



# 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  $30.6 + (20 - 16) \div 2$  or 2 ft. added to  $30.6 = 32.6$ . For slopes of 1 on  $1\frac{1}{2}$  see inside of back cover.

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# 1654

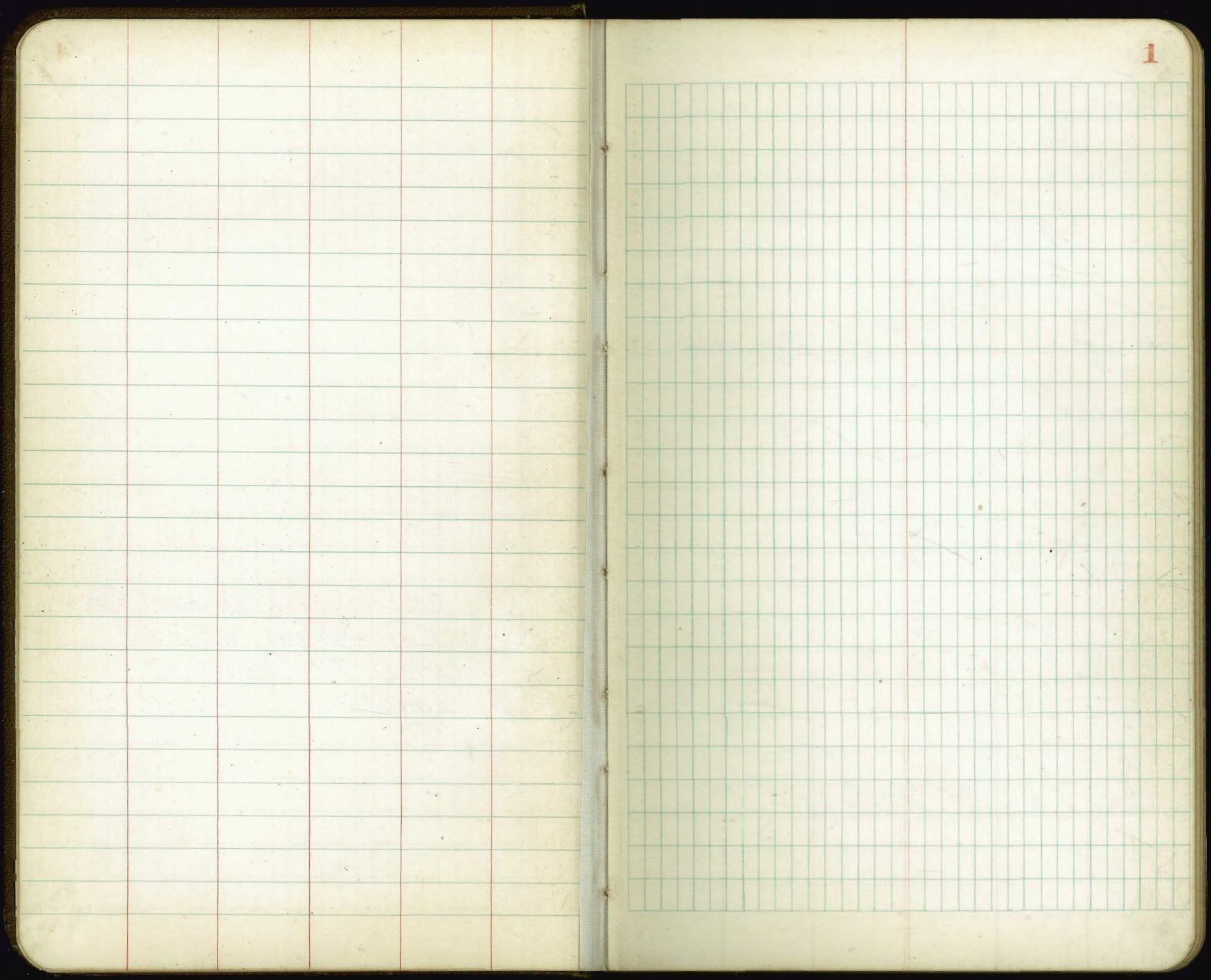
## CITY ENGINEER'S OFFICE

ENGINEERING DEPARTMENT  
CITY OF SAN DIEGO,  
CALIFORNIA.

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.

Home Ave. Extension in Fairmount Ave. "B"  
Line Cross Sections 45-67  
Culvert #1 #2 68-71  
"B" Alignment - 40-44



1

Walker  
 Osborn  
 Hazard  
 3-1942

Location of Newly Constructed 15" Sewer M.H.s  
 in 11th St. Canyon, from A-Street  
 to Union Ave. Also Ties To M.H.s  
 of old 12" line

Note: This a Traverse line and is  
 always  
 Not on the E. of Sewer Between M.H.s

Station	Distance	Bearing
	337.45	N 0° 07' 30" W

177.83 = Δ in Sewer 0° 09' Lt. = E. Russ Blvd.

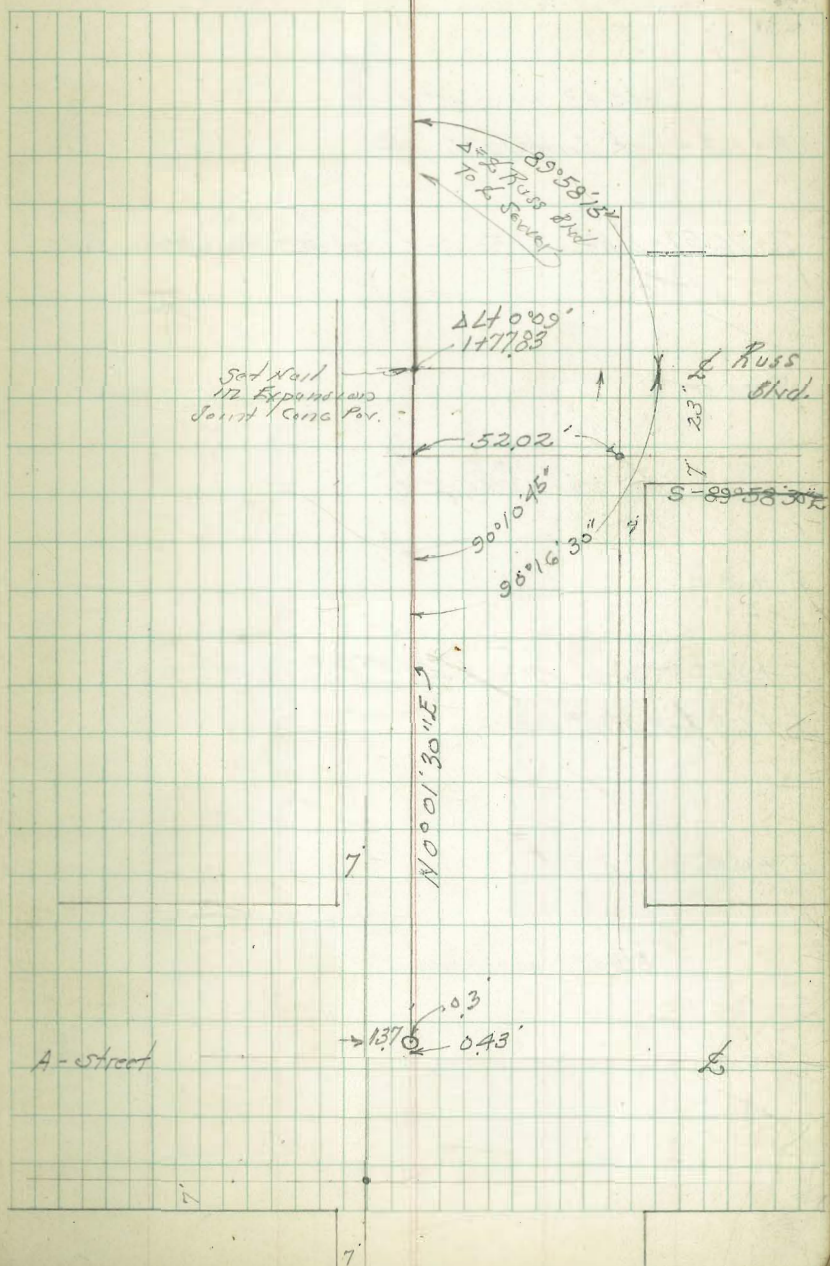
177.83 N 0° 01' 30" E

0+00 = Existing M.H. # 2A  
 0.43' North of E. A St  
 and  
 20.7' E of W.

E 15" Sewer

Indexed  
c.s.k.

2



11th St. Canyon Sensors

623.43' N0°00'45"W

8+0.3 = Int. Exist 12" Sewer

7+76.57 = A Pt. 2°50'30" set Per stake Wedge Pav.

7+00

201.29' N2°51'15"W

6+00

5+75.28 = A Pt. 2°43'45"

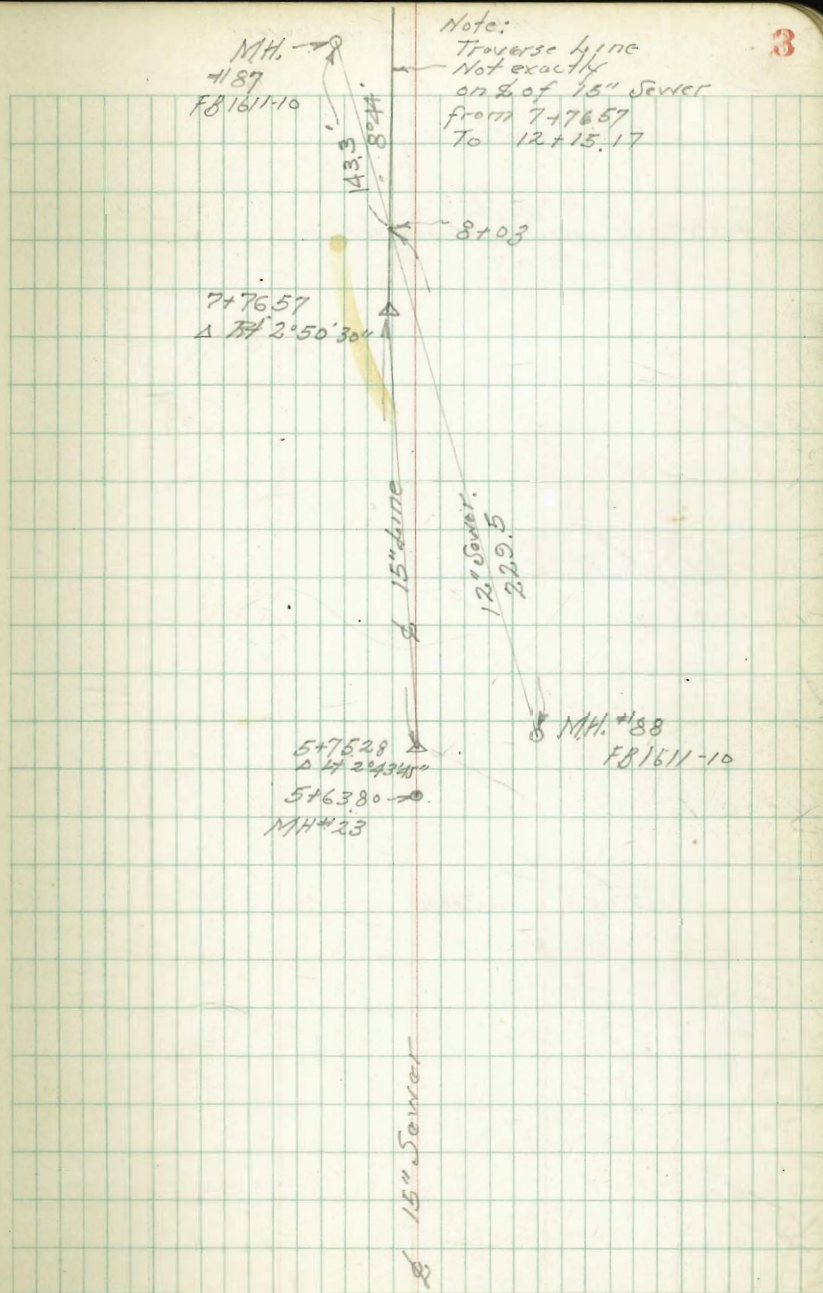
5+63.80 = MH #23

5+00

397.45' N0°07'30"W

4+00

3



11th of Canyon Sewers

500.0 N10°58'W

14+00 = Δ Lt. 10°57'15"  
in Random line

13+00

12+15.17 = MH# 22

12+00

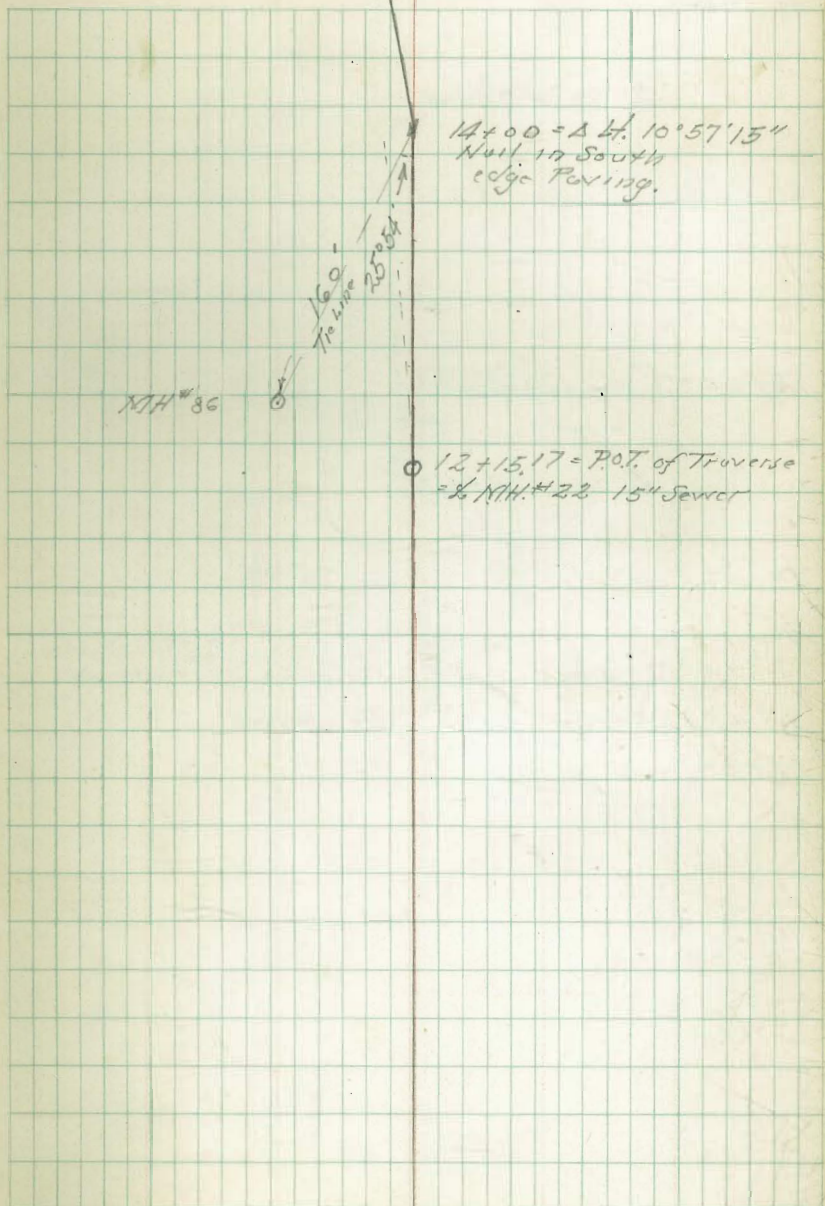
11+00

623.43 N0°00'45"W

10+00

9+00

4



21+00

650.0' N17°36'15"W

20+00

19+00 = Δ L 6°32'15"

500.0' N10°58'W

18+00

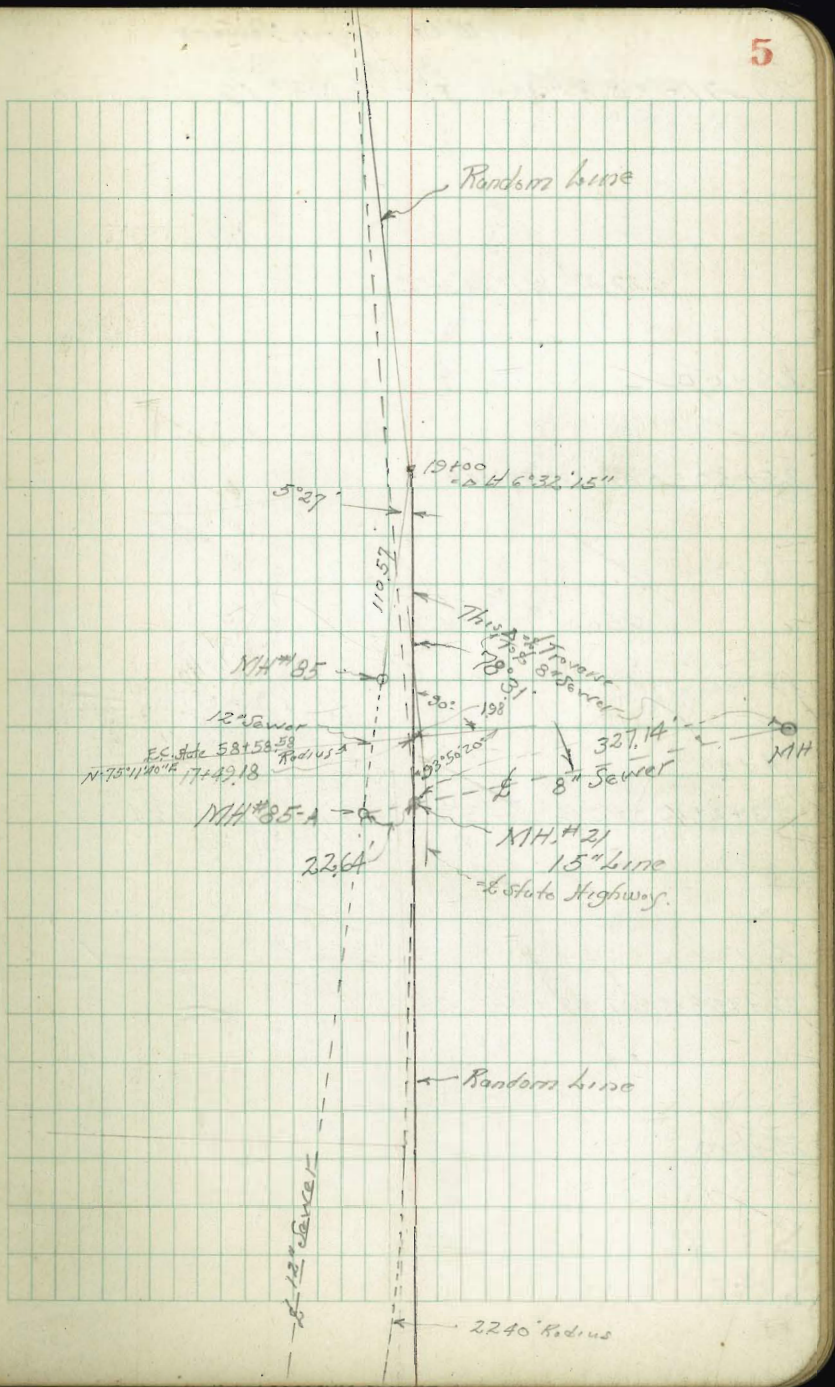
17+49.18 = Intersection E.C. Radius Line & State Highway = 198.87'

17+28.25 = M.H. #21 = P.O.T. Traverse

17+00

16+00

15+00





11th St Canyon Sewers

27+77.27 = Δ Rt 3°47'30" = 1/2 MH#19

227.27' N1°28'30"E

26+00

25+50 = Δ Rt 18°58'45"

25+00

650.0' 17°30'15"W

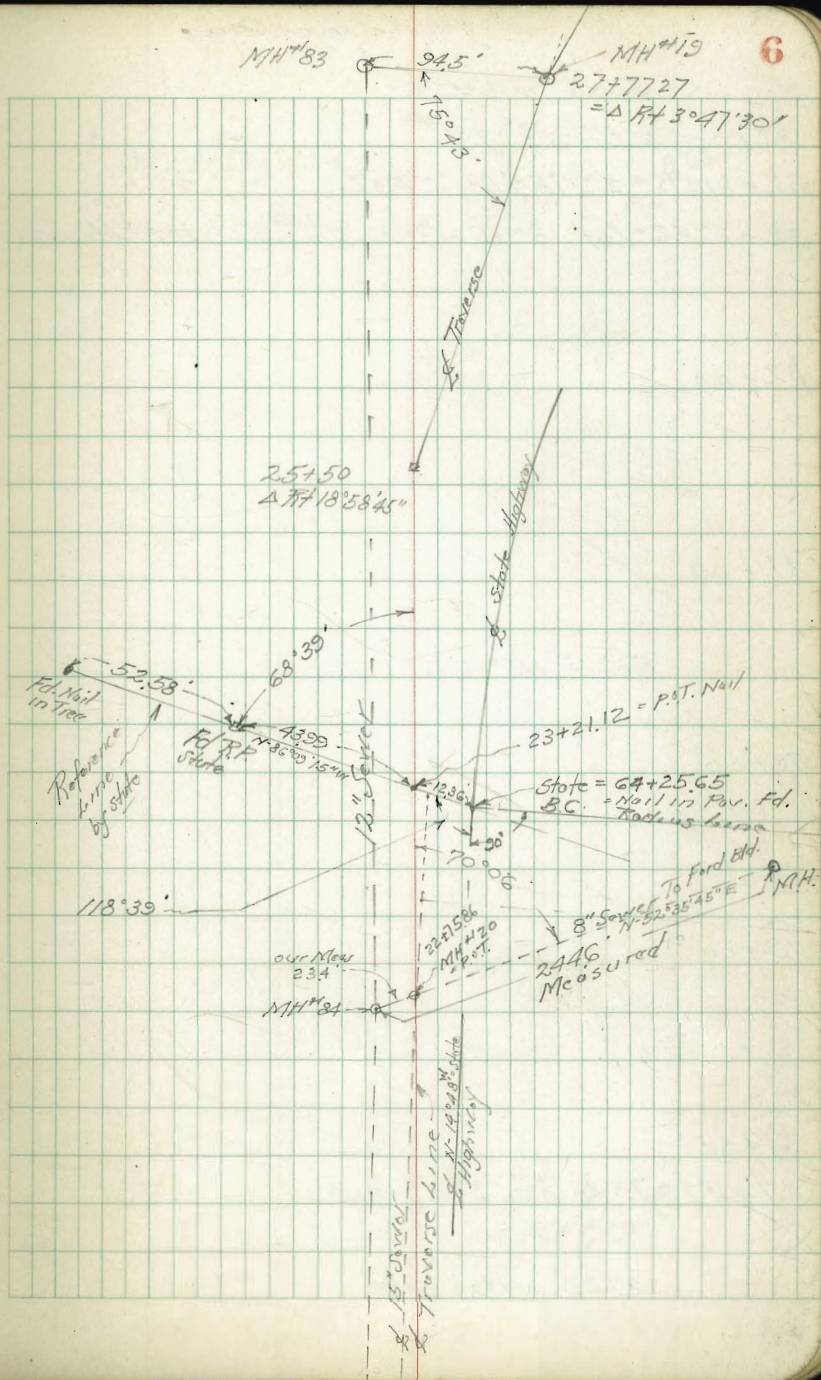
24+00

23+21.12 = P.O.T. = Int. Tie Reference line State Highway

23+00

22+75.86 = P.O.T. = 1/2 MH#20

22+00



11th St Canyon Sewers.

500.0' N19°49'E

33+00 = Δ Rt. 14°33'

32+81.50 = E MH#18 = P.O.T.

32+77.42 = Int 8" Sewer MH#82 = 18.37' Lt. on diag.

