

2  
F.B. 912

LEVEL BOOK

373

# KEUFFEL & ESSER CO.

DRAWING MATERIALS

AND

SURVEYING INSTRUMENTS.

NEW YORK.

CHICAGO.

SAN FRANCISCO.

ST. LOUIS.

## TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.

FOR SINGLE TRACK EXCAVATION.

MICROFILMED  
DEC 1 1964

Copyright, 1885, by Keuffel & Esser Co.

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

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

Handwritten notes and calculations on the right page of the notebook. Includes a vertical line with numbers 208, 1705, 848, and 22927. To the right, there are several small arithmetic problems:  $3783 - 27 = 3756$ ,  $3756 - 53 = 3703$ ,  $3703 - 2990 = 713$ . Another calculation shows  $22927 - 1705 = 21222$ . There are also some other numbers like 1703, 17, 53, and 55 scattered around.

11/19/1911  
13/1/1911  
X Sec of 38 st at 60' continuous  
From Book 900  
1  
TP Book 900

645 82.4 75.9

2.50 S of National an

E 7.0 75.0

7.8 74.3

7.8 74.2

6 8.0 74.0

7.1 74.9

6.4 75.6

W 6.4 75.6

3.0 S = N of 20 st 80'

W 6.5 75.5

6.4 75.6

6.0 76.0

6 5.7 76.3

5.5 76.5

5.7 76.4

E 6.0 76.0

PLOTTED

8204

8204

3800

2

n 1/4 W St

center of W St

E		53	76.7
		56	76.4
		56	76.4
b		60	76.0
		60	76.0
		60	76.0
w		60	76.0

E		52	76.8
		53	76.5
		55	76.5
b		55	76.5
		56	76.4
		58	76.7
w		58	76.7

n 1/4 W St

S 1/4 W St

w		57	76.1
		59	76.1
		59	76.1
b		58	76.7
		56	76.4
		53	76.7
E		50	77.0

w		57	76.3
		57	76.3
		54	76.6
b		54	76.6
		55	76.5
		55	76.5
E		53	76.7

PLOTTED

8204

S

86.6

NW

E

54 76.6

56 76.4

55 76.5

6

57 76.3

57 76.3

60 76.0

W

60 76.0

S

line of

NW

W

61 75.9

58 76.3

57 76.4

6

53 76.7

52 76.8

50 77.0

E

53 76.7

PLOTTED

8204

50

59

W

NW

E

52 76.8

54 76.6

59 76.1

6

62 75.8

63 75.7

64 75.6

W

66 75.4

100

58

NW

W

69 75.1

67 75.3

65 75.5

6

66 75.4

66 75.4

62 75.8

E

60 76.0

386

3

8204

7876

3821

4

	150	S of	W of	
E			72	74.8
			64	75.4
			61	75.9
b			67	75.3
			72	74.8
			74	74.6
W			78	74.2
J.P.	430	7876	758	74.2
	200	S of	W of	
W			43	74.5
			44	74.4
			46	74.2
b			49	73.9
			50	73.8
			50	73.8
E			53	73.5

PLOTTED

	250	S of	W of	
E			48	74.0
			45	74.3
			44	74.4
b			48	74.0
			48	74.0
			47	74.1
W			51	73.7
	310	S =	N of	(80)
W			53	73.5
			52	73.6
			53	73.5
			55	73.3
b			54	73.4
			56	73.2
E			58	73.0

8204  
~~7876~~  
 7876  
 7876

7876

7876

38<sup>th</sup>

5

	N	bank	Gr	
E			54	73.4
			53	73.5
			49	73.9
L			52	73.6
			53	73.5
			54	73.4
W			57	73.6
	N	1/4 of	Gr	
W			56	73.3
			54	73.4
			51	73.7
S			49	73.9
			50	73.8
			48	74.0
E			47	74.1

PLOTTED

		center of	Gr	
E			44	74.4
			44	74.4
			49	73.9
L			57	73.7
			52	73.6
			55	73.3
W			57	73.1
	S	1/4 of	Gr	
W			57	73.1
			54	73.4
			53	73.5
			52	73.6
			50	73.8
			45	74.3
E			46	74.2

PLOTTED

7876

S 66 f Y 11

E	50	738
	48	740
	49	739
A	51	737
	51	737
	54	734
W	56	733

S 66 f Y 11

W	51	737
	51	737
	50	738
A	49	739
	52	736
	50	738
E	51	737

TD

215

7578

510

7363

13' 20" 11  
Y 7-28

PLOTTED

7578

50' 54 Y 11

W	13	745
	17	741
	18	740
A	20	738
	23	735
	24	733
E	25	733

100' 58 Y 11

E	50	708
	52	706
	52	706
A	54	704
	53	705
	54	704
W	54	704

3876

6

7876  
100  
215  
7578



7578

5085

5085

38

7

W	150	S 9	Y 11	114	644
				114	644
				116	643
b				118	640
				119	639
				119	639
E				121	637
TP	089	6347	1240	6338	
	200	506	Y 11		
E				72	56.3
				71	56.4
				70	56.5
b				71	56.4
				72	56.3
				74	56.1
W				78	55.7
TP	001	5085	1260	5087	

PLOTTED

W	250	S 9	Y 11	22	48.7
				23	48.5
				24	48.5
b				22	48.7
				17	49.3
				16	49.3
E				14	49.5
	300	S 2	S 9	Z 11	(80')
				85	47.4
				89	47.0
				90	41.9
				91	41.8
				93	41.4
				92	41.4
W				92	41.7

7578

1240

6338

6747

1260

5085

5485

5485

5085

	N	Center of	Z	ST
W			107	40.2
			108	40.1
			108	40.1
b			107	40.2
			107	40.2
			106	40.3
E			103	40.6
	N	148	Z	ST
E			124	38.7
			122	38.7
			120	38.9
b			122	38.7
			122	38.7
			122	38.7
W			121	38.8
TP	148	4060	1173	39.1

PLOTTED

4060

4060

384

8

	Center of	Z	ST
W		30	37.6
		30	37.6
		32	37.4
b		31	37.3
		33	37.3
		36	37.0
E		35	37.1
	S	14	Z
E		53	35.3
		50	35.6
		48	35.8
b		45	36.1
		43	36.3
		39	36.7
W		38	36.8

5085  
1173  
39.1  
40.60

PLOT

4060  
4040

S cont of Z st

W	51	355
	52	354
	57	349
b	64	342
	65	341
	69	337
E	70	336

S Lg Z

E	86	320
	88	318
	86	320
b	82	324
	76	330
	71	325
W	68	328

TP 059 2817 1302 2758

PLOTTED

2817  
2817

50 54 Z st

W	58	224
	51	231
	46	236
b	41	241
	36	246
	35	247
E	31	251

100 58 Z st

E	89	193
	91	191
	93	189
b	100	182
	104	178
	107	175
W	109	173

TP 229 2754 1292 1825

3822

9

4060  
330  
29.5  
28.5  
28.17  
18.25  
17.54

1754

1754

1857

10

150

S of

Z

W

W

43 133

39 136

40 135

b

38 137

34 141

35 140

E

35 140

200

S of

Z

E

50 125

51 124

50 125

b

52 123

52 123

52 123

W

54 121

225

S of

Z

W

63 113

59 116

66 109

b

66 109

66 109

69 106

E

70 105

250

S of

Z

E

140 3.5

140 3.5

120 5.5

b

100 7.5

87 8.8

86 8.9

W

85 9.0

PLOTTED

17.54

17.54

275

Sy

Z

i

W

14.9 3.1

14.7 3.3

14.7 3.3

b

14.0 3.5

14.0 3.1

9.0 8.5

E

6.5 11.0

300

Sy & Alpha 11 (80)

