

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

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

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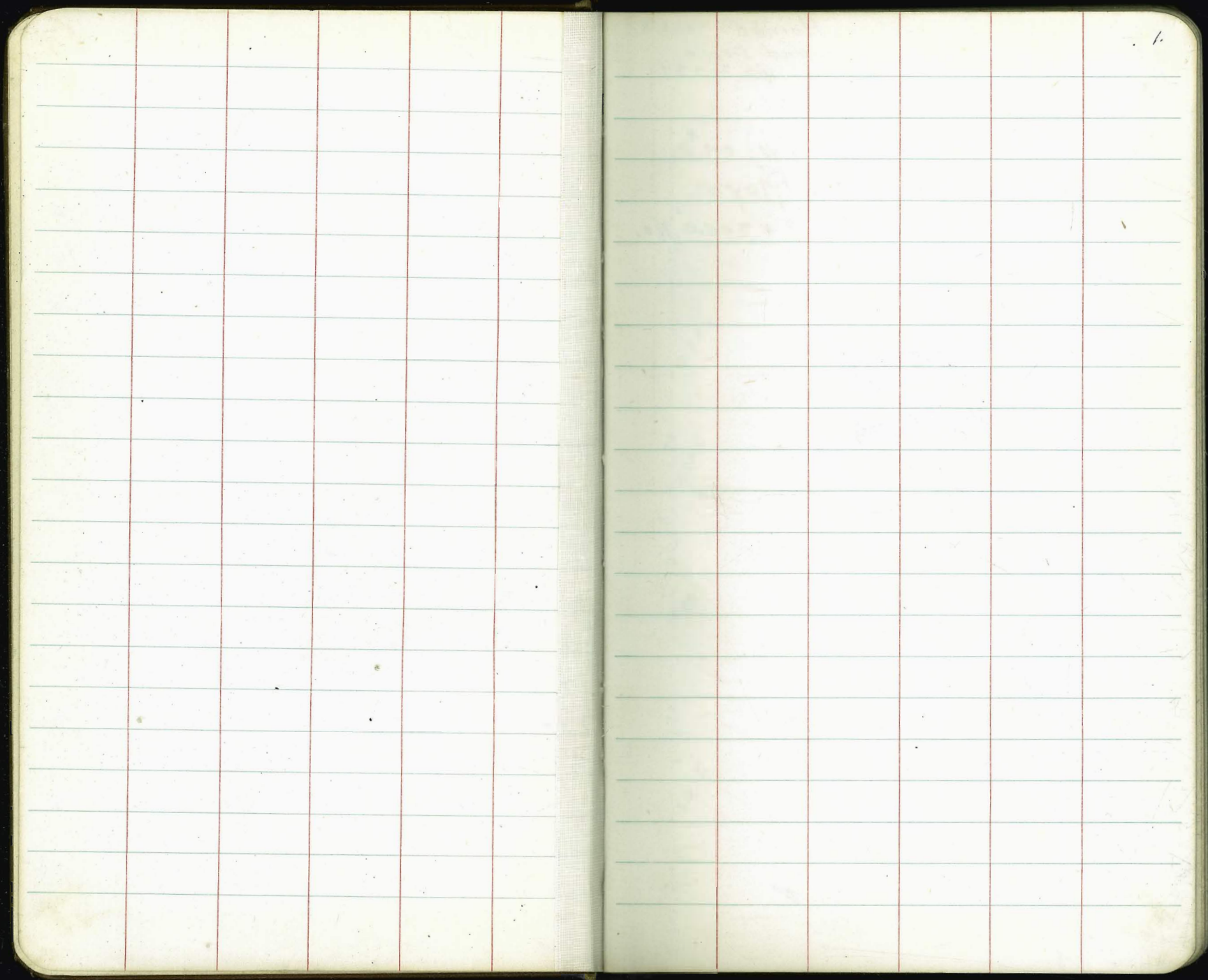
MICROFILMED

APR 13 1965

This Field Book is manufactured 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.

	Paving Haynes	1-11
	Sewer hats 1+2 Blk 105 Univ. Hgts	13
	Culvert Blk 211 Univ. Hgts	18
	Alley Grades Blk 54 Univ. Hgts	14
	Curb Grades Talbot - Catalina to Point	16
	(D sheets - 1189-D + 1191-D)	
	Water Grade Loma Alta #2	20 to 33
	Sewer Extension A3 + Beta	34-55
Pave - etc.	Chalcedony St } ^{w. line} North shore	36
	Missouri St } ^{Highlands to} Ocean Blvd.	
	Dawes - Diamond - Chalcedony	
	Bayard - Diamond + Law.	
	Alley Blk 120 ^{Dawes} to Cass	65
	Alley Blk #1 ^{Watkins +} Biddle Add	66
	" " 79 Park Villas	67
	" " 39 ^{water services Resub.} Teralta Lots H + I	69
	storm Drain ^{Torrey Pines Road} + Princess	72
	57 - South of El Cajon E Grades	73
Dawson + El Cajon - water stub.	74	
52 nd + El Cajon 150' water line	75	
Kane + Moreno ^{prop + Ob.} stakes	78	



1

8/3/48

Curb Grades - Haines

La Playa to Moorland Drive

NO. 31031

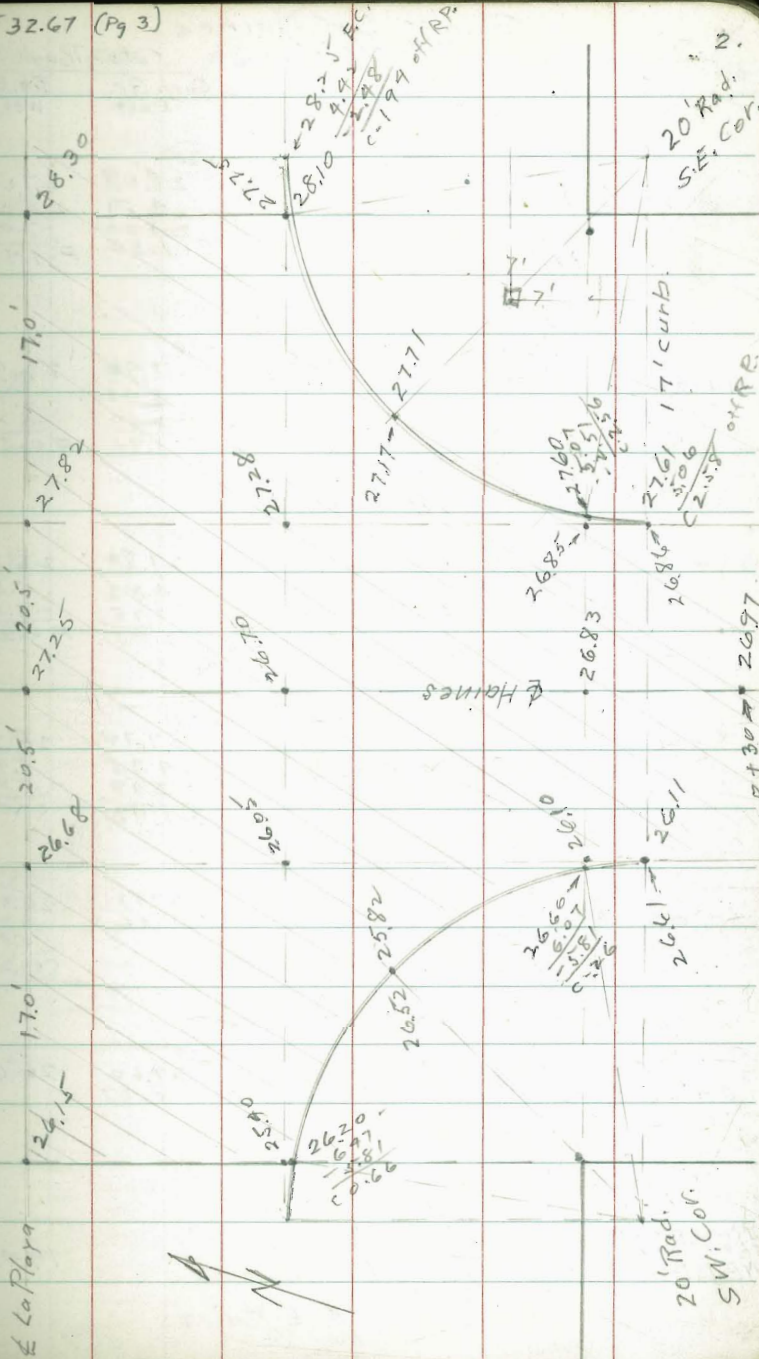
McCoy
W. Moore
Allen
Melton

Tied out Mon. (7' N. + 7' W) on
SE Cor. Haines + La Playa.
100.00' E (on 7') + 100.0 + 200.0 No.
Set 2" x 2" Hobs

INDEXED

WIK
JAN 19 1949

K 32.67 (Pg 3)



Grades for Haines
W.O. 31031

3.

		Cuts	Trough Gr.	E.Ch.	E.Gut.	E 1/4	E	W 1/4	W Gut	W.Cb
		Carb. Gr. East	Ch. Gr. West							
+60	Ch. Stake 7. 19.46 <u>12.40</u> 31.86 <u>1.45</u> 27.41 4.60 <u>32.01</u>	(-3.0) 28.08 4.59 <u>-3.23</u> C-1.36	27.09 5.59 <u>-7.01</u> F-1.42	29.08						27.08
+20		(-1.0) 27.96 4.71 <u>-2.80</u> C-1.91	26.96 5.71 <u>-6.25</u> F-0.54	27.96						26.96
+80		(-1.0) 27.84 4.83 <u>-2.78</u> C-2.05	26.84 5.83 <u>-6.12</u> F-0.29	27.84						26.84
+40		(-1.0) 27.72 4.95 <u>-2.99</u> C-1.96	26.72 5.95 <u>-5.88</u> C-0.07	27.72						26.72
0+03	BC	27.61 5.06	26.61 6.06 <u>-5.83</u> C-0.23 on RR	27.61 <u>4.25</u> X 21.86						26.61 5.25 <u>4.75</u> 00.50
0+00	So P Line La Playa	(-1.0) 27.60 5.07	26.60	27.60 <u>4.25</u>						26.60 5.26 <u>4.75</u> 00.50
	Riviera Dr. + La Playa NEBP	13.21	32.67							19.96

At 0+10 & Haines

HAINES

π 37.14

E. Co. Gr

W. Co. Gr.

E. Ch

E. Gut.

E 1/4

E

W 1/4

W. Gut.

4.

W. Curb

4 + 00

29.20	28.20
7.94	8.94
5.75	9.83
C-2.19	F0.89

29.10
6.71
6.41
00.30

28.20
7.71
7.51
C0.70

+ 80

28.84	27.84
8.30	7.30
-5.86	10.27
C-2.44	F0.97

35.91
28.84
7.07
X

27.84
8.07
7.59
C0.50

3 + 60

Break

29.76
7.18
35.91

28.68	27.68
8.46	9.46
6.18	10.48
C-2.28	F1.02

32.01
28.68
3.33

32.01
27.68
4.33
7.87
C0.50

3 + 20

28.56	27.56
8.58	9.58
6.72	10.71
C-1.84	F1.13

28.56

27.56

TP. so end +
Con. Wa.
3 + 00

8.38

37.14
π 35.45

3.91

28.76

+ 80

28.44	27.44
4.23	5.23
2.96	6.20
C-1.87	F0.97

28.44
F0.30

27.44

+ 40

28.32	27.32
4.35	5.35
3.21	6.20
C1.10	F0.91

28.32

27.32

2 + 00

28.20	27.20
7.47	5.47
-3.27	-6.32
C1.20	F0.85

28.20

27.20

π 32.67

HAINES

	π 37.14	East Ch	West Ch
cord to Prop Line		37.47	33.89
15.71 cord		36.64	34.66
+ 57.77 B.C.	π 37.14	35.86	34.80
(+ 56.98 Edge Conc. Paving)		1.28	2.34
(1756-7)		-1.24	-2.33
		Exist. C&Bcs	check
		35.59	34.59
+ 37.5			
		35.37	34.37
6 + 17.5			
		35.10	34.10
+ 93.75			
		34.84	33.84
5 + 70			

Straight Grade on Chs

Straight Grade

Straight Grade

E.Cb. E.Gut. E 1/4 E W 1/4 W.Gut. 6. W.Ch.

(EXERCISE)

Curb Returns
SE. + S.W. Corners
Haines + La Playa

20' Radius
17' Curbs.

INDEXED
WK
JAN 19 1949

X 31.49

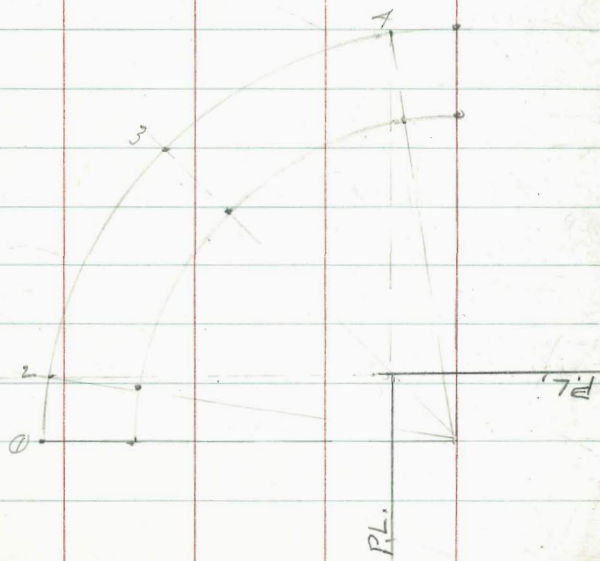
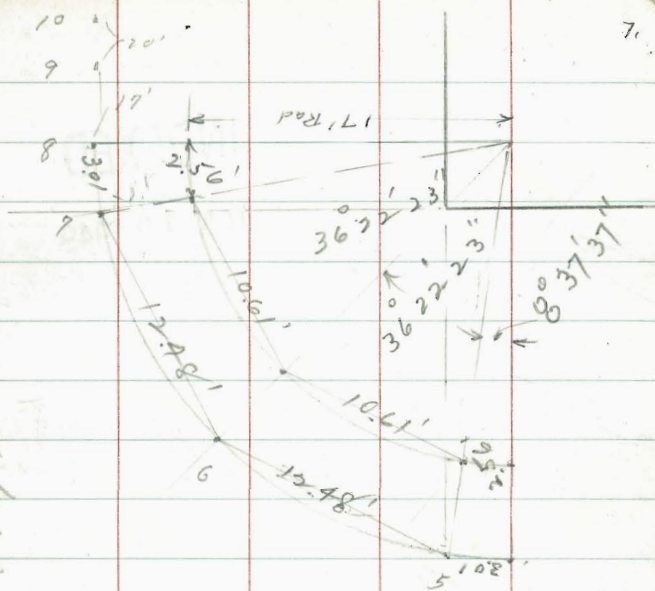
# 15	# 2	# 3	# 4	# 5
26.06	26.20	26.52	26.60	27.60
5.43	5.29	4.97	4.89	3.87
X	X	X	X	X

# 6	# 7	# 8	# 9	# 10
27.71	28.10	28.25	28.82	29.02
3.78	3.37	3.24	2.67	2.47
X	X	X	X	1.97
				00.50

B.M. N.E. Riviera Dr. + La Playa. 19.46
11.03
31.49

La Playa

Haines

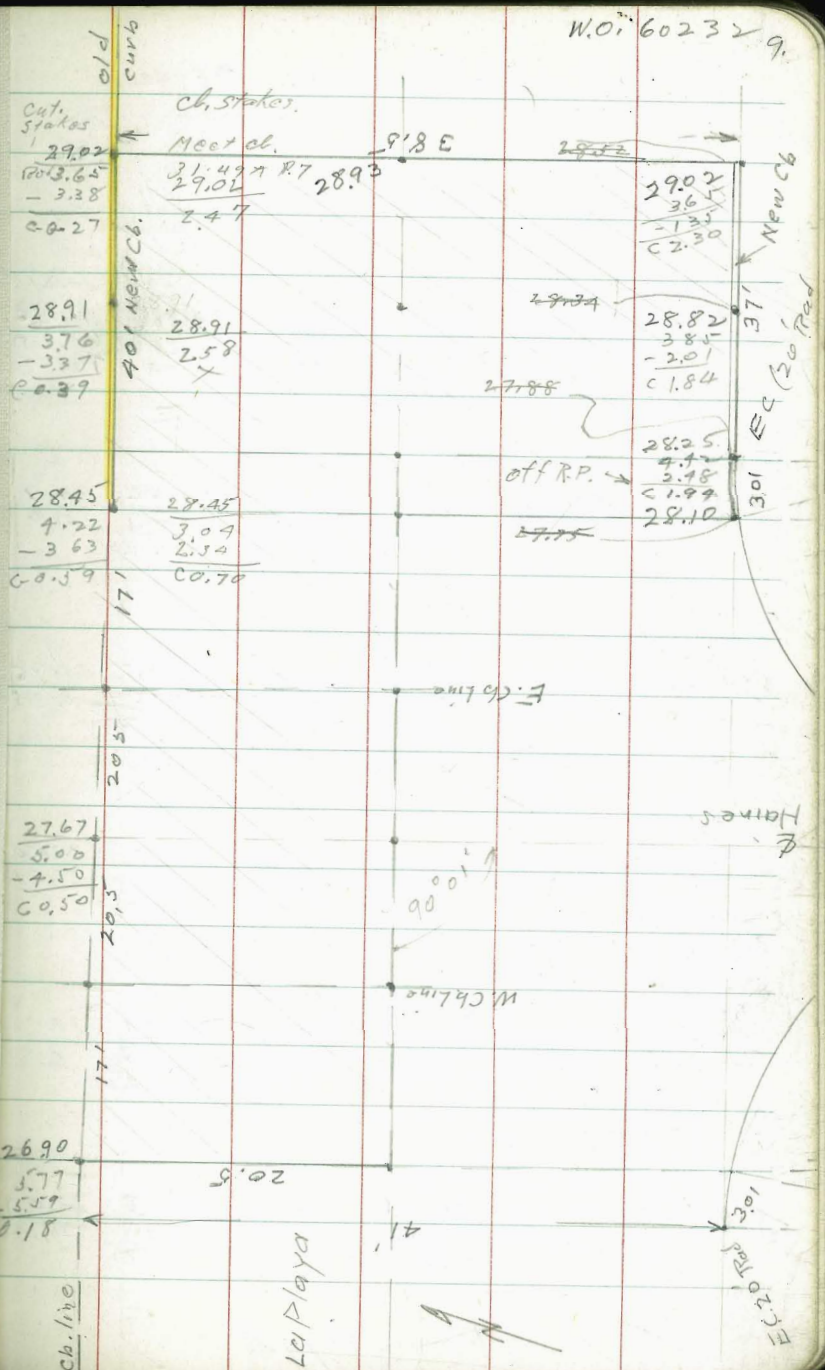


8/3/48

City Contract at
Haines + La Playa

W.O. 60232

↑ 32.67
(P93)



W.O. 60232 9.

