DIETZGEN

ENGINEER'S

FIELD BOOK

No. 404F

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.

G-206

CITY ENGINEER

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

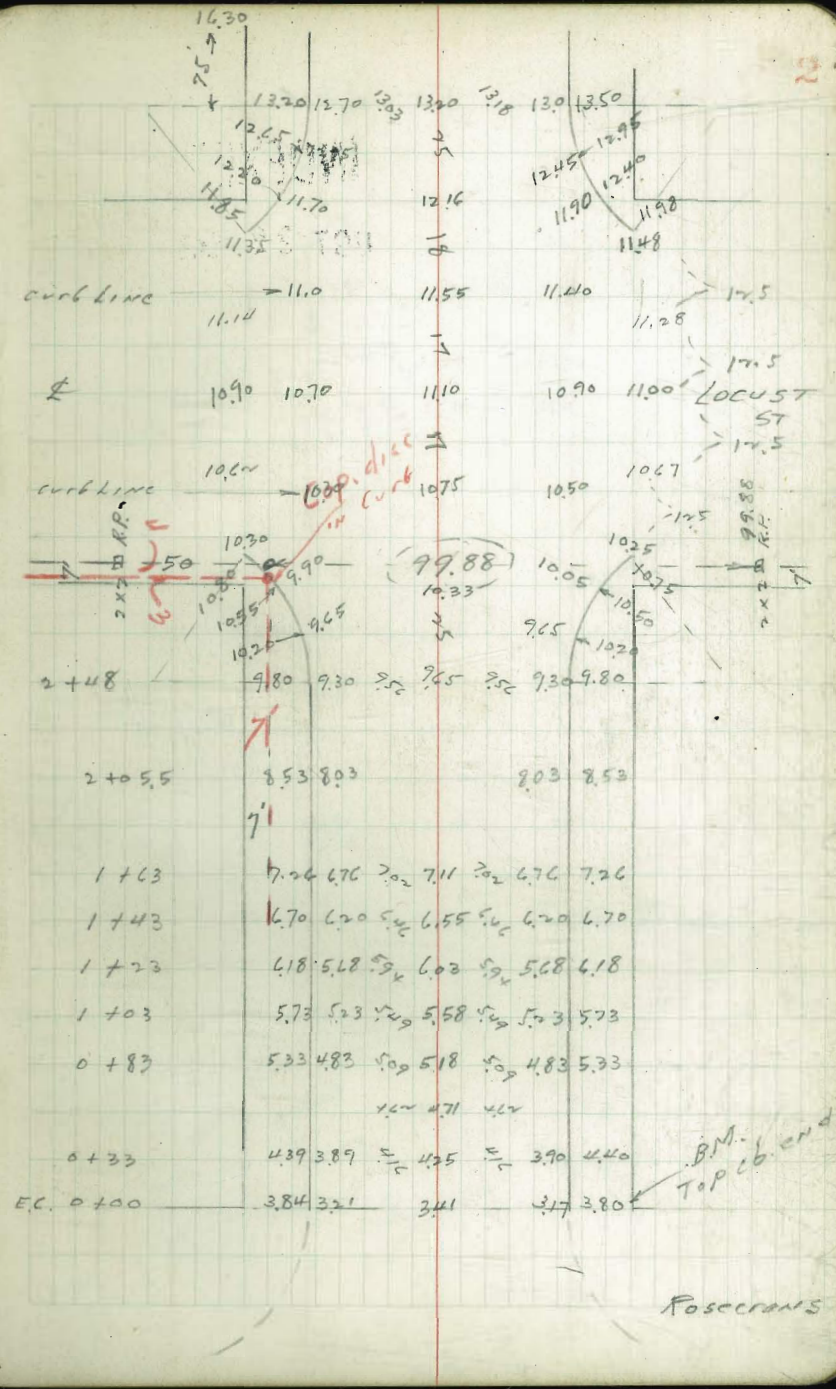
Made in U. S. A.

P.L. 1360 and 1361
F.B. 1498-12

Hugo St. Pav. Griffith Co.

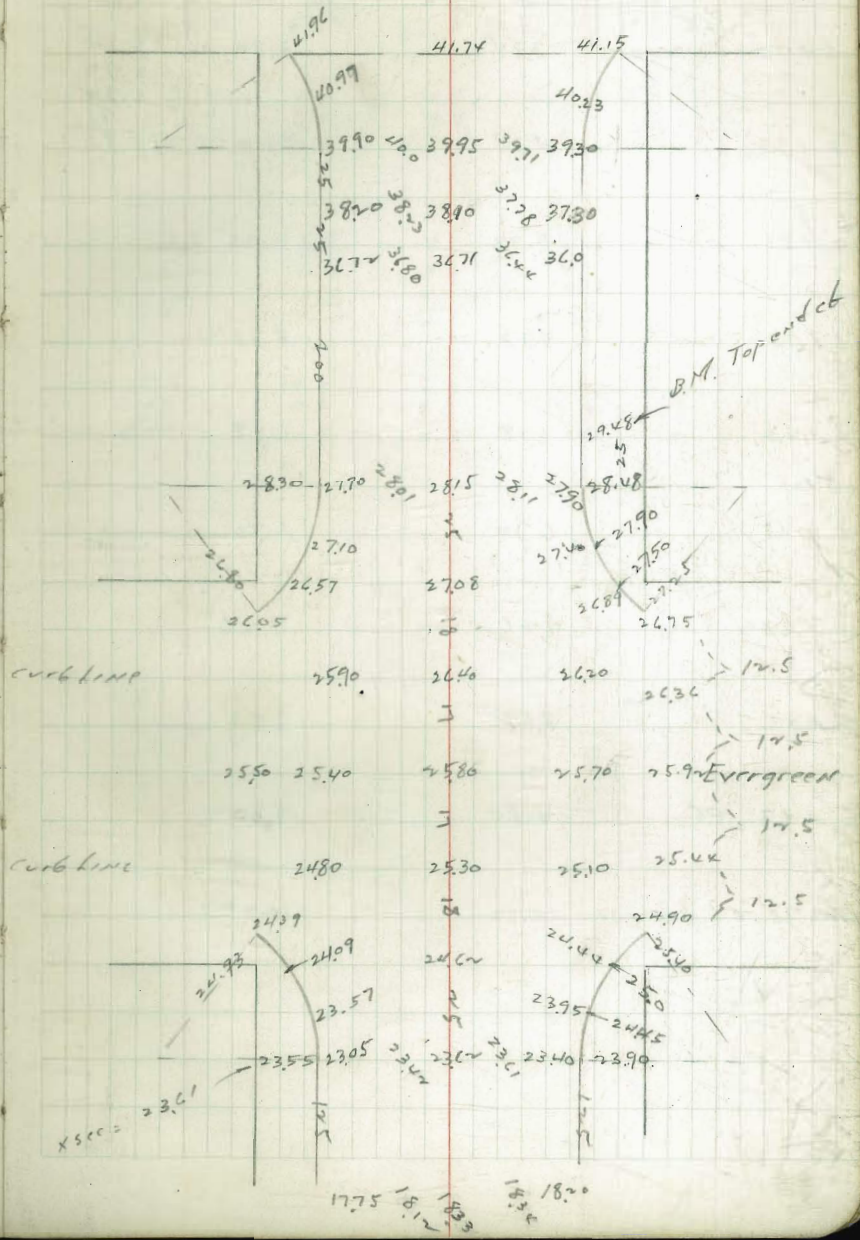
Return 43' R.

R	defl.	chords
12.68	8°26'50"	12.65
14.00	17°46'30"	13.94
14.18	27°13'30"	14.12
14.00	36°33'10"	13.94
12.68	45°00'	12.65



Hugo St. Pav.

Willow



Hugo St. Rough Grades

		S	N	
				3.80
				6.0 ✓
0+00	E.C. Rosecrans	3.8 ✓	3.80	9.8 ✓
				2.90
				6.9 ✓
0+33		4.39	4.40	11.91
				18.83
0+83		5.33	5.33	
1+03		5.73	5.73	
1+23		6.18	6.18	
1+43		6.70	6.70	
1+63		7.26	7.26	
2+05.5		8.53	8.53	
2+28	P.C.	9.80	9.80	
2+73	E.L. Locust	10.80	10.75	

4

S	3.8	4.4	5.3	5.7	6.2	6.70
	6.0	5.4	4.5	4.1	3.6	3.1
	5.5	5.6	4.4	4.0	3.6	2.9
	C 0.5	F 0.2	C 0.1	C 0.1	0.0	C 0.2
						6.70
N	6.0	5.4	4.5	4.1	3.6	12.1
	5.3	6.0	4.2	3.6	3.2	11.5
	C 0.7	F 0.6	C 0.3	C 0.5	C 0.4	C 0.6

S	7.3	8.5	9.8	10.8
	11.5	10.3	9.0	8.0
	11.4	10.5	9.7	8.8
	C 0.1	F 0.2	F 0.7	F 0.8
N	11.5	10.3	9.6	8.0
	10.9	9.8	8.7	7.8
	C 0.6	C 0.5	C 0.3	C 0.2

Hugo St. Rough Grades

	S	N	
			18.83
			0.25
0+00 w/L Locust	11.85	11.5	18.58
			12.17
			30.75
0+25 E.C. Ret.	13.20	13.50	
0+75	15.27	15.58	
1+00 = End grade on St.	16.30	16.63	
1+50		18.71	
~		~20.80	
~+50		~22.88	
~+75 P.C.	~23.55	~23.9	
2+00 ± Evergreen		~25.~?	
		See Sketch	
0+00 w/L "		~27.7?	
0+25 = E.C.		~28.48	
0+50 End grade on N.L.		~29.48	

1700 Con. drive

1.577.5

S

11.85	13.20	15.27	16.30
7.0	5.6	3.5	2.5
6.8	4.22	2.0	1.1
C 0.2	C 1.4	C 1.5	C 1.4

N

11.5	13.5	15.6	16.6	18.7
7.3	5.3	3.22	2.2	12.0
5.0	4.0	1.4	0.7	10.8
C 2.3	C 1.3	C 1.8	C 1.5	C 1.2

N

~20.8	~22.9	~23.9	~25.2	~27.3
9.9	7.8	6.8	5.5	8.4
8.7	6.8	5.3	4.4	7.2
C 1.2	C 1.0	C 1.5	C 1.1	C 1.2

~

~28.48	~29.48
1.2	1.2
0.9	0.4
C 1.3	C 0.8

Hugo St 6" Water

			F.L.	B.M. P.V
0+00	P.C. Rosecrans			380
0+33			1.4	11.58
0+83			2.3	15.38
1+33			3.1	0.15
1+63			4.2	15.23
2+05.5		C6. grade	5.4	11.87
2+48	P.C. (F.H.)	9.80	6.6	27.10
3+08	& Locust	5.58	8.0	0.67
3+68	P.C.	5.87	10.2	26.43
4+18		20.29	12.3	9.42
4+68			14.4	35.85
5+18			16.4	0.80
5+68			18.5	35.05
6+18	& P.C.		20.6	10.25
6+78	& Evergreen		22.9	45.30
7+38	& P.C.		25.2	
7+88			27.4	
8+38			29.6	
8+88			31.8	
9+38	Break		34.0	
9+63	"		35.5	
9+88	P.C.		37.3	
10+13	& Willow			

1.4	2.3	3.1	4.2	5.4	6.6	8.0	10.2	12.3
14.0	13.1	12.3	11.2	10.0	8.8	7.4	5.2	3.1
11.4	10.4	9.5	8.5	7.2	6.0	4.4	2.2	0.1
C 2.6	C 2.7	C 2.8	C 2.7	C 2.8	C 2.8	C 3.0	C 3.0	C 3.0

14.4	16.4	18.5	20.6	22.9	25.2	27.4	29.6
12.7	10.7	8.6	6.5	4.2	10.2	8.5	6.3
9.9	8.1	6.2	4.0	1.3	8.0	5.9	3.7
C 2.8	C 2.6	C 2.4	C 2.5	C 2.9	C 2.2	C 2.6	C 2.6

31.8	34.0	35.5	37.3
4.1	11.3	9.8	8.0
1.4	8.5	7.2	5.4
C 2.7	C 2.8	C 2.6	C 2.6

Sewer Lat.

①	⑧	②	③	⑦	⑪
0.06	0.06	2.37	4.47	4.47	7.94
15.32	15.32	13.01	10.91	10.91	7.44
10.98	11.26	8.78	6.75	5.66	2.82
C 4.34	C 4.06	C 4.23	C 4.16	C 5.25	C 4.62

⑤	⑥	⑨	⑩
100.2	25.58	31.88	33.98
17.06	10.77	13.42	11.32
11.10	4.77	8.02	5.58
C 5.96	C 5.50	C 5.40	C 5.74

48" Drain Const. Taylor & Rosecrans (See L-63L)

For St. Dept.

INDEXED
W.K.
OCT 22 1948

46.4
5.4
10.26 ✓

0+00 F.L. Ex. 18"x10' Conc. Box. -1.8C

0+05 F.L. drop to 4' pipe -3.70

0+96.4 ℄ Junc "A" 130✓ -4.00

F.L. of Ex. -4.3✓

Moore
Hazard
W. Moore
7-8-48

7

BMBD and Curve SE Cor Taylor

S Door

13.1✓
3.1✓
C 9.00

13.9C
3.1✓
C 10.8✓

14.2C
4.75
C 9.51

For St. Dept.
8-1-42.

Grade + Oil of 28th St. west 1/2
Redwood to Upas St.

83' wide E 16 20
W 11 23

	W. Curb	W. Gut
S L Upas 6+00	328.50	
5+14 Top end 22.5 Cb.R.W	327.37	325.80
5		325.62 ✓
+50		325.00
4		324.37
+50		323.75
3		323.13
+50		322.51
2		321.89
+50		321.26
1		320.64
+50		320.02
0+00 NL Thorn	320.0	✓ 319.40
℄ "		318.85
0+00 SL "	319.00	318.30
+50		316.75
1		315.20
+50		313.65
2		312.10
+50		310.55
3	309.70	309.00 — E curb 310.63
+50 Join old oil pav.		307.90 oil gut
4+05 Breaks	307.60 ℄ inlet curb	

N end 10' Cb inlet. 40' Rdwy

8

331.00 NEBP Utah & Upas
2.33
333.33
5.96
327.37
1.22
328.59
8.04
320.55 ← T.P. BP NE 28th & Thorn
0.85
321.40

25.62	25.00	24.37	23.75	23.13	22.51
2.97	3.59	4.22	4.84	5.46	6.08
1.83	2.61	3.33	3.96	4.66	5.48
C 1.04	C 0.98	C 0.89	C 0.88	C 0.80	C 0.60

21.89	21.26	20.64	20.02	19.40
6.70	7.33	7.95	8.57	9.19
6.06	6.82	7.39	8.10	8.93
C 0.64	C 0.51	C 0.56	C 0.47	C 0.26

18.85	18.30	16.75	15.20	13.65
2.55	3.10	4.65	6.20	7.75
2.20	2.70	4.35	5.85	7.43
C 0.35	C 0.40	C 0.30	C 0.35	C 0.32

12.10	10.55	309.0
9.30	10.85	12.40
8.80	10.35	11.50
C 0.50	C 0.50	C 0.90

Fire Station Const. Moore
8-10-47.

Carolina Blvd. +

250.82 Sw. BP Carolina Varona.
7.73
258.55

Top Foundation El. 255.0

INDEXED
W.K.
OCT 22 1948

255.00
3.55

Moore
10-21-47

Curb grades at Fire Sta.
16' sidewalk - 70' ST.

