

(65 ps)

Coronado by 5th St

Otago " North

Lat 1245

72° 51'

369

TRANSIT.

F.B. 107

107 Return to City Engineers Office
 finding the difference of latitude and departure in running
 chains at any course from 1 deg 60 minutes.

Minutes.	Links.	Minutes.	Links.	Minutes.	Links.
1	2½	21	49	41	95¾
2	4½	22	51½	42	98
3	7	23	53	43	100¼
4	9½	24	56	44	102¾
5	11½	25	58½	45	105
6	14	26	60	46	107½
7	16½	27	63	47	109¾
8	18½	28	65½	48	112
9	21	29	67	49	114½
10	23½	30	70	50	116¾
11	25½	31	72½	51	119
12	28	32	74	52	121½
13	30½	33	77	53	123¾
14	32½	34	79½	54	126
15	35	35	81	55	128½
16	37½	36	84	56	130¾
17	39½	37	86½	57	133
18	42	38	88	58	135½
19	44½	39	91	59	137¾
20	46½	40	93½	60	140

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SAN FRANCISCO, CAL.

TABLE FOR RUNNING ON SLOPES.

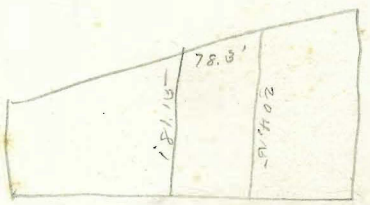
In the following table the first column shows the angle; the second, the number of links to be added to a chain on the slopes, to make one chain—horizontal measurement.

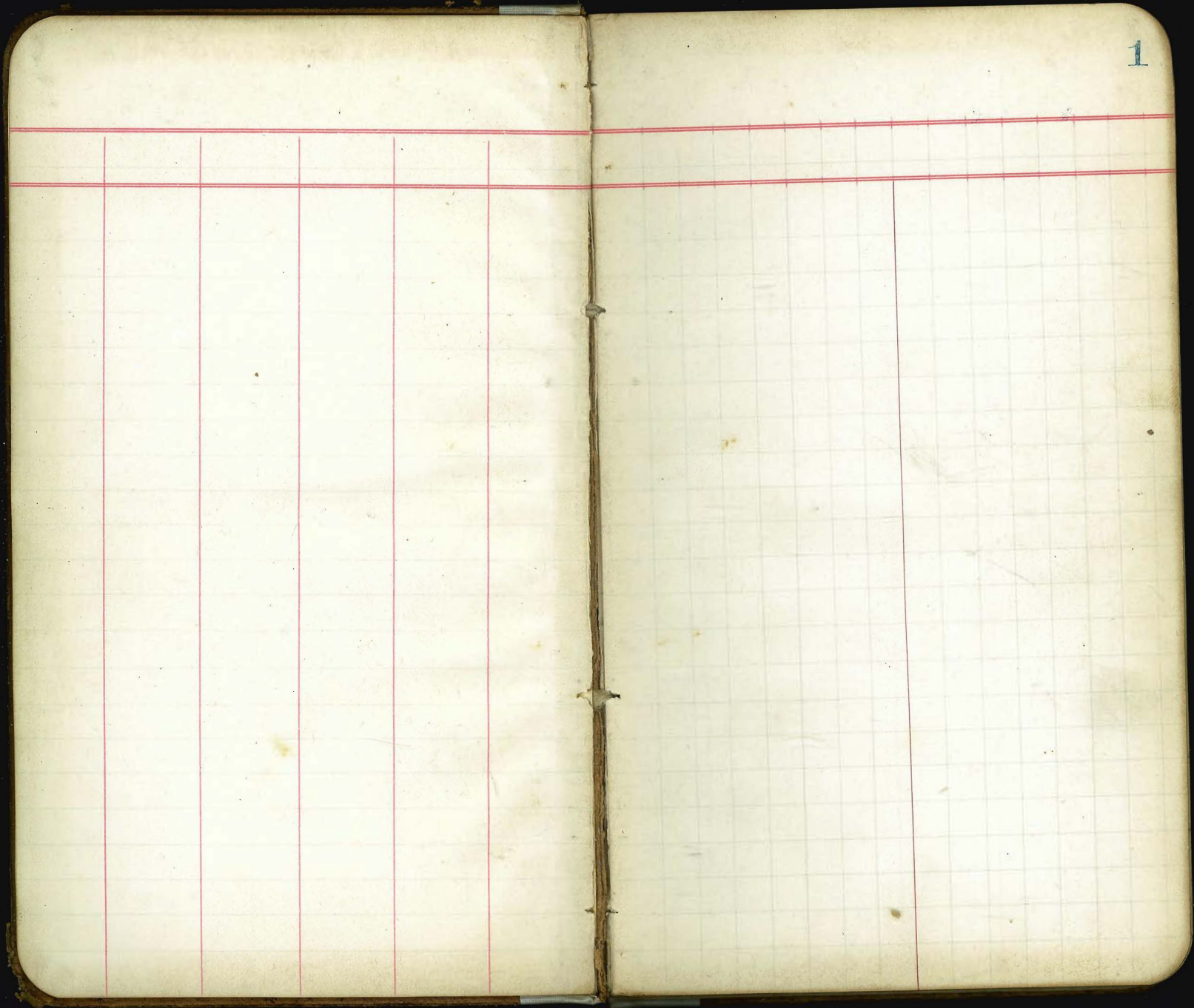
Angle.	Cor. in Links.	Angle.	Cor. in Links.	Angle.	Cor. in Links.
0	0	0	0	0	0
4	0·24	11	1·88	18	5·14
5	0·38	12	2·24	19	5·76
6	0·55	13	2·63	20	6·42
7	0·76	14	3·06	21	7·11
8	0·98	15	3·53	22	7·85
9	1·24	16	4·02	23	8·64
10	1·55	17	4·56	24	9·47
				25	10·54
				26	11·26
				27	12·24
				28	13·37
				29	14·34
				30	15·47
				35	22·07

MICROFILMED
JAN 25 1965

783
 391
 107
 181.16
 23
 204.16
 3) 78.3
 26.1

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





Measurements of Dip & Thickness
at N.W. cor of 10th & Ash

Jan 2 1883

Hamlin

2

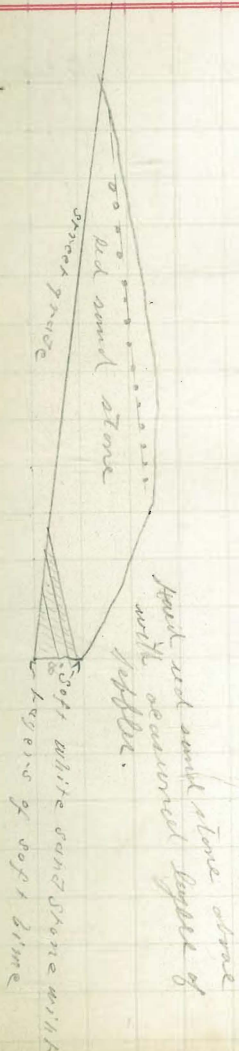
Set up near the N.W. cor of ash & 10th
placed transit in mag Meridian
pointing South.

Turned 74° right ($S74^\circ W$) and
measured dip 5°

Turned 65° right ($S65^\circ W$) and
measured dip $4^\circ 45'$

Turned 30° right ($S30^\circ W$) and
measured dip 6°

Turned 86° ($S86^\circ W$) and
measured dip $4^\circ 30'$



Dip 74°

hard red sandstone above
with occasional layers of
lignite.

Soft white sandstone with
layers of soft lime

Measurements of dip and thickness
near of sandstone on west side
of 10th bet ash & Beech

Jan 2 1898

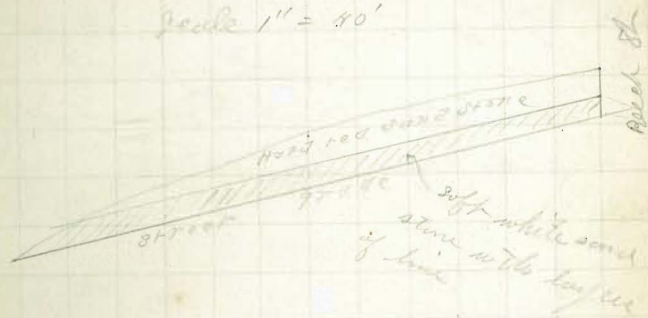
Hambin

3

Set up about 60' south of Beech
St. Placed transit meridian mag.
pointing south. Measured dip
6° 15'

Turned to south 50° west dip 1° 15'

Scale 1" = 40'



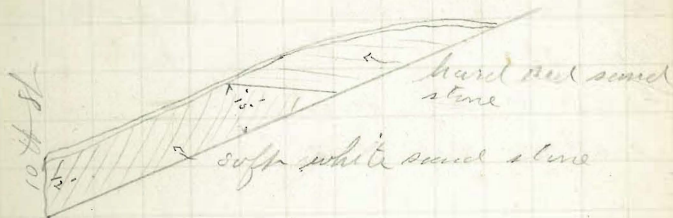
Measurement of Thickness & Dip of Rocks
on South Side of Beech St bet 10th
& 11th

June 2 1893

Humboldt

4

Set up transit and placed it on
Mag meridian pointing south
Turned to Right 86° ($S 86^{\circ} 0' W$)
and measured dip $3^{\circ} 15'$



Measurements of thickness & thickness
of rocks along cut on west side
of 10th St N of Wall

Jan 2 1883

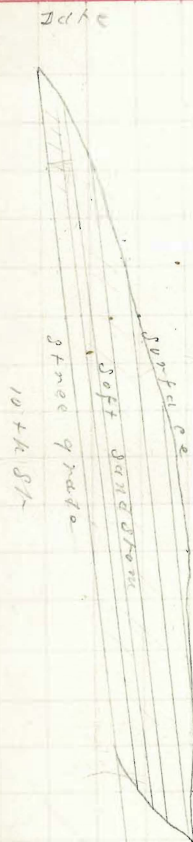
Hamilton

5

Set transit pointing S 50° E. May
dip 3°

S 25° W dip 1° 30'

S 40° W dip 3° 15'



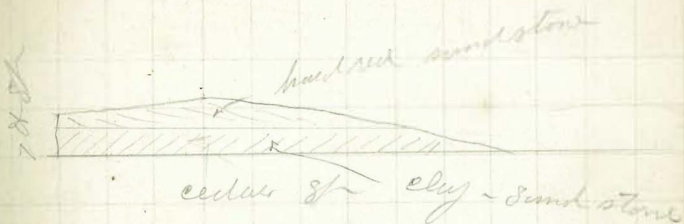
Measurement of thickness & depth of
sandstone of 7th & cedars

Jan 2 1893

Hamlin

6

Set up in cedars St bet 7th & 8th
cut on north side about 5' of
clay-sandstone covered with
from 3 to 8' of hard red sandstone
south side clay-sandstone just
shown above - Gt grade showing
a dip to south



Measurements of thickness and dip
of rock on west side of 2nd St
at Elms

Jan, 2 1892

Hambur

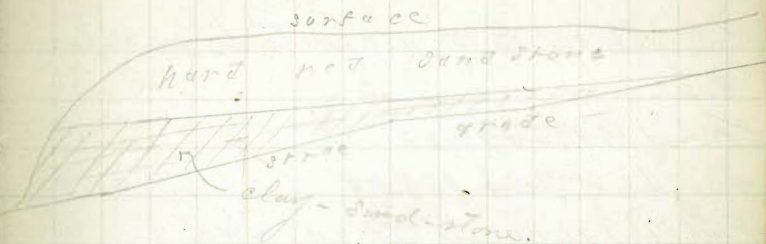
7

Set of m 2d St opposite bank
pointed west. S 7° S' W dip 3°
S 45° W dip 10° 15'
S 30° W dip 4° 0'

at 4th & Erie at N.E. cor 3' of clay-
sand-stone above st grade capped
with 5 to 8' of hard red sand
stone level east & west
dip 2° to south

at N.W. cor 5th & Maple clay-
sand-stone 4' above st grade
capped with 8' of red sand stone
which dips 1° west and 2° to south

along front of corner there
is about 15' of red sand rock
overlying yellow sand stone
dip 3° S 54° W mag.



July 7th 1893. Survey of Lots

5-6 B C Culverwell - Tiggart⁸
for Hughes.

B.S.

B. Sight on B.M. copper Tack on Step
8.21

Elev of B.M. = 178.88

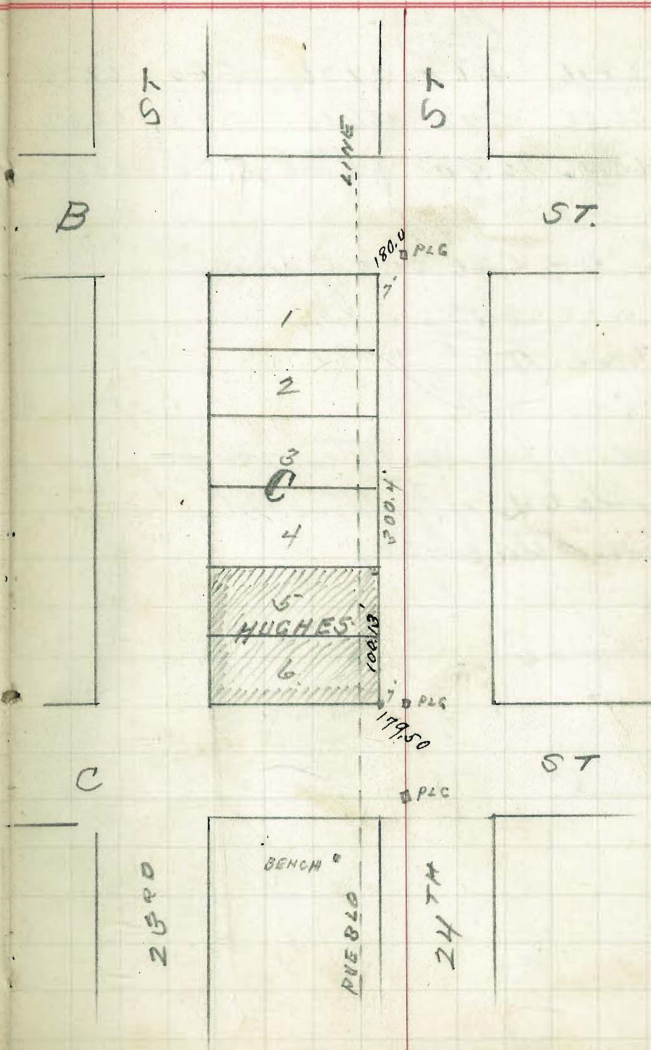
Height of Instrument 186.59

Rod on N.W. cor C = 24 7.09

" " N.E. cor Lot 5 B & C = 6.98

One grade stake set at N.E. cor
Lot 5.

Capper.
Williams
Shaw.
Fannar.



Measurements of Earth fill on
 R for Harbison
 Center

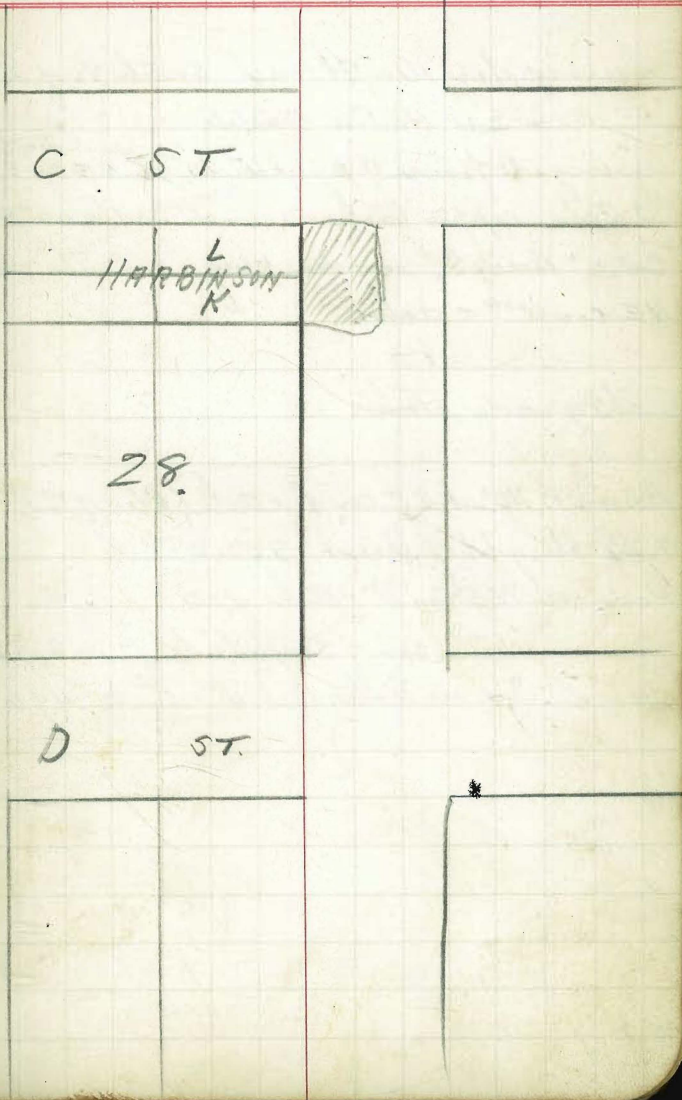
10th Street Bet "C-D"

9

WEST		Sidewalk		Center	
R.	El.	R.	El.	R.	El.
4.20	68.16	4.60	67.76	4.60	67.76
5.70	66.66	5.70	66.66	5.90	66.46
6.90	65.46	6.90	65.46	6.60	65.76

Old fill = 520 cub yds.
 New " = 240 " "
 Total 760 " "

Computed from notes on page
 29 Book 64 of Fullons Notes
 and from the photos



Survey for Di Heine south 1/2 of Lot
 "F" Blk 201 Horton Addition
 Surveyed from Copper tack^{in cement walks} on NE cor of 4th
 and Ash, copper tacks on cement walks on SE
 cor 4th Beach and wooden plug in center on the
 N.E. cor 5th & ash.

Set 3 grade stakes

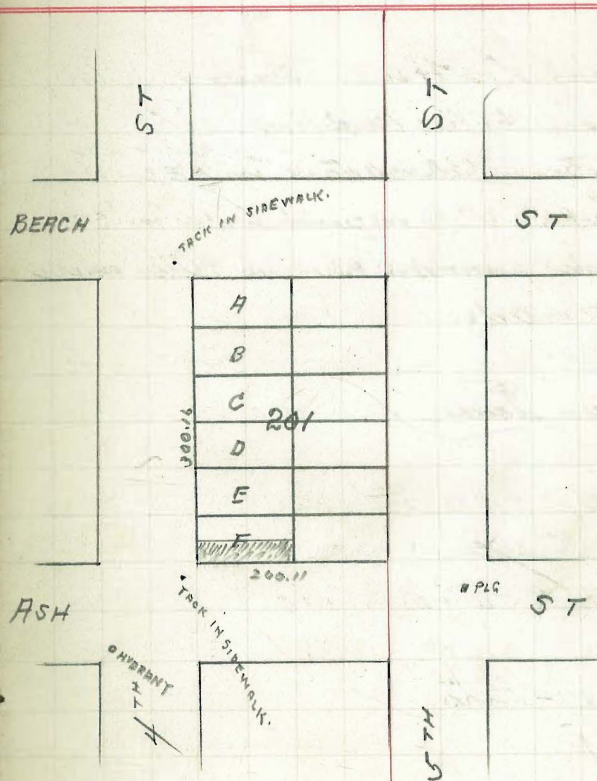
B.S. on B.M. at SE cor 5th & ash (Elev of B.M. = 77.63)

7.47 Height of Inst. 85.10

Rod on NE cor 4th & ash 4.10

" " North cor of south 1/2 lot "F" = 2.90

" " Cor on ash Bet 4th & 5th = 4.10



Survey of Lots 1 to 8 inclusive in Block
188 University Heights for Board Education
By order of Balach

This survey made from old 78th course
as indicated on opposite page,
found old plugs on N.W. and SE corners
placed new plugs on the N.E. and S.W. corners.

Surveyed July 12 1893.

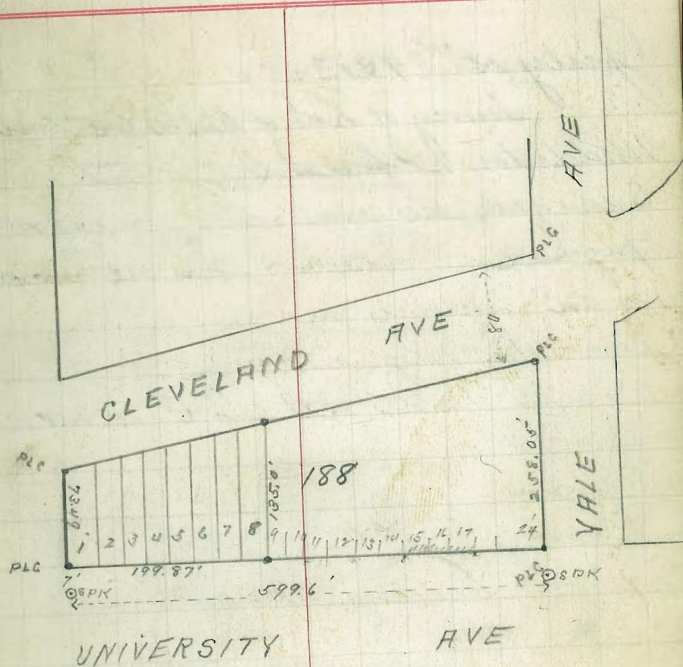
by Wm. Williams, Shaw and Faran.

15-16-17-Lots,

Order Book No 1 p 32
charges \$5.00

11

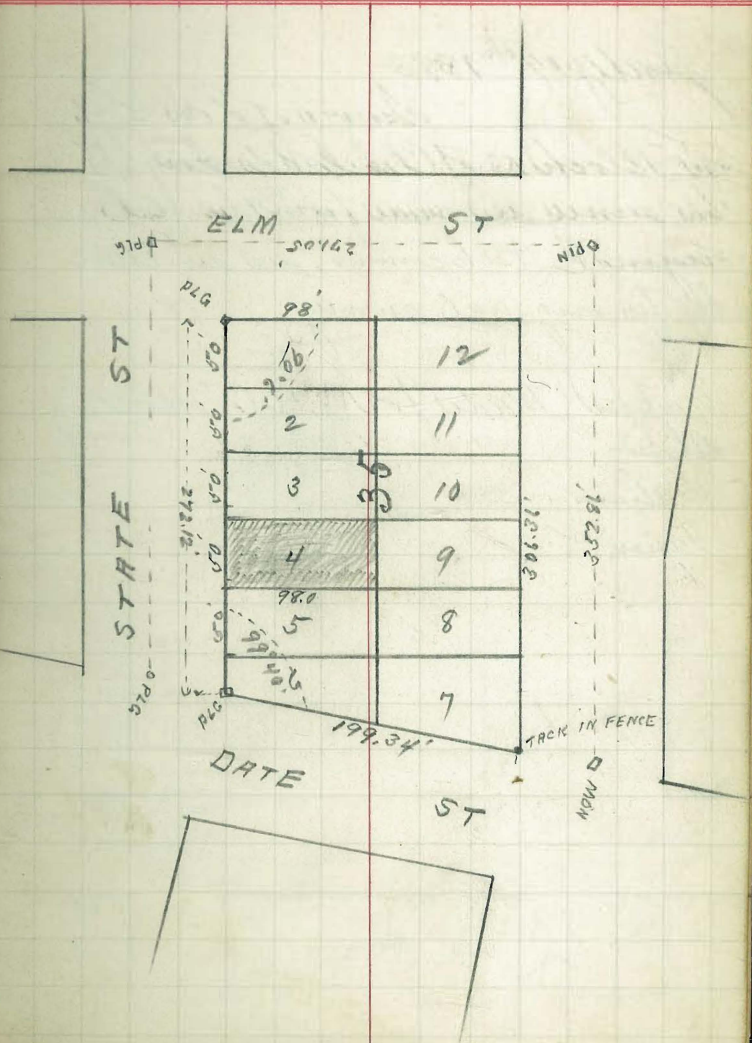
350	100	258.00	350
141		78.49	141
350		826.6	500
1400		600	141,400
350	438	243-1	56-1
49,350	176	2400	240
78.49		570	49,450
122.84			



July 15th - 90.

