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CC 1946-6 62

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#62

EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

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

CACHE COUNTY

CC 1946 - 6

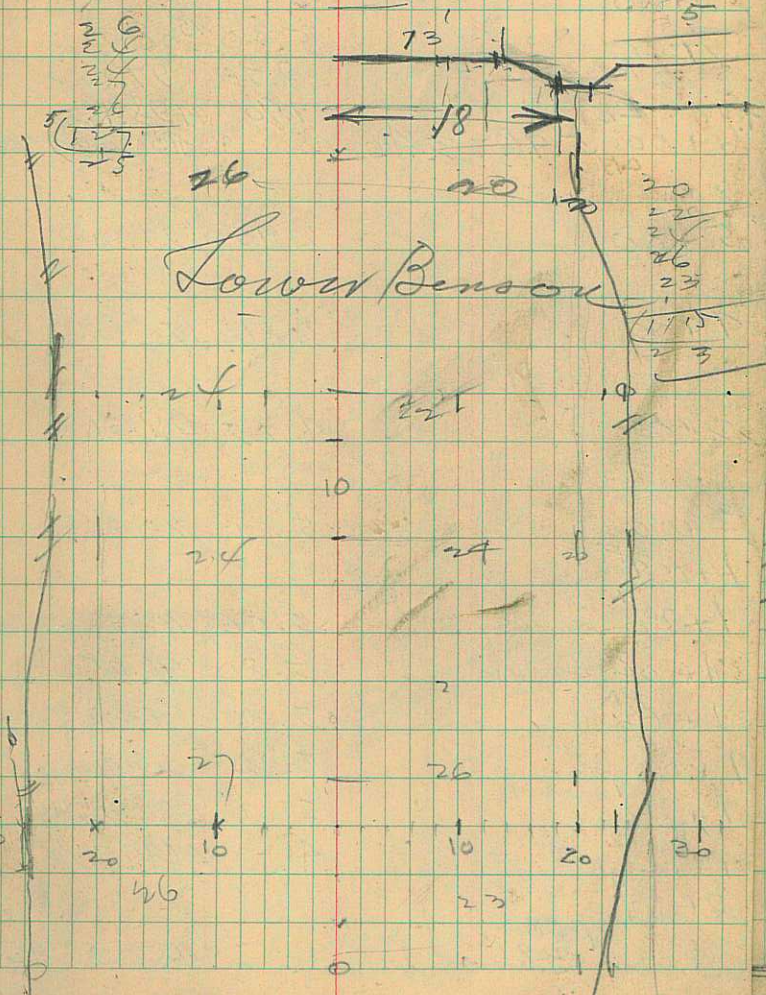
$\frac{40}{66} = $

28/30

Survey on So. Main on Road to River Heights

7-29-46

mean 25



Sta	BS	FS	I.M	Elev	H.I
7+60 F					
7+00			5.40	4500.96	
RB			8.50	97.86	
LB+			7.90	4498.46	
T.P. 6+00	5.90	-3.40		4500.46	4506.36
5+00			3.95	4499.91	
4+00			3.80	4500.06	
3+00			4.55	99.31	
2+00			5.00	98.86	
1+24 F					
1+06 4			5.50	98.36	
1+06 3			5.80	98.06	
1+06 RR			5.10	98.76	
1+00			5.10	98.76	
1+06 1			5.00	98.86	
1+06 2			4.10	4499.76	
0+63 P					
0+00	+BM 3.86			4500	4503.86

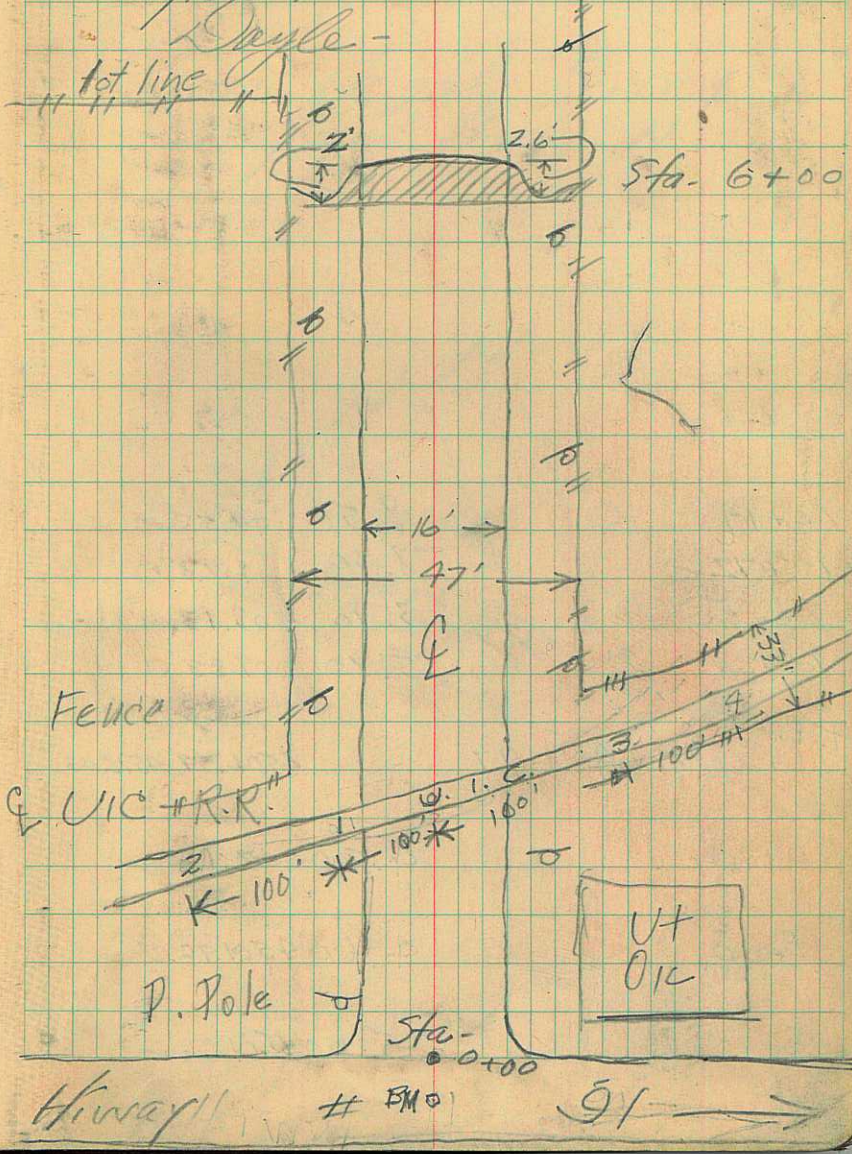
Hiway 91

Survey on Roads to River Heights on So Main

from #91 7-29-46

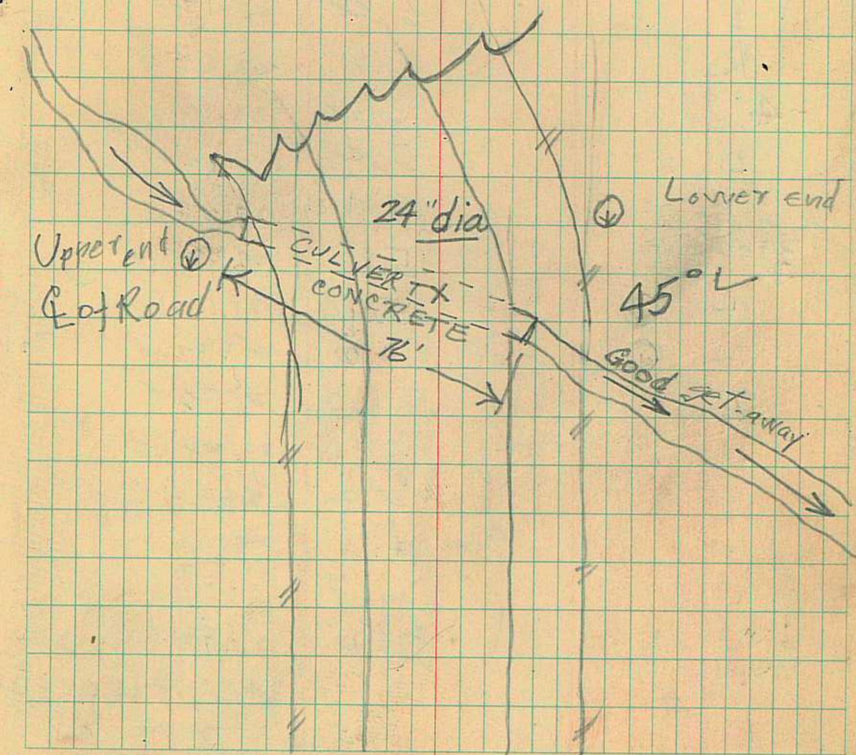
Frank —

Doyle —



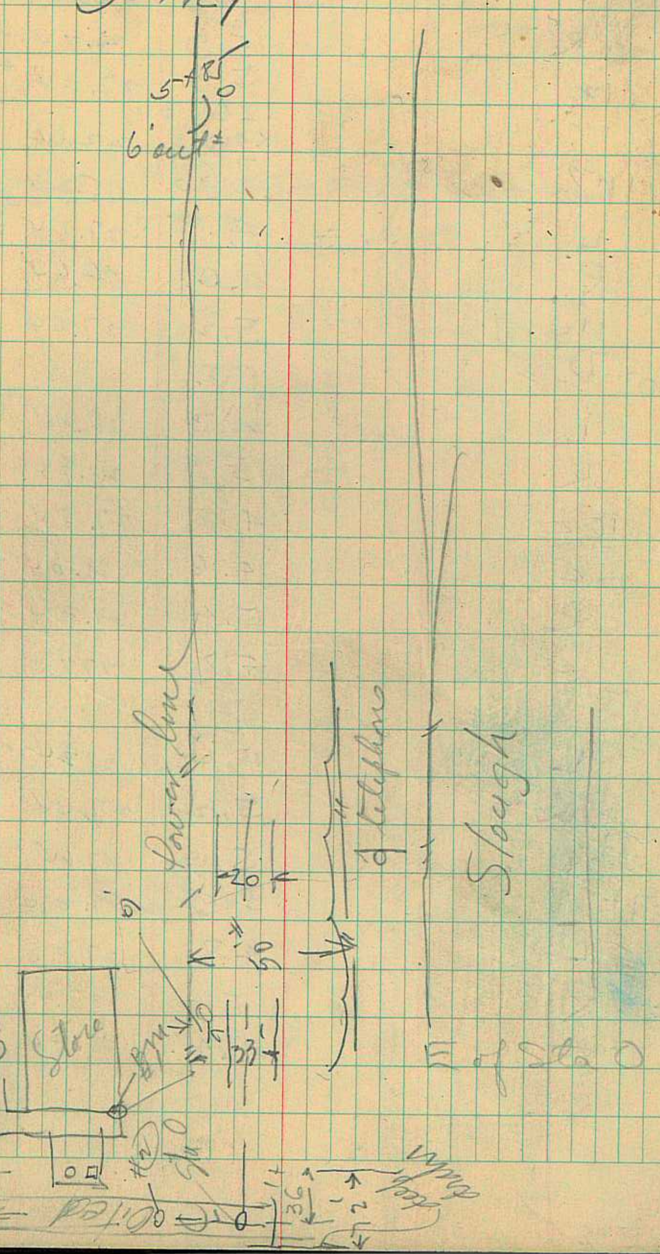
Sta	BS	FS	IM	Elev	H.I.
12+17			8.50	04.53	
12+72 ℄			8.30	04.73	
12+32			3.90	09.13	
12+00			5.70	07.33	
T.P. 11+00	+8.64	-1.97		4504.39	4513.03
10+00			4.20	02.16	
9+00			4.60	4501.76	
8+00			5.00	4501.36	

River Heights Survey
from Hiway 91



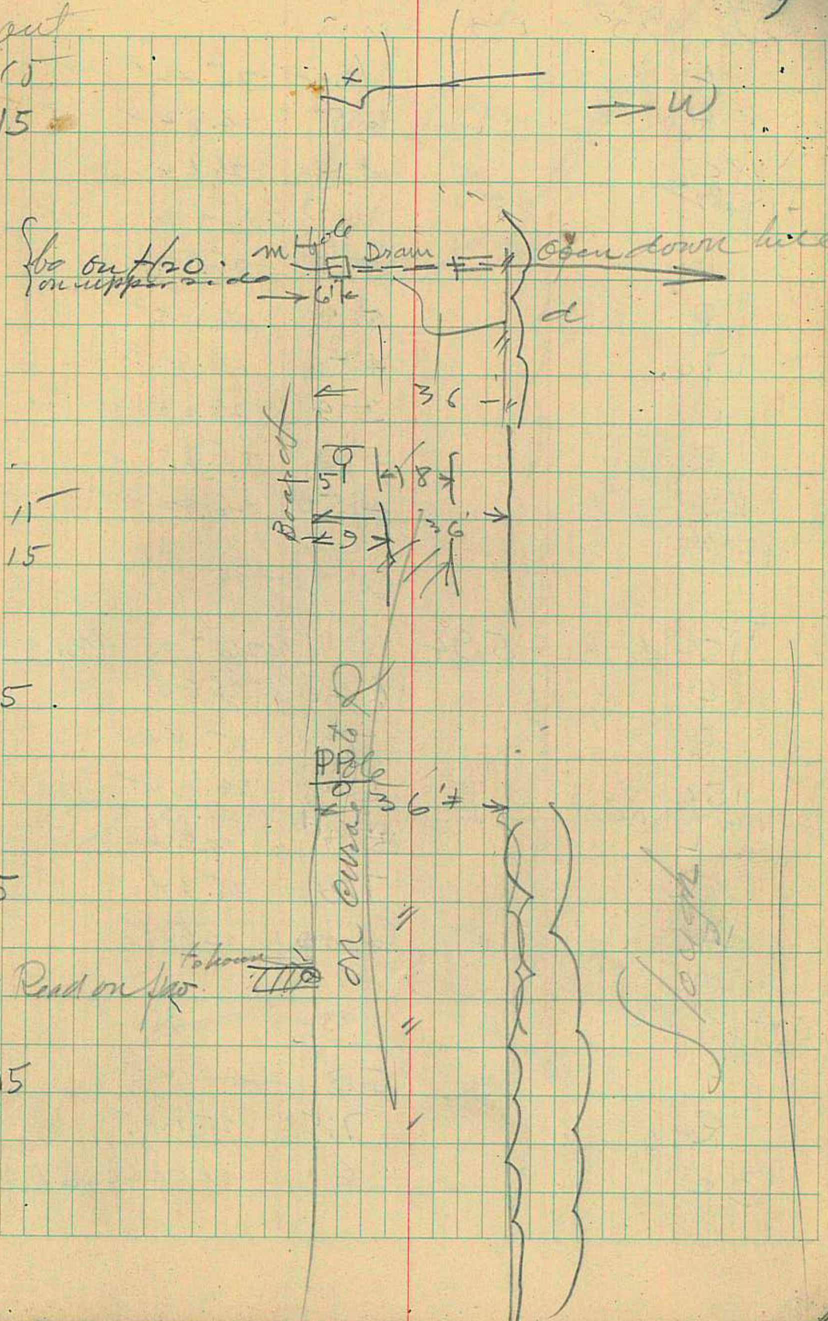
Sta	BS	FS	in	Elev		out
L			4.7	27.94		15
R			5.5	27.14		16
6^{+00} c			4.30	28.34		16
5^{+00} c	4.05	5.73		4428.59	4432.64	
L			6.30	28.02		15
R			6.6	27.72		18
5^{+00} c			5.80	28.52		
L			6.2	28.12		20
R			6.7	27.62		15
4^{+00} c			6.2	28.12		
L			5.4	28.92		15
R			7.1	27.22		16
3^{+00} c			5.1	29.22		
L			5.70	28.62		20
R			7.0	27.32		15
2^{+00} c			5.60	28.72		
L			5.1	29.22		
1^{00}			5.4	28.92		
0			4.6	29.72		
(2)			3.40	30.92		on oil 100
BM #1	4.32			4430.0	4434.32	

Lower Benson Ward Survey —



Sta	BS	FS	m.		
L			6.2	26.44	
R			5.9	26.74	
12c			5.3	27.34	
			12.6 ± x cos.8	22.64	
11+43			7.60	25.04	
L			4.9	27.74	
R			6.0	26.64	
11+00 c			5.2	27.44	
10+73					
L			4.3	28.34	
R			5.7	26.94	
10 c			4.8	27.84	
L			4.6	28.04	
R			5.4	27.24	
9+00 c			4.8	27.84	
8+26 P Pole					
L			4.4	28.24	
R			5.2	27.44	
8+00 c			5.00	27.64	
7+94			3.6	29.04	
L			4.8	27.84	
R			5.2	27.44	
7+00 c			4.4	28.24	4432.64

