

1683

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and
SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

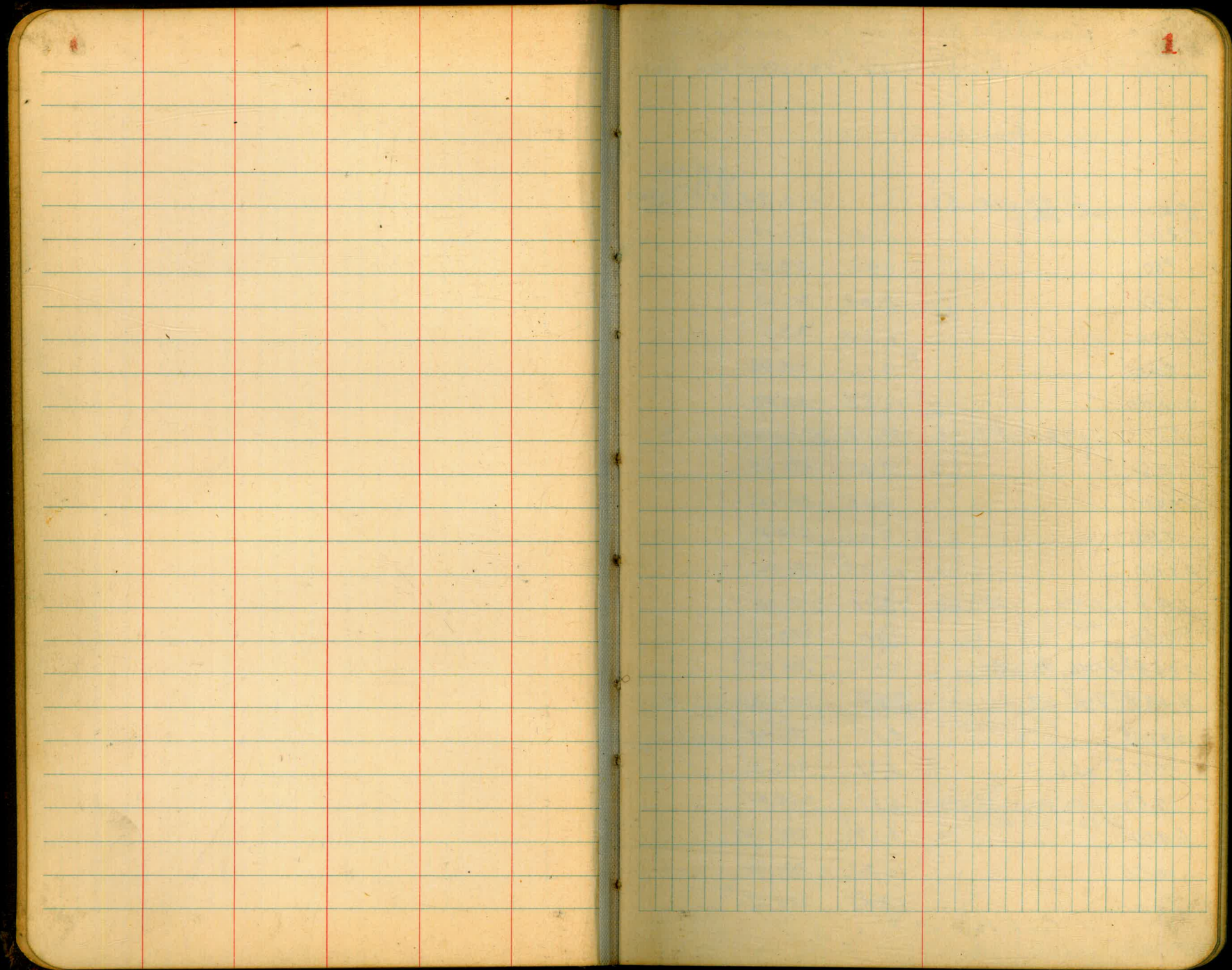
CITY ENGINEER'S OFFICE

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.

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 1½ see inside of back cover.

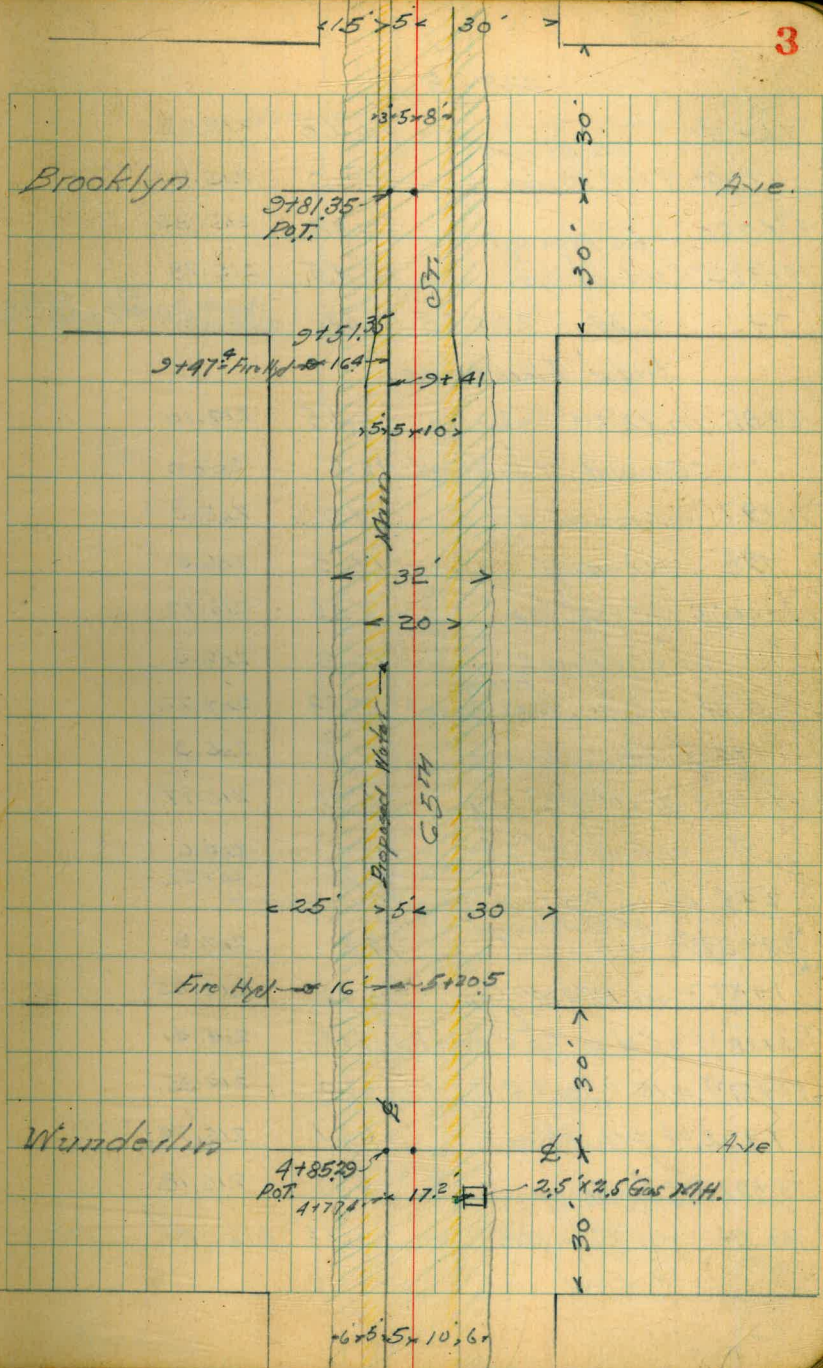
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LEAF 5 Cont. from P. 2

290.62

T.P.	0.57	278.50	12.69	277.93
7+50			2.29	276.21
8+00			4.34	274.16
+50			6.33	272.17
9+00			8.44	270.06
+51.35 N.L. Brooklyn			10.40	268.10
+81.35 = 8			11.33	267.17
10+00			11.78	266.72
+11.35 = S.L.			12.15	266.35
T.P.	0.12	266.07	12.55	265.95
10+50			1.96	264.11
11+00			5.16	260.91
+50			8.58	257.99
11+90 Nail			11.67	254.90
T.P.	0.78	254.13	12.72	253.35
12+50			4.39	249.74
13+00 Nail			8.27	245.86
+50			12.32	241.81
T.P.	0.11	241.18	13.06	241.07
14+00			3.48	237.70
+50			7.72	233.96
15+00			12.17	229.01
T.P.	0.03	228.93	12.98	228.20
+50			3.20	225.03
16+00			6.77	221.46



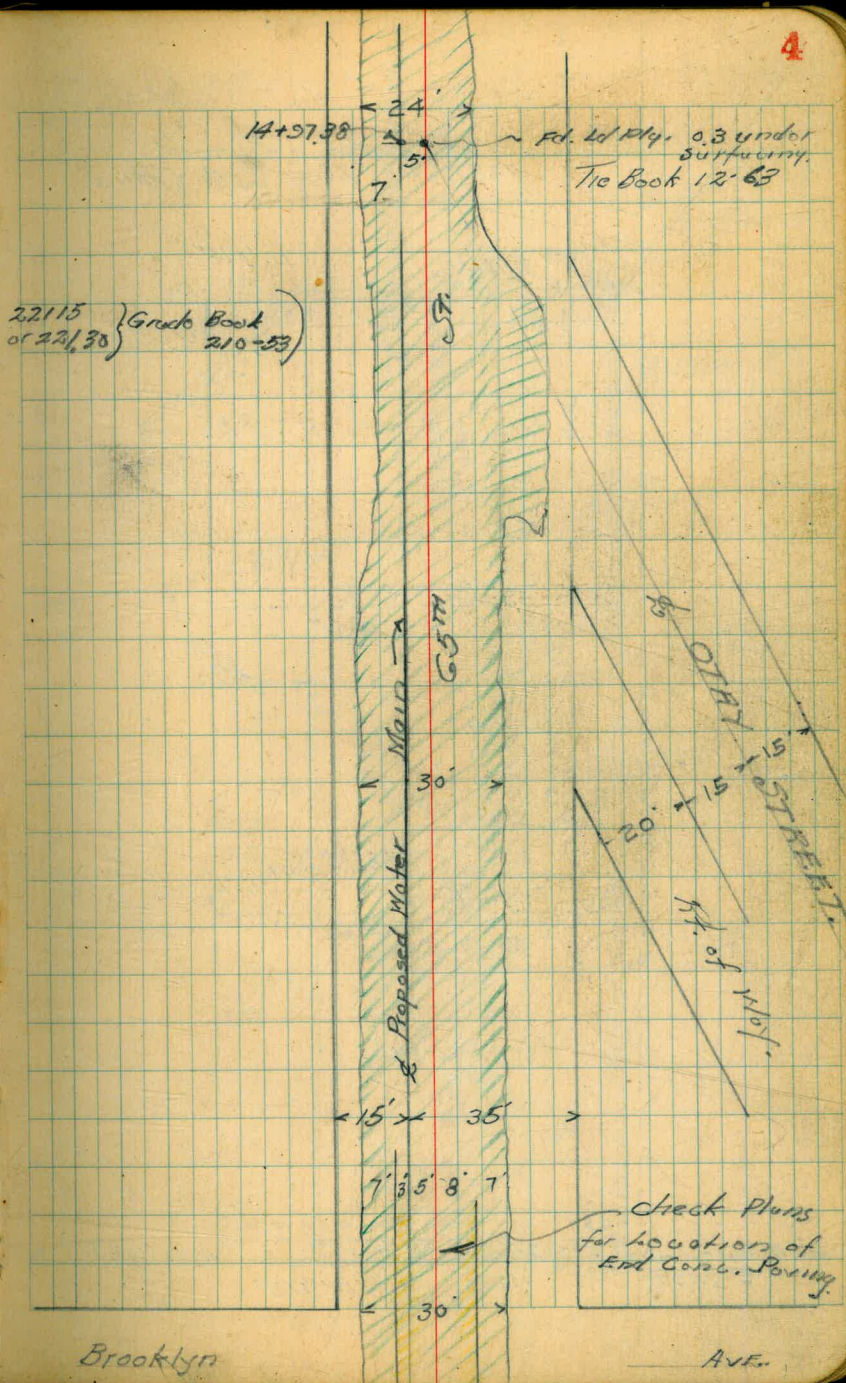
22823 ✓

16+50	on Paving	10.20	218.03
16+88	N end Bridge	12.26	215.97
17+00	on Paving	12.38	215.85
17+37.2	S end Bridge	12.45	215.78
TR	6.34	222.55	12.02 216.21

SE BR Imp + 65th = 22115 (Grade Book 210-53) or 22130

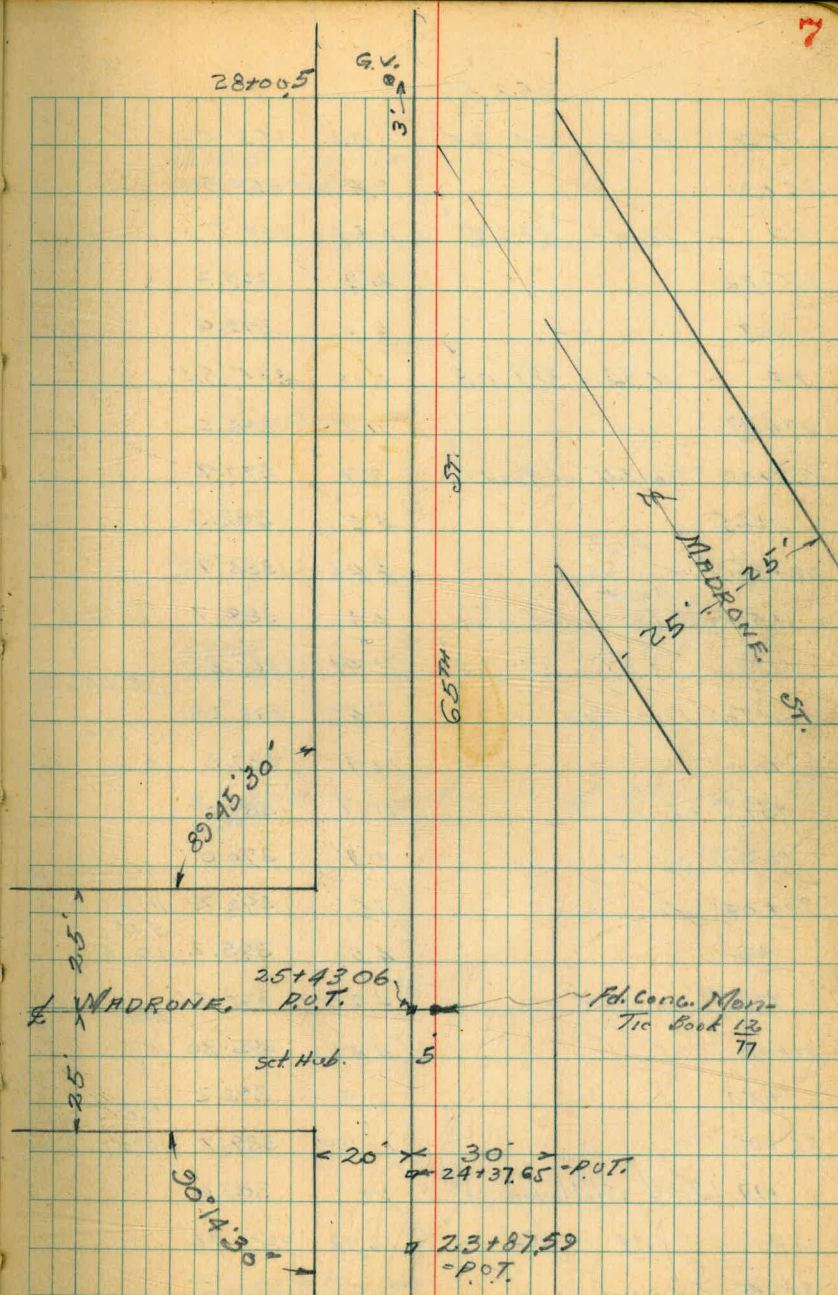
Bridge Elevations

16+83	on 12"x14" Timber Cap	8.45	212.10
"	"Ground at Bulkhead	13.6	209.0
16+97	on Ground	14.3	208.3
198	in channel	16.3	206.3
17+06	12"x12" Cap	8.58	213.97
"	in channel	16.3	206.3
2.5	4" on Conc. Encasement	15.33	207.22
17+14	8" Main Channel	17.3	205.3
17+23.9	6" 10"x12" Cap	8.58	213.97
"	on Ground	16.0	206.6
2.45	4" on Top Conc. Piling Encasement	15.33	207.22
17+37.2	on Ground	14.8	207.8
17+37.2	on 12"x14" Cap	8.70	213.85
(16+88)	3.6" 4" on Top 6" Water Pipe	8.14	212.41
(17+37.2)	4.15" Top 6" "	8.20	212.35
17+72.04	N.H. Pkns	6.61	215.92
17+97.30	4" Pkns	6.37	216.18
20' Rt.	on Rim M.H.	6.16	216.41 ³⁹
"	Flow		

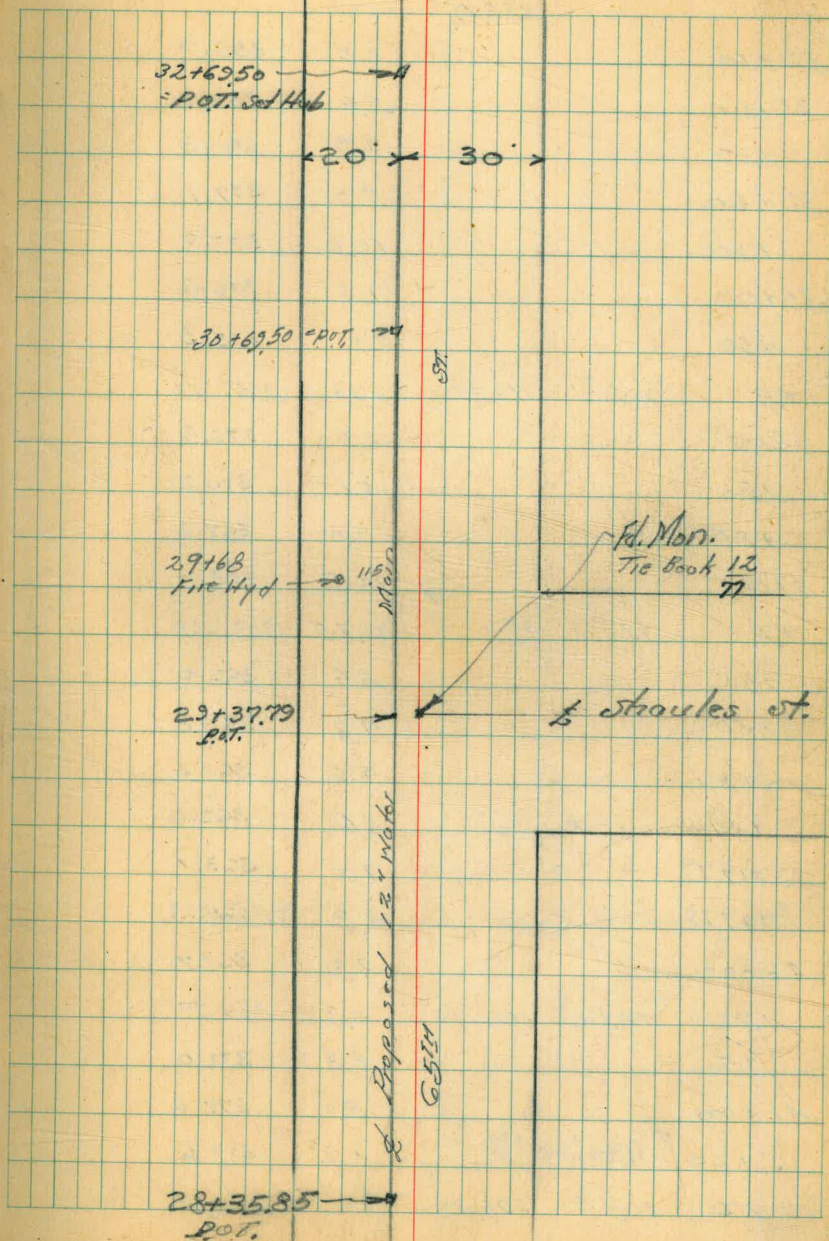


		294.13		
23+25			3.2	290.9
T.P.	13.11	306.68	0.56	293.57
23+50			2.8	296.9
+76			2.3	302.2
+87.59 = P.O.T. on Hub.			0.20	306.28
T.P.	12.65	319.23	0.10	306.58
24+37.65 = P.O.T. on Hub			1.11	318.12
T.P.	12.56	331.59	0.20	319.03
+80			8.2	323.4
25+00			6.4	325.2
+43.06 $\frac{1}{2}$ Madrone on Hub.			2.91	328.68
5' Rt. on L. Mon			1.54	330.05
+68			1.3	330.3
T.P.	12.42	343.39	0.62	330.97
+80			11.1	332.3
+95			9.8	333.6
26+07 L Wash			10.3	333.1
" 5'H			12.5	330.9
" 10'L			14.3	329.1
" 5'Rt			9.6	333.8
26+15			8.8	334.6
5'L			2.3	334.1
+25			6.7	336.7
+43			1.8	341.6
T.P.	10.36	352.57	1.18	342.21

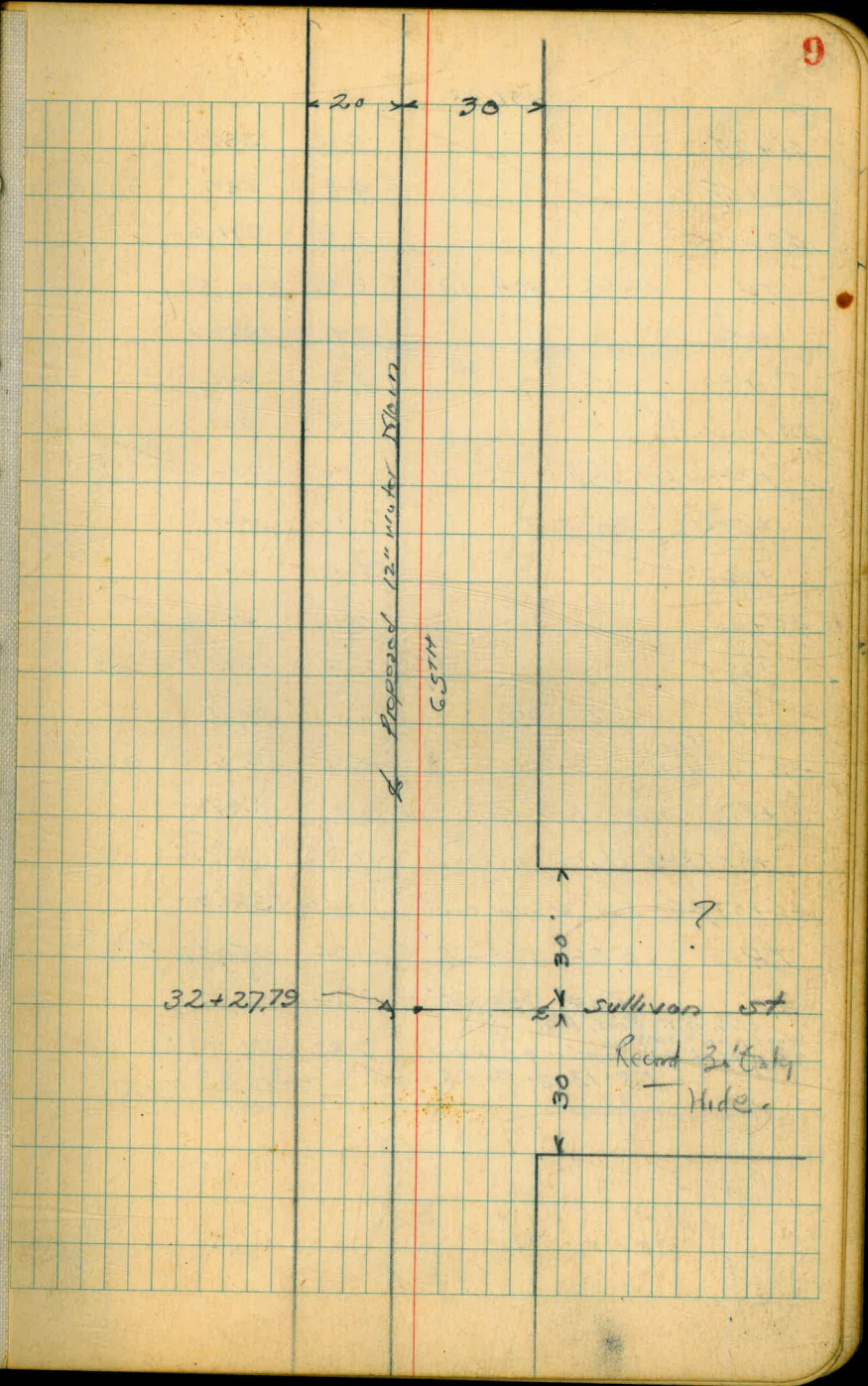
on Lath.
26+03



		352.57			
T.P.	11.74	364.27	0.04	352.53	
26+91			2.4	359.9	
T.P.	12.00	375.72	0.55	363.72	
27+38			8.4	367.3	
+65			3.3	372.9	
T.P.	11.54	387.08	0.18	375.54	
27+87			11.6	375.5	
28+00	Toe fill of Road		2.7	377.9	
+25			4.6	382.5	
28+35.85	P.O.T. on Hub East		3.66	383.92	
+50	Edge of Road		2.4	389.7	20' Wide
T.P.	13.07	399.74	0.91	386.67	St. Shoules
	on Top Fire Hyd		7.46	392.28	3' 1" =
29+00			12.4	387.3	E Edge Road
+37.79	= L. Shoules		10.7	389.0	
+62.79	SL "		9.7	390.0	
30+00			7.5	392.2	7' 11" = slope Rd
+50			4.5	395.2	11' R = " "
+69.50	on Pot.		4.23	395.51	5' 11" " "
31+00			4.4	395.30	2' 11" " "
+50			6.5	398.2	1' 11" " "
32+00			10.0	389.7	16' R " "
+27.79	= of Sullivan st.		12.1	387.6	
T.P.	1.34	388.10	12.98	386.76	
32+42	End of Road				

