

W
530

EUGENE DIETZGEN CO.

530

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

DISTANCES FROM CENTER OF ROADWAY TO CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

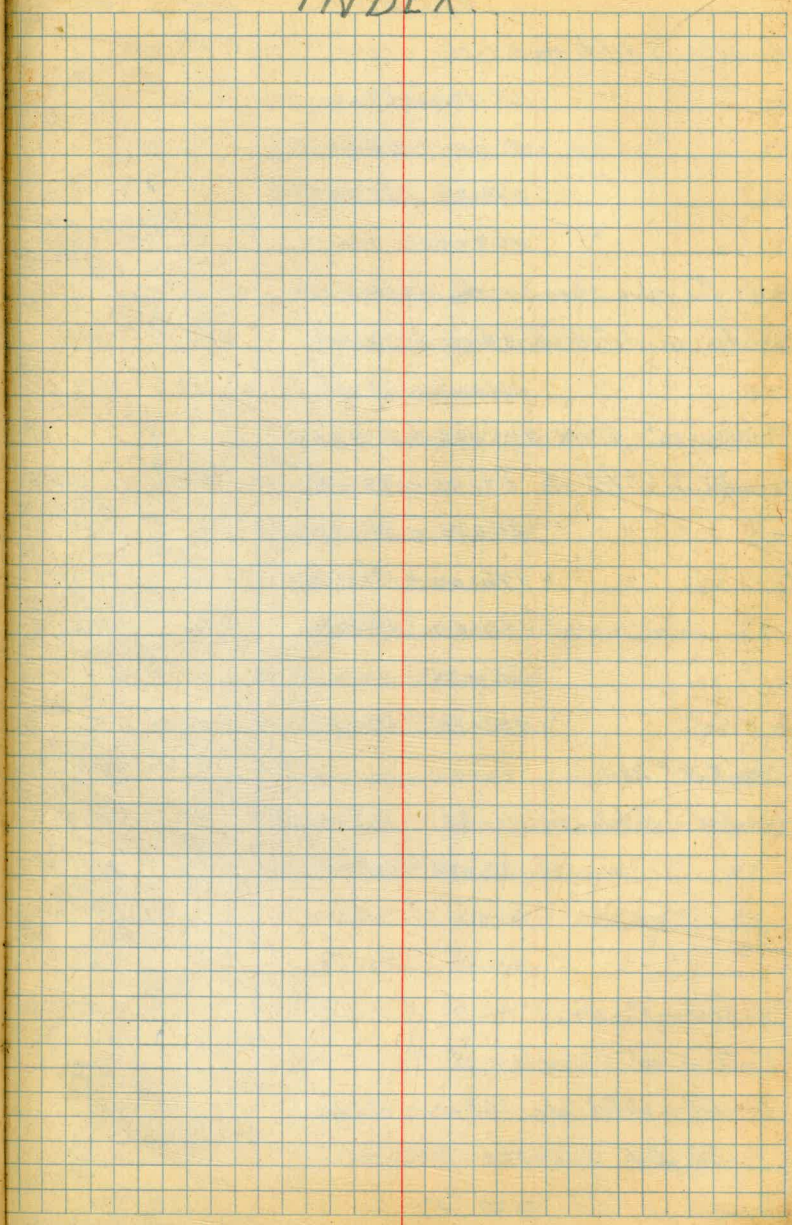
H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	II
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	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

This Field Book is manufactured
of a high grade 50% Rag Paper
having a WATER RESISTING surface.

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

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July 10 1936

Soper
13th St
Remmen

Grades in ditch, sta 49+25 - 50+00

Grade

Grade, sta
48+75

537.38

9.54 546.92

Ch on grade
49+00

9.88

37.04

37.04

49+25

10.05

36.87

36.87

150

10.10

36.82

36.82

175

10.16

36.76

36.76

50+00

10.21

36.71

36.71

July 13 1936

Super
Isbell
Kerrison

3

Grades in ditch sta 68+60.78-69+50.68 Grade

BM^{#9}

537.23

2.50

539.73

ck on 13'

off 68+60

3.9

35.8

Elev. 535.2

Back 515-32

68+60.78

10.73

29.00

529.00

69+50.6830.

9.57

30.16

30.16

Grades "raked in" sta 68+60.78-69+50.68

July 13 1936

Soper
Remmen
Isbell

Grades in ditch - 51+00 - 54+06.21

B.M. #7 9.72 549.21 539.49

Consta
50+75 12.66 36.55 36.55

51+00 12.72 36.49 36.49

+28.39 12.79 36.43

P. 10.61 538.60

8.92 547.52

54+06.21 11.68 35.84 35.84

Grades "raked in" sta 51+28.39 - 54+06.21

July 14 1936

Super
Isbell
Remney

4

Grade in ditch 54+25 - 55+54.94

T.P. 538.60 (Page 3)

9.13 547.73

Chaska
54+06.21

11.89 35.84 35.84

Grade

54+25

11.93 35.80 35.80

+50

11.99 35.74 35.74

+75

12.04 35.69 35.69

55+00

12.09 35.64 35.64

+07.44

8.11 39.62 35.62

Cut 4.0

54.94 EC.
04.94

9.21 38.52 34.96

Cut 3.6

July 16 1936

Super
level
Rommers

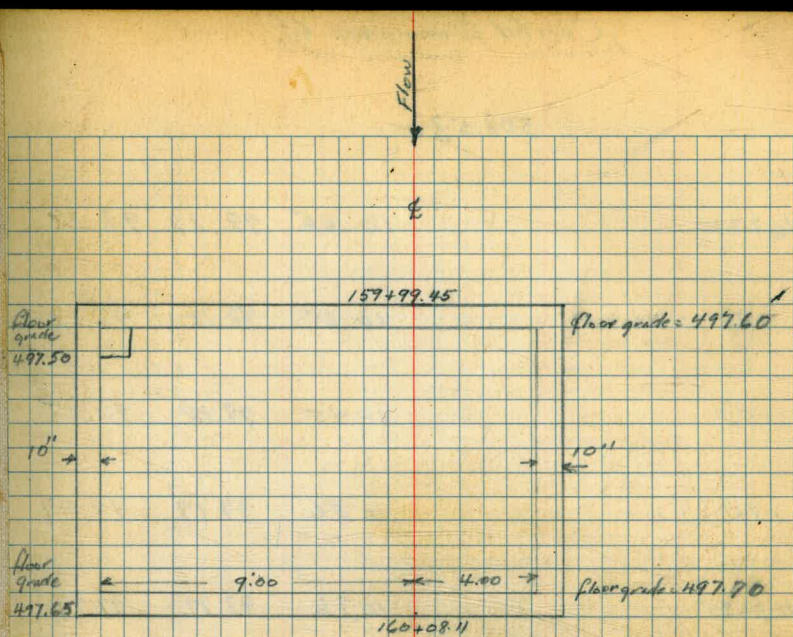
5

Grades in ditch - 157+50 - 164+75.

B.M. 21	9.24	510.36	501.12	on Hub sta
TP			12.33	498.03
	10.15	508.18		16+03.78
157+50			11.17	97.01
				497.01
+75			10.96	97.22
				97.22
158+00			10.75	97.43
				97.43
+25			10.53	97.65
				97.65
+50			10.32	97.86
				97.86
TP			10.15	498.03
	10.50	508.53		
158+75			10.46	98.07
				98.07
159+00			10.25	98.28
				98.28
+25			10.04	98.49
				98.49
154.35 =				
162.76			7.79	98.74

Cont'd from page 5

	508.53		Grade
159+75	9.68	98.85	498.85
159+99.45 (4.83 H)	10.65	97.88	Grade - Bottom of concrete 96.85 ✓ (Cut 1.03)
159+99.45 (9.83 RT)	10.20	98.33	96.75 ✓ (Cut 1.58)
160+08.11 (9.83 RT)	6.95	501.58	96.90 ✓ (Cut 4.68)
160+08.11 (4.83 LT)	3.22	504.71	96.95 ✓ (Cut 7.76)
160+25	9.53	99.00	99.00
+50	9.63	98.90	98.90
+75	9.74	98.79	98.79
101	9.84	98.69	98.69
+25	9.94	98.59	98.59
+50	10.04	98.49	98.49
+75	10.15	98.38	98.38



Continued from page 6

508.53

162100 10.25 98.28 98.28

+25 10.35 98.18 98.18

+50 10.45 98.08 98.08

+75 10.56 97.97 97.97

163+25 10.76 97.77 97.77

+50 10.86 97.67 97.67

+75 10.96 97.57 97.57

164 11.07 97.46 97.46

+25 11.18 97.35 97.35

+50 11.28 97.25 97.25

+75 11.38 97.15 97.15

July 16, 1926

507
Remmen
18604

8

Grades in ditch sta 54+50 - 55+54.94

B.M. 89

539.82

8.49 547.81

Ch on sta
54+25

Grade

12.01

535.80

150

12.07

35.74

175

12.12

35.69

55+00

12.17

35.64

107.44

12.19

35.62

125

12.43

35.38

54.94 =
104.94

12.85

34.96

July 17 1932

Sapir
Isbell
Remmon

Grades in ditch sta 166+00-168+25

B.M. 22	5.34	507.94	502.60	
Ch on sta. 164+75		10.79	97.15	497.15
166+00		11.30	96.64	96.64
+08.0083		11.334	96.606	496.606
+25		11.54	96.40	96.40
+50		11.83	96.11	96.11
+75		12.13	95.81	95.81
167		12.42	95.52	95.52
+24.00		12.70	95.24	95.24
+50		13.00	94.94	94.94
TP.		13.00	494.94	
	9.11	504.10		

Contd from page 9

10

Grade

504.10

167.75

9.46

94.64

168

9.75

94.35

+25

10.07

94.06

July 21 1936

Saper
1 3/4 bell
Hammers.

Cuts on 10' offsets 225+25-225+50

B.M. #27

480.23

2.97

483.20

Grade

ck on 10' of

225+75

3.0

80.2

70.21

225+50

1.8

81.4

70.33

225+25

0.3

82.9

70.45

Cut 10.0

Cut 11.1

Cut 12.5

July 22 1936

Soper
K. Johnson
1.5 bell

Grades in ditch sta 69+75 - 79+96.10

B.M. 9

537.23

6.34 543.57

Grade

Sta
69+50.00

13.41 30.16 530.16

69+75

13.10 30.47 30.47

70+00

10.94 32.63 30.80

Cut 1.83 (cut 4.15)

+25

12.45 31.12 31.12

+50

12.13 31.44 31.44

+75

11.81 31.76 31.76

71+00

11.48 32.09 32.09

+25

8.24 35.33 32.41

Cut 2.92 (cut 5.08)

T.P.

