

Office: Notes & References.

9

TRANSIT

F.B. 65

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.
°		°		°		°	
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

Return to City Engineers Office
City Hall, San Diego, Cal.

City of San Diego 1st party
 E. Horton 2^d party

Together with all and singular the
 tenements and appurtenances thereunto
 in anywise appertaining, To have
 and to hold all and singular the
 above described premises unto the
 said party of the second part: his
 heirs and assigns forever as fully
 and absolutely as we the said Pres.
 & Trustees may or can, by virtue of
the power in us vested convey the
 same.

2
 To the Hon. Board of Supervisors
 of San Diego County

We the undersigned citizens of San Diego County, California, do hereby certify that we have decided on the following route.

Starting at a point where

Mt. At crosses the East line of Sherman's addition thence east along Mt. At to the West line of the Fairbairn Homestead,

thence East along the prolongation of Mt. At to a stake marked 0 and

thence along 5 or 6 feet west of the Fairbairn Homestead (this point may have to be moved either East or West a short distance so as to coincide with a corner stake) thence

by actual survey.

N. 37° 50' E. 219 to stake 2+19
 S 83° 10' E 81
 S 64° 10' E 100
 4

W. M. Stewart
 J. O. McManis
 W. M. Stewart

for the hearing, and notice sent to
 the owners or parties as required by
 law. New Camp from which we
 take about an acre will sell for
 100 per acre.
 We strongly urge and recommend
 the building of this road by the County
 as there is at present only a narrow
 dirt way and even that is through
 private land where the road can be
 shut up at any time: today only we
 cross the river, and at some future
 time the road will have to be built.
 The proposed road is nearly
 straight and follows about a
 half mile or so from the
 corner of the ground to be taken
 into account

and we would advise to have the
 assessment who will give the R of W
 residents we will not be able to
 do some of the owners are not
 will be about 750
 the cost of grading this road
 is a grade of 14" to the foot
 distance of 650 feet then will have
 a distance of about 1.5 miles
 of the County
 which as laid out to the west from
 San Diego Hermitage Quarry thence by
 a straight line between Camp and the
 distant 20, to a point on the
 line to said North line and being
 North line, thence 6.5 or parallel
 being a point 20 south of Camp
 6+50 150 100
 7+50 150 100
 N 87° 50' E 100' to stake 5
 S 71° 50' E 150'
 N 64° 30' E 100'

Henry J. Camp to San Diego County

Book 47 page 6.

Comm. at a point 10 ch 4 ft N
from S.E. cor P.L. 1152 and running
thence West 15 chains thence North
40 feet, East 15 chains South
40 ft to pt of beginning

4
Hays Farm D. 180

Beg. at the N.W. cor of a lot, at
the point of intersection of a ditch
separating said lot from the main
lands and a "bayou" or slough
leading to S.W. River, running thence
in a general direction Easterly and
following the middle of the channel
of said bayou to a point where
a ditch intersects the continuation
of said bayou, said point being
2000' in a direct line Easterly of the
point of starting, thence turning and
running by said ditch on a course
S 11° 10' E to the low water line of
San Diego Bay

Partition of P.L. 1168

1st That the said City of San Diego shall have share & proportion of said P.L. the following:

Blocks 108, 109, 115, Lots 1 to 11 inc
38 to 48 inc in Blk 114, lots 9, 10 & 11
Blk 156

That the said A.H. Julian shall have lots 5 to 13 inc and 36 to 44 inc in Blk 110

Measurements of Potamon on 5th Street,

Intersection of J Street

		sq ft	
.64	X 9.30	5.95	✓
1.38	X 19.57	27.00	✓
.64	X 10.75	6.88	✓
1.38	X 40.30	55.89	✓
.69	X 80.0	55.20	✓
.69	X 33.20	22.90	✓
.66	X 41.35	27.29	✓
.66	X 12.0	7.92	✓
.67	X 62.6	41.80	✓
.69	X 1.5	1.03	✓
		753.26	

5th St bet J & K

sq ft		sq ft	
.69 X 16.40	11.22 ✓	.66 X 4.30	2.84 ✓
.68 X 30.9	20.91 ✓	1.31 X 33	43.23 ✓
.65 X 6.70	4.35 ✓	.66 X 9.5	6.27 ✓
.68 X 30.30	20.60 ✓	1.30 X 1.36	1.77 ✓
.68 X 10.15	6.90 ✓	.66 X 1.50	.99 ✓
.71 X 8.0	5.68 ✓	1.26 X 5.30	6.68 ✓
.68 X 3.70	2.51 ✓	.66 X 8.0	5.28 ✓
.66 X 19	12.54 ✓	1.26 X 72.30	91.10 ✓
.66 X 6.10	4.03 ✓	.66 X 4.0	2.64 ✓
.66 X 16.40	10.82 ✓	1.26 X 116.80	147.17 ✓
.66 X 6.10	4.03 ✓		301.65
.66 X 24.45	16.14 ✓		
.66 X 3.70	3.76 ✓		
.66 X 24.60	16.24 ✓		
.66 X 15.0	9.90 ✓		
.66 X 265.5	175.23 ✓		
1.26 X 33.40	42.08 ✓		
.66 X 4.40	2.90 ✓		
1.25 X 4.80	6.00 ✓		
	398.49 ✓		

$$\begin{array}{r} 398.49 \\ 301.65 \\ \hline 700.14 \end{array}$$

398.49
301.65
96.84

Intersection of R & H

		Sq ft.	
1.26	X 48.0	60.48	✓
.66	X 4.0	2.64	✓
1.30	X 3.50	4.55	✓
1.30	X 1.60	2.08	✓
1.26	X 7.0	8.82	✓
.66	X 57.0	37.60	✓
.66	X 2.80	1.84	✓
.66	X 2.20	1.45	✓
.66	X 33.40	22.04	✓
.66	X 46.70	30.82	✓
.66	X 19.60	12.94	✓
.66	5.60	3.69	✓
.66	8.60	5.68	✓
.66	17.0	11.21	✓
		785.84	

Between R & S

		Sq ft.	
1.26	X 860	10.83	✓
.66	X 37.60	24.80	✓
2.0	X 1.0	2.00	✓
.66	X 28.1	18.53	✓
.66	X 24.40	16.10	✓
.66	X 27.60	18.22	✓
.66	X 2.0	1.32	✓
1.25	X 4.0	5.00	✓
4.66	X 5.9	27.49	✓
.60	X 4.20	2.52	✓
.66	X 2.0	1.32	✓
.66	X 2.0	1.32	✓
.66	X 12.50	11.55	✓
.61	X 27.50	16.76	✓
1.10	X 8.60	9.45	✓
.66	X 13.50	8.91	✓
.66	X 7.9	5.22	✓
.66	X 5.0	3.30	✓
.66	X 28.40	18.73	✓
.60	X 8.60	5.15	✓
.66	X 12.70	8.38	✓
.66	X 31.0	20.43	✓
		245.91	

5th St bet K & L

5th St bet K & L

8

sq ft

sq ft

1.70	X	3.0	51.0	✓	.66	X	11.60	7.66	✓
.66	X	15.20	10.02	✓	1.0	X	1.0	1.00	✓
.66	X	15.50	10.23	✓	.60	X	3.40	2.04	✓
1.0	X	8.0	8.00	✓	.66	X	3.70	2.44	✓
.66	X	12.50	8.25	✓	.66	X	1.5	0.99	✓
.80	X	5.5	4.40	✓	.66	X	27.40	18.08	✓
.66	X	12.6	8.32	✓	.60	X	3.0	1.80	✓
.66	X	13.0	8.58	✓	.66	X	3.30	3.50	✓
.66	X	13.8	9.12	✓	.66	X	4.00	2.64	✓
.90	X	7.0	6.30	✓	.66	X	26.0	17.75	✓
.90	X	7.0	6.30	✓	.66	X	29.0	19.12	✓
.60	X	7.0	4.20	✓	.90	X	7.0	6.30	✓
.56	X	8.6	3.69	✓	.66	X	10.40	6.87	✓
.56	X	17.40	9.75	✓	.66	X	11.40	7.54	✓
.56	X	8.40	4.70	✓	.80	X	5.5	4.40	✓
.66	X	5.20	3.43	✓	.60	X	4.50	2.70	✓
.66	X	42.0	27.72	✓	.58	X	11.70	6.76	✓
.66	X	6.40	4.24	✓	.66	X	21.70	14.32	✓
.66	X	7.80	5.15	✓	.66	X	54.60	36.08	✓
.61	X	59.60	36.36	✓	.66	X	95.0	62.70	✓
.66	X	20.30	13.53	✓	.66	X	12.8	8.45	✓
			197.39					232.51	

.66 X 25.40 16.76 ✓

.61 X 16.20 9.89 ✓

.66 X 5.40 3.56 ✓
30.41

5th Street bet J & J

Jan 8 1891

Intersection of 5th & J St.

