1799

DIETZGEN

ENGINEERS'

FIELD BOOK

No. 404 F

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

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

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

1799

INDEXED

to page #52

except pages #36, 37, 38

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.

Por. Lot. 6 Blk. 34 Pt. Loma Hgts 9
X-Sec. Wabaska Dr. Voltaire to Warrington 10-23
Lot 13 Muirlands (Easement) 40

Indexed
O.S.K.

1

Preliminary Survey for Prop. 80' R.O.W. ± from Wabaska - North to Famosa Blvd. & W. Pt. Loma Blvd.

W.O. 90063
Book 1721-40
T.P. 13-40
1593-66
1375-7

9+00 = P.O.T. Nail

8+34.24 = Hub. = Int. ℄ & ℄ Catalina R.O.W.

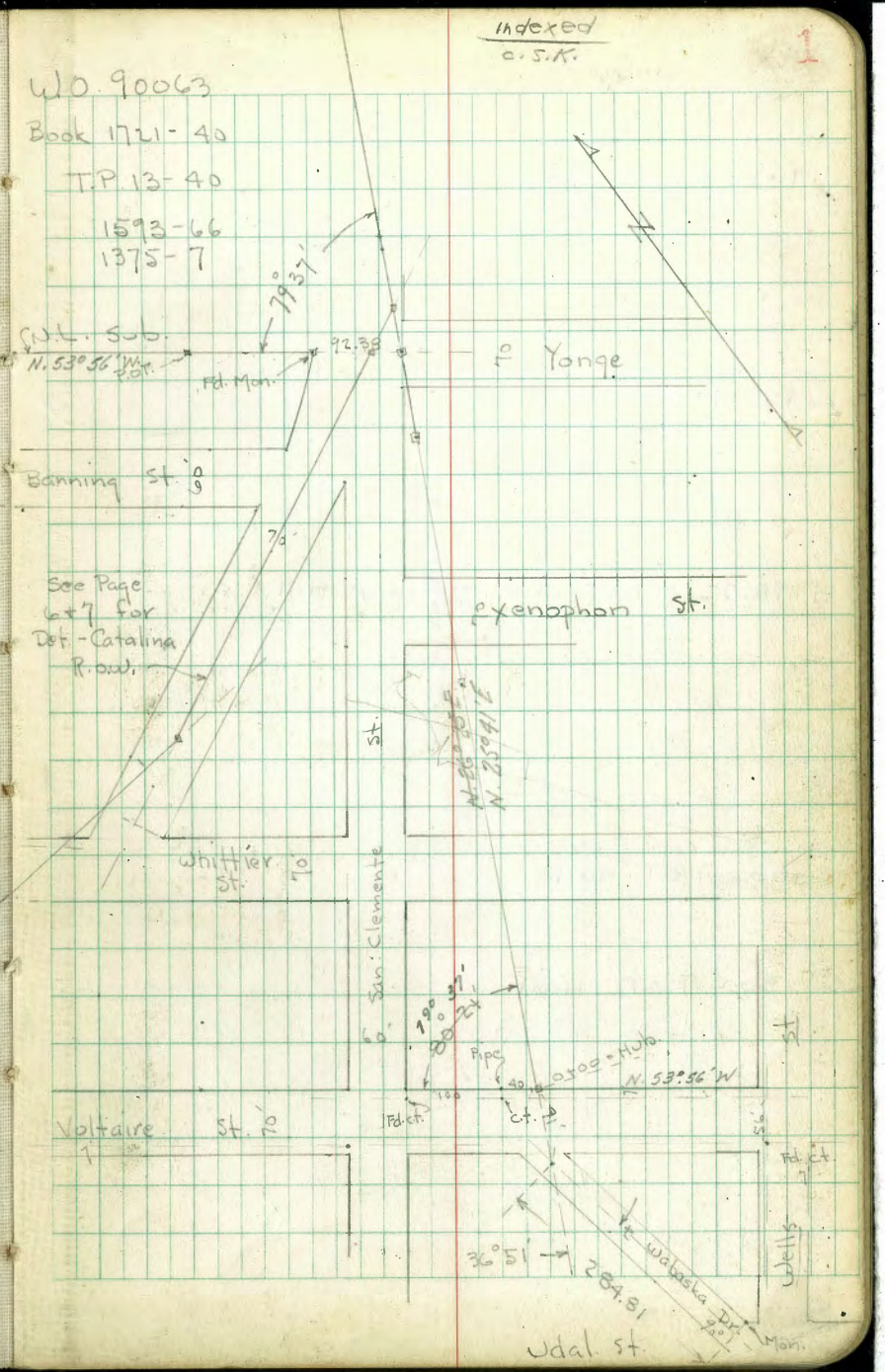
7+92.03 = Hub = int. ℄ R.O.W. & N.L. Loma Alta # 1

7+00 = Hub. - P.O.T.

4+35 = Hub. P.O.T.

0+00 = Hub. on N.L. Voltaire 40' E. of Sub line

0-91.00 = Gal. spike in Pave - ℄ Row. & ℄ Wabaska



19+20 = P.O.T. Hub

16+98.21 = P.O.T. Nail

14+98.92 = P.O.T. Hub. = Top of Hill

12+00 ? = P.O.T. Nail

10+80 = P.O.T. Nail

27+05.80 = Hub. = ℄ + 7' line Mentone

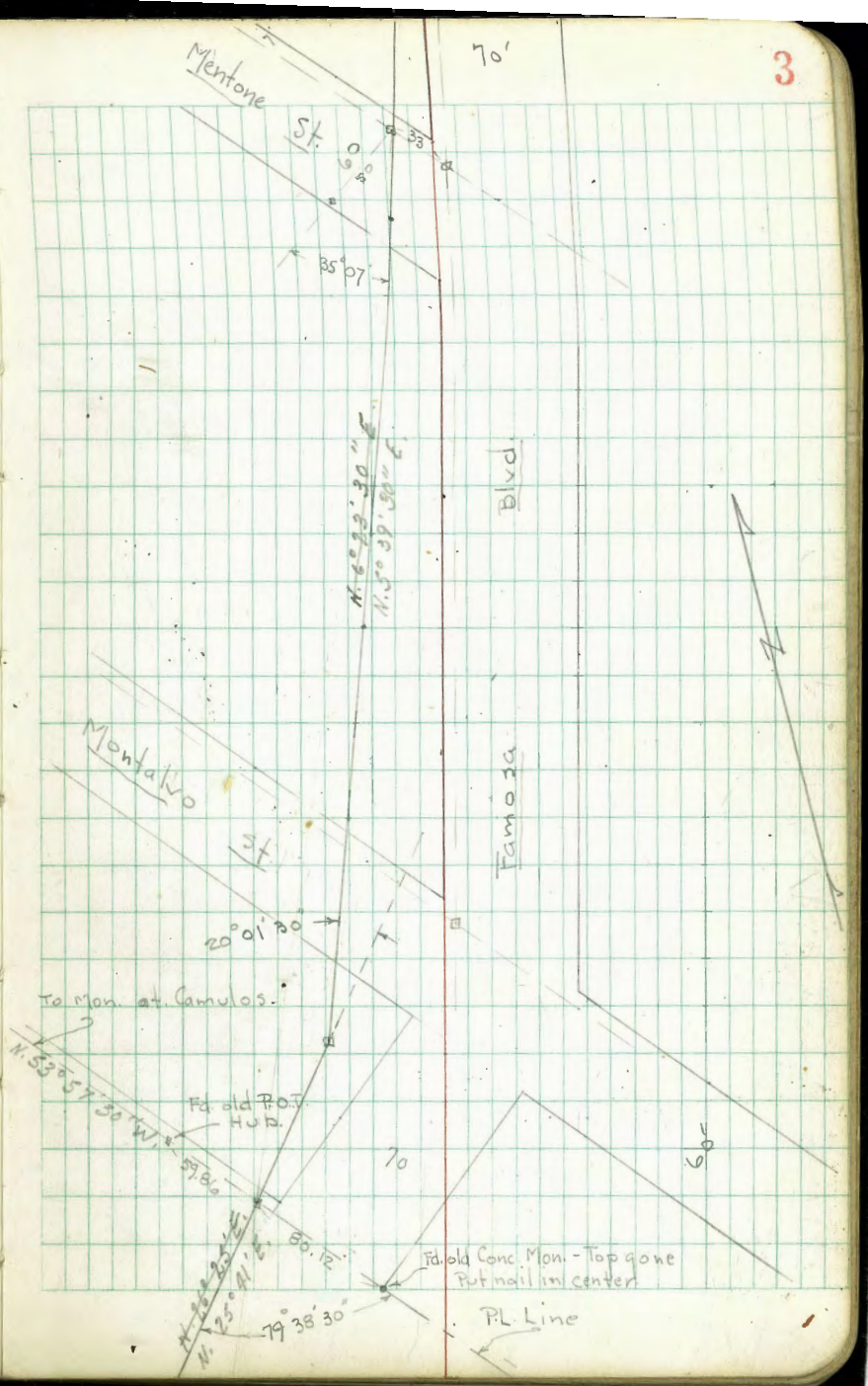
26+60 = P.O.T. Nail

24+24.72 = P.O.T. Nail

Ang. = 20° 01' 30" - Lt.

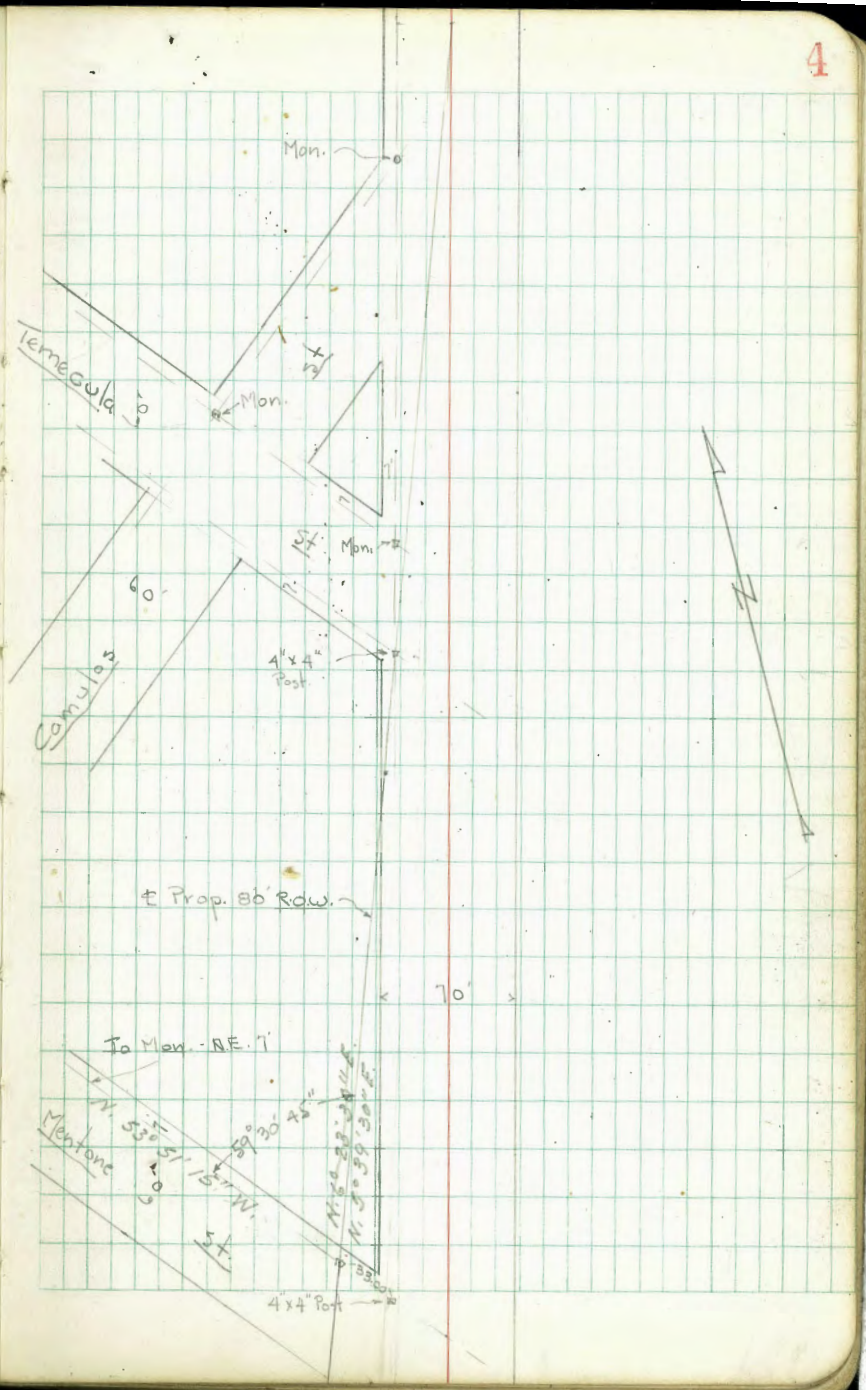
22+25 = Hub. = P.I.

21+34.01 = Hub. = Pueblo line + ℄ R.o.w.



29+60 - P.O.T. Nail

27+05.80 - Hub.



39+38.55 = Set Hub on R.R. fill

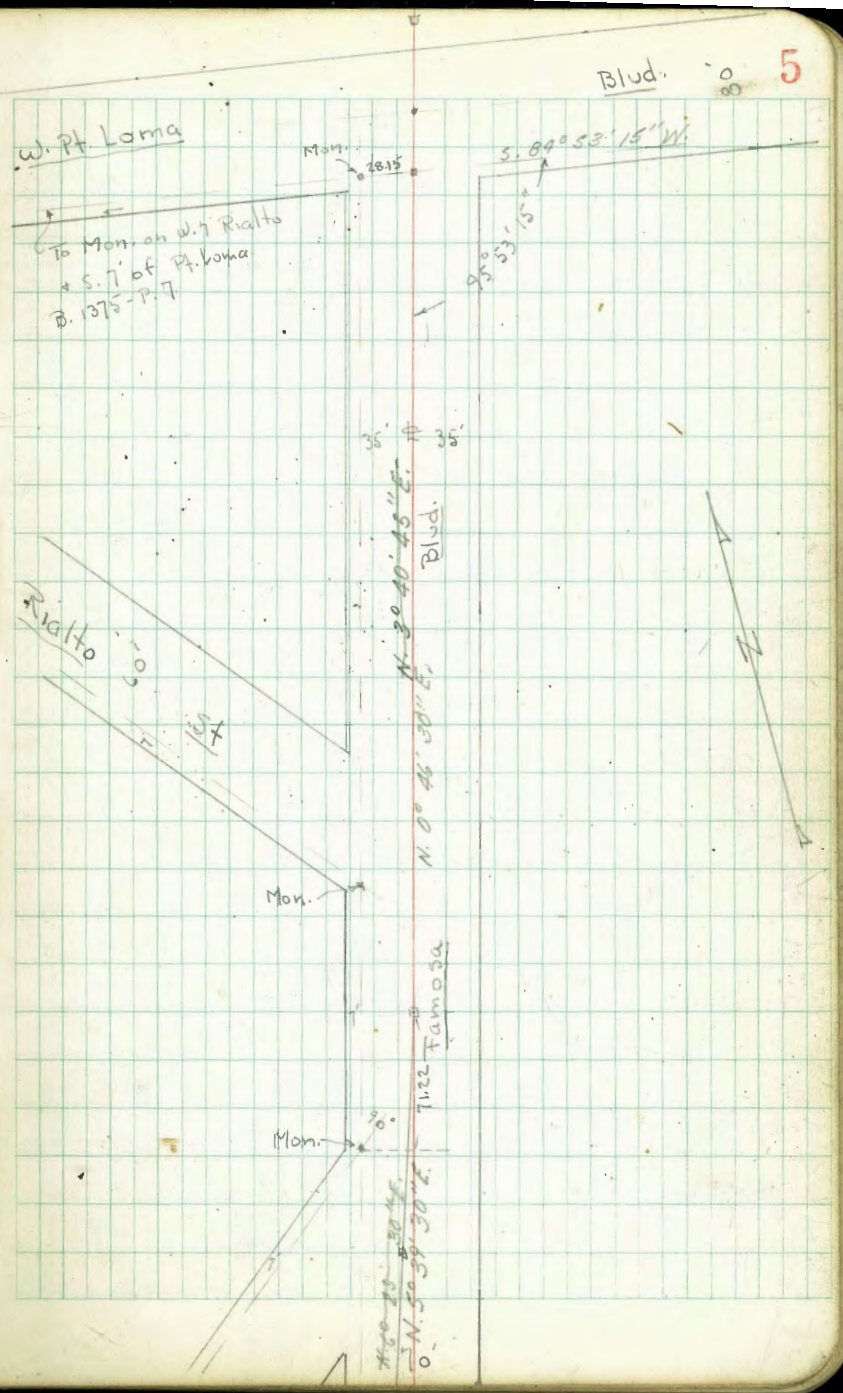
38+39.70 = Set. Gal. spike in Pave. ℄ W. Pt. Loma.