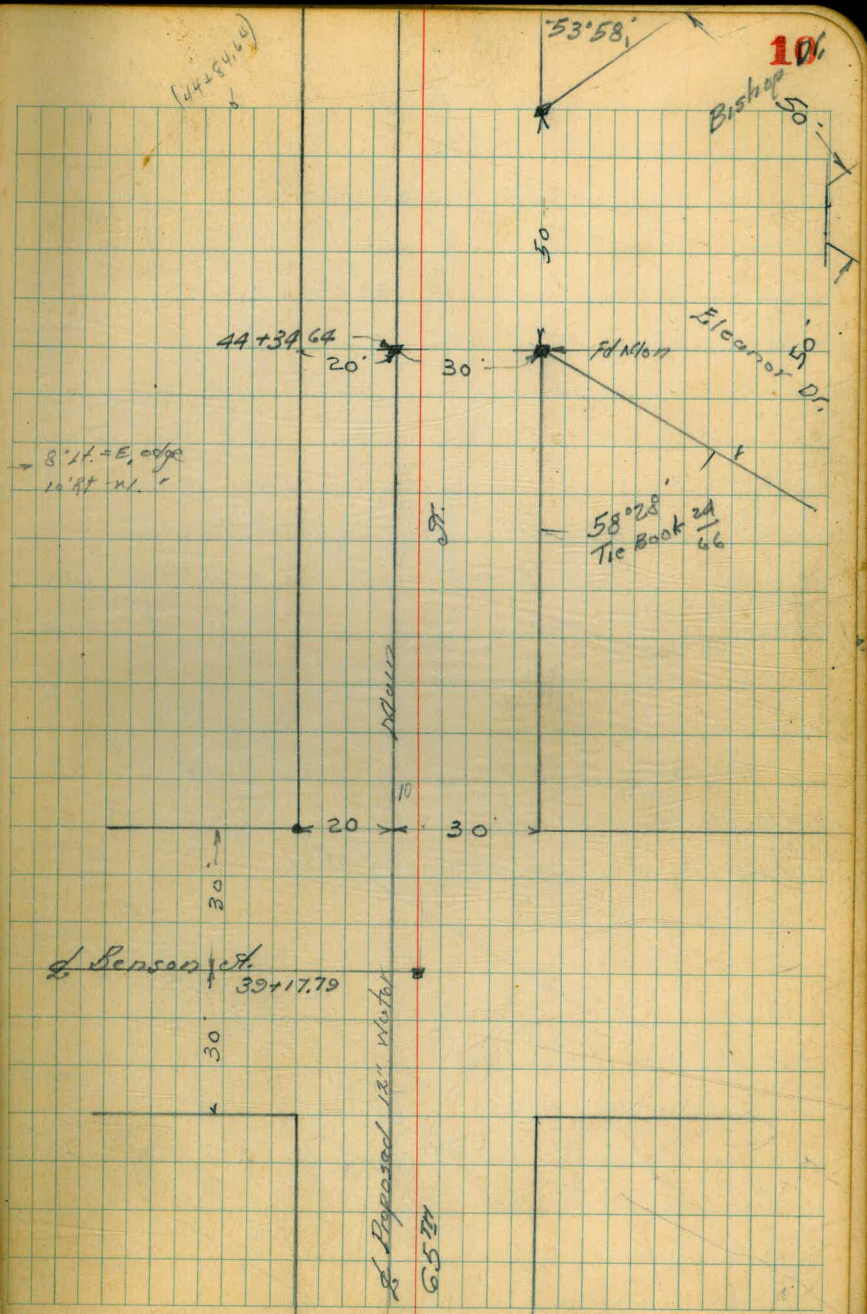


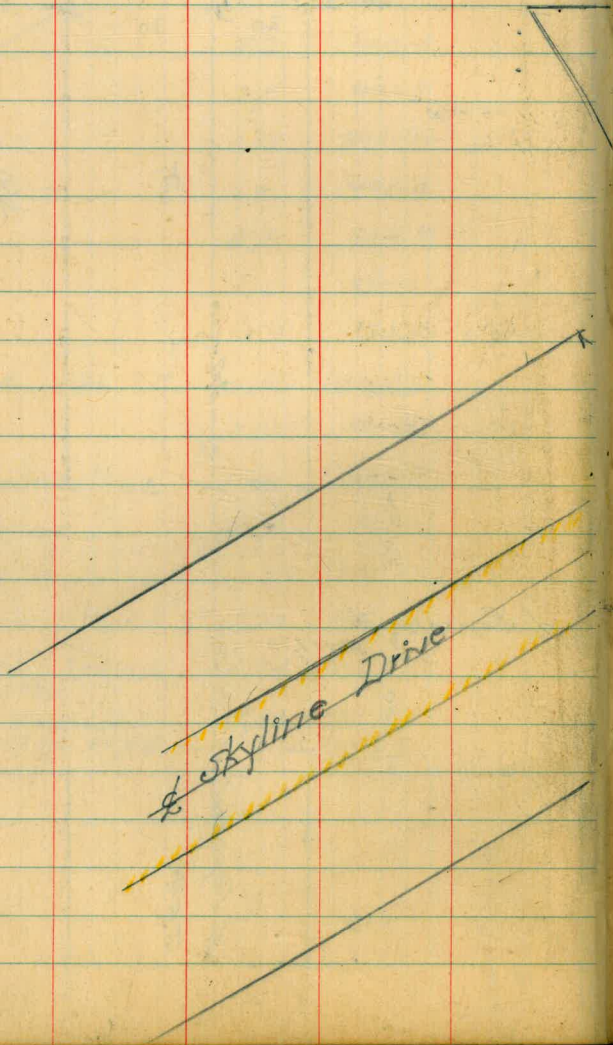
		388.10		
32+50			2.2	385.9
33+00			5.4	382.7
+50			7.3	380.8
34+00			9.0	379.1
+50			10.2	377.9
35+00			11.3	376.8
+50			12.8	375.3
T.P.	1.12	376.24	12.98	375.12
36+00			2.9	373.3
+50			6.1	370.2
+80			9.0	367.2
37+15			12.3	363.9
T.P.	1.11	370.60	12.75	363.49
+50			8.6	362.0
38+00			11.8	358.8
+50			9.4	361.2
+87.79 = N.L. Benson			8.6	362.0
39+17.79			7.5	363.1
+47.79			6.3	364.3
40+00			2.9	367.7
T.P.	10.96	380.76	0.30	370.30
+50			8.8	372.0
41+00			5.0	375.8
? +20	? Walker Says +50		1.2	379.6
T.P.	11.73	391.88	0.61	380.15



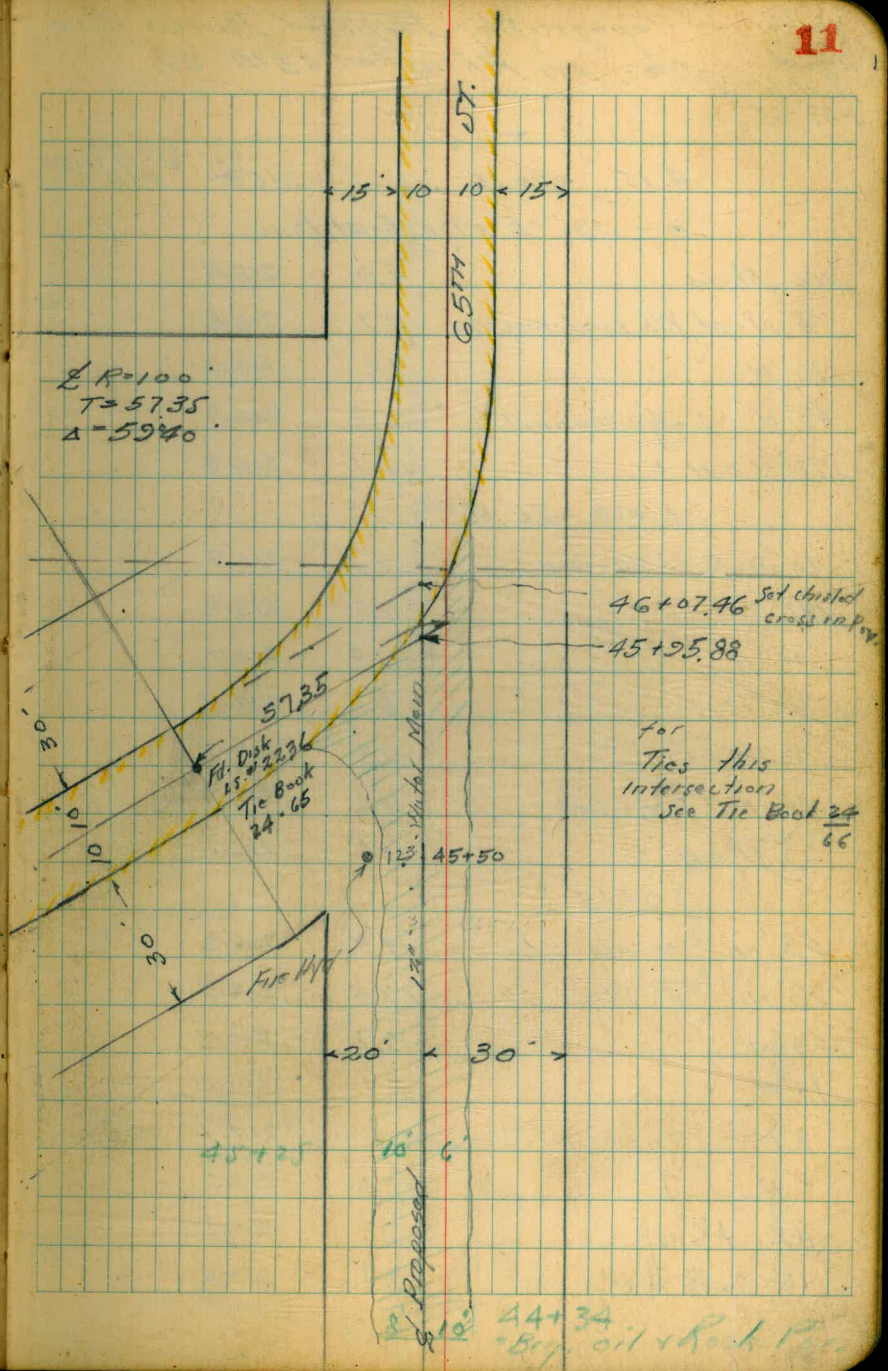
		391.88		
41+85			2.8	382.1
42+45			4.8	387.1
43+00			0.3	391.6
T.P.	12.66	404.18	0.36	391.52
+55			7.1	397.1
+80			4.2	400.0
44+00			2.3	401.9
+3461 = POT. Hub.			1.3%	402.86
+5961			2.4	401.8
+8461			4.8	399.9
45+00			6.6	397.6
+25			10.5	393.7
T.P.	0.64	394.23	10.59	393.59
Fin				390.88
SE Top Hyd			3.35	390.88
+60 on oil & Rock Pav.			6.3	387.9
+25.88 = L Skyline			11.2	383.0
46+07.46 = End = chuted cross			12.46	381.77
T.P.	12.56	398.45	8.34	385.83
T.P.	3.34	399.55	2.24	396.21
chk. BM Brass Pkg.				
Woodman's Skyline				
6.63' W of EL. 0.45' N of L Skyline			2.82	389.73
FB 1383-P-54				389.83
			0.10	difference

Notes Reduced
4.11.95





$R=100'$
 $T=57.35'$
 $\Delta=59^\circ 40'$



46+07.46 Set checked cross in p.w.
 45+95.88

for
 Ties this
 intersection
 see Tie Book 24
 66

44+34
 57.35 oil v R. h. P.

Walker
Hazard
Hudson
3-23-45.

Topography Proposed Pump House
Site - on Atkins and 65th St.

indexed
C.S.K.

12

4.15 220.54 216.7 ³⁹ ^{5 in 10 ft} ^{20° Rt 17+973} ^{P-4}

0-09 = E edge Exist P.V.

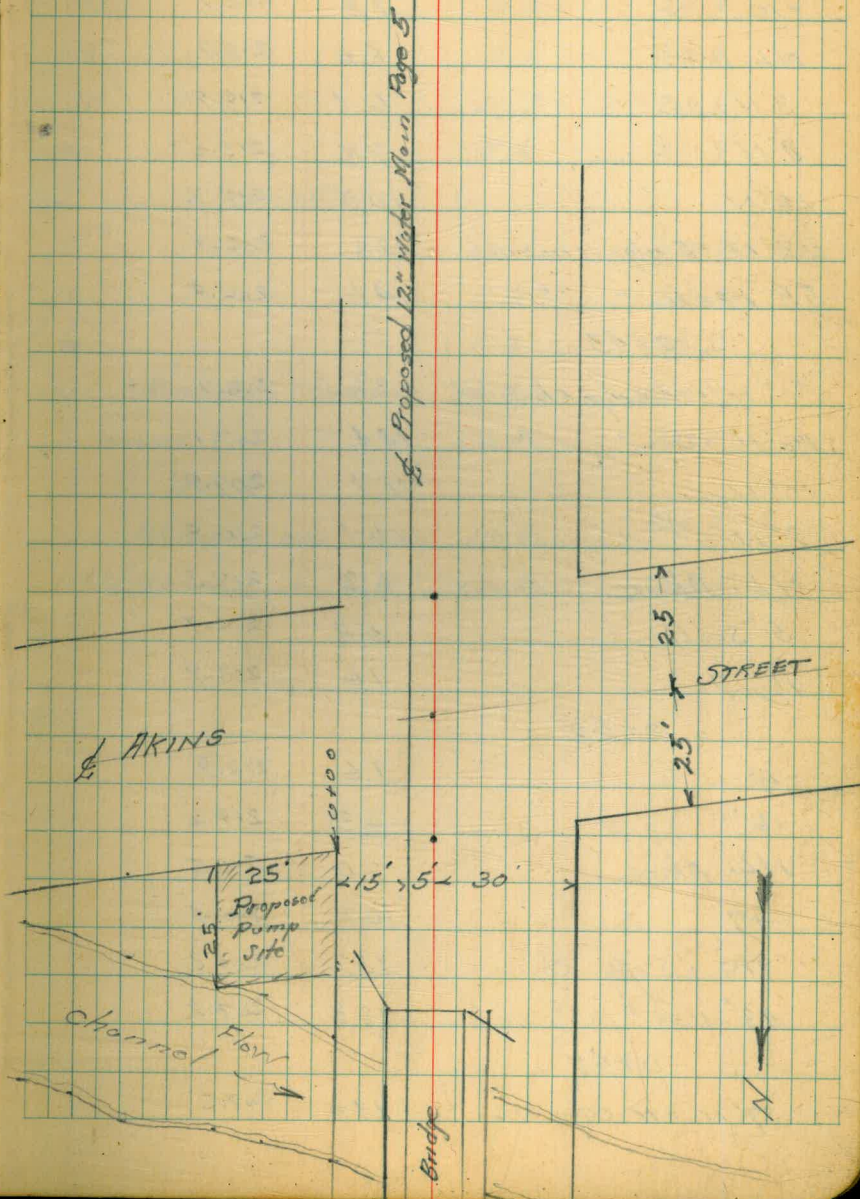
N.L. Atkins	4.9	215.6
24' N. of Blk. head Wing Wall	4.7	215.8
31' N	7.2	213.3
48' N = S edge channel	14.6	205.9
71' N = N "	14.1	206.4

0+00 = EL 65th

10' South of N.L. Atkins	7.1	213.9
N.L.	7.3	213.2
16' N	7.8	212.7
22' N	6.1	214.4
36' N	7.8	212.7
38' N = S edge creek	14.6	205.9
65' N = N "	14.4	206.1

0+15

58' N = N edge Channel	14.3	206.2
28' N = S "	13.8	206.7
23' N	9.7	210.8
18' N	9.7	210.8
8' N	6.4	214.1
4' N	9.0	211.5
N.L. Atkins	8.6	211.9
10' South of N.L.	8.1	212.2



Pump site, Cont. from P-12

22054

0+25

-10	7.8	212.7
N.L. AKINS	6.6	213.9
3' N	6.1	214.9
8' N	7.5	213.0
18' N	10.3	210.2
23' N = S edge channel	13.8	206.7
55' N = N " "	14.1	206.2

0+43

50' N = N Edge channel	13.8	206.7
16' N = S " "	13.4	207.1
10' N	11.1	209.9
8' N	10.1	210.9
N.L. AKINS	6.2	212.3
5' South	5.8	212.7
10' S	7.6	212.9

0+55

-10	7.6	212.9
-6'	6.3	214.2
N.L. AKINS	9.0	211.5
+7	10.7	210.3
+10 = S edge ch.	13.2	207.3
43' N " "	13.3	207.2

0+65

39' N = N edge ch.	13.0	207.5
--------------------	------	-------

0+65 Cont.

22054

13

6' N = S edge channel	13.0	207.5
3' N	10.0	210.5
N.L.	8.6	211.9
3' South	8.6	211.9
10' "	10.7	209.8
20' "	8.6	211.9

0+85

-15'	10.1	210.9
-10'	8.0	212.5
-6'	8.0	212.5
N.L. = South Edge Channel	12.8	207.7
31' N = N " "	12.8	207.7

1+56

N.L. AKINS = N edge channel	12.2	208.3
15' South = S " "	12.2	208.3

Walter
H. Zord
Hardin
3-25-45

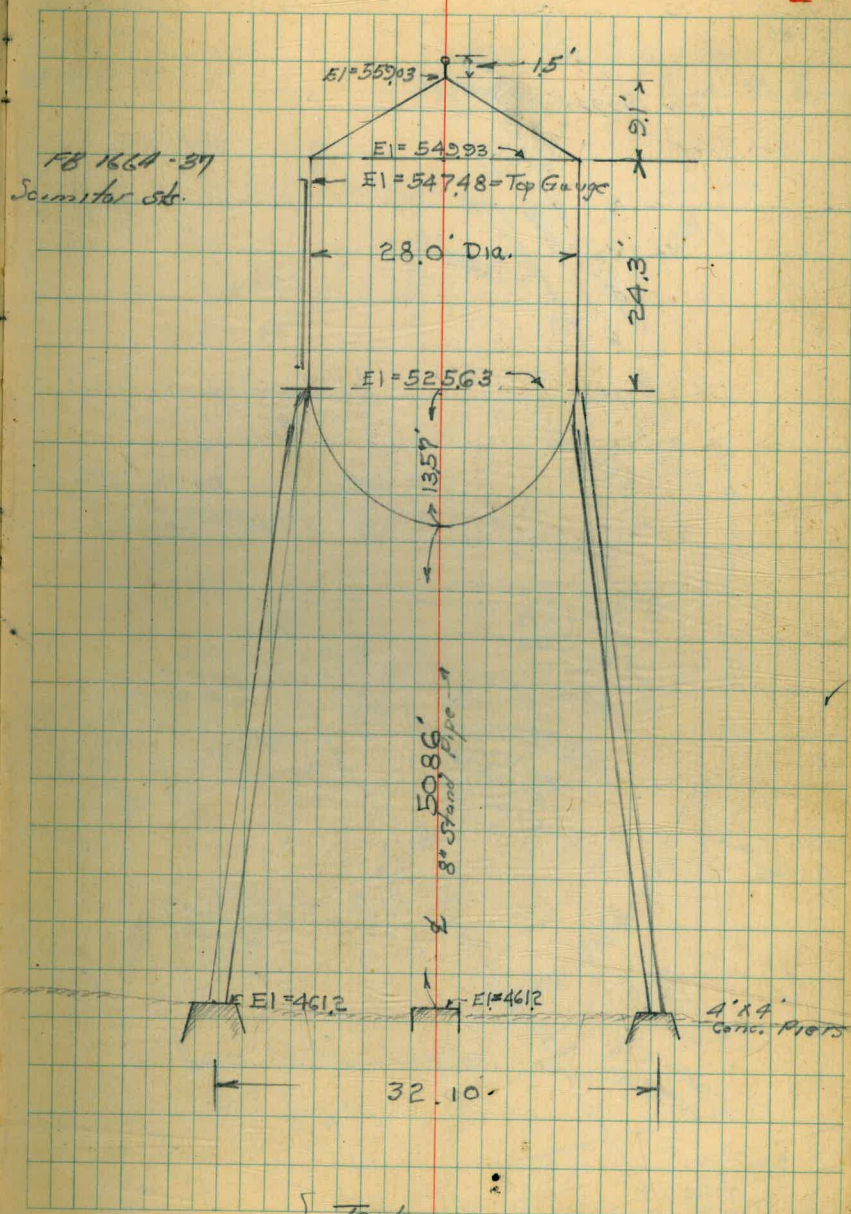
Encanto Water Tank Elev.
Elevations on Water Gauge
on Steel Water Tank North of
Scimitar Drive ^{and} West of Klumber St.

				B.M. Pipe 5W. Prop Cor Klumber &
	8.69	439.28		430.59
T.P.	10.66	444.79	5.15	434.13
T.P.	13.25	456.66	1.98	443.31
T.P.	9.38	464.73	1.31	455.35
on stake under Gauge			3.10	461.63
Mark ⁿ Hand Pipe & Tank			1.73	463.00
				Base = -1.8'
T.P.	10.6	456.41	2.38	455.35
T.P.	1.14	444.46	13.09	443.32
T.P.	5.14	439.28	10.32	434.14
chk. Starting B.M.			8.69	430.59 ✓

||

Indexed
C.S.K.

14



Pumphouse - 32.58-L } Tank.
See Dag. - 459.B.

Walker
Hazard
Hardin
4-6-45

LEVELS - PROPOSED WATER MAIN
from Skyline Drive
To Proposed WATER TANK SITE
in Lot 162 - Encino De San Diego Map # 1546
~ Location P-15 ~

	11.94	401.77		389.83	
S. edge Paving = 0+00			8.17	393.60	
+10.29 = S. Paving			7.95	393.82	
+20.6 = N. edge Pav			8.06	393.71	
+2.5			7.0	394.8	
+30			4.5	397.3	
T.P. 12.30	413.11	0.96	400.81		
0+35			10.9	402.2	
+37			8.2	402.9	
+50			4.0	409.1	
+59			1.1	412.0	
T.P. 12.02	424.67	0.46	412.65		
0+70			8.2	416.5	
+75.71 = P.O.T. on stub			7.35	417.32	
+85			4.6	420.1	
1+00			1.5	423.2	
T.P. 12.64	436.58	0.73	423.94		
1+20			2.2	427.9	
+43			2.5	434.1	
T.P. 11.52	447.62	0.41	436.17		
1+48			10.6	437.1	
1+49.65 = S. Aviation Drive			10.59	437.10	
1+72			9.7	438.0	

P. 10
B.M. S.P.
Woodman
+ Skyline

Edge of Road
Right of Road

Indexed
C.S.K.

		447.62			
1+78			5.9	441.8	
+81			2.3	445.2	
T.P. 12.78	460.11	0.36	447.33		
2+00			9.0	451.1	
+20			4.9	455.2	
+40			1.0	459.1	
T.P. 12.87	472.77	0.21	459.90		
(2+40) 20' Rt			11.2	461.6	
" 20' Lt.			14.4	458.9	
2+55			10.3	462.5	
10' Rt.			8.0	464.8	
20' Rt.			5.1	467.7	
30' Rt.			5.0	467.8	
20' Lt.			12.3	460.5	
30' Lt.			13.6	459.2	
2+60			8.7	464.1	
+70			2.2	469.6	
25' Rt.			3.1	469.7	
40' Rt.			3.2	469.6	
65' Rt.			5.5	473	
35' Lt.			8.5	464.3	
45' Lt.			11.9	460.9	
2+87.45 = P.O.T. stub			1.29	471.98	
T.P. 8.09	480.40	0.46	472.31		

Cont. P-17

Cont. from p. 16

480.40

(2+8745) 13' Rt	8.0	472.9
" 15' Rt	6.5	473.9
" 22' Rt	5.8	474.6
" 23' Rt	9.3	471.1
" 60' Rt	10.9	469.5
25' Lt	10.2	470.2
50' Lt	12.2	468.2
² 3+97	8.0	472.9
13' Rt	7.0	473.9
20' Rt	4.6	475.8
25' R	4.0	476.4
32' R	4.0	476.9
34' R	9.5	470.9
50' Rt	10.2	470.2
60' R	10.7	469.7
3+05	7.1	473.3
60' R	10.6	469.8
48' R	2.5	470.9
45' R	5.5	474.9
36' R	4.2	476.2
33' R	5.7	474.7
25' R	5.7	474.7
42' Lt	10.3	470.1
55' Lt	12.5	467.9
3+10.68 on Hub. = Radius Point	6.86	473.59

(6+10.68)

480.40

17

55' Lt	12.0	468.9
45' Lt	10.4	470.0
25' Lt	8.8	471.6
25' Rt	5.7	474.7
43'	7.2	473.2
60' Rt	10.7	469.7
4+32	4.9	475.5
60' Rt	9.9	470.5
25' Rt	5.8	474.6
8' Lt	5.3	475.1
25' Lt	8.0	472.9
50' Lt	10.4	470.0
70' Lt	12.9	467.5
3+34.65 = Proposed Tank	3.94	476.96 ^{on Hub}
3+40	2.7	477.7
10' Lt	2.8	477.6
15' Lt	4.3	476.1
17' Lt	6.4	474.0
35' Lt	8.7	471.7
70' Lt	12.3	468.1
10' Rt	4.4	476.0
30' Rt	6.0	474.4
65' Rt	10.4	470.0
3+55	2.7	477.7
52' Rt	7.5	472.9
25' R	6.1	474.3
10' Rt	4.6	475.8

480.40 ✓

(3+55) 4' Lt.	2.5	477.9
6' Lt.	4.8	475.6
12' Lt.	5.8	474.6
35' Lt.	8.1	472.3
50' Lt.	9.3	471.1
65' Lt.	11.7	468.7
3+60	4.1	476.3
15' Lt.	5.4	475.0
30' Lt.	7.5	472.9
50' Lt.	9.2	471.2
63' Lt.	10.6	469.8
5' Rt.	4.0	476.4
25' R	6.1	474.3
52' R	7.5	472.9
3+75	5.0	475.4
25' R	5.9	474.3
49' R	7.4	473.0
10' Lt.	4.5	475.9
28' Lt.	6.2	474.2
40' Lt.	8.0	472.4
65' Lt.	11.4	469.0
4+00	5.1	475.3
13' Lt.	5.4	475.0
30' Lt.	7.2	473.2
53' Lt.	9.5	470.9

Notes Redwood. 9-11-25

480.40 ✓

(4+00) 25' Rt.	5.0	475.2	
55' R	8.0	472.9	
1+25	4.4	476.0	
70' R	8.5	471.9	
55' R	6.0	474.3	
25' R	4.0	476.2	
15' R	3.4	477.0	
15' Lt.	6.3	474.1	
30' Lt.	7.0	473.9	
50' Lt.	11.4	469.0	
53' Rt. 4+50	2.22	478.18	
Sed. Lope Nail for BM in Pk			
San Diego Gas & Elec. Pk.			
No. 174837			
T.P. 0.20	467.56	13.04	467.36
T.P. 0.11	454.58	13.09	454.47
T.P. 0.52	442.25	12.85	441.73
T.P. 0.59	429.96	12.88	429.37
T.P. 1.15	418.48	12.63	417.33
T.P. 1.29	407.56	12.21	406.27
T.P. 2.40	396.98	12.98	394.58
chk starting BM	7.15	389.83	✓

Walker
Hazard
Hardin
4-19-45

Additional Topography Lot 162
ENCINA DE SAN DIEGO

indexed
c.s.R.

19

Stadia Readings From 3+3465 station P-15 Elev -
= 476.46 P-17 HI 5.0.

Station	Azimuth	Stadia	Δ	Horiz. Dist	Diff Elev.	True Elev.
	12°45'	140	-3°55'		-9.5	467.0
	31°	124	-1°10'		-2.5	479.0
	47°45'	123	+0°05'		+0.2	476.7
	64°30'	128	+0°30'		+1.1	477.6
Edge of Bank	75°05'	138	-1°10'		-2.8	473.7
	72°10'	191	+0°10'		+0.6	477.1
	60°35'	175	+0°50'		+2.5	479.0
	50°40'	166	+0°40'		+1.9	477.2
	39°45'	167	-0°05'		-0.2	476.3
	30°0'	173	-1°0'		-3.0	473.5
	20°40'	181	-2°20'		-7.3	469.2
	12°15'	194	-3°30'		-11.8	469.7
	4°55'	218	-4°20'		-16.7	460.1
	6°55'	255	-3°15'		-14.2	462.1
	13°30'	236	-2°30'		-10.3	466.2
	20°45'	224	-1°45'		-6.8	469.7
	29°05'	213	-0°40'		-2.5	474.0
	37°35'	208	+0°15'		+1.0	477.5
	46°40'	211	+0°45'		+2.8	479.3
	55°0'	215	+0°55'		+3.2	479.9
	63°10'	228	+0°50'		+3.3	479.8

Readings from 3134.65 Elev. 476.46 $\pi=50$

Station	Azimuth	Stadia	V. A	Horiz. D.	Diff. Elev.	True Elev.
	70°30'	244'	+0°25'		+1.8	478.3
	76°20'	262'	-0°15'		-1.2	475.3
	80°40'	278'	-0°25'		-2.0	474.5
	84°0'	330'	-0°10'		-1.0	475.5
	79°35'	311'	0°		0	476.5
	74°40'	291'	+0°20'		+1.7	478.2
	69°20'	275'	+0°40'		+3.2	479.7
	63°05'	260'	+0°45'		+3.9	479.9
	55°50'	250'	+0°50'		+3.6	480.1
	48°45'	242'	+0°45'		+3.2	479.7
	41°40'	238'	+0°45'		+3.1	479.6
	34°25'	240'	+0°30'		+2.1	478.6
	27°0'	246'	-0°10'		-0.7	475.8
	20°10'	255'	-1°0'		-4.9	472.1
	14°0'	267'	-1°45'		-8.2	468.3
	9°30'	277'	-2°20'		-11.3	465.4
Elec. Pole.	7°55'	280'	-2°45'		-14.0	462.5
Deudman	5°50'	301'	-3°0'		-15.7	460.8
"	12°30'	283'	-1°35'		-7.8	468.7
	359°40'	325'	-3°30'		-19.8	456.7
	358°35'	365'	-3°10'		-20.1	456.9
	3°55'	346'	-2°50'		-17.1	459.9
	8°05'	322'	-2°25'		-13.5	463.0
	11°55'	307'	-2°15'		-12.0	464.5
	16°55'	294'	-0°40'		-3.9	473.1

Readings from 313465 Elev 476.46 HI=50

Station	Azimuth	Stadia	V ₂	Horiz. Dist.	Diff Elev.	True Elev.
	13°10'	333'	-0°45'		-9.9	472.1
	8°15'	355'	-1°40'		-10.3	456.2
	11°10'	380'	-1°25'		-9.9	467.1
	15°45'	363'	-0°50'		-5.3	471.2
?	13°55'	350'	-0°05'		-0.5	476.0
	23°20'	340'	+0°05'		+0.5	477.0
	28°40'	330'	+0°20'		+1.9	478.9
	34°25'	324'	+0°25'		+2.9	478.9
	40°05'	322'	+0°25'		+2.9	478.9
	45°40'	321'	+0°30'		+2.8	479.3
	50°30'	324'	+0°35'		+3.3	479.8
	55°55'	331'	+0°35'		+3.9	479.9
	61°20'	340'	+0°40'		+4.2	480.7
	66°05'	352'	+0°35'		+3.6	480.1
	69°15'	360'	+0°50'		+5.2	481.7
	75°35'	413'	+0°15'		+1.8	478.3
S.W. Cor						
House or shack	64°10'	355	+0°35'		+3.6	480.1
NW " "	61°0'	360'	+0°35'		+3.7	480.2
S. edge Road	85°35'	390'	+0°15'		+1.7	478.2
N " "	85°05'	377'	+0°10'		+1.1	477.6
S " "	88°10'	347'	-0°45'		-9.5	472.0
N " "	85°45'	347'	-0°25'		-2.5	479.0
N " "	83°55'	312'	-0°45'		-4.1	472.9
S " "	87°35'	307	-1°10'		-6.3	470.2

16' Wide 16x20'

READINGS FROM 313465 Elev 476.46 HI 5.0

Station	Azimuth	Stadia	N D	Horiz.	Diff Elev
S edge Road	88°45'	275'	-3°05'		-14.7
Road	85°40'	275'	-1°25'		-6.8
N. edge Road	82°10'	280'	-1°05'		-5.3
" " "	80°15'	248'	-1°40'		-7.2
S " "	83°45'	247'	-1°45'		-7.5
" " "	84°45'	210'	-5°0'		-18.2
S " "	81°05'	210'	-2°45'		-10.5
N " "	78°45'	212'	-2°40'		-9.8
N " "	76°45'	187'	-3°50'		-12.5
S " "	81°20'	180'	-4°0'		-12.5
" " "	85°15'	187'	-6°25'		-20.8
S " "	85°40'	153'	-5°40'		-15.0
N " "	79°50'	144'	-5°05'		-12.7
" " "			0°0'		-2
□ 2	37°19'	375'	0°4.65'		

READINGS FROM □ 2 Elev = 476.81 HI = 5.0

	131°10'	208'	+0°45'		+2.7
	137°30'	150'	+1°25'		+3.7
	141°40'	112'	+1°30'		+3.1
	148°30'	86'	+2°05'		+3.1
	164°30'	54'	+2°20'		+2.2
	194°55'	38'	+2°0'		+1.3
	242°35'	38'	+2°40'		+1.8
	274°30'	56'	+1°15'		+1.2
	284°25'	85'	-0°05'		-0.1
	290°20'	115'	-0°55'		-1.8

23

True Elev.

