

1103

1103

FIELD BOOK

360

Book 1103

1103

KEUFFEL & ESSER CO.
DRAWING MATERIALS
 AND
SURVEYING INSTRUMENTS.
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

TABLE FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
 ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
 FOR SINGLE TRACK EXCAVATION.

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MICROFILMED

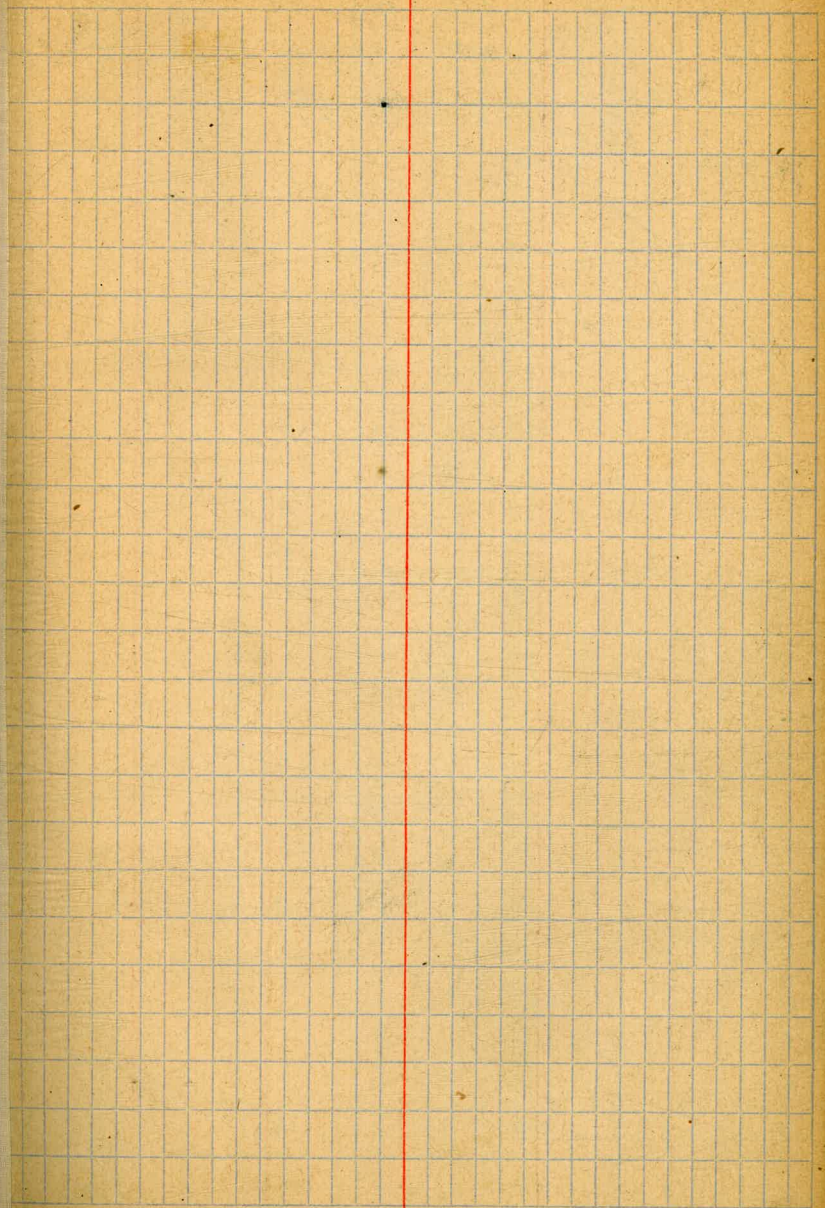
DEC 21 1964

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

Calculated by Julien A. Hall, M. Am. Soc. C. E.

For Keith's Railroad Curve Tables see end of book.

RETURN TO CITY ENGINEER'S OFFICE
 CITY HALL, SAN FRANCISCO, CALIF.

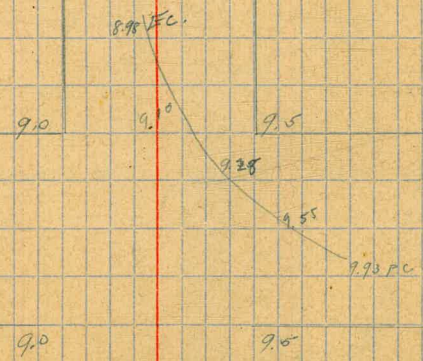
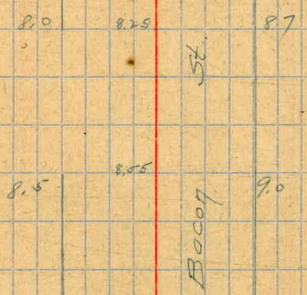
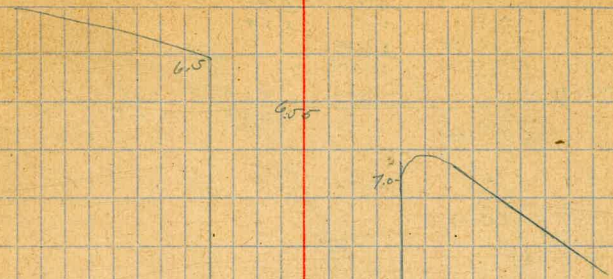


9.52 NE Kottair & Bacon pigt.

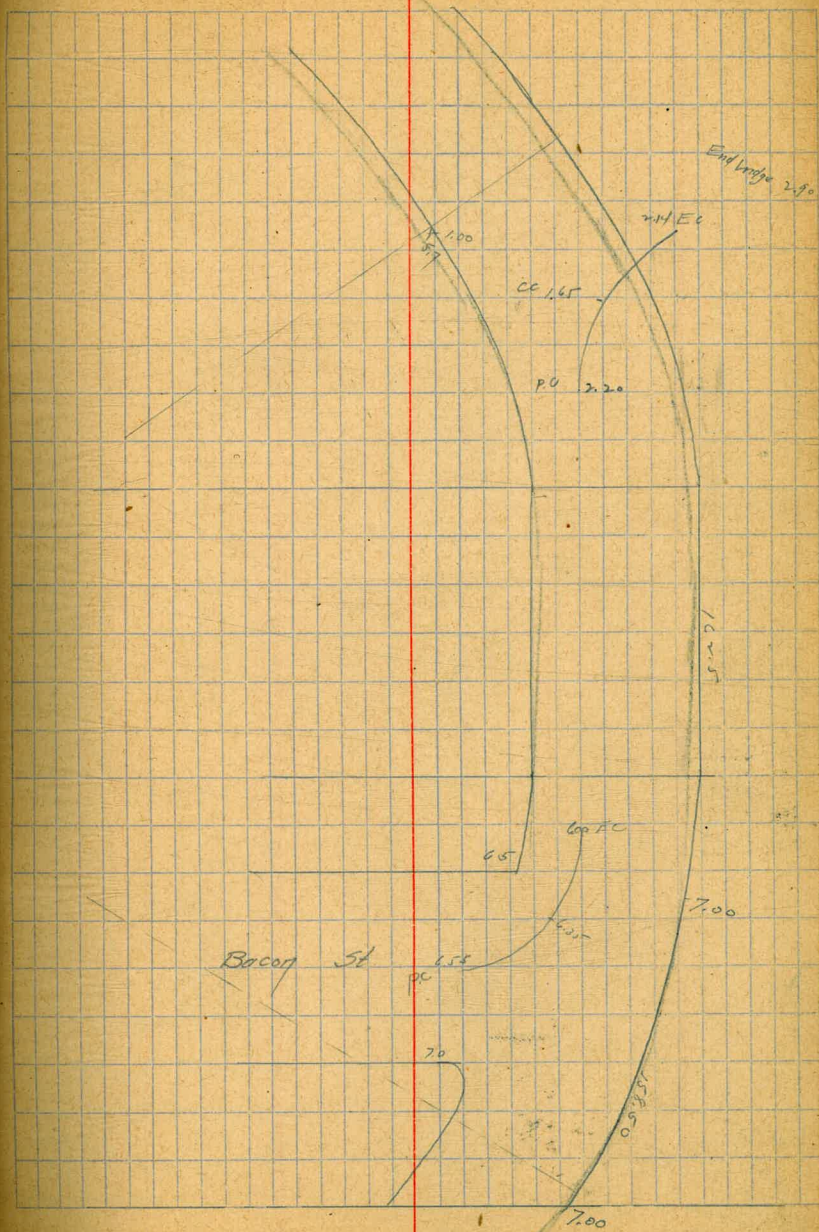
4.36	8.98	9.25	9.78	5.54	9.10
13.88	4.90	4.50	4.60	9.20	5.75
	9.55	8.55			0.25
	4.30	5.20			

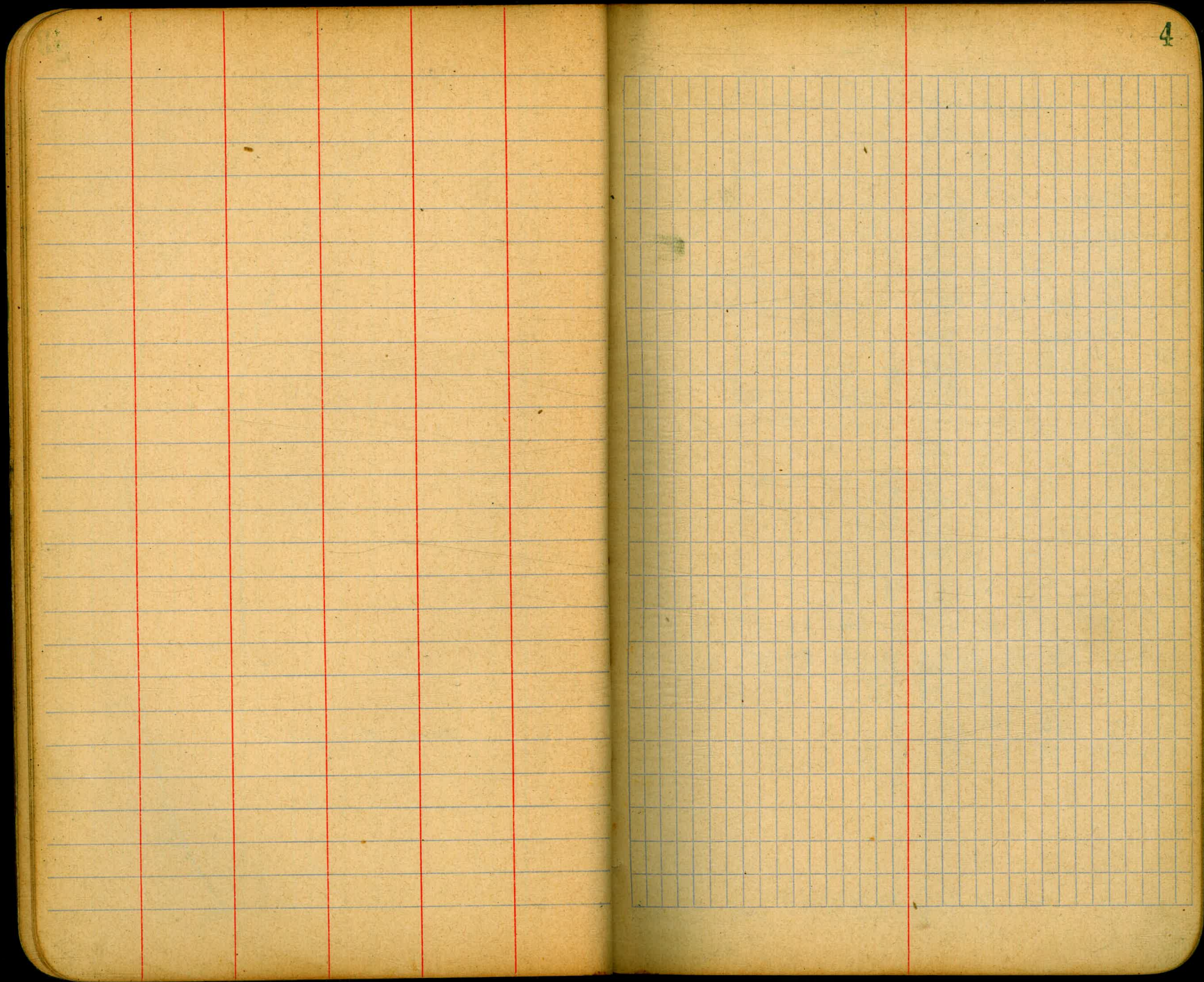
8.55	8.09	8.25	8.85
3.70	8.56	3.40	3.10

SUN Pt. Birds Bacon p. 71 Top Hydr.

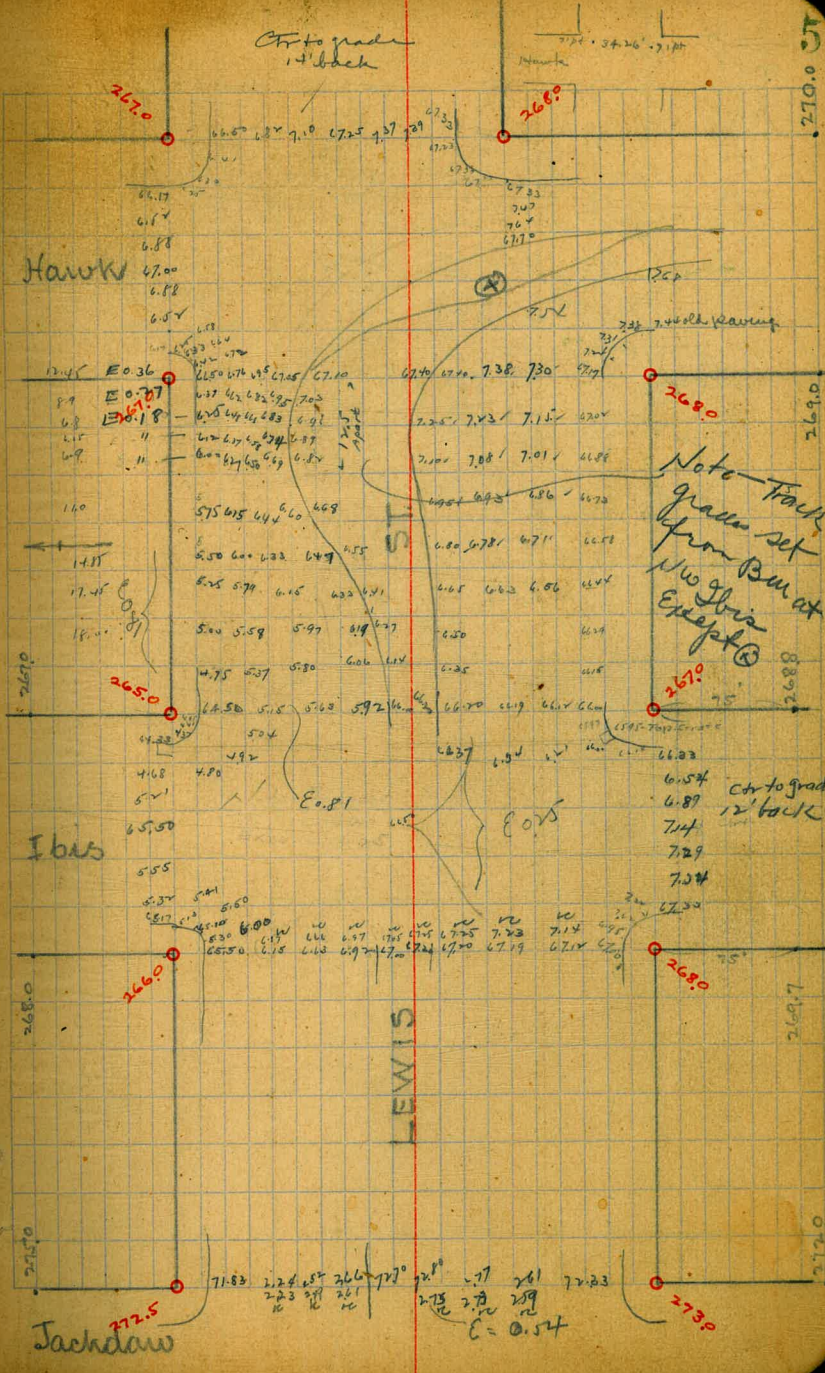


P 71	6.00	6.35	6.55
0.03	2.74	2.39	2.19
P 74 H	2.20		
5.09	6.07		
Both S.W. Cambridge	3.65	4.60	1.65
3.40	2.12	2.89	5.8.4
7.49 H			



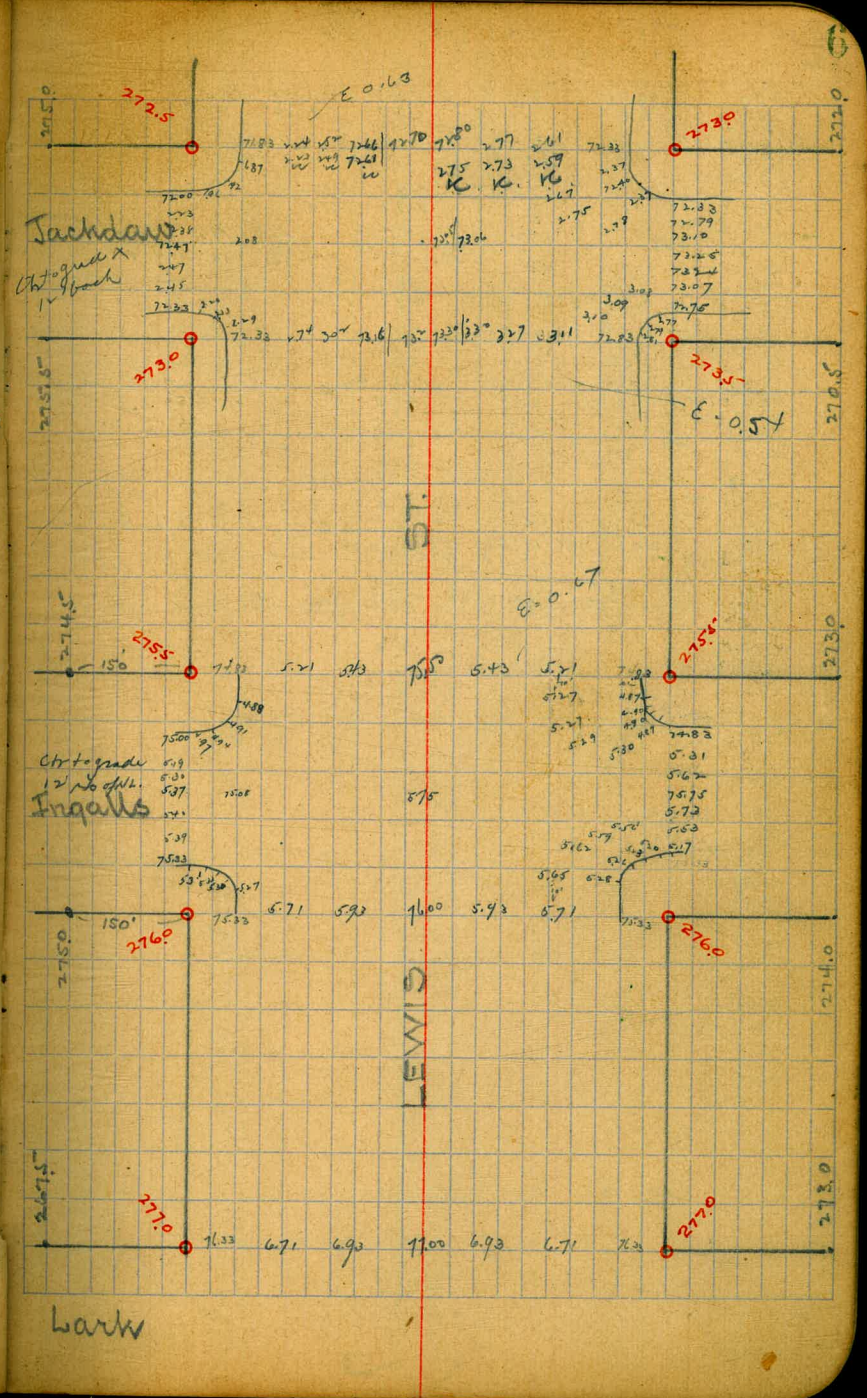


S.W. Lewis & Hawk Pt 267.97	
NW Ibis 266.01	
4.01	6.01
67.97	67.17
71.97	4.81
66.01	6.33
66.01	5.65
75.63	5.22
75.63	6.30
75.17	6.33
78.99	6.17
66.01	6.21
70.92	6.59
66.01	6.70
78.78	6.53
70.00	7.20
66.01	7.27
71.64	7.26
66.01	6.21
66.01	6.34
70.70	6.89
4.44	6.17
66.24	6.27
266.01	6.17
5.28	6.12
271.29	5.12
66.01	5.27
56.3	6.27
71.64	6.47
71.64	5.17
71.64	6.29
71.64	5.18
7.05	6.95
4.59	4.69
4.59	4.37
7.14	6.27
67.97	6.27
4.24	6.27
72.21	6.11



75.99 M	75.17 S.E. Jackdaws markad bolt head on NW					
75.83	75.83 S.E. Ingalls R.R. 51' K pit					
75.74 M	75.33 7483	7483	2.57	75.23 7523	7483	
75.82	5.91 6.31	6.31	75.17	5.41 4.91	5.91	
75.81	75.78	75.22	77.74 M			
75.81	2.42	5.24 6.24	75.83	75.50		
75.74 M	4.91 72.80	73.30	4.57	4.90		
75.78	5.24	26.473	5.40			
75.78	75.73		2.59 273	271		
75.78	4.72	4.65	5.12 4.98	4.96		
75.78 M	80.61					
75.72 M	3.30	3.27 3.11	3.30	6.00	573 571	
75.77 M	4.41	4.44 4.60	4.80	4.61	4.68 4.90	
75.73	75.83		5.42	5.50		
75.73	4.77	5.21	5.42	5.50	3.28 3.09	
75.70 M	80.67	5.40	5.11	5.11	3.06 2.7	
75.7	2.29	2.29	2.24 3.07	2.7	2.75 2.78	
75.17	4.81		4.36 4.50	4.54 4.93	4.85 4.82	
75.17			2.7 2.7	2.7 2.7	5.25 5.31	
75.17			4.83 4.89	4.83 4.96	4.75 4.94	
75.17			5.75 5.73	5.75 5.79	5.71 5.73	
75.17			4.77 4.69	4.63 4.60	4.54 4.52	
75.17			2.1 2.9	2.23 2.3	2.3 2.7	
75.17			5.47 5.59	5.85 5.85	5.70 5.61	
75.08 M	2.44	3.04 3.10	8.57 1.2	1.2 2.0	2.32 2.29	
75.83	5.3	6.06 4.92	6.21 6.16	6.12 6.07	5.76 5.79	
75.83	4.86	5.43 5.21	5.17 5.20	5.27 5.40	5.39	
75.83	4.88	4.93 5.15	5.17 6.06	4.99 4.96	4.97	
75.83	5.21	5.93 6.0	5.27 5.30	5.32 5.30	5.32	
75.83	4.65	4.43 4.30	6.09 5.06	5.03 5.06	5.03	
75.83	5.0	4.97 4.94	4.91 4.88	4.62 4.63	4.71	
75.83	5.28	5.39 5.42	5.45 5.48	4.62 4.89	4.91	
75.83	3.1	3.02 2.74	2.36 2.21	2.49 2.43	2.43	
75.83	4.03	4.17 4.45	4.28 4.43	4.55 4.81	4.81	
75.83						
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75.83						

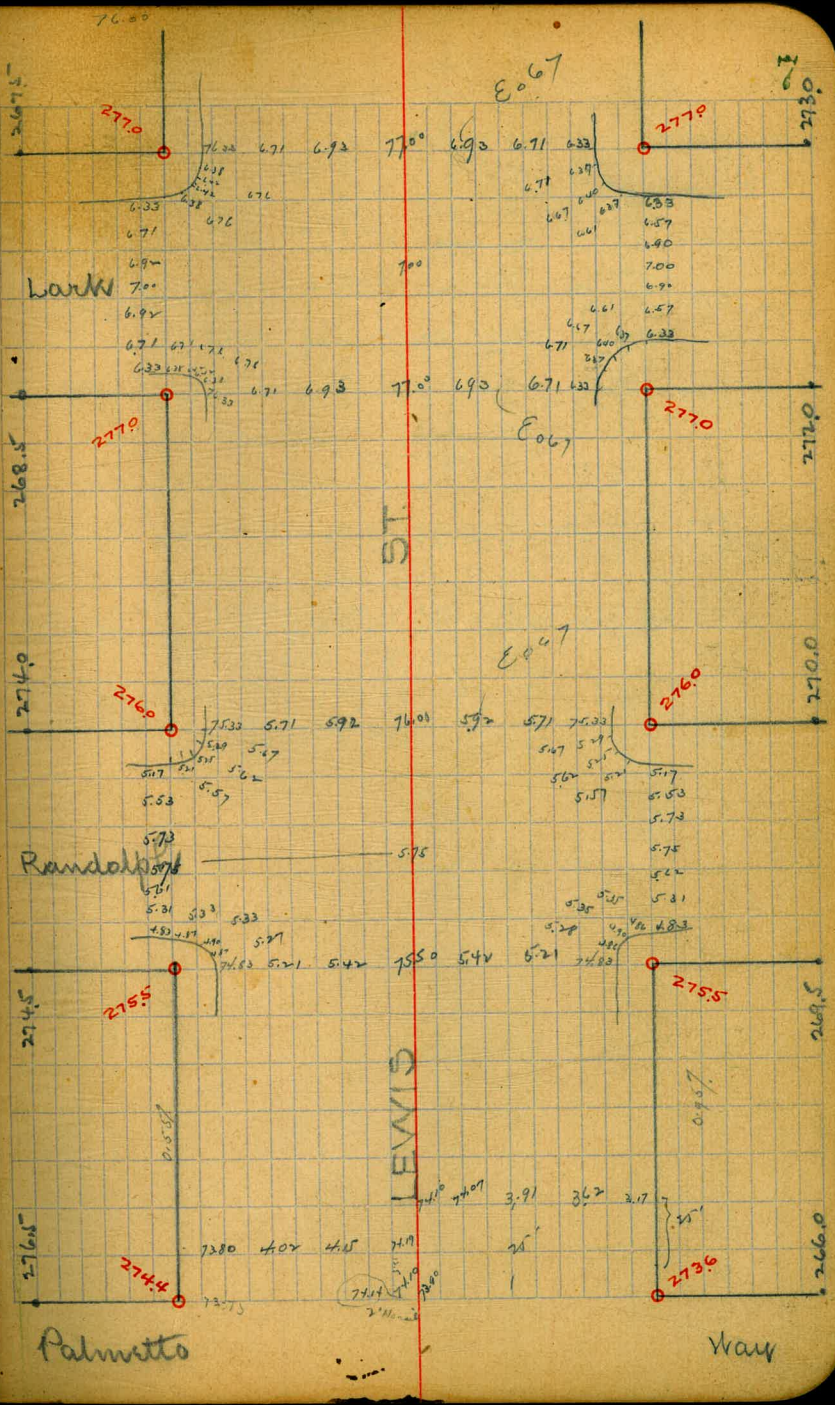
75.93 BM	75.75 16				
75.93	6.01	6.16			
75.93	5.12				
75.93	5.05				
75.93	4.83				
75.93	4.703 BM				



77.03 SW Lark Pt
75.51 SW Randolph "

77.03 412 E115M 4.95 75.51 80.46 AM	76.33 4.82	75.51 5.28 80.79 AM 4.46	74.83 5.96 77.93 81.51 AM 4.86	75.33 5.46	75.51
77.03 4781 81.81 AM		7.00 4.815	6.93 4.885	6.71 5.103	
75.51 4.77 80.28 AM	4.15 78.62 AM	5.42 4.86	5.51 5.07	6.00 4.78	5.92 4.27
77.03 4.60 81.3 AM	75.51 4.72	4.07 4.50	3.91 4.71	3.62 5.00	5.21 5.20
77.03 4.65 81.68 AM	80.23 AM	6.90 4.78	7.00 4.63	6.61 5.02	6.67 4.96
79.06 AM	75.51 4.30	5.50 4.31	5.21 4.39	5.71 4.60	5.37 5.37
77.03 4.41 81.44 AM	75.51 80.64 AM	4.89 4.89	5.23 5.11	5.33 5.27	5.71 5.02
77.03 4.33 81.86 AM		4.87 4.74	4.90 4.74	4.92 4.68	5.02 4.93
75.51 4.51 80.62 81.86 AM		5.75 5.77	5.73 5.74	5.33 5.81	5.17 5.07
77.03 4.41 81.44 AM		6.00 4.64	5.75 4.89	5.21 5.74	5.37 5.02

77.03
412
E115M
4.95
75.51
80.46 AM

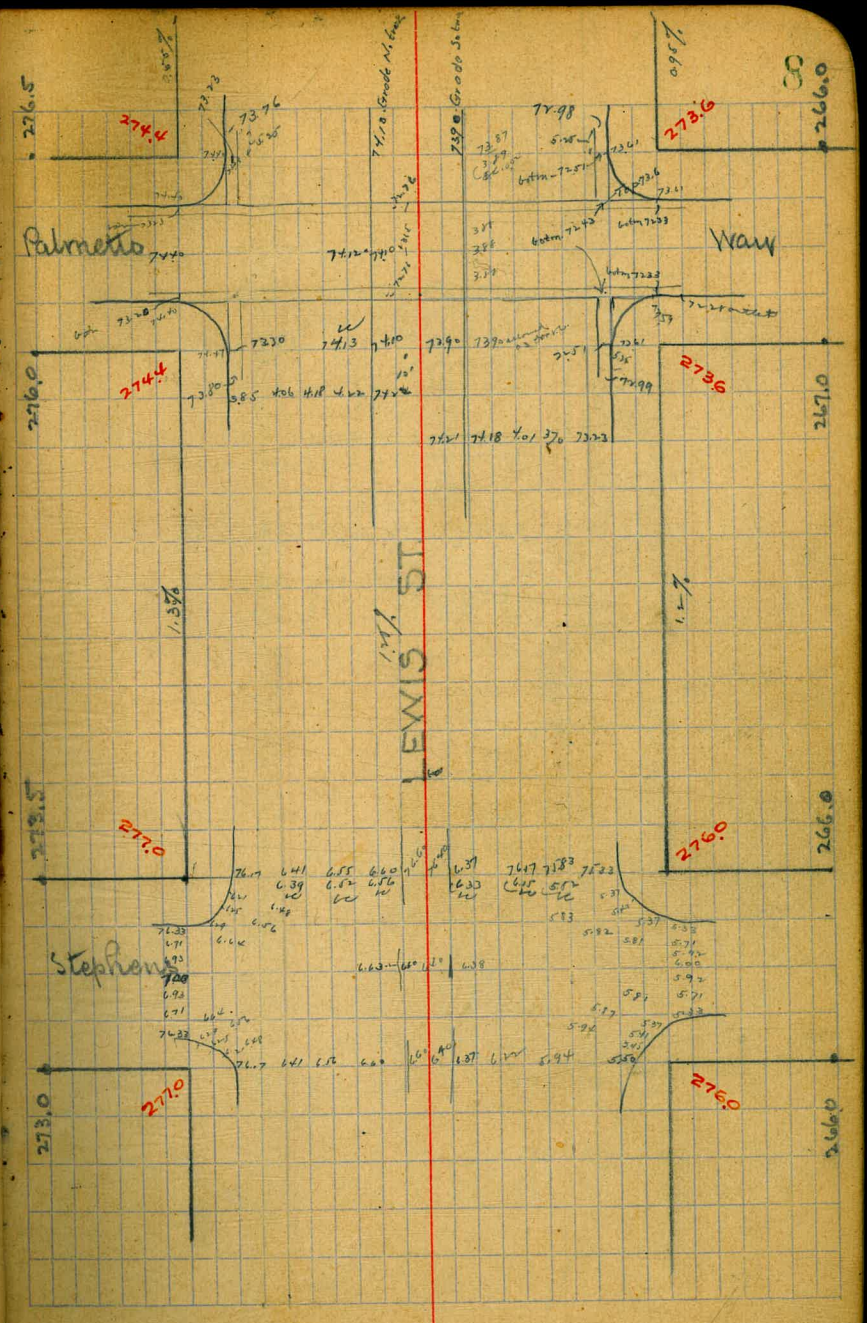


74-77 No. 7 in Ct. N. W. Palmetto.