7.04 536.53

8.69 545.22

71+50

10.30 34.92 32.73

Cut 2.19 (cut 3.92)

Contd from page 12

13

545.22

71+75

12.17

33.05

33.05

72+00

8.37

36.85

33.38

Cut 3.47 (cut 4.35)

+25

9.82

35.46

33.70

Cut 1.70 (cut 3.14)

+48.54

11.22

34.00

34.00

+75

11.32

33.90

33.90

73+00

11.42

33.80

33.80

+25

11.52

33.70

33.70

+50

11.61

33.61

+68.96 EC

11.66

33.56

77.

11.40

533.82

7.38

541.20

76+06.66

8.58

32.62

32.62

Cont'd from page 13

541.20

77+26.15 10.02 31.18 31.18

TP 12.63 528.57

9.70 538.27

79+96.10 11.91 26.36

ck on 13' off.
sta 79+96.10 4.5 33.8 26.36

Grades "raked in" sta 73+68.96 - 79+96.10

14

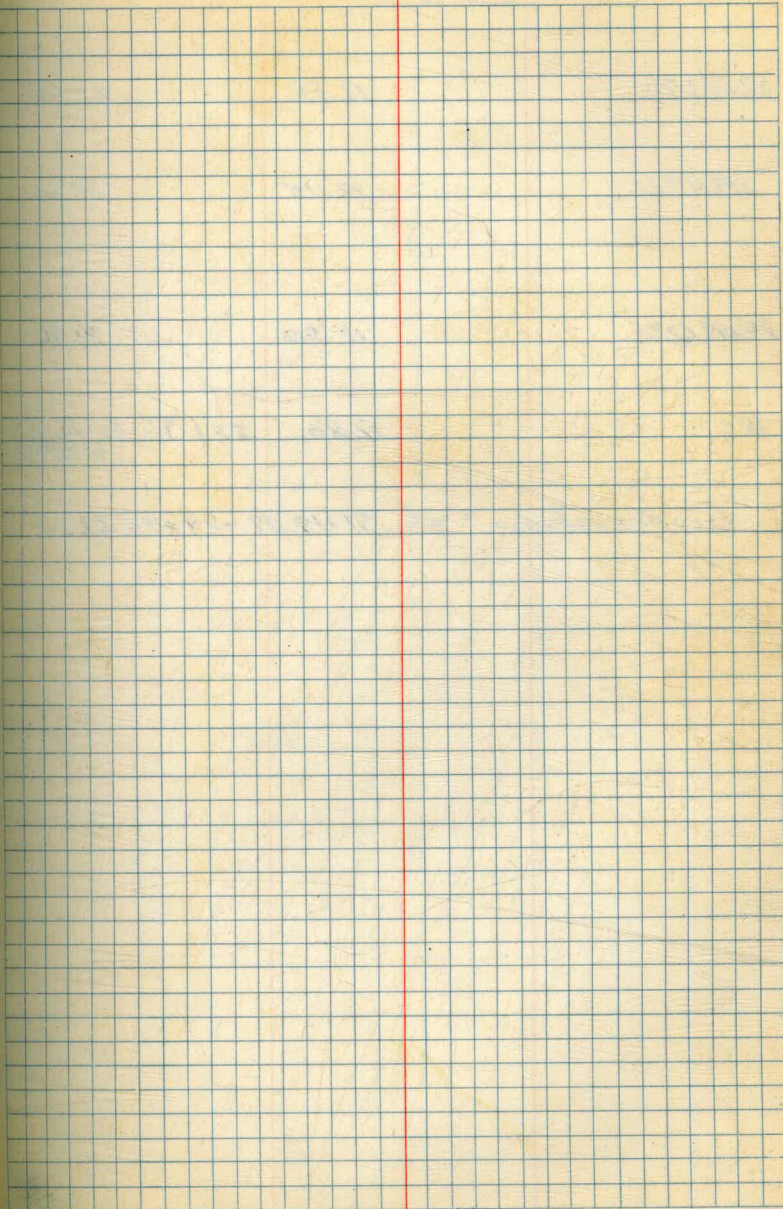
23.8
26.36
 7.4 cut 74 Book 515-36

July 22 1926

5000
1500
Kammen

Grades in ditch sta 80+25 - 84+98.62

				Grade
B.M. 11				548.44
	0.30	548.74		
T.P.			12.04	536.70
	0.17	536.87		
ck on sta 79+96.16			10.51	26.36 26.36
80+25			11.04	25.83 25.83
+50			11.48	25.39 25.39
+75			11.93	24.94 24.94
81+00			12.37	24.50 24.50
+25			12.82	24.05 24.05
T.P.			12.82	524.05
	10.71	534.76		
81+50			11.15	23.61
+75			11.60	23.16



Cont'd from page 15/

16

534.76

82+03.70 12.11 22.65

119.47EC 12.15 22.61

84+98.62BC 12.80 21.96

TP 12.80 521.96 (Grade at
84+98.62)

Grades "raked in" sta 81+19.47 - 84+98.62

July 23 1936

Super
150 ft
Remmen

Grades in ditch sta 176+00 - 179+50

B.M. 22			502.60	
	0.23	502.83		
TP			11.98	490.85
	4.65	495.50		Grade
176+00			4.26	91.24 491.24
+29.74			4.30	91.20 91.20
+50			4.32	91.18 91.18
+75			4.36	91.14 91.14
177+00			4.39	91.11 91.11
+25			4.42	91.08 91.08
+50			4.46	91.04 91.04
+75			4.49	91.01 91.01
178+00				
178+01.7583			4.526	90.974 90.974

Cont'd from page 17

18

495.50

178+25	4.85	90.65	90.65
150	5.19	90.31	90.31
+75	5.53	89.97	89.97
179	5.88	89.62	89.62
+25	6.22	89.28	89.28
+50	6.56	88.94	88.94
TP	6.56	488.94	

July 24 1936

Soper
Lippell
Hermann

17

Grades in ditch sta 180+00 - 184+75

TP	2.71	491.65	488.94	(Page 16)
				Grade
180+00		3.40	88.25	488.25
+10.4459		3.5432	88.1068	88.1068
+25		3.74	87.91	87.91
+50		4.09	87.56	87.56
+75		4.43	87.22	87.22
181		4.77	86.88	86.88
+25		5.12	86.53	86.53
+50		5.46	86.19	86.19
+75		5.81	85.84	85.84
+89.3208		6.0016	85.6484	85.6484
182		6.10	85.55	85.55

Cont'd from page 19

20

491.65

182+25 6.33 85.32 85.32

+50 6.56 85.09 85.09

TP 6.56 585.09

9.51 594.60

+95 9.74 84.86 84.86

183+00 9.97 84.63 84.63

+27.32 10.22 84.39 84.39

+50 10.42 84.18 84.18

+70 10.60 84.00 84.00

184+00 10.88 83.72 83.72

+55 11.11 83.49 83.49

+50 11.34 83.26 83.26

+75 11.57 83.03 83.03

ck on B.M. No
22 Ekr. 493.67

0.93 493.67

July 27 1936

Super
label
Kammern

21

Grades in ditch sta 85+25-102+44.05

I.P. 9.68 531.64 521.96 (Page 16)

85+25 9.74 21.90 21.90

150 9.80 21.84 21.84

+75 9.86 21.78 21.78

86+00 9.92 21.72 21.72

+25 9.98 21.66 21.66

+45 10.03 21.61 21.61

+75 10.09 21.55 21.55

87+00 10.15 21.49 21.49

87+11.20 10.1813 21.4587 21.4587

+25 10.41 21.23

+50 10.82 20.82

Cont'd from page 21

	531.64		Grade
87+70		11.15 2049	20.49
+95		11.56 2009	20.08
88+25		12.04 1960	19.60
+50		12.45 1919	19.19
+75		12.86 1878	18.78
TR		12.86 518.78	
	10.02 528.80		
89+00		10.43 1837	18.37
+25		10.84 1796	17.96
+48.34/C		11.22 1758	17.58
+79		11.72 1708	17.08
90+09.36		12.22 1658	16.58
94+03.67 B.C.		8.78 20.02	20.02

22

Grades "raked in" sta 90+09.36 - 94+03.67

Cont'd from page 22

23

	528.80			
TP		8.78	520.02	
	12.70	532.72		
94+25		12.52	20.20	20.20
+50		12.30	20.42	20.42
+57.47		12.23	20.49	20.49
+75		11.69	21.03	21.03
95+00		10.91	21.81	21.81
+25		10.13	22.59	22.59
+50		9.35	23.37	23.37
+75		8.57	24.15	24.15
+91.43		8.06	24.66	24.66
96+06.78		7.58	25.14	25.14
+37.27		7.32		25.40

Cont'd from page 23

24

	532.72			
96+50		7.21	25.51	25.51
+75		7.00	25.72	25.72
Pr.		7.00	525.72	
	12.18	537.90		
97+00		11.96	25.94	25.94
125		11.75	26.15	26.15
+50		11.53	26.37	26.37
+75		11.31	26.59	26.59
98+00		11.10	26.80	26.80
+16.52		10.96	26.94	26.94
+25		11.10	26.80	26.80
+50		11.51	26.39	26.39
+57.92		11.64	26.26	26.26

Contd from page 24

25

	537.90			
TP		11.64	526.26	
	2.22	528.48		
98+75		2.51	25.97	25.97
99+05		3.00	25.48	25.48
125				25.15
+34.02		3.48	25.00	25.00
+50		3.74	24.74	24.74
+75		4.15	24.33	24.33
100+00		4.57	23.91	23.91
+25.49		4.79	23.49	23.49
+50		5.66	22.82	22.82
+75		6.34	22.14	22.14
101		7.01	21.47	21.47

Cont'd from page 25

26

528.48

101.25	7.69	20.79	
+50	8.37	20.11	20.11
+75	9.05	19.43	19.43
102	9.73	18.75	18.75
+25	10.41	18.07	18.07
+44.05	10.92	17.56	17.56
<u>145.97</u>			
ck on B.M. 147	4.28	524.20	