461.8
469.7
471.2
469.3
469.0
458.3
466.0
466.7
469.0
469.0
455.7
461.5
461.8
476.81
479.5
480.5
479.9
479.9
479.0
478.1
478.6
478.0
476.7
475.0

Readings From Table 2, Elev. 476.81 HI = 5.0

Station	Ag	Stadia	V.A	Horiz. Dist.
226°25'	137'	-2°45'	-6.6	
301°30'	155'	-3°30'	-9.9	
303°25'	124	-3°15'	-7.0	
308°35'	95'	-2°35'	-4.3	
300°30'	59'	-1°05'	-1.1	
292°55'	29'	-1°20'	-6.7	
169°05'	8'	+0°30'	+0.1	
136°	40'	+1°55'	+1.3	
132°20'	73'	+2°0'	+2.6	
129°05'	106'	+1°40'	+3.1	
127°15'	138'	+1°10'	+2.8	
125°35'	177	+0°20'	+1.0	
118°10'	145	+0°15'	+0.6	
113°40'	114'	+0°35'	+1.2	
105°35'	76'	+1°35'	+2.1	
80°50'	43'	+0°25'	+0.3	
32°55'	33'	-2°40'	-1.5	
359°20'	33	-6°20'	-3.6	
338°45'	18'	-5°20'	-1.7	
314°55'	49'	-1°45'	-1.5	
311°	63'	-2°	-2.2	
330°20'	75'	-6°35'	-9.0	
341°50'	58'	-9°40'	-9.6	
16°40'	45	-5°40'	-4.4	
40°45'	49	-4°15'	-3.6	

24

470.2
467.9
469.8
472.5
475.7
476.1
476.9
478.1
479.4
479.9
479.6
477.8
477.9
478.0
478.9
477.1
476.3
475.2
475.1
475.3
474.0
467.8
467.2
472.4
473.2

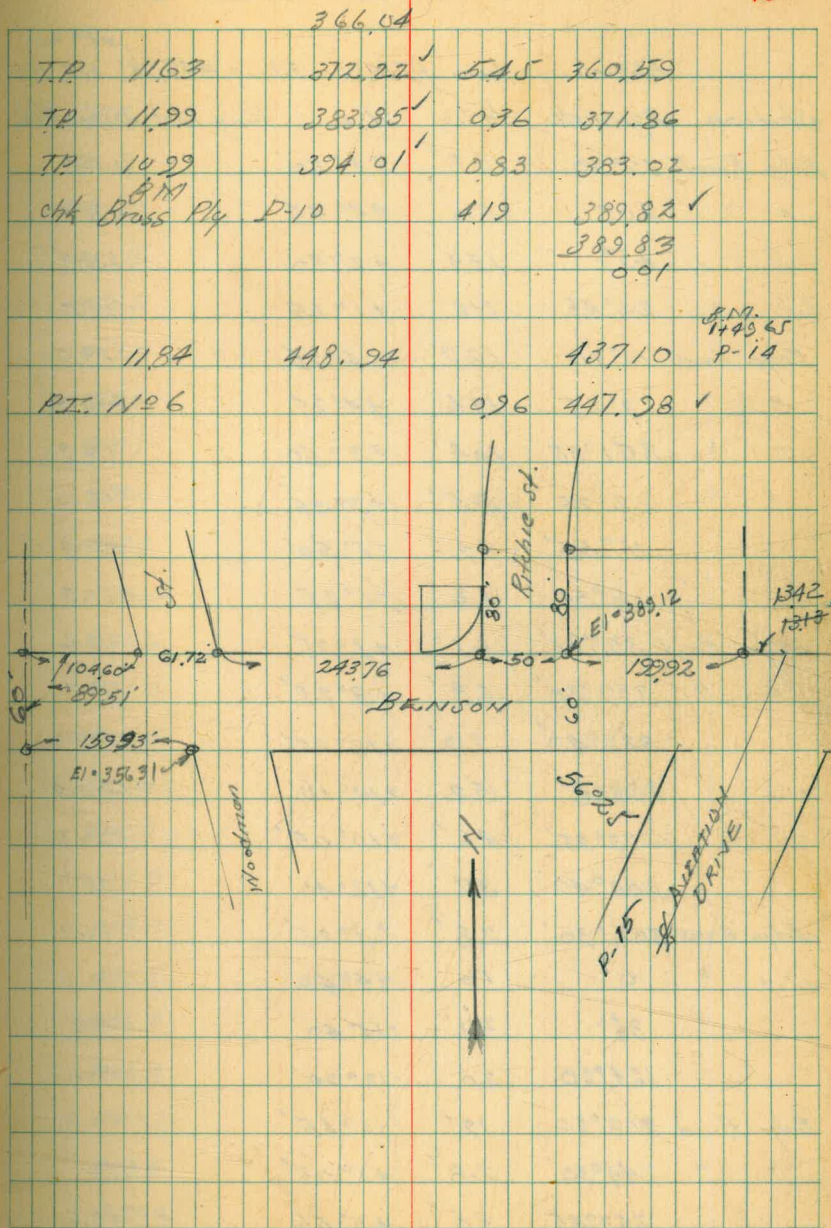
Readings from $\square 2$ Elev. 476.81 HI=5.0

Station	Azimuth	Stadia	VA	
				366.04
	41°20'	68'	-8°25'	-9.8 467.0
	79°35'	62'	+0°45'	+0.8 477.6
	68°40'	76'	-3°35'	-9.7 472.1
	95°50'	83'	+0°25'	+0.6 477.4
	86°15'	94'	-2°40'	-9.4 472.9
	104°30'	116'	-0°35'	-1.2 476.6
			-1°50'	-9.4 470.4
	104°05'	136'	on 7.0	-2.8 472.0
			-1°0'	-2.6 471.2
	113°50'	161	on 7.0	-3 471.2
			-0°45'	-1.3 471.5
	122°20'	198	on 8.0	-9 479.3
			-0°20'	+6.5 478.3
	129°0'	230	on 9.0	+2.3 474.1
			-9	
	132°55'	218	+0°40'	
	137°30'	255	+0°20'	
			+0°30'	
	135°50'	262	on 10.0	

Levels on P.I. & Aviation Drive

for Stadia Control

	0.43	437.53		437.10	PI N°2
				1449.65	P-14
T.P.	2.42	427.30	12.65	424.88	PI N°2
PI N°1			6.14	421.16	
T.P.	1.03	415.72	12.61	414.69	
T.P.	0.32	403.19	12.85	402.87	
on Pipe NE Cor. Ritchie & Benson			14.07	389.12	
T.P.	0.27	390.61	12.85	390.34	
T.P.	0.40	378.59	12.42	378.19	
T.P.	0.51	366.04	13.06	365.53	
on Pipe SW Cor Woodman & Benson			9.78	356.31	



Topog. Existing Dirt Road
Aviation Drive + Benson St.

26

P. 25

Readings from PT N26 Elev = 447.98 HI 5.0

Station	Azimuth	Stadia	V.A	Horiz. Dist.	Diff. Elev	True Elev
Edge Road	15°30	163	+4°30		+12.7	460.7
" "	20°	150	+4°55		+12.8	460.8
" "	25°	133	+2°30		+5.8	453.8
" "	22°45	116	+1°15		+2.5	450.5
Edge Road	10°30	127	+4°15		+9.4	457.4
" "	3°25	136	+4°25		+10.4	458.4
" "	351°35	104	+3°50		+6.9	454.9
" "	2°25	95	+3°35		+6.0	454.0
" "	13°55	92	-1°50		-2.9	445.1
" "	6°55	62	-1°25		-1.5	446.5
Edge Road	355°45	61	+3°25		+3.6	451.6
" "	339°20	63	+3°25		+3.7	451.7
" "	328°40	70	+12°20		+14.6	462.6
" "	297°35	52	+14°10		+12.4	460.4
" "	293°35	46	+10°05		+7.9	455.9
" "	300°40	37	+12°40		+7.9	455.9
Edge Road	306°30	28	+3°25		+1.7	449.7
" "	0°	16	+4°40		+1.3	449.3
" "	36°	20	-13°40		-4.6	443.4
" "	164°20	20	-12°20		-4.4	443.8
Edge Road	208°30	19	-0°45		-0.3	447.7
" "	244°30	28	+0°05		0	448.0
" "	253°45	35	+5°55		+3.6	451.6

Readings from PI N 96 Elev. 447.98 H.I. 50

27

Station	Az	Stadia	\angle		
	261°45'	45'	15° 0'	+3.9	451.9
	262°30'	50'	11° 0'	+9.9	457.9
	257°40'	65'	19° 15'	+10.3	458.3
	252°35'	49'	12° 10'	+1.9	449.9
Edge Road	239°10'	37'	10° 30'	+0.5	448.5
" "	207°55'	28'	-1° 35'	-0.8	447.2
	185°20'	33'	-6° 45'	-3.9	449.1
	212°35'	62'	-4° 35'	-4.9	443.1
Edge Road	226°15'	57'	-1° 35'	-1.6	446.4
" "	238°50'	56'	-0° 40'	-0.7	447.3
	245°25'	58'	-0° 10'	-0.2	447.3
	277°20'	83'	+9° 25'	+13.4	459.4
			on 7.0	-2	
			+5° 45'	+8.5	
	259°20'	85'	on 8.0	-3	453.5
			0° 0'	0	
Edge Road	250°50'	85'	on 8.0	-3	445.0
" "	235°40'	97'	-2° 25'	-4.3	443.7
	231°25'	103'	-5° 30'	-9.8	438.2

Readings from 1449.65 Elev = 437.10 H.I. 5.1

	118°10'	98'	-0° 05'	-0.1	437.0
Edge Road	112°05'	95'	+3° 0'	+5.0	442.1
" "	96°25'	92'	+3° 40'	+5.9	443.0
	92°30'	86'	+8° 30'	+12.6	449.7
	61°25'	91'	+14° 40'	+22.3	459.4
	84°40'	59'	+11° 20'	+11.4	448.5
Edge Road	89°20'	52'	+3° 30'	+3.2	440.3
" "	110°05'	47'	+4° 25'	+3.6	440.7
PI N 57	127°19'	50'	-2° 10'	-1.9	435.2

Readings from 149.65 El. = 437.10 HI-51

28

Station	Azimuth	Stadia	V.A		
	295°20	52	-8°10'	-7.3	429.8
Edge Road	307°0'	50	-4°	-3.5	433.6
" "	334°30	54'	-2°55'	-2.7	434.4
	347°55	52'	+6°50'	+6.2	443.3
	13°25'	76'	+12°45'	+16.3	453.9
	359°30'	96'	+8°50'	+14.6	451.7
"	336°15'	77'	+3°05'	+4.1	441.2
Edge "	330°10'	80'	-2°25'	-3.9	433.7
" "	314°10'	78'	-3°25'	-4.6	432.5
	304°	85'	-6°30'	-9.6	427.5
	316°10'	133	-4°10'	-9.6	427.5
" "	322°15'	132'	-3°15'	-7.5	429.6
" "	329°45'	128'	-2°50'	-6.3	430.8
	334°10'	128'	-0°15'	-0.6	436.5
	353°35'	128'	+1°55'	+10.9	448.0

Readings from PI N. 1. Elev. = 421.16 HI. 53

	145°45'	124'	+11°20'	+23.9	445.1
	155°10'	114'	+7°45'	+15.2	436.9
Edge "	163°40'	110'	+6°20'	+12.0	433.2
" "	167°50'	106'	+3°10'	+5.8	427.9 427.0
" "	178°25'	108'	+2°45'	+5.2	426.9
	188°55'	110'	+0°20'	+0.6	421.8
	195°40'	64'	+0°40'	+0.7	421.9
" "	181°	60'	+0°55'	+1.0	422.2
" "	160°40'	61'	+3°40'	+3.9	425.1

Readings from PJ No 1 Elev 42116
HT=53

Station	Stadia	$\angle A$	
	151°25'	67'	+9°25'
	135°	105'	+12°20'
	115°55'	101'	+14°25'
	119°20'	70'	+14°05'
	132°55'	45'	+16°0'
Edyo Road	140°40'	37'	+6°25'
" "	194°30'	25'	+2°35'
	218°25'	99'	-3°25'
	343°55'	32'	-11°0'
" "	21°25'	25'	-2°45'
" "	66°55'	36'	-0°05'
	73°20'	47'	+9°50'
	87°35'	68'	+12°0'
	91°10'	86'	+11°40'
	94°50'	108'	+12°35'
	98°50'	141'	+13°55'
	88°15'	149'	+11°20'
	84°40'	123'	+11°55'
	78°40'	103'	+9°45'
	58°55'	74'	+7°10'
" "	49°15'	62'	-1°55'
" "	17°15'	62'	-4°25'
	7°40'	60'	-6°05'
	27°55'	112'	-4°55'
Edyo Road	35°45'	111'	-3°25'

29

432.0
443.2
445.5
437.7
433.1
425.3
422.3
415.3
415.2
420.0
421.1
429.1
435.0
438.2
444.2
454.1
449.8
446.1
438.4
430.3
419.1
416.2
414.8
411.7
414.6

Readings from PIN 91 Elev. 421.16
H.I. 53

Station	Az.	Stadia	V.A		
	46°25'	113'	-2°30'	-9.9	416.3
	49°15'	114'	+1°05'	+2.2	423.2
	54°35'	112'	+3°40'	+7.2	428.4
	52°50'	133'	+2°20' on 7.3	+5.9 -2.0	424.6
	48°15'	140'	-0°35' on 6.3	-1.4 -1.9	418.8
Edge Road	47°10'	140'	-1°35' on 7.3	-3.9 -2.0	415.3
" "	35°35'	140'	-3°35'	-8.7	412.5
	31°30'	139'	-5°30'	-13.2	408.0
	29°15'	158'	-5°05'	-13.9	407.3
" "	32°20'	163'	-3°30'	-9.9	411.3
	40°30'	178'	-2°40'	-8.3	412.9
	43°05'	186'	-0°20'	-1.1	420.1
	33°05'	227'	-1°20'	-5.3	415.9
	30°10'	213'	-0°40'	-2.5	418.7
" "	28°55'	204'	-2°55'	-10.4	410.8
	25°10'	181'	-3°50'	-12.1	409.1
NE Cor Benson					
Ritchie on Pipe	340°35'	225'	-8°15'	-31.9	389.3

H.I. 54

Readings from NE Benson & Ritchie Elev. 389.12

Too Slope T. East					
Elcc Pole	111°10'	150'	+4°50'	+12.6	401.7
To North					
Too Slope	110°35'	145'	+4°35'	+11.5	400.6
Edge Road	106°0'	146'	+7°15'	+18.3	407.9
" "	93°15'	139'	+7°25'	+17.8	406.9
	87°45'	141'	+10°15'	+24.7	413.8
	85°50'	97'	+11°20'	+18.7	407.8
" "	93°20'	93'	+6°45'	+10.8	399.9
" "	108°45'	97'	+7°20'	+12.3	401.4
	117°30'	101'	+2°55'	+5.1	394.2

Readings from N.E. Cor Ritchie^{El} 389.12 \ 42.54

Stadia v A

	138°50'	62'	-0°45'	-0.8	388.2
Edge Road	125°45'	49'	+6°20'	+5.4	394.5
" "	95°50'	38'	+7°15'	+4.8	393.9
	80°20'	39'	+13°33'	+8.9	398.0
	302°10'	13'	+6°30'	+1.5	390.6
" "	276°45'	11'	-4°35'	-0.9	388.2
" "	199°50'	34'	-2°10'	-1.3	387.8
	193°45'	52'	-6°0'	-5.4	383.7
	206°50'	59'	-6°40'	-6.8	382.3
	216°50'	41'	-4°30'	-3.2	385.9
Edge oiled Road	278°15'	23'	-4°15'	-1.7	387.4
Ritchie	291°15'	24'	-3°15'	-1.4	387.7
	338°20'	66'	+0°35'	+0.7	389.8
W edge	327°50'	74'	+0°20'	+0.5	389.6
oil Road	281°45'	42'	-4°40'	-3.4	385.7
Edge oil "	263°25'	53'	-6°45'	-6.2	382.9
" " "	246°40'	60'	-6°30'	-6.7	382.4
	236°50'	64'	-6°20'	-7.0	382.1
	228°05'	73'	-7°20'	-9.2	379.4
Elec. Pole	243°20'	113'	-7°25'	-14.5	374.6
	249°15'	109'	-7°0'	-13.2	375.9
Edge oiled Road	255°15'	104'	-6°35'	-11.8	377.3
Toe of Driv	118°	242'	+6°55'	+29.0	418.1
	119°	236'	+9°40'	+44.0	438.1
	120°45'	352'	+11°30'	+68.8	457.9

31

Readings from N.E. Cor Ritchie #1. 389.12 HZ 54

Station #3	Stadia	V. A	
111° 50'	347'	+11° 50'	+09.6
110° 25'	307'	+11° 35'	+10.3
111° 50'	260'	+9° 30'	+02.3
108° 10'	246'	+10° 20'	+03.5
108° 15'	230'	+9° 20'	+06.8

Readings From SW Cor Woodman & Benson El = 356.31

edge of Road	75° 30'	203'	+5° 50'	+20.6
	73° 05'	208'	+6° 25'	+23.1
	69° 45'	170'	+6° 35'	+19.3
" " "	73° 0'	167'	+5° 30'	+15.9
" " "	78° 20'	163'	+5° 35'	+15.7
	81° 10'	160'	+5° 05'	+14.1
	80° 35'	121'	+4° 25'	+9.3
" " "	74° 35'	121'	+4° 50'	+10.2
" " "	67° 35'	124'	+4° 45'	+10.2
	65° 05'	126'	+6° 05'	+13.3
	53° 20'	93'	+5° 05'	+8.2
" " "	58° 0'	88'	+3° 10'	+9.9
" " "	69° 15'	80'	+3° 10'	+9.9
	77° 40'	38'	+3° 10'	+2.1
" " "	67° 05'	64'	+1° 50'	+2.1
" Poi."	81° 50'	45'	+3° 05'	+2.9
" " "	124° 20'	77'	+4° 55'	+6.6
	140° 05'	126'	+5° 30'	+12.0
W " " "	148° 35'	132'	+6° 05'	+13.9

32

					458.7
					449.9
					431.9
					432.6
					425.9
					376.9
					379.7
					375.6
					372.2
					372.0
					370.9
					365.6
					366.5
					366.5
					369.6
					369.5
					361.2
					360.7
					358.9
					358.9
					358.7
					362.9
					368.3
					370.2

4-20-45 Readings from SW Cor Woodman + Barton
 EI = 356.31

Station	Az	Stadia	v.A	
W edge Pav. Rd	140°45'	84'	+5°20'	+7.8
" " "	114°05'	37'	+3°45'	+2.9
" " "	99°55'	21'	-2°55'	-1.1
" " "	331°05'	53'	-4°30'	-9.1
" " "	335°45'	102'	-4°25'	-7.8
" " "	341°	155'	-4°05'	-11.0
E " "	347°30'	152'	-4°15'	-13.9
" " "	345°30'	100'	-4°50'	-8.9
N " "	359°10'	52'	-4°45'	-4.3
" " "	18°55'	42'	-2°40'	-1.9
N " oil "	51°40'	73'	+2°0'	+2.5

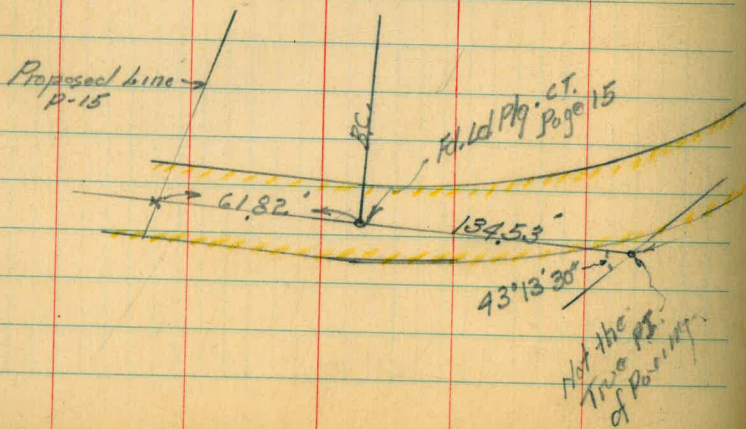
33

369.1
358.7
355.2
352.2
348.5
345.3
342.9
347.9
352.0
359.9
358.8

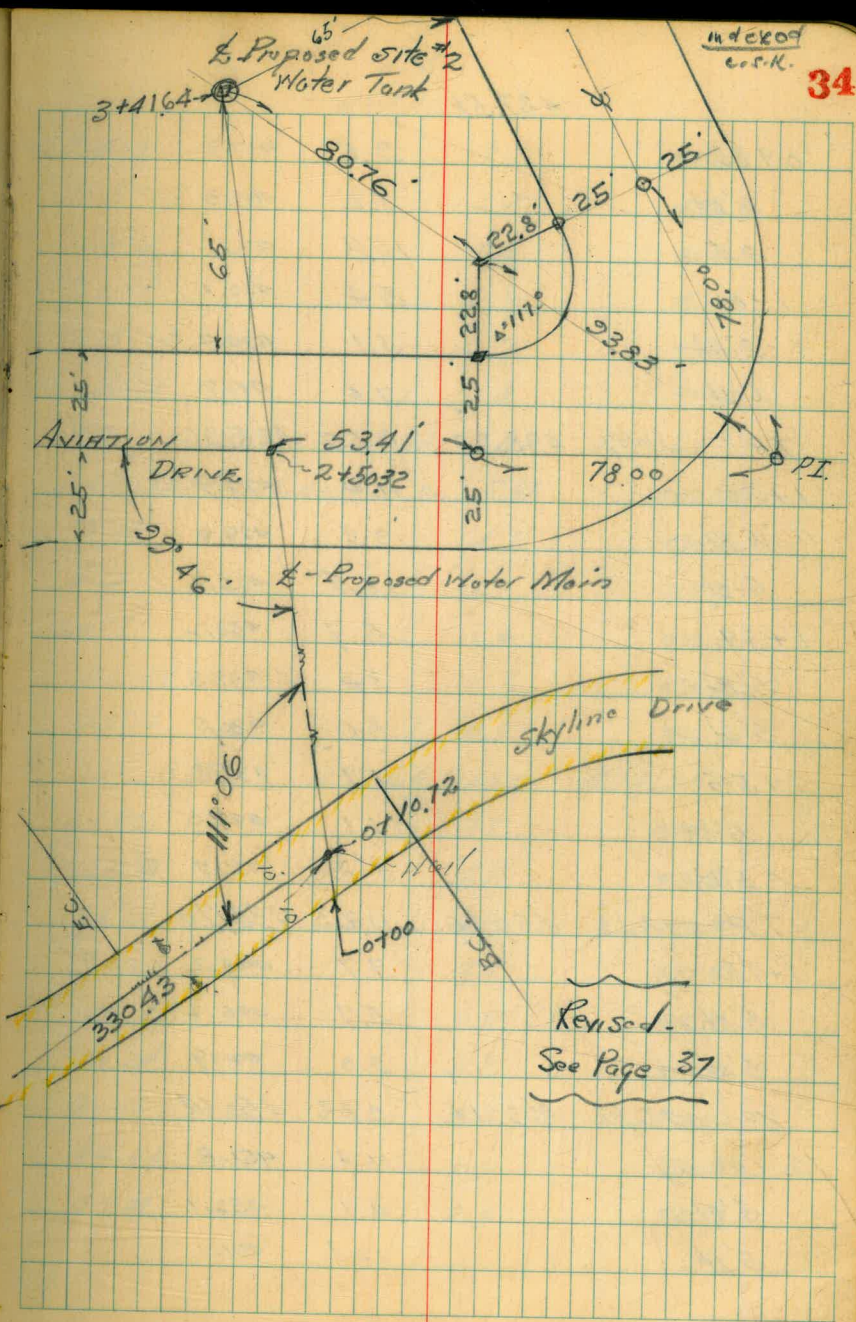
Walker Hazard Hazard
 5-8-45 LEVELS Proposed Water Main
 from Skyline DRIVE
 To Proposed Site No 2

B.M.
 Christed Cross
 0+10.29
 P-16

	9.74	403.56		393.82
TP	12.52	415.38	0.70	402.86
0+00	South edge	Parway	12.95	402.93
+10.72	Left Nail in		12.52	402.86
+21.44	North		12.01	403.37
+42			11.6	403.8
+45			10.8	409.6
+53			6.5	408.9
5' Rt.			5.6	409.8
5' Lt.			7.8	407.6
0+70			1.6	413.8
5' Rt.			0.7	419.7
5' Lt.			3.0	412.2
TP	12.31	427.51	0.18	415.20



Not the true pt.
 of Parway



427.51 ✓

0+85			9.6	417.9
5'RT			8.2	419.3
5'LT			10.8	416.7
1+00			5.4	422.1
5'RT			3.1	429.4
5'LT			7.6	419.9
T.P.	11.97	438.23	0.55	426.26
1+20			11.0	427.9
5'RT			9.5	429.4
5'LT			13.5	425.4
1+37			5.7	433.2
5'RT			3.4	435.5
5'LT			8.0	430.9
1+55			1.1	437.8
5'RT			+1.1	440.0
5'LT			3.2	435.7
T.P.	12.16	450.86	0.23	438.70
1+75			7.7	443.2
5'RT			5.7	445.2
5'LT			9.0	441.9
T.P.	12.52	463.16	0.22	450.64
2+00			11.4	451.8
5'RT			11.1	452.1
5'LT			12.1	451.1

463.16 ✓

35

2+18			7.2	456.0
5'RT			6.5	456.7
5'LT			7.5	455.7
2+35			0.9	462.3
5'RT			0.7	462.5
5'LT			1.8	461.4
T.P.	12.30	474.95	0.51	462.65
2+50	32+POY - S. Arrieta Dr		5.37	469.58
5'RT			4.7	470.3
5'LT			6.1	468.9
2+73			3.8	472.0
25'RT			2.2	472.8
25'LT			4.0	471.0
T.P.	8.89	483.24	0.60	474.35
2+80			9.1	474.1
25'RT			6.8	476.4
25'LT			3.8	474.4
3+00			5.8	477.4
40'LT			6.5	476.7
20'LT			6.2	477.0
20'RT			5.0	478.2
40'RT			2.9	480.3
50'RT			2.3	480.9

483.24 ✓

3+25	3.5	479.7	
65' Rt.	1.8	481.4	
40' Rt.	3.1	480.1	
20' Rt.	3.0	480.2	
25' Lt.	4.4	478.8	
50' Lt.	4.3	478.9	
65' Lt.	4.8	478.9	
3+41.64 = 2 Site No 2	3.20	480.09	on stub
75' Lt.	3.3	479.9	
50' Lt.	3.2	480.0	
25' Lt.	3.6	479.6	
25' Rt.	2.9	480.3	
50' Rt.	2.7	480.5	
75' Rt.	1.7	481.5	
3+75	2.5	480.7	
25' Rt.	2.7	480.5	
45' R	2.6	480.6	
70' Rt.	3.6	479.6	
25' Lt.	3.4	479.8	
50' Lt.	3.1	480.1	
75' Lt.	3.1	480.1	
4+100	2.6	480.6	
75' Lt.	3.0	480.2	
50' Lt.	3.1	480.1	
25'	3.1	480.1	

Notes Reduced.

