

1658



UNIVERSITY OF TORONTO
LEVEL BOOK
No. 4105

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on 1½ see inside of back cover.

Copyright, 1914, by Eugene Dietzgen Co.

1658

CITY ENGINEER'S OFFICE

The paper stock of this book is made of a high grade 50% rag paper having a water resisting surface. This book is sewed with Bing Special Enamel Waterproof Thread.

Made in U. S. A.

Sta. Az.
92+9896 B = "A" is 30' Left. 2-3

"C" 3-6

"D" 7-11
Book 1657-39

Coordinates of proposed E 53

STA 02. Stadia V.A. Horiz. Dist. Ref. Elev.
 E.A. = 30' 4" of "H"
 92 + 98.86 Readings from \square & Mean Elev

Angle	Stadia	V.A.	Horiz. Dist.	Ref. Elev.
288° 14'	201	+10° 20'	194.6	+35.8
284° 36'	136	+9° 01' / 7.55	132.7	+21.0 -10.0
8° 10'	104	+2° 40'	103.8	+4.9
3° 38'	142	+3° 37'	141.5	+9.0
19° 21'	188	+2° 31'	182.6	+8.2
314° 35'	206	+17° 42'	182.1	+59.7
332° 01'	223	+16° 58'	204.2	+62.2
28° 35'	138	+2° 51' / 7.5	132.8	+6.9 -1.0
37° 35'	232	+3° 40' / 8.0	231.1	+14.8 -2.5
37° 52'	225	+2° 32'	225.6	+10.0
4' 50"	226	4.5 lower	226.0	+5.5
47° 41'	225	+2° 51' / 7.0	224.8	+11.2 -4.5
341° 45'	158	+10° 33'	152.7	+28.4
299° 48'	144	+11° 05'	138.8	+22.2
46° 28'	272	+2° 22' / 9.5	276.6	+11.2 -4.0
39° 11'	292	+2° 41' / 10.5	291.4	+13.2 -5.0
44° 33'	323	+2° 39' / 11.5	322.4	+14.9 -6.0
0° 17'	227	+2° 41' / 10.5	221.9	+35.1 -5.0
10° 20'	260	+8° 51'	253.9	+39.5

indexed
 c.s.K.

C. Moore
 J. Moore
 W. Moore
 6-19-43

212.9 ✓
 182.1 ✓
 182.0 ✓
 186.0 ✓
 188.3 ✓
 236.8 ✓
 239.3 ✓
 183.0 ✓
 193.4 ✓
 187.1 ✓
 182.6 ✓
 183.8 ✓
 205.5 ✓
 204.3 ✓
 184.3 ✓
 185.8 ✓
 186.0 ✓
 207.2 ✓
 216.6 ✓

ok 222 406

50 T.P.B.K. #21
 p. 128

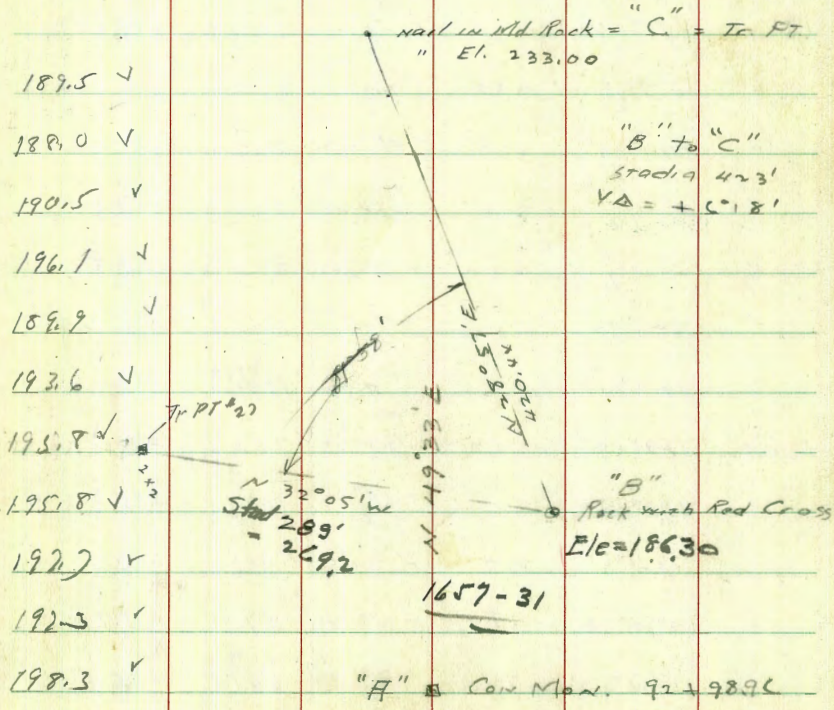
Sta.	Hz	Stadia	V.A	Horiz.	Dif. El.
92+9896	Reading from [7]	"A"	E Mon.	El. 177.07	H.I. 55
	349°16'	296	+14°18'	278.2	+70.9
	1°02'	313	+12°55'	297.6	+68.2
	50°16'	328	+2°50' 11.5	322.2	+16.2 -6.0
	30°12'	284	+5°01' 10.0	281.8	+24.7 -4.5
	20°55'	310	+7°15'	305.2	+38.8

STOP

"C"	Hz	Stadia	V.A	El.	H.I. 51
	Rdg from [7] = "C"				
	210°17'	295	-7°41' 7.5	289.7	-39.1 -4.4
	208°10'	295	-7°35' 11.5	290.0	-38.6 -6.4
	250' ↑	295	2.5 Higher	290.0	-38.6 -3.9
	210°31'	214	-2°32' 14.7	210.3	-22.8 -9.1
	198°53'	320	-7°49'	314.3	-43.1
	194°01'	265	-7°32' 10.1	260.5	-34.4 -5.0
Cypress tree	184°24'	217	-10°02'	200.5	-32.2
"	5' wky	219	same	El 202.5	-32.2
N.S. d. Eucal	169°45'	186	-11°08'	179.3	-35.3
"	168°16'	195	-10°45'	188.3	-35.0
"	167°45'	201	-10°01'	195.0	-34.3

248.0	✓
245.3	✓
189.3	✓
201.3	✓
215.9	✓

182.97 El Hub 94+94.95
 291 Rod
 191.88
 25.3
 186.34
 26.22
 237.00



"B" to "C"
 Stadia 423'
 VA = + 5.18'

"B"
 Rock with Red Cross
 El = 186.30

"A" Conv Mon. 92+98.96

Sta	Az.	Stadia	V. A				
"C"	Rdg. from "C"	"C"	El 433.0	H 1	S. 1		
15' Eucal	165° 42'	105	-8° 43'	200.7	-29.6		203.4 ✓
1' " "	165° 00'	115	-6° 50' 8.1	212.0	-25.4	-30	204.6 ✓
14' " "	160° 30'	170	-11° 27'	168.2	-35.2		192.8 ✓
2' " "	155° 28'	167	-11° 42'	160.2	-33.2		199.8 ✓
	150° 50'	130	-10° 38'	119.5	-35.7		192.8 ✓
	180° 30'	104	-11° 15'	196.4	-39.0		194.0 ✓
Sedge Creek	1' N/4	103	3' lower	195.4	-42.0		191.0 ✓
"	195° 48'	137	-10° 17' 7.1	229.7	-41.6	-2.0	189.4 ✓
"	5' S/4	128	3' Higher	230.7	-40.6		189.4 ? = 192.4 ✓
	100° 30'	115	-11° 44'	206.2	-42.8		190.2 ✓
	4' N/4	113	same el.	204.3	-42.8		190.2 ✓
N edge	6' N/4	112	2' Higher	203.3	-40.8		192.2 ✓
	203° 52'	172	-10° 35' 7.1	166.3	-31.1		201.9 = 195.9 ✓
	10' N/4	170	2' Higher	164.3	-29.1		202.9 ? = 197.9 ✓
	189° 35'	140	-17° 35'	122.4	-40.4		192.6 ✓
	195° 15'	140	-18° 02' 7.1	108.6	-35.3	-20	195.7 ✓
	162° 35'	117	-20° 55'	92.2	-38.0		196.0 ✓
	170° 08'	88	-27° 09'	69.9	-35.7		192.3 ✓
	194° 09'	74	-23° 42' 8.1	60.4	-26.5		206.5 = 203.5 ✓

8' channel with 1' banks

" " " " "

Stra	Hz	Stadia	V. A				
"C."	Rdg from	17 "C"		El 233.0	H. 1	S. 1	
	137°17'	61	-21°03' 17.2	53.1	-20.5	-12.1	200.4 ✓
	100°33'	86	-18°50' 16.5	77.1	-26.3	-11.3	195.4 ✓
Wedge Chan	4' N/S	84	7' Higher	75.1	-30.6		202.4 ✓
	108°26'	100	-22°36'	85.4	-35.5		192.8 ✓
	2' N/S	99	2' Lower	84.4	-32.5		198.8 ✓
	117°28'	135	-15°02'	126.0	-35.8		192.2 ✓
2 Cypress	125°35'	163	-10°10'	157.9	-28.3		204.2 ✓
14" Ewal	130°37'	162	-10°48'	156.4	-29.8		203.2 ✓
	103°52'	242	-4°25'	240.6	-18.6		214.4 ✓
	95°42'	257	-3°24'	256.1	-15.3		219.7 ✓
	89°45'	245	-6°01' 9.1	242.3	-25.5	-4.0	203.5 ✓
	103°01'	217	-7°58'	213.00	-29.8		203.2 ✓
	90°34'	115	-15°17' 14.1	102.2	-28.1	-5.0	199.9 ✓
	81°30'	114	-13°35' 11.1	107.9	-26.0	-6.0	201.0 ✓
5' SW		117	5' Lower	105.9	-32.0		196.0 ✓
	84°02'	150	-11°32' 10.1	144.0	-29.4	-7.1	196.5 ✓
4' N/S			15' Higher	144.0	-35.1		192.9 ✓
	89°50'	200	-9°20'	194.2	-32.0		201.0 ✓
	86°12'	196	-10°20'	189.7	-34.8		198.2 ✓

Jung of Creeks

Census Main "

Sta	Ht	Stadia	V	A		
C	Rdg from El C			El = 23.0	141	5.1
	83°40'	193	-9°50'	187.3	-32.5	
	80°18'	240	-7°20'	236.1	-30.4	
	82°53'	245	-8°05'	240.3	-34.1	
	82°29'	244	-7°40'	239.6	-32.3	
	80°36'	298	-6°08'	294.7	-31.7	
	65°50'	247	-5°45' 8.1	244.6	-24.6	-3.0
	71°42'	160	-9°25'	155.8	-25.8	
	69°54'	122	-11°49'	112.0	-24.5	
	67°24'	110	-13°00' 11.1	104.4	-24.1	-6.0
	"	106	4' lower	100.6	-34.1	
	"	101	same as 110	94.0	-30.1	
	68°15'	85	-14°00' 11.1	80.0	-20.0	-7.0
	65°00'	36	-11°57' 11	34.5	-7.3	-2.0
	270°30'	76	+14°46'	71.1	+18.6	
	230°55'	145	-0°20' 7.1	125.0	-0.7	-2.0
	228°20'	82	-1°33' 8.1	81.9	-2.2	-3.0
	236°40'	61	0°00' 12.1	61.0	-7.1	
	210°16'	74	-16°00' 7.1	66.5	-19.1	-2.0
	8°40'	20	0°00'	20.0	∞	
	294°00'	34	+17°49'	30.8	+9.9	

200.5	v
202.6	v
198.9	v
200.7	v
201.3	v
205.4	v
202.2	v
208.8	v
202.9	v
198.9	v
202.9	v
206.0	v
223.7	v
251.6	v
230.3	v
227.8	v
225.9	v
211.9	v
233.0	v
242.9	v

Toe of slope

Sta.	Hz	Stadia	V A	Horizontal	diff El
"D"	Rdg front El	"D"	El 255.87	H.I.	5.2
	110°55'	60'	+ 3°05'	59.8	+3.2
	125°51'	121	- 4°01'	120.4	+8.4
	141°01'	96	- 9°28' 6.2	93.5	-15.6 +0
	130°02'	158	- 4°02' 12.2	162.2	-11.8 -7.0
	142°28'	165	- 9°10'	160.8	-26.0
	129°45'	197	- 7°50'	191.4	-26.6
	132°36'	197	- 5°35' 7.2	195.2	-12.1 -7.0
	149°52'	193	- 10°14'	187.0	-33.7
	156°37'	194	- 12°58'	184.5	-42.4
	149°22'	152	- 10°40' 12.2	147.8	-27.8 -7.0
	159°02'	107	- 15°30' 8.2	99.4	-26.6 -3.0
	161°50'	68	- 18°35' 9.2	61.2	-20.5 -4.0
	207°30'	60	- 27°01' 7.4	42.6	-24.2 -2.0
	76°28'	26	+ 9°55'	25.2	+4.4
I N of Transit		ground same El = 261.07			
3 " " "		Bar Wash 9' Lower 252.07			
	278°14'	10	- 13°25'	19.5	-2.3
	2°11'	10	2' Lower	9.5	-4.3
	239°55'	45	- 23°03' 4.2	38.1	-16.2 -4.0
	"	47	6' Lower		

259.1 ✓ E. RIM CANYON

242.8 ✓ " " "

232.3 ✓ Below " "

232.2 ✓

229.9 ✓ E RIM "

229.3 ✓ " " " and Nly Rims of Big CANYON on LEXINGTON

229.8 ✓

222.2 ✓

213.5 ✓

226.1 ✓

226.3 ✓

231.4 ✓

229.7 ✓

260.3 ✓

S. edge Washout

S. edge Washout = 261.1 ✓

253.6 ✓

251.6 ✓

235.7 ✓

229.7 ✓

1657-39

STA "D" nail

21°02'

