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400

LEVEL

F.B. 394

Published by H. S. CROCKER COMPANY, Stationers, Drawing Materials, and Mathematical Instruments, San Francisco.

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

MINUTES.	LKS.	MINUTES.	LKS.	MINUTES.	LKS.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

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TABLE FOR RUNNING ON SLOPES.

In the following table the first column shows the angle, the second the number of links to be added to a chain on the slopes, to make one chain, horizontal measurement.

ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS	ANGLE	COR. IN LINKS
°		°		°		°	
4	0.24	11	1.88	18	5.14	25	10.54
5	0.38	12	2.24	19	5.76	26	11.26
6	0.55	13	2.63	20	6.42	27	12.24
7	0.76	14	3.06	21	7.11	28	13.37
8	0.98	15	3.53	22	7.85	29	14.34
9	1.24	16	4.02	23	8.64	30	15.47
10	1.55	17	4.56	24	9.47	35	22.07

Crocker Quality

LEVEL BOOK

No. 400

915.07
1.02
216.09
12.46
203.63

COMMUNI CONSENSU TRADE MARK PRIMO

MANUFACTURED BY

A. S. Crocker Co.

SAN FRANCISCO
and
SACRAMENTO

1

"L" Ft Stockton Blvd.
E Line Levels + X sections

Sta.		H.I.	Rod	Elev
0+00	=14+25 old line	156.43	1.76	154.67
W			4.2	
C			1.76	154.67
E			0.0	
0+50				
W			7.6	
C			4.9	
E			3.1	
1+00				
W			11.1	
12' W of center			7.6	
C			5.6	
E			3.5	
1+50				
W			11.9	
C			8.1	
E			4.5	

15' each side of center. Feb 19/10 { Fields Barber Taylor 2

Sta.		H.I.	Rod	Elev
2+00		156.43		
W			17.5	
C			12.2	
E			6.5	
2+50				
E			9.8	
J.A.	2.11	145.67	12.87	143.56
C			4.53	
W			9.8	
3+00				
E			-1.1	146.8
C			4.9	
W			12.1	~~12.1~~
3+50				
E			0.8	
C			7.1	
W			14.0	

Sta.	H.I.	Rod	Elev.
4+00 △	145.67	11.45	134.22
E		6.5	
C		11.45	
E		6.0	
4+50		13.2	
C		13.2	
E		5.9	
5+00 △			
E		9.1	130.02
E		8.9	
T.P.	5.54	138.96	12.25 133.42
C		8.94	130.02
W		16.3	
W		16.0	
4+00			
W		12.4	
W.		11.7	

Sta.	H.I.	Rod	Elev.
4+50	138.96		
W		13.9	
C		6.5	
5+50			
W		12.6	
C		6.5	
E		0.6	
6+00			
W		13.9	
C		8.6	
E		1.5	
6+35 △			
W		16.3	
C		11.35	127.61
E		6.2	
M		16.2	

Sta.		H.I.	Rod	Elev.
C		138.96	11.3	
S			5.6	
6+50				
S			5.1	
C			9.5	
N			14.7	
7+00				
N			14.9	
C			10.5	
T.P.	5.87	133.48	11.3	127.6
S			1.5	
7+50				
S			4.9	
C			8.6	
N			12.1	
8+00				
N			14.8	

Sta.		H.I.	Rod	Elev.
		133.48		
C			10.7	115.38
S			7.6	
8+50			7.6	
S			8.2	
C			11.3	
T.P.	0.78	122.54	11.72	121.76
N			4.7	
9+00				
N			1.3	
C			3.6	
S			6.8	
9+50				
N			11.8	
C			7.16	115.38
S			3.6	
N			10.6	
C			7.16	
S			4.6	

Sta.	H.I.	Rod	Elev.
9+58	122.54		
ℳ		12.5	
C		8.7	
S		7.0	
9+65			
ℳ		13.5	
C		14.0	
S		7.1	
9+75			
ℳ		18.2	
C		11.3	
S		6.8	
10+00			
ℳ		14.0	
C		10.7	
S		6.8	

Sta.		H.I.	Rod	Elev.
10+50		122.54		
ℳ			11.4	
C			8.1	
S			4.7	
11+00				
ℳ			11.3	
C			7.8	
S			3.3	
11+50				
ℳ			15.8	
C			11.58	
S			6.6	
~~12+00~~ J.S.	0.07	109.87	12.74	109.80
ℳ				9.0
C				5.0
S				1.3

Feb 19/10 { Childs Barber Tayer

Sta.		H.I.	Rod	Elev.
12+50		109.87		
N			13.6	
C			10.5	
S			7.1	
13+00				
T.P.	3.76	100.97	12.66	97.21
N			7.0	
C			5.2	
S			3.5	
13+50				
N			7.4	
C			6.2	
S			5.1	
14+00				
N			5.3	
C			3.8	
S			3.6	

Sta.	~~H.I.~~	H.I.	Rod	Elev.
14+30		100.97		
N			3.5	
C			2.46	98.57
S			1.6	
E			1.7	
C			2.46	
W			3.2	
14+50				
W			5.4	
C			4.0	
E			2.9	
15+00				
W			14.2	
C			12.8	
E			11.5	

see page 7 right Hand page

Levels on changed line from Sta. 6+49 "F" Line

Sta		H.I.	Rod	Elev.
T.P.	5.94	209.57		203.63
0+00				
n			5.7	
c			7.36	
s			10.0	
0+50				
n			7.8	
c			9.2	
s			10.8	
1+00				
n			7.2	
c			8.2	
s			9.1	
1+44.05 @ = 6+49 "F" line				
n			6.0	
c			6.21	
10' so. of center			7.8	
s			12.8	

Sta. 5+07.5 old line To Feb 21/10 {Child Barber Taylor

see page 6

T.P.	1.15	89.88	12.24	88.73
15+37.				
W			5.1	
c			6.9	
E			7.2	
15+50				
W			6.3	
10' W. of center			8.3	
c			4.7	
E			8.2	
15+62.1 @ = 13+05 "E" line				
W.			7.3	
c			4.70	85.19
E			10.9	

"J" Line. levels.