Received 524.20

July 28 1936

Super
Rummen
Isbell

27

Grades in ditch sta 102+75 - 116+08.67 14

B.M. #14A 524.22

2.00 526.22 Grade

ck on sk 102+45.87 8.56 17.56 517.56

102+75 9.46 16.76 16.76

103+00 10.13 16.09 16.09

+25 10.81 15.41 15.41

+54.00 11.60 14.62 14.62

+75 12.17 12.05 14.05

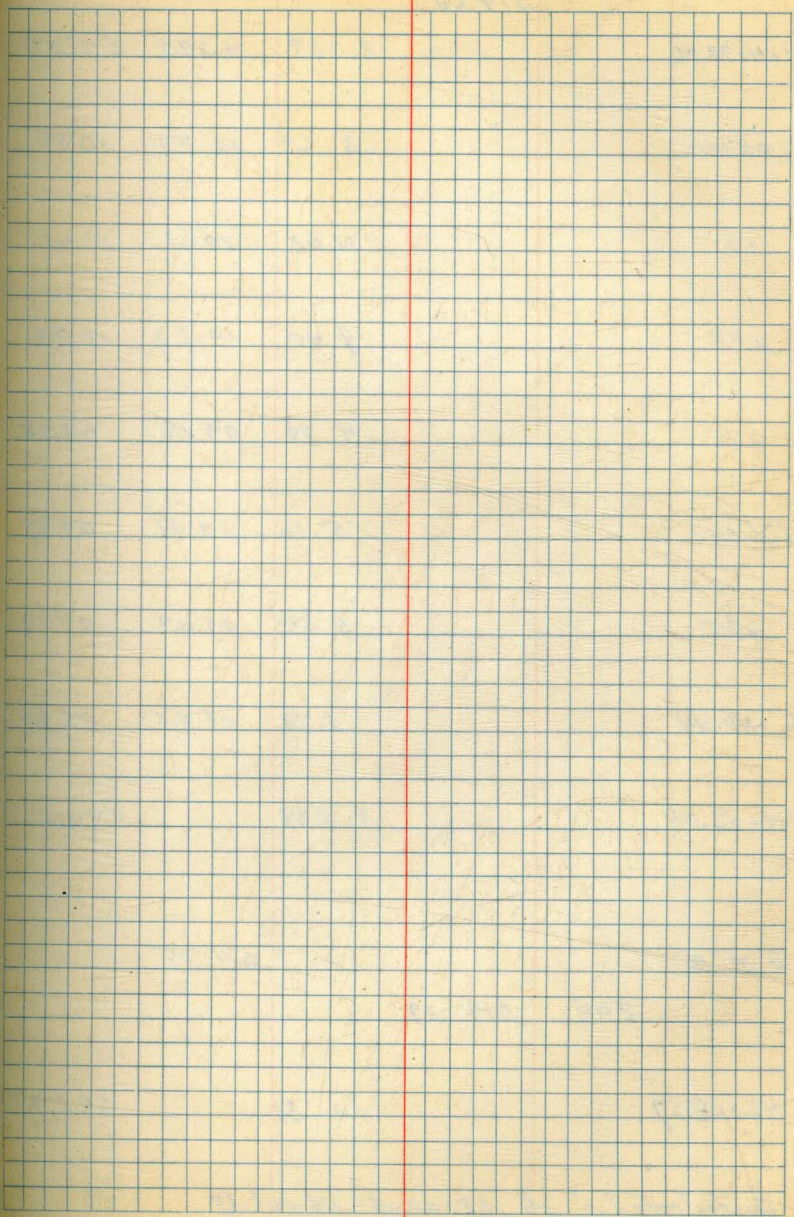
104+00 12.84 13.38 13.38

TP 12.84 513.38

1.25 514.63

+25 1.92 12.71 12.71

+46.49 RC 2.51 12.12 12.12



Continued from page 27

28

	514.63			
104+73.46		3.238	11.392	511.392
105+00		3.64	10.99	10.99
+25		4.02	10.61	10.61
+50		4.40	10.23	10.23
+75		4.78	09.85	09.85
106+00		5.16	09.47	09.47
+25		5.54	09.09	09.09
106+40.44		5.78	08.85	08.85
108+02.05		8.238		506.392
B.M. #16			511.35	
	2.94	514.29		
116+08.67		10.31		503.98

Grades "raked in" sta 108+02.05 - 116+08.67

July 28, 1936

Soper
Shell
Remmen

New B.M.^o 28A

B.M.^o 28

502.84

1.14

503.98

TP

12.41

491.57

0.32

491.89

TP

13.16

478.73

New B.M.^o 28A

July 29 1936

Soper
Lisbell
Remmen

30

Grades in ditch sta 116+35 - 123+47.04

			Grade
B.M. 16		511.35	
	2.18	513.53	
116+35		9.60	03.93 503.93
+80		9.69	03.84 03.84
+94.28		9.72	03.81 03.81
117+25		9.78	03.75 03.75
+50		9.83	03.70 03.70
+70		9.87	03.66 03.66
118+25		9.98	03.55 03.55
+50		10.03	03.50 03.50
+75		10.08	03.45 03.45
119		10.13	03.40 03.40
+55		10.18	03.35 03.35

Cont'd from page 30

513.53

119450.93 10.23 03.30 03.30

475 10.28 03.25 03.25

T.P. 3.30 510.23

3.58 513.81

Chon B.M. #177

Elev. 510.23

120450 10.76 03.05 03.05

475 10.83 02.98 02.98

121 10.91 02.90 02.90

425 10.98 02.83 02.83

450 11.06 02.75 02.75

475 11.13 02.68 02.68

122 11.21 02.60 02.60

425 11.28 02.53 02.53

450 11.36 02.45 02.45

Cont'd from page 31

513.81

122+75

11.43 02.38 02.38

123

11.51 02.30 02.30

+25

11.58 02.23 02.23

+47.04

11.65 02.16 02.16

TP

11.65 502.16

on grade stake
123+47.04

July 30 1936

Soper
Reminen
Isbell

Grades in ditch sta 123+75 - 138+09.47

Grade

B.M. 18	5.20	512.65		507.45
ck on sta 123+47.04			10.49	02.16 502.16
123+75			10.57	02.08 02.08
124			10.65	02.00 02.00
+25			10.72	01.93 01.93
+50			10.80	01.85 01.85
+75			10.87	01.78 01.78
125+00			10.95	01.70 01.70
+25			11.02	01.63 01.63
+34.175			11.05	01.60 501.60
+50			11.10	01.55 01.55
+75			11.18	01.47 01.47

Cont'd from page 33

34

	512.65			
126.00		11.26	01.39	01.39
+25		11.34	01.31	01.31
+50		11.42	01.23	01.23
+75		11.50	01.15	01.15
127		11.58	01.07	01.07
+13.425		11.618	01.032	501.032
+25		11.68	00.97	00.97
+50		11.80	00.85	00.85
+75		11.93	00.72	00.72
128		12.05	00.60	00.60
+11.1466		12.11	00.54	00.54
+40		12.25	00.40	00.40
+70		12.40	00.25	00.25

Cont'd from page 34

35

	512.65			
TR		5.20	507.45	
	2.73	510.18		
129+25		10.21	499.97	499.97
+50		10.33	99.85	99.85
+75		10.46	99.72	99.72
130		10.58	99.60	99.60
+25		10.71	99.47	99.47
+50		10.83	99.35	99.35
+75		10.96	99.22	99.22
131		11.08	99.10	99.10
+25		11.21	98.97	98.97
+50		11.33	98.85	98.85
+74.44		11.45	98.73	98.73

Cont'd from page 35

36

	510.18		Grade
131+91.3(25)		11.538 98.642	498.642
132		11.54 98.64	98.64
+25		11.56 98.62	98.62
+50		11.58 98.60	98.60
+75		11.60 98.58	98.58
133		11.61 98.57	98.57
+25		11.63 98.55	98.55
+50		11.64 98.54	98.54
+75		11.66 98.52	98.52
134		11.67 98.51	98.51
+25		11.69 98.49	98.49
11		11.69 498.49	498.49

Cont'd from page 36

37

			498.49	
	10.77	509.26		
134.50			10.78	98.48 98.48
+75			10.80	98.46 98.46
135			10.82	98.44 98.44
125			10.84	98.42 98.42
+50			10.85	98.41 98.41
+75			10.87	98.39 98.39
136			10.88	98.38 98.38
+08.7375			10.886	98.374 498.374
125			10.94	98.32 98.32
+50			11.01	98.25 98.25
+75			11.09	98.17 98.17
137			11.16	98.10 98.10

Cont'd from page 37

38

509.26

137.25

11.24

98.02

98.02

+50

11.31

97.95

97.95

+75

11.38

97.88

97.88

138

11.45

97.81

97.81

+09.47

11.48

97.78

97.78

July 31 1936

Soper
Level
Remains

Grades in ditch sta 138+09.47 - 157+25

Grade

B.M. 20

503.52

2.77 506.29

141+70

9.58 96.71 496.71

B.M. 20

503.52

2.49 506.01

147+50

10.36 95.65 95.65

150+12.2375

10.62 95.39 95.39

T.P.

10.62 495.39

9.64 505.03

154+90.2375

10.217 94.813 94.813

T.P.

10.22 494.81

10.24 505.05

ck on sta
157+50

8.04 97.01 97.01

157+25

4.01 501.04 96.80

39

Grades "taken in" sta 138+09.47 - 141+70

Grades "taken in" sta 147+50 - 150+12.2375

" " " " 150+12.2375 - 154+90.2375

Cut 4.2 (3.23 out)

