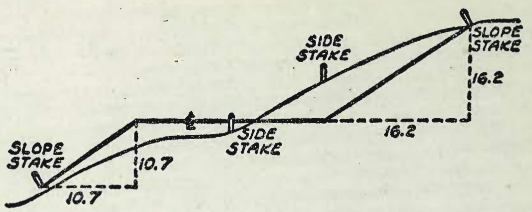
[illegible]



Distances from Side Stakes for Cross-Sectioning

Slope 1 to 1. Roadway of Any Width

	0	.1	.2	.3	.4	.5	.6	.7	.8	9	
0	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	0
1	1.00	1.10	1.20	1.30	1.40	1.50	1.60	1.70	1.80	1.90	1
2	2.00	2.10	2.20	2.30	2.40	2.50	2.60	2.70	2.80	2.90	2
3	3.00	3.10	3.20	3.30	3.40	3.50	3.60	3.70	3.80	3.90	3
4	4.00	4.10	4.20	4.30	4.40	4.50	4.60	4.70	4.80	4.90	4
5	5.00	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	5
6	6.00	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	6
7	7.00	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	7
8	8.00	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	8
9	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	9
10	10.00	10.10	10.20	10.30	10.40	10.50	10.60	10.70	10.80	10.90	10
11	11.00	11.10	11.20	11.30	11.40	11.50	11.60	11.70	11.80	11.90	11
12	12.00	12.10	12.20	12.30	12.40	12.50	12.60	12.70	12.80	12.90	12
13	13.00	13.10	13.20	13.30	13.40	13.50	13.60	13.70	13.80	13.90	13
14	14.00	14.10	14.20	14.30	14.40	14.50	14.60	14.70	14.80	14.90	14
15	15.00	15.10	15.20	15.30	15.40	15.50	15.60	15.70	15.80	15.90	15
16	16.00	16.10	16.20	16.30	16.40	16.50	16.60	16.70	16.80	16.90	16
17	17.00	17.10	17.20	17.30	17.40	17.50	17.60	17.70	17.80	17.90	17
18	18.00	18.10	18.20	18.30	18.40	18.50	18.60	18.70	18.80	18.90	18
19	19.00	19.10	19.20	19.30	19.40	19.50	19.60	19.70	19.80	19.90	19
20	20.00	20.10	20.20	20.30	20.40	20.50	20.60	20.70	20.80	20.90	20
21	21.00	21.10	21.20	21.30	21.40	21.50	21.60	21.70	21.80	21.90	21
22	22.00	22.10	22.20	22.30	22.40	22.50	22.60	22.70	22.80	22.90	22
23	23.00	23.10	23.20	23.30	23.40	23.50	23.60	23.70	23.80	23.90	23
24	24.00	24.10	24.20	24.30	24.40	24.50	24.60	24.70	24.80	24.90	24
25	25.00	25.10	25.20	25.30	25.40	25.50	25.60	25.70	25.80	25.90	25
26	26.00	26.10	26.20	26.30	26.40	26.50	26.60	26.70	26.80	26.90	26
27	27.00	27.10	27.20	27.30	27.40	27.50	27.60	27.70	27.80	27.90	27
28	28.00	28.10	28.20	28.30	28.40	28.50	28.60	28.70	28.80	28.90	28
29	29.00	29.10	29.20	29.30	29.40	29.50	29.60	29.70	29.80	29.90	29
30	30.00	30.10	30.20	30.30	30.40	30.50	30.60	30.70	30.80	30.90	30
31	31.00	31.10	31.20	31.30	31.40	31.50	31.60	31.70	31.80	31.90	31
32	32.00	32.10	32.20	32.30	32.40	32.50	32.60	32.70	32.80	32.90	32
33	33.00	33.10	33.20	33.30	33.40	33.50	33.60	33.70	33.80	33.90	33
34	34.00	34.10	34.20	34.30	34.40	34.50	34.60	34.70	34.80	34.90	34
35	35.00	35.10	35.20	35.30	35.40	35.50	35.60	35.70	35.80	35.90	35
36	36.00	36.10	36.20	36.30	36.40	36.50	36.60	36.70	36.80	36.90	36
37	37.00	37.10	37.20	37.30	37.40	37.50	37.60	37.70	37.80	37.90	37
38	38.00	38.10	38.20	38.30	38.40	38.50	38.60	38.70	38.80	38.90	38
39	39.00	39.10	39.20	39.30	39.40	39.50	39.60	39.70	39.80	39.90	39
40	40.00	40.10	40.20	40.30	40.40	40.50	40.60	40.70	40.80	40.90	40
41	41.00	41.10	41.20	41.30	41.40	41.50	41.60	41.70	41.80	41.90	41
42	42.00	42.10	42.20	42.30	42.40	42.50	42.60	42.70	42.80	42.90	42
43	43.00	43.10	43.20	43.30	43.40	43.50	43.60	43.70	43.80	43.90	43
44	44.00	44.10	44.20	44.30	44.40	44.50	44.60	44.70	44.80	44.90	44
45	45.00	45.10	45.20	45.30	45.40	45.50	45.60	45.70	45.80	45.90	45
46	46.00	46.10	46.20	46.30	46.40	46.50	46.60	46.70	46.80	46.90	46
47	47.00	47.10	47.20	47.30	47.40	47.50	47.60	47.70	47.80	47.90	47
48	48.00	48.10	48.20	48.30	48.40	48.50	48.60	48.70	48.80	48.90	48
49	49.00	49.10	49.20	49.30	49.40	49.50	49.60	49.70	49.80	49.90	49
50	50.00	50.10	50.20	50.30	50.40	50.50	50.60	50.70	50.80	50.90	50

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

2298
580
17.18 =

N.

104.06
594
8.12

IMPROVED TABLES AND INFORMATION

DIRECTIONS FOR USE OF TABLES

TABLE No. XIV

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. VIII

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections. Degree of curve with a given I may be found by dividing tangent, (or external), opposite I by given tangent, (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

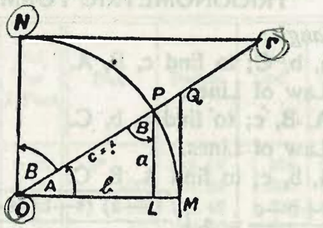


TABLE II
TRIGONOMETRIC FORMULÆ.

$\angle A = \angle MOP \qquad \angle B = \angle PON = \angle OPL$

$R = OB = c = 1$

$$\sin A = \frac{a}{c} = \frac{a}{1} = a = \text{sos } B = LP$$

$$\text{sos } A = \frac{b}{c} = \frac{b}{1} = b = \sin B = OL$$

$$\tan A = \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ$$

$$\cot A = \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT$$

$$\sec A = \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ$$

$$\csc A = \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT$$

$$\text{vers } A = \frac{LM}{OP} = LM = \text{covers } B =$$

$$\text{covers } A = \frac{OP-LP}{OP} = OP-LP = \text{vers } B$$

$\text{exsec } A = PQ = \text{coexsec } B$

$\text{coexsec } A = PT = \text{exsec } B$

$$\sin \tfrac{1}{2} A = \sqrt{\frac{1-\text{Cos } A}{2}} \qquad \cos \tfrac{1}{2} A = \sqrt{\frac{1+\text{Cos } A}{2}}$$

$\sin 2A = 2 \sin A \cos A \qquad \cos 2A = \cos^2 A - \sin^2 A$

Law of Lines $\dfrac{\sin A}{a} = \dfrac{\sin B}{B} = \dfrac{\sin C^1}{C}$

Law of Cosines $c^2 = a^2 + b^2 - 2ab \cos C$

Law of Tangents $\dfrac{a+b}{a-b} = \dfrac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)}$

+29.52 = MH. 57	30.70	0 70 20.59	10.11
178+05	30.23	0 23 20.28	9.95
+80	28.04	8 04 19.97	8.07
+45	26.45	6 45 19.54	6.91
177+10	28.75	8 75 19.10	9.65
+75	30.04	0 04 18.67	11.37
176 +48.34 = M.H. 56	30.26	0 26 18.34	11.92
176+21.61 = Bridge	29.30	9 30 18.01	11.29
+91.41 = Bridge	28.68	8 68 17.64	11.04
+65	23.26	3 26 17.31	5.95
175+38.45 = M.H. 55	25.06	5 06 16.98	8.08

5' Back + 10' Rt.