Haines St. 7-8-42

Sommerneyer

ME Cap

W. Moore

1 1/4

+

W. 1/4

Exisi par.	40.217				40.21
6+59.77	35.34	35.29	35.11	34.81	34.86
	4.87	3.025V	2.200V	3.500V	3.85
	4.84	2.98	OK	OK	3.85
	1.003	0.04			OK

8rk.

6+37E	34.93	35.05	34.93	34.62	34.11
	5.28V	3.26	3.38	3.69	6.10
		3.59V	3.71V	4.02V	

8rk.

6+17.50	34.61	34.72	34.64	34.35	33.86
	5.60V	3.59	3.67	3.96	6.35
		3.72V	4.00V	4.29V	

5+93.75	34.35	34.46	34.38	34.09	33.60
	5.86V	3.85	3.93	4.22	6.61
		4.18V	4.26V	4.55V	

5+70.44 =

34.09					
4.23					
38.31 = X					

5v.c.

5+70	34.09	34.20	34.12	33.83	33.34
	6.12V	4.11	4.19	4.48	6.8
		4.44V	4.52V	4.81V	

From Page 9

5+50	40.21X	35.93			
	33.79	33.91	33.82	33.53	33.04
	6.42V	2.02	2.11	2.40	7.17
		2.35V	2.44V	2.73L	

From Page 8

AINES
La Playa

La Playa, 33 added to for subgrade
5/4 Paving Grades
Curb cuts to finish grade

11
B.M. 11-18
26.22
5.83
32.16

Prop. + 40
28.52
3.64
3.67
-0.03

27.83
3.33
3.66

504 28.93
3.23 3.23
3.56 3.15
10.08

28.83
2.33
3.66

B.C. 37 28.52
3.67

Prop + 20
28.43
3.73

28.70
3.16
3.79

28.78
3.38
3.71

28.65
3.51
3.84

B.C. + 17 28.34
3.82

0 + 00 28.05
4.11

28.27
3.89
4.12

28.30
3.86
4.19

28.12
4.04
4.37

27.75
4.41

prop stakes
E. C. 2 Back 27.65
4.51
S.C. 4.84
4.13
C 0.71
27.20
4.76
sub 5.29
4.29
C 1.00

27.82
4.34
4.67

27.28
4.88
5.21

26.85
5.31
26.86
5.30

W. C. 26.63
5.53
5.86
5.82
C 1.04

26.68
5.48
5.81

26.05
5.11
6.44

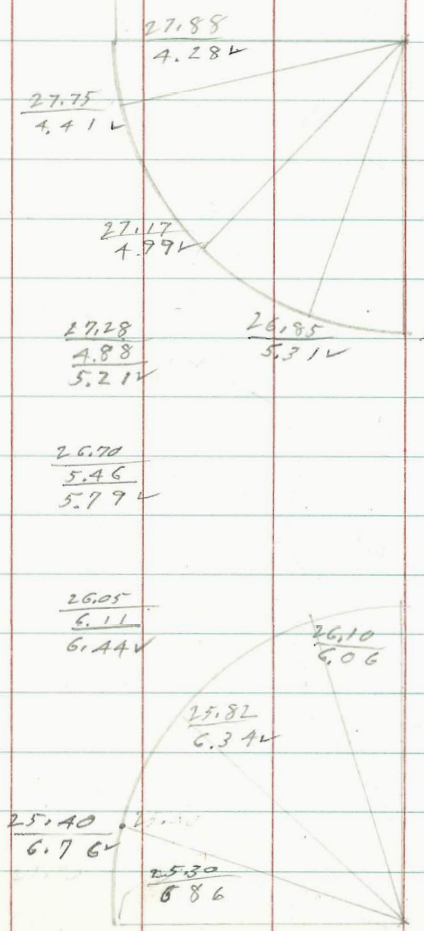
26.11
6.05
26.10
6.06

Prop. 26.10
6.06
6.39
5.12
C 1.27

26.15
6.01
6.34

25.40
6.76

25.30
8.86



The image shows an open notebook with two facing pages. Both pages are cream-colored and feature light blue horizontal ruling. Each page is divided into two columns by a vertical red margin line. The left page has a rounded outer edge on the left side. The right page has the number '12.' printed in the top right corner. The notebook is bound in the center, and the dark cover is visible at the very edges.

8/5/48

McCoy
W. Moore
Allen

Sewer Laterals
E. W. Alley Blk 105
University Heights

NO. 31323

INDEXED

W K
JAN 19 1949

□ 5' so. P.L.

1490

Lateral #2
Lot 23

-12.44

348.92

Boat - 3.80

22.18 Gr. Rd

-16.24

-16.24 stub

C - 5.94 to #

□ 5' so. P.L.

0465

Lot #1
Lot 28

4.11

362.90

8.70 Gr. Rd

-4.11 stub

C - 7.59 to #

0400 = West Line of Hamilton

NE B.P.
Hamilton +
E. Cajon

2.75 371.10

368.35

8/10/48		Alley Grades Blk 54		120.31323	
McCoy W Moore Allen		Univ. Heights (19.5' Paving)			
	West	Set to Subgrade	East		
1+60	378.15 5.29 -5.01 C 0.28		378.75 5.29 -4.94 C 0.35	X 2' Back on Conc. Slab.	
1+20	02' Back 377.93 5.51 -5.65 F 0.17		377.93 5.51 -4.51 C 1.00	Nail in Gr Wall 25'	
TR	5.44	383.44	4.05	278.00	
0+80	02' Back 377.72 1.33 -4.36 F 0.03		377.72 1.33 -3.75 C 0.58	02' Back	
Brk 0+40	02' Back 377.51 4.54 -4.43 C 0.11	376.98 1.66 X	377.51 4.54 -3.89 C 0.65	X 2' Back on Driv.	
Brk 0+20	02' Back 377.28 4.77 -4.43 C 0.34	376.67 4.87 X	377.33 4.72 -4.57 C 0.15	01' Back	
0+00	02' Back 376.80 5.25 -4.74 C 0.51	381.54 376.27 5.27 X	377.00 5.05 -4.76 C 0.29	02' Back	
SEBP Monroe + Hamilton	6.75	387.05		375.30	
	6.24	381.54		375.30 ← For	

Preliminary X-Section 1700-67		14.	
	West		East
INDEXED WIK JAN 19 1949			
4+00	02' Back 379.42 5.02 -5.12 F 0.10	(4.7)	379.42 5.02 -4.43 C 0.59
		375.30 624	
		381.54	
+60	05' Back 379.21 5.23 5.05 C 0.18	377.91 5.89	379.21 5.23 -5.71 F 0.18
		383.80	
		71	
3+20	02' Back 379.00 5.44 -5.22 C 0.22		379.00 5.44 -5.32 C 0.12
TR 02' Lt. 2+80	5.34	384.44	4.34
+80	02' Back 378.79 4.65 -4.39 C 0.31		378.79 4.65 -4.30 C 0.35
+40	X 2' Back on Conc. Walk 378.57 4.87 -4.21 C 0.66		378.57 4.87 -4.30 C 0.57
2+00	Nail in Wall 025 BK 378.36 5.08 -3.08 C 2.00		378.36 5.08 -4.69 C 0.39
		383.44	

		West	Set to Subgrade	East	
4+99.2 So. P.L. Madison	Gutter Pav. check	379.89 5.90 5.42 C.0.02	379.35 4.45 ✓	380.03 5.26 5.37 E.0.06	Gutter Pav.
Brk + 80	□ 0.5' Back	380.04 5.25 4.53 C.0.77	379.45 4.35 X	380.12 5.17 4.62 C.0.55	□ 2' Back
Brk + 60	Nail in Fence Fence 0.50 Back	380.10 5.19 -4.19 C.1.00	379.50 4.30 X	380.15 5.14 -4.14 C.1.00	Nail in Fence Fence 0.50 Back
Brk + 40	□ 2' Back	380.11 5.18 -4.92 C.0.76	379.49 4.31 X	380.13 5.16 -3.16 C.2.00	Nail in Fence Fence 0.85 Back
Brk 5+20	x 2' Back in Slab.	380.05 5.24 -4.92 C.0.32	383.80 379.42 4.38 X	380.05 5.24 -5.11 C.0.13	□ 2' Back (inside Gate)
+ 80	□ 2' Back	379.84 5.45 -5.37 C.0.08		379.84 5.45 -5.38 C.0.07	□ 2' Back
TP	5.66	385.29	4.81	379.63	
4+90	□ 2' Back	379.63 4.81 -4.64 C.0.17	Back	379.63 4.81 -3.81 C.1.0	Nail 0.35 on Fence
		384.44			

J.P. 7' 27.4
Alley at
Madison

4.85 384.45 5.69 379.60
385.29

378.99
(Record)
-5.02

5.44 379.01

Curb Grades on Talbot
From Catalina to Point St.

INDEXED

WK
JAN 19 1949

Catalina

Cb. Elev. = 256.25 @ 100 = E.C. C-2.69

3' Back of
Curb face

0+27 = C-2.17

TALBOT

TAKE

0+52 = C-1.78

0+77 = C-1.00

1+02 = C-0.60

Cb. Elev. = 254.20 @ VI+27

3' Back of

POINT ST

8/9/48 12" Culvert Blk 211 Univ. Hgts.
 McCoy Alley to Bancroft. W.O. 60135
 W. Moore
 Allen

INDEXED

WK
 JAN 19 1949

5 EQUAL PARTS
 1 + 76.71

6' 50. 335.16
 9.44
 - 3.70
 C 5.74

V 1 + 42.97 Clean out "G"
 ← Lt. 344.60

6' 50. 335.58 6' W 335.58
 9.02
 - 1.09
 C 7.93 C-8.20

REGULAR PARTS
 1 + 07.22

0 + 71.48

0 + 35.74

0 + 00 & Type "D"
 Catch Basin

337.34

TP 1.09 344.60 10.90 343.51
 NEBP. Univ. + 32nd 11.69 352.22 352.22
 4.84 353.91 349.07

Culvert 13/R 211
Univ. Heights

Æ

19.

W.C. Bancroft
3 + 09.60
= 1760.35
1694 - 76

5.07 236.06 236.04

3 + 34.16 ϕ Exist
Type H
Curb Inlet

Nail 6'E 333.20
7.93
- 6.11
C-1.82

3 + 11.66 ϕ Clean out "G"
+ 2 RT.

Nail 6'E 333.48
7.65
- 5.73
C-1.92

T.P. 3' No
2 + 77.93

3.80

341.13

7.27

337.33

2 + 77.93

3' No. 333.90
X on Walk 10.70
- 7.27
3.43

2 + 49.19

6'S 334.32
10.28
8.42
C-1.86

2 + 10.45

6'S 334.74
9.86
- 6.59
C-3.27

344.60

5 Equal Parts

↓

For location, see
sheets 1189D & 1191D.
W.D. 31169

INDEXED
WK
JAN 19 1949

B.M.#1
62.55
009
62.63
13.08
49.55
6.19
51.74
12.80
38.94
2.1
37.75

2+60

36.3
15.4
10.4
5.0

2+10

40.2
11.5
5.6
5.9
x 51.74

+60

44.0
18.6
13.1
5.5

1+10

47.9
14.7
10.1
4.6

Brk
+60

62.6
51.8
10.8
7.3
3.5

+30

Base Hydr. 57.6
5.00
5.7
5.7
F.D. 7

52.9
9.7
5.4
4.3

cross =
0+00

Montalvo + Camulos 62.55
S.W. spike B.M.#1.

54.0
8.6
3.6
5.0

Profile Cut. = 6³

Blow off.
4+10

21.7
18.1
11.8
6.3

3+90

25.1
14.7
9.4
5.3

3+60

28.5
11.3
7.3
4.0

3+10

32.4
7.4
3.2
4.2

x 39.75
= 39.8

Sammamish
H. Coy
W Moore
Allen

Montalvo - West from Camulos

Cross = 0+00

Brk
3+00

62.6
6.1
3.1
63.0

B.M. #1
R20

62.55
6.18
68.69
3.0
68.33
6.55
74.88

+50

61.6
7.1
4.2
62.9

Brk
5+00

65.5
7.4
3.8
63.6

67.5
7.4
4.3
63.1

2+00

60.6
5.1
5.0
63.1

4+70

67.45
7.45
3.85
63.6

+50

59.6
7.1
5.5
63.6

Brk
4+40

67.4
7.5
4.0
63.5

2.0%

Brk
1+00

58.6
10.1
5.3
63.8

4+05

66.2
8.7
5.1
63.6

74.9

0+50

56.3
12.4
7.7
64.7

3+70

65.0
3.7
0.4
63.3

3.03%

0+00

54.0

3+35

63.8
4.9
63.1

68.69

Montalvo

Brk 8+40			From Below 63.99 -26 ----- 37.99 +17.81 ----- 51.44 +0.30 ----- 51.74	11+20		40.8 11.0 -7.9 ----- C 3.1
7+95			48.0 3.8 1.3 ----- C 2.5	10+80		41.0 10.8 -7.6 ----- C 3.2
7+50	7+50		51.8 12.5 9.6 ----- C 2.9	10+40		41.3 10.3 -7.5 ----- C 3.0
7+05	7+05		55.7 8.6 5.5 ----- C 3.1	10+00		41.6 10.2 -7.3 ----- C 2.9
From Here stakes N' North						
9.50%		51.74				
Brk 6+60	6+60		South 59.5 15.4 11.2 ----- C 3.2	North Stake 59.5 15.4 11.3 ----- C 3.1	7+60	41.8 10.0 -7.0 ----- C 3.0
6+20			61.5 13.4 10.3 ----- C 3.1	74.88 12.25 ----- 62.63 4.05 ----- 66.68 2.68 ----- 64.00 63.99	Brk 9+20	42.1 9.7 -6.5 ----- C 3.2
5+80			63.5 11.4 7.8 ----- C 3.6	66.68 2.68 ----- 64.00 63.99	0.66%	
		74.88		S.E. A.P. Montalvo + Clovis	8+80	43.15 8.6 5.9 ----- C 2.7
					51.74	

14+07

$$\begin{array}{r} 33.7 \\ 10.7 \\ \hline 6.5 \\ C-4.2 \end{array}$$

8.68%

Brt
13+76
$$\begin{array}{r} 36.4 \\ 8.0 \\ \hline 4.6 \\ C-3.4 \end{array}$$
Brt
13+44
$$\begin{array}{r} 38.2 \\ 6.2 \\ \hline 3.2 \\ C-3.0 \end{array}$$

12+92

$$\begin{array}{r} 39.1 \\ 5.3 \\ \hline 1.9 \\ C-3.7 \end{array}$$
Brt
12+40
$$\begin{array}{r} 40.0 \\ 1.4 \\ \hline 1.4 \\ C-3.0 \end{array}$$

$$\begin{array}{r} 51.74 \\ 8.22 \\ \hline 43.52 \\ 0.83 \\ \hline 44.35 \\ 12.89 \\ \hline 31.46 \\ 19.00 \\ \hline 35.46 \end{array}$$

12+00

$$\begin{array}{r} 40.3 \\ 4.1 \\ \hline 1.1 \\ C-3.0 \end{array}$$
44.35

11+60

51.74

$$\begin{array}{r} 40.5 \\ 11.3 \\ \hline 8.2 \\ C-3.1 \end{array}$$

B.M. 24

15+28

Exist,
stub
$$\begin{array}{r} 23.2 \\ 12.3 \\ \hline 9.6 \\ C-2.7 \end{array}$$

$$\begin{array}{r} 31.46 \\ +4.00 \\ \hline 35.46 \\ B.M. 11.35 \\ 24.11 \\ \hline 24.106 \\ +0.05 \end{array}$$

15+00 Δ

$$\begin{array}{r} 25.6 \\ 9.9 \\ \hline 7.1 \\ 2.8 \end{array}$$

35.46

14+69

$$\begin{array}{r} 28.3 \\ 16.1 \\ \hline 12.9 \\ C-3.2 \end{array}$$

14+38

$$\begin{array}{r} 31.0 \\ 13.4 \\ \hline 9.6 \\ C-3.8 \end{array}$$

44.35

Water line Mentore
East from Camulas

29

stakes - 1' south

INDEXED

WK
JAN 19 1949

1+83 Brk

10.39
15.97 From
~~6.75~~ P.28
C9.22 38.60
13.10

1+57 Brk

13.90
12.46
~~4.55~~
C7.91 25.50
0.86
26.36
0.70
25.66
11.73
37.39
17.6

1+31 Brk

X26.36

19.10
7.26
~~2.05~~
C5.21 35.63
B.M.#2
should be
(35.62)

1+05 Brk

23.0
15.6
11.6
C4.0

0+72

26.25
12.35
~~7.68~~
C4.67

0+40 Brk

29.5
9.1
4.7
C4.4

0+00

31.3
7.3
3.0
C4.3

GAT =
0+00 = 20' W. East line
Camulas

X from P.28 = 38.60

0+00 offset
38.60 Stab
2.98
35.62 =
B.M.#2

2+35 Blow off

8.62
17.74
~~9.20~~
C8.30

2+09 Brk

9.01
17.35
~~7.95~~
C9.40

~~B.M.#2
35.62
12.35
47.97~~

Mentone
Water 1118

West from Camules

2+60	60.07	45.75 14.35 11.1 C 3.2	
2+20		43.5 4.5 1.1 C 3.4	BM #2 . P. 24 35.62 12.35 47.97 0.04
1+80		41.25 6.75 2.7 C 3.8	47.93 12.14 60.07 0.04 60.03 6.26 66.29
5.02%			
1+40 Brk		39.0 9.0 .97 C 4.3	
0+90		35.8 12.2 7.0 C 4.2	
0+40 Brk		32.6 15.4 10.3 C 4.1	
0+00	47.97	31.3 16.7 12.4 C 4.3	
0+00 = 6" T. 40' East of w. line			

1.81%

5+50 Brk.		59.0 7.3 4.1 C 3.2	
5+05	66.29	58.0 8.3 4.7 C 3.4	
2.22%			
4+60 Brk		57.0 3.1 0.0 3.1	= T.P.
4+20		54.75 5.35 1.42 C 3.93	
3+80		52.50 7.6 3.0 C 4.6	
3+40		50.25 9.85 5.05 C 4.8	
3+00		48.0 12.1 8.4 C 3.7	

Mentone
West of Cornudas

8+90^z

50.65
15.65
12.7
C 2.9

9.14%

12+00^z Brk

41.17
x

34.5
6.7
3.0
C 3.7

66.29
12.62
53.65
1.0

8+40^z

52.1
14.2
11.2
C 3.0

11+60^z

37.95
15.80
12.3
C 3.5

53.75
12.90
40.85
0.32
41.17

7+90^z

53.55
12.74
10.9
C 2.7

11+20^z Brk

41.4
12.35
9.42
C 3.0

2.89%

S.E. Pole
Mentone
& Clovis

66.29
396
62.73

62.32

B.M. #3

5.50%

7+40^z Brk

55.0
11.3
8.2
C 3.1

10+70^z

44.15
9.60
6.3
C 3.3

2.50%

7+00^z

56.0
10.3
6.6
C 3.7

10+20^z Brk

46.9
6.85
2.00
C 2.8

Stakes
are 4' North
of station

6+60^z Brk

57.0
9.3
5.3
C 2.0

Base
60.6
5.7
4.9
C 0.8

57.0
9.3
5.1
C 2.2

Cross
Hydt.
57.55
7.8
5.0
C 3.8

9+80^z

48.05
5.70
2.72
C 3.0

6+30^z Fire Hydt.