out
15
15



11
15

15

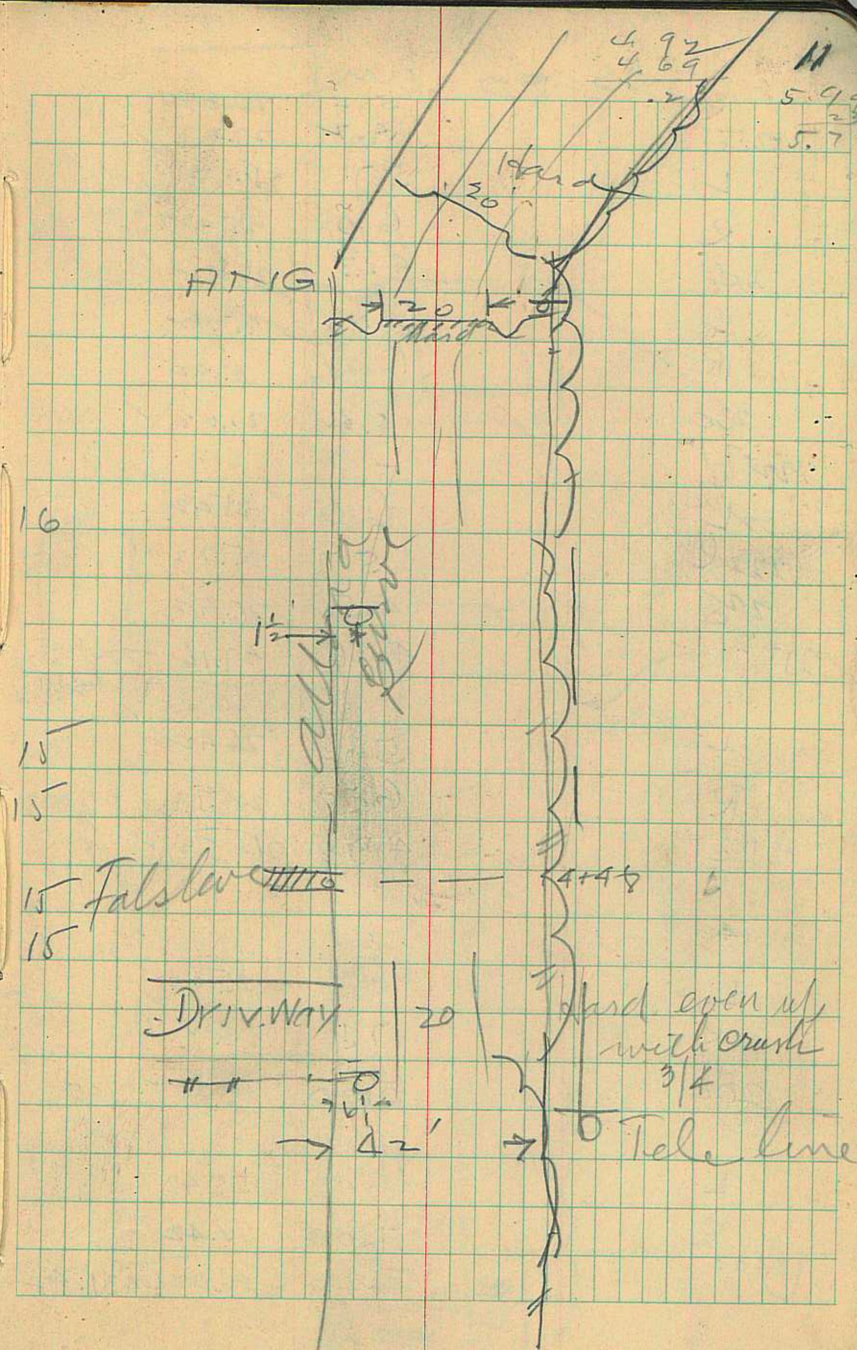
15

15

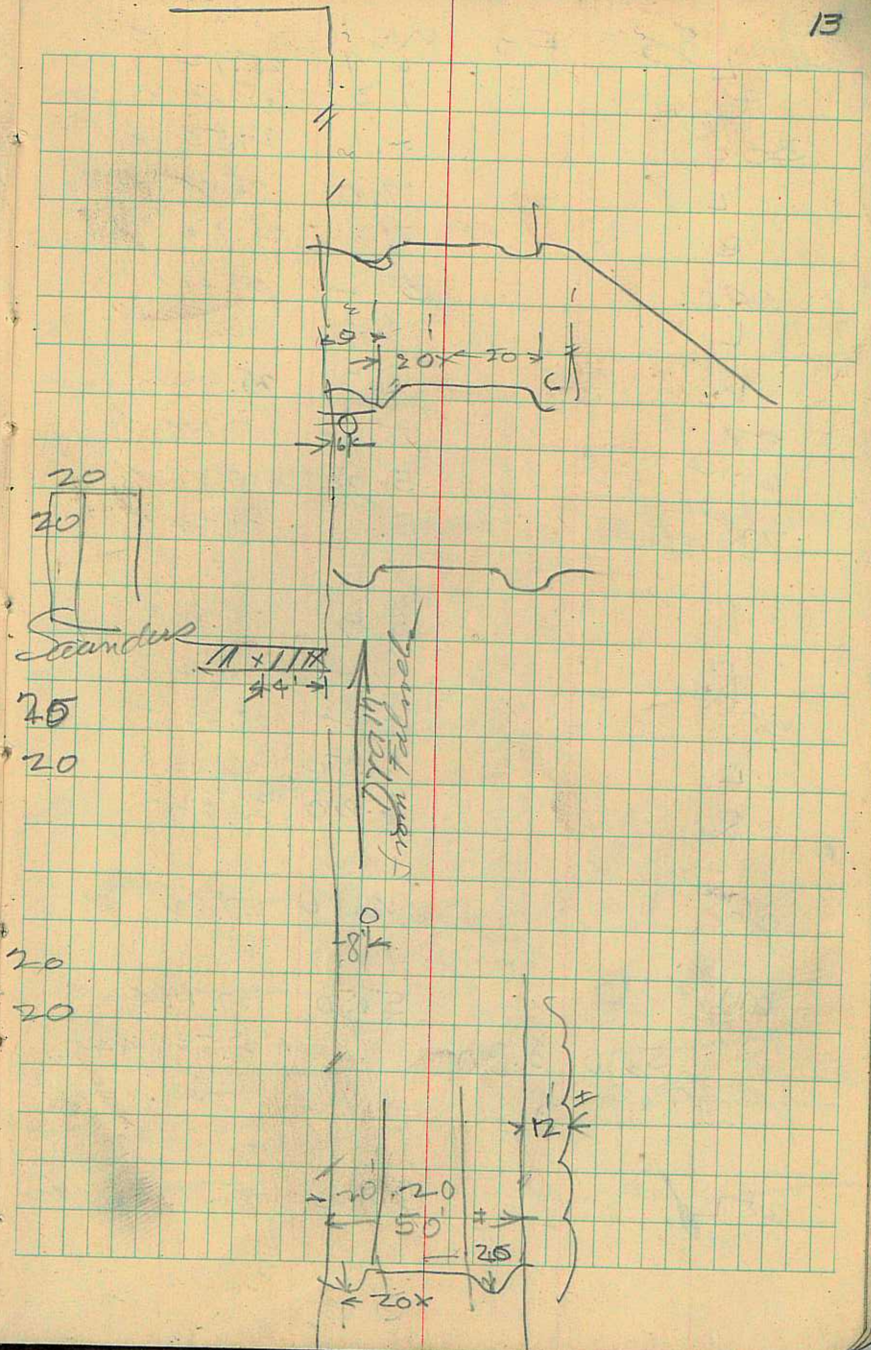
Sta	BS	FS	[illegible]		
L			6.2	25.22	
R			6.5	24.92	
18c 17+82			4.80	26.62	
L			5.5	25.92	
R			5.4	26.02	
17c			4.50	26.92	
L			5.4	26.02	
R			5.6	25.82	
16c 15+36			4.50	26.92	
TP 15c	4.72	5.94		4426.70	4431.42
L			6.00	26.64	
R			7.2	25.44	
15c			5.9	26.74	
14+41			5.71	26.93	
L			5.7	26.94	
R			7.3	25.34	
14c			6.00	26.64	
13+22					
L			5.8	26.84	
R			7.5	25.14	
13c			6.1	26.54	4432.64

4.92
4.69
.23

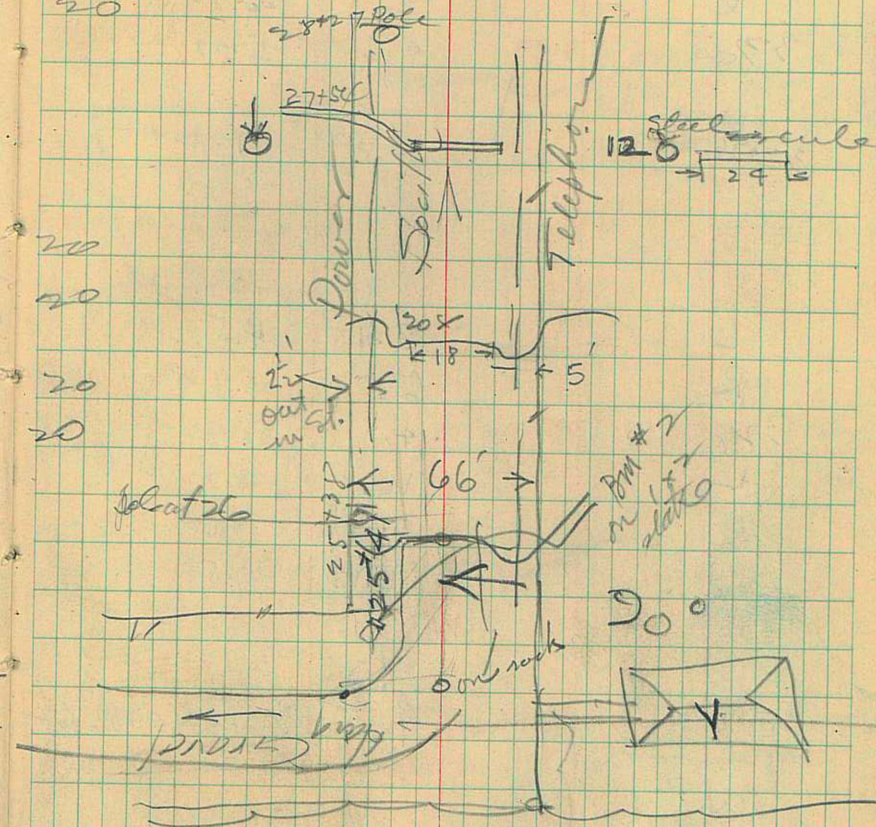
5.99
5.76



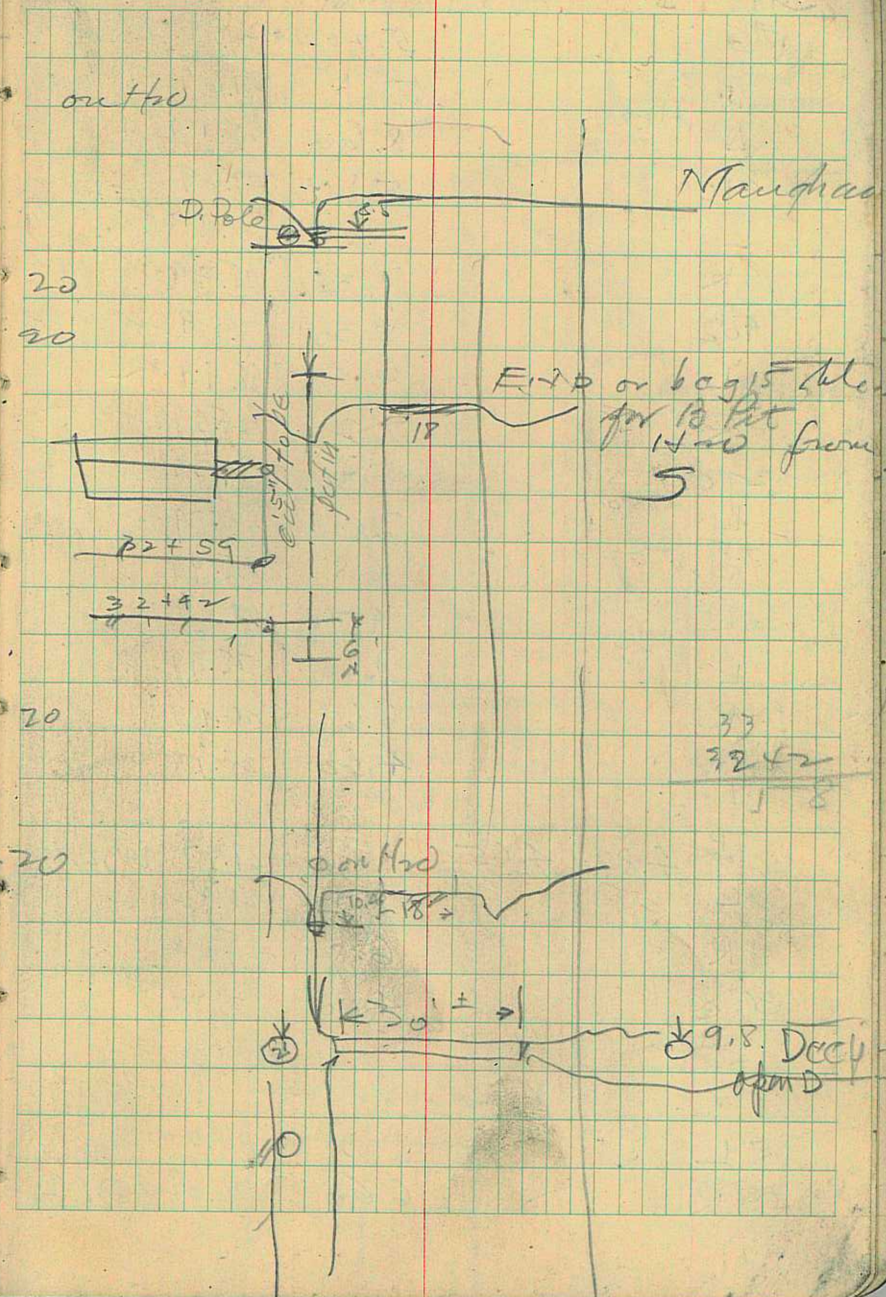
	BS	FS	[illegible]	
R			5.4	26.02
25c			4.2	27.22
L			5.7	25.72
R			6.0	25.42
24c			4.3	27.12
L			6.00	25.42
R			6.00	25.42
23c			4.40	27.02
22+77				
22L			6.0	25.42
22R			5.7	25.72
22F			4.50	26.92
21+21			4.26	27.16
L			5.00	26.42
R			6.70	24.72
21c			4.90	26.52
20+40				
L			6.4	25.02
R			7.1	24.32
20+00 c			5.00	26.42
L			6.00	25.42
R			7.00	24.42
19+00			5.20	26.22 4431.42



Sta	BS	FS	m		
L			6.9	25.72	20
R			7.3	25.32	20
30c			5.1	27.52	
L			7.0	25.62	20
R			7.3	25.32	20
29c			5.2	27.42	
L			6.6	26.02	20
R			6.7	25.92	20
28			5.00	27.62	
27+34			5.30	27.32	
27+34			5.00	27.62	
L			5.9	26.72	20
R			6.2	26.42	20
27+00			4.2	28.42	
L			6.50	26.12	20
R			6.30	26.32	20
26+00 c			4.80	27.82	
BM#2			5.50	27.12	
	5.10	3.90		4427.52	4432.62
25 L			5.70	25.72	4431.42



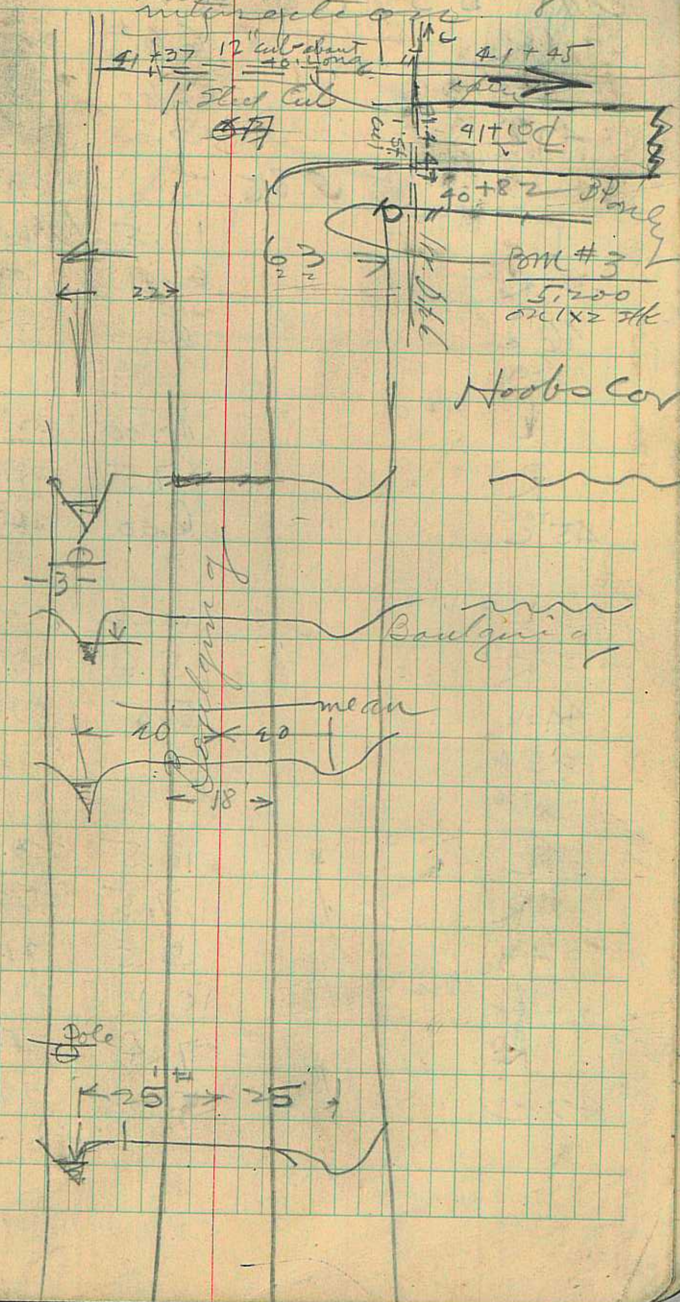
Sta	BS	Fs	cm		
35c			4.8	27.82	
L			8.5	24.12	
R			5.3	27.32	
34c			4.7	27.92	
33+06					
L			6.0	26.62	
R			6.2	26.42	
33c			4.6	28.02	
Pay 32+76			3.81 on Pay	28.81	
L			8.1	24.52	
R			6.7	25.92	
32c			4.7	27.92	
L			10.4	22.22	
R			7.0	25.62	
31c			5.10	27.52	
			9.80	22.82	
30+82			9.25	23.37	4432.62
+64					



Sta.	BS	FS	HI		
BM #3			5.200	4427.59	
(A)	H2O		5.1	27.69	
L			8.60	24.19	
41C	H2O		5.1	27.69	
L			8.2	24.59	
R			7.30	25.49	
40+00 C	H2O		5.30	27.49	
L			6.8	25.99	
R			7.2	25.59	
39 C			5.40	27.39	
L	H2O		7.00	25.79	
+57	pole				
R			6.8	25.99	
38 C	H2O		4.70	28.09	
L			7.00	25.79	
R			6.6	26.19	
37+00			4.60	28.19	
TP 36+00 C H2O	4.82	4.65		4427.97	4432.79
L			8.2	24.42	
R			6.8	25.82	
36+00 C			4.80	27.82	
+87					
35 L			8.3	24.32	
35 R			6.60	26.02	4432.62