32+00

31+00

522.73' N5°16'E

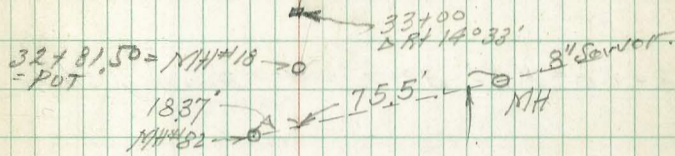
30+00

29+00

28+00

27+77.27 = Δ Rt 3°47'30"

227.27' N1°28'30"E



27+77.27  
Δ Rt. 3°47'30"  
= E MH#19

11th St. Canyon Sewers

400.0' N 23° 21' 46" E

38+00 = Δ Rt. 3° 32' 40" = Paving Stake

37+50.48 = L MH #17 = P.O.T. of Traverse = lat. C Sewer

37+14.17 = P.O.T. in Tie Line To R Highway

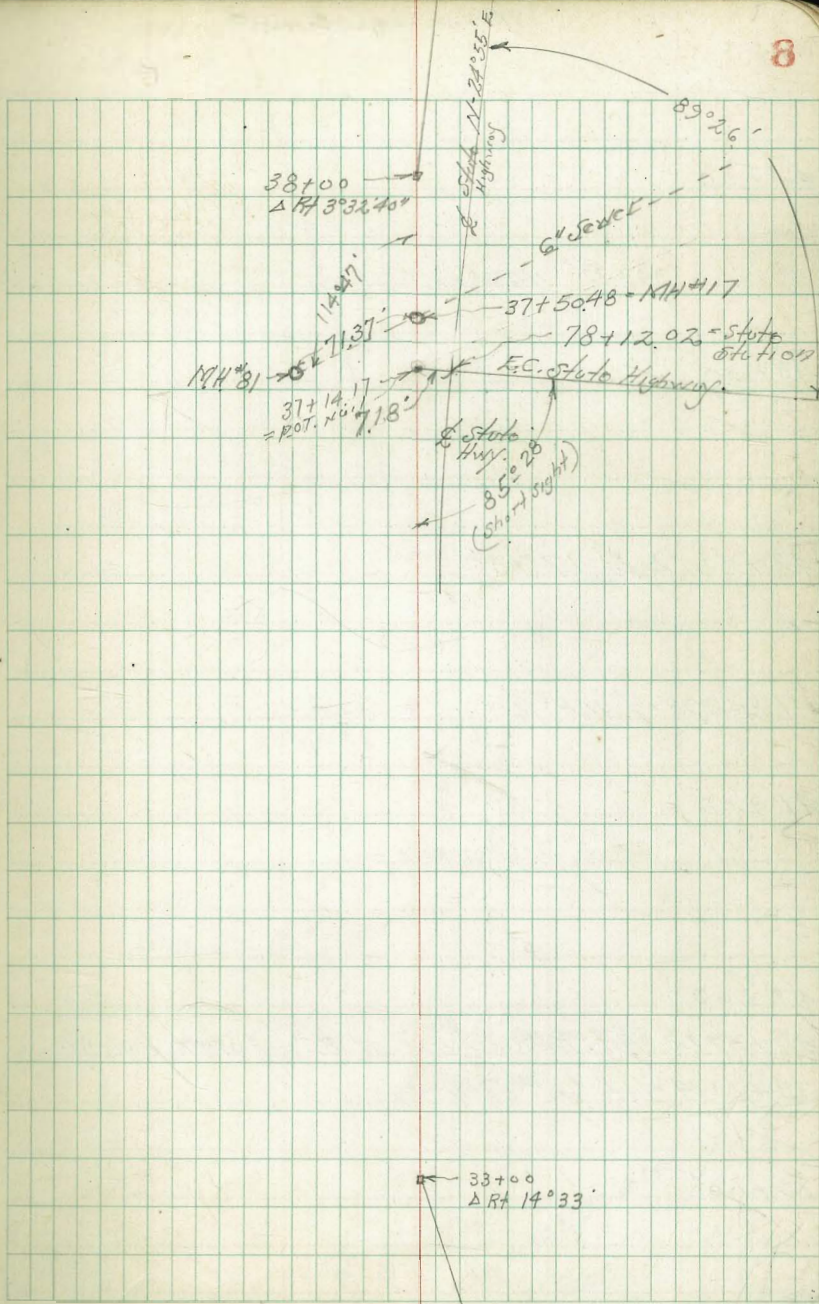
36+00

500.0' N 19° 49' E

35+00

34+00

33+00 = Δ Rt. 14° 33'



44+00

347.32' N6°08'40"E

43+00

42+00 = Δ L 17°13'

41+42.98 = Δ NH#16

41+00

400.0' N23°21'40"E

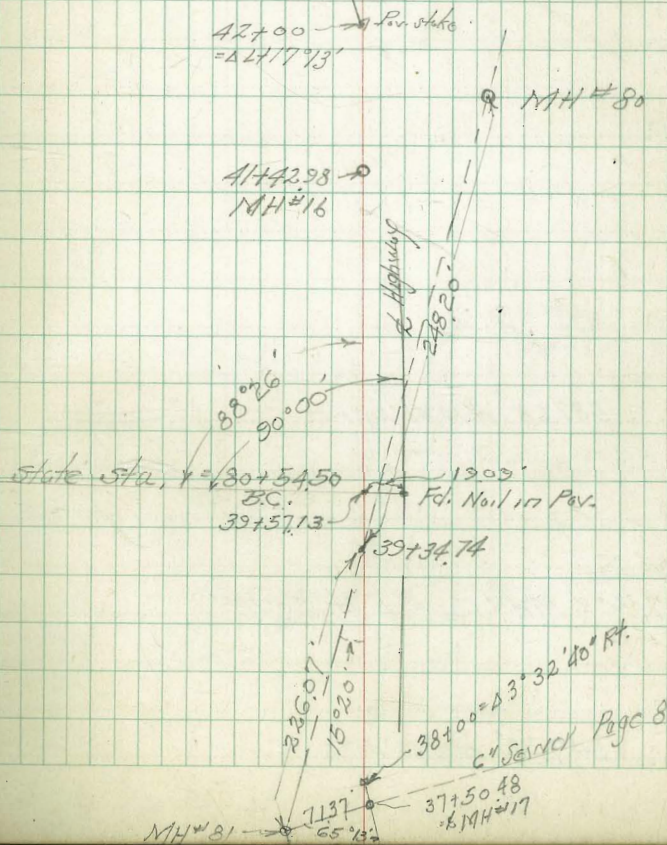
40+00

39+57.13 = Int. Radius Line at B.C. of State Highway.

39+34.74 = Int 12" Sewer

39+00

45+4732  
Δ L 20°54'



50+00

49+00

48+00

47+00

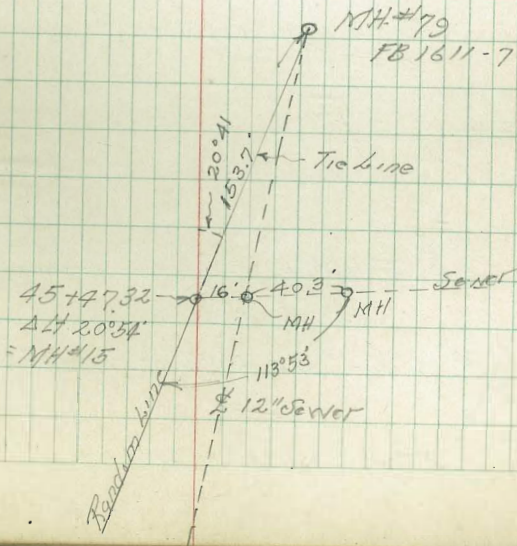
587.68' N14°45'20"W

46+00

45+47.32' = MH#15 = Δ Lt 20°54'

45+00

347.32' N6°08'40"E



315.20' N 14° 39' 20" W

55 + 24.80 = Δ R.L. 10° 47' 15" = E. MH #13

55 + 00

54 + 00

53 + 00

459.80' N 25° 26' 35" W

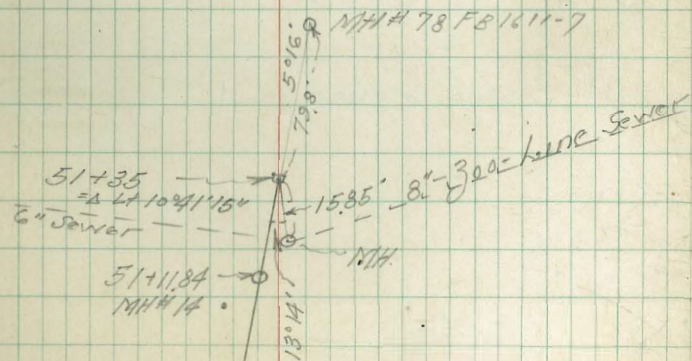
52 + 00

51 + 35 = Δ L. 10° 41' 15" Pav. Stake

51 + 11.84 = E. MH #14 = P.O.T. of Traverse Line

587.68' N 14° 45' 20" W

55 + 24.80 = Δ R.L. 10° 47' 15" MH #13



62+00

61+00

715.00' N2°47'25"E

60+00

59+10 = Δ RT 17°36'45"

59+00

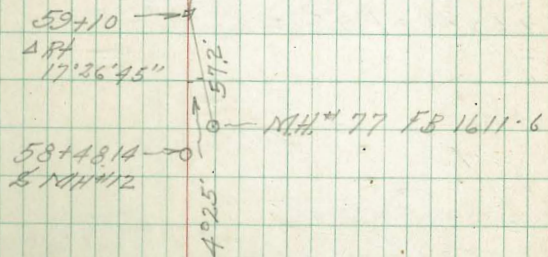
58+48.14 = S. MH#12 = P.O.T. of Traverses

58+00

315.20' N14°39'26"W

57+00

56+00



68

660.47' N4°02'35"W

67

66+25 =  $\Delta L$  6°50' Set Facing Stake

66

65+50.20 = P.O.T. =  $\frac{1}{2}$  M.H. #11

65+00

64+36.8 = P.O.T. = Int. Radius Line BC, State Highway

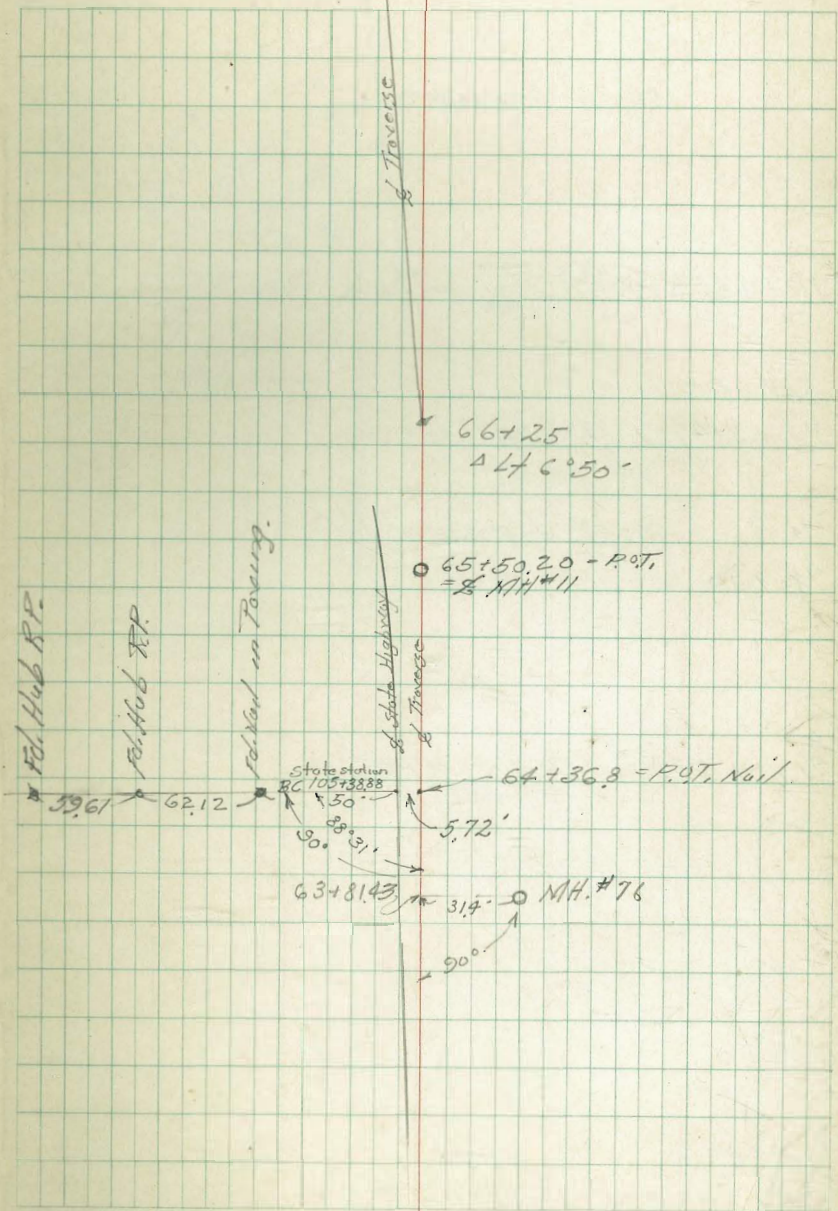
64+00

P.O.T. Nail

63+81.43 = opp MH on 8" Sewer Line

715.00' N2°47'25"E

63+00





350.11' N-10°48'05" W

74+00

73+48.98 = P.O.T. Pav. Stake

73+00

72+85.47 = Δ Lt. 6°45'30"

660.47' N-4°02'35" W

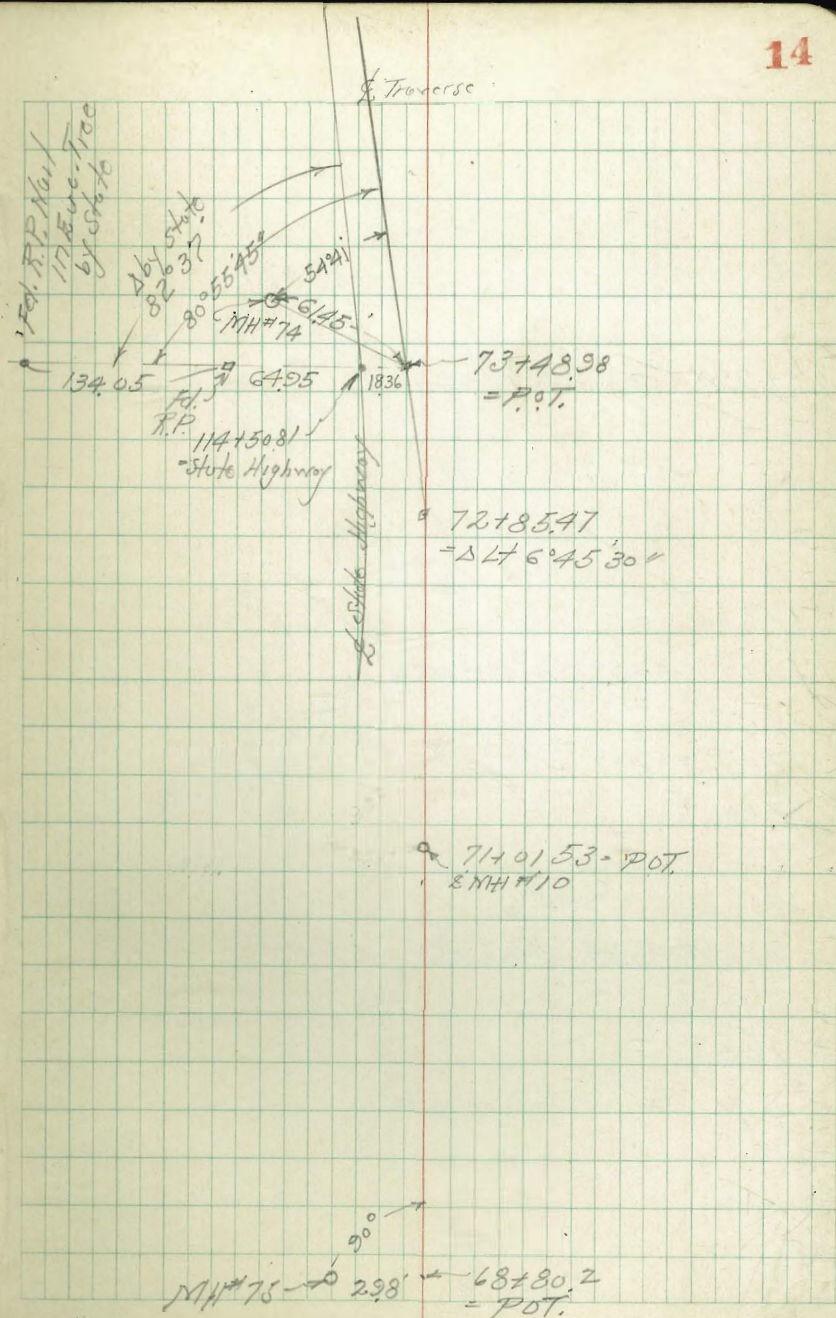
72+00

71+01.53 = Δ MH #10 = P.O.T.

70

69+00

68+80.2 = opposite MH #75



78+99.1 = opposite MH # 73

78+00

543.75' N-6°39'15"W

77+2373 = P.O.T.

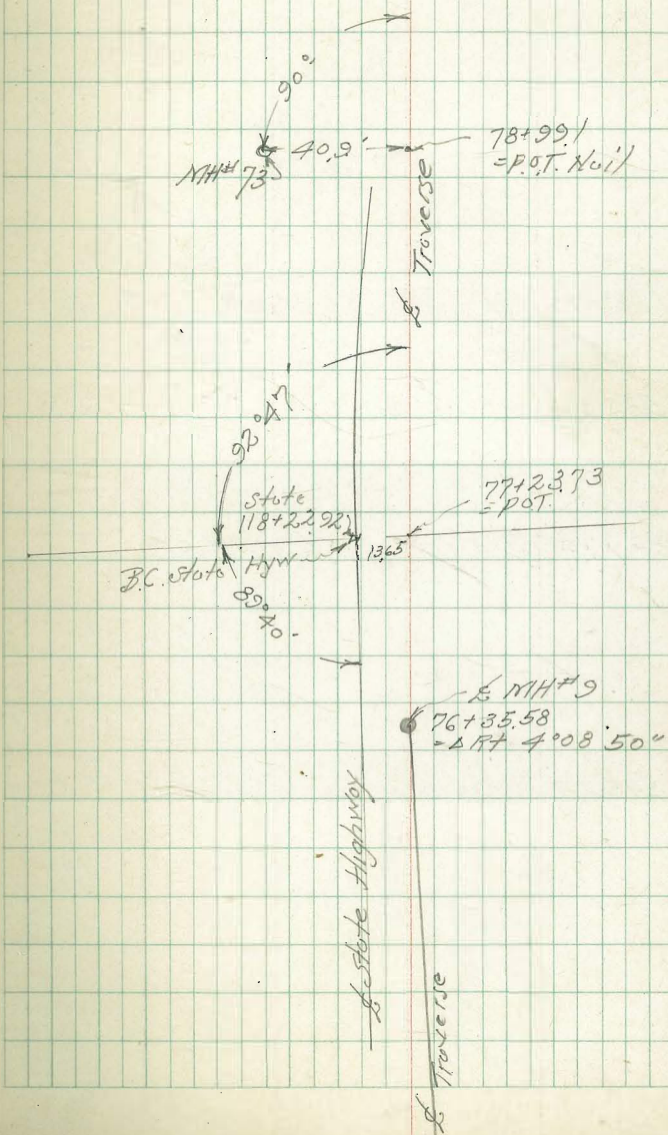
77+00

76+35.58 - L.P.T. 4°08'50" = E. MH # 9

76+00

350.11' N-10°48'05"W

75+00



11th St Canyon Sewers

+30.2 = Int 8" Sewer = P.O.T. Per stake

84+00

83+00

82+63.1 = P.O.T. = Int North line Balboa Park

538.08' N-1°35'E

82

81+79.33 = Δ RT 8°14'15" = Δ MH# 8

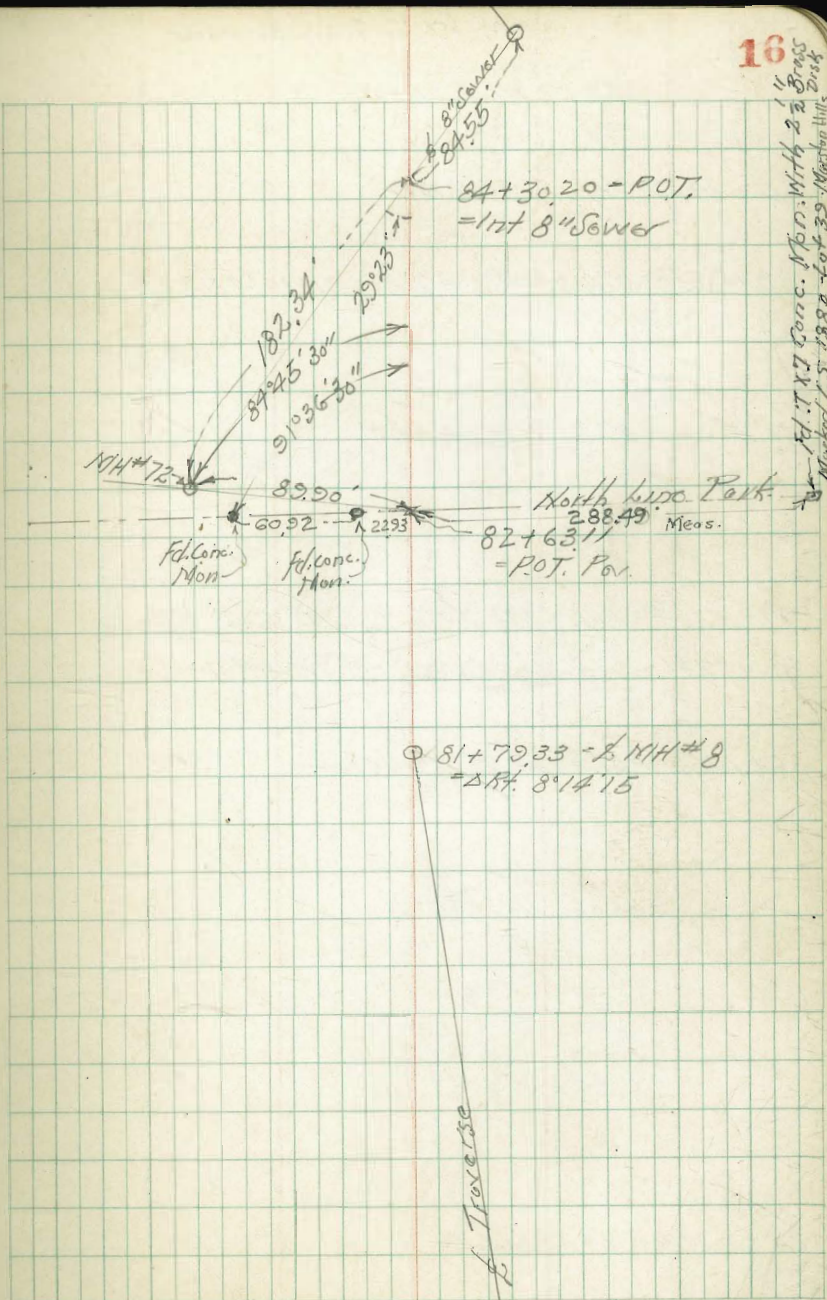
81+00

543.75' N 6°39'15" W

80+00

16

1" 8" Sewer  
1" 8" Sewer  
Marked L.S. 1880 Lot 33 - Mission Hill



○ 81+79.33 = Δ MH# 8  
= Δ RT 8°14'15"

Traverse

11th St. Canyon Sewers

522.15' N-12°21'55"E

20+00

89+84.39 = Int. 8" Sewer

89+25.18 = L. MH#6 = Δ Rt. 31°14'45"

89+00

207.77' N-18°52'50"W

88+00

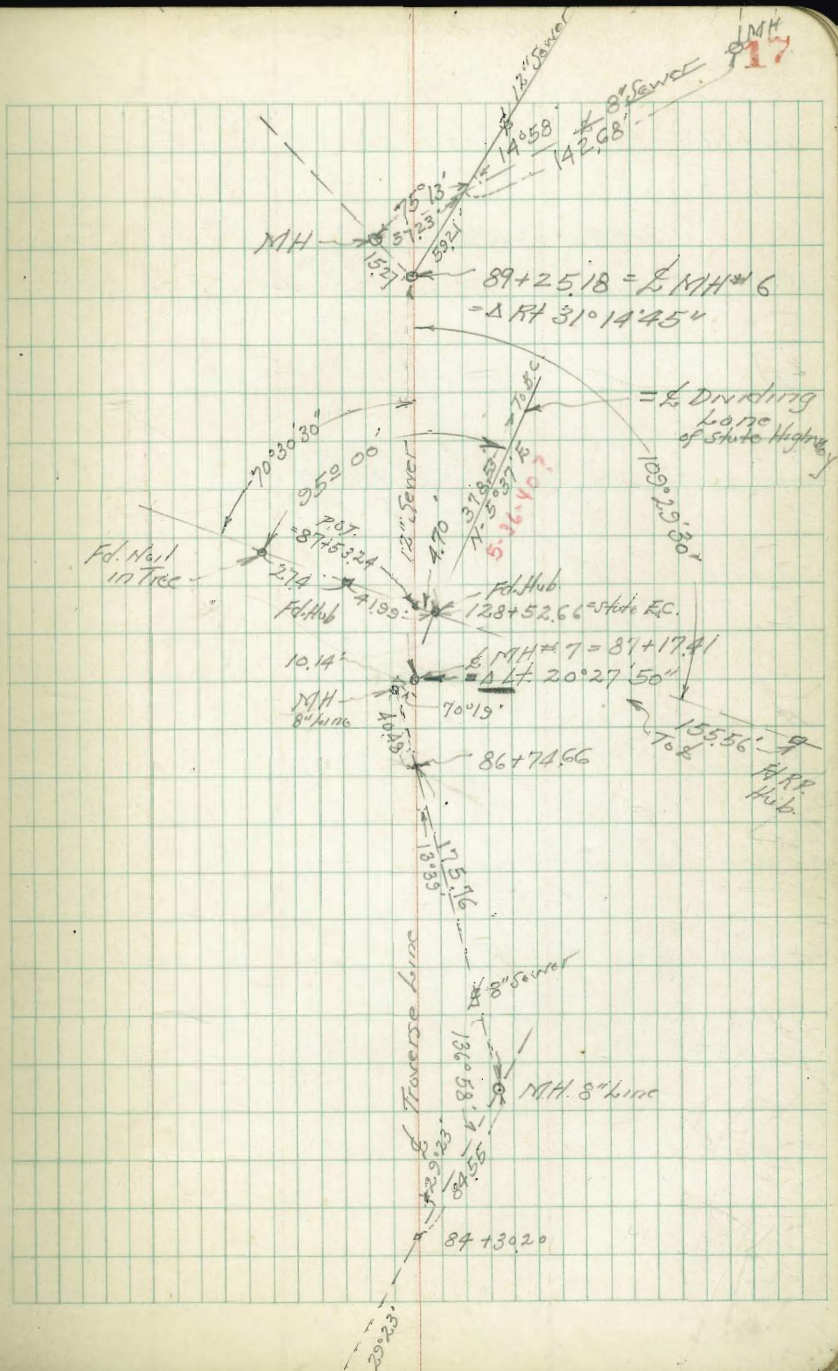
87+53.74 = P.O.T. = Int. of Tie line To E. of Highway

87+17.41 = Δ Lt. 20°27'50" = L. MH#7

86+74.66 = P.O.T. = Int. 8" Sewer

538.08' N-1°35'E

84+30.2 = Int 8" Sewer



11th St. Canyon Sewers

96+27.14 = P.O.T. = 1st Radius Line of State E.C. 137+25.34

96+00

348.18 N-14°35'55"W

95+64.26 = opposite M.H. on 8" Sewer 17.5 ft.