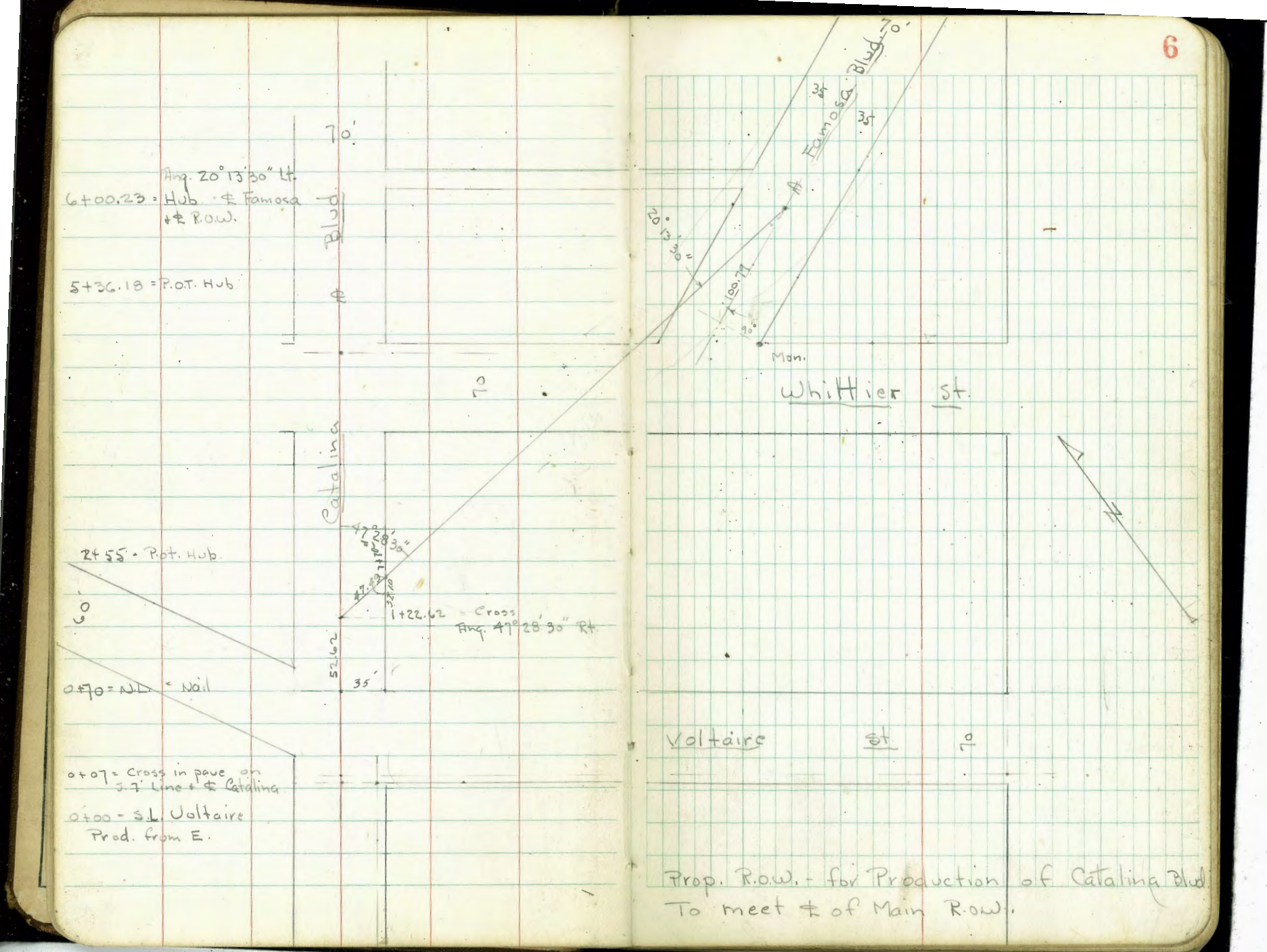
38+06.53 = Hub. ℄ Row. & 5.7' Line of W. Pt. Loma Blvd.

4° 53'

33+49.85 = Hub - Ang. ~~2° 12' 45"~~ Lt.
Int ℄ R.O.W. & ℄ Famosa Blvd.

32+25 = Stub. Top of Road.




70'
Ang. 20° 13' 30" Lt.
6+00.23 = Hub ℄ Famosa & ℄ R.O.W.
5+36.18 = P.O.T. Hub
℄
Catalina
47° 28' 30"
2+55 = P.O.T. Hub
1+22.62 = Cross
Ang. 47° 28' 30" Rt.
52.62
35'
0+70 = Nail
0+07 = Cross in pave. on S.T. Line & ℄ Catalina
0+00 = ℄ Voltaire
Prod. from E.
Famosa Blvd.
35'
20° 13' 30"
100.77
30°
Mon.
Whittier St.
Voltaire St
Prop. R.O.W. - for Production of Catalina Blvd.
To meet ℄ of Main R.O.W.

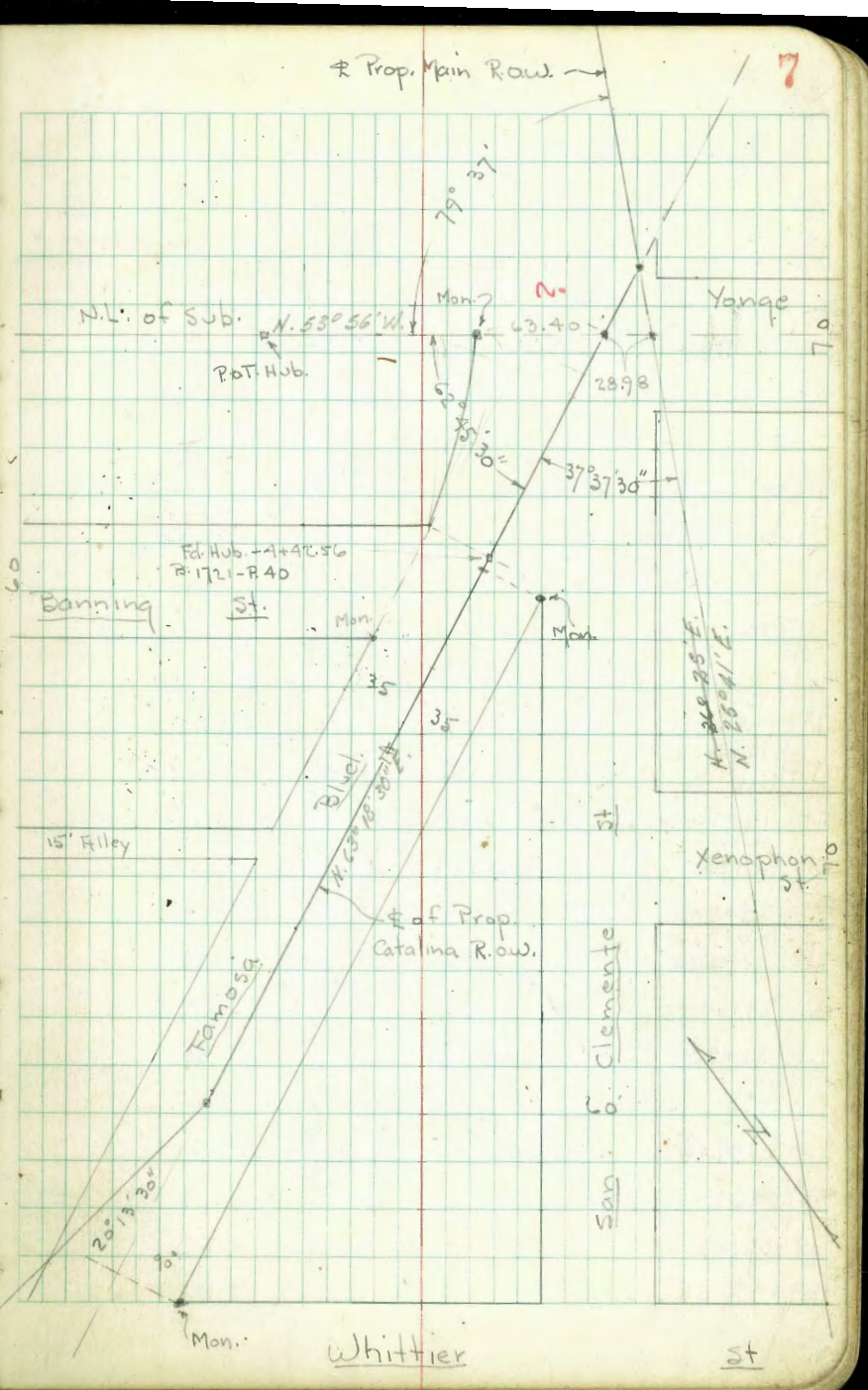
11+01.17 = Hub. = 8+34.24 on Main R.ow.

10+54.51 = Hub. = N.L. Sub. + ℄ Catalina R.ow.

9+24.33 = Fd. Hub.

7+00 = P.O.T. Nail

6+00.23 = P.I. Hub



Controll Levels along ℄ Prop R.o.W. Bet. Voltaire & W. Pt. Loma Blvd.

B.M.	8.51	70.61		62.10	SE. T. ct. Voltaire & Catalina
I.P.	7.92	76.83	1.70	68.91	
0+00 - Hub. T			5.10	71.73	
T.P.	0.23	64.24	12.82	64.01	
I.P.	2.31	59.79	6.76	57.48	
Hub - 5+36.18 - Catalina			2.46	57.33	
Hub 4+35 - Main			7.26	52.53	
	0.15	52.68			
7+00 = Hub.			5.30	47.38	
T.P. 10+00	11.50	63.11	1.07	51.61	
T.P. 14+98.92 = Hub.	1.07	55.47	8.71	54.40	
T.P. 16+58 Hub.	0.12	42.75	12.84	42.63	
T.P. 19+20 Hub.	0.20	30.15	12.80	29.95	
T.P. 22+25	0.77	20.49	10.43	19.72	
T.P. 24+30 Hub.	0.99	9.64	11.84	8.65	
T.P. 27+05.80	7.08	7.96	8.76	0.88	
Peg 29+60			7.74	0.22	
T.P. 31+80	7.82	14.68	1.10	6.86	
Hub 32+25			2.05	12.63	
Hub 33+49.85			4.08	10.60	
T.P. 36+00	1.94	5.67	10.95	3.73	
Hub. 38+06.53			4.14	1.53	
39+38.55			2.51	3.16	

Stake Par. Lot 6 Blk. 34

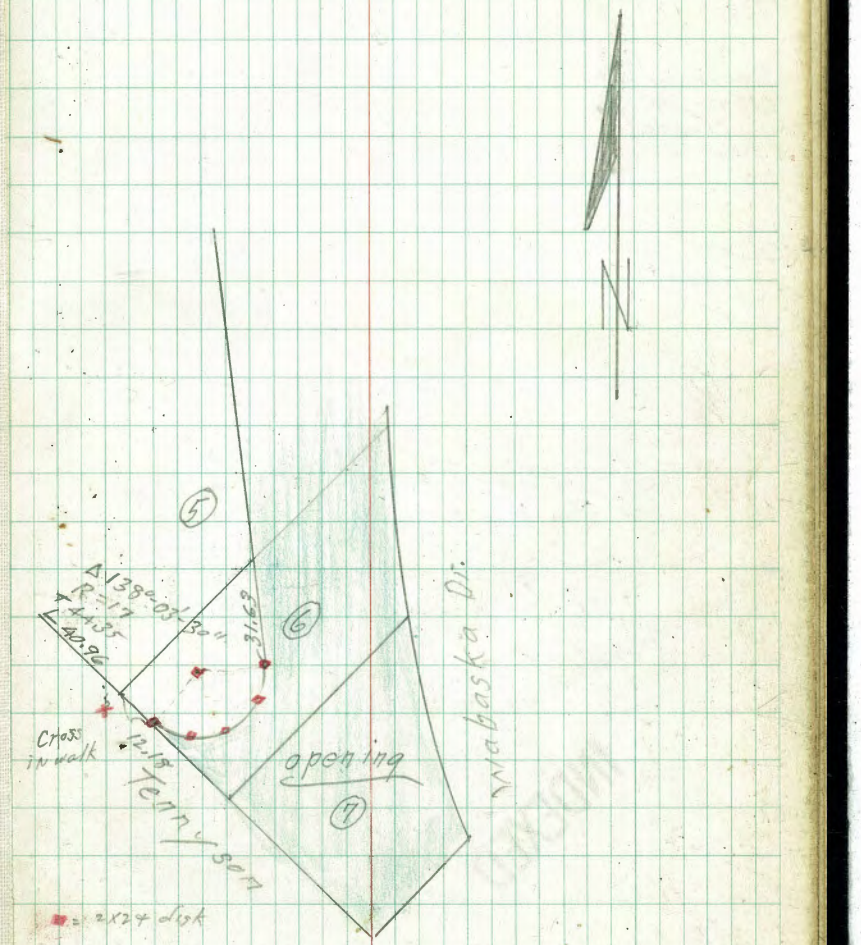
Pt. Loma Hgts. (Resub.)

As per L sheet 6942 3-18-48

W.O. # 90051

Sommarmeyer
McCoy X
W Moore
Sherman.

indexed
C.S.K.



Wabaska Dr. - Cross Section
Warrington to Voltaire

W.O. 90051
3-25-48

Sommermeyer
Mc Coy
vk. Moore
E. Sherman

Fd. L & T

Fd. old spike
46+40.43

Set P.K.
45+82.31 = E.C.

Stucco House

A.C. Drive

Tennis Court

3 strip pole

End Cb.
Δ 1°-20'-30"

2' walk

175' Hwy to West ℄ 59

Curb. B.C.

Δ 1°-53' Endwalk

Set Conc. Nail at P.I.

Warrington

Fd L & T's

Alley Line

See Book 2085 Page 16 for South side alley

INDEXED

ER = 568.28
Δ = 21° 11' 15"
L = 210.02
T = 106.22

Concrete Foundation in here not in Theatre from Mouch house

Tile wall

Set 2 x 2 Hub E.O.

E.C. = 19+03.85

Not to scale

WORDEN St.

A.C. Drive

Set Conc. Nail

ER = 360'
Δ = 41° 55' 30"
L = 263.42
T = 137.92

R = 360

Conc. drive

B.C. = 14+52.39
Δ 41° 55' 30"

Fd. old spike
46+40.43

Fd L & T.

Set P.K. E.C. = 53+44.52
8+56.44 (Sommermeyer's)

Wells

Fd. old 2x2 Hub

7+88.44
Δ 3°53'40" Rt.

Δ 3°53'40" Rt.

Udall St.

Oil + Rock

Set P.K. B.C. = 52+08.58
7+20.44
Sommermeyers Sta.

Wells

7+13 ← 40
7+08 ← 34.3
7+01.5 ← 39
40' Rt. = 7+02.1

6+07 ← 43.7
6+01 ← 49.1
22.0'

6" Conc. Wall and Redwood Fence

w. edge oil + Rock

5+85
5+84 35.4
5+91.9 ← 40
5+74.2 ← 36.1
5+71.7 ← 40

4" Conc. Wall

5+22 39.6

54' Redwood Fence

5+01.9 ← 38.2
4+97.2 ← 40

4+95.8 ← 42.8

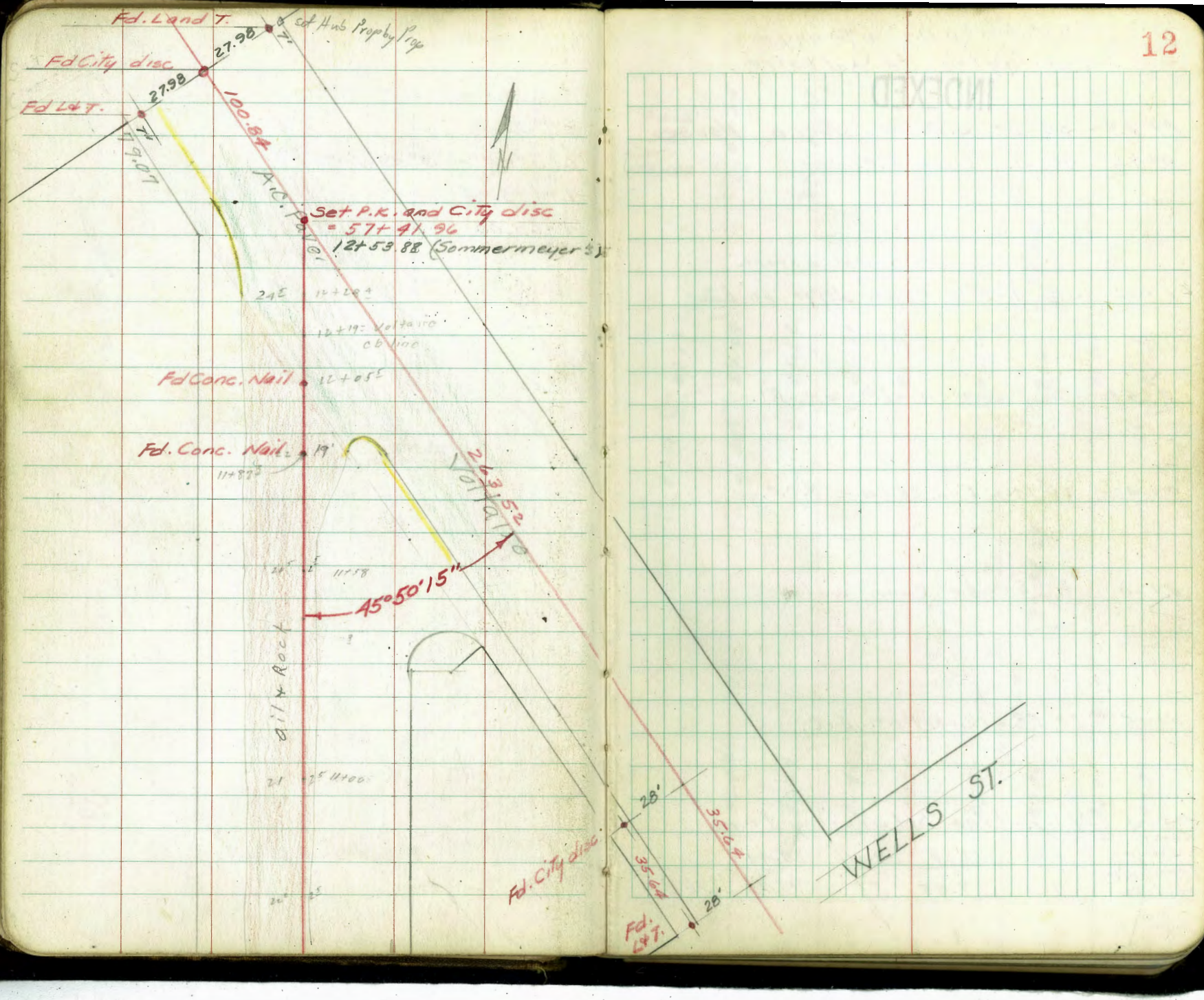
6" Wall 3' high

ER = 2000'
Δ = 3°54' — 3°53'40" (?)
L = 135.94
T = 68.00

Udall

Wells

Udall


Fd. Land T.
Set Hub Prop by Pge
27.98
Fd City disc.
27.98
Fd L & T.
100.84
A.C. Pave.
Set P.K. and City disc
= 57+41.96
12+53.88 (Sommermeyer
24E
12+28.4
12+19: Voltaire
CB line
Fd Conc. Nail
12+05E
Fd. Conc. Nail
19'
11+87E
2" Iron Pipe
35.52
11+58
45°50'15"
Oil & Rock
11+00
Fd. City disc.
WELLS ST.
28'
35.64
35.64
28'
Fd. L & T.

