

DETROIT
MICHIGAN

MINING
TRANSIT BOOK

No. 422F

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburgh 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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Country Club
30' deep

14.14
 $\sqrt{200.0000}$
29 100
92
280 400
281
2820 11900

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.

Induced to 4-54-3/12/48 mod
" " 55-8/2/48 mod
" " 58 11/9/48
" " 63 12/9/48
" " 70 2/8/49 mod

Electric Ave. Pipeline (Alignment) 1-21

Electric Ave. Pipeline (Profile) 22-54

Electric Ave. 6" Pipe Line 20 E & F
between Colima & Foreward (Profile) 55-56

Realignment & Reprofile Electric Ave. from 57-58
west end Agate St. to Elec. Ave.

Alignment Electric Ave 60-63 ✓

RENSED ALIGNMENT ELECTRIC AVE
STA. 142+1472 To 154+2562 68-69 ✓

ALIGNMENT OF PIPELINE FROM COUNTRY CLUB TO
DRIVE TO RESERVOIR - Elec Ave

GRADES SET Electric Ave Pipeline 72-80 ✓

Electric Ave
Feb. 29, 1948

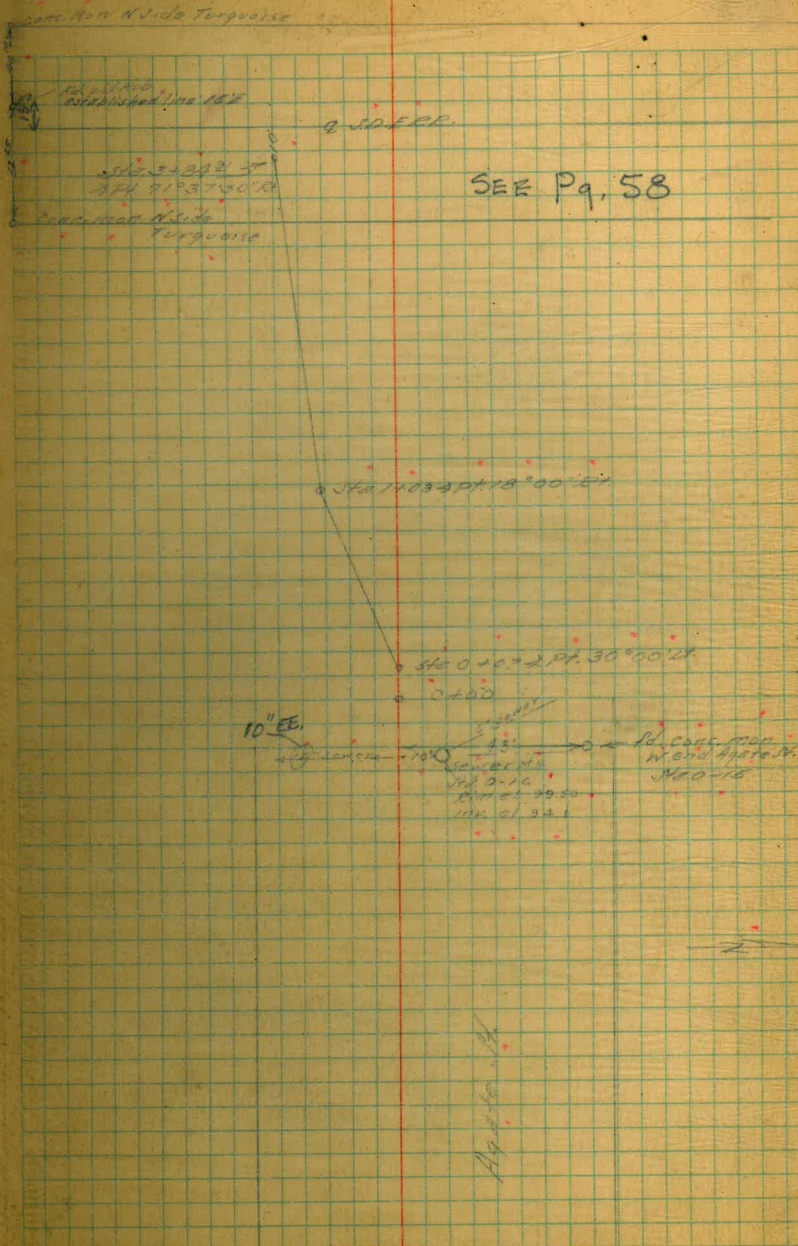
Raney
Baker
Shipman

Sta 3+84.21 71°37'30" Rt

Sta 1+03 18°00' Rt

Sta 0+07 30°00' Lt

Alignment



Sta 16+09⁰⁰ 0°03' Et.

Alignment

At Case No. 16+09⁰⁰
 0.00 4 pt 0.00 108
 205 @ PP Sta 16+08
 inv. 1.800 3.14+80 inv. 1.792
 14 5/16 Drwin 1/2
 2 1/2
 1/2 1/2
 C.S. 1/2
 Case No. 16+09⁰⁰ Sta. 16+09⁰⁰



PP Sta 13+06
 @ 92

PP Sta 13+05
 @ 92

PP Sta 10+00
 @ 92

Case No. 16+09⁰⁰

PP Sta 8+50
 @ 92

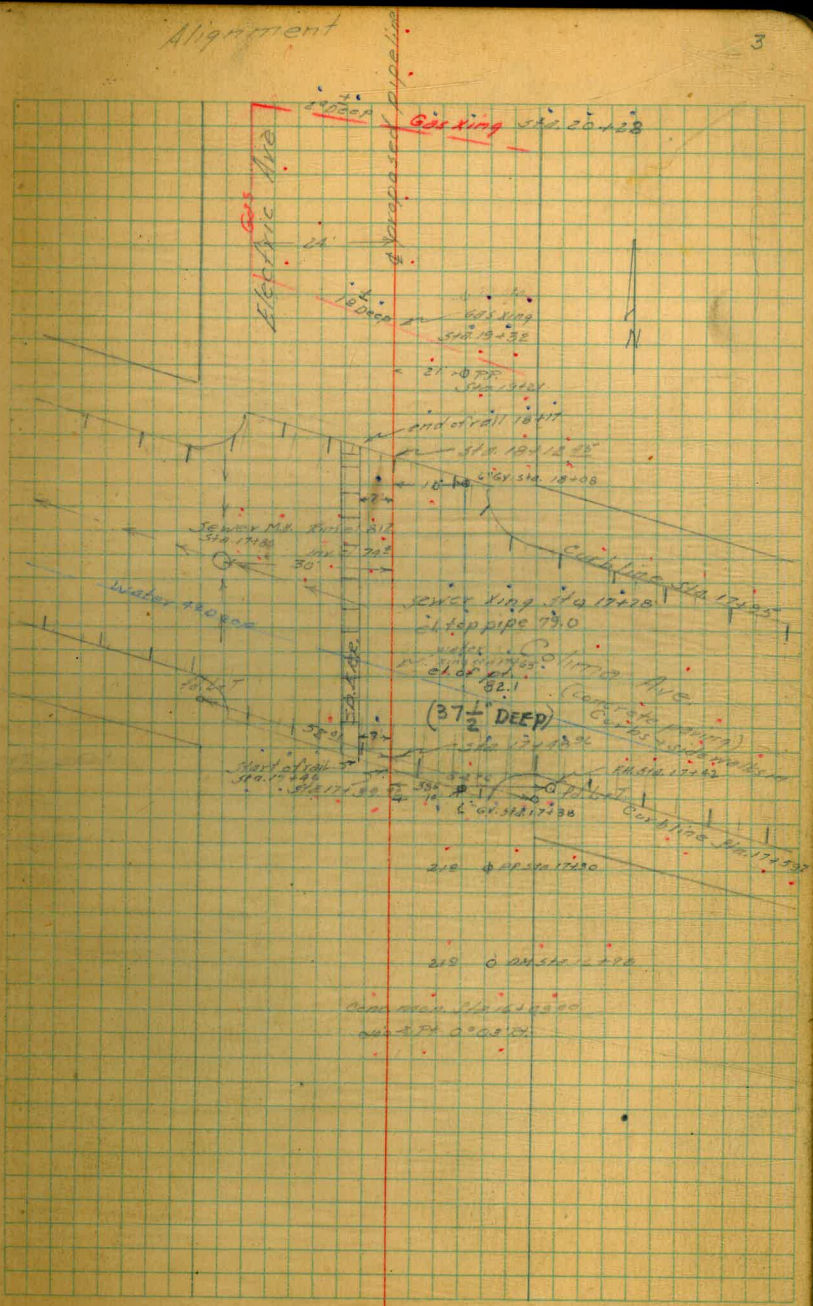
PP Sta 7+10
 @ 92

PP Sta 5+55
 @ 111

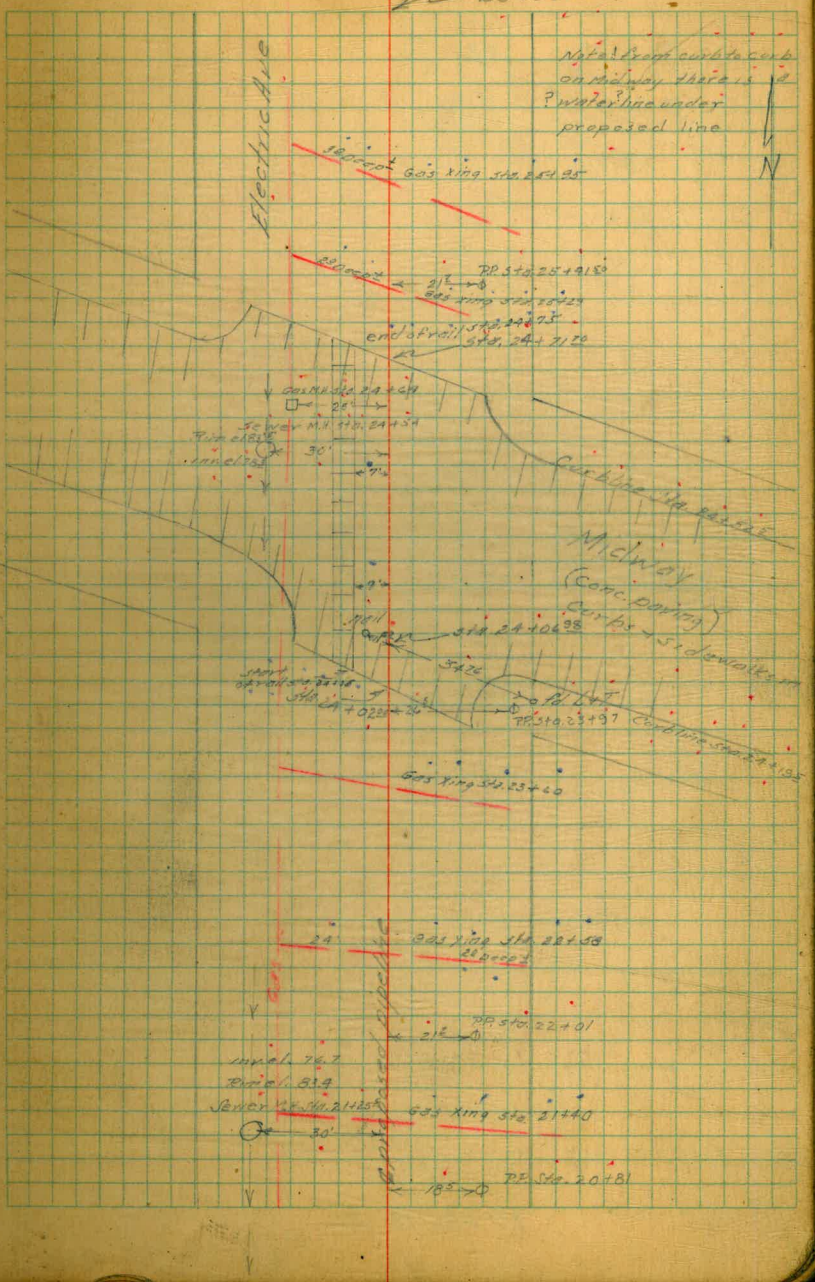
PP Sta 4+00
 @ 102

cont'd. from Pg. 59

4 pt
 No. 16+09⁰⁰
 71°37'30" Et.



BC
2579989



Nptal Prop. curbside curb
 on Midway there is a
 P water header under
 proposed line



incl. 26.7
 Elev. 83.9
 Sewer Sta. 21435

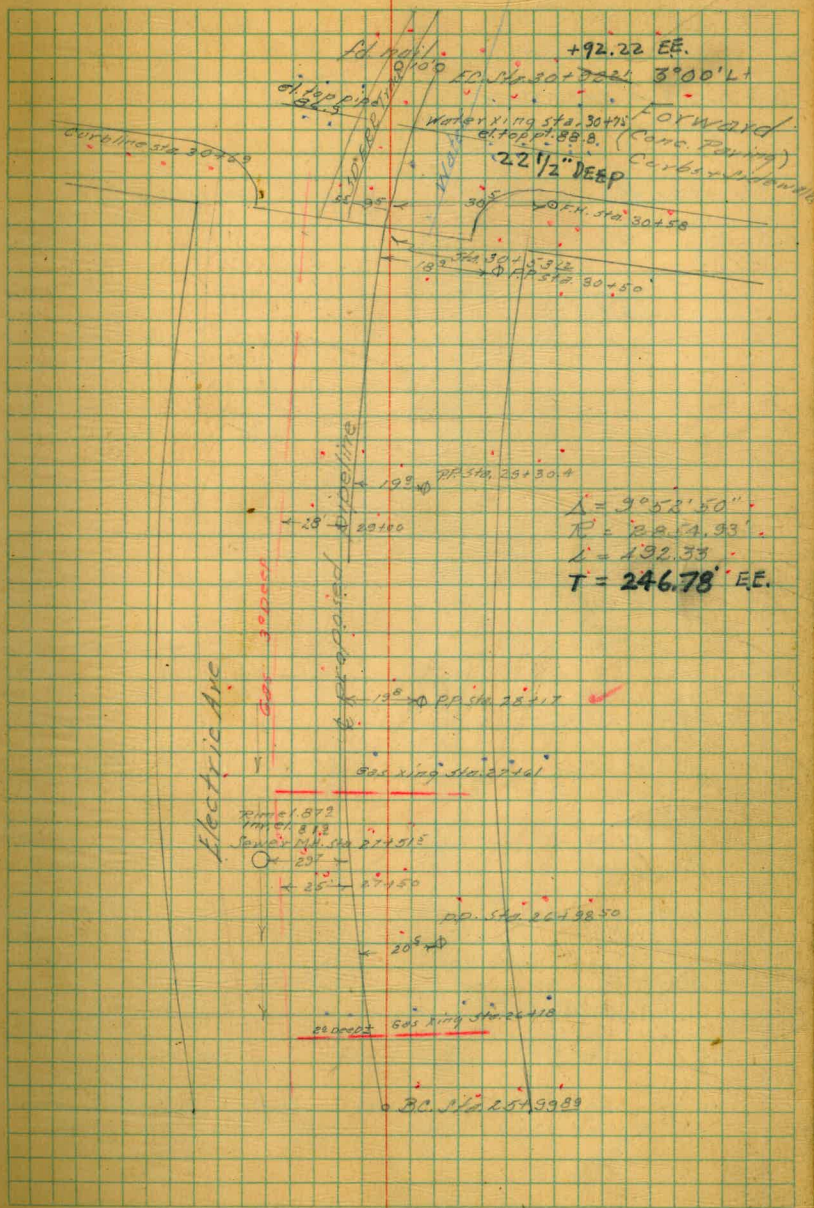
Gas King Sta. 21+58
 PE Sta. 22+01
 Gas King Sta. 21+40
 PE Sta. 20781

Electric Ave Pipeline

+92.22 EE.
E.C. Sta 30+92.21 3°00'14"

Sta. 25+99.89 BC. $\Delta = 9°52'50''$
 $R = 2857.93'$
 $L = 492.33'$
 $T = 246.78' EE.$

Alignment



+92.22 EE.
3°00'14"

$\Delta = 9°52'50''$
 $R = 2857.93'$
 $L = 492.33'$
 $T = 246.78' EE.$

Electric Ave

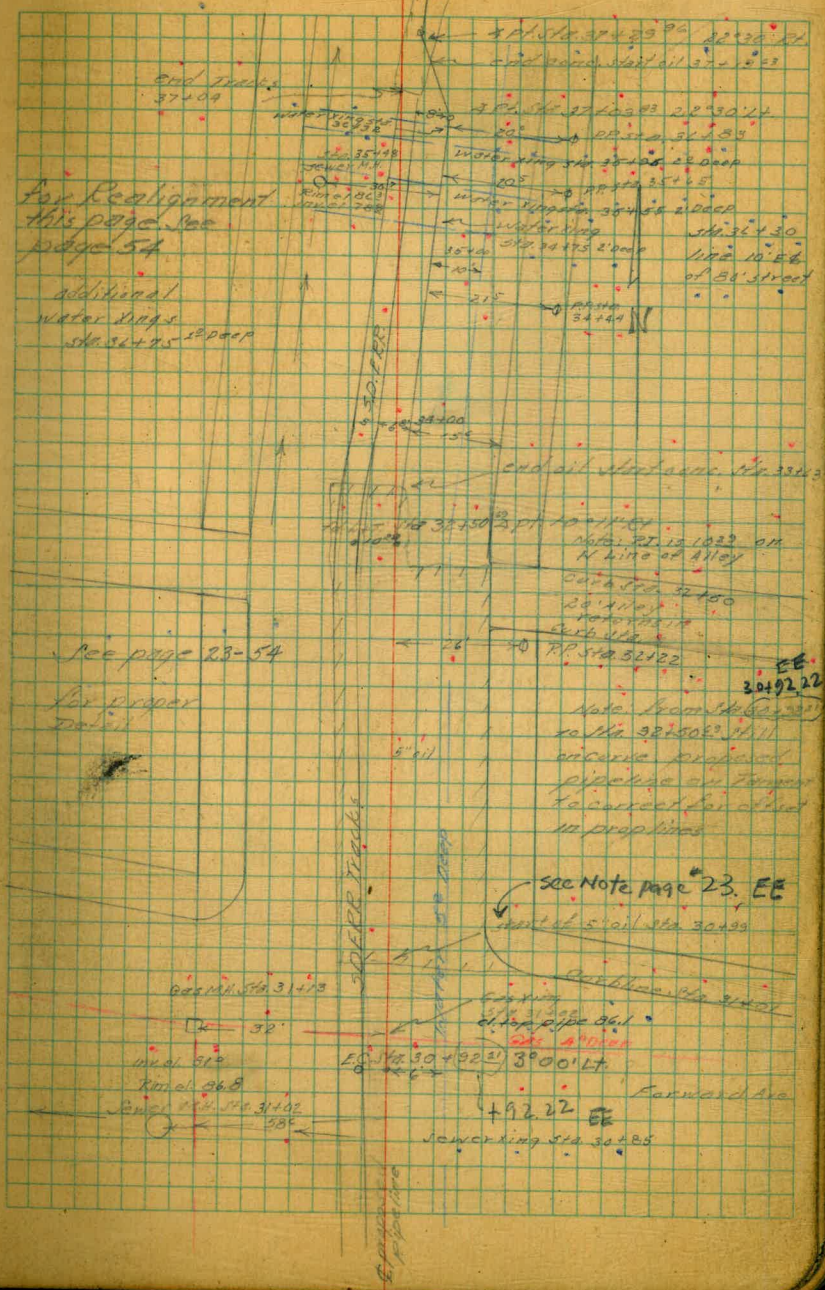
BC Sta. 25+99.89

Sta. 37+29.26 22°30' RT.

Sta. 37+03.83 22°30' LT.

Sta. 32+50.63 10°11' RT.

Alignment



for Realignment
this page, see
page 54

additional
water supply
shaft 32+75 12' deep

see page 23-54

for proper
details

see Note page 23, EE

+92.22 EE
searching sta. 30+85

DEEP TRENCH

oil shaft

Forward Ave

EE
30+92.22

part of 5' oil sta. 30+99

Note from Sta. 30+92.22
call Sta. 32+50.63 Mill
concrete proposed
pipeline on trench
to correct for offset
in prop lines

Note: 27.12.1923 on
N line of Alley

oil
20' x 11' oil
shaft
PP Sta. 32+22

oil shaft
Sta. 32+30

water supply
shaft 32+75 12' deep
LINE 10' E of
of 50' street

water supply
shaft 32+75 12' deep

PP Sta. 31+54

PP Sta. 31+29 90° 22' 30" RT
oil shaft
Sta. 31+03

end of track
37+09

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54

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PP Sta. 31+54

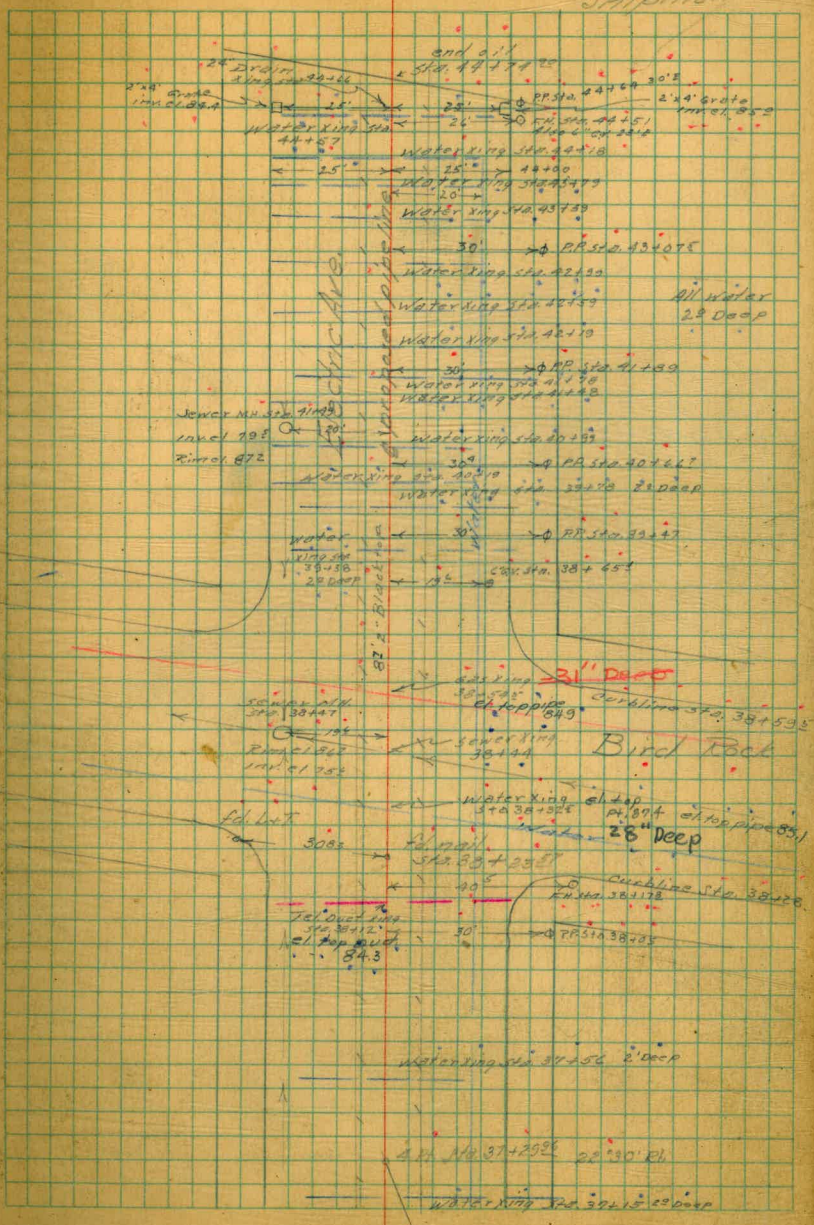
PP Sta. 31+54

PP Sta. 31+54

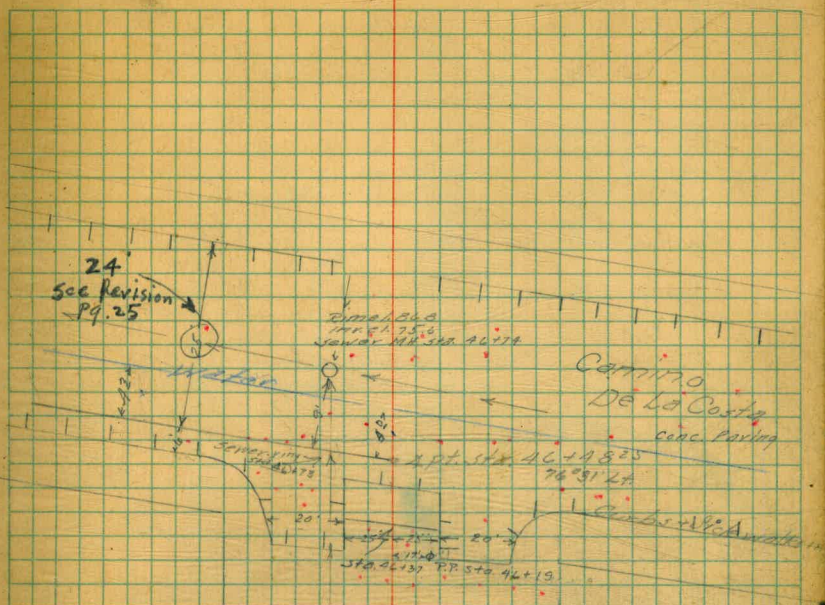
PP Sta. 31+54

PP Sta. 31+54

PP Sta. 31+54



Sta. 46+48.25 76°31'16"



SEE PAGE 25
FOR ADDITIONAL DATA.