505.25

Grade

157100

8.46 96.59 96.59

156+75

8.67 96.38 96.38

+50

8.89 96.16 96.16

+25

9.10 95.95 95.95

156

9.31 95.74 95.74

155+75

9.52 95.53 95.53

+50

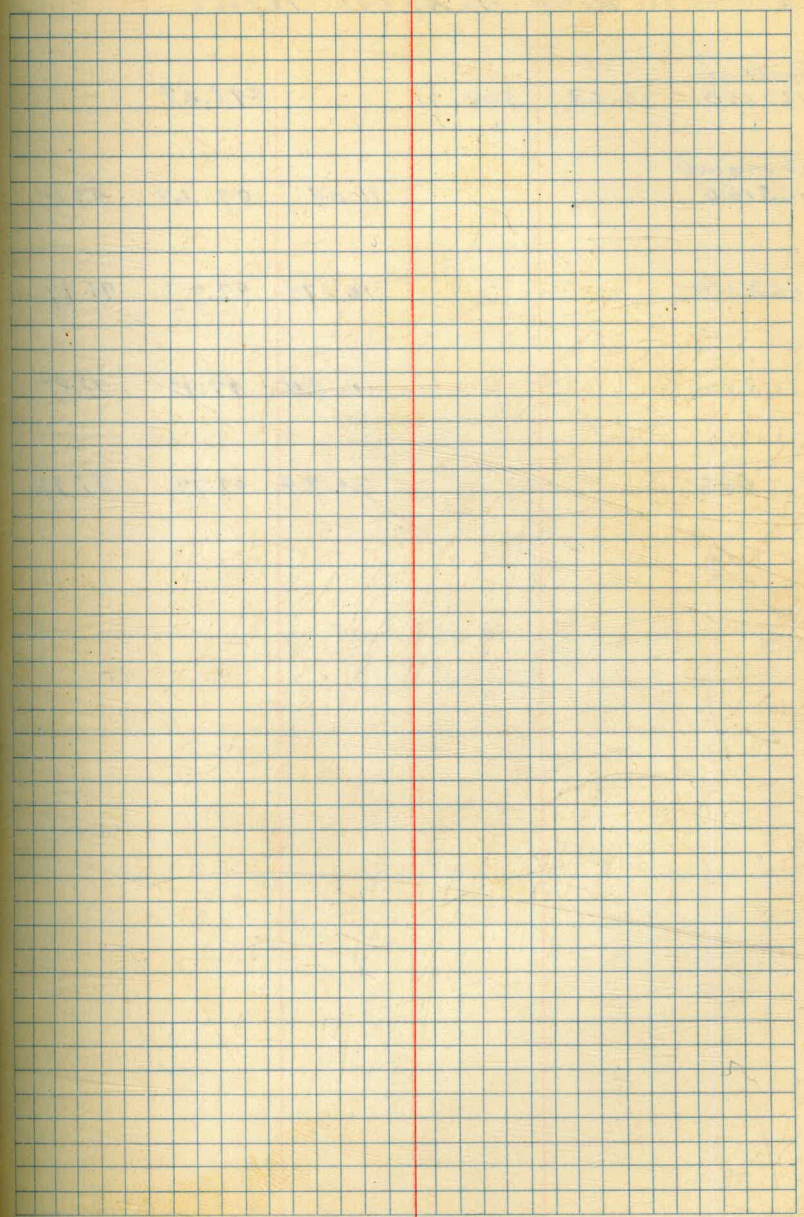
9.73 95.32 95.32

+25

9.95 95.10 95.10

155+08.90

10.08 94.97 94.97



Aug 3 1932

54700
1500
Remmen

Grades in ditch sta 162+50 - 163+50

Grade sta 162+50	10.63	508.71	498.08	
ck on grade 163+50		11.04	97.67	97.67
162+75		10.74	97.77	97.77
163+00		10.84	97.87	97.87
+25		10.74	97.77	97.77

41

Aug 3 1936

Soper
Rommey
Isbell

42

Original X-section for blow off trench sta 68+49

0+00 = 2.8 from ϕ of 48" pipe

B.M. 9 2.69 539.92 537.23

0+00 4.2 535.7 ✓

0+03 4.1 535.8 ✓

0+08 6.8 533.1 ✓

0+22 12.4 527.5 ✓

Final x-section for blow off trench sta 68+49

0+00 = 2.8 from ϕ of 48" Pipe

B.M. 9 2.69 539.92 537.23

0+00 11.9 528.0 ✓

0+03 11.9 528.0 ✓

0+08 11.9 528.0 ✓

0+22 12.4 527.5 ✓

copied & checked
5 34
36 from

Aug. 5 1936

Super
156ell
Remmes

43

Cuts in Valve Chamber etc 160+03

Grade bottom
of concrete

B.M. 21 8.14 509.26

501.12

159+99.45 (4.83 Lt)

11.47

97.79

96.85

Cut - 0.94

159+99.45 (9.83 Rt)

12.92

96.34

96.75

Fill - 0.41

160+08.11 (4.83 Lt)

10.80

98.46

96.95

Cut 1.51

160+08.11 (9.83 Rt)

11.42

97.84

96.90

Cut 0.94

Aug 5 1936

50 per
Kimmer
label

44

Grades in ditch da 168+50 - 176+00

				Grade
B.M. 22	2.56	505.16	502.60	
ck on grade sta 168+25		11.10	94.06	494.06
168+50		11.40	93.76	93.76
+75		11.69	93.47	93.47
169		11.99	93.17	93.17
+25		12.28	92.88	92.88
+50		12.57	92.59	92.59
+75		12.87	92.29	92.29
TR		12.87	492.29	492.29
	4.21	496.50		
169 +95.8208		4.4505	92.0495	92.0495
170+50		4.52	91.98	91.98
+75		4.56	91.94	91.94

Cont'd from page 44

496.50

171 4.59 91.91 91.91

+25 4.62 91.88 91.88

+40.2100 4.64 91.86 91.86

+50 4.66 91.84 91.84

+75 4.69 91.81 91.81

172 4.72 91.78 91.78

+25 4.76 91.74 91.74

+50 4.79 91.71 91.71

+75 4.83 91.67 91.67

173 4.86 91.64 91.64

+25 4.89 91.61 91.61

+50 4.92 91.58 91.58

45

Cont'd from page 45

	496.50		Grade
TP		4.92	491.58
	8.06	499.64	
174+25		8.17	91.47 91.47
+50		8.20	91.44 91.44
+75		8.23	91.41 91.41
175		8.26	91.38 91.38
+25		8.30	91.34 91.34
150		8.33	91.31 91.31
+75		8.37	91.27 91.27
176		8.40	91.24 91.24
ck on grade 176+29.74		8.44	91.20 91.20

Aug 6 1936

Sugar
Shell
Remmen

Profile of $\frac{1}{2}$ 235+33.8 - 236+50

B. N ^o 287			478.73
	12.94	491.67	
235+33.8		1.2	90.5
+50		3.2	88.5
236		11.6	80.1
TP		13.00	478.67
	1.20	479.87	
236+11.30		1.8	78.1
+50		8.5	71.4 (original ground)

Aug 1936
Super
Hemmen
Isbell

Grades in ditch sta 119+75 - 120+20

B.M. #177

510.23

11.82 515.05

Chon
119+50.93

11.75 03.30 503.30

119+96.42

11.84 03.21 03.21

119+75

11.80 03.25 03.25

120+20

11.91 03.14 03.14

Chongrade
120+50

12.00 03.05 03.05

Aug 7 1936

Soper
Isbell
Remmen

49

X-section sta 426+38.67

County BM
21

6.29

406.42

400.13

LT

¢

RT

426

✓
402.36

✓
407.48

✓
402.33

✓
401.88

✓
401.67

✓
2.47

✓
401.97

4.06

3.94

4.09

4.54

4.75

3.95

4.45

426+38.67

30.0

21.0

12.0

0.0

3.0

5.0

14.0

Edge Pav.

¢ Pav.

Edge Pav.

