

#3

3

DEYGEN

ENGINEERS

FIELD BOOK

No. 404

1008

Wellsville City 52.7

S

I

N

North

42.8 T
Exide 52.7
31

2 8

Wells

53.1

Exide 42.8 T

33.7 T
43.7 F

43.5

n
35.3
49.6

1st E
Wells

4

50 to F set back

42.5 T
52.2

Exide

35.2 T
49.6 F set back
36.3 T
44.4 F

Exide
St. 8 set 43.2 T
51.2 T

34 T
43.2 T

Wells

45.7 T
53.0 F
43.5 T
53.3 F
35.5 T
43.1 to center

34 T
43.2 F

Wells

45.7 T
53.0 F
43.5 T
53.3 F
35.5 T
43.1 to center

↑ E

3

55.5

Public
sq.

48.7 T 48.7 T
← 97.5 →

1st E

4! N is empty this

nailed

Center

1st W

44.4 52.4
Bolt
96.8

track

Alignment of 1st S

53.
48.2
96.2
48.1
44.1
43.2
—
—

51.2
44.4
49.5
47.8
44.4
43.8
—
—

52.2
49.6
101.8

95.8
94.5
97.7
97.5
96.6
95.6
96.2
94.4
96.8
—
—

86.7
96.3

49.6

42.6
53.1
297.7
48.8
44.8
—
—

43.5
17
94.5
47.25
43.25

52.7
43.1
95.8
47.9
43.9

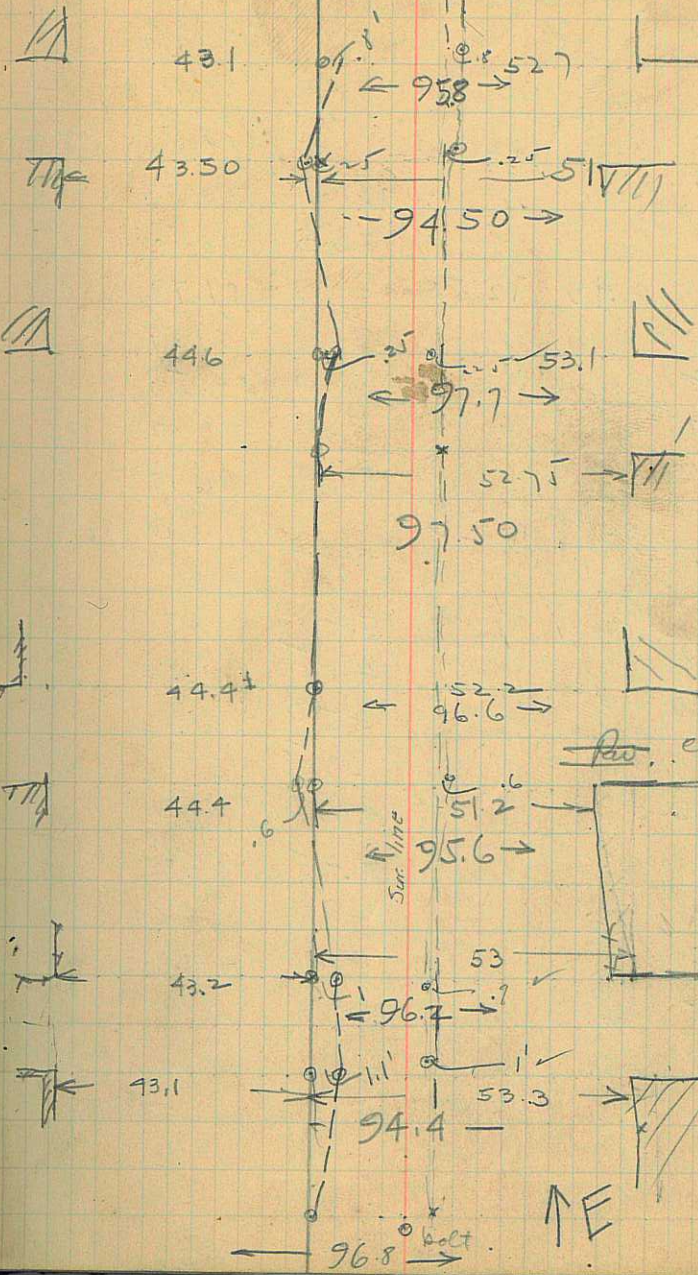
97.0

43.1
53.3
96.4
48.2
44.2
43.1

96.8
96.4
96.2
95.2
96.
97.50
97.70
94.50
95.20
81.86.6:1.0
96.3

Wellsville City

325



440

	B S	F S	m	Elv	H
6+20			6.50	71.34	
6+00			13.60	64.24	
5+50			8.40	69.44	
5.00	on 4'50		6.40	71.44	
	3.78	12.16		74.06	77.84
4+50			12.65	73.57	
400			8.00	78.22	
	4.43	12.58		81.79	86.22
6+50			13.00	81.37	
6+62			9.80	84.57	
6+87			5.00	89.37	
3+50			8.20	86.17	
	0.77	10.23		93.60	94.37
3+00			10.85	93.	
2+50			5.40	98.43	
2+00			4.15	99.68	
1+50			3.50	100.33	
1+00			3.85	100.	
+50			4.00	99.83	
Sta 0			4.45	99.38	
4			2.80	101.00	
3			2.1	101.73	
2			3.30	100.5	
Anchor Bolt	3.83			100.00	103.83

Levels for
Wellville

crack hole on 1st S.

7 3 2.5

48.7

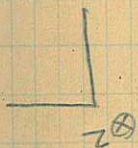
42.75

48

43.75

47.75

10



p bolt

47.75

4.5 W

1st

50

60

9

$$\begin{array}{r} 754.3 \\ \hline \end{array}$$

Roag

$$\begin{array}{r} 6+97 \\ \hline \end{array}$$

BS FS in
 P.M. 100 3.60 100.00 103.60

0+50

1+00

1+50

2+00

3+50

3+00

3+50

4+00

4+50

5+00

5+50

6+20

0.77

12.81

90.79

91.56

0.11

12.95

78.61

78.72

4.65 mty 45
 has been driven
 slightly

Grade
 to
 50
 98.60 5.00
 97.60 6.00
 96.4 7.20

94.4 9.7
 92.2 11.4
 90.00 13.6
 88.00 35.6
 86.00 5.56
 83.80 -5.08
 82.00 -3.3
 82.00 -3.3
 85.00 ±

P.R. no
 grade

1

C-out 103.6
 RR 98.60 211

5.00
 3.80
 5.00
 3.6
 5.00
 3.2 CA

5.00
 4.1
 5.00
 5.00
 5.00

4.65
 4.00
 4.4
 4.4
 4.4

10.0
 13.2
 14.5
 5.2
 13

8.0
 17
 10.1
 17
 10.1

12.9
 3.3
 12.9
 3.3
 12.9

11.4
 3.3
 11.4
 3.3
 11.4

11.4
 3.3
 11.4
 3.3
 11.4

11.4
 3.3
 11.4
 3.3
 11.4

11.4
 3.3
 11.4
 3.3
 11.4

11.4
 3.3
 11.4
 3.3
 11.4

11.4
 3.3
 11.4
 3.3
 11.4

103.60
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

103.6
 12.81
 90.79
 91.56

Robert R. Brown

Wellsville City on
 1st South for grade
 on high fire

5.5
 5.1
 11.6
 2.3

5.5
 5.1
 11.6
 2.3

5.5
 5.1
 11.6
 2.3

5.5
 5.1
 11.6
 2.3

5.5
 5.1
 11.6
 2.3

5.5
 5.1
 11.6
 2.3

Levels on 1st E
Street Inside Public of

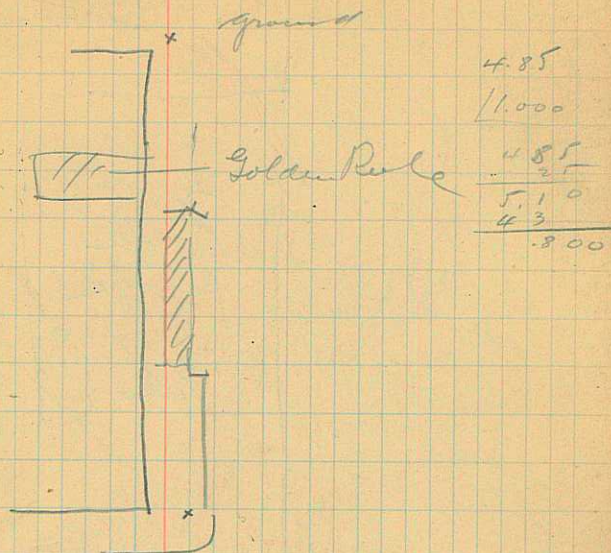
3.85

4.85

4.30

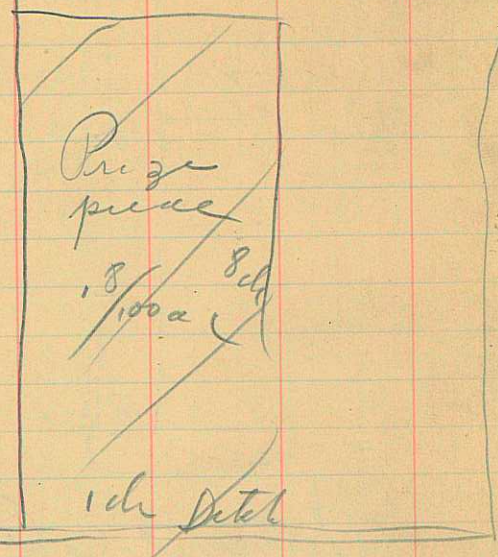
$$\begin{array}{r} 6.60 \\ 18.00 \\ \hline 480 \end{array} = \begin{array}{r} 1.000 \\ 764 \\ \hline 200 \end{array} \begin{array}{r} 4.80 \\ 0.21 \\ \hline \end{array}$$

13



Wellsville City
Grade levels on
old pavement in
front of Golden
Rule

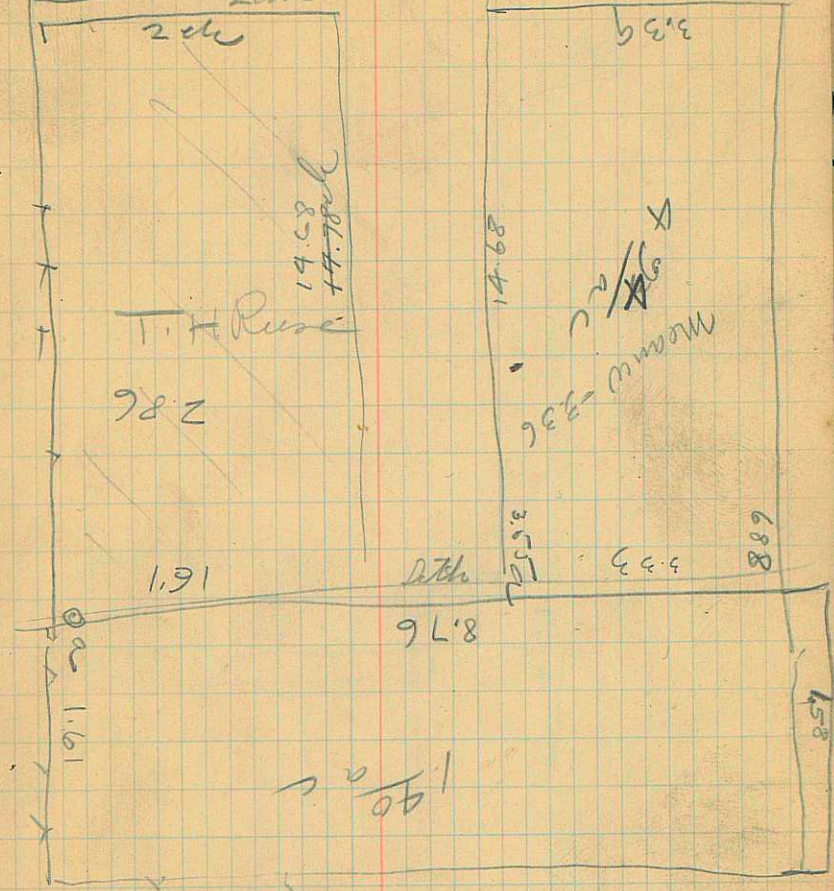
County Road
 Bis Resear
 west side road



↑
S

Gr New ST. 3
 Resear home → W
 Lane

67-15
 21
 697

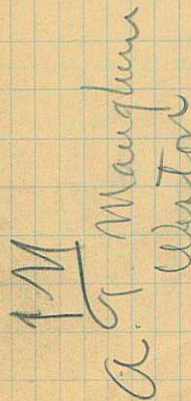


2.8626
 1.40
 1.46
 1.37
 1.32
 1.27
 1.22
 1.17
 1.12
 1.07
 1.02
 .97
 .92
 .87
 .82
 .77
 .72
 .67
 .62
 .57
 .52
 .47
 .42
 .37
 .32
 .27
 .22
 .17
 .12
 .07
 .02

1.40
 1.46
 1.37
 1.32
 1.27
 1.22
 1.17
 1.12
 1.07
 1.02
 .97
 .92
 .87
 .82
 .77
 .72
 .67
 .62
 .57
 .52
 .47
 .42
 .37
 .32
 .27
 .22
 .17
 .12
 .07
 .02

