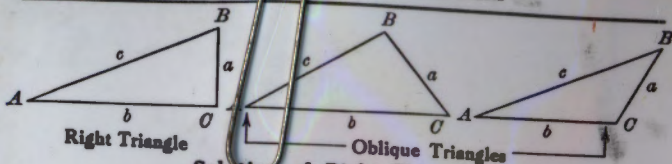


LAND LINE
FIELD BOOK #13
1978-1979 D.KANE

TRIGONOMETRIC FORMULÆ



Right Triangle

Oblique Triangles

Solution of Right Triangles

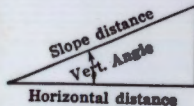
For Angle A. $\sin = \frac{a}{c}$, $\cos = \frac{b}{c}$, $\tan = \frac{a}{b}$, $\cot = \frac{b}{a}$, $\sec = \frac{c}{b}$, $\text{cosec} = \frac{c}{a}$

Given	Required	Formulas
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B$, $c = \sqrt{a^2 + b^2} = a\sqrt{1 + \frac{b^2}{a^2}}$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B$, $b = \sqrt{(c+a)(c-a)} = c\sqrt{1 - \frac{a^2}{c^2}}$
A, a	B, b, c	$B = 90^\circ - A$, $b = a \cot A$, $c = \frac{a}{\sin A}$
A, b	B, a, c	$B = 90^\circ - A$, $a = b \tan A$, $c = \frac{b}{\cos A}$
A, c	B, a, b	$B = 90^\circ - A$, $a = c \sin A$, $b = c \cos A$

Solution of Oblique Triangles

Given	Required	Formulas
A, B, a	b, c, C	$b = \frac{a \sin B}{\sin A}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
A, a, b	B, c, C	$\sin B = \frac{b \sin A}{a}$, $C = 180^\circ - (A + B)$, $c = \frac{a \sin C}{\sin A}$
a, b, C	A, B, c	$A + B = 180^\circ - C$, $\tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
a, b, c	A, B, C	$s = \frac{a + b + c}{2}$, $\sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}$, $C = 180^\circ - (A + B)$
a, b, c	Area	$s = \frac{a + b + c}{2}$, $\text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
A, b, c	Area	$\text{area} = \frac{bc \sin A}{2}$
A, B, C, a	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

REDUCTION TO HORIZONTAL



Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle = $5^\circ 10'$. From Table, Page IX. $\cos 5^\circ 10' = .9959$. Horizontal distance = $319.4 \times .9959 = 318.09$ ft. Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle). With the same figures as in the preceding example, the following result is obtained. $\text{Cosine } 5^\circ 10' = .9959$. $1 - .9959 = .0041$. $319.4 \times .0041 = 1.31$. $319.4 - 1.31 = 318.09$ ft.

When the rise is known, the horizontal distance is approximately: —the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance = $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$ ft.

11/15/78.
OK, CM, JH

RANDOM + TRUE LINE

Y4 S 31 + 32 TO

C/Y S 31

T147N R31W

+30°

STA STA

Occupied sighted 1ST & 2ND & MEAN

1/4 31 32 line South 0° 00' 00"

1	85° 10' 00"	85° 10' 00"
	99.48'	99.48'
	99.73'	99.73'
	99.49'	99.49'
	99.32'	99.32'
	93.99'	93.99'
	99.62'	99.62'
	99.49'	99.49'
	99.72'	99.72'
	99.28'	99.28'
	99.85'	99.85'
	99.27'	99.27'
	90.55'	90.55'

1179.79'

TEMP. COR. 1179.46' 8.02

1 1/4 31/32 0° 00' 00"

2	180° 00' 00"	180° 00' 00"
	99.40'	99.40'
	99.66'	99.66'
	99.73'	99.73'
	99.35'	99.35'
	53.73'	53.73'