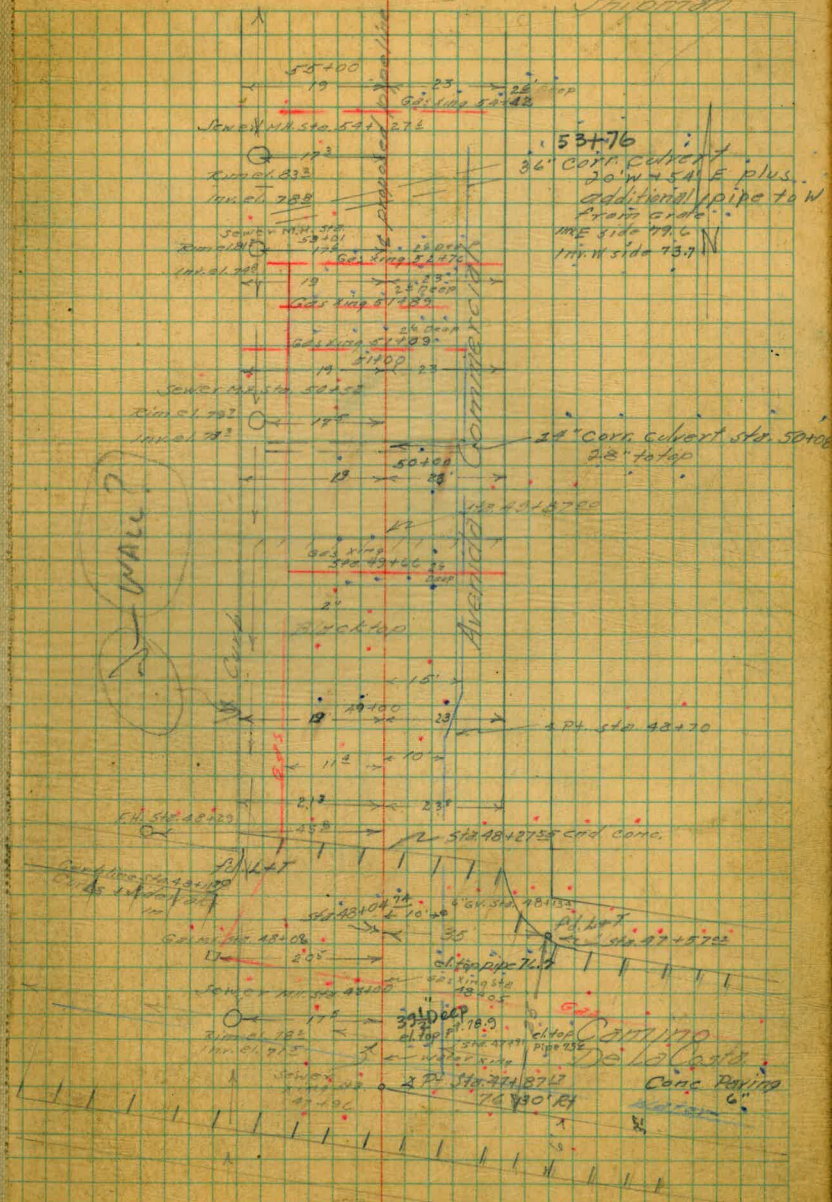
S.D.E. R.R. Easement

Proposed Pipeline



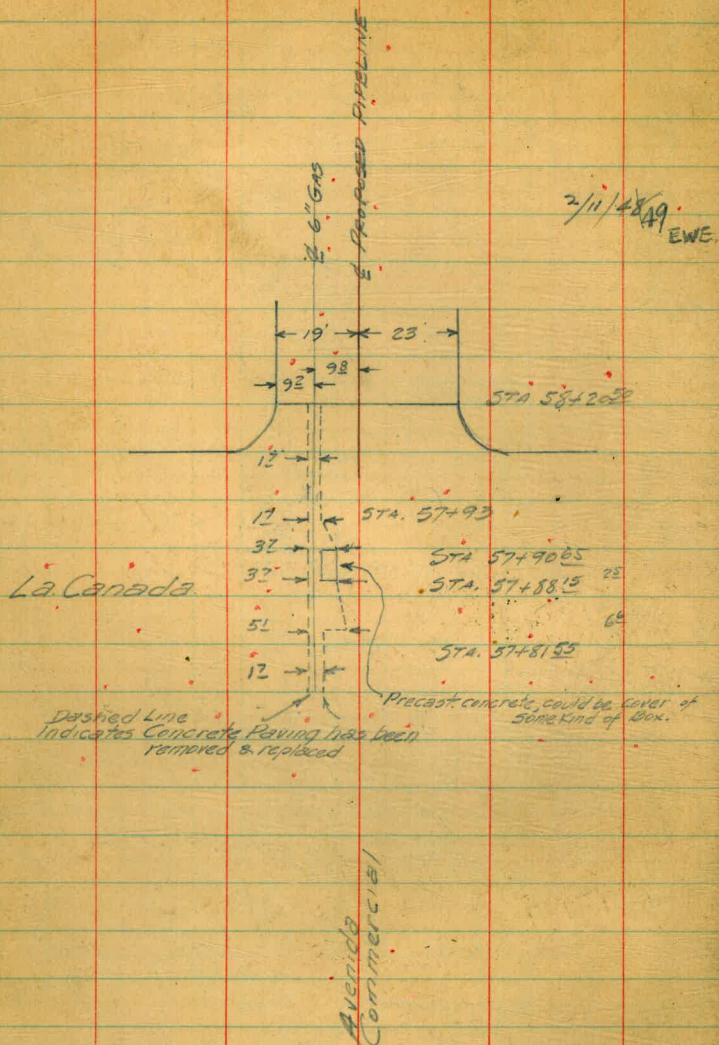
Feb. 26, 1945
Alignment

Raney
Bater
Shipman

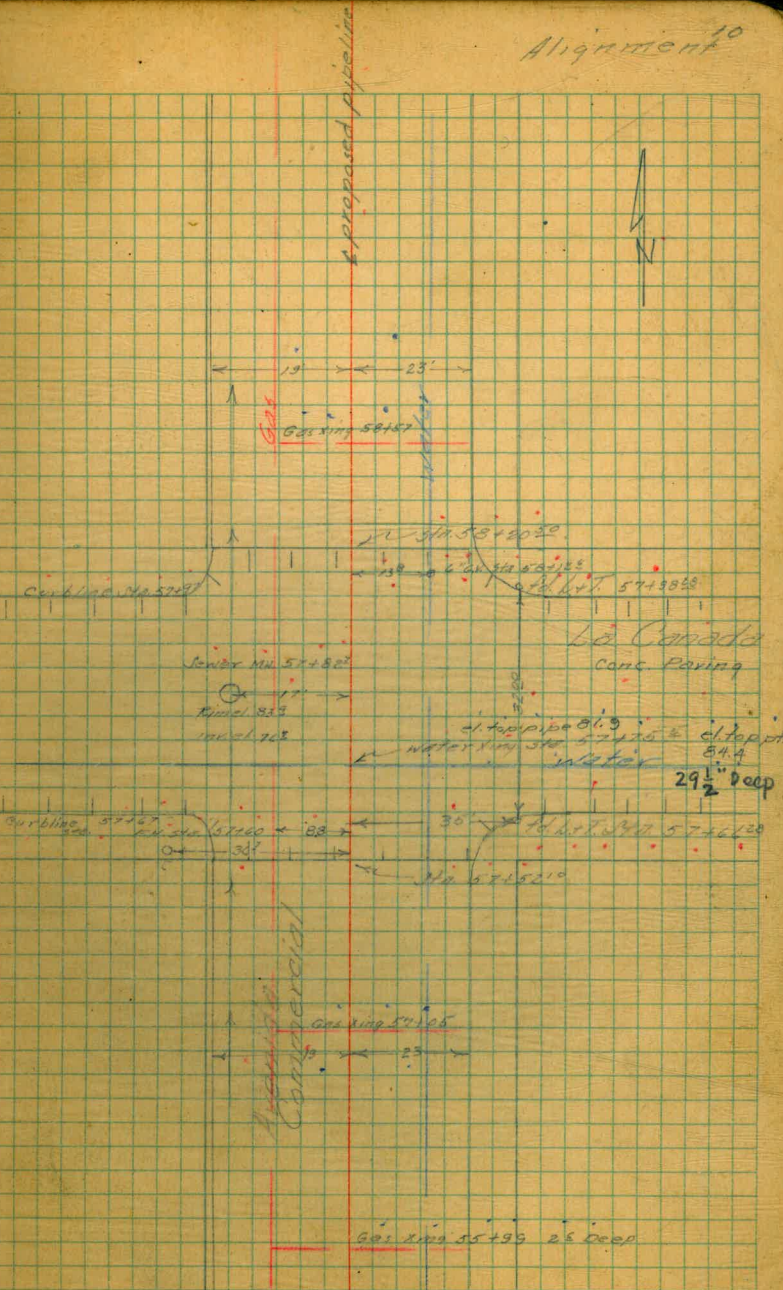


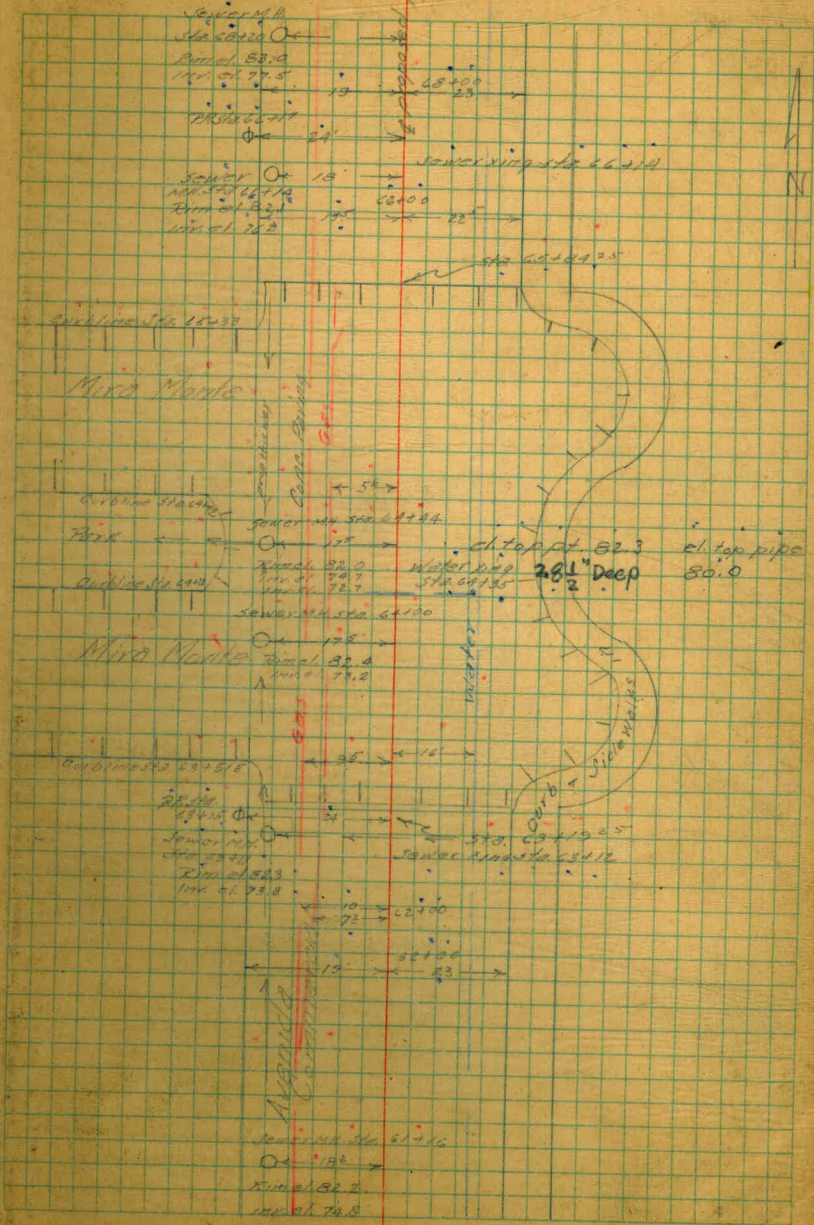
Sta 47+87.2 76°30' Rt.

Electric Ave. Pipeline



Alignment¹⁰

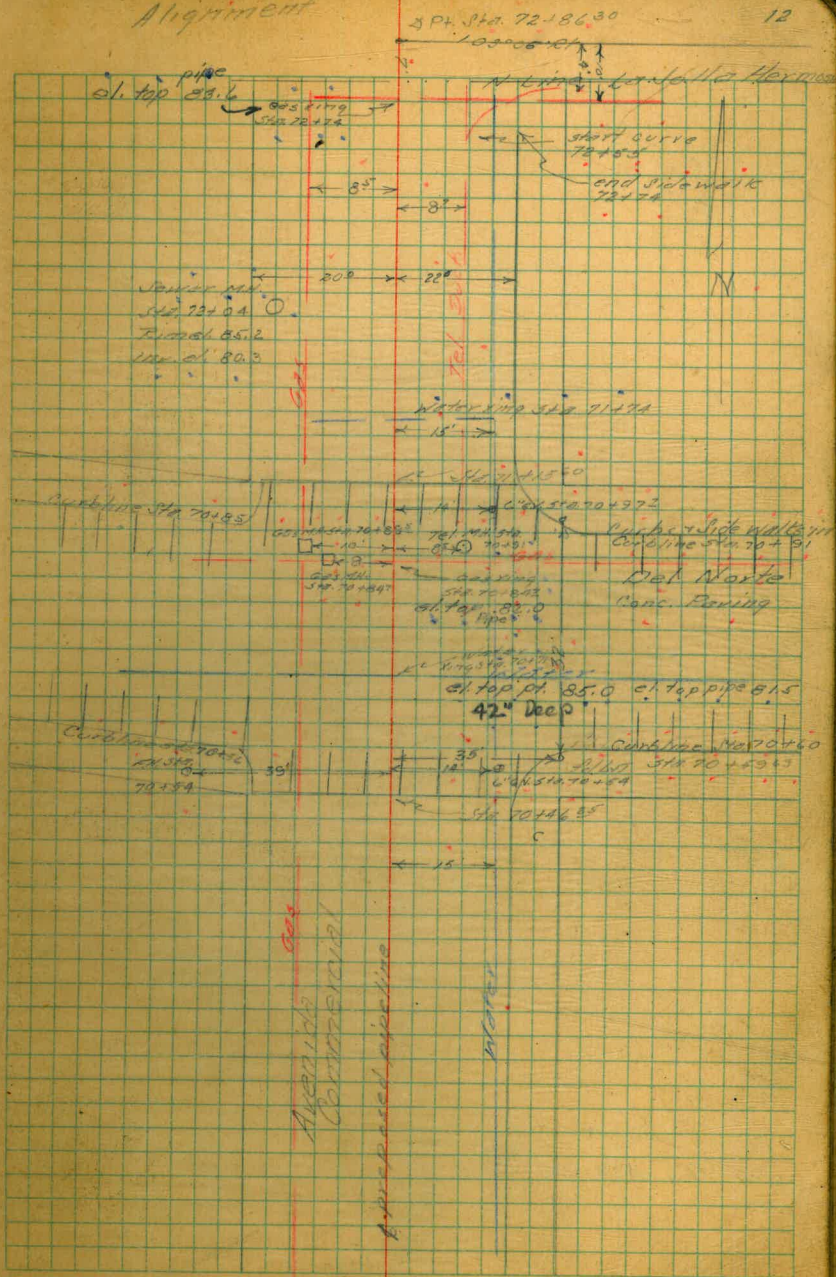




Sta. 72+86.30 103°06' E

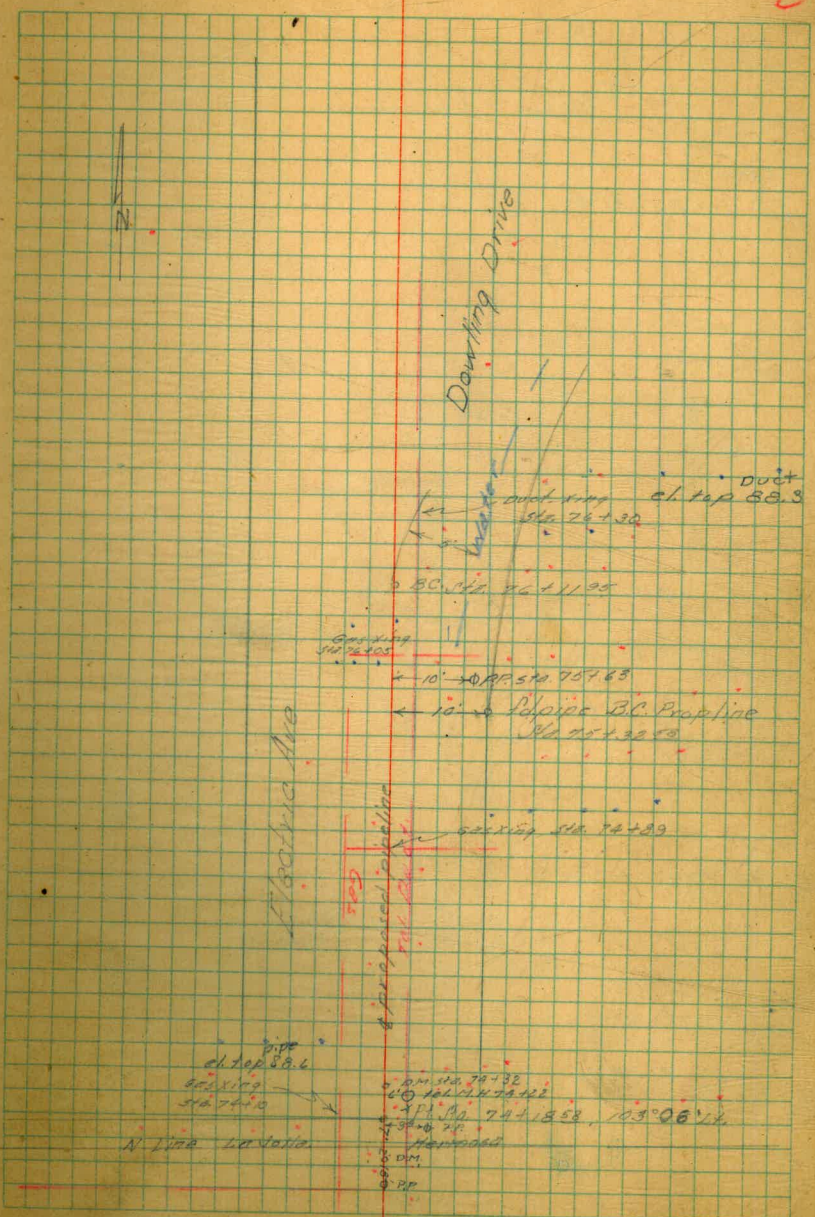
72+86.30
72+86.30
72+86.30

Alignment



Sta. 76+11.95 BC

Sta. 74+18.58 / 03°06'41"



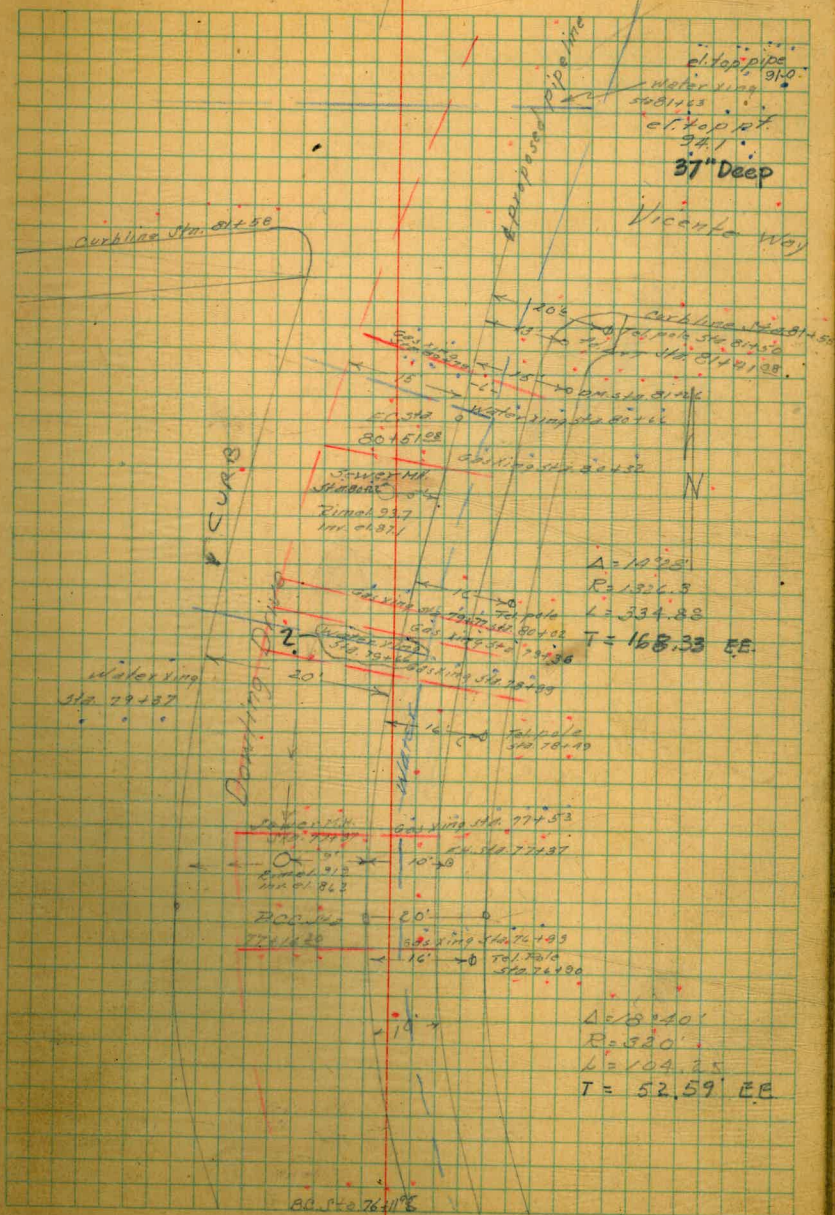
EC Sta. 80+51.28

Sta. 77+16.30 E.C.C.

