

N 507004.491
E 833844.903

CURB LINE CURVE DATA
R= 1817.92
L= 881.58
T= 452.18
Δ= 27° 46' 20"

℄ CURVE DATA
R= 1371.88
L= 397.20
T= 200.00
Δ= 16° 35' 20"

CONSTRUCT 4' WIDE SIDEWALK

CONSTRUCT MOUNTABLE CURB

CONSTRUCT 8" MACADAM PAVEMENT

CONST. 60 L.F. 15" R.C.C.P.

N 507070.907
E 834226.324

P.T. 12+08.07

PROPERTY LINE

CONST. 100 L.F. 15" R.C.C.P. CL IV

UTILITY ℄ DRAINAGE EASEMENT "D"

HARVEST MOON LANE

0+55 MATCH LINE
P.C. STA. 0+53.50
T.C. 390.00
T.C. 379.00
T.C. 381.60

℄ CURVE DATA
R= 750.28
L= 400.23
T= 205.00
Δ= 30° 33' 50"

CONST. 200 L.F. 24" R.C.C.P. CL IV

CONST. 44 L.F. 15" R.C.C.P. CL IV

HESPERUS DRIVE

P.T. 11+49.77

CURB LINE CURVE DATA
R= 1168.62
L= 344.60
T= 173.25
Δ= 16° 35' 20"

R.C. 8+10.87
MATCH LINE

N 507117.314
E 834528.022

P.C. 15+09.20

16+00 MATCH LINE

CONST. 230 L.F. 21" R.C.C.P. CL IV

PAVEMENT TRANSITION

CONST. 60 L.F. 15" R.C.C.P. CL IV

R=81.00'
R=60.00'
R=50.00'
L=60.00'
Δ=90°00'00"

CONSTRUCT 6½" MACADAM PAVEMENT

CONST. 70 L.F. 15" R.C.C.P. CL III

20' WIDE UTILITY ℄ DRAINAGE EASEMENT "L"

CONST. 90 L.F. SODDED DITCH

EXISTING BROOK

KILLINGWORTH WAY

PROPERTY LINE

PLAN
SCALE: 1" = 50'

NOTE:
1. ALL DIMENSIONS AND CURVE DATA FOR THE CURB LINES ARE TO THE BACK OF THE CURB.
2. T.C. IS THE ABBREVIATION FOR TOP OF CURB.

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

APPROVED
PLANNING COMMISSION
DATE NOV. 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND
THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No. 1 LONGFELLOW AREA No. 2
PROJECT TITLE: PLAN & PROFILE HESPERUS DRIVE & KILLINGWORTH WAY

Des By W.P.	Scale 1"=50'	Dwg No 2 OF 19
Drn By J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

℄ PROFILE
SCALE: HOR: 1"=50' VERT: 1"=5'

PROFILE LINE 25' LT. R.O.W.
PROFILE LINE 25' RT. R.O.W.

200' V.C.
P.V.I. STA. 8+00
ELEV. 441.30
M.O. 1.38

150' V.C.
P.V.I. STA. 12+50
ELEV. 403.05
M.O. 0.66

160' V.C.
P.V.I. STA. 16+50
ELEV. 383.05
M.O. 0.75

EXISTING GROUND
FINISHED PAVEMENT
8.50%
5.00%
MATCH LINE 8+00
P.V.T.
P.V.C.
CONST. INLET I-2
CONST. INLET I-3
CONST. INLET I-4
HYDRAULIC GRADIENT
60 L.F. 15" R.C.C.P. @ 4.49%
100 L.F. 15" R.C.C.P. @ 4.59
250 L.F. 21" R.C.C.P. @ 3.64%
800 L.F. 24" R.C.C.P. @ 0.95%
℄ INT. KILLINGWORTH WAY
℄ INT. HARVEST MOON LANE 1+5+09.20
CONST. MANHOLE MH-1
16+00 MATCH LINE

Q= 2.1 cfs
V= 5.8 fps
S MIN = 0.0014
n= 0.015

Q= 2.2 cfs
V= 5.8 fps
S MIN = 0.0015
n= 0.015

Q= 21.4 cfs
V= 14.0 fps
S MIN = 0.01
n= 0.013

Q= 16.0 cfs
V= 9.2 fps
S MIN = 0.014
n= 0.015

PROPOSED ℄ ELEVATION: 439.92 436.71 432.80 428.55 424.80 420.25 415.80 411.55 409.43 407.37 403.71 400.62 399.30 395.25 393.55 390.55 388.05 385.83
EXISTING GROUND ELEVATION: 441.4 437.7 434.0 430.0 426.1 422.0 417.0 412.2 407.4 403.8 400.3 397.5 394.8 392.4 390.2 387.0 383.7

8+0 9+0 10+0 11+0 12+0 13+0 14+0 15+0 16+0

℄ EASEMENT "L"

FINISHED PAVEMENT
+1.00%
EXISTING GROUND
PROPOSED ℄ ELEVATION
EXISTING GROUND ELEVATION
405.39
405.44
405.7
407.8
0+0 1+0
1+05.12 KILLINGWORTH CURB PT.
0+0 12+40.00 HESPERUS DR.

CONST. INLET I-4
PROPOSED GRADE
CONST. 70 L.F. 15" R.C.C.P. @ 12.55 %
HYDRAULIC GRADIENT
EXISTING GRADE
CONST. HEADWALL HW-1
Q= 1.7 cfs
V= 10.0 fps
S MIN = 0.0006
n= 0.015

EASEMENT "D"

CONST. HEADWALL HW-2
EXISTING GROUND
HYDRAULIC GRADIENT
CONST. 727 L.F. 24" R.C.C.P. @ 0.50%
Q= 9.5 cfs
V= 3.3 fps
S MIN = 0.0024
n= 0.015

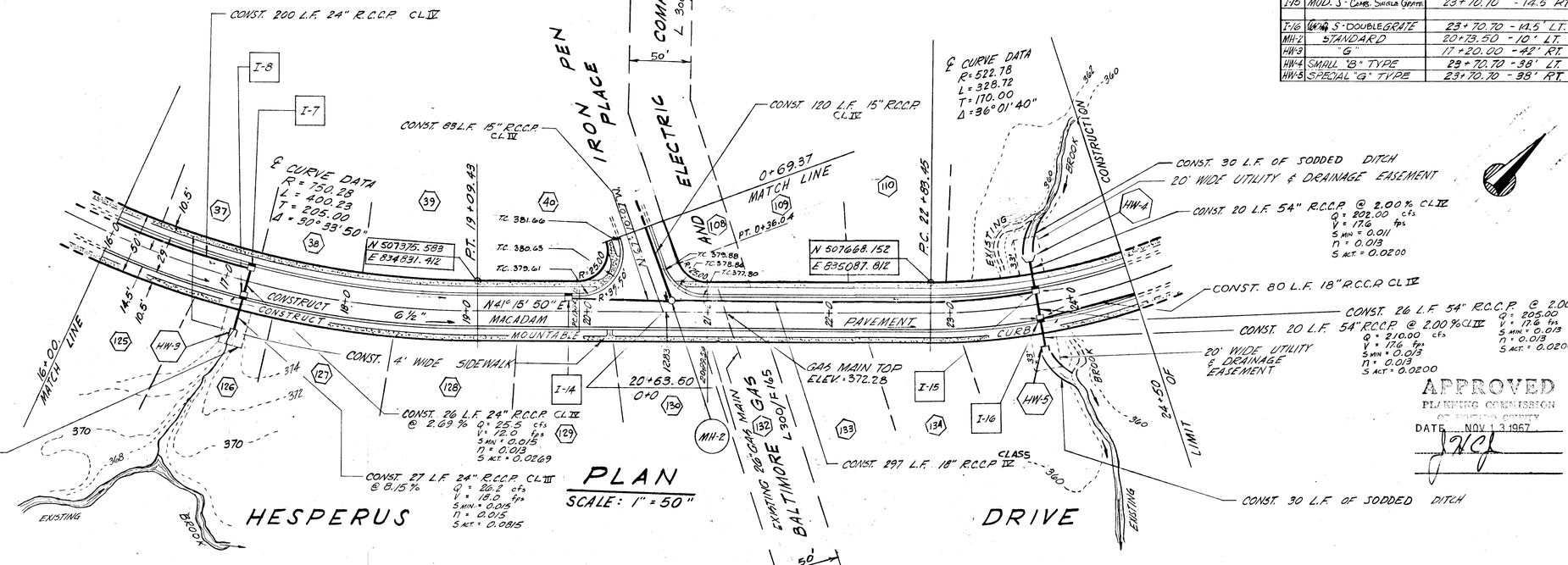
KILLINGWORTH CURB PROFILE

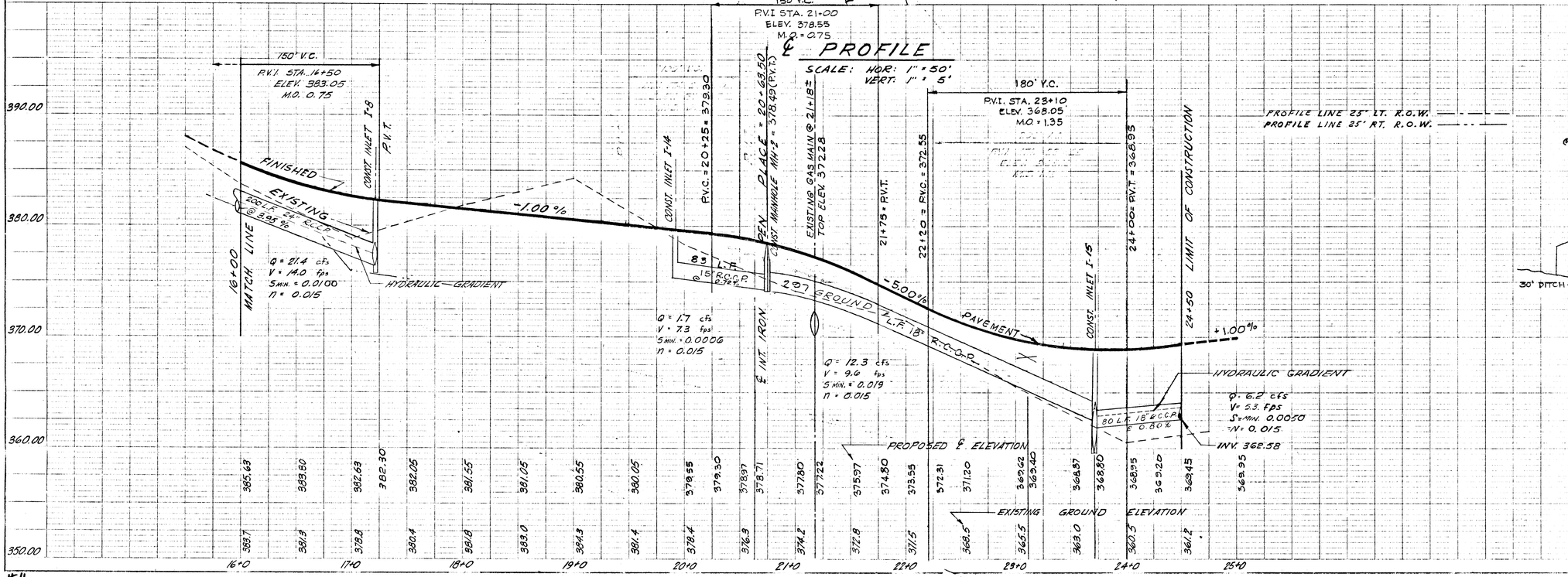
PROFILE 25' BEYOND R.O.W.
EXISTING
FINISHED
GROUND
PAVEMENT
+1.00%
-2.20%
+5.00%
+5.00%
-5.00%
100' V.C.
P.V.I. STA. 2+75.00
ELEV. 404.99
M.O. 0.35
100' V.C.
P.V.I. STA. 1+75.00
ELEV. 407.19
M.O. 0.40
100' V.C.
P.V.I. STA. 3+90.00
ELEV. 399.24
M.O. 1.25
100' V.C.
P.V.I. STA. 5+25.00
ELEV. 405.99
M.O. 0.75
℄ PROFILE 25' BEYOND R.O.W.
℄ CURB P.T.
1+05.12 KILLINGWORTH CURB P.T.
0+0 1+0 2+0 3+0 4+0 5+0
405.44 405.94 406.44 406.69 406.84 406.78 406.54 406.09 405.45 404.64 403.65 401.74 401.29 L.P. 400.49 401.14 402.24 403.49 404.55 405.24 405.55 405.44 405.49

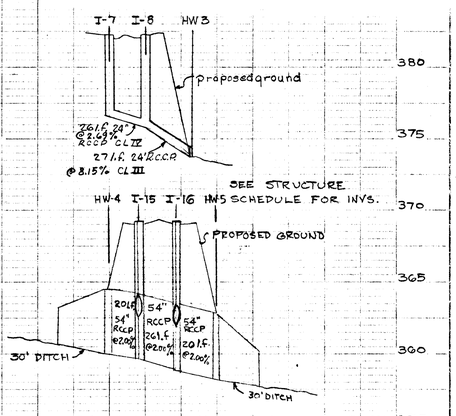
FILE No 1764
F-67-33

STORM DRAINAGE STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN.	INV. OUT	T.C.P. ELEV.	REMARKS
I-7	MOD. S - COMB. SINGLE GRATE	17+20.00 - 14.5' RT.	376.50	376.45		DEPRESSED
I-8	MOD. S - COMB. SINGLE GRATE	17+20.00 - 14.5' LT.	375.75	375.70		DEPRESSED
I-14	MOD. S - COMB. SINGLE GRATE	19+90.00 - 14.5' RT.		375.00		DEPRESSED
I-15	MOD. S - COMB. SINGLE GRATE	23+70.70 - 14.5' RT.	54"-359.60	359.56		DEPRESSED
			18"-362.60			
I-16	MOD. S - DOUBLE GRATE	23+70.70 - 14.5' LT.	54"-358.94 18"-361.74	358.90		DEPRESSED
MH-2	STANDARD	20+73.50 - 10' LT.	374.40	374.15		
HW-3	"G"	17+20.00 - 42' RT.		373.50		
HW-4	SMALL "B" TYPE	23+70.70 - 38' LT.	360.00			
HW-5	SPECIAL "G" TYPE	23+70.70 - 38' RT.		358.30		







STATE OF MARYLAND — RICHARD P. BROWNE — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

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

Rev Date	Rev No	Revision Description
9-7-67	2	Revised Profile - Sta. 20+00 to 25+00
8-17-67	1	Changed Inlets I-15 & I-16, HW-4

