(Gr ps)

[illegible] Coronado Ry 5h 47m 36s [illegible]
Otay " N 5th [illegible]
[illegible] Lat 1342 [illegible]
[illegible] 22d St [illegible]

869

TRANSIT.

F.B. 107

107

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

...ing the difference of latitude and departure in running ...0 chains at any course from 1 to 60 minutes.

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

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TABLE FOR RUNNING ON SLOPES.

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

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

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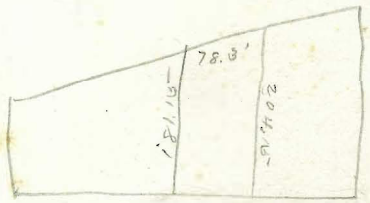
JAN 25 1965

107

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



Measurements of Rifle & Thickness
of N.W. cor of 10th & Ash

Jan 2 1883

Hamlin

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

Turned 74° Right (S 74° W) and
measured dif. 5°

Turned 65° Right (S 65° W) and
measured dif. 4° 45'

Turned 30° Right (S 30° W) and
measured dif. 6°.

Turned 86° (S 86° 0' W) and
measured dif. 4° 30'

Scale 1" = 40'

Measurement of Dip and Thickness of sandstone on west side of 10th bet ash & Beech

Jan 2 1898 Hamlin

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

Jun 2 1893 Hamlin

Set up transit and placed it in Mag meridian pointing South & Turned to Right 86° (S 86° 0' W) and measured dip 3° 15'

Measurement of Dips & Thicknesses of Rocks along cut on west side of 10th St N of Hale

June 2 1883 Hamlin

Set transit pointing S 5° E Mag
Dip 3°
S 25° W Dip 1° 30'
S 40° W Dip 5° 15'

Measurement of Thickness & Dip of sand stone up 7th & Cedar

Jan 2 1893 Hamlin

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

Measurement of thickness and Dip of rock on west side of 3rd St at Elm

Jan, 2 1892 Hamlin

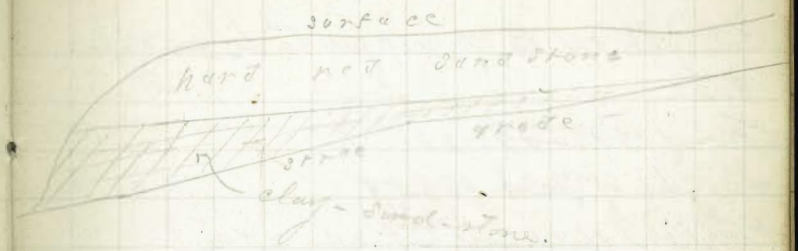
Set up in 2d st opposite bank pointed inst. S 7° 0' W Dip 3°
S 45° W Dip 1° 15'
S 30° W - Dip 4° 0'

---

at 4th & Fir 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
Dipps two 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 Fourth St canon there is about 15' of red sand rock overlying yellow sand stone
Dip 3° S 54° W Mag.



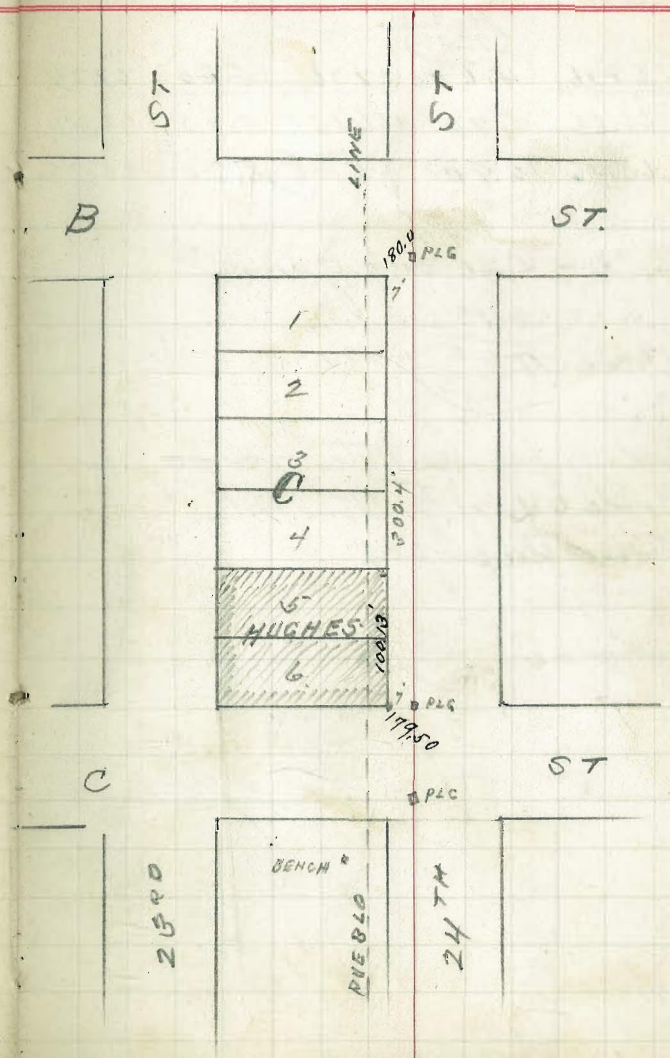
July 7th 1893. Survey of Lots 5 & 6 B C Culverwell & Taggart for Hughes.

B.S.

B. Sight on B.M. copper tack on Step 8.21.
Elev of B.M. = 178.38
Height of Inst 186.59
Rod on N.W. cor C & 24 7.09
" " N.E. Cor Lot 5 Blk "C" 6.95.

One grade stake set at NE Cor Lot 5.

Capper
Williams
Shaw.
Farar.

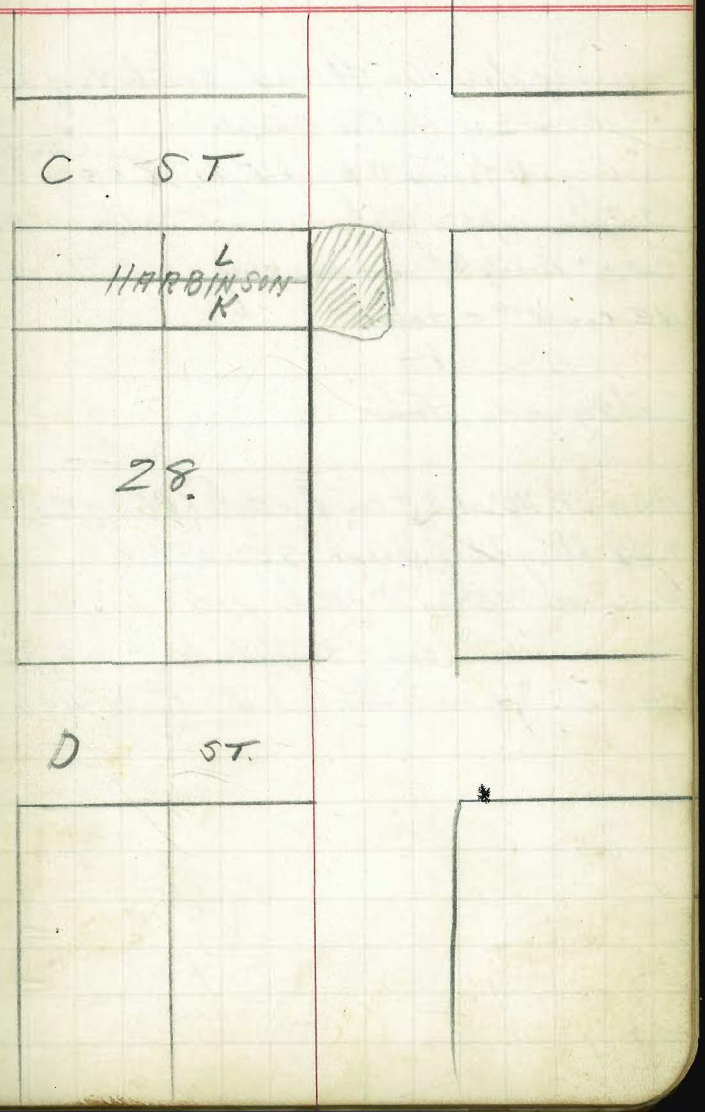


Measurements of Earth fill on 15th Street Bet "C & D" for Harbinson

WEST		Sidewalk		Center	
R.	El.	R	El.	R.	El.
		Hydrant 72.36.			
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 " "

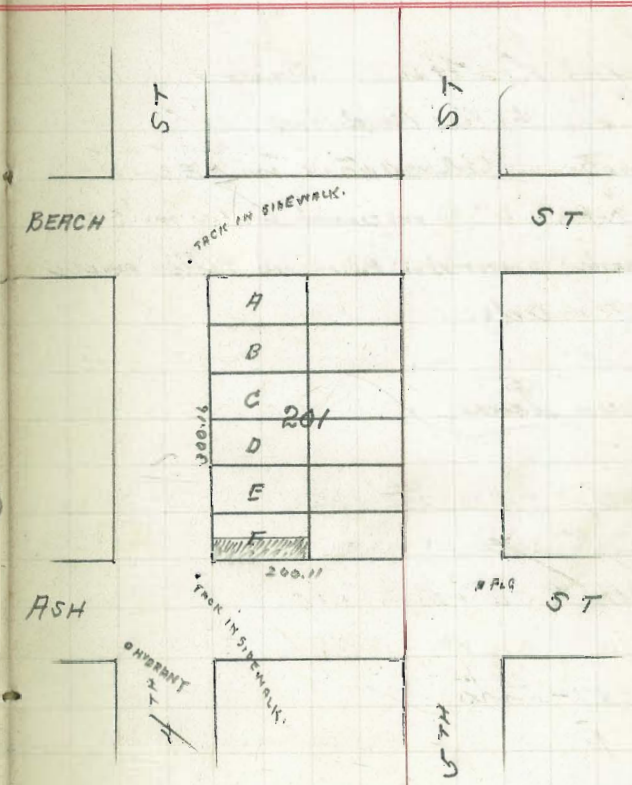
Compiled from Notes on page 29 Book 64 of Fulton's Notes and from the profiles



Survey for Dr Heine south ½ of Lot "F" Blk 201 Horton Addition
Surveyed from Copper tack in cement walk on NE Cor of 4th Ave Ash, copper tack on cement walk on SE Cor 4th Beach Ave wooden plug in Earth 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 Instr. 85.10
Rod on NE Cor 4th & Ash 4.10
" " North cor of South ½ 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 Balache

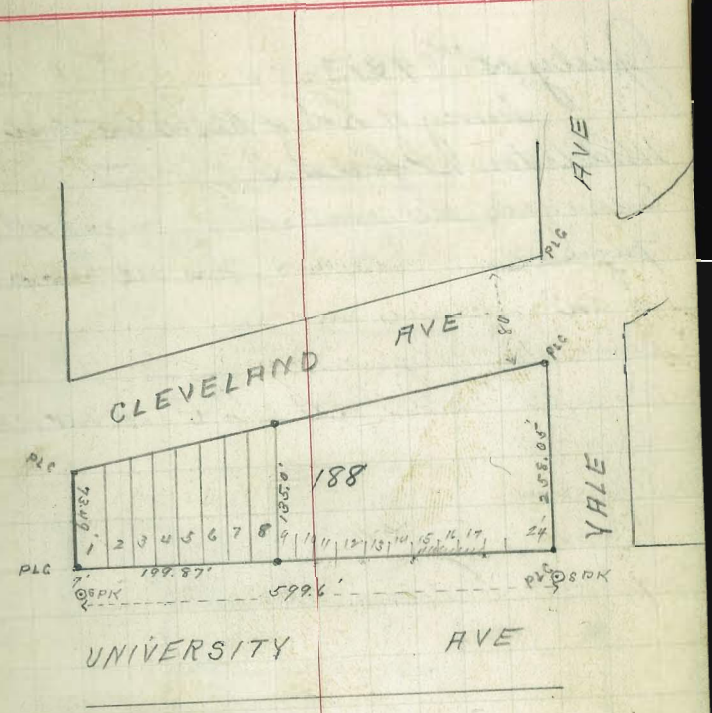
This survey made from old Blk corners as indicated on opposite page.
found old plugs on N.W. and S E Corners
placed new plugs on the N.E. and S.W. Corners

Surveyed July 12th 1893.

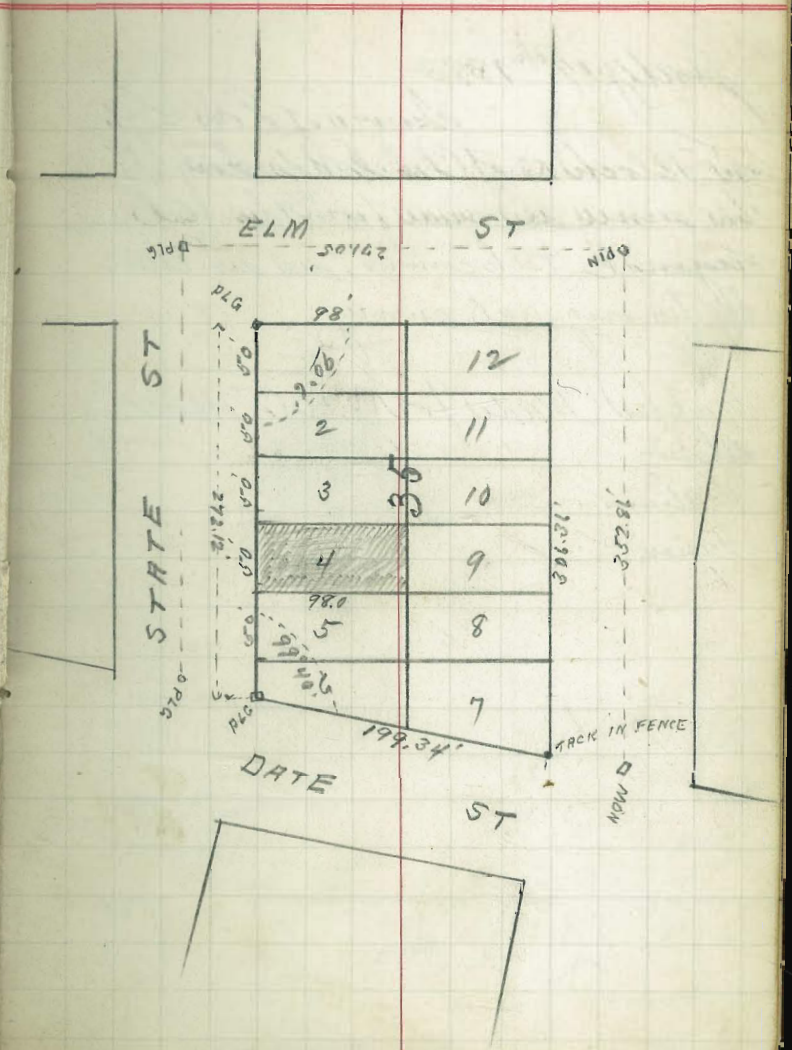
Capps, Williams, Shaw and Farar.

