1735

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)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

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CITY ENGINEER'S OFFICE

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Walker
Hendricks
Becker
5-28-46

Cross Section 15' Alley
Blk. 8 Ocean Beach Park
Between Muir And Longbranch
from Ebers to Sunset Cliffs Blvd.

BM F.B. 1726:20	5.10	36.31	31.21	Set 7' back Muir & Ebers
	0-10			
N cb		4.83	31.48	
" Gut	Paving	5.44	30.87	
L	"	5.46	30.85	
S. Gut.	"	5.41	30.90	
S cb.		4.79	31.52	
	0+00 = W.L. Ebers = End Exist Pav.			
S cb.		4.61	31.70	
S Gut.	Pav	4.91	31.40	
L	"	5.24	31.07	
N Gut.	"	4.85	31.46	
N cb.		4.71	31.60	Conc. Floor
	0+07 = Beg. 4 Car Garage on N			
-8.7' = Garage Floor		3.93	32.38	
-0.2' = Toe Conc. Apron		4.55	31.76	
N		4.5	31.8	
L		5.0	31.3	
S		4.7	31.6	
+5		4.5	31.8	
	0+24			
-8.7' = Garage Floor		3.97	32.34	
-0.2		4.46	31.85	
N		4.5	31.8	

Indexed
e.s.R.

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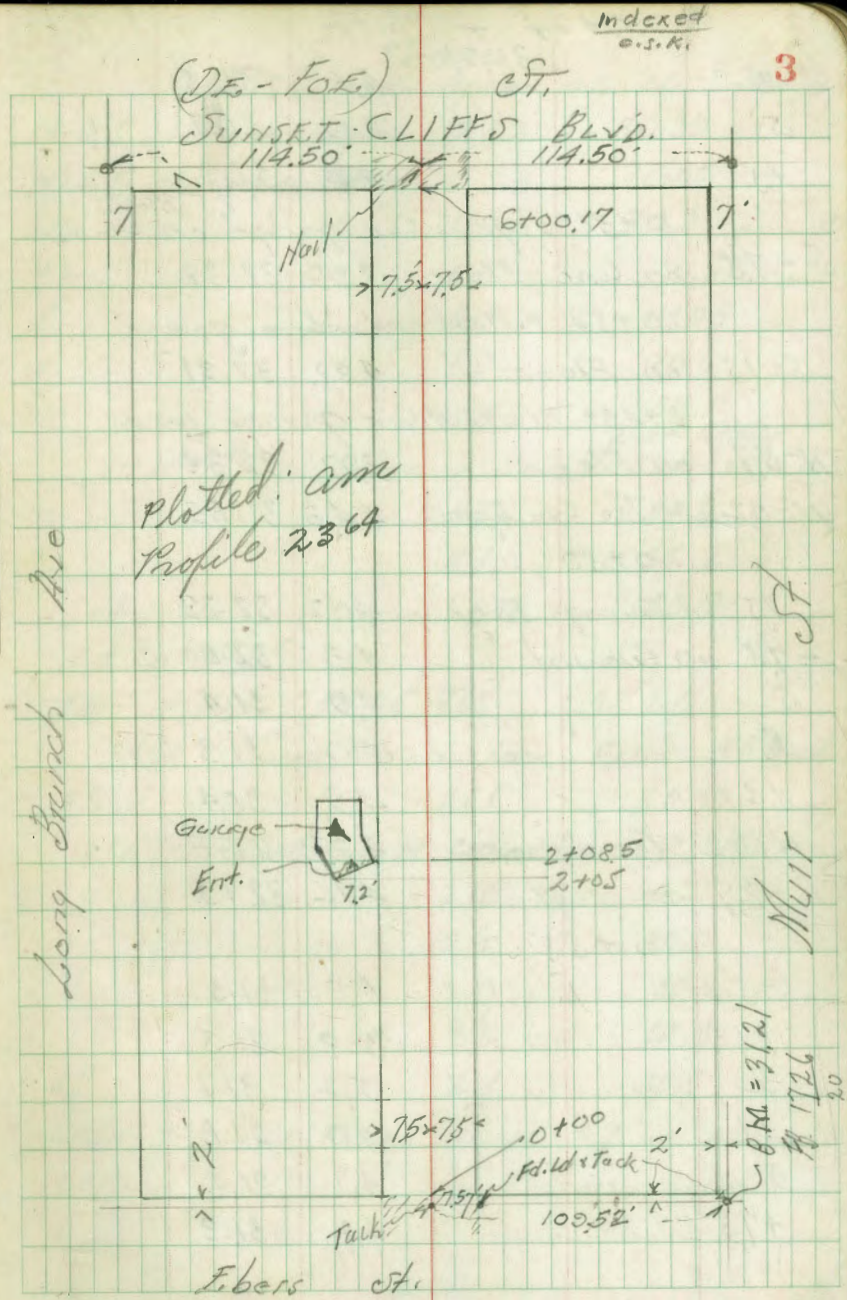

0+24 ℄ 36.31

℄	4.8	31.5
S	4.6	31.7
+5	4.4	31.9

7.5' Back.

0+36 = Beg. 2 Car garage on South

S-7.5' on Conc. Floor	3.99	32.32

0+54 = West end Above garage

S-7.5' on Floor.	4.00	32.31

0+43 = West 4 Car garage on N

N-8.7' on Floor	3.97	32.34
N-0.2 " Toe Conc. Apron	4.46	31.85

0+50

-7.5 on Garage Floor	4.02	32.29
-7.5 on Ground	4.3	32.0
S	4.9	31.4
℄	5.0	31.3
+4	4.9	31.4
N+0.2' = Toe Apron	4.33	31.98
+8.7 on "	4.16	32.15

0+55

-5	5.0	31.3
N	5.0	31.3
℄	5.2	31.1
+6	5.2	31.1
S	4.9	31.4
+7.5	4.4	31.9

36.31 = ℄

8.5' Wide

0+93 = ℄ Conc. Apron on N-℄ Garage 4

N-2.5 on Toe Conc. Apron	5.32	30.99
N-6.5 " Garage Floor	5.23	31.08
N	5.4	30.9
+2	5.8	30.5
℄	5.8	30.5
S	5.7	30.6
+5	5.5	30.8

Dirt Floor

1+10 = ℄ 20' Garage on S. Sh. Ent. on Line

S	5.7	30.6
℄	6.1	30.2
N. of Fence	5.8	30.5

1+20 = Pole

T.P.	0.29	32.95	3.65	32.66

1+34 = ℄ Garage on N. Conc. Floor 5.8 Back

Floor	2.65	30.30

1+43 = ℄ Garage on N Conc. Floor 5.8 Back

Floor	2.72	30.23
N	2.9	30.0
℄	2.0	30.9
S	2.6	30.3
+5	2.4	30.5

0+50 4' Board Fence on N 0.7 in Alley

0+75 " " " " " on Line

3295 Alley Blk. 8

1+69 = ℄ Garage on South		5.3 Back	Conc. Floor
-5.3 = Floor	2.92	30.03	
S	3.2	29.7	
℄	3.2	29.7	
N	3.1	29.8	
1+77 = Beg. 2 car garage on S 7.5' Back			
Conc. Floor	3.17	29.78	
S+1.5 Toe Apron	3.37	29.58	
1+93 = End Above garage			
Conc. Floor	3.12	29.83	
S +1.5' = Toe Apron	3.37	29.58	
2+00			
N -5	3.4	29.5	
N	3.4	29.5	
℄	3.6	29.3	
S	3.5	29.4	
2+05			
on Garage Floor 7.2' South	3.23	29.72	
2+08.5 on Garage Floor S.L.	3.27	29.68	
2+28 = Beg. 2 Car Garage on South			
-3.8' on Conc Floor	3.33	29.62	
S.L. on Toe Conc. Apron	3.67	29.28	
℄	4.0	28.9	
+3	4.0	28.9	
N	3.7	29.2	
2+48 = N end Above garage			
N	3.7	29.2	
+3	4.0	28.7	

3295

℄	4.1	28.8
S.L. = Toe Conc. Apron	3.72	29.23
+3.8' = Conc. Floor	3.38	29.57
2+54 = Elec. Pole on South 18' in Alley		
2+75		
S	3.9	29.0
+3	4.2	28.7
℄	4.3	28.6
+3	4.3	28.6
N	3.9	29.0
3+00		
N	4.3	28.6
℄ Rim Sewer MH	4.33	28.62
S	4.4	28.5
3+19 = ℄ Garage on N Dirt Floor		
N+3.5 at garage	4.5	28.4
3+32 = ℄ Garage on N Dirt Floor		
N+6'	4.8	28.1
3+40 = ℄ garage on N		
N+6	4.9	28.0
3+50		
S	4.7	28.2
℄	5.0	27.9
N	4.9	28.0
+5	4.7	28.2
3+76 = ℄ Pole on S 18' in Alley		
3+75 = ℄ 18" Cypress Tree on S. 6.7' Back = ℄ Tree		

32.95 Alley Blk. 8

	4+00		
N-2		5.2	27.7
N		5.2	27.7
℄		5.1	27.8
S		4.9	28.0
	4+20 = ℄ Garage on S	2' Back	Conc. Floor
Conc. Floor		4.86	28.09
S+1	Toe Apron	4.99 5.2	27.96 27.7
	4+31 = ℄ Garage on S Dirt Floor		
	4+50		
-2		5.4	27.5
S		5.4	27.5
℄		5.6	27.3
+4		5.6	27.3
N		5.1	27.8
	4+82 = Beg. 2 Car Garage on N		
-6.2	= Conc. Floor	5.37	27.58
N		5.6	27.3
℄		5.7	27.2
S		5.4	27.5
	4+99 = W. end Above garage		
	Floor	5.33	27.62
	5+00		
S		5.4	27.5
℄		5.7	27.2
N		5.5	27.4

32.95

	5+03.5 = Beg. Dble. garage on South		
	Conc.		
S-7.7	= Garage Floor	4.87	28.08
S-4.7	= Toe Conc. Apron	5.07	27.88
	5+18 = End Above garage		
S-7.7	= Conc. Floor	4.76	28.19
S-4.7	= Toe Conc. Apron	4.99	27.96
	5+24 = Elec. Pole on South 2.8' in Alley.		
	5+28 = Beg. Dble garage on N		
	5+28 to 5+42 Cottage on South	formerly a garage	
S-1.8	of Cottage on Conc. Apron	5.20	27.75
S-0.3	Toe Conc. Apron	5.33	27.62
	℄	5.9	27.0
	N	5.8	27.1
	+8.3 Conc. Apron	5.89	27.06
	+10.4 = " Floor	5.73	27.22
	5+46 = End Above garage on N		
	Floor	5.66	27.29
	Apron	5.85	27.10
	5+50		
	N	5.8	27.1
	℄	6.2	26.7
	S	5.6	27.3
	5+60 = ℄ garage on South	Dirt Floor	
S-4.6		5.8	27.1
	5+75 = Pole on N 1' in Alley		
S		6.3	26.6

		3295	Alley	Blk 8
℄			6.6	26.3
+4			6.6	26.3
N			5.7	27.2
T.P.	4.75	30.43	7.27	25.68
	6+00.17 = E		Line Sunset Cliffs Blvd	
N Top cb.			4.01	26.42
N Gut. Paving.			4.24	26.19
℄	"		4.60	25.83
S Gut.	"		4.19	26.24
S cb.			3.89	26.54
	6+10.17 = E cb.			
S cb			4.11	26.32
Gut	Pav.		4.78	25.65
℄	"		4.83	25.60
N	"		4.84	25.59
cb.			4.20	26.23
Chk	Volturno + SW B.P.	Sunset Cliffs	4.87	25.56
				25.50 - BM
				0.06

Cross Section Niagara Ave
Catalina Blvd. to Venice St

Levels next page

Sept 26-46
Sisson
McCay
Haddel
Hilen

Work order 230

Indexed
C.S.K.

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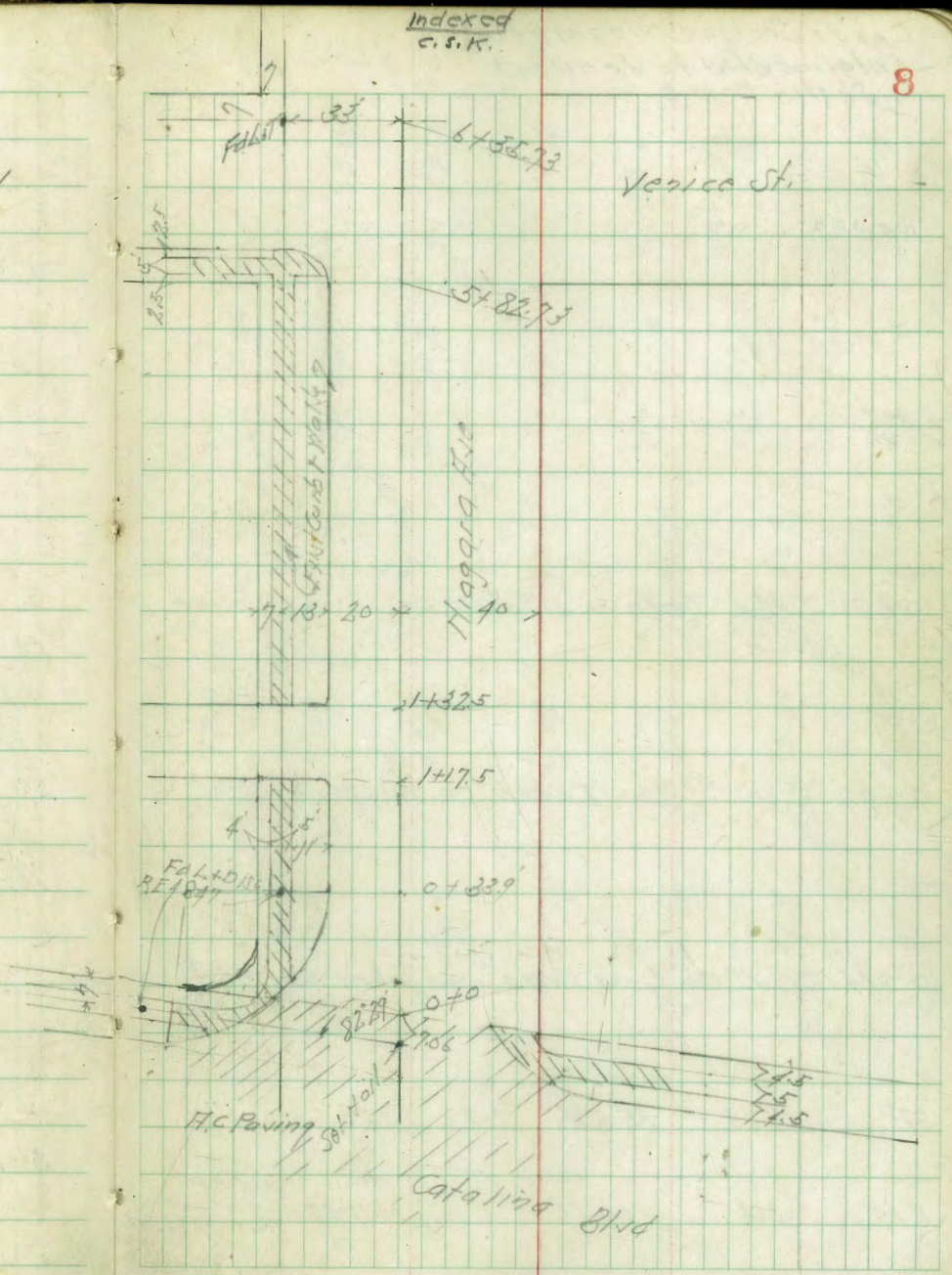

Cross Section Niagara Ave
Catalina Blvd to Venice St.
Sketch Page 8

0+38.9					
+16					
0+0 = W.L. Catalina Taken on Line of Catalina					
0-07.06 Taken on Diag					
0-14.12 = W Cb Line Catalina Taken on Line of Catalina					
TP	7.43	155.86	12.23	148.43	
BM	3.14	160.66		157.52	NERP Catalina & Narragansett

Lt = 5 Δ Rt = 14 9

| | | | | |

Niagara Arc.