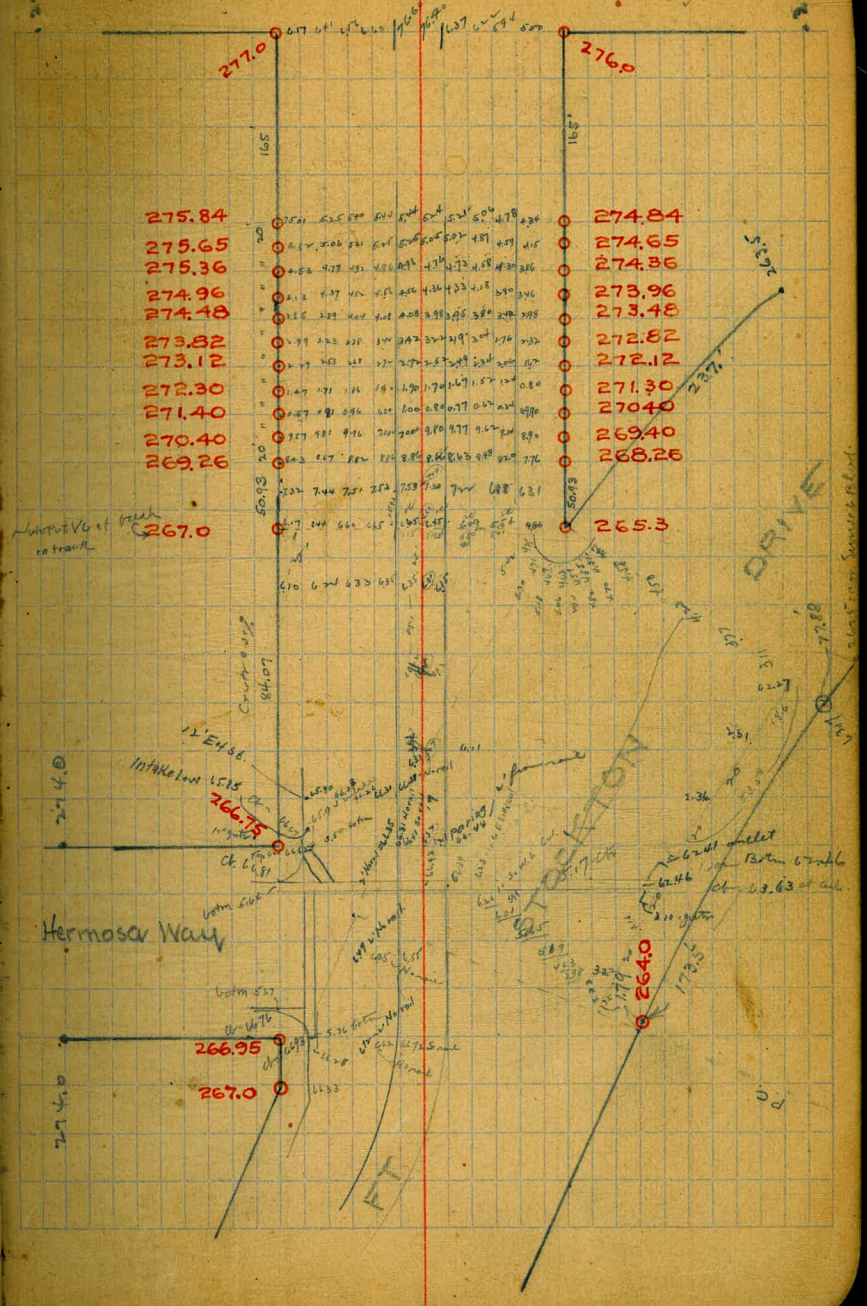
B.M. S.E. cor. Stephens & Lewis. 275.78

74-78 Ft. Stockton " 265.44

75.51	73.76	72.23	72.40	73.50	74.60	75.78	2522	2617
3.62	5.27	6.15	6.74	6.32	7.47	5.25	6.37	5.48
79.13	4.71	5.30	5.22	7.47	5.65	5.11		
74.47	10.20	13.51	72.50	23.90	3.37	77.35	73.23	
79.27	7.33	7.22	7.24	78.25	14.1	5.59	5.12	
4.09	5.01	5.98	5.48					
74.43	7.37			72.95	4.29	74.11	73.97	76.23
79.66	7.22	7.27	WRail	72.95	4.91	5.16	6.42	5.00
75.78	5.99							
81.77	71.21	72.43	72.51	2.32	2.78			
70.47	5.02	6.58	6.50	6.68	6.75			
4.54	4.07	4.18	4.01	3.70	5.37	6.17	5.82	
79.01	79.88	5.70	5.87	6.18	3.51	5.77	5.00	
75.78	3.80	4.10	75.78	5.22	5.15	6.32	5.03	
74.07	4.48	4.28	79.7	3.92	3.55	5.37		
74.07	2.37	2.36	3.02	3.88	5.93	5.71	6.22	
74.07	5.07	5.24	5.02	5.06	5.07	5.69	5.19	4.68
74.07	7.578	6.23	6.17	5.82	5.92	6.00	5.87	6.37
74.07	5.12	4.67	4.75	5.02	4.98	4.90	5.03	4.96
74.07	80.90	6.38	5.45	5.33	7.42	4.12	6.92	7.00
74.47	4.13	4.52	5.25	4.57	4.60	4.88	4.71	4.62
79.00	4.13	4.22	4.18	4.94	4.06	4.88		
75.78	6.76	6.52	6.39	6.58	6.52	6.39		
78.46	4.89	4.93	5.06	4.02	4.08	4.21		
75.78	6.56	6.12	6.39	6.48	6.21	6.00	6.76	6.87
71.64	5.08	5.12	5.28	5.16	5.08	5.00	5.08	5.16
71.64	5.21	5.08	5.04	5.01	5.23	5.29	5.35	5.31



75.77									
403	74.7	75.1	412	453	412	365	429	429	427
79.81	144	48	419	428	468	416	482	7.52	8.34
6.44	0.63	125	2.15	2.11	3.29	3.29	2.87	0.57	7.17
7.24	9.18	6.36	7.22	7.00	6.07	6.12	5.82	1.71	2.81
72.37	6.71	4.63	2.57	2.73	4.73	5.17	5.94	5.78	3.25
72.1	7.21	8.75	5.77	4.65	2.65	2.51	7.06	3.12	5.57
65.44	65.44		4.50	4.74	6.63	6.63			
67.90	67.90		67.00	66.8	5.21	5.26			
71.02	71.02								
65.44	65.44								
70.90	70.90								
79.70	79.70								
73.97	73.97								
65.55	65.55								
65.44	65.44								
71.02	71.02								
65.44	65.44								
40.98	40.98								
9.11	9.11								
65.44	65.44								
65.63	65.63								
72.10	72.10								
65.44	65.44								
4.07	4.07								
69.51	69.51								
75.77	75.77								
50.60	50.60								
76.20	76.20								
65.44	65.44								
71.32	71.32								
65.44	65.44								
71.32	71.32								
75.77	75.77								
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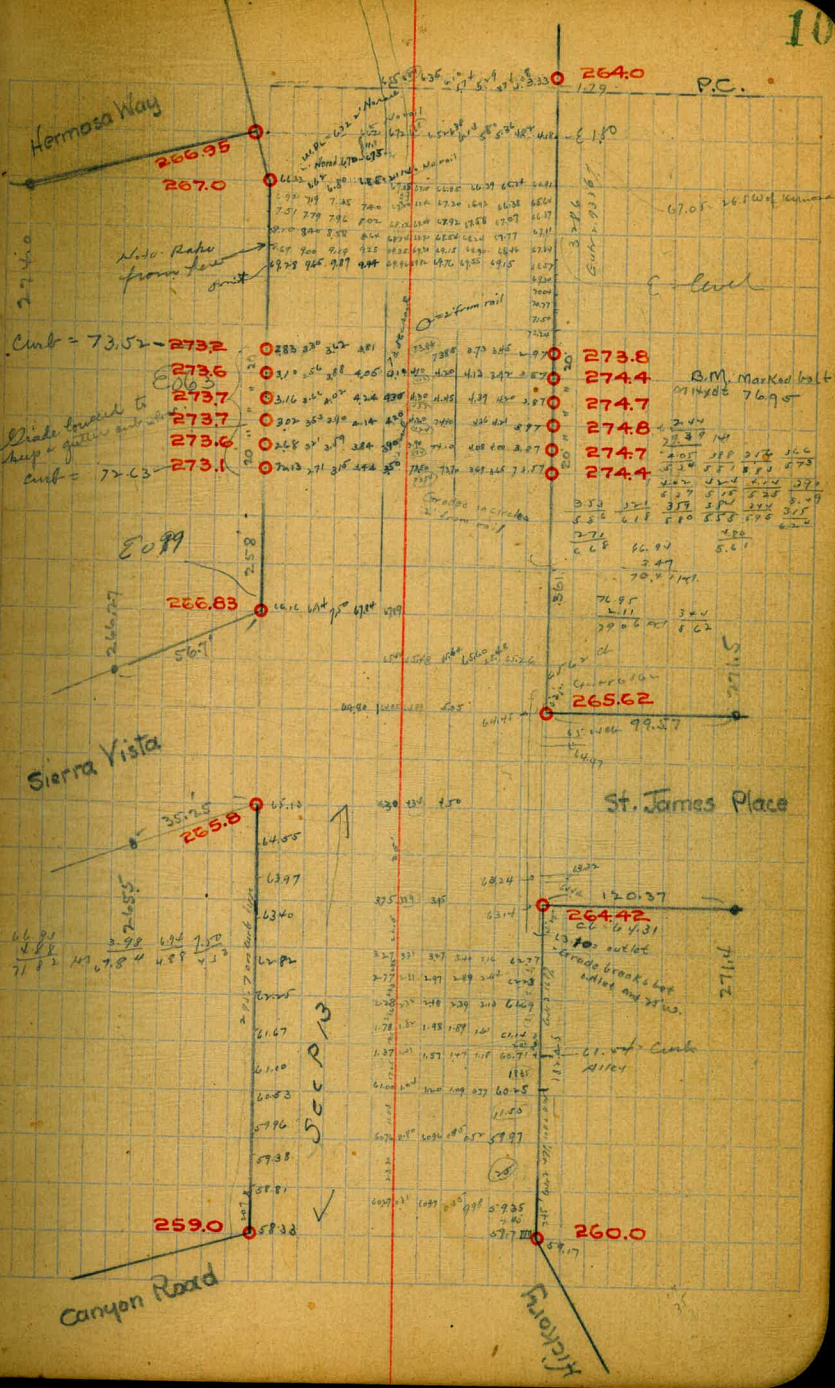


B.M. NE Cor Sierra Vista + W. Jackson 266.94

11 S.E. " Hickory " 266.16

11 " Weatherly " 262.48

6.44	66.16	65.13	3.00	4.21	4.02	4.12	3.00	5.20	3.20
4.47	6.26	6.28	6.28	6.11	6.79	7.23	7.41	4.08	4.25
71.47 AM	3.57	3.27	3.27	3.67	4.22	4.10	4.22	3.20	3.10
66.31	3.58	3.58	3.58	3.58	4.48	4.95	4.52	3.20	3.10
77.45 AM	3.58	3.58	3.58	3.58	4.48	4.95	4.52	3.20	3.10
60.26	3.58	3.58	3.58	3.58	4.48	4.95	4.52	3.20	3.10
6.94	3.58	3.58	3.58	3.58	4.48	4.95	4.52	3.20	3.10
67.10 AM	3.58	3.58	3.58	3.58	4.48	4.95	4.52	3.20	3.10
70.95	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
2.02	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
78.97 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
70.95	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
1.66	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
78.61 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
76.45	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
1.94	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
78.87 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
71.9	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
1.47	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
78.24 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4.06	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
65.41	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
5.53	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
70.97 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
68.45	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
2.15	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
78.07 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
6.23	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
6.49	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
15.20	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
15.20	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
3.75 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
15.20	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
70.78 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
60.16	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
6.12	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
66.26 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
70.91 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
5.62	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
6.58	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
71.06 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
3.89	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
66.94	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
70.23 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
4.85	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
64.57	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
71.13 AM	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21	4.21
76.45	3.16	2.71	3.15	3.22	0.31				
1.84	5.13	5.08	5.04	5.13					
78.79 AM	4.94	7.50	7.54						
71.74 AM	4.80	4.24	3.90						



Diode located to cheap + gutters

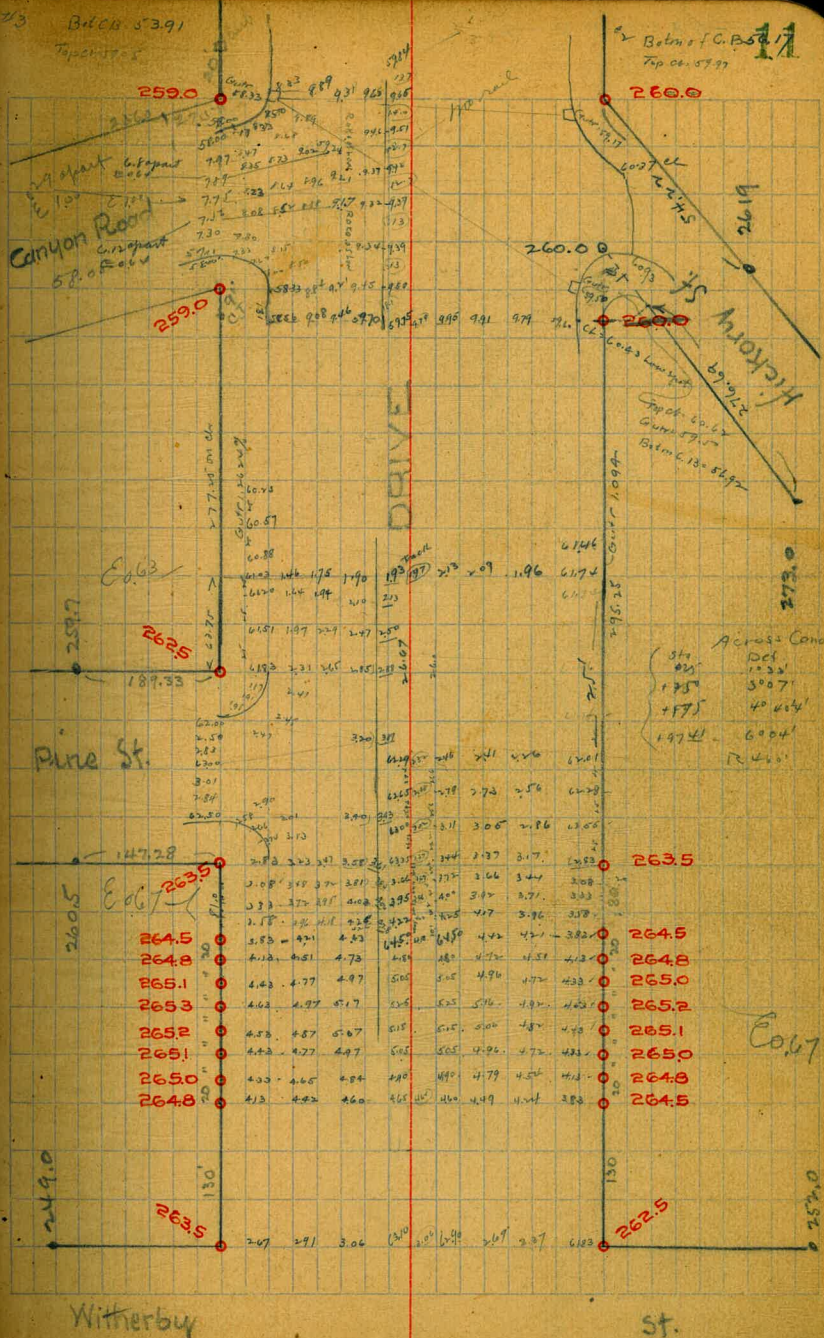
B.M. Max Keel last 714 yds 769

S.E. Hackory 26.16
 SW Pine Nails in Trolleygate 26.4.03

60.16	59.00	3.41	3.37	4.14	6.04	3.37	4.29
62.41	4.54	6.43	6.06	12.70	17.60	59.76	59.05
60.16	5.97						
63.97	59.50	59.17	58.63	5.11	5.24	4.13	4.23
	4.47	4.80	5.64	6.98	8.80	5.53	5.53
7.15	4.13	3.93	3.63	2.83	3.00	3.22	3.58
69.64	4.50	5.10	6.00	6.80	6.80	6.20	6.05
64.03	4.70	4.13	3.83	3.18	3.33	3.08	2.80
67.36	4.70	5.30	6.40	6.00	6.30	6.00	6.00
67.82	4.13	4.43	4.63	4.83	4.83	4.83	4.83
49.98	4.88	4.88	4.88	4.88	4.88	4.88	4.88
64.03	4.88	4.88	4.88	4.88	4.88	4.88	4.88
67.90	4.88	4.88	4.88	4.88	4.88	4.88	4.88

60.16	1.96	2.09	2.15	1.97	1.77	1.95	1.91	1.79
64.66	5.94	5.81	5.77	5.93	6.03	6.07	6.01	5.03
64.82	2.37	2.44	2.06	2.22	2.18	2.18	2.18	2.18
67.36	4.02	4.23	4.30	4.30	4.30	4.30	4.30	4.30
67.82	4.30	4.30	4.30	4.30	4.30	4.30	4.30	4.30
2.89	4.21	3.65	3.70	3.66	3.68	3.68	3.68	3.68
4.42	6.08	6.93	6.26	6.50	6.88	6.69	6.53	5.53
60.16	1.80	1.71	1.56					
64.58	6.03	5.76	5.91	6.20		7.06		5.02
64.82	6.76							

64.03	4.57	4.43	4.21	4.11	4.73	4.00	4.27	4.27
70.20	4.07	4.12	4.21	4.11	4.07	4.10	4.22	4.37
62.41	5.23	5.03	4.93	5.04	5.03	5.03	5.03	5.23
68.18	5.30	4.80	4.65	4.42	4.00	4.65	3.10	3.41
64.03	4.22	4.48	4.74	4.83	4.95	4.00	3.81	3.72
68.26	3.58	3.77	3.23	3.40	3.20	2.85	2.40	2.40
60.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16	4.16
65.08	2.90	3.01	3.13	3.04	2.66	2.89	2.70	2.70
60.16	5.36	5.25	5.13	5.03	5.60	5.60	5.60	5.60
65.07	5.71	4.88	4.88	4.00	4.00	4.00	4.00	4.00
6.39	7.50	7.20	7.00	6.80	6.50	6.30	6.10	6.00
6.47	7.00	7.30	7.00	6.80	6.50	6.30	6.10	6.00
6.60	7.80	7.50	7.20	7.00	6.80	6.50	6.30	6.20



Canon
 195'
 175'
 197'
 600'

262.485 E.W. Hardy

B.M. S.E. cor Hortensia & Ft. Stockton 260.53

11 N.E. Trias 267.06

64.48	5.02	1.33	2.17	4.67	6.07	6.07	0.69
67.65	5.12	6.32	5.27	4.98	6.98	5.63	5.61
60.53	0.96	67.06	6.27	5.83	5.75	6.55	6.18
66.38	6.48	7.18	6.22	6.33	5.75	5.00	5.23
66.87	4.58	4.13	9.45	9.36	9.22	5.75	6.05
66.20	7.06	7.18	6.18	6.22	6.33	5.75	5.00

5.05	4.14	6.10	6.78	6.78	6.56	6.27	6.07	1.52	1.71	
60.53	67.06	4.20	4.42	4.50	4.24	4.92	5.26	4.92	4.73	
65.58	71.20	60.53	6.27	6.27	6.27	6.27	6.27	6.27	6.27	
60.13	1.97	66.24	4.71	4.66	4.61	4.60	4.64	4.72	4.66	
60.13	5.57	60.53	1.24	2.19	2.40	2.56	6.09	6.09	1.15	1.21

62.48	5.15	5.15	4.78	4.07	4.41	5.48	5.13	4.92	4.76	
66.97	6.15	6.15	7.45	2.27	2.06	2.22	2.69	2.37	2.37	
62.18	66.07	60.10	60.10	5.27	4.52	4.12	4.23	4.23	4.23	
67.58	2.17	2.07	2.02	1.97	1.97	2.07	1.97	1.97	1.97	
0.02	1.81	2.19	2.11	2.31	1.82	1.82	1.33	2.19	2.40	2.46

60.53	1.79	1.71	1.71	1.67	2.11	2.23	2.12	1.97	1.18
5.76	5.79	5.83	5.87	5.91	5.47	5.05	5.07	5.71	5.10
66.28	60.46	1.33	1.37	1.41	0.47	0.92	1.02	1.19	
	6.62	6.23	5.33	6.19	5.81	5.06	5.25	5.09	

62.48	6.11	6.09	6.07	6.03	6.05	6.11	1.27	1.71	1.52
46.55	5.17	5.22	5.26	5.29	5.23	5.17	4.41	4.87	4.76
67.10	1.07	1.01	0.91	0.82	0.95	0.93	0.53	0.57	0.61
	5.19	5.24	5.27	5.26	5.23	5.05	5.75	5.71	5.67

60.53	2.41	2.36	2.60	2.17	1.22	1.18	1.03	1.15	1.11
5.74	4.72	4.87	4.82	4.96	5.08	5.09	5.24	5.12	5.16
66.27	1.21	1.22	1.51	1.46	1.31	4.05	4.95	4.41	
	5.01	5.05	4.76	4.81	4.96	3.61	3.27		

67.06	6.80	6.73	6.52	2.91	3.01	3.11	2.60	2.11	
4.69	4.98	5.02	5.23	5.20	5.10	5.02	5.02	5.75	
74.45									

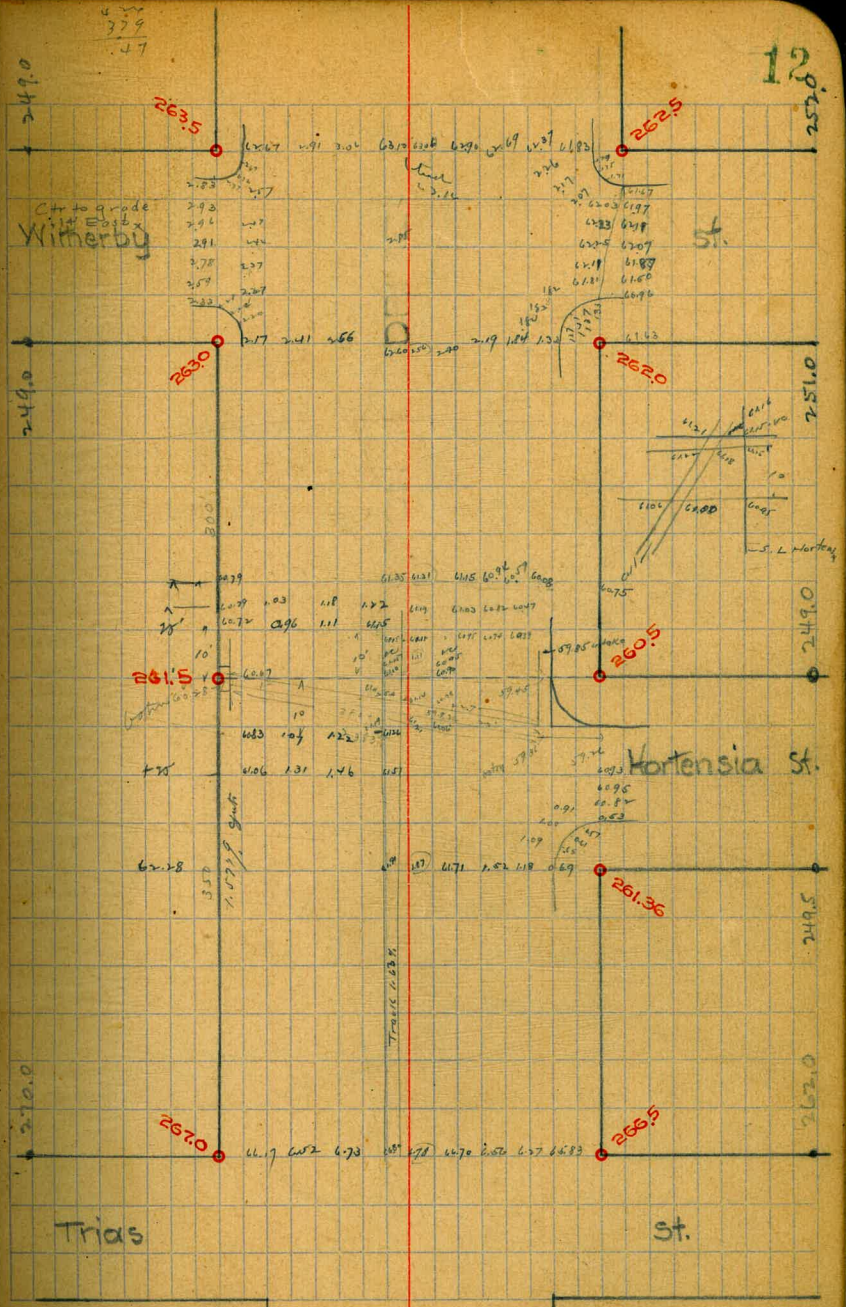
65.48	2.51	2.51	2.93	2.91	2.91	2.78	1.79	2.22	
68.16	5.20	5.20	5.23	5.20	5.20	5.28	5.54	5.70	
	5.49	5.44	5.39	5.23	5.23	5.23	5.23	5.23	

62.48	2.27	2.17	2.27	2.17	5.83	6.00	5.93	4.00	3.11
6.61	5.89	5.79	5.69	5.59	5.86	5.79	5.16	3.09	5.92
19.09	5.18	5.28							

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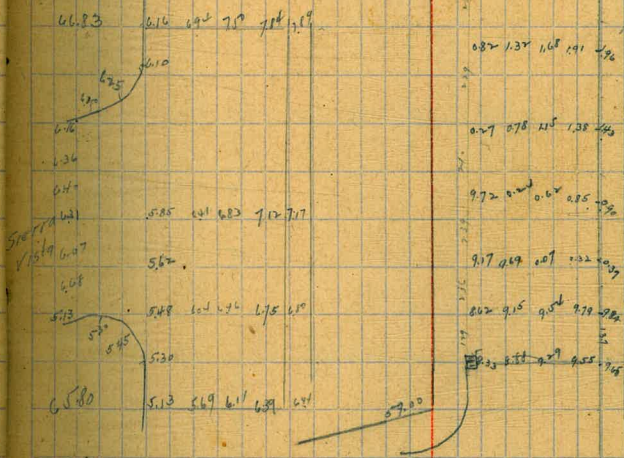
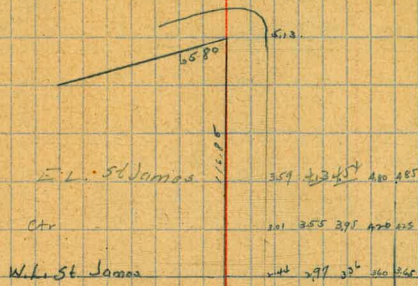
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Case 12th Highway

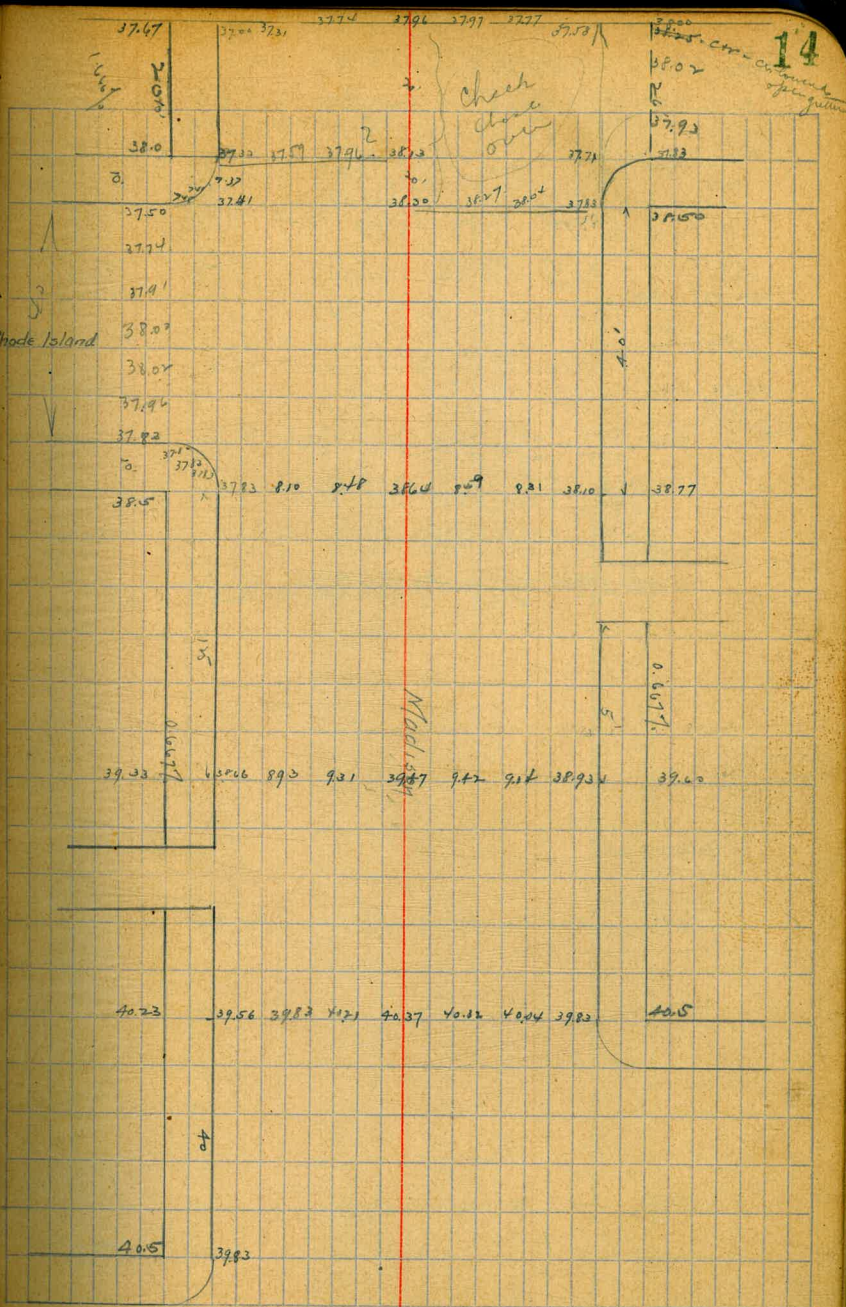
66.94	7.13	9.79	9.24	9.15	9.69	9.27	9.32	
4.80	67.29	7.50	7.75	8.12	7.60	7.22	6.97	
71.74	44	0.50	0.62	0.24	0.71	1.11	1.37	
		6.24	6.67	7.05	6.87	6.74	5.97	
66.94		1.01	1.60	4.32	1.87	1.23	1.14	
1.118		5.08	5.07	5.97	5.02	5.02	4.85	
71.42	44	2.37	2.71	2.41	2.97	2.76	2.32	3.60
		4.32	4.53	4.88	4.32	4.52	3.90	3.69
		4.20	4.20	3.95	3.75	4.52	3.90	
		6.04	5.09	5.34	5.74	4.12		
		4.80	4.54	4.12		6.88		
		6.24	7.20	7.61				
		5.02		4.67	4.30			
		6.390		6.754	6.712			6.92
								4.59
		5.69	6.11	5.47	6.46	6.04	5.70	
		5.73	6.31	5.94	4.96	5.38	5.20	
		5.95	6.41	6.93	6.24	5.70	6.31	6.07
		5.87	5.81	4.89	5.06	5.02	5.11	5.35
		5.32	5.4	5.30	5.13	6.14	5.20	5.07
		6.12	6.97	6.12	6.29	5.26	5.24	5.17



These elevations
for No. 12th
0.5 Elev at E.L. St James
0.1 Elev at W.L. St James
0.2 Elev at Ctr

Rhode Island SW inside property Line Mar. 3 39. 26

37.6	37.00	37.30	37.20	37.23	37.13		
3.69	5.55	5.05	6.55	6.22	5.72		
43.55	42.72	37.96	37.64	37.93	37.21	37.47	37.42
3.86	5.76	5.08	4.79	4.41	4.25	4.20	4.58
42.72	8.10	8.49	8.64	8.59	8.31		
39.96	5.10	4.75	4.89	4.64	4.92		
3.37	7.21	7.74	7.96	7.97	7.72	7.58	
43.23	5.81	5.48	5.16	5.15	5.35	5.54	7.96 7.71
3.26	8.04	8.27	8.30	8.13	7.96	7.57	5.76 5.41
43.12	5.08	4.85	4.82	4.98	5.1	5.53	
39.86	7.96	7.02	7.93	39.4	37.24	37.91	38.00 38.12 38.10
3.31	5.16	5.73	5.19	5.1	5.35	5.21	
43.17	7.37	7.33	7.41	7.45	7.57	7.57	
	5.80	5.84	5.76	5.72	5.67		
	7.83						
	6.34						

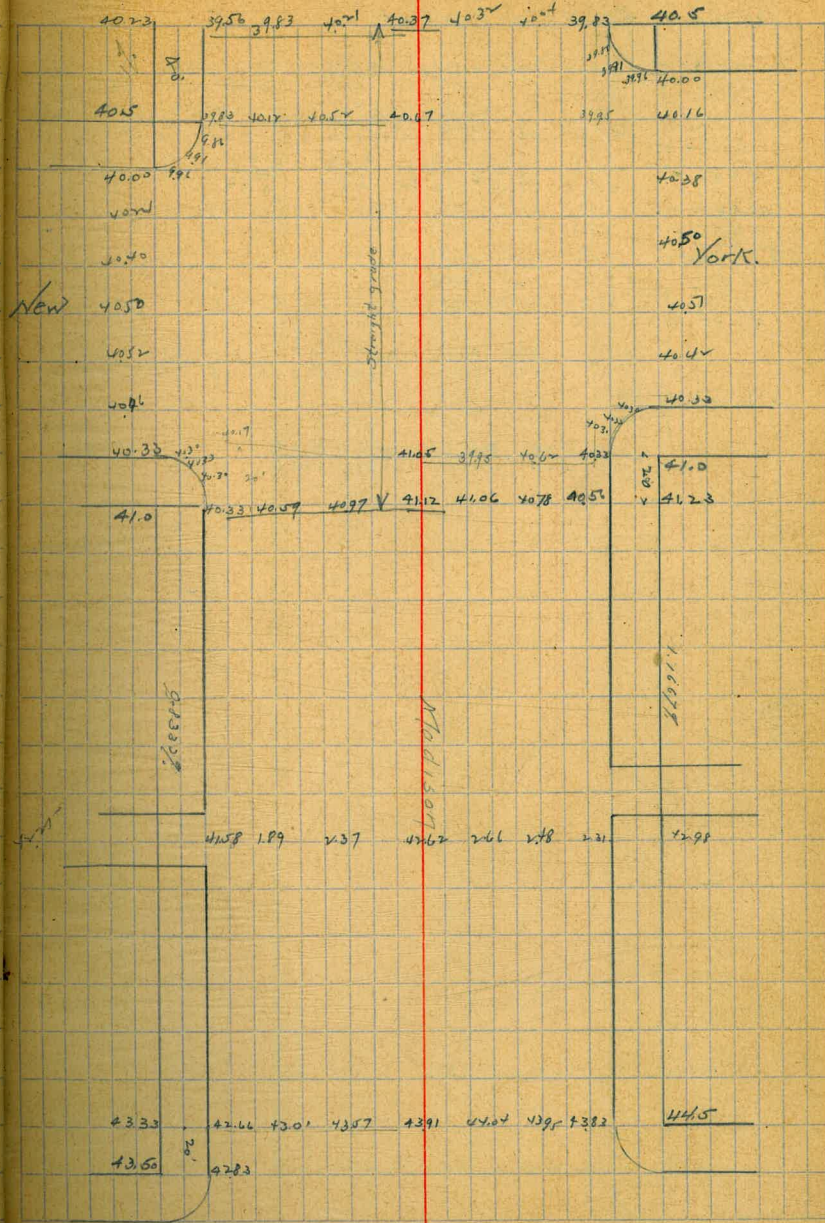


New York.

New York N.W. R.R. Spk. pole 34419

S.W. Right 34051

45.20	40.27	41.12	41.88	42.66	43.42	44.19	44.96
45.61	4.94	4.19	5.43	5.27	5.31	5.56	6.04
45.61	40.37	40.58	40.97	41.17	41.66	42.78	43.91
	4.94	4.93	4.63	4.40	4.46	4.74	4.02
45.51	40.04	40.32	40.37	40.21	40.21	39.83	40.0
45.525	5.48	5.20	5.15	5.31	5.31	5.69	5.20
40.51	40.04	40.21	40.37	40.32	40.04	40.30	40.23
45.54	5.97	5.33	5.17	5.22	5.56	5.46	5.43
40.51	40.67	40.52	40.15	41.05	4.75	4.62	4.06
45.76	4.87	5.02	5.42	4.79	5.59	4.92	5.25
	4.57	4.57	4.95				
	4.96	4.91	4.96	4.00	4.23	4.30	4.50
	5.90	5.85	5.80	5.76	5.43	5.46	5.43
	4.96	4.96	4.91	4.96	4.00	4.23	4.30
	5.93	5.90	5.88	5.80	5.76	5.43	5.42
40.20	40.40	40.80	40.52	41.16	41.16	41.16	41.16
5.52	5.36	5.76	6.24	5.00			
40.42	40.51	40.50	40.38	40.16			
5.34	5.26	5.26	5.38	5.60			



Delaware

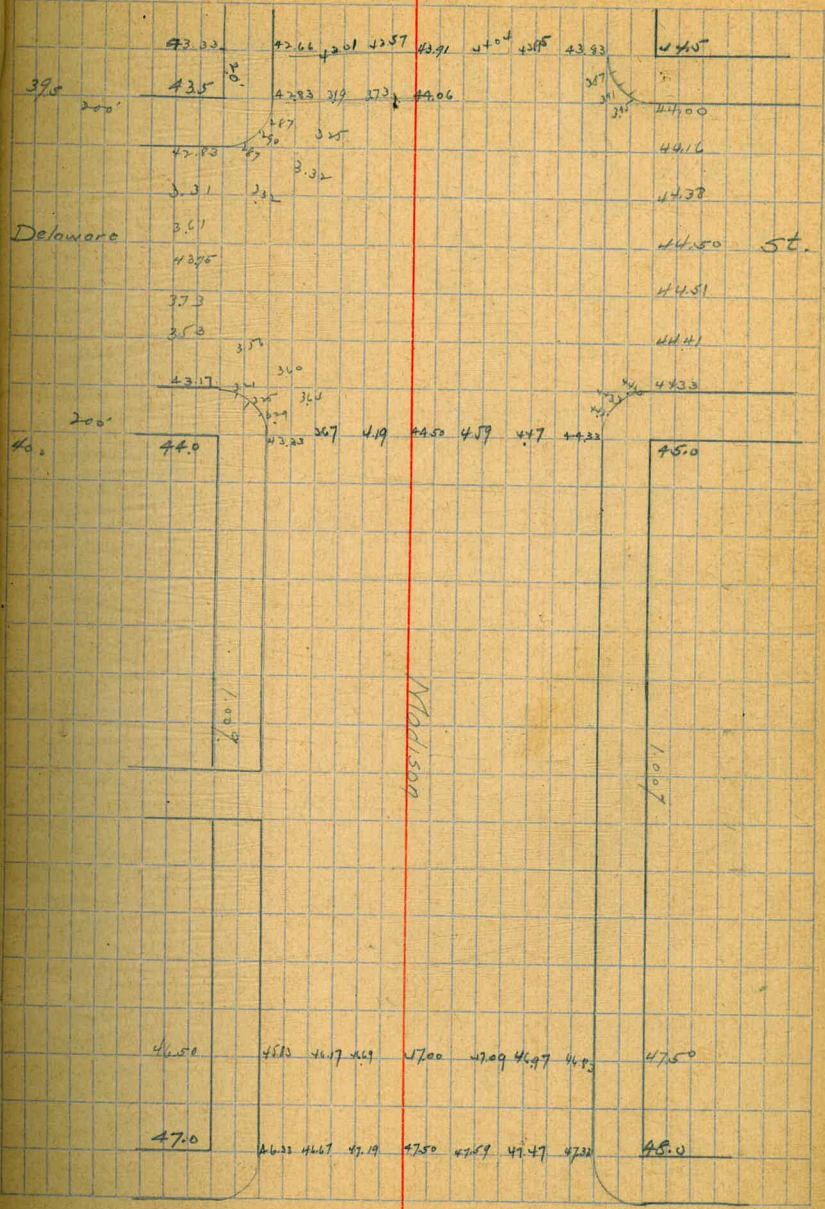
St

Delaware N.E. RR Spk p16 346776

4.45
50.23
45

Delaware S.W. P. 1/4 to 34344

43.44	42.83	41.83	43.33	44.58	43.11	35.7	39.1	40.4
5.57	6.20	5.70	4.70	3.43	5.79	5.23	4.89	4.76
49.03	43.44							
43.44	5.36	3.95	3.67	4.19	4.79	4.47		
4.49	48.80	44	4.85	5.13	4.61	4.20	4.21	4.22
47.93								
43.44	6.17	6.69	7.00	7.09	6.97	4.38	4.50	4.71
	4.76	4.24	3.92	3.84	3.98	4.41	4.29	4.28
46.98	3.01	3.57	3.91	4.04	3.85	4.16	4.41	3.76
3.95	5.78	5.22	4.88	4.75	4.84	4.63	4.28	5.23
50.93	4.47	4.57	4.50	4.19	3.67	3.64	3.60	3.53
43.44	4.82	4.20	4.29	4.60	5.12	5.15	5.19	5.26
5.35	3.73	3.75	3.61	2.31	3.37	3.25	3.19	
48.79	5.06	5.04	5.18	5.48	5.47	5.54	5.60	
	2.87	2.90	2.87	2.83	3.17	3.21	3.29	
	5.92	5.89	5.92	5.96	5.82	5.88	5.84	5.80
52.14	3.87	3.91	3.95	4.00				
	4.92	4.88	4.84	4.79				
	6.17	6.69	7.00	7.09	6.97			
	5.97	5.45	5.14	5.05	5.17			



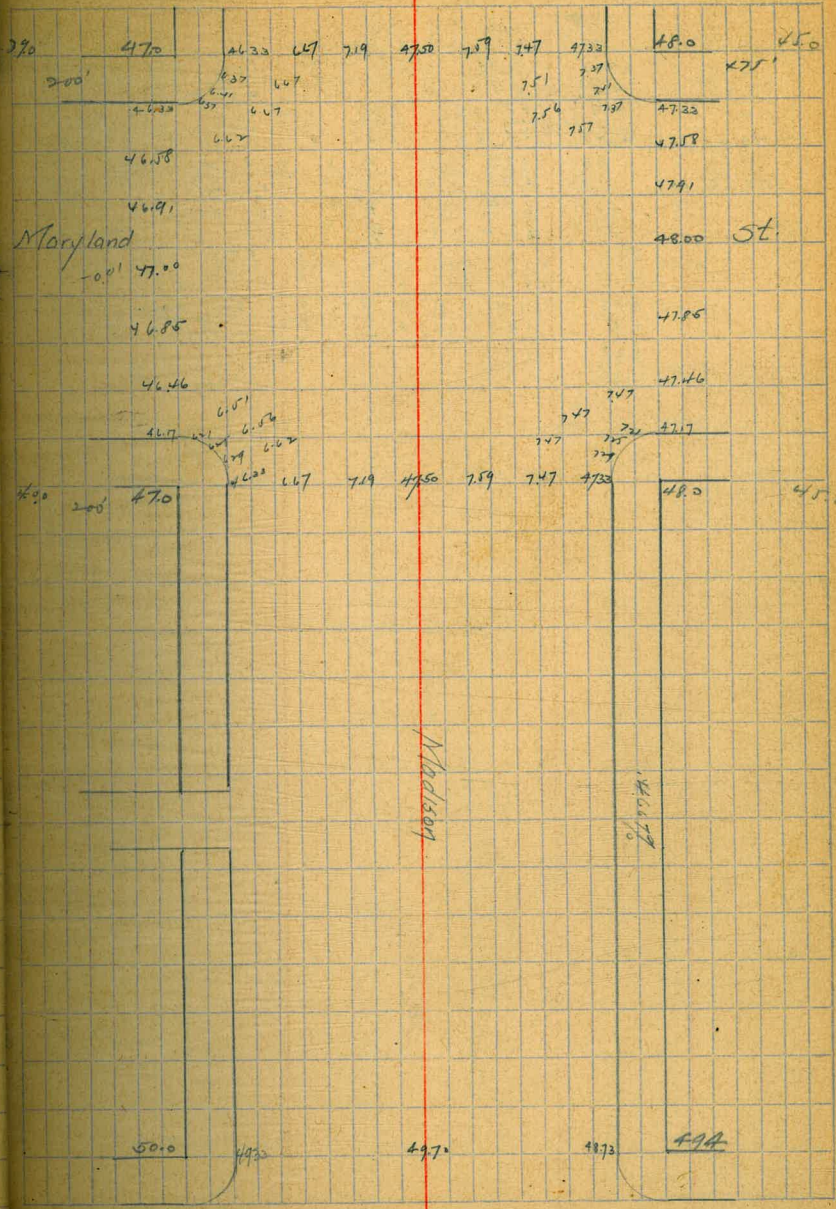
Maryland

St.

