

1479

Arizona Canyon Sewer  
Existing

FIELD BOOK

No. 385 F

B.M. Page 11

Flag Pole 279.52

Indexed complete

c. s. k.

See "Recreational Area" card  
in index.

ENGINEERING DEPARTMENT,  
CITY OF SAN DIEGO,  
CALIFORNIA.

MICROFILMED

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ENGINEERING and DRAFTING SUPPLIES  
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*Index.*

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Balboa Park - Swimming Pool Area. <sup>Indexed</sup>  
Road around Ball \* Grounds - Re-location. 2  
e.s.k.

Dec. 5-1933.

Kanters  
Turnsell  
Jennings

14+70.96 P.T. 19-45

20.94

$\Delta = 39-30 \text{ R}$

□ 50 □ 50

14+50

16-10

T=59.96

L=115.13

49.92

+25

11-52

R=167.0

d=10.293'

14+00

7-35

24.97

+75

3-17

19.15

13+55.83 P.C. R.A.

□ 50 □ 50

13+01.49

A 34

P.T. (Same) North line  
of road South of  
Pool.

21+00

21-04

20+50

16-54

20+00

1244'  $\Delta = 207-30$  lt  
 $R = 343.49$   
 $L = 1243.96$   
 $d = 5.004'$

19+50

8-34

19+00

4-23

49.95

18+50

18+47.33 P.C. Lt.

Center

44.89

42.68

50'

50'

RXR hubs set on Radius 293.49 at each sta. to be used for Reference points, for this entire curve. Center of Curve set; RXR hub.

Distances from R.P.s to  $\pm$  increased for the following stations to meet curb inlet misplaced; all other stations OK.  
Sta 19+50 = 50.56  
20+00 = 50.90  
20+50 = 58.33

24+00

46-06

+50

41-55

23+00

37-45

+50 P.O.C. 33-35

A=67-10

see page 3

22+00

29-25

21+50

25-15

27+00

71-07

+50

66-57

26+00 P.O.C. 62-46

A-125-32

+50

58-36

see page 3

25+00

54-26

24+50

50-16

30+00

96-08

+50

91-58

29+00

87-48

+50

83-37

28+00

79-27

+50

75-17

see page 3



see page 30

$30 + 61.06$

$30 + 91.29 = P.T. 103-45$

$30 + 50$

100-18

center □ 50 □ 50

35.25

see page 3

33+66 P.T.

44-21

+50

41-10

+25

36-12

33+00

31-13

+75

26-15

$\Delta = 88^{\circ}42.3'$

T =

+50

21-17

L = 222.94'

R = 144.0

d = 11.936'

+25

16-18

32+00

11-20

+75

6-21

2496

+50

1-23

31+43.06 P.C. P.T.

~~37 + 00~~~~42-51~~~~+75~~~~38-08~~~~+50~~~~33-26~~~~+25~~~~28-43~~~~36 + 00~~~~24-01~~

$$\Delta = 100 - 26\frac{1}{2}$$

$$T = 182.71$$

$$L = 266.67$$

~~+75~~~~19-18~~

$$R = 152.12$$

$$d = 11.299'$$

~~+50~~~~14-36~~~~+25~~~~9-53~~~~35 + 00~~~~5-11~~~~24.97~~~~+75~~~~0-28~~

3447250 P.C. Lt.

- End -

49+02.55 P.I.  $\Delta = 6^{\circ}50'$  Lt.

259.55

46+43 P.I.  $\Delta = 3^{\circ}40'$  Rt.

569.00

40+80 P.I.  $\Delta = 1^{\circ}39'$  Left.

342.50

37+37.50

37+39.17 = P.I. 50-13.25'

37+25

47-33

Apr 2 Arnold

End c.t.

North Line Upas.

10

<sup>Indexed</sup>  
B.M.'s for construction

(Swimming Pool Area)

Dec. 8-1933.

+ T ✓ -  
10.56 280.12 269.56 ✓

North Edge M.H. South of Tennis Court.  
□ chisle mark N.W cor. base flag pole.

✓ 0.60 279.52 ✓  
4.13 283.65

4.23 279.42 ✓

{ Check tack set in fence base North side  
swimming pool on & Texas (279.42)

✓ 12.41 271.24 ✓  
12.28 283.52

{ Set B.M. stake west side shuffle  
board court on bank, 20' North  
Base flag pole.

4.00 279.52 ✓

6.66 276.22 ✓ 269.56

North Edge M. H. South of Tennis C.  
{ stake & nail S.S. of Courts West 236'  
from present courts.

✓ 5.55 270.67 ✓ X  
5.66 276.33

6.77 269.56 ✓

2.50 273.74 271.24

West of Rogue Court.

3.85 269.89

Profile proposed  
as of Dec. 12-33.

Elev. 269.7 south side  
" 270.7 North "  
A = 4 3/4 " 5/19 b  
269.30 south side  
270.30 North "

Grandstand  
S  
B  
W

271.9 south s.  
Elev. 272.9 North S  
A = 4 3/4 " 5/10 b  
272.5 North S  
271.5 south s.

220'

30'

110'

Indexed  
C.S.K.

sewer Profile from Toilets at Shoffle Bd to Connection with main line in Canyon. (E.L.) 13

Dec. 14-33.

Sta	+ T -	Elev	Grade	cut
	1.97 273.21	271.24		
0+00		4.28 268.93		
0+05			266.76	
+50		4.73 268.48	266.47	2.03
+69		4.7 268.5		
+70			266.0	
+71		5.4 267.8		
+83		5.6 267.6		
+85		4.6 268.6		
+90		4.56 268.65	264.4	4.30
+94		4.6 268.6		
1+00		6.83 266.38	263.6	2.80
1+30			262.0	
1+50		8.64 264.57	261.5	
2+00		8.88 264.33	260.65	
	4.23 268.56			
2+25		4.1 264.5	260.23	
2+40			260.0	
+50		5.95 262.61		
+62		7.8 260.76		
+83		9.5 259.06		
TP		9.36 259.20		
	1.18 260.38			
2+90		3.0 257.4		
3+00		4.31 256.07		
3+21		7.0 253.4		
3+50		8.56 251.82	247.0	
	0.62 252.44			
3+69'		2.4 250.0		

Page 13: 11  
 of foundation  
 East line of house 5' 14" North of N  
 G.B. 0+05

G.B. 0+70  
 Road ditch

" "

G.B. 1+20

T.P.

G.B. 2+40

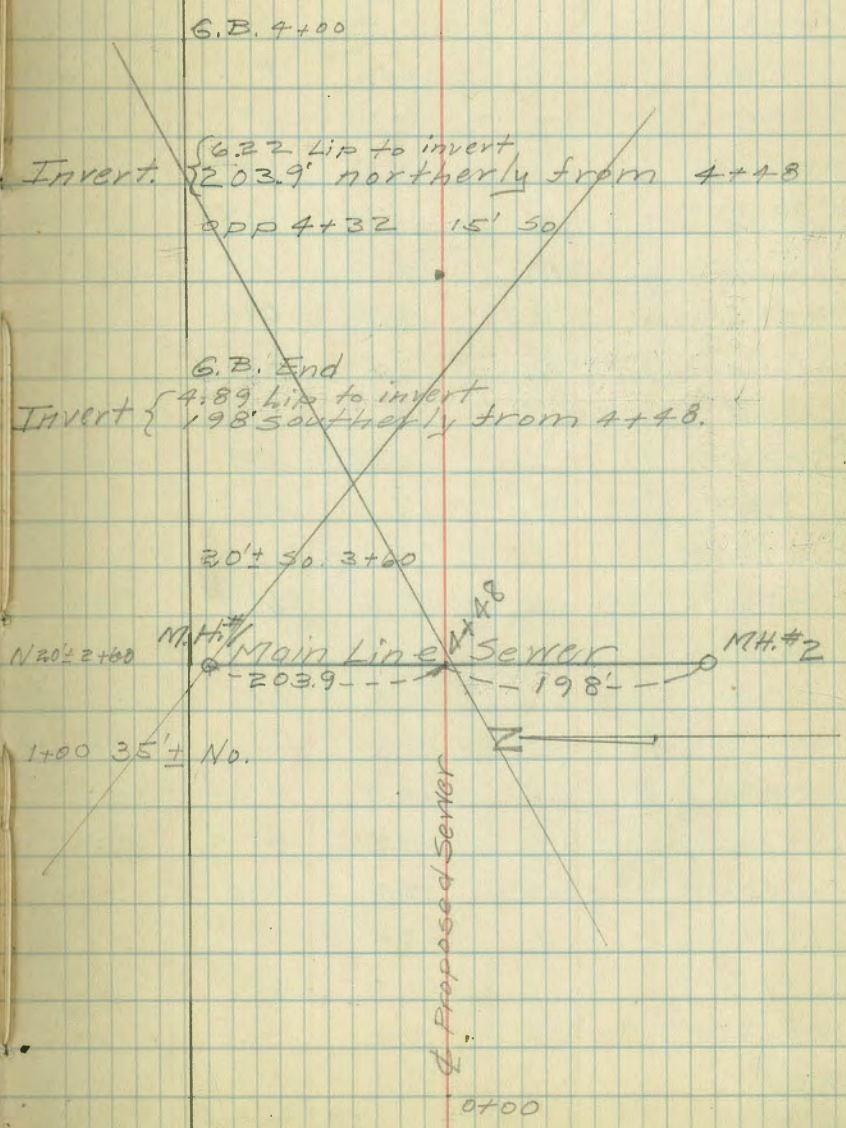
opp 2+83

TP & G.B. 3+50

= 43+135 R Road.

40005 W

Sta	+	T	-	Elev	Grade	Cut
3+92		252.44	4.8	247.6	✓	
4+00			6.31	246.13	244.0	
4+20			8.3	244.1	✓	
4+27			9.52	242.92	✓	
M.H.#1 Main Line			12.65	239.79	✓	
TP			11.41	241.03	✓	
	1.82	242.85				
4+40			4.60	238.25	✓	
4+48			5.4	237.45	234.57	
M.H.#2			13.45	229.40	✓	
TP			1.53	241.32	✓	
	10.44	251.76				
TP			0.77	250.99	✓	
	9.46	260.45				
TP			0.84	259.61	✓	
	9.37	268.98				
TP			2.68	266.30	✓	
	6.82	273.12				
B.M.			1.89	271.23	✓	





X section Road

indexed  
c.s.K.

Dec. 19-33

15

Sta	+	∇	-	Elev.
B.M.	2.61	272.17		269.56
14+00			2.71	69.5
R16			4.3	67.9
L16			2.3	69.9
14+50			3.8	68.4
R16			5.4	66.8
L16			4.3	67.9
+70 <sup>96</sup>			4.4	67.8
R16			5.4	66.8
L16			4.3	67.9
15+00			5.5	66.7
R13			6.0	66.2
L18			5.1	67.1
15+50			6.5	65.7
L18			6.9	65.3
L33			6.8	65.4
R18			6.3	65.9
R37			16.7	55.5
16+00			7.8	64.4
L15			7.4	64.8
L17			8.1	64.1
L325			7.5	64.9
R135			7.7	64.5
R255			14.0	58.2
R355			16.3	55.9

Sta	+	∇	-	Elev.
B.M. <sup>opp 16+65</sup> 31'			7.85	264.32
	2.19	266.51		
16+50			3.5	63.0
L18			2.6	63.9
L215			3.2	63.3
L355			2.4	64.1
R45			4.0	62.5
R16			3.5	63.0
R18			4.1	62.4
R295			9.0	57.5
17+00			2.5	64.0
L18			2.1	64.4
L23			3.1	63.4
L355			2.3	64.2
R75			3.3	63.2
R145			6.3	60.2
R18			6.7	59.8
R315			8.7	57.8
17+50			3.6	62.9
L145			3.5	63.0
L18			3.2	63.3
L34			2.1	64.4
R85			4.0	62.5
R115			5.9	60.6
R18			6.8	59.7

630  
 63.9  
 63.3  
 64.1  
 62.5  
 63.0  
 62.4  
 57.5  
 64.0  
 64.4  
 63.4  
 64.2  
 63.2  
 60.2  
 59.8  
 57.8  
 62.9  
 63.0  
 63.3  
 64.4  
 62.5  
 60.6  
 59.7

268.54  
 - 10.47  
 258.07  
 264.32  
 + 4.22  
 268.54  
 258.07  
 B.M. at 17+00 R 38

	266.51		
R 325		8.2	58.3
18+00		4.4	62.1
L 9.5		4.5	62.0
L 18		3.9	62.6
L 26.5		3.0	63.5
R 9.5		4.6	61.9
R 15		6.7	59.8
R 18		7.0	59.5
R 33		8.0	58.5
18+47 <sup>33</sup>		5.8	60.7
L 18		4.2	62.3
L 25.5		3.5	63.0
R 18		6.2	60.3
R 21.5		7.6	58.9
R 35.5		8.7	57.8
BM <sub>650</sub> <sup>opp 21+00</sup>		4.27	262.24
	3.06	265.30	
19+00		5.5	59.8
L 18		4.1	61.2
L 29		3.2	62.1
R 18		7.5	57.8
R 30		8.4	56.9
19+50		6.7	58.6
L 18		5.4	59.9
L 30		4.3	61.0

B.M. 47 19+00 R 38' = 257.03

262.24  
+ 5.03  
- 267.27  
= 10.14  
257.03

	265.30		
R 18		8.1	57.2
R 32		9.0	56.3
20+00		7.0	58.3
L 18		5.7	59.6
L 30		5.5	59.8
R 18		7.9	57.4
R 30		8.4	56.9
20+50		5.6	59.7
L 18		5.6	59.7
L 30		4.9	60.4
R 18		6.0	59.3
R 30		6.2	59.1
21+00		3.1	62.2
L 18		3.1	62.2
L 30		3.1	62.2
R 18		3.2	62.1
R 30		3.6	61.7
21+50		1.9	63.4
L 18		1.6	63.7
L 30		1.5	63.8
R 18		2.3	63.0
R 30		2.6	62.7
22+00		1.9	63.4
L 18		1.8	63.5
L 30		1.6	63.7

BM opp 22+55 at path  
262.24 + 4.21 - 0.92 = 266.03

265.30

R18	1.7	63.6
R30	2.2	63.1
B.M.	3.06	262.24 ✓
4.13	266.37 ✓	
22+50	4.1	62.3
L18	4.3	62.1
L30	4.1	62.3
R18	3.8	62.6
R30	3.7	62.7
23+00	5.7	60.7
L18	5.4	61.0
L30	5.0	61.4
R18	4.7	61.7
R30	4.5	61.9
23+50	8.8	57.6
L18	7.3	59.1
L30	6.9	59.5
R18	8.9	57.5
R30	8.5	57.9
24+00	10.0	56.4
L18	8.2	58.2
L30	7.4	59.0
R18	11.7	54.7
R30	12.5	53.9
24+50	9.2	57.2

266.37

L18	7.7	58.7
L30	6.8	59.6
R18	10.2	56.2
R30	11.9	54.5
25+00	4.3	62.1
L18	3.3	63.1
L30	2.6	63.8
R18	6.1	60.3
R30	7.3	59.1
B.M. <sup>opp 25+00</sup> L50	1.79	264.58 ✓ <u>out</u>
3.76	268.34 ✓	
25+50	3.1	65.2
L18	2.0	66.3
L30	2.0	66.3
R18	4.1	64.2
R30	4.7	63.6
26+00	2.4	65.9
L18	2.0	66.3
L30	2.0	66.3
R18	2.9	65.4
R30	3.5	64.8
26+21	5.6	62.7
L18	4.1	64.2
L30	4.1	64.2
R18	7.5	60.8

BM opp 25+40 R 58J  
 $267.91 + 0.79 - 8.96 = 260.24$

18

268.34

R 30	9.2	59.1
26+37	10.0	58.3
L 18	8.5	59.8
L 30	8.3	60.0
R 18	11.4	56.9
R 30	12.7	55.6
26+50	11.1	57.2
L 18	10.8	57.5
L 30	9.0	59.3
R 18	12.6	55.7
R 30	14.0	54.3
R 40	14.6	53.7
26+59	12.3	56.0
L 18	10.5	57.8
L 28	9.8	58.5
L 43	8.3	60.0
R 18	12.1	56.2
R 30	12.4	55.9
R 47	13.4	54.9
26+72	9.4	58.9
L 18	9.1	59.2
L 30	8.7	59.6
L 39	8.3	60.0
R 18	9.2	59.1
R 30	9.2	59.1