Survey of Lot 4 Blk 35 in
Middletown for S. S. Cannon

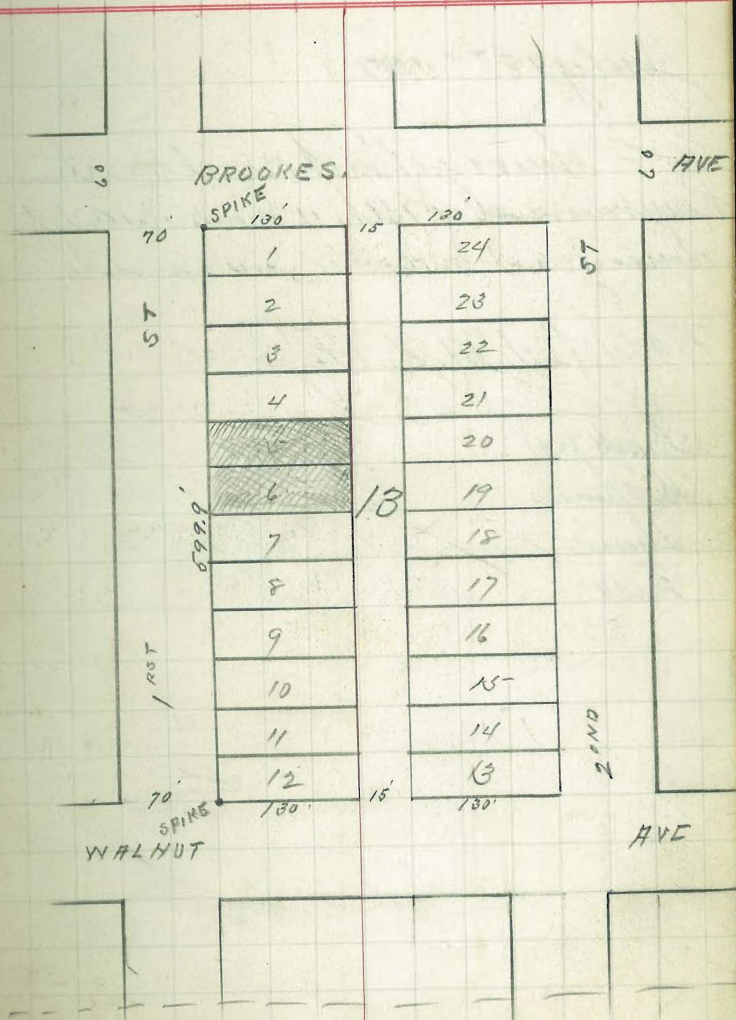
Surveyed, as indicated on opposite
page.



July 17th 1893.

Survey of Lots 5-6
in Block 13 of Cleveland Heights
this survey is made from the old
original Plk. comm. as set there
by the original survey

Capps (Made for J. A. C. Mous.)
Shaw
Williams
Farmer

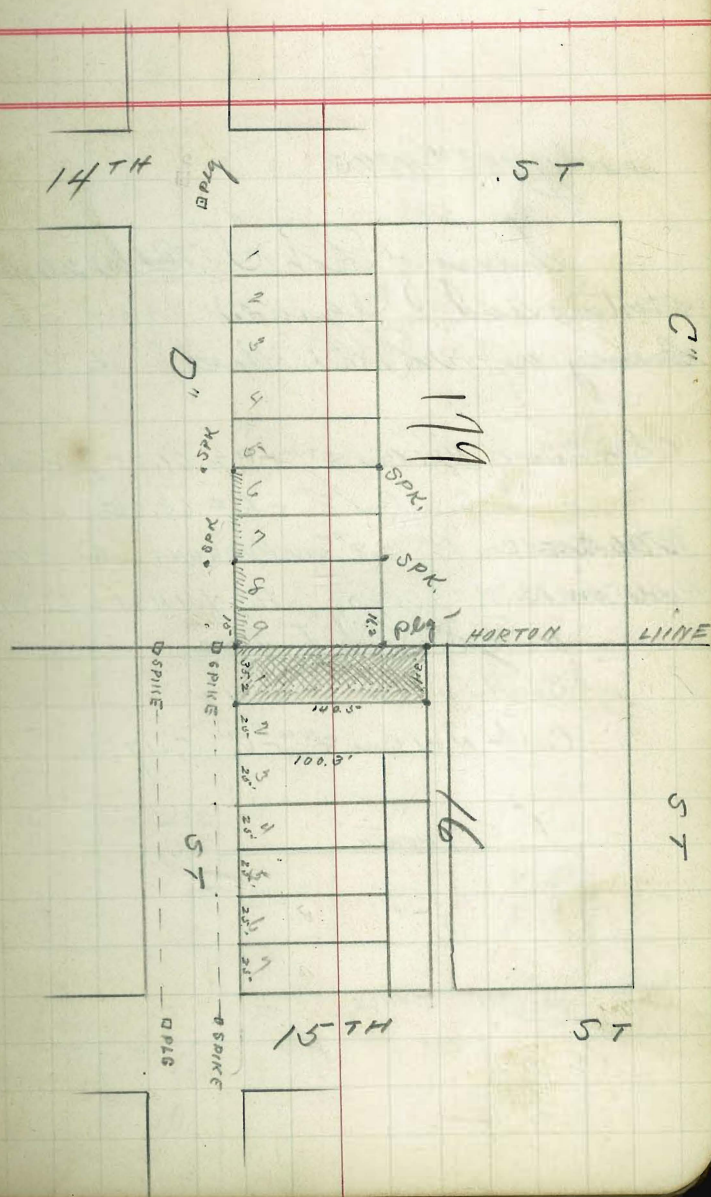


July 18th 1893

Survey of Lot 1 in Almsteads.
 Resubdivision of Blk 16 Garden's add
 Survey as indicated on opposite page

Made for M. L. Fitch

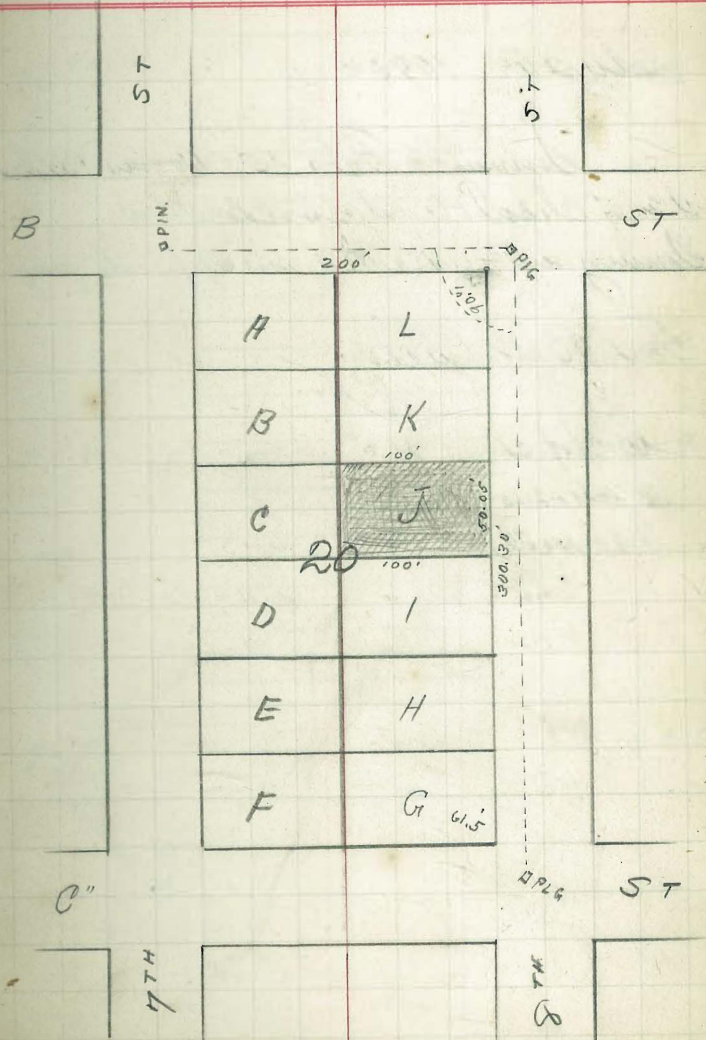
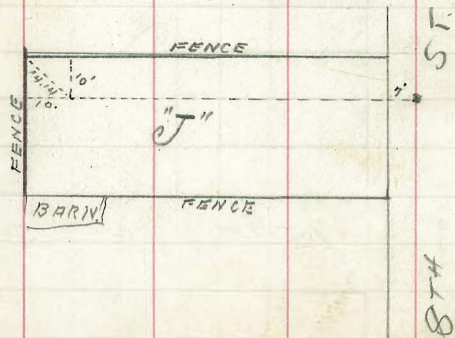
Gappel
 Williams
 Shaw
 Farns.



July 19th 1893.

Survey of Lot "J" Blk 20 in
Horton's Add. ^{and} grade.
Surveyed for L. O. Mix

Elevation of NW Cor 8th - C = 61.75 property
 " " " SW Cor 8th - B = 63.25 " "
 B.M. S.E. Cor "B" ^{and} 8th Cor HYDRANT = 66.072
 Rod on B.M. = 0.90 H^t of INST = 66.972
 " " North Cor Lot "J" 4.22
 " " South " " " 4.47
 " " Curb NW Cor 8th - "C" 5.47

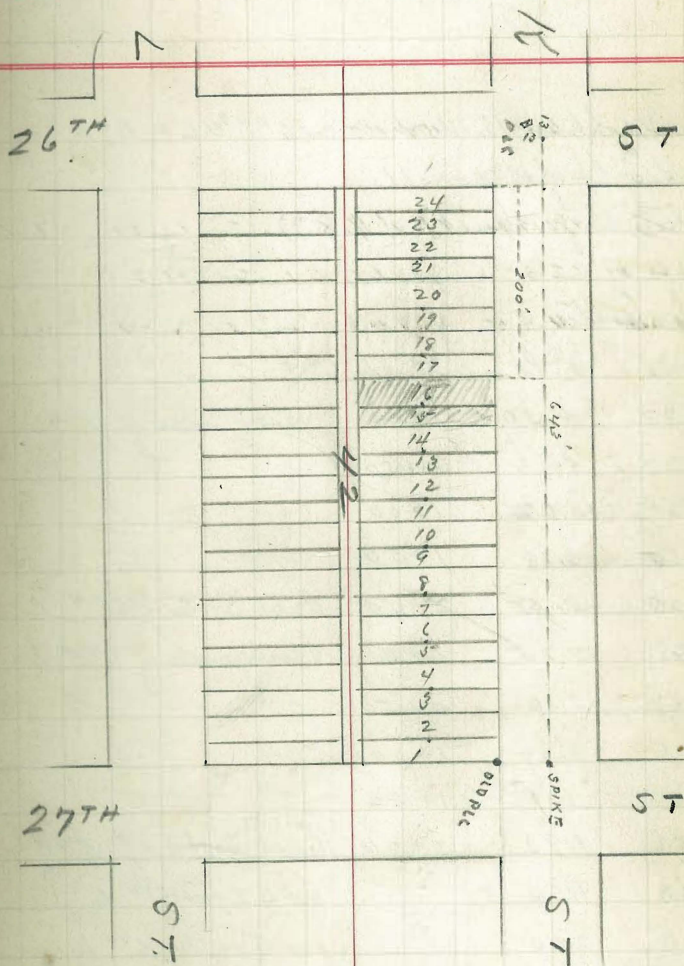


July 20 1893.

Survey of Lots 15 + 16 in Blks
42 of Chas Hensley's Addition
Survey as indicated on opposite page

For G. B. Carey.

Capps
Williams
Cowell.

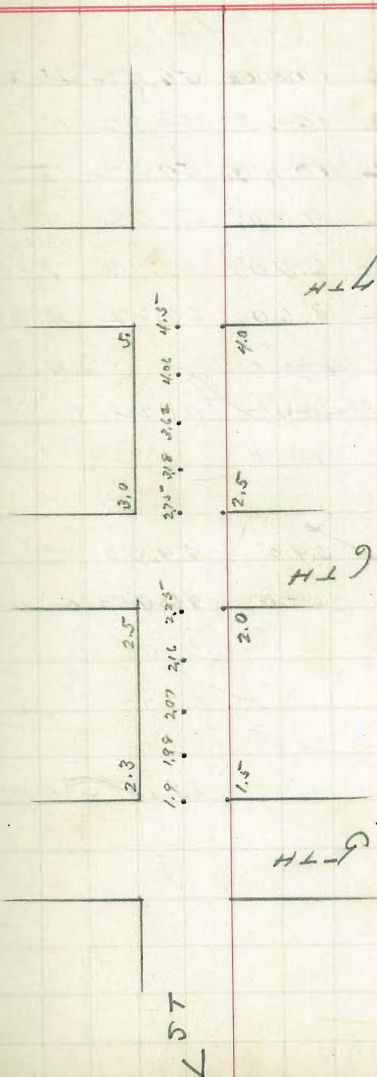


July 20TH 1893. Set grades for R.R. Colorado Belt-line

Sight on B.M. at N.E. cor 6TH L = 3.92
 Height of B.M. = 3.91
 Height of Inst = (7.83)

Center

Rod	El	Dist	
3.33	4.50	0+0	West Side of 7 TH
3.77	4.06	0+50	
4.21	3.62	1+00	
4.65	3.18	1+50	
5.08	2.75	2+00	East Side of 6 TH
5.58	2.25	0+0	West side of 6 TH
5.67	2.16	0+50	
5.76	2.07	1+00	
5.85	1.98	1+50	
5.93	1.90	2+00	East side of 5 TH
6.33	1.50		NW S.E. cor 5 TH L
5.83	2.00		on SW cor 6 TH L
5.33	2.50		on SE cor 6 TH L
3.83	4.00		on S.W. cor 7 TH L



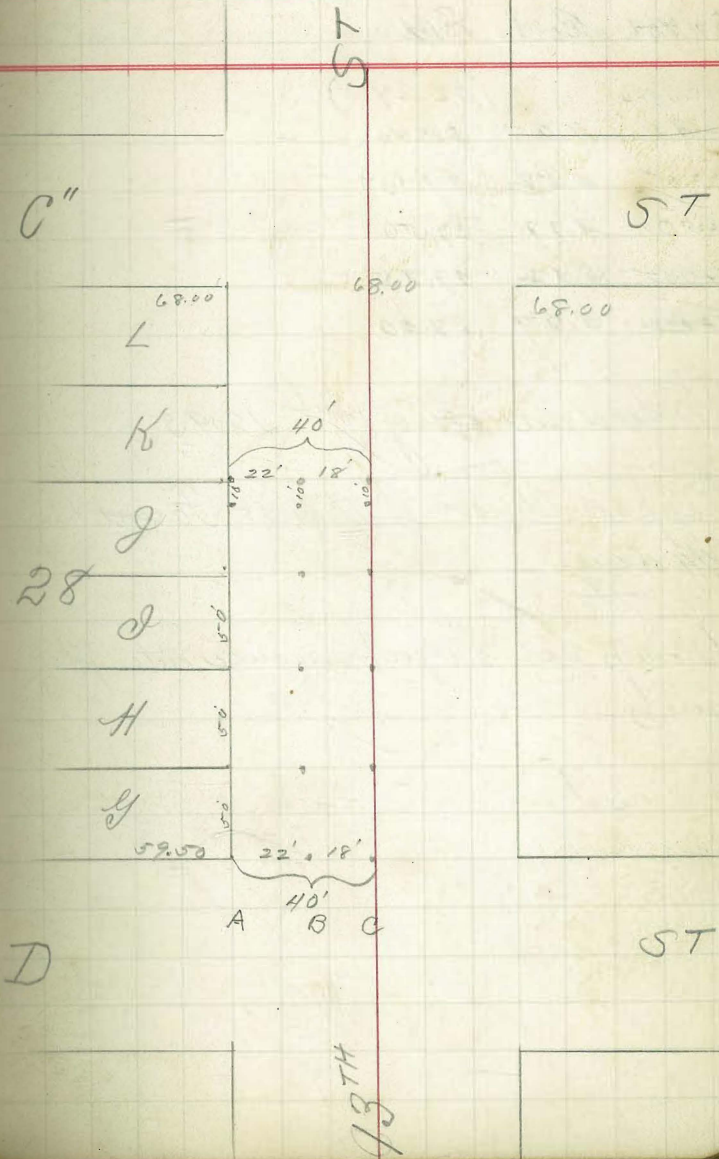
Levels taken July 31, 1893.

on 13th St C-20, to Center line
of Street on West side
of Boomer-Capron

Stk	Rod	EL	Rod	EL	Rod	EL
		A	(69.42) B			C
0+0	9.30	60.12	10.00	59.42	11.20	58.22
+50	9.30	60.12	10.60	58.82	13.00	56.42
1+00	8.90	60.52	10.10	59.32	12.20	57.22
1+50	6.80	62.62	9.80	59.62	11.70	57.72
1+90	4.90	64.52	6.70	62.72	9.10	60.52
2+00	4.10	65.32	3.60	65.82	4.20	65.22

Capps, Williams - Farar.

	A	B	C
	grade	grade	grade
0+0	59.50	59.50	59.5
+50	60.95	60.95	60.95
1+00	62.36	62.36	62.36
1+50	63.77	63.77	63.77
1+90	64.88	64.88	64.88
2+00	65.18	65.18	65.18



Setting Curb on "H" st

for J. V. Collins Aug 19th 1893.

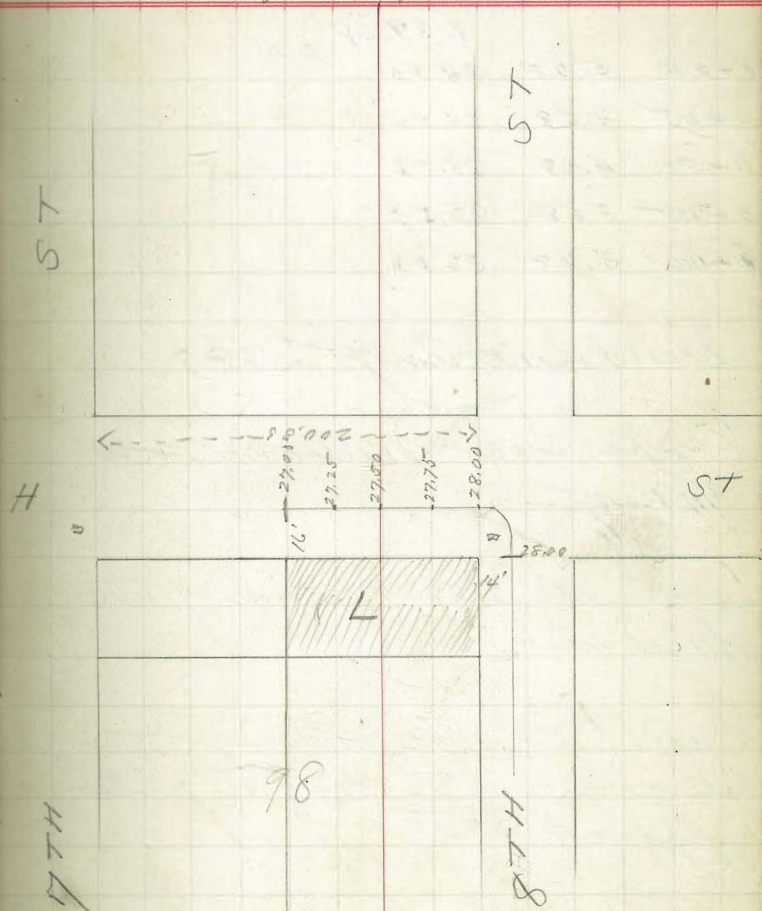
STHT	Rod	EL
5.10.08+H		(32.27)
0+0	4.27	28.00
0+25	4.52	27.75
0+50	4.77	27.50
0+75	5.02	27.25
1+00	5.27	27.00

735. on 18.7m. angle on Hydrant on S.E. cor 8th HST
= 1.25

Work done Aug 1st 1893

Capps, Shaw, Williams & Farar
1/4 day,

points set 2.5 feet inside outer face
curb



Setting Curb on H St

STAT Rod El.

STAT	Rod	El.
		(39.08)
0+00	5.08	34.00
0+25	4.58	34.50
0+50	4.08	35.00
0+75	3.58	35.50
1+00	3.08	36.00

Work done Aug 1st 1893

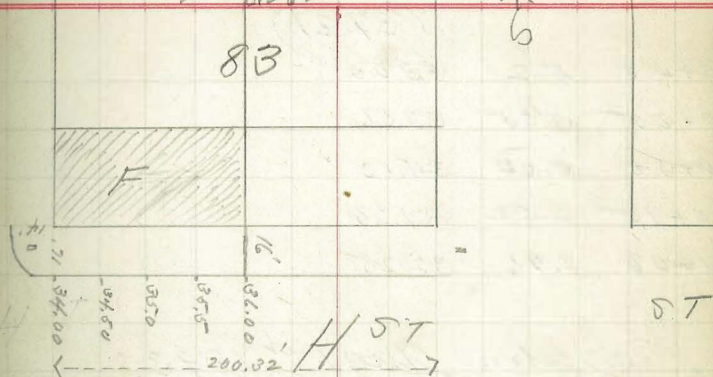
Capps, Shaw, Williams - Faras.
1/4 day

point set 2.5 feet inside of gutter
face curb

Height B.M. 31.02 (North hinge Hydrant S.E.)
Reading on " " 8.06 (low of 8th Street)
Height of curb 39.08

for J. V. Collins Aug 1st 1893.20

B.S. on B.M. hinge on Hydrant S.E. cor of 8TH + H ST = 80.6



9TH

10TH

Setting curb on "H" st

For F. Kies Aug^{1st} 21
1893.

STAT Rod E.L.

STAT	Rod	E.L.
		(37.21)
0+00	4.21	33.00
0+25	3.65	33.56
0+50	3.09	34.12
0+75	2.52	34.69
1+00	1.96	35.25

Work done Aug^{1st} 1893.

Capps, Shaw, Williams & Farver

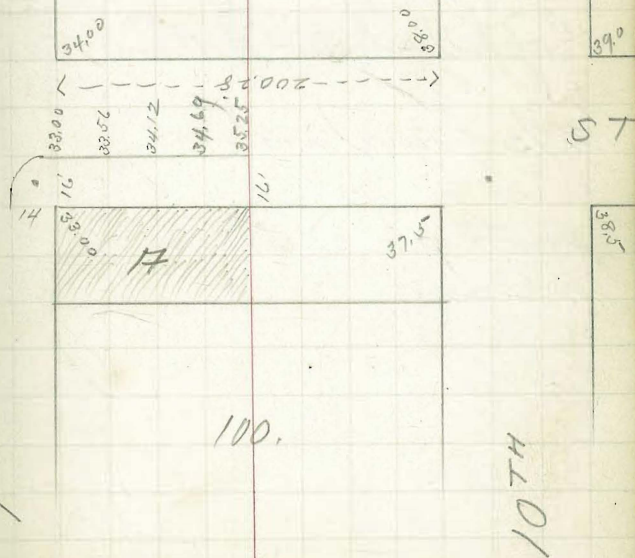
2 hours work.

points set 2.5 feet inside of outer
face curb

B.S. on B.M. Hinge on Hydrant SE. Cor 8TH - HTH ST
= 6.19

5

5

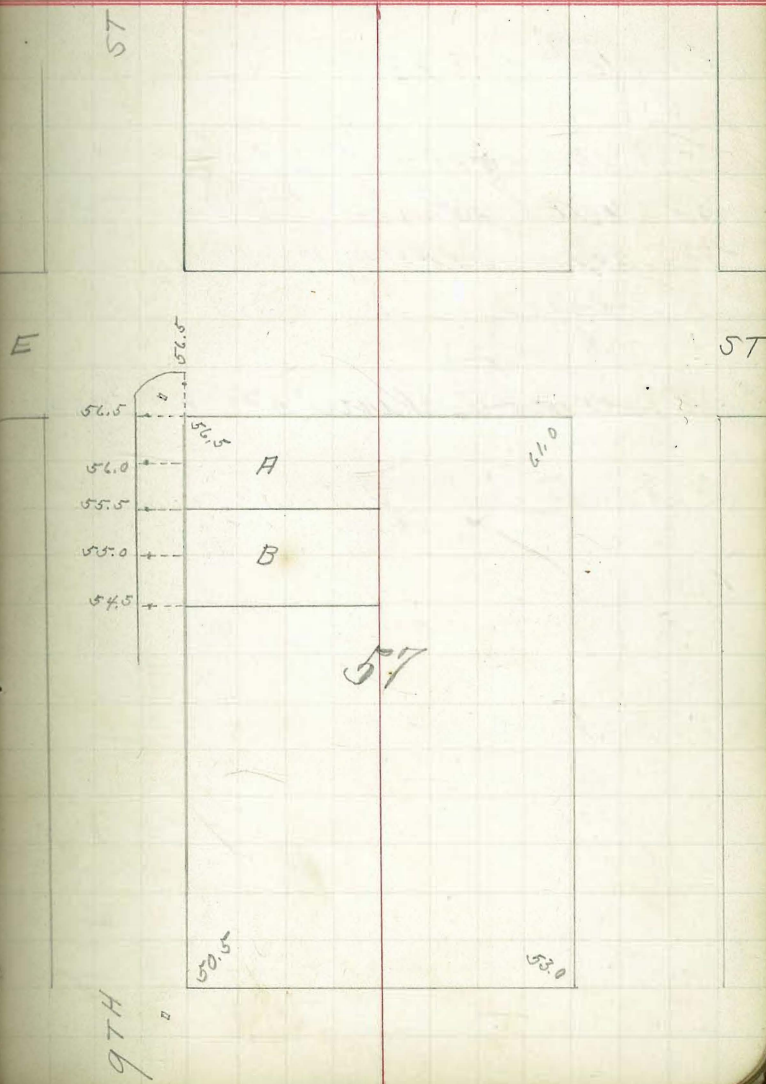


Setting curb on 9th ST

For Kliver Aug 3rd 1893. ²²

STAT	Rod	El.
		(60.86)
0+00	4.36	56.50
0+25	4.86	56.00
0+50	5.36	55.50
0+75	5.86	55.00
1+00	6.36	54.50

B.S. on B.M. Hydrant on S.W. Cor 9th Fth ST
= 10.60



Work done Aug 3rd 1893.