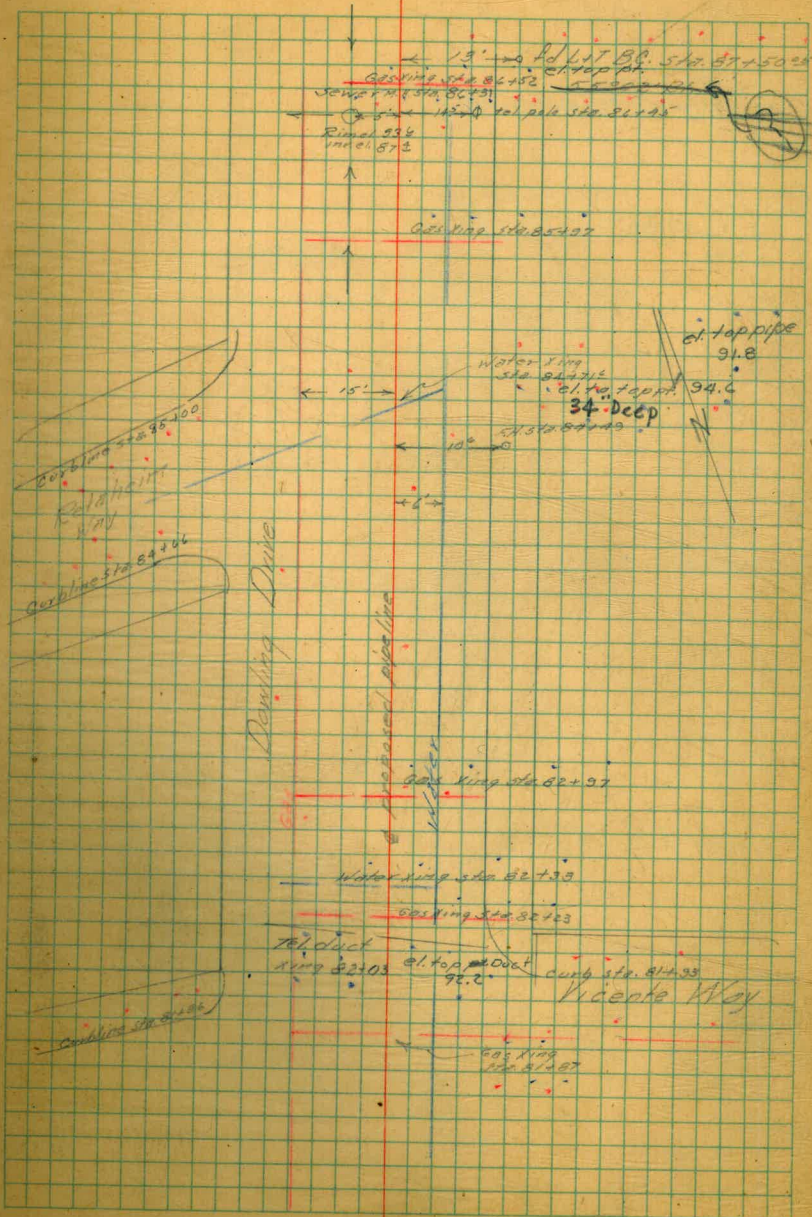
$\Delta = 14^{\circ}28'$
 $R = 1326.3$
 $L = 334.83$
 $T = 168.33' \text{ EE.}$

Sta. 76+11.35 E.C.

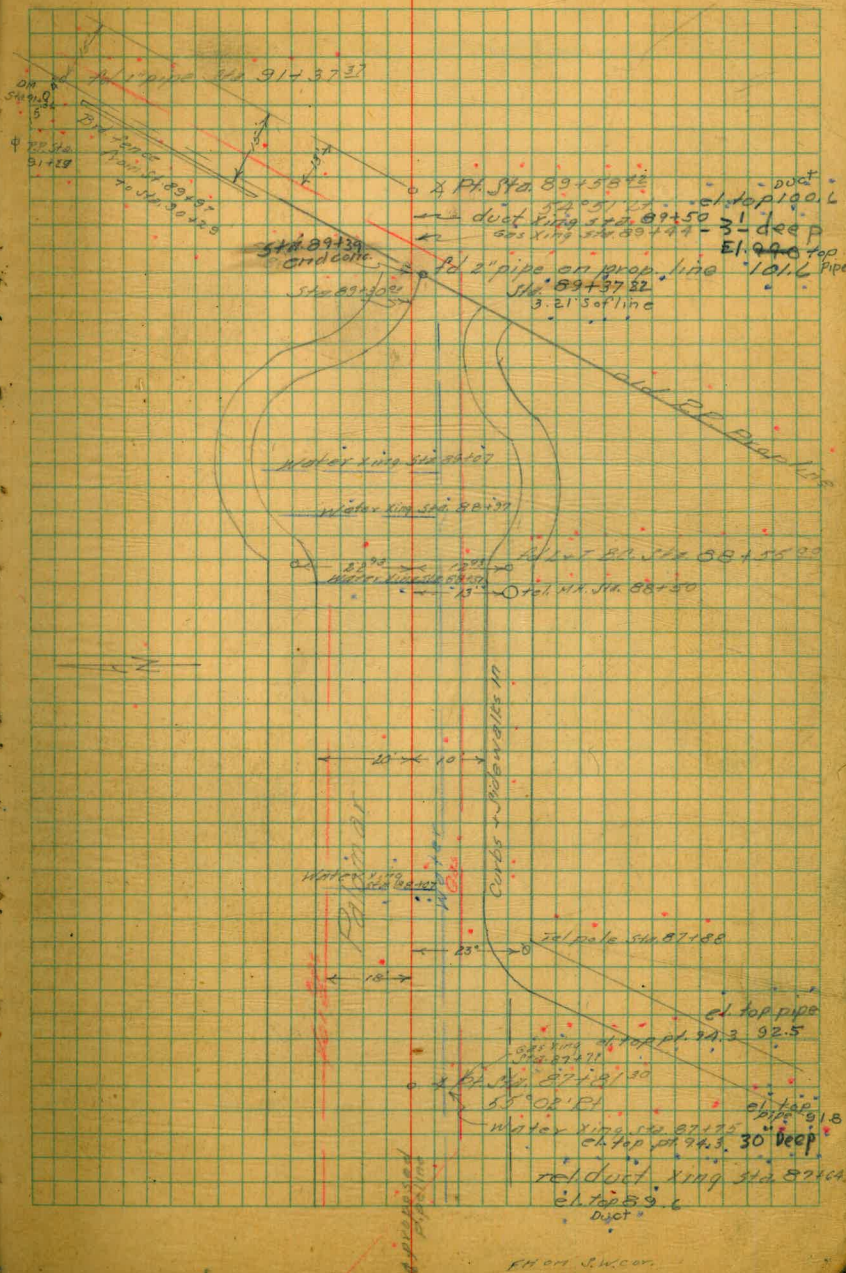
$\Delta = 18^{\circ}40'$ Δ of $14^{\circ}28'$
 $R = 320'$
 $L = 104.25$
 $T = 52.59' \text{ EE.}$



Sta. 87+81.30 55°02' R1

Cainey
Baker
ShipmanNov. 16, 1908.
x Pt. Sta. 87+81.30 55°02' R1. 15

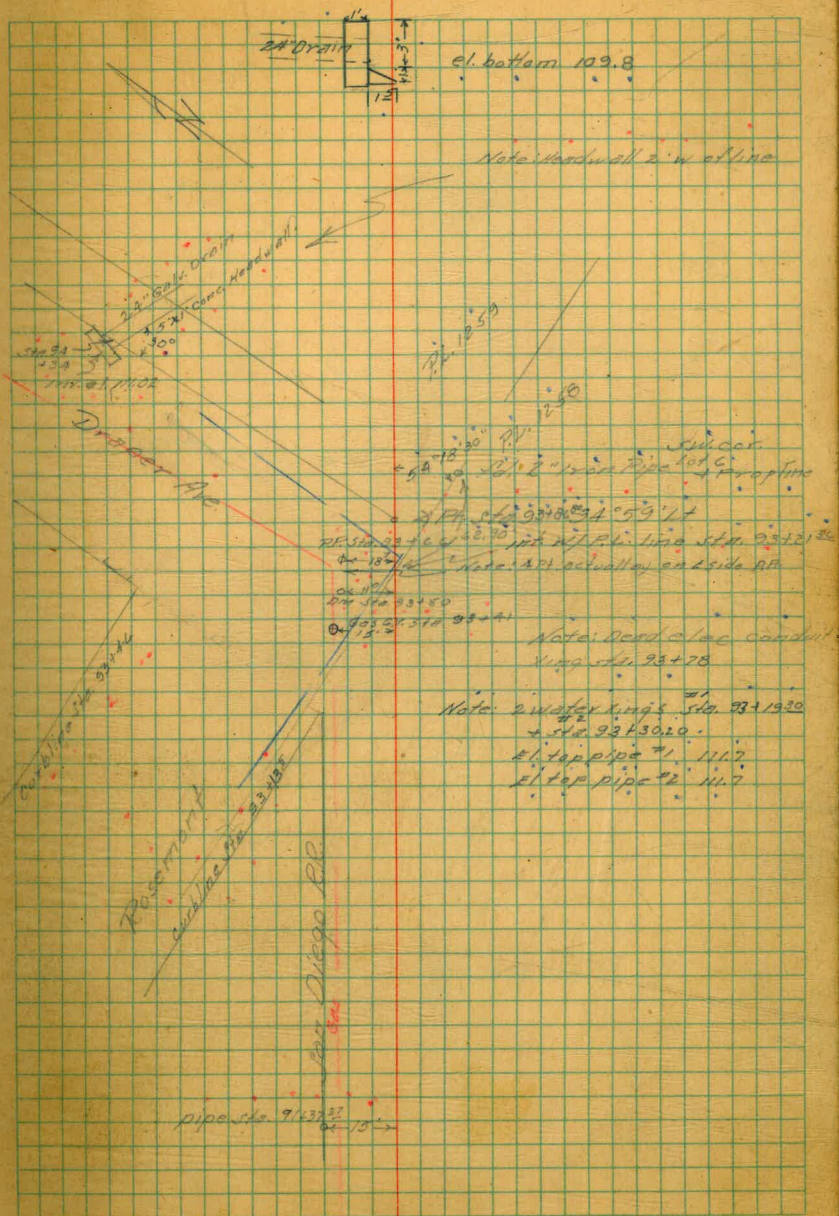
Sta 89458 22 54° 51' 21"

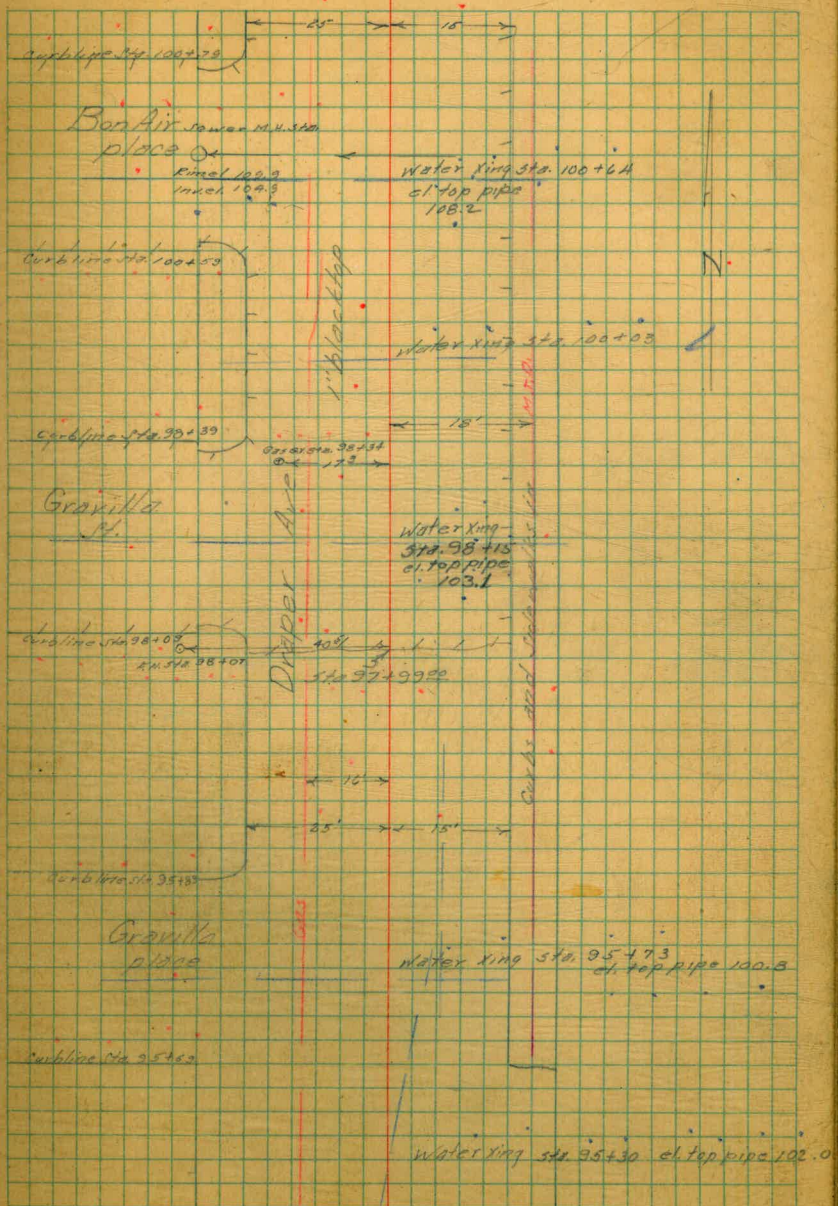


Proposed

PH on S.W. cor.

Sta. 93+86.80 \rightarrow Pt. 34°59'14"





Mar. 2, 1948 Rainey 19.4

Baker

Shipman

~~Curb Sta 102+63~~

~~Water Xing Sta 102+59~~

Gas Xing Sta 102+64 32' Deep

Rise 102+72

102+81 102+72

Curb Sta 102+45

Drapery Ave

Large drain xing sta 104+17
el. top pipe 104.7

533 102+74

102+74

102+89 102+82

Carb Line Sta 103+32.5

Bon Air St

Black Top

2" EWE

See Rainey's

Revised Notes

8-3-48

? ? ? ?

Xing

102+100

33 1/2' Deep water xing sta 103+05

el. top pipe 103.0

On

Sta 102+92

33'

Curb Line Sta 102+94.2

T-1 M.H. Sta 102+63

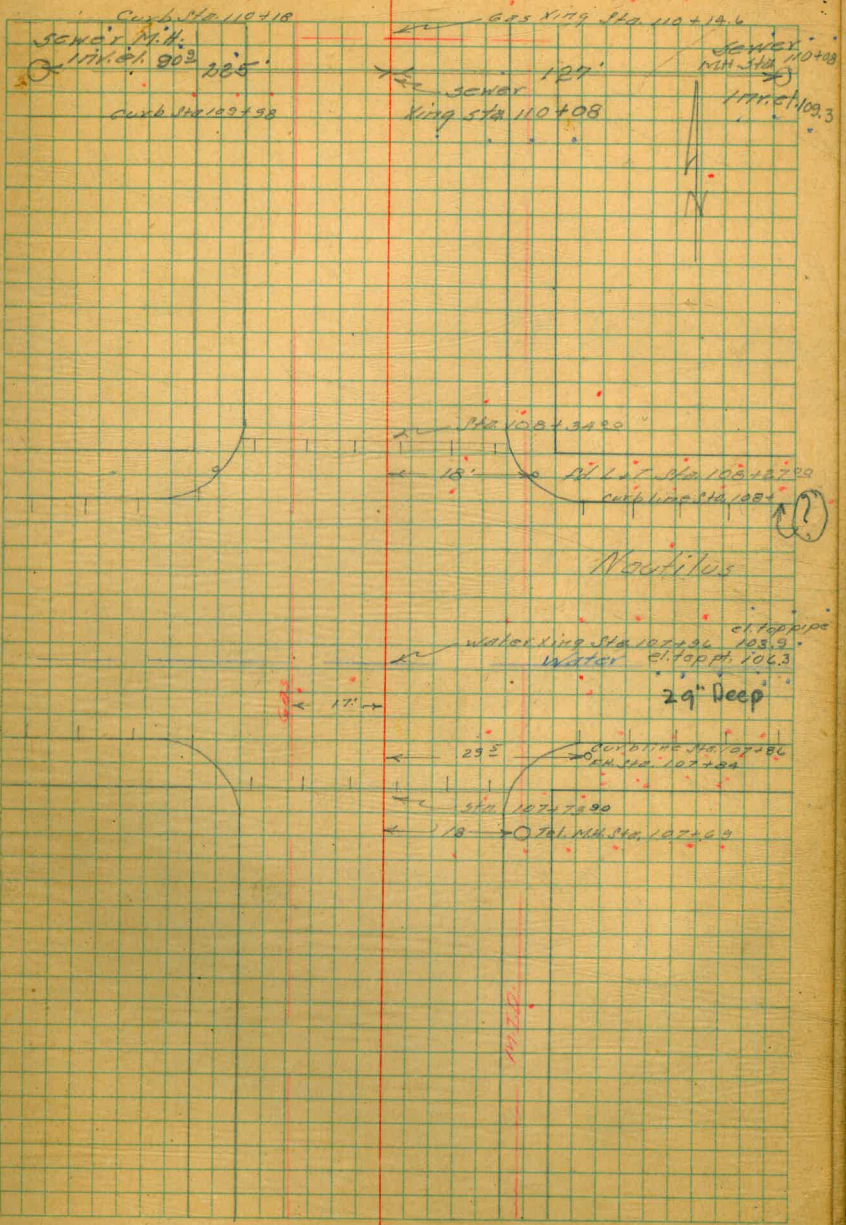
10

Gas Pipe Sta 102+55

Gas Xing

Sta 101+52

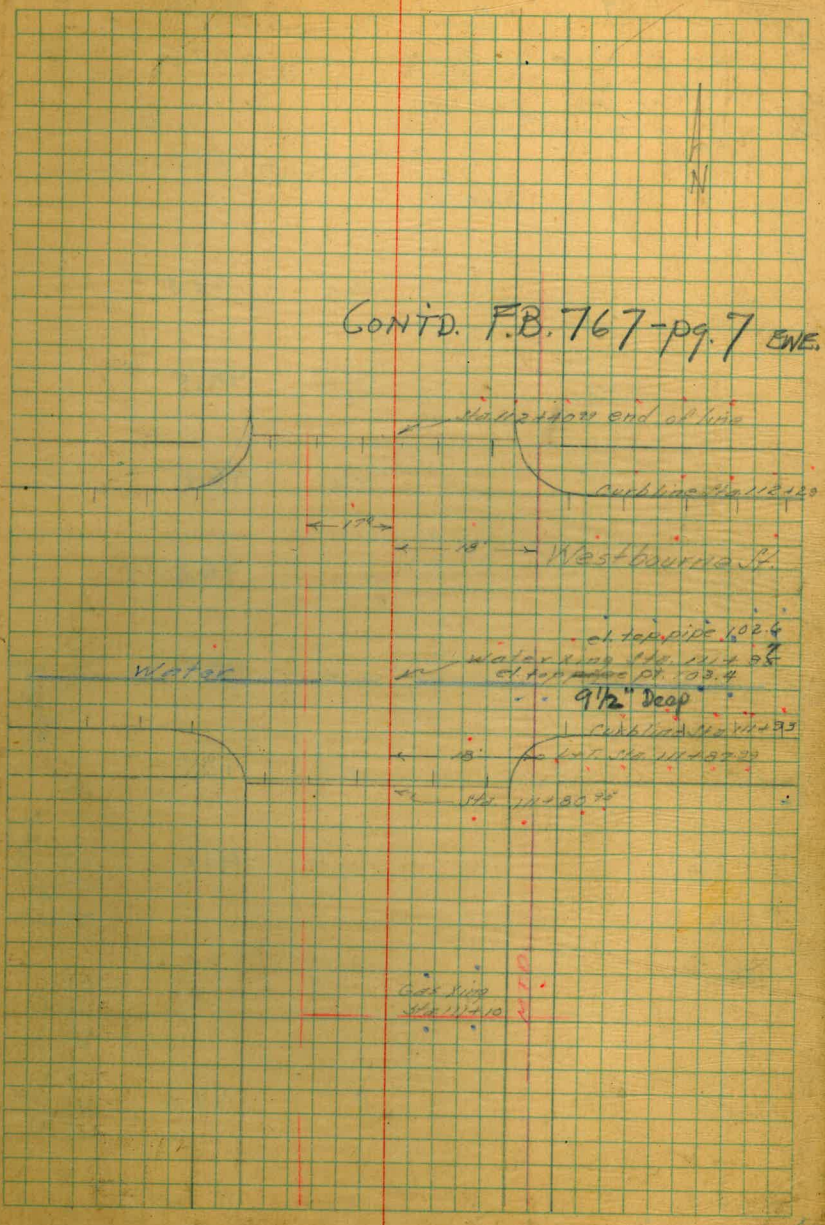
Water Xing Sta 101+35



$$\begin{array}{r} 111 + 5410 \\ \cdot 3574 \\ \hline 111 + 8784 \\ 111 + 8799 \end{array}$$

$$\begin{array}{r} 9067 \\ 111 \overline{) 8799} \\ \underline{268} \end{array}$$

CONTD. F.B. 767-pg. 7 ENE.