483.24 ✓

36

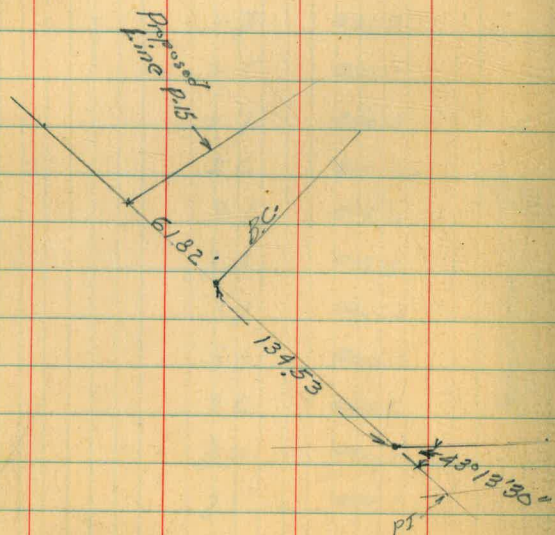
25' Rt. Conc. Plast Cabin	2.40	480.8	
50' Rt.	3.0	480.2	
70' Rt.	5.0	478.2	✓
chk. 819 in Elec. Pile	5.09	478.15	P. 18
		478.18	✓
		0.03	

Walker
Hazard
Hurdin
6-14-45

LOCATION PROPOSED WATER MAIN
from Existing 10" Main on Skyline Dr
to Proposed Tank Site - NO. 3

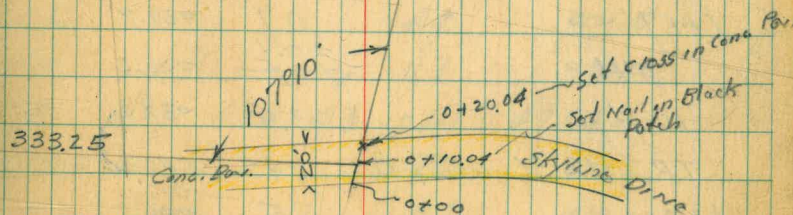
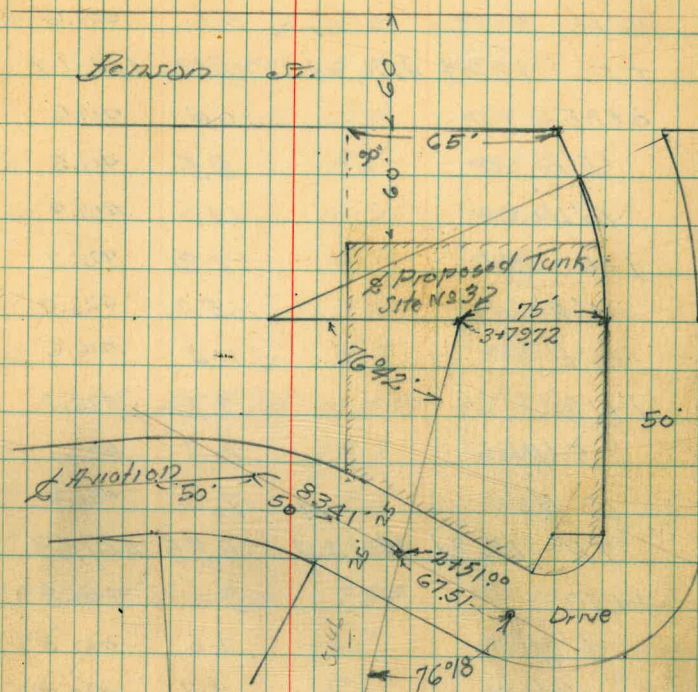
		B.M. Nail 0+10.72 P-34
12.36	415.22	402.86
0+00 South edge Paving	12.84	402.38
0+10.72 = 0.4' South of h. Paving	12.32	402.90
+20	11.84	403.38
+43	10.9	404.32
+51	6.3	408.9
5 Rt	4.9	410.3
9' Lt.	10.0	405.2

Cont. p-38



Indexed
E.S.R.

37



41522 ✓

0+70		1.8	413.9
5'RT		1.0	419.2
10'LT		5.6	409.6
T.P.	13.31 427.98	0.55	414.67
0+85		10.4	417.6
5'RT		8.5	419.5
10'LT		14.6	413.9
1+00		7.3	420.7
5'RT		5.0	423.0
10'LT		11.4	416.6
1+18		2.5	425.5
5'RT		0.4	427.6
10'LT		7.2	420.8
T.P.	12.81 440.44	0.35	427.63
1+40		9.6	430.8
5'RT		7.6	432.8
10'LT		4.7	435.7
1+59		3.9	436.5
5'RT		2.1	438.3
10'LT		5.2	435.2
1+67		0.7	439.7
5'RT		10.1 10.5	440.5
10'LT		3.0	437.4
T.P.	12.36 452.40	0.40	440.04
1+90		5.5	446.9
5'RT		4.3	448.1
10'LT		8.3	444.1

45240 ✓

38

2+00		1.6	450.8
5'RT		0.4	452.0
10'LT		6.0	446.4
T.P.	11.62 463.55	0.47	451.93
2+15		9.4	454.15
5'RT		8.6	455.0
10'LT		10.9	452.6
2+30		4.3	459.2
5'RT		3.6	460.0
10'LT		5.5	458.1
T.P.	12.73 475.74	0.53	463.02
2+40		12.7	463.0
5'RT		12.5	463.2
10'LT		13.2	462.5
2+51.00 = Int'l. Aviation		7.84	467.90 on stake
5'RT		6.7	469.0
10'LT		8.0	467.7
2+55		5.6	470.1
5'RT		5.3	470.9
10'LT		6.1	469.6
2+75		4.2	471.5
1+80		0.7	475.0
T.P.	8.27 484.43	0.28	475.46
3+00		7.2	477.2
1+25		5.2	479.2
1+50		4.6	479.8

LOCATION

48443 ✓

3+7972 on 2"x2" Redwood Hub 4.23 480.20

chk. on stake 3+4164 P.36 4.40 480.03 ✓
 480.04
 0.01

Sec # Tank Site

South 5.2 479.2

+20 4.6 479.8

Radius 4.23 480.20 79.84

+30 4.1 480.3

North 4.7 479.7

Sec B

N.E. 4.5 479.9

+20 4.0 480.9

R 4.23 480.20 80.04

+30' 4.4 480.0

+55 = SW 4.7 479.7

SEC - C

W 4.3 480.1

+20 4.3 "

R 4.23 480.20 80.34

+30 3.9 480.5

+55 = E 3.7 480.7

Sec D

SE 4.1 480.3

+20 3.9 480.5

R 4.23 480.20

Note! Redwood. 6.15.95

80.24
80.20

48443

39

R+30

4.2

480.7

+55 = NW

4.4

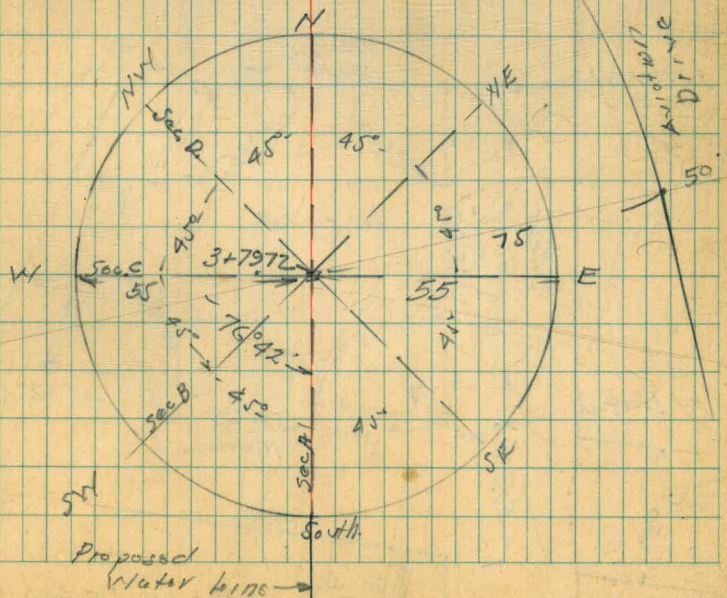
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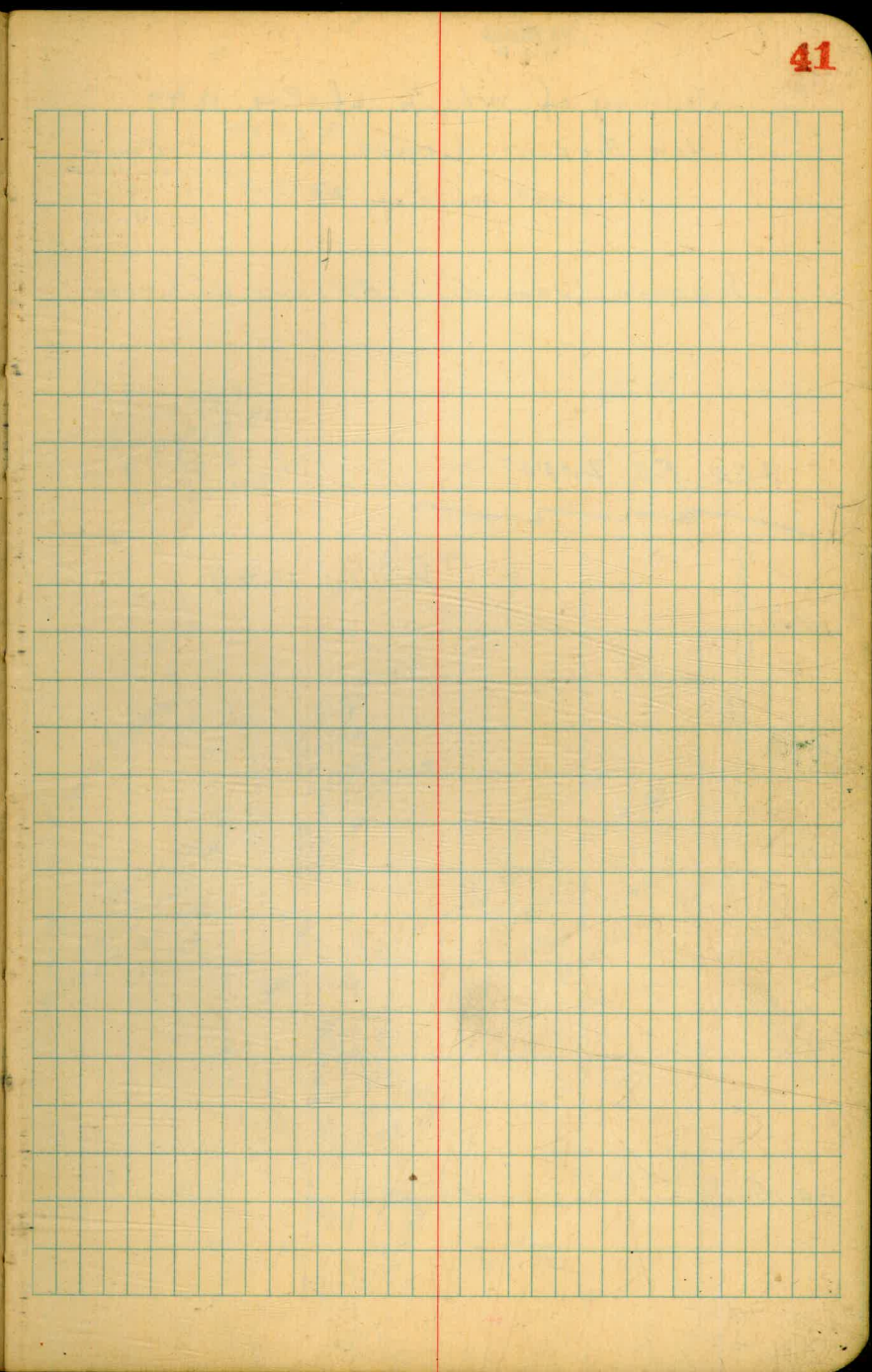
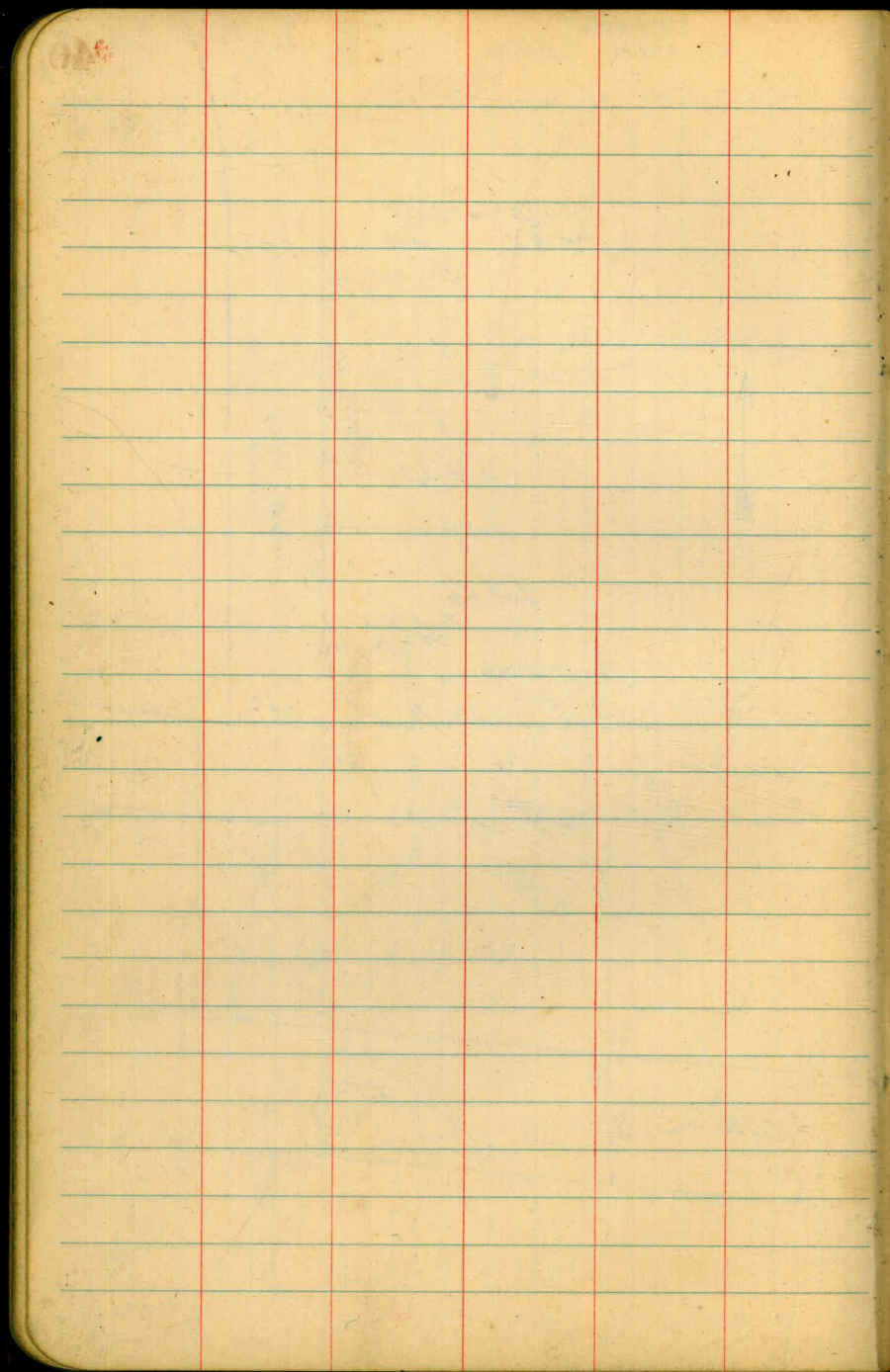
Average Elevations. 80.1

Exterior Elev. 80.0

E 80.2

Elev. 80.1





Survey of Wly $\frac{1}{2}$ of Pl. 1299

for Airport Lease

Set 2nd spikes on Pl.^s

C. Moore
Supt. of Moyn
W.F. Moore
12-10-45.

Suggest, leave dirt Rd. out of lease

SEE F.B. 2055

W $\frac{1}{2}$ 1299

± Torrey Pines Rd.
18.1322-60

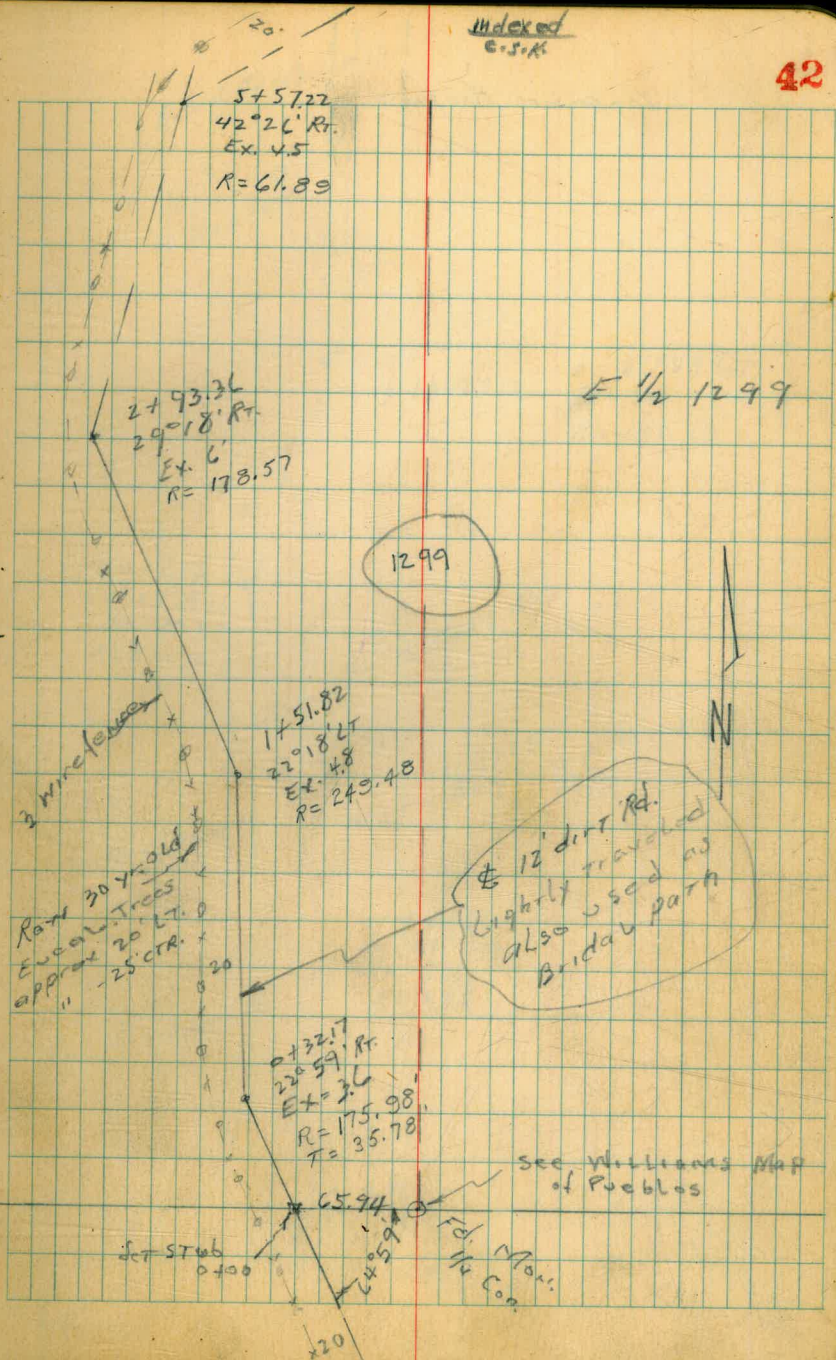
729' 30"

rd. ct.

Ed. Mon.

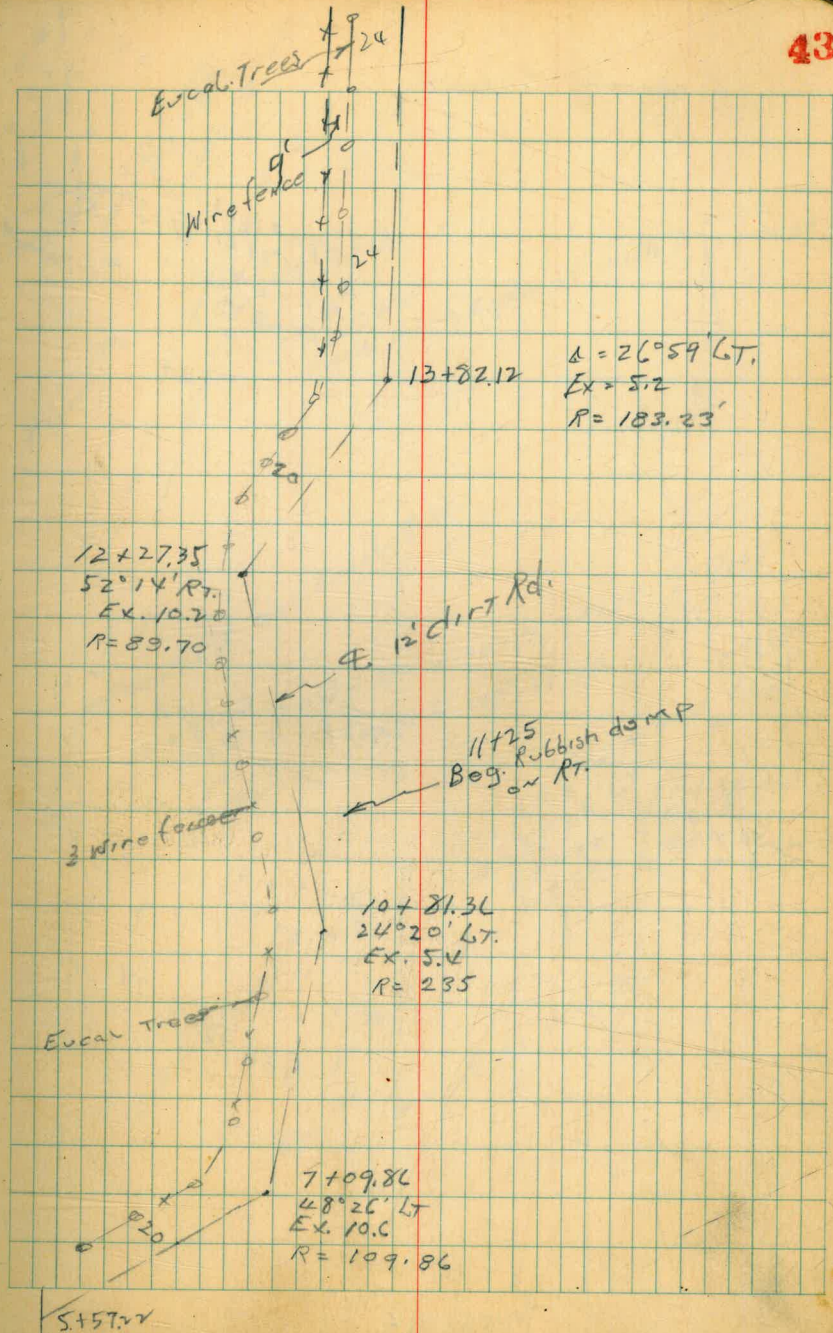
INDEXED
C.S.K.

