

*ocations of Sewer Laterals*

9

TRANSIT

F.B. 660

660

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	2½	21	49	41	95½
2	4½	22	51½	42	98
3	7	23	53½	43	100½
4	9½	24	56	44	102½
5	11½	25	58½	45	105
6	14	26	60½	46	107½
7	16½	27	63	47	109½
8	18½	28	65½	48	112
9	21	29	67½	49	114½
10	23½	30	70	50	116½
11	25½	31	72½	51	119
12	28	32	74½	52	121½
13	30½	33	77	53	123½
14	32½	34	79½	54	126
15	35	35	81½	55	128½
16	37½	36	84	56	130½
17	39½	37	86½	57	133
18	42	38	88½	58	135½
19	44½	39	91	59	137½
20	46½	40	93½	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.
0		0		0		0	
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

Handwritten notes and calculations on the right page, including numbers like 120, 112, 106, 100, 94, 88, 82, 76, 70, 64, 58, 52, 46, 40, 34, 28, 22, 16, 10, 4, 0, and various lines of text.

Nov 10 1888

Localed Lateral  
Sewer for Lot B Blk 45  
Hortons  
Whaley & Co. and Agts.  
Ed McDonald contractor.  
Permit issued Oct 29 / 88

25 1 2  
25 4 0  
1 3 2

H Hamlin  
A Hamlin

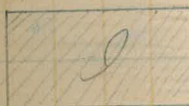
1

LB

30x80

DM

(45)



+27

25' 00"

25' 76"

25' 80"

LB

DM

DM

Nov 10 1888

Bn + HJ - Elev Gals

Located lateral sewer  
on Lot 4 Blk 33 M.T. Add  
W. Haley & Monand Agts.  
On McDonald Contractor.  
Permit issued Oct 29 / 88

30.41 3.76 4.48 1.00 27.63

3.10  
8.2

H. Hamilton  
A. Hamilton

2

Bate

11 x 00

3.48

Middle town  
33

4'27

4'01

4 x 00

bed as

Stale

Nov 10 1888

H Hamlin 3  
A Hamlin

Bm + H<sub>2</sub>O - Elev Grad

Levels on Sewer  
Lot 7 Blk 27 Mt Ad  
on Lincoln & Beech.

30.81 4.95 35.76

+50 Pds. 4.48 31.28 29.80

1.00 Buck of Horse 31.28 29.28

27



Beech

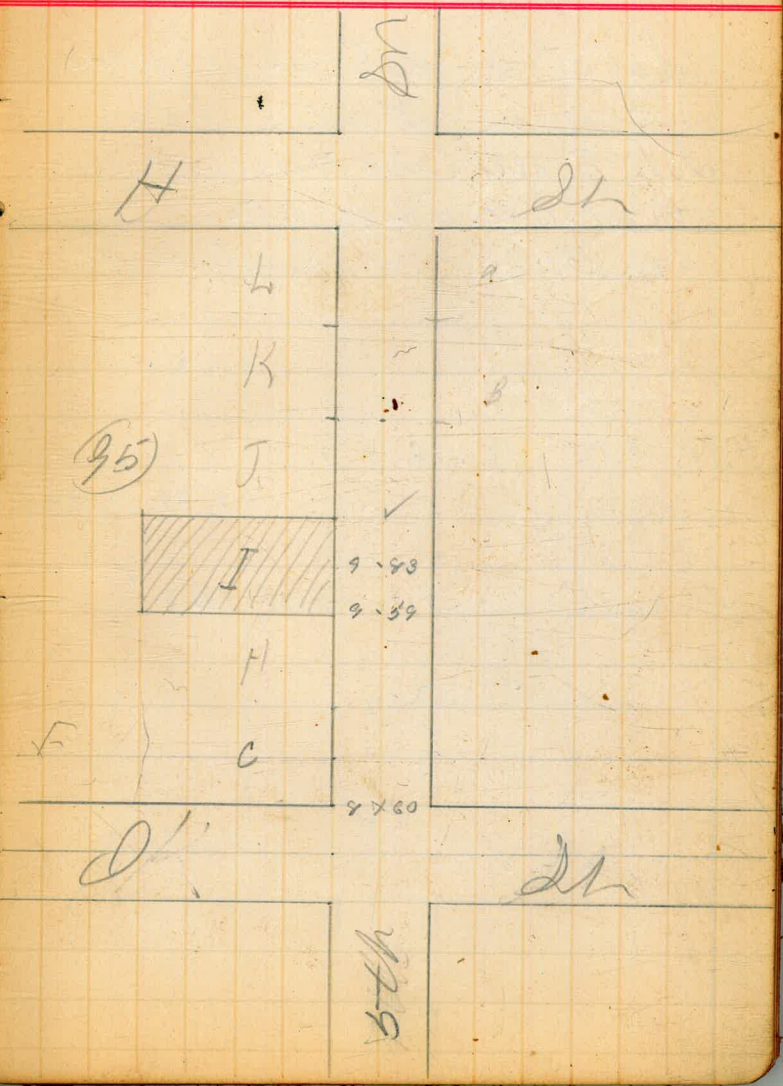
Sh

Lincoln

Nov 1888

H Hamlin  
H Hamlin 4

located outside for  
Lot, I Blk 95 Hinton side  
in Lounstein corner  
Abe Spring contractor  
Permit issued 11/10/88



H Hamlin  
A Hamlin

5

Oct 12 1888

Dr + HO - Elev Grade

Located lateral sewer  
and gave grades for  
Soh E Blk 124 Horton  
St Bet J & K Sts  
for Boshford contractor

11.16 5.60 16.76

2.90 13.86 11.28 2.66

Grade 1-30 Dist 150'

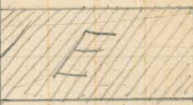
4.4  
5.54  
4.50  
79

(124)

5.54

5.30

4.50



K

St

DK

Nov 12 1888

BM + HD - Elev Gall

Located lateral sewer  
for lots A & B Blk 170 H.A.  
C. Minton, Owner  
J. S. Buck contractor  
Permit dated 11/12/88

8.84 4.82 13.70

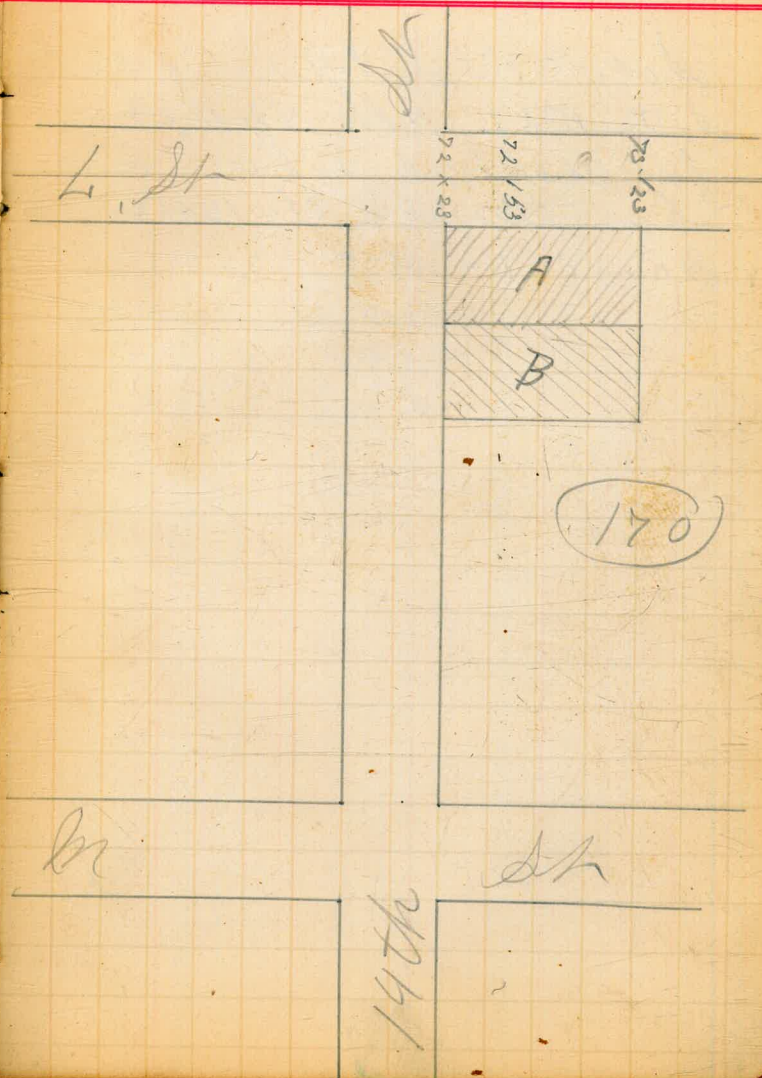
+50 D.P. 6.0 7.70

Grade 1 - - 40

Put in Y at Sta 72+53

H. Hamlin  
A. Hamlin

6



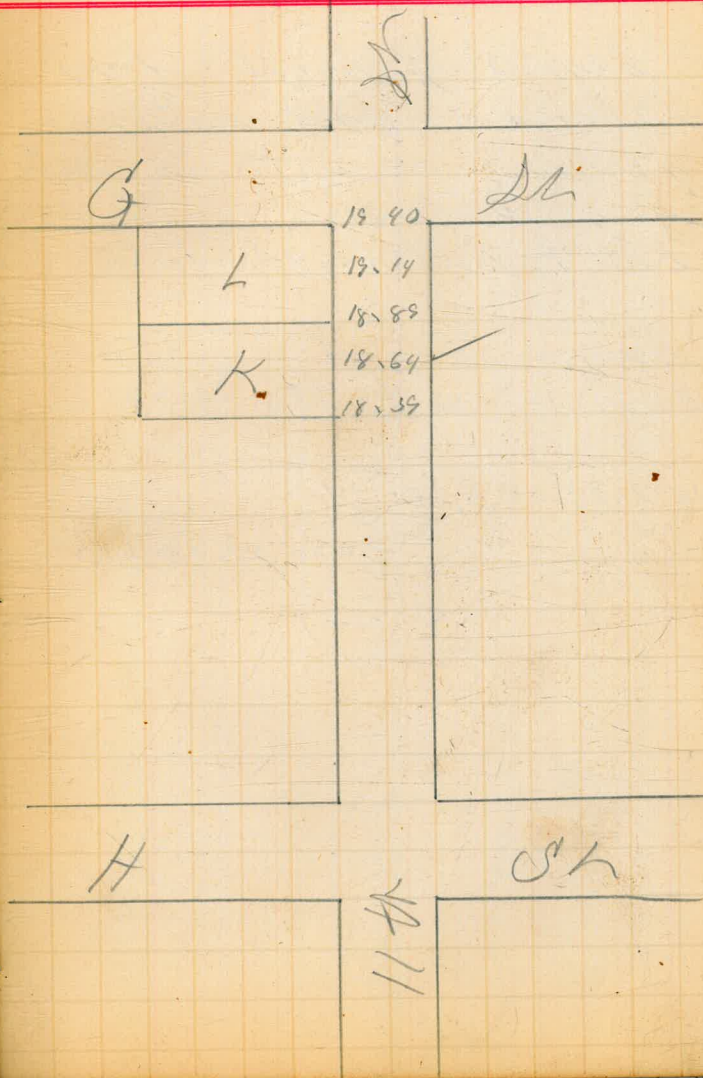


Nov 12 1888

Located lateral for  
lots KSL Blk 42 H.A.  
for Bushford & Co.  
connected to Sta 18769  
Grade 1--60