OPP 28+00  
 BM L 45'

268.34

2.43	270.34	0.43	267.91
26+86		9.9	60.4
L 18		10.8	59.5
L 30		10.6	59.7
R 18		9.2	61.1
R 30		9.4	60.9
27+00		1.8	62.5
L 18		9.4	60.9
L 30		9.4	60.9
R 18		7.1	63.2
R 30		7.2	63.1
27+50		3.9	66.4
L 18		4.4	65.9
L 30		5.3	65.0
R 18		3.0	67.3
R 30		2.8	67.5
28+00		1.6	68.7
L 18		2.1	68.2
L 30		2.3	68.0
R 18		1.2	69.1
R 30		1.3	69.0
28+50		0.9	69.4
L 18		1.0	69.3
L 30		1.3	69.0

	270.34		
R 18	0.1	70.2	
R 30	0.1	70.2	
B.M.	2.43	267.91	
9.04	276.95		
29+00	5.7	71.2	
L 18	6.4	70.5	
L 30	6.5	70.4	
R 18	5.0	71.9	
R 30	4.7	72.2	
29+50	4.4	72.5	
L 18	4.8	72.1	
L 30	5.0	71.9	
R 18	4.0	72.9	
R 30	3.6	73.3	
30+00	3.3	73.6	
L 18	4.1	72.8	
L 30	4.9	72.5	
R 18	2.6	74.3	
R 30	2.1	74.8	
30+50	2.7	74.2	
L 18	3.0	73.9	
L 30	3.2	73.7	
R 18	2.4	74.5	
R 30	2.2	74.7	
30+91	2.9	74.0	

30+91 <sup>29</sup> P.T. = 30+61 <sup>06</sup>  
~~38+91 to 31+00~~

	276.95		
L 18	2.8	74.1	
L 30	2.5	74.4	
R 18	3.2	73.7	
R 30	3.7	73.2	
31+00	4.6	72.3	
L 18	4.0	72.9	
L 30	3.6	73.3	
R 18	5.2	71.7	
R 30	5.6	71.3	
31+43 <sup>06</sup> P.C.	7.0	69.9	
L 18	6.6	70.3	
L 30	6.2	70.7	
R 18	7.5	69.4	
R 30	7.4	69.5	
B.M. <sup>opp D 32+00</sup> L 48'	8.33	262.62	
1.19	269.95		Dec. 20/33
31+75	1.4	68.4	
L 18	0.8	69.0	
L 30	0.7	69.1	
R 18	1.6	68.2	
R 30	1.5	68.3	
32+00	2.2	67.6	
L 18	1.8	68.0	
L 30	2.0	67.8	
R 18	2.0	67.8	

line change

269.81

R30	1.9	67.9
32+25	2.2	67.6
L18	2.7	67.1
L30	2.3	67.5
R18	2.3	67.5
R30	2.2	67.6
32+50	3.6	66.2
L18	3.2	66.6
L30	2.6	67.2
R18	3.0	66.8
R30	2.9	66.9
32+75	5.7	64.1
L18	5.2	64.6
L30	4.9	64.9
R18	5.2	64.6
R30	4.5	65.3
33+00	7.0	62.8
L18	5.9	63.9
L36	8.2	64.6
R18	7.7	62.1
R40	7.1	62.7
33+25	6.5	63.3
L18	3.9	65.9
L30	3.3	66.5
R18	8.8	61.0

269.81

R36	8.9	60.9
33+50	4.7	65.1
L18	2.6	67.2
L30	1.7	68.1
R18	7.1	62.7
R24	7.2	62.6
R30	9.8	60.0
R38	10.6	59.2
33+66	3.9	65.9
L18	1.8	68.0
L30	0.6	69.2
R18	6.9	62.9
R34	9.0	60.8
R36.5	11.2	58.6
34+00	4.1	65.7
L18	2.0	67.8
L30	0.6	69.2
R18	7.2	62.6
R30	9.3	60.5
34+50	3.8	66.0
L18	1.8	68.0
L30	0.9	68.9
R18	7.8	62.0
R30	11.3	58.5
R40	19.3	50.5
34+75 <sup>50</sup>	4.0	65.8

96

269.81

L18	1.9	67.9
L30	1.0	68.8
R18	7.5	62.3
R30	11.5	58.3
R40	19.5	50.3
35+00	8.7	66.1
L18	2.0	67.8
L30	1.3	68.5
R18	7.5	62.3
R39.5	13.7	56.1
OPP 35+25 BM 445'	0.55	269.26

0.71 269.97

35+25	4.5	65.5
L18	2.2	67.8
L30	1.4	68.6
R18	7.7	62.3
R41	13.2	56.8
35+50	5.7	64.3
L18	3.9	66.1
L30	2.8	67.2
R18	9.0	61.0
R40	14.1	53.9
35+75	7.9	62.1
L18	5.2	64.8
L30	4.1	65.9

269.97

R18	10.6	59.4
R40	14.6	55.4
36+00	8.2	61.8
L18	6.1	63.9
L30	5.1	64.9
R18	11.2	58.8
R30	12.6	57.4
36+25	9.3	60.7
L18	7.7	62.3
L30	6.4	63.6
R18	11.3	58.7
R30	12.4	57.6
OPP 36+50 BM L50	5.26	264.71

0.86 265.57

36+50	5.3	60.3
L18	3.8	61.8
L30	2.7	62.9
R18	6.8	58.8
R30	7.9	57.7
36+75	6.0	59.6
L18	4.4	61.2
L30	3.2	62.4
R18	7.6	58.0
R30	9.0	56.6
37+00	6.8	58.8

265.57

L18	5.2	60.4
L30	4.0	61.6
R18	9.0	56.6
R30	10.6	55.0
37+25	8.0	57.6
L18	5.6	60.0
L30	4.6	61.0
R18	9.8	55.8
R30	11.0	54.4
37+39 <sup>L4</sup> PT=37+37 <sup>50</sup>	7.9	57.7
L18	6.0	59.6
L30	5.0	60.6
R18	10.2	55.4
R30	11.6	54.0
37+50	8.3	57.3
L18	6.2	59.4
L30	4.9	60.7
R18	10.4	55.2
R30	12.0	53.6
38+00	9.4	56.2
L18	7.0	58.6
L30	5.9	59.7
R18	12.0	53.6
R30	14.0	51.6
38+50	11.4	54.2

12.50

265.57

L18	9.0	56.6
L30	6.9	58.7
OPP 38+50 BM, L50	9.90	255.67
+0.71	256.38	
38+50 R18	4.1	52.3
R30	7.1	49.3
39+00	5.4	51.0
L18	2.9	53.5
L30	2.1	54.3
R18	7.0	49.4
R30	8.6	47.8
39+50	6.7	49.7
L18	6.1	50.3
L30	5.4	51.0
R18	10.0	46.4
R30	12.0	44.4
40+00	6.6	49.8
L18	5.4	51.0
L30	4.4	52.0
R18	8.4	48.0
R30	9.5	46.9
40+50	4.9	51.5
L18	4.8	51.6
L30	3.1	53.3
R18	7.1	49.3



	256.38		
R 30	8.6	47.8	
40+80 P.I.	5.6	50.8	
L 18	3.9	52.5	
L 30	2.6	53.8	
R 18	7.9	48.5	
R 30	10.0	46.4	
41+00	6.0	50.4	
L 18	3.6	52.8	
L 30	3.4	53.0	
R 18	9.2	47.2	
R 30	11.2	45.2	
41+50	8.0	48.4	
L 18	4.6	51.8	
L 30	2.9	53.5	
R 18	11.4	45.0	
R 30	13.5	42.9	
OPP 42+00 BM 450	2.41	253.97	✓
0.99	254.96		
42+00	6.1	48.9	
L 18	3.9	51.1	
L 30	2.1	52.9	
R 18	8.0	47.0	
R 30	9.8	45.2	
42+50	5.1	49.9	
L 18	3.6	51.4	

	254.96		
L 30	2.5	52.5	
R 18	6.9	48.1	
R 30	8.6	49.4	
43+00	4.7	50.3	
L 18	3.5	51.5	
L 30	2.1	52.9	
R 18	6.7	48.3	
R 30	8.5	46.5	
43+50	7.1	47.9	
L 18	5.5	49.5	
L 30	4.6	50.4	
R 18	8.5	46.5	
R 28	11.7	43.3	River
43+54.5	8.4	46.6	River
L 18	6.2	48.8	
L 30	4.8	50.2	
R 18	9.5	45.5	River
R 30	9.7	45.3	
43+66	6.5	48.5	
L 18	5.7	49.8	
L 30	5.5	49.5	River
R 18	7.4	47.6	
R 30	8.3	46.7	✓
OPP 44+40 BM 450	0.33	254.63	
3.79	258.42		

258.42

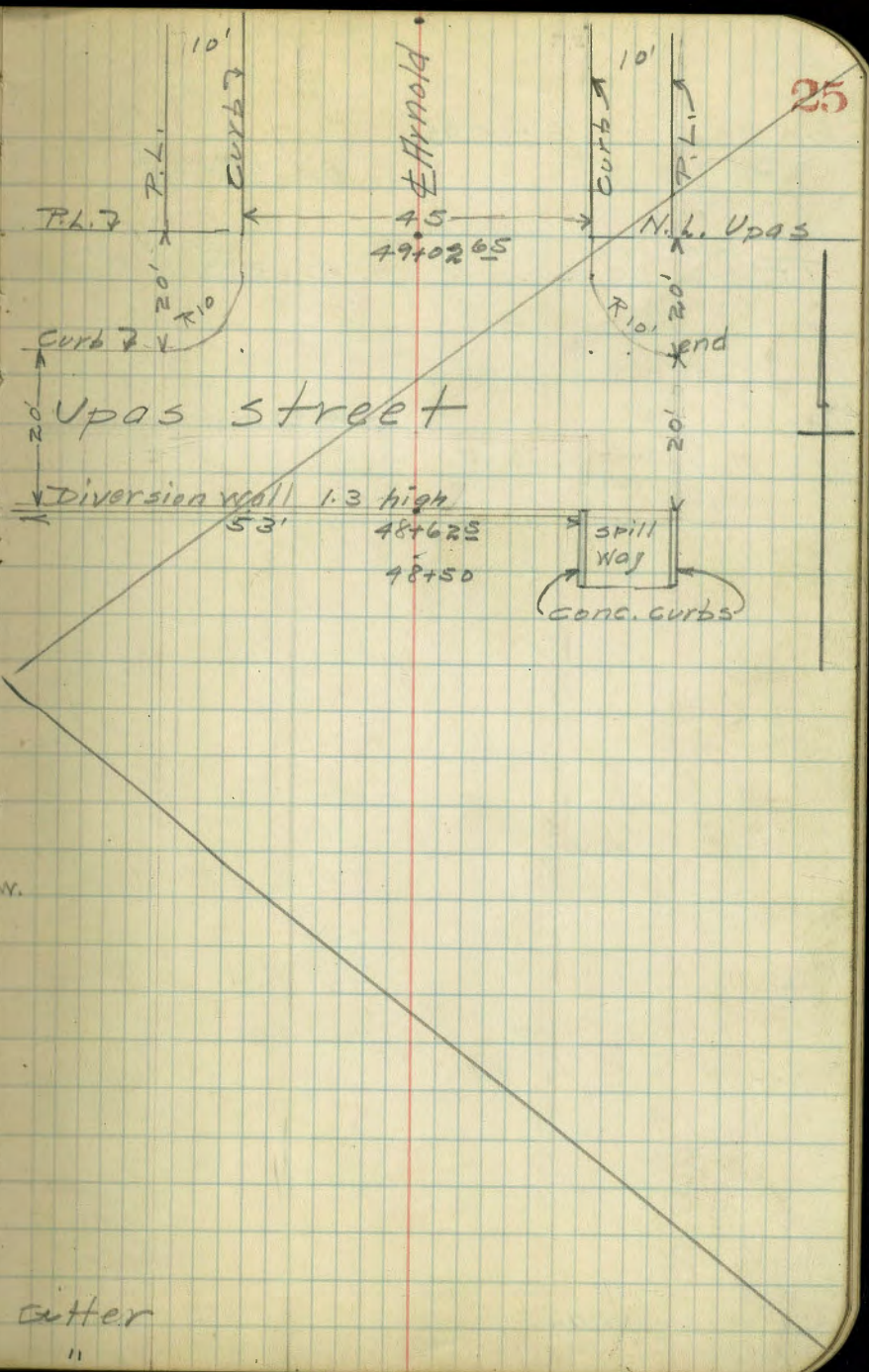
44+00	7.4	51.0	
L18	6.6	51.8	
L30	6.4	52.0	
R18	9.2	49.2	
R30	10.4	48.0	
44+50	5.7	52.7	
L18	3.8	54.6	
L30	3.4	55.0	
R18	8.2	50.2	
R30	10.1	48.3	
45+00	3.5	54.9	
L18	2.0	56.4	
L30	1.7	56.7	
R18	6.2	52.2	
R30	7.7	50.7	
45+50	5.4	53.0	Ditch
L18	3.5	54.9	
L30	2.6	55.8	
R18	5.6	52.8	Ditch
R30	6.3	52.1	Ditch
45+60	4.2	54.2	
L18	3.0	55.4	
L30	3.4	55.0	Ditch
R18	5.6	52.8	
R30	6.3	52.1	

24

258.42

45+68	4.2	54.2	shoulder
L18	3.1	55.3	
L30	2.8	55.6	
R18	5.8	52.6	shoulder
R30	6.2	52.2	shoulder
45+70	5.2	53.2	Gutter
L18	4.7	53.7	Gutter
L30	2.0	55.4	shoulder
R18	5.6	52.8	Gutter
R30	5.8	52.6	
45+93	4.8	53.6	⊥ Rd.
L18	4.0	54.4	⊥ Rd.
L30	3.0	55.4	⊥ Rd.
R18	5.3	53.1	⊥ Rd.
R30	5.6	52.8	⊥ Rd.
46+14	4.8	53.6	Gutter
L18	4.2	54.2	Gutter
R18	5.3	53.1	Gutter
46+43	5.1	53.3	
L30	3.2	55.2	right angles to back ton.
R30	6.2	52.2	
47+00	4.4	54.0	
L40	2.1	56.3	
R45	7.0	51.4	
47+50	5.2	53.2	Water way

	258.42		
L 55	4.6	53.8	Water Way
R 50	5.3	53.1	"
TP	3.48	254.94	
	11.01	265.95	
48+00	9.3	56.6	
L 50	8.6	57.3	
R 50	10.1	55.8	
48+50	4.5	61.4	
L 50	3.0	62.9	
conc. T 17	5.7	60.2	curb of spill way
conc. T 17.1	7.0	58.9	Bottom spill way
conc. R 37.5	7.2	58.7	Bottom spill way
conc. T 37.6	5.9	60.0	curb spill way
48+62.5	3.4	62.5	Top of diversion W.
L 38 sec. taken on & upas	3.4	62.3	"
T 15.8	3.7	62.2	Edge spill W.
R 15.9	5.0	60.9	"
T 35.0	5.0	60.9	"
R 36.1	3.7	62.2	"
49+02.65	3.3	62.6	
42.25	3.6	62.3	Gutter
	3.0	62.9	Curb
R 22.5	4.4	61.5	Gutter
	4.0	61.9	Curb
50 N. on Arnold tr } N.L. of upas	2.2	63.7	East gutter
	1.6	64.3	West "



TP	265.95	111.01	254.94 ✓
577	260.71		
TP sewer line		250	
3+60 rot. so.	9.74	270.97 ✓	

Page 14 250  
270.99 ✓

1370149  
 Addition sections at  
 Start of Road.

Indexed  
 C.S.K.

Dec. 26, 1935.