APPROVED
PLANNING COMMISSION OF HOWARD COUNTY
DATE NOV 13 1967

COLUMBIA
MARYLAND
THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

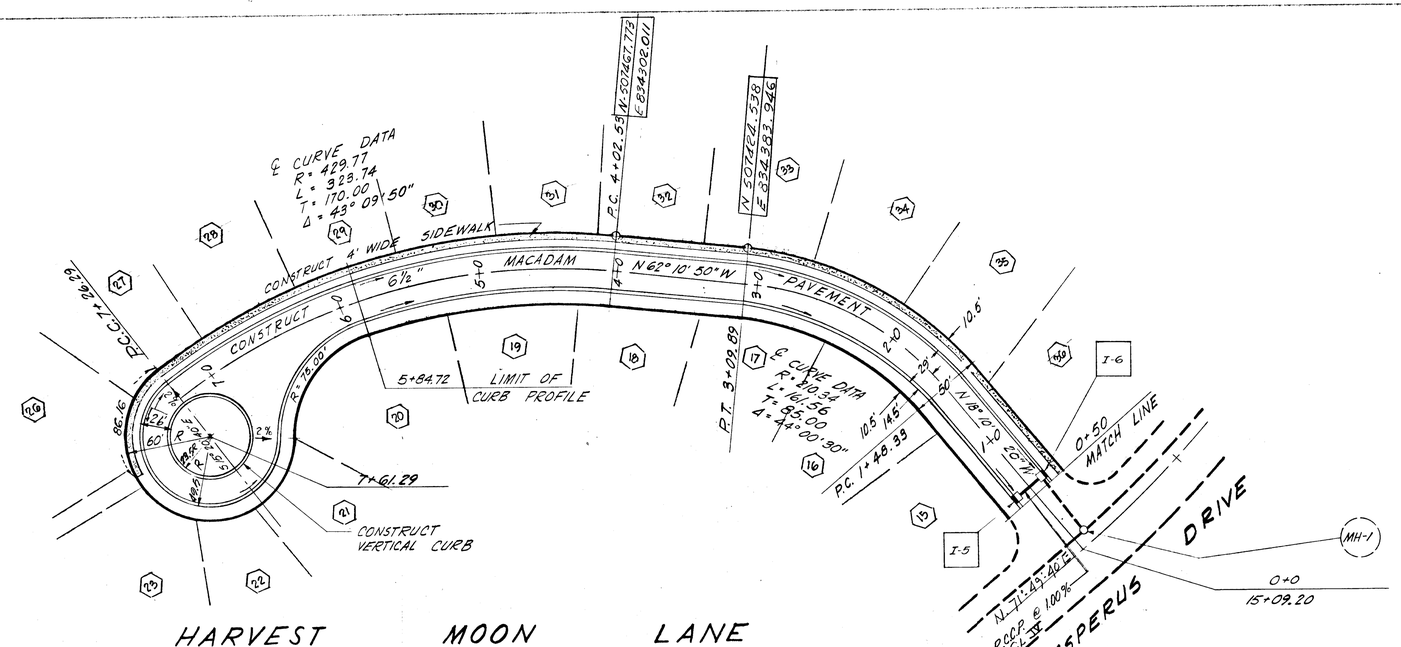
PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. Nº 1 LONGFELLOW AREA Nº 2
PROJECT TITLE: PLAN & PROFILE HESPERUS DRIVE

Des By W.A.	Scale AS SHOWN	Dwg No 5 OF 19
Drn By J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By W.A.	Approved	

FILE Nº 1764
F-67-33

STORM DRAINAGE STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN	INV. OUT	T.C.P. ELEV.	REMARKS
I-5	MOD. S-COMB. SINGLE GRATE	0+53.50 LT.		386.79		DEPRESSED
I-6	MOD. S-COMB. SINGLE GRATE	0+53.50 RT.	386.50	386.45		DEPRESSED



PLAN
SCALE: 1" = 50'

NOTES:
1. ALL DIMENSIONS AND CURVE DATA FOR THE CURB LINES ARE TO THE BACK OF THE CURB.

APPROVED
PLANNING COMMISSION
DATE NOV 3 1967

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

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

Rev Date	Rev No	Revision Description

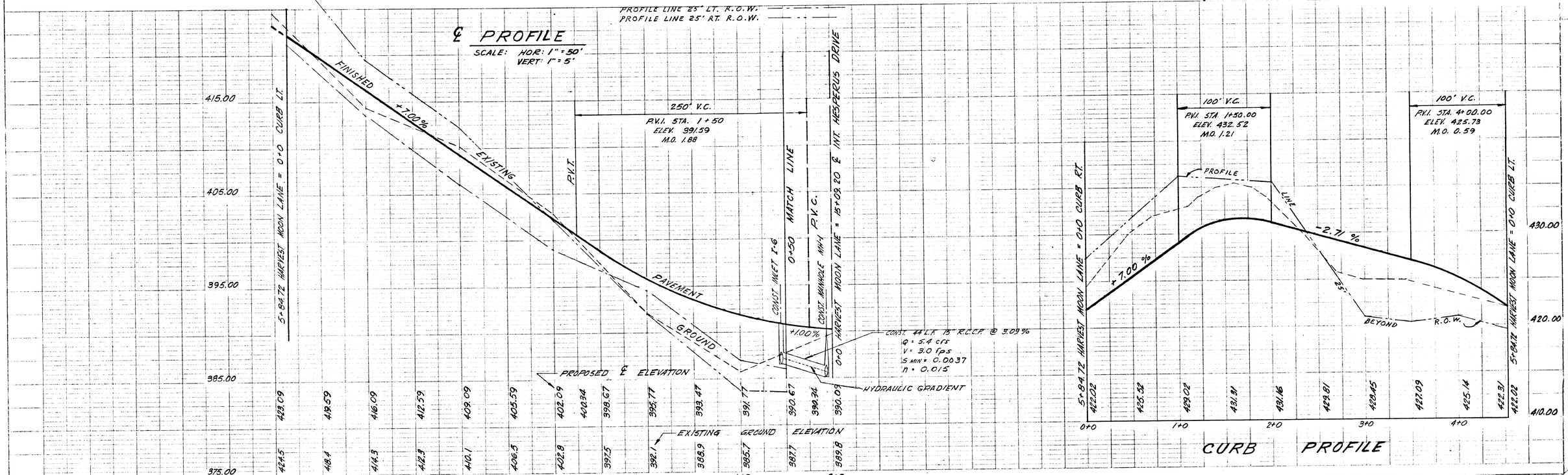
COLUMBIA
MARYLAND
THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. Nº 2 LONGFELLOW AREA Nº 2
PROJECT TITLE: PLAN & PROFILE HARVEST MOON LANE

Des By	N.A.	Scale AS SHOWN	Dwg No 4 OF 19
Drn By	J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By	W.P.	Approved	

PROFILE LINE 25' LT. R.O.W.
PROFILE LINE 25' RT. R.O.W.

℄ PROFILE
SCALE: HOR: 1" = 50'
VERT: 1" = 5'



CURB PROFILE

FILE Nº 1764

F-67-33

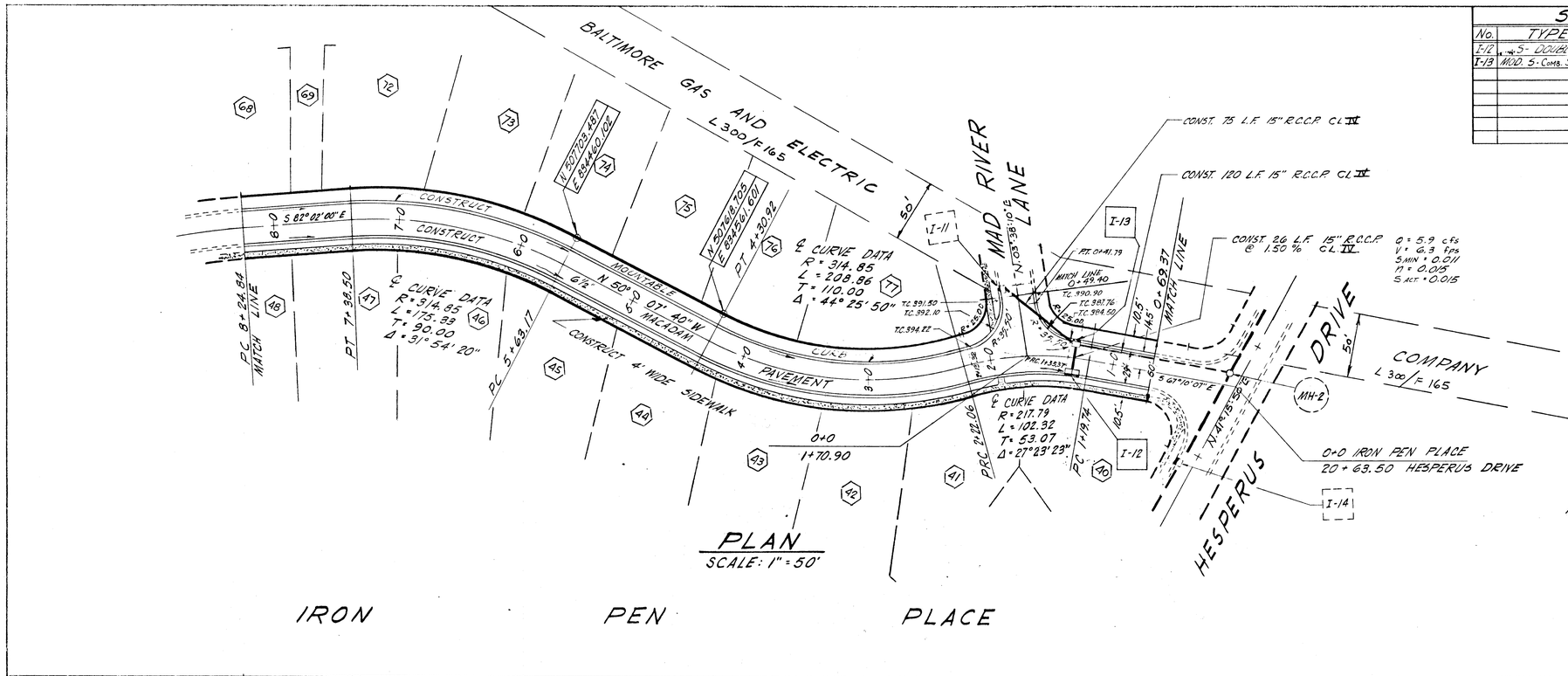
#11

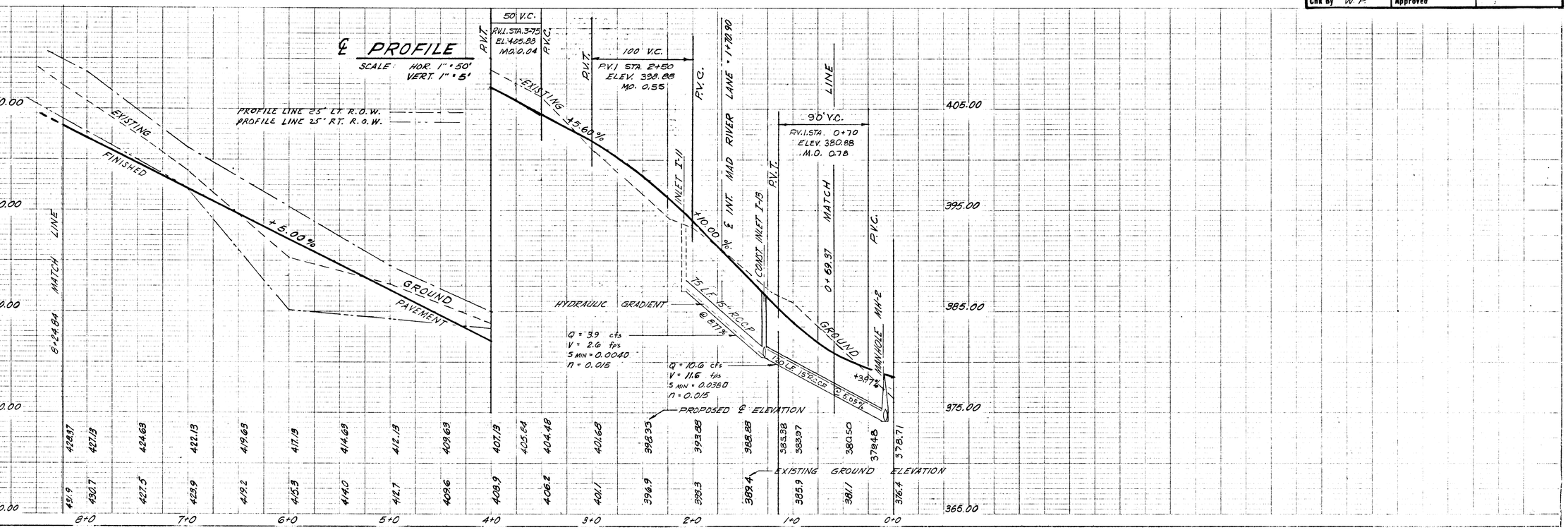
K&E PLATE 1, PLAN-PROFILE KEUFFEL & ESSER CO.

48 7009 ALBANENE® TRACING PAPER

STORM DRAINAGE STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN	INV. OUT	T.C.P. ELEV.	REMARKS
I-12	S-DOUBLE GRATE	1+32.00 LT.		380.92	387.21	DEPRESSED
I-13	MOD. S-COMB. SINGLE GRATE	1+32.00 RT.	380.50	380.46	387.21	DEPRESSED





NOTES:
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2. T.C. IS THE ABBREVIATION FOR TOP OF CURB

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE NOV 13 1967

STATE OF MARYLAND
RICHARD P. BROWNE
REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

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

Rev Date	Rev No	Revision Description
9-7-67	1	Revised Profile Sta. 0+00 to 1+25

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No. 1 LONGFELLOW AREA No. 2

PROJECT TITLE: PLAN & PROFILE IRON PEN PLACE

Des By W.P.	Scale AS SHOWN	Dwg No 5 OF 19
Drn By J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

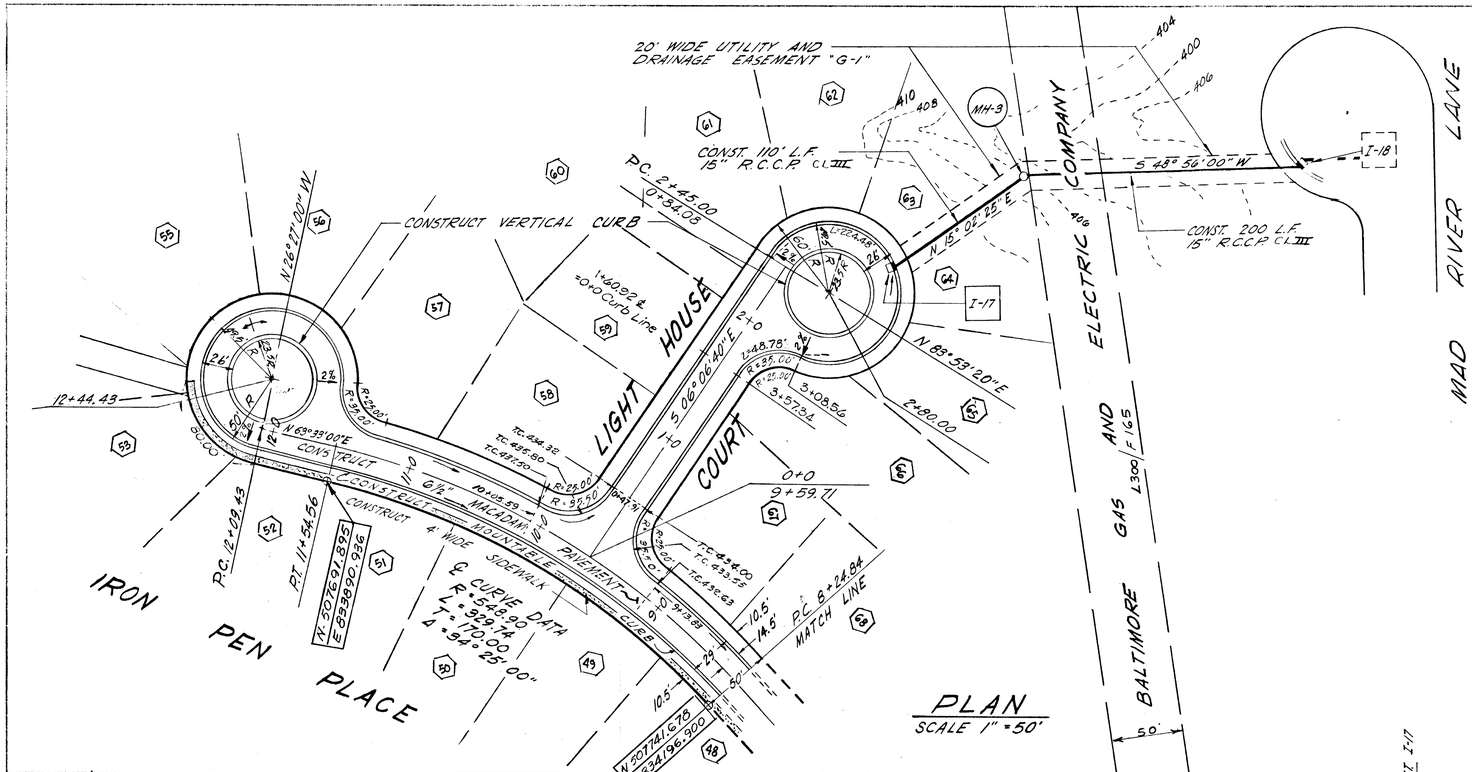
#11

PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.