15-16-17- Lots,

Order Book No 1 p 32
charges $5.20



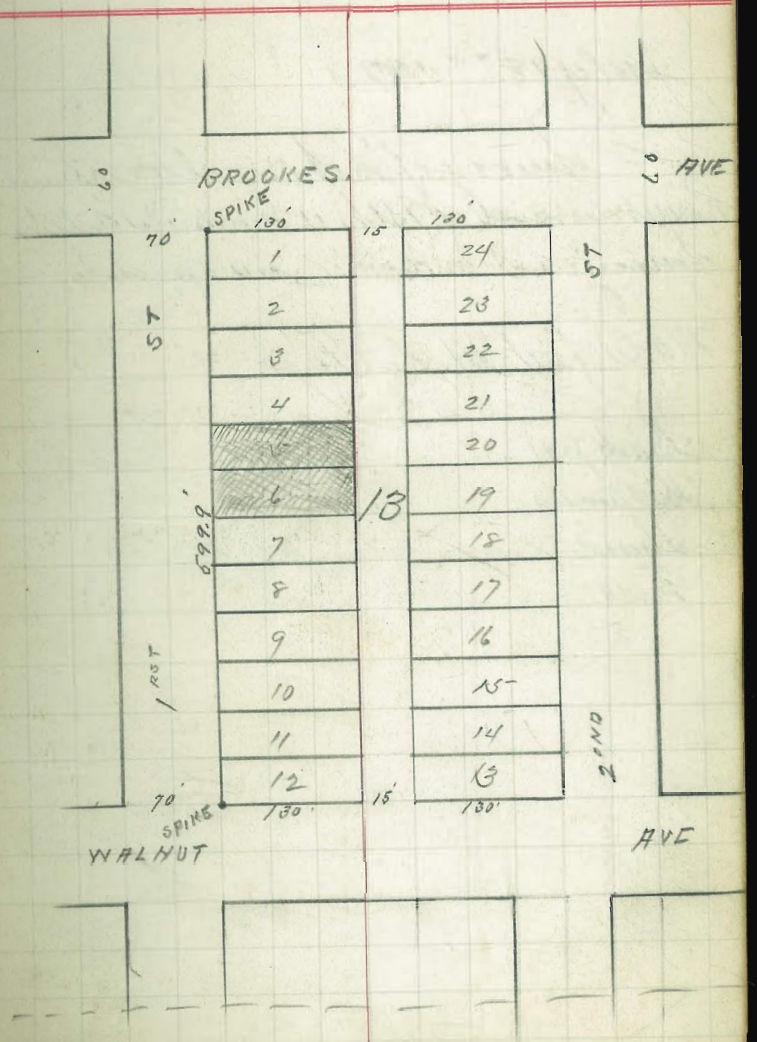
July 15th-93.
Survey of Lot 4 Blk 35 in Middletown for S. S. Dann
Surveyed as indicated on opposite page.



July 17th 1893.

Survey of Lots 5 + 6 in Block 13 of Clevelands Heights this survey is made from the old original Blk corners, as set thru by the original survey

Capps (Made for J. A. C. More.)
Shaw
Williams
Farar.



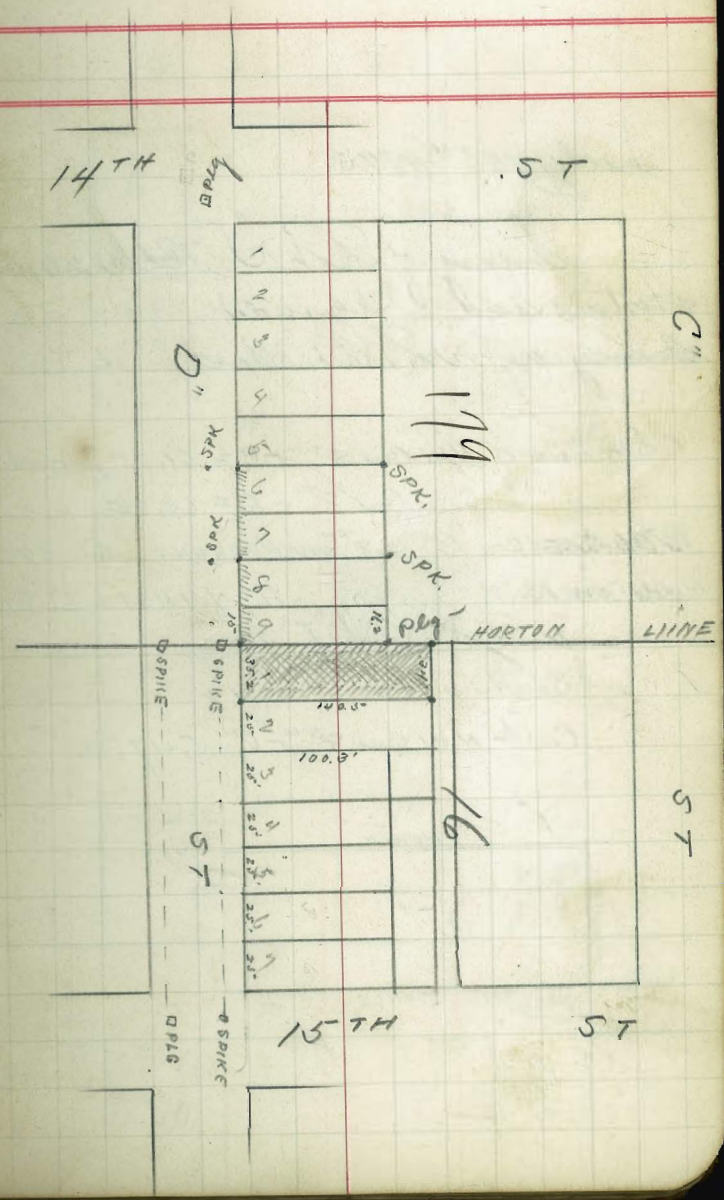
July 18th 1893

Survey of Lot 1 in Olmstead's Resubdivision of Blk 16 Gardner's add

Survey as indicated on opposite page

Made for M. L. Frick

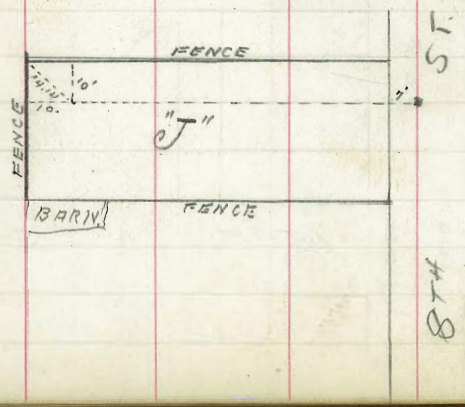
Capps
Williams
Shaw
Farar.

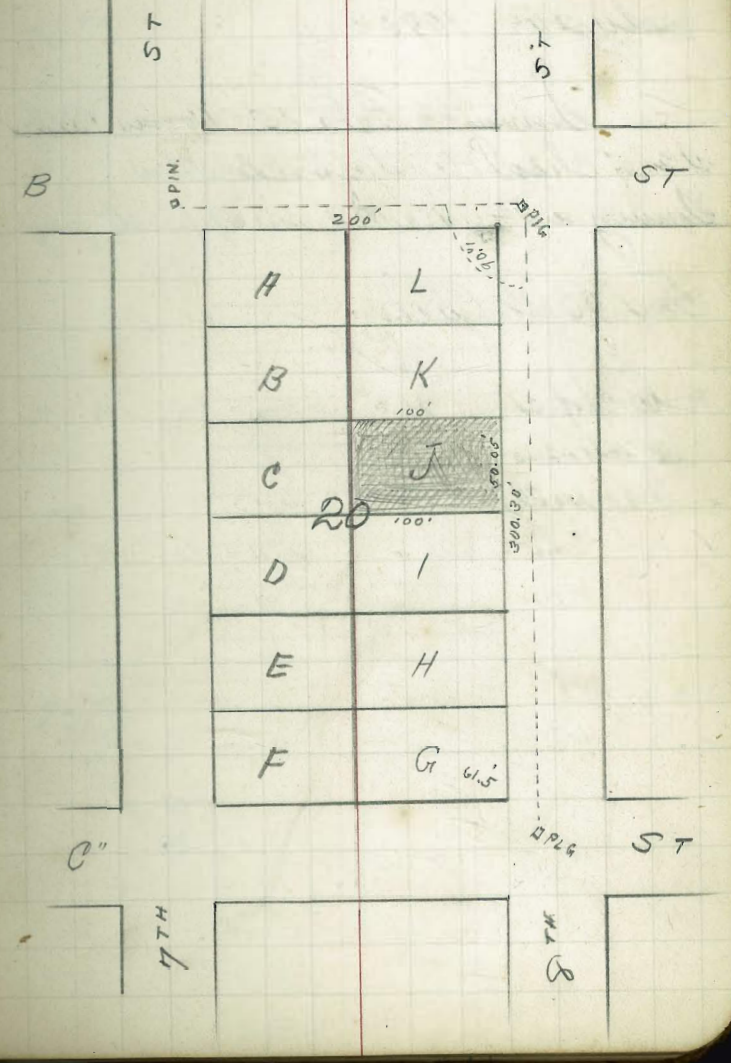


July 19TH 1893.

Survey of Lot "J" Blk 20 in Horton's add. City 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" & 8TH on HYDRANT = 66.072
Rod on B.M = 0.90 HT of INST = 66.972
" " North Cor Lot "J" 4.22
" " South " " " 4.47
" " Curb NW Cor 8TH & "C" 5.47



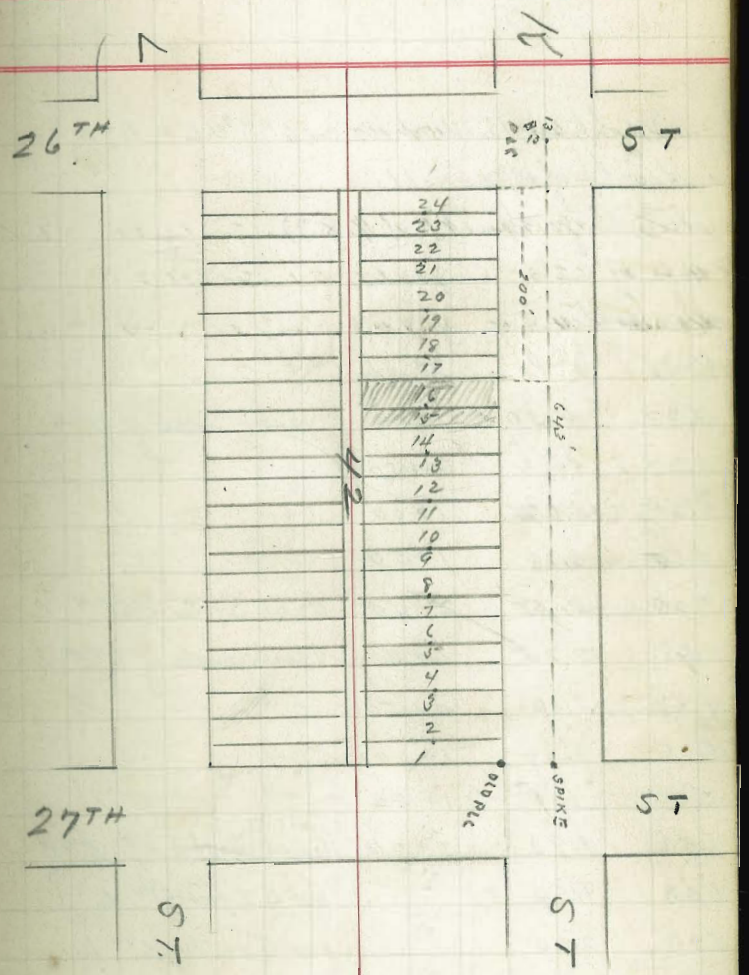


July 20th 1893.

Survey of Lots 15 + 16 in Blk 42 of Chas P Lensley's Addition
Survey as indicated on opposite page

For B. H. Carey.

Capps
Williams
Crowell.

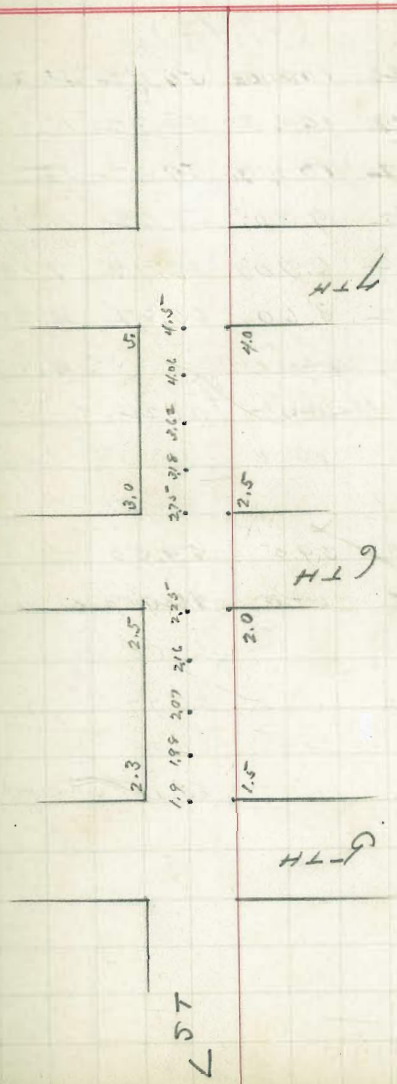


July 20TH 1893. Set grades for R.R. Coronado Belt line

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

Center

Rod	El	Dist	
3.33	4.50	0+0	West Side of 7TH
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 6TH
5.58	2.25	0+0	West side of 6TH
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 5TH
6.33	1.50		on S.E. Cor 5TH L
5.83	2.00		on S.W. Cor 6TH L
5.33	2.50		on S.E. Cor 6 L
3.83	4.00		on S.W. Cor 7T L



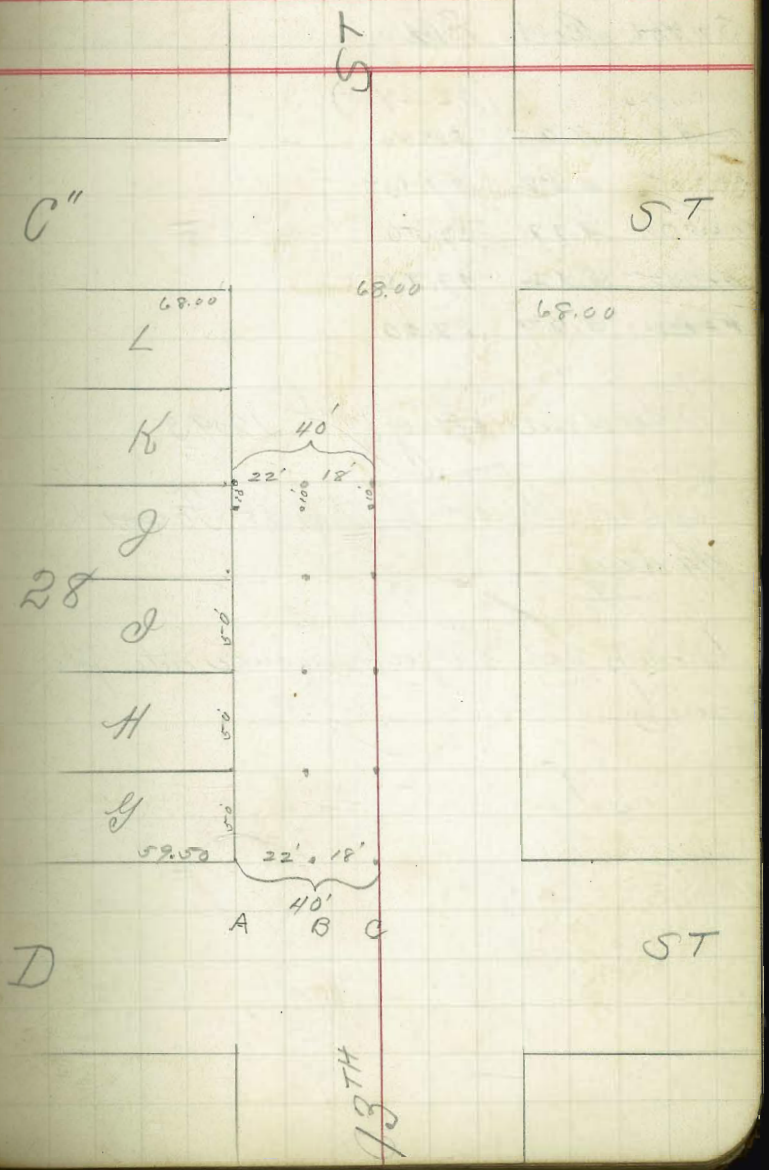
Levels taken July 31st 1893.

on 13th Bet C & D, to Center line of Street on West side for Boone & Capron

Stat	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	60.32
2+00	4.10	65.32	3.60	65.82	4.20	65.22

Capps. Williams & Farar.

