

479

F.B. 479

IND

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	2 $\frac{1}{2}$	21	49	41	95 $\frac{1}{2}$
2	4 $\frac{1}{2}$	22	51 $\frac{1}{2}$	42	98
3	7	23	53 $\frac{1}{2}$	43	100 $\frac{1}{2}$
4	9 $\frac{1}{2}$	24	56	44	102 $\frac{1}{2}$
5	11 $\frac{1}{2}$	25	58 $\frac{1}{2}$	45	105
6	14	26	60 $\frac{1}{2}$	46	107 $\frac{1}{2}$
7	16 $\frac{1}{2}$	27	63	47	109 $\frac{1}{2}$
8	18 $\frac{1}{2}$	28	65 $\frac{1}{2}$	48	112
9	21	29	67 $\frac{1}{2}$	49	114 $\frac{1}{2}$
10	23 $\frac{1}{2}$	30	70	50	116 $\frac{1}{2}$
11	25 $\frac{1}{2}$	31	72 $\frac{1}{2}$	51	119
12	28	32	74 $\frac{1}{2}$	52	121 $\frac{1}{2}$
13	30	33	77	53	123 $\frac{1}{2}$
14	32 $\frac{1}{2}$	34	79 $\frac{1}{2}$	54	126
15	35	35	81 $\frac{1}{2}$	55	128 $\frac{1}{2}$
16	37 $\frac{1}{2}$	36	84	56	130 $\frac{1}{2}$
17	39 $\frac{1}{2}$	37	86 $\frac{1}{2}$	57	133
18	42	38	88 $\frac{1}{2}$	58	135 $\frac{1}{2}$
19	44 $\frac{1}{2}$	39	91	59	137 $\frac{1}{2}$
20	46 $\frac{1}{2}$	40	93 $\frac{1}{2}$	60	140

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



MANUFACTURED BY

A. S. Crocker & Co.

SAN FRANCISCO
and
SACRAMENTO

MICROFILMED
DEC 11 1974

Crocker
Walnut
63

173

Publish
Materia

Table sh
runni

MINUTES.

- 1.....
- 2.....
- 3.....
- 4.....
- 5.....
- 6.....
- 7.....
- 8.....
- 9.....
- 10.....
- 11.....
- 12.....
- 13.....
- 14.....
- 15.....
- 16.....
- 17.....
- 18.....
- 19.....
- 20.....

TA

In the follow
numb
chain

ANGLE

LI

- °
- 4
- 5
- 6
- 7
- 8
- 9
- 10

30" & ash. N.W. cor. 226.77
S.W. cor. 30" & "B" 217.89

Sta 44+50 = 170.72

Olive + Indiq SE BP 100.96

1st + Brooks NW BP 752.90

1200
63
1897

1320
507
06
79.00

10096
078
101.4
12.75
89.96
2.40
1943
12.48
76.67
70.69
77.16
12.17
64.99
6.07
432
67.5
8.0
71.45

1897
76.10

M.H. Olive = 4610

M.H. Palm = 5245

200
2028 B.M.

6275
203
6295 H8

1134
51.63

382

635

352

2580

2192

2380

2280

2280

2280

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1.41

1.33

0.162

0.045

1.00

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

300

63.05 - 29th + 21

64.00 -

69.20 -

72.50 - alley bet L + K

17.77
14.59
3.17

6056
14.74
6235
8.11
51.14
52.20
56.84

1375
1430
4805 = cover

1195
5020 ground

49.05

5110 = 48.05

+ 30. 48.48 13.87 3' cut

+ 40 = cut house 49.05 7.79 3' cut

49.40

49.25

1.3

49.05

Sevier lines East of 30th
& west of Chollas Valley.

alley line bet. G & H from
to Cholla Valley.

Sta		H.I.	Rod	Elev.
0+00	40' East of 31 st	92.44	4.5	87.9
+50			4.2	88.2
1+00	82.76 B.M.		4.8	87.6
+50	9.68 92.44		4.7	87.7
2+00	7.04 85.40 TP.		5.1	87.3
+50	3.67 89.07		5.9	86.5
3+00			6.6	85.8
+50			7.7	84.9
4+00		89.07	5.1	84.0
+50			5.6	83.5
5+00			6.3	82.8
+50			6.6	82.5
+81			6.8	82.3
+82			7.7	81.4
+90.8	Center 32 nd St.		7.3	81.8
6+00			7.7	81.4

40' East 31st

July 16/09

J. Shields
Barber
Eckman 1

Sta	H.I.	Rod	Elev.
6+12	89.07	7.8	81.3
+15		6.8	82.3
+50		7.0	82.1
7+00		6.8	82.3
+50		6.8	82.3
8+00		6.9	82.2
+50		7.5	81.6
+75		9.4	79.7

D/H. street line from 200' west of center 32nd to Sholla Valley. A

Sta.	H.I.	Rod	Elev.
0+00	200' west of 32 nd	89.07	2.6 86.5
+50			4.0 85.1
1+00		5.0	84.1
+50		5.5	83.6
2+00	center 32 nd	6.1	83.0
+50		6.6	82.5
+76		6.3	82.8
+82		7.9	81.2
3+00		7.6	81.5
+02		7.5	81.6
+05		6.5	82.6
+50		6.2	82.9
4+00		6.4	82.7
+50		6.9	82.2
+65		7.7	81.4

32nd Street line from center H to center alley bet. H & G July 16/09

(Childs
Barb
Cokorale)

C

Sta	H.I.	Rod	Elev.
0+00	Center H Street	89.07	6.1 83.0
+50			6.5 82.6
1+00			6.5 82.6
+50			6.8 82.3
+99.8	Center alley bet. G & H.		7.3 81.8

83.18
r. 89

I alley line bet. I + J. from
to Cholla Valley

D

July 16/09
Bluffs Barber 34
C. K. ...

Sta.		H.I.	Rod	Elev.
0+00	600' west west line of 31st	83.30	2.8	80.5
+50			4.9	78.4
1+00			5.9	77.4
+50			6.1	77.2
2+00			6.5	76.8
+50	82.76 0.54 83.30 ✓		6.3	77.0
3+00			6.3	77.0
+50			5.7	77.6
4+00			5.3	78.0
+50			5.4	77.9
5+00			5.0	78.3
+50			5.1	78.2
6+00	west line of 31st		4.8	78.5
+50			4.2	79.1
7+00			4.4	78.9
+50			4.2	79.1

Profile of Bluffs

Sta.		H.I.	Rod	Elev.
8+00		83.30	4.1	79.2
+50			3.7	79.6
9+00			3.0	80.3
+50			2.6	80.7
10+00			3.0	80.3
+50			3.1	80.2
11+00		85.02	4.8	80.2
+50	323 80.07 JP 4.95 85.02 ✓		4.9	80.1
12+00			4.5	80.5
+50			4.0	81.0
+79			3.4	81.6
+80			4.2	80.8
13+00			4.0	81.0
+03			3.2	81.8
+21	East line of 32nd		2.7	82.3
+50			2.2	82.8

Cont from page 3

sta.	H.I.	Rod	Elev.
14+00	<u>85.02</u>	1.3	83.7
+50		0.9	84.1
15+00		1.1	83.9
+50		0.6	84.4
16+00		1.4	83.6

July 16/09

Shilts
Barber
Cokeville

4

↓ alley line bet. J + K from 600'
to Cholla Valley.

Sta	H.I.	Rod	Elev
0+00	600' west of 31 st	80.08	6.9 73.2
+50	76,300 M		6.7 73.4
1+00	3.78 80.08		6.3 73.8
+50			6.2 73.9
2+00			6.1 74.0
+50			6.0 74.1
3+00			6.4 73.7
+50			5.9 74.2
4+00			5.9 74.2
+50			5.7 74.4
5+00			5.3 74.8
+50			4.8 75.3
6+00	West line 31 st		4.7 75.4
+50			4.4 75.7
7+00			4.0 76.1
+50			3.4 76.7

Cholla Valley

west of 31st

July 17/09

{ Shields
Barber
Taylor } 5

Sta.	H.I.	Rod	Elev.
8+00	80.08	2.8	77.3
8+50		1.9	78.2
9+00		1.4	78.7
+50	0.84 79.24 SR	87.07	6.7 80.4
10+00	7.83 87.07		6.4 80.9
+50			6.2 80.9
11+00			5.8 81.3
+50			5.3 81.8
12+00			3.9 83.2
+50			4.2 83.9
+80			3.4 83.7
+83			5.8 81.3
13+00			5.4 81.7
+03			4.3 82.8
+21.22	East line 32 nd		4.1 83.0
+50			4.3 82.8

Cont. - from page 5

Sta.	H.I.	Rod	Elev.
14+00	87.07	5.3	81.8
+50		6.1	81.0
15+00		6.0	81.1
+50		5.7	81.4
16+00		5.7	81.4

July 17/09

L. L. H. No
Barber 6
Taylor

G

alley bet. K & L 34.7 west 32nd to
Cholla Valley

Sta.	H.I.	Rod	Elev.
0+00	34.7 west 32 nd = 85.22 20+40 Book 200 Page 79	6.3	78.9
+34.7	Westline 32 nd	5.9	79.3
+50		5.7	79.5
+55	84.24 B.M. 0.98 85.22 ^v	6.1	79.1
+75		6.1	79.1
+79		5.0	80.2
+100		4.8	80.4
+50		3.4	81.8
+200		3.3	81.9
+50		4.0	81.2
+90		6.0	79.2

↓ alley line bet L & M from center 30th valley.

Sta		H.L.	Rod	Elev.
0+00	old Manhole grade 70.0 center 30 th	81.99	7.6	74.4
+19	76.54 B.M. 6.45 81.99 ✓		7.7	74.3
+20			6.9	75.1
+30			6.7	75.3
+36			8.8	73.2
+50			8.6	73.4
1+00			7.8	74.2
+50			7.6	74.4
2+00			8.0	74.0
+50			7.7	74.3
3+00			7.0	75.0
+50			6.6	75.4
4+00			6.3	75.7
+50			5.8	76.2
5+00			5.1	76.9
+50			5.0	77.0

to cholla

July 19/09
Schields
Barber
Taylor 7

Sta.		H.L.	Rod	Elev.
6+00		81.99	4.6	77.4
+30.3	Westline 31 st		4.4	77.6
+50			4.6	77.4
7+00			4.1	77.9
+50			4.4	77.6
8+00			4.8	77.2
+50			5.7	76.3
9+00			5.9	76.1
+50			6.1	75.9
10+00			6.1	75.9
+50			5.8	76.2
11+00			5.3	76.7
+50	5.74 76.25-JR 5.18 81.43 ✓	81.43	4.7	76.7
12+00			4.2	77.2
+41.7	gate 72.43		5.5	75.9
+50			5.4	76.0
+68			6.6	74.8

Cont. from page 7

Sta.	H.L.	Rod	Elev.
12+91.7 west line 32 nd	81.43	6.7	74.7
13+00		6.9	74.5
+12		6.6	74.8
+17		5.2	76.2
+35		6.4	75.9
+50		6.9	74.5
14+00		6.4	75.0
+50		4.1	77.3
15+00		3.7	77.7
+50		3.62	77.81

July 19/09
Chilts
Barber
Tayler 8

alley line bet. M + N from center
to 488.5 East 31st K

Sta.		H.I.	Rod	Elev.
0+00	Center 30 th 76.54 2.05 78.594	78.59	4.6	74.0
+50			5.0	73.6
1+00			4.9	73.7
+50			5.3	73.3
2+00			4.9	73.7
+50			4.8	73.8
3+00			5.6	73.0
+50			5.1	73.5
4+00			4.9	73.7
+50			5.7	72.9
5+00			5.2	73.4
+50			5.0	73.6
6+00			4.9	73.7
+50			4.9	73.7
+90.5	East line 31st		4.8	73.8
7+00			4.6	74.0