9

Jan 8 1891

1.61 X 141.5 227.81 ✓

.75 X 13.8 10.35 ✓

1.42 X 123.8 175.80 ✓

.70 X 5.5 3.85 ✓

.75 X 281.0 210.75 ✓

1.12 X 15.7 22.29 ✓

1.42 X 24.0 34.08 ✓

.75 X 6.30 4.73 ✓

1.42 X 133.20 189.14 ✓

.75 X 50.20 37.65 ✓

1.42 X 21.3 30.25 ✓

.75 X 18.5 13.88 ✓

1.42 X 47.20 67.02 ✓

.75 X 300. 225.00 ✓

1246.60

1.42 X 28 39.76 ✓

.75 X 10.8 8.10 ✓

.75 X 80.0 60.00 ✓

1.42 X 41.5 58.93 ✓

.75 X 80 60.00 ✓

1.42 X 80 113.60 ✓

340.39

5th St H to J Hamlin & Party
Jan 21 1891

5th St Intersection of H 10

89 ft		89 ft		89 ft		Square feet	
2. x .5	1.0 ✓	7.0 x .5	3.5 ✓	2.0 x 3.5	7.0 ✓	4.7 x 4.7	22.1 ✓
(4.0 x 1.5) not finished	6.0 ✓	1.2 x 2.7	3.2 ✓	3.4 x 1.42	48.4 ✓	4.7 x 4.7	" ✓
300 x .7	210.0 ✓	1.2 x 7.0	8.4 ✓	42.8 x .75	32.2 ✓	4.7 x 4.7	" ✓
2. x .8	1.6 ✓	1.8 x 3.3	5.94 ✓	42.8 x 1.42	60.8 ✓	4.7 x 4.7	" ✓
4. x 1.5	6.0 ✓	4.0 x .7	2.8 ✓	42.8 x .7	30.0 ✓	4.7 x 4.7	" ✓
250 x 1.42	355.0 ✓	2.5 x .7	1.8 ✓	2.7 x .7	1.9 ✓	4.7 x 4.7	" ✓
300 x .7	210.0 ✓	7.5 x .7	5.3 ✓	2.7 x .7	1.9 ✓	4.7 x 4.7	" ✓
2.5 x .7	1.8 ✓	20.0 x .7	14.0 ✓	8 x .7	5.6 ✓	4.7 x .7	3.3 ✓
2.5 x .7	1.8 ✓	2.8 x .6	1.68 ✓	8.6 x .7	6.0 ✓	4.7 x .7	3.3 ✓
50. x .7	35.0 ✓	4.7 x 1.1	5.17 ✓	8. x 1	3.0 ✓	1.3 x 3.3	4.3 ✓
300 x 1.42	426.0 ✓	4.7 x .7	3.29 ✓	8 x 3	2.4 ✓	4.7 x .6	2.8 ✓
300 x .7	210.0 ✓	1.40 x 1	1.4 ✓	12.0 x .8	9.6 ✓	4.7 x .6	2.8 ✓
42.4 x .7	29.6 ✓	10.0 x 1	10.0 ✓	4.7 x 13	61.1 ✓		181.7 ✓
2.6 x .7	1.8 ✓	11.5 x 1	11.5 ✓	6.0 x 1.0	6.0 ✓		332.8 ✓
42.8 x .7	30.0 ✓	6.0 x 1	6.0 ✓	10 x 2.0	20.0 ✓		218.3 ✓
21. x .7	14.7 ✓	8.0 x .75	6.0 ✓	6 x .7	4.2 ✓		173.2 ✓
42.8 x .7	30.0 ✓	8. x .7	5.6 ✓	4.7 x .7	3.3 ✓		89.5 ✓
42.8 x 1.42	60.8 ✓	Error 136-	218.3	4 x 1	4.0 ✓		171.2
9 x .75	6.8 ✓		126.0	4.7 x .6	2.8 ✓		332.6
	173.2		92.3	7.0 x 1.4	9.8 ✓		92.3
Error	.5 +						173.7
	173.7						769.8

below line is in water

Intersection of H

5th 8h bet 8 & 9

2.3 X .7	1.6 ✓	1.8 X 146.0	263.0 ✓
46 X .7	32.2 ✓	2.3 X .7	1.6 ✓
254 X 1.4	355.5 ✓	2.4 X .7	1.7 ✓
17.4 X 1.4	20.4 ✓	2.6 X .7	1.8 ✓
38 X .7	40.6 ✓	2.8 X .7	1.8 ✓
2.3 X .7	16.1 ✓	154 X 1.42	218.7 ✓
33 X 1.5	49.5 ✓	300 X .7	210.0 ✓
51 X .7	35.7 ✓	1.2 X .9	1.08 ✓
2.5 X .7	1.8 ✓	2.4 X .7	1.7 ✓
45.0 1.5	67.5 ✓		701.4
2.3 X .7	16.1 ✓		722.6
2.5 X .7	1.8 ✓	701.4	424.2
100 X .7	70.0 ✓	724.6	
3.0 X .7	2.1 ✓	1426.0	
35.0 .7	3.5 ✓		
2.5 X .7	1.8 ✓		
2.5 X .7	1.8 ✓		
2.5 X .7	1.8 ✓		
2.5 X .7	1.8 ✓		
2.2 X .7	1.5 ✓		
1.5 X 1.0	1.5 ✓		
	724.6		

Measurement of Bitumen laid
after the rest of truck was finished.

Jan 22 1891

12

12 x .7	8.4	} bet H & I St
4' x .7	2.8	
3' x 1.6	4.8	
13' x .7	10.5	
2.5 x .7	17.5	
	18.80	
17' x .7	11.9	} bet I and J
36' x .7	25.2	
14.4 x .7	10.08	
5.0 x .7	3.5	
	50.68	
138.0 x .7	96.6	} bet J & K St
20.0 x .7	14.0	
3.0' x .7	2.1	
	112.7	

112.7
50.68
18.8
182.2

on 5th St bet J & K.

Extra work at joints
bet H and J.

2 x 2.8 x .7	= 3.9	J & F Extra
2 x 2.8 x .7	= 3.9	1.4 x 4.8 = 6.7
2 x 2.6 x .7	= 3.6	1 x 4.8 = 4.8
2 x 2.7 x .7	= 3.8	1.3 x 2.8 = 3.6
2 x 2.7 x .7	= 3.8	.7 x 4.8 = 3.4
2 x 2.3 x .7	= 3.2	1.3 x 4.8 = 6.2
2 x 2.8 x .7	= 3.9	9 x 4.8 = 43
2 x 2.8 x .7	= 3.9	.7 x 4.8 = 3.4
2 x 2.5 x .7	= 3.5	32.4
2 x 2.7 x .7	= 3.8	
2 x 2.8 x .7	= 3.9	
2 x 2.6 x .7	= 3.6	
2 x 3.2 x .7	= 4.2	
2 x 2.6 x .7	= 3.6	
2 x 2.8 x .7	= 3.9	
2 x 2.9 x .7	= 4.1	
2 x 2.9 x .7	= 4.1	
	64.7	

32.4
64.7
97.1

Intersection of E St. & 5th

5th St bet. E & G

13

Measure	sqft		
1.9 X 80	152.00 ✓		
2.8 X .7	1.96 ✓		
.7 X 18	12.60 ✓		
1.5 X 80	120.00 ✓		
.7 X 80	56.00 ✓		
.7 X 80	56.00 ✓		
.7 X 3	2.10 ✓		
.7 X 3	2.10 ✓		
.8 X 2.6	2.08 ✓		
	404.84 ✓		

Measure	sqft		
1.5 X 58.9	88.35 ✓	42 X .6	2.52 ✓
.8 X 57.7	46.16 ✓	.8 X 12	9.60 ✓
1.5 X 62.6	93.90 ✓	.9 X 8.1	7.29 ✓
.8 X 35	28.00 ✓	1.7 X 9.3	15.81 ✓
1.5 X 86.7	130.05 ✓		35.22 ✓
1.5 X 38	57.00 ✓		
.7 X 3	2.10 ✓		
.8 X 2.6	2.08 ✓		1435.32 ✓
.8 X 153.3	122.64 ✓		35.22 ✓
			1470.54 ✓
1.5 X 11.2	16.80 ✓		
.75 X 3	2.25 ✓		
.8 X 13.2	10.56 ✓		
1.5 X 30.0	45.00 ✓		
.8 X 5.0	4.00 ✓		
.7 X 70.8	49.56 ✓		
1.9 X 81.5	154.85 ✓		
.8 X 2.7	2.16 ✓		
1.5 X 216.7	325.05 ✓		
.8 X 300	240.00 ✓		
.8 X 2.5	2.00 ✓		
.9 X 10.9	9.81 ✓		
	1435.32 ✓		

Measure	Sq ft	
1.7 x 47.8	81.26	
1.9 x 54	102.60	
.8 x 29.1	23.28	
.8 x 35.3	28.24	
.8 x 37.8	30.24	
1.5 x 37.7	56.55	
1.5 x 37.7	56.55	
1.5 x 9.4	14.10	
.6 x 4	2.40	
.7 x 4.6	3.22	
4.7 x 4.7	22.09	
4.7 x 4.4	20.68	
4.7 x 4.7	22.09	
1.5 x 33.3	49.95	
1. x 4.5	4.50	
1. x 34.8	34.80	
1.75 x 29.3	21.97	
.8 x 10	8.00	
.8 x 9.2	7.36	
.8 x 9.5	7.60	
.8 x 25.5	20.40	
	<u>617.88</u>	