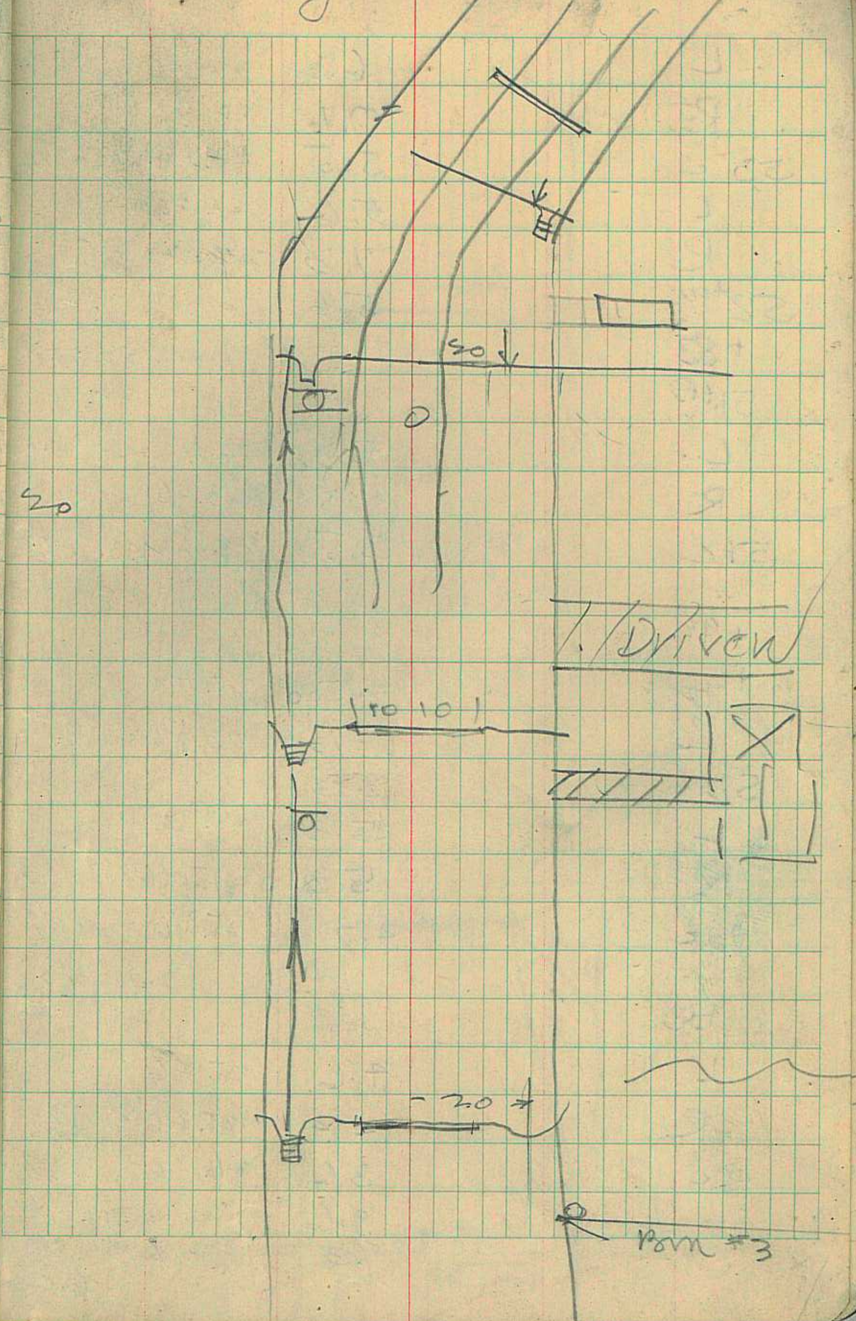
25
25
H2O

out 6 1/2 Benson Road
Church to Roundy

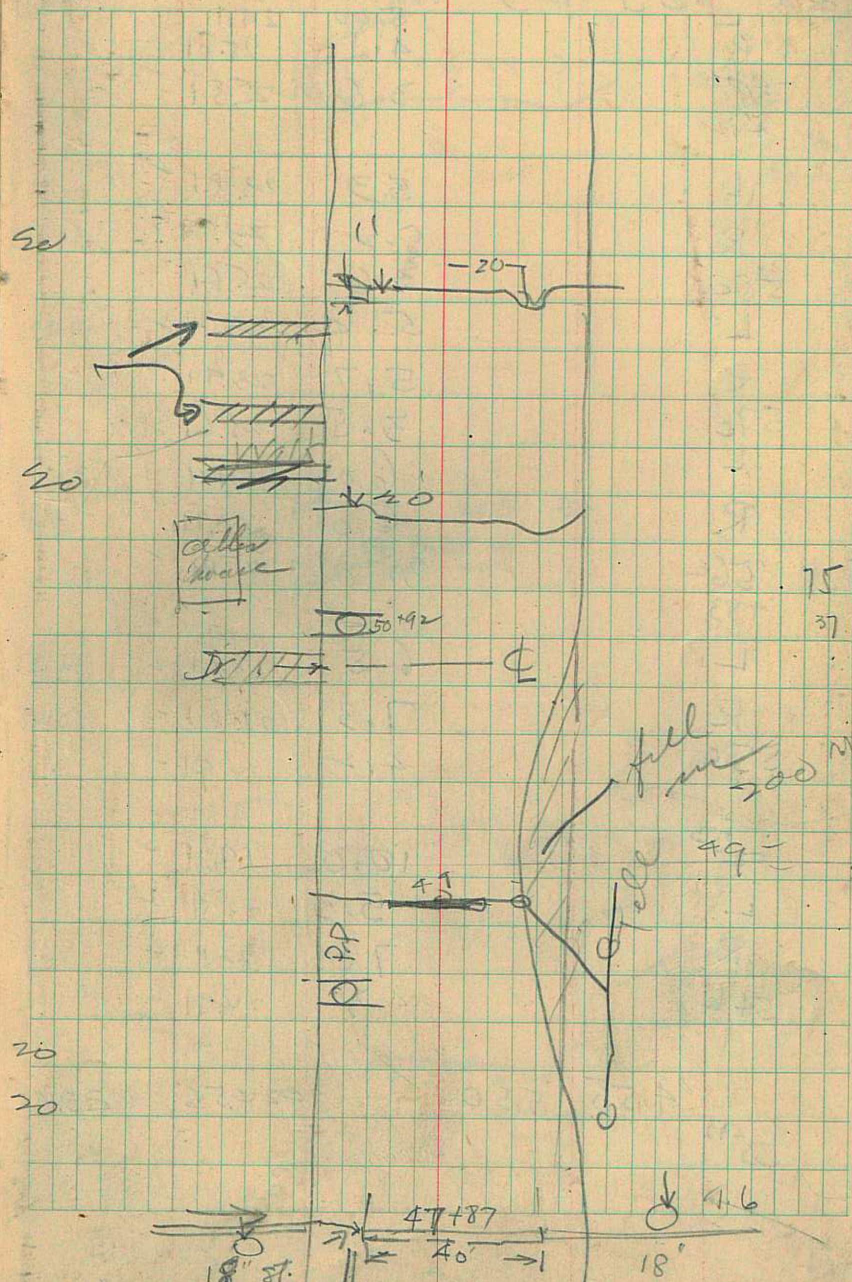


Sta	BS	FS	m		
R			6.6±	23.46	
R			3.60	26.46	
47+00 c			3.00	27.06	
	3.12	5.85		4426.94	4430.06
	H_2O				
L			11.5	21.29	
R			6.9	25.89	
46 c			6.00	26.79	
+91					
L	H_2O		11.00	21.79	
R			7.5	25.29	
45+00 c			6.00	26.79	
L	H_2O		10.6	22.19	
R			5.6	27.19	
44 c			5.5	27.29	
+94					
+36					
L	H_2O		10.5	22.29	
R			7.5	25.29	
43c			5.5	27.29	
L	H_2O		10.1	22.69	
R			7.4	25.39	
42c			5.00	27.79	4432.29

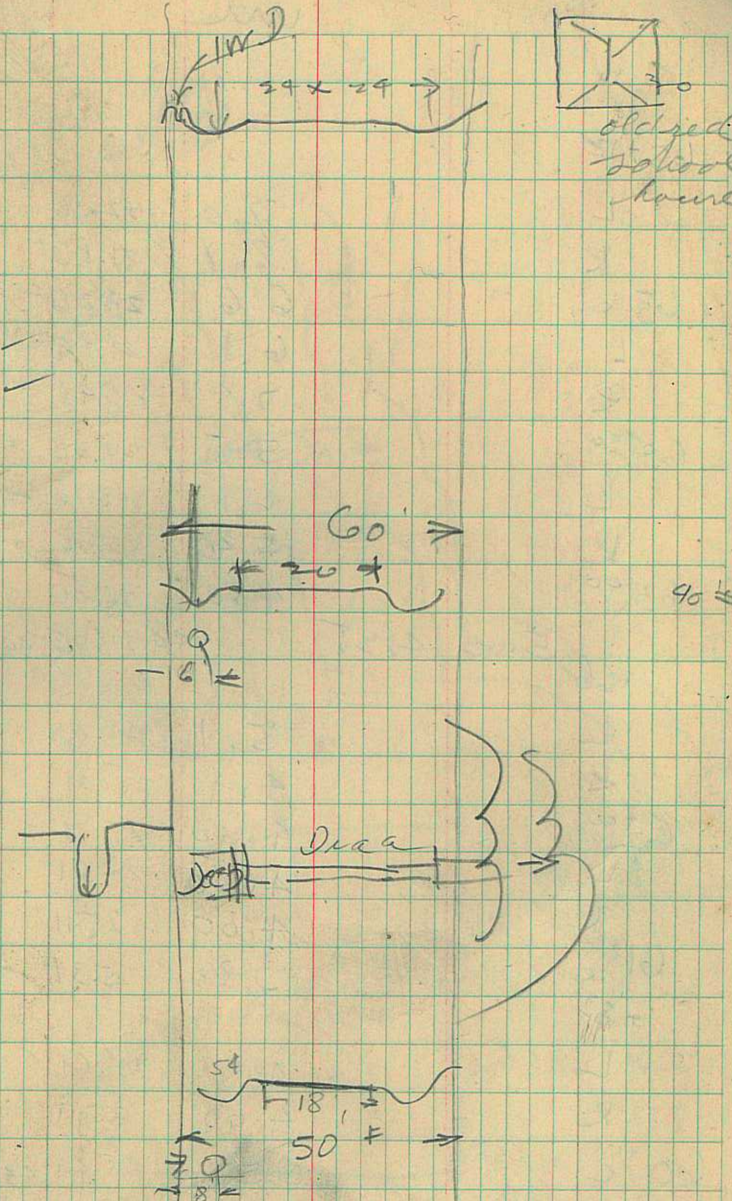
Aug 2 - 1946



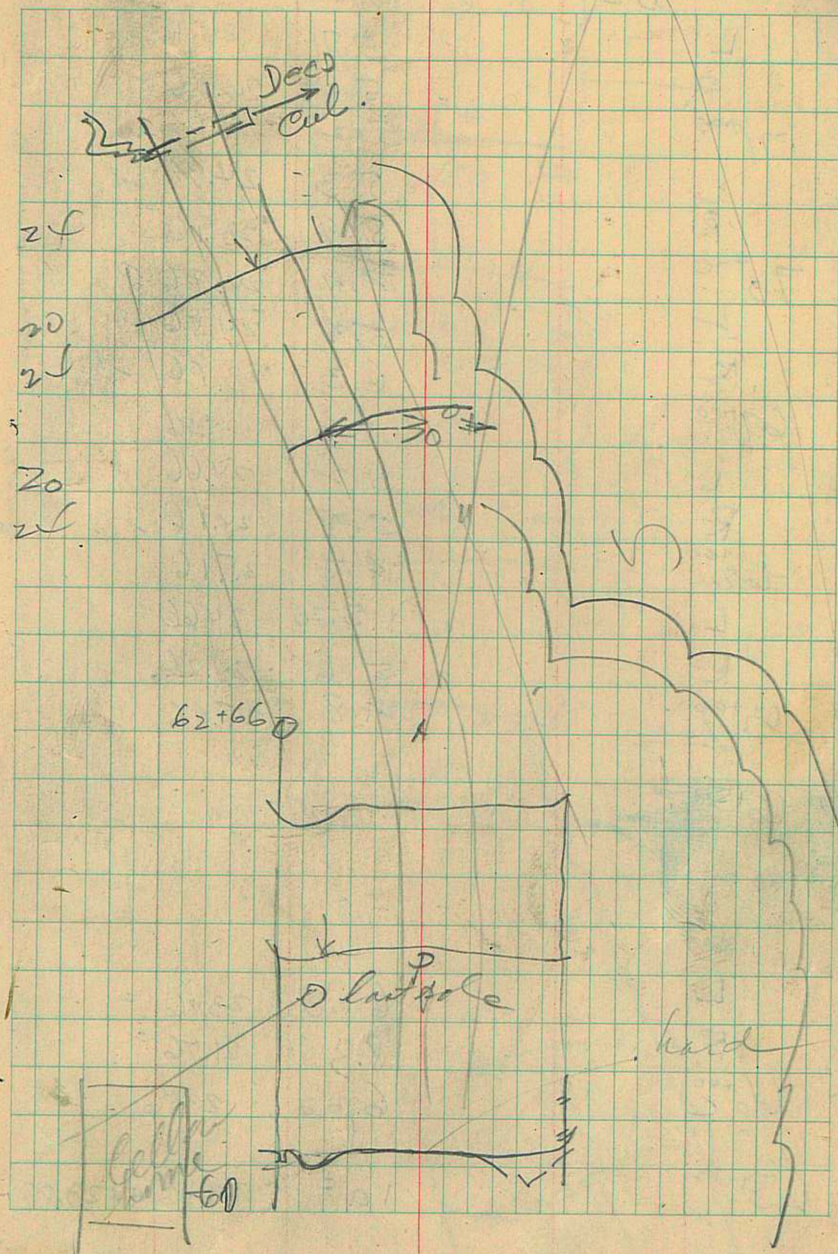
L			6.2	23.86	
R			7.1	22.96	
53 c			5.5	24.56	
L			5.6	24.46	
R			7.3	22.76	
52+00			5.6	24.46	
+83					
51+19					
L			5.30	24.76	
R			6.8	23.26	
51 c			5.5	24.56	4430.06
+94					
+72			4.500	25.56	
L			6.2	23.86	
50 c			5.3	24.76	
L			5.3	24.76	
R			5.00	25.06	
49 c			4.7	25.36	
+38					
L			4.6	25.46	
R			4.4	25.66	
48 c			3.6	26.46	
			9.6	20.46	
			9.3	20.76	
					4430.06



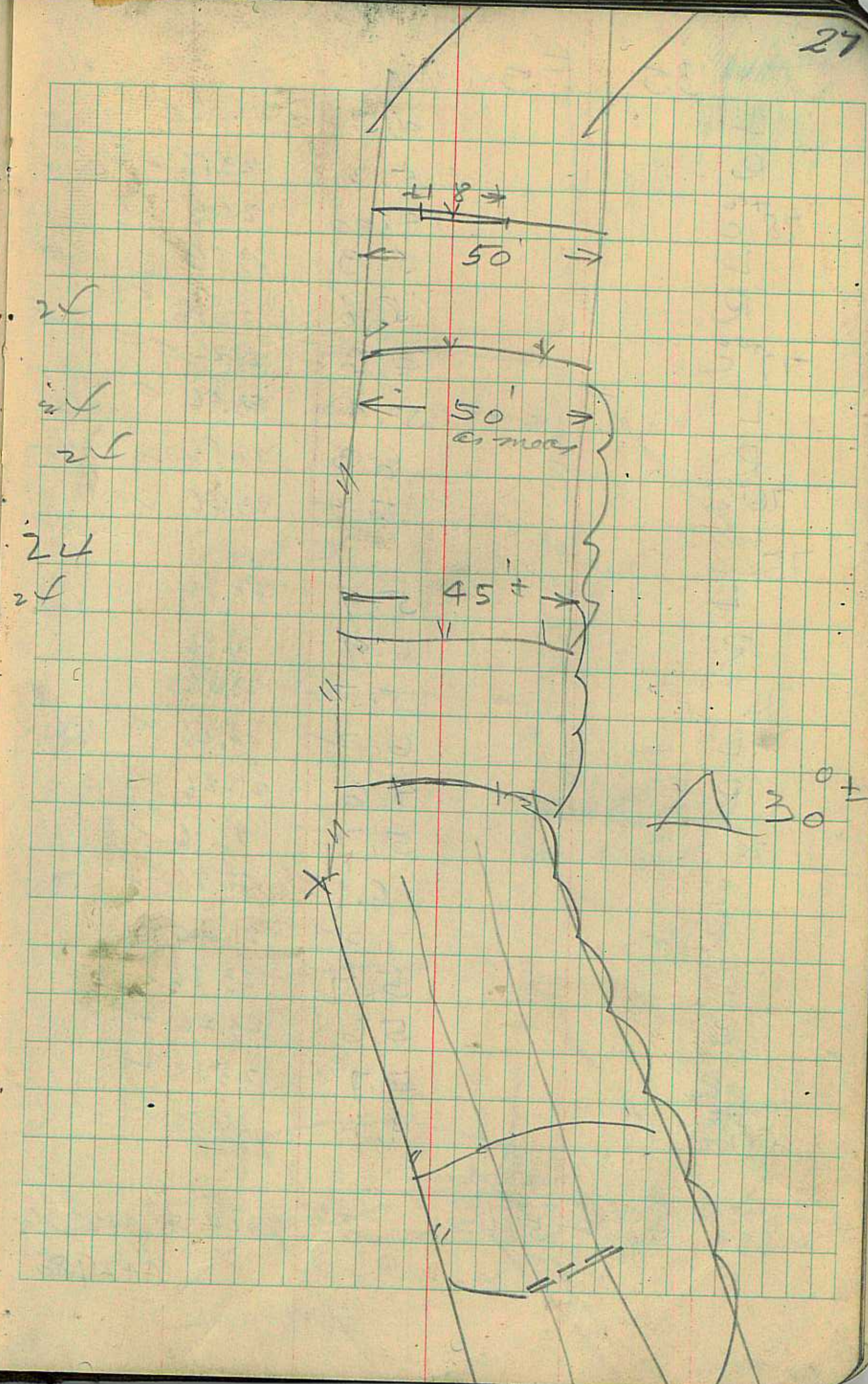
Sta	BS	FS	HI			Out
			5.00	24.11		
℄			4.1	25.01		
59+00 c			3.60	25.51	✓	
+32						
L			5.3	23.81	✓	24
R			5.2	23.91	✓	24
58 c			3.6	25.51	✓	
L			5.4	23.71	✓	24
R			5.7	23.41	✓	24
57 c			3.5	25.61	✓	
L			6.0	23.11		24
R			6.0	23.11		24
56 c +83			3.70	25.41	✓	
L			6.5	22.61	✓	24
R			7.3	21.81	✓	20
55 c			4.2	24.91	✓	
54+53			10.0	19.11	✓	
L			5.3	23.81	✓	
R			7.0	22.11	✓	
54 c			4.3	24.81	✓	
	4.55	5.50		4424.56	4429.11	
53+33						



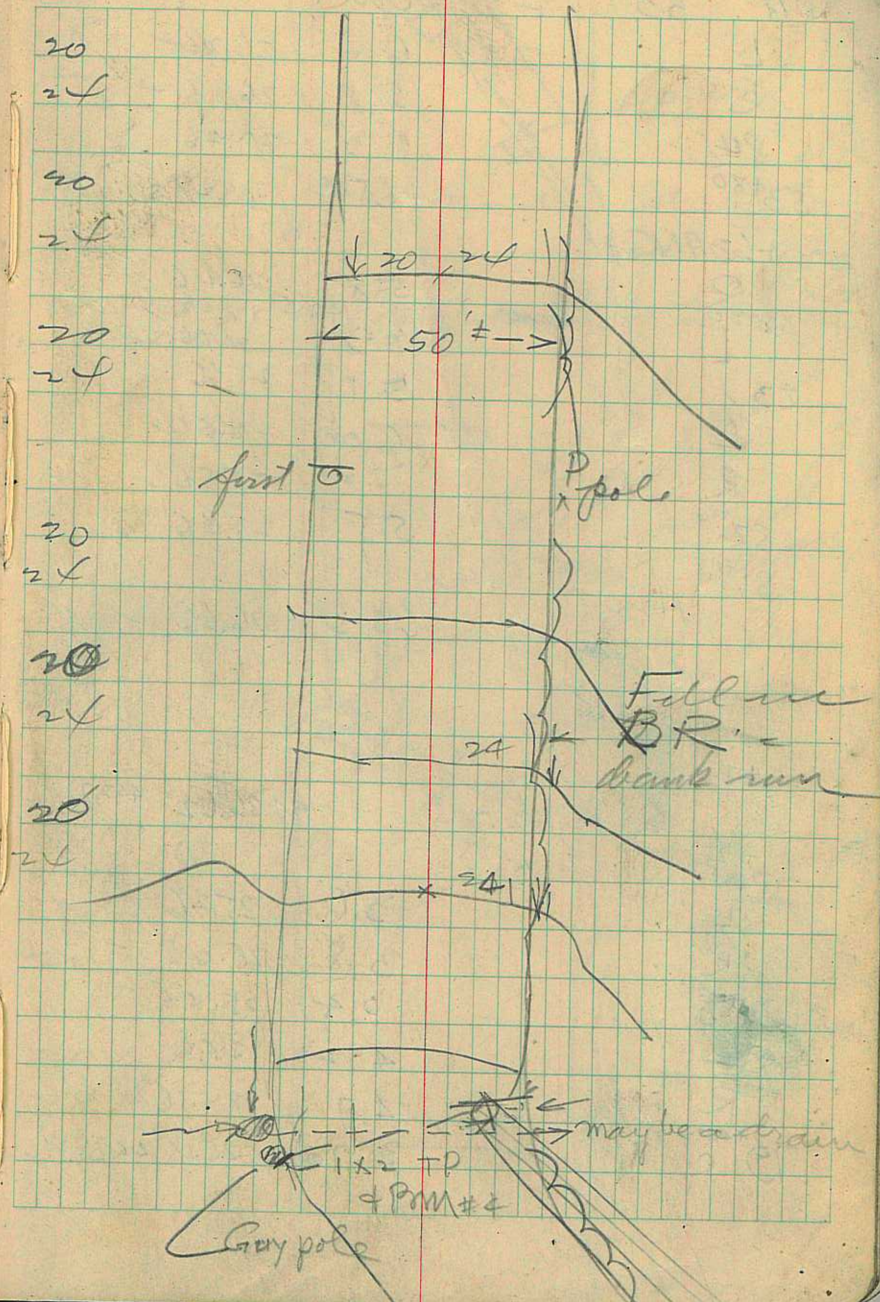
			m		
65+12					
L			7.0	22.86	
R			8.7	21.16	
65 C			6.6	23.26	
L			6.1	23.76	
R			7.4	22.46	
64+00			5.5	24.36	
L			6.1	23.76	
R			5.40	24.46	
63+00			4.80	25.06	
	5.00	4.25		4424.86	4429.86
+66					
L			5.1	24.01	
R			4.1	25.01	
62+00			4.00	25.11	
L			4.60	24.51	
R			4.00	25.11	
61+00 C			3.80	25.31	
+82					
L			4.5	24.61	
R			4.00	25.11	
60+00 C			3.56	25.61	4429.11