E

3.5 12.0

5.7 11.8

5.8 11.7

b

5.8 11.7

5.9 11.4

6.0 11.5

W

6.1 11.4

TP

1.20

16.00

6.74

10.80

13.14  
24.4 38

PLOTTED

16.00

16.00

11

R

H. f

alpha

st

W

4.5 11.5

4.5 11.5

4.3 11.7

b

4.5 11.5

4.4 11.4

4.3 11.7

E

4.2 11.8

R

H. f

alpha

E

4.3 11.7

4.3 11.7

4.4 11.6

b

4.6 11.4

4.3 11.7

4.2 11.8

W

4.2 11.8

17.4  
10.40  
16.00

7600  
16.00

center of Alpha

W 43 11.7

42 11.8

43 11.7

43 11.7

43 11.7

44 11.6

E 45 11.5

S line of Alpha

E 45 11.5

45 11.5

45 11.5

45 11.5

46 11.4

45 11.5

W 46 11.4

PLOTTED

7600  
16.00

S center of Alpha

W 48 11.2

47 11.3

49 11.1

49 10.8

49 11.1

49 11.1

E 50 11.0

S line of Alpha

E 50 11.0

51 10.9

49 11.1

49 11.0

49 11.1

49 11.1

W 48 11.2

3500  
12

1600  
1600

30

54

Alpha ✓

W

59 11.0

47 11.3

47 11.3

b

45 11.5

47 11.3

47 11.3

E

47 11.3

100

54

Alpha ✓

E

50 11.0

50 11.0

50 11.0

b

50 11.0

51 10.9

53 10.7

W

55 10.5

PLOTTED

1600  
1600

3800

13

150

54

Alpha ✓

W

59 10.3

60 10.0

60 10.0

W

58 10.3

60 10.0

58 10.3

E

56 10.4

200

54

Alpha ✓

E

58 10.3

58 10.3

58 10.3

b

59 10.1

61 9.9

62 9.8

W

62 9.8

700

548

1548

600

1000

PLOTTED

1548  
1548

250 S of Alpha

N	55	10.0
	55	10.0
	56	9.9
S	55	10.0
	52	10.3
	53	10.2
E	54	10.1

300 S = 7 S of Beta 2 (60)

E	55	10.0
	56	9.9
	54	10.1
S	61	9.4
	61	9.4
	62	9.3
N	60	9.5

PLOTTED

1548  
1548

380  
14

N S of Beta 2

N	61	9.4
	61	9.4
	61	9.4
S	61	9.4
	56	9.9
	56	9.9
E	57	9.8

N S of Beta 2

E	59	9.6
	56	9.9
	58	9.7
S	59	9.6
	59	9.6
	59	9.6
N	56	9.9



1549  
1548

Center of Beta 1

W	57	9.8
	57	9.8
	58	9.7
b	58	9.7
	59	9.6
	57	9.8
E	53	10.3

S line of Beta 1

E	55	10.0
	56	9.9
	58	9.7
b	59	9.6
	59	9.6
	59	9.6
W	62	9.3

PLOTTED

1549  
1548

38

15

S line of Beta 1

W	61	9.4
	60	9.5
	59	9.5
b	58	9.7
	60	9.5
	55	10.0
E	53	10.3

S line of Beta 1

E	50	10.5
	50	10.5
	52	10.3
b	53	10.3
	56	9.9
	58	9.7
W	60	9.5

PLOTTED

1544  
1548

	50	S of	Beta	↓
W			52	10.3
			53	10.2
			51	10.4
b			52	10.3
			49	10.6
			48	10.7
e			48	10.7
	100	S of	Beta	↓
E			50	10.5
			49	10.6
			49	10.6
b			51	10.4
			50	10.5
			52	10.3
W			53	10.2

PLOTTED

1548  
1548

380  
16

	150	S of	Beta	↓
W			53	10.2
			53	10.2
			55	10.0
b			55	10.0
			55	10.0
			54	10.1
e			55	10.3
	TP	42	56	10.2
	20	S of	Beta	↓
E			44	10.1
			46	9.9
			46	9.9
b			48	9.7
			47	9.8
			45	10.0
			45	10.0

1544  
516  
10.52  
432  
14.54

1/4 Post  
man

1854  
1254

W	250	S of Beta ✓	5.0	9.5
			5.0	9.5
			5.0	9.5
			5.0	9.5
			5.0	9.5
			5.1	9.4
E			5.0	9.5
	303	S = N 2 of Gamma ✓	4.8	9.7
E			4.4	10.1
			4.5	10.0
b			4.7	9.8
			4.8	9.7
			4.9	9.6
W			4.7	9.8

PLOTTED

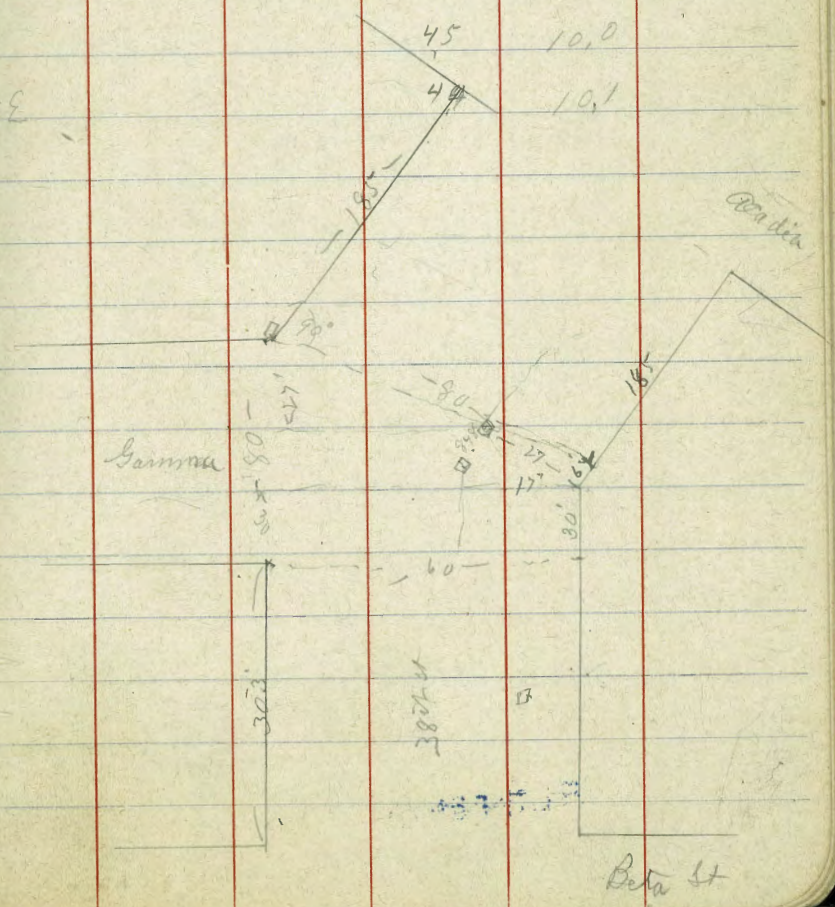
2206

1454  
1254

38  
17

3034 NE of Gamma = angle Gamma = 100  
33554 Beta

W	5.0	9.5
	5.0	9.5
	4.7	9.8
	4.8	9.7
	4.7	9.8
	4.5	10.0
	4.4	10.1



Beta 44

1454  
1454  
SE bar Gamma + 38 }  
6' S of angle on W } 00 = 185' mg Gamma

N		50	9.5
		52	9.3
		43	10.7
b		26	11.9
1/4		0.0	14.5

TP 1124 2574  
2986 000 1852

E		69	18.9
		25	23.3
	50	S of Gamma	
W		158	10.0
		150	10.8
		136	12.7
b		100	15.8
		65	19.3
H		30	23.0