Kanters  
 Jensen  
 Rumsey  
 Jennings

27

BM	2.99	272.55	269.56
12+50			2.1
18'R			3.2
18'L			1.4
13+01.49			2.6
18'R			3.4
18L			2.1
13+55 <sup>83</sup>			3.1
18 R			4.1
19 L			2.6
20 L			2.1
28 L			1.7
14+00			
30R			5.3
23L			2.4
24L			1.8
40 L			0.8
14+50			
30 R			5.5
17 L			3.8
18 L			3.3
28' L			3.0
29' L			2.7
45 L			1.2

Man Hole South of Tennis court

15+60

14R

5.9

36'R

6.7

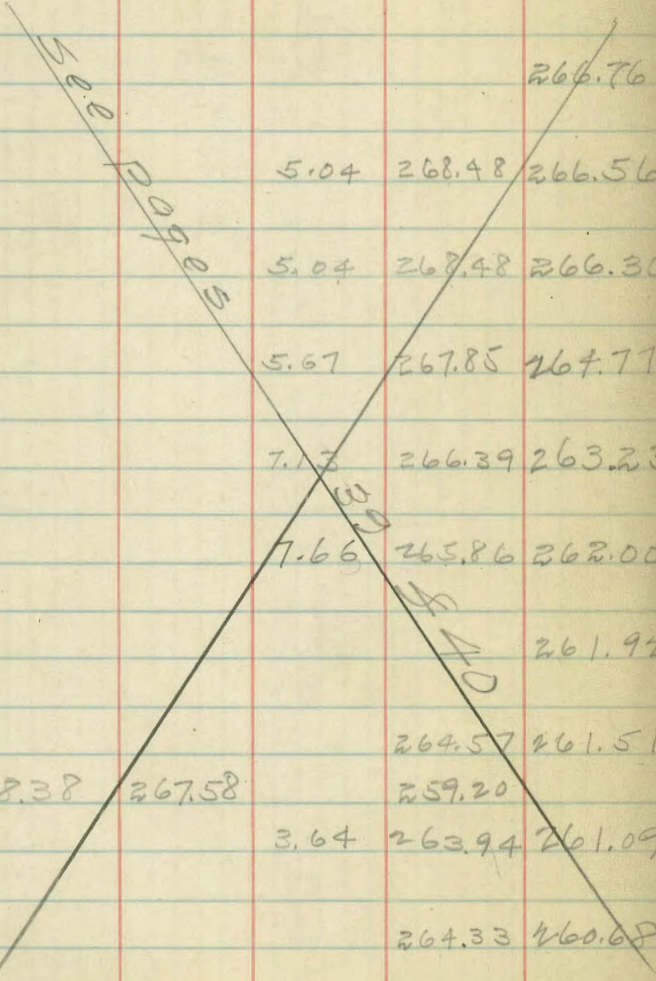
32' L

4.6

Sewer Grades Dec 28 -33.

Grade Cut

BM	2.28	273.52	271.24		
0+00					
+05			266.76		
+25		5.04	268.48	266.56	1.98
+50		5.04	268.48	266.30	2.18 G.B
+75		5.67	267.85	264.77	3.08
+100		7.13	266.39	263.23	3.16
+120		7.66	265.86	262.00	3.86 G.B
+125				261.92	
+150			264.57	261.51	3.06
TP	8.38	267.58	259.20		Page 13
+75		3.64	263.94	261.09	2.85
+200			264.33	260.68	3.65
+25		3.25	264.53	260.26	4.27



cut

2+40		4.19	263.39	260.00	3.39	G.B
2+50			262.61	258.82	3.79	
+75		7.73	259.84	255.87	3.97	
3+00			256.07	252.91	3.16	
TP	+3.00		254.82	251.82		
+45		1.71	253.11	249.95	3.16	
+50			251.82	247.00	4.82	G.B
+75		5.11	249.71	245.50	4.21	
4+00			246.13	244.00	2.13	G.B
+25		12.71	242.11	239.09	3.02	
+28 <sup>00</sup>			237.45	234.57	2.88	

-End-

Line Change 1/3/34  
Road around Pool Area

Indexed  
C.S.K.

30

+99<sup>48</sup> P.T. 45-00  
 24.43  
 +75 40-08  
 +50 35-09  
 +25 30-11  
 133+00 25-13  
 +75 20-14  
 +50 15-16  
 2495  
 +25 10-17  
 132+00 5-19  
 2666  
 131+73<sup>29</sup> P.C. Right  
 82  
 130+91<sup>29</sup> P.T. Same page 7

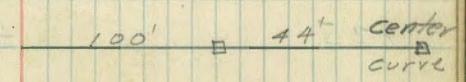
R=144  
 A=90° Rt.  
 L=226.19  
 L.Ch=203.65  
 dt=11.937'

32.94

R=194

35.93 33.64

Rt. 75.50' to left all stations





+50	49-45
+25	44-59
L37+00	40-12
+75	35-26
+50	30-39
+25	25-53
L36+00	21-06
+75	16-20
+50	11-34
+25	6-47
L35+00	2-01

L 34+89.48 P.C. Left

$$R = 150$$

$$\Delta = 115^\circ 4'$$

$$L = 301.07$$

$$Lch = 253.02$$

$$df = 11.459'$$

7.01 16.65

R.P's. 50' left all stations

48+98<sup>80</sup> End

43+05

L39+50.07 P.T. 10-47.5'

39+25

7-12

$R=200$

$\Delta=21-35R^2$

24.98

$L=75.34$

39+00

3-37

S.T.=38.12

P.I.=439+1285

L38+74.73 P.C. Right

dh.=8.594

L37+90<sup>55</sup> P.T.

57-30

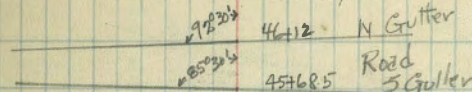
L37+75

54-32

North line Upas & Arnold Page 10

= & sewer 3+25

& sewer 3  
81°-48'



R.P.'s 50' left all stations

1036

Cross section of Line  
change of Road Jan 3/34

Indexed  
c.s.R.

33

opp				Page 18		26934	
B.M. 28+00	9.64	277.55	267.91		R 30	1.6	67.7
31+00		3.8	73.7		L 18	0.7	68.6
R 18		4.2	73.3		L 30	1.0	68.3
R 30		5.0	72.5		32+50	1.9	67.4
L 18		3.6	73.9		R 18	1.6	67.7
L 30		3.3	74.2		R 30	1.9	67.4
31+50		6.2	71.3		L 18	1.6	67.7
R 18		7.9	69.6		L 30	1.6	67.7
R 30		7.7	69.8		32+75	2.6	66.7
L 18		4.8	72.7		R 18	2.1	67.2
L 30		4.4	73.1		R 30	1.6	67.7
31+73 <sup>29</sup> P.C.		7.4	70.1		L 18	2.2	67.1
R 18		8.1	69.4		L 30	1.9	67.4
R 30		8.6	68.9		33+00	3.4	65.9
L 18		7.0	70.5		R 18	4.2	65.1
L 30		6.3	71.2		R 30	3.0	66.3
32+00		8.5	69.0		L 18	3.1	66.2
R 18		9.0	68.5		L 30	2.2	67.1
R 30		9.1	68.4		33+25	5.3	64.0
L 18		8.2	69.3		R 18	6.1	63.2
L 30		7.5	70.0		R 30	5.8	63.5
B.M. 32+00 <sup>opp old</sup>		8.93	268.62	Page 19	L 18	4.9	64.4
	0.72	269.34			L 30	4.8	64.5
32+25		1.2	68.1		33+50	5.3	64.0
R 18		1.5	67.8		R 18	6.6	62.7

	269.34		
R 30	7.4	61.9	
L 18	4.3	65.0	
L 30	3.3	66.0	
33+75	3.9	65.4	
R 18	6.2	63.1	
R 30	7.3	62.0	
L 18	2.3	67.0	
L 30	1.7	67.6	
33+99 <sup>+8</sup> T.T.	3.0	66.3	
R 18	4.7	64.6	
R 30	6.6	62.7	
L 18	1.1	68.2	
L 30	0.3	69.0	
B.M. <sup>opp. old</sup> 32+00	0.72	268.62	Page 19
	3.61	272.23	
34+50	5.0	67.2	
R 18	7.1	65.1	
R 30	9.6	62.6	
L 18	3.2	69.0	
L 30	2.1	70.1	
34+89 <sup>+8</sup> P.C.	4.6	67.6	
R 18	6.8	65.4	
R 30	9.3	62.9	
L 18	3.3	68.9	

	272.23		
L 30	2.8	69.4	
35+00	4.4	67.8	
R 18	6.6	65.6	
R 30	9.3	62.9	
L 18	3.1	69.1	
L 30	2.6	69.6	
35+25	4.0	68.2	
R 18	5.7	66.5	
R 30	7.9	64.3	
L 18	3.0	69.2	
L 30	2.3	69.9	
35+50	3.8	68.4	
R 18	5.3	66.9	
R 30	6.8	65.4	
L 18	2.9	69.3	
L 30	2.4	69.8	
B.M. <sup>opp. old</sup> 35+25	2.98	269.27	
B.M. <sup>L 50</sup> 35+75	1.585	270.645	
	1.465	272.11	
35+75	4.0	68.1	
R 18	5.4	66.7	
R 30	7.2	64.9	
L 18	2.9	69.2	
L 30	2.4	69.7	
36+00	5.3	66.8	

R18	272.11	7.2	64.9
R30		8.7	63.4
L18		9.1	68.0
L30		5.5	68.6
36+25		6.5	65.6
R18		8.4	63.7
R30		9.7	62.4
L18		5.0	67.1
L30		4.2	67.9
36+50		7.9	64.2
R18		9.6	62.5
R30		10.7	61.4
L18		6.2	65.9
L30		5.1	67.0
36+75		8.6	63.5
R18		10.5	61.6
R30		11.6	60.5
L18		7.5	64.6
L30	1	6.4	65.7
37+00		9.6	62.5
R18		11.5	60.6
R30		12.5	59.6
L18		8.4	63.7
L30		7.9	64.2
37+25		10.7	61.4

R18	272.11	12.4	59.7
R30		13.4	58.7
L18		9.1	63.0
L30		8.0	64.1
37+50		11.2	60.9
B.M. <sup>L50</sup> 38+50		9.70	262.41 ✓
	1425	263.835	
R18		4.6	59.2
R30		5.9	57.9
L18		1.4	62.4
L30		0.4	63.4
37+75		3.3	60.5
R18		4.7	59.1
R30		6.4	57.4
L18		1.6	62.2
L30		1.0	62.8
37+90 <sup>55</sup> F.T.		3.3	60.5
R18		4.5	59.3
R30		6.1	57.7
L18		2.3	61.5
L30		1.6	62.2
38+00		3.2	60.6
R18		4.4	59.4
R30		5.6	58.2
L18		2.7	61.1

L 30	263.835	1.7	62.1
38+50		3.6	60.2
R 18		4.8	59.0
R 30		6.2	57.6
L 18		3.0	60.8
L 30		2.5	61.3
38+74 <sup>73</sup> RC		5.0	58.8
R 18		7.2	56.6
R 30		8.3	55.5
L 18		3.7	60.1
L 30		3.7	60.1
L 50 B.M. 40+00		2.285	261.55
	2.56	264.11	
39+00		8.1	56.0
R 18		9.0	55.1
R 30		9.8	54.3
L 18		6.9	57.2
L 30		5.6	58.5
39+25		8.7	55.7
R 18		10.3	53.8
R 30		10.9	53.2
L 18		7.6	56.5
L 30		6.7	57.4
39+50 <sup>07</sup> P.T.		8.9	55.7
R 18		10.0	54.1

R 30	264.11	11.4	52.7
L 18		6.8	57.3
L 30		6.2	57.9
40+00		6.4	57.7
R 18		8.9	55.2
R 30		10.7	53.4
L 18		4.5	59.6
L 30		3.5	60.6
40+50		4.9	59.2
R 18		7.4	56.7
R 30		9.3	54.8
L 18		2.3	61.8
L 30		1.5	62.6
41+00		6.1	58.0
R 18		8.3	55.8
R 30		10.0	54.1
L 18		3.5	60.6
L 30		2.4	61.7
44+50		7.4	56.7
R 18		9.7	54.4
R 30		11.2	52.9
L 18		5.3	58.8
L 30		3.7	60.4
L 44' B.M. 42+00		4.565	259.545
	0.720	260.265	

42+00	260.265	5.6	54.7		L 30	260.265	7.9	52.4	Wash
R 18		7.6	52.7		44+00		7.7	52.6	
R 30		8.2	52.1		R 18		8.7	51.6	
L 18		3.1	57.2		R 30		9.0	51.3	
L 30		1.9	58.4		L 18		7.0	53.3	
42+50		5.6	54.7		L 30		6.5	53.8	
R 18		7.6	52.7		L 50				
R 30		8.5	51.8		B.M. 44+00		3.490	2.56.775	
L 18		3.5	56.8		41+50	4.065	260.84		
L 30		2.7	57.6		44+50		5.6	55.2	
43+00		7.1	53.2		R 18		6.8	54.0	
R 18		7.6	52.7		R 30		8.2	52.6	
R 30		9.3	51.0		L 18		5.2	55.6	
L 18		5.1	55.2	± Sewer C 3.1'	L 30		4.8	56.0	
L 30		3.7	56.6	± Sewer C 3.8'	45+00		4.0	56.8	
43+05 = 3+25 Sewer		7.3	53.0	± Sewer C 3.2'	R 18		5.4	55.4	
43+50		9.3	51.0		R 30		6.9	53.9	
R 18		10.3	50.0		L 18		3.5	57.3	
R 30		11.3	49.0		L 30		3.3	57.5	
L 18		8.2	52.1		45+50		6.4	54.4	
L 30		7.2	53.1		R 18		7.4	53.4	
43+56		10.4	49.9		R 30		8.0	52.8	
R 18		12.0	48.3	Wash	L 18		5.5	55.3	
R 30		13.2	47.1	Wash	L 30		5.2	55.6	
L 18		9.2	51.1	Wash	45+67		5.9	54.9	Break
					R 18		6.6	54.2	"

260.84

R 30	7.0	53.8	Break
L 18	5.4	55.4	"
L 30	4.9	55.9	"
45+67 <sup>50</sup>	7.3	53.5	Ditch
R 18	7.6	53.2	Ditch
R 30	7.9	52.9	Ditch
L 18	6.4	54.4	Ditch
L 30	6.0	54.8	Ditch
45+92	6.5	54.3	Used Road
R 18	7.2	53.6	"
R 30	7.6	53.2	"
L 18	5.7	55.1	"
L 30	5.1	55.7	"
46+09	6.7	54.1	Ditch
R 18	7.3	53.5	"
R 30	7.6	53.2	"
L 18	6.3	54.5	"
L 30	5.9	54.9	"
46+50	6.5	54.3	
47+00	6.5	54.3	
450	7.5	53.3	
48+00	4.0	56.8	
48+44.	0.0	60.8	

48+58<sup>3</sup> of this line is 17' west of 48+62<sup>5</sup> old line

page 25.

old TP  
Page 25

5.890 254.95 ✓



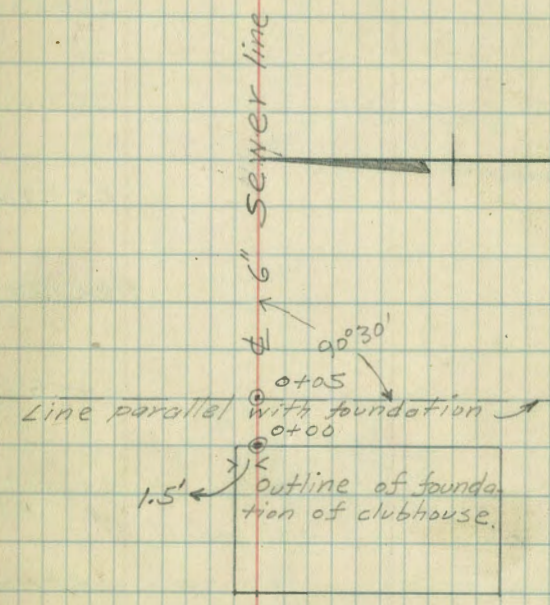
Final(?) Elev. of sewer from  
Toilets at Shuttle Board Ely  
to main line in Canyon see pages