	A grade	B grade	C 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 1st 1893.

STAT	Rod	El
S.W. Cor 8th & 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

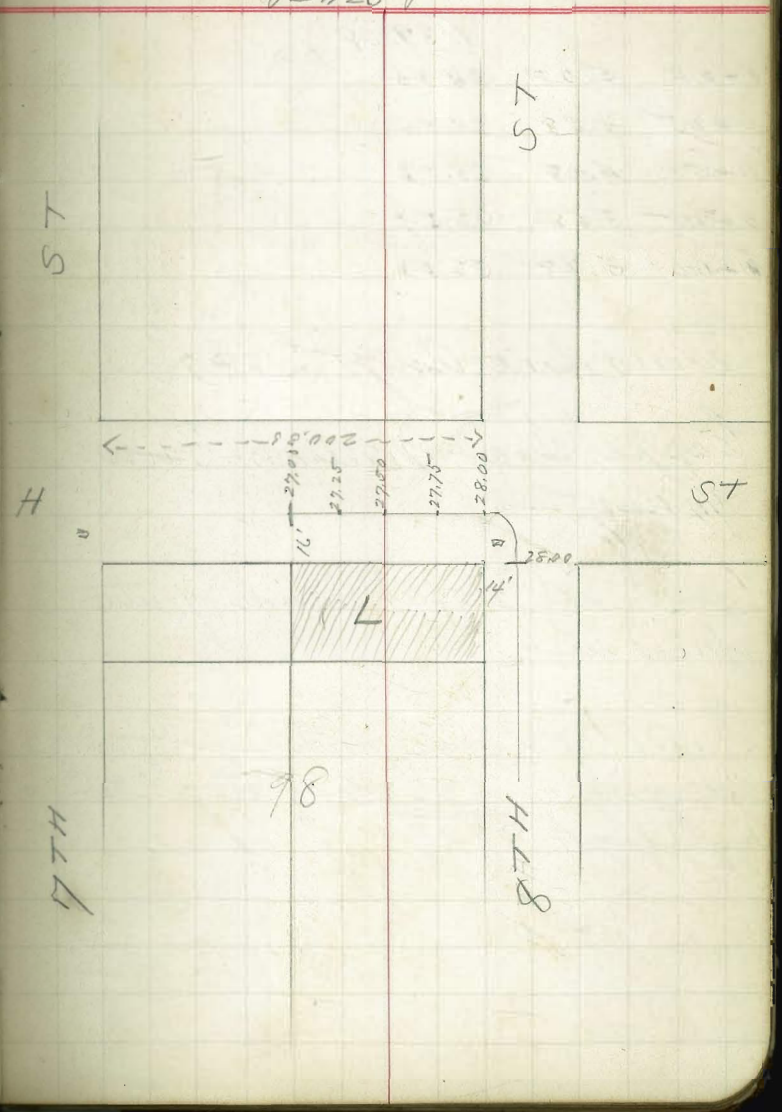
Work done Aug 1st 1893

Lappe, Shaw, Williams & Farr

1/4 day.

points set 2.5 feet inside outer face curb

B.S. on B.M. hinge on Hydrant S.E. Cor 8th & H St = 1.25



Setting Curb on H st for J. V. Collins Aug 1st 1893. 20

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

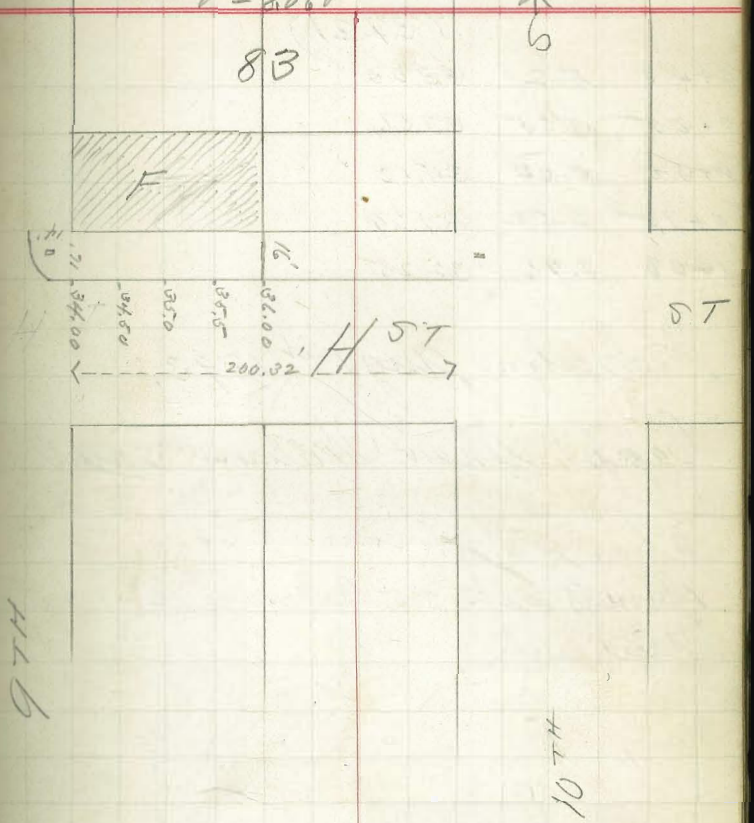
Work done Aug 1st 1893

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

Point set 2.5 feet inside of south face curb

Height B.M. 31.02 (north hinge Hydrant S.E. Cor of 8th & H street)
Readings " " 8.06
Height of Dust 39.08

B.S. on B.M. hinge on Hydrant S E Cor of 8TH & H ST = 8.06



Setting Curb on "H" st

For F. Kies August 1893.

STAT	Rod	El.			
		(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			

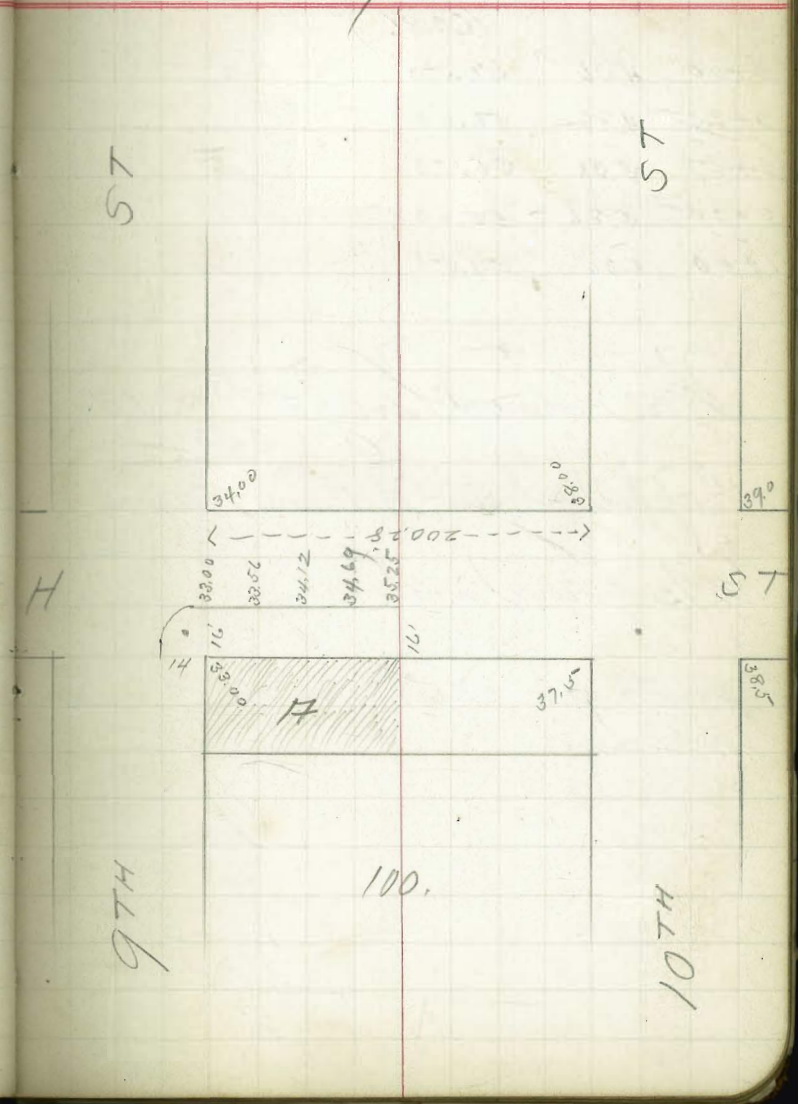
Work done August 1893.

Capps. Shaw. Williams & Farar

2 hours Work.

points set 2.5 feet inside of outer face curb

B.S. on BM Hinge on Hydrant S.E. Cor 8TH - H ST = 6.19



Setting Curb on 9TH ST For Kline Aug 3rd 1893.

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

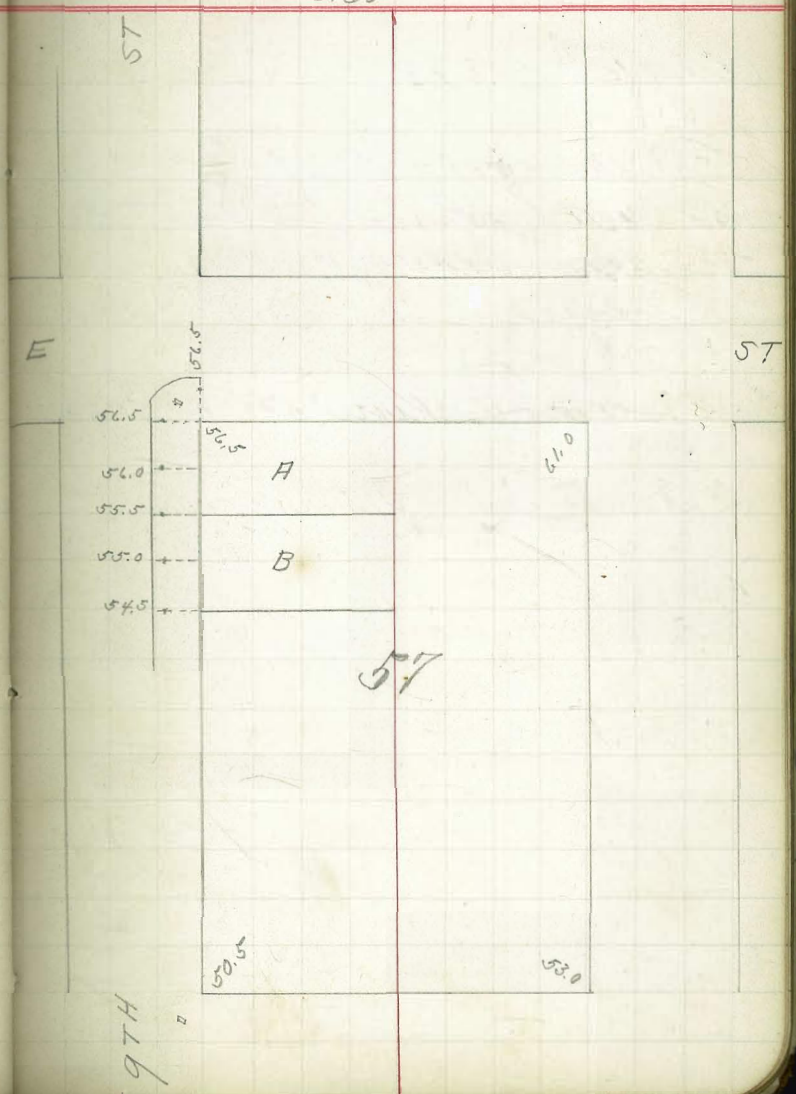
Work done Aug 3rd 1893.

Capps. Shaw, Williams. Farar.

2 1/2 hours work.

points set 3 feet inside of outer face curb.

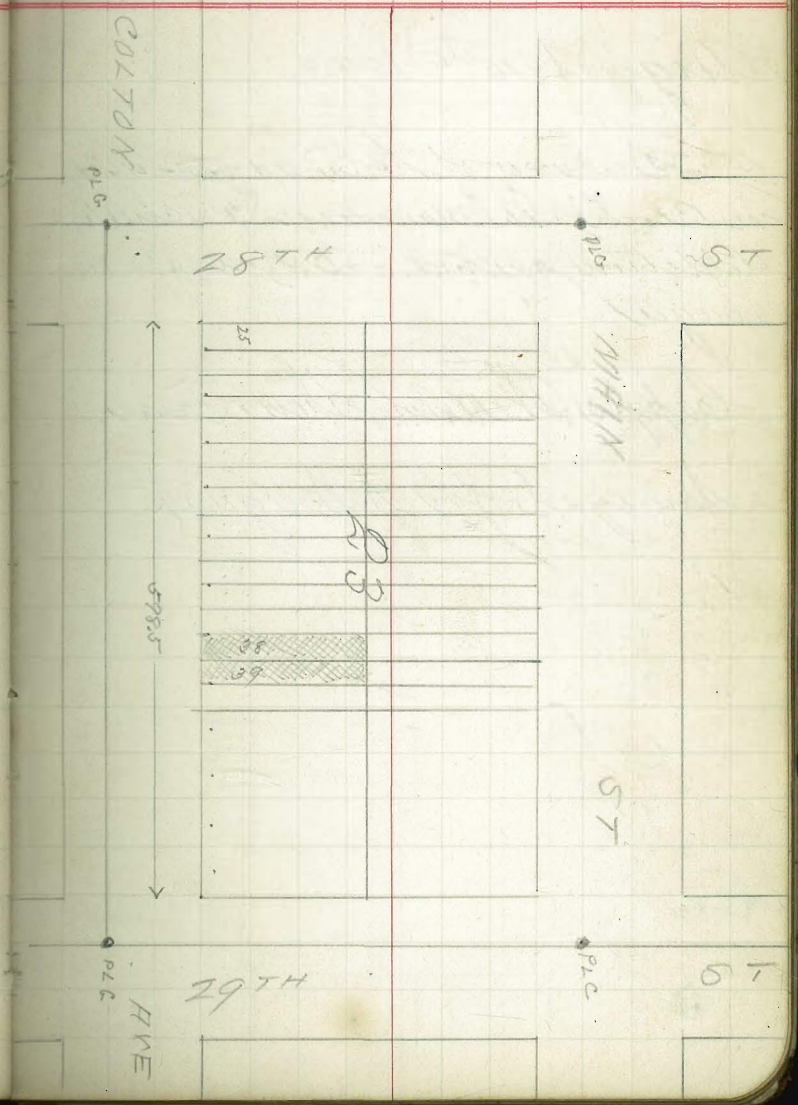
B.S. on B.M. Hydrant on S.W. Cor 9TH & F" ST
=10.60



Aug 7th 1893.

