

U.S. GEOLOGICAL SURVEY

MINING
TRANSIT BOOK

No. 422F

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway to Cross Sectioning
Roadway 16 feet wide. Side Slopes 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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725

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.

Indicated in p. 40 - of 1/98 map

45th to Delta (Fisher) to Kasta / Page 31
Delta St. from Imperial to Birch
Realignment 45th to Delta line 32-34
Profile - 8' offset to 45th street 35-40

Delta St. Line
From National to Birch

Station	Distance	Reading
BM. L&T & Ocean View + 45485.44		
1.60	87.04	
TP#1	13.10	73.94
1.05	74.99	
TP#2	10.44	64.55
0.16	64.71	
0+100	4.7	60.0
0+175 ⁰⁰ Hedge Creek Imperial 4.88		59.83
0+175 ⁰⁰ Hedge Creek Imperial 5.12		59.59
0+50	5.2	59.5
1+00	6.3	58.4
1+50	7.1	57.6
2+00	7.4	57.3
2+50	7.5	57.2
3+00	7.9	56.8
3+50	8.0	56.7

PLAN
L&T
M&W
NOV 3, 5, 6, 7 1947
10:15 AM

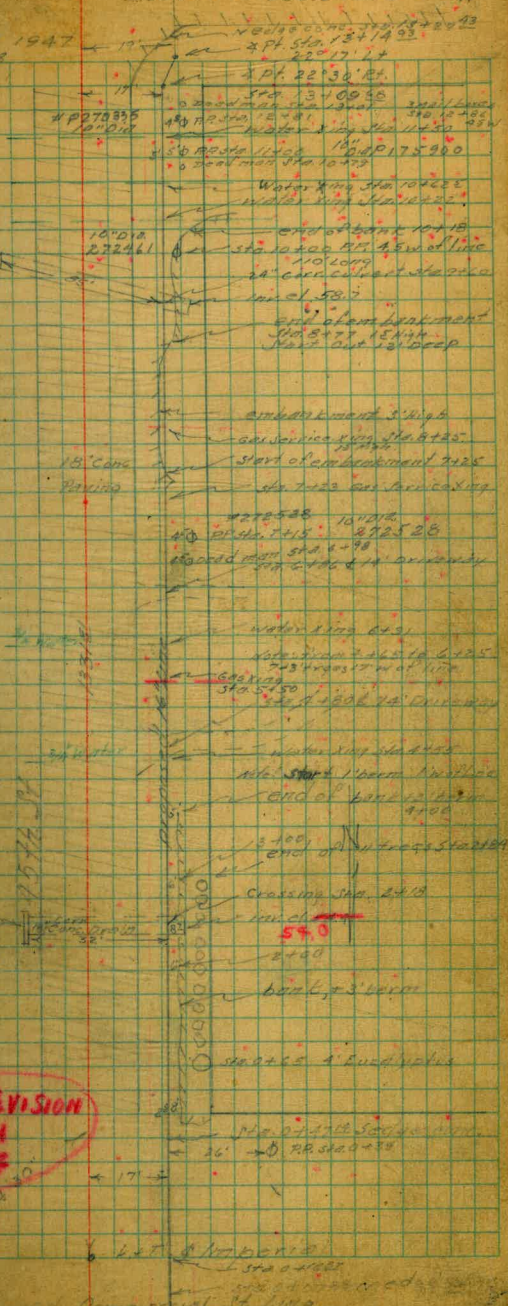
See Detail of
Ocean View and
45485.44

Note for Constr
3rd moved to
12+00

(PLAN SHOWS
2nd CORR. PIPS)

SEE PG 27-REVISION
FOR INTERSECTION
AT IMPERIAL AVE
+ 45 TH.

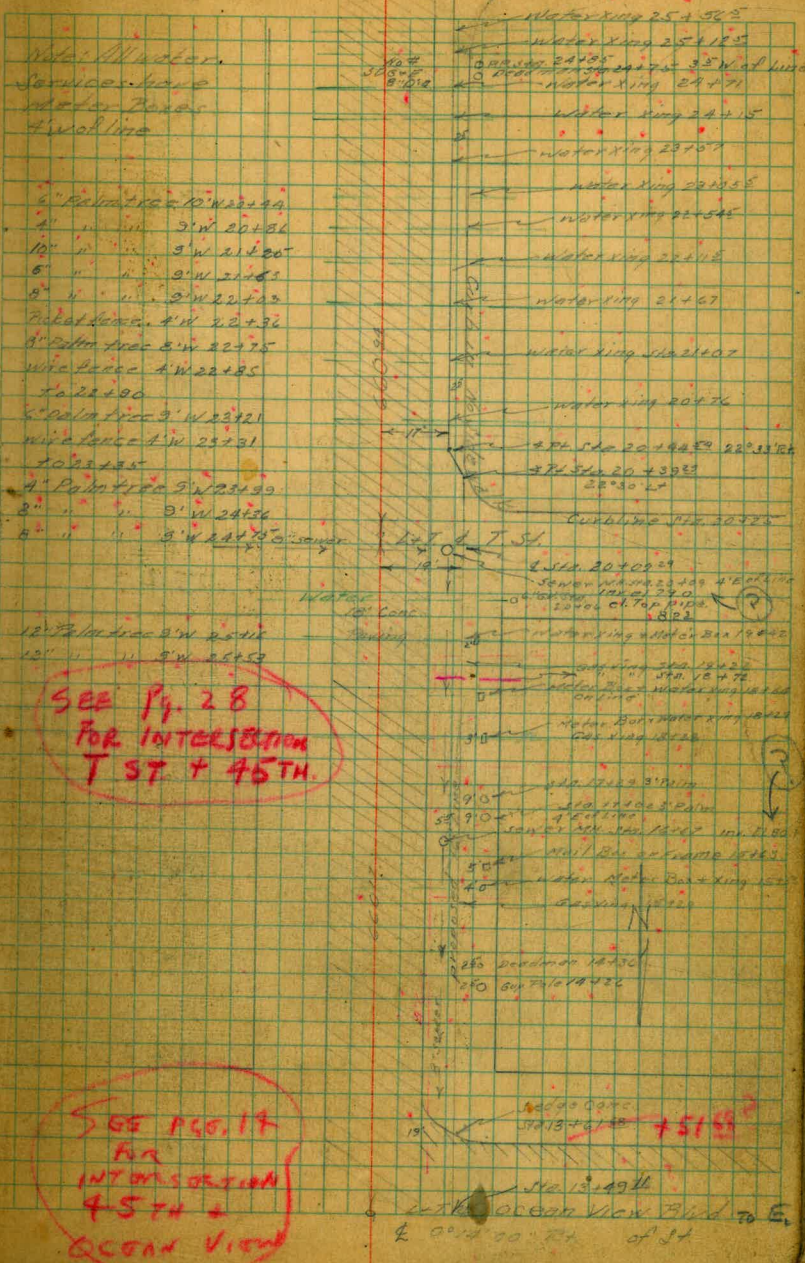
Lat & Ocean View Blvd E
also 4794 Ocean View " 1.



Delta St Line
From National to Birch

	64.71		
4+00		7.7	57.0
4+50		7.3	57.4
5+00		6.5	58.2
5+50		5.0	59.7
6+00		3.3	61.4
6+00	0.5 W	2.4	62.3
6+50		1.1	63.6
TP#3		0.16	64.55
	10.09	74.64	
7+00		10.0	64.6
7+50		8.5	66.1
7+50	3' W	6.7	67.9
8+00		7.0	67.6
8+00	3' W	4.4	70.2
8+50		6.2	68.4
8+50	3' W	4.0	70.6
9+00		4.2	70.4
9+00	1'E	5.2	69.4

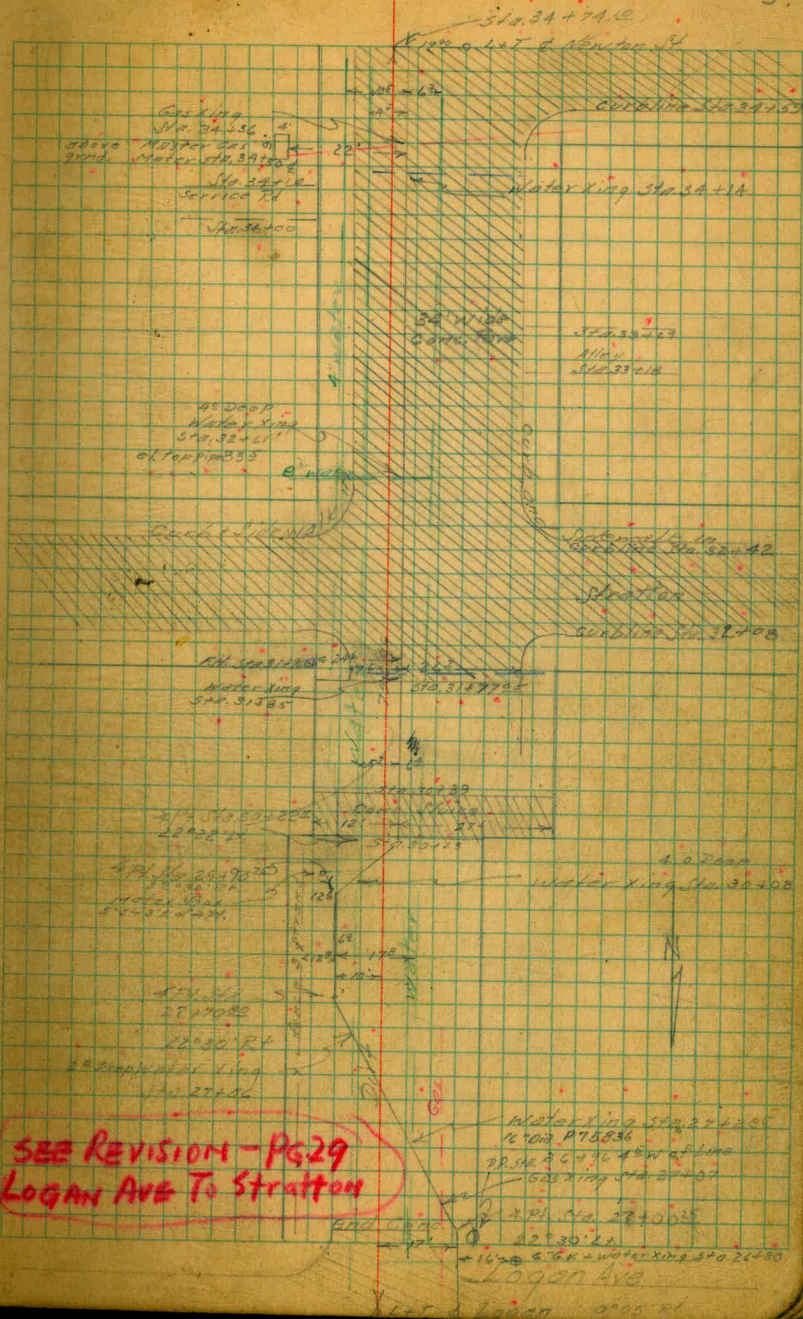
Sta 26+70.25
Dodge Ave



Delta St Line
From National to Birch

		74.64	
9+00	10' W	8.5	66.1
9+50	4	5.4	71.2
9+50	1'E	4.3	70.3
9+50	10' W	9.8	64.8
10+00	4	2.3	72.3
10+00	1'E	2.7	71.9
10+00	10' W	5.4	69.2
10+50		1.0	73.6
TR 2A		0.22	74.42
11+00		85.52	
11+00		10.1	75.4
11+50		7.8	77.7
12+00		5.5	80.0
12+50		3.1	82.4
13+00		1.6	83.9
13+00	4 Ft.	1.3	84.2
13+14 23	4 Ft.	0.9	84.6