8

H H ambler 7  
H H ambler



Oct 13 1888

BM + H 9 - Elev Grade

Sewer opened by  
Mr Masdonald without  
permit or without give  
ing notice  
at K Blk 125 Horton

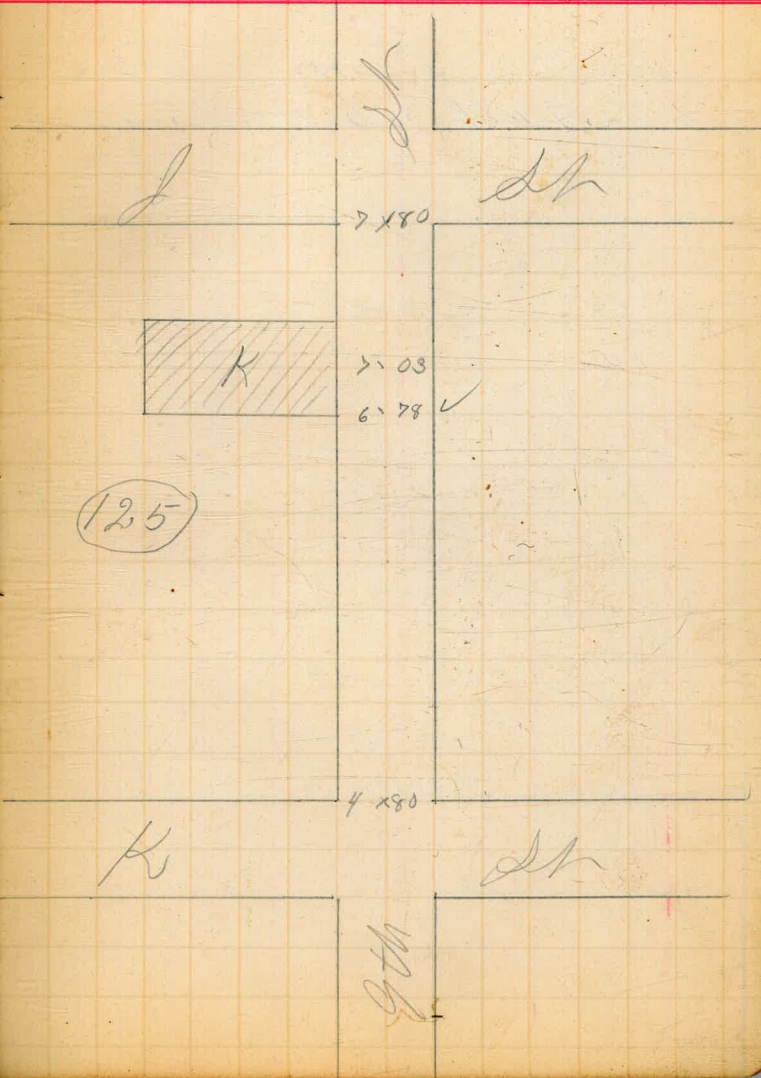
curb is not right  
connected to St 6+78

22.45 2.70 25.15

5.00 20.10 17.57

H H canlin  
at Hamilton

8

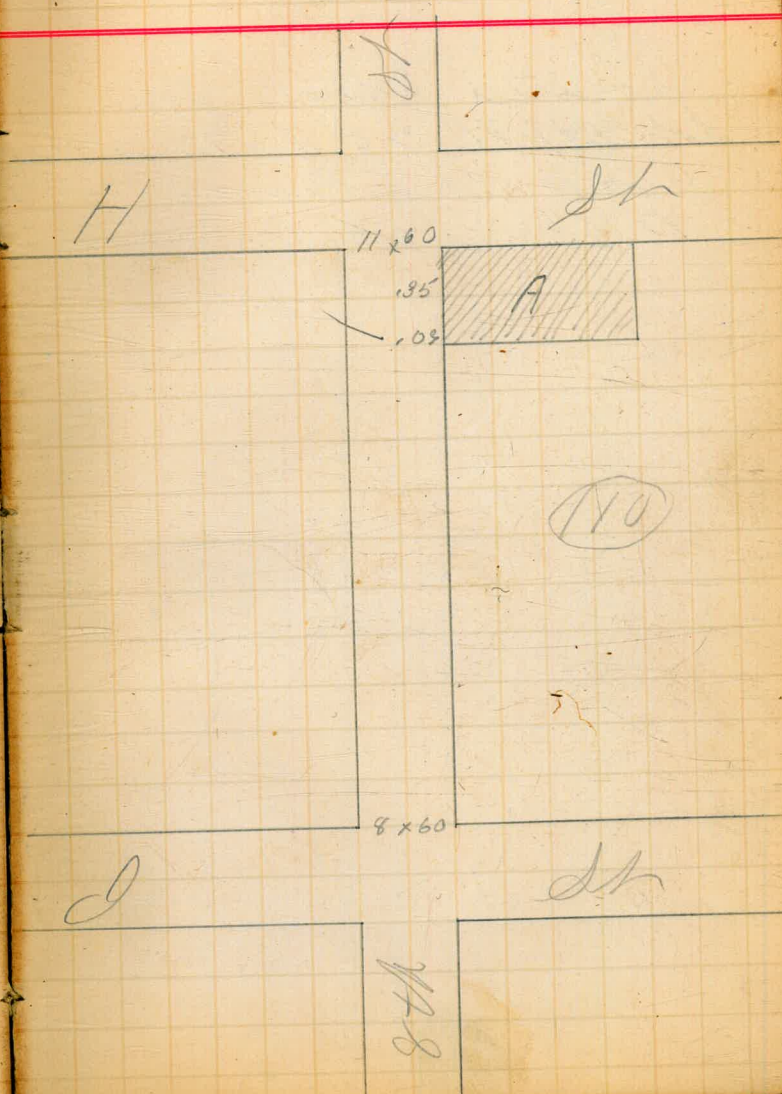


Nov 15 1888

located sewer for  
lot A blk 110 Horton.