+50				
TP	12.19	179.98	0.59	167.79
+32.5 : N'ly Alley on Lt.				
+17.5 : E'ly Alley on Lt.				
170				
+75				
TP	12.65	168.38	0.13	155.73
0+50			-	
		155.86		

Lt.									Rt.

TP	12.5	205.28	0.02	192.73
3+0				
+75				
TP	12.80	192.75	0.03	179.95
+50				
+25				
2+0				
1+75				
		179.98		

Lt. | Rt.

Niagara Ave.

+50				
TP	11.45	225.36	2.40	213.91
+25				
400				
+75				
TP	12.39	216.31	1.36	203.92
+50				
3+25				
		205.28		

Lt. | Ct | Rt

13.54 | 12.8 | 13.4 | 13.6 | 11.1 | 10.0
11.82 20 :46 | 12.6 20 :40 Gutter | 12.0 | 11.8 20 | 8.3 20 | 7.9 10
225.36
11.53 | 11.1 | 11.3 | 10.0 | 13.1 | 13.9
4.78 20 | 5.2 20 | 5.0 | 4.9 | 2.6 20 | 0.4 10
08.27 | 07.6 | 07.8 | 08.3 | 14.9 | 15.1
8.04 20 | 8.7 20 | 8.5 | 8.0 9 | 1.4 20 | 1.2 40
203.92 | 203.31 | 203.9 | 203.3 | 01.5 | 02.5 | 211.5
12.39 20 | 13.1 20 | 13.4 | 13.0 9 | 6.8 18 | 6.8 20 | 4.8 40
216.31
98.75 | 98.0 | 98.2 | 98.4 | 203.5 | 206.3 | 207.7
6.52 20 | 7.3 20 | 7.1 | 6.9 10 | 1.8 20 | +1.0 40 | +2.4 50
93.89 | 93.1 | 93.9 | 92.7 | 95.3 | 95.7 | 95.6
11.40 20 :06 | 12.1 20 :40 Gutter | 12.0 | 11.6 12 | 10.0 16 | 9.6 20 | 9.7 27
88.9 16.4 36
88.6 16.7 40
88.7 14.7 50
205.28

BM			7.68	217.68	SW. BP Niagara + Venice 217.72
+92.73 = E Cb Line of Venice					
+82.73 = E.L. Venice					
+40					
5+0					
4+75					
		22536			

Lt.		Rt.
16.13	17.7	18.4
17.17		
16.1		
16.8		
8.63 10=Cb.	7.7	7.0 20
8.19 30=Cb2c		
9.3 30=Gut.		5.7 40
8.6 20		
12.22	17.6	18.1
8.14 20=Cb	7.8	7.3 30
8.3 20=Gutter		
16.08	14.7	16.8
9.28 20	8.7	8.6 20
9.4 30		
15.06	15.7	16.0
10.30 20	9.7	9.4 30
10.4 20		
14.41	14.7	14.8
10.95 10=Cb	10.7	10.6 30
14.4 20=Gutter		

Lt.		Rt.
19.7		
5.7 40		
20.2		20.4
5.2 25		5.0 40
19.0		19.8
6.4 25		5.6 40
18.1		18.5
7.2 25		6.9 40
15.1		18.0
10.3 25		7.4 40

22536

Cross Section Venice St. Orchard Ave
to 200' South Level next page

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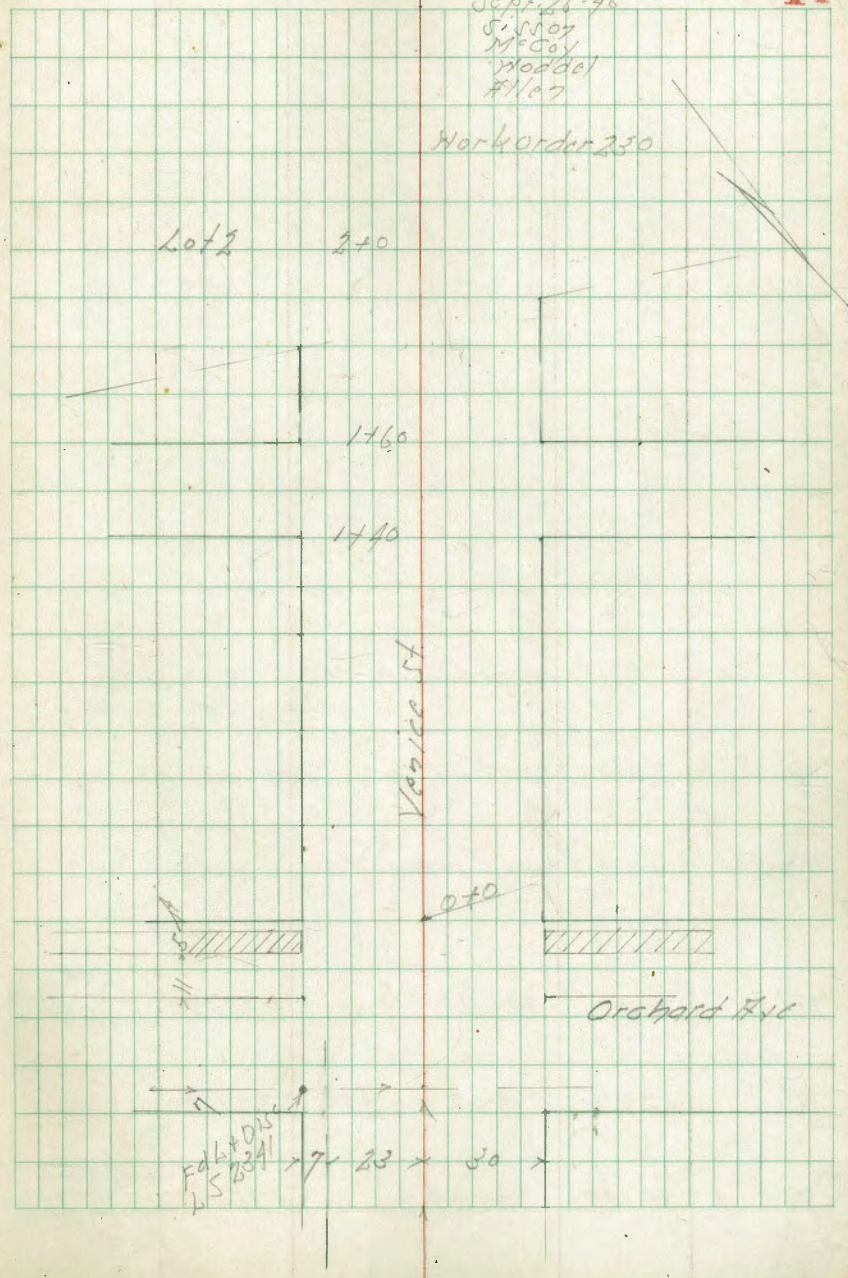
Sept. 26-46
S. S507
M. Coy
Modified
Plot

Work order 230



Cross Section Venice St.
Orchard Ave. to 200' South

+40					
+70					
+50					
040	= S.L. Orchard Ave				
0-5	228 Rt of ℄: Wly Power Pole				
0-20	: S C6 Line Orchard				
TP	10.47	226.83	3.31	216.36	℄ Dive Wly ℄ Orchard ℄ Venice
TP	12.97	219.67	0.29	206.70	
BM	10.49	206.99		196.50	S.W. BP Catalina Blvd & Orchard

Lt ℄ ℄ Rt: W

16.1 18.6 18.6 18.5 18.7 18.9
10.7 8.2 8.2 8.3 8.1 7.9
35'=Tr Pit 30 20 20 30

15.8 18.1 18.2 18.1 18.5 18.6
11.0 8.7 8.6 8.7 8.3 8.2
35'=Tr Pit 30 20 30

16.3 17.1 17.4 17.5 18.3 18.5
10.5 9.7 9.4 9.3 8.5 8.3
35'=Tr Pit 30 20 20

14.9 16.1 16.5 17.2 17.8 18.8 18.8
11.9 10.7 10.3 9.6 9.0 8.0 8.0
30 30 20 20 30

13.68 16.07 15.2 15.7 16.8 17.5 17.8 16.60 11.49
13.21 10.76 11.6 11.1 10.0 9.2 9.0 8.2.3 5.34
80=C6 30=C6 30=Gutter 20 30=Gutter 30=C6 30=C6

226.83

Lt. Rt

2+0

1+60

226.83

15.7 19.3 19.1 19.2 19.3 19.4

11 7.5 7.7 7.6 7.5 7.1
37=Toe Fill 30 20 20 30

15.9 18.7 18.7 18.9 19.0 19.0

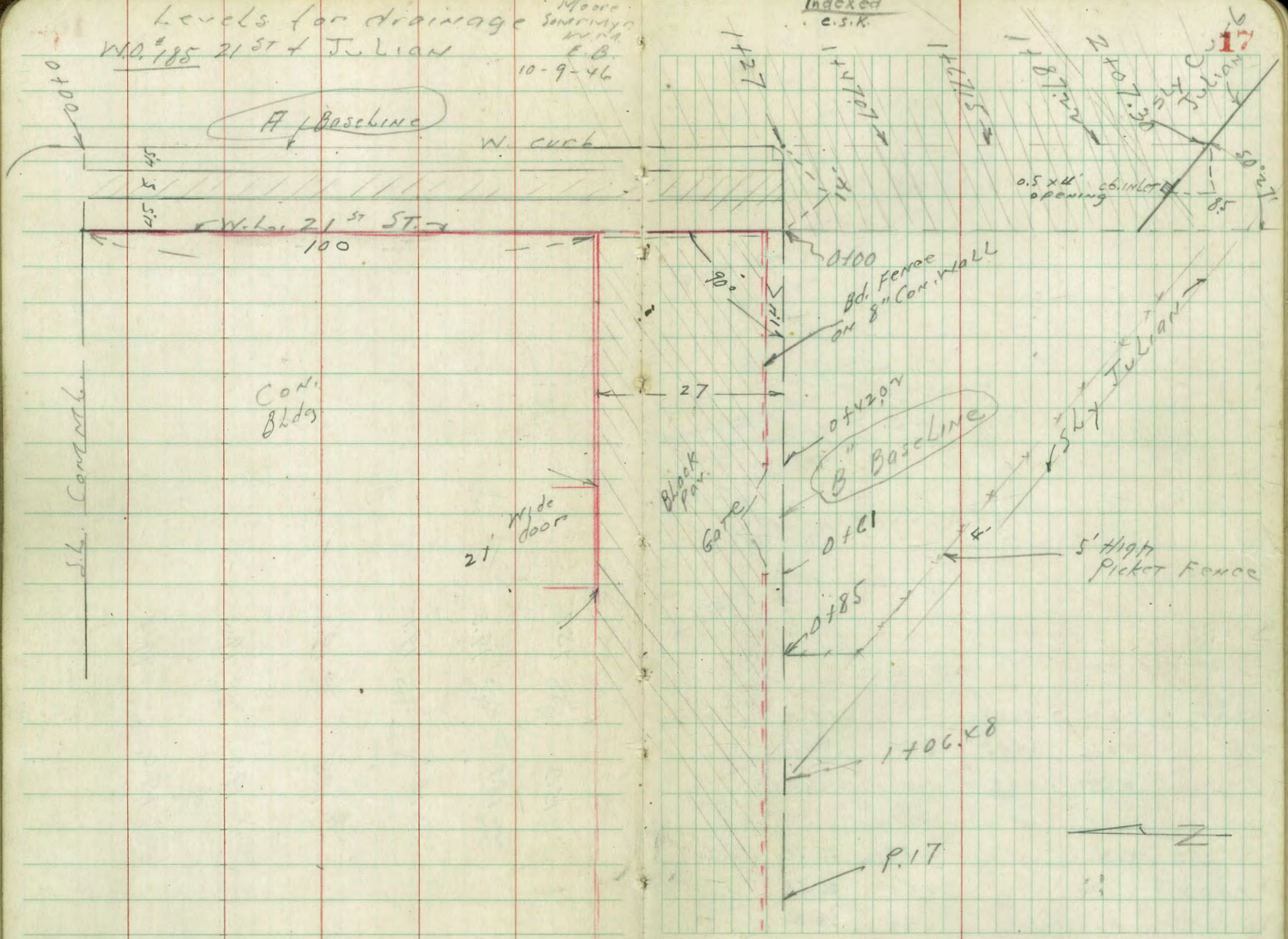
10.9 8.1 8.1 7.9 7.8 7.8
36=Toe Fill 30 20 20 20 30

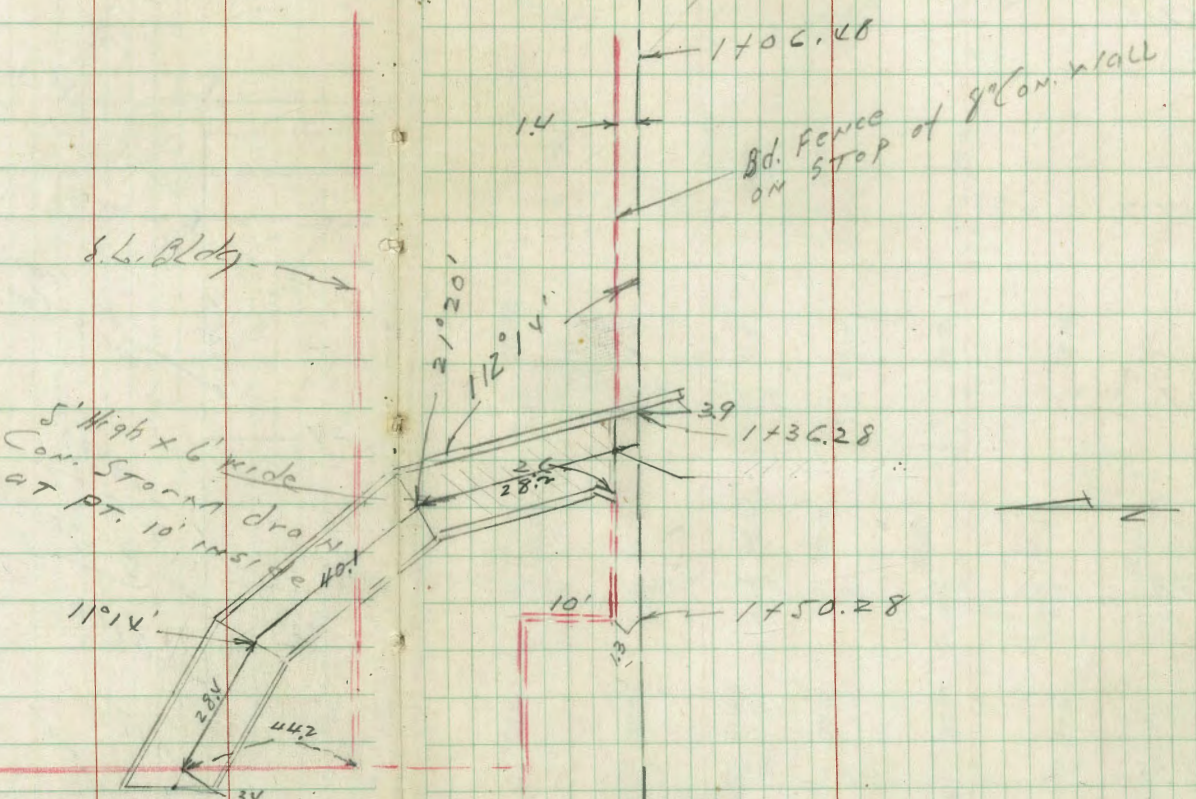
226.83

Levels for drainage
W.O. # 185 21st & J. Lian

Moore Sonstroyn Wurts
E.B.
10-9-46

Indexed
C.S.K.