Capps, Shaw, Williams, Farar.

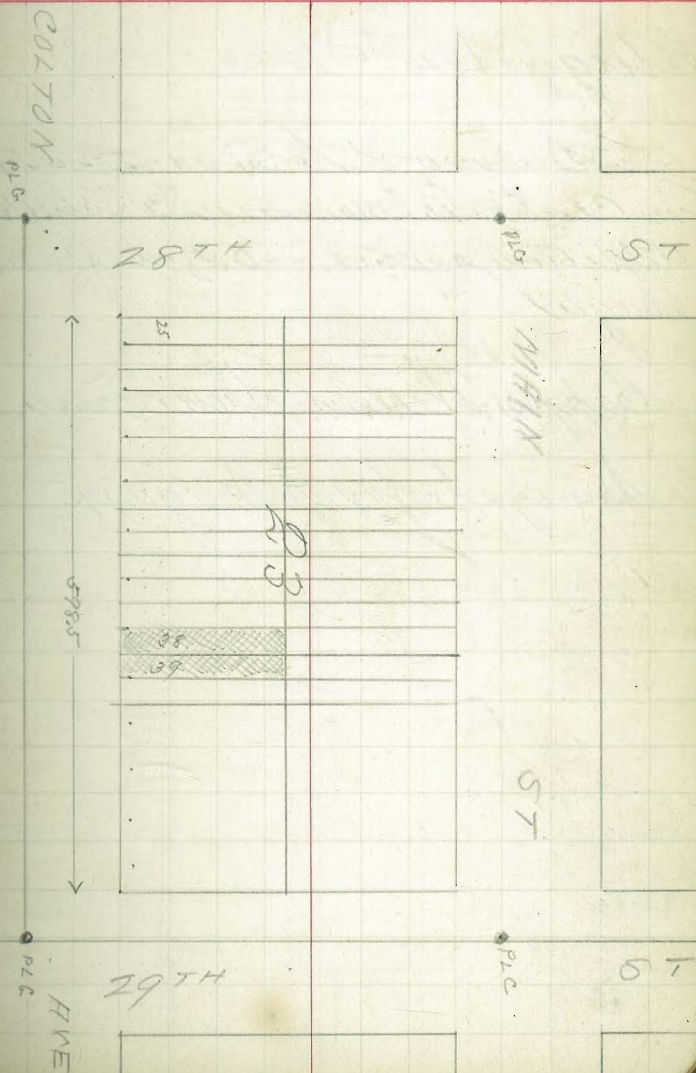
2 1/2 hours work.

points set 3 feet inside of outer
face curb.

Aug 7th 1893.

Survey of Lots 38 & 39 in Block
23 Reed & Shubbell's Addition
as indicated on opposite
page

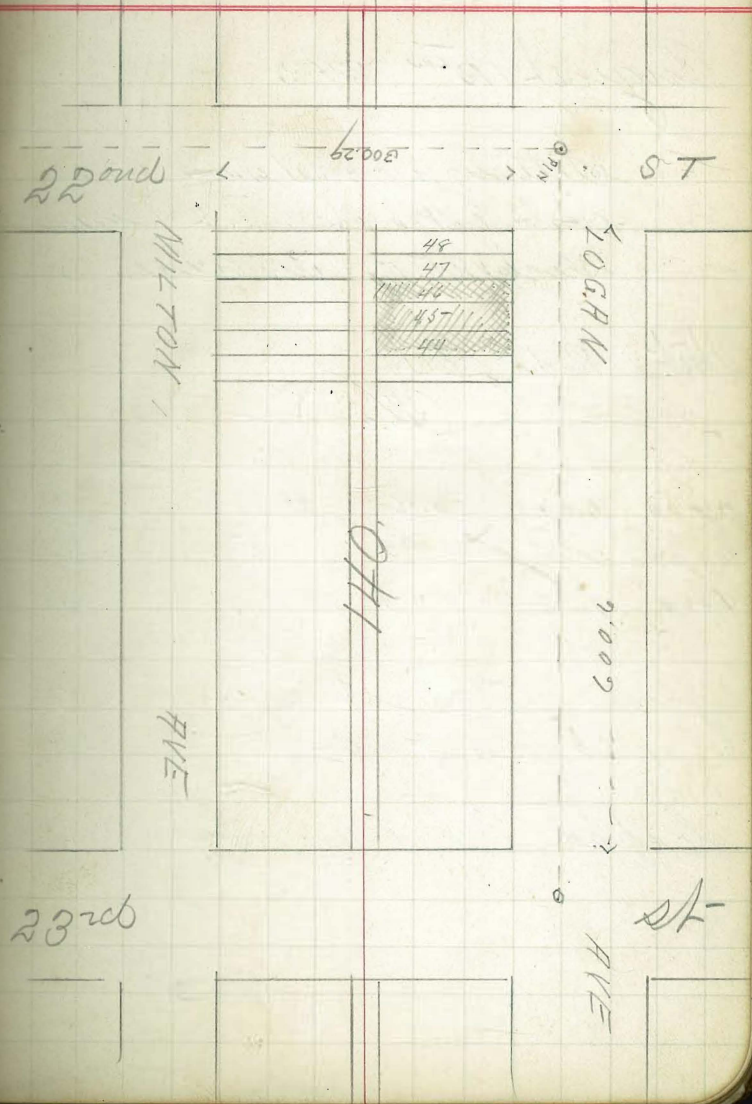
Leapps, Shaw, Williams & Farar



August 10th 1893.

Survey of Lots 44-45-46
in Block 140 Manassas & Schiller's
Addition, as indicated on opposite
page

Capps, Williams, Shaw, & Faran,
Surveyed for A. Helgast



August 12th 1893.

Setting grade stakes for
curb in front of Lot 7 in
Block 85 Horton's add.

Stat Rod Elevation
(H.I.)
(40.23)

A+00	6.07	34.16
B+00	6.65	33.58
C+00	7.23	33.00

grade stakes set 2 feet in side
of outer face of curb.

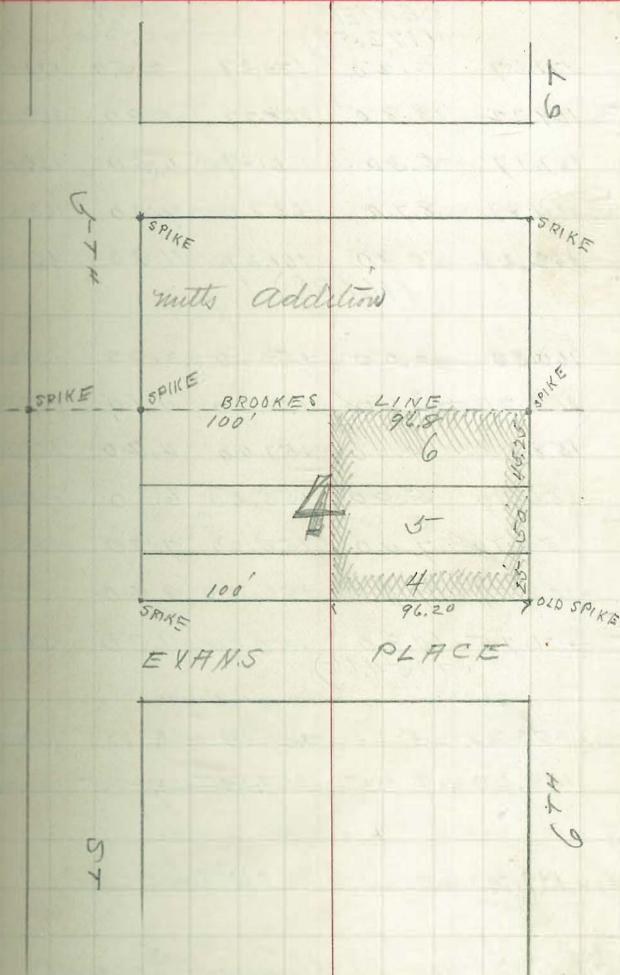
Capps, Williams, Shaw & Farrow.



Survey of Lots 4-5-6 in Block 4
in Brooks Addition
for George Butler (this survey is
made from old original documents
as indicated on opposite page)

Surveyed Aug 16th 1893.

Leopold. Shaw Williams. Surveyor.



Check Levels on Grade

on 24th sheet for Schuyler 27
Aug 17th 1893.

Rod	EL	Rod	EL	Rod	EL	Stat	R.	H.	S.	5
EAST			CENTER (172.57)		WEST		Smith Eastern E-24 th			
0.90	171.67	2.20	170.37	2.50	170.07	0+0				
3.35	169.22	3.80	168.77	4.30	168.27	0+50		E		ST
5.40	167.17	6.30	166.27	6.50	166.07	1+00	170.0		170.75	171.5
7.70	164.87	8.70	163.87	9.00	163.57	1+50	169.25		168.5	169.25
9.90	162.67	10.90	161.67 (161.36)	11.30	161.27	2+00	165.68		166.3	167.00
							162.51		160.1	164.75
1.10	160.30	2.00	159.40	2.30	159.10	2+50	161.34		161.9	162.50
3.20	158.20	3.60	157.80	4.10	157.30	3+00	159.17		159.7	160.25
3.30	158.10	4.40	157.00	4.20	157.20	0+00	157.0		157.5	158.0
5.00	156.40	6.80	155.60	6.10	155.30	0+50				
6.70	154.70	7.40	154.00	7.70	153.70	1+00		F		ST
7.90	153.50	8.90	152.50	9.40	152.00	1+50	157.0		157.5	158.0
9.65	151.75	10.80	150.60 (154.66)	11.30	150.10	2+00	158.25		156.00	156.4
							153.50		154.3	154.82
4.50	150.20	5.60	149.10	6.43	148.27	2+50	151.75		152.6	153.24
6.10	148.60	7.15	147.55	7.95	146.75	3+00	150.00		150.9	151.66
							148.25		149.2	150.8
8.40 on B.M.		SEC on G 9 th	24 th (146.26)				146.5		147.5	148.5
Capps Shaw Williams - Fenner								G	G	ST

24th

Setting Curb-grades

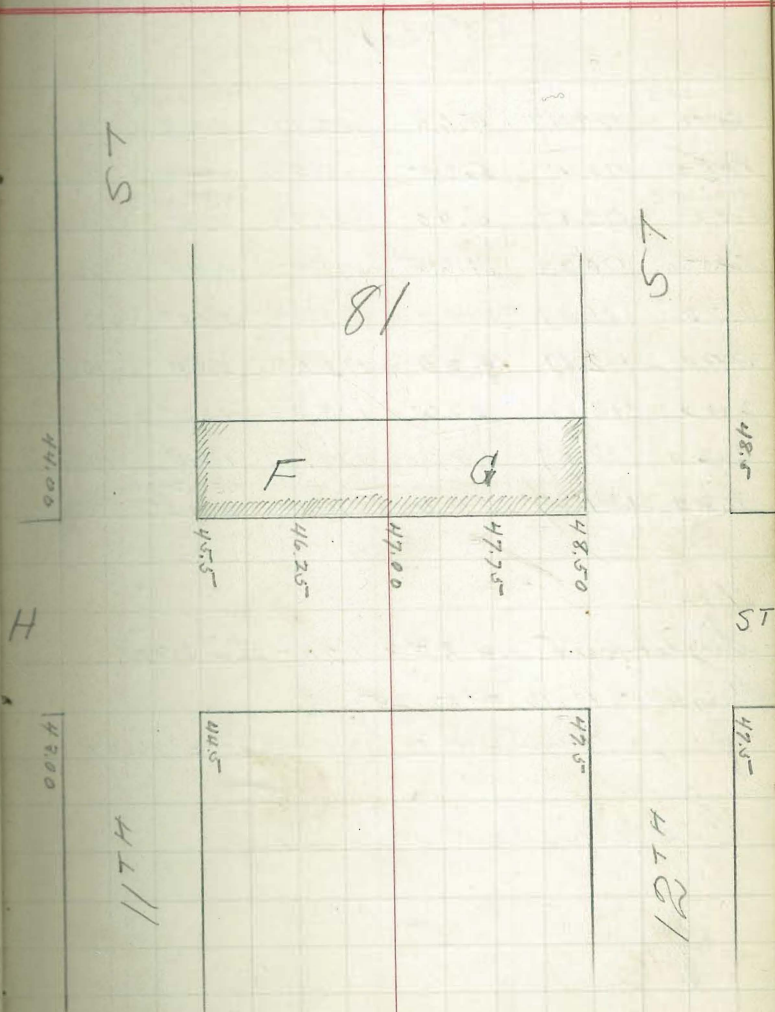
for Lot 81 "G" Blk 81 Horton 28
for Ed Miscott Aug 21st 1893.

Stat	Rod	El.
		(49.99)
NE. C. W. 11 th ST		
0+00	4.49	45.50
0+50	3.74	46.25
1+00	2.99	47.00
1+50	2.24	47.75
2+00	1.49	48.50

Curb stakes set 3 feet inside of
outer face of Curb

Cappal William Shaw, Fenest

B.M. on S.E. cor 120th H muzzles of
hydrant 49.08 B.S. on B.M. =
0.91 = H.I. = 49.99.



Chuck Lavelle on Grade of

24th Bet 20th & E Streets
Aug 22nd 1893.

29

Rod	El	Rod	El	Rod	El.	Stat		ST
		(176.07)						
S.W. cor 24-E 5.90	170.17	5.60	170.47	S.E. cor 24-E 4.40	171.67	0+0	174.00	176.00
5.60	170.47	5.25	170.82	4.40	171.67	0+40		
N.W. cor 24-E 5.80	170.27	5.00	171.07	N.E. cor 24-E 4.15	171.92	0+80	D	ST
5.35	170.72	4.65	171.42	3.50	172.57	0+50 cut .27	174.0	174.5
4.70	171.37	4.00	172.07	3.15	172.92	1+00 " .57	173.80	173.90
3.90	172.17	3.20	172.87	2.50	173.57	1+50 " .53	172.64	173.27
2.90	173.17	2.55	173.52	1.55	174.52	2+00	171.98	172.64
2.20	173.87	1.80	174.27	1.00	175.07	2+50	171.32	172.02
1.80	174.27	1.00	175.07	S.E. cor 24 0.75	175.32	3+00	170.67	171.38
							170.0	170.75
								171.5
								cut .32
								" .70
								co.34
								" .70
								" .28
								" .26
								" .50
								" .40

Sight on B.M. S.E. cor 24-E = 3.82

Height of B.M. = 172.25

" " Instrument 172.25 + 3.82 = 176.07

Capps Shaw Williams

E 170.0

170.0

170.75

171.5

ST

24TH

Setting curb grade stakes for L.B. Richards

Stat	B.S.	I.S.	C.W.F.	Ground Elevations
		(205.67) H.I.		
B.M.	6.33			
0+00	FRONT ST	4.75	0.92	200.92
0+50		4.50	" .92	201.17
1+00		3.45	" .72	202.22
1+50		2.50	" .42	203.17
0+50		KALMIA	3.00	" .55
1+00	0.00		" .42	205.67

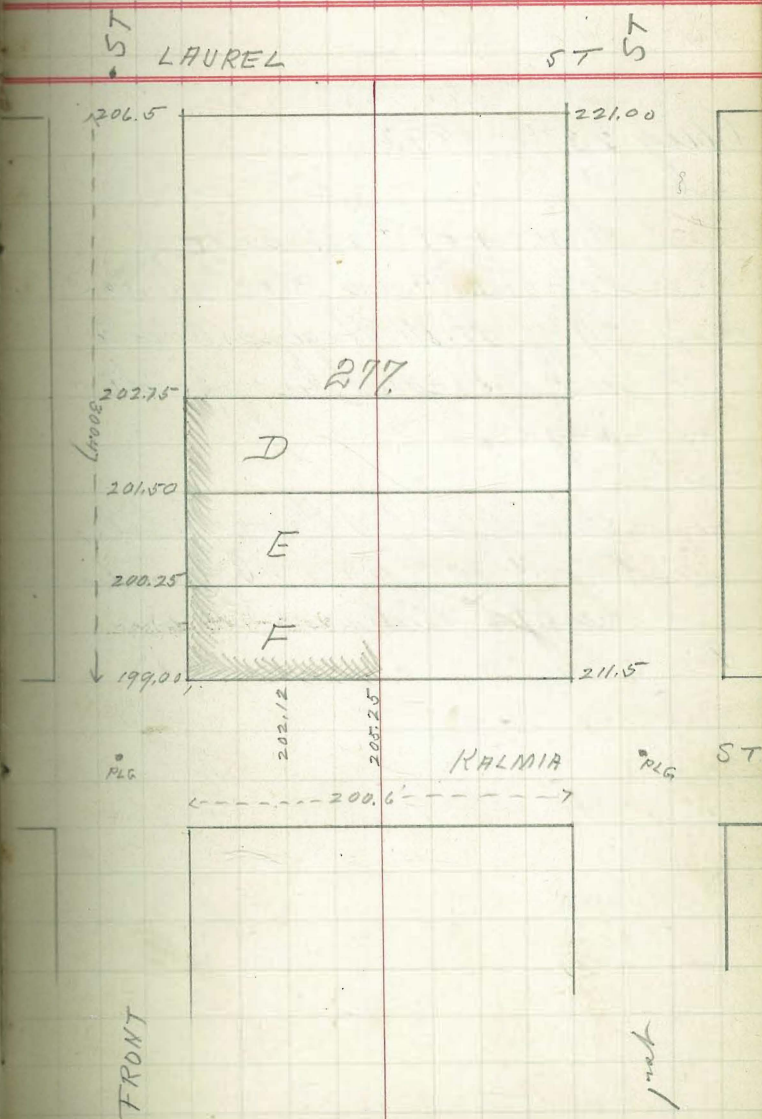
Height of B.M. 199.042 being a spike on top of fence post on NW cor of Kalmia²⁰⁰ Front street.

Reading on B.M. = 6.33

Height of Inst. = 205.67

Leppel Williams - Surveyor

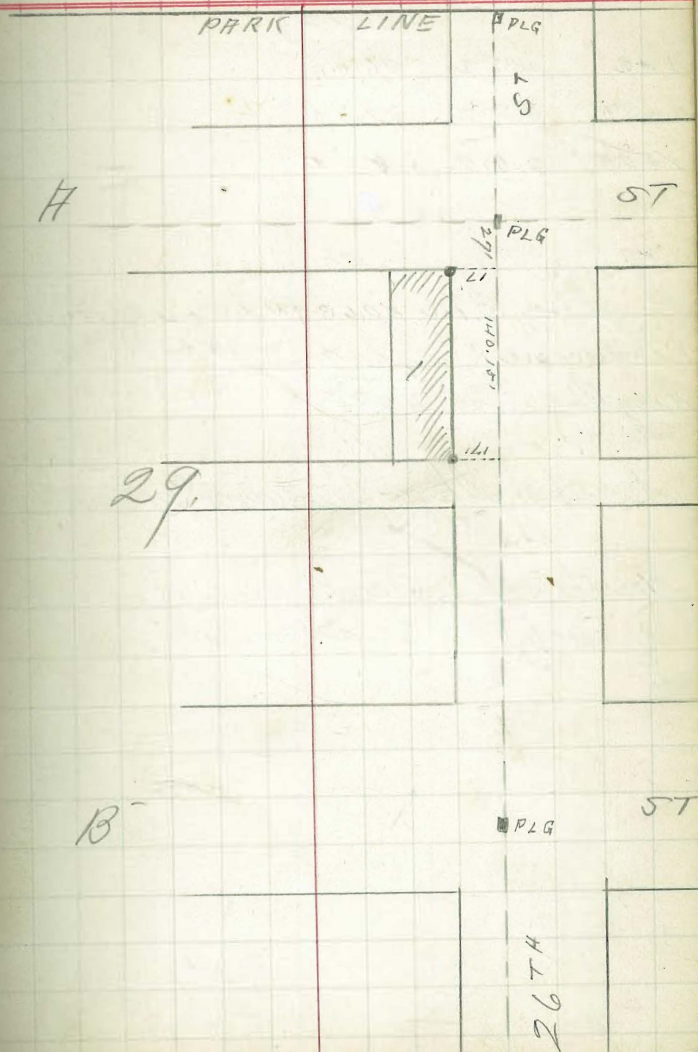
Aug 22nd 1893.



Aug 23rd 1893.

Survey of East side of
lot 29 in Block No.
29 of H. M. Higgins addition
as indicated on opposite
page.

Surveyed for Harvey Stiles
Scapps Williams & Ferrer.



Setting curb grades for Lot

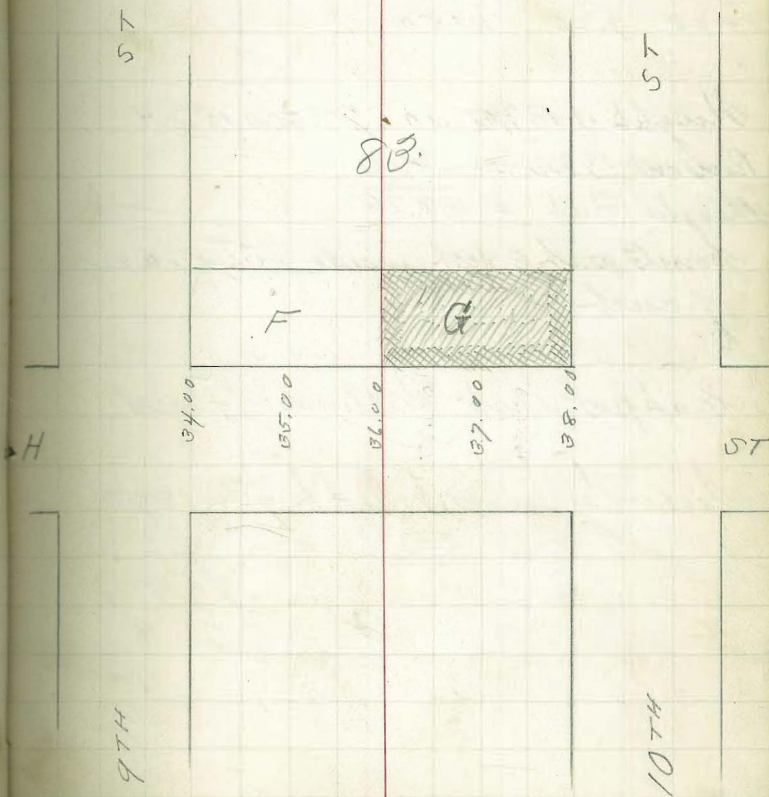
1/2" in Blk 83 Horton's Add. 32
for W. E. Bunnhall Sept 5th 1893.