FILE No 1764

F-67-33

STORM DRAINAGE STRUCTURE SCHEDULE						
No.	TYPE	LOCATION	INV. IN	INV. OUT	T.C.P. ELEV.	REMARKS
I-17	MOD. S. COMB. SINGLE GRATE	SEE PLAN		413.00		DEPRESSED
MH-3	STANDARD	SEE PLAN	402.00	401.96		



NOTES:
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APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

STATE OF MARYLAND — RICHARD P. BROWNE — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

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

Rev Date	Rev No	Revision Description
8/7/67		Added Stations On Light House Court

COLUMBIA
MARYLAND
THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

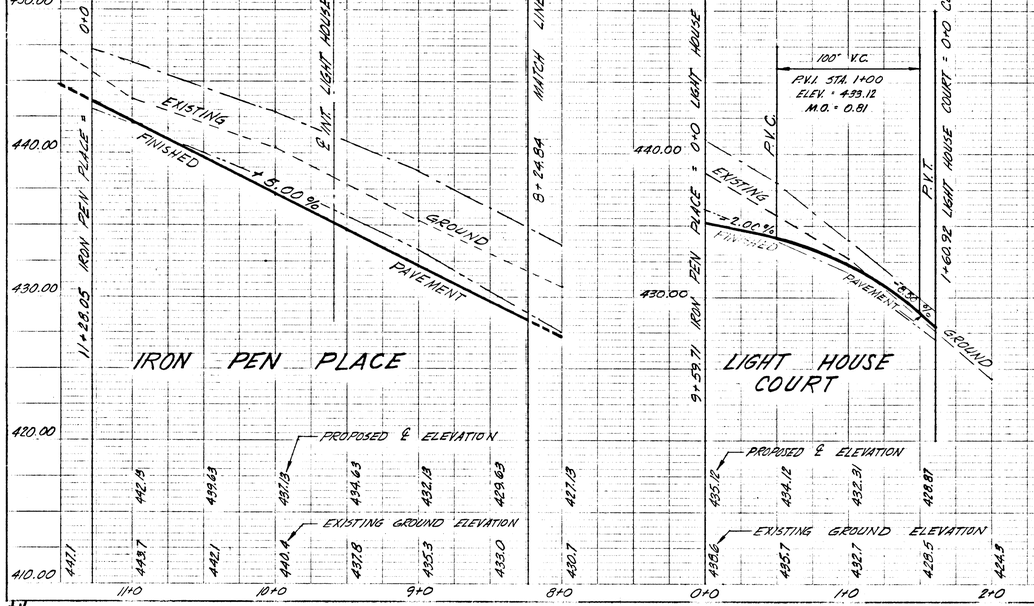
PROJECT AREA
VILLAGE OF HARPER'S CHOICE SEC. Nº 1
LONGFELLOW AREA Nº 2

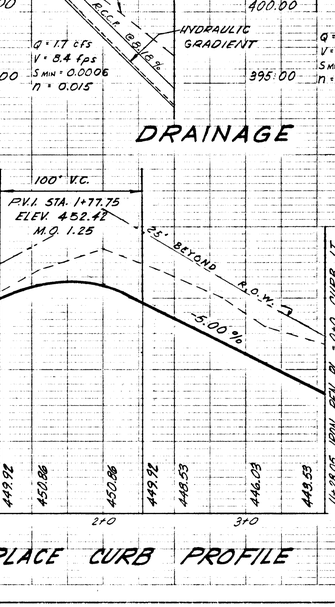
PROJECT TITLE
PLAN & PROFILE
IRON PEN PLACE & LIGHT HOUSE COURT

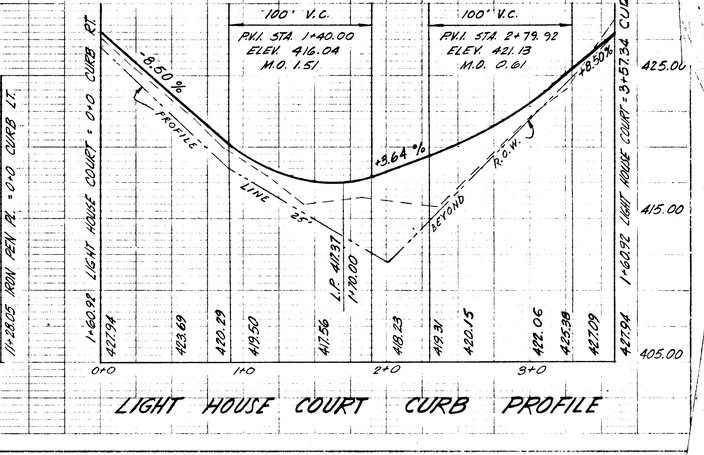
Des By	N.P.	Scale AS SHOWN	Dwg No 6 OF 17
Drn By	J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By	N.P.	Approved	

℄ PROFILE
SCALE: HOR: 1" = 50'
VERT: 1" = 5'

PROFILE LINE 25' LT. R.O.W.
PROFILE LINE 25' RT. R.O.W.







PROFILE
BY
DATE
APPROVED
NOTE BOOK
CHECKED
DRAWN
SHEET NUMBERING CHG.
NO.

#11

PLATE 1, PLAN-PROFILE
KEUFFEL & ESSER CO.
49 7006 ALPHANENE

FILE Nº 1764
F-67-33

NOTES:
1. ALL DIMENSIONS AND CURVE DATA FOR THE CURB LINES ARE TO THE BACK OF THE CURB.

STORM DRAINAGE STRUCTURE SCHEDULE

No.	TYPE	LOCATION	INV. IN	INV. OUT	T.C.P. ELEV.	REMARKS
I-9	S-DOUBLE GRATE	5+13.50 - 14.5' LT.		375.10	379.60	DEPRESSED
I-10	S-DOUBLE GRATE	5+13.50 - 14.5' RT.	373.80	373.65	379.60	DEPRESSED
I-11	MOD. S' COMB. SINGLE GRATE	0+53.00 - 14.5' LT.		387.00	391.60	DEPRESSED
I-18	MOD. S-COMB. SINGLE GRATE	SEE PLAN	384.40	384.36	389.10	DEPRESSED
I-19	MOD. S-COMB. SINGLE GRATE	9+78.81 - 14.5 RT.	382.16	382.10	388.53	DEPRESSED
HW-4	"G"	5+13.50 - 125' RT.		367.90		
HW-5	"G"			376.58		

PLAN
SCALE: 1" = 50'

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

STATE OF MARYLAND — RICHARD P. BROWNE — No. 5238 — REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR

APPROVED
PLANNING COMMISSION OF HOWARD COUNTY
DATE NOV 13 1967

Rev Date	Rev No	Revision Description
9/18/67	1	Revise Profile from 0+00 To 2+65 END

COLUMBIA
M A R Y L A N D

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No. 1 LONGFELLOW AREA No. 2

PROJECT TITLE: PLAN & PROFILE MAD RIVER LANE

Des By W.P.	Scale AS SHOWN	Dwg No 7 OF 19
Drn By J.V.M.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

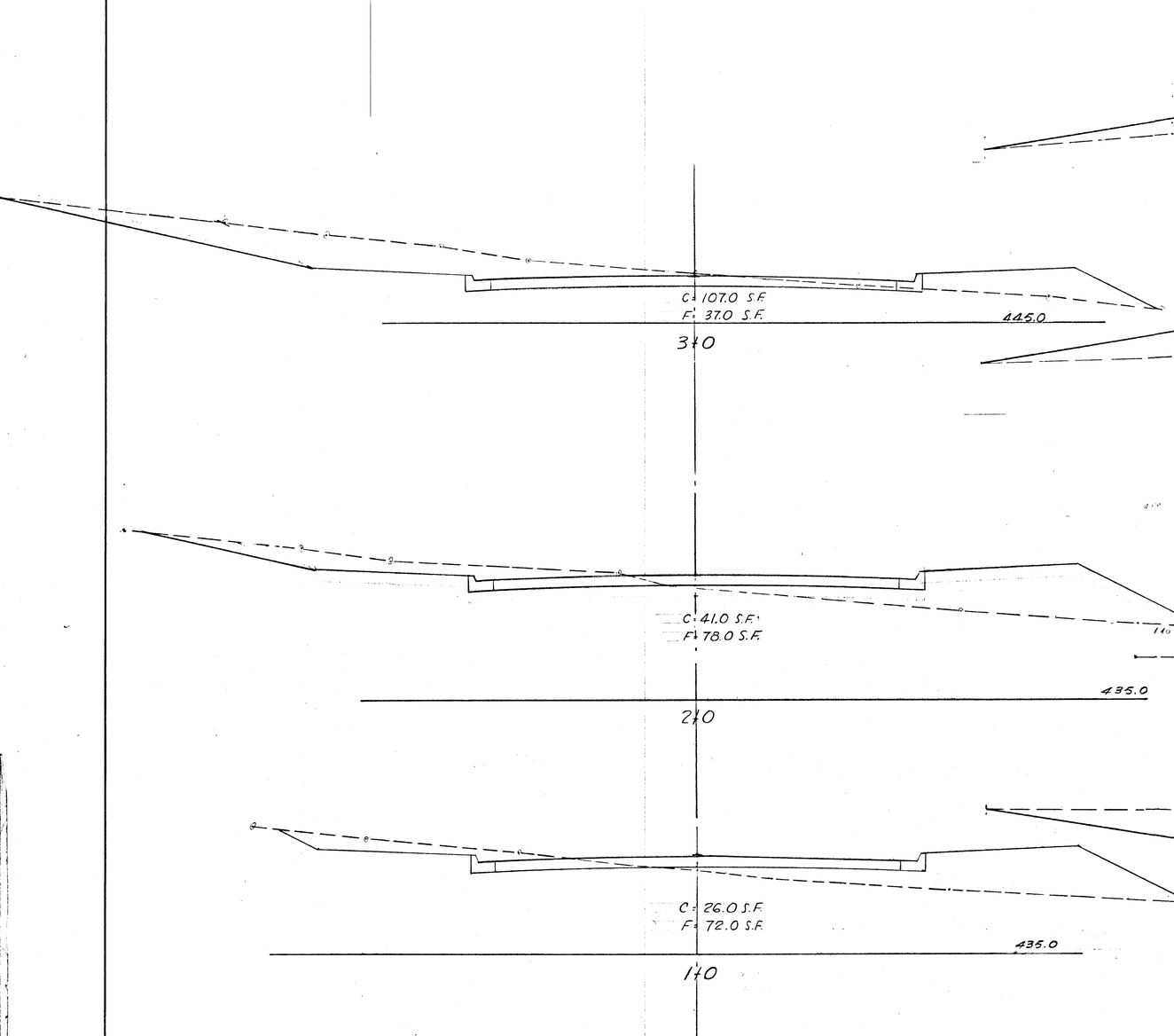
PLAN / PROFILE — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / NOTE BOOK / NO. / BY / DATE

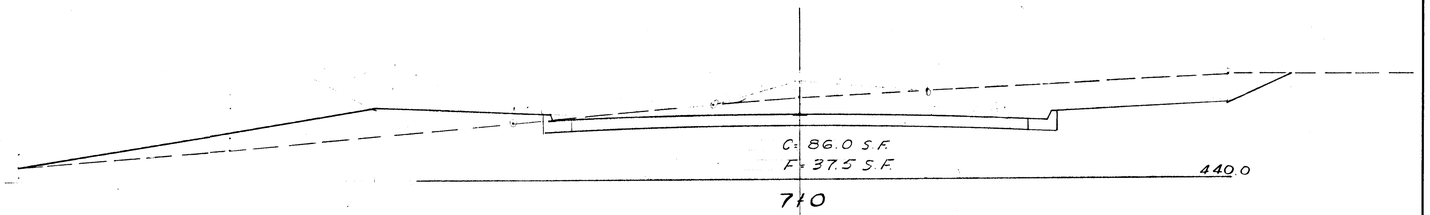
#11

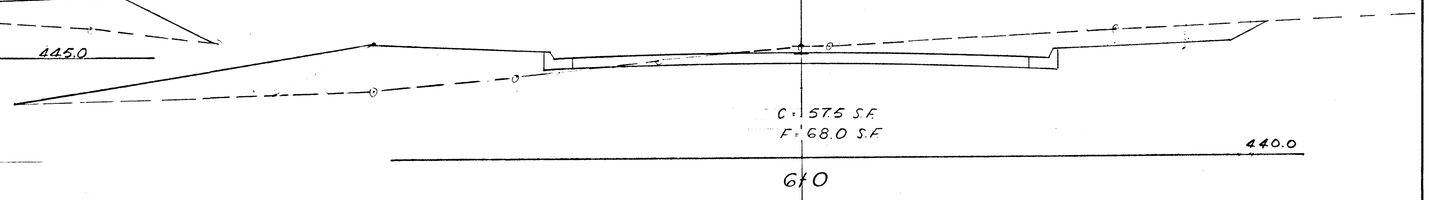
K+E PLATE 1, PLAN PROFILE KEUFFEL & ESSER CO.
46 7008 ALBANENE® TRACING PAPER MADE IN U.S.A.