Levels on Ex. Con. drain

NW BP	1.52	+2.48		40.96	21st + Comm.
T.P.	1.27	34.98	8.77	33.71	
T.P.	4.29	28.55	10.72	24.26	
0+00			2.85	25.70	F.L.
0+07			2.04	26.51	F.L.
0+28.2	Δ 21°20' Lt.		2.79	25.76	F.L.
0+68.3	Δ 11°14' Lt.		3.8	27.8	F.L.
0+96.7	at w.l. Bldg		4.30	27.25	"
1+00.1	end		4.31	27.24	"

Levels on Paving
21st St. at Julian

17+27.15					
17+47.07					
17+27					
17+00					
0+50					
0+00 = S.L. Comm'l.					
T.P.	0.71	45.31 ✓	5.90	44.60	
SEBP	4.46	50.50 ✓		46.04	Kearney Beardsley

LT = East "A" RT.

34.98	34.98		34.80	33.99				
10.83	10.83		10.9	11.37				
2 C	13		Pav	1 x Pav edge				
38.60	38.61		34.16	33.76				
10.71	10.70		11.15	11.55				
2 C	13		Pav	1 x Pav. edge				
34.88	34.92	32.55	38.01	33.59		33.18		
10.43	10.89	11.76	11.30	11.37		12.13		
2 C	13	97.	Top Return	1 x Top Build C6		1 x Pav. edge 97 Typ.		
36.01	35.51	34.65	35.17	35.27		35.1		36.22
9.30	9.80	10.66	10.14	10.04		10.2		9.09
2 C	13	97.		9.5		1 x dirt		1 x Top 8" Wall
38.16	37.75	36.93	37.53	37.58		37.5		
7.15	7.56	8.38	7.78	7.1 x 9.5		7.8 1 x		
2 C	13	97.						
40.41	40.09	39.33	39.87	40.16		40.13		
4.70	5.12	5.98	5.44	5.15		5.18		
2 C	13	97.	C6	9.5 Wedge Walk		1 x		
℄ 21st.							= w/ 21 St.	

45.31 ✓

Ely Con. 21.57 ℄ Julian 0.5 x 6' curb opening INLET

2+07.30 Levels top curb on Sly side of Julian

Sec.s on angle or curb line Julian

2+07.30 Levels in gutter

1+87.22

T.P. 8.50 42.30 11.51 33.80

45.31

35.08 | 8.2 C | grate in gut.

35.88 | 7.x 2 | Top curb inlet

36.75 | 5.55 | 33.7

35.96 | 6.3 x | 16.85

35.18 | 7.16 | C6

36.86 | 7.4 x | 8.5 curb Inlet

36.35 | 7.95 | 18.1 C curb

35.96 | 6.3 x | 33.7

35.213 | 7.07. | 16.85

36.86 | 7.8 x | gut

36.06 | 8.2 x | 8.5 Top grate gut.

Sand 8.5 F.L. drain

33.52 | 8.78 | 18.1 C pav. edge

35.01 | 7.29 | 26

35.08 | 7.26 | 13

36.72 | 7.58 | Pav

33.75 | 8.55 | 1 x pav. edge

42.30

Levels W. end Julian
W of 21ST ST.

LT. = South "B"

0+31.7

0+26

0+20

0+11 Break in track

0+00.67

0+00.67

V12.30

V12.30

Sand outlet of drain

Break Top Wall

Pav. inside

Pav. inside

Top Wall

Pav. inside

Pav. inside

ground

ground

Top Wall Break in grade

Top Wall at 21ST Side

1+22					
1+00				33.8 4.5 57	
0+84				33.9 4.0 CV	26.7 11.7 59
0+61	Beg 8" wall + Fence W W Gate				
0+56 ~~0+66~~	E 21' door		33.7 4.7 77	27.6 10.3 74 ditch	27.3 10.6 65
0+42.20	end 8" wall E.L. gate				
T.P.	4.51	37.91 / 42.30	8.90	33.40	

Lt = South "B" Rt

22

30.3 7.6 39	26.3 11.6 33	26.3 11.6 25	30.6 7.3 24	30.7 7.2	33.23 4.18 1.4 Top wall			
26.6 11.3 52 ditch	26.7 11.2 44	32.1 4.8 34	32.2 4.7 20	31.8 4.5	33.8 4.10 1.4 Top wall			
26.7 11.7 49	32.5 4.7 43	31.9 6.0 26	32.3 5.6 15	32.2 5.7	33.80 4.11 1.4 Top wall			
				32.7 5.2	32.70 5.1 1.4 Pav.	33.88 4.03 1.4 Top wall	32.88 5.03 10 pav.	
33.5 4.4 64	32.3 5.4 42	32.7 5.2 37	33.1 5.8 19	32.76 5.15 Pav edge	33.12 4.79 27 E 21' door Con. floor	33.85 4.06 11 water		
				32.9 5.0 37.91	32.87 5.0 1.4 Pav.	33.88 3.93 1.4 Top Wall	33.11 4.80 27 Pav inside	

Lt = South "B" Pt

check to	NW BP Cornhill & 21st St.	3.6 C	40.96	41.0 N 0.04
T.P.	11.22	44.6 N	4.51	33.40

from this pt. on 1% fall

approx. 8' in on the drain

1+40 on Bot. of drain inlet

1+36.28

37.91

26.6 C
11.3
Bot. is higher than inlet

25.7
12.7 N
Con. Bot.

31.98
5.93
3.9
Top drain hd. wall

30.3
7.6
ground

33.71
4.2 C
1.4
Top 8" Wall

Cross Section Alley Block 51
City Hts.
Levels next page

B.M.s Do not check with University Ave

Plotted on old profile #2385
A.M.

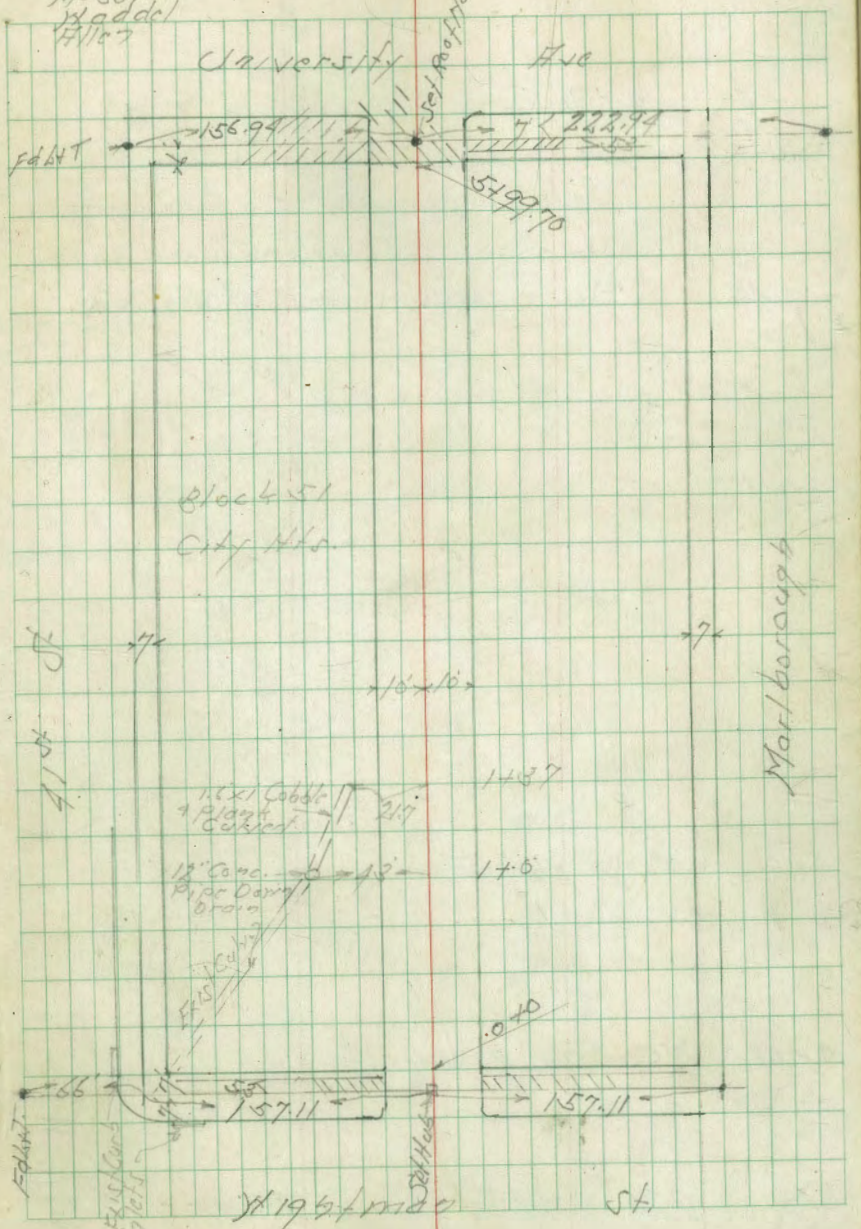
INDEXED
Law
OCT 8 1951

See also
73: 2113-89-29

Oct. 25-46 H.O. 230
S. Sloan
McCoy
Waddell
Hiller

Indexed
C.S.K.

24



+49 - Sections Checked - 6-3-49

7.0.

New Improvements & changes are shown as elevations - no Rods.

+40 Elev's checked thus ✓ are o.k.

+31

+14

0+0 = N.L. Highway

0-14 = N.C.&Line Highway

BM 9.96 345.45 6.6.49 N.W.&P. Highway & N.C.

Lt=W

Rt=E

30.64

5.83 - H.H. Walk

24.55

30.71

5.74

Bottom of Landing → 19.3

4.76 Conc

24.55

40.57

4.88

40.1

5.0

40.3

5.1

40.5

4.9

42.5

3.9

43.2

3.2

43.4

3.0

H.H. House

12.1

Conc. Basement floor

5.6 Conc

40.94

41.23

3.82

10.2-C6

41.5

3.9

10.2-Gutter

41.4

4.0

41.1

3.7

42.35

3.10

9.7-C6 & Ground

41.35

4.1

12-C6

40.6

4.8

12-Gutter

41.0

4.1

41.5

3.9

12-Gutter

42.20

3.25

12-C6

345.45

+75					
+74	10.8 Lt of ℄: Wly Power Pole				
+52	9.6 Rt of of ℄ = Sly Picket Fence				
+50					
+38	10.8' Rt of ℄ = 24" Fac Tree				
+37	= Nly Culvert Cobble x Phone on Lt				
+28					
+23	10' Rt of ℄ = Nly Wire Fence				
+22	9.6 Rt of ℄ = 18" Fac Tree				
+06	10.4 Lt of ℄ = Nly Board Fence				
1+0	9' Rt of ℄ = 18" Fac Tree				
	10.4 Lt of ℄ = Nly Picket Fence + Sly Board Fence				
	9.8' Rt of ℄ - Sly Wire Fence				
TP	0.45	339.68	6.22	339.23	Nail, Path 10' Lt of TP
+88	5.5 Rt of ℄ = 30" Fac Tree				
+73	10.1 Lt of ℄ = Nly Power Pole				
0+50	10' Lt of ℄ = Sly Picket Fence				

345.45

Lt. Rt.

37.8 30.9 31.5 32.4 34.7
7.9 8.3 8.2 7.3 6.0
3.0 2.2 1.0 1.0
2.2 - Bottom Culvert

32.3 30.4 32.4 33.4 35.7 38.2
7.4 9.2 7.3 6.3 4.0 3.6
3.5 1.8 1.0 3.0
1.8 - Bottom Culvert

29.6
10.1
21.7 - Nly Culvert Bottom
Sly Side of Culvert

34.02 34.1 34.1 34.5 36.4
5.46 5.1 5.1 5.2 3.3
1.54 1.0 1.0 1.0
1.0 - Garage Floor

28.43 32.84 33.6 35.4 36.2 36.4 38.4
14.25 6.84 6.1 4.3 3.3 3.3 1.0
4.3 - Bottom Culvert
6.8 = Top of Cone
0.8 Down

339.68

39.7 39.4 39.6 41.5
6.7 6.0 5.8 3.9
1.0 1.0

345.45

+99				
+75				
+74	95 Lt of ℄ = NH Board Fence			
+72	92 Lt of ℄ = NH Power Pole			
+63	63 Rt of ℄ = Wire Fence			
TP	12.61	350.39	1.90	337.78
+50 –	11' Rt = end of good wire fence – Beg. poor.			
+25	123 Lt of ℄ = Sly Board Fence			
+11	115 Rt of ℄ = NHy Picket Fence + Sly Wire Fence			
270				

339.68

Lt. 29 Rt.

45.5 44.6 43.9 39.8 36.2 34.0 33.6

44.27 41.1 38.6 37.6 36.2 33.4 33.4

42.8

39.4 36.0 32.9 33.4 33.4

32.9 32.7 32.1 32.9 33.4

33.4 30.8 30.8 31.9 33.2 36.3

339.68

+76 11.5 Rt of ℄ - Wly Power Pole

+75 - 19.9' Rt. - end 4 Car Garage - (see 1864)

+41

+30

+25

+18

3+0 10.2 Rt of ℄ - Wly Wire Fence

350.39

49.87
19.9
floor
Gar.

49.85 49.1 46.4 47.9 46.9

47.7
3.7
Rt - 4 Garage
Floor

49.77 40.0 47.3 47.3 46.7

48.22 40.10 See 1864 & P41

47.60

46.0 45.1 45.8 45.5 44.2 40.9

350.39

+30

5+00

+91 9.7 Lt of ℄ = NWly Power Pole

+75

+70

+54 - 10.3 Lt = end Board fence

10' Lt of ℄ = NWly Board Fence

+55 9.7 Lt of ℄ = Ely 24" Fee Tree

+50 - 10.3' Lt = Ely. of Tree

TP 8.86 357.45 1.30 349.09

1+00 10' Lt of ℄ = Board Fence

3+93 - 10.1' Lt. = Beg High Board fence

350.39

Lt. ℄ Rt

52.71

4.7 51.4 Ely Edge Pave

10.1 51.4 Ely Edge Pave

51.97 52.2 51.7 51.5 51.9 52.3

5.2 5.7 5.9 6.5 5.5

10 8 9 10 10

Ely Edge Pave

51.22

0.2

10.7 51.32 51.18

10.5 9.7

Ely Garage Conc Floor

Ely Conc Apron

51.1 50.4 50.3 50.7 50.95

6.3 7.0 7.1 6.7 6.50

10 9.8 = NWly Edge Conc Pavement

357.45

49.7 49.3 49.2 46.9

0.7 1.4 1.2 3.5

10 10 10 25

350.39

- See 1864-41 - for New Bldg

BM			8.55	335.47	NW BP Wightman & 41st 336.49
BM	0.42	344.02	11.49	332.60	NW BP Wightman & Central
BM	2.88	355.09	6.15	352.21	NW BP University & Central 351.93
TP	5.40	358.36	4.49	352.96	

6+18.70 = SCb. Line University

+99.70 = SL. University Axe.

9.9 Left of Z = N.E Cor. Stucco Bldg.

+85

+50

57+42

357.45

Lt. Z Rt.

