

172
BENA - FEDERAL DAM SAR.#8
LEVEL NOTES 190-402

FIELD BOOK
360

NO. 172

KEUFFEL & ESSER CO.

DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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

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

For Keith's Railroad Curve Tables see end of book.

Bena to Federal Dam
5 A R # 8
Job # 3201
Cass County

OSWALD PUBLISHING CO.
BUSINESS SUPPLIES LAW BLANKS OFFICE EQUIPMENT
NEW ULM, MINNESOTA

#172

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352
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Sta.	+S	H.I.	-S	Elev
		1323.18		
190+50			4.3	18.9
191			3.8	19.4
+50			1.4	21.8
EC 192+03.3			1.7	21.5
T.P. 193	7.63	1329.52	1.29	1321.89
194			4.1	25.4
195			7.2	22.3
196			7.7	21.8
197			7.8	21.7
198			5.7	23.8
B.C. +12.1			5.3	24.2
+50			4.0	25.5

1975

Abandoned.

" - " - 31

5

L		R	
$\frac{+1.8}{32}$	$\frac{+1.5}{2}$	$\frac{-0.1}{7}$	
$\frac{+0.8}{13}$	$\frac{+0.4}{24}$	$\frac{-0.6}{24}$	$\frac{+0.7}{27}$
$\frac{+1.8}{32}$	$\frac{+1.4}{9}$	$\frac{+0.9}{1}$	$\frac{+1.4}{12}$
$\frac{+0.7}{12}$	$\frac{+0.4}{25}$	$\frac{-0.2}{26}$	$\frac{+0.8}{30}$
$\frac{+0.4}{31}$	$\frac{+0.7}{4}$	$\frac{-1.4}{2}$	$\frac{+0.6}{37}$
$\frac{+0.4}{35}$	$\frac{+0.2}{9}$	$\frac{-1.1}{7}$	$\frac{-0.2}{5}$
$\frac{+0.4}{8}$	$\frac{-0.2}{21}$	$\frac{-1.4}{24}$	$\frac{0.0}{26}$
$\frac{-0.6}{37}$	$\frac{-0.5}{14}$	$\frac{-1.4}{16}$	$\frac{-0.5}{12}$
$\frac{-0.7}{14}$	$\frac{-1.3}{18}$	$\frac{-0.5}{19}$	$\frac{-0.7}{36}$
$\frac{+0.8}{35}$	$\frac{+0.9}{29}$	$\frac{+0.7}{12}$	$\frac{-0.8}{10}$
$\frac{-0.1}{7}$	$\frac{-0.1}{7}$	$\frac{-0.3}{15}$	$\frac{-1.7}{17}$
$\frac{-0.8}{34}$	$\frac{-0.2}{10}$	$\frac{-1.5}{9}$	$\frac{-0.1}{5}$
$\frac{+0.3}{7}$	$\frac{-0.2}{16}$	$\frac{-1.5}{20}$	$\frac{-0.2}{22}$
$\frac{+0.1}{35}$	$\frac{-0.6}{17}$	$\frac{-1.3}{9}$	$\frac{-0.1}{5}$
$\frac{-0.2}{17}$	$\frac{-2.0}{20}$	$\frac{-0.9}{22}$	$\frac{-1.8}{36}$
$\frac{+0.9}{33}$	$\frac{-0.2}{12}$	$\frac{-1.4}{10}$	$\frac{-0.3}{7}$
$\frac{-0.4}{12}$	$\frac{-1.4}{16}$	$\frac{-0.9}{18}$	$\frac{-0.3}{33}$
$\frac{+0.7}{33}$	$\frac{+0.8}{15}$	$\frac{-1.4}{12}$	$\frac{-0.3}{10}$
$\frac{-0.4}{10}$	$\frac{-1.5}{13}$	$\frac{+0.3}{15}$	$\frac{0.0}{31}$

Abandoned

Sta	+S	H.I.	-S	Elev
		1329.52		
199			3.5	26.0
+50			6.1	23.4
200			5.5	24.0
+50			8.7	20.8
+68			10.3	19.2
201			7.6	21.9
+5			9.3	20.2
+20			9.8	19.7
+27			9.1	20.4
+50			9.9	19.6
B.M.#8	9.15	1327.60	10.79	ck. Perched 1318.75
202	7.15	1327.88	8.1	19.9
E.C. +34.0			8.7	19.2
203			8.7	19.8

Abandon - /

$\frac{-1.6}{35}$	$\frac{0.0}{20}$	$\frac{-1.9}{18}$	$\frac{-0.2}{15}$	$\frac{-0.3}{5}$	$\frac{-0.3}{7}$	$\frac{0.0}{7}$	$\frac{+1.7}{17}$	$\frac{+0.9}{31}$
$\frac{+0.2}{41}$	$\frac{+1.2}{27}$	$\frac{-0.3}{23}$	$\frac{+0.6}{21}$	$\frac{+1.1}{11}$	$\frac{+0.6}{1}$	$\frac{+0.1}{5}$	$\frac{+3.3}{8}$	$\frac{+3.6}{13}$
$\frac{+2.4}{15}$	$\frac{+2.7}{15}$	$\frac{+2.1}{30}$						
$\frac{-0.6}{40}$	$\frac{-0.4}{37}$	$\frac{-2.6}{29}$	$\frac{-1.4}{26}$	$\frac{-1.1}{16}$	$\frac{-1.3}{7}$	$\frac{-2.3}{2}$	$\frac{-0.3}{2}$	$\frac{-0.3}{15}$
							$\frac{-1.6}{37}$	C.S.
$\frac{-2.7}{45}$	$\frac{-1.7}{34}$	$\frac{+0.6}{30}$	$\frac{+0.7}{21}$	$\frac{+0.5}{19}$	$\frac{-1.5}{9}$	$\frac{-0.5}{8}$	$\frac{+0.2}{13}$	$\frac{+0.5}{25}$
							$\frac{-0.7}{38}$	$\frac{-0.7}{38}$
$\frac{-0.1}{76}$	$\frac{+0.3}{38}$	$\frac{-0.3}{36}$	$\frac{+2.0}{32}$	$\frac{+1.8}{15}$	$\frac{+0.2}{9}$	$\frac{+0.9}{17}$	$\frac{+1.5}{31}$	L.O.
$\frac{-0.7}{35}$	$\frac{-0.9}{18}$	$\frac{-0.4}{17}$	$\frac{-2.1}{13}$	$\frac{+0.1}{10}$		$\frac{-0.3}{16}$	$\frac{-0.2}{34}$	
$\frac{+1.0}{35}$	$\frac{+0.7}{18}$	$\frac{+1.4}{15}$	$\frac{-0.3}{21}$	$\frac{+1.3}{10}$		$\frac{-0.1}{22}$	$\frac{+0.1}{37}$	
$\frac{+1.5}{29}$	$\frac{+1.5}{19}$	$\frac{-0.2}{14}$	$\frac{+1.1}{11}$		$\frac{-0.2}{21}$	$\frac{+0.3}{32}$		
old road	$\frac{+0.7}{30}$	$\frac{+0.3}{17}$	$\frac{1.6}{13}$	$\frac{-0.1}{11}$		$\frac{+0.3}{18}$	$\frac{+0.9}{29}$	
" "	$\frac{+1.4}{30}$	$\frac{+0.9}{17}$	$\frac{-0.7}{13}$	$\frac{+0.1}{12}$		$\frac{+0.9}{22}$	$\frac{+1.2}{35}$	
	$\frac{+0.2}{37}$	$\frac{-0.7}{28}$	$\frac{+0.2}{15}$	$\frac{-1.5}{11}$	$\frac{-0.1}{10}$	$\frac{-0.9}{22}$	$\frac{-0.9}{34}$	
	$\frac{+0.7}{32}$	$\frac{+1.0}{22}$	$\frac{+0.4}{11}$	$\frac{-1.0}{7}$	$\frac{0.0}{7}$	$\frac{-0.2}{19}$	$\frac{-0.8}{34}$	

See Note Bk #172 Pg 35

Sta.	+S	H.I.	-S	ELRV
		1327.88		
204			7.1	20.8
205			6.0	21.9
206			2.8	25.1
+25			2.2	25.7
207			2.9	25.0
208			4.5	23.4
209			5.1	22.8
210			5.4	22.5
211			4.5	23.4
T.P. 212	8.03	1332.56	3.35	1324.53
B.C. +54.6			8.5	24.1
213			9.9	23.3

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9

L		R	
+0.5 34	+0.4 31	-0.7 29	+0.4 25
+1.0 14	+0.2 7	-1.0 2	+0.3 4
-0.2 36			
cl			
+0.3 38	0.0 23	-1.0 20	-0.3 13
+0.5 7			
cl			
0.0 37	+0.3 20	-0.8 19	-0.3 16
-0.8 7	-1.6 12	+0.2 13	-0.6 36
cl			
+0.9 33	+1.0 20	-0.3 13	-0.1 16
-0.4 7	-1.4 12	+0.2 15	-0.7 37
cl			
+0.9 33	+1.0 17	-0.5 17	0.0 15
+0.3 6			
cl			
-0.7 35	-0.7 19	-1.9 7	-0.7 18
-0.8 11	-2.1 19	+0.4 6	+0.4 35
cl			
-0.8 35	-0.7 19	-1.9 7	-0.7 18
-0.8 11	-2.1 19	+0.4 6	+0.4 35
-1.6 34	-1.3 18	-0.5 17	-2.1 12
-1.0 9			
cl			
0.0 33	-0.4 11	-1.6 8	-0.6 6
+0.3 8	-1.0 19	-2.1 22	-1.2 23
-1.4 33			
+0.5 33	+0.4 19	+1.2 7	+0.8 6
-0.7 2	-0.1 3		
+0.8 10	-0.2 32	-1.2 24	0.0 28
+0.4 38			
cl			
+3.0 33	+2.1 6	+1.6 3	
+0.8 2	+1.5 14	+0.4 25	-0.6 28
+0.5 30	+0.5 34		
cl			
+1.8 33	+2.4 1		
-0.3 2	+0.9 4	+1.7 16	+0.8 27
-0.7 36	+1.9 36	+0.9 35	
cl			
+0.1 21	+0.2 21		
-1.0 1	+0.4 5	+1.2 17	0.0 30
-1.1 32	+0.1 34	+0.9 36	

Sta	+S	H1	-S	Elev
		1932.56		
213+50			8.4	24.2
214			5.7	26.9
+50			4.6	28.0
215			4.8	27.8
+50			5.8	26.8
216			7.0	25.6
+50			8.2	24.4
217			8.5	24.1
+50			8.6	24.0
218			7.9	24.7
+50			6.9	25.7
219			7.0	25.6

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6

L	R
+0.7 +0.6 34 28	-0.1 -0.2 +0.9 +1.4 +0.3 -1.0 +0.1 0.0 2 6 9 20 22 25 27 29
-0.2 -0.1 34 9	+0.2 -1.2 -0.2 +0.3 -0.8 -1.2 0.0 0.3 2 8 11 22 32 33 37 39
-0.1 +1.0 35 2	+0.5 -0.3 +0.1 +0.3 -0.5 -1.5 -1.0 6 8 11 19 22 31 35
-0.7 +0.5 -0.1 -0.8 -0.2 33 8 5 3 2	-0.1 +0.5 -0.6 -1.2 -0.3 -1.1 -1.8 2 10 20 24 27 27 35
+1.3 +2.3 -1.7 -0.4 33 14 7 4	+0.6 -0.5 +1.4 +1.3 6 17 20 34
+1.2 +1.1 +0.4 -2.1 -0.6 33 17 14 10 8	-0.6 -1.3 0.0 -0.1 9 12 14 33
-0.5 -1.0 -2.2 -0.8 +0.1 34 16 13 10 2	-0.7 -2.7 -1.7 -2.5 7 11 13 34
-1.3 -1.4 -2.4 -0.6 34 17 17 11	-0.6 -2.0 -3.8 -2.7 -3.4 7 11 13 17 34
-0.8 -0.9 -1.6 -0.6 35 14 7 9	-0.9 -1.4 -3.0 -2.0 -2.9 10 13 16 18 34
+0.1 -0.4 -1.5 -0.3 33 10 9 6.5	+0.2 -1.0 -2.5 -2.4 -1.0 3 17 17 19 34
+0.1 0 -1.1 -0.4 35 8 6 4	+0.5 -2.7 -2.0 0.2 0.0 6 18 20 23 33
+0.7 +0.3 -0.8 -0.2 34 6 4 3	+0.8 -0.1 -2.0 +0.6 0.0 9 21 22 27 34

Sta	+S	H.I	-S	Elev	B.M
		1332.56			
219+50			7.2	25.4	
B.M. H9	1.98	1328.24	6.30	ck-.02	1326.26
220			2.8	25.4	
+50			2.1	26.1	
221			3.7	24.5	
EC+92.4			5.8	22.4	
222			5.9	22.3	
223			7.4	20.8	
224			9.5	18.7	
T.P. 225	10.21	1329.39	11.06	1317.18	
226			10.7	16.7	
227			10.5	16.9	
228			9.1	18.3	

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 clearing Apr 26 wide

104 33	+0.2 7	-0.7 5	-0.3 3	cl	+0.8 9	-0.2 21	-1.3 24	+0.1 26	20 36	✓
-13 33	-0.2 9	-1.3 7	-0.5 4	cl	+0.2 8	-0.3 20	-1.6 22	0.0 25	-0.1 36	✓
10 34	+0.7 15	+0.2 10	-1.2 7	cl	+0.4 7	-0.3 17	-1.0 18	+0.9 20	+1.6 28	✓
-0.5 35	+0.4 10	-1.1 8	-0.4 6	cl	+0.3 5	-0.5 14	-1.4 16	+0.5 18	-0.2 33	✓
-2.5 33	-0.6 18	-1.5 11	-0.6 8	cl	+0.3 4	-0.2 12	-1.4 15	+0.4 16	-0.6 33	✓
-2.2 33	-1.0 12	-2.0 11	-1.0 8	cl	+0.1 4	-1.0 12	-1.9 14	-0.6 17	-0.4 32	✓
0.0 34	-0.3 12	-1.7 10	-0.2 8	cl	-0.2 11	-0.7 14	-0.1 17	-1.0 35	✓	
-0.3 34	-0.1 15	-2.1 13	-0.6 10	cl	-0.8 10	-2.0 13	-0.4 15	+0.1 34	✓	
-0.5 34	-1.0 15	-2.3 13	-0.9 10	cl	-1.0 11	-2.7 13	-1.4 15	✓	✓	
+0.4 34	-0.6 16	-2.1 14	-0.9 11	cl	-1.0 11	-2.7 13	-1.7 15	-2.5 34	✓	
-0.6 34	-1.3 17	-2.0 15	-1.0 11	cl	-0.8 9	-2.0 12	-1.6 14	-2.4 34	✓	
-0.3 33	-0.5 15	-1.6 15	-0.4 11	cl	-0.7 10	-2.1 13	-0.6 15	-1.5 34	✓	

Sta	+S	H.I.	-S	Elev.
		1327.39		
229			6.2	21.2
230			2.8	24.6
+75			1.7	25.7
231			2.1	25.3
232			3.1	24.3
B.C. + 93.5			4.0	23.4
233			4.0	23.4
+50			4.2	23.2
T.P. 234	5.19	1328.83	3.75	1323.64
+50			4.4	24.4
235			3.4	25.4
+50			2.5	26.3

L		R	
40.8 34 4	41.0 20 16	+0.7 13	-1.7 12
			-2.5
	41.0 35	0.0 17	-1.9 14
			-0.8 13
0.0 35	0.0 25	-1.1 22	-1.6 17
			-2.8 15
			-1.3 12
40.8 39	-0.5 74	-2.3 15	-0.9 11
			-0.9 10
			-0.6 11
			-0.4 12
			-1.2 14
			-0.2 17
			-0.2 19
			-0.6 16
			-0.5 14
			-0.5 17
			-1.0 12
			-1.0 10
			-0.7 9
			-0.6 11
			-1.8 14
			-0.6 16
			-0.5 14
			-0.5 17
			-1.6 12
			-1.6 10
			-0.9 8
			-0.9 10
			-2.5 14
			-1.8 16
			-1.6 15
			-1.6 14
			-1.6 13
			-1.6 12
			-1.6 11
			-1.6 10
			-1.6 9
			-1.6 8
			-1.6 7
			-1.6 6
			-1.6 5
			-1.6 4
			-1.6 3
			-1.6 2
			-1.6 1
			-1.6 0
			-1.6 -1
			-1.6 -2
			-1.6 -3
			-1.6 -4
			-1.6 -5
			-1.6 -6
			-1.6 -7
			-1.6 -8
			-1.6 -9
			-1.6 -10
			-1.6 -11
			-1.6 -12
			-1.6 -13
			-1.6 -14
			-1.6 -15
			-1.6 -16
			-1.6 -17
			-1.6 -18
			-1.6 -19
			-1.6 -20
			-1.6 -21
			-1.6 -22
			-1.6 -23
			-1.6 -24
			-1.6 -25
			-1.6 -26
			-1.6 -27
			-1.6 -28
			-1.6 -29
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			-1.6 -97
			-1.6 -98
			-1.6 -99
			-1.6 -100

Beginning of sand borrow

Sta	+5	H.I.	-5		L R
		1328.83			End of borrow
236			2.9	25.9	$\frac{+0.9}{43} \frac{+0.9}{36} \frac{-0.8}{31} \frac{-0.6}{26} \frac{-1.7}{24} \frac{-0.1}{21} \frac{+0.8}{6} \frac{+0.1}{2} \frac{-1.3}{7} \frac{+0.5}{6} \frac{+0.2}{21} \frac{-0.8}{35}$
+50			4.1	24.7	Edge cl. $\frac{-0.2}{20} \frac{-0.2}{27} \frac{-1.5}{25} \frac{-0.2}{22} \frac{+0.8}{9} \frac{-1.4}{4} \frac{0.0}{6} \frac{-0.1}{26} \frac{-0.2}{35}$
237			4.7	24.1	$\frac{0.0}{56} \frac{+0.2}{28} \frac{-1.4}{26} \frac{-0.3}{22} \frac{+0.7}{10} \frac{0.0}{1} \frac{-1.4}{3} \frac{-0.6}{6} \frac{-0.5}{37}$
+50			4.8	29.0	$\frac{+0.4}{38} \frac{+0.5}{28} \frac{-1.2}{25} \frac{-0.2}{22} \frac{+0.7}{10} \frac{-0.3}{7} \frac{-1.5}{4} \frac{-0.2}{5} \frac{-0.2}{21} \frac{-0.4}{35}$
238			5.6	23.2	$\frac{+0.3}{37} \frac{+0.8}{28} \frac{-0.9}{26} \frac{+0.2}{22} \frac{+1.0}{17} \frac{-1.2}{3} \frac{0.0}{5} \frac{-0.4}{20} \frac{-0.2}{35}$
+50			6.4	22.4	Edge cl. $\frac{+0.8}{40} \frac{+0.6}{30} \frac{-0.5}{27} \frac{+0.6}{24} \frac{+1.6}{12} \frac{+0.7}{2} \frac{-0.8}{8} \frac{+0.5}{3} \frac{+0.2}{20} \frac{-0.3}{37}$
239			6.9	21.9	$\frac{+1.0}{44} \frac{+0.9}{28} \frac{-0.3}{26} \frac{+1.1}{23} \frac{+1.7}{13} \frac{+1.0}{3} \frac{+1.0}{2} \frac{+0.9}{19} \frac{+0.4}{35}$
E.C. + 43.5			7.3	21.5	
T. 240			7.6	21.2	$\frac{+1.8}{47} \frac{+0.8}{30} \frac{+0.2}{27} \frac{+1.1}{25} \frac{+2.2}{13} \frac{+1.5}{2} \frac{+0.8}{2} \frac{+0.8}{22} \frac{+0.8}{34}$
241			7.1	21.7	$\frac{+1.1}{38} \frac{+1.1}{29} \frac{-0.4}{26} \frac{+0.7}{23} \frac{+1.7}{14} \frac{+0.7}{7} \frac{-0.8}{2} \frac{+0.5}{4} \frac{+0.4}{19} \frac{-0.1}{35}$
242			7.1	21.7	$\frac{+1.4}{34} \frac{+0.9}{32} \frac{-0.5}{30} \frac{+0.9}{26} \frac{+1.8}{15} \frac{+1.5}{2} \frac{+0.3}{2} \frac{+1.1}{3} \frac{+1.5}{20} \frac{+1.8}{33}$
T.P. 243	10.18	1335.04	3.97	1924.86	$\frac{-0.3}{34} \frac{-0.9}{35} \frac{-1.1}{30} \frac{-0.4}{29} \frac{+0.5}{16} \frac{-0.2}{7} \frac{-1.8}{4} \frac{-0.3}{2} \frac{-0.2}{30} \frac{-0.1}{35}$