Stat	Rod	El
		(40.82)
0+0	4.82	36.00
0+50	3.82	37.00
1+00	2.82	38.00

Height of B.M. 40.63 (N hinge of Hydrant)
Reading on " " 0.19 (on SE on 10th St)
Height of mark 40.82

Capps, Shaw, Williams & Furan

points set 2.5 feet inside of outer face
of curb



Setting curb grades

Stat	Rod	El.
0+0	4.76	44.00
0+25	5.89	43.37
0+50	6.01	42.75
0+75	6.64	42.12
1+00	7.26	41.50

Height of B.M. 40.63 SECW 10TH-H

Rod on B.M. = 8.13

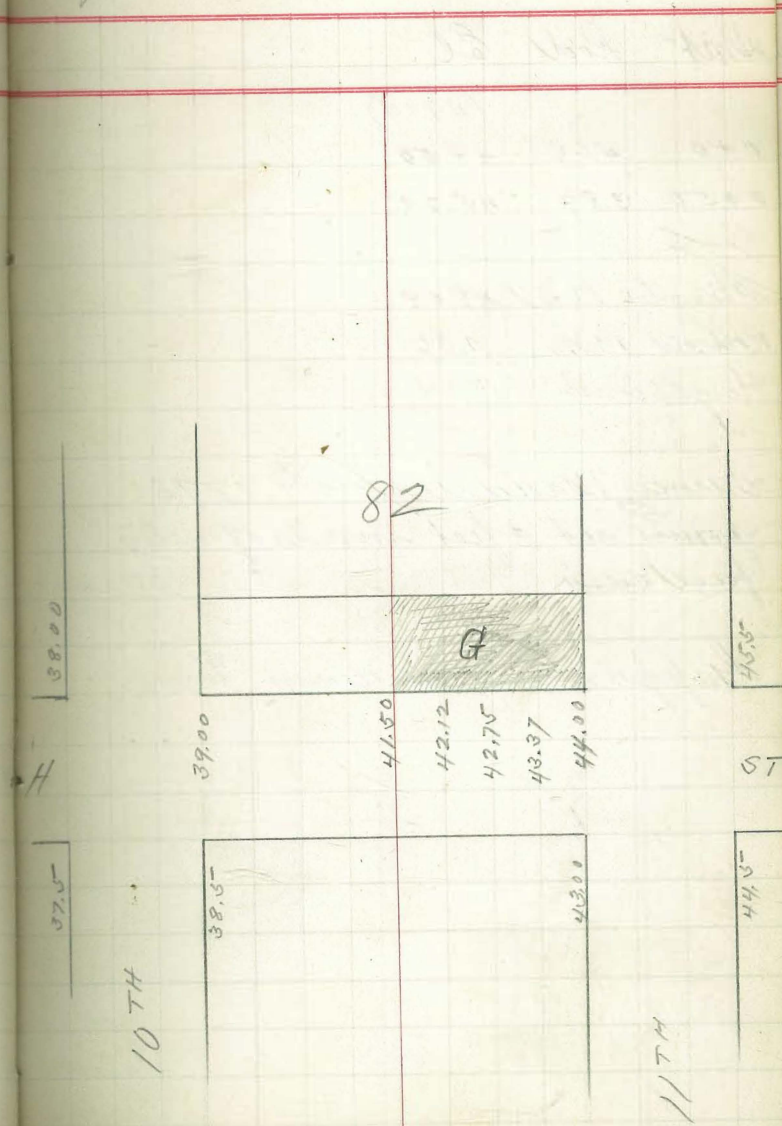
Height Inst = 49.76

points set 3 feet inside outer face of curb.

Cappet Shaw, Williams & Furr

Survey made Sept 7th 1898.

for Lot "G" in Block 82, Horton 33
for



Setting Curb on Hst on West half of Lot "A" in Blk 102 Horton 34

Stat	Rod	El.
		(49.14)
0+0	4.64	44.50
0+50	3.89	45.25

Height B.M. 49.08
 Rod on B.M. 0.06
 Height Inst 49.14

Survey Made Sept 7th 1898.
 points set 3 feet inside of outer
 face curb.

Capps, Shaw, Williams, Fours.



Setting curb grades on Hrd

for Lot F Blk 85 Horton's addy 35
James McNamee or J. H. Hewitt

Stat	Rd	El.
0+0	5.17	27.50
0+50	4.67	28.00
1+00	4.17	28.50

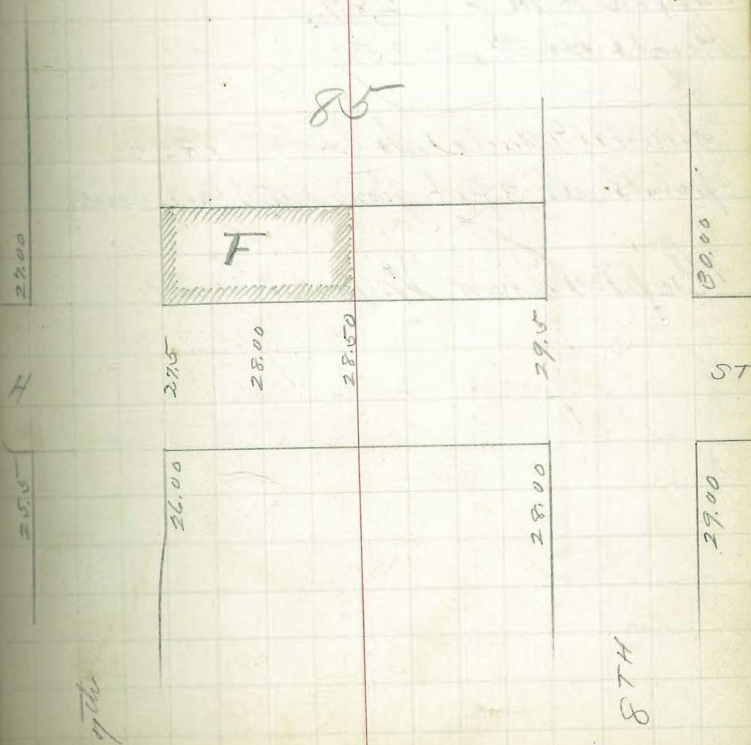
Height B.M. 27.63 SW cor 7th & H

Rd on B.M. 5.04

Height curb 32.67

Survey Made Sept 13th 1893
points set 3 feet from outer face curb.

Capps Shaw, Williams, Furr



Setting curb grade for

Habit side of Lot A Bk 101. 36
 for James Mc Nair Contractor

Stat Rod EL.

Stat	Rod	EL.
		(43.50)
0+0	5.00	38.50
0+50	3.88	39.62
0+00	2.75	40.75

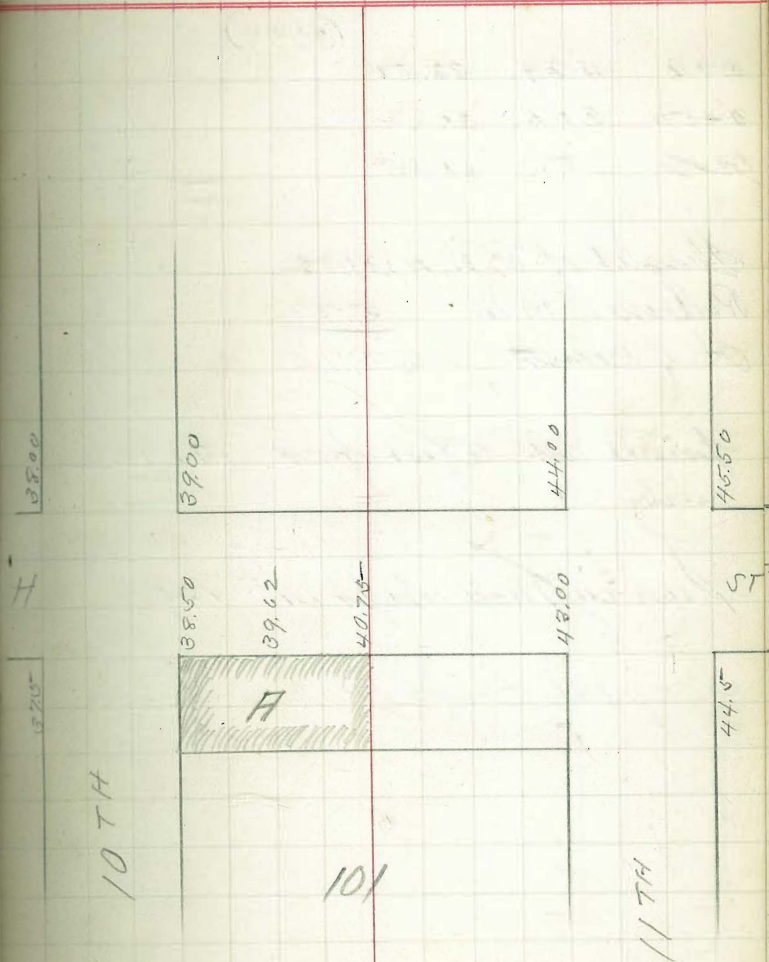
Height B.M. = 40.63 S.E. cor 10th st.

Rod on B.M. = 2.87

Height Inst 43.50

Survey made Sept 13th 1898
 points set 3 feet from outer face curb

Capps Shaw Williams & Feav.



Setting Curb stakes for

HST side of Lot Lⁿ Blk 99 Hobtown 37
for Geo Hazard.

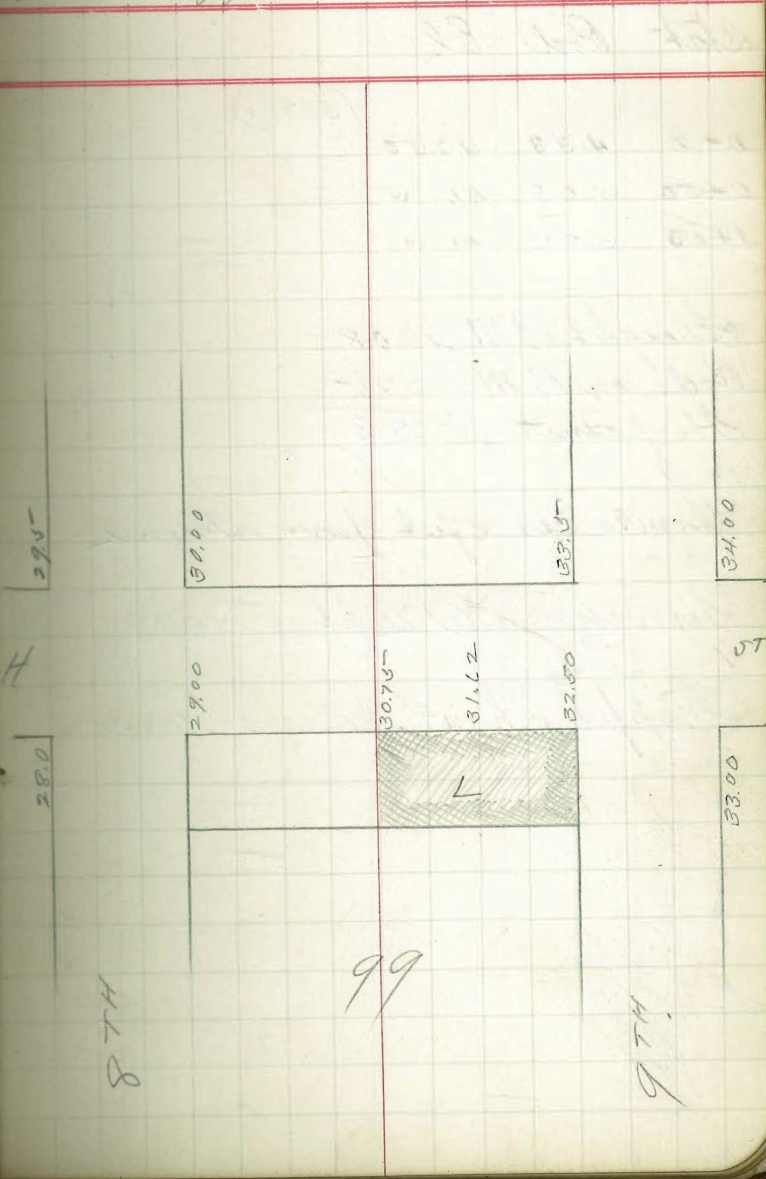
Stat	Rod	El.
0+0	4.29	33.50 (36.79)
0+50	5.17	31.62
1+00	6.04	30.75

Height of BM = 31.02
 Rod on BM = 5.77
 H of Inst = 36.79

points set 3 feet from outer face
 curb

Survey made Sept 14th 1893

Capps, Shaw, Williams & Farar.



Sitting curb grade stakes

for "H" street side of Lot L "Dey Horton's 38
for Geo Haggard

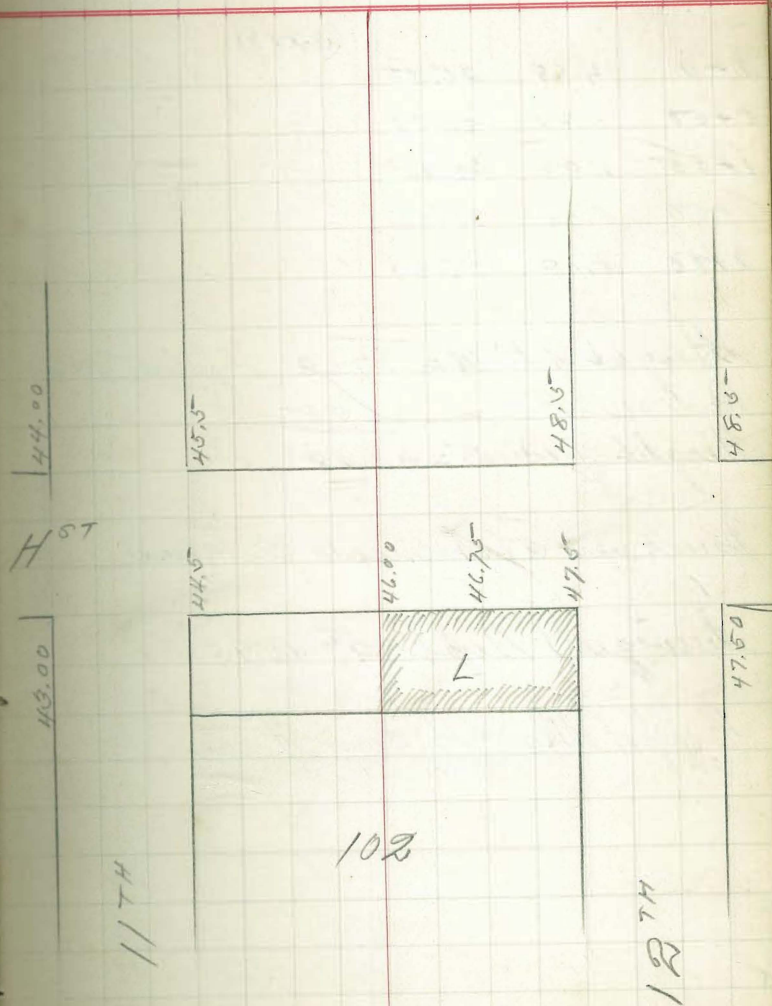
Stat	Rod	El.
		(51.83)
0+0	4.33	47.50
0+50	5.08	46.75
1+00	5.83	46.00

Height B.M. 49.08
Rod on B.M. = 2.75
H. of Inst. $\frac{51.83}{}$

points set 3 feet from outer face

Survey made Sept 14th 1893

Capps Shaw, Williams & Farar



Setting Camb grades for "H"

at side of Lots "A" and "L" Blk 97. Henton 39
for H. P. Whitney

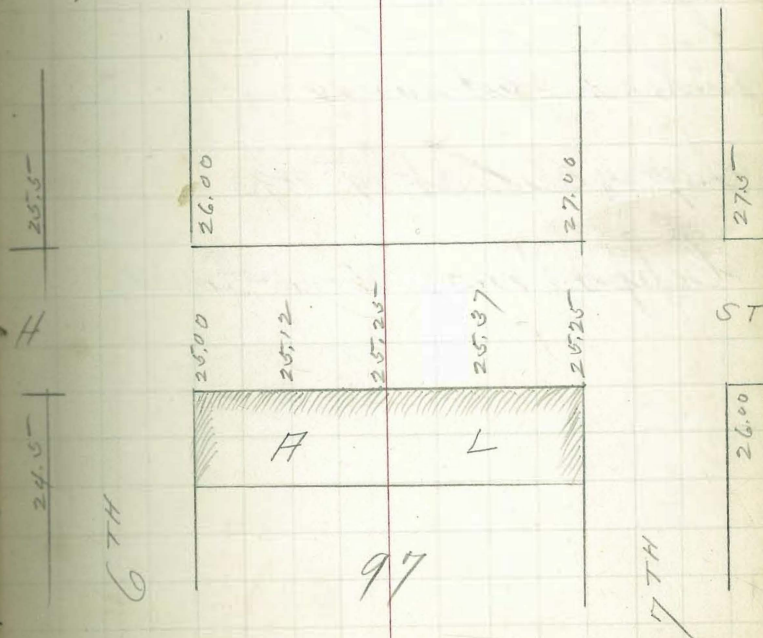
Stat	Rod	El
		(30.18)
0+0	4.68	25.5-
0+50	4.81	25.37
1+00	4.93	25.23-
1+50	5.06	25.12
2+00	5.18	25.00

Height of B.M. = 27.63 Hydrant SW cor
Rod on B.M. 2.55-
Height of Snet = 30.18

Points set 3 feet inside curb lines

Surveyed Sept 19th 1893.

Cappel Shaw Williams Ferris



Setting curb grades on Hat

for Lot "A" Blk 98 Antoin's Add 40
for John Sinks

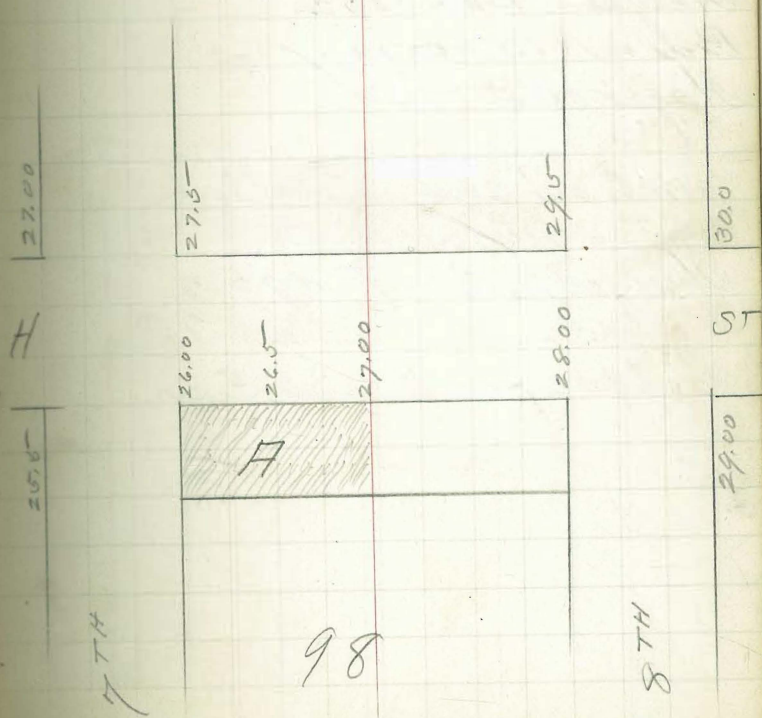
Stat	Prod	EL
		(31.10)
0+0	5.10	26.00
0+50	4.60	26.50
1+00	4.10	27.00

Height of B.M. = 27.63
 Rod on B.M. = 3.47
 Height Inst = 31.10

pins set 3 feet inside curb.

Surveyed Sept 19th 1893

Lepps & Shaw, Williams - Ferris



Setting curb grades for H&A side

Lot "G" & E 1/2 lot "F" Blk 84 Hutton 41
for Snyder & Dougherty.

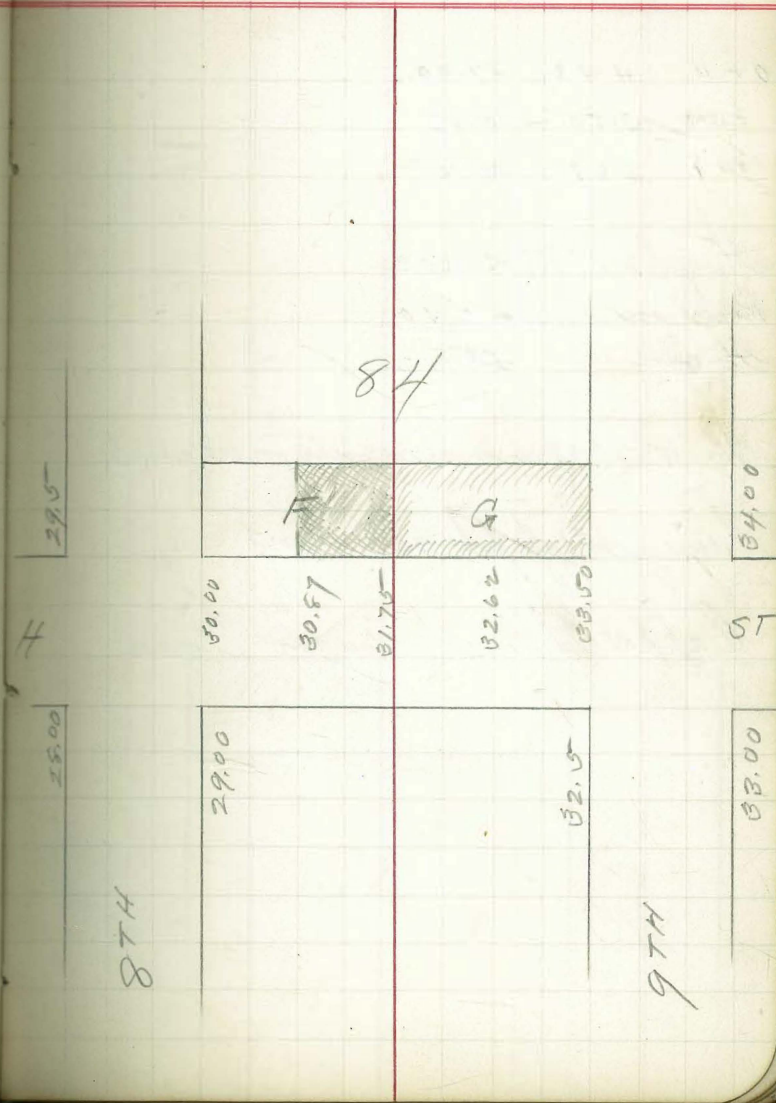
Stat	Prod	EL	
0+0	4.53	33.50	(38.03)
0+50	5.41	32.62	
1+00	6.28	31.75	
1+50	7.16	30.87	

Height of BM 31.02
Prod on BM = 7.01
Height curb 38.03

Points set 3 feet inside curb

Surveyed Sept 19th 1893.

Capps Shaw, Williams, Surv.



Setting curb grades for Pot

W. B. 99 Houton Addition
for Peter Christensen

42

Stat	Prod	EL	(33.42)
------	------	----	---------

0+0	4.42	29.00	
-----	------	-------	--

+50	3.55	29.87	
-----	------	-------	--

1+00	2.67	30.75	
------	------	-------	--

Height B.M. = 31.02

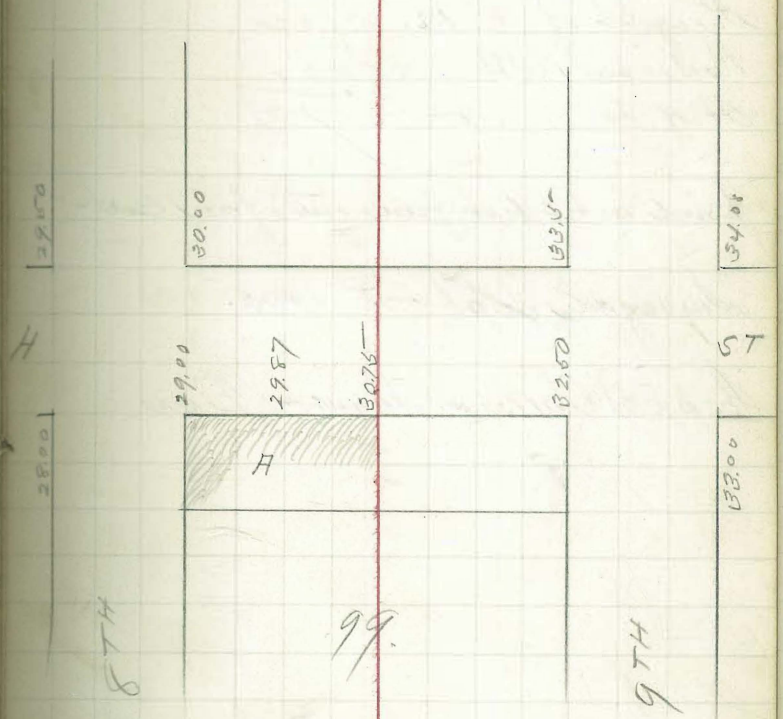
Prod on " " = 2.40

A. I. = 33.42

Points set 3 feet inside outer face curb,

Surveyed Sept. 26th 1893.