2

11/15/78

DK DOSTH

RANDOM + TRU LINE

1/4 S 32 + 31 TO

CY 5 31

T 147 N R 31 W

STA	STA	1STX	2NDX	MEANX
OCC	SIGHTED	1STX	2NDX	MEANX
From PAGE #1	26.29'			26.29'
				- 178.16'
	TEMP. COR.			178.03'

3	2	0°00'00"		
	4	180°00'00"	0°00'00"	180°00'00"
		68.11'		68.11'
		30.94'		30.94'
		30.48'		30.48'
		52.72'		52.72'
				182.25'
		TEMP. COR		182.20'

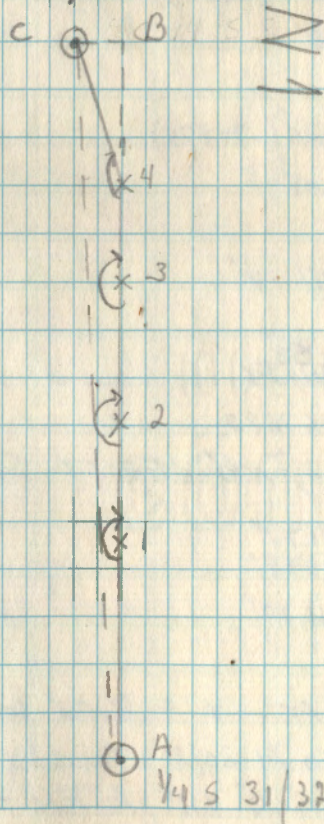
4	3	0°00'00"		
CY431	178.4336	1°6'18"	178.4336"	
	98.98'		98.98'	
	99.59'		99.59'	
	99.01'		99.01'	
	98.70'		98.70'	
	74.15'		74.15'	
	96.89'		96.89'	
	99.72'		99.72'	
	99.98'		99.98'	
	35.45'		35.45'	TEMP. COR. 802.25'
			802.47'	

3

11/15/78

DK, 00, TH

RANDOM + TRUE LINE
 Y4 S.31 + 32 TO
 CY4 S31
 T147N R31W
 CY4S31



MEASURED DIST. 2641.74'
2640.00'
1.74'

$$BC = (802.25)(.02229)$$

$$BC = 17.88'$$

$$AB = 802.25(.99975)$$

$$= 802.05'$$

$$AB = 2641.74'$$

$$\tan A = \frac{17.88'}{2641.74'}$$

$$= .0067682$$

$$= .68' / 100' \text{ OFFSET South}$$

$$C = \frac{2641.74'}{.99998'}$$

$$= 2641.79'$$

OFFSET AT PT. 1 = 8.02' South

RETURNED TO Y4 30/31 + TURNED X 0°23'00"

& AT 1320.63' HIT 1/2" PIPE - P. 4

4

11/15/78

OK, DD, JH
CMT.

RANDOM + TRUE LINE

Y4 531 + 32 TO

C/Y4 531

T147 N R 31 W

STA	STA	1ST X	2ND X	MEAN X
OCC SIGHTED	1/4 5 3/2 PT 1	0° 0' 00"		
	1/2 PIPE	0° 23' 28"	0° 46' 56"	0° 23' 28"
		99.15'	99.15'	
		99.18'	99.18'	
		99.70'	99.70'	
		99.89'	99.89'	
		98.59'	98.59'	
		98.47'	98.47'	
		99.98'	99.98'	
		99.65'	99.65'	
		99.81'	99.81'	
		99.84'	99.84'	
		99.12'	99.12'	
		99.68'	99.68'	
		99.64'	99.64'	
		28.25'	28.25'	
			1320.95'	
	TEMP. COR.		1320.63'	
	PROP. DIST =		1320.89'	