Sta.		H.I.	Rod	Elev.
		209.57		
6+49				
E			5.0	
C			6.21	
W			7.7	
6+56				
W			10.3	
11' W. of center			8.0	
C			6.3	
E			6.1	
6+68				
W			16.7	
C			13.8	
E			11.2	
6+84				
W			7.0	
C			6.0	
E			6.1	

Sta.		H.I.	Rod	Elev.
		209.57		
7+00				
W			4.3	
C			4.2	
E			3.7	
T.P.	12.53	221.93	0.17	209.40
7+50				
W			9.0	
C			9.9	
E			11.0	
8+00				
E			2.0	
C			1.4	
T.P.	12.50	233.86	0.57	221.36
W			12.5	
8+50				
W			11.6	
C			12.0	
E			12.0	

Sta.		H.I.	Rod	Elev.
8+76 △	center arista + webster	233.86		
W			12.2	
C			11.94	
E			11.8	
N			12.1	
C			11.94	
S			11.9	
9+00				
N			11.6	
C			11.5	
S			11.6	
9+50				
N			11.5	
C			11.0	
S			10.8	

Sta.		H.I.	Rod	Elev.
10+00		233.86		
N			11.1	
C			10.6	
S			9.2	
10+50				
N			9.4	
C			8.8	
S			7.3	
11+00				
N			7.1	
C			5.2	
S			4.0	
11+50				
N			4.1	
C			2.1	
S			0.5	

Sta.		H.I.	Rod	Elev.
12+00				
T.P.	1298	244.95	1.89	231.97
N			12.4	~~224~~
C			10.3	
S			8.7	
12+26.1				
N			10.6	
C			8.93	
S			7.3	
N				
C				
S				

"A" Line levels.

Sta.		H.I.	Rod	Elev.
0+00	Sta. 6+35 E line			
ℳ		133.33	11.4	
C			5.72	127.61
S			6.0	
0+50				
ℳ			11.7	
C			7.0	
S			3.0	
1+00				
S			8.5	
C			12.4	
J.P.	0.56	121.20	12.69	120.64
ℳ			4.0	
1+50				
ℳ			9.1	
C			4.5	
S			0.7	

Sta.		H.I.	Rod	Elev.
		121.20		
2+00				
S			5.0	
C			8.9	
ℳ			14.2	
2+50				
S			9.4	
C			13.2	
J.P.	0.40	109.01	12.59	108.61
ℳ			5.1	
3+00				
ℳ			8.1	
C			4.6	
S			1.7	
3+30				
ℳ			11.2	
C			8.6	
S			5.5	

Sta		HI	Rod	Elev.
		109.01		
3+40				
N			15.0	
C			12.5	
S			9.4	
3+50				
N			14.8	
C			10.8	
S			8.8	
3+60				
N			11.8	
C			8.0	
S			6.1	
4+00				
N			7.0	
C			3.6	
S			1.2	

Sta		HI	Rod	Elev.
		109.01		
4+50				
N			6.1	
C			3.3	
S			0.0	
5+00				
N			10.0	
C			5.8	
S			1.6	
5+50				
N			13.3	
C			9.9	
S			6.1	
6+00				
S			10.1	
C			12.8	
T.P.	2.84	99.06	12.79	96.22
N			4.6	

Sta	H.I. 99.06	Rod	Elev
6+50			
ℓ		5.4	
ℓ		3.9	
S		2.3	
6+96.2 = Sta. 11+00 "C" Line			
ℓ		5.8	
ℓ		4.61	
S		3.6	

"I" Line Levels.

Feb 21/10 { Childs, Barber, Taylor

Sta.			H.I.	Rod	Elev.
0+00	= Sta. 12+26.1 "I" Line		244.95		
n				10.0	
c				8.93	
s				7.8	
0+50					
n				5.3	
c				4.1	
s				3.1	
1+00					
n				2.8	
c				1.6	
s				0.2	
1+50					
n				1.7	
c				0.8	
J.P.		4.67	249.47	0.15	244.80
s				4.5	

Sta.			H.I.	
2+00			249.47	
n				7.0
c				6.1
s				5.6
2+50				
n				7.8
c				7.4
s				7.1
3+00				
s				7.7
c	3.3	100' SF		9.1
n				10.8
3+50				
n				7.7
c				6.8
s				6.0

Sta.	H.I. 249.47
4+00	
N	5.1
C	4.5
S	4.2
4+50	
N	3.8
C	3.6
S	3.3
5+00	
N	2.2
C	2.1
S	1.8
5+50	
N	1.0
C	0.6
S	0.4

Sta.		H.I.	Rod	Elev.
T.P.	12.82	261.85	0H4	249.03
6+00				
N			11.8	
C			11.5	
S			11.0	
6+50				
N			8.5	
C			8.6	
S			8.6	
7+00				
N			4.9	
C			5.2	
S			4.9	
7+50				
N.			3.5	
C			2.7	
S			2.5	

Sta.		H.I.	Rod	Elev.
		261.85		
7+83.2				
N			3.4	
C			2.5	
S			1.6	
W			2.2	
C			2.5	
E			3.1	
8+00				
W			1.1	
C			1.3	
E			1.8	
T.P.	9.55	271.31	0.09	261.76
8+50				
W			8.3	
C			8.6	
E			8.1	

Sta.	H.I.	Rod	Elev
	271.31		
9+00			
W		6.8	
C		6.9	
E		6.5	
9+50			
W		5.5	
C		5.8	
E		5.3	
10+00			
W		4.7	
C		4.8	
E		4.7	
10+50			
W		3.9	
C		4.3	
E		4.3	

Feb. 21/10 {Childs, Barber, Taylor} 17

Sta.	H.I.	Rod	Elev.
11+00	271.31		
W		3.5	
C		3.8	
E		3.8	
11+33.13 =			
W		3.1	
C		3.6	
E		3.5	

X Sec. 15th St. S. to H. 14' Walks 5' 1/4's

B.M. Brass Plug N.W. Cor. 15th & H Sts. 29.950

4.39 34.34 29.950

North Line H St.