9.16
 1.40
 1.46
 1.37
 1.32
 1.27
 1.22
 1.17
 1.12
 1.07
 1.02
 .97
 .92
 .87
 .82
 .77
 .72
 .67
 .62
 .57
 .52
 .47
 .42
 .37
 .32
 .27
 .22
 .17
 .12
 .07
 .02

17

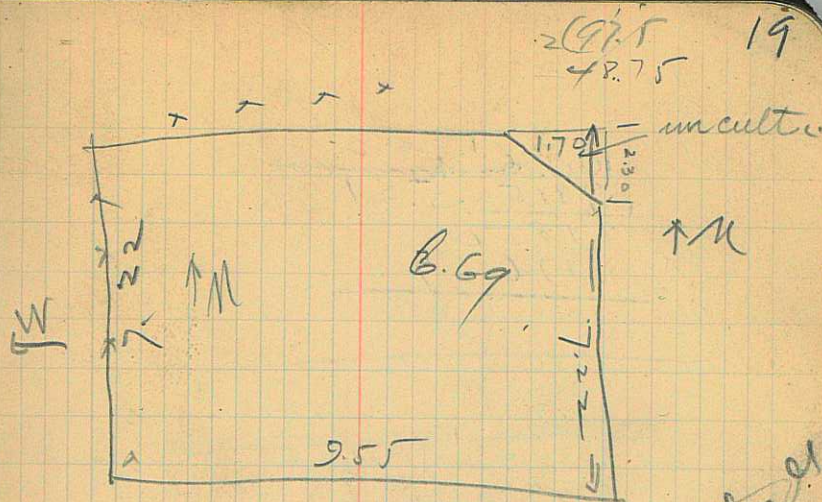


10/5/17

John P. Nelson
Weston

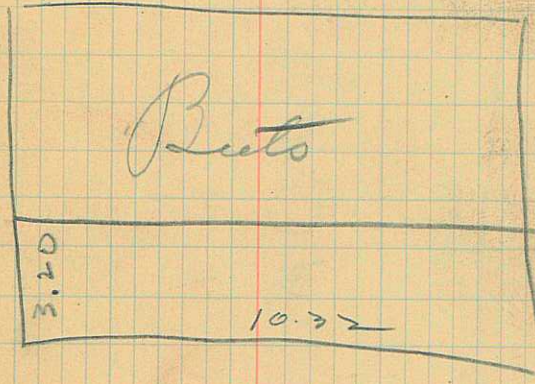
$$\begin{array}{r} 9.55 \\ 7.22 \\ \hline 19.10 \\ 19.10 \\ 6.685 \\ \hline 6.89510 \end{array}$$

$$\begin{array}{r} 1000 \\ 689 \\ \hline 3.11 \\ 2 \\ \hline 3.30010.32 \\ 3096 \\ \hline 20493.40 \\ 1034 \\ \hline 9080 \end{array}$$

$$\begin{array}{r} 2.30 \\ 1.7 \\ \hline 161 \\ 23 \\ \hline .3.91 \end{array}$$


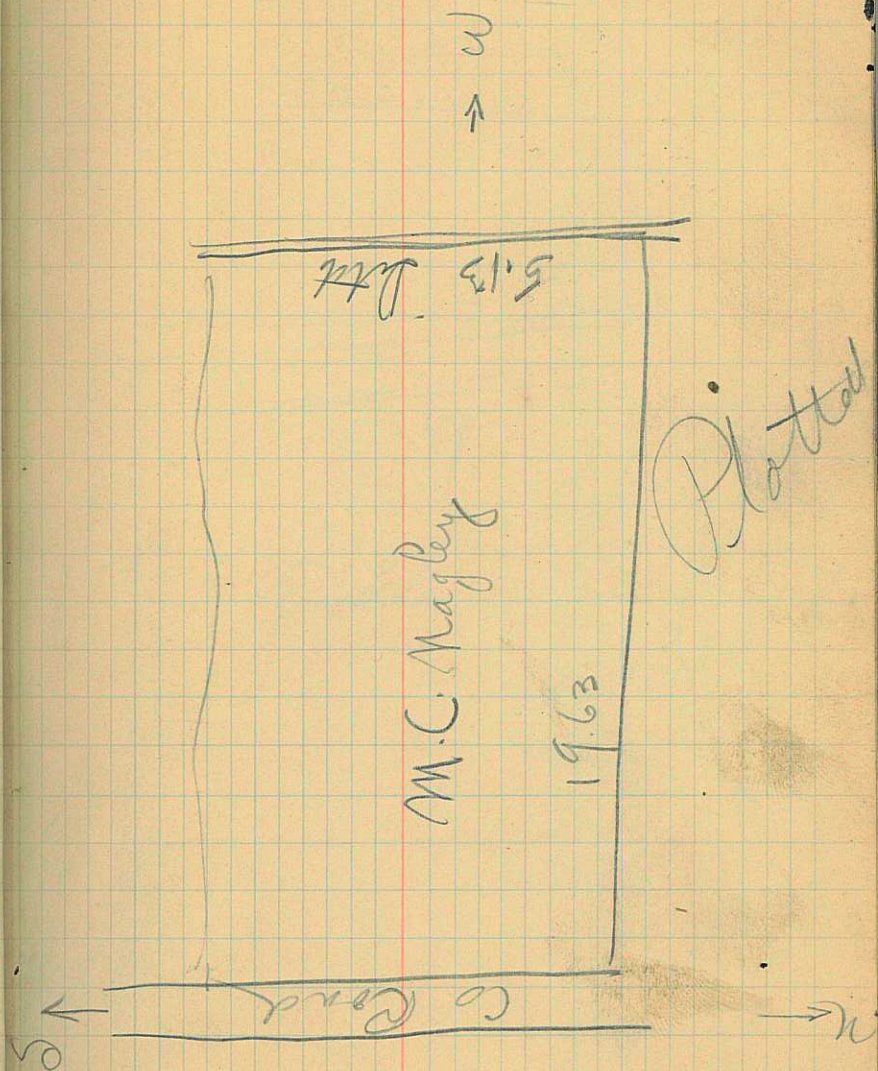
Plowed

~~Plowed~~

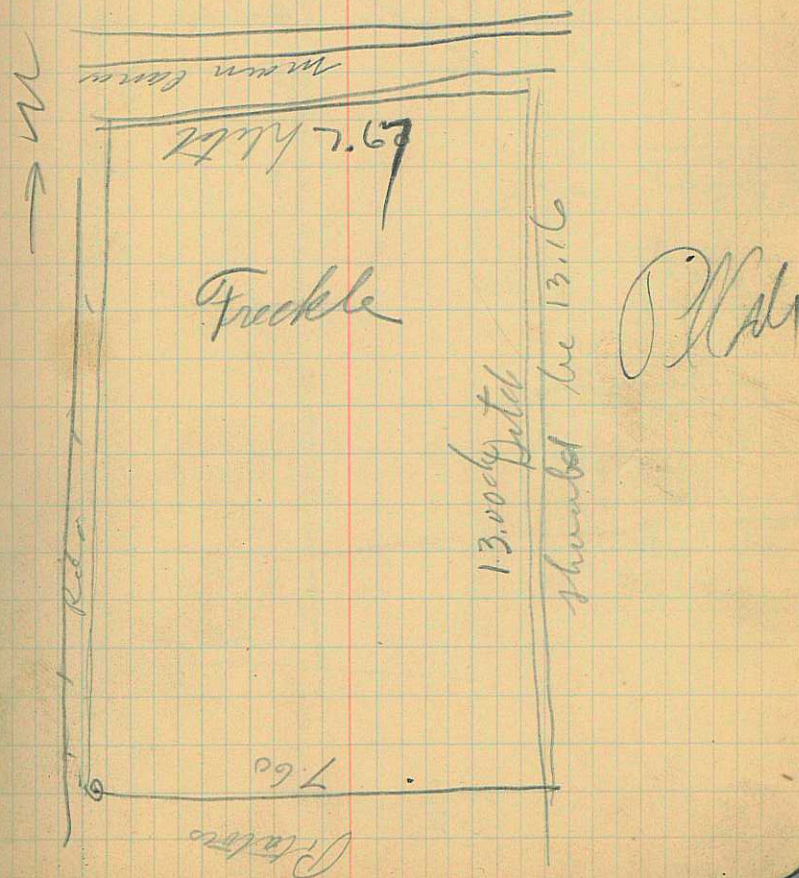


$$\begin{array}{r} 10000 \ 19.63 \\ 9815 \ 5.09 \\ \hline 18500 \\ 17667 \end{array}$$

$$\begin{array}{r} 19.63 \\ 5.09 \\ \hline 17667 \\ 9815 \\ \hline 9.99167 \end{array}$$



$$\begin{array}{r}
 10000 \\
 \underline{760} \\
 2400 \\
 \underline{2280} \\
 1200 \\
 \underline{760} \\
 4400 \\
 \underline{4160}
 \end{array}
 \quad
 \begin{array}{r}
 7.60 \\
 \hline
 13.16
 \end{array}$$

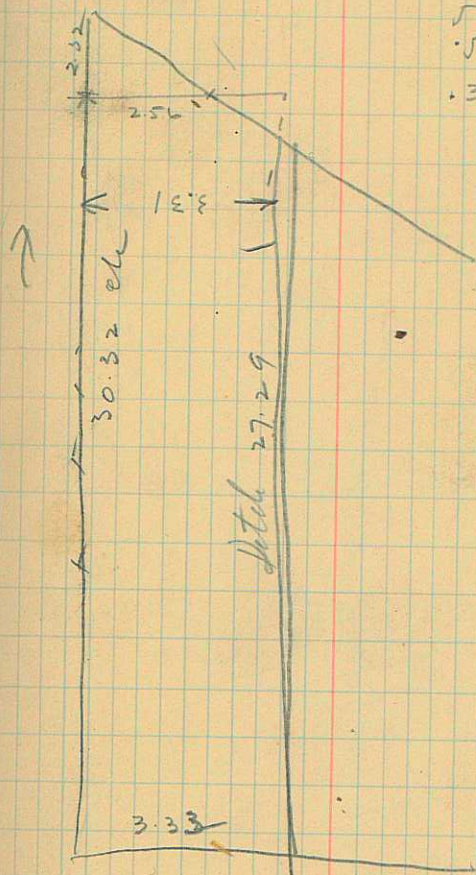


25.00 27.6
2484 90
2160

Bis T.S. Kern 25

25.00 28
2048
512
7.162
7.46

256
2.32
512
768
59392
30



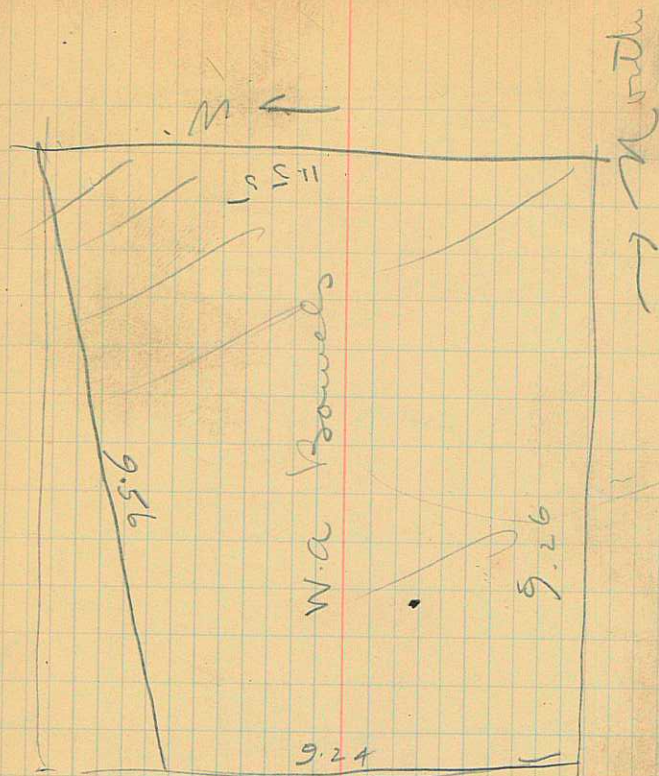
27.29
30.32
25761
2880

3.32

28.81
23.32
5762
8643
8643
9.56492
10.00
9.57
0.4.302729
272915
15710
13645

188
56
203

26
10
16

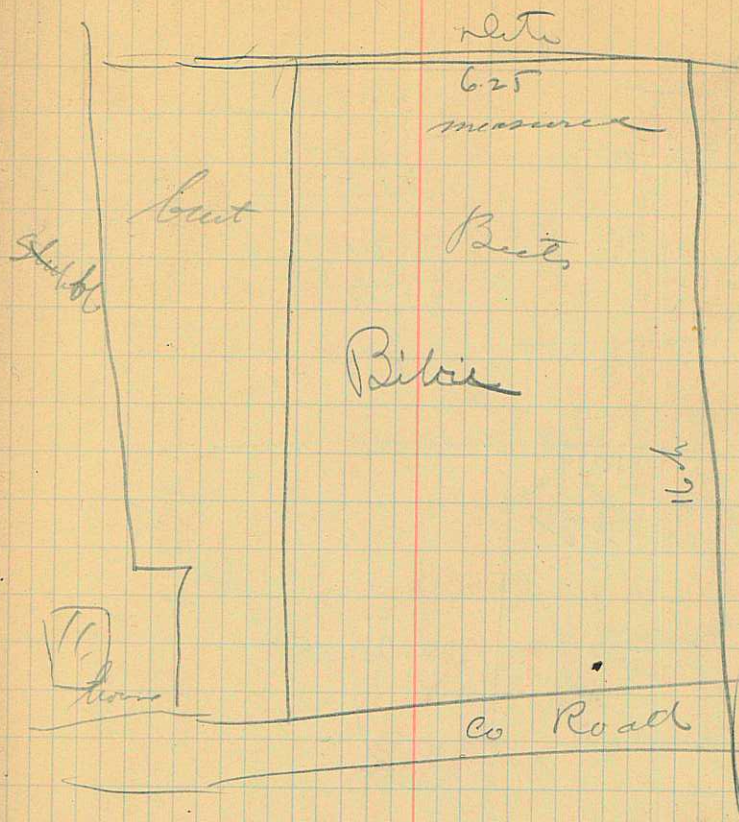


$$\begin{array}{r}
 11.56 \\
 - 9.24 \\
 \hline
 20.80 \\
 2 \overline{) 20.80} \\
 \underline{10.40} \\
 10.40 \\
 \underline{10.40} \\
 0.00 \\
 \hline
 37.04 \\
 72.5 \\
 \hline
 9.6304
 \end{array}$$

$$\begin{array}{r}
 100 \overline{) 16} \\
 40 \quad 625 \\
 80 \quad 3750 \\
 \hline
 625
 \end{array}$$