Maryland N.E. RR Spk pole 350-16

" SW Pkg Ch 346978

46.98 6.12 53.12	46.33 6.77 57.77	7.03 6.57 5.77	6.58	6.91	7.00	6.55	6.66
48.99 4.89 48.27	46.98 5.43 52.41	4.91 5.63 5.77	5.56	5.23	5.12	5.29	5.68
54.63			6.62	6.67	7.19	7.00	7.57
46.98 5.76 52.14	7.47 4.67 2.77	7.46 4.67 2.79	6.00	7.11	7.57	7.57	7.56
			4.14	4.23	4.56	4.57	4.58
	7.47	7.59	7.50	7.19	6.67	6.67	
	4.67	4.55	4.64	4.95	5.47	5.52	
46.98 5.41 52.37	6.33 6.06 2.27	6.27 6.02 5.98	7.37	7.21	7.33	6.21	6.17
	7.17	7.21	7.29	6.29	6.25	6.21	6.17
	5.22	5.18	5.10	6.10	6.14	6.18	6.22
	7.57	7.59					
	4.89	4.80					

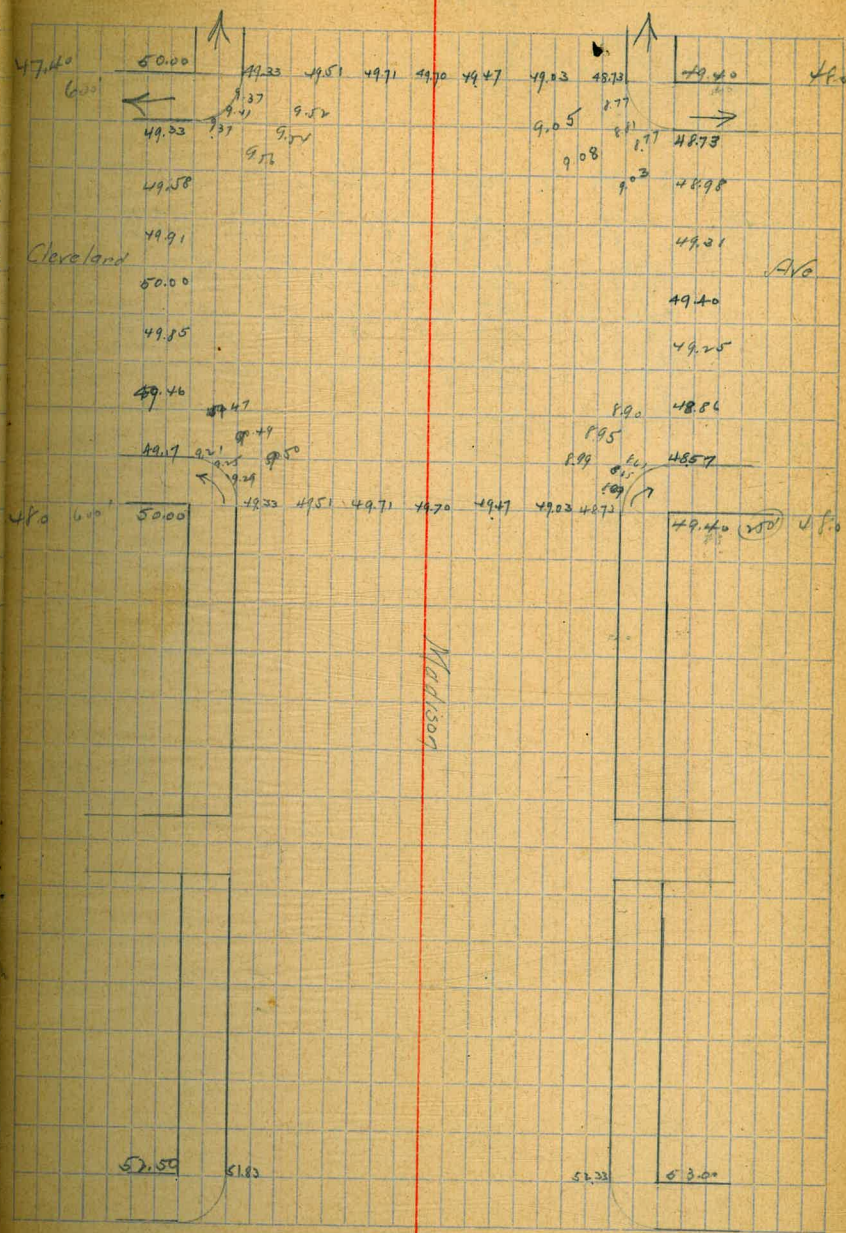


Cleveland

Ave.

No. 1 Ch 4997
 Cleveland S E R.R. Spk pole 349.96

49.47	5.30	5.73	5.90	5.20	5.10	49.97														
54.63	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
54.46	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
54.46	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
54.46	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
54.46	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
49.97	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70
54.46	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70	49.70



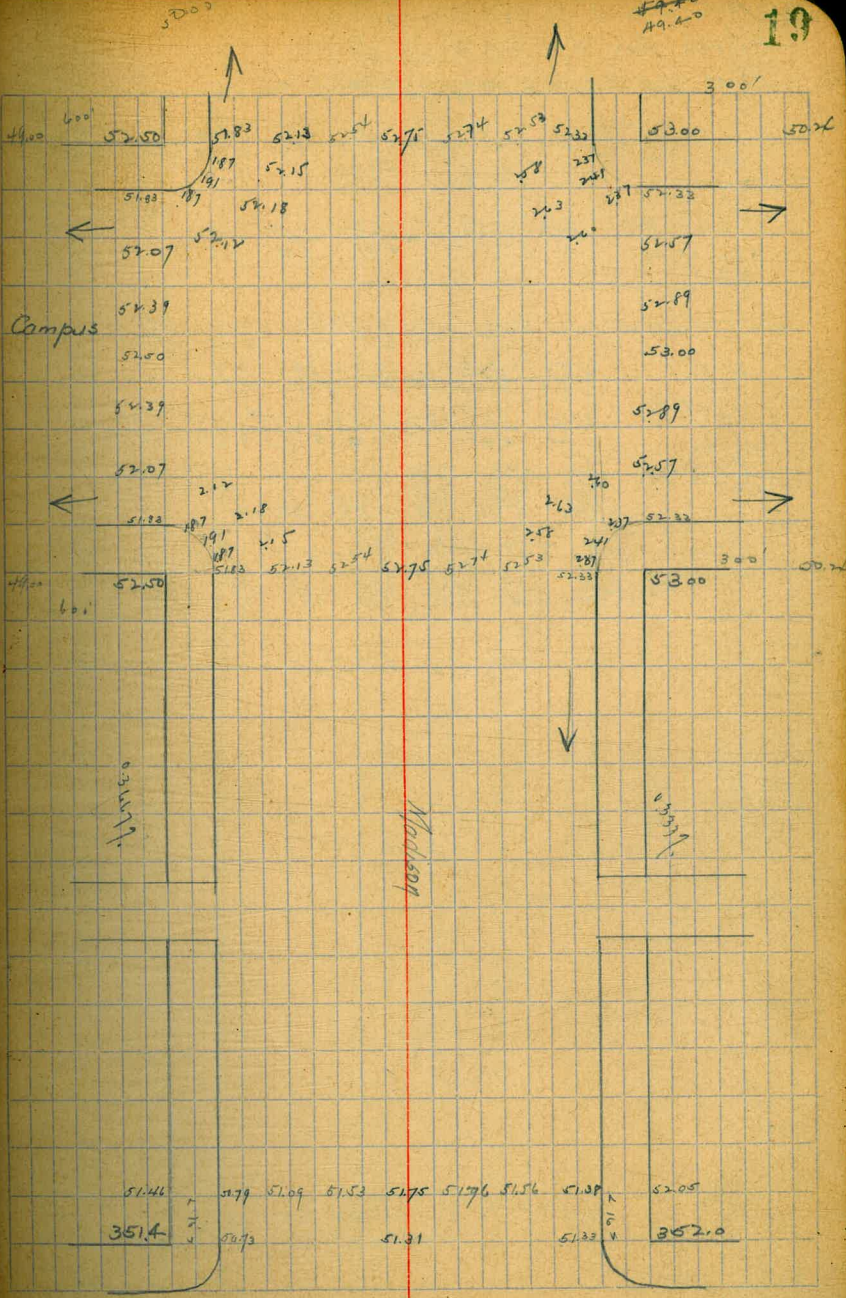
Campus

Ave

Campus S.E. Plgr. 352448

52.48	1.83	5.23	5.79
57.67	5.79	5.29	5.79
57.48	5.79		
4.86	4.59		
57.32			

5140	5100	5153	5174	5176	5186	207	239	250
515	576	532	510	508	510	5.44	5.42	5.01
508								
52.48	212	218	215	212	214	215	274	253
503	539	538	525	528	497	476	477	488
57.51								
212	203	200	257	289	300	215		
493	488	491	496	462	457	494		
200	200	218	215	274	215	215	213	
4.91	4.88	4.93	4.98	4.77	4.76	4.97	5.28	
215	218	212	237	211	210	231		
536	533	439	514	510	5.42	5.18		
117	191	182						
56	560	568						



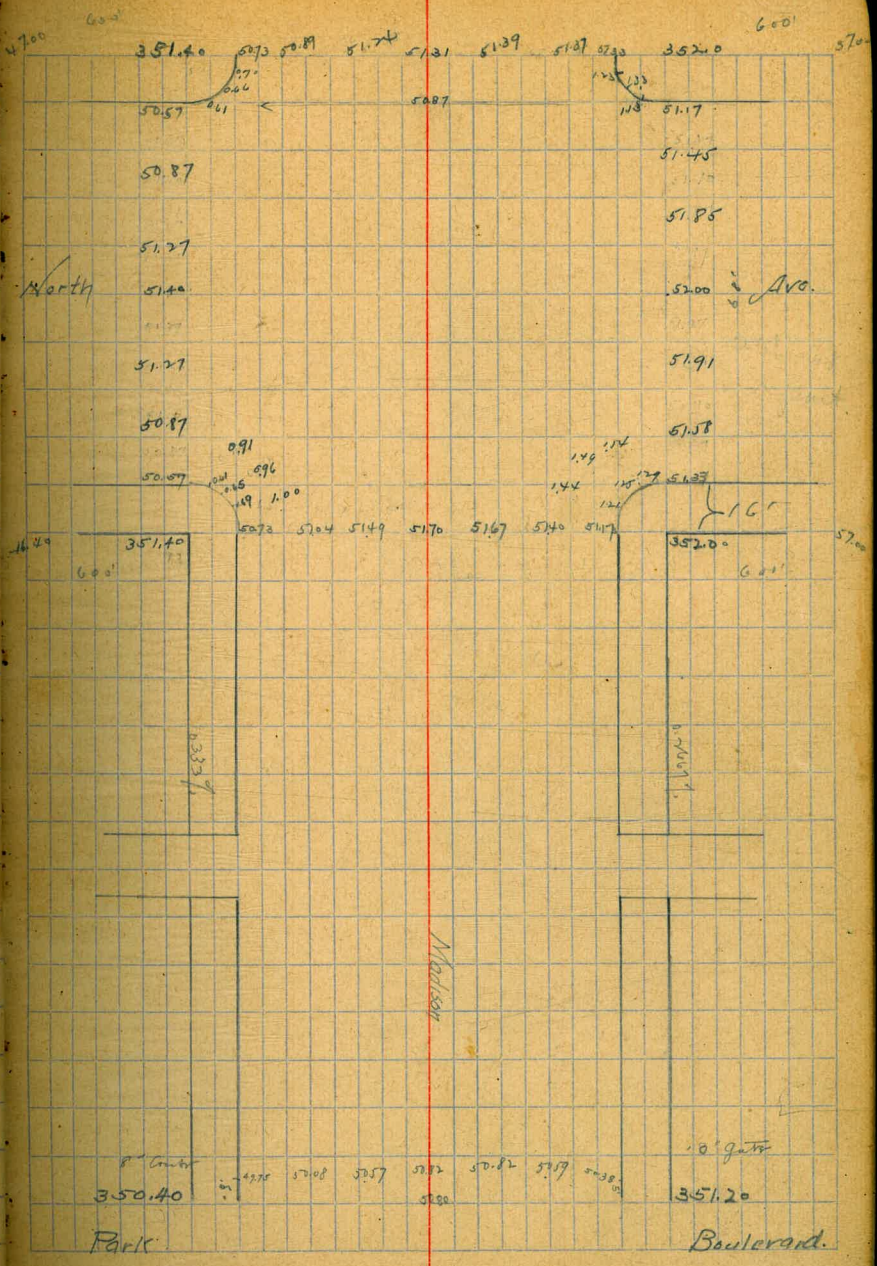
North

Ave.

Park Blvd. 51.82 - Spk pole SW of NW Cor.
 North Ave SW Plg ch. 351.40
 Park Blvd SE. RR Spk pole 51.75

51.46	50.92	51.34	123	1.17	50.73	49.75	50.48
4.72	5.39	4.79	4.79	4.95	5.39	6.07	5.74
51.12	5.33	5.175		5.170			
51.40	5.182	4.62		4.93			
5.13							
56.63	41	104	149	170	167	140	
51.40		491	4.46	4.25	4.28	4.51	
45.5							
55.9	5.47						

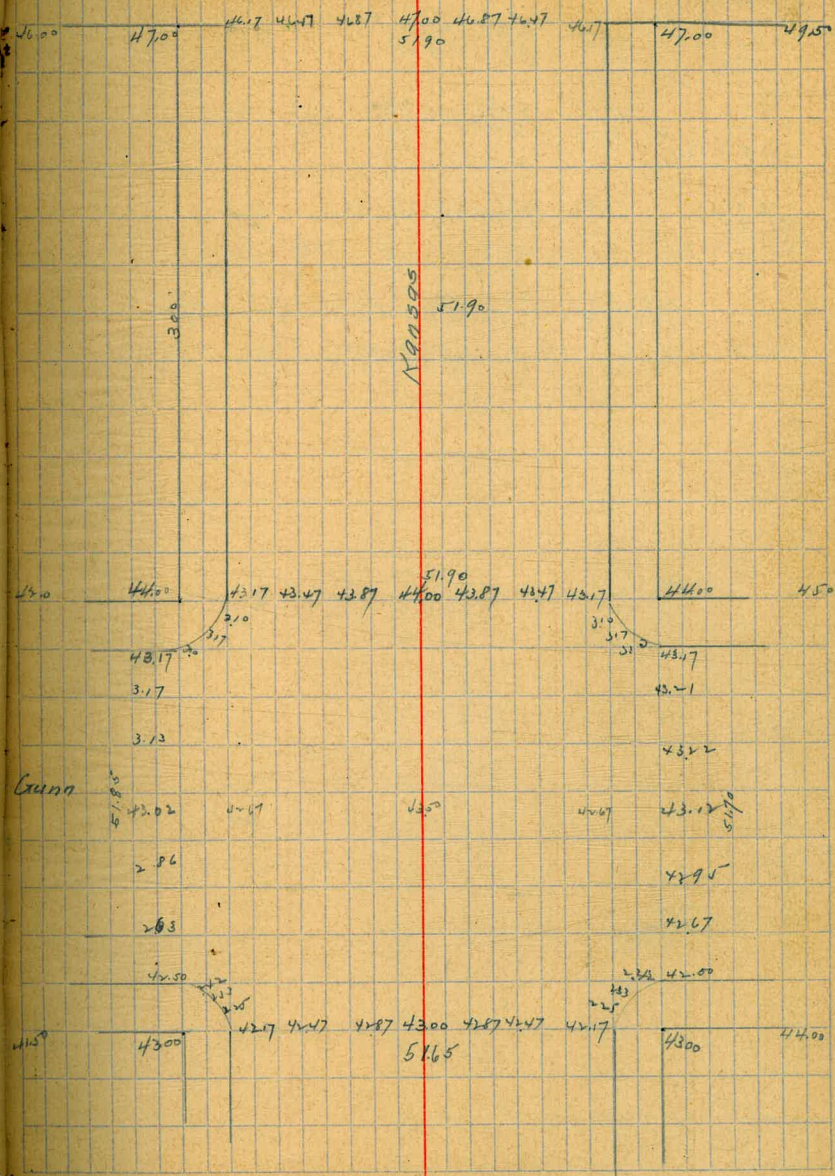
51.82	0.89	1.24	1.31	1.39	1.37		
39.7	5.81	5.46	5.39	5.31	5.33		
55.76	41	145	115	200	191	158	152
51.40	5.25	4.85	4.70	4.79	5.12	5.16	5.21
5.30	1.44	1.40	1.63	1.70	1.59	1.04	1.00
56.90	5.26	5.30	5.07	5.27	5.27	5.26	5.70
	0.96	0.91	0.87	1.27	1.43		
	5.74	5.79	5.83	5.43	5.30		
0.57	0.61	0.66	0.70	1.23	1.13	1.13	1.17
6.13	6.09	6.04	6.01	5.47	5.37	5.57	5.53
1.53	1.49	1.25	1.21	0.69	0.65	0.61	0.57
5.37	5.41	5.45	5.49	6.01	6.05	6.09	6.13





42.93 48.17	2.7 6.00	3.7 8.00							
42.93 48.47	7.63 5.84	7.86 5.61	3.02 5.45	3.13 8.34	3.17 5.00				
46.87 44.0	3.10 5.37	3.17 5.30	2.50 5.97	2.22 6.03	2.33 6.14	2.25 6.22			
51.27	4.27	4.67	4.70						
42.93 5.27 48.22	4.90 4.75	4.20 4.35	4.27						

Wightman



3995
533
4528

217
6.87
5.17

39.95
533
45.28
42.93
490
47.83

4047
481
4087
441
4100
428

4247
536
4287
492
4300
483
927
533
947
572

5.26
39.95
45.21

3964
557
4018
500
927
534
4015
506
4003
518
4014
507
988
538
3964
557

45
596
547
933
588
944
579
95
5.71
4017
6.02
410
5.11
4017
6.04
3941
5.80
933
5.88
925
5.96

Gunn

4150
4300
4217
4247
4287
4300
4287
4247
4217
4300
4400

300

Kansas

51.80

4150
4100
4017
4047
4087
4100
4087
4047
4017
4100
4200

Londis

3650
4000
3917
3947
3987
4000
3987
3947
3917
4100
3900

51.70

39.25

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39.25

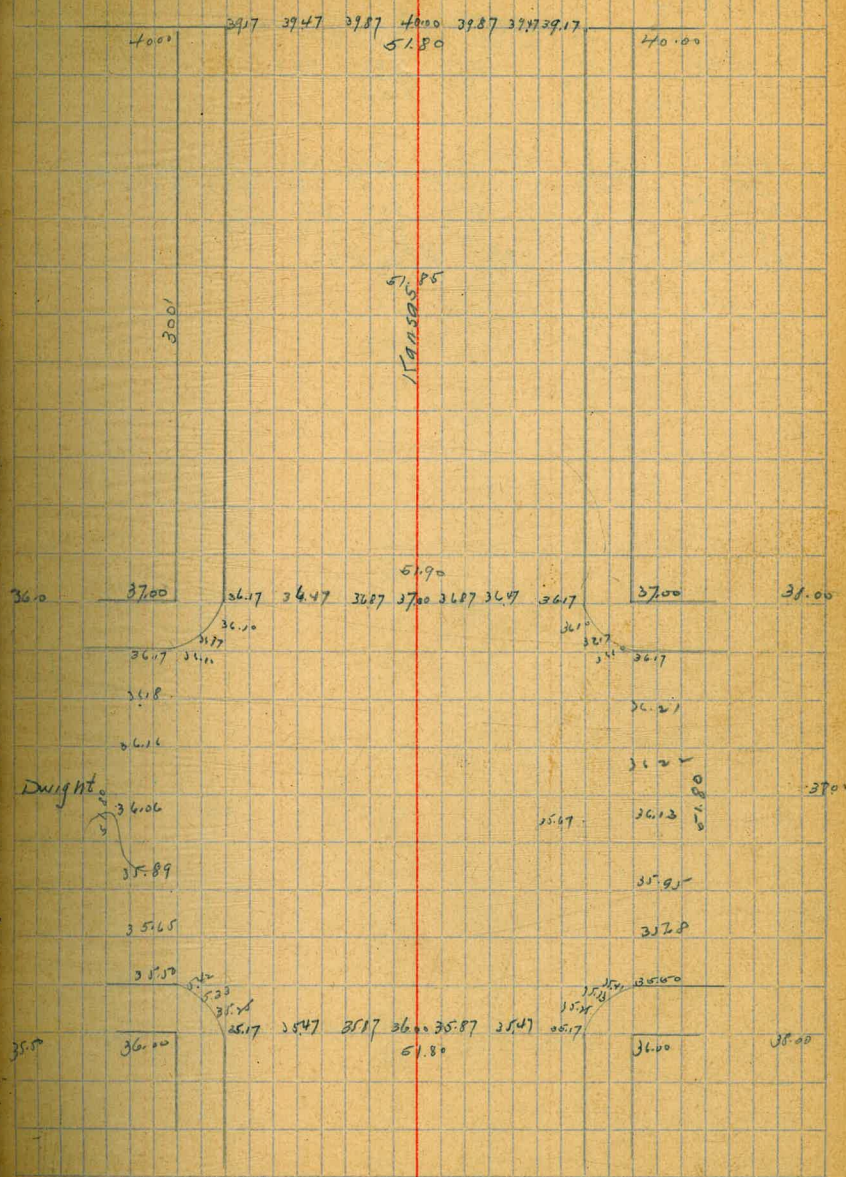
39.25

39.25

Dwight SE 35.87

35.87	5.17	6.17					
41.18	6.01	5.01					
35.87	6.47	6.87	7.00				
5.82	5.24	4.84	4.71				
41.71	9.47	9.87	40.00	9.8			
4.97	5.46	5.05	4.92				
37.91							
44.92							
5.63	5.17	5.87	6.00	5.65	5.89	6.06	
35.89	6.05	5.65	5.52	5.87	5.60	5.46	
41.52	6.16	6.18	6.21	6.2	6.13	5.95	5.68
	5.36	5.3	5.31	5.30	5.37	5.67	5.82
5.47	5.25	5.33	5.41	5.50	5.8	5.95	6.13
35.89	6.11	6.03	5.98	5.82	5.68	5.41	5.23
41.36	6.17	6.10	6.17	6.10	6.00	5.8	5.33
	5.19	5.26	5.19	5.26	5.82	5.92	6.03
							6.11

Landis



Capps SE 3340

33.40
37.00
38.80

33.40
37.05

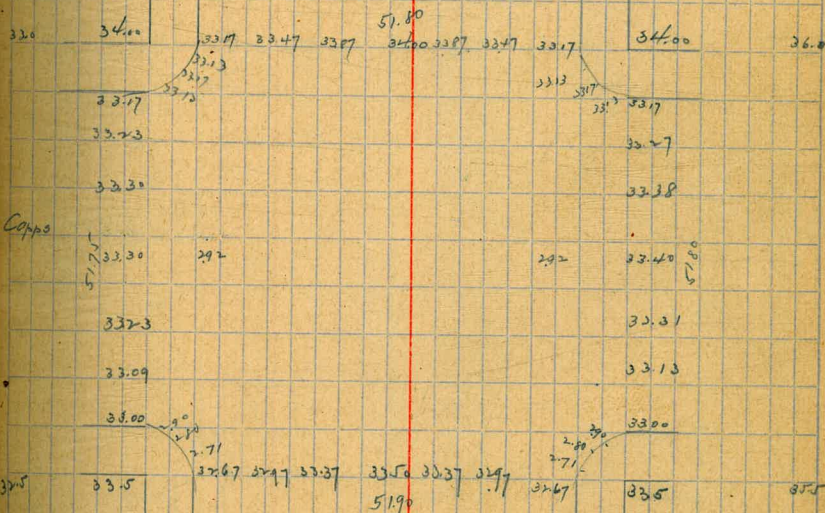
3589 4.5	347 5.00	577 6.00 460 4.47	312 331 5.49 5.21	340 338 5.22 5.20	327 5.35
40.47 AM	328 330 5.39 5.32	323 329 5.39 5.49	309 303 5.53 5.49	317 5.40	
39.70 38.6 AM	320 5.62	290 290 5.72 5.72	270 271 5.80 5.91		

Dwight

36.00 35.27 35.29 35.87 36.00 35.87 35.47 35.17 36.00

300'

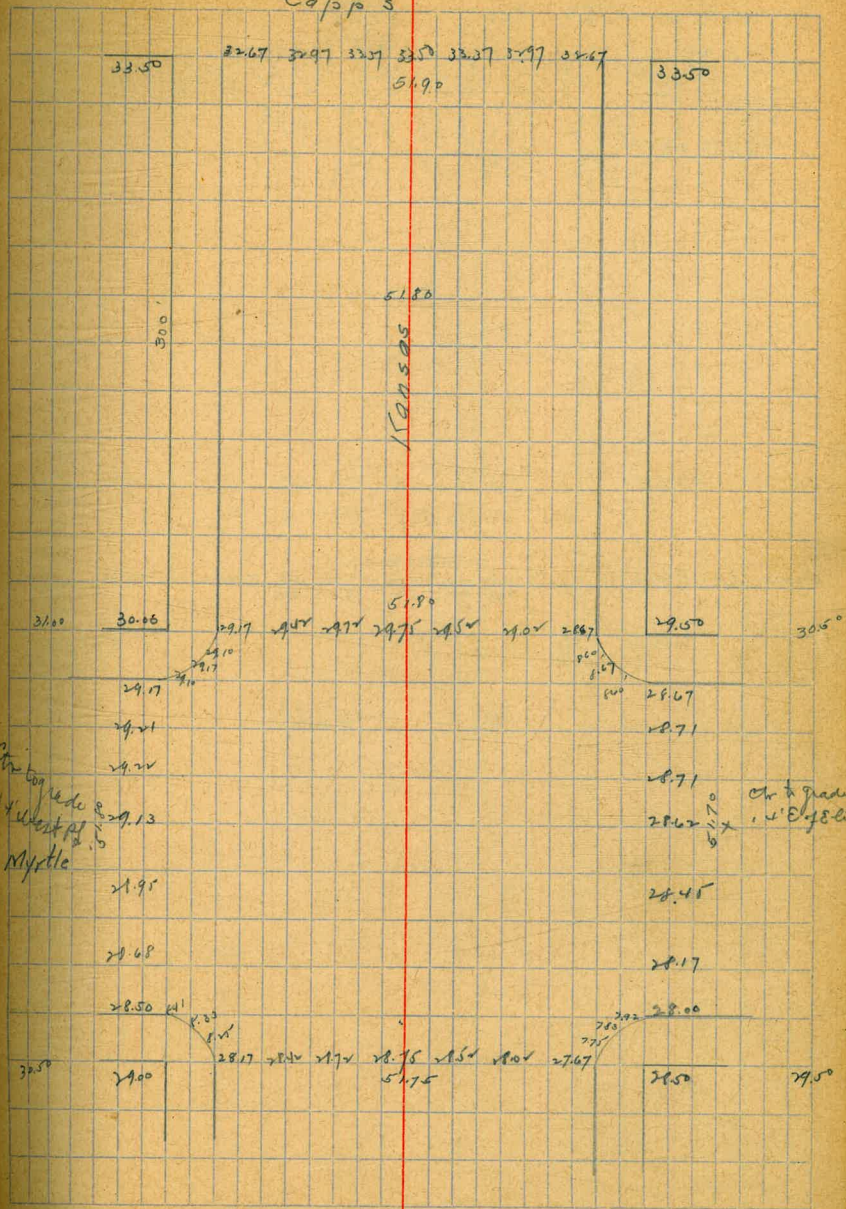
51.90
15000



Myrtle SE 2841

28.41	27.67	28.2	28.7	28.67	28.67	
4405	668	6.18	5.18	5.08	5.07	34.07
34.07						
	9.02	9.82	9.75	9.75	9.67	
	5.06	4.58	4.32	4.35	4.65	
28.67	142	8.72	8.75	8.52	8.02	7.67
535	5.65	5.35	5.32	5.51	6.05	6.45
34.07	7.71					
	6.32	7.83	7.92	8.07	8.67	8.60
	6.22	6.15		5.40	5.07	
8.10	9.17	8.58	8.41	8.32	8.25	
4.97	4.90	5.17	5.62	5.74	5.62	
8.71	8.22	8.45	8.17	8.68	8.95	9.12
5.31	5.40	5.57	5.88	5.94	5.07	4.89
						4.80
						4.81

Cajon S

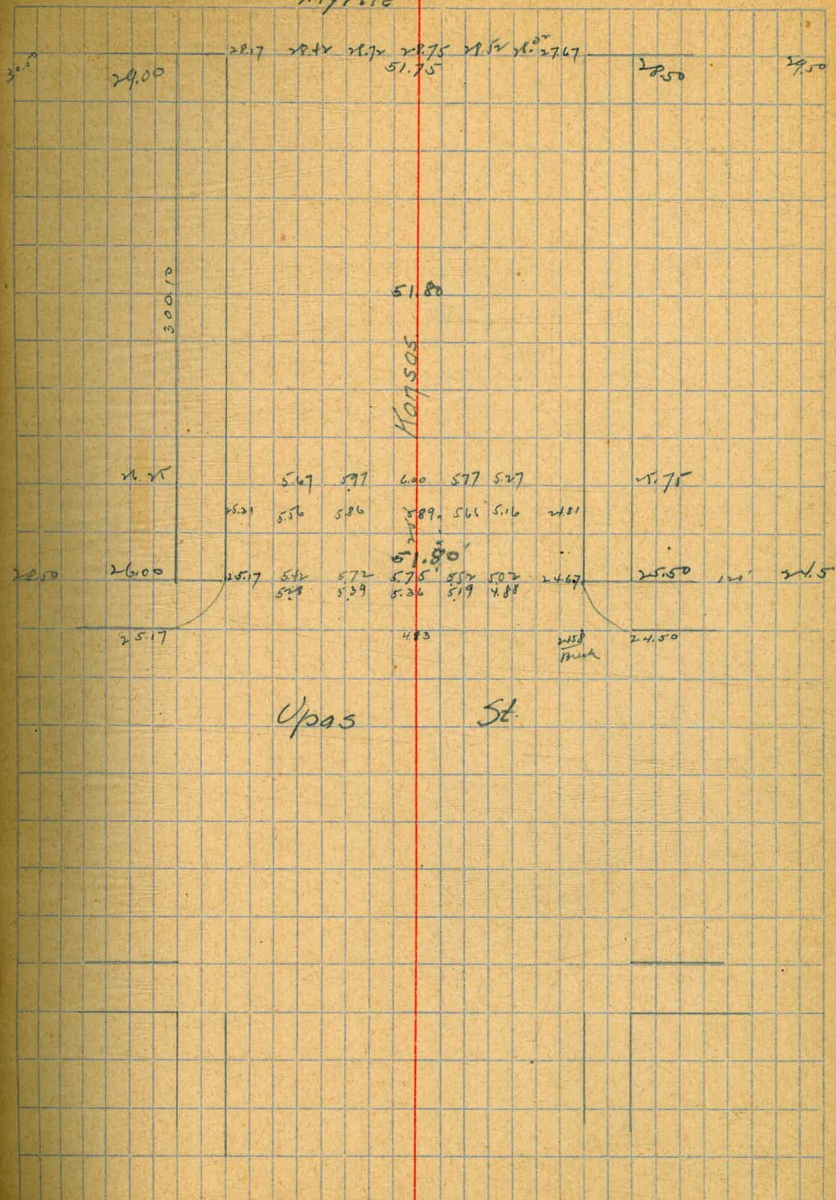


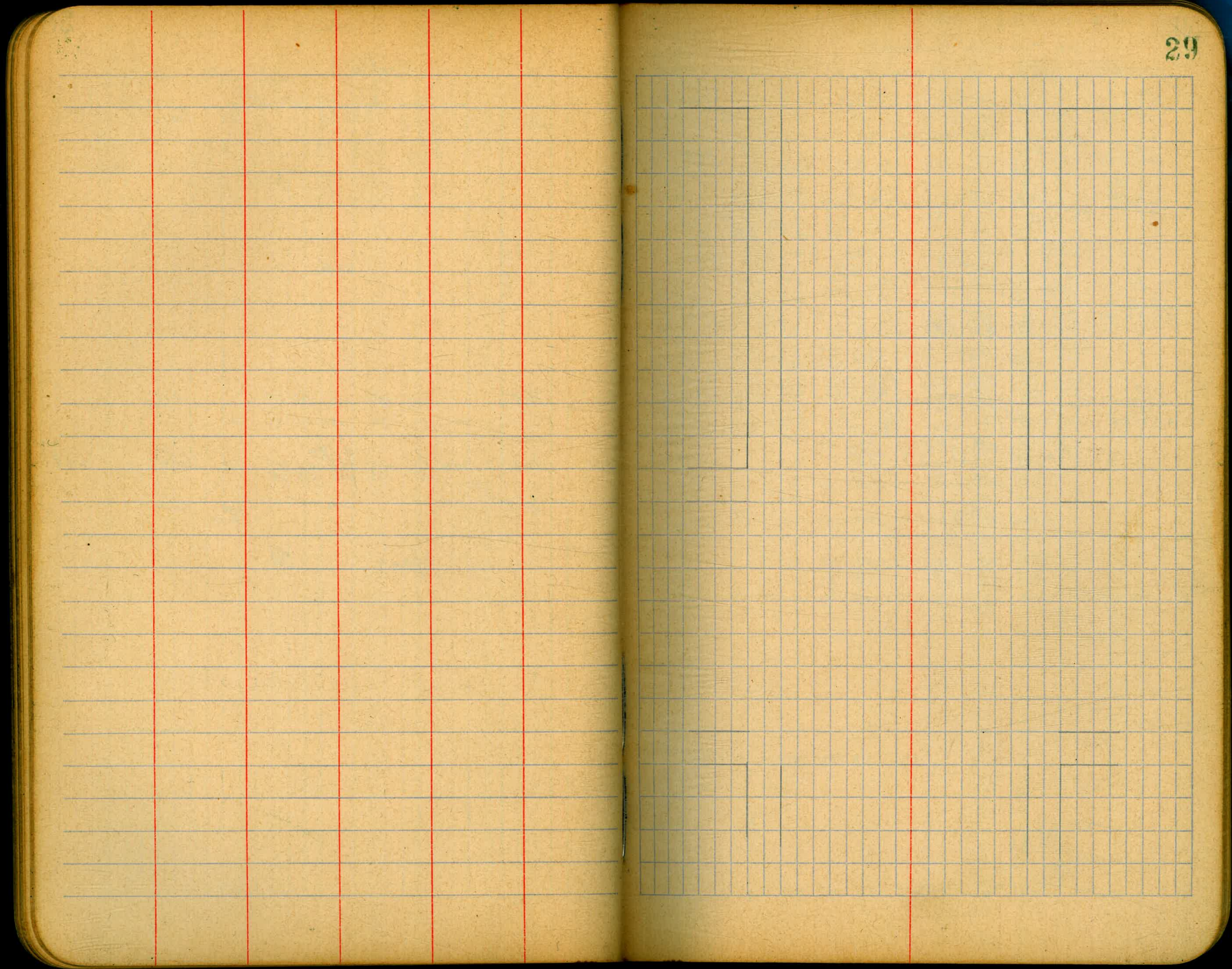
Upas NE 25.82

25.51				25.52		
504	467	517	496	597	627	
20.56 AM	589	529	504	517		
			53			
25.52			600	597	627	
20.51 AM	527	577	471	484	512	
	554	504				
25.52	483	519	536	539	521	
533	597	576	549	546	587	
20.51 AM						
	556	586	589	566	576	
	524	499	496	519	569	