4.7 x 3.6	16.92
1.5 x 33.8	50.70
3.6 x .8	2.88
4.7 x .7	3.29
33.8 x .8	27.04
4.7 x .7	3.29
1.5 x 37.7	56.55
.8 x 37.7	30.16
	<u>190.83</u>

617.88
190.83
808.71

Measure	Sq ft
.8 x 43	34.40
.8 x 28	2.24
.8 x 3.0	2.40
.8 x 2.5	2.00
.8 x 28.7	22.96
.8 x 16.8	13.44
.8 x 15.6	12.48
.7 x 2.4	1.68
.8 x 290.2	232.16
.8 x 300	240.00
.8 x 3.5	2.80
.8 x 2.8	2.24
.8 x 300	240.00
.8 x 300	240.00
.8 x 60.2	48.16
	<u>1096.96</u>

5th Street Intersection of R St
Mar 6, 91

5th Street bet. B & E

Mar 6, 91

15

Measurement

Sq ft

.7 x 80 56.00

.7 x 80 56.00

.7 x 80 56.00

1.4 x 9.3 13.02

.7 x 14 9.80

.7 x 2.3 1.61

.7 x 2.0 1.40

.7 x 2.2 1.54

.7 x 2.2 1.54

.7 x 51.7 36.19

233.10

Measurement

Sq ft

.7 x 2.1 1.47

.7 x 2.1 1.47

.7 x 21.5 15.05

.7 x 1.6 1.12

.7 x 3.5 2.45

.7 x 3.3 2.31

.7 x 300 210.0

.7 x 300 210.0

.7 x 300 210.0

.7 x 300 210.0

863.87

5th Street Intersection of 18 St
March, 1891

5th St between 3 & 18.

16

Measurement	Sq ft	Measurement	Sq ft
.7 x 4.7	3.29 ✓	4.7 x 4.7	22.11
.7 x 3.4	23.80 ✓	4.7 x 4.7	22.11 ✓
.8 x 6.4	5.12	.7 x 9.5	6.65 ✓
.7 x 3.4	23.80 ✓	.7 x 4.7	3.29 ✓
.7 x 3.4	2.38 ✓	.7 x 27.4	19.18 ✓
1.3 x 5.0	6.50 ✓	.7 x 23.1	16.17 ✓
1.0 x 8.2	8.20 ✓	.7 x 6.4	4.48 ✓
.7 x 4.7	3.29 ✓	5.9 x 4.7	27.7 ✓
.7 x 3.4	23.80 ✓	4.7 x 4.7	22.11 ✓
.7 x 3.4	23.80 ✓	4.7 x 4.7	22.11 ✓
.7 x 3.3	2.31 ✓	.8 x 11.0	8.8 ✓
.9 x 7.1	6.39 ✓	.7 x 4.0	2.80 ✓
.7 x 9.6	6.72 ✓	5.5 x 4.7	25.8 ✓
32.5 x .7	22.75 ✓	2.0 x 1.6	3.2 ✓
32.7 x .7	22.89 ✓	.7 x 25.9	18.13 ✓
.5 x 2.0	1.00 ✓	.7 x 27.5	19.25 ✓
3.0 x .7	2.10 ✓	4.0 x 4.7	18.8 ✓
4.7 x 4.7	22.11 ✓	.8 x 32.5	26.0 ✓
4.7 x 4.7	22.11 ✓	.7 x 32.5	22.75 ✓
.7 x 4.7	3.29 ✓	.5 x 1.0	0.5 ✓
.7 x 4.7	3.29 ✓		
238.92		311.90	

Measurement	Sq ft	Measurement	Sq ft
2.0 x 1.0	2.00 ✓	33.5 x .7	23.4 ✓
.7 x 79.5	55.65 ✓	.7 x 300	210.0 ✓
1.8 x 1.5	2.7 ✓		233.4
1.2 x 3.0	3.6 ✓		
.7 x 32.5	22.75 ✓		
.7 x 22.1	15.47 ✓	233.4	
.7 x 14.8	10.01 ✓	573.2	
.7 x 12.1	8.47 ✓	311.9	
.7 x 300	210.00 ✓	238.92	
.7 x 4.5	3.15 ✓	1357.42	
.7 x 13.8	9.7 ✓		
.7 x 19.0	13.30 ✓		
.7 x 40.0	28.00 ✓		
.7 x 14.7	10.29 ✓		
.7 x 17.6	12.32 ✓		
3.0 x 1.2	3.6 ✓		
.7 x 101.5	71.05 ✓		
1.0 x 2.0	2.0 ✓		
.7 x 3.0	2.10 ✓		
.7 x 7.6	5.32 ✓		
.7 x 7.8	5.46 ✓		
	573.17		

5th Street Intersection of C Street

Measurement	Sq ft	Measure
.7 x 33.5	23.4	
.7 x 10.9	7.6	
.7 x 11.6	8.1	
.7 x 33.3	23.3	
.7 x 33.3	23.3	
.7 x 9.7	6.8	
.4 x 4.7	1.9	
1.0 x 1.0	1.0	
.7 x 1.2	.8	
.3 x 1.0	.3	
.7 x 1.6	1.1	
.40 x .70	.3	
.6 x .6	.4	
.7 x 1.6	1.1	
.7 x 1.6	1.1	
1.0 x 1.6	1.6	
.8 x 1.6	.8	
.7 x 7.4	5.2	
.7 x 15.6	10.9	
.7 x 14.6	10.2	
.7 x 21.6	15.2	

3rd St between B & C

Measurement	Sq ft	Measure
.7 x 12.6	8.8	
.7 x 21.6	15.2	
.8 x 63.7	51.0	
.8 x 67.7	54.2	
.8 x 25.4	20.4	
.8 x 14.6	11.7	
.7 x 46.5	32.6	
.8 x 82.4	65.9	
.8 x 114.2	91.4	
.8 x 13.5	10.8	
.9 x 13.0	11.7	
.7 x 40.8	28.1	
.7 x 71.5	50.1	
.7 x 38.0	26.6	
.8 x 120.5	96.4	
.8 x 53.0	42.0	
.8 x 134.5	107.6	
.9 x 11.0	9.9	
.9 x 7.8	7.0	
.8 x 40.5	32.4	
.8 x 19.2	15.4	

$$3740 \times .3 = 1122$$

15th Street paving.

Material to bring "D. St. to grade" may be taken to make the embankment on 5th bet. cedar & Locust.

Earth between Ivy and Juniper goes between Locust & 5th.

Maple St. some may be taken out between 5th St. and Park.

Nutmeg: Material between 4th and 5th on Palm.

Cliffing between Palm & Spruce - be taken south.

Grade of D Street beginning at east side of 15th rises eastward .5 per 100 ft. to west line 16th. and across 16th. Street thence rises at 4 ft in 100 to 17th. Str.

Grade East side 16th 56.
" West end of Bridge

D. Street Bridge.

Load on floor.
6.0 ft depth by $15 \times 100 = 9000$ lbs
for each foot of length.

Strength of joist 3" by 16" 15 ft. for distributed load.

Load $(\frac{2 \times 3 \times 16 \times 16}{3 \times 15 \times 16}) 5000 = 15000$ lbs.

Load of earth per foot lin.

$15 \times 6.6 \times 100 = 10000$ lbs

$\therefore$ Joist per foot will support the load without injurious deflection.

For $\frac{2}{3}(\frac{b \cdot d^2}{l}) S$.
b = width. d = depth. l = length. inches

"D" Street Bridge Culvert
To strengthen foundations;

December 5-1892.
and floor to carry earth.

Floor 3" thick
Joists 3 by 14" (16")

Cap 10" by 12" flat.

Post 12" by 12"

Mud sills 12" by 4' long.

North wall 262' long South wall 185' l.

Place reinforcing posts

oblique width at east end 17' 0"

Midrib same as sidewalls 12" x 12".

34 34 posts on north side.

24 24 " " south side.

29 Oblique joist 27 from at west end

87 Width of floor beams over all 30' ft.

29 posts in midrib.

at least 6 short joists 30' 0".

Should be new outside 34' long.