Sta	+S	HI	-S	Elev.	B.M.
		1335.04			
244			10.8	24.2	
245			7.2	27.8	
246			5.3	29.7	
247			5.5	29.5	
248			5.4	29.3	
249			6.1	28.9	
250			5.1	29.9	
TR-B.M.#10	3.30	1334.95	3.44	1331.60	1331.65
251			2.9	32.1	
7 240			2.4	32.3	
252			5.1	29.9	
P.O. #22.3			5.2	29.8	
253			5.8	29.2	

L	R
$\frac{-0.1}{36}$ $\frac{-0.1}{36}$ $\frac{0.5}{27}$ $\frac{+0.8}{22}$ $\frac{+1.8}{17}$ $\frac{+0.9}{2}$	$\frac{-0.3}{2}$ $\frac{+0.5}{4}$ $\frac{+1.1}{21}$ $\frac{+0.9}{27}$ $\frac{+1.0}{36}$
$\frac{+0.1}{34}$ $\frac{+0.1}{20}$ $\frac{-0.7}{17}$ $\frac{-1.8}{15}$ $\frac{-0.7}{12}$	$\frac{-0.1}{12}$ $\frac{-0.9}{14}$ $\frac{+0.1}{14}$ $\frac{0.0}{54}$
L.O. $\frac{+0.2}{26}$ $\frac{+0.2}{4}$ $\frac{-0.1}{3}$	$\frac{+0.8}{10}$ $\frac{+0.1}{23}$ $\frac{-0.7}{26}$ $\frac{+0.1}{30}$ $\frac{+0.1}{10}$
	$\frac{-0.1}{34}$ $\frac{-0.1}{24}$ $\frac{0.0}{2}$ $\frac{-0.9}{3}$ $\frac{-0.2}{6}$ $\frac{+0.6}{17}$ $\frac{-0.2}{23}$ $\frac{-1.1}{23}$ $\frac{+0.3}{34}$ $\frac{-0.1}{41}$
	$\frac{-1.4}{37}$ $\frac{-1.0}{23}$ $\frac{-0.1}{2}$ $\frac{-1.6}{3}$ $\frac{-0.5}{6}$ $\frac{+0.3}{18}$ $\frac{-0.8}{31}$ $\frac{-1.6}{33}$ $\frac{-0.3}{35}$ L.O.
	$\frac{-0.9}{35}$ $\frac{-0.4}{26}$ $\frac{-1.1}{7}$ $\frac{+0.1}{5}$ $\frac{+0.9}{16}$ $\frac{-0.1}{29}$ $\frac{-1.1}{32}$ $\frac{-0.2}{33}$ $\frac{-0.2}{40}$
	$\frac{-1.6}{36}$ $\frac{-0.1}{14}$ $\frac{-0.1}{2}$ $\frac{-1.2}{3}$ $\frac{-0.1}{6}$ $\frac{+0.8}{16}$ $\frac{-0.3}{28}$ $\frac{-0.7}{30}$ $\frac{+0.5}{32}$ $\frac{+0.4}{40}$
	$\frac{+1.2}{33}$ $\frac{+1.3}{23}$ $\frac{-0.1}{6}$ $\frac{-0.1}{2}$ $\frac{-2.9}{5}$ $\frac{-1.7}{7}$ $\frac{-0.7}{76}$ $\frac{-1.3}{28}$ $\frac{-2.9}{37}$ $\frac{-1.5}{37}$ $\frac{-1.8}{40}$
	$\frac{+0.3}{34}$ $\frac{+0.1}{19}$ $\frac{-0.4}{2}$ $\frac{-2.8}{4}$ $\frac{-1.9}{6}$ $\frac{-1.2}{17}$ $\frac{-2.4}{28}$ $\frac{-3.5}{31}$ $\frac{-2.6}{33}$ $\frac{-2.8}{39}$
	$\frac{+0.6}{41}$ $\frac{+0.2}{26}$ $\frac{-0.1}{2}$ $\frac{-1.3}{3}$ $\frac{-0.5}{6}$ $\frac{+0.3}{17}$ $\frac{-0.6}{30}$ $\frac{-1.8}{33}$ $\frac{-0.7}{34}$ $\frac{-1.2}{40}$
	$\frac{-0.8}{34}$ $\frac{-0.1}{22}$ $\frac{-0.3}{2}$ $\frac{-1.9}{5}$ $\frac{-0.5}{8}$ $\frac{+0.3}{19}$ $\frac{-0.9}{32}$ $\frac{-1.9}{35}$ $\frac{-1.2}{36}$ $\frac{-1.1}{41}$
	$\frac{-1.1}{37}$ $\frac{-0.8}{23}$ $\frac{+1.5}{19}$ $\frac{-0.1}{21}$ $\frac{+0.9}{23}$ $\frac{+1.2}{33}$ $\frac{+0.9}{45}$

Sta	+S	H.I.	-S	Elev.	L	R
		1334.95				
253+18			4.3	30.7	$\frac{-24}{38}$	$\frac{-16}{23}$ $\frac{+22}{30}$ $\frac{-0.1}{37}$ $\frac{+0.8}{36}$ $\frac{+45}{46}$
254			7.3	27.7	$\frac{-0.1}{35}$ $\frac{-0.1}{23}$ $\frac{+1.9}{25}$ $\frac{+2.2}{38}$	110' Indian Corn
255			9.7	25.3	$\frac{0.0}{34}$ $\frac{-0.2}{27}$ $\frac{+0.3}{17}$ $\frac{+0.9}{34}$	
256			6.4	28.6	$\frac{-0.6}{36}$ $\frac{-0.1}{23}$ $\frac{-0.4}{20}$ $\frac{-0.8}{36}$	
+37"			4.6	30.4	$\frac{-1.0}{33}$ $\frac{0.0}{19}$ $\frac{-0.6}{18}$ $\frac{-0.8}{36}$	
257			4.4	30.6	$\frac{+0.5}{34}$ $\frac{+0.2}{21}$ $\frac{-0.4}{20}$ $\frac{-1.4}{37}$	
T.P. 258	3.07	1337.36 ✓	0.66	1334.29 ✓	$\frac{-1.0}{37}$ $\frac{-0.4}{24}$ $\frac{+0.5}{20}$ $\frac{-0.7}{34}$	65.
+72			1.7	35.7	$\frac{-3.5}{42}$ $\frac{-3.0}{33}$ $\frac{-1.6}{20}$ $\frac{0.0}{25}$ $\frac{+0.1}{37}$	
259			2.5	34.9	$\frac{-2.4}{23}$ $\frac{-2.7}{30}$ $\frac{-1.7}{19}$ $\frac{+2.0}{20}$ $\frac{+2.5}{35}$ $\frac{+2.1}{47}$	20.
260			5.7	31.7	$\frac{-1.6}{39}$ $\frac{-1.3}{23}$ $\frac{+0.2}{24}$ $\frac{+1.5}{40}$	
+92			4.9	32.5	$\frac{-2.8}{21}$ $\frac{-1.2}{33}$ $\frac{-0.3}{17}$ $\frac{-0.2}{26}$ $\frac{+0.1}{40}$	
261			9.8	27.6	$\frac{-0.7}{39}$ $\frac{-0.5}{23}$ $\frac{+0.4}{20}$ $\frac{+0.8}{34}$	

Sta	+S	H.I.	-S	L	R
		1337.36			
261	31		11.5	25.9	
	54		12.0	25.4	
	155				
262			10.7	26.7	
B.C. +57.5			5.2	32.2	
263			5.4	32.0	
T.P. +50	2.94	1334.71	5.53	1931.89	
264			3.3	31.5	
+50			6.2	28.6	
265			7.2	27.6	
+50			8.1	26.4	
266			9.3	25.5	
T.P.	4.84	1331.45	8.16	1926.61	Q S+K 265+50
+50			6.0	25.5	

11-12-31

12

L	R
$\frac{-0.5}{34}$	$\frac{+0.0}{22}$
$\frac{+0.3}{33}$	$\frac{+0.4}{20}$
$\frac{-0.5}{34}$	$\frac{-0.2}{21}$
$\frac{-0.8}{33}$	$\frac{-0.4}{22}$
$\frac{+0.7}{33}$	$\frac{-0.1}{22}$
$\frac{-0.8}{36}$	$\frac{0.2}{22}$
$\frac{-1.1}{34}$	$\frac{-0.7}{19}$
$\frac{-0.2}{36}$	$\frac{-0.5}{22}$
$\frac{+0.4}{37}$	$\frac{-0.3}{24}$
$\frac{+0.4}{34}$	$\frac{+0.2}{23}$
$\frac{+0.1}{33}$	$\frac{-0.1}{21}$
$\frac{-0.4}{35}$	$\frac{-0.2}{27}$
	$\frac{+0.3}{22}$
	$\frac{+0.3}{33}$
	$\frac{+0.3}{27}$
	$\frac{+0.3}{34}$

Sta	+s	H.I.	-s	Elev.
		1931.45		
267			4.7	26.0
+38			1.9	29.6
+50			2.4	29.1
+90			3.5	28.0
T.P. 268	2.89	1331.44	2.90	1328.55
+847			3.3	28.2
269			3.6	27.9
B.M. #11	1.77	1331.51	1.77	1329.67 <small>OK. OK ✓</small> <small>com. par</small> 1329.74
270			6.0	25.5
271			7.8	23.7
272			9.9	21.6
273			10.2	21.3
274			9.0	22.5

L	C
$\frac{-1.3}{33} \frac{-0.6}{31}$	$\frac{+0.5}{20} \frac{+0.5}{34}$
$\frac{-2.5}{37} \frac{-1.3}{28}$	$\frac{+0.1}{21} \frac{-2.7}{33}$
$\frac{-1.5}{34} \frac{-0.6}{27}$	$\frac{+0.2}{27} \frac{+0.1}{25}$
$\frac{-1.0}{33} \frac{-0.5}{22}$	$\frac{+0.4}{19} \frac{+1.1}{34}$
$\frac{+1.2}{33} \frac{-0.7}{21}$	$\frac{+0.4}{23} \frac{+0.8}{34}$
$\frac{-1.2}{35} \frac{-0.5}{22}$	$\frac{-2.1}{23} \frac{-0.2}{36}$
$\frac{-1.3}{36} \frac{-0.8}{20}$	$\frac{+0.2}{27} \frac{+0.1}{29} \frac{-1.0}{31} \frac{+0.1}{35} \frac{+1.0}{32}$
$\frac{+0.2}{35} \frac{+0.7}{20} \frac{+0.8}{3}$	$\frac{-0.1}{7} \frac{+0.3}{4} \frac{+2.1}{18} \frac{+1.6}{28} \frac{+0.1}{31} \frac{+2.4}{26} \frac{+2.2}{41}$
$\frac{+0.9}{35} \frac{+1.2}{27} \frac{+0.7}{7} \frac{-0.6}{5} \frac{0.0}{2}$	$\frac{+0.7}{7} \frac{0.0}{18} \frac{+0.5}{19} \frac{+0.1}{21} \frac{-1.6}{25} \frac{+0.3}{28} \frac{+0.2}{39}$
L.O. $\frac{+1.4}{34} \frac{-1.2}{8} \frac{-1.9}{5} \frac{-0.2}{2}$	$\frac{+0.5}{8} \frac{-0.4}{20} \frac{-1.3}{23} \frac{-0.7}{25} \frac{-0.8}{35}$
$\frac{-2.3}{33} \frac{-1.1}{8} \frac{-1.9}{7} \frac{0.0}{3}$	$\frac{+0.7}{9} \frac{-0.4}{19} \frac{-1.5}{22} \frac{0.0}{24} \frac{-0.1}{36}$
$\frac{0.0}{33} \frac{+0.9}{5} \frac{-1.4}{4}$	$\frac{+0.7}{10} \frac{-0.2}{23} \frac{-1.1}{25} \frac{+0.3}{29} \frac{+0.9}{37}$

Sta	+S	H.I.	-S	Elev
		133151		
T.P. 275	1.88	1326.54	6.85	1324.66
276			0.3	26.2
277			1.4	25.1
278			3.9	22.6
279			5.1	21.4
280			5.5	21.0
+50				20.7
281			7.2	19.3
				18.7
282			8.7	17.8
+60				18.5
283			8.0	18.5
284			8.3	18.2
T.P. 285	5.63	1323.85	8.32	1318.22
286			4.9	19.0

11-12-31

14.

		L R											
		+1.6	+1.5	+0.7	-0.7	-0.1	+0.8	0.0	+0.1	-0.1	-1.5	-0.2	0.0
		33	21	6	4	5	11	19	21	24	24	30	38
		-0.3	-0.9	-1.9	-1.5	+0.5	-0.5	-1.8	-0.9	-0.4	+0.2		
		35	12	11	9	7	19	22	24	27	20	10.	
		$\frac{44}{56}$	$\frac{40}{31}$	$\frac{-0.7}{30}$	$\frac{-0.9}{28}$	$\frac{-2.3}{17}$	$\frac{-1.0}{15}$	$\frac{+0.2}{3}$	$\frac{-1.2}{10}$	$\frac{-2.3}{13}$	$\frac{-1.1}{15}$	$\frac{-1.2}{34}$	10
		L.O.	$\frac{40.5}{24}$	$\frac{122}{25}$	$\frac{-15}{22}$	$\frac{-0.3}{20}$	$\frac{+0.6}{7}$	$\frac{-0.4}{6}$	$\frac{-1.3}{8}$	$\frac{0.0}{10}$	$\frac{+0.1}{35}$	L.O.	
		$\frac{-1.2}{43}$	$\frac{-0.9}{31}$	$\frac{-1.5}{28}$	$\frac{-0.6}{25}$	$\frac{+0.7}{14}$	$\frac{-0.3}{2}$	$\frac{-0.9}{7}$	$\frac{-0.1}{6}$	$\frac{+0.6}{9}$	$\frac{+1.0}{34}$		
		L.O.	$\frac{-0.1}{43}$	$\frac{-1.4}{33}$	$\frac{-0.3}{28}$	$\frac{+1.2}{13}$	$\frac{+0.5}{2}$	$\frac{-0.5}{15}$	$\frac{+0.3}{3}$	$\frac{+0.8}{5}$	$\frac{+1.2}{35}$		
		$\frac{+1.7}{20}$	$\frac{+0.1}{24}$	$\frac{+0.6}{32}$	$\frac{+1.7}{15}$	$\frac{+1.0}{6}$	$\frac{+1.0}{2}$	$\frac{+1.8}{5}$	$\frac{+1.7}{34}$	$\frac{+2.0}{10}$	$\frac{+2.0}{34}$		
		$\frac{+0.5}{27}$	$\frac{+0.5}{32}$	$\frac{-0.4}{31}$	$\frac{+0.5}{28}$	$\frac{+1.0}{16}$	$\frac{+0.6}{3}$	$\frac{+0.4}{1}$	$\frac{+1.4}{34}$				
		$\frac{+0.5}{20}$	$\frac{+1.0}{32}$	$\frac{-0.2}{30}$	$\frac{+0.5}{27}$	$\frac{+1.8}{16}$	$\frac{+1.2}{2}$	$\frac{+1.5}{2}$	$\frac{+2.0}{36}$				
		$\frac{+0.1}{32}$	$\frac{+0.3}{32}$	$\frac{-1.4}{27}$	$\frac{+0.3}{25}$	$\frac{+1.5}{14}$	$\frac{+0.6}{2}$	$\frac{+0.2}{3}$	$\frac{+1.5}{9}$	$\frac{+1.5}{35}$			
		$\frac{-0.8}{35}$	$\frac{-0.5}{28}$	$\frac{-1.5}{26}$	$\frac{-2.3}{23}$	$\frac{-1.1}{22}$	$\frac{+0.2}{8}$	$\frac{-0.6}{7}$	$\frac{-1.8}{9}$	$\frac{-0.3}{11}$	$\frac{0.0}{37}$		
		$\frac{-1.6}{33}$	$\frac{-1.7}{18}$	$\frac{-2.4}{15}$	$\frac{-1.1}{11}$	$\frac{+0.9}{10}$	$\frac{-1.8}{12}$	$\frac{-1.5}{14}$	$\frac{-1.4}{35}$				
		$\frac{-1.2}{33}$	$\frac{-0.9}{17}$	$\frac{-2.7}{15}$	$\frac{-1.3}{9}$	$\frac{-1.3}{35}$	$\frac{-2.0}{17}$	$\frac{0.0}{20}$	$\frac{0.0}{35}$				

Sta	+S	HI	-S	Flor.
		1323.85		
287			4.0	19.9
288			5.6	18.3
BC288+00.2				18.3
+50			5.9	18.0
289			5.7	18.2
+50			5.6	18.3
290			5.1	18.8
+50			4.8	19.1
291			4.5	19.4
+50			4.6	19.3
B.M.#12			4.09	1319.76
292			5.1	18.8
+50			4.8	19.1
293			4.4	19.5

11-12-31

L	D
$\frac{-1.1}{34} \frac{0.0}{13} \frac{-0.2}{10} \frac{-1.9}{8} \frac{-0.6}{6}$	$\frac{+0.5}{7} \frac{-0.6}{19} \frac{-0.2}{21} \frac{+0.3}{24} \frac{+0.9}{36}$
$\frac{+0.1}{34} \frac{0.0}{8} \frac{-1.1}{7} \frac{-0.3}{2}$	$\frac{+0.3}{8} \frac{-0.2}{26} \frac{-0.3}{22} \frac{+0.5}{29} \frac{+1.0}{38}$
$\frac{-0.5}{33} \frac{0.0}{8} \frac{-1.0}{6} \frac{-0.1}{2}$	$\frac{+0.9}{9} \frac{-0.2}{21} \frac{-1.0}{23} \frac{+0.3}{26} \frac{+0.5}{34}$
$\frac{-0.6}{34} \frac{-0.2}{7} \frac{+1.3}{5} \frac{-0.7}{3}$	$\frac{+1.0}{10} \frac{-0.4}{22} \frac{-1.5}{25} \frac{-0.1}{28} \frac{+0.0}{33}$
$\frac{-0.9}{35} \frac{0.0}{8} \frac{-0.8}{6} \frac{-0.2}{3}$	$\frac{+1.0}{11} \frac{+0.1}{23} \frac{-1.1}{25} \frac{+0.9}{27} \frac{+0.9}{36}$
$\frac{-0.4}{36} \frac{-0.3}{9} \frac{-1.5}{7} \frac{-0.3}{7}$	$\frac{+0.6}{9} \frac{-0.2}{20} \frac{-0.9}{22} \frac{+0.1}{23} \frac{+0.9}{30} \frac{+1.0}{35}$
$\frac{-0.7}{33} \frac{-0.7}{16} \frac{-1.8}{13} \frac{-1.0}{11}$	$\frac{+0.8}{15} \frac{-1.7}{17} \frac{-0.3}{20} \frac{+0.2}{35}$
$\frac{-0.6}{34} \frac{-0.1}{24} \frac{-0.7}{19} \frac{-2.0}{17} \frac{-1.1}{15}$	$\frac{-0.9}{10} \frac{-1.6}{12} \frac{-0.4}{15} \frac{0.0}{33}$
$\frac{+0.1}{35} \frac{0.0}{22} \frac{-1.6}{20} \frac{-0.7}{19} \frac{+0.5}{9}$	$\frac{-0.7}{6} \frac{-1.2}{8} \frac{+0.2}{17} \frac{+0.2}{37}$ Fence 25
$\frac{-0.6}{35} \frac{-0.8}{24} \frac{-2.0}{23} \frac{-0.5}{19} \frac{+0.8}{9}$	$\frac{-0.4}{5} \frac{-0.9}{7} \frac{+0.4}{9} \frac{+0.7}{34}$
$\frac{-1.2}{34} \frac{-1.3}{22} \frac{-2.4}{20} \frac{-1.3}{18} \frac{+0.2}{7}$	$\frac{-0.6}{9} \frac{-1.2}{10} \frac{+0.4}{14} \frac{+1.0}{35}$
$\frac{-1.0}{33} \frac{-1.0}{16} \frac{-2.7}{13} \frac{-1.3}{11}$	$\frac{-1.1}{14} \frac{-1.3}{15} \frac{+0.3}{17} \frac{F.C.}{27} \frac{+1.0}{36}$