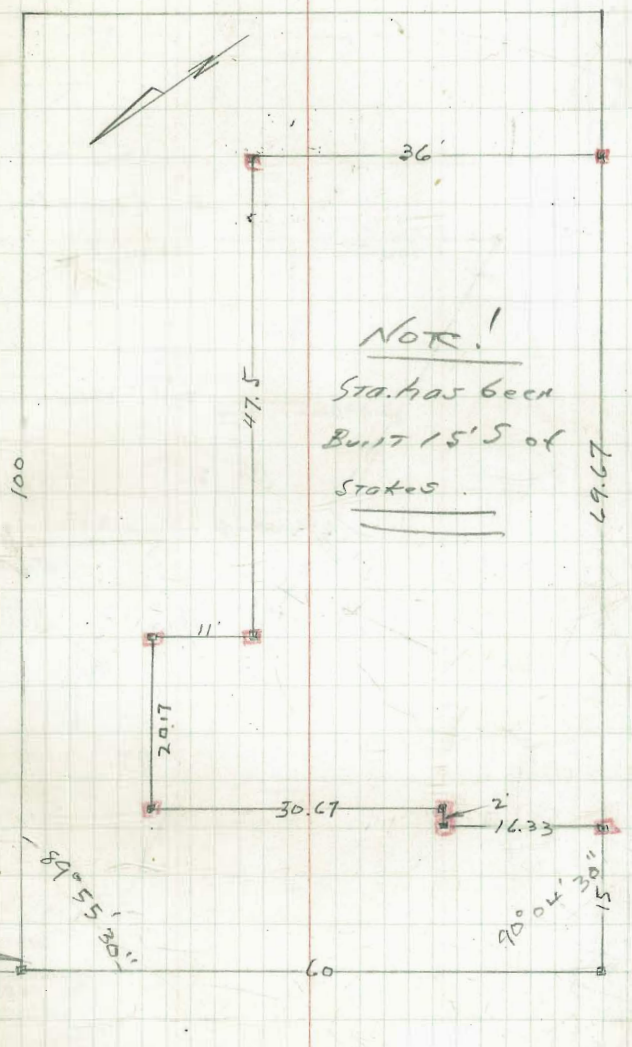
Pueblo Line = 0+00 = ℄ Varona		250.00
0+40 = opp. c6. P.C. on West		250.20
1+52 : NL Sta. Lot		253.0 ✓
1+87 : ℄ " "		253.75 ✓
2+12 : SL " "		254.50 ✓
2+37 =		255.00
2+40 = Break opp PC c6 on W		255.20

Sw. BP. Varona + Cat.
250.82
5.04
255.86

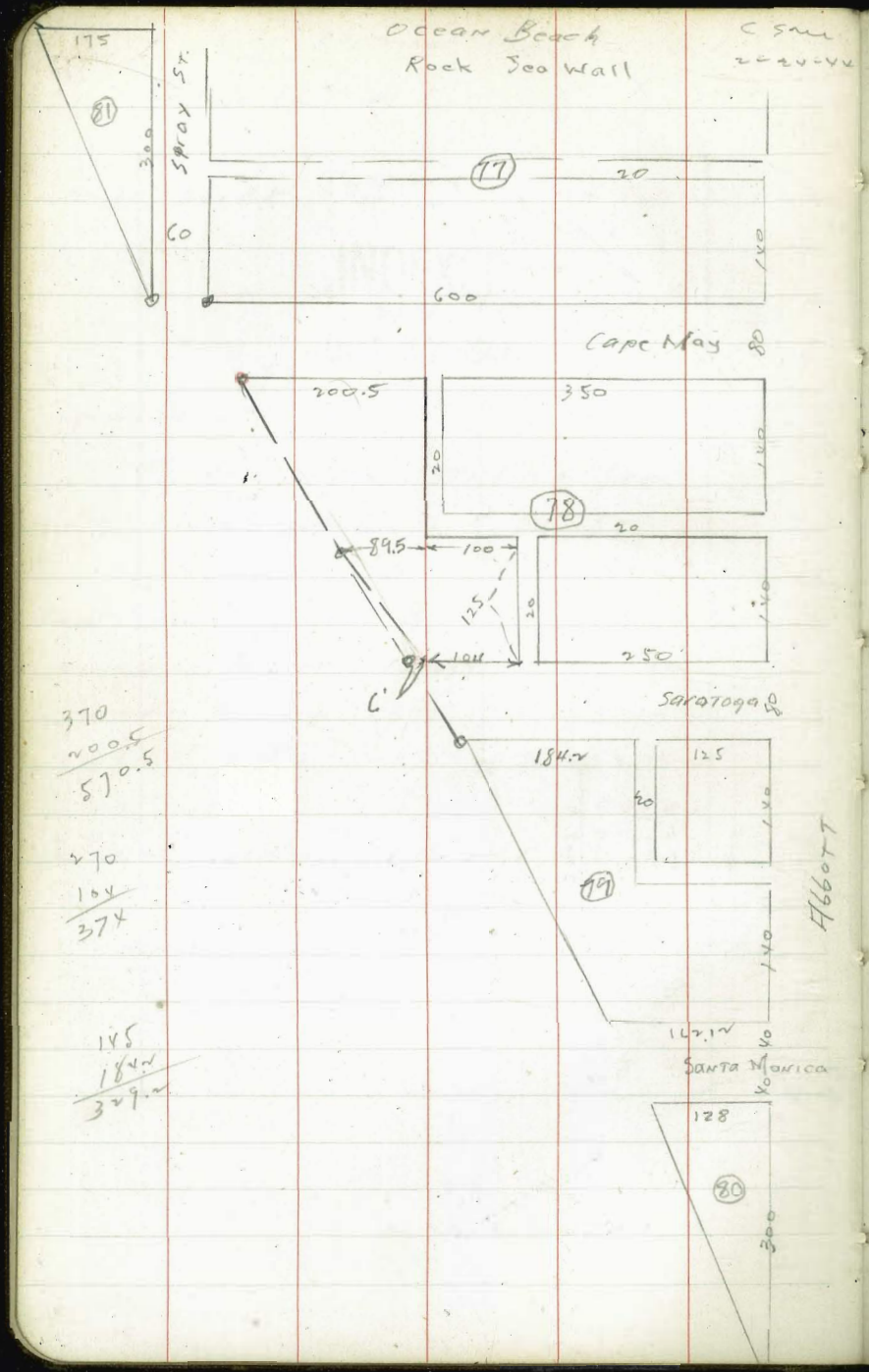
253.0 253.75 254.50 255.0
2.8c 1.1 1.3c 0.8c

152'
100
R.P.

9



NOTE!
Sta. has been built 15' S of stakes.


Ocean Beach
Rock Sea Wall
175
81
300
Spray St.
77
20
60
140
600
Cape May 80
200.5
350
20
140
78
20
89.5
100
125
20
140
250
C'
Saratoga 80
370
200.5
570.5
270
184.4
125
20
140
79
Abbott
270
184.4
374
145
184.4
329.4
142.1
40
Santa Monica
40
128
80
300

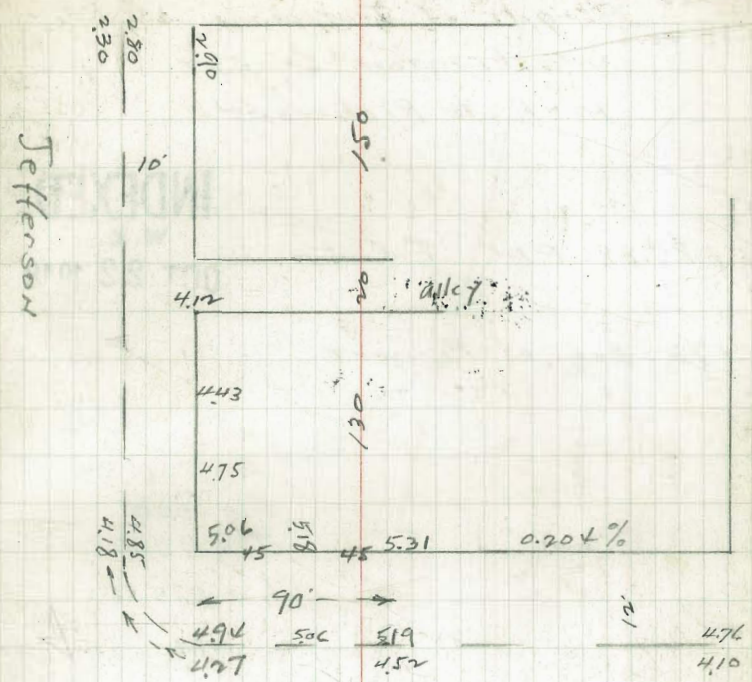
Prop. Line Grades

Newly Cor Rosecrans & Jefferson for Griffith Co.

	5.51	10.13		4.62	BM BP S.D. & Taylor
T.P.	2.56	8.28	4.41	5.72	
T.P.	3.74	8.12 ✓	3.88	4.40	Floor of Bldg

8-12-42

Gaines



Rosecrans

Cor.

4.12	4.43	4.75	5.06	5.18	5.31
4.02 ✓	3.71	3.39	3.08	✓.96	✓.83

℄ Rosecrans ℄
Paving

5.02 ✓		5.22 ✓
3.12		✓.92
3.08		3.00
0.04 High		0.08 Low

C. Moore
W. "
M. Fox
10-15-42.

Algnt. of Temporary 30' Rd.
Washington St. Ext.
10th to Richmond.

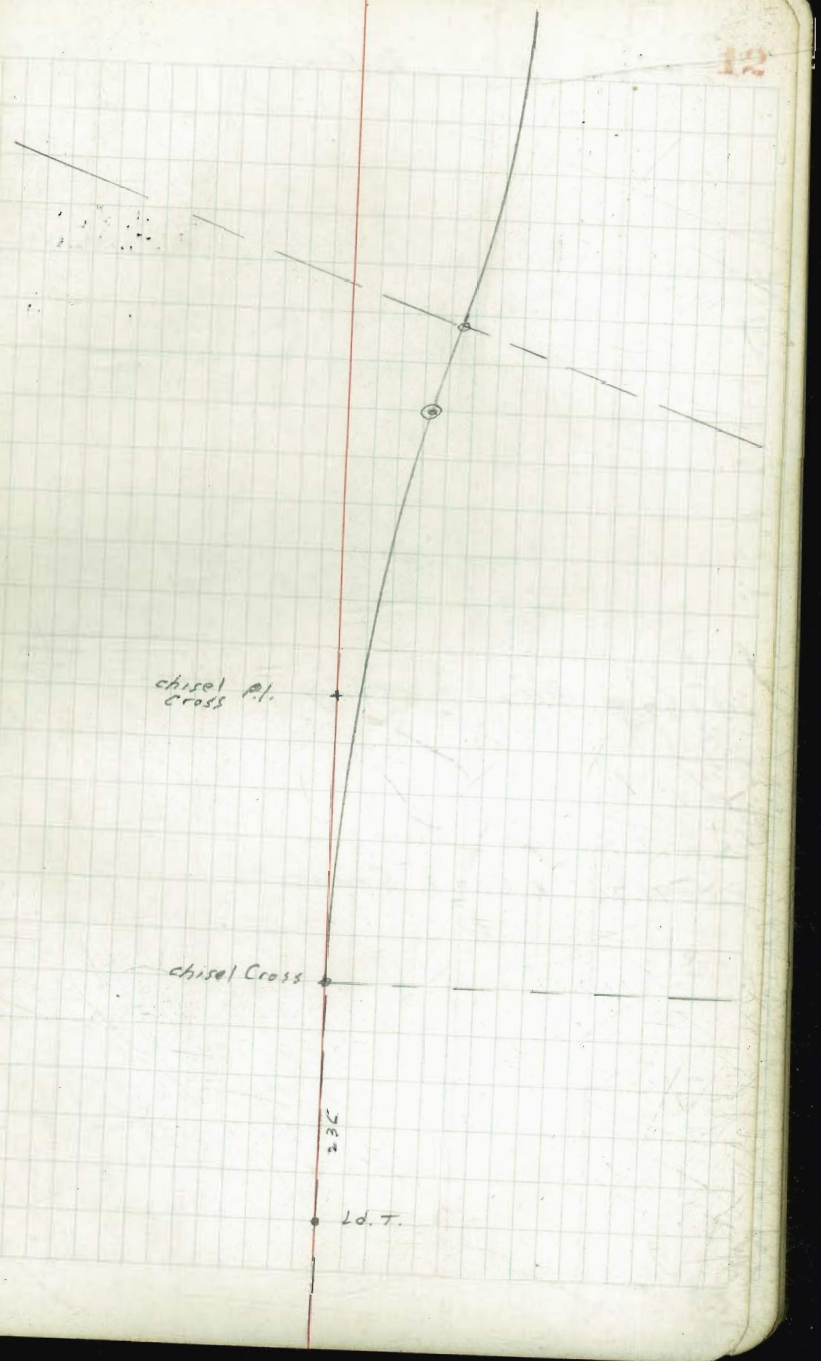
1+85.88 P.R.C. ℄ Const.

1+73 Beg. of Project

Δ = 7°06' Rt.
R = 1500
T = 93.06
L = 185.88
1.1459

0+00 = ℄ Const. = 15+25 "L" B.C. Rt.

12+89 Ld. T. POT = "L"



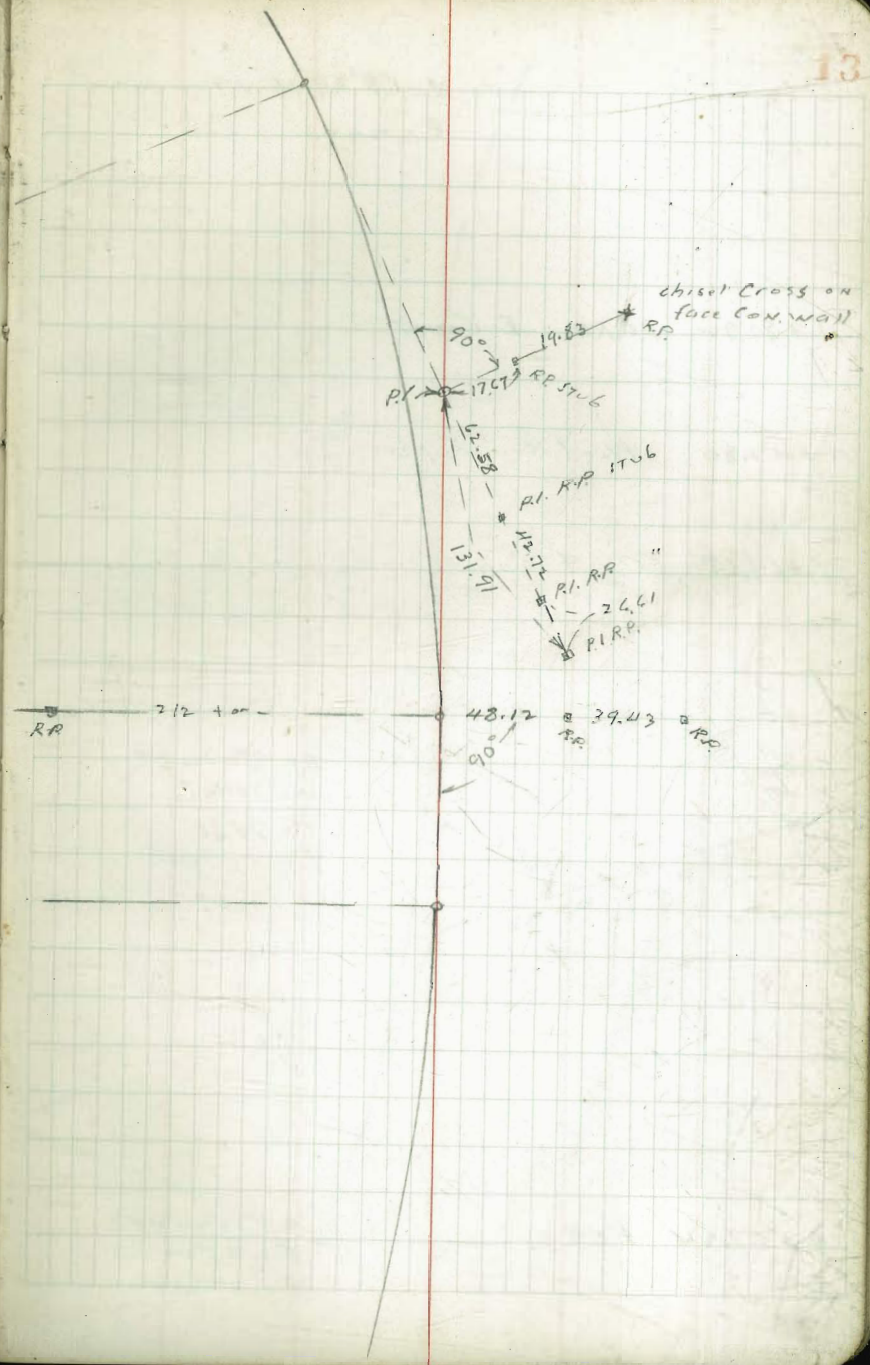
9+57.24 P.C.C. & Const.