29

↑ West

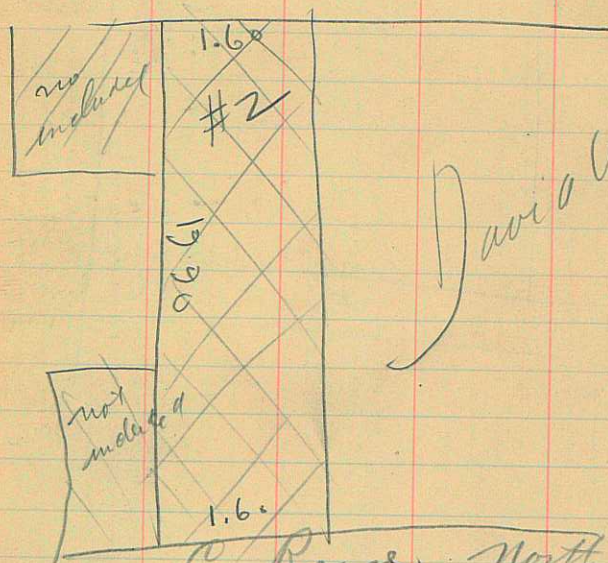


$$\begin{array}{r} 8.16 \\ 9.896 \\ 1.92 \\ \hline 6816 \end{array}$$

$$\begin{array}{r} 10 \\ 682 \\ \hline 3.18 \end{array}$$

$$\begin{array}{r} 31.8 \\ 1990 \\ \hline 11900 \\ 11900 \\ \hline 0 \end{array} \quad \begin{array}{r} 119.90 \\ 1.6 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 19.9 \\ - 1.6 \\ \hline 11.94 \\ 1.99 \\ \hline 3.284 \end{array}$$

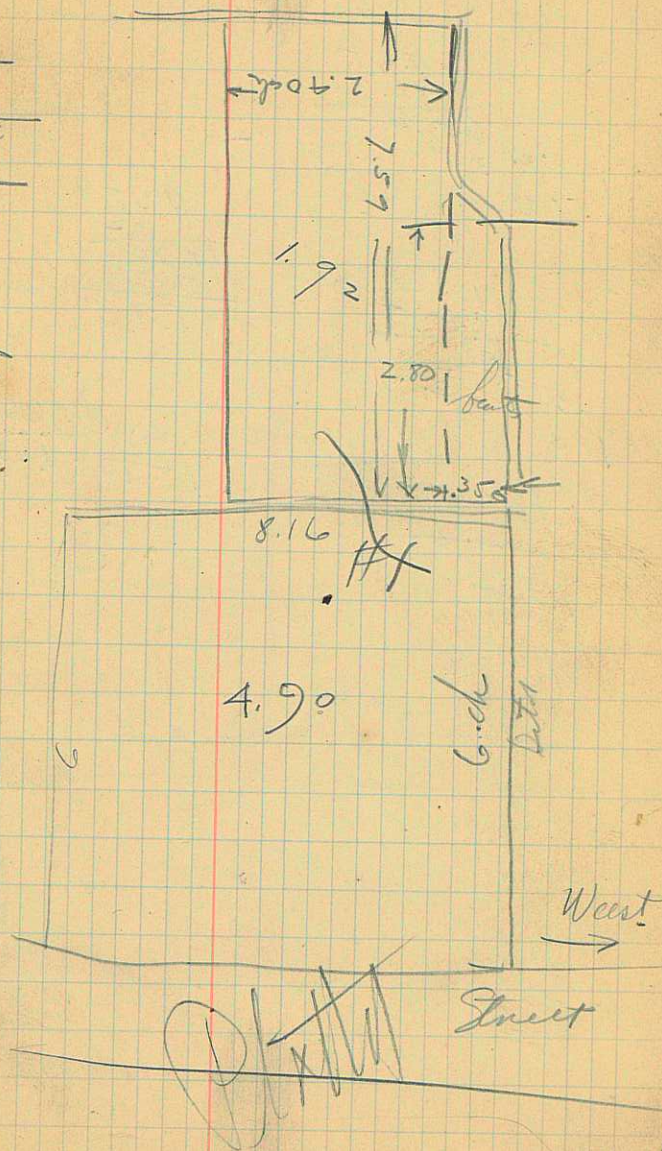
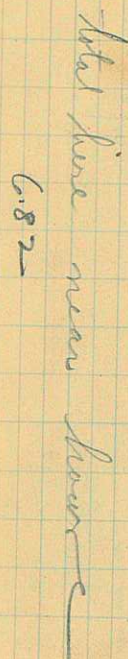


C Road North

David West

$$\begin{array}{r} 28 \\ 135 \\ \hline 1 \quad \checkmark \quad 0 \\ 8 \quad \checkmark \\ \hline 0.0980 \end{array}$$

$$\begin{array}{r} 2.4 \\ 7.6 \\ \hline 14 \end{array}$$



$$\begin{array}{r} 10.00 \quad 9.35 \\ \underline{9.35} \\ 6500 \quad 10.7 \\ \underline{6545} \end{array}$$

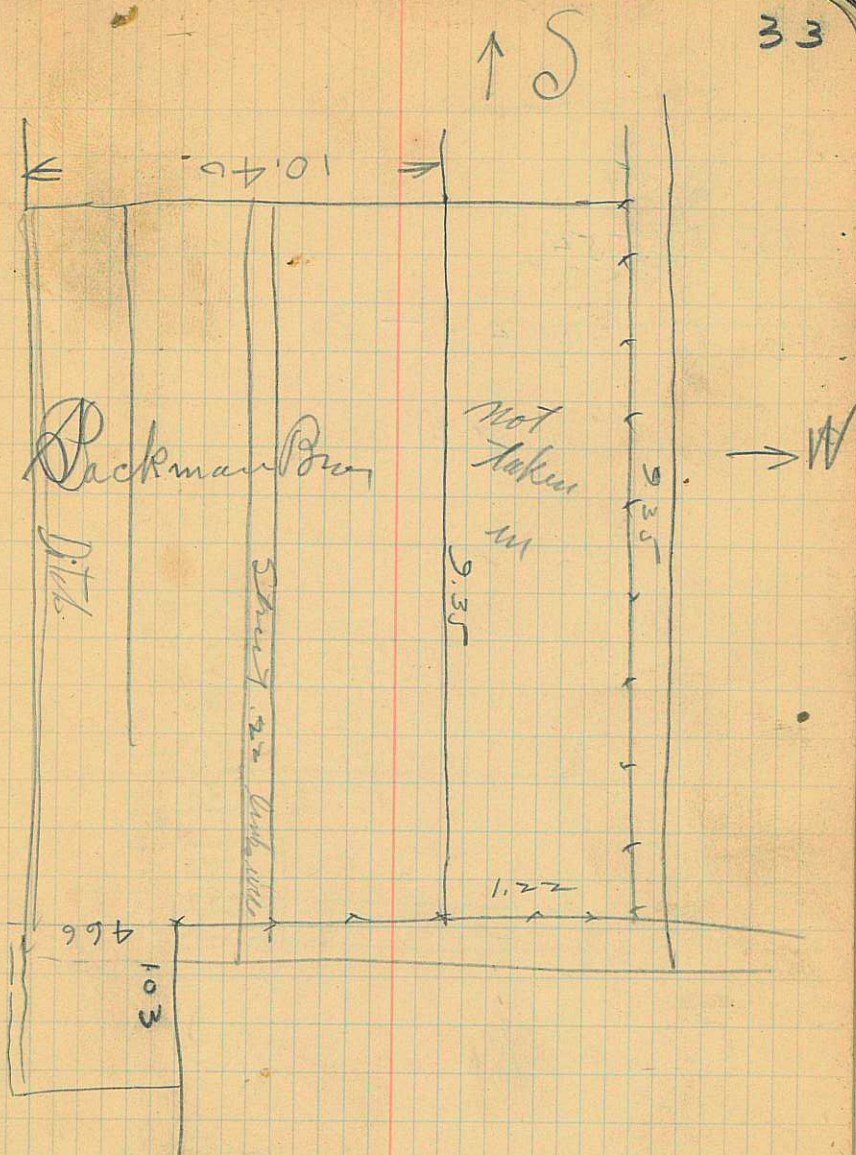
$$\begin{array}{r} 9.35 \\ \underline{10.7} \\ 6545 \\ \underline{9.35} \\ 10.0.0.45 \end{array}$$

$$\begin{array}{r} 9.35 \\ \underline{22} \\ 1870 \\ \underline{1870} \\ .20570 \end{array}$$

$$\begin{array}{r} 10.4 \\ \underline{9.35} \\ 520 \\ 312 \\ \underline{936} \\ 9.7240 \\ \underline{2} \\ 9.52 \end{array}$$

$$\begin{array}{r} 480 \quad 466 \\ \underline{426} \\ 140.103 \end{array}$$

33



a 5.54

b 4.75

9.21

Levels

1077/107

35

gutter

N. G

Haybale

4.75
5.46
9.21

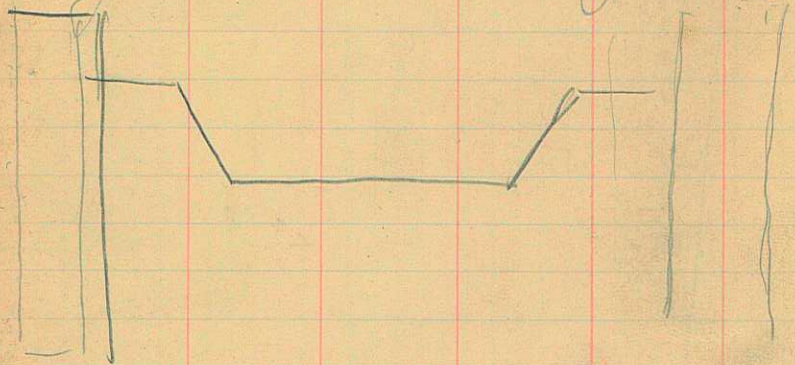
5

b
x

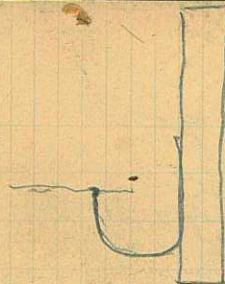
ax

Prattville, Alabama
M. C.

Cub River Worm Creek
for Condie head gate



37



$$\begin{array}{r} 1.5 \\ 2 \\ \hline 90 \end{array}$$

$$\begin{array}{r} 3.33 \\ 1.5 \\ \hline \end{array}$$

$$\begin{array}{r} 333 \\ 9 \\ \hline 2.797 \end{array}$$

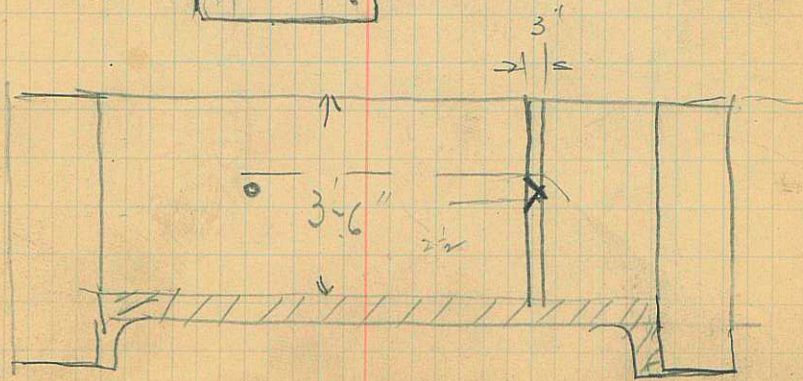
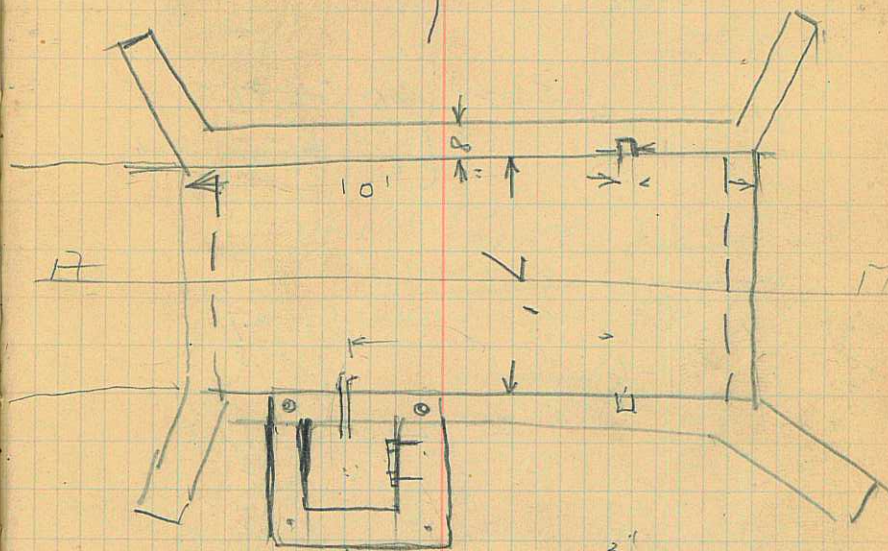
$$\begin{array}{r} 3 \\ 2.5 \\ 5.0 \\ 6.5 \end{array}$$