<sup>Indexed</sup>  
c.s.R.  
Notes copied from preceding **39**  
pages and various scrap paper.  
Jan. 8th-34

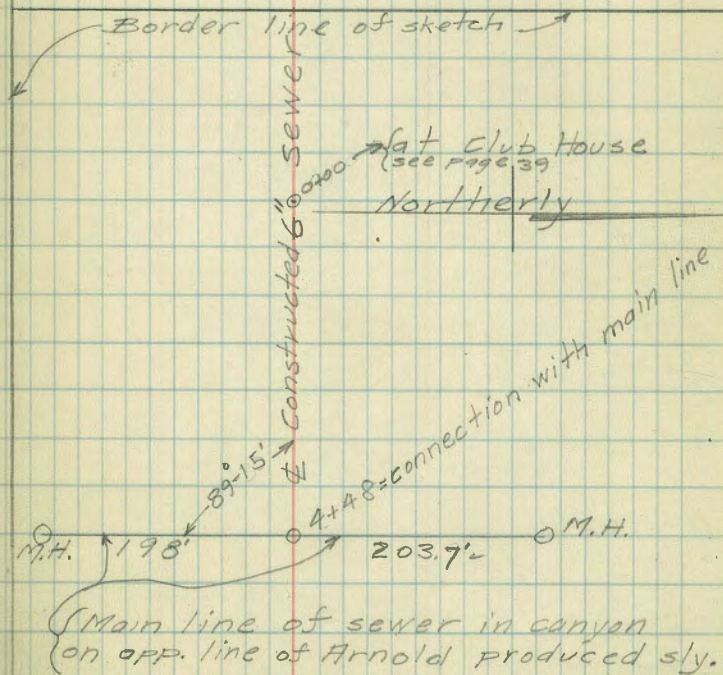
Sta	+	-	Elev.	Grade	Cut.
B.M.	2.28	273.52	271.24		
0+25		5.04	268.48	266.56	1.98
0+50		5.04	268.48	266.30	2.18
0+75		5.67	267.85	264.77	3.08
1+00		7.13	266.39	263.23	3.16
1+20		7.66	265.86	262.00	3.86
1+50			264.57	261.51	3.06
TP			259.20		
	8.38	267.58			
1+75		3.64	263.94	261.09	2.85
2+00			264.33	260.68	3.65
+25		3.05	264.53	260.26	4.27
2+40		4.19	263.39	260.00	3.39

0+00 = East line of foundation of  
toilets; app. 1.5' south of north line  
at Elev. 266.76±

4+48 {connection with  
main line



Sta	+	-	Elev.	Grade	Cut
2+50			262.57	258.72	3.85
+75			259.80	255.51	3.29
3+00			256.03	252.29	3.74
+10			254.83	251.0	3.83
3+25			253.07	250.18	2.87
3+50			251.78	248.82	2.96
3+65			250.29	248.00	2.29
3+75			249.67	246.90	2.77
4+00			246.09	244.15	1.94
4+15			244.66	242.50	2.16
4+25			242.16	240.23	1.93
4+48			235.34	235.0	



Location of Manholes & Elex  
Alley between Arnold & Arizona

<sup>Indexed</sup>  
<sup>2.5. N.</sup> of inverts from Manhole at 41  
southerly thru. Recreational Area.  
Feb 8-39.

Angle Dist

M.H #6

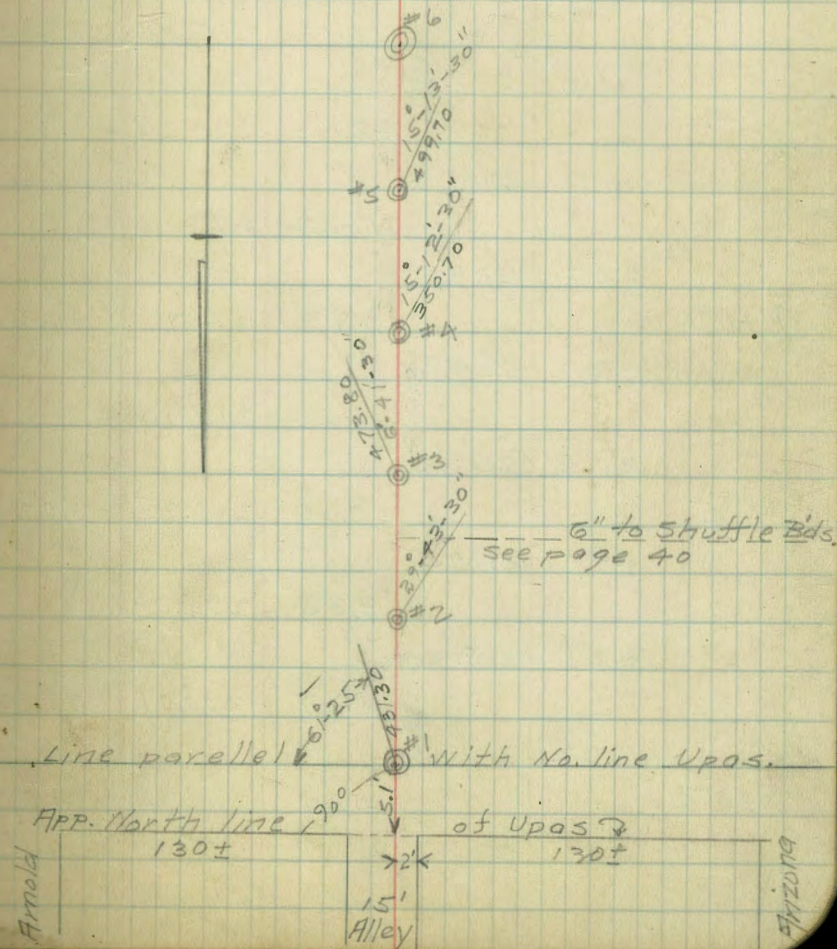
M.H #5 Right ✓  
15-13-30 499.70 ✓

M.H #4 Right ✓  
15-12-30 350.70 ✓

M.H #3 Left ✓  
6-41-30 473.80 ✓

M.H #2 Right ✓  
29-43-30 401.90

M.H #1 431.30



Elev. of Inverts Located on the preceding page.

Indexed. C.S.K.

Feb 8-34

Sta	+	∇	-	cover Elev.	Cover to Invert	Invert Elev.
B.M	10.09	266.865		256.775		see page 37.
M.H.#1			3.35	263.515	-9.60	253.92
	2.39	265.905				
			12.345	253.56		
	2.44	256.00				
M.H.#2			10.02	245.98	-6.22	238.76
	1.16	247.14				
M.H.#3			12.86	234.28	-4.89	229.39
	0.64	234.92				
			11.62	223.30		
	6.62	229.92				
M.H.#4			8.13	221.79	-4.75	217.04
	3.20	224.99				
			11.09	213.90		
	2.15	216.05				
M.H.#5			5.60	210.45	-5.02	205.43
	0.97	211.42				
			9.33	202.09		
	6.21	208.30				
			8.19	200.11		
	5.02	205.13				
M.H.#6			5.00	200.13	-5.04	195.09
	12.14	212.27				
			1.64	210.63		

12.65 223.28 210.63

0.82 222.46

12.38 234.84

0.45 234.39

12.38 246.77

0.42 246.35

12.14 259.09

0.18 258.91

12.06 270.97

1.49 269.48

3.14 272.62

2.17

4.08 288.54

268.62

5/16/34 Grades for Road around Recreational  
 Miller Area at N. End Balboa Park. Indexed  
 Walker c.s.K.  
 Blais

		18' Lt	18' Rt	
46+00		<u>254.50</u>	<u>254.00</u>	<u>253.50</u>
1 B.M.	1.07	<u>257.84</u>		256.77
45+50		<u>254.01</u>	<u>253.64</u>	<u>253.21</u>
		3.83 2.83 C.I.00	4.16 3.16 C.I.00	4.63
45+00		<u>253.52</u>	<u>253.36</u>	<u>252.93</u>
		4.32 3.32 C.I.00	4.48 3.48 C.I.00	4.91 3.91 C.I.00
44+50		<u>253.03</u>	<u>253.04</u>	<u>252.65</u>
		4.81	4.84 3.84 C.I.00	5.19 4.19 C.I.00
44+00		<u>252.72</u>	<u>252.88</u>	<u>252.50</u>
		5.12	4.96	5.34
43+50		<u>252.77</u>	<u>253.03</u>	<u>252.67</u>
		5.07 4.07 C.I.00	4.81	5.17
43+00		<u>253.18</u>	<u>253.51</u>	<u>253.16</u>
		4.66	4.33	4.68
42+50		<u>253.95</u>	<u>254.30</u>	<u>253.95</u>
		3.89	3.54	3.89
42+00		<u>254.90</u>	<u>235.26</u>	<u>254.90</u>
		2.94	2.58	2.94
41+50		<u>255.85</u>	<u>236.22</u>	<u>255.85</u>
		1.99	1.62	1.99
41+00		<u>256.80</u>	<u>257.15</u>	<u>256.80</u>
		1.04	0.69	1.04 0.04 - C.I.00
T.B.	6.18	<u>263.32</u>	0.70	257.14
40+50		<u>257.64</u>	<u>257.99</u>	<u>257.64</u>
		5.68 5.18 C.I.50	5.33 4.83 C.I.50	5.68 4.68 C.I.00
40+00		<u>258.47</u>	<u>258.60</u>	<u>258.35</u>
		4.85	4.72	4.97

263.32

18' Lt      ♀      18' Rt

39+50 <sup>27</sup> EC	<u>259.30</u> 4.02	<u>259.16</u> 4.22	<u>258.90</u> 4.42	3.92 = 0.50
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T.P		1.77	261.55	261.55
-----	--	------	--------	--------

39+25	<u>259.69</u>	<u>259.35</u>	<u>259.02</u>	
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39+12 <sup>40</sup>	<u>259.88</u>	<u>259.48</u>	<u>259.08</u>	
---------------------	---------------	---------------	---------------	--

39+00	<u>259.94</u>	<u>259.60</u>	<u>259.27</u>	
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38+74 <sup>23</sup> BC	<u>260.05</u>	<u>259.85</u>	<u>259.65</u>	
------------------------	---------------	---------------	---------------	--

38+32 <sup>60</sup>	<u>260.25</u>	<u>260.30</u>	<u>260.35</u>	
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37+90 <sup>55</sup> EC	<u>260.45</u>	<u>260.75</u>	<u>261.05</u>	
------------------------	---------------	---------------	---------------	--

Change of Grade.  
Sta 40+50 to 43+50

5/10/3A

Leekey  
Bell  
Higgins

46

Sta	+	Hi	-	Elev.	Grad. Rec.
B.M.	1.54	258.31		256.775	
43+50	RT			252.67	5.64
	£			253.03	5.28
	Lt			252.77	5.50
43+00	RT			253.06	5.25
	£			253.41	4.90
	Lt			253.08	5.23
42+50	RT			253.75	4.56
	£			254.10	4.21
	Lt			253.75	4.56
42+00	RT				
	£				
	Lt				
41+50	RT				
	£				
	Lt				
TIP	6.51	263.30	1.52	256.79	
41+00	RT			256.60	6.70
	£			256.95	6.35
	Lt			256.60	6.70
40+50	RT			257.64	5.66
	£			257.99	5.31
	Lt			257.64	5.66
B.M.			1.76	261.54	

Revised.

Sta 40+00 Elev 261.55.



Set Grades Sta 40+00 to 37+90<sup>55</sup>

5/18/34

Leekey  
Bell  
Higgins

47

Sta	+	Hi	-	Elev	Grad	Roll
B.M.	1.76	263.31		261.55		Sta 44+00
40+00	Rt			258.35	4.96	✓
	£			258.60	4.76	✓
	Lt			258.47	4.84	✓
39+50 <sup>23</sup>	Rt E.C			258.90	4.41	✓
	£			259.10	4.21	✓
	Lt			259.30	4.01	✓
39+25	Rt			259.02	4.89	✓
	£			259.35	3.96	-
	Lt			259.69	3.62	✓
39+12 <sup>40</sup>	Rt			259.08	4.23	This sta was omitted.
	£			259.48	3.83	
	Lt			259.88	3.43	
39+00	Rt			259.27	4.01	✓
	£			259.60	3.71	✓
	Lt			259.94	3.37	✓
38+74 <sup>23</sup>	Rt B.C			259.65	3.66	✓
	£			259.85	3.46	✓ 00.5
	Lt			260.05	3.26	✓
38+32 <sup>60</sup>	Rt			260.35	2.96	✓
	£			260.30	3.01	✓
	Lt			260.25	3.06	✓
37+90 <sup>55</sup>	Rt E.C			261.05	2.86	01.5
	£			260.75	2.56	✓
	Lt			260.45	2.86	✓
B.M.	1.76			261.55		Sta 44+00

See Page 44-45

CK Grade on Road. Sta 44+00 to 45+50

5/18/34

48

See Page 4A.

Sta	+	Hi	-	Elev.	Grad	Red.
B.M.	2.69	259.46		256.77		Sta 44+50
45+50	RT			253.21	6.45	✓
	¢			253.68	5.78	✓ C.I.O.
	LT			254.01	5.45	✓
45+00	RT			252.93	6.53	✓
	¢			253.36	6.10	✓
	LT			253.52	5.74	✓
44+50	RT			252.65	6.81	✓
	¢			253.04	6.42	✓
	LT			253.03	6.43	✓
44+00	RT			252.50	6.96	✓
	¢			252.88	6.58	✓
	LT			252.72	6.74	✓
B.M.		2.69		256.77		Sta 44+50

Grades on Road.

5/21/34

Leeky  
Bell  
Higgins

49

Sta	+	Hi	-	Elev	Grad Rod
B.M.	3.06	265.47		262.41	38+50
37+90 <sup>SS</sup>	FC. Rt			261.05	4.42
	£			260.75	4.72
	Lt'			660.45	5.02
37+75	Rt			261.52	3.95
	£			260.98	4.49
	Lt			260.56	4.91
37+50	Rt			261.95	3.52
	£			261.38	4.09
	Lt			260.75	4.72 ✓
37+25	Rt			262.32	3.15
	£			261.73	3.74
	Lt			261.12	4.35
37+00	Rt			262.70	2.77
	£			262.11	3.36
	Lt.			261.50	3.97
B.M.		3.06		262.41	Sta 38+50

Grades for Rogue Court Drain Pipes

Heckey 5/23/34. Indexed  
 Bell  
 Higgens  
 C.S.K.

50

Sta	+	HI	-	Elev
B.M.	2.65	272.54		269.89
A 0+00				266.85 5.69
0+30				266.60 5.94
0+61				266.35 6.19
B. 0+00				266.85 5.69
0+30				266.60 5.94
0+61				266.35 6.19
C 0+00				266.85 5.69
0+30				266.60 5.94
0+61				266.35 6.19

Note - A = Most Southerly Drain Pipe.  
 B = Center " "  
 C = Most Northerly " "  
 0+00 = Most Westerly End of Pipe.

Grades on Road.

Keeney  
Bell  
Higgins 5/22/34.