ROSE CANYON SEWER

"A" LINE – TO CAMP MATTHEWS

Walker
Meyer
Burnes
Kelley

9-10-57

22.18
1.40
20.78

STATIONS		El. STAKES	El. INVERT	Cuts	offsets
+90		42 138.~~22~~	132.89	5 53 ~~5.33~~ ✓	10' Rt
+55	1.0%	65 138.~~45~~	132.54	6.11 ~~5.91~~ ✓	
+20		76 139.~~56~~	132.19	57 7.~~37~~ ✓	
182 +14.36 = P.O.C	T.P.	66 139.~~46~~	132.14	52 7.~~32~~	
+85	↓	87 140.~~67~~	131.84	9.03 ~~8.83~~ ✓	
M.H. 58 181 +50		96 141.76	131.49 ✓	47 10.~~27~~ ✓	
+25		72 142.~~52~~	67 130.~~64~~	12.05 ~~11.88~~ ✓	
181 +00		47 142.~~27~~	.85 129.~~79~~	12 62 ~~12.48~~	
+70		141.55 ~~141.35~~	.86 128.~~77~~	12.69 ~~12.58~~	
+35		140.09 ~~139.89~~	71 127.~~58~~	12.38 ~~12.31~~	
180 +00		.92 137.~~72~~	.56 126.~~39~~	11.36 ~~11.43~~	
+65 (very slight) = Brk.	T.P. →	136.10 ~~135.90~~	125.40 ~~125.20~~	10.70	
179 +30		.63 134.~~43~~	21 124.~~01~~	10.42	
+95		134.02 ~~133.82~~	123.02 ~~122.82~~	11.00	
178 +60		76 132.~~56~~	83 121.~~63~~	10.93	
178 +29.52 = B.C. Rt.		.23 131.~~03~~	79 120.~~59~~	10.44	

Fd. to be → 130.94
~~130.74~~

B.M.
on ℄ Hub 178+29.52 Sht. #47

ROSE CANYON SEWER

"A" LINE

STATION				EL. INVERT	
190 + 00			44 150.~~24~~	142.23	.21 8.~~01~~ ✓
+60			.57 149.~~37~~	141.61	96 7.~~76~~
189 + 20		T.P.	90 147.~~70~~	140.98	92 6.~~72~~ ✓
+80			32 146.~~12~~	140.36	96 5.~~76~~ ✓
+40	1.56 %		66 145.~~46~~	139.73	93 5.~~73~~ ✓
188 + 00			145.10 ~~144.90~~	139.11	99 5.~~79~~ ✓
+60			145.07 ~~144.87~~	138.49	58 6.~~38~~ ✓
187 +20			62 145.~~42~~	137.86	76 7.~~56~~ ✓
+80			146.10 ~~145.90~~	137.24	86 8.~~66~~
186 + 40			Nail 68 150.~~48~~	136.61	14.07 ~~13.87~~ ✓
MH 59 185 + 99.21 = EC			36 147.~~16~~	135.98	38 11.~~18~~ ✓
+70		T.P.	38 144.~~18~~	135.69	69 8.~~49~~ ✓
+35			76 142.~~56~~	135.34	42 7.~~22~~ ✓
185 + 00			71 140.~~51~~	134.99	72 5.~~52~~ ✓
+65			45 140.~~25~~	134.64	81 5.~~61~~ ✓
184 + 30	1.0 %		93 139.~~73~~	134.29	64 5.~~44~~ ✓
+ 95			68 139.~~48~~	133.94	74 5.~~54~~ ✓
+60			139.03 ~~138.83~~	133.59	44 5.~~24~~ ✓
183 + 25			56 138.~~36~~	133.24	32 5.~~12~~ ✓

ROSE CANYON SEWER
"A" LINE

				10 Rt
196 + 20	2.68%	165.35	152.82	12.53
+90		164.82	152.02	12.80
+60		164.96	151.22	13.74
MH 61 195 + 37.77	= BC. Rt.	163.77 ~~163.96~~	150.62	13.15 ~~13.34~~
+95	1.56%	164.16	149.95	14.21
+50		163.39	149.25	14.14
194 + 07.77	= Beg. Conc. Crdle	160.16	148.59	11.57
193 + 58	= End Conc. Enc. T.P. → 157.69 = Nail	155.25	147.82	7.43
193 + 30		151.07	147.38	3.69
+90		149.95	146.75	3.20
+50		155.07	146.13	8.94
192 + 15	= Beg. Conc. Enc.	153.14 ~~153.17~~	145.59	7.55 ~~7.58~~
+95	1.56%	152.42 ~~152.68~~	145.27	7.15 ~~7.41~~
191 + 55		151.80	144.65	7.15
		0.23		
+55 Chk ℄ Hub	BOT.	151.26 151.03		
191 + 15		151.36 ~~151.16~~	144.03	7.33 ~~7.13~~
MH #60 190 + 75	1.56%	150.87 ~~150.67~~	143.40	7.47 ~~7.27~~
190 + 40		150.94 ~~150.74~~	142.85	8.09 ~~7.89~~

Note. starting B.M. D-2
Fd. To be 0.23 Low, We adjust
the Elev. from 178 + 29.52
To 190 + 15 as per Notes.

ROSE CANYON SEWER
"A" LINE

			El. invert	Cuts	offsets
MH 63 201+00		179.37	165.69	13.68	10'Lt
+65		178.81	164.75	14. 06	"
200+25		178.68	163.68	15.00	"
+85		177.65	162.61	15. 04	"
199+41.83	=End Conc. Crd.	176.83	161.45	15. 38	"
+95		176 27	160.20	16. 07	"
+55		174.86	159.12	15.74	"
198+15		174.05	158.05	16.00	"
+75	T.P. →	172.04	156.98	15. 06	"
+39.83	=Beg. Conc. Crd.	170.61	156.04	14. 57	"
197+04.83		169.16	155.10	14. 06	"
	2.68%				
		191.29	Sht 28-B → (Prelim. Field notes)		
Chk USE&GS	BM	191.28			"
TP.		189.20			"
TP.		17999			"
TP.		17187			"
MH 62		168.48		14.32=10'Lt.	
196+69.83	=E.C.	167.25	154 16	13.09=10'Rt	
196+50	2.68% T.P. →	166.40	153.63	12.77	

ROSE CANYON SEWER
"A" LINE

			El. Invert	Cuts
~~MH 65~~ 206+76.62=E.C.		188.02	178.50	~~10~~ 9.52
+70		187.83	178.44	8.39
+35		186.69	178.11	8.58
206+00	0.96%	187.20	177.77	9.43
+80		186.01	177.58	8.43
+60.96		185.23	177.40	7.83
205 +40.96		185.40	177.20	8.20
MH 64 205+22.96=B.C. Rt.		184.10	177.03	7.07
205+0	T.P. →	184.00	176.42	7.58
+70		183.17	175.61	7.56
204 +30		183.19	174.54	8.65
+90		182.51	173.47	9.04
+50		182.28	172.40	9.88
203 +10		182.39	171.32	11.07
+70		181.58	170.25	11.33
202 +30	T.P. →	180.14	169.18	10.96
201 +89	=End Conc. Enc.	179.39	168.08	11.31
+68	=Beg. Conc. Enc. ✓	178.50	167.52	10.98
201 +34		179.67	166.61	13.06

ROSE CANYON SEWER
"A"-LINE - TO CAMP MATTHEWS

+50			192.99	185.93	7.06 ✓
214+0			193.08	185.45	7.63 ✓
+50	0.96%	T.P.	194.01	184.97	9.04 ✓
213+0			195.86	184.49	11.37 ✓
+65			196.95	184.15	12.80 ✓
212+28 =END CONC		CRD.	197.54	183.80	13.74 ✓
+89 MH 66			198.70	183.43	15.27 ✓
211+50			199.42	183.05	16.37 ✓
211+00			201.44	182.57	18.87 ✓
210+77.88 =P.O.T.			202.01	182.36	19.65 ✓
+50			201.93	182.09	19.84 ✓
210+0			201.61	181.61	20.00 ✓
+50	0.96%		200.20	181.13	19.07 ✓
209+0		T.P. →	197.78	180.65	17.13 ✓
+50			195.66	180.17	15.49 ✓
208+00 =Beg. Conc. Crd.			194.25	179.69	14.56 ✓
+50		T.P.	192.65	179.21	13.44 ✓
207+0 =MH 65			189.54	178.73	10.81 ✓
206+90 =END CONC ENC.			188.89	178.63	10.26 ✓

T.P. 204.98
T.P. 212.76
chk BM (Prelim Field Notes)
#34 Sht 28-B
chk = 215.49
Sht 28-B = 215.45
0.04
city Disc
on PL Lot Line
1' in E Edge Conc.
Pav. US 101

ROSE CANYON SEWER

"A" LINE

				ELEV. INVERT	CUTS
222+06.71		=END CONC. CRD.	208.35	193.20	15.15 ✓
+95	0.96%		208.47	193.09	15.38 ✓
+60			208.31	192.75	15.56 ✓
221+25 MH 68			208.35	192.41	15.94 ✓
220+93.71		=BC. Rt.	207.82	192.11	15.71 ✓
+50			208.64	191.69	16.95 ✓
220+0		T.P. →	209.92	191.21	18.71 ✓
+50			208.60	190.73	17.87 ✓
219+0			205.95	190.25	15.70 ✓
+50			204.84	189.77	15.07 ✓
218+08.71		=Beg. CONC. CRD.	204.27	189.37	14.90 ✓
+80	0.96%		202.92	189.09	13.83 ✓
+40		T.P. →	200.74	188.71	12.03 ✓
217+0			198.52	.32 188.~~39~~	10.20 ✓
+60			198.04	187.94	10.10 ✓
MH#67 216+25.0	0.95%		197.21	187.61	9.60 ✓
216+0			196.63	187.37	9.26 ✓
+50			194.94	186.89	8.05 ✓
215+0			193.09	186.41	6.68 ✓

ROSE CANYON SEWER
"A-LINE

+50			206.45	201.29	5.16 ✓
230 + 0	0.96 %		206.22	200.81	5.41 ✓
+50			205.87	200.33	5.54 ✓
229 + 0		T.P.>	205.73	199.85	5.88 ✓
+50 MH #70			205.55	199.37	6.18 ✓
228 +00			205.78	198.89	6.89 ✓
+50			207.58	198.41	9.17 ✓
227 + 0			208.20	197.93	10.27 ✓
+50			207.57	197.45	10.12 ✓
226 + 0			206.57	196.97	9.60 ✓
+50	0.96 %		206.11	196.49	9.62 ✓
225 + 0			205.66	196.01	9.65 ✓
+50		T.P. >	204.44	195.53	8.91 ✓
224 + 0			204.43	195.05	9.38 ✓
+50 MH 69			205.22	194.57	10.65 ✓
223 +08.97 = E.C.			205.85	194.18	11.67 ✓
+78.97 = End Conc. Enc.			205.37	193.89	11.48 ✓
+54.97 = Beg. Conc. Enc.			204.90	193.66	11.24 ✓
222 + 30	0.96 %		207.57	193.42	14.15 ✓