Sta	+s	H.I	-s	Elev
		1323.85		
293+50			4.9	19.0
T.R. 294	5.46	1323.78	5.53	1318.32
+50			7.8	16.0
295			8.8	15.0
E.C.+30.5			6.7	17.1
T.R. 296	9.39	1330.20	5.95 2.97	1320.81
297			6.4	23.8
298			8.8	21.4
+70			11.5	18.7
299			11.5	18.7
300			8.7	21.5
301			9.5	26.7

	L	R
	$\frac{00}{35} + \frac{1.9}{9} - \frac{1.9}{6} + \frac{10.1}{2}$	$\frac{+1.0}{7} \frac{01}{19} - \frac{0.3}{21} + \frac{0.5}{24} + \frac{1.2}{33}$
	$\frac{-1.3}{33} - \frac{0.7}{21}$	$\frac{-0.1}{2} \frac{-1.1}{5} - \frac{0.2}{8} + \frac{0.6}{18} - \frac{0.1}{28} - \frac{0.7}{30} + \frac{0.3}{34} + \frac{1.7}{37} + \frac{1.7}{40}$
	$\frac{-0.3}{33} - \frac{0.3}{19}$	$\frac{-0.1}{9} + \frac{0.3}{13} - \frac{0.1}{15} + \frac{0.7}{16} + \frac{1.7}{30} + \frac{1.7}{35} + \frac{1.0}{38}$
	$\frac{-0.9}{34} - \frac{1.2}{10}$	$\frac{+0.7}{17} \frac{+0.6}{27} \frac{+0.8}{30} + \frac{1.7}{33} + \frac{1.2}{41}$
	$\frac{-0.1}{34} - \frac{0.6}{19}$	$\frac{-0.6}{7} \frac{+0.4}{23} - \frac{0.1}{32} - \frac{0.5}{36} + \frac{+0.8}{39} + \frac{1.6}{42}$
	$\frac{-1.4}{35} - \frac{0.1}{19}$	$\frac{+1.0}{22} \frac{+1.8}{37}$
	$\frac{-2.2}{35} - \frac{0.6}{18}$	$\frac{-0.3}{16} - \frac{0.3}{33}$
	$\frac{-2.7}{35} - \frac{1.7}{21}$	$\frac{+1.2}{16} \frac{+2.0}{33}$
	$\frac{+1.0}{36} \frac{0.0}{20}$	$\frac{+0.5}{14} \frac{+1.4}{26} \frac{+1.4}{34}$
	$\frac{+1.0}{35} \frac{+1.0}{22}$	$\frac{+1.0}{19} \frac{+1.4}{29} \frac{+0.8}{31} \frac{+2.0}{34} \frac{+2.1}{39}$
	$\frac{+0.1}{34} + \frac{0.3}{16}$	$\frac{-1.6}{13} - \frac{0.5}{17} \frac{0.0}{26} - \frac{1.2}{37}$
	$\frac{+1.0}{32} + \frac{0.9}{16}$	$\frac{-0.5}{6} - \frac{0.5}{10} - \frac{2.0}{12} - \frac{2.5}{15} - \frac{1.6}{22} - \frac{2.1}{32} - \frac{2.7}{34} - \frac{2.4}{36}$

Sta	+S	H.I.	-S	Elev.
		1330.20		
301+30			2.4	27.8
302			2.9	27.3
+50			4.3	27.9 24.5
303			4.2	26.0
304			1.4	28.8
P.O.L + 26.4			0.5	29.7
T.P 305	2.19	1330.93	1.46	1328.74
306			7.0	23.9
T.P 307	1.20	1320.30	11.83	1319.10
308			4.2	16.1
309			6.4	13.9
310			7.8	12.5

L	R
$\frac{+1.9}{36}$ $\frac{+0.3}{22}$	$\frac{-0.5-2.4}{6\ 9}$ $\frac{-2.9}{11}$ $\frac{-1.5-2.3-3.4}{22\ 33\ 37}$ $\frac{-1.6-1.9}{38\ 41}$ ✓
$\frac{+0.8}{37}$ $\frac{+0.5}{15}$	$\frac{0.0-2.5}{2\ 5}$ $\frac{-1.2}{7}$ $\frac{-0.5-1.5-3.5}{18\ 28\ 33}$ $\frac{-2.0-2.2}{35\ 39}$ ✓
$\frac{+3.4}{37}$ $\frac{+2.0}{12}$ $\frac{+1.1}{2}$	$\frac{+1.4}{3}$ $\frac{+1.8}{15}$ $\frac{+0.5-0.7}{26\ 30}$ $\frac{+0.5+0.1}{32\ 37}$ ✓
$\frac{+1.5}{37}$ $\frac{+0.6}{11}$ $\frac{-0.1}{5}$	$\frac{+0.5}{12}$ $\frac{-0.4}{20}$ $\frac{-1.5-2.0}{26\ 27}$ $\frac{-1.1}{30}$ $\frac{-1.1}{36}$ ✓
$\frac{0.0}{35}$ $\frac{-0.4}{10}$ $\frac{-2.0}{8}$ $\frac{-0.8}{7}$	$\frac{+0.8}{8}$ $\frac{-1.1}{19}$ $\frac{+0.5-0.0}{20\ 23}$ $\frac{-0.7}{25}$ $\frac{+1.1}{31}$ $\frac{+0.8}{38}$ ✓
$\frac{-0.6}{37}$ $\frac{-0.5}{23}$ $\frac{-0.2}{11}$ $\frac{-1.7}{8}$ $\frac{-0.4}{4}$	$\frac{+0.8}{9}$ $\frac{0.0}{24}$ $\frac{+0.7}{22}$ ✓
$\frac{-1.0}{34}$ $\frac{0.5}{11}$ $\frac{-2.3}{9}$ $\frac{-0.7}{6}$	$\frac{+0.3}{8}$ $\frac{-0.8}{17}$ $\frac{-2.0}{20}$ $\frac{0.0}{23}$ $\frac{-0.5+0.1}{28\ 37}$ ✓
$\frac{+0.9}{35}$ $\frac{+0.3}{14}$ $\frac{-2.0}{12}$ $\frac{-0.7}{9}$ $\frac{-0.3}{7}$ $\frac{-0.8}{6}$	$\frac{+0.1}{6}$ $\frac{-0.9}{14}$ $\frac{-0.6}{16}$ $\frac{-1.6}{19}$ $\frac{+0.5+1.0}{20\ 24}$ $\frac{+1.7}{33}$ ✓
$\frac{+0.6}{36}$ $\frac{+0.2}{25}$ $\frac{+0.1}{23}$ $\frac{+0.1}{17}$ $\frac{-2.1}{15}$ $\frac{-1.0}{13}$	$\frac{0.0}{25}$ $\frac{-1.0}{12}$ $\frac{-1.8}{16}$ $\frac{0.0-0.2}{19\ 34}$ ✓
$\frac{-0.4}{35}$ $\frac{0.1}{23}$ $\frac{-0.5}{18}$ $\frac{-0.8}{11}$	$\frac{-1.0}{10}$ $\frac{-2.0}{12}$ $\frac{-0.8}{12}$ $\frac{-0.3}{21}$ $\frac{-0.3}{33}$ ✓
$\frac{-0.4}{35}$ $\frac{0.1}{30}$ $\frac{-0.4}{20}$ $\frac{-1.6}{18}$ $\frac{-1.0}{16}$	$\frac{-0.7}{9}$ $\frac{-2.0}{17}$ $\frac{-0.8}{17}$ $\frac{-0.2}{24}$ $\frac{-0.7}{34}$ ✓
$\frac{-1.6}{34}$ $\frac{-1.3}{18}$ $\frac{-2.0}{16}$ $\frac{-1.0}{14}$ $\frac{-0.7}{9}$	$\frac{-1.5-0.7}{17\ 19}$ $\frac{-1.2}{19}$ $\frac{-1.7}{36}$ ✓

Sta	+S	H.I.	-S	Elev
		1320.30		
311			9.2	10.1
312			9.4	10.9
313			10.4	9.9
T.P. 314	4.33	1312.31	12.32	1307.98
315			4.3	8.0
316			5.6	6.7
317			6.7	5.6
318			5.4	6.9
BM #13			4.01	CK. 03
P.O. 1 + 93.5			5.2	7.1
319			5.5	6.8
320			7.3	5.0
321			6.7	5.6

L	R
$\frac{-1.0}{36} \frac{-1.2}{14} \frac{-2.1}{11} \frac{-1.0}{9}$	$\frac{+0.5}{5} \frac{-0.8}{18} \frac{-2.0}{21} \frac{+1.4}{22} \frac{-1.1}{36}$
$\frac{-0.7}{34} \frac{0}{39} \frac{-1.0}{15} \frac{-2.0}{14} \frac{-0.7}{9}$	$\frac{-0.8}{14} \frac{-2.0}{17} \frac{-1.4}{18} \frac{-1.3}{36}$
$\frac{+0.4}{23} \frac{-0.2}{26} \frac{+0.18}{24} \frac{-0.2}{21} \frac{+0.3}{19} \frac{0.0}{18} \frac{+0.6}{13}$	$\frac{-0.5}{3} \frac{-1.2}{5} \frac{-0.2}{6} \frac{-0.6}{33}$
$\frac{+0.9}{40} \frac{+0.5}{34} \frac{-0.5}{32} \frac{+0.4}{30} \frac{+1.7}{17} \frac{+0.2}{17} \frac{-0.8}{7}$	$\frac{+0.4}{2} \frac{-0.2}{33}$
$\frac{-0.2}{49} \frac{+1.0}{37} \frac{-0.1}{26} \frac{-1.2}{14} \frac{-0.4}{9} \frac{-0.4}{8}$	$\frac{-0.3}{19} \frac{-0.1}{36}$
$\frac{+1.1}{36} \frac{0.0}{23} \frac{-1.0}{21} \frac{+1.2}{19} \frac{+0.5}{6}$	$\frac{-0.8}{21} \frac{-1.0}{36}$
$\frac{+2.0}{45} \frac{+0.9}{34} \frac{-0.3}{32} \frac{+0.8}{30} \frac{+1.5}{28} \frac{+0.9}{15}$	$\frac{+0}{18} \frac{-0.2}{34}$
$\frac{+0.4}{36} \frac{+1.3}{27} \frac{+0.1}{14} \frac{+0.1}{12} \frac{+1.0}{10}$	$\frac{+0.5}{16} \frac{+0.2}{33}$
$\frac{-0.7}{24} \frac{0.0}{16} \frac{-0.7}{7} \frac{+1.0}{5} \frac{-0.4}{3}$	$\frac{-0.4}{20} \frac{-1.2}{22} \frac{-0.4}{24} \frac{0}{35}$
$\frac{-1.0}{35} \frac{-0.5}{2} \frac{-0.5}{3} \frac{-0.5}{7}$	$\frac{+0.5}{12} \frac{-0.7}{22} \frac{-1.3}{24} \frac{-0.2}{25} \frac{+0.2}{28}$
$\frac{+0.2}{33} \frac{+0.6}{15}$	$\frac{+0.1}{13} \frac{+0.5}{28} \frac{+1.7}{31} \frac{+1.5}{36}$
$\frac{-0.5}{32} \frac{-0.5}{13}$	$\frac{-0.1}{14} \frac{-0.6}{33}$

Sta	+S	HI	-S	Elev
		1312.31		
322			7.1	5.2
323			6.8	5.5
324			5.5	6.8
T.P. 325	7.15	1314.30	5.16	1307.15 ^{07.0 Elev.}
326			10.5	3.8
327			10.2	4.1
328			6.9	7.4
329			6.9	7.4
	715 +95		9.2	9.1
330			5.6	8.7
R.R. Elev	+18		4.65	9.6
	34 +38		4.7	9.6

L	R
$\frac{-0.2}{34} \frac{00}{17}$	$\frac{+0.2}{17} \frac{+0.1}{35}$
$\frac{-0.7}{36} \frac{-0.3}{24}$	$\frac{+0.3}{15} \frac{+1.0}{36}$
$\frac{-1.0}{34} \frac{-0.7}{17}$	$\frac{00}{7} \frac{-1.3}{8} \frac{00}{12} \frac{+0.8}{23} \frac{00}{35}$
$\frac{+0.1}{33} \frac{0.0}{14}$	$\frac{+0.4}{19} \frac{0.0}{34}$
$\frac{+0.5}{39} \frac{+0.1}{21}$	$\frac{-0.4}{17} \frac{-0.4}{33}$
$\frac{+0.3}{34} \frac{0.0}{19} \frac{-1.1}{16} \frac{-0.4}{13}$	$\frac{-0.9}{21} \frac{-2.0}{39}$
$\frac{-1.1}{37} \frac{-0.7}{32} \frac{0.0}{30} \frac{+0.3}{21} \frac{0.0}{9} \frac{-1.5}{6} \frac{-0.6}{4}$	$\frac{-0.5}{7.85} \frac{-1.6}{28} \frac{-2.0}{35}$ Rydth
$\frac{+1.7}{39} \frac{+0.8}{33} \frac{+1.6}{27} \frac{+2.4}{22} \frac{+1.7}{14} \frac{+1.7}{3}$	$\frac{+0.3}{+2} \frac{+3.3}{10} \frac{+5.8}{26} \frac{+2.8}{31} \frac{+0.2}{37}$
$\frac{-1.3}{38} \frac{-1.5}{32} \frac{-3.1}{26} \frac{-1.5}{24} \frac{-0.4}{13} \frac{-0.6}{9}$	$\frac{+0.3}{6} \frac{0.0}{18} \frac{2.4}{28} \frac{-3.8}{32} \frac{-3.4}{36}$
$\frac{-3.0}{30} \frac{-3.1}{33} \frac{-3.4}{29} \frac{-2.3}{26} \frac{-1.4}{20}$	$\frac{-0.4}{5} \frac{-1.5}{70} \frac{-3.4}{20} \frac{-4.5}{22} \frac{-3.3}{26} \frac{-3.5}{37}$
$\frac{-2.5}{43} \frac{-3.1}{37} \frac{-1.4}{32} \frac{-3.2}{29} \frac{-3.1}{25} \frac{-0.1}{18}$	$\frac{-0.4}{2} \frac{-3.5}{14} \frac{-4.4}{16} \frac{-3.4}{19} \frac{-3.4}{33}$

Sta	+s	H.I.	-S	L Lev
		1314.30		
330+65			6.1	8.2
331			7.1	7.2
332			7.6	6.7
333			7.4	6.9
T.P. 334	40.63	1319.34	5.59	1308.71
335			9.3	10.0
336			7.9	11.4
337			5.4	13.9
B.M #14	3.02	1316.78	5.66	1313.76
P.O.T +54.7			1.4	15.4
338			3.3	13.5
BC +18.7			4.1	12.7
+50			5.1	11.7

L	R
2.1 2.1 +0.2 +1.0 41 37 28 15	-2.3 -2.0 -2.8 4 8 33
8 +1.8 +1.4 -1.3 0.0 +0.4 46 27 18 15 7	-1.3 cl. 0.4 3 28 34
✓ cl	
-0.8 -0.9 -2.4 -0.2 +0.6 36 23 20 16 7	-0.3 -1.8 -2.0 -1.5 -1.5 2 7 7 10 33
cl	
-0.8 -1.0 -2.4 -0.1 +0.6 33 23 21 17 7	-0.4 -0.9 -1.9 -0.8 -1.0 3 5 8 10 33
cl	
-0.3 -0.3 -2.5 -0.5 +0.5 34 24 21 18 7	-0.3 -2.1 0.6 -1.0 4 7 10 33
Fe	
-0.1 -0.1 -0.6 -2.0 -0.5 +0.4 70 25 23 20 17 6	-0.4 -1.3 -0.4 -0.2 4 6 8 33
-0.2 -0.2 -2.0 -1.0 +0.1 36 21 18 16 7	-0.8 -1.7 -0.2 -0.3 8 12 16 38
-0.1 +0.2 -1.4 -0.9 +0.1 40 20 17 15 7	-0.6 -0.3 -0.4 -1.0 -0.2 -0.2 7 8 11 13 15 34
-1.0 -0.5 -1.2 -0.9 +0.1 36 24 19 16 7	-0.2 -0.9 -0.8 +0.4 +0.5 8 10 13 17 38
8 0.1 1.0 -0.7 1.1 -0.6 +0.1 36 27 24 22 19 8	-0.3 1.3 +0.4 +1.0 -0.1 +0.9 +0.7 7 8 11 32 34 37 42
Fe	
-0.5 0.0 -1.0 -1.3 -0.5 +0.4 39 27 25 22 19 8	-0.1 -1.4 +0.4 +1.0 4 8 10 34
-0.1 0.0 -1.8 0.0 -0.3 +0.8 37 27 23 20 17 9	-0.2 -0.7 +0.4 +0.6 4 6 9 33

Sta	+s	H.I	-s	Elev
		1316.78		
339			6.0	10.8
	+50		6.4	10.4
340			7.1	9.7
	+50		7.8	9.0
341			8.8	8.0
	+50		9.1	7.9
342			9.0	7.8
TP +50	6.55	1314.07	9.26	1307.52
343			6.7	7.4
	+50		6.0	8.1
344			5.1	9.0
	+22		4.9	9.2

11-13-31 L R

$\frac{-0.7}{36}$	$\frac{-1.0}{36}$	$\frac{-2.0}{24}$	$\frac{-0.5}{21}$	$\frac{0.0}{18}$	$\frac{10.7}{9}$	$\frac{0.0}{2}$	$\frac{-0.8}{4}$	$\frac{-1.0}{6}$	$\frac{10.4}{8}$	$\frac{+0.8}{35}$
$\frac{+0.8}{33}$	$\frac{+0.5}{28}$	$\frac{+0.1}{24}$	$\frac{-1.0}{27}$	$\frac{-0.4}{19}$	$\frac{+0.5}{8}$	$\frac{-0.1}{4}$	$\frac{-1.2}{6}$	$\frac{+0.5}{8}$	$\frac{+0.2}{37}$	
$\frac{+1.0}{34}$	$\frac{+0.6}{20}$	$\frac{-1.8}{18}$	$\frac{0.9}{16}$	$\frac{+0.2}{5}$		$\frac{-0.5}{6}$	$\frac{-0.7}{8}$	$\frac{-1.8}{17}$	$\frac{-0.1}{12}$	$\frac{+0.5}{17}$
$\frac{-0.5}{37}$	$\frac{-1.0}{18}$	$\frac{-1.8}{15}$	$\frac{-0.9}{12}$	$\frac{0.0}{3}$		$\frac{-1.2}{12}$	$\frac{-2.0}{14}$	$\frac{-1.0}{17}$	$\frac{-0.9}{39}$	
$\frac{-0.7}{37}$	$\frac{-1.0}{20}$	$\frac{-0.1}{21}$	$\frac{-0.9}{13}$	$\frac{-1.1}{11}$	$\frac{-0.7}{9}$	$\frac{+0.3}{5}$	$\frac{-0.3}{14}$	$\frac{-2.0}{18}$	$\frac{-0.9}{21}$	$\frac{-0.8}{40}$
$\frac{-0.6}{37}$	$\frac{-0.7}{10}$	$\frac{-1.8}{9}$	$\frac{-0.2}{7}$			$\frac{+0.5}{17}$	$\frac{-0.5}{17}$	$\frac{-1.5}{20}$	$\frac{-0.8}{22}$	$\frac{-0.3}{26}$
$\frac{-0.2}{35}$	$\frac{-0.9}{9}$	$\frac{-1.6}{6}$	$\frac{-0.4}{3}$			$\frac{+0.7}{10}$	$\frac{-0.2}{20}$	$\frac{-1.6}{23}$	$\frac{-0.4}{22}$	$\frac{0.0}{37}$
$\frac{+0.5}{34}$	$\frac{+0.3}{8}$	$\frac{-1.3}{6}$	$\frac{-0.5}{3}$			$\frac{+0.8}{11}$	$\frac{0.0}{20}$	$\frac{-0.2}{24}$	$\frac{-2.2}{26}$	$\frac{-0.3}{27}$
$\frac{+0.1}{34}$	$\frac{+0.5}{7}$	$\frac{-1.1}{3}$				$\frac{+0.4}{7}$	$\frac{+1.1}{14}$	$\frac{-0.1}{27}$	$\frac{-1.8}{28}$	$\frac{0.0}{30}$
$\frac{+0.8}{35}$	$\frac{+0.6}{4}$					$\frac{-1.7}{3}$	$\frac{0.2}{5}$	$\frac{+0.5}{18}$	$\frac{-0.5}{27}$	$\frac{-2.1}{32}$
$\frac{+0.5}{35}$	$\frac{0.0}{17}$					$\frac{-0.1}{4}$	$\frac{-2.6}{8}$	$\frac{-1.0}{12}$	$\frac{0.0}{26}$	$\frac{-1.2}{35}$
$\frac{+1.3}{34}$	$\frac{0.0}{7}$					$\frac{-0.8}{3}$	$\frac{-1.3}{9}$	$\frac{-2.7}{12}$	$\frac{-1.5}{15}$	$\frac{0.0}{29}$
									$\frac{-0.2}{37}$	$\frac{-0.5}{37}$