Capps Sham Williams - Town



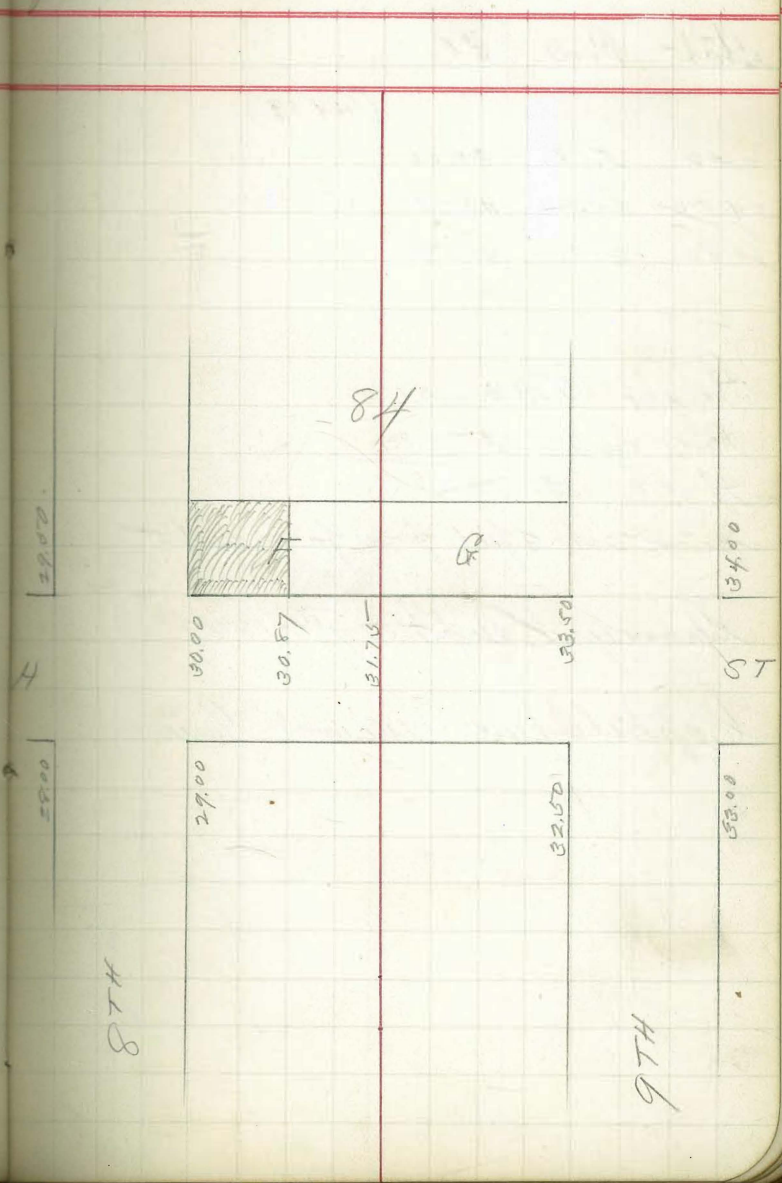
Setting curb grades for W 1/2

Lot "F" in Blk 84 Horton add 43
for Peter Christensen Contractor

Stat	Rod	El.
		(55.10)
0+0	5.10	30.00
0+50	4.23	30.87

Height of B.M. 31.02
Rod on B.M. 4.08
H. of I. 30.10

points set 3 feet from outer face curb -
Surveyed Sept 27 1893
Capt William Shaw - Exec.



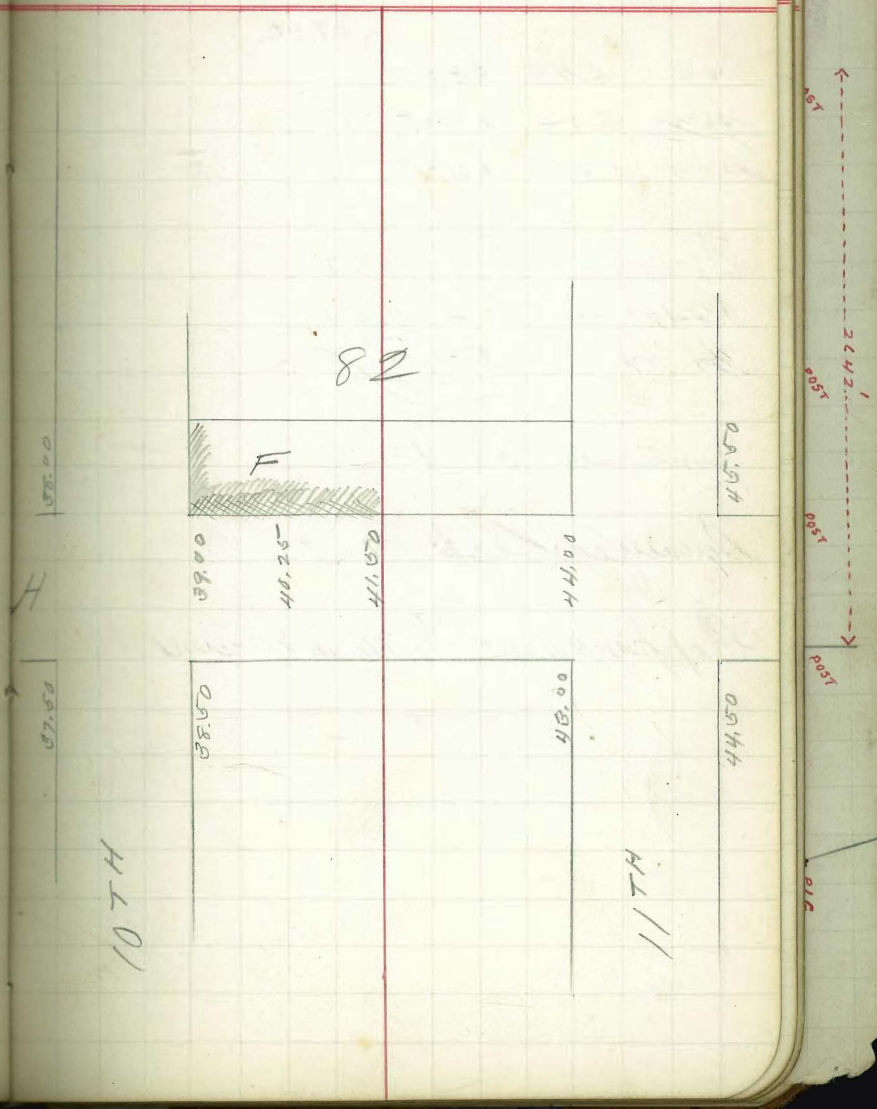
Setting curb grades for Hsh

side Lot 5th Blk 82 Hortons add
 W. McDannells agent by Jos Killey Con

Stat-	Rod	EL
		(44.19)
0+0	5.19	39.00
0+50	5.94	40.25-
1+00	2.69	41.50

Height B.M. = 40.63
 Rod on " " = 5.56
 H of Quat = 44.19
 points set 3 feet from face curb-

Surveyed Sept. 29th 1893
 Capps Shaw-Williams - Eng.



POST
 24.42
 POST
 POST
 41.50
 44.00

Setting Lamb stakes for Hat

side of Lot Rⁿ Blk 101, Horton's 45
for G. D. Stanton agent by Kelley Contractor

Stat.	Rod	El.
		(47.63)
0+0	4.68	43.00
+50	5.76	41.87
1+00	6.88	40.75

Height - BM = 40.63
 Rod on " " = 7.00
 H. I. = 47.63

points set & put

Surveyed Sept 29th 93.

Capps Shaw, Hallam & Turner.



Setting curb stakes for H st

side Lot "G" Blk 86. Horton add 46
 MA Lence per Kelley Contractor

Stat- Rod El.

(31.80)

0+0 4.80 27.00

+50 5.05 26.75

1+00 5.30 26.50

Height B.M. = 26.05

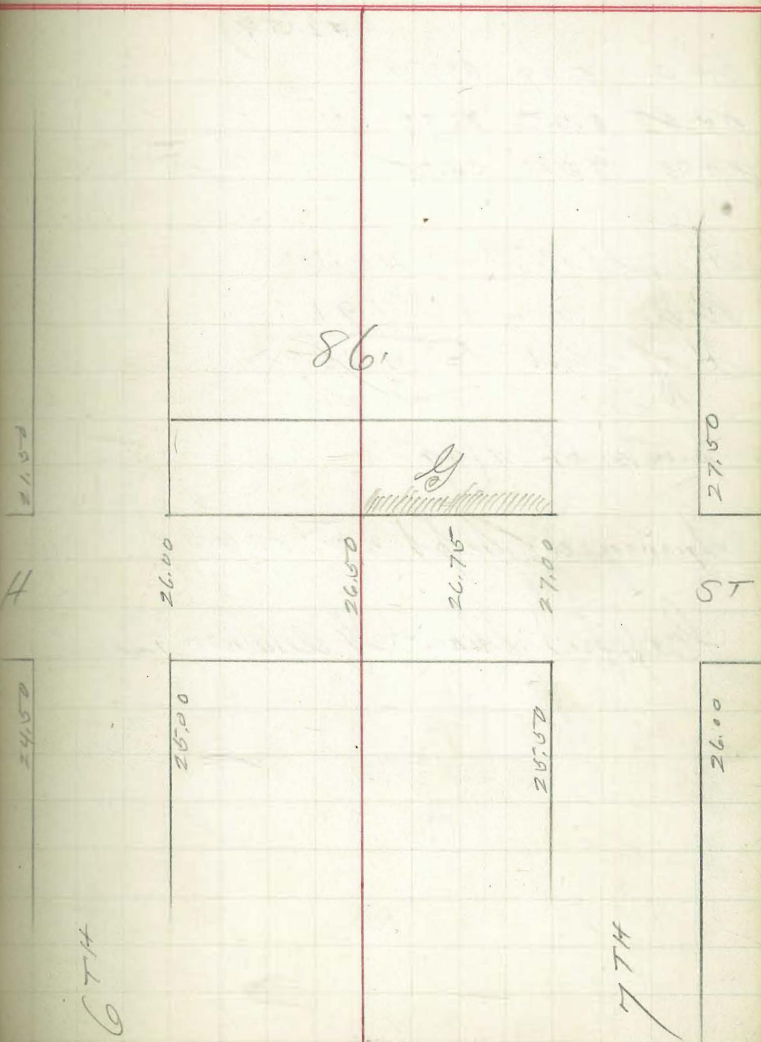
Rod B.M. = 5.75

H. I. = 31.80

point set 3 feet

Surveyed Sept 29th 1893.

Capps Shaw. Williams - True



Setting Curb Grades for Hot

side Lot L¹¹ Belk 100 Harton's add
47
Over-Nagle Contractors

Stat- Rod El.

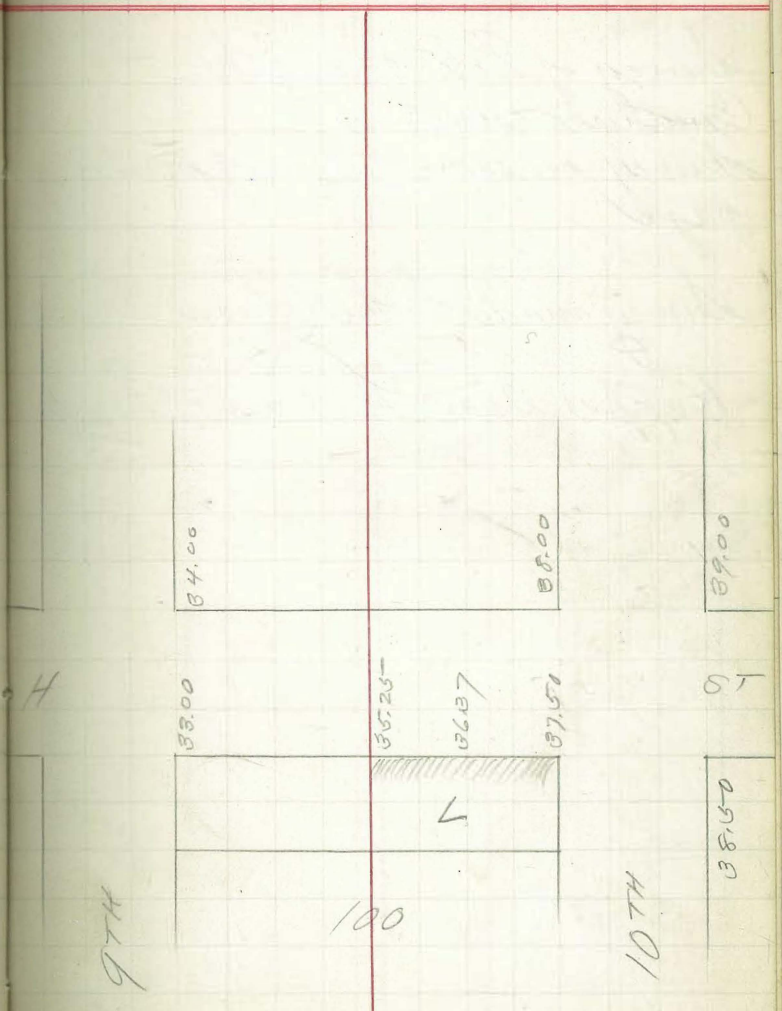
Stat	Rod	El.
		(42.59)
0+0	5.09	37.50
0+50	6.22	31.37
1+00	7.34	35.25

Height BM = 40.63
Rod " " = 1.96
H. of Inst = 42.59

Point each 4 feet

Surveyed Sept 29th 1893

Capps Shaw Williams & Fenn



Sept 30th 1893.

48

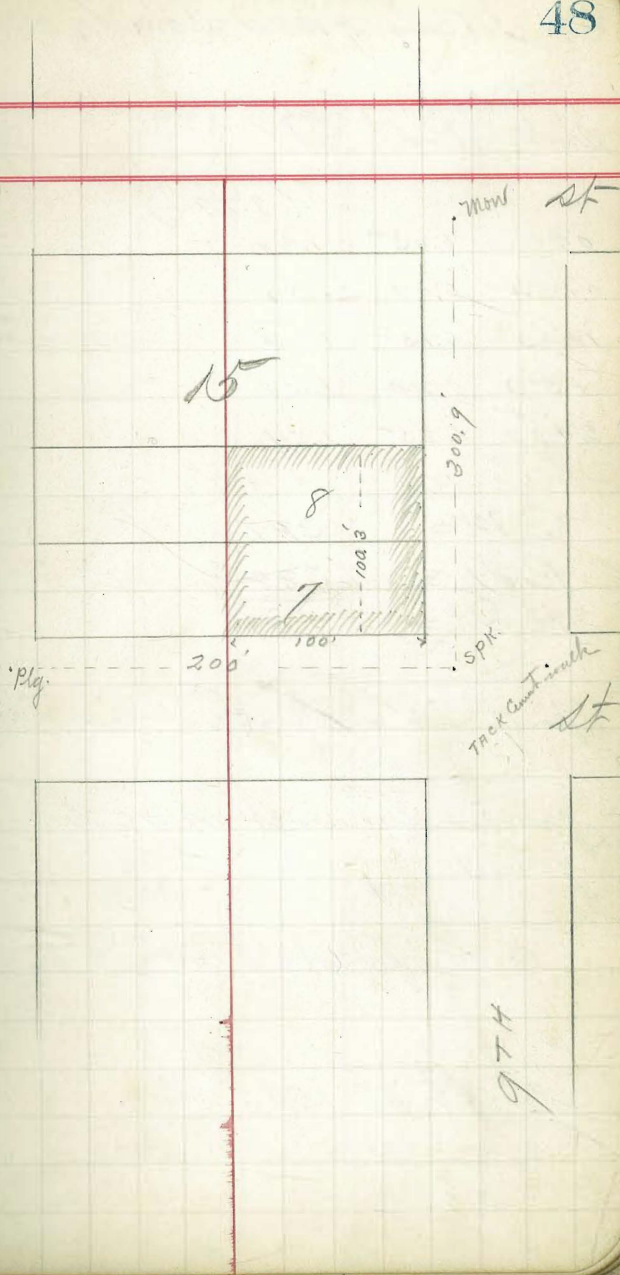
Survey of Lots 7-8 Block 15
Cantwell Addition
Survey as indicated on opposite
page

Survey made by John (Leon Clotkin)
Cappel, Shaw, Williams - Ferris.

Land

Beach

8TH



Setting grade stakes for Otay

R.R. on West Bet 5th & 6th

49

Stat	Rod	EV
		(7.79)
0+0	6.03	1.74
0+50	6.09	1.70
1+00	6.15	1.64
1+50	6.20	1.59
2+00	6.25	1.54

B.M. = 3.91
 Rod = 3.88
 H.I. = 7.79

Points set one foot out from curb

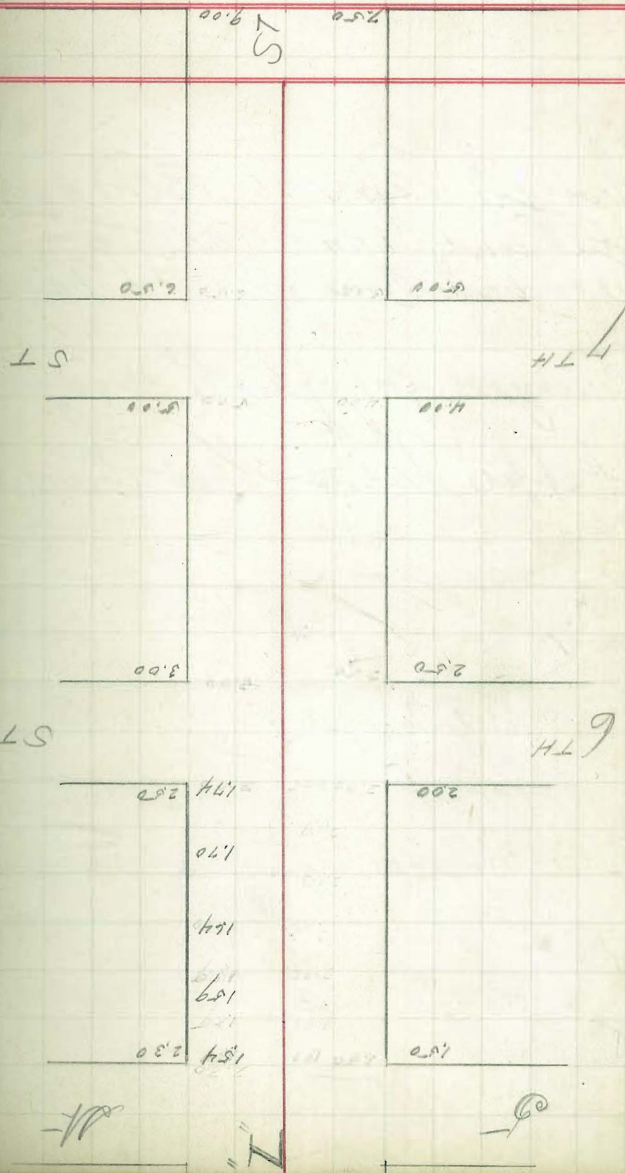
grade stakes set at 76 below curb grade

Capps Shaw, Williams & Co

Sept 5th 1893

LS

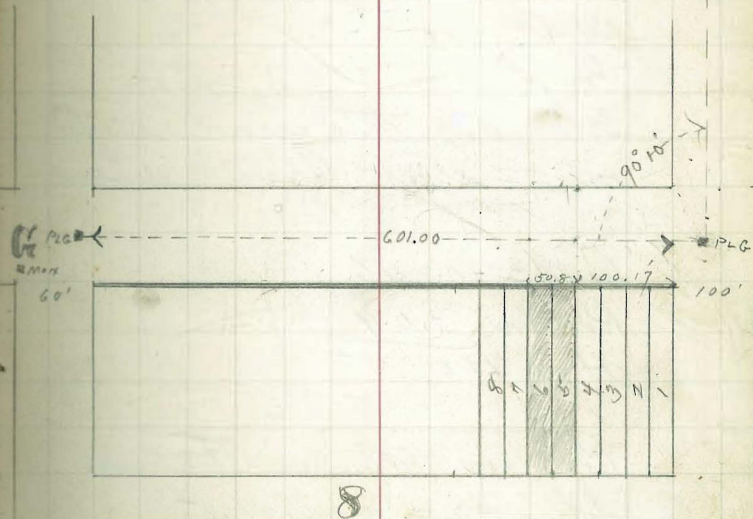
HL 8



Oct 13TH 1893.

Survey of Lots 5-6 Bk 8 in
Block and Chanc Addition
as indicated on opposite page
Surveyed for John G. Dodge
Capps Williams Shaw & Sons -

Survey of Lots 5-6 Bk 8 50
Block-Chanc Add



24TH

25TH

Survey of Lots 5-6-7 5 1/2 8

B299 Shermans Addition
 for J.P. Christensen and John Ferry

51

Oct 18th 1893.