Survey of Lots 38 & 39 in Blk 23 Reid & Hubbells Addition as indicated on opposite page

Capps Shaw Williams - Farar

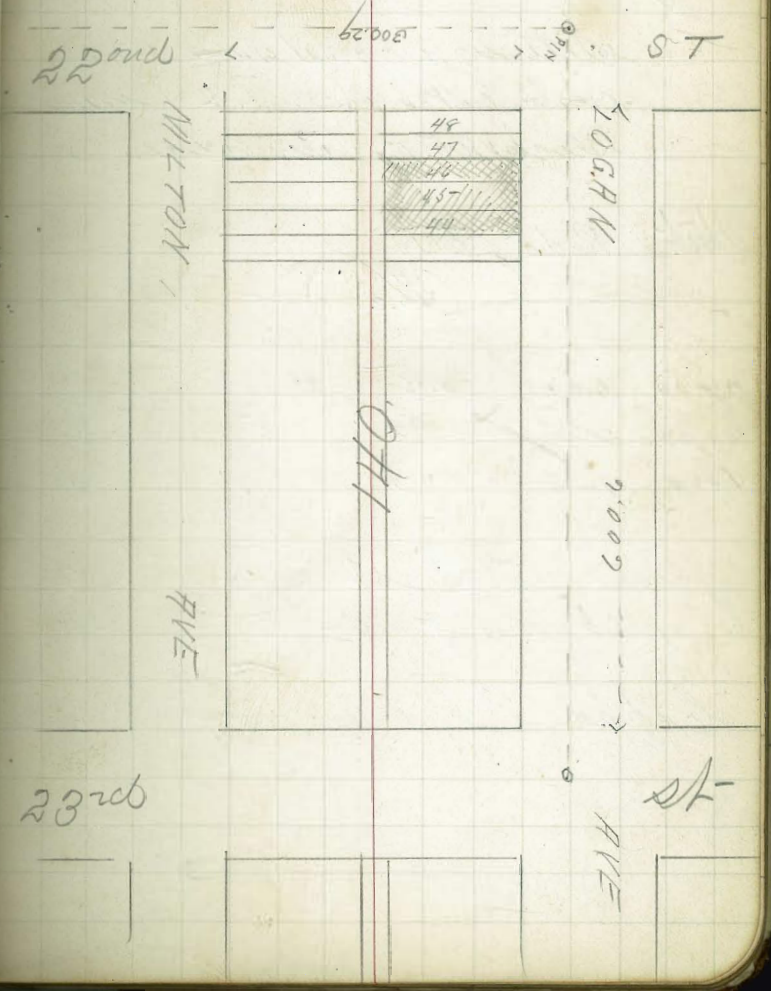


August 15th 1893.

Survey of Lots 44-45-46 in Block 140 Mannasse & Schiller's addition as indicated on opposite page

Capps Williams Shaw & Faran.

Surveyed for A. Wellgast



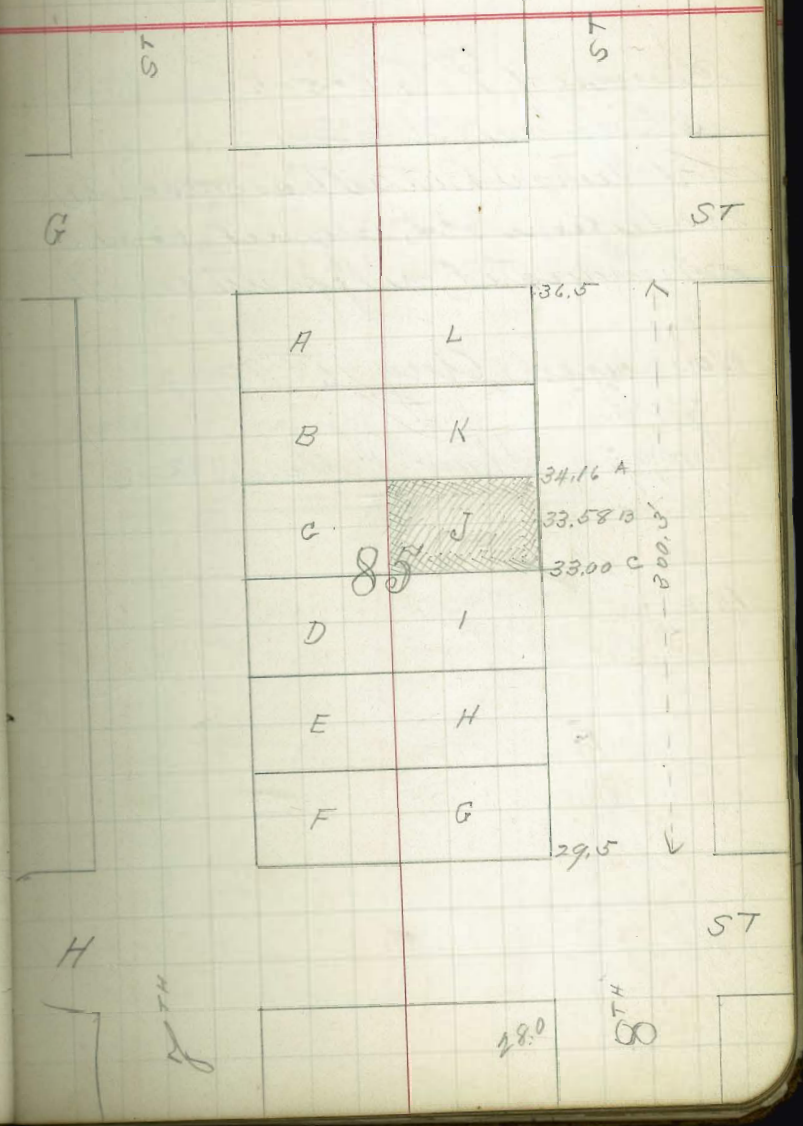
August 12th 1893.

Setting grade stakes for curb in front of Lot J in Block 85 Hoitbus add.

Stat	Rod	El (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 inside of outer face of curb.

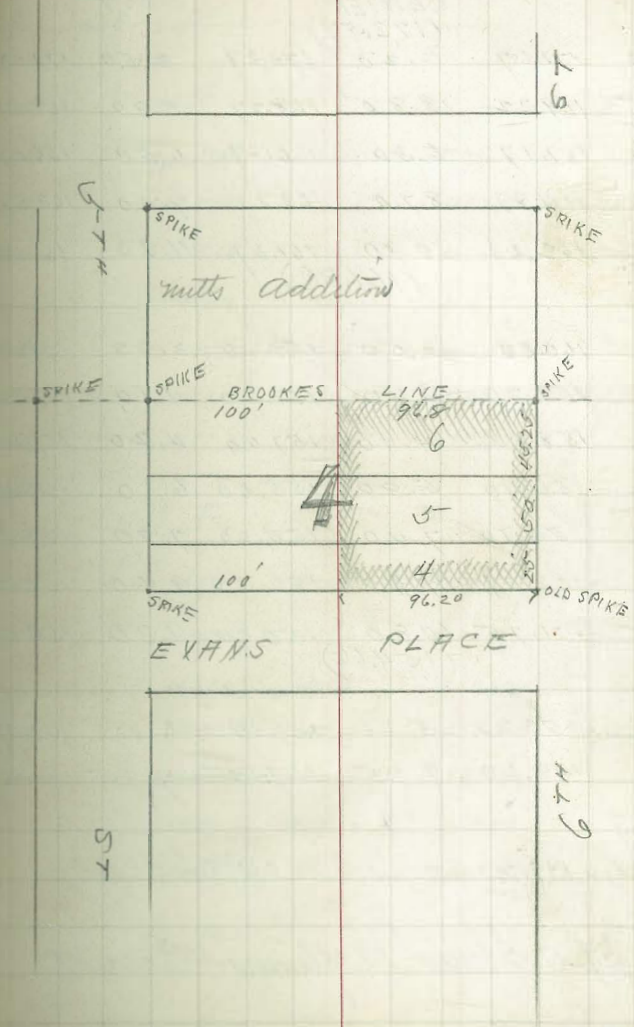
Capt. Williams, Shaw - Farr.



Survey of Lots 4-5-6 in Blk 4
in Brookes Addition
for George Butler this survey is
made from old original corners
as indicated in opposite page

Surveyed Aug 16th 1893.

Copy. Shaw Williams. Surv.



Check Levels on Grade on 24th street for Schyler Aug 17th 1893.

Rod	El	Rod	El	Rod	El	Stat
EAST		CENTER (172.57)		WEST		South East cor E - 24th
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
5.40	167.17	6.30	166.27	6.50	166.07	1+00
7.70	164.87	8.70	163.87	9.00	163.57	1+50
9.90	162.67	10.90 (161.36)	161.67	11.30	161.27	2+00
1.10	160.30	2.00	159.40	2.30	159.10	2+50
3.20	158.20	3.60	157.80	4.10	157.30	3+00
3.30	158.10	4.40	157.00	4.20	157.20	0+00
5.00	156.40	5.80	155.60	6.10	155.30	0+50
6.70	154.70	7.40	154.00	7.70	153.70	1+00
7.90	153.50	8.90	152.50	9.40	152.00	1+50
9.65	151.75	10.80 (154.66)	150.60	11.30	150.10	2+00
4.50	150.20	5.60	149.10	6.43	148.27	2+50
6.10	148.60	7.15	147.55	7.95	146.75	3+00

8.40 on B.M. SE cor G ~~ay~~ 24th = (146.26)

Capps Shaw Williams - Ferrer

	E		ST
	170.0	170.75	171.5
	167.85	168.5	169.25
	165.68	166.3	167.00
	163.51	164.1	164.75
	161.34	161.9	162.50
	159.17	159.7	160.25
	157.0	157.5	158.0

	F		ST
	157.0	157.5	158.0
	155.25	156.00	156.4
	153.50	154.3	154.82
	151.75	152.6	153.24
	150.00	150.9	151.66
	148.25	149.2	150.8
	146.5	147.5	148.5

	G		ST
		24th	

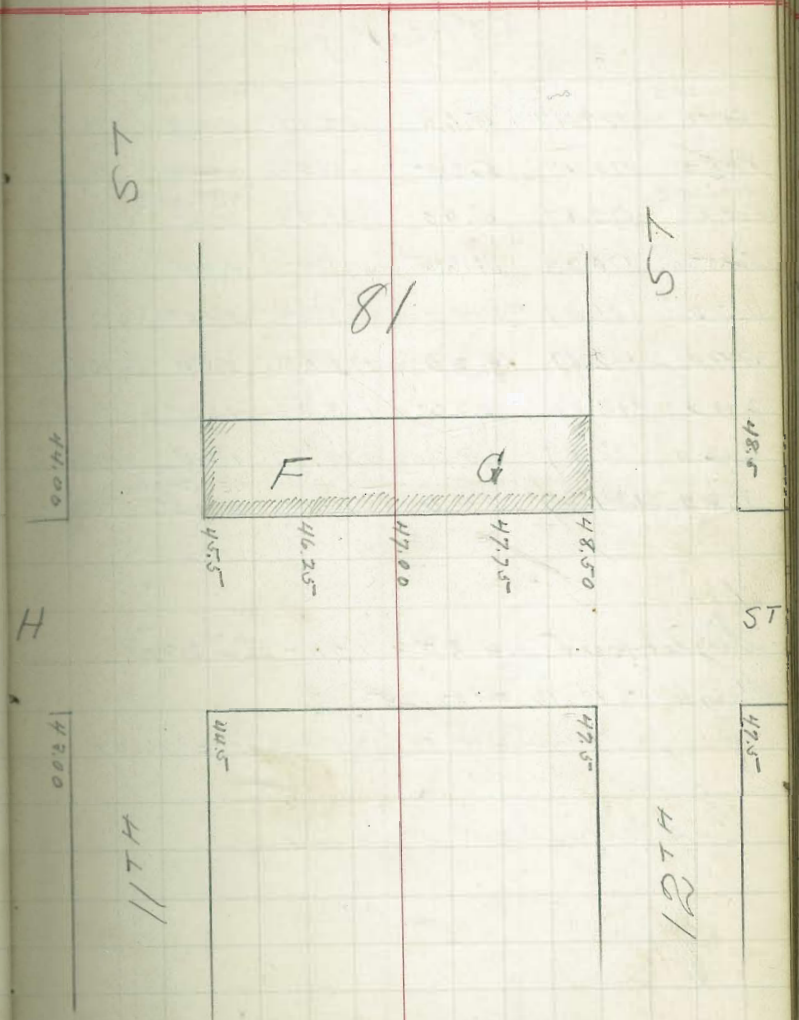
Setting Curb grades for Lots "F" and "G" Blk 81 Hinton for Ed Wescott Aug 21st 1893.

Stat	Rod	El.			
N.E. cor 11th & H ST		(49.99)			
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.

Capps & Williams Shaw, Engrs.

B.M. on S.E. cor 12th & H nozzle of hydrant 49.08 B.S. on BM = 0.91 = H.I. = 49.99.



Check Levels on Grade of 24th Bet "D" & Estrets
Aug 22nd 1893.

Rod	El	Rod	El	Rod	El.	Stat					
		(176.07)							ST		
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		175.00	
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	175.0	cut .32
4.70	171.37	4.00	172.07	3.15	172.92	1+00 " .57		173.30	173.90	174.40	" .70
3.90	172.17	3.20	172.87	2.50	173.57	1+50 " .53		172.64	173.27	173.82	c 0.34 " .70
2.90	173.17	2.55	173.52	1.55	174.52	2+00		171.98	172.64	173.24	" .23
2.20	173.87	1.80	174.27	1.00	175.07	2+50		171.32	172.02	172.66	" .26
1.80	174.27	1.00	175.07	SE cor D-24 0.75	175.32	3+00		170.67	171.38	172.08	" .50
								170.0	170.75	171.5	" .40
							E	170.0	170.75	171.5	ST
								170.0	170.75	171.5	

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

24TH

Setting Curb-grade stake for C. B. Richards

Stat	B.S.	I.S.	C or F.	Ground Elevations
		(205.67) H.I.		
B.M.	6.33			
0+00 (FRONT ST)		4.75	C 1.92	200.92
0+50 (FRONT ST)		4.50	" .92	201.17
1+00 (FRONT ST)		3.45	" .72	202.22
1+50 (FRONT ST)		2.50	" .42	203.17
0+50 (KALMIA)		3.00	" .55	202.67
1+00 (KALMIA)		0.00	" .42	205.67

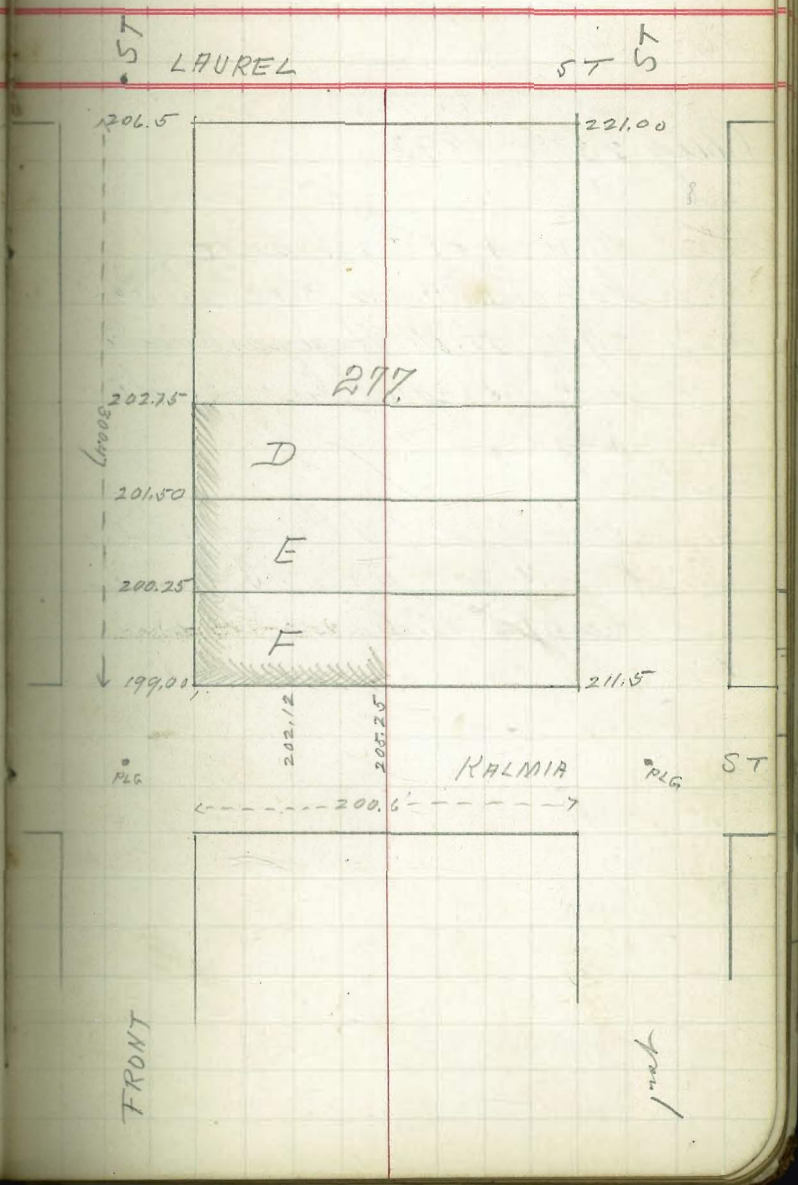
Height of B.M. 199.342 being a spike on top fence post on NW cor of Kalmia and Front street

Reading on B.M. = 6.33

Height of Inst = 205.67

Capps Williams & Ferrer.