42



Proposed Airport

43

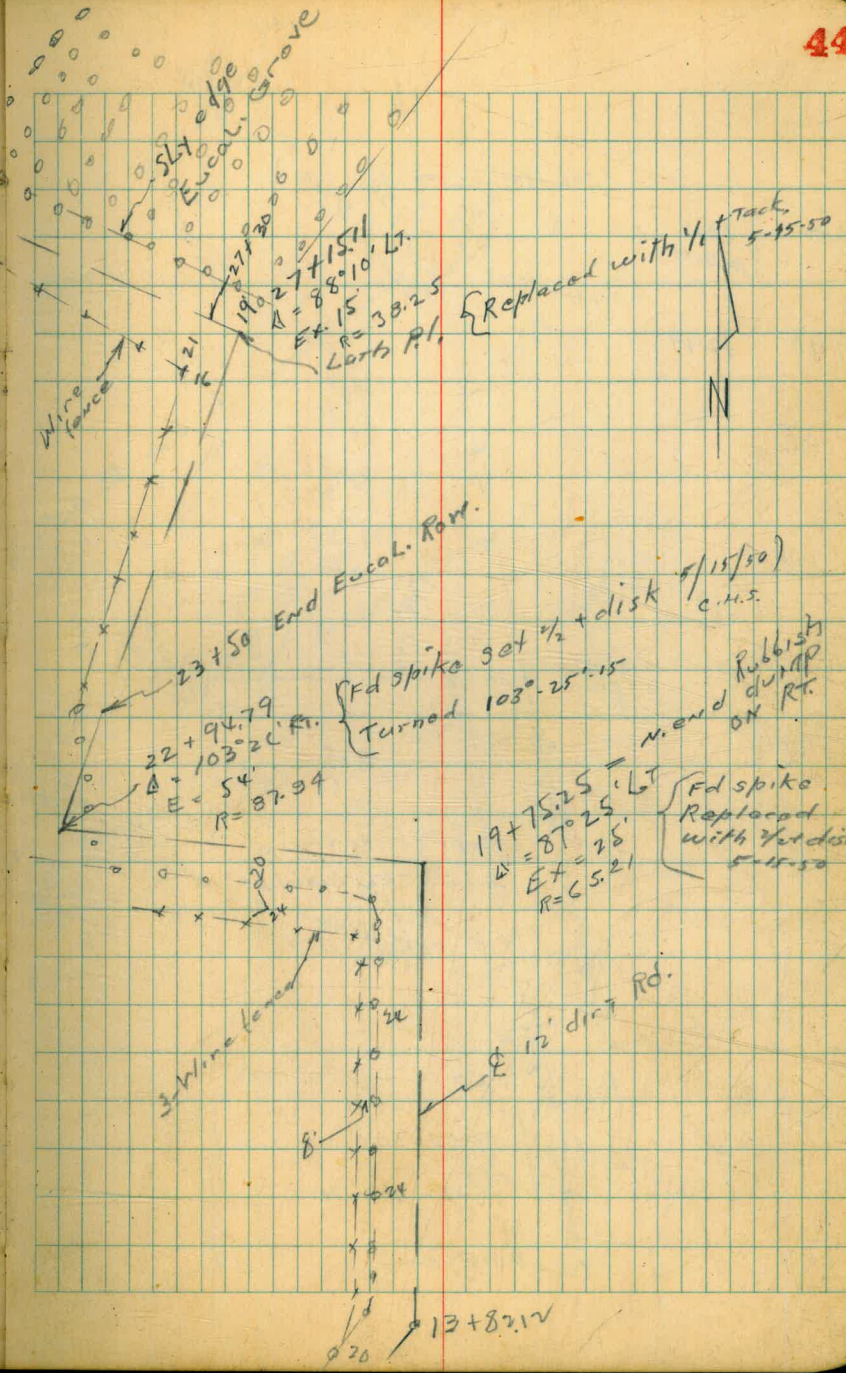


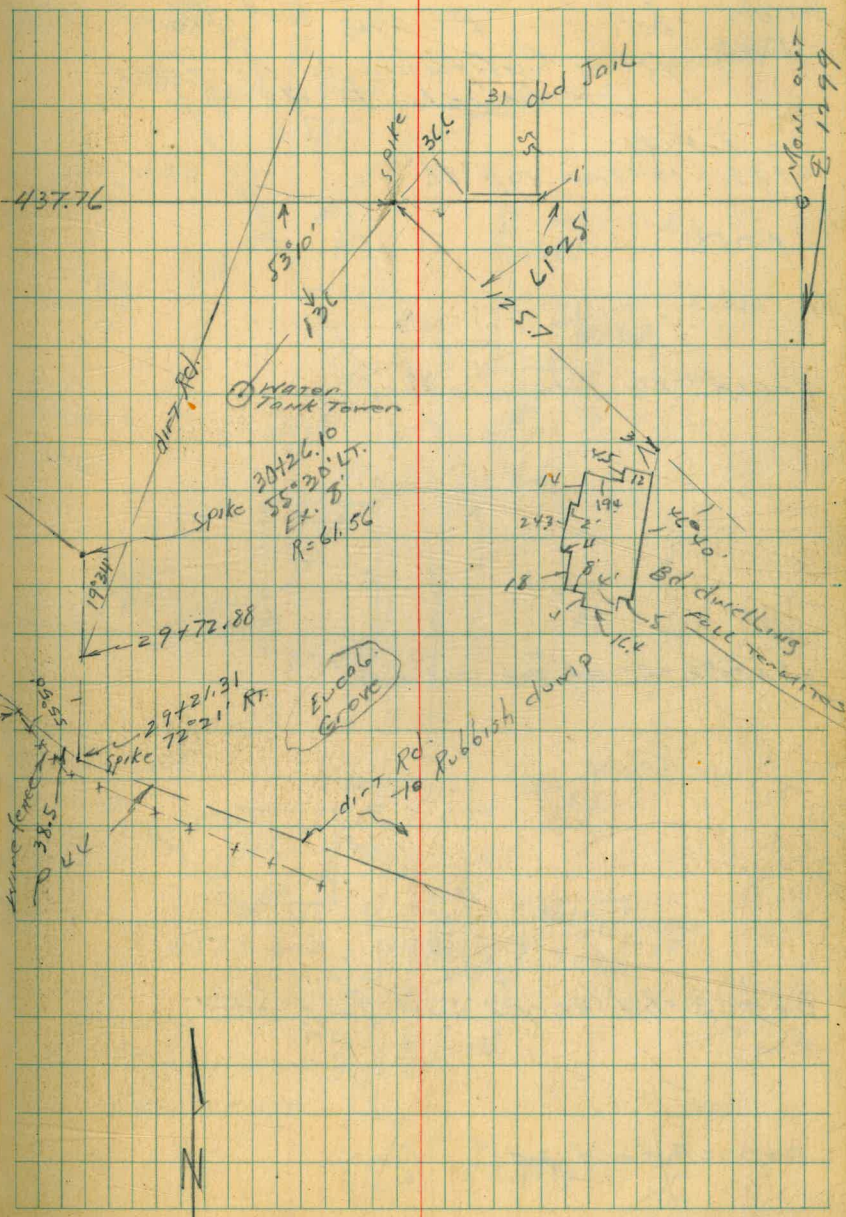
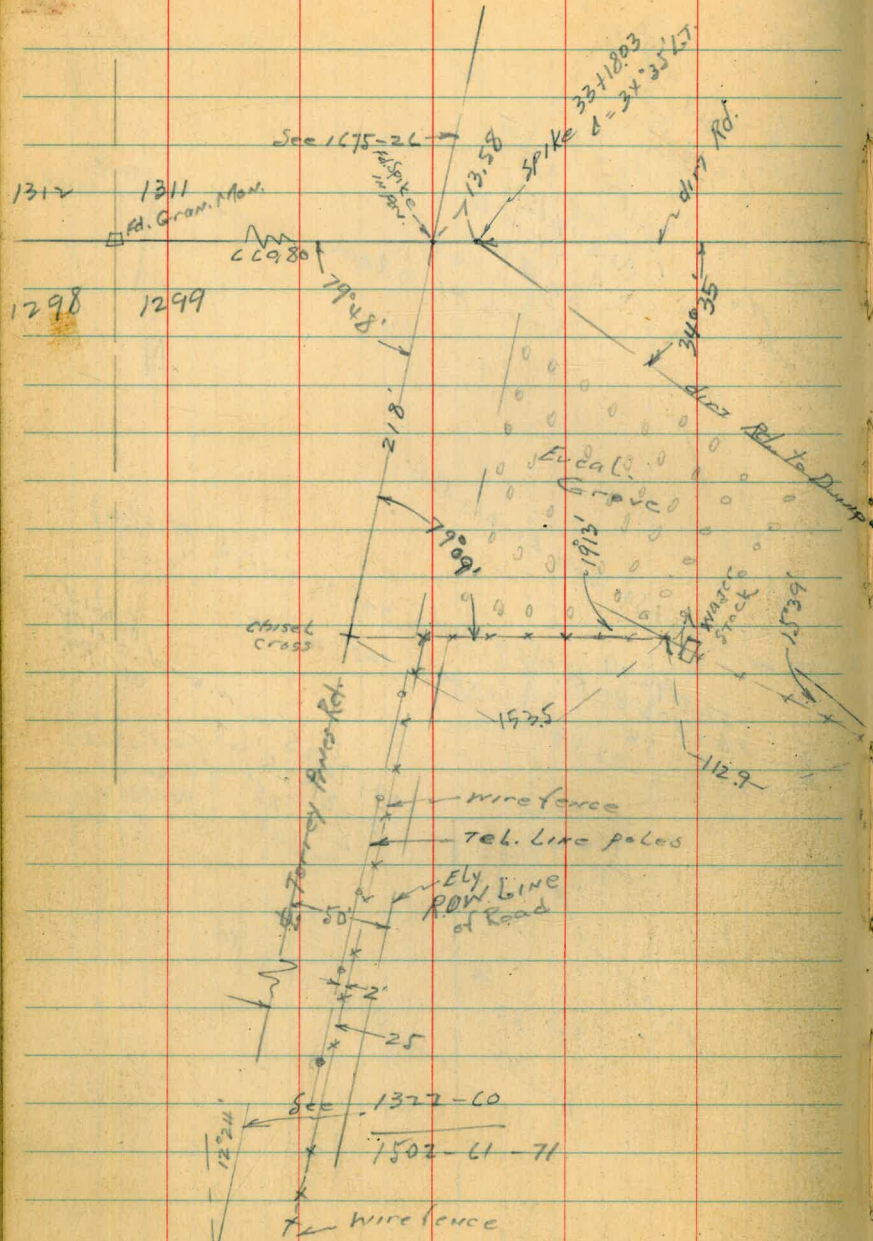
Proposed Airport

29+21.31
 $\Delta = 72^\circ 21' \text{ Rt.}$ SPIKE
 $EX = 11.4$
 $R = 47.73$

1/4" Water line
 May have to be
 changed.

See 1322-79





Walker SURVEY - PROPOSED CULVERT
 Hardin Through Blk. 191 - Middletown
 Hunter between Pringle and Stone sts.
 1-15-46 from California to Kettner
 ~ boxes p. 98 ~

Cont. P. 47
 2+43 - 12" Tree 10.5' Rt.

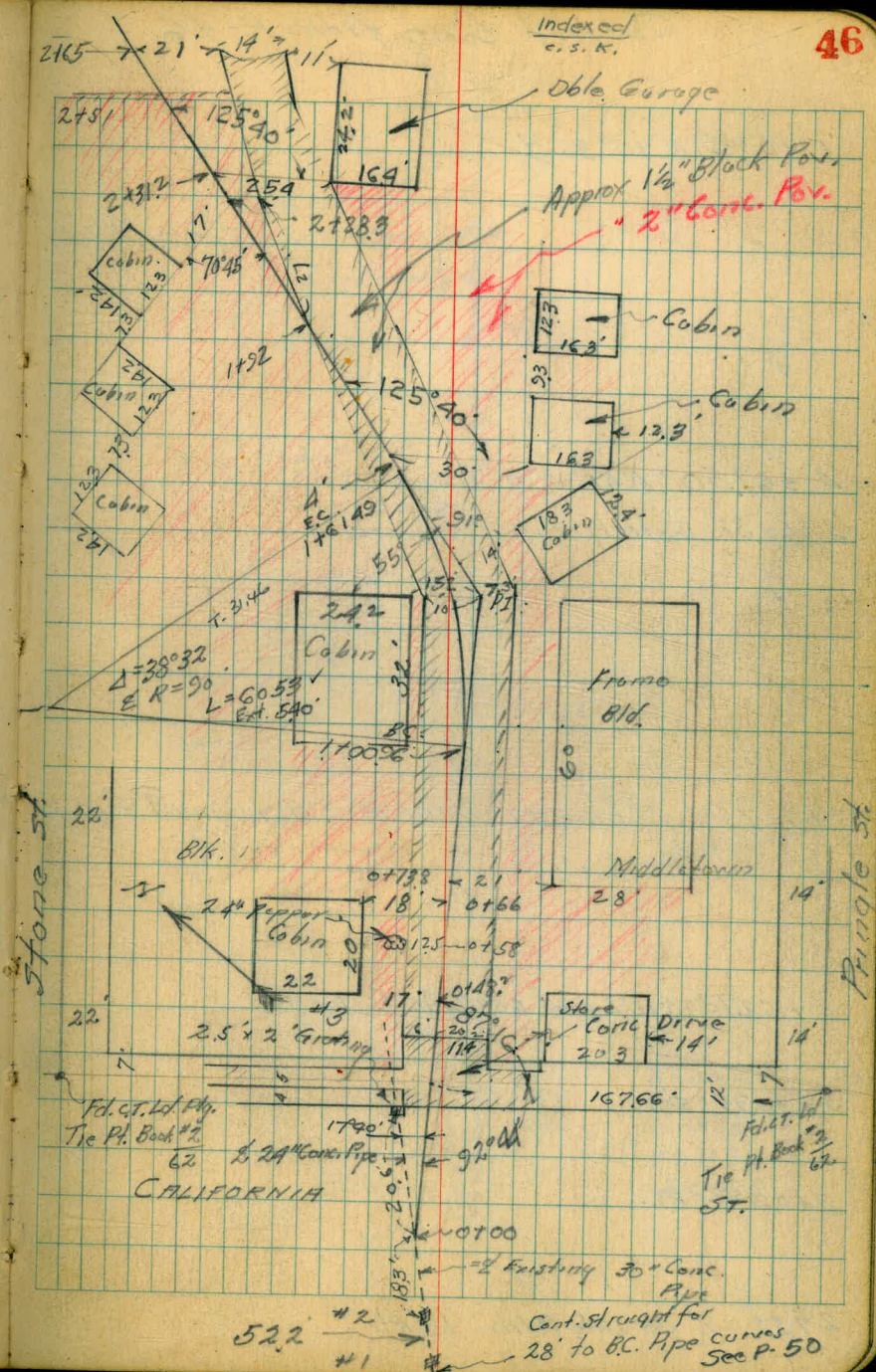
2+00

1+61.49 = EC set Nail in Box

1+00.96 = B.C. W. set Nail in Box

0+26.39 = Int. N.ELY 7' wide Calif. St.

0+00 = East end 30" Conc. Pipe =



Culvert Cont. from P-46

5+53.35 $\Delta 10^{\circ} 30' H$

4+67.50 = $\Delta R 3^{\circ} 0'$

4+60.38 = Easterly end 60" Conc. Culvert

3+96.75 = Int. Line 12' NWLY of SWLY line Titus St

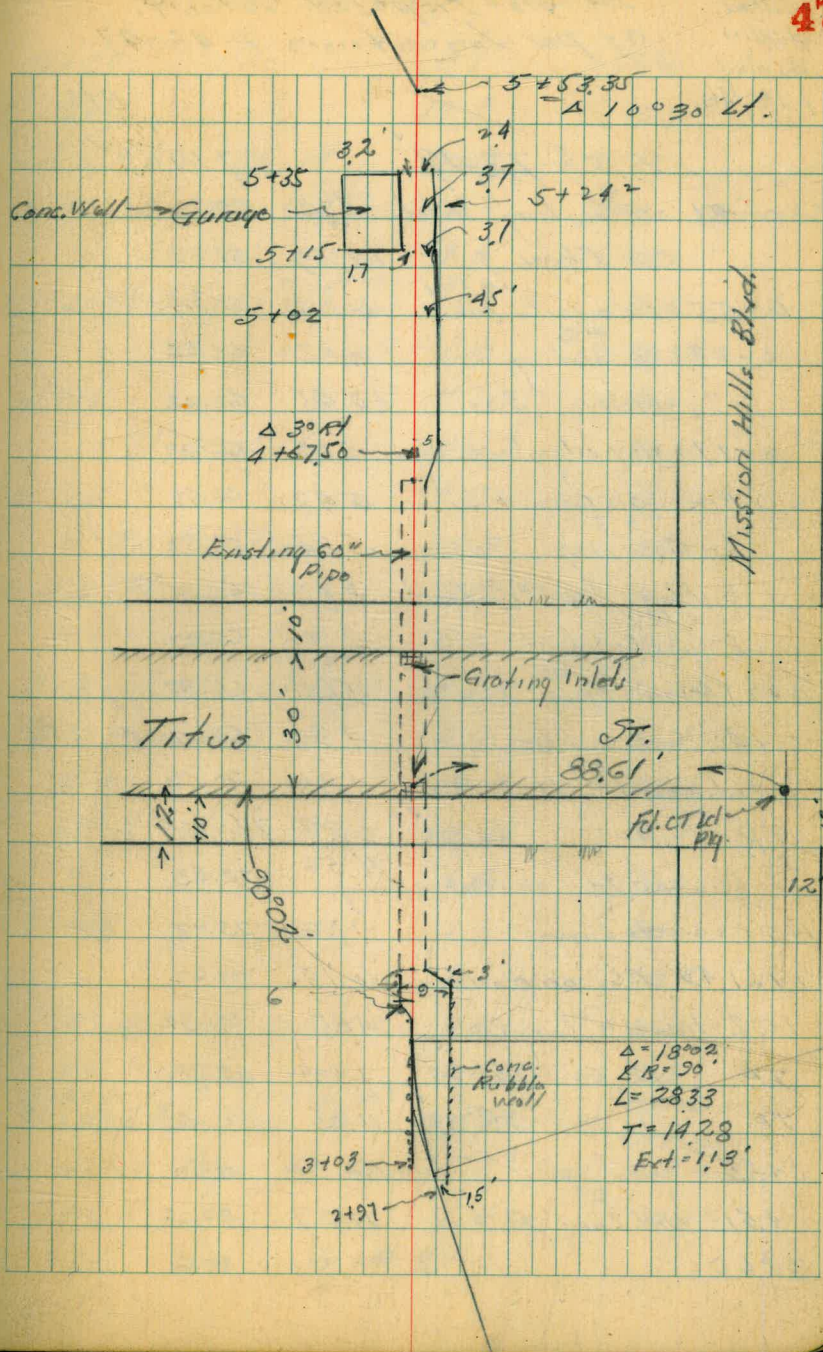
3+58.73 = NWLY end 60" Conc. Culvert.

3+30.25 = E.C.

3+02.62 = B.C.

2+52 = $\Delta 30"$ Date Polm 13' Rt

47



Walker
Hurdin
Hurdley
1-16-46

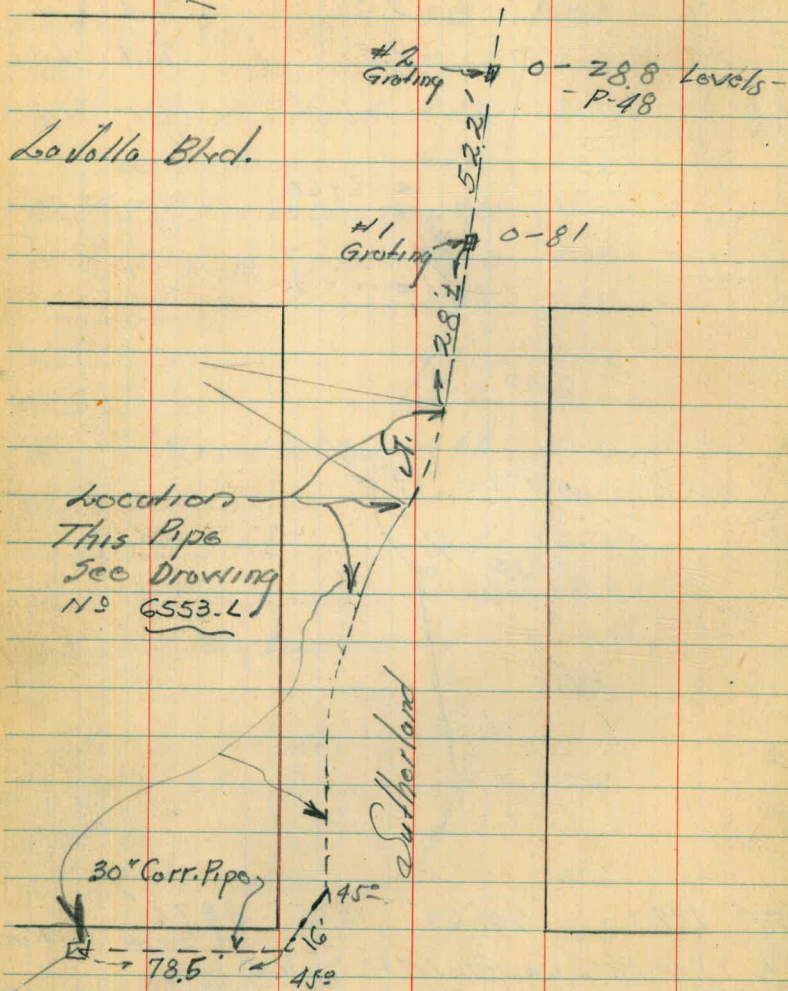
Levels - Proposed Culvert
as per location P-46-47

	5.28	72.47	67.12		
0-81 on Grating Inlet	67.4		65.73		
" " Flow 30"	12.59		59.88		
0-55 = 8' Lapolla Ave	6.03		66.99		
0-288 2' Grating	6.82		65.65		
" Flow 30"	10.45		62.02		
0-17 = WLY edge Conc. Pav	5.69		66.78		
0+00 on Conc. Pav	5.48		66.99		
" on Grating	5.64		66.83		
" Flow 24" Culvert	8.62		63.85		
" Ch Calif. st.	4.70		67.77		
0+21.4 in DRIVE FLY CB	5.60		66.87		
0+40.2 on Con Drive	4.30		68.17		
0+66 on 1 1/2" Black Pav	1.88		70.59		
T.P.	12.75	84.33	0.83	71.64	
1+00.26 = 85. Lth. on Nail in Paving			11.56	72.83	
1+31.22 = c/c Curve			2.22	75.17	
1+61.49 = E.C. on Nail			6.77	77.62	
1+92 = Int. 2 1/2" Conc. Pav			4.05	80.34	
T.P.	12.50	95.30	1.59	82.80	
T.P.	11.08	95.33	11.05	94.25	3+02.67 B.C. on stake
2+35			12.3	83.0	
+51 = end Conc. Pav.			11.07	84.26	
2+60			9.7	85.6	

95.33

48

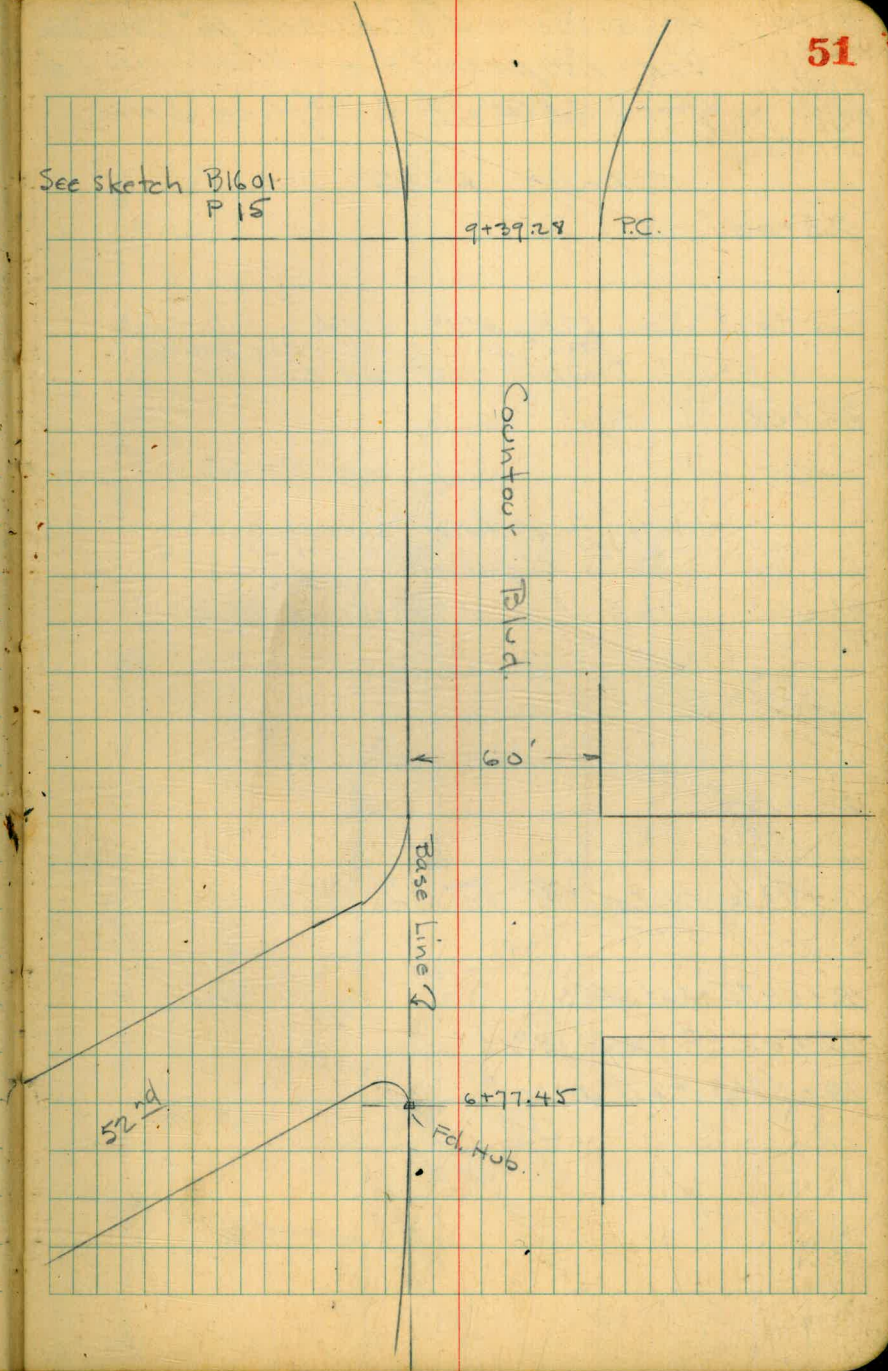
2+84		8.7		86.6
+90		12.1		83.2
3+02.62 = B.C. Rt		11.08		84.25
1+99 = End Broken Conc. Wall		11.2		84.1
" on Wall (15 ft)		7.2		88.1
(3+03) 5.3 Lth. = on Ground		8.8		86.5
" " " Wall		6.8		88.5
3+16		8.9		86.4
1.9 ft. of Wall		8.8		86.5
1.6 " on "		7.0		88.3
2' Rt. of Ditch.		10.3		85.0
5.4 ft. of Wall		9.3		86.0
" " on " on Lt		6.8		88.5
3+30.95 = E.C. of Wall		8.39		86.94
" on Wall		6.7		88.6
3' Rt. of Ditch		10.0		85.3
6.6 ft. of Wall		8.9		86.4
" " on "		6.4		88.9
3+48 at N. Wall		8.1		87.2
" on "		6.6		88.7
3' Rt. = of Ditch		9.8		85.5
5.6 " on Wall		6.0		89.3
3+58.73 on Flow Pipe		10.59		84.74
Nat. Pipe Has Approx 2' Dirt End to End				
3+63		2.4		92.9
				Cont. P-49



Moore St

Add. Elev. on Houses + Walks on Contour
Blvd. 51st to 52nd Used S.L. of Contour
Blvd. for Base line from 6+77.45 to 9+39.28

See sketch B1601
P 15



Walker
Haidin
Huntley
Bogg
2-1-46

LOCATION - PROPOSED 12" WATER MAIN
Via - Imperial Ave & Woodman St.
from 65th St. to Skyline Drive.

Leads P-59

23+00

+60.5 = Sewer M.H. 4' Lt. - E.M.H.
Elev. Location this Drain
+09 = Int. Drain See G. Book 210 or -

22+00

Note: from stations 21+00 to 26+00
- 12" Plumosa Palms on Lt. 185
from E. Proposed water line

21+00 18.5' Lt. of 12" Plumosa Palm

20+00

19+78.94 = P.O.T. = Int. 7.0' line 65th on South

19+53.75 = $\Delta H. 45^{\circ} 0'$

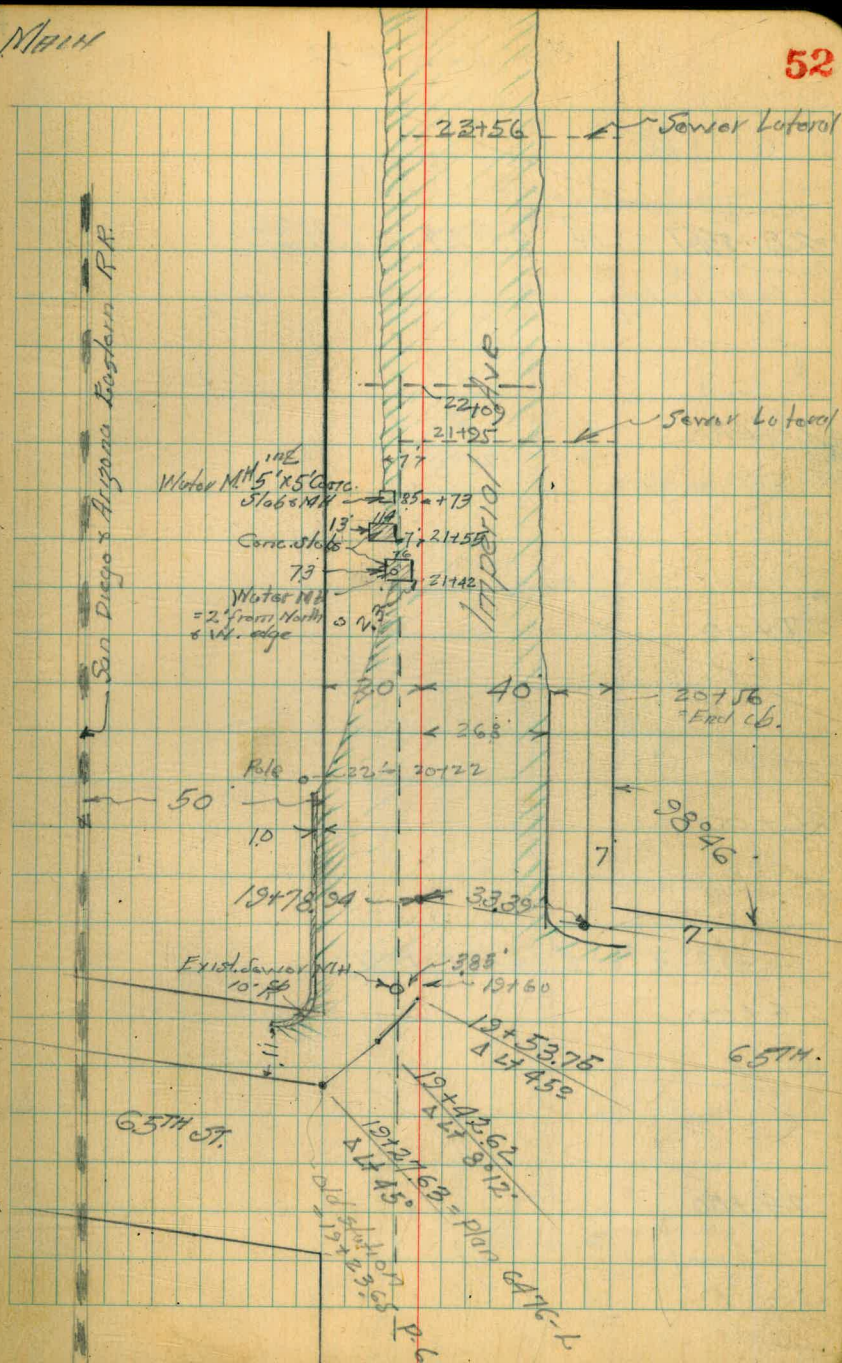
19+42.52 = $\Delta H. 8^{\circ} 12'$

19+27.63 = $\Delta H. 45^{\circ} 0'$

76 Broadway
22+66

MAIN

52



Cont. from p. 52

Use this
28+95.67 Δ Pt. 83°21'

Approx. (rough ch.)
0.7' longer than bags

28+00

27+00

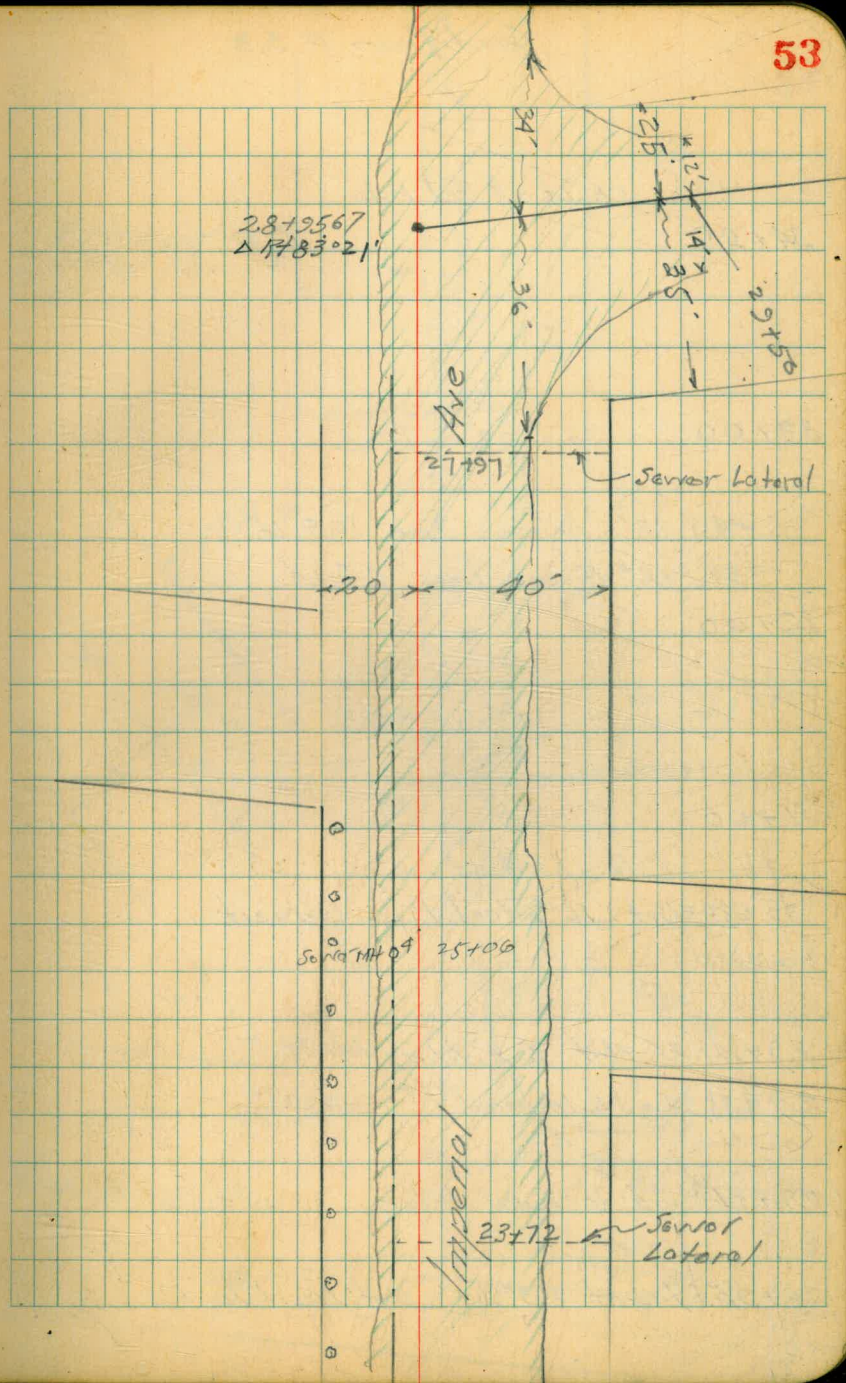
26+00

+0.3 4" dia. Sewer 14ft.