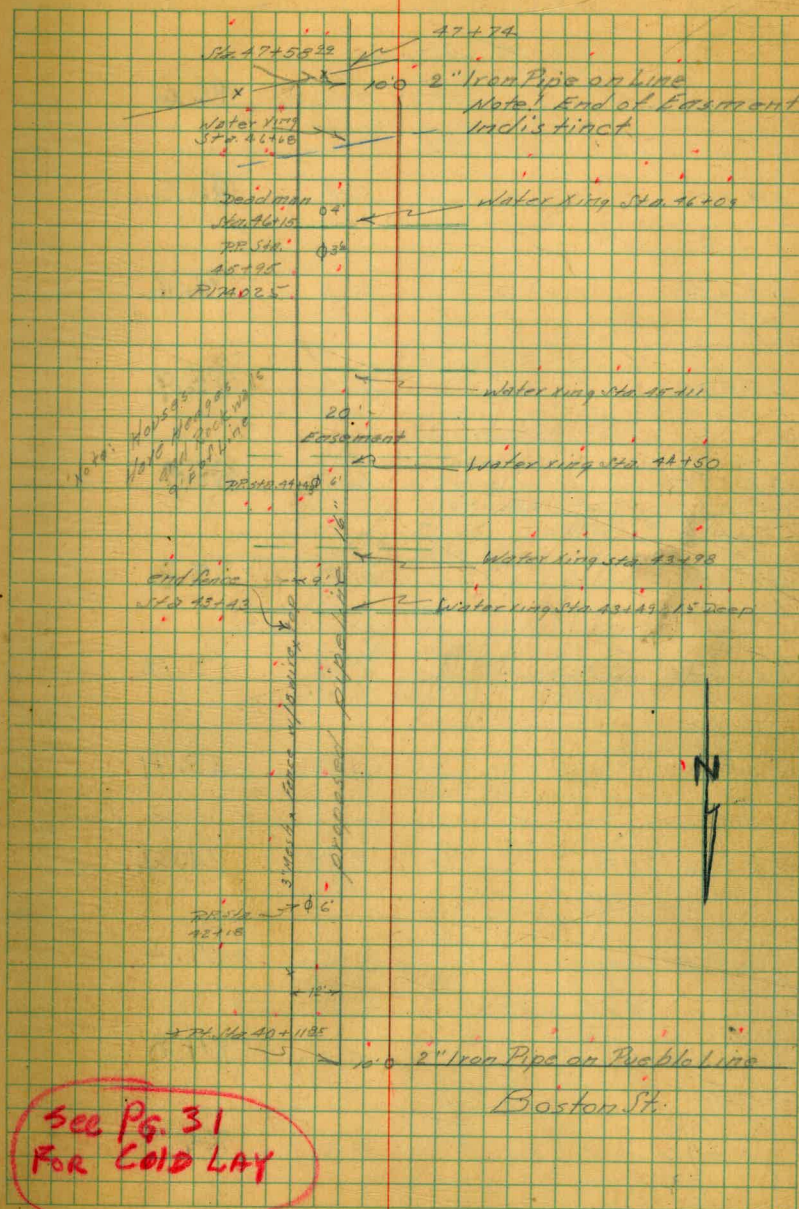
This Portion of Line 2' W of Pueblo Line



SEE REVISION - PG 29
LOGAN AVE TO STRATTON

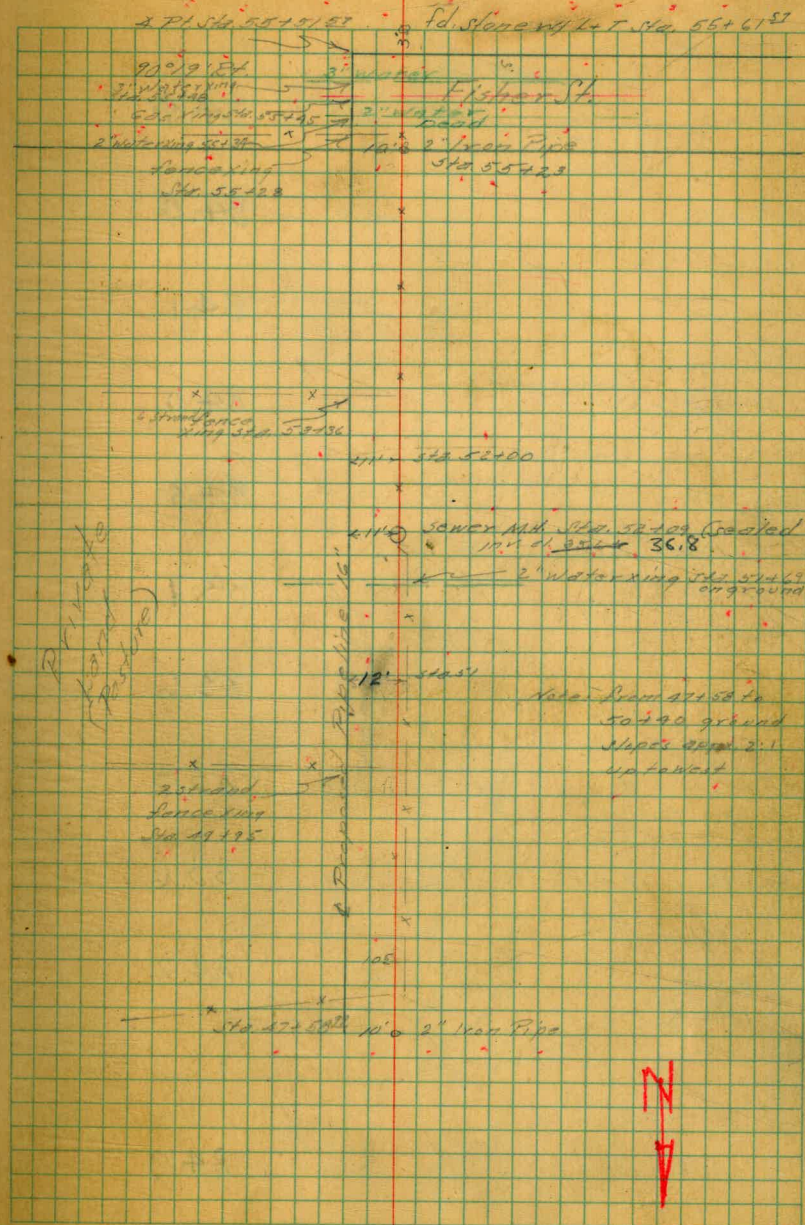
Delta St. Line
From National to Birch

	93.82		
18+50	7.4	86.4	
19+00	7.7	86.1	
19+50	8.2	85.6	
20+00	8.5	85.3	
20+39.33 3 Pt.	8.4	85.4	
J.P. #6	8.45	85.37	
6.79	92.16		
20+44.53 4 Pt.	6.5	85.7	
21+00	6.3	85.9	
21+50	6.1	86.1	
22+00	5.8	86.4	
22+50	5.5	86.7	
23+00	5.4	86.8	



Delta St. Line
From National to Birch

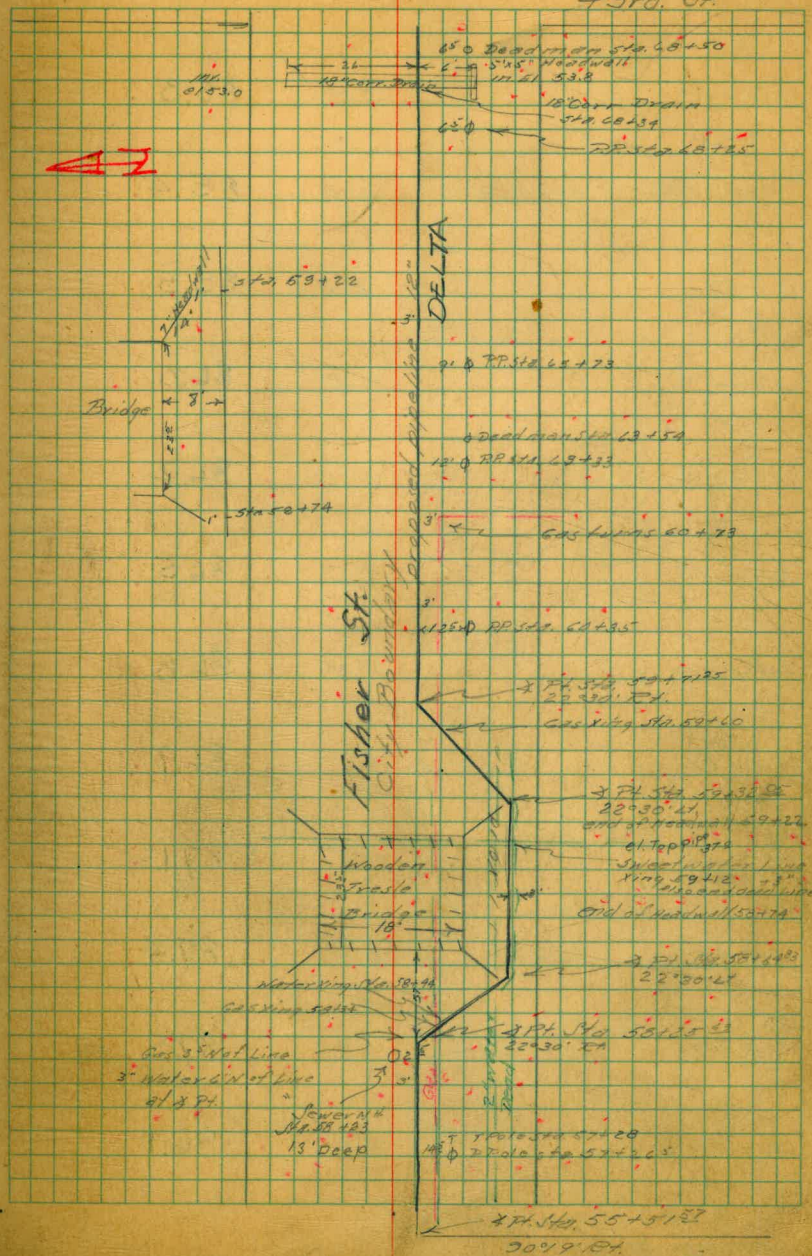
72.16			
23+50	5.6	86.6	
24+00	5.7	86.5	
24+50	6.1	86.1	
25+00	6.3	85.9	
25+50	6.7	85.5	
26+00	6.9	85.3	
26+28 ⁰⁰ Hedge corr. Log 20	6.43	85.73	
26+50	6.45	85.71	
27+00 ²⁵ Sp.	7.54	84.62	
B.M. @ Log 20	7.12	85.04	corr. 85.03
425	89.28		
27+20 ⁰⁰ Sp.	4.5	84.8	
28+00	4.6	84.7	



Delta St. Line
From National to Birch

	89.28		
28+50	4.0	84.4	
29+00	5.3	84.0	
29+50	5.2	84.1	
29+90.5 T.P.	5.3	84.0	
30+08	4.9	84.4	
30+22.4	5.6	83.7	
30+23 Sedge Sluice	5.7	83.6	
30+31	6.0	83.3	
30+39 Sedge Conc. Sluice	5.7	83.6	
30+50	5.1	84.2	
T.P. #8	4.19	85.09	
6.15	91.24		
31+00	6.3	84.9	

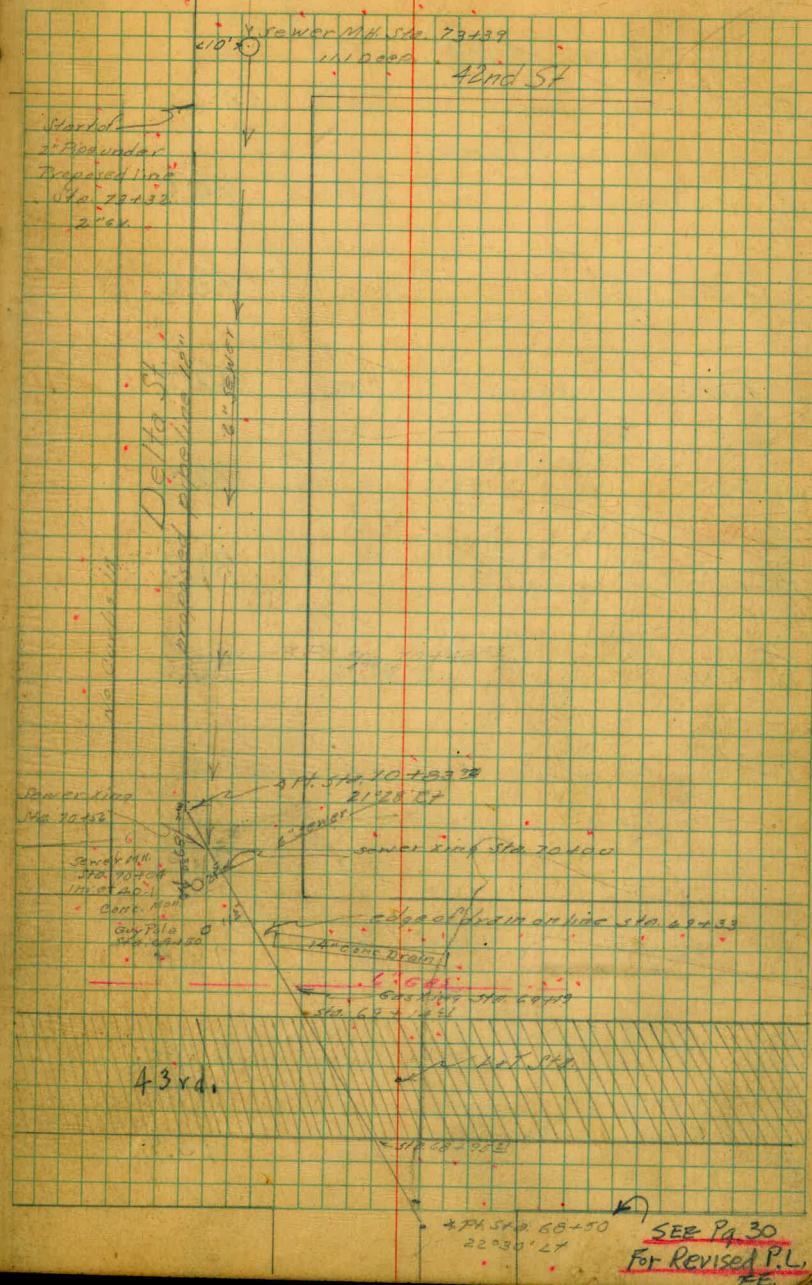
43rd St.