AT 1320.63' 1/2 PIPE

11/15/78

OK DD JH

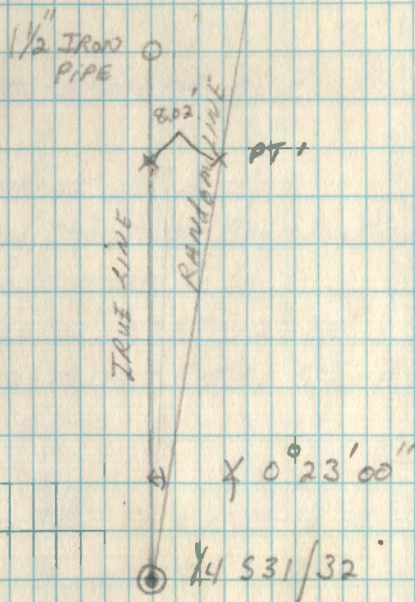
5
RANDOM + TRUE LINE

1/4 531 + 32 To

C/4 531

T 147N R 31W

N
1



11/29/78
OK, ^{cm}
50, ^{1/4}
0

RANDOM + TRUE LINE

C.S. Y16 S 26 TO

S Y16 S 26 + S 25

T147N R31W

W-19

BT'S + ACCESSORIES AT C.S. Y16 S 26

620 N. PINE 14" N124E

FOUND N. PINE AT BIG + DISTANCE

BLOWN OVER

610 POPLAR 8" S37E 127.38'

FOUND BURNED, ROTTED STUMP

8' STEEL POST DUE N 3.48' 54.2 + 54.4

W. OAK 6" N 60E 7.11'

J. PINE 11" S 38E 29.99'

J. PINE 10" N 04W 138.55'

STA STA
 OCCUPED SIGHTED 1ST X 2ND X MEAN X
 C.S. 1/16 LINE N

S26 1 0° 00' 00"
 91° 37' 00" 183.7462 91° 37' 00"
 99.43' 99.43'
 99.57' 99.57'
 99.29' 99.29'
 99.58' 99.58'
 84.23' 84.23'
 482.10'

TEMP. COR. 481.89' 2.31'

1 C.S. 1/16 0° 00' 00"
 2 179° 48' 40" 179° 48' 40"
 99.40' 99.40'
 99.85' 99.85'
 99.55' 99.55'
 99.60' 99.60'
 99.57' 99.57'
 99.56' 99.56'
 99.53' 99.53'
 99.53' 99.53'
 99.95' 99.95'
 99.63' 99.63'
 99.70' 99.70'

2

11/29/78
 DB, DO
 CM, JH

RANDOM TRUE LINE 0°

C.S. 1/16 S26 TO
 S 1/16 S26 + S25
 T147N R31W

BT AT S 1/16 S26 + S25
 8' STEEL POST DUE W 3.41' 54" 26.4'

STA STA
 OCC. SIGHTED 1ST X 2ND X MEAN X
 FROM PAGE #1

99.66' 99.66'

99.56' 99.56'

99.71' 99.71'

84.19' 84.19'

1478.99'

TEMP COR. 1478.34' 9.45'

2 1 0° 00' 00"

3 180° 00' 00" 0° 00' 00" 180° 00' 00"

99.99' 99.99'

99.85' 99.85'

99.90' 99.90'

73.80' 73.80'

373.54'

TEMP COR. 373.38' 11.24'

3 2 0° 00' 00"

S 1/6 S 26 W 178° 48' 42" 178° 48' 42"

73.98' 73.98'

78.18' 78.18'

99.47' 99.47'

TEMP COR. 71.61' 323.10'