$$\begin{array}{r} 7 \\ 7 \\ \hline \end{array}$$

$$\begin{array}{r} .29 \\ 7 \\ \hline \end{array}$$

$$.3 \downarrow 30 \quad 6$$

7



Jos. Conair headgate

5.00

105.00

6.10

5.60

5.02 { top stake 99.98
2 1/2 to top of finished
curb

Q = 3.00 l = 1.5 h = .07
3.70 l = .8

1-6
8

2-2
6

1.5
6

333

2997

7.1
35.5
1.075
3.33
321
321
360 38

149
7
3230
21
930
10
104
1120
220

10 20 = 1-8
60
1-10
12
7 1/2 6

6.10

5. 6.10 4.5
1.60

37

105
5.02
99.98
97.58

105
5.8
99.2
97.5

105
97.5
7.5
5.6

in 10 of 10 can outlet

in ditch just below outlet

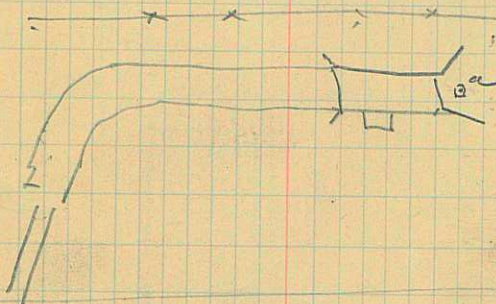
101
35
97.5

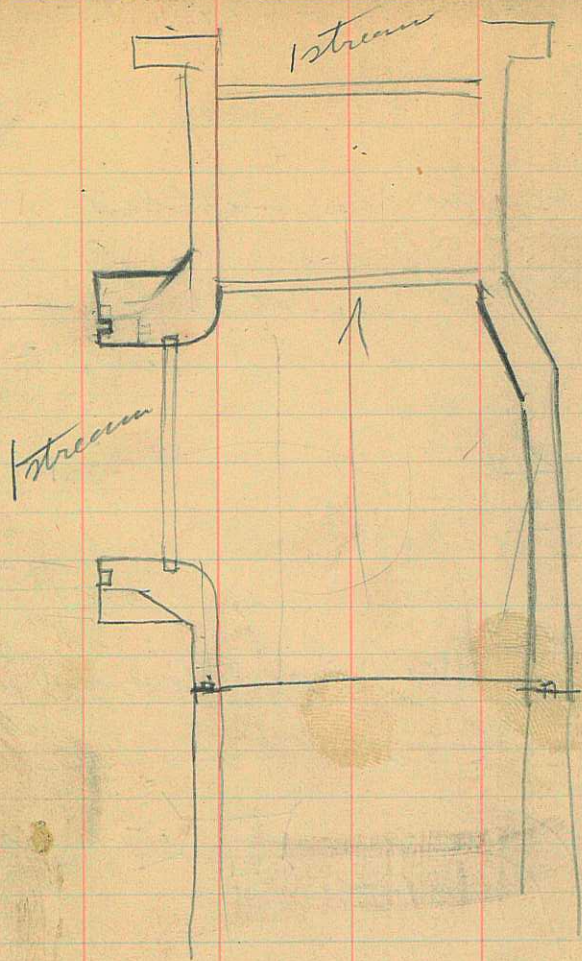
100.5
100.5

106.

97.5

Weir location





a	5.78	top wall	100.00	105.78
Ⓟ	8.00	on old floor of floor	97.78	
on stake Ⓟ	7.12		98.66	
c	8.20		97.58	
	6.38	on culvert	94.20	

17

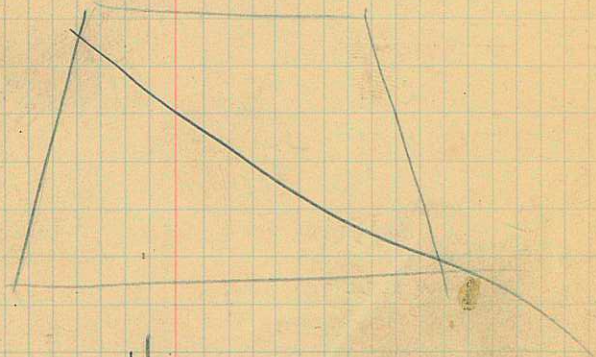
10

41

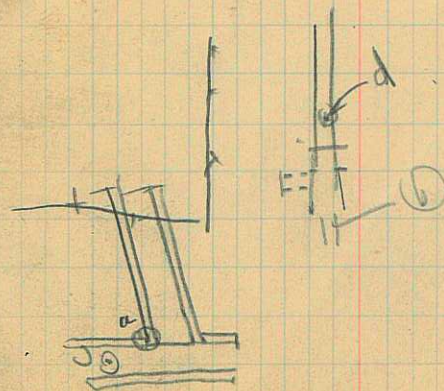
$$\begin{array}{r}
 2.5 \\
 7. \\
 \hline
 17.5 \\
 35.0 \\
 45.00 \\
 20 \\
 \hline
 65.00
 \end{array}$$

Henry Johnson's

$$S = 2\frac{1}{2}$$



$$\begin{array}{r}
 5.78 \\
 2.50 \\
 \hline
 8.28 \\
 7.12 \\
 \hline
 1.16 \\
 7.28
 \end{array}$$



$$\begin{array}{r}
 8.578 \\
 2.22 \\
 \hline
 6.358
 \end{array}$$

1	4.16	100.00	104.16
2	3.11	101.05	
3	5.40	98.76	
4	5.00	99.16	

3.11

Stop walls 101.05

5	4.20	on stake	99.96
6	3.22		100.94

Austin Hollingsworth
at Bartlamaps

on the H₂O mark

below gate

Stake
in between
walls on 4

6 on door
floor

on post
marked blue

Double device

4.16
5
3.66

5.00
3.66
1.34

5.40
2.5
2.9

3.11

3.11
2.0
5.61
4.20
1.41

4.16
3.11
1.05

1.50

6

1' - 41" to
= 1' - 5" top on floor



PM #1

4700

100.45

5.15

on the H₂O

100.00

105.15

6.3

on drip

98.85

2

4.14

on steps

101.01

3

6.70

in ditch

98.45

4

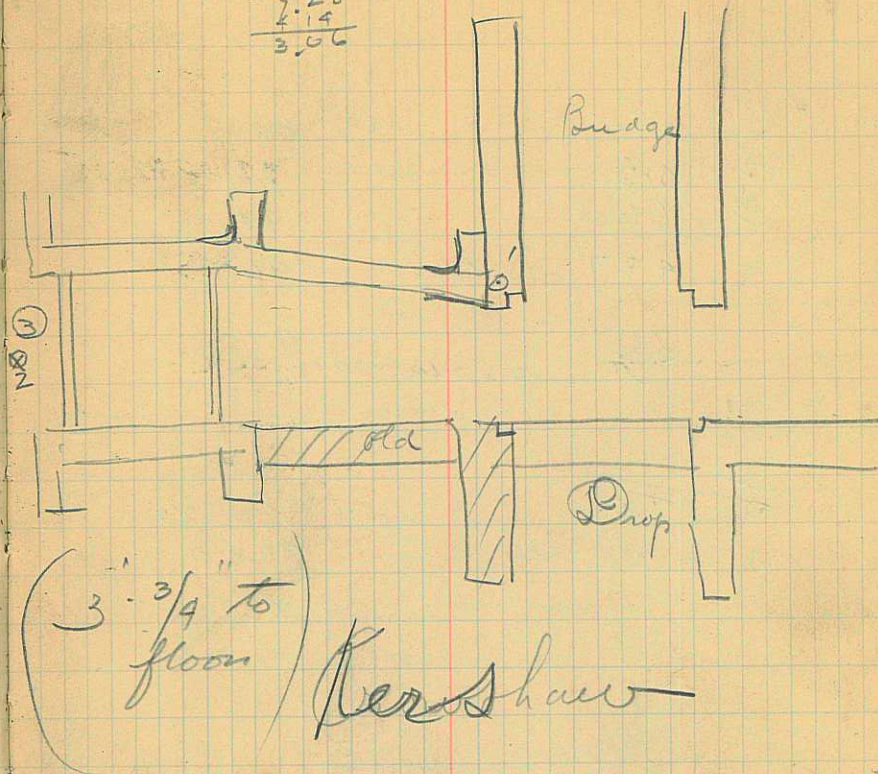
5.40

on dandel

99.75

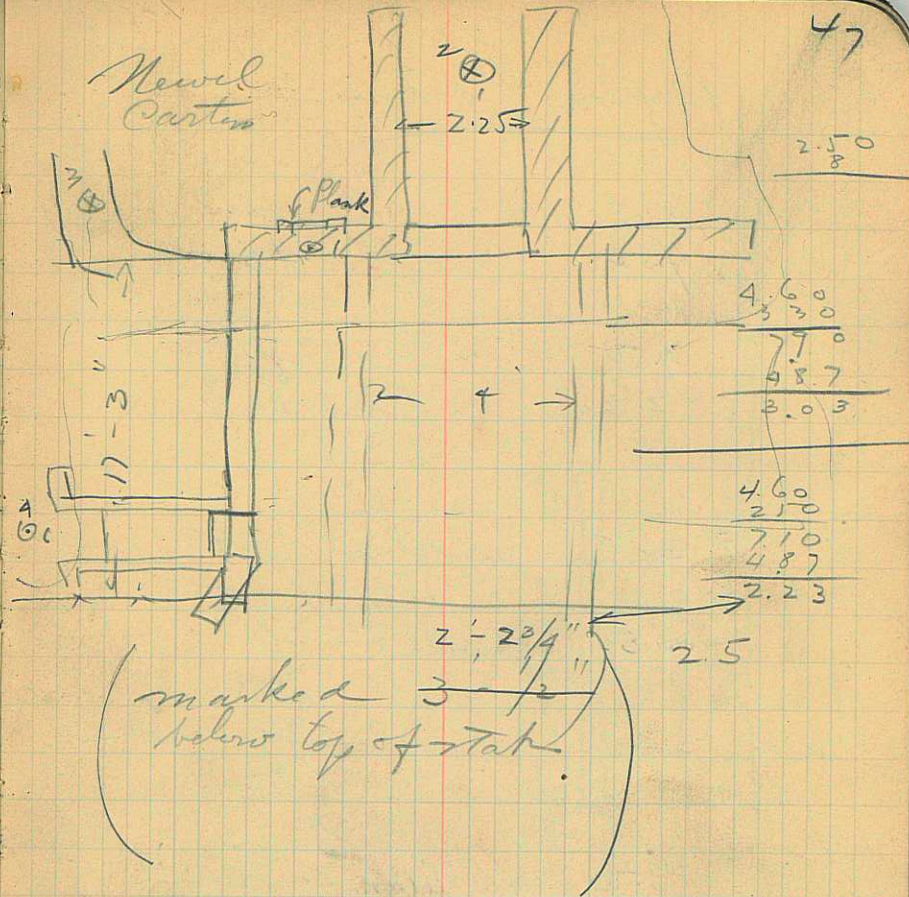
4700
250
220
214
306

45



Bm #	1	4.60	"	100.00	104.60
	2	8.60		96.00	
	3	6.60		98.00	
	4	4.87	on stake	99.73	
		7.10	{ on new proposed S down	97.50	
		7.90			
	5	7.29			
	5	7.00		97.60	

⑤



Myron Carter

1 9.50 95.00
 2 4.50 on Canal High 104.50
 3 2.30 on Canal bank 102.20
 4 3.05 on stake 101.45
 3.50 top wall 101.00
 6.70 in Main Canal bed 97.80