30th street

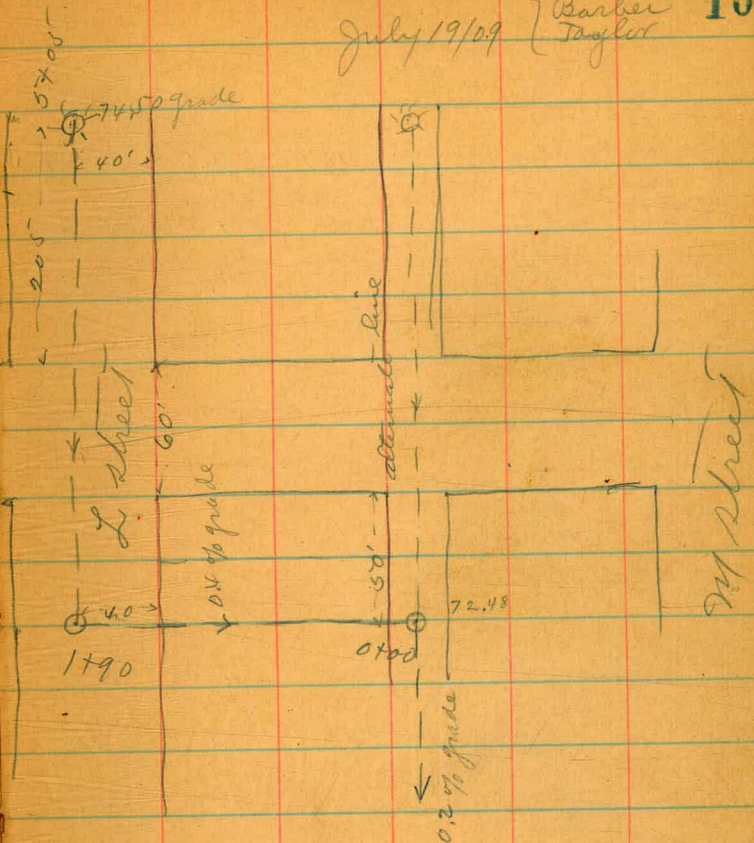
July 19/09

Childs
Barber
Taylor 9

Sta		H.I.	Rod	Elev.
7+50		78.59	4.7	73.9
8+00			3.8	74.8
+50			3.2	75.4
9+00			2.5	76.1
+50			2.1	76.5
10+00			2.4	76.2
+50			3.8	74.8
11+00			4.5	74.1
+50			4.4	74.2
+80	grade 71.86		3.7	74.9
				3.34

line on L + across to alley bet
L & M,

Sta.	H.I.	Rod	Elev.
0+00	grade 72.48 center alley bet M + L. 50 west 32 nd	6.0	75.9
+10		6.0	75.9
1+00	78.00 B.M.	3.6	78.3
+18	3.93	5.2	76.7
+50	81.93 ^v	4.6	77.3
+64		4.7	77.2
+65		5.8	76.1
+90	center L street	4.5	77.4
2+00		4.6	77.3
+10		4.5	77.4
3+00	East line 82 nd	3.6	78.3
+10		2.4	79.5
4+00		3.5	78.4
+50		3.4	78.5
5+00		2.5	79.4
+05	grade 74.50 205' East of 32 nd	2.1	79.8



Sewer line in alley bet. G + H from
435' East of center 29th

Center 29th To

July 21/09

Childs
Barker
Taylor 11

Sta.	H.T.	Rod	Elev.	Grade	Cut
0+00	Center 29 th Pt. 133.46	0.6	132.9	120.15	12.8
+35	131.95 J.P. Sta 16+00 124.52	4.2	130.3	120.29	0.0
+50	131.57 133.46 ✓ 12.99 main line	5.4	119.1		
+65	120.57 J.P. 3.95 124.52 ✓ 0.4% grade	6.6	117.9		
+69	6.27 138.22 ✓	8.4	116.1		
+73	0.43 138.09 J.P. 11.98	6.4	118.1		
1+00	150.07 ✓ 0.44 149.63 J.P.	11.6	121.9	120.55	1.3
+35	12.80 162.43 ✓ 8.33	11.3	126.9	120.69	6.2
+50	168.37 ✓	7.9	130.3		
2+00	150.07	9.1	141.0		
+30		0.7	149.4		
+50	162.43	10.2	152.2		
3+00	M.H.	2.39	160.04		
+50	168.37	5.7	162.7		
4+00		4.6	163.8		
+35	F.S.	5.77	162.60		

Starting from a point 570.43 East of the M.H.
bet. L + K going north across private property

at center 29th or center alley
and up center of 30th to post.

July 21/09
Schields
Barber
Taylor 12

Sta	H.I.	Rod	Elev.
0+00	center alley bet. L + K. 570.43 East center 29 th	78.68	7.78 70.90
+50			8.6 70.1
1+00	75.09 B.M.		6.9 71.8
+50	5.59 78.68		6.9 71.8
+63			7.1 71.6
+65			7.9 70.8
+89.28	center K. street +30 th .	68.1	71.87
2+00		6.8	71.9
+50		5.7	73.0
3+00		5.3	73.4
+50		4.8	73.9
+79.05	center alley bet. J + K (produced)	4.6	74.1
4+00		4.2	74.5
+50		3.6	75.1
5+00		3.1	75.6
+0.5	H.I. about 25' from J street	3.1	75.6

6892

6968

at center alley line bet. K & J produce
 from 600' west of (29th) 31st

to center 30th

July 21/09
 Shields
 Barber
 Taylor 13

Sta.		H.I.	Rod	Elev
0+00	= 600' west 29th on center alley line	78.68	5.5	73.2
+50	bet. K & J.		5.8	72.9
1+00			5.8	72.9
+50	7509 B.M. J + 30th 3.19 78.68		6.1	72.6
+99			5.8	72.9
2+00			5.1	73.6
+40.4	^{3+79.05} center 30th street		4.6	74.1

Sewerline & K & Dodson frame
to J & Dodson. H

center K+30th

July 21/09

Childs
Barber
Taylor

14

Sta.		H.I.	Rod	Elev.
0+00	center K+30 th	79.93	8.06	71.87
+50			7.7	72.2
1+00			7.2	72.7
+50			7.9	72.0
2+00			7.2	72.7
+50			6.9	73.0
+81	center K+Dodson		6.7	73.2
3+00			6.3	73.6
+20	165 78.28 JP.		5.7	74.2
+23	643 84.71 ✓		6.4	73.5
+50			6.4	73.5
4+00			6.1	73.8
+50			5.6	74.3
5+00			3.9	76.0
+50			1.1	78.8
6+00	F.I. about 21.7 fms J. 89°02'	84.71	2.9	81.8

Sewer line starting at a point on
center B and up center B to alley

Sta		H.I.	Rod	Elev.
0+00	60'20" center B + 32 nd on center 32 nd	191.14	9.8	181.3
+17			9.3	181.8
+19			10.9	180.2
+50			10.8	180.3
0+60	Center 32 nd B.		10.49	180.6 180.6
1+00			9.7	181.4
+05			9.3	181.8
+50		203.15	10.8	192.4
2+00		215.63	11.7	203.9
+25	M.H.		8.19	207.44
+50		12.89 202.74 J.P. 41 203.15	6.1	209.5
3+00		12.97 190.18 J.P. 0.96 191.14	4.0	211.6
+50			3.1	212.5
4+00			3.0	212.6
+50			3.8	211.8
5+00			4.7	210.9
+50			5.6	210.0

center 32nd 60'20" of July 22/09
bet. 31st + Ida + up alley Blk 1 cross. add.

Calhoun
Barber
July 16

Sta		H.I.	Rod	Elev.
5+82.90	M.H. center alley bet. Ida + 31 st	215.63	6.3	209.3
6+00			6.3	209.3
+09			6.3	209.3
+10			5.7	209.9
+23	210.43 T.P. 5.20 215.63		4.9	210.7
+24			0.7	214.9
+50	13.03 223.46	223.46	7.4	216.1
7+00			5.2	218.3
+50	0.67 222.95 J.P. 4.03 226.98		3.4	220.1
8+00			1.4	222.1
+50		226.98	2.6	224.4
9+00	F.I. about 23' from A Street		0.92	226.06
			9.4	
			11.9	

Beginning at a point in center alley bet. 29th measuring in a straight line to the

Sta.	H.I.	Rod	Elev.
0+00	center alley bet. L & K + 570'43" East of M.H. 79.99	9.09	70.90
+50	center 29 th grade 68.27	9.6	70.4
1+00		8.5	71.5
+37		8.2	71.8
+45		6.8	73.2
+50		6.9	73.1
2+00		6.2	73.8
+50		5.2	74.8
+56		5.1	74.9
+63		6.7	73.3
+71		4.9	75.1
+94		4.9	75.1
3+00		5.8	74.2
+50		4.7	75.3
+87		5.0	75.0
+90		4.3	75.7

K+L and 57843 East. of the center
 M.H. Center alley bet. L + M. 4 center 29th
 + South to M.H. bet. M + N. July 22/09
 Schields Barber 17 Taylor

Sta	H.I.	Rod	Elev.
4+00	79.99	4.0	76.0
+14		3.8	76.2
+21		6.2	73.8
+33		5.7	74.3
+42		4.1	75.9
+50		4.1	75.9
5+00		4.2	75.8
+14		4.4	75.6
+20	6.30 73.69 S.P. 2.38 76.07	5.3	74.7
+50		5.0	75.0
6+00		5.0	75.0
+50		4.4	75.6
+86.5	grade 65.52 center 29 th + alley bet. L + M,	4.7	75.3
7+00		5.3	74.7
+50		6.0	74.0
8+00		6.4	73.6

Cont. from Page 17

sta	H.I.	Rod	Elev.	Grade
8+50	<u>76.07</u>	3.8	72.3	
9+00		4.5	71.6	
+14		4.0	72.1	
+22		3.1	73.0	
+50		2.9	73.2	
10+00		5.4	70.7	
+50		6.3	69.8	
+66.4	M.H. Center 29 th + alley bet. M+M.	6.0	70.1	64.00

July 22/09

Childs
Barber
Taylor

18

Line on 31st street from ^{center} alley bet. J + K
 F

J + K to ^{center} alley

July 22/09
 Childs
 Barber 19
 Taylor

Sta.	H.I.	Rod	Elev.
0+00	center alley bet. J + K	3.0	78.6
+50		3.3	78.3
1+00		3.6	78.0
+50	76.30 5.30 81.60 ^v	5.1	76.5
2+00		5.2	76.4
+50		5.8	75.8
3+00		5.9	75.7
+50		6.0	75.6
+79.85	center alley bet. J + K	6.1	75.5

D. Line on 32nd from center alley bet. I & J
alley bet. I & J, C

H to center

July 22/09
Childs
Barber
Taylor 20

Sta.	H.I.	Rod	Elev.
0+00	Center alley bet. I & J + G	87.67	6.2 81.5
+50			6.1 81.6
1+00		5.9	81.8
+50	83.18 B.M. 4.49	6.0	81.7
2+00	87.67	5.9	81.8
+50		6.1	81.6
3+00		5.9	81.8
+50		5.7	82.0
+79.86	Center alley bet. I + H,	5.9	81.8

Not in

Preliminary Survey Levels in
 Lat. M. H. on 29th St. River Line
 30th St.

	H. I	Red.	Elev.
0+00 (M. H. on 29 th St. Line)	143.72	2.5	141.2
+34		6.4	137.3
+37		8.7	135.0
0+40		6.8	136.9
+50		5.6	138.1
1+00	153.41	3.2	150.2
1+50	177.07	12.0	165.1
2+00	189.46	9.7	179.7
2+50	197.54	8.0	189.5
3+00		4.9	192.6
+50		4.2	193.3
4+00		4.0	193.5
+50		4.6	192.9
5+00		4.3	193.2
+50		4.0	193.5
6+00		3.1	194.4

Alley Bet. N. & E. St. Starting
 East to 3+25 East of East Line of

21

Barker
 Taylor
 (Shaw)

Grade

Aug 28/09

Plot E.L.B.

Primary Survey Levels

19754

Sta 6+50

2.5 195.0

7+00

2.3 195.2

+50

2.6 194.9

7+80

3.0 194.5

Cont'd from Last Page, 21

22

L Preliminary sewer from
89+92 west to Present F.I.