3

11/29/78
 OK. DD
 cm. JH

RANDOM + TRUE LINE 0°

C.S. 1/16 S 26 TO

S 1/16 S 26 + 25

T 147 N R 31 W

C.S. 1/16 S 26 + 25

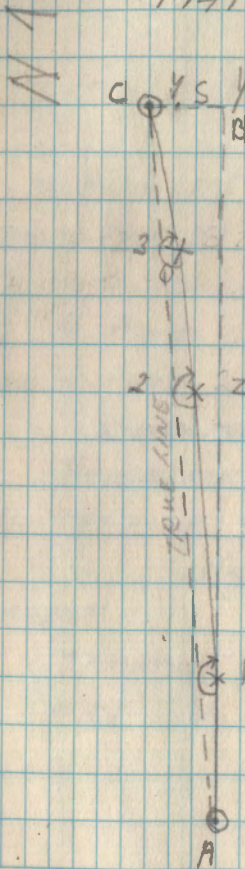
2 2

2 2

2 1

C.S. 1/16 S 26

A



MEASURED DIST. 2656.71'

$$\begin{aligned} Zz &= c \sin A \\ &= (851.72)(.00330) \\ &= 6.11' \end{aligned}$$

$$\begin{aligned} Yc &= (323.10)(.02073) \\ &= 6.70' \end{aligned}$$

$$Zz + Yc = 12.81'$$

$$\begin{aligned} \tan A &= \frac{12.81'}{2656.71} \\ &= .0048217 \\ &= .48' / 100' \text{ OFFSET NORTH} \end{aligned}$$

$$\begin{aligned} AB &= c \cos A \\ &= 2656.71(.99999) \\ &= 2656.68 \end{aligned}$$

10/2/78
DK DD
C/M, SH

BT'S + ACCESSORIES AT +60°
TOWN CORNER OF
T.P.S. 146 + 147N RS. 31 + 32W

SET 8" STEEL POST NORTH 2.03' 54-9

W. PINE 10" N 35³/₄ E 290 LKS
NEW W. PINE 24" N 35³/₄ E 191.79'
SCRIBED "BT"

N. PINE 6" S 4 E 406 LKS 267.96'
NEW N. PINE 20" S 4 E 267.96'
SCRIBED "BT"

TAMARACK 3" S 59³/₄ W 136 LKS
NEW TAMARACK 9" S 59³/₄ W 89.60'
SCRIBED "BT"

NEW BT
TAMARACK 9" S 35 E 194.61'
MKD T146N R31W S6 BT

60°

9/6/79
DK, BLD

RANDOM & TRUE LINE
FROM S.C. $\frac{14}{23/24}$ TO
Y4 S 23/24
T 147 N R 31 W

P-2'

BT'S AT Y4 S 23/24
TAM 7" N 64 W 75.68'
CEDAR 9" S 68 W 61.52'
CEDAR 9" S 76 W 39.40'

P. CLdy 70°

7/24/79

OK, BSBL

TRUE LINE FROM
W.C. NORTH SIDE OF LAKE
TO S $\frac{1}{16}$ S 24/19
WEST RANGE LINE
T147N R31W

TRUE LINE IS BRUSHED,
BLAZED, POSTED & PAINTED
TO FSM STANDARDS

STA STA
000 sighted 1STX 2NDX MEANX
W.C. 16 0°00'00"
1 79°17'47" 158°35'34" 79°47'17"

CLdy 70°

7/23/79

OK, B, S, L

TRUE LINE W.C.
South SIDE OF LAKE TO
N 1/4 S 25/30
WEST RANGE LINE
T147N R31N

TRUE LINE IS BRUSHED,
BLAZED, POSTED & PAINTED
TO FSM STANDARDS

STA STA
OCC. SIGHTED 1ST X 2ND X MEAN X

W.C. PT 17 0°00'00"

PT 1 215°24'42" 170°49'24" 215°24'42"

2

10/17/78
DK CM, DD
52°

RANDOM + TRUE LINE

Y4 SEC. 29+32 TO

S.C. 29-30-31-32

T147N R31W

STA	STA	1ST X	2ND X	MEAN X
Occupied	Sighted			

2	1	0°00'00"		
	3	179°52'30"	359°45"	179°52'30"
		73.00	-	73.00
		37.27	-	37.27
		37.11	-	37.11
		99.40	-	99.40
		90.19	-	90.19
				336.97