2°35'
268.95

STADIA 750
V.A. = +5°15'

"C" = 233.00051.
Rad +5.1
258.10
22.87
260.97
Rad = 5.1
ground at "D" = 255.87
5.2
H.I. = 261.07

STA "C" nail in back Md.
500 P 3

N = 28°57'

Sta	Htz	Stada	V. Δ	Hor. dis	diff El.		
"D"	"D"	Rdg from El	"D"	El. 255.27	111.5		
758°53	68	-26°00'	55.0	-26.8	229.1	✓	
3' N ↗	69	6' Higher	55.8	-20.8	235.1	✓	N edge washout
247°44'	71	-21°28' 10.4	61.6	-24.2-50	226.7	✓	" "
3' S ↘	71	6' Lower	61.6	-30.2	228.7	✓	? = 220.7 ✓
236°31'	82	-19°44' 17.4	72.7	-26.1-120	217.8	✓	Bot of Cañon and washout
188°58'	107	-21°08' 10.4	92.3	-36.0-50	214.9	✓	" " "
191°42'	115	-21°40'	99.3	-39.5	216.4	✓	
5' W ↖		6' Higher	99.3	-33.5	222.7	✓	
155°07'	138	-18°12' 10.4	124.6	-41.0-50	209.9	✓	" " "
228°50'	100	-20°10' 9.4	88.1	-32.4-40	219.5	✓	Top of wash bank in Cañon
285°17'	54	-20°15'	45.9	-16.9	239.0	✓	in washout
3' N ↗	54	10' Higher	47.9	-6.9	249.0	✓	N edge Top " "
289°50'	34	-33°01'	23.8	-15.5	240.4	✓	Bot " "
341°00'	21	+12°25'	20.1	+4.4	260.3	✓	Top " "
"	19	6' Lower	18.1	-6.6	254.3	✓	
59°20'	21	+6°50'	20.2	+2.5	258.4	✓	Bot + Beg of Washout
44°02'	36	+11°06'	34.7	+6.7	262.6	✓	N edge Top " "
66°33'	65	+7°51'	63.7	+8.8	247.1	✓	in Swale
197°30'	201	-0°45'	201.0	-2.6	253.3	✓	Beg Cañons on wly Slope of Cañon which is tributary to Main Big "

Sta	Hx	stadia	V. A	Horiz dist	diff. El.
"D"	Rdg. from	El	"D"	El. 255.87	H. 1.52
180°20'	205	-6°53'	202.1	-24.4	
186°18'	163	-7°46'	160.1	-21.8	
199°20'	195	-0°28'	195.0	-1.6	
208°12'	188	+2°10'	182.7	+7.1	
206°38'	131	-7°16'	129.0	-16.4	
211°01'	155	-1°06'	155.0	-2.7	
218°14'	180	+2°36'	179.2	+2.8	
224°56'	193	+3°45'	192.2	+12.5	
241°57'	196	+4°17'	195.0	+14.6	
229°20'	155	+0°35'	155.0	+1.6	
246°10'	123	-5°00' 70.2	126.6	-10.7 -50	
218°20'	107	-15°38'	99.4	-22.8	
197°25'	124	-13°36'	112.3	-22.3	
178°53'	147	-13°22' 7.2	139.2	-33.1	
250°25'	127	-4°32' 7.2	125.4	-14.3 -20	
309°15'	314	+2°44'	313.3	+15.0	
244°24'	156	-0°30'	156.0	-1.40	

231.8 ✓
 234.1 ✓
 254.3 ✓
 263.0 ✓
 239.5 ✓
 253.2 ✓
 263.2 ✓
 268.4 ✓
 270.5 ✓
 257.5 ✓
 240.2 ✓
 228.1 ✓
 228.6 ✓
 222.8 = 220.8 ✓
 239.6 ✓

Pin. Cañon and Tel. pole

270.9 ✓
 254.4 ✓

F. Book 1657/39
 check to Walker Sta. #33
 255.87
 14.97
 270.84
 El. 270.53 = #33
 313.64 = Corr. dist. to #33

Az	Stadia	∠	Height	Dist. FL		
"D"	Rdg. from Fl	"D"	Fl. 255.27	H. 50		
255°08'	177	+1°30'	176.9	+4.6		
265°27'	148	-4°02' 9.2	142.3	-10.4	-40	
322°58'	113	+10°00'	193.2	+193		
14°52'	122	+10°16'	135.7	+24.6		
323°56'	204	+1°33'	201.4	+23.1		
2°40'	242	+10°00' 9.2	234.6	+41.5		
355°40'	232	+11°03' 9.2	223.5	+43.6	-30	
15°30'	185	+10°30' 10.2	178.5	+33.5	-50	
354°15'	174	+11°04' 9.2	162.7	+32.8	-20	
" "	54	+12°00'	51.6	+11.0		
278°20'	157	-7°15' 12.2	154.6	-19.6	-20	
283°30'	150	-7°55' 12.2	142.2	-20.5	-20	
287°20'	145	-6°0' 9.2	143.4	-15.1	-40	
305°21'	48	+1°02'	48.0	0.8		
309°46'	92	+2°10'	91.9	+3.5		
303°22'	130	+2°00' 9.2	129.8	+4.6	-30	
287°42'	98	-8°35' 10.2	95.9	-14.5	-50	
291°42'	142	-4°57' 6.2	141.0	-12.2	-10	
312°41'	147	+4°12'	146.2	+10.7		

260.5 ✓					
241.5 ✓					
275.2 ✓	Now on Top	Fl	Fl	Fl	Fl
280.5 ✓	"	"	"	"	"
278.9 ✓	"	"	"	"	"
292.4 = 293.4 ✓	"	"	"	"	"
296.5 ✓	"	"	"	"	"
284.7 ✓	"	"	"	"	"
286.7 ✓	"	"	"	"	"
266.9 ✓	"	"	"	"	"
222.3 ✓	BOT	Canyon			
228.4 ✓	"	"			
236.8	"	"			
256.7 ✓	Now on E Slope				
259.4 ✓	"	"			
252.5 ✓	"	"			
236.4 ✓	"	"			
242.2 ✓	"	"			
266.8 ✓	"	"			

Flz stadia v A Housdis d (E)

"D" Rdy from Pt "D" El. 2557 H. 52

30° 35' 165 $\frac{+0^{\circ}50'}{10.2}$ 165.0 +24

29° 55' 172 $\frac{-3^{\circ}01'}{10.2}$ 171.8 -9.0

311° 30' 195 $\frac{+3^{\circ}27'}{10.2}$ 194.3 +11.7

312° 50' 223 $\frac{+4^{\circ}02'}{9.2}$ 221.9 +15.7 -30

ELY slope Cañon

258.3 v = 2533

2469 v = 2419

2626 v = 262.6

268.6 ✓

Walker
Dutton
Hugard
8-28-43

Additional Readings Mebus Canyon

Readings from FB 17 Elev = 417.2 HI = 54

Station Azimuth, station \angle Horiz. Diff. Elev.

23°40'	240'	+0°35'	240	+245	
338°35'	310'	+19°12'	276.4	+96.3	
346°0'	360'	+17°28'	327.6	+103.1	
16°06'	235'	+2°47'	234.4	+11.4	
363°14'	405'	+15°55'	374.5	+106.8	
356°28'	433'	+14°24'	406.2	+104.3	
2°25'	384'	+11°20'	369.2	+74.0	
22°31'	377'	+2°32'	376.2	+16.7	
359°45'	335'	+11°45'	321.1	+66.6	
8°45'	357'	+7°46'	350.6	+47.2	
354°30'	287'	+13°13'	272.0	+63.9	
346°25'	232'	+14°32'	217.4	+56.4	
7°10'	312'	+7°07'	307.2	+38.4	
352°38'	213'	+11°40'	204.3	+42.2	-2.0
4°27'	250'	+7°06'	246.2	+30.7	

FB 1656-12

Readings from FB 19 Elev 128.58 HI 51

277°55'	117'	+26°45'	93.3	+47.0	
218°41'	391'	+5°52'	386.9	+39.8	
280°34'	221'	+29°02'	168.9	+93.8	

Cont. Page 13

1656-61

119.5	✓
213.3	✓
220.1	✓
128.4	✓
223.8	✓
221.3	✓
191.0	✓
133.7	
183.6	✓
164.2	✓
180.9	✓
173.4	✓
155.4	✓
157.2	✓
147.7	✓

1656-64

175.6	✓
168.4	✓
222.4	

Duplication

Cont. from Page 12

Readings from $\square A$ Elev. 128.58 HI = 5.1

Station	Azimuth	Stadia	Vert. Δ	Horiz.	Diff. Elev.
	225°22'	400'	+9°33'	389.0	+65.4
	257°02'	253'	+22°25'	216.2	+89.2
	297°03'	265'	+18°52' ^{7.1}	237.3	+81.1 - 2.0
	229°30'	367'	+10°40'	354.4	+66.8
chkd. 9-23-48	227°16'	280'	+8°12' ^{6.1}	274.3	+39.7 - 1.0
chkd. 9-23-43	224°00'	280'	+6°53' ^{9.1}	276.0	+33.3 - 4.0
	224°47'	234'	+6°48' ^{7.1}	230.7	+27.5 - 2.0
	226°12'	182'	+6°32'	179.6	+20.6
	211°52'	278'	+1°24' ^{9.1}	277.8	+6.8 - 4.0

Elev.					
194.0	✓				
217.8	✓				
207.7	✓				
195.4	✓				
167.3	✓	OK	C.B.W.	9-23-43	
157.9	✓	"	"	9-23-43	
154.1	✓				
149.2	✓				
131.4	✓				

Check Readings of Stations "B", "C", "D"

Readings from $\square A$ Elev. 177.07 HI = 5.3

$\square B$	54°42'	305'	+2°05'		+11.07 - 1.0
$\square 27$	32°04'	285'	+15°17'		
	416'	462'			

Readings from $\square B$ Elev. = 197.14 HI = 4.9

$\square 27$	32°04'	285'	+15°17'	72.44	259.5	1657-31
$\square C$	28°57'	418'	+6°19'	15.7	222.83	Page 3 this book

Cont. P. 14

Station. Readings from $\square C$ Elev. 232.83

$\square B$ Azimuth Station Vert. & Horiz. Dist. Diff. Elev

$\square B$ 208°57' 420' -6°21' 414.8 -46.1
128°24' 131' -15°38' 121.5 34.0

$\square D$ 2°35' 299' 7.5°14' 246.9 +22.6

Readings From $\square D$ Elev. 255.4 H.I. = 51

$\square C$ 182°35' 249' -5°20' 246.86 23.0

$\square 33$ 309°17' 313' +2°47' 118.57

Elev

186.7

198.8

255.4

232.4

270.97

See Tie Book

Man. E. Lexington - P. 6. at Central

Page 7 this book

Page 3 this book

FB 1657-39

8-30-43 Check Readings $\square B$ 1656-73

Readings from $\square 20$ Elev. 134.46 H.I. = 50

333°21' 270' +14°53' 13.0 252.0 +67.0 -80

333°21' 300' +14°55' 9.0 280.3 +74.7 -40

336°15' 360' +13°15' 341.3 +80.3 -

341°40' 268' +8°56' 7.0 261.7 +40.7 -20

342°13' 308' +9°10' 12.0 300.2 +48.4 -70

343°18' 321' +8°11' 314.5 +45.1 -

345°40' 324' +8°27' 14.0 317.0 +47.1 -90

347°0' 381' +6°45' 7.0 376.0 +44.4 -20

Readings From $\square 21$ Elev. 157.64 H.I. = 50

254°38' 441' +2°55' 439.8 +22.4

256°57' 441' +3°47' 439.1 +29.0

193.5 ✓

= 205.1

= 214.8

= 173.2

= 175.9

= 179.6

172.6 ✓

176.8

these are rechecks 1656-73 use original

180.0 ✓

in Draw ✓

186.6 ✓

Wabash Canyon Freeway
Preliminary Plats St. Main St. to
40th St + Lexington Ave.

14+67.82 A 29° 50' 30" Lt.

2+56.00 P.O.T.

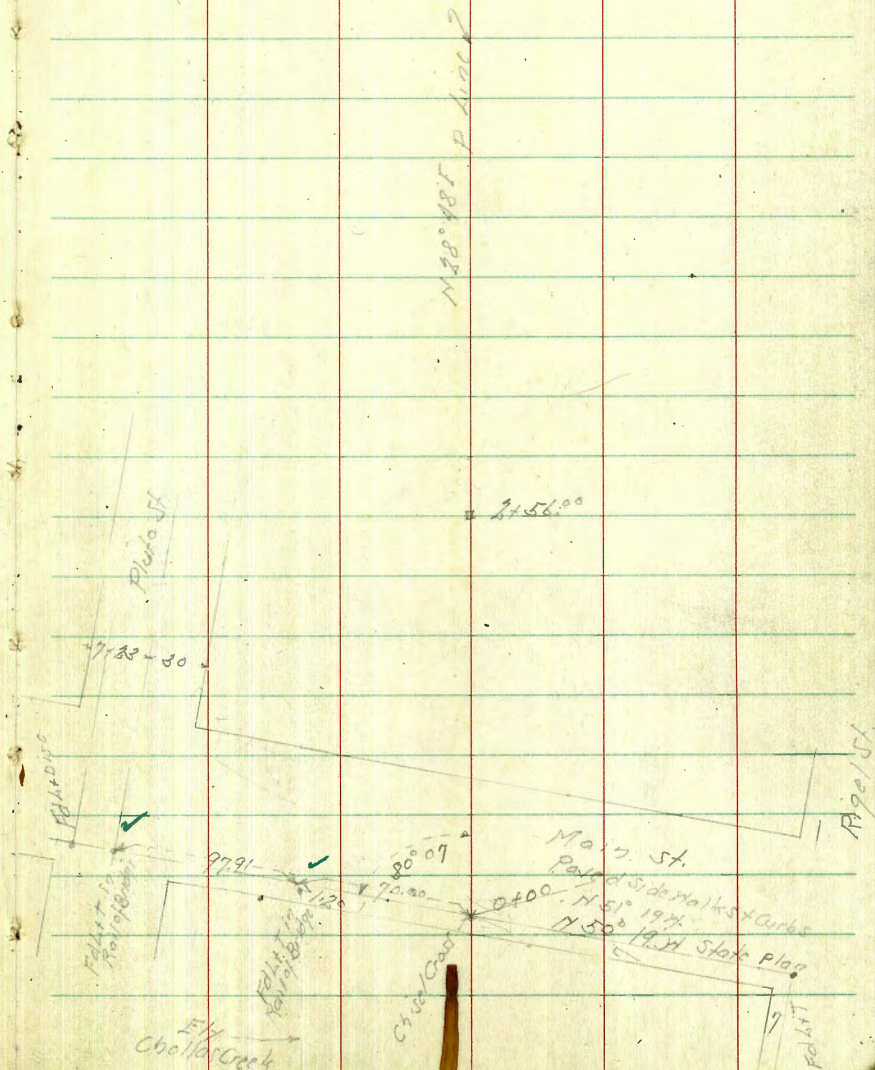
✓ = FD - 4-1-82
G.P.