Wabaska Dr. + Tennyson
Warrington to Voltaire.

INDEXED

0+93 – 58' Lt. S.E.Cor. Stucco House

0+92 20' Lt. = Curb E.C.

drive is level across.

0+72 = ℄ 7' wide Conc. drive on Rt.

0+55 = ℄ 3' conc. walk on Rt.

0+43.5 22.3 Lt. = End. Cl. Rot. = P.C.C.

0+20 ℄ 2.5' wide Conc. walk.

0+05 20' Rt. = Curb. Rot. E.C.

0+00 = N.L. line Warrington

T.R.L+T. = old B.C. Wabaska	4.85	93.29	9.11	88.44	
Tennyson Ht. Alicia	1.80	97.55	—	95.75	N.W.B.P.

90.6
58
Cor.
House

87.11
6.18
21.3
cl.

87.79
5.5
40

87.73
5.54
20
cl.

87.29
6.00
21.3
cl.

86.48
6.81
20

87.07
6.22
20
pav.

86.28
6.81
22.3
pav.

86.66
6.43
21.3
pav.

86.49
6.80
20

87.71
6.58
20

86.41
6.88
6

86.55
6.74

84.24
7.05

93.29

86.20
7.09
10

85.90
7.39
10

87.42
5.80
40 on drive

85.80
7.49
20
pav.

86.27
7.02
40
on walk

85.43
7.86
20
cl.

85.45
7.84
22.5

86.33
6.94
20
cl.

86.07
7.12
20
cl.

86.03
7.16
20.5
pc.

87.04
6.23
40
on walk

86.39
6.9
20

1+76 ~ 54' Lt. = N.E. Cor. garage

1+72.5 ~ 37.8 Lt. End 4' Board Fence

1+71.5 ~ 30.4 Lt. = South End Return

1+62 ~ 20.3 Lt. = B.C. alley Return and 93.8

65.5 Lt. S.E. Cor. Stucco garage. 65.5 Cor Gar.

start busted back curve in curb.

1+76 19 Rt. = End existing conc. walk + also

1+68 ~ 21.5 Rt. = ℄ Power Pole #JP 3850

Stations Radial off ℄

1+59.5 ~ .5 Lt. = ℄ Sewer M.H. 93.1 92.99

1+52.29 = B.C. Rt. 93.5 0.3

65 on lawn 50 on lawn 40 in Yard

1+26 ~ 54' Lt. N.E. Cor. Stucco garage.

1+23 ~ 35.7 Lt. begin 4' board Fence.

1+19 = ℄ 2' Conc. drive ribbon on Rt

1+20 ~ 38.8 Lt. N.E. Cor Stucco House

1+14.5 = ℄ 2' Conc. drive ribbon on Rt.

90.5

1+00 ~ 52.5 Lt. = Stucco House

52.5 along House

All elevations in Red is Self Reading Rod.

0+97 = ℄ 3' wide conc. walk on Rt.

93.29

94.1 54 Cor. gar. 90.0 38 Toe of alley

89.04 Top 88.98 End Ret. 30.4

93.8 93.3 89.0 88.83 out 88.19

50 on lawn 36.5 Top Bank at Fence 30 Toe 88.20 Top Cb 20.3 out .5 rim M.H.

92.5

88.79 4.5 30 36 of Board Fence

88.74 4.55 24 cc

88.01 5.28 20 pav

88.09 5.20 10

88.04 5.25

94.1 54 Cor. garage

87.72 5.57 10

87.77 5.52 19.3 pav

88.30 4.99 19.3 cb

87.34 5.95 20 pav

88.42 4.87 19.2 End walk

87.92 5.37 20 cc

Back edge

89.99 3.3 40

89.29 4.0 40

88.12 5.17 40

88.16 5.13 40

90.5 38.8 Cor. House

88.59 4.7 40

87.84 5.45 20 cc

87.10 6.11 20 pav

87.22 6.07 10

87.10 6.17

86.84 6.145 10

86.35 6.94 20 pav

87.00 6.29 20 cc

87.73 5.56 40 on walk

87.29 5.5 40

93.29

Wabaska

T.P. 6.47 96.94 2.82 90.47

2+99 = End A.C. Pav. + start Rock + oil Pav. on ℄

2+82 ~ 45' Rt. Closes Cor. of Stucco House.

2+70 Rt. = Edge A.C. Pav. + start Rock + oil

2+41 = 35' Rt. = end Conc. Drive

2+27 = 34' = Edge, start conc. drive on Rt. 94.8 60 in yard on lawn

2+17 = 24 = Rt. = End ℄. + Edge A.C. Pav.

2+00 = ℄ 3' wide Conc. Walk 92.0 55 in alley 93.3 50 Top Bank

1+88 - 24' Lt. = ℄ Power Pole # 3851

1+87.5 ~ 32' Lt. = Nth. End Return of Alley

1+85.5 ~ 22' Lt. = Nth. alley E.C.

℄

91.84 1.45 3A Spike & Tenn. 91.70 .59 42.5 cl. 91.08 2.21 42.5 pav 90.55 2.94 8 90.87 2.42 20 90.56 2.73 89.88 3.41 11 90.19 3.41 N on pav 89.93 4.1 3.45 Edge oil pav 89.39 3.9 40 89.59 3.7 40 89.39 90.0 15 at House 90.15 48.6 at Stucco House

89.35 3.94 35 End Dr. 89.72 89.39 89.50 3.99 40 on Dr. 89.80 3.49 56 at Bar. on floor

94.3 17 Top Bank 90.48 38 Back edge Walk Toe 90.29 Top 22.2 ch 89.72 gut 89.90 15 89.50 edge A.C. 22.5 89.72 3.90 34 start Dr. 89.39 3.99 40 on Dr. 89.50 3.48 39 Bar. floor 89.81

88.56 4.73 24 pav 89.20 4.07 24 End ℄.

93.19 0.1 40 89.99 3.3 32 89.50 3.79 29.7 ℄ 88.89 4.40 23.6 pav 89.22 4.07 70 89.07 4.22 88.50 4.79 70 88.47 5.07 72 pav 88.83 4.46 22.3 ℄. 90.21 3.95 40 on walk

89.61 Top End Return 89.20 32 gut 89.18 Top E.C. 88.55 22 gut

Wahoska.

Rt. of Way sheets & Hard copy
See location of Bldgs. etc. on

4+45 40' Lt. = Fence line

4+20 ~ 40.3 Lt. to Cor. of Stucco House.

4+15 71 = E.C. 95.2 / 50

4+05 ~ 53.8 Rt. = End of New Curb.

Worden St. now under construction for Paving.

45± Lt. = curb line Tennyson

3+57 15' Rt. = Δ in P. Edge

3+47 ~ 36.3 = B.C. of Return Tennyson St.

3+46 ~ 33.6 Lt. = ℄ Power Pole P 3902

3+42 ~~8' Lt. = Fire Hydt.~~ Removed

3+41 8' Lt. = End curb.

D = dirt.
P = oil + Rock Pave

3+36 18' Lt. = End A.C. Pave. + 4" oil Rock Pav.

3+33 ~ 11.4 Rt. = ℄ Sewer M.H

3+25 57' Rt. = w'ly. cor. Conc. Dr.

3+23 ~ 38.5 Rt. = End of "6" Type Return at Worden St. New Curbs and being Paved.

96.94

93.3
40.3
Cor. House
87.32 86.83 3.6 / 40
Top End Curb
53.8 gut

93.34
92.46 gut.

91.84
92.98
36.3 Top Cb.

89.64

87.44
7.5 / 13 D.

82.54
9.4 / 13 P.

87.44
9.8 / 36.5 P

87.34
9.6 / 40 D

93.04
3.90 / 45± / 8 Curb

93.64
3.90 / 45± / Top Ch.

93.34
3.4 / 40

93.34
3.7 / 25

91.34
5.6

90.44
6.5 / 10

88.74
8.2 / 16 P

88.84
8.1 / 27 P

88.44
8.5 / 38 P

88.44
8.5 / 40 D

91.75
5.12 / 8 End ch.

94.14
5.80 / P / 8 ℄

92.03
4.59 / 30 Approx Cb. line Tennyson

92.18
4.76 / 18.7 Top Cb.

91.71
5.23 / 18.7 A.C. Pav Cutter

94.34
6.6 / oil Pav

89.74
7.7 / 17 P.

89.24
7.7 / 27 P.

88.74
8.2 / 39 Edge P

88.54
8.4 / 40 D

89.28
11.4
rim
M.H.

88.88
8.28
57'

92.90 91.45 91.33 90.58 89.52 89.42 88.90 89.43
46.5 23 13 14 26 38.5 gut Top End Ret.
rim M.H.

96.94

Wabaska Dr.

5+40 ~ 38.5 Lt. = E 14" Acacia Tree

T.P. 2.74 88.21 11.47 85.47

5+37 ~ 15' Lt. = E 14" Acacia

5+16.5 ~ 12.3 Rt = E Sewer M.H.

5+01 2 40' Rt. = End Conc. Dr.

5+00 Cont

5+00

4+95 2 40' Rt. = start Edge conc. Dr.

3+85 8 42 8 Rt. = start Conc. Dr.

4+66 5 22 5 Lt. = NW. Cor. of 12' x 16' Conc. slab. Garage has been removed.

4+50

96.94

85.66
12.3
rim
M.H.

11.25 / 38 — 85.69 — Cor. Dr.

11.27 / 40 — 85.67 — End Drive

11.39 / 61 — 85.55 — @ Gar. Floor

11.2 / 34 — 85.74

11.25 / 38 — 85.69 — Edge Drive

11.27 / 40 — 85.71 — @ Drive

92.5 42 along 5' Redwood Fence	91.54	87.44	88.74	85.94	85.54	85.24	85.94	85.24	85.14
	5.4 / 40	7.5 / 31	8.2 / N	11.0	11.4 / 32 D	N.1 / 2 P	11.0 / 15 P	11.7 / 27 P	11.8 / 28 D

85.67

11.27 / 40 — Edge Dr.

85.81

11.13 / 42.8 — Cor. Conc. Dr.

91.70
22.5
on slab

93.94	93.44	91.84	91.04	87.44	86.94	86.94	86.94	86.44	86.14
3.9 / 50	2.3 / 40	5.1 / 33	5.9 / 22	9.3	12.1 / 9.5 D	10.0 / 1.0 P	10.0 / 2.1 P	10.5 / 3.2 P	10.2 / 4.0 D

96.94

Wabaska

6+07 — 43 ft = Wly. Cor. Conc. Dr.

6+01 — 49 1/2 Rt = S. Cor. Conc. Dr.

5+85 — = Int. Edge Rock + Oil pav.

5+81 ft — 40' Rt. = End Conc. drive

see page 11

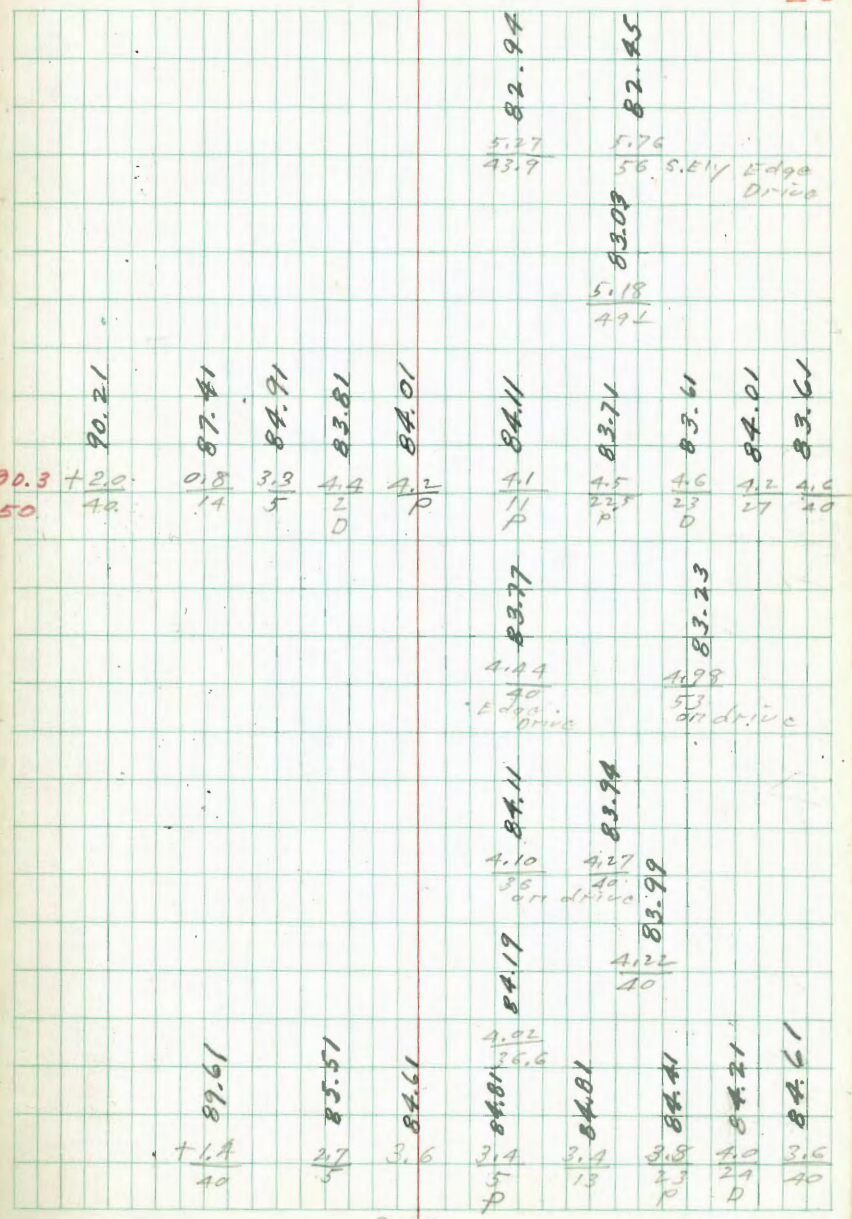
5+74 ft — 36' Rt. = Edge E of conc drive

5+71 ft — 40' Rt. = start Conc. Dr.

5+69 ft — 36 E Rt = Cor Conc. drive

5+50 ~ — 18.5 Lt. = E 5" Acacia Tree

88.21



Wabasha

7+20.44 = 52+08.58 on New proposed B.C. Will locate from semi Tangs as there's little to add to Sommermeyer's notes.

7+13	40' Rt. = Nly. Edge drive
7+08	34 Rt. = Wly Cor. drive
7+02	40' Rt. = sly edge Dr.
7+01	39' Rt. = Sly Cor. drive
7+00	
+50	Cont.
6+54	~ 39' Rt. = E. 36" Palm.
6+50	

89.1
50

89.57
50
edge
Walk
along House

88.7
40

88.21

88.21

87.2	84.91	83.21	82.41	82.61	82.61	82.71	82.41	82.31	82.71	82.1		
23	1.3 / 14	5.0 / 5	5.8 / 2 / D	5.9 / 1.5 / P	5.6 / P	5.5 / 10 / P	5.8 / 20.5 / P	5.9 / 21 / D	5.5 / 26	6.1 / 40		
87.11	85.91	83.71	83.21	81.51	81.51	81.51	81.51	81.21	81.41	81.41	80.91	
1.1 / 40	2.3 / 19	4.5 / 16	5.0 / 5	6.7 / 3 / D	6.7 / 0.5 / P	6.7 / P	6.7 / 10 / P	7.0 / 20.5 / P	7.2 / 21 / D	6.8 / 25	7.3 / 40	
			88.81	86.41								
			+0.6 / 40	L.C. / 17								
								80.84	80.83	80.64		
							7.37 / 40	7.36 / 34.3	7.57 / 40			
						80.88	7.33 / 39					
							80.41	79.82				
							7.18 / 40	8.39 / 37				

Sly Edge drive

Wabaska Dr.