8

H Hamlin  
H Hamlin 9

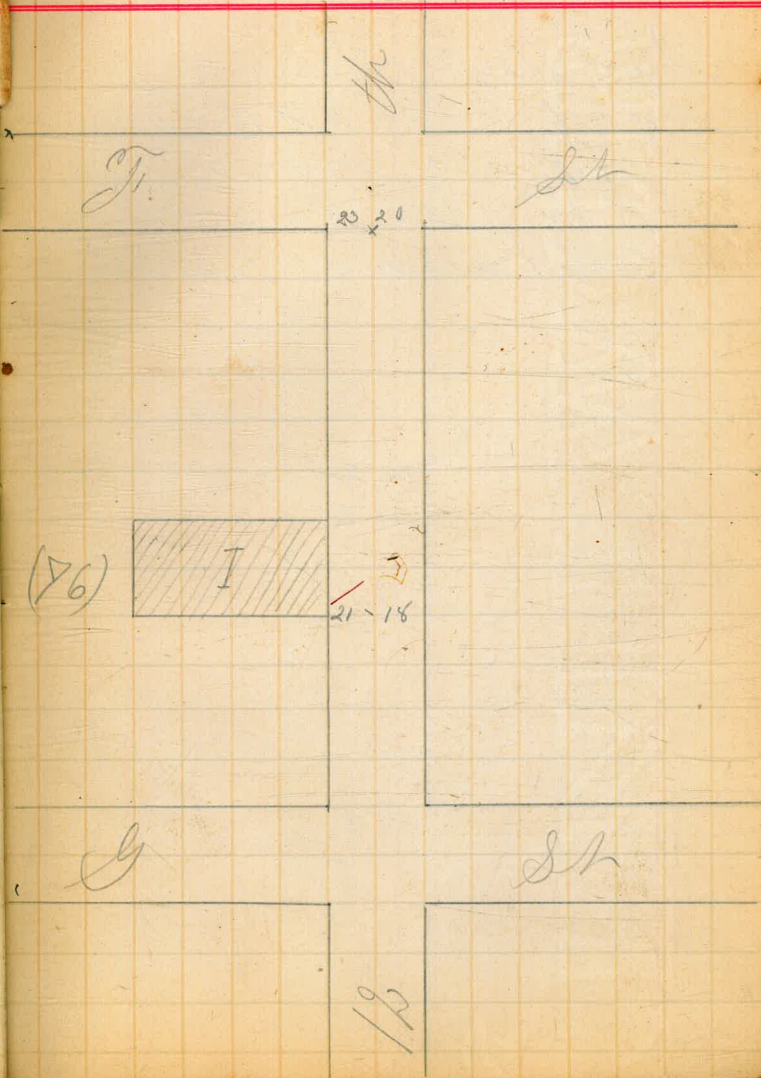


Nov 13

1888

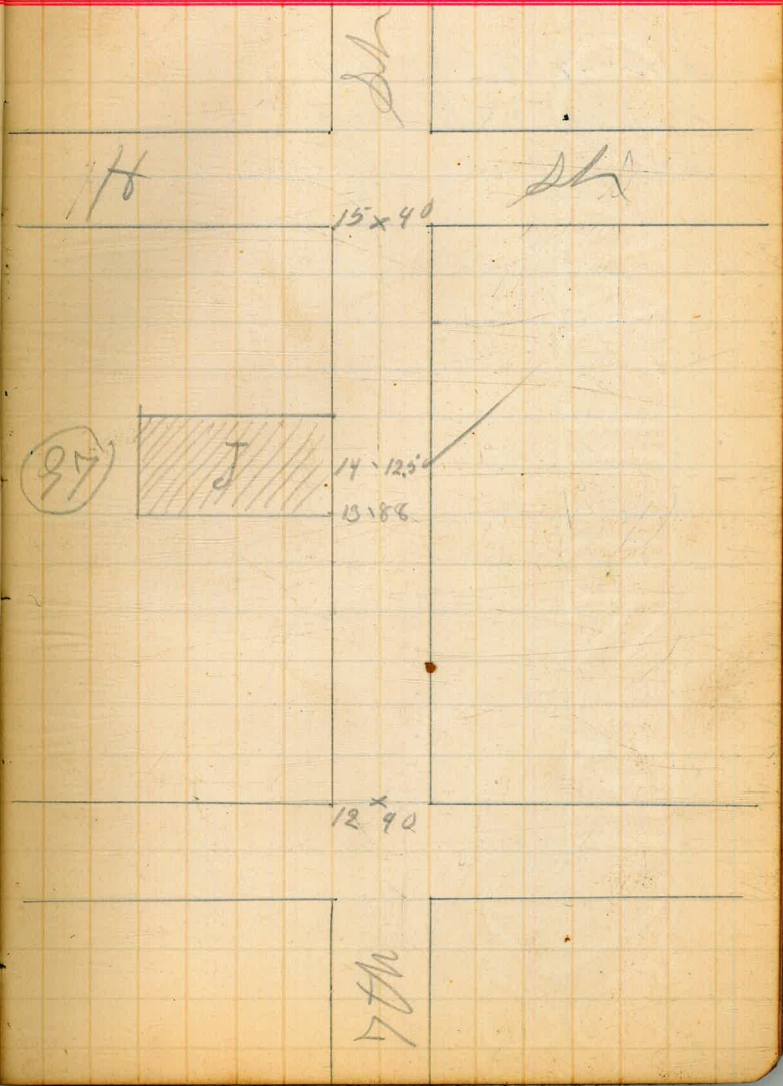
Located sewer for  
lot # 2 blk 76 Hastings.  
J. H. Bailey owner  
P. O. Bennett contractor.

H. H. Coulter  
A. Hamilton 10



Nov 19 1888

Located Sewer for  
lot of Blk 97 Kontona  
L & Beers, owner  
A Kindler contractor  
Permit issued 11/16/88



Nov 17 1888

Lot 9 Blk 14  
 Culverwell's Add  
 Lot 7 from office.

(14)



47-78 ✓

96 x 96

Lot

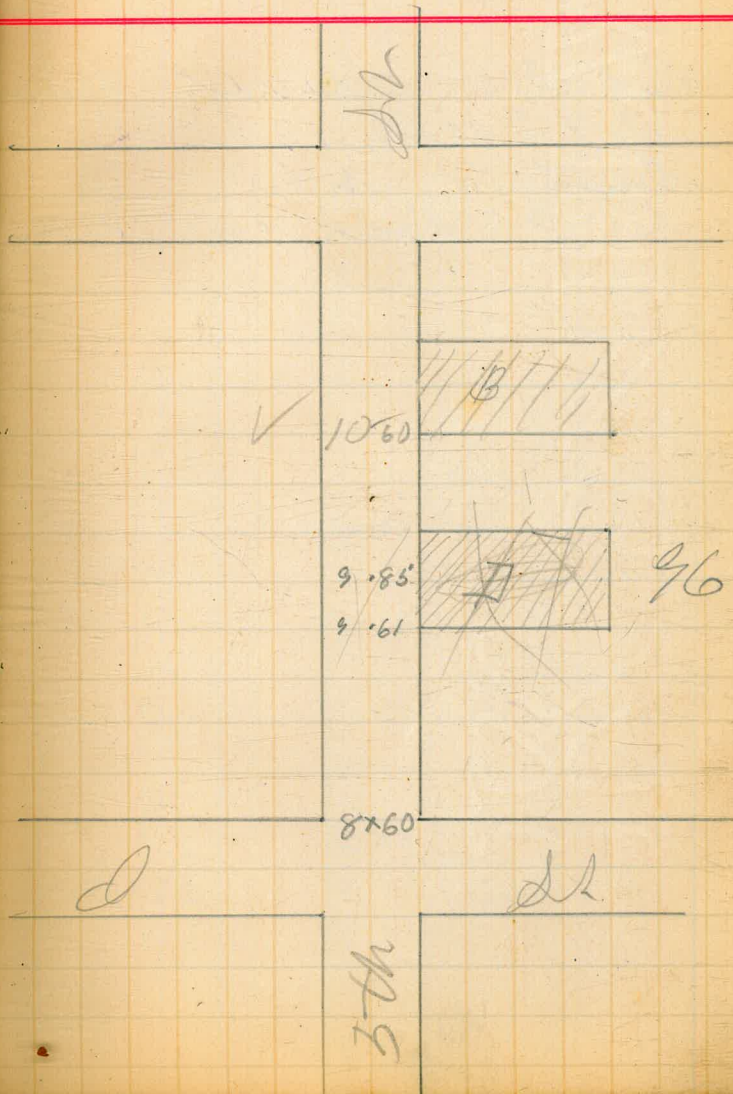
82

Dime track

Nov 17 1884

13

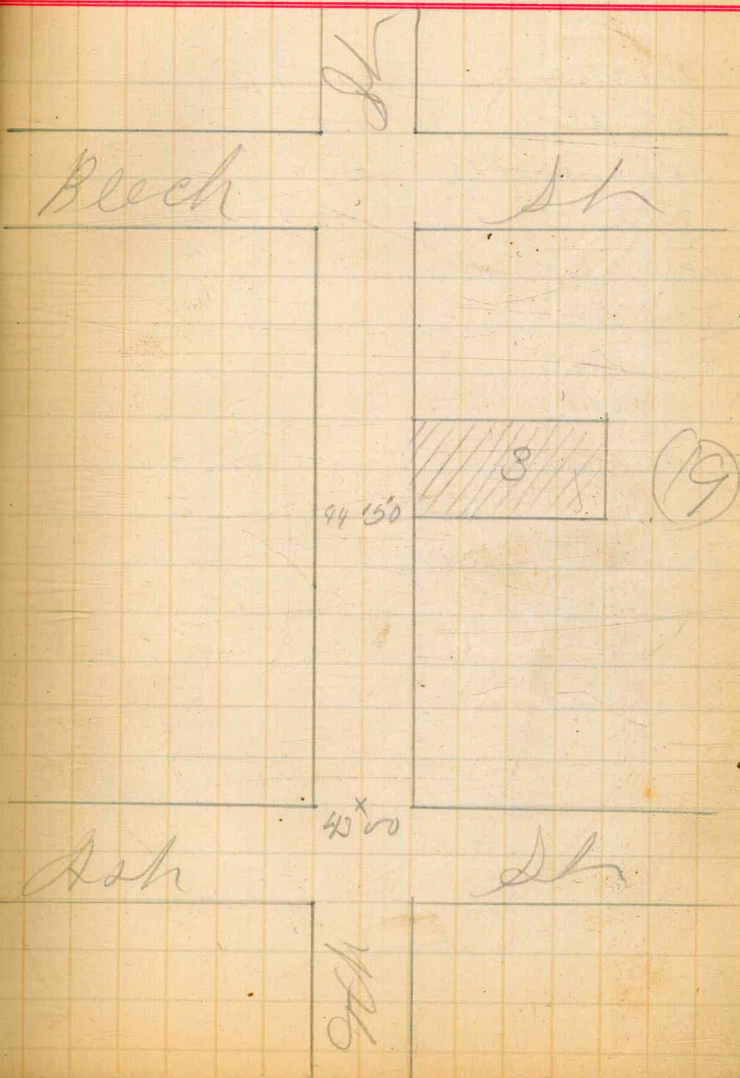
Located Level for  
Abe Spring  
Set B Blk 96 Penton



Nov 19 1888

14

Created sewer for  
Set 3 Blk 19<sup>th</sup> St  
Bartholomew Rd.  
for O. S. Buck Contractor





Nov 20 1888

E. S. Wheeler

N 0+13 Prop	5	075 Prop	
0.13	.55	076	674
.78	0.10	1.01	0.99
1.03	1.05	1.25±	1.23.5
1.28	1.30	1.495	1.475
1.53	1.55	1.76	1.74
1.78	1.50		
	+ 26.0	7	26.0 -

B.M. 11.83 26.15  
 6.85 19.3

Location of sewer for lot Blk

Sherman's

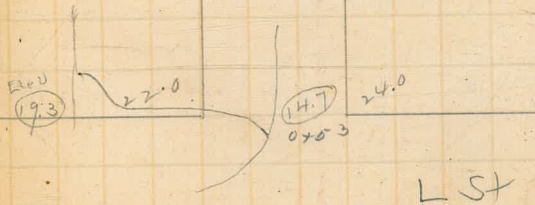
Mr. Wallach owner  
 Bashford Contractor

27' to prop line

19.5 to center of prop line

14.7 15.7  
 17.7 15

15+0 ST  
 16+0 ST



Shaw-  
McRae.