95+00

94+47.33 = Δ L 26°57' = 2 M.H. #5

94+00

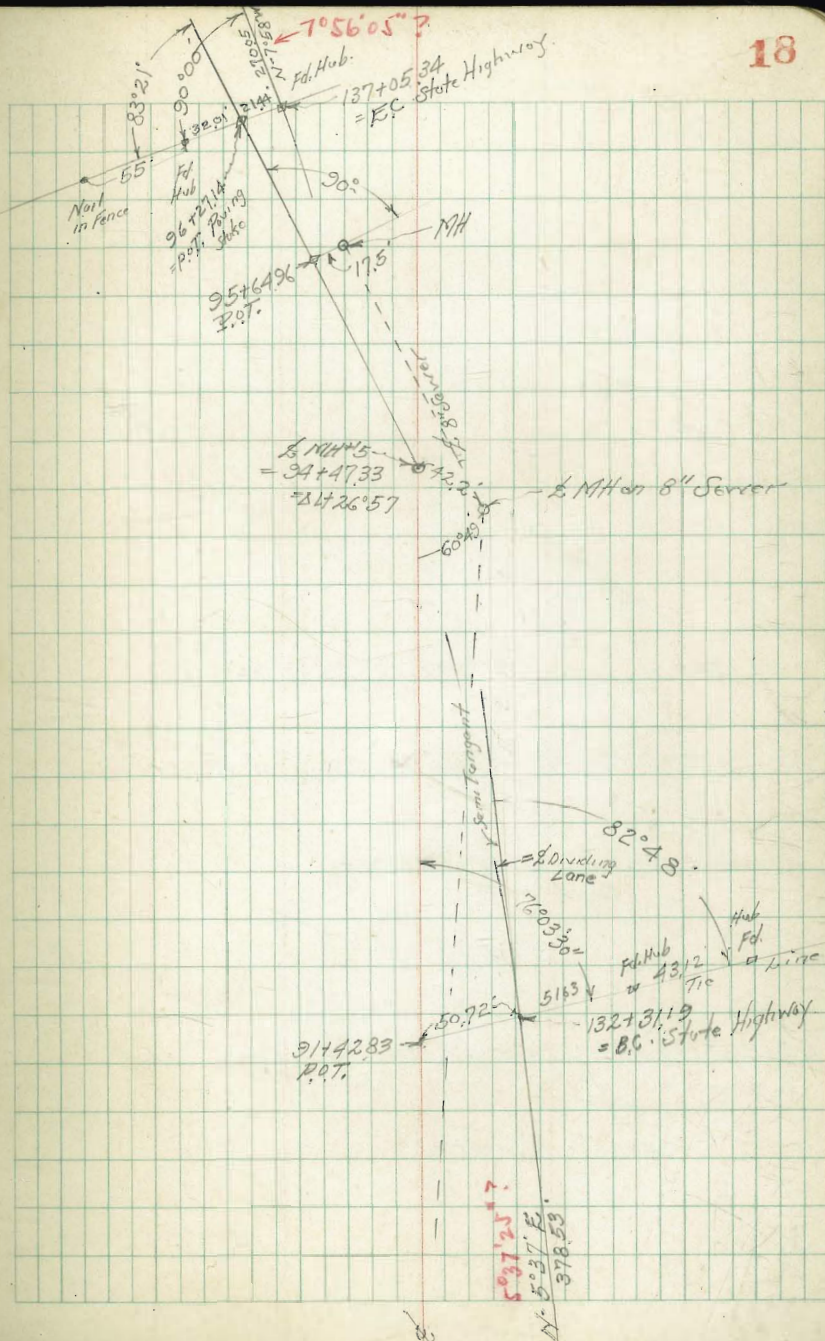
522.15 N-12°21'55"E

93+00

92+00

91+42.83

91+00



202+00

101+00

100+00

99+13.36 = opposite M.H. 8" line 25.82' RT

98+99.29 = P.O.T. = Tie to Reference line at B.C. State Highway

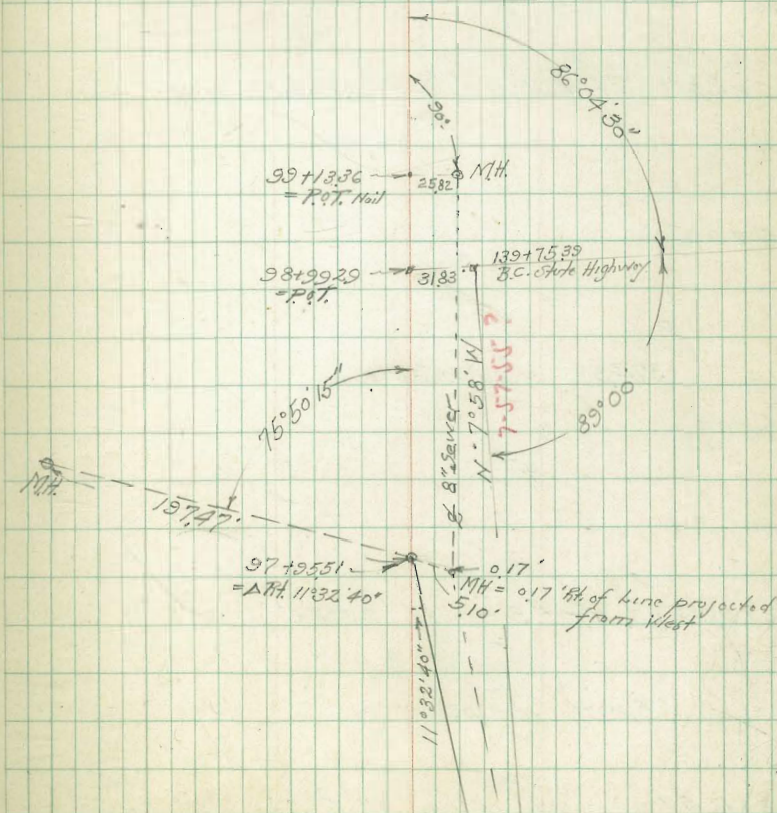
139+75.39

500.62 N-3°02'25"W

97+95.51 = Δ RT 11°32'40" = 1/2 M.H. #4

348.18' N-14°35'05"W

97+00



107+32.95 = opp. MH on 8" line 17.52' H 90° To Traverse

324.52 N-60°48'35" E

107+00

= B MH #2

106+71.10 = A Rt 40°03'

106+08.35 = opp MH on 8" line 16.15' H at 90° To Traverse

105+64.53 = Int. Radius line = P.O.T. on Traverse

105+00

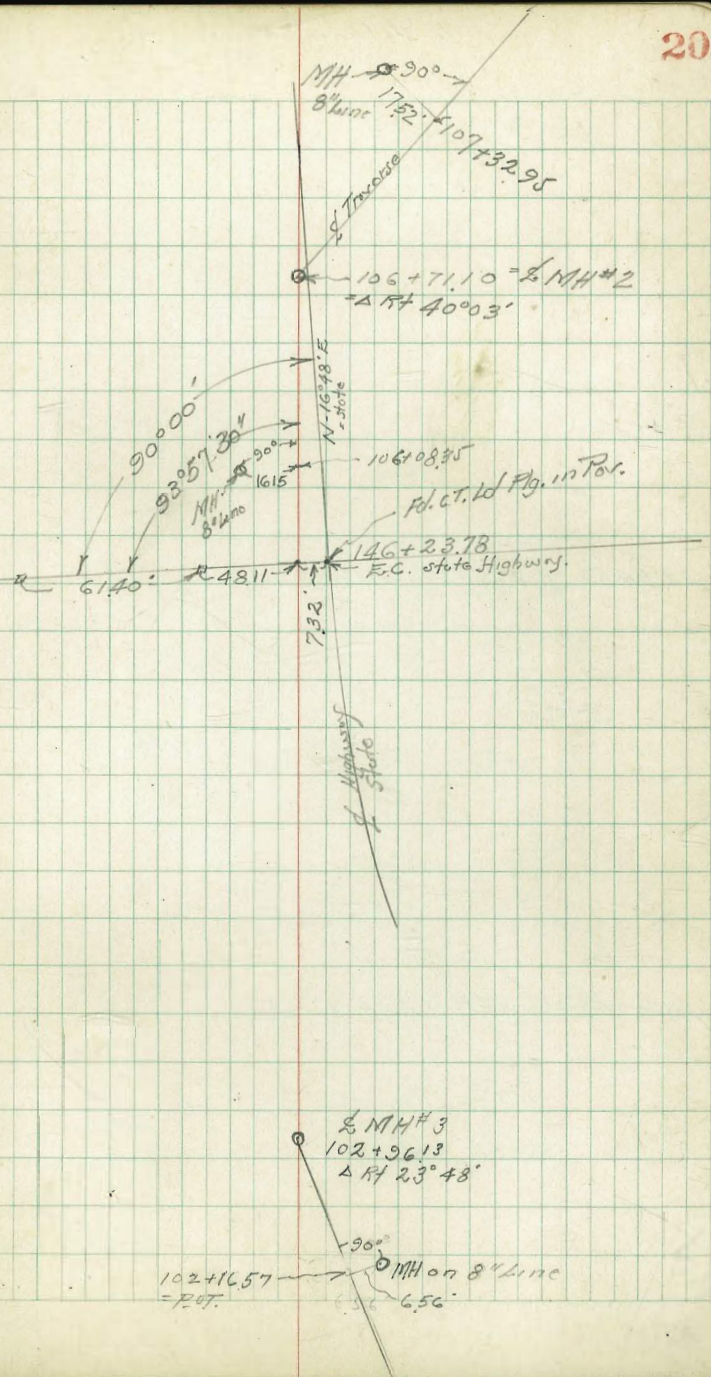
374.97 N-20°45'35" E

104+00

102+96.13 = B MH #3 = A Rt 23°48'

500.62 N-3°02'25"W

102+16.57 = opposite MH on 8" line 6.56' Rt

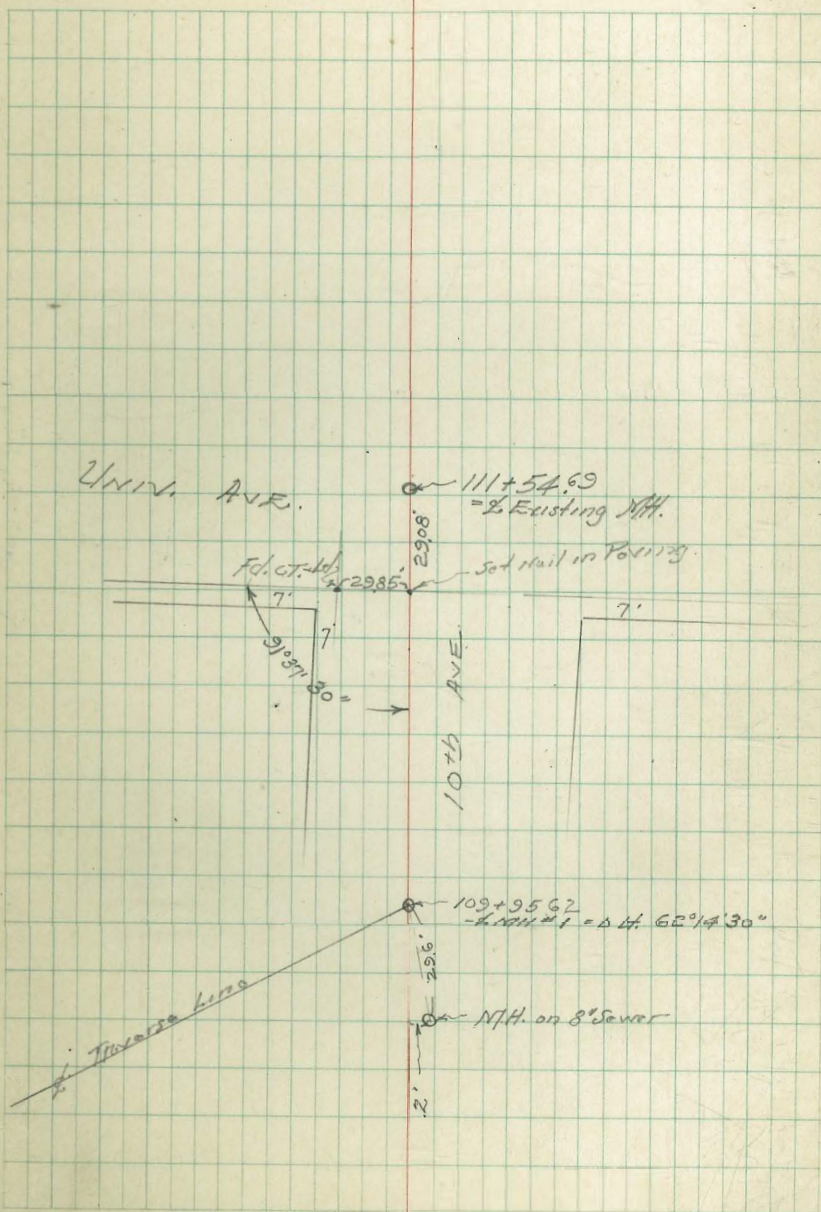


= 0+00 FB. 1611 Also Plan 987-D Sheet 1  
 111+54.69 = Existing M.H. 10th & Univ. Ave.

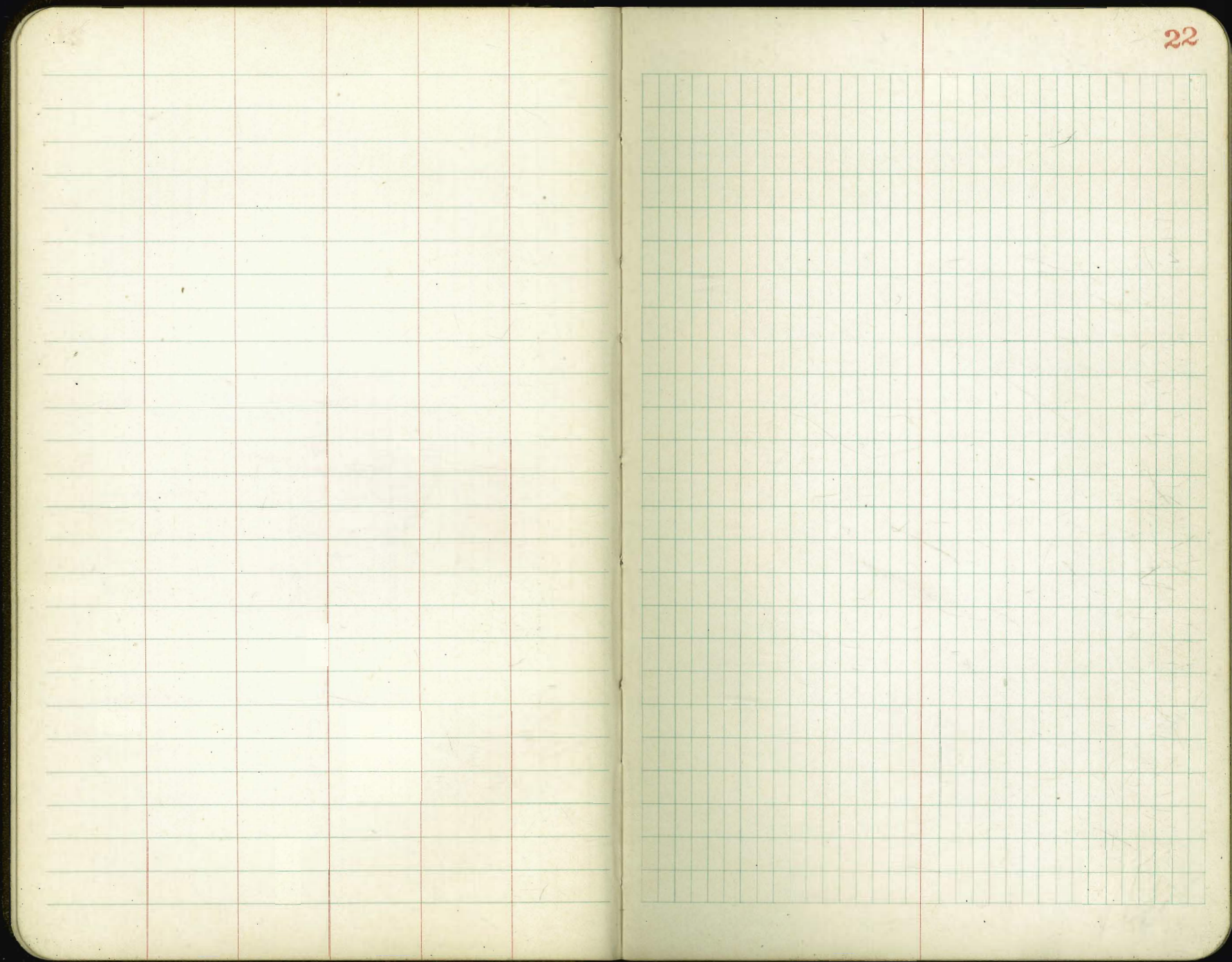
159.07' N-1°25'55"W

109+95.62 = Existing M.H.#1 = Δ Lt 62°14'30"

324.52' N 60°48'35"E







Walker  
Osborne  
Hazard  
5-28-49

Levels for Proposed Sidewalk  
on Lagolla Ave  
Between Ampudia and Conde St.

1694-3

F.B. 1587  
Page -67

8.14 43.62 35.48

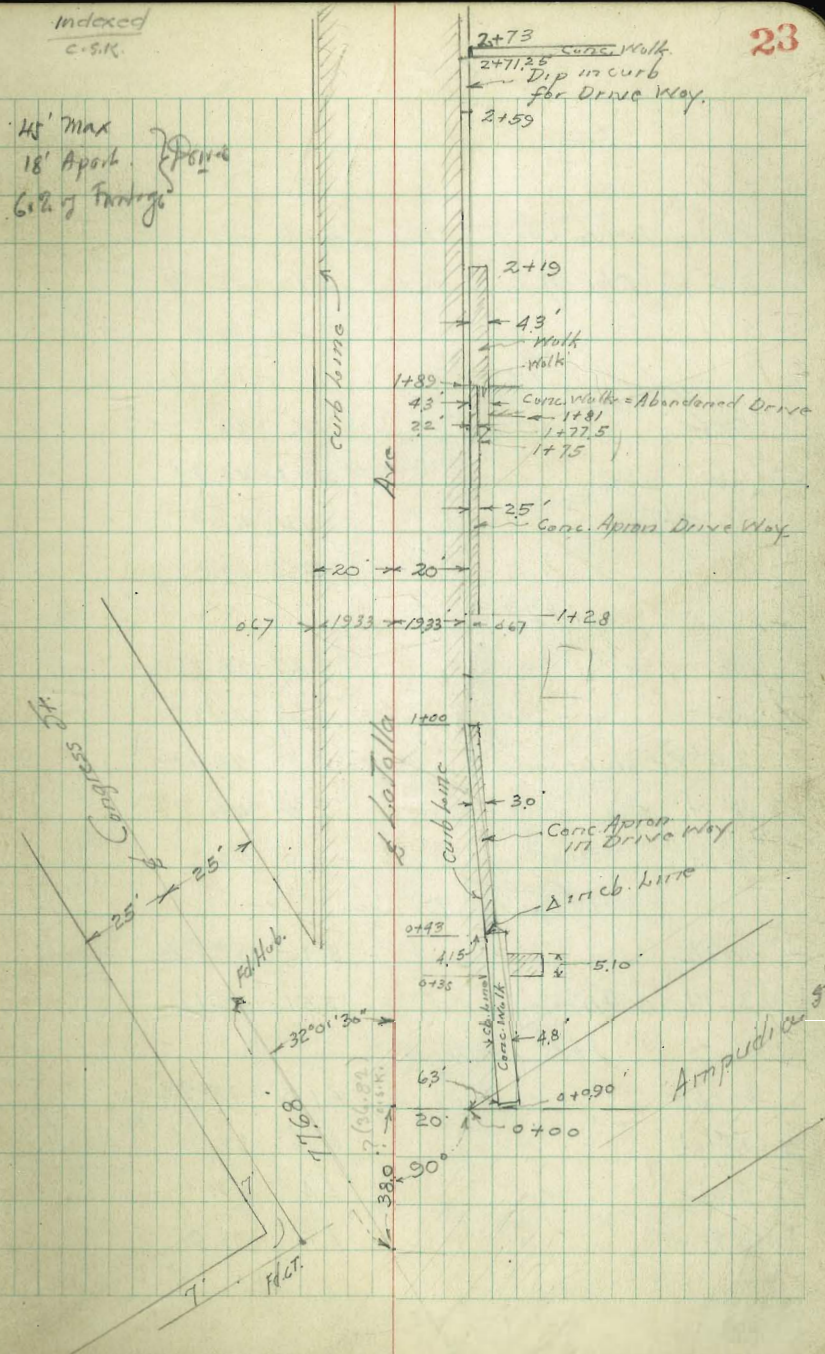
0+00

Note: All shots Rt are from Property line  
NLY side of street

B.M. BP.  
SF. Aristo  
4 Lagolla

on Pav.	1.36	42.26
0+00.90		
on Pav	1.39	42.23
6.3 Rt. on Pav. Cut	1.43	42.19
6.3 " " cb.	0.73	42.89
11.1 Rt. on Edge Walk.	0.62	42.00
15' Rt.	0.9	42.7
on Paring. 0+35	2.02	41.60
4.7 Cut. on Pav	2.04	41.58
" on cb.	1.39	42.23
9.5 Rt. = edge Walk	1.23	42.39
14.5 Rt. on Walk	0.77	42.85
0+43 - Δ in cb.		
on Pav.	2.24	41.38
4.15 Rt. on Cut	2.25	41.37
" " " cb	1.55	42.07
8.95 " on edge walk.	1.36	42.26
14' Rt.	1.3	42.3
0+43 in Drive		
4' Rt. in Drive and cb.	2.29	41.33
7' Rt. edge Apron	1.82	41.80
12' Rt.	1.8	41.8
15' Rt.	1.5	42.1

Indexed  
C.S.K.