Profile Elec. Ave. Pipeline

Mar. 2, 1948

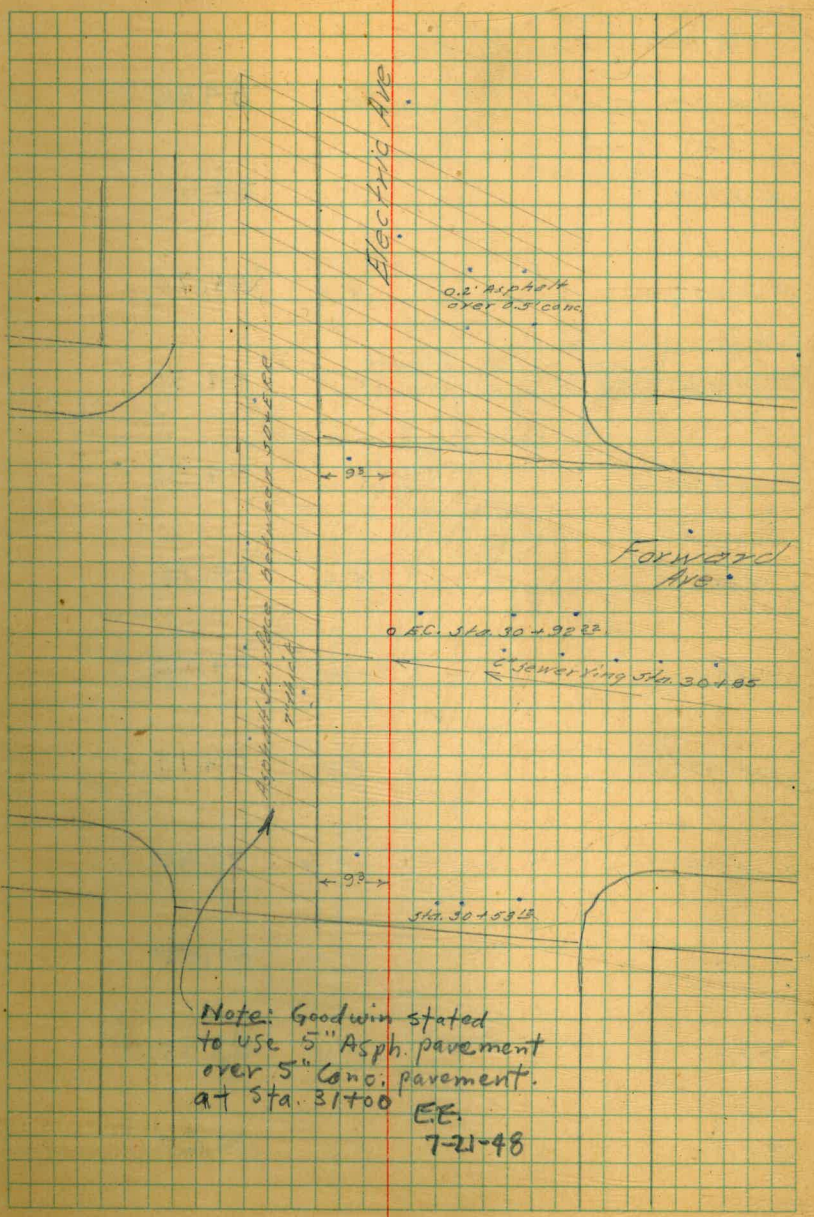
Rainey
Baker 22
Shipman

<u>T</u>	<u>H.I.</u>	<u>Shores Dist</u>	<u>Elev</u>
Cond. Man. N.E. Cor. Apstar Co. Sells		114.75	114.85
	0.48	115.23	
TP #1		12.10	103.13
	0.19	103.32	
0+00		4.6	98.8 ✓
0+07 3 Pt.		4.9	98.5 ✓
0+50		7.3	96.1 ✓
1+00		8.6	94.8 ✓
1+03 3 Pt.		8.9	94.5 ✓
1+50		10.3	93.1 ✓
2+00		12.3	91.1 ✓
TP #2		12.72	90.80
	1.00	91.80	
2+50		2.1	89.6 ✓
3+00		4.1	87.6 ✓

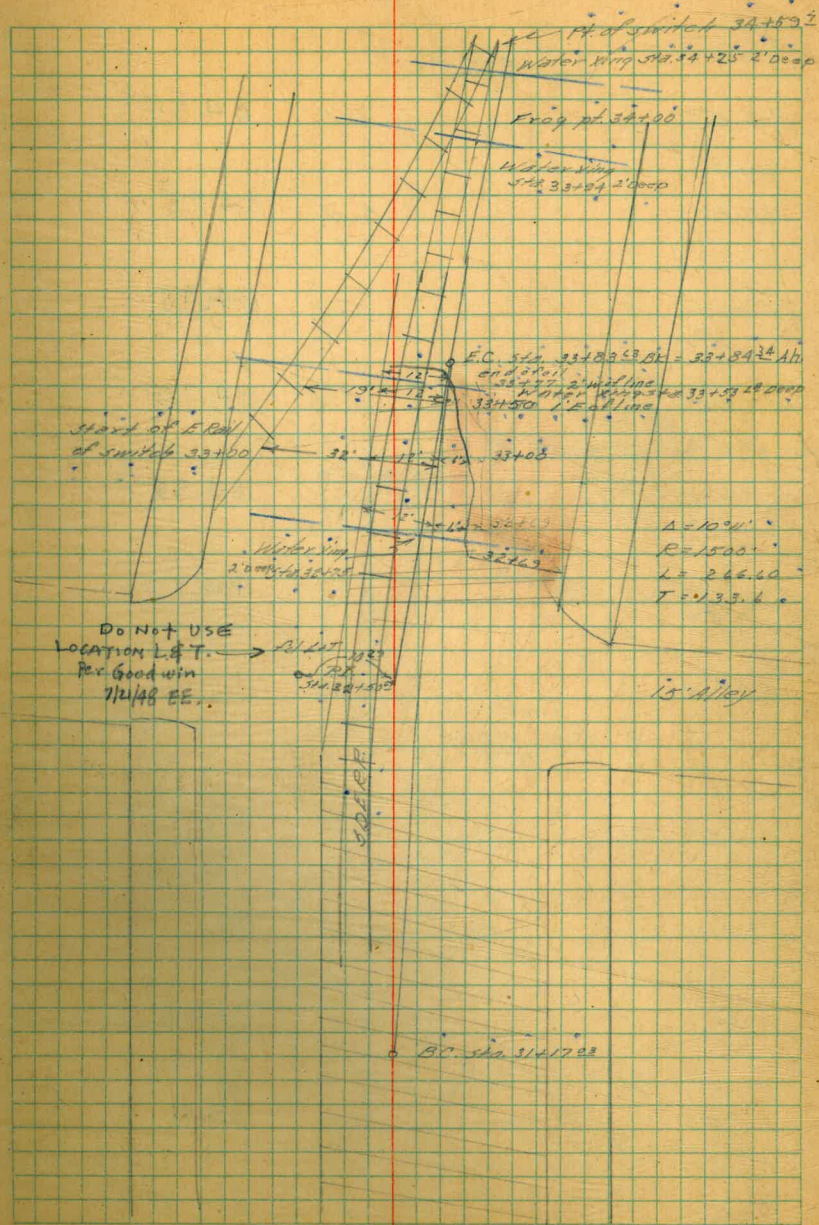
REDUCED 4/16/48
 CHECKED 5/21/48
 J.N.G.
 E.W.E.

All elevations raised 0.10 duct to
 difference in elev. between city Expts
 and F.B. #677

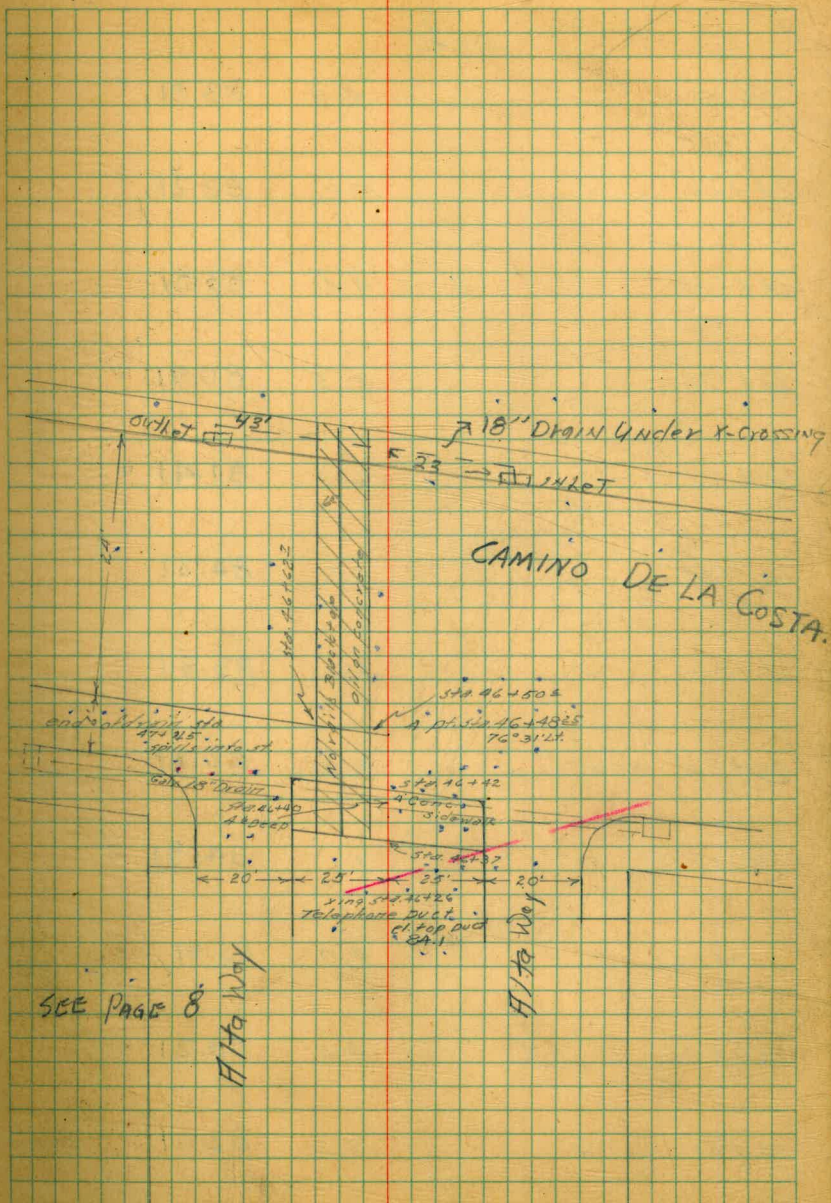
		7 91.60		
3+50			4.4	87.3 ✓
3+84 ²¹	3PT		4.4	87.3 ✓
4+00			4.6	87.1 ✓
4+50			5.0	86.7 ✓
5+00			5.1	86.6 ✓
	Cont'd from pg. 58		459	
5+50			5.4	86.3 ✓
6+00			5.8	85.9 ✓
6+50			6.3	85.4 ✓
7+00			6.5	85.2 ✓
7+50			7.1	84.6 ✓
7P ²³			6.90	84.80 ✓
	4.85	89.55		
7+94			5.7	83.95 ✓



	89.55 ⁶		
8+00	4.9	84.75 ✓	
8+27	5.0	84.65 ✓	
8+32	3.9	85.75 ✓	
8+38	5.1	84.55 ✓	
8+49	5.6	84.05 ✓	
8+50	4.9	84.75 ✓	
8+66	5.2	84.45 ✓	
8+70	3.5	86.15 ✓	
8+73	10.7	78.95 ✓	
8+80	8.1	81.55 ✓	
8+81	5.8	83.85 ✓	
9+00	5.0	84.65 ✓	



	89.55 ⁶		
9+50	5.1	84.55	✓
10+00	5.4	84.25	✓
10+50	5.2	84.45	✓
11+00	5.4	84.25	✓
11+50	5.1	84.55	✓
12+00	5.5	84.15	✓
TP#4	5.46	84.89	✓
	3.22	87.91 ⁴	
12+50	3.3	84.11	✓
13+00	3.3	84.11	✓
13+50	3.4	84.01	✓
14+00	4.0	83.41	✓
14+50	4.4	83.01	✓



SEE PAGE 8

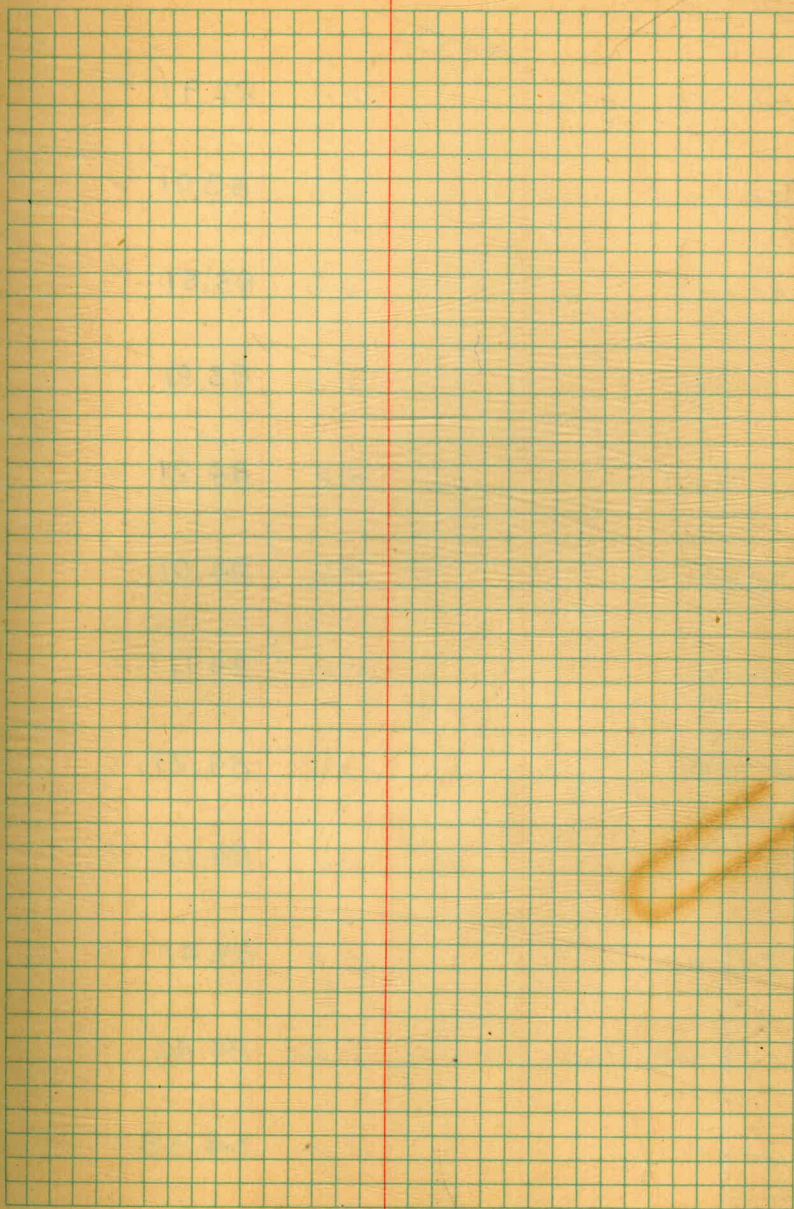
H/Ha Way

H/Ha Way

	⁴ 87.81		
14457		4.4	83.01 ✓
14462		5.2	82.21 ✓
14469		4.4	83.01 ✓
14479		6.5	80.91 ✓
14488		6.0	81.41 ✓
14496		3.2	84.21 ✓
15400		3.6	83.81 ✓
15400 4 ^{SE} W		4.9	82.51 ✓
15422		3.1	84.31 ✓
15425		4.0	83.41 ✓
15450		4.2	83.21 ✓
15450 2 ^{SE} W		5.2	82.21 ✓

Profile Elec. Ave. Pipeline

		4 87.81		
16+00		5.0	82.41	✓
16+00	1'W	5.3	82.11	✓
16+50		4.9	82.51	✓
17+00		4.6	82.81	✓
17+39.22	S edge conc.	5.20	82.21	✓
17+50		5.26	82.15	✓
18+00		5.11	82.30	✓
TP 45		5.11	82.30	✓
		7.61	89.81	
18+12.5	N edge conc.	7.50	82.41	✓
18+50		7.6	82.31	✓
19+00		7.2	82.71	✓



	89.81 ⁹		
19+50	7.0	82.91	✓
20+00	6.9	83.01	✓
20+50	6.4	83.51	✓
21+00	6.0	83.91	✓
21+50	5.7	84.21	✓
22+00	5.9	84.01	✓
22+50	5.8	84.11	✓
23+00	5.7	84.21	✓
23+50	5.8	84.71	✓
24+00	5.5	84.41	✓
24+02 ⁹ Sedge conc.	5.45	84.46	✓
24+50	5.52	84.39	✓

9
89.81

2417129

5.53 84.38

TP#6

5.36

84.45 ✓

7.94

4
92.89

25400

7.3

85.19 ✓

25450

6.8

85.69 ✓

25499⁸⁵ B.C.

7.0

85.49 ✓

25499⁸⁵

5'E

6.6

85.89

26150

6.3

86.19 ✓

26150 4'E

3.8

88.69

26450 2'W

7.3

85.19

27400

5.9

86.59 ✓

27400 8'E

2.9

89.59

27400 4'W

6.5

85.99

see
p.74

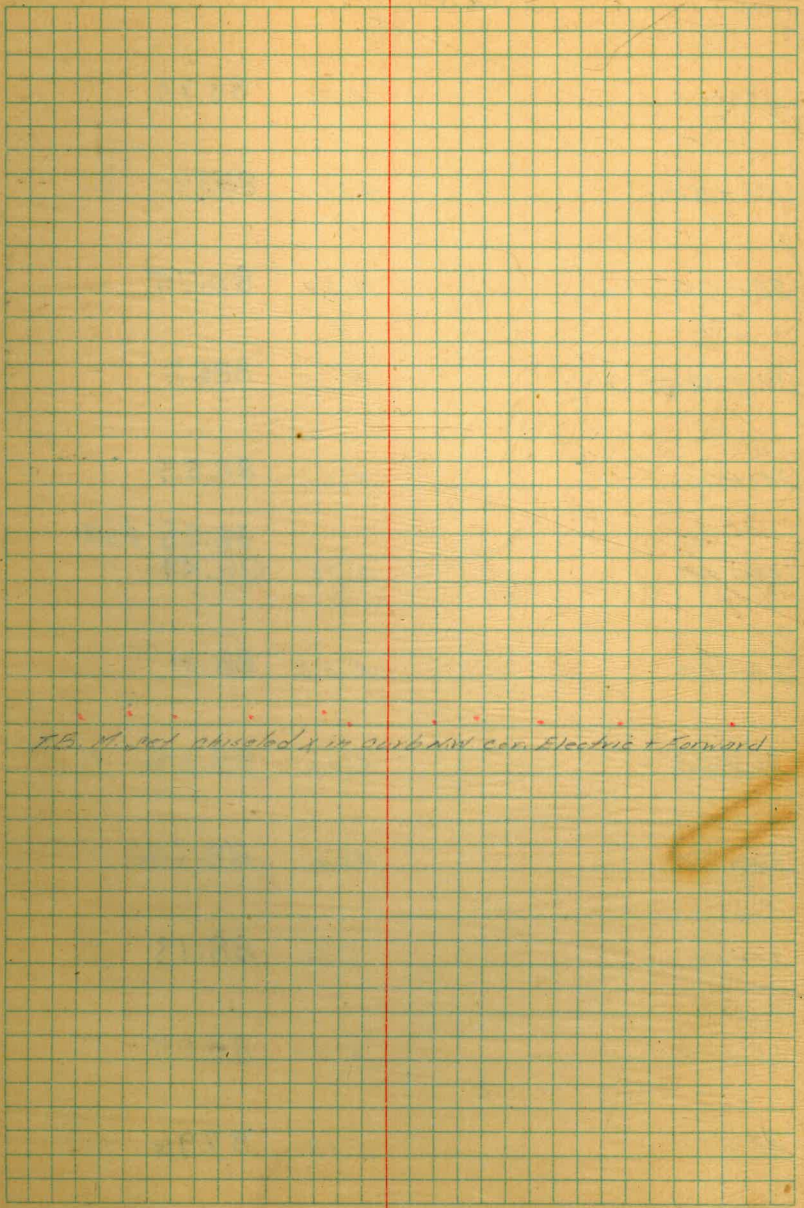
27+11		5.5	86.99 ✓
27+11	10'E	2.8	89.69
27+11	4'W		
27+13	same as 26+98	5.0	87.49 ✓
27+13	1'E	3.3	89.19
27+13	3'W	6.6	85.89
27+50		5.3	87.19 ✓
27+50	3'E	3.3	89.19
27+50	3'W	6.6	85.89
27+73		4.5	87.99 ✓
27+73	5'E	2.1	90.39
27+73	4'W	5.9	86.59

Profile Elec. Ave. Pipeline

4
92.89

27+75	4.8	87.69	✓
27+75 5'E	3.5	88.99	
27+75 4'W	5.5	86.99	
28+00	5.6	86.89	✓
28+50	5.0	87.49	✓
29+00	4.5	87.99	✓
29+50	4.7	87.79	✓
29+7	4.51	87.88 ⁹	✓
5.16	93.84		
30+00	4.8	88.34	✓
30+50	4.4	88.74	✓
30+53 ¹² Sedge conc.	4.43	88.71	✓
30+92 ²¹ E.C.	4.30	88.84	✓

92.89
P. 74



75. The road situated in carbons can Electric + Forward

31+00	4.36	88.78	✓
31+50	4.32	88.82	✓
32+00	4.39	88.75	✓
32+50 ² 2 PT.	4.52	88.62	✓
33+00	4.61	88.53	✓
33+50	4.76	88.38 EWE. 88.44	✓
34+00	4.83	88.31	✓
34+50	4.92	88.22	✓
35+00	4.92	88.22	✓
35+50	5.01	88.13	✓
36+00	5.09	88.05	✓
36+50	5.18	87.96	✓

93.84

37+00		5.23	87.91	✓
37+03 ⁸³		5.22	87.92	✓
37+19 ⁸³	Hard oil End conc.	5.30	87.84	✓
37+29 ⁸⁴		5.4	87.74	✓
37+50		5.4	87.74	✓
38+00		5.7	87.44	✓
38+50		5.6	87.54	✓
39+00		5.5	87.64	✓
TP ⁸ B		6.06	^{7.0} 88.18	
	5.14	² 92.82		
39+50		4.5	87.72	✓
40+00		4.5	87.72	✓
40+50		4.7	87.52	✓

²
32.12

41+00 4.8 87.42 ✓

41+50 4.9 87.32 ✓

42+00 5.0 87.22 ✓

42+50 5.1 87.12 ✓

43+00 5.1 87.12 ✓

43+50 5.2 87.02 ✓

44+00 5.2 87.02 ✓

44+50 5.3 86.92 ✓

45+00 5.5 86.72 ✓

45+50 5.4 86.82 ✓

46+00 5.0 87.22 ✓

46+37²⁵ 4.32 87.90 ✓

2
92.X2

46+48²⁵ x Pt. 4.23 87.99 ✓

46+60 4.2 88.02 ✓

TP 49 4.41 87.81⁸ ✓

0.24 8.0
8 x 5
La Jolla + De La Costa
Notorn check to BM, BP 1258 SWer 11.89 76.86¹

47+00 3.26 84.79 ✓

47+50 7.41 80.64 ✓

47+87⁴² 2 Pt. 9.24 78.81 ✓

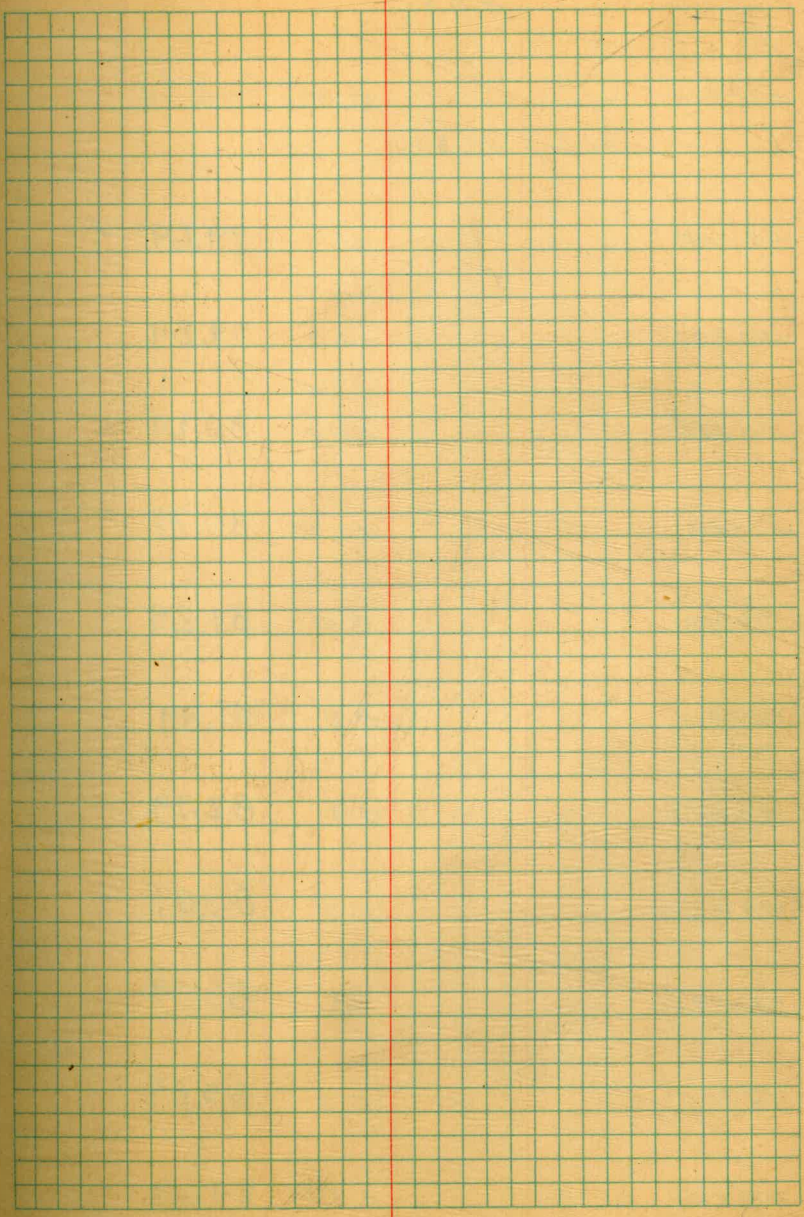
48+00 9.17 78.88 ✓

48+15 9.41 78.64 ✓

48+27⁵⁵ N edge conc. 9.20 78.85 ✓

48+50 9.0 79.05 ✓

49+00 8.7 79.35 ✓



8.0
8x95

36

T.P. #10	8.90	79.85
11.64	90.89	
49+50	11.1	79.69 ✓
50+00	10.9	79.89 ✓
50+50	10.5	80.29 ✓
51+00	10.0	80.79 ✓
51+50	9.5	81.29 ✓
52+00	8.9	81.89 ✓
52+50	8.4	82.39 ✓
53+00	7.7	83.09 ✓
53+50	7.0	83.59 ✓
54+00	6.9	83.89 ✓
54+50	6.1	84.69 ✓