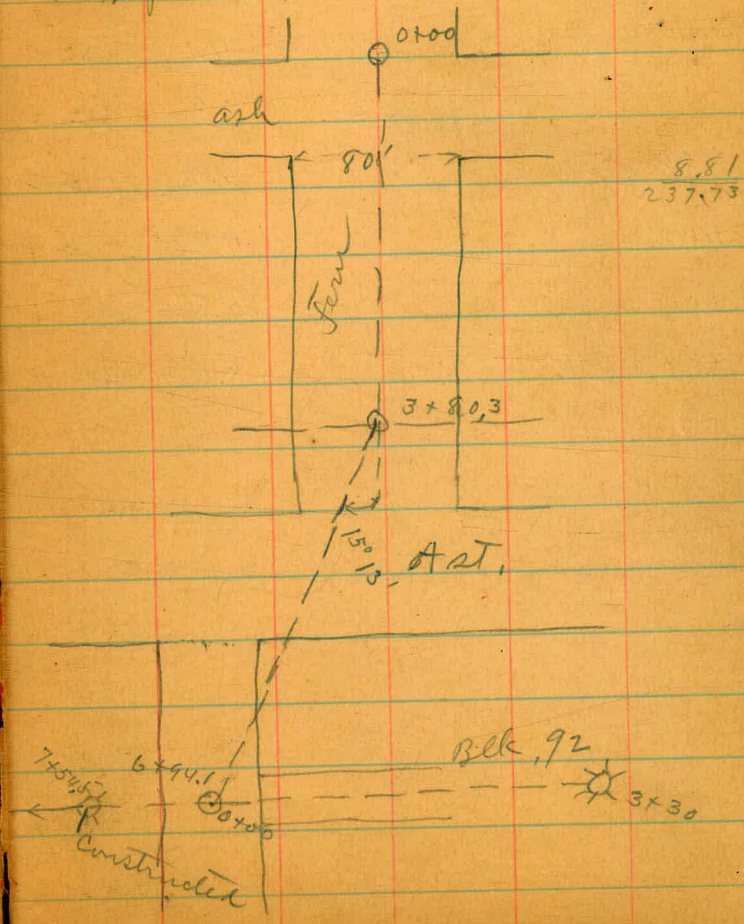
Sta.	H.I.	Red Elev.
0+00	FT. no. line A.A. 237.73 + center from	3.9 223.8
+50		4.0 223.7
1+00	5	4.7 222.0
+50		5.7 222.0
2+00		6.1 221.6
+50		7.0 220.7
3+00		7.9 229.8
+50		8.6 229.1
+80.3	M.H. center from 229.38 + on pueblo line	0.46 228.92
4+00		0.5 228.9
+50	5	1.4 228.0
5+00		2.4 227.0
+50		2.8 226.6
6+00		3.6 225.8
+50		5.5 223.9
6+94.1	M.H. center 30th + alley on blk. 89+92	6.7 222.7

see Page 25

see page 25

30th to alley in Blk. } builds
Barb 23
Aug. 30/09 } Taylor

Sta	POSTED	H.I.	Red Elev.
7+00		229.38	7.0
+25			7.0
+25			5.5
+54.5	present F.I.		5.6



8.81
237.73

Sewer line Blk. 92

Aug 30/09
 Schiller
 Baker
 Taylor 24

Sta.		H.I.	Rod Elev
0+00	N.W. Cor. 30 th & alley bet. 89 & 92	229.38	6.7 222.7
+50			4.7 224.7
1+00			4.1 225.3
+50	POSTED		3.8 225.6
2+00			4.0 225.6
+50			4.4 225.0
3+00			5.8 223.6
+30	F.J.		8.0 221.4

218

$$\begin{array}{r} 217.89 \\ 11.49 \\ \hline 229.38 \end{array}$$

219.0 6.4

From page 23

	H.I.		
3+80.3 = E. Fern St & Pueblo Line			
3+80.3	229.95	1.0	228.95
4+00		0.9	229.0
4+10 M.H. AR. 27°30'		1.05	228.9
4+50		2.0	227.9
5+00		2.6	227.3
5+50		3.6	226.3
6+00		4.7	225.2
6+50		4.2	223.7
7+00		5.9	224.0
7+18.8 F.T. Top COVER		6.2	223.7
E. end BK 89 E.M. Morse.			

9-8-09

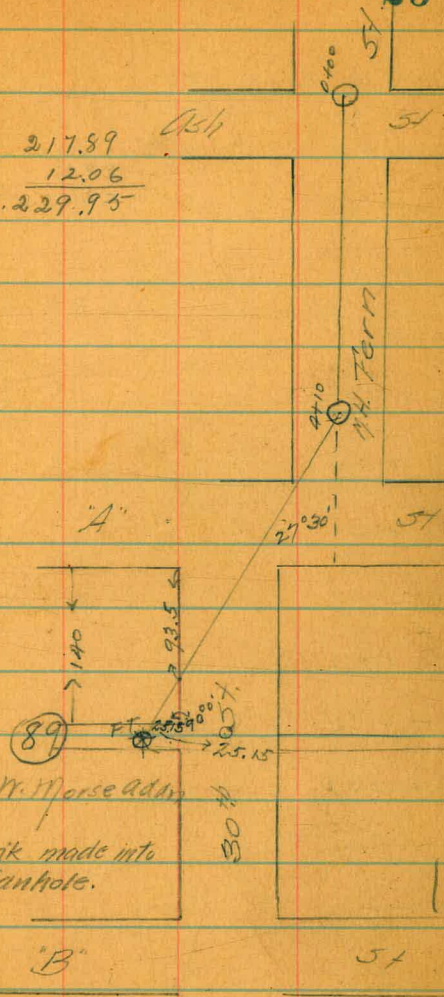
Lockwood.
Waus.
Lambert.

B.M. 30th & B - 217.89

12.06

H.I. 229.95

25



140
25.15
26.5

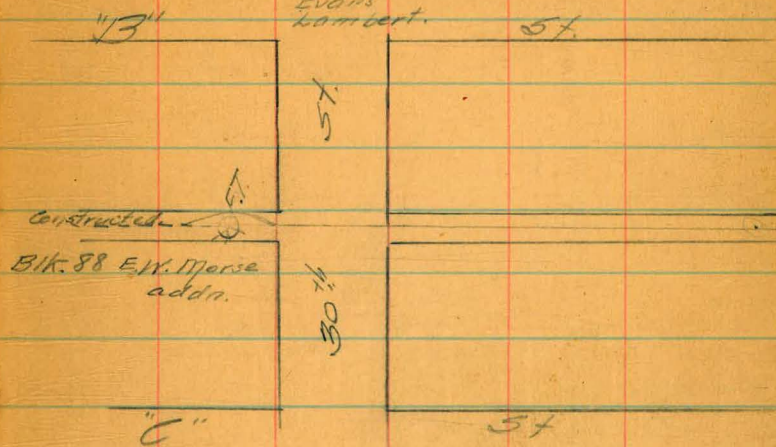
Commence at F.T. east end, BIK.
 Alley to sta. in BIK

0+00 - Centre F.T.	219.43	13.4	206.0
0+25		7.0	212.4
10+30		12.3	207.1
0+50		12.7	206.7
1+00		10.2	209.0
1+50		10.1	209.3
2+00		10.1	209.3
2+50		6.3	213.1
3+00		3.8	215.6
3+50		4.6	214.8
4+00		5.3	214.1
4+50		10.3	209.1

88 E. W. Morse Addr. Thence E. & 26

9-8-09

Lockwood.
 Evans
 Lambert.



B.M. 217.89

1.54

219.43

↓ Preliminary Survey Line from Fern St from N Line Ash St. North 27
 Fern St.

N. Line Ash St	H.I.		
0+00	277.44	3.6	273.8
0+50		2.8	274.6
1+00		3.6	273.8
1+50	5	3.5	273.9
2+00		3.9	273.5
2+50		5.0	272.4
3+00 S. Beach		5.4	272.0
+50		5.2	272.2
4+00		4.5	272.9
+50		4.6	272.8
5+00		5.2	272.2
+50		6.6	270.8

307 Ash N. Line
 317 266.77
 10.67
 41 277.44

alley Bk, 1 Gross add. A street.

+ 31st

Oct 5/09

Jahilds
Barber 28
Taylor

Sta.	H.I.	Rod Elev.	Sta.	H.I.	Rod Elev.
0+00	Sta 9+00 Page 16 of alley line in Bk-1.	229.24	3.17	226.0	6+00
+35			3.0	226.2	+6.18 Rod line Ash.
+38			3.8	225.4	+5.0
+50			3.3	225.9	7+00
+62.9	M.H. Center A Street		2.62	226.6	+5.0
1+00			3.3	225.9	8+00
+50	11.35 217.89 229.24		4.2	225.0	+5.0
2+00			5.1	224.1	9+00
+14.95	M.H. Center A St. 43rd going north		6.02	223.1	+5.0
+50			5.6	223.6	+7.0 F.S. Near Beech
3+00			4.0	225.2	
+50			2.6	226.6	
4+00	0.05 229.19 J.P.D.		0.0	229.2	
+50	10.76 239.95 ✓	239.95	8.5	231.5	
5+00	0.86 239.09 J.P.D.		7.8	232.2	
+50			6.5	233.5	

Line on A street & Ida

Sta.	M.H. center A	H.I.	Rod	Elev
0+00	= Sta. 0+62.9m Page 28	229.24	2.62	226.6
+50			1.7	227.5
1+00			1.3	227.9
+28	M.H. center A St. + Ida going north	115		228.1
+50			1.5	227.7
+68	239.09 J.P. @ 329		0.2	229.
+70	242.38 ✓	242.38	12.4	230.0
2+00			11.6	230.8
+50			10.5	231.9
3+00			9.4	233.0
+50			8.2	234.2
4+00			7.3	235.1
+50			6.1	236.3
5+00			5.1	237.3
+23.35	Robin ash		4.5	237.9
+50			4.3	238.1

Street

Sta

6+00

+50

7+00

+50

F.I.

Oct. 5/09

Childs
Barber 29
Taylor

H.I.

Rod Elev.