52.99 52.76 52.74 52.69 52.96

4.46 4.69 4.71 4.74 4.49

13-Cb 13-Gutter 13-Cb

53.46 53.11 53.31 53.35

4.19 4.34 4.14 4.10

9.9-Paving 9.9-Gutter 9.9-Cb

53.61

3.84

14-4" Conc Landing

52.7 52.3 52.4

4.7 5.1 5.0

10 10

53.39 52.82

4.06 4.54

10.8-4" Conc Floor 8.4-4" Conc Floor

10.1 = edge of Bldg

357.45

Walker
Bethel
Johnson
3-28-47

Cross Section Revere St 70' wide
From Glendora St. 18' cbs
to Pacific Highway. 8.5 1/4
FB 1647
9.41 19.50 10.09 70

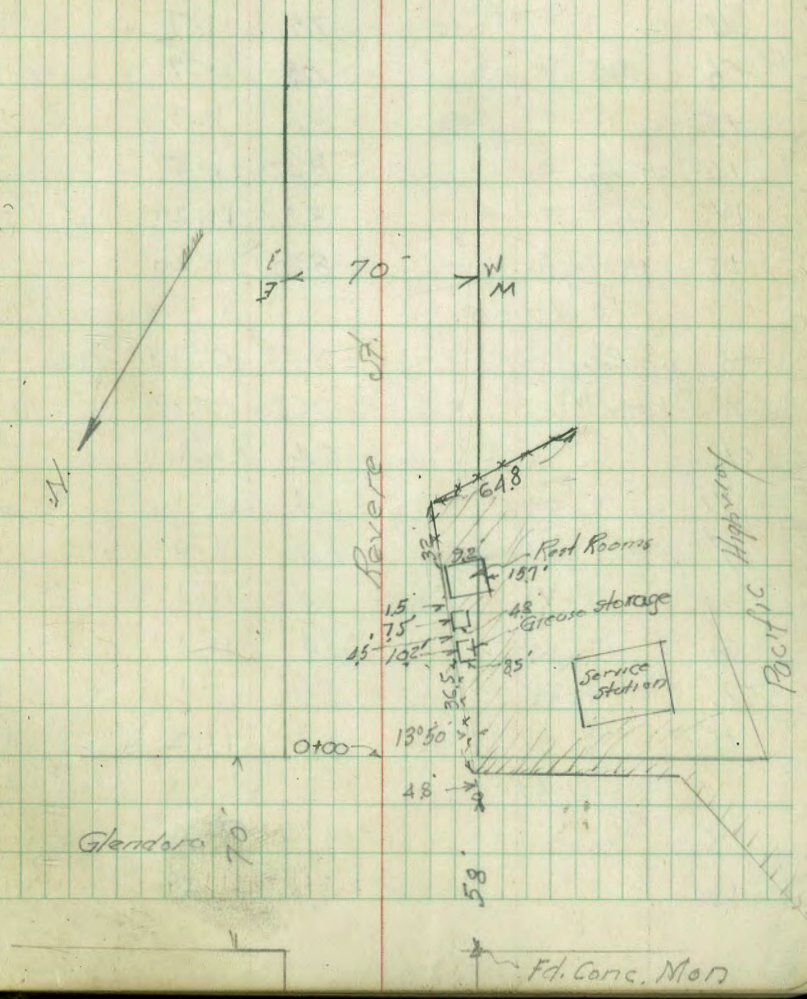
0+00 - S. Line Glendora St.

-5		50	14.5
E		51	14.4
cb		54	14.1
1/4		59	13.6
L		62	13.3
1/4		66	12.9
cb.		72	12.3
+13		76	11.9
+14	on Pav	824	11.26
W	" "	834	11.16
+5	" "	843	11.07
	0+25		
-5		840	11.10
W		836	11.14
+9	= edge Pav.	824	11.26
+12		76	11.9
W cb.		73	12.2
1/4		68	12.7
L		64	13.1
1/4		63	13.2
E cb.		66	12.9
E.		61	13.4
+5		60	13.5

Indexed
C.S.K.

31

BM in E Cor Revere & Pacific
B.M. Mon. only.



Revere St

19.56

0+50

-5	8.0	11.5
E	7.9	11.6
E Cb	8.1	11.4
1/4	7.8	11.7
C	7.9	11.6
1/4	7.8	11.7
W Cb	7.8	11.7
+5	7.8	11.7
+6 on edge Pav.	8.00	11.5
W on "	8.21	11.29
+5 " "	8.30	11.20

1+00

-5 on Pav.	8.78	10.72
W "edge"	8.62	10.88
Cb	8.4	11.1
1/4	8.4	11.1
C	8.5	11.0
1/4	8.4	11.1
Cb	8.4	11.1
E	8.4	11.1
+5	8.3	11.2

1+50

-5	8.1	11.4
Cb	8.1	11.4

1+50 1956

32

E 1/4	8.5	11.0
C	9.0	10.5
W 1/4	9.4	10.1
W Cb	9.9	9.6
W	9.6	9.9
+5	9.5	10.0
2+00.56 see sketch P-33		
-5	10.4	9.1
W on Conc. Mon Prop Cor.	10.20	9.30
Cb	9.8	9.70
1/4	9.1	10.4
C	8.4	11.1
1/4	7.6	11.9
Cb	7.5	12.0
E	7.6	11.9
+5	7.7	11.8
2+56.26 2+55.96 see sketch P-33		
-5	7.0	12.5
E	7.3	12.2
Cb	8.0	11.5
1/4	7.8	11.7
C	8.1	11.4
1/4	8.8	10.7
Cb = E.L. Pacific	9.8	9.7

Cont. P-33

Revere St.

19.50

3+08.27 Rt △ Section

℄	9.5	10.0
E ¼	8.5	11.0
E cb.	8.1	11.4
E. Line	7.6	11.9
+5	7.3	12.2

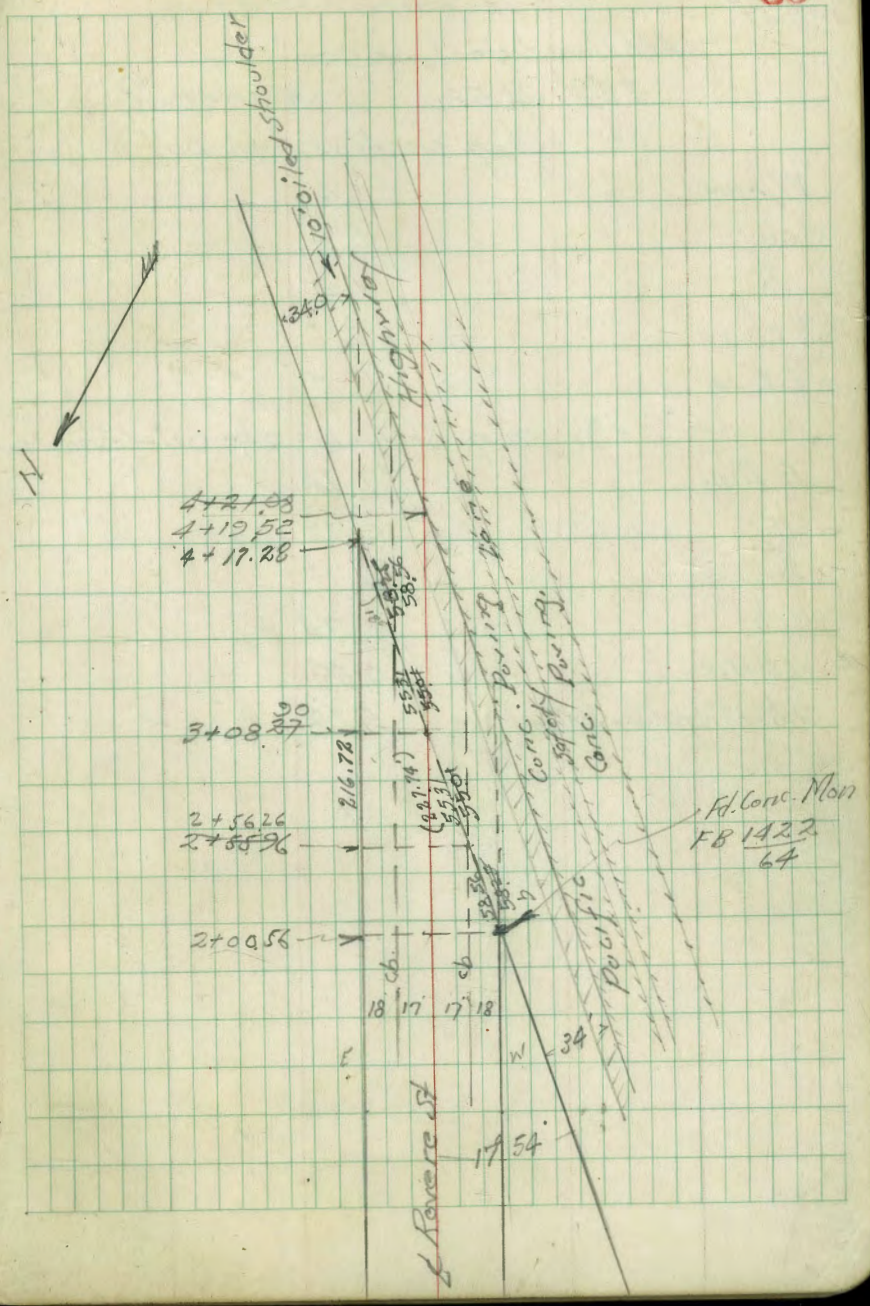
3+08.27 diag. Section

W. Line Revere St.	10.20	9.30 on Mon
cb	9.8	9.7
¼	10.1	9.4
℄	9.5	9.9
¼	9.2	10.3
cb.	9.4	10.1
E	8.8	11.7

4+19.52
4+21.08 diag. Section on edge Conc. Pav.

E. Line Revere Produced		11.67	
TP	4.42 14.51	9.91	10.09 Hunting BM
E Line Revere Produced		6.86	12.64
E ¼ cb.		6.73	12.77
¼		6.69	12.81
℄		6.55	12.95
¼		6.43	13.07
cb.		6.34	13.16
West. Line " "		6.23	13.27

Cont. P. 34



Walker
Hendricks
4-17-47

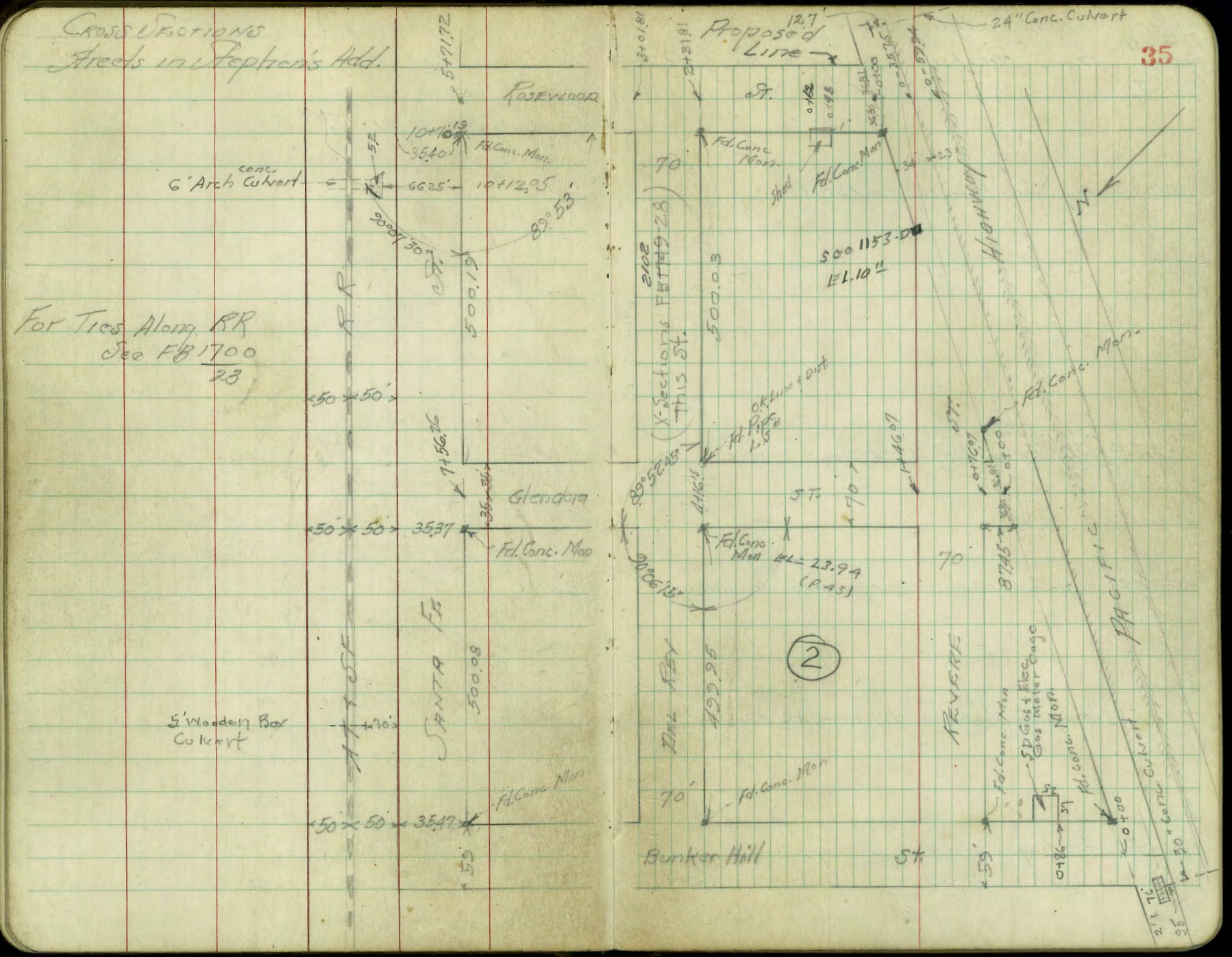
Revere Street

Cont. from P-33

— Additional Sections —

4.49	14.58		10.09	B.M. Conc. Mon = Starting BM P-31
3+71 = diag. Section			on Dirt Shoulder	
W Line		6.4		
W cb		6.3		
℄		6.4		
E cb.		6.1		
E Line		6.5		
3+87 diag. Section = edge oiled Shoulder				
E Line		7.14		
cb		6.90		
℄		6.72		
W cb.		6.74		
W Line		6.59		
chk. Prop Cor Mon		5.28	9.30	

Cross Sections Streets in Stephen's Add.



Walker
Hendricks
Becker
Johnson
5-15-47

Cross Section Rosewood St.
from Pacific Highway to Santa Fe st.
Sketch P-35

Lt ℄ Indexed C.S.K. Rt.

36

0-13 = diag. Sec. Parallel to Pacific

9.8 8.7 8.3 8.4
7.3 8.2 9.3 9.2
61 36.8 17.88

8.0 7.9
3.6 3.7
50 100

0-22.4 = Diag. Section NLY Face Hd. No 11 24" Conc. Curb & Gutter

8.4 8.4 8.1 7.6 7.5 7.9 7.9 7.0 6.5 4.7 6.23 3.23 7.0 8.0
9.23 9.2 9.5 10.0 10.1 9.7 9.7 10.6 11.1 12.9 11.34 14.34 10.6 3.6
100 50 36.8 17.88 10 6.0 15 17.9 18 22.5 on Abutment 22.5 From Curb Line 26 36.81

0-25.29 = diag. Section on NLY edge oiled Shoulder

7.70 7.56 7.49 7.43 7.33 7.32 7.33 7.17 7.04
9.87 10.01 10.08 10.14 10.24 10.25 10.24 10.40 10.53
100 50 36.81 17.88 17.81 36.81 50 100

0-35.75 = diag. Section on NLY edge A.C. Pav.

7.92 7.78 7.77 7.68 7.61 7.58 7.53 7.49 7.38
9.65 9.79 9.80 9.89 9.96 9.99 10.04 10.08 10.19
100 50 36.81 17.88 17.88 36.81 50 100

0-59.94 = diag. Section on Paving. on Main P-31

8.30 8.14 8.10 8.04 7.99 7.99 7.91 7.88 7.75
9.27 9.43 9.47 9.53 9.58 9.58 9.66 9.69 9.82
100 50 36.81 17.88 17.88 36.81 50 100

7.48 17.57 10.09 17.57

Rosewood St.