Profile Elec. Ave. Pipeline

90.79

55+00 5.7 85.09 ✓

55+50 5.4 85.39 ✓

56+00 5.5 85.29 ✓

56+50 5.5 85.29 ✓

79.85

11.56 90.81

57+00 5.7 85.0 ✓

57+50 5.9 84.8 ✓

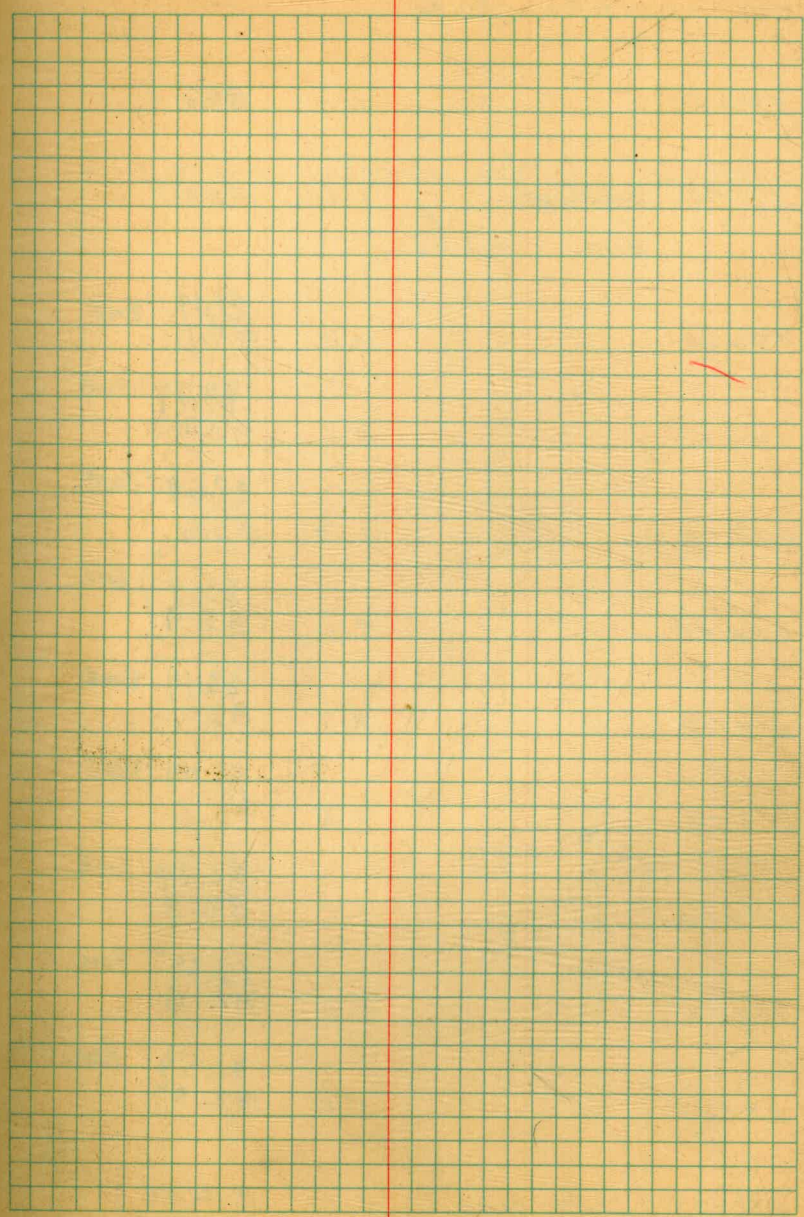
57+52¹⁰ Sedge cane 5.84 84.87 ✓

57+61 6.24 84.47 ✓

57+80 6.22 84.49 ✓

58+00 6.51 84.20 ✓

58+20⁵⁰ Sedge cane 6.15 84.56 ✓



Profile Electric Ave. Pipeline

7
90.81

58+50		6.1	84.6 ✓
TR #11 IBM set		3.34	87.87 ³
	0.22	87.89 ⁵	
59+00		3.4	84.19 ^v EWE. (84.1)
59+50		3.6	83.99 ^v EWE (83.9)
60+00		3.9	83.69 ^v EWE (83.6)
60+50		4.1	83.49 ^v EWE (83.4)
61+00		4.4	83.19 ^v EWE (83.1)
61+50		4.5	83.09 ^v EWE (83.0)
62+00		4.7	82.89 ^v EWE (82.8)
62+50		4.9	82.69 ^v EWE (82.6)
63+00		5.0	82.59 ^v EWE (82.5)
63+19.25	Sedgewick	4.73	82.86 ✓

Nov. 3, 1948

Rainey
Baker
Shipman

38

at Right Hand of Statue N.E. Cor. to Canada
+ Commercial

63+19.3
67
63+12.6

5
82.29

63+50	5.31	82.28	✓
63+79	5.07	82.52	✓
64+00	4.99	82.60	✓
64+50	4.99	82.60	✓
65+00	4.94	82.65	✓
65+39	5.30	82.29	✓
65+80 ² <i>Need conc.</i>	4.54	83.05	✓
66+00	4.4	83.19	✓
66+50	4.5	83.09	✓
67+00	4.4	83.19	✓
TP #12	4.45	83.84	✓
9.64	7	92.88	
67+50	9.5	83.28	✓

68+00	9.3	83.48	✓
68+50	9.1	83.68	✓
69+00	8.8	83.98	✓
69+50	8.5	84.28	✓
70+00	8.1	84.68	✓
70+46 ²⁵ ledge conc.	8.06	84.72	✓
70+57	8.14	84.64	✓
70+73	7.83	84.95	✓
71+00	7.64	85.14	✓
71+15 ⁴⁹ ledge conc.	7.54	85.24	✓
71+50	7.6	85.18	✓
72+00	7.2	85.58	✓

7
92.88

72+50 6.9 85.88 ✓

72+86⁸⁰ x Pt. 6.7 86.08 ✓

73+00 6.5 86.28 ✓

73+10 6.6 86.18 ✓

73+17 5.7 87.08 ✓

73+50 3.7 89.08 ✓

74+00 0.4 92.38 ✓

74+13 0.35 92.73 ✓

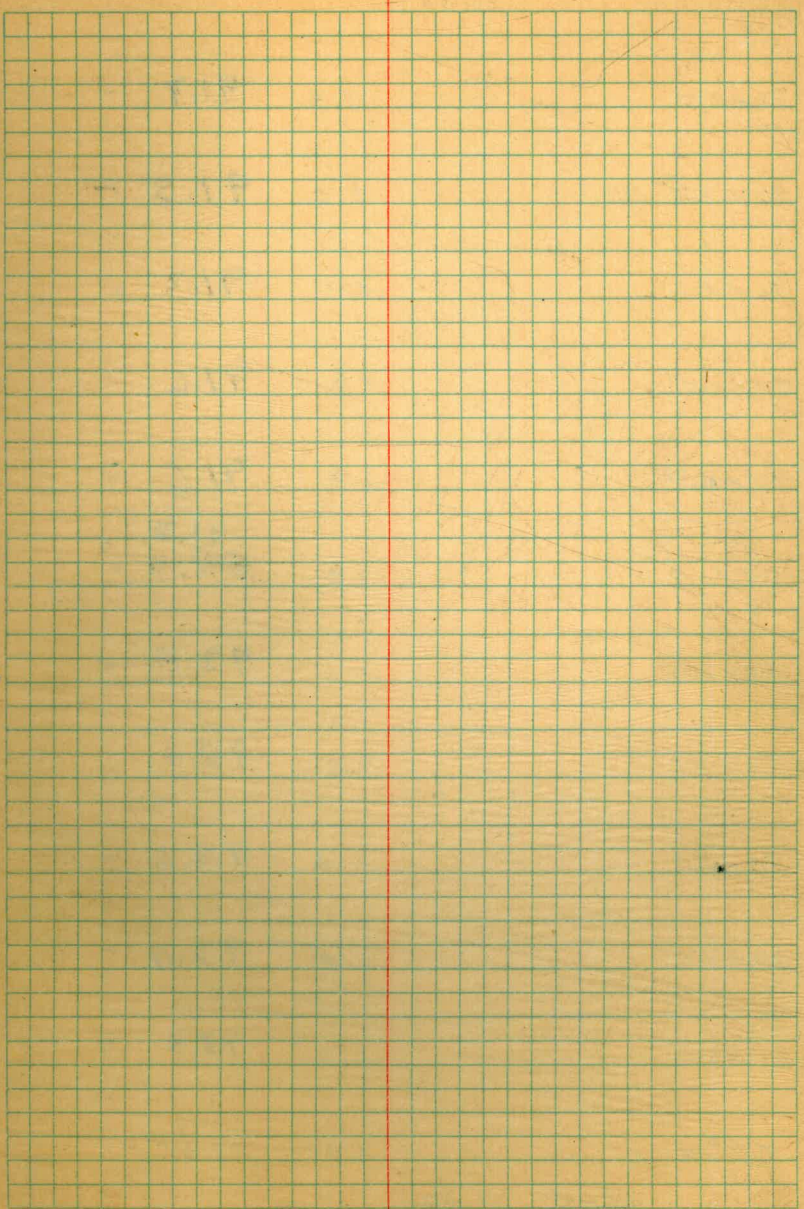
3.11 95.84⁵

74+18⁵³ x Pt. 2.6 92.9 ✓

74+50 2.6 92.9 ✓

75+00 3.3 92.2 ✓

75+50 3.5 92.0 ✓



Profile Elec. Ave Pipeline

5
95.44

76+00 3.8 91.7 ✓

76+125 BC 4.0 91.5 ✓

76+50 4.2 91.3 ✓

77+00 3.9 91.6 ✓

77+16²⁰ 3.9 91.6 ✓

77+50 3.8 ~~91.7~~
89.7 ✓

78+00 3.5 92.0 ✓

78+50 3.3 92.2 ✓

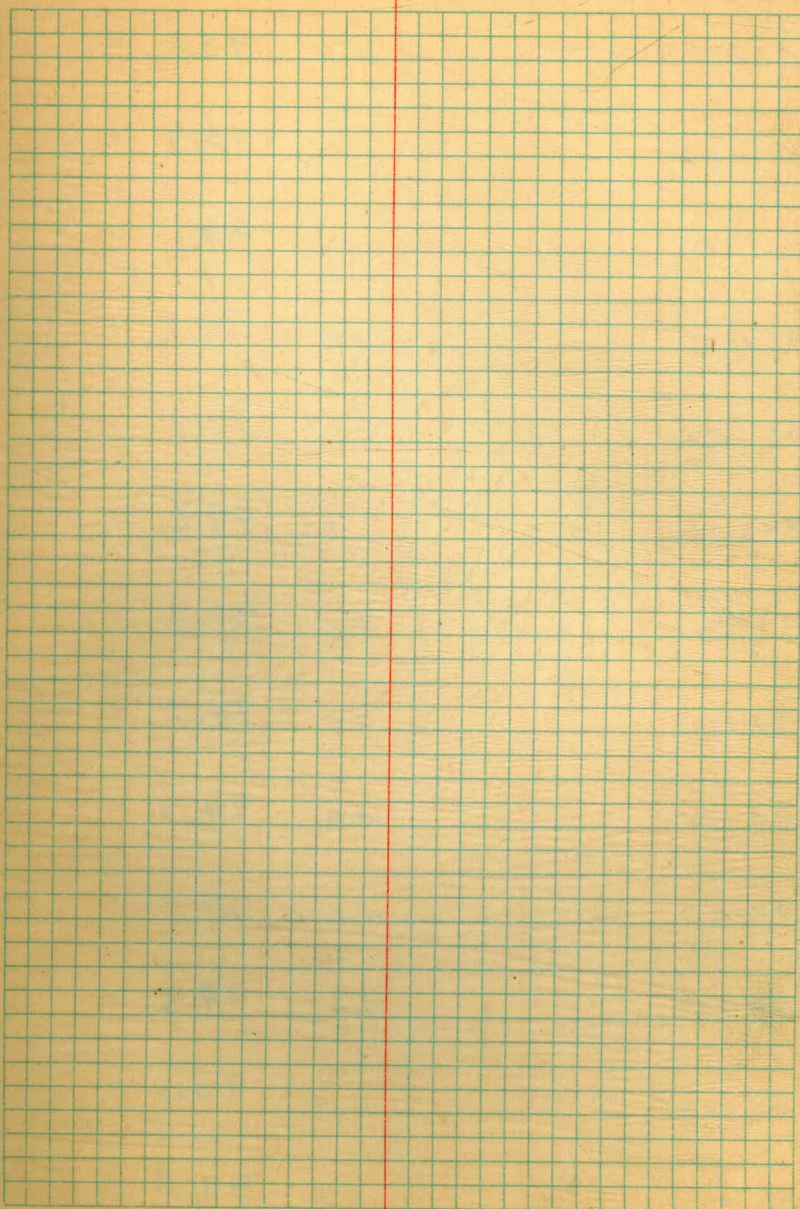
79+00 2.9 92.6 ✓

79+50 2.5 93.0 ✓

80+00 2.2 93.3 ✓

TP#1A 2.39 93.85

5.95 99.60



99.80

80+51⁰⁰ E.C. 5.5 93.6 ✓

81+00 5.2 93.9 ✓

81+50 5.0 94.1 ✓

82+00 4.9 94.2 ✓

82+50 4.7 94.4 ✓

83+00 4.5 94.6 ✓

83+50 4.3 94.8 ✓

84+00 4.4 94.7 ✓

84+50 4.4 94.7 ✓

85+00 4.6 94.5 ✓

85+50 4.8 94.3 ✓

86+00 5.4 93.7 ✓

86+50 5.8 93.3 ✓

99.80¹

87+00 6.2 92.9 ✓

87+50 5.8 93.3 ✓

87+81³⁰ APT 4.7 94.4 ✓

88+00 4.0 95.1 ✓

TP#14 TBM 5.14 93.86⁹
12.28 106.2²

88+50 9.1 97.14 ✓

89+00 5.8 100.44 ✓

89+30⁰⁰ 3.72 102.52 ✓

89+30⁰⁰ top curb 103.00 ✓

89+36⁹² END SIDEWALK (EE) 2.93 103.31 ✓

TP#15 2.85 103.89³
12.69 115.58^{6.0}

89+58⁴² APT 7.5 108.6 ✓

top E.H. SW Cor. Dawling Drive Palomar Ave

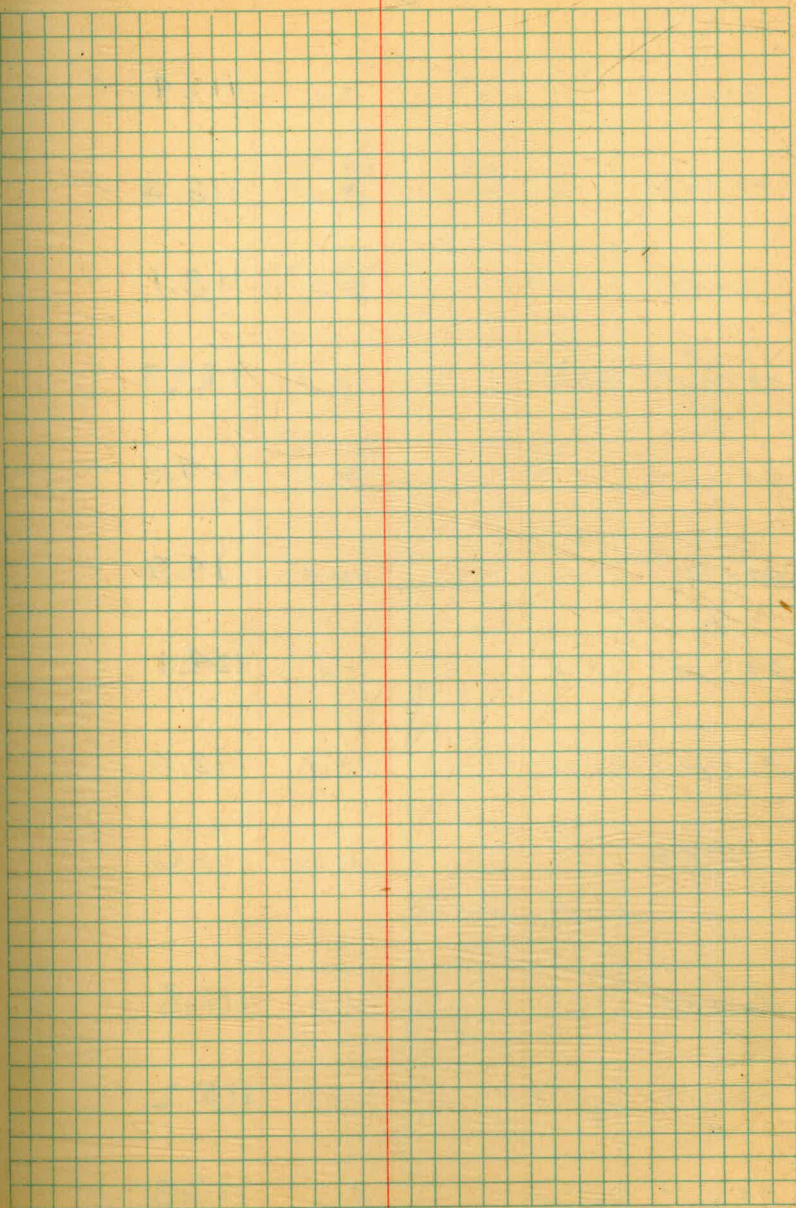
603
11.98

90° to tan head

89+58 ⁹²	10'E	3.4	112.7	
89+58 ⁹²	10'W	10.1	106.0	
90+00		5.5	110.6	✓
90+00	10'E	2.6	113.5	
90+00	10'W	7.7	108.4	
90+50		4.3	111.8	✓
90+50	10'E	2.0	114.1	
90+50	10'W	4.8	111.3	
7P ⁷⁶		0.84	115.24	
	10.04	125.28 ²		
91+00		9.6	115.7	✓
91+00	10'E	7.3	118.0	
91+00	10'W	11.5	113.8	

125.18²

91+50		9.1	116.2 ✓
91+50	10'E	6.6	118.7 ✓
91+50	10'W	9.6	115.7 ✓
92+00		7.8	117.5 ✓
92+00	10'E	5.1	120.2 ✓
92+00	10'W	10.1	115.2 ✓
92+50		5.4	119.9 ✓
92+50	10'E	3.4	121.9 ✓
92+50	10'W	8.0	117.3 ✓
92+68		5.4	119.9 ✓
93+00		8.4	116.9 ✓
93+00	10'E	4.8	120.5 ✓
93+00	10'W	10.2	115.1 ✓



12.5.83²

47

93+32 5.9 115.4 ✓

93+55 8.5 116.8 ✓

93+56 7.2 118.1 ✓

93+86⁸⁰ 4 Pt. 3.1 122.2 ✓

94+00 5.5 119.8 ✓

94+14 10.7 114.9 ✓

94+14 12' F 1.2 124.1 ✓

94+14 10' W 12.3 113.0 ✓

T.R. #17 11.08 114.80²

0.05² 114.85

94+50 1.7 112.6 ✓

94+50 10' F 40.9 115.2 ✓

94+50 10' W 4.0 110.3 ✓

W		E	
11.1	10'	6.9	2.7
		9	12
10.5	9.3	6.8	1.1
10	0.5	0.6	10
10.5	2.5		1.2
10	1.0		10
10.6		1.1	0.5
10		4	10
11.4	10.4		1.0
10	5.0		10

112. X 5²

95+00		5.8	108.5	✓
95+00	5'E	4.7	109.6	
95+00	5'W	6.5	107.8	
95+50		8.6	105.7	✓
95+64		9.5	104.8	✓
95+64	5'E	9.3	104.8	
95+64	5'W	9.7	104.6	
96+00		10.2	104.1	✓
96+50		9.9	104.9	✓
97+00		9.4	104.9	✓
97+50		9.0	105.3	✓
98+00		8.5	105.8	✓

Profile Elec. Ave. Pipeline

²
114.85

98+50 7.7 106.6 ✓

99+00 5.3 109.0 ✓

99+50 2.9 111.4 ✓

100+00 2.2 112.1 ✓

100+50 2.3 112.0 ✓

101+00 3.1 111.2 ✓

101+50 4.3 110.0 ✓

102+00 5.4 108.9 ✓

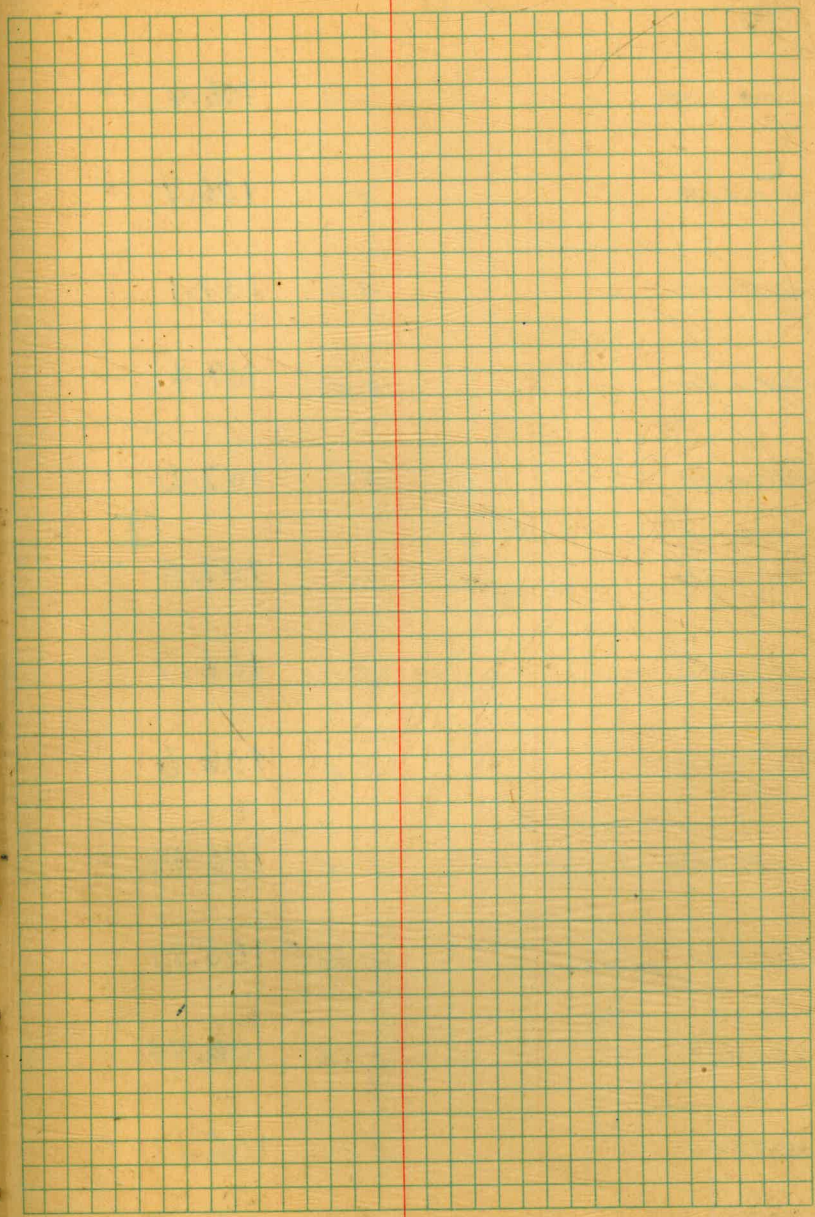
102+50 6.8 107.5 ✓

103+00 7.9 106.4 ✓

I.P. #18 8.01 106.2²

5.58 ⁸ 111.82

103+50 6.0 105.8 ✓



104+00		5.4	106.4	✓
104+50		5.1	106.7	✓
105+00		4.7	107.1	✓
105+50		4.4	107.4	✓
106+00		4.6	107.2	✓
106+50		4.8	107.0	✓
107+00		5.1	106.7	✓
107+50		5.2	106.6	✓
107+73 ²⁰	sedge conc.	5.38	106.44	✓
107+87		5.92	105.90	✓
108+04	t	5.28	106.54	✓
108+20		5.65	106.17	✓
108+34 ²⁰	N edge conc.	5.14	106.68	✓

8
111.X2

51

108+50	5.6	106.2	✓
109+00	5.9	105.9	✓
109+50	6.2	105.6	✓
110+00	6.5	105.3	✓
110+50	6.9	104.9	✓
111+00	7.3	104.5	✓
111+50	7.6	104.2	✓
111+80 ²⁵ sedge conc.	7.79	104.03	✓
111+93	8.43	103.39	✓
112+06	8.04	103.78	✓
112+27	8.95	102.87	✓
112+40 ²⁹ End	8.30	103.52	✓
BM BR SW Cor Ben Air + Dropper	6.02	105.70	✓

CONTD F.B. 767 - pg. 21 EWE.