0+0 = South 7' line of Main St

Indexed
C.S.K.

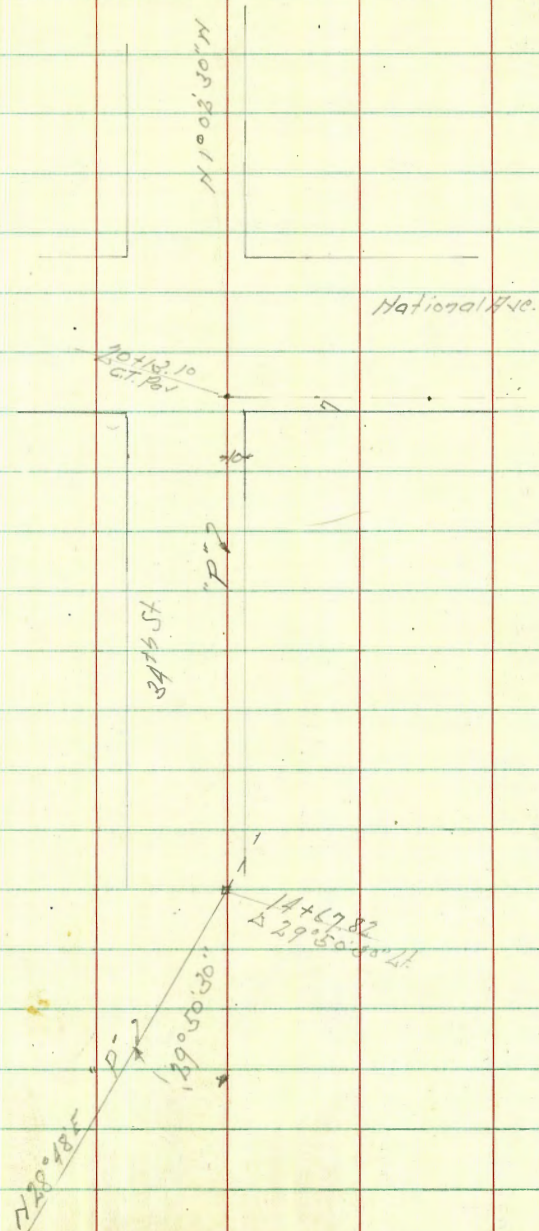
Oct. 17, 44
S. 1550
S. 1550
S. 1550
S. 1550
S. 1550

15



20+1210 = South 7/16 National Ave

14+6782 $\Delta 29^{\circ}50'30''$



26+38.30 Δ 17° 11' 30" Lt

225' 10

24+13.20 Δ 17° 17' 30" Rt

945' 38

28+38.30

Flarecase

34' 45"

Fd Mon

26+38.30
 Δ 17° 11' 30" Lt

212' 116' 15"

Logan Ave

13' 41.22' 2

Fd Mon

24+13.20
 Δ 17° 17' 30" Rt

84' 45"

16'

11.02' 23' 00" N

39+99.75 $\Delta 1^{\circ} 53' 11''$ - N.L. Ocean View Blvd.

39+99.75
 $\Delta 1^{\circ} 53' 11''$

Ocean View Blvd.

Front

34 1/2 St.

N 00 58 30 W

P 12

33+3229

22

33+229

F 11 10 0 0

Martin

E 4 10 0 0

51931
136125

109822

7

5140 Nail P.O.T.

48+76.95 $\Delta 3^{\circ} 42' 15''$ Rt.

87729

39+99.75 $\Delta 1^{\circ} 53' 14''$

109822

48+76.95
 $\Delta 3^{\circ} 42' 15''$ Rt.

P. 7

109822

39+99.75
 $\Delta 1^{\circ} 53' 14''$

64+00.40 A 19°19'30" RA

43523

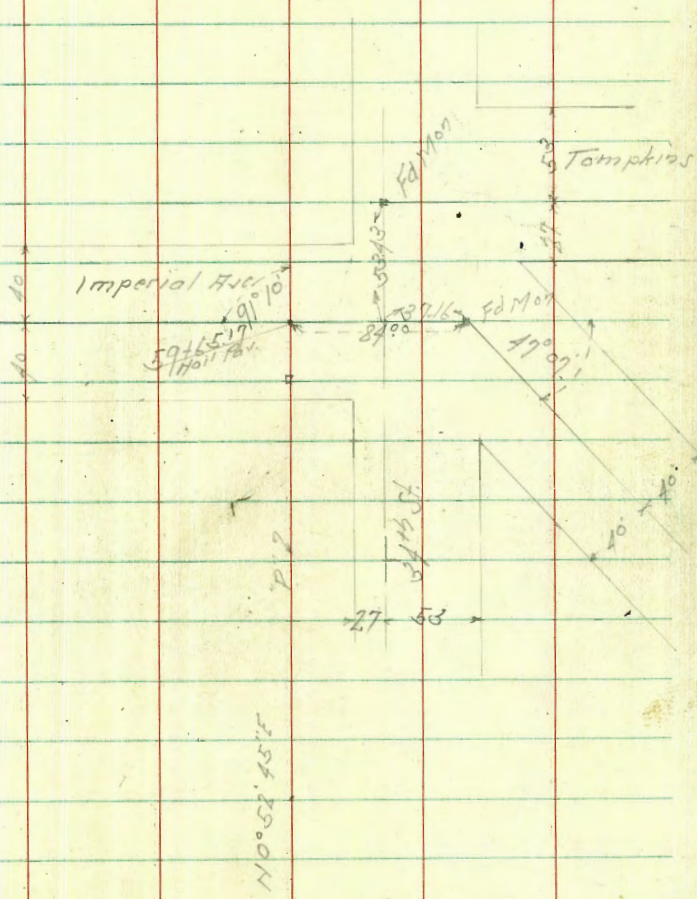
59+65.17

59+60.00 P.O.T

54+0 P.O.T Nail

64+00.40
A 19°19'30" RA

N 20° 12' 15"



72+61.00 P.O.T.

67+69.00 P.O.T.

64+00.00 Δ 19° 19' 30" R

N 20° 12' 15" E

19° P

85+69.80 - P.O.T. Mon

787.22

80+11.05 Δ $14^{\circ} 38' 15''$ Rt.

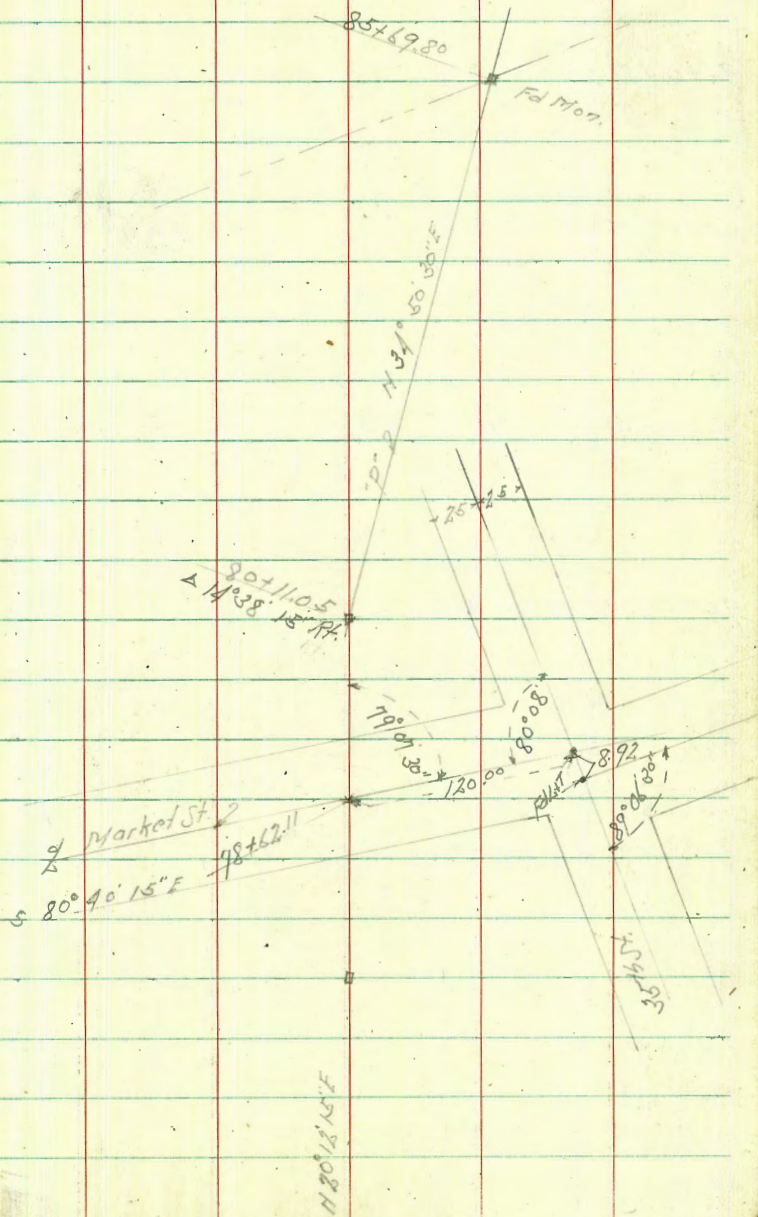
148.94

78+62.11

77+55.40 P.O.T.

1461.21

22



94+04.28 P.O.T. Nail

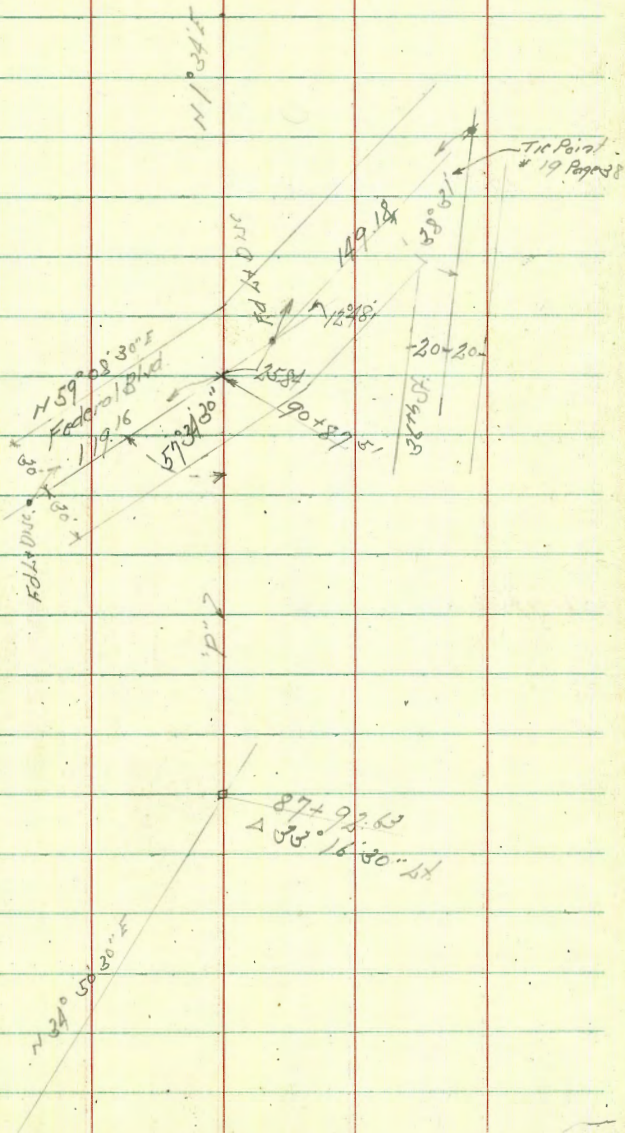
90+87.51 = R.L. Federal Blvd.

90+03.85 P.O.T. Nail

21122

294

87+92.63 Δ 33° 16' 30" Lt



105+49.29 Δ 21° 51' 15" Rt.

1461.78

101+72.52

Hub

100+82.52

Hail

1461.78

105+49.29
 Δ 21° 51' 15" Rt.

9" 2

101+72.52

1461.78

122+2123 $\Delta 1^{\circ} 04' 45''$ Lt. = Brass Plug in Conc. Mon

1023.28

113+23⁰⁰ P.O.T. Stub

111+95.94 $\Delta 14^{\circ} 47' 30''$ Rt.