4362

1700 0+98

Gut.	332	40.30
cb. in Drive Way	328	40.24
3'2" Rt. = Edge Apron-Drive Way	278	40.84
5' Rt.	2.6	41.0

1700

Gut.	326	40.36
cb.	271	40.91
5' Rt.	2.6	41.0
8' "	2.6	41.0

1728

Gut.	387	39.75
cb.	329	40.33
2.4' Rt. on Apron	338	40.24
5' Rt.	3.3	40.3
10' Rt.	3.0	40.3

1730 in Drive

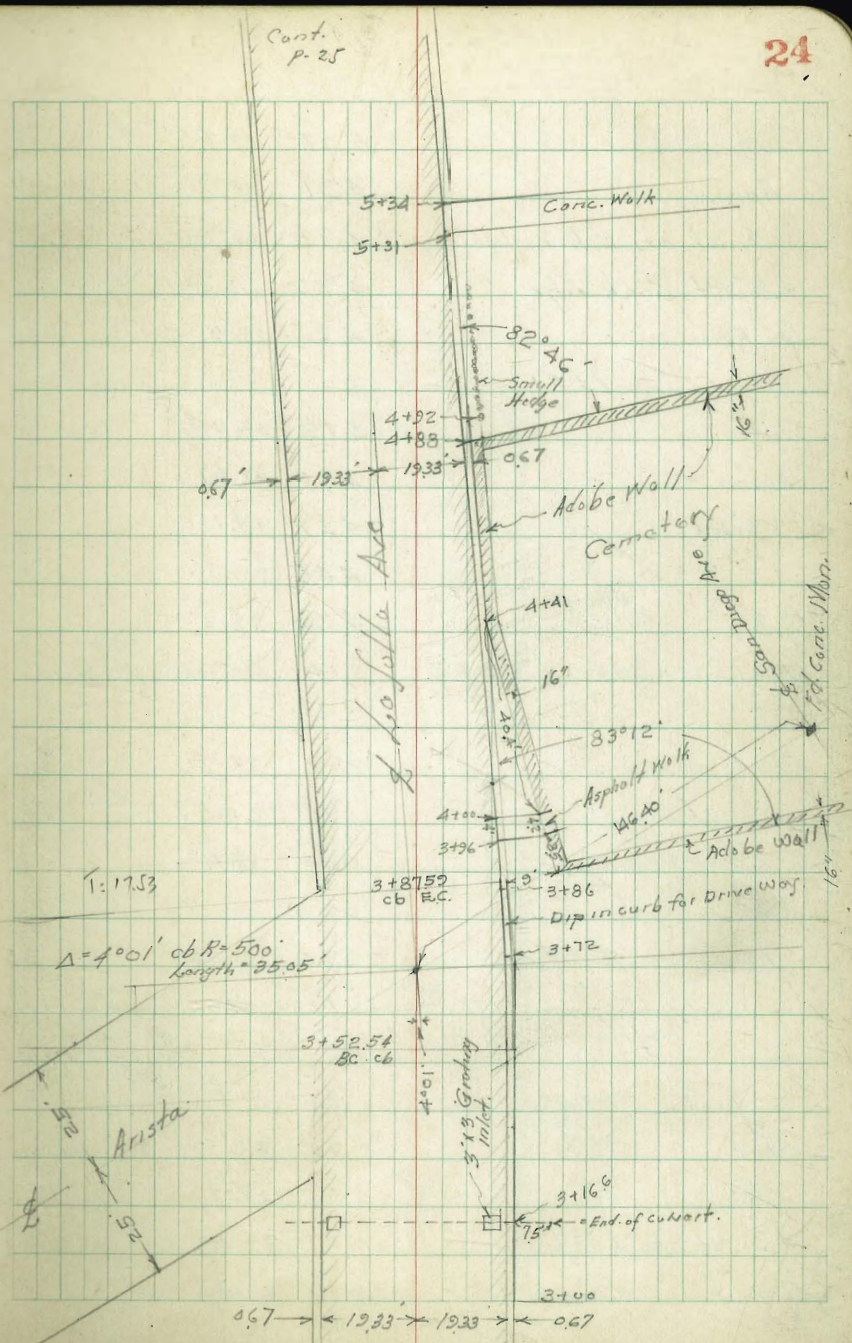
on cb.	395	39.67
2.4' Rt. on Apron	351	40.11

1775 in Drive

on cb.	490	38.72
2.5' Rt.	4.66	38.96
5' Rt.	4.4	39.2
10' Rt.	4.1	39.5

Cont.  
p. 25

24



4362

14775

Gut.	5.07	38.55
Apron	4.91	38.71
2.2' Rt. on Brk. in Walk	4.38	39.24
4.3' Rt. Back edge "	4.32	39.30
10' Rt	4.2	39.4

1481

Gut.	5.15	38.47			
Apron	4.95	38.62			
2.2' Rt	4.47	39.15			
4.3' "	4.45	39.17			
9.3' "	4.20	39.42			
TR	3.84	39.32	8.14	35.48	Starting

1488

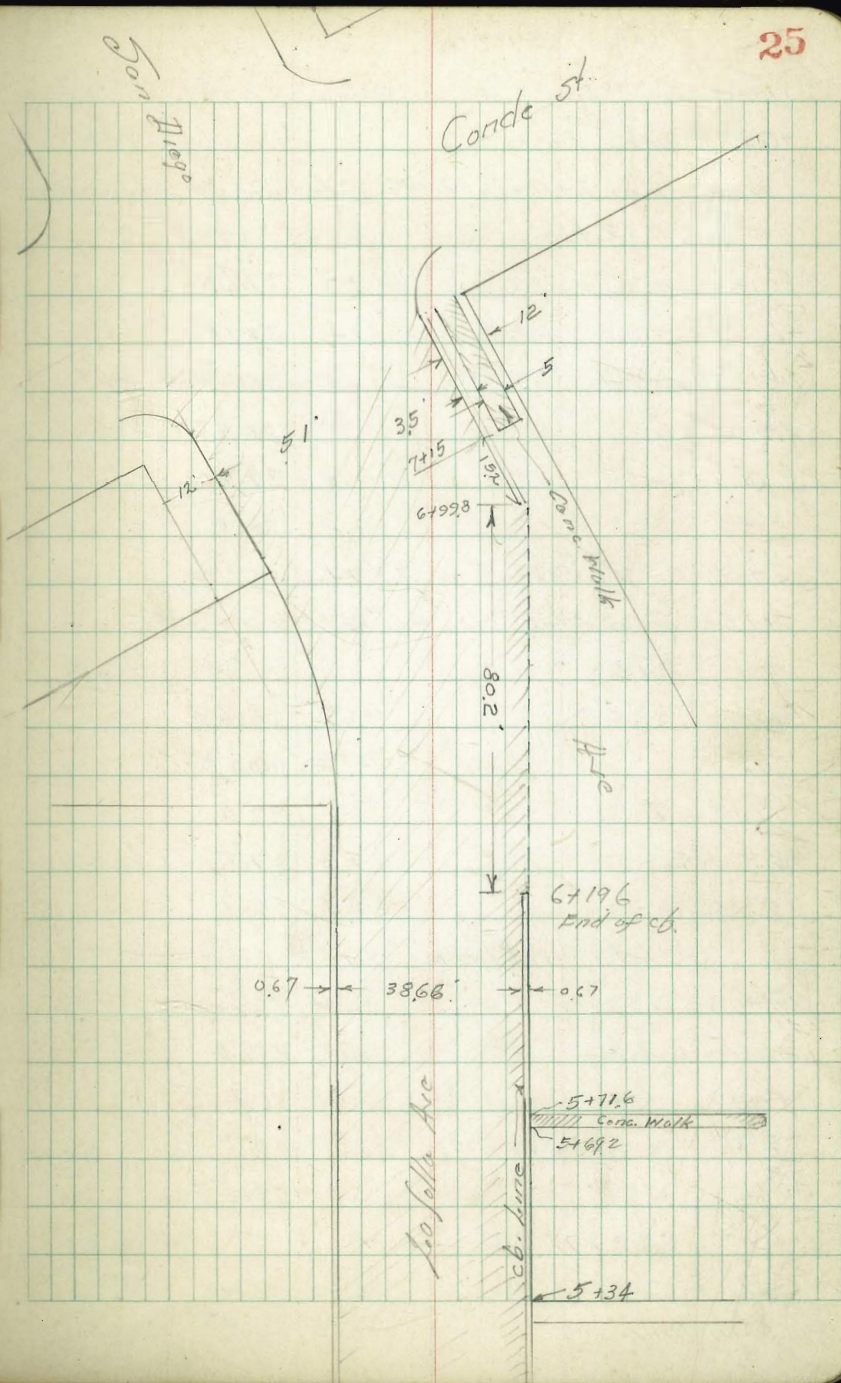
Gut. on Pav.	0.96	38.36
" cb	0.75	38.52
2.2' Rt - Brk. in Walk	0.30	39.02
4.3' "	0.28	39.04
9.3' " on Conc. Drive	+0.04	39.36

Note: from 1476 to sta 1488 - Abandoned Drive  
Walk and Curb can be Constructed Standard.

1489

Gut.	0.98	38.34
cb.	0.35	38.92
4.3' Rt. - Back edge walk	0.29	39.03
9.3' "	+0.1	39.33

25



39 32

2+00 = 3" Pipe 0.3 39.29 7.9 Rt

+02 = <sup>Water</sup> Meter Box 1' Rt

Notes: from 2+10 To 2+19 Side Walk should be replaced

2+19

Gut 1.70 37.62

cb. 1.14 38.18

0.1' Rt. on Walk. 1.05 38.29

4.3' Rt. 0.79 38.53

5' Rt 0.6 39.26

10' Rt. 0.3 39.0

2+39 = 1/2 Castor Bean Tree 7.7' Rt 4" dia.

2+58 = 1/2 16" Elec Pole 4.6' Rt = sky edge

2+59

Gut. 2.63 36.69

cb. 2.13 37.09

Prop 2.1 37.2

4.6' Rt. 2.3 37.0

10' Rt 2.4 36.9

2+60 in Drive (ditch)

Gut 2.66 36.66

cb. in Drive 2.76 36.56

Prop 2.4 36.9

5' Rt. 2.3 37.0

10' Rt 2.4 36.9

2+71.2

Gut 2.92 36.40

cb. in Drive 2.85 36.47

La Bolla Ave

26

39.32

Prop 2.6 36.7

5' Rt. 2.5 36.8

10' Rt. 2.5 36.8

2+71.25 = ELY edge walk

Gut. 2.92 36.40

cb. 2.36 36.96

5' Rt on Walks 2.26 37.06

10' Rt " " 2.23 37.09

2+92

Gut. 3.36 35.96

cb. 2.78 36.54

Prop 2.7 36.6

5' Rt 2.8 36.5

10' Rt. 2.7 36.6

2+94

Gut. 3.41 35.91

cb. 2.82 36.56

Prop 2.8 36.5

3' Rt 2.9 36.4

5' " 4.0 35.3

10' Rt. 4.2 35.1

2+95 = ditch.

cb. 2.85 36.47

Prop. in ditch. 5.7 33.6

5' Rt. " " 5.6 33.7

10' Rt. 5.7 33.6

3932

2+97

cb.	288	36.44
Prop	28	36.5
5' Rt.	27	36.6
10' Rt.	39	35.4

3+04

cb.	304	36.28
Prop.	33	36.0
5' R	37	35.6
10' R	43	35.0

3+08

cb.	314	36.18
Prop.	34	35.9
2' Rt	45	34.8
5' "	53	34.0
10' R	61	33.2

3+16.6 - 1/2" Culvert

38' H. Flow Culvert	1062	28.70
2' " " "	881	30.51
Gut. on Grading	292	35.40
cb	234	35.98
Prop	37	35.6
3' Rt	52	34.1
7.5' Rt. Flow 18" <sup>concr.</sup> Culvert	8.16	31.16
7.5' Rt.	6.4	32.9
13' Rt	6.5	32.8

3932

Lofolla Ave

27

3+23 = 2" Water Meter Box	3.70	35.62
3+24 = 5" Plumosa Palm	6.5	Rt
Gut.	4.09	35.23
cb	3.50	35.82
Prop	3.5	35.8
4' R	3.8	35.5
6.5' Rt.	4.4	35.9
12' R	5.4	34.9

3+50.54 - cb BC

Gut	4.65	34.57
cb.	4.07	35.25
Prop.	4.1	35.2
5' Rt	4.4	34.9
10' R	4.6	34.7

3+55 = 8" Plumosa Palm 2" dia 5.9' Rt

3+72

Gut.	5.02	34.30
cb.	4.48	34.84
Prop	4.6	34.7
4.3' R = 2" cypress Tree	4.8	34.5
10'	4.7	34.6

3+73 = Dip 10' cb for Dirt Drive

cb.	5.00	34.3
Prop	4.9	34.4
5'	4.7	34.6
10' R	4.5	34.8

3932

3+855 end dip in cb dirt drive

cb.	5.22	34.10
Prop.	5.0	34.3
5'R	4.8	34.5
10'R	4.5	34.8
5+865		
Gut.	5.32	34.00
cb.	4.72	34.60
Prop.	4.8	34.5
5'R	4.3	35.0
10'R	4.0	35.3
3+8759 = cb E.C. = 1/2 Plumosa Palm 6'Rt. <sup>10" dia</sup>		
Gut.	5.33	33.99
cb.	4.71	34.61
Prop.	4.7	34.6
5'R	4.3	35.0
9'Rt. Base Adobe Wall	4.6	34.7
9" Top " "	4.0	35.3
9" Top " "	4.3	39.0
3+94.5 = 1/2 ornamental shrub 5.7 Rt		
3+96 = Fly edge Asphalt Walk		
Gut.	5.45	33.87
cb.	4.84	34.48
Prop.	4.84	34.47
5'Rt on walls	4.59	34.73
8'Rt " "	4.40	34.92
13'Rt.	4.1	35.2

3932

Lo Solla Ave

28

4+00

Gut.	5.52	33.80
cb.	4.89	34.43
Prop. on Asphalt Walk	4.93	34.39
6.9'Rt on Walk	4.43	34.89
12' " " Lowri	4.0	35.3
4+03 = 1/2 Shrub 4.5 Rt		
4+21 = 1/2 Plumosa Palm 6'Rt		
Gut.	5.71	33.61
cb.	5.14	34.18
Prop.	5.1	34.2
3'Rt = Base wall	4.6	34.6
" " on "	4.97	34.35
4.33'Rt. " "	4.50	34.82
4.4' " Base "	4.0	35.3
6'Rt.	4.1	35.2
12'Rt in Lowri	3.8	35.5
4+23 = 1/2 2 1/2 Iron Sign Post 2'Rt		
4+30 = 1/2 4" x 4" Wood Post - Danger Signal = 98 R		
4+30 to 4+47 = Cactus Grove 4' Wide <sup>Agg. 1.15 ft inside edge</sup> Adobe wall		
4+41 = Δ in Adobe Wall		
Gut.	5.85	33.47
cb.	5.25	34.08
Prop = Base Wall	5.25	34.08
" on "	1.25	38.08
1.3 Rt on wall	0.8	38.5
" " base "	4.2	35.1

8' Rt	4.0	35.3
13 "	3.8	35.5 16" dia
4+55 = Plumosa Palm 5.3 Rt. Sky edge		
cb.	5.33	33.99
1.3' Rt	4.4	34.9
5.3 " at Tree	4.3	35.0
10' R	4.1	35.2
4+79.4		
Gut.	6.06	33.26
cb.	5.49	33.83
Prop.	5.5	33.8
1.3' Rt	4.4	34.9
5.3' Rt = Sky edge	Apparent Grace = 7	4.2
10' R	4.0	35.3
4+88 = End Adobe Wall		
Gut.	5.98	33.34
cb.	5.54	33.78
Prop. = Base Wall	5.5	33.8
" on Top Wall	1.50	37.8
5' R " " "	1.04	38.28
10 " " "	0.80	38.52
4+88.5		
cb.	5.56	33.76
Prop.	5.5	33.82
5' R	5.1	34.22
10' R	4.5	34.82

4+93 = Plumosa Palm 5.3' R = Sky edge		
4+79.5 on cb.	5.54	33.78 cb settled
4+99.5 " "	5.81	33.51 " "
4+99.6 on cb.	5.66	33.66
5+00		
Gut.	6.06	33.26
cb.	5.67	33.65
Prop.	5.7	33.6
5' Rt on lower	4.9	34.4
10' " " "	4.5	34.8
5+31 = ELY edge Walk		
Gut.	6.22	33.10
cb.	5.80	33.52
Prop on Walk	5.78	33.54
5' R " "	5.33	33.99
10' " " "	4.82	34.50
5+50		
Gut.	6.31	33.01
cb.	5.89	33.43
Prop.	5.8	33.5
5' R in Lower	5.1	34.2
10 " " "	4.7	34.6
5+28 = Plumosa Palm Tree 5.2' R = Sky edge 8"		
5+66 " " " " 5.3' " " " 10"		
Cont. P-30		



3932

5+69.2 = ELY edge Conc. Walk.

Gut.	6.33	32.99
cb.	5.92	33.40
Prop. on Walk	5.81	33.57
5' R " "	5.31	34.01
10' " " "	4.79	34.53

4+77

Gut.	6.42	32.90
cb.	5.91	33.41
Prop.	5.8	33.5
5' R	5.1	34.2
10' R	4.7	34.6

6+00

Gut.	6.39	32.93
cb.	5.89	33.43
Prop.	5.9	33.4
5' R	5.3	34.0
10' Rt	4.8	34.5

6+03 = Plumsa Palm 5.4' R = 5.4' edge

6+19.6 End Existing cb.

Gut.	6.35	32.97
cb.	5.94	33.38
Prop.	6.0	33.3
5' R	5.6	33.7
10' Rt.	5.0	34.3

3932

L. Jolla Ave

30

6+27

Gut. on Asphalt Pav	6.33	32.99
5' R " oil Roadway	6.04	33.28
10' R " " "	5.55	33.77

6+60

Gut. on Asphalt Gut	6.29	33.03
5' Rt. on oil Roadway.	5.86	33.46
10' " " " "	5.36	33.96

6+87

Gut on Asphalt Pav.	6.23	33.09
5' Rt. on dirt	5.9	33.4
10' " " "	5.7	33.6

6+99.8

Gut.	6.24	33.08
on cb.	5.79	33.53
+1	6.0	33.3
+5	5.6	33.7
+10'	5.5	33.8

7+15

Gut.	6.34	32.98
cb.	5.91	33.41
+3.5 on edge Walk	5.92	33.48 90%
+8.5 " " "	5.80	33.52
chk. starting BM	3.84	35.48 "

F. Moore  
S. Moore

W. Moore  
7-26-43,

X sec TRIAS ST 50' wide  
10' cbs.  
Congress to La Jolla Blvd

SEBP	10.49	45.77		35.48	ARISTA La Jolla Ave
T.P.	12.16	57.49	0.24	45.33	
T.P.	12.67	<u>69.95</u>	0.21	57.28	

Ely Line Congress

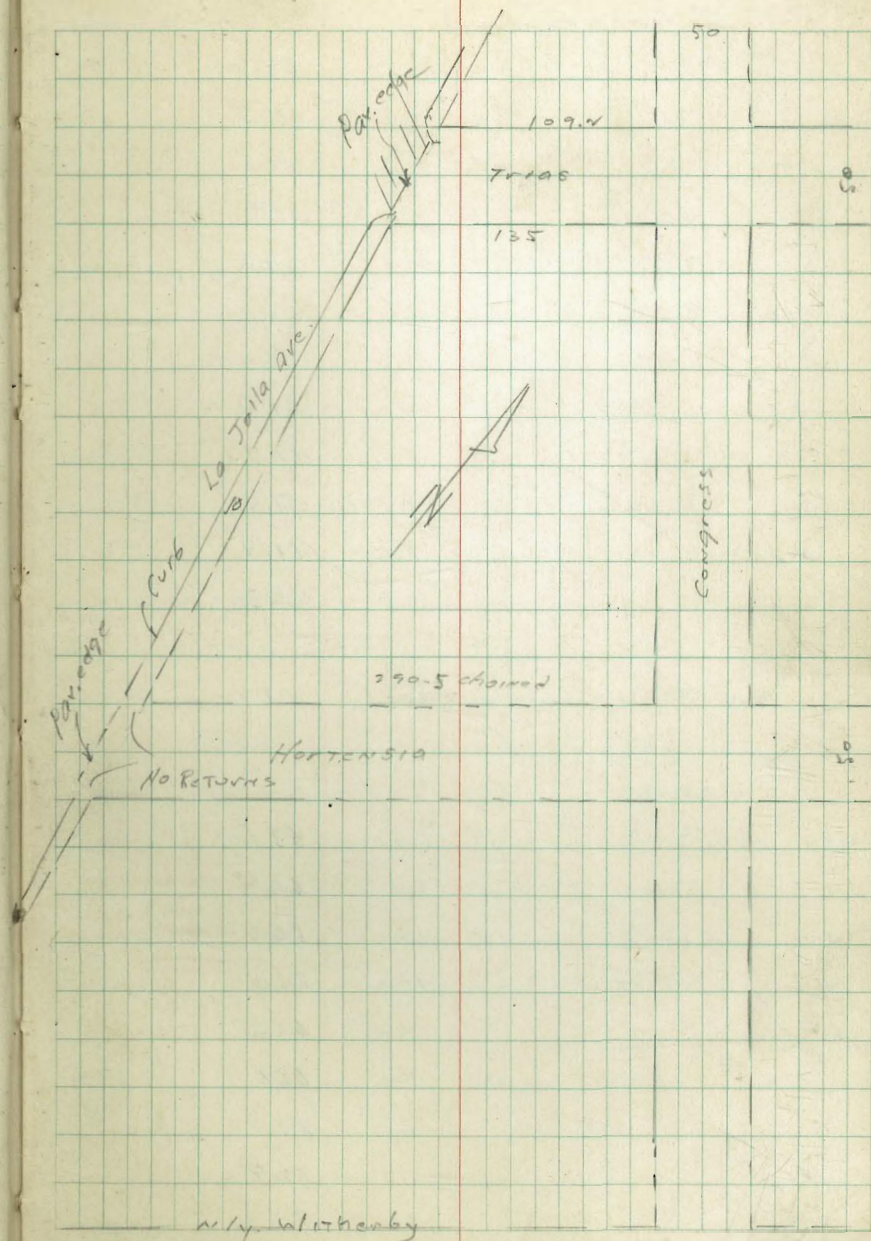
N		2.4	67.6
cb		1.8	68.2
c		0.7	69.3
+5		0.1	69.9
cb		0.8	69.2
S		0.4	69.6
+10		1.2	68.8

I Congress

-13		4.0	66.0
-8	Staircase	6.7	63.3
-1	"	7.7	62.8
S		3.5	66.5
cb		2.7	67.3
+10		1.5	68.5
E		2.2	68.8
cb		2.1	66.9
N	on 4" oil Rock Pav.	4.0	66.0

Indexed  
C.S.K. 1

31



69.95

0100 v. l. y Congress

N		6.0	64.0
cb		5.7	64.3
+5		5.5	64.5
E		3.2	66.8
+7		2.8	67.2
+10		4.0	66.0
cb		4.0	66.0
+C		4.0	66.0
+7		8.2	61.8
S	ditch	8.0	61.4
+4	"	8.0	61.4
+5		5.7	64.3
Top N.E. Pier			
T.P. Army Shed	T.P. for Congress	3.4	66.5

0145

-10		6.9	63.9
S		6.4	63.6
+2	ditch	10.0	60.0
+4	"	10.0	60.0
cb		4.4	65.8
+10		4.0	66.0
C		7.1	62.9
cb		7.7	62.8
N		7.7	62.3