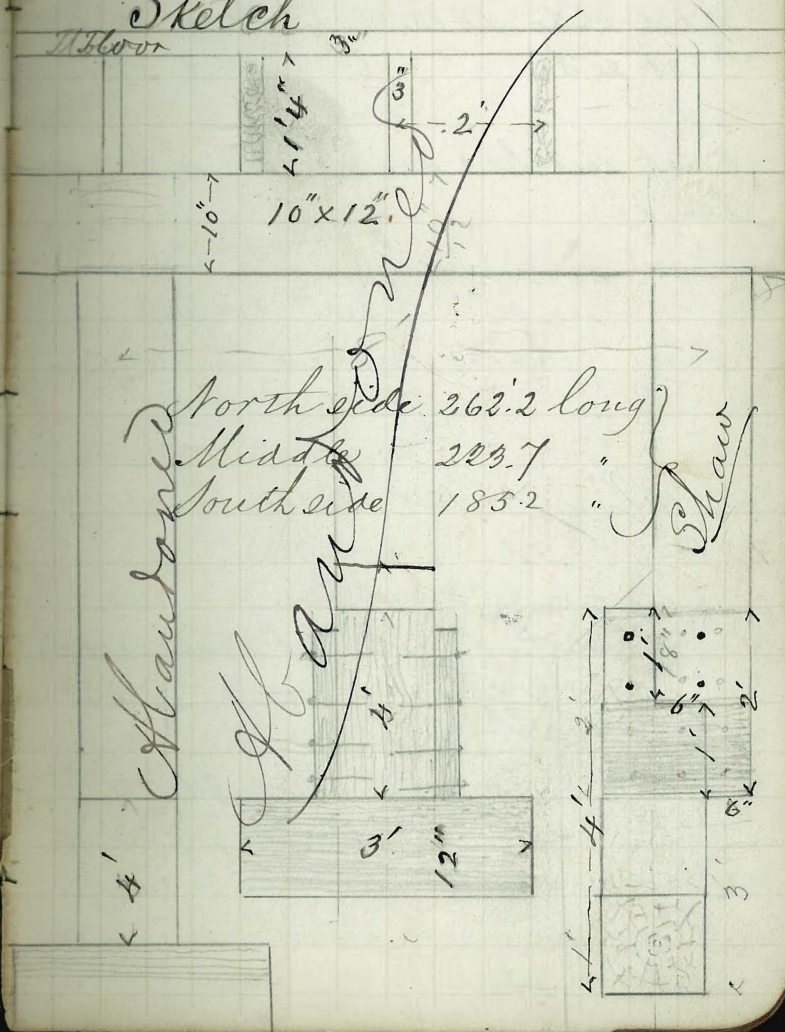
Square width of floor 31 feet.

Oblique beam at west end 668' long.

should be about 10" by 16" for end.

Sketch

11 floor



"C" Street Culvert.

West side	18 th	Grade	&	56.00
East side	" "	"	&	57.00

East end bed drainage	E 51.7
West " " "	48.7

Placing sills 3 feet deep
fives grades East end E 48.7
" " West " E 45.7

Hights: Side to grade East 11.8 ft.
 " " " West 10.3 ft.

Strength of Backing

$$\text{Load} = \frac{v'' \times f''^2}{2''}$$
$$\frac{12 \times 2 \times 2}{8} \times 400 = 2400$$

$$\times 1.6 \text{ dis} = 2400$$

$$1440$$

$$6240$$

"C" and 18th Streets.
Bill of Material

2 Sills 192' l. 10" x 10" 3200

25' l. 10" x 10" 208

2	Cäps 192 l.	10" x 10"	3200
		" "	208

25' l. 10" x 10" 208

1 piece 24' l. 9" x 12" 216

50' back 7' l 10" x 10" 2920

50 posts 7' x 10' x 10' 233

4 parts 1 lb. 10 x 10
T. 1 lb. 3 x 12" 5280

88 Torch 20 l. 3 x 12
Fl 12' 12" x 3" 11520

Floor 192 x 20 x 3

" 25' x 20' x 3' ($\frac{2}{2}$) 352 150

Backing 192' x 10' x 2 x 3" 115.20

25 X 10 X 3" 750

Nails 8 Keys \$3.00

Rail.	20' l.	3" x 4"	05	20
-------	--------	---------	----	----

Pack 9, 5' l. 3" x 4" 43

Plots 54' 2" 3' x 10" 270

Whal. quad. 2,50' l. 6x24" 2'00"

100
 100

Shrub Plant 50, 2 x 12
\$ 812.00 40640

206000720 = 812.00
Lap on pay 0.2 150.00

Excavation 1300 c 30 \$90.00

Total Cost \$ 13520.00

16th and "D" Street notes.

To grade 16th street between
"C" and "E" to the new grade
of "D" street will require
3100 C. Yds.

Were the new grade of
"D" begun at east side
of 16th. the grade to 17th
would be increased from
4% to 7%, and there
would be saved 5000 C. Yds.

To make approaches to
"D" Street Bridge on 16th
for 6 p.c. grade

$$Q = \frac{80 \times 6 \times 100}{2 \times 3 \times 9} = 900 \text{ C. Yds.}$$

each side.

21
From Culvert
on "C" Street

$$Q = \frac{190 \times 24 \times 7}{2 \times 7} = 1180 \text{ C. Yds.}$$

More than needed to make
one approach to "D" Str. Bridge.

January 11. 1893

Inspection for pro- visional grade & work.

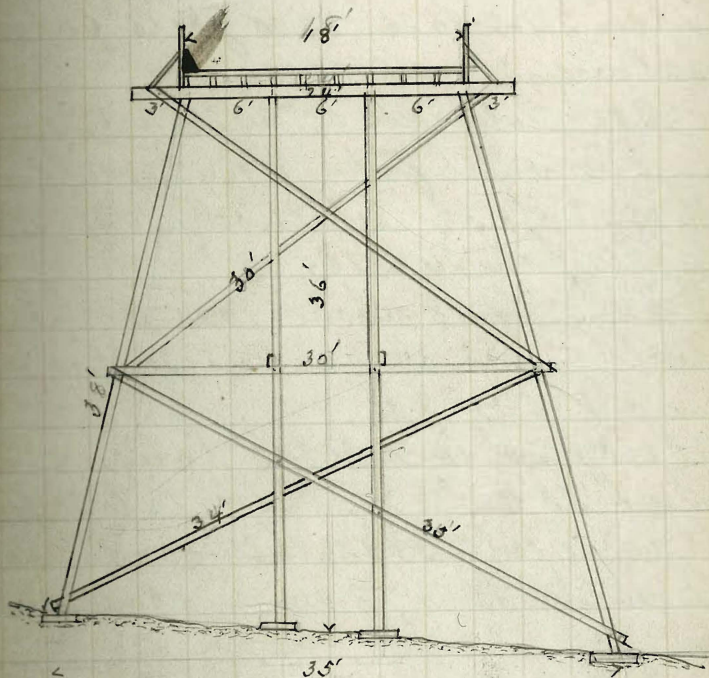
Ravine between 27th & 28th Sts. can be accommodated with a trestle bridge of 33' maximum height and about 200 feet long. Cutting 6 feet on 27th. and 8 ft on 28th Street.

And the ravine near 29th can be crossed by the north half width at same expense by a similar structure.

P. Street

22

Cut { 27th day 6 ft.
28th day 8 ft.



Joist 16' l. 3' by 12" load $\frac{2 \times 3 \times 12 \times 12}{37} = \frac{2 \times 3 \times 12 \times 12}{16 \times 12}$

R. Street

Jan 12 Ho

23

Beginning at 30th Street
Station 20 to 23 cut say
1000 yds to fill from 23 to 24.50
From 24.50 to 26. 1200 yds to cut
between 23 and 24.50

Box Culvert 22' by 36" and 40' l.
under water pipe 8" Kalamien.
From 28 to 32 Cut enough say 2500
to fill from 26 to 28.

From 32 to 48 about 1000 yds. to
Bridge, and at east end of Bridge
about 500 yds.

Bridge 20' wide & 140' long.

Bent 20' center & joints 16' to 20 ft

Carve into 35 & 36 l. s. 35 & 36. 1500

From Sta 63 to 78 move about 2000

yds.

yds.

January 28th.
County Road 6th & Union Ave.

To clear lot road would be moved $12\frac{1}{2}$ feet by depth of 4 feet for 150 feet = 270 yds.

In the matter of occupancy
of lot 1. Block A. Estudillo
tract subdivision.

The road about 20 feet wide has its middle along the west side of lot for its length 120 feet, being a cut way about 4 feet deep.

From the north end of Lot the road bears off westward.

To free the lot the road could
be excavated from 10 to 12 ft.
westward, and the dirt cast
to the east side.

This work would require the moving of 270 yds c 20¢ 54¢ or may be less.

~~Encroachment on
Lots 1, 2 & 3 of Block A.~~



February 8th. 1893
Examinations of occupancy

Block 409.

Portion of claimed by
Estate of Capt. Fitch
(Morse, Whaley & Dalton)

411 Lots 1, 2, 3 and 4.

Block 436 Lot 4.

Block 454. Lots 1 & 4.

25
City Property
in Old Town.

Lots 1 & 2 fenced. Lot 3 has
old house on n. w. Corner
unoccupied.

Lot 4 is occupied by a
henery, and is claimed by
James McCoy under a quieted
title of Superior Court Case

Has old vines and trees, and
fenced. Occupied by
Lyons, who claims to have title
chain

Occupied by School House,
and

The House of J. B. Stewart,
(estate) on the s. w. Corner
and fenced. Claims S. of Lot.

Fenced and occupied by
house on north line, partly
in street.

March 30th.

Notes of work done in improvement.

Curb begins with east line of 6th

Return at 7th Street has 7 posts

Between 7 & 8th Streets

Between 8th & 9th Streets

Between 9 & 10 Streets

Between 10th & 14th streets

Between 14th & Alley

Between 14 & 15th. Curb 37 posts

From east line of 20th east to 21st

" " "

Between 21 & 22nd Streets

From 22 to 23 side walks curb return

From 23 to 24 Side walks. curb & gutter

done but intersection not done.