Δ = 12°00'45" Lt.
R = 2500
T = 263.041
L = 524.14
0.6875

4+33.10 B.C. Lt. & Const.

3+76 24" Culv.
3+71.76 E.C. & Const.

Δ = 7°06' Lt.
R = 1500
T = 93.06
L = 185.88
1.1459



Δ = 68°39'15" Rt
R = 200

11+80.97 B.C.R.T. & Const.

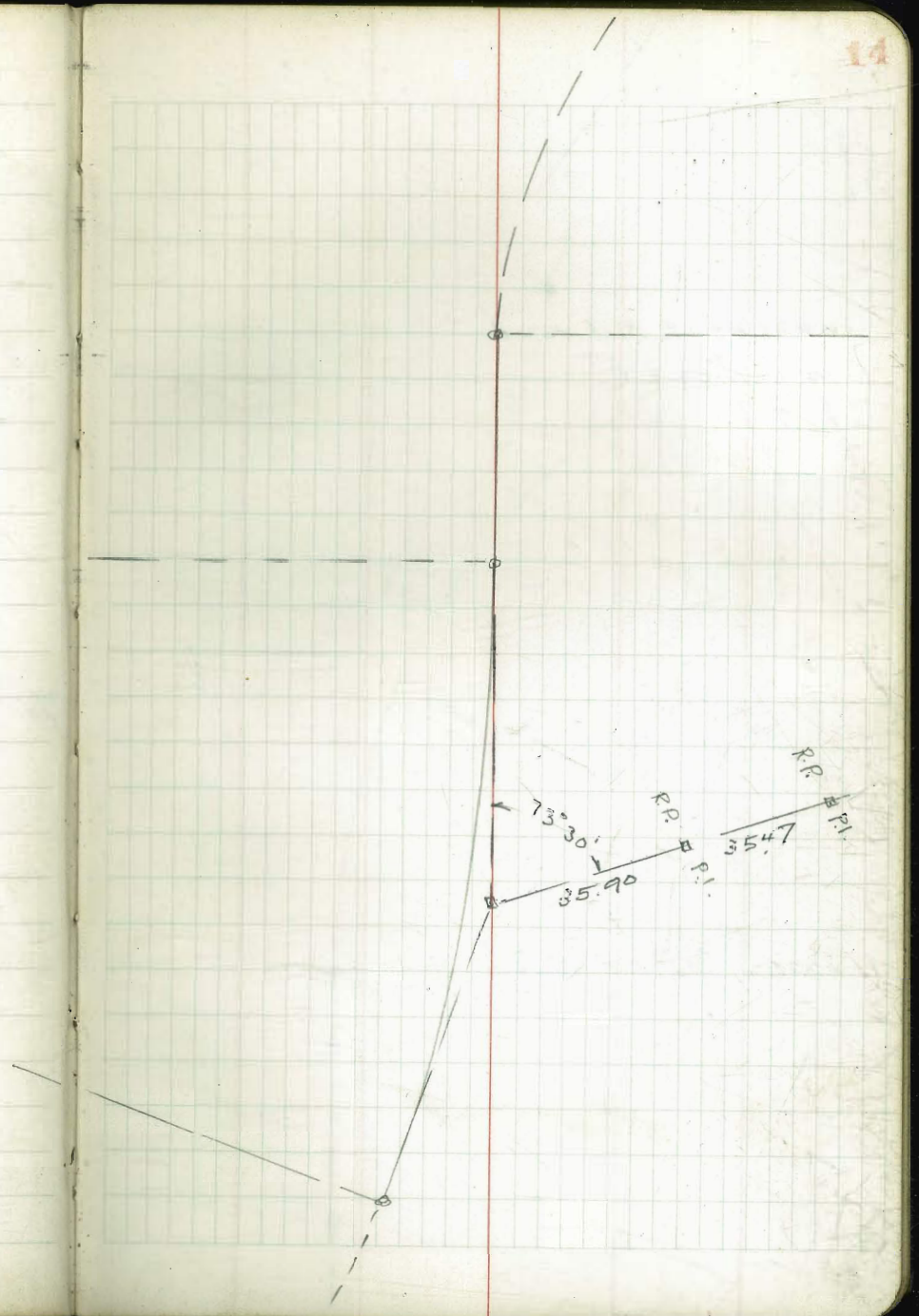
11+47.80 Pt. of Rev. Super

11+14.68 E.C. & Const.

Δ = 9°01'15"
R = 1000
T = 78.88
L = 157.44
1.7189

9+57.24 P.C.C.

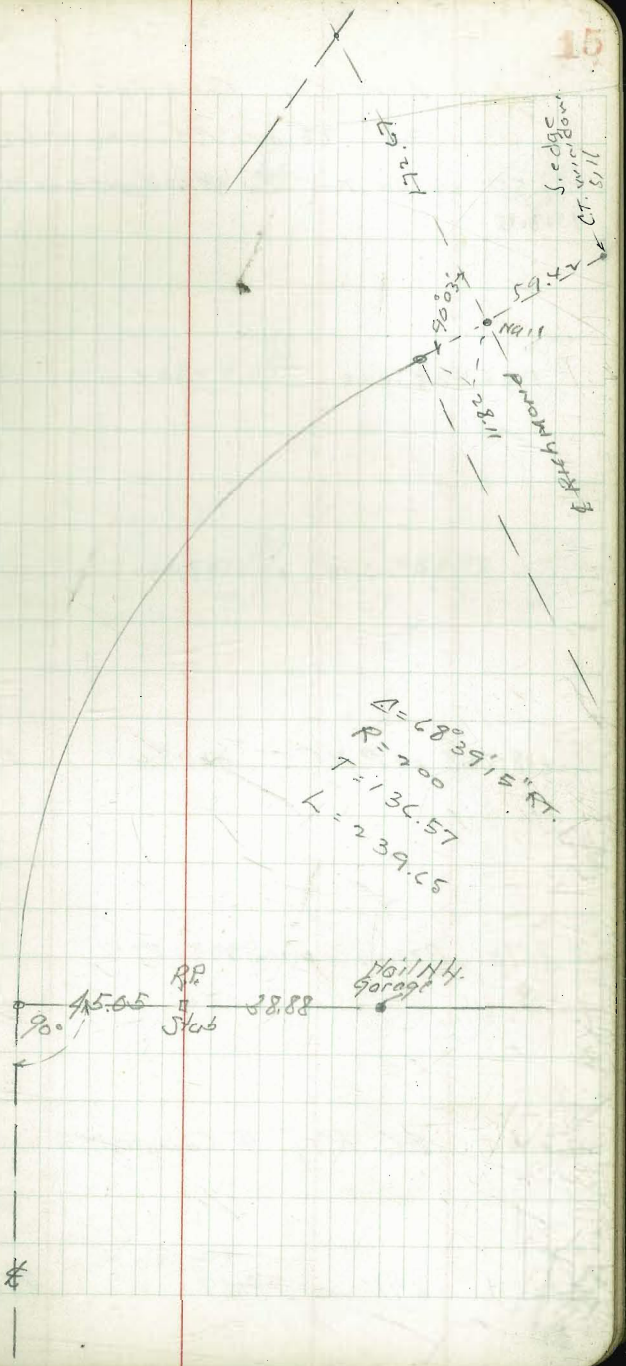
Δ = 12°00'45"
R = 2500
T = 263.04



14+48.68 ℄ Richmond

14+20.57 E.C.

11+80.92 B.C.R.T. ℄ Const.



Oct 20 '42
Moore
W. Moore
Sisson
Hazard

FINISH Grades on
30' Temp. Rd. on Washington
10th to Richmond.

				LT.	℄	RT.
+50	1°13.5					
+25	0°44.8					
2	0°16.16					
1+85.88 = P.R.C.						
1+73	Beg. Project. P.V.C.					
0+00	B.C. Rt. ℄ Const.					
BM	4.71	281.19	276.48 #6			

14.2 / 14.8 / 0.6 / 7.7 — 267.04 — 267.37 — 13.9 / 7.4 / C 6.5 — 267.46 — 13.7 / 5.6 / C 19.1 / 25.1

268.02 — 268.44 — 13.0 / 4.9 / C 9.0 — 268.45 — 13.9 / 1.8 / C 11.9 / 26.9

268.93 — 269.97 — 13.1 / 2.8 / C 9.3 — 268.97 — 12.5 / 2.5 / C 11.1 / 26.1

269.32 — 269.50 — 269.34

269.91

276.48 B.M. #6
3.53
280.01
9.36
270.65 B.M. chisel square
Top of N.E. Con.
10th St. Bridge

281.19 T

~~3+76 = 24" x 168' Culv~~

3 + 75 = End V.C.

3° 33.0
3' + 71.76 = E.C. & Const.

3 + 68.46 3° 29.0 24" x 168' Culv 85°17'5W

+ 50 3° 08.1

TP	0.44	238.17	12.58	235.73
+ 45	N° 39.4			
TP	0.75	24881	8.81	247.56
2° 10.8				
3 = End 1:1 Cut and beg. of 1½:1 Cuts				
TP	0.49	256.37	12.65	255.88
1° 42.1				
N + 75 = P.R. V.C.				
TP	0.27	268.53	12.93	268.26
		281.19		

17

Lt.	℄	Rt.
-26.2	out	-27.2
N 62.37	N 62.85	N 63.33
-26.2	out	-27.3
N 62.37	262.95	N 63.42
-26.4 26.8 F 33.7 95.1	N 62.53	N 63.06 N 63.54 F -27.4 3.8 3.0 70.0
-27.0 28.7 F 43.7 81.6	N 63.15	N 63.63 N 64.11 F -27.9 6.4 34.1 67.2
	286.17T	
-15.7 14.8 F 30.5 61.8	N 64.01	N 64.48 N 64.95 F -16.6 9.6 26.2 55.3
	248.31T	
-8.5 8.7 F 17.2 41.8	N 64.89	N 65.33 N 65.76 F -17.5 5.9 18.4 13.6
	256.37T	
2.6 8.0 F 5.4 24.8	N 65.97	N 66.35 2.2 4.6 Co. 6 N 66.75 14.5 12.1 68.4 17.4
	268.53	
	281.19	

	2° 03.0'				
6 + 17	Ped. overpass				
C	1° 54.7				
+ 50	1° 20.4				
T.P.	8.94	287.20	0.29	278.26	
5	0° 46.0				
4 + 75	P.O.C. 0° 28.8 ✓				
	0° 11.6' Lt.				
4 + 50	= P.V.C.				
T.P.	6.29	278.55	0.28	272.26	
T.P.	11.78	272.50	0.37	260.72	
4 + 33.10	B.C. Lt.				
T.P.	12.84	261.09	0.05	248.25	
TP	12.29	248.30	0.16	236.01	
4 + 02.43	Midway 6 ct. P.I. 5				
		236.17			

	Lt	℄	Rt.	
				10
C 21.0 / 10.4 / 10.6 / 20.3	257.50 ~~257.64~~ 278.55 ✓	257.98 ~~258.10~~	258.46 ~~258.58~~	28.6 / 2.5 / C 26.1 / 28.1
+ 14.5 / 8.4 / C 6.1 / 18.1	258.01 272.5 ✓	258.49	258.97 287.20 ✓	28.7 / 4.9 / C 25.3 / 27.7
+ 2.7 / 0.4 / C 2.3 / 16.7	258.84 261.09 ✓	259.3 ✓	259.80 278.55 ✓	18.8 / 0.7 / C 18.1 / 24.3
− 11.8 / 0.6 / F 12.4 / 34.6	260.17	260.60 ✓	261.08 272.5 ✓	+ 11.4 / 11.4 / 0.0 / 15
− 12.3 / 10.3 / F 22.6 / 49.7	260.63	261.11	261.59 261.09 ✓	− 0.5 / 6.0 / F 6.5 / 25.8
	(248.30 ✓)			
− 26.4 / 12.4 / F 38.8 / 80.2	261.55	262.03	262.51	− 12.7 / 11.8 / F 19.0 / 44.5
				✓ 248.30
		236.17		

				287.56 = BM #7 3.18 290.74 12.90 277.84 0.71 278.55 π 0.34 278.21 8.49 286.70 π	
+50	4°46.6	P.O.C.			
				13.10 273.60 T.P. 1.42 275.02 π	
8	4°12.3	P.O.C.			
+50	3°37.9	P.O.C.			
7	3°03.5				
T.P.	1.17	291.20	0.85	290.03	
6 +50	2°29.1				
	3.32	290.88		287.56	
6 +17	2°06.44 24"x	36' Culv.			
check to B.M. #7			1.44	287.56	287.56
T.P.	2.78	289.00	0.98	286.22	
		287.20			

– LT.		℄	RT. +	
24.4 10.3 C 14.1 22.1	262.26	262.74	263.22 291.2 π	28.0 5.8 C 22.2 26.1
26.2 7.5 C 18.7 24.4	260.45	260.93	261.41	29.5 0.7 C 28.8 29.4
19.4 1.2 C 18.2 24.1	259.09	259.57	260.05	30.9 2.8 C 28.1 29.1
20.4 10.7 C 9.7 19.8	258.14	258.62	259.10	31.8 8.4 C 23.4 26.7
21.0 7.0 C 14.0 22	257.67 278.55 π	258.15	258.63 290.88 π	32.3 4.7 C 27.6 28.8
	257.64	P. 28 258.12	258.60	

262.84
2.36
260.48 = T.P. Top S.E. Cor. of N.W. Con. Pier Vermont Ped. Bridge

Station	Notes	Levels	Lt.	℄	Rt.
		262.59 T.P. 12.85 275.44 0.06 275.38 T.P. 11.36			
10+20	P.O.C. 1°47.88 ✓				
10	1°13.5 ✓ Beg. Timber fence on Rt.	286.74 ⊼ 0.37 286.37 T.P. 7.56 293.93 ⊼	270.01	270.61	271.21 C 22.7 / 11.3 / 11.4 / 20.7
9+90	0°56.3 ✓ Beg. Const. of Intercepting ditch on Rt.		C 17.2 / 8.4 / 8.8 / 19.4 — 269.45	270.03	270.61 C 15.5 / 10.5 / 5.0 / 17.5
9+57.24	= P.C.C. ℄ Const. 6°00'22" 6°00.37	275.02 ⊼ 12.46 262.56 T.P. 0.59 263.15 ⊼ = Level 0.56 262.59 = T.P. (9.15 254.00 = ⊼ Transit)	F 4.3 / 5.3 / 9.6 / 30.4 — 267.56	268.11	268.66 F 5.4 / 5.2 / 10.6 / 37.9
9+50	5°55.4' = E.V.C.		F Not Set 267.16	267.69	268.22 F Not Set
9+33	5°43.7' = 10°13' in N.W. off Rad. 24" × 84 Culv.		F -11.9 / 10.3 / 22.2 / 49.3 — 266.25 = 90° 265.9 = 10°13' Culv.	266.77 F -13.6 / 1.0 / 14.6 / 37.9	267.29 = 90° 267.6 = 10°13 Culv.
9	5°21.0	293.93 6.18 287.75 0.00	F 10.5 / 17.0 / 6.5 / 25.8 — 264.50	264.99	265.48 4.5 / 9.5 / 0.0 / 16
			275.02 ⊼		275.02 ⊼

Pipe 75 Rt
T.P. 8+50 — 3.45 — 287.75 — 291.20

			LT.	℄	RT.		
11 + 80.9 ~	B.C. Rt.						
11 + 50	End of Intercepting ditch on Rt.						
11 + 47.8	Pt. of Rev. Super						
11 + 14.68	4° 30' 37" E.C. 4° 30.63 ~						
		~93.93 x 4.58 = 289.35 3.33 = ~97.68 x 7.35 = ~85.33 T.P. & BCH 46 11+80.9 ~ 7.38 = ~77.71 x					
10 + 90	3° 48.~ ✓		11.2 15.4 F 4.2 = 22.3	~81.46	~81.16	~80.86	11.8 3.6 C 8.2 = 19.1
				~79.39	~79.36	~79.33	
			13.5 8.5 C 5.0 = 17.5	~79.~3	~79.~3	~79.~3	13.5 1.4 C 12.1 = 27.1
				~72.7 x			
			15.7 8.3 C 7.4 = 18.7	~77.0~	~77.30	~77.58	15.1 0.9 C 14.2 = 22.1
10 + 60	2° 56.6 ✓		17.3 7.2 C 10.1 = 20.1	~75.4~	~75.86	276.30	16.4 0.7 C 15.7 = 22.9
			19.~ 5.7 C 13.5 = 21.8	~73.55 ✓	~74.11	~74.67	18.0 0.1 C 17.7 = 23.9
10 + 30	2° 05.1 ✓		22.1 8.4 C 13.7 = 21.9	~71.76	~72.36	~72.96	20.9 2.0 C 18.9 = 24.5

293.93

+25	20°38.3 ✓				
13	17°03.4 ✓ P.O.C.				
T.P.	L.C.V	94.93	30	90.99	
+75	13°28.6 ✓ = P.V.C.				
				86.39	
				2.35	3-15-43.
+50	9°53.7 ✓			84.04	Rock T.P.
+25	6°18.8 ✓				
12	2°44.0 Rt. ✓				
T.P.	7.26	94.59	738	85.33	℄ BCH.6
		94.71 ✓			11+80.9

LT. ℄ RT.