6+05^z

58.0
8.3
4.7
C 3.6

9+40^z

53.75
x

49.12
4.55
1.56
C 3.0

66.29
x

Menton's
West of Camulos

27

13+71²: Connection: end.

20.3

$\frac{12.3}{10.2}$
C 2.1

41.17

11.96

29.21

3.37

32.58

8.42

24.16

14.00

0.10

see

P. 23

4.51%

13+40²

32.58

x

21.7

10.9

6.9

C 4.0

13+05²

24.9

16.3

11.0

C 4.7

12+70²

28.1

13.1

9.1

C 4.0

12+35²

41.17

x

31.3

9.9

6.2

C 3.7

Water Canules St.
Mentave to Mentone

8/17/48
W.O. 31169

28

B.H. 41
P. 20

2+00

X
50162 7

40.8

62.55

9.8

04

33

62.59

C 6.5

13.10

49.49

113

50.62

1+60

INDEXED
WK
JAN 19 1949

43.9

12.87

18.7

37.75

13.1

0.85

C 5.6

38.60

cont.

P. 24

1+20

47.1

15.5

10.7

C 4.8

0+80

50.2

12.4

8.5

C 3.9

3+24? = T' on
Mentone

X
38.6 7

31.3

7.3

3.0

C 4.3

7.79%

0+40 BTK

53.3

7.3

6.2

C 3.1

2+80 BTK

34.6

16.0

11.0

C 5.0

0+00

54.0

C 2.0 T

8.6

3.6

C 5.0

2+40

37.7

12.9

6.4

C 6.5

0+00: Cross 201 South of
N. line Mentave.

Rialto - Famosa + Carrulos
W. Pt. Loma to Temecula

INDEXED
WK
JAN 20 1949

BM#5
P. 32

				4+30		8.2
						14.0
						9.8
1+60	40'	X 2222	10.8	7.09	7.6%	50' twice
			11.4	7.49		
			7.1	14.58	3+80	Brk.
			C 4.3	1.15		12.00
	40'			13.43		10.2
1+20	Brk.	T.P.	9.5	8.79		7.0
			5.1	22.22		C 3.2
			11.5			
			C 4.0		3+40	12.75
	40'					9.47
						5.65
0+80			6.9			C 3.8
			7.7		40' twice	
			4.1		3+00	Brk.
			C 3.6			13.5
						8.7
0+446 = Hydt. Base			7.4			4.7
			7.2			C 4.0
			4.5			
			C 2.7		2+70	13.45
						8.47
0+446 Five Hydt. ϕ			4.7			4.7
			9.9			C 4.1
			7.0		30' twice	
6.33%			C 2.9		2+40	Brk.
						13.4
0+00 stakes set 4' 50.		X 1458	1.9			8.8
			12.7			5.2
			9.5			C 3.6
			C 3.2		2+00	40'
0+00 = Exist Stub W. Pt. Loma + Rialto						22.22
						12.1
						10.1
						6.1
						C 4.0

Rialto + Farnoga Blvd, a md Carrulos

W. Pt. Lotta Blvd to Terracula

4.4 = stub 30
11.9 A. South
8.2 = 0100 P.31
5.7 of

2+00			5.7		1+AA ⁸⁸ = 6" T + Carrulos	4.3
			10.6			12.0
			4.4			7.8
			C 6.2			C 4.2 stub to west 4'
				90'		
1+50			4.9	22.22	1+1A ⁸⁸ = F. Hydt. (Base)	7.6
			11.4	12.02		8.7
			5.0	10.20		13.6
			C 6.4	6.09		F 4.9
				16.29		
1+00			4.1		1+1A ⁸⁸ = Fire Hydt. \neq	4.6
			12.2			11.7
			6.0			8.5
			C 6.2			C 3.2
					14%	
0+50			3.4		1+00	4.8
			12.9			11.5
			7.6			8.3
			C 5.3			C 3.2
1.5A%						
0+00	Stakes set 4' West (RT.)		2.6		+50	5.4
			X			10.9
						6.7
						C 4.2
					1.17%	
5+24.17	8x6 T $\Delta 57^\circ - 39'$ RT.		2.6		0+00 secant = 4.5 on split	6.0
			13.7			
			9.3		stakes 4' RT.	
	AA I		C 4.4		= 0+00 carrulos	
4+80	Brk s		4.4		2+20 ⁷⁵ $\Delta 35^\circ 20'$ RT. on split	6.0
			11.9			10.3
		16.29	7.4			4.4
		X	C 4.5			C 5.9
					16.29	
					X	

Temecula water Grades
Carrulos to W. Pt. Loma.

8/20/48
31

2+00		K3A.06	20.00	
			14.1	
			10.2	
			C3.7	B.M.#4
7.25%	A'-3 TIMES			Spikes in P.A.
				S.E. Clovis
				+ Temecula
1+60	Brk		17.1	(1699)
			4.3	
			0.2	43.79
			C4.1	125
				45.02
				13.20
				31.82
				.31
1+19			11.8	321.3
			9.6	10.94
			5.9	21.19
			C3.7	0.24
	A' twice			21.43
				0.24
				21.19
0+78	Brk		6.5	12.87
			14.9	34.06
			10.8	0.45
			C4.1	33.61
	16'			11.13
				44.74
0+62	Brk		5.4	
			16.0	
			12.2	
			C3.8	
0+31			4.9	
			16.5	
			13.1	
			C3.4	
0+00			4.4	
Temecula			17.0	
Carrulos			13.3	
			C3.7	Stub
	Stakes set A' south			A' South

INDEXED
WK
JAN 20 1949

5+10				
				35.2
				9.5
				6.0
				C3.5
1.75%	50' - A TIMES			
4+60	Brk			34.3
				10.4
				7.1
				C3.7
4+15				32.2
				12.5
				8.9
				C3.6
				X4A.74
3+70				30.0
				4.1
				0.45
				C3.9
				overnite
				T.P. 8/20/48
3+25				27.9
				6.2
				2.8
				C3.4
4.72%	A'-A-TIMES			
2+80	Brk			25.8
				8.3
				5.2
				C3.1
2+40				22.9
				11.2
				7.5
				C3.7

Terraculla

7.17%				
8+20	Brk	34.2		
		<u>10.5</u>	44.74	
		<u>7.9</u>	<u>0.95</u>	
		C 2.6	43.79	
			<u>95</u>	
			44.74	
			<u>9.63</u>	
7+80		35.3	35.11	
		<u>9.4</u>	<u>0.85</u>	
		<u>5.5</u>	35.96	
		C 3.7	12.49	
			23.47	
			<u>1.58</u>	
			25.05	
			<u>11.12</u>	
7+40		36.5	13.83	
		<u>8.2</u>	<u>0.60</u>	
		<u>1.5</u>	14.43	
		C 3.7	7.34	
			<u>7.07</u>	
2.83%	40' 3 times		Set B.M.	
	u.l. Clovis		S. wly	
7+00	Brk	37.6	P. Pole	
		<u>7.1</u>	Rialto	
		<u>3.3</u>	u. Pt.	
		C 3.8	Lotta.	
	40'		B.M. #5	
6+60	Brk	37.8	Spikes	
		<u>6.9</u>	& Nails	
		<u>3.7</u>		
		C 3.2		
6+10		36.9		
		<u>7.8</u>		
		<u>4.4</u>		
		C 3.4		
5+60		36.0		
		<u>8.7</u>		
	π	<u>5.6</u>		
	44.74	C 3.1		

10+22	Exist. stub.	15.7		
		<u>9.4</u>		
		<u>6.8</u>		
		C 2.6		π
	42			
9+80	Brk.	18.4		
		<u>6.7</u>		
		<u>3.7</u>		
		C 3.0		
	6			
9+75	Fire Hyd. - Base.	22.8		
		<u>2.3</u>		
		<u>1.6</u>		
		C 0.7		
9+73	Fire Hyd. (E)	$\pi 25.05$	19.2	
			<u>5.9</u>	
			<u>2.9</u>	
			C 3.0	
	43			
9+30		24.1		
		<u>11.9</u>		
		<u>8.4</u>		
		C 3.5		
11.50%	50			
8+80	Brk	$\pi 35.96$	29.9	
			<u>6.1</u>	
			<u>3.4</u>	
			C 2.7	
8+50		32.0		T.P
		<u>12.7</u>		
	30' 2 times	<u>9.63</u>		
		C 3.1		

Valeta St.

W. Pt. Loma to Soto St.

2+11³

39.9

B.M. #4

6.0

24.06

1.5

5.93

C4.5

29.99

8.67

21.32

38.2

12.06

7.7

33.38

3.6

4.9

C4.1

328.9

13.01

15.90

1.49

35.1

44.41

10.8

7.30

C4.5

51.71

30' twice

(T.P.)

1+81.3

Brk

w. line & towards

4+51³= Blow off.
= w. line Soto

37.58

14.13

8.2

C5.9

INDEXED

WK
JAN 20 19491+46³

35' twice

3+96³

39.9

11.8

6.0

C5.8

55' twice

1+11³

Brk.

π 45.9

32.0

13.9

10.5

C3.4

3+41³

Brk.

47.2

9.5

5.1

C4.4

45'

0+66³Brk. Δ ^{Tang = 0.08}
40° 23' R.T.

25.4

8.0

4.5

C3.5

3+11³

42.4

9.3

4.8

C4.5

30' twice

0+33¹⁵

22.0

11.4

8.3

C3.1

2+81³

Brk

42.6

9.1

5.0

C4.1

40'

0+00 = Exist stub.

λ =

33.4

18.6

14.8

12.1

C2.7

2+41³

Brk

π 51.71

41.6

10.1

5.8

C4.3

W. Pt Loma Blvd

B.M. spike in P.P. &c

S.E. of Mentane

+ W. Pt. Loma

FB $\frac{1699}{7} = 240.6$

B.M. #4

Sewer Extension on 42nd at Beta

8-24-48
W.O. 60327

INDEXED
WIK
JAN 20 1949

Summermyer
McCoy
W.L. Moore

stakes set, west of L.

0400

11.98 Grade
5.71 Red

C. 6.27

0100

0130

M.H. #1

0160

190

1+20

1+45

89.08 see page 35

77.10

77.79

78.48

78.69

78.90

79.07

11.98

11.29

10.60

10.39

10.18

10.01

12.00

5.45

4.90

5.03

5.18

5.13

0102

C5.84

C5.70

C5.36

C5.00

C4.88

Exist D.E.

1+70

1+95

2+20

2+45

D.E.

2+70

79.25

79.42

79.60

79.77

79.95

9.83

9.66

9.48

9.31

9.13

5.17

5.48

5.54

5.65

5.66

C4.66

C4.18

C3.94

C3.66

C3.37

El. this M.H. = 68⁵³ see page 35

B.M. = M.H.

Gamma +

42nd

(B3588)

10.25 Red

10.31 Red

295.6

93.06

72.50

42nd

34.

• = fd. pipe ±

230-307

2+70

2+45

2+20

2+20

1+95

Beta

1+70

Closed

1+45

1+40

1+20

0+70

M.H. #1 = 0+60

0+30

0+00

N. End Exist Sewer

(B3588)

Check for benches on
Sewer, 43rd + Beta. 8/24/49

INDEXED
WK
JAN 20 1949

Extd. Exist sewer.		12.00	77.08	
M.H. Invert shown on 3588B as 72.50				
	Red. 10.30			Invert
F.L. : 10.25	10.25	6.853		M.H.
Rim. M.H. Gamma + 42"	10.30	78.78		Rim M.H.
sw. 13' Man. Gamma + 42	11.13	77.95	(77.90)	
T.P.	3.53	89.08	7.04	85.55
Sw. Act. chisel in Sewer, Alpha + 43"	2.43	92.59		90.16

9/29/48
W.O. 31189

Sidewalk grades
Chalcedony Mission Blvd west

stakes 1' back back
edge of walk
Sottimer Meyer

	curb	Back Edge walk	Back Edge walk	curb.
1+60	44.43	44.60 6.88 7.29 F0.41	48.49 169 50.18 7.88 40.30 0.61	45.10 44.93 6.38 7.18 F0.80
1+20	44.91	45.08 6.40 6.91 F0.51	44.91x 5.90 6.44 F0.54	45.58 45.41
0+80	45.38	45.55 5.93 6.45 F0.52	BR 48.49 0.89 48.38x 7.58 39.80 2.42 42.22x	46.05 45.88 5.43 5.62 F0.19
0+40	45.86	46.03 5.45 6.20 F0.75	46.53 4.95 4.54 00.41	46.36
Brk 0+20	46.10 3.28	46.27 5.61 5.71 F0.50	46.97 4.71 4.47 C0.22	46.60 3.58 x
E.C. dn 0+10	46.05 3.33	46.17 5.31 5.	47.12 4.36	46.78 2.60 2.87 30.19x 46.95 3.25
0+00 w/line Mission Blvd	46.00 3.38			
N.E. Chalcedony + Mission Blvd B.P.	1.99	51.48	18.19	B.M. #1A

rake to 2+10

curb

INDEXED
WK

JAN 20 1949

36

curb

E.V.C. 3+20	47.35x 39.80 7.58 x	39.97 4.96 5.16 F0.20	40.47 4.46 4.48 F0.02	50.19x 40.30 7.88 x
3+00	41.23 8.15 x	41.40 3.53 2.97 C0.56	41.90 3.08 3.24 F0.21	41.73 8.45 x
2+80	42.32 7.06 x	42.49 2.44 2.25 C0.19	42.99 1.94 2.01 F0.07	42.82 7.36 x
2+60	43.07 6.31 x	43.24 4.69 1.75 F0.06	43.74 1.19 1.02 C0.17	43.57 6.61 x
T.P.	0.75	44.93	44.18	7.30
P.V.C. Brk 2+40	48.38x 43.48 5.90 x	43.65 7.83 8.10 F0.27	44.15 7.33 7.10 C0.03	50.18x 43.98 6.20 x
2+00	43.96	44.13 7.35 7.45 F0.10	44.63 6.85 7.17 F0.32	44.46
				51.48

rake

Chalcedony

Mission Blvd. West

	curb	Back edge walk	Back Edge walk	curb
E. line alley on No. 4+00	34.42	34.59 10.34 10.38 FO.04	35.09 9.84 10.00 FO.20	34.92 25.99 -5.99 prop. 3499-Rad 35.02 5.89
2' db. Rad- 3+97	34.61 7.61 x			
W. line alley on No. 3+95	34.65 FO.57 FO.67 East.	34.82 10.11 10.29 FO.33		
3+80	35.46 x		36.13 8.80 8.25 CO.55	35.96 4.95 x
7' db. 6.27 6.85 FO.58 FO.100 2' db. Rad.				
E. line alley on No. 3+75	35.75 6.47	35.92 9.01		
2' db. Rad: 3+73	35.85 6.37 x	9.59 FO.58		
3+60	36.71 5.51 x	36.88 8.05 8.75 FO.70	37.38 7.55 6.69 CO.86	37.21 3.70 x
P.V.C. 3+40	42.22 x 38.20 4.02 x	38.37 6.56 9.03 FO.47	38.87 6.06 5.63 CO.43	40.91 x 38.70 2.21 x
		44.93		

	curb.		curb
E. line alley Front. on No. 5+35			40.91 x 30.33 30.16 6.97 10.75 6.95 FO.46
E. line alley EXIST. @ Front. on No. 5+25	30.00 6.82 6.81 check CO.12 FO.22	30.17 6.65 6.48 CO.17	30.67 30.50 6.15 6.97 FO.82
4+90	31.21 4.10 x	31.38 5.44 5.59 FO.15	31.88 4.94 5.40 FO.46 31.71 9.20 x
4+55	32.42 9.80 x	32.59 4.23 4.51 FO.28	33.09 3.73 4.23 FO.50 32.72 7.99 x
T.I.P. W. line Alley on north 4+20 E.V.C.	3.13 33.62 8.60 x	36.82 33.79 11.14 11.24 FO.10	11.24 33.69 34.29 10.64 10.60 CO.04 34.12 6.77 6.59 prop. 4+22-Rad 34.05 6.86
		44.93	

Side walk Grades

Chalcedony - Bayard to Mission Blk
stakes 1' back back edge of walk.

Back edge
walk

Curb Gr.

2+50

49.36
7.19
7.58
F0.39

2+00

49.78
6.77
9.43
F0.66

1+50

50.19
6.36
6.61
F0.25

1+00

50.61
5.94
5.83
C0.11

0+50

South
51.02
5.53
5.62
F0.09

0+06

50.75
5
50.70

W.L. Bayard

51.25
51.43
5.12
5.39
F0.27

0+00

10' Wly. tie disk

3.85

52.70 BM #1

7' L+T

Chalcedony

3.79

56.55

52.76

N.W.
L+T.

+ Bayard.

South

Back Edge
walk

Curb Gr.

Sd Out

~~47.00~~ 47.90

46.70

E.L.M. Blvd.

5+00

47.08
7.55
47.25
7.38

47.08
7.55
7.50
0.05

Back
A+90

57.77
47.20
9.57
47.37
7.26
7.56

F0.30

4+50

47.70
6.93
7.17
F0.24

4+00

48.14
6.52
6.75
F0.43

3+50

48.52
6.11
6.33
F0.22

3+00

48.94
5.69
6.01
F0.32

T.P.

5.66

54.63

7.58

48.97

38

A+90

N. Out

47.73

32.70

48.49 =
BM #1 A
P.36

2+50 stub

INDEXED
WK
JAN 20 1949

48.49 = N.E.C.P.
3.29
51.77

1008
6
49.2

0+06
Curb
North
51.75
5
51.70

Chalcedony - Cass to Bayard

Side walk Grades

stakes 11 Back of walk.

El. on. Back edge of walk.