Survey of Lots 5-6-7-5 1/2 8
 Blk 29 Shermans Add
 as indicated on opposite
 page

Also set two grade stakes
 on 22 street for Christensen

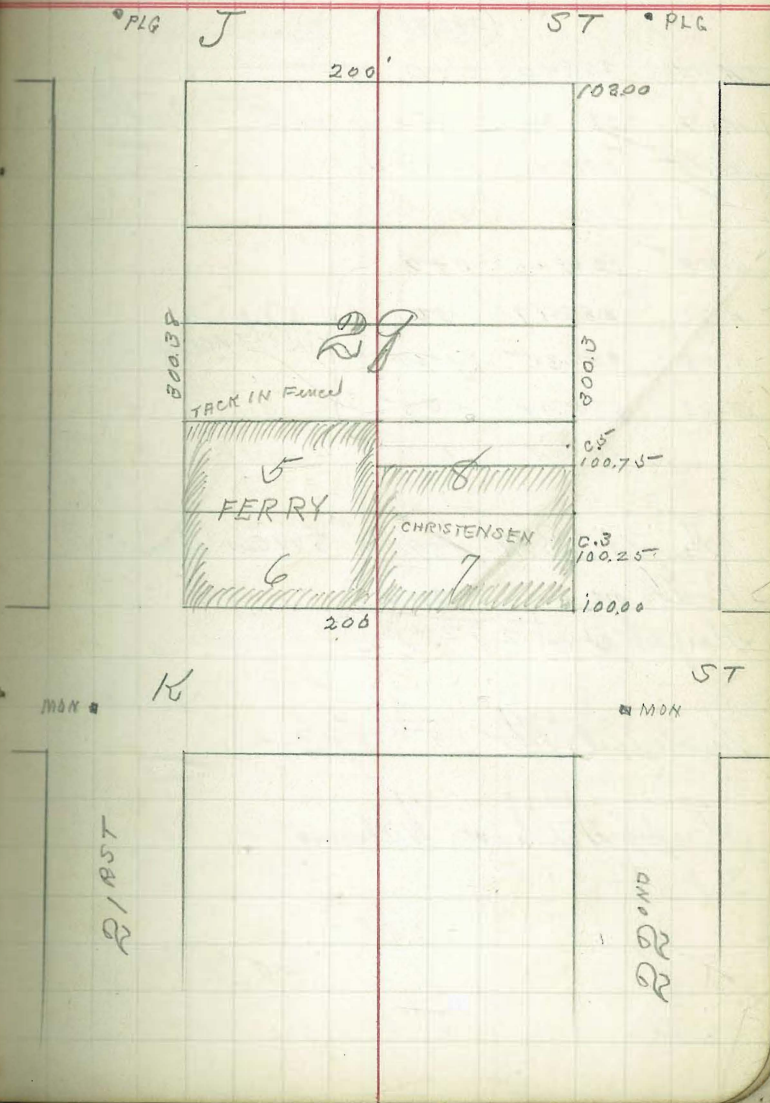
BM = 103.46

Rod on 2.69

H.O. 106.15

Rod on north line Christensen
 lot 4.90 = a cut of .5

Rod at 25ft from Cor = 5.60
 = a cut of .3 foot
 Capps party



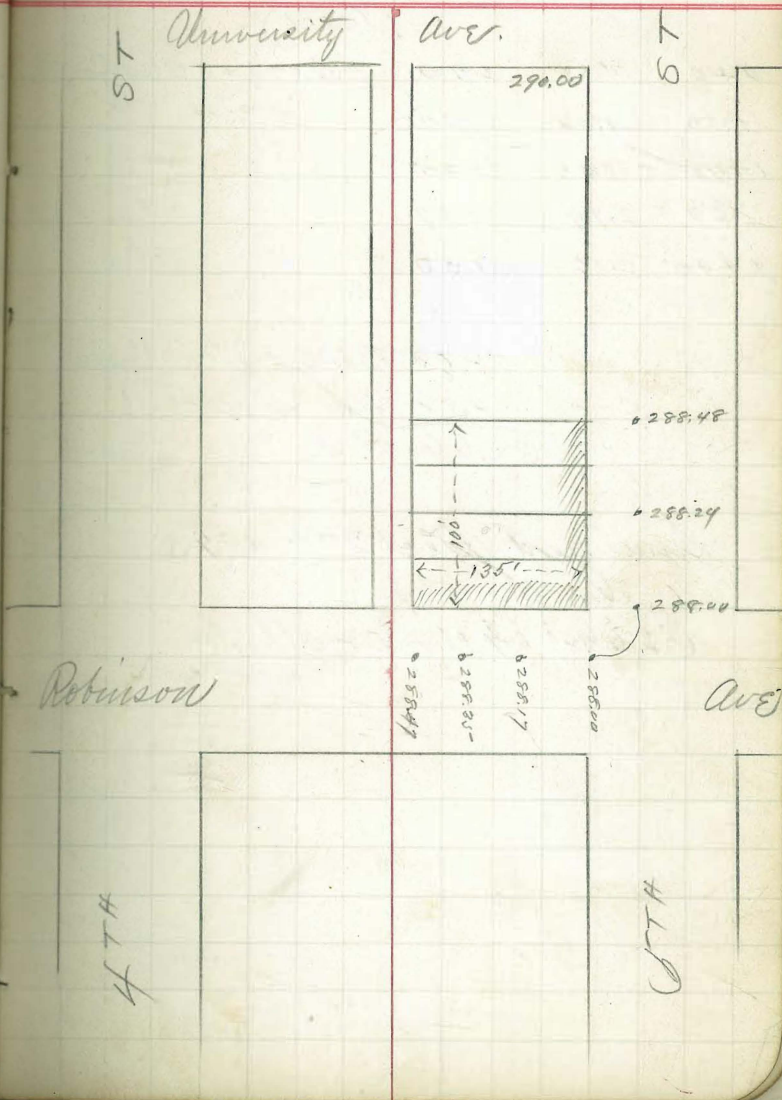
Sitting Curb grades for

City Attorney Barber
in Nuts Addition

Rod	EV	Stat	
		(292.43)	
4.43	288.00	0+0	} on 5' street
4.19	288.24	+50	
3.95	288.48	+100	
4.43	288.00	0+0	} Robinson Ave
4.26	288.17	50	
4.08	288.35	+100	
3.96	288.47	+135	

Height B.M. 289.99 seven Univ 5'
Rod on 19 244
Height Inst 292.43

Surveyed Nov 13th 1893
Capps Shaw, Williams



Setting curb for County

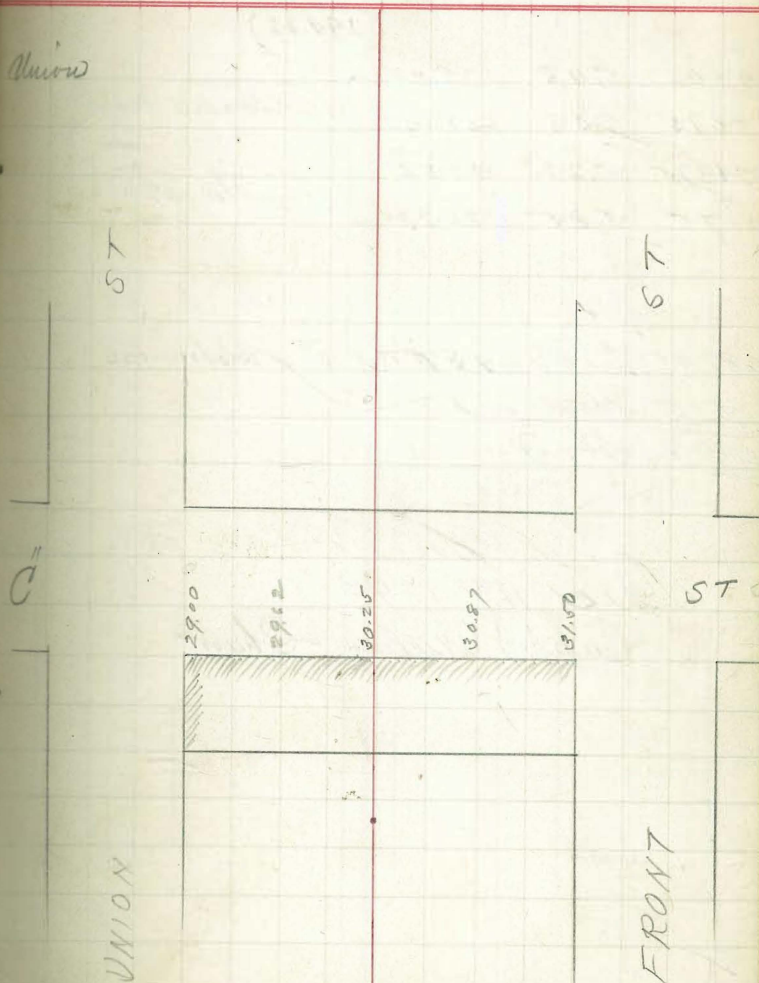
Stat	Rd	El	
0+0	4.66	29.00	(33.66) Stat 0+0 = SEC of C + Union
150	4.04	29.62	
1+00	3.41	30.25	
50	2.79	30.87	
2+00	2.16	31.50	

28.78 B.M. NW cor Union
 4.88 Rd on B.M.
 33.66 H.S.

Surveyed Dec 2nd 1893

Capps, Williams & Shaw

On South Side C^o Bet Union - 53
 Front st



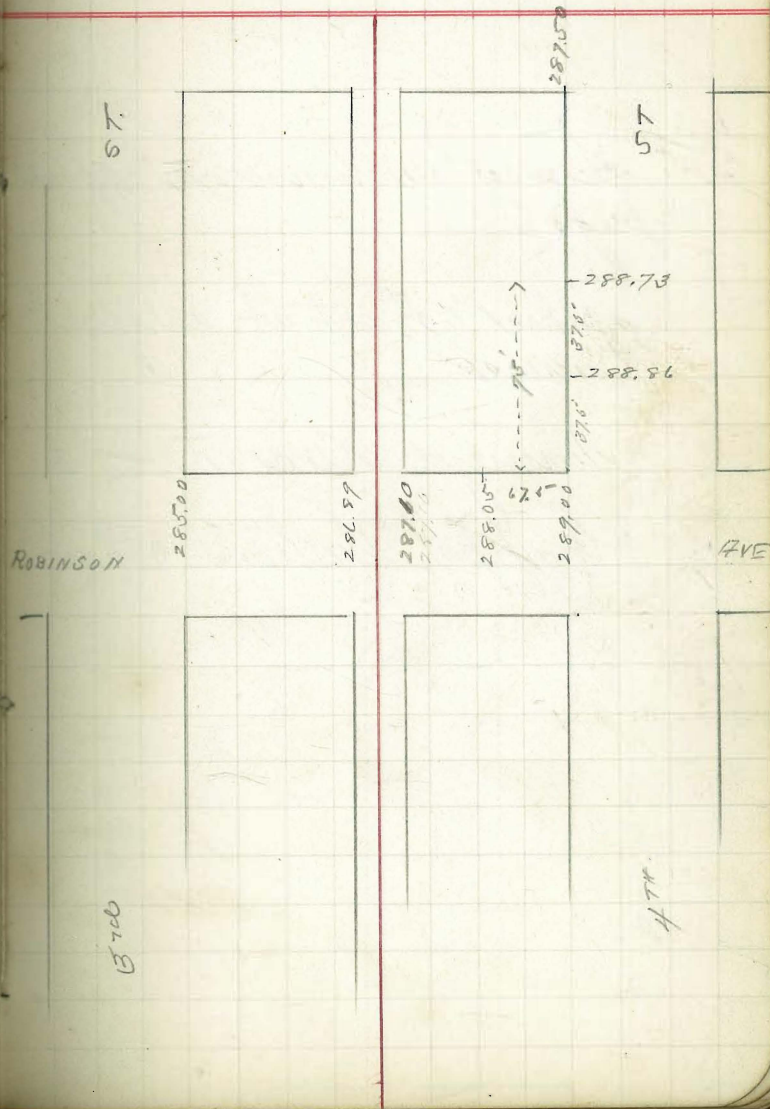
Setting curb grade to

Low of Robinson - 4th St
 by J. H. Edmundscales

Stat	Prod	El	
			(294.08)
0+0	5.08	289.00	} Robinson Ave
+67.5	6.03	288.05	
0+137.5	5.22	288.86	} Fourth St
0+175	5.35	288.73	

288.95 B.M. on S E cor 4th - Robinson
 5.13 Prod on
294.08 St. J

Dec 11th 1893
 Capps William - Show.



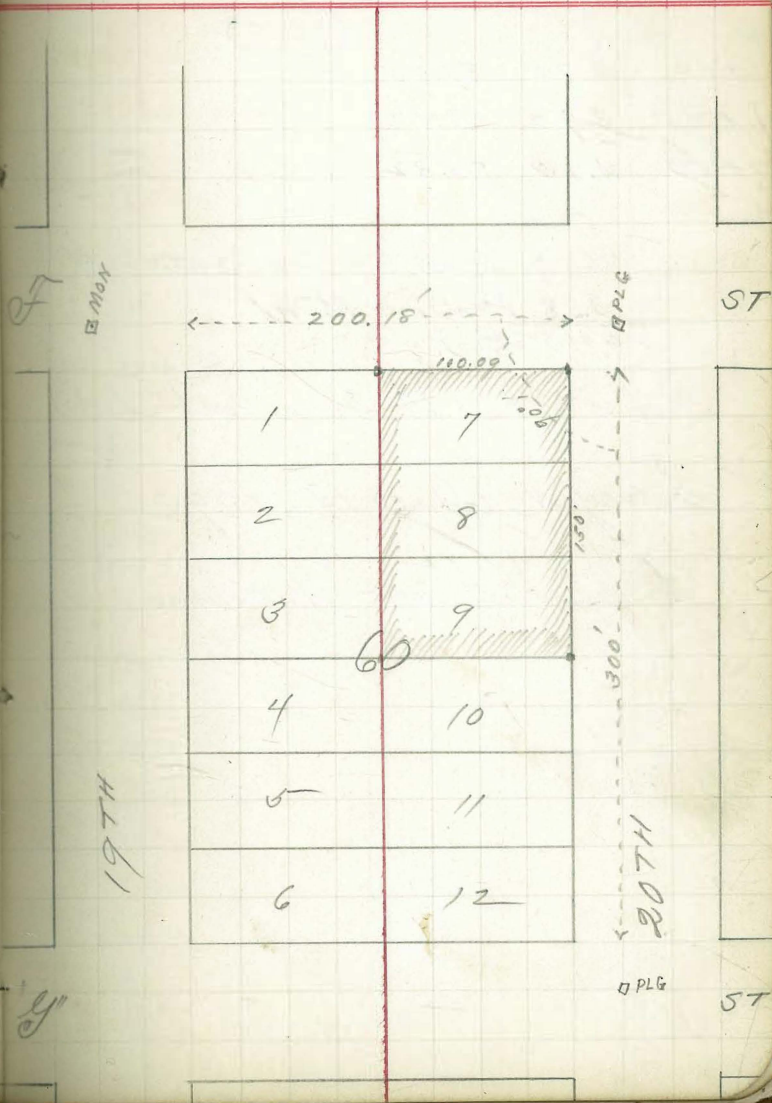
Survey of Lots 7-8-9 in Block 60 of 11th Addition
Waltham Mass

55

Survey as shown on opposite
page

spikes 60^{ft} set at all four
corners

Surveyed Dec 11th 1893
Capps, Williams & Shaw



Setting curb grades to Lot

4 Bks 12 of Shumans addition
A.P. Johnson Jr. 56

Stat Rod Elev

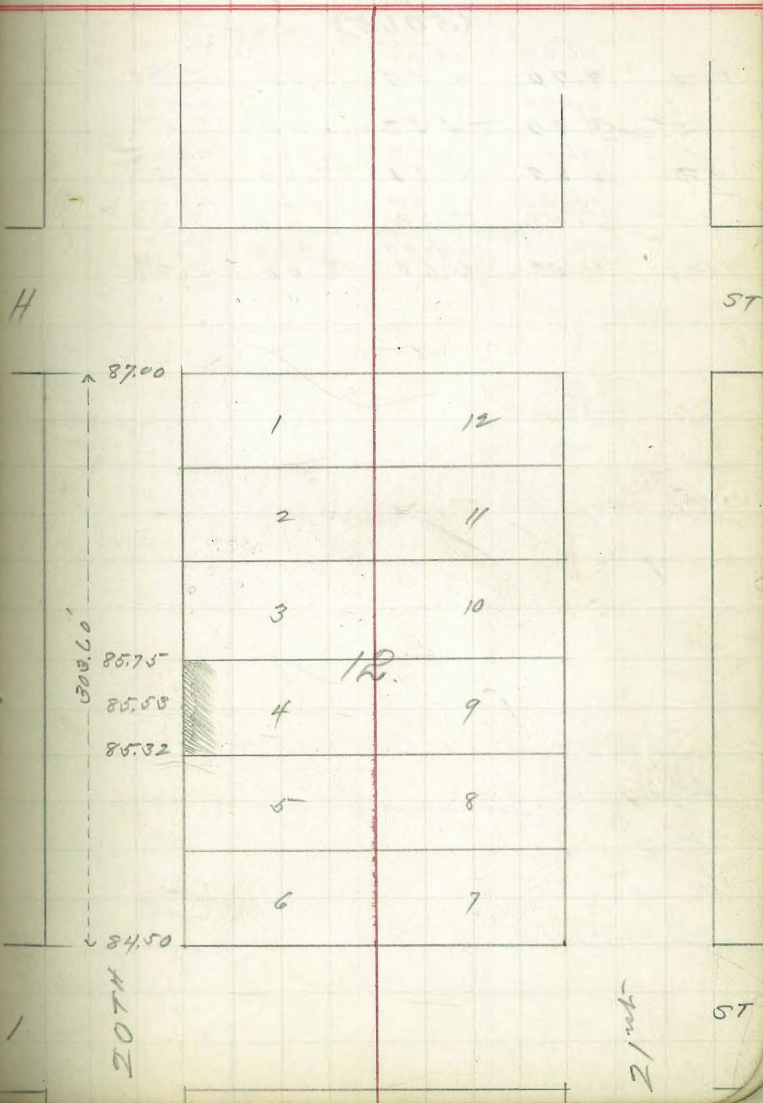
		(89.45)
0+0	3.70	85.75
+25	3.92	85.53
+50	4.13	85.32

86.07 B.M. SW cor 20th - H
3.38 Rod on B.M.
89.45 - H.J.

Stakes set 2 ft from curb line

Surveyed Dec 14th 1893.

Capps Shaw Williams



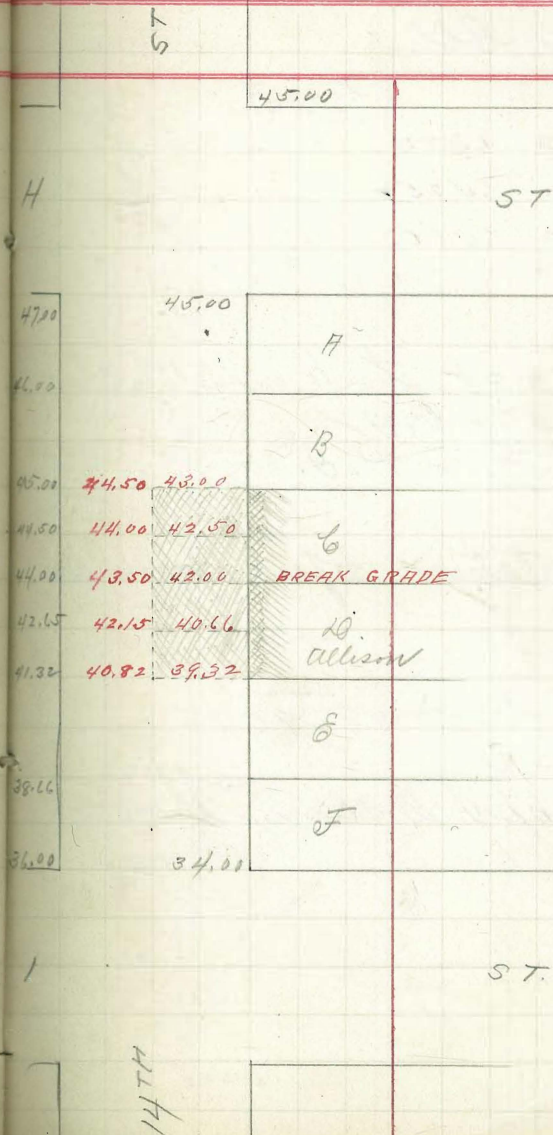
Setting Grade stakes

and cross section to Centre 57
Allison

Station	East	Curve	Center	Centre
		(50.65)		
0+0	46.60	46.20	44.60	44.80
	4.00	4.40	6.00	5.80
	45.90	46.10	44.10	44.10
25-	4.70	4.50	6.50	6.50
	46.00	46.60	43.60	43.60
50	4.60	5.00	7.00	7.00
	45.20	46.30	43.40	43.30
75-	5.40	5.30	7.20	7.30
	43.80	44.00	42.60	42.60
1+00	6.80	6.60	8.00	8.00

B.M. = 47.19 S.W. cor. H. 14
 Rod = 3.46
 H.I. 50.65

Dec 14 - 1893
 Capps, Shaw, Williams



Selling Comb grades

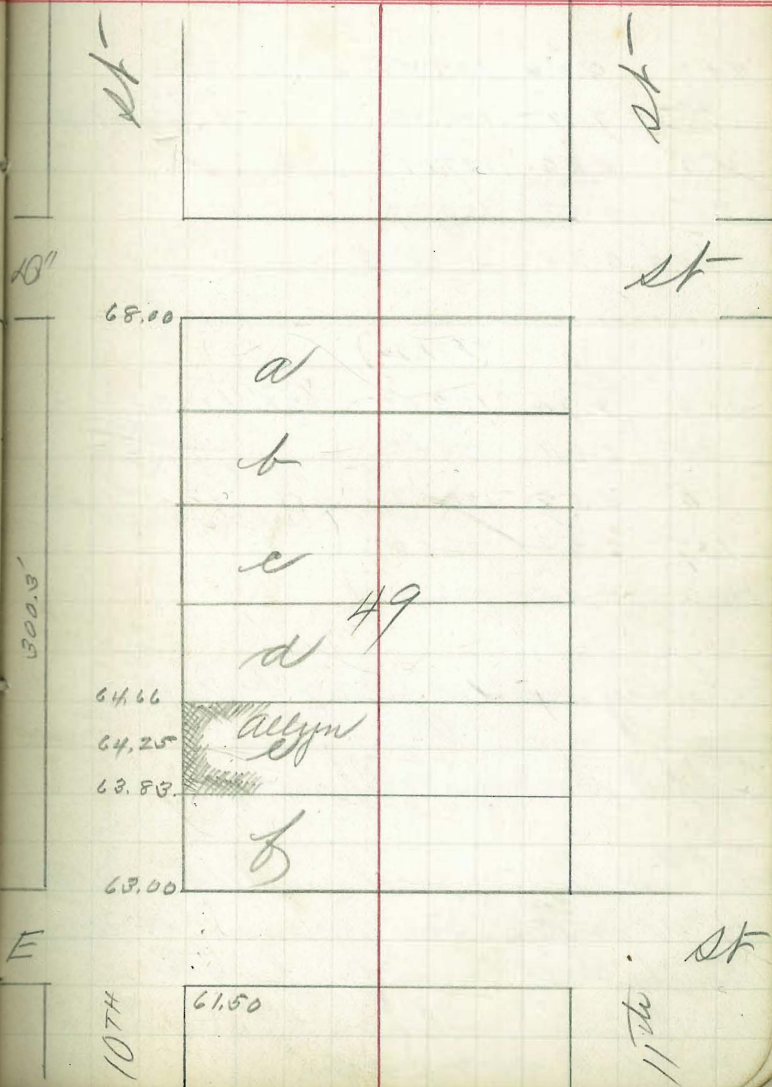
to Lot E^o Bk 49 Huttons 58
Dr Allyn

Station	Rod	EL
		(67.55)
+50	3.72	63.83
75	3.80	64.25
100	2.89	64.66

H.B.M. 62.85 tack on slip chunch
4.70 Rod
67.55 = H. D.

Set 3 stakes 2 feet from comb
line

Surveyed Jaws 1894
Capps, Williams, Shaw



Setting curb-grades to

Lots 7-8 B15 Caruthers
For J. Kukui

59

Stat	Prod	EL (131.90)	
0+0	9.40	122.50	B.M. 120.00 11.90 <u>131.90</u> H.D. 9th Street
25	7.11	124.79	
50	4.82	127.08	
75	2.53	129.37	
1+00	0.24	131.66	

Stat	Prod	EL (131.20)	
0+0	8.70	122.50	B.M. 120.00 11.20 <u>131.20</u> Beech Street
25	6.64	124.56	
50	4.58	126.62	
75	2.52	128.68	
1+00	0.45	130.75	

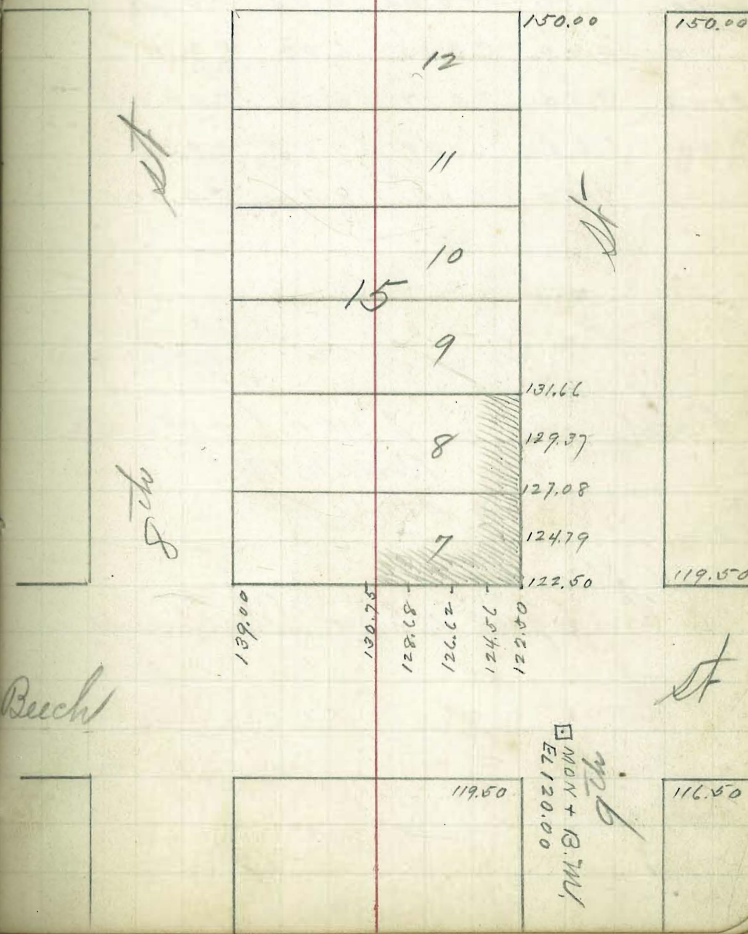
Survey made Jan 9th 1894

Capps, Williams & Shaw

This Survey was made from the
B.M. on the Stone Monument at the
South West Corner Beech - 9th
P.S. the Cement walk on N.E. Cor Beech - 9th
is 1 foot above grade

Cedar

st



Setting check levels

Stat	EAST		Rd	WEST	
	Rod	Elev. F.		Elev. F.	
		(182.90)			
0+0	2.50	0.00	3.20	0.20	
50	3.10	0.022	4.00	0.32	
1+00	4.20	0.04	5.00	0.24	
50	4.90	0.25	6.00	0.15	
2+00	5.80	0.27	6.70	0.37	
50	6.60	0.38	7.60	0.38	
3+00	7.50	0.40	8.70	0.20	

B.M. 174.16 I.W. cor 24th rd
 8.74 Rod in B.M.
 182.90 H.C.