22

-3.8				8 X
19.5				4.9
F 13.3	90.14	89.32	88.51	C 3.5
51.0				16.7
-2.7				5.4
13.5				1.3
F 16.2	89.0	88.04	87.14	C 11.1
40.3				17.1
86.37				
5.2				6.7
16.4				0.8
F 11.2	87.36	86.65	85.94	C 5.9
32.8				18
6.7				8.1
15.9				0.1
F 9.2	85.86	85.19	84.52	C 8.0
29.8				19
		47.59		
8.4				9.5
9.5				1.3
F 1.1	84.49	83.73	83.19	C 8.2
17.7				19.1
10.0				10.9
16.9				3.5
F 6.9	82.30	81.87	81.84	C 7.4
26.4				18.7

			LT.	℄	RT.	
14 + 20.57	34°19.6 E.C.					
			~94.91	~93.06	~94.93	
14	31°22.9		~99.34	~97.41	~97.18	4.7 3.1 C 1.6 = 15.8
+75	27°48.0		~91.90	~91.51	~91.73	5.8 3.9 C 1.9 = 14.0
+50	24°13.1		Top Cb. −4.7 ~91.19	~91.04	~90.47	~89.85 7.1 4.5 C 2.6 = 14.3
+48.97	24°04.25	Beg. curb on LT.				
13 + 30	21°21.3 End Timber fence on RT.		——	~89.55	NOT SET ~88.93	
T.P.	1.33	~96.92	12.00	~84.93	~96.97	

Grades at Richmond St. Intersec.

13 + 48.97 E.C on N = Beg. curb

Red = Curb Const.

P.O.C.

W. end cb = 0 + 00

0 + 27.35

1 BC 0 + 54.70

0 + 8°41'15"

+ 17°22'30"

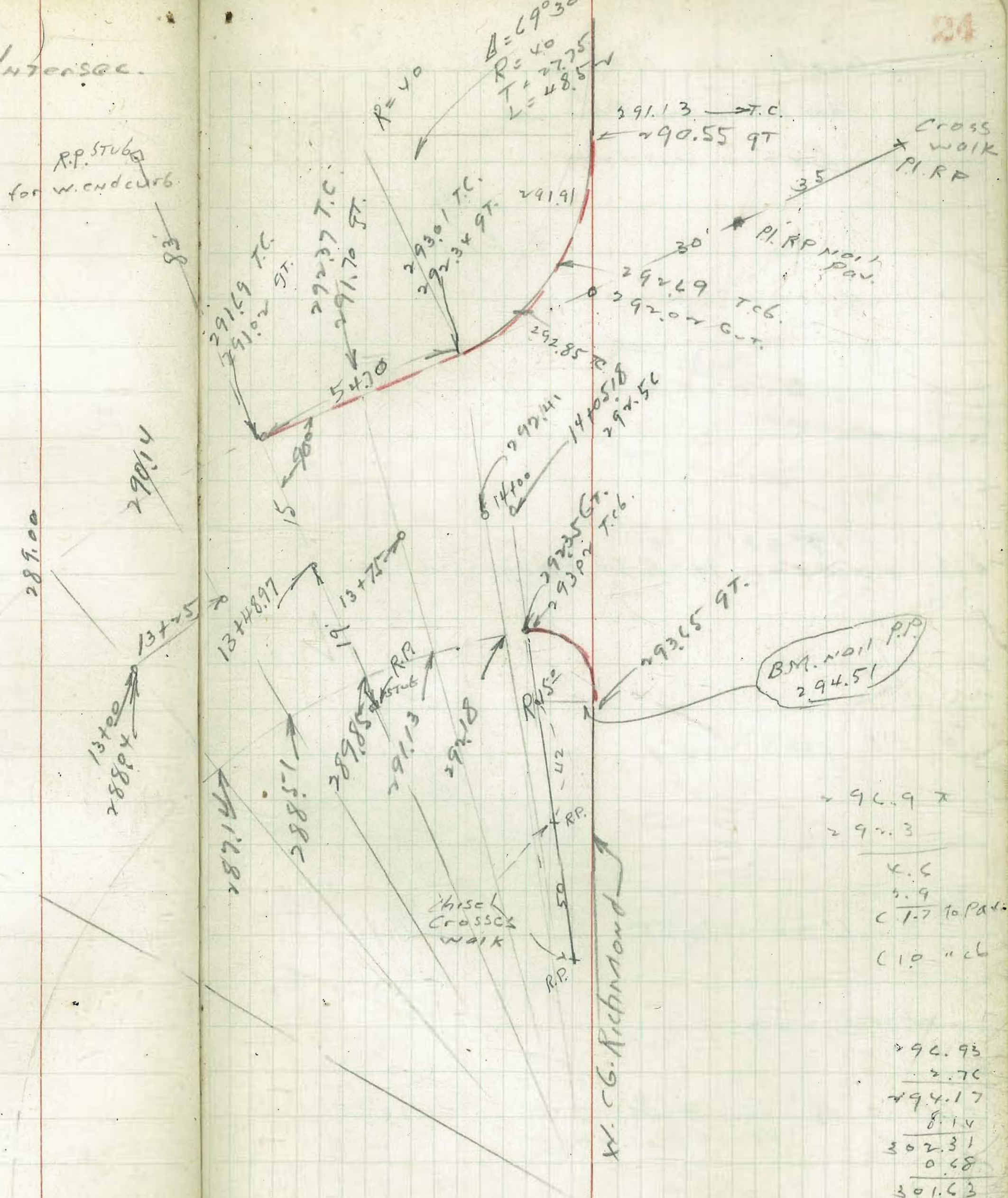
+ 26°03'45"

1 E.C. + 34°45'

ch 12.08

286.26 ⊼
1.33
284.93 T.P.
1.02
285.95 ⊼

291.0	291.7	292.4
−24.7	− 5.7	− 26.4
17.6	158	7.2
F 22.3	F 21.5	F 13.6
49.5	373	20.4



296.9 ⊼
292.3
4.6
5.9
C 1.7 to Pav.
C 1.0 " cb

296.93
2.76
294.17
8.14
302.31
0.68
301.63

B.M. #9 301.64
0.01

Grades at 107th St. Bridge
on Nl. edge Paving
Extra width

107th St.
Bridge

changed

See p 49

#3 = NE Cor. 107th St Bridge 19°38' rt 269.58

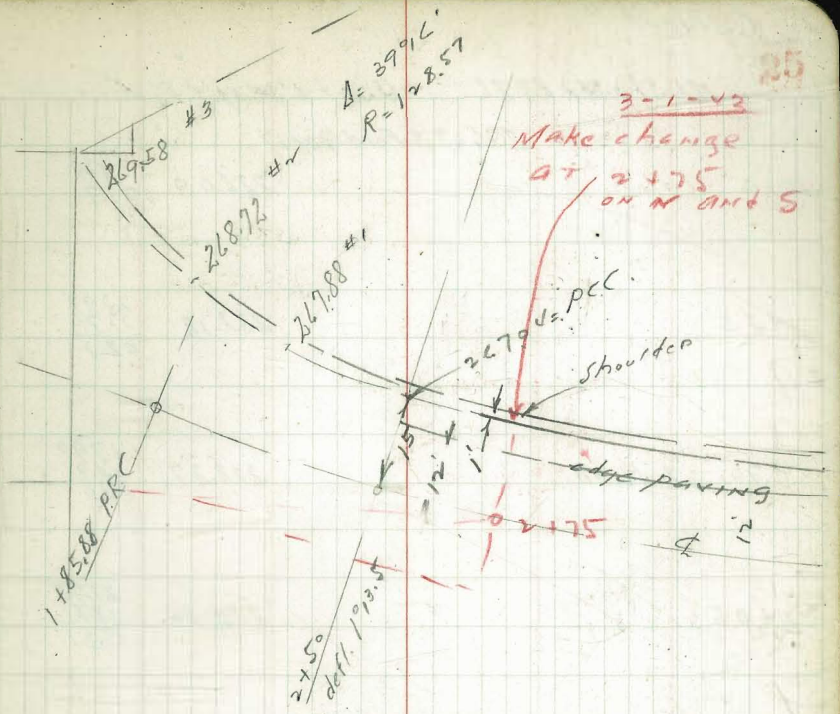
#2 13°05'20" rt 268.72

#1 6°32'40" RT rt 267.88

chords = 9.37

P.C.C. = 15' Lt. = 3' offset from Pav. edge rt 270.42

3-1-43
Make change at 2+75 on N and S



Cuts to daylight on Nl.

12.8
12.8
0.0
12.8
267.88

12.5
12.5
0.0
12.5
268.72

11.6
269.58

281.19 ℄

Culvert #

At Sta 8+68.26 offset 4' W of Δ Pipe

Δ36.17 Δ Ford Page 17

0+0 - Inlet	226.00	10.17 8.46 C 1.7
+25	222.18	13.99 11.71 C 2.3
+70 = Δ Road	218.27	17.90 14.9 C 3.0
1+05	214.45	21.72 18.6 C 3.1
1+40	210.65	25.52 25.0 C 0.5
1+65 1= Outlet	207.90	28.27 27.55 C 0.7

See P. 20 align.

24" Culv. at 7+33 & Stakes offset 4' W

263.15 = Π Level 454.00 Π = Transit

& ground Levels

0+00 inlet	1.0	453.0
0+37.9 ℄ Rd.	5.0	449.0
0+60	7.6	446.4
0+87.5 outlet	10.3	443.7

.5

Culv. grades & Cuts Level 263.15

263.15 Π ℄ Grades 11% 254.00 = Π.Π 263.15

0+00 451.8 11.35 / 8.75 / C 2.60

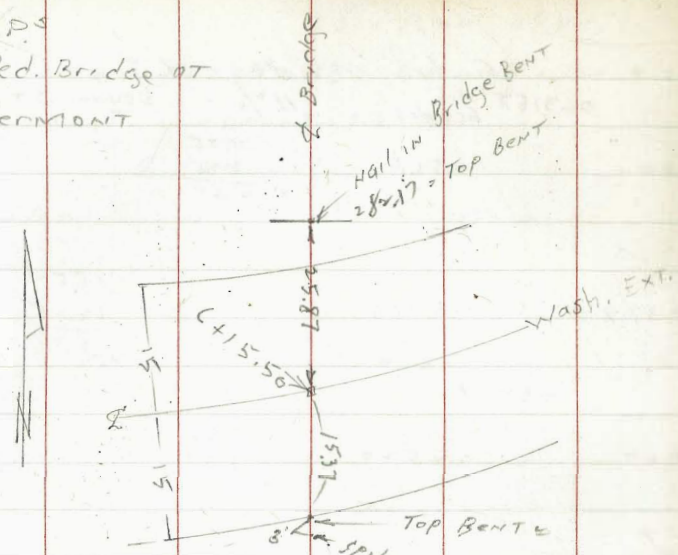
0+37.9 447.63 15.5 / 12.25 / C 3.27

454.0 Π

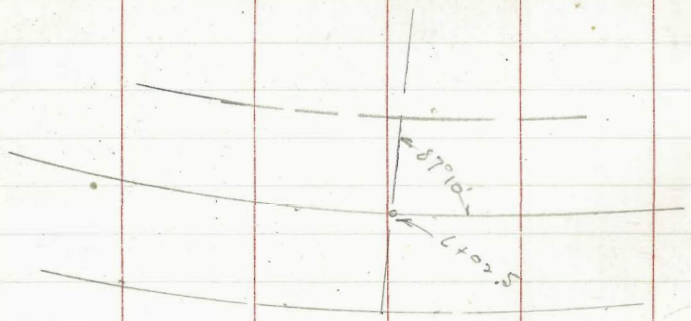
0+60 445.20 8.80 / 5.57 / C 3.23

0+87.5 442.5 11.80 / 9.30 / C 2.XX

R.P.
Ped. Bridge at
Vermont



24" Culv. at Vermont St.



Spike ℄

28.75 = BM
0.93
= 88.49 x
1.88
= 75.61
0.97
= 76.58
12.40
= 64.18
3.21
= 67.39 x

288.49
6.32
= 82.17
= 61.87
F 20.30 to Top Bent on S.L.

Grade SL Par 5.5%
= 58.58
8.81
5.5%
C 3.29 on Spike

Spike 21.87

Top S.E. Con. of N.W. Pier
at Vermont Ped. Bridge 3-17-43

= 60.48 T.P.
7.80
= 68.28

S.L. Par.	N.W. Par.
= 58.46	= 57.50
9.87	10.78
7.94	6.83
C 1.88	C 3.95

S. Inlet F.L. 24" pipe = N.W. F.L.

= 54.0	= 53.0
14.28	15.78
7.94	6.83
C 6.34 = F.L. Bot. Box	C 8.95 F.L. Bot. Box

Top C.B. Inlet grades 3-17-43

= 60.48
2.05
= 62.53

N	S
= 58.17	= 59.13
4.36	3.40
4.36	2.19
0.0	C 1.21 from Top Pier

Grades at E. end 10th St. Bridge

Kurtz St Grades

See Kurtz St. Profile

Old Rosecrans to New State Rosecrans

	S. Curb grades	N
0 to N/y old	3.08	2.50
0 + 50	3.34	2.83
	3.57	3.16
1 50	3.81	3.50
1	4.06	3.83
1 + 18.5	4.20	4.07
1 50		4.16
1 86		4.40

4.50 — Greenwood S.E. Cor
4.53 Hancock Top RR Rail Cor.

