

C.C.C.

3

FIELD BOOK

364 A

# 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.

75-S  
Ray H. Hall - Camp Engineer

 APR 10 1986

Page	Sec.	Tr <sup>n</sup>	R <sup>e</sup>	Remarks.
✓ 1-5 <sup>67</sup>	14	38	5	Random 4W
✓ 6	1	"	"	Re-meas $\$ N\frac{1}{2}$
✓ 7-9-15-19	16 $\frac{1}{4}$	"	"	Calc. 6 Sec. exterior
✓ 11-14	24	"	"	Random 4W
✓ 20-21 <sup>23</sup>	12	"	"	" $\$$
✓ 25-27	11	"	"	" $\$ E\frac{1}{2}$
✓ 29-30	30	39	5	Interior corners (Don)
✓ 31	25-34 36	38	4	Cruising
✓ 32	2	37	4	"
✓ 33	12	38	5	Compass traverse
✓ 35	28	39	5	Sideman Rd. Curves 16
✓ 36-39	23	38	5	Random $\$ 23$
✓ 41-49 <sub>86</sub>	33	39	5	" picket lines for planting & Angl. N + E $\frac{1}{4}$ corner $\$ \pm$ etc.
✓ 50	4	38	5	$\$ \pm$ etc.
✓ 51	28-29	39	5	Angl. $\frac{1}{4}$ S. cor.
✓ 53	30	"	"	P. 16 re-loc. W. end
✓ 55	33	"	"	Summary of planting
✓ 56-62	23	38	5	H + No. 8 $\frac{1}{4}$ line
✓ 63	"	"	"	Sample plots NW SE
✓ 64	29-30	39	5	Angl. $\frac{1}{4}$ S.
✓ 65	21	38	4	Cruising
✓ 66	14+15	39	4	"
✓ 68-78	32	36	8	Porcupine Tower lines
✓ 80	19	38	5	#29 Flowage road

③

## INDEX

Page	Sec.	Tr. <sup>n</sup>	R <sup>e</sup>	Remarks
82-84	27	39	7	Lake Tomahawk Tower
87	32	39	5	At random
90	"	"	"	Orign N $\frac{1}{4}$ cor.
91-92		38	5	line markers along $\frac{1}{16}$
92	3	38	5	SW $\frac{1}{4}$ for planting
93	8 + 6	"	"	Search for origin
94-96-97	4	"	"	Traverse #14 etc
97	10	38	4	Search for $\frac{1}{4}$ S
100-123	33	35	6	City of Tomahawk Iron Works
124-129	22	36	10	Monico Tower
130	28	39	5	Orign NE cor.
131-134	23	"	"	
132	14	39	7	Sweeney L. Rd (44)
99	30	39	5	⊕ ±
142-154	23	36	5	line for cutting
155	6 + 7	38	5	line markers etc
155	36	39	4	Cross at W $\frac{1}{2}$
156	35	"	"	" " NE $\frac{1}{4}$ etc
157	24	"	"	⊕ SE $\frac{1}{4}$

44 14-38-5

Random

March 12<sup>th</sup> - 1934 PM

Rt. Hall. Dwyzynski. Gergen. Wojciechowski

Begin random line Sly from

Orign Cor 10-11-14-15

Calc course of S 2° 16' E to strike Orign  
SW Cor 14.Turn off as near as possible by ± off  
random 4 14

Mark another new Bearing at NW Cor 14

J. J. Jack Pine 4" N 28° 40' W .575

var 32.48

Var. all on 0° Az.

0.0 Sec Cor.

.03 August Ashbams Stake.

3.015 hub

March 13<sup>th</sup> - 1934

Overcast 35°. Same party

6.014 Tack on log for hub

8.00 hrs swamp SE &amp; NW.

10.94 Hub (W edge) Var 4° 10' E

" " on shoulder - Swamp E 1 ch.

14.00 re-enters same swamp NE SW

13. to along edge "

14.72 hrs swamp ✓

14.42' Hub  
 15.40 re-enter same swamp SW  
 18.82' Hub

22.974 Spike (3.7' NW of tabium)  
 23.73 br. swamp NE SW  
 27.239 Hub in thick 2+3" jack  
 30.606

39.7  
 32.4  
 12.3  
 15.8  
 14.02

W 14 - 38 - 5

Continued.

March 14<sup>th</sup> 1934 Fair +15°  
 R. Hall. Dwyzynski. Guger. Wojciechowski  
 30.606 hub var 4°-50' E  
 31.84  $\frac{1}{2}$  rd river road NE SW  
 34.30 Enter Swamp NE SW  
 35.802 Hub var 4°-35' E  
 38.065 Picket  
 38.9<sup>?</sup> hub  
 38.959 "

40.20 br. swamp  
 43.905 Spike on hill (.058 S of Jack atp)  
 + about 6' NW of 26<sup>th</sup> Y.P.  
 do spotted sp.?

4 LW 14-38-5  
Continued

March 15<sup>th</sup>  
Mostly fair. Same party

46.454 Spike about 11 SE of tall jack  
47.00 Enter marsh bottom  
NE SW  
51.60  $\oplus$  Tomhawk R NE SW

68.468 to base of slope W. ramp  
+ .095

68.563 + 1.00 on slope  $20^{\circ}39'$   
= .936

+ .936  
69.499 Spike on ridge

+ .303  
69.802 " +  $\angle$  to cor (left)

$4^{\circ}26'$

(2) 8.52

9.593

Sis .0773

x

"

.742

Cor. .99701

x

"

= 9.56

5 LW 14-38-5  
Continued

$\frac{968}{9.36}$   
11.70  
 $\frac{39.70}{1.30}$

$\therefore 69.802$   
+ 9.56

$\frac{79.362}{}$  right angle E. to our past  
at Orig. Cor. 14-15-27-23 .742

true line =

$\frac{.00935}{}$   
=  $\tan 0^{\circ}32'$  fell W.  
79.365

$\frac{2 = 16'}{32}$   
 $\therefore S 2^{\circ}48'E$  = apparent course.

Mark another new bearing for Orig. SW 14  
{ Y. Pine 20'  $N 32^{\circ}33'E$  2.13<sup>+</sup> ch.

( $\rightarrow$  Adjusted on basis of  $S 2^{\circ}31'E$  for 40-14)

$\rightarrow$  Apparently we lost true Az. at some point on the circuit. Obs. on random  $\oplus$  13+14 indicated this.

Assuming  $S 2^{\circ}16'E$  for random

$\frac{173-18}{133-25}$  to hub on  $\oplus$   
 $\frac{159-53}{}$

## Measurements

March 20<sup>th</sup> - 1934

Sent Ed Duszyński, E. Jeger + A. Wojciechowski to re-meas.  
Rabdom  $\Phi$  13- + 14  
find do OK.

Same party re-meas  $\Phi$  N. part of  $\frac{1}{2}$   
Sec 1 N. from  $\frac{1}{4}$  S.

20.134  $\frac{1}{8}$ = (12.402 for  $\frac{1}{8}$  S.) S from Tp Cor.

32.536

Tp. Cor.

→ We called this 31.534  
when we ran this line  
June 21<sup>st</sup> last

32.536	M		
32.32	R		
.216	Surp	$\div 32.32$	$= .00668 \times 20 = .134$
			20.134
			$\times 12.32 = .082$
			12.402
			32.536

$\therefore$  of 12.402 correct W - + set  $\frac{1}{8}$  S.

$.225 \div 32.536 = .00692 = 0^{\circ} 23.8'$  correctn.  
S  $\frac{0^{\circ} 52'}{0^{\circ} 28.2'}$  E true line.

Therefore the actual Az. of True line  $\Phi$  W from Tp cor. appear to be:

	S	E	W	E	W
① $179^{\circ} 31.8' = S 0^{\circ} 28.2' E$	32.533	.265		32.533	.265
② $179^{\circ} 27' = S 0^{\circ} 33' E$	40.018	.384		72.55'	.649
③ $179^{\circ} 21.5' = S 0^{\circ} 38.5' E$	79.995	.896		152.546	1.575
④ $179^{\circ} 13.8' = S 0^{\circ} 46.2' E$	80.471	.874		233.017	1.919
⑤ <del><math>270^{\circ} 21.6' = N 89^{\circ} 39' 10'' W</math></del>					
$270^{\circ} 15' = N 89^{\circ} 45' W$	70 <sup>N</sup>			160.475	232.317
					158.556

straight  
line  
from  
Tp  
Cor.

Temp. adjustment pending meas. of balance of  $\Phi$  11 & 12

Apparent actual Az. of lines W to S from Tp. cor.

- ① N 89°-57' W 40.17  
 ② N 89°-59' W 40.057  
 ③ N 89°-57' W 80.382  
 comparing S 89°-53' W 40.191  
 S 189°-49' W 40.191

N .035  
 N .012  
 N .07

S from W. =

40.17  
 40.057  
 80.382

N

.035  
 .047  
 .117

S

40.17  
 80.222  
 160.609

W

- ④ S 0°-17' W 34.29  
 ⑤ S 0°-35' W 39.413  
 ⑥ S 0°-55' W 79.46

.17  
 .401  
 1.271

34.29  
 39.413  
 79.46

34.173  
 73.586  
 153.046

160.779  
 161.180  
 162.050

- ~~S 2°-48' E 79.37~~  
 S 2°-31' E 79.37

79.244 3.4858

= 282.34 158.565

9



March 17<sup>th</sup> 1934 20° Snowing

4" New snow

RH Hall. with Thall. Johnson & Gaddow's  
Run  $\phi^{14}$  on random  $\# 24$  by extending  
same random  $\# 12 + 13$  ( $\phi 0^\circ + 16.5' E.$ )

0.0 = Temp. SW x 13 as provided Erod.  
= Sta 00 for  $\# 12 + 13$ .

.895 random S. line 13 + 12

+ 1.399 at  $\angle$  West ~~at~~ for final Corner to

.504 Secs. 13-14-23-24  
(E. 268)

.446  
.895  

---

1341

+ 1.341 at  $\angle$  W (.067) to Orig Cor.

7.889 Spike for hub

.58' W

11.09  $\phi$  Cedar Falls Road

about 1 ch. W. of BC left.

12.436 Spike

.38' W.

16.57  $\frac{1}{2}$  intersect some ones Erod picked  
line .249 E. of a poplar post

44-24-38-5

16.83 Hub

23.226 " on ridge N. of swamp

.18 W

.09 E

lines intersect  
@ 21.229 sta.March 19<sup>th</sup> 1934 Fair 20°

R.H. with Ed. Emil - Tony

Re-meas above line + make hub

23.21

27.907

Hub over looking open marsh

30.00

Enter swamp

30.25

" flowage

40.00

Set temp picket

2" E of proper place (note)

40.21

Fall .094 E of Stake

set by H.J. M. Ginnis

No sign of corner but one line  
follows blazes closely.

21.237

8' falls in random

41.075 etc E .013 for 1/4 S

44-24-38-5

41.66 to hard land W + SE.

US Record = 72.00 ch.!

45.093

Spike .06 SW of a Jack

1.03' E

46.963

Hub in edge same marsh.

1.12' E

March 27<sup>th</sup> 1934 20° Fair.

R.H. Ed. Emil - Tony.

Continue above random line

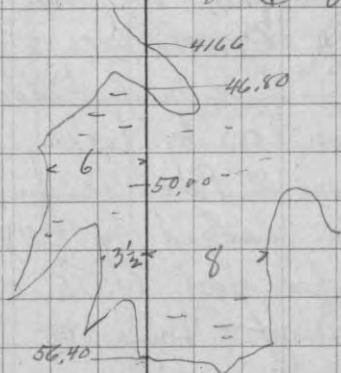
46.80

Enter open marsh

} to SW 1 ch ± thence SW  
} " SE 2 1/2 ± to point.

46.963 Hub

50 ±

Swamp extends W 6 ch ±  
+ E 8" ±

56.40 by marsh.

58.753

Spike for hub (.053 N. of Jack stump)

1.62' E

Var. 4°-22' E here.

4W 24 - 38 - 5

59.30 Enter marsh  
 } to NWly.  
 } + E. 75 thence SSW

64 ± Tang. to SW end of point  
 hard land

60.913 at E .026 for 85

74.556 Hub on ridge - <sup>2.31 E</sup> find road on 10. slip  
 80.674 " about W. of an old  
 + .078 blaze found.  
 80.752 fall .039 W. of Origh  
 Cor. to Secs. 23, 24, 25, 26  
 on E shoulder ridge

Identify this cor. by looking N33E W  
 from a down W. Pine assumed to be  
 the 8" W. Pine marked by D.H.V. 1909  
 + finding his post 15x15" down under  
 a post of snow - Drive new Tam post  
 + mark

Var 3° E	}	Jack Pine 7" S 30½° W	1.678	110.75
		W. " 4" S 23¼° E	1.157	76.56
		Y " 3" N 26¼° E	1.04	65.24

Calc. 4W 12-13-24

Meas. 157.307  
 + 80.752  
 3) 238.059  
 79.353  
 per mile.

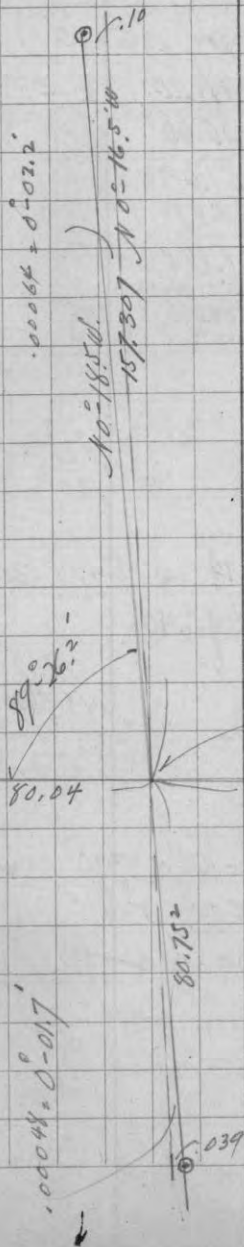
240.00 Rec  
 338.059 M  
 1.941 dist.

80.752  
 - 79.353  
 1.399

S. of temp cor.

Call AHS straight line N 0° - 18.5° W.

Extrapolating that the 3 points line up.



12

13

N. 89° - 40' W  
 Temp. Cor. E. W.  
 = Sta 0.0 N + S  
 80.437

24

∴ The two straight  
 lines intersect @ 80.752 N + S  
 + form angle 89° 26.2' ±  
 W to N.

160.476 = (meas) direct from  $SE \times 13$  to  $SW \times 14$

Record = 81.00 \$13

80.60 \$14

161.600

- 160.476

161.6) 1.124 short.

.00696 x 81. = <sup>.563</sup> - 81.   
 80.437 \$13.

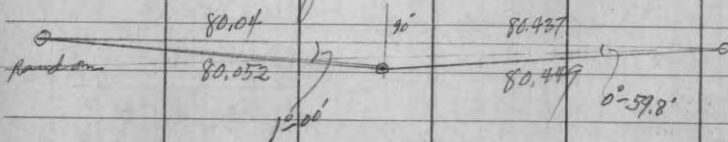
" x 80.6 = <sup>.56</sup>   
 80.60   
 80.04 \$14

$\therefore$  Rt =  $89^\circ$  from straight  $\$13 + 14$  at temp x EorW.   
 a distance of 1.40

$89^\circ - 26.2^\circ - 90^\circ = 33.8^\circ$  in

" = .014 ch. W of N to line   
 .001 correct   
 .013 W of random

$\therefore$  Sec. Cor. as proportioned both ways comes   
 1.40 @ Temp. cor r   
 .013 W. of N to random



Calc. (6 sec.)

.10 W. random   
 .013 " "   
 2) .113   
 .056 W. random

157.307   
 1.399   
 2) 158.706   
 79.353 per sec.   
 11  $\phi$    
 - 1.399   
 @ Sta. 77.954 N.

= temp cor. (x + S) for 11-12-13 + 14   
 Pending EorW meas.  $1\frac{1}{2}$  miles

Since  $SE$  cor 12 is 152.546 S + 157.56   
 4  $\frac{1}{4}$  " " 153.606 S + 119.01 W   
 1.060 S  $\div$  120.555 W

= .00880   
 = Co tang  $89^\circ - 29.8^\circ$  W.

Rec = 80.80 \$12   
 40.05   
 120.85

120.560 calc.   
 - 120.85 Rec.   
 120.85 | .29 (short)   
 .0024 per ch.

.00240 x 80.8 = .194   
 80.80   
 80.606

" x 40.05   
 " + <sup>.076</sup> 40.05   
 37.954   
 = 120.56

Calc.

∴ Since temp 80 x 12 (N+S)  
calc. 1.459 S + .122 E.

of Calc. E & W P.R.