TP 160 2986  
2986 150 2926

E 16 29.3

2986  
2986

384

18

100 S of Gamma

E		03	29.4
		23	27.5
		60	23.9
b		24	20.7
		120	17.9

148 15.1

164 13.5

150 S of Gamma

W		130	16.9
		128	17.1
		106	19.3
b		82	21.6
		64	23.5
		51	24.8
H		35	26.4

142  
1576  
150  
2426  
260  
2986

2286

2986

185

S = 9 L of Acetic

E

36 24.3

47 25.3

59 24.0

6

80 21.9

90 20.9

97 20.7

W

100 19.6

7P

060

25.08

5.38

24.48

270

24.09

3.70

21.38

Chk

9.50

14.58

Br-9m  
+ 10min

2286

24.48

25.08

27.20

27.38

27.70

24.04

PLOTTED

GET OUT

14 B	Height Eggs Zk	X Sec of 37th St (60)	Woolman on South			8961			37th
		11.3v	68.58	57.26		100	S of Woolman		20
									59.26
									15.32
									68.58
									16.6
									65.76
									12.37
									75.85
									21
									78.60
									8.97
									69.61
E			18	66.8			E	82	814
			20	65.4				86	81.0
			34	65.7			b	110	786
L			48	63.8				110	796
			48	63.8				120	776
			54	63.2			W	123	77.3
W			60	62.6		121	S = 2nd of Track		BC on W (50)
TP	1292	7985	166	65.9v			W	110	786
	50	5 of	Woolman						at 60 or 4
W			83	71.6				99	797
			77	72.7				96	800
			70	72.9			L	98	79.8
b			68	73.1				77	81.9
			43	75.6				72	824
			30	71.9				65	831
E			28	72.1					
TP	9.97	8961	121	78.61					

PLOTTED



8961  
8961

(10) N barb of Tank at = N down W

E	68	828
	74	822
	79	817
b	91	805
	91	805
	97	799
W	94	802

N barb of Tank = N 86 W

W 2	100	794
W	92	804
	88	808
	84	813
b	80	814
	76	820
	71	825
E	64	832

PLOTTED

8961  
8961

372

22

(10) barb of Tank at

E	59	837
	63	833
	68	828
b	76	820
	78	818
	79	817
W	81	815

barb of Tank = W

(5) W	88	818
-------	----	-----

S barb of Tank at

W	76	820
	73	823
	68	828
b	69	827
	61	835
	57	839
E	55	841

West barb of Tank

W	75	821
---	----	-----



8961  
8961

S bank of

Track Both sides

E 54 842

52 842

59 837

b 52 844

53 843

66 830

W 19 827

S line of Track

W 63 833

61 835

58 838

b 58 838

52 844

49 847

E 46 850

PLOTTED

8961  
8961

37  
23

50 59 Track

E 19 877

24 873

29 867

b 33 863

34 862

40 856

W 40 856

TP 268 8923 286 8925

109 S of Track

W 33 864

30 867

25 872

b 20 877

18 879

14 883

E 12 887

8961  
282  
81.05  
268  
88.73

8973  
8973

150

S of

Peak

E

01 896

09 888

14 885

L

14 883

18 879

22 875

W

25 873

200

S of

Peak

W

31 866

30 867

30 867

L

27 870

25 873

23 874

E

17 880

PLOTTED

8973  
8973

264

S =

N S of

S at 60' (on E only)

E

44 843

53 844

62 835

L

68 839

72 825

76 821

W

80 817

72

back of

S at

W

87 810

82 815

78 819

L

72 825

66 821

59 828

E

44 827

PLOTTED

37

24

8973  
8973

W

W of

S of

E

51 84.4

63 83.4

70 82.7

S

76 82.1

80 81.7

85 81.2

W

88 80.9

center of

S of

W

91 80.6

87 81.0

84 81.3

S

80 81.7

73 82.4

65 83.2

E

55 84.2

PLOTTED

8973  
8973

25

S

W of

S of

E

57 84.0

67 83.0

75 82.3

S

81 81.6

85 81.2

W

91 80.6

95 80.3

S

W of

S of

W

97 80.0

91 80.4

85 81.2

S

82 81.5

78 81.9

68 82.9

E

61 83.7

8973  
8973

S

dir

SW

E

6.3 834

6.8 829

7.7 820

b

8.3 814

8.8 809

9.5 812

W

10.0 797

50

S of

SW

W

10.7 790

10.2 795

9.5 802

b

9.0 807

8.4 813

8.0 817

E

7.6 821

PLOTTED

8973  
8973

26

100

S of

S of

E

27 80.0

104 79.3

111 78.6

b

11.8 77.9

12.6 77.1

TP

135

79.33

79.33

117.5 77.9

W

29 76.4

W

33 76.0

150

S of

S of

W

34 74.1

45 74.8

b

38 75.5

32 76.1

25 76.8

12 78.1

E

00 79.3

8973  
1125  
79.98  
123  
79.03

PLOTTED

7933  
7933

240

S of

S of

E	25	76.8
	30	76.3
	35	75.8
S	46	74.7
	53	74.0
	58	73.5
W	61	73.2

250

S of

S of

W	73	72.0
	72	72.1
	72	72.1
S	73	72.0
	71	72.3
	69	72.4
E	64	72.9

260

S = N & T of on W (50)

W	80	71.3
---	----	------

PLOTTED

7933  
7933

27

268

S = N &

T of

(60)

E	74	71.9
	74	71.9
	77	71.4
S	80	71.3
	81	71.3
	80	71.3
W	81	71.2

268

S = N &

T of

W	86	70.7
	85	70.8
	86	70.7
S	84	70.9
	80	71.3
	77	71.4
E	74	71.9

7933  
7933

N 1/2 f T w

E 76 71.7  
78 71.5  
83 71.0

S 88 70.5  
90 70.3  
93 70.0

W 92 70.0

Section of T w

W 97 69.6  
96 69.7  
94 69.9

S 90 70.3  
82 71.1  
79 71.4

E 72 72.1

**PLOTTED**

7933  
7933

387  
28

S 1/2 f T w

E 69 72.4  
75 71.8  
86 70.7

S 90 70.3  
96 69.7  
99 69.4

W 99 69.4

Section of T w

W 101 69.2  
S 101 69.2  
W 101 69.2

S 101 69.3  
100 69.3  
96 69.7

E 89 70.4

80 71.3

E 74 71.9

7933  
7933

S Lin of T<sub>1</sub>

E		77	714
		83	710
		89	704
b		96	697
		101	692
		104	689
W		109	684
	15' S of T <sub>1</sub>		
W		123	670
		107	686
		97	695
b		87	706
		83	710
		77	714
E		73	720