1+50

1+00

0+86 = NELY Cor Fence 21.5' Lt

0+76 = ℄ 6" Pepper Tree

0+62 = Co Shed 33' Lt of ℄

0+50

0+46 = ℄ 12" Pepper Tree 29' Lt of ℄ St.

0+35

0+02 = diag Section Parallel to Pacific

fence on Lt 1.6' N of St

0+00 diag. Section on NLY line Pacific

0-11 diag. Section Parallel to Pacific

17.57

Lt ℄ Rt

16.3 16.6 16.9 16.4 13.9 17.2 16.3 16.2 16.4
1.3 1.0 1.7 1.2 3.7 0.4 1.3 1.4 1.2
50 35 17 4 6 17 35 50

14.9 15.3 15.2 15.0 13.1 15.7 14.8 14.4 14.5
2.7 2.3 2.4 2.6 4.5 1.9 2.8 3.2 3.1
50 35 17 2 4 17 35 50

13.9 13.9 13.7 12.2 14.5 13.5 12.8 12.7
3.7 3.7 3.9 5.4 3.1 4.1 4.8 4.9
34 17 2.0 5.0 17 35 50
of Shed

13.1 13.3 13.3 13.4 11.6 11.6 13.7 13.0 12.4 12.6
4.5 4.3 4.3 4.2 6.0 6.0 3.9 4.6 5.2 5.0
43 = at front of House 35 17 1.0 3.9 8 17 35 50

11.6 11.6 10.4 9.9 10.4 12.6 12.6 12.3 9.1 12.0 11.7 12.1 12.2
6.0 6.0 7.2 7.7 7.2 5.0 5.0 5.3 8.5 5.6 5.9 5.5 5.4
50 36.88 27 17.88 8 5 6 10 15 17.88 36.8 50

11.4 11.4 11.3 9.7 9.5 8.7 9.5 7.5 9.5 8.6 8.4 8.4
6.2 6.2 6.3 7.2 8.1 8.9 8.1 10.1 8.1 9.0 9.2 9.2
50 36.8 32 28 17.88 10 11.5 13 17.88 36.81 50

10.9 11.0 10.6 8.5 8.5 8.5
6.7 6.6 7.0 9.1 9.1 9.1
50 36.81 30 26 17.88

17.57

Rosewood St. X-Sections

2+01.81 - NLY Line Del Rey

2+83.81

2+66.81 - ℄ Del Rey

2+49.81 - Proposed c/l Del Rey

2+31.81 - SWLY Line Del Rey St

2+00

T.P. 12.45 28.38 1.64 15.93

17.57

Lt				℄				Rt.
21.1	21.2	21.6	19.6	21.4	21.1	21.2	21.5	21.8
7.3	7.2	6.8	8.8	7.0	7.3	7.2	6.9	6.6
35	17	12	7	3		17	35	50
20.5	20.6	20.4	18.9	20.3	20.6	21.0	21.3	
7.9	7.8	8.0	2.5	8.1	7.8	7.4	7.1	
35	17	11	5		17	35	50	
20.0	20.2	19.9	18.00	20.5	19.8	20.0	20.5	
8.4	8.2	8.5	10.4	7.9	8.5	8.4	7.9	
35	17	8		8	17	35	50	
19.4	19.7	19.6	19.3	19.8	19.5	19.6	19.9	
9.0	8.7	8.8	12.1	8.6	8.9	8.8	8.5	
35	17	6		3	17	35	50	
19.1	19.3	18.8	15.6	19.6	18.8	19.10	19.3	
9.3	9.1	9.6	12.8	8.8	9.6	9.4	9.1	
35	17		4	7	17	35	50	
17.6	17.7	17.3	17.6	14.7	16.4	17.7	17.8	19.3
10.8	10.7	11.1	10.8	13.7	10.0	10.7	10.6	10.1
50	35	17		4	7	17	35	50

28.38

Rosewood St. X. Sections.

5+71.72 = Skyline Santa Fe St

5+50

5+00

TP 13.00 39.05 2.33 26.05

4+50

4+00

3+50 28.38

℄ Rt.

33.07 chkd. P.A.C.

33.07 33.5 34.5 35.3 36.0 37.0 37.2

5.28 5.5 4.5 3.7 3.0 2.0 1.8
35 17 5.0 17 35 50

On Conc Main

31.5 31.8 32.0 32.3 33.1 33.7 34.6 35.1

5.5 7.2 7.0 6.7 5.9 5.3 4.4 3.9
50 35 17 7 17 35 50

28.4 28.6 29.1 30.1 30.0 30.9 31.7

10.6 10.4 9.9 8.9 9.0 8.1 7.3
50 35 17 39.05

26.2 25.7 22.9 26.3 25.9 26.7 26.8 26.7 27.1

2.2 2.7 5.5 3.1 2.5 1.7 1.5 1.7 1.3
50 35 30 26 17 35 17 35 50

24.4 24.4 23.8 23.6 22.4 23.9 25.5 24.6 24.6 25.0

4.0 4.6 4.6 4.8 6.0 4.5 2.9 3.8 3.8 3.4
50 35 17 15 12 10 17 35 50

22.9 22.6 22.2 22.4 23.0 23.0 23.3

5.5 5.9 6.2 6.0 5.4 5.4 5.1
50 35 17 28.38 17 35 50

Rosewood St. x Section

		π B= 41			
	2.93	15.42	8.57	12.49	
	10.97	21.06		10.09	B.M.
				0.02 / 10.09 = 10.11	B.M. P-31 Mon.
Chk	Starting B.M.		10.97		
T.P.	4.61	21.08	10.20	16.47	
T.P.	1.37	27.37	13.05	26.00	
6+20					

6+06.72 = NLY line Santa Fe St = SLY Line Santa Fe Rt of Way

5+89.22 = ℄ Santa Fe St.
39.05

LT ℄ RT

35.5	36.8	37.7	39.4	40.9	41.4	
3.5	2.2	1.3	+0.4	+1.9	+2.4	
35	17		17	35	50	

35.2	36.1	37.4	39.5	40.2	41.3	
3.8	2.9	1.6	+0.5	+1.2	+2.3	
35	17		17	35	50	

33.9	34.7	35.6	36.9	37.6	38.8	39.3	
5.1	4.3	3.4	2.1	1.4	0.2	+0.3	
35	17	5		17	35	50	

39.05

Walther
Hendricks
Becker
Johnson
5-15-47

CROSS SECTION - GLENDORA ST. 70' Wide

from Pacific Highway to Santa Fe St.

Sketch P-35

0+42 = Angle in Par to Service Sta

0+00 = Pole 23' Lt at Rt Δ to ℄ = #447091-H Tel. Pole

0+00 = diag. Section Parallel to Pacific

0-11.7 23.1 Lt. = Pole Anchor

Diag. Section Sketch
0-15.1 = Int. Paving to Service Station P-46

Diag.
0-12.7 17'Lt = Pole Anchor 32.5'Lt = #426083-H Tel Pole

Parallel to Pacific
0-25.24 = diag. Section on oiled Shoulder

T.P. 6.38 18.87 293 12.49 on Main Sw'd/ Glendora

Parallel to Pacific
0-35.75 = diag. Section on edge AC Paving

0-59.94 = diag Section on Paving Parallel to Pacific

15.42
π from P. 40

Indexed
Lt. ℄ C.S. Rt

41

10.7	10.7	10.8	10.6	10.6	10.73	10.73	10.62	
8.2	8.2	8.1	8.3	8.3	8.14	8.14	8.25	
50	35	17		17	31 on Par	35.7 on Par	50 on Par	
9.4	9.23	9.7	9.6	9.70	9.70	9.92	9.92	
9.5	9.64	9.2	9.4	9.17	9.17	8.95	8.85	
50	36.8 on Main	17.88		135 1/4 Par	17.88 on Par	36.8 on Par	50 on Par	
9.4	9.5	9.7	9.46	9.24	9.38	9.75		
9.5	9.4	9.2	9.61	9.63	9.49	9.12		
50	36.8	17.78		17.88 on Par	36.8 on Par	50 on Par		
9.02	8.95	9.00	9.05	9.09	9.10	9.04	8.96	8.81
9.85	9.82	9.87	9.82	9.78	9.77	9.83	9.91	10.06
100	50	36.8	17.88		17.88	36.8	50	100
9.28	9.28	9.27	9.23	9.17	9.16	9.11	9.07	8.98
6.14	6.14	6.15	6.19	6.25	6.27	6.31	6.35	6.44
100	50	36.81	17.88		17.88	36.81	50	100
9.81	9.69	9.64	9.60	9.54	9.50	9.48	9.46	9.33
5.61	5.73	5.78	5.82	5.88	5.92	5.94	5.96	6.09
100	50	36.8	17.88		17.88	36.8	50	100

18.87

15.42

Glendora St. X-Sections

1+75

1+49.5 = Elec Pole 27.1 Rt ± 3001

1+46.07 = N.H.S. Line Revere St.

1+28.07

1+26 = Tel Pole ± 426084-H 27.2 Lt.

1+11.07 = ℄ Revere St

0+94.07

0+76.07 S.H.S. Line Revere St.
18.87

Lt	℄	Rt
16.3	16.9	15.2
2.6	3.0	3.7
50	35	17
14.9	14.2	13.8
4.0	4.7	5.1
35	17	17
13.9	13.9	13.3
5.0	5.0	5.6
35	17	17
13.8	13.3	12.9
5.1	5.6	6.0
35	17	17
12.7	12.3	12.2
6.2	6.6	6.7
35	17	17
12.5	11.7	11.5
6.4	7.2	7.4
35	17	18.87 ℄

℄	Rt	
14.8	15.0	14.6
4.1	3.9	4.3
	17	50
13.8	14.1	14.5
5.1	4.8	4.4
17	17	35
13.3	13.5	14.2
5.6	5.4	4.7
17	17	35
12.9	12.9	13.3
6.0	6.0	5.6
17	17	35
12.2	12.3	12.3
6.7	6.6	6.6
17	17	35
11.5	11.3	11.11
7.4	7.6	7.76
18.87 ℄	17	27.1 Rt Pol
	11.11	11.09
	7.76	7.78
	35	50
	27.1 Rt Pol	50 Rt Pol

Glendora St.
X-Sections

4+16.15 = Sdg. Line Del Ring

4+00

3+50

3+00

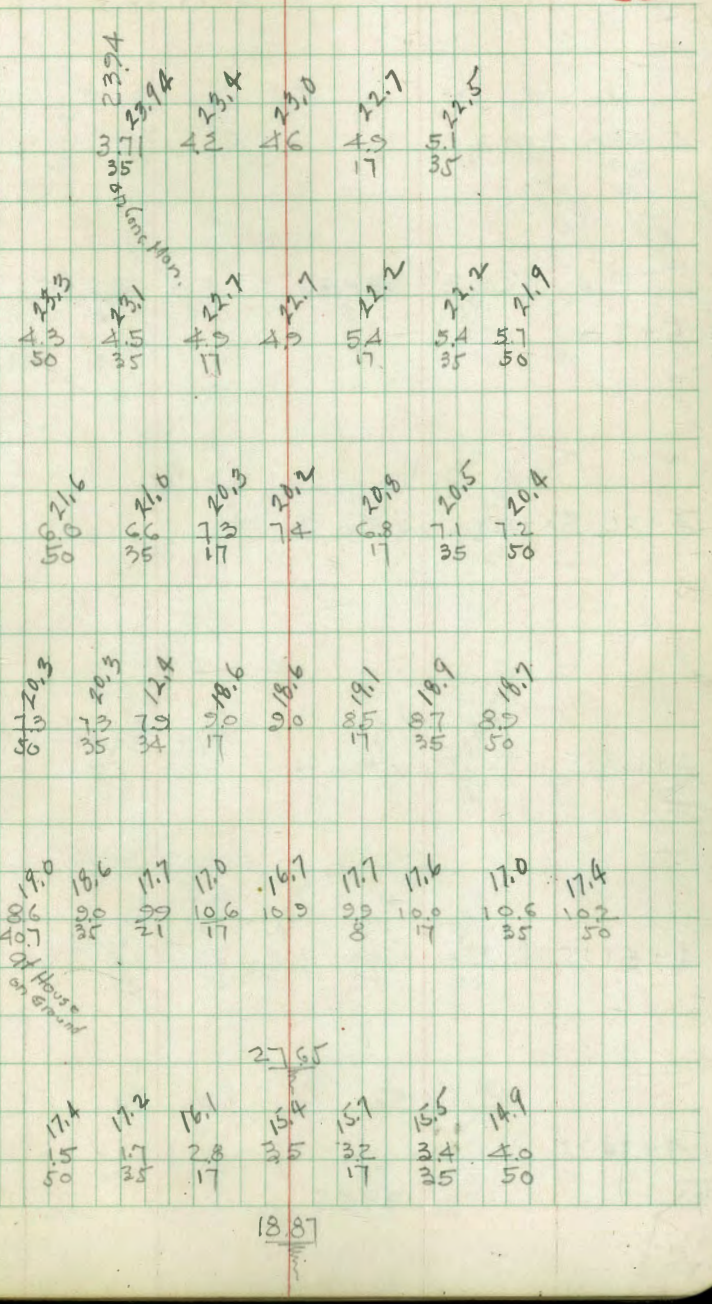
2+91.7 = Tel. Pole 35' Lt #450609-H

2+76 = Elec Pole 25.5' Rt #3049

2+50

T.P.	12.11	27.65	2.33	15.54
2+00				
		1887		

Lt ℄ Rt



Glendora St.
X- Sections

5+50

T.P 12.33 38.48 1.50 26.15

5+20

4+86.15 = NWly Line Del Roy St.

#47 3040-14

4+68.15 = Tel Pole 30.4

4+51.15 = ℄ Del Roy

4+34.15

27.65

Lt ℄ Rt

44

29.2 29.2 28.1 28.9 28.1 28.1 28.1 28.1
2.3 2.3 2.8 2.6 10.4 10.4 10.4 10.4
50 35 17 17 35 40 at Porch on Ground 44.5 at House on Ground

38.48

28.0 27.8 27.4 27.2 26.8 26.8 26.4
+0.4 +0.2 0.2 0.4 0.8 0.8 1.2
50 35 17 17 35 50

26.3 25.9 26.9 26.3 25.1
1.3 1.7 1.7 2.3 2.5
35 17 17 35

25.5 25.1 24.7 24.6 24.5
2.1 2.5 2.9 3.0 3.1
35 17 17 35

25.1 25.0 24.5 24.4 24.0
2.5 2.6 3.1 3.2 3.6
35 17 17 35

24.5 24.0 23.7 23.5 23.4
3.1 3.6 3.9 4.1 4.2
35 17 17 35

27.65

Glendora St.