Aug 22nd 1893.

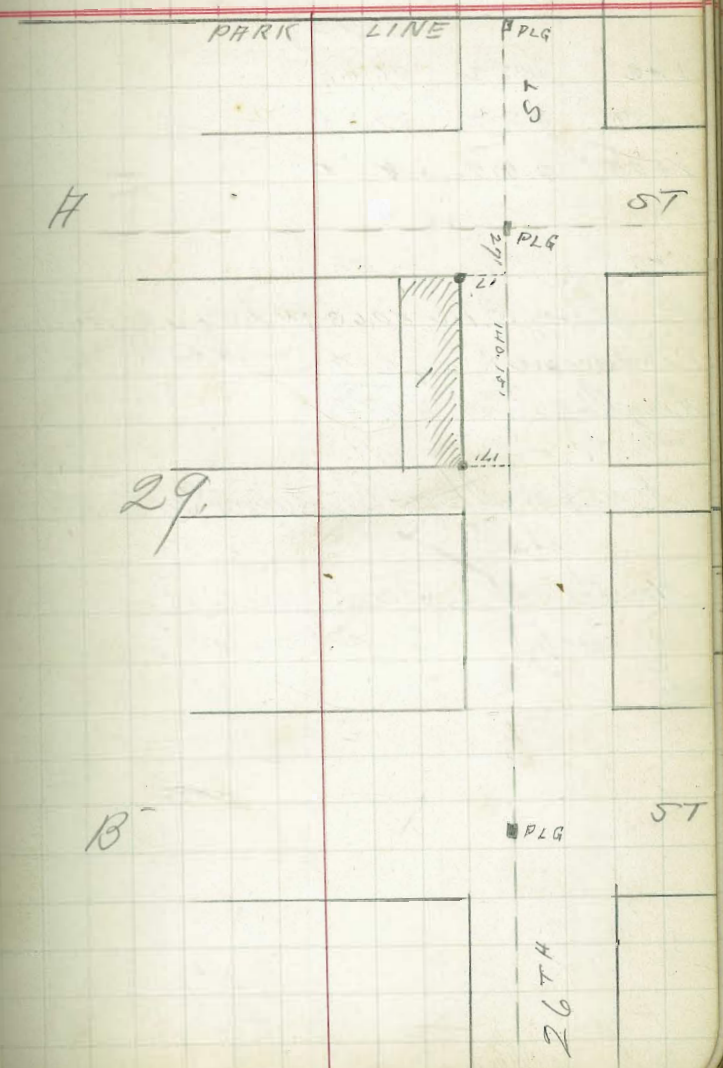


Aug 23rd 1893.

Survey of East side of lot other(1) in Block No. 29 of H. M. Higgins Addition as indicated on opposite page.

Surveyed for Harvey Stiles

Copps Williams & Ferrer.



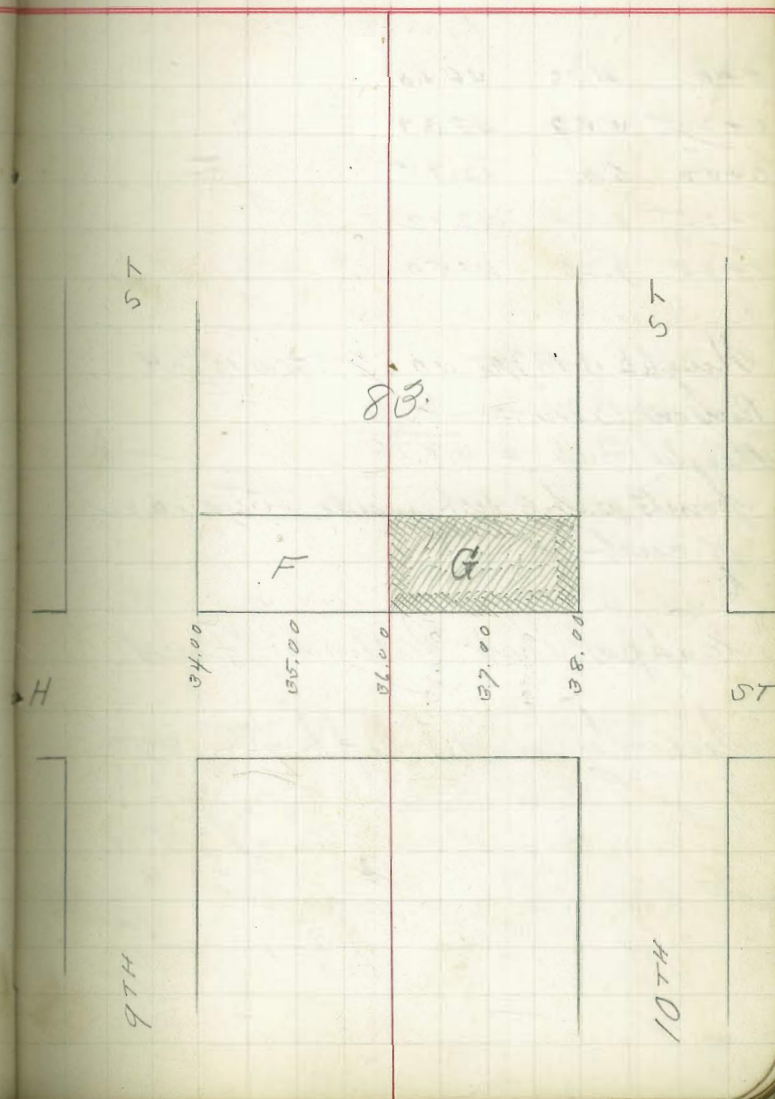
Setting curb grades for Lot "G" in Blk 83 Horton's Add. for W. E. Brimhall Sept 5th 1893.

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 on SE cor 10th & H st)
Reading on " " 0.19
Height of Inst 40.82

Capps. Shaw Williams & Ferar

points set 2.5 feet inside of outer face of curb



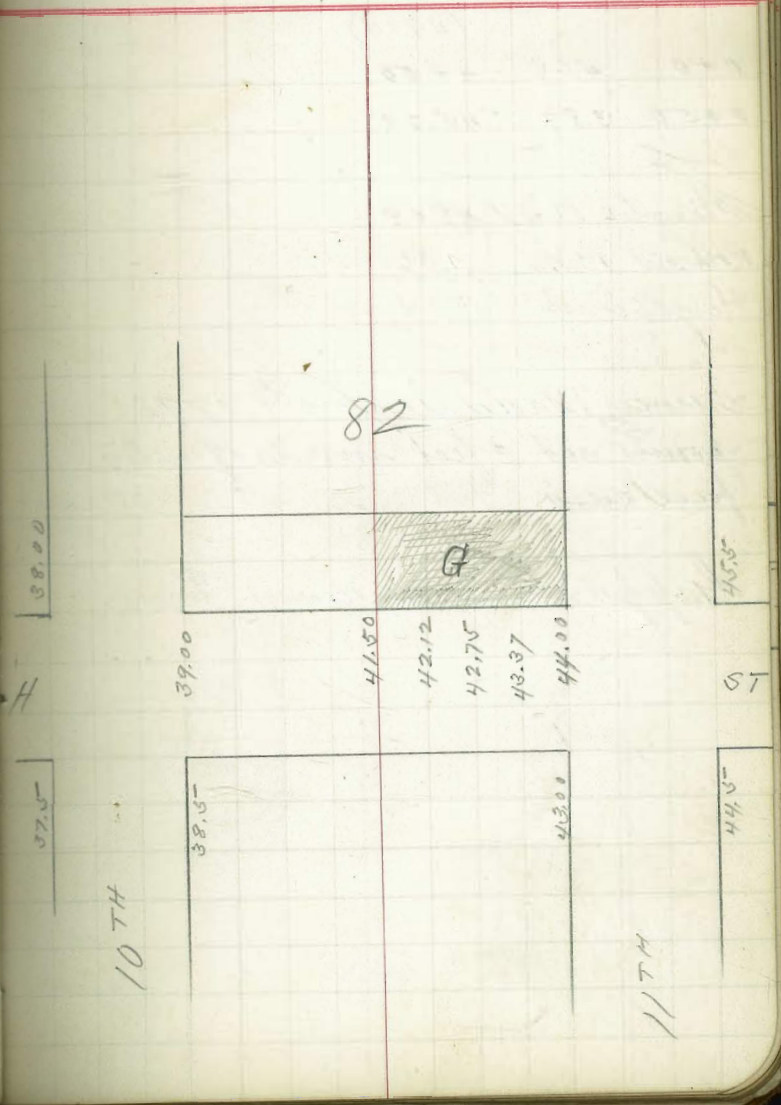
Setting Curb grades for Lot "G" in Block 82 Hilton's for

Stat	Rod	El.			
0+0	4.76	44.00			
0+25	5.39	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 SE Cor 10TH & H
Rod on B.M. = 8.13
Height Inst = 48.76
points set 3 feet inside outer face of curb.

Capt. Shaw. Williams & Fuer

Survey made Sept 7th 1893.



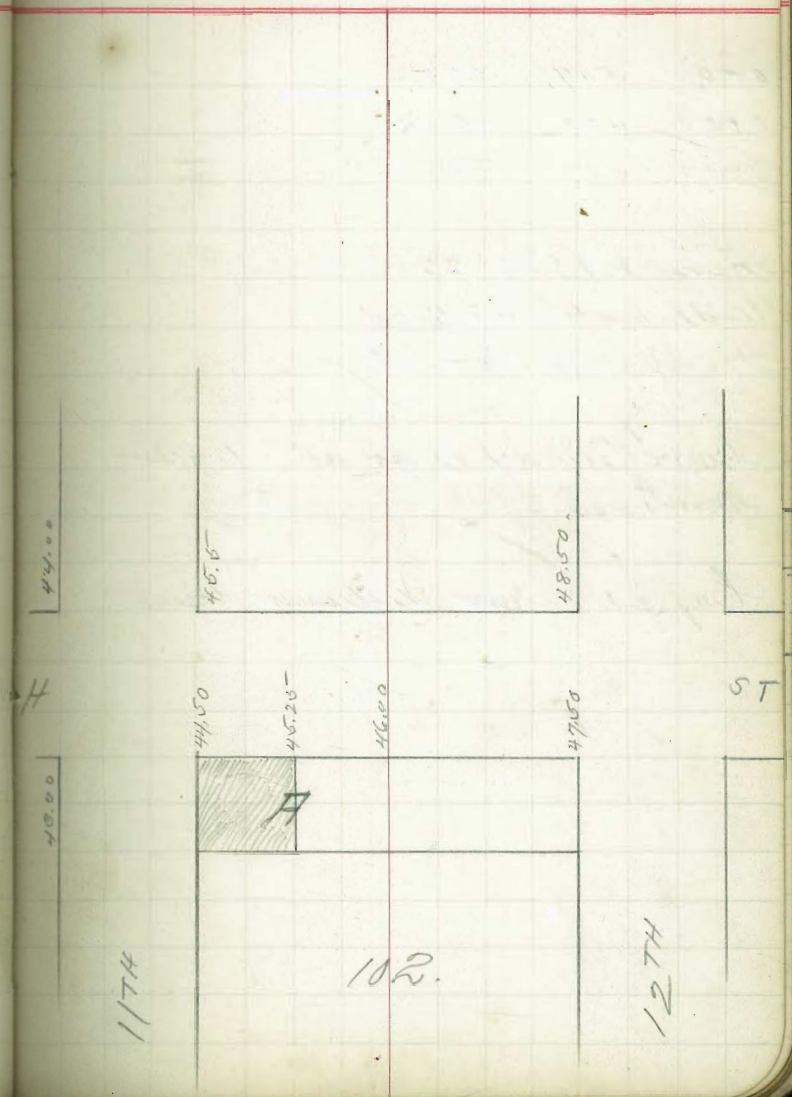
Setting Curb on H^st on West half of Lot "A" in Blk 102 Hortons

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 1893.
points set 3 feet inside of outer face curb.

Capps, Shaw, Williams, Ferer.



Setting Curb grades on "H" st for Lot "F" Blk 85 Horton's add.

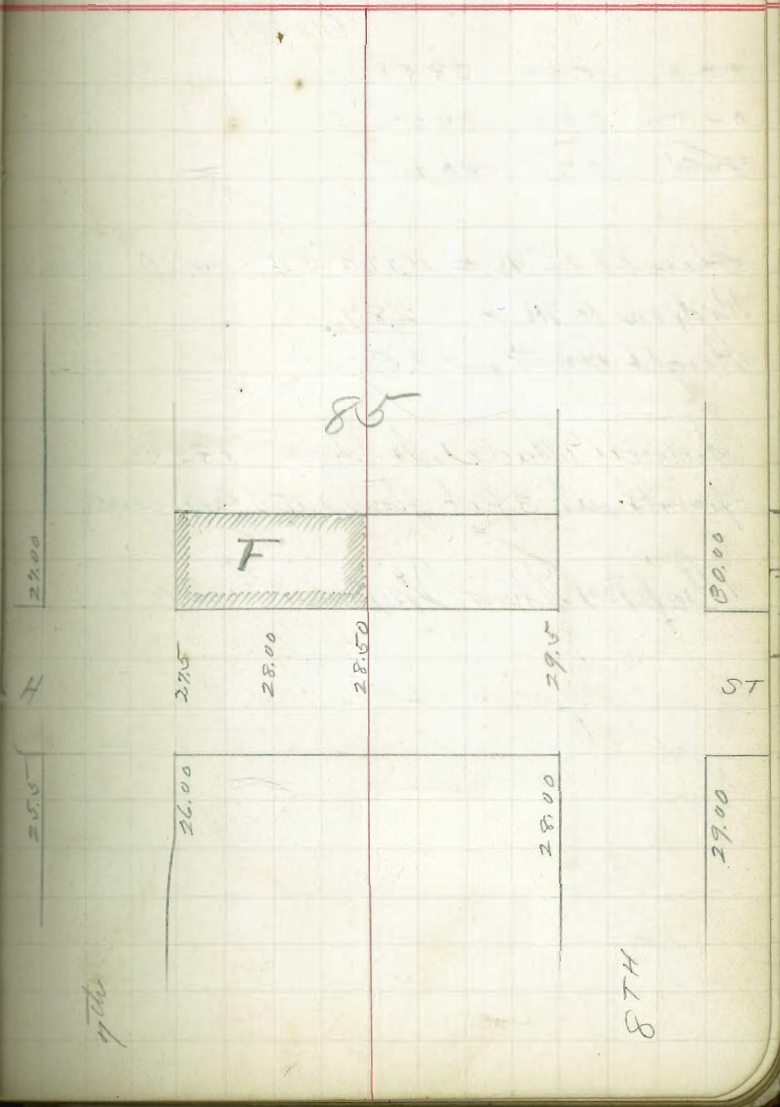
James McNair vs D.H. Hewitt

Stat.	Rod	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
Rod on BM 5.04
Height Inst 32.67

Survey Made Sept 18th 1893
points set 8 feet from outer face curb.