28

Myrtle





91.54- Top of Mt S.W. San Marcos

94.90 Mt	8.02	9.46	9.47	9.52	9.56	9.61	9.66	9.71	9.76	9.81	9.86	9.91
89.71	8.17	9.59	9.48	9.33	9.27	9.16	9.04	8.95	8.85	8.74	8.65	8.54
94.95 Mt	8.80	8.71	8.62	8.52	8.40	8.29	8.18	8.07	7.96	7.85	7.74	7.63
91.54	8.48	8.52	8.55	8.57	8.58	8.58	8.57	8.56	8.54	8.52	8.50	8.48
94.49 Mt	8.88	8.72	8.43	8.20	8.03	7.89	7.76	7.62	7.48	7.32	7.17	7.02
91.54	8.79	8.75	8.72	8.68	8.64	8.60	8.56	8.52	8.48	8.44	8.40	8.36
93.74	8.73	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72	8.72
91.54	8.35	8.37	8.39	8.41	8.43	8.45	8.47	8.49	8.51	8.53	8.55	8.57
94.72 Mt	8.86	8.71	8.55	8.39	8.23	8.07	7.91	7.75	7.59	7.43	7.27	7.11
91.54	8.82	8.01	8.05	8.09	8.13	8.17	8.21	8.25	8.29	8.33	8.37	8.41
93.41 Mt	8.72	8.84	8.86	8.88	8.90	8.92	8.94	8.96	8.98	9.00	9.02	9.04

Old points

89.65	89.33	89.75	89.35	289.85
89.38	89.42	89.66	89.81	89.86
89.47	89.52	89.57	89.61	89.64
89.66	89.66	89.66	89.66	89.66
89.71	89.71	89.71	89.71	89.71
89.75	89.75	89.75	89.75	89.75
89.80	89.80	89.80	89.80	89.80
89.84	89.84	89.84	89.84	89.84
89.88	89.88	89.88	89.88	89.88
89.92	89.92	89.92	89.92	89.92
89.96	89.96	89.96	89.96	89.96
90.00	90.00	90.00	90.00	90.00
90.04	90.04	90.04	90.04	90.04
90.08	90.08	90.08	90.08	90.08
90.12	90.12	90.12	90.12	90.12
90.16	90.16	90.16	90.16	90.16
90.20	90.20	90.20	90.20	90.20
90.24	90.24	90.24	90.24	90.24
90.28	90.28	90.28	90.28	90.28
90.32	90.32	90.32	90.32	90.32
90.36	90.36	90.36	90.36	90.36
90.40	90.40	90.40	90.40	90.40
90.44	90.44	90.44	90.44	90.44
90.48	90.48	90.48	90.48	90.48
90.52	90.52	90.52	90.52	90.52
90.56	90.56	90.56	90.56	90.56
90.60	90.60	90.60	90.60	90.60
90.64	90.64	90.64	90.64	90.64
90.68	90.68	90.68	90.68	90.68
90.72	90.72	90.72	90.72	90.72
90.76	90.76	90.76	90.76	90.76
90.80	90.80	90.80	90.80	90.80
90.84	90.84	90.84	90.84	90.84
90.88	90.88	90.88	90.88	90.88
90.92	90.92	90.92	90.92	90.92
90.96	90.96	90.96	90.96	90.96
91.00	91.00	91.00	91.00	91.00

San Marcos

99.49 H1	90.60	90.55						
96.26 M1	5.64	5.55						
	6.93	5.12	11P	111	692	0.77	0.87	0.89
	5.33	5.14	5.08	5.15	5.32	5.49	5.59	5.38
	6.87	6.67	6.64	6.83	6.87	6.78	6.57	
	5.44	5.39	5.60	5.43	5.39	5.48	5.69	
	6.37	6.41	6.42	6.60	6.57			
	5.88	5.88	6.82	5.66	5.69			

289.30

25

San Marco 31

8946 X

8896

8822

289.10

201.15

9072 X

9022

9057

9078

9087

9088

9086

9085

291.02

9007

9088

9084

9067

9082

907

9058

Capitan

9187

9077

9060

594

9109

9087

9087

9101

9101

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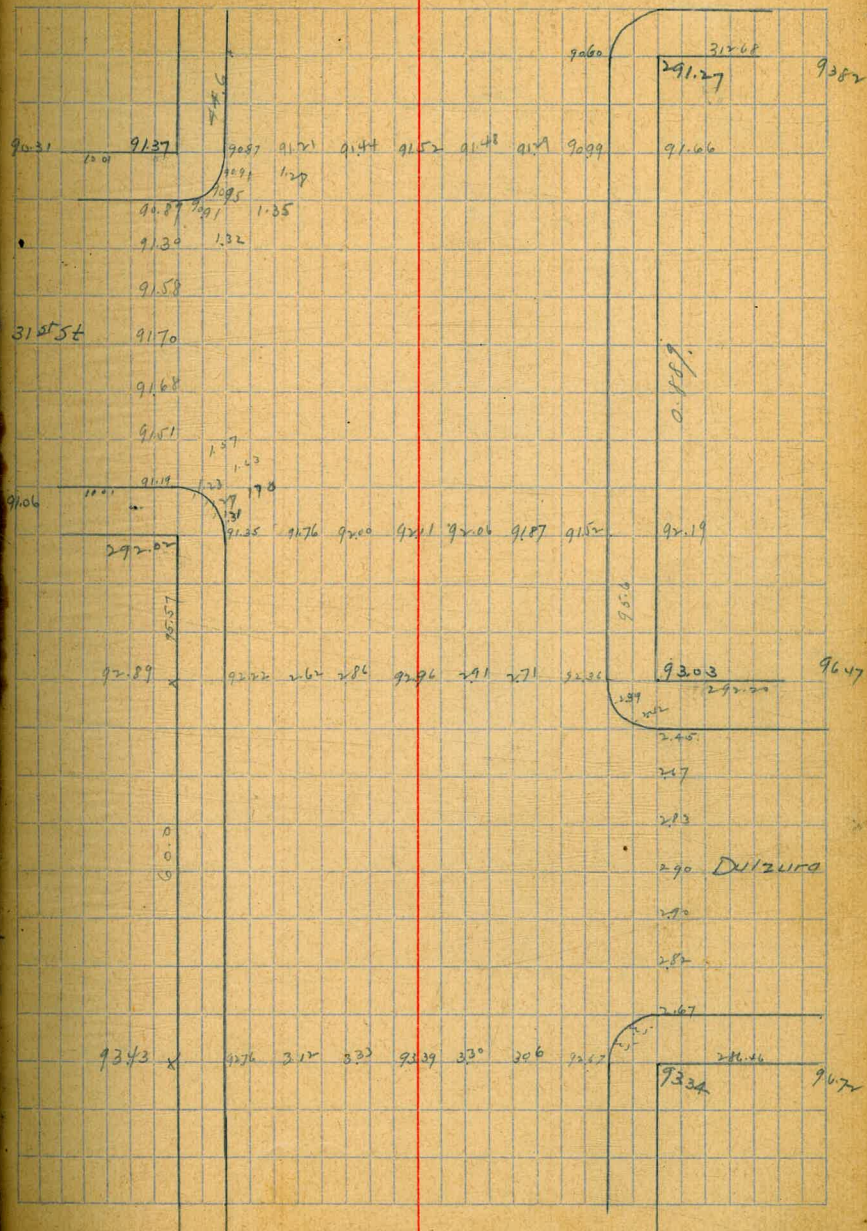
9101

9101

9101

3125+

92.05 4.15	91.31 4.55	92.27 5.32	92.18 92.05 97.25 AT	92.36 4.87	92.67 4.56				
96.20 AT		92.62 4.76	286 276 4.52 4.42	271 271 267 4.47 4.64 4.71	283 280 4.55 4.44				
97.28 AT		292 4.56	306 330 4.22 4.08	339 333 3.99 4.01	312 4.26				
92.05 4.21	92.27 4.99	92.27 4.96	92.27 4.93	92.27 4.71	92.27 4.73				
96.26 AT		91.87 4.39	92.06 4.20	92.11 4.10	92.00 4.26	91.76 4.56	1.70 4.63	1.23 4.69	1.57
		1.51 4.75	1.67 4.58	1.70 4.56	1.77 4.68	1.80 4.92	1.74 4.94	1.55 4.91	1.28 4.98
		1.21 5.05	1.24 4.82	1.52 4.74	1.48 4.78	1.29 4.97	1.23 5.03	0.91 5.35	0.95 5.37
		1.19 5.07	1.23 5.03	1.27 4.99	1.31 4.95				



29751 Top Hyd SW Pamo

30061 RH	9389	9371					
310	6.62	6.90					
9751	4.81	4.77	4.82	4.58	4.60	4.23	
	4.73	4.65	4.72	4.96	4.90	5.31	
97.51	4.72	4.96	5.23	5.24	5.31	3.74	
200	4.78	4.58	4.31	4.20	4.20	5.20	
99.54 RH	4.15	4.25	4.5	4.8	4.03	3.94	
	5.29	5.30	5.29	5.36	5.51	5.54	
	3.80	3.77	3.74				
	5.7	5.77	5.80				

33

Dulzura

93.43

93.87

9334

9672

6000

95.25 X

4.58 4.81 4.89 4.82 4.60 4.23 93.71

94.38

9592

6000

95.79 X

4.15 4.25 4.5 4.8 4.03 3.94 93.99

94.66

9612

32nd @ Kol. S.W. Pl. rt 29762

9762	9697	747				
299	262	3.14				
300.61	41	745	773	787	790	576
9762		4.79	4.49	4.33	4.32	4.46
460						
102.22	41					

Pano. 34

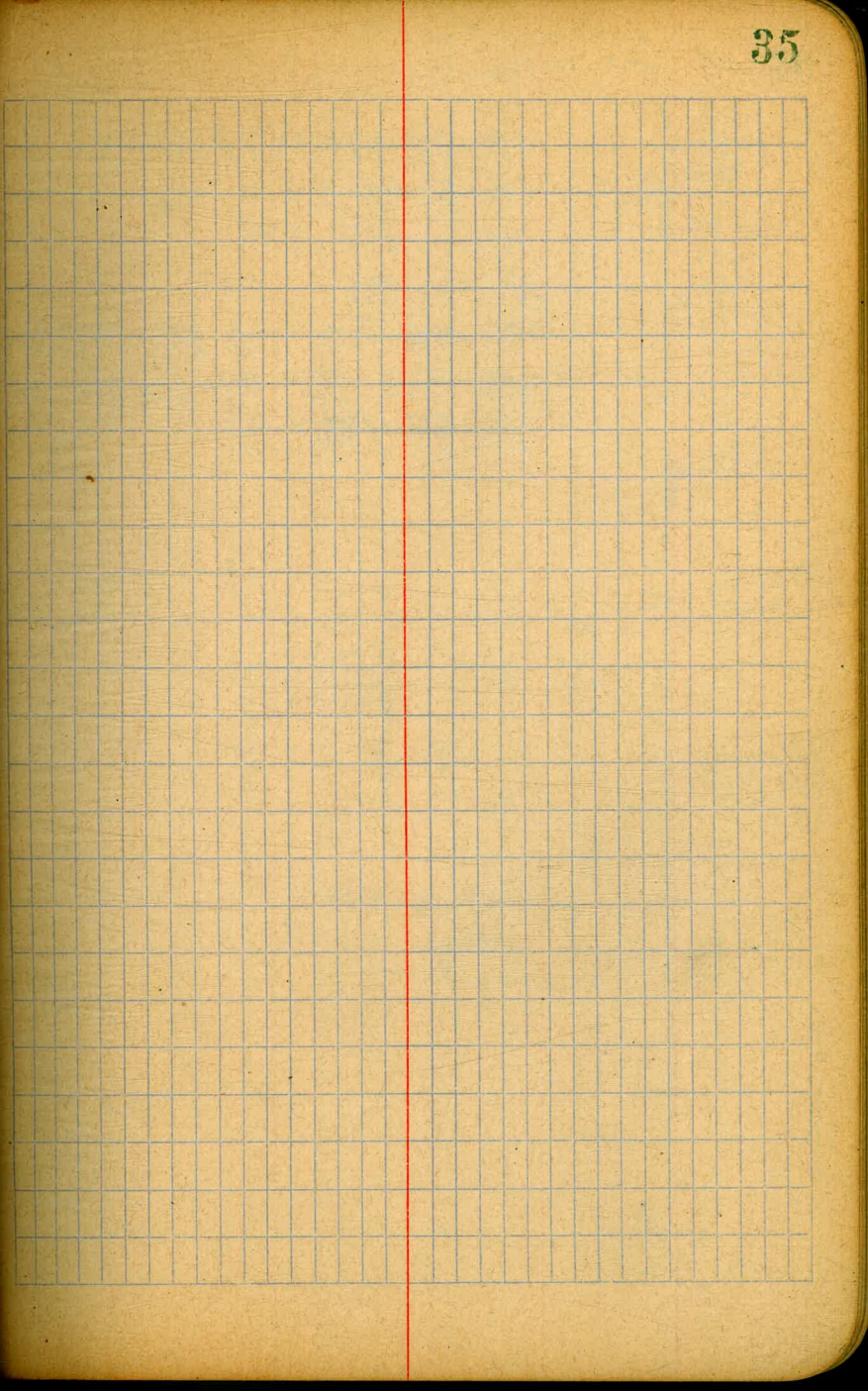
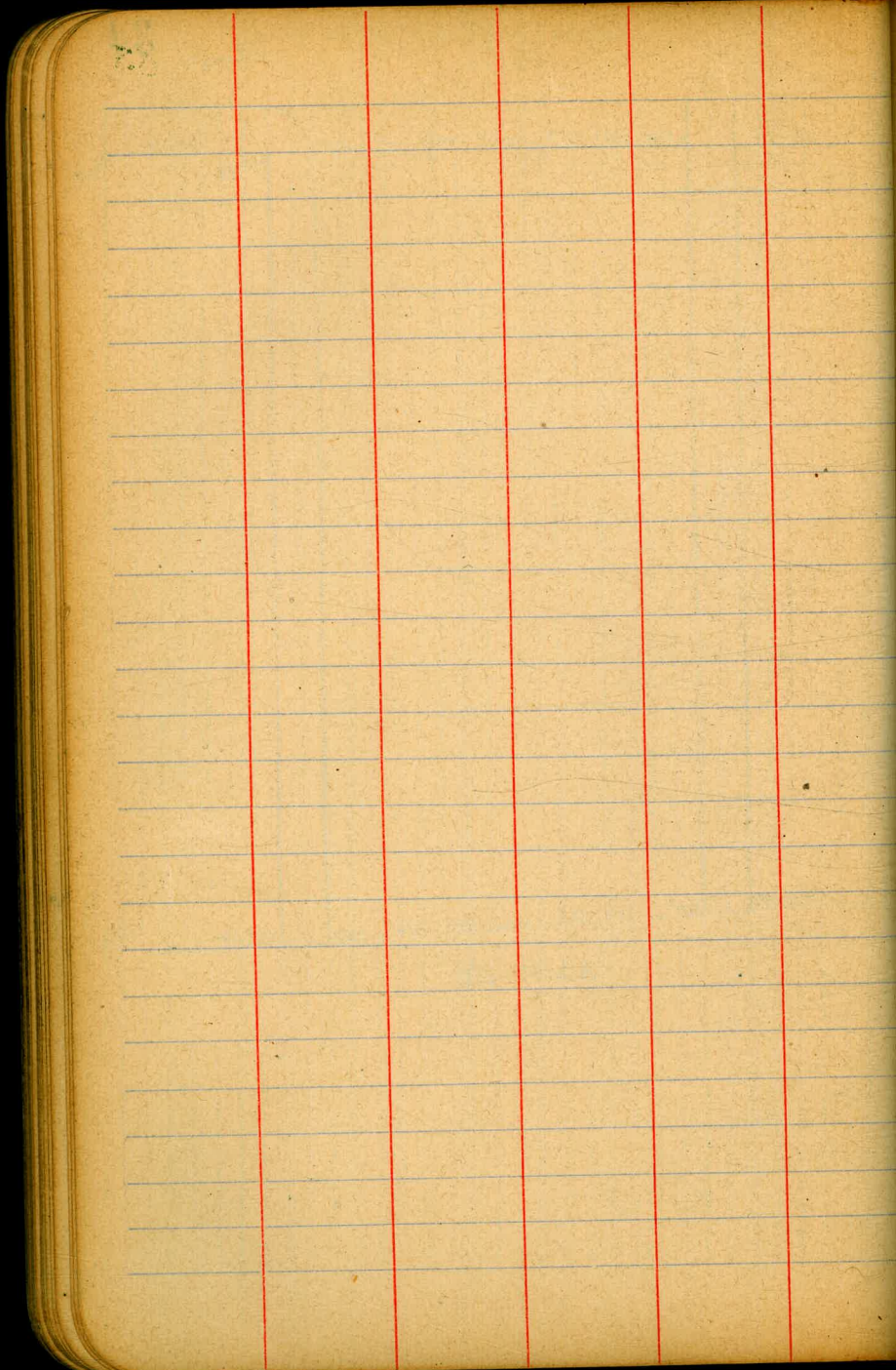
95.79 95.79 95.31 95.24 95.23 94.96 94.56 93.77

94.66 259.64 96.12

20437

97.64 96.97 773 773 779 780 774 97.77 98.14 96.00

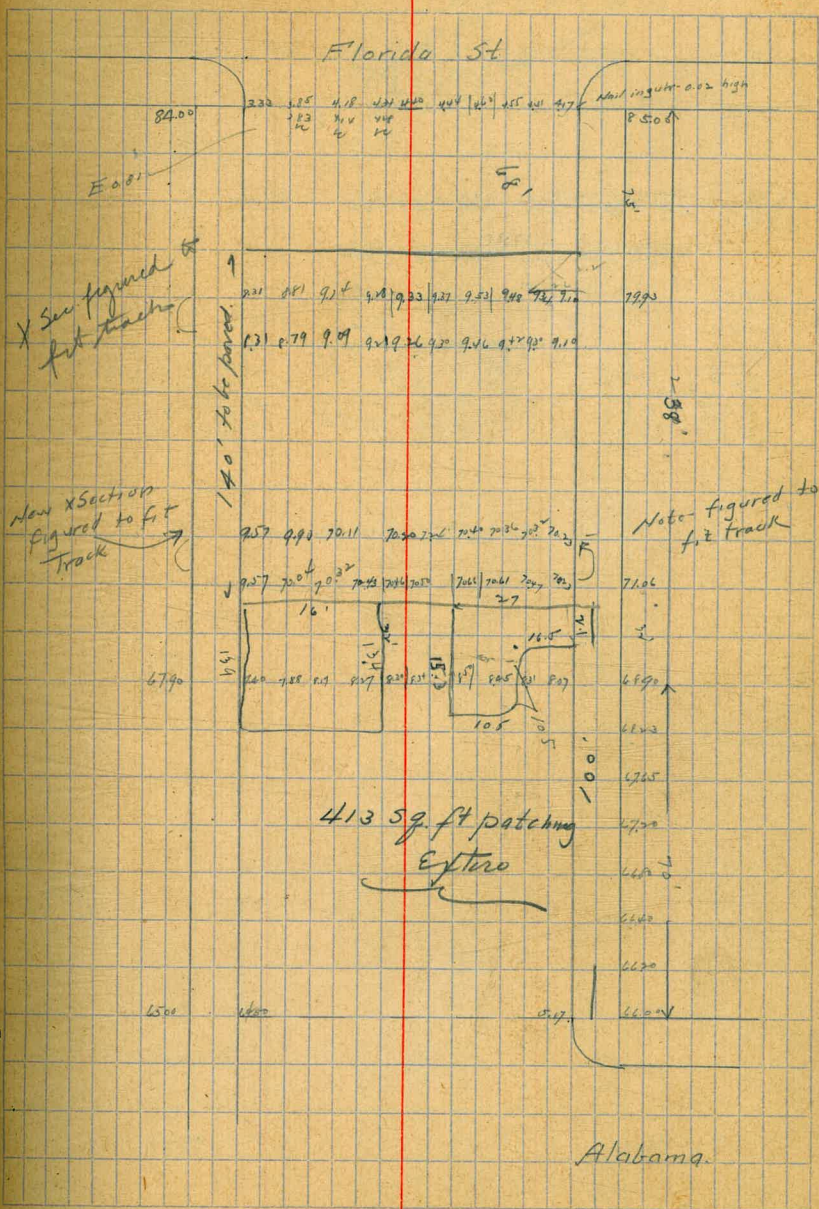
32nd 56



88-26 Spk SW Florida
64-86 SW Alabama Right

36

8826	9.32	9.27	9.53	9.48	9.34	9.10
1.37	2.57	2.53	2.27	2.42	2.56	2.80
8963 M	9.28	9.14	8.21	8.31		
990	2.62	2.76	3.09	3.59		
79.73 TP	70.04	164	227			
217	1.77	70.17	19.54			
81.90 M	164	1.61	8.30			
64.76	70.17	70.20	3.51			
695	7.90	70.11	70.20	224	240	0.36 0.32
71.81 M	1.91	1.70	1.61	4.57	4.41	1.43 1.49
64.86	2.98	3.02	2.98	2.80	2.86	2.42 2.30
276	4.64	4.60	9.26	2.90	2.78	2.82 2.94
6262 M	9.21	9.09	8.79			
79.88	3.03	3.15	3.45			
276						
82.24 M						



816 - 196.96 BM. NW. 27th St
 747.43 - Tackia Ch. E line feed Store. bet 27th St

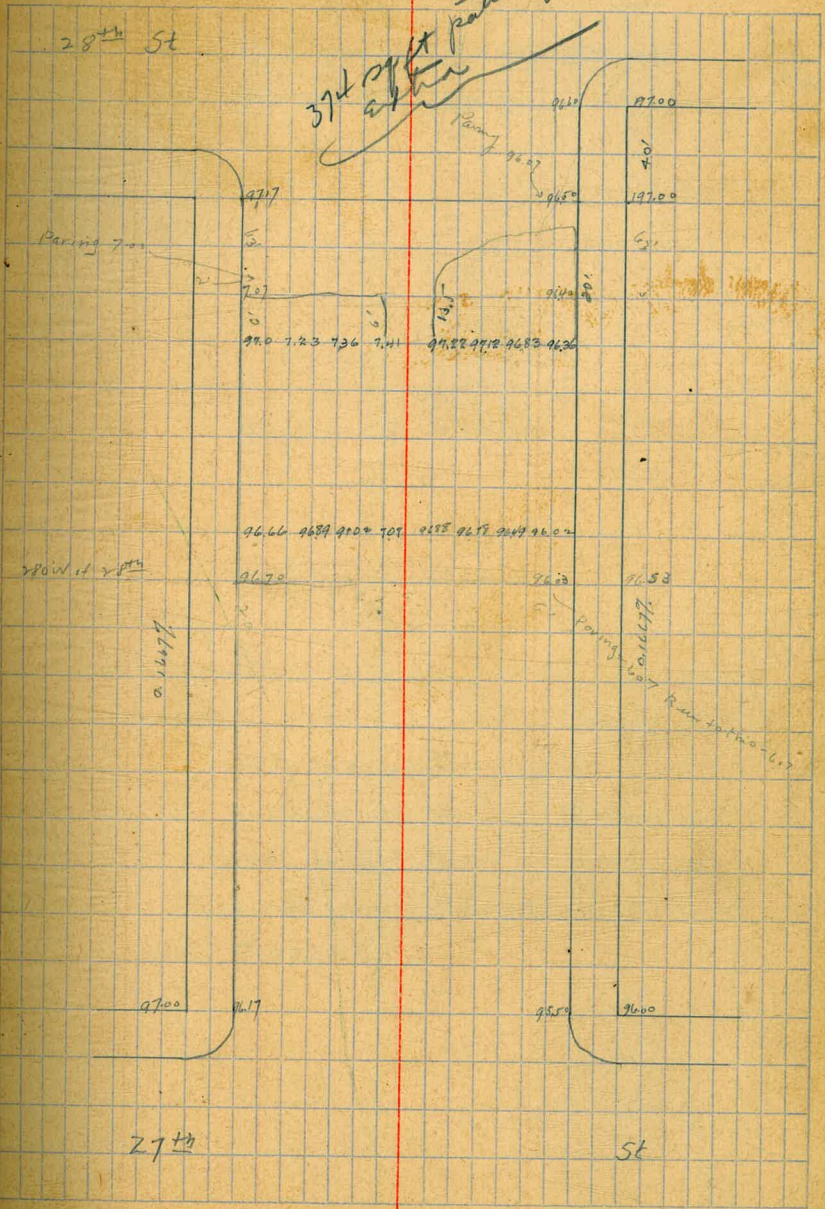
OK - 196.96. S.E. 28th St

141.96	7.07	6.40	5.79	4.96
5.00				
201.96	4.87	4.56	4.07	7.00
197.13	9.70	9.13	5.99	
4.63	5.06	6.07		
202.06				

196.96 2453 2712 2732 2723 2736 2741
 429 452 423 413 412 399 394

2689 2702 2707 2644 2693 2688
 446 423 422 486 401 487

6.50	6.17	5.98	5.58	5.21	4.84	4.88
4.2	4.2	4.2	4.2	4.2	4.2	4.2
6.92	6.19	6.40	6.00	5.63	5.22	5.37
2.18	3.77	4.41	4.99	5.05	4.66	6.21
3.60	4.19	4.87	5.42	5.45	5.08	6.62
5.79	5.37	4.90	4.62	5.52	5.33	5.88
6.21	5.79	5.32	5.02	5.92	5.78	5.50



56.23 Mon NE Laurel

+6.50 Top Hydt SE Kalmia

4150
357
5004

4360 4370
6.87

4370 4380
6.30 6.77

4380 4390
6.66 6.87

4390 4400
7.26

4780

4.20

4785

2.80

4790

2.37

4795

2.37

4800

2.57

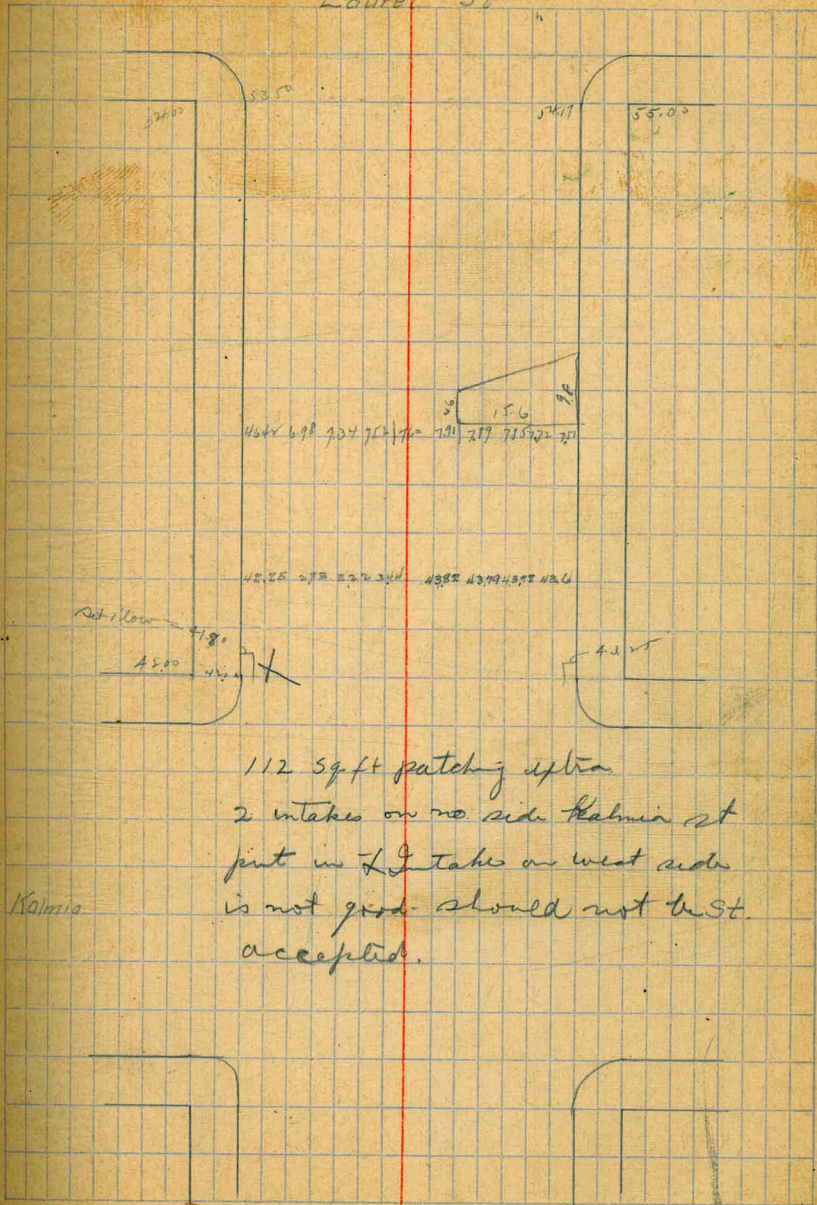
4805

2.75

4810

3.11

Laurel St



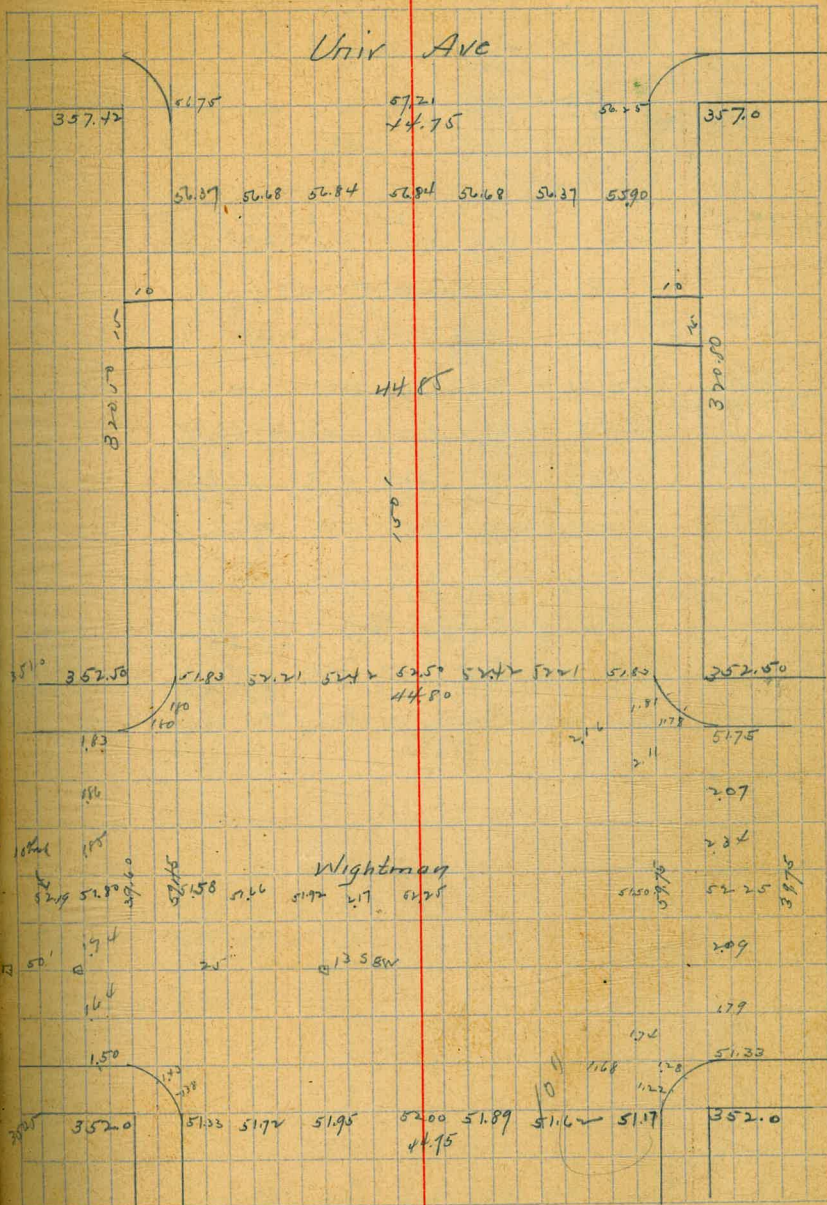
112 sq ft patching extra
 2 intakes on no side Kalmia st
 put in 2 intakes on west side
 is not good. should not be st.
 accepted.