Cappel Shaw Williams

on 24th bet "C" and "D"
 for D. Schyler. Jan 16 1893.

60 2

179.50	180.50
179.50	180.50
178.58	179.58
177.66	178.66
176.76	177.76
175.83	176.83
174.92	175.92
174.00	175.00

"20"

174.00	175.00
--------	--------

H.H.B.

Setting out ^{and} Fill
for P.O. Schyler

Red figures represent
official grade

Black figures represent
respective cut ^{and} fill

Surveyed Jan 31st 94

Capps, Shaw ^{and} Williams

Staked out 25' Bet 20" - Park 61

south line City Park

grade	203.00	203.00	C 2.60
C 0.20	202.50	202.50	C 1.80
F 1.00	202.00	202.00	C 1.60
A		ST	
F 2.00	201.00	201.00	C 1.20
F 2.20	200.34	200.34	C 0.40
F 2.30	199.68	199.68	F 0.10
F 2.40	199.00	199.00	F 0.10
F 2.10	198.35	198.35	C 0.20
F 2.30	197.68	197.68	F 0.40
F 2.00	197.00	197.00	F 0.80
B		ST	
F 1.30	196.00	196.00	F 1.00
F 0.70	195.32	195.32	F 1.00
C 1.80	194.66	194.66	F 1.50
C 1.00	194.00	194.00	F 1.80
C 2.60	193.32	193.32	F 1.80
C 3.20	192.66	192.66	F 1.10
C 3.20	192.00	192.00	F 1.60
C		ST	
C 3.40	191.00	191.00	F 2.50
C 3.50	190.50	190.50	F 2.10
C 4.00	190.00	190.00	F 2.80
C 2.10	189.50	189.50	F 2.10
C 3.80	189.00	189.00	F 2.10
C 4.50	188.50	188.50	F 2.30
C 4.50	188.00	188.00	Grade

Street

25'-th

D

Setting Curt grade on 12th and
to Lot 6 E of Blk 57 Horton

Stat	Rod	EL.
		(71.78)
0+0	5.28	66.50
25	4.90	66.88
50	4.53	67.25
75	4.15	67.63
1+00	3.78	68.00

} 12th sheet

Stat	Rod	EL.	+
		(71.78)	
0+0	3.60	66.50	+1.68
25	3.10	65.68	+3.00
50	3.00	64.87	+3.60
75	3.80	64.06	+3.90
1+00	4.90	63.25	+3.63

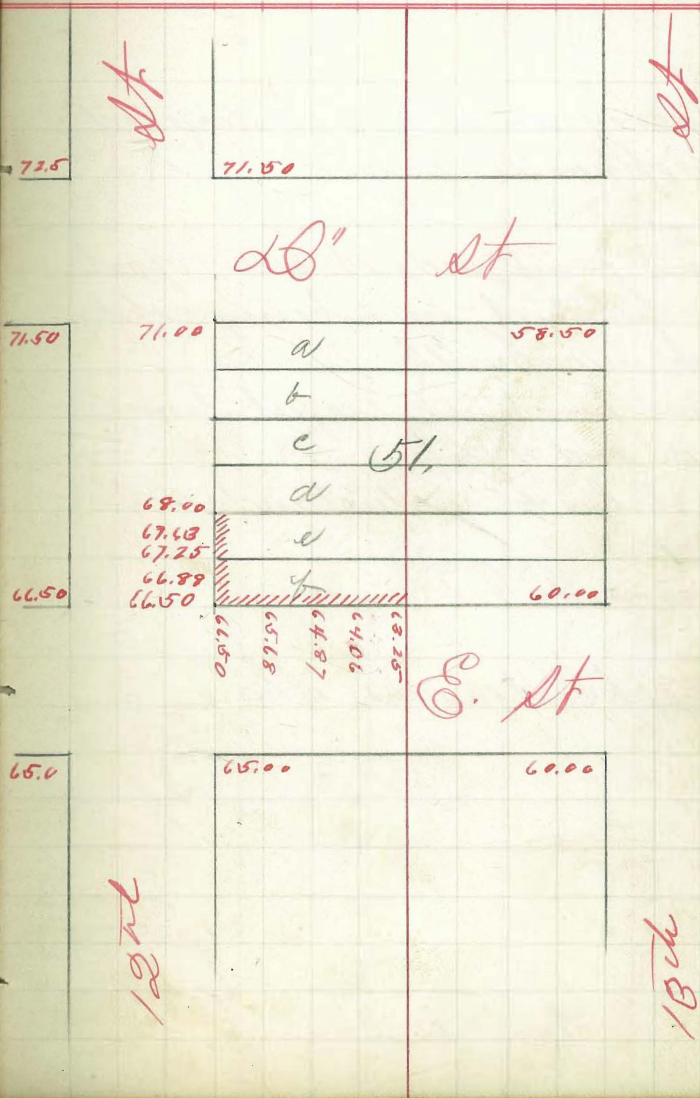
} Cut on
"E"
Sheet

B.M. 69.79 N.W. cor 12th E
Rod 1.99
H. J. 71.78

Stakes on 12th set 1 foot above grade
This survey is made from Elevation
of "20th and E" sheet with uniform
grade on 12th set 20th E.
Surveyed Feb set 1893 Capps

Cut - Fill stakes on "E" St
for Williamson

62



Survey of South $\frac{1}{2}$ of Lot

"K" Block 61 Horton's add
For C. W. Clark.

63

Survey made as indicated
on opposite page

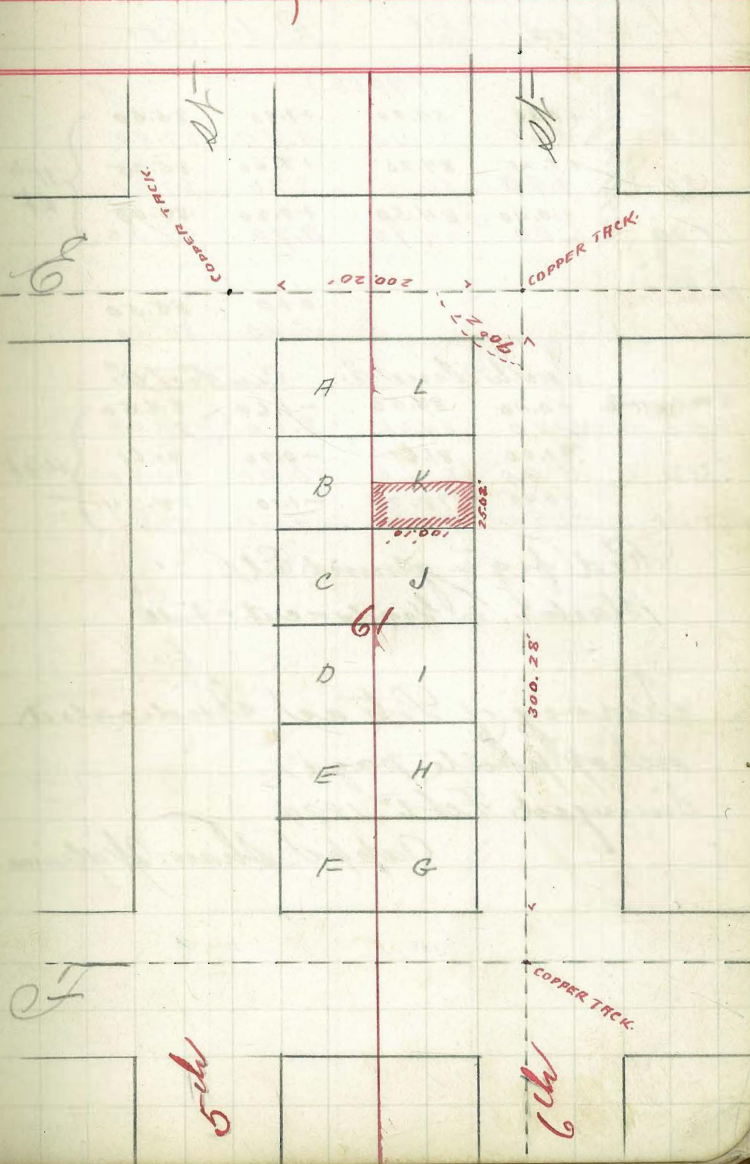
Front points are set one (1) foot
in the street, and being copper
tack in sidewalk

Rear points set 1.10 feet from
rear end of lot

So Clark understands it

Surveyed Feb 5th 1894

Capps, Williams & Shaw



Survey and cut & fill

West line 17th

Center of 17th

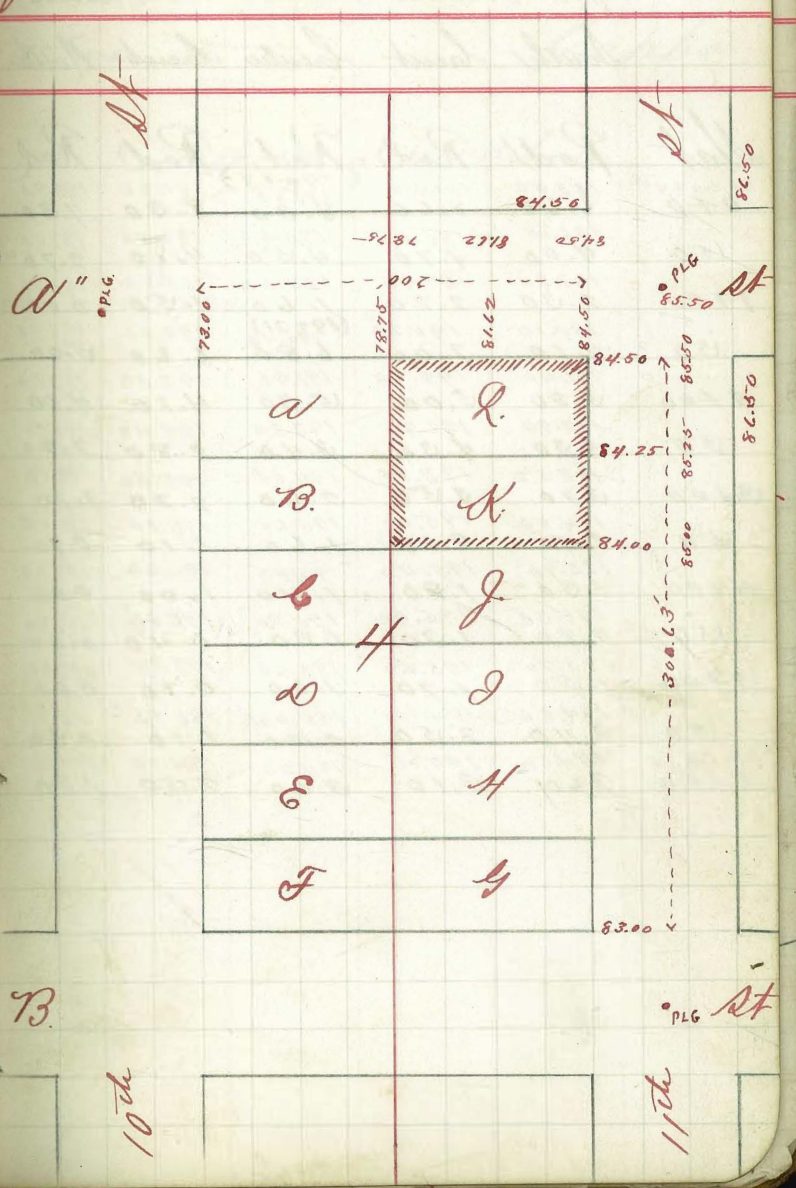
Stat	Rod	EL	Rod	EL
		(90.88)		
0+0	+1.30 5.60	84.00 85.30	+1.90 3.50	85.50 87.40
50	+1.75 4.90	84.25 86.00	+2.00 3.70	85.25 87.20
1+00	+0.40 6.00	84.50 84.90	+2.20 3.70	85.00 87.20
center 11-40			0+0	85.50
'40			5.40	85.50
	South line 'a'	Center 'a'		
SW cut 11-40	+0.40	84.50	-1.60	84.50
0+0	6.00	84.90	8.00	82.90
50	+1.00	81.61	-0.70	81.61
	8.30	82.60	10.00	80.90
1+00	+0.40	78.74	-1.10	78.74
	11.80	79.10	13.30	77.60

Red fig = ground EL
Black " = Grads - cut - fill

Survey of Pts as Indicated
on opposite page
Surveyed Feb 6th 1894
Capt. Shaw. Williams

to Lot No 2. Bldg 4 Horton
for Samuel Fox

64



"C" Street X Section
for Golden Hill Land and

Bet 24th - 25th sheets
Building Co Feb 12th 1894

65

South East Centre East North

B.S. F.S. E.L.

Capps.

Stat	Rod	Rod	Rod	Rod	Rod
^{S.E. Cor 24th} 0+0	183.50 6.60	181.50 8.60	(190.13) 181.80 8.30	181.80 8.30	182.80 7.30
50	186.10 4.00	185.40 4.70	185.60 4.50	186.00 4.10	187.40 2.70
1+00	187.50 2.30	187.90 2.20	188.50 1.60	188.60 1.50	190.10 0.00
50	190.10 7.10	190.20 7.00	(190.21) 190.40 6.80	190.60 6.60	192.20 5.00
2+00	191.40 5.80	192.20 5.00	191.90 5.30	192.50 4.70	193.20 4.00
50	192.90 4.30	192.90 4.30	193.80 3.40	194.40 2.80	195.00 2.20
3+00	193.50 3.70	193.70 3.50	194.60 2.60	195.00 2.20	195.50 1.70
50	194.80 2.40	195.10 2.10	195.60 1.60	196.10 1.10	196.50 0.70
4+00	195.90 1.30	195.40 1.80	195.80 1.40	196.20 1.00	197.20 0.00
50	196.80 0.90	195.90 1.30	195.90 1.30	196.80 0.40	197.20 0.00
5700	195.70 1.50	195.50 1.70	195.60 1.60	196.50 0.70	197.20 0.00
50	194.80 2.40	194.70 2.50	195.00 2.20	196.10 1.10	196.70 0.50
^{S.W. Cor 25} 6+00	194.60 2.60	194.10 3.10	194.20 3.00	194.70 2.50	195.40 1.80

11.75 178.38 137m on steps of house

8.30 1.22 188.91

Setting Grade stakes
stakes set on E²

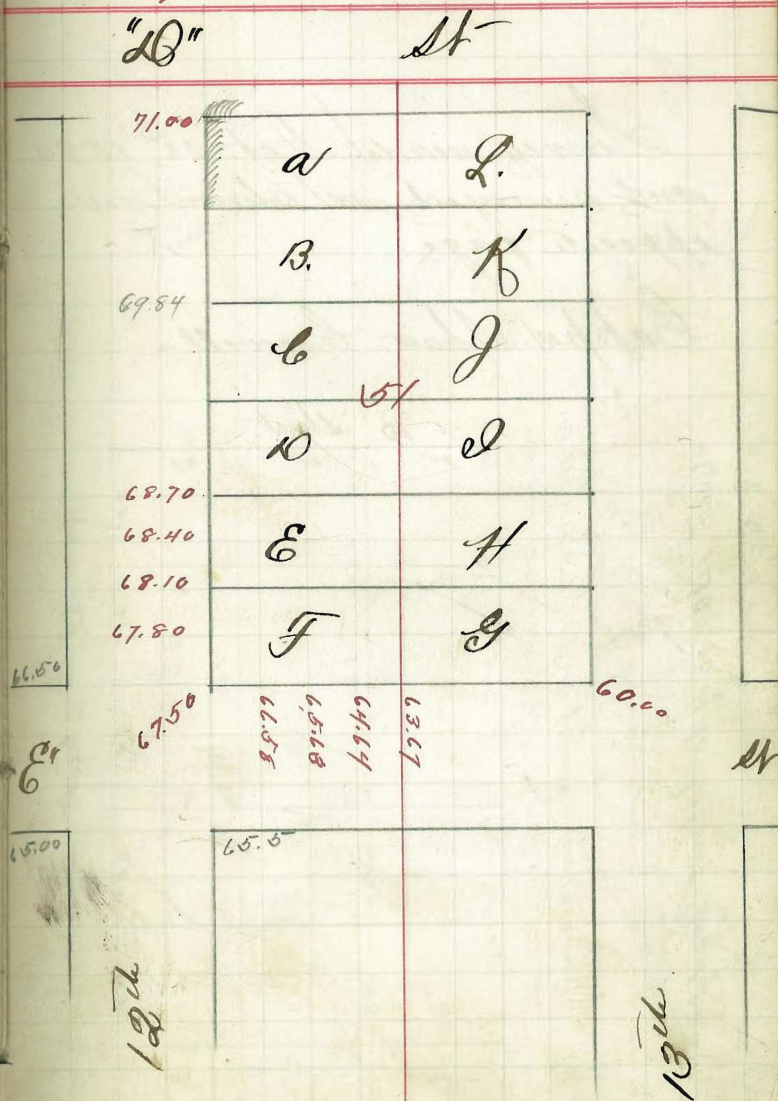
to Lot E² F Reh 51 Horton 66
12^m according to the 12^m sheet Grade
Ordinance Dec 1886.

Stat	Rod	El ^{grade}		
		(71.82)		
0+0	4.32	67.50	} 12 ^m sheet	
25	4.02	67.80		
50	3.72	68.10		
75	3.42	68.40		
1+00	3.12	68.70		
0+0	4.32	67.50	} Est grade	
25	4.67	66.58		c 0.57
50	5.22	65.63		c 0.97
75	5.23	64.64		c 1.95
1+00	5.58	63.67		c 2.57

This survey is made according
to the Grade of 12^m sheet and takes
the place of the survey on Page 62.

Surveyed Feb 14th 1894 Capps.

For W. Williamson



Survey of Lots A, and P

in Block 17 Horton
Street Burnaby -

67

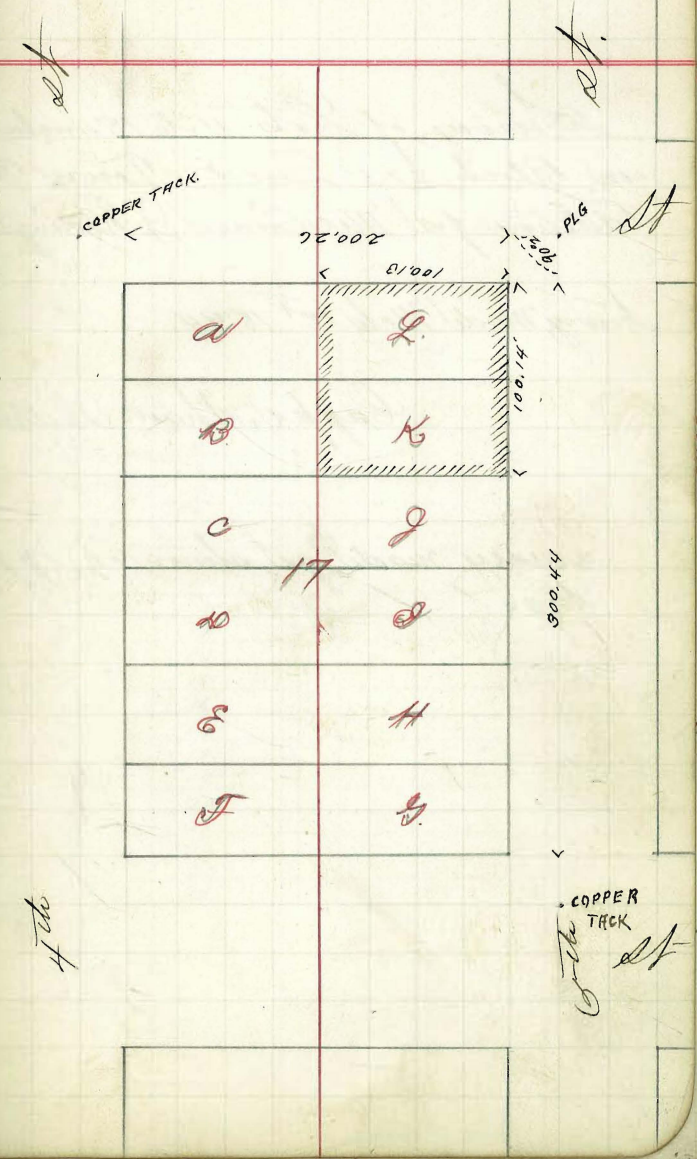
Survey made Feb 26th 1894
and surveyed as shown on
opposite page.

Capps. Shaw, Crowell -

B Street		G th Street	
4.90	20'	4.90	20'
	5.26		5.00
	5.90		5.10
	6.00		5.20
	6.20		5.30
	6.50		5.40
	6.80		5.50
	7.10		5.60

Good Section of Pt. N. & S. B17 Highway
B.M. 555.67
0.15
H.I. 55.72
Total figures = Red readings

Cut 1405.00 yds below Grade at
M. 20 15-18.

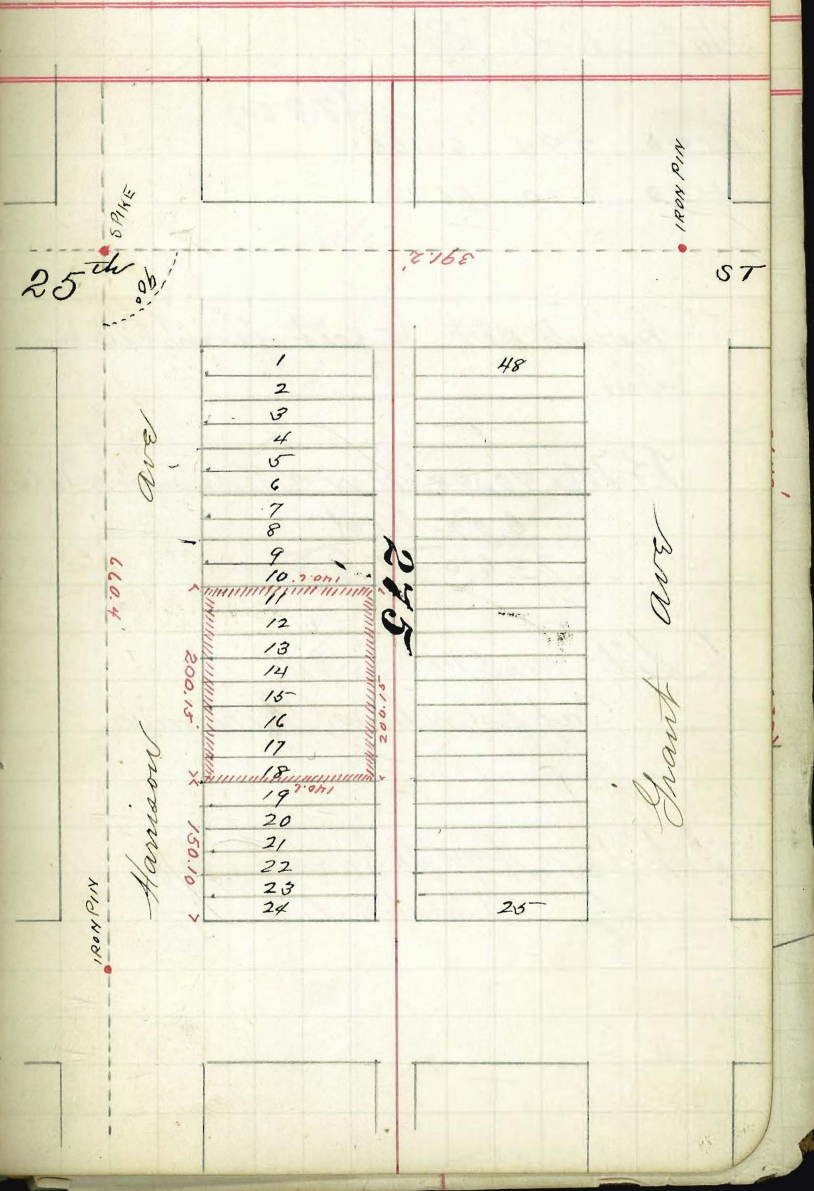


Survey of Lots 11 to 18 inclusive in Block 275 Land & Town Co 68
for Emma J. Redington Mch 1st 1894

Survey of Lots 11 to 18 inclusive
in Block 275 Land & Town Co
Addition for Mrs Emma J. Redington
Survey made Mch 1st 1894

Capps, Shaw, Williams

Survey made as shown on opposite
page



Setting Curb graded to

Lot 9 Blk 33. Middletown

69

Mch 5 1894
Capp.

Stat Rod El.