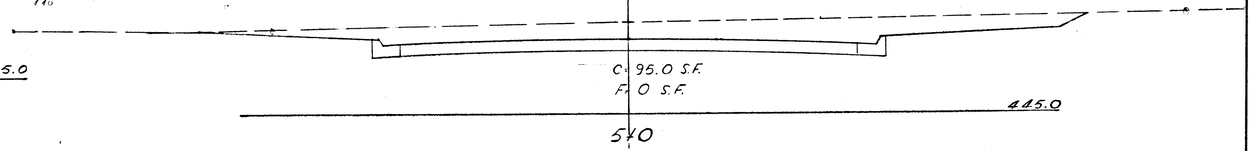
FILE No. 1764

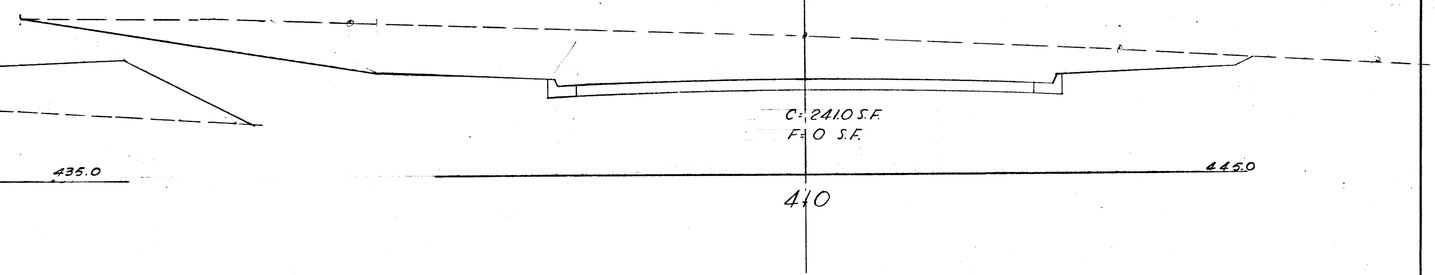
F-67-33

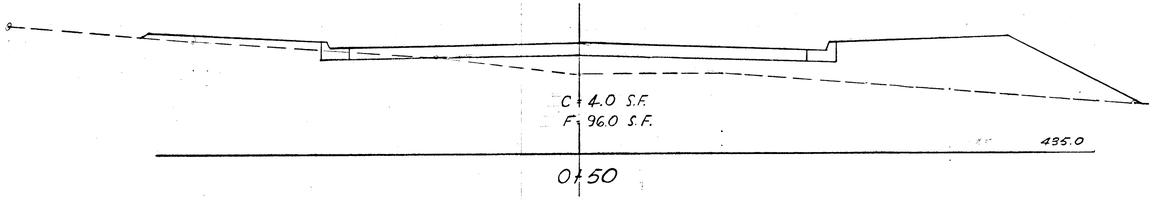












APPROVED
PLANNING COMMISSION
OF
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

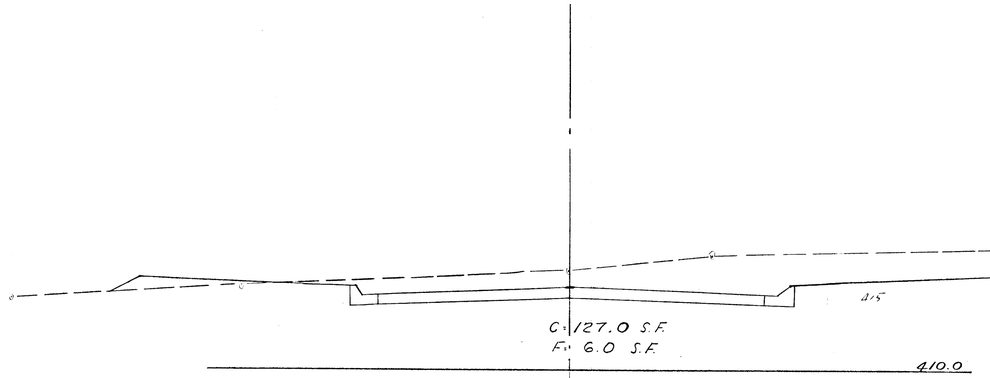
PROJECT AREA
VILLAGE OF HARPER'S CHOICE SEC Nº 1
LONGFELLOW AREA Nº 2

PROJECT TITLE
CROSS SECTIONS
HESPERUS DRIVE

Des By N.V.P.	Scale 1" = 5	Dwg No 8 OF 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By N.V.P.	Approved	

#1

F-67-33



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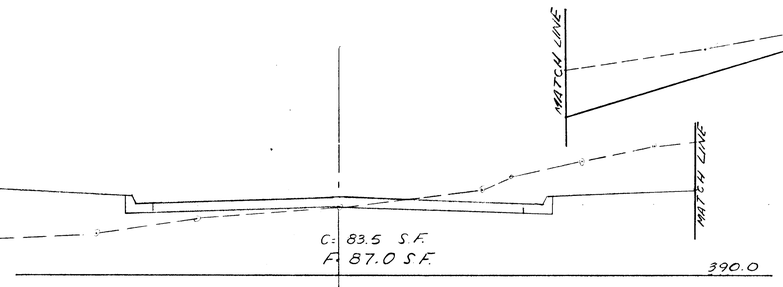

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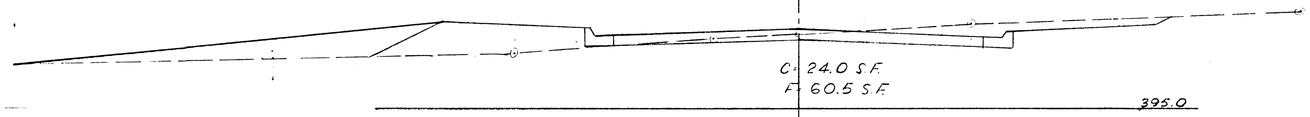

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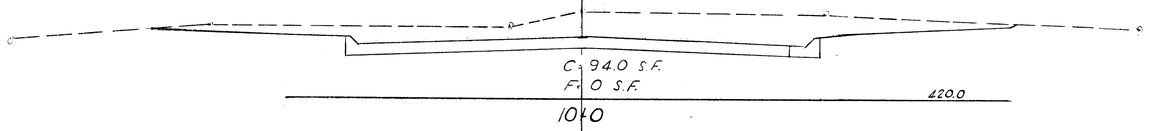

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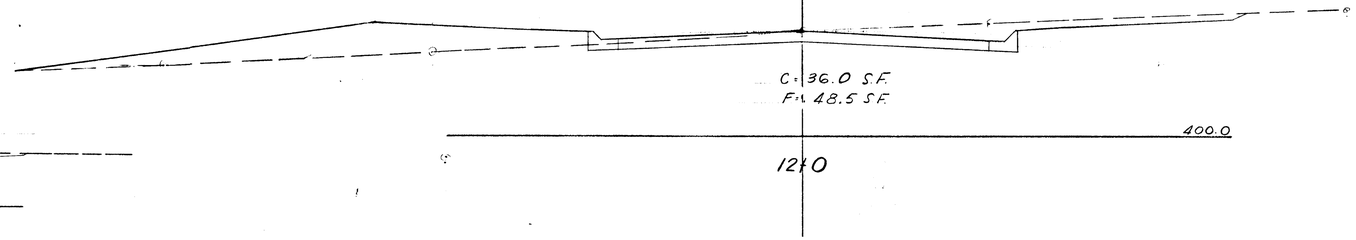

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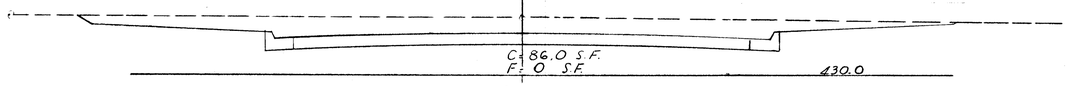

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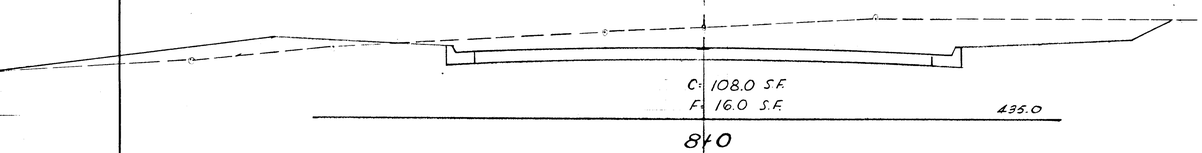


840

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

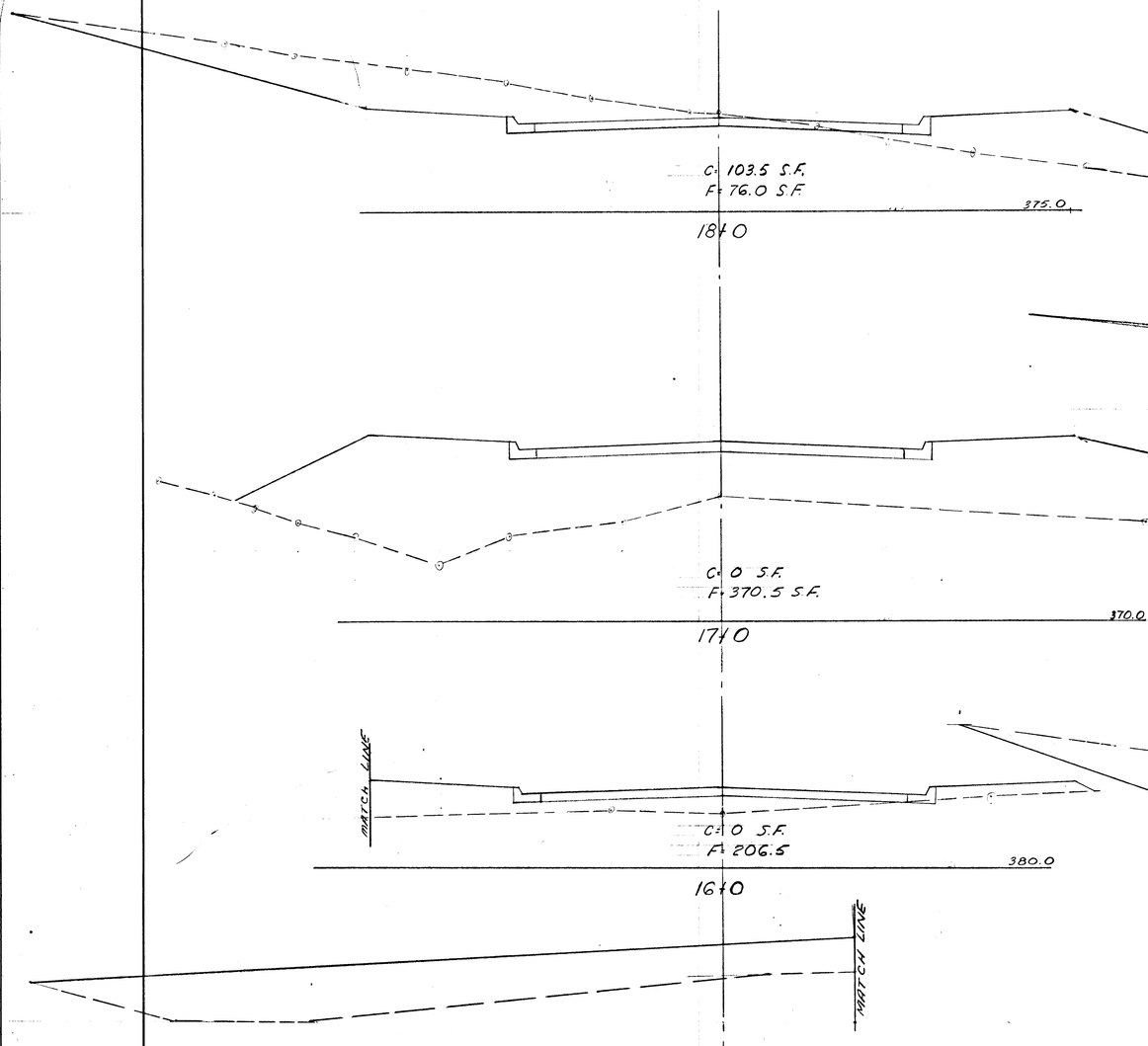
PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. № 1
LONGFELLOW AREA № 2

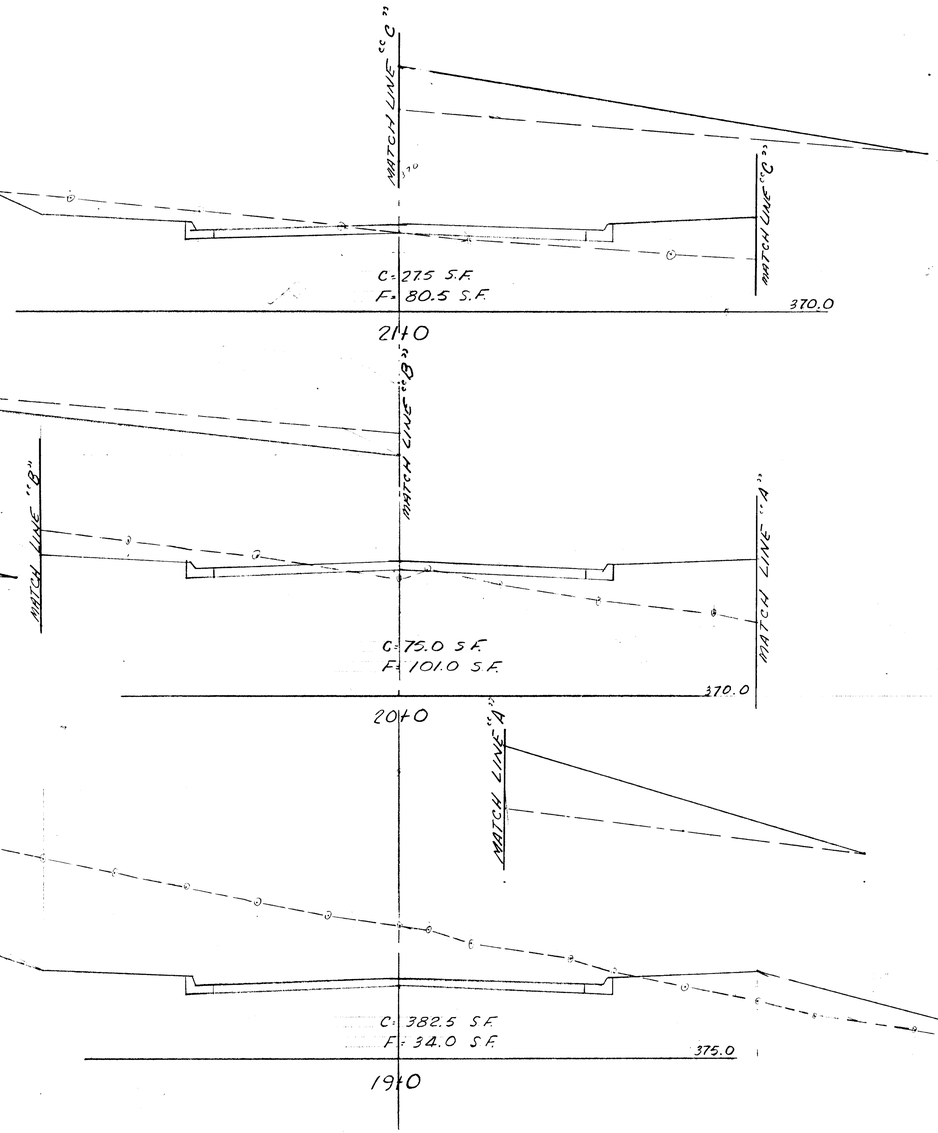
PROJECT TITLE: CROSS SECTIONS
HESPERUS DRIVE

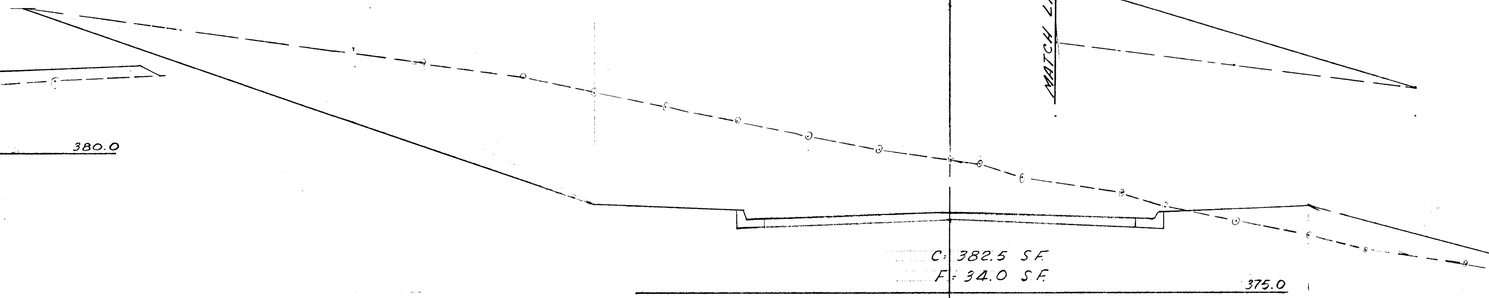
Des By M.A	Scale 1"=5'	Dwg No 9 of 19
Drn By W.C.S	Date JUNE 9, 1967	C.C.F. No
Chk By W.P	Approved	