TEMP. COR. 336.94 ✓

3	2			
	4	180°57'00"	0°54'00"	180°57'00"
		99.60	-	99.60
		99.42	-	99.42
		99.76	-	99.76
		99.76	-	99.76
		99.56	-	99.56
		99.83	-	99.83
		16.39	-	16.39

TEMP. COR. 614.32 ✓ M.C.H.
614.26

3

10/2 78
PK, DD
CM, JH
+55°

RANDOM + TRUE LINE
Y4 SEC. 29 + 32 TO
S.C. 29-30-31-32
T147N R31W

STA STA
 OCC. SIGHTED 1ST X 2ND X MEAN X

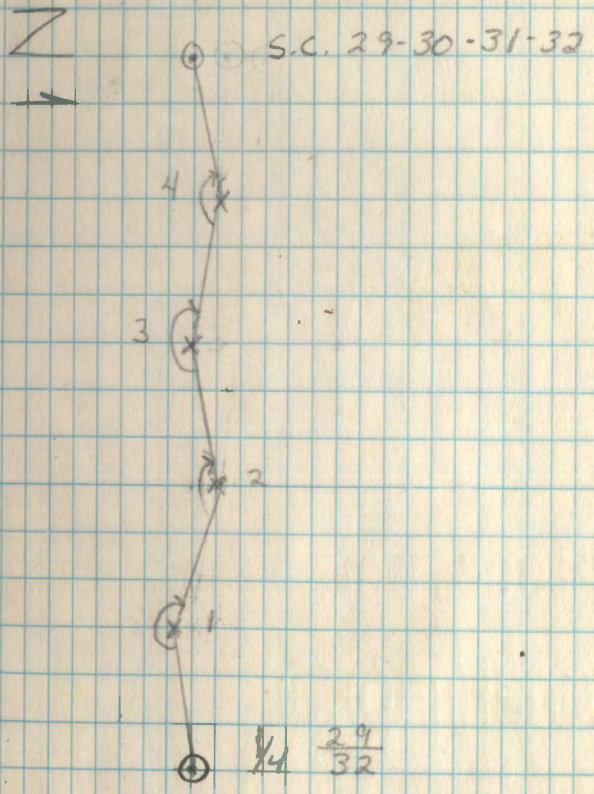
4	3	
	<u>30</u>	
S.C. 31	32	174 2700"
		348 54
		174 2700"
	100.00'	- 100.00'
	99.48'	- 99.48'
	29.83'	- 29.83'
		229.31'

TEMP. COR. 2.29.29' ✓

4

10/17/78
 DK, DD, CM

RANDOM + TRUE LINE +55°
 1/4 SEC 29+32 TO
 S.C. 29-30-31-32
 T147 N R 31 W



P. Cldy 90°

7/10/79
OK, BS, JH, BL

STA STA
OCC sighted 1st & 2nd & MEAN X
2A 1/4 941 0 0000

65.28'

2A SW COR
GARAGE

3572212"

30.88'

2A POWER POLL

1433218"

98.65'

2A POWER POLL

1773306"

97.37'

10/12/78
OK, DD
LM, JH
+55°

RANDOM + TRUE LINE
1/4 SEC. 29+32 TO
S.C. 29-30-31-32
T147N R31W

BT'S + ACCESSORIES AT S.C. 29-30-31-32
8' STEEL POST EAST 9.87' S42+54-9
ELM 11" S01E 48.09'
ASH 10" S48W 76.09'
MAPLE 11" N30W 19.25'
ELM 7" N51E 65.56'

BT'S + ACCESSORIES AT 1/4 S 29+32

8' STEEL POST DUE WEST 3.90'
SECURED PIPE WITH 8' STEEL
POST + WIRE
NO BT'S AVAILABLE

STA occupied STH sighted 1ST X 2ND X MEAN X
 45.32 1

BRG OF S86W

99.54	0°	99.54
99.96	0°	99.96
99.35	0°	99.35
99.50	0°	99.50
99.91	0°	99.91
99.82	0°	99.82
98.87	0°	98.87
45.71	0°	45.71

TEMP. COR.