Sta	+S	HT	-S	Elev
30		1314.07		
344 + 29			6.4	7.7
44				
+ 43			6.6	7.5
+ 50			4.7	9.4
345			4.9	9.2
EC + 267			5.2	8.9
346			6.7	7.4
347			6.6	7.5
+ 45			5.1	9.0
348			7.3	6.8
Point + 873			9.1	5.0
T.P 349	483	1309.86	9.04	1305.03
350			3.6	6.3

L		R	
71-13-31			
2.7			
$\frac{+2.7}{33}$	$\frac{+1.3}{3}$	$\frac{-0.3}{11}$	$\frac{-1.2}{13}$
		$\frac{+0.1}{17}$	$\frac{+0.9}{21}$
		$\frac{+0.8}{25}$	
$\frac{+2.7}{38}$	$\frac{+1.7}{10}$	$\frac{-0.5}{12}$	$\frac{-1.7}{15}$
		$\frac{0.0}{15}$	$\frac{+0.8}{31}$
		$\frac{+0.4}{37}$	
$\frac{+2.4}{39}$	$\frac{+0.8}{32}$	$\frac{-0.6}{9}$	$\frac{-3.2}{16}$
		$\frac{-1.2}{20}$	$\frac{-0.3}{33}$
$\frac{+1.3}{36}$	$\frac{+0.5}{18}$	$\frac{-0.5}{17}$	$\frac{-3.4}{23}$
		$\frac{-1.3}{21}$	$\frac{-0.2}{27}$
		$\frac{-0.2}{29}$	$\frac{-0.2}{33}$
		$\frac{-0.2}{43}$	
$\frac{+0.7}{35}$	$\frac{+0.5}{21}$	$\frac{0.0}{17}$	$\frac{-0.4}{35}$
$\frac{+0.7}{34}$	$\frac{+0.8}{23}$	$\frac{-0.9}{21}$	$\frac{-1.7}{37}$
$\frac{0.0}{36}$	$\frac{-0.2}{21}$	$\frac{-1.3}{30}$	$\frac{-2.0}{37}$
$\frac{-0.1}{37}$	$\frac{0.0}{11}$	$\frac{+0.7}{20}$	$\frac{+0.8}{34}$
$\frac{-0.5}{36}$	$\frac{-0.2}{19}$	$\frac{+0.2}{15}$	$\frac{+0.6}{34}$
$\frac{-1.6}{34}$	$\frac{-0.7}{22}$	$\frac{+0.1}{23}$	$\frac{+0.3}{36}$

Sta	+ S	H.I	- S	Elev
350		1309.86		
351			3.9	6.0
RR Ditch Cul. +45			6.1	1.8
352			9.3	1300.6
B.C. +34.0			8.6	1.3
+50			8.3	1.6
353			8.2	1.7
T.P. +50	6.44	1314.28	5.4	4.5
354			7.7	7.7 <i>stake</i>
+50			2.02	1307.84
355			5.6	8.8
B.M. #15			4.4	9.9
+50			4.5	9.8
			7.34	CR.03 1306.74
			8.3	6.0

L	R
$\frac{-0.6}{34}$	$\frac{-0.2}{8}$
$\frac{-0.2}{33}$	$\frac{+0.6}{33}$
$\frac{+0.5}{33}$	$\frac{+0.2}{15}$
$\frac{+0.4}{34}$	$\frac{0.0}{34}$
$\frac{-0.5}{34}$	$\frac{+0.2}{14}$
$\frac{-0.2}{34}$	$\frac{0.0}{34}$
$\frac{-0.2}{34}$	$\frac{+0.2}{16}$
$\frac{-0.1}{18}$	$\frac{+0.4}{16}$
$\frac{+0.5}{34}$	$\frac{+1.6}{33}$
$\frac{+0.2}{34}$	$\frac{+1.7}{17}$
$\frac{+0.2}{11}$	$\frac{+2.5}{31}$
$\frac{+0.7}{34}$	$\frac{+1.5}{33}$
$\frac{+0.2}{16}$	$\frac{+1.9}{35}$
$\frac{+0.2}{34}$	$\frac{+2.4}{41}$
$\frac{-2.0}{34}$	$\frac{+1.5}{12}$
$\frac{-1.6}{34}$	$\frac{+2.5}{24}$
$\frac{-1.0}{16}$	$\frac{+0.7}{27}$
$\frac{+2.0}{34}$	$\frac{+2.0}{30}$
$\frac{+1.9}{34}$	$\frac{+1.9}{37}$
$\frac{-1.6}{34}$	$\frac{+0.5}{19}$
$\frac{-1.0}{18}$	$\frac{-1.5}{22}$
$\frac{+0.5}{34}$	$\frac{+0.6}{27}$
$\frac{+0.5}{37}$	$\frac{+0.5}{37}$
$\frac{-1.2}{37}$	$\frac{+0.5}{17}$
$\frac{-0.5}{19}$	$\frac{-1.0}{19}$
$\frac{+0.5}{37}$	$\frac{+0.3}{22}$
$\frac{+0.8}{33}$	$\frac{+0.8}{37}$
$\frac{-1.8}{33}$	$\frac{-1.0}{11}$
$\frac{-0.7}{21}$	$\frac{-0.2}{14}$
$\frac{+0.2}{11}$	$\frac{-0.1}{18}$
$\frac{-0.1}{21}$	$\frac{+0.1}{31}$
$\frac{-0.1}{27}$	$\frac{-0.1}{37}$
$\frac{-2.1}{37}$	$\frac{-0.2}{7}$
$\frac{-1.0}{27}$	$\frac{-0.2}{9}$
$\frac{-0.2}{27}$	$\frac{-1.4}{12}$
$\frac{-1.0}{27}$	$\frac{0.7}{25}$
$\frac{-1.8}{27}$	$\frac{-1.8}{34}$
$\frac{+1.5}{37}$	$\frac{+1.8}{4}$
$\frac{+1.7}{27}$	$\frac{+1.8}{19}$
$\frac{+1.0}{7}$	$\frac{+1.0}{28}$
	$\frac{+0.3}{32}$
	$\frac{+1.9}{34}$
	$\frac{+1.9}{38}$

Sta	+s	H.I.	-s	Elev.
		1314.28		
356			6.9	7.4
150			7.1	7.2
357			8.8	5.5
E.C +65.7			10.0	4.3
358			10.6	3.7
359			10.9	3.4
T.P. 360	4.52	1308.54	10.23	1304.05
361			4.0	4.6
362			3.9	4.7
363			7.3	1.3
* +25			1.6	
364			5.8	2.8
B.M. #16			1.36	1307.21
365			4.0	4.6
363 +70				2.3

11-13-31		L	R
$\frac{+1.5}{35}$	$\frac{+0.2}{7}$	$\frac{-1.0}{6}$	$\frac{-0.3}{11}$
$\frac{+1.0}{35}$	$\frac{+0.2}{12}$	$\frac{-1.0}{9}$	$\frac{-0.3}{5}$
$\frac{+0.2}{36}$	$\frac{-0.4}{16}$	$\frac{-1.8}{13}$	$\frac{-0.3}{10}$
$\frac{+1.0}{37}$	$\frac{+0.5}{21}$	$\frac{-1.0}{19}$	$\frac{+0.0}{15}$
$\frac{+0.3}{36}$	0.0	$\frac{-2.0}{20}$	$\frac{-0.1}{17}$
$\frac{+0.7}{37}$	$\frac{+0.2}{29}$	$\frac{+0.2}{25}$	$\frac{-0.3}{22}$
$\frac{0.0}{34}$	$\frac{-0.2}{24}$	$\frac{-1.9}{22}$	$\frac{-0.6}{19}$
$\frac{+0.5}{34}$	$\frac{+1.1}{20}$	$\frac{-0.9}{18}$	$\frac{+0.2}{16}$
$\frac{-2.0}{34}$	$\frac{-1.1}{14}$	$\frac{-2.1}{12}$	$\frac{-0.3}{7}$
$\frac{0.0}{38}$	$\frac{-0.3}{7}$	$\frac{-1.0}{3}$	
$\frac{+3.8}{33}$	$\frac{+3.5}{24}$	$\frac{+2.5}{13}$	$\frac{+1.6}{2}$
$\frac{-1.0}{33}$	$\frac{+0.5}{7}$	$\frac{+1.0}{2}$	
$\frac{+3.7}{34}$	$\frac{+3.2}{24}$	$\frac{+2.0}{18}$	$\frac{+1.2}{2}$
$\frac{+0.4}{5}$	$\frac{+0.6}{13}$	$\frac{+0.1}{23}$	$\frac{-1.2}{26}$
$\frac{+0.5}{6}$	$\frac{-0.1}{19}$	$\frac{-1.4}{22}$	$\frac{+0.3}{25}$
$\frac{+0.2}{4}$	$\frac{+0.1}{16}$	$\frac{-1.0}{18}$	$\frac{+0.4}{21}$
$\frac{-0.2}{6}$	$\frac{-0.3}{10}$	$\frac{-1.5}{13}$	$\frac{-0.1}{16}$
$\frac{-0.1}{7}$	$\frac{-0.1}{11}$	$\frac{-0.6}{12}$	$\frac{-1.0}{34}$
$\frac{-0.6}{7}$	$\frac{-1.8}{17}$	$\frac{-0.7}{12}$	$\frac{-1.0}{33}$
$\frac{-0.4}{11}$	$\frac{-2.0}{14}$	$\frac{+0.1}{16}$	$\frac{-0.6}{34}$
$\frac{-0.3}{16}$	$\frac{-2.0}{22}$	$\frac{-0.3}{21}$	$\frac{-1.0}{34}$
$\frac{-0.3}{7}$	$\frac{+0.2}{12}$	$\frac{-0.7}{24}$	$\frac{-2.1}{27}$
$\frac{+2.1}{5}$	$\frac{+2.4}{16}$	$\frac{+1.4}{28}$	$\frac{+0.2}{32}$
$\frac{+1.5}{4}$	$\frac{+3.3}{13}$	$\frac{+1.6}{26}$	$\frac{+0.8}{36}$
$\frac{+1.5}{2}$	$\frac{+2.1}{17}$	$\frac{+1.6}{29}$	$\frac{+0.1}{34}$
$\frac{+0.9}{5}$	$\frac{+1.5}{20}$	$\frac{-1.0}{30}$	$\frac{+1.5}{33}$
$\frac{+1.2}{4}$	$\frac{+1.9}{19}$	$\frac{+1.5}{28}$	$\frac{0.0}{33}$

Sta	+S	H.I.	-S	Flex	L	R
		1308.57				
366			4.8	3.8	$\frac{-0.7}{37} \frac{-0.3}{27}$	$\frac{+0.1}{3} \frac{-1}{7} \frac{+1.2}{11} \frac{+1.9}{21} \frac{+1.5}{37}$
37	+83		5.1	3.5	$\frac{-0.2}{35} \frac{+0.2}{27}$	$\frac{-0.7}{5} \frac{-2.1}{7} \frac{+0.5}{14} \frac{+1.0}{27} \frac{+1.0}{38}$
41	+40		6.4	2.2	$\frac{+1.9}{35} \frac{+1.1}{24} \frac{0.0}{17}$	$\frac{+0.2}{5} \frac{-1.0}{7} \frac{+1.7}{17} \frac{+2.8}{28} \frac{+2.5}{33}$
367			6.7	1.9	$\frac{+0.9}{39} \frac{+0.3}{21}$	$\frac{-0.4}{12} \frac{-1.6}{14} \frac{+0.5}{19} \frac{+1.8}{33}$
72	+80		7.0	1.6	$\frac{+0.1}{42} \frac{+3.2}{37} \frac{+2.0}{33} \frac{0.0}{23} \frac{-0.5}{7}$	$\frac{-0.8}{16} \frac{-2.0}{19} \frac{-0.4}{23} \frac{+0.8}{36}$
T.P. 368	7.81	1308.50	7.88	1300.69	$\frac{+2.9}{38} \frac{+3.1}{13} \frac{40.9}{16}$	$\frac{-0.9}{20} \frac{+0.2}{23} \frac{+1.3}{36}$
T.P.	+5.0		7.6	0.9		
16	+45		5.7	2.8	$\frac{+0.6}{35} \frac{+0.3}{17}$	$\frac{-0.5}{2} \frac{-2.5}{7} \frac{-2.4}{16} \frac{-3.4}{19} \frac{-2.0}{22} \frac{-1.0}{36}$
369			5.0	3.5	$\frac{+0.1}{37} \frac{-0.1}{19}$	$\frac{0.0}{2} \frac{-0.2}{3} \frac{-1.4}{12} \frac{-3.1}{16} \frac{-1.5}{19} \frac{-0.5}{32} \frac{-1.0}{44}$
40.9				3.9	$\frac{-0.1}{38} \frac{-0.5}{21}$	$\frac{0.0}{7} \frac{-0.1}{12} \frac{-3.0}{15} \frac{-1.8}{18} \frac{-1.0}{33} \frac{-1.5}{40}$
B.C. +65.5			5.0	3.5	$\frac{+0.1}{35} \frac{0.0}{25}$	$\frac{-0.2}{8} \frac{-2.5}{9} \frac{-1.7}{12} \frac{-0.7}{27} \frac{-1.7}{40}$
370			6.0	2.5	$\frac{+0.3}{35} \frac{+0.5}{17}$	$\frac{0.0}{3} \frac{-1.2}{7} \frac{-0.4}{8} \frac{+0.2}{23} \frac{-0.4}{37}$
+50			6.5	2.0	$\frac{+0.5}{33} \frac{-0.2}{7} \frac{-1.2}{7}$	$\frac{+0.7}{13} \frac{0.0}{25} \frac{-1.0}{27} \frac{0.0}{29} \frac{-0.5}{37}$

Sta	FS	H.I	-S	
		1308.56		
371			5.4	3.1
+ 50			6.1	2.4
372			5.2	3.3
+ 50			4.9	3.6
373			4.8	3.7
L.C. + 102	4.57	1308.11	4.96	1303.54
T.1 P.R.-X	opposite Pt. (371-435)		4.93	3.2
374			4.5	3.6
375			4.4	3.5
376			4.8	3.3
377			4.8	3.3
378			4.8	3.3

L	R
$\frac{-1.0}{33} \frac{-0.8}{27} \frac{-1.0}{23} \frac{0.0}{16} \frac{0.0}{17}$	$\frac{-0.1}{10} \frac{-2.7}{16} \frac{-3.0}{33}$
$\frac{-0.7}{38} \frac{+1.5}{29} \frac{+1.8}{18} \frac{+1.7}{3}$	$\frac{-2.8}{5} \frac{-4.0}{33}$
GR	GR
$\frac{-5.0}{35} \frac{-4.9}{31} \frac{+0.3}{20} \frac{+1.1}{13}$	$\frac{-5.4}{12} \frac{-6.5}{36}$
$\frac{-5.8}{81} \frac{-5.1}{21} \frac{+0.3}{13} \frac{-1.4}{11} \frac{+0.4}{7}$	GR. $\frac{-0.4}{6} \frac{-1.5}{22} \frac{-0.3}{32}$
$\frac{-7.0}{36} \frac{-4.0}{19} \frac{-0.6}{9}$	$\frac{-0.5}{9} \frac{-0.4}{25} \frac{-0.2}{35} \frac{-4.1}{1}$
$\frac{-7.5}{28} \frac{-7.1}{14} \frac{-0.9}{9}$	$\frac{-0.7}{9} \frac{-2.0}{26} \frac{-0.5}{39}$
$\frac{-9.5}{30} \frac{-7.4}{19} \frac{-0.5}{7}$	$\frac{-0.7}{11} \frac{-7.5}{25} \frac{-0.4}{35} \frac{8}{1}$

Sta.	45	H.I.	-5	Elev.	
		1308.11			
T.P. 79	4.95	1308.21	4.85	1303.26	4 Stake
380			4.6	3.6	
381			4.9	3.3	
382			5.0	3.2	
T.P. 23	5.08	1308.11	5.18	1303.03	4 Stake
384		1308.11	4.8	3.3	
T. 385			4.7	3.4	
386			4.9	3.2	
387			4.6	3.5	
388			4.4	3.7	
389			4.6	3.5	
T.P. 390	4.98	1308.45	4.64	1303.45	6 Stake

$\frac{-9.4}{33} - \frac{8.3}{20} - \frac{0.4}{8}$ $\frac{-0.6}{11} - \frac{8.1}{27} - \frac{8.4}{35}$

$\frac{-10.2}{34} - \frac{8.1}{21} - \frac{0.4}{7}$ $\frac{+0.1}{12} - \frac{0.6}{18} - \frac{8.9}{31} - \frac{9.5}{41}$

$\frac{-12.4}{34} - \frac{9.0}{22} - \frac{0.4}{7}$ $\frac{+0.2}{7} - \frac{0.6}{12} - \frac{9.6}{30} - \frac{9.5}{37}$

57a. 1.5 H.T. - 5 E 100

130845

391 5.0 3.5

392 5.0 3.5

393 4.9 3.6

394 4.9 3.6

395 5.6 2.9

396 5.5 3.0

T. 397 5.92 130910 5.17 130928 95%

398 5.4 3.6

399 5.1 3.9

400 4.8 4.2

401 4.8 4.2

402 4.6 4.4

403 4.6 4.4

404 4.6 4.4

L R

-9.4	-9.1	-0.3	+0.2	-0.2	-0.2	-5.4
33	21	8	4	13	33	38

-8.0	-7.1	-0.4	+0.2	-0.1	-10.0	-10.5
33	21	7	2	15	36	43

47	-12.0	-5.0	-2.5	0.0
	33	17	11	7

Gen. 10K,
SMB TV Ice

-0.1	-0.5	-10.0
10	22	43

15 HI - 5 110v

1309.00

463.8

5.0

4.0

10. Folge
20. 21)

BMI

4.07

1304.38

Sta	Def Angle		
POC 81	20°-12'	POC.	
80 +49			
80	18°-12'	POC.	PI 80+685
79 +27			Δ 60°-41'
79	16°-12'	✓	4°CL
			T=978.8
78	14°-12'	POC.	146°-17171
			Equis
POC 77	12°-12'	✓	Loc B EC 88+06.8 = 73+76.9 Loc A.
76	10°-12'	P.O.C.	
75	8°-12'	POC	
74	6°-12'	✓	
73	4°-12'	POC.	
Loc. POC 72	2°-12'	✓	
71	0°-12.36'	✓	
PI 70+89.7	10.3'		Begin Loc B line sta = Loc A Sta

Snowed out

1-15-32

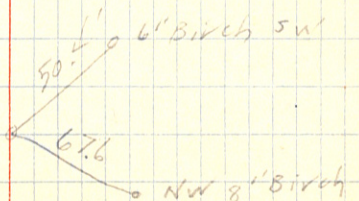
29

5.60 yds

B. 3' sound

5.3.200

4.3.200



Revision Loc. B Line

LASH 102

101

100

POT 99+99.1

99

98

97

96

95

Loc. H Sta. 94

Loc. B Sta. 94

P.T. 88+06.8

$54^{\circ}-20.52'$

$0^{\circ}-08.76'$

= Loc. H Sta. 93 + 98.9 (592.1)

88

$34^{\circ}-12'$

87+60

Township line

P.O.C. 87

$32^{\circ}-13'$ P.O.C.