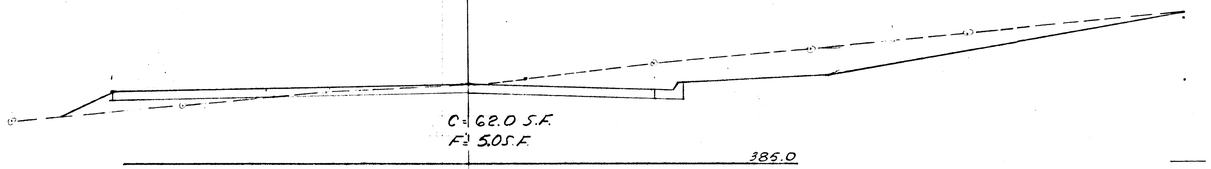
#11

F-67-33









APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No. 1 & LONGFELLOW AREA No. 2

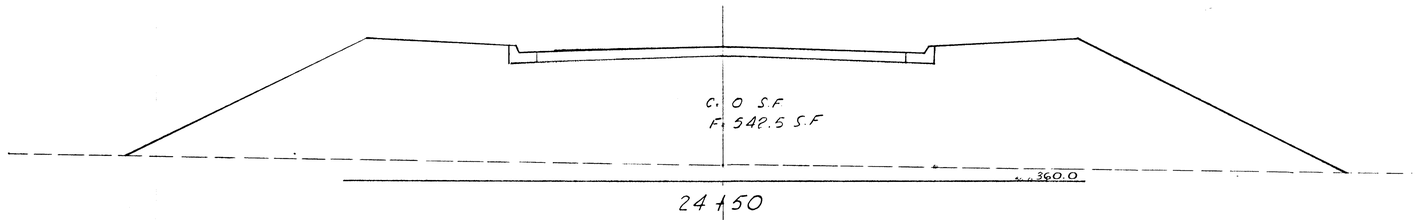
PROJECT TITLE: CROSS SECTIONS HESPERUS DRIVE

Des By W.H.	Scale 1"=5'	Dwg No 10 of 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

395

#11

F-67-33



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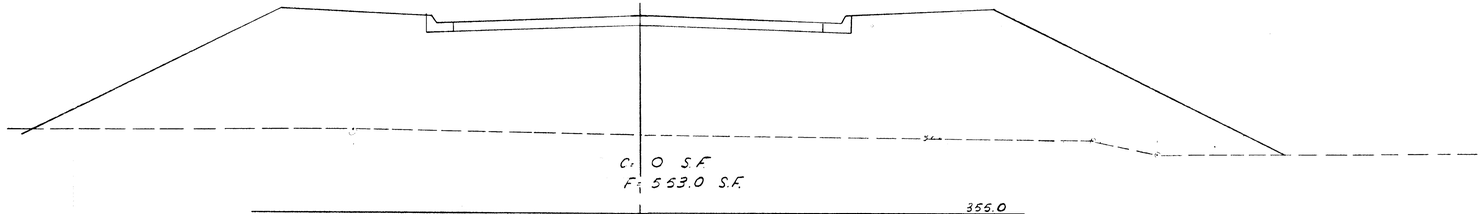

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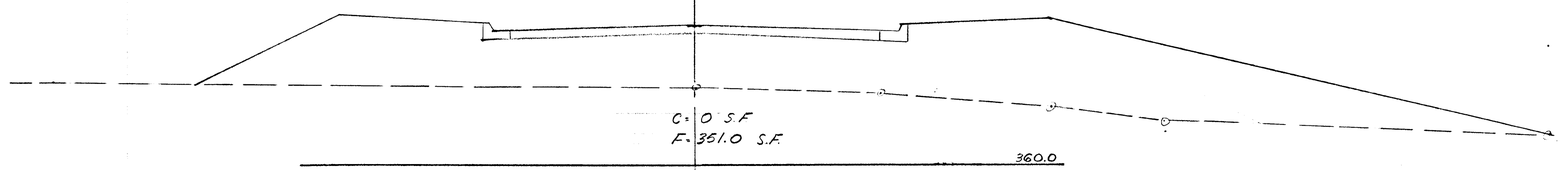
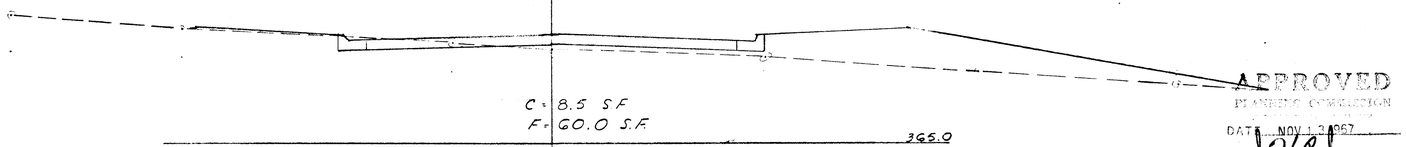


23+0



22+0

APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No 1
LONGFELLOW AREA No 2

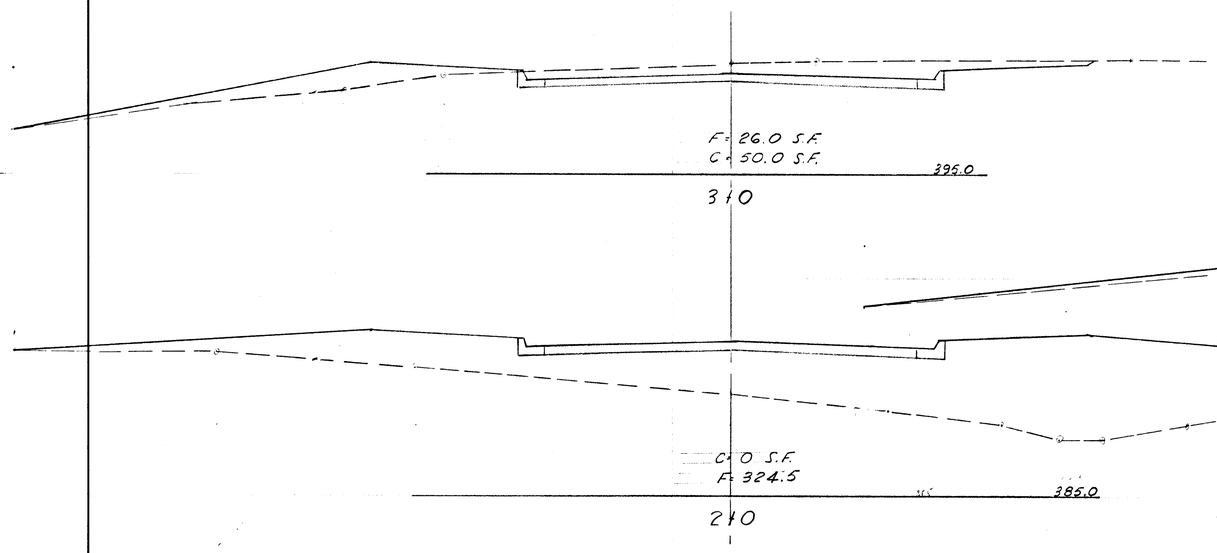
PROJECT TITLE: CROSS SECTIONS
HESPERUS DRIVE

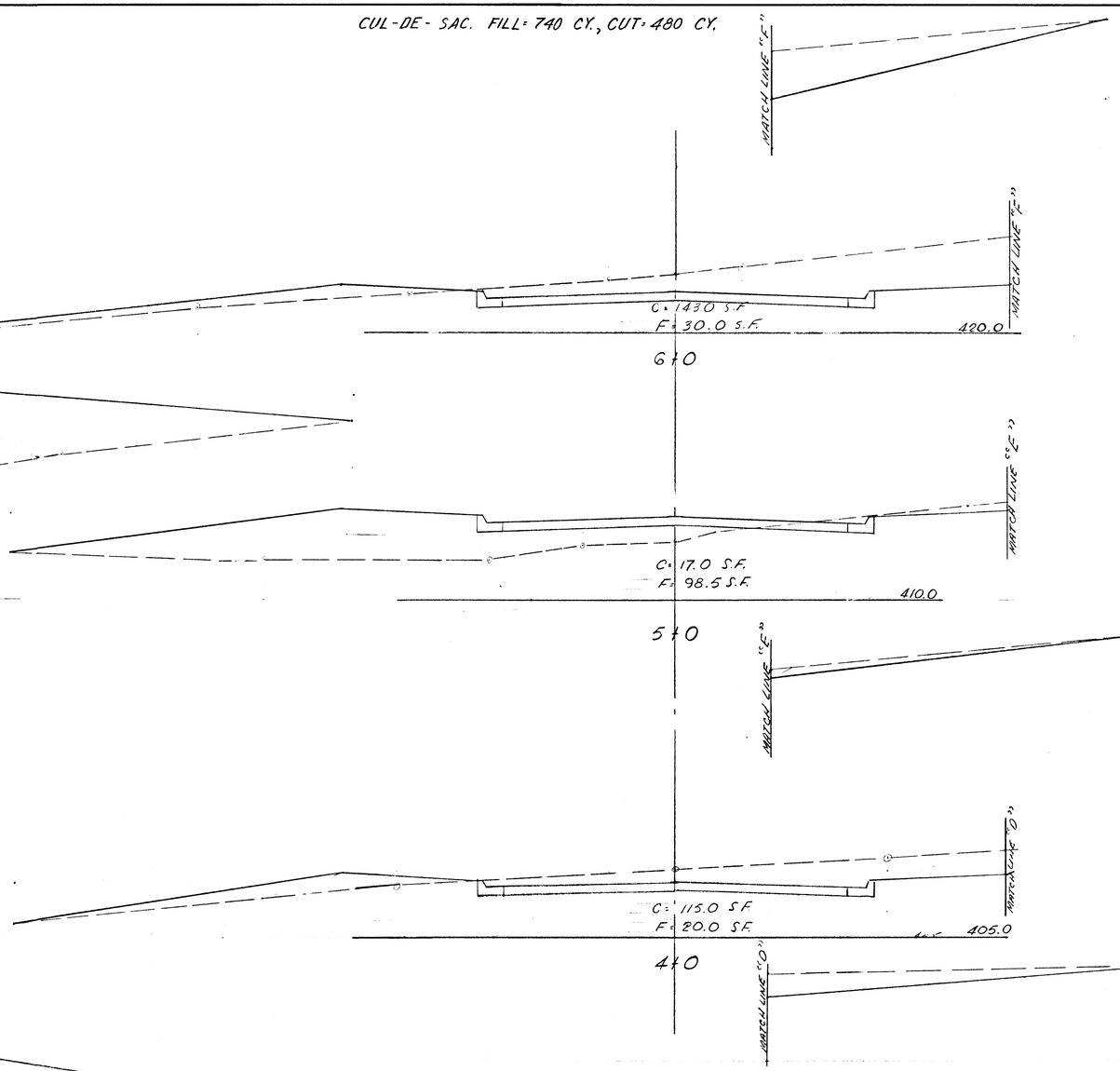
Des By N.R.	Scale 1"=5'	Dwg No 11 OF 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

#11

F-67-33

CUL-DE-SAC. FILL=740 CY., CUT=480 CY.





APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

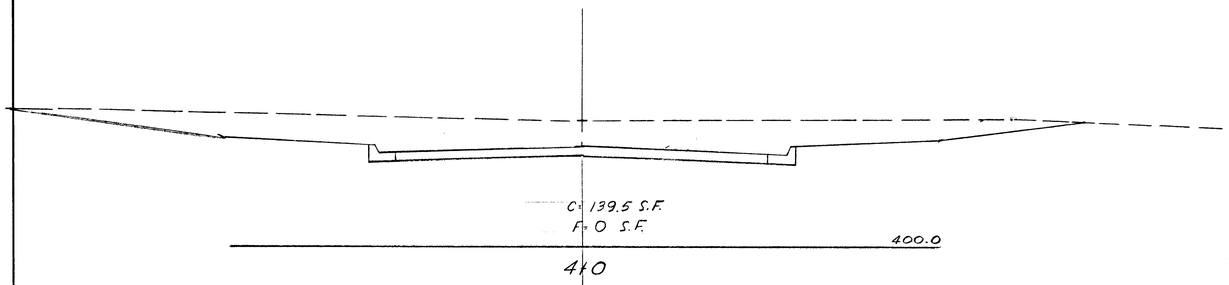
PROJECT AREA
VILLAGE OF HARPER'S CHOICE SEC. No. 1
LONGFELLOW AREA No. 2

PROJECT TITLE
CROSS SECTIONS
HARVEST MOON LANE

Des By W.R.	Scale 1" = 5'	Dwg No 12 OF 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.R.	Approved	

#11

F-67-33



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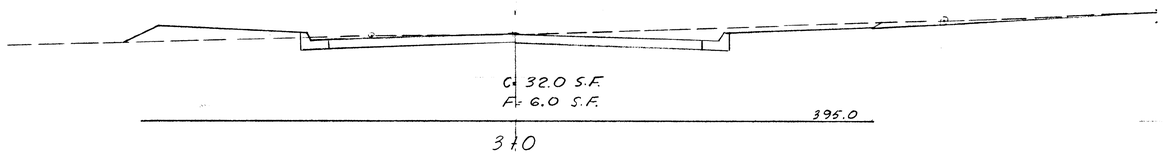

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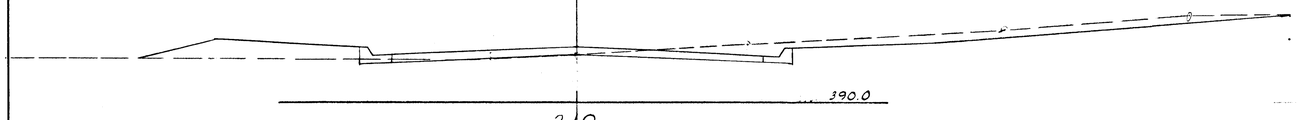
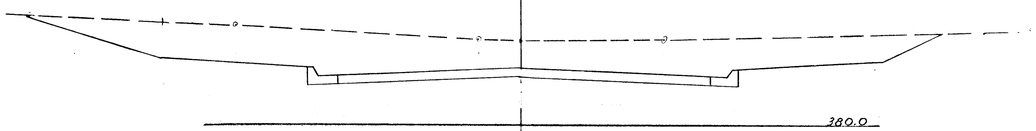


2+0

C= 90.0 S.F.
F= 14.0 S.F.



1+0

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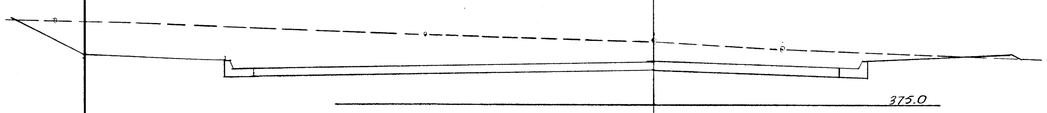
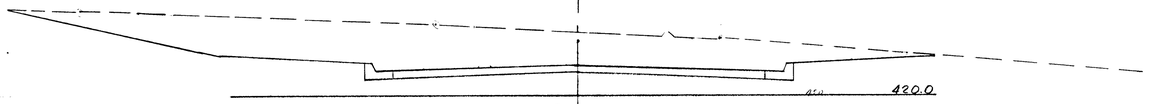
F= 0 S.F.



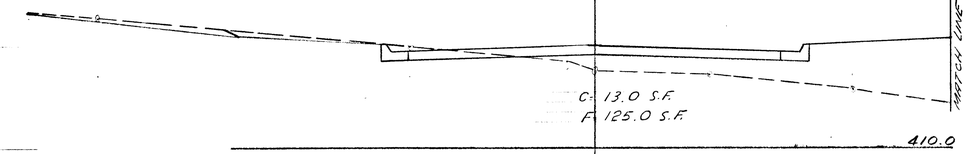
0+25

C= 137.5 S.F.
F= 1.0 S.F.