W	4.0	30.3
crb	4.3	30.0
1/4	4.4	29.9
M	4.3	30.0
1/4	4.5	29.8
crb	4.5	29.8
E	4.2	30.1

+25 North

E	3.9	30.4
crb	4.6	29.7
1/4	4.7	29.6
M	5.1	29.1
1/4	4.3	30.0
crb	4.3	30.0
W	3.7	30.6

Shaw 30/12/10
Evans
Tichinor

34.34

0+50

W	3.9	30.4
crb	4.6	29.7
1/4	4.9	29.4
M	5.3	29.0
1/4	4.7	29.6
crb	4.6	29.7
E	3.8	30.5

0+75

E	4.1	30.2
crb	4.7	29.6
1/4	5.2	29.1
M	5.1	29.2
1/4	5.2	29.1
crb	5.0	29.3
W	4.1	30.2

34,34

1+00

W	5.1	29.1
crb	5.4	28.9
1/4	5.2	29.1
M	5.4	28.9
1/4	5.4	28.9
crb	5.3	29.0
E	4.7	29.6

1+25

E	5.4	28.9
crb	5.4	28.9
1/4	5.6	28.7
M	5.6	28.7
1/4	5.3	29.0
crb	5.2	29.1
W	5.0	29.3

34,34

1+50

W	4.8	29.6
crb	5.0	29.3
1/4	5.3	29.0
M	5.3	29.0
1/4	5.3	29.0
crb	5.3	29.0
E	5.2	29.1

1+75

E	5.2	29.1
crb	5.0	29.3
1/4	5.0	29.3
M	5.1	29.2
1/4	4.7	29.6
crb	4.8	29.5
W	4.6	29.7

3434

2+00

W		4.2	30.1
crb		4.5	29.8
1/4		4.5	29.8
M		4.8	29.5
1/4		4.7	29.6
crb		4.8	29.5
E		4.8	29.5

2+25

E		4.0	30.3
crb		4.5	29.8
1/4		4.4	29.9
M		4.6	29.7
1/4		4.7	29.6
crb		4.6	29.7
W		6.1	28.2

3434

2+50

W		6.0	28.3
crb		6.0	28.3
1/4		5.5	28.8
M		4.2	30.1
1/4		4.2	30.1
crb		4.1	30.2
E		3.6	30.7

2+75

E		2.2	32.1
crb		3.3	31.0
1/4		3.6	30.7
M		4.1	30.2
1/4		4.5	29.8
crb		4.9	29.4
W		5.6	28.7
T.P.	7.61	36.95	5.00	29.34

36.98

3+0

W	8.0	29.0
+5	8.2	28.8
+10	8.2	30.8
crb	6.4	30.6
1/4	7.0	30.0
+12	6.9	30.1
+14	5.7	31.3
M	5.2	31.8
1/4	5.3	31.7
crb	5.3	31.7
+6	4.9	32.1
E	2.6	34.4

3+08 = South Line G St

E	2.1	34.9
brt	2.4	34.6
+1	3.3	33.7
1/4	3.8	33.2
M	4.1	32.9
1/4	2.7	34.3
crb	2.6	34.4
W	2.9	34.1

X Sec. First St. South Line Robinson to 200' South.
70' Wide - 14' Walks - 5' 1/4s
B.M. Brass Plug N.E. Cor 1st & Robinson 269.965

B.M	2.46	272.42		269.96
	South Line Robinson			
E			2.1	270.3
crb			3.3	269.1
1/4			3.3	269.1
M			3.5	268.9
1/4			3.9	268.5
crb			4.0	268.4
W			3.3	269.1
		0+25 South		
W			4.2	268.2
crb			3.8	268.6
1/4			3.6	268.8
M			3.6	268.8
1/4			3.4	269.0
crb			3.0	269.4
+7			2.7	269.7
E			3.0	269.4
		272.42		
		0+50		
E			4.4	268.0
crb			3.7	268.7
1/4			4.1	268.3
M			4.3	268.1
+7			4.2	268.2
1/4			5.4	267.0
crb			6.2	266.2
W			6.4	266.0
		0+75		
W			7.2	265.2
crb			7.4	265.0
1/4			7.2	265.2
M			5.8	266.6
1/4			5.6	266.8
crb			5.8	266.6
+7			4.6	267.8
E			5.7	266.7

272.42

1+00

E			8.6	263.8
crb			8.7	263.7
1/4			8.7	263.7
M			8.1	264.3
1/4			7.7	264.7
crb			7.8	264.6
W			7.4	265.0
		1+25		
W			7.9	264.5
crb			8.2	264.2
1/4			8.4	264.0
M			8.9	263.5
1/4			9.3	263.1
crb			9.9	262.5
+7			10.4	262.0
E			11.5	260.9
TP	4.46	266.45	10.43	261.99

266.45

1+50

E			15.8	250.7
+5			11.9	254.6
crb			9.6	256.9
1/4			8.9	257.6
M			4.9	261.6
1/4			2.9	263.6
crb			2.8	263.7
W			2.5	264.0
		1+75		
W			3.1	263.4
crb			5.2	261.3
1/4			5.9	260.6
M			10.3	256.2
TP	3.20	256.79	12.86	253.59
1/4			5.1	251.7
crb			6.3	250.5
E			11.4	245.4