646.65

25

N37°08'E

122+2123
 $\Delta 1^{\circ} 04' 45''$ Lt.

N38°14'45"E

P.O.T.

111+95.94
 $\Delta 14^{\circ} 47' 30''$ Rt.

N23°25'15"E

145+11.19 Δ 28° 31' 30" Lt

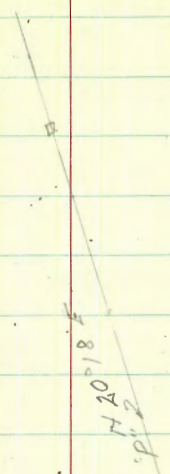
142+40.54

Nail

123501

134+54.28 Δ 16° 50' Lt

123026



134+54.28
 Δ 16° 50' Lt

N 37° 08' E

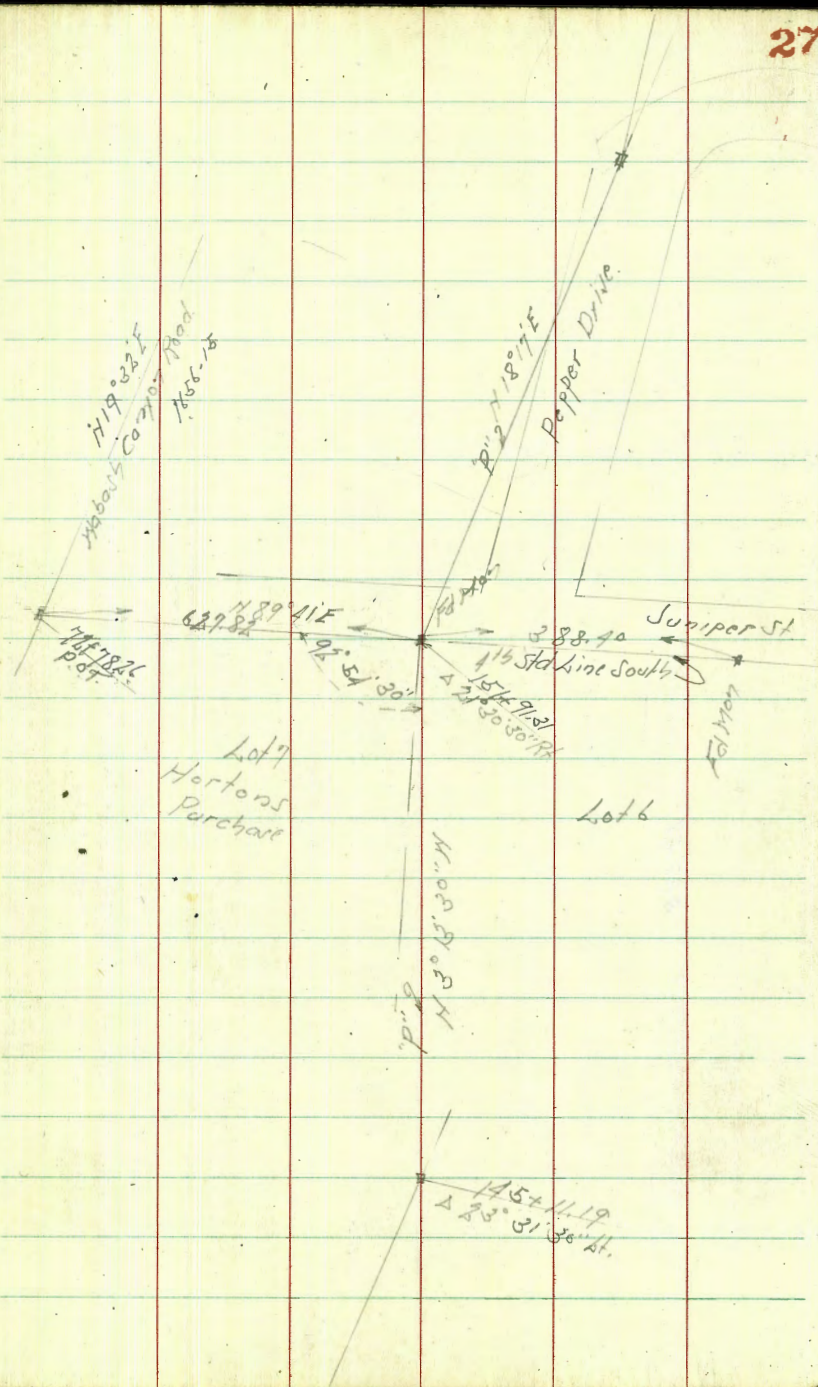
156+84.15 Δ 7° 40' 15" Lt

492.54

151+91.31 = 1100.00 4th Std Line Δ 21° 30' 30" Rt

680.72

145+11.19 Δ 22° 31' 30" Lt



719.22 E
Abbott's Co 719.22
Road
145-14

Pepper Drive

117.82 E
117.82
P.O.

Juniper St

Lot 7
Hortons
Purchase

Lot 6

P12
143° 15' 30" N

145+11.19
Δ 22° 31' 30" Lt

165+66.72 Δ 10° 26' 15" Lt

882.37

156+84.15 Δ 7° 40' 15" Lt

N 0° 10' 30" E

165+66.72
 Δ 10° 26' 15" Lt

N 10° 36' 45" E "P" 2

156+84.15
 Δ 7° 40' 15" Lt

171+17.28

167+79° POT

550.56'

165+66.72 $\Delta 10^{\circ} 26' 15''$ Lt.

Quince St.

Penton

40' x 40'

40' x 40'

438' 100'

Lexington Ave

F.M. 171+17.28

100'

165+66.72
 $\Delta 10^{\circ} 26' 15''$ Lt.

3730 = Bottom Sly Creek

3707 = Bottom Sly Creek

2795 = Top Sly Creek

270

TP 604 15.58 245 9.54

140

11.99

21.940
21.6
100968
19.1
10075
88.9
89.0
TOP FLY
Creek59
96
97.0
TOP FLY
Creek61
60
61.0
TOP FLY
Creek21.940
21.6
50965
19.1
5050
88.75113
113.9
114.263
57
5021.5
21.5
1009658
19.0
5080
80.07568
88
15.5845
45
100

11.99

21.5
21.5
100967
18.9
5068
68.7381
81.5071
71
10021.4
21.4
100968
18.8
10087
87.7
10083
83.7
10067
67
100

TP 216 7.00 10.74 4.84

6+0

5+0

4+0

3+77 = Top N/4 Creek

3+54 = Bot N/4 Creek

15.58

Lt.

Lt.

Rt.

32

10.7
50
100
04 7

11.0
50
100
04 6

11.1
50
100
04 5

10.9
50
100
04 1

11.04
50
100
04 5

10.2
50
100
05 4

10.9
50
100
04 7

9.9
50
100
05 2

10.5
50
100
05 1

10.4
50
100
05 2

11.1
50
100
04 5

11.1
50
100
04 5

10.9
50
100
04 2

10.9
50
100
05 4

10.6
50
100
05 1

10.4
50
100
05 2

10.5
50
100
05 1

10.4
50
100
05 2

10.5
50
100
05 1

11.0
50
100
04 6

11.9
50
100
96 4

11.9
50
100
96 5

11.1
50
100
96 5

11.0
50
100
96 6

11.9
50
100
96 4

15.58

1270

1210

1170

1070

970

870

770

7.00

Lt.

04
27
100

03
25
100

03
40
100

02
48
100

02
46
100

03
40
100

03
44
100

04
26
50

03
23
50

04
26
50

02
43
50

02
41
50

02
41
50

03
45
50

04
24
50

04
23
50

04
26
50

04
36
50

02
44
50

02
45
50

04
44
50

04
24
50

05
18
50

05
20
50

04
25
50

02
44
50

02
40
50

03
43
50

04
16
100

05
16
100

05
16
100

04
21
100

03
26
100

02
19
50

03
15
100

Rt

7.00

17+0

+65 = Approx of Next top

16+0

15+0

14+67.82 A 29° 50' 30" Lt

Taken on Sekt of Angle

14+0

TP 3.73 8.22 2.41 4.59
7.00

Lt.

Rt.

Rt.

34

60 2 2 1/2

60 02 3

60 2 5

60 2 9

60 03 2

60 02 2

60 3 3

60 3 1

60 2 8

60 2 9

60 3 3

60 03 5

60 3 1

60 3 3

60 3 3

60 3 3

60 3 5

60 4 5

8.22

60 5 5

60 4 2

60 4 2

60 2 9

60 03 6

60 4 1

60 8 8

60 8 8

60 5 4

60 3 4

60 4 5

60 4 4

4/1000 cont
Pow

800
Pow

22+0

20+86.10 = H.L. National H/c

20+46.10 = J. National

B.M

5.93

6.98

SE BP
National H/c
+ 34755
6.82

20+06.10 = J.L. National H/c

19+0

IP

6.36

12.71

1.99

6.35

on Man Hole
234' S of
National

18+0

8.32

Lt.

St

Rt

35

6.3	6.3	6.5	6.9	6.7	6.0	6.6	6.1
100	50	10-cb	10-60th	10-60th	10-60th	10-60th	10-60th

6.8	6.5	6.6	6.1	6.8	6.0	6.8	6.8
100	50	50	50	50	50	50	50

6.6	6.5	6.9	6.2	6.6	6.9	6.6	6.1
100	50	10-cb top	10-cb top	10-cb top	10-cb top	10-cb top	10-cb top

10.4	10.9	7.5	8.5	6.1	6.6	6.1	6.1
100	50	50	50	50	50	50	50

6.0	6.1	4.8	4.8	4.8	4.8	4.8	4.8
100	50	50	50	50	50	50	50

8.32

27+0

+38° = Δ 17° 11' 30" Lt Taken on split of Hoyle

26+0

25+0

24+13.2° = Δ 17° 17' 30" Rt = 18° 4' 09" Taken on split of Hoyle

TP 11.80 19.91 4.6° 8.11

23+0

12.71

Lt

Rt

Rt

132
100
065

127
50
72

8.0
11.9

7.7
74
122

+4.0
32
239

+8.0
70
279

132
100
67
FH Hoyle

140
80
79

130
77
168

2.6
17.3

+4.7
50
246

+10.0
100
319

135
100
64

147
78
82

148
82
151

3.5
16.8

+2.0
38
219
FH Hoyle

+6.5
50
264

+11.1
100
319

140
100
59

127
50
77

8.6
11.3

5.8
50
169

+0.5
100
204

158
100
041

132
50
61

10.9
09.0

8.7
50
112

15.1
100
142

19.91

156
100
71

153
50
74

4.7
07.8

18
50
109

10.1
50
125

12.71

32+0

32+0

31+0

30+0

IP

4.16

15.89

8.18

11.73

29+0

28+0

19.91

4.

8

Rt. Oct. 26-47 37

93
100

81
100

88
100

85
100

74
100

69
100

101
100

95
100

99
100

86
100

82
100

83
100

115

112

108

112

120

122

134

112

123

149

150

147

159

146

131

166

194

194

15.89

19.91

BM

8.04

19.98

SF 7.447
Ocean View Blvd
73415.57

39+19.75 = S.L. Ocean View Blvd

TP

9.85

28.02

2.11

18.17

38+0

37+0

36+0

35+0

TP

8.92

20.28

4.53

11.36

34+0

15.89

Lt.

Rt

Rt

18.6
94
100

18.6
94
50-03

18.2
98
50-64

19.1
89
10-64

19.7
83
10-64

20.0
80

24.4
85.6
100

29.0
41.0
100

28.02

13.1
74
100

14.0
66
50

17.0
81
100

19.1
65.4
100

23.5
44
100

12.3
80
100

14.8
64
50

15.5
77

17.1
64
50

19.5
10
100

11.1
94
100

13.1
76
50

15.0
53

16.8
53.5
100

19.2
11
100

10.3
100
100

11.3
90
50

13.1
76

14.0
58
100

14.5
15
100

20.28

9.9
60
50

10.0
59
50

11.5
74

14.3
66
50

16.2
40
100

15.89

P Line Levels Topog. Controls

Wabash Canyon Freeway		28.02 Bl. Ford				73.98				
TP	1.83	18.42	11.43	16.59	73+61.00		10.96	63.02	Hub	
12+0			3.0	15.1	TP	12.75	86.40	0.23	73.65	
45+0			6.76	11.66	Stus	TP	12.74	98.28	0.86	85.54
47+10			5.78	12.64	Hub	TP	12.98	110.13	1.13	97.15
TP	7.40	20.04	5.78	12.64	77+55.10		1.69	108.44	Hub	
48+76.95	A 3°42'15" Rt		5.06	14.98	Hub	TP	13.08	121.52	1.69	108.44
51+0			3.7	16.3		80+11.05	A 11°38'15" Rt	6.61	114.91	Hub
TP	9.85	26.61	3.28	16.76	82+11		11.23	110.29	Plug	
54+0			6.56	20.05	Plug	TP	12.95	133.96	0.51	121.01
TP	11.56	32.15	5.72	20.89	85+69.80	Foot. Pl. Mon.	11.62	122.34		
59+60			5.33	27.12	Hub	TP	6.68	138.87	1.77	132.19
BM			2.85	29.60	BP 11 Rail B Bridg. E. of 621 Imperial 29.57	87+92.63	A 53°16'30"	2.47	136.40	Hub
TP	12.56	44.64	0.37	32.08		TP	0.81	136.80	12.88	125.99
62+28.7	South Rail of RR		8.14	36.50	Top	TP	0.49	114.40	12.89	113.91
TP	12.37	56.22	0.79	42.85		90+03.85		11.69	102.71	Plug
64+00.40	A 19°19'30" Rt		1.92	54.30	Hub	TP	0.66	102.48	12.58	101.82
TP	13.11	67.41	1.92	54.20	or Hub 64+00.40	TP	0.00	89.42	13.06	89.42
TP	6.94	72.46	1.89	65.52		TP	0.81	77.19	13.04	76.38
67+69.00			4.16	68.30	Hub	TP	0.52	64.73	12.98	64.21
TP	3.92	73.98	2.40	70.06		90+87.51	Federal Blvd	9.24	55.49	