Delta St. Line
From National to Birch

Station	Grade	Elevation
31+50	5.9	85.3
31+77 ⁰⁵ N edge Conc.	5.8	85.4
32+00	5.7	85.5
32+50	5.2	86.0
33+00	5.0	86.2
33+50	4.7	86.5
34+00	4.4	86.8
34+50	4.3	86.9
35+00	4.1	87.1
35+50	3.8	87.4
36+00	3.7	87.5
36+50	3.1	86.1

42nd St Sta 73+33.22



Delta St. Line
From National to Birch

	91.24		
T.P. 29	5.43	85.81	
0.65	86.46		
37+00	2.0	84.5	
37+50	3.0	83.5	
37+84.00 end conc.	3.8	82.7	
38+00	4.0	82.5	
38+50	5.0	81.5	
39+00	5.9	80.6	
T.P. on Fire Hydrant	5.83	80.63	
1.42	82.05		
39+50	3.6	78.5	
39+80.45 x pt	3.7	78.4	
40+11.85	4.7	77.4	
40+52	8.6	73.5	

Comp. Man
Sta 80+13.25

41st St

37+73.88

79+50
+ 16'

79+30
5' x 18'

79+20
4' x 11'

79+10
5' x 12'

79+00
10' x 10'

78+50
5' x 10'

78+00
5' x 10'

77+00
5' x 14'

76+00
5' x 15'

75+00
5' x 13'

radius block 2' line
under Proposed Line

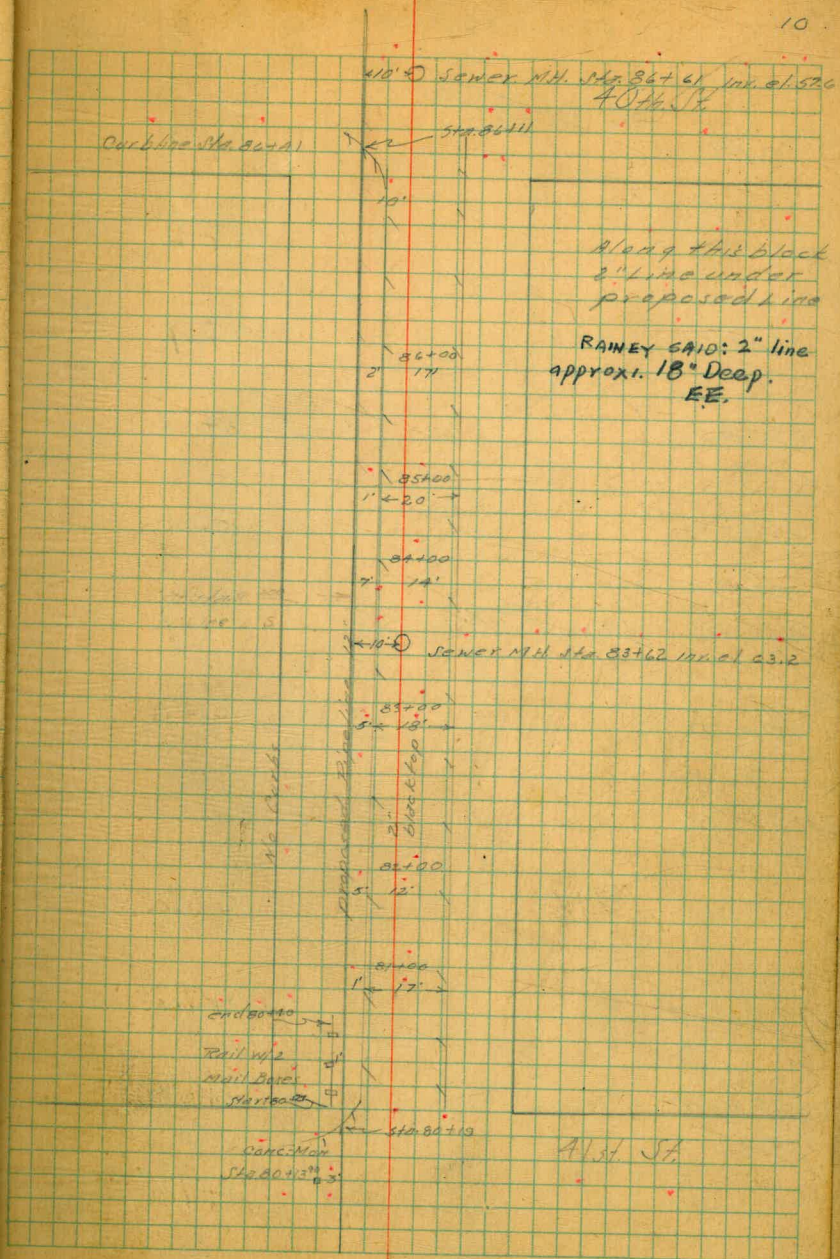
10' Sewer man. set 72' at 44.1

42nd St

Watering Sta
75+30 el. top pipe 63.3

Delta St. Line
From National to Birch

	82.05		
40+60	9.6	72.5	
41+00	12.8	69.3	
41+50	15.7	66.4	
42+00	14.5	67.6	
42+50	11.0	71.1	
43+00	10.3	71.8	
43+50	9.9	72.2	
TP #11	9.88	72.17	
	0.38	72.55	
44+00	0.9	71.7	
44+50	2.3	70.3	
45+00	2.9	69.7	
45+50	4.0	68.6	



Delta St. line
From National to Birch

	72.55	
46+00	6.4	66.2
46+50	8.0	64.6
46+80	8.7	63.9
47+00	7.9	64.7
47+22	7.5	65.1
47+50	8.9	63.7
48+00	14.6	58.0
TP#12	12.42	60.13
	0.05	60.18
48+50	7.0	53.2
49+00	13.0	47.2
49+50	13.3	46.9
50+00	12.4	47.8

110 - Sewer 44H, 549, 93+22 Int. el. 41.2

39TH. ST.

car

Curb line Sta. 92+04

Stand pipe

Pipe 12" dia. at Sta. 92+83

Along this block
2" line varies from
under Proposed line
to 2' at 90+00

16.25

26.25

36'

10' - Sewer 44H, 549, 92+92 Int. el. 40.6

Curb line Sta. 92+04

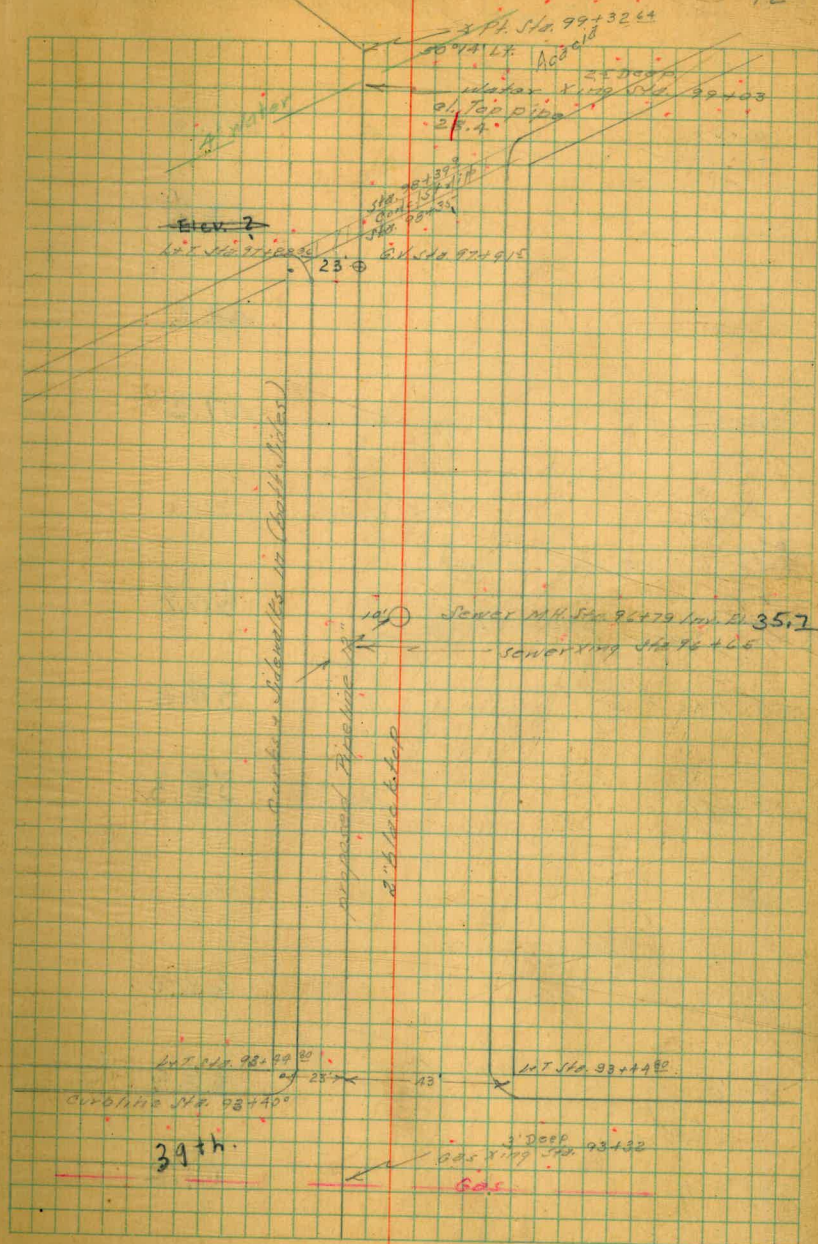
Proposed Birch St.

10' - Sewer 44H, 549, 92+92 Int. el. 40.6
Curb line Sta. 92+04

40th. ST.

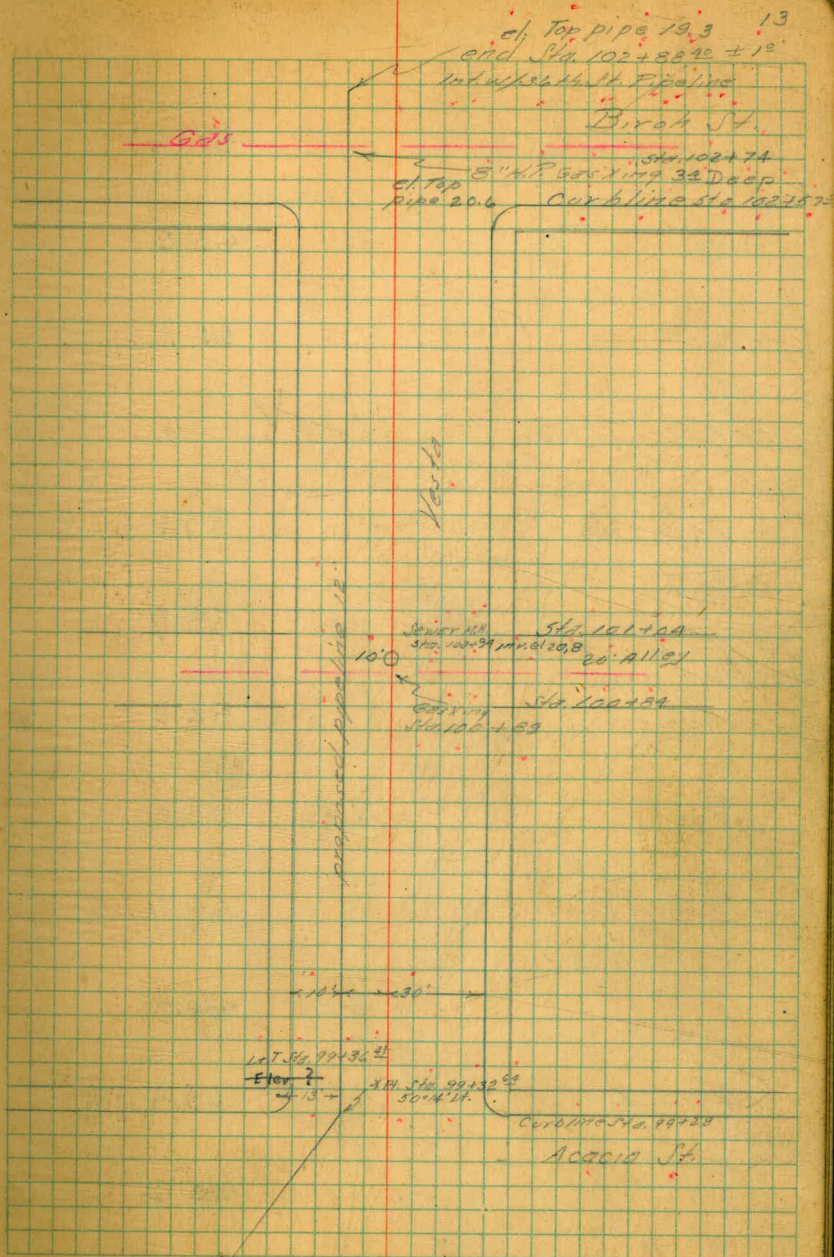
Delta St. Line
From National to Birch

	60.18		
TR #13	13.02	47.16	
	0.44	47.60	
50+50	1.5	46.1	
51+00	3.0	44.6	
51+50	3.6	44.0	
51+58	4.0	43.6	
51+60	6.6	41.0	
51+69 on 2" water	5.4	42.2	
51+74	5.6	42.0	
51+77	4.0	43.6	
51+89	4.3	43.3	
51+94	5.4	42.2	
52+00	5.0	42.6	