242.38

4.0 238.4

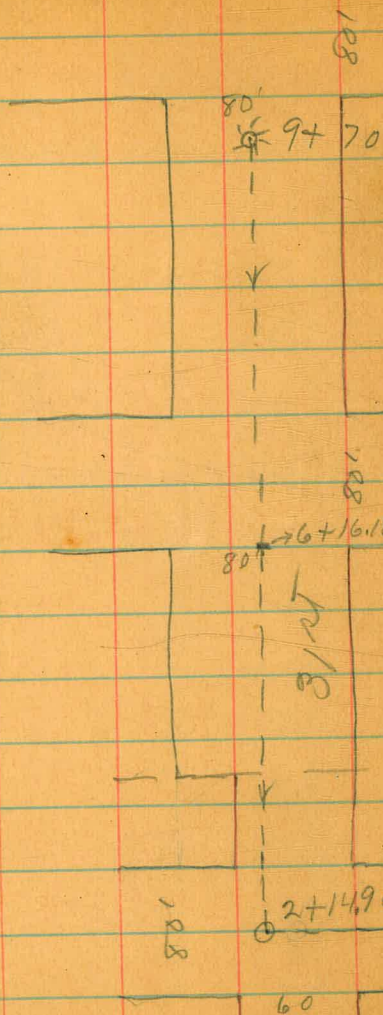
4.0 238.4

4.4 238.0

7.53 234.9

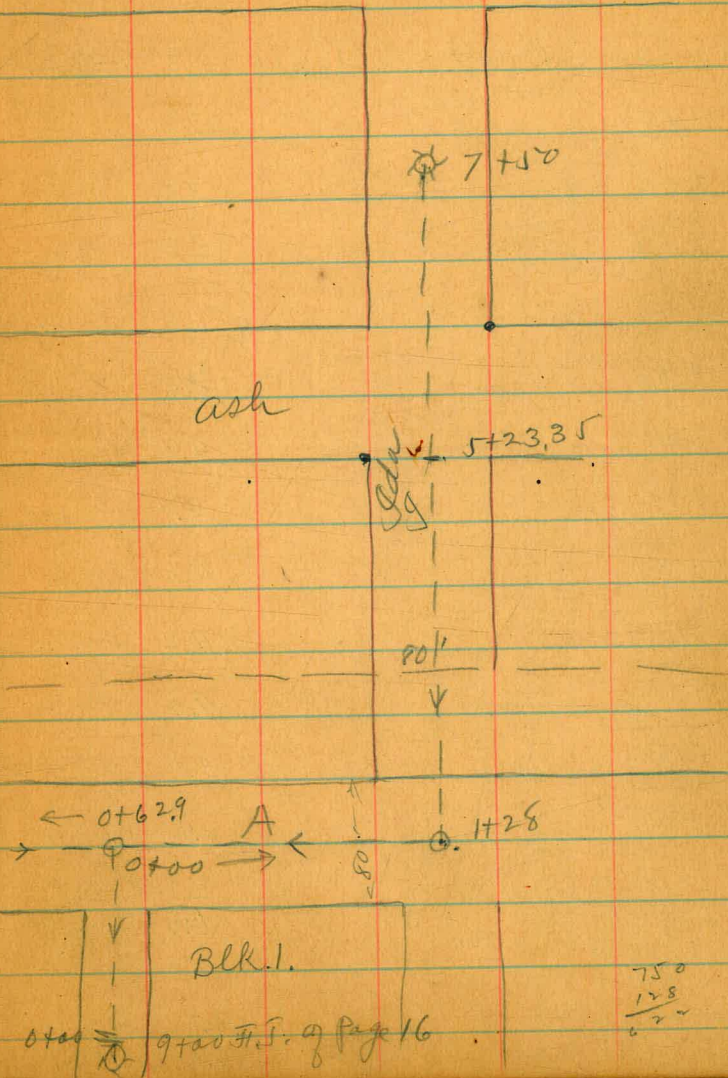
see diagram next page

214.95
 62.9
 152.05
 33



Oct. 5/09
 Heilichs
 Barber
 Taylor 30

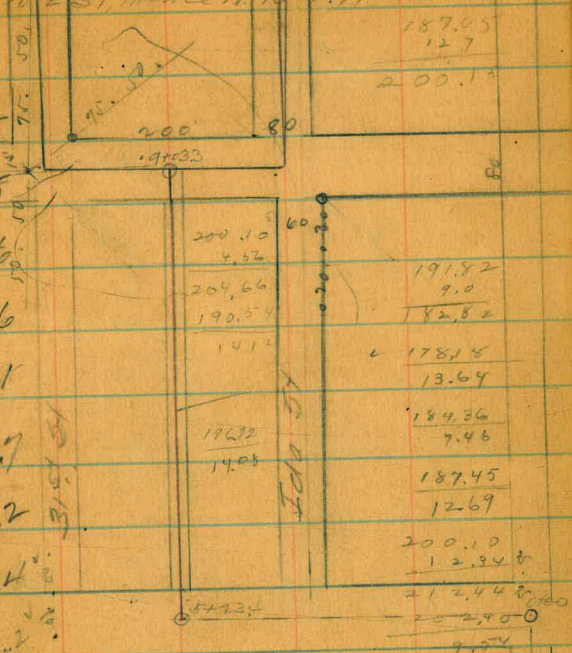
Beech



750
 128
 622

226.77
 228.29
 179.97
 170.93
 193.04
 193.04 12.5 180.5
 12.4 180.6
 10.2 182.8
 4.1 188.9
 204.87 10.4 194.5
 4.8 200.1
 215.37 9.7 205.7
 5.3 210.1
 3.3 212.1
 2.7 212.7
 2.6 212.8
 3.6 211.8
 4.5 210.9
 5.5 209.9
 6.06 209.31
 2234 M.H.T.P.
 inter Bailey RR of Ida

172.00 8.5
 175.09 5.5
 178.18 4.6
 181.27 7.6
 184.36 10.1
 187.45 12.7
 190.54 15.2
 196.72 13.4
 202.90 9.2
 203.36 9.3
 203.83 9.0
 204.29 7.5
 204.76 6.1
 205.22 4.7
 205.55 3.7
 B.M. Hub
 180.17 203.36 180.17
 12.87 13.06 11.65
 173.04 191.82
 0.14 0.75 T.P.
 172.60 12.59 191.07
 12.27 9.07
 204.87 204.29 200.14
 0.40 0.04
 204.47 12.13 200.10 = T.P.
 10.90 1.070
 215.37 204.70 210.80
 6.06 11.66 212.44 H.P.
 209.81 205.22 2.29
 12.72 11.20 210.45
 222.08 6.27
 205.55 216.42
 10.87



5+50 B.M. 222.03 12.20 209.83
 6+00 5.6 216.4
 7+00 3.3 218.7
 7+00 F.P. 1.46 220.57
 +25 Vertical Curve 229.13 6.5 222.6
 8+00 4.3 224.8
 9+00 2.9 226.2
 9+00 Not in
 9+03.3 M.H. \pm A St. 2.5 226.6
 and align m. of Idast.
 +50 3.3 225.8
 10+00 4.3 224.4
 11+00 5.4 223.7
 11+55.5 M.H. \pm 31st North 5.9 223.2
 11+00 5.3 223.8
 11+50 3.6 225.5
 11+56.2 Public Line
 12+00 B.M. T.P. 2.05 222.08

207.19 2.6 207.19
 9.23 222.03 221.83
 210.28 6.1 210.28
 12.07 220.57 220.37
 213.36 5.3 213.36
 8.99 229.13 228.93
 216.45 4.1 216.45
 5.90 227.08 226.88
 218.00 4.5 218.00
 218.14 6.4 218.14
 4.35 216.42 H.I.
 4.21 209.88
 218.42 7.5 218.42
 3.93 12.52
 218.70 222.35 H.I.
 218.98 8.65 218.42
 12.57 220.57
 219.00 7.6 219.00
 3.35 218.70
 12.29 220.99 H.I.
 219.31 6.5 219.31
 11.99 227.45 H.I.
 219.64 5.2 219.64
 219.81
 8.14 221.09
 219.96 3.7 219.96
 7.81 6.36
 222.33
 5.12
 219.96 2.7 219.96
 7.49 223.56
 220.00 3.89
 7.45
 222.33 3.2 222.33
 223.56 3.5 223.56

127.50	23842	8.7	229.7	✓ 224.78	4.9	224.78	227.08	226.88
						11.74	11.34	11.34
134.00		7.0	231.4	✓ 226.02	5.4	226.02	238.42	238.22
+40 V. Curve.				✓ 227.00		10.50	3.20	3.20
+50		6.3	232.1	✓ 227.06	5.0	227.06	235.22	235.02
						9.46	1.22	1.02
144.00		4.8	233.6	✓ 227.33	6.3	227.33	236.24	236.04
						9.19	9.46	7.44
+50		2.6	235.8	✓ 227.61	8.2	227.61	226.78	226.58
						8.91		226.58 = wheels BM
+56.9 = S side Ash St.		3.1	235.3	✓ 227.65	7.6	227.65	227.08	227.08 = BM
							0.37	
154.00		1.9	236.5	✓ 227.89	8.6	227.89	240.83	227.49
						12.94		227.08
+50		1.4	237.0	✓ 228.16	8.8	228.16		9.44
						12.67		236.52
164.00		1.5	236.9	✓ 228.44	8.5	228.44	(Sta 14+50)	0.70
						12.89		235.82 T.P.
180		1.4	237.0	✓ 228.72	8.3	228.72		5.06
						12.11		240.83
174.00		1.5	236.9	✓ 229.0	7.9	229.0		16.77
						11.83		9.80
14 57								297.03
7 43								

174.00
14 57
7 43

Line from N.H. inter. A St. and alley
 thence N. to ash. H.A.

0+00 = N.H. E. A St. & alley N. of Mab. 6

0+00 233.13 6.6 226.5

0+50 5.7 227.4

1+00 5.1 228.0

1+28 N.H. E. A St. & Ida St. 5.1 228.0

1+50 5.3 227.8

2+00 2.6 230.5

2+50 T.P. 1.33 231.80

3+00 238.51 5.6 232.9

3+50 4.4 234.1

4+00 3.5 235.0

4+50 2.2 236.3

4+75 1.8 236.7

1 28
 3 47

bet. Ida & 314 St thence E to Ida

232.93

233.13

219.0 7.5

220.95 6.4

222.90 5.1

224.00 4.0

224.38 3.4

225.24 5.3

226.11 5.7

226.97 5.9

227.84 6.3

228.70 6.3

229.57 6.7

230.0 6.7

35

220.57
 12.56

233.13

1.93

T.P. 231.80

6.71

238.51

230.99 10.1

231.80

6.12

237.92

231.80

6.14

237.94

226.97 226.97

10.95 10.98

227.84

10.08

10.10

228.70

9.24

229.57

8.37

230.00

7.94

Fern St. Line Sewer		Hi.	Rod.	Elv	Grade	Str. Cor.	30 th & B	B.M.	217.89
0+00 - F.T. in alley bet 30 th & B near 30 th								41	230.79
0+00		230.79	7.0	223.8	218.00	5.8	✓		12.96
0+50	b		6.1	224.7	218.82	5.9	218.82		228.71
1+00			6.9	223.9	219.64	4.3	11.76		1.87
1+50			4.8	226.0	220.46	5.5	219.64		230.58
2+00			3.9	226.9	221.28	5.6	10.94	215.00	228.71
2+50			2.7	228.1	222.10	6.0	220.46	12.58	5.92
3+00 = T.P.		2.08	228.71	222.92	5.8	10.12			234.63
3+25 M.H.		1.9	228.9	223.07	5.8	9.30			
30.3' S. of curb to line							222.92		
3+50		235.91	6.9	229.0	223.74	5.3	7.66		
4+00			6.4	229.5	224.56	4.9	223.07		
4+50			5.4	230.5	225.38	5.1	7.51		
5+00			4.7	231.2	226.20	5.0	223.74		
5+50			4.0	231.9	227.02	4.9	10.89		LT
6+00			3.1	232.8	227.84	5.0	224.56		
6+10 F.T.		2.9	233.0	228.0	5.0	10.07			
3.09							225.38		
3.01							7.25		
							226.20		
							8.43		
							227.02		
							7.61		
							227.84		228.00
							6.79		6.63

Series on C⁵ ft. from M.H. at

32nd and C¹¹ west to W Line 1 do

37

	H. 1	Ground	grade			
0+00 = M.H. 32 nd 8' C ¹¹	183.88	10.2	173.7	167.0	6.7	$\begin{array}{r} 217.50 + 40.25 = \\ 170.93 \\ 12.95 \\ \hline 183.88 \\ 1.78 \\ \hline 182.10 \\ 11.89 \\ \hline 193.99 \end{array}$
0+95						$\begin{array}{r} 173.94 \\ 11.22 \\ \hline 180.88 \\ 4.23 \\ \hline 203.19 \end{array}$
0+50		6.5	177.4	173.94	3.5	$\begin{array}{r} 182.10 \\ 11.89 \\ \hline 193.99 \\ 1.14 \\ \hline 192.85 \\ 10.34 \\ \hline 203.19 \end{array}$
0+75 T.P.		1.78	182.10	177.41	4.7	
1+00	193.99	7.6	186.4	180.88	5.5	$\begin{array}{r} 200.93 \\ 3.87 \\ \hline 182.10 \\ 3.06 \\ \hline 185.16 \end{array}$
1+25		4.1	189.9	184.35	5.5	
1+50 T.P.		1.14	192.8	187.82	5.0	$\begin{array}{r} 187.82 \\ 12.56 \\ \hline 192.00 \\ 8.38 \\ \hline 200.38 \end{array}$
1+80 = V. Carre				192.00		
2+00	203.19	6.7	196.5	192.08	4.4	
2+50		5.0	198.2	192.29	5.9	$\begin{array}{r} 192.08 \\ 8.30 \\ \hline 192.29 \\ 8.09 \\ \hline 192.50 \\ 7.88 \\ \hline 192.70 \\ 7.66 \\ \hline 192.91 \\ 7.44 \\ \hline 193.00 \\ 7.34 \end{array}$
3+00		4.2	199.0	192.50	6.5	
3+50		4.5	198.7	192.70	6.0	
4+00		5.3	199.9	192.91	5.0	
4+20 Deadend		5.8	197.4	193.00	4.4	
Back Bunderick's House		5.5	197.7			

Sever on alley N of Center

0+00 = M.H. in Univ. and alley N of Center N of the Univ. Ave.