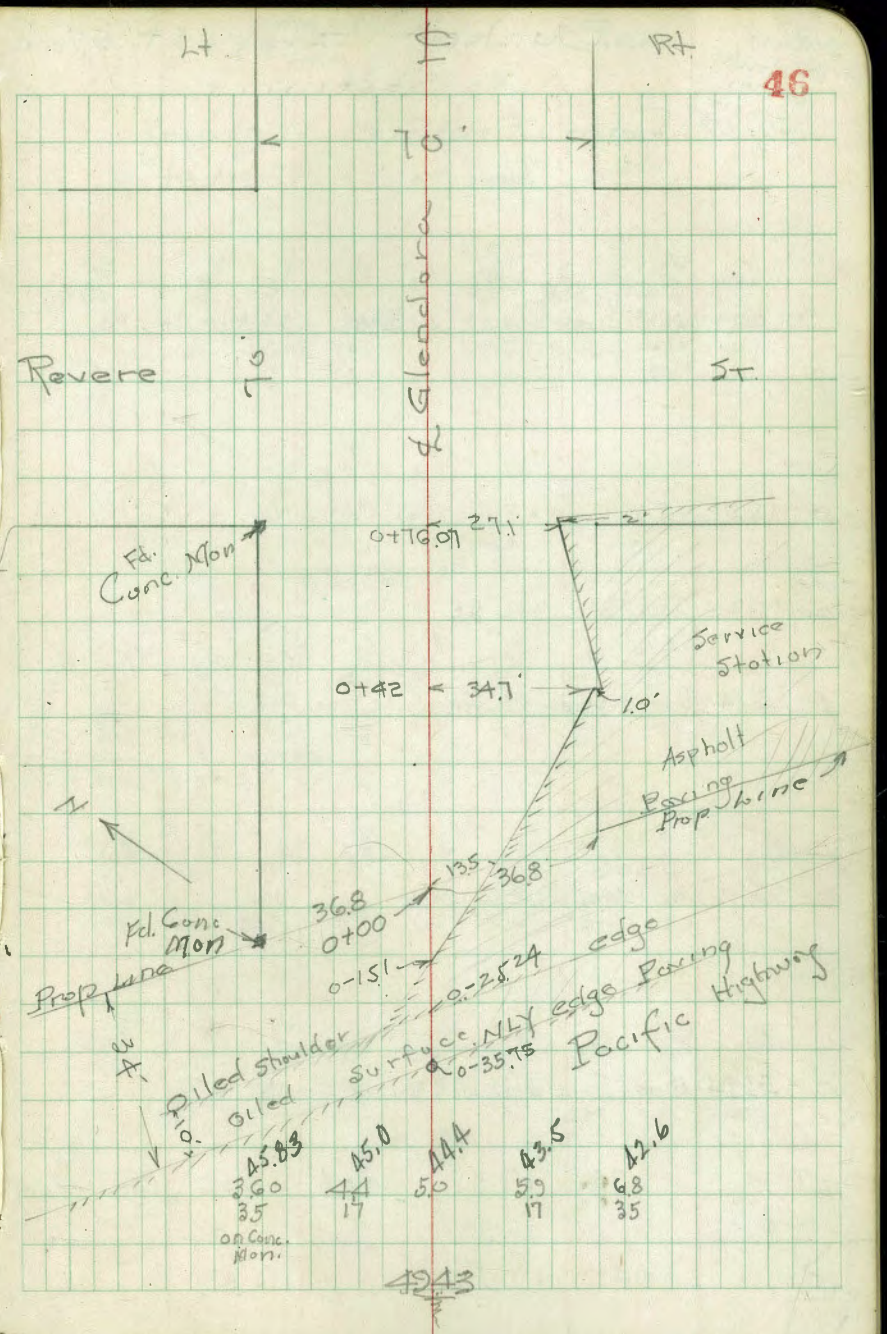
X-Sections

7+21					
7+00					
T.P	11.00	49.43	0.05	38.43	Nail Guy Pole
6+75					
6+60	Elec. Pole Anchor 26' Rt				
6+57 =	Tel Pole Anchor 29' Lt				
6+50					
6+53.8	27' Rt = Guy Pole Elec # 473042-H				
6+42 =	28' Lt. Tel Guy Pole # 473041-H				
6+05 =	Tel Pole 29' Lt # 3149				
6+06 =	Elec Pole 26' Rt				
6+00					
		38.48			

45

Lt		℄		Rt		
42.7	42.2	41.8	41.5	40.9	40.3	39.6
6.7	7.2	7.6	7.9	8.5	9.1	9.8
50	35	17		17	35	50
39.0	38.6	38.5	38.5	37.7	37.4	37.3
10.4	10.8	10.9	10.9	11.7	12.0	12.1
50	35	17		17	35	50
			49.43			
37.0	36.9	36.1	35.7	35.4	34.9	34.8
1.5	1.6	2.4	2.8	3.1	3.6	3.7
50	35	17		17	35	50
35.0	34.7	34.1	33.9	33.4	32.9	32.7
3.5	3.8	4.4	4.6	5.1	5.6	5.8
50	35	17		17	35	50
31.8	31.8	31.3	31.1	30.5	30.5	30.1
6.7	6.7	7.2	7.4	8.0	8.0	8.4
50	35	17		17	35	50
			38.48			

Glendora Street
X-Sections



	Rosewood & Santa Fe	11.16	0.02 33.07	Page 39
Check	Conc. Mon NWLY Cor		33.05	
T.P	1.45	44.21	6.67	42.76	

7+56.26 = Sly line Santa Fe St.

4943

Walker
Hendricks
Becker
Johnson
5-15-47

Bunker Hill St. 59' wide
X-Sections from Pacific Highway to Santo Fe Street

0+00 = Diag. Sec NLY Line Pacific Blvd. 4' Rt = Elec. Pole #2901

0-15.9 = SD Gas + Elec Co. Conc. MH. 4.2 x 7'

305813-H

0-18.2 = Tel Pole 21.6 Rt

0-25.24 = diag. Section Parallel to Pacific

0-35.75 = Diag. on NLY edge Paving

0-59.94 = diag. Section on Paving Parallel to Pacific

Mon NELY cor Pacific + Bunker Hill

TP	7.79	17.35	12.01	9.56
TP	5.35	21.57	3.36	16.22
	2.49	19.58		10.09

Lt Indexed C.S.K. ℄ Rt

47

10.4	10.6	10.5	10.1	9.9	9.5	9.56	10.0
6.9	6.7	6.8	7.2	7.4	7.8	7.79	7.4
41	31.02	19.5		19.5	31.02	31.02 on Mon	41

10.61	10.61
6.74	6.76 = Ely edge MH
on NLY edge MH	

10.17	6.72	10.20	10.20	10.21	10.22	10.20	10.14	10.11
7.78	10.63	7.15	7.15	7.14	7.13	7.15	7.21	7.24
32.3	29.5	29.5	25.7	10.5		10.5	31	41
Flow 30" P.C. grating	Flow 30" P.C. grating	on c.b & grating	on grating					

10.74	10.65	10.56	10.51	10.52	10.49	10.45	10.43	10.28
6.61	6.70	6.79	6.84	6.83	6.86	6.90	6.92	7.07
100	50	31	10.5		10.5	31.0	50	100

11.20	11.08	11.05	10.99	10.96	10.95	10.88	10.84	10.67
6.15	6.27	6.30	6.36	6.39	6.40	6.47	6.51	6.68
100	50	31	10.5	17.35	10.5	31.0	50	100

Bunker Hill St. 59' wide

X-Sections

2+95.5 = ℄ ~~Glendora~~ Revere

2+78.5

2+60.50 = ~~Wly~~ Line ~~Glendora~~ Revere St.

2+33 Gas Elec Pole #2949 5' Rt

2+00

T.P 11.40 26.28 2.47 14.88

1+50

1+12 = Gas Elec Pole #2927 3' Rt

1+00

0+50

17.35

Lt				℄			Rt
23.0	22.6	18.3	17.9	17.8	18.5	17.6	17.1
3.3	3.7	8.0	8.4	8.5	7.8	8.7	9.2
50	40	29.5	19.5		2	19.5	29.5
22.1	21.7	18.2	17.1	17.5	18.1	17.0	16.5
4.2	4.6	8.1	9.2	8.8	8.2	9.3	9.8
50	40	29.5	19.5		3	19.5	29.5
21.4	21.1	17.0	16.8	17.0	17.7	16.8	16.30
4.9	5.2	9.3	9.5	9.3	8.6	9.5	9.98
50	40	29.5	19.5		2	19.5	29.5
							on Conc. Mon't
18.1	16.1	16.0	16.0		16.0	15.2	14.6	14.1
8.2	11.2	11.3	11.3		10.3	11.1	11.7	12.2
40	29.5	19.5			3	19.5	29.5	40
			26.28					
15.9	14.7	14.0	14.2	13.6	14.2	13.8	13.6	13.4
1.5	2.7	3.4	3.2	3.8	3.2	3.6	3.9	4.0
40	33	29.5	19.5		5	19.5	29.5	40
12.8	12.8	12.4	12.5	12.2		11.9		11.9
4.6	4.6	5.0	4.9	5.2		5.5		5.5
40	29.5	19.5		19.5		29.5		40
11.4	11.2	11.3	11.1	10.4	10.3		10.0	
6.0	6.0	6.1	6.3	7.0	7.1		7.4	
40	29.5	19.5	17.35	19.5	29.5		40	

Bunker Hill St.

TP.	12.78	38.89	0.17	26.11	Guy Pole #3027

4+54 Gas & Elec Pole #3027 = 5' Rt (Guy Pole) 29.3 Lt

4+50

4+25

4+00

3+59 5' Rt = Gas & Elec Pole #3001

3+50

3+30.5 = NLy Line ~~Flendara~~ Revere

3+12.5 26.28

4.3	23.3	2.5	23.8	2.1	23.6	2.8	23.5	3.1	23.2	2.7	23.7
4.0		3.8		29.5		19.5		4		6	
4.3	22.0	3.5	22.8	3.8	22.5	3.8	22.5	4.3	22.0	3.8	22.5
4.0		35		29.5		19.5		3		8	
4.7	21.6	4.6	21.7	4.9	21.4	5.2	21.1	6.0	20.3	6.3	20.0
40		29.5		19.5		19.5		19.5		29.5	
4.3	22.0	7.2	19.1	6.7	19.6	6.8	19.5	7.4	18.9	7.8	18.5
4.0		29.5		19.5		6		19.5		29.5	
3.3	23.0	3.7	22.6	7.2	19.1	7.3	19.0	7.4	18.9	7.1	19.2
50		4.0		29.5		19.5		6		2	
2.7	23.6	3.4	23.9	7.9	18.4	7.9	18.4	8.0	18.3	7.5	18.8
50		40		29.5		19.5		6		2	

7.4	18.9	7.9	18.4	8.3	18.0
6		19.5		29.5	
7.5	18.8	8.5	17.8	8.8	17.5
2		19.5		29.5	

26.28

Bunker Hill St. 59' wide

X-Sections

6+35.56

6+18.56

6+13 = Gas Elec Pole 5.5 Rt 3049

6+00.56 = WLy SLy Line Del Roy

5+50

5+09

5+00

4+75

3889

31.2	31.3	33.2	33.1	33.4	33.1	34.2	34.6	34.5
7.7	7.6	5.7	5.8	5.5	5.8	4.7	4.3	4.4
50	40	33	29.5	19.5	2		19.5	29.5

30.3	30.9	31.2	32.2	32.5	31.9	32.9	33.9	33.7
8.6	8.0	7.7	6.7	6.4	7.0	6.0	5.0	5.2
50	40	36	29.5	19.5	2		19.5	29.5

29.5	29.9	31.0	31.3	31.3	31.6	31.7	34.0	33.7	33.4
9.4	9.0	7.9	7.6	7.6	7.3	7.2	4.9	5.2	5.45
50	40	29.5	19.5	1		4	8	19.5	29.5

on Conc. Mon

27.3	28.5	29.2	28.1	28.6	28.2	29.1	29.3	31.9	31.3	31.2	31.0
11.6	10.4	9.7	10.8	10.3	10.1	9.8	9.6	7.0	7.6	7.7	7.9
50	40	35	29.5	19.5	3		3	7	19.5	29.5	40

25.1	26.2	26.3	26.2	26.3	26.9	27.2	28.3	28.3	28.3	29.0	28.9
13.2	12.7	12.6	12.7	12.6	12.0	11.7	10.6	10.6	10.6	9.9	10.0
40	38	29.5	19.5	3		5	8	19.5	25	29.5	40

25.6	26.0	25.8	26.0	26.9	27.3	27.6	27.6	27.8	
13.3	12.9	13.1	12.9	12.0	11.6	11.3	11.3	11.1	
40	29.5	19.5	3		14	19.5	29.5	40	

24.1	25.0	25.0	24.5	24.6	25.4	24.8	25.3	25.8	26.0	
14.8	13.9	13.9	14.4	14.3	13.5	14.1	13.6	13.1	12.9	
40	36	29.5	19.5	3		15	19.5	29.5	40	

3889

Bunker Hill St. 50' wide

X. Sections

8+85

8+68.2 = Elec Pole 6.5' Rt #3127

8+50

8+10

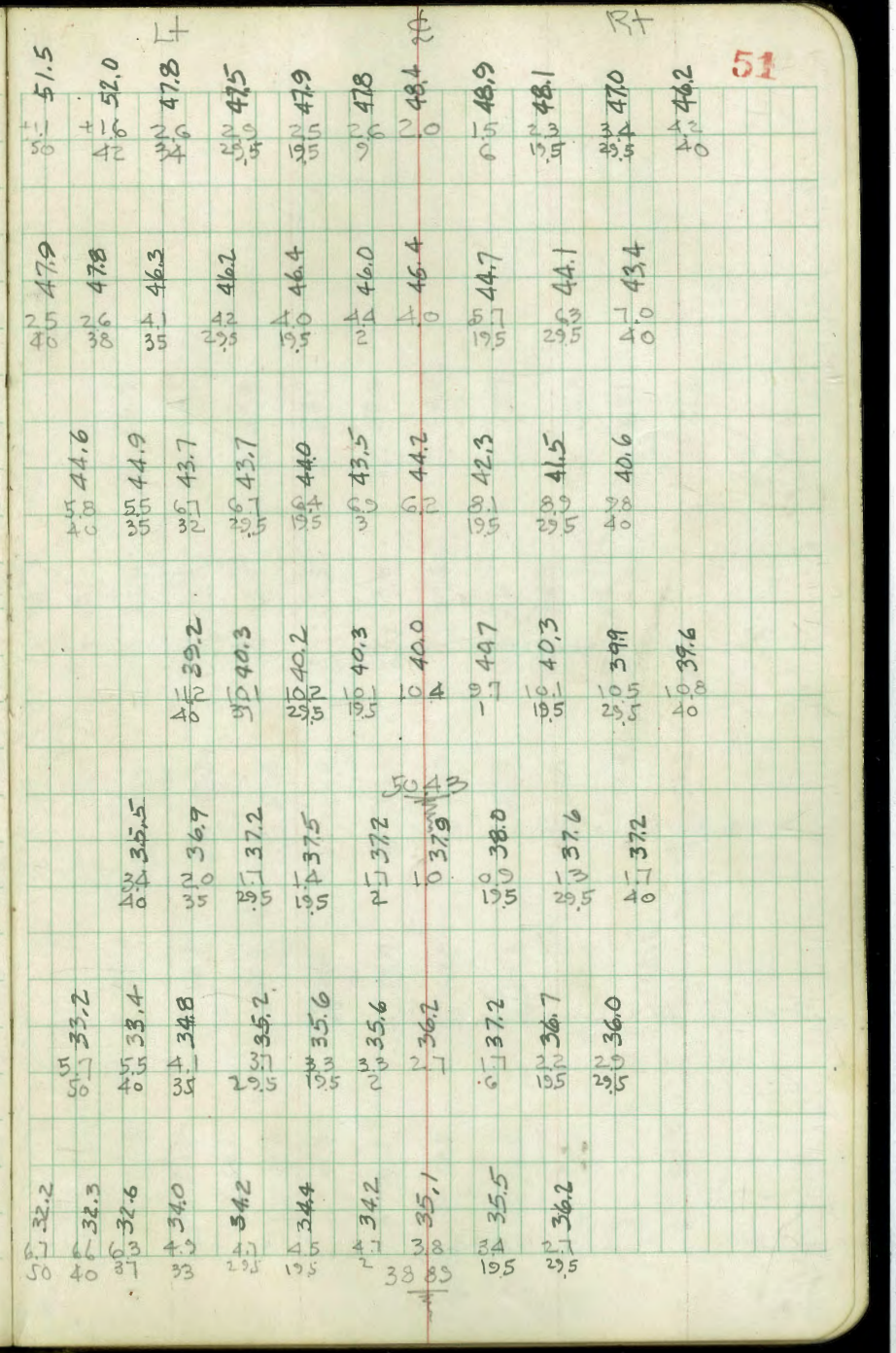
7+50

T.P.	12.68	50.43	1.14	37.75

7+00

6+70.56 = N&Y Line Del Rey

6+52.56 38.89



Bunker Hill St.