		1473						212.33			
RM			12.93	51.80	✓ NWBP Federal Blvd + 351507 51.87		6.06	217.45	0.94	211.39	
TP	11.81	65.51	11.23	53.50			122+24.22	Δ 1°04'45" Lt.	8.66	213.99	Brass Plug in Conc. Moq.
95+62.28			9.76	55.55	Plug		10.44	221.83	6.06	211.39	
TP	12.78	77.47	0.62	64.69			126+62.58		6.80	215.03	Plug.
TP	12.59	89.36	0.70	76.77			130.00	229.91	4.92	216.91	
TP	12.87	101.60	0.63	88.73			130+62.58		8.52	221.39	Plug
101+79.52			1.40	100.20	Hub		TP	4.70	234.21	0.40	229.51
TP	12.56	113.55	0.61	100.99			134+54.28	Δ 16°50' Lt.	4.41	229.80	Hub
TP	12.98	125.87	0.66	112.89			137+54		8.45	225.76	Plug
TP	13.00	138.53	0.34	125.53			12.48	238.16	8.53	225.68	
TP	12.99	150.91	0.61	137.92			11.69	248.11	1.74	236.42	
105+49.29	Δ 2°51'15" Rt.		0.99	149.92	Hub		142+40.54		14.34	233.77	Top Lat 4
TP	12.91	162.83	0.99	149.92	on Hub 105+49.29		145+11.9	Δ 23°31'50" Lt.	3.18	244.93	Hub
		12.99	175.56	0.26	162.57		6.16	245.99	8.28	239.85	
		12.97	188.22	0.31	175.25		130+40.83		6.43	239.56	Plug
1149594	Δ 14°47'30" Rt.		5.09	183.13	Hub		9.86	242.87	12.98	233.01	
163+23.00			8.42	179.80	Stub		151+91.51	Δ 14°54'40" Lt.	11.85	231.02	Moq.
		12.90	200.52	0.60	187.62		12.70	254.96	0.61	242.26	
RM			4.24	196.28	3701.17 in Funct. Pot 504.5 Co. 1508		7.92	261.39	1.49	253.47	
		12.55	212.33	0.74	199.78		9.43	270.45	0.37	261.02	

270.45

1217 282.03 0.59 289.86

H.F. Cor 224
Pepper Dr
Violet

BM 572 287.44 0.31 281.72

498 291.80 0.62 286.82

202 290.85 2.97 288.83

10.30 300.61 0.54 290.31

7.20 306.93 0.88 299.73

11.99 318.64 0.28 306.65

SE 80
Thorn + V
Fairmount

BM 0.90 317.74

BM 7.94 238.96 231.02

Mo 7
1819181
Atchafalaya
W of Poplar

BM 0.21 238.72

Mo 7 E Prop
Orchid St.
11/10/81
238.86

BM 12.62 243.64 231.02

Mo 7
157+91031
738 1/2 in. S.

12.48 255.53 0.59 243.05

156+84¹⁵ 3.04 252.49 on Hub

160+08 13.1 242.4 on Hub

12.92 267.20 1.25 254.28

165+66.72 6.58 272.54 1.34 265.96 on Hub
165+66.72

167+79 15.2 257.3 on Hub

BM 12.87 259.67 on Hub
97+65.56
1657-4

259.85

P-Line Co-ordinates

Lt	Rt.	See P-15 this book.	cos.	sin	N.	E
		N. 51° 19' W	62.50156	.7806123	312.50	390.31
0+00	80° 07'				30000	10000
+33 ⁴²	Main St.				29.33	16.12
	1467 ⁸²	N. 23° 48' E	8763067	4817537		
14+67 ⁸²	29° 50' 30"				31286.86	10707.13
	945 ³⁸	N. 1° 02' 30" W	9998348	0181795		
24+13 ²⁰	17° 17' 30"				32231.48	10689.94
	225 ¹⁰	N. 16° 15' E	9600499	2798290		
26+38 ³⁰	17° 11' 30"				32447.59	10752.93
	1361 ⁴⁵	N. 0° 56' 30" W	9998649	0164344		
39+99 ⁷⁵	1° 53'				33808.85	10730.55

Cos. Sin.

39499⁷⁵ 1°53'

N. 0°56'30" W

877²⁰

N. 2°49'30" W

9987847 0492856

48476⁸⁵

3°42'15"

34684.99 10687.32

1088²²

N. 0°52'45" E

9998823 0153438

59465¹⁷ P.O.T.

35773.08 10704.02

435²³64400⁴⁰

19°19'30"

36208.26 10710.69

1461⁷¹

N. 20°12'15" E

9384679 3453664

78462¹¹ P.O.T.

37580.03 11215.52

N. 20° 12' 15" E

78+62⁵¹ P.O.T.148⁹⁴

37719.80 11266.96

80+11⁰⁵

14° 38' 15"

781⁵⁸

N. 34° 50' 30" E

8207340 5713106

87+92⁶³ 33° 16' 30"

38361.27 11713.48

294⁸⁸

N. 7° 34" E

99962.62 0273401

90+87⁵¹ P.O.T.

38656.04 11721.54

1461⁷⁸101+72⁵²1085.81
376.77

39740.64 11751.20

105+49²⁹

21° 51' 15"

40117.27 11761.51

105149 ²⁹	21°51'15"	N. 1° 34' E
	646 ⁶⁵	N. 23° 25' 15" E
111195 ⁹⁴	14°47'30"	
	1028 ²⁸	N. 38° 12' 45" E
122124 ²²	1°04'45"	
	1230 ⁰⁶	N. 37° 08' E
134154 ²⁸	16° 50'	
	1056 ⁹¹	N. 20° 18' E
145111 ¹⁹	2.3° 31' 30"	

9176102	3974816
---------	---------

40710.65	12018.54
----------	----------

7857220	6185798
---------	---------

41518.59	12654.62
----------	----------

7972329	6036719
---------	---------

42499.23	13397.17
----------	----------

9378889	3469357
---------	---------

43490.50	13763.85
----------	----------

145+11²⁹ 2.3°31'30"

N. 20°18'E.

680¹²

N. 30°13'30"W.

9984163 0562572

151+91³¹ 21°30'30"492⁸⁴

N. 18°17'E.

9495168 3137163

44169.54 13725.59

156+84¹⁵ 7°40'15"882⁵⁷

N. 10°36'45"E.

9828952 1841658

44637.50 13880.20

165+66⁷³ 10°26'15"

550.56

N. 0°10'30"E.

9999953 0030543

45509.98 14042.74

171+17²⁸

46055.53 14044.42

P-Line Co-ordinates

0100

1032.79 N. 45° 06' E

P.L. 46° 09' 45"

2036.18 N. 1° 03' 45" W

3043917

P.L. 21° 24'

37625.90 10536.62

✓
7058716 7083398✓
38354.12 11268.08✓
9998334 0185431✓
40390.76 11230.33

10430⁸⁶
P.I.

16° 56'

1000.49' N. 20° 20' 15" E.

.9376616 .3475494

41328.88 11578.04

52498⁸⁸ BK.
P.I.

16° 56'

1272⁸² N. 37° 15' E.

.7957819 .6055834

42341.13 12348.36

P-57425⁸⁰

7° 20'

430⁸⁴ N. 20° 20' 15" E.

.9376616 .3475494

.4274510 12498.10

P-67440⁸⁰ 15° 18'1015⁸⁰ N. 27° 40' 15" E.

.8856301 .4643913

43644.02 12969.46

P-71470⁸⁰

7° 09' 45"

430⁸⁰ N. 12° 22' 15" E.

.9767814 .2142381

44064.04 13061.58

108⁸⁵ N. 19° 32' E.

.9424471 .3343552

Lt.	Rt.	Dist	Col. Bear.	Cosine	Sin.	N.	E.
15491 ³¹			N 3° 13' 30" W.			44169.54	13725.59
	87° 05' 30"	627.82	S. 89° 41' W	.0055268	.9999847		
P-72+78 ²⁶	109° 51'					44166.07	13097.75
		595.84	N 19° 32' E.	.9424471	.3343552		
P-78+74 ¹⁹	13° 06' 30"					44727.62	13297.00
		385.98	N. 6° 25' 30" E.	.9937192	.1119025		
P-82+60 ⁰⁸	27° 59' 30"					45111.17	13340.18
		887.85	N. 34° 25' E	.8249491	.5652070		
P-91+47 ³³	15° 08'					45843.60	13842.01

91+47²³ 15°08'

266.02 N49°33'E

.6487842 .7609724

P-94+13⁹⁵ 49°38'30"

700.54 N10°05'30"W

.9999987 .0015998

46016.19 14049.44

101+14⁴³ P.O.T.

612.86

46716.73 14043.32

P-107+27³⁵

47329.59 14042.34

Lt	Rt.	Dist	Col. Bear.	Cos.	Sin	N.	E.
			N. 42° 30' 15" E.				
L-2017 $\frac{69}{A}$	3° 17'					29,964.49	10,045.18
		73'	N. 39° 13' 15" E. B'k = N. 38° 41' E. A'hd	.7806123	.6250156		
L-21144 $\frac{69}{A}$	8° 40' 10"					30,021.47	10,090.80
L-27152 $\frac{78}{B.C.}$		1118.92'	N. 30° 00' 50" E.	.8659042	.5002099		
			A-28° 39' 20" R-2000 T-510.83' L-1000.27 E-62.21'			30,990.35	10,650.49
L-37153 $\frac{05}{F.C. B'k}$		1245'	N. 1° 21' 30" E.	.9997190	.0287052		
L-22186.81	P.O.T. A'hd						
P.I. = P.O.T. L-21144 $\frac{69}{A}$						32,235	10,680
						30,021.47	10,090.80
		1118.92'	N. 30° 00' 50" E.	.8659042	.5002099		
P.I.	24° 02' 10"					30,990.35	10,650.49
		3026.10	N. 5° 58' 40" E.	.9945624	.1041427		
P.I.	15° 28' 10"					34,000.00	10,965.64
		3034.45'	N. 6° 29' 30" W.	.9935883	.1130587		
P.I.						37,015.00	10,622.57

L-Line Co-ordinates

Sta. Lt. Rt. Dist. Bear.

Cos. Sin. N. E.

L-3+10¹⁵

Nly line Main

P.I.

P.I.

P. 0+00

L-2 +53³⁴

L-3+10¹⁵

56.81'

275° S. 51° 19' E.

30000 10000.83

29,964.49 10,045.18

.6250156 .7806123

5428³⁹
Main St.

P.I. 107° 34'

T. N. of W. line

29828.12 10215.50

16+79⁸²

1347³⁶ N. 21° 07' E.

A-22° 09' 30"
R-1000

T-195⁸¹

P.I. 22° 09' 30" L-386⁷⁴

.9328488 .3602682 1256.88 10630.37

31085 10700.91

20+66⁶³

1150¹⁹ N. 1° 02' 30" W

1150 2091

.9998346 .0181795

.0181820

1515
87052

29737²² Lt. Rt. Dist Bear.
N. 1°02'30"W

30721⁰¹ D. 2°24'
P.I. R=9000' 2°24'
54771⁶⁰ T-8379
P.O.T. L-16755 1088.40

31404² E.C. 3538.99 N. 1°21'30"E

L-65460⁰⁰ P.I. 7°51' Traffic circle

74426³¹ B.C. 1250.01 N. 6°29'30"W

98710.01 D-41°59'
P.I. R=1000' 41°59'
T-383.70'
L-732.75 E=71.08

81459⁰⁰ E.C.

95423⁰⁰ B.C. 2149.56 N. 35°29'30"E

P.I. 53°20'30" D-53°20'30"
R=800'
T-401.85 372.65
L-744.79

102787⁰⁰ E.C.

107437⁰⁰ B.C. 1176.64 N. 17°51'W

P.I.

cos. sin. N. E

32235 10680.1

34684.99 10738.09

.9997190 .0237052 3538.08 83.89

35773 10763.89

9935883 .1130587 1242 141.32

37015 10622.59

E.C. 37327.40

8141899 .5805845 1750 1248.00

38452.84

38437.81 11637.26

38780.03

38765 11870.59

E.C. = 39162.53 11747.37

39119.88 11756.29

.9518623 .3065261 1120 360.67

39594.15 11603.55

39885 11509.90

P.I. $\Delta-41^{\circ}48'30''$ / N. $17^{\circ}51'W$
 R-800' /
 T-305.56 / $41^{\circ}48'30''$
 L-583.75
 113+20²¹ E.C. 1609.53 ✓
 124+74²⁰ B.C. 1579.05 N. $23^{\circ}57'30'' E.$ ✓
 39885.00 / 1509.80

P.I. $\Delta-6^{\circ}51'30''$ / $6^{\circ}50'$
 R-2000' / $6^{\circ}51'30''$
 T-719.84 / $6^{\circ}51'30''$
 L-239.40 / 238.53
 127+138²¹ E.C. N. $30^{\circ}47'30'' E.$
 144+48²² B.C. 2021.98 N. $30^{\circ}49' E.$
 9138410, 4060722 1443 641.23
 41,355.95
 41328 12151.11 ?
 41430.92 12212.50

P.I. $\Delta-18^{\circ}58'$
 R-1000' /
 T-167.04
 L-331.03
 147+80²² E.C. /
 166+78²¹ S.S. 1898.12
 2401.68 N. $11^{\circ}51' E.$
 8588109, 5122927 1736.5 1035.86
 42921.04 13101.38 ✓
 43064.5 13186.95

P.I. $\Delta-28^{\circ}53'$ / $\Delta_c-11^{\circ}23'$
 Δ_c-17° / $\Delta_s-8^{\circ}45'$
 Ls-250' / Xc-243.42
 Ts-336.52 / Yc-12.29
 R-818.51 / Lc-162.61
 170+90²⁵ C.S.
 173+40²⁵ S.T. 903.99 N. $40^{\circ}44' E.$
 2350.5 493.19
 9786886, 2053502 45,085.65 13,611.04
 20535 45415 13680.14
 7577548, 6525394 685.00 589.89

P.I. 7577548 46100 14270.03

173 159⁶⁵ T.S. 159
1764 0965 S.C.