ROSE CANYON SEWER
"A"-LINE

			El. Invert	
+50		209.73	206.09	3.64 ✓
+25		209.50	205.85	3.65 -
235 + 0		208.92	205.60	3.32 ✓
+75		207.78	205.37	2.41 ✓
+50		203.73	205.13	F 1.40 ✓
+25		200.20	204.89	F 4.69
234 + 00 = Beg. Ch. 25' Rt.		207.19	204.65	2.54 ✓
+75		207.89	204.41	3.48 ✓
+50		208.38	204.17	4.21 ✓
233 + 25		207.91	203.93	3.98 ✓
232 + 89.81		0.05 207.60		
Chk ℄ Hub Sht. 61 Prelim Notes		207.55	~~203.59~~	
MH 71				
232 + 89.81 = BC Lt.		207.77	203.59	C 4.18 ✓
232 + 67.81 = Beg Conc. Enc.		207.79	203.38	4.41 ✓
+50		207.46	203.21	4.25 ✓
232 + 0		207.68	202.73	4.95 ✓
+50	0.96%	207.03	202.25	4.78 ✓
231 + 0		206.66	201.77	4.89 ✓

ROSE CANYON SEWER
"A"-LINE

STATION cont. - p. 14			EL. INVERT	CUTS
MH 73 241 +75		219.21	212.74	6.47 ✓
241 +30		218.74	212.24	6.50 ✓
+90		217.81	211.79	6.02 ✓
+50		217.07	211.34	5.75 ✓
240 +10		215.36	210.89	4.47 ✓
239 +70	T.P.	214.72	210.44	4.28 ✓
239 +32.19 =END CONC. ENC.		213.41	210.02	3.39 ✓
+90		210.96	209.55	1.41 ✓
238 +45		207.08	209.04	F 1.96 ✓
237 +95		212.01	208.54	C 3.47 ✓
MH 72 237 +68.19=EC	T.P.	211.10	208.18	2.92 ✓
+50		73 210.~~78~~	208.01	2.72 ✓
+25		210.58 ~~210.83~~	207.77	2.81 ✓
237 +00		210.83 ~~210.57~~	207.53	3.30
+75		210.69	207.29	3.40 ✓
+50		210.35	207.05	3.30 ✓
+25		210.14	206.81	3.33 ✓
236 +0		209.96	206.57	3.398 ✓
235 +75		209.89	206.33	3.56 ✓

New Channel Line & Grades

from 234+0 to 239+50

10' Wide Bottom
Slope = 1½:1

Walker
Kelley
Meyer
Petreplis
9-24-57

20' to ℄

R.P. 1.5' to Hinge

					Lt		℄	Rt	
238 +50			12.5	12.5 204.5 C 8.0			204.5		
~~+45~~							204.45 ~~204.0~~	12.3 3.9 c 8.4 19.0	
238+0 ~~(out)~~			12.4	12.4 204.0 C 8.4					
237+68.19 = E.C. ~~+50~~			12.3	12.3 203.7 C 8.6	13.0 5.8 c 7.2 16	13.2 6.0 c 7.2 16.0	~~203.5~~ 203.7 216.73	13.2 4.7 c 8.5 17.8 13	13.0 4.5 c 8.5 17.8
T.P.	5.63	216.73	3.36	211.10					
237+0			11.8	11.8 203.0 C 8.8		11.5 4.2 c 7.3 16.0	203.0	11.5 2.9 8.6 17.9	
+50			10.8	10.8 202.5 C 8.3		12.0 5.2 c 6.8 15.2	202.5	12.0 3.9 c 8.1 17.2	
236 +0			09.6	9.6 202.0 C 7.6		12.5 5.9 c 6.6 14.9	202.0	12.5 5.0 c 7.5 16.3	
+50			09.0	9.0 201.5 C 7.5		13.0 6.2 c 6.8 15.2	201.5	13.0 5.7 c 7.3 16.0	
235 +0			08.8	8.8 201.0 C 7.8		13.5 7.3 c 6.2 14.3	201.0	13.5 5.9 c 7.6 16.4	
+50			08.7	8.7 200.5 C 8.2		14.0 8.8 c 5.2 12.8	200.5	14.0 6.8 c 7.2 15.8	
234+0			06.9	200.0 C 6.9		14.5 9.4 c 5.1 12.7	200.0	14.5 8.2 c 6.3 14.5	
	4.57	214.46		209.89					

B.M. = Elev. stub 10' Lt. 235+75

Spike in Pole – 209.22

New Channel Grades
(Rose Canyon Sewer)
from 234+00 to 239+50

			Lt.		℄	Rt.
239 + 50 = end.			25' to ℄	09.6	9.6 205.5	c 4.1
239 + 00			30' to ℄	14.0	14.0 205.0	c 9.0
~~238+90~~					204.9	
	216.73 π					

Sept. 25-57

ROSE CANYON SEWER
"A" LINE

STATIONS				ELEV. INVERT		
249 + ~~05~~ 15			231.11	~~218.45~~ 217.79 218.41	~~12.66~~ ✓	13.32
+ ~~70~~ 80			~~229.79~~ 229.54	~~218.32~~ 217.42 218.28	~~11.47~~ ✓	~~12.37~~ 12.12
+ ~~35~~ 45			227.89 ~~228.55~~	~~218.20~~ 217.05 218.16	~~10.35~~ ✓	~~11.50~~ 10.84
~~+40~~			~~228.44~~			
248 + 0 = END New ch.		TP.	226.68	216.57 ~~218.03~~	~~8.65~~ ✓	10.11
+75	1.06 % Plan 4577-XD		223.~~24~~ 14	216.31 ~~217.94~~		6.83
+40			219.73	215.94 ~~217.81~~		3.79
247 + 05			217.88	215.~~89~~ 57 ~~217.69~~		2.31
+70			218.09	215.20 ~~217.56~~		2.89
+35			218.15	214.83 ~~217.44~~		3.32
246 + 0 Beg. ch. on rt.			221.79	214.46 ~~217.31~~		7.33
245 + 75 = MH# ~~74~~			225.02	214.18 ~~217.22~~	~~7.80~~ ✓	10.84
+40			226.00	214.05 ~~216.82~~	~~9.78~~ ✓	11.95
245 + 0	0.36 % Plan 4577-XD		224.96	213.91 ~~216.37~~	~~8.59~~ ✓	11.05
+50			224.32	213.73 ~~215.81~~	~~8.51~~ ✓	10.59
244 + 0			224.13	213.55 ~~215.25~~	~~8.88~~ ✓	10.58
+50		T.P.	223.43	213.37 ~~214.69~~	~~8.74~~ ✓	10.06
243 + 0			223.06	213.19 ~~214.13~~	~~8.93~~ ✓	9.87
+55			220.89	213.03 ~~213.63~~	~~7.26~~ ✓	7.86
242 + 15			220.08	212.89 ~~213.18~~	~~6.90~~ ✓	7.19

Cont from P-11

Note: Grade change 241+75 to 250+08.44
Per H-Cole Design Eng. 9-27-1957

ROSE CANYON SEWER
"A" LINE

STATION			INVERT	CUTS	
255 +0		238.26	220.55	17.71 ✓	
+65		236.60	220.42	16.18 ✓	
254 +30		235.13	220.30	14.83 ✓	
+95		234.16	220.17	13.99 ✓	
+60		233.49	220.04	13.45 ✓	
253 +25		234.02	219.92	14.10 ✓	
+90		234.71	219.79	14.92 ✓	
+55		235.50	219.67	15.83 ✓	
252 +20		236.28	219.54	16.~~84~~ .74 ✓	
+85		237.05	219.41	17.64 ✓	
+50 = MH 76		237.77	219.29	18.48 ✓	
+25		238.27	219.20	19.07 ✓	
251+01.19 = E.C.		238.66	219.11	19.55 ✓	
+88.44		232.23	219.06	13.17	
+68.44 = Beg. Conc. Enc.	End Crdle.	232.91	218.99	13.92	
+35		237.19	218.87 ~~22~~	18.32 ~~06~~	
250 +08.44 = B.C. Rt.		235.69	218.78	16.91 ✓	
+75	106% Plan 4577 XD	234.02	218.43 ~~218.66~~	~~15.46~~ ✓	15.59
249 + ~~40~~ 50		233.09	~~218.57~~ ~~218.53~~ 218.16	~~14.52~~ ✓	14.93

250 + 08.44 = 235.6 ✓ = Prelim. Levels
chk ℄ 235.61

16

Walker
Kelley
Meyer
Petroplis
9-25-1957

ROSE CANYON SEWER
"A" LINE

				Cuts			
M.H. 78							
260 +05.11 = B.C. Rt.		233.04	222.37	10.67 ✓	10 Lt	Chk P.I. Hub Prelim sht. 67	237.94 237.96 0.02
260 +03.46 = E.C.		233.08	222.36	10.72 ✓			
+75		233.57	222.24	11.33 ✓			
+50		234.05	222.15	11.90 ✓			
+25		234.58	222.06	12.52 ✓			
259 +0		234.61	221.97	12.64 ✓			
+75	T.P. =	234.65	221.88	12.77 ✓			
+50		235.18	221.79	13.39 ✓			
+28.15		236.60	221.71	14.89 ✓			
258 +0		238.51	221.61	16.90 ✓			
+75		239.86	~~222.52~~ 221.52	18.34 ✓			
+50		240.85	221.43	19.42 ✓			
+25		241.85	221.34	20.51 ✓			
257 +0		242.67	221.25	21.42 ✓			
+75		242.67	221.16	21.51 ✓			
M.H. # 77 256 +42.15 = B.C.		242.62	221.06	21.56 ✓		chk ℄	241.79 = Rec. 241.78
256 +05		242.08	220.93	21.15 ✓			
+70		240.41	220.80	19.61 ✓			
255 +35	T.P.	239.97	220.67	19.30 ✓			