INDEXED
WIK
JAN 20 1949

2+50	55.97	56.97
	6.85	5.95
	6.94	5.45
	F0.09	C0.40

2+00	56.73	57.73
	6.09	5.09
	6.38	4.64
	F0.29	C0.45

1+50	57.49	58.49
	5.33	4.33
	5.88	4.62
	F0.55	F0.29

1+00	58.25	59.25
	4.57	3.57
	5.26	3.78
	F0.69	F0.11

0+50	59.01	60.01
	3.81	2.81
	4.03	3.13
	F0.22	F0.32

W.L. Cass	17.		
0+00	59.59	59.76	60.76
	3.23	3.98	2.06
	3.22	3.16	2.23
	2.01	-0.10	1.29
			2.19
			C0.27
			C0.04

s. W.L. + Cass	3.27	62.82	59.55	B.M. #3
----------------	------	-------	-------	---------

	6.17	52.72	52.70	B.M. #1-R38
--	------	-------	-------	-------------

El. Bayard	5+00	52.00	52.17	53.17	53.00
			6.72	5.72	
			6.37	5.56	
			C0.35	C0.16	

1+50	52.93	53.93
	5.96	4.76
	5.74	4.84
	C0.22	C0.12

1+00	53.69	54.69
	5.20	4.20
	5.17	4.37
	C0.03	F0.17

T.P.	2.80	58.89	6.73	56.09	North 3+50, stub.
------	------	-------	------	-------	-------------------

3+50	54.45	55.45
	8.37	7.37
	8.40	6.73
	F0.03	C0.64

3+00	55.21	56.21
	7.61	6.61
	7.64	6.00
	F0.03	C0.61

	62.82
--	-------

Chalcedony Side walk Grades
Going East. Cass to west line North
shore Highlands

INDEXED

WK
JAN 20 1949

	Stakes 1' Back of back edge of			Curb grade	North		South.	Curb grade
Walk. - Set to 0.17 Above Curb. grade.			5+00	69.00	<u>69.17</u> 4.93 <u>4.45</u> C 0.48		<u>68.17</u> 5.93 <u>5.74</u> C 0.19	68.00
	Curb. Gr.	North	South	Curb. Gr.				
2+00		<u>64.50</u> 3.93 <u>4.27</u> F 0.34						
				4+50	<u>68.40</u> 5.70 <u>4.78</u> C 0.92		<u>68.437</u> <u>67.40</u> 1.03 <u>1.00</u> C 0.03	
1+50		<u>63.71</u> 4.72 <u>5.04</u> F 0.32						
				4+00	<u>67.62</u> 6.48 <u>6.30</u> C 0.18		<u>66.63</u> 1.80 <u>2.30</u> F 0.50	
1+00		<u>62.93</u> 5.50 <u>5.94</u> F 0.44						
				3+50	<u>68.437</u> <u>66.84</u> 1.59 <u>1.04</u> C 0.55		<u>65.87</u> 2.56 <u>2.90</u> F 0.34	
0+50		<u>62.15</u> 6.28 <u>6.45</u> F 0.17						
				3+00	<u>66.05</u> 2.37 <u>2.43</u> F 0.06		<u>65.10</u> 3.33 <u>3.22</u> C 0.11	
E.L. Cass 0+00	<u>61.20</u> 7.23 <u>7.34</u> F 0.11	<u>61.37</u> 7.06 Meet	Exist	Walk				
SE 10' tie								
Back to 7' track = B.M.#4		5138	68.72	2+50	<u>65.28</u> 3.15 <u>3.33</u> F 0.18		<u>64.33</u> 4.10 <u>4.44</u> F 0.34	
T.P.	6.72	74.10	195					
B.M.#3.	8.88	<u>68.43</u>						
P.39								
				S.W.L.T.T. Cass Chalcedony				<u>68.437</u>

Chalcedony - side walks

	curb grade	North		South	curb grade
2+50		74.27 5.13 3.74 C 1.19		73.14 6.26 5.79 C 0.47	
2+00		73.50 5.70 4.70 C 1.10		72.40 7.00 6.55 C 0.45	
T.P.	5.37	77.40	0.07	74.03	
1+50		74.10X 72.73 1.37 0.07 C 1.30		74.10X 71.65 2.45 2.08 C 0.37	79.40X 71.65 7.75 7.38 C 0.37 LX
1+00		71.96 2.14 0.72 C 1.42		70.91 3.19 2.91 C 0.28	
0+50		71.19 2.91 1.95 C 0.96		70.16 3.94 3.61 C 0.33	
0+00					
E.L. Dawes	70.25	70.42 3.68 2.76 C 0.92		69.42 4.68 4.59 C 0.09	69.25

7410 Prom. P. 41.

	Curb. Cr.	North		South	Curb. Cr.
Willie North Shore Highlands	76.62	76.79		75.75	75.58
AHL	2.78 2.77 C 0.01 X				3.82 3.80 C 0.02 X
4+00		76.58 2.82 2.01 C 0.81		75.38 4.02 3.61 C 0.41	
3+50		75.81 3.59 2.41 C 1.18		74.63 4.77 4.62 C 0.15	
3+00		75.04 4.36 3.12 C 1.24		73.89 5.51 5.05 C 0.46	

INDEXED
NK
JAN 20 1949

Missouri St. Side walks

stakes 1' Back Back edge - walk

Grade set. 0.17 above curb grade.
walk Curb

2+00
 $\frac{65.36X}{63.12}$
 $\frac{2.02}{2.02}$
 $\frac{2.02}{2.02}$
 F0.11

1+50
 $\frac{65.36X}{63.12}$
 $\frac{2.24}{2.35}$ = T.P.
 $\frac{62.17}{3.18}$
 $\frac{65.36X}{2.35}$
 $\frac{2.94}{3.42}$
 $\frac{2.96}{2.96}$
 F0.24

1+00
 $\frac{62.17}{3.18}$
 $\frac{3.42}{3.90}$
 F0.48

0+50
 $\frac{61.97}{4.12}$
 $\frac{4.12}{4.12}$
 F0.36

0+10
 $\frac{60.46}{4.90}$

0+00 =
 E.L. Dawes
 $\frac{60.09}{61.27}$
 $\frac{4.82}{4.157}$
 C0.25

Spike N.K.
 P.O. 1729
 5
 3.18 65.36 — 62.18

BM#1
 Missouri
 Dawes

East End of Job
 Exis walk
 A+12⁴²
 $\frac{66.88}{3.75}$
 $\frac{3.77}{3.77}$
 F0.02

A+00
 $\frac{66.87}{3.96}$
 $\frac{4.06}{4.06}$
 F0.30

3+50
 $\frac{66.17}{4.46}$
 $\frac{4.60}{4.60}$
 F0.14

3+00
 $\frac{65.47}{5.16}$
 $\frac{5.12}{5.12}$
 F0.26

2+50
 $\frac{70.63}{64.77}$
 $\frac{5.86}{5.86}$
 C0.22

Walk
 $\frac{66.10}{3.62}$
 $\frac{3.64}{3.64}$
 F0.02

11
 $\frac{65.92}{3.80}$
 $\frac{4.06}{4.06}$
 F0.26

$\frac{65.22}{4.50}$
 $\frac{5.00}{5.00}$
 F0.50

$\frac{64.52}{5.20}$
 $\frac{5.72}{5.72}$
 F0.52

$\frac{69.72}{63.82}$
 $\frac{5.90}{6.46}$
 F0.56

Missouri - Side walks
E.L. Cass to W.L. Dawes

	N.	S.	Carb. Cr.
2+00	55.87 <u>3.88</u> 3.24 00.64	55.24 <u>7.15</u> 9.78 E0.63	66 Sw. 7' 2 1/2" Cass + Missouri 51.52 8.23 59.75x 1.36 58.39 7.70 66.09
1+50	55.20 <u>4.55</u> 3.89 00.66	54.52 <u>7.81</u> 8.53 F 0.72	51.52 <u>5.50</u> 57.02
1+00	54.53 <u>5.22</u> 5.40 F0.24	53.92 <u>8.47</u> 9.00 F0.53	
67			
0+50	53.86 <u>5.89</u> 6.18 F0.29	53.26 <u>9.13</u> 9.96 F0.83	
0+06	57.02 53.43 <u>3.89</u> 6.48 6.32 00.16	52.67 <u>9.72</u> 10.37 F0.65 = F0.78 To front walk	57.02 52.91 4.51 L
E.L. Cass. 0+00	59.75x <u>53.05</u> 6.70 6.68 70.00	59.75x <u>53.22</u> 6.53 9.79 12.77 F 1.55	52.60 52.43 9.96
BM #1 P.42	0.021 02.39	02.48	

Going East

43

	N.	S.	Carb. Cr.
W.L. Dawes 5+00	59.75 <u>6.17</u> 6.17 X	59.17 <u>3.22</u> 3.52 F0.30	59.00
4+50	66.09x <u>59.23</u> 6.86 6.55 00.31	65 58.52 <u>3.87</u> 4.10 F0.33	
A+00	59.75x <u>58.55 T.P.</u> 1.20 1.36 F0.16	66 57.86 <u>4.53</u> 5.07 F0.54	
End Exist walk			
3+50	57.88 <u>1.87</u> 1.88 F0.01	57.20 <u>5.19</u> 5.89 F0.70	
Start. exist walk			
3+00	57.21 <u>2.54</u> 2.47 00.07	65 56.55 <u>5.184</u> 6.54 F0.70	
2+50	56.54 <u>3.24</u> 3.40 F0.19	65 55.90 <u>6.49</u> 9.07 F0.58	

Missouri - Side walks
Bayard to Cass.

	N.	S.	
	Back of Walk	Back of Walk	From P. 55.
2+50	49.02 6.61 6.80 F0.25	48.02 4.43 4.47 F0.04	52.48 0.93 51.52 = S.W.L + Cass + Missouri = 51.52 cl.
2+00	55.63x 48.30 7.33 7.45 F0.40	47.30 5.15 5.30 F0.15	0.14 7
1+50	49.49x 47.58 1.91 2.23 F0.32	46.58 5.87 5.87 0.14	X From P. 45 49.49 2.03 + 7.26 8.37 55.03
1+00	46.86 2.63 2.95 F0.32	45.86 6.59 6.65 F0.06	
0+50	46.14 3.35 3.04 C0.31	45.14 7.31 7.41 F0.10	
E.L. Bayard cl. 0+00	49.49 45.25 4.02 3.90 C0.12	52.45x 44.42 8.03 8.21 F0.18	cl. 44.25

Going East

44

	N.	S.	
	Back of Walk	Back of Walk	
5+00	52.65 2.78 1.17 cl. = 3.15 3.15 +	52.45x 51.65 0.80 0.91 F0.11	cl. 51.48 0.97 0.92 C0.05
Brk 4+94	52.37 3.09 2.74 C0.35	52.54 3.09 2.74 F0.28	cl. 51.38
4+50	51.90 3.73 3.89 F0.16	50.90 1.55 1.81 F0.26	
4+00	51.18 4.45 4.187 F0.42	50.18 2.27 2.46 F0.19	
3+50	50.46 5.17 5.53 F0.36	49.46 2.99 3.25 F0.26	
3+00	49.74 5.89 6.20 F0.31	48.74 3.71 3.79 F0.08	

Missouri - Sidewalks
Mission Blvd to Bayard.

	N.	S	B.M.#1, N.W. 7'417. Mission & Missouri
2+50	Back of walk 42.79 4.69 4.74 FO.05	Back of walk 41.99 4.30 4.82 FO.52	40.46 5.83 46.29X 2.97 43.32 9.13 52.45 7.49
2+00	42.46 5.02 5.02 x	41.65 4.64 5.19 FO.65	B.M.#1 40.46 7.02 47.48X 3.32 44.16 5.33 47.49X 70. P. 44
1+50	42.13 5.35 5.36 FO.01	41.32 4.77 5.42 FO.45	4+50 41.09 5.40 4.67 CO.71
1+00	41.80 5.68 5.70 FO.02	40.98 5.31 5.79 FO.18	4+00 43.76 5.73 5.16 CO.57
0+50	41.48 6.80 5.95 CO.05	40.65 5.64 6.07 FO.43	3+50 47.49X 43.44 4.84 3.82 CO.32
0+00 E. Mission	cl. 43.25 20.98 6.56	41.15 6.33	cl. 40.14 6.18 6.13 .02

Running East

45

	N. Back Edge walk	S. Back of walk
5+00	44.25 17. 50.7 4.83 CO.34	49.82X 44.42 5.40 5.30 CO.10
+94	44.21	43.67 2.62 2.97 FO.35
4+50	41.09	43.50 T.P. 17 43.46
4+00	43.76	43.33 2.96 3.59 FO.63
3+50	43.44	43.00 3.29 3.21 CO.08
3+00	43.11	42.66 3.63 4.125 FO.62
	43.07	42.33 3.96 4.40 FO.44

Missouri - Side walks
Mission Blvd. - to 000000

Running west

	EL = Back of Walk	N.W. 7' 1/2" B.M. #1 P. 45	EL = Back of Walk		
1+70	37.12 6.07 X	37.29 5.36 5.90 F0.54	40.146 2.19 12.65 4.74 37.91 3.39	38.29 4.36 4.09 C0.27	38.12 5.07 X
1+45	37.40 5.79 X	37.57 5.08 5.38 F0.30	41.30 4.08 3.87 C0.21	38.57 4.08 3.87 C0.21	38.40 4.79 X
1+20	37.75 5.44 X	37.92 4.73 5.01 F0.28	Curbs B.M. #1 P. 45 40.46 2.77 43.19	38.92 3.73 3.49 C0.26	38.75 4.44 X
0+70	4.69 X	38.67 3.98 4.51 F0.53		39.67 2.98 3.05 F0.07	3.69 X
0+20	39.25 3.94 X	39.42 3.23 3.82 F0.59		40.42 2.23 2.58 F0.35	41.19 40.25 2.74 X
0+10 = E.C. alt. Back See page 57					
W.L. Mission out b.		42.657	42.657	alt	
0+00	39.70 3.47 2.95	39.87	40.58	40.41 2.21	
0+10 = B.C.	39.47		alt. E.C.	40.33	

20' Rad. Δ=30° see page 57

	EL = Back of Walk	EL = Back of Walk	EL = Back of Walk
3+45	W.L. Alley to 50	41.30x 36.29 5.01 5.22 F0.11	alt.
3+25	E.L. Alley to 50	36.39 4.91 5.09 F0.18	37.39 3.91 4.39 F0.48
2+90		36.56 4.74 5.09 F0.35	37.56 3.74 3.96 F0.22
2+55		41.31x 36.74 4.56 4.95 F0.39	41.30x 37.74 3.56 3.78 F0.22
2+20		42.65x 36.75 6.44 X F0.43	42.65x 37.92 5.73 6.16 F0.01
1+95		36.90 6.29 X F0.48	38.07 4.58 4.62 F0.04

37.75
T.R. 544
X

EL. =
Back of
walk

EL. =
Back of
walk

Missouri

Alley on. No. (End of returns

4796^{ET}

35.40
7.79
7.87
-0.08
End
47.19X
35.40
7.79
7.87
-0.08

41.30X
35.57
5.73
6.03
FO.30

41.30X
36.53
4.77
3.91
C 0.86

End.
21.38
36.86
2.94
43.19X
36.36
6.83
6.85
-0.02

w. dc.

43.19X
37.07
6.12
X

43.19X
37.17 Comb.
6.02
X

4788²⁰

4745

35.79
5.51
5.87
FO.36

36.79
4.51
4.85
FO.34

3795

36.04
5.26
5.52
FO.26

37.04
4.26
4.66
FO.40

W.L. Alley
To No.

3775

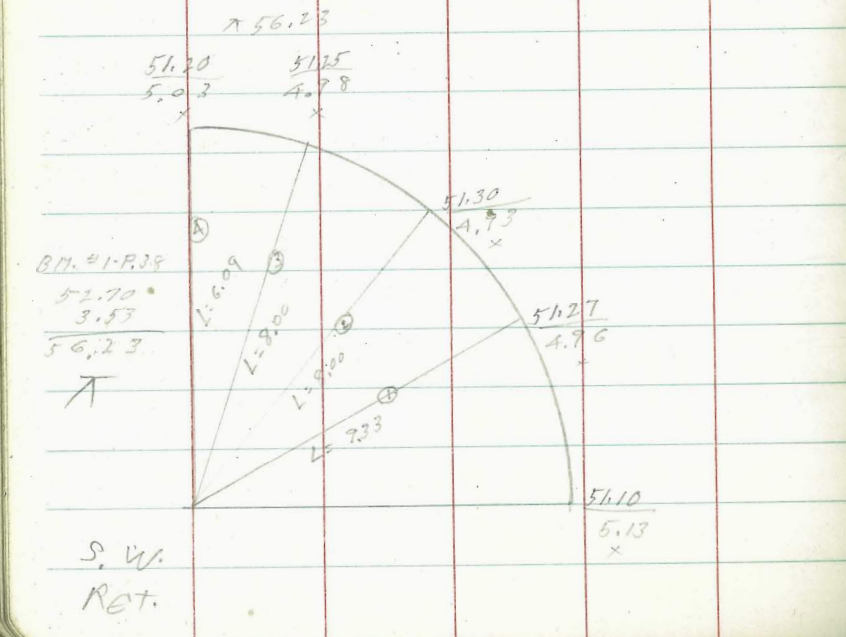
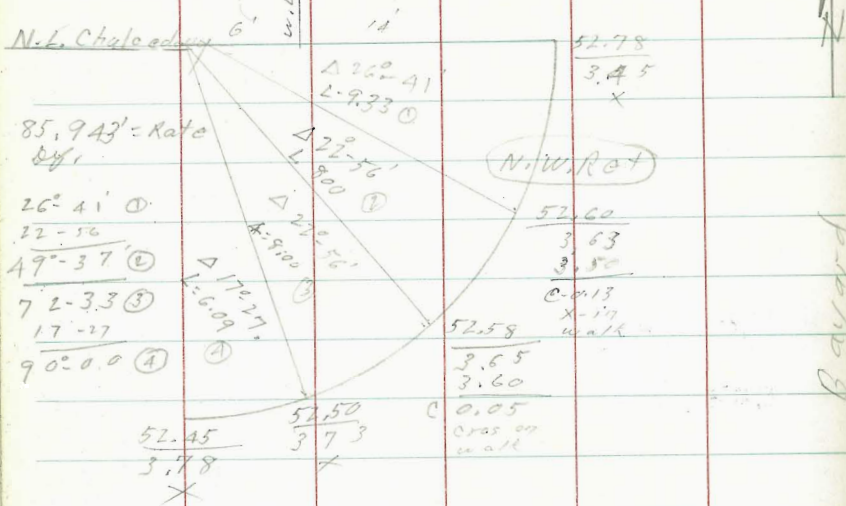
—

41.30
37.14
4.16
4.22
FO.06

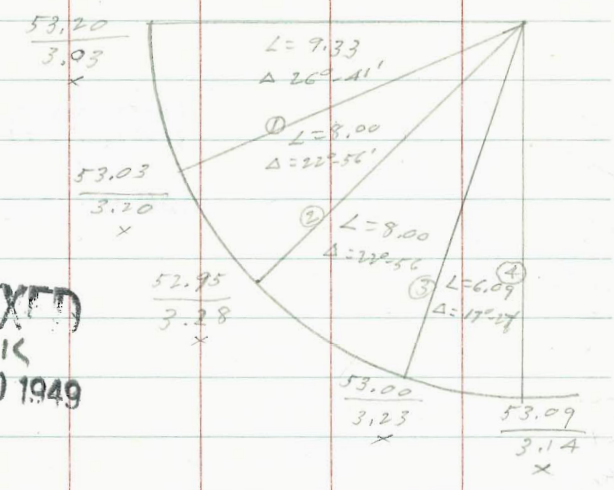
E.L. Alley
To No.