C. Moore
Sommerville
W. Moore
6-28-43.

9.03
5.26
3.77
3.80
7.57

S	3.08	3.34	3.57	3.81	4.06	4.20
	4.49	4.75	4.00	3.76	3.51	3.37
	5.69	4.75	4.00	3.76	4.61	4.47
	−1.20	0.0	0.0	00	−3.1	−3.1

N	2.50	2.83	3.16	3.50	3.83	4.07
	5.07	4.74	4.41	4.07	+3.74	3.55
	5.07	3.74	4.41	4.07	5.74	3.55
	4	C 1.0	0.0	0.0 Nail	F 1.5	0.0 Nail

N	4.16	4.40
	3.41	3.17
	3.41	3.17
	0.0 Nail	0.0 Nail

Moore
8-4-43.

24" Storm Drain Const.

Indexed
C.S.K.

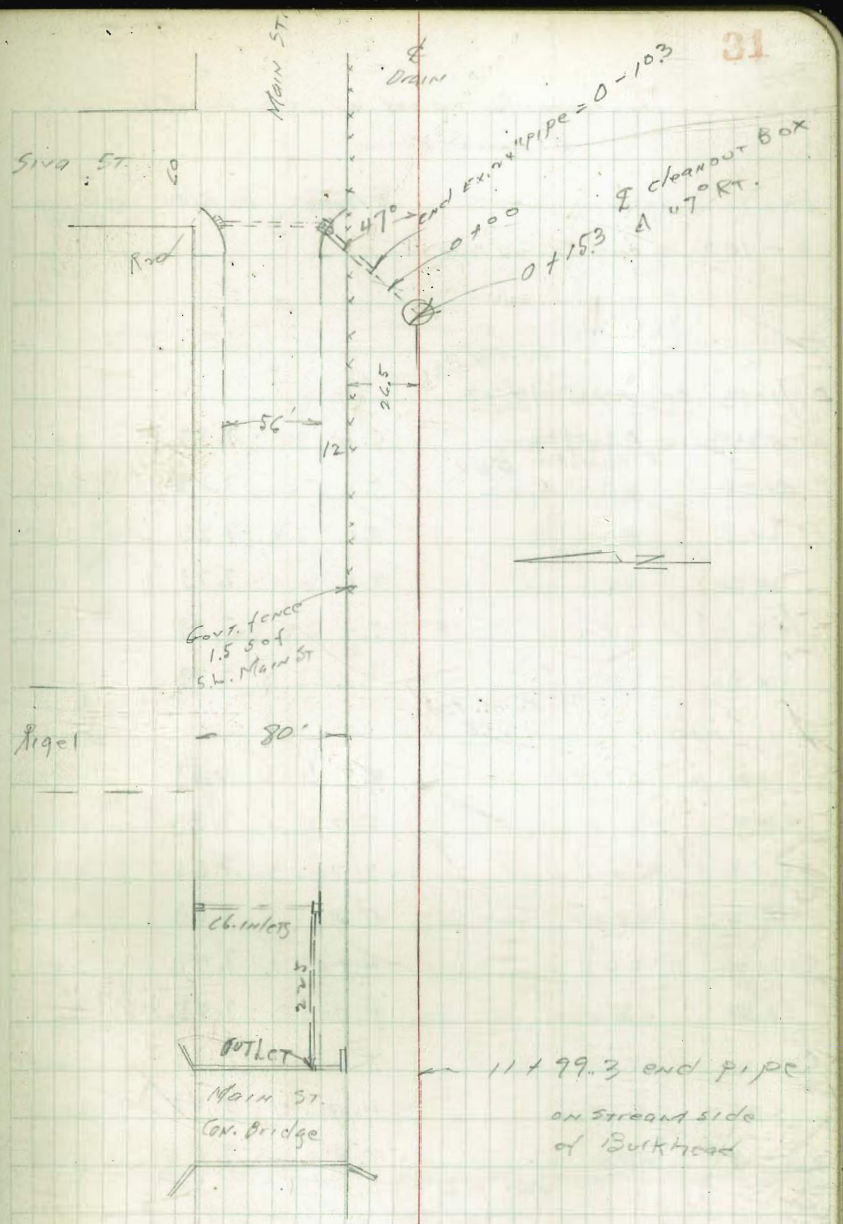
VC.5 S. of SL Main,
Siva St W'ly to Slough

S.E.B.P.	4.18	11.43		7.05	Main St. and Siva
T.P.	4.64	12.33	3.54	7.69	
T.P. 20d Spike			6.35	5.98 ✓	Fence Post S.E. Cor. Main & Siva

8-4-43

H.I.

T.P. Spike	6.35	12.33 ✓		5.98	
S.W. Top C6	Main & Siva		7.43	5.10	
T.P.	4.41	12.68 ✓	4.06	8.27	
T.P.	4.41	12.40 ✓	4.69	7.99	
	4.91	10.89		5.98	above BM Spike
F.L. end EX. 12" pipe		12.29		-1.40 ✓	



℄ Levels and Cuts to F.L.

24" STORM DRAIN

			℄ Rods	℄ Elev.
0 – 10.3	= end Ex. 24" Pipe			
		H.I. Fwd P.31		
0 – 10.3	end pipe	124.33		
0+15.3	= ∠ 47° RT. Cleanout Box		5.0	7.33
0+50			5.1	7.23
1			5.1	7.23
+50			4.6	7.73
2			5.2	7.13
+50			4.6	7.73
		Fwd. P.31		
		12.68		
3+00			5.5	6.83
+50			5.0	7.33
4			4.7	7.63
+50			4.8	7.53
5			4.9	7.43
+50			4.9	7.43
6			5.0	7.33
+50			4.9	7.43
7			4.8	7.53
		Fwd. P. 31		
		12.40		
7+50			4.5	7.83
8			4.8	7.53

New! Cut Stakes 24' N of ℄ drain

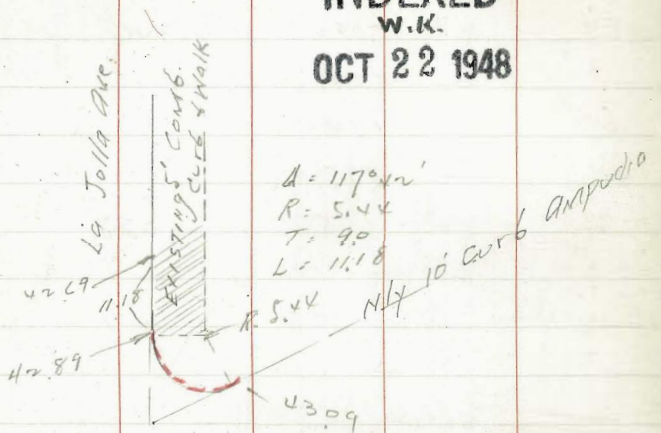
Cut Stake Rods	Cut Stake Elev.	F.L. grades	Cuts
		P.31	
		– 1.46	—
5.95	6.38	– 1.45	7.83
6.30	6.03	– 1.53	7.56
6.28	5.85	– 1.63	7.48
6.71	5.64	– 1.72	7.36
6.38	5.95	– 1.85	7.80
5.80	6.53	– 1.96	8.49
6.57	6.11	– 2.06	8.17
5.77	6.91	– 2.17	9.08
6.61	6.07	– 2.28	8.35
6.09	6.59	– 2.38	8.97
4.66	8.02	– 2.49	10.51
6.16	6.52	– 2.60	9.12
5.26	7.42	– 2.70	10.12
5.38	7.30	– 2.81	10.11
6.13	6.55	– 2.92	9.47
6.04	6.36	– 3.03	9.39
5.75	6.65	– 3.14	9.79

		HI 17.40	℄ Rods	℄ Elev.	
8+50			4.9	7.8	
9			5.0	7.4	
+50			5.0	7.4	
10			4.8	7.6	
+50			4.7	7.7	
11			4.7	7.7	
+50			5.0	7.4	
+60			5.5	6.9	
+70			9.9	2.5	
+80			10.9	1.5	
+90			13.9	- 1.5	
11+99.3	Prop. end Pipe		17.7	-17.30	on Mud
12+20	Bot. Slough		16.7	-17.30	" "
Mkd P.K.	on Bot. S. guard				
BM.	in Red Point rail E. end Con. Bridge		9.43	7.97	
	Main 500 E of 3rd Ave.			9.01	
				16.98	17.15
					- 0.17
T.P.	4.96	11.15	6.21	6.19	
check to M.H. Rim 30' E & 20' S of Wood Bridge Rigol & Datum			6.21	4.94	5.03 Walker - 0.09
T.P.	6.64	17.86	4.93	6.92	
T.P.	4.76	17.25	7.37	5.49	
check to Spike BM. P. 31			6.45	6.00	5.98

Cut Stake Rods	Cut Stake Elev.	F.L. Grades	Cuts
6.00	6.40	-3.24	9.64
6.24	6.16	- 3.35	9.51
6.51	5.89	- 3.46	9.35
6.71	5.69	- 3.56	9.25
6.46	5.94	- 3.67	9.61
6.45	5.95	- 3.78	9.73
5.65	6.75	- 3.88	10.63
17.31 ✓	0.09	-4.00	4.09

Moore
10-13-43

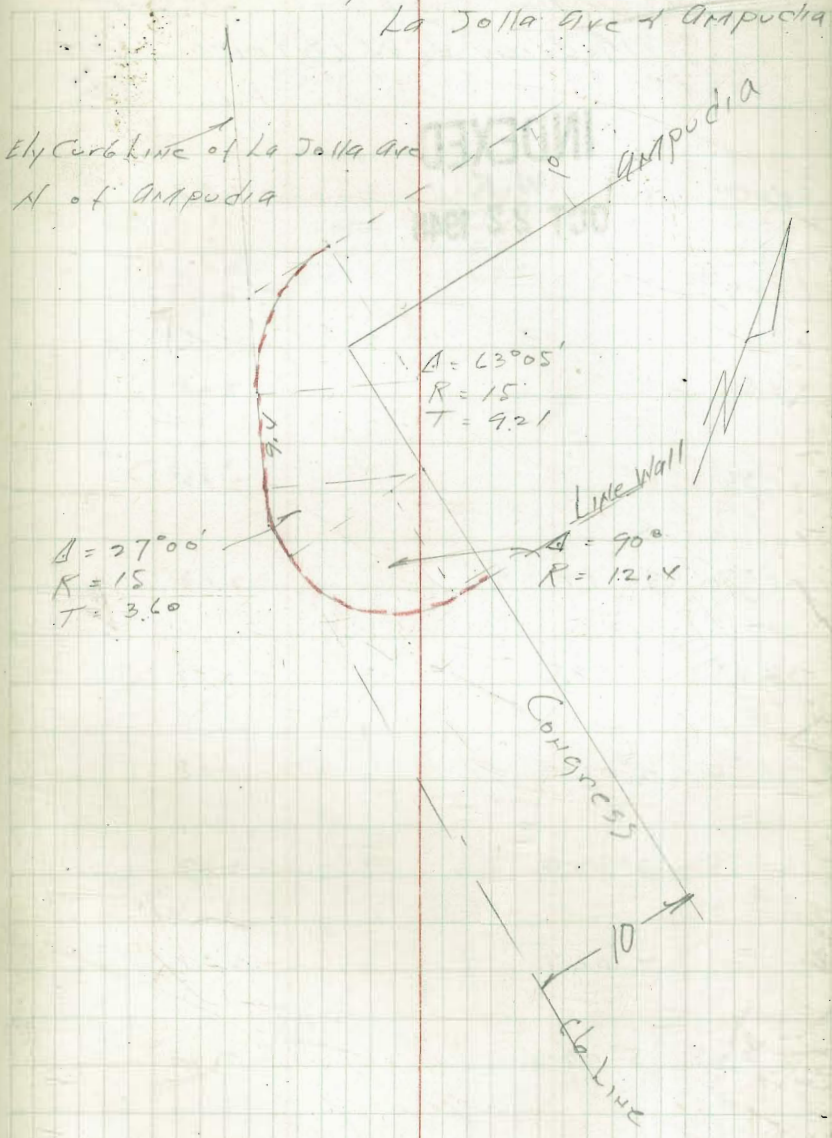
CONST. N'ly CURB RETURN
La Jolla Ave. & Ampudia ST. DEPT.



Swly. B.P.	17.1 R	47.09		35.48	Ar. 370 & La Jolla Ave
end Ex. Curb			4.73	42.89	
end Return			4.53	43.09	

10-24-43. S.E'ly. RETURN
La Jolla Ave & Ampudia

34



C Moore
Sommerdeyer
W Moore
Osborne

10-15-43

24" Drain Const. St. Dept.
Midway & W. Pt. Loma Blvd.

F.L.

0+00		- 1.98
+25		- 2.03
+50		- 2.08
+75		- 2.13
1+01.70	B.C. L.T.	- 2.18
+25	0°58.5	- 2.23
+50	2°01.7	- 2.28
+75	3°03.9	- 2.33
"	4°06.7	- 2.38
+25	5°09.4	- 2.43
+50	6°12.1	- 2.48

3.00 BMBR SWY Top Headwall Triple Box Culv. 35
7.80 on Midway
10.80 150' Wly of W. Pt. Loma Blvd.

3.73	- 1.98	- 2.03	- 2.08	- 2.13	- 2.18
7.07	L.	10.36	10.47	10.46	10.58
1.26		7.15	7.06	6.97	6.67
8.33 = H.I.		C 3.21	C 3.35	C 3.49	C 3.84

- 2.23	- 2.28	- 2.33	- 2.38	- 2.43
10.56	10.61	10.66	10.71	10.76
6.32	5.99	5.67	5.25	4.83
C 4.24	C 4.62	C 4.99	C 5.46	C 5.93

- 2.48
10.81
4.42
C 6.39

2 + 75	7° 14.9		− 2.53
3	8° 17.6		− 2.58
+ 25	9° 20.3		− 2.63
+ 50	10° 23.0		− 2.68
+ 75	11° 25.8		− 2.73
4	12° 28.5		− 2.78
4 + 27	13° 36.25′ E.C. 60° 32′ RT	R.P. 4.91 and 14.91 at 40° 45′ RT of Fwd. T.	− 2.83
+ 50			− 2.88
+ 75			− 2.93
5			− 2.98
+ 25			− 3.03
changed Δ PT.			
~~5 + 43.58~~	~~Δ = 33° 22′ Rt.~~ R.P. ~~90° RT. Fwd T. 20 to X in cb 66.56 to C.T. & 2 Roofnails~~		~~− 3.07~~
5 + 52.87	= 30° 38′ LT		= 3.08

8.33 H.I.
3.10
5.23 T.P.
5.30
10.53 H.I.

−2.53	−2.58	−2.63	−2.68	−2.73
10.86	10.91	10.96	11.01	11.06
4.07	3.69	3.42	3.17	2.83
C 6.79	C 7.22	C 7.54	C 7.84	C 8.23

T.P.

−2.78	−2.83	−2.88	−2.93	−2.98
11.11	11.16	13.41	13.46	13.51
2.65	2.57	4.24	3.59	3.43
C 8.46	C 8.59	C 9.17	C 9.87	C 10.08

−3.03	−3.08
13.56	13.61
3.40	4.52
C 10.16	C 9.09

R.P. 21′ and 65′ 90° RT. (nail; chisel X 14 cb.)

5 + ~~75~~ +73.36	- 3.13
6 5+98.36	- 3.18
C +23.36	- 3.23
+48.36	- 3.28
C +58.5 End	- 3.30

Changed
See p. 38

Box drain across Midway

C6 inlet # 2 = 0+00 = N.C6. Midway	- 1.50
0+14	- 1.62
0+28 = ℄ Midway	- 1.74
0+42	- 1.86
0+56 = C6. inlet #1 S.C6. Midway	- 1.98

10.53 = H.I.
7.53
3.00 = B.M. orig.

- 3.13	- 3.18	- 3.23	- 3.28	- 3.30
13.66	13.71	13.76	13.81	13.86
4.50	4.52	5.09	5.11	7.59
C 9.16	C 9.19	C 8.67	C 8.70	C 6.27

7.0M Top Ret. Wall

8.33 = H.I.