104.50
 6.70
 97.80 make box 3' deep.
 950
 350
 600

stream

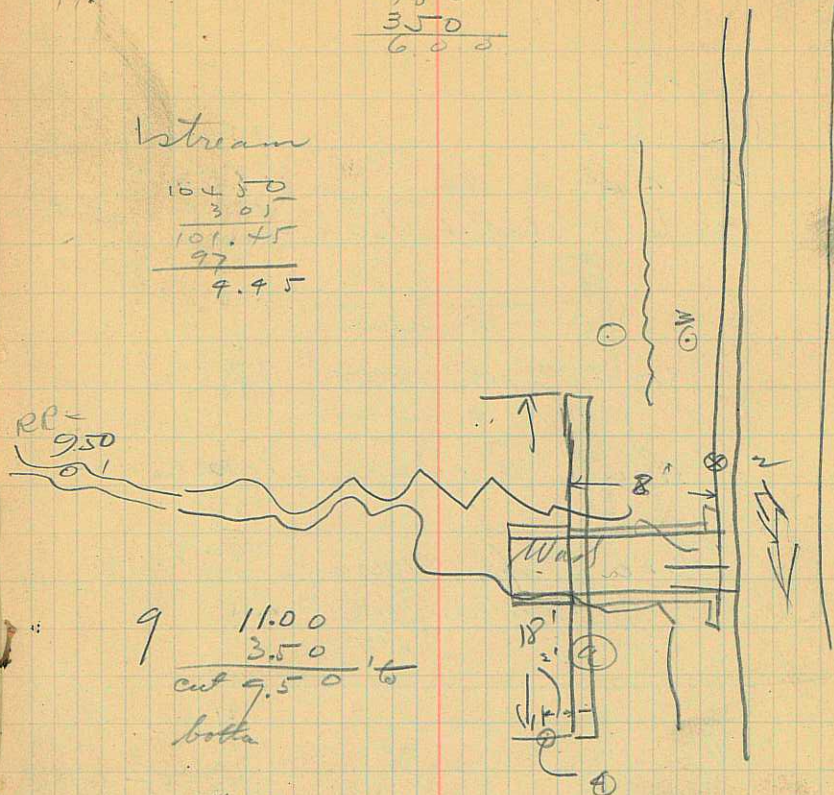
104.50
 3.05
 101.45
 97
 4.45

RP-
 9.50
 0.1

9 11.00
 3.50
 cut 7.50 to
 bottom

11.00
 3.05
 7.95

from stake { 8" from top stake to bottom wall
 4' - 5" to floor in box



1 10.50 95.66
 2 4.24 on stake 101.92
 6.16 height H₂O in canal 100.00 106.16

8.20 bottom canal 97.96

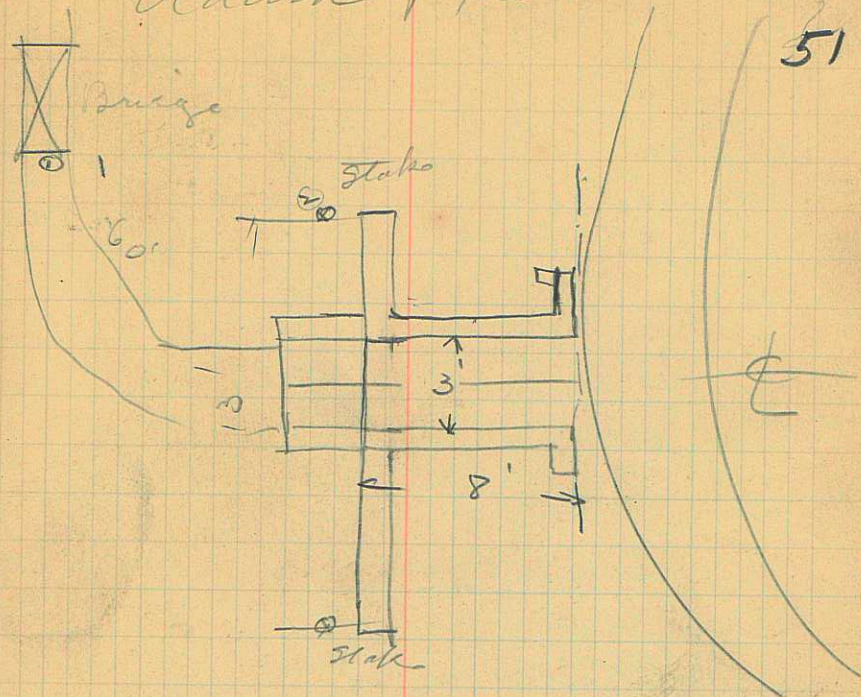
4.00 bank canal 102.16

6.00 { perhaps extreme height 100.16
 1.50 water in canal

$\frac{13}{91}$

91.00
 80
 12
 183 35
 175 5

Adam & Fletcher 6.5.16
 51



cut 7.26 = 7'-3" to bottom
 of cut off wall

$\frac{6.16}{2.50}$
 8.76

4.50 on cement wall

8.2
 4.50

8.3 in bottom bottom
 4'-1" to floor of box
 3" above top wall
 8.30 4.50
 4.24 4.24
 4.06 6.26

8.3 4.50
 4.5
 3.8

Co

Survey for Anderson & Sons

11

5	2°-48'	5.00
---	--------	------

4 -

#4	2 ^o 48	2.548
----	-------------------	-------

3 2-48 8.548

#	2	270°55	0.452
---	---	--------	-------

239⁰05

17



nov 21-1917

Ob on pt #5

Hor L dest L time

direct 47°19' 14°20' 3:30

inverted 48°7' 13°41'

47°43' 14°00'30"

direct 47°46' 14°03'

inverted 48°28' 13°26'

48°07' 13°44'30"

direct 48°16' 13°43' ~~3:36~~

inverted 49° 13°05' 3:36

48°43' 13°24'

Mean 48°11' 13°43' cor. for refraction
= 13°39'10"

Z = 76°20'50"

φ = 41°42'30"

δ = - 19°57'20"

76°20'50"
41°42'30"
118°03'20"

= 117°63'20"
19°57'20"
98°06'00"
49°03'

118°03'20"
19°57'20"
138°00'40"
69°00'20"

55

Lat 41°42'30"

True bearing of sun = 46°36'40" ✓
Sub - 1°34' ✓
from all 09

time elapsed - 10½ hours

19°51' 32.8" = 5-1
+ 5 57 60
11 1
- 19°57' 23.8"

log cos 49°03' = T. 816 5066
log sin 69°00' 20" = T. 970 1679

log tan 76°20'50" = T. 799 1226

log sec 41°42'30" = T. 873 0539

Sum 1/2 = 66°41'40"
T. 926 0687
T. 963 0343

	A_0	L	Stations
20	200°5'	10	13.6
19	201°35'	10	13.02
18	227°20'	11	13.92
16 ⁺	236°48'	9	13.93

17-

17 57°48' 13.85

B 6°13'
cur 17 220°30'

16	58°58'	2	6.25
15	78°54'	3	5.98
14	121°43'	4	5.93
13	150°20'	4	5.21
12	170°50'	3	5.21
11	187°07'	4	5.86
10	194°04'	5	5.9

9 -

9 71°28' 20.585

4-

71°28' 10.63

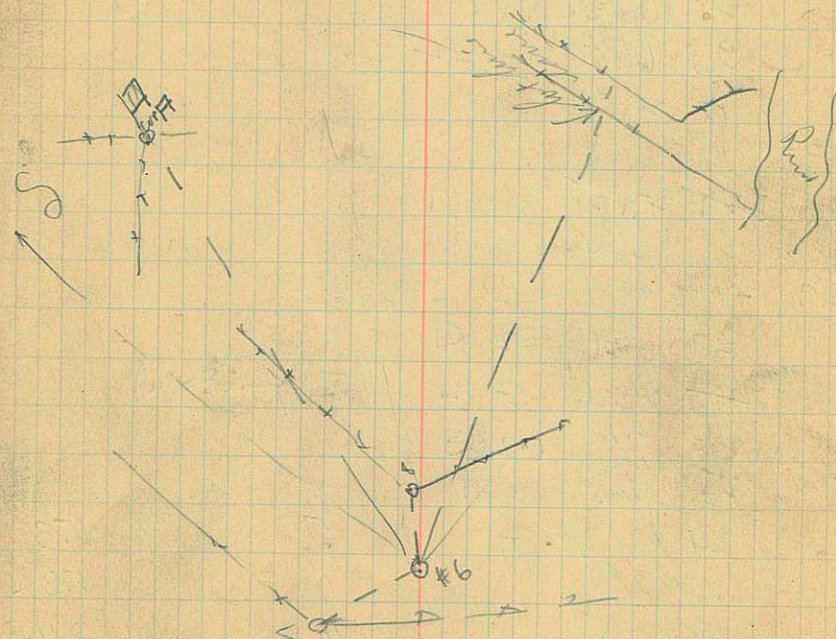
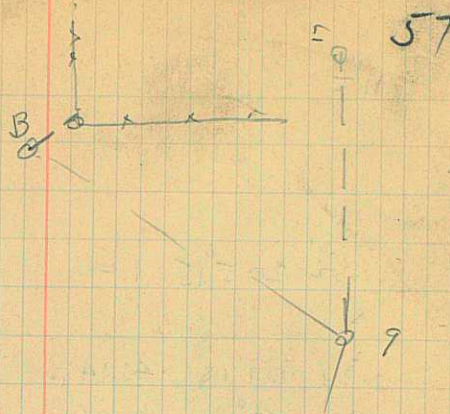
71°28' 10.38 20.585 to line 1145

8 43°14' 0.372

7 272°24' .74

lot A 33°09'

6-



Pt Ay

L C C

	32	205°15'	1.40		
31-					
	31	187°10'	4.143		
	20	187°10'	3.06	intersect E side OSL	
172					
			4.20	to creek flow west	
		186°15'	0.66	to fence E+W	
	29	100°30'	0.99		
	9	186°15'	10.22		
	cor A	271°00'			
B29-					
	B29	271°25'	10.661		
	28	126°40'	0.17		
27					
	27	0°36'	2.51		
	27	0°36'	2.91	to fence E+W	
	26	71°0'	0.283		
	25	62°0'	0.11		
	24	169°30'	11	5	5.3
	23	183°0'		4	5.32
	22	188°22'		11	13.45
	21	189°44'		10	13.5

Rebank + OSL R of W

60

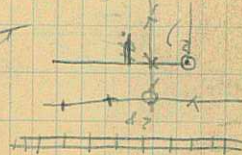
E of OSL curve

R of W

set 57°48'

set 91°25'

2' markers on S. side of post



E. Rail O.S.L. track

O.S.L. R. of W. post split off. stake

OSL R of W

OSL R of way along fence

OSL R of way

River Creek + OSL Rt of way

9559
77
27

996 post
fence B

94.1

10.941

28
10.661

Hyle Park Extension

Nov 23-17

63

3+00

2+85

2.00

1+82

1+00

0+84

~~0+84~~

0+51

Survey
Ch. 20-10
23-27

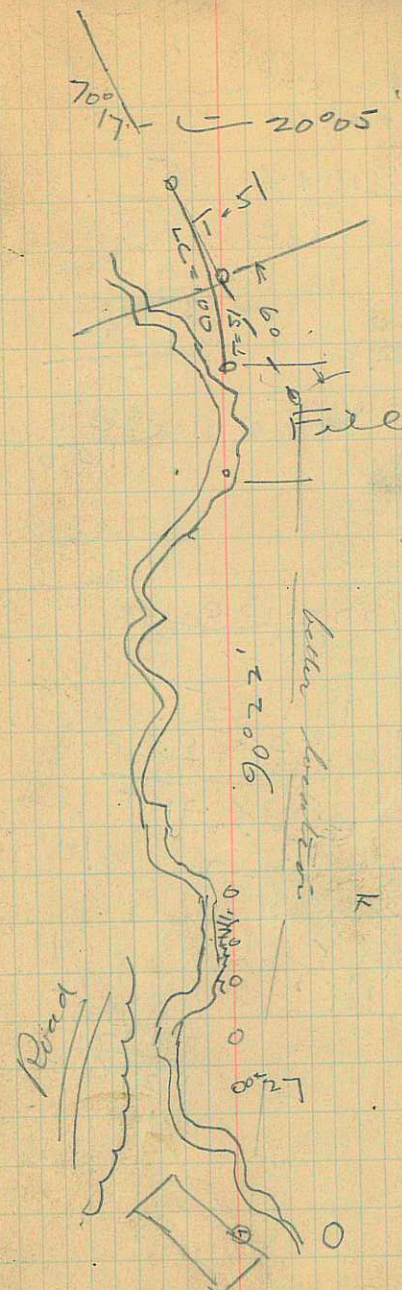
Creek

0+51

S

P.I. 11+50	B 5	53	Ele	H I	680.04	
11+00						
10+00			9.0	671.04	✓	
P.T. 9+48			8.7	671.34	✓	
PT { 8+98mc			4.5	675.54	✓	
π { 8+99						
P.C. 8+48	20°		7.00	673.04	✓	
8+45	11.79	0.30		679.74	691.73	
7+85			8.4	683.33	✓	
7+40			6.1	685.63	✓	
7+00	13.36	0.42	10+00	691.31	704.67	
6+00		at 7	3.50	694.67	✓	
5+60			4.5	700.17	✓	
5+00	12.00	0.60	9.9	704.67	716.67	
4+00		at 5		706.77		
3+00	13.42	1.510	2.7	713.97	✓	
2+00	8.25	0.13	7.80	715.16	728.58	
1+68			7.80	720.78	✓	
1+49			6.00	728.45	736.90	
1+00			7.80	728.90	✓	
0+56			5.00	730.70	✓	
0+27			6.30	731.70	✓	
0+27			1.20	730.40	✓	
Am #4 80m			4.1	735.50	✓	
g 128			4.75	732.60	✓	
Creek			4.75	731.95	✓	
0			5.2	731.50	✓	
Intake box			4.5	732.20	✓	