25+00

24+00

53



Cont. from p. 53

+12.5 3.5' Lt - 2 Tel. Pole

34+00

33+00

+40 12" Pepper Tree 10.5' Lt.

+34 - 12" Pepper Tree 8.5' Lt

32+00

31+00

+87 - Pole 10.4' Lt.

30+38 = Int. 16" Steel Pipe Culvert

30+00

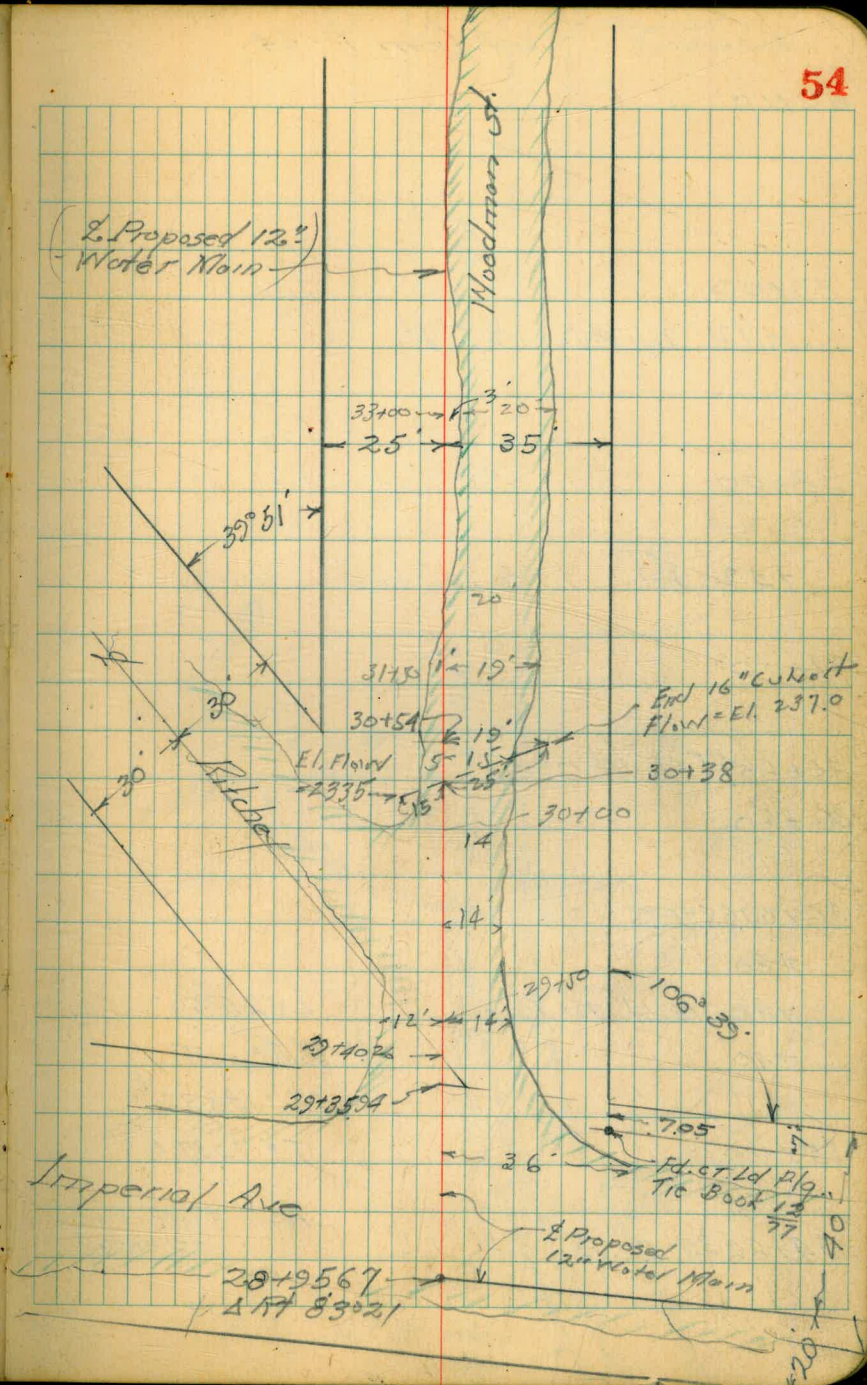
29+40.26 = Int. & Ritchey

29+35.94 = S.H. Imperial

(29+37) 4.5' Lt = Water Valve.

28+25.67 = 2 RT 83° 21' Set Nail in Paving.

54



Cont. from P-54

40+00

39+00

+72 Tel Pole 12.5' Lt.

38+00

+42 Top Pole 13.5' Lt.

37+00

36+60.45 = A RT 0° 01'

36+50

36+04.65 = E.C.

+80

+68 15' Lt. Tel Pole

$\Delta = 2.5^\circ 59'$

+40

$R = 305$

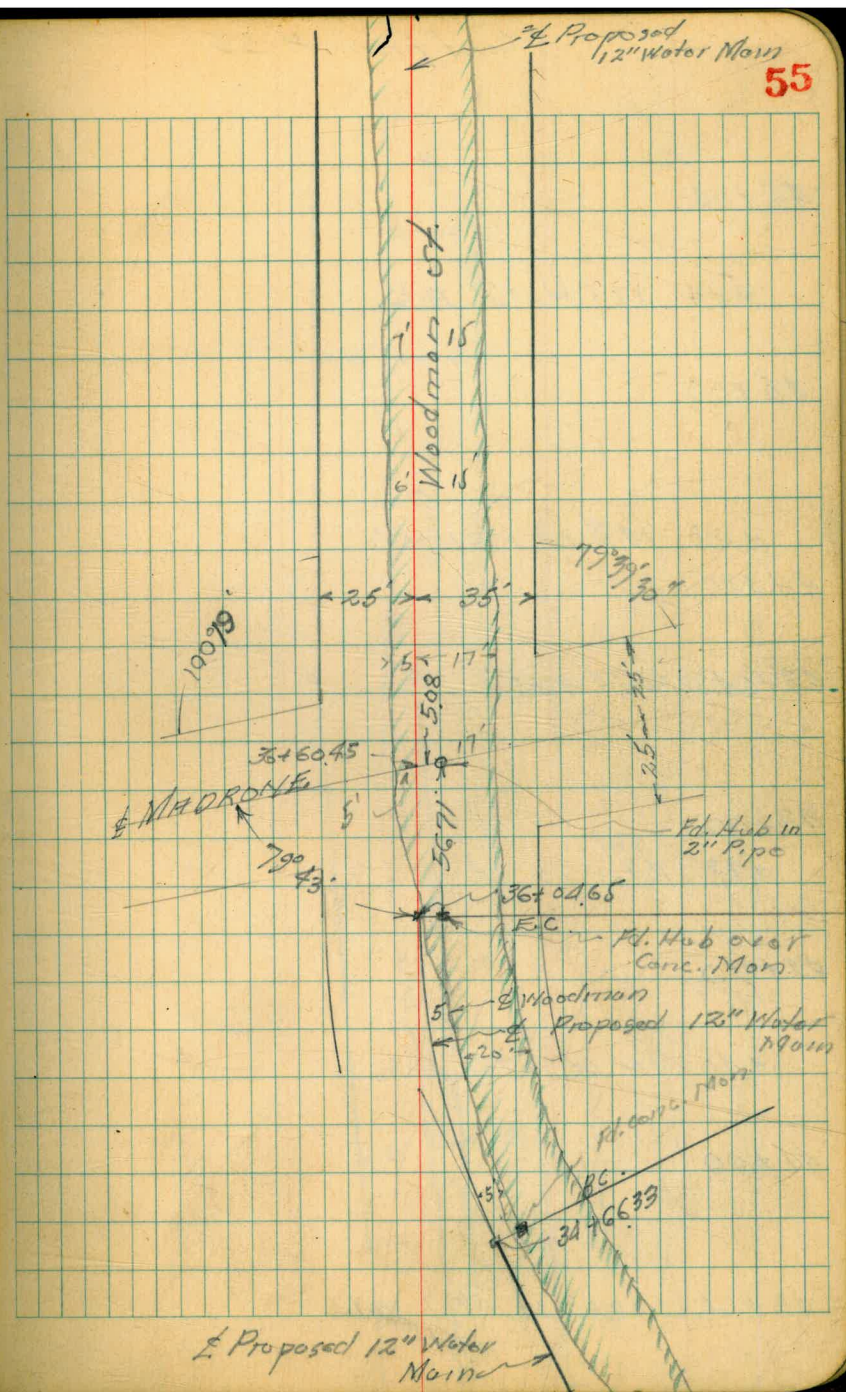
$L = 138.32'$

35+00

$T = 70.37'$

34+66.33 = B.C. RT set stake

Pos. 3' RT = E edge
22' wide



46+00

+44 17.5' Lt. Tol. Pole

45+00

+08 19.3' Lt = Tol Pole

44+00

43+64.39 = $\Delta 1.77$ 4°55'

43+00

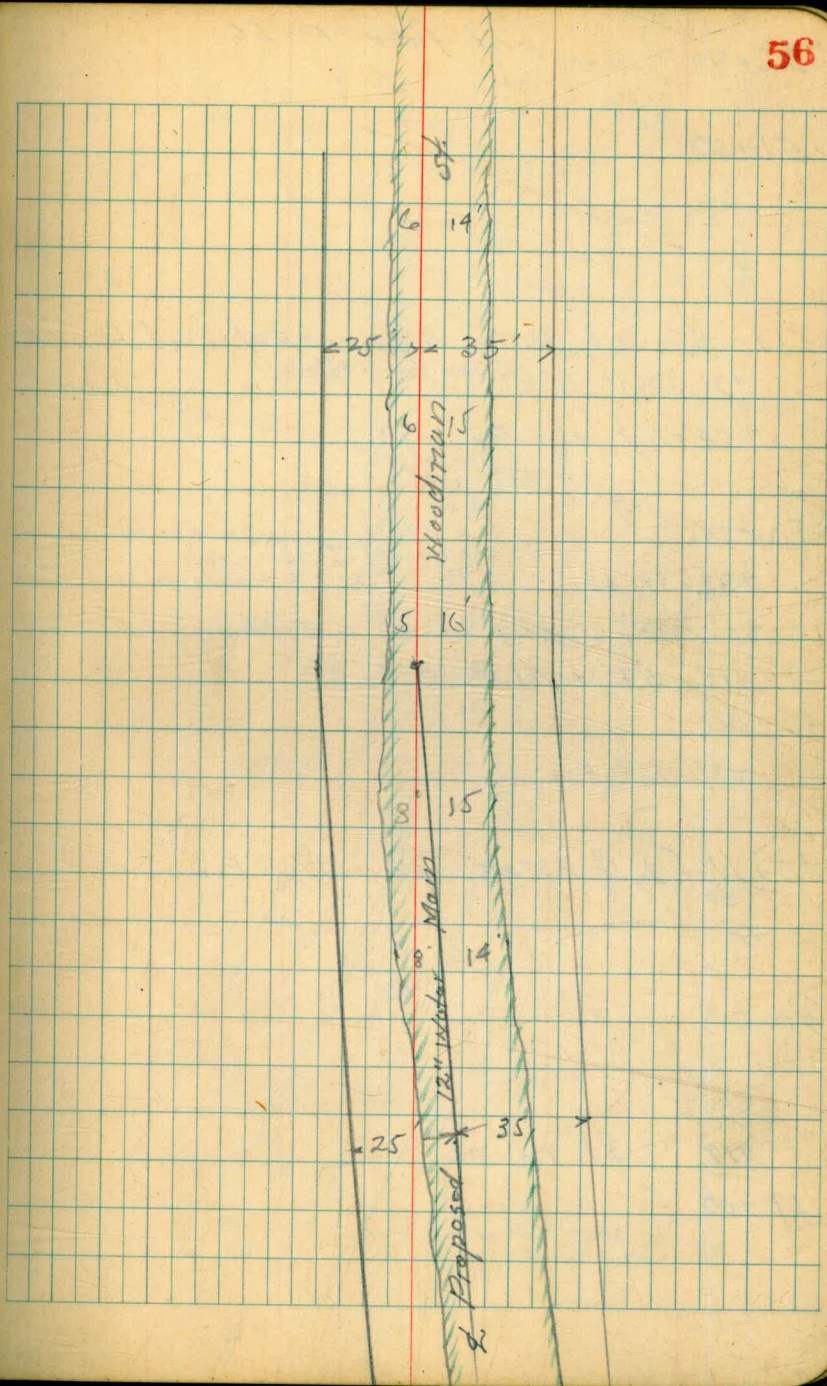
Tol
+73 Pole 12' Lt.

42+00

+40 12' Lt = Tol Pole

41+00

40+06 12.6' Lt = Tol Pole



52+00

Cont. from P. 56

51+50

51+01.55 = Int. S Line Benson = P.O.T. set Pav. Stake
+91 12' Rt = 16" Elec. Arc Lamp Pole

+54 = Int. edge Pav

50+00

Guto Valve 36" Water
+93.6 = N edge Conc. Box 6' x 8' = outside

+82.2 = 4" Blow off Valve 5.3 Lt

+15 5.4' Lt = Tol. Pole

49+00

+89 = Int. Pav

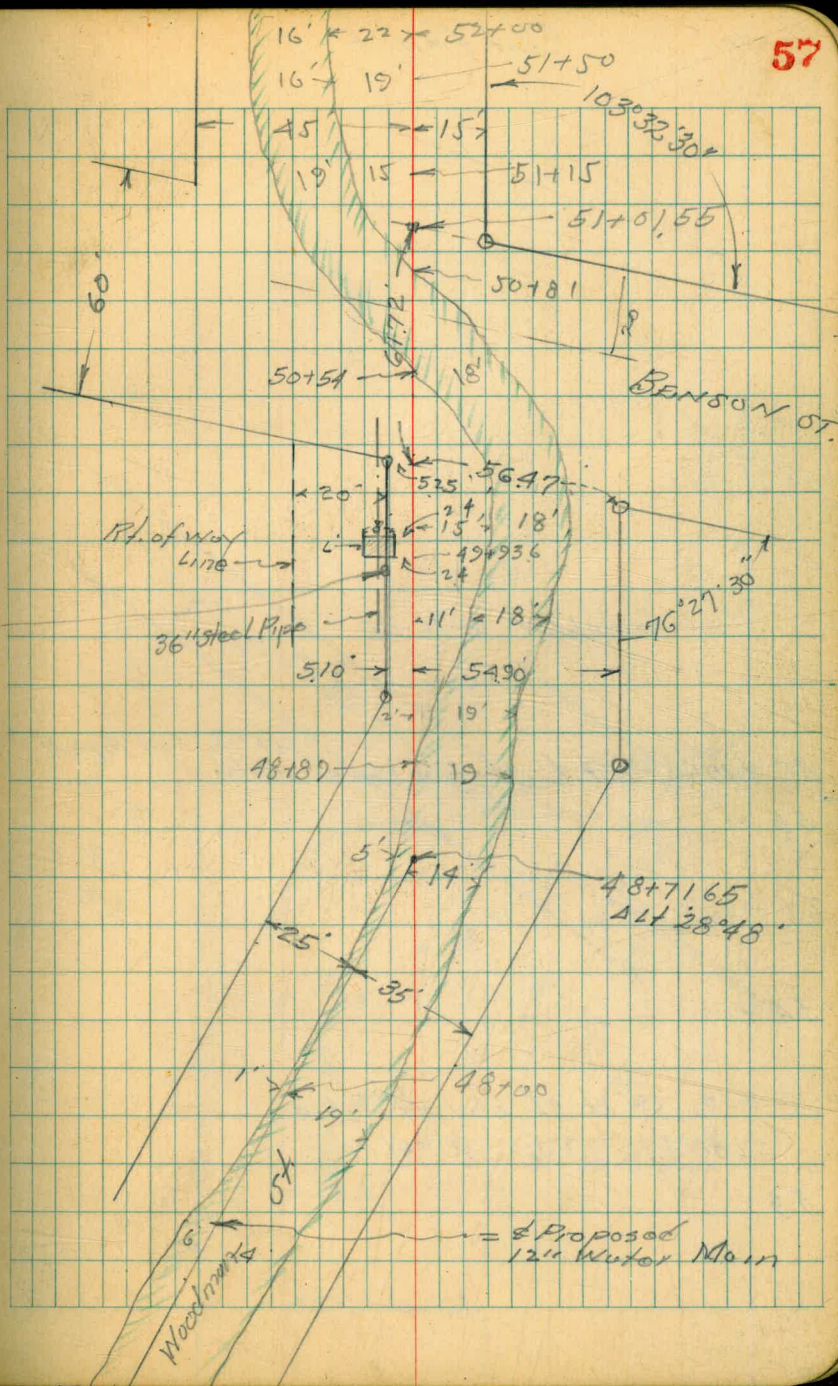
48+71.65 Δ Lt 28°48' set Nail in Pav

48+00

+19 18.34 Tol Pole

47+00

57



Completed 2-16-46

55 + 19.64 = Int. of Skyline Drive

Set Nail in Asphalt Patch

55 + 10

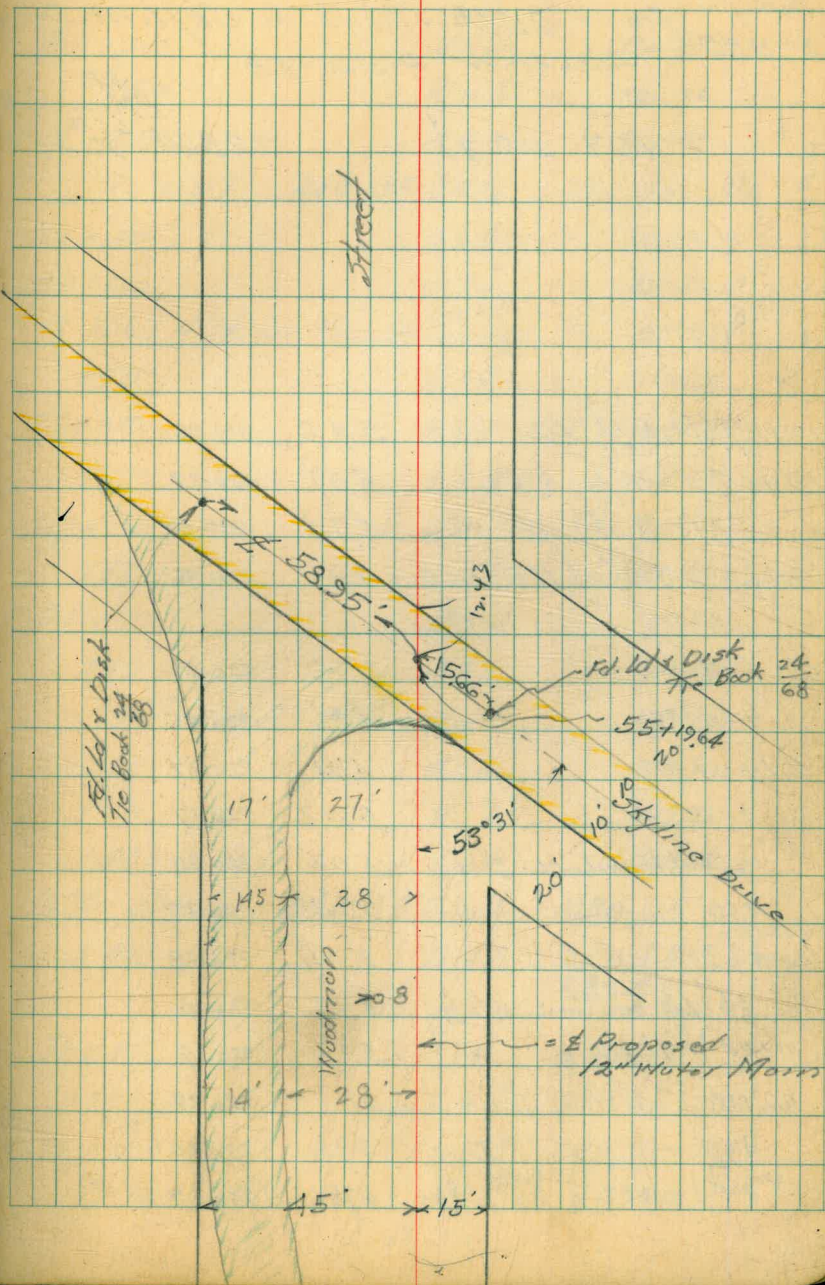
+50

54 + 00

+40 8' Lt = E Blow off valve

+18 E. loc. Pole 8' Pt.

53



Walker LEVELS - PROPOSED 12" WATER MAIN
 Hardin on Imperial Ave and on Woodman St
 Hunsley from 65th + Imp. to Skyline Drive
 2-15-46 Location D-52-58

Levels on 65th
 to Broadway
 P. 2 to 6

1.67 225.31 ✓
 223.64 ✓
 SE
 BM on Hunsley
 65th + Imp.
 Page 6

19+27.63 - 1 Lt. 45°	5.45	219.86
19+42.62 Δ Lt 8°12'	5.07	220.29
+53.75 Δ 45° Lt.	4.74	220.57
(19+60) 3.85 - 2 MH on Rim	4.85	220.96
" " Floor		
20+00	4.79	220.52
+50	4.82	220.95
21+00	4.94	220.37
+42	5.02	220.29
2.3 Lt. on Conc. slab.	5.03	220.28
+50	5.04	220.27
+73	5.07	220.29
8.5 Lt. on Conc. slab	5.13	220.18
(21+55) 7 Lt. " "	5.12	220.19
22+00	5.07	220.29
+50	4.91	220.90
(22+60) 4.0 Lt. of Sewer MH on Rim	4.94	220.37

225.31 ✓

23+00	4.72	220.59
+50	4.55	220.76
24+00	✓ 4.30	221.01
T.P. 11.47	233.32 3.46	221.85
24+50	11.76	221.56
25+00	10.76	222.56
(25+06) 4 Lt. on Rim Sewer MH	10.75	222.57
+50	9.78	223.52
26+00	8.79	229.53
+50	7.62	225.63
27+00	6.65	226.67
+50	5.58	227.72
28+00	4.20	228.92
+50	4.57	228.75
19.567 Δ Rt 83°21'	4.40	228.92
29+00	4.36	228.96
+18	4.12	229.20
+50	✓ 4.79	231.53
T.P. 10.90	241.55 2.67	230.65
chk BM on SW Jack	11.17	230.38
		230.40
		0.02
30+00	5.34	236.21
+50	✓ 2.47	239.08
T.P.		
31+00	10.58 252.08	0.05 241.50
2 Lt. Shankler	11.1	241.0

Woodman
 - Imp.

Cont. P. 60

252.08

Cont. from P-59

31+50	8.43	243.65
4' Lt. Shoulder Rd	2.1	243.0
10' Lt. Toe Fill	13.0	239.1
32+00	6.23	245.85
3' Lt. shoulder	7.0	245.1
7' = Toe Fill	10.0	242.1
32+50	3.8	248.3
2' Rt. on Pav	3.62	248.86
T.P. 12.55	263.40	1.23 250.85
33+00 = edge ^{Dirt} shoulder	12.1	251.3
3' Rt. on edge Pav	12.22	251.18
7' Lt. Toe Fill	15.1	248.3
33+50	8.4	255.0
34+00 = edge Pav	4.70	258.70
1' Lt. = shoulder	4.8	258.6
24' Lt. Bottom Ditch	14.0	249.9
34+50	2.1	261.3
+66.33 = B.C. Rt. on stake	1.92	261.98 ^{edge} shoulder
T.P. 10.67	272.99	1.08 262.32
6' Lt. = Toe Fill	15.3	257.7
35+00	11.2	261.8
3' Rt. shoulder	9.5	263.5
5' Rt. = edge Pav.	9.5	263.5
9' Lt. = Toe Fill	14.4	258.6
12' Lt. ^{South end of} Ditch	16.4	256.6

272.99 ✓

60

35+40	10.4	262.6
3' Rt	8.4	262.6
5' Rt. = edge Pav	8.5	262.5
35+80	8.1	262.9
36+04.65 = E.C. on stake	6.78	266.21 ^{East edge} Pav. ^{2.5} wide
36+60.45 Δ Rt 0°01'	4.84	268.15 ^{on Pav.}
37+00	✓ 2.61	270.38
T.P. 12.68	284.86	0.81 272.18
+50	11.59	273.27
38+00	8.86	276.00
+50	6.28	278.58
39+00	3.44	281.42
+50	✓ 0.83	282.03
T.P. 12.14	296.52	0.48 284.38
40+00	9.72	286.80
+50	7.05	289.47
41+00	4.22	292.30
+50	✓ 1.22	295.30
T.P. 12.06	307.55	1.03 295.49
42+00	9.32	298.23
+50	6.41	301.14
43+00	✓ 3.43	302.12
T.P. 12.87	320.04	0.38 307.17
+64.39 = Δ Rt 4°55'	12.42	307.62
44+00	10.47	309.57
+50	7.87	312.17

		320.04		
45+00		5.24	319.80	
+50	✓	2.48	317.56	
TP	13.05 332.35	0.74	312.30	
46+00		11.95	320.40	
+50		9.04	323.31	
47+00		5.96	326.39	
+50	✓	2.65	329.70	
TP	13.03 345.03	0.35	332.00	
48+00		11.66	333.37	
+50		8.87	336.66	
+71.65 ALT 28°48'		6.09	338.99	
+89 = edge Pav.		4.64	340.39	
49+00 in Ditch		5.3	338.7	
2' Rt = edge Pav.	✓	3.8	341.2	
TP	11.82 355.54	1.31	343.72	
49+20 in Ditch		13.6	341.9	
+30		11.1	344.9	
+50		9.2	346.3	
+96.6 on Ground opp 2 Box		4.9	350.6	
2.4 Lt. on Top Box		3.34	352.20	
7.14. on Top 36" Steel Pipe		2.42	346.12	
on Floor Box		13.40	342.12	
50+00		4.7	350.8	
+54 = Int edge Pav.	✓	2.91	353.13	
TP	12.50 367.82	0.22	355.32	
chk SW Pipe	Benson Woodman P-25	11.44	356.38 ✓	
			356.31	
			0.07	

		367.82		61
50+81 = edge Pav.		12.5	355.3	
+91 = P.O.T.		10.7	357.1	
51+01.55 on Stake		10.12	357.70	
+15		9.8	358.0	
+34		7.1	360.7	
+50		5.9	361.9	
19' Lt. on Pav.		6.03	361.79	
51+60		5.2	362.6v	
+84		1.9	365.9	
52+00	✓	0.2	367.6	
TP	12.33 380.72	0.43	367.39	
+12		12.3	368.4	
+23		10.6	370.1	
+50		7.7	373.0	
53+00		3.5	371.2	
28' Lt. on Pav.		2.5	378.2	
+40		3.3	377.9	
4" Blow off			376.30	
8' Lt. on Valve	✓	4.42	376.30	on Valve Stairs
TP	12.16 388.46	4.42	376.30	
on Top 36" Steel Pipe		15.86	372.60	
53+75		9.1	379.9	
54+00 Nat. Ground		7.2	381.3	10' Lt 1.5' lower
28' Lt. on Wedge Pav.		4.9	383.6	
54+18		5.1	383.9	
+23 Fill Ground		2.7	385.8	
+40 " "		1.4	387.1	

Cont. P-62

	388.46	✓	
TP	7.58	395.55	0.49 387.97
54+36 in Fill			2.4 386.7
6 ft.			13.0 382.6
27 ft.			10.2 385.2
54+70			93 386.3
+98			57 389.9
55+01 = N. edge Asphalt			6.0 389.6
+07.2 = N " Conc. Paving.			5.70 389.85
55+12.64 = Skyline			5.57 389.98
55+32.08 Sedge Par			5.57 389.98
chk S.M. Brass Plg.			5.62 389.93 ✓
Woodman Skyline			389.83 P-10
			0.10

Completed 2-16-46

Survey of Lot shown
for Court Case May 1, 1946.