ROSE CANYON SEWER

"A2" LINE = VIA CAMP MATTHEWS

Walker
Kelley
Meyer
Petoplois

Stat. 106-A2-Line = 232.83

9-30-57 Chk & stake 263+67.58 232.79

STATIONS			INVERT	CUTS	Offsets
263 +67.58 = E.C.	25°57.6'	233.00	223.67	9.33	10' Lt.
+50	24°42.06'	233.47	223.61	9.86	
+25	22°54.63	232.54	223.52	9.02	
263 +0	21°07.2'	232.10	223.43	8.67	
+75	19°19.77'	231.82	223.34	8.48	
+50	17°32.34'	231.93	223.25	8.68	
+25	15°44.91'	232.16	223.16	9.00	
262 + 0	13°57.48'	231.94	223.07	8.87	
+75	12°10.05'	231.82	222.98	8.84	
+50	10°22.62'	232.12	222.89	9.23	
+25	8°35.19'	231.58	222.80	8.78	
261 + 0	6°47.76'	231.20	222.71	8.49	
+75	5°00.26'	231.54	222.62	8.92	
+50	3°12.83'	231.96	222.53	9.43	
+25	1°25.40	232.69	222.44	10.25	
260 + 05.11 = B.C.R.	P-16		222.37		
+~~75~~					
~~+50~~					
2~~60~~ +~~25~~					

ROSE CANYON SEWER
"A2" LINE = VIA - CAMP MATTHEWS

270 + 25		36.72	6 72 26.04	10.68
+ 90		35.06	5 06 25.91	9.15
+ 55		33.40	3 40 25.78	7.62
269 + 20		32.31	2 31 25.66	6.65
+ 85		31.76	1 76 25.53	6.23
+ 50	M.H. # 80	31.26	1 26 25.41	5.85
268 + 20	T.P. 31.435	31.43	1 43 25.30	6.13
+ 85		31.06	1 06 25.17	5.89
+ 50		30.76	0 76 25.05	5.71
267 + 15		30.70	0 70 24.92	5.78
+ 80		30.74	0 74 24.79	5.95
+ 45		30.27	0 27 24.67	5.60
266 + 10		30.48	0 48 24.54	5.94
+ 75		31.11	1 11 24.42	6.69
+ 40		31.12	1 12 24.29	6.83
265 + 05		31.57	1 57 24.16	7.41
+ 70		32.17	2 17 24.04	8.13
+ 35		32.65	2 65 23.91	8.74
264 + 00		32.89	2 89 23.79	9.10

ROSE CANYON SEWER
"AZ" LINE - VIA CAMP MATTHEWS

				INVERT	CUTS	OFFSETS
	+65		34.63	4 63 28.34	6.29	
276	+30		34.69	4 69 28.22	6.47	
	+95		34.57	4 57 28.09	6.48	
	+60		34.43	4 43 27.97	6.46	
275	+25		34.50	4 50 27.84	6.66	
	+90		34.54	4 54 27.71	6.83	
	+55		34.38	4 38 27.59	6.79	
274	+20		35.11	5 11 27.46	7.65	
	+85		36.95	6 95 27.34	9.61	
	+50	MH# 81	39.35	9 35 27.21	12.14	
	+30		39.83	9 83 27.13	12.70	
273	+05		39.58	9 58 27.04	12.54	
	+70		39.16	9 16 26.92	12.24	
	+35		39.29	9 29 26.79	12.50	
272	+00		39.34	9 34 26.67	12.67	
	+65		39.60	9 60 26.54	13.06	
271	+30		39.18	9 18 26.41	12.77	
	+95		38.05	8 05 26.29	11.76	
270	+60		37.43	7 43 26.16	11.27	

ROSE CANYON SEWER
"A2" - LINE - VIC. - CAMP MATTHEWS

			INVERT	CUTS	OFFSETS
283+05		42.12	2 12 34.47	7.65	10' Lt.
+70		41.65	1 65 34.05	7.60	
+35		41.87	1 87 33.63	8.24	
282+00		41.18	1 18 33.21	7.97	
+65		41.09	1 09 32.79	8.30	
281 +30		39.90	9 90 32.37	7.53	
+95		39.45	9 45 31.95	7.50	
+60		38.78	8 78 31.53	7.25	
280 +25		37.61	7 61 31.11	6.50	
+90		35.66	5 66 30.69	4.97	
+55		36.54	6 54 30.27	6.27	
279 +20		36.58	6 58 29.85	6.73	
+85		36.12	6 12 29.43	6.69	
+50	M.H. #82	35.98	5 98 29.01	6.97	
+30		35.67	5.67 28.94	6.73	
278 +05		35.40	5 40 28.85	6.55	
+70		35.24	5 24 28.72	6.52	
+35		34.84	4.84 28.60	6.24	
277 +00		34.45	4 45 28.47	5.98	

	+75	15°29'15"	50.90	0 90 41.84	9.06
	+50	13°41'45"	50.10	0 10 41.34	8.76
	+25	11°54'30"	49.92	9.92 40.84	9.08
	287 ~	10°07'	48.03	8 03 40.34	7.69
	+75	8°19'30"	45.83	5 83 39.84	5.99
	+50	6°32'	44.25	4 25 39.34	4.91
	+25	4°44'45"	43.16	3 16 38.84	4.32
	286 ~	2°57'15"	42.74	2 74 38.34	4.40
24.37	+75	1°09'45"	42.35	2 35 37.84	4.51
15.84	= B.C. +58.75 = M.H. 84		41.89 ~~42.78~~	1.89 37.52	4.37
	+14.88 = E.C	17°21'30"	42.33 ~~41.60~~	2 33 36.99	5.34
	14.38 285 +00	15°56'15"	43.40 ~~40.92~~	3 40 36.81	6.59
	+75	13°33'	44.30 ~~42.08~~	4 30 36.51	7.79
	+50	11°09'45"	45.11	5 11 36.21	8.90
	+25	8°46'30"	50.42	50 42 35.91	14.51
	284 +00	6°23'15"	44.45	4 45 35.61	8.84
24.16	+75	4°	42.45	2 45 35.31	7.14
16.33	+50	1°36'45"	42.22	2 22 35.01	7.21
	= B.C. 283+33.10 = M.H. 83		42.33	2 3 3 34.81	7.52

Pole by E.C. = M.H. 85 = 49.82
For Line ahed of M.H.

	293 +15		61.21	1 21 51.14	10.07
	+98.19 = M.H 87	E.C. 7°39'45"	61.19	1 19 50.97	10.22
22.72	+75	6° 20	61.18	1 18 50.73	10.45
	+50	4° 54'	61.18	1 18 50.48	10.70
	+25	3°28'15"	60.91	0 91 50.23	10.68
	292 +00	2°02'15"	60.80	0 80 49.98	10.82
24.50	+75	0°36'15"	60.78	0 78 49.73	11.05
10.34	= B.C. +64.45 = M.H. 86		61.15	1 15 49.63	11.52
	291 +25		60.55	0 55 48.85	11.70
	+90		59.03	9 03 48.15	10.88
	+55		58.13	8 13 47.45	10.68
	290 +20		57.16	7 16 46.75	10.41
	+85		56.01	6 01 46.05	9.96
	+50		56.51	6 51 45.35	11.16
	289 +15		57.88	7 88 44.65	13.23
	+80		58.23	8 23 43.95	14.28
	+45		56.04	6 04 43.25	12.79
	= E.C. 18°00'45" +10.25 = MH 85		52.90	2 90 42.55	10.35
	9.99 288 +00	17°16'45"	52.24	2 24 42.34	9.90

	10' Lt.		
+75	65.26	5 26 57.74	7.52
+40	64.95	4 95 57.39	7.56
299 +05	64.80	4 80 57.04	7.76
+70	65.37	5 37 56.69	8.68
+35	65.33	5 33 56.34	8.99
298 +00 = M.H. 88	64.70	4 70 55.99	8.71
+70	64.05	4 05 55.69	8.36
+35	63.72	3 72 55.34	8.38
297 +00	63.63	3 63 54.99	8.64
+65	63.66	3 66 54.64	9.02
296 +30	63.41	3 41 54.29	9.12
+95	63.23	3 23 53.94	9.29
+60	62.92	2 92 53.59	9.33
295 +25	62.55	2 55 53.24	9.31
+90 = T.P.	62.57	2 57 52.89	9.68
+55	63.60	3 60 52.54	11.06
294 +20	62.37	2 37 52.19	10.18
293 +85	61.61	1 61 51.84	9.77
293 +50	61.25	1 25 51.49	9.76

	10' Lt.		
304 +98.88 = B.C.	73.30	3 30 67.75	5.55
+75	73.12	3 12 67.03	6.09
+45	72.72	2 72 66.13	6.59
304 +15	72.26	2 26 65.23	7.03
E.C. 37°26' 303 +83.26 = MH 90	71.75	1 75 64.28	7.47
11.92 33° 38 +70	71.38	1 38 63.92	7.46
27 54 15 +50	71.01	1 01 63.34	7.67
22° 10 30" +30	68.56	8 56 62.76	5.80
16°26'45" 303 + 10	67.42	7 42 62.18	5.24
10° 43 +90	67.15	7 15 61.60	5.55
17.97 4°59'15" +70	66.86	6 86 61.02	5.84
15.65 = B.C. +52.59 = M.H. 89	66.84	6 84 60.52	6.32
302 +20	66.50	6 50 60.19	6.31
+85	66.42	6.42 59.84	6.58
+50	66.47	6 47 59.49	6.98
301 + 15 T.P.	66.40	6 40 59.14	7.26
+80	66.21	6 21 58.79	7.42
+45	66.91	6 91 58.44	8.47
300 + 10	65.57	5 57 58.09	7.48