Cl. Returns Bayard

Chalcedony



N.E. Ret

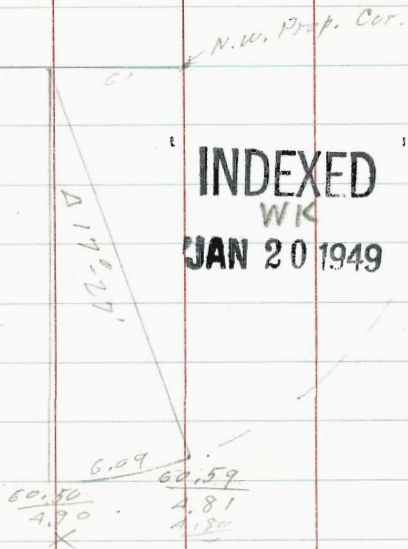


INDEXED
WIK
JAN 20 1949

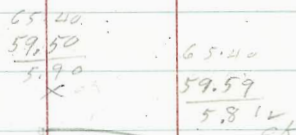
S.E. Ret.
Rad. = 20
stakes 3' Back

INDEXED
WK
JAN 20 1949

N.W. Ret



Chalcedony



S.W. Ret

S.W. Prop. Cor

6'

CASS ST.

N.E. Ret.

BM #3 - R39

59.55
5.12
64.67

59.55	± Pav.	el. End. 0.12 Low
5.12	60.34	
64.67	1.48	
	1.53	
	-0.05	

60.62
59.95
120.54
60.29

61.20
4.20
65.40

61.30

4.10
65.62
4.20

Chalcedony

60.88

4.54

7

4.61

4.02

60.41

4.99

± Pav.

59.95

4.87

Exist. cc.

S.E. Ret.

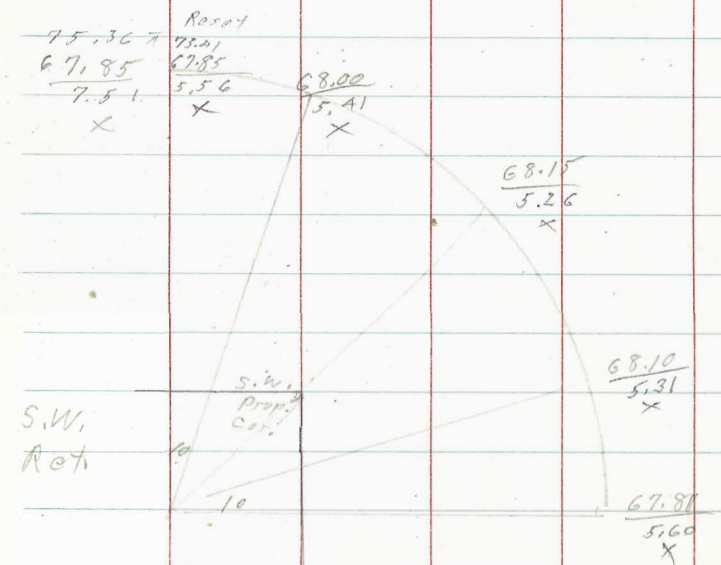
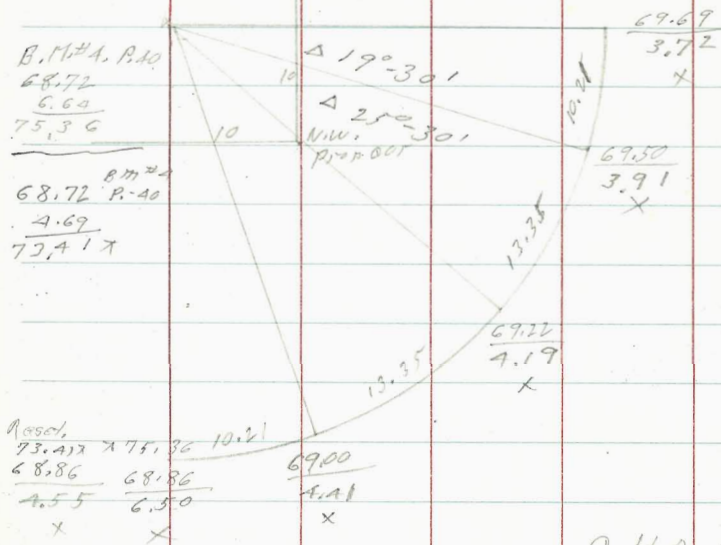
S.E. Prop. Cor

6'

17.27'

Curb Return.

R = 30

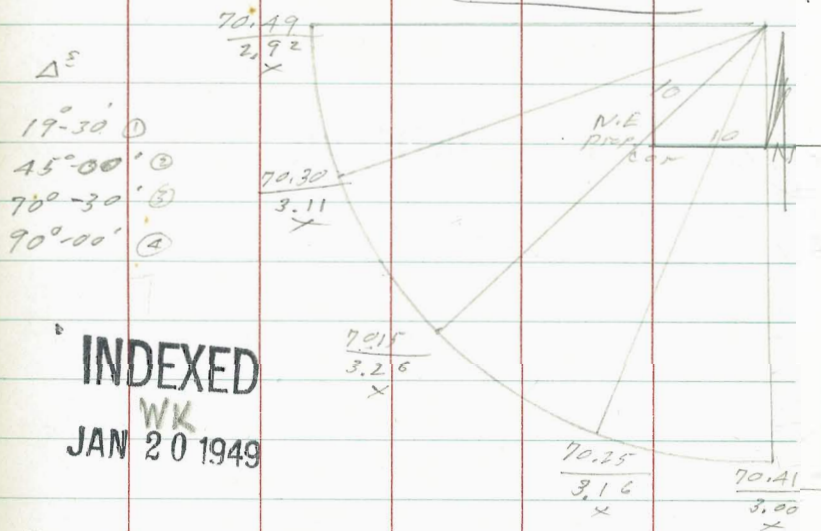


2/1/59/51

Chalcedony + Dawes.

50.

10-26-48



INDEXED

WK
JAN 20 1949

CHALCEDONY.

DAWES

Raised 0.25 73.417
 To 68.36 \rightarrow 68.11
 5.30
 \times

SEE ALSO PAGE 58

Chalcedony Paving

Wily line North Shore Highlands - to Dawes

E.L. Dawes
0+00

INDEXED
WK
JAN 20 1949

Ch. B.C.
A+02⁵⁵

68.90

69.55

69.66

Wily line
North Shore
Highland

74.95

75.97

75.95

Chalcedony Paving

Dawes to Bayard

51

S.E. S. 1/4 & N. 1/4

N.G.

East. line
5+00

Bayard

Ch. B.C.

A+94

51.59

52.00

52.34

Brk.

A+84

52.50

Rate

W. line Cass

0+00

59.12

59.86

59.92

East. line Cass

5+00

59.85

59.86

59.92

W. E. C.

0+10

67.35

68.25

68.11

W. L. Dawes

0+00

C

Chalcedony paving
Bayard to Mission Blvd

B.P.			
N.E. Chalcedony + Mission	48.49		N.O.
	3.76		
S.O.	<u>52.25</u>		

INDEXED

East line Mission Blvd.			
5+00	46.51	47.35	47.65

Brk.	52.25		52.25
4+90	46.70	47.62	47.93
	<u>5.55</u>		<u>4.52</u>

Ch. E.C.			
0+06	50.70	51.60	51.70

W.I. Bayard			
0+00	50.75	51.65	51.75

Mission to Ocean Blvd. 52

Brk	S.O.	S-1/4	E	N-1/4	N.C.
3+00	40.56		41.21		41.06
	8.97		8.34		8.97
			<u>8.46</u>		
			Fo.12		

Brk				
2+80	41.65		42.30	42.15
	7.88		7.25	7.38
			<u>7.36</u>	
			Fo.11	

Brk				
2+60	42.40		43.05	42.90
	7.13		6.50	6.63
			<u>6.63</u>	
			Fo.13	

P.V.C.				
Brk				
2+40	42.81		43.46	43.31
	6.72		6.09	6.22
			<u>6.21</u>	
			Fo.12	

Brk				
0+20	45.43		46.08	45.93
	4.10		3.48	3.60
			<u>3.52</u>	
			Fo.07	

W.I. E.C.		B.M. NIP36		
0+10	45.53	48.49	46.17	46.17
B.M. P36	1.00	1.06		
48.49		49.55	3.38	3.36
<u>1.00</u>		X Ar	<u>3.00</u>	
49.53		E	Fo.02	

W.I. E.C.				
Mission Blvd	49.53		46.17	49.53
0+00	45.68			46.34
	3.85		3.38	3.19
			X	

Chalcedony Paving

Brk. Rate	S. 1/4	±	N. 1/4	S. 1/4
4+20	32.95	33.60		33.45
	6.07	5.25		5.57
		5.34		
		10.09		

INDEXED

Brk.				
4+00	33.75	34.00		34.25
	5.27	4.45		4.77
		4.49		
		10.04		

Brk				
3+80	34.78	38.85 ^X 35.44	39.55 ^X 35.29	35.28
	4.24	3.41	3.57	3.74
		3.01		
		10.00		

Brk				
3+60	37.02 ^X 36.04	49.55 ^X 36.67	39.02 ^X 36.54	
	2.98	12.86	2.48	
		12.86		
		10.00		

Brk				
3+40	49.53 ^X 37.53	38.18	49.53 ^X 38.03	
	12.00	11.37	11.50	
		11.48		
		10.11		

Brk				
3+20	39.13	49.55 ^X 39.78	39.63	
	10.40	9.77	9.90	
		9.88		
		10.11		
	49.55			
	10.82			
	38.70			
	0.32			
	39.01			

Mission Blvd. to Ocean Blvd

	49.55 ^X
	12.84
	36.71
	2.14
	39.85

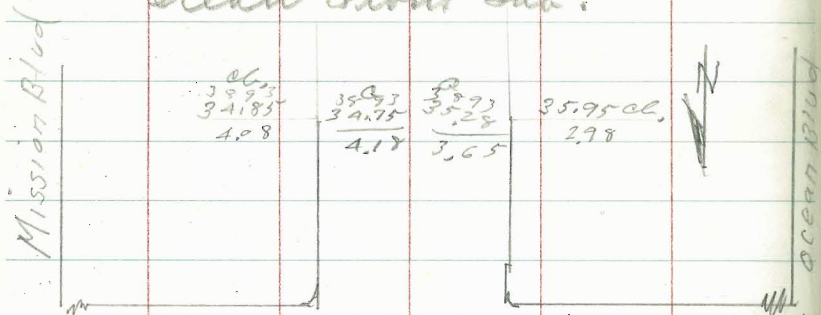
Set
B.M. #5
N. 7' Chalcedony
& Alley to south
3.18 35.84 B.M. #5
39.02

So. 1/4 S. 1/4 ± N. 1/4 N. 1/4
West line
Ocean Blvd

9.62	29.33	29.41	9.36	29.49
	9.69	9.44		9.53
				9.58
				10.03

Rate

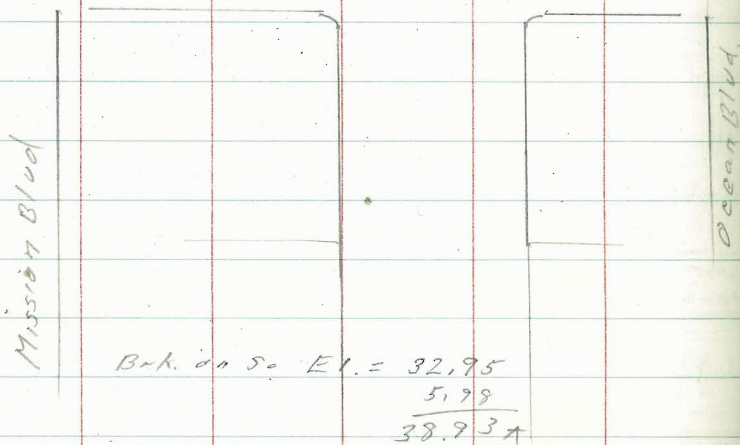
Alloy Return. BIK. 117
Ocean Front Sub.



Chalcedony

INDEXED
WK
JAN 20 1949

Chalcedony



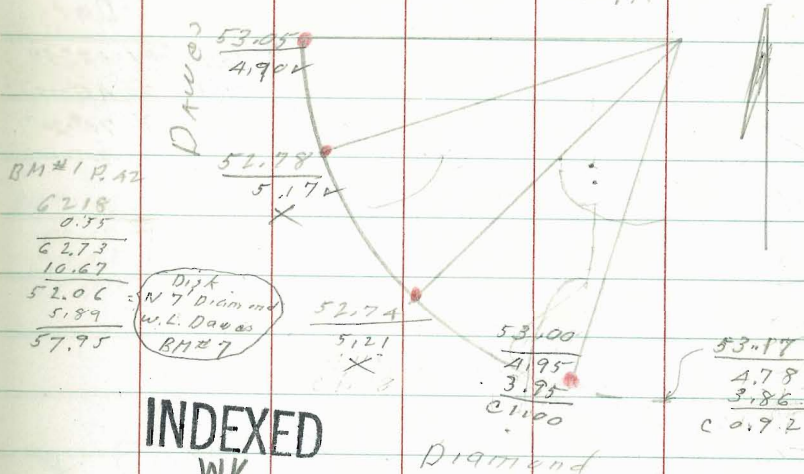
B-A. on So E1. = 32.95
5.99
38.93

Curb. Returns.

11-1-48 51

DAVIES + DIAMOND

30' Rad A 70°33' N.E. Ret.



BM # 1 P. 42

62.18

0.35

62.73

10.67

52.06

5.89

57.95

Dijk
N 7' Diamond
W.L. Davies
RM # 7

53.05
4.90

52.78
5.17

52.74
5.21

53.00
4.95
3.95

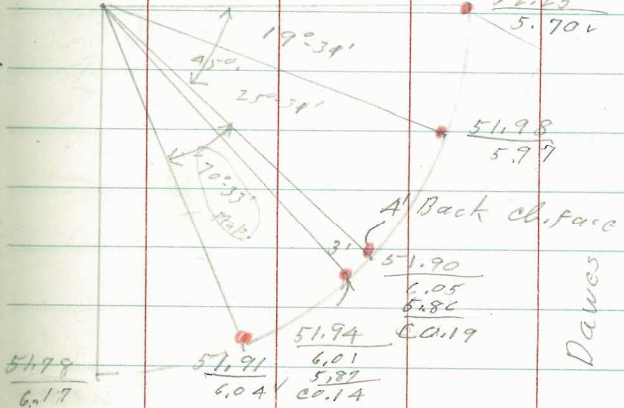
53.17
4.78
3.86

CO. 7.2

INDEXED
WK
JAN 21 1949

Diamond

N.W. Ret.



52.25
5.70

51.98
5.97

A' Back of face

51.90
6.05
5.86

CO. 19

Davies

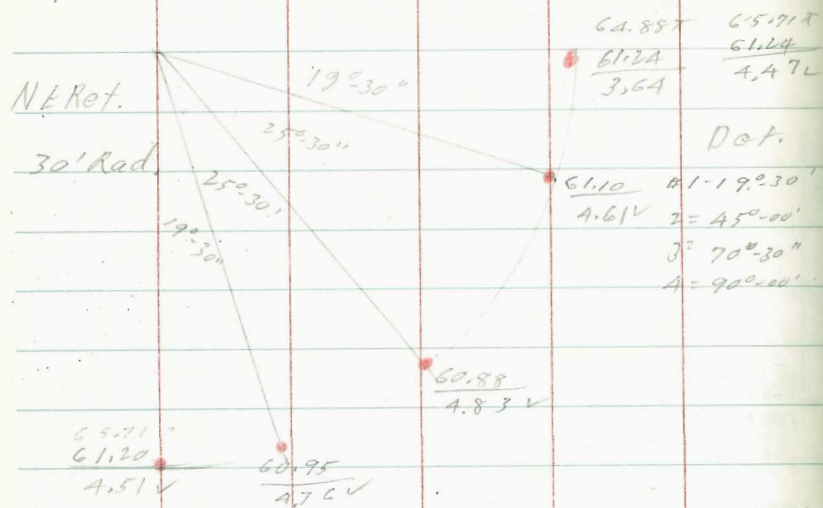
51.99
6.17

51.91
6.04

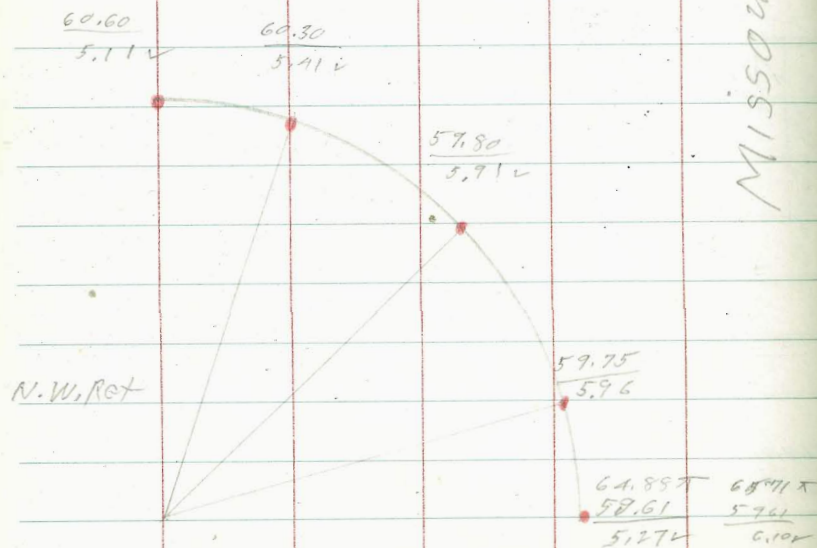
51.94
6.01
5.87
CO. 14

Diamond

MISSOURI AT DAWES.

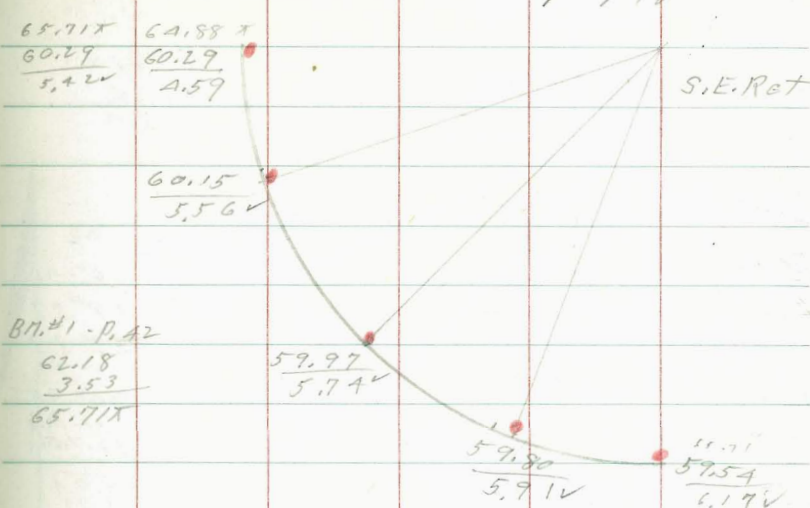


DAWES



Curbs,

10/29/48 55



INDEXED
WIK
JAN 21 1949

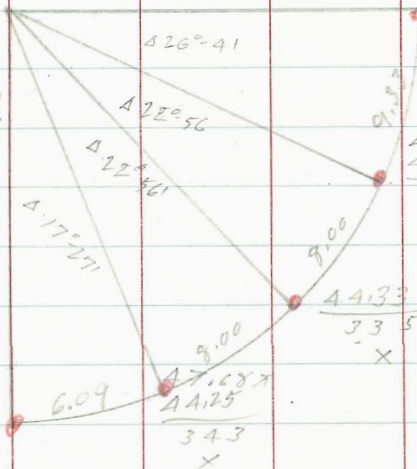
MISSOURI

Bayard + Missouri

N.W. Ret.