X. Sections

9+81

9+76.12 = NLY Line Santa Fe St. = SLY Line Santa Fe R R Rt.way

9+58.35 = ℄ Santa Fe St

9+40.65 SLY. Line Santa Fe St.

9+25

TP	8.65	58.74	0.34	50.09
		5043		

Lt. | ℄ | Rt.

Lt.			℄			Rt.
			56.9			
			2.4			
			54.5			
			56.3			
			4.8			
			53.9			
			4.6			
			54.1			
			4.7			
			54.6			
			4.1			
			54.0			
			2.6			
			55.9			
			3.4			
			55.3			
			3.6			
			53.1			
			1.1			
			51.6			
56.0		57.1	+0.4		58.1	56.7
27			4.0		3.6	2.0
54			51.1		54.5	54.7
55.5		57.8	4.4		54.3	56.1
4.2			4.0		2.5	4.6
51.3			51.3		51.8	51.5
50.1		57.3	4.4		54.3	56.1
8.6			4.0		2.5	4.6
41.5			51.3		51.8	51.5
50.1		52.4	6.3		52.5	50.8
8.6			5.4		2.6	2.5
41.5			51.0		49.9	48.3
50.6		52.4	6.3		52.5	50.8
8.1			5.4		2.6	2.5
42.5			51.0		49.9	48.3
51.4		52.4	6.6		53.8	51.5
7.3			5.7		2.9	2.2
44.1			50.9		50.9	49.3
49.3		52.8	5.9		54.3	52.0
4.9			5.0		2.5	1.3
44.4			50.9		51.8	50.7
50.5		52.2	6.5		53.4	50.7
8.2			5.5		2.5	8.0
42.3			50.9		50.9	42.7
52.8		52.7	6.0		55.7	54.4
5.9			5.1		2.6	1.3
46.9			50.9		53.1	53.1
52.3		56.1	6.0		55.7	53.6
6.4			5.1		2.6	1.5
49.9			50.9		53.1	52.1
51.7		54.8	6.0		54.2	53.02
7.0			5.1		2.5	1.72
44.7			50.9		51.7	51.3
50.0		53.3	5.9		54.2	
8.7			5.4		2.5	
41.3			50.5		51.7	

58.74

On Conc. Mon.

Walker
Hendricks
Becker
Johnson
5-19-47

SANTA FE ST.

Indexed
C.S.K.

X-Sections

from Bunker Hill st
to Rosewood st.

2+09

2+00

1+48 = ℄ Existing Wooden Box Culvert 48' ℄ of ℄

1+00

T.P. 7.36 53.41 12.69 46.05

0+50

0+00 = ELY Line Bunker Hill st.

π from P-52
58.74

Lt. ℄ Rt.

53

Santa Fe St

X-Sections

3+60					
3+10					
2+80					
2+28					
2+17					
2+14					
T.P	899	54.59 53.41	7.81	45.60	on Pipe 19' Lt 2+25

| Lt. | | | | |

Santa Fe st.
X. Sections

5+52.08

5+35.08 = ℄ Glendora st.

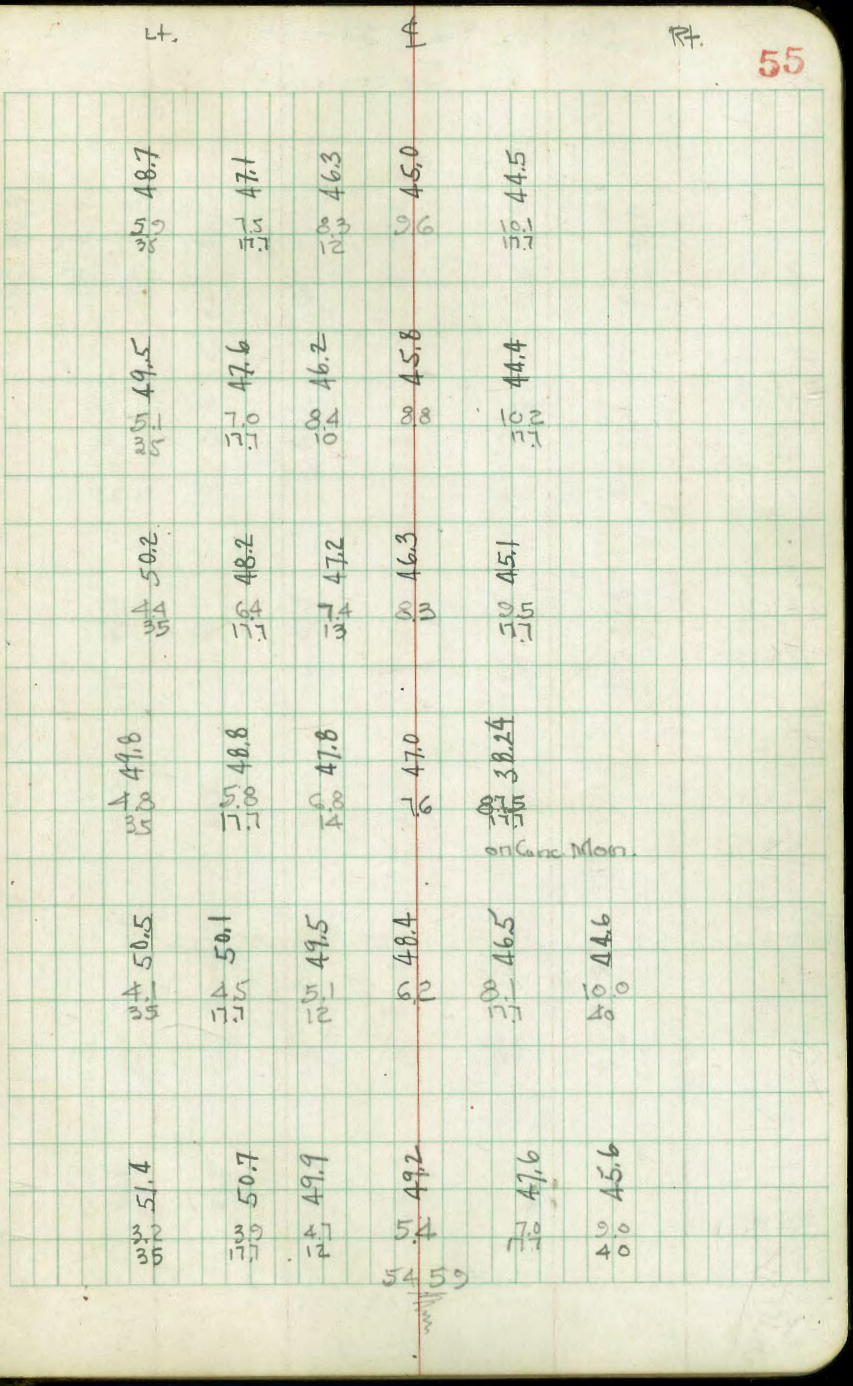
5+18.08

5+00.08 = R/W. line Glendora st.

4+50

4+00

54.59



Santa Fe Street
X Sections

8+00
7+50
7+00
6+50
6+00
T.P. 3.72 45.76 12.52 42.04
5+70.08 54.59

8+00	7+50	7+00	6+50	6+00	T.P.	5+70.08
4.9 / 35 40.9	4.2 / 35 41.6	3.1 / 35 42.7	1.8 / 35 44.0	8.0 / 35 46.6	6.8 / 35 47.8	
5.0 / 25 40.8						
4.3 / 23 41.5						
4.6 / 17.7 41.2	4.4 / 17.7 41.4	3.8 / 17.7 42.0	2.4 / 17.7 43.4	9.4 / 17.7 45.2	8.1 / 17.7 46.5	
5.2 / 13 40.6	4.7 / 13 41.1	4.1 / 13 41.7	2.9 / 13 42.9	10.0 / 13 44.6	8.9 / 12 45.7	
6.1 39.7	5.8 40.0	5.1 40.7	3.1 / 45.76 42.1	11.2 43.4	10.2 44.4	54.59
7.4 / 17.7 38.4	6.7 / 17.7 38.9	6.5 / 17.7 39.3	5.3 / 17.7 40.5	12.8 / 17.7 41.8	12.0 / 17.7 42.6	
8.8 / 40 37.0	8.4 / 40 37.4	8.2 / 40 37.6	6.9 / 40 38.9	14.7 / 40 39.9		

Lt

Rt

56

Santa Fe Street

X- Sections

10+12 in Drainage Ditch Culvert sketch P-35

10+07

10+00

9+75

T.P. 2.26 42.32 12.70 3307 33.06 NWLY Conc. Mon. Rosewood St & Santa Fe St

9+33

9+00

8+50 45.76

Lt

34.86 34.4 35.8 35.6 37.2 37.7 39.2

485 Flowline Culvert

33.3 34.1 34.9 37.3 38.0 39.8 40.7

33.2 35.2 35.1 35.8 39.2 39.8 40.1

31.7 34.2 34.2 36.4 38.6 38.9 39.5

42.32

45.76

Rt

30.9 33.2 33.5 35.6 37.7 37.2 38.1

30.4 30.8 32.4 34.3 35.3 35.5 36.5

29.8 30.7 29.6 30.0 31.2

30.4 30.7 32.4 34.3 35.3 35.5 36.5

Santa Fe Street
X- Sections

10+70.27 = NLy Line Rosewood St

10+28

10+23 In Drainage Ditch
42°32

| | | |

Walker
Hendricks
Becker
Johnson
5-21-41

Cross Sections

Revere Street 70' Wide from Bunker Hill to Glendora

1+75

1+60

1+45 to 2+20 Wood Fence on Rt on Line

1+22

0+70

0+50

0+00 - E.L.S. Line Bunker Hill

6.62 22.92 16.30

Indexed
C.S.K.

| | | |

1+50	2+00	2+50	3+00	3+50	4+00	4+50
22.92						
4.3 50 18.6	5.6 50 17.3	5.6 50 17.3				
4.8 35 18.1	5.8 35 17.1	5.8 35 17.1	5.5 50 17.4	6.0 50 16.9	6.2 50 16.7	6.5 50 16.4
6.0 32 16.9	6.0 32 16.9	6.08 31 ON CURVE 1684	6.1 35 16.8	6.4 35 16.5	6.7 35 16.2	7.1 35 15.8
6.8 17 16.1	6.8 17 16.1	6.9 17 16.0	6.7 17 16.2	7.3 17 15.6	7.4 17 15.5	7.2 17 15.0
7.0 15.9	7.3 15.6	7.2 15.7	7.2 15.7	7.5 15.4	7.8 15.1	8.3 14.6
22.92						
7.4 17 15.5	7.9 17 15.0	8.1 17 14.8	7.7 17 15.2	8.4 17 14.5	8.6 17 14.3	9.6 17 13.3
7.7 35 15.2	8.5 35 14.4	8.5 35 14.4	8.3 35 14.6	8.7 35 14.2	9.1 35 13.8	10.2 35 12.7
8.0 50 14.9	8.3 50 14.6	8.9 50 14.0	8.9 50 14.0	9.3 50 13.6	10.0 50 12.9	10.7 50 12.2

Completed 5-21-47

Chk BM on Mon		1043	12.49 P-41
35' Lt		8.4	14.5
17' Lt		9.0	13.9
35' R		10.4	12.5
17' R		10.3	12.6
℄		9.2	13.7

~5+00 ~ NWLY Line Glendora

22.92

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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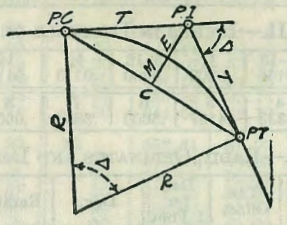


CURVE FORMULAS

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

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

Middle ordinate=M=R(1—cos. $\frac{\Delta}{2}$) (5)=Rvers $\frac{\Delta}{2}$ (6)

External=E=Ttan$\frac{\Delta}{4}$ (7)=R ÷ cos.$\frac{\Delta}{2}$—R (8)=Rexsec$\frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. △=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=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=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6 ÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose △=32° 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° 30′.

Table I.—Minutes in Decimals of a Degree.

1′	.0167	11′	.1833	21′	.3500	31′	.5167	41′	.6833	51′	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

Table II.—Inches in Decimals of a Foot.

1–16	3–32	1/8	3–16	1/4	5–16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

Table III.—Radii, Ordinates and Deflections.

Deg.	Radius	Mid. Ord.	Tan. Offset	Def. for 1 Foot	Deg.	Radius	Mid. Ord.	Tan Offset	Def. for 1 Foot
0° 10′	34377.5	.036	.145	0.05′	7°	819.02	1.528	6.105	2.10′
20	17188.8	.073	.291	0.10	20′	781.84	1.600	6.395	2.20
30	11459.2	.109	.436	0.15	30	764.49	1.637	6.540	2.25
40	8594.42	.145	.582	0.20	40	747.89	1.673	6.685	2.30
50	6875.55	.182	.727	0.25	8	716.78	1.746	6.976	2.40
1	5729.65	.218	.873	0.30	20	688.16	1.819	7.266	2.50
10	4911.15	.255	1.018	0.35	30	674.69	1.855	7.411	2.55
20	4297.28	.291	1.164	0.40	40	661.74	1.892	7.556	2.60
30	3819.83	.327	1.309	0.45	9	637.28	1.965	7.846	2.70
40	3437.87	.364	1.454	0.50	20	614.56	2.037	8.136	2.80
50	3125.36	.400	1.600	0.55	30	603.80	2.074	8.281	2.85
2	2864.93	.436	1.745	0.60	40	593.42	2.110	8.426	2.90
10	2644.58	.473	1.891	0.65	10	573.69	2.183	8.716	3.00
20	2455.70	.509	2.036	0.70	30	546.44	2.292	9.150	3.15
30	2292.01	.545	2.181	0.75	11	521.67	2.402	9.585	3.30
40	2148.79	.582	2.327	0.80	30	499.06	2.511	10.02	3.45
50	2022.41	.618	2.472	0.85	12	478.34	2.620	10.45	3.60
3	1910.08	.655	2.618	0.90	30	459.28	2.730	10.89	3.75
10	1809.57	.691	2.763	0.95	13	441.68	2.839	11.32	3.90
20	1719.12	.727	2.908	1.00	30	425.40	2.949	11.75	4.05
30	1637.28	.764	3.054	1.05	14	410.28	3.058	12.18	4.20
40	1562.88	.800	3.199	1.10	30	396.20	3.168	12.62	4.35
50	1494.95	.836	3.345	1.15	15	383.07	3.277	13.05	4.50
4	1432.69	.873	3.490	1.20	30	370.78	3.387	13.49	4.65
10	1375.40	.909	3.635	1.25	16	359.27	3.496	13.92	4.80
20	1322.53	.945	3.718	1.30	30	348.45	3.606	14.35	4.95
30	1273.57	.982	3.926	1.35	17	338.27	3.716	14.78	5.10
40	1228.11	1.018	4.071	1.40	18	319.62	3.935	15.64	5.40
50	1185.78	1.055	4.217	1.45	19	302.94	4.155	16.51	5.70
5	1146.28	1.091	4.362	1.50	20	287.94	4.374	17.37	6.00
10	1109.33	1.127	4.507	1.55	21	274.37	4.594	18.22	6.30
20	1074.68	1.164	4.653	1.60	22	262.04	4.814	19.08	6.60
30	1042.14	1.200	4.798	1.65	23	250.79	5.035	19.94	6.90
40	1011.51	1.237	4.943	1.70	24	240.49	5.255	20.79	7.20
50	982.64	1.273	5.088	1.75	25	231.01	5.476	21.64	7.50
6	955.37	1.309	5.234	1.80	26	222.27	5.697	22.50	7.80
10	929.57	1.346	5.379	1.85	27	214.18	5.918	23.35	8.10
20	905.13	1.382	5.524	1.90	28	206.68	6.139	24.19	8.40
30	881.95	1.418	5.669	1.95	29	199.70	6.360	25.04	8.70
40	859.92	1.455	5.814	2.00	30	193.18	6.583	25.88	9.00

Note. Chord Deflection=2 times tangent deflection.