Delta St. Line
From National to Birch

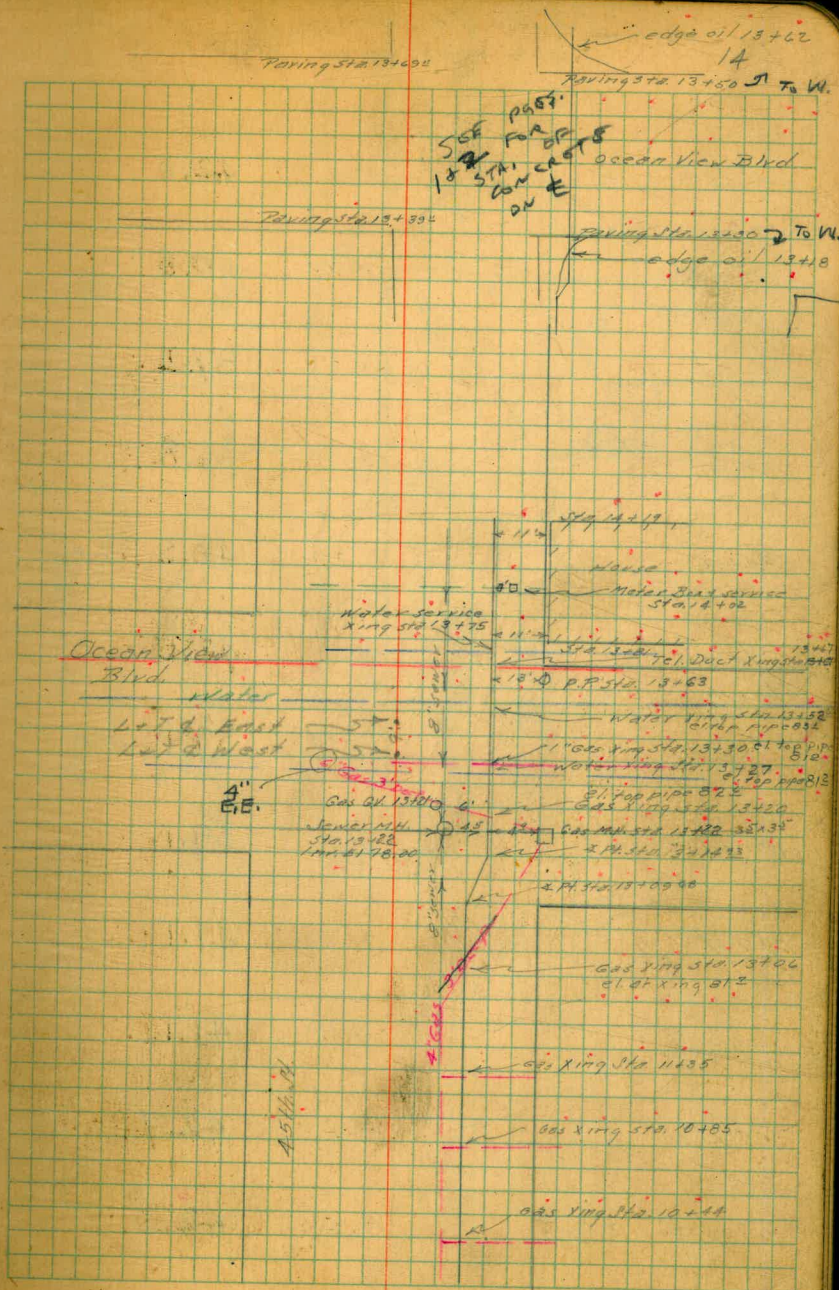
	47.60		
52+50		5.0	42.6
53+00		4.3	43.3
53+19		3.0	44.6
53+32		0.4	47.2
I.P. #14		0.37	47.23
	12.11	59.34	
53+38		8.5	50.8
53+46		5.1	54.2
54+00		1.0	58.3
I.P. #15		0.45	58.89
	7.30	66.19	
54+50		4.2	62.0
55+00		5.3	60.9
55+34		5.0	61.2



1A

Delta St. line
From National to Birch

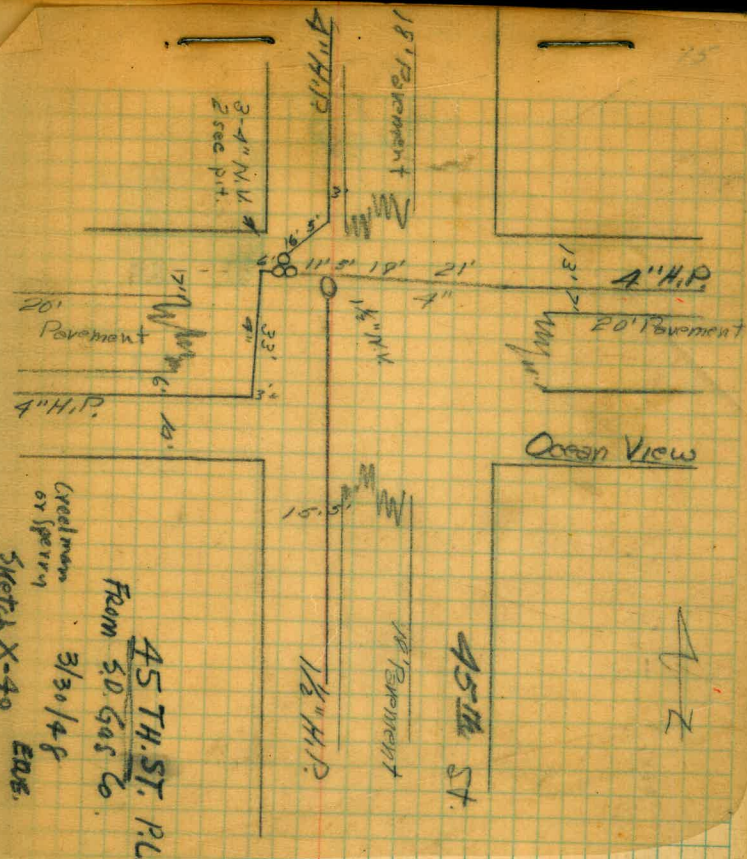
55+34	on 2" water	6.3	59.9
55+39		5.0	61.2
55+51 ²	4PT.	4.5	61.7
TR #16	on Pipe TBM:	5.64	60.55
	1.51	62.06	
56+00		3.0	59.1
56+50		6.4	55.7
57+00		9.9	52.2
TR #17		12.66	49.40
	1.40	50.80	
57+50		1.1	49.7
58+00		4.5	46.3
58+25 ³	4PT.	5.5	45.3
58+55		6.6	44.2



15

Delta St. Line
From National to Birch

	50.80		
58+64.93 3 Pt.	8.8	42.0	
58+86	10.0	40.8	
90 58+88	13.6	37.2	
58+98	14.0	36.8	
59+03	10.3	40.5	
59+08	10.3	40.5	
59+10	11.7	39.1	
59+15	11.7	39.1	
59+17	9.7	41.1	
59+21	9.7	41.1	
59+26	8.1	42.7	
59+32.05 3 Pt.	8.5	42.3	



Delta St. Line
From National to Birch

50.80

59+44 6.9 43.9

59+71²⁵ x Pt. 5.7 45.1

60+00 4.7 46.1

60+50 1.6 49.2

I.P.#18 0.49 50.31

11.63 61.94

61+00 8.7 53.2

61+21 6.7 55.2

61+50 5.1 56.8

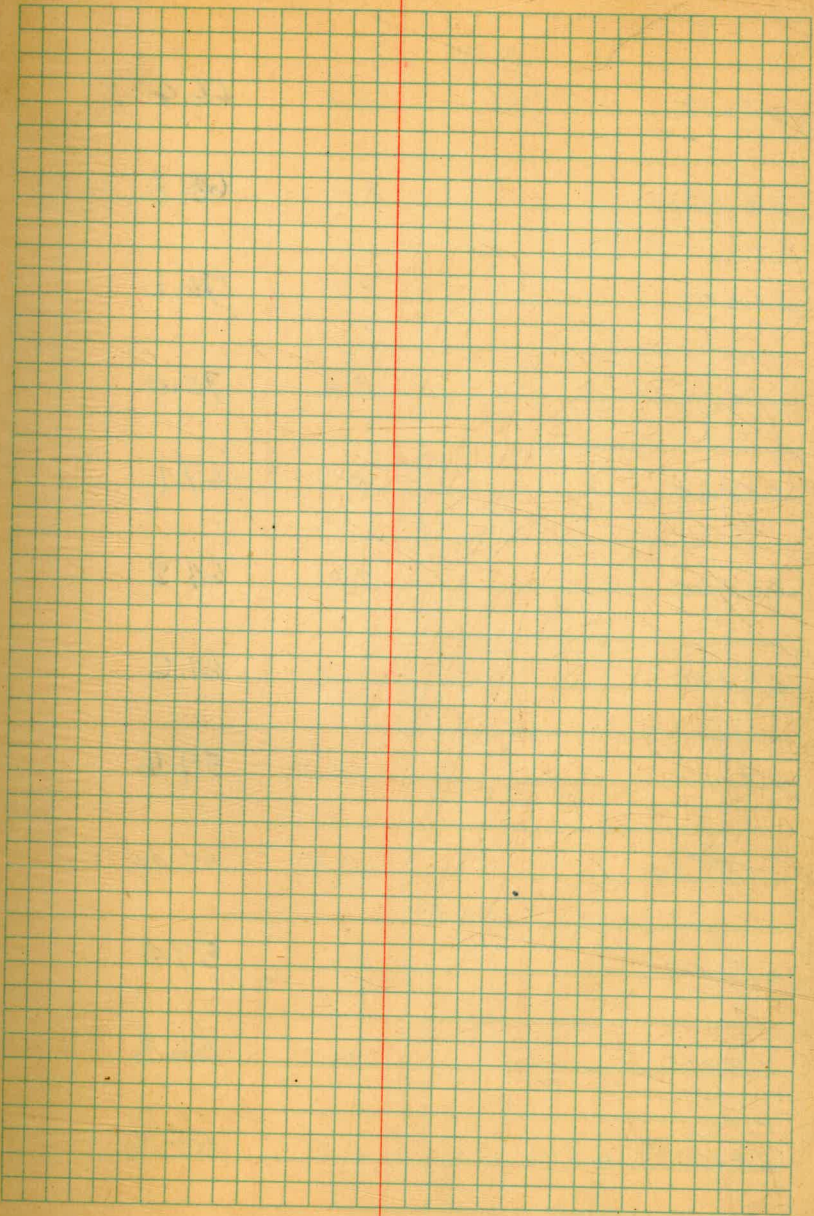
62+00 3.1 58.8

62+50 0.9 61.0

I.P.#19 0.63 61.31

10.47 71.78

63+00 8.4 ← 63.4
EE.



Delta St. Line
From National to Birch

	71.78		
63+50		5.4	66.4
64+00		3.0	68.8
64+50		1.7	70.1
65+00		1.8	70.0
65+50		4.7	67.1
66+00		7.3	64.5
66+50		10.2	61.6
67+00		12.2	59.6
T.P. # 20		18.43	59.35
	112	60.47	
67+50		3.1	57.4
68+00		4.2	56.3
68+50 ⁰⁰ APT.		4.9	55.6

Delta St. Line
From National to Birch

60.47.