Kalmia

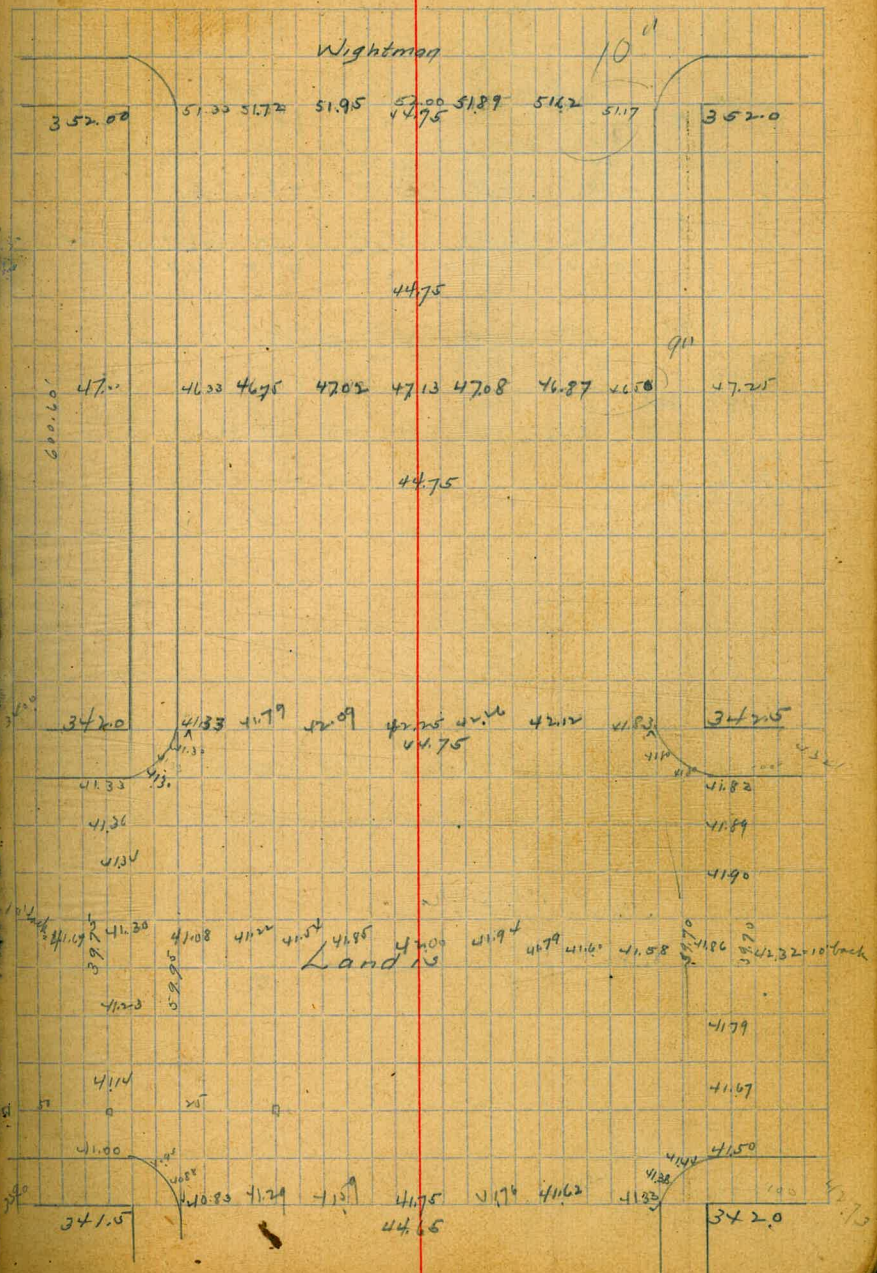
352.50 BM NW Univ & Iowa.
359.28 - 3157 Univ SE. Tip N401

5.53	2.75	56.75	56.83	56.90	56.97	57.04	57.11	57.18
362.00	59.28	5.28	5.70	5.43	5.78			
	4.86	5.25	5.83	5.33				
	7.87	5.78	5.17	5.67				
5.10	57.12	5.21	5.12	5.12	5.12	5.12	5.12	5.12
4.50	5.83	5.07	4.86	4.78	4.86			
57.50		5.90	56.37	56.68	6.64	6.68		
	5.25	6.16	5.69	5.38	5.22	5.38		
4.78	4.78							
540	57.28141							
59.28	181	178	175	172	171	172	173	175
2.78	522	525	528	529	535	581	565	560
62.06	183	180	169	174	179	207	224	231
	5.23	5.35	5.29	5.24	4.94	4.78	4.69	
52.50	207	211	216	220	217	192	166	158
4.53	496	492	487	478	486	511	537	565
57.03	186	185	180	174	164			
	5.17	5.18	5.23	5.29	5.39			

Univ Ave



52.20						
52.25 M	6.40	41.83	41.67	41.33		
7.22	7.48	7.05	7.21	7.51		
46.53 TP	40.83	41.33	-17.03 M	42.12		
48.88 M	8.05	7.55		4.91		
46.4	5.5	46.32	46.58			
44.19	2.08	8.25	6.08			
0.76	54.58 M	51.58	51.91	52.0	1.85	1.4
52.50		3.20	2.90	2.8	2.96	3.35
2.31		6.74	7.65	7.12	6.98	6.63
54.81 M		8.07	7.76	7.68	7.83	8.21
4.19	41.92	42.26	42.25	2.09	1.79	
2.60	4.87	4.53	4.54	4.7	5.00	
46.79 M	46.07	47.08	47.02	46.75	6.33	6.50
57.12	5.50	5.29	5.58	5.62	6.04	5.87
5.24						
52.37 M	46.87	47.08	47.13	47.02	46.75	4.33 3.05
4.50	5.48	5.27	5.22	5.33	5.60	2.7 3.21
5.85	5.62	5.19	5.20	5.195	5.12	
52.3 T	5.10	4.82	4.72	4.74	5.00	
52.50	41.32	41.32	41.00	40.95	40.80	
4.22	5.76	5.73	6.00	6.12	6.18	
66.72 M	41.38	41.44	41.50	1.83	1.80	1.36
44.19 M	5.68	5.62	5.52	5.28	5.26	5.78
2.87	1.20	1.14	1.17	1.17	1.06	1.89
47.06 M	5.96	5.83	5.92	5.39	5.27	5.20
						5.16 5.17
	1.58	1.60	1.79	1.95	2.00	1.85 1.57
	5.48	5.46	5.27	5.12	5.06	5.21 5.52 5.40 5.98



332.52 VE Dwight Pigot

32.52
5.01
27.51 *1

31.83
5.70

44.19
0.30
44.49 *1

36.58 7.30
7.91 27.10

36.32
8.10

765
56.84

44.19
2.21
46.40 *1

41.42
4.98

41.76
4.64

41.75
4.65

41.79
4.81

41.79
5.11

36.58
5.16
36.91
4.83
37.09
4.65
37.12
4.62
37.00
4.94
36.75
4.99

36.52
5.21
41.74 *1

221
5.71

222
5.56

250
5.42

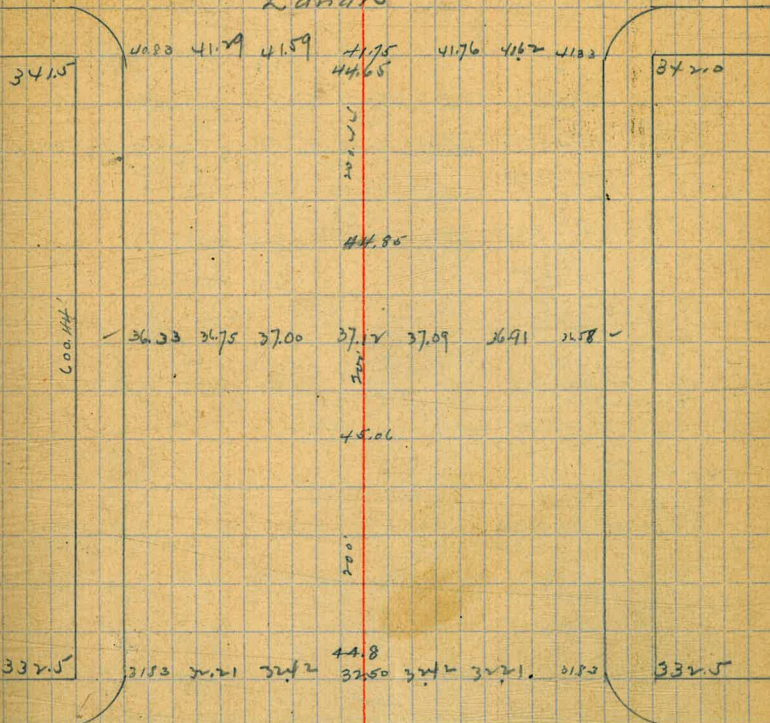
41.62
5.41

32.52
5.40
27.92 *1

44.19
2.24
47.03 *1

41

Landis



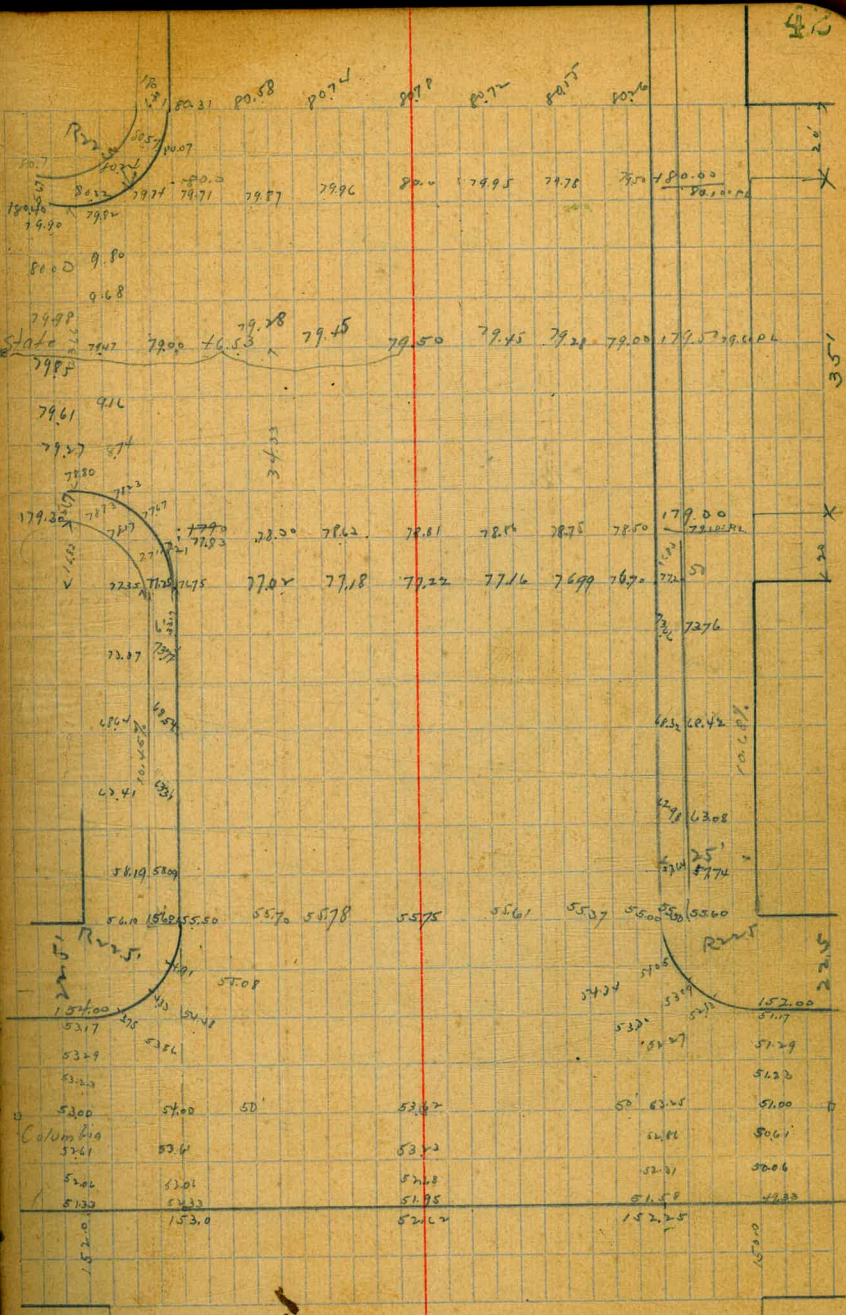
Dwight

3320

3320

54.94 (from 54.94) per
 NE Columbia, Ga.
 209.77 Top 144' Redwood 200 ft
 181.35 Pipe in Well NE State & Guinea

0.81	13.90	17.95	17.90	17.36		
209.77	187.67	1.97	5.8	78.1	93	
212.69	12.43			5.3	42.5	78
5.59	86.7	97.77	98.3		1.5	
20.7.10	77.35	177.0	23.76	23.87	18.64	61.84
0.51	4.20	2.65	8.00	7.88	12.11	13.33
207.64						7.25
186.27	6.41	58.19	57.71	55.60	12.10	
5.59	6.92	12.12	12.59	4.4	3.90	
170.44	0.40	1.82	2.25	2.25	2.42	59.41
170.33	8.1	7.87	7.87	6.64		1.34
58.87	11.98	4.40	7.98	1.60		6.87
60.0	69.77	58.19	61.6	6.308	57.7	
81.35	0.51	12.09	7.20	12.5		5.88
2.41	70.28	11.50	2.96	4.40		54.9
83.76	1.39	79.16	80.10	5.19	5.00	59.7
2.76	8.35	3.64	2.64	6.33	3.20	8.27
57.98	82.7	81.25	60.27			
57.96	55.8	82.6	12.90	3.60		
1.925	7.315					
56.865	180.40	179.20	5.20	5.30	5.205	
181.35	5.43	6.43	5.04	7.84	5.09	
185.83	1.65	1.05				
54.94	6.33	8.11	6.16	6.96	6.22	18.17
1.89	7.21	7.67	1.23	2.80	2.89	9.12
56.83	9.25	8.79	8.23	7.66	6.50	6.60
3.67	5.78	5.78	5.61	5.37	7.27	7.61
59.41	2.7	2.65	2.66	2.80	4.00	4.20
2.35	2.69	7.26	7.27	7.18	2.20	2.99
2.23	6.68	6.51	6.48	6.99	6.65	5.53
83.67	7.90	7.92	7.94	7.95	7.945	8.74
81.35	4.51	4.23	4.06	4.01	4.06	4.77
85.57	9.80	9.71	9.87	9.96	8.00	9.95
87.04	3.71	3.80	3.6	3.53	3.51	3.56
57.08	8.96	8.81	8.63	8.30	7.73	2.60
81.35	4.76	4.25	4.70	4.84	5.21	5.69
85.82	50.06	50.61	51.00	51.23	51.29	5.3
4.51	7.02	6.47	6.08	5.79	5.79	2.74
59.75	3.78	3.85	4.08	4.47	5.0	5.36
	3.78	3.85	4.08	4.47	5.0	5.36
	2.81	3.25	3.45	3.99	4.75	5.99
	4.22	3.83	3.03	2.99	4.95	5.97
	5.23	5.13	3.17	3.75	4.33	4.91
	4.75	4.75	3.9	3.33	2.75	2.7
	8.18	8.07	10.78	2.98	5.70	7.15
	5.28	5.17	5.08	1.58	4.05	4.05

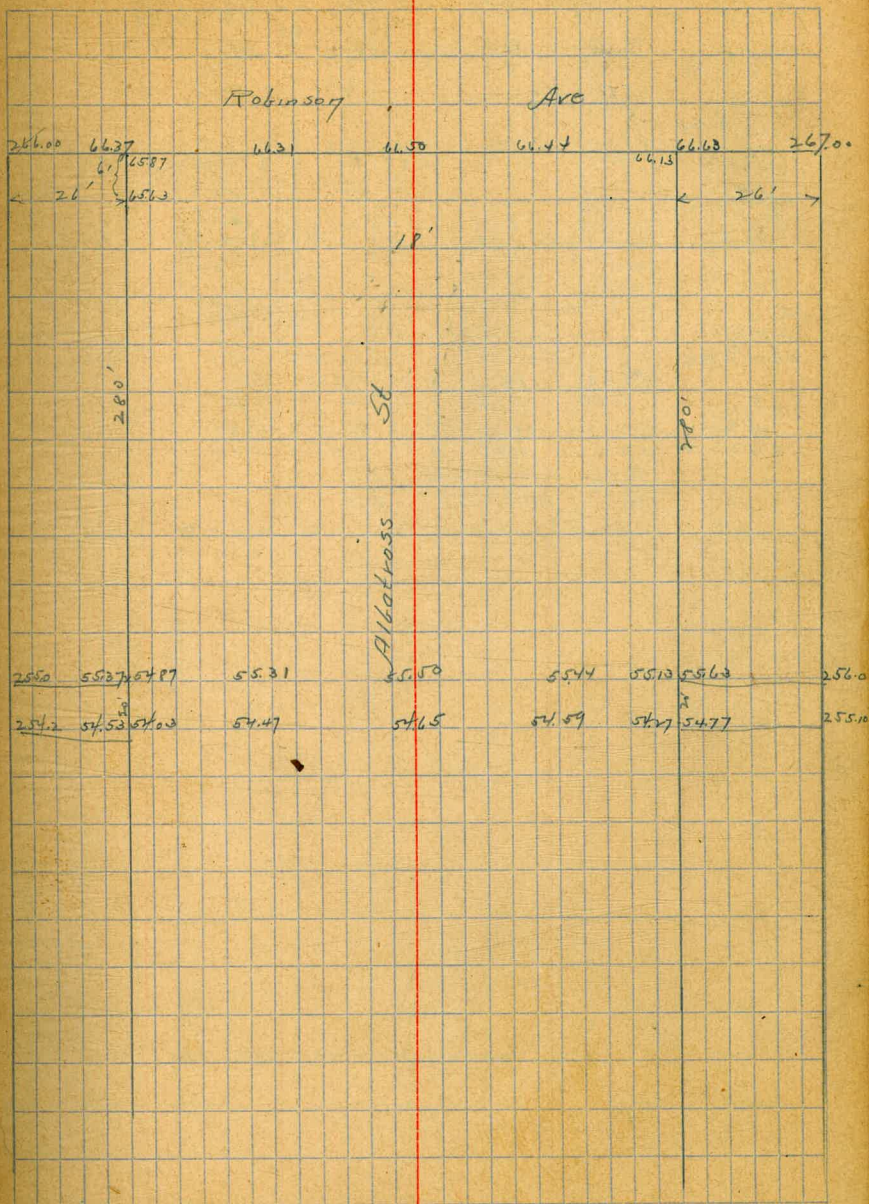


253.9 North E of 513 So. Riv.

267.06 NE A16 & Robinson P1grt

219							
269.25 M1	66.63	66.37	55.23	54.77	55.37	54.53	
8.57	2.62	2.88	7.09	7.95	7.35	8.19	
260.68 M1		67.06	66.13	65.87	65.63		
20.4	7.23	27.01	49.4	5.2	5.44		
262.72 M1	53.49	71.07 M1					

60.1	54.27	54.03	54.77	55.13
53.49	5.26	5.50	4.66	4.40
59.53 M1				
53.49	54.57	46.5	44.7	
64.3	5.33	5.27	5.45	
59.92 M1	5.31	5.5	5.4	
48.65	4.61	4.42	4.48	
66.13	66.04	66.50	66.31	
70.69 M1	4.255	4.195	4.385	



289.01 Wash. NW Pigst

287.01N.W Pigst - Univ.

87.01 4945	275 8651	509 1687	89.01 543	604 9449	602 8838
91.96 M1			94.49 M1		
5.00	86.17	16.90	87.02	86.93	88.19
92.01 M1	5.43	5.11	5.01	4.52	5.25
89.01	87.41	87.62		4.87	87.86
4.43	5.96	5.81			
93.42 M1					
87.01	88.22	88.26	6.92	7.16	7.28
4.96	5.22	5.20	5.35	4.81	4.89
91.97 M1	87.48	87.73	5.38	5.12	5.02
87.86	5.57	5.19	88.10	88.15	87.96
5.19		5.52	4.85	4.90	5.09
93.05	89.01		5.28	5.23	5.42
	4.71				
89.01	93.72 M1	88.10	88.12	88.40	88.83
4.08		5.12	4.90	4.82	4.89
93.09 M1		5.23	5.23	5.23	5.11
					5.40
87.01	88.60	88.22	8.90	8.90	8.61
4.49	4.27	4.19	4.20	4.48	
5.21	87.86	88.12	88.19	88.15	87.96
92.22 M1	5.23	4.99	4.90	4.90	5.13
	16.92	7.16	7.22	7.16	
	5.30	5.06	4.94	5.08	

45

At St
Washington

289.00	88.33		89.00		88.35	289.00
88.88	88.22	88.40	88.12	88.90	88.83	88.91
88.07	87.48	87.86	88.10	88.19	88.15	87.96
						87.43
						88.30
87.09	86.58		87.33		86.90	87.57
87.01	86.53	86.92	87.16	87.28	87.14	87.53
287.00	86.50				86.83	287.50

300'

5.40'

0.3778' 1/2

0.32 687' 1/2

0.3140'

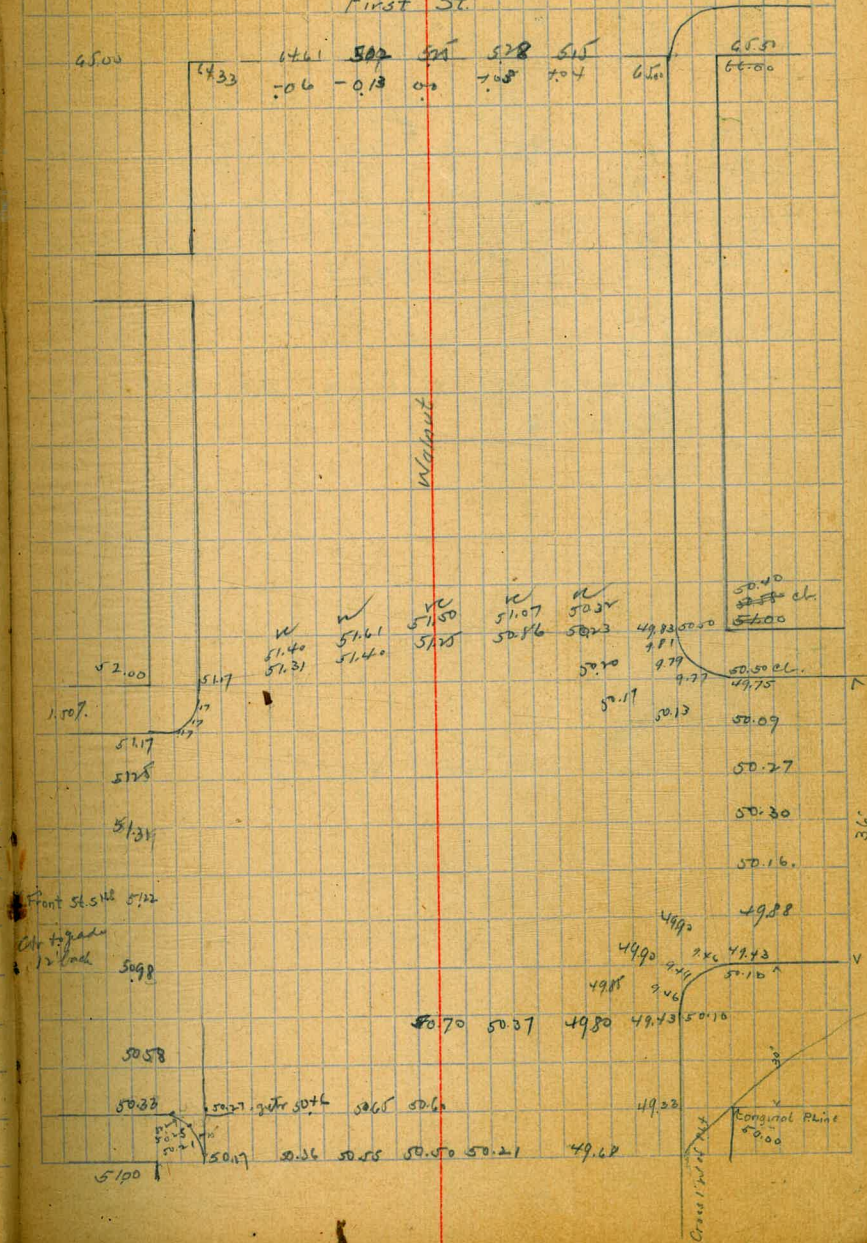
0.2678' 1/2

New Front

250.90	NW 1st & Walnut Plgrt.	50.17	49.23	51.2	50.00	51.17
256.10	H	5.93	6.77	80.58	6.10	493
50.90		50.50	50.40	50.10		
4.33		4.73	4.83	5.13		
55.23	H	51.40	51.61	51.58	51.07	50.82
4.97		4.47	4.26	4.37	4.80	5.50
50.90						3.53
55.87	H	4.99	49.20	50.37	80.5	990
50.90		60.70	6.89	5.22	5.79	5.81
4.79						5.50
55.69	H	50.27	50.09	50.13	50.77	50.22
		5.42	5.60	5.56	5.49	4.44
						5.12
						1.29
						1.22
						4.00
						4.47
						5.13
						4.38
						5.09
						5.26
						5.215
65.00		50.33	50.24	50.20	50.21	50.27
3.37		5.36	5.40	5.44	5.48	5.42
68.37	H	5.42	6.26	6.20	5.94	9.22
						4.79
						5.90
						5.28
						5.86
						1.17
						4.52
						4.99
						5.61
						3.38
						3.76

69.00

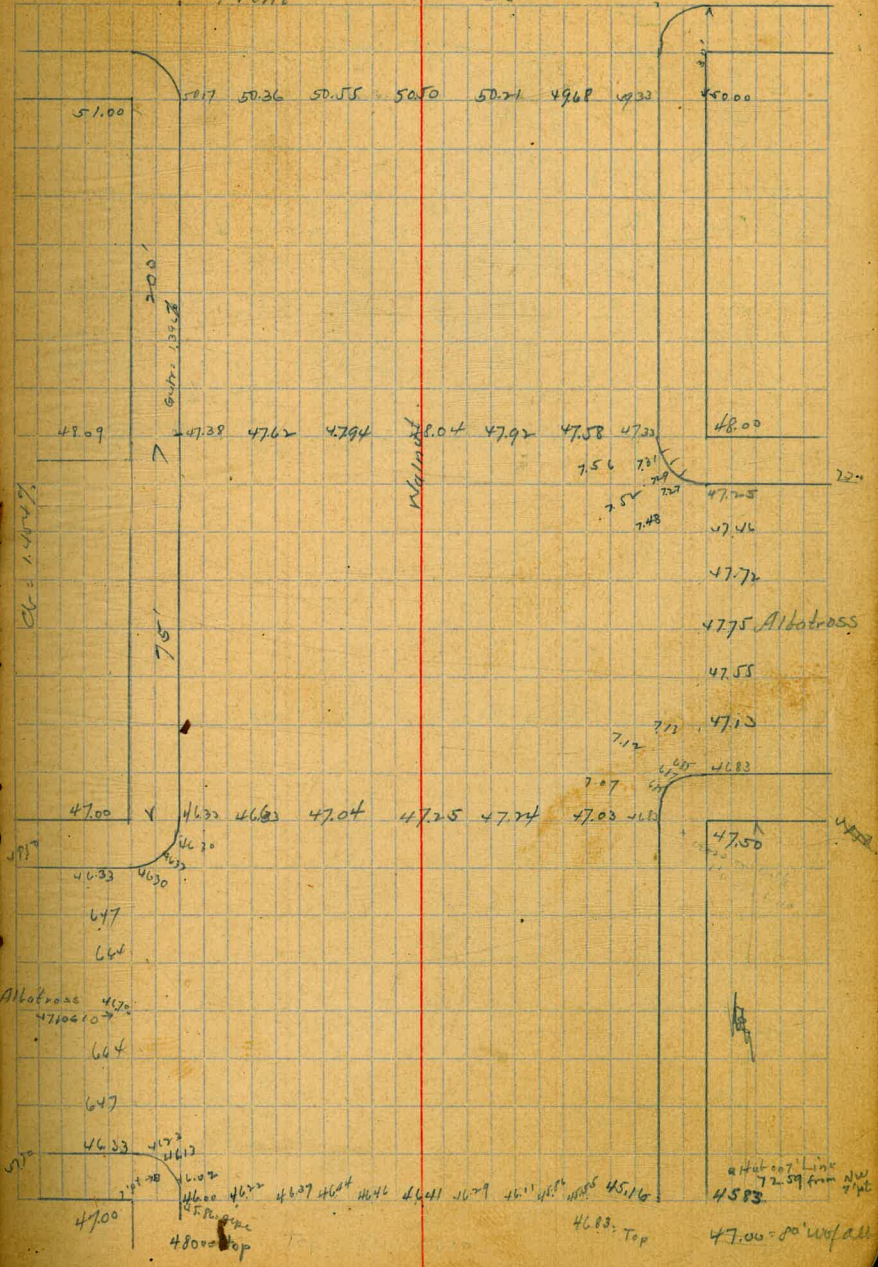
First St.



48.00 Nail in cb. SE. Albatross & Walnut.

50.90	47.33	50.05	47.21	46.83	46.33
26.05	6.17	48.00	6.25	6.67	7.17
53.505	48.11	50.77	46.85		
48.00	48.00	46.13	5.15		
4.00	5.95	46.01	46.7	4.4	4.6
52.06	5.19	5.95	5.73	5.58	6.51
		5.20			
48.00		48.17	46.75	45.83	45.55
4.29		4.32	5.74	6.06	6.94
52.49	47.58	47.92	46.04	47.94	47.62
5.26	5.68	5.24	5.2	5.52	5.64
48.00	59.17				
53.29	5.10	50.36	50.55	50.5	50.21
49.07	7.17	2.91	2.72	2.77	3.06
3.06	4.30	2.48	2.51	2.77	3.59
51.86	4.61	4.38	4.40	4.11	4.75
	7.27	2.04	2.65	3.35	4.1
	4.12	4.61	4.82	5.23	4.57
	6.47	6.64	6.70	6.4	6.33
	5.39	5.22	5.16	5.22	5.53
55.87	6.2	6.4	6.41	6.1	5.17
	5.64	5.42	5.45	5.75	6.31
				6.70	5.01
					4.99
	7.27	7.29	7.31	6.50	6.33
	4.59	4.27	4.55	5.56	6.53
	50.21	49.69		5.51	5.32
	5.66	6.19			5.37

Front SE.

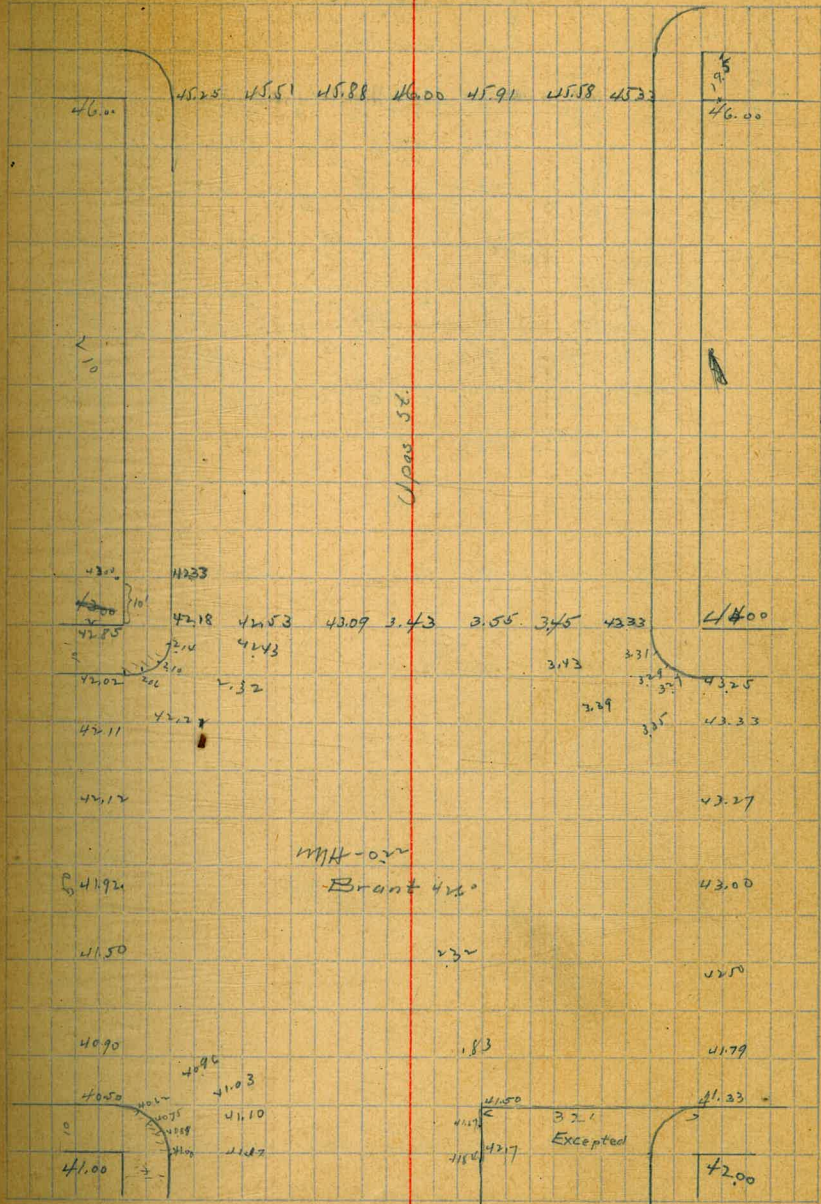


1599 Nail Ct NW 416 x Upas

7395 " " SE Upas & Brant.

374	571	677	722	4333	4325	4133
49.73 M	42.95	42.96	7.40	6.40	6.48	8.40
43.83	42.85	42.00	345	355	343	309
41.28 M	3.43	6.27	5.79	5.69	5.81	6.15
43.95	45.99	45.51	45.88	46.00	45.91	45.58
43.95	3.22	3.74	3.57	3.25	3.24	5.66
49.24 M	3.55	3.23	1.32	2.21	2.11	2.12
43.95	3.00	5.12	5.23	5.34	5.44	5.43
3.60	1.50	2.9	3.43	4.55	4.67	4.74
47.55 M	6.85	6.5	4.12	6.05	5.88	5.71
43.95	40.88	40.75	40.62	40.32	343	357
3.42	1.17	6.50	4.93	7.05	4.00	4.00
47.43 M	5.64	2.78	2.10	2.04	2.02	6.14
3.03	3.31	5.25	5.29	5.33	5.37	5.47
43.95	4.12	3.27	4.11	4.03	4.09	4.17
46.98 M	4.38	4.10	6.33	6.40	6.47	
	4.26	2.22	1.93			
		6.6	5.15			

Albatross



Brant Spruce C.T. top of pillar S. side Steps End bridge 29.45

40.97- NW Brant Thorn Nail in Ob.