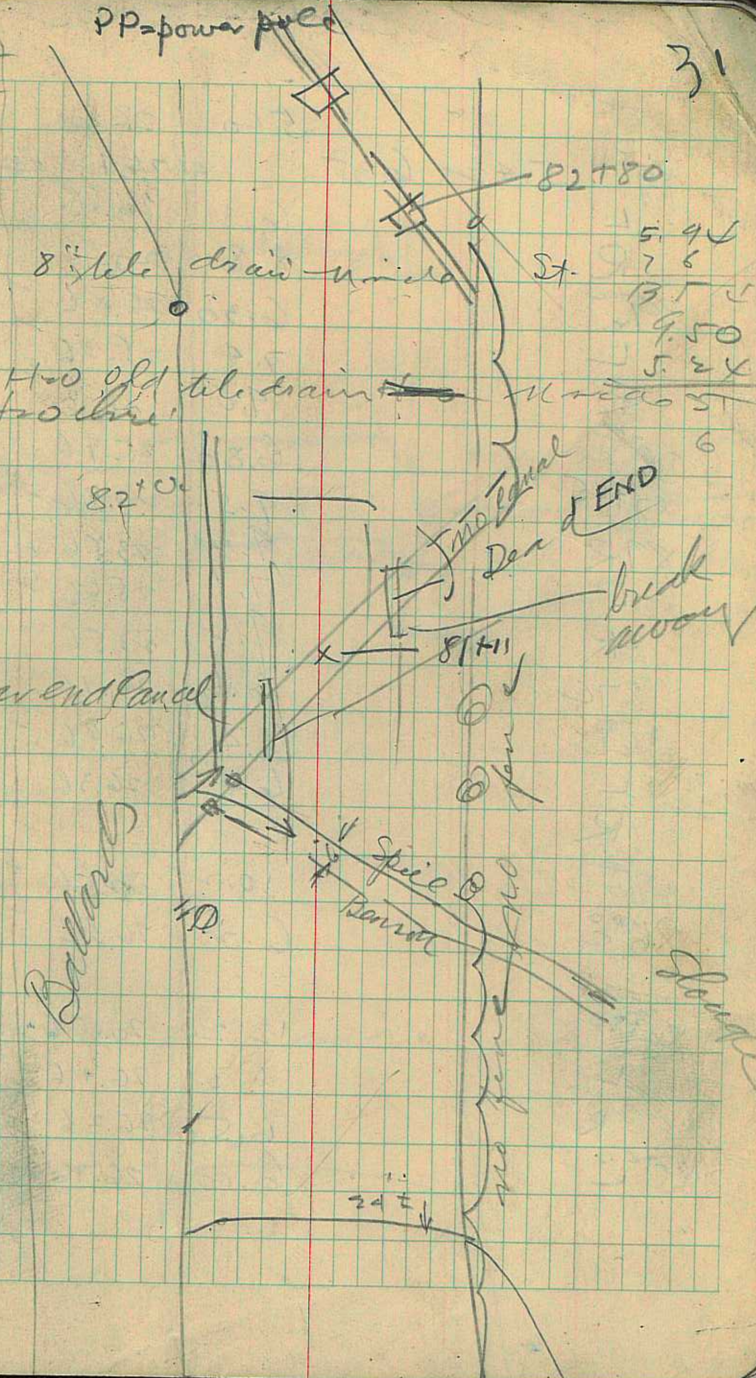
	BS	F→	uu	
L			5.7	24.16
R			5.8	24.06
71+00			5.2	24.66
L			5.3	24.56
R			5.9	23.96
70+00			4.9	24.96
L			5.3	24.56
R			6.3	23.56
69+00 C			5.0	24.86
L			5.2	24.66
R			5.7	24.16
68+00			4.7	25.16
L			5.20	24.66
R			5.6	24.26
67+00			4.8	25.06
66+50				
L			6.00	23.86
R			8.3	21.56
66+00 C			6.00	23.86
65+12			10.±	19.86 4429.86



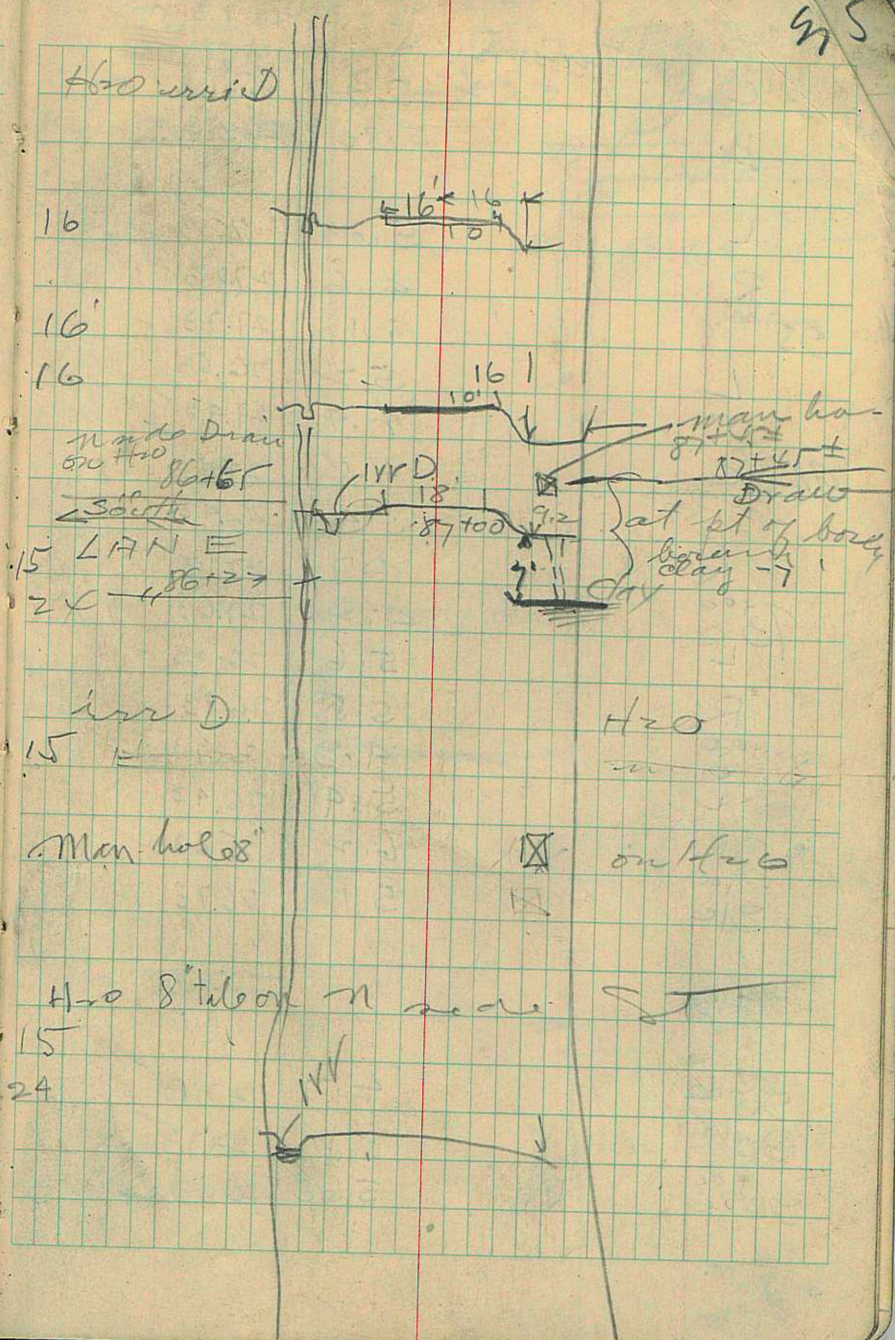
Sta	BS	FS	[illegible]		
L			4.5	24.36	
R			5.3	23.56	
78+00 C			4.00	24.86	
L			5.3	23.56	
R			6.0	22.86	
77+00 C			4.6	24.26	
L			5.4	23.46	
R			6.3	22.56	
76+00 C			5.2	23.66	
75+09					
L			5.9	22.96	
R			6.9	21.96	
75+00			5.5	23.36	
L			6.2	22.66	
R			7.6	21.26	
74+00			5.7	23.16	
L			6.1	22.76	
R			7.2	21.66	
73+00 C			5.7	23.16	
L			5.6	23.26	
R			5.7	23.16	
72+00 C			4.7	24.16	
71+80 BM#4	4.62	5.62		4424.24	4428.86
					4429.86



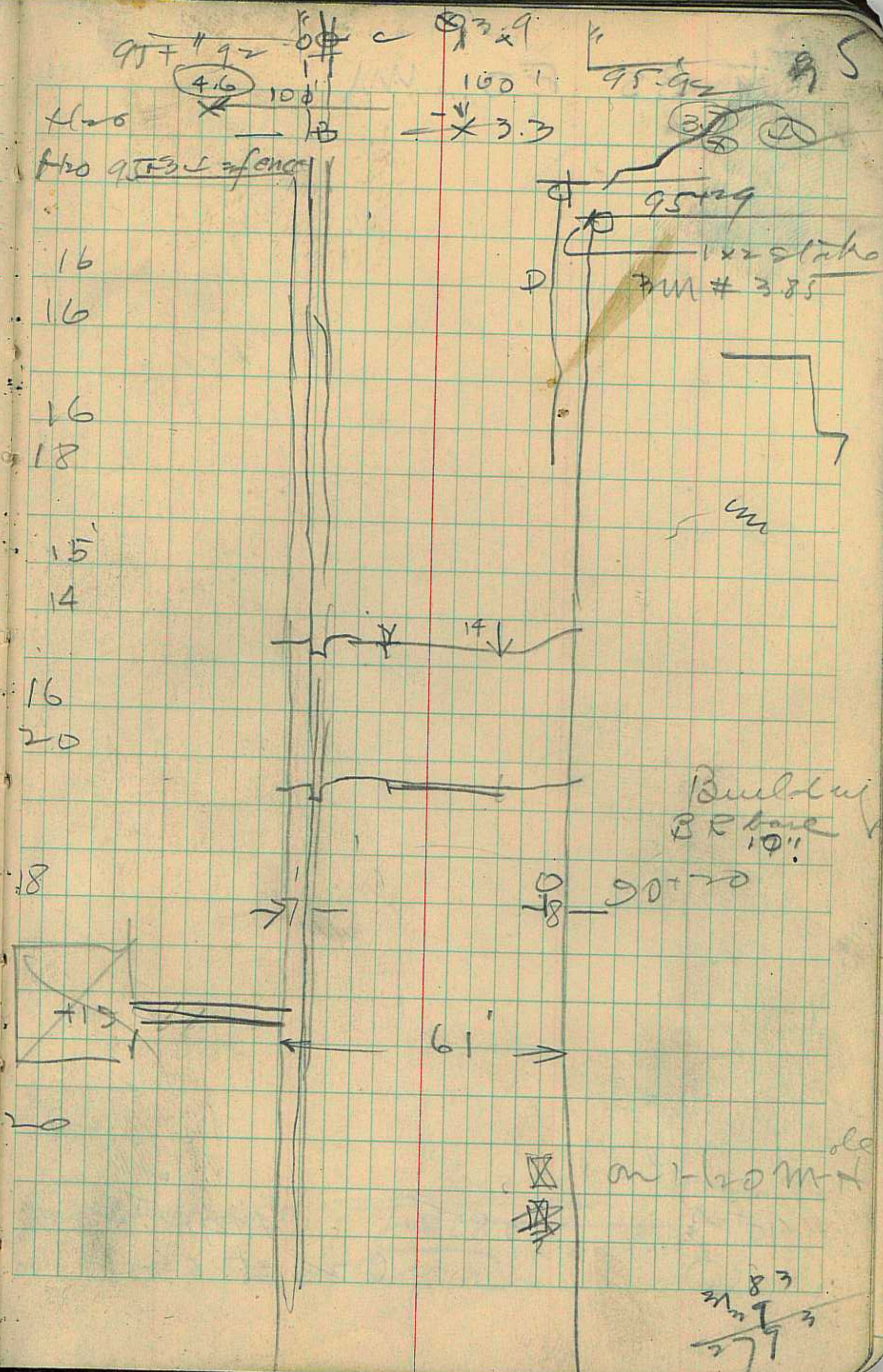
Sta	BS	FS	cut			Out
L			6.0	26.76		15
R			5.8	26.96		15
84 c			5.3	27.46		
83+80			13.5	19.22		H2O 8" tile drain
+63 ANG pt.						
R			5.8	26.96		
82+80			6.3 14.74	18.02		on H2O old tile drain
L				26.46		on H2O line
83 c			5.1	27.66		
L			6.00	26.76		
R			7.2	25.56		
82+00			5.5	27.26		
81+11	H2O					
			6.10	26.66		near end panel
+75						
	6.14	2.24		4426.62	4432.76	
PP +26						
L			3.6	25.26		20
R			3.8	25.06		20
80+00 c			3.4	25.46		
L			4.2	24.66		20
R			4.7	24.16		24
79+00 c			3.70	25.16	4428.86	



89 T.P.			5.60	26.23	
89	5.42	6.35		4426.41	4431.83
L			6.1	26.66	
R			8.8	23.96	
89+00 c			6.30	26.46	
L			7.4	25.36	
R			9.0	23.76	
88+00 c			6.80	25.96	
87+45			9.5	23.26	
87R			9.2	23.56	
L			7.1	25.66	
R			9.2	23.56	
87C			6.6	26.16	
86+80 L			6.4	26.36	
L			6.4	26.36	
R					
86+00			10.2	22.56	
86+00 c			6.2	26.56	
84+80			12.20	20.56	
L			6.3	26.46	
R			6.5	26.26	
85+00 c			6.00	26.76	4432.76



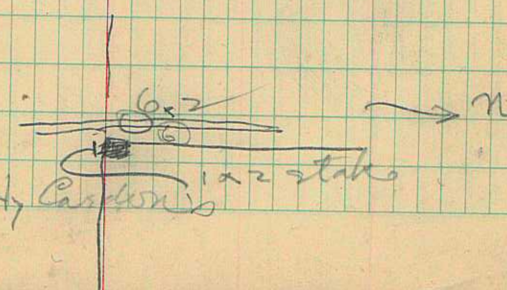
			4.6	27.23	
4	Center inter.		3.7	28.13	
			3.30	28.53	
C			5.90	25.93	
B			5.80	26.03	
L			5.00	26.83	
R			4.6	27.23	
95^{+00}			4.1	27.73	
L			5.2	26.63	
R			4.4	27.93	
94^{+00} C			4.4	27.43	
L			5.9	26.43	
R			4.7	27.13	
93^{+00} C			4.2	27.63	
L			5.6	26.23	
R			5.5	26.33	
92^{+00} C			4.9	26.93	
L			5.4	26.43	
R			6.2	25.63	
91^{+00} C			5.1	26.73	
+19					
90^{+00}			4.7	27.13	
90^{+00}			8.1	23.73	
90^{+00} C			5.00	26.83	4431.83



Sta	BS	FS	un		
95^{+29}		3.85		4427.98	
6			6.2	25.63	

aut

on 1×2 hubs BM



on H2O from Hy Carlson's

Formation study

Sta			F	C
Sta 10			0.2	
20			.65	
22			0.40	
27				.6
30			0.65	
40			0.60	

0.655 aug 8 - 1926

Benson Road (39)

3" gravel and thence virgin soil

1½" Gravel to "

2" gravel thence wet subsoil

2" mixed with soil & 4 sub-soil below
very poor sub base
on old grade

Aug 13 - 1946

670.8

72.6

73.6
74.15
S 74.67

W 75

S 3360

S 2600
S 2640

S 1600

S 1320
S 1000

1 0

Aug - 13 - 1946

Study of proposed Road at Gaps near W4 sec. 14 - 11 N-1W north Wellsville

at 91 go west on Gittle Road

S. L. Meridian

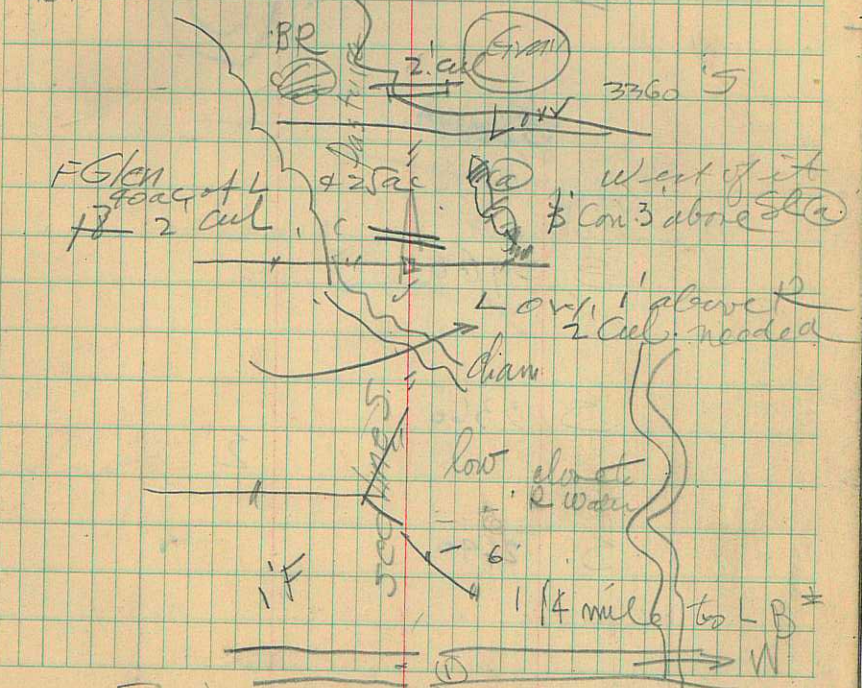
S Young Church

back to " "

intersection going west

turned back east to Gap place

BR = bull rushes



Gap 60 or ±

start 10.10 am walk
8 - 14 - 46

F C

5000±

S 3960

660
S 3360

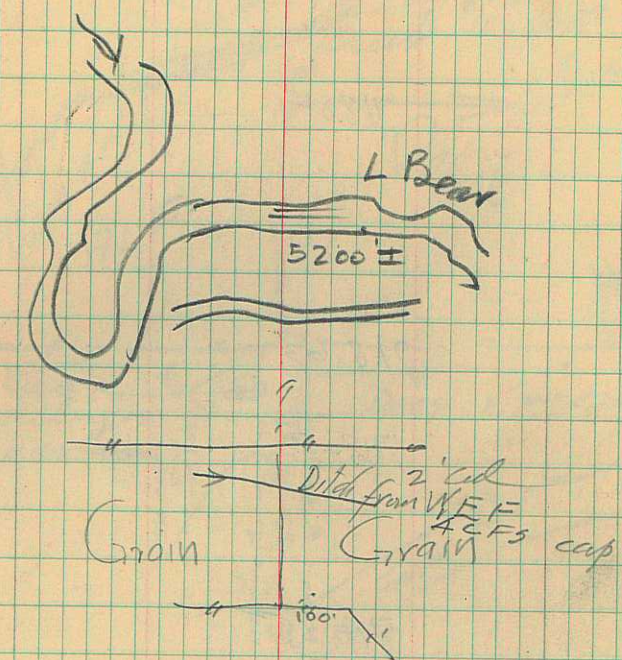
2'

S 2640

2640
1320

Aug 13 - 1946

Study



Low

+500'