BM#1:
P.38
52.70
0.35
53.05

49.59
44.21
5.38



53.05X
44.25
8.30

47.68
44.50
3.18
X

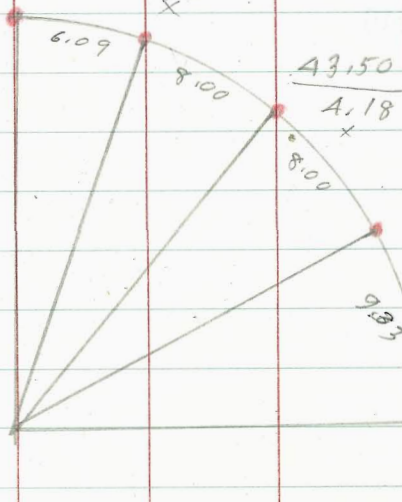
Δ9
26°41'
49°37'
72°33'
17 27
90°00'
BM#1-P38
52.70
1.34
54.04
8.79
55.25
2.34
57.59X

MISSOURI

49.59
43.46
6.13

47.68
43.50
4.18
X

~~BM#15. P.79
44.32
4.12
49.44X~~



43.40
4.28
X

47.68
43.30
4.38
X

S.W.
Ret

Curb Returns

INDEXED
WK
JAN 21 1949

56

N.E. Ret.

53.05X
45.25
7.80

47.68
45.20
2.48
X

45.20
2.48
X

47.68
45.25
2.43

49.59
45.34
4.25
X

E.C.S.W.

43.46
41.22
47.68X

Bayard

47.68
44.25
3.43
X

49.59X
44.34
5.25
X

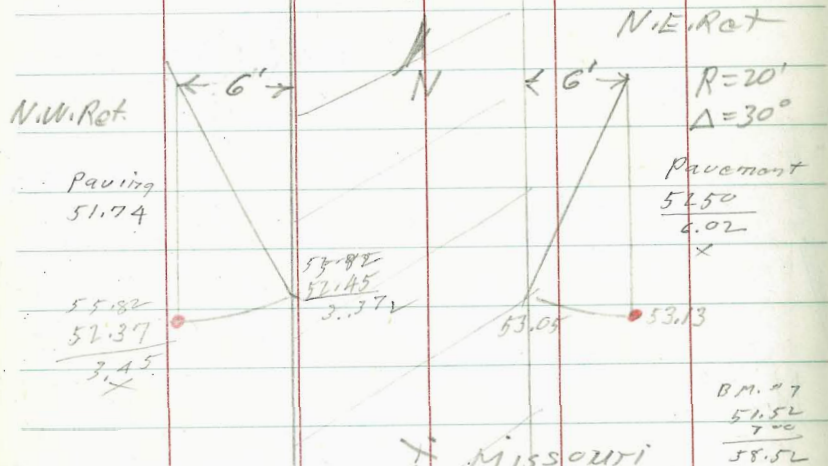
44.14
3.54
X

44.00
3.68
X

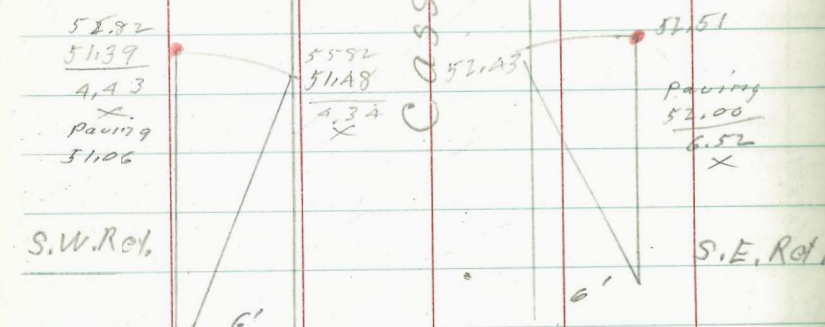
47.68
43.80
3.88
X

S.E.
Ret.

Missouri & Cass (Curb, Returns)



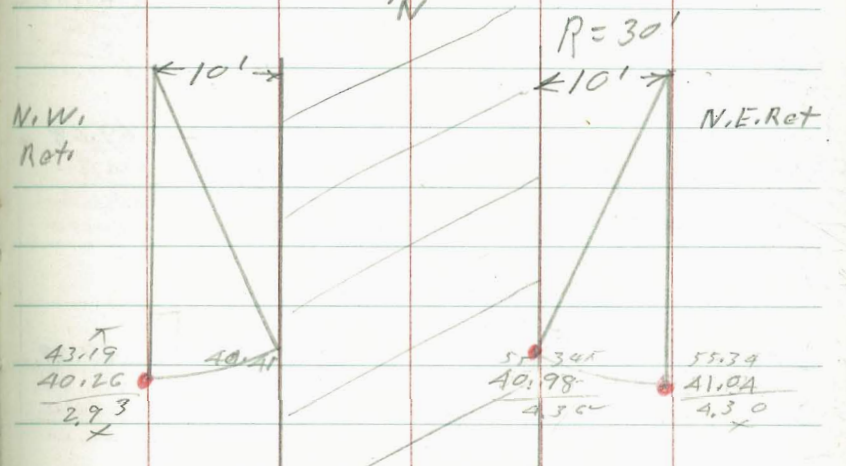
MISSOURI
CASS



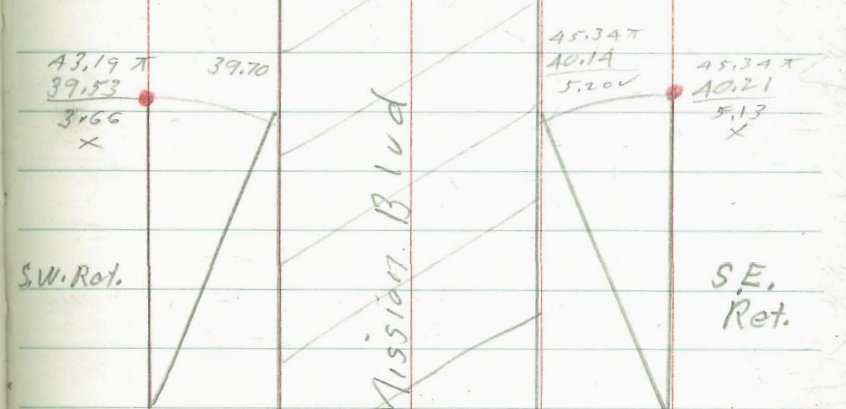
BM #7 P.A.S.
51.52
4.30
55.82

INDEXED
WK
JAN 21 1949

MISSOURI and Mission



MISSOURI
MISSION

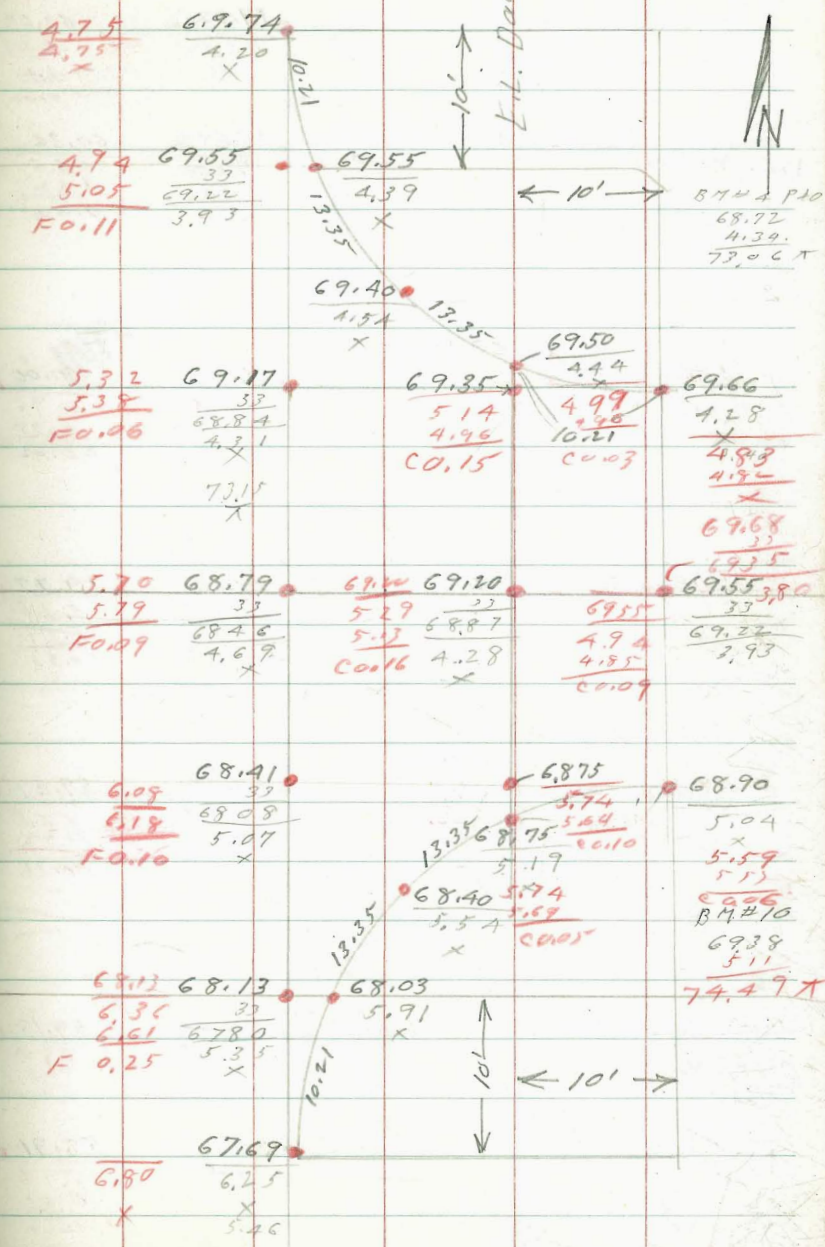
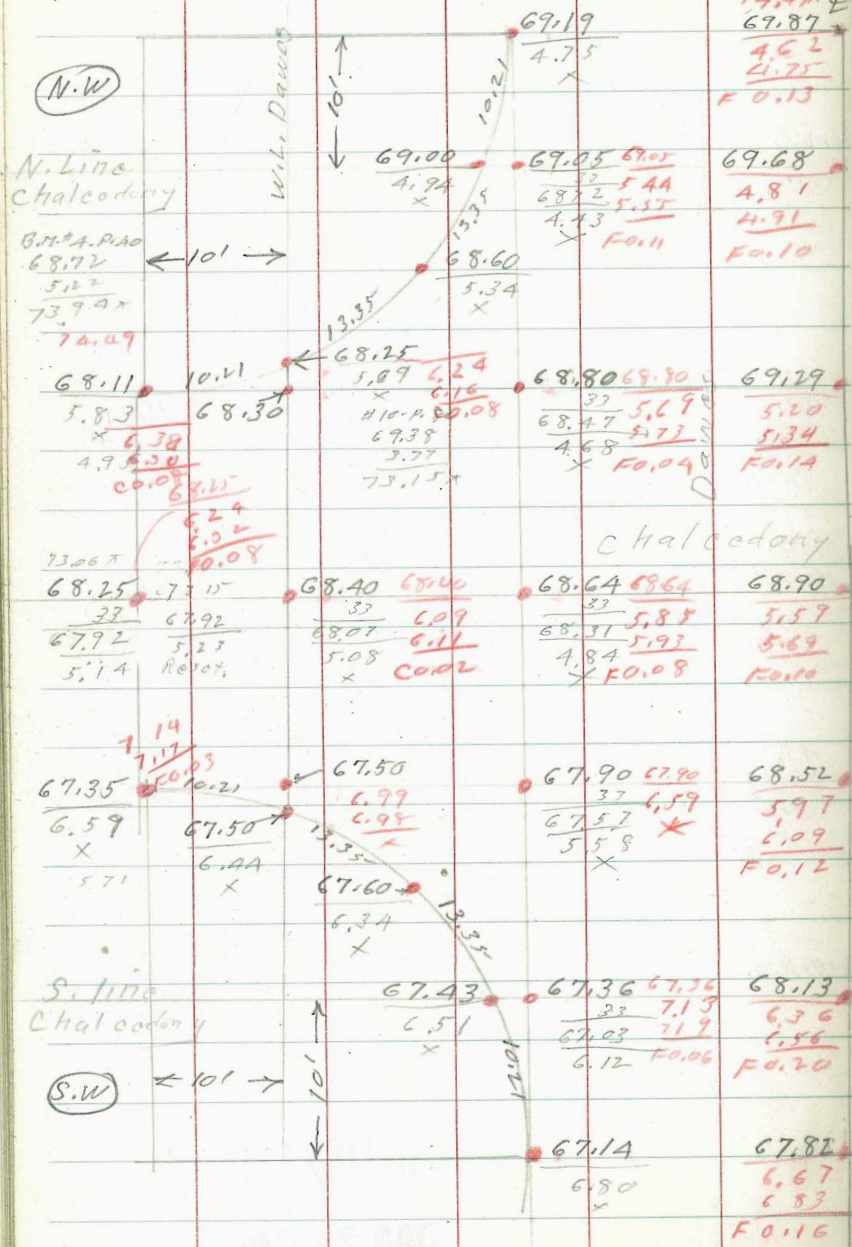


MISSION

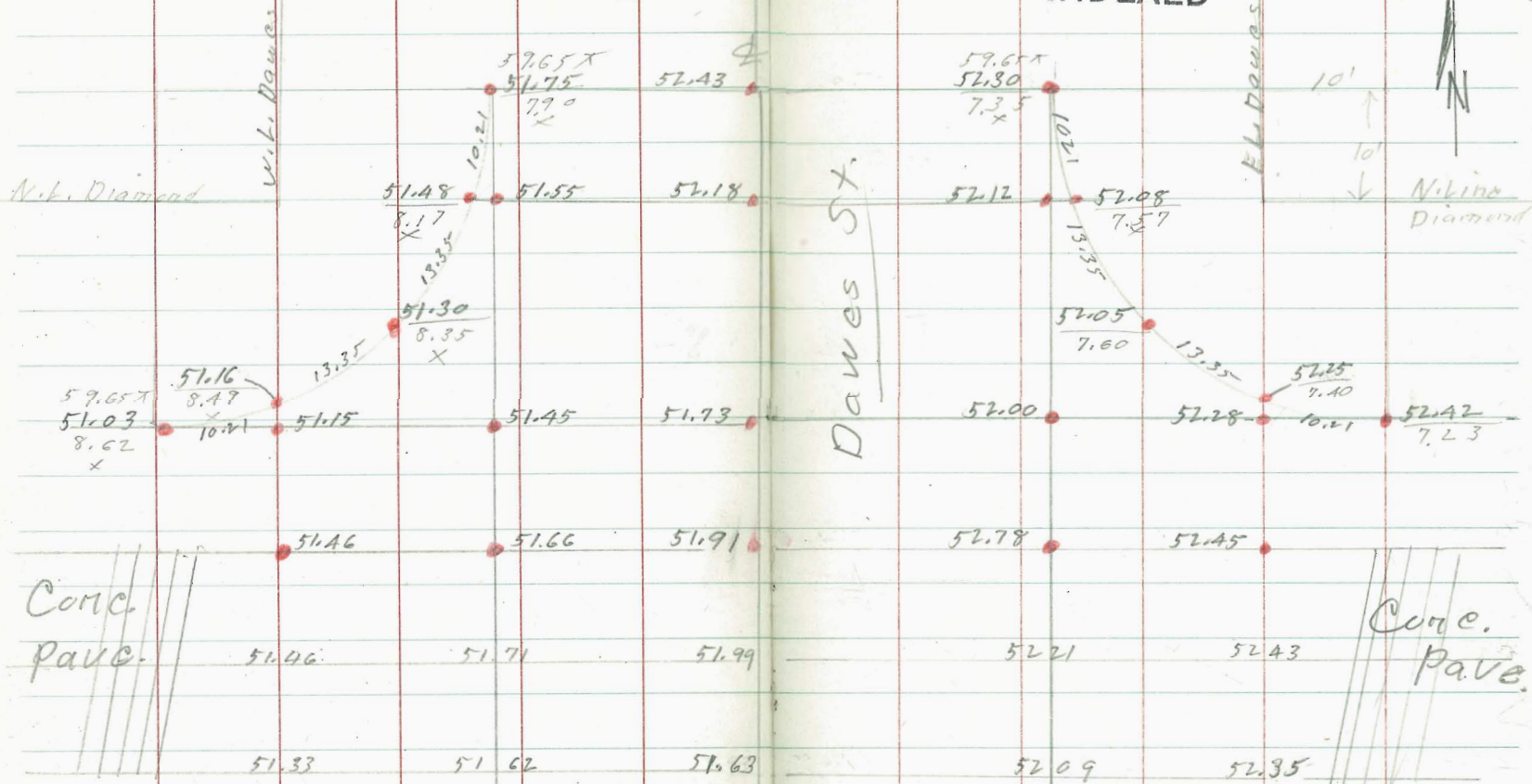
INDEXED
WK
JAN 21 1949

Intersection - Dawes &

Chalcedony INDEFIN



Intersection. DAWES + Diamond INDEXED



Diamond St

1.80
 59.56
 009
 59.65

Bayard and Chalcedony

B.M. #1 R38

52.70
354

56.24x

11-3-48

B.M. #1 R38

52.70
4.28

56.98x

52.70
360

56.24

51.70

4.54

51.75

51.60

51.27

5.03

51.11

50.75

50.70

5.54

50.75

50.72

6.23

50.68

6.30

50.43

5.72

51.30

50.97

6.37

51.68

5.99

51.48

5.23

51.13

5.85

51.20

5.78

51.35

5.63

51.59

5.48

51.50

5.27

51.67

4.71

52.17

4.21

52.50

5.15

51.77

4.61

52.10

5.15

6' prep.

14'

56.98

52.08

4.90

51.60

5.38

51.80

5.19

51.95

5.62

51.62

4.70

51.78

51.45

51.07

51.65

51.32

51.45

4.93

51.78

51.10

50.77

5.51

51.10

50.77

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

5.51

51.10

Bayard Street

INDEXED

INDEXED

Bayard Street

B.M. #1 A

53.10

4.124

57.34

52.53

4.45

52.28

4.70

52.18

5.185

4.53

51.83

51.50

4.88

51.48

5.15

51.13

5.85

51.20

5.78

51.35

5.63

51.59

5.48

51.50

5.27

51.67

4.71

52.17

4.21

52.50

5.15

51.77

4.61

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

El. Bayard

61
11-16-48

N.L. Chalcedony

20'

6' prep.

10'

52.10

52.00

51.77

4.61

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

52.10

5.15

← 26' →

← 26' →

prep.