~~742.66~~ ~~742.06~~

742.60

m.c.f.

1 45.32 0° 00' 00"

2 180° 23' 00" 0° 46' 00" 180° 23' 00"

99.72 - 99.72

99.57 - 99.57

100.00 - 100.00

100.00 - 100.00

100.00 - 100.00

100.00 - 100.00

99.90 - 99.90

18.33 - 18.33

717.52

TEMP. COR. ~~716.92~~ 717.46

m.c.f.

RAIN 65°

7/2/79

OK, BS, JH

RANDOM & TRUE LINE

Y4 20/21 TO

W.M.C. NORTH SHORE BIG LAKE

T 147 N R 31 W

TRUE LINE IS BRUSHED, BLAZED,
 POSTED & PAINTED TO
 F.S.M. STANDARDS

STA STA
Occ. sighted 1st x 2nd x MEANLY

1 Y4 29/21 0°00'00"

W.M.C. 180°00'00" 360°00'00" 180°00'00" "Wiggled"
IN

CLR 84°

7/5/79

OK, JH, CK

TRUE LINE FROM

Y4 13/18 TO

S.C. ^{12/17}
13/18

T 147 N R 31 W

ON WEST RANGE LINE

TRUE LINE IS BRUSHED.
BLAZED, POSTED & PAINTED
TO FSM STANDARDS

STA occ.	STA sighted	1ST X	2ND X	MEAN X
Y4 13/18	STA #4	0° 00' 00"		
	1	96° 11' 20"	192° 22' 40"	96° 11' 20"

4/5/79

OK, JH

RANDOM + TRUE LINE

Y4 39/31

MC, RP

+1/6° F

TO C/Y4 S 31

T 147° N R 31 W

TRUE LINE IS BRUSHED
BLAZED, POSTED, & PAINTED
TO F.S.M. STANDARDS

STA STA
OCL sighted 1st x 2nd x MEAN X
1/4 0°00'00"

1 273°45'00" 273°45'00"

1 1/4
2 180°00'00" 180°00'00"

9/21/79

DKBLGS

RANDOM + TRUE LINE
CW 1/16 S24 T0
SW 1/16 S24
T148N R29W

TRUE LINE IS BRUSHED, BLAZED,
POSTED + PAINTED TO
FSM STANDARDS

STH STA
OCC sighted 1st & 2nd & MEAN &
CW 1/16 BY ON
LINE NEST 0° 00' 00"
90° 02' 1/2 180° 05' 90° 02' 30'

80° CLR

7/31/79

DK, BS, JH, BL

RANDOM & TRUE LINE

N 1/16 S 23/24 TO

CN 1/16 S 24

T 148 N R 29 W

TRUE LINE IS BRUSHED, BLAZED,
POSTED & PAINTED TO
FSM STANDARDS

STA STA
OCC. SIGHTED 1ST & 2ND & MEAN X
N 1/6 23/24 Y 4 23/24 0°00'00"

1 270°07'00" 180°14'00" 270°07'00"

75° P. Udy

7/30/79

DK, BSAHRL

RANDOM + TRUE LINE
Y4 S 23/24 To
CW 1/6 S 24
T148N R 29W

TRUE LINE IS BRUSHED, BLAZED,
POSTED, & PAINTED TO FSN
STANDARDS.

STA STA
Occ. SIGHTED 1st X 2nd X MEAN X

1/4 23/24 N 1/16 23/24 0° 00' 00"

1 89° 41' 00" 179° 22' 00" 89° 41' 00"

+44°

5/3/19

DK, JH, RP

RANDOM & TRUE LINE

S.C. 14-13-23-24 TO

W 1/16 S 13/24

T 148 N R 29 W

TRUE LINE IS BRUSHED
BLAZED POSTED & PAINTED
TO F.S.M. STANDARDS.