REDUCED 4/16/48 J.M.A.

B.P.S. W. Car. Ben Air + Draper	105. 80 ⁸		
0.00	105. 80 ⁸		
T.P. ⁰¹	11.32	94. 88 ⁴	
0.98	95. 86 ⁴		
T.P. ⁰²	12.48	82. 88 ⁹	
2.09	84. 87 ^{5.0}		
	12.76	72. 81 ³	corr. 72.36
Mon. NE Car. Agate + Lovella Stone	114. 85 ⁸		
1.29	116. 84 ¹		
	15.46	103. 88 ⁶	
2.70	106. 88 ³		
Mon. W. Agate	6.41	99. 87 ⁹	
B.M. B.P.S. Car. Case + Turquoise	134. 85 ⁹		
1.61	136. 86 ⁵		
	12.09	124. 87 ⁴	
0.61	125.08		
	124.98		
	6.60	118. 88 ⁴	
3.53	122.01		
	127.91		
	7.13	114. 88 ⁸	

check levels

TP #10			79.05	
10.76	89.81			
TP #1		4.21	85.60	
6.22	91.82			
TP #2		5.38	86.44	
7.24	93.68			
TP #3 TBM. Calross		5.78	87.90	
3.52	91.42			
TP #4		7.70	83.72	
4.80	89.52			
TP #5 TP near Jend Elec. Ave.		7.55	80.97	
8.29	89.76			
TP #6		3.08	86.68	
9.20	95.88			
TP #7		2.25	98.63	
12.02	105.65			
		5.79	99.86	99.87
				99.84

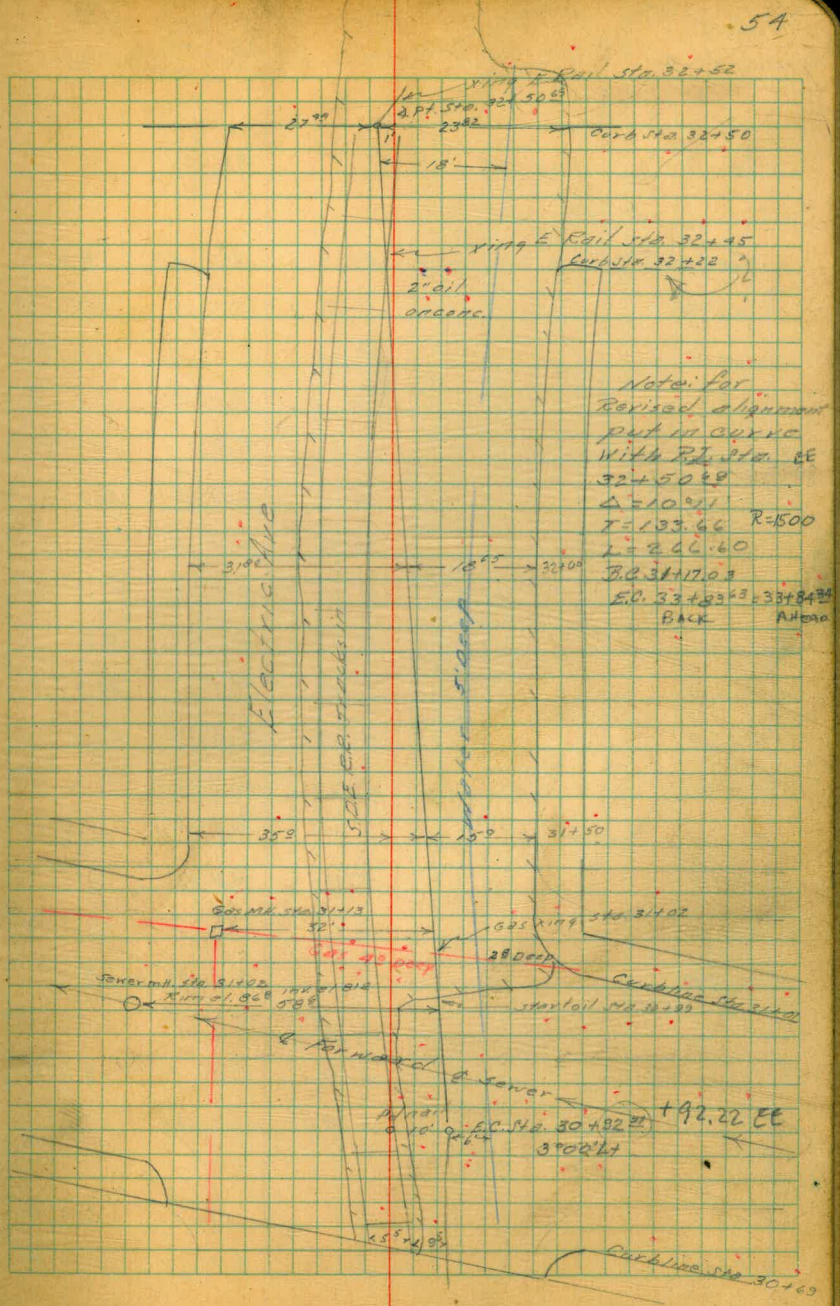
Mar. 4, 1948

Rainey
Baker
Shipman

53

TBM

TP #7 99.94
Tyler



Notes for
 Revised alignment
 put in curve
 with P.I. Sta. EE
 32+50.88
 $\Delta = 10^{\circ}11'$
 $R = 1500$
 $T = 133.66$
 $L = 266.60$
 B.O. 31+17.03
 E.O. 33+83.53
 BACK Atlanta

Electric Ave

SIDE E.R. TRACKS

Car Line

Forward & Cover

+92.22 EE

3700'ht

Car Line Sta. 30+69

July 20 Rainey
1948 King
West

Nudge conc 18+12+5	82.41		
8.10 · 30.51			
0+00	8.1	82.4	80.0
0+50	7.2	83.3	80.3
1+00	6.8	83.7	80.6
1+50	6.5	84.0	81.0
2+00	6.4	84.1	81.3
2+50	6.1	84.4	81.6
3+00	5.8	84.7	82.0
3+50	5.5	85.0	82.3
4+00	5.5	85.0	82.6
4+50	5.4	85.1	83.0
5+00	5.2	85.3	83.3
5+50	4.6	85.9	83.6
6+00 conc.	5.8	84.7	84.0
6+50	5.9	84.6	84.0
7+00	4.7	85.8	84.0
7+50	4.1	86.4	84.4
8+05 BC.			
8+00	3.5	87.0	84.8
8+50	2.4	88.1	85.2
TP #1	2.44	88.07	
4.33 · 32.40			
9+00	3.1	89.3	85.4
9+50	2.3	90.1	85.8

(A) 6" C.I. Pipeline Elec. Ave. Columbia
20' E.R. for construction by City to forward

Int. existing on Nudge conc. Columns

6.5
6.6
6.5
6.2
6.3
6.2
6.2
5.9
5.6
5.5
5.8
4.2
4.1
5.3
5.5
5.7
6.4
7.4
7.8

6" C.I. Electric Ave from
Columbia to Forward Cont.

	92.40			
10+00	4.1	88.3	86.2	
10+50	3.9	88.6	86.6	
11+00	3.5	88.9	87.0	
11+50	3.4	89.0	87.4	
12+00	3.6	88.8	87.8	
12+43	3.7	88.7	88.0	
CK to TBM + in curb	4.44	87.96	87.98	

N.W. Cor. 2nd & Ele.

Curb

5.6

5.5

5.4

5.1

4.5

Avert w/ existing gate & edge curb
forward

See F.B. 677
Pg. 69

Re-alignment & re-profile
Elec. Ave. line from W. end Agate
to 5+32.22 St.

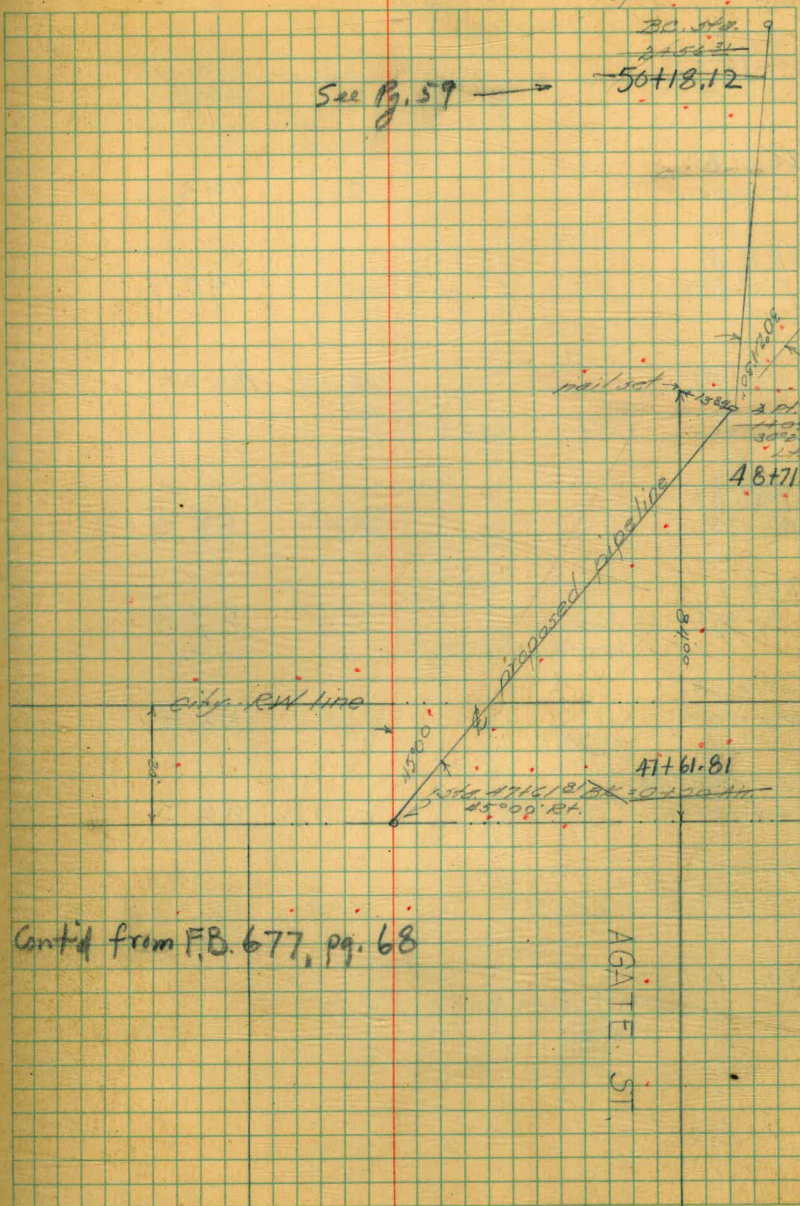
Station	BM. Corp. Elev.	99.87	
47+61.81	2.77	102.64	3.8 98.8
48+11.81	2+50		4.3 98.3
48+61.81	1+00		3.9 98.7
48+71.59	1+09.22		4.0 98.6
49+09.31	1+47.25		5.6 97.0
49+11.81	1+50		7.3 95.3
49+15.81	1+54	bottom	8.1 94.2
49+17.81	1+56		7.8 94.8
49+23.81	1+62		7.1 95.5
49+28.81	1+67		5.8 96.8
49+61.81	2+00		6.8 95.8
50+11.81	2+50		8.2 94.4

Reduced by EWF 11-12-48

Nov. 8, 1948 Rainey
King
Pater
Rogers

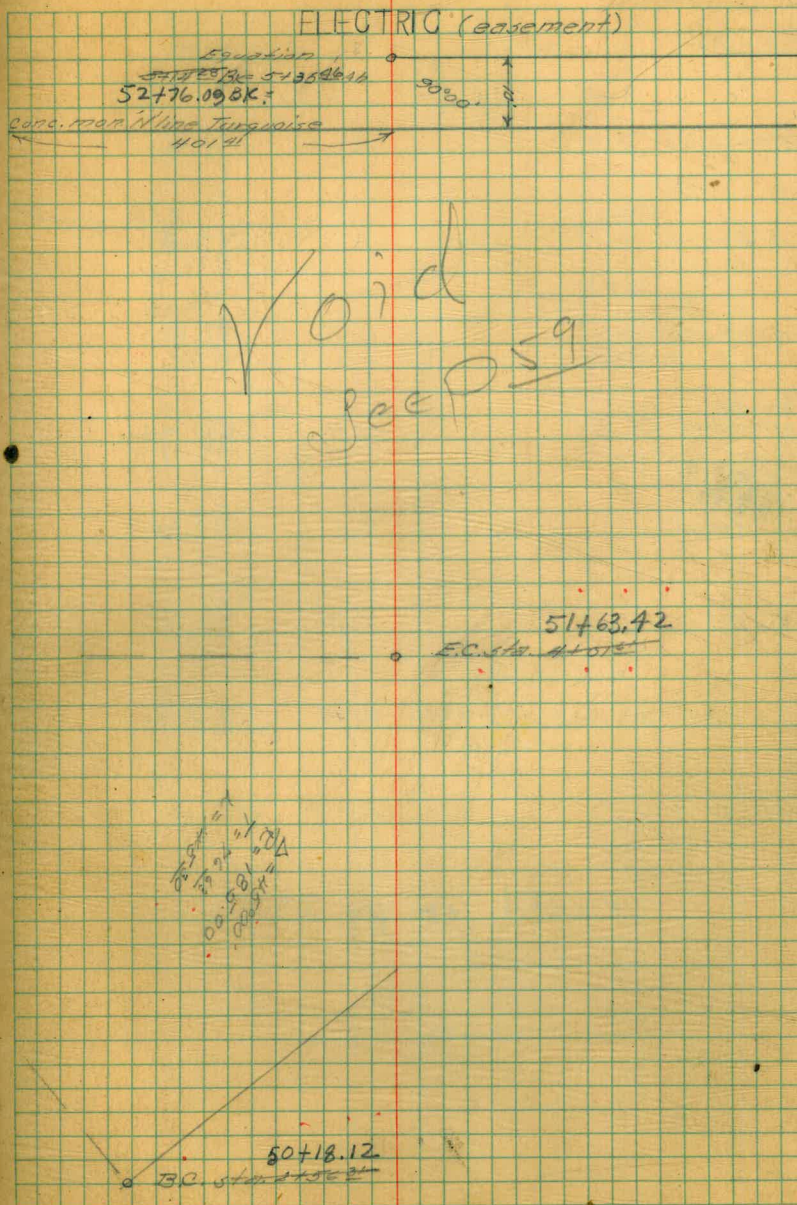
57

See Pg. 59 →



102.64		
50+18.12 2156	8.3	94.3
50+61.81 3100	9.4	93.2
51+11.81 3450	11.9	90.7
TR. 41	12.34	90.30
2.93	93.23	
51+61.81 4100	4.7	88.5
52+11.81 4450	5.9	87.3
52+61.81 5400	6.8	86.4
52+76.09 BK. 5+1428 BK. = 5+352 BK.	6.9	86.3
ck. to 3+84.2	5.9	87.3

Cont'd. on page 23



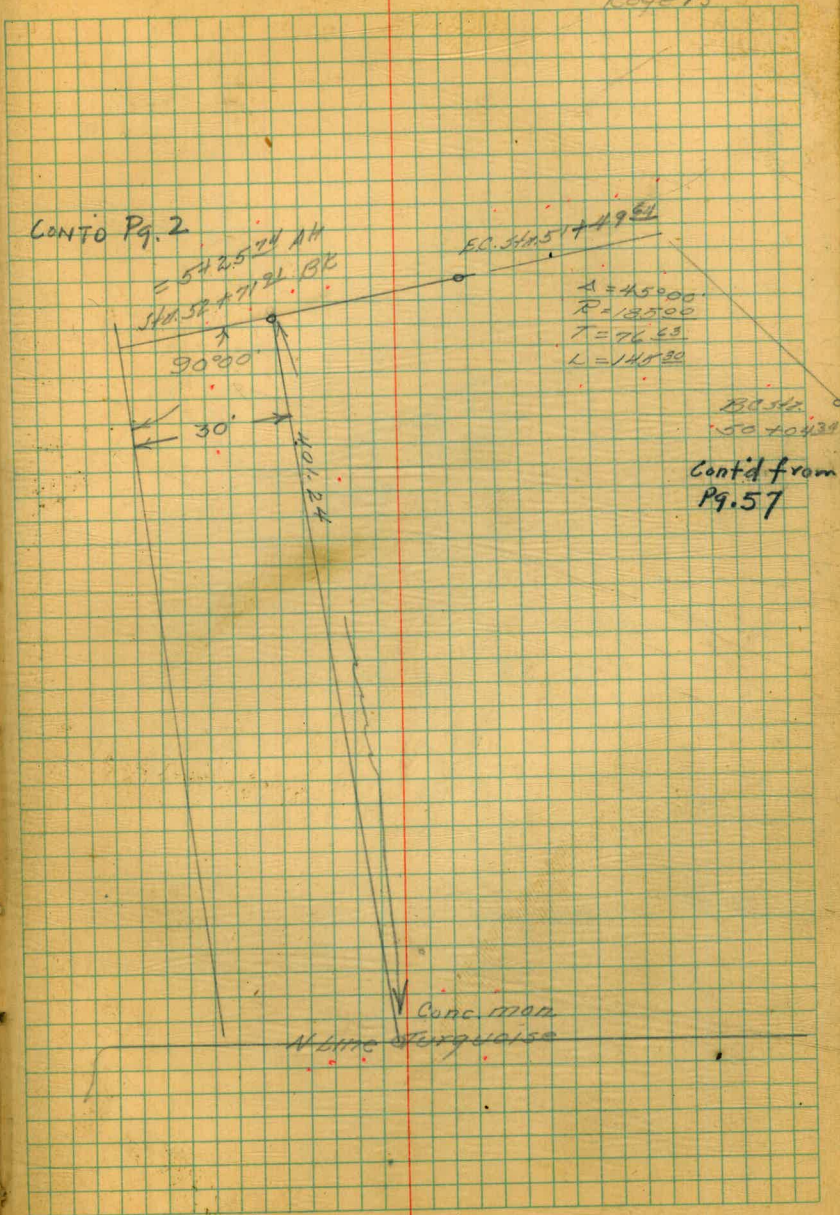
Realignment
Elev. Ave.

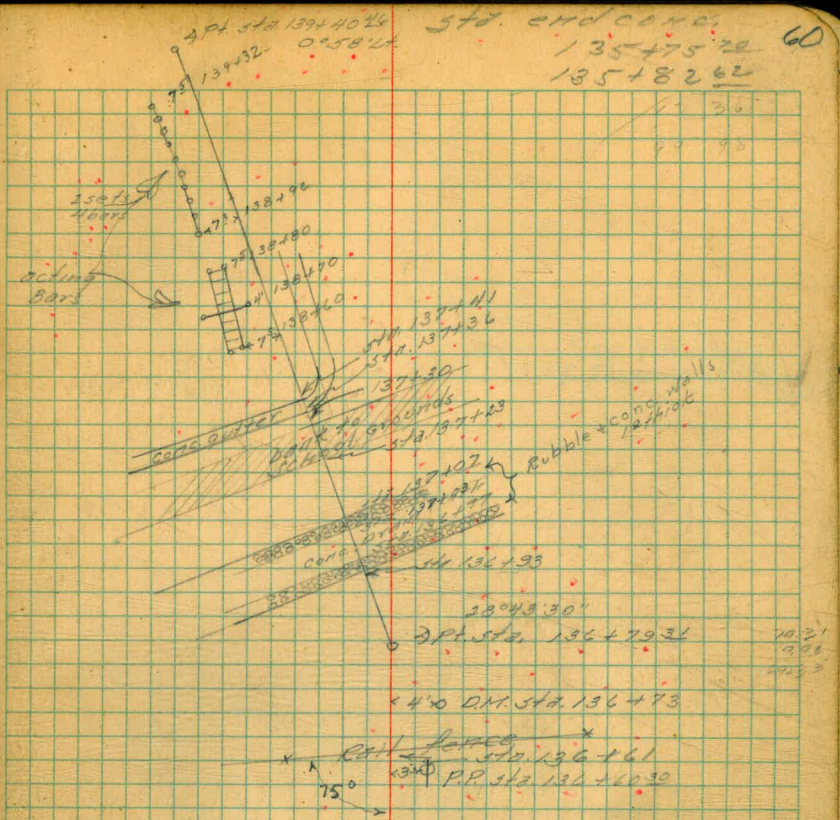
Station	Dist	Elev
3+84 ²		88.4 ³
9.11	96.41	
50+04 ² B.C.	2.1	94.6
50+50	3.3	93.4
51+00	5.3	91.4
51+49 ² E.C.	7.8	88.9
52+00	9.1	87.6
52+50	9.9	86.8
52+71 ² B.P. = 5+25 ² A.H.	9.5	87.2
cl to 5+35	10.3	86.5 ⁴