Capps Shaw, Williams, Finer



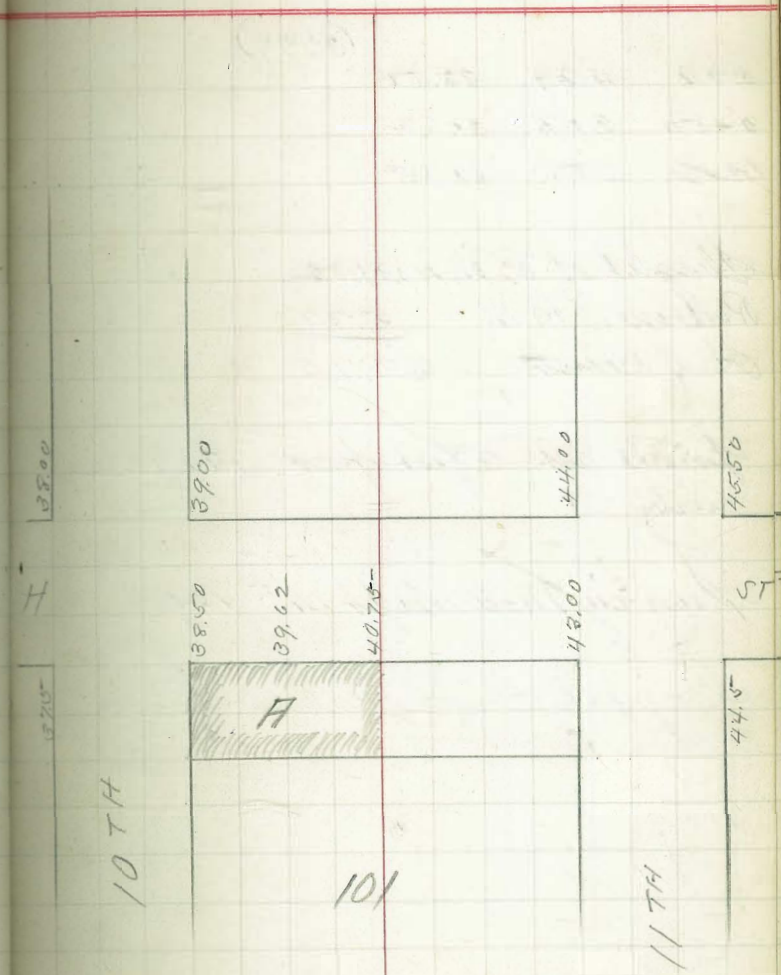
Setting Curb grade for H street side of Lot "A" Blk 101. Hortons for James McNair Contractor

Stat	Rod	El.
		(43.50)
0+0	5.00	38.50
0+50	3.88	39.62
1+00	2.75	40.75

Height B.M. = 40.63 S.E. cor 10th street
Rod on B.M. = 2.87
Height Inst 43.50

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

Capps Shaw Williams & Fisar.



Setting Curb stakes for H ST side of Lot "L" Blk 99 Hortons
for Geo Hazzard.

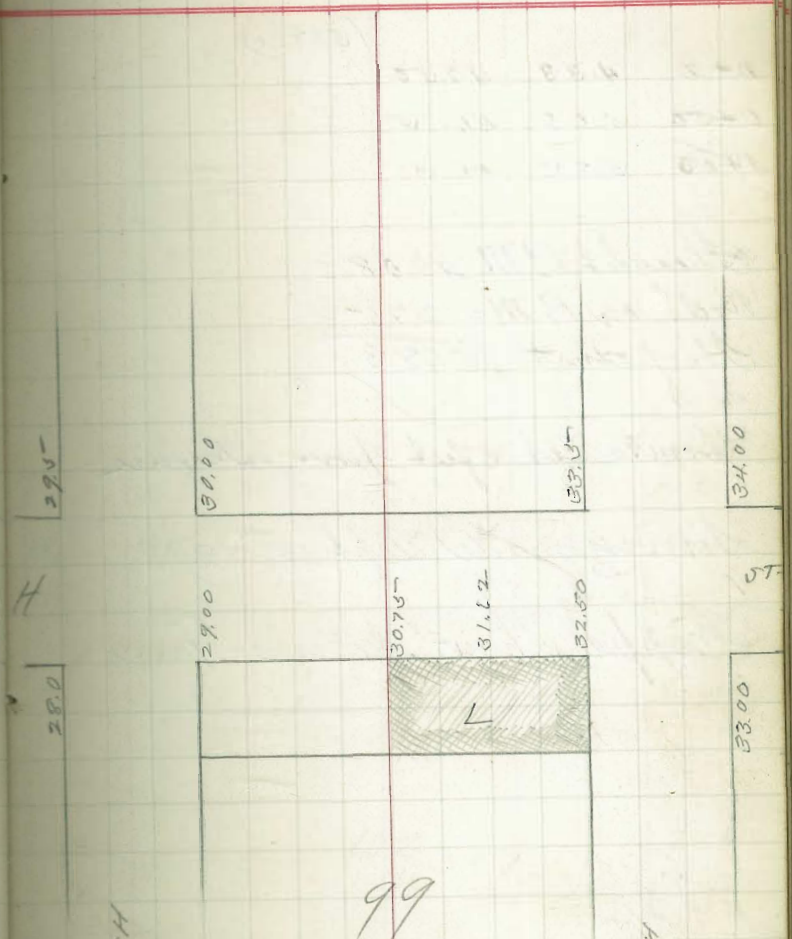
Stat	Rod	El.	
			(36.79)
0+0	4.29	32.50	
0+50	5.17	31.62	
1+00	6.04	30.75	

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.



Setting Curb grade stakes for "H" street side of Lot "L" Horton's for Geo Hazzard

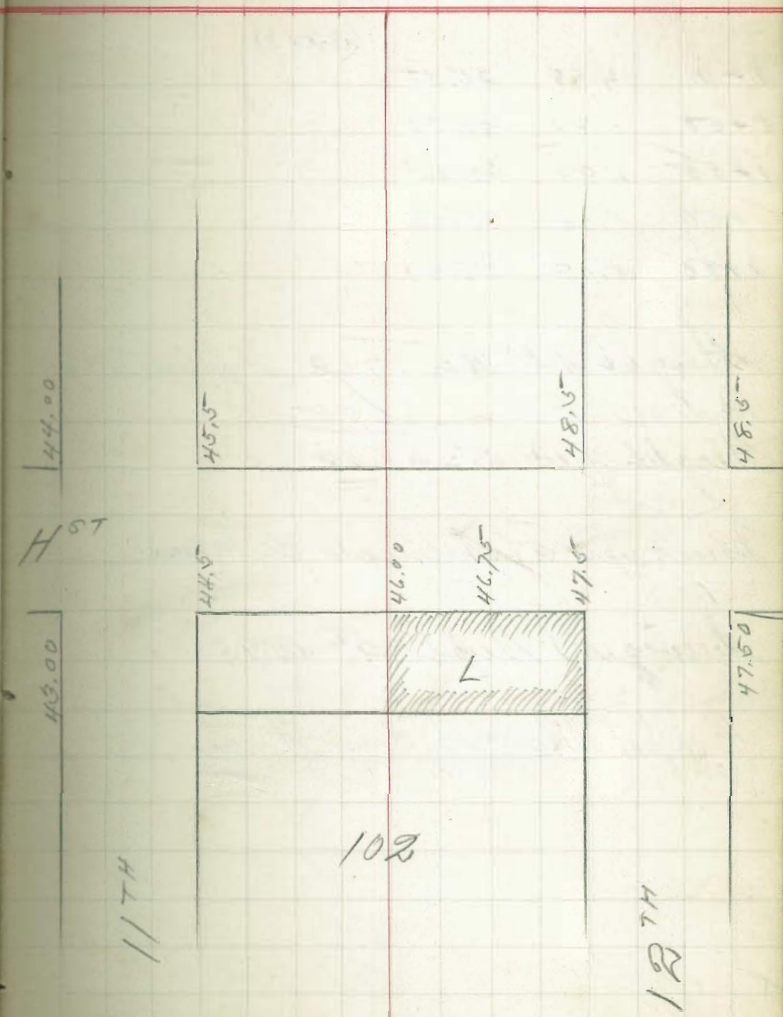
Stat	Rod	El.	
			(51.83)
0+0	4.33	47.50	
0+50	5.08	46.75	
1+00	5.83	46.00	

Height B.M. 49.08
Rod on B.M. = 2.75
H. of Inst 51.83

Points set 3 feet from outer face

Survey made Sept 14th 1893

Capps Shaw, Williams & Farar



Setting Curb grades for "H" st side of Lots "A" and "L" Blk 97. Hortons for H. P. Whitney

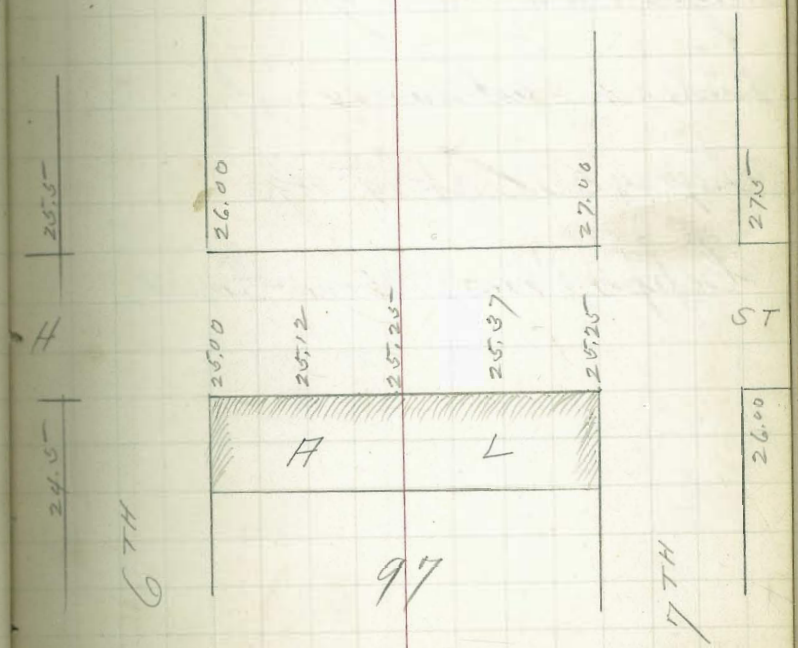
Stat	Rod	El	
			(30.18)
0+0	4.68	25.5	
0+50	4.81	25.37	
1+00	4.93	25.25	
1+50	5.06	25.12	
2+00	5.18	25.00	

Height of BM = 27.63 Hydrant SW Cor 7
Rod on BM. 2.55
Height of Inst = 30.18

Points set 3 feet inside curb line

Surveyed Sept 19th 1893.

Capps Shaw Williams Ferar



Setting Curb grades on "H" st for Lot "A" Blk 98 Horton's Add for John Sinks

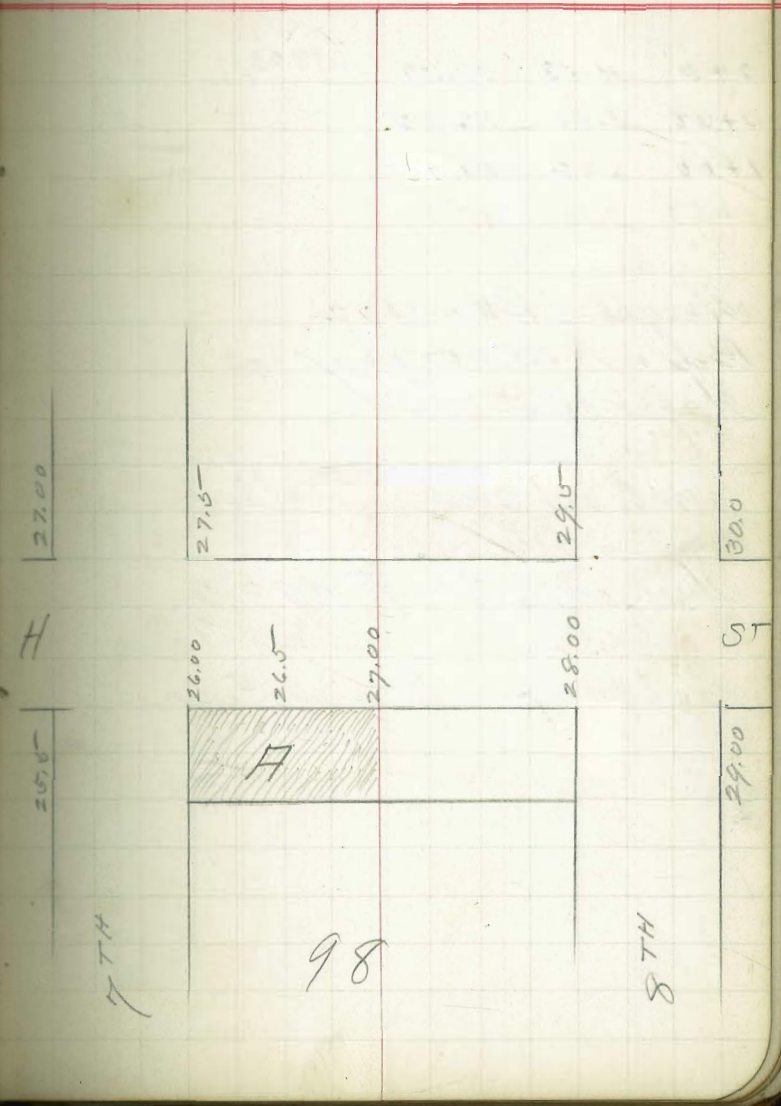
Stat	Rod	Ele	
			(31.10')
0+0	5.10	26.00	
0+50	4.60	26.50	
1+00	4.10	27.00	

Height of BM = 27.63
Rod on BM = 3.47
Height Inst 31.10

points set 3 feet inside curb.

Surveyed Sept 19th 1893

Capps Shaw Williams & Ferer



Setting Curb grades for West side of Lot "G" & E½ lot "F" Blk 84 Harlow for Snyder & Dougherty.