86

$30^{\circ}-12'$

85

$28^{\circ}-12'$

84

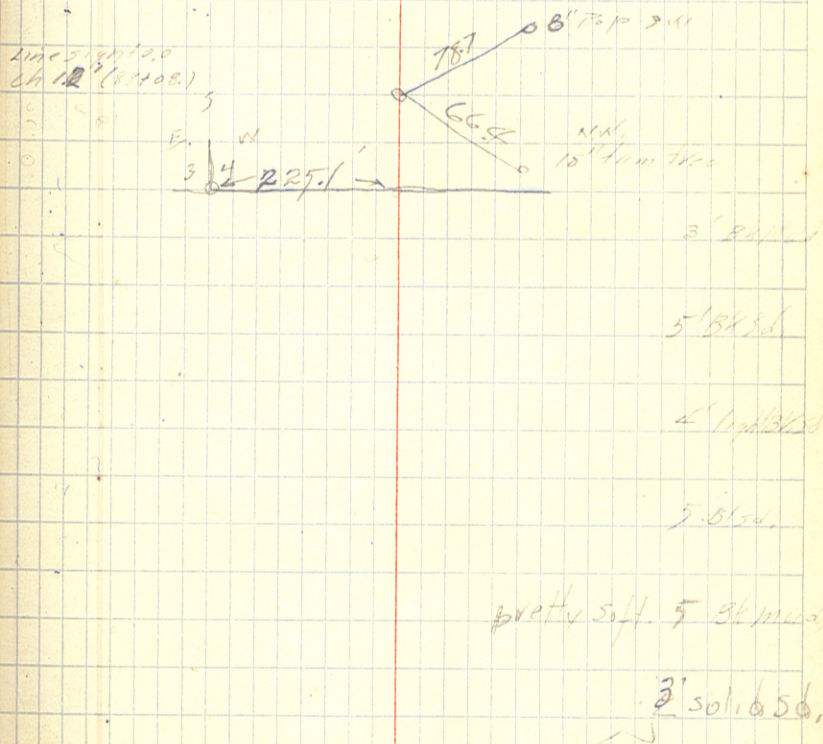
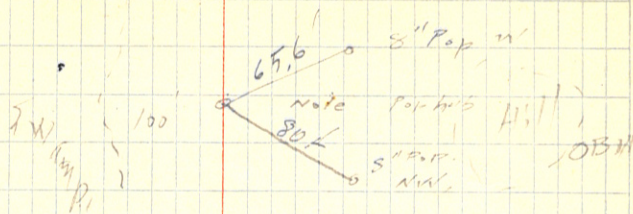
$26^{\circ}-12'$ P.O.C.

83

$24^{\circ}-12'$

82

$22^{\circ}-12'$ P.O.C.



Revision Loc B line.

108+35.9 ^{EC} Loc A Line

108

107

106

105+83.3 ^{Loc A Line 7} _{PI 107+207} Phoney PI for forward Loc A = PI 105+33.1

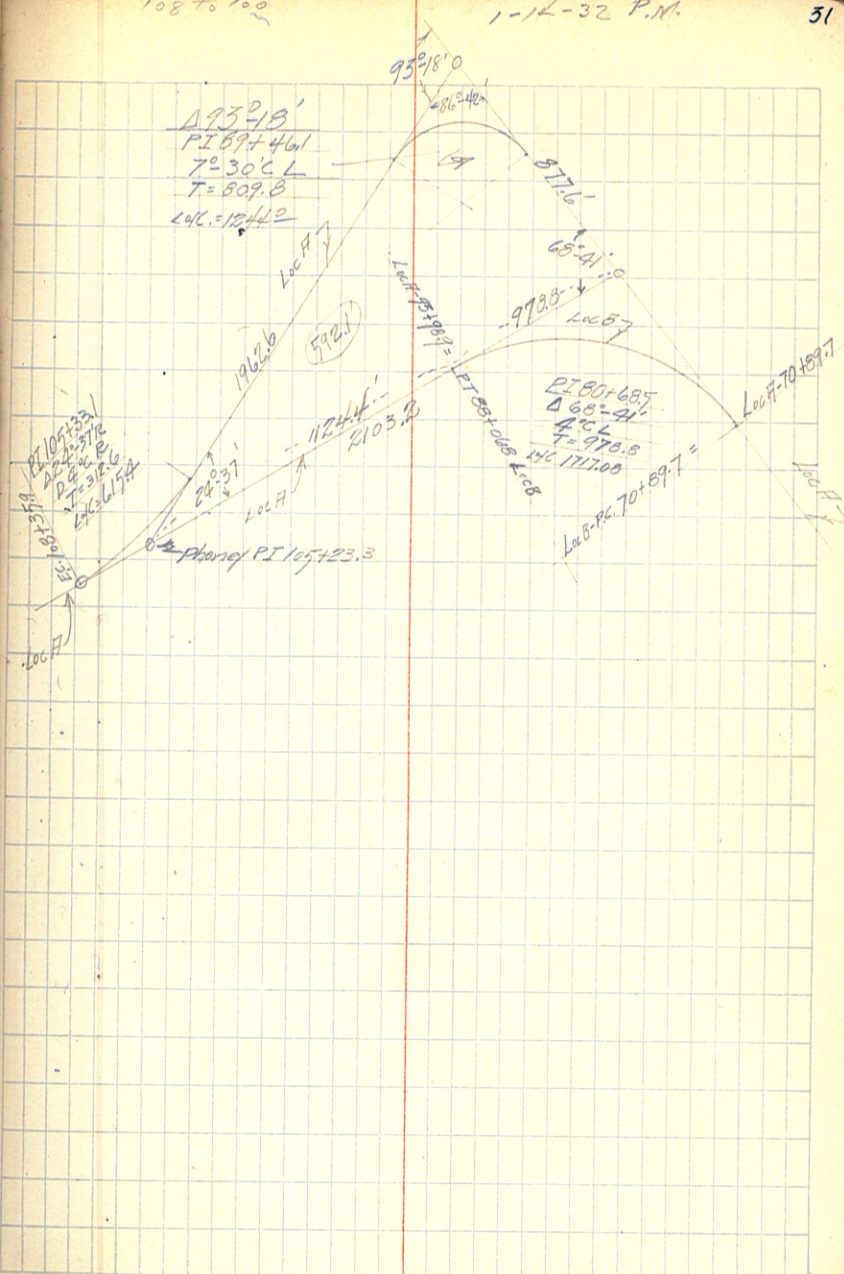
104

103

108 to 100

1-14-32 P.M.

31



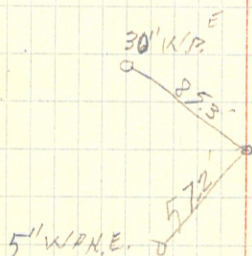
Corr. Chainage Revision Loc C Line
of 177

18/10/93

1-13-32 A.M.
S. S. Walker
E. J. Schuler
Bob Newcom

189	15° 00'	POC. ✓	
188	13° 00'	POC	
187	11° 00'	POC.	
186	9° 00'	✓	
185	7° 00'	✓ POC.	Const POC
184	5° 00'	✓ POC.	
183	3° 00'	✓	
182	1° 00'	✓	
Loc. start PC. 181+50.0	500		
181		stake corrected ✓	= LA-181+500 ✓ = 182+500 LA
180		stake corrected ✓	= 182 LA
179		stake corrected ✓	= 181 LA
178		stake corrected ✓	= 180 LA
177		stake corrected ✓	= 179 LA
176 LA			= 178 LA -100' = 176 LA

W. Walker



Revision Loc C Line

	+ 5	HT	- 5
199+44			6.0
199+72			3.6
199+92			6.2
200	57° 00'	POC	4.8
199	57° 00'	✓	2.9
198	55° 00'	✓	
		const POC	
197	51° 00'	POC	
196	29° 00'	✓	
195	27° 00'	POC	
194	25° 00'	✓	
193	23° 00'	POC	
		const POC	
192	21° 00'	✓	
191	19° 00'	POC	
190	17° 00'	✓	
		const POC	

1-10-3R
193 to 201+9.9

S.S.W. of Hwy 7
BLSchulter Pad.
Bob New ch.

Revision Loc C Line

10 HI - 5 BM

6.0

BM#3

sight 0.7 R
ch 2.0
sight 1.1 L
in 0.1

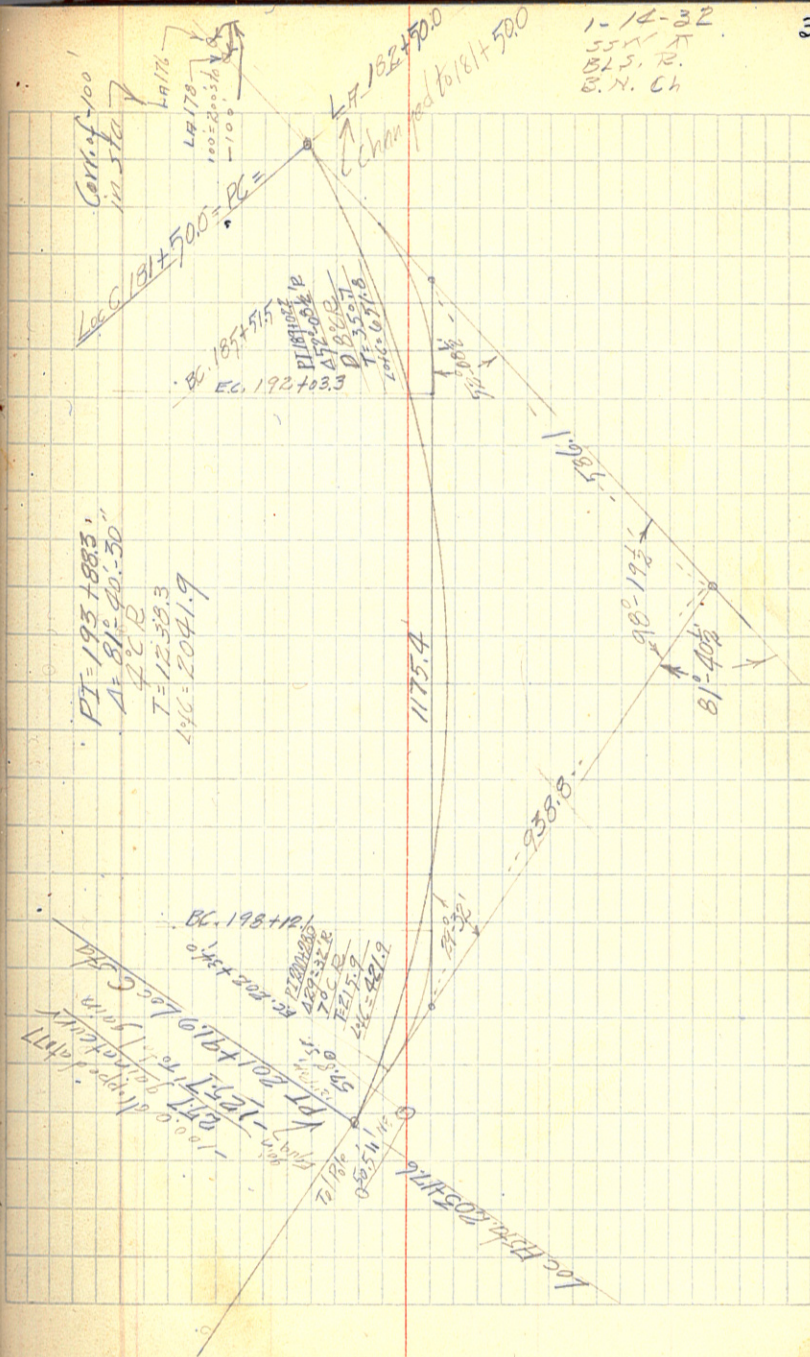
Loc C stop
P.T. 201+91.9 40°-50.28'
820.4 - 50.28'

From 9.11+50.2 = 203+17.6 Loc B 5.7 L

201 39°-00'

6.1

1-14-32
55 N T
BLS, R.
S. N. Ch



Sta	+5	LE HI	-5	661	B.M.
189		↑	43	18.3	
T.P.	0.75	2263	7.67	21.88	
+92			7.4	22.2	
190			8.7	20.9	
190+27			7.25	22.4	
191			7.7	21.9	
192			7.8	21.8	
192+23			5.2	22.4	
192+62			4.1	25.5	
193			5.1	24.5	
194		↑	7.1	22.5	
T.P.	6.63	27.55	7.47	22.2	
195			8.1	22.3	
196		30.39	8.2	22.2	
		↑			

5.5.11.11.11 - 13
B.L. 3.1.1.1.1.1
B.B. Neururer L D

1-14-32 Level 36

	+1.0	+0.5	-0.2	10.5	+0.2	-0.3		✓
	35	36	22	16	21	34		
Spine 24								✓
pa	-0.2	-2.0	-0.7	-0.5	-1.4	+0.2	+0.2	
shoulder	34	32	29	7	2	18	35	
40	+0.7	-1.1	+0.5	+1.1	+0.5	+1.2	+1.5	+1.0
inditch	34	31	28	15	5	22	35	
	+0.5	+0.3	-0.5	-0.3	+0.5	-1.4	+0.5	+0.2
	34	29	26	24	11	3	6	21
								33
	-0.3	-0.3	-1.7	-0.8	-0.9	-2.0	-1.0	-1.2
	34	17	15	12	10	16	18	32
Bottom of hole	+1.5	+1.4	+1.7	10.6	+1.0	+0.5	-0.7	+0.8
	33	19	3	7	19	29	32	35
	+0.5	+0.3	-1.7	-0.8	-0.5	-1.3	-2.4	-1.0
	33	18	2	5	27	37	39	20
	+0.3	+0.6	0.0	-1.4	-0.5	-0.2	-0.5	
	32	19	6	9	12	26	35	
	-0.2	-1.0	+1.1	-0.5	+0.5	+0.5	+0.5	+0.7
	33	14	14	17	27	33	33	39
								22.6
	-0.3	+0.2	-0.8	-0.6	-1.6	-0.7	-0.3	
	33	14	17	26	28	3	38	
Naif in teleph pole								Kd
	+0.8	+0.5	-0.8	-2.4	-1.0	0.0		Z
	35	33	27	30	34	23		
	-0.8	-0.4	+0.3	-1.4	-0.2	+0.6		
	33	21	18	22	27	37		

Sta	+	49	2	del	BM's
70	8.60	21.03			±3/3 12.43
70	6.40	23.04	4.39	16.64	
B70+89.7pc.					
71			8.2	14.8	
71+77			7.9	15.1	
72			4.5	18.5	
			4.9	18.1	
73			7.0	16.0	
73+50			6.8	16.2	
74			9.8	13.3	
75			9.2	13.8	
T.P.	4.54	22.59	4.99	18.05	
76			2.9	19.7	
77			4.2	18.4	
78			6.7	16.1	
79			6.3	16.3	
79+27			8.1	14.5	
80			7.7	14.9	
T.P.	+(-0.23)	14.39	7.97	14.60	
80+49			8.4	11.0	

	L	R	
14" No. 1 78400 45' B			
Sp 5' Spruce			
same L ^r Notes			
	-1.0	-0.7	+0.3 0.0
	34	19	20 34
	-1.4	-1.0	+0.7 +1.5 +1.1
	41	29	15 34 41
	-0.4	+1.1	-0.7 0.0
	37	27	20 34
			Edgwl.
	20.	+0.2	-0.3 -0.8 -2.1 -1.0
		33	16 17 32 35 41
	+0.4	+0.8	+0.6 +0.5
	33	19	14 34
	+1.2	+0.5	+1.0 +0.5
	34	28	15 34
Spin 1/2 Spruce			
	-0.8	-0.7	-0.1 -1.6 -1.6
	33	17	12 29 34
	+0.5	+0.8	-0.3 -1.6
	35	16	13 35
	CS.	+2.0	+0.5 +0.1 +0.0
		35	15 16 34
			L ^r
	CS.	+0.5	+0.2
	40	20	19 34
			L ^r
	+1.3	0.0	0.0 -0.3
	34	18	15 35
			CS.
	0.0	+0.3	-0.8 -2.0
	34	16	14 37
Spin 1/2 Spruce	-1.0	-0.3	0.0 +0.2
	34	15	16 34
			Boy Low gr

LB	sta.	NS	NS	NS
			14.39	100
LB 81			4.4	100
82			5.8	86
83			5.5	89
84			5.4	90
T.P.	3.17	13.37	4.19	1000
85			4.0	9.4
86			3.8	9.6
87			4.2	9.6
88			3.6	9.8
LB 88	4.18	14.42	3.13	10.2
P.P. 887068 = 93 + 96.9			5.4	9.0
94			5.4	9.0
95			5.4	9.0
96			4.7	9.7

39

V R

			$\frac{-0.3}{33}$	$\frac{0.0}{16}$	$\frac{-0.3}{14}$	$\frac{-0.7}{33}$	✓
Begin			$\frac{0.0}{33}$	$\frac{+0.5}{17}$	$\frac{0.0}{17}$	$\frac{+0.1}{33}$	live tag elders swept + R "final" 5/21/91
			$\frac{-0.4}{35}$	$\frac{+0.2}{20}$	$\frac{0.0}{17}$	$\frac{-0.6}{33}$	200' edge SW
			$\frac{+0.4}{34}$	$\frac{0.0}{15}$	$\frac{-0.3}{15}$	$\frac{+0.1}{33}$	100' edge SW
			$\frac{-0.9}{33}$	$\frac{-0.1}{18}$	$\frac{-0.6}{14}$	$\frac{-0.5}{33}$	✓
			$\frac{-0.5}{33}$	$\frac{-0.8}{19}$	$\frac{-0.5}{16}$	$\frac{-0.1}{33}$	✓
			$\frac{0.0}{33}$	$\frac{+0.3}{16}$	$\frac{-0.3}{17}$	$\frac{-0.2}{33}$	✓
			$\frac{-0.4}{33}$	$\frac{-0.6}{16}$	$\frac{-0.9}{13}$	$\frac{-0.5}{51}$	✓
end of			$\frac{-0.7}{33}$	$\frac{+0.2}{16}$	$\frac{-0.3}{15}$	$\frac{0.0}{33}$	end-sweep
			$\frac{-0.4}{33}$	$\frac{+0.4}{17}$	$\frac{+0.8}{16}$	$\frac{+0.4}{33}$	✓
			$\frac{-1.0}{33}$	$\frac{-1.1}{14}$	$\frac{-0.8}{14}$	$\frac{-0.6}{33}$	✓

L ⁿ		H ⁿ	-5	F ⁿ
97		12.42	4.7	9.7
98			4.1	10.3
99			4.7	9.7
99+51			4.4	10.0
100			1.5	12.9
7.P	3.11	16.72	0.81	13.6
101			2.8	13.9
101+17			6.1	10.6
102			7.2	9.5
103			7.5	9.2
104			5.0	11.7
104+27			4.4	12.3
105			7.4	9.3
POT. 0.5+23.3			6.8	9.9
106			6.6	10.1
107			6.9	9.8
108			5.1	11.6
7.P	9.75	22.29	4.18	12.52
108+35.9			8.69	

	L	R	
60' SW	-1.0 36	-0.8 15	-0.2 15
			0.0 33
	-1.4 36	-0.7 17	-0.8 5
			-1.0 17
			0.0 33
70' SW	-1.2 33	-0.8 14	-0.5 18
			-0.6 33
100' SW	-0.6 33	-0.6 16	+1.0 15
			+2.7 33
			+3.5 33
	-1.8 33	-0.8 16	+0.2 17
			+1.3 42
			+2.4 32
			0.0 35
50' SW	-1.6 33	-1.0 17	+0.6 16
			+0.6 33
			+0.8 46
	-0.9 36	-0.8 15	+0.3 17
			+1.2 32
			+2.4 47
	-1.8 34	-0.1 17	0.0 17
			+1.3 24
			+2.5 36
			+3.5 49
SW	-0.6 50	-0.5 17	+0.2 18
			+1.4 31
			+2.5 40
60	-2.6 33	-1.4 16	-0.5 14
			-0.3 33
			0.0 40
40	-3.0 33	-1.7 30	-0.9 14
			-0.8 33
			0.0 33
	+0.5 33	+0.6 14	+0.5 20
			-0.5 31
			+2.6 26
			+2.5 35
	+0.5 33	+0.6 17	+0.2 5
			-1.0 6
			+1.4 16
			+1.4 26
			+1.5 30
			+0.0 35
	-0.5 37	0.0 18	+0.2 3
			+1.5 2
			+1.2 13
			-0.1 27
			+0.3 36
	-1.4 37	-1.3 28	-1.3 8
			-2.5 6
			+0.1 2
			0.0 16
			-1.7 22
			-2.0 33
			SW
			99+00 LA

46

108+35.9

clock 1313.54

B N+C SP head 30' 15' 65' L 99+00 LA

Revision LD

32+580 BC.