PLOTTED

7933  
7933

57  
29

50 S of T<sub>1</sub>

E		48	745	7933
		50	743	7933
		62	731	7933
b		66	727	
		74	719	
		86	707	
W		90	703	
	100 S of T <sub>1</sub>			
W		63	730	
		66	727	
		65	728	
b		64	729	
		64	729	
		63	730	
E		57	736	
	TP	585	7218	700
				7233

7814  
7818

130' S of T 1st

E 55 72.7

60 72.3

62 72.0

6 68 71.4

70 71.2

76 70.5

W 80 70.3

200' S of T 1st

W 82 70.0

78 70.4

78 70.4

1 75 70.7

68 71.4

63 71.9

E 58 72.4

PLOTTED

7814  
7818

00

250' S of T 1st

E 51 73.1

55 72.7

61 73.1

65 71.7

72 71.0

74 70.6

W 82 70.0

268' S = 2nd Floor. at 160'

W 80 70.7

79 70.3

72 71.0

1 66 71.6

62 72.0

56 72.5

E 52 73.0



$\frac{7818}{7818}$

N 1/4

Florence

E 61 72.1

66 71.6

67 71.5

S 72 71.0

76 70.6

80 70.3

W 84 69.8

N 1/4

Florence

W 89 69.3

84 69.8

80 70.3

S 76 70.6

75 70.7

72 71.0

E 70 71.2

$\frac{7818}{7818}$

Section of

Florence

E 75 70.7

77 70.5

79 70.3

S 80 70.3

80 70.3

90 69.2

W 92 69.0

S 1/4

Florence

W 94 68.8

90 69.2

86 69.6

S 84 69.8

81 70.1

78 70.4

E 75 70.7

37  
31

PLOTTED

78.4  
78.18

S

66 f

Florence

E

7.9 70.3

8.2 70.0

8.3 69.9

b

8.4 69.6

8.9 69.3

9.4 68.8

W

9.8 68.4

S Spring

Florence

W

9.9 68.3

9.6 68.6

9.2 69.0

b

9.0 69.2

8.8 69.4

8.7 69.5

E

8.3 69.9

TP

1.4

71.08

8.24

69.94

59.4 Florence

PLOTTED

71.08  
71.08

50

S

Florence

E

25 68.6

28 68.3

27 68.4

b

28 68.3

32 67.9

W

40 67.1

100

S of

Florence

W

52 66.5

52 66.5

50 66.1

b

48 66.3

47 66.4

44 66.7

E

42 66.9

71.08  
52

78.18

8.24

69.94

71.08

7108

140

S of = Pueblo Lin

E	49	66.7
	53	65.8
	59	65.7
b	67	64.4
	72	63.9
	76	63.5
W	76	63.5

65.71

Tp

263

65.74

500

63.8

New SW  
alley

150

S of Flamm

W	26	63.1
	28	62.9
	23	63.4
b	15	64.7
	10	64.7
	07	65.0
E	00	65.7

PLOTTER

6571

65.71

374

33

200

S of

Flamm

E	40	61.7
	41	61.5
	44	61.3
b	45	61.3
	44	61.3
	44	61.3
W	36	62.1

200

S of

Flamm

W	44	61.3
	60	59.7
	66	59.1
	69	58.8
	79	57.8
	79	57.8
E	80	57.7

7108

63.8

63.8

63.8

	550'	S of	F. Lawrence	
E			10.8	54.9
			10.5	55.2
			10.3	55.4
b			10.2	55.5
			9.8	55.9
			9.2	56.5
W			8.4	57.3

287' S-N of West (80')

W			13.8	51.9
			13.4	52.3
			13.3	52.4
b			13.2	52.5
			12.6	53.1
			12.2	53.5
E			12.0	53.7

PLOTTED

	N	East of West	
E			10.8 54.9
			12.1 53.6
			12.6 53.1
b			13.2 52.5
			13.4 52.3
			13.8 51.9
W			14.0 51.7

N 1/4 of West

W			14.0 51.7
			13.6 52.1
			13.4 52.3
b			12.6 53.1
			12.0 53.7
			11.6 54.1
E			10.3 55.4

6571  
6571

Center of West

E	71	586
	97	560
	104	550
b	117	540
	127	530
	134	523
W	144	513

S 1/4 of West

W	140	517
	130	527
	120	537
b	100	557
	86	571
	79	578
	60	597
E	58	599

PLOTTED

6571  
6571

S 1/4 of West

E	48	608
	50	607
	64	593
	73	584
b	90	567
	110	547
	120	534
W	138	519

S 1/4 of West

W	130	527
	114	543
	100	557
b	83	574
	72	585
	62	595
	51	606
E	48	609

374  
35

6571  
6571

50

S of

West

E

5.2 60.5

+3'

6.0 59.7

6.0 59.7

7.6 58.1

b

8.2 57.5

9.0 56.7

9.5 56.2

W

10.0 55.7

710

490

6138

923 56.44

166

S of

West

W

6.5 54.9

6.0 55.4

5.1 56.3

b

3.8 57.6

x5'

2.9 58.6

1.8 59.0

1.0 60.4

E

1.1 60.3

PLOTTED

6138  
6138

150

S of

West

E

24 59.0

19 59.5

20 59.4

36 57.8

b

44 57.0

55 55.9

63 55.1

W

73 54.1

200

S of

West

W

97 51.7

87 52.7

77 53.7

b

69 54.5

60 55.4

48 56.6

E

41 57.3

374

36

6571

56.44

4.99

61.58

6134  
6138

250

S of

Point

E

42 573

49 565

52 563

b

70 544

75 539

82 533

W

83 531

W

299

S of

Point

W

96 518

93 521

100 514

b

100 514

85 559

55 559

E

38 558

PLOTTED

6134  
6138

300

S = rd National Ave (80) <sup>Grade</sup>

E

108 506

100 504

114 500

b

122 492

123 491

123 491

W

126 488

TP

142

5192

5192

1088 5030

S

Line

of

National

E

37 483

43 476

47 473

b

47 473

58 461

61 458

W

55 464

37  
37

(80) <sup>Grade</sup>

6134

1034

50.20

1.72

51.92

5192  
51.92

1' S of National av

W	24	495
	23	496
	24	495
	31	488
	33	486
	35	484
E	38	481

50' S of National

E	99	420
	82	437
	85	434
	96	423
	101	418
	96	423
W	92	427

PLOTTED

5192  
51.92

70' S of National

W	123	396
	117	403
	115	404
b	114	405
	110	409
	100	411.9
E	90	429

100' S of National

E	53	464
	74	440
	94	425
b	110	409
	120	399
	124	396
W	138	389

38



5192  
5192

125'

S of

National

W

128 39.1

112 40.7

97 42.3

S

80 43.9

61 45.8

40 47.9

E

24 49.5

150

S of

National

E

39 48.0

45 47.4

60 45.9

S

74 44.5

75 44.4

82 43.7

W

82 43.7

PLOTTED

5192  
5192

175'