Sta	+	H <sub>1</sub>	-	Elev	Grade Rd.	
B.M.	12.75	270.82		258.07		
13+55.88	RC Lt			269.61	1.21	✓
	¢			269.01	1.81	✓
	RT			268.41	2.41	✓
+75	Lt			269.35	1.47	✓
	¢			268.75	2.07	✓
	RT			268.15	2.67	✓
14+00	Lt			269.08	1.74	✓ C0.2
	¢			268.48	2.34	✓ C0.7
	RT			267.88	2.94	✓
+25	Lt			268.84	1.98	✓ C0.4 Grade
	¢			268.24	2.58	✓ C0.3
	RT			267.64	3.18	✓
+50	Lt			268.60	2.22	✓
	¢			268.00	2.82	C0.3
	RT			267.40	3.42	✓
+70.96	RT Lt			267.97	2.85	✓
	¢			267.37	3.45	C0.5
	RT			266.77	4.05	✓
15+00	Lt			267.00	3.82	
	¢			266.80	4.02	✓
	R			266.30	4.52	✓
+50	Lt			265.45	5.37	
	¢			265.80	5.02	
	RT			265.45	5.37	
B.M.		12.75		258.07		

## Grade on Road.

Leekey 5/25/34  
Bell  
Higgins

52

Sta	+	Hi	-	Elev	Grade Rd.	
B.M.	11.45	269.52		258.07		
16+00	Lt			264.45	5.07	
	¢			264.80	4.72	
	Rt			264.45	5.07	F 2.5
16+50	Lt			263.45	6.07	
	¢			263.80	5.72	
	Rt			263.45	6.07	
17+00	Lt			262.65	6.87	
	¢			263.00	6.52	C 0.3
	Rt			263.00	6.52	
17+50	Lt			262.15	7.37	
	¢			262.50	7.02	C 0.4
	Rt			262.70	6.82	
18+00	Lt			261.85	7.67	
	¢			262.20	7.32	
	Rt			262.50	7.02	
18+47.33 PC	Lt			261.52	8.00	
	¢			261.92	7.60	
	Rt			262.32	7.20	
19+00	Lt			261.20	8.32	
	¢			261.60	7.92	
	Rt			262.00	7.52	
19+50	Lt			260.90	8.62	
	¢			261.30	8.22	
	Rt			261.70	7.82	

Grade on Road  
Cont Page 52.

Sta	+	H <sup>i</sup>	-	Elev	Grade Rod
		269.52			
T.P.	3.82	265.72	7.62	267.90	
20+00	Lt			260.60	5.12
	±			261.00	4.72
	Rt			261.40	4.32
20+50	Lt			260.30	5.42
	±			260.70	5.02
	Rt			261.10	4.62
21+00	Lt			260.00	5.72
	±			260.40	5.32
	Rt			260.80	4.92
B.M.			3.50	262.22	Sta 21+00 Elev 262.24

Grades on Road:

Leekey 5/28/34  
Bell  
Higgins

Sta	+	Hi	-	Elev	Grade Rod	
B.M.	4.09	266.33		262.24		Sta 21+00
21+50	Lt			259.70	6.63	C10
	£			260.10	6.23	C03
	Rt			260.50	5.83	C10
22+00	Lt			259.40	6.93	C12
	£			259.80	6.53	C05
	Rt			260.20	6.13	C20
22+50	Lt			259.10	7.23	C10
	£			259.50	6.83	C06
	Rt			259.90	6.43	C09
23+00	Lt			258.80	7.53	C09
	£			259.20	7.13	C02
	Rt			259.60	6.73	C05
23+50	Lt			258.50	7.83	C07
	£			258.90	7.43	✓
	Rt			259.30	7.03	✓
24+00	Lt			258.40	7.93	✓
	£			258.80	7.53	✓
	Rt			259.20	7.13	✓
24+50	Lt			258.70	7.63	✓
	£			259.10	7.23	✓
	Rt			259.50	6.83	✓
25+00	Lt			259.40	6.93	C11
	£			259.80	6.53	C10
	Rt			260.20	6.13	✓

6.08 260.25

Elev 260.24 = Sta 25+25



Grades on Road.

Leekey 5/29/34

Bell  
Higgins

Sta	+ HI -	Elev	Grade Rod	
	0.47 271.11	270.64		Sta 35+75 Elev 270.64
37+50	Lt	260.75	10.36	0.1
37+25	Lt	261.12	9.99	✓
37+00	Lt	261.50	9.61	✓
36+75	Rt	263.07	8.04	✓
	£	262.48	8.63	✓
36+50	Rt	263.45	7.66	✓
	£	262.85	8.26	0.1
36+25	Rt	263.82	7.29	✓
	£	263.23	7.88	0.7
36+00	Rt	264.20	6.92	0.6
	£	263.60	7.51	0.8
35+75	Rt	264.57	6.54	0.9
	£	263.98	7.13	0.5
35+50	Rt	264.95	6.16	0.9
	£	264.35	6.76	0.2
35+25	Rt	265.20	5.91	0.1
	£	264.73	6.38	0.6
35+00	Rt	265.45	5.66	✓
	£	265.12	5.99	0.2
34+89.48	Rt	265.55	5.56	✓
	£	265.28	5.83	0.4
B.M.	0.47	270.64		Sta 35+75.

## Grades on Road.

Leekey 6/9/34  
Bell

56

Sta	+	H <sub>i</sub>	-	Elev	Grade Rod	
B.M.	9.02	276.93		267.91		Sta 28+00
28+00	Lt			267.00	9.93	00.7
	¢			267.40	9.53	00.3
	Rt			267.80	9.13	00.4
28+50	Lt			268.30	8.63	00.5
	¢			268.70	8.23	✓
	Rt			269.10	7.83	✓
29+00	Lt			269.43	7.50	00.3
	¢			269.83	7.10	00.1
	Rt			270.23	6.70	✓
29+50	Lt			270.22	6.71	00.5
	¢			270.62	6.31	00.4
	Rt			271.02	5.91	00.8
30+00	Lt			270.66	6.27	00.9
	¢			271.06	5.87	00.8
	Rt			271.46	5.47	Omitted.
B.M.		9.02		267.91		Sta 28+00

## Grade on Road.

Heckey 6/12/34  
Bell  
Higgins

57

Sta	+	H.	-	Elev	Grade Road
B.M.	1.49	169.40		267.91	
27+00	Lt			264.40	5.00
	R			264.80	4.60
	RT			265.20	4.20
26+75	Lt			263.75	5.65
	R			264.15	5.25
	RT			264.55	4.85
26+50	Lt			263.10	6.30
	R			263.50	5.90
	RT			263.90	5.50
26+25	Lt			262.45	6.95
	R			262.85	6.55
	RT			263.25	6.15
B.M.		1.49		267.91	

Sta 28+00 = B.M.

C.O.B

Sta 28+00

Sewer Location for Bleachers

Sta

Hor. Ang.

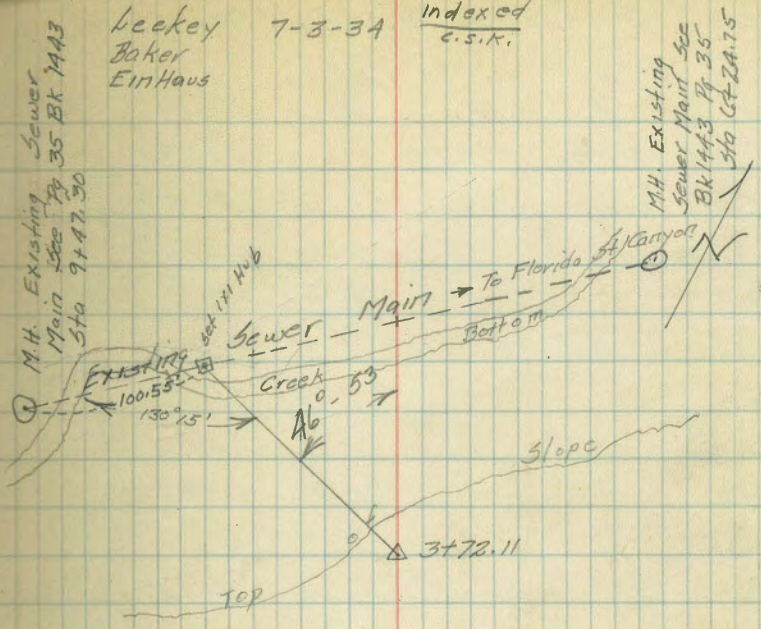
5+03.70

Intersection with Existing Sewer

3+72.11

L.F. Lt  $16^{\circ}-53'$

0+00



Leekey 7-3-34  
Baker  
Einhaus  
Indexed  
E.S.K.

M.H. Existing Sewer Main 35 Bk 1443 Sta 9+47.50



Profile of Proposed Sewer Line

Leskey Baker 7-3-34

Indexed  
C.S.K.

Sta	+ HI	-	Elev
B.M.	9.48	271.72	262.24
Top Conc Foundation of Bk		1.35	270.37
" of Ground at "		2.3	269.4
0+00		2.9	268.8
+50		2.5	269.2
1+00		2.9	268.8
+50		3.5	268.2
2+00		4.6	267.1
+25		5.1	266.6
+50		6.1	265.6
+75		7.6	264.1
+98		8.5	263.2
3+00		9.5	262.2
+04		9.5	262.2
+04		10.0	261.7
+44		9.2	262.5
+46		8.2	263.5
+48		8.2	263.5
+58		13.2	258.5
T.P.	0.80	259.33	13.19 258.53
3+72.11	L Pt.	1.54	257.79
3+88	Top of Slope	3.7	255.6
4+02		8.7	250.6
4+17		13.1	246.2
T.P.	0.20	247.01	13.52 246.81

Opp of Sta. 21+00 50' lt of E.

East Gutter line of Road.

West " " " "

Top of Berm

" " "

Toe of Slope

Sta	+	Hi	-	Elev	
		247.01			
4+40			9.8	237.3	
T.P.	106	235.31	12.76	234.25	
4+67			9.0	226.3	
T.P.	113	223.39	13.05	222.26	
4+85			3.9	219.5	E Bottom of Creek.
4+94			4.6	218.8	W Bottom of Creek
4+96			3.7	219.7	
5+03.70			3.15	220.24	Intersection of Proposed line + Existing sewer.
			7.80	215.59	Top Existing Pipe 9' S of Intersection.
			7.04	216.35	Top of M.H.
			13.70	209.69	Flow line of M.H. Sta 9+47.30
B.M.	7.58	269.82		262.24	
2+30	Top of Pipe		4.73	265.09	Intersection of Proposed sewer line + Existing water line.

Center Grades For Bleachers

Index  
C.S.N.

Aug. 13-34  
J. S. Soren  
North Gary  
8/1/35

61

0-45	Opp. S.E. Cor. Bleachers	5.62	266.64	4.84 C320 1.84
0-15	Opp. N.W. Cor. Bleachers	5.86	266.00	4.84 C320 1.84
0+0	= A	6.01	265.85	4.88 C316 1.83
+50		6.51	265.95	5.49 C407 1.42
+10		7.01	264.85	5.38 C412 1.87
+50		7.51	264.35	6.49 C408 2.11
+10		8.01	263.85	6.59 C337 3.23
+25	= B1k	8.26	263.60	7.24 C340 3.87
+50		9.17	262.39	8.15 C340 5.05
+30		11.30	259.96	10.78 C306 7.74
+30	= B1k	2.41	258.50	12.34 C376 8.62
+72.11	= M.H.	6.41	255.50	13.24 C243 12.91
+85	= B1k	7.91	254.00	2.05 C222 1.82

BM 262.24  
8.80  
270.84  
12.91  
257.93  
6.12  
258.05

Opp. Sta 24°  
50' 4" of 2 Page 59

Bottom Grades  
8-21-34

262.24  
9.62  
271.86  
11.92  
259.96  
1.95  
261.91  
12.32  
249.59  
240.18  
249.77

4720 = Bkt	7.27	C2.74	242.50	15.95 C222	259.05	
			243.00	1.81	12.61	
					245.44	
					0.03	
752.5	8.73	C3.09	229.23	2.50 C222	245.47	
			230.00	0.37	13.90	
780 = Bkt	7.30	C1.84	218.00		232.57	
	2.76				12.12	
785 = Bkt			217.00	15.10 C374	232.59	
				11.25	12.16	
					220.23	0.05/0.04 x
5703.70	11.78		215.80	16.80 C534	220.24	5703.70
				11.35		

220.23  
5.07  
225.30

249.77 Bkt Ford  
1.88  
233.88  
1.01  
237.96  
13.17  
225.79  
1.70  
227.58



## Box Culvert - Ground Elevs.

Smith 9/17  
SettleIndexed  
C.S.K.

63

Sta.	+	H.I.	-	Elev.
B.M.	0.63	257.40		256.775
T.P	9.26	255.09	11.57	245.83
0+00			11.8	243.3
+15			10.8	244.3
+24			8.3	246.8
25			8.7	246.4
32			9.0	246.1
35			3.1	252.0
48			2.7	252.4
76			2.5	252.6
82			4.3	250.8
88.5			6.6	248.5
88.5			9.25	245.84
88.5			9.5	245.6

at Sta. 44+50 on Road -

on top of bank 3.0 <sup>252.1</sup>

on Conc. Hdwall

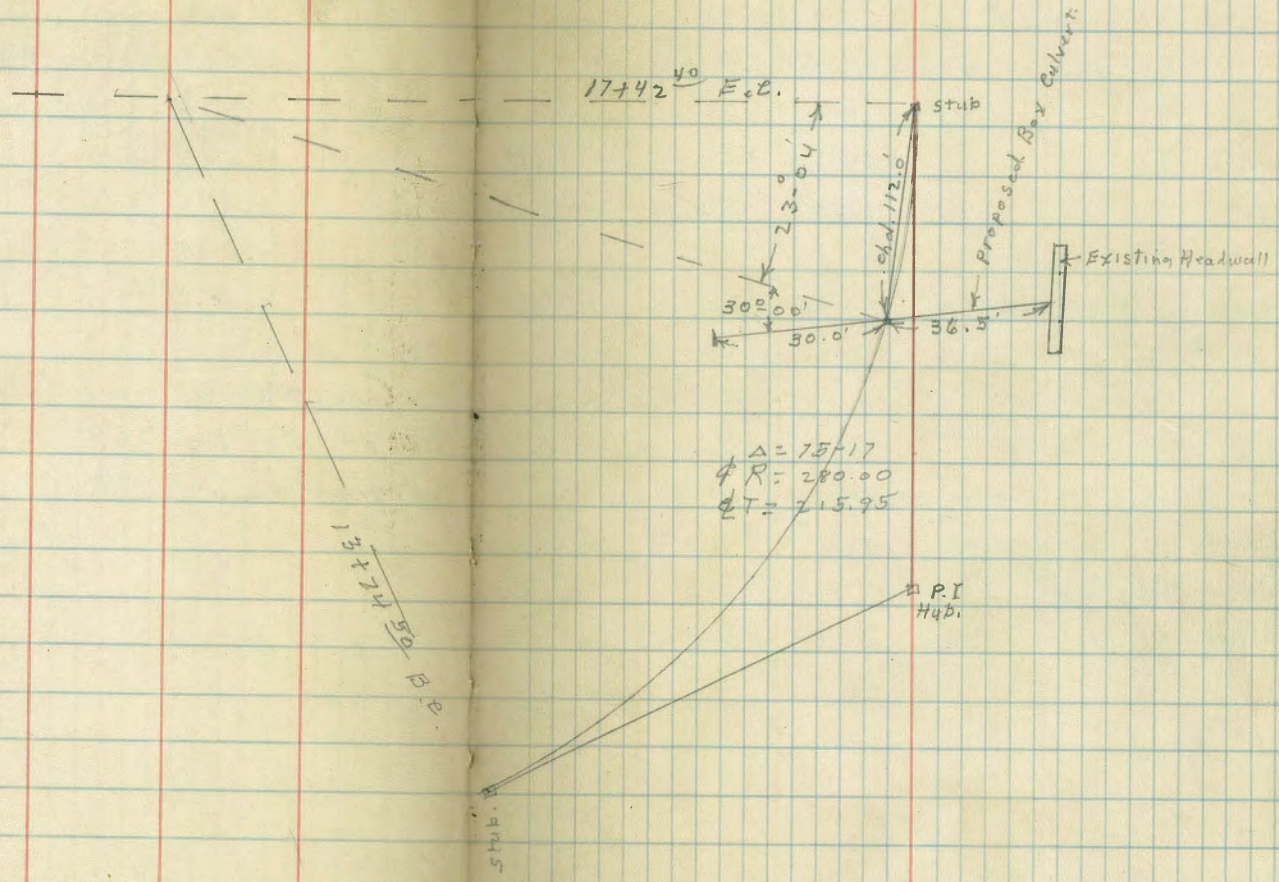
F.L. of 18" Pipe

on ground

9-18-34

Miller  
Walker  
Bliss

B.M.	1.74	258.51	256.77
stoo outlet	15.8		



## culvert levels

index of  
c.i.s.K.