69.95

0150

N		9.9	65.1	
cb		9.9	60.1	
C		8.7	61.1	
+7		7.6	62.4	
+12		7.7	62.3	
cb		8.8	61.2	
+2	ditch	10.8	59.2	
+5	"	10.8	59.2	
+6		7.8	62.1	
S		7.8	62.1	
+10		8.0	62.0	
0175				
S		9.4	61.6	
+5		10.0	60.0	
cb	ditch	12.0	58.0	
+4	"	12.1	57.9	
+10		7.1	60.9	
C		10.0	60.0	
cb		10.4	59.6	
N		11.1	58.9	
T.P.	3.59	62.11	11.43	58.54
1709.4 Sec at 90°				
N		4.9	57.2	

32

62.11

N cb	3.8	58.3
+10	4.0	58.1
+14	4.8	57.3
C	4.9	57.2
+8	4.8	57.3
cb	5.2	56.9
S	5.5	56.6
1 + 35 on diag. = Ely La Jolla Ave		
S	5.9	56.2
cb Top Rot.	6.20	55.91
gut edge pav	7.22	54.89
C " "	7.26	54.65
N gut " "	8.83	53.28
N cb Top Rot	7.65	54.46
N	7.4	54.7
Ely 10' cb line La Jolla Ave.		
N cb Top ob.	8.29	53.82
" gut pav	9.14	52.97
C pav	8.22	53.89
SL gut	7.23	54.88
SL Top cb.	6.27	55.84

Indexed  
65.11

33

1/2 sec of Congress so with 10' cbs  
Tries St. Sly towards WITBeeby  
Sly Tries = 0 + 100

TR. P. 24	10.36	76.90	66.54	Top N.E. Pier Army shed
0 + 45				
-10		14.6	64.4	
W		13.1	64.9	
C		9.8	67.2	
+7		9.8	67.2	
+9 ditch		13.1	63.9	
+13 "		12.9	64.1	
+20		9.6	67.4	
E		9.1	67.9	
+10		8.6	68.4	
0 + 60				
-18		7.6	69.4	
-15 ditch		11.0	66.0	
-12 "		11.1	65.9	
-4		6.3	70.7	
E		6.3	70.7	
C		8.3	68.2	
+10		9.1	69.9	
W		7.7	69.3	
+10		8.4	68.6	

76.90

0 + 80

-10		3.3	73.7
W		3.5	73.5
C		6.1	70.8
E		5.5	71.5
+4		4.9	72.1
+17	direct	10.4	66.8
+16	"	10.4	66.8
+20		7.8	69.2

1 + 05

-28		6.0	71.9
-24	direct	8.8	68.2
-17	"	7.6	69.4
-7		3.1	73.9
E		2.8	74.2
C		0.4	76.6

T.P	11.30	<u>86.91</u>	1.29	75.61
-----	-------	--------------	------	-------

C + 10		9.3	72.6
W		9.3	72.6

1 + 45

W		8.4	78.7
+15		7.6	79.3
C		6.0	80.9
E		9.7	77.2

86.91

34

1 + 38

E		5.5	81.4
+11		4.7	82.2
C		5.0	81.9
W		8.0	78.9

1 + 50

W		7.8	79.1
+13		7.4	79.7
C		5.9	81.0
+10		3.8	83.2
E		3.5	83.5

1 + 75

E		4.4	82.5
+7		5.5	81.4
C		6.4	80.7
W		6.0	80.3

2 + 30

-15		15.7	71.2
W		5.7	81.2
C		5.4	81.5
E		5.0	81.3

1 + 41

E		5.8	81.1
C		5.3	81.6
+10		15.7	71.2
W		16.0	70.9

86.91

2 + 75

W	16.0	709
C	15.9	710
+ 8	15.0	713
+ 10	5.7	812
E	5.0	813

3 + 00 = N/ly Hortensia

E - 10	5.5	814
E	5.0	813
+ 8	14.4	725
C	14.1	728
W	14.4	725

N/ly 66 Hortensia

W	14.0	723
C	14.5	724
E	14.0	727

E Hortensia

E	13.0	733
C	13.8	731
W	13.0	733

0100 Sly Hortensia

E	13.7	737
C	17.4	743
W	17.8	741

0 + 50

W	17.7	747
---	------	-----

86.91

35

C	11.0	753
E	11.3	756
1 + 00		
E	11.0	753
C	12.1	748
W	12.7	742

1 + 50

W	12.3	746
C	11.9	750
E	11.0	757
1 + 90		
E	10.0	769
C	10.0	767
W	10.3	766

7. P. 507 for 1500 Hortensia 13.17 7379

1 + 91

W	+ 4.4	713
+ 5	10.0	767
C	10.1	768
+ 21	10.0	769
E	+ 4.0	915

1 + 95

E	+ 4.5	914
+ 20	+ 4.4	913
+ 21	10.0	769

C		10.0	769
+14		10.1	768
+16		+4.4	91.3
W		+4.4	91.3
	1+97		
W		+4.4	91.3
C		+4.3	91.2
E		+4.6	91.1
	2+15		
E		+4.6	91.5
C		+4.5	91.4
W		+4.4	91.3
	2+20		
W		+17.4	104.3
+8		+17.3	104.2
+12		+4.7	91.1
C		+4.6	91.5
E		+4.8	91.7
	2+28		
E		+5.0	91.9
+17		+5.6	92.5
C		+17.4	104.3
W		+17.5	104.8
	2+35		
W		+17.9	104.8
C		+18.6	105.5

E		+21.0	107.9
	2+45		
E		+26.2	113.1
C		+23.4	110.3
W		+22.8	109.7
	2+50		
W		+43.1	130.0
C		+43.0	129.9
E		+43.2	130.1
	2+67		
E		+43.4	130.3
C		+43.7	130.6
W		+43.8	130.7
	2+70		
W		+54.7	141.6
C		+55.5	142.4
+10		+56.1	143.0
+18		+59.0	145.9
E		+58.1	145.0
	2+86		
E		+58.0	144.9
+14		+61.5	148.4
C		+55.4	142.3
W		+55.2	142.1

Front here, cut slopes up to old  
Natural ground on Nly of Witherby

Indexed  
a.s.k.

X sec of Hortensia 50' wide  
Congress to La Jolla Ave

7-26-43

H.I. Fwd.  
8691

Ely Congress = 0+00, going Ely  
0+16

N	5.0	81.9
+8	5.1	81.5
C	13.0	73.9
S	13.1	73.8
0+21		
S	13.3	73.6
+18	13.1	73.8
C	5.1	81.8
N	5.0	81.9
0+29		
N	5.0	81.9
C	4.6	82.3
+14	4.6	82.3
S	12.8	74.1
0+36		
S	1.0	85.9
C	3.6	83.3
N	5.0	81.9
0+91		
N	2.6	84.3

8691

37

C	1.4	85.5
S	1.1	85.9
0+96		
S	+21.4	108.3 = NATURAL ground
+13	1.2	85.7
C	1.4	85.5
N	2.4	84.5
1+08 = Top CUT		
N - 25	8.1	78.8 = NAT. Grd IN WASH
N - 7	6.6	80.3 "
N - 2	1.1	85.8 "
N	1.1	85.8 "
+14	1.0	85.9 "
C	+11.6	98.5 "
S	+21.1	108.1 "

Cross Sec. HORTENSIA Congress to La Jolla Ave  
w/ly Congress = 0+00 going w/ly

T.P.P.35 291 76.70 73.79

0+50

N	4.4	72.3
C	3.7	73.0
S	3.6	73.1
1+00		
S	4.3	72.4



C Barrage Barrer	5.3	714
N	5.7	710
	17.50	
N	7.6	69.1
C	7.3	69.4
S	6.4	70.5
	77.00	
S	6.8	69.9
C	8.1	68.6
N	9.5	67.2
	27.50	
N	9.9	66.8
C	9.4	67.5
S	8.0	68
	27.90	chained on Nly
S	9.8	66.9
		Sec. on Ely La Jolla ave.
O	11.0	65.7
N	11.4	65.3
		Sec. on Ely Curb line La Jolla Blvd
N-7 Top Curb	11.47	65.23
N-7 Gut Pav	12.36	64.34
N Pav.	12.17	64.53
C "	11.77	64.93
S GUT.	11.22	65.48
S Top Curb	10.85	66.25

76.70

T.P.	6.22	74.58	834	68.36
				69.83
				+ 0.01
check to BMBP in Curb NE Wetherby & La Jolla ave.			x.54	70.04
				70.53
				- 0.49

T.P.	0.40	67.26	1274	61.86
T.P.	0.00	49.49	1297	49.29
T.P.	0.25	37.44	1210	37.19

check to B.P. in Curb. 5' d.b. on S. side Subway approx. 300' E of RR Viaduct.			9.54	2790	27.73
					+ 0.17

Check Levels, La Jolla ave.  
Wetherby to

B.P. NE Cor. Wetherby La Jolla ave.	10.74	80.76		70.04
NEBP La Jolla ave & COLTS		0.50	80.24	80.05
				+ 0.19

NE Wetherby La Jolla Blvd.	1.17	71.21		70.04
-------------------------------	------	-------	--	-------

T.P.	0.09	61.65	965	61.56
------	------	-------	-----	-------

Top NE Ret. Trius and La Jolla ave. Sec p. 33			7.19	54.44	54.44
					0.00

Check Levels  
NEXT PAGE

from P. 38

check Lev-15

61.65

T.P. 0.20 51.37 10.48 51.17

T.P. 2.64 43.71 10.28 41.09

T.P. B.M.B.P. 8.21 35.50 35.48

3.90 39.38 35.48

T.P. 4.35 36.43 7.30 32.08 31.95  
+0.13

T.P. 4.08 34.74 5.79 30.64

T.P. 2.31 31.45 5.78 28.94 28.80  
+0.14

T.P. 2.53 25.84 7.94 23.31

check to Serial #19 U.S.G.S. 6.38 1946  $\frac{1946}{6.14} = 25.58$

Att! See p. 43 this Book

to this starting B.M. N.G.?

STARTING  
B.M.

Swly B.P. in c6. Conde + San Diego ave.

Swly J'ld. CT. Triggs + San Diego ave.

USGS DATUM  $\frac{\text{old USGS Elev.}}{25.44} + 0.14$

BOTTOM  
Chiseled ss. Top of Gran. Mar  
on Mason St. 150' wly from  
San Diego ave. in lawn  
parking front of  
old Town library

Home Ave. And Fairmount Connection

B Line

indexed  
C.S.K.

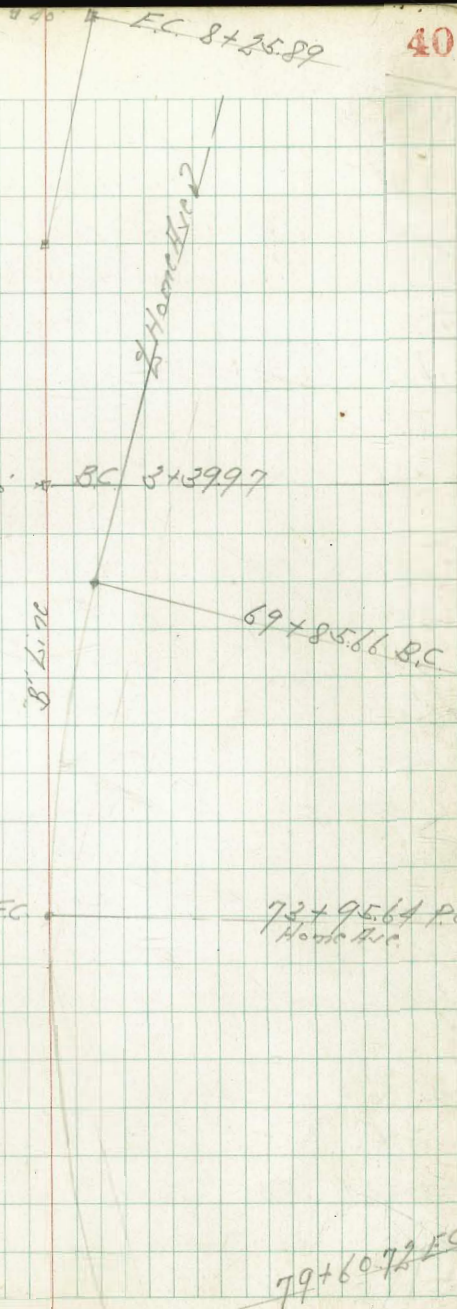
8+25.89	F.C.	1° 38.41'	
8+0	21.17	1° 23.55'	
7+50		3° 54.91'	
7+0		3° 26.26'	
+50	13.21	2° 57.62'	A 9° 16' 50"
+35	POC 34.37	2° 49.02'	R 3000.0
6+0		2° 28.97'	T 242.50
+50		2° 00.33'	L 485.92
5+0		1° 31.68'	D 572.9
+50		1° 03.04'	
4+0	20.57	0° 34.39'	
+50	10.17	0° 05.75'	
3+39.97	B.C. RT		

0-1+33.15

Aug. 5. 1943

S. S. S. S. S.  
Blinn  
8099

Walker  
Osborn  
Hazard

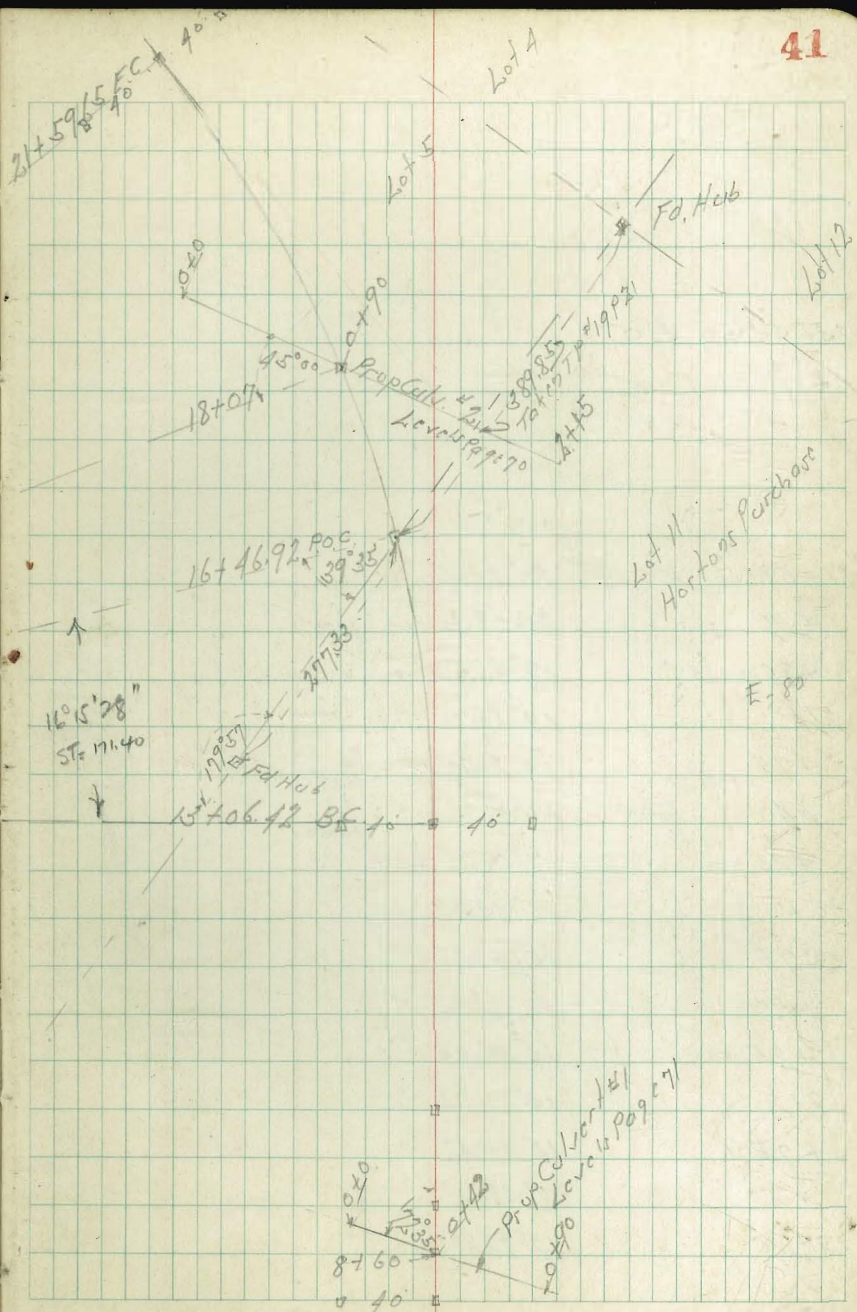


(0-1+33.15) F.C.

72+95.64 P.O.C.  
Home Ave.

79+60.72 F.C.

18+07	Calc.	11°57.02		
18+0		11°46.98	.0	
+75		11°11.18	.0	
+50		10°35.37	.0	
+25		9°59.51	.0	
17+0		9°23.75	✓	
+60	38.27 POC	8°26.45	.0	41.00
+50	9.65	8°12.12	.0x	10.05
+25		7°36.32	.0	Δ 40°44'20"
16+0		7°00.51	.0x	R 1200.0
+75	POC	6°24.70	.0	L 863.22
+50		5°48.89	.0	C 825.49
+25		5°13.08	.0	D 1.4321
15+0		4°37.27	.0	
+75		4°01.45	.0	
+50		3°25.65	.0	
+25		2°49.85	.0	
14+0		2°14.05	.0	
+75	POC	1°38.22	.0	2.581
+50	42.11	1°02.91	.0	4.501
13+06.42	BC Lt			
12+50	P.O.T.			
11+27.07	P.O.T.			
8+60	Calc. cont			
8+26.89	F.C.			



23+53.50 P.O.T.

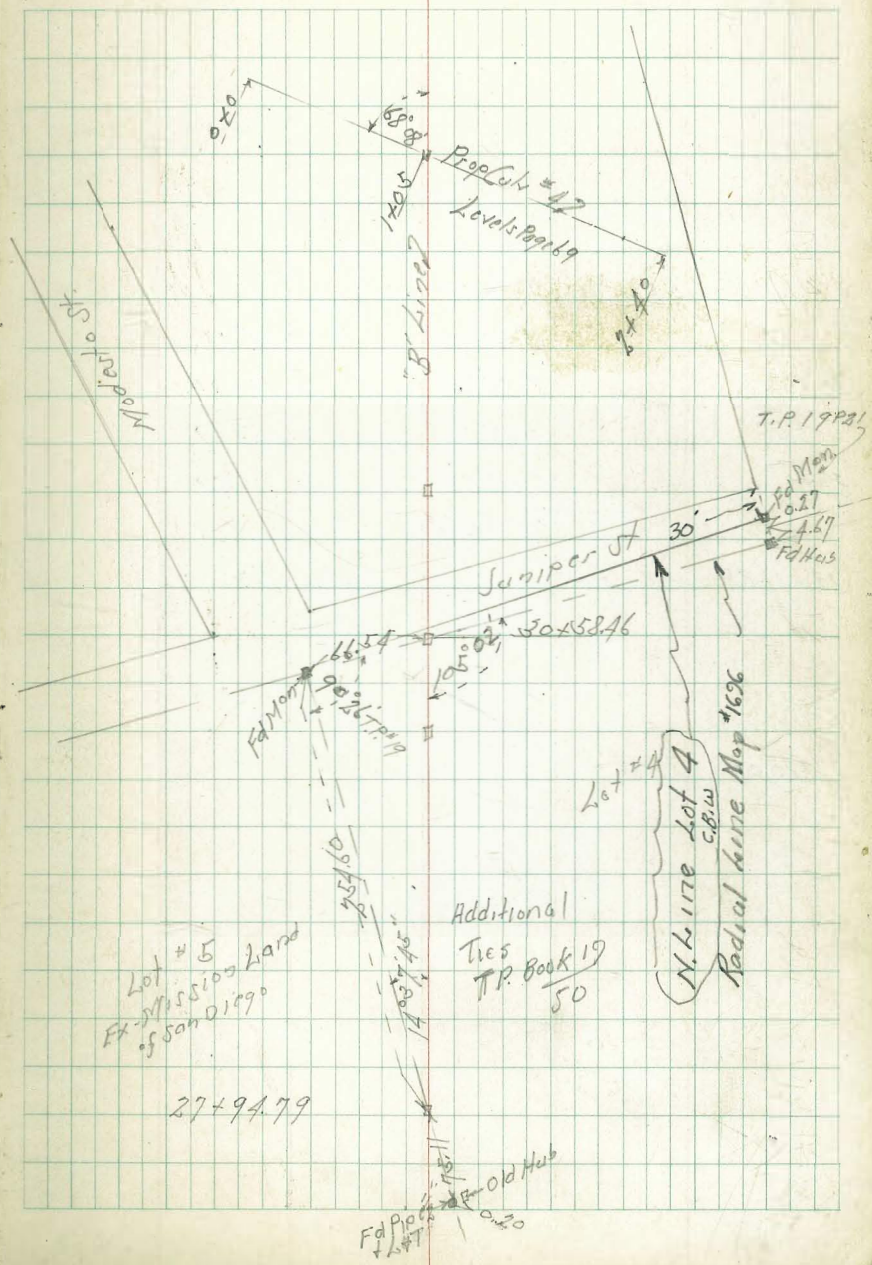
21+59.65	E.C.	20°22.16'	
+50	33.5	20°08.33'	out 35.80
+25		19°52.52'	°
21+0		18°56.71'	°x
+75	33.83	18°20.90'	° 36.17
+40	P.O.C.	17°30.76'	°
+25	14.51	17°09.28'	°x 15.50
20+0		16°33.47'	°
+75		15°57.66'	°
+50		15°21.85'	°
+25		14°46.04'	°x
19+0		14°10.23'	°
+75		13°34.42'	°
+50		12°58.61'	°
18+25		12°22.80'	°

□ 40 □ 40 □

34+13 Proposed Culvert #4

31+85.0 P.O.T.

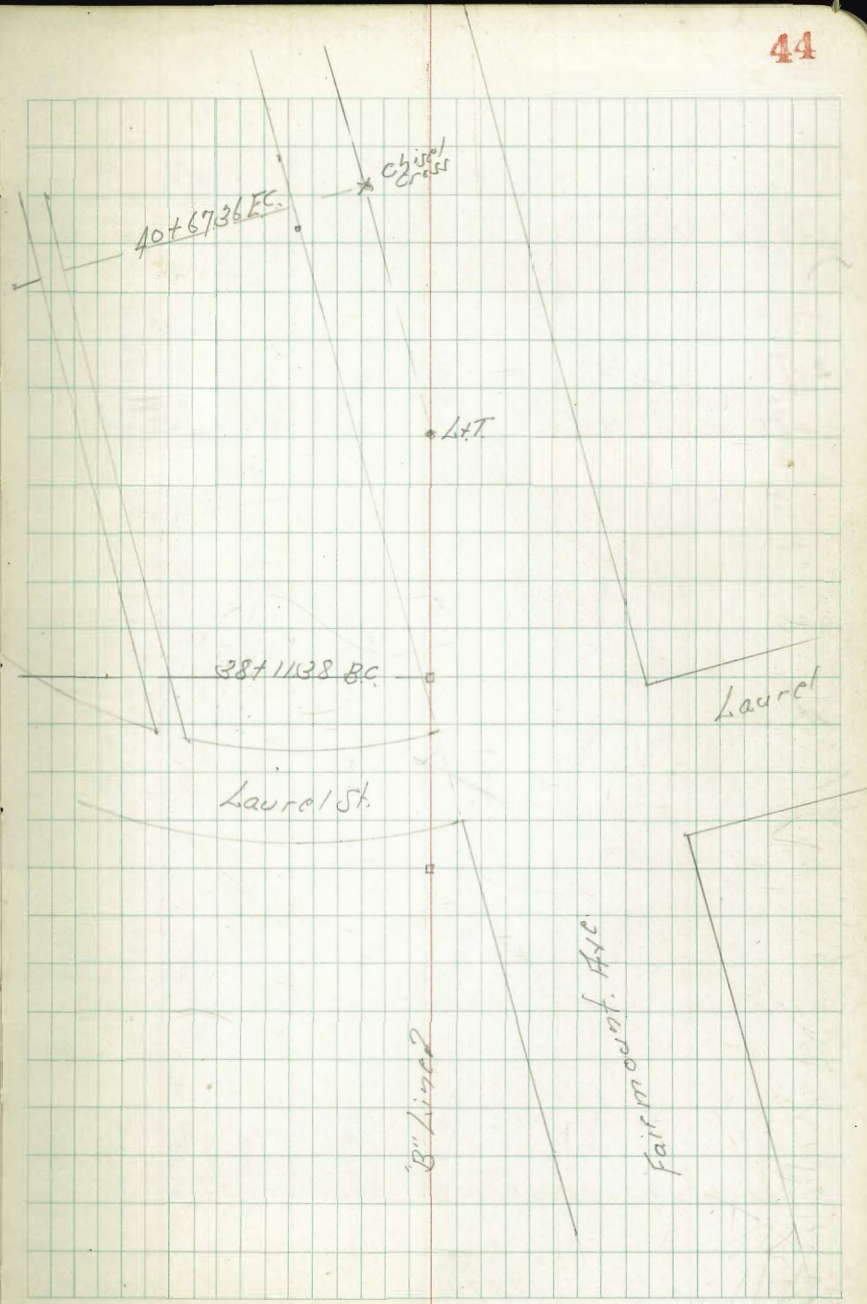
30+22.17 P.O.T.