68+95 ²¹	E edge conc.	5.15	55.32
69+14 ²⁴	W edge conc.	5.47	55.00
69+21		5.7	54.8
69+23		5.2	55.3
T.P. #21	on 1st N.W. Cor. 43rd + Delta	5.51	corn. 54.74 54.96
	6.20	6.16	
69+34		8.9	52.3
69+50		9.9	51.3
70+00		12.8	48.4
70+25		13.2	48.0
70+50		8.4	51.8
70+88 ²²		5.2	56.0
71+00		3.2	58.0

Delta St. line
From National to Birch

	61.16		
TR #22	0.63	60.53	
	12.15	72.68	
71+50	8.2	64.5	
72+00	4.4	68.3	
72+50	3.0	69.7	
73+00	2.0	70.7	
73+25	1.3	71.4	
73+50	2.4	70.3	
73+72	2.3	70.4	
73+85	3.1	69.6	
74+00	3.0	69.7	
	3.28	69.40	
	6.81	76.21	
74+50	6.7	69.5	

Delta St Line
From National to Bitoh

76.21

75+00

6.4

69.8

75+50

6.7

69.5

76+00

2.1

69.1

76+50

6.1

70.1

77+00

5.0

71.2

77+50

5.7

70.5

78+00

6.0

70.2

78+50

5.7

70.5

79+00

3.5

72.7

79+50

1.3

74.9

80+00

1.6

74.6

I.P. 23

Off Mon. 41st + Delta

2.32

corr 73.67

73.89

0.77

74.66

74.66

Delta St. Line
From National to Birch

71.66

80+32	40.4	75.1
80+50	0.1	74.6
81+00	1.5	73.2
81+50	2.3	72.4
82+00	3.0	71.7
82+50	2.9	71.8
83+00	4.1	70.6
83+50	5.6	69.1
84+00	7.2	67.5
84+50	8.3	66.4
85+00	9.1	65.6
85+50	9.7	65.0

Delta St. Line
From National to Birch

	74.66		
86+00	10.0	64.7	
86+50	11.1	63.6	
87+00	12.55	62.11	
			corr 69.29
TP. L+TXW. cor. 40th + Delta	11.14	63.92	
	0.10	63.62	
87+50	2.8	60.8	
88+00	4.1	59.5	
88+50	5.5	58.1	
89+00	6.9	56.7	
89+50	8.5	55.1	
90+00	9.8	53.8	
90+50	11.2	52.4	
91+00	12.3	51.3	

Delta St. Line
From National to Birch

	63.62		
TP#25	12.54	51.08	
	0.08	51.16	
91+50	1.3	49.9	
92+00	2.5	48.7	
92+50	3.7	47.5	
93+00	4.6	46.6	
93+50	5.5	45.7	
94+00	6.3	44.9	
94+50	7.0	44.2	
95+00	7.6	43.6	
95+50	8.6	42.6	
96+00	9.4	41.8	
96+50	10.3	40.9	

Delta St. Line
From National to Birch

	51.16		
T.P. #26		12.37	38.79
	0.51	39.30	
97+00		1.6	37.7
97+50		3.9	35.4
98+00		5.4	33.9
98+50		6.7	32.6
99+00		8.4	30.9
99+32 4 3 Pt.		9.8	29.5
99+50		9.6	29.7
T.P. #27		11.24	28.06
	8.59	36.65	
100+00		8.0	28.7
100+50		9.1	27.6
101+00		10.2	26.5

Delta St. Pipeline
From National to Birch

	36.65		
101+50	11.4	25.3	
102+00	12.4	24.3	
102+50	13.2	23.5	
102+88	13.8	22.9	
TR #28	0.58	36.07	
11.25	47.32		
TR #29	1+T-SE. Cor. #44	1.09	46.26
			Corr. 46.01
			54.96
			Corr. 54.74
			54.96
	11.60	66.56	
TR #1	0.15	66.41	
5.29	71.70		
	12.19	59.51	
1.59	61.10		
TR #18	10.75	50.35	
10.65	61.00		
TR #16	0.41	60.59	
			Corr. 60.55
1.27	61.86		
	11.73	50.13	
0.69	50.82		

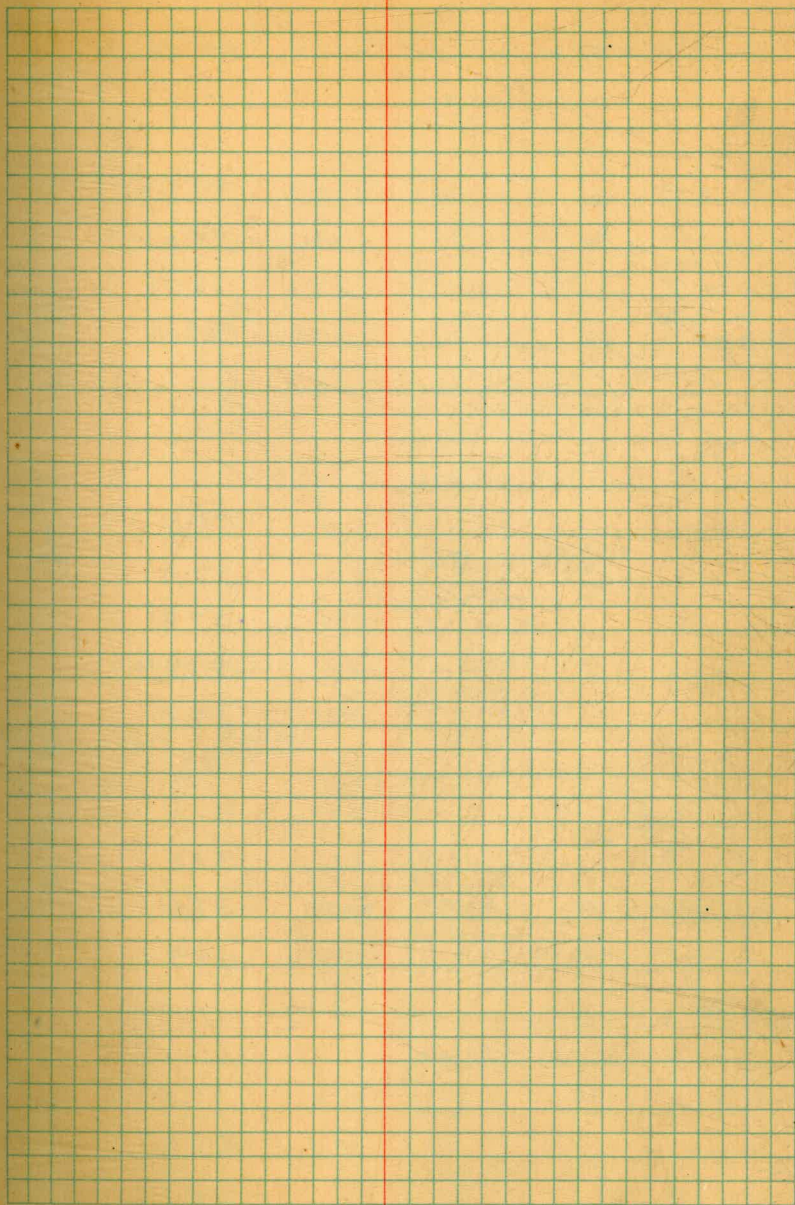
check levels

Pit. BM. P. 18

 Rainey
 King
 Nichol
 Nov. 19, 1947
 Nov. 20, 1947
 Nov. 21, 1947

Delta St. Line
From National to Birch

	50.82		
T.P.		3.64	47.18
	12.95	60.13	
T.P.#12		2.00	60.13
	12.90	73.03	
T.P.		0.57	72.46
	11.84	84.30	
T.P.		0.49	83.81
	8.21	92.02	
T.P.		6.65	85.37
	4.00	89.37	
			Corr 85.03
B.M. L&T & Logan		4.29	85.08



Wedge Conc. Imperial 59.59
4.25 63.84

0+05⁶³ Wedge Conc. Imperial 4.01 59.83
0+44⁶³ x Pt. 4.23 59.61
0+77⁷⁴ Wedge conc. 4.73 59.05
0+97⁵¹ 5.4 58.4

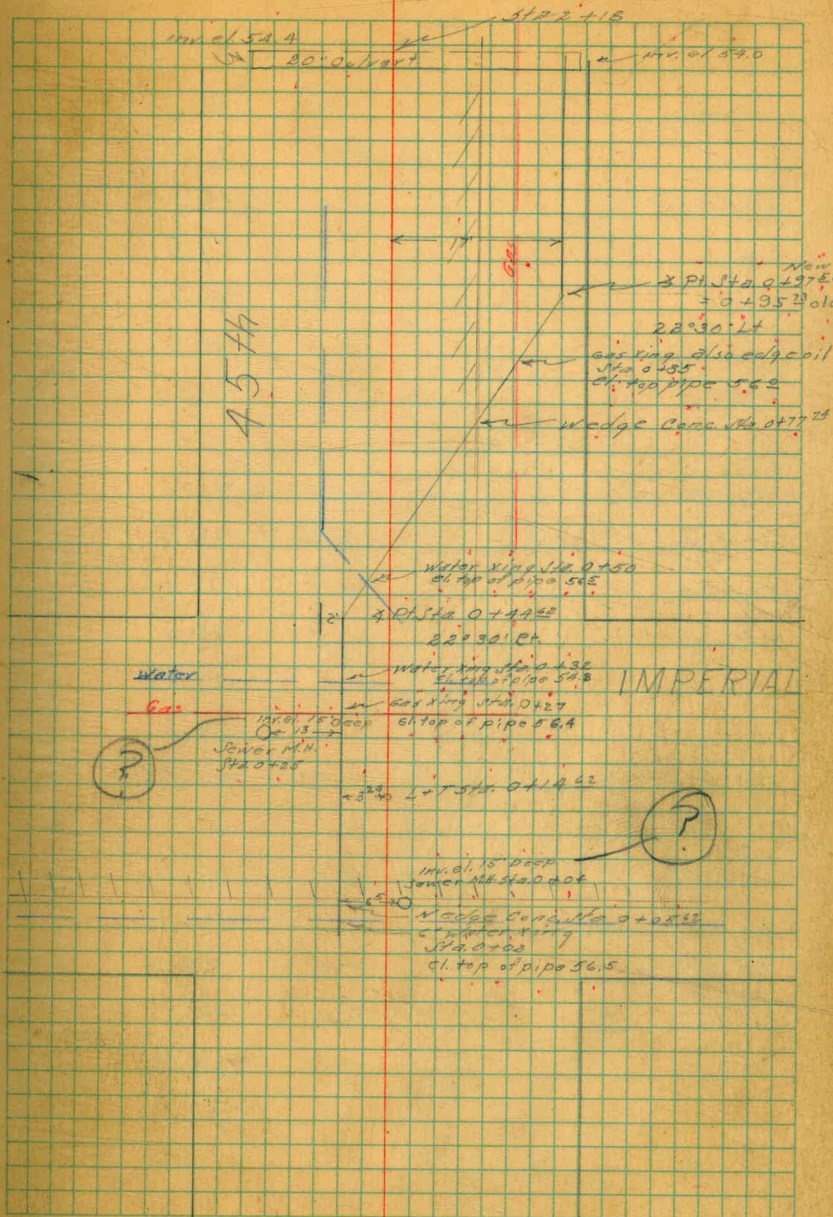
Pavement Profile - 90' test of pipeline

Wedge conc. Imperial 59.59
2.20 61.79

1+00	3.1	58.7
1+50	3.9	57.9
2+00	4.4	57.4
2+50	4.6	57.2
3+00	4.8	57.0
3+50	4.7	57.1
4+00	4.6	57.2
4+50	4.2	57.6
5+00	3.4	58.4
5+50	1.9	59.9
TR 41	0.95	60.84
6+00	11.3	61.6
6+50	9.7	63.2
7+00	8.8	64.7

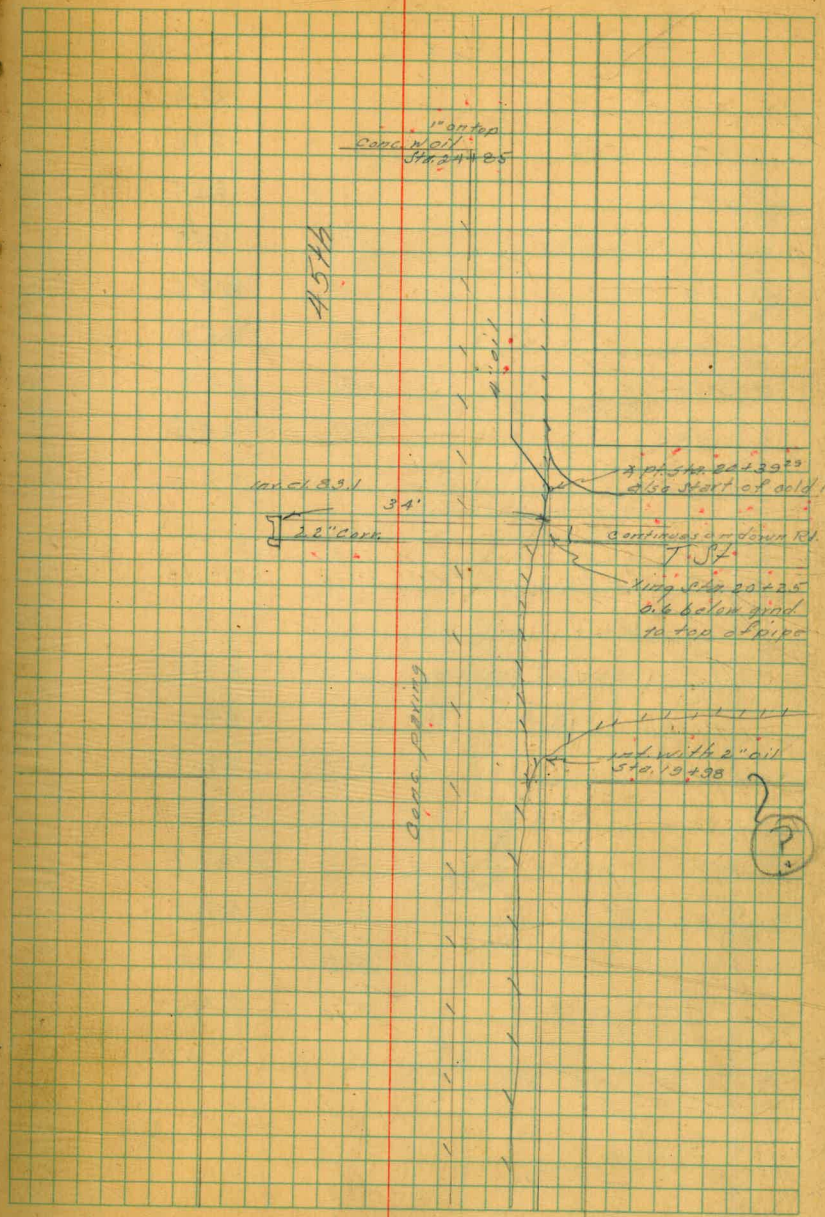
NOTES RECORDED 7/6/48

Rainey King Baker 27



	72.93		
7+50		6.6	66.3
8+00		5.2	67.7
8+50		4.4	68.5
9+00		3.4	69.5
9+50		2.4	70.5
10+00		0.9	72.0
T.P.#2		0.14	72.79
	12.76	85.55	
10+50		11.3	73.7
11+00		9.9	75.7
11+50		7.5	78.1
12+00		5.1	80.5
12+50		2.8	82.8
13+00		1.3	84.3
T.M.L+T		2.09	85.46
	8.15	93.64	
13+50		8.1	85.5
14+00		6.7	86.9
14+50		5.2	88.4
15+00		4.4	89.2
15+50		4.2	89.4
16+00		4.6	89.0
16+50		5.1	88.5
17+00		5.6	88.0