31

30

30+376 P&T

29

28

27

26

25

24

53-660 HUB POT

23

22+81 FC

22

21+84 FC

21

B-20+565 SPINDLE POT

19+77

POT 18+0695

JR Hub

PT 18+043

15°-49'

18

15°-41'

17

12°-41'

16

9°-41'

POG

15

6°-41'

POG

P.I. 15+47.7

14

3°-41'

Δ 512-38R

13

0°-41'

6° CR

P.C. 12+77.1

RR.9

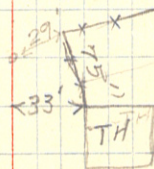
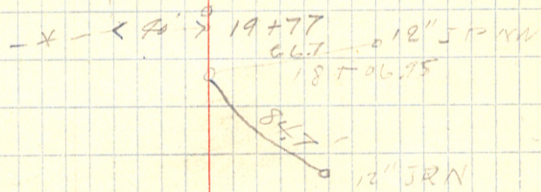
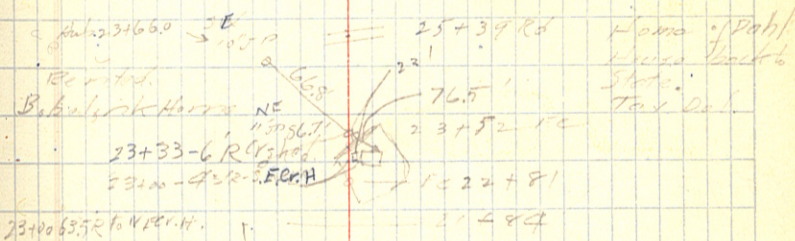
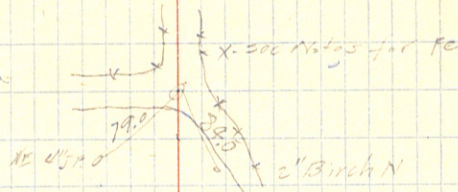
T=270.63

x%0=527.2

523°-15'12"

1-17-32 - Brushed.
1-18-32 - Run Line

41



Revision LP

30+87.6
62.4

PT 37+68.0 0°-53.0
0°-06.8

LD = [41+63.8] 17

37 0°-46

36 0°-36

PI-LD = 35+02.9

P.I. = L[#] 38+98.9

35 0°-26 ✓

Δ 1°-46' R

T = 264.9

34 0°-16.2 ✓

L₁ = 530.0

0°-20' C.R.

33 0°-06.2 ✓
PG. 32+38.0 62

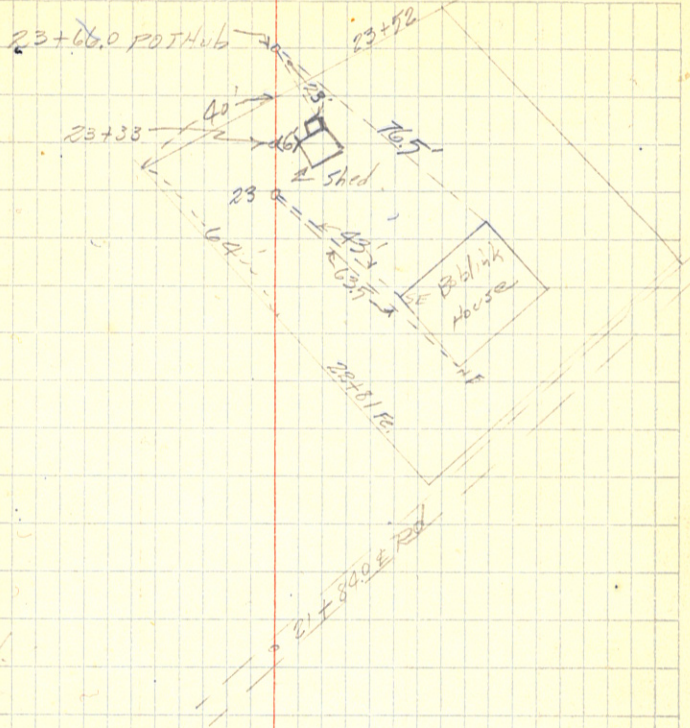
1°-46' R

1-17-32 - BRUSHED

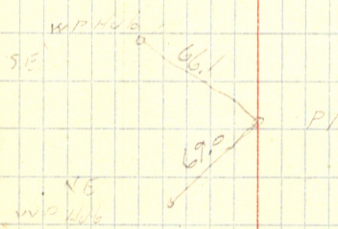
Δ 1°-50' R

1-18-32 RUN LINE

PI = L[#] 35+98.9



attach on right



Levels on Revision LP Line.

Sta	+ S	+ 1/2	- 5	Flev	Bl
T.P.	7.32	20.08			#1) 18134
T.P.	11.76	23.07	9.17	11.31	
PC=12+77.1			4.8	18.3	
13			4.9	18.2	
14			5.9	17.2	
15			4.9	18.2	
16			2.1	21.0	
16+68			7.7	15.4	
17			6.2	16.9	
17+32			5.3	17.8	
18			7.6	15.5	
T.P.	4.75	19.94	7.84	15.19	
PT 181043			4.6	15.1	
19			7.3	12.6	
20			6.4	13.5	

1-18-37-Levels
 35. Walker R.
 32. Schuster Red
 Bob Neurrerch.
 L R

+0.2	-0.0	-0.6	+0.8	+0.1	+0.6	+0.2	-0.8	+0.3	+0.5	PC
35	23	20	13	9	11	15	19	23	40	
-0.1	-0.1	+0.1	+0.5	-0.3	+0.5	+0.2	-1.3	0.0	-0.3	+0.8
33	22	18	14	11	10	15	18	22	31	39
+0.3	-0.6	-0.6	0.0	+0.1	+0.2	-0.8	-0.6	-1.0	T.H.	
33	34	28	19	27	12	15	32	36.7		
-0.2	0.0	+1.0	0.0	-0.3	-0.2	+0.5	+2.2	+2.4		
35	22	13	6	4	8	11	21	34		
-1.0	-3.5	-3.2	-0.5	0.0	+0.2					
42	32	18	5	21	35					
+0.5	+0.2	+0.2	-0.0							
35	20	20	34							
+0.2	+0.5	-0.6	-1.0							
36	22	20	34							
0.0	-1.4	-0.1	-0.5	-1.0						
32	20	20	34	20	34	0.0				
-1.4	-0.0	+0.5	+0.6							
35	20	15	34							
+0.2	-0.1	+0.1	-0.4							
33	19	15	34							
0.0	-0.2	-0.4	-0.6							
36	33	20	34							

LD Sta	+5	-5	5' 2v	84
		19.94		
POT 20+36.5		4.4	15.5	
20+60		3.9	16.0	
21		4.4	15.5	
22		2.5	16.4	
23		2.3	17.6	
T.P.	360	77.19	1.25	18.59
23+66.0		3.3	18.9	
24		2.9	18.3	
25		4.5	17.7	
an Drain T.P. 26	20.7	16.64	7.62	14.57
27		4.7	11.9	
28		2.4	14.2	
28+54		4.3	17.3	

L	R
$\frac{-0.6}{35}$	$\frac{-0.4}{21}$
$\frac{-0.6}{33}$	$\frac{-0.3}{20}$
$\frac{-0.5}{33}$	$\frac{-0.2}{18}$
$\frac{+0.4}{36}$	$\frac{+0.5}{22}$
$\frac{+0.7}{36}$	$\frac{+0.5}{20}$
$\frac{-1.1}{34}$	$\frac{-0.8}{20}$
$\frac{-0.7}{34}$	$\frac{-0.6}{20}$
$\frac{-0.4}{34}$	$\frac{-0.2}{20}$
$\frac{0.0}{33}$	$\frac{0.0}{20}$
$\frac{+0.6}{34}$	$\frac{+0.3}{20}$
$\frac{0.0}{32}$	$\frac{+0.1}{30}$
$\frac{+1.7}{37}$	$\frac{+0.9}{20}$

sto +5 H1 -3 FIV
18.30

37 8.3 10.0

PG 37+68° 8.1 10.2

stads^{LA} Est. 5.29 13.01

L R

-0.6 -0.4 +1.7
34 24 17 23 26 30 31

-1.4 -0.8 +1.2
34 24 19 37

Ch. 0.4
Col Elev 12.97

Sto	+5	H.I.	-5	Ref	
T.P.	6.67	17.83			1313.16
T.P.	5.62	18.20	6.65	12.12	
			5.37		1313.43
T.P.	10.05	1322.48			1312.43
			2.75		1319.73
T.P.	5.97	18.63			1313.54
T.P.	1.28	12.98	6.73	11.90	
			2.64	10.34	
T.P.	8.56	14.10			1313.54
T.P.	1.71	21.29	10.60	11.50	
			6.10	15.19	

S.S. R. 1/4 of 15
 M. Duran
 B.L. Schilder ch.

Nov 20-32

47

10" J.A.P. 70' L
 B.M. #1 sto 27+50 abandoned 1" line

P.O.T. # 376

B.M. #1 sto 27+50 2.36' Jpk. Hd. in Root.

B.M. 78+00 POST 45' R. Ry Sp. in 16" Riv. Pipe

33' at 76+00 #3

99+50 - 185' R.N.R.

R.R. 4th 3/4" sta 97+00
 100' 1/2" R.N.R.

99+50 - 185' R.N.R.

8" W.P.L. 709+60-35'

Sta	+5	4.7	-5	Ground	Grade	L	±	R	GRd
	3.95	17.13			1313.18		POT ± 30 + 34.6		
30			6.2	10.9	12.9	7.4 6.6 15.6	-2.0	RC 1.6 2.6 22.4	4.7 ✓
+37.6			3.9	13.2	12.7	RC 1.8 4.6 22.7	+0.5	+1.1 3.3 24.7	4.4 ✓
31			5.4	11.7	12.5	11.1 3.5 24.7	-0.8	RC 0.4 6.2 29.6	4.6 ✓
~32			7.2	09.8	12.0	RC 0.7 6.2 21.1	-2.2	-3.7 9.0 17.9	5.1 ✓
P.C. + 38.0									
33			5.8	11.3	12.0	RC 1.0 6.1 21.5	-0.7	RC 1.5 5.6 22.3	5.1 ✓
T.P.	456	17.74			1313.18		POT ± 30 + 34.6		
34			4.2	13.5	12.0	11.6 4.1 25.4	+1.5	+2.4 3.3 26.6	5.7 ✓
35			6.7	11.0	12.0	RC 0.3 7.4 29.5	-1.0	-1.0 6.2 15.8	5.7 ✓
36			4.9	12.8	12.0	+2.0 3.7 26.0	+0.8	+2.6 3.1 26.9	5.7 ✓
T.P.	6.88	16.95	7.67	12.07					
36+21					111.7				
37			7.0	10.0	11.5	RC 0.1 7.4 20.2	-1.5	RC 1.8 5.7 22.7	5.5 ✓
LD									
PT 37 + 64.0 = L ^o 4163.8			6.7	10.3	11.2	RC 0.3 7.5 20.5	-0.9	+0.6 5.2 23.9	5.8 ✓

Sta	IS	HI	-S	G Elev	Grade	L	R	R	GR.
		16.95							
42			57	11.3	11.0	20.1 6.9 21.7	+0.3	+1.8 4.2 25.7	6.0 ✓
43			53	11.7	10.5	+1.3 5.2 25.0	+1.2	10.9 5.6 24.1	6.5 ✓
44			6.9	10.1	10.0	0.0 7.0 23.0	+0.1	0.0 7.0 23.0	7.0 ✓
45			9.5	7.5	10.0	-0.7 7.7 16.1	-2.5	-2.3 9.3 15.5	7.0 ✓
46			9.4	7.6	10.0	-2.1 9.1 15.7	-2.4	-2.5 7.5 15.8	7.0 ✓
in the TP Nail	0.47	19.79	4.85	10.10		1319.32 BMS 2+55			
47			12.5	7.3	10.0	-2.4 12.2 15.6	-2.7	-2.6 12.4 15.9	9.8 ✓
+52			10.8		10.0	20.1,3 10.5 27.0	-1.0	20.1,3 10.5 27.0	7.8 ✓
48			12.2		10.0	-2.5 12.3 15.8	-2.4	-2.5 12.3 15.8	9.8 ✓
49			12.6		10.0	-2.6 12.4 15.9	-2.8	-2.7 12.5 16.1	9.8 ✓
50			11.9		10.0	-2.1 11.7 15.7	-2.1	-2.0 11.8 15.0	9.8 ✓
TP	+(-0.25)	19.07				1319.32			
51			9.6		10.0	20.1,5 9.6 27.3	-0.5	+0.6 8.5 23.9	9.1 ✓

				Gr. Elev	Gr. Elev	GR	SE	L	Z	R	SE	GR	G.P.
540	+5	1-1 19.07	-5	1319.3	B/M 52+50	Ry 54	10/6	J.P. 110' L			+		
PC. 51+46.5			8.4	10.3	8.8	1	PC 1.7 9.1 22.6	+0.5		41.6 7.4 25.4	1	7.0	8.9 ✓
52			6.0	10.5	8.5		+2.2 6.3 26.3	+2.6		+5.3 5.4 28.0	1	8.7	8.6 ✓
+50			3.7	10.8	8.2		+4.4 3.8 29.6	+4.6		+4.6 3.8 29.9	1	8.4	8.3 ✓
53			8.7	11.0	8.0		+0.6 7.4 20.9	-0.6		PC 1.4 8.8 22.1	1	8.2	8.1 ✓
+50			7.1	11.3	7.7		+1.6 6.1 25.4	+0.7		PC 1.2 8.7 21.8	1	7.9	7.8 ✓
54			9.8	11.5	7.5		PC 1.2 8.3 21.8	-2.2		-2.2 9.9 15.3		7.7	7.6 ✓
+50			9.8	11.5	7.5		PC 0.3 9.2 20.0	-2.2		-2.4 10.0 15.6		7.7	7.6 ✓
+60				11.4									7.7
55			6.7	11.4	7.6		+1.4 6.2 25.1	+1.5		+1.0 6.8 24.5		7.8	7.7 ✓
+50			5.5	11.4	7.6		+3.2 4.4 27.8	+2.2		+1.4 6.4 25.1		7.8	7.7 ✓
+75				11.3									

R. Curve Rn

Sto	+5	H/I	-5	Cor Elev	Grade
		19.07			
56			4.9		11.3
T.P.	347	17.36	5.18	13.89	
+50			4.8		11.3
+78					11.3
57			5.9		11.2
T.P.	573	16.55	6.54	10.82	
P.T. 58.4			5.2		11.1
58			4.3		11.1
+70			6.5		11.0
59			6.2		11.0
60			8.3		11.0
61			8.1		11.0
+55			6.6		11.0

CR	SE	L	±	P	SE	GR	GR
77		12.2 5.5 16.3	+2.9	-4.1 3.8 29.7		7.1	7.8
6.0		50.1 7.9 30.7	-1.3	80.3 7.9 20.5		6.2	6.4
		+1.8 4.3	+0.3	80.7 7.6 21.1		6.3	6.2
		26.1 2.57 54		0.0 5.6 73.0		5.0	5.5
		11.7 3.8 25.6	+1.2	+0.1 5.1 23.6			5.5
		80.1 6.5 21.7	-0.9	80.7 6.5 21.8			5.6
		80.4 6.2 22.1	-0.6	80.8 6.2 21.2			5.6
		80.3 7.3 20.5	-2.7	-2.8 8.2 16.2			5.6
		80.6 7.0 20.9	-2.5	-2.7 8.5 16.4			5.6
		80.12 6.4 21.8	-1.0	80.04 7.2 20.6			5.6

Sta	+5	H/I	-5	Cor Elev	Cor. Elev
		16.55 ↓			
62			7.0		11.0
T.P.	6.03	15.40 ↓	7.18	9.37	
+75			4.8		11.0
				5.16	12.24
63			6.1		11.0
+46			3.9		11.0
64			4.8		11.0
65		↓ ↑	6.6		11.0
T.P. 4000			6.11	10.79	
66			8.2		11.0
+30			7.1		11.0
67			7.9		11.0
68			8.1		11.0
69		↑ 16.70	8.4		11.0

L	E	R	G.R.
200.7 6.9 21.1	-1.4	200.1 7.5 20.2	5.6 ✓
201.2 5.7 21.8	-0.4	201.5 4.9 22.3	4.4 ✓
200.8 5.6 21.2	-1.1	201.4 5.0 22.1	4.2 ✓
201.9 4.5 22.9	+0.5	201.0 5.1 21.5	4.5 ✓
200.8 5.6 21.2	-0.4	201 3.7 24.1	4.4 ✓
201.4 6.5 15.6	-1.2	201.5 6.9 15.8	4.4 ✓
201.6 8.0 15.9	-2.8	201.2 7.6 15.3	5.4 ✓
201.8 7.2 12.7	-1.7	201.06 6.8 20.9	5.4 ✓
201.5 7.9 15.8	-2.5	201.5 7.9 15.8	5.4 ✓
201.7 8.1 16.1	-2.7	201.5 7.9 15.8	5.4 ✓
201.5 7.9 15.8	-3.0	201.5 7.9 15.8	5.4 ✓

Sta	+5	H1	-5	Coverley	Grade	GR.	SE.	L	E	R	SE.	GR	GR
							+				-		
70			6.3		11.3			-2.3			-3.0		
T.P.	3.98	16.40	10.81	12.67			7.2	-1.2			8.1		5.1
+56	3.50	↑	10.7	1319.73	11.9	stump	15.5				16.5		
	4.19	23.23					10.9	+0.6			9.8		11.3
		23.92			1319.73		23.6				25.3		
P.C. +89.4			9.2		12.2	30276100		+2.6			+2.6		
						11.9		9.3	+2.5		8.9		11.5
								26.9			26.9		11.7
71			8.9		12.3			-2.6			+2.9		
						11.8		9.2	+2.7		8.5		11.4
								26.9			27.4		11.6
72			5.8		13.5			+2.0			+5.4		
						10.6		6.6	+4.6		4.8		10.7
								29.0			31.1		10.4
73			8.0		14.5			+1.9			+0.1		
	3.31	23.04			1319.73	9.6		7.8	+1.4		8.5		9.2
								25.7			27.1		9.4
+50			6.9		14.9			+2.1			+0.8		
			10.9	17.0		8.3		6.2	+1.2		7.1		7.9
								26.2			24.2		8.1
74			10.0		15.1			100.4			100.1		
			10.0			8.1		9.7	-2.1		9.6		7.7
								20.6			20.2		7.9
75			9.1		15.2			100.1			100.6		
						8.0		8.9	-1.3		9.0		7.6
								21.7			20.9		7.8
76			3.7		14.9			+3.1			+3.0		
						8.3		4.6	+4.4		4.9		7.9
								28.6			27.5		8.1