8+92 ~ 22' Rt. = ℄ Tel. Pole # 484059H

8+66.5 ~ 11.5 Rt. = ℄ Sewer M.H. 87.38 11.5 rim M.H.

8+50 Cont.

8+56.44 = 53+44.52 New Proposed E.C. On Same Tangents from here on.

8+50 46' Lt. end 7' cyclone fence

8+20

T.P. 0.41 79.75 8.87 79.34

△ Disk on ℄ 7+88.44

(Fwd. tangt)

7+89.80 90° to △ 2x2 Hub on East line Wabaska

7+88.46 A on Split ~45.3 Lt. Begin 7' cyclone Fence at Gas & Electric Power Plant.

(Back tang)

7+87.08 = 90° to △ 2x2 on East line Wabaska = P.I. of New Line

7+50

7+47 ~ 19' Lt. = ℄ Tel. pole # D29492T

88.21

Lt ℄ Rt

on New fill

88.0 87.7 87.6 79.9 78.43 78.44 78.49 78.15 78.1 78.2

44.8 40 33 19 2 8 18.5 40 50

at fence Top Toe E.P E.P

87.8 87.6 80.31 79.31 79.31 78.91 79.41 79.01 79.0 79.0

45.3 Top 7.9 8.9 8.9 9.3 8.8 10.2 13.8 21.0

along fence Bank 21 0 0.5 P 22 P 25 D 33 40 60

Toe

87.7 84.1 80.21 79.31 79.31 78.91 79.41 78.81 78.9 78.9

40 35 7.6 8.9 8.9 9.3 8.8 10.2 13.8

14 0 0.5 P 22 P 25 D 33 40

93.0 81.8 93.4 80.91 80.21 80.21 80.31 79.91 79.81 79.81 79.81

40 25 22.8 7.3 8.0 8.0 7.7 8.3 8.4 8.9 10.4

1 0.5 R 10 P 2.5 P 2.2 D 40 70

edge grading

88.21

Wabraska

11+00 Cont. 65'Rt.= Toe Voltaire Ave Fill.

11+00
10+65 ~ 22'Lt. begin Cold lay Parking
10+62 ~ 32'Lt. = ℄ Power Pole # 4026
10+58 ~ 49.9 Lt. = End Stucco Bldg.
10+56 ~ 35.3 Lt. = ℄ Deadman
10+50 Cont.

10+50

10+11 ~ 49.3 Lt. to Cor Stucco Bldg.

10+00

9+50

9+00

79.75

Red = Self Reading Rod.

21

79.75

Wabaska

13.76
47.2 at Bldg.

12+05 5 — 47.2 Lt to Stucco Bldg
End Rock + oil pav. Start A.C. Pav.

11+91 ~ 29.4 Rt. = B.C. of Curb on Voltaire

11+90 ~ 20.4 Rt = End Curb.
A.C. pav. a ~~start curb ret.~~ Broken off.

11+87 3 — 19' Rt. = End oil + Rock Pave. start

11+88 ~ 30.5 Rt. = ℄ Power Pole # P 40.65

11+81 ~ 36.5 Rt. = ℄ 14" Palm Tree.

11+77

11+58 — 2 5 Rt. = Δ in paving edge

11+50 Cont.

11+50 — 34 Rt. = to Wabaska + also Voltaire

Fills

79.75

71.21 | 70.64 | 87 72.55 | 71.85 | 71.94 72.55 | 71.59
Top CB | 29.4 out | 7.2 40 D cold lay | 7.9 23 P + edge cold lay | 7.7 12 P | 8.16 A.C. pav
71.14 | 70.49 | 73.25 | 71.95 | 72.35 | 71.85 | 70.65 | 71.25
Top End Ret. | 20.4 out | 6.5 40 D | 7.8 23 P | 7.4 12 P | 7.9 P | 9.10 18 Gutter | 8.50 18 dr.
75.10 | 72.25 | 72.45 | 72.05 35 | 72.27 | 72.45 | 71.95 | 70.95 | 71.5 72.05 | 71.6 70.75 | 70.97 | 70.85
60 on Cold lay | 6.5 40 on Cold lay | 7.6 4 D | 7.7 23 P | 22 edge Cold lay | 7.3 11 P | 7.8 P | 8.8 48 P | 7.7 15 D | 9.0 24 | 34 West edge work on Voltaire | 45 Top CB
74.17 | 73.45 | 80 72.55 | 72.60 | 72.35 | 72.25 | 72.35 | 72.25 | 11.9 72.45 | 71.9 73.35 | 71.9 72.25 | 72.1 63.15
50 on cold lay Parking | 6.3 40 | 7.4 28 D | 23 edge Cold lay | 7.4 22 5 P | 7.0 11 P | 7.4 P | 7.5 2 P | 7.8 4 D | 6.4 5 | 7.1 12 | 18.3 21 34 Top Fill

62.5 | 63.45 | 70.15 | 8.6 66 = Sta. Wly. line Voltaire
16.2 40
7.7 2.5 P

79.75

out 70.16

Wabaska Drive

12+53.88 = E Voltaire = 57+41.96 on New Proposed line. Section parallel To Voltaire St.

S. Line & E 7' Lot. Catalina & Voltaire	(P.8)		10.50	62.14	(62.10)
T.P.	1,23	72.64	3:53	71.11	

S.W'ly Gutter Voltaire Cont.

S.W'ly. Gutter line Voltaire ← on A.C. Pav.

These sections taken on ℄ of Voltaire & intersect Wabaska ℄ at sta. 12+19±

S.W'ly curb line Voltaire →

T.P.	2.77	74.94	7.58	72.17

Curb return.
= Start A.C. Pavement + start
12+28 — 24' Lt. = End Rock & oil pav. also
12+20 ~ 39.5 Lt. to 3.5 Conc. Steps To Bldg.
12+09.5 ~ 43' Lt to Angle in Stucco Bldg.

79.75

Lt. ℄ Rt.

71.62	71.99	72.09	72.08	71.93	71.52	70.65
100	50	25	on disc	25	50	100

68.70

6.24 / 1.56 ± Ctr. Grade of Curb

71.24 — 3.70 / 100
71.36 — 3.58 / 785
71.63 — 3.31 / 40
71.24 — 3.30
71.24 — 3.70 / 40
70.71 — 4.23 / 41
69.54 — 5.40 / 100
68.98 — 5.96 / 140

71.86 — 3.08 / 100
72.01 — 2.93 / 785 of E.C. Rad.
71.34 — 3.60 / 41 of Rad. E.C.
70.70 — 4.24 / 100
69.65 — 5.27 / 140
69.70 — 5.24 / 1.56 ±

Belongs on left side

74.94

75.15 — 43 floor Bldg. — 72.72
72.19 — 39.5 at steps on Coldlay
71.60 — 8.15 / 2.45 A.C. pav.
72.17 — 7.58 / 2.45 top of
72.13 — 39.6 Coldlay at Porch
75.09 — Top Conc. Landing

43 on Coldlay at Bldg.

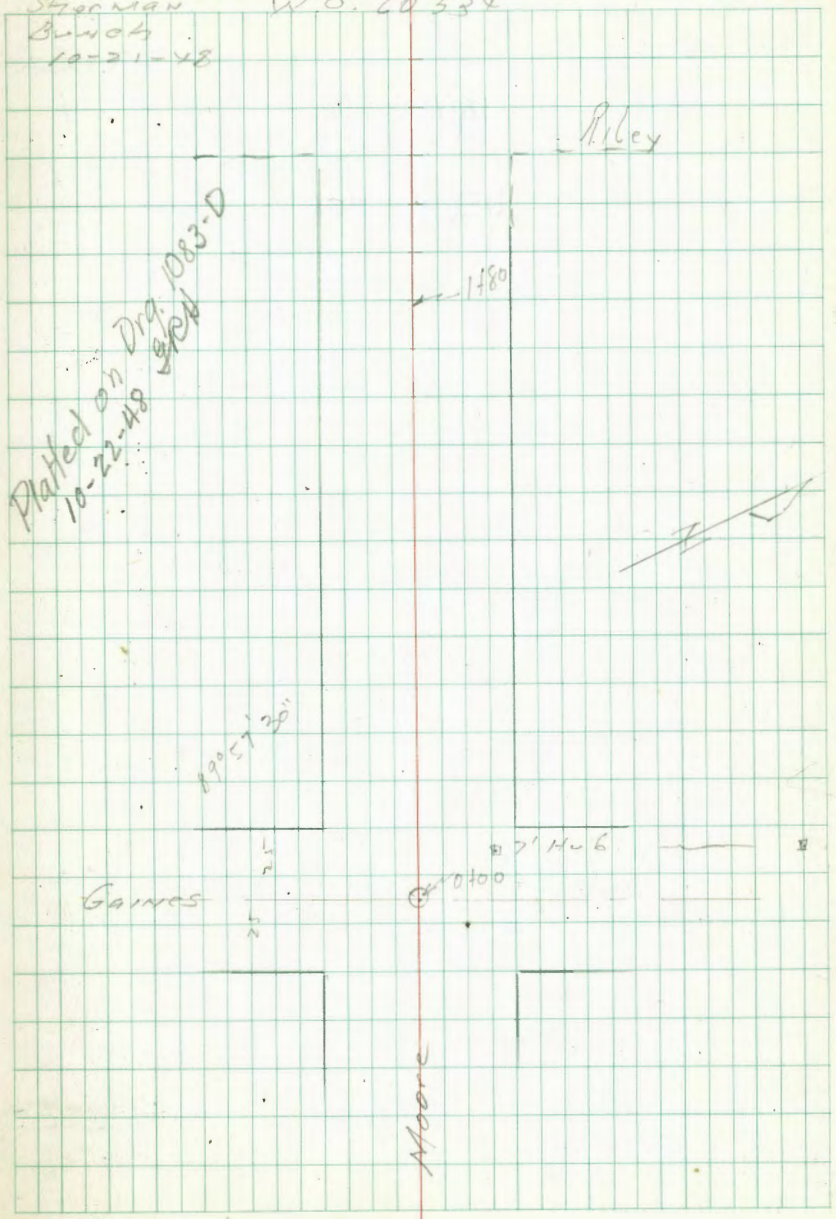
79.75

Sewer Const.
on Moore St.
Newly Road Gaines

		H.I.			
0+00	12.77	7.32			-5.45
0+30					-5.24
				2.98	12.56
					4.34
					C 8.22
0+60					-5.03
				2.89	12.35
					4.45
					C 7.90
0+90					-4.82
				2.82	12.14
					4.50
					C 7.64
1+20					-4.61
				2.78	11.93
					4.54
					C 7.39
1+50					-4.40
				2.97	11.72
					4.35
					C 7.37
1+80	D.E.				-4.19
				3.04	11.51
					4.28
					C 7.23

Moore
Begg
Sherman
Burnett
10-21-48

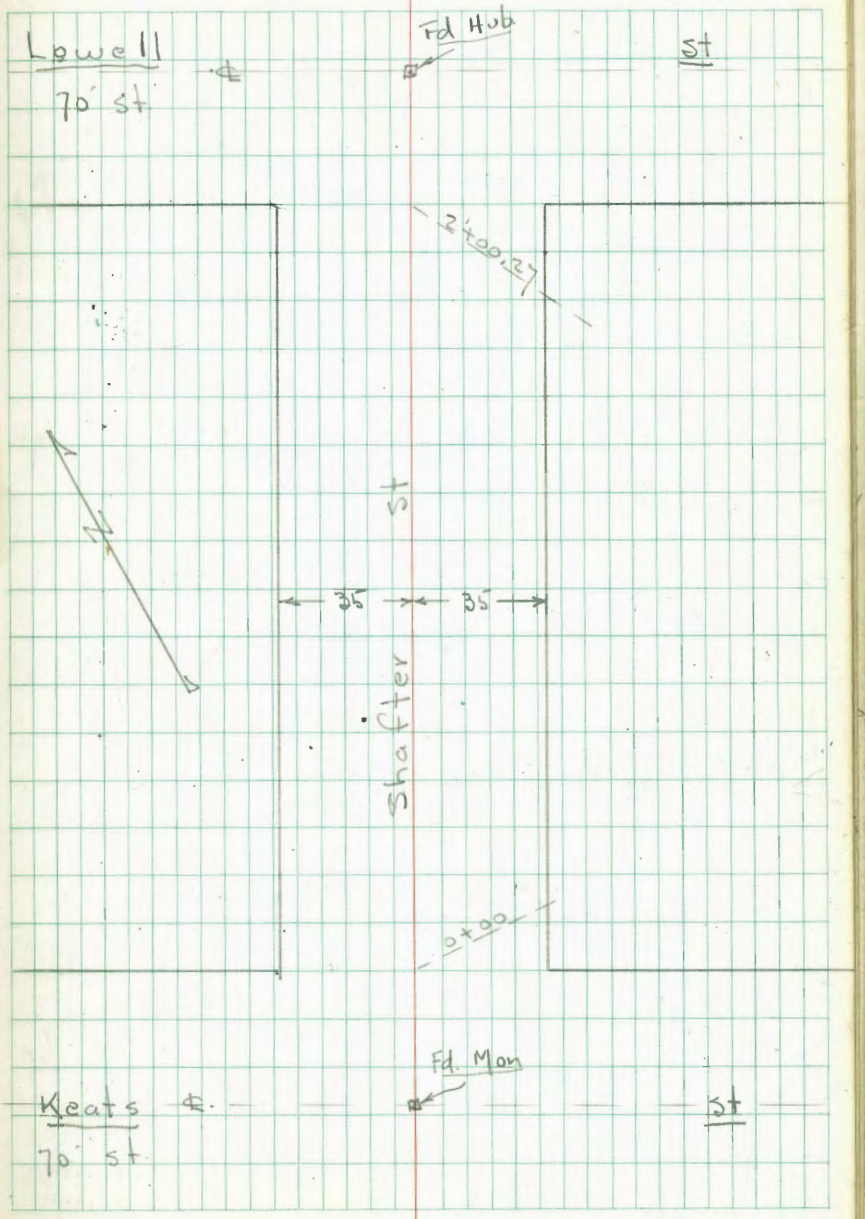
W.O. 60334



X-Section Shafter - Keats to Lowell

W.O. 22002

12-27-48
Osborne
Hardin
Decker
Hatch



X-Sect. Shafter - Keats to Lowell

Dirt - Rough Graded - 70' St - 18' cbs.

0+54 - 28.7' Lt. = ℄ 7" Pine

0+50

0+41 - 29.5' Lt - ℄ 12" Pine

0+28 - 22.7 Lt. - Beg. 12" Conc + Rock cb.

0+24 - 29' Lt - Beg. ℄ of Row of Shrubs 7' High

0+09 - 31.7 Lt. = ℄ 6" Tree

0+00 = N.L. Keats

0-02 - 30.5' Lt. = ℄ 12" Pine Tree

0-18 = N. cb.

0-35 = ℄

0-52 - S. cb

0-70 = S.L. Keats

On Mon - ℄ Keats & Shafter 8.20 - 2.42

5.01 5.78 0.77

S.W. Pipe
B - 1777
P - 14
Lowell + Shafter

Lt. ℄ Rt.

5.78

See 777 - P. 14 for Int.

2+00.27 = SL Lowell

2+00.07 = 35' Lt. = end of Walk - Rods on Prop Sect.

1+98 - 32.6' Lt. = ℄ P. pole # 1698

1+77 = ℄ N. Porch to House on Lt.

1+50

1+20 - 14.5' Rt. = ℄ Tel. pole # D 32337

1+19 - 35' Lt. = Beg. 5.2' Conc. walk

1+10 - 66' Lt. = ℄ Doub. Gar - Dirt floor

1+00.5 - 23.2 Lt. = Cor.+ end of Conc. + Rock cb. goes west along lot line

T.P.	5.36	6.13	5.01	0.77

1+00 - 24.3' Lt. = ℄ P. pole # 1674

0+99 - 27' Lt. = end ℄ Row of Shrubs

0+67 - 24.5' Lt. = ℄ 4' Conc. Steps to 3' Brick walk

Lt.		℄		Rt.
0.73	0.73	-0.3	0.3	1.1	1.4
5.40	5.40	6.4	5.8	5.0	4.7
40.2	35	17		17	35
	Cor. walk				

2.34	0.63	0.75	0.6	0.0	-0.1	0.5	1.6	1.3
3.79	5.50	5.38	5.5	6.1	6.2	5.6	4.5	4.8
48	40.3	35	35	17		17	35	50
Porch at House	walk at Porch	edge walk						

2.41	0.71	0.76	0.0	-0.2	0.4	0.8	1.0
3.72	5.42	5.37	6.1	6.3	5.7	5.3	5.1
48	40.3	35	17		17	35	50
Porch at House	walk at Porch	edge walk					

0.73	0.79	0.8	
5.40	5.39	5.3	
40.2	35 = Cor.	66 = floor	
Cor. walk	walk		

1.68	0.6	1.80	0.65	0.4
4.45	5.5	4.33	5.48	5.7
35	35	24.8	23.2	23.2
Top wall	ground To W.	Top wall	Top Cor.	ground

6.13

1.6	1.7	0.66	0.5	0.1	-0.4	-0.3	0.8	1.0	1.3
4.2	4.1	5.12	5.3	5.7	6.2	6.1	5.0	4.8	4.5
50	35	23.3	23.3	17		11	17	35	50
		Top cb.							