Aug 7 1936

Super
Isbell
Remmen

Original x-section for blow off trench sta 23+05

0.00 = 2.8 from E of 48" Pipe

B.M. # 4	0.71	569.47	568.76
0+00		6.1	63.4
0+19		6.2	63.3
0+26.5		10.1	59.4
0+48.5		13.4	56.1
0+53.0		15.2	54.3

Aug. 15 1936

Super
Isbell
Remmen

Final x-section for blow off trench sta 23+05

0.00 = 2.8 from E of 48" pipe

B.M. # 4			568.76
	0.54	569.30	
0+00		14.0	55.3
0+19		14.4	54.9
0+26.5		14.4	54.9
0+48.5		15.0	54.3
0+53		15.0	54.3

8/24/36
to 53A
35
JTW

Aug 10 1932

Saper
Remmers
Isbell

51

Grades in ditch sta 141+70 - 144+14; 145+50 - 147+20

B.M. 20 503.52

3.02 506.54

144+14.7375 10.5556 495.9844 495.9844

ck on sta
141+70 9.83 96.71 96.71

Grade

B.M. 20 3.04 506.56 503.52

ck on sta
147+50 10.91 95.65 495.65

147+20 10.89 95.67 95.67

146+94.68 10.85 95.71

IR 4.69 500.40 10.85 495.71

146+75 4.68 95.72 95.72

146+50 4.65 95.75 95.75

425 4.63 95.77 95.77

146+00 4.60 95.80 95.80

145+75 4.59 95.82 95.82

145+50 4.55 95.85 95.85

146+00 4.58 95.85 95.85

Grades "raked in" sta 141+70 - 144+14.7375

Aug 10 1936

Saper
15 bell
Rennen

52

Original x-section of trench for blowoff 89+98

0+00 = 2.80 from E of 48" Pipe

Grade at sta
90+09.36

516.58

9.39 525.97

0+00

2.9 23.1

0+17

3.3 22.7

0+26

9.0 17.0

Final x-section of trench for blow-off sta 89+98

0+00 = 2.8 from E of 48" pipe

Grade at sta
90+09.36

516.58

9.39 525.97

0+00

10.0 516.0 ✓

0+17

10.6 515.4 ✓

0+26

10.9

515.1 ✓

534
97
534
97
checked
JRN

Aug 11 1936

Soper
Kerrman
Schell

Grades in ditch sta 144+14.7375 - 145+30.79

Grade at sta

144+14.7375

495.9844

10.88 506.8644

ck on sta

145+50

11.01

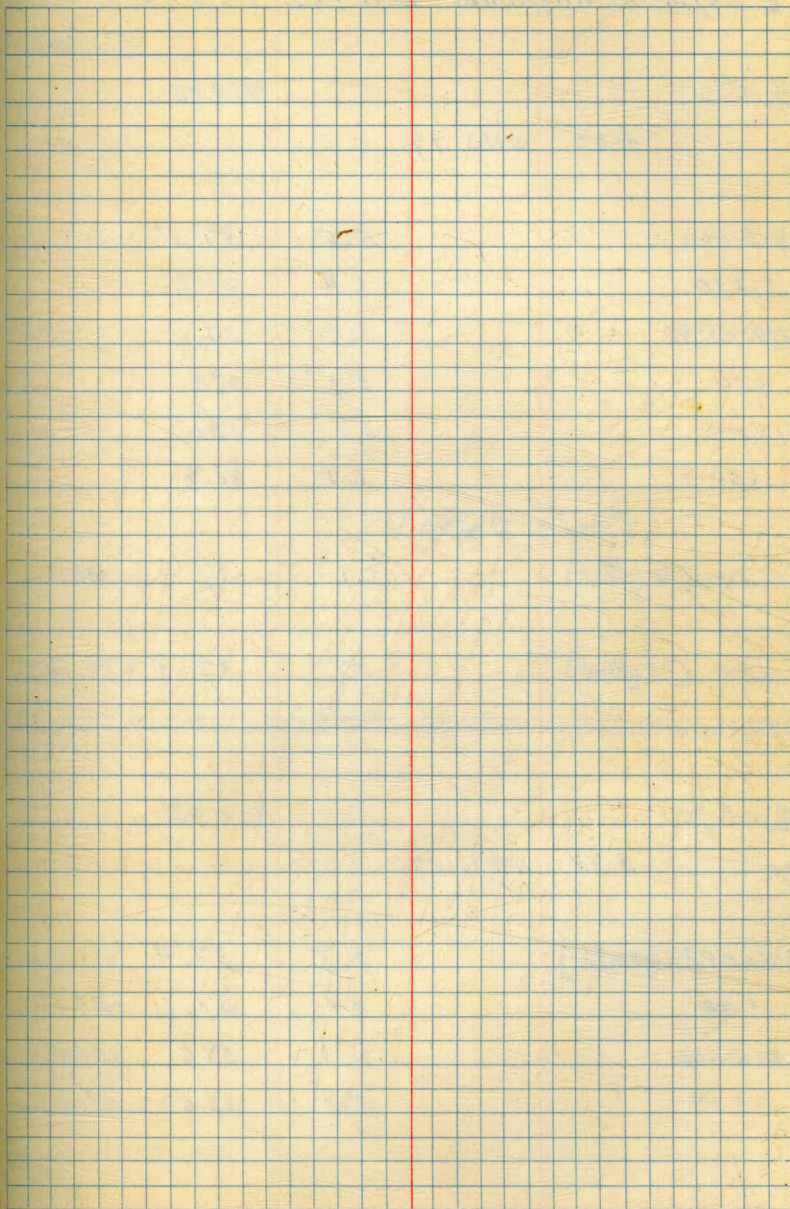
95.85 95.85

145+30.79

10.79

95.97 95.87

Grades "raked in" sta. 144+14.7375 - 145+30.79



Aug 11, 1936

54

& Profile on alignment - W.D. 567 Sta 313+00 - 316+00

Grade

B.M.³⁵

438.93

4.64 542.97

313+00

5.5 37.5

+50

6.4 36.6

314+05.34

5.9 37.1

+50

5.1 37.9

315+00

6.0 37.0

+50

6.1 36.9

(Profile 13' offset)

313+00 (13' offset)

5.1 37.9 32.5

+50 (13' offset)

5.6 37.4 32.0

B.M.³⁵

438.93

3.74 542.67

314+05.34 (13' offset)

5.3 37.4 31.6

+50

5.1 37.6 31.5

315+00

5.1 37.6 31.4

+50

5.2 37.5 31.3

Cut - 5.4

Cut - 5.4

Cut - 5.8

" 6.1

" 6.2

" 6.2

Aug 11 1936

Soper
123011
Remmen

Original x-section for valve chamber sta 313+63

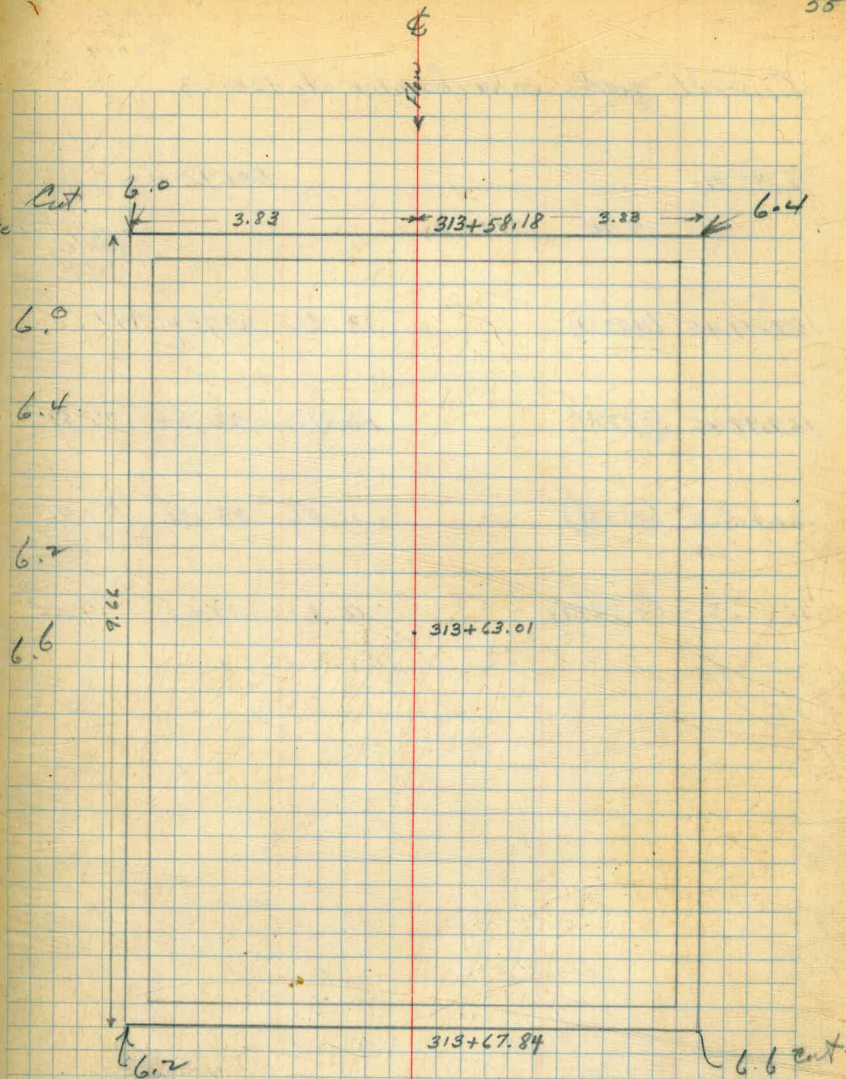
B.M. #35			438.93	Grade for bottom of concrete
3.39	442.32			
313+58.18	3.83 RT	5.9	36.4	430.25
313+58.18	3.83 LT	5.5	36.8	430.35
313+67.84	3.83 RT	5.9	36.4	430.25
313+67.84	3.83 LT	5.5	36.8	430.25

10' RT sta
313+00

5.8 436.5

App. location of recording station

55



True Ex

Dr. Cut $6.2 \times 7\frac{1}{2}$ width = 47.53 sq ft

" " $6.4 \times 7\frac{1}{2}$ " = 49.07

$\frac{96.60}{2}$

$48.3 \times 9\frac{1}{2} = 466.9$ cu ft

= 17.3 cu yds

class 3 Ex.

Recorded
See 528
57

Aug 12 1936
Sopiv
Reservoir
126011

Concrete grades - valve chamber sta 160+03

B.M. # 21

501.12

9.14 510.26

Concrete floor
grade

159+99.45 (4.8314)

12.66 497.60 497.60

159+99.45 (4.8371)

13.92 96.34 97.50

Fill 1.16 to top of conc. floor

160+08.11 (4.8314)

12.56 97.70 97.70

160+08.11 (4.8374)

12.61 97.65 97.65

Aug 12 1886

Soper
Kilbourn
Kedell

57

Grades in ditch sta 184+75 - 190+02.58

BM# 23

493.67

1.70 495.37

ck on grade
184+50

12.11 83.26 483.26

184+75

12.34 83.03 83.03

184+87.7583

12.4606 82.9094 482.9094

185+00

12.47 82.90 82.90

+25

12.48 82.89 82.89

+50

12.49 82.88 82.88

186+25

12.53 82.84 82.84

TP

12.53 482.84

10.13 492.97

186+50

10.15 82.82 82.82

+75

10.16 82.81 82.81

Cont'd from page 57

58

492.97

187	10.17	82.80	82.80
+25	10.18	82.79	82.79
+50	10.20	82.77	82.77
+75	10.21	82.76	82.76
188	10.22	82.75	82.75
+20.00	10.23	82.74	82.74
+50	10.25	82.72	82.72
+75	10.26	82.71	82.71
189.00	10.27	82.70	82.70
+25	10.29	82.68	82.68
+50	10.30	82.67	82.67
+75	10.31	82.66	82.66
190.02 58 EC.	10.33	82.64	82.64

Aug 12 1936

Super
1 1/2 bell
Remmen

59

Checked grades sta 156+00 - 157+25

grade sta
157+50

497.01

4.12 501.13

157+25

4.33 96.80 496.80

157+00

4.54 96.57 96.59

156+75

4.75 96.38 96.39

156+50

4.97 96.16 96.16

+25

5.18 95.95 95.95

156+00

5.39 95.74 95.74

Aug 13 1936

Sayer
12 ball
Kerriman

Grades in ditch sta 190+02.58 - 206+54.14

Grade

B.M. 257

487.58

3.18 490.76

206+54.14

12.32 478.44 478.44

TP

11.54 479.22

12.42 491.44

200+11.3833

11.274 80.366 480.366

TP

11.24 480.40

5.20 485.60

195+03.5083

3.2156 482.3844

Grades "raked in" sta 190+02.58 - 195+03.5083

" " " " 195+03.5083 - 200+11.3833

" " " " 200+11.3833 - 206+54.14

Aug 17 1936

Soper
Isbell
Remmen

61

Grades in ditch sta 206+75 - 215+25

B.M. #25H			487.58	
	0.00	487.58		
ck on 206+54H		9.14		78.44
206+75		9.21	78.37	478.37
207		9.28	78.30	78.30
+25		9.36	78.22	78.22
+87.8208		9.543	78.037	478.037
208+00		9.60	77.98	77.98
+25		9.73	77.85	77.85
+50		9.85	77.73	77.73
+75		9.97	77.61	77.61
209		10.09	77.49	77.49
+25		10.21	77.37	77.37
+50		10.34	77.24	77.24