Cuts
from
Pro.
29



9022
7017
2005
17960
2005
15955
7957
7015
940

Curve cam

8+99

$$\begin{array}{r} 1004 \overline{) 114} \\ 114 \\ \hline \end{array}$$

$$\begin{array}{r} 1014 \overline{) 140} \\ 140 \\ \hline \end{array}$$

$$\begin{array}{r} 89 \overline{) 40} \\ 40 \\ \hline \end{array}$$

$$\begin{array}{r} 2008 \overline{) 100} \\ 100 \\ \hline \end{array}$$

$$\begin{array}{r} 8+48 \\ 50 \\ \hline 898 \end{array}$$

$$\begin{array}{r} 1773 \overline{) 80} \\ 80 \\ \hline \end{array}$$

$$\begin{array}{r} 268 \overline{) 180} \\ 180 \\ \hline \end{array}$$

$$\begin{array}{r} 3438 \overline{) 11375} \\ 11375 \\ \hline \end{array}$$

$$\begin{array}{r} 10785 \overline{) 687} \\ 687 \\ \hline \end{array}$$

$$\begin{array}{r} 10785 \overline{) 12160} \\ 12160 \\ \hline \end{array}$$

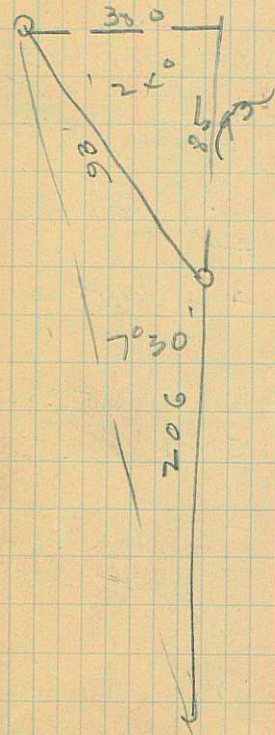
12
10

$$\begin{array}{r} 89 \overline{) 891} \\ 891 \\ \hline \end{array}$$

$$\begin{array}{r} 210 \overline{) 1680} \\ 1680 \\ \hline \end{array}$$

206

$$\begin{array}{r} 79.67 \overline{) 120} \\ 120 \\ \hline \end{array}$$



$$\begin{array}{r} 180 \overline{) 156} \\ 156 \\ \hline \end{array}$$

$$\begin{array}{r} 206 \overline{) 380} \\ 380 \\ \hline \end{array}$$

$$\begin{array}{r} 380 \overline{) 290} \\ 290 \\ \hline \end{array}$$

BS F= on Ele HI Cuto
 1947

PI
 16+35
 on C 16+35
 PC 15+91.3 ✓

15+00

14+76

14+56

7.59 1.20

1.50

640.37

640.67

642.76

642.66

641.87

10.9

630.97

7.9

633.97

2.2

2.7

2.6

3.6

2.30

14+25 PI
 14+24.3 on C

PC 13+92.7

13+77

13+50

11.46

1.520

6.7

641.36

9.0 on C

639.06

4.2

643.86

12.00 at 13+77

645.86

658.00

7.9

650.10

4

4.6

653.40

657.90

669.02

13+00

8.2

11.12

0.10

12+16

10.9

658.12

5.49

663.53

on P.I.

11+97.2

5.6

663.42

10+78.5

2.0

667.02

668.42

680.04

11.6

0.60

Flo' on P.I.
 30° R

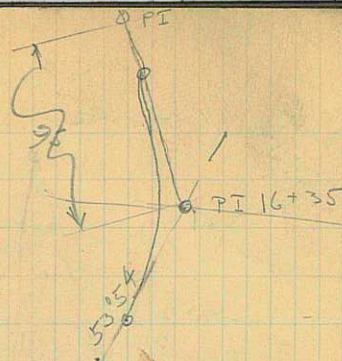
2.6

2.6

2.00

2.62

2.7



69

19.00

19.00

53.54

34.54

19.00

LC = 13.3

14+56 ✓

13+92.7

11.50

7.15

107.65

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

35° 54'

13+92.7

13+77

13+50

13+25

13+00

12+75

12+50

12+25

12+00

11+75

11+50

11+25

11+00

10+75

10+50

10+25

10+00

9+75

9+50

9+25

9+00

8+75

8+50

8+25

8+00

7+75

7+50

7+25

7+00

69.77

35.54

34.23

179.60

34.23

145.37

72.97

48

72.97

48

72.97

48

72.97

48

72.97

48

72.97

48

72.97

48

30° L

com 14+25

$$\begin{array}{r} 958.8 \quad (30) \\ 58 \quad 37.9 \\ 288 \quad 4 \\ \hline 270 \quad 32.3 \end{array}$$

$$\begin{array}{r} 14.25 \\ 32.3 \\ 139.27 \\ 63.3 \\ \hline 14.560 \end{array}$$

$$\begin{array}{r} 190(30) \\ 10.63.3 \\ 10 \end{array}$$

$$\begin{array}{r} 2 \quad 63.3 \\ 31.65 \end{array}$$

$$\begin{array}{r} 13927 \\ 14+243 \end{array}$$

com 16+25

$$L = 2316$$

$$\begin{array}{r} 1180 \quad (25) \\ 180 \quad 47.2 \\ 50 \end{array}$$

$$\begin{array}{r} 1635 \\ 475 \\ \hline 15.875 \end{array}$$

$$\begin{array}{r} 119 \quad (25) \\ 190 \quad 4.8 \\ 40 \quad 47.5 - T \\ 525 \end{array}$$

$$\begin{array}{r} 1635 \quad 1180 \quad (30) \\ 397 \quad 90 \quad 39.3 \\ 280 \quad 4 \\ 100 \quad 39.7 \\ \hline 15.953 \end{array}$$

$$\begin{array}{r} 16340 \\ 119 \quad (30) \\ 4 \end{array}$$

$$\begin{array}{r} 23.26 \quad (30) \\ 21.6 \quad 277.5 \\ 226 \quad 387 \\ \hline 210 \quad 160 \end{array}$$

38°42

$$\begin{array}{r} 2012 \quad (40) \\ 5 \end{array}$$

$$\begin{array}{r} 2012 \quad (35) \\ 175 \quad 57 \\ 261 \\ \hline 215 \quad 6 \end{array}$$

$$\begin{array}{r} 2012 \quad (38) \\ 190 \quad 52.9 \\ 112 \\ \hline 176 \quad 6 \end{array}$$

$$\begin{array}{r} 38.7 \quad (38) \\ 38 \quad 19.8 \\ 070 \quad 50.9 \\ 38 \\ \hline 3204 \end{array}$$

$$\begin{array}{r} 1729 \\ 360 \\ 312 \\ \hline 1678.1 \end{array}$$

$$\begin{array}{r} 1729 \\ 54 \\ \hline 16.75 \\ 51 \\ \hline 1726 \end{array}$$

$$\begin{array}{r} 342 \quad (38) \\ 342 \quad 9 \end{array}$$

$$\begin{array}{r} 16.75 \\ 101.8 \\ \hline 1776.8 \end{array}$$

1023

1030

$$520 \quad (10)$$

135 F3 ~ Ele HI at

PI 20+20

62+21

19+77

19+21 Creek

1900

18+45

18+00.00

PT 17+76.8

6.59 0.32

10.6 613.61 ✓

7.00 617.21 ✓

4.5 619.71 ✓

3.4 620.81 ✓

623.89 630.48

17+26

5.00 625.48 ✓

16+75.0

2.00 628.48 ✓

11.39 0.00

630.48 641.87

2.4

2.5

2.00

1.7

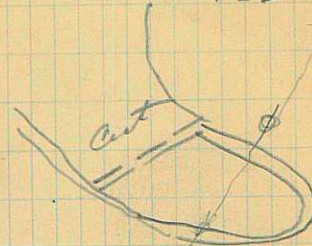
2.7

3) 38° R

16+75.0

73

PI 20+20



6880
3038
3842

17960
3542
20141.78
7039
6920
13919

PI 17+29.0

13959

5354
3038
2316

17960
2216
20176.44
7782
2428

P.T. 16+72.8

524° 28' 6"

16+34

16+22.8

15+95.3

16+35

7.0

30° L

B S FS in Ele #1 Cut

75

22+03

57
21x46

12.00 on 9.75 of 21-

11.00 59 0.75 60.75 1.9

21+000

PT 20+81.7 ✓

5.00 596.75 3.40

3.5 598.25 2.80

11.50 0.52 601.23 6 12.73

20+29 12+29

10.4 602.33 ✓ 2.3

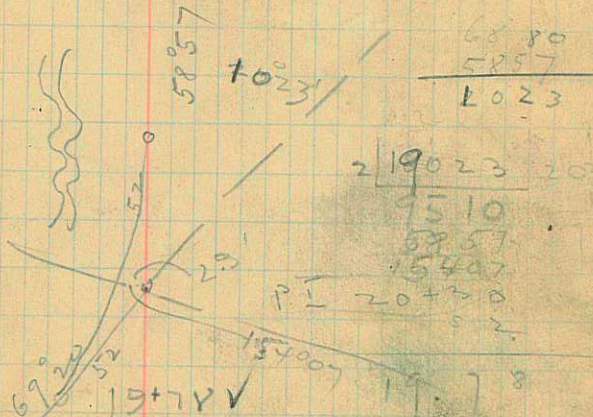
19+78 ✓

12.40 0.92 608.13 611.81 624.21

(3) 10° L

103
1975
1

middle opening



$$\begin{array}{r}
 10.3.8 \\
 51.9 \\
 1978 \\
 19299 \\
 \hline
 19788 \\
 1038 \\
 \hline
 20818
 \end{array}$$

Com

$$31+65$$

$$L = 26^{\circ}14' R$$

$$\begin{array}{r}
 1235 \\
 135 \\
 \hline
 120 \\
 150
 \end{array}
 \begin{array}{r}
 20 \\
 66.7 \\
 \hline
 7.7
 \end{array}$$

$$\begin{array}{r}
 26.23 \\
 62 \\
 \hline
 131.1
 \end{array}$$

$$\begin{array}{r}
 154 \\
 140 \\
 \hline
 7.7
 \end{array}$$

$$67 = T$$

$$7.7 = E$$

$$34+86$$

$$47^{\circ}41'$$

$$47^{\circ}44'$$

$$\begin{array}{r}
 2535 \\
 135 \\
 \hline
 150
 \end{array}
 \begin{array}{r}
 30 \\
 84.7 \\
 \hline
 9
 \end{array}
 \begin{array}{r}
 536 \\
 226 \\
 \hline
 260
 \end{array}
 \begin{array}{r}
 30 \\
 17.8 \\
 \hline
 17.8
 \end{array}$$

$$\begin{array}{r}
 85.6 \\
 21159 \\
 \hline
 78.5 \\
 3408 \\
 \hline
 3780
 \end{array}$$

$$\begin{array}{r}
 47.73 \\
 177 \\
 \hline
 270 \\
 159
 \end{array}$$

B.S. F.S. in Gale HI
 562.85 3.00

2500 9.00 553.85 ✓ 2.5

28500 5.2 557.65 ✓ 2.5

10.6 10.18 1.50 561.35 571.53 2.5

26+940 8.2 563.33 ✓ 2.5

81.3 bottom 4.2 lat. 567.33 inlet to Ber. 2.5

26+12.7 5.65 565.88 4.39 water 567.14 3.9 567.63

26+8.7 9.92 0.94 on SW on box 570.59 580.51

26 12.0 568.51 ✓ 1.1

25+00 4.50 576. ✓ 3.0

12.10 0.89 579.62 591.72 2.4

2400 10.7 581.02 ✓ 3

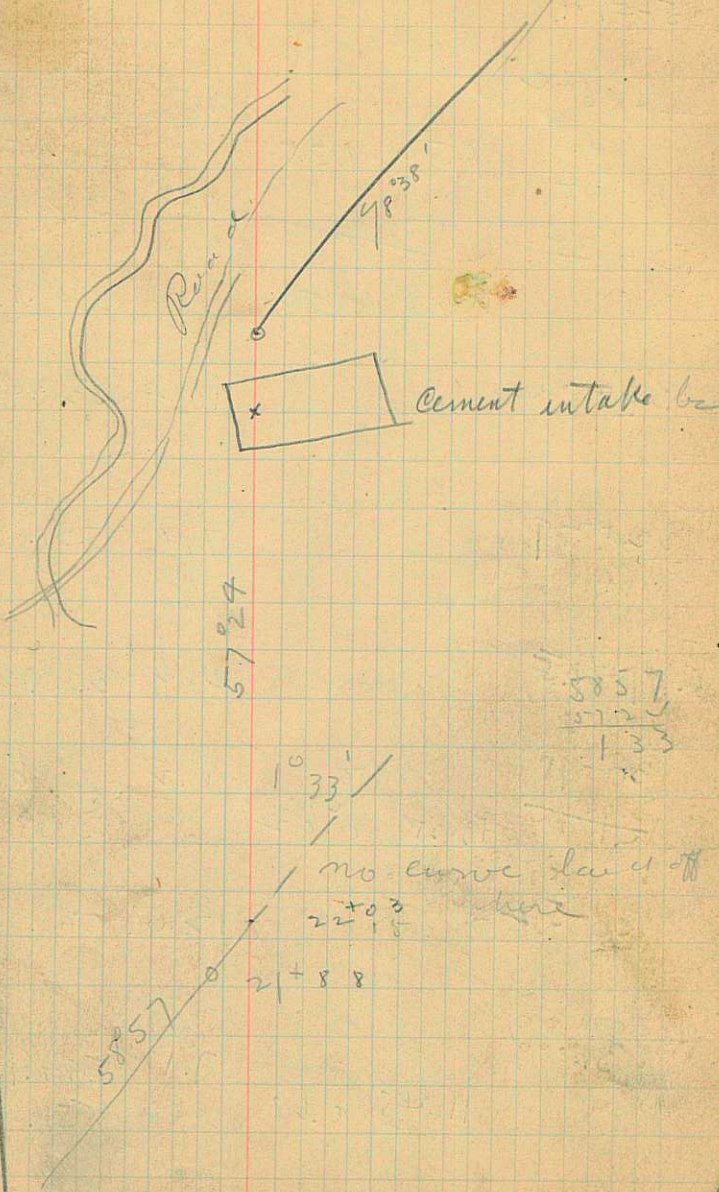
23+00 4.5 587.22 ✓ 3

10.87 0.84 590.88 601.75

22+03 9.8 596.95

21+88 12.6 589.15 ✓

Nov-27-1917 79
 Hyde Park
 Attention



B to F ~ Ele HT cut

35+59.4

34+80 on c

m PT.