St and S of Univ. Ave

N.W. cor Univ Bldg 301.73

Brass plate

38

B.M. N.W. cor Center + Univ Ave.
H.R. RR sph near grad. 305.67

bet M.H. 1170 301.73

7.17

308.90

297.20

301.73

7.62

H.L. 309.35

0+00	308.90	6.0	302.9	297.10	5.8	
0+50		6.6	302.3	297.30	5.0	297.30
1+00		2.1	306.8	297.50	9.3	12.66
1+06.3 M.H. Eddy 4' S of S. line Univ. Ave.		2.0	306.9	297.52	9.4	297.52
1+50		2.8	306.1	297.70	8.4	12.44
2+00		3.6	305.3	297.90	7.4	297.70 ✓ 11.65
2+50		4.1	304.8	298.10	6.7	297.90 ✓ 11.45
3+00		3.8	305.1	298.30	6.8	298.10 ✓ 11.25
3+50		4.1	304.8	298.50	6.3	298.30 ✓ 11.05
4+00		4.7	304.2	298.70	5.5	298.50 ✓ 10.85
4+50		5.1	303.8	298.90	4.9	298.70 ✓ 10.65
5+00		4.8	304.1	299.10	5.0	298.90 ✓ 10.45
5+50		6.4	302.5	299.30	3.2	299.10 ✓ 10.25
6+00		6.9	302.0	299.50	2.5	299.30 ✓ 10.05
						4.85

See page 31

Bottom States
12-7-09
Lockwood
Evans
Lambert

105.71
4.81
90

481

2 Preliminary line on 3rd St from

Spruce to Redwood

39

6700 E. 3rd Spruce	277.9	14	276.5
0750		21	275.8
1400		29	275.0
150		37	274.2
2700		44	273.5
750		53	272.6
3700		61	271.8
150 - 10' S. N. line Redwood	78		270.1
4400 - W. Line 3rd & Redwood	66		271.3
750		76	270.3
5700		91	268.8
750		103	267.6
6400		117	266.2

152 M.H. on S. side Redwood
at 2nd St.

2700

W. Line 3rd & Spruce

B.M. 277.00

292
41277.90

260.20

Sever line from F.T. bet. 30

0400 = opposite F.T. in F.T. bet 34 & 41
Heart Lewis St.

0400	295.53	4.0	291.5
0450		4.3	291.2
1400		5.1	290.4
1500		6.2	289.3
2400		7.3	288.2
2425 P. END		7.8	287.5

24th H. near Lewis. M. 011 3rd 40

N.E. Co. Lewis & 3rd RR. Oct. 11 1866.
S. W. " " " 4th B.P. Return

283.80	7.7	283.80 ✓	290.97
		11.90	283.14
284.00	7.2	284.00	12.87
		11.70	Net 295.53
284.20	6.2	284.20 ✓	
		11.50	
284.40	4.9	284.40 ✓	B.M. 283.14
		11.30	12.56
284.60	3.6	284.60 ✓	4.9295.70
		11.10	Bottom slates
284.70	3.0	284.70 ✓	12-14-64
		11.00	Lockwood
			EVANS

Change of Maryland St

9.32

Elev. 114

0+00 both sides at change	322.85	9.91	312.94
0+25			
0+41		7.9	314.9
0+73			
0+98		5.3	317.5
1+24			
		5.8	317.0

5

- 1+24 = inter old sewer
- 0+73 pt on property 30' E. of prop. line
- 0+41 pt 1' from prop. line
- 0+00 = pt on Rahmmer's pipe

Sewer

33.35

312.94			
312.91		312.91	
312.90	7.0	9.79	
		312.90	
		9.80	
312.86	4.6	312.86	
312.83		9.84	
312.80	4.2	312.83	312.83
		9.87	312.89
			10.16

321.84
0.86
322.70 Hi
9.97
312.73

0.0012951

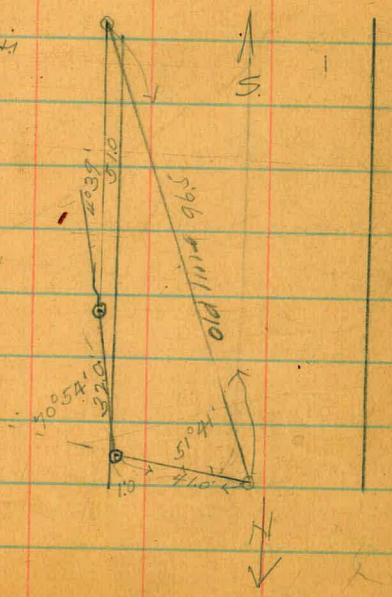
171.55 of s. line Meade

604
11
575
Elev Sewer Prepture 317.83

41

571.5 m. on Cleveland & Meade
RR. spike in pole

344.86
1.05
346.31
12.93
333.38
0.14
333.52
11.68
321.84
1.01
322.85



Levels on Sewer on First from

Maple to Dunsmuir

0+00	229.07	3.8	225.3
+50		4.2	224.9
1+00		4.7	224.4
+50		4.9	224.2
2+00		4.3	224.8
+18.8		6.3	222.8
+50		7.8	221.3
3+00		6.0	223.1
+34		4.3	224.8
+45.2	237.60	7.1	230.5
4+04.9		8.5	229.1
+50		7.1	230.5
5+00		5.6	232.0
+50		4.7	232.9
6+00		4.7	232.9
+50		7.5	230.1

H.I. 229.07
 0.30
 228.77
 8.83
 237.60

Cut stakes for sewer on first see page 42 + 43

Sta.		H.I.	Rod	Ground	Grade	cut		
		4.98		223.99			223.99	
		228.97					5.48	
		229.00					229.47	223.99
0+00	M.H. center manhole + first		3.7	225.3	218.00	7.3	218.28	9.22
+30			4.1	224.9	218.75	6.6	11.22	233.21
1+00			4.6	224.4	218.50	5.9	18.50	219.70
+50			5.2	223.8	218.75	5.0	10.97	73.41
2+00			4.7	224.3	219.00	5.3	218.75	220.02
+15	P.C.		8.8	220.2	219.07	1.1	10.72	13.19
+28.6	Center		9.0	220.0	219.14	0.8	219.00	223.09
+42.2	P.T.		9.2	219.8	219.21	0.6	10.47	10.12
+50			9.0	220.0	219.75	0.7	219.07	219.92
3+00			7.2	221.8	219.50	2.3	10.40	13.29
+30	P.C.		5.2	223.8	219.65	4.2	219.14	4.23
+45	Center		0.26	228.71	219.73	9.0	10.33	229.98
J.P.		225					219.21	3.23
+60	P.T.		5.2	230.8	219.80	11.0	10.26	232.21
4+00			7.0	229.0	220.00	9.0	219.07	223.05
+04.9	M.H. Center manhole + first		6.9	229.1	220.02	9.1	9.97	8.66
+50			5.5	230.5	223.55	7.0	9.82	

Feb 4/10
 Leholds
 Braker
 Taylor
 grades.

see over

Cuts states on 1st & on p

maple.

45

Sta.		H.I.	Rod	Ground	Grade	cut	
							223.99
		235.76					2.83
5+00		236.0	4.0	232.0	224.16	7.8	213.0
							9.98
+50			3.1	232.9	224.77	8.1	215.5
							7.48
6+00			3.1	232.9	225.38	7.5	215.0
							4.98
+50	J.P.		5.9	230.1	226.0	4.1	232.21
							224.16
							8.05
							224.77
							7.44
J.P.		2.98		223.97			225.93
0+00	M.H. center 1st & maple	229.0	1.7	225.3	218.0	7.3	6.28
+50			3.5	223.5	215.5	8.0	225.38
							6.83
1+00			7.2	219.8	213.0	6.8	
1+40					211.0		
+50			10.87	216.10			
J.P.		1.18		217.28			
2+00			5.0				
+50			8.5				
+80.5	M.H. center 1st & maple		9.5				

albatross street sewer from
205 to about north line of it.

Sta.		H.I.	Red	Ground
		253.53		
0+00	M.H. center of		5.9	247.6
+15	albatross &			
+50	walnut.		5.8	247.7
1+00			5.6	247.9
+50	of 0+40 grade.	}	5.6	247.9
2+00			5.6	247.9
+05	F.S. 40.9 No. 9 center of pipe		5.7	247.8

Center Walnut

Feb 4/10

Childs
Barber 46
Taylor

Grade	cut.
242.70	4.9
242.76	
242.90	4.8
243.10	4.8
243.30	4.6
243.50	4.4
243.52	4.3

250.90
2.05
252.95
242.76
10.19
242.90
10.05
243.10
9.83
243.30
9.65
243.50
9.45
243.52
9.43

Childs
Barber
Taylor

Feb 9/10

Walnut St.

64
E. Albatross

Walnut street & alley bet, 1st &
 from center of front to center Brooks

Sta.		H.I.	Rod	Ground
J.P.		2.63	253.53	250.90
0+00	M.H. Center Front & Walnut.		2.9	
+50			3.1	
1+00			3.6	
+50			4.3	
+80.3	M.H. Center alley & Walnut		5.2	
2+00			6.0	
+50			3.6	
3+00			3.3	
+50			3.3	
4+00			3.3	
+50			3.9	
5+00			4.1	
+45	M.H.		3.9	
+50			3.9	
6+00			3.5	

albatross

Feb 4/10

Lehilds
 Barber
 Taylor 47

Grade cut

240.00

242.0

248.3

242

 6.3

Cont. from page 47

Sta.	H.I.	Rod	Ground
6+50	253.53		2.2
7+00			3.2
+50			4.1
8+00			4.0
+50.6	M.H. center of Brooks street		3.4

East.

Feb. 4/10

Schields
Barber 48
Tayler

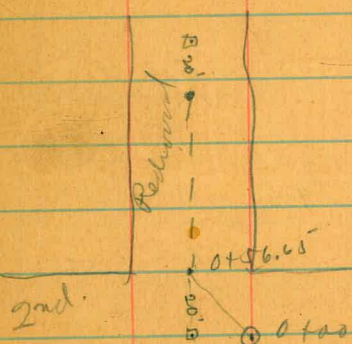
Grade cut

245.0

I Sever on Redwood from 2nd

Sta.	H.I.	Rod	Ground
J.P.	1.64	BM 273.01	
0+00	M.H. Soline	9.9	264.7
+56.65	Redwood	8.5	266.1
	end eastline		
	of 2nd.		
1+00	232 1/2	7.22	267.43
+50	5	6.0	268.6
+72	dead end	5.3	269.3

265.53 BM N. of 2nd Redwood pigt.



East.