65

BM.		258.51	256.77	Grade	
-16.	±	15.8	242.7		
-4.	±	13.8	244.7	243.2	
0100 = outlet = S. End.	±	12.9	243.6		
0200	5' Lt. of ± on stub	11.86	246.65	243.34	C. 3.31
+12	±	12.3	246.2		
+15	±	6.6	251.9		
+15	5' Lt. of ± on stub	6.68	251.83	243.87	C. 7.96
+30	±	6.5	252.0		
+30	5' Lt. of ± on stub	6.45	252.06	244.40	C. 7.66
+48 <sup>25</sup>	±	5.8	252.7		
+48 <sup>25</sup>	5' Lt. of ±	5.88	252.63	245.05	C. 7.58
+54	±	6.1	252.4		
+66 <sup>5</sup>	Inlet, ± Top Headwall	10.00	248.51		
+66 <sup>5</sup>	5' Lt. of ± on stub	9.13	249.88	45.70	C. 3.68
+67 <sup>5</sup>	FL. Ex. Pipe East	12.71	245.80		
+67 <sup>5</sup>	FL Ex pipe West	12.81	245.70		

$$\begin{array}{r} 14.0 \\ 44.5 \\ \hline 14.5 \\ 44.0 \end{array}$$

Curb. stakes at. Man. 21 ft Pool  
(P-9-1 off pat)

12-21-24  
Miller  
Walker  
Bliss

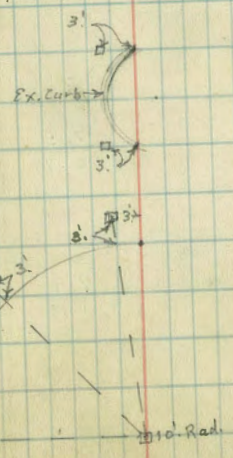
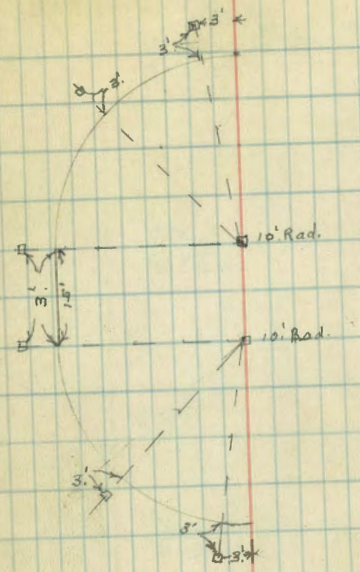
Indexed  
c.s.k.

N

280.21 66

Station	Ground	Curve Grade
B.M. Flag Pole	279.42	275.90
0+00 B.C.	275.8	4.103
0+07 <sup>85</sup> Ctr Curve	279.42 0.51 279.93	276.00 3.93
0+15 <sup>21</sup> E.C.	4.2 276.0	275.92 4.01
0+30 <sup>71</sup> B.C.	4.4 275.8	275.76 4.17
0+38 <sup>56</sup> Ctr Curve		275.68 4.25
0+46 <sup>42</sup> E.C.	4.7 275.5	275.60 4.33
0+70 <sup>22</sup>		275.38 4.55
0+95.42 N. End. Ex. C.B	Ex. cl. 5.04 275.17	275.17 4.76
1+02 <sup>42</sup> S. End. Ex C.B	Ex. cl. 5.10 275.11	275.11 4.82
1+20 <sup>12</sup> B.C.	Ground. 5.5 274.7	274.80 5.13
1+27 <sup>92</sup> Ctr Curve		274.65 5.28
1+35 <sup>83</sup> E.C.	6.1 274.1	274.50 5.43

C. 4 15.7 West.



20.1 path.

4.42  
275.79

5.00  
275.21

5.00  
275.21

5.30  
274.91

1+55<sup>83</sup> B.C.

1+63<sup>68</sup> Ctr Curve

1+71<sup>54</sup> E.C.

1+96<sup>59</sup> E.C.

2+21<sup>65</sup>

2+46<sup>71</sup> B.C.

2+52<sup>26</sup>

2+58<sup>02</sup> Ctr Curve

2+63<sup>47</sup>

2+69<sup>33</sup> E.C.

X 280.21

Ground.  
15.7 West  
6.6

$\frac{6.2}{274.0}$

$\frac{5.9}{274.3}$

$\frac{6.8}{273.4}$

$\frac{7.5}{272.7}$

22.7 West  
 $\frac{8.9}{271.3}$

Curr. Grade  
X 279.93

$\frac{274.30}{5.63}$

$\frac{274.10}{5.53}$

$\frac{274.36}{5.57}$

$\frac{274.08}{5.85}$

$\frac{273.79}{6.14}$

$\frac{273.50}{6.42}$

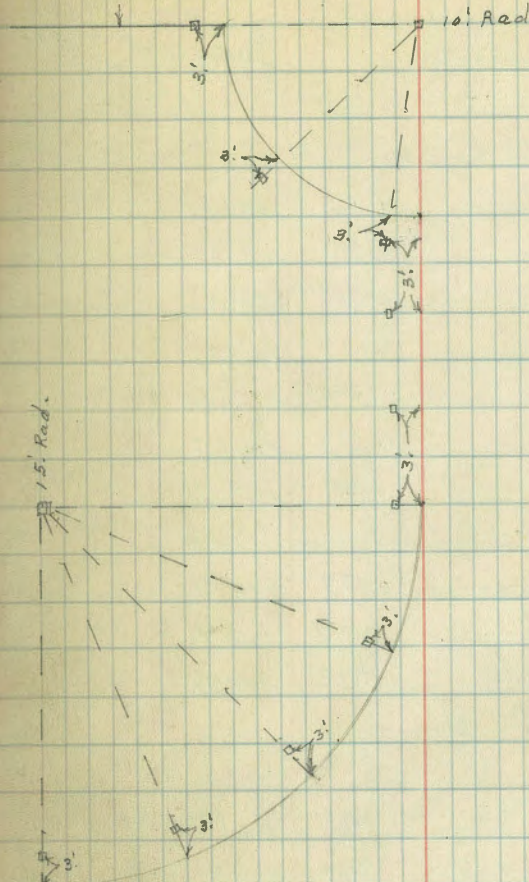
$\frac{273.33}{6.60}$

$\frac{273.12}{6.81}$

$\frac{272.88}{7.05}$

$\frac{272.60}{7.33}$

20' Path.



67

Grade of  
Ex. 2. 06.

$\frac{5.44}{274.77}$

$\frac{6.30}{273.91}$

4-20-35  
miles  
Walker  
Bliss

X Sec. Alley B.K. 54  
City Hts.  
20' Wide  
Indexed  
C.S.M.

B.M.B.P. 543 35269 347.24 N.W. 39<sup>th</sup>  
+ Univ.

14' N. of S. Line = S. ch. Univ. Ave

W - 20 gutter	5.23	347.44
w - 20 emt. ch	4.87	347.80
W. " "	4.81	347.86
w gutter	5.10	347.57
☒ " "	4.94	347.63
E. " "	4.89	347.75
E. emt. ch.	4.40	348.27

0+00 = S. Line Univ Ave

E. S. End. Emt. ch + Pav.	4.30	348.37
☒ " " "	4.54	348.13
W " " " " "	4.45	348.22

0+35

W	5.1	347.6
☒	4.9	347.8
E Dirt Drive to Lumber Yard.	5.0	347.7

0+70

E. Dirt Drive to Lumber Yard.	4.8	347.9
☒	4.8	347.9
W.	5.0	347.7

1+00

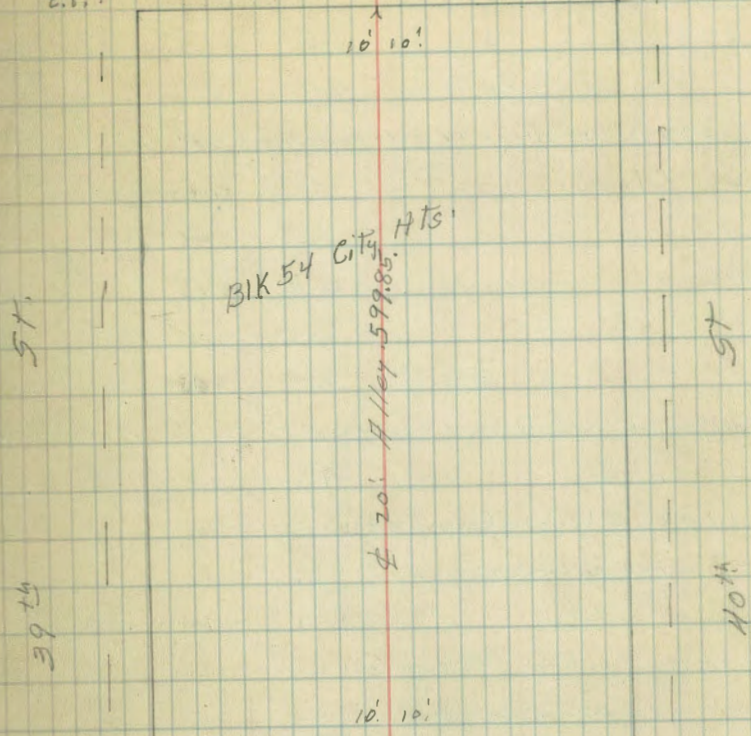
W	5.1	347.6
☒	5.0	347.7
E	4.8	347.9

Univ.

Ave

68

156.81 156.81



B.K. 54 City Hts.

☒ 20' Alley 59985

59th  
39th

10th

196.96' 156.96'

Wrightman St.

352.67  
1+40

E		5.5	347.2
Φ		5.8	346.9
W		5.7	342.0
1+73 N. End Double garage on W. cmt. floor 4' Back.			
W-4 floor		6.61	346.10
W.		6.2	346.5
Φ		6.0	346.7
E		6.0	346.7
T.P.	4.03	350.69	6.01 346.66
1+80 = N. End. Double Garage on E. cmt. floor on line			
E. floor		4.06	346.63
1+82 Φ Double Garage on W.			
W. - 4 = floor + N. W. Cor. cmt. apron		4.62	346.07
W-0.5 = N. E. Cor. " " "		4.71	345.94
1+91 = S. End. Double Garage on W.			
W-4 = floor + S. W. Cor. cmt. apron.		4.59	346.10
W-0.5 = S. E. " " "		4.71	345.98
1+97 = S. End. Double Garage on E.			
E. line floor		4.02	346.67
2+00			
E		4.1	346.6
Φ		4.1	346.6
W		4.5	346.2
2+07 Garage on E cmt. floor 9' Back			
2+07 Garage on W. Dirt floor 8' Back			
W+8 floor.		4.9	345.9
E+9 floor.		3.80	346.9

350.69

Alley BIK 54 City Hts

69

2+52 = N. End Double Garage on E 7' Back			
W		4.9	345.8
Φ		4.6	346.1
E.		4.3	346.4
+2.0 N.W. Cor. cmt. apron		4.14	346.55
+7 = floor " " "		4.08	346.61
2+71 = S. End above Garage			
- 7' = floor 4 cmt. Apron		4.12	346.57
- 2' = S.W. Cor. " " "		4.26	346.43
2+86 garage on W. Dirt floor 0.2' Back			
W-0.2 floor		5.2	345.50
2+89 garage on E cmt. floor 2.0' Back			
E-2.0 floor		4.81	345.88
3+00			
E		5.3	345.4
Φ		5.3	345.4
W		5.5	345.2
3+08 garage on E. Dirt floor 1.4' Back			
E.-1.4 floor		5.5	345.2
3+36 garage on E. Dirt floor 0.6' Back			
E-0.6 floor		5.3	345.4
3+50			
W		6.3	344.4
Φ		6.0	344.7
E.		5.5	345.2
T.P.	4.39	349.15	5.93 344.76

349.15

5' Back

3+72 = N. End Double Garage on E. cmt. floor + apron		
1.8' in alley NW Cor. apron	4.36	344.79
E.	4.31	344.84
E+5 = floor + apron	4.21	344.94
3+94 = S. End above Garage		
E+5 = floor + apron	4.20	344.95
E.	4.37	344.78
1.8' in alley	4.40	344.75
	4+00	
E	4.5	344.6
Φ	4.4	344.8
W	4.5	344.7
4+08 garage on W. dirt floor 0.5 Back		
W-0.5 floor	4.5	344.7
4+21+24 Φ Double garage on E. Dirt floor 6.0 Back		
E-6' floor	4.4	344.8
	4+50	
W	4.1	345.1
+3	4.1	345.1
+4	4.4	344.8
Φ	4.5	344.7
E	4.8	344.4
4+55 = N. End Double Garage on W. cmt. floor + apron 5' Back		
0.5 in alley = N.E. Cor. apron	3.67	345.48
W+5' = floor + NW. "	3.91	345.24

349.15

Alhambra City Hts.

70

4+75 = S. End above garage		
W-5 = floor + apron	3.56	345.59
1.0' in alley = S. E. Cor. apron	3.74	345.39
	5+00	
E	4.4	344.8
+2	4.9	344.3
Φ	5.0	344.2
+6	4.8	344.4
+9	3.7	345.2
W	3.7	345.2
	5+02	
W	4.9	344.3
Φ	5.0	344.2
+8	4.8	344.4
E.	4.3	344.9
	5+07	
W+0.5 E. edge apron	4.89	344.26
W+9 = floor	3.21	345.94
5+12 Φ double garage on E. dirt floor 6.5' Back		
W	4.7	344.5
Φ	5.2	344.0
+8	4.8	344.4
E.	4.2	345.0
E+6.5 floor	3.5	345.7



E	4.5	344.7
+3	5.1	344.1
⊕	5.3	343.9
+7	5.2	344.0
+8	3.3	345.9
W.	3.3	345.9

W	3.3	345.9
+2	3.3	345.9
+3	5.0	344.2
⊕	5.5	343.7
+8	5.2	345.0
E	3.7	345.5

5+31 garage on W dirt floor 3' Buck

W-3' floor

E	3.7	345.5
+2	5.4	344.8
⊕	5.7	343.5

W	5.1	344.1
W	3.7	345.5

+1	3.7	345.5
+3	5.5	343.7
⊕	5.8	343.4
+8	5.6	343.6
E.	3.5	345.7

E	4.1	345.1
+2	4.1	345.1
+3	6.2	343.0
⊕	6.4	342.8
+7	6.3	342.9
+8	4.4	344.8
W	3.7	345.5

W	4.2	345.6
+2	6.6	342.6
+4	7.4	341.8
⊕	7.2	342.0
+8	7.2	342.0
E	4.8	344.9

5  
4+99.85 = N. line Wightman

E. Ent. el + dirt gutter 7.55 341.60

⊕ 7.4 341.8

W. ent. el + dirt gutter 7.72 341.43

1/4" S. = N. el. of Wightman

W. ent. el 8.02 341.13

W. gutter 8.5 340.7

⊕ " 8.2 341.0

E. " 8.1 341.1

E. ent. el 7.77 341.38

T.P. 5.68 346.75 808 341.07

B.M. B.P. 3.66 343.09

N.W. cor.  
40' + Wightman

7-8-35 X see. 5<sup>th</sup> Ave & B. St. Indexed  
 Miller Walker B. Liss. for Drainage  
 E.S.K.