∴ Since 39.954

$$.03651 = \text{Tang } 2^{\circ} 05' 2''$$

$$\div \text{Cos } = 39.981$$

$$80.606 \div \text{Cos } 1^{\circ} 02' = 80.619$$

Calc total (three point N+S)

120.600
120.85
<u>120.85 / .25 short</u>
.00207

$$.00207 \times 80.80 = .167$$

$$\frac{.167}{80.633}$$

x

$$\frac{40.05}{.083} = 37.967$$

$$- 80.619 \quad 37.981$$

$$\frac{.014}{.014} \quad \sqrt{\frac{.014}{.014}}$$

∴ move additional " W. =

$$056 \text{ W random.}$$

$$+ .122 \text{ " Temp N+S pt.}$$

$$+ .014$$

∴ 192 W of random at Sta 77.954

$$S 89^{\circ} 29' 8''$$

$$- 1^{\circ} 02'$$

$$S 88^{\circ} 28' W \quad 80.633 \text{ \&}$$

$$\text{for } \$12$$

$$\frac{89^{\circ} 30' 55''}{.99} = \frac{30.55}{.99}$$

$$\frac{192}{.99} = 24.44 \text{ W}$$

$$37.967 + 24.44 = 62.407$$

$$\therefore .192 \text{ W random at } 77.954$$

$$.013 \text{ W " " } - 1.399$$

$$\frac{.179}{79.353} = .00226$$

$$= \text{Tangent } 0^{\circ} 07.8'$$

$$+ N 0^{\circ} 16.5' W$$

$$N 0^{\circ} 24.3' W$$

$$79.353$$

$$\text{W } 13$$

$$\therefore .192 \text{ W random. } S 89 \times 12$$

$$.10 \text{ " " " at NW } \times 12$$

$$\frac{.092}{79.353} = .00116 = \text{Tang } 0^{\circ} 04'$$

$$\text{W } 12$$

$$N 0^{\circ} 12.5' W$$

$$79.353$$

$$79.353 / .014 \text{ W of St. line at } -1.40$$

$$\frac{.00018}{.014} = \text{Tang } 0^{\circ} 00.6'$$

$$+ N 0^{\circ} 18.5' W$$

$$N 0^{\circ} 19' W \quad 79.353 \text{ W } 74$$

$$80.437 / 1.399 = .01739 = \text{Tang } 1^{\circ} 00' (57.8')$$

$$+ N 89^{\circ} 45' W \quad \frac{13}{80.449}$$

$$S 89^{\circ} 15' W \quad \frac{13}{80.449}$$

$$80.04 / .01747 = 45.84 = \text{Tang } 1^{\circ} 00'$$

$$+ N 89^{\circ} 45' W$$

$$N 88^{\circ} 45' W \quad \frac{14}{80.052}$$

\$ 12-38-5

April 2nd 1934

Overcast 40°

6" new snow on a foot or 2 old snow  
R.H. Hall with Duszyński + Wojciechowski  
transit at sta. 77.958 on random 44-12

thence  $N 88^{\circ} 28' E \pm$  by  $N 70^{\circ} E$  (Pole S. 1.72)  
"  $52^{\circ} 26'$

$88^{\circ} 44 \frac{1}{2}'$  off random

set pine hub .192 wly grandon

" for Temp. Cor. 11-12-13-14  
Var  $0^{\circ} A = 2^{\circ} 10' E$

$N 88^{\circ} 28' E$  on line of stacs 12 + 13

.177 final post bus .029 N final 5/12/36

.192 random NTD true line agrees

6.744 Hub on ridge NTD

Var. on  $0^{\circ} A = 2^{\circ} 18' E$

9.70 } S. tip narrow  
10.60 } open swamp

13.262 Spike for hub E. from hill  
Same swamp about 1.25" wide  
by  $N = 1.25$

21.32 intersectn. with true line

\$ 12-38-5

16.00 Enter same marsh  
to  $S 30^{\circ} E$  3ch  $\pm$  Th. Edg.

" N. edge to bus  $N 82^{\circ} E$

18.00 Leave to bus N 1ch Th. Edg.

20.16 drive temp.  $\frac{1}{8}$  S hub  
20.043 correct  $\frac{1}{8}$  for  $\frac{1}{8}$  S  
1.16' (more  $\times 1.45$ )

7/16/35 Set cedar post + mark

June 12' Jack 7  $N 40^{\circ} 07' E$  1.105

V. 3' E " 5"  $S 50^{\circ} 41' W$  1.03

8/16/35 Moved N. 022 ch

24.285 Pitch hub at W. edge old road  
Var on  $0^{\circ} A = 2^{\circ} 53' E$

24.75 Intersect one compass trav. of  
road (see page) .78 ch.  
 $N 46^{\circ} W$  (P.C.) of sta  $\odot$  labeled 1.649

25.00  $\pm$  E. End long marsh to  $\odot$  3ch  $\pm$

28.416 Hub  $.026^{\circ} \odot = 1.74' .01^{\circ}$

32.16 ? old Stereos mill road N 7

33.498 Spike for hub + quit for day  $.0217 = 2.29'$

\$ 12.38-5

continued

April 6<sup>th</sup> 1934

Fair 35 45

RH Hall - Duzymaki + Wojciechowski  
Continue "N 88° 28' E" on same random

37.19<sup>6</sup> Spike for hub  
.112 E of a pole

38.72 \$ Hwy # 4  
to N 20° - 44' E

40.200 Tack in Poplar stump

40.317 Calc for 7/8 S

40.260 correct S .039 for 1/4 S  
= 2.59'

1.54 ch

7/15/35

Set cedar post + mark:

Should be corrected N 015 ch.

over } Jack 8" S 51° E .478  
" 5 S 65 1/2° W 1.075

1/10 Set Co. Mon. 1' N.

100' + 14' x 12' 4" 1/2" Mon

} Jack 8 S 49 1/2° E .488  
" 5 S 64 1/2° W 1.078

42.71' Spike for hub .0415 = 274  
(17' N of 18" Jack)

Was on 0° 1° 45' E

46.06<sup>6</sup> Spike for hub on hill .034 = 277  
.077 S of from - pole

\$ 12 continued

48.43 Old road NE + SW

50.00 Enter Spruce + Tam Swamp  
N 20° E + S 40° W

60.479 Correct S .0604 for 1/8 S  
= 4' .053 = 3.50'

62.60 Creek from SW

64.65 " " S

Junction just N. of 64.65

67.30 Leave Swamp

to N about 1 1/2 ch. Hence N 67°

68.772 Spike on bare knoll (N 1° 53' E)

74.35<sup>2</sup> " for hub + turn 2 right to 475

our post for Crig. S E. 12

0° 44' @ 1° 29' 6.345 ch.

Sim = .0128 x " = .0812

Co = .99992 " = 6.345

+ 74.352

80.697

80.697 full .0812 N of Cor.

.00101 = Tang. 0° 03 1/2'

6<sup>1</sup>/<sub>2</sub> 11

April 7<sup>th</sup> 1934 Fair 40°<sup>+</sup>  
 R.H. Hall. Duszynski. Wgciechowski  
 + Richard Roeder.

Run Wg (N 88° 24' ± W ±) from sta 0.0  
 for §12 = Our temporary cor. to Secs.  
 11-12-13-14 as calc.

Very poor chance for start.  
 transit at temp cor.

Lay off = 3° 09' E to S of random §12  
 then reverse + run Wg.

\* P.C.  
var. } Orig Jack S 39 E .729  
 " " } New 3" " S 42 W .628

(\*) Sec change to loc. .029 Nly = 149 4/16/35  
 + .176 Final loc. of cor. to .006 <sup>104</sup>

0.0 Hub at temp Sec cor. 158  
.024 N  
.004

.88' Spike for hub. on ridge

4. ± fall about .20 ft. of old blaze on  
 of jack stub .035  
= 2.31

7.909 Spike for hub (.078 W of a jack)  
 Var on 0° A2 = 5° 44' E

17.903 Spike for hub .038  
.05 = 3.30  
 Var on 0° 4° 25' E

Right on old blaze (down)



Continued .053 = 3.50'

20.219 Correct N. ~~1.239~~ = 2.57' for 1/8 S.

19.983 calc 1/8 S. ?

20.00 Spike on W. slope meter .053  
bottom - open N.22.00 Enter Spruce Swamp  
NW + SE. .056 = 37°

22.084 Hub + Jack. Var on 0° 4° 40' E

30.745 Spike in Swamp. .056 = 4.62  
.07 = 4.62

35.30 Leave Swamp. SW NE .07 = 5.24

37.81 Spike on hill for hub .07 = 5.24  
Var on 0° 4° 30' E

Swamp island. trail to SW.

Turn = right to 1/4 post  
1-58' 3-55

39.60 Enter Swamp NE SW

40.26<sup>3</sup> To Orig 1/4 Cor.

Our new bearings read:

av.			
4-15-6	1/4 Pmc 6'	N 62° 36' E	1.231
	Spruce 6'	N 10° W	.104
	Orig	S 64° W	.066

Calc.

$$\sin 1-58' = .0343$$

$$\begin{array}{r} 40.263 \\ - .176 \\ \hline 40.087 \end{array}$$

$$\sin 07.7' = .00224 / .084$$

$$\begin{array}{r} 37.415 \\ - 2.672 \\ \hline 40.087 \end{array}$$

$$\begin{array}{r} \therefore 2672 \\ + .176 \\ \hline \end{array}$$

@ Sta 2.848 random crosses true line.

$$\therefore \text{Sta.} - 2.848 \times .002245 = \text{Correction Sta.}$$

Summary. Meas. 80.697  
40.263

Meas 120.960  
Rec 120.85

$$120.85 / .11 \text{ amp.}$$

$$.00091 \times 80.80 = 80.80$$

$$\begin{array}{r} .00091 \\ \times 40.05 \\ \hline 40.05 \\ - 40.086 \\ \hline \end{array}$$

$$\begin{array}{r} 80.80 \\ 80.894 \\ 40.086 \\ \hline 120.960 \end{array}$$

$$\begin{array}{r} 40.263 \\ 37.81 \\ \hline 2.453 \\ \times .0343 \\ \hline .0842 \text{ full S.} \end{array}$$

$$\begin{array}{r} .084 \\ - .006 \\ \hline .090 \end{array}$$

$$.090 (.002245 = \text{Tang.})$$

$$0 = 07.7' \text{ correct.}$$

188 cm 1/2 W  
7.7  
188 16.8 W

Cruising  
 To identify corners established by B.F. Dorr  
 in May 1890 (Dorr 1/94)

April 17<sup>th</sup> 1934

Overcast to fair 50° ±

R.H. Hall, Duszynski, Wojciechowski.

Look for  $\frac{1}{8}$  E of Center

Fail to positively identify it.

Duszynski finds Dorr's Center Sec.

Post down - hole definite, agreeing  
 with remains of both hemlocks.

Set new pitch post 5' x 5' x 5' + mark

Pocket Compass 0' var.	}	W. Pine 7" 144° E .626
		N. " 14" 162° W 1.689

latter just N. of junction  
 Sheffer + Murray roads.

Cruise S var 2° E

37 steps E Murray road about 100' way

A 23

Book 2 p. 95

288 enter open marsh

hs 155° E, S40° W

428 One marsh S80E - 180W  
 464 Kind Donis  $\frac{1}{8}$  S of Center.  
 to post hole but side bearing  
 is off - marks all OK.

(allow for  $3\frac{1}{2}^\circ$  var.)

Set new patch post  $2' \times 4' \times 5'$   
 between 2 Norways.

var $0^\circ$	{	N.P. 6" N7W .056
		do 9" S7E .04
		Down stp S27E .24 $\frac{1}{2}$

Run W (on var.  $4^\circ$  E)

25 steps enter narrow open marsh.

90 leave do SE + NW

drains into wetter bog hole  $\frac{1}{8}$   
 of  $\frac{1}{8}$  cor.

460 Look along road for  $\frac{1}{8}$   
 Pine L. road.

possibly 480 " " "

Misc. Cruising

March 1934

Sec 34-38-4

$N\frac{1}{4}$  +  $E\frac{1}{4}$ ? Marked by very old  
 large posts & blazes of about same  
 age as "... With snow on it is  
 difficult to determine if these are orig  
 or merely an early day woodsmans  
 idea of corner + which has since been  
 considered OK.

East MC on  $\frac{1}{8}$  marked by post  
 facing Orig. BT which does not agree  
 with US notes.

A post only for S.  $\frac{1}{4}$   
 Nothing identified for SE cor.  
 Assorted blazes E+W.

Sec 25-38-4

Find post only for NE cor +  $E\frac{1}{4}$

SE corner bearings are all there with marks  
 on! No post visible

Sec. 36-38-4

Fail to find any  $E\frac{1}{4}$

SEx (tp. cor) marked by new post +  
 Spruce BT. Birch appears to be Orig.

## Sec. 2-37-4

W $\frac{1}{4}$  not definite - only blazed saplings  
SW corner is Orngl.

Small hub found for cor. + Orngl.  
Hemlock is down - marks OK. no  
others visible.

Scott of Tripoli has marked this  
up pretty well.

Cruise E. + find Orngl S $\frac{1}{4}$ .

Duszyński " " Bruch B.T.  
in Edgs of slashings.

## Sec. 12-38-5

Compass Traverse old road in SW $\frac{1}{4}$

March 30<sup>th</sup> AM Snowing

Rt. Ed. Emil + Tony

Begin on highway #4 at undetermined  
point.

O'van.

①	312°	1.91 ch.
②	325°	2.72
③	275°	2.05
④	317°	1.89 to fork hrs 17°
⑤	250°	1.78°
⑥	279°	1.45

Compass not working freely. N.G.

⑦	304°	1.97
⑧	262°	1.65
⑨	316°	3.12

@ .78 Intersect random #12 at  
Sta. 24.75 E of temp SW x 12.

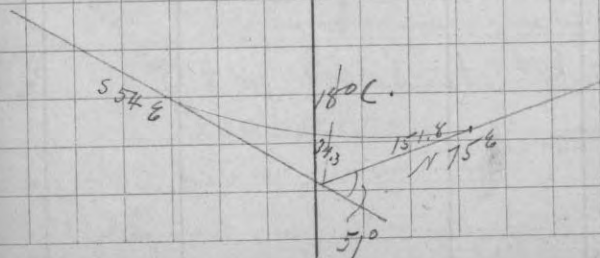
⑩	298°	2.16
⑪	317°	3.00 to bank above dense Swamp E.W.
⑫	308°	1.76
⑬	294°	1.49
⑭	307°	2.98
⑮	334°	2.50 leave + hrs 145E 5ch thence NW $\frac{1}{4}$

## Scotchman L. Road.

April 18<sup>th</sup> 1934 Overcast - showers  
 RH, with Duszyński, & Wojciechowski  
 + Ford pick-up  
 From new bridge over Squirrel River  
 line out & " Bracket compass - 0° var.

S 65° W 265' from E bridge  
 18° (8° Curve Tang 113.4 Ext. 8.9 length 225'  
 S 87° W 272'  
 17° (8° Curve Tang 107' " 8' " 212.5'  
 S 66° W 471.  
 (16° C. Tang 86'  
 Thence N 87° W over creek as prev. staked.

At shoulder of hill (sta. on orig. Tract.)  
 Lay one curve 18°  
 Tang 151.8 Ext 34.3'



£April 19<sup>th</sup> 1934

Snow + sleet 35°

Rt Hall with Duzynski + Wojciechowski  
Run due west ± from Orig. SE cor.  
by L off random £

called N 0-16 1/2 W

Var on 0° Azimuth 3° 20' E.

0.0 Our new post at Sec Cor.

.039 R on random £

2.31 Spike for hub .068 N

3.78<sup>6</sup> Hub + tack .111 N

4.78 E old road N+S crooked

6.35 Enter pocket of Swamp  
hs N 1ch Thence Wly  
" SW

8.62 leave do NW + d

12.17<sup>3</sup> Hub + re-enters same .356

Swamp ENE + SW

21.38<sup>9</sup> rt + N .626 for 1/2 S.23.655  
21.389  
22.666

23. br. marsh for low neck NE + SW

23.65<sup>5</sup> Spike for hub on " .692

.13 NW of pine stub

Osprey nest 1/2 hrs SE of 250 or 300'

Birds repairing nest.

40.00 Picket

40.58 Leave swamp NW + SE

No sign of orig! (or any other) 1/4 S

42.458 Spike on ridge.

(.038 SW of pole)

42.77<sup>8</sup> rt + North 1.25 + drive Pitch post.{ W. Pine 32" N 21-15 E 1.83<sup>8</sup>Var  
3° 45' E{ N. " 20" S 50-10' W 1.14<sup>7</sup>12.178  
21.389  
22.666  
23.655

23-38-5

Continued

April 20<sup>th</sup> 1934

Overcast 50°

R.H. Anzyski, Wojciechowski & Ward Chappel

Continue same line after looking again for 1/4 S on both sides of point - find nothing

42.45<sup>8</sup> Spike Var 3° 40' E

44.80 Re-enter same swamp  
bs. NE + S.

50.58 Leave same WNW + South about

50.90<sup>3</sup> Pitch hub - leans<sup>1.49</sup> N. 75 Th. NW  
Var. 4° 33' E

56.433 " Hub " 4° 15' E 1.652

60.00 Picket

63.293 Hub 1.853

64.16<sup>8</sup> st = N 1877 for 8 S.

Dime Scribed cedar post. S. edge Swamp.

12/20/34

{ Spruce 3" N 78° 40' W .097  
M. Pine 18" N 63° 48' E .674 ✓

68.50 Re-enter Swamp NE + W.

69.766 Hub at point of hard land  
Swamp bs S. there  
2.041

23

72.70 Leave swamp N + S.

76.00 E Cedar Falls road

P.C. bearing do do N 32° E + S 32° W

76.207 Hub Var. 4° 15' E. 2.23 N.

April 23<sup>rd</sup> 1934

Overcast + windy. Snow flurries in PM

Same crew continue same random

79.25 Enter Swamp NE + SW

82.80 Leave do NE + SE.

83.735 Hub + turn = NW to E. See 4/3

comes to random

① 126° 04' ✓ ② 252° 08.5'  
3.094 ch.

Var 3° 36' E

126° 04'  
- 179° 60'  
= 53° 56'

Sim. .80833 x 2 = 2.503  
Cos. .58873 1.823

83.735

+ 1.823

85.558 st = N. to Orig. Sec Cor. / 2.503

2928

= 1° 41'

Cos. .99957

.00043

x 53.56 = .037

85.558

→ 85.595

See Book II  
page 2

89 = 60°  
40.6°  
N 89° 19.4' W

True line

9.357

Misc. lines for tree planting.  
 April 24<sup>th</sup> 1934  
 R.H. with Duszyński-Wojciechowski  
 + Chappell

Continue picket line (E road) north from  
 P.I. to Swamp.

" = 927' N of E  $\frac{1}{8}$  on  $\frac{1}{4}$   
 (called 970' by mistake).

∴ at 19.35 ch. (" 20 ch - S ") Swamp 110 steps N.

Run Wly on picket line 20.00.

Thence Nly on random N + S  $\frac{1}{4}$  line. (var 2  $\frac{1}{2}$  E ±)

20.65 picket for temporary Center 33

Thence N again - same straight line.

.65 enter Swamp

3.90 W NW + SE.

6.00 opposite bend in swamp

" swings West.

10.00 picket (.631)

on flat hill top - dwarf people

15. Enter 4 + 5" jack E + W

17. Gully W to Swamp

20.00 picket for Approx  $\frac{1}{2}$  N. of Center  
 on N. slope



33-39-5 E.

N+S picket  $\frac{1}{4}$  line  $\pm$ 

- thence N. again - same picket line.
- 42 Enter swamp NE SW
- 3, 31 do do E + W
- 4 to 6 along E edge same swamp  
+ " W. " of ridge 150 wide  
between swamps
- 6 to 7 Across NE tip of swamp
10. stake
14. " N. end lake by E (0° var)
16. 25 NW cor swamp by E 3°  $\pm$
21. 55 fall .91° E of Orig  $\frac{1}{4}$  cor  
between Secs. 28 + 33  
as identified + marked:

Set new dry cedar post at  $\frac{1}{4}$ . (Rec'd from both stps.)

South B.T. found by Wojciechowski  
marks OK. but they face the  
location of other stp. no marks on  
latter. Find an old post down.  
base is .14 from BT & .12 from  
doubtful stp.

o'lar  
P.C.

U. Pine 2 $\frac{1}{2}$ "	N 29° E	.238
Mooney stp. 8"	S 50 $\frac{1}{2}$ ° E	.235
do 12"	S 21° E	.209

N.B. - This corner is about .35 S of swamp  
+ 1.00 E " "

is visible from N. + W. directions for  
some distance. Set flag.

Sight West agrees with line of cutting on  
SE SW 28 - thru Cedar swamp.