D.C. 10.8

stump

stump

sta	+5	H1 v3.0d	-5	Cor. Elev	Grade	GR.	JE +	L	#	R	SE	GR.	GR.
					1312.43	1705.7 78 too R/Sp							
77			5.0		14.3	6.9	2	4.6 4.3 29.9	+3.7	+2.3 6.2 26.5	2	25	8.7
78			7.1		13.7	9.5	R	+3.3 6.2	+2.2	+2.7 6.4 27.1	3	9.1	9.3
T.P.	249	18.85	6.67	16.37		EX 78		28.0					
79			2.8		13.1	6.0	2	+3.5 2.5 28.3	+3.0	+2.5 3.1 26.7	2	5.6	5.8
80			4.2		12.6	6.5	2	+2.2 4.3 26.3	+2.1	+0.7 5.4 24.1	2	6.1	6.3
+49			8.3		12.3	1.8	2	200.6 8.2 20.9	-1.7	200.6 7.8 20.9	2	6.4	6.6
81			9.5		12.0	7.1	2	-5.1 9.2 15.2	-2.6	-7.7 9.4 16.1	2	6.7	6.9
82			10.4		12.0	7.1	2	-3.3 10.4 17.0	-3.5	-3.5 10.2 17.3	2	6.7	6.9
83			10.1		12.0	7.1	2	-2.7 9.5 16.1	-3.2	-3.4 10.1 17.1	2	6.7	6.9
84			10.3		12.0	7.1	2	-3.2 10.3 16.8	-3.4	-3.9 10.6 17.9	2	6.7	6.9
85			10.3		12.0	7.1	2	-3.3 10.4 17.0	-3.4	-3.8 10.5 17.7	2	6.7	6.9
	4.60	14.98	8.47	10.38		35 tam tree R - 5ok		17.0					
86			5.9		12.0	3.2	2	-3.2 6.4 16.8	-2.9	-3.1 6.5 17.1	2	2.8	3.0

Sta	+S	H1	-S	Gr. Elev	Grade	GR	SE	L	£	R	SE	GR	GrR
		14.98											
87			6.5		12.0	3.2	2	-3.0 6.2 16.5	-3.5	-3.7 6.5 17.6	2	2.8	3.0
88			5.7		12.0	3.2	2	-2.9 6.1 16.4	-2.7	-3.7 6.5 17.6	2	2.8	3.0
PT 88 to 6.8					12.0		2				2		
Equi. 592.15													
95			6.3		12.0			-3.5 6.5 17.3	-3.5	-2.7 5.7 16.1			3.0
96			6.0		12.0			-3.3 6.3 17.0	-3.0	-2.8 5.8 16.2			3.0
97			5.5		12.0			-2.9 5.9 16.4	-2.5	-2.9 5.9 16.4		2.0 5.0 14.0	3.0
98			4.9		12.0			-3.5 6.5 17.3	-1.9	-2.9 5.8 16.2			3.0
99			5.6		12.0			-3.0 6.0 16.5	-2.6	-3.3 6.3 17.0			Brood 3.0
T.P.	8.17	17.60	5.50	GR 2499 9.48	13.13.54	99+50	185'R	Sp Hd in 30" N61. Pine					
	+31		8.4		12.0	00		-2.4 8.0 15.6	-2.8	+0.4 5.2 63.6		5.6	40' (5.0)
100			5.7		12.0	20.8		100.8 -6.8 41.2	+0.4	+5.2 0.4 70.8			40' (5.0)

Sta	+5	H/I 17.60	-5	Cor Elev	Grade	+ -63 dc = 60	L	L	+43 dc = 40	R	GR
101			3.9		12.0	NOBY	pc 1.7 5.9 42.6		+1.7	+2.2 3.1 66.3	40.8 (56)
+47			7.4		12.0	0.0	-2.6 8.2 15.9		-2.8	+2.3 3.3 66.5	40.8 (56)
102			8.3		12.0	-2.2 4.8	-5.9 5.4 16.2		-2.7	-2.4 8.0 15.6	40.8 (56)
103			8.7		12.0	-4.9 8.5	-3.7 8.5 16.8		-3.1	-2.7 8.3 16.1	5.6
104			6.0		12.0	-1.0 6.6 7.0	-1.6 7.2 14.4		-0.4	pc 1.6 6.0 32.4	5.6
104 40 T.P.	212	16.31	6.1 8.4 1.0	7.9	12.0	15.19	pc 0.3 7.3 20.5		-0.5	pc 1.5 4.1 22.3	5.6
105			7.2		12.0		-2.6 6.9 15.9		-2.9	-2.6 6.7 15.9	4.3
+73.3					12.0						4.3
106 5			6.4		12.0		pc 0.0 6.3 20.0		-2.1	pc 1.2 5.1 21.2	4.5
107		16.31	5.7		12.0		-2.0 6.3 15.0		-1.2	pc 1.3 5.0 22.0	4.3

see Pg #61

Sta 5 = 24' top
6 to 13 = 30' top.

F. 15' 1.5' over
DC = 20'
cut = 2.15

Sta	+5	H 1	-5	Cut Elev	Grade	L	R	GR
	7.00	13.70		1306.70	Sta 0 - 272' Lt & 70' North - Ry Sp. 20" W.P.			
2			3.6	10.5		DC 0.5 3.7 20.8	-0.4 21.1 20.7	3.8
3			5.1	09.7		0.9 4.7 16.4	-1.1 5.2 17.1	4.0
4			4.4	09.5		21.28 5.8 17.4	-0.2 5.9 17.6	4.2
5			4.1	09.5		DC 0.0 5.2 20.0	+0.1 5.2 20.0	4.2
6			4.6	09.8		DC 0.1 4.8 20.2	DC 0.1 4.5 20.6	3.9
T.P.	11.83	20.95	4.58	9.12	446	DC 0.5 10.7 20.8	-1.1 11.3 16.7	10.2
7			11.3	9.7	10.8			10.0
8			7.8	12.0		DC 0.2 9.8 20.3	DC 0.3 9.7 20.5	9.0
9			7.5	14.0		+0.1 6.9 21.7	DC 0.5 7.7 20.5	7.0 40B Wm 24.5
10			4.5	16.0		10.1 4.6 22.1	+0.7 4.3 22.4	5.0 40B Wm 26.6
TP Lamp Post	7.06	23.18	4.83	16.2		DC 0.3 6.3 20.5	DC 0.7 5.9 21.1	5.6
11			5.9	17.6				

Sta	+S	H/I	-S	GR. Elev	GR. Elev	GR	SE	L	±	R	SE	GR	GR
		23.18											
12			5.0	18.3									4.9 ✓
P.C. +77.1			5.2	18.6		4.3	3						4.6 ✓
13			5.2	18.7		4.2	3						4.5 ✓
14			6.1	18.8		4.1	3						4.4 ✓
15			5.2	18.7		4.2	3						4.5 ✓
16			7.5	18.3		4.6	3						4.9 ✓
T.P.	4.62	22.06	5.74	17.44									
+68			6.8	18.1		3.7	3						4.6 ✓
17			5.3	18.0		3.8	3						4.1 ✓
+32			4.2	17.9		3.9	3						4.2 ✓
78			6.7	17.7		4.1	3						4.4 ✓
P.T. 16+043													

1-
24 R/S
↓

Sta	+S	H/I	-S	Gal. Elev	Grade	L	±	R	G.R.
	2.56	20.00		17.44		Abnd Spk J.P. 1.33' of 16.400			
19			7.4		17.3	-4.6 7.3 18.9	-2.7	-2.8 7.5 19.2	2.7
20			6.5		17.0	-3.6 6.2 17.4	-3.5	-4.1 7.1 18.2	3.0
+60			4.0		16.8	pc 1.1 2.1 21.7	-0.8	pc 0.9 4.3 21.4	3.2
21			4.3		16.7	pc 0.6 4.7 20.9	-1.0	pc 0.9 4.2 21.4	3.3
22			3.6		16.3	+0.6 3.1 23.9	+0.1	pc 1.1 4.6 21.7	3.7
23			2.3		16.0	+7.2 1.8 26.3	+1.7	+0.9 3.1 24.4	4.0
T.P.	3.35	21.53	1.52	18.18	25/23	12.3 3.5 26.5	+3.1	+3.4 2.4 28.1	5.8
+66			2.7		15.7	+1.9 2.0 25.9	+2.4	+4.3 1.6 29.5	5.9
24			3.5		15.6	+2.2 4.2 26.3	-1.2	+2.3 4.1 26.5	6.4
25			4.0		15.1	pc 1.5 7.3 22.3	-0.2	+0.2 6.6 23.3	6.8
26			7.0		14.7				
			8.13	13.40		(Ch. 13) 9M. 13/13.43			

sta 15 H1 -5 Gr Elev Grade
21.53

1313.43

27

9.7

14.7

28

7.3

13.8

154

9.3

13.6

29

9.0

17.5

13.4

continued on pg 48 Bk #142

30

12.9

30 + 37.6

12.9

L \$ R GR

274.50 2 36 L^A Sp. Hd.- 2.4
9.7
- 15.6

- 2.4

- 2.4
9.7
15.6

7.3

+ 0.7

7.0

22.1

+ 0.4

201.6

8.1

22.4

7.7

0.0

7.9

23.0

- 1.4

200.6

9.3

20.9

7.9

207.1

9.0

21.7

- 0.9

201.4

8.7

22.1

201.4

8.7

22.1

8.1

- 2.4

11.0

15.6

8.6

201.6

9.7

22.4

8.8

Sta	+3	H1	-5	Ground	Grade
		16.31			
108	112	16.31 17.47 21.29	5.0		12.3
109			9.4		13.0
109+60			7.3		13.6
110			6.0		14.0
+70			2.6		14.7
111			2.4		15.0
+52.3			1.2		15.4
T.P.	2.18	20.49	2.98	18.31	
112			2.0		15.6
+75			7.7		15.6
113	5		9.9		15.5

L	R	B	G.R.
15.19			
2.3 6.3 15.5	-1.0	-1.1 5.1 13.7	4.0 ✓
2.8 11.1 16.2	-1.1	-0.9 7.2 13.4	8.3 ✓
11.2 6.6 24.7	+0.4	50.1.7 8.0 27.6	7.7 ✓
+1.6 5.7 24.2	+1.3	+1.3 6.0 26.0	7.3 ✓
3.8 2.8 28.7	-1.4	+3.4 3.2 28.1	6.6 ✓
+3.5 2.8 27.8	+3.9	+3.5 2.8 28.3	6.3 ✓
4.0 1.9 29.0	+4.7	+3.1 2.8 27.7	5.9 ✓
1.5 3.4 25.3	+2.9	+1.8 3.1 25.7	4.9 ✓
-5.3 10.2 24.0	-4.8	-2.5 7.4 15.8	4.9 ✓
-5.6 10.6 22.4	-4.9	3.4 8.2 17.1	5.0 ✓

sta	+5	H1 2049	-5	G1	Glade
113+27			6.7		15.4
T.P.	4.18	21.94 ✓	2.73	17.76	
+70			8.1		15.8
114			8.2		15.0
+66			6.0		14.7
115			5.5		14.5
+19			5.8	16.1	14.4
+67			7.4	14.5	14.7
116			8.5		14.0
117			9.4		13.5
+36					13.3

L	R	GR
10.5 2.6 15.8	-4.4	20.2 6.7 20.2
2.4 9.1 15.6	-1.4	20.3 8.0 20.5
-20.8 8.9 15.0	-1.3	20.7 8.0 21.4
+20 5.2 26.0	+1.2	+26 4.6 26.9
+3.0 3.5 top	+1.9 ✓	+1.3 6.1 25.0
+4.5 5.0 26.7	+1.7	0.0 7.5 23.0
+1.1 6.6 24.7	+0.3	+2.7 5.0 27.1
+2.0 5.4 top	-0.6 ✓	+0.4 7.5 23.6
+0.9 7.2 top	-1.0 ✓	21.5 8.9 22.3
		86



Sta	+S	H/I	-S	Gr	Calde
		21.94			
118			11.6		13.0
+43			11.9		12.8
119			8.3		12.5
T.P.	711	19.85	9.20	12.94	
120			4.8		12.0
121			6.3		12.0
122			5.3		12.0
123			6.1		12.0
124			10.2		12.0
125			16.2		12.0
126			10.1		12.0
T.P.	415	16.5	7.95	11.90	

L	E	R	
2.2 17.5	-2.8 11.7 16.2	-2.7	200.8 10.1 21.2
	-3.2 12.3 16.8	-2.8	201.6 9.5 22.4
+10 0.6 top.	10.7 8.7 24.8	+1.1	+20 7.4 26.0
22.5 5.2	+2.2 5.7 26.3	+3.1	+3.6 4.3 28.4
2.5 5.5 8.1	+1.7 6.2 25.6	+1.6	+1.2 6.7 24.8
1.7 1.2 3.3	+3.1 4.8 27.7	+2.6	+2.5 5.4 26.7
+3.5 4.4 8.1	+2.6 5.3 26.9	+1.8	+2.2 5.7 26.3
	-2.6 10.5 15.9	-2.5	-2.6 10.5 15.9
	-2.1 10.0 15.2	-2.3	-2.0 9.9 15.0
0.1 8.0	10.0 8.9 21.5	-2.2	-2.2 10.1 15.3
lake			

Sta	+S	111	-S	Gal	Grade	L	#	R	
		16.05							
127			6.3		17.0	21.0 5.1 21.5	-23	-2.5 6.6 15.8	4.1 ✓
128			4.8		17.0	0.1 4.7 18 -0.8 4.9 13.7	-07	-2.6 6.7 15.9	4.1 ✓
129			5.2		17.0	3.3 7.4 17.0	-11	-2.5 6.4 15.8	4.1 ✓
130			5.1		17.0	2.9 7.0 14.4	-10	-1.1 5.7 13.7	4.1 ✓
131			5.3		17.0	2.8 6.8 16.2	-12	21.6 6.5 22.4	4.1 ✓
132			4.8		17.0	2.1 6.9 16.2	-07	-2.8 6.9 16.2	4.1 ✓
+29			6.0		17.0		+01		4.1 ✓
133			6.8		17.0	2.6 6.7 15.9	-27	-2.6 6.7 15.9	4.1 ✓
134			1.3		12.0	2.4 6.5 15.6	-22	-2.4 6.5 15.6	4.1 ✓
135			6.5		17.0	2.6 6.7 15.9	-22	-2.5 6.6 15.8	4.1 ✓

EC + 32 6-17-32
 cut, 135.0

sta	+5	1/1	-5	gt	Grade	L	R	Co.R	
T.P.	836	17.69	472	11.33	131482	Stamp			
			4.87	14.82		Stamp			
					17.0				
					17.0				
					17.0				
T.P.	472	19.56			131482				
176. +50			10.0		17.0	7.5 10.0 15.8	-2.5	-2.6 10.1 15.9	7.5
					1314.82	TBMAL 138100 95.1			
136			9.9		12.0	2.1 7.6 23.5	-2.4	20.5 7.0 20.8	7.5 ✓
+50			7.5		12.0	10.1 7.2 35.2	0.0	10.3 17.2 35.5	7.5 12' B ✓
137			5.6		17.0	1.7 5.8 30.4	+1.9	1.8 5.7 37.7	7.5 12' B ✓
+50			4.6		17.1	3.1 4.3 37.7	+2.8	3.2 4.2 39.8	7.5 12' B ✓
138			6.2		17.3	1.6 5.9 37	+1.0	0.0 7.2 35.0	7.5 12' B ✓

10 - Curve L

Sta	+5	H1 19.54	-5	Ground	Grade	L	R	R	GR	
138+50			8.2		12.7	6.4 3.5	-1.4	22.6 7.2 34.0	6.8	13.8
139			5.9		13.3	7.8 32.6	+0.3	41.7 4.5 37.6	6.2	13.8
150			5.8		13.9	6.4 21.8	-0.2	40.3 5.3 28.5	5.6	
140 ~			6.8		14.6	6.3 20.9	-1.9	41.7 5.2 22.4	4.9	
P.T. +337	5.46	20.28	6.4		15.0	7.3 15.0	-1.1	40.6 5.7 72.4	out 1.0	5.3
141			6.7		15.8	7.3 16.7	-1.2	40.2 6.1 20.6		4.5
+57			7.1		16.6	4.0 11.7 18.0	-3.4	40.7 5.0 21.1		3.7
T.P. 977	26.58	3.41	16.87							
142			9.9		17.1	11.8 15.5	-0.4	42.5 7.0 26.7		9.5
+75			8.4		17.4	10.5 14.0	+0.8	42.2 7.0 26.3		9.2
+80			7.1		18.1	10.5 15.0	-0.4	43.9 4.6 28.9		8.5
143			7.5		18.4	9.6 14.1	+0.7	43.0 5.2 27.5		8.2

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Sta	+S	H/I	-S	Ground	Corade	L	±	R	G.R.
		26.58							
143+41			5.4		18.9	10.2 7.1 23.0	+2.1	+1.7 5.8 25.6	7.5 ✓
144			6.9		19.7	+10.1 5.9 7.5 10.3 6.6 23.3	0.0 ✓	+0.7 6.2 24.1	6.7 ✓
145			4.1		20.7	+1.5 4.4 26.0 10.8 5.1 24.2	+1.8	+2.5 3.4 26.7	out 100 5.9 ✓
145.8			3.3		20.8		+2.5 ✓		5.8
146			4.0		21.0	+2.4 3.2 24.6	+1.6	+3.3 2.3 28.0	5.6 ✓
T.P.	0.64	25.73 ✓	1.49	25.09					
+45			1.6		21.0	+1.7 3.0 25.6	+3.1	+3.1 1.6 27.7	4.7 ✓
147			3.5		21.0	+3.5 4.2 26.7	+1.2 ✓	+0.5 4.2 23.8	4.7 ✓
148			8.3		21.0	+1.3 6.0 27.0 3.5 8.2 17.3	-3.6	-4.7 9.4 19.1	4.7 ✓ +100
149			10.0		21.0	-5.6 10.3 5.5 -6.5 11.2 23.8	-5.3	-7.6 17.3 25.4	4.7 ✓
150			7.8		21.0	+0.8 5.5 21.5 00.0 6.1 27.5	-3.1	00.8 4.9 22.7	4.7 ✓
+60			4.7		21.0	00.12 5.5 21.8	0.0	00.16 5.1 22.4	4.7 ✓

Sta	YS	HI	-S	Calend	Grade
		2573			
T.P.	5.65	25.22	6.14	19.59	
151			5.8	21.0	
152			5.8	21.0	
153			3.8	21.0	
T.P.	8.74	27.82	6.16	1319.08	
+70			9.5	21.0	
154			8.0	21.0	
155			10.2	21.0	
156			5.9	21.0	
157			4.3	21.0	
158			6.2	21.0	
+42.9			5.4	21.0	
159			7.4	20.8	

SS. Walker T.
M. Duncan R.
B. Schluter Ch.