STA STA
OCC SIGHTED 1ST & 2ND & MERRY
S.C. 23/24 N 1/16 23/24 0°00'00"

1 270°33'00" 181°06'00" 270°33'00"

1

4/30/79

OK, JH, MC, RP

RANDOM & TRUE LINE

Y4 C. S24 & 13

To

CN 1/16 S24

T148 N R29W

RANDOM LINE IS BRUSHED, BLAZED,
POSTED & PAINTED TO
F.S.M. STANDARDS.

BT'S & ACCESSORIES AT Y4 13/24

8' STEEL POST 3.23' BOTH SIGNS.

ASH 5" 10.71' S86E

RH. MACDONALD ASH 6" S78W 44.3' "BT" MKD

" CEDAR 12" S50 1/2 W 58.2' "BT"

" ASH 6" S21 1/2 W 80.4' "BT"

4x4 POST + SIGN 266.0' SOUTH OF Y4 13/24

4x4 POST + SIGN 545.5' NORTH OF CN 1/16

STA STA
000 SIGHTED 1ST X 2ND X MEAN X
1/4 13 PT. ON
24 E-W Line 0°00'00"

91°27'00" / 82°54' / 91°27'00"

5/21/79

DK, B.S. ML

RANDOM + TRUE LINE

NE 1/4 S 8 TO

CN 1/4 S 8

T148N R28W

TRUE LINE IS BRUSHED,
BLAZED & POSTED TO
F.S.M. STANDARDS

F-8

BT + ACCESSORIES AT NE 1/4 S 8

ELM 11" N44W 92.81'

ELM 12" S57W 52.20'

ELM 12" N49W 51.0'

4x4 wood POST DUE WEST 39.7' BOTH SIGNS

STA STA
000 SIGHTED 1ST & 2ND & MEAN
NE 1/4 PT ON
LINE SOUTH 0° 00' 00"

1 92° 07' 45" 184° 15' 30" 92° 07' 45"

1 NE 1/4 0° 00' 00"
CN 1/16 180° 00' 00" 360° 00' 00" 180° 00' 00"

CR 61° 1

5/23/79

DK, BS, ML

RANDOM & TRUE LINE

CN 1/16 S 8 TO

NW 1/16 S 8

T 148 N R 28 W

TRUE LINE IS BRUSHED, BLAZED
POSTED & PAINTED TO F. S. M.
STANDARDS.

F-7

BT'S + ACCESSORIES AT CN 1/16 S 8

8' STEEL POST DUE EAST 3.37' 54-2, 54-4

8' STEEL POST DUE WEST 3.83

ELM 16" N 31 W 10.46'

BASSWOOD 19" N 25 E 26.5'

ASH 9" N 80 1/2 E 26.01'

ELM 16" 20" S 34 E 26.21'

ASH 14" S 81 W 26.68'

STA STA DIST. TO
OCC SIGHTED 1ST X 2ND X MEAN X FENCE
PT ON

CN¹/₁₆ LINE EAST 0°00'00"

1 180°23'00" 00°46'00" 180°23'00"

99.49'

99.60' 2.30' N

65.02' 6.60' N

99.73'

99.65'

15.61' 12.47'

99.35'

78.72' 22.40'

1 CN¹/₁₆ 0°00'00"

NW¹/₁₆ 180°00'00" 360°00'00" 180°00'00"

99.49' 23.5'

99.52' 16.40'

99.74' 4.50'

41.83' X FENCE

97.51'

99.24'

11.88'

2

5/23/79

DK BS ML

6/4/79

DKBSRP

RANDOM + TRUE LINE
CE $\frac{1}{16}$ S 8 TO
C $\frac{1}{4}$ S 8
T148 N R 28 W

TRUE LINE IS BRUSHED
PAINTED 'BLAZED & POSTED
TO F.S.M. STANDARDS

G-8

BT'S + ACCESSORIES AT CE $\frac{1}{16}$ S 8
4x4 POST 47.49' DUE WEST
ASH 8" S 86 W 107.15' CE $\frac{1}{16}$ S 8 BT
ASH 7" S 48 $\frac{1}{2}$ W 64.3' "TAG"
ELM 13" N 38 W 77.85' "TAG"