"C" Street.

sticks Curb has 33 posts to block

Return measure 27' 10"

Curb has 32 + 34 posts.

Curb has 25 post on each side.

Curb has 23 post on each side.

North side. To return

Curb. n. side 26 post. + 24 to 15th.

of which 3 are of opposite.

Curb has not return to alley.

Curb gutters & side walks done.

Grade not out in middle of str.

not fully finished.

gutters finished but street not X'd.

done but intersection not done.

H. Street Petition
April 8th.

to grade and curb
Notes.

On north side of H 100 feet
On south side all of block
Between 7th & 8th Kew & Burnham
South side all.

Corner H & 9th Asphalt side walk
Thence to 12th Street all to be curbed
Corner H & 8th. N.H.L. all side

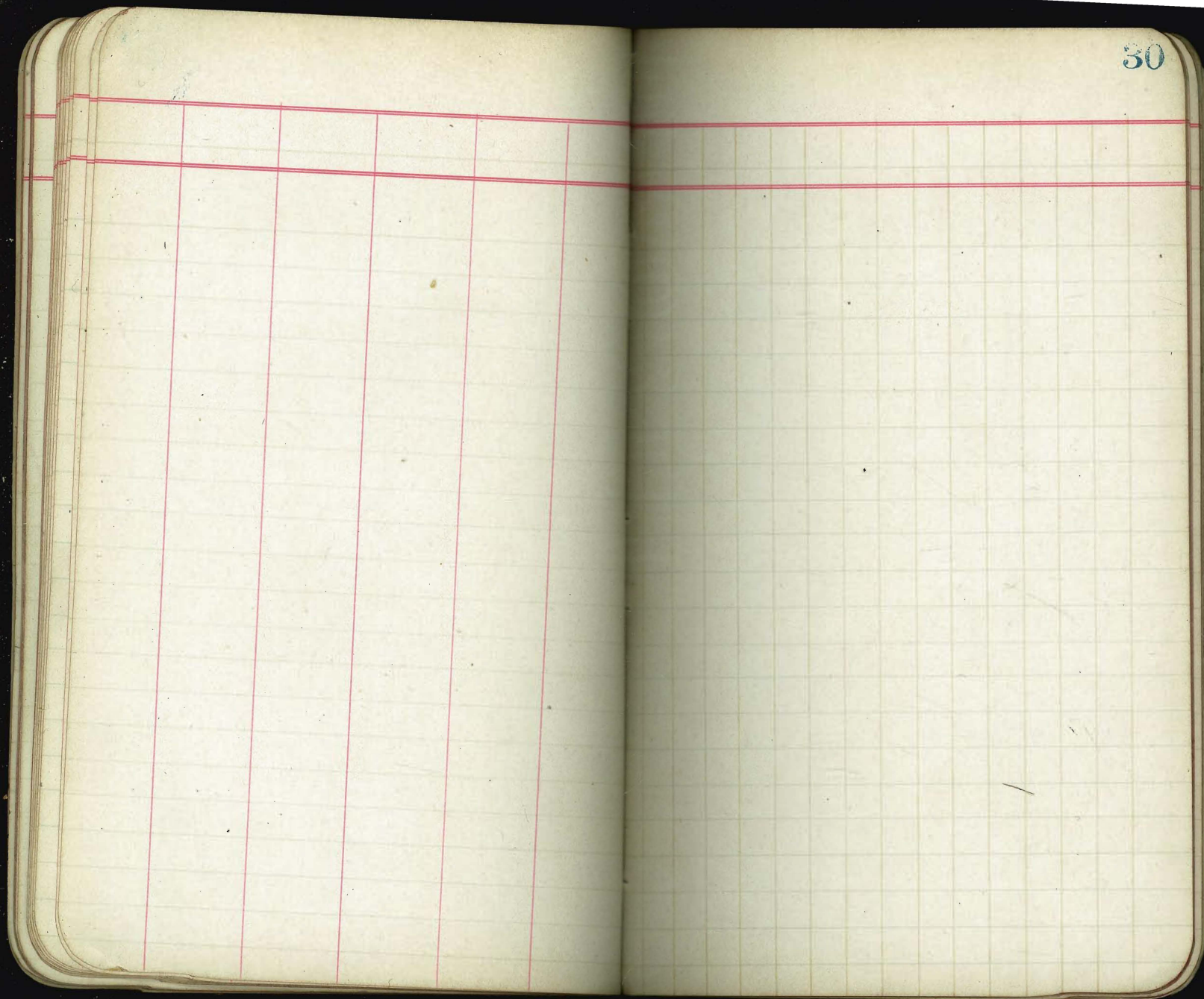
cut from 6th
6th to 7th.

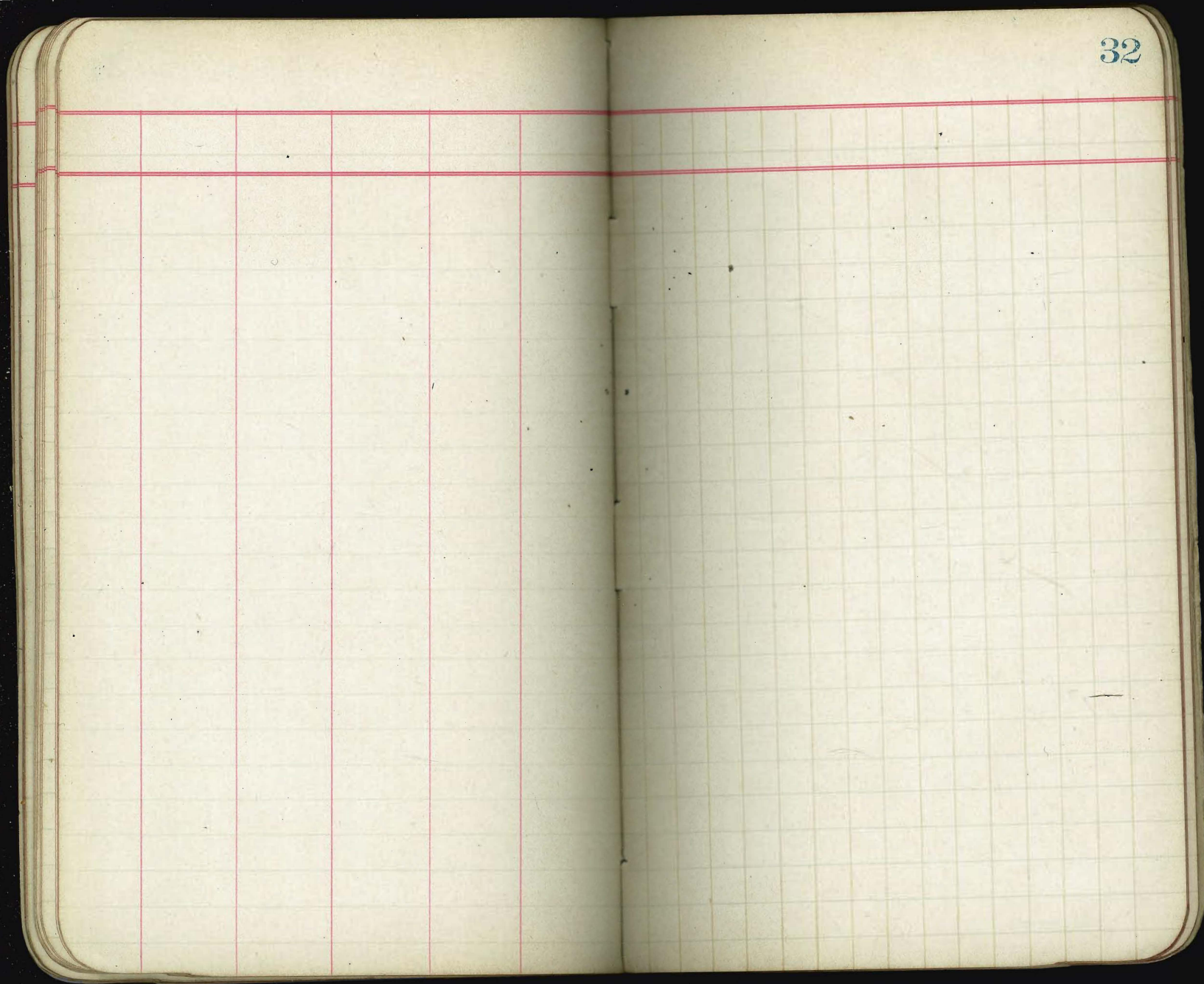
have 50 feet of side walk. N.