June 16-32
" 27-32

68

	L	R	GR.
0.7 4.9 3.1	10.0	20.5 5.7 20.8	4.2 ✓
1.1 5.3 2.1	10.0	20.4 5.8 20.6	4.2 ✓
1.5 2.1 2.1	10.0	20.0 4.2 23.0	4.2 ✓
0.7 0.1 0.5	10.0	20.7 7.1 22.6	6.8
1.8 8.1 7.9	10.0	20.0 6.8 23.0	6.8
2.3 4.5 5.7	10.0	20.7 5.1 25.6	6.8
2.7 2.1 2.8	10.0	20.1 4.7 26.2	6.8
4.9 5.9 25.0	10.0	20.2 6.6 23.3	4.2
0.1 7.1 2.4	10.0	20.5 5.3 25.3	6.8
	10.0	20.3 7.7 22.0	7.0

27.82

159+50
TR 486 23.41 9.0 20.6

160 5.0 20.2

161 6.7 19.7

162 4.7 18.1

163 4.5 16.9

164 6.9 15.7

165 6.5 14.5

166 8.8 13.4

167 T.P. 1.34 14.88 11.3 12.2

PCJ+IX2 9.87 13.54 12.0

	L	±	R	
	PC 0.8 8.1 21.7	-18	-2.2 -9.4 15.3	7.2
	PC 0.8 4.4 21.2	-18	PC 0.3 4.9 20.5	3.2
	-1.7 5.7 1.7	-25	-2.5 6.7 15.8	4.2
	+2.3 3.0 2.7	+0.6	+0.8 4.5 24.2	5.3
	+4.7 1.8 12.9	+20	+2.2 4.3 26.3	6.5
	+3.5 2.5 3.3	+0.8	+0.7 7.0 24.1	7.7
	+3.1 3.8 2.4	+2.4	+2.4 6.5 26.0	8.9
	+2.3 2.7 3.8	+1.2	+1.2 2.8 24.8	10.0
	+1.3 9.9	+0.1	PC 1.5 10.4 22.3	11.2

		14.88									
167+50			7.9		11.6			40.6 2.7 23.9	-1.6	20.2 5.1 20.3	3.3
168			5.5		11.3		+1.2 2.4 3.3 23.5	40.3 2.3 23.5	-1.9	-2.7 6.3 16.1	3.6
+50			5.4		11.1		20.0 3.8 23.0	20.0 3.8 23.0	-1.6	-2.4 6.2 15.6	3.8
169			4.1		11.0		+0.5 3.4 2.5	20.0 4.9 21.5	-0.2	20.5 2.4 20.8	3.9
+50			3.6		11.0		20.3 5.6 20.5	20.3 5.6 20.5	+0.3	20.7 4.2 22.6	3.9
170			4.3		11.0		20.1 3.3 2.5	20.1 4.0 22.9	-0.4	20.1 4.2 21.7	3.9
T.P	4.99	15.47	4.40	1.048			stamp				
+50			6.8		11.0			-2.1 6.6 15.7	-2.3	20.0 5.5 21.5	4.5
171			6.6		11.0			-3.3 7.8 17.0	-2.1	-1.2 5.7 13.8	4.5
+50			5.9		11.0			-2.8 7.3 16.2	-1.2	-1.2 6.5 15.0	4.5
172			5.8		11.0			-2.4 7.9 14.1	-1.3	2.3 7.8 17.0	4.5

		15.47		
172 +50		5.8		11.0
173		5.4		11.0
+50		4.9		11.2
174		4.7		11.0
+50		5.2		11.0
175		5.4		11.0
T.P	5.56	15.73	5.80	9.67
+50		5.2		11.0
PT +76.8		5.2		11.0
176		5.1		11.0
177		5.3		11.0

	-3.0		-2.4	
	7.5	-1.3	6.9	4.5
	16.5		15.6	
	-2.7		20.9	
	7.2	-0.9	5.6	4.5
	16.1		21.4	
	20.6		20.9	
	5.9	-0.3	5.6	4.5
	20.9		21.4	
	10.0		10.1	
	4.5	-0.2	4.2	4.5
	12.0		23.2	
	-1.6		20.7	
	6.1	-0.7	5.8	4.5
	14.4		21.1	
	-2.0		-2.2	
	6.5	-0.9	6.7	4.5
	15.0		15.3	
	-2.9		-2.6	
	7.1	-1.0	6.9	4.2
	16.4		15.9	
	-3.1		-2.3	
	7.3	-1.0	6.7	4.2
	16.7		15.5	
	-2.6		-2.6	
	6.8	-0.7	6.8	4.2
	15.9		15.9	
	-3.0		-2.9	
	7.2	-1.1	7.1	4.2
	16.5		16.4	

15.73

L & B

178 5.2 11.0

-21
7.3 -1.0 6.3 4.2
16.7 -15.2

179 5.0 11.0

100.1
6.1 -0.8 5.4 4.2
20.7 21.7

180 3.3 11.0

+0.4
3.8 +0.9 4.5 4.2
23.6 22.6

181 2.5 11.0

10.4
5.8 +1.7 +2.4 4.2
28.9 26.3

T.P. 6.22 18.39 3.06 12.17

13.4
11.0 +2.3 +2.1 7.4
28.1 26.8

78.50 3.1 11.0

+2.2
2.0 +4.5 5.4 7.6 7.4
27.8 26.3

182 4.9 11.0

13.2
2.0 +4.5 5.4 7.6 7.4
27.8 26.3

183 6.7 11.5

10.4
6.3 +0.2 801.1 7.1 6.9
23.4 21.7

+35 B.P.

184 6.7 12.0

6.2 1501.9
6.3 -0.3 +0.5 6.6 6.4
22.9 23.8

6.58

11.31

Notes of 1922 survey

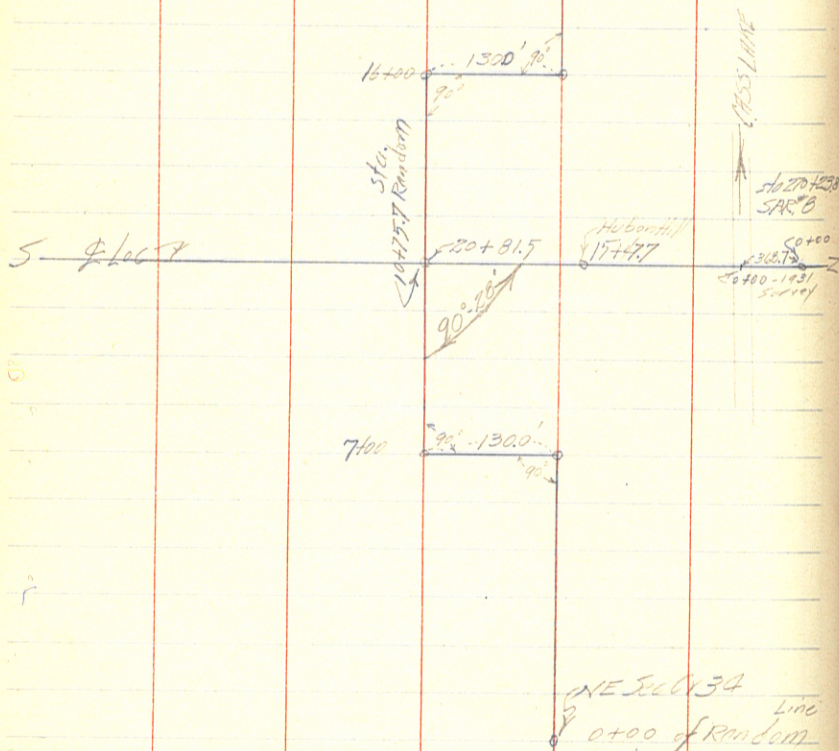
Book 147 - Bond. Tel. Div.

Transcribed to out loc. figures

taken from pg 1, 2, 3 + 6.
S.S. Walker.

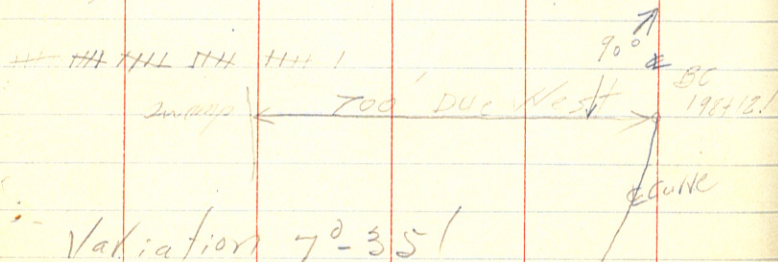
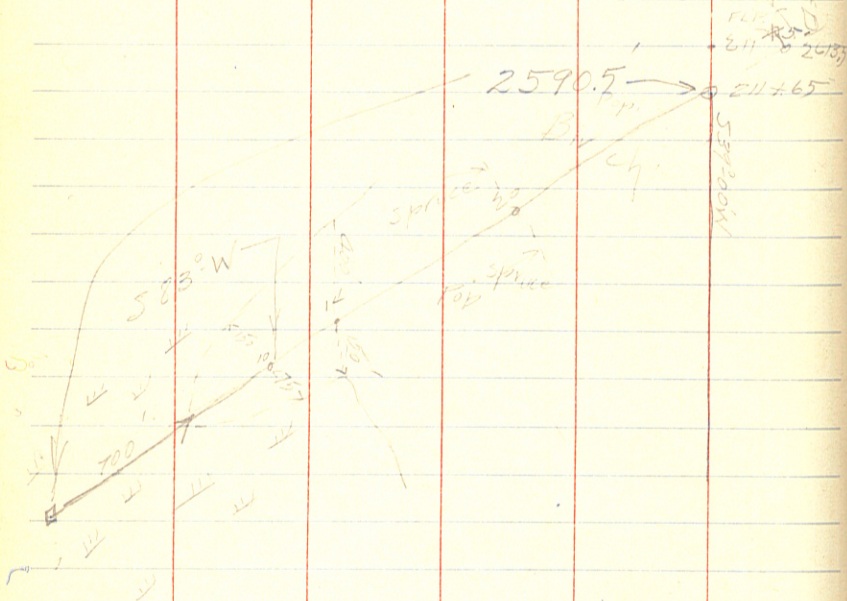
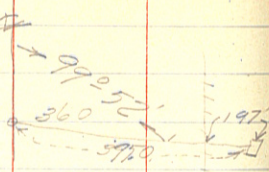
33 28
34 27
51168.0

26+40
30° 26'

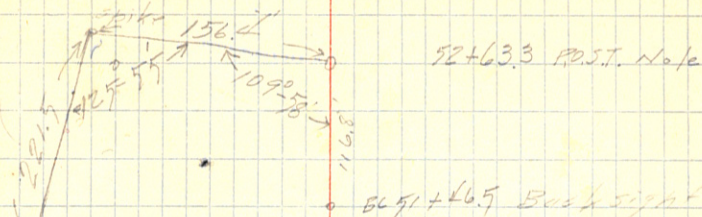


U.S. Reservation
 Land Corner 28+27
 1/4 Cr. Blanz Mon
 in Concrete Blk 6x6"

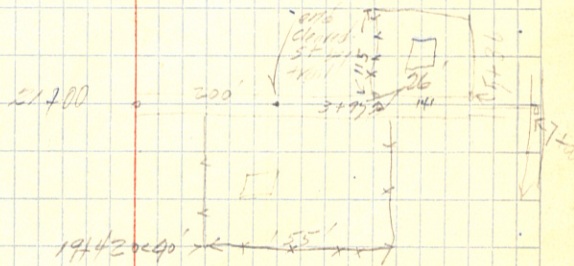
B.S. PI 355700



Variation $7^{\circ}-35'$
 $582^{\circ}-25'W$ Blazing
 255+35



Confirmed wood St. H
 Center of Sec. 34
 Known & used 63.33
 to 10 year local
 evidence - Mr. Met. Soderbak



KEITH'S RAILROAD CURVE TABLES.

Published by KEUFFEL & ESSER CO., New York.

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HOW TO USE KEITH'S TABLES.

EXAMPLE.

Wanted a Curve with an Ext. of about 12 ft. Angle
of Intersection or I. P.= $23^{\circ} 20'$ to the R. at Station
542+72.

Ext. in Tab. IV opposite $23^{\circ} 20'$ =120.87
 $120.87+12=10.07$. Say a 10° Curve.

Tan. in Tab. IV opp. $23^{\circ} 20'$ =1183.1
 $1183.1+10=118.31$.

Tab. V. correction for A. $23^{\circ} 20'$ for a 10° Cur.=0.16
 $118.31+0.16=118.47$ =corrected Tangent.

(If corrected Ext. is required find in same way)
Ang. $23^{\circ} 20'$ = $23.33^{\circ} + 10$ =2.3333=L. C.

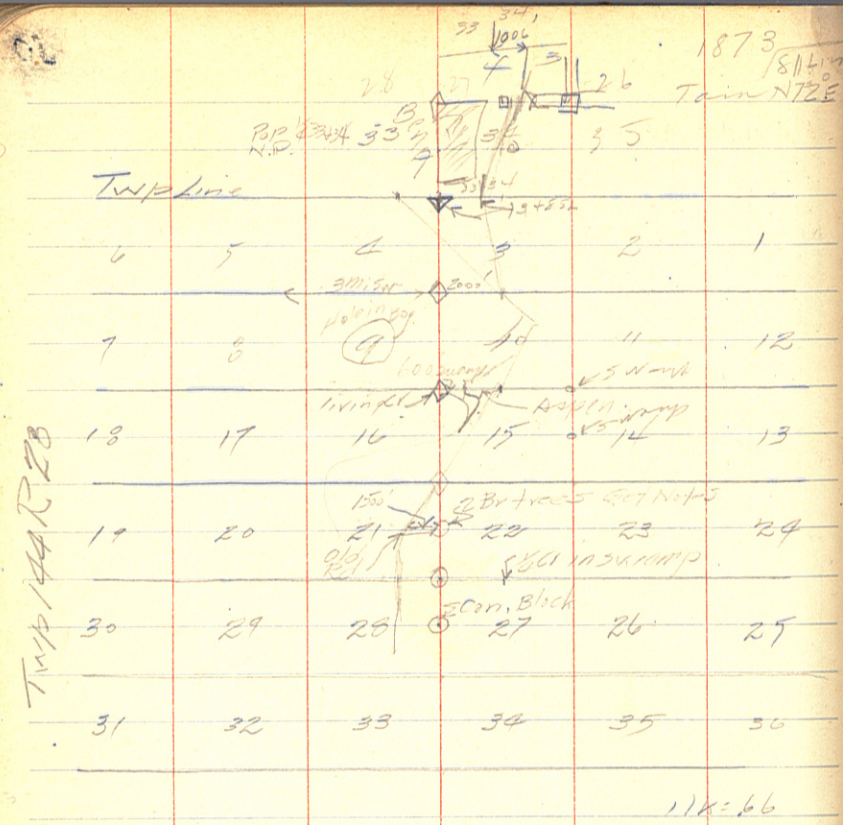
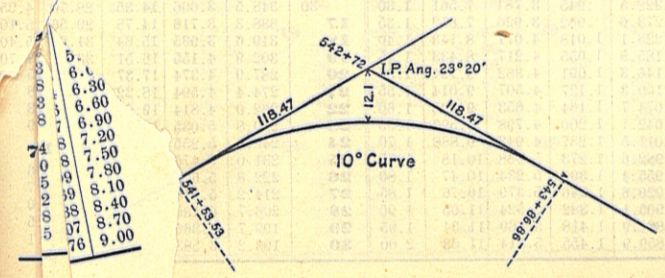
$2^{\circ} 19\frac{1}{2}'$ =def. for sta. 542	I. P.=sta. 542+72
$4^{\circ} 49\frac{1}{2}'$ = " " " +50	Tan.= 1.18.47
$7^{\circ} 19\frac{1}{2}'$ = " " " 543	B. C.=sta. 541+53.53
$9^{\circ} 49\frac{1}{2}'$ = " " " +50	L. C.= 2.33.33
$11^{\circ} 40'$ = " " " 543+	E. C.=sta. 543+86.86
86.86	

$100-53.53=46.47 \times 3'$ (def. for 1 ft. of 10° Cur.)= $139.41'$ =
 $2^{\circ} 19\frac{1}{2}'$ =def. for sta. 542.

Def. for 50 ft.= $2^{\circ} 30'$ for a 10° Curve.

Def. for 36.86 ft.= $1^{\circ} 50\frac{1}{2}'$ for a 10° Curve

(These tables are published in Field Books of
KEUFFEL & ESSER Co., New York, N. Y.)



Twp 144 R 28

Elm 6" N 75° W 45 links
Pop. 16" South 14 links

Table VI. Deflections for Sub Chords for Short Radius Curves.

Degree of Curve	Radius 50 sin. def. ang.	$\frac{1}{2}$ sub chord R = sin of def. angle				Length of arc for 100 ft.
		12.5 Ft.	15 Ft.	20 Ft.	25 Ft.	
30°	193.18	1° 51'	2° 17'	2° 58'	3° 43'	101.15
32°	181.39	1° 59'	2° 25'	3° 10'	3° 58'	101.33
34°	171.01	2° 06'	2° 33'	3° 21'	4° 12'	101.48
36°	161.80	2° 13'	2° 41'	3° 33'	4° 26'	101.66
38°	153.58	2° 20'	2° 49'	3° 44'	4° 40'	101.85
40°	146.19	2° 27'	2° 57'	3° 55'	4° 54'	102.06
42°	139.52	2° 34'	3° 05'	4° 07'	5° 08'	102.29
44°	133.47	2° 41'	3° 13'	4° 18'	5° 22'	102.53
46°	127.97	2° 48'	3° 21'	4° 29'	5° 36'	102.76
48°	122.92	2° 55'	3° 29'	4° 40'	5° 50'	103.00
50°	118.31	3° 02'	3° 38'	4° 51'	6° 04'	103.24
52°	114.06	3° 09'	3° 46'	5° 02'	6° 17'	103.54
54°	110.11	3° 16'	3° 54'	5° 13'	6° 31'	103.84
56°	106.50	3° 22'	4° 02'	5° 23'	6° 44'	104.14
58°	103.14	3° 29'	4° 10'	5° 34'	6° 57'	104.43
60°	100.00	3° 35'	4° 18'	5° 44'	7° 11'	104.72

CURVE FORMULAS.

$T = R \tan \frac{1}{2} I$	$R = T \cot. \frac{1}{2} I$	Chord def. = $\frac{\text{chord}^2}{R}$
$T = \frac{50 \tan. \frac{1}{2} I}{\text{Sin. D}}$	$R = \frac{50}{\text{Sin. D}}$	No. chords = $\frac{1}{2} \frac{I}{D}$
$\text{Sin. D} = \frac{50}{R}$	$E = R \text{ ex. sec. } \frac{1}{2} I$	Tan. def. = $\frac{1}{2} \text{ chord de}$
$\text{Sin. D} = \frac{50 \tan. \frac{1}{2} I}{T}$	$E = T \tan \frac{1}{2} I$	

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

Table IV. contains Tangents and External to a 1° curve. Tan. and Ext. to any other radius may be found, nearly enough, by dividing the Tan. or Ext. opposite the given Central Angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table IV.: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.), and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance: Multiply the angle by .01745, and the product by the distance.

RIGHT ANGLE TRIANGLES.— Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt 10. $10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. 25. $25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875 =$ Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

11
38+98.7
264.9
416.38
37+68.0
395.8 sov-s Eq 44

1-34.3
938.8
299.5
37+38.0
264.9
35+029.02

68
3
37 20.4
16.8
46.2
53.0

38
2 0.3
3 11.4
3.8
2 20.4
10.1
43.8
10-46
41.06
26
53
2/106

100.0
38
62.0
3
3/18.6
6.2

1312.43	1439	1313.6
8.60	8.19	732
<u>1321.03</u>	<u>10.20</u>	<u>1320.48</u>
4.39	317	9.17
<u>16.64</u>	<u>13.37</u>	<u>11.31</u>
16.40	313	23.07
23.04	<u>20.24</u>	<u>7.88</u>
<u>4.99</u>	<u>4.18</u>	<u>15.19</u>
8.05	<u>22.2</u>	<u>4.75</u>
<u>4.54</u>	<u>0.8</u>	<u>19.94</u>
22.59	<u>12.61</u>	<u>1.35</u>
<u>7.97</u>	<u>3.11</u>	<u>18.59</u>
14.62	<u>26.72</u>	<u>3.60</u>
<u>2.3</u>	<u>4.18</u>	<u>22.19</u>
14.39	<u>12.54</u>	<u>7.62</u>
<u>18.73</u>	<u>9.75</u>	<u>15.57</u>
<u>6.68</u>	<u>22.27</u>	<u>20.7</u>
<u>25.41</u>	<u>8.69</u>	<u>17.64</u>
30.39	<u>13.60</u>	<u>6.14</u>
<u>7.47</u>		<u>11.50</u>
22.92		<u>7.80</u>
<u>6.63</u>		<u>19.30</u>
29.55		
<u>7.67</u>		
21.88		
<u>20.75</u>		
22.63		
<u>8.63</u>		
14.00		
17.33		
<u>5.59</u>		
11.94		

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 14 FEET WIDE. SIDE SLOPES 1 1/2 TO 1.
FOR SINGLE TRACK EMBANKMENT.

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

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

MADE IN GERMANY.

R.