P.I. $\Delta - 54^{\circ}33'$ $\Delta_c - 37^{\circ}03'$ N. $40^{\circ}44'$ E.
181 138⁹³ C.S. $\Delta_c - 7^{\circ}$ $\theta_s - 8^{\circ}45'$
183+88⁸² S.T. 13 $L_s - 250$ $X_c - 249.42$
 $T_s - 548.57$ $Y_c - 12.29$
 $R - 818.51$ $L_c - 528.28$
97¹⁶ S.T. 950.50 N. $13^{\circ}49'$ W.

184 186⁰⁹ T.S.
186 136⁰⁹ S.C.

P.I. $\Delta - 13^{\circ}43'$ $\Delta_c - 9^{\circ}13'$
 $13^{\circ}43'30''$ $\Delta_c - 3^{\circ}$ $\theta_s - 2^{\circ}15'$
 $L_s - 150$ $X_c - 149.08$
 $T_s - 309.27$ $Y_c - 1.96$
 $R - 1909.84$ $L_c - 307.22$
306.55 N. $0^{\circ}06'$ W.

P.107427³⁵

57

46100 14270.03

.9710649 .2388159 923. 227.00

47023. 14043.03

.9999987 .0015998 306⁵⁵ 0.49

47329⁵⁵ 14042.54

Walker,
Handricks
Huntley
Cure
3-14-46

CURB AND GUTTER ELEV.
FIRST AVE And UNIV. AVE.

4.42 283.92

278.50

RM
N.E. BR. W.
UNIV. 1st
And 1st

going North

0+00 = 100' S.S. Univ.

Cb. 4.05 78.87

Gut. 4.44 78.98

+5 4.22 78.70

0+25

Cb. 3.71 79.21

Gut. 4.18 78.74

+5 3.84 79.08

0+50

Cb. 3.28 79.64

Gut. 3.74 79.18

+5 3.57 79.35

0+75

Cb. 3.12 79.80

Gut. 3.49 79.43

+5 3.29 79.63

1+00 = S.L. Univ.

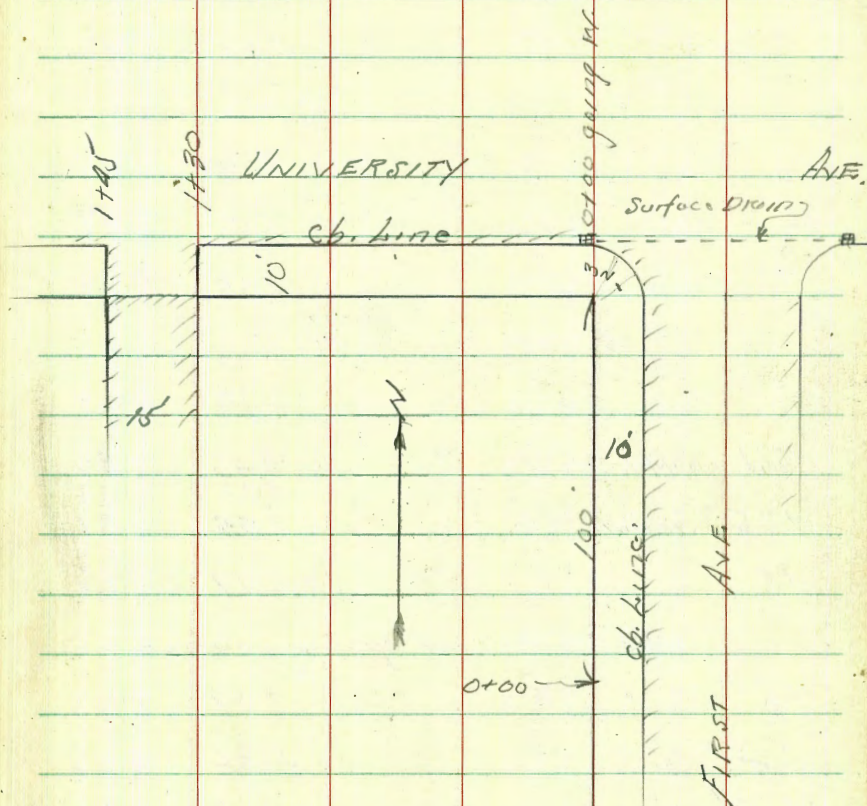
Cb. 2.76 80.16

Gut. 3.28 79.64

+5 3.05 79.87

Indexed
C.S.R.

58



#1

cb.	2.85	80.07
Cent.	3.37	79.55
+5	3.26	79.66

#2

cb.	2.84	80.08
Cent.	3.44	79.48
+5	3.50	79.42

#3 = 0+00

cb.	2.73	80.19
Cent. on Hd. Wall	3.49	79.43
	4.78	78.14
+25 " x end "	3.35	79.37
+5	3.77	79.15

0+05 = 14' end grating outlet

cb.	3.01	79.91
Cent.	4.86	78.06
+5'	4.52	78.40

0+25

cb.	3.70	79.22
Cent.	5.28	77.64
+5	5.04	77.88

0+50

cb.	4.44	78.48
Cent.	5.79	77.13
+5	5.58	77.34

0+75

cb.	5.24	77.68
Cent.	6.24	76.68
+9.6	6.04	76.88

1+00

cb.	6.04	76.88
Cent.	6.82	76.10
+5	6.70	76.22

1+30

Sl. on cb.	6.63	76.29
" Por.	6.60	76.32
+1' on Por.	6.87	76.05

5 cb.	6.88	76.04
Cent.	7.73	75.19

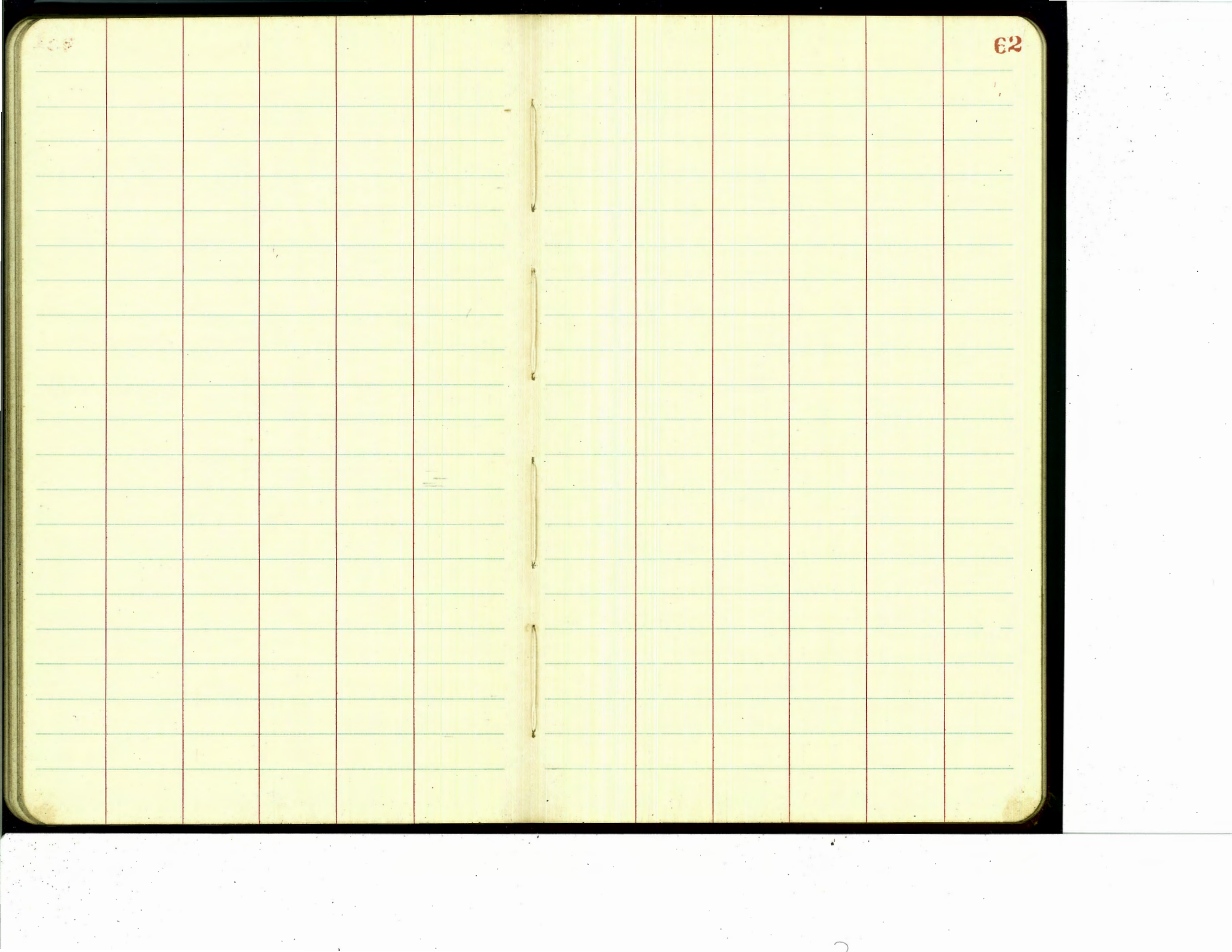
+5'	7.58	75.34
-----	------	-------

1+375 = E. Alley

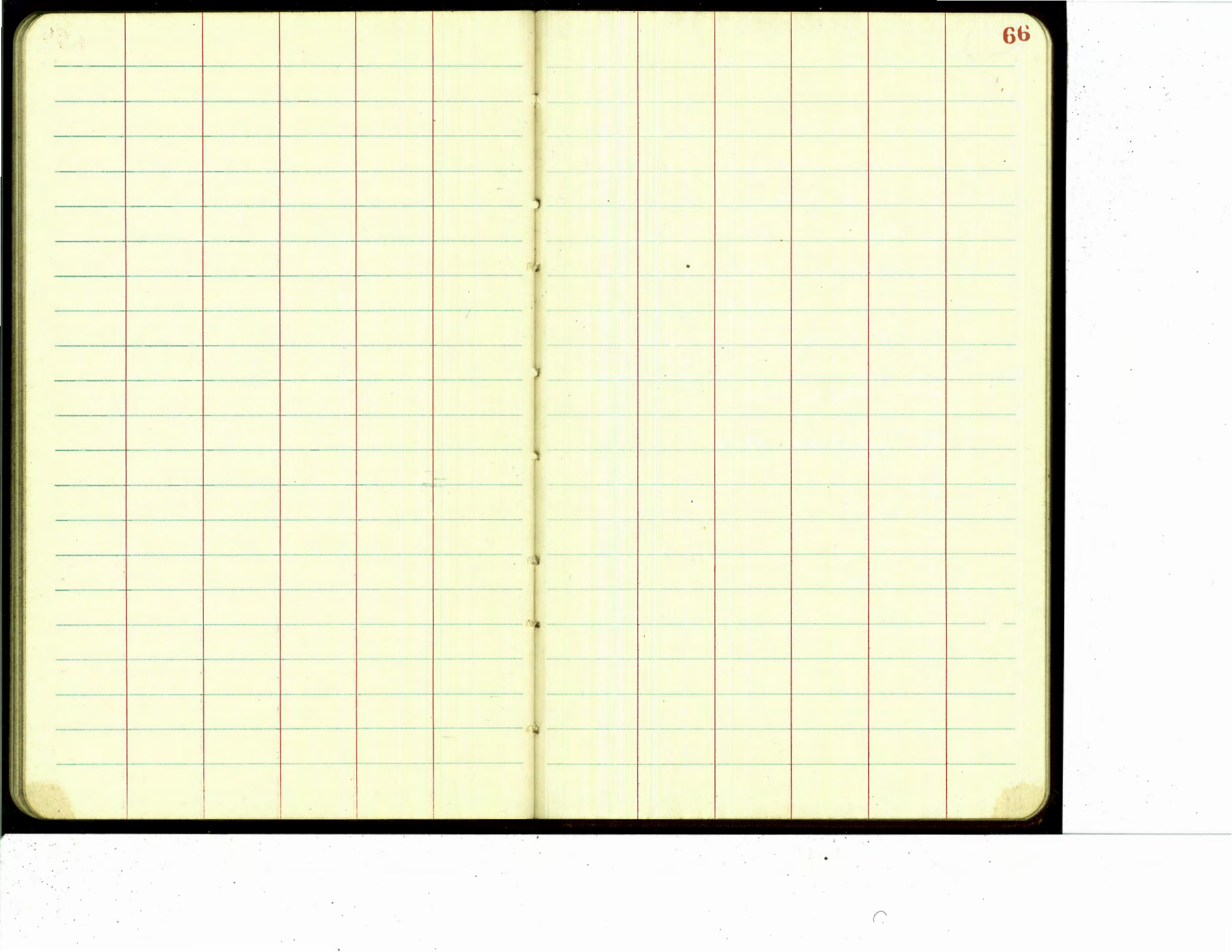
S.L.	7.09	75.83
+1'	7.35	75.57
Gut.	7.29	74.93
+5	7.82	75.10

1+45 = W.L. Alley

cb.	7.14	75.78
Gut. on Conc. Pav.	7.07	75.85
+1' on Black "	7.26	75.66
cb.	7.43	75.49
Gut. Pav.	8.20	74.72
+5 "	8.07	74.85
chk. starting BM.	4.42	78.50



An open notebook with two blank, lined pages. The pages are cream-colored with light blue horizontal ruling and red vertical margin lines. The right page is numbered '65' in the top right corner. The notebook is bound in the center, and the pages are slightly aged with some minor discoloration at the bottom corners.