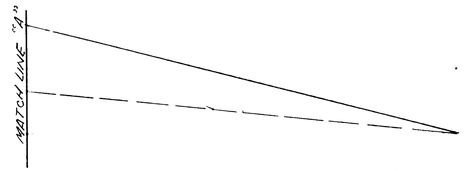


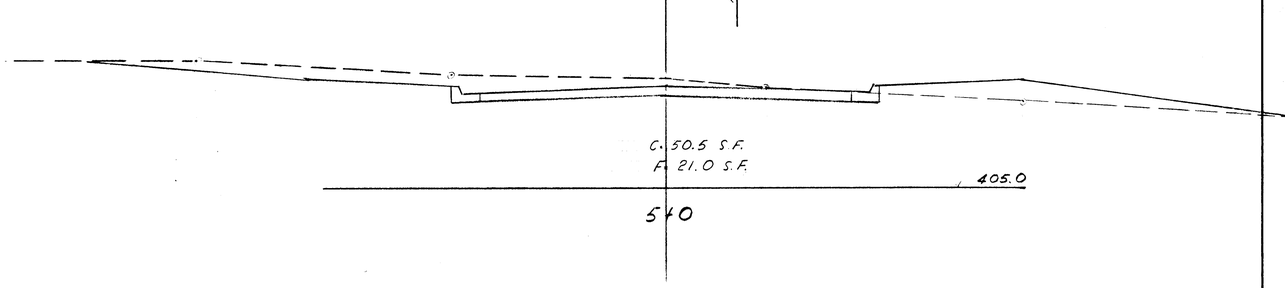
7+0

C= 148.0 S.F.
F= 0 S.F.



6+0





5+0

#11

APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

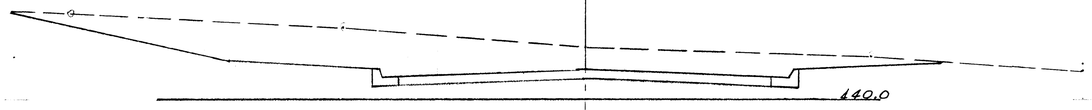
PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. Nº 1
LONGFELLOW AREA Nº 2

PROJECT TITLE: GROSS SECTIONS
IRON PEN PLACE

Des By W.P.	Scale 1" = 5'	Dwg No 13 OF 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

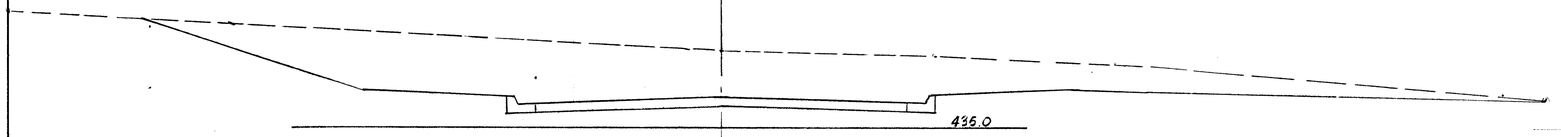
F-67-33

CUL-DE-SAC. FILL = 80 CY., CUT = 1,110 CY.



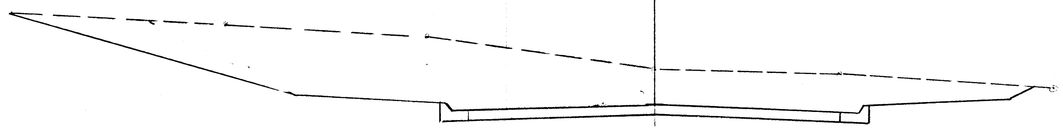
1170

C = 133.5 S.F.
F = 0 S.F.



1010

C = 255.0 S.F.
F = 0 S.F.



970

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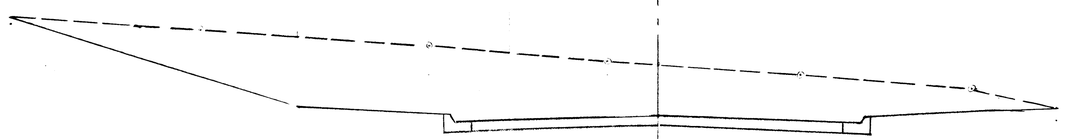
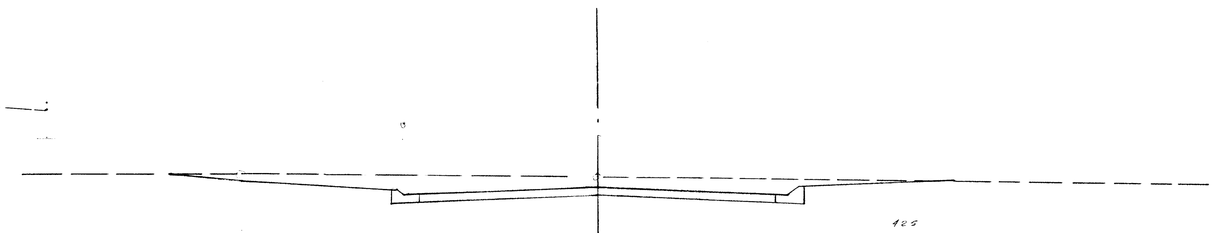
F = 0 S.F.



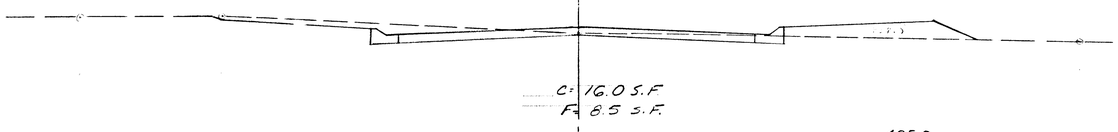
810

CUL-DE-SAC: FILL = 880 CY., CUT = 0 CY.



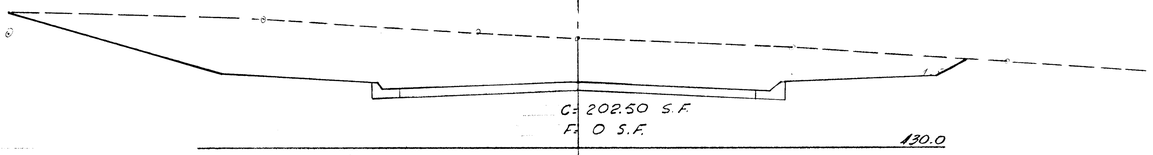
C = 50.0 S.F.
F = 0.S.F.

1160.92



C = 16.0 S.F.
F = 8.5 S.F.

140



C = 202.50 S.F.
F = 0 S.F.

0125

LIGHT HOUSE COURT

APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. NO. 1
LONGFELLOW AREA NO. 2

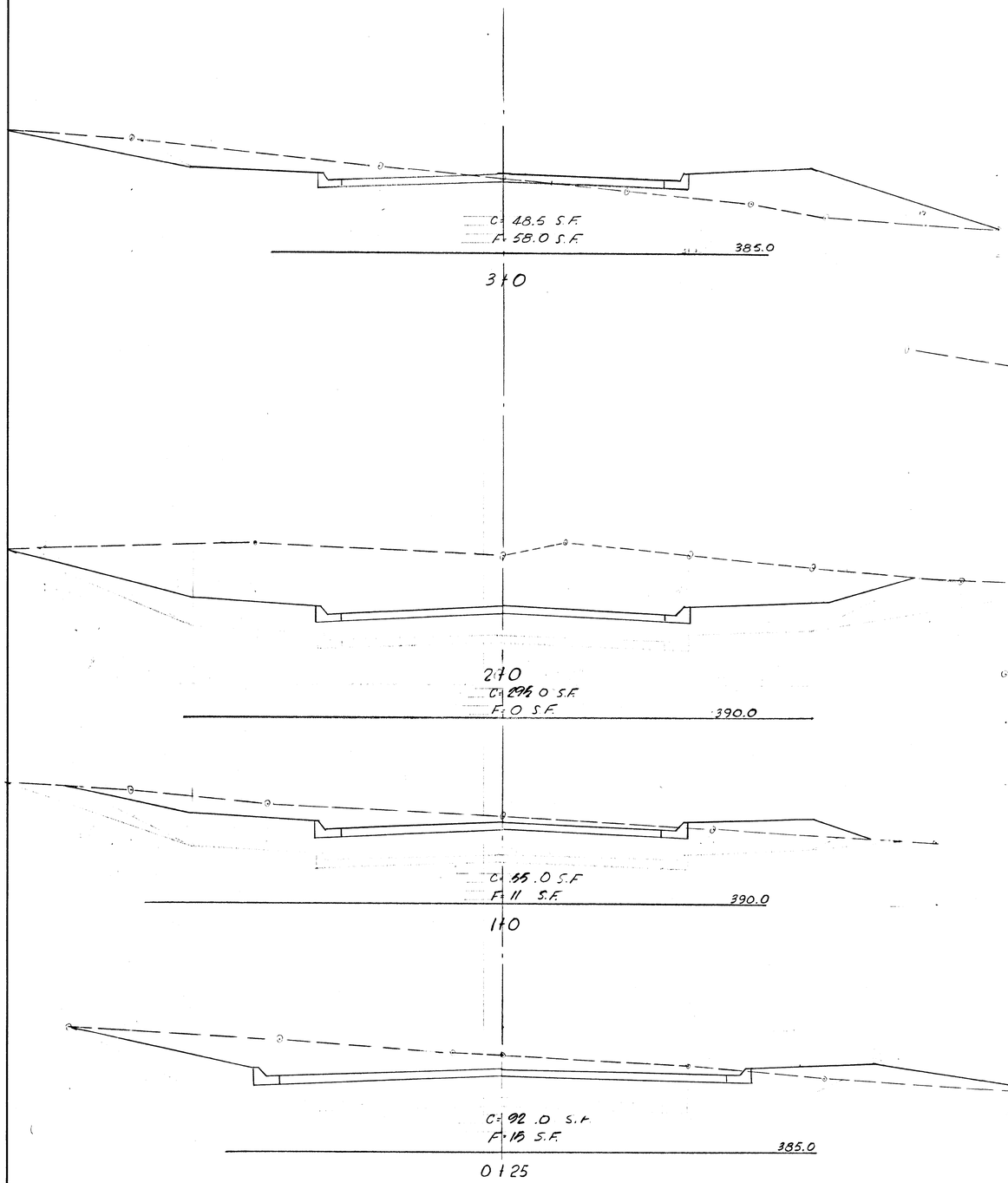
PROJECT TITLE: CROSS SECTIONS
IRON PEN PLACE & LIGHT HOUSE CT.

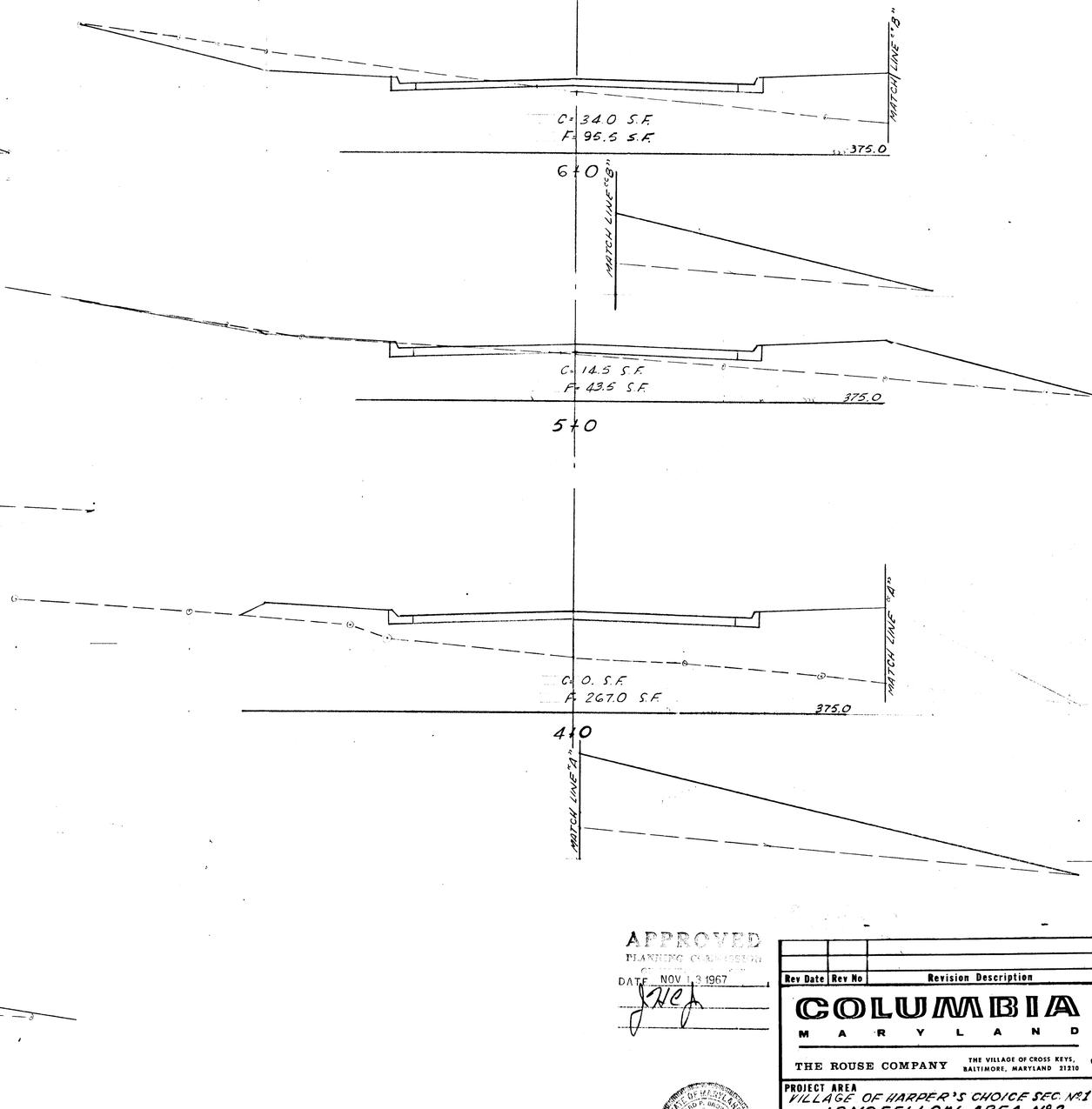
Des By N.P.	Scale 1" = 5'	Dwg No 14 of 19
Drn By W.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

#11

F-67-33

CUL-DE-SAC. FILL: 356 CY., CUT: 266 CY.