Nov 22/88-

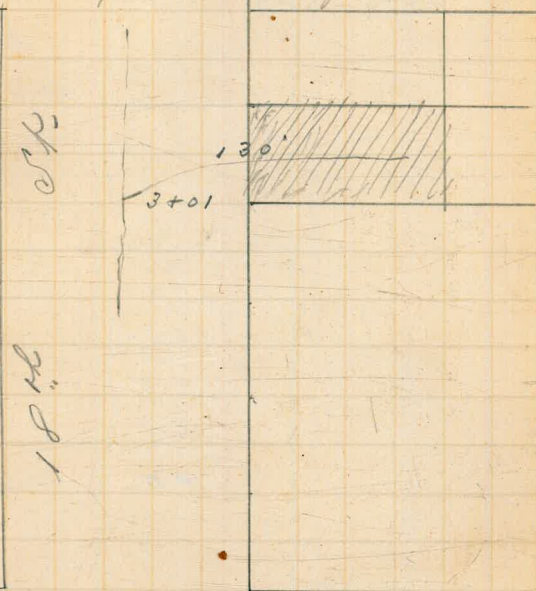
			13.70.	SE cor.
			63.13	184g.
0.65	63.78			
		2.87	60.91	

Bashford Contractors.  
- Advent Church.

16

G St

4+00 = Prop Line



H

St.

Shaw Level  
Huber Road.

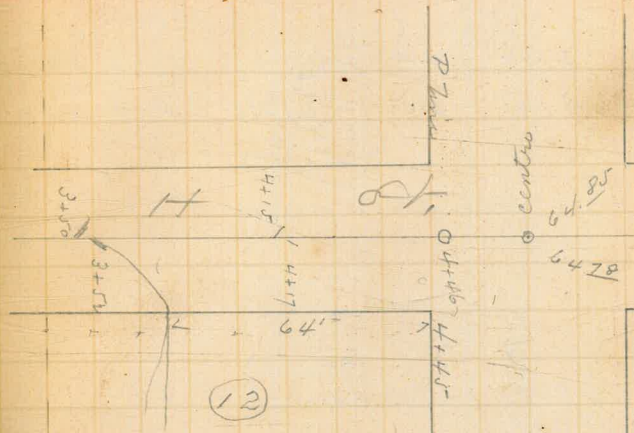
Sta	Grade	Cut		
3+52	40.75	4.9		
			23 No. SW	
			49.47	4 x 18"
			40.50	Y-
	10.16	50.66		
			6.1	44.56 gutter
			5.3	Roof line
			6.9	43.7 Edge of
			4.4	stone pipe
			6.5	
			8.0	42.66 under
				valve

Y curb  
40.50  
Connected at Sta 3+52  
Fall 1' to 40'

Bashford Contractor  
Nov. 26/88 17

4.45  
3.53  
.92

5' depth at  
3+52



(15)

18 No. SW

Nov. 27. 1888  
 Show Level  
 Huber Rod

Sta	Grade	Cut			
				13.90.	
3+23	2.95	6.4	(K) NW	11.16	Sp. 10 Jc S. End Hyd. Ring
2+97	3.19	6.5	(L) NE	8.59	
				8.59	
	4.71	13.30			
				3.8	9.5
				52	8.1
				-2.	6.1

Grade 2' to 5'  
 Length of lateral lever 9.5 ft.

Rushford Contractor 18

4.00	4.00
3.23	2.97
0.77	1.03

16. St



9th St.

10. St.

Nov. 28

Bashford Contractor

19

Shaw

27.00  
25.25  
1.75

W<sup>1/2</sup> Lot 10. 131 1/2 H. Horton's Add.

Reconnected at Sta 25+25

27+00

Prop'd Line

Prop'd St

(H)

25+25

N<sup>1/2</sup> Lot 10

C St

Prop'd St

Mc Halton  
Shaw.

Mc Donald Contractor  
Nov. 28/88

20

42.20	42.20
41.93	41.68
.27	.52

A St.

Prop Line 42+20



42+20  
41+93  
4+68

B St.

9  
11/24

Nov. 20/88.

M. Mc Donald - 21"  
Lot 9 Blk 8 "Gardner's Add"  
J. W. Ward owner or agt.

15.40  
14.16  
1.24

A' St



1416 Prop. Line

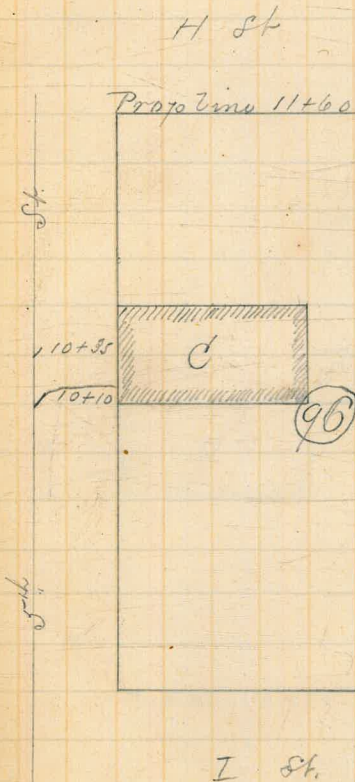
B' St

D. B. Hale -  
Shaw.

Connected at Sta 10+10

M. M. Donald -  
Lot C Blk 96 H A <sup>22</sup>

11.60	11.60
10.35	10.10
1.25	1.50





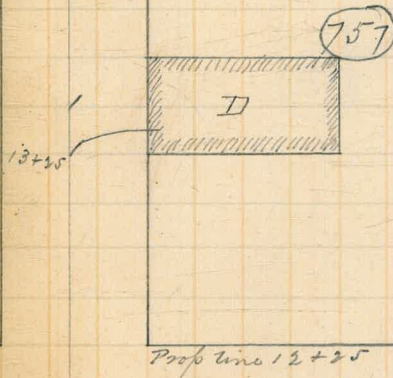
Thos Whaley

Dec. 3/88

Van Hook

Connected at Sta 13+25

A. C. Hilton "Contractor" 23  
Loc D. Blk 757 (55) New Town



Walter Starbird

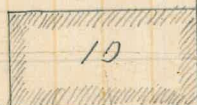
Lot 10 Blk<sup>10</sup> Caranthe 2A  
Add.

Ash St.

46+00 Prop Line

8' 8"  
9' 6"

20



8'

44+49

10'

H St.

A. S. Johnson's

Dec. 3<sup>rd</sup> 88

Roser + Mathes Contract 25

Show

39.93	39.66.5
<u>39.20</u>	<u>39.20.0</u>
.73	.46.5

Connectia at Sta. 39+66.5

A St.

9 ft St.

10 ft St.

(5)



39+93  
39+66.5

Propo Line 39+20

B St.

"Court House"

Dec 3/88

J. S. Buck Contractor 26

Shaw

To connect Court House Sewer  
on Atlantic St.

19+60

C St

Court House Sewer

19+00

Atlantic St.

California St.

71 St.

For W. B. Klein

Dec. 4/88

Shaw.

M. M. Donald "Contractor" 27

E St

7th St

8th St

(59)

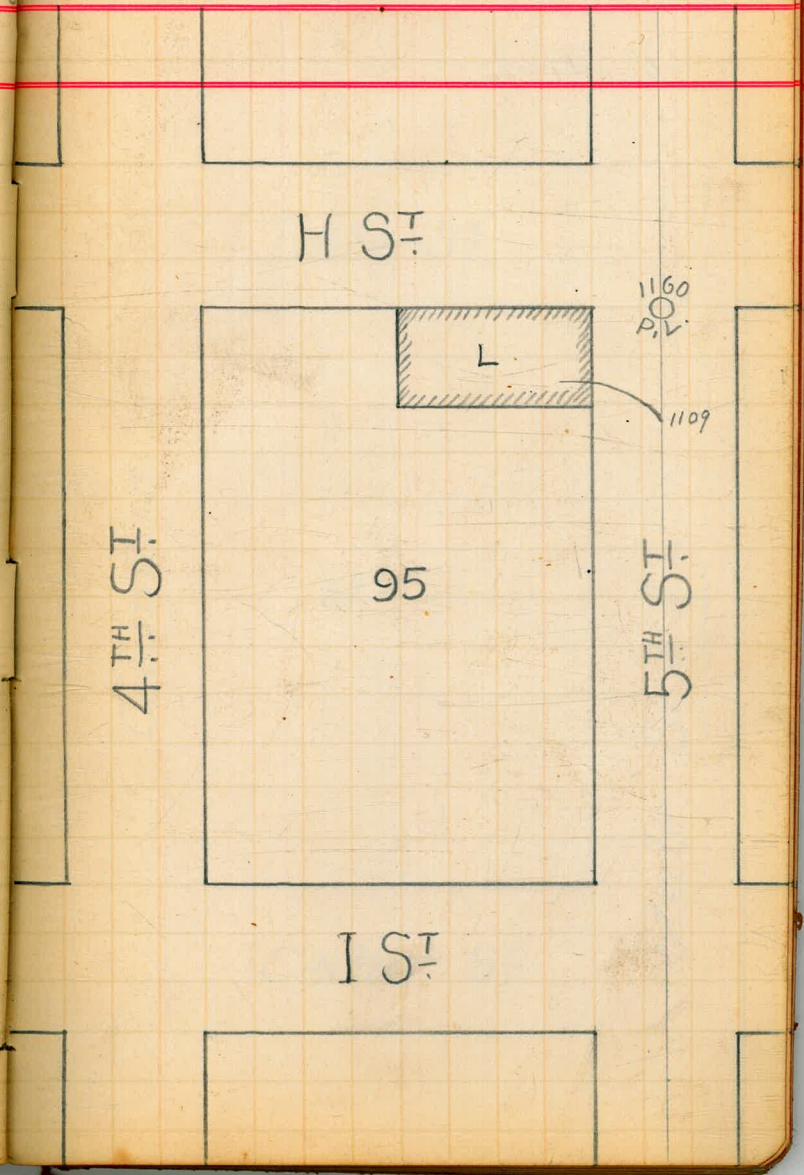


F St

Nov. 5<sup>th</sup>/88

Lot L Block 95 Horton's Addition

Van Hook



J. B. Speth Owner or Agent

M. M. Schald Contractor 29

Nov. 6<sup>th</sup> 1888

Van Hook

Date S<sup>r</sup>

11.00  
P.L.

Columbia S<sup>r</sup>

32

10

9

9.49

State S<sup>r</sup>

Cedar S<sup>r</sup>

Mrs Rutter 12/6/78

Shaw

Connected at Sta 18+20.5

J. S. Buck Contractor 30

Lots 1, 2, 7 & 8 Culverwells Add.