718.84

718.63

718.50

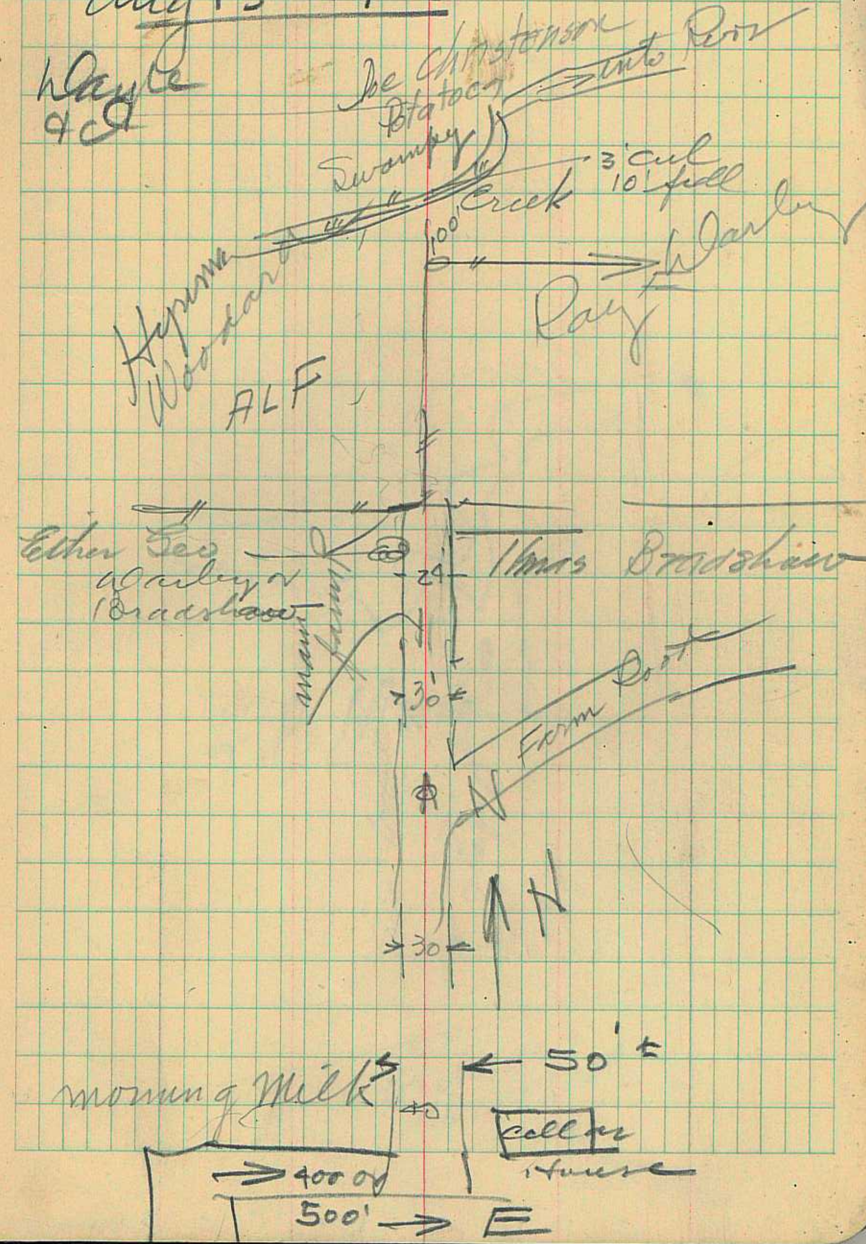
718.25

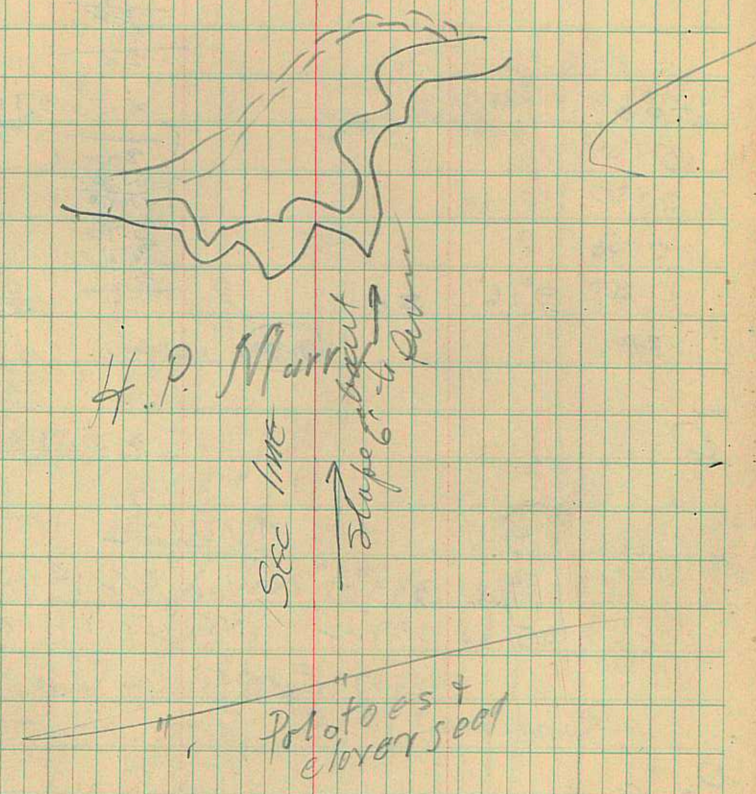
718.00

717.25
717.35

Milage 730
667
63 miles @6¢

Aug 13 - 1946




H. P. Marrit
Sec line
Potatoes & clover seed

Lower Benson Road 8-22-46

Sta	AZ	DIST	BS	FS	um	℄	Grd BD	Cor F
2+00					8.5 / 25 R		5.08	F 3.4
					7.7 / 20 R			
					4.75 L / 23			C 1"
					4.80 L / 20		4.83	G
2+00					4.75 ℄	3.834		F 11"
1+00					5.3 / 20		R 5.05	F 3"
					3.98 L / 22		L 4.80	C 10"
					4.1 / 20			
1+00					4.50 ℄	3.777	4.80	F 9" ℄
0+50					22			G
0+50					5.00 / 20		R 5.00	G
0+50					3.72 / 23		L 4.75	C 1 1/2"
0+50	5°16	50			4.1 / 20	3.75		F 4" ℄
BM			3.42					
0					3.70	3.72		

9°16'

℄ Road

59.80 333°07' NW cor Store 1st brick

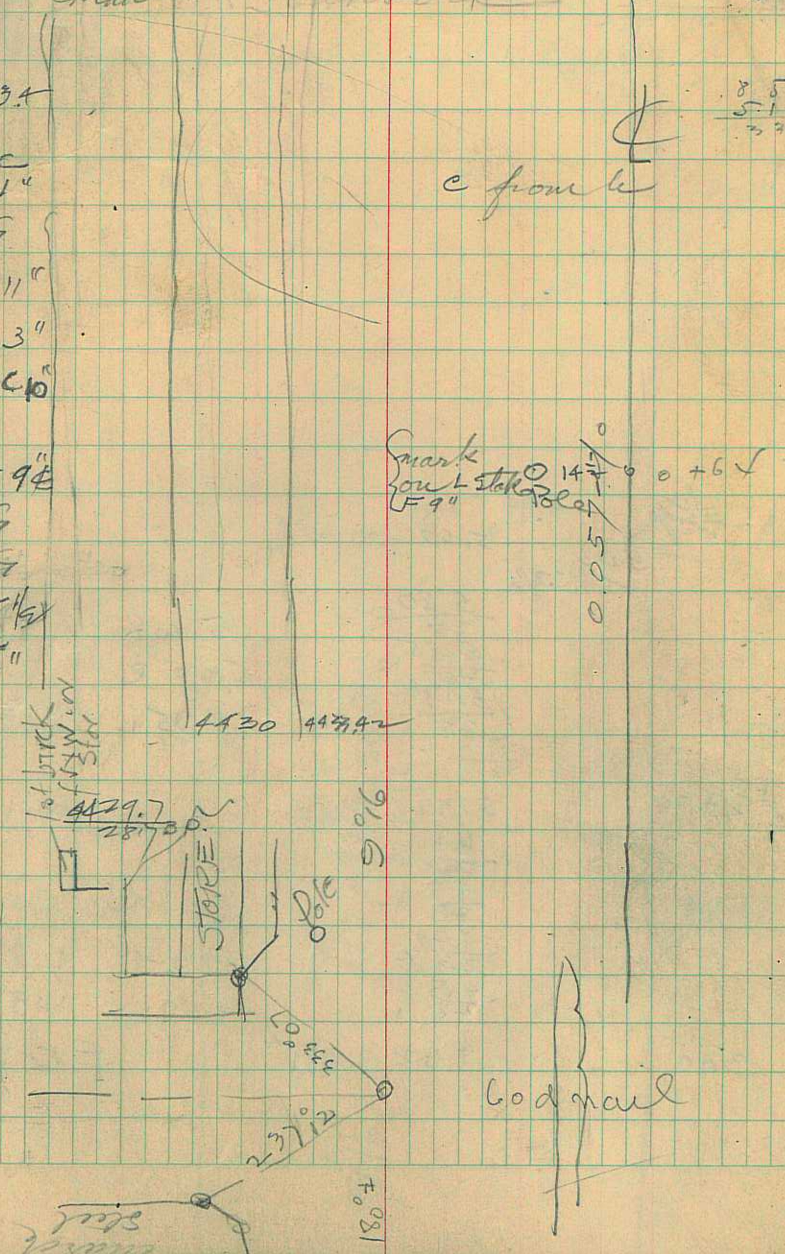
65.30 237°12' ANG in Ir. fence

189°37' Exre Brick cor School

Elev Grade | Elev | HI | Requd RR out

69

8.5
5.1
3.4



BS	FS	I m	Grd. ℄	B.P.	℄ or PF	Grd. Elev	Elev	H I
E w/side	4.94							
5.03	5.26	5.10 Gonal ℄						
		5.80 / 25 R		5.20 R		F 8"		
		5.85 / 20 R		5.20 R				
		5.17 / 23 L		4.95 / 25 L		F 3" L		
		5.3 / 20 L						
P.I. 4+00		5.32 nail ℄ 3.948				℄ F 1'-4½		
		6.2 / 12 R						
		4.8 / 20 R		5.14 R		C 4"		
		4.23 / 23 L		4.89 / 25 L	C 8"			
		4.5 / 20 L		4.89 L	C 5"			
3+00		4.42 3.891			F 6½ ℄			

5.03
4.94
.09

5.10
4.94
.16

5.32
5.17
.15

△ AHG

9°16' 0-057 elp to Sta?

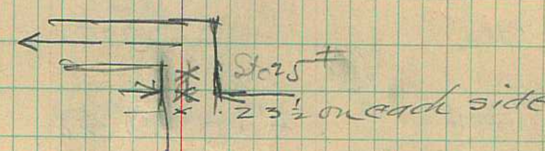
3/9 TP	Ang ℄	½ Width = ℄	Width
14	26°55'	19.25	38.5
13	24°02'	21	42
12	22°8'	22½	45
11+00	20°35	19½	39
10	19°32'	18	36
9+00	18°40'	22½	45
8+00	17°44	35½	71 (a)
7+00	17°12'	46/2 ~~46/2~~	46 ~~46~~
6+00	16°38	45/2	45
5+00	16°23'	HNG 48/2	48

4+00.0 x

(a) maybe inconsistant

25½ 28½ Good mail 5/2 4/5 285

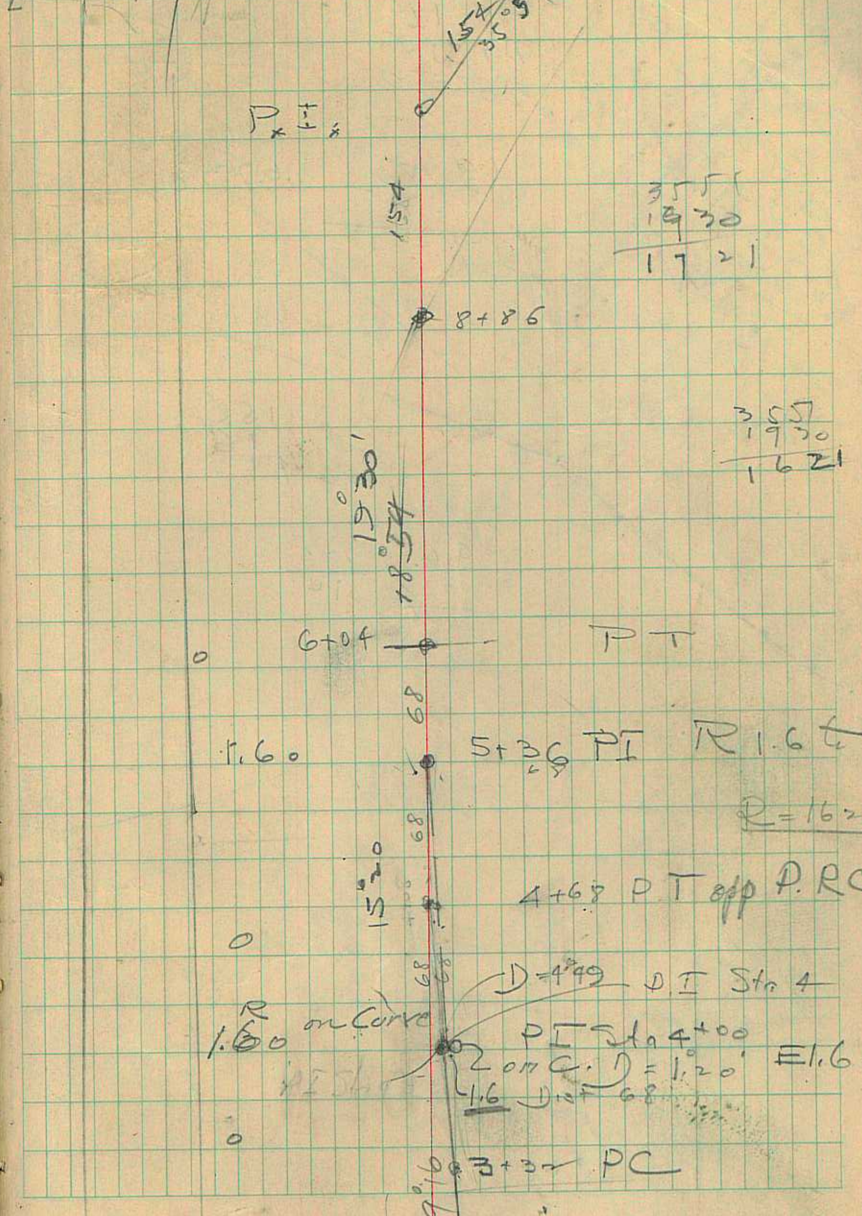
4+00	218°33		
	80°48'	along ℄ ~~Wx~~ Westerly	
18 ^			
JP 18	68°18'	24.75	49.5
17	66°05	22½	45
16	65°04	20	40
15	62°07	18.75	37.5
14 ^			



Sta	Dist.	Def	Az	BS	FS	HI	℄
10+40							
9+00 8+86 154			19°30				
			19°30				
7+00			1930				
PT 6+04	96	4°10	19°20				
PI 5+36 68			15°20				
	136	6°04	1520				
4+68	68	6°04	= PRC				
4 PI							
PC 3+32	6						

Grd. BP offset

13

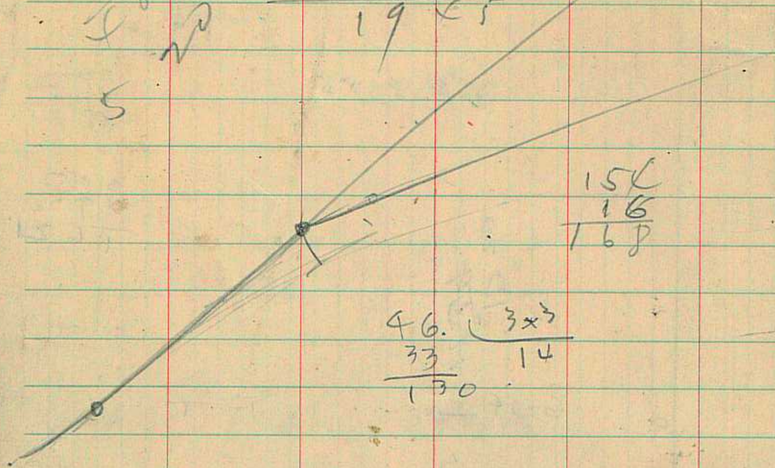


1 16
18 5x
20 2 0
3

1072
21 x 6

19 80
31
19 65

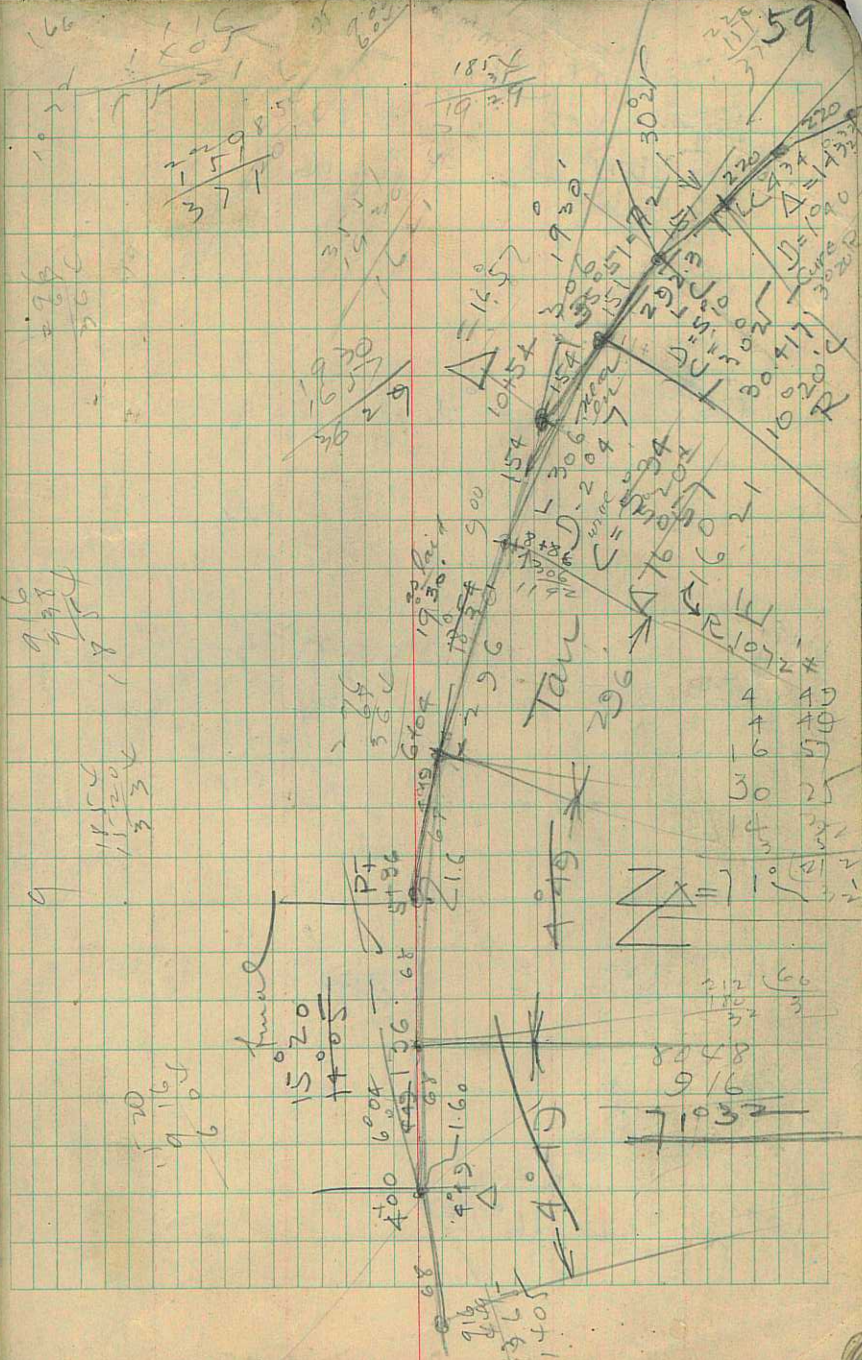
6730



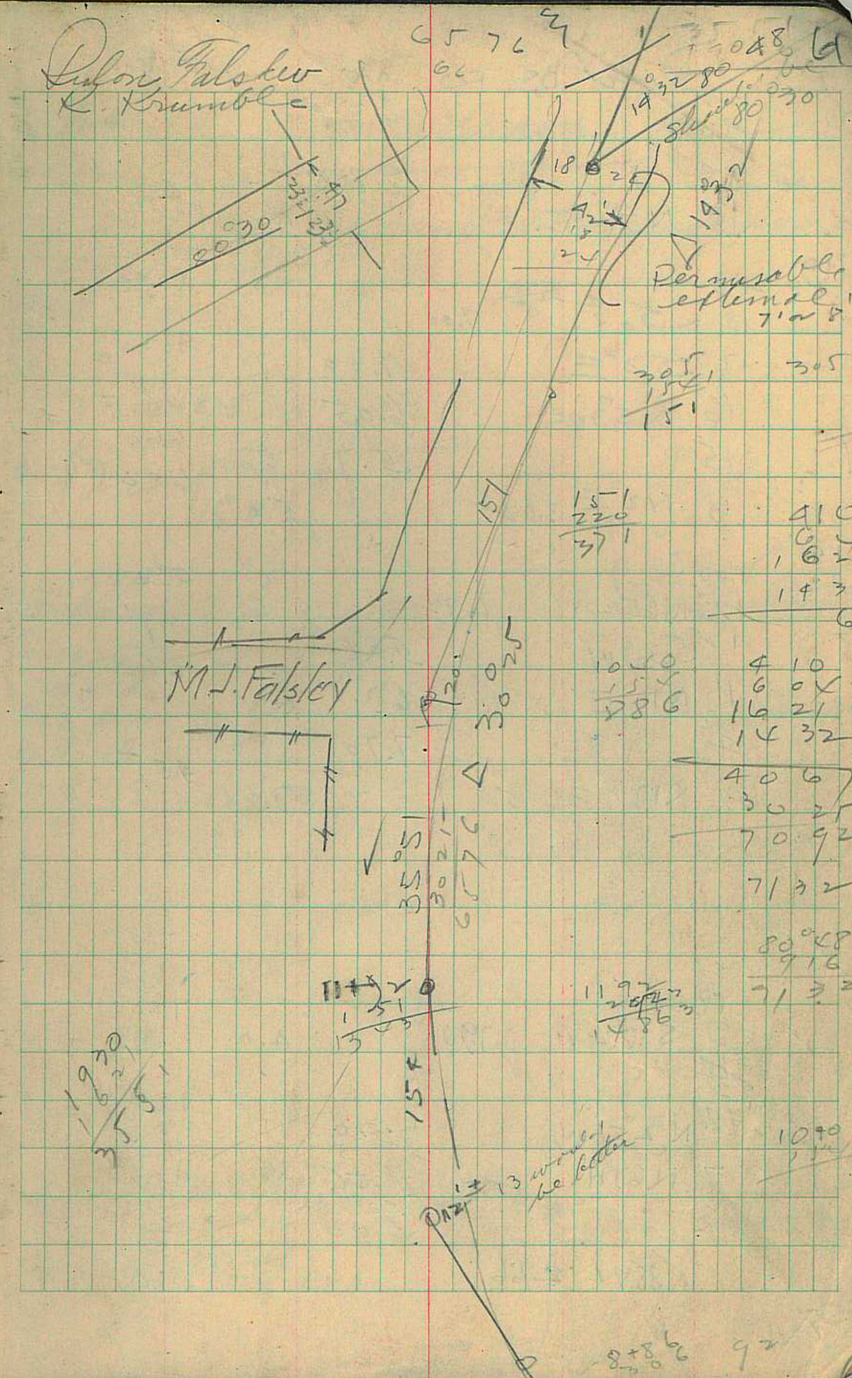
15K
16
168

46.
33
130

3x3
14



	Dist	Def	ay	
			205°31' to nw orchard	
PI	371		66 16 14 32	
14+86		30°25		
PI 13+43 PI 13+13	305		35°51 30 25	
11+92	154		35°51	
PI 10+40		16°21		