(73.60)
1+00 7.94 65.66
+50 7.10 66.50.

points set 5 feet from curb
line

B.M. 70.58 N.W. cor. Union - Date
3.02 Rod
73.60 H.D.

Set Mch 5 1894
Capp. & Har. Sullivan

Set for Wm. Scharnhorst
Contractor

Date

1	12	69.00
2	11	
3	10	66.50
4	9	65.66
5	8	
6	7	64.00

Cedar.

State

Union

Cross section of North $\frac{1}{2}$ of 6^{"E"}

Checked up Mch 24 94
Between 12^{"-13["]}

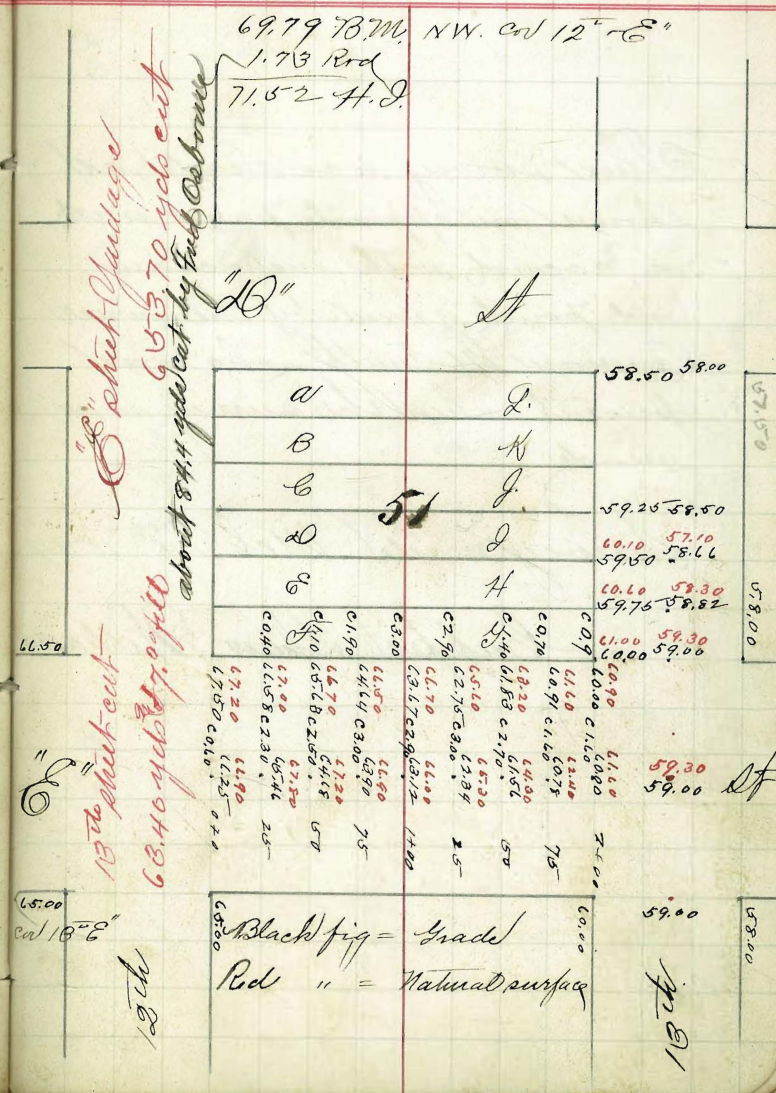
Williamson March 12["] 1894. Cappe. ⁷⁰

Station	North	South	Center	Prof. cut	Center cut
			(71.52)		
0+0	67.20 4.130	67.20 4.130	66.90 4.60	0.00	C 0.60
25-	67.00 4.50	67.00 4.50	67.80 6.70	C 0.40	C 2.30
50	66.70 4.80	66.70 4.80	67.20 4.30	C 1.10	C 2.50
75	66.50 5.00	66.50 5.00	66.90 4.60	C 1.90	C 3.00
1+00	66.70 4.80	66.40 5.10	66.00 6.50	C 3.03	C 2.96
25	65.60 5.90	65.90 5.60	65.80 6.20	C 2.90	C 3.00
50	63.20 8.130	63.50 8.00	64.30 7.20	C 1.40	C 2.70
75	61.60 9.90	61.50 10.00	62.40 9.10	C 0.70	C 1.60
2+00	60.90 10.60	60.30 11.20	61.60 9.90	C 0.90	C 1.60

69.79 78.77 NW. cor 12^{"-E"}
1.73 Red
71.52 H.I.
Black fig = Red
Red " = Ground Elevation

Station	West	East	Center	Prof. cut	Center
			(65.45)		
0+0	61.00 4.150	60.20 5.30	59.30 6.20	0.100	C 0.36
50	60.60 4.90	59.90 6.60	59.30 7.20	C 0.90	F 0.50
1+00	60.10 5.40	59.50 6.00	57.10 8.40	C 0.60	F 1.60

Cross section on 18^{"-st} West $\frac{1}{2}$ of sheet
100ft from NW cor 10^{"-E"}
Black fig = Red
Red = Ground Elevation
59.14 78.77 NE cor 10^{"-E"}
6.81
65.45 H.I.



8" sheet (yardage)
 65.370 yds cut
 about 84.4 gds cut by Fresh Oak house
 13th sheet cut
 68.40 yds cut by Fresh Oak house
 13th

Survey of acre tract at

South East Cor 33rd & D "Strip" 71
for Truman M. Smith Mch 14th 1894

This survey was made as
shown on opposite page and
in accord with instructions
and points given by the owner
Truman M. Smith, who was
present when the survey was
made

Survey made Mch 14th 1894

Capps. Shaw. Williams



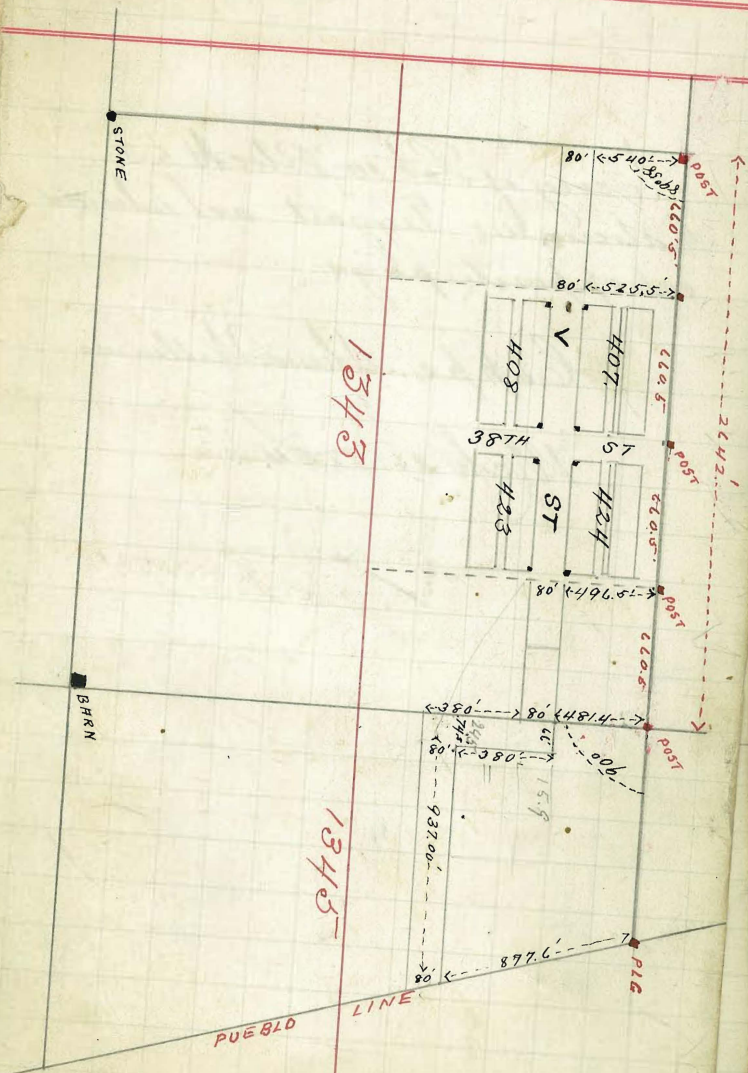
March 15th 1894

Survey of Pueblo Lot 1343.

Beginning at the NW cor of 1343
it being a wooden post 4" x 4" x 1'
in earth mound thence running along
the north line of said Pueblo lot at 660.5
ft set ply at 1321 ft intersect a wooden
post 4" x 6" at 1981.5 ft intersect a wooden
post 4" x 6" at 2642 intersect a wooden
post being the N.E. cor of Pueblo lot
1343, thence angle right 90°
out to S.E. cor of P.L. 1343

Balance of Survey made, as shown
on opposite page

Capps, Shaw, William



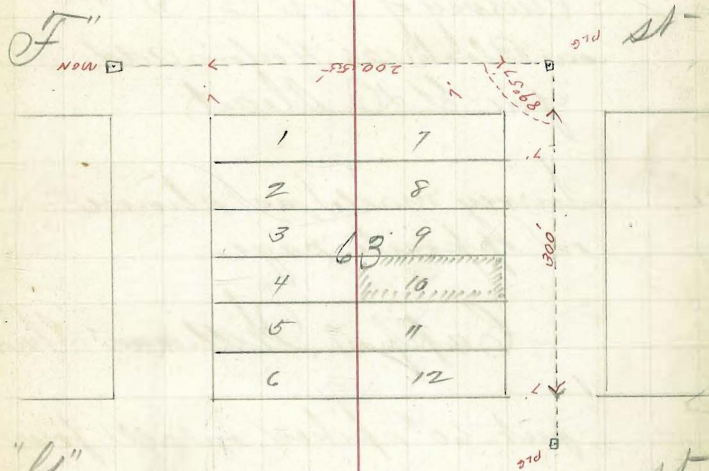
Survey of Lot 10 Block

Survey of Lot 10 Block 63
Culverwell - Taggart as shown
on opposite page

Capper. Shaw. Williams

Mar 26 1894

63. Culverwell and Taggart ⁷³
Jacob Ranul Mar 26 1894 Capper.



22nd

23rd

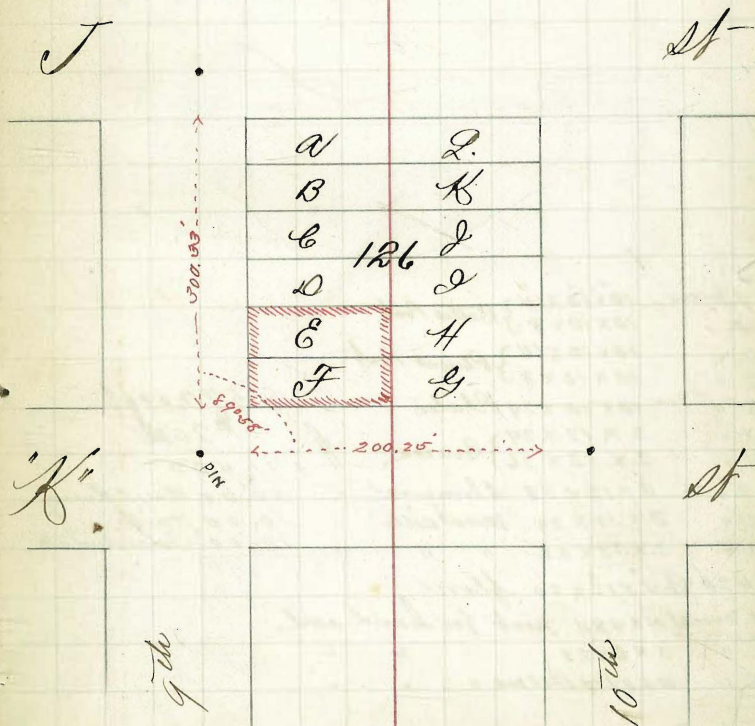
April 2nd 1894

Survey of Lots "E" & "F"
in Block 126 Horton's add
for G. D. Stead

Survey made as shown
on opposite page

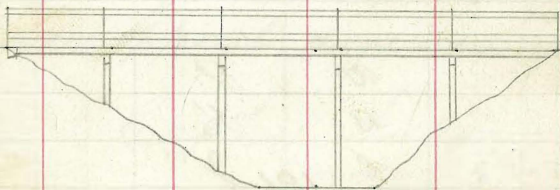
Capps William Shaw.

put 60th spikes on all four
corners.



22ND STREET

Bridge 20 ft wide
April 3rd 1894 Cappe



4 pieces	10" x 10" x 14	} Battis Post	
4 "	10" x 10" x 8		
2 "	10" x 10" x 14	} Plumb Post	
2 "	10" x 10" x 8		
6 "	10" x 10" x 24	Plates	
4 "	2" x 12" x 24	} Braces	
4 "	2" x 12" x 26		
22 "	3" x 12" x 28	Stringer	
2 "	3" x 12" x 24	Mud sills	
2 "	3" x 12" x 22	" "	
3420 ft	3" x 12" x 20	floor	
12 pieces	4" x 4" x 4	post for hand rail	
8 "	2" x 6" x 28	" " "	
12 "	4" x 4" x 14	Brace " " "	

8570.00 ft

\$20.00

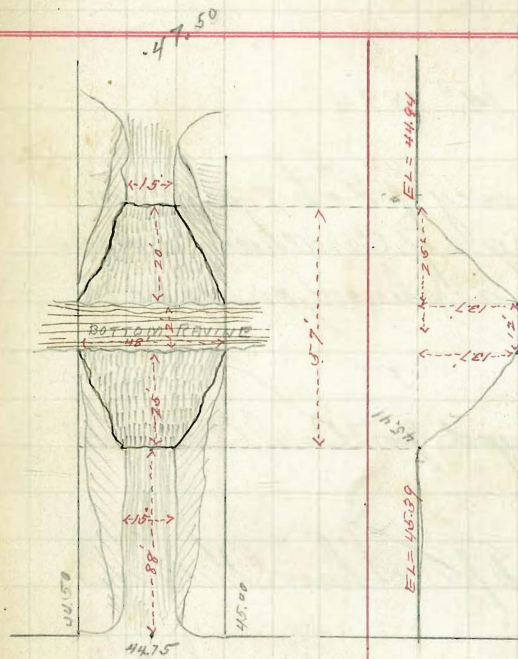
171.400

50.00 Building

10.00 Nails

10.00 Incidental

\$241.40



JULIAN AVE

44.50

22ND ST

45.00

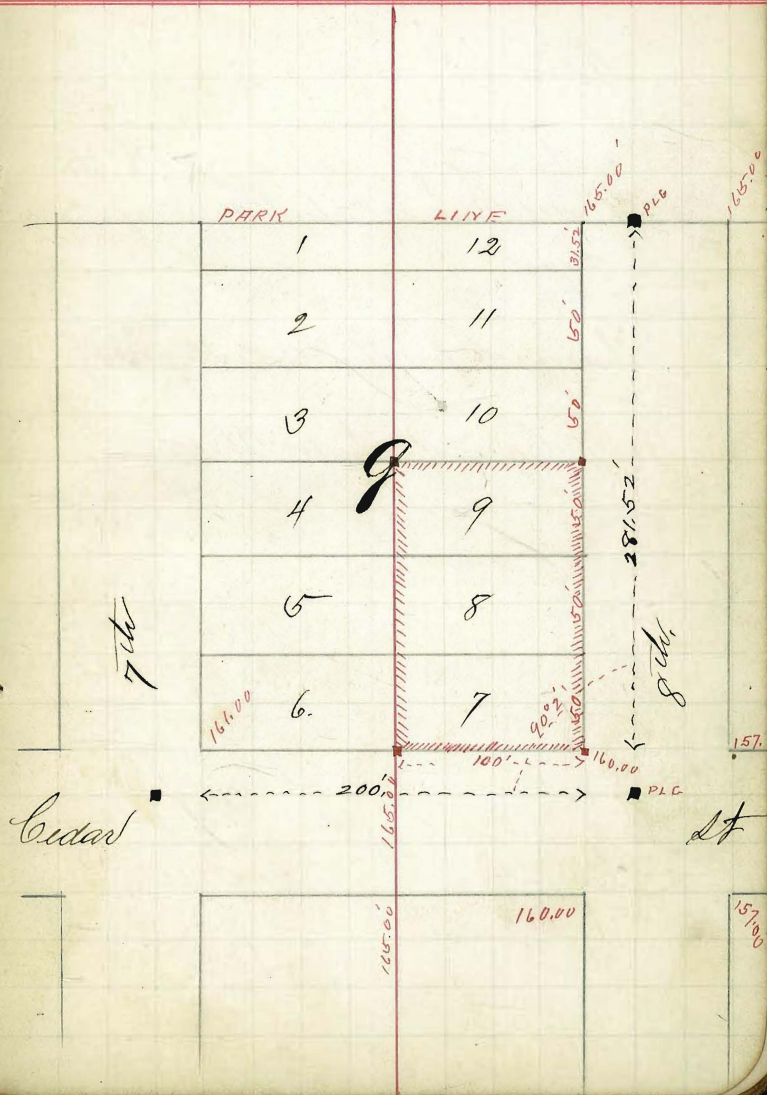
April 14th 1894

Survey of Lot 7-8-9 in
Blk 9 of Carthage Addition
and as shown on opposite
page

Surveyed for Wm. C. Stinson

Capps, Shaw, Williams

also set two grade stakes
on the interior of lot

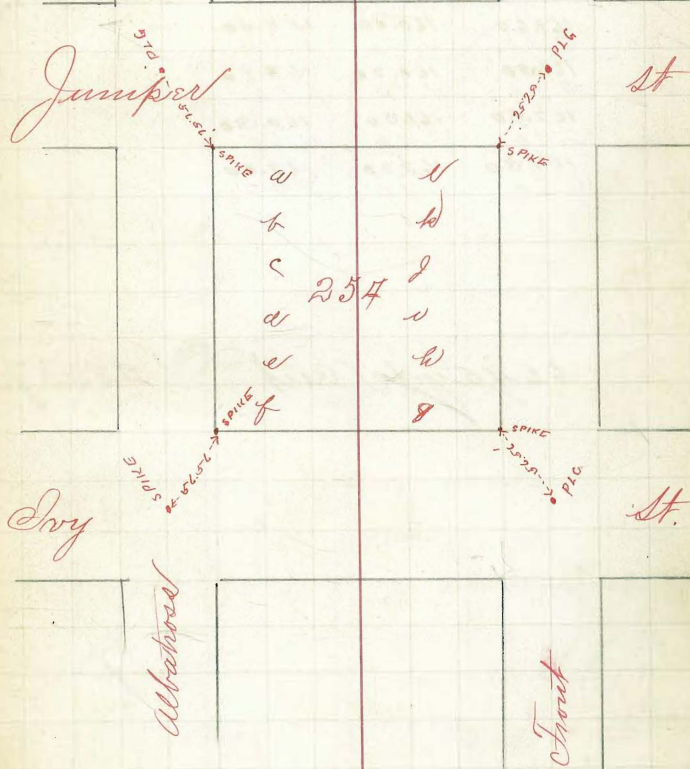


April 14th 1894

Survey of Blk 254 Horton
addition as shown on opposite
page.

Surveyed for Gen A C Ducat.

Capps Shaw Williams



Cross Section of

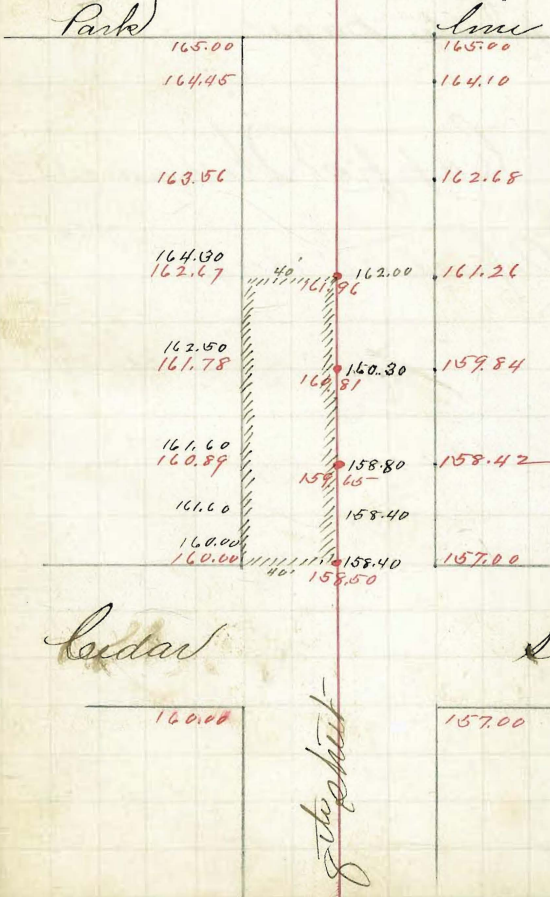
Site Bet Cedar - Parkline ⁷⁸
 Dr S.E. King April 26 1894

Stat West Cut Center

Stat	West	Cut	Center	
	160.00	159.60	(164.86)	
0+0	4.90	5.30	158.40	Cedar St.
	161.60	160.40	6.50	
+20	3.30	4.50	158.40	
	161.50	160.20	6.50	
+50	3.40	4.70	158.80	
	162.50	161.50	6.10	
+100	2.40	3.40	160.30	
	164.30	163.20	4.60	
50	0.60	1.70	162.00	
			2.90	

66.40 yds cut and 28.10 fill

Red fig = official grade Elevation
 Black " = Ground Elevation



Survey of Lots "G" and "H"

Survey made as shown on
opposite page

Capt. Williams' Share
April 26 1894

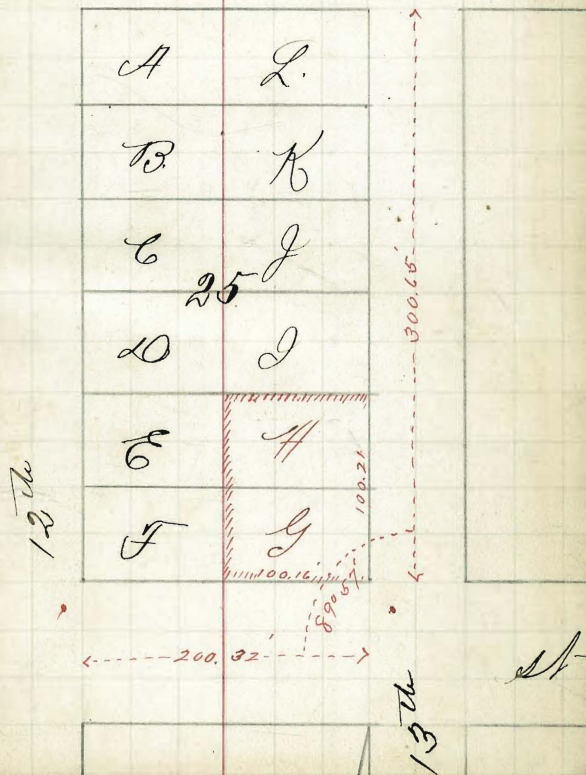
Block 25 Home Addition

79

A.M. Mc Cowoughy, April 26-94

B.

St



Sur

Sur
oppo

a

$$\begin{array}{r}
 258.05- \\
 78.49 \\
 \hline
 600 / 18456 \text{ (3076)} \\
 1800 \\
 \hline
 4560 \\
 4200 \\
 \hline
 360
 \end{array}$$

$$\begin{array}{r}
 3076 \\
 75 \\
 \hline
 15380 \\
 21532 \\
 \hline
 230700 \\
 78115- \\
 \hline
 20422
 \end{array}$$

$$\begin{array}{r}
 .307 \quad 3076 \\
 20 \quad 200 \\
 \hline
 61400 \quad 615200 \\
 7849 \quad 7849 \\
 \hline
 13489 \quad 13601
 \end{array}$$

$$\begin{array}{r}
 3076 \\
 257 \\
 \hline
 153800 \\
 9228 \\
 \hline
 1076600 \\
 7849 \\
 \hline
 18115-
 \end{array}$$

$$\begin{array}{r}
 20415- \\
 18115- \\
 \hline
 2200
 \end{array}$$

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

26
16
41
6 / 40.966
86
00

184.62
337
922800
55368
600 / 6.059600 / 107.600 / 184.56 / 13076
600
4696
4200
3960
1812
258.00
7349
600 / 184.56 / 1307
4360
4200
1076600
7349
18115
207
350
107460
7349
18090
600: 184.56 = 350

Return to City Engineers Office
TRAVERSE TABLE FOR TRANSIT BOOK.
City Hall, San Diego, Cal.
From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.60	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.52	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.91	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							