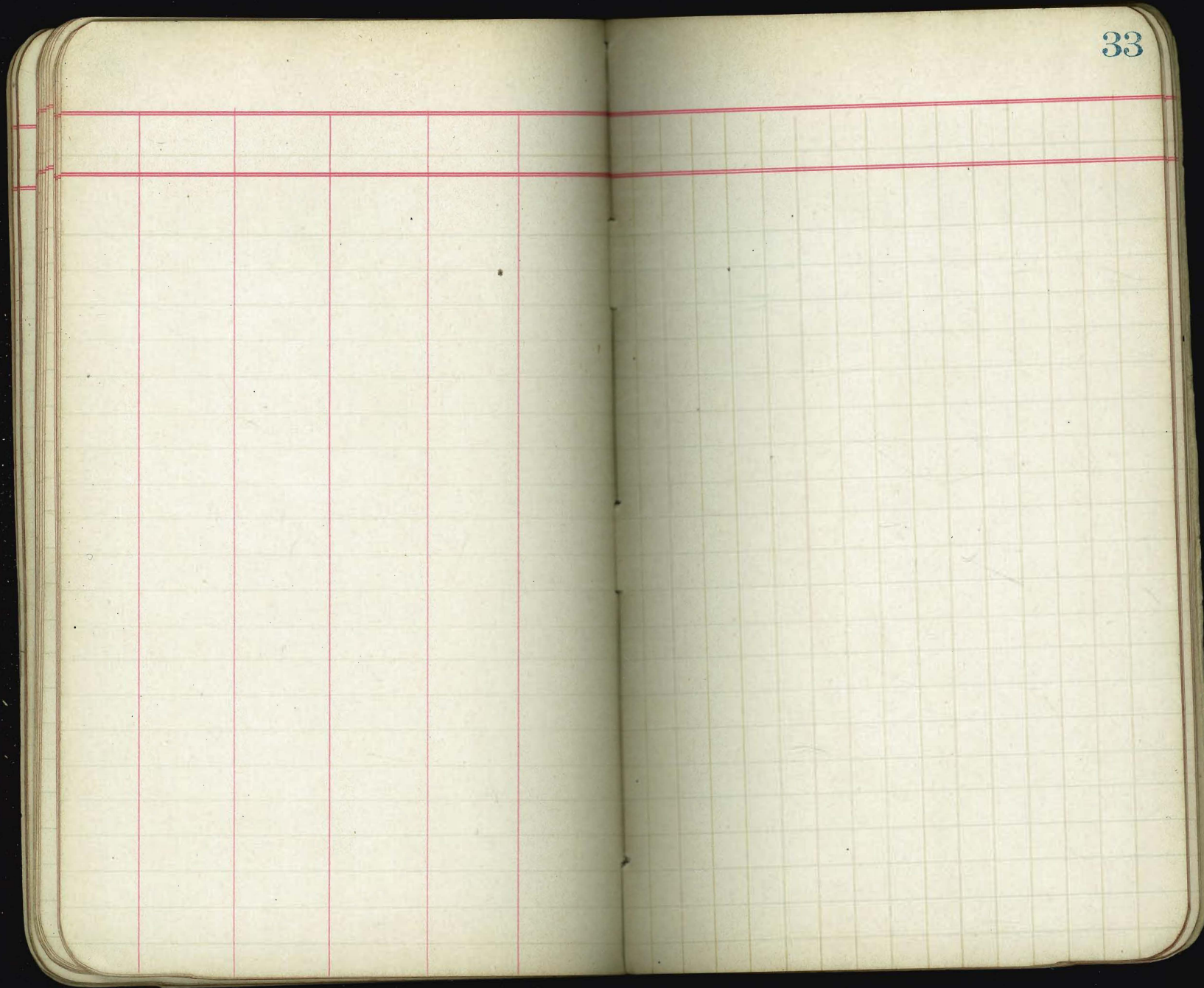
See Bohler & Brown.

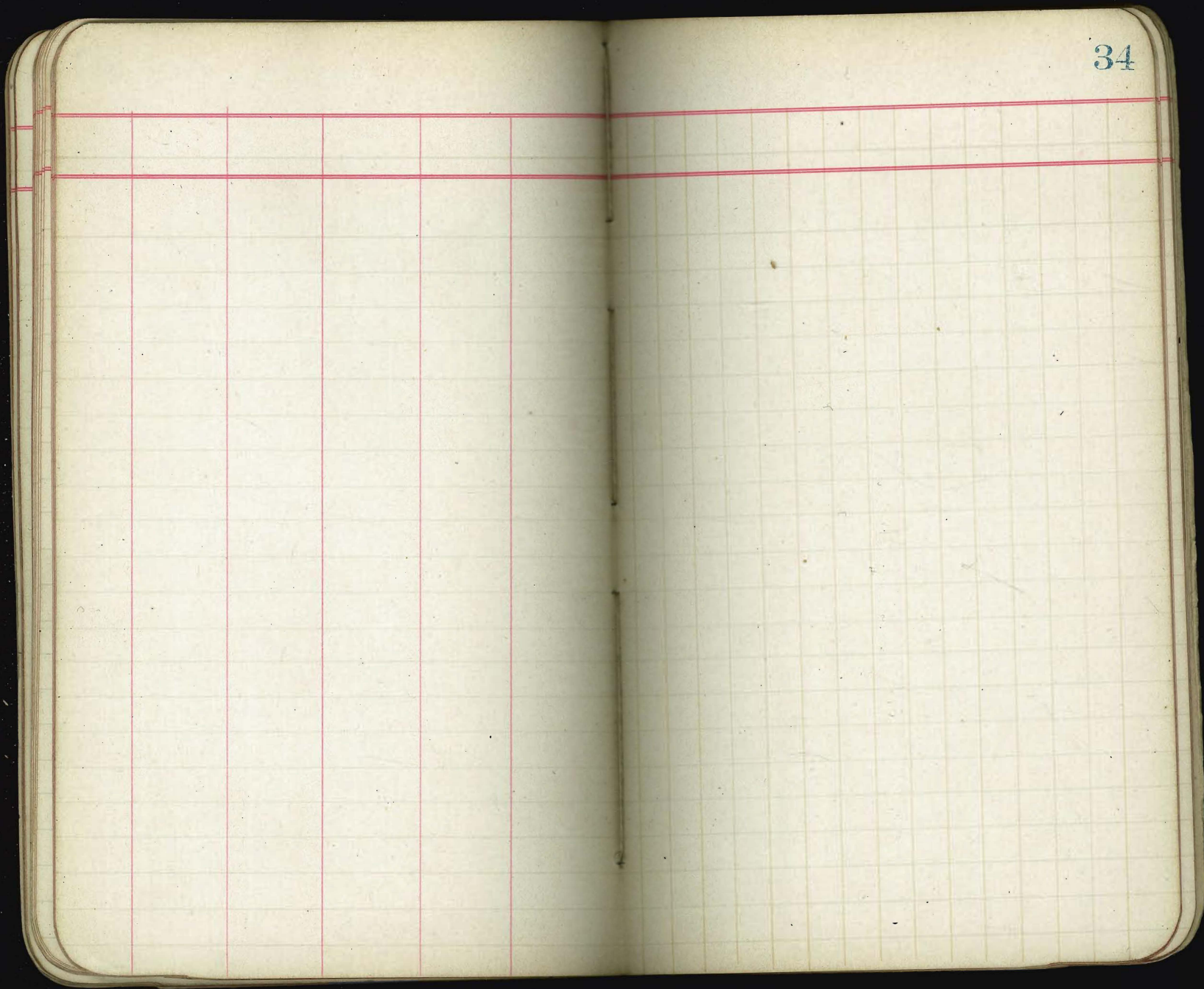
and side walked.