1.24	1.20	1.22	0.22	
4.54	4.58	4.56	5.56	
50	35	24.5	24.5	
on walk	on walk	Top = walk	= Bottom step	5.78

Prop. Line Profile & Improvements along Haines - Fortuna to Oliver.

1+63 - 50.7 Lt. = ℄ Doub. Gar - Conc. floor

1+52 = ℄ 3' Conc. Walk - 34' Rt.

1+50

1+44 - 45.5' Lt. = ℄ Sing. Gar - Conc. floor

1+10 - 27.3' Lt. = ℄ 3.5' Conc. Walk

1+00

0+78 - 37.6 Rt. = ℄ 3' Conc. Walk

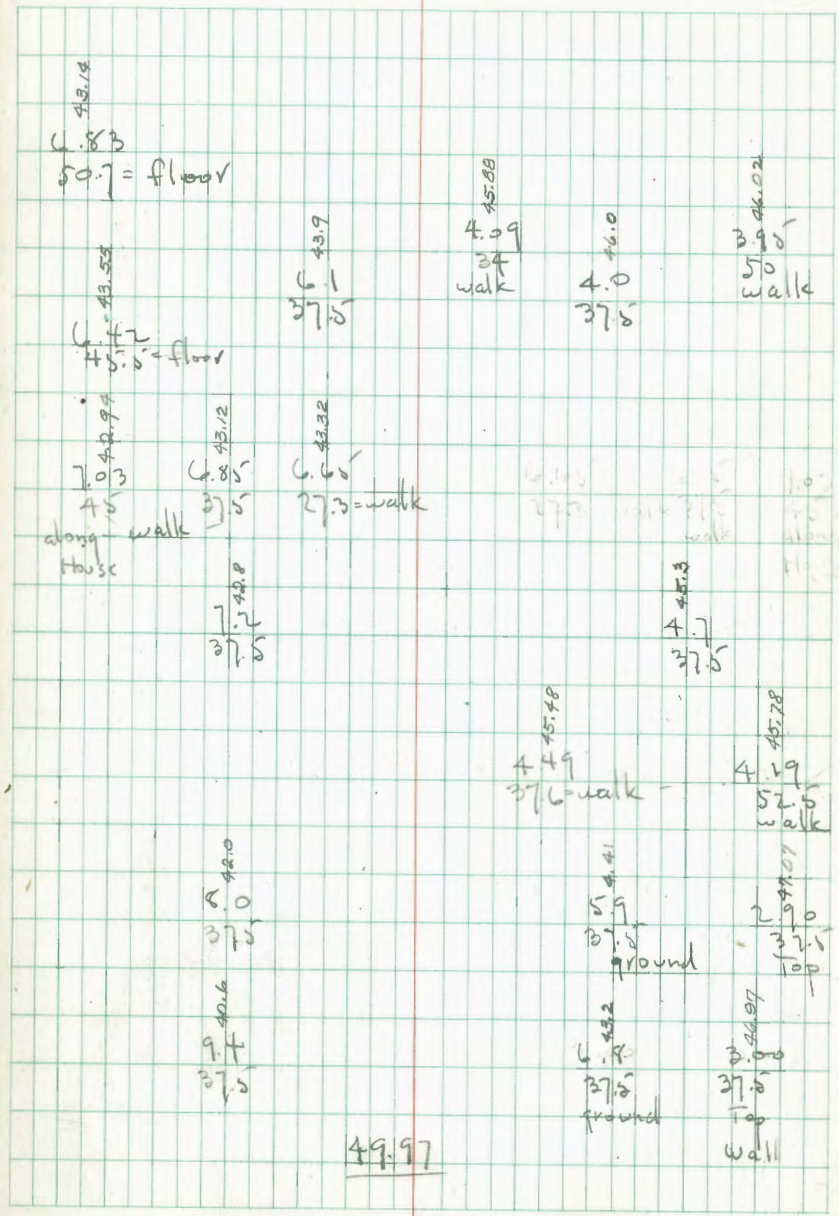
0+50 - 37.5' Rt. = end wall

0+00 - 37.5' Rt. - Beg 6" Conc. wall

0+00 - N.L. Fortuna

	491	49.97	10.50	45.06
B.M. on M.H.	192	55.56		53.64

Lt ℄ Rt



3+84 - 37.8 Lt. = ± 6.7 Dr. - 2 - 1.5' Conc. Strips

3+67 - 38.1 Lt. = ± 7' Dr. - 2 - 2' Conc. Strips
3+64 = 38' Rt. = ± 7' Dr - 2 - 2' Conc. Strips
3+50

3+42 - 37.2 Lt. = ± 3' Walk

T.P. 10.58 57.91 2.64 47.33

3+00

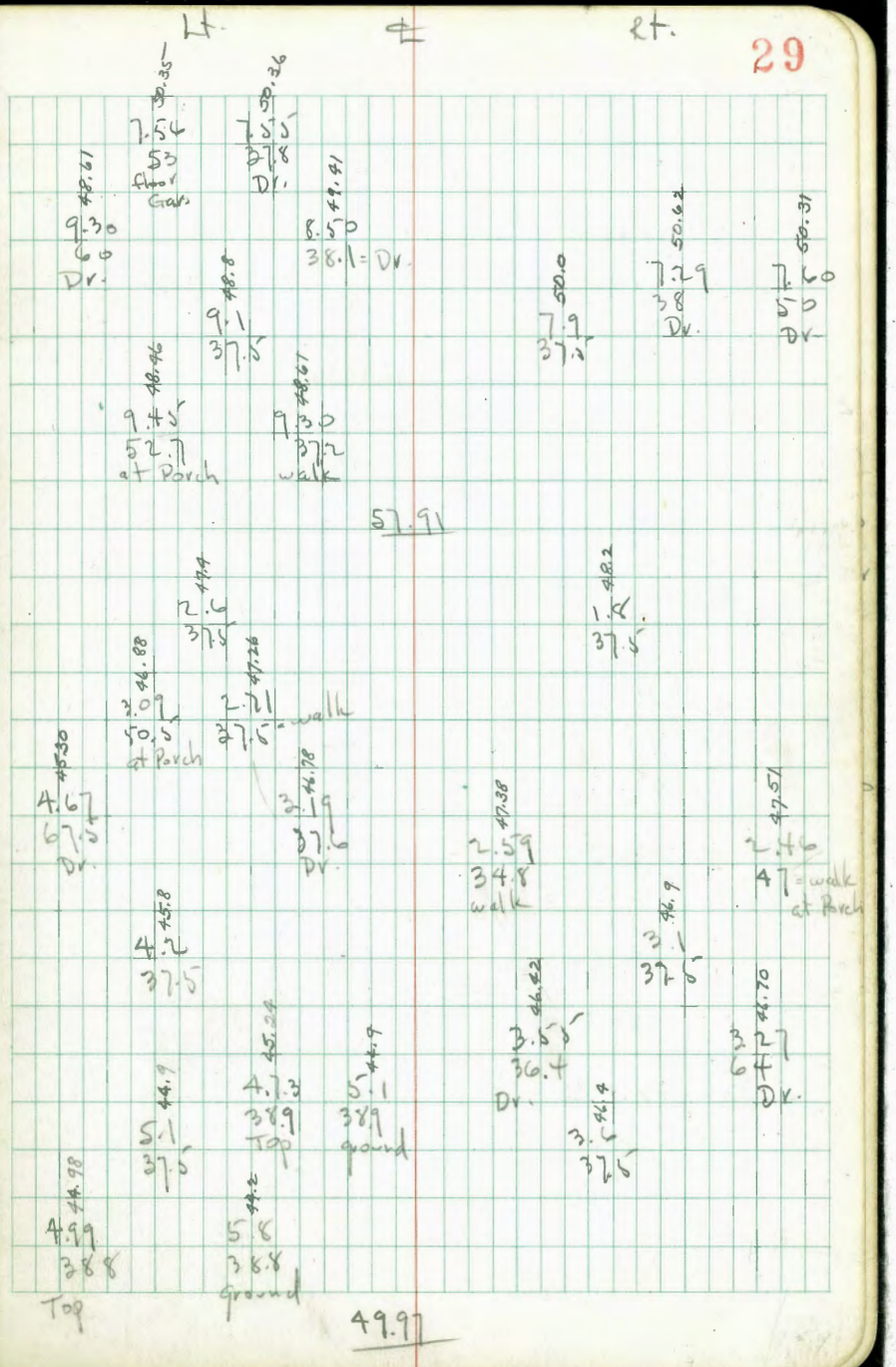
2+96 - 37.5 Lt. = ± 3' Conc Walk

2+80 - 37.6 Lt. = ± 7' Conc. Dr.
2+63 - 34.8 Rt. = ± 2' Conc. Wall

2+50

2+09 - 36.4 Rt. = ± 7' Conc. Dr.
2+08 - 38.9 Lt. = end wall
2+00

1+73 - 38.8 Lt. = Beg. 6" Brick Wall



0+50 - 4' Conc. walk on Lt

0+25 - 41 Rt. = ℄ 4' Conc. Walk - To House
0+15 - 39.6 Lt = ℄ 15' Conc. Dr. - Doub. Gar. - Conc. floor

T.P. 2.92 56.56 6.76 53.64

Note - House in street on Rt. ?

0+00 = N.L. Pac Beach Dr. - 80' st.

Show profile
Both ways along Prop Lines of Pac. B. Dr. to:

5+25 = S.L. Pac. Beach Dr. = end at 75' st.

T.P. 6.76 60.40 4.27 53.64 = B.M.

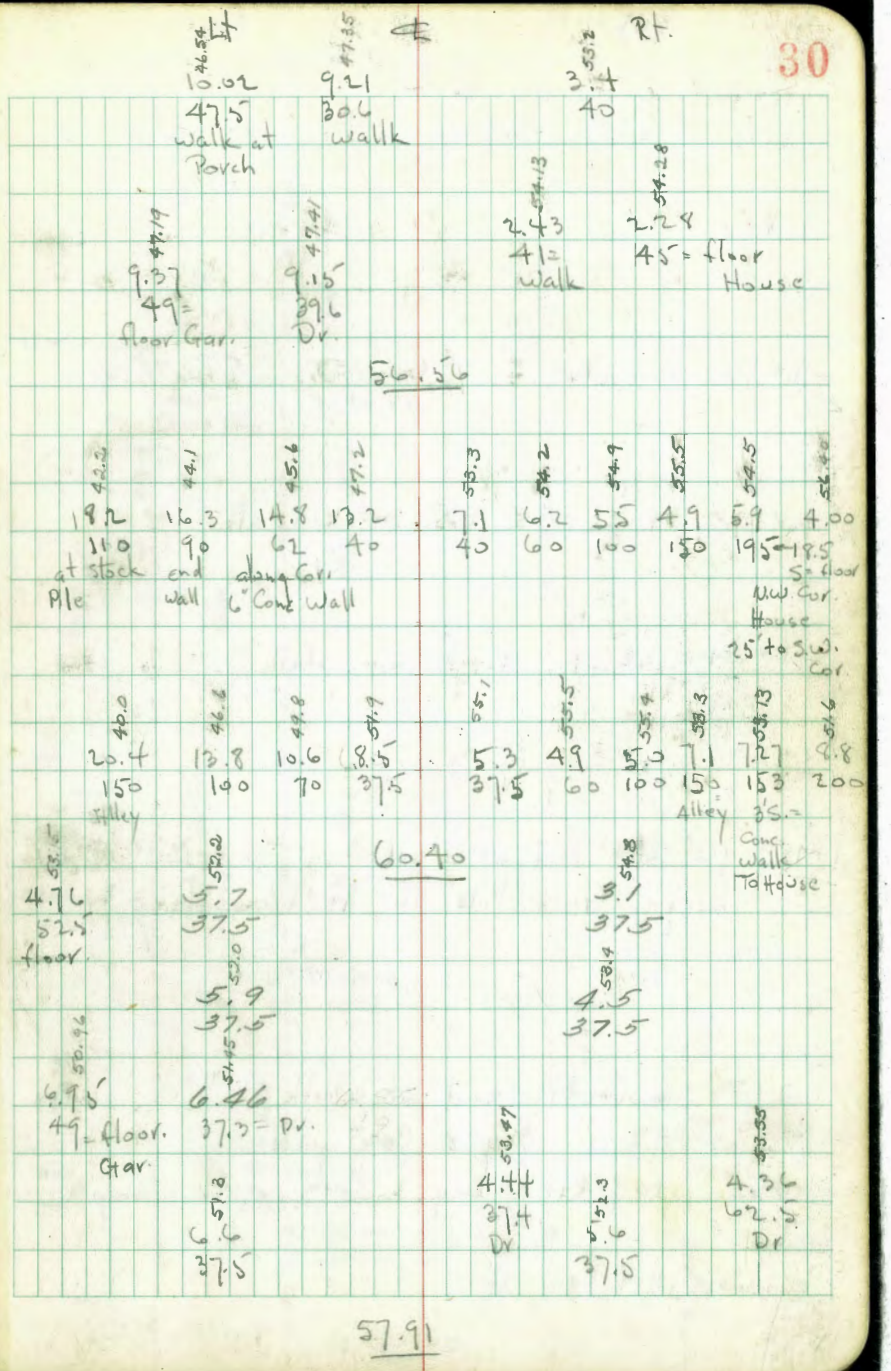
5+00 - 52.5' Lt. - ℄ New House - (under Const.)

4+50

4+35 37.3 Lt. = ℄ 7' Conc. Dr.

4+34 - 37.4 Rt. = ℄ 75' Conc. Dr.

4+00



T.P.	4.78	48.20	13.14	43.42

2+00

1+96 - 30.4 Lt. = ℄ 7' Conc. Dr. - Sing Conc. floor Gar.

1+77 - 34' Lt. = ℄ 2.5 Brick Walk

1+64 - 34' Lt. = ℄ 2' Conc. Walk

1+50

1+15 - 40' Lt. = end of Wall
Large Stock Pile on Rt. from Here

1+00

0+84 - 40.4 Rt. = end of Walk
0+75 - 39.9 Lt. = Beg. 8" Conc. wall
0+65 - 40.7 Rt. = Beg 3' Conc. walk along House

0+60 - Brk on Rt.

Lt. ℄ Rt.

48.20

43.2
13.14
40

43.01
13.55'
46 =
floor Gar.

43.44
13.12
30.4 = Rt.

45.12
11.44
45.8 =
floor
House

43.76
12.80
34 = walk

48.69
12.87
57.0
= along
House

44.05
12.51
34 = walk

44.1
12.5'
40

43.74
12.82
Bottom
of footing

50.27
6.29
Top
Wall

45.2
11.4
40 = ground

45.5
11.1
39.9 = along
Wall

50.33
6.23
Top
Wall

44.4
10.2
ground
about 2' down
To Bottom
of footing

51.92
4.64
40.1
Wall

51.91
4.60'
40.4
Walk

51.7
4.6'
40

51.93
4.63
44 = walk
= floor
House

51.95
4.61
45.0
Walk

51.84
4.73
40

56.56

2+50 = SL. Oliver

2+18 - 26.7 Lt. = ℄ 3' Conc. Walk

Lt. ℄ Rt.