256.79

2+0

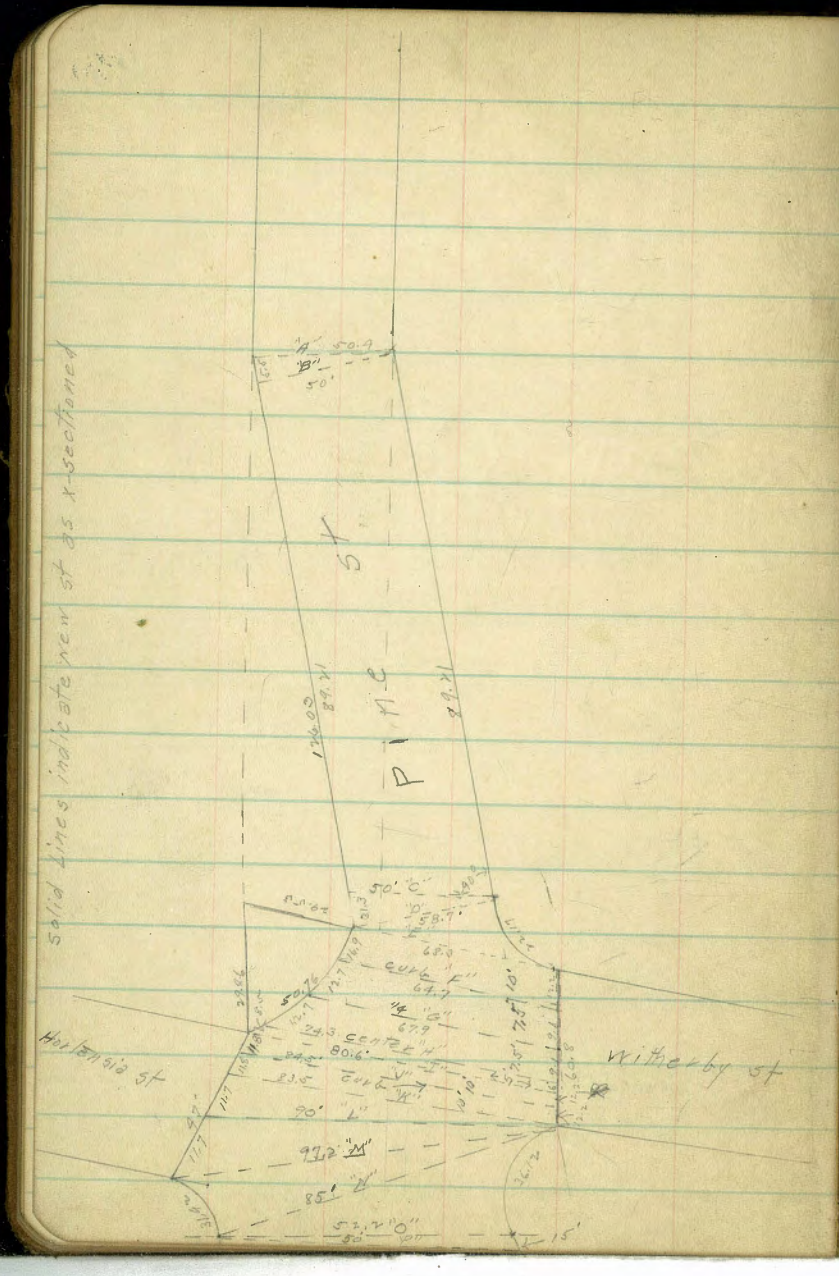
E	11.1	245.7
+10	15.3	241.5
crb	14.7	242.1
114	12.9	243.9
M	7.6	249.2
114	3.6	253.2
crb	1.9	254.9
W	+1.4	258.19

x-section Pine St for Proposed Change 1/20 Dunkle
" " for 7.5' 1/4's St 50' wide 1/11 Shaw
B.M. spk. Ft Stockton & Witherby 266.34 Fichner

B.M.	2.89	269.23			
T.P.	0.75	258.54	11.44	257.79	
	x-section "A"				
S			3.6	254.9	
crb			4.9		
1/4			6.2		
M			7.4	251.1	
1/4			8.5		
crb			9.7		
N			12.8	245.7	
+20			16.3		
	x-sec "B"				
−20			18.3		
N			13.2	245.3	
crb			10.8		
1/4			8.8		
M			7.6	250.9	
1/4			6.3		
Crb			5.0		
S			3.6	254.9	

0+25 W of "B"

S			3.9	254.6	
+2			4.4		
crb			9.0		
+4			11.0		
1/4			11.8		
M			13.3	245.2	
1/4			14.7		
crb			16.1		
N			19.4	239.1	
+30			29.3		
	0+50				
−45			43.2		
−35			39.9		
+30			35.2		
N			26.3	232.2	
crb			20.9		
1/4			18.6		
M			17.0	241.5	
1/4			15.6		
+3			15.0		
crb			12.0		
S			4.8	253.7	



258.54

0+75

26

S			6.2	252.3
Crk			13.5	
1/4			17.6	
M			20.3	238.2
1/4			23.2	
Crk			27.3	
+2			30.2	
N			32.2	226.3
+3			33.3	
+25			44.3	
+35			45.2	
+50			42.3	

0+89.2 W of Sec "B" = Sec "C"

-35			37.0	
-20			38.4	
-15			38.2	
N			32.1	226.4
+7			30.1	
Crk			27.9	
1/4			26.5	
+3			23.0	
M			20.1	238.4
1/4			17.2	
Crk			14.1	
S			7.1	251.4
T.P.	1.84	253.24	7.14	251.40

-253.24

x-sec "D"

S	1.8	251.4
crk	9.0	244.2
1/4	13.5	
M	15.1	238.1
1/4	15.2	
crk	17.1	
N	16.0	237.2
+20	15.8	

x-sec "E"

N	16.0	237.2
crk	15.1	
1/4	12.9	
+7		
M	10.7	243.0
	9.0	
1/4	6.1	
+4	4.1	
crk	3.5	
S	1.0	252.2

x-sec "E"

S	4.7	248.5
+10	6.0	
+20	7.1	
+30	7.3	
+40	9.8	
+50	11.0	
+64.7=N	12.5	240.7

x-sec "G"

N	9.9	243.3
#10	9.6	
+20	8.6	
+30	7.4	
+40	7.0	
+50	5.9	
+60	5.8	
+67.9=S	5.1	249.1

25324

x-sec "H"

5	5.3	247.9
+10	5.8	
+20	6.3	
+30	6.5	
+40	7.4	
+50	8.1	
+60	8.7	
+74.3=N	8.4	244.8

x-sec "I"