Feb. 17/10

Lehilds
Barber
Tanger

Grade	Cuts	265.53	261.32	262.32	262.32
Spice		5.16	9.37	8.87	7.30
260.00	4.7	270.69 M	261.32		
			262.32		
261.32	4.8		263.48		
			264.00		
261.32	5.1				
262.32	5.1				
263.48	5.3				
264.00					

172.5
57.5
115.0

Sewer at 29th & A to relieve

I

Sta.		H.I.	Rod	Grade
0+00	M.H. Sta. 37+90 on alley bet. A & B.	181.06	7.4	173.7
+25			7.2	173.9
+50			6.7	174.4
+75	b		8.9	172.2
1+00			10.2	170.9
+25			10.2	170.9
+50			7.6	173.5
+75			4.3	176.8
+90.4	M.H. Center A.		2.3	178.8
S.P.	11.85	192.83	0.08	180.98
2+00			10.4	182.4
+25			8.3	184.5
+50			6.7	186.1
+75			4.7	188.1
3+00			2.9	189.9
+25			1.8	191.0
+50			0.64	192.39
+75	5.50	191.89	2.1	195.9
+92	Join to present of Septic tank		2.48	195.51

Septic tank

Feb 24/10
Chilids
Barber 50
Taylor

Grade cut

169.00	4.7
169.25	4.7
169.50	4.9
169.75	2.5
170.00	0.9
170.25	0.7
170.50	3.0
170.75	6.0
170.90	7.9
174.0	
175.04	7.4
180.24	5.9
185.44	4.5
188.04	
190.64	1.6
195.00	0.5

180.52
181.98
181.50 H.I.
168.50 4.70
12.00
170.00
11.50
170.25
17.25
170.75 5.20
10.75 2.60
170.90
10.60 39v
175.04 190.4
6.46 201.6
174.0
7.50

Feb. 26/10
Chilids
Barber
Taylor
grades
180.98
10.22 H.I.
181.20
150.24
10.96 10.40
185.04
5.76
Mar. 1/10 188.04 202 24.10 11.93
grades 3.16 202 39.0 5.9
210 1.439 62.0 1.78
207
1800
1606
1940
1818
1220

11300 872-34

Y A Street from center 29th

West

Feb 24/10
Schmidt 51
Barber
Taylor

Sta.	H.I.	Rod	Ground	Grade	Cut	
0+00 M.H. center A	181.06	2.3	178.8	170.9	7.9 ✓	181.50 H.I.
+25		7.9	173.2	171.15	2.0 ✓	171.15 10.35
+50		6.3	174.8	171.40	3.4 ✓	171.40 10.10
+60		2.5	178.6	175.52	3.1	7.22 180.98 ✓ 188.20 181.76 6.50
+75	193.84	7.7	186.1	181.70	4.4	180.98 4.25 185.23 ✓ 10.47
+100	206.92	10.3	196.6	192.00	4.6	205.70 4.25 207.75 H.I. 10.00 199.25
+20		7.6	199.3	193.10	6.2	11.01 198.74 J.P.
+50	209.75	6.78	202.97	194.74	8.23	2.89 201.13 H.I. 7.25 193.88 192.00 1.88
+200		3.66	206.09	197.49	8.60	
+32 End old pipe				199.25	26.30	37.57
205.50						
142						
206.92 H.I.						
13.05						
193.87 J.P.						
-0.03						
9.38	193.84 H.I.					
82	12.95					
9.20	180.99 J.P.					
197.7	0.07					
	181.06 H.I.					

1 Alley line bet. G & H from center
25th street

24th st. to

March 10

Childs
Lockwood
Jager

52

Sta.		H.I.	Rod	Ground	Grade	cut.
0+00	M.H. Center of 24 th Street	144.71	8.1	136.6	129.5	7.1
+50			5.1	139.6	132.08	7.5
1+00			2.1	142.6	134.66	7.9
+50		157.18	12.67	144.51	137.25	7.3
+80			11.7	143.5		
2+00			10.5	146.7	139.83	6.9
+50			7.6	149.6	142.42	7.2
3+00	M.H.		6.0	151.2	145.0	6.2
+50			4.3	152.9	147.18	5.7
4+00			2.5	154.7	149.36	5.3
+50	*	169.03	12.21	156.82	151.54	5.3
5+00			9.8	159.7	153.72	5.5
+50			7.2	161.8	155.90	5.9
+75	F.S.		6.2	162.8	157.0	5.8

156.95
12.08
169.03 ✓
1
156.82
0.36
157.18 ✓

0.20
144.51
144.71 ✓

Sewer bet. B+C 30th + 31st

Sta.	H.I.	Rod	Ground	Grade	Cut
0+00	219.18	13.2	206.0	201.00	5.0
+30.77	West line 30 th				
+50		12.8	206.4	202.05	4.4
+100		9.84	209.34	203.10	6.2
+150		9.7	209.5	204.15	5.3
+200		9.6	209.6	205.21	4.4
+250		5.90	213.28	206.26	7.0
+300		3.5	215.7	207.31	8.4
+350		4.3	214.9	208.37	6.5
+400		4.7	214.5	209.0	5.5

2.105% grade

F.S.
15'

This is continuation of line 495-11

Mar 3/10

Shields
Barber
Taylor

209.34	197.78
6.54	12.52
215.88	270.30
208.10	0.06
12.78	210.24
204.15	8.94
11.73	219.18
205.21	213.28
10.67	6.44
206.26	219.72
9.62	208.37
0.3	11.33
207.31	209.0
8.57	10.72

Shields
Barber
Taylor

380 / 2105
400
380
2105
30
1980
63750

F. Street from center Balic
 160' west.

Sta.		H.I.	Rod	Ground
0+00	M.H. Constructed	152.96	5.4	147.6
+50	Center Balic Balic + J.		3.1	149.9
1+00		164.80	9.38	155.42
+50			3.05	161.75
+60			1.8	163.0

Balic now Glendale Ave.

(Const'd 1910)

54

Grade	Cut
141.40	6.2
146.90	3.0
152.40	3.0
157.90	3.9
159.0	4.0

156.95
 12.38
 169.33 ✓
 11.29
 158.04 J.P.
 6.76
 164.80 H.I.
 12.29
 152.57 J.P.
 0.45
 152.96
 11.52
 141.40

 158.0
 14.12
 160/176 (6.00)
 160
 160

Lewis and 2nd street
Stockton

Sta.		H.I.	Rod	Ground
J.P.		293.79		287.97
0+00	old N.W. alley bet. 1st & 2nd	5.82	6.3	287.5
+47.2	m.H. center Lewis		6.1	287.7
1+00			6.1	287.7
1+50			5.7	288.1
+65.65	m.H. center 2nd & Lewis		5.7	288.1
2+00			5.6	288.2
+50			5.1	288.7
3+00			4.7	289.1
+60			4.0	289.8
4+00			3.7	290.1
+50			3.10	290.69
5+00			2.8	291.0
5+18.15	of Broadway		2.8	291.0
+50			2.8	291.0
6+00			2.3	290.5
+50			3.8	290.0
7+00			4.4	289.4

from Lewis to

Mar. 11/10

Calhoun
Barber
Fayler 55

Grade cut

280.45	7.0	287.97	280.85	281.05
280.64	7.1	5.04	12.66	12.46
280.85	6.9	293.57 H.I.	281.11	281.25
281.05	7.1	280.65	12.40	12.26
281.11	7.0	12.87	281.45	281.55
281.25	7.0	281.45	11.86	11.66
281.45	7.3	282.25	11.26	10.86
281.65	7.5	282.45	11.06	10.86
281.85	8.0	290.69	3.14	282.85
282.05	8.1	293.88 H.I.	10.98	283.05
282.25	8.5	11.78	10.78	283.25
282.45	8.6	282.65		10.58
282.65	8.4			
282.85	7.7			
283.05	7.0			
283.25	6.2			

Mar 31/10
grades.

Calhoun
Barber
Fayler

287.97 old Lewis end

Cont. from page 55

Sta

7+58

8+00

H.I. about 38'
from Stockton

H.I. Rod Grv

293.79

5.0 288.8

5.5 288.3

Grade cut

283.45 5.4

283.65 4.7

293.83 H.I.
283.45
10.38
283.65
10.18

See 806-40

6.3

8.7

2.6

In sewer line on Lewis from center
 2nd + up to Broadway
 Bachman

Sta.	J.P.	H.I.	Rod	Ground
0+00	M.H. Center of 2nd + Lewis	8.74 296.71	8.6	287.97 288.1
+50			8.0	288.7
1+00			7.2	289.5
+50			6.0	290.7
2+00			5.1	291.6
+50			4.7	292.0
+79.9	M.H. center of Lewis.		4.7	292.0
3+00			4.6	292.1
+50			4.8	291.9
4+00			5.48	291.23
+50			6.0	290.7
5+00	Did not log all of this		6.4	290.3
+50			7.0	289.7
+70	dead end. about 37.5 from Broadway		7.3	289.4
Aug 30 th 1910	6+0 extended 116 to Bachman			
+50				
+78	28x of Broadway			

2nd to center of Bachman
 Apr. 1/10
 Childs
 Barber 57
 Taylor

Grade	cut			
287.97				
281.11	7.0	294.23 281.31 12.92	281.57 12.72	
281.31	7.4	281.71 12.52	281.91 12.32	282.11 12.12
281.51	8.0	282.23 12.80	282.31 11.92	173 292.50 3.02
281.71	9.0	282.71 12.81	282.91 12.61	295.52 Ht. 282.51 13.01
282.11	9.9	283.11 12.41	283.31 12.21	283.39 12.13
282.23	9.8			grade stakes Apr. 18/10
282.31	9.8	291.99 3.45	1255.01 3.52	12.15
282.51	9.4	295.47 6.24	293.29 9.75	293.29 8.24
282.71	8.5	288.50 4.79	283.54 7.50	285.04 283.79 1.25
282.91	7.8	293.29		
283.11	7.2	293.29 83.62	93.29 83.83	93.29 83.99
283.31	6.4	9.47	946	91.32
283.39	6.0	8/10	bottom 5th	Dunker Haver Bunker
283.54				
283.62				
283.23				
283.97				

B.M. N.W. Cor. 5th & A 67.82

4-14-1910

0.95 68.77 67.82

2.50 60.09 11.18 57.59

4.05 56.04 = Elev.

Sewer at 4th & A 54

Harper
Lockwood

59

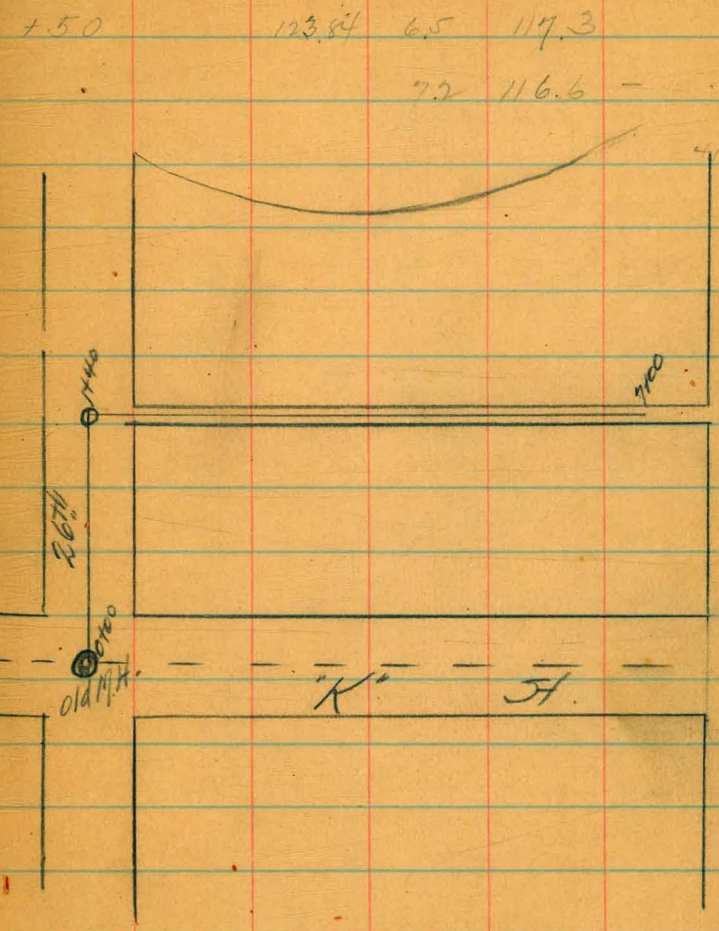
Bottom Excavation

Preliminary Survey Lot 2
 7th Sts - 26th - 27th Sts

			811
	12.30	99.18	86.88
0+00 = N.H. Entry 26 th		10.4	88.8
0+50		8.4	90.8
1+00		0.5	98.7
T.P.	12.74	111.55	0.37
1+40 = N.H. Entry 26 th		6.5	105.0
1+50		6.0	105.5
2+00		1.6	109.9
T.P.	12.47	123.84	0.18
1+50		9.9	113.0
3+00		6.7	117.1
4+50		4.5	119.3
4+00		3.7	120.1
4+50		3.1	120.7
5+00		3.5	120.3
4+50		3.3	120.5
6+00		4.3	119.5

B.M. 26th St S.W. Cor. 86.88

60



Sewer on 3rd from west line to north line of Maple.