20' RP to	M.H. 9.1	86.78		
Exist MH	on Cut	88.41	83.96 = I.E 84.00	
M.H. 91 - To N.		86.74	6 74 77.25	9.49
1+13.38 = M.	H. 92	84.90	4 90 82.70	2.20
+90		84.57	4 57 81.49	3.08
+60		84.39	4 39 79.96	4.43
0+30		85.92	5 92 78.43	7.49
= 0+00 - ahead = M.H 91		86.74	6 74 76.90	9.84
+90.50 = E.C.		86.74	6 74 76.50	10.24
+70		86.00	6 00 75.89	10.11
+50		84.64	4 64 75.29	9.35
+30		83.54	3 54 74.69	8.85
307+13.14 = B.C.		82.42	2 42 74.18	8.24
26 +85		80.55	0 55 73.33	7.22
306+55		77.78	7 78 72.43	5.35
7°23 45 +27.98 = E.C.	= .06 Low	75.75	5 75 71.62	4.13
28.50 5°47 30 306+00		75.15	5 15 70.78	4.37
4°21 30 +75		74.31	4 31 70.03	4.28
2°55 45 +50		73.84	3 84 69.28	4.56
25.50 1°29 45 305+25 26.12		73.38	3 38 68.53	4.85

Grades - Jacking - Balboa

3+34	= end pipe -5.		6.55	- .57
4+21.41	= Nail	12.76	2 76 6.68	6.08
+38.45	= Nail	12.61	2 61 6.70	5.91
+39.40	= end pipe N.		6.70	6.71

-15' Lt.

0+00 = MH.1	17.70	7 70 6.17	11.53
+30	19.43	9 43 6.21	13.22
+60	22.47	2 47 6.24	16.23
+90	29.15	29 15 6.28	22.87
1+19.22 = MH 2	31.26	31 26 6.31	24.95
+41	30.91	30 91 6.34	24.57
1+76	24.74	24 74 6.38	18.36

spike = C. 19.69

15' Lt

10' Rt.

2+11	23.98	3 98 6.42	17.56
+46	24.07	4 07 6.47	17.60
+81	24.41	4 41 6.51	17.90
3+16	24.84	4 84 6.55	18.29
+41	24.34	4 34 6.58	17.76
+86 Jack.		6.63	
4+21 Beg. 10' Lt.	23.34	3 34 6.68	16.66
+48	23.77	3 77 6.71	17.06
4+75 = M.H. 3	23.48	3 48 6.74	16.74
5+17.72 = M.H.4	23.30	3 30 6.79	16.51
+45	22.64	2 64 6.82	15.82
+80	22.08	2 08 6.87	15.21
6+15	21.59	1 59 6.91	14.68
+50	21.13	1 13 6.95	14.18
+85	20.45	0 45 6.99	13.46
7+20	20.13	0 13 7.03	13.10
+55	19.60	9 60 7.08	12.52
7+90	19.50	9 50 7.12	12.38

8 +25	19.23	9 23 7.16	12.07
8 + 50 = M.H. 5	19.39	9 39 7.19	12.20
+85	19.74	9 74 7.23	12.51
9 +20	19.86	9 86 7.27	12.59
+55	19.44	9 44 7.32	12.12
+90	20.38	0 38 7.36	13.02
10 +25	20.80	0 80 7.40	13.40
+60	21.13	1 13 7.44	13.69
+95	19.16	9 16 7.48	11.68
11 +30	18.75	18 75 7.53	11.22
+65	18.92	8 92 7.57	11.35
12 + 00 = M.H. 6	18.95	8 95 7.61	11.34
+35	19.51	9 51 7.67	11.84
+70	20.45	0 45 7.72	12.73
13 +05	16.73	6 73 7.78	8.95
+40	12.74	2 74 7.83	4.91
+75	13.16	3 16 7.89	5.27
14 + 10	13.30	3 30 7.95	5.35
14 + 45	13.72	3 72 8.00	5.72

+70	12.89	2 89 8.04	4.85
= B.C. 14 + 95.26 = M.H. 7	11.79	1 79 8.08	3.71
1° 36' 15" 15 + 17.66	11.02	1 02 8.12	2.90
3° 12' 30" +40.06	10.81	0 81 8.15	2.66
ch = 21.83 = 10' Rt +62.46 4°48'45"	10.95	0 95 8.19	2.76
= E.C. 6° 25' 15 + 84.85 = M.H. 8	10.67	0.67 8.22	2.45
16 + 20	11.50	1 50 8.28	3.22
+55	11.92	1 92 8.33	3.59
+90	12.74	2 74 8.39	4.35
17 +25	13.01	3 01 8.44	4.57
+60	13.36	3 36 8.50	4.86
+95	13.60	3 60 8.56	5.04
18 + 30	13.98	3 98 8.61	5.37
+65	13.63	3 63 8.67	4.96
19 + 00 = M.H. 9	14.12	4 12 8.72	5.40
+35	14.58	4 58 8.78	5.80
+70	15.25	5 25 8.83	6.42
20 + 05	15.79	5 79 8.89	6.90
20 + 40	15.37	5 37 8.94	6.43

Rose Canyon Sewer - Const.
"A" Line

			El.	Cuts		Offsets
25 +20	T.P.	19.64	12.21	7.43 ✓		10' Rt.
24 + 90		18.63	11.91	6.72 ✓		"
+60		17.74	11.60	6.14 ✓		"
+30		17.39	11.30	6.09 ✓		"
24 + 00		17.05	10.99	6.06		"
+70		16.94	10.68	6.26		"
+40		16.67	10.38	6.29		"
23 +10		16.56	10.07	6.49		"
22 +80		16.13	9.77	6.36		"
+50		15.58	9.46	6.12		"
22 +30.05 = B.C. Rt		15.02 15.10	5.02 9.25	5.85	5.77	"
Chk BM #4 Psht #1	chk →	18.125 18.15 0.015	= BM # 4			
22+05		14.10	4.10 9.21	4.89		
+80		13.64	3.64 9.17	4.47		
+45		13.62	3.62 9.11	4.51		
21 + 10		14.30	4.30 9.06	5.24		
+75		14.55	4.55 9.00	5.55		

ROSE CANYON SEWER
"A" - LINE CONST.

			EL. INVERT	CUTS	OFFSET
31+50		27.45	17.17	10.28 ✓	10' Rt.
+15		27.71	16.95	10.76 ✓	"
30 +80		27.72	16.72	11.00 ✓	"
+45		27.24	16.50	10.74 ✓	·
30 +10		27.14	16.27	10.87 ✓	"
+75		27.76	16.05	11.71 ✓	"
+40		26.31	15.83	10.48 ✓	"
29 + 05		26.40	15.60	10.80 ✓	"
28 +70		25.59	15.38	10.21 ✓	"
+35		25.69	15.15	10.54 ✓	"
28 + 00	T.P. →	25.59	14.93	10.66 ✓	·
MH#11	ΔLt 16°58 18 from Tan	25.91		11.20 ✓	10' Rt Δ to Fwd. Tan.
27 +65 = P.O.C		26.00	14.71	11.29 ✓	10' Rt on Radial Line
+32.5		26.46	14.38	12.08 ✓	"
27 + 00		25.71	14.05	11.66 ✓	"
+70		~~27~~ 22.84	13.74	~~14~~ 9.10	"
+40		21.23	13.44	7.79 ✓	"
26 +10		20.95	13.13	7.82 ✓	"
25 +80		20.85	12.83	8.02 ✓	"
+50		20.08	12.52	7.56 ✓	"

ROSE CANYON SEWER
"A"-LINE

			EL. INVERT	CUTS	offsets
37+50		29.15	21.00	8.15 ✓	10' Rt
37+15		29.29	20.78	8.51 ✓	"
36+80		29.71	20.55	9.16 ✓	"
+45		29.23	20.33	8.90 ✓	"
+10		28.55	20.11	8.44	"
35+88^{29}=MH13		28.60	19.97	8.63 ✓	"
+50		28.35	19.~~73~~ .70	8.65 ✓	"
35+15		28.23	19.47	8.76 ✓	"
34+80		26.26	19.25	7.01 ✓	"
+45		24.78	19.02	5.76 ✓	"
34+10		24.31	18.80	5.51 ✓	"
33+75	T.P.	24.45	18.58	5.87 ✓	"
+40		24.47	18.35	6.12 ✓	"
33+05		24.78	18.13	6.65 ✓	"
+70		24.52	17.90	6.62 ✓	"
+35		24.83	17.68	7.15 ✓	"
32+00		26.16	17.46	8.70 ✓	"
31+76.65 P.O.T. - MH 12		27.19	17.34	9.85 ✓	"