N	7.5	245.7
+10	7.3	
+20	7.9	
+30	7.9	
+40	7.1	
+50	6.7	
+60	6.4	
+70	6.0	
+80.6=S	5.1	248.1

x-sec "J"

S	4.7	248.5
+10	5.5	
+20	6.0	
+30	6.6	
+40	6.9	
+50	6.3	
+60	5.5	
+70	4.6	
+84.5=N	3.9	249.3

x-sec "K"

N	2.6	250.6
+10	2.8	
+20	3.1	
+30	3.6	
+40	4.6	
+50	5.2	
+60	4.8	
+70	3.6	
+83.5=S	3.2	250.0
T.P.	3.90	258.97	3.17	250.07

258.97

x-sec "L"

S	9.0	250.0
+10	9.2	
+20	9.2	
30	10.2	
40	10.1	
50	9.1	
60	8.0	
70	7.4	
80	7.2	
+90 = N	6.2	254.8

x-sec "M"

N	4.6	254.4
+10	5.5	
20	6.8	
30	7.3	
40	7.9	
50	8.9	
60	9.5	
70	9.9	
80	9.0	
90	8.9	
97.2 = S	9.0	250.0

x-sec "N"

S	9.0	250.0
+10	8.9	
20	8.8	
30	8.8	
40	8.1	
50	7.3	
60	6.5	
70	5.5	
+85 = N	4.1	254.9

x-sec "O"

N	4.2	254.8
Crk	4.9	
"	5.4	
M	5.9	
"	6.4	
Crk	6.6	
S	7.1	251.9

25897

X-sec "P" = 90° from P.L. running W

S	5.1	253.9
crk	5.4	
½	5.4	
N	5.4	
½	4.9	
crk	4.6	
N	4.2	254.8

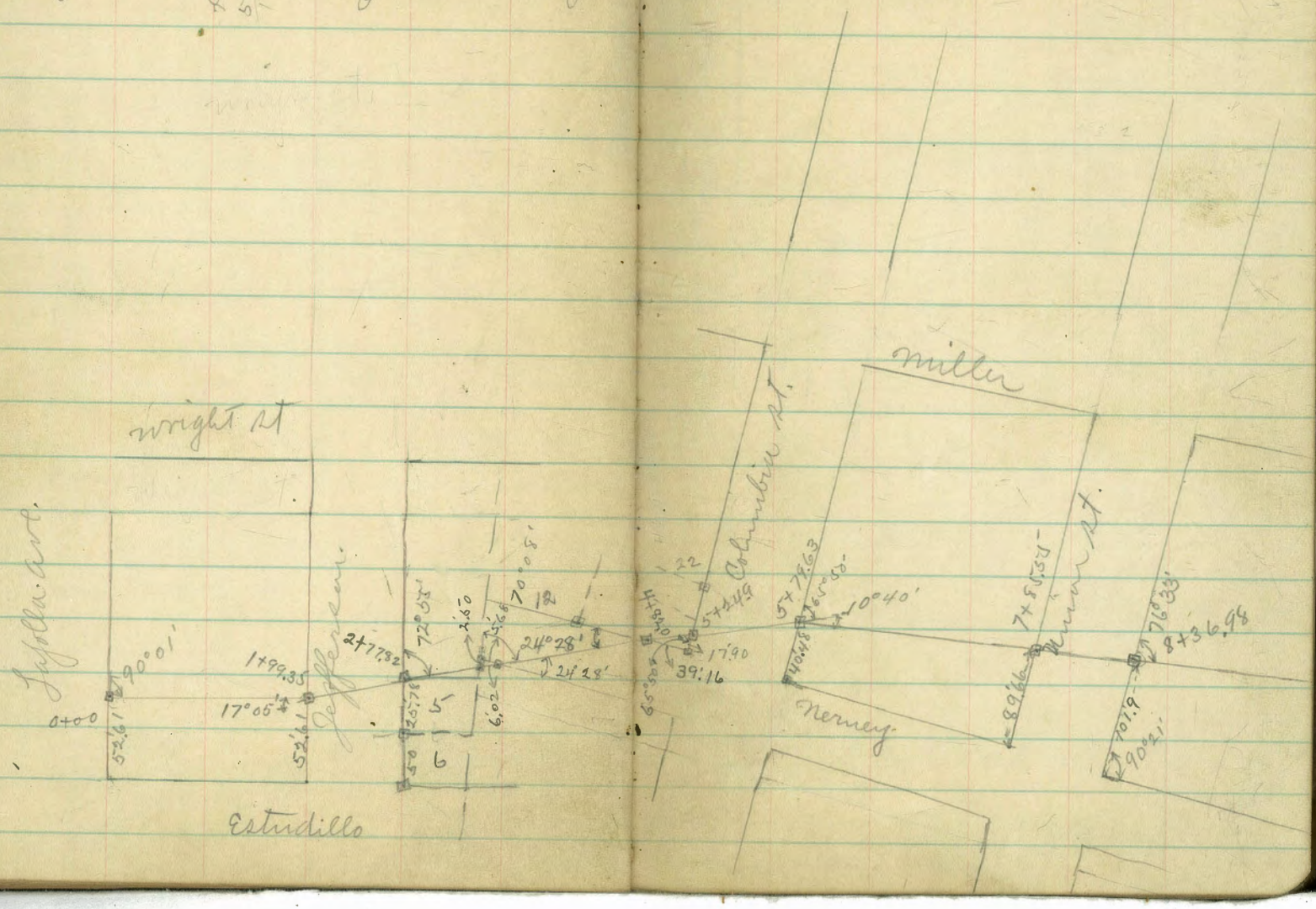
0+25 W of "P"