487.58

Grade

209+75 10.46 77.12 77.12

+96.5083 10.562 77.018 77.018

210+25 10.75 76.83 76.83

+50 10.92 76.66 76.66

175 11.09 76.49 76.49

211 11.25 76.33 76.33

+25 11.42 76.16 76.16

+77 11.42 76.16

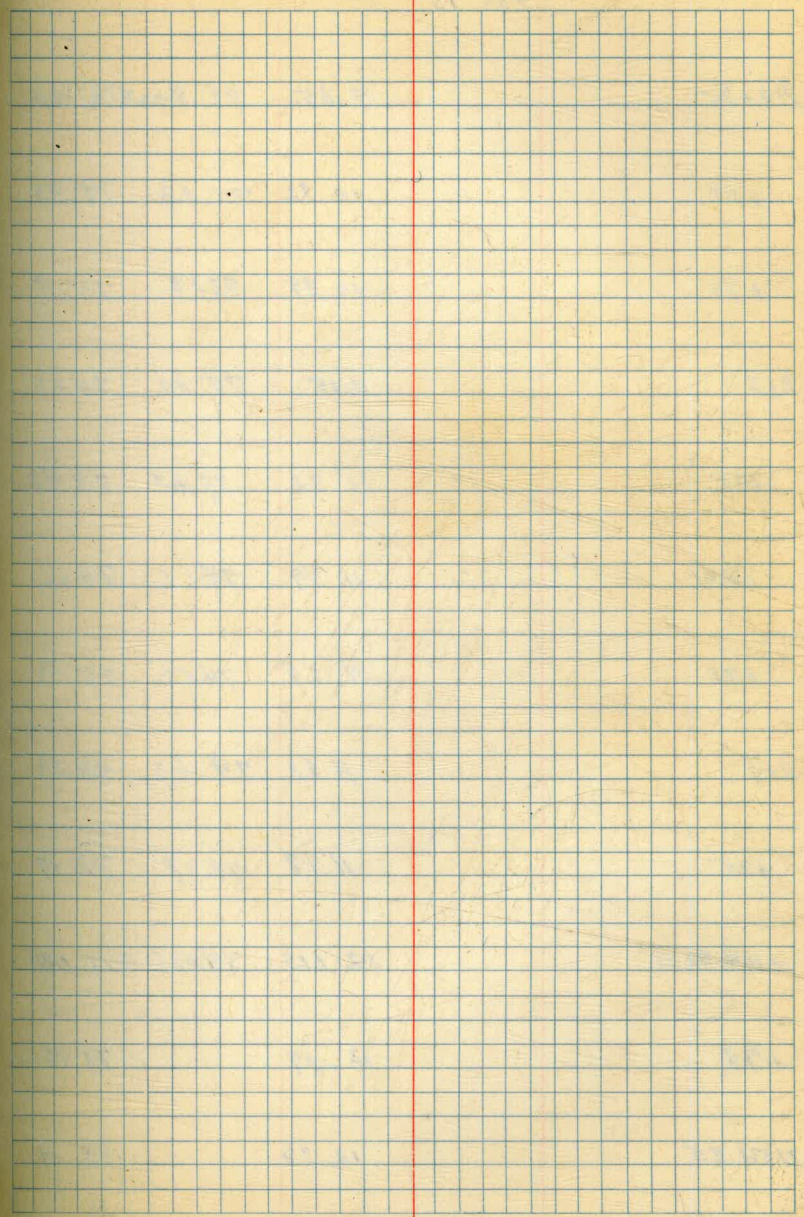
9.99 486.15

+39.42 10.08 76.07 76.07

+50 10.15 76.00 76.00

+75 10.32 75.83 75.83

212 10.49 75.66 75.66



486.15

212+25 9.35 76.80 75.50

+50 10.82 75.33 75.33

+75 10.98 75.17 75.17

213 11.15 75.00 75.00

+25 11.32 74.85 74.83

+50 11.49 74.66 74.66

+75 11.65 74.50 74.50

214 11.82 74.33 74.33

+25 11.98 74.17 74.17

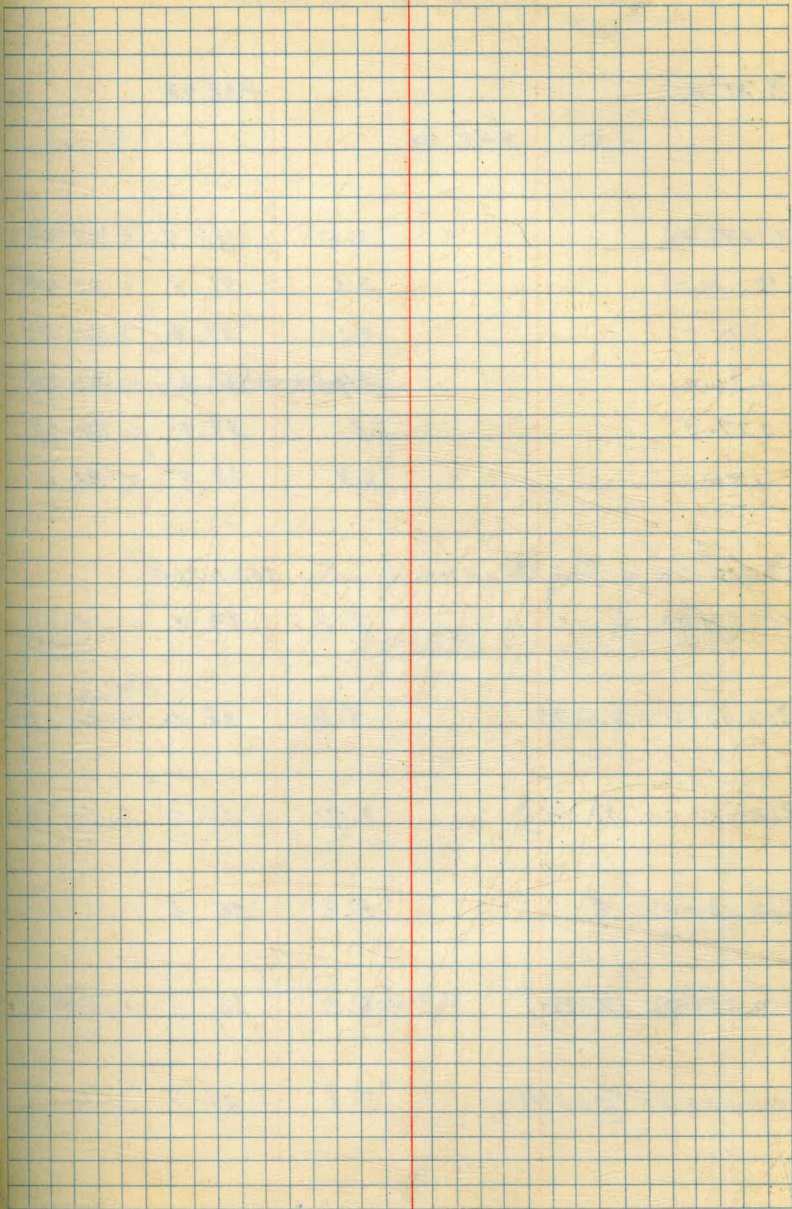
+44.3208 12.113 74.037 74.037

+75 12.17 73.98

215+25 12.26 73.89

Cut 1.30

215+50	73.85
+75	73.80
216	73.76
+25	73.71
+50	73.66
+75	73.61
217	73.57
+25	73.52
+50	73.48
+75	73.43
218+02.8208	73.3896



Aug 18 1936

Soper
13 bell
Remmen

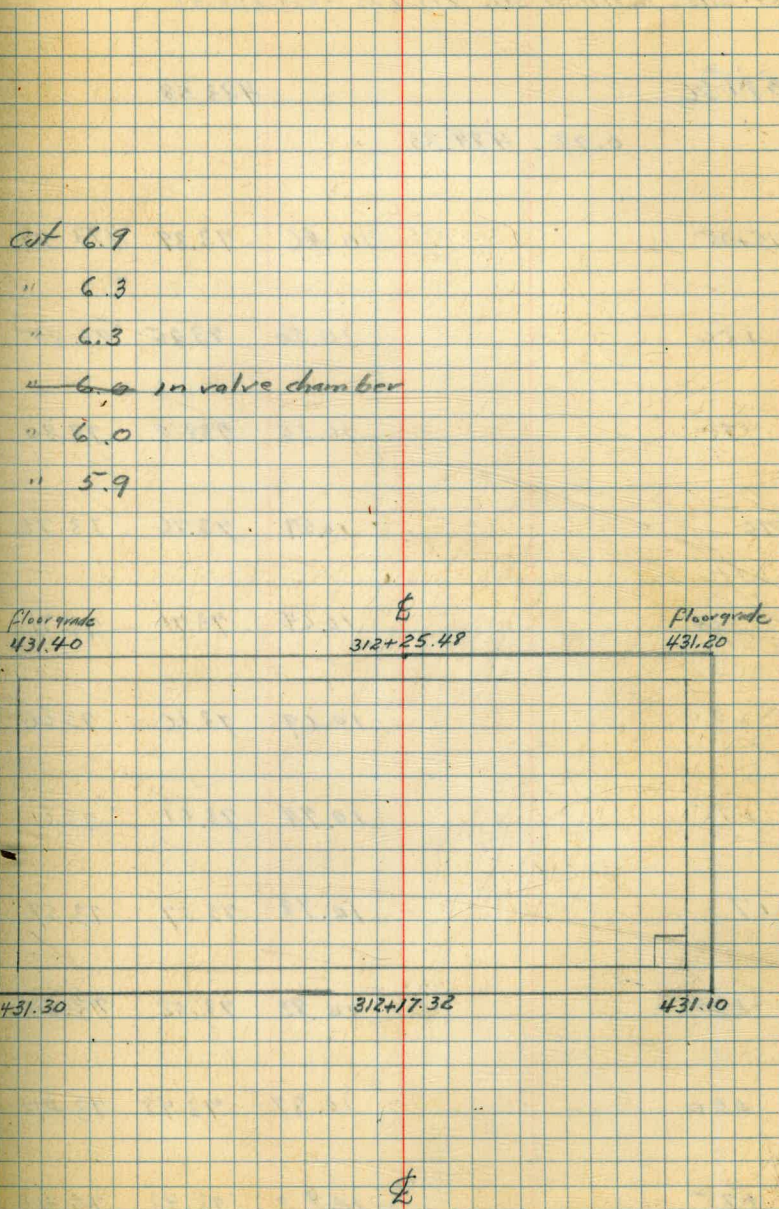
65

Profile 13' offsets 311+78.44 - 312+50

B.M. 35		438.93	
3.51	442.44		Grade
311+98.44	3.5	38.9	32.00
312+10.03	3.1	38.9	32.48
+15.0	3.6	38.8	32.47
+20.0	3.7	38.7	32.71
+27.8	3.6	38.8	32.77
+50	3.9	38.5	32.6

Original x-section for valve chamber 312+21.4

312+17.32	3.2	39.2	
312+17.32 (9.08 RT)	4.4	38.0	sub grade 30.35 Cut 1.65
312+17.32 (12.58 LT)	3.7	38.7	30.55 8.15
312+35.48	5.8	36.6	
312+25.48 (9.08 RT)	6.2	36.2	30.45 5.75
312+25.48 (12.58 LT)	3.6	38.9	30.65 8.15