	Bear	BS.	FS	Elev		Factor Stadia	
22				8.80			
21				8.70			
20			app. 18	8.70			
						25	
18	N5°W	5.78			5		7.52
19 TP 18	S0° ±		7.00		1	1050	11.5
						430	
17	S3°E			9.20	7		11.3
16	N5°30'E			6.05		300' ±	
						660	
15				5.7	5.00	680	11.6
13	N2°E	3.02			5.0		11.8
14 TP 13	N65°20'W		6.87		6	595'	11.95
						49'	
12	S30°W			5.04		262	
11	N16°E			6.7	5		7.62
10				7.70			
TP 9	N17°30'E	6.95			7.	455	11.55
10							
TP 9	S16°20'W		7.90		4.0	720	11.2
BM #8	N2°50'W			6.30		1020 / 6	11.1
7	N63°W			7.56		40	
Bm on rock				5.00			
0	N88°W	2.66				820	

63

Aug 29 - 1946

Study of drain in Lower Bureau - In Swale

250' W of John Ricks brick home

Elev H(1)

H2O about 15" Dia

on H2O in Old drain

20.19 See over

25.89

RR 22.87 on Road

4424.65

23.00

4422

on H2O by #9

4429.69

22.74

24.34

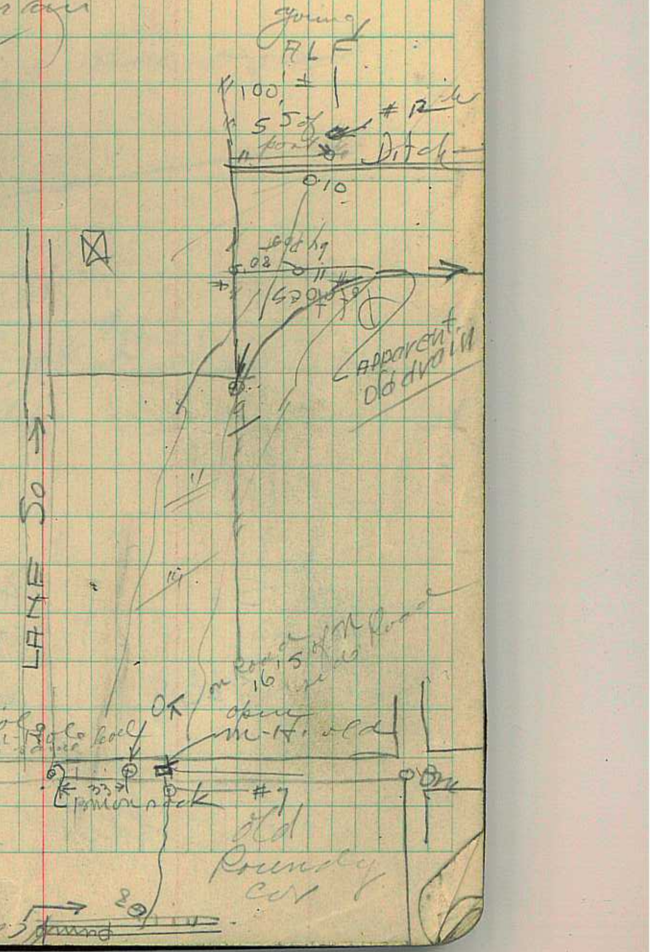
23.08 10' N of Man hole on H2O

on large Rock S side

Pace 25.6

4427.98 4430.64 ± on 1x2

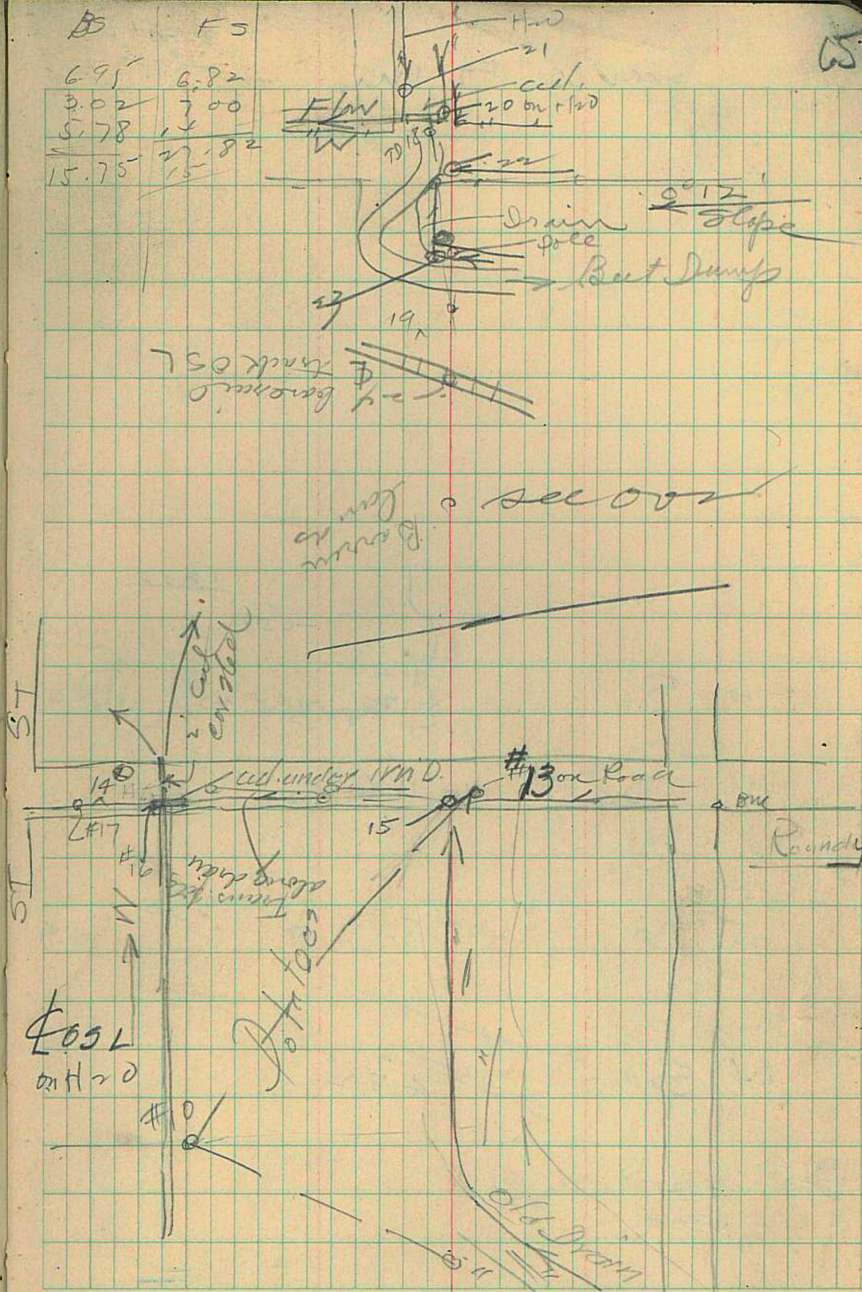
4430.64



	Bear	BS F5	m	L	Sector Blade
24	S0		4.82	63'	
23			8.80		
BM #6	N5°45'W		6.85	73'	

19

BS	FS
6.95	6.82
3.02	7.00
5.78	1.4
15.75	27.82
	15



	Bear	BS	FS	Im	factor Slater	
					1080	
				-0°24'	6.	11.4
27	So		14± 12		0°0 -0°4	
					800	
26	So		11.6	2		10
					390	
25	So		8.1	8		11.9
24	So		4.8 2			
19 ⊼						

10.8
5.7
5.00

5.52
10.8

10
7.00
5.0

5.80
.15
.13

10.00
12

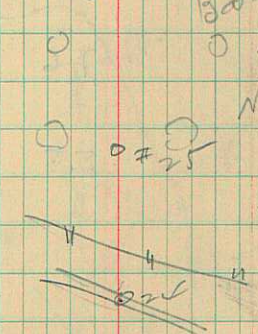
25
14

14
25
11.5
8.52
2.7

enter Barrino

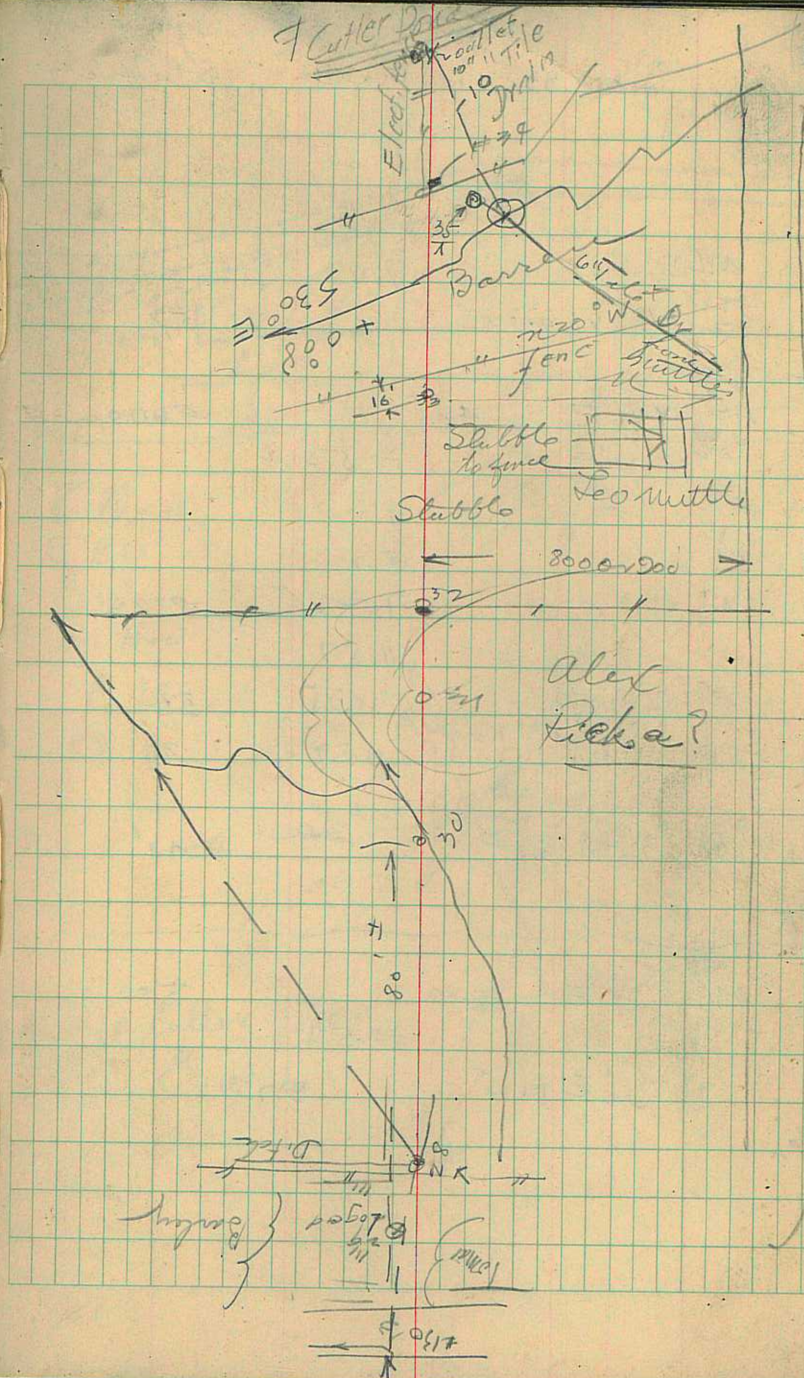
South

Barren O lands moles

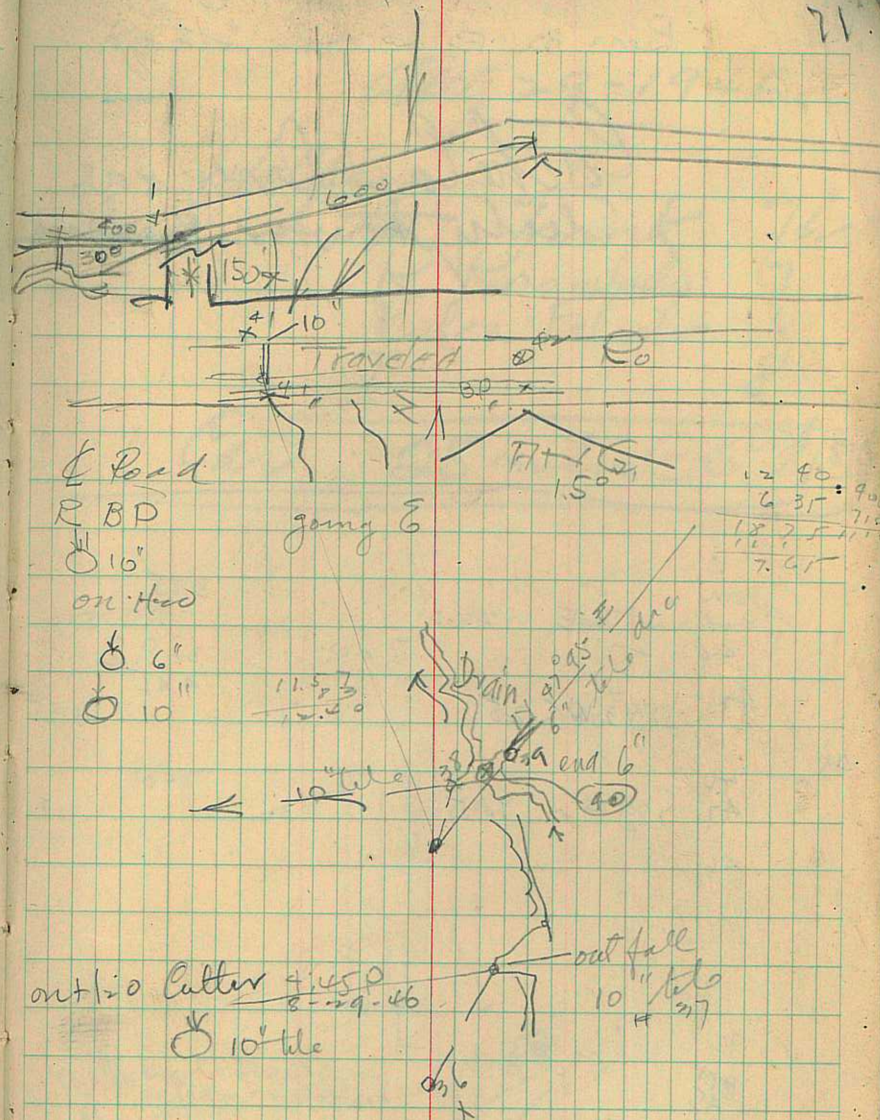


19 ⊼ on Road to Beest Dump 250' SE

	Bear	BS	FS	HI	[illegible] Elev	
~~34~~	~~S33°30W~~	~~3.35~~			~~43~~	
35 TP 34	N84°15W	3.03		6	590	11.9
37	E	2.30		5	640	11.4
37 / 32 TP	W	6.35		5.0	660	11.6
31	W		5.5		440	
	S60°W			-0.14	1500'	
30	W		7.6		80	
29	E		5.8		330	
13	S86°45E	4.30		5.0	660	11.6
28						



Bear	BS	F up	fur or Stadia
44 S56°30'E		7.13	⊙ 6" 26
TD 42 N88°W 6.30			5.70
43			
TP 42 N21°E	4.00		900.00
R BP 42 N21°E		7.50	
Road 41		4.60	
BP 41		8.2	
41 N18°W		7.20	810
40		11.87	
39 N47°45'E		11.35	55'
38 N18°10'E		11.57	27'
BM 34 S32°W 3.72			41'
35			
BM 34 S85°E	0.80		400.0
		11.57	
37 S1°E 11.25		97'	
36			



Bear BS FS [illegible] feet or Station

Elev. H I

73

Aug 29-1946

Cachelo Drainage Study Lower Benson

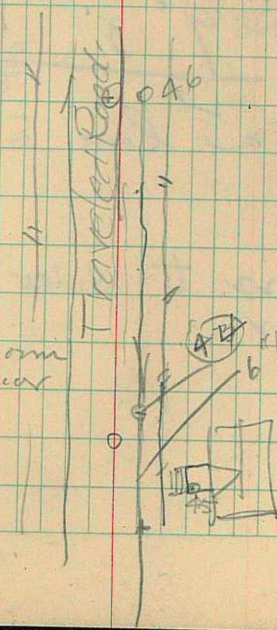
Helpers
Frank 7h
Krambule 7
Kulon Falsetto 6
I 8

Car 25 miles @ 6¢ $1.50

BM at Roundy's cor N 87°50' E 2.62 3.85 5.85 4427.98 R.B.P.
49 S 7.00 2 30
47 S 89°30' W 6.25 4.41
48 7. 11.45
T.P. 47 S 89° E 1.75 3. 8.40 1.4
46

4.6
46
BM 45 0.44
44 TP S 64°30' E 7.13
42 N 88° W 6.30
43

on Concrete Platform extreme n.w. cor
6" tile



Survey for Town of N Logan
for Res. Site

S for Aug 30 - 1946

14 + 9 7 42.6
4 27 6

10 am 9 3 15 0
40
55

9° 4'

10-30 am 9 7 42.6
-5
9 2 42 6
36

9° 3' 12

N on S line Sec 13-12N
1E-

(1) 100° 22 to Widow Light Tower at
100° 22

$\frac{10}{14.9} = \frac{x}{5.35}$

$x = \frac{5.35}{14.9} = 41\ 59\ 60$

5.35 / 14 / 3.8 / 60

41 46 10

$\ominus = 41°\ 46\ 10$

Co $\ominus$ = 48 13 50 or say 48° 14'

89 59 60 Co $\ominus$

53.6 / 5 - hly change

268.00 / 60 / 4.46

27 6

65 / 60 / 3700

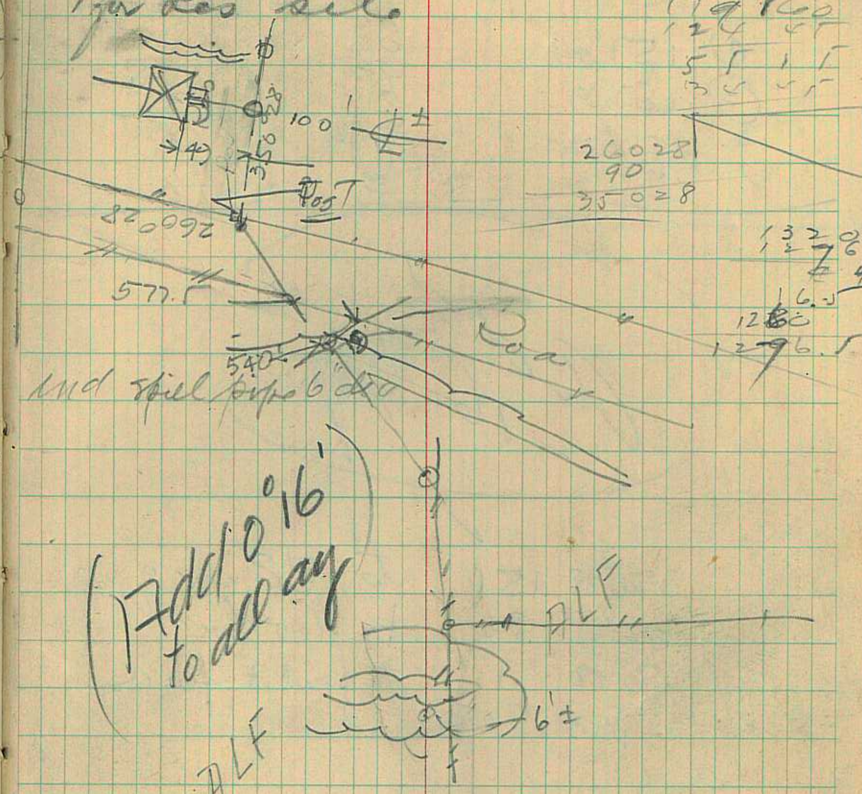
268
268
2948 / 60 / 5

(See over)

Air port

18			
18	260°28	197.0	
	260°28	104	℄ of small gate
17	350°28	151	Sw in a stake (from fence net 150)
	350°28	100	E 49 to W end Res
16			
16	336°47	628.0	
		629	to cor post
	336°47	577.5	
	336°47	540	to pt go R 19' to
15,			
15	358°19	226'	
	358°19	68'	fence goes W
4			
4	358°19	1260	
	358°19'	1000 pins	
	133°26		
	100°22		
3	89°19'	22.2	
2	124°45	28.5	
	45 15		
1			

Sur. 8-30-46 for N Logan
for tract of land to be conveyed
from Andrew King
for Res site.