S of

National

W

75 44.4

62 45.7

57 46.3

S

60 45.9

65 45.4

62 45.7

E

63 45.6

200

S of

National

E

81 43.8

77 44.3

86 43.3

S

85 43.4

80 43.9

77 44.3

W

70 44.9

70

442

4931

70 44.89

3740

39

5192  
703  
4489  
422  
4931

4931  
4931

250

S g

Station

W 86 40.7

86 40.7

99 39.4

b 99 39.4

93 40.0

87 40.6

E 75 41.8

296

S = N 27 West (80)

E 59 43.4

74 41.9

88 40.5

b 106 38.7

117 37.6

118 37.5

W 128 36.5

PLOTTED

4931  
4931

372

40

N

hourly

W

W

W 130 36.3

122 37.1

116 37.7

b 96 38.7

78 41.5

68 42.5

E 55 43.8

N

hourly

W

E 50 44.3

62 43.1

70 42.3

b 87 40.6

94 39.9

107 38.6

W 129 36.4

PLOTTED

4931  
4931

Center of West

W	114	37.9
	90	40.3
	80	41.3
b	77	41.6
	74	41.9
	64	42.9
E	50	44.3

S 1/2 of West

E	51	44.7
	64	42.9
	71	42.7
b	80	41.3
	85	40.8
	95	39.8
W	107	38.6

PLOTTED

4931  
4931

37  
41

S Center of West

W	99	39.6
	92	40.1
	85	40.8
b	77	41.6
	67	42.6
	60	43.3
E	50	44.3

S 1/2 of West

E	46	44.7
	60	42.3
	67	42.6
b	70	42.3
	76	41.7
	90	40.3
W	108	38.5

PLOTTED

4901  
4931

50

Sy

Wst

W

91

40.3

85

40.8

78

41.5

b

70

42.3

64

42.9

66

42.7

E

60

43.3

100

Sy

Wst

E

74

41.9

79

41.4

80

41.3

81

41.3

80

41.3

81

41.3

W

85

40.8

TP

324

4435

820

41.1

PLOTTED

4435  
4435

32

42

150

Sy

Wst

W

55

38.9

55

38.9

52

39.0

b

49

39.5

46

39.8

38

40.6

E

33

41.1

200

Sy

Wst

E

47

39.7

54

39.0

57

38.7

b

61

38.3

67

37.7

70

37.4

W

70

37.4

4931  
324  
41.1  
324  
49.35

44.35

250

S y

W x

W

83 36.1

78 36.6

75 36.9

b

72 37.2

68 37.6

63 38.1

E

57 38.7

300

S =

n 2

Y x

(80)

E

62 38.2

61 38.3

64 38.0

b

70 37.4

74 37.0

82 36.2

W

90 35.1

PLOTTED

44.35

370

43

N

bushy

Y

x

W

94 35.0

85 35.9

77 36.7

b

70 37.4

68 37.6

70 37.4

E

69 37.5

N

1/4 b

Y

x

E

75 36.9

77 36.7

77 36.7

b

79 36.5

81 36.3

87 35.7

W

95 34.9

Sentine of Y W

W 97 34.7

91 35.3

88 35.6

6 86 35.8

83 36.1

82 36.3

E 80 36.4

S 1/4 of Y

E 83 36.1

83 36.1

83 36.1

6 84 36.0

86 35.8

87 35.7

W 86 34.8

PLOTTED

S 66 of Y W

W 94 35.0

95 35.9

85 35.9

6 84 36.0

84 36.0

85 35.9

E 86 35.8

S line of Y

E 92 35.7

92 35.7

92 35.7

6 91 35.3

90 35.4

90 35.4

W 102 34.7

TIP 1.35 37.00 870 35.65

mm 13'

Y + 37

4435  
870  
35.65  
37.00

3700

3700

3700  
15

50

S of

Y of

150

S of

Y of

W

3700

1115

24.92

27.24

33.86

W

47 32.3

W

121 24.9

48 32.2

126 24.4

48 32.2

126 24.4

L

46 32.4

L

126 24.4

41 32.9

124 24.8

34 33.6

117 25.3

E

28 34.2

E

119 25.1

100

S of

Y of

TP

794

3386

1108

15.20

E

73 29.7

155

S of

Y of

73 29.7

E

102 23.7

72 29.8

93 24.5

L

70 30.0

95 24.4

69 30.1

L

100 23.9

65 30.5

101 23.8

W

60 31.0

101 23.8

W

98 24.1

PLOTTED

3386

190

Sg

Y

W

126 21.3

130 20.9

115 22.4

L

100 23.9

92 24.7

86 25.3

E

81 25.8

200

Sg

Y

E

64 27.5

61 27.8

71 26.8

L

88 25.1

100 23.9

112 22.7

W

118 22.1

PLOTTED

3386

200

Sg

Y

W

89 25.0

76 26.3

72 26.9

L

59 28.0

48 29.1

39 30.0

E

31 30.8

250

Sg

Y

E

30 30.9

31 30.9

33 30.6

L

37 30.3

43 29.6

48 29.1

W

57 28.2

370

46



3386

275

S<sub>q</sub>

Y

N

42 297

42 297

42 297

S

41 298

41 298

41 298

E

38 301

300

S =

N

Z

11

(80)

E

50 289

50 289

50 289

S

53 286

50 289

49 290

W

52 287

PLOTTED

3386

374

47

N

bulb

Z

W

61 278

60 279

60 279

S

60 279

60 279

E

60 279

N

1/4

Z

E

67 273

67 273

66 273

S

67 273

68 271

69 270

W

67 273

3386

Center of

Z

W	78	26.1
	77	26.2
	74	26.5
b	71	26.8
	73	26.6
	75	26.4
E	72	26.7
	73	26.6
	74	26.5
	79	26.0
b	82	25.7
	83	25.6
	85	25.4
W	87	25.2

S 1/4 of

Z

E	73	26.6
	74	26.5
	79	26.0
b	82	25.7
	83	25.6
	85	25.4
W	87	25.2

PLOTTED

3386

37

48

S

Center of

Z

st

W	90	24.9
	87	25.2
	86	25.3
b	85	25.4
	77	26.2
	73	26.6
E	75	26.4
	77	26.2
	75	26.4
	77	26.2
	75	26.4
	76	26.3
b	84	25.5
	90	24.9
	92	24.7
W	93	24.6

S

Center of

Z

E	77	26.2
	75	26.4
	76	26.3
b	84	25.5
	90	24.9
	92	24.7
W	93	24.6

3386

	50	Sg	Z	A
W			100	239
			98	241
			102	237
b			103	236
			104	235
			101	238
E			99	240
	100	Sg	Z	A
E			112	227
			110	229
			110	229
b			108	231
			109	230
			113	226
W			117	222
TP	121	2403	114	227

PLOTTED

2403  
2403

49

	150	S	g	Z	A
W				27	213
				23	217
				24	216
b				23	217
				25	215
				26	214
E				29	211
	200	S	g	Z	A
E				44	196
				42	198
				40	200
b				39	201
				38	202
				38	202
W				43	197

2386  
110  
221  
2403

2403

250	Sy	Z	W
W		69	17.1
		66	17.4
		65	17.5
b		65	17.5
		66	17.4
		68	17.2
E		70	17.0

300 S = 20 & alpha

E		105	13.5
		108	13.2
		111	12.9
b		115	12.5
		122	11.8
		128	11.2
W		137	10.3

TP	168	1311	1260	1173
----	-----	------	------	------

PLOTTED

1311

274

50

W	h	count	alpha	W
				2463
				1260
				1193
				418
				1311
		36	9.5	
		28	10.3	
		24	10.7	
b		19	11.2	
		14	11.7	
		10	12.1	
E		04	12.7	