Walker Alley Blk 48 - W.P. HERBERTS ADD

Hendricks Additional Elevations

Huntley
Carey
5-21-46

5.13 372.00 366.87

East & West Alley

1408 - beginning Asphalt Paving on South

10 Ft. on Pav. 4.51

1433 10 Ft. on Pav. 4.74

4.58 4.83

5.07

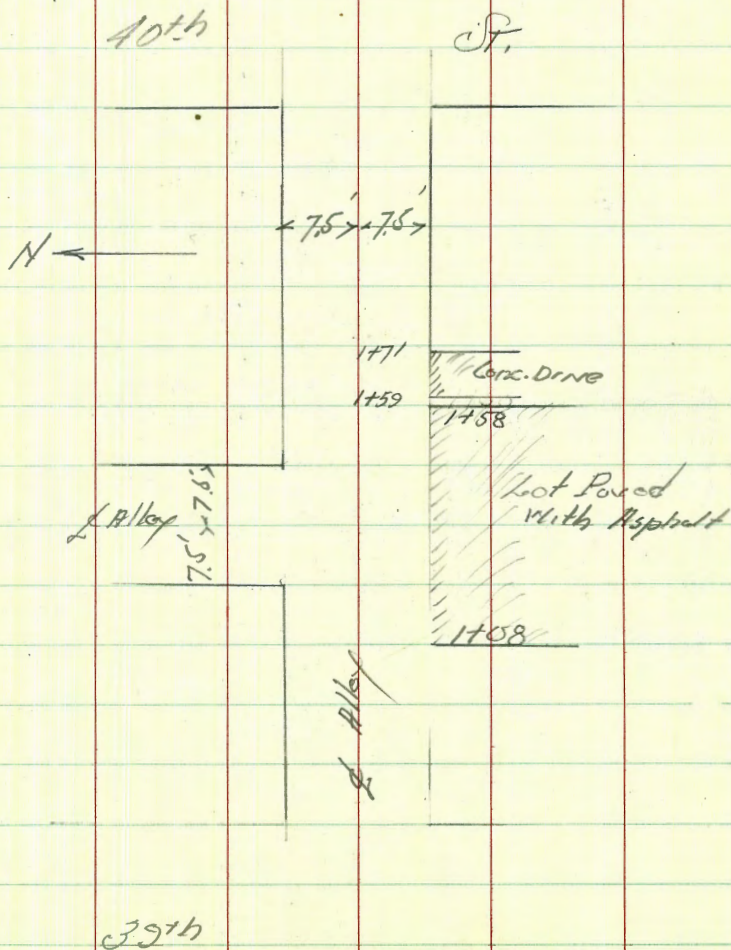
1' Back

1465 - 12' Conc. slab on South

Note:

Asphalt Paving edge Rolled down. Elevations are on Flat Surface

Cross Sections P-71



indexed
C.S.K.

Grades in alley

Blk 47 W.P. Roberts Sub.

See P. 78 for Xsec.

Griffith Co. Contractor

1 + 57. E end Ex. Pav

2 + 0.111

2 + 45.20

2 + 65.022 = W.L. 39TH

C.S. 2nd
C.S.
W.M.

3-4-44

367.72
4.17

371.89

THIS HD
USED

THIS IS NOT
A CITY BRASS
PLUG

Ed 1/2" Iron PIN WITH + ON TOP
IN CURB approx 20' West

of W.L. of 39TH on
S side EL CAYON AVE

THIS I THINK IS A
STATE R.P. POINT

SAME
SETUP
of Level

? 367.72 = BM SW EL CAYON + 39TH 68

369.15 = NE BR EL CAYON + 38TH
See P. 71 THIS BOOK

5.46
374.61
6.85

367.76
11.27

372.03 = 1st H.I.

367.62

ON PAV
367.39 367.57

4.50
4.47
0.03 H

367.48

4.41
7.01

C 2.0 NAIL

367.7

367.46

4.43
4.20

0.17
STUB

367.34

4.55
4.66

STUB
F 0.11

367.14

367.38

4.55
4.47

0.28
STUB

367.12

on Pav 4.77

4.73

4 H

367.99

7.89

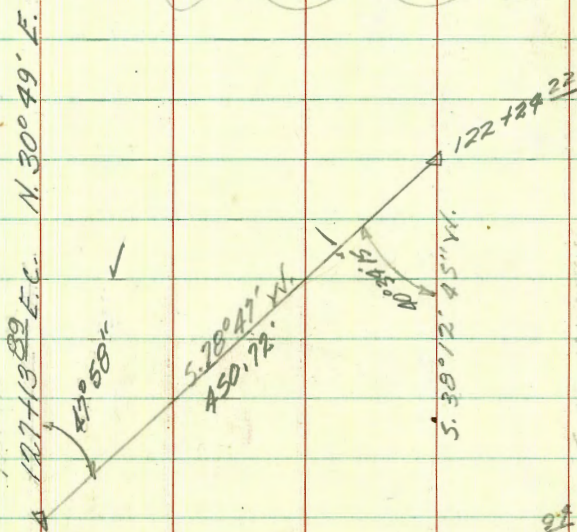
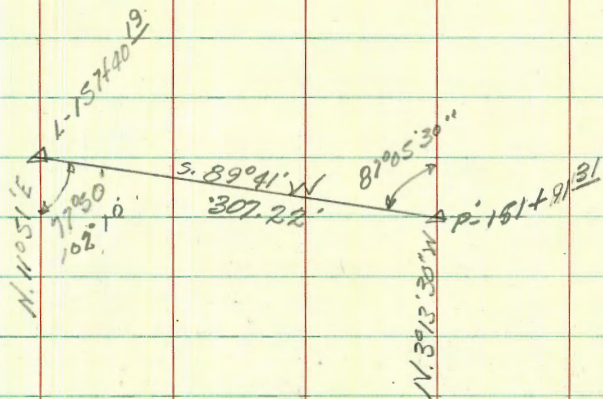
on Pav

367.21

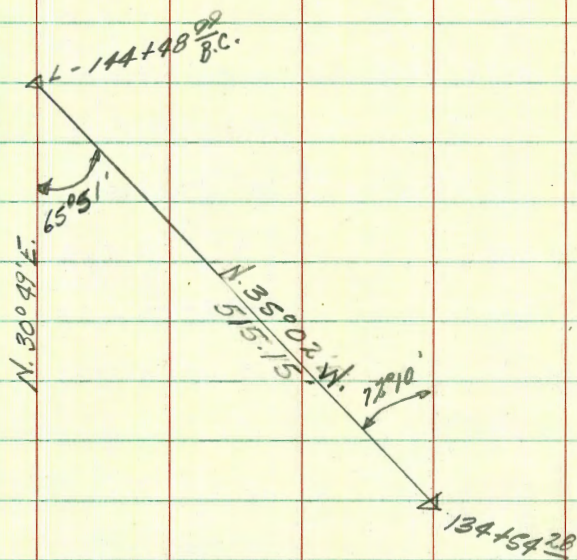
4.68

4.60

0.02
H



111495.92
 A



CROSS SECTION - ALLEY BLK. 48
 W.P. HERBERTS Subdivisions
 Between 39th and 40th
 And E. Cajon & Meade Ave.

9-25-45 Original Sections = FB 1503
 Additional Leads P-67 55

B.M.		373.00	362.15	NE BRP E. Cajon & 38th
	3.85	375.97	372.12	
		372.16	362.44	
T.P.	5.72	375.13	6.56	369.41

EAST AND WEST ALLEY

0-10 = E. Line 39th St.

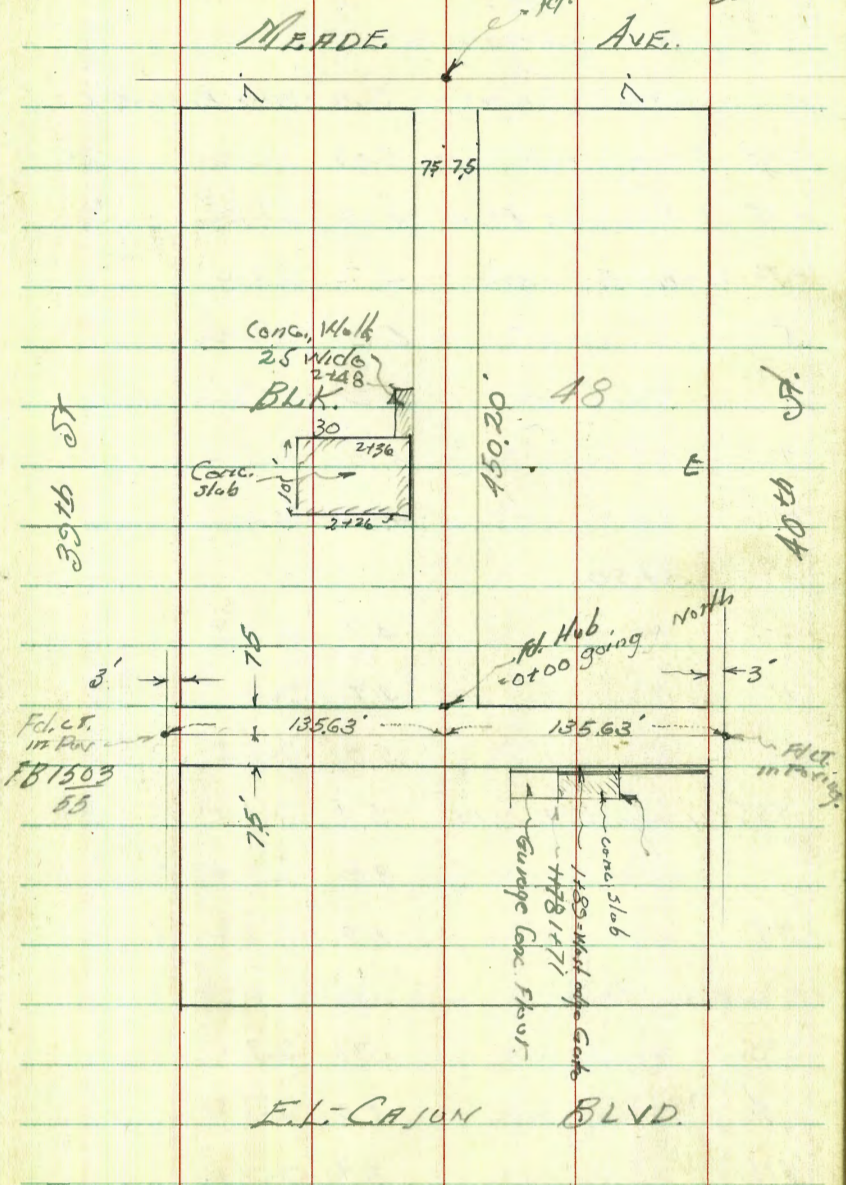
S-25 on cb.		5.25	366.91
" " Gut.		5.78	366.38
S. Gut.		5.65	366.51
S on cb Ret.		5.17	366.99
L		5.63	366.53
N Gut.		5.64	366.52
N on cb Ret.		5.17	366.99
+25 on cb.		5.15	367.01
" " Gut.		5.59	366.57

0+00 = E. Line 39th

N on cb.		5.20	366.96
" Gut.		5.48	366.68
L		5.43	366.73
Gut.		5.28	366.88
S. cb.		4.98	367.18

Notes reduced by C.S. Kelley 9-26-45
 Indexed C.S.K.

Part of FB 1503 55 71



Alley X Section Blk 48

Cont. from P-71

372.16

375.13

216.