3400

33+00

PT 32+29

on Cur. 31+63.5

30+98

31+00

48

30+52

3000

9.50 1.58

11.64 0.82

1.7 518.38 ✓

6.7 521.30 ✓

10.4 528.42 ✓

7.1 531.72 ✓

2.6 536.22 ✓

0.2 538.62 ✓

12.0 540.05 ✓

7.1 544.95 ✓

11.48 0.68

518.50 528.00

527.18 538.82

538.80 552.05

551.37 562.85

520.08

23

3.6

2.0

3.3

2.7

3.2

(2) 20°

15

3.0

P.T. 34+86

4744
150
3559
22744
11352
57030
171.00

17960
2614
15346
7653
10452
18145

P.T. 31+65

(2) 20° R

15

3.0

3400.4
159
3559

PT = 35+57.4

LC = 159

178°E

shape left at 3400
3400.4

2694

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

10452

7653

18145

4744 81

0.5 F. more

171°

85.6

178°E

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

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171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

171°

P5 43

B 5 P 5 ~

480.37

42

12.05 0.50

2.2 478.17 ✓

2.3

479.87 491.92

41

7.6 484.32 ✓

3.3

40

11.00 0.35

3.5 488.42 ✓

2.5

491.57 502.57

39

8.9 493.67 ✓

2.7

enter stable

38.00

3.00 499.57 ✓

2.9

8.4 0.36

502.21 510.62

m. h. v. 8.00 12.4

498.22 ✓

m. c. v. 12.5

498.12 ✓

m. v. 3.00 12.1

509.41 ✓

at 3.7 6.1

504.52 ✓

2.2

37.00

36+7.5

to function

36+57

10.31 0.85

4.5 506.12 ✓

1.8 4

509.77 520.08

36+0.00

9.3 510.78

2.8

P.T. 40.6
35+59.7

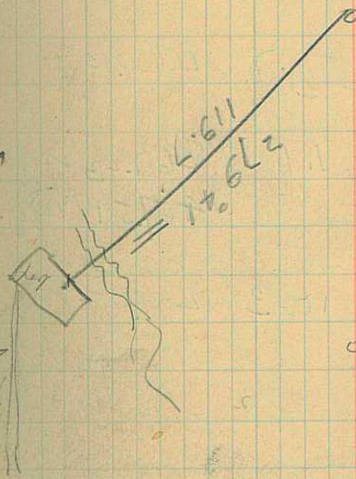
7.5 512.58 ✓

2.3

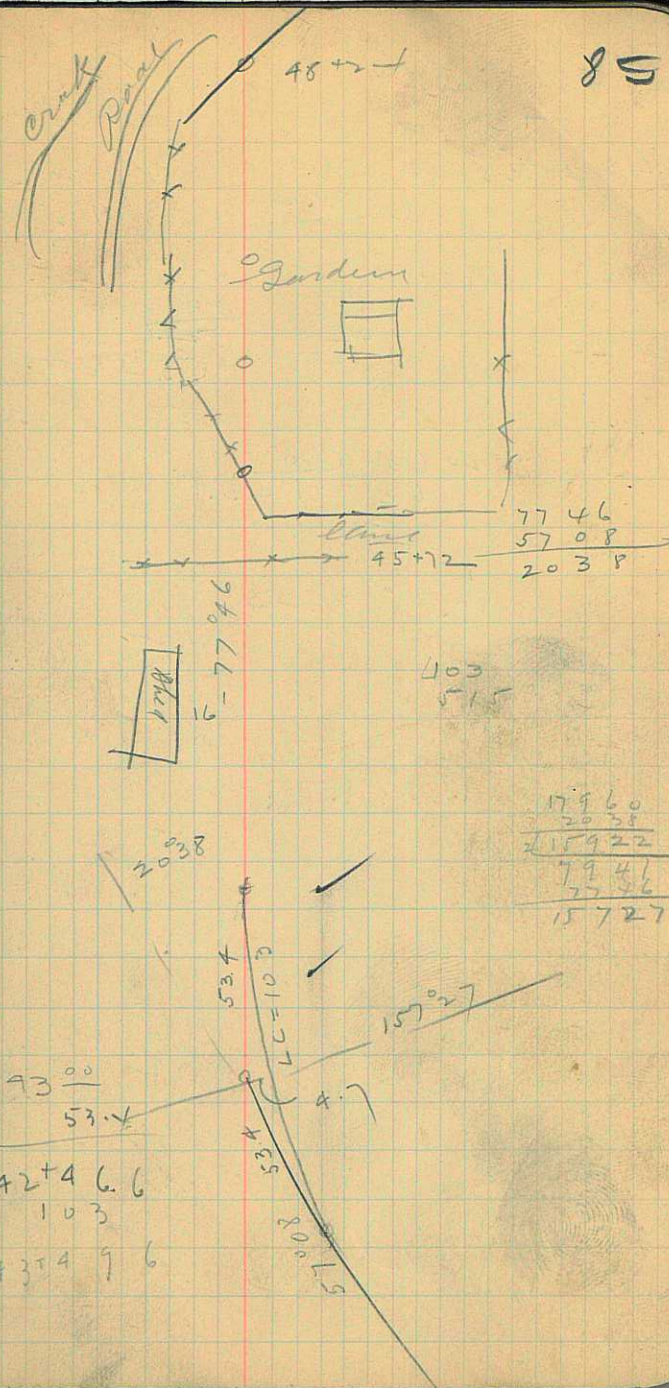
P.T. = 35+59.4

36.71
2.29

83



48+24	BS	FS	m	492.45	
			5.2	437.25	457.25
48			2.7	439.75	439.75 2.75
	13.46	0.59		441.86	455.32
47			9.0	446.32	2.00
46			0.7	454.62	2.6
45+92.7	13.05	in stake 0.04		455.28	468.33
45+00			7.7	460.63	2.3
44+000			1.1	467.23	2.5
	12.86	m 4400 0.82		467.51	480.37
PT 50 45					
43+49.6			10.3	470.07	2.7
42					
42+98.1 MC			6.7	473.67	2.7
51.5					
PC 42+46.6			4.7	475.64	2.2



corr

43

L = 20°38

$$\begin{array}{r} 1044.7 \\ 1036.1 \\ \hline 8.6 \end{array}$$

$$\begin{array}{r} 975 \quad 20 \\ 120 \quad 4.7 \end{array}$$

$$\begin{array}{r} 1036.1 \\ 6.4 \\ \hline 1042.5 \\ 42 \\ \hline 25 \end{array}$$

$$\begin{array}{r} 20 \\ 52 \end{array}$$

53.4 = T

$$\begin{array}{r} 20.63 \quad 20 \\ 63 \quad 103.1 \\ \hline 30 \end{array}$$

87

	B S	P S	mm		cut
60			2.4	379.08 ✓	4.50
59			3.8	377.68 ✓	2.0
58			0.8	380.68 ✓	3.68
	13.26	0.69	on 58	380.79 394.05	
57			8.5	385.55 ✓	2.7
56			2.7	391.35 ✓	3.00
	12.95	0.33		393.72 406.67	
55			9.5	397.17 ✓	2.8
54			4.00	402.67 ✓	2.47
	13.22	1.79		404.88 418.10	
53			7.8	410.30 ✓	4.3
	13.38	0.16		417.94 431.32	
52			13.0	418.32 ✓	3.32
51			3.6	427.72 ✓	3.72
	12.66	1.53		429.79 442.45	
50 ⁺			12.60	429.85	2.35
pm #3 down					
Rock by desk					
near 49			8.88	433.57 ✓	2.57
49			9.2	433.25 ✓	

77° 46

0

49+85

70⁰⁰

135 FS

levels down

319.63

2.20 317.43

319.63 333.23

69⁰⁰

13.60 0.00

10.7 322.53

332.68 345.48

12.80

0.55

68 no stake

F 67+690

9.9 335.58

P.T. 67+33.5

9.2 336.28

C 66+40

8.3 337.18

PC 65+45.5

3.00 342.48

12.55 1.40

344.08 356.63

65

8.7 347.93

64

0.00 356.63

13.30 0.51

356.12 369.42

63

8.2 361.22

13.45 1.39

368.03 381.48

62 R

12.6 369.38

61

6.8 374.68

60

2.4 379.08

Cut 4.4 at 70

1.50

2.8

1.3

(12) 20° L

2.7 ✓

3.1

2.00

4.2

3.6

91

40° 37' 25"

$$\begin{array}{r} 77.56 \\ 20.21 \\ \hline 37.25 \end{array}$$

67+33.5 = P.T.

97.5

149091

= 16'

LC 2187

935

T = 97.5

$$\begin{array}{r} 66.44 \\ 97.1 \\ \hline 65.46.5 \\ 1.07 \\ \hline 67.33.5 \end{array}$$

65+46.5

$$\begin{array}{r} 65.46.5 \\ 93.1 \\ \hline 66.46.0 \end{array}$$

77° 46'

$$\begin{array}{r} 180 \\ 37.25 \\ \hline 221.75 \\ 108.42 \\ 40.21 \\ \hline 149.03 \end{array}$$

com

37°25

$$\begin{array}{r} 1940 \overline{) 3720} \\ \underline{180} \\ 140 \end{array} \quad \begin{array}{r} 20 \\ 97 \end{array} \quad \begin{array}{r} 3720 \overline{) 16} \\ \underline{16} \\ 0 \end{array} = T$$

97.50 = T

$$\begin{array}{r} 37.42 \overline{) 189.1} \\ \underline{174} \\ 142 \\ \underline{140} \\ 20 \end{array}$$

com

4°30

$$\begin{array}{r} 729 \overline{) 110} \\ \underline{11} \\ 0 \end{array} \quad \begin{array}{r} 46.2 \overline{) 4.6} \\ \underline{46} \\ 0 \end{array}$$

73 = T

14.50

93

80

12.8

10.7

280.73

10.7

270.03

4.2

79

11.6

269.13

1.7

78.00

9.2

271.53

2.33

77.00

1.8

278.93

3.6

13.26 - 0.05

280.78

294.04

76.00

5.4

288.64

2.7

13.50 0.43

293.61

307.11

75.52

12.0

295.11

4.1

74.52

8.60

298.51

2.50

12.70 0.18

306.93

319.63

73.52

11.4

308.23

3.7

72.79.5

4.60

315.03

5.7

72.07 marked

2.1

317.53

1.3

72.00

2.00

317.63

1.3

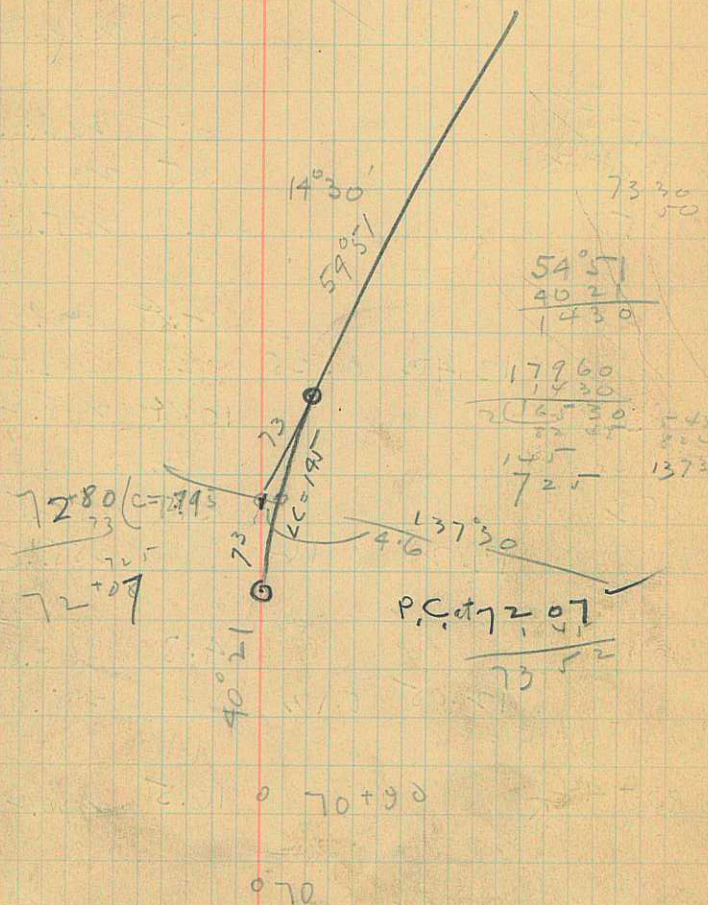
70.90

5.70

313.93

2.1

29



87+73 Bas F m

231.92

100

86+73

11.16 0.44

4.7

227.22

4.00

231.48 242.64

73

86⁰⁰

7.8

234.84 ✓

85+55
mm #2

6.2

236.24 ✓

6.00

3.5

239.14 ✓

2.9

85

6.9

235.74 ✓

84

2.4

240.24 ✓

2.50

13.43 0.38

242.26 255.69

83

10.4

245.29 ✓

2.7

82

3.1

252.59 ✓

2.60

13.28 0.16

255.53 268.81

81⁰⁰

4.8

264.01 ✓

4.0

12.05 0.13

268.68 280.73

80+4 ✓

10.5

290.23 ✓

5.1



97

5882
5451
431

no curve laid
of here

from
on Rock near 85+55

54° 51'

54° 51'

PI
95+ 0 3 BS FS on Ell H.I.
209.60

94+ 30

93+ 62
68

8.8 200.80

93+ 48
20

6.4 203.20 ✓ ✓
208.82 221.92

13.1 0.78

92+ 72
48

11.6 210.32 -

92+ 00

14.00 209.92 ✓

91+ 48

14 207.92 -

90+ 00

~~14.00~~ 218.22

10.17 0.17 221.75 231.92

89+ 50

9.8 222.12 -

88+ 77
73

14.0 217.92 -

87+ 100
73

11.8 220.12 ✓

Angle 99

Mean cut
Sta 39-108+82
5.6 ft

5.10

2.3

6.8 ✓

3.9 ✓

2.9 ✓

4.2

7.6

2.50

3.5

Road

59°22'

Road

down well level
BS FO

P199+13

⁷⁴
98+39

5.40 180.63 ✓

⁷⁸
97+61

6.2 179.83 ✓

⁵⁰
97+11

10.3 175.73 ✓

³⁸
96+73

11.1 174.93

¹⁰⁰
95+73 PT.