April 26<sup>th</sup> '34 Overcast 40° Same party

Picket line E from Orig NW x 33  
Var 3° E  $\pm$

266 to 350 paces swamp.

540 to brow of hill overlooking swamp.

Did not have transit to v' to  $\frac{1}{4}$

Pace S. on random course (var 2 $\frac{1}{2}$ ° E)  
from Orig NW x 33.

74 steps E hwy 16 = 3.20 ch

200 enter open marsh NE SW 8.57 ch.

402 old winter road <sup>17.40</sup> N 80° W + S 80° E.

466 W. marsh = 20.20 ch.

Continue thence on hard land skirting W. edge  
dense swamp closely.

Some blazes but no evidence of W  $\frac{1}{4}$  cor  
except one pitch stub apparently  
squared up not so long ago.

23-39-5

S. on projection N+S  $\frac{1}{4}$  line as  
previously described.

0.0 Tang & S of C. .65 to per S.

2.80 Enter Swamp N45W + E

10.33 lv. do NW + SE

15.70 } Gap between islands just W  
17.85 } of narrows.

19.38  $\frac{1}{2}$  full .177 E. of Orig. S.  $\frac{1}{4}$

See Book 1 pages 139-140

Notes would read:

0.0 To line .177 E of  $\frac{1}{4}$

1.53 to 3.68 neck of swamp.

9.05 re-enters swamp NW SE.

16.58 lv. do N45W + E.

19.38  $\frac{1}{2}$  picket line from E.

20.00 correct W. .358 + drive

peg.

Match 2" jack S60E .39

" " N30E .757

E old road S38W .457

PC  
Swamp 1/4  
@ 1/4

Record  
N. of

40.00 st = W. .57 + drive temp hub  
for Center. .115 S of brink of hill

matched } y. P. stop N30E .108  
do N13W .28

40.70 Enter Swamp

43.90 leave do NW SE

50.03 picket (.631)

57 gully to NW to Swamp

60.45 Enter swamp N60E

60.79 offset W .729 + set white flag in  
swamp for approx E N7C.

63.33 lv. " E+W.

64 to 66 along E edge do.

66 to 67 across N6 tip do

70.03 picket

74. N end lake to E no bar.

76.28 NW x swamp to E 3 ch +

81.58 fall .918 E of orig N.  $\frac{1}{4}$  cor.

$\therefore$  .918  $\rightarrow$  Assume perp. all in N  $\frac{1}{2}$  33  $\leftarrow$

.177  
81.58 } .741

.00904 Tang 0-31

" = corrects per ch then add .177

.00908  
28  
1264  
716  
1679  
105424  
105424  
105424

April 27<sup>th</sup> 1934

R. H. Hall - Dworzynski, Wojciechowodi + Chappel

E<sup>±</sup> on picket line from N  $\frac{1}{4}$ 6.07 fall .64 N. of M<sup>c</sup> Quinn's mark

14.75 to marsh surrounding pond

to SW + NE.

This line possibly too far N. at E end

Look again for Orig. Bearings to NE x

There are many truncheons down + standing  
- thereabouts but squared up tree + old

Cruiser's marks are only indications.

Rec. dist W. to hard land + E to river  
does not exist in field ✓

South thru brush - chain. PC var 3° E ±

0.0 Apparent loc of corner.

about 4' SW of squared stub

15.48 Leave swamp E + W

17.27<sup>2</sup> 12" boway

19. Enter swamp (open) W + SE

20.00 set temp  $\frac{1}{2}$  picket@ 17.75<sup>±</sup> fall about .55 E of blazed  
y. PinePicket line W. from said temp N  $\frac{1}{8}$  E3.83 lv. swamp to SE Var 3°  
+ N.

8.47 old RR grade (traversed)

8.59 picket

" to 9.72 N. tip of swamp

17.28 to swamp NW + SE.

20.00 set flag Th. N

27 to 78 steps over  
W. end hard point  
Bal. all swamp.S. again from temp N  $\frac{1}{8}$  E continuing from 20.00

29.15 lv. swamp SEly

31.85 picket

32. old RR grade to S 41° E.

Apr. 30<sup>th</sup> Same crew. fair - windy 50-6038.85 fall .32  $\frac{1}{2}$  E of an old

scribed + charred post between

2 down pines squared + overgrown

+ facing old double blaze to E.

There is evidence of a birch at record

dist only it to N 50 E

No post hole to be found S 79 W .17 from  
said birch. Nor can other birch be  
found ✓

$E\frac{1}{4}$ ) I believe this is the best evidence of the corner + set new green cedar post where post stood:

P.C. no var. set flag	{	W. Pin 10" N 76° W 1.82
		Y. " 8 S 46° W 1.477
		(on knoll)

Picket line W. from  $E\frac{1}{4}$   
174 steps to Swamp  
" to S and N NW

Picket line S from  $E\frac{1}{4}$   
247 steps to Swamp to W.  
Skirt W. edge" all way. J  
" 2 to 4 ch. dist.

§ SE SE. May 1<sup>st</sup> with Transit.  
Get on line between flags at SE x +  $E\frac{1}{4}$  +  
set line of pickets on that part of §  
lying on the ground.

Pace N. from T<sub>p</sub> line 40 steps to SE x  
56 steps then offset E to line  
+ 290  
346 " to Swamp NW SE.

NW  $\frac{1}{4}$

May 3<sup>rd</sup> 1934

Fair 60°

Same party

Chain E on picket line + check alignment with transit.

0.0 Angl N to cor.

26 to swampy draw

2.27 BS 15° N. of random .056 ch

7.24' BS on line -173

11. to Swamp NW

14.70 to " NE. SW

16.94 BS on line .405 N

20.00 picket

19.924 ends at. - N. .477 for  $\frac{1}{8}$

Sept. 12<sup>th</sup> 34 Set 4x4 Cedar post. Var on true line 2° 05' E.

{ M. P. 20" S 24 $\frac{1}{2}$ ° E 1.147

{ do 3" N 64° E .785

\* Old post-down-br. S. 22° BT down 50<sup>±</sup> 34

23.145 hub at brow of hill + turn  
.553 N defl + left to  $\frac{1}{4}$  S.

① 3° 15' ② 6° 32' ③ 9° 48'

= 3° 16'

Triangulate from near  $\frac{1}{4}$  S - results:

39.848 at - N. .953 to  $\frac{1}{4}$  S.

.02391 Tang 1° 22.1

50  $\$$  4 - 38 - 5

Approximate for planting

May 1<sup>st</sup> 1934

RH Ed. Tony + Chappel

$\Delta$  over flowage car to 12.59 ch.

Transit into line with old blaze near  
E  $\frac{1}{4}$  location:

@ 12.58 ch. S. of 18x set pine  
picket for temp N  $\frac{1}{8}$   $\$$

Thence S  $\frac{1}{4}$  again on same line

14.468 picket at N. edge road

14.84  $\$$  P. 16 pine lane

20.00 Temp E  $\frac{1}{4}$

20.10  $\frac{3}{4}$  to old blazed stub

P.M. Due S. from E  $\frac{1}{8}$  4 with transit

8.30  $\$$  road

8.792 picket

13.62 pitch hub on S. slope at  
rec. dist.

Thence: picket lines

> 189° 48' E + hit temp  $\frac{1}{8}$  on  $\$$

> S  $\frac{1}{4}$  across marsh + 250 steps

of high ground to SW swamp.

> W  $\frac{1}{4}$  (S 87° 48' W)

@ 183 round marsh

243 over do

388 to big swamp N + S.

39 - 5.

51

Sept. 28 + 29.

May 16<sup>th</sup> 1934 P.M. fair swamper  
R # Hall alone.

Pace N.  $\frac{1}{4}$  from Junction old tower road  
+ old Scotchman L. Rd. called

"The 4 Corners."

following traverse (Book 2 p. 119)

N 31  $\frac{1}{2}$ ° E 82 steps

North (var 3°) 171 "

I fall about 10' S of angle  $\frac{1}{4}$  S between  
28 + 29. old post down which

agrees very near by pacing with

Old NE bearing also down to

signs of recent use. or of other Y. Pine.

Car comes at E. edge small marsh.

Drive new scribed tamarac post in S. hole  
for temporary marker. to tree  
near.

Pace East (var 3°)

176 steps to  $\$$  old road N  $\frac{1}{4}$  + S  $\frac{1}{4}$

+ blaze small birch (on ridge).

Intend to place Wis Cons. Monument here.

since S  $\frac{1}{2}$  N  $\frac{1}{4}$  29 is State land

over —

28-39-5

May '34

Set Wis. Cons. Dept. monument  
at Engl. 1/4 bet. 29+286" exposed - tan post  
alongside.

marked b'njs - failed to meas. do.

Dec. 22<sup>nd</sup> 1936 Hall & Swearingen.

Read my 2 bearings with

o'Fabr. box compass on stake -

var. 0  
Y. Pine 24° N 65° E, 2.02

Y. Pine 11° N 73 1/2° W 4.692

notation duplicated in

(7) 21

P. 16

in Sec 30-39-5

Re-location W. end (16)

June 5<sup>th</sup> 1934 fair + hot.

Rt Hall - Auszynski - Wojciechowski + Chappelle

See Book 2 page 85

over

at (i) change degree of Curv. to 10° left

(j) " from N 56° W to

N 55° W 608.9

@ 111.4 EC 10° C.

@ 518.1 BC 24° Curve left.

@ 608.9 P.I.

{ Poplar 3" N 45° W 25.6'  
{ Birch 2" N 23° E 33.

External - S 14° W 16.7'

(k) S 83° 20' W 144.1'

@ 90.8' EC 24° C.

@ 90.4 BC 25° C left (Ext. S 20° E 6.2')

@ 144. P.I.

{ Poplar 3" S 35° E 28.2'  
{ " 4" S 12° W 45.1'

- (1) S 57°W 108.5'  
 @ 53.4 EC 25° C. Ext. 7.7' <sup>5492</sup>  
 @ 53.7 BC 30° C. left into Town Rd  
 to S 25°W  
 @ 108.5 P.I.  
 { Tel pole face S 78°W 14.  
 Pina stp. N 15°W 24.6

Connect above compound curve with Town road  
 by 46° curve right. length 170'  
 tangents S 88°W 100.8  
 + N 12°W "  
 Ext. N 38°E 35.7  
 P.I.  
 { Piple 3" N 52°W 12.4'  
 + 3" S 60°W 11.5'

## Summary of Planting 33-39-5

Count of trees 100' Each way at various points

- ① 456 in 100x100  
 ② 500  
 ③ 725  
 ④ 576  
 ⑤ 576  
 ⑥ 598

$$c) 3431 (571.8 \text{ Av.} \div 2297 \text{ A} = 2489 \text{ trees per A. av.} \\ \times 180 \text{ A. by traverse} \\ \hline 448,000 \text{ of planting}$$

Approx. number trees planted. <sup>sec.</sup> 53

June 11<sup>th</sup> 1934calc.

office - rain

$\frac{78.768}{78.76}$   
calc.  $13^{\circ}42.2'E$

Oing

 $N 88^{\circ}45'W$   
80.052

 $calc$   $N 7^{\circ}41'42''E$  79.012

1946.

 $N 88^{\circ}19.4'W$ 

85.595

Ending Oing North  $\frac{1}{4}$  alters this sketch:

 $\frac{85.595}{27.399}$ 

Oing

 $N 8^{\circ}19'W$   
79.333

~~East~~ ~~South~~  
P.R.

Lim	Course	Ch.	N.	S.	E.	W
$\text{A}$	$S 88^{\circ}45'E$	80.052		1.757	80.033	85.558
$\text{B}$	$S 0^{\circ}19'E$	79.353		79.352	.439	85.558
$\text{C}$	$N 88^{\circ}19.4'W$	85.595	2.504			80.472
			2.504	81.109	80.472	5.086
				2.504		5.086
				78.605		$\frac{.02472}{2 \text{ ang.}}$
			$144 \text{ calc.}$			$\frac{.02472}{2 \text{ ang.}}$ $\times \frac{3}{4} = 42.2'E$
$\text{D}$	$S 88^{\circ}45'E$	40.026		.878	40.017	42.179
$\text{E}$	$S 0^{\circ}19'E$	79.353		79.352	.439	42.179
$\text{F}$	$N 88^{\circ}19.4'W$	42.797	1.252			40.456
			1.252	80.230	40.456	40.456
				1.252		2.323
				78.979		2.323
			$\frac{1}{4} \text{ line calc}$			4.2242
						$\frac{1}{4} = 41.1'E$

78.768 +

 $144 = 141.4$ 
 $\frac{78.979}{79.012}$   
 $\frac{19.753}{19.753}$  approx  $\frac{1}{4} S 2 C$



23-38-5

N + S 1/4 Sec. line

June 12<sup>th</sup> 1934

Rainy to fair 55-65°

Rt #11. Dwyzynski-Wojciechowski  
& Ward ChappelleRun N 1°-41.4' E ± from South 1/4 cor.  
Sec page 37

by angle of random \$ at 42.816

• Turns 88°-17' twice (88°-18.6' intended)

- 1.25 R on random \$

0.0 1/4 S. post

1.86 Enter wet tan. & alder swamp  
E + SW

4.21 Leave do E + W.

5.01 Cut E side 8" W Pine 1"

5.101 pitch hub + tack

6.13 22" y. Pine on line

5.101 Move transit West .003 ch.  
& B/S on str - 1.25

This adjusts course as calc.

19.01 ch

2/78.910

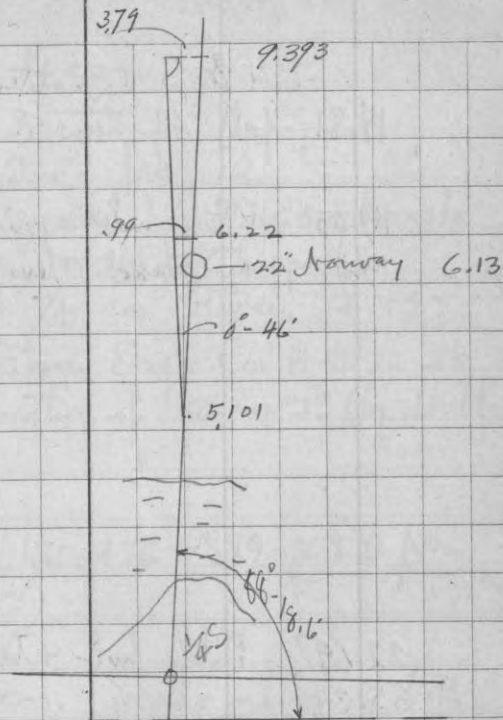
2/39.485

19.742

approx. dist.

Calc. 11.0

" 11.000



5.101 Turn defl &amp; left 0°-46' to pass Norway.

6.22 correct E .99 ft. into line

9.393 " " 3.79 " " &amp; continue

N 1°-41.4' E.

12.62 Hub Var on Meridian 3°-25' E ±

13 1/4 S end open marsh but W 3 rods ±

15.35 } Cross do near NE cor marsh

17.05 }

23-38-5 E.

N &amp; S Quarter line

18.81 fall 49 steps E of approx  $\frac{1}{8}$   
(Half-Maturen)19.03<sup>3</sup> Pitch hub on ridge E & W19.75 " stake - temp  $\frac{1}{8}$ 22.697 Pitch hub + tack (mimature post)  
35.34 " " "

23-38-5

North  $\frac{1}{4}$  cor.June 13<sup>th</sup> 1934

Fair 70° +

Rt Hall, Ed Duszynski - A. Wojcickowski  
+ Ward ChappellePrepare to set  $\frac{1}{4}$  cor. between 14 + 23  
on pro rate between Orig Cor 14-15-22-23  
and the calc. location of NE cor. 23 (by double  
pro rate.)Transit over sta 120.456 (S 89°-36.8' W from  
Orig, SE cor 13)Find Orig  $\frac{1}{4}$  cor. Scribe marks on both  
stumps and well defined old post hole  
Record dist. from both. ✓

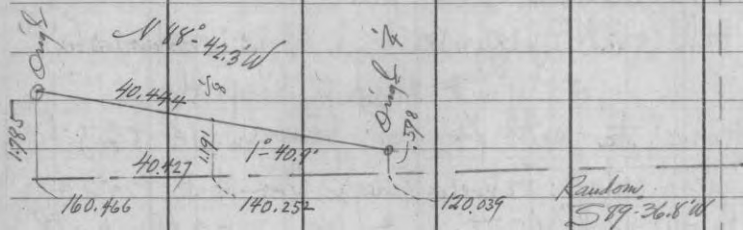
Set new pointed cedar post in hole &amp; mark:

Var 4-30 on Meridian	1/8 Cedar 5" (in swamp)	N 73°-20' W	.510
	1/4 Pine 10"	N 80°-45' E	.431

Orig	BT	S 59° 9'	.09
	"	N 9 $\frac{1}{4}$ E	.09

Angle + dist from Sta 120.456  
" E to NE 55°-04' .729 ch. ✓

A 23-38-5

∴ @ 120.039 st = N. 598 To Orig  $\frac{1}{4}$ 

Adjust random for correction of .418 E + of S.  
 =  $0 - 18.2' = \text{tang } .00529$

Sta	19.03	cont'd E.	.10
"	22.70	"	.12
"	25.34	"	.134 + continue

is at	20.12	line of S bdy	S. Isolation strip
21.12	"	"	S. plot
"	22.12	"	"
"	23.12	"	Isolation strip
/	24.12	"	"
	25.12	"	North plot

Run with Transit = 90° off line  
 @ 1.00 = SW cor. N. plot  
 @ 11.00 SE " "  
 @ 12.00 E bdy E Isolation strip

= S 474 + 3.05 for hubs.

26.12	line of N. boundary	N. plot.
27.12	"	N. isol. strip
25.754	a	pine hub
30.28	±	Cedar Falls Road
30.449	hub	

N.B. - Mr. Stevens - regional inspector advises having space of 3 ch. between actual plots instead of 2 ch. as planned.  
 June 15<sup>th</sup> '34 Fair 875° RH - Ed. Tony - ward  
 Run S line of N plot + act plot corners  
 + " " " " " "

This looks O.K. (Pitch hubs used! but or miss)  
 Maturen shifts to ch. S. 1 ch.

30-39-5.

Orig.  $\frac{1}{4}$  Cor.June 16<sup>th</sup> 1934 AM

Fair. 70°

R H Hall with Ward Chappelle.

Assume apparent location of Don's  
 $\frac{1}{8}$  E. of Center to be correct + drive  
 pine hole at intersection of record distances  
 from both stumps. + mark fish on  
 $\frac{1}{8}$ " Norway - N<sup>g</sup> about 6'.

Cruise  $\frac{1}{4}$  E. Var 5°E 23 steps = 1 ch.

0.0

171 To old road N+S - general direction

227 } Squirrel R. runs S.