○ = Set Flags at 3
Corners of Parcel
in NLY Portion of P.L. 275

C. Moore
Sundermeyer
Begg

See F.B. 871-31

Date 4-24-1946.

" Map # 1443

1:30 P.M. Called Lt. Lovell,

Fire Dept. NOT IN,

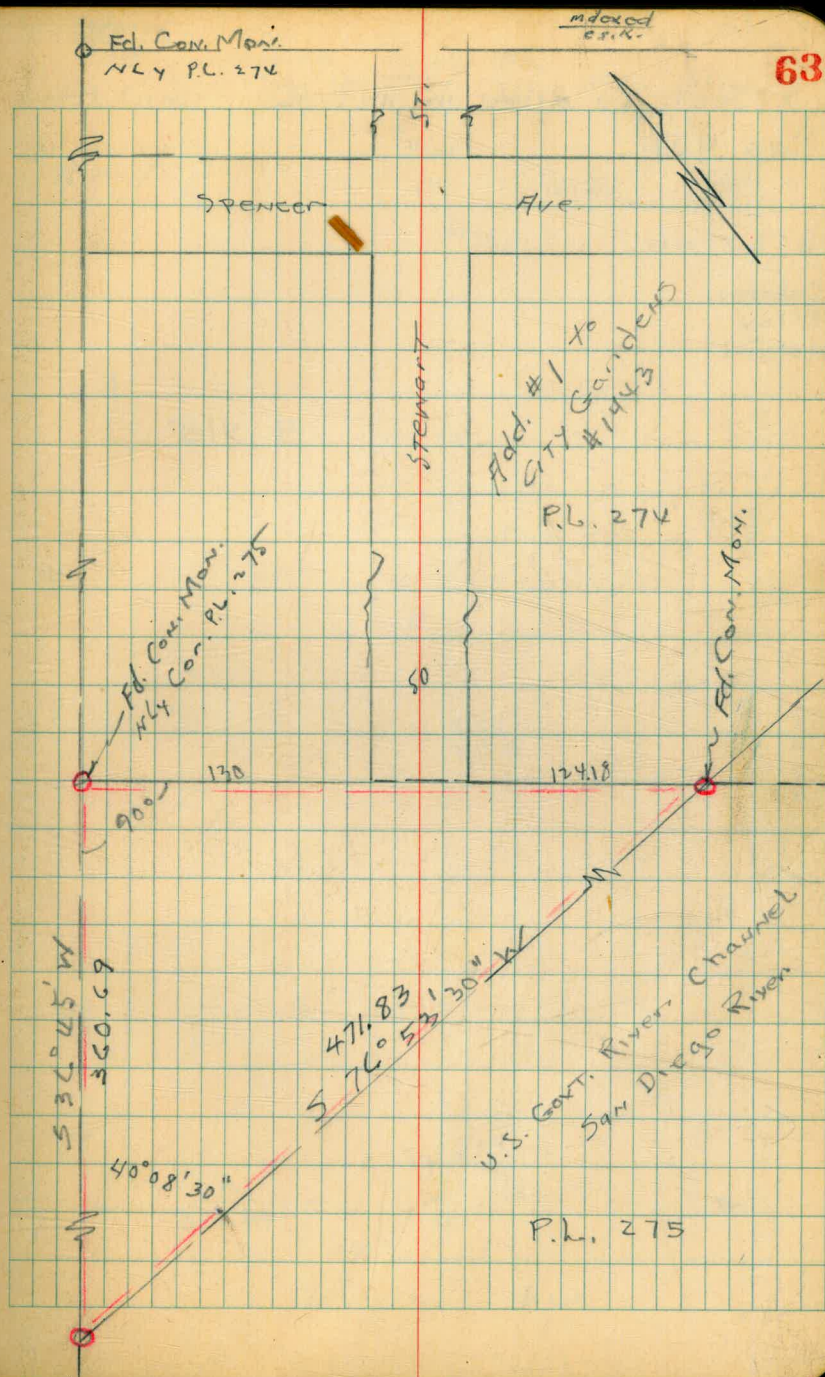
but left message

for him to Re-pictures

of Parcel and Flags

at Corners,

C.S.M.



(1+81) - Note: Show Sag in Gar. floor (no room below)

1+98 = N. end 4 Car. Gar. on Rt

1+96 = Sin. Gar. on Lt - Conc. floor

1+91 = 9' Lt. = P. pole - + 9.5' Lt. = end board fence

1+61 = S. end 4 Car Gar. on Rt. Conc. floor + Apron
Apron is rough slab.

1+59 - 9.8 Rt. = end Pickett fence

1+50 - 8.2 Rt. = N. side of 2.4' Conc. walk

1+50 - 9.8 Rt. - Beg. Pickett fence

1+50 - 9.9 Lt. - Beg. Board fence

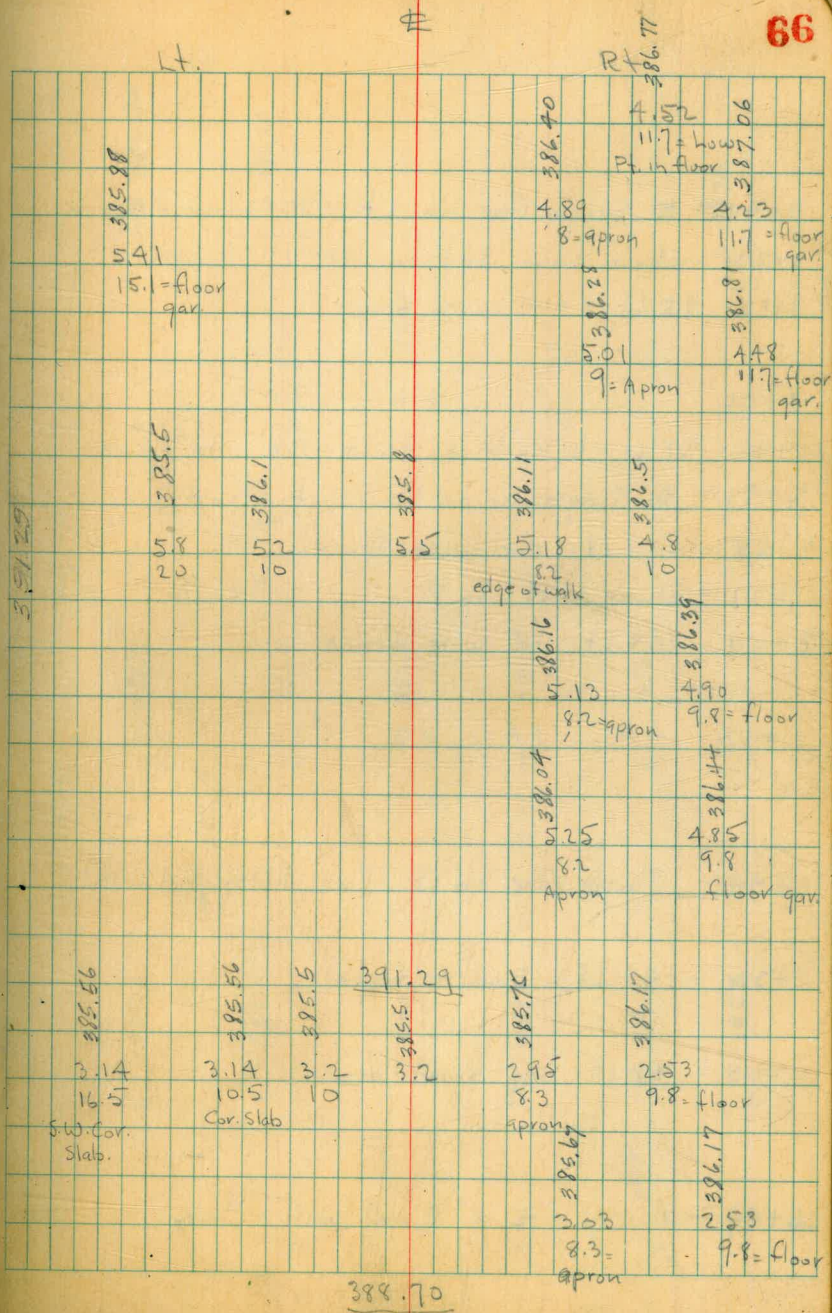
1+47 = N. end 7 Car. gar. on Rt.

1+29 - Beg. raise in Gar. floor.

T.P. 548 391.29 2.89 385.81

1+00 = 10.5 Lt. = S.E. Cor of 6x7' Conc. Slab. for
incinerator

0+89 = Show Raise in floor of Gar. on Rt.



3+44 = Single Gar. on Lt. Conc. floor + Apron

3+23 - Show low sect. on Rt.

3+22 - 9.8 Lt. = end wire fence

3+00

2+99 - 9.1 Lt. = P. pole + 9.6 Lt. = Beg. wire fence

2+93 = Single gar. on Lt. Dirt floor

2+85 - 10.1 Lt. = end wire fence

2+77 = Sewer M.H. on Φ 386.70 Eh. on Rim.

2+54 - 10.3 Lt. = Beg. wire fence

2+50

2+44 - Single Gar. on Lt. - Conc. floor + Apron

2+30 - 9.8 Lt. = End B. fence

2+00 - 9.9 Lt. beg. board fence

1+99 - 10' Rt. = 8" E.+W. wall - Conc.

	Lt.	Φ	Rt.
3+44	1.4 14.7 floor Gar.	386.85 4.44 10.2 Apron	387.1 4.7 20
3+23			
3+22			
3+00			
2+99	396.6 1.6 5.6 4.7 14.8 = floor gar.	386.7 4.5 10	387.0 4.3 3.9 10
2+93			
2+85			
2+77			
2+54	386.23 5.06 12.6	385.7 5.6 386.13 5.16 9.7	386.3 5.0 386.4 5.9 10
2+50			
2+44			
2+30	386.6 5.1 386.0 0.3	386.2 5.1 386.0 0.3	386.9 4.4 10 386.9 4.4 10
2+00			
1+99			387.9 3.32 = Top of wall 10

391.29

4+82 = N. end of cb. + 2' walk on Lt. + S. end of 2 Car gar. on Lt. - 1 Single Gar. on Rt. - Conc. floor + apron
 Conc. floor + Apron

4+50 = 9.6 Lt. = Beg. Slat fence + 9.8 Lt. = edge of 4" curb - E. + W. and N. + S. along 2' Conc. walk

4+38 = N. end Doub. Gar on Lt.

4+16 = S. end Double gar. on Lt. Conc. floor + Apron

4+00 = 8.8 Lt. = P. pole

3+92 = Single gar. on Lt. - Dirt floor

T.P. 5.69 393.12 3.86 387.43

3+50

387.94	388.44	388.02	388.53	388.2	388.51	388.92
5.18	4.68	5.10	4.8	4.9	4.61	4.20
12	10	8.2	8	10	13.6	15.9
on back of walk	edge of cb. + floor of gar.	- edge of Apron			apron	floor
387.92	388.47	388.1	388.2	387.9	388.2	388.92
5.20	4.65	5.0	4.9	5.2	4.9	4.20
12.2	9.8	9.8	10	10	20	
Back of walk	edge wall top car.	ground				
387.71	388.16	388.16	388.2	387.9	388.2	388.92
5.41	5.46	5.46	4.9	5.2	4.9	4.20
15.6	9.7	9.7	10	10	20	
floor	apron	apron				
387.70	387.64	387.64	387.7	387.9	388.2	388.92
5.42	5.48	5.48	4.9	5.2	4.9	4.20
15.6	9.7	9.7	10	10	20	
floor gar.	apron	apron				
387.5	387.5	387.5	387.8	387.9	388.2	388.92
5.6	5.6	5.6	5.3	5.2	5.0	4.20
10	10	10	10	10	10	10
13.8	13.8	13.8	13.8	13.8	13.8	13.8
floor Gar.	floor Gar.	floor Gar.				
387.1	387.2	387.2	387.2	387.3	387.3	386.9
4.2	4.1	4.1	3.9	4.0	4.4	4.4
20	10	10	10	10	20	20
			393.12			
			387.4			
			391.29			

5+85

T.P. 3.01 391.46 4.67 388.45

5+60

5+34 - 9.5 Lt. = end wire fence

5+32 - 13.5 Lt. = 4' Conc. walk

5+30 = 3' Conc. walk on Rt. + 9.7 Lt. = Beg. wire fence

5+07 = 1' Sing. Gar. on Lt. - Conc. floor

5+05 = 1' Sing. Gar. on Rt. - Dirt floor

5+00 = 8.7 Lt. = P. pole

4+99 = N. end 2 car Gar. on Lt. Conc. floor + apron

4+93 = 1' Sing. Gar. on Rt. Conc. Apron + Dirt floor

	$\begin{array}{r} \text{Lt.} \\ 388.68 \\ - 2.9 \\ \hline 385.78 \end{array}$	$\begin{array}{r} 388.4 \\ - 3.1 \\ \hline 385.3 \end{array}$	$\begin{array}{r} 388.70 \\ - 2.3 \\ \hline 386.40 \end{array}$
	$\begin{array}{r} 388.7 \\ - 4.4 \\ \hline 384.3 \end{array}$	$\begin{array}{r} 391.46 \\ - 388.5 \\ \hline 2.96 \end{array}$	$\begin{array}{r} 388.8 \\ - 4.3 \\ \hline 384.5 \end{array}$
388.68	$\begin{array}{r} 4.44 \\ - 1.35 \\ \hline 3.09 \\ \text{edge walk} \end{array}$	$\begin{array}{r} 388.2 \\ - 4.9 \\ \hline 383.3 \end{array}$	$\begin{array}{r} 388.5 \\ - 4.6 \\ \hline 383.9 \end{array}$
388.36	$\begin{array}{r} 4.76 \\ - 11.6 \\ \hline -7.84 \\ \text{floor gar.} \end{array}$	$\begin{array}{r} 388.5 \\ - 4.8 \\ \hline 383.7 \end{array}$	$\begin{array}{r} 389.00 \\ - 10.4 \\ \hline 378.60 \\ \text{edge of walk} \end{array}$
388.22	$\begin{array}{r} 4.90 \\ - 10.2 \\ \hline -5.30 \\ \text{floor} \end{array}$	$\begin{array}{r} 388.2 \\ - 4.9 \\ \hline 383.3 \end{array}$	$\begin{array}{r} 388.4 \\ - 4.7 \\ \hline 383.7 \end{array}$
388.94	$\begin{array}{r} 4.90 \\ - 1.7 \\ \hline 3.20 \\ \text{apron} \end{array}$	$\begin{array}{r} 388.0 \\ - 5.1 \\ \hline 382.9 \end{array}$	$\begin{array}{r} 389.1 \\ - 4.0 \\ \hline 385.1 \\ \text{Dirt floor} \end{array}$
388.78	$\begin{array}{r} 4.90 \\ - 10.2 \\ \hline -5.30 \\ \text{floor} \end{array}$	$\begin{array}{r} 388.4 \\ - 5.1 \\ \hline 383.3 \end{array}$	$\begin{array}{r} 388.85 \\ - 4.7 \\ \hline 384.15 \\ \text{Dirt floor} \end{array}$
388.78	$\begin{array}{r} 4.64 \\ - 12.2 \\ \hline -7.56 \\ \text{edge apron} \end{array}$	$\begin{array}{r} 388.4 \\ - 5.1 \\ \hline 383.3 \end{array}$	$\begin{array}{r} 388.85 \\ - 4.27 \\ \hline 384.58 \\ \text{Back apron floor} \end{array}$
		$\begin{array}{r} 393.12 \\ - 388.5 \\ \hline 4.62 \end{array}$	

LISTED GWE

X-Sect 20' Alley in Block 32 - Fairmount
Add. - Map 1035

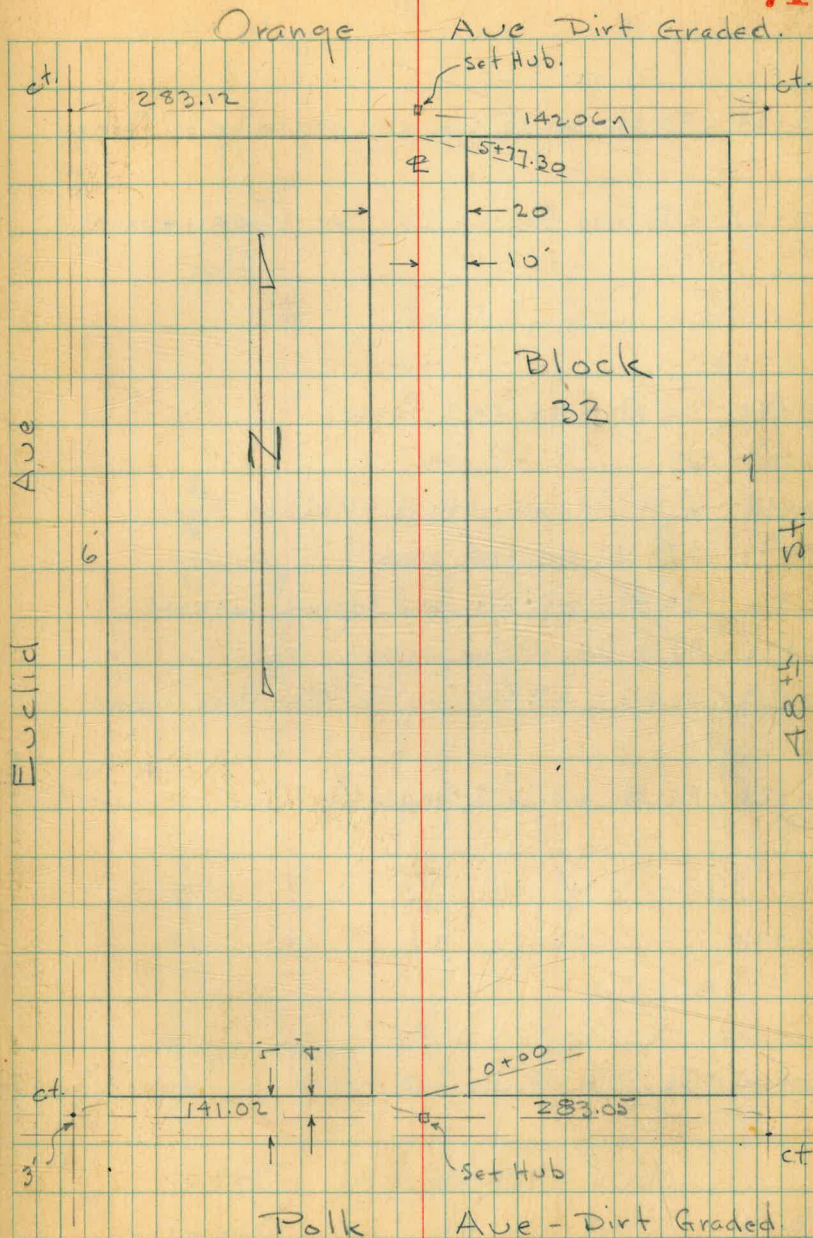
8-7-46

Plotted Am.

8/26/46.

Osborne
McCoy
Hardin
Waddel

71



T.P 6.02 349.84 143 343.82

4+80

4+75 - 9' Lt. = Tel. + P. pole + 9.8 Lt. = beg. board fence
4+72 = N. end 4 Car Gar. on Lt.

4+63 - 15.8 Rt. = 2 Doub Gar. - Dirt floor

4+50

4+38 - S. end 4 Car. gar. on Lt. - Conc. floor + apron.

4+00

3+99 - 16.3 Rt. = 2 Story Apts. bottom = Conc. floor

3+75 - 10' Lt. = end wire fence

3+62 - 10' Lt. = 3' Conc walk

Lt. Rt.

20
20
43.0

10
10
43.3

18
43.8

10
10
44.0

258
196 = floor
42.37

274
147 = apron
42.21

0
15.8 = floor
44.25

29
42.1

29
42.1

26
42.4

263
196 = floor
42.38

287
147 = apron
42.08

10
10
41.0

20
40.3

10
40.4

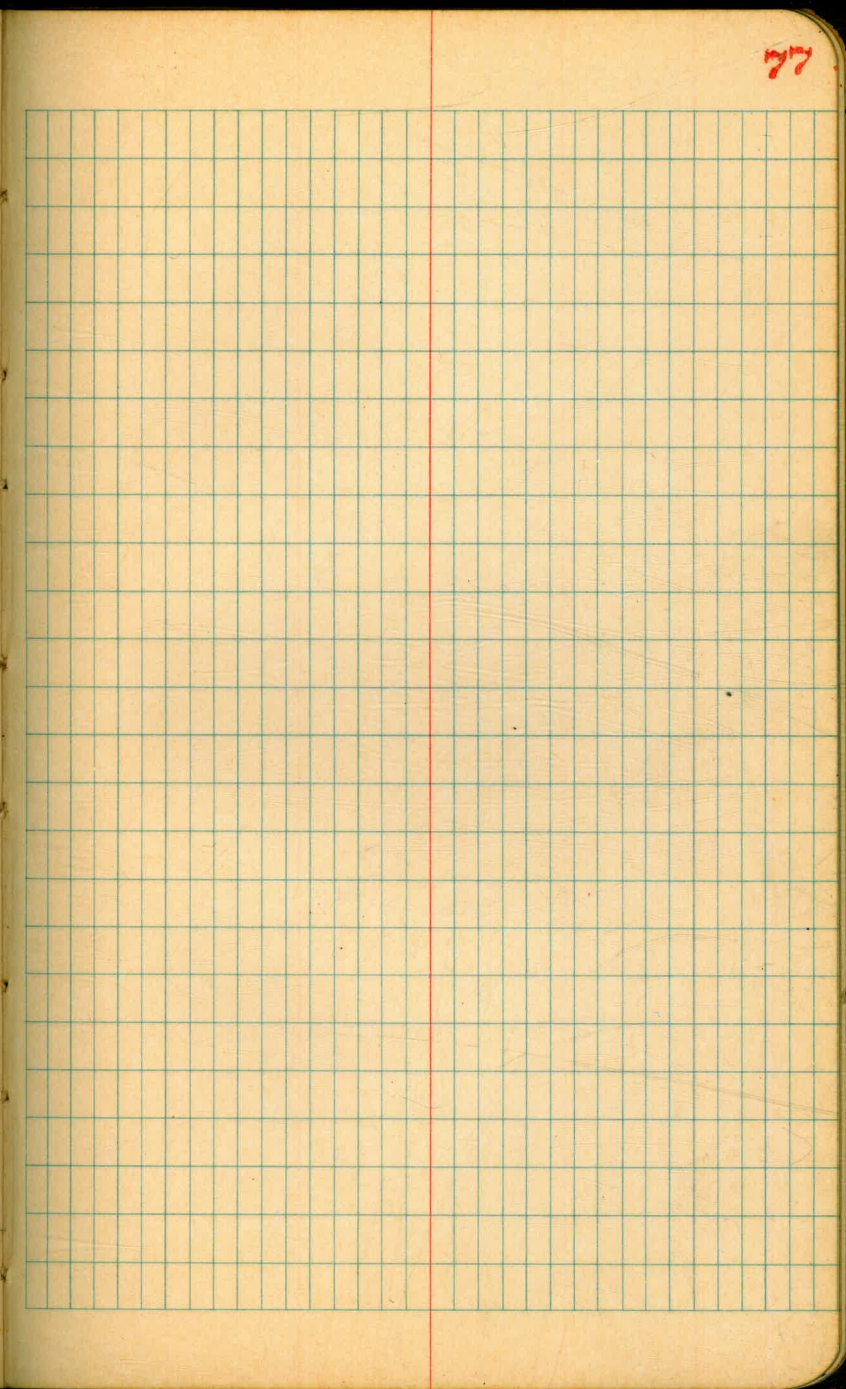
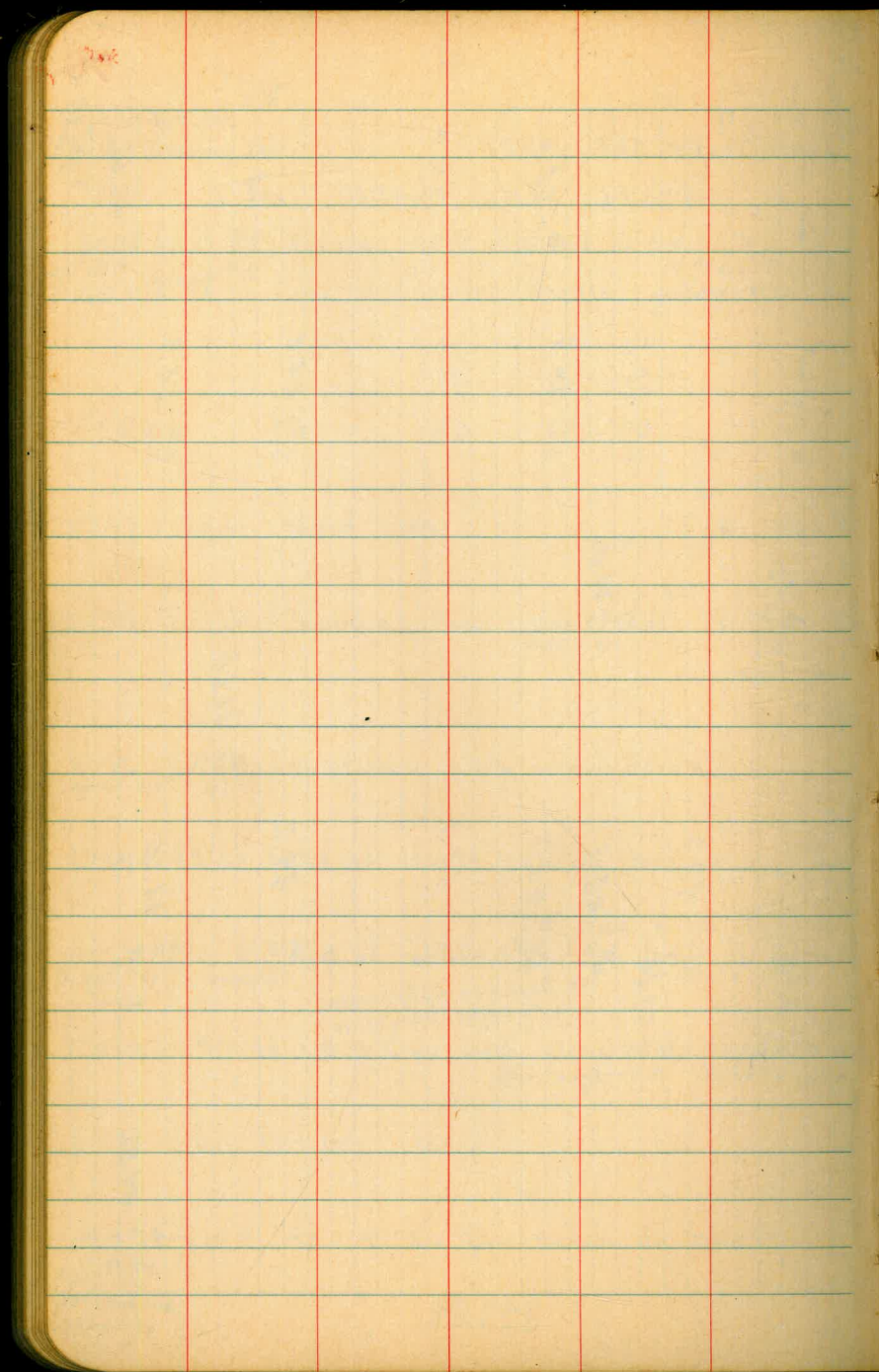
45
40.5