Sta.		H.I.	Rod	Ground
0+00	M.H. center Laurel west line 3 rd .	240.70	3.6	237.1
+25			3.6	237.1
+50			3.2	237.5
+60	North line Laurel,		2.7	238.0
1+00	J.P.	12.95	1.26	239.44
+50			11.1	241.3
2+00			9.2	243.2
+50			7.6	244.8
3+00			5.6	246.8
+50			3.8	248.6
4+00.45	M.H.		3.0	249.4
+40.45	North Maple		2.49	249.90

5.8' of grades

251.5 cent. Mt.
257.0 " Ellipse
256.04 n.w.

3rd & Laurel

May 2/10
35
Bluhls
Boyer
Tager

Grade	cut
229.80	7.3
230.75	6.4
231.70	5.8
232.05	5.9
233.60	5.8
235.50	5.8
237.40	5.8
239.30	5.5
241.20	5.5
243.10	5.5
245.0	4.4
245.60	4.3

239.44	229.94	B.M. 2 nd & 3 rd
241	10.76	
241.85	240.70	H.I.
230.75	11.46	
11.10	229.24	
231.70	252.34	2.45
10.15	250.00	0.92
232.05	229.52	258.25
9.77		0.42
233.60		2.66
8.25		0.58
235.50		241.27
6.35		11.50
237.40		252.77
4.45		241.20
239.30		11.57
2.57		243.10
241.20		9.67
0.65		244.8
		7.77
		245.60
		7.77

11.2' of grades

4+00.45

North Maple

4+00.45

20

40

M.H. 10
0+00

Bluhls
Gregory
Tager
map 10/10
grades.

Laurel

1 Quince Street from east line 5th

Sta.	H.I. Rod Ground
0+00	East line 5th 0.5' north of center of Quince
+50	
1+10	0.4% grade

110' East.

May 14/10

Lehildts
Barling
Taylor
82

Grade cut

276.17

276.37

276.61

278.00

5.56

283.56

7.89

276.17

276.37

7.89

276.61

6.96

H.I.

3.70

4.13

3.90

279.66

276.5

278.0

26th St. & alley bet. K &

Sta.		HT.	Rod	Grade
J.P.		6.83	93.71	86.88
0+00	M.H. center 26 th 7 K.		4.9	89.8
+50			3.12	90.59
J.P.		11.98	105.67	93.69
1+00			7.00	98.67
+40	M.H. Center alley		0.60	105.07
J.P.	bet K & 26 th	116.48		
+50	East of 26 th		10.7	105.9
2+00			6.32	110.16
+50			2.2	114.3
+70			0.8	115.7
+80			0.37	116.11
J.P.		6.98	123.09	
+90			6.2	116.9
3+00			5.5	117.6
+50			3.35	119.74
4+00	M.H.		3.1	120.0
+50			0.9	122.2
+60			2.08	121.06
5+00		2.17	123.23	120.6
+50			2.25	120.98
6+00			3.3	119.9
+50			3.56	117.67
7+00	end of road		6.4	116.8

Jc streets

June 11/10
Childs
Barber
Taylor 63

Grade	cut			
		98.67		
82.5	6.3	7.19	100.00	
		105.86	5.86	
87.00	3.6	94.22		
		11.64	110.16	
94.22	4.5		3.33	
		104.90	113.49	H.T.
		8.59	100.82	
			12.67	
100.00	5.1	108.97	110.60	
		4.52	2.89	
100.82	5.0	111.10	111.50	111.54
		2.39	1.99	1.98
104.90	5.3	111.74	115.11	
		1.75	7.26	
108.97	5.3	120.98	123.87	111.94
		0.40	111.74	11.93
110.60	5.1	121.38	12.13	112.14
		112.34		11.73
		9.04	11.69	
111.10	5.0	112.34	112.18	
		8.54		
111.50	5.4	112.74	June 18/10	Childs Barber Taylor
		8.64	Grades.	
111.54	6.1	112.94	Mar. 9/12	Childs Taylor Barber
		8.44		
111.74	8.0	8.36		
111.94	8.1			
112.14	10.1			
112.18	8.8			
112.34	8.3			
112.54	8.5			
112.74	7.2			
112.94	4.8			
113.14	3.7			

Pre. Page 60

B.P. 6th Penna. St. N.W. Cor. 286,86

10.22
250
272

Grove St. N.W. 250.00 - 31 68 A

4.1 220.00
9.21 229.21

Grove & A	4.19	225.02
Popline	9.09	220.1
Popline	8.16	221.0
" "	4.8	224.4
+ 50	2.7	225.5
+ 10	2.8	226.4
+ 50	2.1	227.1
2.10	1.5	227.7
+ 50	0.8	228.4
- 92		229.4

Sever in Cleveland Ave from
west on Tyler to inter. of Allen St
Grade of sever in alley bet Maryland

Sta	0.83	337.78	336.95	
		H.I.	Rod	Ground
0+00		337.78	6.13	331.65
+50			8.0	329.8
1+00			9.8	328.0
+50			11.92	325.96
J.P.	1.23	327.19		
2+00			3.3	323.9
+50			5.1	322.1
3+00			7.5	319.7
+50			9.8	317.4
4+00			11.88	315.31
J.P.	1.73	317.04		
+50			4.2	312.8
5+00			6.6	310.4
	0.38	310.03		309.65
+17			-0.2	310.2
+50			4.53	305.50
J.P.			6.36	303.67
5+82.8				
hull				

4' grade
5
m.H. in Tyler
3.07497
3.07497

100' S of VanBuren to Tyler; thence
+ Cleveland & Maryland Aves.
+ Cleveland at N. line Tyler = 301.00
Sept. 13/10

65.

Childs
Barber
Taylor

B.M.	Grade	Cut		
	315.81			
	9.78		314.50	
	325.09	H.I.	10.59	
	312.50			65.8
	12.59			103
	316.50			168.8
	8.59		168.8	4.820 (22.63)
	318.50			33.76
	6.59			14.440
				3376
				10640
				10128
				5120
	305.10			
	9.61			
	315.11	H.I.		
	303.82			2.263
	9.29		303.27	
	304.81		11.94	308.50 310.50
	10.30		306.50	6.61 4.61
	303.50		8.61	
	11.31			
	314.50			
	312.50			
	310.50			
	308.50			
	306.50			
	305.82			
	304.81			
	303.80			
	303.27			

Childs
Barber
Taylor
Sept. 27/10
305.82
300.63
5.190 (3.074)
5.064 33
126.00 222
1181.6222
78.420 1442
3024
17
21518
3074
52268
310.03
295.27
11.76
298.27
0.45
298.70
Stake 4' below grade

§ Sewer line on 3rd St. S. of
B.M. N. Cor. 4th & Spruce. 272.88

B.M. 7.91 280.79 272.88

0+00 = M.H. 3rd & Spruce.

0+00

4.4 276.4 270.0

+50

50 275.8 270.2

1+00

59 274.9 270.4

+50

67 274.1 270.6

Copied by Lockwood

Spruce,

Sept 14/10

Childs
Barber
Taylor

272.88

5.25

278.13 H.I.

270.6

7.53

270.2

7.93

270.4

7.73

Sept. 20/10

grades.

Childs
Barber
Taylor

X Sewer line on center 10th + Hendricks, from alley bet. Hendricks 260.57
 + Cleveland to Sta. 4+60 center Hendricks

68

J.P. 7.20 289.29
 B.M. S.W. Cor. 10th + University

282.09

grade
 278.6

Sept. 29/10

Childs
 Barber
 Taylor

Sta.	H.I.	Rod	Elev.	Grade.	
EP.	289.29				
0+00	M.H. constructed center alley bet.	5.9	283.4	278.6	4.8
+50	Hendricks + Cleveland + 10 th st.	5.7	283.6	278.8	
1+00	-	5.8	283.5	279.0	
+50		6.1	283.2	279.2	
2+00		6.5	282.8	279.4	
+01.9	M.H. center of 10 th + Hendricks.	6.47	282.82	279.41	
J.P.	287.50				
+50	4.68	4.9	282.6	279.6	
3+00	ground at House 11 lower	5.0	282.5	279.8	2.7
+50		4.8	282.7	280.0	
4+00		4.3	283.2	280.2	
+50		3.1	284.4	280.4	
+60	ground at House 15 lower. F.S. center Hendricks	2.95	284.55	280.44	4.1

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Sewer at 5th & Olive

B.M. N. Water nitney + 5th

264.95

Sta.		H.I.	Rod	Ground	Grade	cut
J.P.		9.77	274.72	264.95 B.M.		
0+00	my H. constructed So. line Olive center 9 5 th		3.8	270.9	260.60	10.3
+58	center Olive 42' east center 9 5 th		3.2	271.5	260.83	10.7
1+00			3.81	270.91	261.00	9.9
+50			5.2	269.5	261.20	8.3
+60			5.3	269.4	261.24	8.2

1037
383
14.20

Sept. 29/10
C. Childs
Barber 69
Taylor

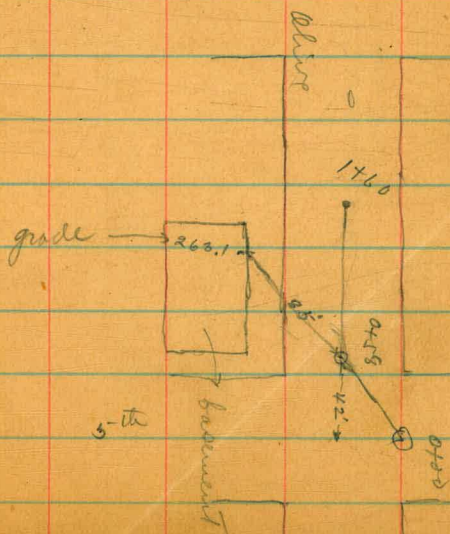
273.53

E
↑
W

261.00
264.95
8.79
273.74 H.I.
260.83
12.91

13.74
261.24
12.50

grades Oct. 15/10
C. Childs
Barber
Taylor



Lincoln & Vermont sw. cor. 4d 5K
Pole at ground
292.06

M.H. on Vermont bet. Pascoe & Lincoln 288.60

586 105.86 100.00 1

294 102.92

Nov 15th 1910

Mr. Jones, Rod

Edwards Level

12/10/1901
 31/10/1901
 713 ft. 1/2

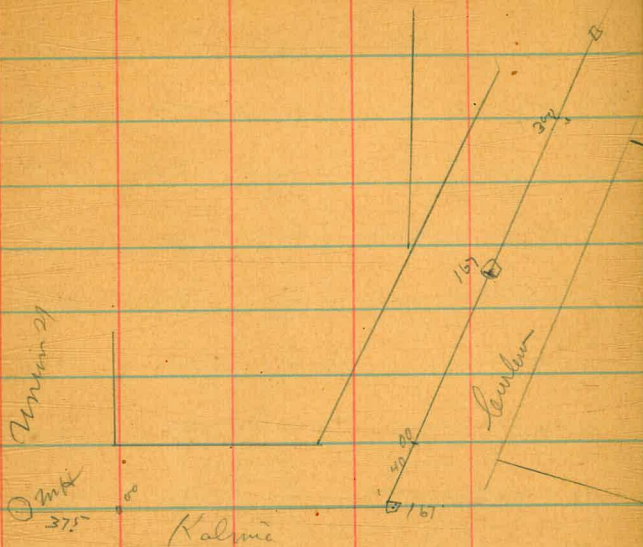
Serels for Seme on level line of
 Kalmia at Mt in Union to Cent Laurel

ℓ	744	12144	11400	NE 2000 1/2 Union & Kalmia
Mt to Cent Union			9.1	112.3
(375) E line of Union st			8.1	113.3
50' E			5.4	116.0
100' E			3.0	118.4
125' E = Mt Laurel			1.7	119.7
167' E = Cent Laurel			0.9	120.5
TP	12.95	13324	1.5	120.29