Table IV.—Tangents and Externals to a 1° Curve.

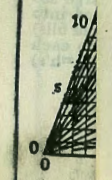
Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
1°	50.00	.22	11°	551.70	26.50	21°	1061.9	97.57
10′	58.34	.30	10′	560.11	27.31	10′	1070.6	99.16
20	66.67	.39	20	568.53	28.14	20	1079.2	100.75
30	75.01	.49	30	576.95	28.97	30	1087.8	102.35
40	83.34	.61	40	585.36	29.82	40	1096.4	103.97
50	91.68	.73	50	593.79	30.68	50	1105.1	105.60
2	100.01	.87	12	602.21	31.56	22	1113.7	107.24
10	108.35	1.02	10	610.64	32.45	10	1122.4	108.90
20	116.68	1.19	20	619.07	33.35	20	1131.0	110.57
30	125.02	1.36	30	627.50	34.26	30	1139.7	112.25
40	133.36	1.55	40	635.93	35.18	40	1148.4	113.95
50	141.70	1.75	50	644.37	36.12	50	1157.0	115.66
3	150.04	1.96	13	652.81	37.07	23	1165.7	117.38
10	158.38	2.19	10	661.25	38.03	10	1174.4	119.12
20	166.72	2.43	20	669.70	39.01	20	1183.1	120.87
30	175.06	2.67	30	678.15	39.99	30	1191.8	122.63
40	183.40	2.93	40	686.60	40.99	40	1200.5	124.41
50	191.74	3.21	50	695.06	42.00	50	1209.2	126.20
4	200.08	3.49	14	703.51	43.03	24	1217.9	128.00
10	208.43	3.79	10	711.97	44.07	10	1226.6	129.82
20	216.77	4.10	20	720.44	45.12	20	1235.3	131.65
30	225.12	4.42	30	728.90	46.18	30	1244.0	133.50
40	233.47	4.76	40	737.37	47.25	40	1252.8	135.35
50	241.81	5.10	50	745.85	48.34	50	1261.5	137.23
5	250.16	5.46	15	754.32	49.44	25	1270.2	139.11
10	258.51	5.83	10	762.80	50.55	10	1279.0	141.01
20	266.86	6.21	20	771.29	51.68	20	1287.7	142.93
30	275.21	6.61	30	779.77	52.89	30	1296.5	144.85
40	283.57	7.01	40	788.26	53.97	40	1305.3	146.79
50	291.92	7.43	50	796.75	55.13	50	1314.0	148.75
6	300.28	7.86	16	805.25	56.31	26	1322.8	150.71
10	308.64	8.31	10	813.75	57.50	10	1331.6	152.69
20	316.99	8.76	20	822.25	58.70	20	1340.4	154.69
30	325.35	9.23	30	830.76	59.91	30	1349.2	156.70
40	333.71	9.71	40	839.27	61.14	40	1358.0	158.72
50	342.08	10.20	50	847.78	62.38	50	1366.8	160.76
7	350.44	10.71	17	856.30	63.63	27	1375.6	162.81
10	358.81	11.22	10	864.82	64.90	10	1384.4	164.86
20	367.17	11.75	20	873.35	66.18	20	1393.2	166.95
30	375.54	12.29	30	881.88	67.47	30	1402.0	169.04
40	383.91	12.85	40	890.41	68.77	40	1410.9	171.15
50	392.28	13.41	50	898.95	70.09	50	1419.7	173.27
8	400.66	13.99	18	907.49	71.42	28	1428.6	175.41
10	409.03	14.58	10	916.03	72.76	10	1437.4	177.55
20	417.41	15.18	20	924.58	74.12	20	1446.3	179.72
30	425.79	15.80	30	933.13	75.49	30	1455.1	181.89
40	434.17	16.43	40	941.69	76.86	40	1464.0	184.08
50	442.55	17.07	50	950.25	78.26	50	1472.9	186.29
9	450.93	17.72	19	958.81	79.67	29	1481.8	188.51
10	459.32	18.38	10	967.38	81.09	10	1490.7	190.74
20	467.71	19.06	20	975.96	82.53	20	1499.6	192.99
30	476.10	19.75	30	984.53	83.97	30	1508.5	195.25
40	484.49	20.45	40	993.12	85.43	40	1517.4	197.53
50	492.88	21.16	50	1001.7	86.90	50	1526.3	199.82
10	501.28	21.89	20	1010.3	88.39	30	1535.3	202.12
10	509.68	22.62	10	1018.9	89.89	10	1544.2	204.44
20	518.08	23.38	20	1027.5	91.40	20	1553.1	206.77
30	526.48	24.14	30	1036.1	92.92	30	1562.1	209.12
40	534.89	24.91	40	1044.7	94.46	40	1571.0	211.48
50	543.29	25.70	50	1053.3	96.01	50	1580.0	213.86

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
31°	1589.0	216.3	**41°**	2142.2	387.4	**51°**	2732.9	618.4
10′	1598.0	218.7	10′	2151.7	390.7	10′	2743.1	622.8
20	1606.9	221.1	20	2161.2	394.1	20	2753.4	627.2
30	1615.9	223.5	30	2170.8	397.4	30	2763.7	631.7
40	1624.9	226.0	40	2180.3	400.8	40	2773.9	636.2
50	1633.9	228.4	50	2189.9	404.2	50	2784.2	640.7
32	1643.0	230.9	**42**	2199.4	407.6	**52**	2794.5	645.2
10	1652.0	233.4	10	2209.0	411.1	10	2804.9	649.7
20	1661.0	235.9	20	2218.6	414.5	20	2815.2	654.3
30	1670.0	238.4	30	2228.1	418.0	30	2825.6	658.8
40	1679.1	241.0	40	2237.7	421.4	40	2835.9	663.4
50	1688.1	243.5	50	2247.3	425.0	50	2846.3	668.0
33	1697.2	246.1	**43**	2257.0	428.5	**53**	2856.7	672.7
10	1706.3	248.7	10	2266.6	432.0	10	2867.1	677.3
20	1715.3	251.3	20	2276.2	435.6	20	2877.5	682.0
30	1724.4	253.9	30	2285.9	439.2	30	2888.0	686.7
40	1733.5	256.5	40	2295.6	442.8	40	2898.4	691.4
50	1742.6	259.1	50	2305.2	446.4	50	2908.9	696.1
34	1751.7	261.8	**44**	2314.9	450.0	**54**	2919.4	700.9
10	1760.8	264.5	10	2324.6	453.6	10	2929.9	705.7
20	1770.0	267.2	20	2334.3	457.3	20	2940.4	710.5
30	1779.1	269.9	30	2344.1	461.0	30	2951.0	715.3
40	1788.2	272.6	40	2353.8	464.6	40	2961.5	720.1
50	1797.4	275.3	50	2363.5	468.4	50	2972.1	725.0
35	1806.6	278.1	**45**	2373.3	472.1	**55**	2982.7	729.9
10	1815.7	280.8	10	2383.1	475.8	10	2993.3	734.8
20	1824.9	283.6	20	2392.8	479.6	20	3003.9	739.7
30	1834.1	286.4	30	2402.6	483.3	30	3014.5	744.6
40	1843.3	289.2	40	2412.4	487.2	40	3025.2	749.6
50	1852.5	292.0	50	2422.3	491.0	50	3035.8	754.6
36	1861.7	294.9	**46**	2432.1	494.8	**56**	3046.5	759.6
10	1870.9	297.7	10	2441.9	498.7	10	3057.2	764.6
20	1880.1	300.6	20	2451.8	502.5	20	3067.9	769.7
30	1889.4	303.5	30	2461.7	506.4	30	3078.7	774.7
40	1898.6	306.4	40	2471.5	510.3	40	3089.4	779.8
50	1907.9	309.3	50	2481.4	514.3	50	3100.2	784.9
37	1917.1	312.2	**47**	2491.3	518.2	**57**	3110.9	790.1
10	1926.4	315.2	10	2501.2	522.2	10	3121.7	795.2
20	1935.7	318.1	20	2511.2	526.1	20	3132.6	800.4
30	1945.0	321.1	30	2521.1	530.1	30	3143.4	805.6
40	1954.3	324.1	40	2531.1	534.2	40	3154.2	810.9
50	1963.6	327.1	50	2541.0	538.2	50	3165.1	816.1
38	1972.9	330.2	**48**	2551.0	542.2	**58**	3176.0	821.4
10	1982.2	333.2	10	2561.0	546.3	10	3186.9	826.7
20	1991.5	336.3	20	2571.0	550.4	20	3197.8	832.0
30	2000.9	339.3	30	2581.0	554.5	30	3208.8	837.3
40	2010.2	342.4	40	2591.0	558.6	40	3219.7	842.7
50	2019.6	345.5	50	2601.1	562.8	50	3230.7	848.1
39	2029.0	348.6	**49**	2611.2	566.9	**59**	3241.7	853.5
10	2038.4	351.8	10	2621.2	571.1	10	3252.7	858.9
20	2047.8	354.9	20	2631.3	575.3	20	3263.7	864.3
30	2057.2	358.1	30	2641.4	579.5	30	3274.8	869.8
40	2066.6	361.3	40	2651.5	583.8	40	3285.8	875.3
50	2076.0	364.5	50	2661.6	588.0	50	3296.9	880.8
40	2085.4	367.7	**50**	2671.8	592.3	**60**	3308.0	886.4
10	2094.9	371.0	10	2681.9	596.6	10	3319.1	892.0
20	2104.3	374.2	20	2692.1	600.9	20	3330.3	897.5
30	2113.8	377.5	30	2702.3	605.3	30	3341.4	903.2
40	2123.3	380.8	40	2712.5	609.6	40	3352.6	908.8
50	2132.7	384.1	50	2722.7	614.0	50	3363.8	914.5

Table IV.—Tangents and Externals to a 1° Curve.

Central Angle	Tangent	External	Central Angle	Tangent	External	Central Angle	Tangent	External
61°	3375.0	920.2	**71°**	4086.9	1308.2	**81°**	4893.6	1805.3
10′	3386.3	925.9	10′	4099.5	1315.6	10′	4908.0	1814.7
20	3397.5	931.6	20	4112.1	1322.9	20	4922.5	1824.1
30	3408.8	937.3	30	4124.8	1330.3	30	4937.0	1833.6
40	3420.1	943.1	40	4137.4	1337.7	40	4951.5	1843.1
50	3431.4	948.9	50	4150.1	1345.1	50	4966.1	1852.6
62	3442.7	954.8	**72**	4162.8	1352.6	**82**	4980.7	1862.2
10	3454.1	960.6	10	4175.6	1360.1	10	4995.4	1871.8
20	3465.4	966.5	20	4188.5	1367.6	20	5010.0	1881.5
30	3476.8	972.4	30	4201.2	1375.2	30	5024.8	1891.2
40	3488.3	978.3	40	4214.0	1382.8	40	5039.5	1900.9
50	3499.7	984.3	50	4226.8	1390.4	50	5054.3	1910.7
63	3511.1	990.2	**73**	4239.7	1398.0	**83**	5069.2	1920.5
10	3522.6	996.2	10	4252.6	1405.7	10	5084.0	1930.4
20	3534.1	1002.3	20	4265.6	1413.5	20	5099.0	1940.3
30	3545.6	1008.3	30	4278.5	1421.2	30	5113.9	1950.3
40	3557.2	1014.4	40	4291.5	1429.0	40	5128.9	1960.2
50	3568.7	1020.5	50	4304.6	1436.8	50	5143.9	1970.3
64	3580.3	1026.6	**74**	4317.6	1444.6	**84**	5159.0	1980.4
10	3591.9	1032.8	10	4330.7	1452.5	10	5174.1	1990.5
20	3603.5	1039.0	20	4343.8	1460.4	20	5189.3	2000.6
30	3615.1	1045.2	30	4356.9	1468.4	30	5204.4	2010.8
40	3626.8	1051.4	40	4370.1	1476.4	40	5219.7	2021.1
50	3638.5	1057.7	50	4383.3	1484.4	50	5234.9	2031.4
65	3650.2	1063.9	**75**	4396.5	1492.4	**85**	5250.3	2041.7
10	3661.9	1070.2	10	4409.8	1500.5	10	5265.6	2052.1
20	3673.7	1076.6	20	4423.1	1508.6	20	5281.0	2062.5
30	3685.4	1082.9	30	4436.4	1516.7	30	5296.4	2073.0
40	3697.2	1089.3	40	4449.7	1524.9	40	5311.9	2083.5
50	3709.0	1095.7	50	4463.1	1533.1	50	5327.4	2094.1
66	3720.9	1102.2	**76**	4476.5	1541.4	**86**	5343.0	2104.7
10	3732.7	1108.6	10	4489.9	1549.7	10	5358.6	2115.3
20	3744.6	1115.1	20	4503.4	1558.0	20	5374.2	2126.0
30	3756.5	1121.7	30	4516.9	1566.3	30	5389.9	2136.7
40	3768.5	1128.2	40	4530.4	1574.7	40	5405.6	2147.5
50	3780.4	1134.8	50	4544.0	1583.1	50	5421.4	2158.4
67	3792.4	1141.4	**77**	4557.6	1591.6	**87**	5437.2	2169.2
10	3804.4	1148.0	10	4571.2	1600.1	10	5453.1	2180.2
20	3816.4	1154.7	20	4584.8	1608.6	20	5469.0	2191.1
30	3828.4	1161.3	30	4598.5	1617.1	30	5484.9	2202.2
40	3840.5	1168.1	40	4612.2	1625.7	40	5500.9	2213.2
50	3852.6	1174.8	50	4626.0	1634.4	50	5517.0	2224.3
68	3864.7	1181.6	**78**	4639.8	1643.0	**88**	5533.1	2235.5
10	3876.8	1188.4	10	4653.6	1651.7	10	5549.2	2246.7
20	3889.0	1195.2	20	4667.4	1660.5	20	5565.4	2258.0
30	3901.2	1202.0	30	4681.3	1669.2	30	5581.6	2269.3
40	3913.4	1208.9	40	4695.2	1678.1	40	5597.8	2280.6
50	3925.6	1215.8	50	4709.2	1686.9	50	5614.2	2292.0
69	3937.9	1222.7	**79**	4723.2	1695.8	**89**	5630.5	2303.5
10	3950.2	1229.7	10	4737.2	1704.7	10	5646.9	2315.0
20	3962.5	1236.7	20	4751.2	1713.7	20	5663.4	2326.6
30	3974.8	1243.7	30	4765.3	1722.7	30	5679.9	2338.2
40	3987.2	1250.8	40	4779.4	1731.7	40	5696.4	2349.8
50	3999.5	1257.9	50	4793.6	1740.8	50	5713.0	2361.5
70	4011.9	1265.0	**80**	4807.7	1749.9	**90**	5729.7	2373.3
10	4024.4	1272.1	10	4822.9	1759.0	10	5746.3	2385.1
20	4036.8	1279.3	20	4836.2	1768.2	20	5763.1	2397.0
30	4049.3	1286.5	30	4850.5	1777.4	30	5779.9	2408.9
40	4061.8	1293.6	40	4864.8	1786.7	40	5796.7	2420.9
50	4074.4	1300.9	50	4879.2	1796.0	50	5813.6	2432.9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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 some 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.

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