Contd. on pg. 23

Nov. 18, 1948

Rainey
Baker
Rogers 59





Contd. from P.B. 767-Pg. 16

GIRARD AVE

GENTER AVE

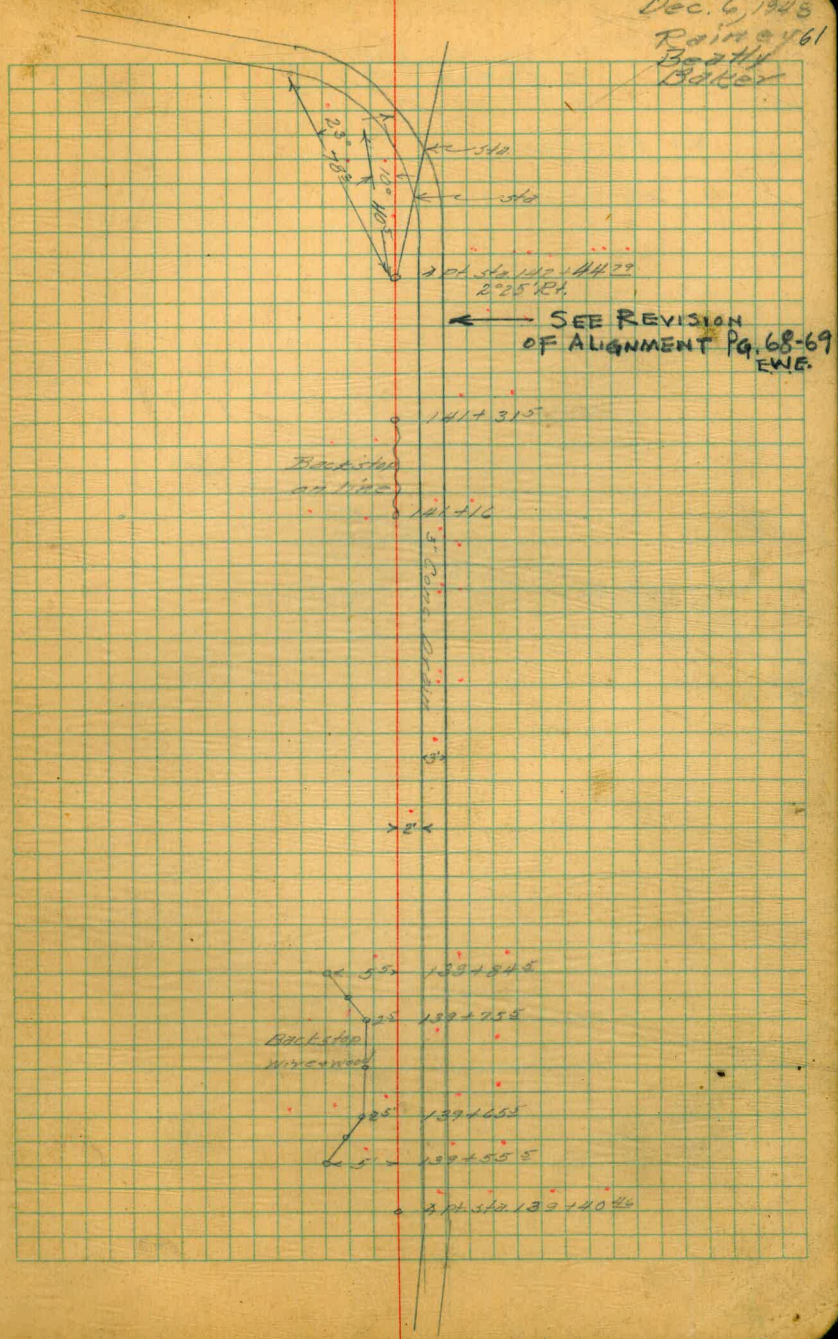
ROT 7' off profile

Dec. 6, 1948

Rain 0.161

Bathy

Baker



Dec. 7, 1948 Rainey

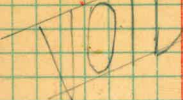
62

Beatty

Boyer

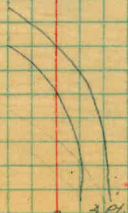
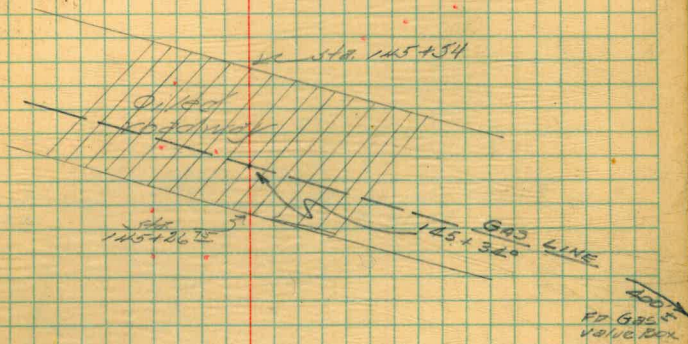
of Cabrilho
Practical

147+72.88
CR = 23.24



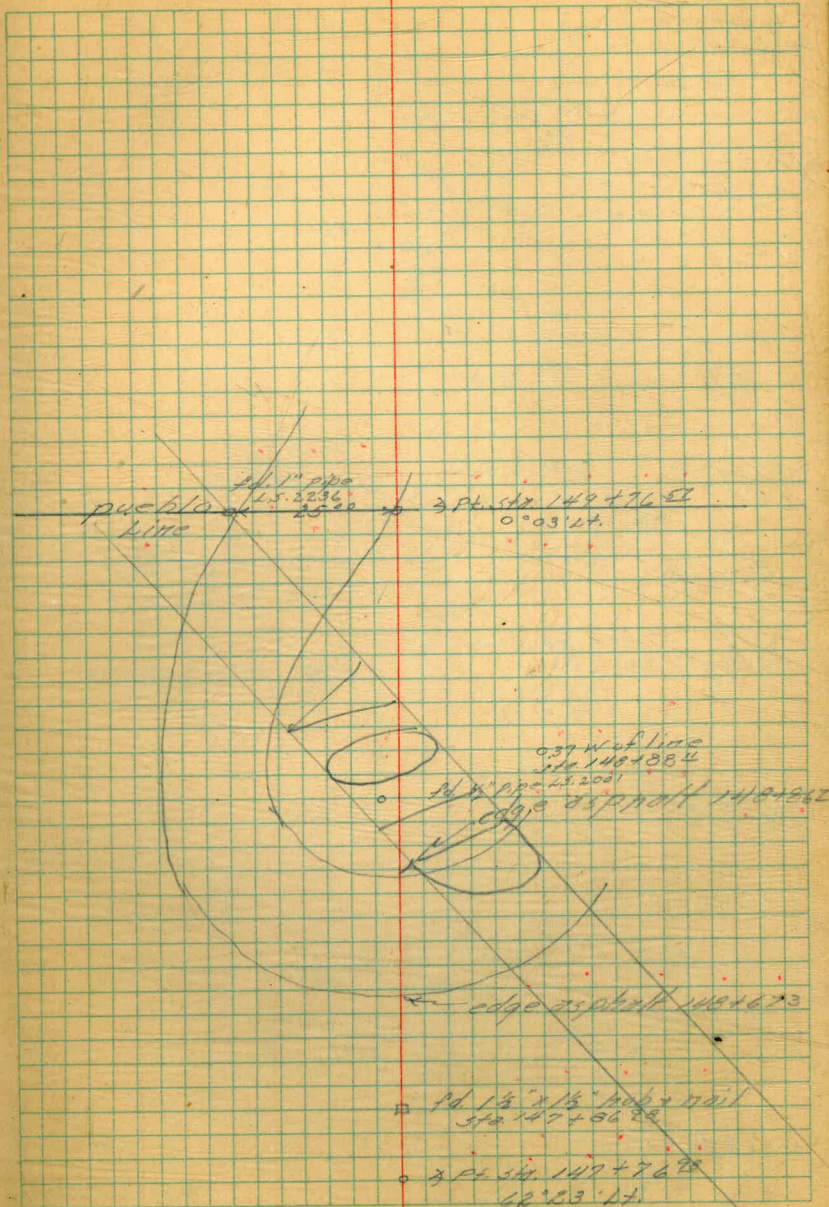
CONT'D. Pg. 64

• POT. 146+87.54 ✓



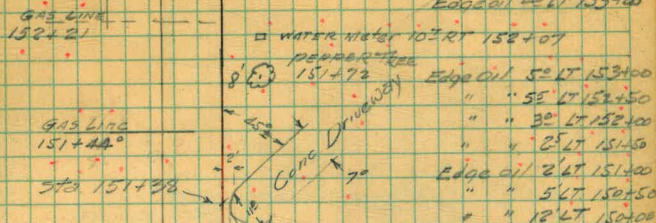
NOTE
SEE REVISION OF
ALIGN. PG. 68-69

• POT. 142+44.22



Dec. 9 1948. Beatty
Baer
Rodgers

Begin of E 153+975
Edge of 151+72 153+150



153+60 W. Meter ^{Box} 1° RT
152+98.5 W. Meter ^{Box} 1° RT

149+93.9 L PT 0°01'45" RT

70.34

149+23.33 L PT 22°32' RT

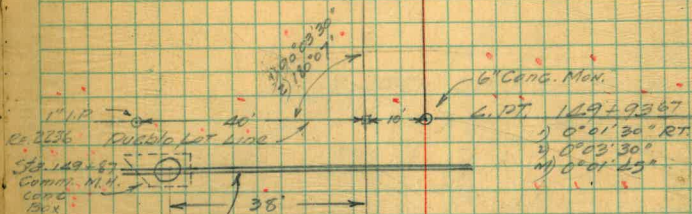
26.12

148+97.21 L PT 22°30' LT

2.16

148+05.05 L PT 62°27' LT

146+87.34 P.O.T.



2-CABLES (Bot. # 4-way duct
Top # Single duct
2" Lead cables
12')

L PT 149+23.33
1) 22°32' RT
2) 25°04'
M) 22°38'

148+97.21 L PT
FD. 1/2" I.P. LS. 2001 1) 22°30' LT
2) 45°00'

148+09.65
FD. 3/4" I.P. LS. 2001

GULLY

L PT 148+05.05
1) 22°27' LT
2) 124°56'
M) 65°27' LT

P.O.T.
146+87.34

NOTE
SEE REVISION
OF ALIGNMENT
Pg. 68-69

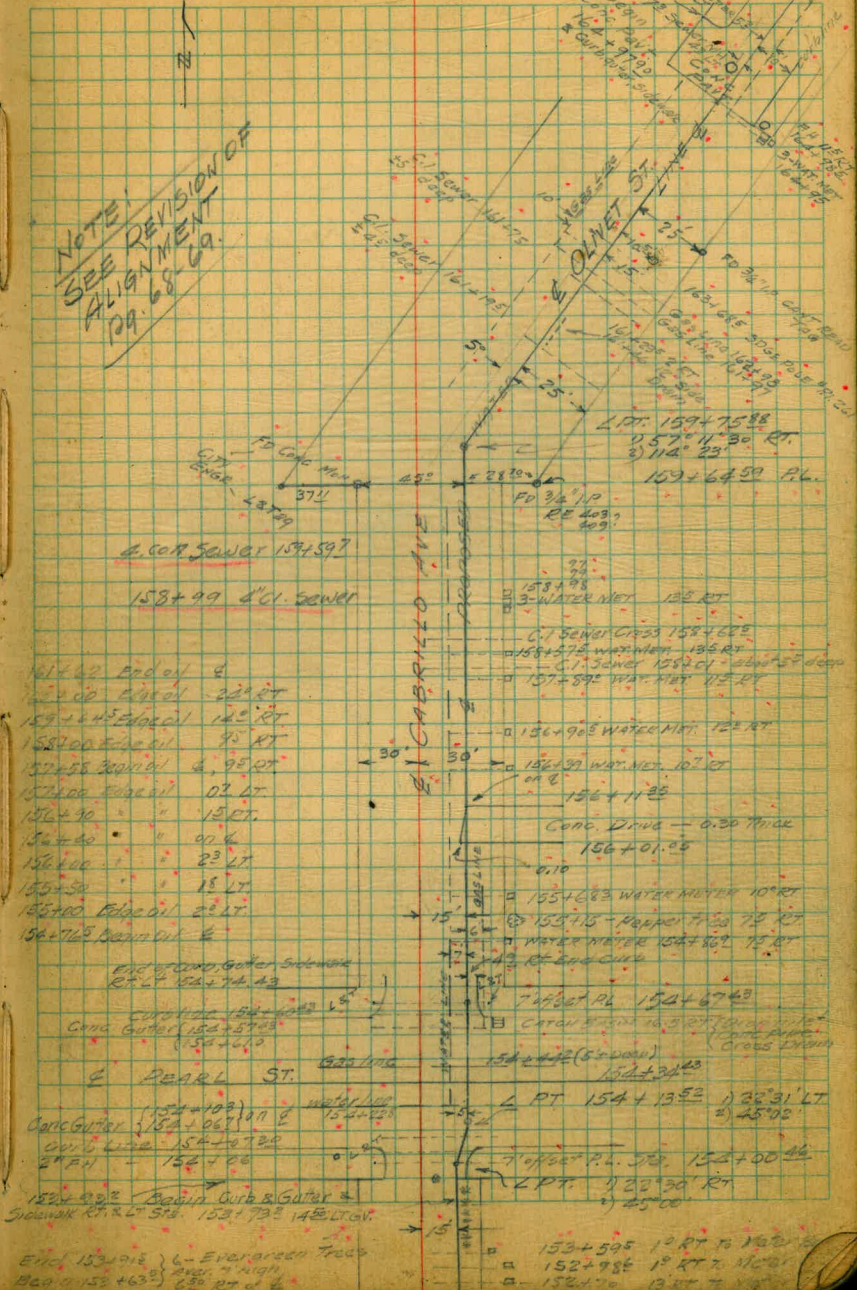
164+97.90 Beginning Conc. Pav't
Curb & Gutter

159+75.88 L PT. 57°11'30" RT

152+13.52
152+46.89 L PT. 22°31' LT

152+00.26
152+30.83 L PT. 22°30' RT

NOTE
SEE REVISION OF
ALIGNMENT OF
00+68.66



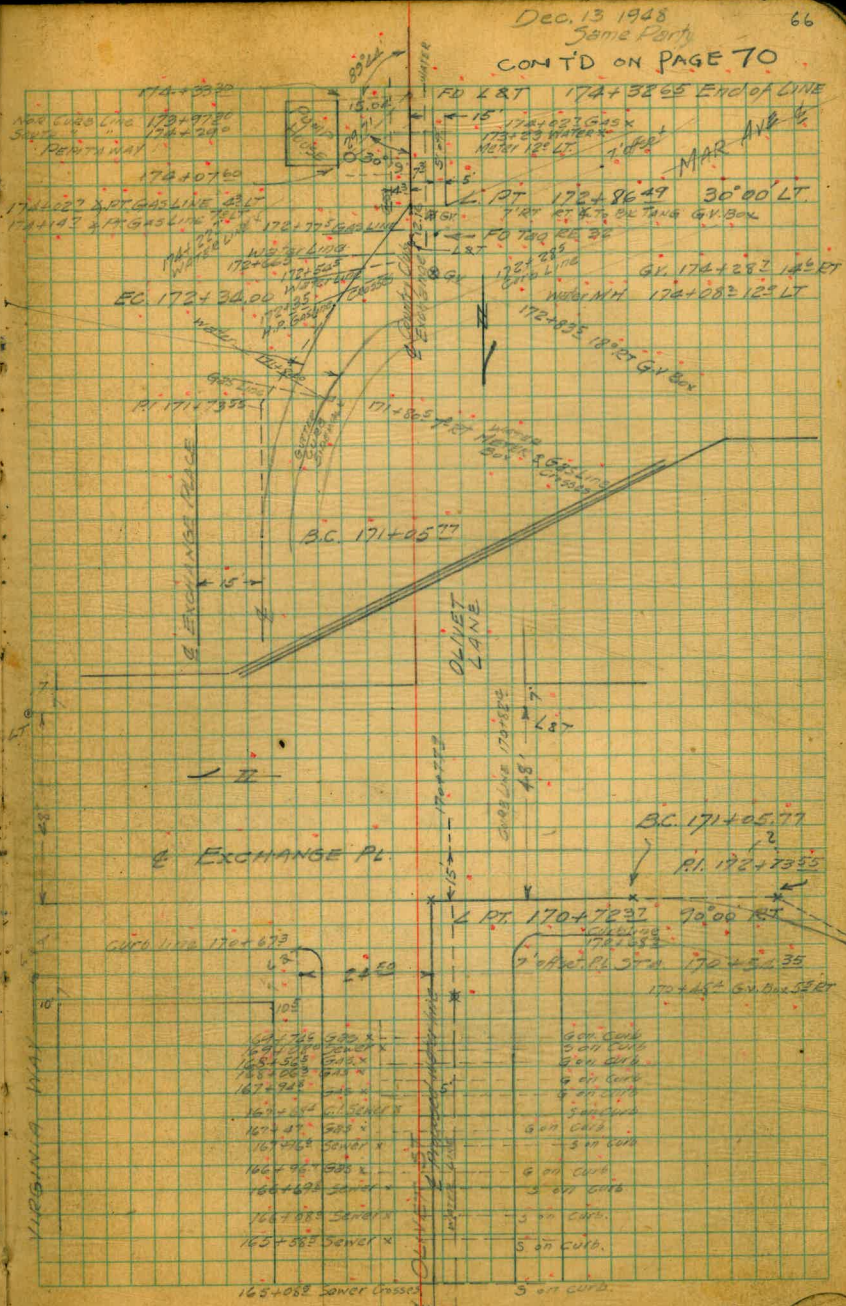
- 152+00 Edge of - 22' RT
- 152+00 Edge of - 12' RT
- 152+00 Edge of - 9' RT
- 152+00 Edge of - 9' RT
- 152+00 Edge of - 02' LT
- 152+30 " 15' RT
- 152+40 " 00' L
- 152+40 " 23' LT
- 152+50 " 15' LT
- 152+60 Edge of - 22' LT
- 152+75 Cabildo St
- 152+75 Gutter Sidewalk
RT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43
- 152+75 Gutter Sidewalk
LT - 152+74.43

- 153+00 Edge of - 22' RT
- 153+00 Edge of - 12' RT
- 153+00 Edge of - 9' RT
- 153+00 Edge of - 9' RT
- 153+00 Edge of - 02' LT
- 153+30 " 15' RT
- 153+40 " 00' L
- 153+40 " 23' LT
- 153+50 " 15' LT
- 153+60 Edge of - 22' LT
- 153+75 Cabildo St
- 153+75 Gutter Sidewalk
RT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43
- 153+75 Gutter Sidewalk
LT - 153+74.43

152+98.88 Beginning Conc. Pav't
Curb & Gutter
Station RT. & LT. Sta. 153+73.145 LT. Sta.

153+98.88 10' RT to 153+98.88
152+98.88 10' RT to 152+98.88
152+98.88 10' RT to 152+98.88

172+34.00	E.C.	22°57'30"	25' LT TO 10" WATER	7.85 To CURB OF RT. (ROAD)
+25		21°21'01"		5.11 "
172+00		16°52'26"	230' LT TO 10" WATER	6.95 "
+75		12°23'51"		6.82 "
		$\Delta = 45^\circ 55' \text{ RT.}$ $R = 160.00$ $T = 67.78$ $L = 128.22$ $Ch. 2497$		
171+73.55	P.I.			
+50		7°55'10"	248' LT TO 10" WATER	6.02 "
+25		3°26'41"		5.70 "
171+05.77	P.I.C.	0°00'	268' LT TO 10" WATER	5.15 To CURB
170+72.37	L PT.	90°00' RT	276' LT TO 10" WATER	RT 3 TO FWD TANG.
169+24	425' LT TO 6" Sewer Flushing 4260' 19.			



DEC. 14 1948
Same Party

67

174+32⁶⁵ L & T { 2 COUNTRY CLUB DRIVE
7' OH 50 PL. PEDITA WAY

174+29° SOUTH " " " "

173+97³⁰ NORTH CURB LINE PEDITA WAY

173+86° 16⁵ LT TO 10' WATER (2 PT.)
173+53 16⁵ LT TO 10' WATER

172+86⁶⁹ 4 PT.

30°00' LT

23' LT TO 10' WATER
RT. X TO FWD TANG

ELECTRIC AVE. P. L.

REVISED ALIGNMENT.

STA. 142+44.79 TO STA. 154+25.63

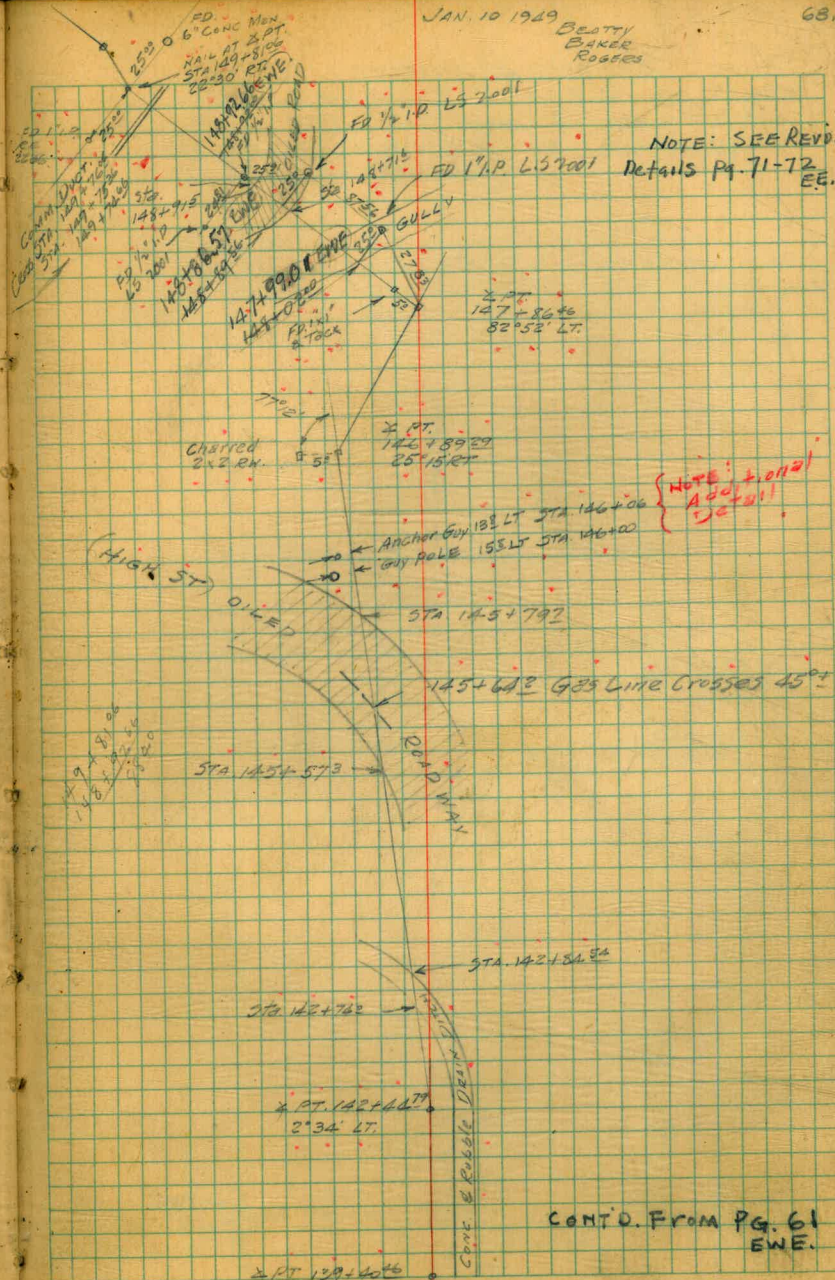
Note
See BK 767
pg. 52 for Elev.



JAN. 10 1929

BERRY
BAKER
ROGERS

68.



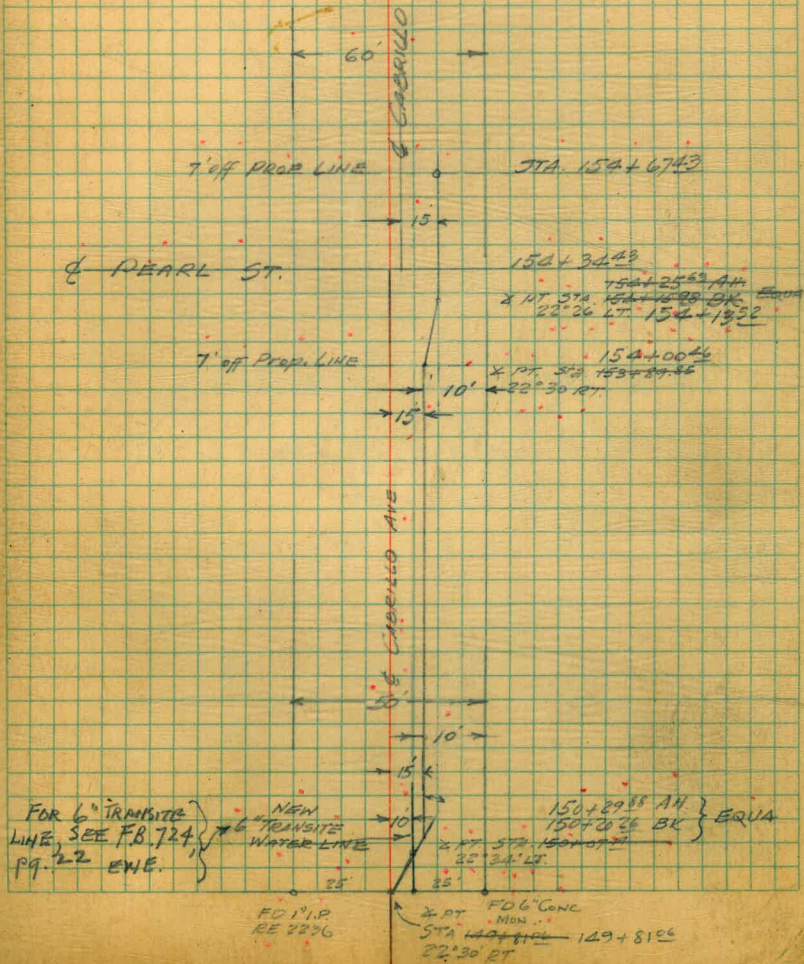
CONT'D. FROM PG. 61
EWE.