40+67.36	E.C.	7° 20'	
+50		2° 50.14'	Δ 14° 40'
40+0		5° 24.20'	R 1000.0
+50		5° 58.26'	T 128.69
39+0		2° 32.32'	L 255.98
+50		1° 06.38'	D 1.7188

38+11.38 B.C.H

37+10.07 P.O.T.



Cross Section Home Ave. & Fairmount Connection  
8th Line

Aug 12.43  
5.5507  
81.51  
80.99

H.

8

PK

45

1+0

119.8	114.7	112.1	110.3	107.3	107.2	107.3	106.70
+49 70	28 28	28 20	4.6 9	7.6 1	7.7	7.6 1.5091 13.71	8.25 24

0+50

114.1	112.9	110.2	106.8	106.60	106.54	106.07
8.80 70	2.6 20	1.7 14	0.8 0.8	8.38 1.5091	8.39	8.86 1.8-Edg

0+0

108.9	108.0	106.3	103.94	103.82	103.34
6.0 70	6.9 27	8.1 16	8.99 6-Edg	9.11	9.59 1.1-Edg

0-50

107.9	107.6	105.7	103.32	103.13	102.93
7.0 70	7.8 28	9.7 16	9.61 8	9.80	10.00 1.2-Edg

0-100

104.7	104.3	106.5	104.1	104.52	104.35	104.20
10.7 52	10.6 27	8.4 22	10.2 17	10.41 10	10.58	10.73 1.4-Edg

0-133.15 = 73+95.14 POC Home Ave.

103.8	105.5	108.7	103.8	104.01	103.78	103.47
11.1 25	2.1 25	9.2 21	11.1 15	10.92 10-Edg 10.1	11.13	11.46 10-Edg 10.1

BM 662 114.93 108.31

Rim of M.H.  
Opp 3+0  
H-Line

114.93



TP 12.43 129.82 2.49 117.89

4+0

3+3997 BC.Rt

3+0

2+50

2+0

TP 11.95 119.88 7.00 107.93

1+50

114.93

27

27

PT

46

1239 +70 40	1203 +90 28	1181 +80 28	1150 +70 28	1141 +50 28	110.9 96 28	109.4 10.5 40	109.92 996 15.5-1000 28
1217 +70 40	1180 +80 28	1161 +80 28	1126 +70 28	1099 +60 28	109.0 10.9 28	108.94 10.9 28	108.49 10.5 28
1209 +80 40	1162 +80 28	1141 +80 28	1109 90	1090 10.9 28	108.94 10.9 28	108.55 11.83 47-1000 28	
1244 +70 40	1198 +90 28	1143 +80 28	1114 +80 28	110.9 90	108.2 11.7 28	108.51 11.57 17-1000 28	107.98 11.90 37-1000 28
1227 +70 40	1186 +80 28	1159 +80 28	1112 +80 28	1090 59	107.6 70	108.01 6.92 16-1000 28	107.36 7.57 30-1000 28

114.93

Home Ave + Fairmount Connection  
B Line

TP 7.49 132.81 4.50 125.32

6+50

6+35

6+0

5+50

5+0

4+50

129.82

Lt.

Z

Rt.

47

133.1	130.7	127.5	124.7	123.6	122.0
$\frac{133.3}{10}$	$\frac{10.9}{38}$	$\frac{2.3}{10}$	41	$\frac{4.1}{38}$	$\frac{7.8}{40}$
133.1	131.8	127.8	123.9	122.0	
$\frac{133.0}{10}$	$\frac{2.0}{38}$	20	$\frac{15.9}{38}$	$\frac{7.8}{40}$	
132.8	131.2	130.2	127.9	123.9	122.2
$\frac{133.0}{10}$	$\frac{1.4}{38}$	$\frac{0.1}{10}$	19	$\frac{5.9}{38}$	$\frac{7.6}{40}$
131.3	129.8	128.0	125.4	123.4	122.1
$\frac{11.6}{10}$	$\frac{0.0}{38}$	$\frac{1.8}{10}$	11	$\frac{6.4}{38}$	$\frac{7.7}{38}$
129.7	127.8	126.4	123.1	120.3	119.2
$\frac{10.1}{10}$	$\frac{2.0}{38}$	$\frac{1.4}{10}$	68	$\frac{9.5}{10}$	$\frac{1.8}{38}$
127.1	125.1	123.6	121.1	117.8	117.0
$\frac{7.7}{10}$	$\frac{4.7}{38}$	$\frac{6.6}{10}$	87	$\frac{12.0}{16}$	$\frac{13.8}{38}$

129.82

Lt Z Pt

8+25.89 FC

8+0

7+75

7+50

7+0

6+75

124.5	120.7	118.6	117.9	118.6	118.6	118.2	116.4	117.7
58.6 20	12.1 20	14.2 28	14.9 26	14.2	14.2 14	14.6 28	16.4 24	15.1 20
126.9	123.9	122.4	117.9	118.3	118.0	117.1	116.5	
5.9 20	9.6 28	10.4 26	14.9 20	14.5	14.8 14	15.7 28	16.3 20	
130.4	125.4	123.8	119.3	118.1	116.9	117.1		
2.4 20	2.4 28	10.0 20	13.5	14.7 14	15.9 28	15.7 20		
132.0	128.3	123.5	121.1	118.6	116.4	115.6		
6.8 20	4.5 28	9.3 20	11.7	14.2 12	16.4 28	17.9 20		
127.8	124.4	121.5	124.2	122.7	120.5	118.7		
7.8 20	7.4 20	8.3 28	5.2 20	8.8 20	10.1	10.6 28	14.1 20	
128.8	125.5	125.4	130.7	125.8	123.4	121.7	121.0	120.1
7.8 20	7.7 20	7.6 20	2.4 28	7.0 20	7.4	11.1 20	11.8 28	13.7 20

133.81

133.81

9430

121.8  
1150

940

121.4 121.3  
114 115  
97 40

8782

119.6 120.2 116.1 116.2 119.6 120.1 120.4 121.7 123.0  
132 130 126 16.7 16.6 13.2 12.7 12.4 11.1 10.8  
50 40 28 19 14 8 14 28 40

8775

116.7 116.8 117.1 116.4 119.5 119.6 120.1 120.4 121.4 121.3  
16.1 16.0 15.7 16.4 13.3 13.2 12.7 12.4 11.1 11.6  
50 40 28 14 9 15 28 40 50

8765

121.2 120.1 119.9 119.5 115.8 115.7 115.2 119.8 119.0 119.4 119.8  
11.6 12.7 12.9 13.3 12.0 17.1 17.6 14.0 13.8 13.1 13.0  
50 40 28 8 6 8 8 28 28 40 50

8750

120.9 120.4 118.4 119.5 119.3 114.5 113.5 117.7 118.0  
11.9 12.4 14.1 13.0 13.5 12.0 12.0 12.4 12.0  
50 40 28 50 50 50 50 50 50

132.81

bt

2

pt

49

121.6 121.4 118.3 117.8 123.2 123.7 124.7 125.0 125.0  
11.1 11.1 14.5 15.8 9.6 9.1 8.1 7.8 7.8  
40 21 20 11 7 7 15 20 40

119.6 119.0 115.8 116.0 120.5 120.6 121.6 122.4 123.1  
129 138 170 168 123 12.2 11.2 10.1 9.7  
28 17 15 11 10 20 20 28 40

119.6 120.2 116.1 116.2 119.6 120.1 120.4 121.7 123.0  
132 130 126 16.7 16.6 13.2 12.7 12.4 11.1 10.8  
50 40 28 19 14 8 14 28 40

116.7 116.8 117.1 116.4 119.5 119.6 120.1 120.4 121.4 121.3  
16.1 16.0 15.7 16.4 13.3 13.2 12.7 12.4 11.1 11.6  
50 40 28 14 9 15 28 40 50

121.2 120.1 119.9 119.5 115.8 115.7 115.2 119.8 119.0 119.4 119.8  
11.6 12.7 12.9 13.3 12.0 17.1 17.6 14.0 13.8 13.1 13.0  
50 40 28 8 6 8 8 28 28 40 50

120.9 120.4 118.4 119.5 119.3 114.5 113.5 117.7 118.0  
11.9 12.4 14.1 13.0 13.5 12.0 12.0 12.4 12.0  
50 40 28 50 50 50 50 50 50

132.81

118.0  
11.8  
50

TP 1268 156.40 0.81 143.72

11+0

10+50

TP 1228 144.53 0.56 132.25

10+0

9+75

9+50

9+42

132.81

	LT		RT		RT	
	152.0		149.9		146.1	
	$\frac{75}{40}$		$\frac{54}{28}$		$\frac{71}{14}$	
	149.0		140.6		139.8	
	$\frac{75}{40}$		$\frac{59}{28}$		$\frac{77}{14}$	
	138.2		136.2		133.2	
	$\frac{76}{40}$		$\frac{70}{28}$		$\frac{76}{14}$	
	130.7		130.7		130.7	
	$\frac{76}{40}$		$\frac{70}{28}$		$\frac{76}{14}$	
	141.53					
	129.7		130.7		132.3	
	$\frac{77}{40}$		$\frac{79}{28}$		$\frac{85}{14}$	
	128.9		128.9		128.9	
	$\frac{77}{40}$		$\frac{79}{28}$		$\frac{85}{14}$	
	128.7		127.4		126.9	
	$\frac{77}{40}$		$\frac{75}{28}$		$\frac{80}{14}$	
	122.3		122.4		123.1	
	$\frac{75}{40}$		$\frac{74}{28}$		$\frac{79}{14}$	
	125.9		126.3		126.1	
	$\frac{79}{40}$		$\frac{85}{28}$		$\frac{91}{14}$	
	118.7		118.3		122.4	
	$\frac{74}{40}$		$\frac{73}{28}$		$\frac{74}{14}$	
	123.6		125.2		125.8	
	$\frac{73}{40}$		$\frac{76}{28}$		$\frac{79}{14}$	
	125.8		125.9		125.5	
	$\frac{79}{40}$		$\frac{79}{28}$		$\frac{73}{14}$	

132.81

Home Mt + Fairmount Connection  
B' Line

13+06.42 BC Lt

12+75

12+50 \*

TP 10.06 176.53 1.40 166.47

TP 12.98 169.87 1.51 154.89 <sup>0.75706</sup><sub>11+58.96</sub>  
7" line

12+0 141.0

11+50

11+25

156.40

Aug. 12-43

51

	LT	LT	LT	LT	RT	RT	RT	RT
169.8	164.6	159.0	151.7	144.2	138.7	134.2	131.8	127.9
67 50	11.81 100/105	17.5 28	24.8 14	32.1	37.8 14	42.5 28	44.7 40	48.6 20
171.8	167.4	163.2	155.8	148.5	141.7	134.3	130.5	126.1
47 50	9.1 40	13.3 28	20.7 14	28.0	34.8 14	42.2 28	46.0 40	49.4 20
174.0	169.8	163.9	157.6	150.2	142.7	135.9	132.0	127.2
2.5 50	6.7 40	12.6 28	18.9 14	26.3	33.8 14	40.6 28	44.5 40	49.3 20
					176.53			
170.7	166.9	161.9	154.6	147.6	141.0	133.9	131.0	126.6
+14.3 50	+10.5 40	+5.5 28	1.8 14	8.8	15.4 14	21.5 28	25.4 40	29.8 20
165.5	162.4	158.1	152.0	145.7	140.1	135.5	130.8	126.1
+9.1 50	+6.0 40	+1.7 28	4.4 14	11.0	16.6 14	20.9 28	25.6 40	30.3 20
159.9	159.1	155.2	150.1	144.0	138.8	134.2	131.4	127.4
+8.5 50	+2.7 40	12 28	6.3 14	13.7	17.6 14	22.2 28	26.0 28	31.0 40
								119.6

156.40

L S Pt.

14+75

172.6	170.8	167.9	162.6	159.2	155.0	149.6	144.4	136.2
550	557	8.6	13.9	17.6	21.5	26.9	32.1	40.0
50	10	28	14	14	14	28	40	60

14+50

164.8	162.1	156.3	153.7	149.9	146.9	142.9	139.5	133.7	131.8
11.7	14.4	20.2	23.8	26.6	29.6	32.6	37.0	43.8	44.7
50	10	28	14	14	14	28	40	60	70

14+25

162.9	159.5	154.0	149.1	144.8	142.1	137.8	136.5	133.0	132.1
12.6	17.0	22.5	27.4	31.7	34.4	38.7	40.0	46.5	44.7
50	10	28	14	14	14	28	40	60	70

14+0

170.6	166.4	161.5	155.6	150.2	143.9	140.1	135.8	132.4	130.3
6.59	10.1	15.0	20.9	26.3	22.6	26.4	30.7	34.1	36.2
50	10	28	14	14	14	28	40	60	70

13+75

177.5	172.5	167.0	159.5	155.4	147.5	140.3	135.3	130.4	128.7
11.0	15.0	9.5	17.0	21.1	29.0	36.3	41.2	46.1	47.8
50	50	28	14	14	14	28	40	60	70

13+50

175.2	169.8	162.8	155.6	149.0	143.1	137.5	134.1	129.8
6.55	6.7	13.7	20.9	27.5	33.1	39.6	42.1	47.2
50	10	28	14	14	14	28	40	60

0.76

175.77

07 Nov 2  
13+87.95 H  
175.79

176.53

176.53

16+25

189.9	187.4	184.5	180.7	176.6	172.1	167.5	162.1	159.0
$\frac{70}{50}$	$\frac{17}{10}$	$\frac{16}{28}$	$\frac{8.4}{14}$	$\frac{12.5}{14}$	$\frac{17.0}{14}$	$\frac{21.6}{28}$	$\frac{27.0}{10}$	$\frac{60.1}{50}$

16+0

190.4	187.6	183.9	181.0	176.2	171.6	166.6	162.2	159.2
$\frac{70}{50}$	$\frac{15}{10}$	$\frac{6.5}{28}$	$\frac{8.1}{14}$	$\frac{12.9}{14}$	$\frac{17.6}{14}$	$\frac{22.5}{28}$	$\frac{26.9}{10}$	$\frac{29.9}{50}$

15+75

189.1	186.9	183.7	179.6	174.6	169.3	164.3	159.9	155.5
$\frac{80}{50}$	$\frac{22}{10}$	$\frac{5.4}{28}$	$\frac{9.6}{14}$	$\frac{14.5}{14}$	$\frac{19.8}{14}$	$\frac{24.6}{28}$	$\frac{29.2}{10}$	$\frac{62.1}{50}$

15+50

188.4	185.9	182.6	176.9	171.2	165.8	159.6	154.2	150.1
$\frac{8.7}{50}$	$\frac{6.3}{10}$	$\frac{6.6}{28}$	$\frac{12.2}{14}$	$\frac{17.9}{14}$	$\frac{23.3}{14}$	$\frac{29.5}{28}$	$\frac{34.9}{10}$	$\frac{39.0}{50}$

15+25

186.9	184.2	180.9	174.8	168.9	162.1	154.4	148.9	142.6
$\frac{8.2}{50}$	$\frac{4.9}{10}$	$\frac{8.2}{28}$	$\frac{14.6}{14}$	$\frac{20.2}{14}$	$\frac{27.0}{14}$	$\frac{34.7}{28}$	$\frac{40.0}{10}$	$\frac{46.5}{50}$

TP

12.57    189.10    0.00    176.53

15+0

182.3	180.1	176.2	171.5	167.2	162.3	154.8	147.4	138.5
$\frac{75.8}{50}$	$\frac{7.5}{10}$	$\frac{9.7}{28}$	$\frac{5.0}{14}$	$\frac{9.2}{14}$	$\frac{14.3}{14}$	$\frac{21.7}{28}$	$\frac{29.1}{10}$	$\frac{63.8}{50}$

176.53

176.53



17+75

TP 1.82 168.18 1256 166.36

17+50

17+25

TP 0.79 178.92 1097 178.13

17+0

16+75

16+50

189.10

LT

S

RT

54

162.4	158.9	154.9	148.5	142.8	136.3	130.2	124.1	118.0	111.9	105.8
52 50	9.5 40	10.3 28	19.7 14	25.1	31.9 20 14	39.0 14	46.1 28	52.9 40	60.1 60	67.1 75
169.8	164.8	159.9	154.0	148.6	144.2	141.5	138.5	134.2	130.4	127.1
9.1 50	14.1 40	19.0 28	24.9 14	30.8	37.7 14	44.4 28	50.1 40	57.7 50	64.8 60	72.2 75
174.7	171.4	166.5	159.0	153.1	148.5	144.7	142.3	139.5	136.0	131.3
32 50	7.5 40	12.1 28	19.9 20	25.8	30.4 14	34.2 28	36.6 40	39.1 50	41.7 60	44.6 75
182.4	178.4	171.8	165.9	161.5	156.8	152.8	148.3	144.3	139.5	
27 50	10.7 40	17.0 28	20.3 14	27.6	32.3 14	36.3 28	40.8 40	47.8 50	50.6 75	
186.5	183.9	179.7	176.6	171.6	166.7	160.9	156.4	152.6		
26 50	5.2 40	9.1 28	12.5 14	17.5	22.1 14	28.0 28	32.7 40	36.5 50		
188.7	186.5	184.2	180.7	175.9	171.0	164.9	159.4	154.8		
24 50	2.6 40	4.9 28	8.1 14	13.3	18.1 14	24.2 28	29.7 40	34.3 50		

189.10

19+25

1537  
348  
72.80  
5064

TP 13.11 188.46 0.27 175.35

19+0

1565  
191  
75

18+75

TP 8.31 175.62 0.87 167.31

on Lot 4  
10. RT of 4  
18+65

18+50

1567  
115  
70

18+25

18+0

16818

1821	1618	1664	1729	1786	1844	1854	1785	1716
304 65	267 55	221 40	154 28	99 14	41	21 14	100 28	169 40
18846								
1601	1574	1615	1662	1721	1776	1796	1752	1701
284 65	183 53	141 40	94 28	35 14	220	140 14	01 28	55 40
1596	1476	1564	1606	1656	1687	1705	1683	1652
280 65	280 53	192 40	150 28	101 14	69	51 14	24 28	104 40
17562								
1532	1469	1497	1545	1594	1627	1636	1626	1600
150 65	212 50	125 40	137 28	88 14	55	46 14	56 28	82 40
1580	1535	1475	1447	1478	1533	1562	1575	1579
102 65	147 50	207 40	235 35	204 28	149 14	120 68	107 14	110 28
1357								
1597	1527	1485	1422	1463	1509	1517	1519	1498
85 60	155 40	197 28	260 14	264 20	173 7	156 14	162 28	180 40
16818								
1384								
298 55								

20+75

20+40

20+25

TP +

20+0

19+75

TP

19+50

12.99

204.54

742

191.55

on 2 lots  
20+25

12.70

198.97

219

186.27

188.46

191.8	194.7	197.8	197.0	193.4	187.4	181.4	175.1	169.5	152.9	147.0
12.7 47	9.8 40	6.7 30	7.5 20	11.1 14	17.1 14	20.1 14	29.1 28	35.0 40	11.6 55	57.0 50

190.1	194.5	196.6	196.2	192.4	186.1	177.7	170.0	160.8	153.0
14.4 40	19.0 28	7.9 20	8.3 10	13.1 14	18.1 14	23.8 28	24.5 40	13.7 45	57.0 70

187.4	191.4	194.9	194.3	191.5	186.3	178.8	171.5	159.2
17.1 40	13.1 28	9.6 14	10.2 6	13.0 14	18.2 14	25.7 28	30.0 40	45.0 50

180.6	187.3	191.2	189.7	185.6	183.1	178.3	173.3	158.2
18.4 40	14.7 28	7.8 14	9.0 14	13.4 14	15.9 20	20.7 28	26.7 40	40.8 50

168.1	176.0	181.9	188.2	190.5	189.5	188.8	185.8	177.7	170.9	158.1
50.0 55	23.0 40	17.1 28	10.8 14	8.5 10	9.5 10	11.2 10	13.2 14	21.3 28	28.1 40	40.9 50

166.5	171.9	176.1	184.8	188.2	187.5	185.9	178.1	171.1
22.0 55	16.6 40	12.4 28	9.7 14	0.3 10	1.0 8	2.6 14	12.1 28	17.0 40

188.46

22+50

22+25

TP 11.66 215.64 0.56 203.98

22+0

BM 9.39 195.15 <sup>0, 2 Hub</sup> ~~214.53 EC~~ ~~219.5~~ 195.19

21+59.63 EC

21+25

21+0

204.54

206.9	208.8	208.3	206.0	200.3	195.3	188.4	181.8	168.8	164.3
8.7 50	6.8 40	7.3 25	9.6 15	15.3	20.3 14	27.2 28	32.8 40	46.8 70	51.0 80
205.6	207.2	206.9	205.4	197.5	193.0	183.2	176.7	166.6	154.6
100 20	8.4 46	8.7 25	10.2 15	18.1	22.4 70	32.4 28	38.9 40	50.0 80	61.0 85
				215.64			152.1 62.5 25		
204.5	203.7	198.3		192.9	184.4	177.3	170.3	164.9	153.3
8.0 40	0.8 30	6.2 14		11.6	20.1 14	27.2 25	34.2 40	42.6 50	51.5 80
							150.1 51.1 90	148.0 66.5 70	
195.8	197.9	199.5	196.3	193.3	189.6	183.2	176.5	168.5	161.2
8.7 50	6.1 22	5.0 40	8.7 28	11.2 20	14.9 14	21.3	28.0 14	34.0 28	43.0 40
									145.2 59.2 70
193.4	197.9	197.8	197.8	196.4	191.2	182.5	174.3	167.1	160.0
11.1 60	7.2 47	6.9 40	6.9 60	8.1 25	12.3 14	22.0	30.3 14	37.4 28	44.5 40
									150.2 51.2 80
									145.9 59.5 80
									141.7 62.8 100
									138.2 65.3 70
									137.0 67.5 70
190.2	195.5	198.7	198.6	194.0	186.0	177.7	170.1	163.0	153.2
14.0 60	9.0 40	5.8 22	5.9 20	10.5 14	18.5	26.9 14	34.4 28	41.5 40	51.2 80
									141.2 62.2 70
									137.5 67.0 70
									135.2 69.3 110

204.54

24+50

TP 12.13 236.18 3.74 224.05

24+0

23+50

23+25

TP 12.49 227.79 0.34 215.30

23+0

22+75

215.64

231.6	230.5	229.0	226.5	223.9	221.4	219.4	217.7	215.5
$\frac{16}{50}$	$\frac{5.7}{40}$	$\frac{7.2}{38}$	$\frac{9.7}{17}$	$\frac{12.2}{14}$	$\frac{14.8}{10}$	$\frac{15.8}{38}$	$\frac{18.5}{40}$	$\frac{20.7}{50}$

236.18

227.8	227.1	227.3	227.6	223.3	220.8	218.1	215.4
$\frac{8.0}{50}$	$\frac{9.1}{40}$	$\frac{9.5}{38}$	$\frac{9.2}{17}$	$\frac{4.5}{14}$	$\frac{7.0}{14}$	$\frac{9.7}{38}$	$\frac{13.1}{40}$

220.8	223.6	225.0	225.2	222.7	219.4	215.9	213.1
$\frac{7.0}{50}$	$\frac{4.2}{40}$	$\frac{3.8}{38}$	$\frac{3.5}{17}$	$\frac{5.1}{14}$	$\frac{8.4}{14}$	$\frac{11.8}{38}$	$\frac{14.7}{40}$

217.3	220.6	221.9	221.9	219.9	216.1	211.8	207.3
$\frac{10.5}{50}$	$\frac{7.2}{40}$	$\frac{5.9}{38}$	$\frac{5.9}{17}$	$\frac{7.9}{14}$	$\frac{11.7}{14}$	$\frac{16.0}{38}$	$\frac{20.5}{40}$

227.79

212.7	214.7	216.3	216.0	213.8	210.5	203.2	198.9
$\frac{8.9}{50}$	$\frac{9.9}{40}$	$\frac{10.7}{38}$	$\frac{10.4}{17}$	$\frac{1.8}{14}$	$\frac{5.1}{14}$	$\frac{13.4}{38}$	$\frac{17.6}{40}$

210.2	211.1	210.6	209.6	206.3	202.4	196.9	189.4	185.4
$\frac{5.4}{50}$	$\frac{4.5}{40}$	$\frac{5.0}{38}$	$\frac{5.0}{17}$	$\frac{9.8}{14}$	$\frac{13.2}{14}$	$\frac{18.7}{38}$	$\frac{26.2}{40}$	$\frac{38.3}{50}$

215.64

27+50

TP x

978

235.66

1080

225.88

Top Lat 6 &  
26+50 B

27+0

26+50

26+0

25+50

25+0

236.18

232.8	230.5	228.4	226.1	224.2	221.5	217.6	215.5	211.2
79 50	51 40	73 28	90 14	11.5	14.2 14	18.1 28	20.2 40	24.5 50

235.66

234.3	231.4	230.0	229.2	227.9	225.3	222.9	220.7	218.8	217.1
19 50	48 40	69 25	70 28	8.5 14	10.9	12.5 14	15.5 28	17.1 40	19.1 50

226.5	223.9	230.7	227.4	225.9	223.7	221.6	219.6	217.8
70.2 50	7.2 40	55 28	8.2 14	10.5	12.5 14	14.6 28	16.6 40	18.4 50

236.1	234.5	232.1	228.2	225.5	223.3	222.3	220.2	215.1
50.1	17 40	11 28	8.2 14	10.7	12.1 14	13.2 28	16.0 40	18.1 50

236.2	234.6	232.5	229.6	226.0	222.9	221.4	219.7	218.0
50	1.6 40	5.7 28	6.6 14	10.2	12.3 14	14.8 28	15.5 40	18.2 50

234.0	232.6	231.0	228.0	224.6	222.1	221.8	220.8	219.0	216.9
7.2 50	5.6 40	5.2 28	8.2 14	11.6	14.1 14	14.4 14	15.4 28	17.2 40	19.3 50

236.18

Home Ave + Fairmount Connection  
8" Line

TP 1476 240.03 1.62 228.27

2940

28775

28750

28735

TP 703 229.89 12.80 222.86

2870

27775

235.66

749.77-43

8

PT.