237 }

484 to stump of Don's maple <sup>marks</sup>  
 (483 calc = length of line)

Find Don's post leaning against his 28" N. Pine  
 Stp. (no marks on stp.) post hole evident.  
 Agrees with loc. of Owl birch as marked by  
 another old post down. →

Stp of maple agrees apparently - no tape.

Mark 28" stp. (N 7°W 2') + drive pitch plug in hole.

June 20<sup>th</sup> 1934

Ray H. Hall + Henry Freund

At RR iron alleged to be at Owl  $\frac{1}{4}$  S  
 between 21 + 22 - Fail to find any  
 supporting evidence - may have been moved.

Old RR more crooked than appeared  
 before brushing out. Not certain that it  
 follows Sec. line between 15 + 16 as  
 reported.

At 720 steps N. of approx.  $\frac{1}{4}$  15+16  
 on old grade to SW by turning to W  
 - May go to Bootjack?

To check location of line between 9+10  
 + 15+16  
 will have to come in from Bootjack L.  
 or from Swampauger L. if we can  
 identify corners there.

E  $\frac{1}{4}$  30-39-5 continuedJuly 9<sup>th</sup> 1934 Hall, Chappelle, Kaszanski +Set 1 $\frac{1}{2}$ " ± Iron Rod + Cedar post. Nowak.

Var. { W.P. 10" S 61 $\frac{1}{2}$ " W 52.1 ft.  
 3°E { Y.P. 11" N 21° W 67.3 ft.  
 (miscellaneous)

39-4

June 21<sup>st</sup> 34

Hall + Freund

Dine in S+E from Town Road  
on E side Square L. (NE 1/4 16)

Hemlock slash

Find stub at edge of road  
marked "60 rods N. to 1/4 15 + 16Continue S+E to junction\* of old  
roads S 90° E + S 70° E.

Speedometer readings

83.4 m. Approx 1/4 16

83.5 Chas Hill's road

84.2 Peterson's 60 rod mark

85.0 Junction\* of old Squirrel Rd

85.9 Old camp blacksmith shop  
on Stone L. branch.

Road forks here.

Follow left fork to Stone L  
apost. Road choked up.

Pace S+E on Squirrel Rd from juncti\* \*

120 steps ± enter marsh.

150 bridge - Creek 20 rods N.

218 lv. marsh

48 ch = 125 to one cherry tree blazed coming  
from E. (Hard land route)

13 - 38 - 5

July 9<sup>th</sup> 1934 Fair. PM  
R H Hall, Chapelle-Koszenki + Nowak  
Search again for Engl. Bell x 13  
where it pro rates since discovery of  
14 between 14 + 23 (.50 S of sta 80.16) ±  
Comes between two Cruisers marks  
which are some dist apart but facing  
the location. check up on several  
pole stp. remains but find nothing  
definite.

Look again for the two Spruces for 14  
13 + 24 but fail to find any definite  
remains. Many spruces grew there.

I consider these as lost corners.  
Obviously there were several differing  
opinions as to location of the Sec. Cor  
judging by the blazes.

## Telephone line route

July 16<sup>th</sup> 1934W. Quinn, Hall, Masar, Roscoe  
Pionkowsky + NicholsIdentify Dons  $\frac{1}{4}$  S. bet. 31 + 32 <sup>36-8</sup>  
wire fence hrs about .23 E. of cor.  
+ " " " " .24 S. of cor.Select an opening just S. of cor. +  
slightly E. of fence + place Target.  
Must fall about 8 lbs W of ds.

(5-35-8)

From angle in Hickkeys pole line at  
its intersection with a town road winding  
said to be about E of  $\frac{1}{4}$  Sec. 5  
distant ?Run line N. to  $0^{\circ} 03\frac{1}{2}'$  W. of our target.July 17<sup>th</sup> Reume (without Mac)

Pole stations 2 ch. long.

16 = 32 ch.

16 $\frac{1}{2}$  = 33 ch.+ 16 = 33.15 to river .50 W. of Hickey  
+ .53 E. of MC post  
fenceJuly 18<sup>th</sup> 1934 + 19<sup>th</sup>

Same crew continue from N

July 20<sup>th</sup> Same crew. fall p. 73 E. of <sup>SW 32</sup>  
Reach river + check OK with line on S bank.  
Triangulate roughly 231' over river.Identify Dons  $\frac{1}{4}$  S. on ~~4~~ 32 36-8  
Old post down - with slips (Dons)  
Clear on transit

Set I.P. with square plug

Red Oak 9"	S 39 E	1.08 ch.
Maple 5"	S 70 W	.269
E+W fence hrs	S.	.239
N+S " "	E	.226
Telephone line	E	.265

Supposed cor (SW x 32) may be the corner  
Only indic is 3 old posts + down pin  
NW $\frac{1}{4}$  10 lbs. ✓

July 20<sup>th</sup> 1934 Am. 80°  
 Observe Sun for Azimuth  
 Select exposed boulder 3 or 4' W+S  
 of apparent SW x 29

Remains on 0° sight of Fire Tower  
 NE to SE to Sun (Std. Time.)

(1) 8:47 AM Cont. Std time  
 vert  $42^{\circ}-57'$  =  $60^{\circ}-36'E$   
 horizontal  $44^{\circ}-22'$   
 Mag course to Sun (var 3'E) S74E

(2) 8:50.5 AM  
 v  $43^{\circ}-33\frac{1}{2}'$   
 h  $45^{\circ}-11'$  =  $N61^{\circ}33'E$

(3) 8:53 AM  
 v  $43^{\circ}-59'$  =  $N60^{\circ}38\frac{1}{2}E$   
 h  $45^{\circ}-43'$   
*Mag course 2*  
*Mag course 2*

Near N in E road  
 0.0 = Dons W 7 32  
 2.50 Gate on E private road E

14.72 Road to SW  
 19.48<sup>3/4</sup> line of fence E  
 19.61 Dons records

39.22 " "  
 39.32 Pro rate.

39.34 $\frac{1}{2}$  line of fences E+W. + later identify  
 depressions where Dons stood.  
 + Dons & iron for cor.  
 in line of fences

Thence W along fence  
 0.0 about E road  
 2.80 = brow of hill (Dons called this "lake")  
 3.19 old fence cor E+N  
 6.30 to lake steep bank from 2.80

Remains meas Nly in lane from 39.22  
 15. — road to NE.  
 mark on fence post

19.61 Dons rec.  
 19.78 to E+W fence (fence W+S) ✓  
 Find Dons 2 $\frac{1}{2}$  Norway. Put  $\frac{1}{8}$  in  
 E+W fence about 3' W  
 fence cor.

39.22

19.76

58.98 Meas.

58.83 Dons rec.

58.83) 15 surp (.00255 per ch.)

x 39.22

.10

39.22 ✓

39.32 P.R.

Did not split hairs on meas.

✓

29-36-8

## Porcupine Tower Location

August 1<sup>st</sup> 1934 Fair-windy 70°  
 R# Hall with Harry Nowak + Walter Wilk

Dons S'8 on W-29

Drive short iron pipe by Dons road course  
 + distance from top of his tower.

Comes in E+W fence, .06<sup>th</sup> W. of N+S fence

Mark: Y. Pine 3" ~~#46 W~~  
 S46 E P.C. .10 1/2  
 mark

At Dons SW. cor. 29 bury 6x6" concrete  
 monument 8" below road surface.  
 by road dist from holes where Dons steps  
 were. + in line of E+W wire fence.

} fence post to	to E	.26
	" " " W	.296
} Oak 9"	S 43° 37' W	1.15
	Cherry 8"	S 51° 36' E

Transit over boulder. used July 20<sup>th</sup> as star obs.  
 point + orient Transit 60° 36' on E Tower (top)  
 258° 15' Norway top on horizon (1/2 or 2 miles)  
 5° 03' Transc hub a  
 75° 23' Sec. Cor. mon. .178 ch. ✓



29-36-8

Continued

Transit at Sec. Cor (SW<sup>29</sup>)

Orient transit by 258°-15' on Norway.

Read courses to new bearings as noted:

Var 2° E ± interference

E. Tower 60°-16'

Unable to see flag at 1/4 bet 31+32 :

transverse NW-SW SW<sup>29</sup>

a bs 3°-23' 5.77' ch.

at @ orient transit by 183°-23' on Cor.

Obs. boulder bs. 185°-03 1/2'

E. Tower " 105°-00'

Sta (E) bears 359°-28' 12.548 ch.

to C 12°-46' 1.33 "

" = 1/8 cor.

N E W

∴ N 3°-23' E 5.77' = 5.761 .34

N 0°-32' W 12.548 12.548 .117

N 12°-46' E 1.33 1.297 .294

19.606 .634 .117

-

.517

.02637 = Tang.

1°-30.6'

= N 1°-31' E.

19.613 ✓

.25 in 1°-31' 19.61

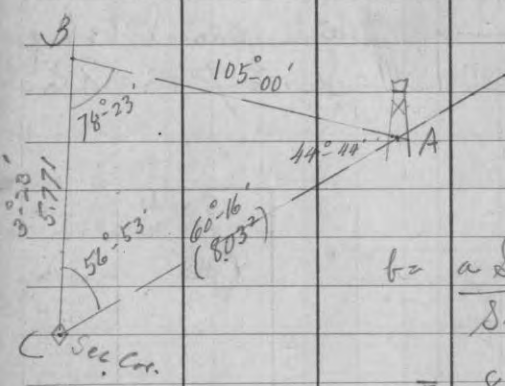
= .0066 ch. = 0.44 ft for.

Had set spikes { .25 ch. due N of Sec. Cor.  
& 25 lbs.Tower Site Conveyance Recorded  
Warranty Deed # 80196 } Vol 103 page 58A  
Aug 10<sup>th</sup> 1927 } Jan. 21<sup>st</sup> 1928Lena Byers to State of Wisconsin  
Starting at the Corner of Secs. 29-30-31-32  
Tp. 36 N R 8 E; Thence north along the  
Section line between secs. 29 + 30 one rod;  
thence east on a line parallel with the  
Section line(s) between secs 29 + 32,  
24 rods; thence north 19 rods;  
thence east 8 rods; thence south to the  
Section line between secs. 29 + 32;  
thence west along said section line to  
Place of Beginning; said parcel being  
a part of the SW 1/4 SW Sec. 29-36-8 E.

At spike 25 lbs due north of Sec. Cor (SW cor 29)  
 fence 64 to a point 25 lbs N. of fence  
 about 5 ch & in potato patch.  
 Course  $\approx 89^\circ - 51' E$

#1) 5.248 Hub (25 lbs N of fence)  
 & Tower hrs.  $\times 37^\circ - 44'$  from sec line  
 #2)  $\frac{8.941}{8.921}$  Hub on hill - fence hrs S.  $26\frac{1}{2}$  lbs  
 & Tower hrs.  $\frac{332-10}{359-60} = 27^\circ - 50'$

3) 11.042 Hub



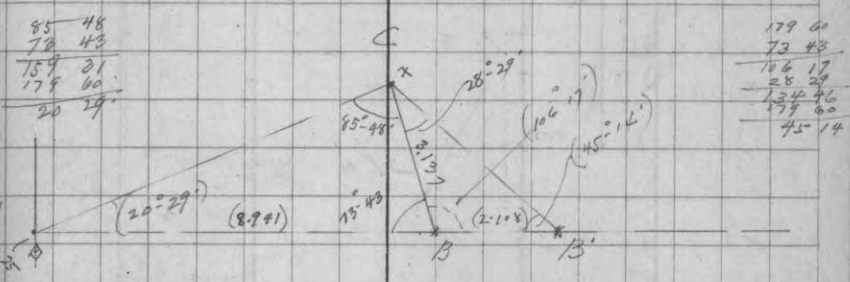
$$b = \frac{a \sin B}{\sin A} = \frac{5.771 \times \sin 78^\circ - 23'}{\sin 44^\circ - 44'} = 8.032 \text{ ch.}$$

$\frac{89^\circ - 51'}{60} = 1.4833$   
 $\frac{29^\circ - 35'}{60} = 0.4917$   
 $\sin 44^\circ 34' = 0.7003$   
 $\cos 44^\circ 34' = 0.7696$   
 N. of fence at stn @  
 6.98 ch Ely of Sec Cor.

@ 8.04 it is 3.97 N of 6.99 ch. (90)

August 2nd 1934 Mostly fair 70° Same party.  
 At hub assumed as 8.921 from Sec. line  
 Lay off base 3.137 ch. NWly on shoulder. = x  
 Course  $\approx 116^\circ - 26' W$

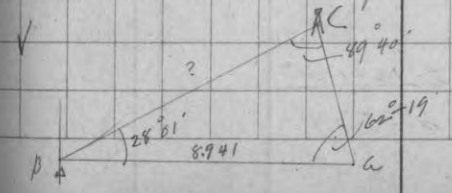
$\angle W \text{ to } N = 73^\circ - 43' @ 147^\circ - 26'$   
 at x  $\angle W \text{ to } S = 85^\circ - 48' 171^\circ - 35'$   
 " "  $\angle S \text{ to } SE \text{ to last hub on run } 28^\circ - 29'$   
 @  $56^\circ - 56.5'$



$$c = \frac{a \sin C}{\sin A} = \frac{3.137 \times \sin 85^\circ - 48'}{\sin 20^\circ - 29'} = \frac{3.137 \times .99791}{.34993} = 8.941 \text{ ch.}$$

$$c' = \frac{b \sin C'}{\sin B'} = \frac{3.137 \times \sin 28^\circ - 29'}{\sin 45^\circ - 14'} = \frac{3.137 \times .4769}{.70998} = 2.108$$

$\therefore 11.042$  Hub  $B^2$  from 1st Sec.



$$\therefore a = \frac{c \sin B}{\sin C} = \frac{8.941 \times \sin 28^\circ - 29'}{\sin 49^\circ - 40'} = \frac{8.941 \times .47533}{.75994} = 5.533$$

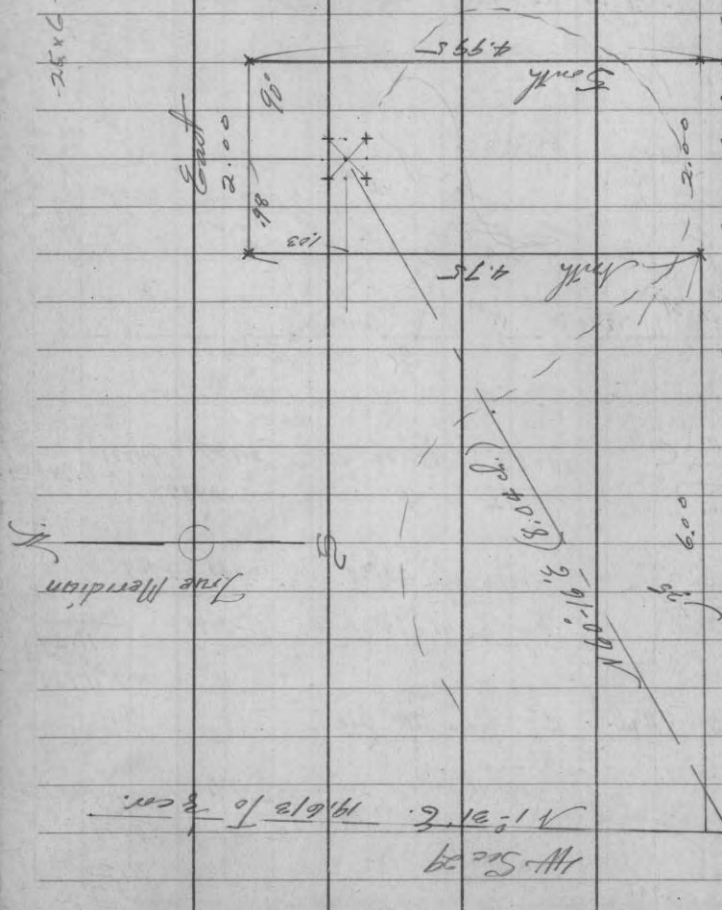
re-calc from Sec Cor

29-36-8  
Porcupine Tower.

$$5 \times 2 = 10$$

$$- 25 \times 6 =$$

$$\frac{1.50}{4.50} A.$$

S.W. cor  
50029  
1

Fence (489°-51°E)  
Assumed to be true line (since Pt. Davis Random is turned out  
to be true line)

(No record of any corners between Sec 15 & 16.)

Since Pt. Davis Random is turned out  
to be true line

Truck trail in SW  $\frac{1}{4}$  19 + W  $\frac{1}{2}$  30

April 4<sup>th</sup> 1934

Overcast 40°

R.H. Hall. Duszynski - Jager - Wojciechowski  
P.C. (no. var.)

- 393.

0.0 =  $\pm$  Zentner Road

400 or so W. of #2 Junction

S 17 E 1090.

To P.I. 16° C. left

② S 53 E 348.

" " 18° C right  
@ 250' old rd. in gully bas.  
S 65 E

③ S 18 E 138.

To P.I. 22° C. left

④ S 33 E 412.8'

To H.P. flayed trail  $\frac{N}{W}$   $\frac{1}{1}$

144 to 214 Beaver creek 160 E.

⑤ S 3 E

@ 532.4 apparent line between  
Secs. 19 & 30

931  
1000.

picket - rain + just.  
P.I.

$\angle$  30° C 14°

August 15<sup>th</sup> 1934

Hall: Koszowski + D. Nowak - continue  $\pm$   
picket line on average of H.P. reads spots. S 2 E

@ ④  $\angle$  30° right Curve 14°

Tang 109.7. Ext. 14.4 Rad. 410.3'

BC 14° C = 2150'

EC " " = 2364'

+ Tang. S 2 E 711' = 3075

@ Approx Sec line  $\frac{19}{30}$  @ 2776

$\angle$  12° Curve 6° { BC 3075

⑥ S 14 E 227. { EC 3275

$\angle$  8° Curve 5° { BC 3353.3

{ EC 3533.3

⑦ S 6 E 112

$\angle$  13° Curve 1° BC 3570

EC + PEC 3702

⑧ S 4  $\frac{1}{2}$  E 307

$\angle$  14  $\frac{1}{2}$  C 7° right.

EC do 3902

⑨ S 10 W 222

Resume in B 4 P. 18  $\leftarrow$

Location of Lake Tomahawk Tower  
Known to be in SW SW Sec. 27

August 11<sup>th</sup> 1934 Fair 75° F.