REVISED ALIGNMENT (CONT'D)

CHECKED WITH MR. HALL, ASST. CITY ENGR. WHO STATED NO PETITION RECEIVED TO DATE. WE ARE OKAY TO KEEP P.L. 15' FROM PROP. LINE. EWE 1/12/49 AT STA. 151+00± TO 153+83±

NOTE:

In Conversation with property owner, was informed that a petition has been started to decrease width of Cabrillo Ave. from Pearl St. to Olivet; from 60 wide to 40 wide. Present location could possibly conflict with future curb line. Ho/ro 18



ELEC. AVE.

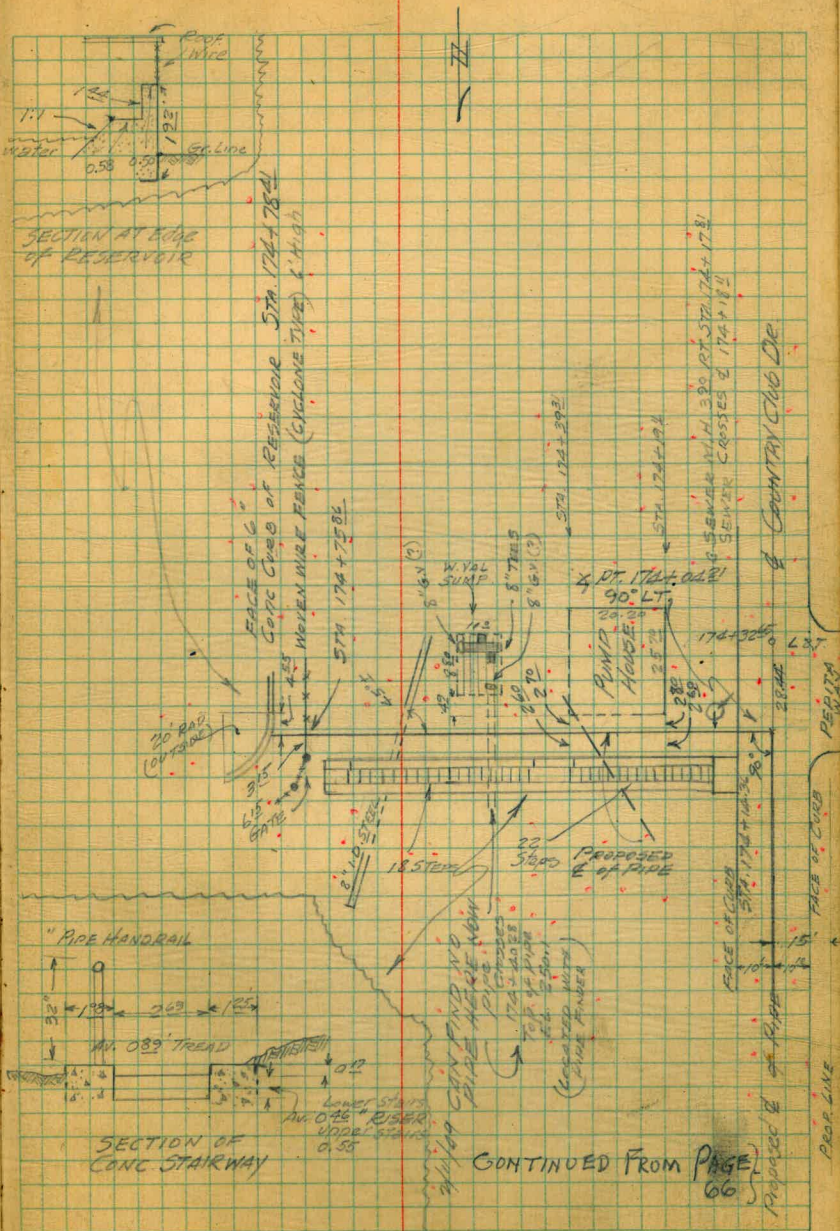
ALIGNMENT OF PIPE LINE FROM
COUNTRY CLUB DRIVE TO RESERVOIR

CAN FIND NO INDICATION OF 8" WATER
STA 174+4028 WITH PIPE FINDER 2/4/49-45

174+346 8" 10" WATER AT PUMPHOUSE 2⁷⁰ RT

174+323 8" 10" WATER CROSSES

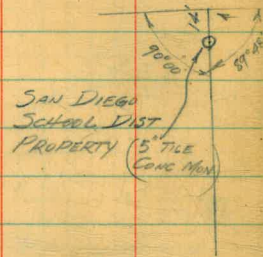
174+204 19³ LT. X PT. 10" WATER



JAN 10 1949
Same Party

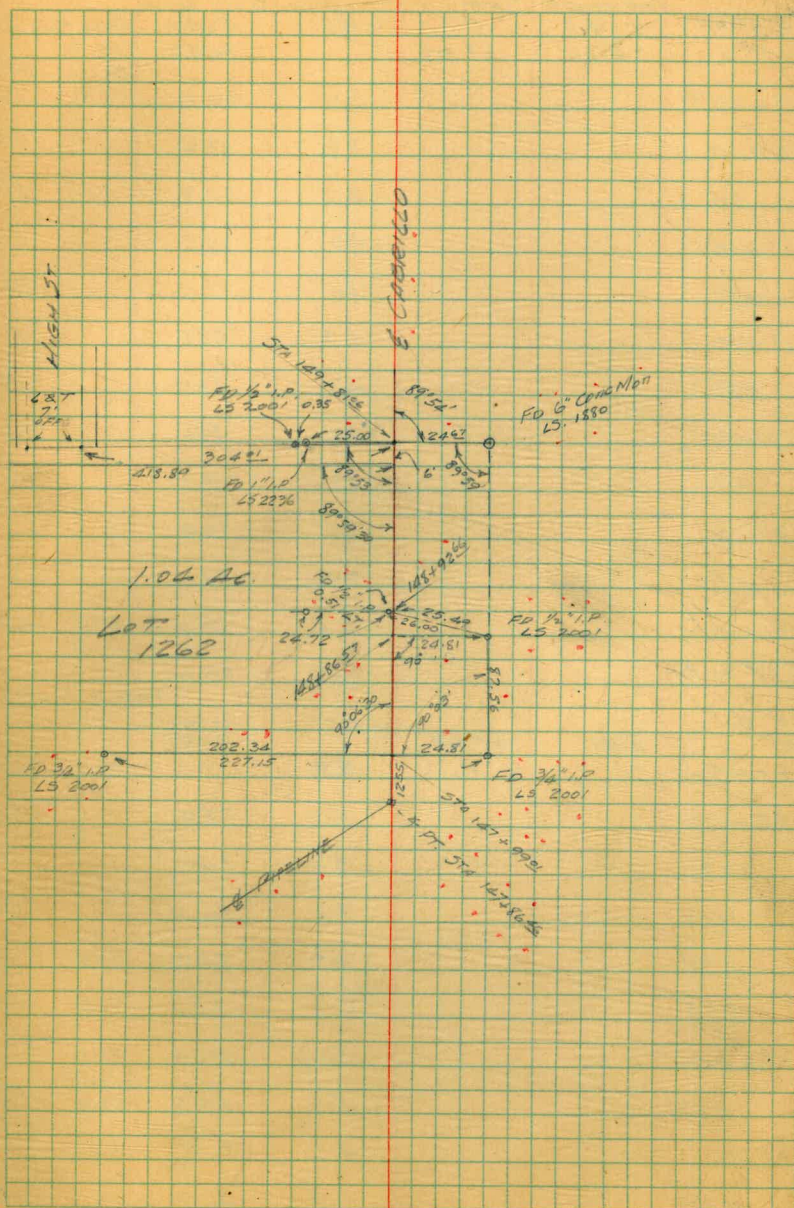
70.

TIES TO PRIVATE Property 1.04 Acre Tract
IN LOT 1262 Pueblo, LANDS



FEB. 4 1949

72



June 8 1949

73

STATION	GRADES + B.S.	SET I.I.	Electric Ave - F.S.	ELEV.	Cont. Mon. (29.53) GRADE CUT
IP #5	6.06	87.03		80.97	77.5 - 058
15+75 ⁰⁰			3.7	83.3	058
16+00			3.8	83.2	057
+50			4.2	82.8	053
17+00			4.3	82.7	052
+50			5.0	82.0	045
18+00			4.7	82.3	048
+50			4.3	82.7	052
19+00			4.0	83.0	055
+50			3.7	83.3	058
20+00			3.6	83.4	059
+50			3.4	83.6	061
21+00			3.0	84.0	77.5 - 065
IP Top R.H.			3.02	84.01	
CK IP			6.06	80.97	
IP	5.61	89.62		84.01	
21+50			5.8	83.5	77.5 - 062
22+00			5.7	83.9	061
+50			5.6	84.0	062
23+00			5.2	84.4	062
+50			4.7	84.9	77.5 - 074
+75			4.8	84.8	78.5 - 063
24+00			5.2	84.4	78.5 - 052
+50			5.3	84.3	78.6 - 052
25+00			4.8	84.8	78.6 - 062
+50			4.4	85.2	78.7 - 062
25+99 ⁸⁰ DC			4.34	85.28	78.8 - 065
26 ⁷⁰ TBM			5.57	84.05	RP HUB LT

061 (6) West

JUNE 16, 1949

$$\frac{80.97 + 5.79}{86.76} = 84.78 \quad (22+50)$$

6-20-49

GRADES SET - Electric Ave PL

TP	8.36	92.41	84.05				
26+50			5.9	6.6	85.8	86.5	78.8 c70
27+00			5.7	6.3	86.1	86.7	78.8 c72
27+50			6.0	6.3	86.1	86.4	78.8 c72
28+00			5.7	5.9	86.4	86.7	78.8 c70
28+37.5			5.2	5.5	86.9	87.2	80.7 c62
+50			5.0	5.3	87.1	87.4	80.7 c62
29+00			4.6	4.8	87.6	87.8	80.8 c68
+50			4.3	4.5	87.9	88.1	80.9 c70
30+00			4.0	4.2	88.2	88.4	81.0 c72
+50			3.7	3.7	88.7	88.7	81.2 c72
+87.41				3.8	88.6		81.3 c72
31+18.81				3.7	88.7		81.3 c52
CEP #7			4.52		87.89		87.87 100.31 = 87.90 29.53

June 21 1949

TP # 7	4.98	92.87	87.89				
31+50.23			4.2		88.7		83.8 c42
+81.75			4.2		88.7		83.8 c42
+13.3							(2" AVA IN PLACE)
32+19.27			4.3		88.6		83.9 c42
+22.78			4.3		88.6		83.2 c52
+76.10			4.4		88.5		80.9 c76
33+07.58			4.5		88.4		80.8 c76
+39.10			4.5		88.4		80.8 c76
+70.62			4.6		88.3		80.7 c76
34+02.14 BK			4.7		88.2		80.7 c75
32+02.55 AH							

74

REVISED ALIGNMENT

Moved (C) Hub 15' LT

E Elect Manhole

" " " 30' LT

7° RT 4'

" " " 30' LT

STA. 27+75

" " " 20' LT

" " " 15' LT

" " " 05' LT

GRADES SET — ELECTRIC AVE

92.87

34+50			4.7	88.2	80.7	C75
35+00			4.7	88.2	80.6	C75
+50			4.8	88.1	80.6	C75
36+00			4.9	88.0	80.5	C75
+50			5.0	87.9	80.5	C74
36+99.83	5.52	93.42	4.97	87.90	80.5	C73
37+07.83			5.6	87.8	80.5	C73
+25.76			5.6	87.8	80.5	C73
+33.96			5.7	87.7	80.5	C73
+50			5.8	87.6	80.4	C73
38+00			5.9	87.5	80.4	C71
+28.46			6.1	87.3	80.4	C69
+56.53			6.3	87.1	80.4	C67
39+00			6.2	87.2	80.4	C68
+50			6.1	87.3	80.4	C69
40+00			6.0	87.4	80.4	C70
+50			5.9	87.5	80.3	C73
41+00			6.1	87.3	80.3	C70
+50			6.2	87.2	80.3	C67
42+00			6.3	87.1	80.3	C68
+50	5.02	92.17	6.27	87.15	80.3	C68
43+00			5.1	87.1	80.3	C68
+50			5.2	87.0	80.3	C67
43+00			5.3	86.9	80.3	C66
+50			5.4	86.8	80.3	C65
44+00			5.5	86.7	80.2	C65
+50			5.6	86.6	80.2	C64

Revised Alignment

37+03.83 * PT Revised to POT.

6-21-49

45+00	92.17	5.8	86.4	80.2	C63
+50		5.5	86.7	80.2	C65
46+00		5.1	87.1	80.2	C69
+44.02		4.2	88.0	79.4	C84
OK & PT		4.24	87.93	87.99	

June 27 1949

IP	2.52	90.53		87.99	
44+83.81 (Begin 22°30' Special)			3.9	86.6	80.2 C64
44+91.81			4.0	86.5	80.2 C63
45+09.94			4.0	86.5	80.2 C63
45+17.94			4.0	86.5	80.2 C63
45+50			3.8	86.7	80.2 C63
46+00			2.4	87.1	80.2 C69
46+44.02			2.5	88.0	79.4 C84
46+52.02			2.6	87.9	79.4 C85
46+83.52			2.7	85.8	79.4 C64
47+15.02			6.5	84.0	79.4 C53
47+46.31			9.3	81.2	76.24 C49
47+77.70			10.9	79.6	72.09 C59
47+82.95			11.1	79.4	72.25 C62
47+90.94			11.9	78.6	72.70 C57
48+22.66			11.9	78.6	72.90 C52
48+53.94			11.8	78.7	72.91 C58
49+00			11.2	79.1	72.90 C62
IP	6.36	85.88	11.01	79.52	
+50			6.4	79.5	72.90 C66

76

June 24, 1949

REVISE ALIGNMENT AS STAKED	AS BUILT
44+86.62 X PT 22°30' LT	44+87.81
45+12.75 X PT 22°30' RT	45+13.74

6/27/49

	85.88.					
50+00		6.2	79.7	72.90	068	
+1144		6.2	79.7	72.90	068	
+4284		5.9	80.0	75.42	066	
+7421		5.6	80.3	75.78	065	
51+00		5.4	80.5	76.0	065	
+50		4.9	81.0	76.6	064	
52+00		4.3	81.6	77.1	065	
+50		3.7	82.2	77.8	064	
53+00		3.2	82.7	78.3	064	
+50		2.7	83.2	79.0	062	
P +75	6.60	89.75	2.73	83.15	79.2	060
+8920		6.4	83.4	79.1	062	
54+2070		5.6	84.2	79.0	052	
+50		5.4	84.4	78.8	056	
55+00		5.0	84.8	78.7	061	
+50		4.8	85.0	78.7	063	
56+00		4.7	85.1	78.6	065	
+50		4.7	85.1	78.6	065	
57+00		5.0	84.8	78.5	063	
+3571		5.1	84.7	78.5	062	
+6033		5.3	84.5	78.5	060	
+6453		5.5	84.3	78.5	058	
P		4.58	85.17	78.5	058	

2.47 35 RT
57+95.20

77

5.01
4.46
85

87.15
59.5
89.10
27.9
5.0

7/20/49

El. East Cor 84.63
El. West Cor 83.73

53+920 2" AYA SET. FIN Elev. 83.90

Elev Top of VALVE BOX LA CANADA AT. COMMERCIAL
 NE COR 5.35 84.78
 SE COR 5.21 84.92
 SW COR 5.66 84.47
 NW COR 5.86 84.27
 B.M. 87.27
 H. 90.13

GRADES SET FOR VALVE CHAMBER
 LA CANADA AT COMMERCIAL

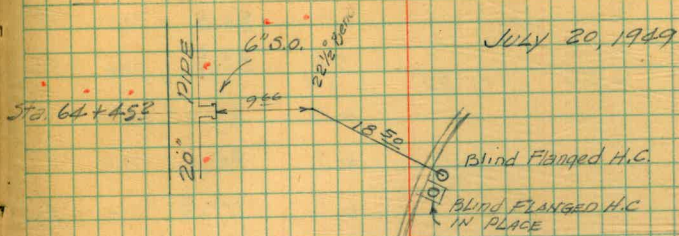
H.I. = 85.88

		GRD		
⊙ E NE COR	4.06	84.82	76.15	087
⊙ N NE COR	4.15	84.73	76.15	086
⊙ N NW COR	4.63	84.25	75.55	087
⊙ W NW COR	4.80	84.05	75.55	085
⊙ W SW COR	4.67	84.21	75.90	083
⊙ S SW COR	4.36	84.50	75.90	086
⊙ S SE COR	3.91	84.97	76.50	085
⊙ E SE COR	3.93	84.95	76.50	085

June 28, 1949

71)	4.27	89.44		85.17		
CK TBM	2.10	89.47	2.10	87.34	= 87.37	HAND of 5/20/49
57+67 ⁸³			5.2	84.3	78.5	C58
+70 ¹⁷			5.2	84.3	78.8	C58
58+00			5.0	84.1	78.8	C56
+50		✓	5.0	84.5	78.40	C61
59+00			5.5	84.0	78.40	C56
+50			5.7	83.8	78.40	C52
60+00			6.0	83.5	78.40	C51
+50			6.1	83.4	78.40	C50
61+00			6.4	83.1	78.3	C48
+50			6.6	82.9	78.3	C46
62+00			6.7	82.8	78.30	C45
+50			6.9	82.6	78.0	C45
63+00			6.9	82.6	77.5	C48
71)	5.74	88.63	6.58	82.89		
+50			6.4	82.2	77.6	C46
64+00			6.1	82.5	77.4	C51
+25			6.1	82.5	77.30	C52
+31 ⁶⁷			6.2	82.4	77.30	C51
+63 ¹⁷			6.1	82.5	77.4	C51
+75			6.1	82.5	77.7	C48
65+00			6.2	82.4	78.1	C43
+50			5.7	82.9	78.30	C46
+75			5.6	83.0	78.3	C47
66+00			5.6	83.0	78.3	C47
+25			5.6	83.0	78.3	C47
+50			5.6	83.0	78.3	C47
67+00			5.6	83.0	78.3	C47

78



JULY 20, 1949

SEWER LINE CONFLICTIONS July 6, 1949

71)	4.48	87.37	82.89
63+12 ⁶	Bot. 6" Conc Sewer	8.71	78.66
64+00	" " " "	9.51	77.86
64+61.5	" " " "	9.71	77.66
65+80	" " " "	8.32	79.05
65+15	TOP 8" " "	10.07	77.30
77.8			
76.4	C58		
75.2	C73		
"	C73		
"	C73		
"	C73		
75.2	C71		
75.6	C69		
76.6	C58		
77.0	C59		
77.4	C56		
77.7	C54		
77.8	C53		
77.9	C51		

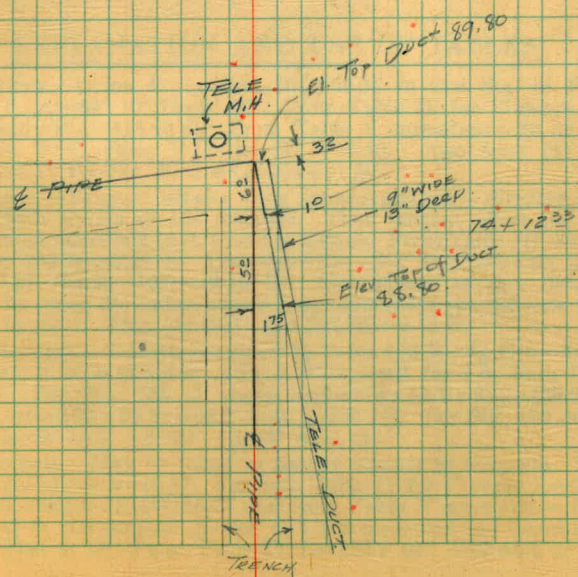
GRADE REVISION
JULY 6, 1949

6/28/49

67+50	88.63		5.5	83.1	78.3	C48
68+00			5.3	83.3	78.4	C49
69+50			5.1	83.5	78.4	C51
Rock	6.76	90.55	4.84	83.79		
69+00			6.7	83.9	78.2	C55
+50			6.5	84.1	78.4	C57
70+00			6.1	84.5	78.4	C61
+50			6.0	84.6	78.5	C62
+93.17			5.6	85.0	78.50	C63
71+24.63			5.5	85.1	80.10	C92
+56.04			5.5	85.1	80.1	C50
72+00			5.2	85.4	80.2	C53
+50.54			4.8	85.8	80.3	C55
+80.05			4.8	85.8	80.30	C55
ck.	So edge part	70+06.25	5.80	84.75	= 84.72	
Jet TBM	9.18	95.75	3.98	86.57	on curb 72+50.2	
72+92.85			9.3	86.5	80.7	C52
72+24.30			8.0	87.8	82.4	C54
73+55.75			6.5	89.3	84.1	C52
73+87.15			4.6	91.2	84.1	C71
74+12.33			2.6	93.2	84.1	C92
74+25.14			2.8	93.0	84.1	C89
+50			3.1	92.7	84.1	C86
75+00			3.5	92.3	84.1	C83
+50			3.9	91.9	84.1	C78
+82.64			4.1	91.7	84.1	C76

79

781 C 50



93.2
3.4
89.8

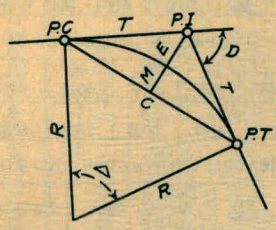
69
2.5
44
93.7
2.2
88.8

76+07.95	93.75	4.7	91.1	84.10	C7°
76+11.95		4.7	91.1	84.10	C7°
OK BC E		4.22	91.53	= 91.50	
SET TOM TOP FH		1.17	94.58		

Continued on page 53
Book 767

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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CURVE FORMULAS

- Radius $= R = \frac{50}{\sin \frac{D}{2}} (1)$ 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 $= M = R (1 - \cos \frac{\Delta}{2}) (5) = R \text{vers } \frac{\Delta}{2} (6)$
- External $= E = T \tan \frac{\Delta}{4} (7) = R \div \cos \frac{\Delta}{2} - R (8) = R \text{exsec } \frac{\Delta}{2} (9)$
- Long Chord $= C = 2 R \sin \frac{\Delta}{2} (10)$ Δ = Central Angle

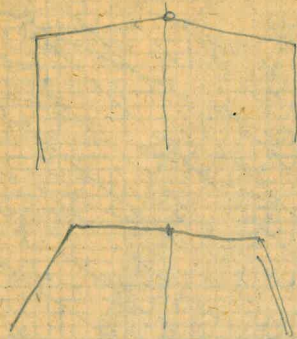
EXPLANATION AND USE OF TABLES

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 $\div 8\frac{1}{3}$ =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.

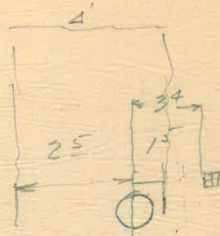
Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 (54.50÷100)²=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus (54.50)²÷(2×688.26)=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×C×D° or=defl. for 1 ft. from Table III×C. For Sta. 158 of above curve=.3×54.5×8 $\frac{1}{3}$ =136.2' or 2° 16.2', or=2.50×54.5=136.2' from Table III. For Sta. 159 deflection angle=2° 16.2'+8° 20'÷2=6° 26.2', etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20'=960.6÷8 $\frac{1}{3}$ =115.27 and from Table V correction=.10 or E=115.37 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 $\div 42$ =5.5 or D=5° 30'.



87.88



**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.

57-07
114-16-30
180-00
82-52
97-08
48-34
9927
89343
60-4
94
6
34
8.7
w curb
La Jolla Blvd.
1255 Camino Dela
Costa
75.89
old city 75.84
76.18
76.05
72.36
Maybe 72.00
Turguaise cross G.E.B.P.
184.85
Agate + c
77.4
75.2
99.94
NT CONC. HTON
Wend Agate
82.2
77.6
46
13.00
28.2
130.5
22.30
11
48
100
3
8
2
15
53
7
6
2