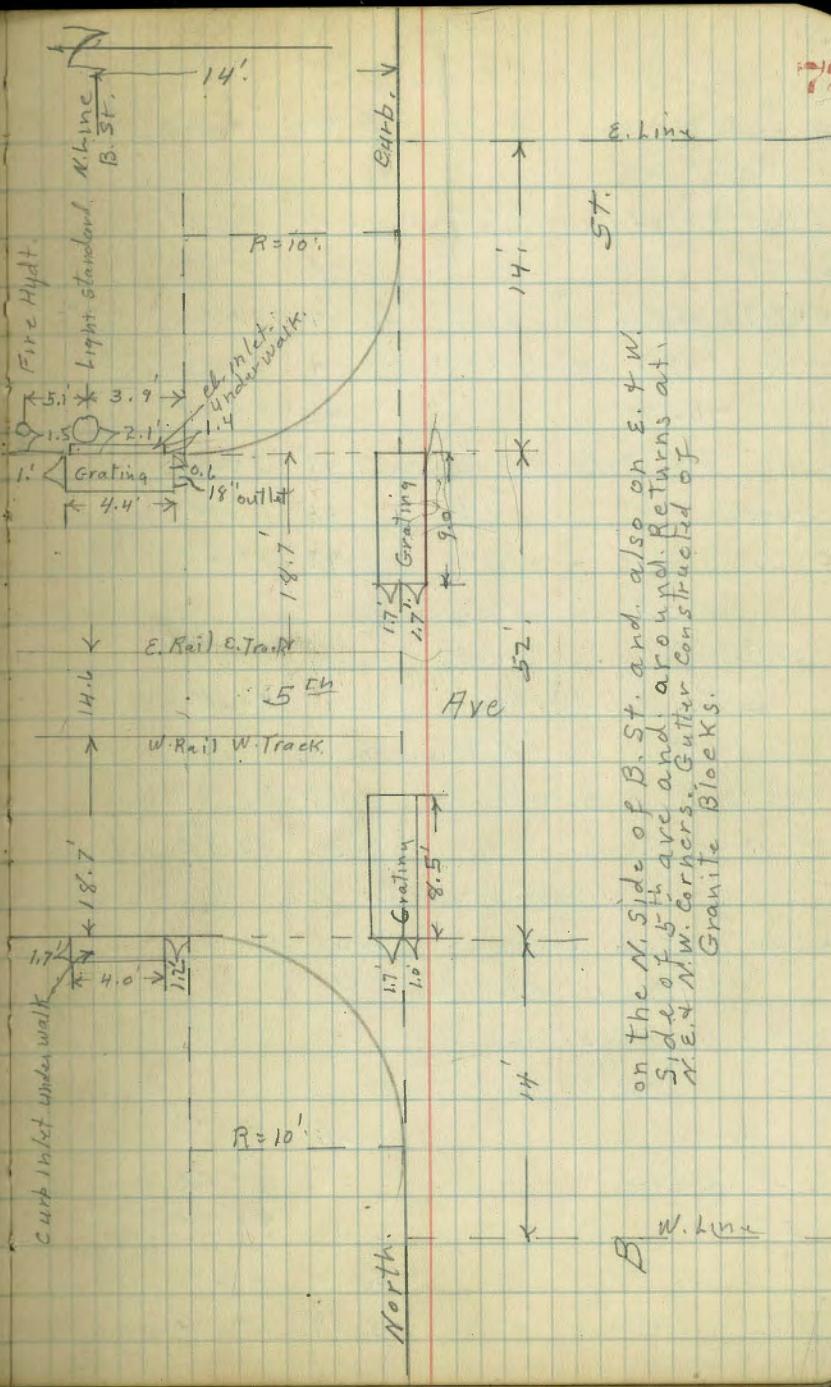
B.M. B.P. 7.45 57.80 50.35 N.W. 4<sup>th</sup> + B. St.  
 T.P. 5.89 60.42 3.27 54.53

3.5' S. of N. ch. line of B. St.

= S. Edge of Granite Block Gutters

W. line	6.43	53.99
+4	6.42	54.00
+14 = W. ch. line	6.33	54.09
ch + 8.5	10.10	50.32
" + 18.7 = W. Rail W. Track	5.95	54.47
18.7 W. of E. ch = E. Rail E. Track	5.96	54.46
9' W. of E. ch.	6.04	54.38
W. ch. line	6.34	54.08
+10	6.36	54.07
+14 = E. Line	6.36	54.06

E. Line	N. ch. Line B. St	5.86	54.56
+4	{ gutter curb	6.46	53.96
	{ curb gutter	5.92	54.50
	{ gutter	6.47	53.95
E. ch. = E. End. Grating		6.55	53.87
" " + 9' = W. End. grating		6.08	54.34
" " + 18.7 = E. Rail.		5.93	54.49
W. ch. - 18.7 = W. "		5.91	54.51
" " - 8.5 = E. End. grating		6.12	54.30
W. ch. = W. End. "		6.41	54.01
+10 Gutter		6.43	53.97
+10 curb.		5.95	54.47
W. line "		5.98	54.44
" " Gutter		6.52	53.90



on the N. side of B. St. and also on E. & W. side of 5<sup>th</sup> Ave and around Returns at N.E. & N.W. corners. Gutter constructed of Granite Blocks.

## 4' S. of N. line of B St.

W. ch.	5.89	54.53
Gutter	6.50	53.92
+3.5 = edge Granite Gutter	6.28	54.14
+11.1	5.89	54.53
+18.7 = W. Rail W. Track	5.79	54.65
E. ch. - 18.7 = E. Rail E. Track	5.79	54.65
" " - 11.1	5.92	54.50
" " - 3.5 edge granite gutter	6.35	54.07
Gutter	6.50	53.92
E. ch.	5.93	54.49

## 3.4' S. of N. Line B.

E. gutter at S. end. ch. inlet.	6.52	53.98
1' E. Bottom ch. inlet - Box.	10.57	49.85

## 2.8' S. of N. Line B.

W. gutter S. end. ch. inlet.	6.48	53.94
1' W. Bottom ch. inlet Box.	11.3	49.12

## 1.0' N. of N. Line B.

EG gutter N. end. ch. inlet	6.47	53.95
-----------------------------	------	-------

## 1.2' N. of N. Line B.

W. Gutter N. end. ch. inlet.	6.47	53.95
------------------------------	------	-------

## 5' N. of N. Line B.

E. ch.	5.64	54.78
Gutter	6.38	54.04
+3.5	6.03	54.39
+11.1	5.67	54.75
+18.7 = E. Rail	5.58	54.84

18.7' W. of W. ch = W. Rail	5.56	54.86
11.1 " " " "	5.66	54.76
3.5 " " " "	6.13	54.29
Gutter	6.39	54.11
W. ch.	5.59	54.83

## 10' N. of N. Line B.

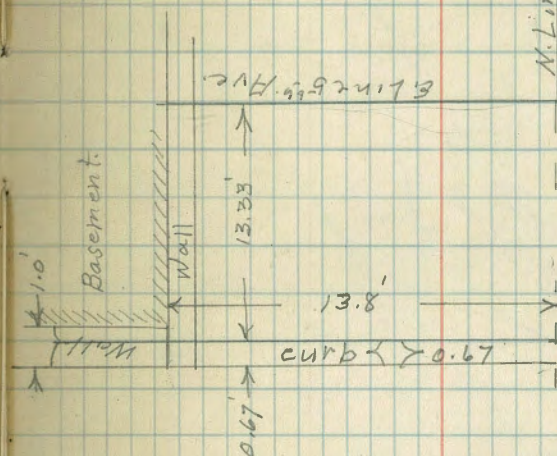
W. ch.	5.42	55.00
Gutter	6.15	54.27
+3.5	5.93	54.49
+11.1	5.53	54.89
+18.7 = W. Rail	5.42	55.00
E. ch. - 18.7 = E. Rail	5.44	54.96
" " - 11.1	5.53	54.89
" " - 3.5	5.89	54.53
Gutter	6.16	54.26
E. ch.	5.49	54.93

## 25' N. of N. Line

E. ch.	4.95	55.47
Gutter	5.60	54.82
+3.5	5.37	55.05
+11.1	5.08	55.34
+18.7 = E. Rail	5.03	55.39
W. ch. - 18.7 = W. Rail	4.96	55.46
" " - 11.1	5.04	55.38
" " - 3.5	5.39	55.03
Gutter	5.59	54.83
W. ch.	4.87	55.55

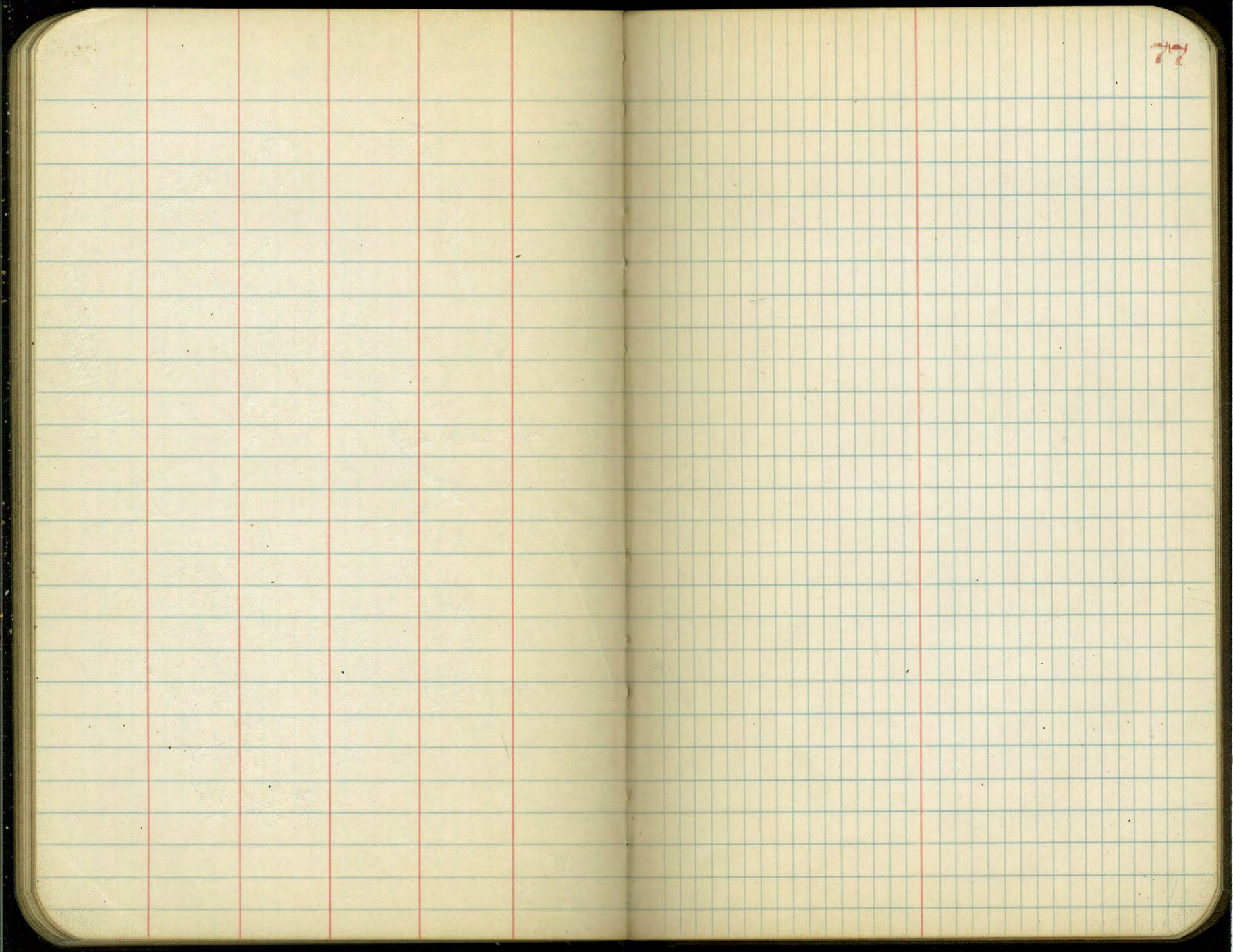
60.42  
50' N. of N. Line B.

W. el	4.03	56.39
gutter	4.71	55.71
+3.5 = edge granite gutter	4.51	55.91
+11.1	4.23	56.19
+18.1 = W. Rail	4.09	56.33
E. el = 18.7 = E. Rail	4.09	56.33
" 4 - 11.1	4.17	56.25
" 4 - 3.5 = edge granite gutter	4.47	55.95
Gutter	4.73	55.69
E. el.	4.03	56.39
T.P.C.T. N 7' 1" 13 St.	5.87	54.55



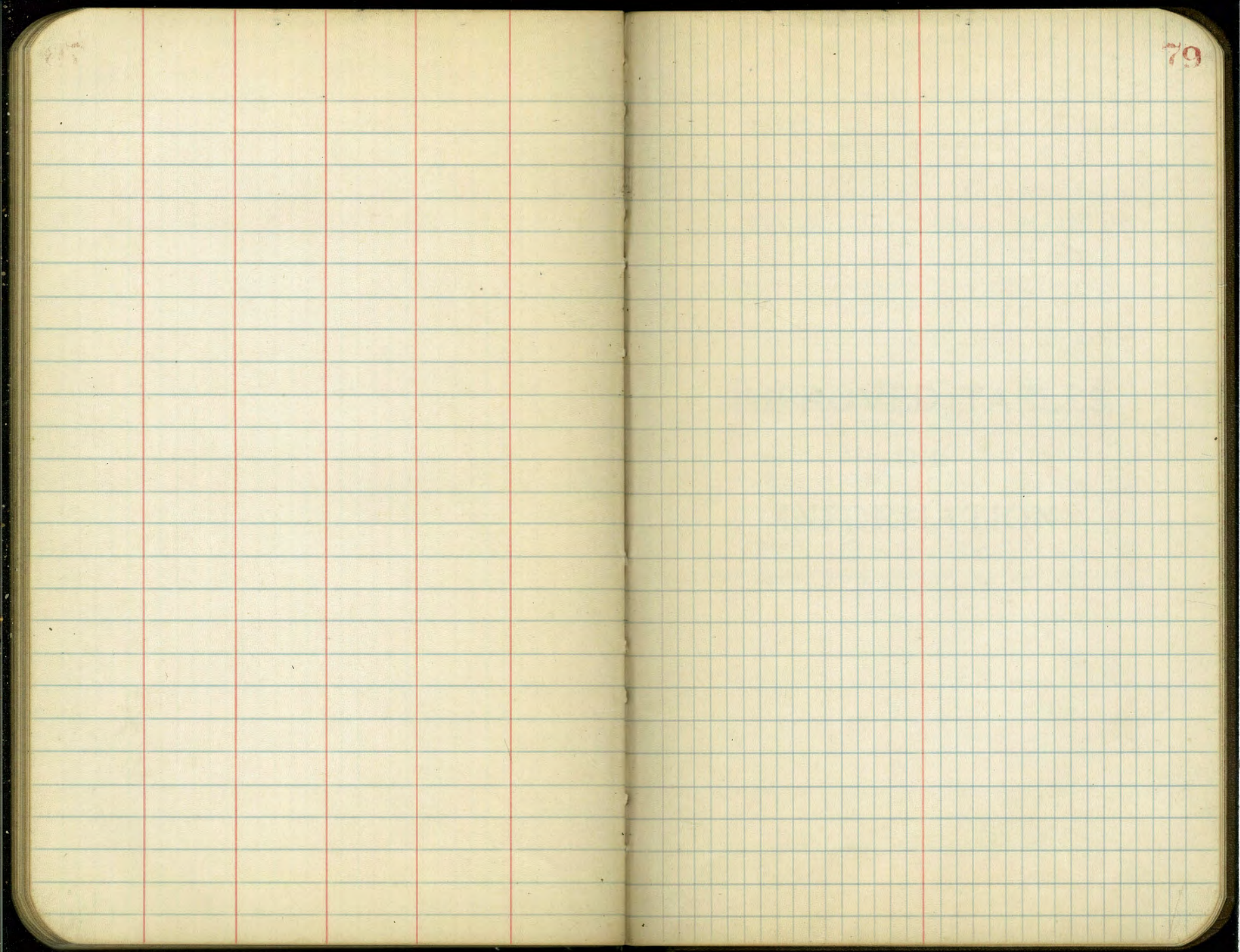












Shoemaker 8-27-28-X-30  
 Updegrat 8-27-28-29-X  
 Woods 8-27-X-29-30

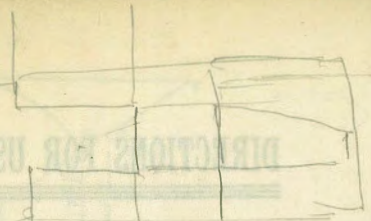
TENNIS COURTS-RECREATION AREA.

B.M. 270.67

ELEV.