E	h	count	alpha
		14	11.7
		18	11.3
		24	10.7
b		26	10.5
		35	9.6
		42	8.9
W		45	8.6

3170

Center of Alpha

W 49 82

48 83

44 87

b 37 94

32 99

29 102

E 26 105

S 1/4 of Alpha

E 40 91

42 89

44 87

b 46 83

52 79

57 74

W 57 74

PLOTTED

S 1/4 of alpha

W 54 77

53 78

51 80

b 48 83

49 83

48 83

E 48 83

S 1/4 of alpha

E 51 80

50 81

50 81

b 50 81

50 81

50 81

W 50 81

W 51 80

	40	sg	alpha	
W			5.2	7.9
			5.0	8.1
			5.2	7.9
b			5.8	7.3
			5.7	7.4
			6.6	6.5
E			6.8	6.3

	50	sg	alpha	
E			13.0	0.1
			13.0	0.1
			13.0	0.1
b			13.0	0.1
			13.0	0.1
			13.0	0.1
W			13.0	0.1

PLOTTED

	65	sg	alpha	
W			12.0	1.1
			10.5	2.6
			10.4	2.7
b			9.5	3.6
			7.2	5.9
			6.6	6.5
E			6.0	7.1

	100	sg	alpha	
E			5.2	7.9
			5.5	7.6
			5.5	7.6
b			5.4	7.7
			5.3	7.8
			5.2	7.9
W			4.8	8.3

13.11

150

S of

alpha

W

48 83

50 81

50 81

S

51 80

51 80

50 81

E

50 81

200

S of

alpha

E

55 76

55 76

57 74

S

57 74

56 75

57 74

W

56 75

13.11

250

S of

alpha

W

61 7.0

62 6.9

62 6.9

S

62 6.9

62 6.9

62 6.9

E

63 6.8

300

S =

7 of

Beta of (80)

E

64 6.7

64 6.7

65 6.6

S

64 6.7

64 6.7

66 6.5

W

66 6.5

374

53

PLOTTED

1311

11.37

372

54

W N. h.f. Beta 2  
6.6 6.5

6.5 6.6

6.5 6.6

L 6.6 6.5

6.3 6.8

6.4 6.7

E 6.5 6.6

70 5.24 11.37 6.98 6.3

N h.f. Beta 1

E 4.8 6.6

4.8 6.6

4.7 6.7

L 4.7 6.7

4.7 6.7

5.0 6.4

W 5.9 5.5

Counter of Beta 2

W 5.5 5.9

5.4 6.0

5.5 5.9

L 5.4 6.0

5.4 6.0

5.3 6.1

E 5.2 6.3

S 74.7 Beta 2

E 5.0 6.4

5.1 6.3

5.1 6.3

L 5.1 6.3

5.0 6.4

5.0 6.4

W 5.1 6.3

1211  
5.13  
5.24  
7.57

PLOTTED



1137

S Carb of B. to 2

W	51	6.3
	50	6.4
	52	6.2
b	52	6.2
	52	6.2
	51	6.3
E	50	6.4

S Carb of B. to 2

E	51	6.3
	52	6.2
	53	6.1
b	53	6.1
	54	6.0
	52	6.2
W	51	6.3

PLOTTED

1137

1137

37th

55

W Carb of B. to 2

W	55	5.9
	55	5.9
	55	5.9
b	55	5.9
	55	5.9
	51	5.8
E	55	5.9

Chick

105 10.32 14 Red m 380 P.H.

PLOTTED

11/17  
17/18  
18/19

X dia of 36th St (60')  
Siegel St South

Mar 36  
Siegel

10243

36th  
56

5.94  
10243  
10243

96.49

50 S of Siegel

96.49  
59.2  
102.4

(67')

S Line of Siegel St

E

5.8 96.4

E

6.0 96.4

6.0 96.4

7.2 95.3

7.0 95.4

8.2 94.3

W

6.7 95.7

W

9.4 93.0

6.3 96.1

11.0 91.4

6.0 96.4

11.4 91.0

W

5.3 97.1

11.4 91.0

W 76'

9.3 93.1

76.6 S = end of 9th St (60')

S of Siegel on 31' S on

E } 00  
W }

W

4.8 97.6

W

7.4 95.0

5.2 97.3

8.1 94.3

6.0 96.4

9.4 93.0

W

6.0 96.4

W

9.4 93.0

6.4 96.0

6.7 95.7

6.2 96.3

6.1 96.3

E

5.9 96.5

E

6.0 96.4

PLOTTED

16243

N  
cut of Webster

E	59	96.5
	61	96.3
	61	96.3
b	60	96.4
	57	96.7
	53	97.1
W	47	97.7

N  
1/4 of Webster

W	47	97.7
	50	97.4
	54	97.0
b	58	96.6
	59	96.5
	60	96.4
E	60	96.4

PLOTTED

10243

362

57

S  
cut of Webster

E	60	96.4
	60	96.4
	57	96.7
b	56	96.8
	53	97.1
	47	97.7
W	44	98.0

S  
1/4 of Webster

W	44	98.0
	50	97.4
	53	97.1
b	55	96.9
	56	97.8
	61	96.3
E	65	96.3

PLOT

10243

S Burl of Webster

E 63 96.1

58 96.6

57 96.7

6 60 96.4

55 96.9

50 97.4

W 48 97.6

S Burl of Webster

W 51 97.3

55 96.9

57 96.7

L 61 96.3

56 96.8

56 96.8

E 64 96.0

PLOTTED

10245

50

S of Webster

E 69 95.5

56 96.8

55 96.9

6 62 96.2

62 96.2

50 97.4

W 55 96.9

TP 535 10288 10288 490 97.5

100 S of Webster

W 48 98.1

48 98.1

52 97.7

6 55 97.4

51 97.8

60 96.9

E 66 96.3

58

10243

50

97.5

102.88

102.88

150

S of

Webster

E 70 95.9

60 96.9

53 97.6

L 51 97.8

51 97.8

48 98.1

W 48 98.1

200

S of

Webster

W 56 97.3

56 97.3

56 97.3

L 57 97.7

57 97.7

60 96.9

E 64 96.5

PLOTTED

102.88

250

S of

Webster

E 78 95.1

70 95.9

63 96.6

L 58 97.1

58 97.1

57 97.7

W 55 97.4

300

S of

Webster

W 37 99.2

37 99.2

40 98.9

L 45 98.4

53 97.6

59 97.0

E 68 96.1

TR 183 100.99  
100.99 372 99.6

59

102.88  
372  
53.72  
183  
100.99on Page 300 S  
W Line

10099

350

S of Webster

W	27	98.3
	23	98.7
	23	98.7
b	26	98.4
	28	98.2
	33	97.7
E	48	96.2

400

ST

Webster

E	57	95.3
	57	95.8
	50	96.0
b	47	96.3
	47	96.3
	49	96.1
W	51	95.9

PLOTTED

10079

442

S. of = N. of Gilmore (58') (on E)

32

60

W	71	93.9
	66	94.4
	60	95.0
b	58	95.2
	56	95.4
	56	95.4
E	56	95.4

N

Lambert

Gilmore

E	55	95.5
	58	95.2
	60	95.0
b	66	94.4
	70	94.0
	75	93.5
W	78	93.2

	N	1/4	Gilman
W			83 92.7
			77 93.3
			70 94.0
b			66 94.4
			62 94.8
			58 95.2
E			50 96.0
	Center of		Gilman
E			49 96.1
			57 95.3
			63 94.7
b			70 94.0
			74 93.4
			78 93.2
W			83 92.7