R. H. Hall & Arnold Thall

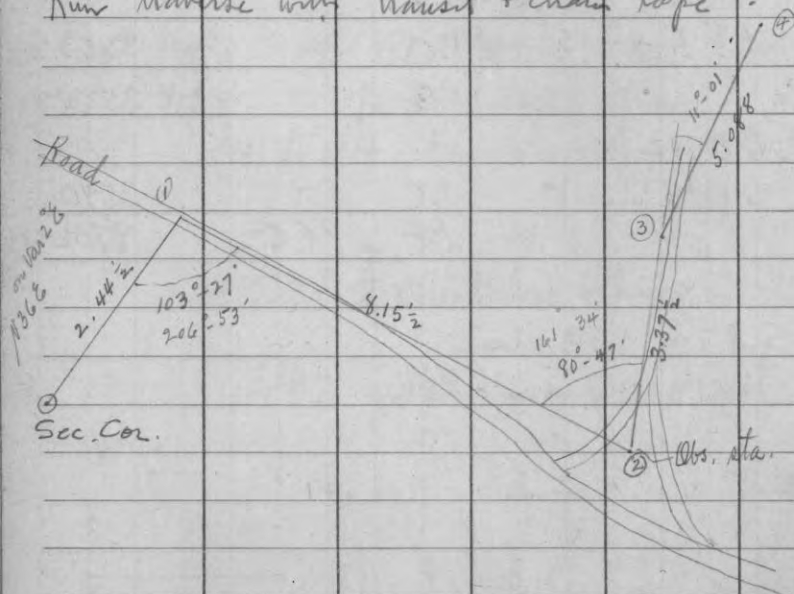
Orig. Cor. to 27-28-33 & 34 identified  
in 1930 or 31 by H. C. Hall in

Survey for M. Dinkman (33-39-7)

- Marked by pitch post & iron pipe  
& new pine stp. bearing.

See

Run traverse with Transit + chain tape =



at station ② observe sun. Time - Cent. Std.

① 9:29 AM vert 45°-48'  $S_{\text{un}} = S 89^{\circ} 08' E.$   
 $\angle \text{to Sun} = 108^{\circ} 17'$   
 $\begin{array}{r} 108 \ 17 \\ 167 \ 25 \\ \hline 179 \ 60 \\ = N 12^{\circ} 35' E \end{array}$

② 9:33 AM 46°-26'  
 hor. 109°-20'  
 $= N 12^{\circ} 41 \frac{1}{2}' E$

③ 9:36 AM 46°-49'  
 110°-12'  
 $= N 12^{\circ} 32' E.$

Call Course ② to ③  $N 12^{\circ} 33' E.$

Traverse continued by angles. (Per. set on 2° E.)

④ angle left 18°-37' 2.20' ch.  
 mag. course  $S 6^{\circ} E$

⑤ " left 25°-20' 4.338 "  
 mag.  $N 19^{\circ} 4' W$

⑥ ( " left to tower 34° 36'  
 " " ⑦ 33°-36' 8.92  
 course  $N 53^{\circ} 4' W$

⑧ " left 40°-44'  
 to & Tower  $S 81^{\circ} W$  .247  
 (" attract?")

Therefore =

By approx. true Azimuth

Average Mag. variation =  $1^{\circ}15' E$ .

	N	S	E	W.
① N $35^{\circ}13' E$	2.445	1.998	1.410	
② S $68^{\circ}14' E$	8.155	3.024	7.574	
③ N $12^{\circ}33' E$	3.375	3.294	.733	
④ N $23^{\circ}34' E$	5.088	4.664	2.034	
⑤ N $4^{\circ}57' E$	2.201	2.192	.19	
⑥ N $20^{\circ}25' W$	4.338	4.067		1.511
⑦ N $53^{\circ}59' W$	8.92	5.245		7.215
⑧ S $85^{\circ}17' W$	.247	.021		.246
	21.460	3.045	11.941	8.972
	- 3.045		- 8.972	
	18.415 N.		2.97 E	

$$.16125 = \tan 9^{\circ}10'$$

$$\div \cos 9^{\circ}10' .98725$$

∴ Tower hts.  $18.65^3$  ch. N.  $9^{\circ}10' E$  from Sec Cor.

If we assume W.  $S \frac{1}{2}$  Sec 27 to be due North  
Tower is 1215 ft. N. thence E 196 feet

N.B. This traverse was executed short hauled  
& in a hurry but I believe it  
represents conditions with reasonable

accuracy. R.H.H.  
Az. probably correct to  $0^{\circ}03'$

$$18. \quad = \quad 1188.$$

$$.653 = \quad \quad 43$$

$$\hline 1231.$$

Sept 11<sup>th</sup> 1934 PM  
 RA Hall, Koszowski + Nowiak  
 Correct our random # NW  $\frac{1}{4}$  run May 3<sup>rd</sup> (page 49)  
 Set  $\frac{1}{8}$  S post as noted

The del. chained post found lying down  
 22" S. of ours looks like Dours +  
 the bearing to same " " "  
 from old post sd. by (down) bus.  
 (N. Pine 8") S 50° E .34

E+W division exactly same!

Difference in alignment may be due to slightly  
 different setting of NW cor - found no post  
 there. Or predecessor may have used  
 sight compass.

Sept 12<sup>th</sup> 1934 PM. fair 70°  
 Same party.  
 Produce said corrected # NW  $\frac{1}{4}$  33 W by  
 as random # NW  $\frac{1}{4}$  32

### Chains

0.0 Orig. Cor. Secs. 28-29-32-33 in gully.  
 .23 Leave swamp drain N+S  
 2.33  $\frac{1}{2}$  Fire lane #16  
 2.51<sup>2</sup> Hub.

4.06<sup>6</sup> Hub .0416  
 5.947 " .061  
 10.633 " .109

Sept 13<sup>th</sup> '34 Same party - continue  
 - variable 75° F.

11.20 enter draw - lower drain  
 11.47  $\frac{1}{2}$  old winter rd N7E + S 20E curving  
 12.00 W. draw  
 13.719 Hub .1405  
 16.47<sup>5</sup> " .169  
 20.193 Hub

32-39-5  
random continued20.379 st. = N. 209 + act 4x4" Cedar post  
on NW slope

Mag. var.  $1^{\circ} 25' E$

Jack 8' N 38° 05' W .759  
W.P. 3' S 27½° E .612  
152° 20

20.193 Hub + obscure Sun  
line called 270° 00' 75° E.

① 2:22 PM Cent. Alt time

vert = 37° 21'

Az 228° 35.5

(calc " 228° 20.4

15.1  
- 89 60 = S 89° 44.9' W.

② 2:25 PM

v 36° 56'

Az 229° 27'

calc " 229 10.5

16.5  
- 89 60 = S 89° 43.5' W

Average S 89° 44' W. ±

Mag. var. of line = 2° 35' E.

16

2° 19' E to Meridian

32-39-5  
Random 4 ½ continuedSeptember 19<sup>th</sup> 1934 Overcast 70°

R.H. Hall. Norak + Koszowski

Continue (S 89° 44' W ±) on Random

24.481 Hub .2506

26.348 people stop on line .21

31.16 = Hub .319

34.214 Hub .3504

36.574 people hub .3744

+ .181

36.755 Hub in sight of ¼ S. + turn  
deft. angle right to " post  
5° 57' @ 11 = 53.5' 4.026 ch.

(45 hrs. 275° 40' by rerun.)

5° 57' Sin .10366 x 4.026 = .4173 var. S

Cos. .99461 x " 4.004

36.755

4.004

40.759 right angle N to Orig ¼ S .4173

.01024 = Tang

0° 35.2'

∴ S 89° 44.2' W.

35.2

19.4

N 89° 40.6' W true line

→ Even.



Orig's  $\frac{1}{4}$  S. bet. 29+32 39-58.

The NE orig' line is only one which can be positively identified - Marks OK

Other doubtful - remains of a cedar down but can not determine exact position before it rotted over in muck.

Drive new scribed cedar post S55W P.C.  
10 lbs. from B.T.

Transit over post - Az.  $\pm$  from back sight.

Mag. Var.  $1^{\circ}45' E$

New	{	Cedar	7" S 71 $\frac{1}{2}$ E	.329
		"	9" N 44 $\frac{1}{2}$ E	.576

Old	{	BT hrs.	N 58 $\frac{1}{2}$ E	.10
		Other?	S 45 W	.16 $\pm$

Return + set  $\frac{1}{8}$  S. as on page 88.  
then S. 180 $^{\circ}$  for 20.00

Th. S. 20.00 ch  
by pocket compass  
& picket line

for planters  
ends in swamp  $(N 8 \frac{1}{2} E)$

v

## Aluminum Line Markers.

Sept 18<sup>th</sup>, 1934

Hall, Norak + Koszeniski

Set Cedar posts painted white with Aluminum cards tacked on, as follows:

38-5

Line of Secs. 2+3 at N. edge #2 road +  
488' S<sup>ly</sup> from Sec. Cor. (meas. from E road)

Approx. N+S  $\frac{1}{4}$  line in Sec. 3 524.3' S. of  $\frac{1}{4}$  S.  
+ 16.5' N. of E #2 road  
" " " = 540.8 S.

Approx E Sec. 4 1850' S. of Sec. Cor.

39-5

N+S  $\frac{1}{4}$  line in Sec. 33 29.26 ch or 1931' N.  
of orig' South  $\frac{1}{4}$  cor. + 1 road N of  
E #16 fire lane.

Approx W Sec. 29 on S side #16 +  
973' S of orig'  $\frac{1}{4}$  S  
var 2 $^{\circ}$  W.

Approx N+S  $\frac{1}{4}$  line Sec. 30  
90.5' S of B.P. Dows Center Sec.

## Line Markers

39-4

Approx. # Sec 36  
952' E. of Orig. 1/4 S.  
+ on W side of road

Sept. 26<sup>th</sup> 1934

39-5

On § Sec 33  
19' E of E 1/4 S.

On 4<sup>th</sup> Sec 32  
166' W. of Sec. Cor.

3-38-5

for planting.

Run random compass line E from flag  
33.69 S of NW cor. (Page 50)

Approx 20 ch. Th. S. 20 ch + 9.78 to swamp.

(along 4<sup>th</sup> private forty)±

also picket out § " " ± E to swamp.

+ 1A " " ± " " "

8-38-5

Search for West 1/4

Sept 28<sup>th</sup> 1934

Hall - Novak + Koszenki.

Look again for 1/4 S.

Fail to find scrub marks but find 2  
Tamarac remains which check pretty  
close. putting cor. 26 hrs S of sur-  
flag. The stub representing NW bag?  
is all turned on S. side - has blaze  
on NE side facing other bag?  
latter is low stub with what appears to  
be lower part of BT facing but not  
enough remains above notch to have  
any marks.

My theory is that their oval meas. N on 4<sup>th</sup> 8  
landed too far N. at NW cor so they fudged  
same S a bit - making N 1/2 of line -

6-38-5

Also searched for evidence of Orig S 1/4 + SWx  
Sec. 6-38-5

Could find no evidence

Set new cedar post for SWx 6 as noted  
Book II page 25

Project 2 <sup>& 14</sup> - Horn Sec 4-38-5Sept. 27<sup>th</sup> 1934

fair 70°

Hall Morak + Koszynski

Produce our approx  $\frac{1}{4}$  (which we saw  
from high NE x slip thru old blaze in  
vicinity where  $\frac{1}{4}$  should be)

across Howard Creek Swamp + to #2

var. reads about  $2\frac{1}{2}^{\circ}$  E ✓Run P.C. traverse W<sub>g</sub> along 2 + 14

Reading courses with compass set on staff

O'ran + reducing for 2° error:

o.o = hub .16 S 1/2 E 2 on E Sec. 4

1 = S60W = S62W 9.05

2 = S73W = S75W 3.84

3 = N74W = N72W 11.68

② 8.72 m approx  $\frac{1}{8}$  line N to Swamp

4 = N68W = N66W 9.27

② 3.30 enter swamp

② 637 E bridge

② 8.00 hr. swamp

5 = N88W = N86W 2.313

② 1.75 re enter swamp

## Project 14

6 = N72W = N70W 4.83

② 2.30 hr. Swamp

7 = S89W = N89W 14.00

② 1.87 m approx.  $\frac{1}{4}$  line N to Swamp.

8 = N54W = N52W 3.00

9 = N43W = N41W 9.65

② 8.40 m picket line N for  $\frac{1}{8}$  line ±

10 = N69W = N67W 5.16

11 = S84W = S86W 14.465

= 8000 ch. W. of E

Agrees about with my previous conception  
of line bet. Secs 4 + 5. I never found  $\frac{1}{4}$

Run picket line N. about 15 ch. for 40 ±

over —

Sec. 4-38-5

NW NW 1/4 ±

October 2<sup>nd</sup> 1934

R.H. Hall - Koszowski + Novak

Continue trial picket line S for approx 1/4  
New. N. from E #14 fire lane0.0 " "  
1.74 = Record S of NWx

18.40 gully E+W

20.509 picket

21.52 fall 6" ± W. of poplar  
squared up last winter21.74 Run picket line E (ran 2 1/2 E)  
- Record S. of Tp. line.  
do line intersects N+S thin W + S of <sup>big</sup> swamp

21.75 } narrow marsh E+W

22.50 }

35.49 fall .12' W. of Dip NWx

See Book I page 141-142

Secs. 10 + 11

38-4

October 1<sup>st</sup> 1934

Fair + windy

PM only.

Hall. Koszowski + Novak

Cham &amp; thru swamp from approx. calc.

intersects of E #17 with Sec line

Sec II p. 134

1. ? enter low swampy ground

4.10 ± fall about 20 steps E of 8" cedar  
squared up for ?

12.30 Creek .05 SE.

13.06 calc. loc of 1/4

13.80 " " " by creek + look  
for 1/4Practically all old timber - cedar - hem - + pine  
is down + charred - thick alders + willow  
growth.Most of trunks 1/2 buried in swamp  
Find nothing. no blazes found along  
route, but creek checks out well.Continue our trial 4-38-5  
N+S 1/4 in NW 1/4

Intersects big swamp - N of E+W 1/4 line

Sept. 6<sup>th</sup> 1934 Overcast-wet brush  
 R.H. Hall + Delfin Norak. News.  $\frac{1}{2}$  thru  
 brush from Ough E $\frac{1}{4}$  Var. 1 $\frac{3}{4}$ ° W.

0.0 post + iron

3.40 enter marsh NE + SW

6.37 to 6.82 Squirrel P. runs NE.

10. + 11. Tang. to hard land on W.

12.35 lr alder swamp E+W.

14.53 ⊕ Truck trail # 16

16.72 ⊕ old winter road + enter alders.

17.48 lr " NE

20.00 mark on alder. skirt W. edge <sup>low</sup> ground

25.00 Enter N. end small marsh

27.00 lr. do W. of S. tip

28.00 Enter another  $\frac{1}{2}$  hrs SW. Road  $1\frac{1}{2}$  ± E

29.57 lr. marsh E+W

31.97 ⊕ Tower road SSW

36 to 43 follow "

40.02 New Telephone line

43.00 ⊕ road + on our E+W line. " <sup>58.27 W</sup>

45.00 Picket found by N84W .689

West from ⊕ Squirrel Tower Var 2° E

6.95 ch Thence N " "

5.32 To our blazed pole where picket was found.

US evidently made ⊕ S $\frac{1}{2}$  45.00 by mistake ✓

Sec 33-35-6 E. in

Meters & Bounds. Parcels in Govt Lots 7 + 8  
 Otherwise the  $N\frac{1}{2}$  SE $\frac{1}{4}$  + N. to river.

Sec M+B descriptions:

Iron Works Lat.  $45^{\circ}28'N$   
 long  $89^{\circ}44.4'W$  from map.  
 = 5.983 hrs W. of Juch

City of Tomahawk, Wis

October 6<sup>th</sup> 1934 55° overcast - very windy  
 R + Hall + Walt Harnes

- > SE $\times$  Ry. St + Soms Ave - find sigl in cleft  
 14" below CW.  
 OK with edge of CW N+S + Ry. Av.  
 .20' S of CW E+W - on Soms  
 Make 2' offset marks.
- > SW cor Lincoln + 4<sup>th</sup> St. (W. of school)  
 Find 2" iron pipe 15" below CW.  
 .05 N. of joint + .01 E of joint
- > For Soms at 4<sup>th</sup> Measure 66' N. of E. end  
 old 2 story brick at SW $\times$   
 $\nabla$  comes .07 N. of joint at NW $\times$
- > Orig. cast iron monument for E Tomahawk Av.  
 + 4<sup>th</sup> Lincoln St. Found - appears to be OK
- > Fail to find similar mon for E Wisconsin Av  
 + 4<sup>th</sup> Railway st.

Copied  
 5/10/37

## City of Tomahawk

Run  $\frac{1}{4}$  Soms Ave by 66' N. of bolt  $S\frac{1}{2} \times Ry. st.$   
 Line comes .20 S. of 2<sup>nd</sup> City Frame }  
 + 16 N. of S. face Water Table }  
 and by 66' N. of old 2<sup>nd</sup> City Brick at SW  $\times$  4<sup>th</sup>.

Run on 4' offset (S.) Line falls:

66-11 N. of Main face 1<sup>st</sup> City Brick SW  $\times$  Tomahawk

Intersect Main track C. St. P. + N. Ry.  $\times$

Turn angle N to E

①  $89^{\circ}-59'$  ②  $179^{\circ}-58\frac{1}{2}'$

" " Stock yard track  $\times$  Turn = N to E

①  $88^{\circ}-59'$  ②  $177^{\circ}-59\frac{1}{2}'$  (88 59.7)

This offset line is obstructed by trees W. of Iron Works  
 Will have to revert to another offset.

Meas. N from  $\frac{1}{4}$  Soms on E. rail Stock yd track  
 500' comes 1.4' N. of Dutch bar  
 Line West parallel  $\frac{1}{4}$  Soms will run thru  
 the sawmill.

Too windy for accurate work.

Copied  
5/10/37

October 8<sup>th</sup> 1934 Fair 60° to 80° calm  
 R. H. Hall with F. Brehm + W<sup>m</sup> Sloski  
 (C.C.S. Camp Tomahawk)

Re-run  $\frac{1}{4}$  Soms by same points + get 66.12  
 N of brick at  $\frac{1}{4}$  Tomahawk.

New line as run falls .09 N of #1 @ Main track  $\times$

" " " .08 S of #1 @ Stock track

$\angle$  E to N at Main track  $89^{\circ}-59\frac{1}{2}'$   $179^{\circ}-59'$

$\angle$  " " - Stock yd track  $88^{\circ}-59\frac{1}{2}'$   $177^{\circ}-58.5'$

Will use new line.

Run  $\frac{1}{2}$  Railway St by iron bolt at  $\frac{1}{2}$  Soms  
 and by Main face Tomahawk land to bldg.  
 at  $\frac{1}{2}$  Wisconsin

Intersection of 2' offset on Railway & 4' offset on Soms  
 falls 1.87' W. of joint & 1.87' N. of Sedge Cd.  
 $\angle$  E to S =  $90^{\circ}-01'$  @  $180^{\circ}-01'$ .