4.5 181.53

95+02

0.4 185.63 ✓

11.60 0.50

185.53 197.13

⁷¹
94+31 = PC

5.4

191.73 ✓

12.94 0.47

196.66 199.60

8.30

7.2

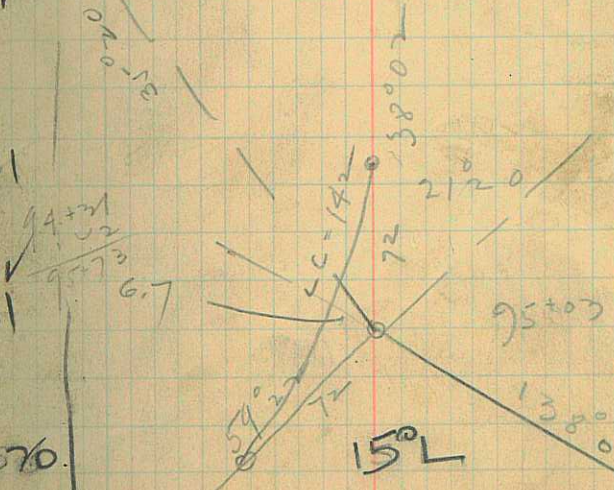
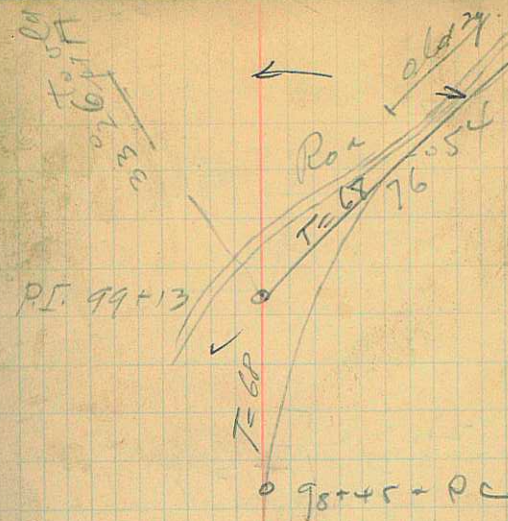
29

2'

3.1

2.1

20%



59.22
38.02
21.20

21.20
18.0
201.20
100.00
38.02

101

Com 21°20

$$\begin{array}{r} 1079 \overline{) 105} \quad 15 \\ 105 \\ \hline 29 \\ 15 \\ \hline 140 \\ 135 \\ \hline 5 \end{array} \quad \begin{array}{r} 1007 \overline{) 15} \\ 1007 \\ \hline 67 \end{array}$$

$$\begin{array}{r} 21.3 \overline{) 15} \\ 63 \\ 30 \\ \hline 142 \end{array} \quad 142 \div 2 = 71$$

$$\begin{array}{r} 95.03 \\ 72 \\ \hline 1431 \end{array}$$

103

38°52

$$\begin{array}{r} 2021 \overline{) 30} \\ 180 \\ \hline 220 \\ 210 \\ \hline 100 \end{array} \quad \begin{array}{r} 67.3 \\ 68.1 \end{array}$$

$$\begin{array}{r} 38.87 \overline{) 30} \\ 88 \\ 287 \\ \hline 170 \end{array}$$

$$\begin{array}{r} 345 \overline{) 30} \\ 45 \\ \hline 115 \end{array} \quad 11.5 = E$$

54°03

$$\begin{array}{r} 2922 \overline{) 125} \\ 42 \\ \hline 1172 \\ 1100 \\ \hline 220 \end{array}$$

$$\begin{array}{r} 702 \overline{) 25} \\ 20 \\ \hline 20 \\ \hline 28.0 \end{array}$$

$$\begin{array}{r} 5405 \overline{) 25} \\ 40 \\ \hline 1405 \\ 1350 \\ \hline 55 \end{array}$$

104+00 13.5 FS 3.3 137.09 140.39

103+48 52 3.80 136.59 ✓
11.61 0.40 139.99 151.60

103 11.4 140.20 ✓

102+00 7.3 144.30
10.3 141.30
10.3 140.00

Am # on
rock mile

0.88 150.72
146.80
4.80 150.20
150.35 162.35

101+00 12.00 1.25 mile 1.40 150.20
13.57 0.34 162.01 175.58

99+78.6 PT 12.55 2.10 10.6 175.0
173.48 186.03

99+09.8 10.6 175.43 ✓

98+45 PC 6.00 180.03

4.1

1.6

7.7

3.30

2.70

7.0

170 7.8

98+45 6.8

105

100 = C = 4

70.34
76.54
147.28

101+78

179.60
38.52
141.08
70.34

76.54
38.52
38.52

24129.6
6.48 = 1/2 c

197.28

98.45
2.96
99.746



100+42
Bureau of
Engineering

138.52

68

127.6

11.5

38.00

B5 F5 um Ele HI

B- A 31193' near 5 48° 58'

8.66 7658
 5.24 100.00 105.24
 108+180 12.75 0.47 104.770 117.5
 8.10 at stake 109.42

PT 107+03.6
 12.20 0.65 4.80 112.92
 116.87 129.07

106+00.0
 11.67 0.35 6.10 122.97
 128.72 140.37
 10500
 PC 108
 104+92.2
 104
 11.1 at 105
 129.29
 10.6 129.79
 3.3 137.09

10500

set 128.39 F5 100.

on way over

E end of hole

7.8

2.32

6.4

2.3 at 105

4.1

Add to all
 no an

25°R

107

104792.2
 216
 10708.4
 108.180

add

B 118.58
 108.32

108+18

13057
 7654
 5403

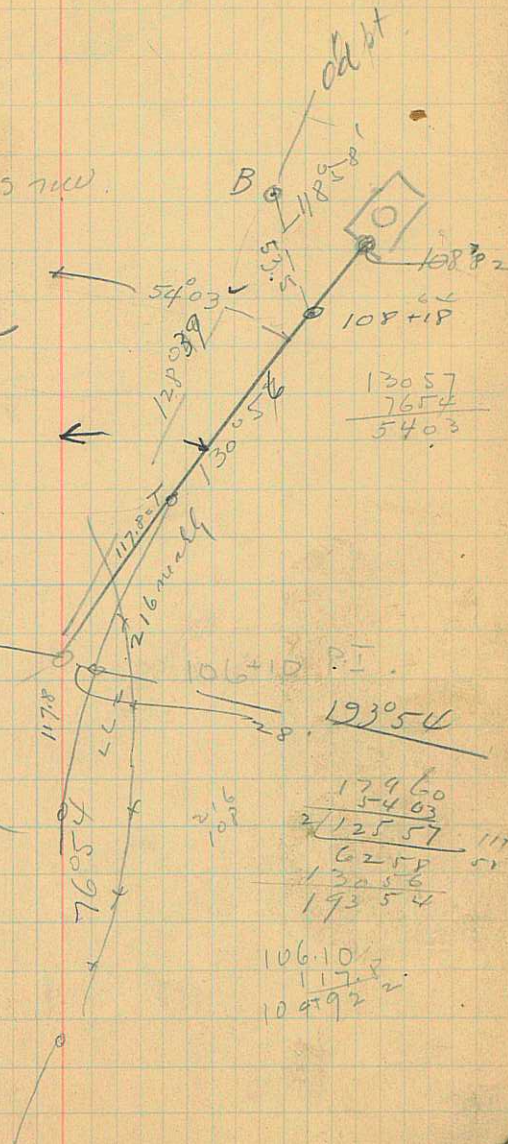
5403
 128.39
 130.56

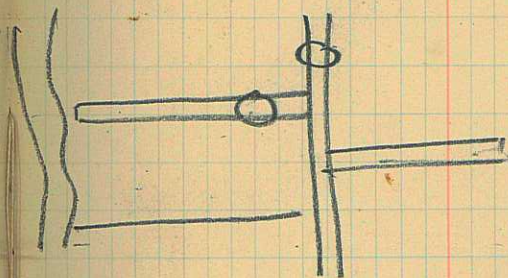
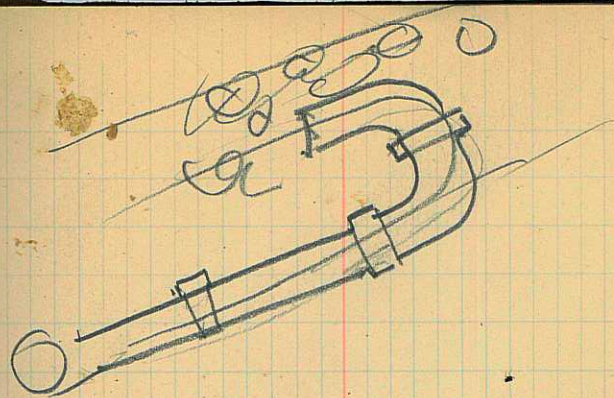
117.8
 216mud

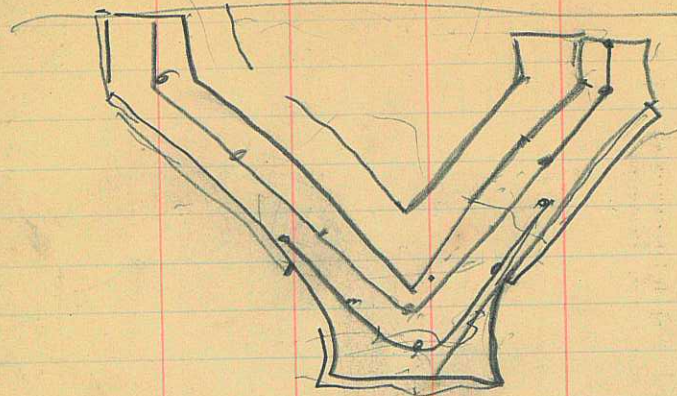
106+10 P.I.
 193°54

17960
 5403
 212557
 6258
 13056
 19354

106.10
 117.8
 104792.2



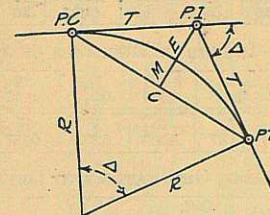




113

115

60-6

[illegible]

$$\text{gent} = T = R \tan \frac{\Delta}{2} \quad (3) \quad \text{Length of Curve} = L = 100 \frac{\Delta}{D} \quad (4)$$

The ordinate = $M = R(1 - \cos. \frac{\Delta}{2})$ (5) = $R \text{vers } \frac{\Delta}{2}$ (6)

$$a_l = E = T \tan \frac{\Delta}{4} \quad (7) = R \cos \frac{\Delta}{2} (1 - \cos \frac{\Delta}{2}) \quad (8) = R \sec \frac{\Delta}{2} \quad (9)$$

$$l_{\text{chord}} = C = 2 R \sin \frac{\Delta}{2} \quad (10) \quad \Delta = \text{Central Angle}$$

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

Offsets.—Tangent offsets vary (approximately) directly with the square of the distance. Thus tangent offset for Station 100 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 multiplied 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.,
For c ft.=(in minutes) $.3 \times C \times D^{\circ}$ or=defl. for 1 ft. from Table
C. For Sta. 158 of above curve= $.3 \times 54.5 \times 8\frac{1}{2}$ =136.2' or
or=2.50 x 54.5=136.2' from Table III. For Sta. 159 deflec-
=2° 16.2' + 8° 20' ÷ 2=6° 26.2', etc.

11s.—May be found in similar manner to tangents. Thus above is 91.37. For from Table IV for 1° curve E=960.6 $960.6 \div 8\frac{1}{2}=91.27$ and from Table V correction=.10 or suppose $\Delta=32^\circ$ and E is measured and found to be 92. From Table IV E=230.9 and $\div 42=5.5$ or D=

732
585
14.7

(6)

1430 2240
1344 6.3
860 5.1
6.72 8

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½.

For Single Track Embankment.

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

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans: from Table 41.9. For same slopes but other widths of 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.