APPROVED
PLANNING COMMISSION
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No. 1
LONGFELLOW AREA No. 2

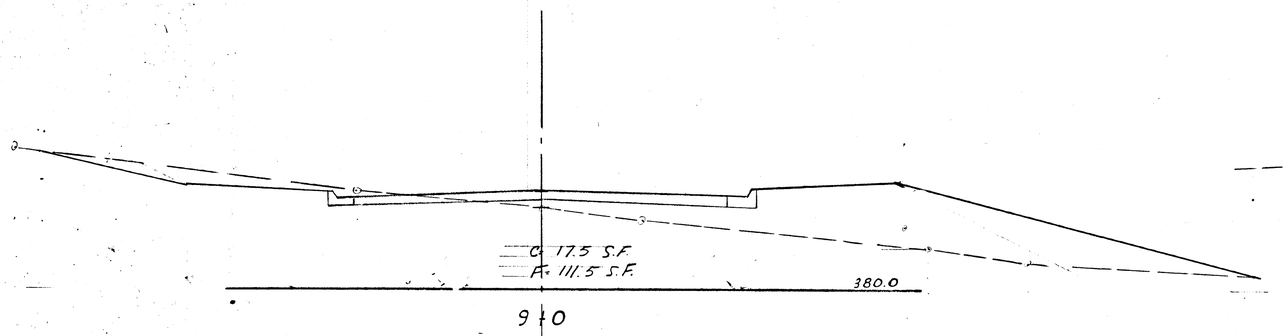
PROJECT TITLE: CROSS SECTIONS
MAD RIVER LANE

Des By W.P.	Scale 1" = 5'	Dwg No 16 of 19
Drn By H.C.S.	Date JUNE 9, 1967	C.C.F. No
Chk By W.P.	Approved	

#11

F-67-33

CUL-DE-SAC. FILL: 3,100 CY., CUT: 1,200 CY.



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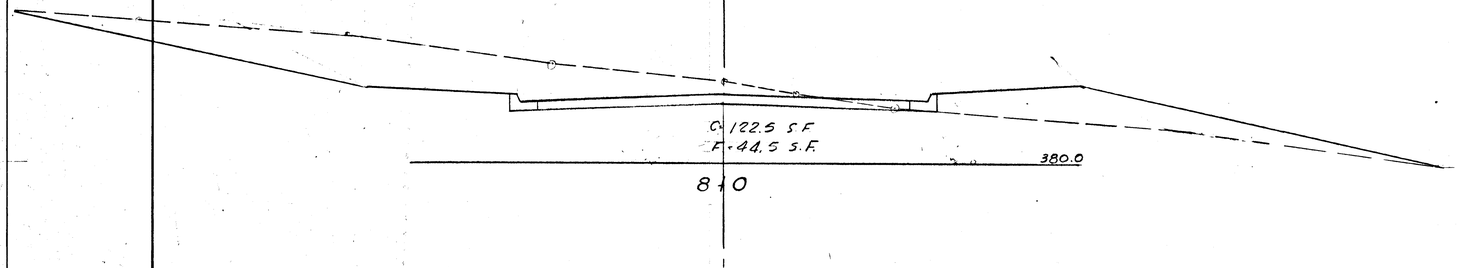

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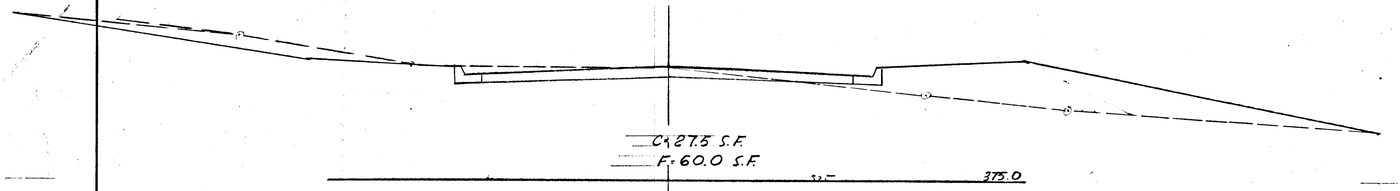

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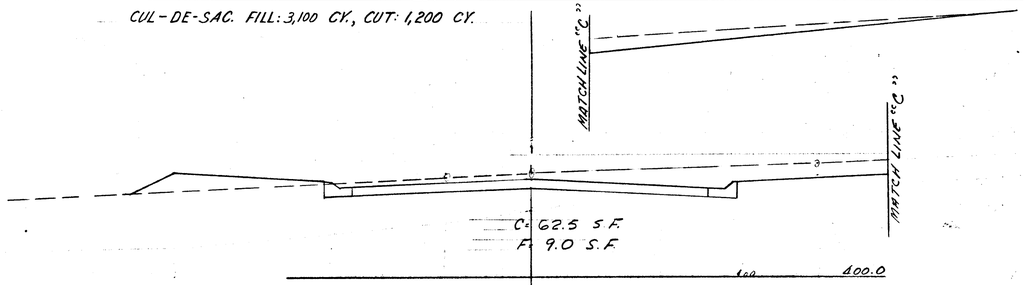

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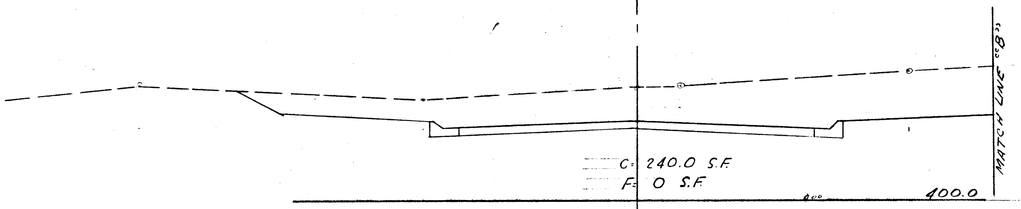

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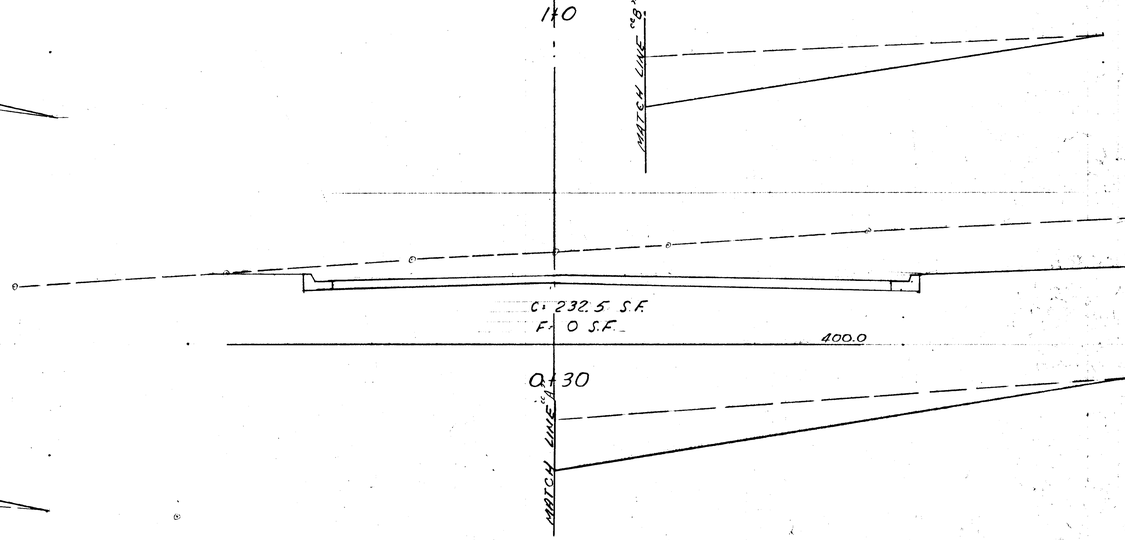

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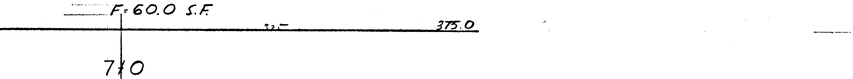


KILLINGWORTH WAY

APPROVED
PLANNING COMMISSION
OF HOWARD COUNTY
DATE NOV 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA
VILLAGE OF HARPER'S CHOICE SEC. No 1
LONGFELLOW AREA No 2

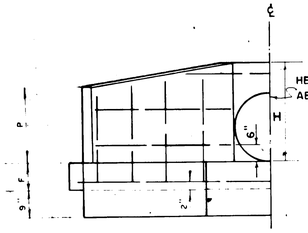
PROJECT TITLE
CROSS SECTIONS
MAD RIVER LANE & KILLINGWORTH WAY

Des By	Scale 1" = 5'	Dwg No 16 of 19
Drn By	Date JUNE 2 1967	C.C.F. No
Chk By	Approved	

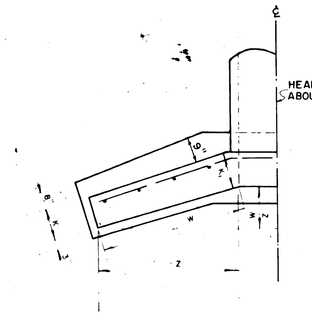
#11

MAD RIVER LANE
KILLINGWORTH WAY

F-67-33



ELEVATION



PLAN

SLOPE 2:1																	
OPENING		DIMENSION FOR CONCRETE													QUANTITIES	
		HEADWALL					WINGS								1 HEADWALL 2 WINGS	
PIPE DIA D	AREA SQ FT	L	B	F	H	W	X	Z	K_1	K	P				CONC CU YDS	STEEL LBS
12"	0.79	1'-9"	9"	9"	1'-7"	2'-3"	1'-10"	2'-0"	9"	7"	1'-3"				0.55	38
15"	1.23	2'-0"	9"	9"	1'-11"	2'-6"	2'-6"	2'-3"	9"	8"	1'-5"				0.73	46
16"	1.39	2'-1"	9"	9"	1'-11"	2'-7"	2'-6"	2'-3"	9"	8"	1'-5"				0.75	46
18"	1.78	2'-3"	9"	9"	2'-2"	3'-0"	3'-0"	2'-7"	9"	8"	1'-7"				0.89	57
24"	3.14	3'-0"	12"	9"	2'-8"	4'-0"	4'-0"	3'-5"	12"	11"	2'-1"				1.64	82
30"	4.91	3'-6"	12"	9"	3'-4"	4'-8"	5'-2"	4'-1"	12"	11"	2'-6"				2.14	113
36"	7.07	4'-0"	12"	9"	3'-10"	5'-4"	6'-2"	4'-7"	12"	11"	2'-10"				2.48	132
42"	9.62	4'-6"	12"	9"	4'-5"	6'-4"	7'-4"	5'-6"	12"	11"	3'-2"				3.30	163
48"	12.57	5'-0"	12"	9"	4'-11"	7'-0"	8'-4"	6'-1"	12"	11"	3'-6"				3.85	193

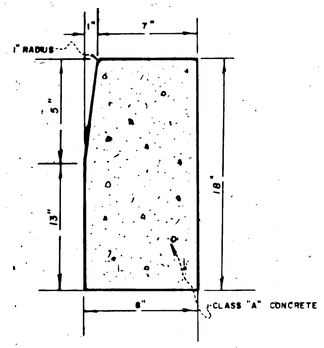
NOTE: (STEEL IN WINGS)
VERT 3/4" BARS 12" C.C.
HOR 1/2" BARS 12" C.C.
HOOKED ON ONE END

NOTE: CHAMFER ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED

MODIFIED TYPE "F" HEADWALL

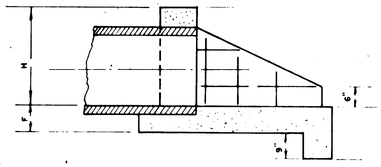
NOTE: 1. HEADWALLS FOR PIPE SIZES NOT SHOWN IN TABLE ABOVE, USE HEADWALL SPECIFIED FOR NEXT LARGEST PIPE.

2. HEADWALL IS MODIFIED IN ACCORDANCE WITH CASE 2 FOR A TYPE "F" ENDWALL AS INDICATED IN THE HOWARD COUNTY ROAD CONSTRUCTION CODE & STANDARD SPECIFICATIONS.



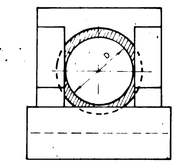
VERTICAL CURB

NO SCALE



NOTE: (STEEL IN WINGS)
VERT 3/4" BARS 12" C.C.
HOR 1/2" BARS 12" C.C.
HOOKED ON ONE END

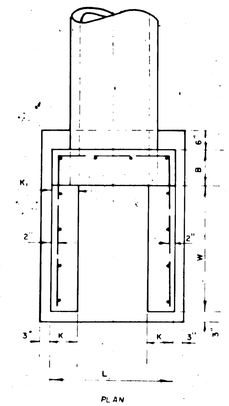
NOTE: CHAMFER ALL EXPOSED EDGES 1"x 1" OR AS DIRECTED



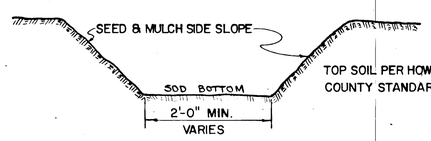
ELEVATION

SLOPE 2:1																	
OPENING		DIMENSIONS FOR CONCRETE													QUANTITIES	
		HEADWALL					WINGS								1 HEADWALL 2 WINGS	
PIPE DIA D	AREA SQ FT	L	B	F	H	W	K'	K_1							CONC CU YDS	STEEL LBS
12"	0.79	2'-0"	9"	9"	1'-7"	1'-4"	6"	6"							0.36	34
15"	1.23	2'-3"	9"	9"	1'-11"	1'-8"	6"	6"							0.47	37
16"	1.39	2'-4"	9"	9"	1'-11"	2'-0"	6"	6"							0.50	38
18"	1.78	2'-6"	9"	9"	2'-2"	2'-6"	6"	6"							0.61	53
24"	3.14	3'-6"	12"	9"	2'-8"	3'-6"	9"	9"							1.17	71
30"	4.91	4'-0"	12"	9"	3'-4"	4'-7"	9"	9"							1.62	91
36"	7.07	4'-6"	12"	9"	3'-10"	5'-8"	9"	9"							2.12	116
42"	9.62	5'-6"	12"	9"	4'-5"	6'-9"	9"	12"							3.15	141
48"	12.57	6'-0"	12"	9"	4'-11"	7'-10"	9"	12"							3.88	174

STANDARD TYPE "G" HEADWALL

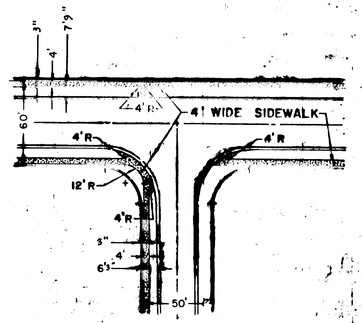


PLAN



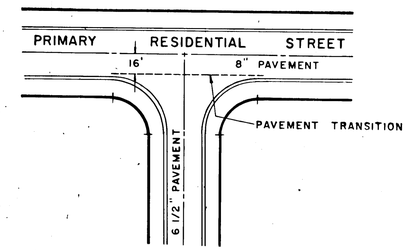
TYPICAL DRAINAGE DITCH

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



TYPICAL SIDEWALK DETAIL AT INTERSECTIONS

NO SCALE



SECONDARY RESIDENTIAL STREET

TYPICAL PAVEMENT TRANSITION DETAIL

NO SCALE

APPROVED
PLANNING COMMISSION
DATE NOV. 13 1967

Rev Date	Rev No	Revision Description

COLUMBIA
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. No 1 LONGFELLOW AREA No 2

PROJECT TITLE: CONSTRUCTION DETAILS

Des By	Scale 1" = Noted	Dwg No 17 of 19
Drn By	Date JUNE 9, 1967	C.C.F. No
Chk By	Approved	

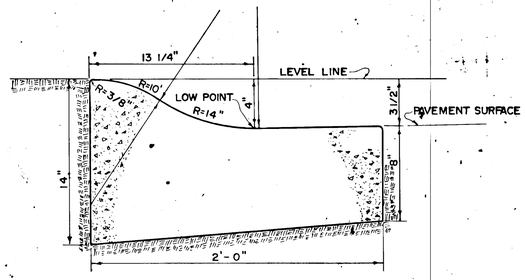
Richard P. Browne

RICHARD P. BROWNE, P.E. & L.S.
Lic. No. 5238 State MD.