6'

14'

14'

6'

20'

20'

20'

20'

20'

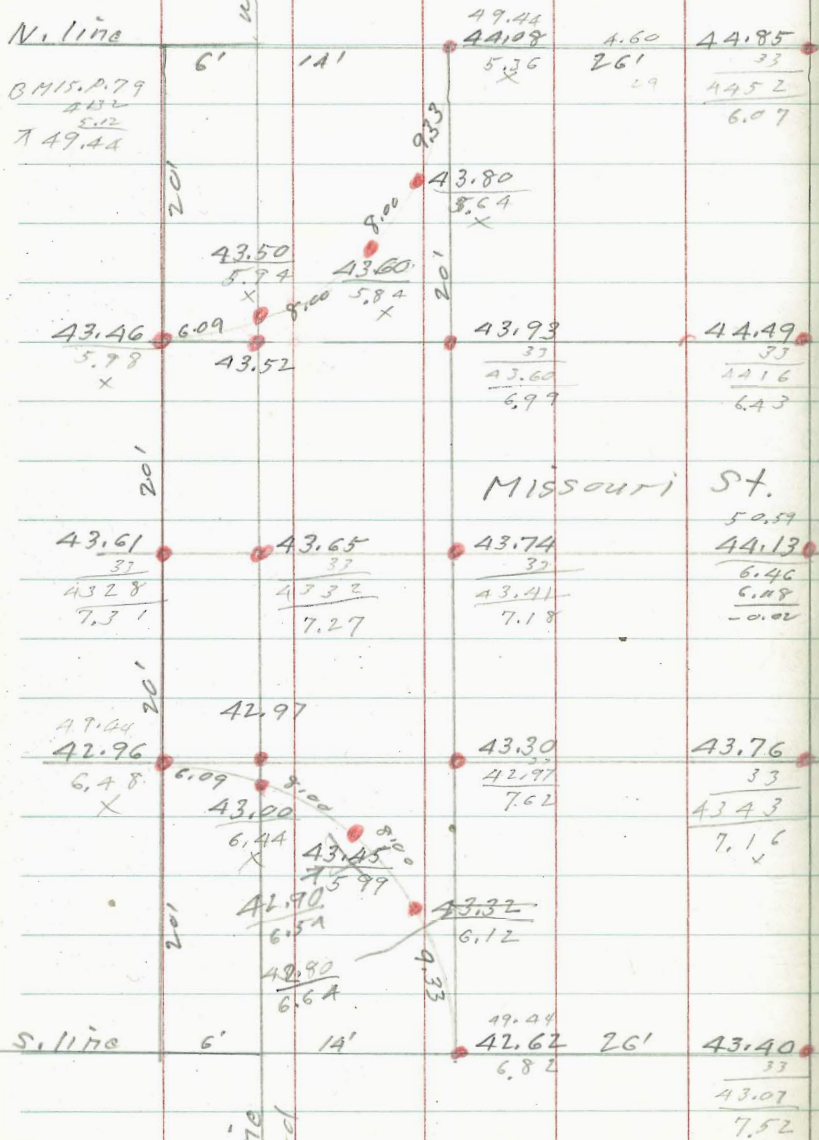
20'

20'

Intersection

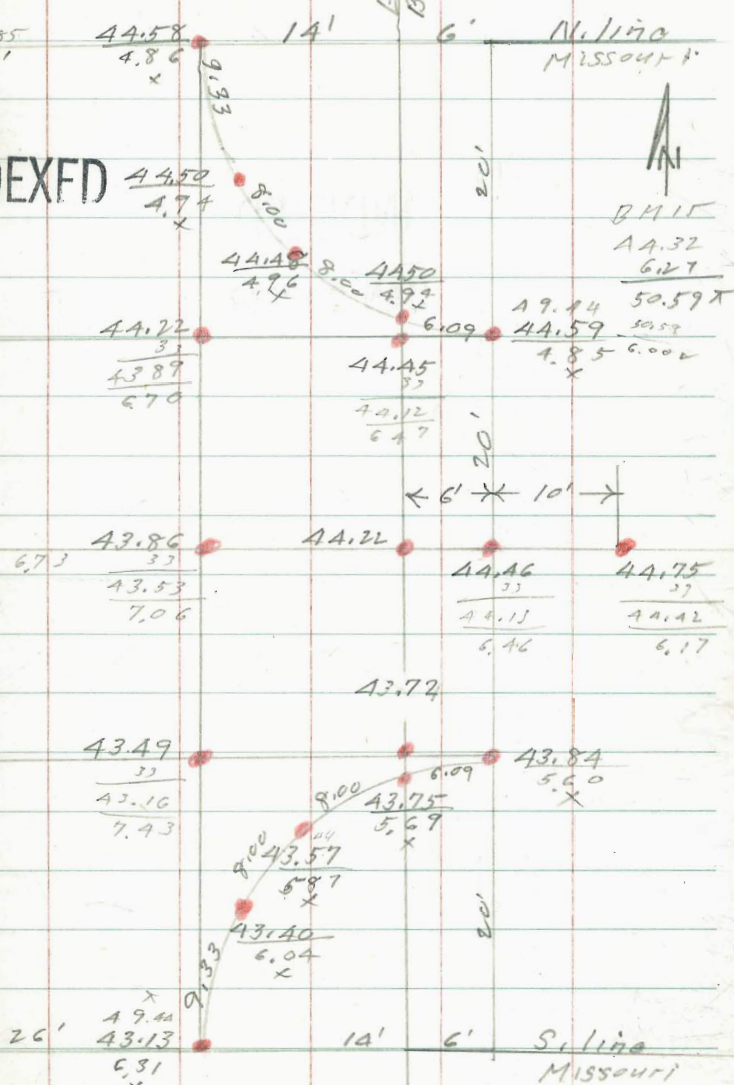
Bayard +

Missouri



INDEXED

Bayard St.



11/5/48 Alley Blk. 120 - Pac. Beach
 Dances to Cass between Chalcedony & Missouri

19 1/2 wide Paving.

Brk	So.	±	Ni.
1+80	$\begin{array}{r} \square-2' \\ 60.36 \\ 8.69 \\ 9.56 \\ \hline 60.13 \end{array}$	60.20	$\begin{array}{r} \square-2' \\ 60.66 \\ 8.37 \\ 7.79 \\ \hline 60.60 \end{array}$
1760	$\begin{array}{r} \square-2' \\ 60.74 \\ 8.31 \\ 7.83 \\ \hline 60.48 \end{array}$	60.59	$\begin{array}{r} \square-2' \\ 61.04 \\ 8.01 \\ 7.59 \\ \hline 60.42 \end{array}$
1+20	$\begin{array}{r} \square-2' \\ 59.05 \\ 61.58 \\ 7.17 \\ 7.25 \\ \hline 60.22 \end{array}$	61.43	$\begin{array}{r} \square-2' \\ 61.88 \\ 7.17 \\ 6.80 \\ \hline 60.37 \end{array}$
+80	$\begin{array}{r} \square-0.90 \\ 62.42 \\ 6.63 \\ 6.10 \\ \hline 60.53 \end{array}$	62.27	$\begin{array}{r} X-2' \\ 62.72 \\ 6.33 \\ 5.56 \\ \hline 60.77 \end{array}$
+10	$\begin{array}{r} \square-2' \\ 63.26 \\ 5.77 \\ 5.39 \\ \hline 60.40 \end{array}$	63.11	$\begin{array}{r} \square-2' \\ 63.56 \\ 5.49 \\ 5.06 \\ \hline 60.43 \end{array}$
$\begin{array}{l} 69.05 \\ \text{Cl.} = 64.20 \\ 4.85 \\ \text{O} + \text{C.} \\ \text{W. line Dances} \end{array}$	$\begin{array}{r} \square-2' \\ 69.05 \\ 64.10 \\ 4.95 \\ 4.85 \\ \hline 60.10 \end{array}$	63.95	$\begin{array}{r} \square-2' \\ 69.05 \\ 64.40 \\ 4.65 \\ 4.25 \\ \hline 60.40 \end{array}$
	6.87	69.05	62.18

INDEXED
 WK
 JAN 21 1949

B.M. #1
 P. 12

Brk	South	±	North
A+10	$\begin{array}{r} 57.88 \\ 7.25 \\ 7.00 \\ \hline 60.25 \end{array}$	57.73	$\begin{array}{r} 58.18 \\ 6.75 \\ 6.87 \\ \hline 60.08 \end{array}$
3+67E	$\begin{array}{r} N.-0.88 \\ 58.29 \\ 6.84 \\ 5.77 \\ \hline 67.07 \end{array}$	58.14	$\begin{array}{r} N.-0.75 \\ 58.59 \\ 6.54 \\ 4.37 \\ \hline 62.17 \end{array}$
3+25	$\begin{array}{r} N.-0.53 \\ 58.70 \\ 6.43 \\ 5.14 \\ \hline 67.29 \end{array}$	58.55	$\begin{array}{r} \square-2' \\ 59.00 \\ 6.13 \\ 5.90 \\ \hline 60.23 \end{array}$
2+82E	$\begin{array}{r} N.-0.53 \\ 59.11 \\ 6.02 \\ 4.89 \\ \hline 61.13 \end{array}$	58.96	$\begin{array}{r} \square-2' \\ 59.41 \\ 5.72 \\ 5.24 \\ \hline 60.48 \end{array}$
Brk 2+10	$\begin{array}{r} N.-0.40 \\ 59.52 \\ 5.61 \\ 5.84 \\ \hline 60.57 \end{array}$	59.37	$\begin{array}{r} \square-2' \\ 59.82 \\ 5.31 \\ 4.12 \\ \hline 60.87 \end{array}$
Brk 2+20	$\begin{array}{r} \square-2' \\ 59.74 \\ 5.37 \\ 5.07 \\ \hline 60.32 \end{array}$	59.59	$\begin{array}{r} \square-2' \\ 60.04 \\ 5.09 \\ 4.85 \\ \hline 60.74 \end{array}$
Brk 2+00	$\begin{array}{r} \square-2' \\ 60.01 \\ 5.12 \\ 4.83 \\ \hline 60.29 \end{array}$	59.86	$\begin{array}{r} \square-2' \\ 60.31 \\ 4.82 \\ 3.87 \\ \hline 60.95 \end{array}$
T.P.	4.65	65.13	8.57
			60.48

Chalcedony Paving
Mission Blvd to Bayard

North

INDEXED

South.

E. Line Cass.	South	±	North.
5+00	Pave 56.27	56.25	56.69
6-56.30	8.86 8.90 0.04		8.49 X
4+90	0-2' 56.47	56.37	0-2' 56.85
	8.64 3.14 CO.50		8.28 7.94 CO.34
4+70	0-2' 56.96	56.82	0-2' 57.28
	8.17 7.31 CO.86		7.85 7.69 CO.21
4+50	0-2' 57.34	57.20	0-2' 57.66
	7.79 7.39 CO.40		7.47 7.75 FO.28
4+30	0-2' 57.65	57.50	0-2' 57.95
	7.48 7.28 CO.20		7.18 7.60 FO.42

W. L. Bayard

5+00 - See page 61

12K⁶

Bk
0+10

47.73

47.62

46.70

0+00 =
E. L. Mission

47.65

47.35

46.51

11-22-48

Missouri Paving
Mission Blvd to ocean

65

1+95	36.40 7.18 x	37.18	37.15 6.43 x
------	--------------------	-------	--------------------

1+70	36.62 6.96 x	37.40	37.37 6.21 x
------	--------------------	-------	--------------------

1+45	36.90 6.68 x	37.68	37.65 5.93 x
------	--------------------	-------	--------------------

P.V.C. 1+20	37.25 6.33 x	38.03	38.00 5.58 x
----------------	--------------------	-------	--------------------

+95	5.95x		5.20 x
+70	5.58x		4.93 x
+45	5.120x		4.45 x

0+20	38.75 4.83 x		39.50 4.08 x
------	--------------------	--	--------------------

+10BC	4.62		3.88 x
-------	------	--	-----------

W.L. MB Ltd 0+00	39.17 4.41	39.74	39.90 3.68 x
---------------------	---------------	-------	--------------------

D.M. 41 PAF	3.12	43.58	40.46
----------------	------	-------	-------

47.58
EU 35.40
9.18

INDEXED
WK
JAN 21 1949

4+96²⁰

35.61

7.97

8.14

-0.17

35.60

4+88²⁰

34.90

8.68

7.25

-0.57

Meet catch basins. Now in

3+97 set to 6750L - 5 sheets #8 or 10 sheets

E.V.C.

2+20

36.25

37.03

37.00

7.33

6.58

x

x

Alley BK I - Watkins + Biddle. Add.
Stakes set back of Alley line.

12-9-48
W.O. 31454

Samuel Mayer

1+10	0-2' <u>272.40</u> 6.59 6.61 F0.02	X--0.3 <u>272.21</u> 6.78 6.70 C0.08	277.64 195 <u>278.99</u> 6.74 272.25 3.19 <u>275.44</u> 12.17 263.27 6.99 270.16
0+90	X-2' <u>272.73</u> 6.26 6.22 C0.04	0-2' <u>272.55</u> 6.44 6.27 C0.17	275.44 12.17 263.27 6.99 270.16
0+70	0-2' <u>273.13</u> 5.86 5.73 C0.13	X-2' <u>272.96</u> 6.03 6.03 X	0.38 269.79 7.21 277.19 2.54 <u>274.65</u> 4.68 279.33 2.28 277.05 0.94 B.M. +0.01
0+50	X-2' <u>273.60</u> 5.39 5.37 C0.02	0-2' <u>273.44</u> 5.55 5.59 F0.04	279.33 2.28 277.05 0.94 B.M. +0.01
0+20	0-2' <u>274.34</u> 4.65 4.41 C0.24	0-2' <u>274.22</u> 4.77 4.89 F0.12	
0+00 = E. line Fern	<u>274.84</u> 4.15 4.00 +0.15	<u>274.74</u> 4.25 4.21 .04	
N.W.B.R. Fern + Hawthorne		277.04	

INDEXED

WIK
JAN 21 1949

End Culvert 2+41	0-4'50 270.16 256.88 13.28 10.59 C2470			
T.P.	6.89	270.16	12.17	75.04
End. 2+17	Cl. 271.02 4.42 5.66 F1.24	0-2' Pavement 270.69 4.75 5.66 F0.91	263.27 0-2' Pavement 270.49 4.95 4.77 C0.18	Cl. 275.04 271.02 4.42 4.77 F0.35
2+00		0-2' <u>271.23</u> 4.21 4.24 F0.03	N-0.6 <u>271.03</u> 4.41 3.97 C0.42	
T.P.	3.19	275.44	6.74	272.25
1+65		0-2' <u>271.68</u> 7.31 6.67 C0.64	Mark in wall 0.04 <u>271.48</u> 7.51 6.26 C1.05	
1+30		0-2' 278.99 <u>272.14</u> 6.85 6.60 C0.25	X-2' 278.99 <u>271.94</u> 7.05 6.95 C0.30	

Alley Bk. 79 Park Villas

Dwight to Landis - between Arnold + Arizona

12-9-48
W.C. 31065

stakes set back of Prop. line.

Sommermejer
McCoy
Allen
Jones

INDEXED
WK
JAN 21 1949

	West		East	
			SE.B.P. Landis + Arizona	
			285.31	
			3.40	
			288.71	
			6.54	
0+80	D-2' 294.50 287.55	(0.5)	X-2' 274.50 287.76	1+80
	6.95		282.17	
	6.58		8.19	
	2		290.367	
	Co.03		2.59	
	Co.037		287.77	
			6.73	
			294.50	
			Co.061	
			Co.21	
0+60	D-2' 286.89		X-2' 287.07	1+60
	3.77		3.29	
	2.91		2.69	
	Co.16		Co.60	
	Co.056	(0.7)	Co.30	
0+40	D-2' 286.11		D-1' 286.25	1+40
	4.25		4.11	
	3.08		3.20	
	Co.97		Co.91	
	Co.177	(0.5)	Co.71	
0+20	D-2' 285.22		D-1' 285.32	1+20
	5.14		5.04	
	3.86		3.65	
	Co.18		Co.39	
	Co.128	(0.1)	Co.29	
0+00 = N. line Dwight	D-2' 290.367 284.22		D-1' 290.367 284.27	1+00
	6.14		6.09	
	6.19		6.12	
	0.05		0.03	

	West		East	
2+00	X-2' 289.20	0.5	289.50	
	5.30		5.00	
	4.44		3.72	
	Co.136		Co.86	
			Co.78	
1+80	D-2' 289.20		289.50	
	5.30		5.00	
	4.48		3.44	
	Co.40		Co.90	
		(0.5)	Co.56	
			Co.06	
1+60	D-2' 289.10	0.5	289.39	
	5.40		5.11	
	4.59		3.46	
	Co.31		Co.81	
			Co.15	
1+40	D-2' 288.88	0.5	289.16	
	5.62		5.34	
	4.90		3.29	
	Co.022		Co.92	
			Co.05	
			Co.55	
1+20	D-2' 288.55		D-2' 288.81	
	5.95		5.69	
	5.69		4.34	
	Co.24		Co.26	
		(0.5)	Co.35	
			Co.85	
1+00	D-2' 288.10	0.5	288.34	
	6.40		6.16	
	5.98		5.62	
	Co.02		Co.54	
			Co.04	

Restate 1/1/49

B.M. $\frac{285.21}{7.89}$
293.10

	West	East	
	0-2'		294.50
4+40	288.48	288.78	5.81
	4.89	4.59	158.69
	5.98	4.76	4.68
	<u>F1.09</u>	<u>F0.17</u>	293.37
			4.77

	N-0.42	0-2'	288.60
4+00	288.60	288.90	5.47
	4.77	4.47	294.07
	4.77	4.79	8.79
	X	<u>F0.32</u>	285.28
			5.31

	0-2'	N-0.40	-0.03
3+60	288.72	289.02	
	4.65	4.35	
	5.28	4.15	
	<u>F0.63</u>	<u>C0.80</u>	

	0-2'	0-2'	
3+20	293.37	293.37	
	288.84	289.14	
	4.53	4.23	
	4.64	4.85	
	<u>F0.11</u>	<u>F0.62</u>	

	N-0.30	N-0.21	
2+80	288.96	289.26	
	5.54	5.24	
	3.74	4.18	
	<u>C1.80</u>	<u>C1.06</u>	C0.96

	289.08	0.3	289.38
2+40	5.42		5.12
	4.06		3.69
	<u>C1.06</u>		<u>C1.43</u>
			01.13

294.50

S' w. of line	285.29
Sewer	7.28
Lat. #1	292.56
282.80	
9.66	
3.49	
<u>C6.18</u>	

S. line	0-2'	West	East
Landis.	288.00	288.30	
6+00	6.07	5.77	
	5.51	5.14	
	<u>C0.56</u>	<u>C0.63</u>	

5+60	294.07	
Restate	292.56	
Restate 1/1/49	288.12	
4.44	5.95	
2.57	5.18	
5.02	6.77	
4.18		
<u>C0.84</u>		

5+20	0-2'	N-1.20
294.07	294.07	288.54
288.24	5.83	2.60
	5.22	0.39
	<u>C0.61</u>	<u>C4.21</u>

4+80	N-1.07	N-1.50
288.36	288.36	288.66
4.79	5.01	4.71
4.46	4.20	3.52
<u>C0.82</u>	<u>C0.81</u>	<u>C1.19</u>

12-15-48	1/1/49
294.07	288.42
292.56	288.42
288.12	5.65
4.44	4.72
2.57	3.50
5.02	<u>C1.82</u>
4.18	<u>C1.22</u>

Water Services - Orange to El Cajon.
B1K 39 Teralta (Resub. Lots H+I) Between 34th + Felton.