Walker
Kelley
Meyer
Gueddy

ROSE CANYON SEWER CONST.
"A"-LINE

9-20-1957

BM #7 Prelim sht. 12 = 38.21
T.P. 32.79
T.P. 29.91

			El. Invert	Cuts	offsets
MH 15 43+96.52=E.C.		33.96	3 96 25.14	8.82	10 Rt.
+60		34.04	4 04 24.91	9.13	"
+25		33.21	3 21 24.69	8.52	"
42+90		32.56	2 56 24.46	8.10	"
+55		32.80	2 80 24.24	8.56	"
42+20		32.98	2 98 24.01	8.97	"
41+85		32.93	2 93 23.79	9.14	"
+50		32.55	2 55 23.56	8.99	"
41+15		31.35	1 35 23.34	8.01	"
40+80		30.39	0 39 23.11	7.28	"
+45		30.58	30 58 22.89	7.69	"
40+10		30.49	30 49 22.66	7.83	"
MH 14 39+99.95=B.C. Rt.		30.23	22.60	7.63	"
+60		29.96	22.35	7.61 ✓	"
+25		30.16	22.12	8.04	"
38+90	T.P.	29.91	21.90	8.01 ✓	"
+55		29.68	21.67	8.01 ✓	"
38+20		29.82	21.45	8.37 ✓	"
37+85		29.81	21.23	8.58	"

ROSE CANYON SEWER
"A"-LINE

Stations			El. Invert	
+95		36.83	6 83 28.34	8.49
+60	0.40%	36.09	6 09 28.19	7.90
49+25		35.63	5 63 28.05	7.58
48 +90		34.98	4 98 27.91	7.07
Δ 59°00' Lt				
48 +61.06=M.H. 17		35.06 ~~36.27~~	5 06 27.79	7.27
+30	0.40%	35.18	5 18 27.66	7.52
~~48+0~~ 47+95		33.12	3 12 27.52	5.60
+75		33.80	27.44	C6.36
47+41.28 Ahd 47+37.05=Back	} Equation MH 16 Δ=29°17'40" Rt	34.68	27.30	C 7.38
	34.45 B.M.			
47+10 +11.2		34.38	27.14	C 7.24
+75 +76.2		33.98	26.92	C 7.06
+40 +41.2		33.50	26.71	C 6.79
46 +05 +06.2	0.6343%	33.53	26.48	C 7.05
+70 +71.2		33.34	26.26	C 7.08
+35 +36.2		32.88	26.03	C 6.85
45+0 +01.2		33.40	25.81	C 7.59
+65 +66.2		33.49	25.58	C 7.91
44+30 +31.2		33.38	25.36	C 8.02

ROSE CANYON SEWER.
"A"-LINE

48.67 = spike in Pole - .65 from M.H. 19
45.46 = Pole - ahead M.H. 19

56 +50 = P.O.T. - MH 19			43.27	3 27 32.54	10.73
+25	- 10' Lt		43.02	3 02 32.34	10.68
56 +0			43.57	3 57 32.14	11.43
+65			44.90	4 90 31.86	13.04
55 +30			44.95	4 95 31.58	13.37
+95	- 10' Lt.	0.80%	40.17	0 17 31.30	8.87
+60	- 11' Lt.		39.70	9 70 31.02	8.68
54 +25	- 9' Lt		40.06	0 06 30.74	9.32
+90	- 10' Lt		40.54	0 54 30.46	10.08
+55	- 11' Lt.		40.06	40 06 30.18	9.88
53 +20	- 9' Lt.		39.87	9 87 29.90	9.97
52 +85			39.65	9 65 29.62	10.03
MH 18 52 +50 = P.O.T.			39.48	9 48 29.34	10.14
+25			39.46	9 46 29.24	10.22
52 +0	- 10' Lt.		39.25	9 25 29.14	10.11
+70	10' Rt.	0.40%	37.06	7 06 29.04	8.02
+35			37.05	7 05 28.90	8.15
51 +0			36.88	6 88 28.76	8.12
+65			36.65	6 65 28.62	8.03
50 +30	10' Rt		36.63	6 63 28.48	8.15

ROSE CANYON SEWER
"A" LINE

STATIONS				INVERT		
62 +95			43.50	35.12	8.38	
+60			43.74	34.98	8.76	
62 +25	0.40%		43.80	34.84	8.96	
+90			43.46	34.70	8.76	
+55			44.13	34.56	9.57	
61 +20			43.96	34.42	9.54	
+85		44.41	~~44.70~~	4 20 34.28	~~10.42~~	10.13
60 +50 = MH 20			44.58	4 58 34.14	10.44	
+25			44.94	4 94 34.04	10.90	
60 +0		44.74	47.50	4 74 33.94	~~13.56~~	10.80
+65		43.65	48.44	3 65 33.80	~~14.64~~	9.85
59 +30		43.84	48.40	3 84 33.66	~~14.74~~	10.18
+95		45.78	48.23	5 78 33.52	~~14.71~~	12.26
+60	0.40%	47.80	47.48 ✓	7 80 33.38	~~14.10~~	14.42
58 +25		47.71	46.78	7 71 33.24	~~13.54~~	14.47
+90		47.46	47.42	7 46 33.10	~~14.32~~	14.36
+55			47.69	7 69 32.96	14.73	
57+20			47.16	7 16 32.82	14.34	
56+85			45.69	5 69 32.68	13.01	

ROSE CANYON SEWER
"A"-LINE

37.04

37
12
15

STATIONS					
69 +20	0.32%	45.37	5 37 37.56	7.81	
+85		45.10	5 10 37.45	7.65	
68 +50 = M.H. 22		45.35	5 3 5 37.34	8.01	
+25		45.27	5 27 37.24	8.03	- 37.04 = Pipe
68 +0		45.03	5.03 37.14	7.89	
+65		44.98	4 98 37.00	7.98	
67 +30		44.86	4 86 36.86	8.00	
+95	~~0.32%~~ .4%	44.65	4 65 36.72	7.93	
+60		44.37	4 .37 36.58	7.79	
66 +25		44.37	4 37 36.44	7.93	
+90		44.33	4 33 36.30	8.03	
+55		44.05	4 05 36.16	7.89	
65 +20		4377	3 77 36.02	7.75	
+85		43.36	3 36 35.88	7.48	
64 +50 MH#21		43.23	3.23 35.74	7.49	
+25		43.69	3. 69 35.64	8.05	
64 +0	0.4%	43.23	3 23 35.54	7.69	
+65		43.37	3 37 35.40	7.97	
63 +30		43.42	35.26	8.16	

ROSE CANYON SEWER
"A"-LINE

Station			El Invert				
			39.40 = Exist.				
Δ Lt. 76°35'30"							
75 +30.40 = MH 24		47.90	7.90 39.52	8.38			
+95		47.62	7 62 39.40	8.22			
+60		47.52	7 52 39.29	8.23			
74+25		47.58	7 58 39.18	8.40			
+90		47.32	7 32 39.07	8.25			
+55		47.16	7 16 38.96	8.20			
73 +20		47.04	7 04 38.84	8.20			
+85		~~46.98~~	6 98 38.73	~~8.25~~	46.84	6 84 38.73	8.11
72 +50 = P.C.T. MH 23		~~46.78~~	6.78 38.62	~~8.16~~	46.65	6 65 38.62	8.03
+25		~~46.87~~	6.87 38.54	~~8.33~~	46.73	6 73 38.54	8.19
72 +0		~~46.57~~	6 57 38.46	~~8.11~~	46.43	6 43 38.46	7.97
+65		~~46.79~~	6.79 38.35	~~8.44~~	46.67	6 67 38.35	8.32
71 +30	0.32%	~~46.45~~	6 45 ~~38.24~~	~~8.21~~	46.32	6.32 38.20	8.12
+95		~~46.18~~	6 18 ~~38.12~~	~~8.06~~	46.06	6 06 38.05	8.01
+60		~~45.74~~	5.74 38.01	~~7.73~~	45.61	5.61 37.90	7.71
70 +25		~~45.73~~	5 73 37.90	~~7.83~~	45.59	5.59 37.75	7.84
+90		~~45.65~~	5 65 37.79	~~7.86~~	45 52	5 52 37.60	7.92
69 +55 = T.P.	45.01 Corr. Elev. 45.14	~~45.53~~	5 14 37.68	~~7.85~~ ~~7.46~~	45 01	5 01 37.45 = I.E. - Laid = C 7.56	

ROSE CANYON SEWER
"A" LINE

N = Rock = 55.55
S. end Bridge = 54.02 = Rock

				Cuts	offsets		
+85		53.35	41.09	12.26	10' Rt.		
79 +50	= P.O.T. MH 26 51.69	51.75 ~~52.18~~	.91 = Pip 40.87	10.88			
79 +10		52.95 ~~50.32~~	40.74	12.21 ~~9.58~~		BM USC&GS	60.35
+75		50.28	40.63	9.65			
+40		50.45	40.52	9.93			
78 +05		51.54	40.41	11.13			
+70		52.32	40.29	12.03			
+35		52.28	40.18	12.10			
77 +0		52.68	40.07	12.61			
76 +65		53.34	39.96	13.38			
+ ~~75~~							
~~75~~ + ~~60~~							
76 +37.~~45~~.75 Ahd. = 76 +46.79 = Back	Δ Rt 70°44'11" Equation MH #25	51.62	1 62 39.87	11.75	54.12	39.87 14.25	20' LT.
+25	17' Rt.	48.01	8 01 39.81	8.20			
76 +0		47.62	7 62 39.73	7.89			
+75		46.91	6 91 39.66	7.25			
75 +50		46.71	6 71 39.58	7.13			