- 1.50	- 1.62	- 1.74	- 1.86	- 1.98
9.83	9.95	10.07	10.19	10.31
7.16	7.55	7.41	7.50	7.30
C 2.67	C 2.40	C 2.66	C 2.69	C 3.01

54" Pipe 4+07 to 6+58.5

11-03-03.

4+07 = E.C. Cleanout Box	- 5.00
+50	- 5.05
+75	- 5.10
5	- 5.15
+25	- 5.20
5+57.87 Δ 30°38'LT	- 5.25
+73.36	- 5.29
+98.36	- 5.34
6+23.36	- 5.39
+48.36	- 5.44
+58.5 end	- 5.46

← This El. to be used on Sewer 08

2.89 = BM BP. 5 Hdwall Triple Box Culv.
7.90
10.79

- 5.00	- 5.05	- 5.10	- 5.15
15.79	15.84	15.89	15.94
5.12	4.67	3.97	3.81
C 10.67 ✓	C 11.17 ✓	C 11.92 ←	C 12.13 ✓

- 5.20	- 5.25	- 5.29	- 5.34
15.99	16.04	16.08	16.13
3.78	4.91	4.88	4.91
C 12.21 ✓	C 11.13 ✓	C 11.20 ✓	C 11.22 ✓

- 5.39	- 5.44	- 5.46
16.18	16.23	16.25
5.48	5.48	7.99
C 10.70 ✓	C 10.75 ✓	C 8.26 = Top Ret. Wall

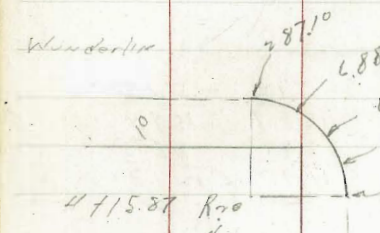
3.00 = BM to check other Cuts
7.90
10.90

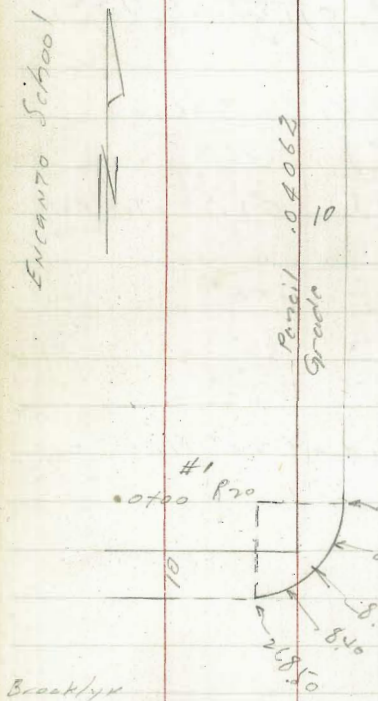
10.90
- 2.82
13.73
5.12
C 8.61 for end of 24" Pipe

11-29-43

Curb Stakes W. side (5th)
Brooklyn to Wunderlin

℄ Ld. C.T.
B.M. 287.17





Brooklyn

℄ Ld. C.T.
B.M. 267.25

INDEXED
W.K.
OCT 22 1948

B.M.
267.25
7.38
274.63
0.32
274.31
12.44
286.75
0.24
286.51
0.00
92.51

5.34
87.17 = C.T.

#1 Return

39

B.C.					5.C.
288.50	8.40	8.50	8.68		69.20
11.80	6.13	6.13	5.95		5.63
8.42	5.31	6.09	6.81	6.77	6.22
C3.37	C0.82	C0.14	F0.68	F0.82	F0.59
					11.30
					8.33
					C2.97
					C2.77

Jaap-50
#5.700
Chavez
Rorer

#2 Return on Wunderlin

B.C.					
286.0	6.30	6.60	6.88	287.10	
BM 267.25	6.75	6.21	5.91	5.63	5.41
18.05	1.17	6.26	5.25	4.10	3.80
280.30	0.82	F0.05	C0.66	C1.53	C1.61
0.69					1.99
279.61					3.15
9.98					F0.16
289.09					
1.94	0+50	1+00	1+50	2+00	2+50
287.15	71.33	73.36	75.39	77.42	79.45
Elev.	3.58	1.54	11.62	9.58	7.53
Wunderlin	4.15	2.00	12.09	9.97	7.91
+65.15	0.56	F0.46	F0.47	F0.41	F0.43
	9.26	7.21	5.17	3.13	1.07
	6.33	4.20	8.19	1.22	8.85
	C2.93	C2.81	C1.98	C1.91	C1.78
	C2.74	C2.64	C1.82	C1.26	C1.19
	3+00	3+50	4+00	4+1587	
	81.38	83.41	85.44	86.10	
	5.49	3.45	1.40	0.75	
	5.92	3.87	1.85	1.17	
	F0.43	F0.42	F0.45	F0.42	
	7.86	5.79	3.74	3.09	
	5.89	4.38	1.33	1.69	
	C2.97	C1.41	C2.41	C1.40	
	C2.82	C1.40	C2.43	C1.30	

#2 Stakes
Set 12' Back of Curb Face
or 3' Back of Property Line

Moore
11/30/43

Gutter Grades
on Hart St.
El Cajon to Cazoctin

	W	E
N.C. El Cajon	462.41	462.03
1	464.09	461.84
2	461.77	461.64
3 = 17Co Break	461.45	461.45
4	461.37	461.36
5	461.30	461.27
6	461.22	461.19
7	461.15	461.10
8	461.07	461.01
9	461.0	460.92
10	460.92	460.84
11 S.C. Cazoctin	460.85	460.75

Grades raked

El Cajon
N.W. Curb
463.07
3.59
466.66
5.17
461.49
4.09
460.18

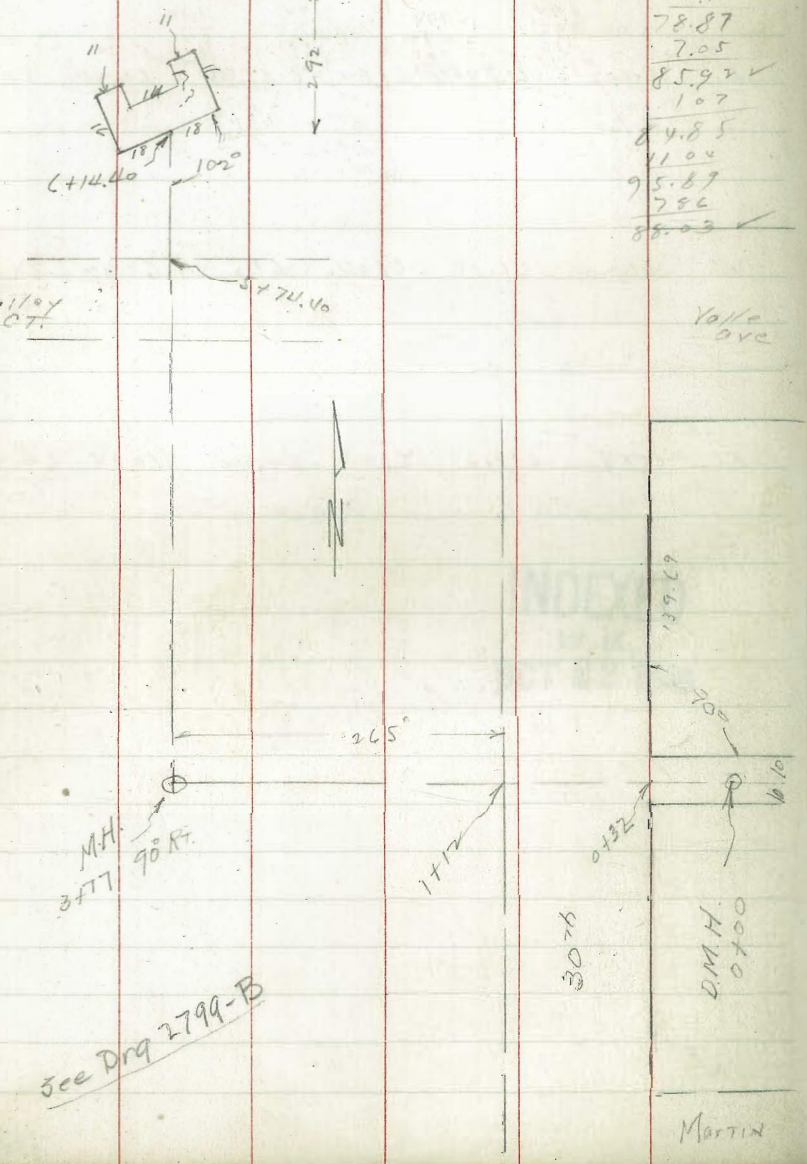
(B)

W	462.41	462.09	461.77	461.45	461.37	461.30
	4.95 ✓			5.21 ✓		
E	462.03 ✓	461.84	461.64	461.45	461.36	461.27
	4.66	4.82 / 5.05 / F 0.73	5.07 / 5.38 / F 0.78	5.21 / 5.77 / F 0.56		
W'	461.22	461.15	461.07	461.0	460.92	460.85
						5.33
E	461.19	461.10	461.01	460.92	460.84	460.75
						5.43

12-4-43

Sewer Const.

Memorial Park



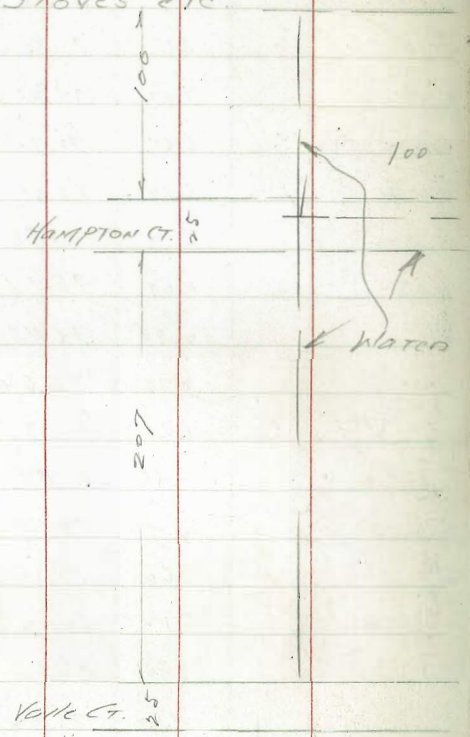
NW BP 30" Ocean View

88.03
0.35
88.38
12.25
T.P. Ball 76.13
3.23
79.36
0.49
78.87
7.05
85.92
1.07
84.85
41.04
95.89
7.86
88.03

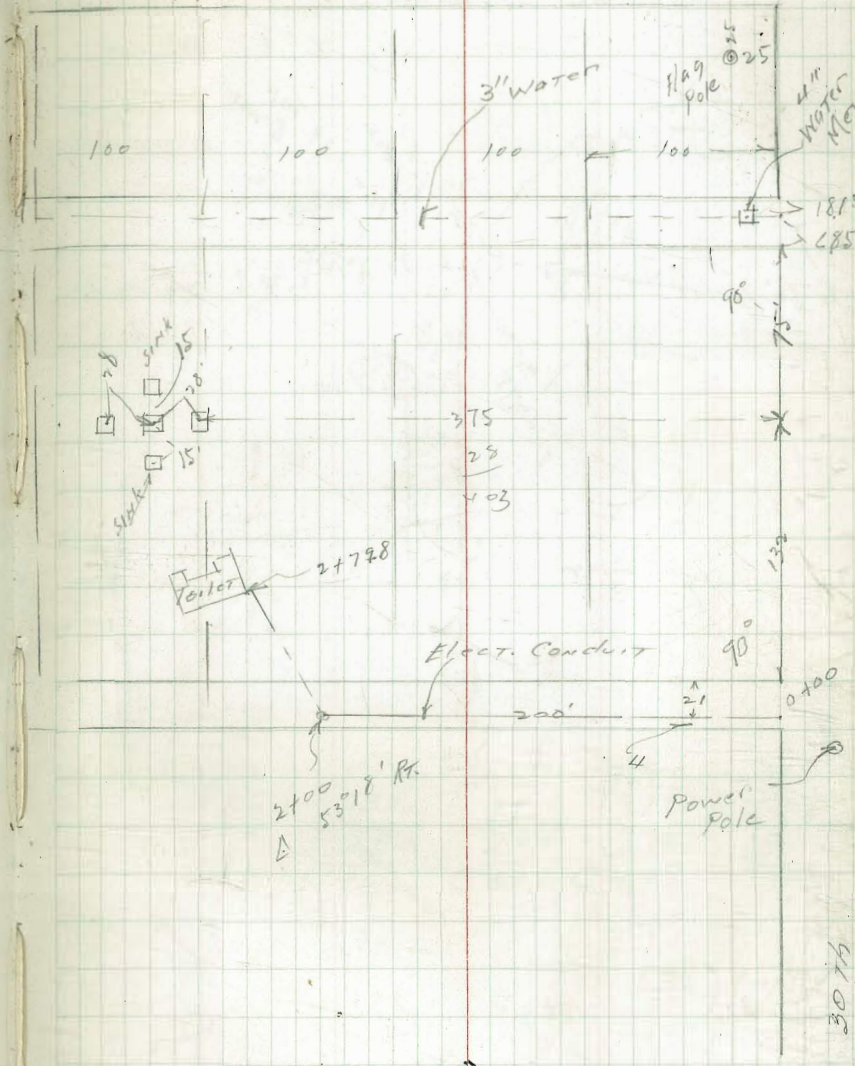
	Indexed C.S.K.		El. Stubs	F.L.	
				Curb	Curb
0+00 = M.H.	12.22	67.14	64.77	~~2.37~~	
0+45	7.85	71.51	6581 Break	5.70	
0+60	7.07	72.32	66.16	6.18	
0+75	6.61	73.75	66.50	6.25	
0+90	6.72	73.64	66.85	5.79	
1+17	6.60	73.76	67.36	5.40	
1+50	4.19	75.17	68.24	6.93	
2	2.88	76.48	69.40	7.08	
+50	2.72	76.64	70.55	6.09	
3	1.60	77.76	71.70	6.06	
+50	0.49	78.87	72.86	6.01	
3+77 = 90° Rt M.H.	6.47	79.45	73.50	5.95	
4	6.60	79.32	74.03	5.29	
+50	5.72	80.20	75.18	5.02	
5	5.06	80.86	76.34	4.14	
+50	4.00	81.92	77.50	4.02	
6	2.92	83.00	78.65	4.75	
6+14.4	1.68	84.24	78.98	5.26	

Memorial Park

Water, Stoves, etc.

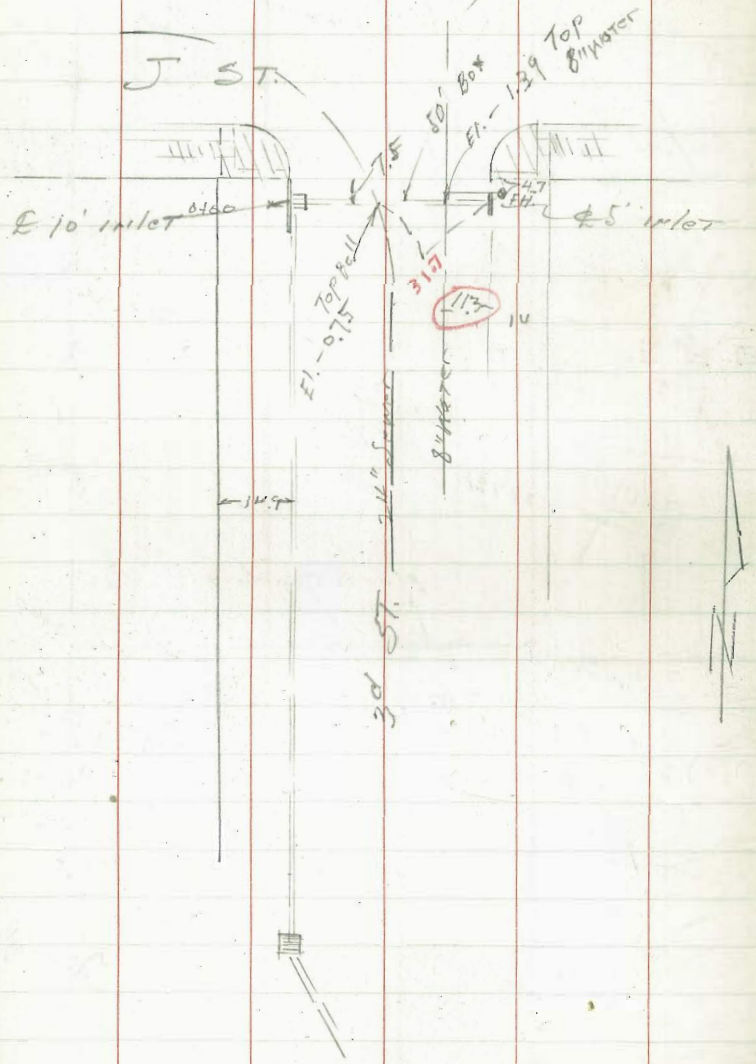


Ocean View Blvd.