1
10/10/78
DK, DD, CH, IH

RANDOM = TRUE LINE
MC S 25 T147N R31W
S30 T147N R30W
TO

Y4 S 25 + S30
ON EAST BOUNDARY OF TOWNSHIP
T147N R31W

TRUE LINE IS BRUSHED
BLAZED, POSTED + PAINTED
TO F.S.M. STANDARDS

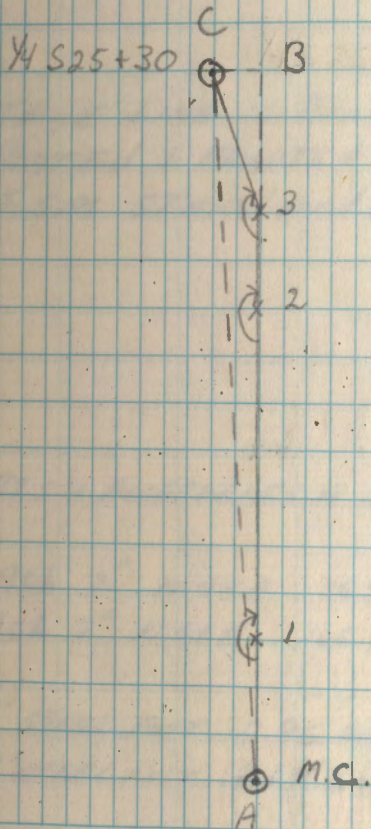
BT'S & ACCESSORIES AT M.C.
S. SHORE BIG RICE LAKE

8' STEEL POST DUE NORTH 297' 54.2, 54-4
4X4 WOOD POST DUE SOUTH 466' 54.2, 54-4
ASH 9" SOLE 61.35'
ELM 10" N52W 35.30'
ASH 8" S29E 72.25' MC S30 BT

179° 11' 00"

STA Occupied	STA Sighted	1st X	2nd X	MEAN X
1	M.C.	0° 00' 00"		
2		180° 00' 00"	360° 00' 00"	180° 00' 00"

 10/10/78
 DK, DD,
 CM, JH

 2
 RANDOM + TRUE LINE
 M.C. S25 + S30 TO
 Y4 S25 + S30


9/19/79

DK, BL

RANDOM & TRUE LINE

CW $\frac{1}{16}$ S30 TO

M.C. S. SIDE Big RICE LAKE

T147N R30W

TRUE LINE IS BRUSHED, BLAZED,
POSTED + PAINTED TO
FSM STANDARDS

BT'S + ACCESSORIES A CW $\frac{1}{16}$ S30

Ash 7" N48E 268.9' CW $\frac{1}{16}$ S30 BT

Ash 7" N61E 166.45' CW $\frac{1}{16}$ S30 BT

8' STEEL POST 2.85' DUE WEST BOTH SIGNS

8' STEEL POST 2.64' DUE NORTH BOTH SIGNS

STA OCCUPIED	STA SIGHTED	1ST X	2ND X	MEAN X
CW 1/16	PT ON LINE WEST	0°00'00"	90°24'06"	180°48'12"
			90°24'06"	

56° cldy

8/21/79

DKCR, PA

RANDOM & TRUE LINE

Y4 25/30 TO

CW 1/16 S30

T147N R30W

TRUE LINE IS BRUSHED, BLAZED,
POSTED & PAINTED TO
FSM STANDARDS

STA
STA OCC. SIGHTED 1ST X 2ND X MEAN X
PT. 00 0° 00' 00"

1/4 25/30 LINE N

87° 02' 25" 1740450 87° 02' 25"