℄ smoke stack Cache Valley Dairy at Amalga
to ℄ window light tower at Air Port

Second solar

$\ominus$ = 41 46
co$\ominus$ 48 14

① 157°04
② 157 03

~~15702~~
~~15704~~
157003

add 16 to all ay

350°28	151	to SE cor of prop.
350°28	84	+ flow line
350°28	1'	to post + fence
257°43	805.	

18

Ob 8-30-46 at 79

3:30 PM + 4:00 PM

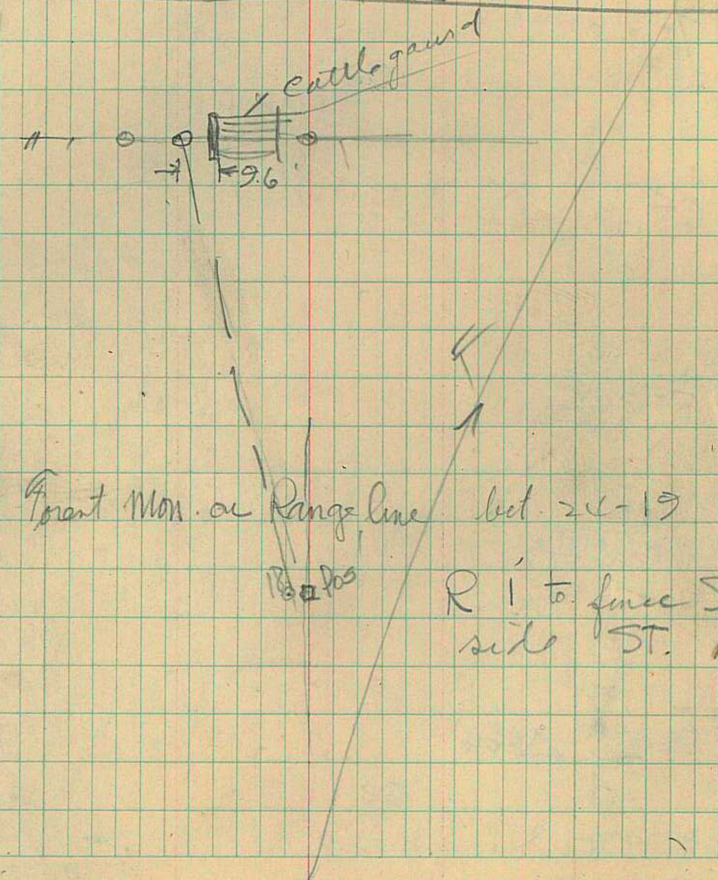
867 42.6 53°

8 66 10 2 6
9 50

8 57 52 6 8 58 1 8.6

59 3:30P 859 3 0 6

4:00 859 = δ



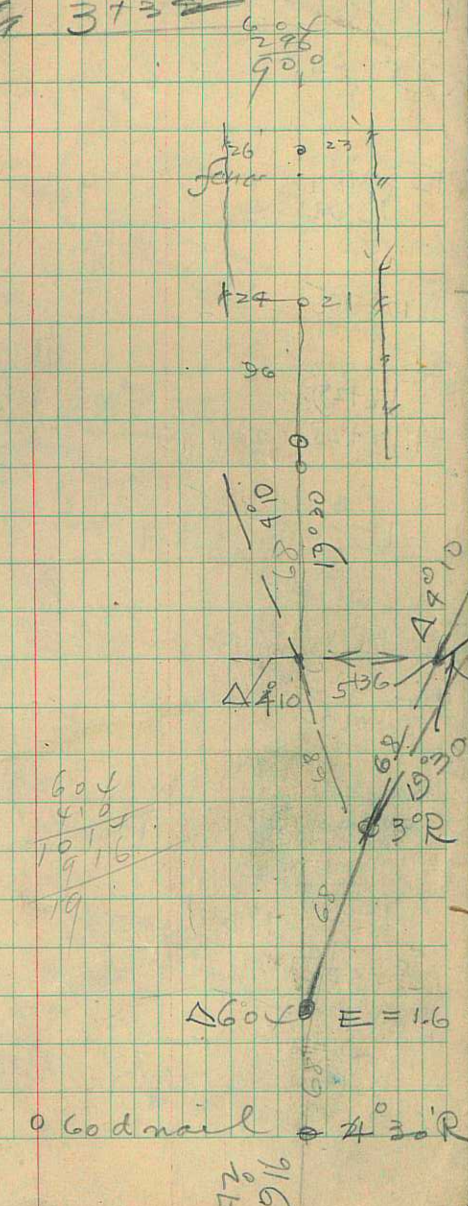
to Forest Mon. on Range line bet. 24-19

18 Pos

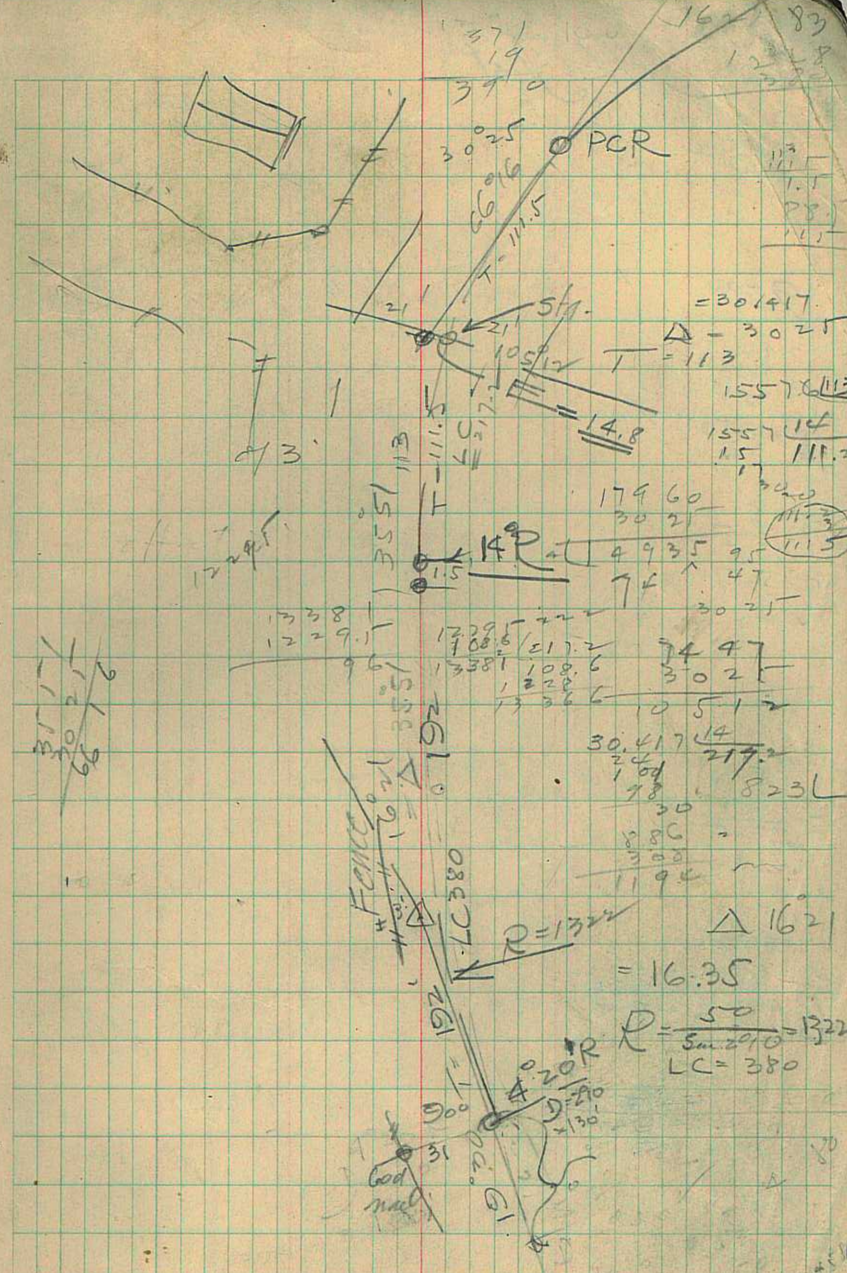
R 1 to fence S side ST.

Sta	Defl	Dist
8^{+00}		100
7+00		96'
96		
6^{+} PT 04		
5+36 PI 68		
68 4+68 PT+PC		
68 PI 4+00	Δ6°04'	68
3+32		

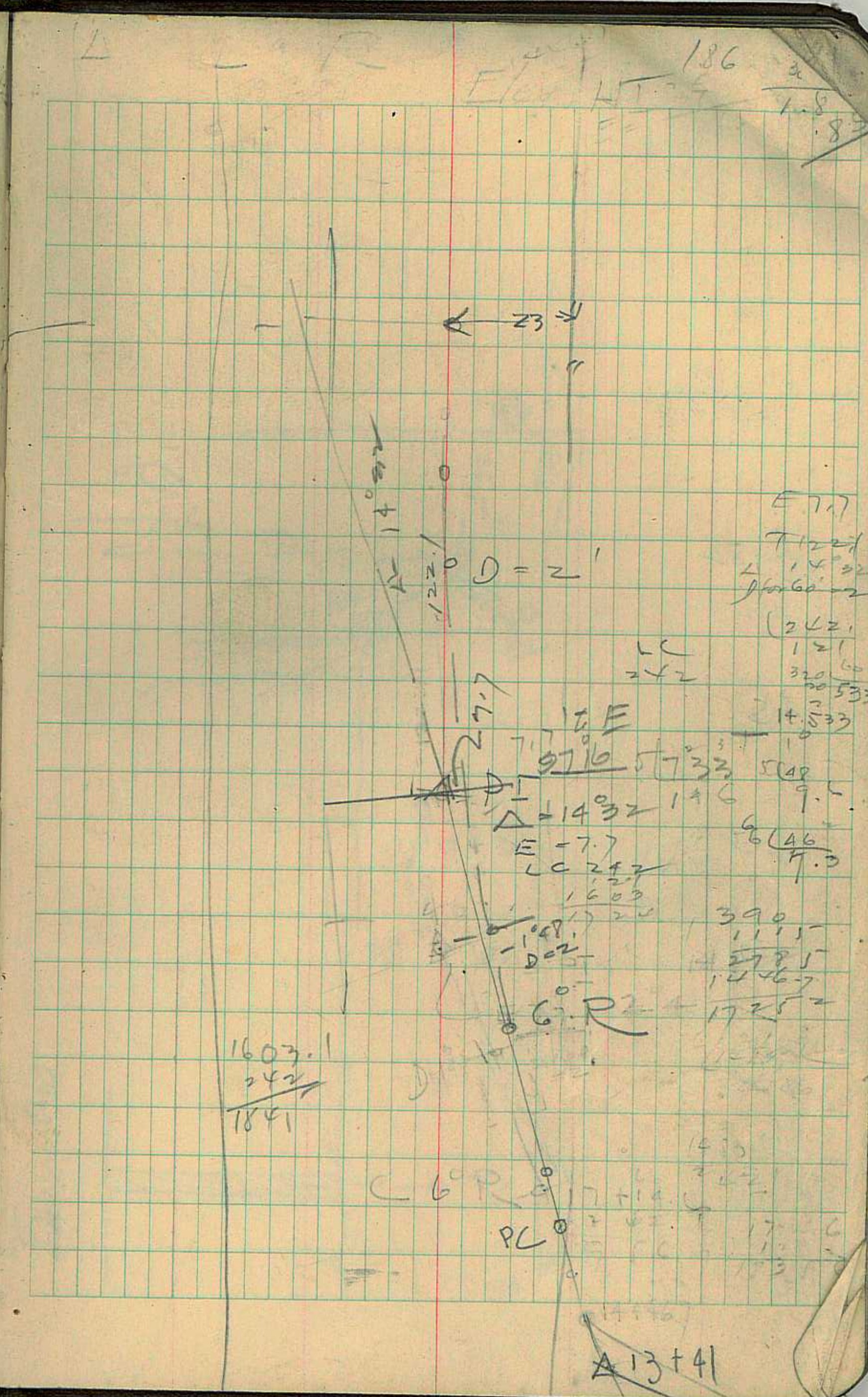
℄ Sept 12 - 1966
Savory Lower Benson
Beg at Sta 3^{+32}



Sta	Def.	L. Dist	
PC 14+46.7 (50)			
13+96.7			
PI 13+41 / 13+38.1 ℄			
12+79.5			
PC 12+29.5 (5°)			
PT 12+28	8° 11'		
12	7 36 37		
11	5 2		
PT 10+40			
10+00	3 17 / 2 10	100	
9+00	1° 07'	~~52~~	
PC 8+48			



Sta	Defl	Dist
20+00		
19+00		
18+45 PT		
17+85		
PI 17+25.7		
℄ 17+24		
16+63		
PC 16+03.1		
15+00		
14+46.7		