0+2.3 - Garages on South = West Entrance

-1.95 = Garage Dirt Floor 5.0 367.2

-2.95 = " " Conc. Floor 4.90 367.26

-3.5 = N edge Garage 5.2 367.0

S 5.2 367.0

L 5.2 367.0

+5 5.2 367.0

N 4.9 367.3

0+50

-5 4.7 367.5

N 4.7 367.5

L 5.0 367.2

+6.5 N edge 16" Elec. Pole 5.1 367.1

S 4.8 367.4

+5 5.0 367.2

1+00

-5 5.1 367.1

L 5.0 367.2

N 5.1 367.1

+5 5.1 367.1

375.13

372.16

4.49

72

1+194 = Garage on N. Conc. Floor 6' Back

1+25.13 ~~alt~~

1+32.63 = West Line N & South Alley

-5 4.8 367.4

South 5.0 367.2

L 5.2 367.0

N 5.0 367.2

1+32.63 ~~alt~~

1+40.13 = N & S Alley

N on Hub. 5.36 366.80

L 5.1 367.1

L on Riv. MH 5.29 366.87

S 5.0 367.2

+5 4.9 367.3

1+40.13 EL N & S Alley ~~alt~~

1+47.63

-5 4.9 367.3

S 5.1 367.1

L 5.2 367.0

N 5.2 367.0

1+71

1+78 = E edge Garage on South See sketch P-71

-5 5.3 366.9

N 5.5 366.7

L 5.2 367.0

Cont. P-73

375+3
372.16Alley Blk 48
Cont. from p72

S		50	367.2	
+0.7'	on Conc. Wall	5.25	366.91	
+6.5'	to Garage	5.22	366.94	
			366.80	
T.P.	4.82	5.36	369.77	
	on Conc. Wall	4.82	366.87	
	1+89 = West edge Gate to Drive on South			
	2+04 = E " " " " "			
-5	on Conc. Slob.	4.66	367.03	
-0.4	" " Wall	4.66	367.03	
S		4.7	367.0	
L		4.8	366.9	
N		4.7	367.0	
-1.8	at House	4.7	367.0	
	2+414 = W. edge Conc. Walk on South			
-1.8	at House	5.1	366.6	
N		5.1	366.6	
L		5.0	366.7	
+7.4	at Walk on ground	4.9	366.8	
	on Walk	4.53	367.16	
0.2	West on Wall	4.42	367.27	
	2+47.4 E edge Above Walk			
5+0.1	on Walk = Wall	4.41	367.28	* Blk in wall
S		4.8	366.9	

374.66
371.89

73

L		5.0	366.7	
+0		5.2	366.5	
N		4.8	366.9	
+5		4.6	367.1	
	2+65.26 = W.L. 40th			
N	on cb.	4.90	366.79	
"	" Gut. Por.	5.09	366.60	
L	on "	5.41	366.28	
S	Line Gut.	5.14	366.55	
"	" Top cb	5.03	366.66	
	on Top Wall = South + 0.5	4.75		
	10' E. F Line 40th = N cb Line 40th			
-4.5	cb.	5.26	366.43	
-4.5	Gut	5.76	365.93	
S	L. Gut.	5.69	366.0	
"	cb Ret.	5.25	366.44	
L		5.74	365.95	
N	Gut.	5.66	366.03	
N	cb Ret.	5.15	366.54	
N	+4.5 on cb	5.14	366.55	
"	" " Gut.	5.66	366.03	

ALLEY 81K 48

Cont. from P. 73

372.06
375.03

74

	371.69		
	374.66		
	372.06		366.80
TP	5.26	375.03	4.89 369.77

North and South Alley

0+00 = N Line Alley

E		5.1	367.0
S		5.3	366.8
W		5.1	367.0

0+50

-5		5.1	367.0
W		5.1	367.0
S		5.1	367.0
E		5.1	367.0
+5		5.3	366.8

0+75

-5		5.3	366.8
E		5.3	366.8
S		5.2	366.9
W		5.1	367.0
+5		5.0	367.1

0+85 = Elec. Pole on W 1.5' in Alley

-5 4.9 367.2

W 4.7 367.4

S 5.0 367.1

E 5.1 367.0

+5 5.2 366.9

4.88 367.18

1+09 = 7.0' Conc. Slab on E 4' Buck

4.40 367.66

1+08 = South edge 3' Conc. Walk on West. Parallel to Alley

1+23 N " 4.35 367.71

1+15

-5 4.9 367.2

E 4.9 367.2

S 4.8 367.3

W 4.7 367.4

1+50

-5 4.6 367.5

W 4.5 367.6

S 4.8 367.3

E 4.8 367.3

+5 4.3 367.8

	37803 372.06	N + S - Alley		
	1+79.50	= South edge	Dble Garage on W. Conc. Floor	
-5		4.9	367.2	
E		5.1	367.0	
L		4.9	367.2	
W		4.9	367.2	
+0.2	= Too Conc. Apron	4.94	367.12	
+32	= Brk. " "	4.73	367.33	
+8.6	on Conc. Floor	4.67	367.39	
	1+98.5	= N edge	Above Garage	
-8.6	on Conc. Floor	4.46	367.60	
-3.2	Brk. Conc. Apron	4.54	367.52	
-0.2	on Top Conc. Apron	4.88	367.18	
W		4.8	367.3	
L		4.8	367.3	
+5		4.7	367.4	
E		4.3	367.8	
		4.86	367.20	
1+82.8	= L 2' Conc. Walk on E 35' Back			(Not in use)
1+93	= L 2' conc. Ribbon on E 35' Back	4.69	367.37	} Formerly conc. Drive to Garage
1+97	" " " " " E 35' Back	4.69	367.37	

	372.06 373.47		367.50	75.	
T.P.	5.97	376.44	4.56	370.47	
		2'	6.16	367.31	
	2+01	= L Conc. Walk on W, 2.0 in Alley			
	2+06.2	= S edge Dble Garage on W 0.5' Back			
W	0.5	on Garage Floor	5.80	367.67	
W	+2.3	Too Conc. Apron	6.16	367.31	
L			6.0	367.47	
E			5.8	367.67	
+5			5.4	368.07	
	2+24.5	= N end Above Dble Garage			
-5			5.4	368.07	
E			5.9	367.57	
L			5.9	367.57	
+5.2	Too Conc. Apron		6.09	367.38	
W	+0.5	= Garage Floor	5.79	367.68	
			5.53	367.94	
	2+26	= South edge Conc. Slab on West			
	2+31	= L Above Conc. Slab		Drains to Alley	
W. Line		on Conc. Slab	5.72	367.75	
30'	West on "		5.42	368.05	
2+36	= N edge Above Slab		5.50	367.97	beg. Conc. Walk
2+48	= N end Conc. Walk		5.52	367.95	

37644
373.47

N + S - Alley

2+30	Elec. Pole	5'lt of E		
2+37	= 4" Oleander Tree on W	5'lt of E		
2+42	" 3	" " " "	5'lt of E	
2+50	" " " "	" " " "	5'lt of E	
2+54	" 2" " "	" " " "	5'lt of E	
	on Top =	376	367.95	
2+53	= 9' Conc. Porch on W	0.6' in Alley		
		5.52	367.95	
2+65	= South edge 4' Conc. Walk on W	1.5' in Alley		
2+69	= " " " "	5.50	367.97	
2+69	= South end 3 Car garage on W + East			
-0.5	= Garage Floor	5.29	368.18	
W+1.5	Toe Conc. Apron	5.59	367.88	
E		5.5	367.97	
E		5.5	367.97	
+5	Toe Conc. Apron	5.52	367.95	
+7.2	on Garage Floor	5.35	368.12	
2+98	= N end Above 3 Car garages on E + W			
-7.2	on Floor	5.38	368.09	
-5	on Toe Conc. Apron	5.50	367.97	
E		5.6	367.87	
E		5.5	367.97	
+5.8	Toe Apron	5.55	367.92	
W+0.5		5.35	368.12	

37644
373.47

76

2+99	= 2' Conc. Walk on W	5.47	368.00	1.5' in Alley
"	W+10 on "	5.53	367.94	
	3+25			
-5		5.2	368.27	
W		5.1	368.37	
E		5.2	368.27	
E		5.3	368.17	
+5		5.4	368.07	
3+36	= Elec. Pole on W	5.4	368.07	5.4'lt of E
	3+50			
-5		5.1	368.37	
E		5.1	368.37	
E		5.1	368.37	
W		4.9	368.57	
+5		5.2	368.27	
3+86	= S. side Garage on W			4.6' Back
W-1.3	= Toe Conc. Apron	4.98	368.49	
W-4.6	on " Floor	4.74	368.73	
3+98	= N. Side Above Garage			
W-1.3		4.82	368.58	
W-4.6	on Garage Floor	4.64	368.83	

3+98

376.44
373.47

N + S - Alley

W		4.9	368.57
L		4.9	368.57
E		4.8	368.67
T.S.		4.8	368.67
4+05 = L Gauge on E. Coni. Floor			
E - 4' on Floor		5.18	368.29
E 0.7 " Top Conc. Apion		4.43	369.04
4+40			
-5		4.9	368.57
E		5.0	368.47
L		5.0	368.47
W		5.0	368.47
4+50 2 = S. line Meado Ave			
W on cb.		4.93	368.54
Gut		5.13	368.34
L		5.33	368.14
E Gut.		5.17	368.30
E cb.		4.94	368.53
T.P.	50.3	373.33	368.30
		376.30	371.27
14' N of S.L. Meado = S. cb.			

S. cb. Meado 376.30
373.33

E - 32 on cb.		4.98	368.35
" " Gut.		5.52	367.81
E "		5.44	367.89
" cb.		4.96	368.37
E		5.45	367.88
W cb.		4.94	368.39
" Gut.		5.37	367.76
W 732 cb		4.85	368.48
" Gut.		5.26	368.07
chk N.W. BP	Not in		Meado + 40' h
		377.29	368.97
T.P.	8.32	380.26	4.36 371.94
chk. NW BP			Meado Ave + 38' h
		300	
		376.06	372.30
T.P.	3.76	379.03	4.29 375.27
T.P.	3.77	372.92	369.15
chk. Shading BM.		375.03	6.91 372.12
			369.18
			000
chk SW Top cb		5.27	367.65
			370.62
T.P.	4.39	371.47	367.08
		374.44	5.84 370.05
chk SW BP 40' h E/Cujon		5.42	366.05
			369.02
Starting B.M. Hopkins by			366.05
			2.97
			OK, after correction
			- To be subtracted from starting B.M. Elev = 372.12 " - 369.15

corrected

77

Walker
Huntley
1-18-46

CROSS SECTION Alley Blk. 47

W.P. HERBERTS SUBDIVISION

Between 38th and 39th

North of El Cajon Blvd

Original X-Sections

FB 570
69

East and West Alley

440 372.12

367.72

B.M. SW. BR
El Cajon
+ 39' - FB 570
69

0+00 = E. Line 38th St

N cb. 2.09 70.03

" Gut. on Pav. 2.39 69.73

L " " 2.72 69.40

Sh. " " 2.43 69.69

" Top cb 2.24 69.88

0+20 = Blk.

S.L. 2.59 69.53

L 2.84 69.28

N 2.65 69.47

0+40 = Blk.

N 3.12 69.00

L 3.23 68.89

S 3.09 69.03

Indexed
C.S.K.

78

39th

Jr.

2+652.2

15

1+57
= End Existing Paving.

108.2

45'

See p. 68 For Grades

Alley

0+00

38th

Jr.

372.12

0+60 = Brk

S.L.	3.52	68.60
E.	3.81	68.31
N.L.	3.57	68.55

0+80 = Brk

N	3.92	68.20
E	4.13	67.99
S	3.83	68.29

1+00 = Brk.

S	4.14	67.98
E	4.38	67.74
N	4.11	68.01

1+25.1 = Wk. Alley on North

N	4.21	67.91
E	4.46	67.66
S	4.11	68.01

1+40.1 = E.L. Alley on North

S	4.17	67.95
E	4.53	67.59
N	4.37	67.75

1+32.5
chk Rim MH

4.50 367.62

Has been
Issued
Since
orig. Notes

372.12

1+55

N	4.32	67.73
E	4.58	67.54
S	4.37	67.75

1+57 = End of Existing Paving

S	4.50	67.62
E	4.73	67.39
N	4.55	67.57

1+75

N	4.4	67.7
E	4.4	67.7
S	4.4	67.7

2+00

S	4.5	67.6
E	4.6	67.5
N	4.5	67.6

2+30

N	4.7	67.4
E	4.8	67.3
S	4.7	67.4

79

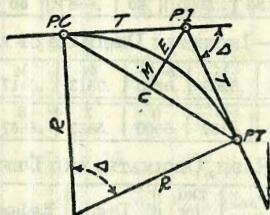
37212

2.6522 = W.L. 391/54

S. Top cb.	4.77	67.35
" Gut on Pav.	5.00	67.12
g	5.13	66.99
N. Cent chk	4.91	67.21
N. Top cb.	4.71	367.41
FB 570 71		367.40 0.01

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

Copyright, 1914, by Eugene Dietzgen Co., New York City



CURVE FORMULAS

$$\text{Radius} = R = \frac{50}{\sin \frac{D}{2}} \quad (1) \quad \text{Degree of Curve} = D \text{ and } \sin \frac{D}{2} = \frac{50}{R} \quad (2)$$

$$\text{Tangent} = T = R \tan \frac{\Delta}{2} \quad (3) \quad \text{Length of Curve} = L = 100 \frac{\Delta}{D} \quad (4)$$

$$\text{Middle ordinate} = M = R(1 - \cos \frac{\Delta}{2}) \quad (5) = R \text{vers} \frac{\Delta}{2} \quad (6)$$

$$\text{External} = E = T \tan \frac{\Delta}{4} \quad (7) = R \div \cos \frac{\Delta}{2} - R \quad (8) = R \text{exsec} \frac{\Delta}{2} \quad (9)$$

$$\text{Long Chord} = C = 2 R \sin \frac{\Delta}{2} \quad (10) \quad \Delta = \text{Central Angle}$$

EXPLANATION AND USE OF TABLES

Stations.—Given P. I. = Sta. 161 + 60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $+8\frac{1}{2} = 414.49$ ft. From Table V correction = .36 or $T = 414.85$ ft. P. C. = Sta. P. I. $- T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T. = Sta. P. C. $+ L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft. = 7.27 ft. Distance = 158 $-$ Sta. P. C. = 54.50, hence offset = 7.27 $(54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26) = 2.16$ ft.

Deflections.—Deflection angle = $\frac{1}{2} D$ for 100 ft., $\frac{1}{4} D$ for 50 ft., etc. For c ft. = (in minutes) $.3 \times C \times D^\circ$ or = defl. for 1 ft. from Table III $\times C$. For Sta. 158 of above curve = $.3 \times 54.5 \times 8\frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or $= 2.50 \times 54.5 = 136.2'$ from Table III. For Sta. 159 deflection angle = $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 91.27$ and from Table V correction = .10 or $E = 91.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $+42 = 5.5$ or $D = 5^\circ 30'$.

1300
833 Capistrano

0.26 S
0.30 N

39 + 99.75
26 + 38.30
13 61.45

DISTANCES FROM CENTER OF ROADWAY FOR
CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9 + (20—16) ÷ 2 or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.

MADE IN U.S.A.