Aug 19 1936
Soper
1364
Remmen

66

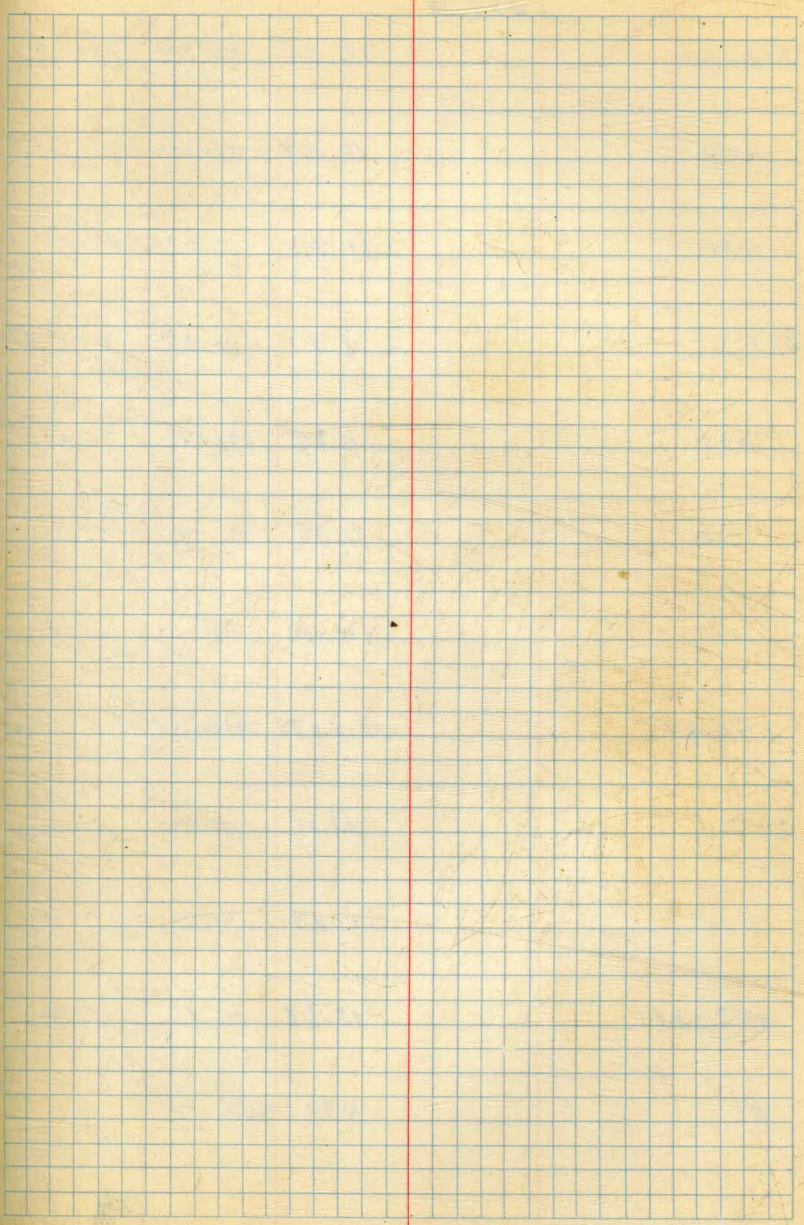
Grades in ditch sta 215+25-226+65.81

BM 26			483.58	
	0.77	484.35		
215+25		10.46	73.89	473.89
+50		10.50	73.85	73.85
175		10.55	73.80	73.80
216		10.59	73.76	73.76
+25		10.64	73.71	73.71
+50		10.69	73.66	73.66
+75		10.74	73.61	73.61
217		10.78	73.57	73.57
+25		10.83	73.52	73.52
+50		10.87	73.48	73.48
+75		10.92	73.43	73.43

Cont'd from page 66

484.35

218202.8208	10.9604	73.3896	473.3896
+25	11.04	73.31	73.31
+44.00	11.10	73.25	73.25
B. 10 th 26		483.58	
0.60	484.18		
ck on 218244.00	10.93	73.25	73.25
+75	11.04	73.14	73.14
219	11.12	73.06	73.06
+25	11.21	72.97	72.97
+50	11.30	72.88	72.88
+75	11.38	72.80	72.80
220	11.47	72.71	72.71



Cont'd from page 67

484.18

220 +25 11.55 72.63 72.63

+50 11.64 72.54 72.54

+75 11.72 72.46 72.46

221 11.81 72.37 72.37

+25 11.89 72.29 72.29

+50 11.98 72.20 72.20

+75 12.07 72.11 72.11

+90.44 12.1175 72.0625 72.0625

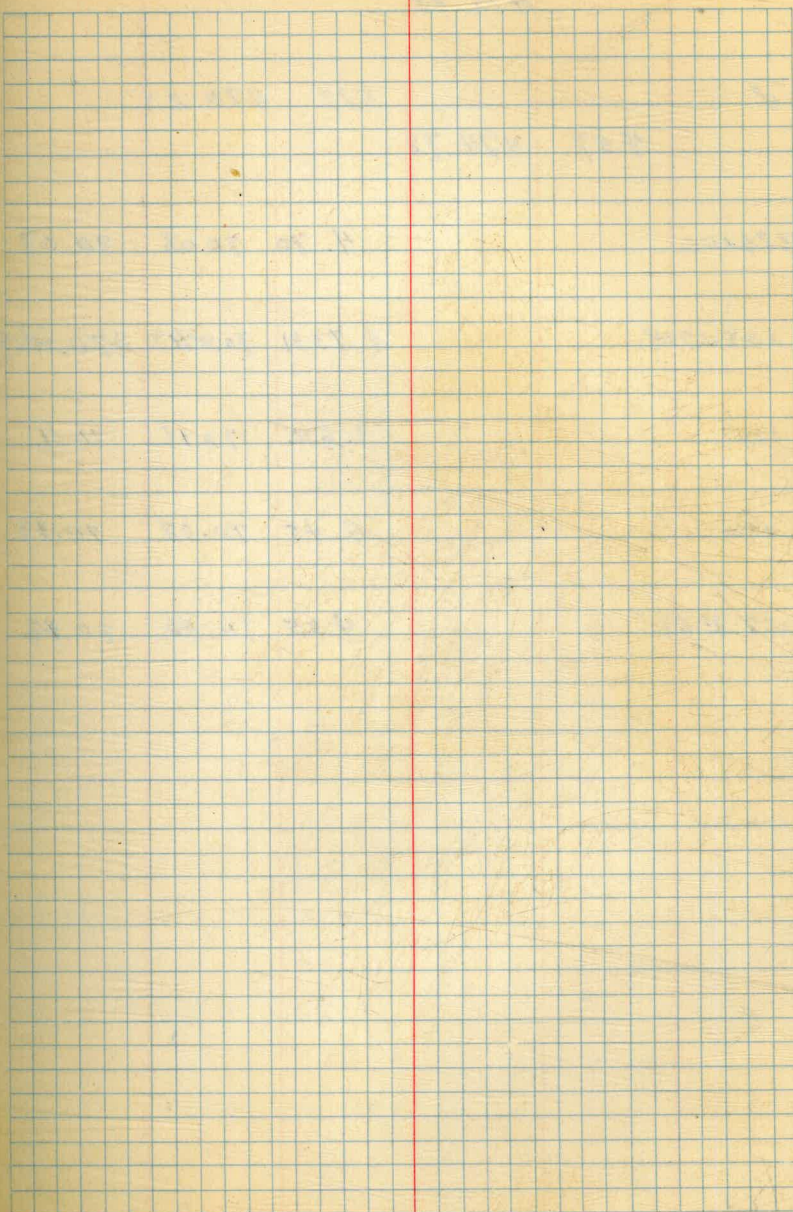
222 12.16 72.02 72.02

+25 12.29 71.89 71.89

+43.22 EC 12.37 71.81 71.81

TR 4.79 479.39

	5.69	485.08		478.39
TP			12.10	472.98
	2.50	475.48		
223+00			3.95	71.53
				71.53
+25			4.07	71.41
				71.41
+50			4.19	71.29
				71.29
+70.34			4.29	71.19
				71.19
224+00			4.43	71.05
				71.05
+25			4.55	70.93
				70.93
+50			4.67	70.81
				70.81
+75			4.78	70.70
				70.70
225-			4.91	70.57
				70.57
+25			5.03	70.45
				70.45
+50			5.15	70.33
				70.33
+75			5.27	70.21
				70.21