8.9 / 150 — 37.3

6.8 / 100 — 44.4

5.1 / 40 — 43.1

3.7 / 40 — 44.5

3.6 / 100 — 44.6

7.43 / 131 = ℄ 8' Conc. Dr. — 45.7.7

4.40 / 45.7 — 45.80 — Floor House

4.6 / 26.1 — 45.55 — 5' Walk

48.20

8-22-49
Hendricks
Roberts
Bunch
Gregory
HO#25020

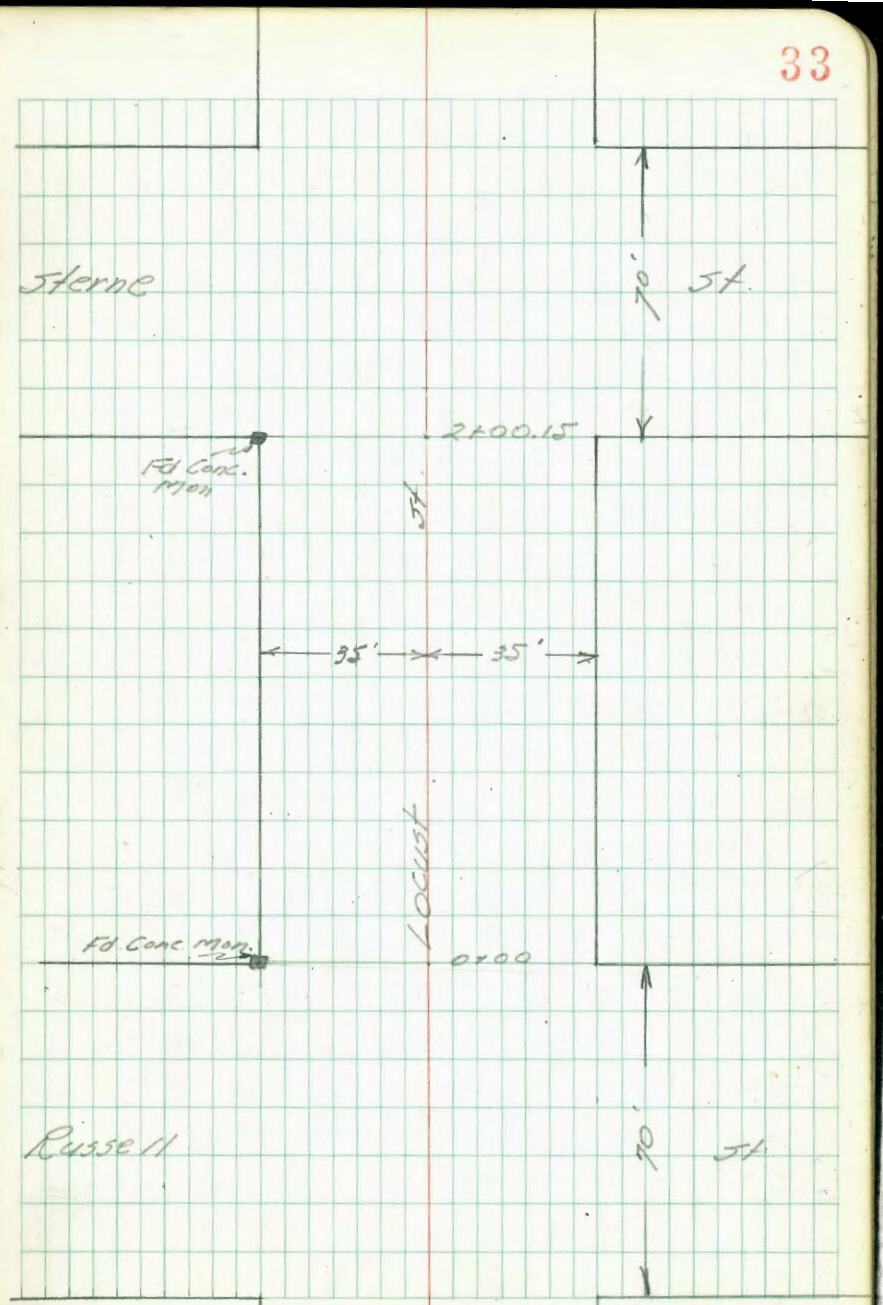
X ject Locust St.
Russell to Sterne.

INDEXED
W.K.
AUG 24 1949

Notes Returned & Plotted
Profile #1232
McClarren
8-31-49

Aug. 20 49
H.S. Sisson

BM	4.025	14.415		8.39	NW 8 P Rosecrans Nevell
	1.52	10.915	5.99	6.425	
BM			5.395	5.550	SW 8 P Rosecrans Russell
					Rec. 5.54



Levels Locust St
Russell to Sterne

0+40				
0+15				
0+00				
0-21				
0-35	& Russell St.			
T.P	7.23	~~48.69~~ 41.46	0.22	41.46
T.P.	12.63	41.68	0.34	29.05
T.P.	12.18	29.29	0.00	17.21
BM	11.67	17.21		~~5.83~~ 5.54

correct figure

41.7 42.1 42.3 39.1 39.4 37.2 36.7 35.4 34.7 33.4 33.1 33.6
7 6.6 6.4 9.0 9 11.4 12 10 13.8 14 10 15.4 15.6 15.1
41 41 35 23 17 5 17 29 35 43 50
Fl. House

42.8 41.3 39.2 37.5 35.2 34.6 33.7 32.4
5.9 7.4 9.5 11 12 13.0 14.1 15.0 16.2
50 35 17 17 31 35 50

43.2 41.7 39.9 38.2 36.2 34.6 33.9 32.8
5.0 7.1 8 10 14 12.5 14.1 15.5 15.9
50 35 17 17 33 36 50

44.1 42.8 40.8 39.0 36.9 35.4 33.2
4.5 6 7.9 9.7 11 13 15
50 35 17 17 33 50

45.2 43.1 41.3 39.5 37.8 35.9 34.3
3.5 5.4 7.1 9 10.9 12.8 14.4
50 35 17 17 35 50

48.69

NW. Prop Mon. Locust & Russell

SW BP Rosecrans & Russell

Locust St Cont'd

Russell to Sterne

B.M.			3.87	5.55	5.54
T.P.	3.31	9.42	12.94	6.11	
T.P.	0.55	19.05	12.62	18.50	
T.P.	0.65	31.12	12.61	30.47	
T.P.	0.16	43.08	12.41	42.92	
2+35.15		℄ sewer MH. ℄ Sterne St.			
2+00.15		So. Line Sterne			
1+50					
T.P.	2.14	55.33	2.50	46.19	
1+00					
0+70					
		48.69			

JVVBP Rasecrans & Russell

59.9 55.8 53.0 47.0 42.8 39.1 36.7

+4 16 +0 14 2 14 8 3.2 12 14 16 2 18 6

50 35 23 Rim 16 35 50

55.6 52.36 50.5 44.0 39.9 35.3

+0 3 2 9.7 4 8 11 3 17 14 20 0

50 37.1 27 30 35 50

Mon.

52.4 49.6 47.7 43.3 38.3 37.6 35.2

2 1 5.7 7 6 10 2 17 0 17 7 20 1

50 35 26 26 35 50

55.33

2" Pipe 35'4 Sta. 1+00 (CE 48+47)

49.8 46.0 44.9 40.6 39.1 37.6 36.2 35.1 34.9 33.8 33.6

0 2 7 4 14.4 8 10 6 9 11 1 12 9 13 8 14 2 15 1

50 35 25 11 19 32 33 38 46 50

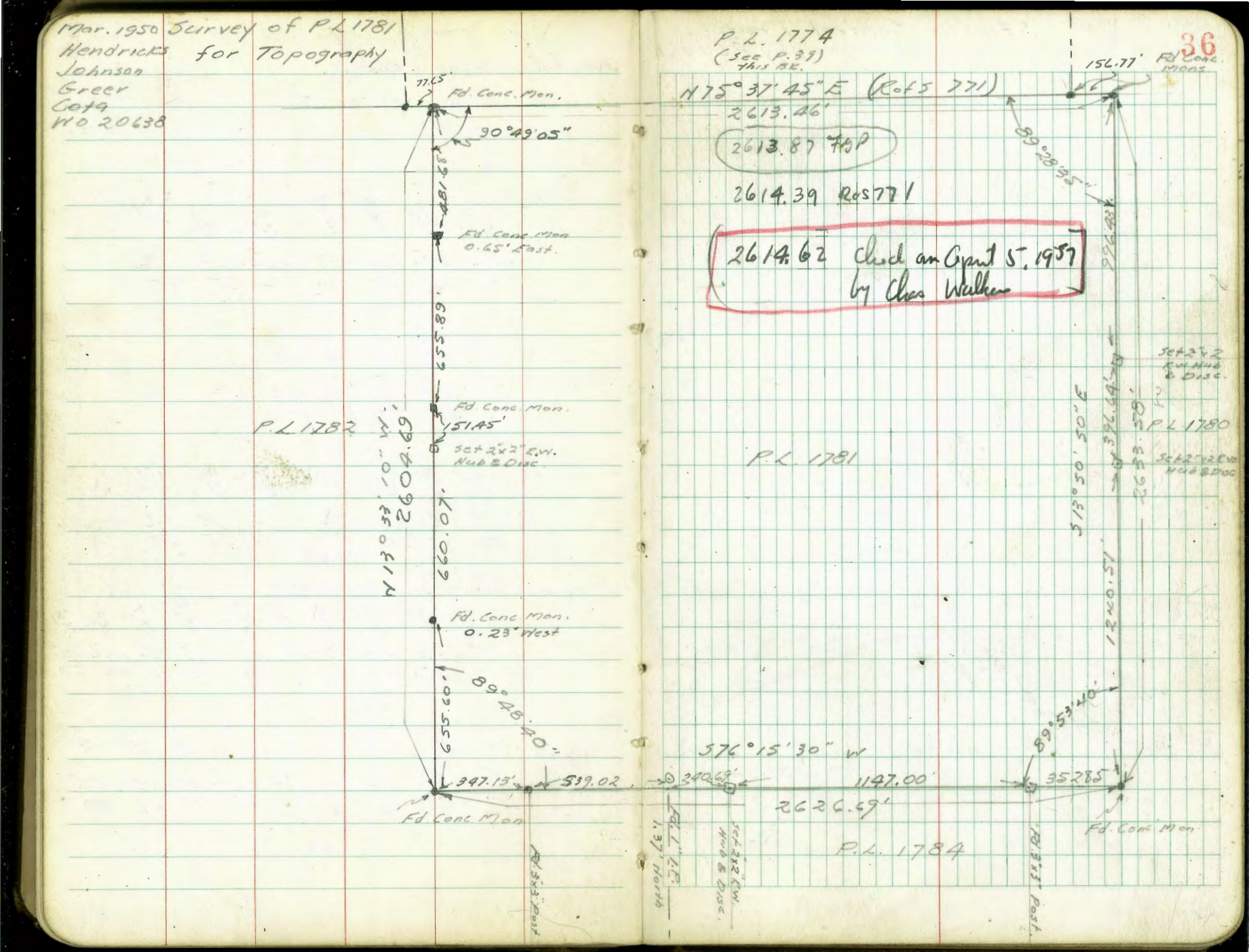
45.2 44.0 43.2 41.5 39.2 38.2 36.8 34.4 34.1 33.5 32.0

3 14 4 2 5 2 7 2 9 5 10 5 12 15 14 3 15 2 16 7

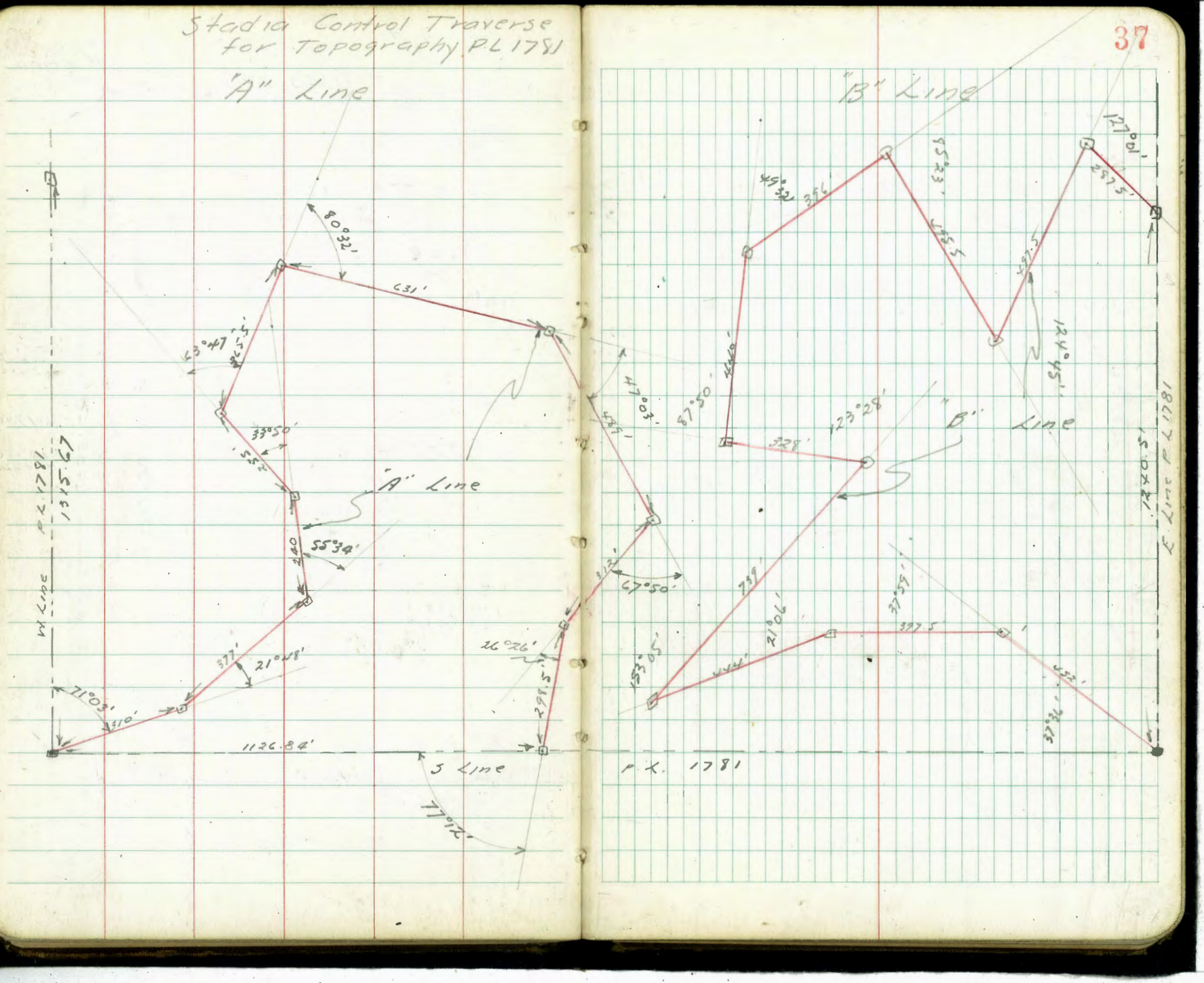
50 40 35 33 21 7 17 34 35 37 50

48.69

Mar. 1950 Survey of P.L. 1781
Hendricks for Topography
Johnson
Greer
Cotg
WO 20638