BMBR SW 1.48
30 + J 5.35
6.83

1-11-44 Const. Storm Drain
on W c & 3d St.
J St S/y to Ex. Box.



F.L.

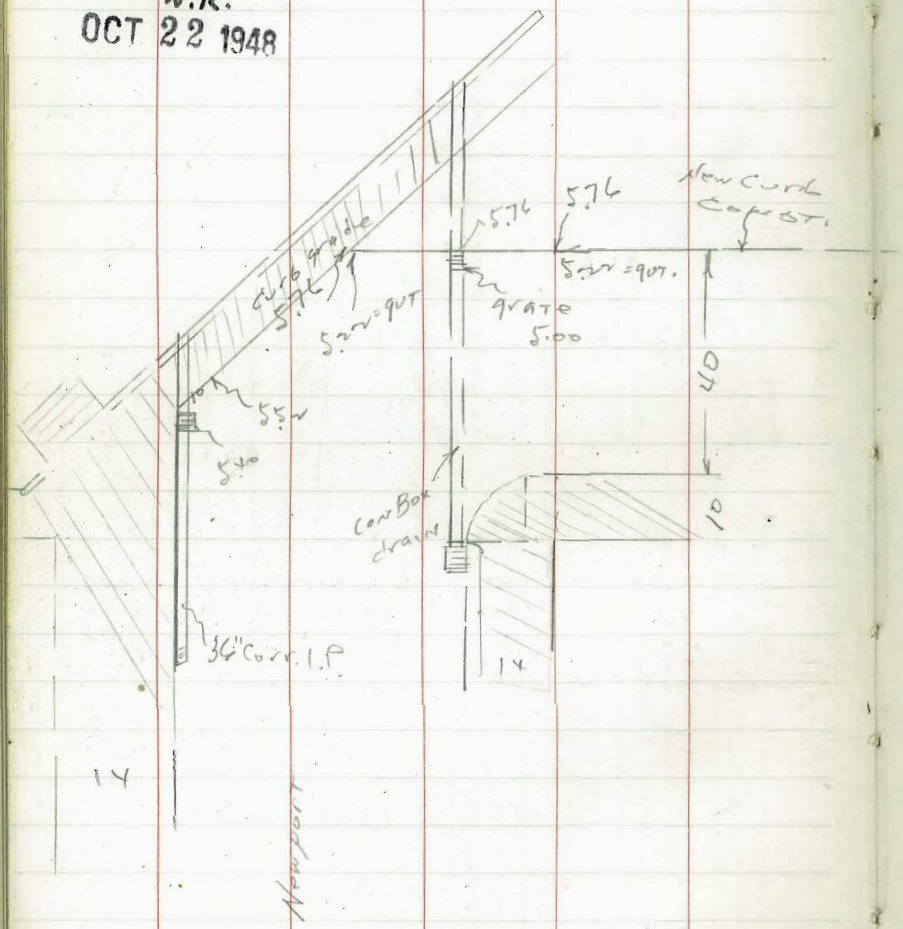
5' Inlet	-0.20
0+17.5	
0+25	
0+37.5	
0+50 = 10' c6. Inlet Box	-0.45
0+00 = 7.5 S of 5L. J St. ℄ 10' Inlet	-1.67
+50	-1.92
1	-2.17
+33	-2.33
+80	-2.57
Present Const.	-2.67
+50	-2.92
+96.1 Ex Box,	+3.15

-2.33	-2.57	-2.67	-2.92	-3.15
9.16	9.40	9.50	9.75	9.98
4.43	5.70	5.42	5.70	
C 4.73	C 3.70	C 4.08	C 4.05	

C 3.65 C 4.01 C 3.93

Curb Grades, Foot of Newport.

2-4-42.



44

6.50 B.M. NE Cor Newport & Abbott

3 x C

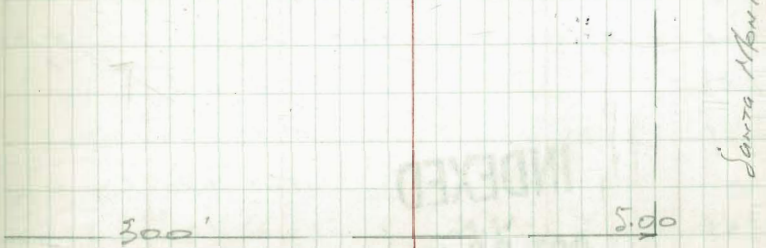
9.9 C

5.7 C

4.2 ?

X.C ~ 5C = 5.18

V.78 5C = 5.34



Abbott

2-7-44
C Smith? Smvyor WFM

Sewer Const.
on Ely Rosecrans
Kurtz to Pacific Hwy.

BM. B.P. Wly Curb Pac. 4.31
See P. 47

Sta.		F.L.	
0+00			
+25	Nly Kurtz = Break	-5.10	7.79 π P47
+50		-5.00	
+75		-4.90	
1	Location changed	-4.80	
+25	by order of H.W.J.	-4.70	π P47 7.08
+50		-4.60	
+75		-4.50	
2		-4.40	π P.47
+25		-4.30	8.35
+50		-4.20	
+75		-4.10	
3		-4.00	
+25	M.H. changed to S.L.	-3.90	
+50	~~E Hancock MH.~~	-3.80	
+75		-3.70	
4		-3.60	
+25		-3.50	
+50		-3.40	2.97
+75		-3.30	4.14 / 7.11 π
5		-3.20	3.81 / 3.30
+25		-3.10	5.00
+50		-3.00	8.30 π / 4.17
+75		-2.90	4.13 / 5.06
6		-2.80	9.19 π

BM BP Sly Cor Kurtz & Rosecrans S. Cor drain Box

800' Sly of Rosecrans

-5.10	5.00	-4.90	-4.80	-4.70	-4.60
12.89	12.79	11.98	11.88	11.78	11.68
5.32	5.03	4.53	4.85	4.79	4.75
C 7.57	C 7.76	C 7.45	C 7.03	C 6.99	C 6.93

-4.50	-4.40	-4.30	-4.20	-4.10
11.58	11.48	11.38	11.28	11.18
5.03	4.72	4.40	4.93	4.76
C 6.55	C 6.76	C 6.98	C 6.35	C 6.42

-4.00	-3.90	-3.80	-3.70	-3.60	-3.50
11.08	10.98	10.88	10.78	10.68	10.58
4.51	4.48	4.50	4.68	4.57	4.72
C 6.57	C 6.50	C 6.38	C 6.10	C 6.11	C 5.86

-3.40	-3.30	-3.20	-3.10	-3.00	-2.90
10.48	11.65	11.55	11.45	11.35	11.25
4.28	T.P. 5.93	5.74	5.63	5.65	4.25
C 6.20	C 5.72	C 5.81	C 5.82	C 5.70	C 7.0

-2.80
11.15
3.34
C 7.81

Note! Rim grades
Set to Pencil grades (Profile)
Rosecrans
and 10' sdw.

Back IN

~~M.H. Rim grades~~

0+75	3+25	7+00	10+50	14+00 DE.
2.46	3.19	4.13	5.00	El. 5.24
4.67	3.92	4.17	4.19	4.98
4.65	4.50	0.0 ✓	0.0 ✓	F 0.26 grade Sdw.
C 0.02	F 0.58			

12
9
28

P.V.7
8.55 A

			F.L.	
+25			-2.70	
+50			-2.60	
+75			-2.50	
7	E Moore M.H.		-2.40	
+25		7.8 w H.	-2.30	
+50		3.65	-2.20	
+75		4.17	-2.10	
8		3.76	-2.00	
+25		7.93	-1.90	
+50			-1.80	
+75			-1.70	
9			-1.60	
+25			-1.50	
+50		-1.00 7.93 8.93	-1.40	
+75			-1.30	
10		8.8x .9 H. 0.0	-1.20	
+25			-1.10	
+50	E Jefferson M.H.		-1.00	
+75			-0.83	
11			-0.67	
+25			-0.50	
+50			-0.33	
+75			-0.17	
IN	DE.		0.00	

-2.40 7.93 10.33 10.31 0.02

Backed IN

46

0.00	-0.17	-0.33	-0.50	-0.67
8.55	8.72	8.88	9.05	9.22
3.57	3.72	3.88	3.95	3.22
C 4.98	C 5.0	C 5.0	C 6.0	C 6.0

-0.83	-1.00 MH	-1.10	-1.20	-1.30
9.38	9.55	9.65	9.75	9.85
3.38	3.55	2.65	3.75	2.85
C 6.0	C 6.0	C 7.0	C 6.0	C 7.0

-1.40	-1.50	-1.60	-1.70	-1.80
9.95	10.05	10.15	10.25	10.35
2.95	3.05	2.15	3.25	3.35
C 7.0	C 7.0	C 8.0	C 7.0	C 7.0

-1.90	-2.00	-2.10	-2.20	-2.30
10.45	10.55	10.65	10.75	10.85
3.45	3.55	3.65	3.75	3.73
C 7.0	C 7.0	C 7.0	C 8.0	C 7.12

-2.40 MH.	-2.50	-2.60	-2.70
10.95	11.05	11.15	11.25
3.65	3.58	3.74	3.68
C 7.30	C 7.47	C 7.41	C 7.57

2-7-44

Bench Levels
OLD TOWN

CSM
Joint Intake
for Sewer Const.

BMBP	4.03	8.34		4.31	
T.P.	5.13	7.97	5.50	2.84	
T.P.	4.37	8.55	3.79	4.18	
TP	4.17	8.35	4.37	4.18	
TP	4.46	7.08	5.93	2.42	
T.P.	5.20	7.79 ✓	4.49	2.59	2.58
					0.01
RR Spike				2.59	
T.P.	5.90	8.87	5.05	2.97 ✓ Set BM	
TP	4.42	7.80	5.49	3.38	
T.P.	4.44	6.27	5.95	1.85	
check to BM. 1 Pav.			5.56	(0.71)	0.64
					0.09
TP	5.69	7.33	4.63	1.64	
TP	4.60	8.25	3.68	3.65	
check to BM BP			5.27	2.98	(2.97)
					0.01

Wly 6 Pacific Hwy approx 800 Sly of Rosecrans

3 nails in PP E side Rosecrans PP Wly 50' N of Hancock St

" " " " " " " "

Stk 6 4x75

R.R. Spike in Pav. & Kurtz & Wly 25' line of Rosecrans formally & of old 50' St. "

El. estab in Levels for drain at Rosecrans & Kurtz

Above B.M.

BP in S Con. 6" Curb inlet Box. Wly Cor of Kurtz & Rosecrans

F.B. 16 52 - BM. 1 Pav Sw Cor Corner of Midway 2' inside Curb Wly Line Pav

Above BM.
S Con 6" Curb inlet Box Wly Cor Kurtz Rosecrans

C.S.
2-10-44 F.M. Bench levels
for Greenwood Sewer

BM BP	3.74	6.69		2.97
T.P.	2.47	6.67	2.49	4.20
T.P.	5.07	6.88 ✓	4.81	1.81 ✓
check F.L. Standard MH		19.98		−13.10
T.P.	5.78	7.80 ✓	4.86	2.94
T.P.				

Set Temp. B.M. Kurtz & Greenwood

	6.17	7.98		1.81 ✓ above T.P.
Set B.M. Ld. C.T.			4.96	(3.07) in curb

in S Cor of 26 Inlet Cleanout Box
Swly Cor. Rosecrans & Kurtz

F.L. MH & Kurtz & Greenwood

on E Greenwood + 25.30 Swly from E Kurtz

CSM Sewer Const.

2-10-42

Greenwood, Kurtz to Congress

Station		Grade	
		-13.03 = Plan	
0+00	6.88 ⊼ P.48	-13.10	
+25		-13.04	
+50		-12.98	
+75	7.80 ⊼ P.48	-12.93	
1		-12.87	
+25	2-17-44	-12.82	
+50	3.02	-12.77	
+75	4.41 / 7.43 ⊼	-12.71	
2		-12.66	
+25		-12.60	
+50		-12.55	
+75		-12.50	3.02 / 4.64 / 7.66
3		-12.44	
+25		-12.39	3.17
+50		-12.33	~~4.49~~
3+70	M.H. #1	-12.29	RR BM 4.50

Stakes off 20' Wly

M.H. #1 RR 20' + 15' Wly

RR Iron BM has been knocked over

Cont'd P. 51

These Cuts were on Freeland Hubs but were found to be N.G. for Line

(crossed out)

Grade				Cut
-13.10	6.88	19.98		
-13.04	6.88	19.92	5.00	C14.92
-12.98	6.88	19.86	4.53	C15.33
-12.93	6.88	19.81	4.57	C15.24
-12.87	6.88	19.75	4.86	C14.89
-12.82	7.80	20.62	5.61	C15.01
-12.77	7.80	20.57	4.47	C16.10
-12.71	7.80	20.51	5.02	C15.49
-12.66	7.80	20.46	4.81	C15.65
-12.60	7.80	20.40	3.94	C16.46
-12.55	7.80	20.35	5.12	C15.23
-12.50	7.80	20.30	4.68	C15.62
-12.44	7.80	20.24	4.96	C15.28
-12.39	7.80	20.19	5.00	C15.19
-12.33	7.80	20.13	5.33	C14.80
-12.29	7.80	20.09	4.75	C15.34