9/7/98
 R 5000
 No 703



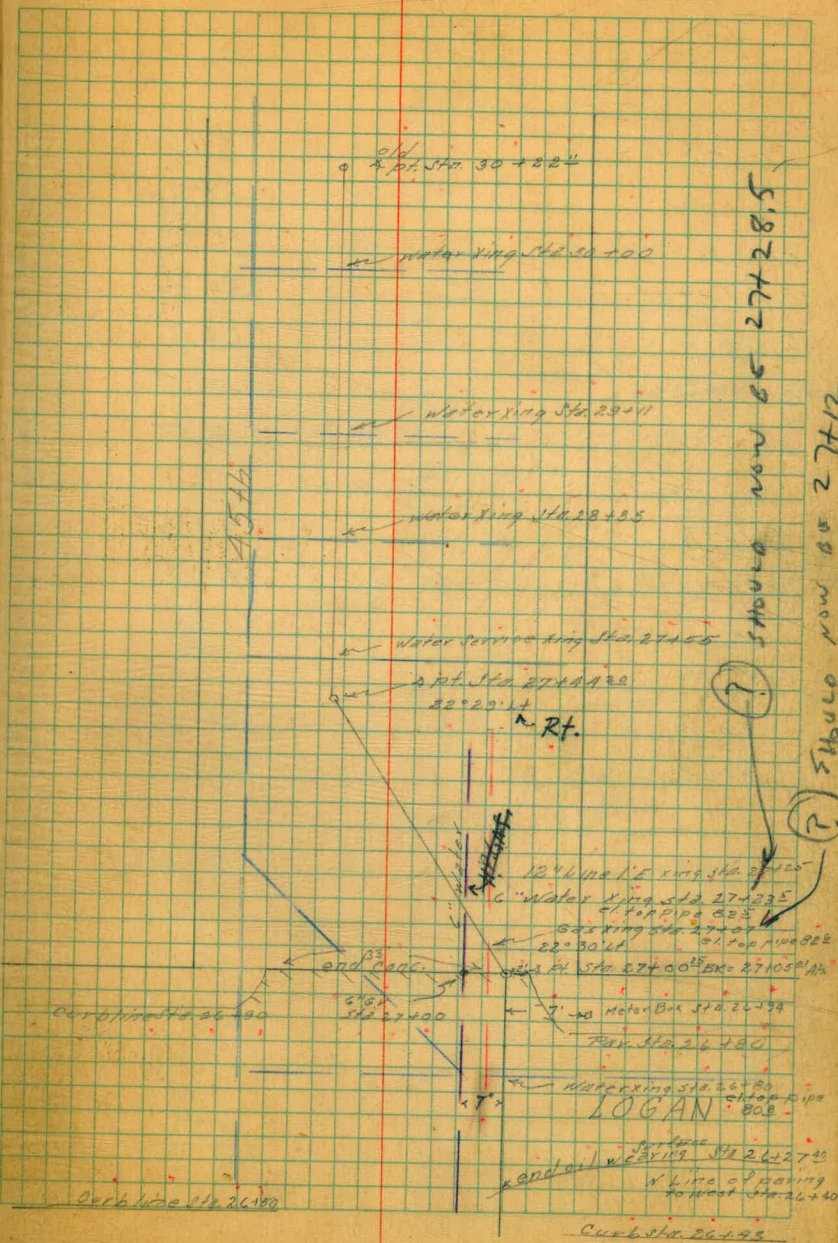
93.64

17+50	6.1	87.5
18+00	6.6	87.0
18+50	7.2	86.4
19+00	7.7	85.9
19+50	8.0	85.6
20+00	8.1	85.5
20+50	8.0	85.6
21+00	8.1	85.5
B.M. L+T @ Ocean View	8.18	85.46

Profile

B.M. L+T @ Logan		85.03
1.39		89.42
27+00.25 BK=27+05.11	4.6	84.8
27+44.20	4.7	84.7
28+00	4.6	84.8
28+50	4.7	84.7
29+00	5.0	84.4
29+50	5.1	84.3
30+00	4.9	84.5
30+22.2	5.8	83.6
	4.39	85.03

4/2/88
 10705
 1000000

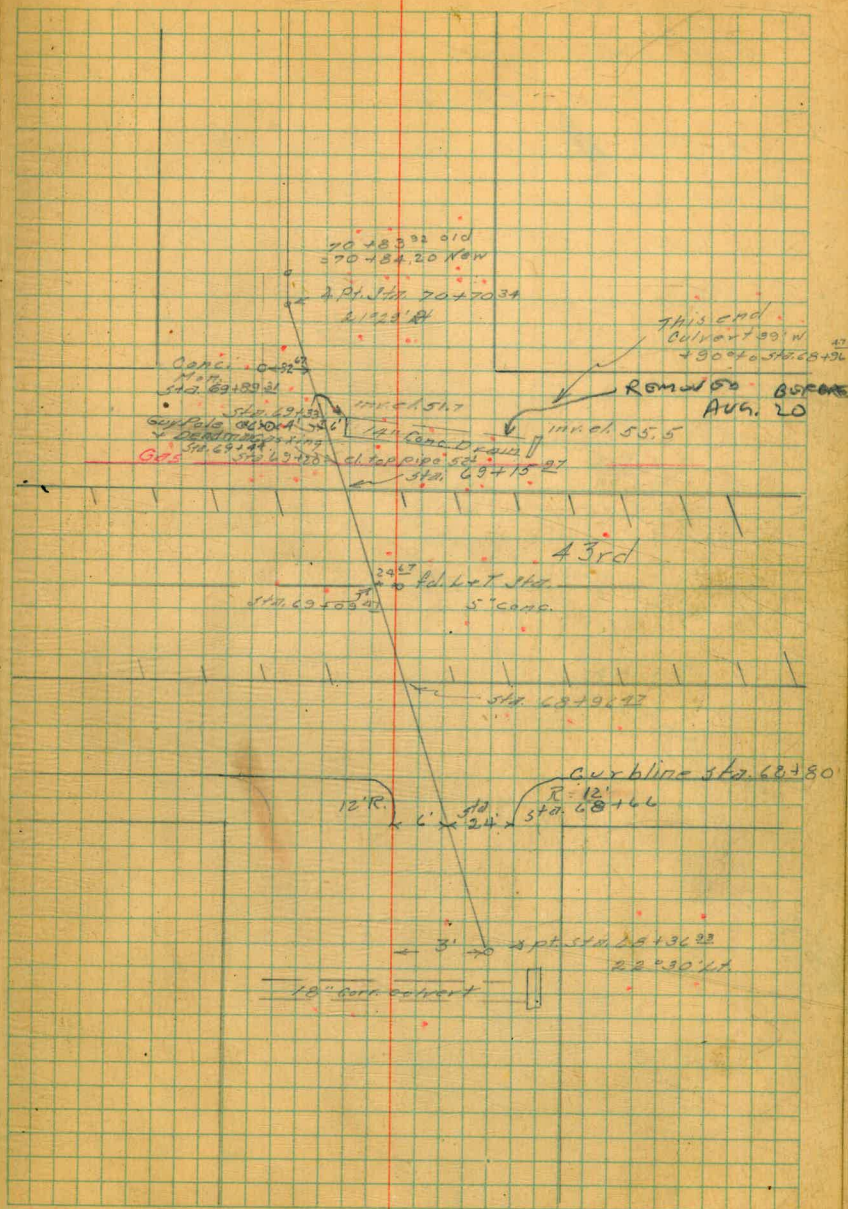


W edge conc 43rd		55.00
3.00		58.00
68+36 ³³ apt	2.2	55.8
68+50	2.2	55.8
68+96 ⁴¹ W edge conc.	2.95	55.05
69+15 ²² Wedge conc.	3.31	54.69
69+25	3.2	54.8
69+38	6.3	51.7
69+50	6.7	51.3
70+00	9.9	48.1
70+24	10.2	47.8
70+70 ³² apt.	4.8	53.2
old apt. 70+83 ²²	2.1	55.3

Profile Conc. from Bestanta Keeler

IP top FH. P9		80.63
5.24		85.87
37+84 ⁵⁰	3.1	82.8
38+00	3.5	82.4
38+50	5.0	80.9
39+00	6.5	79.4
39+50	8.0	77.9
40+00	8.0	77.9
to FH.	5.24	80.63

7/7/48
4/9/48
E.W.S.
NOTES
REDUCED
CHECKED



Profile same to 69+15.97
 AFTER GRADING FOR NEW
 Delta St. Line
 PAVEMENT

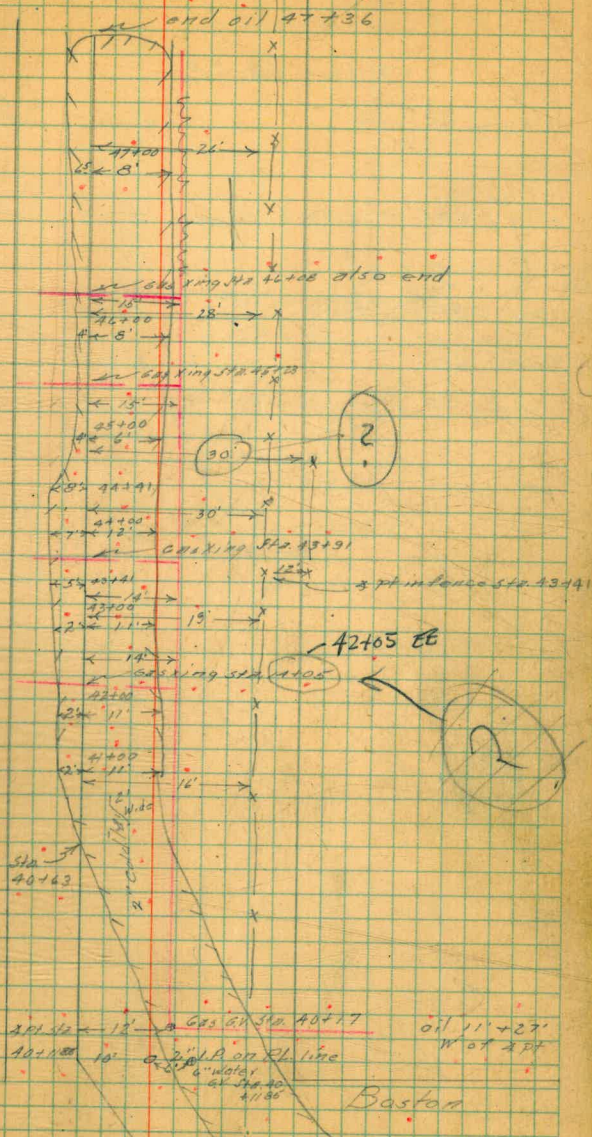
Aug. 20, 1928

5.	Edge conc.	55.05	
	5.84	60.89	
	69+15.97	Edge conc	6.3 59.6
	69+41.5		7.2 53.7
	69+47		4.3 56.6
	69+50		6.2 54.7
	69+57		10.0 50.9
	70+00		12.7 48.2
	ck		7.6 53.3