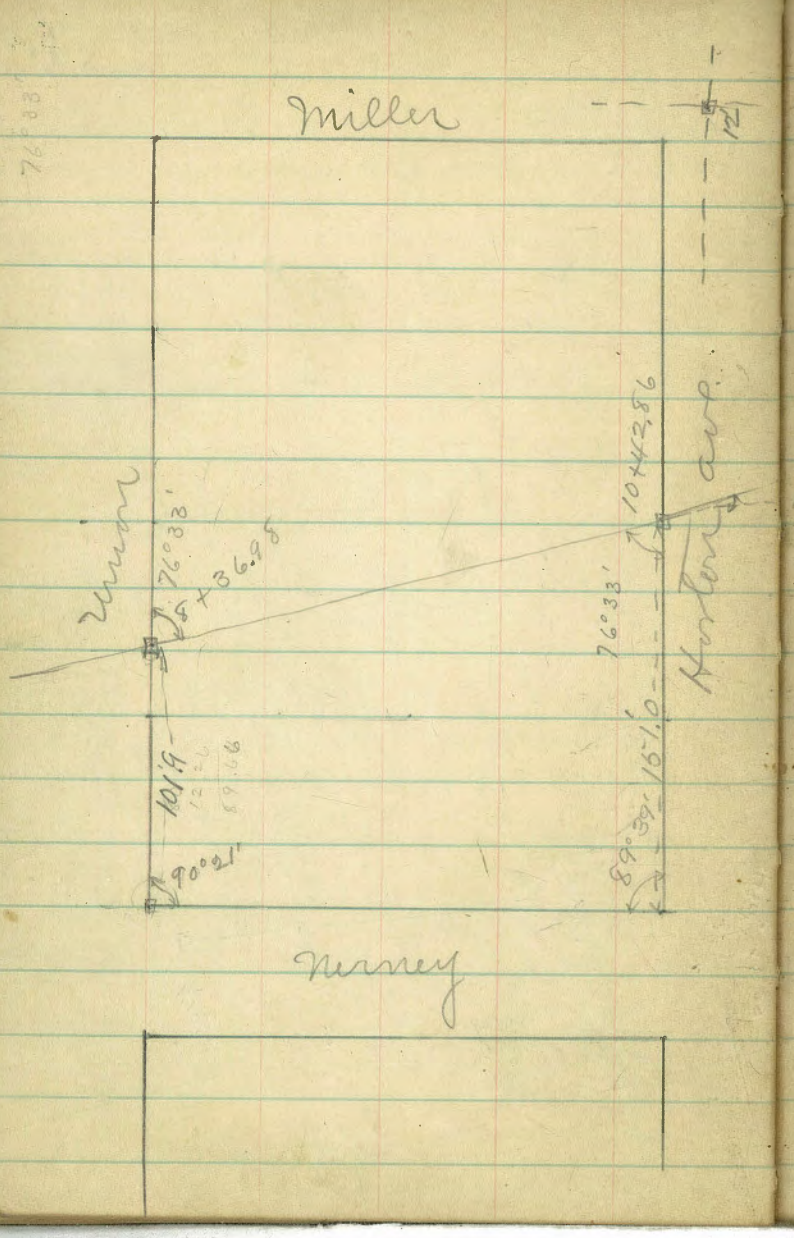
N	1.9	259.1
crk	2.4	
½	2.5	
N	2.7	
½	2.9	
crk	2.7	
S	2.6	256.#

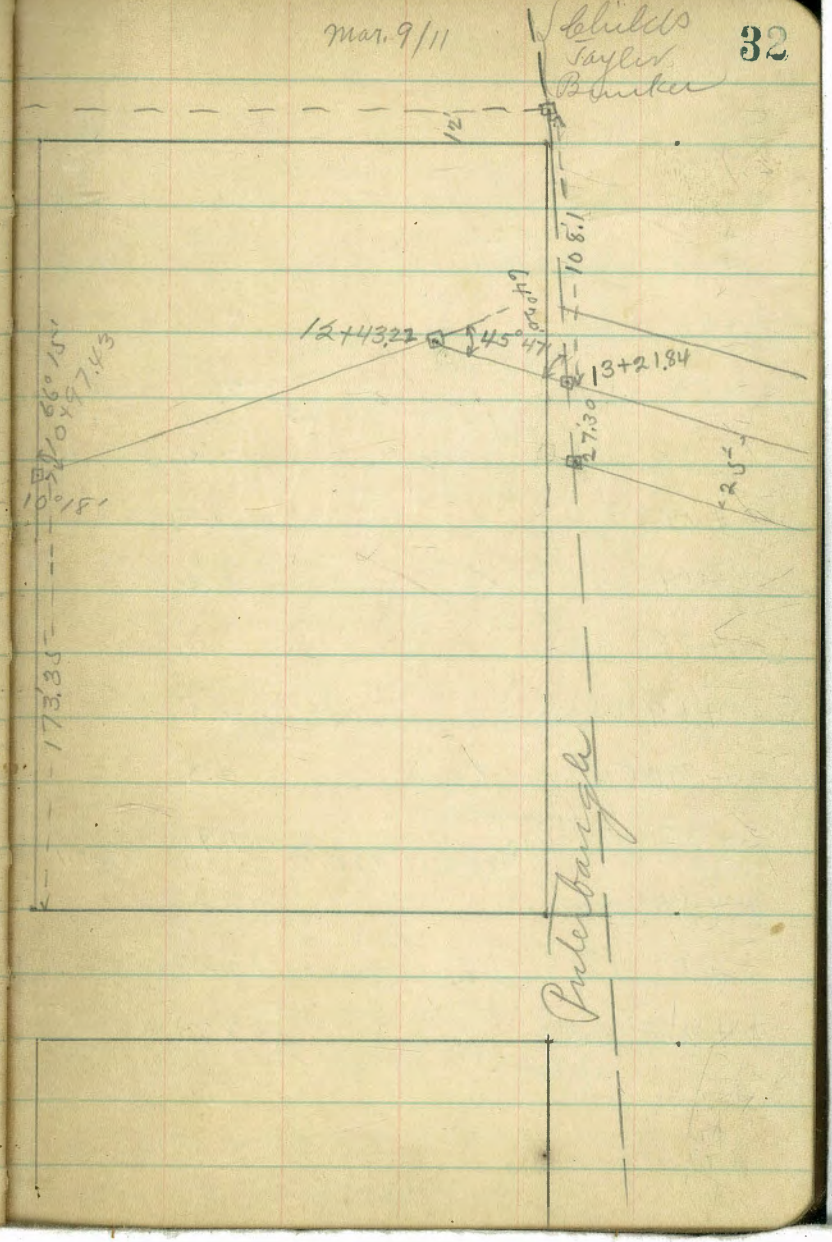
Survey of Road from Lafolla ave & Estudillo
up Tuna pass canyon to Inspiration Hts.