42.95	7.74	40.33	508	41.33	41.00		
3.75	39.97	6.68	49.07	5.68	6.01		
46.71 41							
6.04							
46.97	6.76	40.25	40.33	5.11	40.90		
3.92	3.90	6.82	6.74	5.18	6.17		
40.97	2.91	41.21	41.53	4.65	41.53	41.39	
6.10	40.67	5.18	4.86	4.75	4.86	5.00	
40.97	3.30	4.33	4.33	3.00	4.50	4.77	5.46
40.97	4.92 41	3.92	3.92	4.26	4.71	5.46	
46.27 41							
48.85							
46.27 41	40.60	41.21	41.53	41.64	41.53	41.78	41.96
5.53	5.00	4.67	4.57	4.61	4.43	4.36	
41.33	41.48	4.16	4.15	4.17	4.23	4.20	
4.83	4.73	4.10	4.69	4.77	4.77	4.78	4.51
4.07	4.05	4.05	4.05	4.05	4.05	4.05	4.05
5.50	5.56	5.63	5.66	5.62	5.57	5.58	
41.33	1.21	1.21	1.21	1.21	1.21	1.21	
4.88	4.97	5.10	5.20	5.21	5.23	5.25	
0.27	0.24	0.31	0.15				
5.92	5.92	5.90					

Upas St

42.00	41.33	41.79	42.50	43.00	43.27	43.33	43.25	44.00
-------	-------	-------	-------	-------	-------	-------	-------	-------

41.00	40.33	40.63	41.21	41.50	41.64	41.53	41.39	41.06
42.5	4.31	4.30	4.35					
40.51	4.45			41.52	41.61	41.48	41.32	41.33

40.98								
41.00								
40.91								

41.00	40.33	40.70	41.33	41.50	41.50	41.04	41.00	42.00
	4.65	4.71	4.07					
41.00	41.11	41.11						

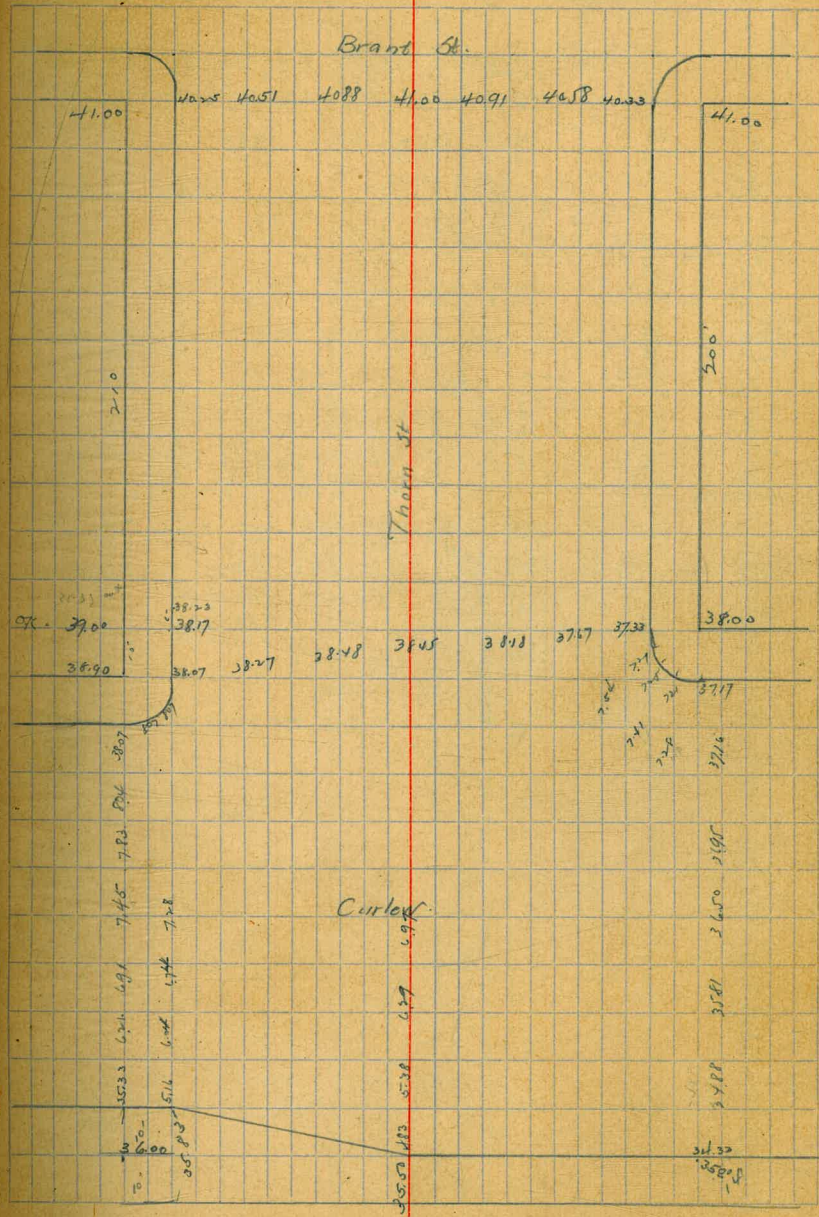
Brant

Thorn St

Ch to grade 90-foot

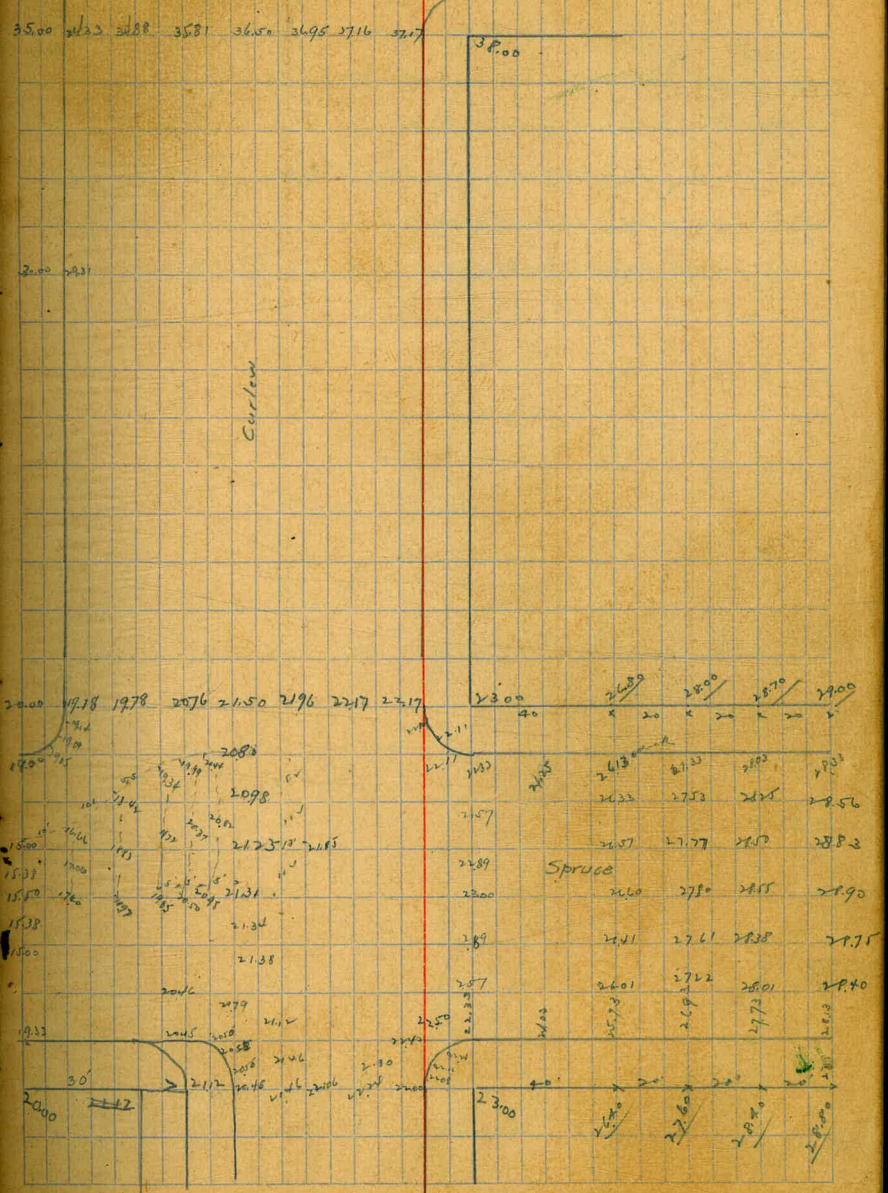
37.95 B.M. Nail in Ct. S.E. Front & Curlew

40.97	5.07	6.17	37.00	38.23	36.00	37.00
3.10	39.00	37.98	6.74	5.74	6.29	7.79
44.07 M						
37.95	3.83	3.00	31.90	40.05		
43.4	6.46	6.9	3.59	4.78		
42.99 M	40.51	40.98	41.00	40.91	40.58	
4.06	4.82	4.15	4.03	4.12	4.45	
40.97						
45.08 M	37.67	38.18	38.45	39.41	38.27	38.07
37.95	8.08	4.57	4.30	4.27	4.48	4.68
4.90	4.59	8.00	7.83	7.45	6.91	6.21
42.75 M	38.13	4.54	4.75	5.13	5.67	6.37
37.95	6.00	8.74	7.71	7.97	6.67	5.37
6.05	6.52	8.52	8.11	8.29	6.29	7.20
42.58 M	5.33	5.16	4.83	4.58	4.21	3.72
	7.25	7.42	7.75	8.00	8.37	8.74



3795	31.33	6.5							
3887 M	29.2								
1014	34.06 M	513	2412	2773	2693	2573	27		
28.40 M		28.93	5.93	6.33	7.1	4.84	3.9		
77	22.97	2403	2333	2502	2375	2484	2297		
29.47 M	6.2	19.03	9.26	6.42	7.8	6.75	7.0		
22.97	31.59 M	2617	2733	2803	2733				
11.09		5.42	4.26	3.56	3.28				
0.40 M	25.12 M	2112	2112						
29.30		4.02	2.11						
22.97	22.15	2195	2150	2081	1918	1933			
2.28	4.09	4.30	4.75	5.44	22.57	6.92			
26.25 M	1918	1972	2074	2141	2257				
37.95	7.07	1.47	5.49	4.29	4.08				
1.44	10.08	32.16	26.95	26.50	25.11	34.88			
39.39 M	29.31	2.23	2.44	2.89	2.58	4.51			
2.97									
8.24	22.57	28.9	300	2601	261	26.0	26.57	26.6	613
31.31 M	8.74	2.42	8.31	5.30	4.9	4.71	4.72	4.78	5.18
	7.53	7.77	7.70	7.61	7.22	8.01	1.31	8.55	8.70
2.97	3.78	3.5	3.51	3.70	4.09	3.80	2.93	3.76	3.81
4.35	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
27.02 M	3.06	2.75	2.48	2.41	2.56	2.91	0.72	4.99	
	2.7	2.99	3.00	2.41	2.30	2.2	2.2	1.1	
4.6	4.75	4.03	4.32	4.8	4.92	5.02	5.08	5.26	5.86
26.43 M	21.31	1.77	1.1	1.08	2.09	2.09	2.13		
	6.08	6.04	6.16	6.24	6.02	6.34	6.09		
22.97	22.11	22.14	22.1	21.6	20.8	200	9.80	2.51	
1.39	4.32	4.29	4.19	4.27	4.35	4.42	4.47	1.85	
20.36 M	20.71	20.5	19.85	18.5	18.38	18.5			
	3.41	3.86	4.51	4.36	8.98	8.8			
22.97	20.44	19.99	19.22	18.2	16.1	21.1	5.33	4.64	
3.13	4.82	4.37	4.02	5.02	7.70	17.20	8.97		
26.10 M	20.86	20.7	19.72	18.3	17.26	20.45	16.5		
	3.54	3.79	4.64	8.53	3.20	39.045			
	2.62	2.79	2.5	2.7	2.45				
	4.98	5.31	5.60	5.88	5.65				
	19.18	19.1	19.09	19.05	19.00				
	6.92	6.96	7.01	7.03	7.10				

Thorn St

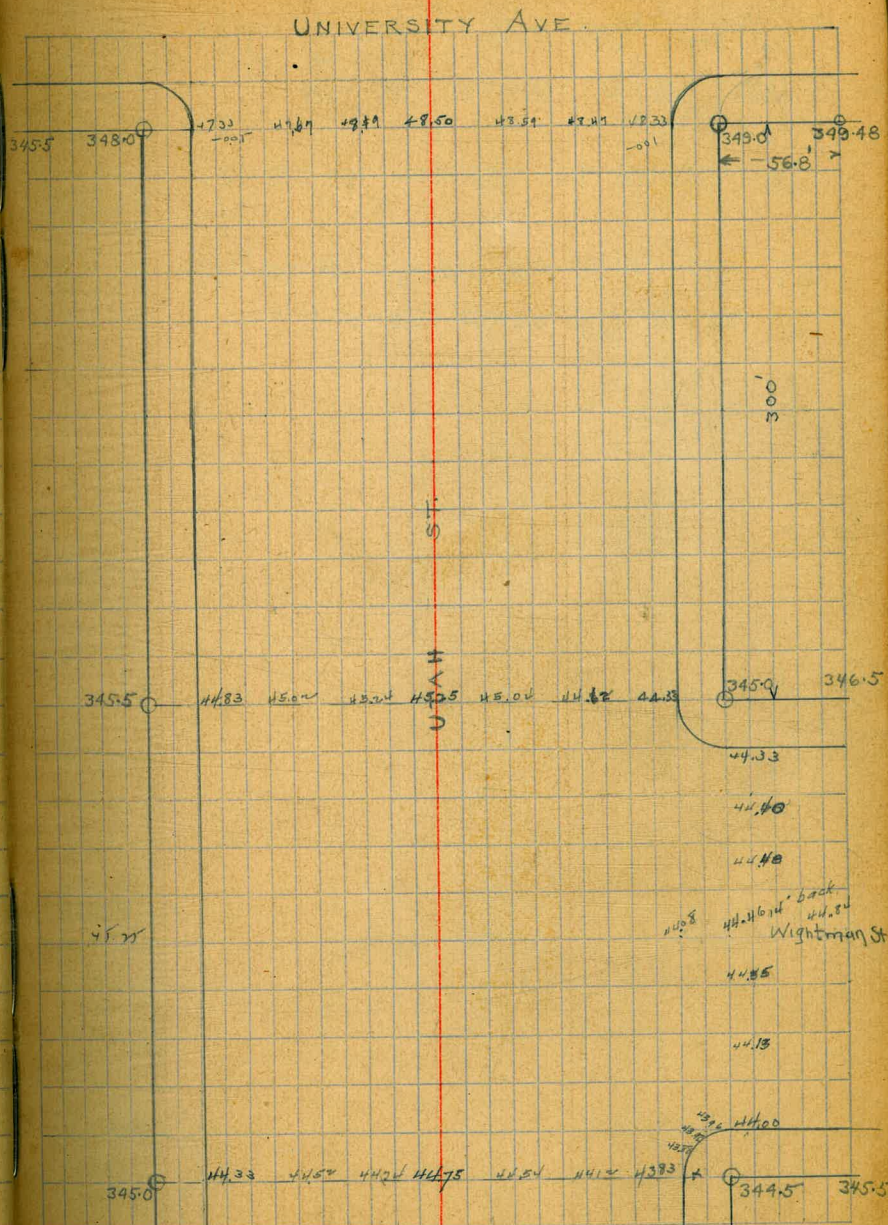


3.97	44.03	44.33	46.33	362	44.75	45.25
469.4	6.08	6.58	2.58	472.8	6.38	5.88
50.97	46.94	45.95	46.33	47.42	48.50	
4.19	4.12	4.19	4.19	3.70		
46.90	5.12					
51.73						

46.94	45.07	45.27	45.86	45.04	44.97	
2.54	4.51	4.29	4.29	4.49	4.29	
47.53						

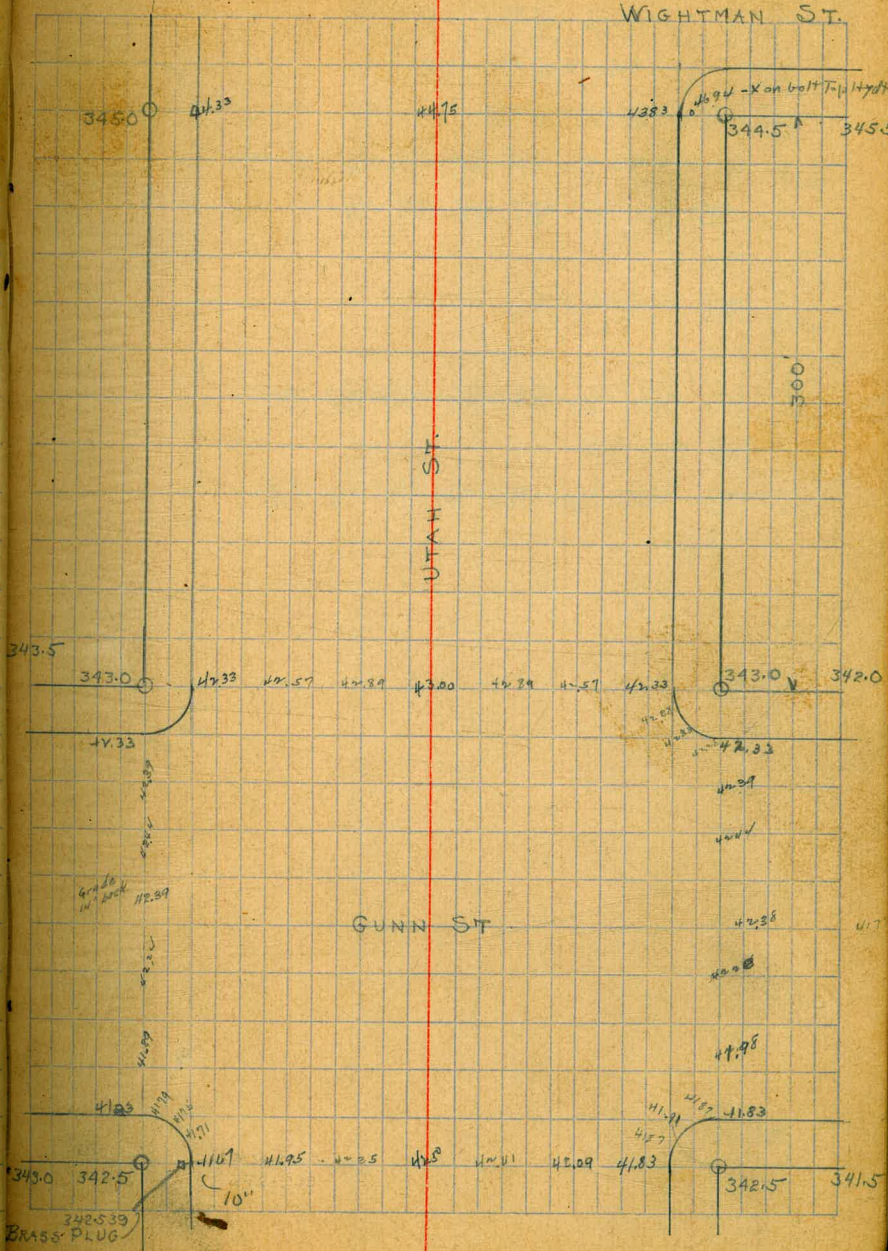
46.94	44.12	44.94	44.75	44.74	44.57	44.4	44.19	44.35	44.46	44.57	44.35	44.35
48.88	5.01	4.99	4.77	4.77	5.01	5.59	5.34	5.18	5.01	5.01	4.15	5.20

46.96	44.12	44.94	44.75	44.74	44.57	44.13	44.35	44.66	44.65	44.60	44.92
48.88	5.37	4.94	4.74	4.75	4.71	5.36	5.14	5.22	5.01	5.07	4.57

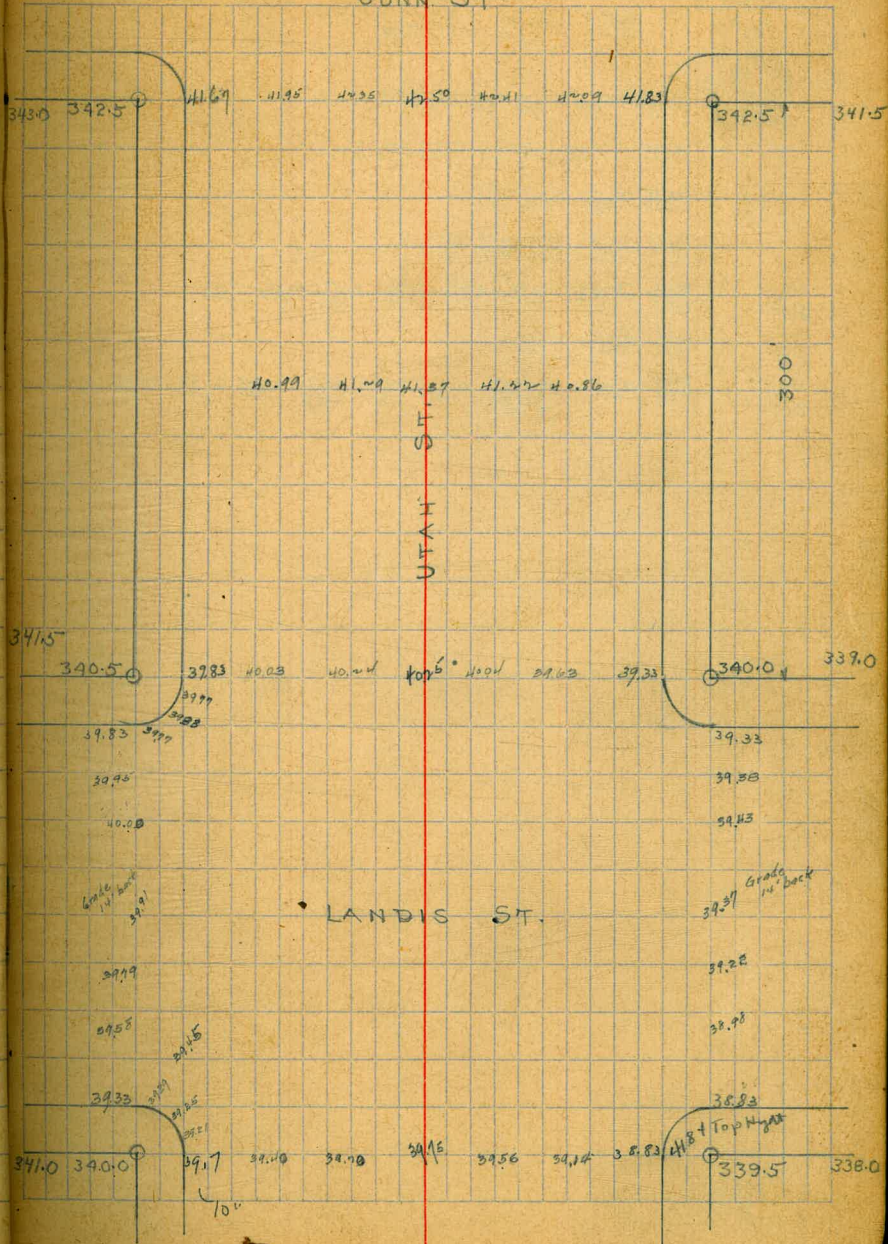


BM 4694 - X cut on hydr. bolt.

48.54 3.54 46.08 AM	41.67 4.41	41.83 4.25	6.31 48.85 AM	41.32 6.52 42.82 6.02	1.91 4.52
42.04 4.52 47.52	41.67 3.75	42.01 3.41	42.07 3.04	42.00 2.92	42.01 3.01
42.54 4.81 47.72	42.07 4.41	42.07 4.63	42.07 4.52	42.00 4.15	42.00 3.91
42.54 4.51 47.03	42.07 4.41	42.07 4.63	42.07 4.52	42.00 4.15	42.00 3.91
42.54 4.81 47.72	42.07 4.41	42.07 4.63	42.07 4.52	42.00 4.15	42.00 3.91

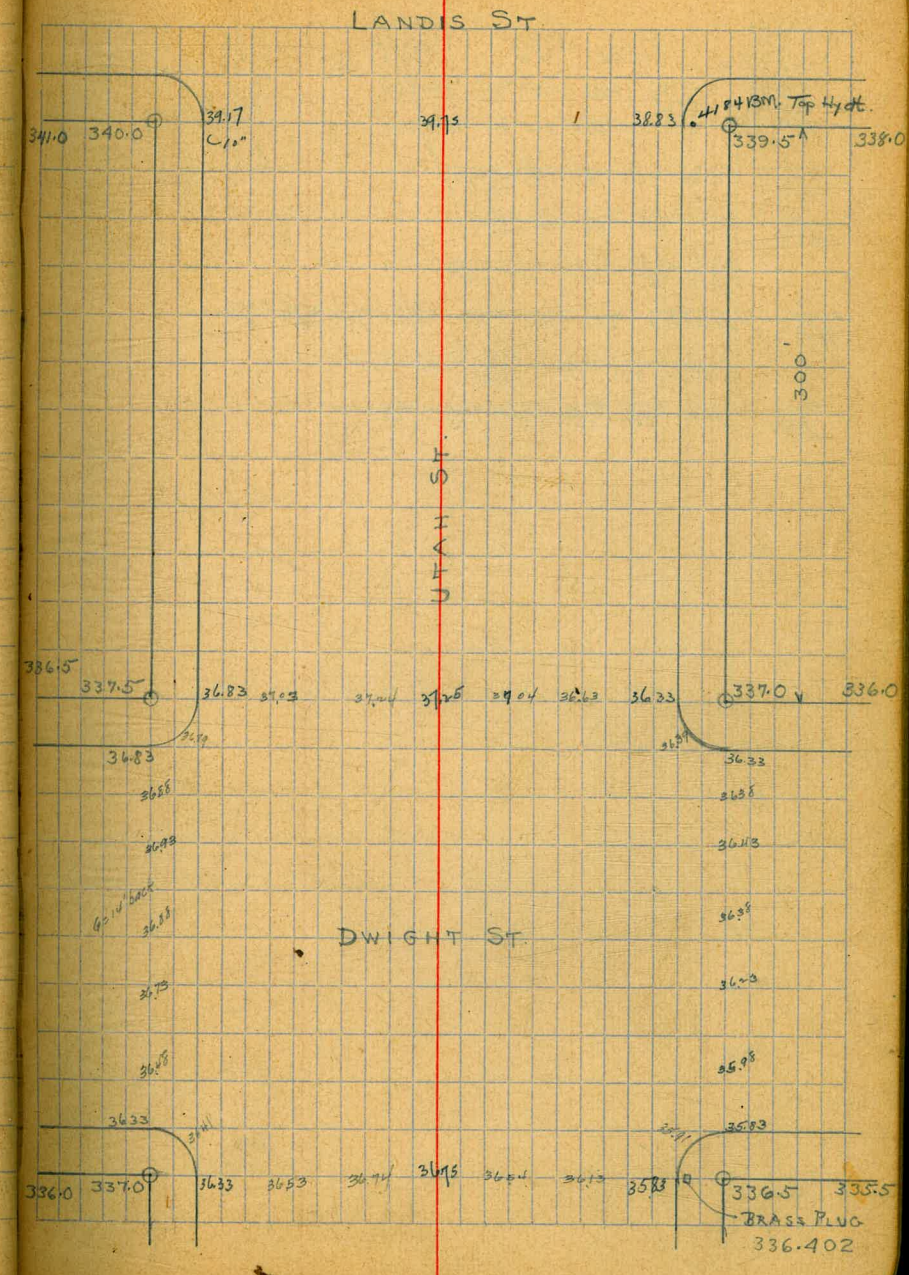


GUNN ST

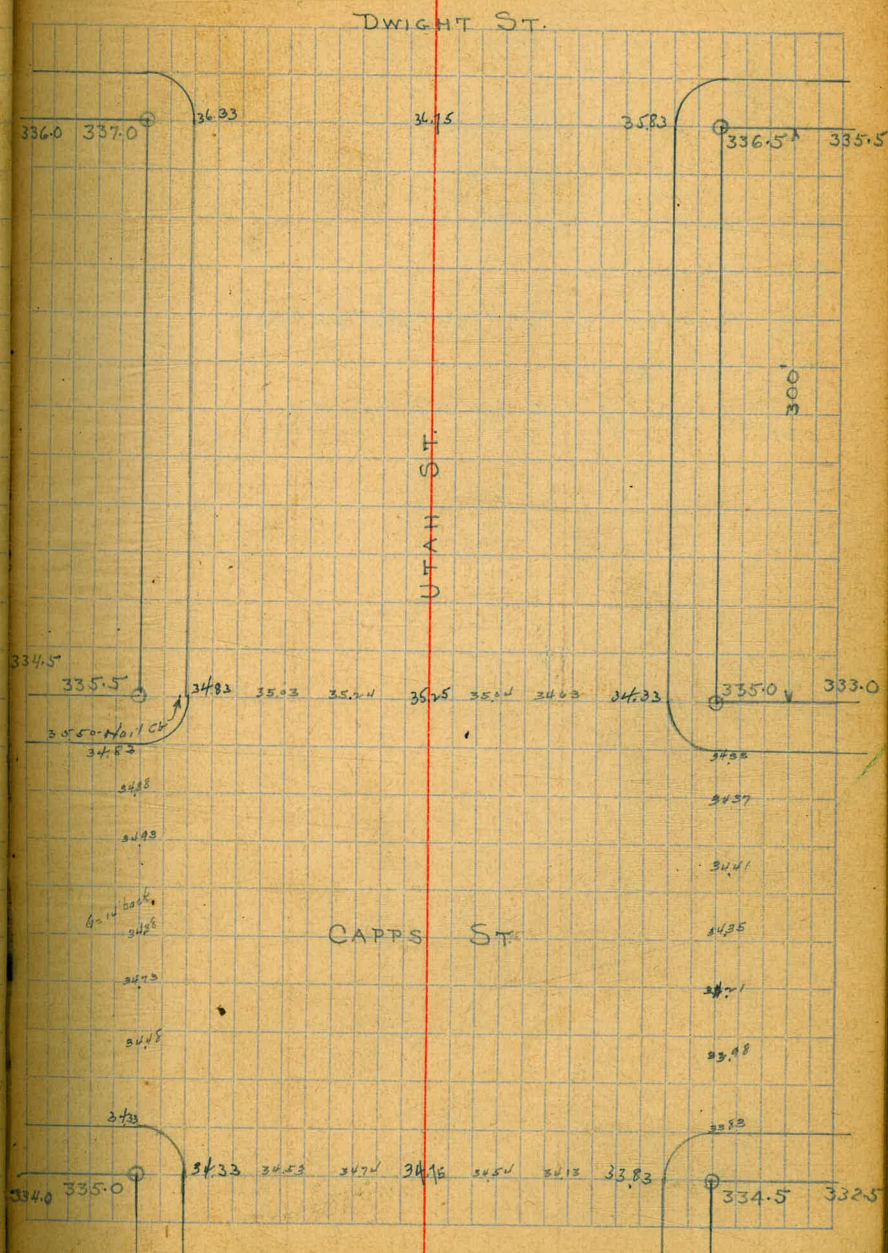


41.94	39.33	39.83							
46.07	4.71	6.71	6.21						
41.74	39.07	39.53	39.75	39.73	39.79				
44.39	5.92	4.86	4.66	4.66	4.92				
41.04	39.63	40.04	40.25	40.24	40.03				
45.12	4.79	4.81	4.71	4.79	4.84				
41.74	39.21	39.24	39.24	39.45	39.53	39.79	39.91	40.03	39.94
44.08	4.78	4.85	4.85	4.71	4.71	4.70	4.58	4.66	4.54
	39.83	39.77	39.53	39.40	39.45	39.87	39.11	39.26	39.73
	4.66	4.76	4.76	4.64	4.64	4.54	4.41	4.41	4.66
41.84	39.2								
44.66									
41.84	39.63	40.04	40.25						
44.39	4.79	4.81	4.71						
41.84	39.16	39.56	39.76	39.86	39.24	39.37	39.43	39.85	
44.39	4.20	4.76	4.67	4.20	4.12	4.97	4.91	4.76	
41.84	40.03	40.24	40.25	40.25					
44.39	4.66	4.42	4.44						
41.84	39.71	39.70	39.40	39.54	39.70	39.71	40.0	39.90	
44.07	4.52	4.81	4.47	4.60	4.38	4.16	4.87	4.77	
	39.71								
	4.52								

210.56 RT			36.40	096	36.33	36.73
36.40	358.3	36.33	6.40	41.8 W	6.47	5.97
417	474	472	42.8	0.44	39.7	38.3
40.57 RT					3.63	3.97
336.40	36.13	36.54	26.73	26.74	27.53	26.91
308	3.95	3.34	3.83	3.34	3.33	3.17
340.8	37.03	37.24	37.25	37.07	26.63	
	3.05	2.71	1.83	3.07	3.44	
336.40	35.98	36.23	36.88	36.48		
310	5.2	5.31	5.12	5.17		
341.60	36.48	36.73	36.88	36.98		
	5.12	4.87	4.72	4.67	4.77	
236.40	36.13	36.54	26.75	26.75	26.73	26.88
431	4.58	4.17	3.96	4.13	4.48	4.33
340.71	26.83	27.04	27.25			
	4.08	3.67	3.46			
236.40	37.03	37.24	37.25	36.73	36.73	36.88
219	3.6	4.32	4.25	4.57	4.80	4.85
341.54			341.35			



3349 539	3433 465	3485 400	3550 436	3432 553	3380 603
38.88 H	3450 376	3502 393	3550 436	3432 553	3380 603
337	3450 376	3502 393	3550 436	3432 553	3380 603
3550 506	3450 376	3502 393	3550 436	3432 553	3380 603
40.56 H	3450 376	3502 393	3550 436	3432 553	3380 603
3550 406	3450 376	3502 393	3550 436	3432 553	3380 603
40.66	3450 376	3502 393	3550 436	3432 553	3380 603
3550 412	3450 376	3502 393	3550 436	3432 553	3380 603
39.6	3450 376	3502 393	3550 436	3432 553	3380 603
3550 412	3450 376	3502 393	3550 436	3432 553	3380 603
39.6	3450 376	3502 393	3550 436	3432 553	3380 603
3550 412	3450 376	3502 393	3550 436	3432 553	3380 603
39.6	3450 376	3502 393	3550 436	3432 553	3380 603
3550 412	3450 376	3502 393	3550 436	3432 553	3380 603
39.6	3450 376	3502 393	3550 436	3432 553	3380 603



CAPPS ST

5.29	23.29	32.33	32.33	32.73
31.04	4.81	4.78	4.26	
37.08	28.30	5.97		
35.9				
30.47				
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			
30.44	22.58	22.78	22.58	
37.57	3.54	4.76	4.26	
	37.24			

334.0 335.0 32.33 34.75 33.35 334.5 332.5

UTAH ST

332.5 333.5 32.85 33.08 32.9 33.00 3.77 33.08 32.83 333.5 334.0

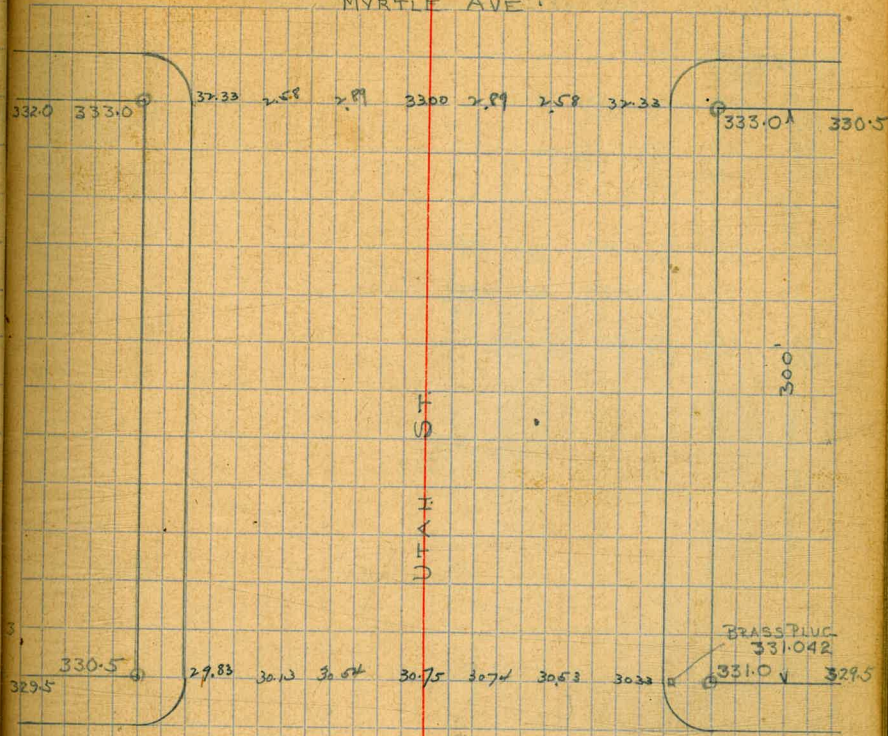
33.49. Nat'l Cl. 32.83

32.71
32.73
32.74
32.85
32.87

MYRTLE AVE

32.33 332.0 333.0 32.33 208 2.89 3.00 2.99 208 32.33 333.0 330.5

MYRTLE AVE



F
I
L
L
I
D

UPAS ST

300

BRASS PLUG
331.042

331.04 329.5

31.04	19.83	32.33
6.24	7.40	49.5
37.28 AM		
37.9	31.04	30.33
23.49	0.90	5.41
	35.74 AM	

31.04	20.54	20.74	20.54	20.13
6.24	6.81	6.60	6.59	6.80
57.30				7.21

31.04	20.54	20.74	20.54
6.24	6.81	6.79	6.78
36.73			

31.04	20.54	20.13
6.24	6.06	6.67
36.60		

890 = curb

B.M. 1114 P1906 on So N St on 16th 15 ch.