Mar. 5, 1948

Rainey King Baker 31

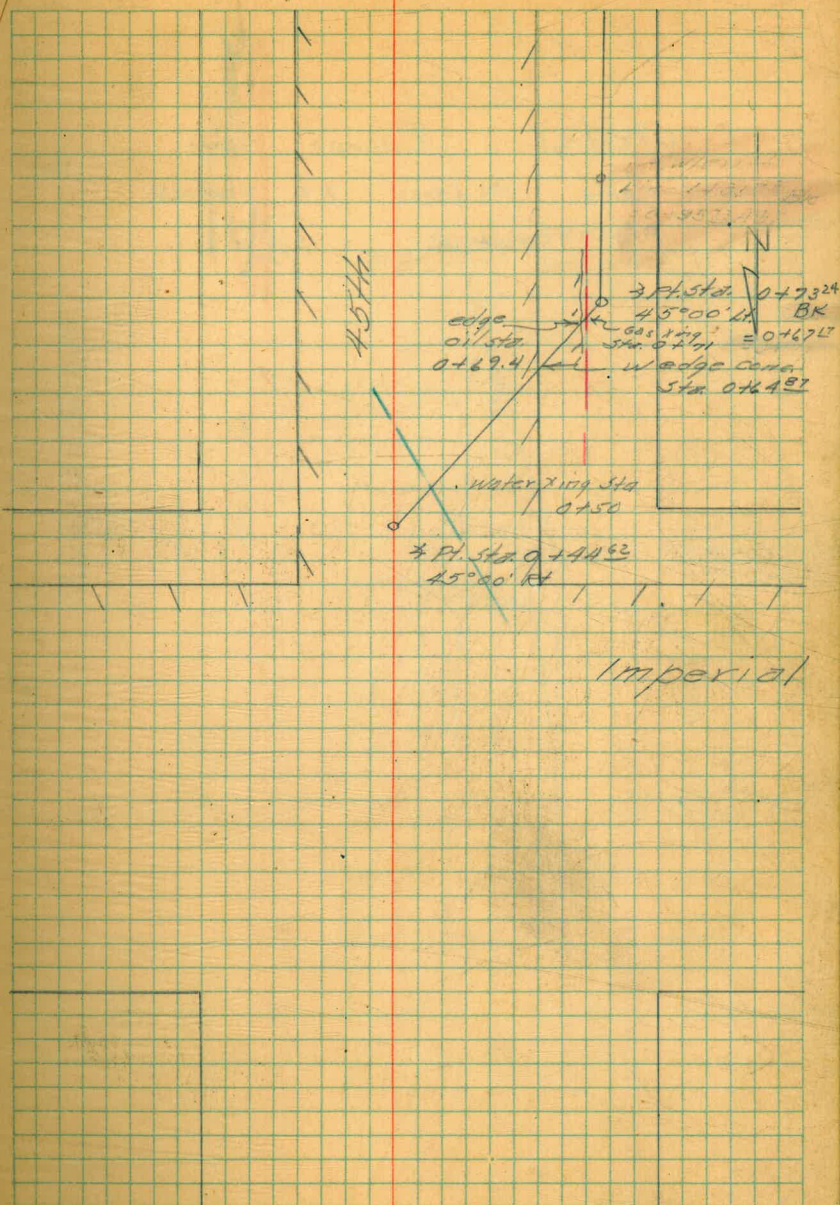
X 14' X 5 ft in fence sta 47+58



Profile

1+7 to Imp. + 45th 3.36 63.23		59.87
0+44 ²³ 3 Ft.	3.61	59.62
0+64 ²² w edge conc.	4.01	59.22
0+73 ²⁴ 3 Ft.	4.2	59.0
1+01 ²⁰ BK = 0+95 ²³ Ah.	4.9	58.9

Realignment 45th + Delta 32
line

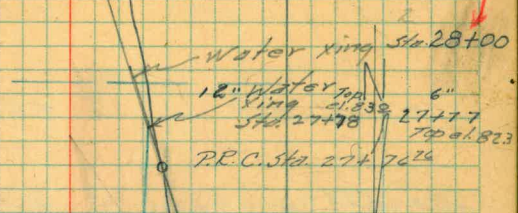


6/29/98 RAINY SAYS
 SAME PROFILES AS BEFORE. →
 NO CHANGES *DR*

EC Sta
 28+53.27
 BK=28+21.68 Ah.

Rainey
 Bayley
 West 33

$\Delta = 11^{\circ} 17'$
 $R = 388.51$
 $L = 76.51$
 $T = 38.38$



Water xing Sta 28+00
 12" water main
 Sta 27+78
 6" water main
 Sta 27+77
 Total 823

P.P.C. Sta 27+76.25

45th St

$\Delta = 11^{\circ} 18'$
 $R = 387.31$
 $L = 76.51$
 $T = 38.38$

Water Service
 xing Sta 27+14

Cas Vining
 Sta 27+56
 39 deep

BC Sta 27+00.25

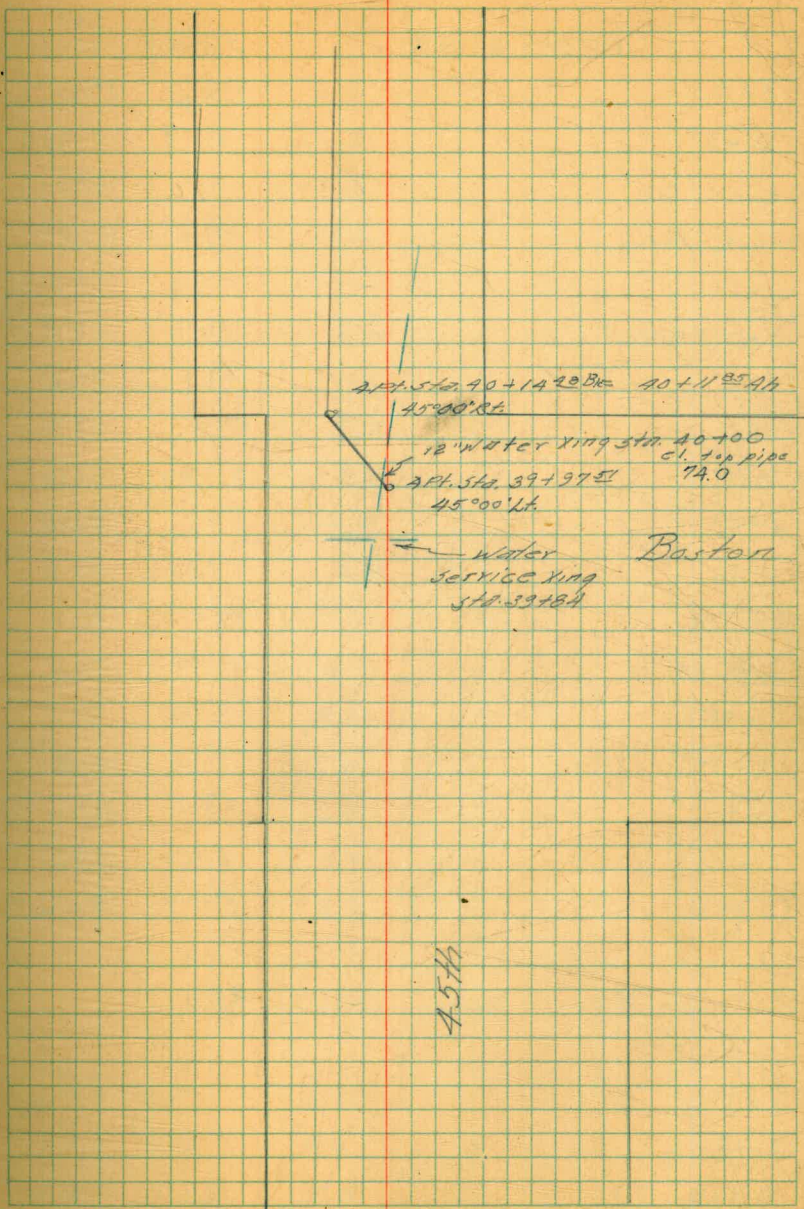
Logan
 Ave.

F.H. N.W. Cor. 45th + Boston 80.63
1.64 82.27

39+80' old A.P. 3.9 78.7

39+97.5' A.P. 4.4 77.9

40+14.95 BK = 40+11.85 4.9 77.4



	1.96	61.83	59.87	45 ^{ft} 45 ^{ft} Imp	
0+06			2.2	59.6	54.2
0+33			2.1	59.7	55.2
0+44 6 ² Back			2.2	59.6	54.1
0+44 6 ² Ahead			2.4	59.4	54.1
0+50			2.5	59.3	53.6
0+73 24 ^{ft} = 0+67 4 ^{ft} Ahead			2.6	59.2	53.5
1+00			3.1	58.7	53.4
1+50			3.9	57.9	53.3
1+75			4.2	57.6	53.2
2+00			4.4	57.4	52.5
+20			4.6	57.2	51.8
2+50			4.7	57.1	52.2
2+75			4.8	57.0	52.5
3+25			4.8	57.0	52.6
3+50			4.7	57.1	52.8
4+00			4.6	57.2	53.0
4+50			4.2	57.6	53.2
5+00			3.4	58.4	54.2
T.P.	11.64	70.11	3.36	58.47	
5+50			10.2	59.9	55.6
6+00			8.5	61.6	57.2
6+50			6.9	63.2	58.8

5.4
4.5
5.5
5.3
5.7
5.7
5.3
4.6
4.2
4.9
5.4
4.9
4.5
4.4
4.3
4.2
4.4
4.2
4.3
4.4
4.4

70.11

7+00	5.4	64.7	60.5
7+50	3.8	66.3	62.0
8+00	2.4	67.7	63.5
8+50	1.5	68.6	64.2
8+75	1.0	69.1	64.6
9+00	0.5	69.6	65.1

T.P.	12.93	82.55	0.49	69.62
------	-------	-------	------	-------

9+50	12.0	70.6	66.2
10+00	10.5	72.1	67.8
10+25	9.6	73.0	68.0
10+50	8.9	73.7	69.3
11+00	6.8	75.8	71.4
11+50	4.5	78.1	73.6
12+00	2.1	80.5	75.8

T.P.	7.21	89.33	0.43	82.12
------	------	-------	------	-------

12+50	6.6	82.7	75.9
13+00	5.1	84.2	76.0
13+0968 Back	4.9	84.4	76.0
13+0968 ahead	4.8	84.5	76.0
	3.86	85.47	85.44

4.2
4.3
4.2
4.4
4.5
4.5

4.4
4.3
5.0
4.4
4.4
4.5
4.7

6.8
8.2
8.4
8.5

ASTH. + Delta

85.44

7.55 92.99

13+14 ²³	split	8.4 ⁵	84.5	76.0	8.5
13+20		8.4	84.6	76.0	8.6
13+50		7.6	85.4	77.4	8.0
14+00		6.1	86.9	81.1	5.8
14+25		5.3	87.7	83.0	4.7
14+50		4.6	88.4	84.0	4.4
15+00		3.8	89.2	85.0	4.2
15+50		3.6	89.4	85.2	4.2
16+00		4.0	89.0	84.7	4.3
16+50		4.5	88.5	84.2	4.3
17+00		5.0	88.0	83.7	4.3
17+50		5.5	87.5	83.2	4.3
18+00		6.0	87.0	82.6	4.4
18+50		6.6	86.4	82.1	4.3
19+00		7.1	85.9	81.6	4.3
19+50		7.4	85.6	81.3	4.3
20+00		7.45	85.54	81.1	4.4
f ck		7.7	85.3		

Aug. 19, 1948

Rainey
King
West
Adams

37

(8)

Edge conc. & 53rd + D₁₇ 55.05

1.59 56.44

68+36 ²³ x Pt. on split	0.8	55.8	52.0
68+50	1.1	55.5	51.8
69+00	2.1	54.5	51.2
69+25	2.9	53.7	49.6
69+50	2.9	53.7	47.1
69+75	7.5	49.1	45.5
70+00	8.5	48.1	44.2
70+25	8.8	47.8	44.2
70+50	6.7	49.9	47.2
70+70 ³⁴ BK	3.7	52.9	49.7
70+70 ³⁴ Ab.	3.0	53.6	49.7
66 to 4	3.34	53.3	
offset rail 20+00		85.54	

6.00 91.54

20+25	6.0	85.5	80.8
20+39 ²⁹ split	6.0	85.5	81.2
20+44 ⁵⁴ BK	6.0	85.5	81.4
20+44 ⁵⁴ Ab.	6.0	85.5	81.4
20+50	6.0	85.5	81.5
21+00	5.9	85.6	81.8
21+50	5.6	85.9	82.2
22+00	5.2	86.3	82.5
22+50	4.9	86.6	82.7

Cuts

38

3.8

3.7

3.3

4.1

6.6

3.6

3.9

3.6

2.7

3.2

3.9

4.7

4.3

4.1

4.4

4.0

3.8

3.7

3.8

3.9

91.54

23+00	4.9	86.6	82.9
23+50	4.9	86.6	82.6
24+00	5.1	86.4	82.3
24+50	5.4	86.1	82.0
25+00	5.7	85.8	81.8
25+50	6.0	85.5	81.5
26+00	6.0	85.5	81.2
26+50	5.8	85.7	80.9
27+00 ²⁵	6.8	84.7	80.6
27T & Logan	6.54	85.00	85.04 ^{corr}
27T & Logan		85.04	