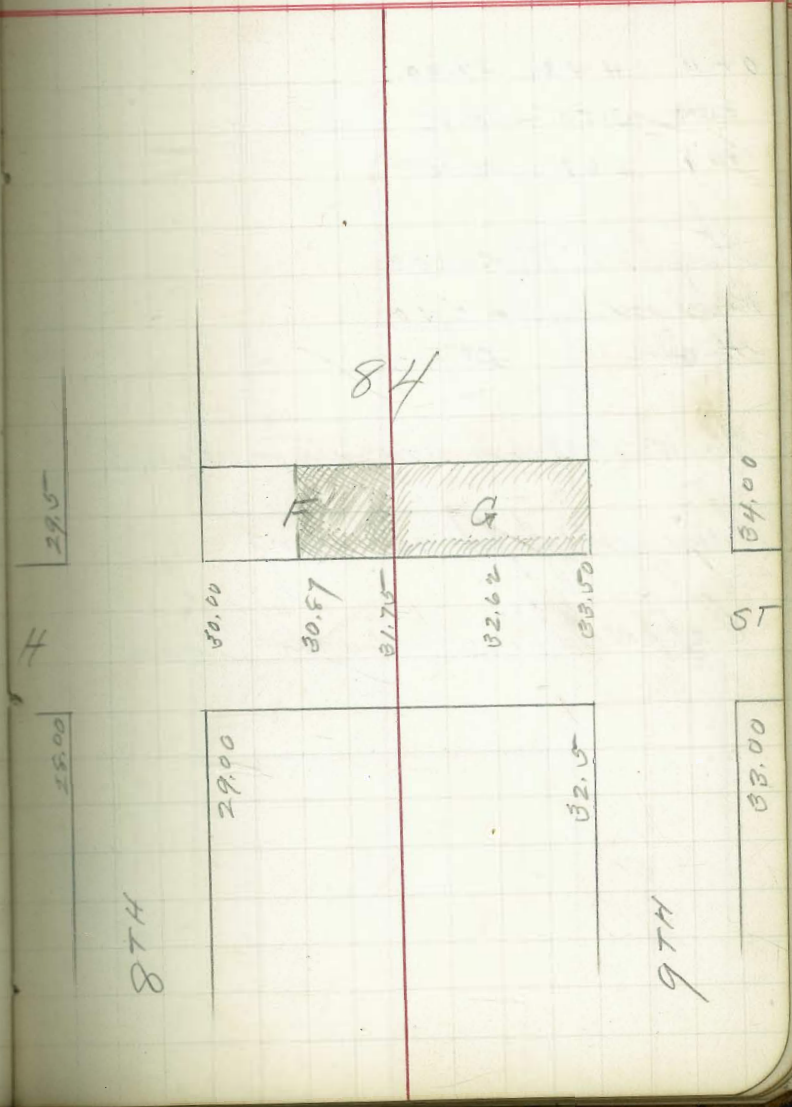
Stat	Rod	El	
0+0	4.53	33.50	(38.03)
0+50	5.41	32.62	
1+00	6.28	31.75	
1+50	7.16	30.87	

Height of BM 31.02
Rod on BM = 7.01
Height Chest 38.03

Points set 3 feet inside Curb

Surveyed Sept 19th 1893.

Capps Shaw Williams, Engr.



Setting Curb grades for Lot "A" Blk 99 Horton Addition for Peter Christensen

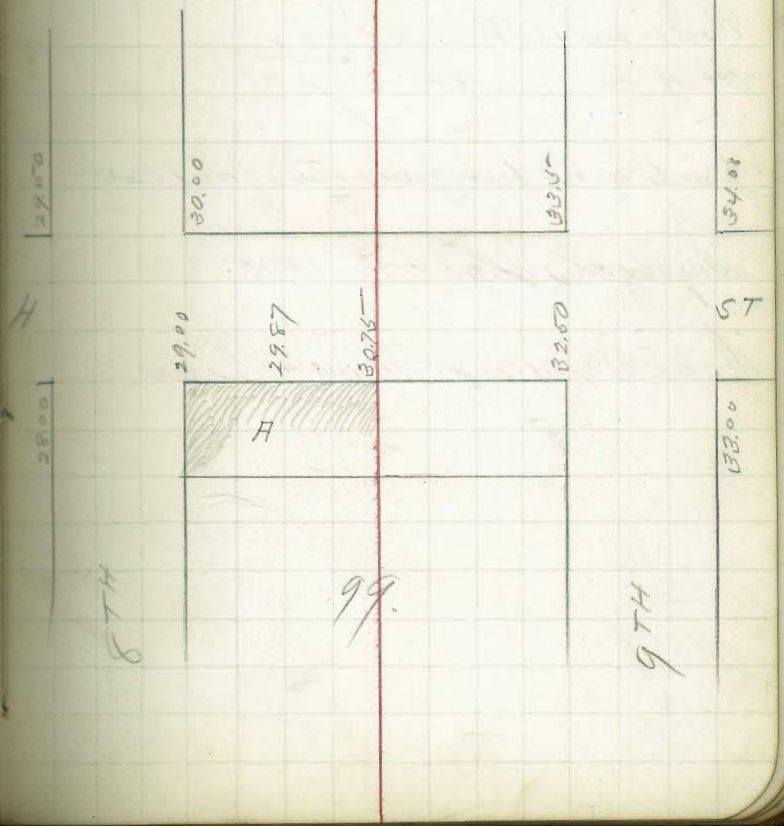
Sta	Rod	El	(33.42)
0+0	4.42	29.00	
+50	3.55	29.87	
1+00	2.67	30.75	

Height BM = 31.02
Rod on " " = 2.40
H. I = 33.42

Points set 3 feet inside outer face curb

Surveyed Sept. 26th 1893.

Capps Shaw Williams & Fair



Setting Curb grades for W½ of Lot "F" in Blk 84 Horton add for Peter Christensen Contractor

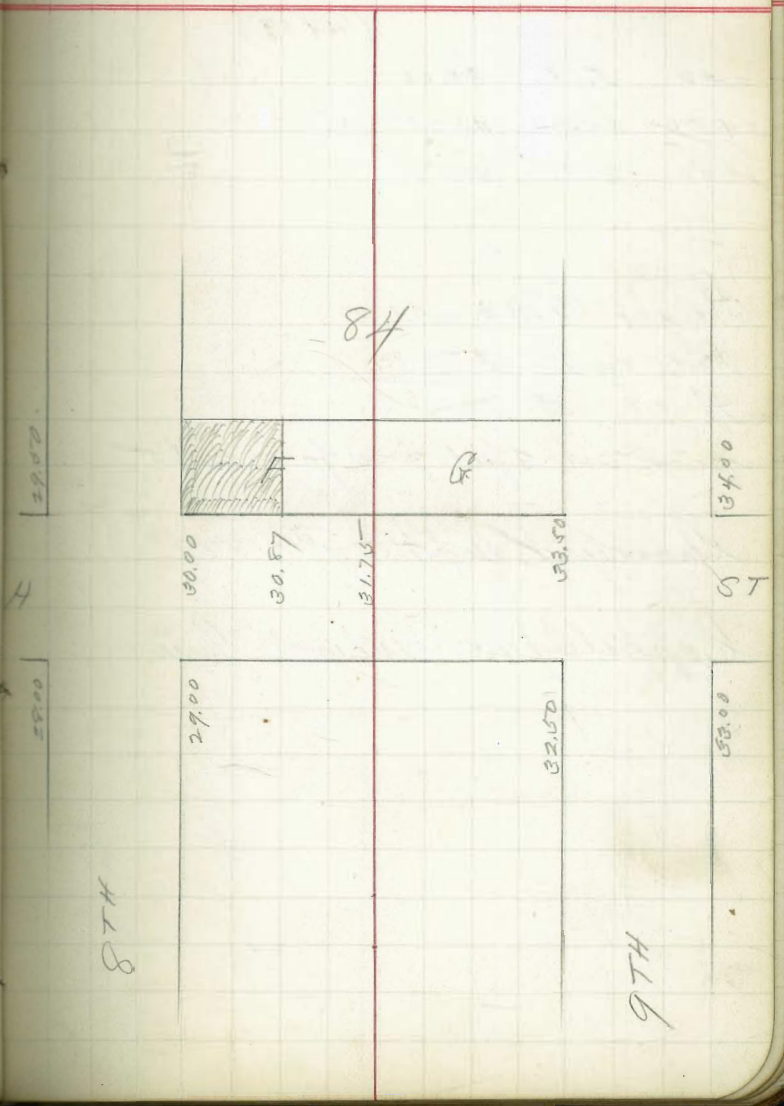
Stat	Rod	El.	
			(35.10)
0+0	5.10	30.00	
0+50	4.23	30.87.	

Height of B.M. 31.02
Rod on B.M. 4.08
H. of I. 35.10

points set 3 feet from outer face curb -

Surveyed Sept 27th 1893

Capps Williams Shaw - Ferer.



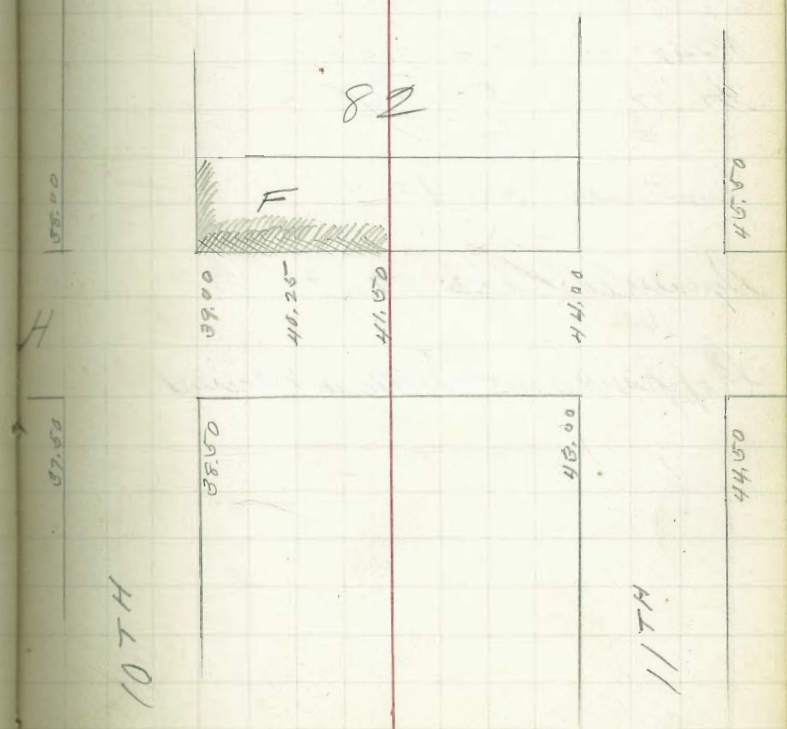
Setting Curb grades for H st side Lot "F" Blk 82 Hortons Add
G. McDannels agent by Jos Kelley Con

Stat	Rod	El
		(44.19)
0+0	5.19	39.00
0+50	3.94	40.25
1+00	2.69	41.50

Height BM = 40.63
Rod on " " = 3.56
H of Inst = 44.19
point set 3 feet from face curb

Surveyed Sept. 29th 1893

Capps Shaw Williams & Fenn.



Setting Curb stakes for H st side of Lot L" Blk 101. Hortons for C. Q. Stanton agent by Kelley Contractor

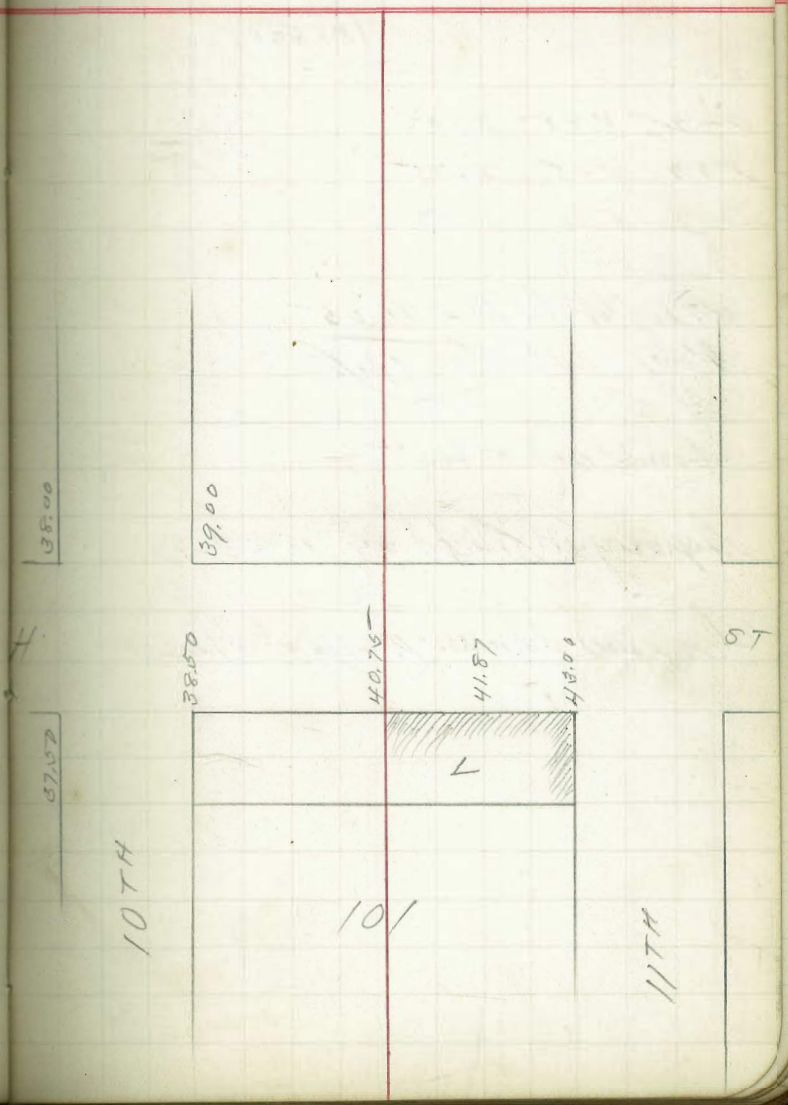
Stat	Rod	El.	
			(47.63)
0+0	4.63	43.00	
+50	5.76	41.87	
1+00	6.88	40.75	

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

points set 3 feet

Surveyed Sept 29th 93.

Capps Shaw, Williams & Fever.



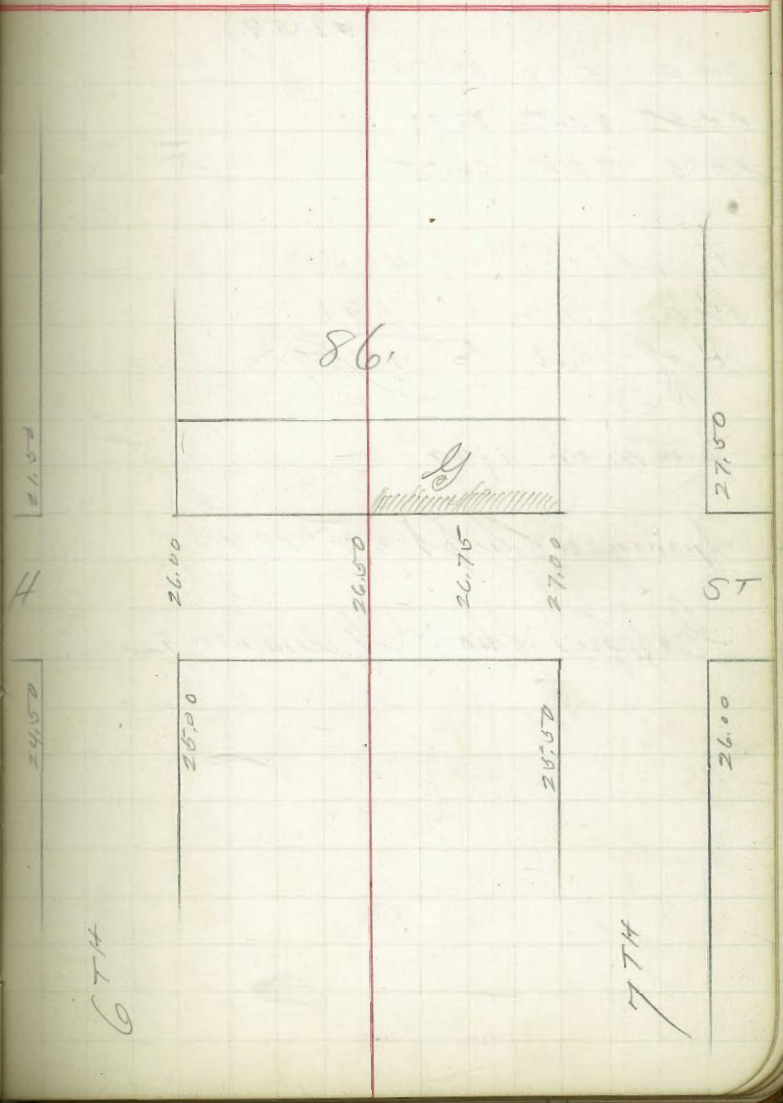
Setting Curb stakes for H st side Lot "G" Blk 86. Hortons Add
M A Luce per Kelley Contractor

Stat	Rod	El.			
			(31.80)		
0+0	4.80	27.00			
+50	5.05	26.75			
1+00	5.30	26.50			

Height BM = 26.05
Rod BM = 5.75
H. I = 31.80
point set 3 feet

Survey ed Sept 29th 1893.