60

228.6  
1.5  
30  
221.1  
8.8  
38  
215.1  
1.8  
18  
214.4  
1.8  
18  
221.4  
8.5  
14  
228.2  
1.7  
14  
230.3  
9.4  
38  
231.5  
1.6  
40

225.2  
1.7  
40  
219.3  
10.6  
38  
211.2  
1.8  
14  
216.8  
8.1  
14  
221.6  
8.9  
14  
223.4  
8.5  
30  
224.8  
5.7  
38  
225.8  
1  
40

228.1  
1.8  
40  
223.6  
5.8  
38  
214.6  
1.5  
14  
212.7  
1.2  
8  
206.9  
8.0  
30  
213.1  
1.6  
14  
217.7  
1.2  
38  
218.6  
1.6  
40

228.5  
1.7  
40  
225.4  
8.5  
38  
220.1  
9.8  
14  
213.7  
1.6  
14  
208.4  
2.5  
10  
203.6  
2.6  
16  
207.9  
2.2  
38  
210.7  
1.9  
45  
211.0  
1.8  
80

229.89

231.9  
5.8  
50  
229.7  
6.0  
40  
226.7  
9.0  
38  
222.4  
1.8  
14  
215.7  
8.0  
40  
206.5  
3.7  
14  
206.9  
8.8  
30  
201.5  
6.7  
38  
196.7  
8.5  
40  
192.7  
4.0  
50

194.0

193.7

232.2  
5.8  
40  
230.2  
5.8  
40  
228.1  
7.6  
38  
225.7  
1.0  
14  
221.6  
1.1  
14  
216.4  
1.8  
14  
211.7  
2.0  
38  
207.3  
2.8  
40  
204.1  
5.6  
50  
200.3  
5.7  
50  
200.3  
5.7  
40

235.66

30x50

30x25

BM

30x0

TP

29x75

TP

29x50

29x25

240.03

11.53

250.42

249.80

237.32

0.2 Has  
30+22.17  
# 250.15

Lt

Z

Pt.

253.6	253.1	253.2	253.6	253.8	254.5	255.0	255.6	256.1
8.4 50	8.9 70	8.8 28	8.7 14	8.2	7.5 14	7.0 28	6.4 40	5.8 50

250.7	250.8	250.9	250.9	251.4	251.7	252.5	253.0	253.8
11.0 50	11.2 70	11.1 28	11.1 14	10.6	10.0 14	9.5 28	9.0 40	8.8 50

245.9	246.6	247.6	247.9	247.7	248.5	249.5
15.1 70	15.4 28	14.4 14	14.1	14.3 14	13.7 28	13.5 40

261.95

240.8	236.9	241.2	244.1	244.6	244.7	245.0
9.4 70	12.0 50	9.0 14	6.1	5.6 14	5.5 28	5.2 40

250.24

235.2	228.2	230.2	231.7	233.3	234.1	236.8	240.0	239.8
4.8 70	11.0 28	9.8 28	8.0 14	6.7	5.9 5	5.3 14	9.0 28	9.0 70

229.7	226.2	220.1	222.3	223.0	229.3	232.3	233.8
10.0 28	13.0 28	19.9 14	17.7 7	17.0	10.7 14	7.7 28	6.4 40

240.03



3270

257.3	256.9	256.4	256.1	255.6	254.5	253.0	251.4	250.4
51/50	6.5/40	7.0/28	7.0/14	7.8	8.9/14	10.1/28	12.0/20	13.0

31795

258.3	258.2	257.9	257.3	257.1	256.7	256.3	255.6	254.9
51/50	5.5/28	5.5/28	6.1/14	6.0	6.7/14	7.1/28	7.8/20	8.5/30

31750

258.7	258.7	258.6	258.5	258.6	258.5	258.3	258.1	257.8
1.7/50	4.7/40	4.8/28	4.6/14	4.8	4.9/14	5.1/28	5.2/20	5.6/30

31725

258.1	257.9	258.0	258.2	258.6	258.8	259.0	259.0	259.0
5.3/50	5.5/40	5.4/28	5.3/14	4.8	4.6/14	4.7/28	4.4/20	4.4/30

TP

6.77

263.42

5.29

256.66

078 H068  
31785

261.43

3170

256.9	257.0	257.4	257.6	257.5	257.9	258.5	258.6	258.9
5.1/50	5.0/40	4.6/28	4.4/14	4.5	4.1/14	3.5/28	3.1/20	3.1/30

30795

255.7	255.3	254.8	255.3	256.0	256.4	256.8	257.4	257.4
6.3/50	6.7/40	7.2/28	6.7/14	6.0	5.6/14	5.3/28	4.6/20	4.6/30

261.95

261.95

Home A/c + Fairmount Connection  
B-Line

TP 2.22 219.06 12.94 216.84

33+50

TP 2.49 229.78 12.64 227.29

33+25

33+0

TP 0.67 239.93 13.07 239.26

33+75

33+50

TP x 1.01 252.33 12.11 251.32

33+25

260.40

Aug 18 43 Lt.

St

St

63

2323 2284 2269 219.5 218.1 217.1 215.8 215.1 210.3 206.2 201.7  
 $\frac{2323}{50}$   $\frac{2284}{50}$   $\frac{2269}{40}$   $\frac{219.5}{38}$   $\frac{218.1}{42}$   $\frac{217.1}{37}$   $\frac{215.8}{40}$   $\frac{215.1}{38}$   $\frac{210.3}{40}$   $\frac{206.2}{30}$   $\frac{201.7}{30}$   
 229.78  $\frac{19.77}{100}$   $\frac{1960}{110}$

2354 2344 2324 2311 2286 2262 2239 2225 2190 2167 2149  
 $\frac{2354}{60}$   $\frac{2344}{50}$   $\frac{2324}{40}$   $\frac{2311}{38}$   $\frac{2286}{42}$   $\frac{2262}{37}$   $\frac{2239}{40}$   $\frac{2225}{32}$   $\frac{2190}{38}$   $\frac{2167}{30}$   $\frac{2149}{50}$   
 211.2 210.7  $\frac{88.7}{80}$   $\frac{80.2}{90}$

2414 2395 2379 2359 2326 2299 2287 2271 2253 2243  
 $\frac{2414}{50}$   $\frac{2395}{40}$   $\frac{2379}{38}$   $\frac{2359}{40}$   $\frac{2326}{42}$   $\frac{2299}{37}$   $\frac{2287}{38}$   $\frac{2271}{40}$   $\frac{2253}{30}$   $\frac{2243}{50}$   
 222.5  $\frac{12.1}{50}$

2480 2469 2455 2438 2408 2379 2348 2329 2316 2302  
 $\frac{2480}{50}$   $\frac{2469}{40}$   $\frac{2455}{38}$   $\frac{2438}{42}$   $\frac{2408}{40}$   $\frac{2379}{37}$   $\frac{2348}{38}$   $\frac{2329}{40}$   $\frac{2316}{50}$   $\frac{2302}{30}$

2517 2513 2498 2482 2468 2449 2425 2399 2384  
 $\frac{2517}{50}$   $\frac{2513}{40}$   $\frac{2498}{38}$   $\frac{2482}{42}$   $\frac{2468}{40}$   $\frac{2449}{37}$   $\frac{2425}{38}$   $\frac{2399}{40}$   $\frac{2384}{50}$   
 252.00

2551 2542 2537 2528 2514 2498 2484 2466 2454  
 $\frac{2551}{50}$   $\frac{2542}{40}$   $\frac{2537}{38}$   $\frac{2528}{42}$   $\frac{2514}{40}$   $\frac{2498}{37}$   $\frac{2484}{38}$   $\frac{2466}{40}$   $\frac{2454}{50}$

260.40

TP 12.04 243.10 0.43 231.06

34+75

TP 13.03 231.49 0.60 218.46

34+30

34+25

34+13

34+0

BM

12.25 206.81

Top of lat 9  
33+80 2' 8"

33+75

219.06

lt.

8

pt.

219.3 221.6 223.4 224.7 221.9 219.4 214.9 220.2 225.7 230.2 233.5  
 $\begin{array}{r} 12.2 \\ 7.5 \end{array}$   $\begin{array}{r} 9.9 \\ 6.0 \end{array}$   $\begin{array}{r} 8.1 \\ 4.0 \end{array}$   $\begin{array}{r} 6.8 \\ 2.8 \end{array}$   $\begin{array}{r} 9.6 \\ 1.4 \end{array}$   $\begin{array}{r} 12.1 \\ 1.5 \end{array}$   $\begin{array}{r} 16.6 \\ 1.5 \end{array}$   $\begin{array}{r} 11.2 \\ 2.8 \end{array}$   $\begin{array}{r} 5.8 \\ 4.0 \end{array}$   $\begin{array}{r} 1.3 \\ 5.0 \end{array}$   $\begin{array}{r} 12.0 \\ 8.0 \end{array}$   
 214.1 214.6  
 $\begin{array}{r} 17.4 \\ 1.0 \end{array}$   $\begin{array}{r} 16.9 \\ 9.0 \end{array}$   $\begin{array}{r} 13.9 \\ 8.5 \end{array}$

207.0 208.5 211.4 213.1 211.8 207.7 206.4 207.1 210.1 215.3 218.4 222.3  
 $\begin{array}{r} 13.1 \\ 8.0 \end{array}$   $\begin{array}{r} 10.6 \\ 6.0 \end{array}$   $\begin{array}{r} 7.7 \\ 4.0 \end{array}$   $\begin{array}{r} 6.0 \\ 2.8 \end{array}$   $\begin{array}{r} 7.2 \\ 1.4 \end{array}$   $\begin{array}{r} 11.1 \\ 1.8 \end{array}$   $\begin{array}{r} 12.5 \\ 5.1 \end{array}$   $\begin{array}{r} 13.0 \\ 1.5 \end{array}$   $\begin{array}{r} 9.0 \\ 7.4 \end{array}$   $\begin{array}{r} 5.8 \\ 2.8 \end{array}$   $\begin{array}{r} 0.7 \\ 4.0 \end{array}$   $\begin{array}{r} 10.2 \\ 6.0 \end{array}$   
 210.7 207.6  
 $\begin{array}{r} 8.4 \\ 1.0 \end{array}$   $\begin{array}{r} 16.5 \\ 9.0 \end{array}$   $\begin{array}{r} 22.5 \\ 7.5 \end{array}$

210.6 207.7 202.3 198.9 197.3 197.9 200.4 203.5 205.7 207.0 208.0 213.5  
 $\begin{array}{r} 8.5 \\ 7.5 \end{array}$   $\begin{array}{r} 11.4 \\ 6.0 \end{array}$   $\begin{array}{r} 16.8 \\ 4.0 \end{array}$   $\begin{array}{r} 21.1 \\ 2.8 \end{array}$   $\begin{array}{r} 21.8 \\ 2.0 \end{array}$   $\begin{array}{r} 21.2 \\ 5.0 \end{array}$   $\begin{array}{r} 18.7 \\ 7.0 \end{array}$   $\begin{array}{r} 15.6 \\ 7.0 \end{array}$   $\begin{array}{r} 13.4 \\ 1.4 \end{array}$   $\begin{array}{r} 12.1 \\ 2.8 \end{array}$   $\begin{array}{r} 11.1 \\ 4.0 \end{array}$   $\begin{array}{r} 5.6 \\ 8.0 \end{array}$   
 217.9  
 $\begin{array}{r} 1.2 \\ 1.0 \end{array}$   $\begin{array}{r} 21.7 \\ 7.0 \end{array}$   $\begin{array}{r} 21.4 \\ 9.0 \end{array}$

195.7  
207.9

219.4 221.8 212.5 209.3 205.4 198.3 193.7 195.2 194.3 194.5 200.5  
 $\begin{array}{r} 7.0 \\ 8.0 \end{array}$   $\begin{array}{r} 2.7 \\ 6.0 \end{array}$   $\begin{array}{r} 6.6 \\ 4.0 \end{array}$   $\begin{array}{r} 9.8 \\ 2.8 \end{array}$   $\begin{array}{r} 13.7 \\ 1.4 \end{array}$   $\begin{array}{r} 19.8 \\ 1.8 \end{array}$   $\begin{array}{r} 25.4 \\ 7.1 \end{array}$   $\begin{array}{r} 33.9 \\ 7.4 \end{array}$   $\begin{array}{r} 24.8 \\ 2.8 \end{array}$   $\begin{array}{r} 24.6 \\ 4.0 \end{array}$   $\begin{array}{r} 18.6 \\ 8.0 \end{array}$   
 201.7 202.8 202.8  
 $\begin{array}{r} 12.4 \\ 8.0 \end{array}$   $\begin{array}{r} 16.3 \\ 1.0 \end{array}$   $\begin{array}{r} 16.5 \\ 11.5 \end{array}$

224.9 223.8 221.5 218.0 213.4 208.8 206.3 202.7 200.0 196.8 193.7  
 $\begin{array}{r} 4.8 \\ 8.0 \end{array}$   $\begin{array}{r} 4.7 \\ 8.0 \end{array}$   $\begin{array}{r} 4.2 \\ 4.0 \end{array}$   $\begin{array}{r} 1.1 \\ 2.8 \end{array}$   $\begin{array}{r} 5.7 \\ 1.4 \end{array}$   $\begin{array}{r} 10.3 \\ 1.8 \end{array}$   $\begin{array}{r} 12.8 \\ 1.4 \end{array}$   $\begin{array}{r} 15.9 \\ 2.8 \end{array}$   $\begin{array}{r} 19.1 \\ 4.0 \end{array}$   $\begin{array}{r} 22.3 \\ 5.0 \end{array}$   $\begin{array}{r} 25.4 \\ 8.0 \end{array}$   
 190.9 198.6 191.5 192.7  
 $\begin{array}{r} 28.2 \\ 7.5 \end{array}$   $\begin{array}{r} 30.5 \\ 9.0 \end{array}$   $\begin{array}{r} 27.6 \\ 11.0 \end{array}$   $\begin{array}{r} 26.4 \\ 12.0 \end{array}$

219.06



Home Ave + Fairmount Connections  
"B" Line

37+18

37+14

37+0

36+75

36+50

TP 837 273.65 098 265.28

36+25

266.26

Lt.

S

Rt.

66

2646	2645	2649	2699	2700	2705	2640	2636	2633.5
$\frac{9.1}{35}$	$\frac{9.1}{28}$	$\frac{8.8}{2}$	$\frac{0.8}{10}$	3.7	$\frac{3.2}{14}$	$\frac{9.7}{20}$	$\frac{10.1}{28}$	$\frac{10.20}{27.5}$

2693	2695	2697	2700	2705	2635	2634	263.23
$\frac{1.1}{35}$	$\frac{1.1}{28}$	$\frac{1.0}{14}$	3.7	$\frac{3.2}{14}$	$\frac{10.2}{18}$	$\frac{10.0}{28}$	$\frac{10.12}{28}$

1/4 Pol  
Fairmount

2684	2688	2692	2694	2698	2630	2630	2624
$\frac{5.0}{40}$	$\frac{4.0}{28}$	$\frac{1.5}{14}$	4.0	$\frac{3.9}{18}$	$\frac{10.7}{20}$	$\frac{10.7}{28}$	$\frac{11.3}{40}$

2668	2671	2676	2678	2681	2685	2687	2615
$\frac{4.9}{40}$	$\frac{6.6}{28}$	$\frac{4.1}{14}$	5.9	$\frac{5.6}{14}$	$\frac{5.2}{28}$	$\frac{5.0}{28}$	$\frac{13.2}{20}$

2657	2656	2660	2662	2663	2665	2671
$\frac{8.5}{40}$	$\frac{8.1}{28}$	$\frac{7.7}{14}$	7.5	$\frac{7.1}{14}$	$\frac{7.2}{28}$	$\frac{6.6}{20}$

2703.65

2632	2635	2638	2636	2639	2641	264.8
$\frac{3.1}{40}$	$\frac{3.8}{28}$	$\frac{3.5}{14}$	2.7	$\frac{2.1}{14}$	$\frac{2.2}{28}$	$\frac{1.5}{20}$

266.26

38+11,38 B.C. Lt.

37+75

37+69

B.M.

1.70

271.95

0721406  
37+82.667  
271.98

37+64

37+62

37+21

272.65

272.2

1.5  
35

272.4

1.5  
28

272.3

1.5  
16

266.4

7.0  
70

265.5

8.9  
on Hdb

265.40

8.25  
130

264.94

8.71  
130-600

265.14

8.51  
34 on Pst

271.9

1.5  
38

271.9

1.5  
28

271.8

1.9  
14

272.1

1.6

266.2

7.5  
14

264.7

9.0  
14

264.5

9.1  
14

264.99

9.16  
22.5

264.10

9.55  
22.1 = 9.10  
100

271.7

3.0  
35

271.7

2.0  
38

271.7

2.0  
16

267.3

6.1  
15

265.7

8.0

264.4

9.3  
14

274.03

9.62  
24.5 = 11.40

270.5

3.1  
35

265.8

2.9  
28

265.6

8.1  
14

274.7

9.0

274.2

9.5  
14

263.99

9.6  
25.6 = 11.10

264.8

8.9  
35

264.9

8.8  
28

264.6

9.1  
14

264.3

9.1

263.8

9.9

263.95

9.70  
23.2 = 11.40

264.1

9.6  
35

264.1

9.6  
28

264.4

9.3  
14

264.5

9.2

264.1

9.6  
14

263.6

10.1  
22.5 = 10.10

263.7

10.0  
28

263.5

10.20  
30.5 = 11.10

272.65

40+67.36 - FC

40+50

40+0

39+50

TP 2.55 275.16 1.04 272.61

39+0

38+50

275.65

21

2

RT

68

271.8	271.8	271.53	271.09	271.45
35.4 35	35.4 38	35.3 35.3	40.7 40.5	37.1
271.6	271.4	271.23	270.69	271.09
35.6 35	35.0 38	39.3 39.2	41.7 40.5	40.7
270.9	270.3	270.01	269.99	269.89
41.5 35	41.0 38	51.5 49.8	51.7 49.8	52.7
	271.2	269.0	268.82	268.74
	41.0 35	61.2 38	68.4 68.2	69.6 69.0
	270.6	268.82	268.20	268.12
	41.0 35	61.2 38	68.4 68.2	69.6 69.0
272.6	272.8	268.2	267.47	267.03
1.1 35	0.9 38	55.5 28	6.0 14	6.18 6.83
272.0	272.1	272.0	267.1	266.8
1.7 35	1.6 38	1.7 38	6.6 16	6.9 14
		266.5	266.38	265.86
		7.27 35.38	7.19 35.38	7.19 35.38

273.65

## Levels Culvert #4

Sketch Page 43

BM	0.64	207.45		206.81	Top Lot 4 53+80 7 8" Page 84
TP	7.38	202.65	12.18	195.27	2nd Hub 34+13
TP	11.74	211.48	2.91	199.74	
0+0			4.1	207.4	
+17			9.2	202.3	
+35			10.6	200.9	
+44			9.6	201.9	
+46			11.9	199.6	
TP	2.57	202.31	11.74	199.74	
+60			3.6	198.7	
+80			5.0	197.3	
+90			4.2	198.1	
+10			6.3	196.0	
+05' = 34+13 8" Lin.			7.0	195.3	
+11			7.0	195.3	
+20			4.5	197.8	
+25			4.5	197.8	
+40			8.8	193.5	
+55			10.2	192.1	
TP	4.48	196.61	10.18	192.13	
+70			3.8	192.8	
+84			4.6	192.0	
+93			5.4	191.2	
+97			7.8	188.8	
2+15			9.0	187.6	

Aug 18-43

51107

31.55

8299

196.61

69

2+25	9.1	187.5
+30	8.2	188.4
+40	9.6	187.0



## Levels Culvert #2

Sketch Page 41

BJM	0.46	167.77	167.01	072975 10.81 of 2 10715 Page 55
TP	1.78	156.74	154.96	
0+0 Z		4.8	151.9	
5' Lt - Bottom Gulch		8.4	148.3	
5' Rt		2.2	154.5	
0+15 - Bottom Gulch		9.2	147.5	
5' Lt		9.2	147.5	
5' Lt		6.5	150.2	
5' Rt		9.5	147.5	
5' Rt		7.0	149.7	
0+33		7.2	149.5	
7' Rt - Bot. Gulch		11.3	145.4	
5' Lt		8.9	152.8	
0+50		4.9	151.8	
5' Rt		8.0	148.7	
5' Lt		2.8	153.9	
0+70		4.3	152.4	
5' Rt		7.2	149.5	
5' Lt		2.7	154.0	
0+90 = 18+07 Z 8'		6.27	150.4	on start
5' Rt		9.5	146.2	
5' Lt		5.5	153.2	
1+0		6.7	150.0	
5' Rt		9.5	147.2	
5' Lt		4.4	152.3	

Reduced 8-2-1943

Aug. 20. 43

513007

81101

8199

70

1420	9.3	147.4	156.74
5' Rt of Z	12.0	144.7	
5' Lt " "	8.0	148.7	
TP	0.55	149.21	130.8
			142.66
1+40	2.6	141.6	
5' Rt	4.2	140.0	
5' Lt	1.6	142.6	
1+55	9.3	134.4	
5' Rt - Bottom Gulch	11.7	132.5	
5' Rt	11.7	132.5	
5' Lt	6.4	137.8	
1+69 - Bottom Gulch	13.5	130.7	
5' Rt	10.9	133.3	
5' Lt	10.0	134.2	
1+75	12.2	132.0	
5' Rt	10.3	133.9	
5' Lt	12.4	130.8	
5' Lt	11.4	132.8	
1+85	11.4	132.8	
5' Rt	9.1	135.1	
5' Lt - Bottom Gulch	14.3	129.9	
2+0	14.5	129.7	
5' Rt	12.6	131.6	
6' Lt - Bottom Gulch	15.5	128.7	
2+15 - Top Cut Home side	14.5	129.7	
5' Rt	11.5	232.7	
5' Lt	16.8	227.4	
6' Lt - Bottom Gulch	19.8	224.4	

Levels Culvert #1

Sketch Page 41

B.M.	2.14	126.62	124.49	6444.66 1891-271
TP	5.53	124.52	9.84	118.79
0+0			7.5	116.8
3' R1			7.3	117.0
3' L1			7.5	116.8
0+07			7.6	116.7
1' R1			7.6	116.7
3' R1			5.3	119.0
3' L1			7.3	117.0
0+15			7.8	116.5
3' R1			6.5	117.8
3' L1			7.8	116.5
0+28			7.5	116.8
3' R1			6.4	117.9
3' L1			8.3	116.0
0+29			4.8	119.5
3' R1			4.5	119.8
3' L1			5.0	119.3
3' L1			8.5	115.8
0+35			5.0	119.3
3' R1			4.6	119.7
1' L1			5.0	119.3
3' L1			8.1	115.9
0+38			8.2	116.1
1' R1			8.2	116.1
3' R1			4.7	119.6

Reduced 8-2-1943 C.B.H.