Mar. 6/11

Childs
Taylor
Bunker




Miller
Nerney
Union
Horton ave.
76°33'
8+36.98
10+42.86
76°33'
101.9
90°21'
89°39'
151.0
12'


Mar. 9/11
Childs
Taylor
Bunker
12'
108.1
12+43.22
45°47'
13+21.84
27.30
25'
66°15'
10+97.43
10°18'
173.35
Pinterbaugh

Levels on Loma pass road from To inspiration Hts.

Sta.		H.I.	Rod	Elev.
		87.82		
T.P. 0+00	East line Fayolla ave. 52.6 No. of Estudillo.		9.12	78.70
+30			6.3	81.5
+46			2.0	85.8
+50			2.6	85.2
T.P.		12.08	0.45	87.37
1+00		99.45	10.5	89.0
+50			7.3	92.2
+51			8.2	91.3
+68			7.3	92.2
+69			6.5	93.0
+99.35	Hub west line Jefferson.		4.3	95.2
2+33			1.9	97.6
T.P.		12.65	0.31	99.14
+50		111.79	12.2	99.6
+57			10.5	101.3
+77.82	Hub east line Jefferson		7.92	103.87
3+00			5.7	106.1
+37			3.5	108.3

Fayolla ave. mar. 10/11 Schields Taylor Bunker

Sta.		H.I.	Rod	Elev.
		111.79		
3+50			4.3	107.5
+69			4.2	107.6
+85			0.8	111.0
T.P.		12.90	0.93	110.86
+92		123.76	10.2	113.6
4+00			9.4	114.4
+50			4.2	119.6
+81.7	no. line survey		3.78	119.98
5+00			3.8	120.0
+24.9	west line of Columbia		4.44	119.3
+32			2.5	121.3
+50			1.1	122.7
T.P.		12.94	1.81	121.95
+73		134.89	12.7	122.2
+79.63	east line of Columbia		11.21	123.7
6+00			11.2	123.7
+05			9.6	125.3
+50			3.8	131.1
+66			4.6	130.3

Sta.		H.I. 134.89	Rod	Elev.
6+69			6.6	128.3
+77			4.3	130.6
T.P.	12.86	146.24	1.51	133.38
7+00			10.8	135.4
+03			13.4	132.8
+25			11.2	135.0
+34			8.5	137.7
+50			4.3	141.9
+71			2.4	143.8
+85.55	West line of Union		3.37	142.8
8+00			2.6	143.6
+15			3.0	143.2
+19			4.7	141.5
+28			2.7	143.5
+36.98	East line of Union		0.49	145.75
T.P.	13.07	158.82		
+50			9.9	148.9
9+00			4.5	154.3

Sta.		H.I. 158.82	Rod	Elev.
9+25			1.8	157.0
9+50			2.8	156.0
+80			1.6	157.2
+85			3.5	155.3
+90			4.1	154.7
10+00			2.7	156.1
			1.6	157.2
+22			0.92	157.90
T.P.	12.65	170.55	11.2	159.4
+27			9.26	161.3
+42.86	West line of Hortense Ave.		8.5	162.0
+50			9.0	161.5
+63			7.4	163.1
+73			6.33	165.2
+97.43	East line of Hortense Ave.		5.0	165.5
11+00			5.5	165.0
+07			4.2	166.3
+27				

Sta.		H.I.	Rod	Elev.
		170.55		
11+40			0.6	169.9
T.S.	11.81	182.18	0.18	170.37
+50			11.5	170.7
+70			11.2	171.0
+76			12.1	170.1
+87			9.1	173.1
12+00			8.0	174.2
+08			8.5	173.7
+12			9.7	172.5
+17			7.9	174.3
+43.21	Hub angle.		4.89	177.3
12+50			5.5	176.7
+64			6.6	175.6
+66			6.9	175.3
+75			5.5	176.7
+85			5.9	176.3
13+00			4.8	177.4

Sta.	H.I.	Rod	Elev.
13+14		3.9	178.3
+16		1.9	180.3
+21.84 hub, pk blo hub		0.49	181.7
		0.41	

Re X sec of Pine St (50) E L of Witherby
to Angle 189.2' E

2/3/12 Clough
Quinn
Tilly

3.27	268.40		265.13	BM Witherby + Stock
.75	257.32	11.83	256.57	

(SA) (58.2) E Sin of Witherby

SL		3.1	254.2
bb		3.5	253.8
4		3.6	253.7
b		3.9	253.4
4		4.6	252.4
bb		4.6	252.7
NL		4.5	252.8

(SB) 31.8' E of NE bor of Witherby } = 00
on S E Sin of Witherby

257.32

SL		3.1	254.2
bb		3.4	253.9
4		3.3	254.0
b		8.0	249.3
4		13.0	244.3

(Sin C) 25' E of Witherby St 0.0 Sin

SL		2.7	254.6
bb		2.6	254.7
+2'		2.6	254.7
4		6.6	250.7
b		12.4	244.9

(L D) 50' E of Witherby

SL		2.2	255.1
bb		1.7	255.6
+3'		2.9	254.4
4		6.1	251.2
b		11.6	245.7
4		16.1	241.2

257.32

(LE)	75'	E of	Witherly st	
S L			2.0	255.3
bh			2.3	255.0
y			3.0	254.3
b			8.7	248.6
y			11.0	246.3
bh			13.0	244.3
N L			15.2	242.1
(LF)	89.2	E = Angle on S		
N L			11.9	245.4
bh			9.6	247.7
y			7.6	249.7
b			6.2	251.1
y +4			3.0	254.3
			2.6	254.7
bh			2.3	255.0
S L			2.5	254.8