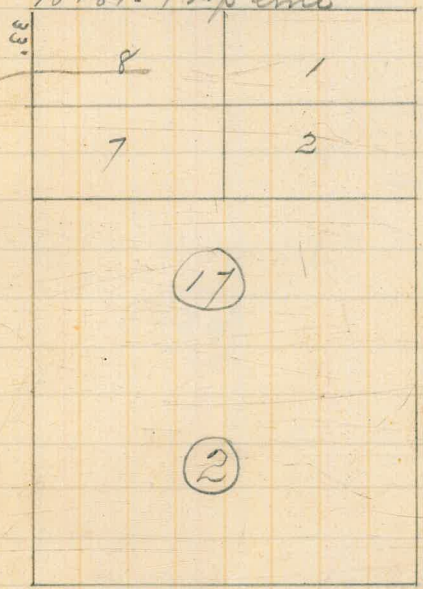
18.51 - 18.51	18.51 - 18.51	17.72 - 17.72
18.455	18.205	17.965
35.5	160.5	84.5

G St

18+81 Prop line

18+45.5  
18+20.5  
17+96.5  
17+72

15th St



16.5 ft

H St



"Winters" Cracker Bakery -

12/7/18

Shaw

connected at Sta 10+58 with  
with Williams + Angle Lateral 4" pipe

W. C. Donald

Lot J+K Blk 94 H.A.

31

<del>11.60</del>	<del>11.60</del>	11.60	11.60
<del>11.33</del>	<del>11.33</del>	10.83	10.58
<del>.27</del>	<del>.27</del>	.77	1.02
11.60	11.60		
10.33	10.83		
1.27	1.52		

H St

Property H+60

5th St

94

4th St

I St

10+83  
10+58  
10+33  
10+08

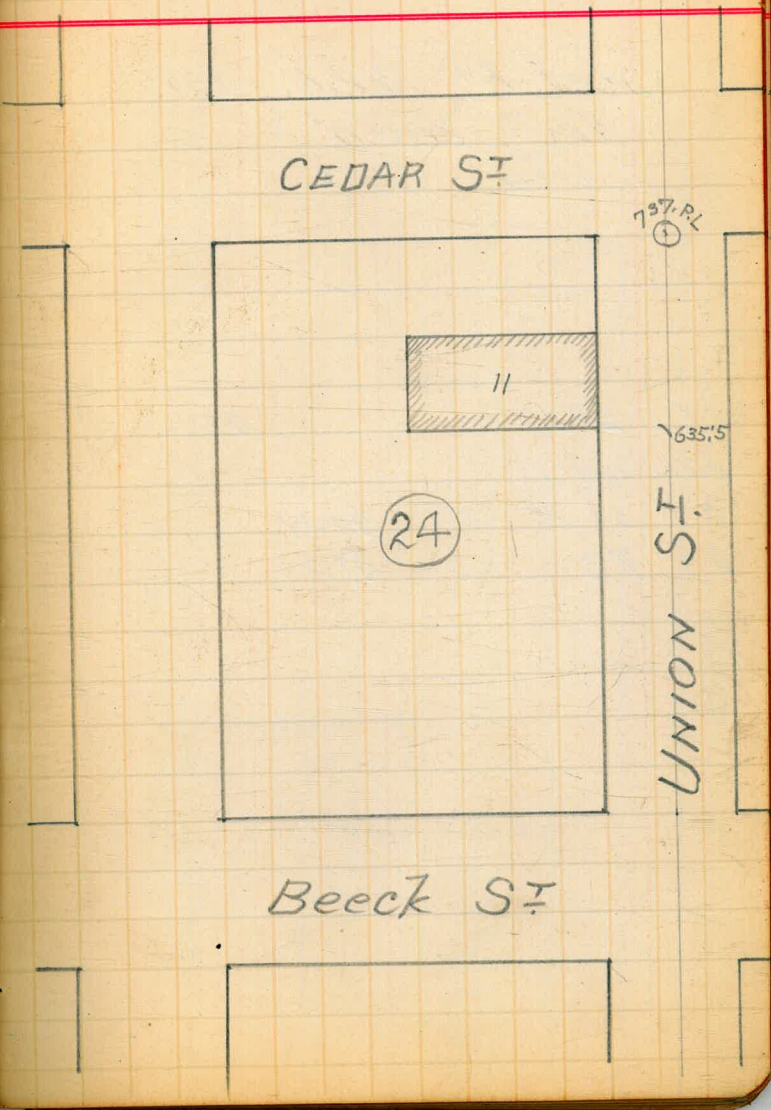
Owner G. Russell

M. McDonald Contractor 32

Van Hook

Dec. 10<sup>th</sup>/1888

S<sup>1</sup>/<sub>2</sub> Lot 11 Block 24  
Hortons Add. Sta 635'5



Owner  
S.W. Kroff

J.B. Fulton Dec. 17 88

lot # 13 blk. 1  
Hwy add  
sta. 8.02

0.05 57.17 57.16

from 18th st

0 + 30 ft 4.50 51.17

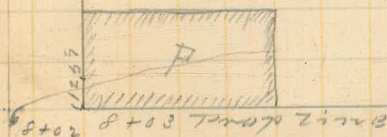
0 + 73 " 5.32 61.85

J. S. Johnstone  
Contractor 33

A st

13th

14th



B st.

J. A. Sherriff Curves

Loc 24# 1888

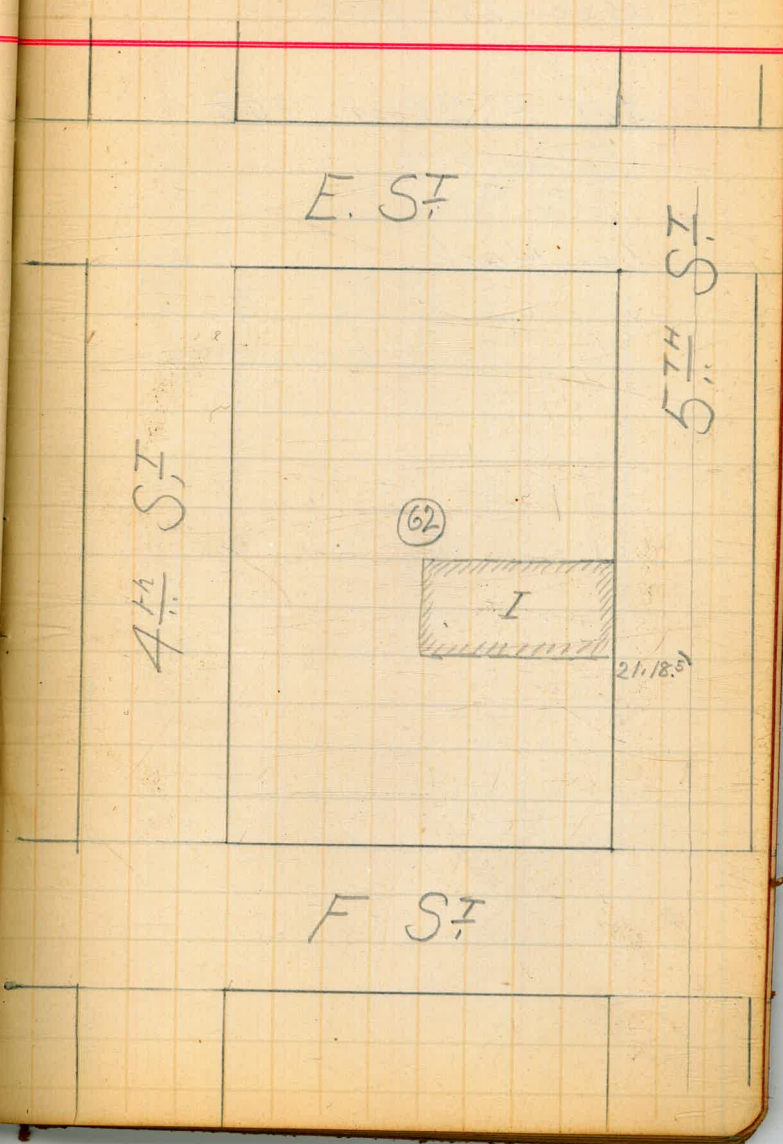
South 1/2 Lot D.B 62.

Station 21+18.5  
98.5 North of P.L.