124.52

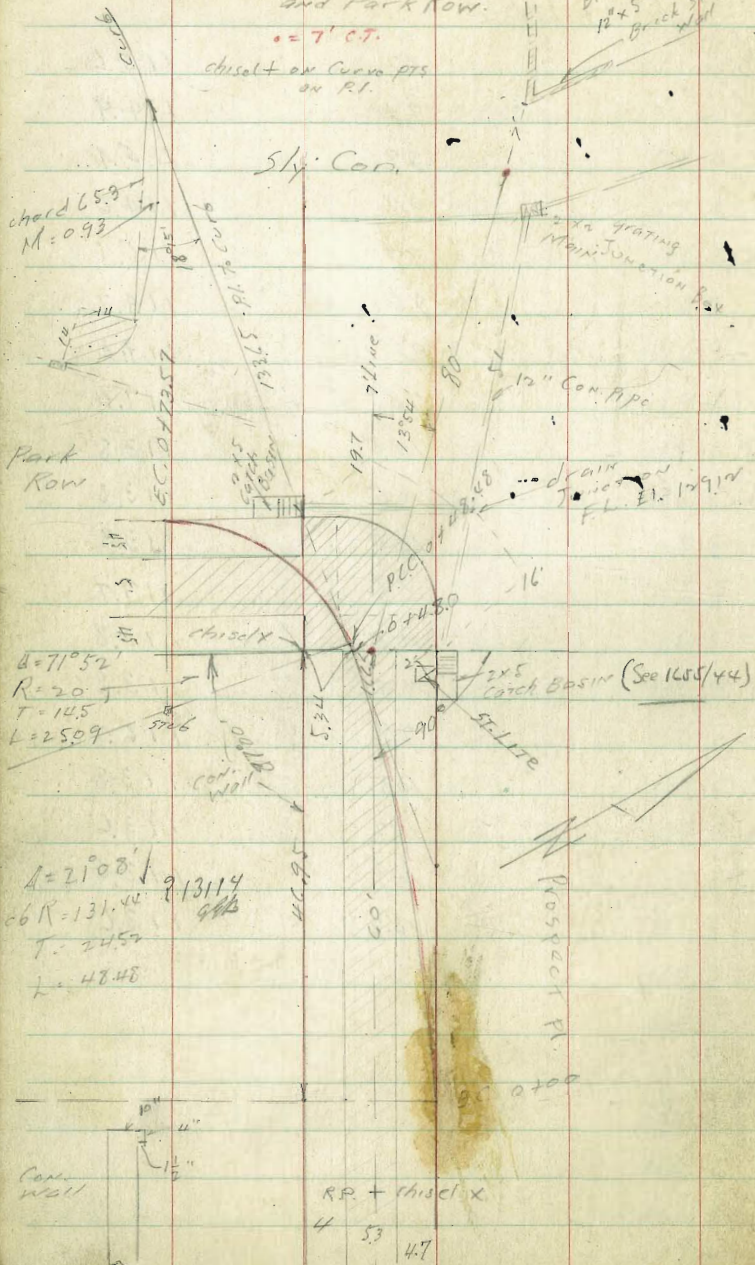
3' L1	8.7	115.6
0+50	9.4	114.9
3' R1	8.9	115.4
3' L1	9.7	114.6
0+65	9.2	115.1
3' R1	9.6	114.7
1' L1	9.2	119.1
3' L1	7.3	117.0
0+72	10.5	113.8
3' R1	10.5	113.8
1' L1	10.5	113.8
3' L1	6.6	117.7
0+80	10.5	113.8
3' L1	10.5	113.8
3' L1	7.6	116.7
3' R1	10.5	113.8
0+90	10.7	113.6
3' R1	10.7	113.6
3' L1	10.7	113.6

Proposed Ret. Const.  
Prospect St.  
and Park Row.

7' C.T.

chisel + ex. Curv. pts  
on P.I.

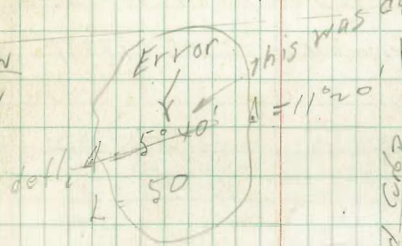
B.R. 48  
12x5  
Brick Structure



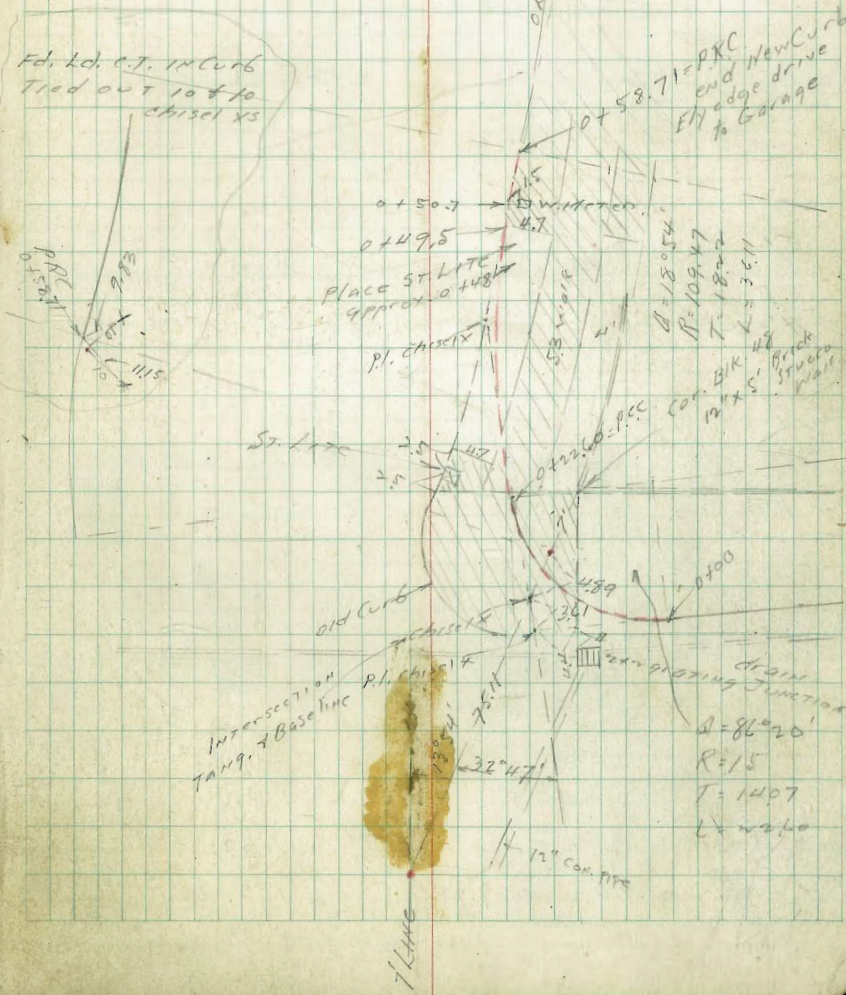
Indexed  
C.S.K.

72

Nly Cor.



Contd.  
166-29



Sly Cor. Prospect + Park Row

Top Cor of Cen. wall 5.35 133.89 Prop. Cor  
chisel X

0 + 42.48 P.C.C.

0 + 36.36

0 + 28.24

0 + 12.12

0 + 00 B.C.

Transfer  
 Set New BM BP <sup>SAME</sup> Corner 6.61 132.63 ← 25' S of  
 BM BP 7.16 139.24 132.08 S.L. Prospect  
 on Ely  
 curb of  
 Park Row.

134.62	132.4	132.22	132.18	131.95	131.22	131.51	131.22
5.22	6.8	2.02	7.06	2.29	7.52	7.73	8.02
5.3	5	13		9.7	9.7	20	30
Wall		Walk		cb	gut		Par

135.16	133.5	133.50	133.17	133.15	132.80	132.31	132.25	1322	131.83
4.08	5.7	5.74	6.07	6.09	6.34	6.93	6.44	7.02	7.41
9.3	9	5.2	6.07	2.2	5.2	5.2	10	20	30
Top wall		Walk edge		Walk edge	cb	gut		Par	

136.23	134.5	134.54	134.32	134.0	134.12	133.46	133.40	133.19
3.01	4.7	4.70	4.92	5.2	5.2	5.76	5.82	6.05
11.9	11.7	7.7	7.4		2.3	2.3	10	20
Top Wall		Walk			cb	gut		Par

137.15	135.4	135.40	135.26	135.22	135.21	134.56	134.61	134.48
2.09	3.8	3.82	3.98	4.02	4.03	4.68	4.63	4.76
13.5	13.5	9.3	4		2.6	0.7	10	20
Top Wall		Walk			cb	gut		Par

138.23	136.5	136.42	136.31	136.26	135.58	135.61	135.95
2.01	2.7	2.82	2.93	3.04	3.66	3.63	3.79
14	14	9	4.7	6	0.1	10	20
Top Wall			sch		gut.		Par

139.24

S. Cor Prospect + Park Row

Sly. Cor.

Main Junc Box Fl. 0467 1341 125.83  
 Junc. of 12" pipes 0416 129.14  
 Fly Fl. 12" pipe inlet 040 910 130.14

0480

0473.57 F.C.

0467.29

0461.04

0454.75

Lt.

&

Rt.

74

<u>132.64</u>	<u>132.57</u>	<u>132.50</u>	<u>131.94</u>	<u>131.72</u>	<u>131.36</u>	<u>131.07</u>
6.60	5.66	6.74	7.30	7.54	7.88	8.22
95	45	66	907	10	20	30
walk						

<u>134.28</u>	<u>132.6</u>	<u>132.48</u>	<u>132.40</u>	<u>132.33</u>	<u>131.74</u>	<u>131.68</u>	<u>131.33</u>	<u>130.95</u>
4.96	6.6	6.75	6.84	6.91	7.50	7.56	7.91	8.29
14	13.8	9.5	4.5	66	907	10	20	30
Top wall								

<u>134.21</u>	<u>132.5</u>	<u>132.39</u>	<u>132.21</u>	<u>132.1</u>	<u>132.14</u>	<u>131.53</u>	<u>131.50</u>	<u>131.07</u>	<u>130.44</u>
5.03	6.7	6.85	7.03	7.1	7.10	7.71	7.74	8.17	8.58
13.2	13.1	8.8	3.5	7.1	10	1	10	20	30
Top wall									

<u>134.14</u>	<u>132.8</u>	<u>132.26</u>	<u>132.01</u>	<u>132.0</u>	<u>131.85</u>	<u>131.44</u>	<u>131.44</u>	<u>131.05</u>	<u>130.58</u>
5.10	6.8	6.98	7.23	7.2	7.39	7.75	7.80	8.19	8.66
12.4	14	7.0	6.7	7.2	4.7	11.7	10	20	30
Top wall									

<u>134.01</u>	<u>132.3</u>	<u>132.13</u>	<u>132.09</u>	<u>131.83</u>	<u>131.55</u>	<u>131.21</u>	<u>130.72</u>
5.23	6.9	7.11	7.15	7.41	7.69	8.03	8.62
93	9.1	2.7	7.15	10	10	20	30
Top wall							

139.24

0 + 31.63

<u>12787</u>	<u>12856</u>	<u>12802</u>	<u>12893</u>	<u>12832</u>	<u>12944</u>	<u>12954</u>
7.77	9.68	10.27	10.51	9.97	9.80	9.70
30	30	10	4.4	6.4	0.5	5.6
			9.7	6.6	edg wall	

0 + 0.60 P.C.

<u>12998</u>	<u>12964</u>	<u>12990</u>	<u>12932</u>	<u>12951</u>	<u>1295</u>
9.72	9.60	10.34	9.97	9.73	9.7
30	30	8.6	8.6		approx 6.5
		9.7	6.6		Prop. Cor. under wall

0 + 11.95

<u>13011</u>	<u>12963</u>	<u>12882</u>	<u>12923</u>	<u>12850</u>
8.13	8.61	10.47	10.01	9.74
30	30	9.7	9.7	
		9.7	6.6	

0 + 11.30

<u>12992</u>	<u>12946</u>	<u>12871</u>	<u>12846</u>	<u>12915</u>	<u>12990</u>
9.77	9.78	10.53	10.78	10.09	9.84
30	20	10	5.6	5.6	on old Ret.
			9.7	6.6	

0 + 05.65

<u>12927</u>	<u>12848</u>	<u>12825</u>	<u>12821</u>	<u>12904</u>	<u>12900</u>
9.97	10.26	10.77	11.03	10.20	10.77
20	10	6.8	1.7	1.7	
			9.7	6.6	
			9.7	6.6	

0 + 00 B.C.

<u>12916</u>	<u>12859</u>	<u>12806</u>	<u>12885</u>
10.14	10.65	11.16	10.39
20	10	9.7	6.6

139.24

0 + 58.71 PRC

0 + 49.69

0 + 40.66

$$\begin{array}{r} 129.46 \\ 9.78 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 129.06 \\ 10.18 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 128.59 \\ 10.65 \\ 9.47 \\ \hline \text{IN DRIVE} \\ \text{WAY} \end{array}$$

$$\begin{array}{r} 129.39 \\ 9.85 \\ \hline 4.7 \end{array}$$

$$\begin{array}{r} 129.51 \\ 9.73 \\ \hline 9.0 \end{array}$$

← wait

$$\begin{array}{r} 129.50 \\ 9.78 \\ \hline 70 \end{array}$$

$$\begin{array}{r} 129.07 \\ 10.17 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 128.62 \\ 10.67 \\ 9.3 \\ \hline \text{GUT} \end{array}$$

$$\begin{array}{r} 128.24 \\ 10.00 \\ 9.3 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 129.26 \\ 9.78 \\ \hline \end{array}$$

$$\begin{array}{r} 129.46 \\ 9.84 \\ \hline 4.5 \end{array}$$

$$\begin{array}{r} 129.49 \\ 9.75 \\ 9.9 \\ \hline \end{array}$$

← wait

$$\begin{array}{r} 129.62 \\ 9.57 \\ \hline 70 \end{array}$$

GTR. 947C

129.82

129.74

129.08

128.69

129.31

$$\begin{array}{r} 9.47 \\ 30 \end{array}$$

$$\begin{array}{r} 9.70 \\ 20 \end{array}$$

$$\begin{array}{r} 10.16 \\ 10 \end{array}$$

$$\begin{array}{r} 10.55 \\ 1.8 \\ \hline \text{GUT} \end{array}$$

$$\begin{array}{r} 9.73 \\ 1.8 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 129.2 \\ 10.0 \\ \hline \end{array}$$

$$\begin{array}{r} 129.42 \\ 9.84 \\ 3.1 \\ \hline \end{array}$$

← wait

$$\begin{array}{r} 129.49 \\ 9.75 \\ 2.5 \\ \hline \end{array}$$

139.24

Prop. Recr. Bldg.

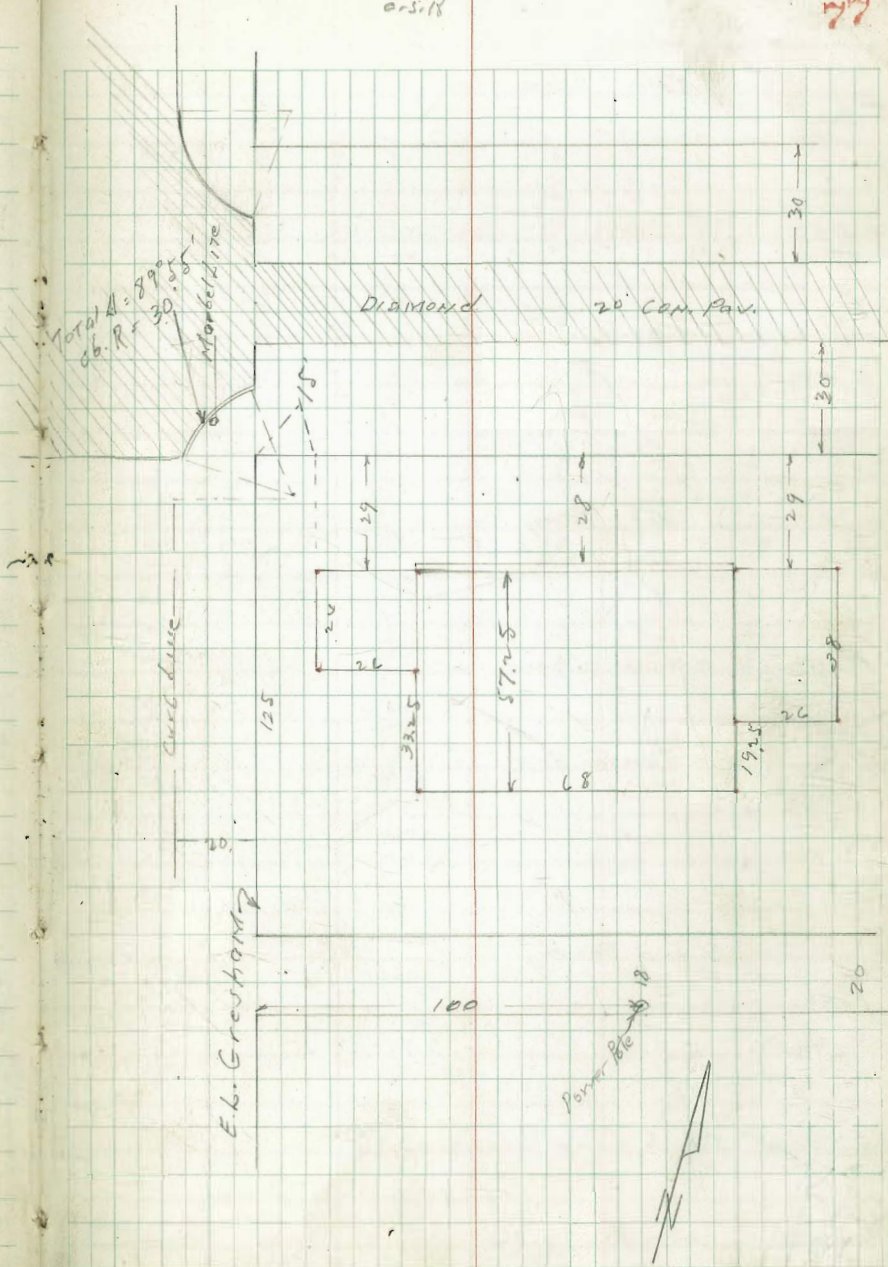
Messrs SE Cor Diamond & Gresham  
 Summerhayes  
 N.E.K.

4-21-44



Indexed  
 a.s. 11

177





Levels on Pac Beach  
Rec'd Bldg site

O + 75 ♀ Bldg.

O + 41

O + 15 W.L. Bldg.

O + 0 = E.W. Gresham

Center Ret.

cb

90T

S. end Ret. cb.

cb

90T

O - 20 E. cb line Gresham

NWBR 4.49 74.86

70.37

Diamond  
Gresham

LT

S.L. DIAMONDS

RT = to So. 78

71.15	3.71	3.71	3.81	3.9	2.4	4.5	4.9	5.0	5.2	5.4
70.68	70.67	70.54	70.56	70.96	71.46	70.36	69.96	69.17	68.22	68.46
4.18	4.19	4.34	4.3	3.4	4.4	4.90	5.29	5.6	5.35	7.3
50	50	30	24	22	44	29 H06	53 H06	86.35 H06	125	125
70.16	70.22	70.16	70.36	71.16	70.36	69.96	69.25	67.86	67.50	67.50
4.0	4.5	4.70	4.5	2.7	4.5	4.70	5.21	7.0	7.3	7.3
50	40	30	17	19	45	29 H06	53 H06	100	125	125
69.96	70.01	69.93	69.42	69.97	70.26	69.46	67.46	67.16	67.16	67.16
4.90	4.85	4.93	5.44	4.89	4.6	5.4	7.0	7.7	7.7	7.7
50	40	30	18	18	44	50	100	125	125	125
20' strip pay			90T pay	cb. end						
										E. end cb. Ret.
						67.13	67.76	66.76	76.06	
						573 pay	7.1	8.1	8.8	
						50	100	125	125	
						71.86				

2+50 W/L Fenced private property

2+00

1+35 FL Bldg

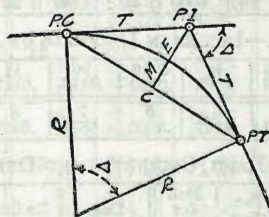
1+09

74.80

73.27	73.27	73.17	73.46	74.86	73.46	72.56	72.46
1.59	1.59	1.59	1.4	1.0	1.4	2.3	1.4
50	40	30	20	50	50	100	125
72.72	72.73	72.57	72.56	72.56	71.76	70.56	70.36
2.1	2.1	2.3	2.3	2.3	3.1	4.3	4.5
50	60	30	26	3	50	100	125
71.90	71.93	71.83	71.56	71.56	70.83	69.93	69.56
2.9	2.9	3.03	2.3	3.3	4.03	4.91	5.3
50	60	30	25	30	Hub	Hub	5
71.58	71.61	71.49	71.26	71.56	70.51	69.89	69.16
3.28	3.25	3.37	3.0	3.3	4.35	4.97	5.7
50	50	30	25	23	29	7	125
1	1	1	1	1	Hub	Hub	Hub
PAV.				74.80			

# DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES

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### CURVE FORMULAS

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

### EXPLANATION AND USE OF TABLES

**Stations.**—Given P. I.—Sta. 161+60.35 to find Sta. of P. C. and P. T.  $\Delta = 62^\circ 10'$   $D = 8^\circ 20'$ . From Table IV for  $1^\circ$  curve  $T = 3454.1$  and  $\div 8\frac{1}{3} = 414.49$  ft. From Table V correction=.36 or  $T = 414.85$  ft. P. C.—Sta. P.I.— $T = 157 + 45.50$ . Also from (4)  $L = 746.00$  and P. T.—Sta. P. C. +  $L = 164 + 91.50$ .

**Offsets.**—Tangent offsets vary (approximately) directly with  $D$  and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—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= $\frac{1}{2} D$  for 100 ft.,  $\frac{1}{4} D$  for 50 ft., etc. For  $c$  ft.—(in minutes)  $.3 \times C \times D^\circ$  or=defl. for 1 ft. from Table III  $\times C$ . For Sta. 158 of above curve=.3  $\times 54.5 \times 8\frac{1}{3} = 136.2'$  or  $2^\circ 16.2'$ , or= $2.50 \times 54.5 = 136.2'$  from Table III. For Sta. 159 deflection angle= $2^\circ 16.2' + 8^\circ 20' \div 2 = 6^\circ 26.2'$ , etc.

**Externals.**—May be found in similar manner for tangents. Thus  $E$  for curve above is 115.37. For from Table IV for  $1^\circ$  curve  $E = 960.6$  for  $8^\circ 20' = 960.6 \div 8\frac{1}{3} = 115.27$  and from Table V correction=.10 or  $E = 115.37$  ft. Or suppose  $\Delta = 32^\circ$  and  $E$  is measured and found to be 42 ft. What is  $D$ ? From Table IV  $E = 230.9$  and  $\div 42 = 5.5$  or  $D = 5^\circ 30'$ .



483  
570  
1067

7137

15369 M.H.

2613

78+9910

4708  
1, 2, 3  
55-71

2617  
19553  
19553  
5230  
2617  
3331

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1 1/2 For Single Track Embankment.

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

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

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