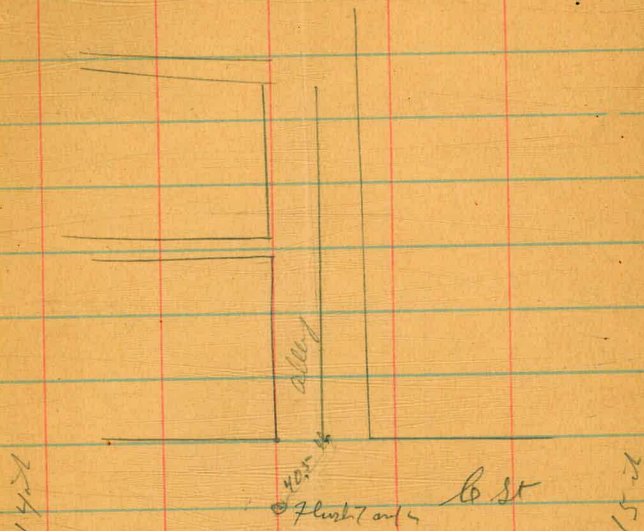
Serels for Seme on Laurel
 from center of Kalmia to Laurel

Cent Kalmia	13324	12.7	120.5	
(40) N line Kalmia		12.0	121.2	
50' n		8.2	125.0	
100' n		3.4	129.8	
150' n		0.2	133.0	
	12.90	145.99	0.15	133.09
167' n = Cent Laurel		11.5	134.5	
200' n		9.2	136.8	
250' n		5.5	140.5	
300' n = S of Laurel		0.8	145.2	

71



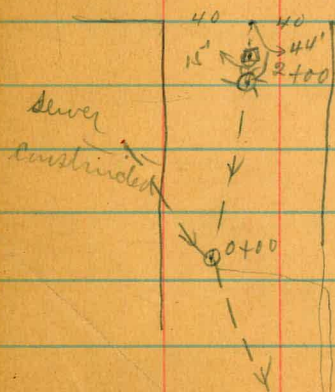
7/27/1907		Levels for Sewer in alley		Prem	
31	31	Bottom	Bot 14 + 15 st	6 + 13	
10	10	July			SW 13
\$	L	1125	8833	76.98	2'
	Flush Tank			2.9	85.4
(370)	Sept Oct			1.8	86.5
E	2' in 6 st				
50	TP	1275	101.07	0.01	88.32
100	25' n			9.9	91.2
125	50' n			6.0	95.1
167	75' n			3.0	98.1
	100 n = rd alley			0.2	100.9
	TP	1252	11340	0.19	100.88
125	125' n			9.6	103.8
(40)	150' n			7.8	106.4
30	175' n			4.2	109.2
100	200 n = S d alley			1.4	112.0
150					
167					
200					
250					
300					



Maryland St. 5 of Meade.

Sta.		H.I.	Rod	Ground
0+00	Old cut.	323.65	7.05	316.6
+50		332.42	12.78	319.64
1+00			9.8	322.6
+50			6.97	325.45
2+00	Fls. 44' from So. side meade.		3.5	328.9

5



4.01
323.65

200.2
334.9

Feb 4/11

Edith
Taylor 73
Bunker

Grade	Cut.
313.35	3.25
316.10	3.5
318.85	3.8
321.60	3.8
324.35	4.6

Sever. alley bet. E & F west of
30th.

Stn		H.I.	Rod	Ground	Grade	cut
0+00	M.H. bottom of Canyon bet.	141.19	12.2	129.0	124.70	4.3
+50	E & F central alley		11.53	129.66	124.90	4.8
+70	M.H.		10.2	131.0	124.92	6.1
+75			9.1	132.1	126.06	6.0
+100			3.2	138.0	131.77	6.2
+25		152.63	8.23	144.40	137.49	6.9
+50			1.1	151.5	143.20	8.3
+75		165.27	8.1	157.2	148.92	8.3
+200			4.8	160.5	154.63	5.9
+25		177.05	12.22	164.83	160.35	4.5
+50	P.O.		6.6	170.4	166.06	4.3
+75	P.O.		3.1	174.0	169.06	4.9
+300		187.58	12.11	175.47	169.36	6.1
+25			10.9	176.7	169.66	7.0
+50			10.3	177.3	169.96	7.3
+75			10.1	177.5	170.26	7.2

Feb. 14/11

Schields
Tupper
Blumber

74

380.27						
1700						
1155.2	12.20					
644.5	4.20					
	16.47					
	124.72					
	20					
	.050					
E. A.W.	185.42					
F. A.W.	167.32					
20 NW	192.80					
C S E	195.30					
8' W	157.61					
	Feb 18/11					
129.66	144.40					
7.38	1.02					
137.04 KZ	145.42					
124.92	131.77					
12.12	131.77					
144.40	131.77					
89.5	13.01					
153.35	1.77					
143.20	151.88					
70.15	7.88					
	154.63					
	4.93					
	159.46 KZ					
	145.82					
	10.54					
	129.66					
	347					
	133.13 KZ					
	8.85					
	124.78					
	128.02					
	8.11					
	03					
	175.47					
	5.46 KZ					
	180.93					
	169.36					
	17.57					
	170.26					
	10.67					
	162.96					
	10.97					
	124.75					
	1.34					
	5					
	5					
	25					

cut. from page 74

sta:

4+00

+15 leadend

H.I. Rod Ground

187.58

9.0

178.6

8.83

178.75

Grade cut

170.56

8.0

170.75

8.0

Feb. 21/11

Chilts
Taylor
Blunder

75

180.93 H.I.

170.56

10.37

170.91

10.18

Sewer in alley bet. A + B last of

30th street

Feb. 18/11

Childs
Taylor
Bunker 76

Sta.	J.P.	H.I.	Rod	Ground	Grade	Cut.			
	9.01	226.90		217.89					
0+00	M.H. about 60'		3.2	223.7	217.7	6.0			
+25	west center of 30th.		3.0	223.9	217.8	6.1	217.89	217.89	
+50			4.8	222.1	217.9	4.2	9.07	217.89	
+75			4.1	222.8	218.0	4.8	226.96 HI	217.95	218.55
1+00			2.5	224.4	218.1	6.3	217.8	217.71	218.0
+25			1.9	225.0	218.2	6.8	9.16	217.8	218.0
+50			1.6	225.3	218.3	7.0		217.71	218.0
+75			1.7	225.2	218.4	6.8		9.25	8.96
2+00			1.3	225.6	218.5	7.1	218.1	218.3	218.5
+25			1.4	225.5	218.6	6.9	8.86	218.3	218.7
+50			1.4	225.5	218.7	6.8	8.66	219.1	219.26
+75			1.5	225.4	218.8	6.6	8.06	219.1	219.26
3+00			1.7	225.2	218.9	6.3	8.86	217.46	
+25			2.1	224.8	219.0	5.8	6.0		
+50			2.8	224.1	219.1	5.0	9.50		
+75			4.1	222.8	219.2	3.6			
+90	dead end		5.7	221.2	219.26	1.9			

Mar. 3/11
Childs
Taylor
Bunker

I. Sewer on 29th from center
600' north.

Sta.	IP	3.78	Hgt.	210.99	Rod	Ground	2072.13M
0+00	M.H. center of Beech.				5.6	205.4	
+50					4.5	206.5	
1+00					3.5	207.5	
+50					2.4	208.6	
2+00					1.3	209.7	
+50					0.12	210.87	
3+00	IP	7.78	218.65		6.8	211.8	
+50					5.6	213.0	
+90.78	M.H. center of Cedar.				4.7	213.9	
4					5.4	213.2	
+50					4.2	214.4	
5+00					3.2	215.4	
+50					2.4	216.2	
6+00	dead end Cedar,				1.25	217.40	
	IP						
	050						

of Beech

Childs
Taylor
Dunker
Mar 11/11
77

Grade	Cut.	214.68	R.C. 34.	214.68	5.61	NE cor cedar	+29th
201.1	4.3	210.57		0.95			
202.01	4.5	211.82	H.I.	202.92	203.83		
202.92	4.6	202.01		9.81	8.90	7.99	
203.83	4.8	204.73		7.09	214.68		
204.73	5.0				2.73		
205.64	5.2	205.64		7.77	217.41	H.I.	
206.55	5.2	206.55		10.86			
207.45	5.6	207.45		9.96			
208.00	5.9	208.00		9.41			
208.36	4.8	208.36		9.05			
209.28	5.1	209.28		8.13			
210.20	5.2	210.20		7.21			
211.12	5.1	211.12		6.29			
212.04	5.4	212.04		5.37			

Sewer line on Farm from 29' 20.
to about 49' 20. Beech

Sta.	H.I.	Rod	Ground
S.P.	10.12		226.77
0+00 old F.S.	236.89	4.0	232.9
+25		3.7	233.2
+50		3.1	233.8
+75		3.0	233.9
1+00		3.3	233.6
+25		2.9	234.0
+50		2.86	234.03
+75		2.9	234.0
2+00		2.8	234.1
+25		3.2	233.7
+50		3.00	233.89
+75		3.0	233.9
3+00		3.5	233.4
+25		3.9	233.0
+50		4.5	232.4
+60 dead end		4.8	232.1

of ash

Mar 7/11 } bluffs
Jaylor 78
Bunker

Grade	cut		
234.03		193	
4.32		160	
238.35	4.9		
10.60		228.0	
227.75	5.1	10.35	
228.2	5.6	228.1	228.2
228.3	5.6	70.25	10.15
228.4	5.2	9.95	
228.5	5.5	228.6	228.8
228.6	5.4	9.75	9.55
228.7	5.3	229.0	9.35
228.8	5.3	229.2	229.4
228.9	4.8	9.15	8.95
229.0	4.9		8.71
229.1	4.8		
229.2	4.2		
229.3	3.7		
229.4	3.0		
229.44	2.7		

Mar. 15/11 } bluffs
Jaylor
Bunker

Sta Rod 4.20 Elev 629

57.5684

250.90

1.46

252.36

9.08

243.80 top of pipe

245.9

69.9

132/72.5 15.49

66.0

65.0 2.74

5.28

122.0

118.8

15.49

32.0

300.

~~28~~ 290

280

5.70

J. M. Eshleman

75' S. of Dry Lane 8.6

Inter. " " 75' 7.3

629
80
109
250
359

179.97

13.02

192.99

0.20

192.79

12.86

205.65

0.42

205.23

1.040

215.63

9.58

206.05

6.11

212.16

0.20

211.96

10.34

222.30

4.48

217.82

45

50

95

45

40

37

112

113

570

123

693

9.69
123/500/40
492
800

43

10

1720

38

40

45

123

170.72

13.02

183.74 = H.I.

0.20

183.54 = T.P.

12.86

196.40 = H.I.

0.42

195.98 = T.P.

10.40

206.38 = H.I.

9.58

196.80 = T.P.

6.11

202.91 = H.I.

0.20

202.71 = T.P.

10.34

213.05 = H.I.

4.48

208.57

283.54

284.04

217.89 S.W. cor. 30th & R.

2.13
220.02 ✓
9.59
210.43 J.P.

M.H. Rod. 6.24

47.2

118.45 B.M. 185.42
165.65

197.54 ✓
9.20
188.34
1.12 ✓
189.46 ✓
12.62
176.84
176.23

177.07 ✓
12.41
164.66 ✓
20

164.86 ✓
2.07
152.79 ✓
2.79
329.8
22.65
22.57

31416
80
2573280
61
3.5
400
15.201

153.41 ✓
10.96
142.45
1.27 ✓
143.72 ✓

179.97
12.70
192.67
0.24 = T.P.
172.39
12.15
204.54 = N.P.
0.47
204.07 T.P.
10.90
214.97
5.85
209.12
7.64
216.79
0.93
216.16
6.21
222.37
4.69
217.68

38.19
60
2580

446
19
95

B.M. 30th R. 192.40
B.M. 30th E. 185.42

8784
4
3.9816
69.79
73.27
1.218
610
2150
1600
290
143.72
215
112.15
350
172.00
645
131.81700
9.69
92
6887

41.22
71
131.81700
9.69
92
6887

11.29
5
5.58
2.89
11.80
2
23.60

175
300
7000
525
59500
143.72
6.24
157.49

73.5 grade
72.6 grade
0.9
1.5
340
6980
45
5100
143.72
6.24
137.48/1.0
68.2
1300
2800
1600
2000
7000
6500
1000

69.70 grade
68.97 "

68.9
2.36
71.26
217.59
217.68
21

970
4
3880
73.27
7.15
312.940000
.066289
312893711
1036125
312897580