ROSE CANYON SEWER
"A" LINE

			INVERT	CUTS	OFFSETS
+25		59.90	44.55	15.35	
85+0		59.19	44.39	14.80	
+75		58.52	852 44.23	14.29	
+50		57.83	783 44.07	13.76	
+25		57.31	731 43.91	13.40	
84 +0		56.71	671 43.75	12.96	
+75		55.82	582 43.59	12.23	
+50		55.62	562 43.43	12.19	
+25		55.76	576 43.27	12.49	
83 +0		55.88	588 43.11	12.77	
+75	TP >	56.29	629 42.95	13.34	
82 +49.91 = B.C. Rt		56.53	653 42.79	13.74	
82 + 30		56.46	42.66	13.80	
+95		56.23	42.44	13.79	
+60		55.74	42.21	13.53	
81 +25		55.51	41.99	13.52	
+90		55.48	41.76	13.72	
+55		54.97	41.54	13.43	
80+20		54.04	41.32	12.72	

ROSE CANYON SEWER
"A" – LINE

			INVERT	cuts	
91+10		62.84 ~~62.26~~	2.84 47.85	~~14.41~~	14.99
+75		63.44 ~~62.85~~	3.44 47.70	~~15.15~~	15.74
+40		62.94 ~~62.72~~	2.94 47.55	~~15.17~~	15.39
90+05		62.43 ~~62.70~~	2.43 47.40	~~15.30~~	15.03
+70		62.49 ~~62.37~~	2.49 47.25	~~15.12~~	15.24
+35		61.99 ~~62.14~~	1.99 47.10	~~15.04~~	14.89
89 +00=MH.29		61.90 ~~61.80~~	1 90 46.95	~~14.85~~	14.95
+75		61.54	1 54 46.80	14.74	
+50		60.99	0 99 46.64	14.35	
88 +15		60.35	0 35 46.41	13.94	
+80		59.43	9 43 46.19	13.24	
+45		59.42	9 42 45.96	13.46	
87 +10		59.87	9 87 45.74	14.13	
+75		60.30	0 30 45.51	14.79	
MH 28 86 +43.90=E.C.	16°07.45'	60.82	45.31	15.51	
+25	15° 21.05'	60.67	45.19	15.48	
86 + 0	14° 19.66'	60.92	45.03	15.89	
+75	13°18.27'	60.83	45.87	14.96	
85 +50	12°17.88	60.29	44.71	15.58	

ROSE CANYON SEWER
"A" LINE

		I.E	Cuts
+40	66.52 ~~66.92~~	6.52 50.20	16.32 ~~16.72~~
96+05′	66.48 ~~66.66~~	6.48 50.05	16.43 ~~16.61~~
+70	66.50 ~~67.30~~	6.50 49.89	16.61 ~~17.41~~
+35′	64.66 ~~63.60~~	4.66 49.74	14.92 ~~13.86~~
95+00	63.44 ~~63.92~~	3.44 49.58	13.86 ~~14.34~~
+65′	62.77 ~~63.50~~	2.77 49.43	13.34 ~~14.07~~
=M.H. 31 +33.33=E.C.	62.57 ~~62.49~~	2.57 49.29	13.28 ~~13.20~~
94+00	61.84 ~~62.14~~	1.84 49.14	12.70 ~~13.00~~
+75′	62.07 ~~62.16~~	2.07 49.03	13.04 ~~13.13~~
+50	62.22 ~~62.60~~	2.22 48.92	13.30 ~~13.68~~
+25′	62.95 ~~63.11~~	2.95 48.81	14.14 ~~14.30~~
93+00	63.53 ~~64.08~~	3.53 48.70	14.83 ~~15.38~~
+75′	63.70 ~~63.77~~	3.70 48.59	15.11 ~~15.18~~
+50	63.25 ~~63.06~~	3.25 48.48	14.77 ~~14.58~~
+25′	62.95 ~~62.94~~	2.95 48.37	14.58 ~~14.57~~
92+00	62.62 ~~62.76~~	2.62 48.26	14.36 ~~14.50~~
=M.H 30			
91+68.47 ah. 91+72.18 BK. =BC.	62.17 ~~62.28~~	2.17 48.11	14.06 ~~14.17~~
91+40	61.95 ~~62.02~~	1.95 47.98	13.97 ~~14.04~~

71.21 = Pole

	Stake	I.E.	Cut.
+85	64.51 ~~64.62~~	4.51 53.03	11.48 ~~11.59~~
+50	67.80 ~~65.92~~	7.80 52.88	14.92 ~~13.04~~
102+15′	70.36 ~~70.14~~	0.36 52.73	17.63 ~~17.41~~
+80	70.13 ~~69.59~~	0.13 52.57	17.56 ~~17.02~~
+45′	69.85 ~~69.59~~	9.85 52.42	17.43 ~~17.17~~
101+10	69.54 ~~69.29~~	9.54 52.26	17.28 ~~17.03~~
+75′	69.21 ~~69.00~~	9.21 52.11	17.10 ~~16.89~~
+40	68.89 ~~68.66~~	8.89 51.96	16.93 ~~16.70~~
100+05′	68.42 ~~68.38~~	8.42 51.80	16.62 ~~16.58~~
+70	68.15 ~~68.10~~	8.15 51.65	16.50 ~~16.45~~
+35′	67.75 ~~67.79~~	7.75 51.49	16.26 ~~16.30~~
99+00=M.H. 32	67.61 ~~67.47~~	7.61 51.34	16.27 ~~16.13~~
+75′	67.46 ~~67.26~~	7.46 51.23	16.23 ~~16.03~~
+50	67.41 ~~67.36~~	7.41 51.12	16.29 ~~16.24~~
98+15′	67.15 ~~67.55~~	7.15 50.97	16.18 ~~16.58~~
+80	67.03 ~~67.23~~	7.03 50.82	16.21 ~~16.41~~
+45′	66.93 ~~67.05~~	6.93 50.66	16.27 ~~16.39~~
97+10	66.75 ~~67.07~~	6.75 50.51	16.24 ~~16.56~~
96+75	66.69 ~~66.94~~	6.69 50.35	16.34 ~~16.59~~

65.01
53.37
11.64
MH.33

Rose. Canyon Sewer
"A" = Line

		20' Lt.		
+55		85.60	55.53	30.07
108+20	55.37	83.54	.44 55.38	28.16
+85		84.27	55.22	29.05
+50 = M.H.35		82.76	2 76 55.07	27.69
+30		81.65	1 65 54.99	26.66
107+10		79.93	9 93 54.90	25.03
+75		78.98	8 98 54.74	24.24
+40		78.37	8 37 54.59	23.78
106+05		76.62	6 62 54.44	22.18
+70		73.70	73 70 54.28	19.42
+35		71.26	1 26 54.13	17.13
105+00 -20' Lt.		66.65	6 65 53.97	12.68
104+64.94 ah. 104+75.18 Bk = M.H.34		64.73 ~~65.13~~	4.73 53.82	10.91 ~~11.31~~
+50		64.79 ~~65.10~~	4.79 53.72	11.07 ~~11.38~~
104+20		64.29 ~~64.45~~	4.29 53.60	10.69 ~~10.85~~
+90		64.72 ~~65.17~~	4 72 53.48	11.24 ~~11.69~~
26' Rt. 103+62.26 = M.H.33		64.14 ~~65.26~~	4 14 53.37	10.77 ~~11.89~~
+35		66.78 ~~64.90~~	6 78 53.25	13.53 ~~11.65~~
103+10		66.11 ~~64.57~~	6 11 53.14	12.97 ~~11.43~~

64.54
53.82
10.72 = M.H.34

53
34
9.1
44

62.3
38
00.3

3.52
46

114+00	87.39	59.80		27.59
+75	86.47	59.55		26.92
+50	86.50	59.30		27.20
+25	86.75	59.05		27.70
113+00	86.74	58.80		27.94
+75	86.63	58.55		28.08
+50	86.42	58.30		28.12
+25	86.30	58.05		28.25
112+00	86.11	57.80		28.31
+75	85.91	57.55		28.36
+50	85.78	57.30		28.48
+25	85.64	57.05		28.59
111+00	85.39	56.80	-.73	28.59
= B.C. +66.73 = MH.36	84.96	4 96 56.46	-40	28.50
110+30	86.94	6 94 56.30		30.64
+95	86.22	6 22 56.15		30.07
+60	89.25	9 25 55.99		33.26
109+25	87.35	7 35 55.84		31.51
108+90	87.08	7 08 55.69		31.39

	10' Lt.		
+29.73	75.18	5 18 65.04	10.14
119 +01.59 = B.C	74.58	4 58 64.82	9.76
+65	74.06	4 06 64.52	9.54
118 + 30	73.12	3 12 64.25	8.87
117 + 98.22 Ah. = E.C.	72.71		8.72
118 + 19.15 = BK = MH 38	73.07	3 07 63.99	9.08
118 + 00	72.54	63.80	8.74
+ 80	72.39	63.60	8.79
+ 50	73.11	63.30	9.81
117 + 20	74.88	63.00	11.88
+ 90	76.51	62.70	13.81
+ 60	78.98	62.40	16.58
+ 29.39 = B.C.	81.08	62.09	18.99
116 + 10	81.91	61.90	20.01
+ 85	85.75	61.65	24.10
+ 50	87.55	61.30	26.25
115 + 15	88.65	60.95	27.70
+ 80	87.86	60.60	27.26
= E.C. + 45.54 = MH 37	90.33	60.25	30.08
114 + 25	90.71	60.05	30.66