Cont'd from page 69

475.48

77

5.27 470.21

457 474.78

226.00

4.70 70.08 70.08

+08.0708

4.7331 70.0469 470.0469

125

4.62 70.16 70.16

+50

4.45 70.33 70.33

+65.8156

4.35 70.43 70.43

Aug 20 1936

Soper
Isbell
Remmer

Grades in ditch sta 226+75 - 236+11.30

Grade

BM^o 27

480.23

2.95 483.18

ck on grade
226+65.81

12.75 70.43 470.43

+75

12.69 70.49 70.49

227+00

12.52 70.66 70.66

+25

12.35 70.83 70.83

+57.3208

12.1342 70.458 71.0458

+75

11.78 71.40 71.40

228

11.28 71.90 71.90

+25

10.78 72.40 72.40

+46.9278

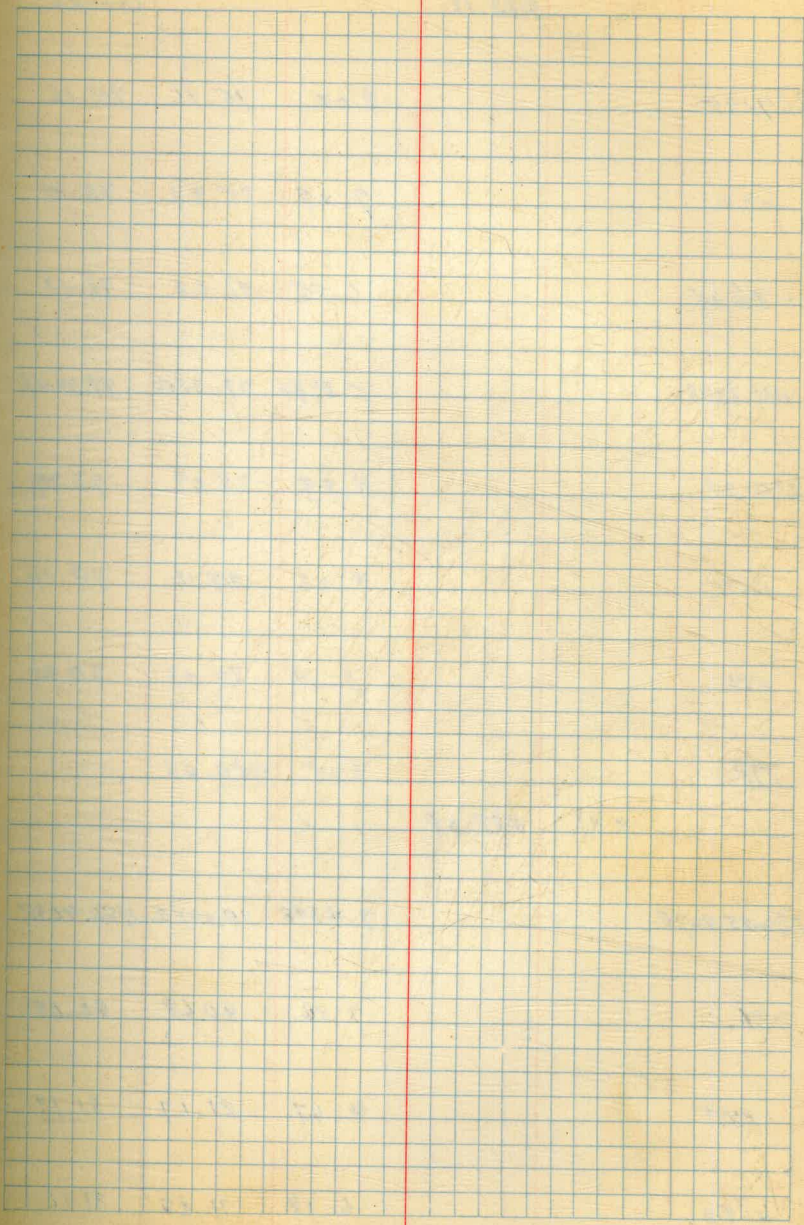
10.3425 72.8375 472.8375

+75

9.51 73.67 73.67

229

8.76 74.42 74.42



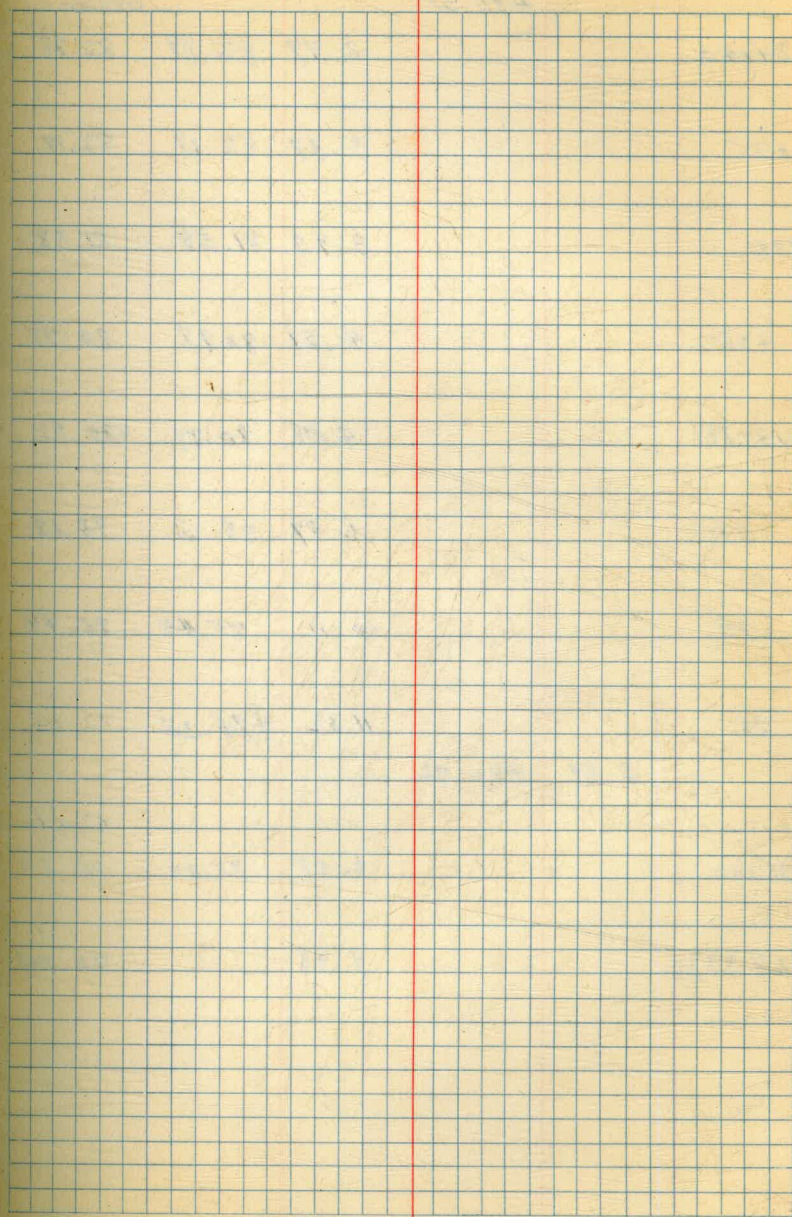
Critical from page 71

72

	483.18			Grade
229+25		8.02	75.16	75.16
+50		7.27	75.91	75.91
+74.24		6.55	76.63	76.63
+96.2378		5.8944	77.2852	77.2856
230+25		4.89	78.29	78.29
+50		4.02	79.16	79.16
+75		3.15	80.03	80.03
TP. 30.18		3.15	480.03	81.402
	7.81	487.84		
230+85.8078		7.4348	80.4052	480.4052
231		7.16	80.68	80.68
+25		6.47	81.17	81.17
+50		6.18	81.66	81.66

Cont'd from page 72

		#87.84		Grade
231+75		5.69	82.15	82.15
232		5.20	82.64	82.64
+25		4.71	83.13	83.13
+35.1578		4.506	83.334	483.334
+50		4.48	83.36	83.36
+75		4.44	83.40	83.40
233		4.40	83.44	83.44
+25		4.36	83.48	83.48
+50		4.32	83.52	83.52
+75		4.28	83.56	83.56
234		4.24	83.60	83.60
+14.4078		4.2108		483.62.92
TR	192	485.55	4.21	483.63
+25		2.18	83.37	83.37



Cont'd from page 73

74

	485.55		Grade
234+50		2.77 82.78	82.78
+75		3.37 82.19	82.19
235		3.97 81.58	81.58
+55		4.57 80.98	80.98
+33.883		4.78 80.77	80.77
150		6.87 78.68	78.68
+75		10.11 75.44	75.44
T.P.		11.32 474.23	72.20
	6.49 490.72		
236+00		8.52 72.20	72.20
+11.30 FC.		9.98	70.74

Aug 21 1936

Sages
Isbell
Remmes

75

Fill stake in Valve chamber sta 160+03

B.M.#21

501.12

8.85 509.97

Nail in floor
of valve chamber

12.35 497.62 499.09

159+92.4

6.94 503.04

160+15.2

6.90 503.07

Elev. of ground
75' Rst of Chamber

12.2 97.8

B.M.#

502.60

3.67 506.27

10.96 495.31

10.02 505.33

177+97

10.31 495.02

Grade for bottom of valve
sta 160+03.78

top of pipe by 4" P.A.V. + V. Valve for height of cover

" " " " " " " "

top of 48" Pipe by 4" P.A.V. + V. Valve

Aug 21 1936

Capit
Isabel
Remmon

75

Grade breaks in ditch sta 236+11.30 - 258+02.90

B.M. # 30

454.11

5.51 459.62

TP

11.24 448.28

10.21 458.49

258+02.8995

12.4431 46.0469 446.0469

255+04.1695

9.9375 49.5505 449.5505

TP

7.66 450.83

11.41 462.24

251+00

10.24 52.00 452.00

247+87.1695

8.344 53.896 453.896

TP

8.46 453.84

11.98 465.82

244+00

9.00 56.82 456.82

TP

7.87 457.95

12.77 470.72

Cont'd from page 76

77

470.72

240+10.4195

10.948 59.772 459.772

238+00

9.40 61.32 461.32

IP

9.41 461.31

11.15 472.46

236+81.7945

10.2665 462.1935 462.1935

236+76.94

10.23 62.23 462.23

236+50

6.74 65.72 65.72

+25

3.50 68.96 68.96

ck on site

236+11.30

1.72 1.73 70.74

Grades "raked in" between grade breaks.

Aug 24 1936

Soper
Isbell
Remick

Original x-section of blow off trench and
Pump Out Box sta 154+75

0+00 = 2.8 from E. of 48" pipe.

B.M. 20 5.87 509.39 503.52

P. 4.12 505.27

1.94 507.21

0+00 6.4 500.8

0+10.2 6.4 500.8

Cor. of Box 6.4 500.8 All corners
Elev. 500.8

Exc comp 9/3

Final x-section - Sept. 3 1936

P. 505.27

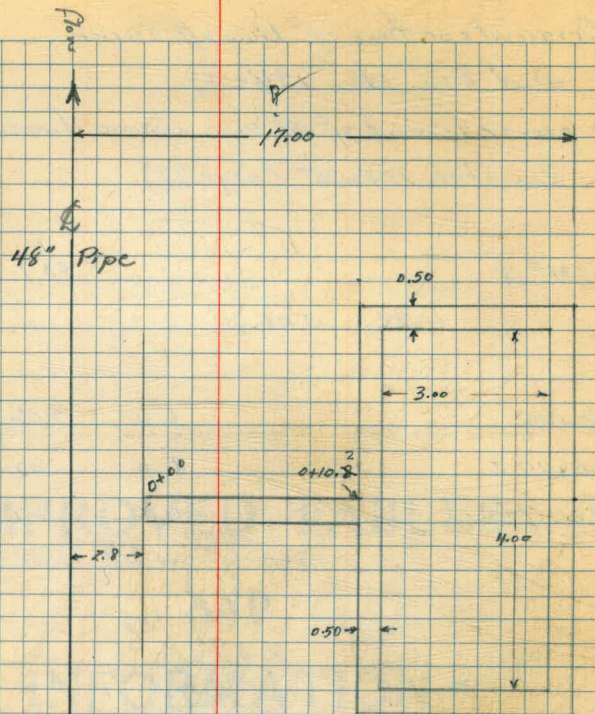
1.90 506.17

0+00 12.5 493.7

0+17 12.3 493.9

Excavated to full dimensions of box

78



Exc = Trench Cuyds

~~5.20~~ 7

Exc = Box Cuyds

~~5.11~~

19.

Aug 26 1936

Soper
Isbell
RemmenOriginal section of blow off trench
and Box sta 134+47one = 28' from E of 48" pipe. Same dimensions as
Box at sta 154+75 (page 78)

B.M. 18			507.45
	1.22	508.71	
0+00		6.0	502.7
0+10.2		6.0	02.7
Cor. of Box		6.0	02.7

All corners
elev. 502.7See $\frac{528}{58}$ for Best Quar.
$$\frac{528}{60}$$

DIRECTIONS FOR USE OF TABLES

TABLE No. 1.

Distance of slope stake from side or shoulder
stake for any width roadway, slope 1% to 1.
If ground is nearly level, the cut or fill at side
stake is located by the double entry method in
left column and top row. The number in body
of table in same row and column gives distance

IMPROVED TABLES

AND

INFORMATION

TABLE No. 2.

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

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	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 $41.9 + (20 - 16) \div 2$ or 2 ft. added to 41.9 = 43.9. For slopes of 1 on 1 see inside of front cover.