1	269.70			
2	269.79			
3	269.87			
4	269.95			
5	270.03			
6	270.12			
7	270.20			
8	270.28	4.57	6.91	6.83
9	270.36	4.49	6.83	6.75
10	270.45	4.40	6.74	6.66
11	270.55	4.30	6.64	6.56
12	270.62	4.23	6.57	6.49
13	270.70	4.15	6.49	6.41

270.70 74.90  
 4.20 70.12  
 274.90 6.79  
 269.79 74.90  
 9.87 70.2  
 74.90 6.70  
 69.87 74.90  
 5.03 70.28  
 74.90 70.28  
 69.95 6.62  
 4.91  
 74.90  
 78.03  
 6.87



50  
 64  
 220  
 330  
 9/3520  
 391

## IMPROVED TABLES AND INFORMATION

To find Tangent and External for curve of any other degree divide by degree of curve and add correction found in column of corrections. Degree of curve with given I may be found by dividing tangent (or external), opposite I by given tangent (or external). The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

TABLE VI (continued)  
SINES, COSINES, TANGENTS, COTANGENTS (continued)

deg.	sin 0'	tan 0'	sin 10'	tan 10'	sin 20'	tan 20'	sin 30'	tan 30'	sin 40'	tan 40'	sin 50'	tan 50'	deg.
46	7193	1.0355	7214	1.0416	7234	1.0477	7254	1.0533	7274	1.0599	7294	1.0661	43
47	314	.0724	333	.0786	353	.0850	373	.0913	392	.0977	412	.1041	42
48	431	.1106	451	.1171	470	.1237	490	.1303	509	.1369	528	.1436	41
49	547	.1504	566	.1571	585	.1640	604	.1708	623	.1778	642	.1847	40
50	660	1.1918	7679	1.1988	7698	1.2059	7716	1.2131	7735	1.2203	7753	1.2276	39
51	771	2.349	790	.2423	808	.2497	826	.2572	844	.2647	862	.2723	38
52	880	2.799	898	.2876	916	.2954	934	.3032	951	.3111	969	.3190	37
53	986	3.270	8004	.3351	8021	.3452	8039	.3514	8056	.3597	8073	.3680	36
54	8090	3.764	107	.3848	124	.3934	141	.4019	158	.4106	175	.4193	35
55	192	4.281	208	.4370	225	.4460	241	.4550	258	.4641	274	.4733	34
56	290	4.826	307	.4919	323	.5013	339	.5108	355	.5204	371	.5301	33
57	387	5.399	403	.5497	418	.5597	434	.5697	450	.5798	465	.5900	32
58	480	6.003	496	.6107	511	.6212	526	.6319	542	.6426	557	.6534	31
59	572	6.643	587	.6753	601	.6864	615	.6977	631	.7090	646	.7205	30
60	660	1.7321	8675	1.7437	8689	1.7556	8704	1.7675	8718	1.7797	8732	1.7917	29
61	746	.8040	760	.8165	774	.8291	788	.8418	802	.8546	816	.8676	28
62	829	.8807	843	.8940	857	.9074	870	.9210	884	.9347	897	.9486	27
63	910	.9826	923	.9768	936	.9912	949	2.0057	962	2.0204	975	2.0353	26
64	988	2.0503	9001	2.0655	9013	2.0809	9026	.0965	9038	.1123	9051	.1283	25
65	9063	1.445	075	.1609	088	.1775	100	.1943	112	.2113	124	.2286	24
66	135	2.460	147	.2637	159	.2817	171	.2998	182	.3183	194	.3369	23
67	205	3.559	216	.3750	228	.3945	239	.4142	250	.4342	261	.4545	22
68	272	4.751	283	.4960	293	.5172	304	.5386	315	.5605	325	.5826	21
69	336	6.051	346	.6279	356	.6511	367	.6746	377	.6985	387	.7228	20
70	397	2.7475	9407	2.7725	9417	2.7980	9426	2.8239	9436	2.8502	9446	2.8770	19
71	455	.9042	465	.9319	474	.9600	483	.9887	492	3.0178	502	3.0475	18
72	511	3.0777	520	3.1084	528	3.1397	537	3.1716	546	.2041	555	.2371	17
73	563	2.709	572	.3052	580	.3402	588	.3759	596	.4124	605	.4495	16
74	613	4.874	621	.5261	628	.5656	636	.6059	644	.6470	652	.6891	15
75	659	7.321	667	.7760	674	.8208	681	.8657	689	.9136	696	.9617	14
76	703	4.0108	710	4.0611	717	4.1126	724	4.1653	730	4.2193	737	4.2747	13
77	744	3.315	750	.3897	757	.4494	763	.5107	769	.5736	775	.6382	12
78	781	7.046	787	.7729	793	.8430	799	.9152	805	.9894	811	5.0658	11
79	816	1.446	822	5.2257	827	5.3093	833	5.3955	838	5.4845	843	.5764	10
80	9848	5.6713	9853	5.7694	9858	5.8708	9863	5.9758	9868	6.0844	9872	6.1970	9
81	877	6.3138	881	6.4348	886	6.5606	890	6.6912	894	.8269	899	.9682	8
82	903	7.1154	907	7.2687	911	7.4287	914	7.5958	918	7.7704	922	7.9530	7
83	925	8.1443	929	8.3450	932	8.5555	936	8.7769	939	9.0098	942	9.2553	6
84	945	9.5144	948	9.7882	951	10.078	954	10.385	957	10.711	959	11.059	5
85	962	11.430	964	11.826	967	12.250	969	12.706	971	13.197	974	13.727	4
86	976	14.300	978	14.924	980	15.605	981	16.350	983	17.169	985	18.075	3
87	986	19.081	988	20.206	989	21.470	990	22.903	992	24.542	993	26.432	2
88	994	28.636	995	31.242	996	34.368	997	38.189	997	42.964	998	49.104	1
89	998	57.290	999	68.750	999	85.940	999	114.58	1.000	171.88	1.000	343.77	0
deg.	cos 60'	cot 60'	cos 50'	cot 50'	cos 40'	cot 40'	cos 30'	cot 30'	cos 20'	cot 20'	cos 10'	cot 10'	deg.

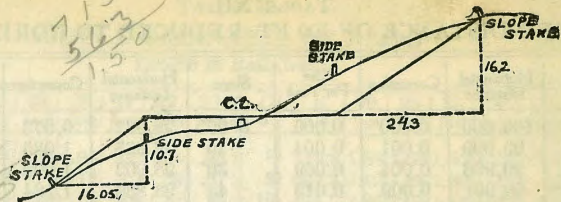
TABLE VII  
RODS IN FEET AND INCHES

Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches	Rods	Feet Inches
1	16-6	21	346-6	41	676-6	61	1006-6	81	1336-6
2	33-0	22	363-0	42	693-0	62	1023-0	82	1353-0
3	49-6	23	379-6	43	709-6	63	1039-6	83	1369-6
4	66-0	24	396-0	44	726-0	64	1056-0	84	1386-0
5	82-6	25	412-6	45	742-6	65	1072-6	85	1402-6
6	99-0	26	429-0	46	759-0	66	1089-0	86	1419-0
7	115-6	27	445-6	47	775-6	67	1105-6	87	1435-6
8	132-0	28	462-0	48	792-0	68	1122-0	88	1452-0
9	148-6	29	478-6	49	808-6	69	1138-6	89	1468-6
10	165-0	30	495-0	50	825-0	70	1155-0	90	1485-0
11	181-6	31	511-6	51	841-6	71	1171-6	91	1501-6
12	198-0	32	528-0	52	858-0	72	1188-0	92	1518-0
13	214-6	33	544-6	53	874-6	73	1204-6	93	1534-6
14	231-0	34	561-0	54	891-0	74	1221-0	94	1551-0
15	247-6	35	577-6	55	907-6	75	1237-6	95	1567-6
16	264-0	36	594-0	56	924-0	76	1254-0	96	1584-0
17	280-6	37	610-6	57	940-6	77	1270-6	97	1600-6
18	297-0	38	627-0	58	957-0	78	1287-0	98	1617-0
19	313-6	39	643-6	59	973-6	79	1303-6	99	1633-6
20	330-0	40	660-0	60	990-0	80	1320-0	100	1650-0

TABLE VIII  
LINKS IN FEET AND INCHES

Links	Feet Inches	Links	Feet Inches	Links	Feet Inches	Links	Feet Inches	Links	Feet Inches
1	0- 7.92	18	11-10.56	35	23- 1.20	52	34- 3.84	69	45- 6.48
2	1- 3.84	19	12- 6.48	36	23- 9.12	53	34-11.76	70	46- 2.40
3	1-11.76	20	13- 2.40	37	24- 5.04	54	35- 7.68	71	46-10.32
4	2- 7.68	21	13-10.32	38	25- 0.96	55	36- 3.60	72	47- 6.24
5	3- 3.60	22	14- 6.24	39	25- 8.88	56	36-11.52	73	48- 2.16
6	3-11.52	23	15- 2.16	40	26- 4.80	57	37- 7.44	74	48-10.08
7	4- 7.44	24	15-10.08	41	27- 0.72	58	38- 3.36	75	49- 6.00
8	5- 3.36	25	16- 6.00	42	27- 8.64	59	38-11.28	76	50- 1.92
9	5-11.28	26	17- 1.92	43	28- 4.56	60	39- 7.20	77	50- 9.84
10	6- 7.20	27	17- 9.84	44	29- 0.48	61	40- 3.12	78	51- 5.76
11	7- 3.12	28	18- 5.76	45	29- 8.40	62	40-11.04	79	52- 1.68
12	7-11.04	29	19- 1.68	46	30- 4.32	63	41- 6.96	80	52- 9.60
13	8- 6.96	30	19- 9.60	47	31- 0.24	64	42- 2.88	81	53- 5.52
14	9- 2.88	31	20- 5.52	48	31- 8.16	65	42-10.80	82	54- 1.44
15	9-10.80	32	21- 1.44	49	32- 4.08	66	43- 6.72	83	54- 9.36
16	10- 6.72	33	21- 9.36	50	33- 0.00	67	44- 2.64	84	55- 5.28
17	11- 2.64	34	22- 5.28	51	33- 7.92	68	44-10.56	85	56- 1.20

5.02  
322.11  
4+67.13  
36.57  
5+03.70



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1 1/4 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0.00	0.15	0.30	0.45	0.60	0.75	0.90	1.05	1.20	1.35	0
1	1.50	1.65	1.80	1.95	2.10	2.25	2.40	2.55	2.70	2.85	1
2	3.00	3.15	3.30	3.45	3.60	3.75	3.90	4.05	4.20	4.35	2
3	4.50	4.65	4.80	4.95	5.10	5.25	5.40	5.55	5.70	5.85	3
4	6.00	6.15	6.30	6.45	6.60	6.75	6.90	7.05	7.20	7.35	4
5	7.50	7.65	7.80	7.95	8.10	8.25	8.40	8.55	8.70	8.85	5
6	9.00	9.15	9.30	9.45	9.60	9.75	9.90	10.05	10.20	10.35	6
7	10.50	10.65	10.80	10.95	11.10	11.25	11.40	11.55	11.70	11.85	7
8	12.00	12.15	12.30	12.45	12.60	12.75	12.90	13.05	13.20	13.35	8
9	13.50	13.65	13.80	13.95	14.10	14.25	14.40	14.55	14.70	14.85	9
10	15.00	15.15	15.30	15.45	15.60	15.75	15.90	16.05	16.20	16.35	10
11	16.50	16.65	16.80	16.95	17.10	17.25	17.40	17.55	17.70	17.85	11
12	18.00	18.15	18.30	18.45	18.60	18.75	18.90	19.05	19.20	19.35	12
13	19.50	19.65	19.80	19.95	20.10	20.25	20.40	20.55	20.70	20.85	13
14	21.00	21.15	21.30	21.45	21.60	21.75	21.90	22.05	22.20	22.35	14
15	22.50	22.65	22.80	22.95	23.10	23.25	23.40	23.55	23.70	23.85	15
16	24.00	24.15	24.30	24.45	24.60	24.75	24.90	25.05	25.20	25.35	16
17	25.50	25.65	25.80	25.95	26.10	26.25	26.40	26.55	26.70	26.85	17
18	27.00	27.15	27.30	27.45	27.60	27.75	27.90	28.05	28.20	28.35	18
19	28.50	28.65	28.80	28.95	29.10	29.25	29.40	29.55	29.70	29.85	19
20	30.00	30.15	30.30	30.45	30.60	30.75	30.90	31.05	31.20	31.35	20
21	31.50	31.65	31.80	31.95	32.10	32.25	32.40	32.55	32.70	32.85	21
22	33.00	33.15	33.30	33.45	33.60	33.75	33.90	34.05	34.20	34.35	22
23	34.50	34.65	34.80	34.95	35.10	35.25	35.40	35.55	35.70	35.85	23
24	36.00	36.15	36.30	36.45	36.60	36.75	36.90	37.05	37.20	37.35	24
25	37.50	37.65	37.80	37.95	38.10	38.25	38.40	38.55	38.70	38.85	25
26	39.00	39.15	39.30	39.45	39.60	39.75	39.90	40.05	40.20	40.35	26
27	40.50	40.65	40.80	40.95	41.10	41.25	41.40	41.55	41.70	41.85	27
28	42.00	42.15	42.30	42.45	42.60	42.75	42.90	43.05	43.20	43.35	28
29	43.50	43.65	43.80	43.95	44.10	44.25	44.40	44.55	44.70	44.85	29
30	45.00	45.15	45.30	45.45	45.60	45.75	45.90	46.05	46.20	46.35	30
31	46.50	46.65	46.80	46.95	47.10	47.25	47.40	47.55	47.70	47.85	31
32	48.00	48.15	48.30	48.45	48.60	48.75	48.90	49.05	49.20	49.35	32
33	49.50	49.65	49.80	49.95	50.10	50.25	50.40	50.55	50.70	50.85	33
34	51.00	51.15	51.30	51.45	51.60	51.75	51.90	52.05	52.20	52.35	34
35	52.50	52.65	52.80	52.95	53.10	53.25	53.40	53.55	53.70	53.85	35
36	54.00	54.15	54.30	54.45	54.60	54.75	54.90	55.05	55.20	55.35	36
37	55.50	55.65	55.80	55.95	56.10	56.25	56.40	56.55	56.70	56.85	37
38	57.00	57.15	57.30	57.45	57.60	57.75	57.90	58.05	58.20	58.35	38
39	58.50	58.65	58.80	58.95	59.10	59.25	59.40	59.55	59.70	59.85	39
40	60.00	60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	40
41	61.50	61.65	61.80	61.95	62.10	62.25	62.40	62.55	62.70	62.85	41
42	63.00	63.15	63.30	63.45	63.60	63.75	63.90	64.05	64.20	64.35	42
43	64.50	64.65	64.80	64.95	65.10	65.25	65.40	65.55	65.70	65.85	43
44	66.00	66.15	66.30	66.45	66.60	66.75	66.90	67.05	67.20	67.35	44
45	67.50	67.65	67.80	67.95	68.10	68.25	68.40	68.55	68.70	68.85	45
46	69.00	69.15	69.30	69.45	69.60	69.75	69.90	70.05	70.20	70.35	46
47	70.50	70.65	70.80	70.95	71.10	71.25	71.40	71.55	71.70	71.85	47
48	72.00	72.15	72.30	72.45	72.60	72.75	72.90	73.05	73.20	73.35	48
49	73.50	73.65	73.80	73.95	74.10	74.25	74.40	74.55	74.70	74.85	49
50	75.00	75.15	75.30	75.45	75.60	75.75	75.90	76.05	76.20	76.35	50

Computed by L. Leland Locke.

58.31 58.31 58.31  
 53.06 53.41 53.08  
 5.25 4.90 5.23

58.31 58.31 58.31  
 25375 5910  
 456 4.21

63.30 63.30 63.30 63.30  
 56.79 56.60 56.15  
 6.51 6.70 6.35

63.30 63.30  
 57.64 57.49  
 5.66 5.31

269.56  
 4.89  
 274.45

3.75 or 6  
 270.69 ✓