Owner	West	East	West	East
Sommermejer McCoy Jones		12-16-48 W.O. 31299	2+47	376.74 5.36 2.16 C 1.20
INDEXED		N.W.B.R. Orange 433 ¹²		
WK JAN 21 1949 1+39	West —	East 376.39 3.30 2.72 C 0.78	2+43	N.O.E. 376.58 5.52 3.72 C 1.80
1+22	N.O.E. 376.13 3.56 3.13 C 0.43	—		
0+96	N.O.E. in 375.90 3.79 3.39 C 0.40	—	2+24	N-Line 376.67 5.43 4.22 C 1.21
0+87	—	D-1' 375.96 3.73 3.67 C 0.06	1+98	N.O.E. 376.44 5.66 4.58 C 1.08
0+35	D 1' 374.87 4.82 4.86 Error	—	1+77	N-16' 376.53 5.57 4.23 C 1.34
0+34	—	N.O.E. in 375.01 4.68 3.68 C 1.00	1+65	D-2' 376.34 5.76 4.89 C 0.92
0+00 = N. line Orange		379.69	1+60 = Brk	382.10

Water Services

Bik 39 Toralta - Cont.

70

	West	East	T.P. Dato P44251	West	East
3+96	—	N 02 377.20 5.80 4.74 C 1.06	282.10 3.69 378.41 4.59 383.00	5+33	377.61 5.39 5.18 C 0.21
3+68	D-2' 376.94 6.06 4.87 C 1.19	—		N. 02 in 4+89 377.32 5.68 4.30 C 1.38	—
3+21	—	D-2' 376.97 6.03 5.01 C 1.02		—	D-2' 377.48 5.52 4.82 C 0.71
3+05	N-08 376.75 6.25 4.91 C 1.34	—		D-2' 4+29 377.14 5.86 5.17 C 0.69	—
2+89	4.59 382.02 —	3.69 378.41 D-12 376.87 5.23 4.31 C 0.92		4+19	N. 05 377.27 5.73 3.92 C 2.00
2+76	N. 02 376.67 5.43 3.46 C 1.97	—		N 02 4+00 377.05 5.75 5.01 C 0.94	—
		382.10 —			

Water Services

Bk. 39.

Teralta. - Cont.

71

West

East

6+07

top. ch.
378.06
4.94
4.97 ok
101

5+83

2-2'
377.76
5.24
4.59
C 0.65

5+74

top. Pipe L
377.58
5.42
4.37
C 1.05

5+68

X-1'
377.71
5.29
4.72
C 0.57

Storm Drain Lot 1-BIK3
 Amalphi
 Torrey Pines Road + Princess
 sheets 3611B + 3612B.
 F.B. 1847-

0100 Invent $\frac{1847}{22}$

78.04
 11.99
 90.03
 1.37
 88.66 78
 10.93
 99.59
 15126 (3 Best)
 8423
 0.12

INDEXED

WK

JAN 21 1949

check grate $\text{E.L. } 84.35$

1465

99.59
 95.46
 4.13
 2.72
 C 1.41

1425

91.00
 8.59
 6.87
 C 1.72

0475

99.59
 85.50
 14.09
 11.84
 C 3.25

0425

80.00
 10.03
 5.69
 C 4.34

04125

78.80
 11.23
 6.55
 C 4.68

Exist Culvert.
 0100

78.04
 11.99

52nd - El Cajon to 150' South

± Grades INDEXED
WK

± 52nd (So. of El Cajon) set
from tie sheet # 3673

set to fit state curb
stake, .67 to 45' off city profile

0100	010A	012A	014A	016A	019A
Meet	374.57	374.25	373.50	372.32	370.22
pave	2.40	2.75	3.47	4.65	6.75
	3.87	5.10	5.77	6.97	9.37
	F1.47	F2.35	F2.26	F2.32	F2.62
	1124	1144	1164		
	368.12	366.79	365.62		
	8.87	10.18	11.55		
	12.66	14.23	14.59		
	F3.79	F3.95	F3.24		

51st + El Cajon
S.W. R. R.

386.82
1.25
388.07
12.74
375.33
1.64
376.97
1.64
375.33
12.77
388.10
1.15
396.82

S.W. Cl. 374.47 = Profile
 2.50 2.50
 3.13 3.22
 F 0.65 = low. 2' 72 low

Check.

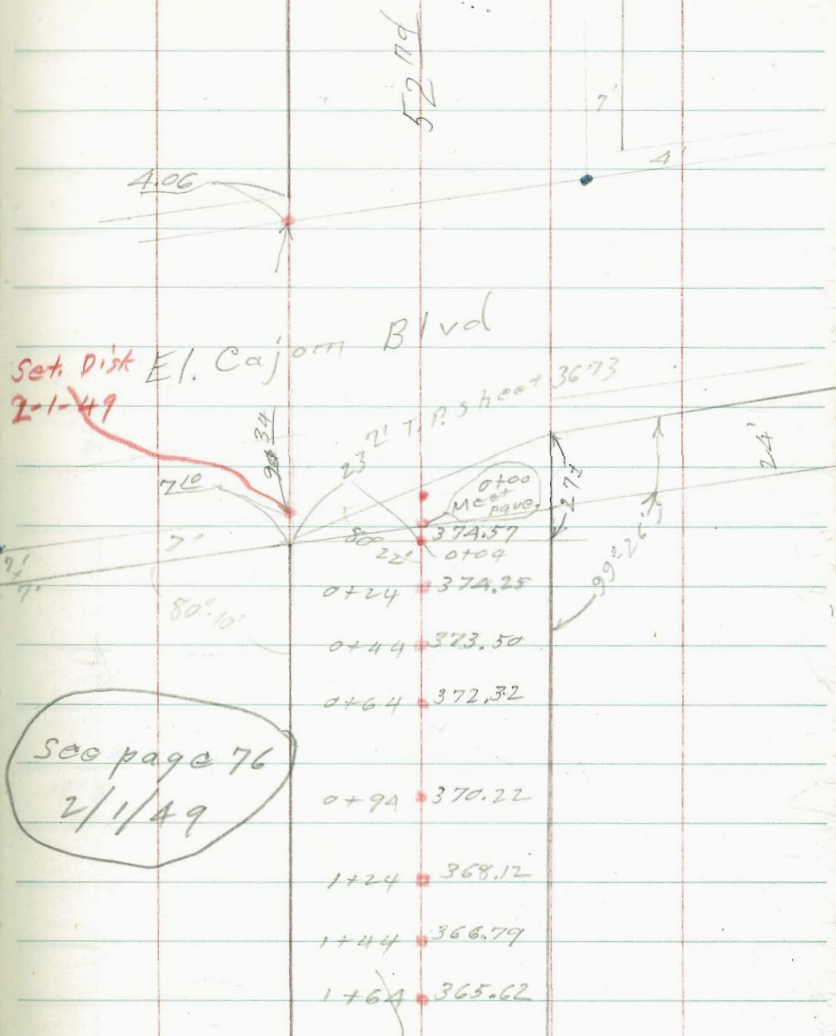
state Cl. E.C. S.E. Cor. on stake 14' Back

Rod. 331 on stake

373.68 = EL stake

F 0.13

373.81 = El state Cl. E.C. - So. end S.E. Rot.



Water stub to South
El Cajon + Dawson



Pav. Gr. 393.76
To invert $\frac{350}{}$
390.26 Invert
14.02 Gut. red
10.18
C $\frac{3.84}{}$

N.W. Dawson +
L+T. El Cajon 10.48 393.80 Set.
B.M.

S.W. B.P.
53rd +
El Cajon 0.40 394.28 - 393.88

7A

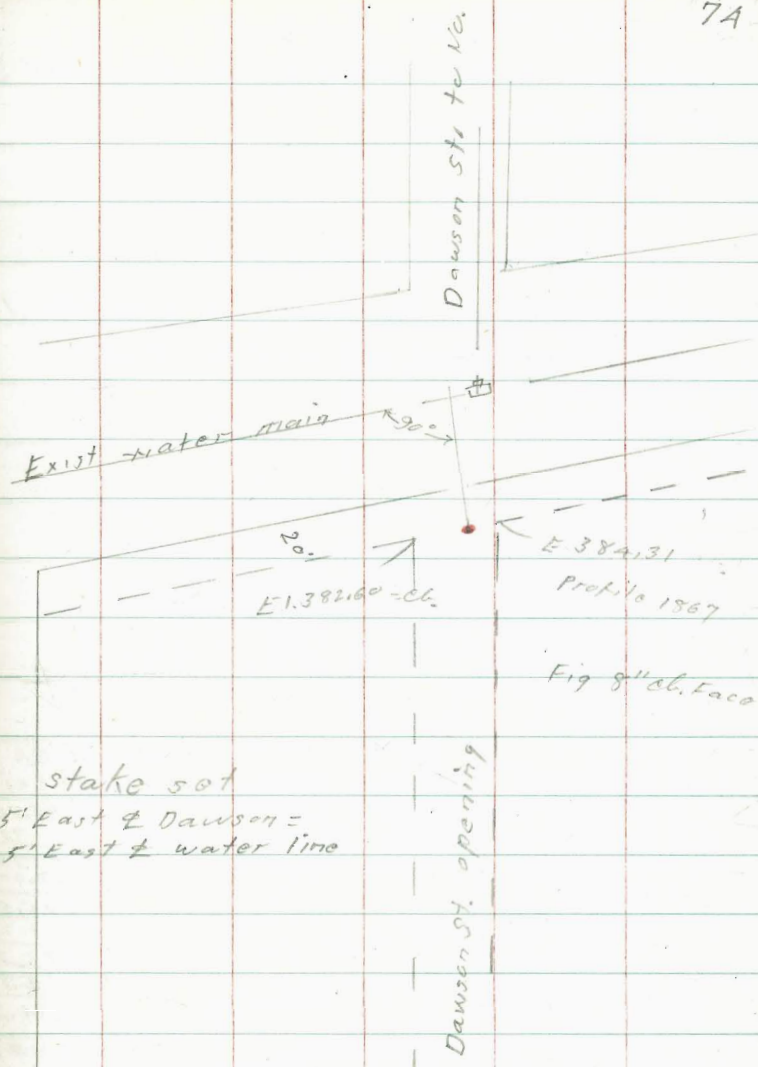


Fig 8" db. Laco

52nd + El Cajon
 Water line El Cajon to 160' So
 of S.W. Prop Cor.

0+00 = 0+04 Page 73

Line staked 10' East of $\frac{1}{4}$ 36' Roadway
 stakes 16' East of water line

0+00	0+20	0+40	0+60
370.87	370.55	369.80	368.62
<u>5.86</u>	<u>6.18</u>	<u>6.93</u>	<u>8.11</u>
2.98			
<u>2.88</u>			
<u>2.10</u>			
C 3.58			

1+20	1+40	1+60
364.02	363.09	361.92

lowerd 0.70 to
 meet curb grades

set. B.M. N.E. 1/4 1/4 Lat
 52nd + El Cajon

SWRA 51 +
 El Cajon
 386.82
90
 387.72
12.20
 375.52
1.21
 376.73 π
2.15
 374.58
 BM#1

0+00	0+20	0+40	0+60
370.17	369.85	369.10	367.92
<u>6.56</u>	<u>6.88</u>	<u>7.63</u>	<u>8.81</u>
2.98	8.89	4.40	5.06
C 3.58	C 3.00	C 3.23	C 3.75

1+20	1+40	1+60
363.72	362.39	361.22
<u>13.01</u>	<u>14.34</u>	<u>15.51</u>
8.25	9.99	10.01
C 4.76	C 4.85	C 4.50

El Cajon + 52 (160' 50")
 & Grades for tapping 2-1-49
 Sommermayor

East. Cl.
 374.07
 3.87
 4.30
 F 0.57

See sketch P. 73

0+00 this page = 0+00 on P. 73.

stakes set 25' west of
 # 52 ¹¹⁹

Rt. top. Cl.

0+00 0+00 0+20 0+40 0+60

374.17	374.10	373.58	372.83	371.55
3.48	3.85	4.37	5.12	6.40
4.13	4.13	4.55	4.72	4.87
F 0.99	F 0.28	F 0.18	C 0.40	C 1.53
Low				

1+20 ⁰⁶⁵ 1+40 1+60

367.45	366.12	364.95
10.50	11.83	13.00
6.91	8.37	8.82
C 3.59	C 3.46	C 4.18

March 12-48
 Smith
 Becker
 80721

1+20
 10 Fnd
 367.35 367.45
 6.04 5.91
 5.82 5.58
 C 0.25 C 0.36

BM 371.04 ^{Stab} 25' W
 2.35 1+20
 373.39 T

374.58 = B.M. #1 P. 75

3.37
 377.95 T
 3.06
 374.89
 12.78
 387.67
 85

386.82 ✓ = s.w. B.M. 51' E El Cajon = 386.82

Stake S.E. Prop and
Curb line Kane & Morena

2-11-49

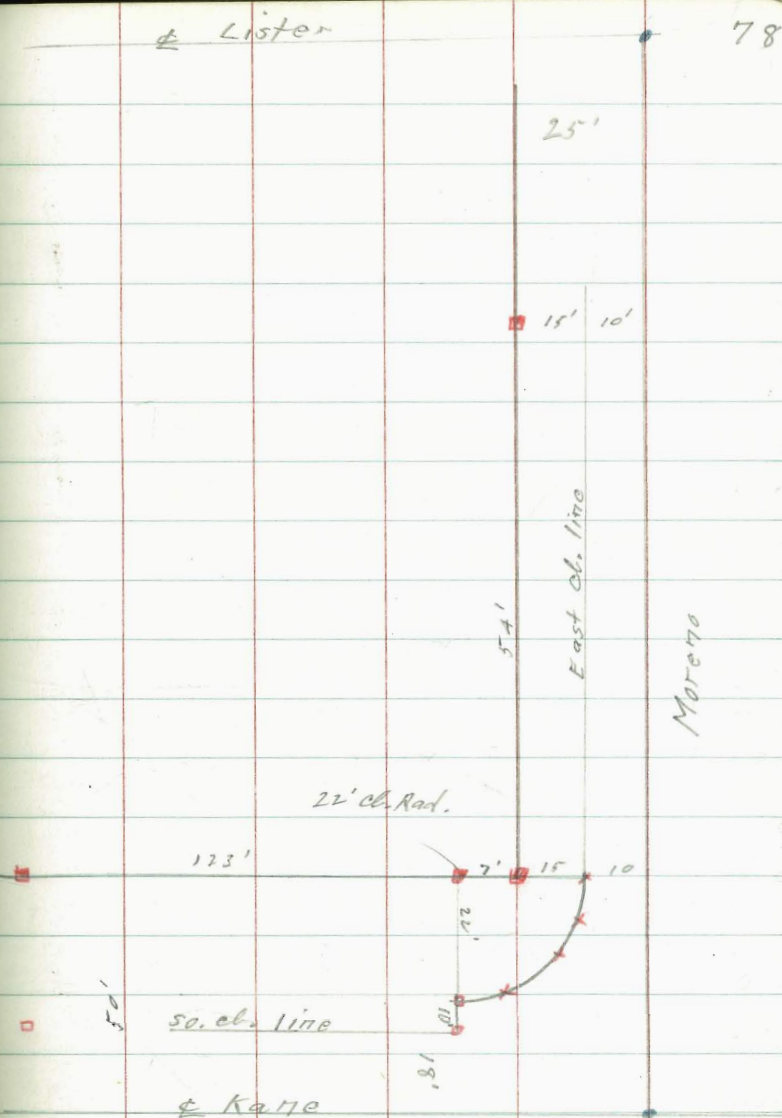
INDEXED
WTK

FEB 21 1949

Sommermeier
McCoy
Jones

- = Fd Man.
- = Fd LTT.
- = set 1/2 Hub & Tack
- = set stub
- x = " Laths

← Kane & Chicago



Bench

79

INDEXED
WIK
JAN 21 1949

				3.23	+ 0.01 52.53	Check BM 12 p. 80 = 52.52
T.P.	7.74	55.76	1.42	48.02		
Set. S.E.B.P. Gayard + Missouri			5.12	<u>44.32</u>	<u>BM #15</u> ✓	
T.P.	2.81	49.44	8.25	46.60		
Set. N.E.B.P. Dial code by + Bayard			1.75	<u>53.10</u>	<u>BM #14</u> ✓	
	2.15	54.85		52.70	BM #1 P. 38	

Set. B.P. N.W. Dawes
+ Diamond 7.42 52.23 #13 ✓

0.09 59.65 - 59.56

Set. B.R.
S.E. Dawes +
Chalcedony see #10
P. 40.
BM #A 4.34 73.06 - 69.38 #10 ✓

Set. B.P.
S.E. Cor. Cass
+ Missouri - - 6.00 52.52 #12 ✓
S.W. 7' 44".
Missouri + Cass 7.00 58.52 - 51.52

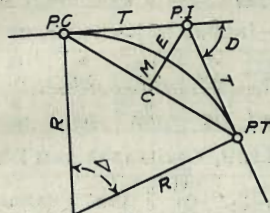
Set. B.P. S.E. 17d
Ch. Rot. S.E. Missouri + Dawes. 5.17 59.56 #11 ✓
BM #1-P42 2.55 64.73 - 62.18

Set. B.P. S.E. Dawes
+ Chalcedony 4.56 69.38 #10 ✓
BM #A 5.22 73.94 - 68.72 #

BM #1
P. 38 4.28 56.98 - 52.70

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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



CURVE FORMULAS

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

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

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

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

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

EXPLANATION AND USE OF TABLES

Stations.—Given P. I. = Sta. 161 + 60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $+8\frac{1}{3} = 414.49$ 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 = $158 - \text{Sta. P. C.} = 54.50$, hence offset = $7.27 (54.50 \div 100)^2 = 2.16$ ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26) = 2.16$ ft.

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

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve $E = 960.6$ for $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 115.27$ and from Table V correction = .10 or $E = 115.37$ ft. Or suppose $\Delta = 32^\circ$ and E is measured and found to be 42 ft. What is D ? From Table IV $E = 230.9$ and $\div 42 = 5.5$ or $D = 5^\circ 30'$.

Cass. S.W. 1/4 2+7. 59.55

Missouri + Cass S.W. 1/4 7' 2+7. 51.52

52.70

4.37

57.57

52.17

5.40

6.035

59.12

5.23

4.709

4.438

9.71

51.50

2.20

53.70

51.95

4.75

52.05

3.7

51.90

57.00

52.17

4.83

4.95

5.71

11066

5.33

4.0

4.93

3.2

5.26

69.11

67.35

12540

59.55

67.77

4.80

62.35

52.50

51.59

7.1

3.7

5.8

6.09

5.42

6.7

1.8

4.0

2.7

2.5

4A

36

18

28

15

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2

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 41.0. 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.

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