257.32

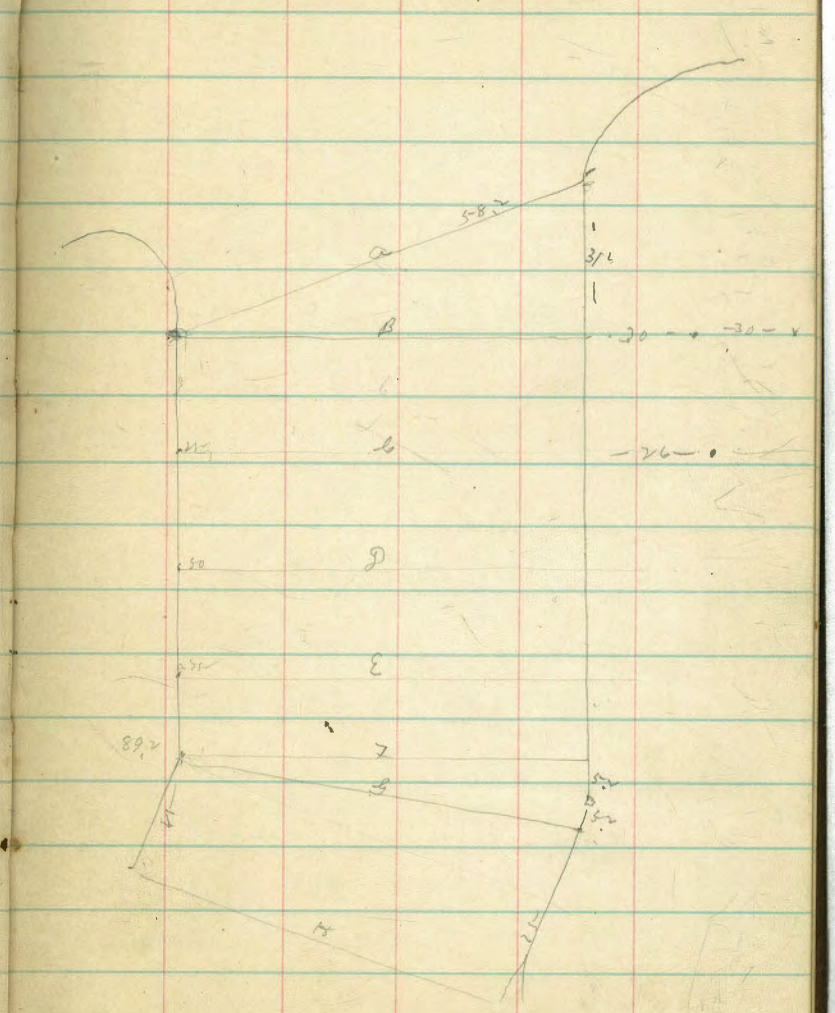
5.2 E of Angle on N L

(LG)	Angle Pt on S		(10.50)	
S L			2.5	254.8
bh			2.5	254.8
y			2.4	254.9
+5'			3.0	254.3
b			4.0	253.3
y			6.7	250.6
bh			7.5	249.8
N L			10.1	247.2
20' N slope			12.7	
(LH)	25'	E of	Angle Pt.	
n			4.7	252.6
bh			2.6	254.7
y			2.0	255.3
b			2.0	255.3
y			1.4	255.9
bh			1.9	255.4
S L			1.1	256.2
TP	0.40	244.97	12.75	244.57

244.97
245.0

Sin E	75'	E of	Westerly	
20' n of NL			8.6	236.4
LD	50'	E of	Westerly	
N bb			6.7	238.3
N Sin			10.0	235.0
20' n of NL			16.6	228.4
Uniform, Stop 100' North				
LC	25'	E of	Westerly	
N 1/4			5.0	240.0
N bb			10.0	235.0
N L			16.8	228.2
26' n of NL			24.9	220.1
60' n of NL			41.0	204.0
LB	{31.8 E of Westerly on N; E L of Westerly on S}			
N bb			5.5	239.5
N L			11.6	233.4
30' n of NL			23.4	221.6
60' n of NL			24.7	220.3

43.47
89.21
132.68



2/10/12 / Clough Dinner

X Sec of Andersen Place (50')
(15' Curbs)

		5.86	285.77		279.91
		E Line of		5th st	
S				5.3	280.5
bb	Gutter			6.0	
				5.7	280.1
4					
b				5.4	280.4
4					
bb				5.6	280.2
n	Gutter			5.8	
				5.1	280.7
		25'	E of	5th	st
n				4.2	281.6
bb				5.0	280.8
b				4.8	281.0
bb				5.3	280.5
S				5.0	280.8

285.77

	50'	E of	5th	st
S			4.4	281.4
bb			4.7	281.1
b			4.3	281.5
bb			4.3	281.5
n			3.7	282.1
	75'	E of	5th	st
n			3.2	282.6
bb			3.7	282.1
b			3.8	282.0
bb			4.4	281.4
S			4.1	281.7
	100'	E of	5th	st
S			3.8	282.0
bb			4.0	281.8
b			3.5	282.3
Gutter			3.5	
bb			2.85	283.0

Sidewalk + Curb is in

		285.77		
	125'	E of	5th	
N bk in			2,3	283,5
Gutter			3,0	282,8
b			3,2	282,6
bk			3,6	282,2
S			3,7	282,1
	150'	E of	5th	st
S			3,1	282,7
bk			3,3	282,5
b			2,6	283,2
Gutter			2,7	
bk			1,7	284,1
	175'	E of	5th	st
N bk			1,1	284,7
Gutter			2,1	283,7
b			1,9	283,9
bk			2,4	283,4
S			2,4	283,4

	193' 192,8	E of 5th " " 5	= W S 6th st	
S			1,6	284,2
bk			1,7	284,1
b			1,3	284,5
Gutter			1,1	284,7
N bk			0,7	285,1

Side walks + Curb are in E 193' on N side

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TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							

Degrees.	DEGREES		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		Degrees
	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	