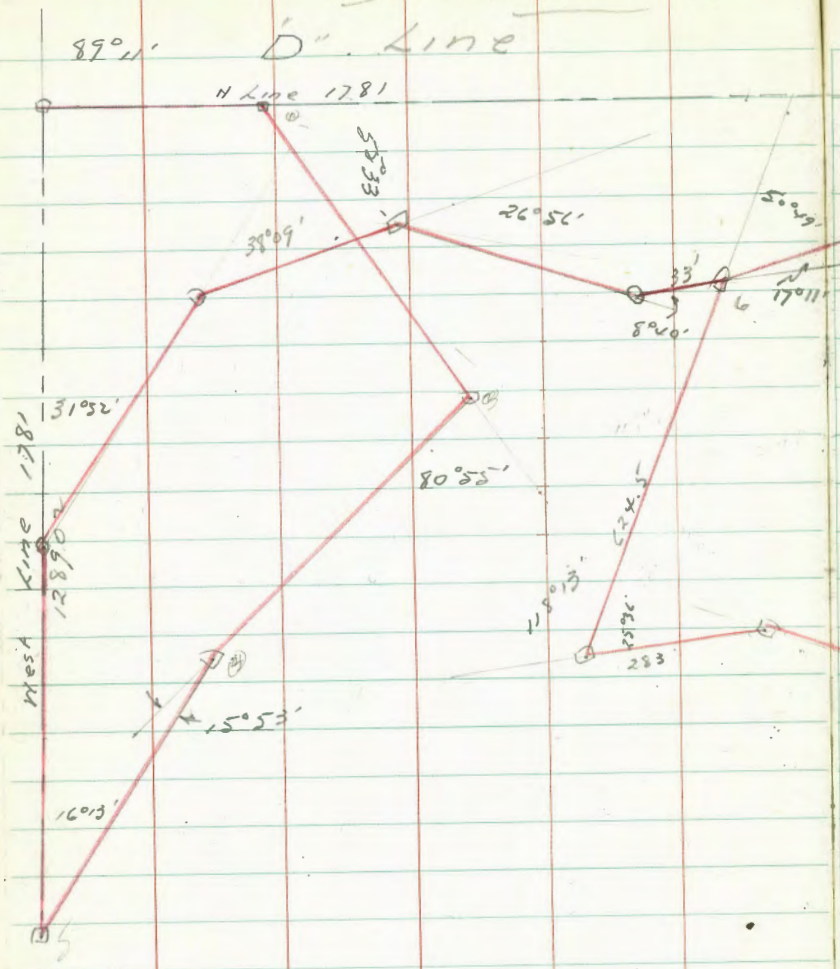


Stadia Control Traverse for Topography P.L 1781

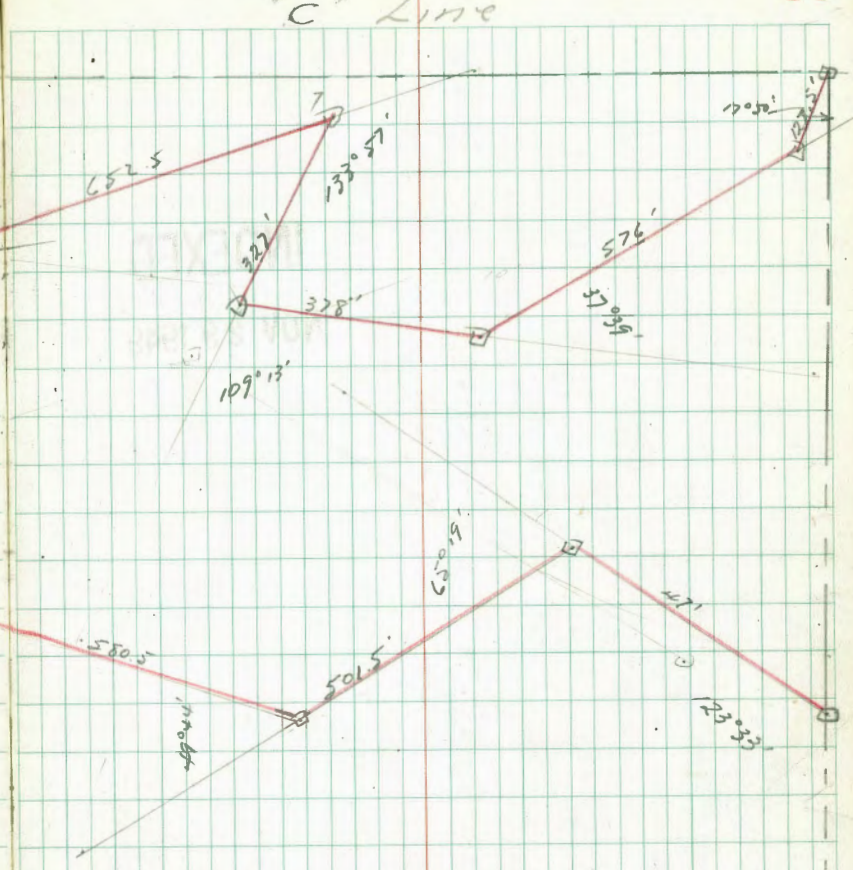


Stadia Traverses for Topography P.L. 1781

"D" Line

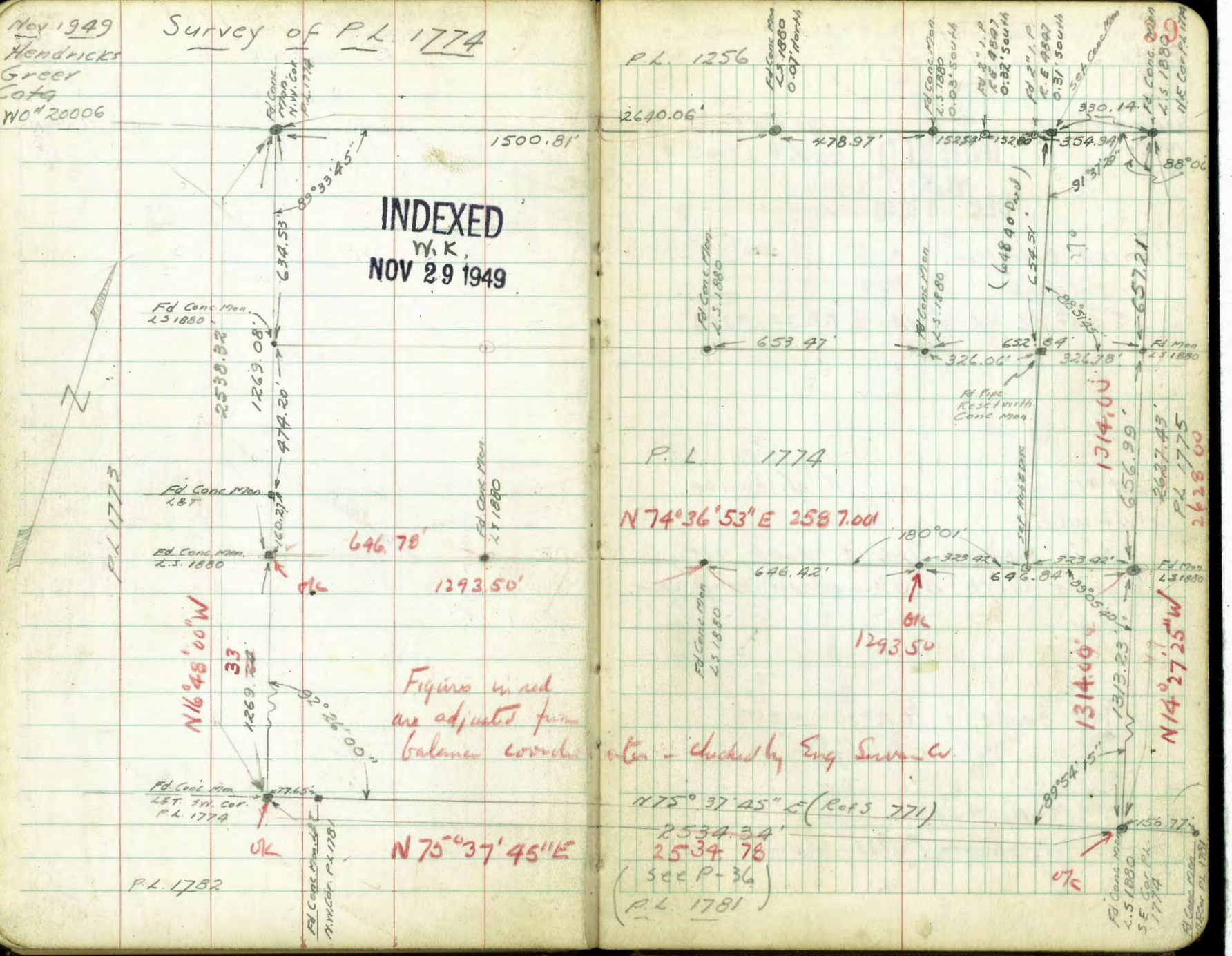


"C" Line



Nov. 1949
Hendricks
Greer
Cotg
WO# 20006

Survey of P.L. 1774



Figures in red are adjusted from Galanes coordinates - checked by Eng Surv Co

Easement Lot 13
Muirlands.

Sommermeyer-
McCoy.
Rorer.

11/30/49
W.O. # 20006

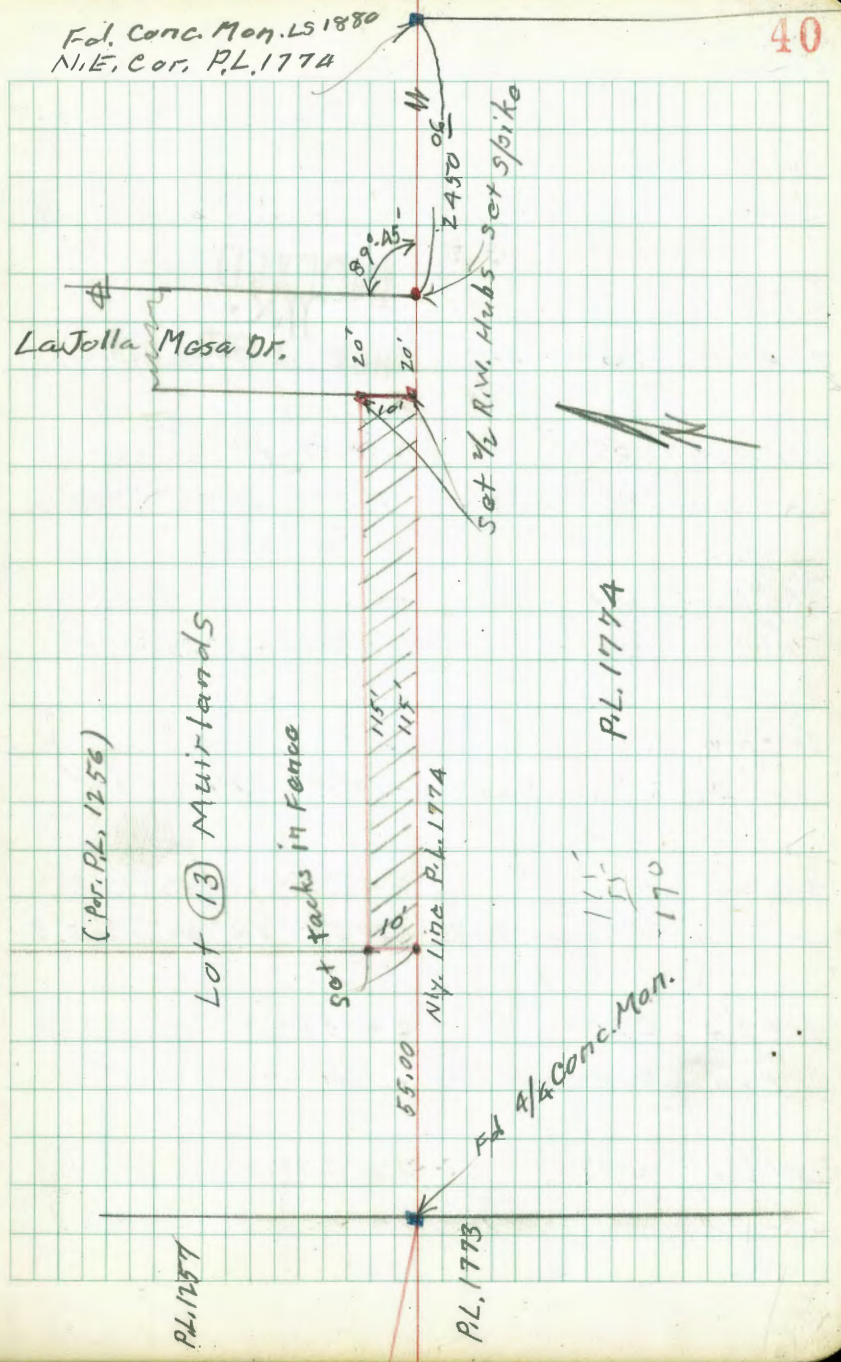
■ = Fd. Conc. Mon.
□ = Set. Hub
• = set spike 11/29/49 (T.P. 30-P35)

Lot #13 given required distance
Ely. & Wly.

Δ in S.E. Cor. lot 13 does not agree with Δ shown on map 2024.

Ref. books = T.P. #30-P35
F.B. 1799/39

Map # 2024
T.P. sheets # 1733



3-9-50
Hendricks
Greer.

Stadia Control Traverse for Topography of PL 1781 "A" Line

Course	Stadia Dist.	Mean	Vert. Angle	Mean Vert. Angle	Corr. Dist	Defl. Angle	Bearing	Diff El.	Elev.	H.I.
							N13°33'10"W (West Line)			
S.W. Cor. P.L. 1781	310								242.77	5.0
to CP#1A	310	310			310'	71°03' Rt.	N57°30'E	(width Recvd)	250.50	
CP#1A	385		+8°35'			21°48' Lt	N35°42'E			5.2
to CP#2A	387	386	-8°37	+8°36'	377			+ 57.29 / ~~57.20~~	307.79 / ~~307.70~~	
CP#2A	247		+9°58'			55°34' Lt	N19°52'W			5.3
to CP#3A	249	248	-10°00	+9°59'	240			+ 42.52 / ~~42.46~~	350.31 / ~~350.16~~	
CP#3A	255		+1°13'			33°50' Lt	N53°42'W			5.3
to CP#4A	256	255.5	-1°15'	+1°14'	255			+ 5.57 / 5.51	355.88 / ~~355.67~~	
CP#4A	366		+2°55'			63°47' Rt	N10°05'E			5.3
to CP#5A	367	366.5	-2°57'	+2°56'	365.5			+ 18.85 / 18.76	374.73 / ~~374.43~~	
CP#5A	631		-0°32'			80°32' Rt	S89°23'E			5.3
to CP#6A	631		+0°31'	-0°31'30"	631			- 5.48 / 5.63	369.25 / ~~368.80~~	
CP#6A	492		-4°14'			47°03' Rt	~~S42°~~ 20'E			5.2
to CP#7A		492	+4°12'	-4°13'	489			- 36.40 / ~~36.23~~	333.15 / ~~332.87~~	

"A" Line Contd

Course	Stadia Dist.	Mean	Vert. Angle	Mean Vert. L.	Corr. Dist.
CP# 7A	312		-0°28'		
to CP# 8A	313	312.5	+0°31'	-0°29'30"	312.5
CP# 8A	299		-2°12'		
to CP# 9A	299	299	+2°10'	-2°11'	298.5
CP# 9A to SW Mon		1126.84			1126.84

Defl. Angle	Bearing	Diff Elev	Elev.	H.I.
	S 42° 20' E		333.15 332.57	
67°50' Rt	S 25° 30' W			5.3
		2.59 - 2.67	330.56 ~~329.90~~	
26°26' Lt	S 0° 56' E			5.3
		11.37 - 11.44	319.19 ~~318.46~~ → (319.19)	
77°12' Rt	S 76° 15' 30" W (South Line)			5.3

Stadia Control Traverse "B" Line

Course	Stadia Dist	Mean	Vert. Angle	Mean	Corr. Dist	Defl Angle	Bearing	Diff El	Elev	H I
							S 76° 15' 30" W (South Line)			
SE Mon	455		- 4° 16'						374.22	5.0
CP #1 B	454	454.5	+ 4° 16'	- 4° 16'	452.	37° 36' Rt	N 66° 08' W	- 33.49 ~~- 33.73~~ - .24	340.73 ~~340.49~~	
CP #1 B	398		- 1° 19'							5.2
CP #2 B	397	397.5	+ 1° 18'	- 1° 18' 30"	397.5	37° 59' Lt	S 75° 53' W	- 8.84 ~~9.05~~ - .21	331.89 ~~331.44~~	
CP #2 B	445		- 3° 12'							5.3
CP #3 B	445	445	+ 3° 10'	- 3° 11'	444	21° 06' Lt	S 54° 47' W	- 24.43 ~~- 24.66~~ - .23	307.41 ~~306.78~~	
CP #3 B	741		+ 2° 54'							5.1
CP #4 B	741	741	- 2° 56'	+ 2° 54'	739	153° 05' Lt	N 27° 52' E	+ 37.79 ~~+ 37.41~~ + .38	345.25 ~~344.87~~	
CP #4 B	331		- 5° 44'							5.2
CP #5 B	331	331	+ 5° 43'	- 5° 43' 30"	328	123° 28' Lt	S 84° 24' W	- 32.66 ~~- 32.83~~ - .17	312.59 ~~311.96~~	
CP #5 B	441		+ 1° 22'							5.2
CP #6 B	440	440.5	- 1° 22'	+ 1° 22'	440	87° 50' Rt	N 7° 46' W	+ 10.72 ~~+ 10.49~~ + .23	323.31 ~~321.85~~	
CP #6 B	408		+ 9° 46'							5.3
CP #7 B	407	407.5	- 9° 47'	+ 9° 46' 30"	396	49° 32' Lt	N 41° 46' E	+ 68.37 ~~+ 68.16~~ + .21	391.68 ~~390.01~~	
CP 7 B	496		- 1° 47'							5.3
CP 8 B	496	496	+ 1° 47'	- 1° 47'	495.5	85° 23' Rt	S 52° 51' E	- 15.16 ~~- 15.42~~ - .26	376.52 ~~374.57~~	

44793

"B" Line Contd.

Course	Stadia Dist	Mean	Vert Angle	Mean	Corr Dist	Defl Angle	Bearing	Diff El	Elev	H.I
							S 52° 51' E		376.52	
CP# 8										
	508		+8°08'							
CP# 9	507	507.5	-8°10	+8°09'	497.5	124°45'Lt	N 02° 24' E	+71.78 +71.52 +26	448.30 ~~446.41~~	
CP# 9										
	288		-0°08'							
CP# 10	287	287.5	+0°05	-0°06'30"	287.5	127°01' Rt	S 50° 35' E	-0.38 -0.53 -.15	447.93 ~~445.58~~	447.93
CP# 10 = 12+40.51	East Line									
SE Mon					1240.51	36°37' Rt	S 13° 58' E (S 13° 50' 59" E East Line)			

Stadia Control Traverse For Topography

Course	Stadia	"C" Line Mean	Vert Angle	Mean	Corr. Dist.
CP#1 "C" 16+37.15 Back Ramp	473		-3°57'		
CP#2 "C"	473	473	+3°59	-3°58'	471
CP#2C	505		-4°18'		
CP#3C	504	504.5	+4°18'	-4°18'	501.5
CP#3	582		+2°55		
CP#4		582		+2°55'	580.8
CP#4	285		+4°49'		
CP#5	285	285	-4°47'	+4°48'	283
CP#5	625		+1°33'		
CP#6	625	625	-1°33'	+1°33	624.5
CP#6	652		-0°22'		
CP#7	653	652.5	+0°21'	-0°21'30"	652.5
CP#7	344		-12°34'		
CP#8	342	343	+12°35	-12°34'30"	327

Defl. Angle	Bearing	Diff. El	El
	S 13°51' E		
			456.10
123°33'Rt	N 70°18' W	- 32.63	423.47
68°19'Lt	S 44°23' W	- 37.40	386.07
49°44'Rt	N 85°53' W	+ 29.55	415.62
25°36'Lt	S 68°31' W	+ 23.73	439.35
118°13'Lt	N 06°44' E	+ 16.88	456.23
50°49'Rt	N 57°33' E	- 4.12	452.11
123°57'Rt	S 11°30' W	- 72.90	379.21

"C" Line Cont'd.