447. 89.51

27+25	4.8	84.7	80.3
27+50	4.7	84.8	80.1
27+76 ²⁵ P.B.C.	4.6	84.9	79.8
28+00	4.7	84.8	79.8
28+25	4.8	84.7	79.8
28+53 ²⁷ E.C.	5.1	84.4	79.8
=28+60 Ahead			
29+00 E.C.	5.3	84.2	79.7
29+50	5.4	84.1	79.5
30+00	5.2	84.3	79.4
30+20	5.7	83.8	79.3
30+40	5.8	83.7	79.3

39

3.7

4.0

4.1

4.1

4.0

4.0

4.3

4.8

4.1

4.4

4.7

5.1

5.0

4.9

4.6

4.5

4.6

4.9

4.5

4.4

	89.51			
31700	4.9	84.6	80.1	
31750	4.4	85.1	80.8	
31775	3.9	85.6	81.2	
T.P.	0.41	89.11		

	92.25			
32700	6.2	85.5	81.2	
+50	6.3	86.0	81.2	
+65	6.2	86.1	81.2	
33700	5.6	86.7	82.2	
+50	5.3	87.0	82.6	
34700	5.6	86.7	82.8	
+50	4.8	87.5	83.0	
35700	4.7	87.7	83.1	
+50	4.9	87.4	83.3	
36700	4.6	87.7	83.5	
+50	5.7	86.6	82.0	
37700	7.9	84.4	80.5	
T.P.	7.05	85.20		

cut

40

4.5
4.4
4.4

Top Hyd. Lt 31790

4.3
4.8
4.9
4.5
4.4
3.9
4.5
4.5
4.1
4.2
4.6
3.9

N.E. Cor. 45^B & Keeler

Rainey King Adams 9-7-48

41

B.M. Tap FH	N.W. Cor	+ 45th. Boston		
	3.76	84.39		80.63
37+50			1.2	83.2 79.4
38+00			1.5	82.9 78.2
38+50			2.0	82.4 76.6
39+00			3.0	81.4 75.0
39+30			4.2	80.2 74.2
39+50			5.4	79.0 73.2
39+92.5	5 Ft. split		6.0	78.4 71.0
40+14	BK		6.2	78.2 78.4
40+11	5 Aft.		7.2	77.2 70.4
40+50			11.4	73.0 69.0
XR			12.31	72.08
	2.18	74.26		
41+00			5.2	69.1 65.2
41+40			7.7	66.6 62.8
41+60			7.9	66.4 62.2
41+80			8.0	66.3 62.6
42+00			6.7	67.6 63.3
42+50			3.5	70.8 65.3
43+00			2.9	71.4 65.1
43+50			2.4	71.9 64.8
44+00			2.8	71.5 64.7
44+50			3.8	70.5 64.5
45+75			4.8	69.5 64.4

3.8

4.7

5.8

6.4

6.0

5.8

7.4

7.8

6.8

4.0

3.9

4.0

4.2

3.7

4.3

5.5

6.3

7.1

6.8

6.0

5.1

25	74.26			
45+00		5.1	69.2	64.0
45+50		6.1	68.2	63.3
46+00		8.7	65.6	61.9
46+50		9.9	64.4	60.5
47+00		9.9	64.4	59.2
ck to 4		9.65	64.7	
set T.P. and 2" pipe	47+58.	10.68	63.58	
	0.78		64.36	
47+50		0.3	64.1	57.8
47+75		1.8	62.6	56.0
48+00		4.2	60.2	53.7
48+50		6.3	58.1	49.0
T.P.		12.39	51.97	
	0.45		52.42	
49+00		2.3	50.1	43.0
49+50		4.2	48.2	42.9
50+00		1.8	50.6	42.8
50+50		5.6	46.8	42.0
51+00		7.8	44.6	40.0
51+50		7.7	44.7	36.0
51+75		9.8	42.6	34.9
52+00		9.6	42.8	34.9
52+50		9.4	43.0	37.0
53+00		9.0	43.4	39.0
53+18		7.3	45.1	40.4

Sept. 14, 1948		Rainey King Ester	
			52
			4.9
			3.7
			3.9
			52
			6.3
			6.6
			6.5
			9.1
			7.1
			5.3
			7.8
			4.8
			4.6
			8.7
			7.7
			7.9
			6.0
			4.4
			4.7

52.42

53+36			3.3	49.1	42.6
T.P.			3.25	49.17	
	11.97	61.14			
53+54			7.9	53.2	45.6
53+72			6.2	54.9	49.4
53+90			4.0	57.1	52.4
54+08			1.9	59.2	54.6
T.P.			1.88	59.26	
	7.19	66.45			
54+26			5.3	60.2	56.0
54+44			4.5	62.0	56.6
55+00			6.4	60.1	56.6
			5.94	60.51	60.55
	6.24	66.69		60.55	
55+43			6.0	60.7	56.6
55+57	57 BK		5.6	61.2	56.3
R.M.	1.60	62.15		60.55	3' PPK
57+51	57 AH			61.4	56.3
56+00			3.5	58.7	58.7
+50			6.7	55.5	51.0
57+00			9.7	52.5	48.4
T.P.	0.73	50.77	12.11	50.04	
57+50			2.2	48.6	45.6
58+00			4.6	46.2	42.8
58+25	23 BX		5.7	45.1	41.4

6.5

7.6

5.5

4.7

4.6

5.2

5.4

3.5

4.1

4.9

5.0

4.5

4.1

3.0

3.4

3.9

50.77

\$58725 ⁰³	AHEAD		5.8	45.0	41.4
\$58764 ⁸³	on split.		6.5	44.3	37.1
+85 ⁰⁰			6.8	44.0	33.2
59405 ⁰⁰			6.8	44.0	33.2
A +32 ⁰⁵	on split		6.5	44.3	37.1
\$59471 ²⁵	B.C.		5.8	45.0	40.2
check to E. Sta.			5.7	45.1	
T.M. + 2.90	51.44	2.23	48.54		
59471 ²⁵			6.4	45.0	40.2
60400			5.5	45.9	42.4
60450			2.6	48.8	45.4
T.P.	10.98	61.77	0.65	50.79	
61400			8.7	53.1	48.3
+50			5.0	56.8	51.3
62400			2.9	58.9	54.2
62450			0.9	60.9	56.4
T.P.	7.64	68.94	0.47	61.30	
63400			5.8	63.1	58.3
+50			3.2	65.7	60.1
64			0.6	68.3	62.0
T.B.M			0.44	68.50	

3.6

4.0

10.8

10.8

7.2

4.8

spike in T pole sta. 60+35

4.8

3.5

3.4

4.8

3.5

4.7

4.5

4.8

5.6

6.3

IN T.P. R+63+25

			68.50	
	2.70	71.20		
64+75		1.9	69.3	62.5
64+50		1.3	69.9	62.8
64+75		1.1	70.1	62.7
65+00		1.5	69.7	62.4
65+50		4.0	67.2	60.6
66+00		6.9	64.3	58.9
66+50		9.3	61.9	57.1
67+00		11.4	59.8	55.7
TP		12.40	58.80	
	8.24	62.04		
67+50		9.3	57.7	53.6
68+00		10.7	56.3	52.5
ck to 67+00		7.4	59.6	51.9

68

7.1

7.4

7.3

6.6

5.4

4.8

4.4

4.1

3.8

Baker
Oct. 4, 1948

Rainey
King
Adams
Peters

6.47	N.W. Cor. 40°44' + Delta	63.52		
	11.39	74.91		
86+50		11.2	63.1	59.7
86+00		10.8	64.1	60.4
85+50		10.3	64.6	61.0
85+00		9.7	65.2	61.7
84+50		8.7	66.2	62.4
84+00		7.5	67.4	63.0
83+50		6.0	68.9	63.7
83+00		4.3	70.6	64.4
82+50		3.5	71.4	65.0
82+00		3.6	71.3	65.7
81+50		3.1	71.8	66.4
81+00		2.6	72.3	67.0
80+50		1.6	73.3	67.7
80+00		1.4	73.5	68.2
T.P.		1.34	73.57	
	9.21	76.28		
79+50		2.7	73.6	68.3
79+00		5.0	71.3	67.8
78+50		6.6	69.7	67.2
78+00		6.6	69.7	66.6
77+50		5.9	70.4	66.0
77+00		5.3	71.0	65.4
76+50		7.1	69.2	64.8

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5.3
5.3
2.5
2.5
3.1
4.4
5.4
4.4

76.28

76+00	7.5	68.8	64.3
75+50	7.0	69.3	63.7
75+00	6.5	69.8	63.2
74+50	7.2	69.1	62.6
74+00	6.7	69.6	62.0
73+50	6.2	70.1	61.4
T.P.	6.17	70.11	

4.36 74.47

73+00	4.1	70.4	60.7
72+50	5.2	69.3	59.8
72+00	6.4	68.1	58.8
71+50	10.8	63.7	57.2
T.P.	10.79	63.68	

0.25 63.93

70+100	6.1	57.8	53.5
70+70 ³⁴ 257	10.6	53.3	49.7
ck to 68+00	7.66	56.27	56.3

4.5

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8.7

9.7

9.5

9.3

6.5

4.3

3.6

oct. 7, 1948
 Rainey
 King
 Baker
 Adams
 Rogers

	+	π	-	ELEV	GRADE
L&T. N.W. CORNER				40th & Delta	63.52
	1.26	64.78			
87+00			3.1	61.7	58.4
+50			4.5	60.3	57.1
88+00			5.8	59.0	55.8
+50			7.0	57.8	54.4
89+00			8.5	56.3	53.0
+50			10.0	54.8	51.6
90+00	6' off		11.3	53.5	50.2
90+00	10' off		11.5	53.3	50.2
+50			12.7	52.1	48.9
T.P.	0.17	52.12	12.83	51.95	
91+00			1.3	50.8	47.5
+50			2.9	49.2	46.2
92+00			4.2	47.9	44.9
+50			5.3	46.8	43.6
93+00			6.2	45.9	42.8
+50			7.1	45.0	41.4
94+00			7.8	44.3	40.8
+50			8.5	43.6	40.2
95+00			9.0	43.1	39.6
T.P.	0.03	42.93	9.22	42.90	
95+50			0.8	42.1	39.0
96+00			2.0	40.9	37.6
+50			3.7	39.2	34.7
96+00			4.1	38.8	34.1

Cut:

3.3
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 3.2
 3.4
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Annex St.
for Construction

Rainey
King
Baker
Adams

W Rail		14.27		
	0.28	14.55		
9+00		3.5	11.1	7.2
9+50		5.1	9.5	5.4
9+75		6.5	8.1	3.8
10+00		7.1	7.5	3.6
10+50		7.1	7.5	3.2
10+70 ⁸⁰ 2 Pt.		7.8	6.8	2.1
East Rail		14.30		
	2.27	16.57		
7+00		6.2	10.4	5.7
6+50		7.7	8.9	4.8
6+25		8.1	8.5	4.6
6+00		8.0	8.6	4.5
5+50		7.7	8.9	4.4
5+25		8.2	8.4	3.8
5+00		8.7	7.9	3.7
4+50		8.4	8.2	3.6
4+25		3.7	6.9	2.8
4+00		10.4	6.2	2.7
3+50		10.9	5.7	2.6
3+00		10.2	6.4	2.5
2+50		9.8	6.8	2.3
2+42 ⁸⁵ 2 Pt.		9.85	6.72	2.2 ³

3.9
4.1
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Sept. 24, 1948

Rainey
King
Adams
Rogers

W. Rail / AT. & SE. RR	14.27		
	5.61	17.88	
10+70 ⁰⁰ SPT	7.7	10.2	2.1
11+00	8.4	9.5	2.0
11+50	6.4	11.5	1.7
12+00	4.9	13.0	1.5
12+50	9.0	8.9	1.3
13+00	9.3	8.6	1.1
13+50	9.5	8.4	0.9
14+00	9.7	8.2	0.9
14+50	9.8	8.1	0.9
15+00	9.8	8.1	0.8
15+50	10.1	7.8	0.8
16+00	10.3	7.6	0.8
16+50	11.1	6.8	0.8
17+00	9.1	7.8	0.7
17+50	10.7	7.2	0.7
18+00	11.3	6.6	-0.6
18+50	11.0	6.9	0.4
19+00	11.6	6.3	0.6
19+50	11.8	6.1	1.0
20+00	11.8	6.1	1.4
20+50	7.0	10.9	1.7
20+75	11.3	6.6	1.9
	11.2		

8.1

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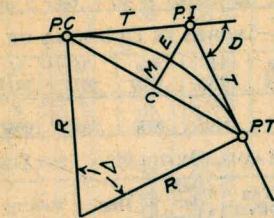
4.7

9.6

4.7

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) $\Delta =$ 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 $\div 8\frac{1}{3} = 414.49$ 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 $= 158 - \text{Sta. P. C.} = 54.50$, hence offset $= 7.27 \frac{54.50}{100} = 2.16$ 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 $D = 5^\circ 30'$.

25

21

21

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DISTANCES FROM CENTER OF ROADWAY FOR
 CROSS-SECTIONING.

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

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For 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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