Extend  $\frac{1}{2}$  Railway St as run + leave points  
 at Lincoln

OK with NW  $\times$  old 2<sup>nd</sup> City frame at  $\frac{1}{2}$  Lincoln

Copied  
5/10/37

## City of Tomahawk

Measure West on 4' offset (4' ~~line~~)0.0  $\pm$  Railway st as run259.84  $\pm$  Main track

and offset 4' N. onto line

Angle off rail checks OK with

BS on mark at NE  $\times$  Ry. Av. ✓259.84  
199.84(Use gauge  
to rail)

Continue W on true 4' Somo loc

- 259.84  $\pm$  Ry. st.149.84  $\pm$  Main track

2.36 West gauge line Main track

300.09 " " Stock yd "

- 297.73  $\pm$  " " "

+ 85

306.23 our temporary iron bolt for SE  $\times$ 

= 506.07 Iron Works property.

Continue West 175' =

481.23 Hub + tack for SW  $\times$  lease

= 681.07 also " 2' E of do

(Must use 1' E of do for sight N.)

Thence W (from 481.23) 108.93 =

590.16

= 790.00 W. from Ry. st. + set Hub  
also " " 300 W of SE lease790  
590.16  
213.93



## City of Tomahawk

October 9<sup>th</sup> 1934 Fair 50° 60°

RH Hall - Brehm + Soloski

Estimate that 25' offset N of  $\frac{1}{2}$  Lincoln St  
will avoid the obstacles W. of R.R.

Run  $\frac{1}{2}$  Lincoln St by  $\frac{1}{2}$  at 41' S of  
Cast Iron Man at  $\frac{1}{2}$  Tomahawk +  $\frac{1}{2}$  Lincoln  
and by 25' N of S.P. found at SW X 4<sup>th</sup> St.  
This offset is open clear them.

Intersect this 25' line with 2' line on Ry. st  
Set small bolt + turn  $\angle$  E to S.  
90°-10' 180°-18½'

Offset line (Lincoln) falls:

22.3 N. of old 2<sup>nd</sup> frame at  $\frac{1}{2}$  Ry. Av.  
22.8 N. " "  $\frac{1}{2}$  Tomahawk  
22.95 N. " "  $\frac{1}{2}$  " "

Produce 25' line West + set stake 60' W of  $\frac{1}{2}$  Ry. Av.  
Thence W. 200.06  $\frac{1}{2}$  Main Track  
+ 140. set stake S of sawdust  
for W. R.R. R.O.W.

Turn  $\angle$  E to S 90°-08' + mark line

Intersect  $\frac{1}{2}$  rail M.T. S. of joint  $\angle$  E to S 90°-08'

Extend 25' line West from  $\frac{1}{2}$  R.O.W.

381. Set Hub + tack E of Lh. pile.

(489.94 required)

108.94 4000 W. + 41' N

300.06  
489.94  

---

790.00

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5/10/37

## City of Tomahawk

Measure S. along E side Tomahawk Av.  
from N face old 2 sty frame at Lincoln

00.0 " " "  
2.05 sur.  $\frac{1}{2}$  Lincoln

48. Apparent line bet. sheds

50.07 joint

99. about line fence posts

149.7 "

150.03 joint

199.2 line of fence

249. " " occupation

249.49 joint

299.71 N. edge CW @ Washington

This block must have been staked  
too far N.

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5/10/37

## Measure N. on E side Railway Av.

0.0 sur.  $\frac{1}{2}$  Soms as run

50.00 line of S. face old 2 sty frame

99.9 " N. " adjoining "

150. line of occ.

248. S. " old shed

299.01 joint

299.12 N. face " @ S. side Washington

359.47  $\frac{1}{2}$  end CW at N. " "

415.7 " face old fence

465.7 N. " old foundation

565.4 old fence

640 " in rear

665.68 N. face old 2 sty frame.

662.35 sur.  $\frac{1}{2}$  Lincoln as run

665.19 N. end CW

687.35 sur 25' line

666 rec.

662.35 m

3.65

short

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5/10/37

300  
333  
323  
366  
300  
666 rec

## City of Tomahawk

Measure N. along W side 4th St.  
 - 66. N face brick market bldg.  
 0.0 ~~4~~ Sono as used

299.85	N face 2 <sup>nd</sup> story frame
299.94	joint
365.90	" on N side Washington
	+ about line of CW west
507.94	<del>4</del> occ.
551.8	line "
665.80	our <del>4</del> \$ Lincoln as run.
666.	
<hr/>	
	2 short.

Conclude Iron Monument must have been  
 disturbed as plat is definite in giving  
 90° + same record on Ry + on streets  $\bar{E}$

Copied  
 8/10/37

October 10<sup>th</sup>, 1934 Fair 40 to 70°  
 Same party

Try adjusting line of Lincoln by ignoring  
 iron monument at  $\bar{E}$  Tomahawk Av.  
 + calculating straight line from 4th to  
 Ry st. parallel to Sono as per  
 record

Now 4.06' N. at  $\bar{E}$  rail main track +  
 turn  $\bar{E}$  90°-00' ✓  
 fall 2.55 N at  $\bar{E}$  Tomahawk Av.  
 " 3.50 ± N "  $\bar{W}$  Ry Av.

@ 1794' ± W of 4th St =  $\bar{W}$  R. O. W.  
 + 130.51  


---

 1924.6 " " " set temp iron + correct N.

4.62 + set square bolt.

" Observe Sun Temp 60°  
 line #1 assumed as 90°-22' (second plat)

① 10:18.3 AM  
 vert 34°-25'  
 hor. 153°-23'

City of Tomahawk

(2) 10:21 AM vert 34°33'  
 Az 154°09'

(3) 10:23.4 AM alt. 34°49'  
 Az 154°51'

Correct N. 5.22 at our hub 381' W of ROW  
 then project true line West. 108.94 to 790'  
 thence N. (90°) 41' + set stake flush

after setting hub 15' W for sight of  $\odot$ ,  $\oplus$

1525 W of RR Ryst - fence  $\pm$   
 1531 main corner " N  
 1536.5 Sand. " "

Correct  
 5/10/57

4th Somo to 25' line

665.80  
 25'  
 690.80  
 N + S

306.23  
 199.84  
 506.07

965.50  
 1.63  
 963.87  
 11.54  
 975.16

942.7  
 506.07  
 436.17  
 2526.  
 37.23

P.M. offset 15' W of 790 on 4th Somo to turn  
 angle N 54° E to  $\oplus$  on line S

① 89°58' ② 179°54.5' ③ 269°51.5'  
 ④ 359°49.5'  
 Arc = 89°57.3'

0° 2.7' in 690.8  
 = .54' more  
 W.

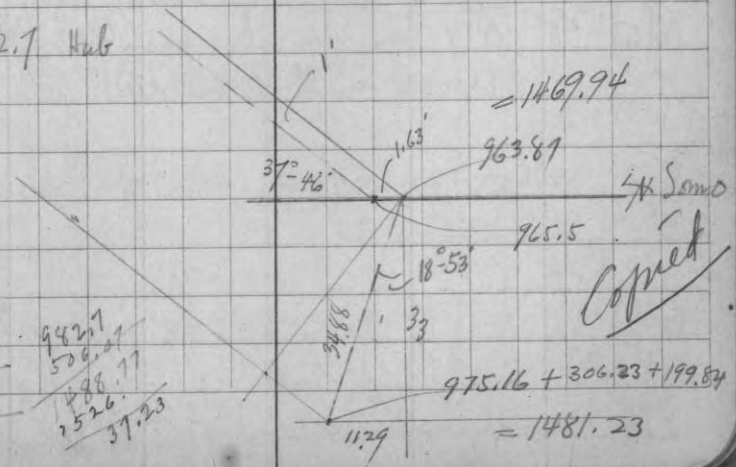
Continue W on True 4th Somo Av. (See page 104)  
 from hub 300' W of SE x lease

+ 652.2 = 952.2' Hub

+ 13.3  
 965.5 iron pin & intersect  
 on line 32' N 60° + R  $\oplus$  road

$\angle$  W to NW 37°46'

982.7 Hub



975.16 + 306.23 + 199.84  
 = 1481.23

## City of Tomahawk

Same party

October 11<sup>th</sup> 1934 Fair breezy 60° 80°Adjust transit - find vert. circle vertical  
in error about 0° 04'

will ignore solar shots made previously

Substitute 1 3/4" Iron Pipe at SE x RR lease  
= 4 Soms St. 8.5' W of S.W. track  
& lease falls 5.05 E of SE x Foundry 180' N 75'  
8.40 2' N E x "

4 Soms falls

10.30 S of SE x " 100.00 E + W  
10.14 S of SW x "

Drive similar pipe 500' Nly + 8.5' W of S.W. track  
is 1.85' N of Switch post.

offset 50' S + turn line W. parallel Soms St.  
to avoid mill + sawdust pile

Copied  
5/11/37

Intersect our line 15.10 of 790'  
with adjusted " 25' x 1/2 of line  
+ E to S 90°-05' 180°-09'

Average 2.1 + 4.5 = 0° 33.6' + 90°-01' 180°-02' 1/2  
Move intersection 0.72' W + extend N 41'

Set 1 1/2" steel shaft for NW x RR track  
(" with gear below.)

Observe sun timing = S to W adjusted line to  
Temp 65° F =

① 2:25 PM Cent. Std. time

Sh. alt 26°-33' = 44°-56' + 5°-26'  
rule

Calc. sun Az =  $\frac{S 45°-27.4' W}{S 31.4' W}$  ✓

② 2:27.5

alt 26°-09' = 45°-38' (rule 46°-12')

long hand Calc sun Az  $\frac{S 46°-12.5' W}{S 0° 34.5' W}$  ✓

Average is S 0°-32.9' W.

that says

C to Hill must have determined meridian  
5/11/37

## City of Tomahawk

Intersect our 50' offset S of 500'  
with 15' " W of 790'  
= E to S  $89^{\circ}59'$  @  $179^{\circ}58'$

Thence N by 50' + E by 15' ( $90^{\circ}$ )  
+ drive pipe for SW x R.R. tract.

Drive I.P. for 4th ROW +  $\frac{1}{2}$  flowage

## Results of Solar Obs.

1	"	Oct 11 <sup>th</sup>	.6 excess
2	"	" 12 <sup>th</sup>	7.2 "
2	"	" "	2.2 short.
			Av. 1.9' excess.

Since shot on Polaris is lacking  
will take Hills course as Meridian.  
" R.R. line as  $N 0^{\circ}32' E$

Copied  
5/10/37

October 12<sup>th</sup> 1934 Fair  $65^{\circ}$  Same party  
try to get angle given in desc. by  
taking  $\frac{1}{2}$  Som's Av. by mid point between  
fences 1500'  $\pm$  W of 4th Ry. ( $\frac{63'}{2}$ ) + by our  $\frac{1}{2}$   
at Main track.

This gives =  $37^{\circ}10'$

Decide to stick to our line which is line  
of platting extended.

Since 1526' falls almost even with fence S  
+ " angle in street is about  $\frac{1526}{1481}$  ( $45$ )  
 $45^{\circ}$  E of 1526  
+ " fence N. is crooked + at  $\frac{506}{1029}$  ( $1535$ )

I decide to place line at 1526' + run it north.

$\therefore$  Extend 4th Som's west to " + drive iron rod  
in gravel Hwy - falls about in  $\frac{1}{2}$  do.  
thence S at  $90^{\circ}$  33 feet + drive I.P. in  
 $\frac{1}{2}$  old road SW for  $\frac{1}{2}$  Som's + SW x desc.

Copied  
5/10/37

## City of Tomahawk

Reference said I. P. (at Somo 1526' W of HW Ry st)

0.42	(3 tacks E. face Hi line pole)	
0.17	S 5°-07' E	12.00
0.11	1" db in 11" Elm N 41½° E	44.4
	" " 8" " N 15¼° E	45.6

Run South on .31' offset by turning - E to N  
 off HW Somo 90°-32'  
 (.31' = 0°-32' in 33')

Turn 3 times - result is 0°-01.7' short of 90°-32'

∴ North from I.P. at Somo

33	iron rods .31' E of line
77.07	drive I.P. for HW street
	71.85' NW of intersection point HW st.
	" NW of angle point HW Somo

267 intersect old E-W fence 6.3 E of NTS pin  
 645.43 Hub (target for angle 90°-32' off HW Somo)

Drive iron pin .62' W for line  
 0.17 in 645 = .31  
 + offset = .62 (fence has W 3.7)

Copied  
 5/10/87

Observe Sun @ iron pin (645.43) to check accuracy  
 of Meridian line  
 turn from sight of 180°-00' 70° F.  
 Cent. old time.

This location is roughly 290' S of 7' line  
 1726' W of E Sec.  
 45°-28' N. Lat.  
 89°-44.7' W Long.

① 1:33.7 PM	alt. 31°-45'	212°-24'
	l.h. calc #1	212 30.5'
	duplex rule	212 33.5'
② 1:36 PM	31°-31'	213°-07'
	duplex calc =	213 = 13½'

900.00 Hub 7' E of fence  
 SW & down works has 133°-24'

② 2:21 PM	26°-33'	224°-38'
	calc	224-37 rule 224°-36'
④ 2:24	26°-16'	225°-14'
	calc	" 225°-11'

## City of Tomahawk

1046.0 Drive Iron Pipe in old RR  
at shore  
water 16' N. fence 10' W

thence by transit traverse + parallel to shore  
+ 16' 5.7' " ±

- |   |                          |                                  |
|---|--------------------------|----------------------------------|
| ① | 73°-06'                  | 366.7                            |
| ② | 81°-48'                  | 147.5                            |
| ③ | 100°-16'<br>= 579°-44' E | 571.<br>" = about 35' S of river |
| ④ | 119°-36'<br>= 560°-24' E | 204                              |

To Iron Pipe on R.O.W. line  
this last shot cut across rounded pt.  
55' ± mid-ord.  
180°-32' ✓

Meas. S along R.O.W. line

0.0 I.P.

218.3 Calc = in property line - under shavings

263.6 on Hub on first 25' line run.

+ 25.43

289.0 to planing mill.

Copied

## Acreage Summary.

The Raymond tract	22.84 A	To shore (23.54)
Lease to Iron Works	2.01 A	
RR to Wis.	1.30	

26.15 Total within  
traverse

+ .7 ±  
26.85 to water  
edge

1046.  
900  
147

1046.  
645.4  
400.6

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5/11/37

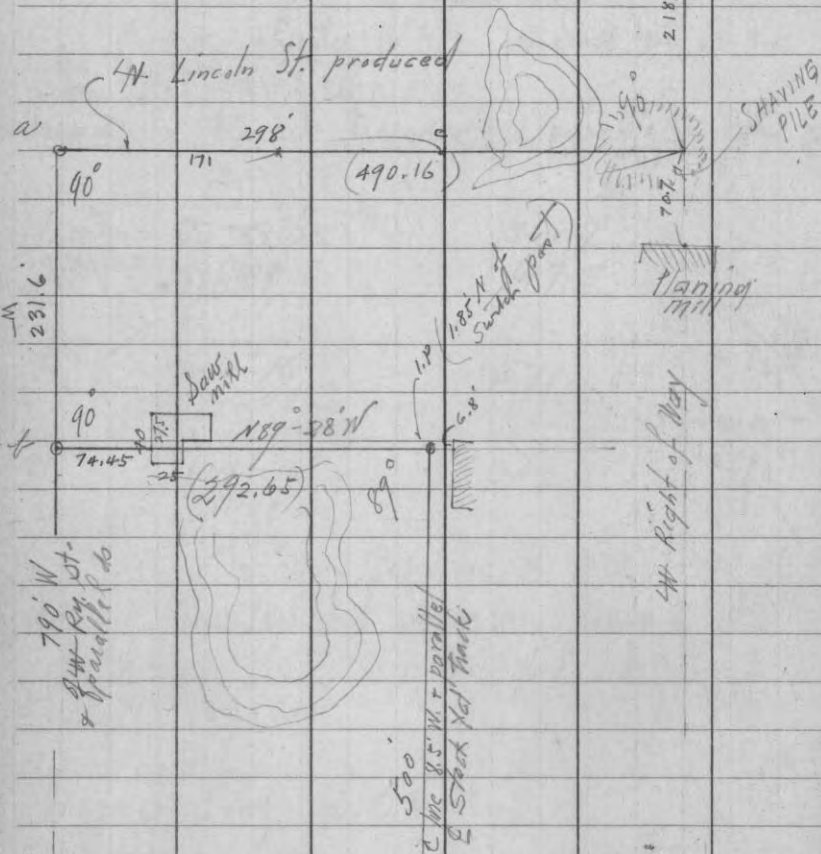


October 13<sup>th</sup> 1934

fair

Attn only

RH + Brehm



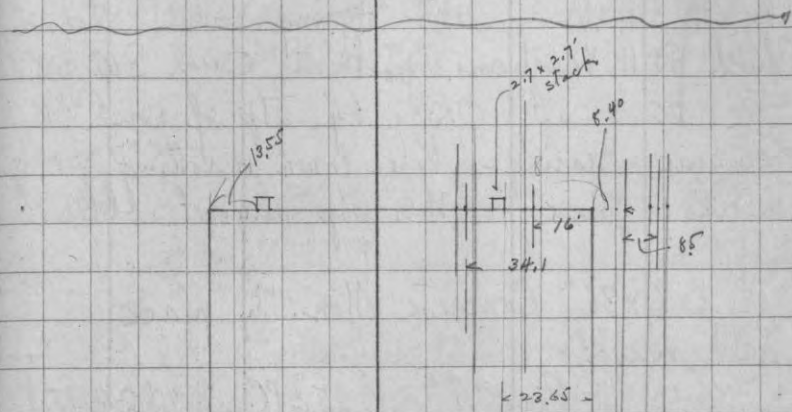
Locate South pond from 4 (ag. stadia)

- |   |          |      |               |
|---|----------|------|---------------|
| ① | 138° ±   | 82'  |               |
| ② | 182 3/4° | 180' | 7' from water |
| ③ | 152 1/2° | 300' | 10'           |
| ④ | 136°-50' | 350' | 10'           |

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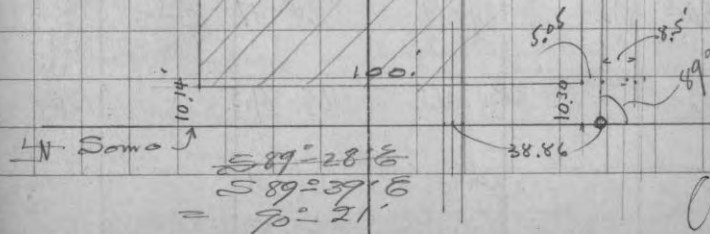
Locate North pond from C (298' E of Mill corner)

- |   |          |      |
|---|----------|------|
| ① | 29°-05'  | 175' |
| ② | 80°-10'  | "    |
| ③ | 105°-45' | 130' |



Machine Shop

Stock Yds. Track

Copied  
5/11/37

## Monies Tower

Sec. 22-36-10 E.