Course	Stadia Dist.	Mean	Vert. Angle	Mean	Corr Dist.	Def'l Angle	Bearing	Diff El.	Elev.
CP#8	378'		+0°14'						
CP#9	378'	378	-0°16'	+0°15'	378	+09°~~14~~ 13' Lt	N 82°~~14~~ 17' E	+ 1.67	380.88
CP#9	586		+7°32'						
CP#10	586.	586	-7°32'	+7°32'	576	37°~~40~~ 39' Lt.	N 44°~~34~~ 38' E	+ ~~65.78~~ 76.18	457.06
CP#10	128'		+3°56'						
NE Mon.	128'	128	-4°02	+3°59'	127.8	17°~~54~~ 50' Lt	N 26°~~48~~ 48' E	+ 8.86	~~465.92~~ (466.31)
NE Mon									
16+32.15 East Line						139°21' Rt	S 13°~~59~~ 51' E	(S 13°50'50" E)	

Stadia Control Traverse for Topography "O" Line

Course	Stadia Dist	Mean	Vert. Angle	Mean	Corr. Dist	Defl Angle	Bearing (N13°33'16"W) West Line	D. H. El	Elev. (460.31)
CP#1 NW Mon	339		-2°03'						
CP#2 "O"	340	339.5	+2°03	-2°03'	339	89°11' Rt	N75°38'E	- 12.07 12.11	448.24
CP#2	556		-2°09'						
CP#3	556	556	+2°11'	-2°10'	555	35°33' Rt	S 48°49' E	- 20.99 21.06	427.25
CP#3	579		-4°26'						
CP#4	577	578.33	+4°27'	-4°26'30"	574.5	80°55' Rt	S 32°06' W	- 44.63 44.70	382.62
CP#4	500		-2°06'						364.36
CP#5	500	500'	+2°07	-2°06'30"	499.5	15°55' Lt	S 16°11' W	- 18.28 18.38	364.09 (364.36)
13+15.67 CP#5 =	619		-6°14'		611.5				
CP#6 = 19+28 W Lot Line	619	619	+6°13'	-6°13'30"		150°18'	N 13°31' W (N 13°33' W)	- 66.60	297.86
CP#6	465		+2°09			31°52' Rt			
CP#7	466	465.5			458.00		N 18°19' E	+ 57.50	355.46
CP#7	328		+1°08			38°09' Rt			
CP#8	328	328	-1°09'	+1°08'30"	327.00		N 56°28' E	+ 6.50	362.06
CP#8	600		+8°53 23'						
CP#9	599	599.5	-8°52	+8°52'30	590.00 585.00	26°56' Rt	N 83°24' E	+ 91.50	453.66
CP#9 D									(456.23)
CP#10 D = CC	38 33	38 33			38 33.00	8°40' Lt	N 74°44' E	+ 2.5	(456.23)
10 D 7 C						17°11' Lt	N 57°33' E		

Stadia Control Traverse for Topography P.L. 1781

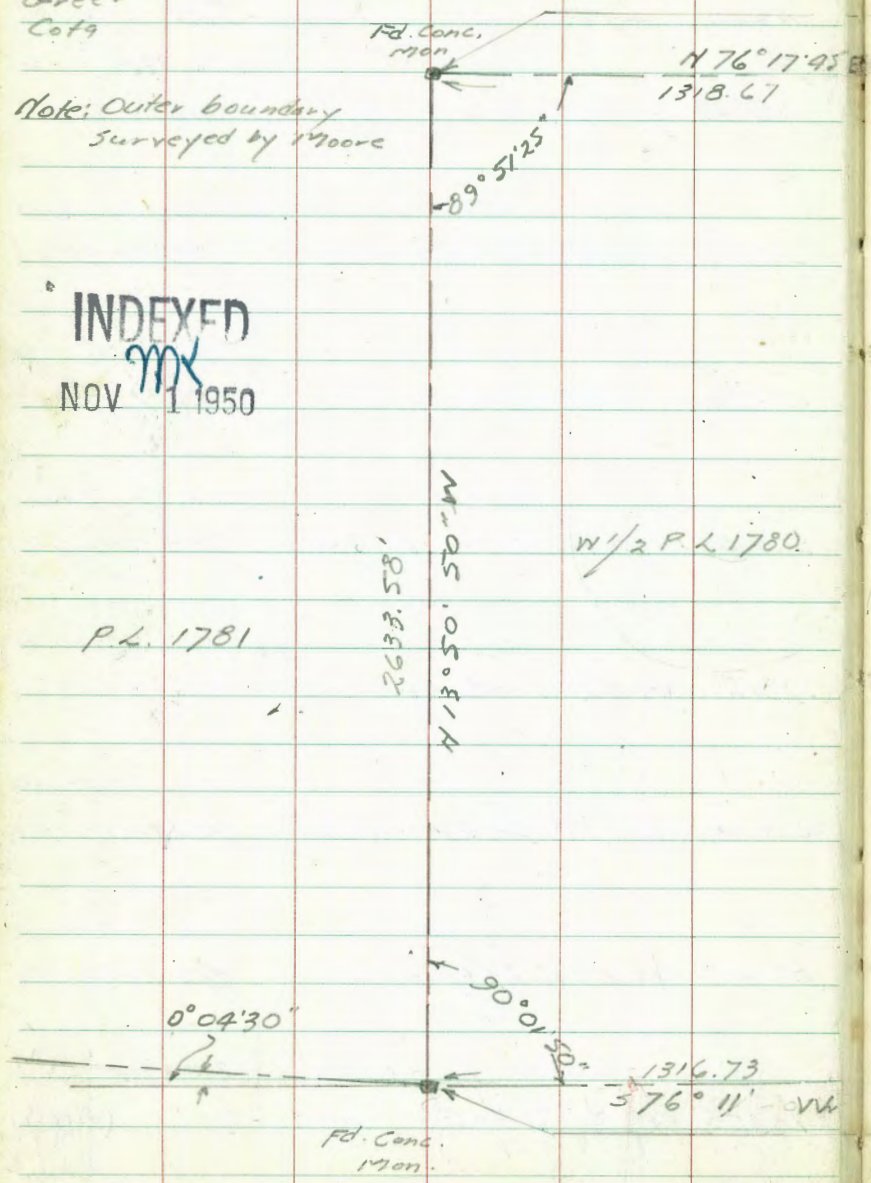
Course	Stadia Dist.	Mean	Vertical Angle	Mean	Corr. Dist
CP #1A	409'		- 6°51'		
CP 1E	408'	408.5'	+6°50	-6°50'30"	405
CP 1E	636'		+2°56'		
CP 2E	637'	636.5	-2°57'	+2°56'30"	635
CP 2E	398'		+3°12'		
CP 3E	400	399'	-3°13'	+3°12'30"	398
CP 3E	608'		+3°53'		
CP 4E	609	608.5	-3°53	+3°53'	606.
CP 4E	580'		+1°14'		
CP 5E	578	579'	-1°14'	+1°14'	579
CP 5E	253'		+0°20'		
CP 6E	255'	254'	-0°19'	+0°19'30	254'
CP 6E	167'		+3°29'		
CP 7E	167'	167'	-3°27	+3°28'	166.5
CP #7E	185'		+19°32		
CP 9C	187	186'	-19°32'	+19°32	165

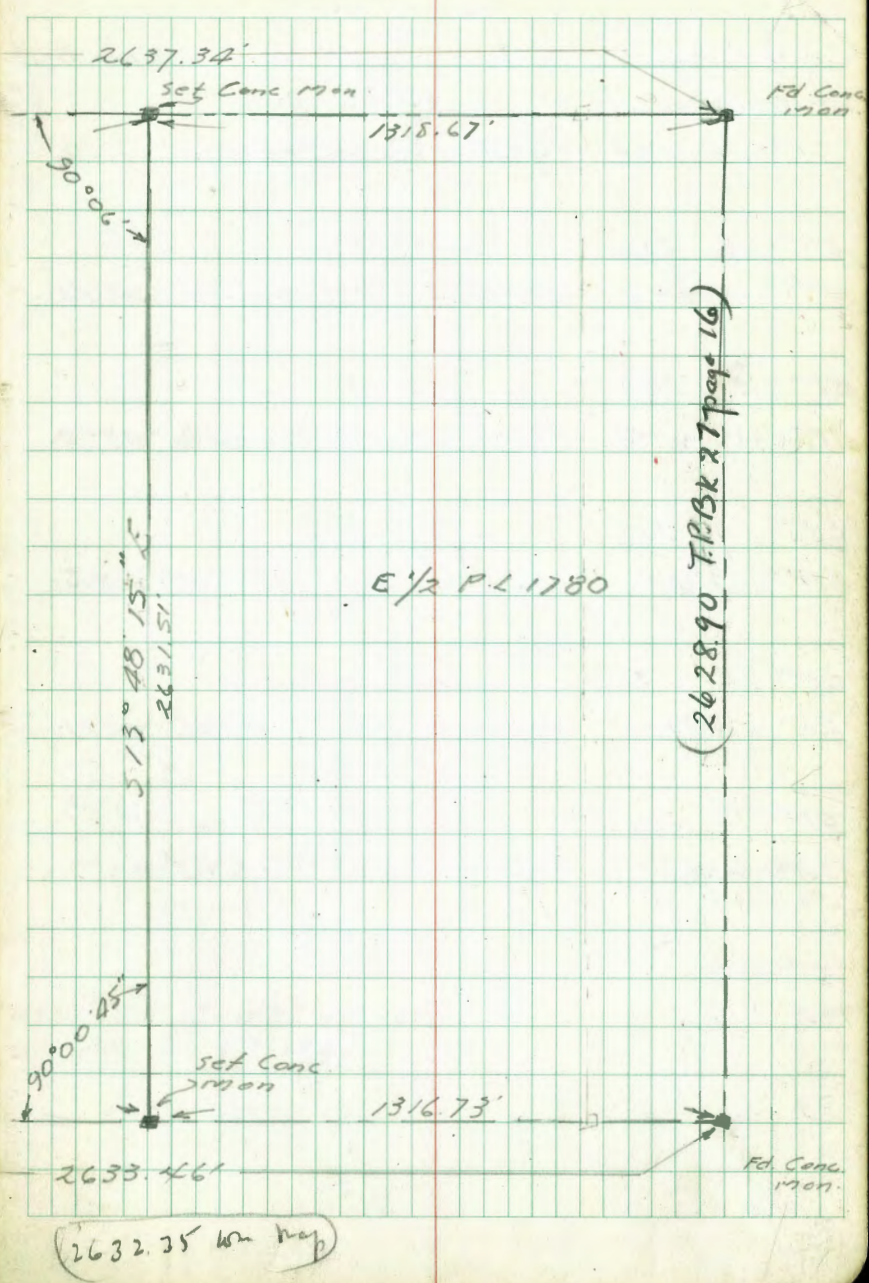
"E" Line

Defl. Angle		Bearing (N 57°30' E 3 minutes to 19.)	Diff. El.	Elev.
				250.50
26°27'26"	Rt	N 83°56' E	-48.90.	202.18
58°03'	Lt	N 25°53' E	+32.28	234.59
15°51'	Rt	N 41°44' E	+22.25	256.87
56°44'	Lt	N 15°00' W	+41.10	298.10
37°15'	Rt	N 22°15' E	+12.95	310.63
22°14'15"	Lt	North N 0°00' E	+1.42	312.13
8°25'24"	Rt	N 08°24' E	+10.08	322.29
			+58.50	380.87
73°53'	Rt	N 82°17' E (N 82°17' E)		(380.88)

March 1949
Hendricks
Johnson
Greer
Cote

Survey of P.L. 1780 for Topography





Stadia Control Traverse for Topography P.L. 1780 "A" Line

Course (1780)	Stadia Dist	Mean	Vert Angle	Mean	Corr. Dist	Defl. Angle	Bearing (West Line (N 13° 51' W))	Diff. Elev.	Elev.
Sw'y Mon	560		+3° 40'						374.22
CP#1A	567	562	-3° 41	+3° 40' 30"	560	10° 01' Rt	N 3° 50' W	+35.85	410.1
CP#1A	246		+3° 33'						
CP#2A	245	245.5'	-3° 31	+3° 32'	244.5	42° 42' Rt	N 38° 52' E	+15.10	425.2
CP#2A	237		-3° 02'						
CP#3A	237	237	+3° 03	-3° 02' 30"	236.5	88° 56' Rt	S 52° 12' E	-12.55	412.6
CP#3A	310'		-3° 48'						
CP#4A	310	310'	+3° 49'	-3° 48' 30"	308.5	46° 01' Rt	S 06° 11' E	-20.60	392.0
CP#4A	171'		+1° 00'						
CP#5A	171	171'	-1° 00	+1° 00'	171'	43° 14' Rt	S 37° 03' W	+3.00	395.0
CP#5A	284'		-3° 40'	+3' -3° 40'	283				
(Sw'y Mon PL 1780)						19° 00' Rt	S 56° 03' W	-21.10	374.22
Sw'y Mon to West Line						110° 08' Rt	N 13° 49' W (N 13° 51' W Rec.)		

Stadia Control Traverse for Topography of PL. 1780

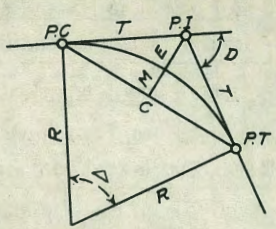
"B" Line

Course	Stadia Dist.	Mean	Vert. Angle	Mean	Corr. Dist.	Defl. Angle	Bearing	Diff. El.	Elev.
NE Cor. of W½ PL 1780	324		-1°33'				(S 13°48' 15" E)		527.13
1 B	325	324.5	+1°34'	-1°33'30"	324	63°50' Rt	S 50° 02' W	-8.75 / -8.85	518.38
1 B	336'		-1°30'			85°21' Lt	S 35° 19' E	8.75 / -8.85	509.63
2 B	335	335.5	+1°31	-1°30'30"	335				
2 B	613'		-3°54'			24°35' Rt	S 10° 44' E	-41.60 / -44.70	468.03
3 B	614	613.5	+3°55'	-3°54'30"	610.5				
3 B	345'		-3°13'			32°20' Rt	S 21°36' W	-13.30 / -13.40	448.73
4 B	345	345'	+3°14'	-3°13'30"	344				
4 B	698'		+0°13'			110°57' Rt	N 47°27' W	+2.35 / +2.45	451.28
5 B	697	697.5	-0°11	+0°12'	697				
5 B	166'		+5°00'			54°21' Lt	S 78°12 W	+14.40 / +14.30	465.58
6 B	164	165'	-5°00	+5°00'	164				
6 B	387'		+0°45'			105°24' Rt	~~S 75°54' W~~ N 30°36' E	+5.15 / +5.05	470.83
7 B	(Side Shot)			+0°45'	387				
6 B	434'		-1°18'			34°38' Lt	S 43°34' W	-9.70 / -9.80	452.0
1 C = (IC + 37.15 E Line 1781)	435	434.5	+1°17	-1°17'30"	434				(456.10)
1 C to East Line 1781						122°34' Rt	N 13°52' W → N 13°50'50" W (Rec.)		

Stadia Control Traverse for Topography R.L. 1780

Course	Stadia Dist	"C" Mean	Line Vert. Angle	Mean	Corr Dist	Defl. Angle	Bearing	Diff El	Elev
Mon SW Cor. 1780							N 13°51' W		
5A					283	69°52' Rt	N 56°01' E		395.0
5A	156'		-4°59'			22°35' 22°36' Rt	78°36' N 25°37' E	- 13.60	381.2
1C	158'	157'	+4°59'	-4°59'	157				
1C	357'		-14°47'			13°03' Lt. 13°02' Lt.	65°33' N 65°35' E	- 87.30	293.9
2C	357	357'	+14°48'	-14°47'30"	334				
2C	255		-1°20'			89°31' 89°30' Lt.	N 23°58' W	+ 5.95	299.75
3C	255	255'	-1°20'	+1°20'	255				
3C	259'		+3°29'			4°43' 4°42' Lt	N 28°41' W	+ 15.70	315.35
4C	258	258.5	-3°28'	+3°28'30"	257.5				
4C	317'		+8°00'			31°25' 31°26' Rt	N 2°44' E	+ 43.70	359.0
5C	318	317.5	-7°58'	+7°59'	311.5				
5C	397		+3°41'			33°57' 33°56' Lt.	N 31°13' W	+ 28.45	384.4
6C	396	396.5	+3°40'	+3°40'30"	378				
6C	473'		+7°30'			51°19' 51°18' Lt	N 82°32' W	+ 61.20	443.6
7C	471	472	-7°29'	+7°29'30"	464				
7C	317'	317'	±0°28' -0°30'	+0°29'	317	76°53' Lt 76°52' Lt 34°26'	S 20°35' W S 20°43' W S 13°51' E	+ 2.65	448.1 (447.3)
12+40.51 (Elev 1781) to SW Mon.	317				1240.51				

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

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

Tangent=T=Rtan$\frac{\triangle}{2}$ (3) Length of Curve=L=100$\frac{\triangle}{D}$ (4)

Middle ordinate=M=R(1—cos. $\frac{\triangle}{2}$) (5)=Rvers $\frac{\triangle}{2}$ (6)

External=E=Ttan$\frac{\triangle}{4}$-(7)=R ÷ cos.$\frac{\triangle}{2}$—R(8)=Rexsec$\frac{\triangle}{2}$(9)

Long Chord=C=2 R sin.$\frac{\triangle}{2}$ (10) △=Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. △=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=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 $(54.50)^2 \div (2 \times 688.26)$=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose △=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of readbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.