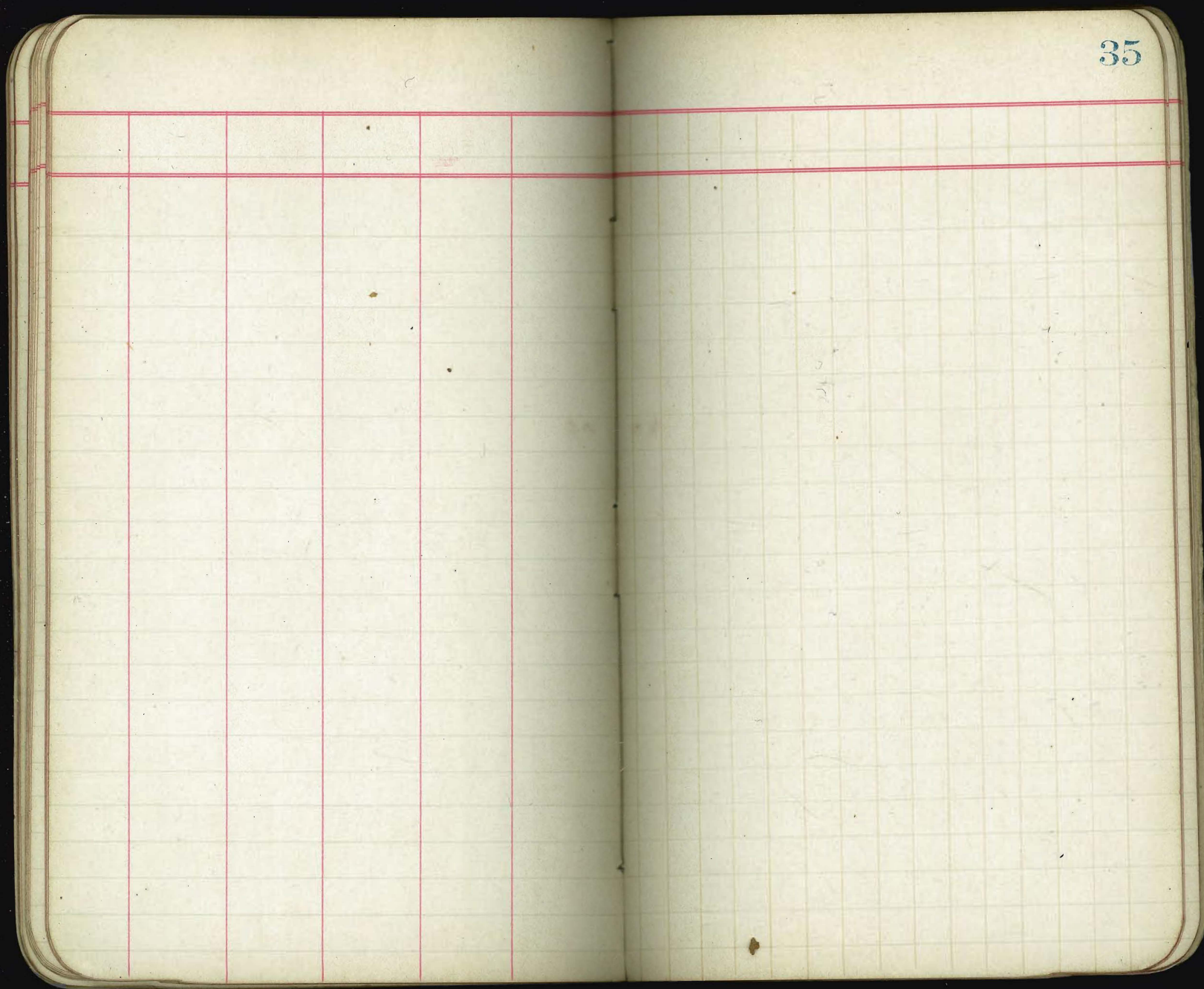
side walk (should be excepted).

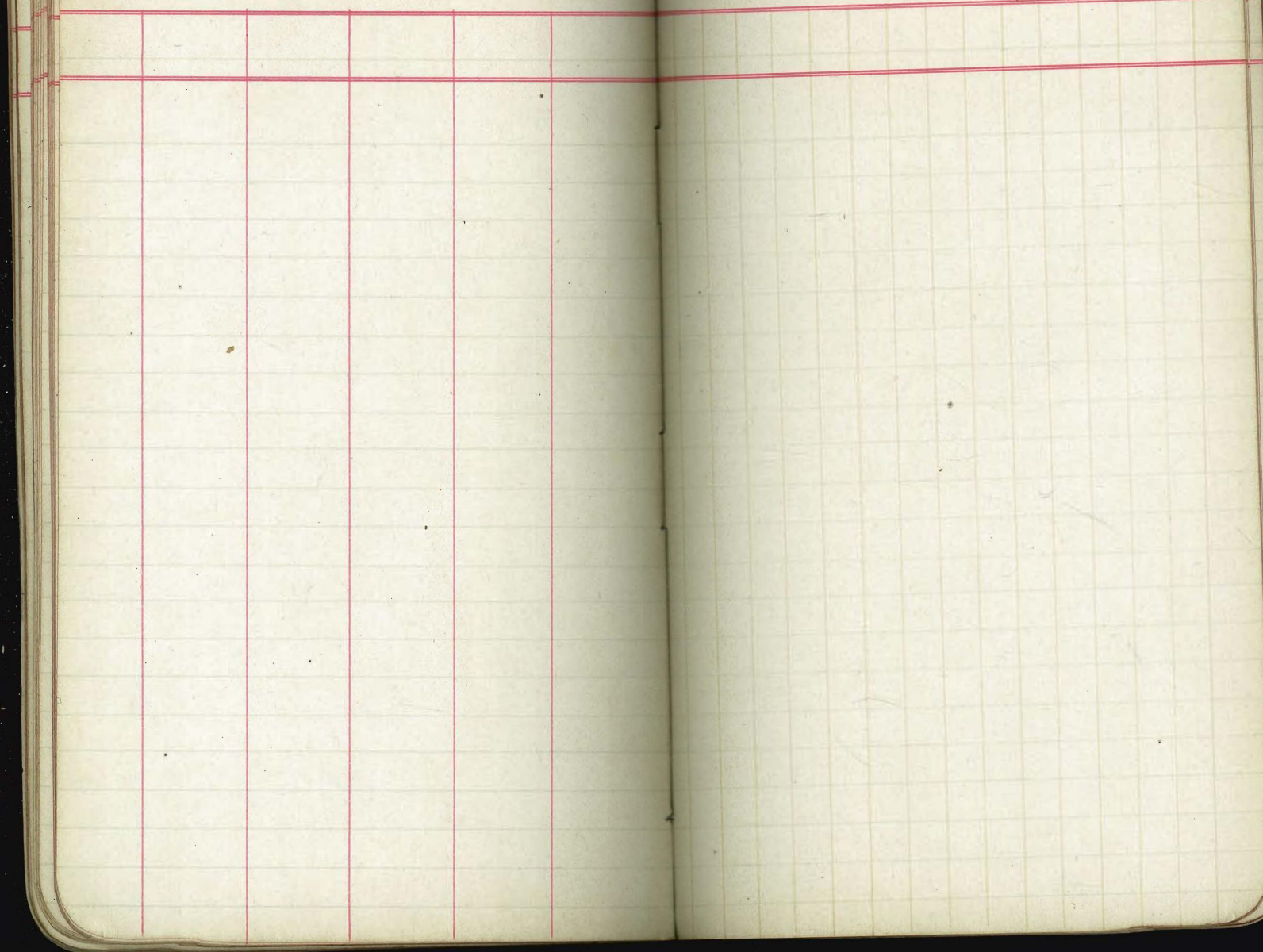


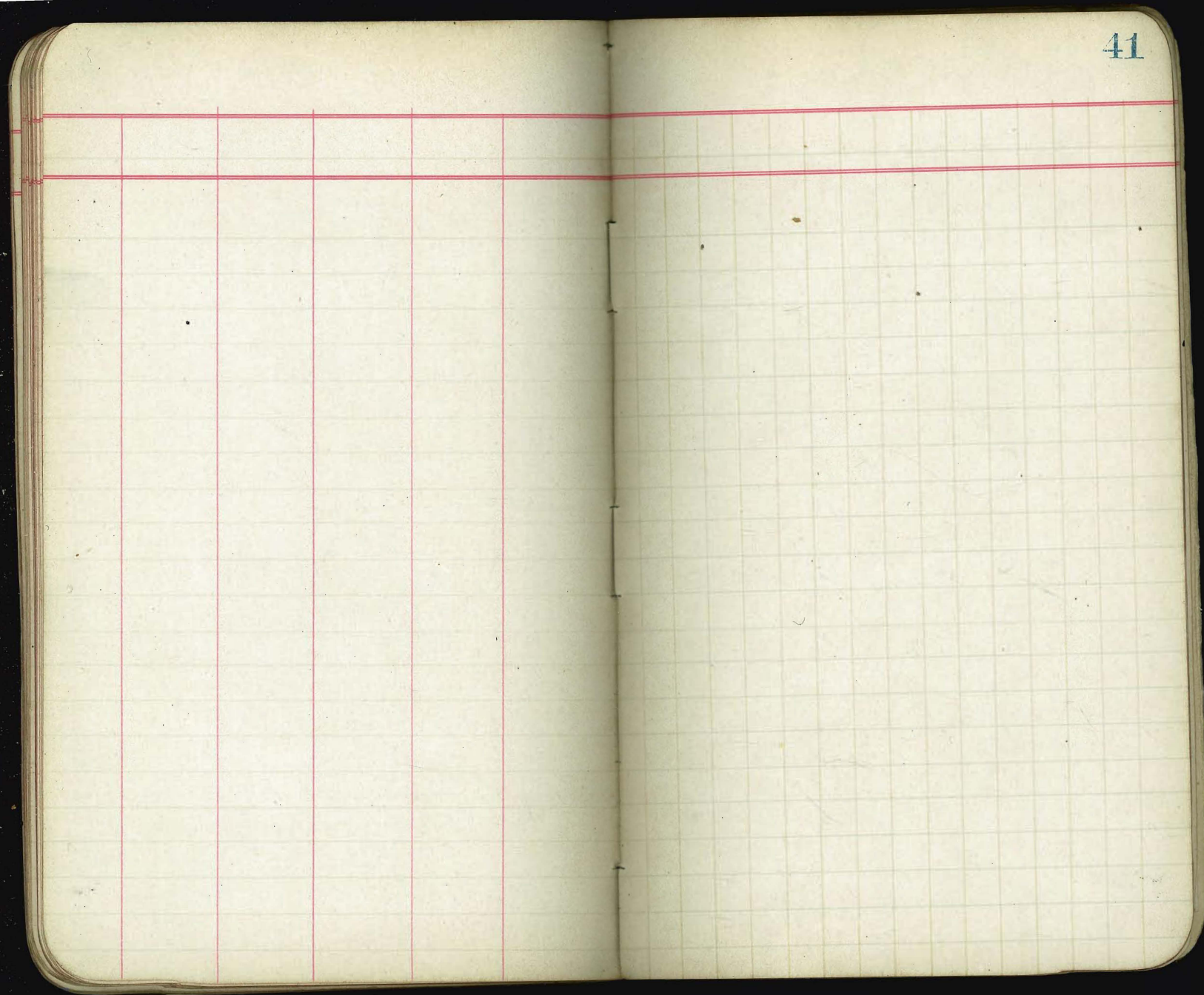












India Street Trestle.