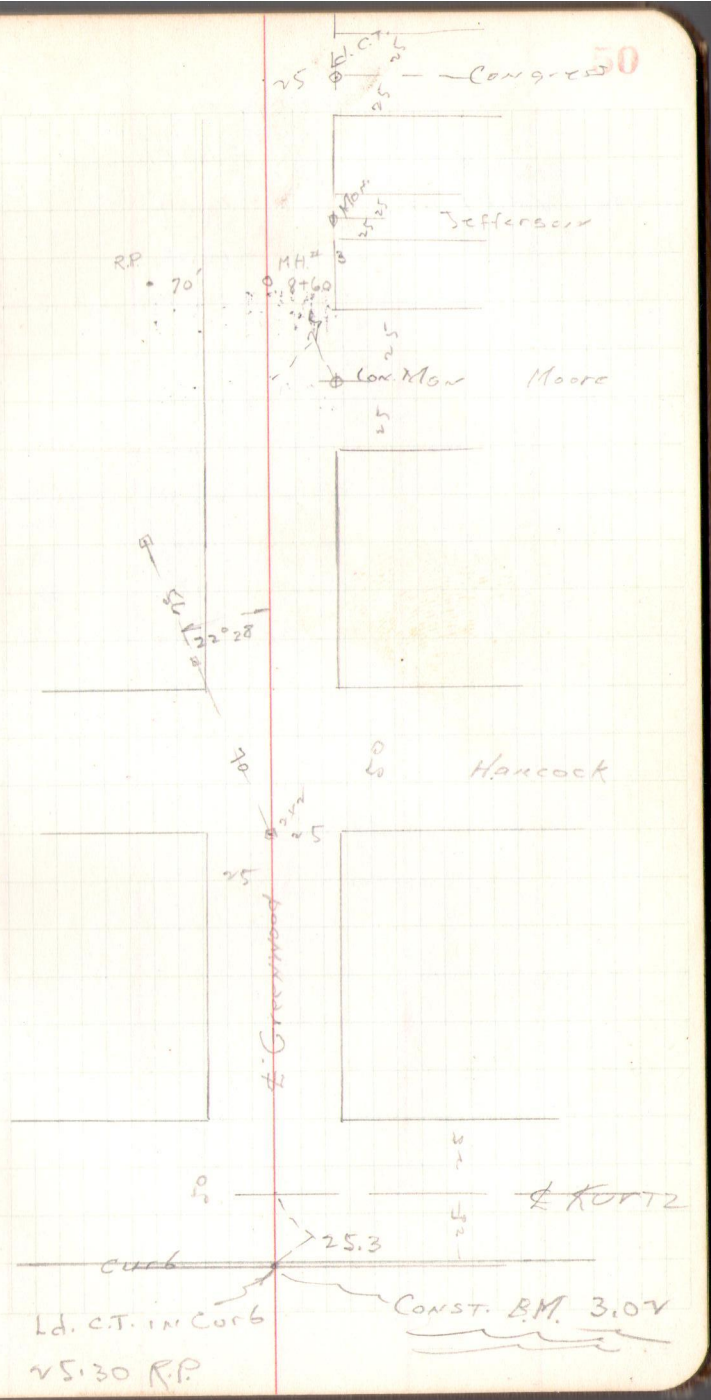
Grade				Cut
-13.04	7.66	20.70	5.81	C14.89
-12.98	7.66	20.64	5.31	C15.33
-12.93	7.66	20.59	5.38	C15.21 ✓
-12.87	7.66	20.53	5.67	C14.86 ✓
-12.82	7.66	20.48	5.45	C15.03 ✓
~~-12.77~~	~~7.66~~	~~20.43~~	4.32	C16.11
-12.71	7.66	20.37	4.87	C15.50 ✓
-12.66	7.66	20.32	4.67	C15.65 ✓
-12.60	7.66	20.26	4.15	C16.11
-12.55	7.66	20.21	4.97	C15.24
-12.50	7.66	20.16	4.65	C15.51
-12.44	7.66	20.10	5.03	C15.07
-12.39	7.66	20.05	4.86	C15.19
-12.33	7.66	19.99	5.06	C14.93
-12.29	7.66	19.95	4.74	C15.21

Checked 2-17-44

Grade				Cut
12.93	7.43	20.36	5.15	C15.21
12.87	7.43	20.30	5.43	C14.87
12.82	7.43	20.25	5.22	C15.03
12.77	7.43	20.20	4.69	C15.51
12.71	7.43	20.14	4.65	C15.49
12.66	7.43	20.09	4.45	C15.64

This stub driven deeper

R.P. Tie outs for
Greenwood
Kurtz N'ly



Sewer Const. on Greenwood
Cont'd. From P. 49

F.S. El.

M.H. Built at 3+67.4

3+70 M.H. #1 cor Hancock — 12.29

4 — 12.23

+25 — 12.18

+50 — 12.13

+75 — 12.08

5 — 12.03

+25 — 11.98

+50 — 11.93

+75 — 11.88

6 — 11.83

+25 — 11.78

+50 — 11.73

+75 — 11.68

7 M.H. #2 & Alley — 11.63

Cont'd. P. 52

Kurtz to Congress
3-2-44.

367 BM #1
4.58
7.56
4.57
2.99 T.P.
4.77
7.76 ✓
3.59
4.17
3.88
8.05 ✓
3.25
T.P. = 4.80

Spike P.P. in power pole on Greenwood

B.M. Nail in Pole - Hancock 3.71
To Tie 3.70

51

-12.29	-12.23	-12.18	-12.13	-12.08
7.76	7.76	7.76	8.05	8.05
20.05	19.99	19.94	20.18	20.13
4.86	4.92	4.02	5.06	5.10
C 15.19	C 15.07	C 15.92	C 15.12	C 15.03

-12.03	-11.98	-11.93	-11.88	-11.83
8.05	8.05	8.05	8.05	8.05
20.08	20.03	19.98	19.93	19.88
5.02	5.01	5.10	5.10	5.08
C 15.06	C 15.02	C 14.88	C 14.83	C 14.80

-11.78	-11.73	-11.68	-11.63
8.05	8.05	8.05	8.05
19.83	19.78	19.73	19.68
4.98	5.00	4.43	4.00
C 14.85	C 14.78	C 15.30	C 15.68

Sewer Const. on Greenwood

		F.L.
7+00	M.H. # 2 & Moore	- 11.63
+25		- 11.58
+50		- 11.53
+75		- 11.48
8		- 11.43
+30		- 11.37
8+60	M.H. #3	- 11.31
+80		- 11.27
9		- 11.23
+30		- 11.17
9+60	End. Con. Plug	- 11.11

9+57.5 = End as built.

9+57.5
700
257.5

B.M. Rail 6.33

52

4-NO-44.

La Jolla

Grades on Draper St. Tennis Courts

SEBP Kline & Draper

77.65	77.36	77.03	76.65
5.96	6.45	5.17	5.55
4.18	6.66	8.57	7.07
C 1.78	Fo.41	F3.40	F1.52

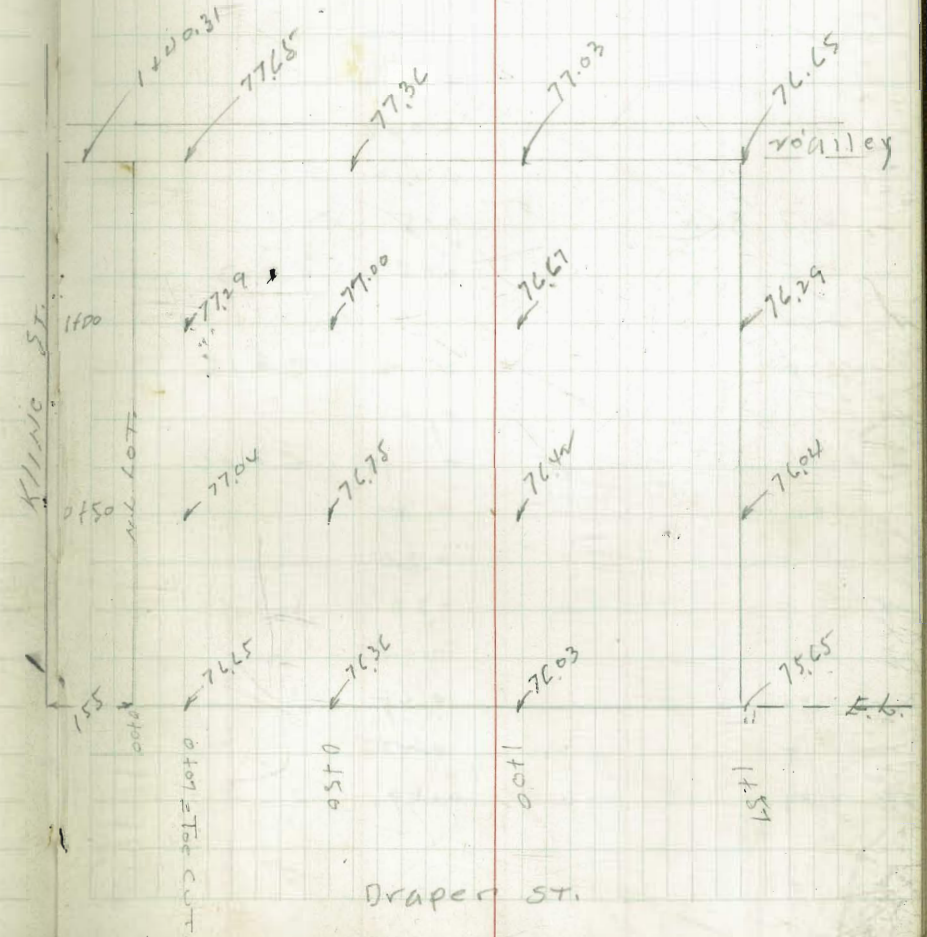
8:30 H.I. 77.29	77.00	76.67	76.29
4.91	5.20	5.53	5.91
7.01	4.30	5.67	5.25
C 2.90	C 0.90	F 0.14	F 0.34

77.04	76.75	76.42	76.04
5.16	5.45	5.78	6.16
2.70	4.33	6.23	6.82
C 2.46	C 1.12	Fo.45	F 0.66

76.65	76.36	76.03	75.65
5.55	5.84	6.17	6.55
3.42	5.41	7.44	8.51
C 1.93	C 0.23	F 1.27	F 1.96

Note. See F.B. 2033/1 for additional levels.

84.04	
0.57	
84.61	
8.03	
78.58	
3.62	
82.20	T
7.99	
74.21	
9.40	
83.61	T



2-11-48 Center grades N side Midway

Rosecrans	W/X	
0+00	-0.23	
+25	-0.19	
50	-0.14	
75	-0.10	
1	-0.06	
+25	-0.02	
+50	+0.02	
+75	+0.07	
2	+0.12	
+17 Brk	0.15	
+25	0.16	C 0.23
+50	0.19	
+75	0.22	C 0.15
3	0.26	
+25	0.29	C 0.06
+50	0.32	
+75	0.36	
4	0.39	
+25	0.44	
+50	0.45	
+75	0.48	
4+79	0.49	

0.71 = 5.07 / 5.78

5 W Cor Midway 3M Mon Gaines

54

2-19-44. Gutter Grades

N.S. Midway

300' SEly of Frontier

			300
			5.79
			11.79
			7.29
			4.50
			1.30
			5.80 +
0+00	Wly end Curb Inlet		
0+15	Ely " "	0.27	
0+36		0.27	
0+50		0.30	
0+75		0.36	
1+00	Spike	0.47	

5.58
4.86
C0.72

5.53
5.03
C0.50

5.50
5.00
C0.50

5.47
4.97
C0.50

5.38
5.38
0.0 Spike

Const. 4" Water Line
3-21-44 on Keats St. City Water Dept.
Evergreen to Willow Correct Eb.

Ely Evergreen Not Set 17.0

10' E. E of Evergreen	= 0-45	17.9	19.70 = Eb. 4" Stub
Wly "	= 0+00	18.8	21.20
0+45		20.5	22.33
0+72.5		21.4	25.50
1+20		28.3	28.67
1+40		32.1	30.04
1+60		36.0	31.44
1+80		39.9	32.95
2+40		41.6	36.84
3+00 Eb Willow			40.73

INDEXED
WK.
OCT 22 1948

B.M. Spike S. PP. Evergreen Keats 22.23

R.P.'s for 4' off Stub at 16" Main on Evergreen
49.4 Sly to 7' Hub
44' Wly to 7' Hub

Willow
Lowell

56

52.26 SWBP

5-7 Swly Cap. disk Rosecrans Ingelow

17.9 / 10.4 / 5.3 / C 5.1

18.8 / 9.5 / 3.1 / C 6.4

20.5 / 18.1 / 11.7 / C 6.9

21.4 / 14.2 / 7.5 / C 6.7

28.3 / 10.3 / 5.6 / C 4.7

32.1 / 6.5 / 2.7 / C 3.8

36.0 / 14.3 / 10.8 / C 3.5

39.9 / 10.4 / 7.1 / C 3.3

41.6 / 8.7 / 5.8 / C 2.9

No. 19

Set B.M. 20d spike SE. PP. Jarvis + Evergreen

48.30 — H.I.

16" Main on Evergreen 2' Too High. Change of St. Grade will be Necessary

38.62 — H.I.

50.29 — H.I.

52.30 = SWBP Lowell Willow 52.26 0.04

22.23 B.M. 48.17 Staked 4-13-44.
9.99 1.21
32.22 47.96
0.54 9.94
31.68 55.90
12.08 3.65 W.B.P.
43.76 52.25 = BM = 52.26
3.17 Lowell + Willow
40.59
7.58
48.17

19.20	21.20	22.73	25.50	28.47	30.04
13.02	11.02	9.87	6.72	15.09	13.74
9.85	7.17	4.95	1.43	10.92	9.95
C 3.17	C 3.85	C 4.92	C 5.29	C 4.17	C 3.78

31.44	32.95	36.84	40.73
12.32	10.81	11.33	7.44
8.96	7.83	7.58	3.89
C 3.36	C 4.98	C 3.75	C 3.55

C S ~
4-28-44

NEBP

Alley Par Arapudia & Hickory
Winthrop Highlands

For St. Dept.

		S		N	
					250.02
					2.76
					252.78 ⊼
					7.13
					245.65
					4.12
0+00	Wly Arapudia	248.01		248.21	249.77
					6.39
+20	Brk.	48.71		48.64	243.38
					2.31
+40	"	48.87		48.63	245.69
+60	"	48.50		48.20	
1		47.23		46.93	
+40		45.95		45.65	
+80		44.68	Exception	44.38	
2+20	Brk.	43.40	↓	43.10	
+30		43.08	↓	42.78	
+40		42.65	42.56	42.35	
+50		41.99	41.90	41.70	
+60		41.10	41.01	40.82	
+70		40.00	39.91	39.73	
+80		38.66	38.57	38.42	
+90		37.10	37.01	36.88	
3	Ely Arista	35.43		35.23	

S	8.01	8.71	8.87	8.50	7.23	5.95	4.68
	4.77 ✓	4.07	3.91	4.28	5.55	3.82	5.09
		3.31	3.35	3.80	4.91	3.35	4.12
		C 0.76	C 0.56	C 0.48	C 0.64	C 0.47	C 0.97
					T.P.		T.P.
N	8.21	8.64	8.63	8.20	6.93	5.65	4.38
	4.57 ✓	4.14	4.15	4.58	5.85	4.12	5.39
		3.60	3.55	4.44	5.66	4.23	4.39
		C 0.54	C 0.60	C 0.14	C 0.19	F 0.11	C 1.00

S	3.40	3.08	2.56	1.90	1.01	39.90	38.57
	2.29	2.61	3.13	3.79	4.68	5.79	7.12
	1.20	1.43	1.97	2.63	3.71	5.01	6.32
	C 1.09	C 1.18	C 1.16	C 1.16	C 0.97	C 0.78	C 0.80
N	3.10	2.78	2.35	1.70	40.82	9.73	8.42
	2.59	2.91	3.34	3.99	4.87	5.96	7.27
	2.46	2.35	2.94	3.27	3.16	3.57	4.30
	C 0.13	C 0.56	C 0.40	C 0.72	C 1.71	C 2.39	C 2.97

S	7.01	5.43
	8.68	10.26 ✓
	7.85	
	C 0.83	
N	6.88	5.23
	8.81	10.46 ✓
	5.37	
	C 3.44	

CSM Const. Curb Return N. Cor.
6-2-44. Congress & La Jolla Ave St. Dept.

S.D. 4 Conc W. Cor BM & BP

31.95
8.14
40.09
4.73
35.36 T.P. on BM.
8.98
44.34

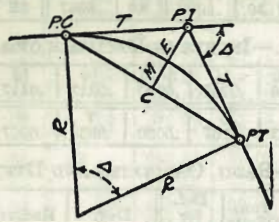
39.66 40.00 40.44 40.83
4.68 4.34 3.90 3.51

41.00 40.95 end Ex. c6
3.34 3.39

Set to grade 3' Back

W. Cor B.P.
Cristo
La Jolla Ave
35.48
0.14

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

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

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

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

External=E=T tan $\frac{\Delta}{4}$ (7) =R÷cos. $\frac{\Delta}{2}$ −R (8)=R exsec $\frac{\Delta}{2}$ (9)

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. Δ=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÷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÷(2 x 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 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose Δ=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′.

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.