#11

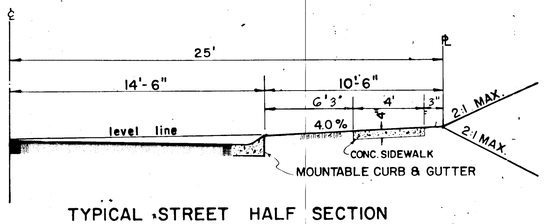
FILE NO. 1764

F-67-23



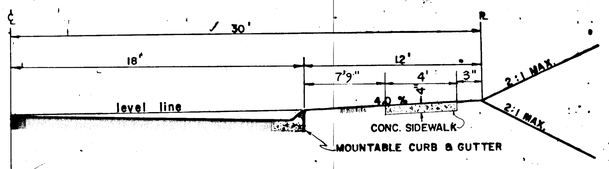
MOUNTABLE CURB & GUTTER

NO SCALE



TYPICAL STREET HALF SECTION

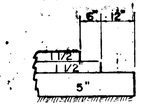
NO SCALE



NOTE: SIDEWALK AT DRIVEWAYS IS 6" THICK.

TYPICAL STREET HALF SECTION

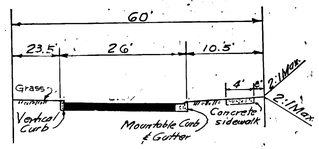
NO SCALE



TYPICAL EDGE OF PAVEMENT

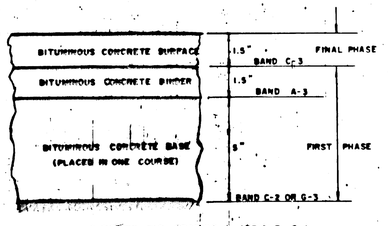
(WHERE CURB IS NOT CONSTRUCTED)

NO SCALE



TYPICAL HALF-SECTION-CUL-DE-SAC

NO SCALE

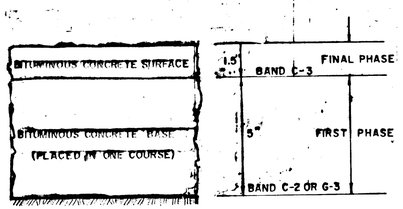


CLEARING AND GRUBBING	ARTICLE C-1
SUBGRADE	ARTICLE C-2
BASE COURSE	ARTICLE C-31 OR C-33
BINDER COURSE	ARTICLE C-31
SURFACE COURSE	ARTICLE C-31

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS.

PRIMARY RESIDENTIAL STREET

NO SCALE



CLEARING and GRUBBING	ARTICLE C-1
SUBGRADE	ARTICLE C-2
BASE COURSE	ARTICLE C-31 or C-33
SURFACE COURSE	ARTICLE C-31

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY ROAD CONSTRUCTION CODE AND SPECIFICATIONS.

SECONDARY RESIDENTIAL STREET

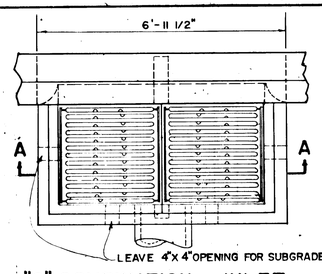
NO SCALE

PAVEMENT SECTIONS

Richard E. Browne

RICHARD E. BROWNE, P.E. & L.S.

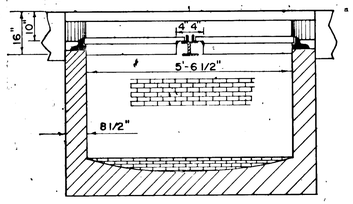
Lic. No. 5238 State MD.



"S" COMBINATION INLET

(DOUBLE GRATE)

NO SCALE

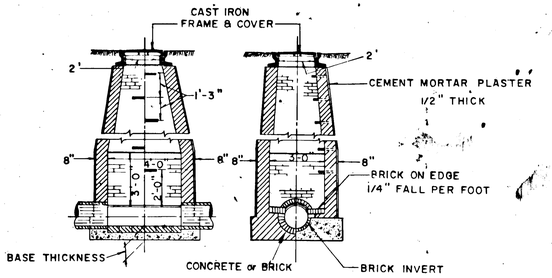


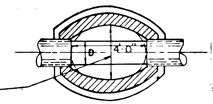
SECTION "A"-"A"

NO SCALE

STANDARD MANHOLE DETAIL

NO SCALE





MANHOLE WALL THICKNESS

8" to depth of 12'-0"

12" { Below depth of 12'-0" / To depth of 24'-0"

MANHOLE BASE THICKNESS

8" Wall	12" Base
12" "	15"

BENCH HEIGHT ABOVE OUTGOING PIPE INVERT

Storm Water 0.5 D

Rev Date	Rev No	Revision Description

COLUMBIA

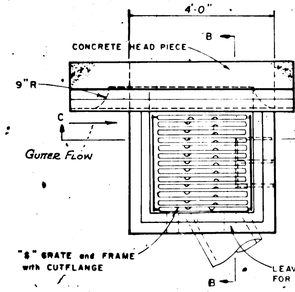
MARYLAND

THE ROUSE COMPANY — THE VILLAGE OF CROSS KEYS, BALTIMORE, MARYLAND 21210

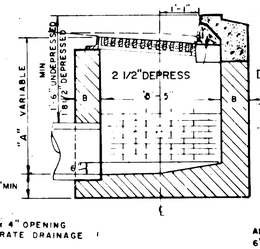
PROJECT AREA: VILLAGE OF HARPER'S CHOICE SEC. N°1 LONGFELLOW AREA N°2

PROJECT TITLE: CONSTRUCTION DETAILS

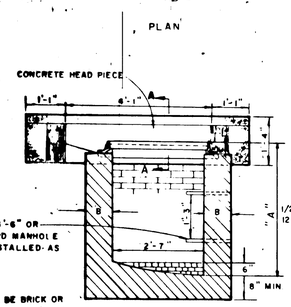
Des By	Scale As Noted	Dwg No
Drn By	Date JUNE 9 1967	C.C.F. No
Chk By	Approved	



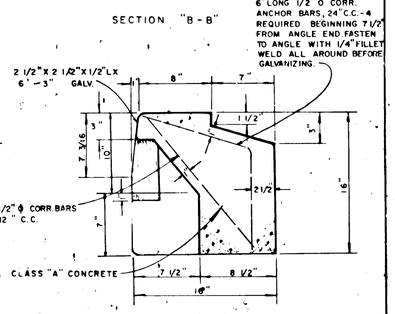
PLAN



SECTION "B-B"



SECTION "C-C"



ALL LONGITUDINAL BARS 6' LONG 1/2" ϕ CORR. ANCHOR BARS, 24" C.C. - 4 REQUIRED BEGINNING 7 1/2" FROM ANGLE END. FASTEN TO ANGLE WITH 1/4" FILLET WELD ALL AROUND BEFORE GALVANIZING.

SECTION "A-A"

NOTE:
1. THE WALLS AND INVERT SHALL BE BRICK OR PLAIN CLASS "A" REINFORCED CONCRETE
2. B = 8" WHERE A IS 7' OR LESS
   B = 12" WHERE A IS 7' TO 11'.
3. TOP 4" OF WALLS SHALL BE BRICK MASONRY. ADDITIONAL BRICK SHALL BE USED TO BRING THE GRATE TO EXISTING GRADE IF REQUIRED.
4. WHERE BRICK IS USED INVERT SHALL BE LAID ON EDGE.

"S" COMBINATION INLET DETAIL

MODIFIED

(SINGLE GRATE)

NO SCALE

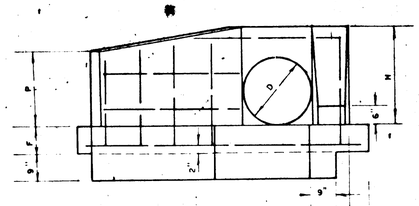
APPROV

PLANNING COMM

DATE NOV 13 1967

File No. 1764

F-67-33



ELEVATION

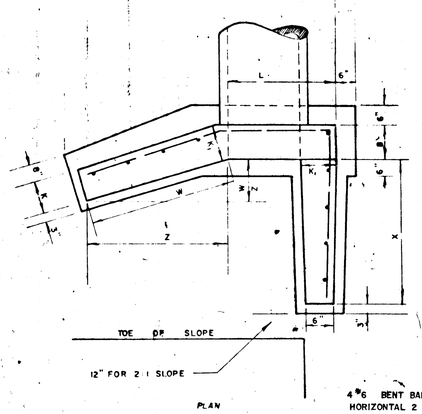
SLOPE 2:1														
OPENINGS			DIMENSION FOR CONCRETE										QUANTITIES	
PIPE DIA	AREA		ENDWALL				WINGS						1 ENDWALL 2 WINGS	
D	SQ FT	L	B	F	H	W	X	Z	K_1	K	P		CONC. CU YDS	STEEL LBS
12"	0.79	1'-9"	9"	9"	1'-7"	2'-3"	1'-0"	2'-0"	9"	7"	1'-3"		0.55	38
15"	1.23	2'-0"	9"	9"	1'-8"	2'-6"	2'-6"	2'-2"	9"	8"	1'-5"		0.73	46
18"	1.39	2'-1"	9"	9"	1'-9"	2'-7"	2'-6"	2'-3"	9"	8"	1'-5"		0.75	48
18"	1.78	2'-3"	9"	9"	2'-1"	3'-0"	3'-0"	2'-7"	9"	8"	1'-7"		0.89	57
24"	3.14	3'-0"	12"	9"	2'-9"	4'-0"	4'-0"	3'-5"	12"	11"	2'-1"		1.64	82
30"	4.91	3'-6"	12"	9"	3'-4"	4'-6"	5'-2"	4'-1"	12"	11"	2'-6"		2.14	113
36"	7.07	4'-0"	12"	9"	3'-10"	5'-0"	6'-2"	4'-7"	12"	11"	2'-10"		2.48	132
42"	9.62	4'-6"	12"	9"	4'-5"	5'-6"	7'-4"	5'-6"	12"	11"	3'-2"		3.30	163
48"	12.57	5'-0"	12"	9"	4'-11"	7'-0"	8'-4"	6'-1"	12"	11"	3'-6"		3.85	193

NOTE: (STEEL IN WINGS)
VERT 3/4" BARS 12" C.C.
HOR 1/2" BARS 12" C.C.
HOOKED ON ONE END

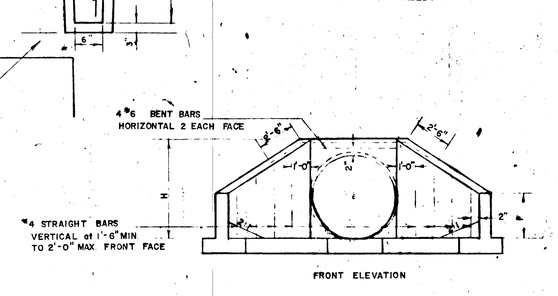
NOTE: CHAMFER ALL EXPOSED EDGES
1"x 1" OR AS DIRECTED.

STANDARD TYPE "F" ENDWALL

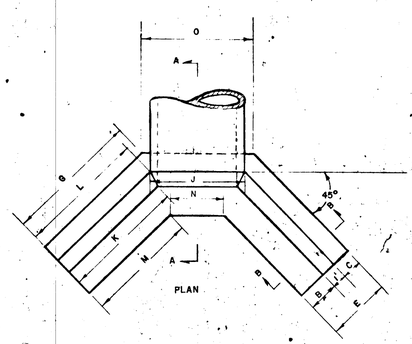
NOTE: 1. ENDWALLS WILL BE SET IN THE FIELD BY THE ENGINEER DURING CONSTRUCTION.
2. ENDWALL FOR 33" PIPE SHALL BE CONSTRUCTED TO THE DIMENSIONS FOR 36" PIPE DIAMETER
3. WINGWALLS FOR TYPE "F" ENDWALLS SHALL BE CONSTRUCTED TO CONFORM TO THE ALIGNMENT OF EXISTING BROOK CHANNELS.



PLAN

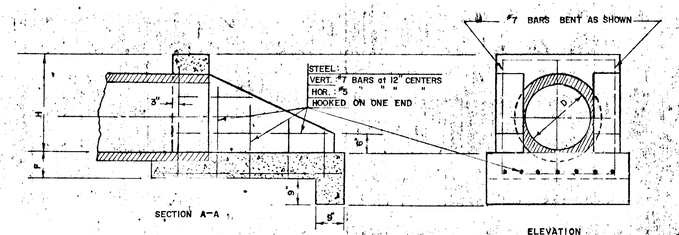


FRONT ELEVATION



PLAN

STANDARD SMALL "B" HEADWALL

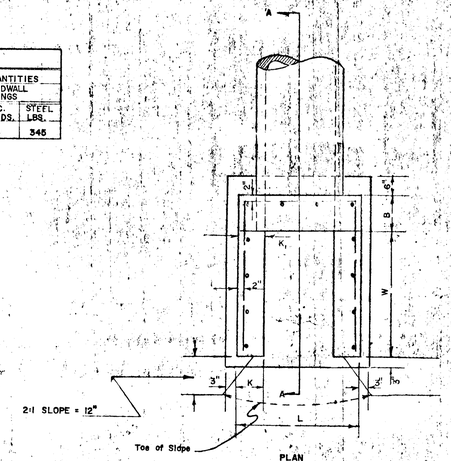


SECTION A-A

ELEVATION

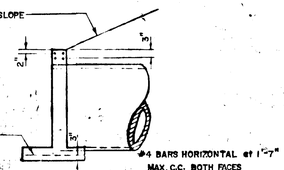
SLOPE 2:1														
OPENING			DIMENSIONS FOR CONCRETE										QUANTITIES	
DIAM OF PIPE	AREA		ENDWALL				WINGS						1-ENDWALL 2-WINGS	
D	SQ FT	L	B	F	H	W	K	K_1					CONC. CU YDS.	STEEL LBS.
54	15.90	6'-6"	12"	12"	6'-0"	8'-8"	10"	12"					4.64	345

NOTE: CHAMFER ALL EXPOSED EDGES
1"x1" OR AS DIRECTED.

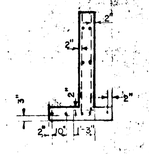


PLAN

SPECIAL TYPE "G" HEADWALL



SECTION A-A



DISPOSITION OF BARS DETAIL

OPENING		DIMENSIONS													VOL. CONC. C.Y.	STEEL LBS.
D INCHES	AREA SQ FT	B	C	E	F	G	H	J	K	L	M	N	O			
48	12.57	1'-4"	10"	3'-2"	2'-8"	1'-03/4"	5'-0"	4'-10"	6'-31/2"	8'-11/2"	5'-9"	1'-103/4"	5'-6"		4.3	262
54	15.9	1'-8"	1'-0"	3'-8"	3'-0"	1'-81/2"	5'-6"	5'-4"	6'-101/2"	9'-3"	6'-3 5/8"	2'-21/4"	6'-11 1/2"	6'-2"	5.3	301
60	19.64	1'-8"	1'-0"	3'-8"	3'-3"	1'-8 1/2"	6'-0"	5'-10"	7'-1 1/4"	9'-5 1/2"	6'-11"	2'-7 1/16"	6'-8"		6.0	361

GENERAL NOTES

SPECIFICATIONS	: LATEST S.R.C.
CONCRETE	: SEE S.R.C. SPECIFICATIONS
REINFORCING	: DEFORMED STEEL BARS 4 & 5
CHAMFER	: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

Richard P Browne

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APPROVED
PLANNING COMMISSION
DATE NOV 1967

Revised: 8-67 Details for B & G Headwalls added

SHEET 18 OF 18
File No. 11

#11

F-67-33