Oct 16<sup>th</sup> 1934 Fair to overcast 65° +  
 Ray H. Hall - John Hering + Barton  
 Check D.H. Vaughans post at Ough SW cor  
 Sec. 22 as OK by rtp of Ough SW  
 Tamarac Bearing - bple down + nothing  
 marks plain: Other stp almost obliterated

Set 6x6x36" Concrete Mon. in place  
 and mark.

W. Pine 9" S 25° E (PC) 82.2 feet.

Run transit traverse on fire lane to connect  
 Sec. Cor with Tower + if possible find  
 D.H. Vaughans Center - est. in Nov. 1906.

Solar obs at 0.

- |              |         |            |      |          |
|--------------|---------|------------|------|----------|
| ① 10:50.5 Am | 34°-19' | 164°-47'   | calc | 163°-54' |
| ② 10:53      | 34°-26' | 165°-29.5' | "    | 164°-30' |
| ③ 10:55      | 34°-31' | 166°-01'   |      | 164°-58' |
- ✓ not so good - too late?

Sta.

0 in road (3' 58" of E) pg.  
 Set verner on van 2°-15' E pending calc of  
 solar obs. for Azimuth

Sec Cor to (v) 5°-44' (E)	173.6'
" " (v) 68°-20' (E)	1244.7'
	4' 58" of E

Thence

" 2	N 67°-56' E	899.
		13' 58" of E

at 2 obs Sun. (v. 1°-43' E here)

Ⓐ 1:55 P.M.	27°-54'	218°-08.5'
		calc = 217° 56'

Ⓑ 1:58.7	27°-28'	219°-00.5'
		calc 218° 57.5'

Ⓒ 2:01.2	27°-15'	219°-37'
		calc 219° 29'

Tower obs is 19°-07' E.

∴ True Meridian is evidently 0°-07' E of <sup>assumed</sup> Mer.  
 ∴ decrease NE + SW courses by "  
 increase SE + NW " "

∴ Mag dec. averages 143°-07' or 1°-36' E.

Watch is slow 1/2 min. at 11.

Right check 747°-57' after obs.

22-36-10 E.

#(3)  $\approx 29^{\circ}12' E$  1550.  
13' 58" E(4) 350 17  
 $\approx 19^{\circ}43' W$  550  
to peg W of House(5)  $\approx 7^{\circ}21' E$  32.2'  
to Center of Tower.

fail to find DAV Center (yet)

∴ DAV's center should be  
46.8' S + 64' W of Tower.

	Assumed	Actual
SWx to Tower = 3671'	$\approx 45^{\circ}57' E$	$145^{\circ}52' E$
" " 85 of Tower = 2861	166 14 E	$66^{\circ}07' E$
SWx S $\frac{1}{4}$ ± 2636 DAV	$586^{\circ}46' E$	$82^{\circ}53' E \pm$

N.B. Later calc gives  
Road crossing & Sec. :  
380' E of SWx &  
428' NE of " (obs pt.)

∴ &amp; to Tower = 3990'

October 17<sup>th</sup> 1934 overcast - colder.  
Ray H. Hall, Alfonso + NicholsSince our 100' tape was broken yesterday AMV  
& traverse measured with a 50' section:We re-meas. traverse + (Bearing at Sec. Cor.)  
with 100' tape.find meas. same except (4)  
which we make 549.5'Run S  $8^{\circ}27' W$  thru brush from (3) 778'  
find DAV  $\frac{1}{8}$  S of Center about 55' beyond "His old post down between rocks, both his  
Tamarac bearing trees charred but legible.  
Distance between " a little shortSet new Cedar post + iron pipe -  
nothing near for new bearings

tie in to traverse by connecting at 900' on (3)  
∴  $29^{\circ}12' E$  900'  
141  $^{\circ}09'$   
 $\approx 38^{\circ}51' E$  329.4 to  $\frac{1}{8}$  S.

New bug at SWx by transit trav.  
=  $158^{\circ}51' (S 21^{\circ}09' E)$  82.5 (v.  $1^{\circ}43' E$ )

Adjusted Traverse from SW x 22-36-10 E.

Course	Feet	N	S	E	W	N	S	E
1 S 5° 37' W	173.6		172.76		17.00			
2 N 68° 13' E	1244.7	461.9		1155.82		489.15		1138.82
3 N 67° 49' E	899.	339.44		832.45		628.59		1971.27
4 N 29° 05' E	900.	786.52		437.47		1415.11		2408.74
5 S 38° 58' E	329.4		256.11	207.15		1159.00		2615.89
								2.257022 = Tang
								1866.86' E
								2861.2'
								SW x to 1/8

Continue from (B)

N 29° 05' E	1550.	1354.57		753.42		1983.16		2724.59
N 9° 50' W	550.	541.92		93.93		2525.08		2630.76
N 7° 14' E.	322.	319.4		4.06		2557.02		2634.82
								1.03043 = Tang

A 45° 51.5' E

3671.6

SW x to Center of tower

Calculations indicate Course of E to be  $\pm$  S 86° 56' E.

S 45° 51' E

10° 56' W

" Tower stands  $\pm$  97.6' N. of E. 40.2' E. A Center Sec.

" We should tie to S. 1/4 Center of 1/4 Sec. 10

Sec 28-39-5 E.

October 18<sup>th</sup> 1934 P.M.  
Ray H. Hall + Frank Koszowski.

Resume pacing north (12 $\frac{1}{2}$  E) from  
my picket on approx @

207 steps - " " " " at Scotchman rd.  
This was paced N of probable  $\frac{3}{4}$

474 " 9" W Pine + enter small marsh NE.  
2nd " "

744 Enter big swamp NE.

924 Talley  
(Find Orig NE cor. S 63 E 25 steps)

Set new post record dist. from both Orig. marks OK

P.C.	Orig.	BT	N 43 W	13.2'
0° var.	"	"	N 49 E	16.5'
1 <sup>st</sup> pin	"	found	S 39 E	20.1'
New	{	Cedar 11"	S 67 E	30.00'
		" 9"	S 10 W	14.00'

Li Cornish  
= .01184 \* = 0° 41' - 2 30 = var 1° 50' E  
" " \* 1131 P = 13.4 steps E at road ±  
± 30.70 ch = cor to road d.

Sec. 23-39-5

Project (16)

Oct 22<sup>nd</sup> / 23<sup>rd</sup> 1934

Stake out & proposed road west 1/4 on  
1/4 line found 700' (var. 1° E)

thence SW by best route to intersect  
Barney Morans & just SW of approx.  
center SE 1/4

Reference post found for E 1/4  
Assume this to be orig cor but can not  
be positive  
& town road N by on var 3 1/2° E  
" " " E " " 13/4° E

Old pine stp. which appears to have been  
orig bearing.

N 59° E 15.4' (Rec. 14.5)

Assume US deputy had courses + bearings confused

var 0 { Pople 9' S 50° E 35.5'  
" y. Pine 10' S 25 1/2° W 131.1'

Sec 11-14-15 ?

39-7

Project (44) Sweeney L. road  
 Oct. 24<sup>th</sup> + 25<sup>th</sup> 1934  
 Look for MC on N. shore " "

bet 14 &amp; 15

fail to find do but select approx.  
 location from like meander notes.

Cruise N record paces for  $\frac{1}{4}$   
 fail to find evidence

Lay out new road along best available route  
 beginning about 8 rods NE of MC +  
 continuing Nly + NEly thru  
 W  $\frac{1}{2}$  NW  $\frac{1}{4}$  Sec 14 apparently.

& Intersecting Pickens L. Rd somewhere  
 near W  $\frac{1}{8}$   $\frac{1}{4}$  14.

Did not have US notes at first + later  
 did not get opportunity to look  
 for NW  $\frac{1}{4}$  14

I doubt if it is known. We found a  
 picket line meant for  $\frac{1}{4}$  11 but at its  
 S. terminal there was nothing, but a  
 picket 400 steps S of a road.

Sec. 23-39-5

Scotchman L. Road

November 1<sup>st</sup> 1934 Overcast 35° 45°  
 Hall + Koszowski look for S  $\frac{1}{4}$   
 Novak + Simdel make line pickets. (16)

Cruise S on approx N + S  $\frac{1}{4}$  line from  
 assumed  $\frac{1}{8}$  S of Center (based on pacing  
 from  $\frac{1}{8}$  post (found) E of Center).

Poles run out in pot hole.  
 Find Origin  $\frac{1}{4}$  S. about 150' SW on  
 shoulder of ridge.

Charred boxings OK on both End of P. bearings  
 No iron marks but facings are plain.  
 Courses on 12' E agree + distances agree.  
 No sign of any post.

New Bongs.

vm 0	of	Post	5°	N 27° E	.328
		do	5	S 27° W	.128

Comes in triangle between ridges  
 E + W  
 S + E  
 + S + W.



23-39-5 E.

Continued

Nov. 2<sup>nd</sup> 1934 Fair 40°

Same crew

Set 3/4" x 27" steel shaft with anchor base  
at Old South 1/4 cor. (4" exposed.)

Set scribed cedar post about 2" N of iron.

Run eye picket N. on normal course  
Var. 2° E ±

0.0 1/4 cor.

662. Enter open marsh by W

750 Over do just W. of inlet  
from higher marsh with  
+ drive stake

+ 35.2

785.  $\oint$  of new (16)  $\downarrow$   
(9' N 59° W) of EC 40° Curve over drainThence on  $\oint$  track. 0 var.

- |   |             |          |
|---|-------------|----------|
| ① | N 59° W     | 108'     |
| ② | N 77 1/2° W | 137      |
| ③ | S 72 1/2° W | 139'     |
| ④ | N 73° W     | 106 1/2' |
| ⑤ | S 87 1/2° W |          |

(about 180')

To Tang old road  
by 571 W

Survey of small unsurveyed islands  
in S. end of lake in Secs.  
19+30 (Lake George)

US notes + Plat show two islands  
nearby the 4<sup>th</sup> Sec. 30 and meandered.

November 8<sup>th</sup> - 1934

Overcast to fair 30° to 40°  
Ray # Hall, Novak, Sindel  
& Koszeniski (chauffeur).

Show the Orig. Meander Corners on  
4<sup>th</sup> 30 on W + E shores by George

On the West shore Both orig trees standing  
marks OK. distance between  
same short. One is .24'  
N 3° E (PC) from other.

A post about .20 E of MC + on shore  
about in line with MC East.

On the East shore The top of N. Tam is  
in good shape. SE tree down, marks all  
plain. No evidence of any post or recent  
stake altho a line has been bushed &  
blazed East. Blazes painted.

Set cedar post 18" long at corner.  
Comes in dock landing to portage.

.15 E of water + .01½ N. of a windfall.

Set transit with Mag. verniers adjusted  
to 1° 40' E var. which I estimate  
about right. Hence by vernier.

{	Orig. Tam	N 3¼° E	.12
	" "	down S 40° E	.26

{	W. Pine 26"	S 85¼° E	.509
	Did not mark this.		

{	Some Surveyor has peeled a facing.		
	Cedar	8" N 38° E	.105
"	9"	S 19° E	.227

do is 2° E of a 20" W.P.

E. gable of Island lodge is. N 64° 52' W.

Line West appears to cut only 6 or 7' off  
S. tip island. Look in vain for MCs on  
island.



30-44-5

continued

Traverse by transit & chain from MC  
on E. shore

Az = Needle ch.

① 159°-31' S20°-29' E S20½° E 1.23<sup>5</sup>

② 164°-09.5' S15°-50.5' E 1.88

@1 the post on W shore has  
277°-22' ?③ 154°-25.5' S25°-34.5' E S25°-40' E 3.86<sup>5</sup>

④ 186°-23' = S6°-23' W S6°-20' W 2.83

@3 re-act var to 2°-10' E

⑤ 162°-16.5' = S17°-43.5' E S17° E 1.25

over ridge pt.

⑥ 182°-04' S2°-04' W S2° W 2.13<sup>5</sup>Nov. 9<sup>th</sup> Same pathy ½ snow 35° Overcast⑦ 215°-17' = S35°-17' W S35° W 2.64<sup>7</sup>

.50 from shore + parallel

⑧ 229°-14' = S49°-14' W S49¾° W 1.55<sup>5</sup>

out into point.

triangulate to island from here.

⑨ 206°-41' = S26°-41' W 3.88 triangulated

S. E. W.

= 1.157 432

2.966 945

6.452 2.614

9.265 2.30°

10.456 2.68°

12.59° 2.60<sup>3</sup>14.75° 1.07<sup>4</sup>15.76<sup>5</sup> .10<sup>4</sup>

19.232 1.846

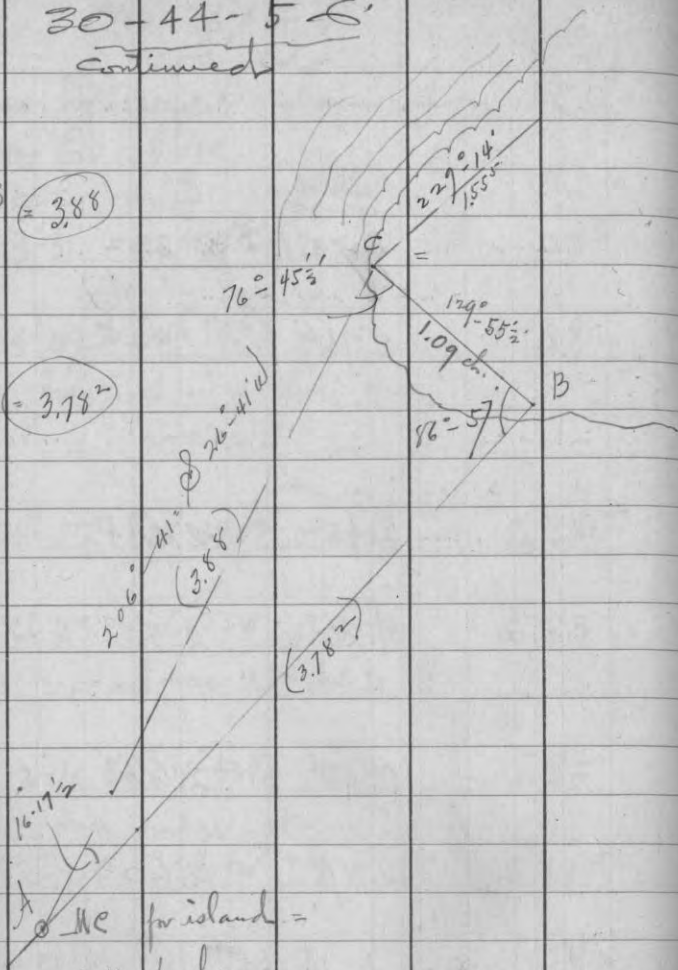
.09598 = Tang.  
S 5°-29' W.  
19.319 from U.S. AC.

30-44-5 E.

continued

$$b = a \frac{\sin B}{\sin A} = 3.88$$

$$c = a \frac{\sin C}{\sin A} = 3.78$$



Drive 3 1/2' Iron bar + cedar post:

var 1/2 at E.	}	Cedar 6" bis S 20 1/2° E	134 ch
		W. Pine 8" N 22° 35' E	44 "
		both marked 'BT' only	

Some cross of line E+W thru NE 1/4 intersects  
the lake at pt. 72° 42' from N.C.

Header of Island  
from meander corner just established.

- ① 201° 14' 2,209 ch.  
along the shore 10 lbs inland.  
@ ① to line intersection brs 75°  
End of point = 104 1/2°
- ② 219° 33' 1.89  
Var 0° 30' E here.  
To shore near SW end island.  
" " brs W. 40°
- ③ 301° 04' .52  
@ ③ a point brs. ③ 32° W 7 or 8 ch.
- ④ 13° 36' 2,895  
cut off .18 bulge
- ⑤ 46° 35' 1,515  
Var 1° 25' E here  
cut off .20 mid. sd.
- ⑥ 83° 59' .854  
across " " to extremity
- ⑦ 194° 12' .71 To P.O.B.

at P.O.B.

@ brs. 13° 59'  
14 12  
85 13' error.

Area  
Calc. .446 trans.  
14 outside tract  
- .460 A

finished.

23-36-5 E

to Establish true H of NE NW (State)

Nov. 13<sup>th</sup> 1934 Overcast 30°Ray H. Hall. Sindel. (Koszenki-driven) Novak  
with Mr. Floyd + helpers.Identify orig NE cor 23 by DH Vaughans  
bearing marked in 1906 now a stp.  
This agrees with charred jack stp  
taken for orig NE bearing.

Cor. falls in N+S road just E of W rut.

Plant flat iron bar 2 1/2' long - anchored.  
5" below rut of road

Sight S along Town Road

Mag var. reads 2°-08'E.

Bearings from iron " " var.

DH stp. S 52° W .41

Orig N 63 1/2° W .61 ✓

New { Jack 8" S 9 3/4° W 1.042  
" 3 N 40° W .592Floyd had run random W from old posts which  
we find offset about .50 E but do not  
quite check out.

Random 4-23

Line out Floyd's random as near as possible  
at point about 4 1/4 ch. west. (var 1°-53'E)

0.0 Our monument at orig cor to N. .04 ch.

1.10 ± } S. end of open marsh.  
3.80 }6.00 } Swamp. to NE SW  
10.85 }

13.964 Hub

18.64 " SE of slough. (var here 2°-13'E)

20.00 Hub S "

24.533 Hub (var 4°-03'E)

33.849 "

36.00 Creek .05 S

37.30 " .10 S

40.50 Hub + quit for day. ✓

Rec. says 26.00

23-36-58

Nov. 14<sup>th</sup> 1934 fair - no snow 30° - 40°  
 Same party + 1 pulp man

41.45 ± possible 1/4 cor. hrs & about 1.00 ch.  
 hem + birch which agree  
 reasonably well - no marks.

42.55 hr swamp

45.77<sup>2</sup> Hub on ridge N + E v 2°48'E

47.34 Enter Swamp N + E

48.52<sup>4</sup> Hub 4' ± W 15° hem  
 v 3°11'E

52.20 hr. swamp

53.57<sup>3</sup> Hub 3°-25'

57.80 Enter open marsh SW + NW

61.00 Hub in " "

62 1/2 ± hr marsh

65.60 ± hr. low fir growth - bottom land  
 65.65<sup>2</sup> Hub semi swamp

+ observe Sun 40° F.

Assume line as 270°-00'

① 1:35 Cont. Std. Time.

vert. 21°-17' Az.  $\frac{206°-50'}{(208°-51')}$   
 Calc =  $\frac{2°-01'}{2°-01'}$

② 1:37 1/2 PM: 21°-03' Az 207°-25'

Calc =  $\frac{209°-27'}{2°-02'}$

This indicates random is N 87°-59' W.  
 + Arc var is 5°-05' E.  
 r assumed N is 2°-01' E of random

70.135 Hub on brow of hill

73.77 " v. 2°49'E

74.00 Enter swamp - hrs 21

74.60 Small creek .05 (NW)

Probable course  
88° 17' W.