1114	564	725	604
225	481	618	672
1546			

321	523	433	833
651	714	674	874
1027			
124	1114	823	723
823	912	493	592
581			
1321	1821		

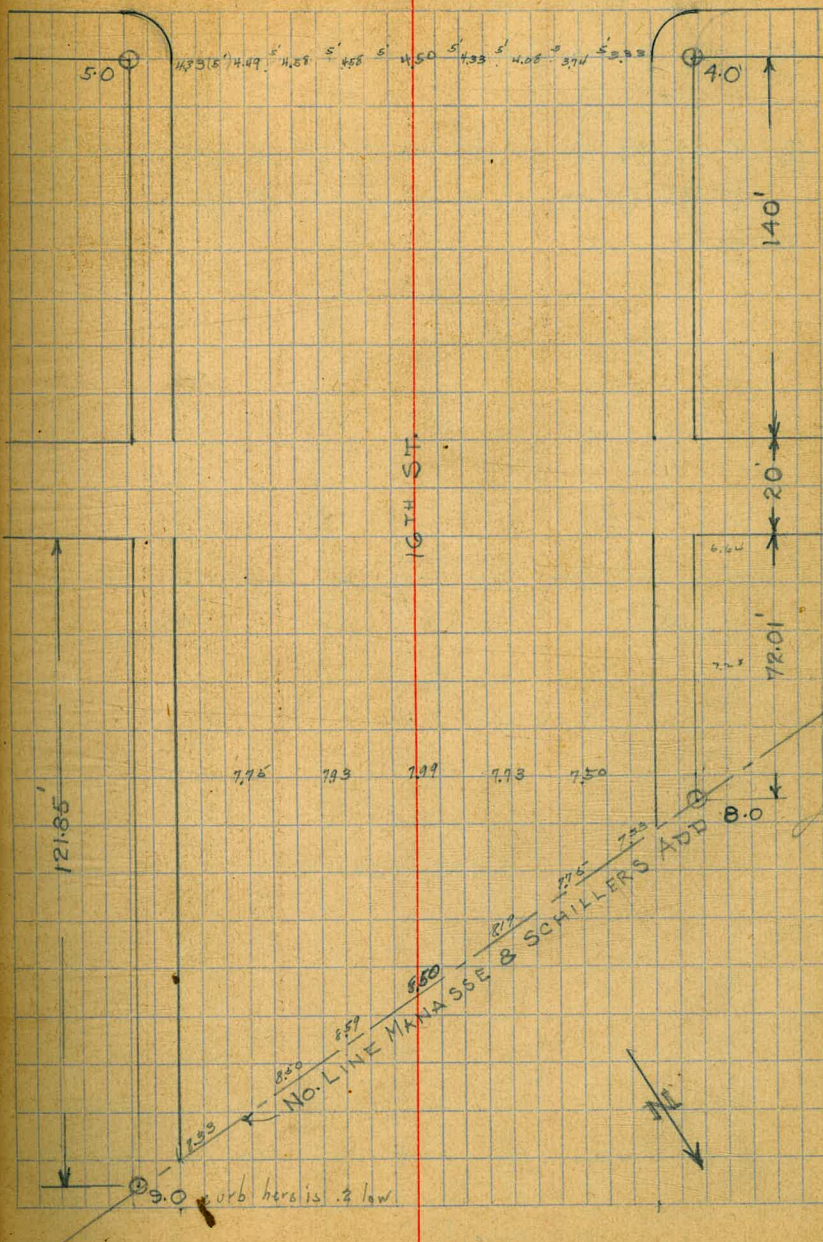
824	374	419	450	459	419
	750	434	404	395	706

750	773	791	793	775
102	101	100	101	100

1114	850	659	860	819	775
850	913	394	248	394	423
1193					

NATIONAL AVE

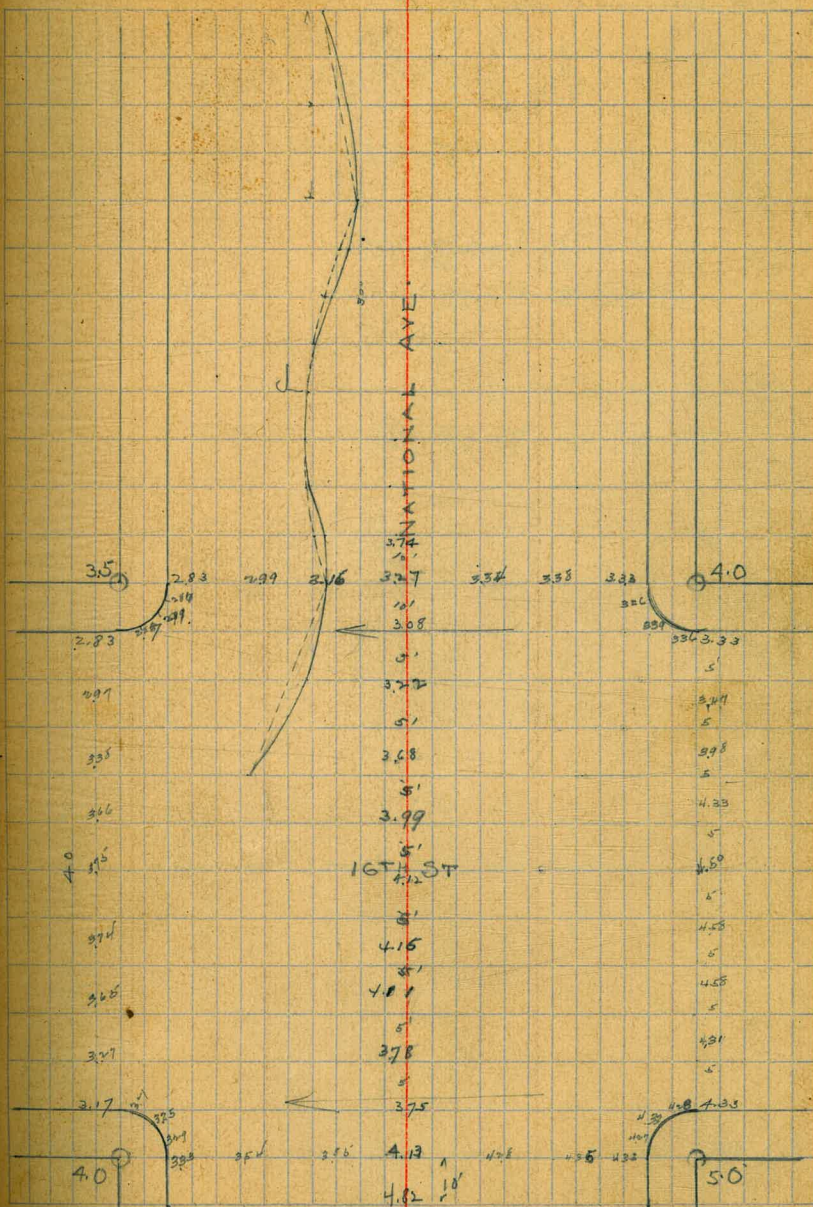
60



BM 391 Pigt NW 16th Nat 1

391	330	324	327	316	3
6.08	516	520	527	503	551
<hr/>					
6.54					

391	347	393	493	450	458	421	407	435	425	413	375	351	333	325
7.49	6.50	5.49	5.14	4.97	4.84	5.16	5.19	5.1	5.19	5.32	4.6	5.9	6.0	6.22
<hr/>														
321	317	327	325	375	346	307	297	258	258	291	279			
6.2	6.30	6.20	5.82	5.10	5.71	6.09	6.50	6.64	6.60	6.66	6.60			
<hr/>														
326	339													
6.11	6.08													



Chase guide 18 feet

B.M. 543 Top Hyd SE 14th y Natl

B.M. 391 NW 16th y Natl Pigt

473	333	293	200	263	267	224
8.53 MI	520	570	553	590	553	488
582	512	2.35	292	735	242	
3.2 TP	3.12	5.87	520	570	523	
501						4.9
P. 22 MI						

805 MI	262	300	422	333	283
475	551	514	391	481	531
3.30 TP					
412					
8.14 MI					

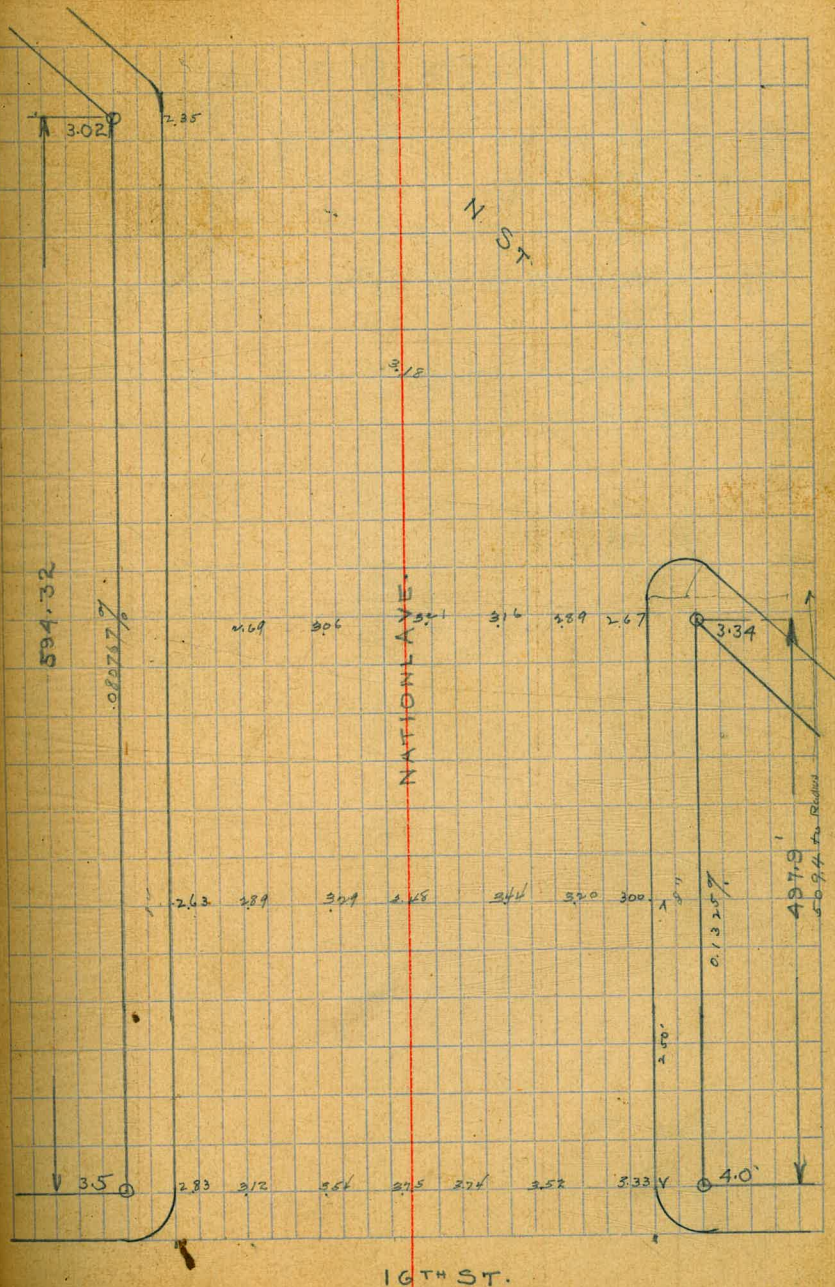
543	543	318	391	442	391	274
372	839	311	412	456	301	477
720						

3.01	3.52	274	326	354	212
389	428	406	405	426	405
780					

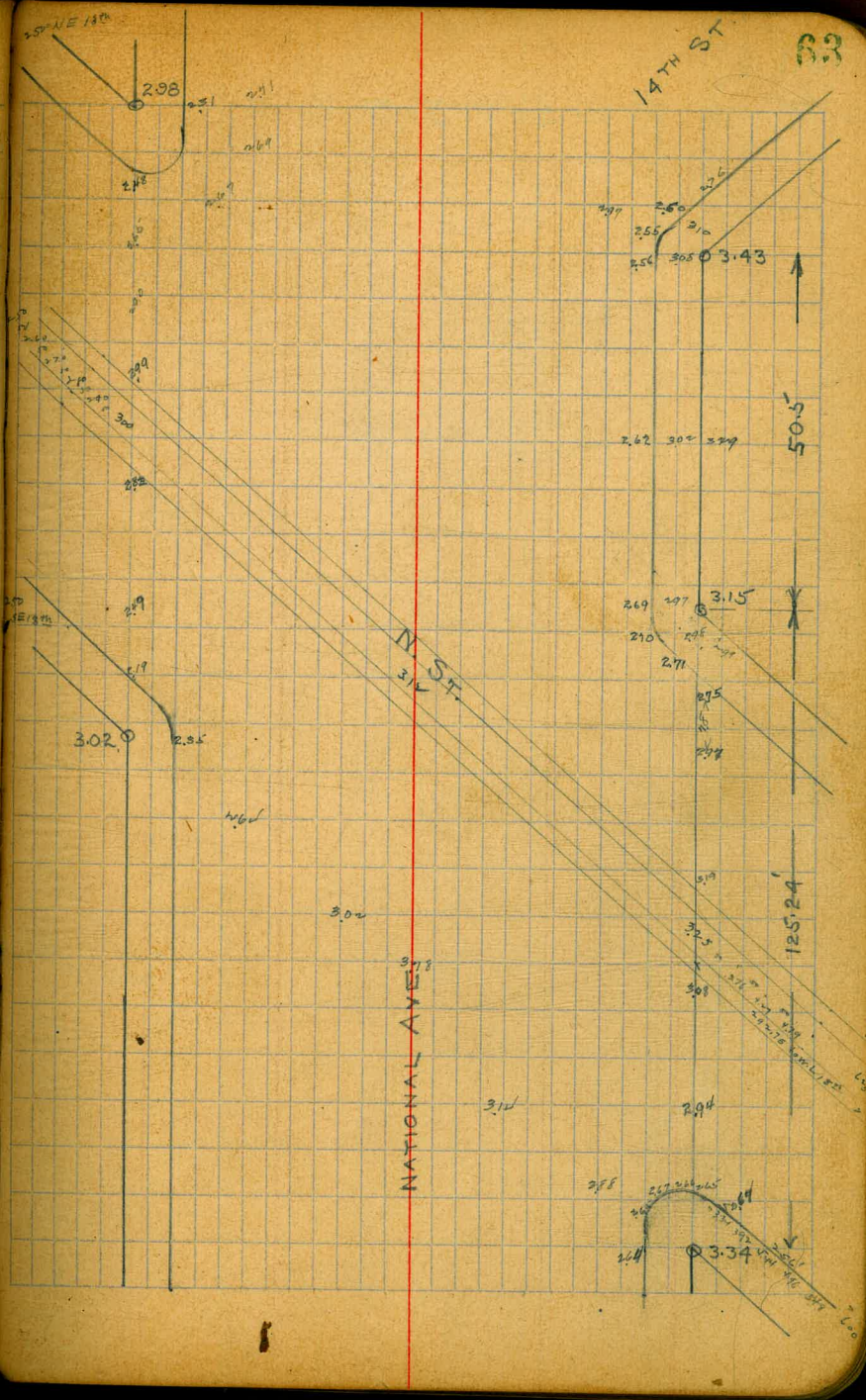
10.50 TP

543	789	316	341	306	269
473	507	320	512	531	507
536					

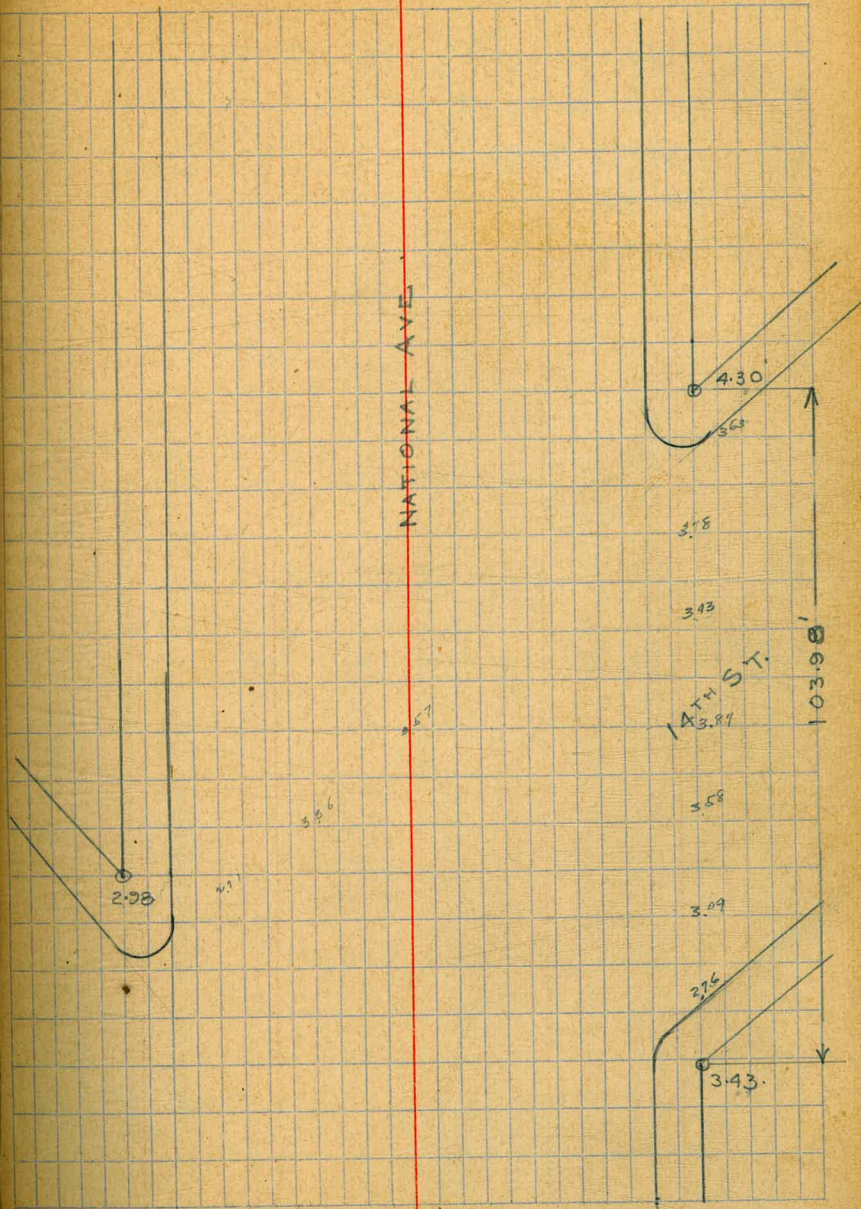
240	344	368	309	279	242
516	472	481	507	549	518



543 Ben Hoydt SW Neck & N										
3.55										
8.98	3.12	3.20	2.90	2.80	2.70	2.60	2.50	2.40	2.30	5.38
	5.86	5.98	6.08	6.18	6.28	6.38	6.48	6.58	6.68	3.60
	7.10	7.17	7.25	7.33	7.41	7.49	7.57	7.65	7.73	
		7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	
5.42	2.19	2.48	2.45	2.32	2.42	2.45	2.40	2.45	2.45	
3.73	6.02	6.28	6.93	6.84	6.77	6.56	6.51	6.53		
9.24										
		3.26	2.71	2.62						
		5.26	6.50	6.52						
5.42	3.28	3.43	3.20	3.30						
1.77	3.92	3.77	3.00	3.00						
7.50										
5.42	2.15	2.25	2.25	2.40	2.56	2.65	2.62	2.62	2.67	2.77
1.86	4.11	4.32	4.42	4.67	4.71	4.77	4.77	4.77	4.77	4.77
6.89										
	2.11	2.27								
	4.01	4.80								
5.42	2.12	2.47	2.52	2.64	2.64	2.64	2.64	2.64	2.64	2.64
1.86	4.11	4.32	4.42	4.67	4.71	4.77	4.77	4.77	4.77	4.77
6.89										
2.88	2.24	2.24	2.25	2.47	2.67					
4.26	4.01	4.00	4.00	4.00	4.00					
7.52										



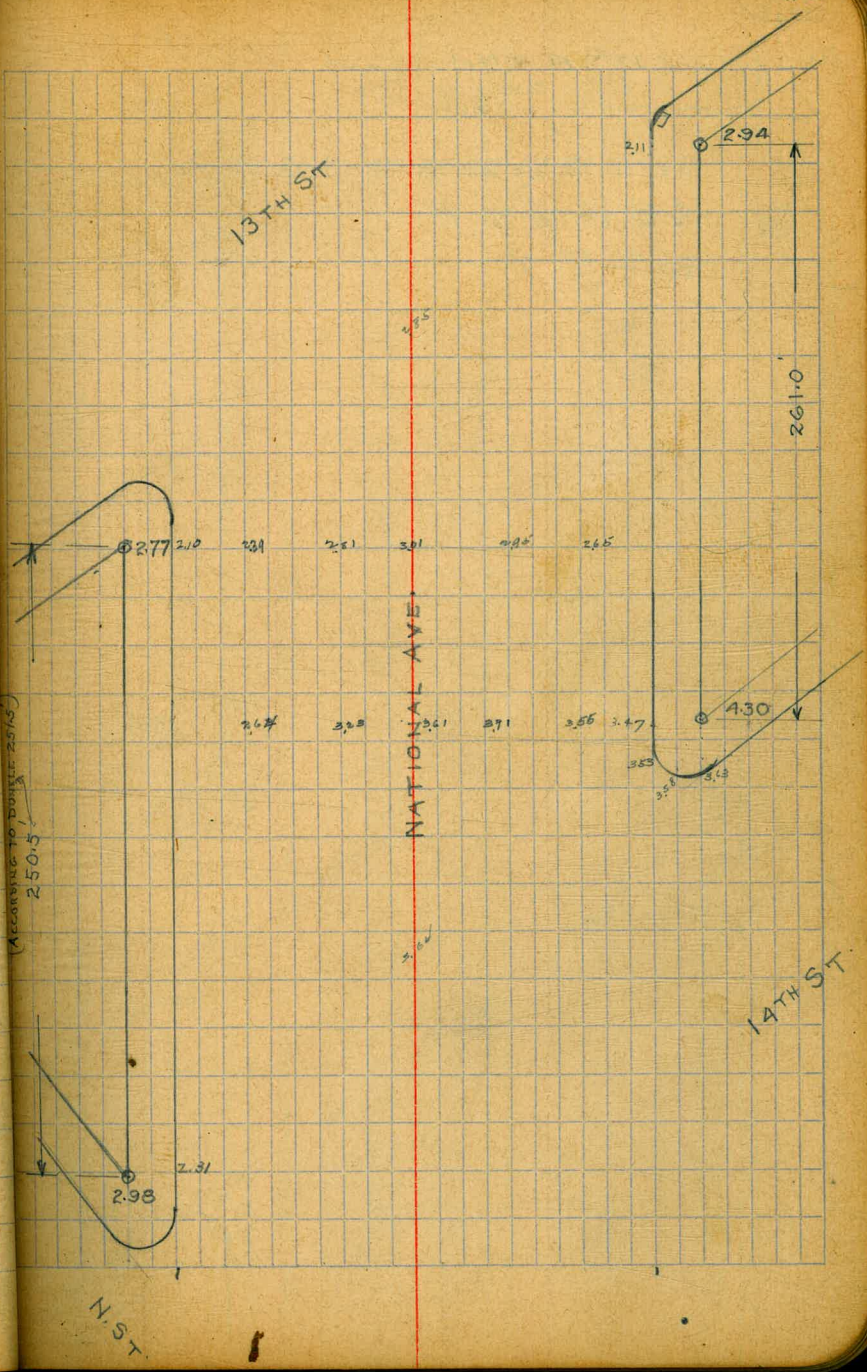
$\frac{276}{2.45}$ $\frac{301}{2.12}$ $\frac{328}{2.63}$ $\frac{357}{4.34}$ $\frac{393}{5.23}$ $\frac{378}{4.13}$ $\frac{359}{5.62}$ $\frac{365}{5.56}$ $\frac{371}{5.00}$



N. ST.

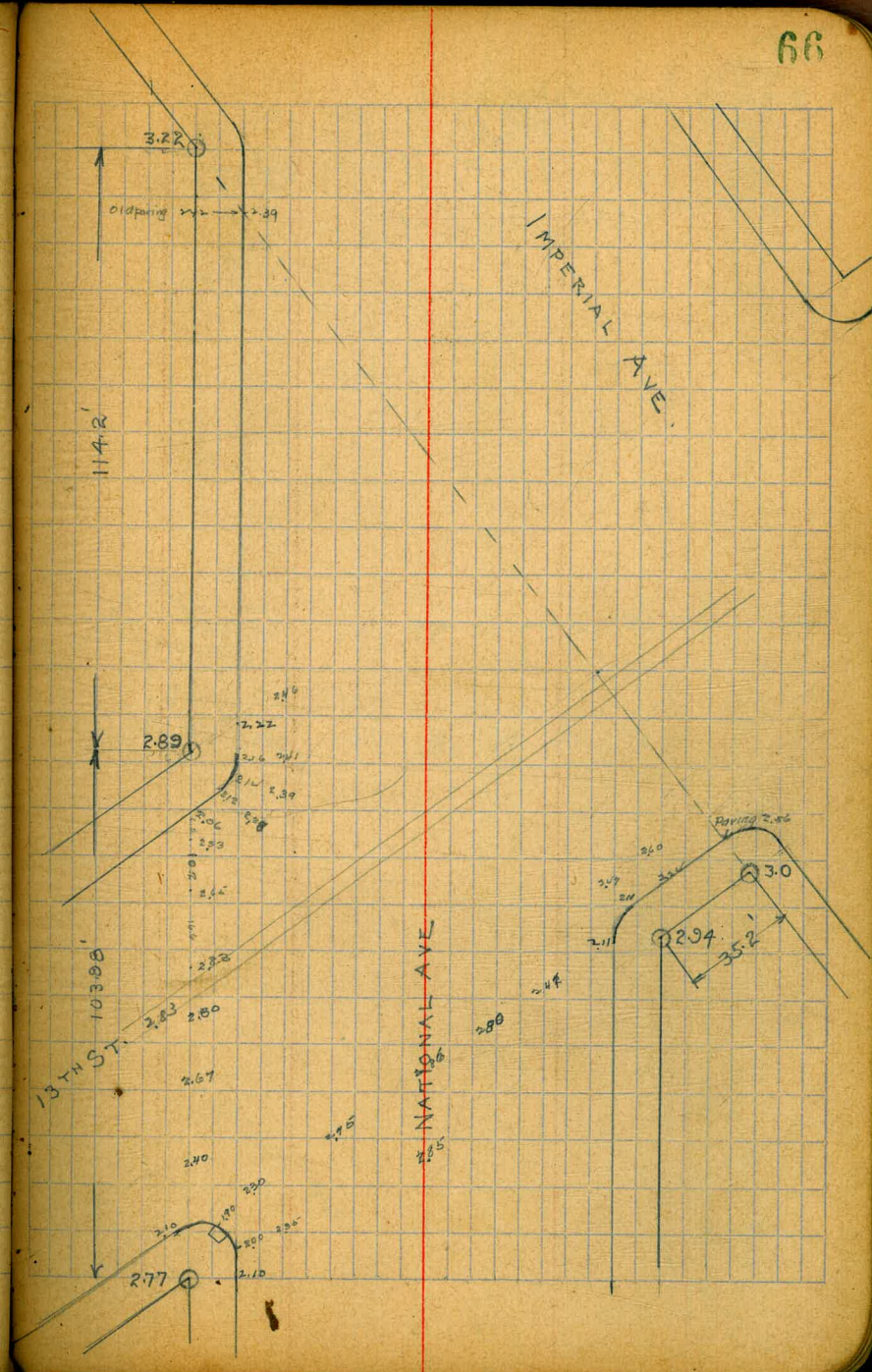
B.M. 3.00 N.E. 12th ST.

922	4.2	3.6	4.8	5.4	2.31	3.47
		5.8	6.3	9.38	7.04	5.91
907	6.6	4.5	4.8	3.1	2.1	2.2
		4.3	4.1	4.2	4.5	4.5
934	3.8	4.4	3.2	3.1	3.3	3.3
		4.2	3.3	3.3	3.3	3.3
944	3.8	3.1	3.5	3.1	3.1	3.1
		2.9	4.0			
921	5.2	3.3	3.2			
	5.8	5.2	5.8			



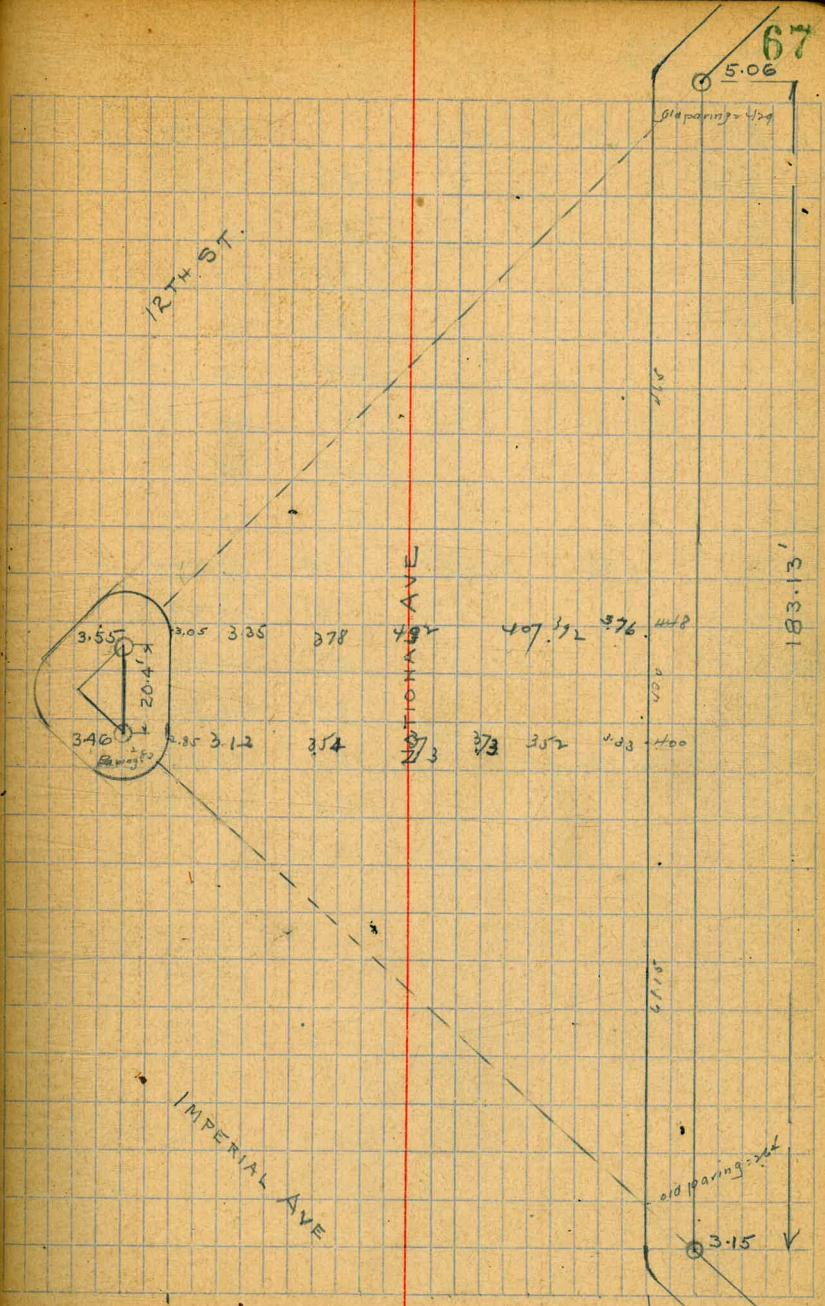
BM 3.00 NE 13th & M Pigt
 4 71 5.79 2.21 2.10
 771.41 2.42 5.49 5.60 6.12

300 396 696	288 413	267 451	240 480	214 452	239 451	210 454	216 480	227 459	284 452	240 450
300 399 699	288 419	267 452	240 484	214 479	200 477	205 474				
	266 459	271 452	250 479	255 474						



BM 3.53 NE 12th FM P19 rd.

450	528	525	503	305	382	547	353
8.11 MI	283	526	308	506	429	264	411
3.53	482	434	407	392	402	378	335
462	3.33	376	408	423	412	437	480
8.15 MI	313	354	373	352			
	5.02	4.61	4.42	4.63			



2/16/23

Gregory
Moore
MillerLevels on South Curb Line of
CEDAR ST
from W.L. at Felton 200' E14' 00" on
Cedar

68

on B.M.	0.75	226.14		225.39	Max. NW Felton - Cedar
W.L. Felton			8.6	217.5 ✓	
8' E			8.4	217.7 ✓	
2.5' ✓			7.3	218.8 ✓	
45' ✓			8.7	217.4 ✓	
50' ✓			8.2	217.9 ✓	
85' ✓			8.1	217.7 ✓	
100' ✓			9.9	216.2 ✓	
125' ✓			11.0	215.1 ✓	
TP	1.32	215.31	12.5	213.99	
140' E			1.5	213.8 ✓	
166' ✓			4.2	211.1 ✓	
180' ✓			8.5	206.8 ✓	
196' ✓ = Natural ground			15.7	199.6 ✓	
200' ✓			16.4	198.9 ✓	

5/9/23

Gregory
Moore
1711/14
21WCROSS SECTION ALLEY
BLOCK 8 BROOKES
from Brookes to Pennsylvania
4+5 15' wide.

	286.11	283.32	
	N. Curb Brookes No #/ft returns		
W	4.37	281.74	
E	4.60	81.51	
	N. L. Brookes		
E	281.91	4.1	82.0 on old paving
C	281.75	4.4	✓ ✓ ✓
W	282.09	4.3	✓ ✓ ✓
	50' N		
W	282.26	3.8	82.3
C	281.92	4.8	81.3
E	282.08	3.7	82.4
	95' N		
E	282.23	3.8	82.3
C	282.07	4.6	81.5
W	282.41	3.50	82.6
	125' N		
W	282.51	3.5	82.6
C	282.17	4.5	81.6
E	282.33	3.75	282.36
	(This paving is N.G.) 150' N = End of paving		
E	282.41	3.8	82.3
C	282.25	4.3	81.8
W	282.59	3.6	82.5

Plotted May 10 1923
MOR

286.11

69

200' N

W	282.74	3.8	282.3
C	282.22	4.1	82.0
E	282.58	3.9	82.2
	219' N		
	5' W of W.L. = garage cement floor		
T.P.	5.53	287.87	3.77
	250' N		
E	282.74	5.17	82.70
	E = Top of retaining wall		
C	282.58	5.8	82.1
W	282.92	5.5	82.4
	282' N = end of retaining wall		
E	5.10	82.8	
	dirt floor 289' N = garage 5' W + .3 higher		
W	283.05	5.2	82.5
C	282.71	5.5	82.4
E	282.78	5.2	82.7
	356' N		
E	283.09	4.8	83.1
C	282.94	5.0	82.9
W	283.28	4.9	83.0
	+3.5 = garage dirt floor		
	407' N		
	4' W of W.L. = garage wood floor		
W	283.45	4.8	83.5
C	283.10	4.9	83.1
E	5.15	4.9	83.0
	E 283.27		
	5.2 ✓ 82.7		

287.87

450' N = S End of garage

E	283.41	4.8	283.10
C	283.75	4.8	83.1
W = edge cement apron	283.59	4.35	283.52
+2 = garage		4.15	283.72

494' N = N. End garage

W = edge apron		4.06	283.81
+2 = garage		4.00	283.87

499' N = walk to house on W

W = walk to house	283.74	4.40	283.47
C	283.41	4.3	83.6
E	283.56	4.7	83.2

500' N

3' E of E.L. = garage dirt floor		4.5	83.4
----------------------------------	--	-----	------

543.5

5.5' W. of W.L. = garage cement fl.		3.55	284.32
-------------------------------------	--	------	--------

W		3.80	84.1
---	--	------	------

550' N

3' E of E.L. = garage dirt floor		4.2	83.7
----------------------------------	--	-----	------

E	283.74	4.2	83.7
---	--------	-----	------

C	283.58	4.2	83.7
---	--------	-----	------

W	283.92	3.9	84.0
---	--------	-----	------

600' N = 5L. Pennsylv.