PLOTTED

	S	1/4	Gilman
W			83 92.7
			80 93.0
			75 93.5
b			69 94.1
			64 94.8
			52 95.4
E			49 96.1
	Center of		Gilman
E			46 96.4
			52 95.8
			60 95.0
b			67 94.3
			76 93.4
			80 93.0
W			86 92.4

10099

S line of Gilmore

W		90	920
		80	930
		76	934
L		66	944
		56	954
		45	965
E		44	966
	50	S of	Gilmore
E		36	974
		38	977
		48	969
L		55	955
		73	937
		82	928
W		90	920

PLOTTED

10119

S of Gilmore

W		85	925	10119
		70	940	274
		59	957	98286
L		49	961	98281
		44	966	
		35	975	
E		29	981	
	TP	066	9891	274
	160	S = N of	Minnesota St	(50) (in W)
E		22	967	
		29	960	
		33	966	
L		39	950	
		51	938	
		65	924	
W		83	906	

3600

62



9891

N barb Minerva

W 94 895

72 917

60 929

S 49 940

36 953

22 957

E 20 969

N 1/4 of Minerva

E 20 969

32 957

39 950

S 50 939

63 926

74 915

W 93 896

9891

Center of Minerva

W 22 897

26 913

65 924

S 52 937

40 949

34 955

E 22 967

S 1/4 of Minerva

E 24 965

35 954

41 948

S 53 936

67 923

77 913

W 92 896

362

23

PLOTTED

9891  
9891

S. Cent of Minerva

W 22 897

78 911

67 922

S 56 933

44 945

36 953

E 27 962

S. Sin of Minerva

E 28 961

110 949

47 942

S 56 933

67 922

77 912

W 89 900

PLOTTED

9891  
9891

50 S of Minerva

W 108 881

100 889

97 892

S 76 913

68 921

62 927

E 55 934

100 S of Minerva

E 82 907

92 897

88 891

S 102 887

S 110 879

122 867

W 130 859

TP 208 888 1200 865

364  
64

9881  
1200  
9675  
208  
84.90

8893  
8893

150' S of Minerva

W	57	83.7
	45	84.4
	32	85.7
b	21	86.8
	11	87.8
	05	88.4
E	+02	89.1

200' S of Minerva

E	13	87.6
	25	86.4
	35	85.4
b	46	84.3
	60	82.9
	74	81.5
W	82	80.7

PLOTTED

88.83  
88.93

250' S of Minerva

W	104	78.5
	96	79.3
	80	80.9
b	66	82.3
	3-4	83.5
	48	84.1
E	32	85.7

300' S of Minerva

E	50	83.9
	66	82.3
	74	81.5
b	88	80.1
	101	78.8
	118	77.1
W	132	75.7

TP

132

79.32

79.32

1023

78.90

95

364

65

88.83  
109  
78.00  
1.11  
79.32

7932  
7932

-350' S of Minerva

W	67	72.6
	58	73.5
	50	74.3
b	34	75.9
	20	77.3
	12	78.1
E	01	79.2

390' S of Minerva (80)

E	51	74.2
	56	73.7
	62	73.1
b	76	71.7
	82	71.1
	90	70.3
W	90	70.3

TP. 050 6919 1053 6869  
 Check 02 6919 ✓ BM

PLOTTED

6919  
6919

364  
66

S line of Woodman

E	29	66.3
b	22	66.0
W	54	63.8

50' S of Woodman

W	87	60.5
b	70	62.2
E	69	62.3

125' S

E	88	60.4
b	106	58.6
W	117	57.5

150' S

W	138	55.4
b	123	56.9
E	115	57.7

TP. 050 6919 1264 5655

175' S

E	24	54.7
b	15	55.6
W	22	54.9

7932  
 68.69  
 57.87  
 12.64  
 46.53  
 97.08

5708  
5708

	200	S of	Wolman	
W			41	530
b			40	531
E			69	502
	250	S of	W	
E			132	439
b			86	485
W			70	501
	300	S		
W			77	494
b			110	461
TP	50	4415	1293	445
E		4415	40	402
	350	S		
E			95	347
b			65	377
W			23	419
	580	S		
W			77	363
b			110	332
E			125	317

PLOTTED

445

364  
67

	400	S of	Wolman	
E			113	379
b			125	317
W			107	335
	425	S		
W			130	312
b			120	322
E			72	370
	4433	S = N 2 of S at (60) = E		
E			40	402
b			95	347
W			130	312
		center of	SN	
W			110	332
b			52	390
E			708	450
		S 2 of	SN	
E			710	452
b			32	410
W			95	347

4208  
1591  
5415

4415  
4415

	50	S of	SV	
W			6.6	37.4
S			5.0	39.2
TP	683	44.71	4.27	39.84
E			4.7	42.0
	100	S		
E			0.6	44.1
S			2.0	44.7
W			4.0	42.7
	115	S		
W			4.6	42.1
S			2.5	44.2
E			0.2	44.6
	150	S		
E			4.7	42.0
S			7.0	39.7
W			10.1	36.6
	190	S		
W			10.5	31.2

PLOTTED

4671  
4671

	195	S of	SV	
W			21.0	35.7
	200	S		
W			15.5	31.2
S			16.0	30.7
E			10.3	36.4
	220	S		
E			12.0	34.7
	235	S		
E			15.8	30.9
	245	S		
E			11.7	35.0
	250	S		
E			10.4	36.3
S			7.7	39.0
W			4.1	42.6
	270	S		
W			2.4	44.3

364  
68

3415  
2.22  
29.84  
1.83  
36.71

4671

	300	S of	S of		
W			31	436	
b			1.1	456	
E			29	438	
TP	110		118	453	
	350	S			
E			74	491	
b			74	491	
W			10.2	463	
	400	S			
W			86	479	
b			52	573	
E			42	523	
	450	S			
E			24	521	
b			35	530	
W			72	493	
	500	S			
W			52	513	
b			30	530	
E			23	542	

PLOTTED

69

	70		756	5.53 61.94 61.94	215	5434
			550	S of	S of	
E					47	572
b					67	553
W					88	531
			600	S		
W					78	541
b					71	548
E					58	561
			650	S		
E					56	563
b					46	573
W					67	553
			700	S		
W					49	570
b					47	573
E					48	571
			750	S		
E					57	563
b					60.7	559
W					58	561

3671  
 118  
 355.3  
 11.00  
 46.53  
 25.5  
 44.38  
 70.5  
 51.94  
 6.00  
 45.94