73.15<sup>±</sup> Creek .05 runs N.  
75.80 " " " "  
76.± hr swamp + skirt do on N. border

77.867 Hub about .35 N. of swamp

80.50 " at record. (var 4° 05' E)  
falls about a rod N of swamp  
+ 68 steps E of gobblers mark,  
which is at W. edge swamp.

Run S. from 80.50

4.70 hr swamp in center S end.

November 15<sup>th</sup> 1934 fair 50 60°

Same party minus help man:

Search again for NW<sub>x</sub> 23 no luck.

Produce our random west to edge of swamp

2.75<sup>3</sup> Hub " " "  
just N of gobblers mark 608'

this is right in NW cor of swamp.

" has S30W

+ curves thence W. + NW.

Observe Sun at 80.50  $50^{\circ} F$   
line E as  $90^{\circ}-00'$  for convenience  $+20^{\circ} C$

① 10:27 AM alt  $23^{\circ}-35'$  Az  $158^{\circ}-24'$

② 10:29 AM  $23^{\circ}-41'$   $158^{\circ}-53'$

Sly again from 80.50 thru opening

= E to S  $88^{\circ}-52'$

= S  $81^{\circ} 59'$   
= S  $8^{\circ}-53' W \pm$

4.70 hr. swamp to NE<sub>6</sub> + W

5.53<sup>8</sup> Hub " about 1 1/2 ch. Th. NW

8.14 E N<sub>6</sub> Cor fine lane ESW<sub>9</sub>

10.13<sup>4</sup> Hub

10.41 N bank Little Rice river runs  
N50 E to pt about 2 ch  
E of line, thence S E by

11.00 @ bank

14.22 hr. bottom

15.28<sup>3</sup> Hub (var. of line =  $3^{\circ}-40' E$ )

44-23-36-5

Continue A

20.00 Hub

20.54 Enter alder swamp W + NE

25.37<sup>2</sup> People stop hubSet transit on 180°-53' + observe Sun  
60-70°

① 2:30.3 PM 15°-40' 221°-07'

② 2:32 15°-27' 221°-30'

31.39 } alder swamp  
35.34 }36.41<sup>9</sup> Hub on low people flat.40.00 " at record of  
Fail to find evidence. 2 ch. S ±  
a swamp to E + NE ly.Many pine stps + tamaracs noted.  
mold everything burned.

→ Continue on page 150 ←

Postable  
cross  
S 0°-35' W

32-38-6 E

Nov. 15<sup>th</sup> 1934 (AM)Stop at McCormick L. road + fix up  
Orign 1/4 @ between 32-38-6  
+ 5-37-6The SW orign is a stb. 4' high - some marks  
re-mark same.

" NW " is only hole where tree grew.

Intersect record marks from ad. bearings  
+ dig. Find old stake within 3" of spot +Set 30" iron rod for corner. Cedar post  
alongside.

Assume a var of 3° E tract varies on 0° Az.

New	Orign to S 23 1/2° W	.44
	" hole N 57° W	.37
	Dak 9° 218° 42	.80 <sup>4</sup>
	S 38° W	
	SW x log house 77°	1.83 <sup>6</sup>

N 76 3/4° E

♀ County Hwy y to 89°-53' + 180°-00'  
Observe Sun 40°① 9:07 AM 16°-44' 141°-14'  
S 39°-10' E. 141°-17' calc.② 9:10 AM 17°-01' 141°-50'  
calc = 141°-51.5 ✓

∴ assumed Az. practically OK.

Random W 23-36-5 E

continued fly

November 16<sup>th</sup> 1934 fair 60°

RH Hall, Novak, Snidel

Floyd, Praeger + pulpman.

at 40.00 for W 1/4 cor 23

Var of line 3°-07' E

42. Enter alder swamp ESW

42.40 possible line blaze for W 37 steps

48.00 ± for swamp ESW

51.37<sup>2</sup> Hub Var. 2°-48' E

51.80 ± Old road ESW

61.37<sup>2</sup> Hub Var. 2°-34' E

all low Hem slash

semi-swamp - no signs of line

on 40 corner

✓

66.59<sup>2</sup> Hub Var 2°-46' E72.63<sup>8</sup> " " about same

80.00 " + look for SW cor 23 - no luck

ground is bare but most of Tamarac

remains are far gone + find no

indications of line or corner. Many

pine stumps. A thick clump of

Cedar + Hem etc. but about 1/4 ch.

It is said 1/4 is there.

Cruise W. from road intersection just N of

School house. presumed to be SE cor 23

1/2 mile run out in wet alder + willow

swamp. most all Tamaracs are down +

chewed. fail to find 1/4 cor.

Over ✓

Random  $\frac{1}{2}$  W $\frac{1}{2}$  23-36-5Nov. 19<sup>th</sup> 1934 Overcast 50° Misty.R.H. Hall with M<sup>rs</sup> Donald + Botwink

Floyd + Dreyer.

Cruise W. from apparent SE $\times$  again

Var 2° E.

Lead msteadily.

900 steps fall 44 steps N. of orig  $\frac{1}{4}$  S.Identify same by old post + SW bag down  
no marks. good boxing.

SE tree doubtful. there is one 12 or 13

like SE-down:

Set 3 $\frac{1}{2}$ ' iron bar + Cedar post.

V 4 $\frac{1}{2}$ ' E	{	Spruce 4"	S 21° W	1.73
		Jack 2"	N 87 $\frac{1}{2}$ ° W	1.15

Run mostly on random (var. 4°-50° E.)

- 113

A set up.

(Spruce 4" S 33° W)

(Jack 2" N 88° W)

0.0  $\frac{1}{4}$  Sec. Cor.

8.35 Leave Swamp S + NW

16.107 Hub Var 5°-23' E

18.78 Enter Swamp

20.00 Tally stake on line + hr Swamp.

v

28.07 Hub Var 5°-23'

34.814 " " "

36.00 Enter Swamp NW + SE

1

40.00 Hub + look for SW cor. no luck.

39.00 comes about 3.60 S of 80.00  
with

v



Random  $4W$   $S \frac{1}{2}$  14-36-5November 21<sup>st</sup> 1934 Overcast to rainy 50°  
no snowR.H. Hall with Koszinski, Mc Donald,  
Jostwiak, Bruno + helper.  
Floyd + Draeger.Produce our random  $4W$  23 westerly from  
Temp. NW = 230.0 " " " = Sta 80.50 W. of Orig  $N \frac{1}{2}$   
same is on side hill 1<sup>st</sup> N of4.935 Hub (Var  $A = 43^{\circ} E$ ) Swamp

9.00 Enter Swamp NW + SE

19.20 $\pm$  W. do " "

21.11' Hub

26.08 " (Var.  $4^{\circ} 33' E$ )

26.50 enter Swamp NW + SE

27.46 Creek .06 runs E

31.87' Hub

31.90 Creek SE + along him to 29.00  $\checkmark$ 

33.609 Hub on hard land. extends E

34.46 Same creek .06 SW

40.00 Hub + fail to find  
Anything!

6 + 7

38-5

Dec. 6<sup>th</sup> 7<sup>th</sup> 8<sup>th</sup> + 10<sup>th</sup>Correct  $\$ 6$  - setting  $\frac{1}{8}$  +  $\frac{1}{4}$  corners +  $4W N \frac{1}{2} E$ Set line markers on  $\$ \pm$  +  $\$$  exact Sec 6  
+ on  $4W$  (exact) " 7 @  $\frac{1}{4}$ 

See Book 2

 $4W$  Sec. 36-39-4December 11<sup>th</sup> 1934 0° Fair 16" snow  $\pm$ 

Ray H. Hall. Mc Donald + Jozwiak.

Cruise west (Var  $2^{\circ} E$ ) from Orig South  $\frac{1}{4}$ 

Near - thru brush with chain tape.

5. ch. W. Swamp after bordering do  $4^{\text{th}}$ .  
one point

12.00 W. tamarac stand

20.00 in open swamp - small tam.

35.00 small island of pines bears N 1ch  $\pm$ 

38.45 W. swamp. has WNW + SW

40.20 reach - fail to find Sec Cor.

swamps directly N. about 1 rod.

Thence W. again

2.00 Enter Swamp  $N \frac{1}{2}$  SW

8.50 old winter road? SW

19.97 Recrod. Thence S.

14.86 mark a birch

45.22  $\$$  Stone L. Road

July

December 12<sup>th</sup> 1934 \* 15<sup>±</sup> Same party.

Meas. Wly from approx 1/16 cor. in NE ~~1/4~~  
All spruce 2'+3' dia.

12. a few dead Tamaracs on rt.

12.54 } ridge NE + S.

13.55 }

20.00 Tally on poles <sup>\*</sup> thence S.  
Low approx 1/4 line.

62 a pole.

73 E Stone L. rd. in swamps.

thence traverse same Ely.

Pocket Compadre on staff  
O'var.

① E. 87

② S59E 4.00 @ 150 W. swamp. for pt.  
" to E + Sly

③ S45°E 1.64

④ S4W 2.38

⑤ S14°E 1.35

⑥ S27W 2.91 on ridge bet swamps.

⑦ S4E 5.33 2.75 to 4.25 " condurony

⑧ S57E 3.00

⑨ S24E 1.17

⑩ S70 1/2 E 3.43 .60 to 1.70 swamp

⑪ S28E 2.17

December 14<sup>th</sup> '34 Overcast 15° Same party.

Search for S6E x 24 but fail to see any  
evidence. Meas. Wly from approx. loc.  
according to our traverse of Squaw L. Rd.  
Vape 2 1/2 G

open gullies

13.00 lv. do + enter grove of 3'+4"  
pine E + W. }

17. ± lv. do.

20.00 about S. edge 2<sup>nd</sup> grove

Murray Rd. (N.S.) to E 1 1/2 ±

21.02 fall 4 ft. W. of 9" Y.P. face  
blazed for 1/8 S? N.W. S.

thence N. again - about parallel rd.

20.00 Tally on fuel - approx 1/4 S.

21.82 Enter Swamp drive peg.  
E + Wly

24.73 fail to find lone Tam. BT

Run Wly from temp 67 Thence grove  
6" Y.P. predom.

8.73 enter swamp  
to Ely + S Ely.

14.48 Or. do (open)

15.15 hack 9" Hem.

20 over the ridge - paper growth.

ely from approx.  $6\frac{1}{2}$  24-39-4

116 steps mark a pole  
125<sup>±</sup> " & Murray rd NW & S.

# KEITH'S RAILROAD CURVE TABLES.

Published by KEUFFEL & ESSER CO., New York.

Entered according to Act of Congress in the year 1883,  
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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  $10^{\circ}$  Curve.

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

Tab. V. correction for A.  $23^{\circ} 20'$  for a  $10^{\circ}$  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.

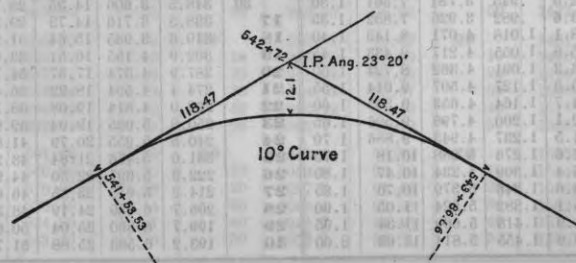
$2^{\circ} 19\frac{1}{2}' =$ def. for sta.	542	I. P. = sta.	542+72
$4^{\circ} 49\frac{1}{2}' =$ " " "	+50	Tan. =	1.18.47
$7^{\circ} 19\frac{1}{2}' =$ " " "	543	B. C. = sta.	541+53.53
$9^{\circ} 49\frac{1}{2}' =$ " " "	+50	L. C. =	2 33.33
$11^{\circ} 40' =$ " " "	543+	E. C. = sta.	543+86.86
	86.86		

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

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

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

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



Natural Tangents

deg.	0'	10'	20'	30'	40'	50'	deg.	0'	10'	20'	30'	40'	50'	deg.	
0	0000	0029	0058	0087	0116	0145	89	40	8391	8441	8491	8541	8591	8642	49
1	0175	0204	0233	0262	0291	0320	88	41	8693	8744	8796	8847	8899	8952	48
2	0349	0378	0407	0437	0466	0495	87	42	9004	9057	9110	9163	9217	9271	47
3	0524	0553	0582	0612	0641	0670	86	43	9325	9380	9435	9490	9545	9601	46
4	0699	0729	0758	0787	0816	0846	85	44	9657	9713	9770	9827	9884	9942	45
5	0875	0904	0934	0963	0992	1022	84	45	1.0000	1.0058	1.0117	1.0176	1.0235	1.0295	44
6	1051	1080	1110	1139	1169	1198	83	46	1.0355	1.0416	1.0477	1.0533	1.0599	1.0661	43
7	1228	1257	1287	1317	1346	1376	82	47	1.0724	1.0786	1.0850	1.0913	1.0977	1.1041	42
8	1405	1435	1465	1495	1524	1554	81	48	1.1106	1.1171	1.1237	1.1303	1.1369	1.1436	41
9	1584	1614	1644	1673	1703	1733	80	49	1.1504	1.1571	1.1640	1.1708	1.1778	1.1847	40
10	1763	1793	1823	1853	1883	1914	79	50	1.1918	1.1988	1.2059	1.2131	1.2203	1.2276	39
11	1944	1974	2004	2035	2065	2095	78	51	1.2349	1.2423	1.2497	1.2572	1.2647	1.2723	38
12	2126	2156	2186	2217	2247	2278	77	52	1.2799	1.2876	1.2954	1.3032	1.3111	1.3190	37
13	2309	2339	2370	2401	2432	2462	76	53	1.3270	1.3351	1.3432	1.3514	1.3597	1.3680	36
14	2493	2524	2555	2586	2617	2648	75	54	1.3704	1.3788	1.3874	1.4019	1.4106	1.4193	35
15	2679	2711	2742	2773	2805	2836	74	55	1.4281	1.4370	1.4460	1.4550	1.4641	1.4733	34
16	2867	2899	2931	2962	2994	3026	73	56	1.4826	1.4919	1.5013	1.5108	1.5204	1.5301	33
17	3057	3089	3121	3153	3185	3217	72	57	1.5399	1.5497	1.5597	1.5697	1.5798	1.5900	32
18	3249	3281	3314	3346	3378	3411	71	58	1.6003	1.6107	1.6212	1.6319	1.6426	1.6534	31
19	3443	3476	3508	3541	3574	3607	70	59	1.6643	1.6753	1.6864	1.6977	1.7090	1.7205	30
20	3640	3673	3706	3739	3772	3805	69	60	1.7321	1.7437	1.7556	1.7675	1.7797	1.7917	29
21	3839	3872	3906	3939	3973	4006	68	61	1.8040	1.8165	1.8291	1.8418	1.8546	1.8676	28
22	4040	4074	4108	4142	4176	4210	67	62	1.8807	1.8940	1.9074	1.9210	1.9347	1.9486	27
23	4245	4279	4314	4348	4383	4417	66	63	1.9626	1.9768	1.9912	2.0057	2.0204	2.0353	26
24	4452	4487	4522	4557	4592	4628	65	64	2.0503	2.0655	2.0809	2.0965	2.1123	2.1283	25
25	4663	4699	4734	4770	4806	4841	64	65	2.1445	2.1609	2.1775	2.1943	2.2113	2.2286	24
26	4877	4913	4950	4986	5022	5059	63	66	2.2460	2.2637	2.2817	2.2998	2.3183	2.3369	23
27	5095	5132	5169	5206	5243	5280	62	67	2.3559	2.3750	2.3945	2.4142	2.4342	2.4545	22
28	5317	5354	5392	5430	5467	5505	61	68	2.4751	2.4960	2.5172	2.5386	2.5605	2.5826	21
29	5543	5581	5619	5658	5696	5735	60	69	2.6051	2.6279	2.6511	2.6746	2.6985	2.7228	20
30	5774	5812	5851	5890	5930	5969	59	70	2.7475	2.7725	2.7980	2.8239	2.8502	2.8770	19
31	6009	6048	6088	6128	6168	6208	58	71	2.9042	2.9319	2.9600	2.9887	3.0178	3.0475	18
32	6249	6289	6330	6371	6412	6453	57	72	3.0777	3.1084	3.1397	3.1716	3.2041	3.2371	17
33	6494	6536	6577	6619	6661	6703	56	73	3.2709	3.3052	3.3402	3.3759	3.4124	3.4495	16
34	6745	6787	6830	6873	6916	6959	55	74	3.4874	3.5261	3.5656	3.6059	3.6470	3.6891	15
35	7002	7046	7089	7133	7177	7221	54	75	3.7321	3.7760	3.8208	3.8667	3.9136	3.9617	14
36	7265	7310	7355	7400	7445	7490	53	76	4.0108	4.0611	4.1126	4.1653	4.2193	4.2747	13
37	7536	7581	7627	7673	7720	7766	52	77	4.3315	4.3897	4.4494	4.5107	4.5736	4.6382	12
38	7813	7860	7907	7954	8002	8050	51	78	4.7046	4.7729	4.8430	4.9152	4.9894	5.0658	11
39	8098	8146	8195	8243	8292	8342	50	79	5.1446	5.2257	5.3093	5.3955	5.4845	5.5764	10

deg.	0'	10'	20'	30'	40'	50'	deg.
80	5.6713	5.7694	5.8708	5.9758	6.0844	6.1970	9
81	6.3138	6.4348	6.5606	6.6912	6.8269	6.9682	8
82	7.1154	7.2687	7.4287	7.5958	7.7704	7.9530	7
83	8.1443	8.3450	8.5555	8.7769	9.0098	9.2553	6
84	9.5144	9.7882	10.078	10.385	10.711	11.059	5
85	11.430	11.826	12.250	12.706	13.197	13.727	4
86	14.300	14.924	15.605	16.350	17.169	18.075	3
87	19.081	20.206	21.470	22.903	24.542	26.432	2
88	28.636	31.242	34.368	38.189	42.964	49.104	1
89	57.290	68.750	85.940	114.588	171.885	343.770	0

Natural Cotangents

*Orig cor only*

Wis. Cons. Monuments  
Camp T.D.S.

Set. '68

38-5-

SW cor Sec 23.  
SW " " 2  
SW " " 1

Book I  
Page 2  
39  
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39-5

1/4 lot 28 & 29

III 52

39-7

Orig cor 7-8-17-18

IV 39

lat  
long

517  
31

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.

Sec 22 - 36 - 10 E.  
SW x Reclus 45° 34.8' N. Lat + 89° 14' W Long.  
Center " 45° 35.3 " " 89° 13.3' "