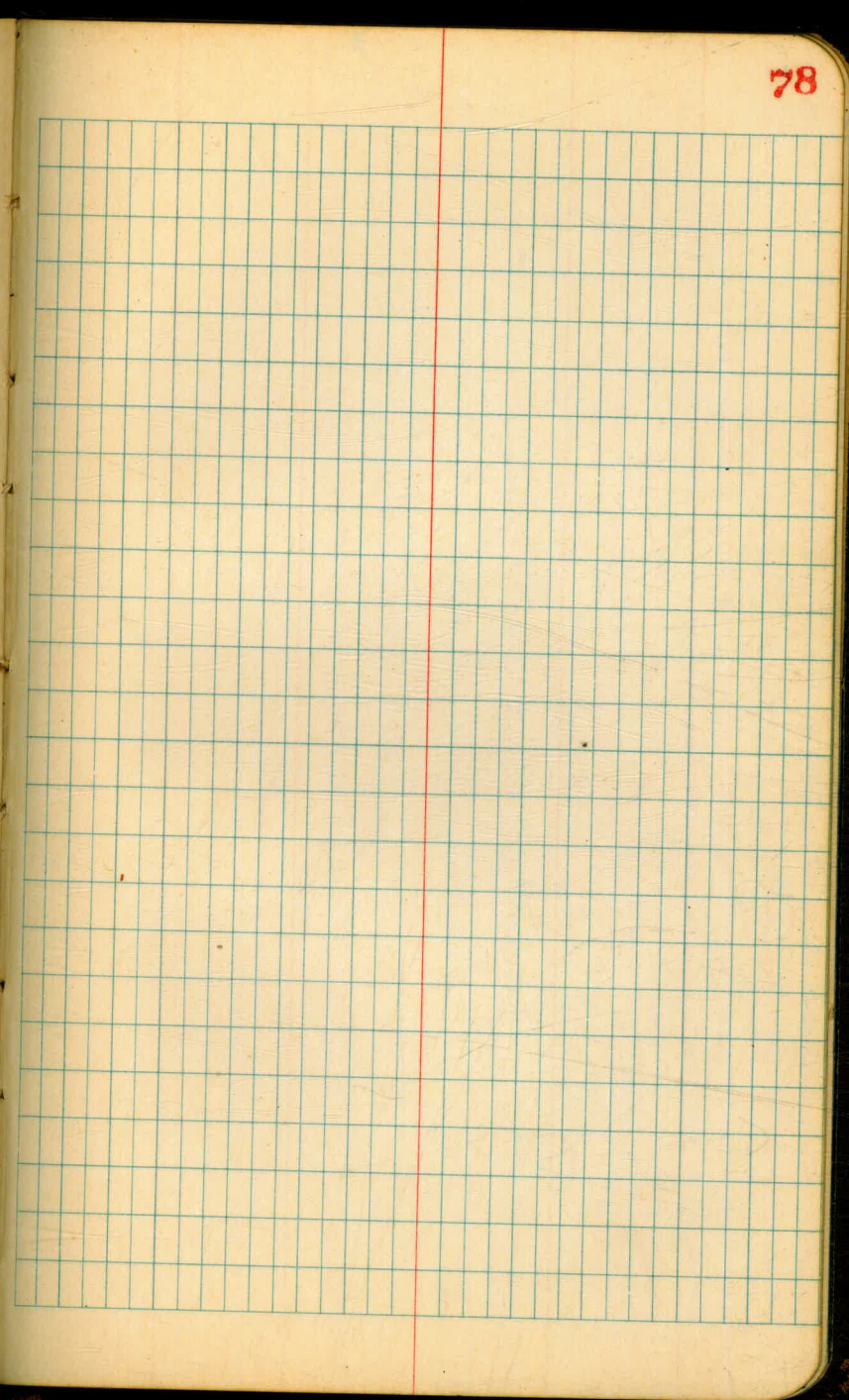
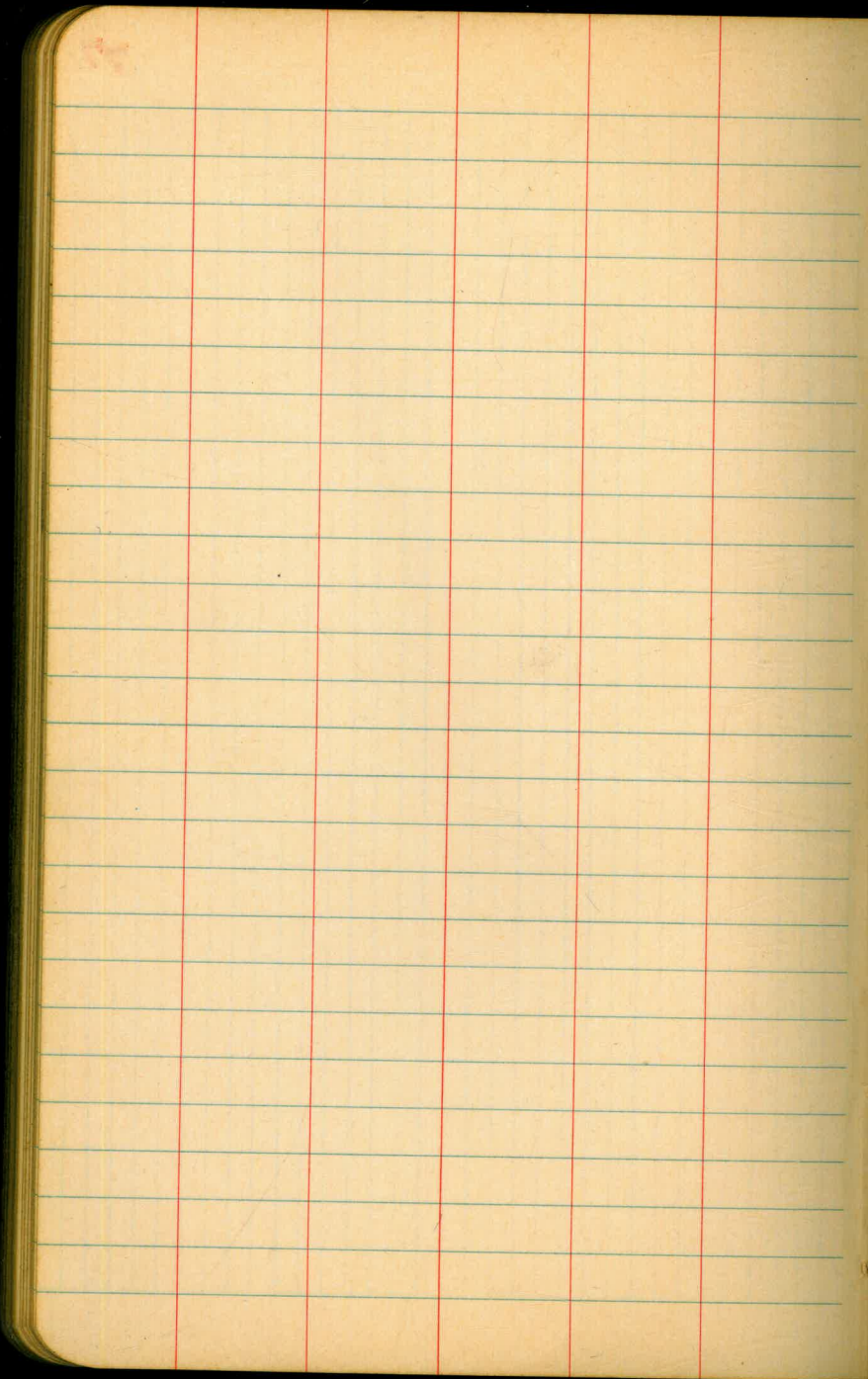
10
40.7

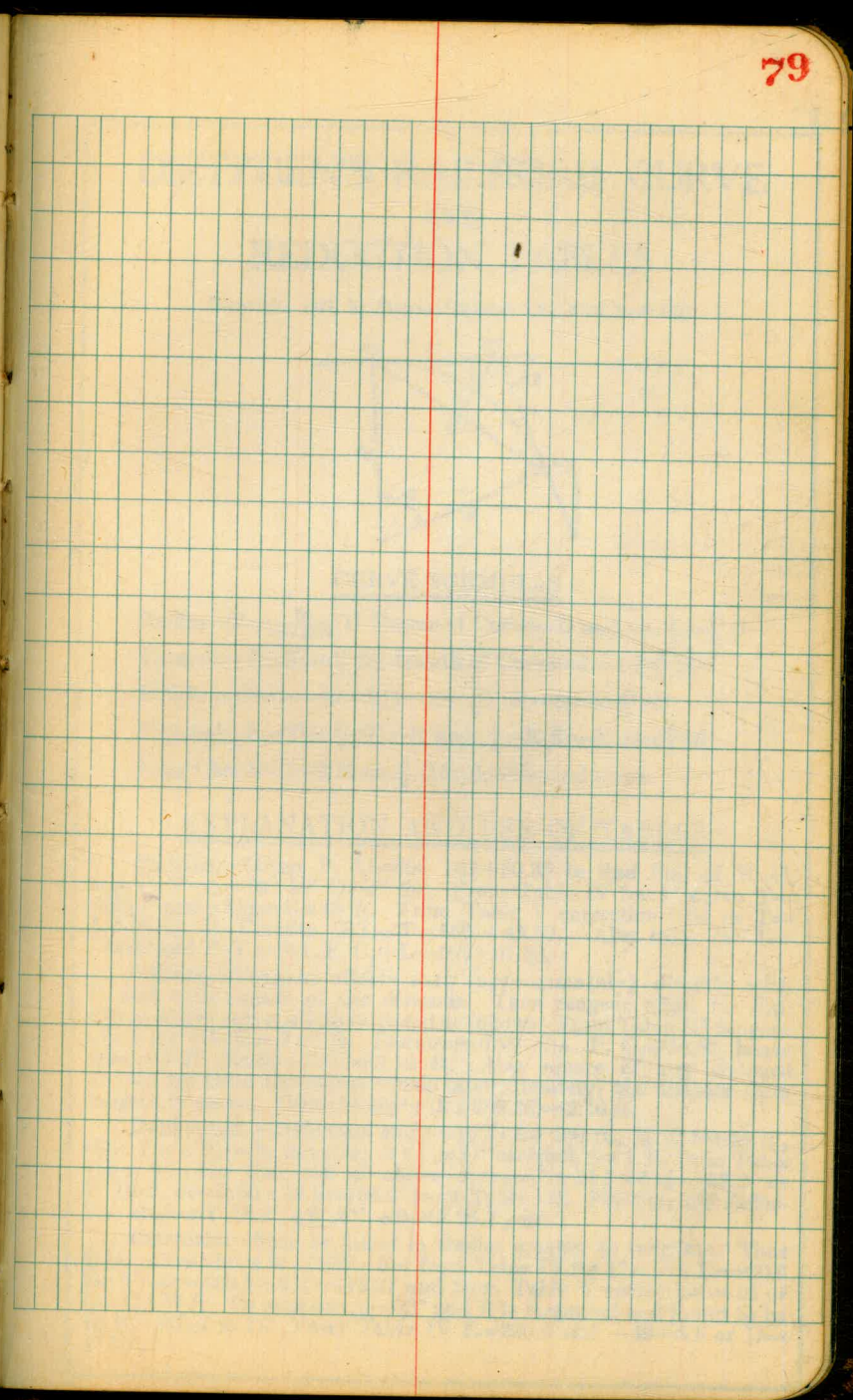
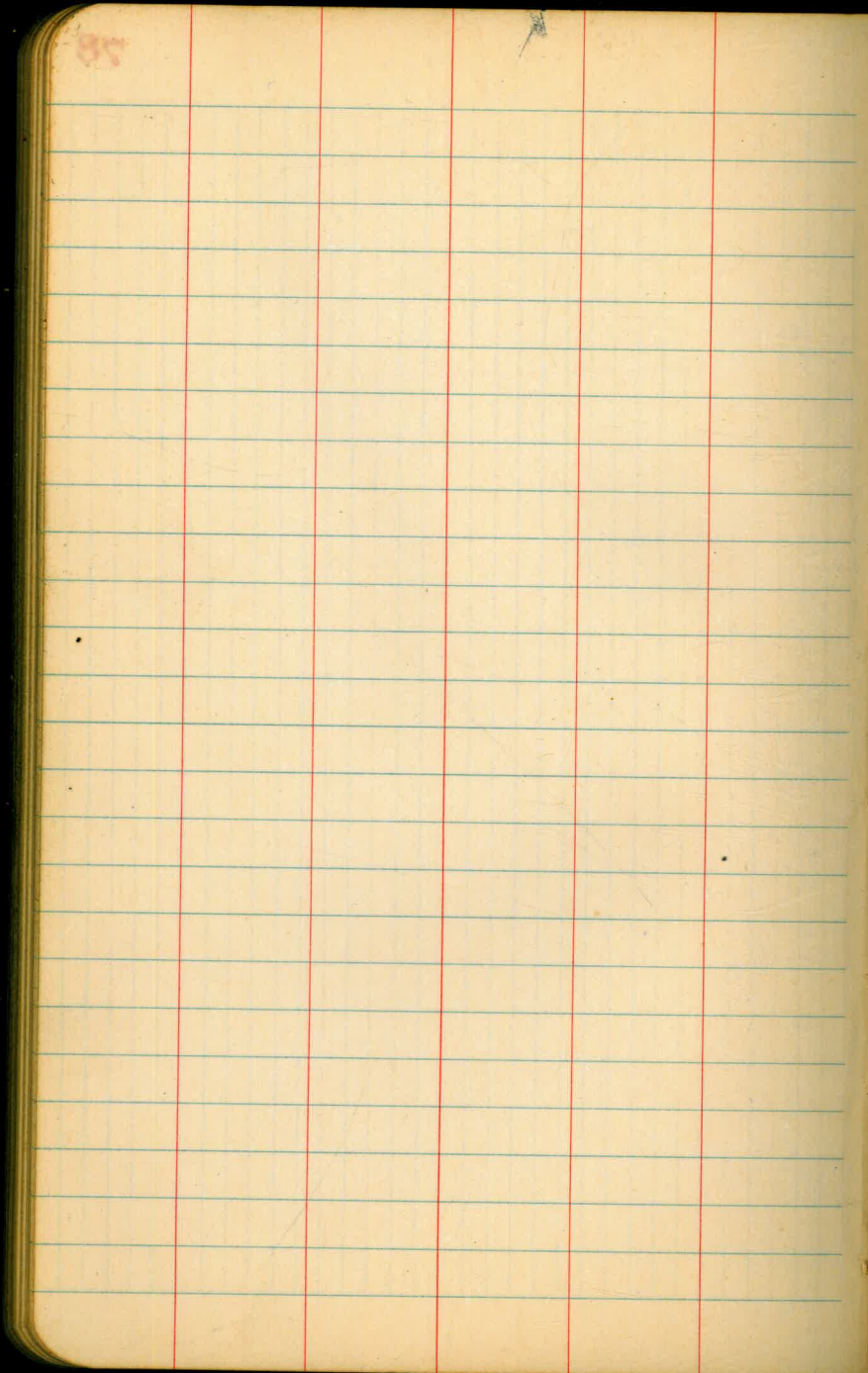
10.8
16.3 = Conc. floor
40.87

485
10 = edge walk
40.10

344.95

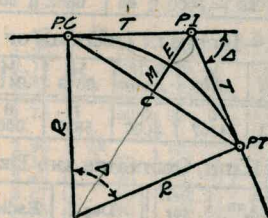






DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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CURVE FORMULAS

- Radius— $R = \frac{50}{\sin. \frac{D}{2}}$ (1) Degree of Curve= D and $\sin. \frac{D}{2} = \frac{50}{R}$ (2)
 Tangent— $T = R \tan \frac{\Delta}{2}$ (3) Length of Curve— $L = 100 \frac{\Delta}{D}$ (4)
 Middle ordinate— $M = R(1 - \cos. \frac{\Delta}{2})$ (5) $= R \text{vers} \frac{\Delta}{2}$ (6)
 External— $E = T \tan \frac{\Delta}{4}$ (7) $= R \div \cos. \frac{\Delta}{2} - R$ (8) $= R \text{exsec} \frac{\Delta}{2}$ (9)
 Long Chord— $C = 2 R \sin. \frac{\Delta}{2}$ (10) Δ —Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T. $\Delta = 62^\circ 10'$ $D = 8^\circ 20'$. From Table IV for 1° curve $T = 3454.1$ and $\div 8\frac{1}{2} = 414.49$ ft. From Table V correction—.36 or $T = 414.85$ ft. P. C.—Sta. P.I.— $T = 157 + 45.50$. Also from (4) $L = 746.00$ and P. T.—Sta. P. C. + $L = 164 + 91.50$.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.—7.27 ft. Distance—158—Sta. P. C.—54.50, hence offset—7.27 (54.50 \div 100)²—2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus (54.50)² \div (2 x 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 x C . For Sta. 158 of above curve—.3 x 54.5 x $8\frac{1}{2} = 136.2'$ or $2^\circ 16.2'$, or—2.50 x 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 $8^\circ 20' = 960.6 \div 8\frac{1}{2} = 115.27$ 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 $D = 5^\circ 30'$.

TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Table with columns for Angle, Sine, Tan., Cotg., and Cosin. for angles 0 to 90 degrees. Includes handwritten 'S' and 'C' markers for sine and cosine columns.

Handwritten numbers: 2142, 76, 24, 73, 47, 214550, 70, XI

TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Table with columns for Angle, Sine, Tan., Cotg., and Cosin. for angles 16 to 31 degrees. Includes handwritten 'S' and 'C' markers for sine and cosine columns.

TABLE VIII.—NATURAL TRIGONOMETRICAL FUNCTIONS.

Angle	Sine.	Tan.	Cotg.	Cosin.	Angle	Sine.	Tan.	Cotg.	Cosin.	
32	.5209	.6249	1.600	.84805	58	.8500	1.1918	.8391	.16095	
10	.5324	.6289	1.590	.84650	50	.7660	1.1918	.8391	.16095	
20	.5348	.6330	1.580	.84495	40	.6428	1.1918	.8391	.16095	
30	.5373	.6371	1.570	.84339	30	.5000	1.1918	.8391	.16095	
40	.5398	.6412	1.560	.84182	20	.3420	1.1918	.8391	.16095	
50	.5422	.6453	1.550	.84025	10	.1699	1.1918	.8391	.16095	
33	.5446	.6494	1.540	.83867	57	.8391	1.1918	.8391	.16095	
10	.5471	.6536	1.530	.83708	50	.7660	1.1918	.8391	.16095	
20	.5495	.6577	1.520	.83549	40	.6428	1.1918	.8391	.16095	
30	.5519	.6619	1.511	.83389	30	.5000	1.1918	.8391	.16095	
40	.5544	.6661	1.501	.83228	20	.3420	1.1918	.8391	.16095	
50	.5568	.6703	1.492	.83066	10	.1699	1.1918	.8391	.16095	
34	.5592	.6745	1.483	.82904	56	.8290	1.1918	.8391	.16095	
10	.5616	.6787	1.473	.82741	50	.7660	1.1918	.8391	.16095	
20	.5640	.6830	1.464	.82577	40	.6428	1.1918	.8391	.16095	
30	.5664	.6873	1.455	.82413	30	.5000	1.1918	.8391	.16095	
40	.5688	.6916	1.446	.82248	20	.3420	1.1918	.8391	.16095	
50	.5712	.6959	1.437	.82082	10	.1699	1.1918	.8391	.16095	
35	.5736	.7002	1.428	.81915	55	.8191	1.1918	.8391	.16095	
10	.5760	.7046	1.419	.81748	50	.7660	1.1918	.8391	.16095	
20	.5783	.7089	1.411	.81580	40	.6428	1.1918	.8391	.16095	
30	.5807	.7133	1.402	.81412	30	.5000	1.1918	.8391	.16095	
40	.5831	.7177	1.393	.81242	20	.3420	1.1918	.8391	.16095	
50	.5854	.7221	1.385	.81072	10	.1699	1.1918	.8391	.16095	
36	.5878	.7265	1.376	.80902	54	.8090	1.1918	.8391	.16095	
10	.5901	.7310	1.368	.80730	50	.7660	1.1918	.8391	.16095	
20	.5925	.7355	1.360	.80558	40	.6428	1.1918	.8391	.16095	
30	.5948	.7400	1.351	.80386	30	.5000	1.1918	.8391	.16095	
40	.5972	.7445	1.343	.80212	20	.3420	1.1918	.8391	.16095	
50	.5995	.7490	1.335	.80038	10	.1699	1.1918	.8391	.16095	
37	.6018	.7536	1.327	.79864	53	.7986	1.1918	.8391	.16095	
10	.6041	.7581	1.319	.79688	50	.7660	1.1918	.8391	.16095	
20	.6065	.7627	1.311	.79512	40	.6428	1.1918	.8391	.16095	
30	.6088	.7673	1.303	.79335	30	.5000	1.1918	.8391	.16095	
40	.6111	.7720	1.295	.79158	20	.3420	1.1918	.8391	.16095	
50	.6134	.7766	1.288	.78980	10	.1699	1.1918	.8391	.16095	
38	.6157	.7813	1.280	.78801	52	.7880	1.1918	.8391	.16095	
10	.6180	.7860	1.272	.78622	50	.7660	1.1918	.8391	.16095	
20	.6203	.7907	1.265	.78442	40	.6428	1.1918	.8391	.16095	
						.7071	1.	1.	.7071	
	Cosin.	Cotg.	Tan.	Sine.	Angle.	Cosin.	Cotg.	Tan.	Sine.	Angle.

3086
6172

TABLE IX.—CALCULATION OF EARTHWORK.

Width	HEIGHT														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	.02	.04	.06	.07	.09	.11	.13	.15	.17	.18	.20	.22	.24	.26	.28
2	.04	.07	.11	.15	.18	.22	.26	.30	.33	.37	.41	.44	.48	.52	.56
3	.06	.11	.17	.22	.28	.33	.39	.44	.50	.56	.61	.67	.72	.78	.83
4	.07	.15	.22	.30	.37	.44	.52	.59	.67	.74	.81	.89	.96	1.04	1.11
5	.09	.19	.28	.37	.46	.56	.65	.74	.83	.93	1.02	1.11	1.20	1.30	1.39
6	.11	.22	.33	.44	.56	.67	.78	.89	1.00	1.11	1.22	1.33	1.44	1.55	1.67
7	.13	.26	.39	.52	.65	.78	.91	1.04	1.16	1.30	1.42	1.55	1.68	1.81	1.94
8	.15	.30	.44	.59	.74	.89	1.04	1.19	1.33	1.48	1.63	1.78	1.92	2.08	2.22
9	.17	.33	.50	.67	.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	2.50
10	.18	.37	.56	.74	.93	1.11	1.30	1.48	1.67	1.85	2.04	2.22	2.41	2.59	2.78
11	.20	.41	.61	.82	1.02	1.22	1.43	1.63	1.83	2.04	2.24	2.44	2.65	2.85	3.06
12	.22	.44	.67	.89	1.11	1.33	1.56	1.78	2.00	2.22	2.44	2.67	2.89	3.11	3.33
13	.24	.48	.72	.96	1.20	1.44	1.68	1.92	2.16	2.41	2.65	2.89	3.13	3.37	3.61
14	.26	.52	.78	1.04	1.30	1.55	1.81	2.08	2.33	2.59	2.85	3.11	3.37	3.63	3.89
15	.28	.56	.83	1.11	1.39	1.67	1.94	2.22	2.50	2.78	3.06	3.33	3.61	3.89	4.17
16	.30	.59	.89	1.18	1.48	1.78	2.07	2.37	2.67	2.96	3.26	3.56	3.85	4.15	4.44
17	.31	.63	.94	1.26	1.57	1.89	2.20	2.52	2.83	3.15	3.46	3.78	4.09	4.41	4.72
18	.33	.67	1.00	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00	4.33	4.67	5.00
19	.35	.70	1.06	1.41	1.76	2.11	2.46	2.82	3.17	3.52	3.87	4.22	4.57	4.92	5.28
20	.37	.74	1.11	1.48	1.85	2.22	2.56	2.96	3.33	3.70	4.07	4.44	4.81	5.18	5.56
21	.39	.78	1.17	1.52	1.94	2.33	2.72	3.11	3.50	3.89	4.28	4.67	5.06	5.44	5.83
22	.41	.81	1.22	1.63	2.04	2.44	2.85	3.26	3.67	4.07	4.48	4.89	5.30	5.70	6.11
23	.43	.85	1.28	1.70	2.13	2.56	2.98	3.41	3.83	4.26	4.68	5.11	5.54	5.96	6.39
24	.44	.89	1.33	1.78	2.22	2.67	3.11	3.56	4.00	4.44	4.89	5.33	5.78	6.22	6.67
25	.46	.92	1.39	1.83	2.31	2.78	3.24	3.70	4.17	4.63	5.09	5.56	6.02	6.48	6.94
26	.48	.96	1.44	1.92	2.41	2.89	3.37	3.85	4.33	4.82	5.30	5.78	6.26	6.74	7.24
27	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50
28	.52	1.04	1.55	2.07	2.59	3.11	3.63	4.15	4.67	5.18	5.70	6.22	6.74	7.26	7.78
29	.54	1.07	1.61	2.15	2.68	3.22	3.76	4.30	4.83	5.37	5.91	6.44	6.98	7.52	8.06
30	.56	1.11	1.67	2.22	2.78	3.33	3.89	4.44	5.00	5.55	6.11	6.67	7.22	7.78	8.33
31	.57	1.15	1.72	2.30	2.87	3.44	4.02	4.59	5.17	5.74	6.32	6.89	7.46	8.04	8.61
32	.59	1.18	1.78	2.37	2.96	3.56	4.15	4.74	5.33	5.92	6.52	7.11	7.70	8.30	8.89
33	.61	1.22	1.83	2.44	3.05	3.67	4.28	4.89	5.50	6.11	6.72	7.33	7.94	8.55	9.17
34	.63	1.26	1.89	2.52	3.15	3.78	4.40	5.04	5.67	6.29	6.93	7.56	8.18	8.81	9.44
35	.65	1.30	1.94	2.59	3.24	3.89	4.53	5.18	5.83	6.48	7.13	7.78	8.42	9.08	9.72
36	.67	1.33	2.00	2.67	3.33	4.00	4.66	5.33	6.00	6.67	7.33	8.00	8.67	9.33	10.00
37	.68	1.37	2.06	2.74	3.42	4.11	4.79	5.48	6.17	6.85	7.54	8.22	8.91	9.59	10.28
38	.70	1.41	2.11	2.82	3.52	4.22	4.92	5.63	6.33	7.03	7.74	8.44	9.15	9.85	10.56
39	.72	1.44	2.17	2.89	3.61	4.33	5.05	5.78	6.50	7.22	7.95	8.67	9.39	10.11	10.83
40	.74	1.48	2.22	2.96	3.70	4.44	5.18	5.92	6.67	7.41	8.15	8.89	9.63	10.37	11.11

Table gives cu. yds. in 1 ft. of a triangle of given width and height. Corrections for tenths of width are one tenth the values found under each height considering the widths from 1 to 9 as tenths and similarly the corrections for tenths of height are one tenth the figures opposite width considering the heights from 1 to 9 as tenths. Thus if $w = 16.3$ and $h = 5.3$, cu. yds. $= 1.48 + .023 + .089 = 1.597$ cu. yds. or practically 160 cu. yds. per 100 ft. If w exceeds 40 ft., use one half and multiply result by 2, if both w and h are large use one half of each and multiply result by 4. Any cross-section may be divided into triangles by the following rule. To the triangle of the sum of the outside cuts (or fills) $= h$, and $\frac{1}{2}$ the roadbed $= w$, add the triangles formed by taking the distance out to each break in turn ($= w$) by the difference between the cuts (or fills) on each side of it ($= h$) always subtracting the outer from the inner.

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