Estimate of Material.

Bents & Posts

middle side	Total
1. 2x11' 2x12' 2	46
2. 2x22 2x24	92
3. 2x23 2x24	94
4. 2x18 2x20	76
5. 2x7' 2x8.	30
5 Caps of 32' ft.	160
5 Sills 30, 30, 32, 32, 34	160
	658
Posts 658' lin. 10" by 10" =	5484
52 Joists 22' long 3" by 12"	3432
H.R. posts 34, 5' l. 4" by 4"	227
" " Braces 10, 5' l. 4" by 4"	67
" " Blocks 24, 1 1/2' by 3"	108
" " Str. 8, 20' l. 4" x 4"	214
Floor 80' by 24' x 3"	5760
Sub plk. 8, 20' l. 1 1/2" by 10"	200
Backing (10' by 36' by 3") 2,	1560
Total ft. b. on timber	17052
Reducing sills to 8" by 10" same	1100
" " Hand rail	632
1" in floor increases	1920.

Cost.

Timber 17684 ft. #20 p. ft. \$353.68
 Nails 5 kegs @ \$3.00 15.00
 Total \$368.68

Timber 15952 ft. c#20 = \$319.04
 Nails 5 kegs @ \$3.00 15.00
 Increase floor 1920 #20 38.60
 372.64

"D" Street extension Trestle estimates.

One bent 40' high	b.m.
1 Cap. 22'l. 10 by 10 =	185
4 Post. 38'l. 10" 10"	1265
4 Sills 4'l. 10" 10"	135
2 Ties 28'l. 3" x 6"	85
For bent.	1670
Difference for 1' 35 1/3 feet.	
1 span of floor etc	
10 Joists 22'l. 3" by 14"	770
Floor 18' x 20' x 3"	1080
Long. Sur 2' 22'l. 4" x 8"	176
Hand rail 20'l. 3" by 4"	20
" Post. 3' 5'l. 3" x 4"	15
" Braces 3' 4'l. 3" x 4"	12
Scant 2' 20'l. 1 1/2" x 8"	40
For 20 feet	2113
" 100 feet	10565.

Memoranda of Quantities.

Cut at 27th Street C.Y.	1500
" 28th 29 " "	1000
" 30th Street " "	2000
" by 31st Street " "	400
" 32nd Street " "	6000
Total C. Ys.	10900

Trestle 26th Street	\$ 1750
" 28th " "	" 1125
" Entire 29 & 30 " "	" 1350
" 31st Str.	" 1125
	<u>\$ 5350</u>
10900 Yds Excavat. 0.00 =	5450
Making	\$ 10800
March 3rd 1893.	

"J" Street Extension.

Quantities in post sill & Caps.

Jan'y 18th 1893

In 1871? C.T. Fox ran in
Centers on "H" Street eastward
to Pueblo Line, or "36th St"
and south on 36th to the
line of National City.

Cap. 24" x 10" by 10"

HS. 2, 5' 10" 4"

Or 2, 4' 10" 4"

D Street extension

Trestle 26th str 63360

63360 x 22.50

1295

Carpentry & Raising etc

305

1600

Trestle 28 street 43400

43400 x 22.50

1000

Carpentry & c

250

1250

Between 29th & 30th 51000

51000 x 22.50 =

1157.00

Carpentry & c

275.00

1425.00

3rd Street same as 28th # 1250

Total

675

1600

1250

1425

1250

5325

Greatest height & length 400'.
Including drayage.

Greatest h 33.5 l. 275 ft.

Greatest height 38 1/2 l. 300 ft.

Ex car

1500

1000

2000

400

6000

10900

5400

Greatest height

New

Excavation

1550

1000

1350

1125

5350

5400

10750

8400

500

4200.

5330

9550.

Trestle Quantities.

For each bent & one span.

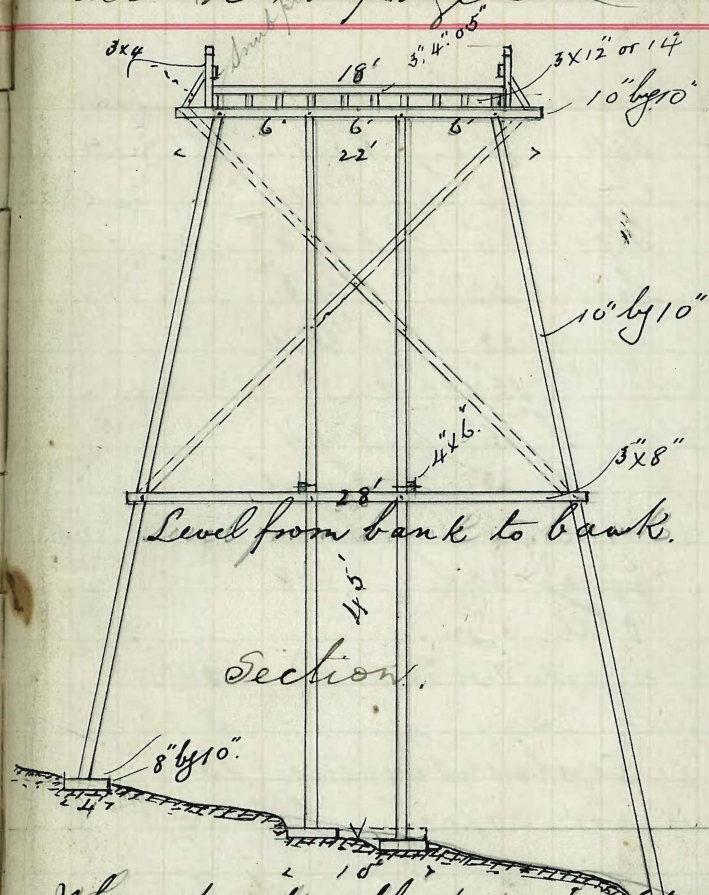
H. Posts

R.M.

50		4167
48		4100
45		4000
42		3934
40		3857
38		3770
35		3670
32		3570
30		3510
28		3445
25		3350
22		3250
20	Drop ties	3140
17		3030
15		2965
12		2865
10		2765
8		2665
5		2485
2 1/2	Sill, no posts.	2290

For "D" Street.
See next page

18



When practicable put upright posts on same sill.
Difference for 1 foot. $33\frac{1}{3}$ ft.
See next page for details

Estimate: 1 Cent of Trestle
18 feet wide 35' high 028' 0.

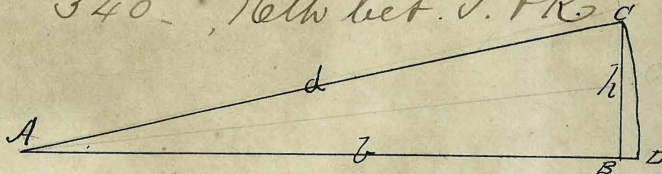
				B.M.
4	Posts	35' l.	10" by 10"	1168
4	Sill	4' l.	8" by 10"	106
1	Cap.	22' l.	10" by 10"	184
2	Pies	26' l.	3" by 8"	108
2	Long ties	22' l.	4" by 8"	110
10	Joists	22' l.	3" by 14"	770
	Floor	18' x 20' x 3"		1080
	Ho. Rail	2, 16' l.	3" by 4"	32
	"	6, 5' l.	3" by 4"	30
	"	6, 5' l.	3" by 4"	30
2	Sm. ty	20' l.	2" by 8"	53
	Total B.M.			3670

3670 @ \$22.50 delivered \$82.92
Nails Day 5.00
Carpentry raising 15.00
Day for 20 feet \$100.92

An embankment of 12 1/2' high }
= Area 446 x 20' = 8920 cft }
323 C. Yr. @ 33 3/4 = \$108.00 }
Trestle 35' h. = Embk 14' d 18' wd.

A. Hamlin.

340. 16th bet. J. & K. a



Having measured an incline distance $AC = d$, knowing the sine $CB = h$ of $\angle CAB$, = the difference $BD = \delta$, of the distance d and the horizontal distance AB , sought may be put.

$$\delta = \frac{h^2}{2d}, \text{ or } b = d - \delta.$$

Useful to find true distance by measuring the slope length of blocks in City surveying.

An embankment of 9 or 12 1/2 feet at 50- or 30 cts aparo. will cost as much as a trestle 35' high. (18' wide)

Return to City Engineers Office
City Hall, San Diego, Cal.

TRAVERSE TABLE FOR TRANSIT BOOK.

From 49° 00' 00" for a distance of 100

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

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