Van Hook

34

Ford & Heckman "Con"



Mrs Quinn Owner

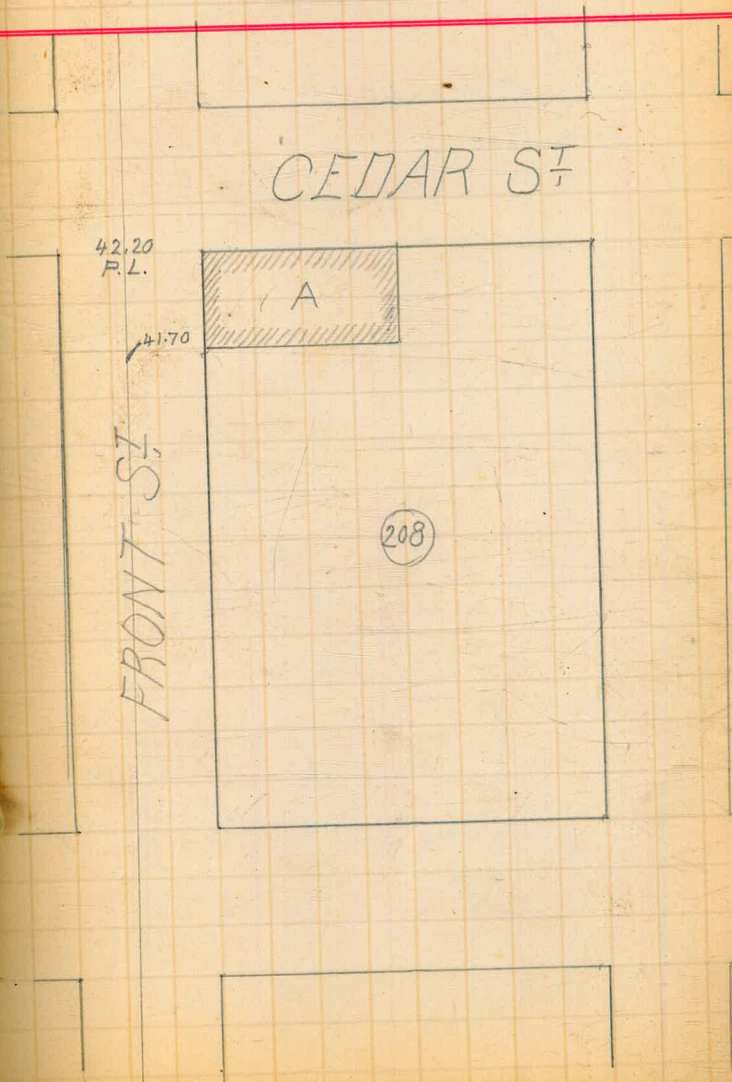
M. Mc Donald "Contractor"

Loc. 284/88

Lot A. Block 208

Station 41.70

Van Hook.



Mr Morris

Connexion at Sta 28+30

Wheeler

Johnston & Kelly  
Contractors

36

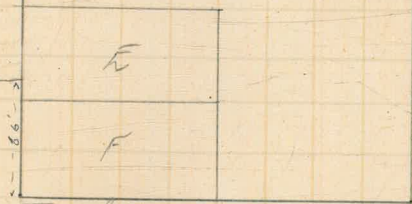
Dec. 3/88

77 St.

9th St.

10th St.

28+54  
28+30  
28+05  
27+80



Prop line 27+80

77 St.

John N. Young Owner

Jan. 2<sup>nd</sup> 1889.

connection at star.

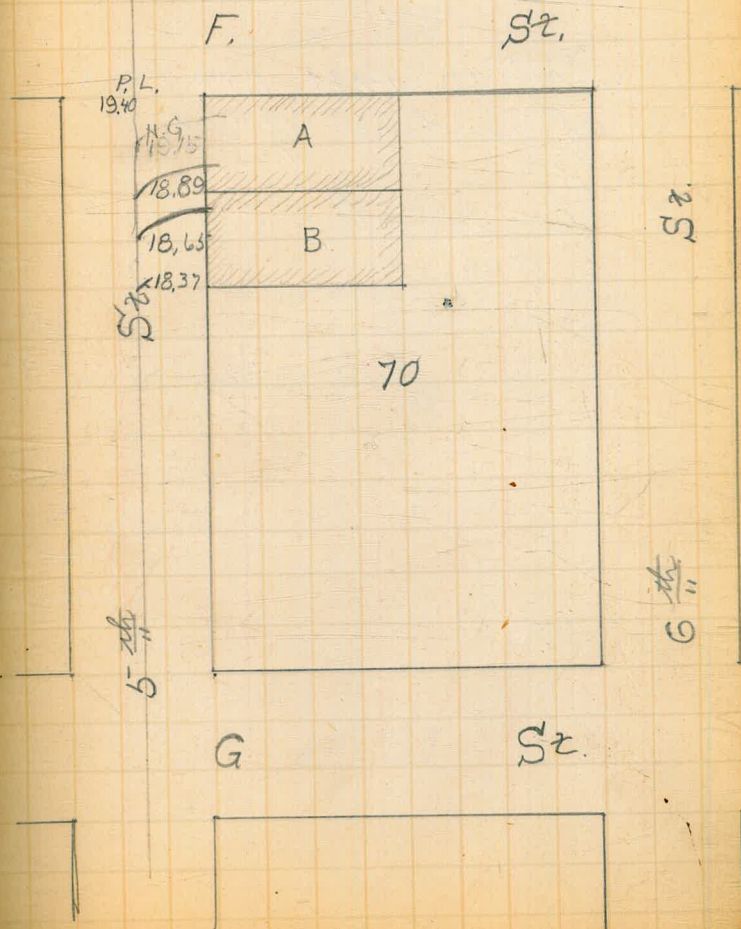
1865 and 1889

Van Hook

37

J. S. Johnston  
Contractor

Jan 2<sup>nd</sup> 1889



Howard Owner

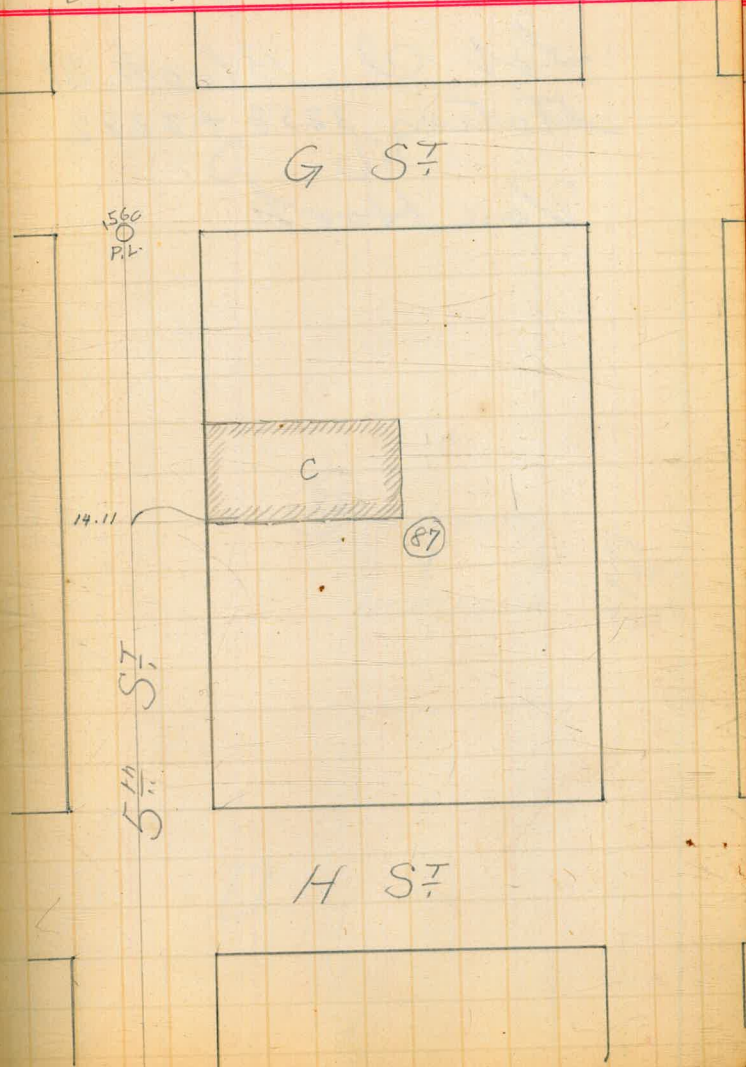
S<sup>1</sup>/<sub>2</sub> Lot C Block 87  
Hortons Acd.

Station 1411. 149 f<sup>t</sup> S.  
of S. line G St.

Van Hook,

M. M<sup>c</sup>Donald Con. <sup>38</sup>

Jan. 5<sup>th</sup> 1889





Owner

M McDonald Con. 39

Jan'y 8<sup>th</sup> 1889

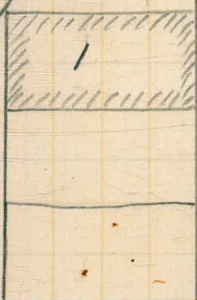
Lot C Block 31  
Station 3258 + 3282

Van Hook

C SI

FS  
6

(31)



3282  
3258

□

San Francisco

Pico Owner

Jan'y 8<sup>th</sup> 1889

Lot F Block 778

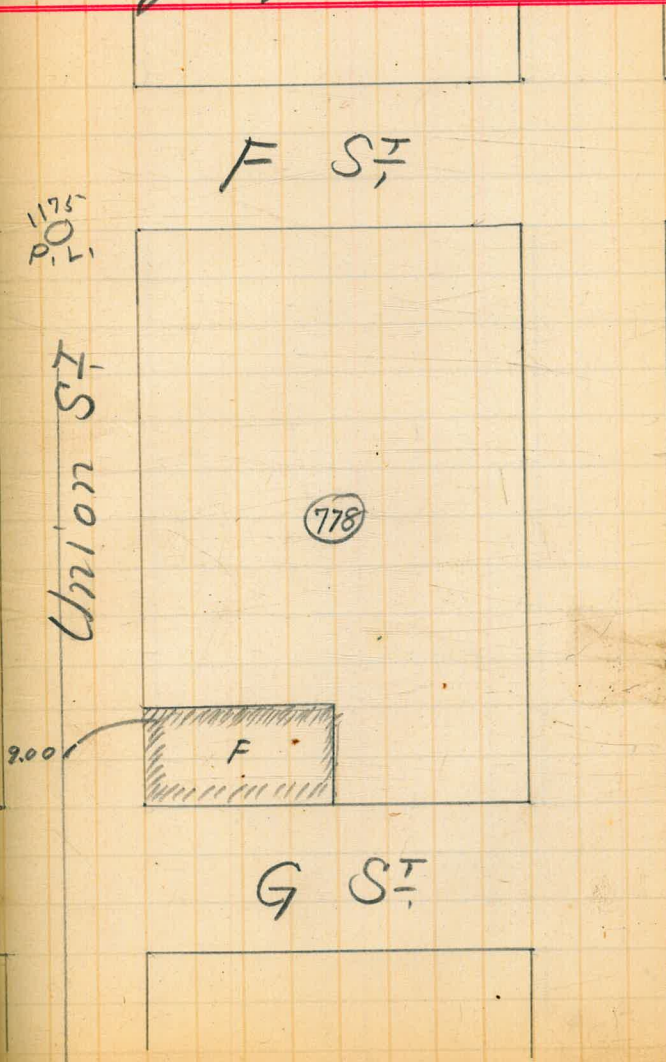
Union St bet F+G.