6194

6194

-781 S of S = Pueblo line SA 1161 S

W

69 55.0

L

71 54.8

E

58 54.1

5976

TP

382

5976

600 55.94

Ben Mon  
SW Pueblo  
1161  
Logan

800' S of S at = 143' n of Logan

E

33 56.5

32 56.6

36 56.2

L

48 55.0

56 54.2

54 54.4

W

53 54.5

850' S

W

71 52.7

74 52.4

73 52.5

L

63 53.5

54 54.4

50 54.8

E

48 55.0

PLOTTED

5976

5976

900' S of SW

E

74 52.4

76 52.2

79 51.9

L

87 51.1

95 50.3

E

94 50.4

W

98 50.0

5872

TP

306

5872

910 50.66

943' S = A L of Logan on (80')

E

30 50.7

40 49.7

36 50.1

L

40 49.7

50 48.7

54 48.3

W

56 48.1

362 70

45.94  
2.82  
49.76  
4.14  
40.66  
2.66  
43.72

MEH  
Logan 24



5372  
5372

N Center of Log

E			35	502
			47	490
			45	492
b			44	493
			50	487
			57	480
W	n	1/4	52	485
W			53	484
			61	476
			60	477
b			54	483
			53	484
			50	487
E			41	486

PLOTTED

5372  
5372

Center of Log

E			43	494	4322
			54	483	57.46
			58	479	59.50
b			67	470	
			70	467	
			66	471	
W			58	479	
	S	1/4		Log	
W			60	477	
			67	470	
			76	461	
b			73	464	
			70	467	
			65	475	
E			48	489	
TP	204	4850	626	474	SEM Log

36  
1

4950  
4950

S curb of Logy

E	13	48.3
	22	47.3
	32	46.3
6	42	45.3
	42	45.3
	39	45.6
W	32	46.3

S Lin of Logy

W	32	46.3
	41	45.4
	47	44.8
6	47	44.8
	42	45.3
	31	46.4
E	21	47.4

PLOTTED

4950  
4950

50 S of Logy

E	56	43.9
	64	43.1
	70	42.5
6	64	43.1
	55	43.0
	42	45.3
W	33	46.0

100 S of Logy

W	66	43.9
	68	43.7
	80	41.5
6	86	40.9
	88	40.7
	91	40.4
E	77	41.8
TP	72	41.8

264  
72

2950  
772  
31.74  
32.68

090 42.68

4268  
4268

150 S of Logon

E 37 390

36 391

29 398

6 25 402

15 412

08 419

W 00 427

200 S of Logon

W 00 427

05 427

25 402

6 40 387

45 382

54 373

E 60 367

PLOTTED

4268  
4268

36  
33

250 S of Logon

E 65 362

55 372

41 385

6 32 395

23 404

16 411

W 10 417

299 S of Logon

W 02 425

17 408

30 397

6 36 391

43 384

50 377

E 57 370

42.68  
42.68

300

S = N of National (80')

E 46 38.1

49 37.8

47 38.0

N 39 38.8

33 39.4

32 39.4

W 24 40.3

Baseline of National

W 42 38.5

44 38.3

50 37.7

V 55 37.2

62 36.5

64 36.3

E 67 36.4

chip 12.95 49.28 635 36.33

m. m. 52  
T. m. m.

PLOTTED

49.28  
49.28

364

4

i sq National an

E 122 37.0

113 38.0

93 40.0

N 90 40.3

81 41.2

52 44.1

W 31 46.2

50 S of National

W 28 46.5

44 44.9

35 43.8

N 67 42.6

70 42.3

86 40.7

E 98 39.6

42.14  
635  
36.03  
12.95  
49.28

4928  
4938

100 S of National

E 101 393

93 400

86 407

S 68 425

44 449

30 463

W 22 471

150 S of National

W 13 480

28 465

40 453

S 35 438

75 418

86 407

E 96 397

TP 988 5464 372 4556

PLOTTED

5464  
5464

51 75

200 S of National

E 140 404

120 424

106 440

S 88 458

73 473

62 484

W 52 494

250 S of National

W 44 503

54 493

68 478

S 82 464

99 457

116 430

E 140 403

4928  
322  
4536  
728  
5464

5464  
5464

-300 S = N of Grand ave (80)

E	100	44.0
	85	46.1
	71	47.5
S	63	48.3
	53	49.3
	39	50.7
W	30	51.4
W	30	51.4
	39	50.7
	50	49.6
S	55	49.1
	67	47.9
	85	46.1
E	103	44.3

PLOTTED

5464  
5464362  
76

N 100 Grand av

E	100	44.6
	80	46.6
	70	47.6
S	60	48.6
	50	49.6
	40	50.6
W	34	51.7
W	32	51.4
	37	50.9
	43	50.3
S	53	49.3
	66	48.0
	77	46.9
E	95	45.1

PLOTTED

5464  
5464

S

1/4 of

Grand

E

92 45.4

72 47.4

62 48.4

S

52 49.4

44 50.2

38 50.8

W

346 51.8

S

bank of

Grand

W

37 50.9

39 50.8

40 50.6

S

48 49.8

58 48.8

68 47.8

S

88 46.8

in 15' min

5464  
5464

36  
78

E

S

1/4 of

Grand

E

84 46.7

61 48.5

54 49.7

S

51 49.5

45 50.1

39 50.7

W

41 50.5

10

S 7

Grand

W

52 49.4

57 48.9

63 48.3

S

69 47.7

77 46.9

86 46.0

E

100 44.6

PLOTTED



5464  
5464

100

S of

Ground

E

84 46.2

70 47.6

64 48.2

S

55 49.1

47 49.9

45 50.1

W

47 49.9

150

S of

Ground

W

56 49.0

53 49.3

54 49.2

S

56 49.0

58 48.8

60 48.6

E

67 47.9

TP

242

5145

561

49.0

PLOTTED

5145  
5145

200

S of

Ground

E

32 48.3

30 48.5

27 48.8

S

24 49.1

25 49.0

26 48.9

W

29 48.6

250

S of

Ground

W

41 47.4

39 47.6

37 47.8

S

35 48.0

39 47.6

44 47.1

E

47 46.8

260

79

48.6

51

49.05

51.45

51.45

5145

5145

300 S of = End Baslin (80)

E	66	44.9
	63	45.7
	62	45.3
	62	45.3
	62	45.3
	60	45.5
W	60	45.5

N End of Baslin

W	69	44.6
	70	44.5
	70	44.5
L	72	44.3
	72	44.3
	73	44.2
E	75	44.0

PLOTTED

5145

5145

80

N 1/2 of Baslin

E	87	43.8
	82	43.3
	81	43.4
S	78	43.7
	78	43.7
	77	43.8
W	77	43.8

S End of Baslin

W	84	43.1
	85	43.0
	89	42.6
L	89	42.6
	92	42.3
	95	42.0
E	97	41.8

5145

S

1/2 of Bunker

E

102 41.3

102 41.3

99 41.6

b

96 41.9

96 41.9

94 42.1

W

933 42.12

on 12/12  
Bunker

S

bl

W

104 41.1

105 41.0

106 40.9

b

105 41.0

106 40.9

107 40.8

E

100 40.5

3

PLOTTED

X 502 387.5 (60) Bunker

5145 5145

S 1/2 of Bunker

E

130 38.5

126 38.9

124 39.1

121 39.4

b

117 39.8

114 40.1

W

111 40.4

Continued in Book 915 P1

PLOTTED

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES  $1\frac{1}{2}$  TO 1.

FOR SINGLE TRACK EMBANKMENT.

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

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

MADE IN GERMANY.