125 + 00	82.77	2 77 68.77	14.00
+ 65	83.38	3 38 68.61	14.77
124 + 30	83.02	3.02 68.45	14.57
+ 95	83.01	3 01 68.29	14.72
+ 60	82.81	2 81 68.13	14.68
123 + 25	82.10	2 10 67.96	14.14
+ 90	82.30	2 30 67.80	14.50
= E.C + 54.47 MH 41	81.88	81 88 67.64	14.24
+ 25	81.71	1 71 67.40	14.31
122 + 00	81.57	1 57 67.20	14.37
+ 75	81.71	1 71 67.00	14.71
+ 50	82.32	2 32 66.80	15.52
+ 25	82.18	2 18 66.60	15.58
= T.P. 121 + 00	80.72	0 72 66.40	14.32
+ 75	79.68	9 68 66.20	13.48
+ 44.92 = B.C.	78.84	8 84 65.96	12.88
120 + 14.16 = E.C.	77.98	7 98 65.72	12.26
+ 86.01	76.71	6 71 65.50	11.21
119 + 57.87	76.15	6 15 65.27	10.88

	10' Lt.		
+60	86.01	6 01 73.92	12.09
131 + 20	85.28	5 28 73.55	11.73
+85	84.40	4 40 73.23	11.17
+50	83.92	3 92 72.91	11.01
130 + 15	83.59	3 59 72.59	11.00
+80	82.72	2 72 72.27	10.45
+45	82.12	2 12 71.94	10.18
129 + 10	81.72	1 72 71.62	10.10
+75	80.99	0 99 71.30	9.69
+40	81.21	1 21 70.98	10.23
128 + 05	80.85	0 85 70.66	10.19
+70	80.78	0 78 70.33	10.45
+35	80.74	0 74 70.01	10.73
127 + 00 = M.H 42	69.95 81.38	1 38 69.69	11.69
+75	82.10	2 10 69.57	12.53
+ 40	82.34	2 34 69.41	12.93
126 + 05	82.61	2 61 69.25	13.36
+70	83.23	3 23 69.09	14.14
125 + 35	82.74	2 74 68.93	13.81

℄ L = 27.925

ch- 10' Lt. = 27.645

4° 00' 138 + 02.13	92.71	2 71 80.57	12.14
3° 12 +74.20	92.30	2 30 80.20	12.10
2° 24 +46.28	91.92	1 92 79.83	12.09
1° 36' 137 + 18.35	91.42	1 42 79.47	11.95
0° 48' +90.43 = B.C.	91.08	1 08 79.10	11.98
+ 62.50 = M.H. 44	78.66 90.78	0 78 78.73	12.05
136 + 25	90.14	0 14 78.38	11.76
+85	89.34	9 34 77.99	11.35
+50	88.27	8 27 77.65	10.62
135 + 15	87.41	7 41 77.32	10.09
+80	86.92	6 92 76.98	9.94
+45	86.74	6 74 76.65	10.09
134 + 10	86.95	6 95 76.31	10.64
+75	87.37	7 37 75.97	11.40
+40	86.96	6 96 75.64	11.32
133 + 05	86.42	6 42 75.30	11.12
+70	86.02	6 02 74.97	11.05
+35	86.05	6 05 74.63	11.42
132 + 00 = M.H. 43	74.29 86.04	6.04 74.29	11.75

10' Lt.

+75		93.65	87.76	5.89
+40		93.05	87.49	5.56
= M.H. 46 143 +05.31 = E.C.	3°35'08"	92.81	2 81 87.22	5.59
2°41'21" +74.03		93.26	3 26 86.80	6.46
1°47'34" +42.74		92.97	2 97 86.39	6.58
31.29 0°53'47" 142 + 11.45 -	ch = 31.60	93.21	3 21 85.97	7.24
+80.16 = B.C.		93.74	3 74 85.56	8.18
28.78 +51.38		94.83	4 83 85.18	9.65
35 141 +16.38		95.22	5 22 84.72	10.50
= M.H. 45 +81.38 = E.C.		95.42	5 42 84.26	11.16
+53.45		95.75	5 75 83.88	11.87
140 + 25.53		96.22	6 22 83.51	12.71
+97.60		96.29	6 29 83.15	13.14
+69.68		96.27	6 27 82.78	13.49
+41.75		95.68	5 68 82.41	13.27
139 +13.83		94.92	4 92 82.04	12.88
+85.90		94.37	4 37 81.67	12.70
+57.98		93.84	3.84 81.31	12.53
138 +30.05		93.18	3 18 80.94	12.24

10' Lt. ch = 33.13

90.69

= B.C. +74.62 = MH 48	3.84	91.95	11.89
+50	4.43	91.84	12.59
150+15	3.86	91.69	12.17
+80	4.04	91.53	12.51
+45	3.27	91.38	11.89
149 +10	102.47	91.22	11.25
+75	1.89	91.07	10.82
+40	1.68	90.92	10.76
148 +05	101.06	✓ 90.76	10.30
+70 90.91	100.75	90.69 90.61 -.68	10.14
+35	100.14	✓ 90.45	9.69
147 +00 = MH 47	99.75	28 90.30	9.45
+60	99.96	89.99	9.97
146 + 20	99.62	89.67	9.95
+85	99.59	89.40	10.19
+50	99.40	89.13	10.27
145 +15	99.00	88.85	10.15
+80	98.78	88.58	10.20
+45	97.71	88.31	9.40
144 +10	94.93	88.04	6.89

ch = 10' Lt.
30' - 30.30

10°12'30" +50	5.95	94.48	11.47
9°20'45" 156+20	5.46	94.35	11.11
8°29'15" +90	4.88	94.21	10.67
7°37'45" +60	4.23	94.08	10.15
6°46'15" +30	3.71	93.95	9.76
5°54'30" 155+00	3.01	93.82	9.19
5°03 +70	2.86	93.69	9.17
4°11'30" +40	2.45	93.55	8.90
3°20 154+10	2.00	93.42	8.58
2°28'15" +80	2.16	93.29	8.87
1°36'45" +50	1.79	93.16	8.63
0°45'15" 153+20 ch = 30.30	1.10	93.03	8.07
26.28 = B.C. ch = 26.54 +93.72 = M.H. 49	100.59	92.91	7.68
+63.52	99.88	92.78	7.10
+33.52	99.95	92.65	7.30
152+03.52	99.62	92.52	7.10
1°25" +73.52 = E.C.	99.65	92.39	7.26
0°56'40" +40.56	100.46	92.24	8.22
0°28'20" 151+07.59	101.50	92.10	9.40

5°04'15" 162+15	5.86	99.40	6.46
4°12'30" +85	5.88	99.11	6.77
3°21' +55	5.89	98.82	7.07
2°29'30" 161+25	5.82	98.54	7.28
1°38' +95	5.18	98.25	6.93
0°46'15" +65	4.65	97.96 - 98.12	6.69
= B.C. +38.06 = M.H. 51	4.50	97.70 - .80	6.80
160+15	4.71	97.48	7.23
+90	4.43	97.24	7.19
+55	3.71	96.90	6.81
159+20	4.50	96.57	7.93
+85	4.42	96.23	8.19
+50	5.37	95.89	9.48
158+15	6.39	95.56	10.83
+80	6.39	95.22	11.17
13° = E.C. ch = 7.58 +47.51 = M.H. 50	6.54	94.91	11.63
12°47 +40	6.50	94.87	11.63
11°55'30" 157+10	6.39	94.74	11.65
11°04' 156+80	6.38	94.61	11.77

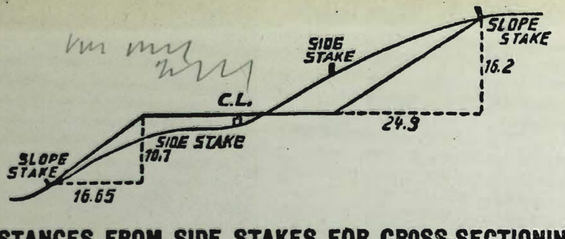
+40	16.95	6 95 07.55	9.40
168 + 05	16.37	6 37 07.06	9.31
+70	14.36	4 36 06.57	7.79
+35	10.38	10 38 06.08	4.30
10' LT.	11.14		5.55
167 + 00 = M.H.53	8.58	8 58 105.59	2.99
+65	10.98	105.10	5.88
166 + 30	10.34	104.61	5.73
+95	9.55	104.12	5.43
+60	8.64	103.63	5.01
165 + 25	8.36	103.14	5.22
+90	8.12	102.65	5.47
+55	7.82	102.16	5.66
164 + 20	7.27	101.67	5.60
+85	6.98	101.18	5.80
8°58'45" = E.C. +51.49 = M.H.52	6.69	100.71	5.98
8°30'30" +35	6.67	100.55	6.12
7°38'45" 163 + 05	6.65	100.26	6.39
6°47"15" +75	6.45	99.97	6.48
5°55'45" 162 + 45	106.35	99.69	6.66

+50	24.77	4 77 15.81	8.96
174 + 20	24.93	4 93 15.41	9.52
+90	24.57	4 57 15.02	9.55
+60	24.07	4 07 14.62	9.45
+30	23.65	3.65 14.22	9.43
173 + 00	23.27	3 27 13.83	9.44
+70	22.91	2 91 13.43	9.48
28.42 +41.58 = B.C.	22.61	2 61 13.06	9.55
172 + 05	22.24	2 24 12.58	9.66
+70	21.91	1 91 12.11	9.80
+35	21.59	1 59 11.65	9.94
T.P. 171 + 00 = M.H.54	21.10	1 10 11.19	9.91
+75	20.81	10.84	9.97
+50	20.54	10.49	10.05
170 + 15	20.09	10.00	10.09
+80	19.52	09.51	10.01
+45	19.08	09.02	10.06
169 + 10	18.14	08.53	9.61
168 + 75	17.66	08.04	9.62

			3 62	
+38.45 =	M.H. .55	23.62	16.98	6.64
			3 77	
175 + 10		23.77	16.60	7.17
			4 52	
174 +80		24.52	16.20	8.32

39.89
2.44
37.45
68
.23
.13
.10

45.01
37.45
7.66



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1½ TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.20	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

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