Station 9.00  
175 S. of S. P. L.  
of F St.

Van Hook

M. McDonald Loan

Jan'y 8<sup>th</sup> 189.

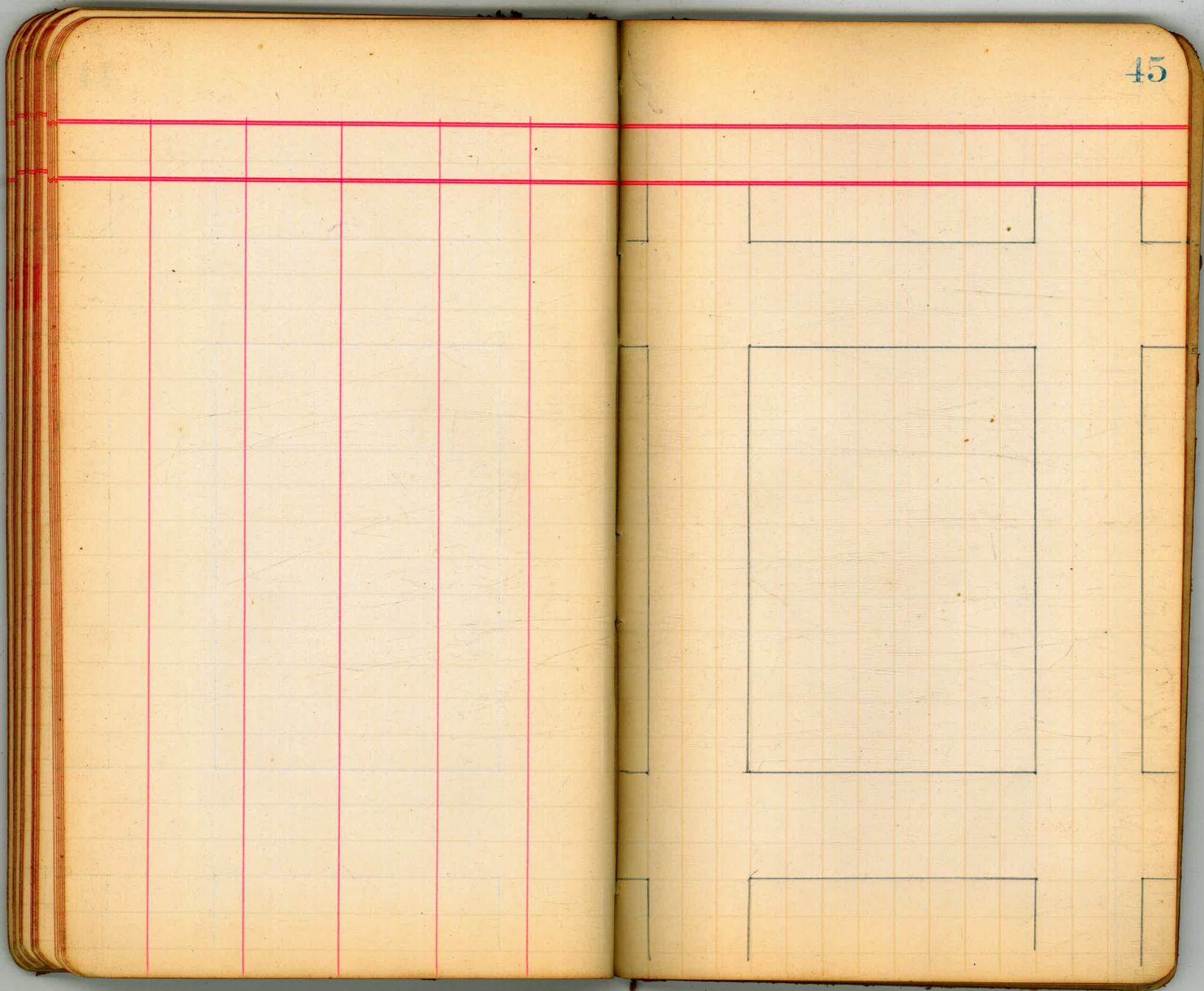


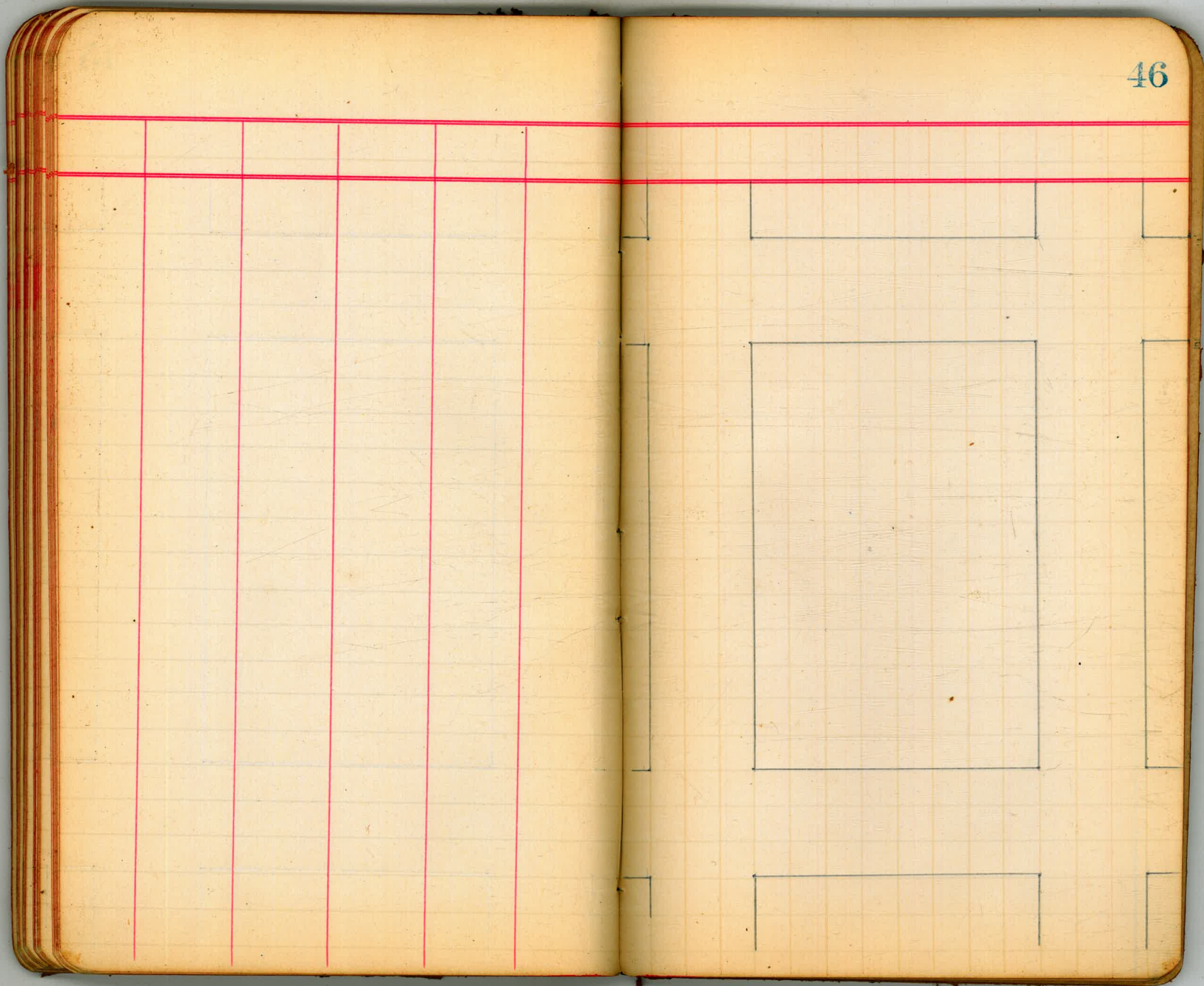
The image shows an open notebook with two pages. The left page is ruled with a grid of 6 columns and 15 rows. The top two rows are highlighted with red lines. The right page is ruled with a grid of 15 columns and 15 rows. A large rectangle is drawn in black ink on the right page, spanning approximately 10 columns and 10 rows in the center. The notebook is placed on a light-colored surface.

The image shows an open notebook with two pages. The left page is ruled with a grid of light blue horizontal lines and five vertical red lines, creating six columns. The right page is also ruled with a grid of light blue horizontal lines. It features a large central rectangle defined by blue lines, with smaller rectangles at the top and bottom corners, also defined by blue lines. The number '42' is printed in blue in the top right corner of the right page.