W	284.09	3.85	284.02 = cement curb
---	--------	------	----------------------

C	283.75	3.9	84.0
---	--------	-----	------

E	283.91	3.98	83.89 = cement curb
---	--------	------	---------------------

70

5/9/23 Gregory CROSS SECTION
 Moore HAWTHORN ST
 WL California to E.L. Atlantic

80' wide
 14' cbs

2500
 222
 47.82002
 30.48
 1249

B.P. SW
 10014-44

on B.M.	1.04	46.04		4500
	0.76	33.91	12.89	33.15
	0.13	21.70	12.94	20.97
	1.04	17.49	4.65	16.45
	2.97		30.48	

WL California

N			0.8	16.7
cb			0.7	16.8
+2			1.5	16.0
1/4			1.2	16.3
C			0.9	16.6
1/4			1.0	16.5
+9			1.0	16.5
+10			1.9	15.6
Eb			1.9	15.6
+3			0.7	16.8
S			1.0	16.5

35' W

-6			5.4	12.1
S			3.3	14.2
+9			4.6	14.9
cb			3.2	14.3
+2			4.0	13.5
1/4			3.7	13.8
C			3.3	14.2
1/4			4.0	13.5

370
 17.40

Eb	3.8	13.7
N	3.6	13.9
+4	5.2	12.3
+10	5.3	12.2

75' W

-5	6.1	11.4
N	5.6	11.9
+4	6.8	10.7
cb	6.3	11.2
1/4	6.0	11.5
C	5.7	11.8
1/4	5.4	12.1
cb	5.0	12.5
+6	5.3	12.2
S	6.6	10.9
+4	9.6	7.9
+15	11.0	6.5

115' W

-10	10.5	7.0
-4	10.3	7.2
S	7.8	9.7
+6	6.0	11.5
+10	6.1	11.4
cb	8.4	9.1
+3	8.3	9.2

17.49

+4	6.9	10.6
1/4	6.3	11.2
C	5.6	11.9
1/4	5.6	11.9
+7	6.2	11.3
+9	7.6	9.9
C6	7.4	10.1
N	6.6	10.9
+5	6.5	11.0

150' W

N	5.9	11.6
C6	6.7	10.8
+3	7.7	9.8
+10	8.2	9.3
1/4	6.5	11.0
C	6.4	11.1
1/4	6.4	11.1
+5	6.7	10.8
+8	9.0	8.5
+12	8.8	8.2
C6	6.8	10.2
+5	6.1	11.4
+9	6.8	10.2
S	10.0	7.5
+15	11.0	6.5

17.49 H1

12

160' W

+15	11.3	6.2
S	10.7	6.8
+6	6.8	10.7
C6	6.1	11.4
+2	6.7	10.8
+3	9.0	8.5
1/4	8.8	8.2
C	8.4	9.1
1/4	8.3	9.2
+4	8.0	9.5
+7	6.9	10.6
C6	6.4	11.1
N	5.6	11.9

170' W

N	6.1	11.4
C6	6.8	10.2
1/4	7.1	10.4
+3	8.1	9.4
C	8.9	8.6
1/4	9.0	8.5
+9	8.5	9.0
+10	6.7	10.8
C6	6.3	11.2
+5	6.3	11.2
+8	8.0	9.5

17.49

S	11.2	6.3
+15	12.1	5.4
185°W		
-10	9.7	7.8
S	10.8	6.7
+10	6.8	10.7
cb	6.6	10.9
+3	6.5	11.0
+6	8.8	8.7
1/4	9.2	8.3
+3	9.2	8.3
+9	7.2	10.3
C	7.1	10.4
1/4	6.8	10.7
cb	6.3	11.2
N	6.1	11.4

192°W

-5	6.7	10.8
S	6.6	10.9
cb	6.2	11.3

200°W = E.L. Atlantic

N	5.8	11.7
cb	6.1	11.4
1/4	7.2	10.3
C	7.1	10.4
+8	6.9	10.6

73

6.56
8.34

+10		8.3	9.2
1/4		8.6	8.9
+4		8.1	9.4
+6		6.8	10.7
cb.		6.2	11.3
S		6.8	10.7
+5		7.2	10.3
T.P.	1.52	14.90	4.11
			13.38

5/10/73

Elev. on Spur Tracks
Kalmia + Belt:

6.56 15.04

8.48 Top N/d
Belt + Junction

Elev. on Rail 6' N of d of Kalmia produced
west (from Nolia across Mattner Blvd)
and 11' E of W.L. of Belt St. 9.04 6.00

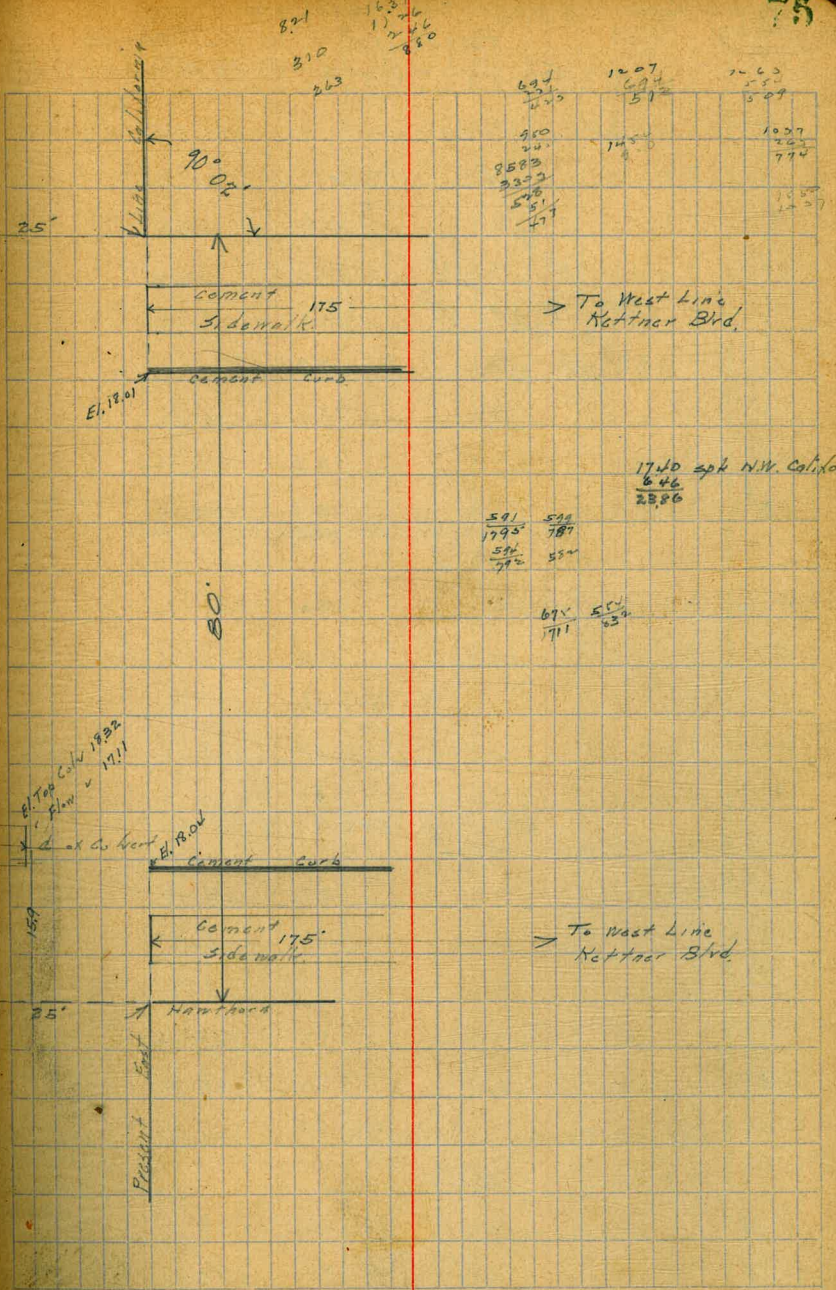
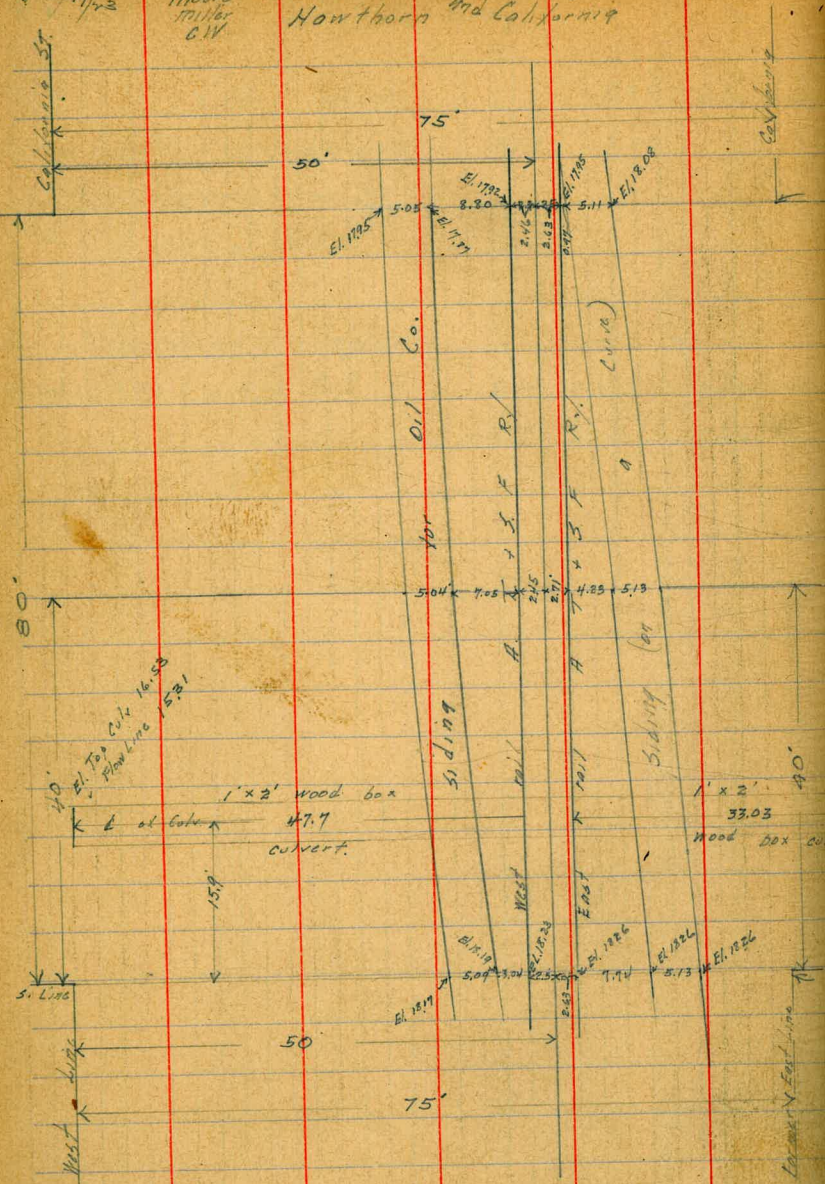
Elev. on Track 6' N of d of Kalmia (produced
as above) + 30' E of d of Belt. 9.00 6.04 = West rail
9.17 5.87 = East rail

74

5/17/32

Greene
Moore
Miller
C.W.

Location of Tracks etc Hawthorn and California



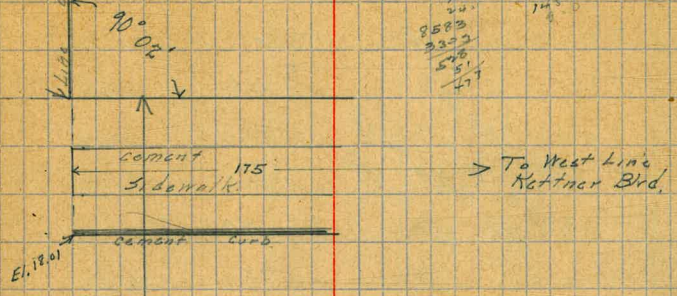
821
310
263

694
333
1027
694
592
3583
3373
526
477

1027
694
592

1027
207
774

1027
207
774

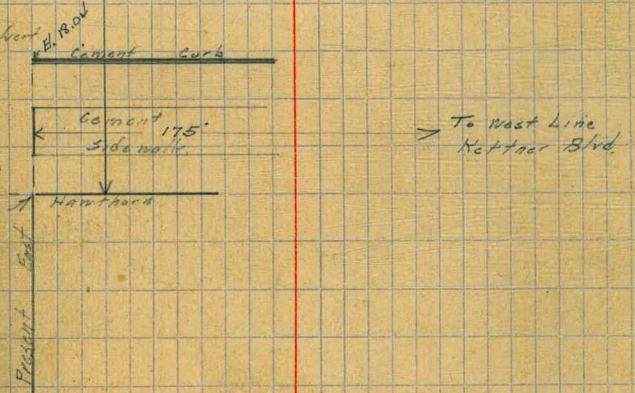


1740 spk N.W. California
646
2386

591
1793
591
576

67x
1711

El. Top Caly 1932
Flow = 1711



5/17/23

Gregory CROSS SECTION OF
 PALM ST 80' wide 14' cbs
 from E.L. Columbia St to W.L. State St

09 B.M.	0.81	144.37	143.56	BP in c.f. wall Columbia St Obs.
E.L. Columbia				
S		11.6	132.8	
cb		12.0	132.4	
1/4		12.2	132.2	
c		12.7	131.7	
1/2		13.0	131.4	
cb		13.5	130.9	
+8 = Top of slope		13.7	130.7	
see book 1108 for added sections here 30' E				
N 1/4 = Top of slope		9.0	135.4	
c		9.3	135.1	
1/4		8.8	135.6	
cb		8.9	135.5	
S		8.7	135.7	
see book 1108 for added sections 65' E				
S		3.7	140.7	
cb		4.6	139.8	
1/2		5.2	139.2	
c		6.1	138.2	
+8 =		6.0	138.4	
1/4 = Top of slope		6.8	137.6	
78' E				
N cb		14.5	129.9	
1/4		9.8	134.6	

see book 1108 for new sections and added

changed.

see book 1108 for added sections here

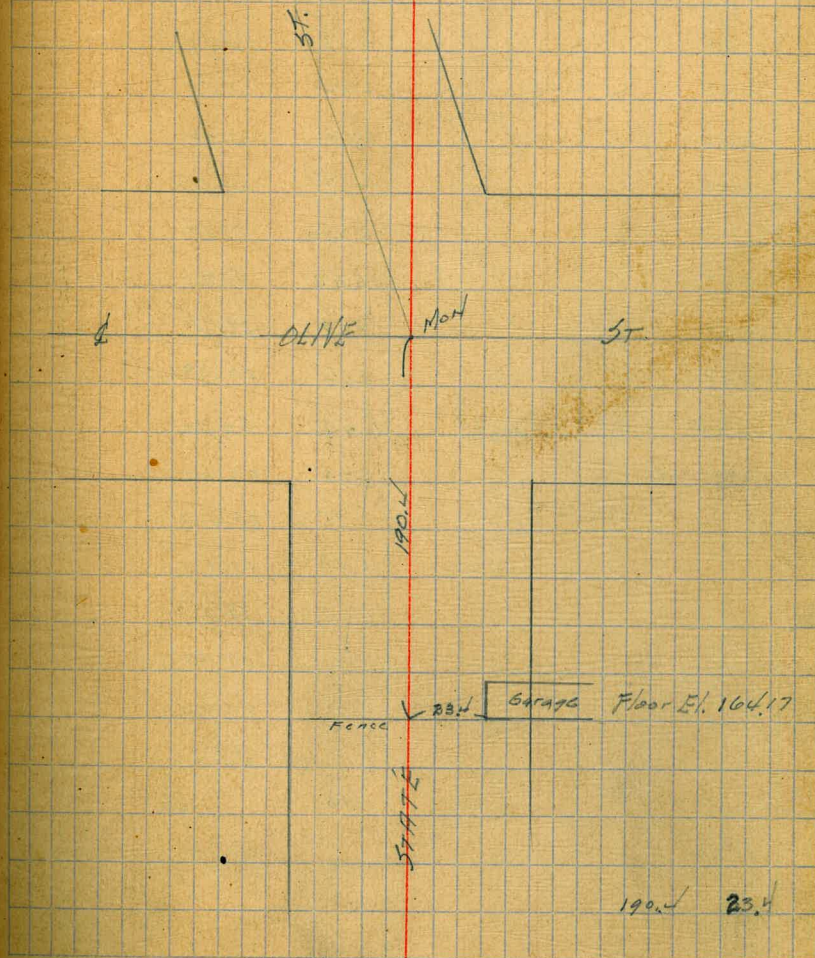
see book 1108 for added sections

c		6.2	138.7	
1/4		4.4	140.0	
+6		2.7	141.7	
cb		2.9	141.5	
S		2.2	142.2	
85' E				
S		1.2	143.2	
cb		1.9	142.5	
+6		2.1	142.3	
1/4		5.1	139.3	
c		8.1	136.3	
1/4		11.2	133.2	
cb		14.3	130.1	
110' E				
N cb		9.2	135.2	
1/4		7.8	136.6	
c		5.5	138.9	
T.P.	12.91	10.5	143.32	15603
1/4		12.5	143.5	
+6		10.4	145.6	
cb		10.9	145.1	
+12		10.0	146.0	
S		7.5	148.5	
129' E				
S		6.1	149.9	
cb		7.9	148.1	
1/4		7.3	148.7	

5	193'E	7.2	161.0 ✓
5		6.9	161.3 ✓
cb		9.1	159.1 ✓
1/4		9.7	158.5 ✓
c		9.8	158.4 ✓
1/4		10.4	157.8 ✓
cb		11.0	157.2 ✓
2.5 + 3.5 = front of garage		14.9	153.3 ✓
197'E.			
N = alongside garage		14.8	153.4 ✓
+ 11.5 = front of		14.3	153.9 ✓
cb		10.9	157.3 ✓
1/4		10.0	158.2 ✓
c		9.4	158.8 ✓
198.5'E			
c		9.0	159.2 ✓
1/4		8.2	160.0 ✓
cb		8.5	159.7 ✓
N		9.0	159.2 ✓
200'E = W.L. State St			
N		9.0	159.2 ✓
cb		8.3	159.9 ✓
1/4		8.0	160.2 ✓
c		8.0	160.2 ✓
1/4		8.4	159.8 ✓
cb		7.9	160.3 ✓
5		6.2	160.0 ✓

T.P.	12.51	1810.13	054	167.62
T.P.	7.83	187.66	030	179.83
			277	184.89
	0.74	175.62	1278	174.88
Elev. on floor of garage.			11.45	164.17

Star Map
State - Olive

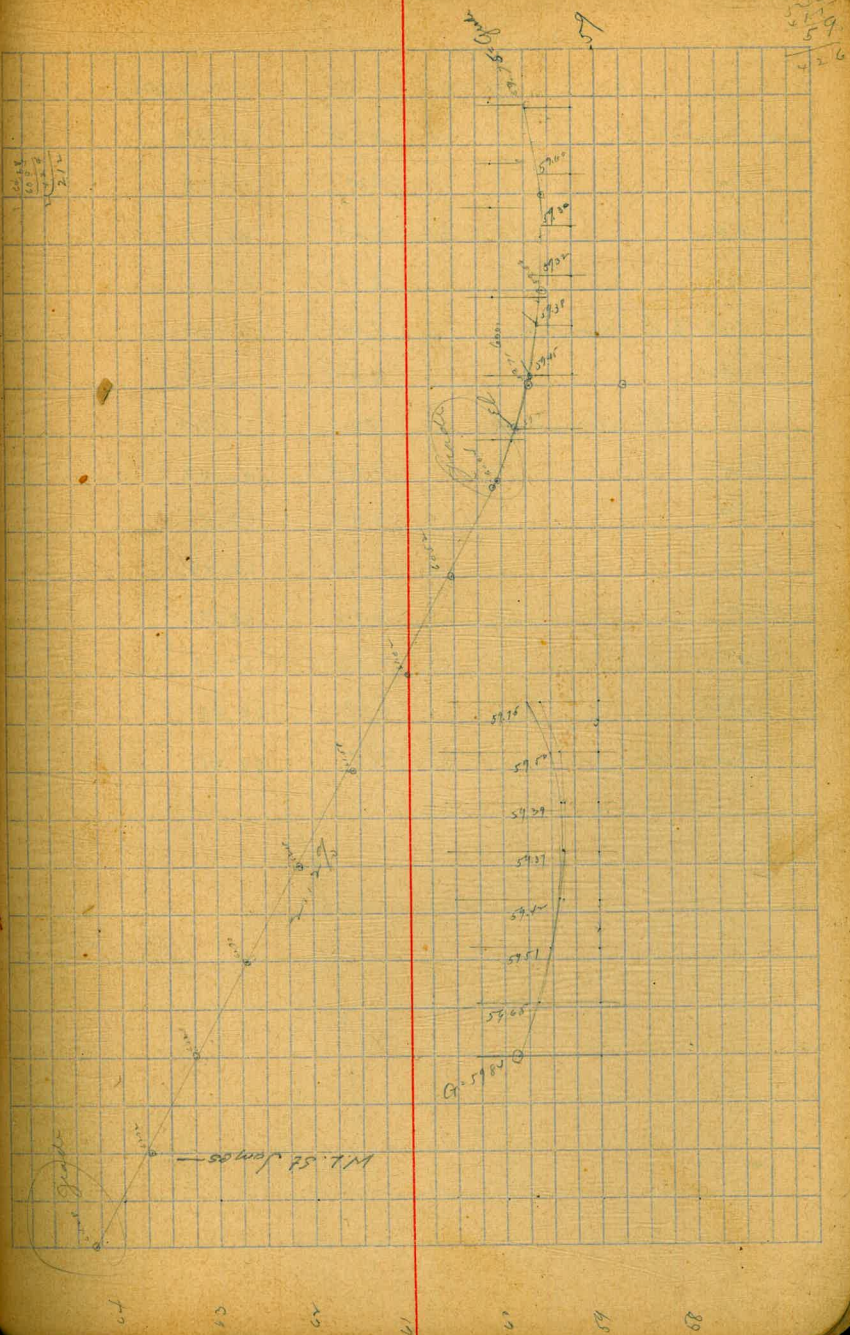


190.4 23.4

Track - $\frac{1}{2}$ St James to Hickory
So sail retrack

	6.48	66.64	60.16 PM Hickory
0+00 = $\frac{1}{2}$ St James		2.20	64.28
1.25 - WL "		2.92	63.72
1.50		3.40	63.24
1.75		3.92	62.70
1.90		4.49	62.15
1.95		5.06	61.58
1.50		5.62	61.02
1.75		6.12	60.52
2		6.60	60.04
1.45		6.93	59.71
1.50		7.08	59.52
1.75		7.06	59.58
1.97 $\frac{1}{2}$	65.08	6.94	59.70
Last Station		5.23	59.85
		5.45	59.63
		5.57	59.51
		5.71	59.37
		5.72	59.36
		5.73	59.35
		5.66	59.42
		5.47	59.61

60.16
60.16
60.16
60.16



Track at Kemura Way

So Road

141

0.01

71.45

65.44 Run

0100 break	5.12	66.33
+25	5.37	66.08
+50	5.23	66.22
+75	5.10	66.35
+100.82 Kemura	5.04	66.41
+125	4.92	66.53
W.L. Kemura	4.73	66.72
+25	4.48	66.97
+50	3.99	67.41
+75	3.36	68.09
100	2.75	68.70
+25	2.16	69.29
+50	1.49	69.96
Cut on et	2.17	69.28



KEITH'S RAILROAD CURVE TABLES.

Published by KEUFFEL & ESSER CO., New York.

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HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle
of Intersection or I. P. = $23^{\circ} 20'$ to the R. at Station
542+72.

Ext. in Tab. IV opposite $23^{\circ} 20' = 120.87$
 $120.87 + 12 = 10.07$. Say a 10° Curve.

Tan. in Tab. IV opp. $23^{\circ} 20' = 1183.1$
 $1183.1 + 10 = 118.31$.

Tab. V, correction for A. $23^{\circ} 20'$ for a 10° Cur. = 0.16
 $118.31 + 0.16 = 118.47 =$ corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. $23^{\circ} 20' = 23.33^{\circ} + 10 = 2.3333 =$ L. C.

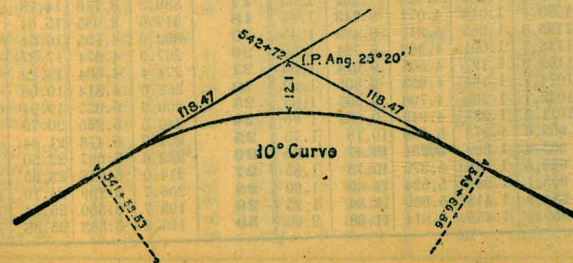
$2^{\circ} 19\frac{1}{2}' =$ def. for sta.	542	I. P. = sta.	542+72
$4^{\circ} 49\frac{1}{2}' =$ " " "	+50	Tan. =	1.18.47
$7^{\circ} 19\frac{1}{2}' =$ " " "	543	B. C. = sta.	541+53.53
$9^{\circ} 49\frac{1}{2}' =$ " " "	+50	L. C. =	2.33.33
$11^{\circ} 40' =$ " " "	543+	E. C. = sta.	543+86.86
	86.86		

$100 - 53.53 = 46.47 \times 3' =$ (def. for 1 ft. of 10° Cur.) = 139.41' =
 $2^{\circ} 19\frac{1}{2}' =$ def. for sta. 542.

Def. for 50 ft. = $2^{\circ} 30'$ for a 10° Curve.

Def. for 86.86 ft. = $1^{\circ} 50\frac{1}{2}'$ for a 10° Curve

(These tables are published in Field Books of
KEUFFEL & ESSER Co., New York, N. Y.)



Natural Tangents

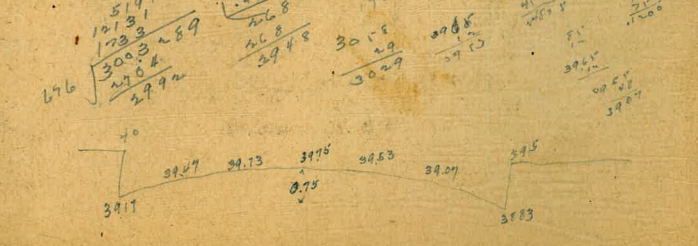
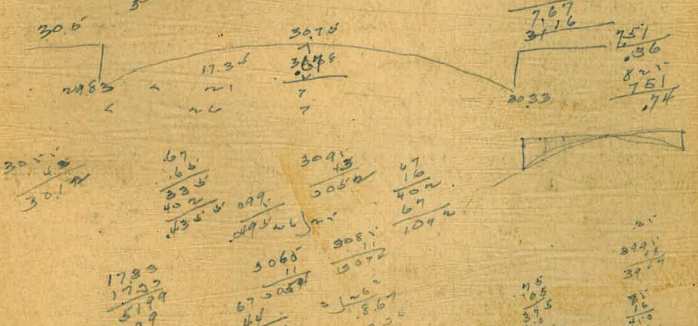
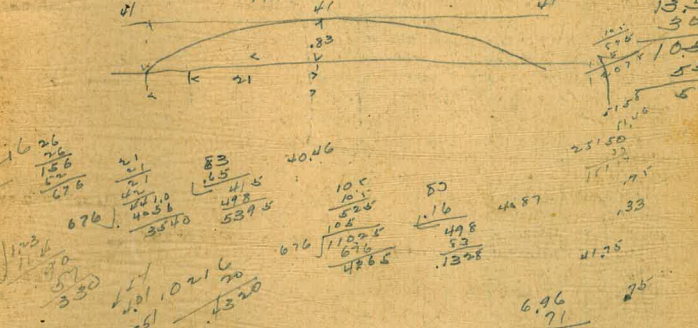
sec	0'	10'	20'	30'	40'	50'	sec	0'	10'	20'	30'	40'	50'	sec	
0	0000	0029	0058	0087	0116	0145	89	40	8391	8441	8491	8541	8591	8642	49
1	0175	0204	0233	0262	0291	0320	88	41	8693	8744	8796	8847	8899	8952	48
2	0349	0378	0407	0437	0466	0495	87	42	9004	9057	9110	9163	9217	9271	47
3	0524	0553	0582	0612	0641	0670	86	43	9325	9380	9435	9490	9545	9601	46
4	0699	0729	0758	0787	0816	0846	85	44	9657	9713	9770	9827	9884	9942	45
5	0875	0904	0934	0963	0992	1022	84	45	1.0000	1.0058	1.0117	1.0176	1.0235	1.0295	44
6	1051	1080	1110	1139	1169	1198	83	46	1.0355	1.0416	1.0477	1.0533	1.0599	1.0661	43
7	1228	1257	1287	1317	1346	1376	82	47	1.0724	1.0786	1.0850	1.0913	1.0977	1.1041	42
8	1405	1435	1465	1495	1524	1554	81	48	1.1106	1.1171	1.1237	1.1303	1.1369	1.1436	41
9	1584	1614	1644	1673	1703	1733	80	49	1.1504	1.1571	1.1640	1.1708	1.1778	1.1847	40
10	1763	1793	1823	1853	1883	1914	79	50	1.1918	1.1988	1.2059	1.2131	1.2203	1.2276	39
11	1944	1974	2004	2035	2065	2095	78	51	1.2349	1.2423	1.2497	1.2572	1.2647	1.2723	38
12	2126	2156	2186	2217	2247	2278	77	52	1.2799	1.2876	1.2954	1.3032	1.3111	1.3190	37
13	2309	2339	2370	2401	2432	2462	76	53	1.3270	1.3351	1.3432	1.3514	1.3597	1.3680	36
14	2493	2524	2555	2586	2617	2648	75	54	1.3764	1.3848	1.3934	1.4019	1.4106	1.4193	35
15	2679	2711	2742	2773	2805	2836	74	55	1.4281	1.4370	1.4460	1.4550	1.4641	1.4733	34
16	2867	2899	2931	2962	2994	3026	73	56	1.4826	1.4919	1.5013	1.5108	1.5204	1.5301	33
17	3057	3089	3121	3153	3185	3217	72	57	1.5399	1.5497	1.5597	1.5697	1.5798	1.5900	32
18	3249	3281	3314	3346	3378	3411	71	58	1.6003	1.6107	1.6212	1.6319	1.6426	1.6534	31
19	3443	3476	3508	3541	3574	3607	70	59	1.6643	1.6753	1.6864	1.6977	1.7090	1.7205	30
20	3640	3673	3706	3739	3772	3805	69	60	1.7321	1.7437	1.7556	1.7675	1.7797	1.7917	29
21	3839	3872	3906	3939	3973	4006	68	61	1.8040	1.8165	1.8291	1.8418	1.8546	1.8676	28
22	4040	4074	4108	4142	4176	4210	67	62	1.8807	1.8940	1.9074	1.9210	1.9347	1.9486	27
23	4245	4279	4314	4348	4383	4417	66	63	1.9626	1.9768	1.9912	2.0057	2.0204	2.0353	26
24	4452	4487	4522	4557	4592	4628	65	64	2.0503	2.0655	2.0809	2.0965	2.1123	2.1283	25
25	4663	4699	4734	4770	4806	4841	64	65	2.1445	2.1609	2.1775	2.1943	2.2113	2.2286	24
26	4877	4913	4950	4986	5022	5059	63	66	2.2400	2.2637	2.2817	2.2998	2.3183	2.3369	23
27	5095	5132	5169	5206	5243	5280	62	67	2.3559	2.3750	2.3945	2.4142	2.4342	2.4545	22
28	5317	5354	5392	5430	5467	5505	61	68	2.4751	2.4960	2.5172	2.5386	2.5605	2.5826	21
29	5543	5581	5619	5658	5696	5735	60	69	2.6051	2.6279	2.6511	2.6746	2.6985	2.7228	20
30	5774	5812	5851	5890	5930	5969	59	70	2.7475	2.7725	2.7980	2.8239	2.8502	2.8770	19
31	6009	6048	6088	6128	6168	6208	58	71	2.9042	2.9310	2.9600	2.9887	3.0178	3.0475	18
32	6249	6289	6330	6371	6412	6453	57	72	3.0777	3.1084	3.1397	3.1716	3.2041	3.2371	17
33	6494	6536	6577	6619	6661	6703	56	73	3.2709	3.3052	3.3402	3.3759	3.4124	3.4495	16
34	6745	6787	6830	6873	6916	6959	55	74	3.4874	3.5261	3.5656	3.6059	3.6470	3.6891	15
35	7002	7046	7089	7133	7177	7221	54	75	3.7321	3.7760	3.8208	3.8657	3.9136	3.9617	14
36	7265	7310	7355	7400	7445	7490	53	76	4.0108	4.0611	4.1126	4.1653	4.2193	4.2747	13
37	7536	7581	7627	7673	7720	7766	52	77	4.3315	4.3897	4.4494	4.5107	4.5736	4.6382	12
38	7813	7860	7907	7954	8002	8050	51	78	4.7046	4.7729	4.8430	4.9152	4.9894	5.0658	11
39	8098	8146	8195	8243	8292	8342	50	79	5.1446	5.2257	5.3093	5.3955	5.4845	5.5764	10

sec	60'	50'	40'	30'	20'	10'	sec	60'	50'	40'	30'	20'	10'	sec
80	5.6713	5.7694	5.8708	5.9758	6.0844	6.1970	9							
81	6.3138	6.4348	6.5606	6.6912	6.8269	6.9682	8							
82	7.1154	7.2587	7.4287	7.5958	7.7704	7.9530	7							
83	8.1443	8.3450	8.5555	8.7769	9.0098	9.2536	6							
84	9.5144	9.7882	10.078	10.385	10.7111	11.0595	5							
85	11.430	11.826	12.250	12.706	13.197	13.7274	4							
86	14.300	14.924	15.605	16.350	17.169	18.0753	3							
87	19.081	20.206	21.470	22.903	24.512	26.4322	2							
88	28.636	31.242	34.368	38.189	42.964	49.1047	1							
89	57.290	68.750	85.940	114.588	171.885	343.770	0							

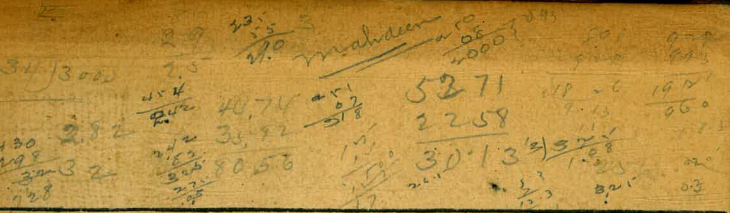
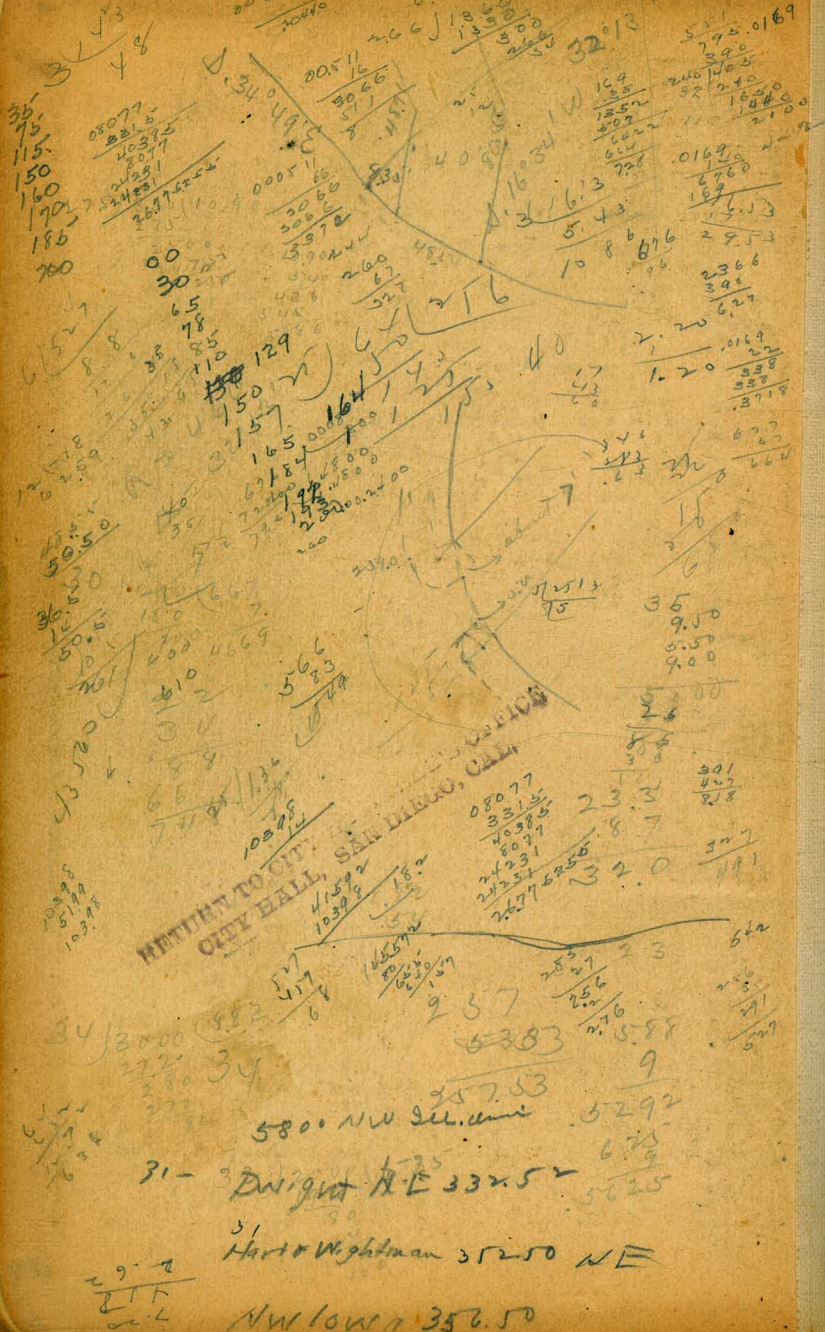
Natural Cotangents

50.09
 719
 333
 1066
 391
 655

8.25
 41.81
 78
 4.28
 728.896
 4281.413
 646
 363
 646
 4263
 655
 43.41
 678
 43.31



Main 3866



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
 ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 TO 1.
 FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.

Handwritten notes at the bottom of the right page, including '7 E', '135', '30', '45', '65', '75', '85', '110', and '129'.