25+52

25

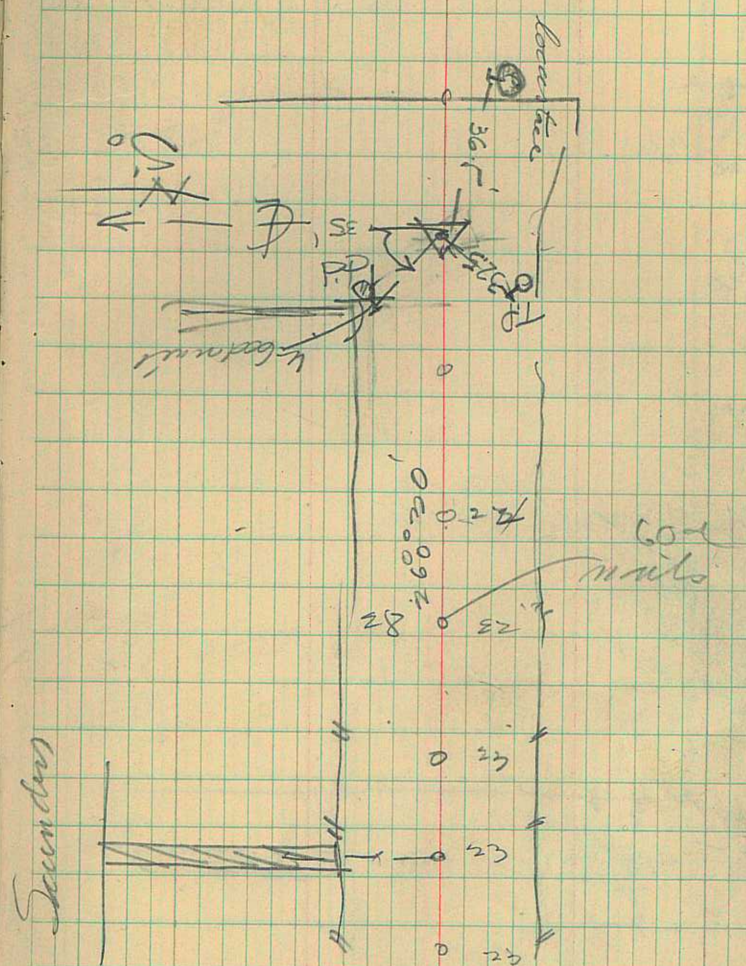
24

23

22

21

20



+38½

32+

+20

31+00

+76

30+00

29+00

28+00

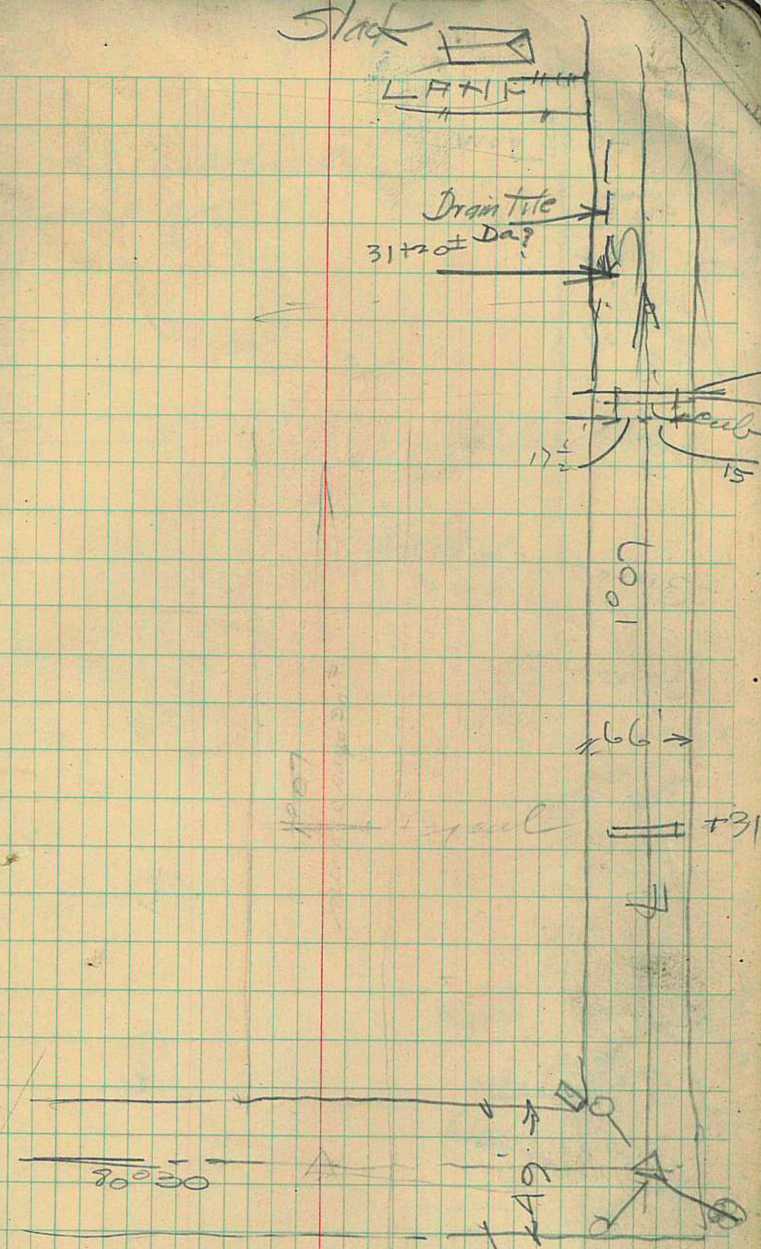
+31

27+00

26+00

48

25+52



+10 ℄ gow

41^{+00}

+79.4

40^{+00}

39^{+00}

38^{+00}

37^{+00}

36^{+00}

35^{+00}

34^{+00}

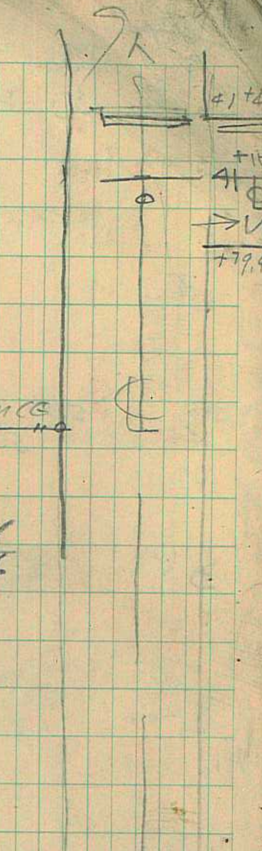
+25

33^{+00}

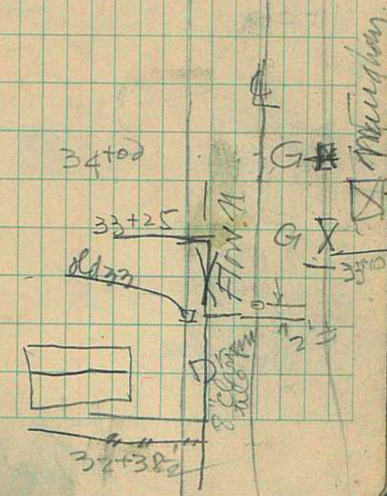
4079
4141
8220
4110

G = gate

rag 60d nail
no rag



4110
-4079.4
30.6



Sta	BS	FS	Left		℄ cor F	℄ RR nail	℄	L	P	R			Elev.
Sta	BS	FS	Left		℄ cor F	RR		BP L	P	R			Elev.
4			f 5.0 / 28	−2" 5.2 / 18.0		3.9160		5.3	5.6	+4" 5.9 / 18	5.3 / 26.5		
4	5.39	5.35			+1.47	3.876 ~~3.9760~~							4428.04 4433.43
3+00			4.0 / 21.5	c9" 4.5 / 18	+7"	0715 3.8045	4.36	5.25	5.50	6.2 / 12	5.4 / 18	4.80 / 26.0	
2+00			4.8 / 29	c10" 4.4 / 18	+1'	0715 3.7330 ~~3.7330~~	4.72	5.25 ~~5.25~~	5.50 ~~5.50~~	6.2 / 15	7.1 / 19	4.5" 6.9 / 18	
1+00			3.8 / 26.5 f	c1' 4.1 / 18	+10"	0715 3.6615	4.46	5.11	5.36	c3" 5.1 / 18'	5.4 / 22		
0+50				c1.2" 4.1 / 8 ; 4.1 / 18	F6"	3.625	4.11	5.17	5.37	4.4 / 14	5.5 / 19	4.5 / 25 ; F6" 4.9 / 18	
0 BM	3.39					3.5 3.59	3.73						4429.8 4430.44 4433.39

0715 ← 15' Lft. ← 0+25

Notes up

Lower Johnson

15 to 33 + 0.072

4-27-5

Sta (one)	BS	FS		Left		℄ Cov F	℄ Grd	℄ RR	BP	FP		Right		Elev ℄
~~12+79.5~~														
12+79.5			4.4/15	c9" 4.5/18	5.1/12	F1'-2"	3.848	4.99	5.2	5.50	6.1/15	c5" 5.9/18	6.1/23 f	
12+28 PT														
12+00			3.6/20 f	c6" 4.6/18	5.3/15	+10"	~~3.668~~ 3.443	4.48	5.1	5.4	c3" 5.2/18	4.9/25 f		
11+00	4.39	5.98												4431.84
11+00				c1' 5.4/18	5.8/7	+0.947 +11"	5.033	5.95	6.4	6.7	F6" 7.16/18	30°		4427.45
10+00				c1'-8" 4.6/17 f	5.1/10	+8"	4.808	5.45	6.2	6.5	6.2/18	6.3/19 f		
9+00			5.5/12	4.9/21 f	c1'-1½ 4.9/18	+10"	4.583	5.40	6.0	6.3	c1½ 6.2/18	6.4/24 f		
8+48				5.1/25 f	c9" 5.2/18	+1'-3"	4.466	5.72	5.9	6.2	6.2/18	6.2/24 f		
8			4.4/28.5	c1' 4.8/18	5.6/12	+1'6"	4.358	5.9	5.8	6.1	6.2/16	c2½ 5.9/18	5.8/23 f	
7+00			4.6/25 f	5.6/20	c3" 5.1/18	+1'1½"	4.133	5.35	5.35	5.85	c0" 5.8/18	5.8/21 f 30°	6.0/14	4433.43 change
6+04				f 5.0/22	c3" 5.3/18	+1'2"	4.063	5.21	5.50	5.81	+8" 6.4/18	6.7/22 f 30°		
5+36				4.8/22	c4" 5.15/18	+11"	~~4.063~~ 4.013	4.97	5.50	5.76	F3" 6.0/18	5.8/24 f		
4+68 PC PT				4.6/24 f	5.4/18	+1'	3.966	5.00	5.50	5.75	5.5/18	5.4/26		
4							3.916							

To 5.00

0.225 →

Station	BS	FS	Left	℄ on F	℄ Grd	℄ RR	RR LBP	RR RBP	Right	Elev	H.I.
20+00			5.4/31 6./18 5.6/14	+1'-4½"	4.068	5.46	5.5	5.8	6.3/14 7.15/18 7.7/23	6.10	
19+00 5.695		5.60	(5.3 f/29) (F1'-14 6.6/18) 5.8/15	+1' 5½	4.140	5.69	5.50	5.8	6.1/13 (+1'+5" 7.2/18) 7.6/24	27.79 26.24	4431.93
PT 18+45			4.7/27 (F1'-2 6.1/18) 5.6/12	+1.496 +1'-4"	4.104	5.4	5.50	5.80	6.4/14 (F1' 6.9/18) 7.6/24		4431.34
onc 17+85			4./27 (F1' 6.6/18) 5.5/12	+11"	4.147	5.1	5.55	5.85	6./14 6.4/18 6.7 f/22		
17+24 ℄ curve			(f 3.6/26) (F4" 6./18) 4.8/10	+6"	4.191	4.66	5.7	5.9	5.3/15 (c3" 5.7/18) 6/21		
16+63 on c			(f 4.2/21) 5.4/18 5.7/15 5.1/10	+7"	4.235	4.80	5.7	5.9	(c2" 5.8/18) (6.1 f/22)		4431.84
16+03			(4.2 f/19) 4.1/18 5.8/14 5.3/11	+8"	4.278	4.93	5.7	6.00	5.4/14 6.1/18 6.1/21		
15			— (c9" 5.08/13)	+9½"	4.352	5.14	5.7	6.00	5.65/10 6.1/17 f	4427.5 G	
ms end Falsley pav 4.8.6											
13+96.7			(c5" 5.1/17 f)	F 9"	4.118	4.87	5.52	5.82	6.5/16 (F9" 6.5/18) (6.6 f/22)		
℄ curve 13+381			(4.4/26 lane) (c9" 4.7/18)	+1'-2"	3.978	5.15"	5.4	5.7	6.2/16 (F4" 6./18) (6/22 f)		
12+79.5											

288 at 33

Sta	BS	FS	Left				C or F	C Grd RR	RR	LBP	RBP	Right				Elev	HI
30			4.2/32	6.2/23	F9" 5.6/18	4.6/14	F11"	3.408	4.36	4.9	5.2	F1/2" 6.4/18	5.1/10	6.6/32	4.1/33		
												~~5.1/18~~	~~6.6/2~~				
29			f 4.5/32	5.8/25	F1-1" 6.1/18	4.4/13		3.480 .072	4.62	5.00	5.3	4.9/11	4.2/33	F10" 6.1/18			
28 + culvert			F2 1/2 5.7/18	4.4/32	5.8/22	4.5/12	C4 F1'	3.552 .072	4.32	5.00	5.3	4.8/13	5.9/21	4.1/3	F5" 5.7/18		
27+00				3.7/31	5.7/18	3.6/12	C1'-1" F1'-1.16	3.624 .072	3.5	5.1	5.4	4.0/12	4.1/28	4.1	C 5.3 0' /18		
26.			C0" 5.3/18	4.6/32	5.8/23	4.6/14	C9 1/2 F1'	3.696 .072	3.90	5.2	5.1	4.1/10	C4" 5.2/18	4.8/32			
												Began 9-16-46					
BM#2				4.76												BM#2 27.12	31.99
PI 25+52	4.76	4.70														4427.23	
25			4.4/35	C8" 4.9/18	6.1/15	5.1/9	F11"	3.708	4.65	5.1	5.4	4.6/16	C2" 5.2/18	5.7/2			
24			f 4.1/38	F9 5.9/18	6.1/15	5.2/8	F1'-1"	3.780 .072	4.85	5.2	5.5	5.4/18	6.3/22				
23			4.6/29	F11" 6.1/18		5/10	F10"	3.852 .072	4.65	5.2	5.1	5.5/16	5.6/18	6.3/22			
22+00			f 4.5/31	6.4/23	F6" 5.8/18	5.0/12	F1'	3.924 .072	4.92	5.3	5.6 5.8/14	F6" 6.1/18	6.3/23 F				
21			4.7/33	C4" 5.1/18	5.4/15		+1'-2 1/2"	3.996 .072	5.2	5.4	5.7	5.9/15	F8" 6.2/18	6.8/23			
20+00								4.068 .072									

([illegible])

Sta 33 Grd 28.8 cut .4 41
" 41 28.2

Begin cut Sta 36-34 for 1' a rope. 0.6/800 = .07

Sta	BS	FS	Left				℄ Cut/F
39			f5.6/33	6.2/24	F8" 6./18	5.3/15	F1'
38			4.3/32	6.8/24	F8" 5.9/18	5.4/16	C8" F1'
37+00			F4" 5.6/18	4.8/32	6.6/24	5.0/15	
36			F8" 5.8/18	4.5/32	7.9/25	5.0/15	C7" F1' C4" F1'
35+00	4.43	4.16					F 0.818
35+00			4.5/31	7.9/25	4.9/18		C 2" F1'
34+00			4.1/32	8.2/25	4.4/15	C5" 4.3/18	C 2" F1'
+25							
33+00			3.65/32	5.3/26	C10" 3.8/18		C 2 F1'
32+00			4.4/32	7.5/24	4.8/18	4.2/14	C4" F1'
31+00			5.2/32 f	10.1/24	F9 5.1/18	15.4 4.5/13	F1'-1½"
+76			4.46	2 Cut 32.5			
30							

℄ Grd RR	℄ RR	RR Grd LBP,	RBP	Right				Elev	
3.912	4.9	5.4	5.7	5.8/13	F9" 6.4/18	6.35/32			
3.837	4.15	5.3	5.6	5/13	6.0 5.7/18	6.3/23	4.0/32		
3.762	4.18	5.25	5.55	F6" 6.0/18	5.2/12	6.4/23	4.7/31		
3.687	4.34	5.2	5.150	F4" 5.85/18	5.25/11	6.3/22	4.7/33		
3.612								44 27.83	32.26
3.342	4.12	4.8	5.1	4.8/11	5.5/23	4.5/32	F6" 5.6/18		
3.267	4.07	4.7	5.00	C6" 4.5/18	4.5/32 f				31.99
3.269	8.25			8" tile					
3.192	4.01	4.6	4.9	4.7/12	F5" 5.7/18	5.3/25	4.1/32	28.80	
3.264	4.01	4.7	5.00	4.5/11	5.7/18	F1" 5.9/21	4.5/31		
3.334	4.40	4.8	5.1	5.1/12	F1½" 6.2/18	6.3/20	4.5/32		
	4.46								
3.408									

Oct 25-28 for 1' Gravel

Sta	BS	FS	Left	℄ C or F	Gd RR	℄ RR	RR Grad LBD	RR Grad RDP	Right	Elev	HI
21+10									possible culvert 60' 12" pipe Saunders		
BM #3	4.56								finished trig 9-16-66 2 PM 27.70		
41+00			6.6f/31 8.6/28 4.8/9 6.9/18	C 5" F 1'	4.06	4.60	5.6				
40+0			6.2f/32 7.8/26 F1.2" 6.6/18 5.0/11	F 10"	3.987 0.75	4.77	5.4	5.7	5.2/10 6.5/18 6.0f/32		
39+00					3.912 0.75						

88+50 day $10\frac{1}{2}$

off Wm Peterson at Lower Benson

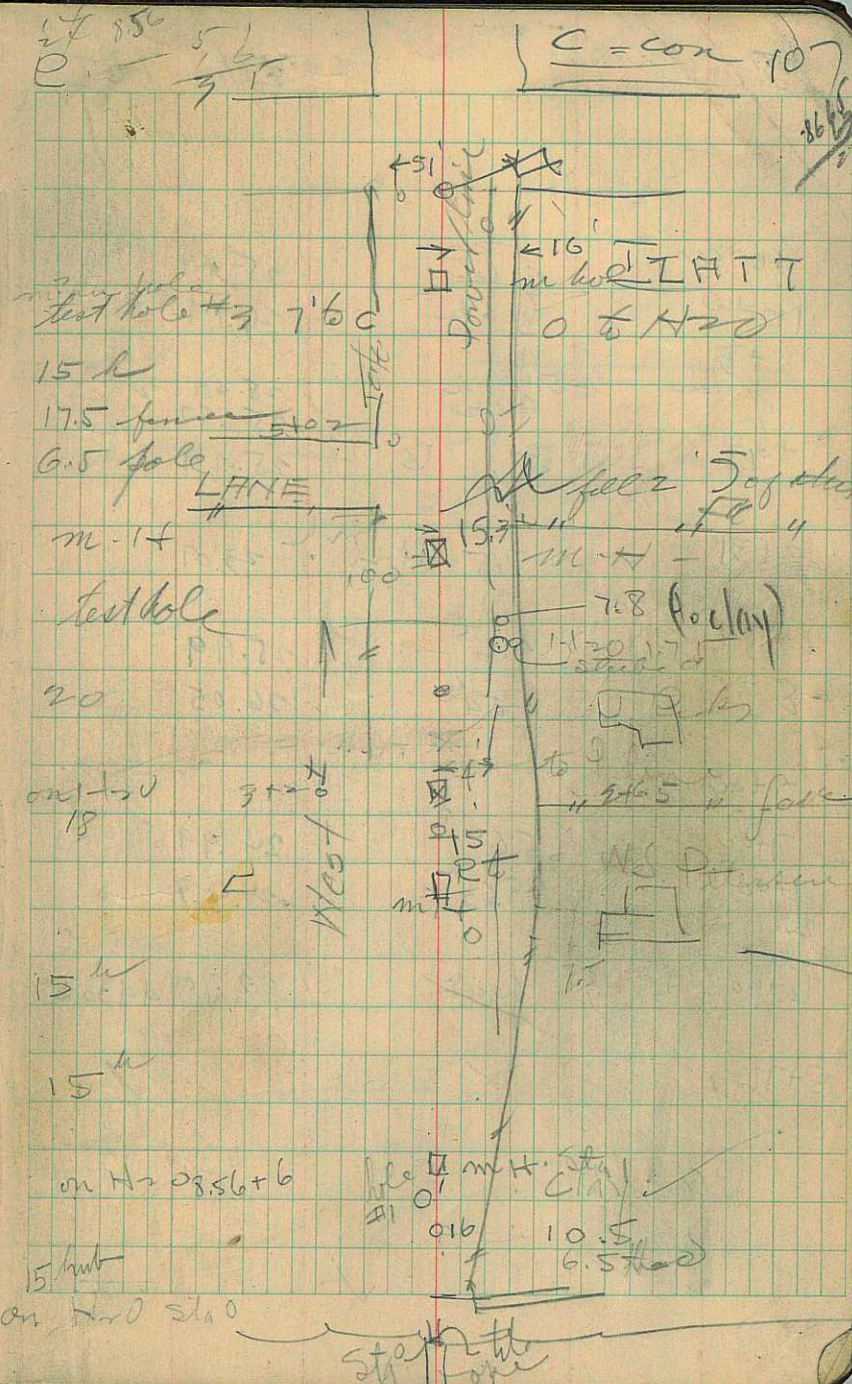
Sept 16	Medy	Shasky	$6\frac{1}{2}$ hr
16	Jim	Doffort	$6\frac{1}{2}$ hr
1	Frank full ti		7 hr
	full time		

Sept 17 — Drain L. Bena

Medy 2.00 h

Jonby 2

Sta	BS	FS		Elev	HI
6			6.4^c	24.19	
6			6.89	23.70	
76					
+65			7.60 H2O mH	22.99	
5+00			7.00 c test hole	23.59	
Annex rock			5.7 rock	24.89	
			4.95	4425.64	4430.59
5+00	4.98	6.93		4425.61	4430.59
+80					
+36			10.60 H2O	21.94	
+16			7.1 edge hole	25.44	
4+00			6.7^c	25.84	
4+00			6.50^h	26.04	
3			6.1	26.44	
3+20			11.7	20.84	
3+00			5.55^h	26.99	
mH 2+17			13.36	19.18	
			7.26+6		
2			6.10	26.44	
2+00			5.28^h	27.26	
~~1+14~~			5.50	27.04	
1+14			6.55^c 10 clay	25.99	
1+00 mH			14.56	17.98	
0+38			6.40 con	26.14	
0+38	6.35	1.90		4426.19	4432.54
⊙	11.8			4416.29	4428.09 on H2O sta 0



Sta			Elev	HI	R
10+00	4.6c		25.99		15 le
10+00	3.8 le		26.79		17 f
+73 / 9 9+00	5.1c le / 4.62		25.49 / 25.97		15 le / 17 f at test hole
+73	5.1 c 3		25.49		
8+35	7.5 H2O ml		23.09		
8	4.6c		25.99		15 le
8	4.54 le		26.05		16 fen
7+00					15 le
7+00	5.6c		24.99		17 fen
7+00	5.62 le		24.97		19' fence
6+00	6.89 le		23.70	4430.59	7.2 to pole
5+76					

30.64

1+10 test hole 1

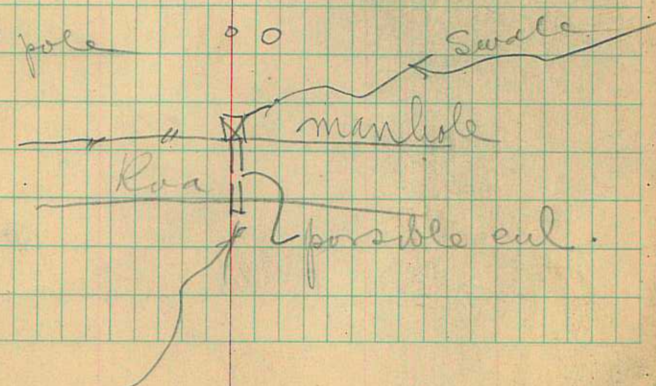
Corral

9+73

(7' to C a?)

o test hole

□ m Ted R



Sta	Dist	Def	ang		

Oct 4 - 1946

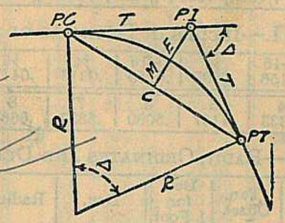
Lower Benson Frank

Oct M - Benne
9 - 2

19 N 3 W

Robt Davidson
Survey

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



31.84
4.86
26.98

CURVE FORMULAS

Radius=R=$\frac{50}{\sin. D/2}$(1) Degree of Curve=D and $\sin. \frac{D}{2}=\frac{50}{R}$ (2)

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

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

External=E=$T\tan\frac{\Delta}{4}$ (7)=$R \div \cos.\frac{\Delta}{2} - R$ (8)=$R\text{exsec}\frac{\Delta}{2}$ (9)

Long Chord=C=$2 R \sin.\frac{\Delta}{2}$ (10) Δ=Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161+60.35 to find Sta. of P. C. and P. T. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C.+L=164+91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 $(54.50 \div 100)^2$=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus $(54.50)^2 \div (2 \times 688.26)$=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 115.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=115.27 and from Table V correction=.10 or E=115.37 ft. Or suppose Δ=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.