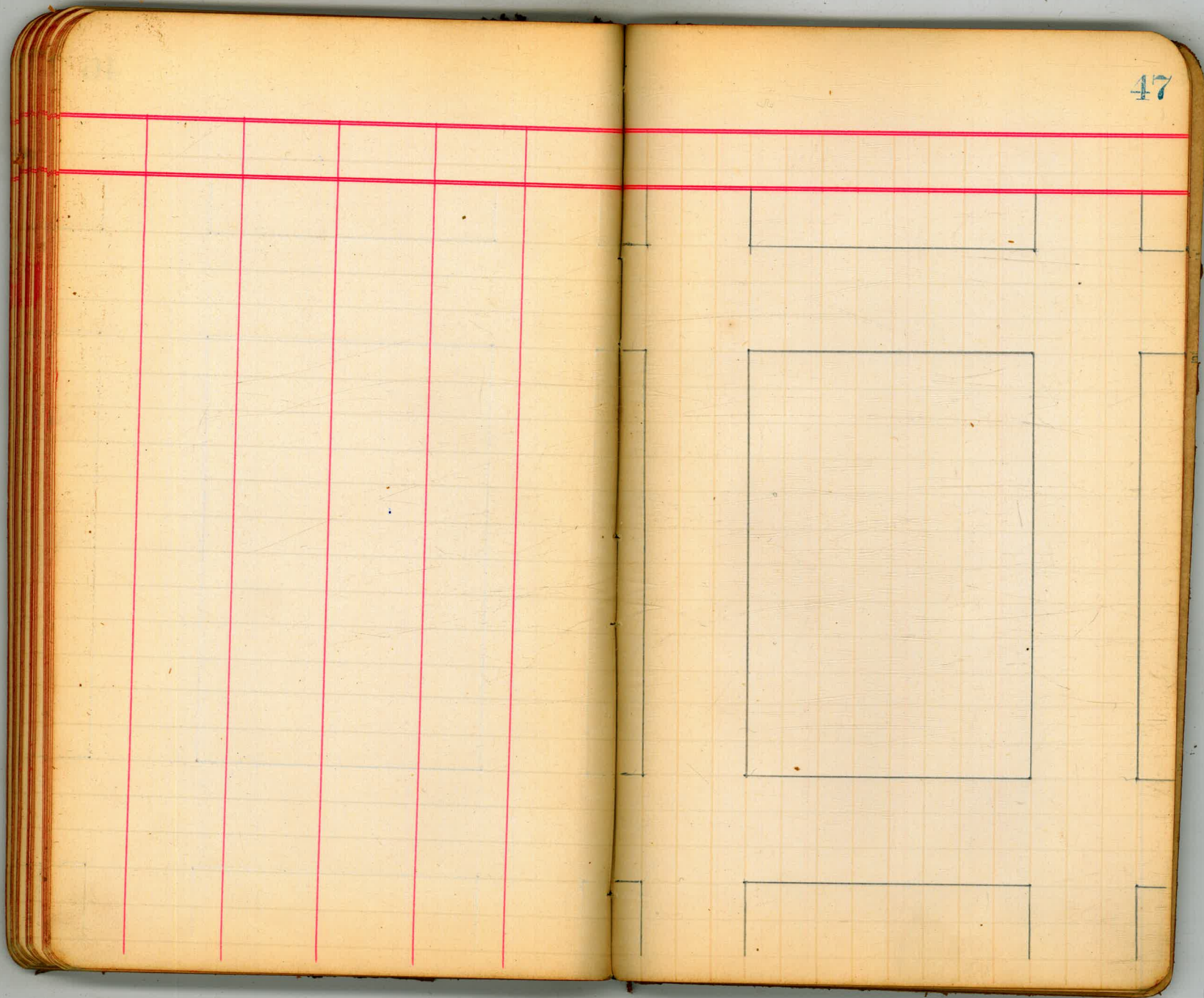
The image shows an open notebook with two pages. The pages are cream-colored and feature a light blue grid. The left page has two vertical red lines, one near the left edge and one near the center. The right page has a large central rectangle outlined in black, with two smaller black-outlined rectangles positioned above and below it, centered horizontally. The page number '43' is printed in blue ink in the top right corner of the right page.

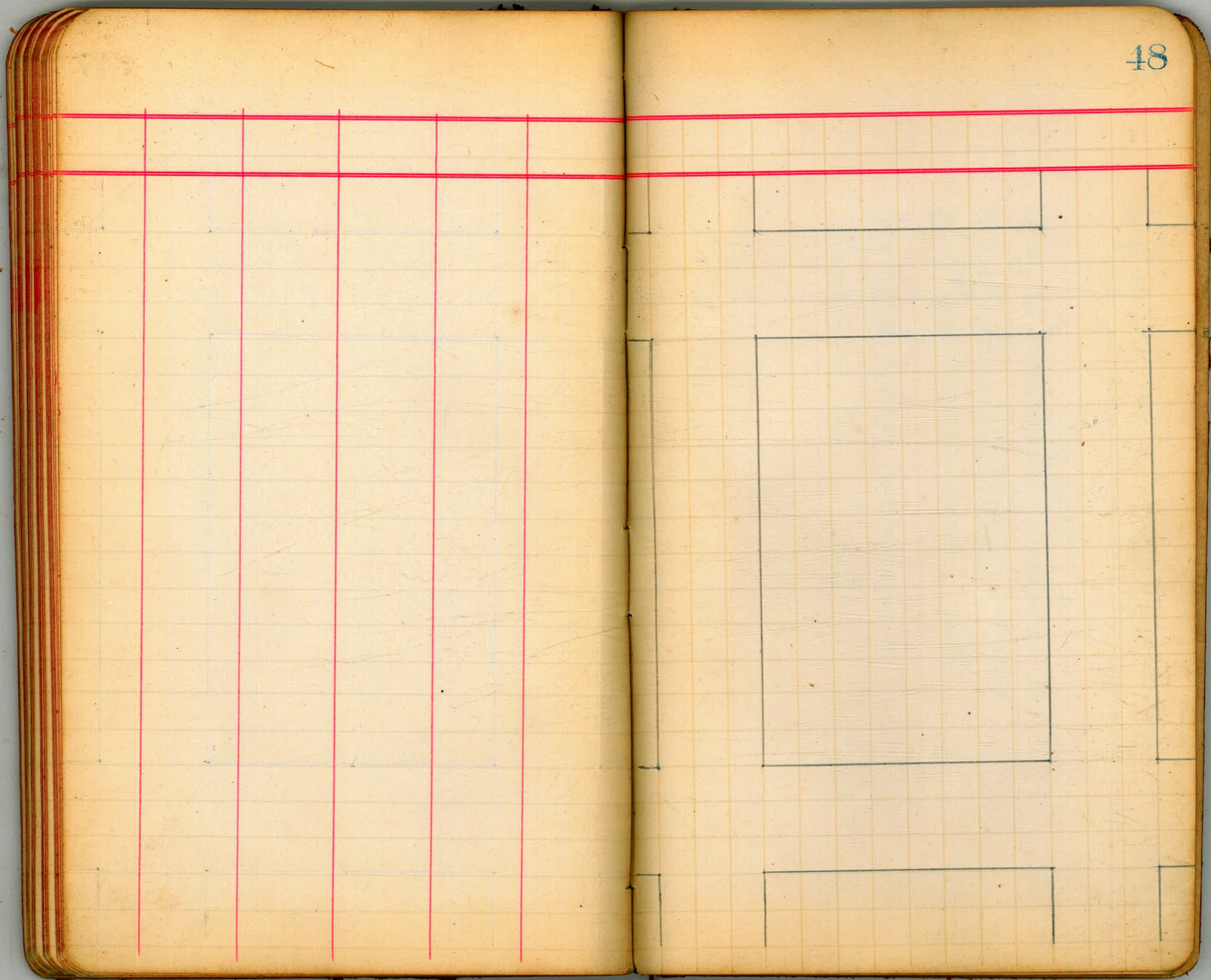
The image shows an open notebook with two pages. The left page is ruled with a grid of light blue horizontal lines and features five vertical red lines that divide the page into six columns. The right page is also ruled with a grid of light blue horizontal lines and has a large blue rectangle drawn on it, spanning approximately 10 grid units in width and 12 grid units in height. The number '44' is printed in blue ink in the top right corner of the right page.











Y to connect W + S sewer. at H +  
5<sup>th</sup> is 30' north of <sup>South</sup> property of H St.  
Williams + Ingalls sewer 45 ft S. S. W.  
of N. line of H St.

2 1/2 on lot 3

1141

12484

$$\begin{array}{r}
 43.7 \\
 40.5 \\
 \hline
 3.2 \\
 2.5 \\
 \hline
 5.7 \\
 2.0 \\
 \hline
 7.7 \\
 2.0 \\
 \hline
 9.7
 \end{array}$$

$$\begin{array}{r}
 40) 96 \\
 \underline{80} \\
 16 \\
 \underline{16} \\
 0
 \end{array}$$

$$\begin{array}{r}
 13.67 \\
 \underline{13.5} \\
 .17 \\
 14.57 \\
 \underline{14.0} \\
 .57 \\
 \underline{.5} \\
 .07 \\
 \underline{.06} \\
 .01
 \end{array}$$

$$\begin{array}{r}
 30) 96 \\
 \underline{60} \\
 36 \\
 \underline{30} \\
 6 \\
 \underline{6} \\
 0
 \end{array}$$

$$\begin{array}{r}
 20.15 \\
 \underline{16.2} \\
 3.95
 \end{array}$$

$$\begin{array}{r}
 20.15 \\
 \underline{17.57} \\
 2.58
 \end{array}$$

$$\begin{array}{r}
 14.37 \\
 \underline{11.0} \\
 3.27 \\
 \underline{3.2} \\
 .07
 \end{array}$$

270

270

$$\begin{array}{r}
 97 \\
 \underline{70} \\
 27
 \end{array}$$

$$\begin{array}{r}
 14 \\
 \underline{7} \\
 21 \\
 40) 560 \\
 \underline{40} \\
 120 \\
 \underline{120} \\
 0
 \end{array}$$

270

$$\begin{array}{r}
 19 \\
 \underline{19} \\
 0 \\
 195 \\
 \underline{195} \\
 0
 \end{array}$$

$$\begin{array}{r}
 43.75 \\
 \underline{1.75} \\
 42.00 \\
 270 \\
 \underline{140} \\
 4.10
 \end{array}$$

40) 9.8

$$\begin{array}{r}
 90 \\
 \underline{50} \\
 40
 \end{array}$$

$$\begin{array}{r}
 271 \\
 \underline{4.0} \\
 267
 \end{array}$$

$$\begin{array}{r}
 3.56 \\
 \underline{1} \\
 2.56
 \end{array}$$

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	88
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	87
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	86
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	85
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.38	84
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	83
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	82
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	81
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	80
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	79
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	78
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	77
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	76
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	75
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	74
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	73
16	96.15	27.56	96.00	27.98	95.88	28.40	95.76	28.82	72
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	71
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	70
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	69
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	68
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	67
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	66
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	65
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	64
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	63
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	62
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	61
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	60
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	59
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	58
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	57
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	56
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	55
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	54
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	53
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	52
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	51
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	50
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	49
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	48
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	47
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	46
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	45
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	44
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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