Capps Shaw. Williams & Ferer



Setting Curb Grades for H st side Lot "L" Blk 100 Horton's add
for Over & Nagle Contractors

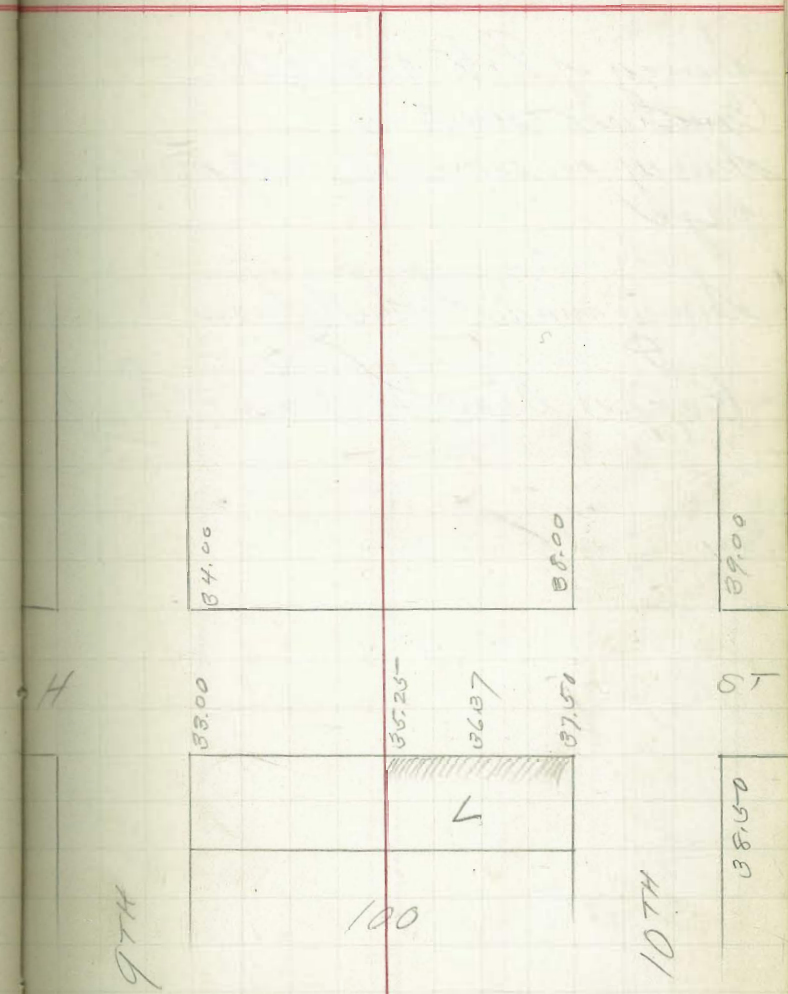
Stat	Rod	El
		(42.59)
0+0	5.09	37.50
0+50	6.22	36.37
1+00	7.34	35.25

Height B M = 40.63
Rod " " = 1.96
H. of Inst = 42.59

points set 4 feet

Surveyed Sept 29th 1893

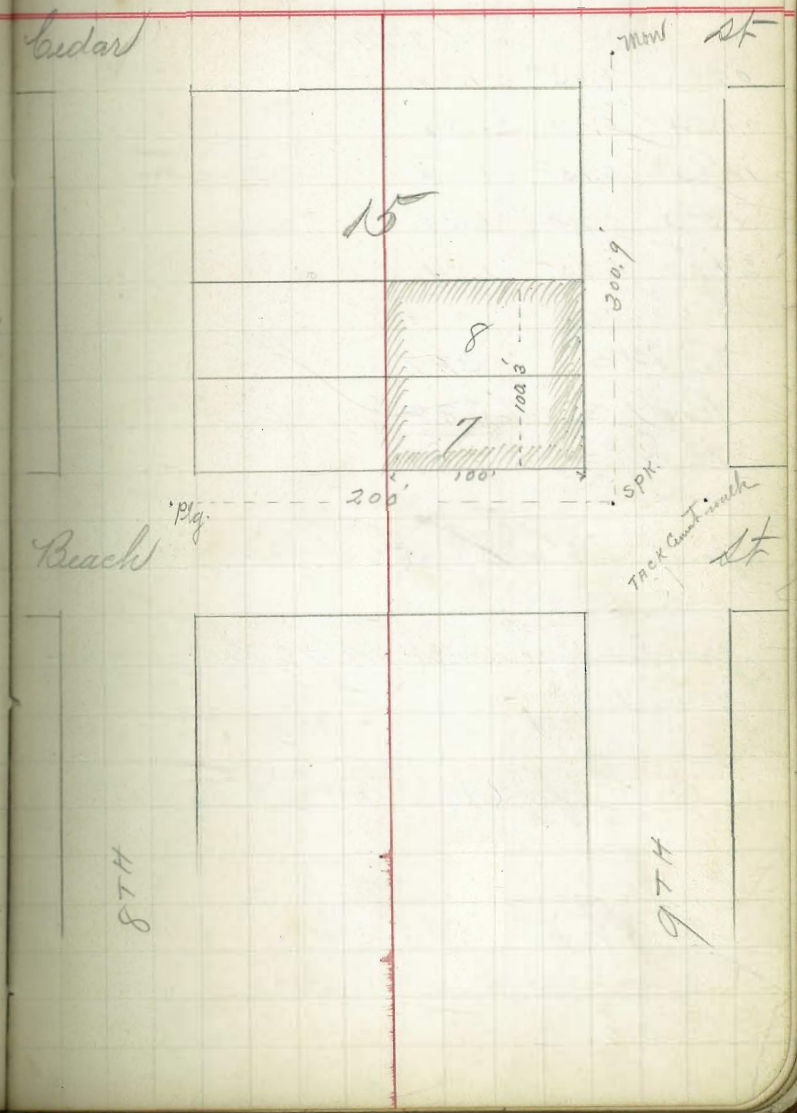
Capps Shaw Williams & Ferer



Sept 30th 1893.

Survey of Lots 7 & 8 Blk 15
Cauthers Addition
Survey as indicated on opposite
page

Survey made Cohn (Lion Clothier)
&
Capper. Shaw. Williams & Ferrer.



Setting grade stakes for Otay R.R. on "N" st Bet 5th and 6th

Stat	Rod	El
		(7.79)
0+0	6.05	1.74
0+50	6.09	1.70
1+00	6.15	1.64
+50	6.20	1.59
2+00	6.25	1.54

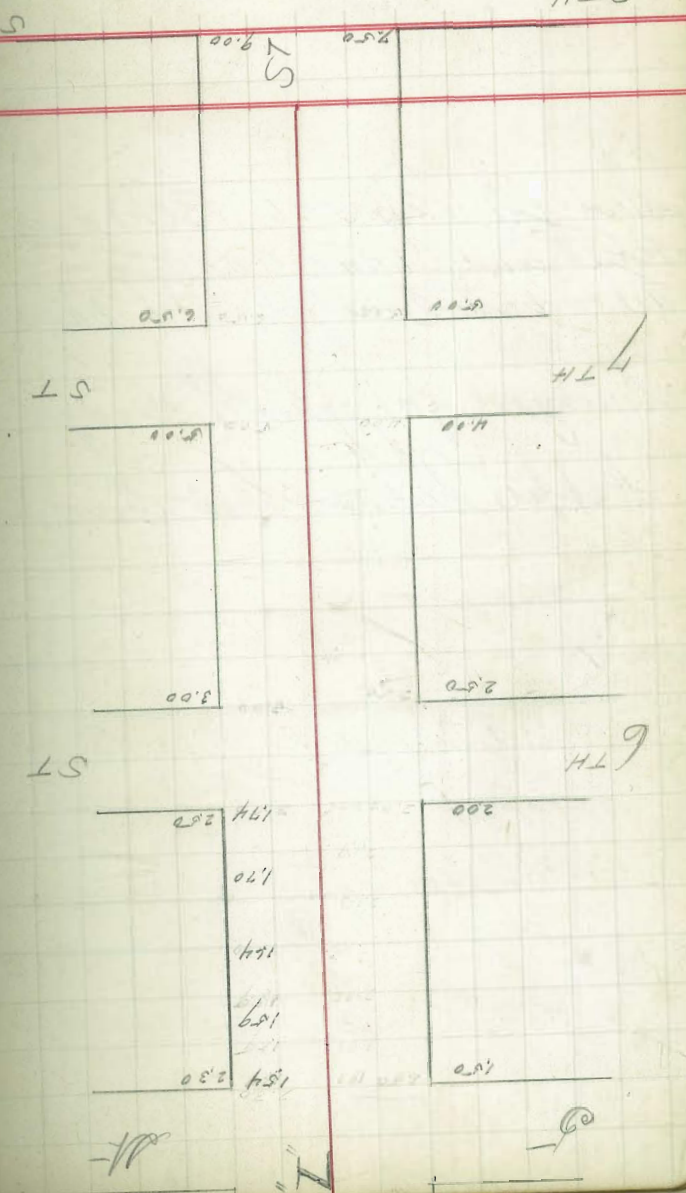
BM = 3.91
Rod = 3.88
HI = 7.79

Points set one foot out from Curb

grade stakes set at .76 below Curb grade

Capps Shaw Williams Fenn

Sept 5th 1893



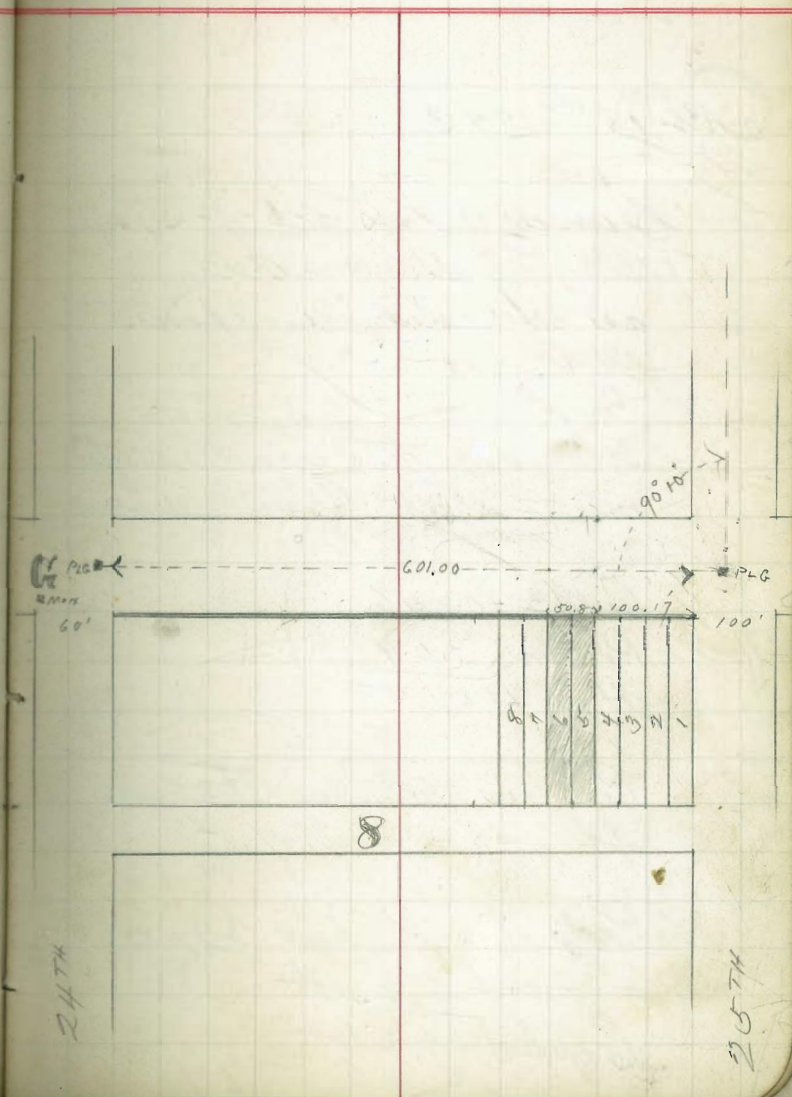
Oct 13TH 1893.

Survey of Lots 5-6 Blk 8 in Breed and Chases Addition as indicated on opposite page

Surveyed for John G. Dodge

Capps Williams. Shaw. Finer —

Survey of Lots 5-6 B 8 Breed-Chases Add



Survey of Lots 5-6-7 S½ 8 Blk 29 Sherman's Addition for J. P. Christensen and John Ferry

Oct 18th 1893.

Survey of Lots 5-6-7-S½ 8 Blk 29 Sherman's Add as indicated on opposite page

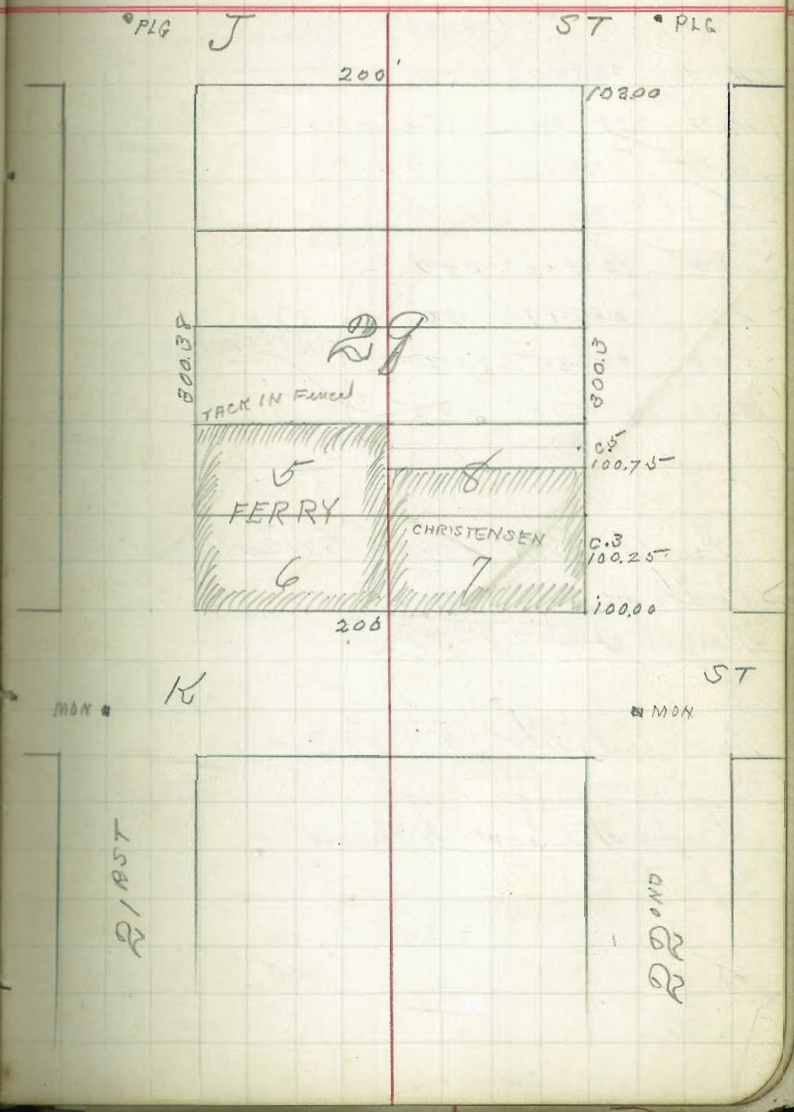
Also set two grade stakes on 22 street for Christensen

BM = 103.46
Rod on 2.69
H.I. 106.15

Rod on North line Christensen lot 4.90 = a cut of .3

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

Capps - party



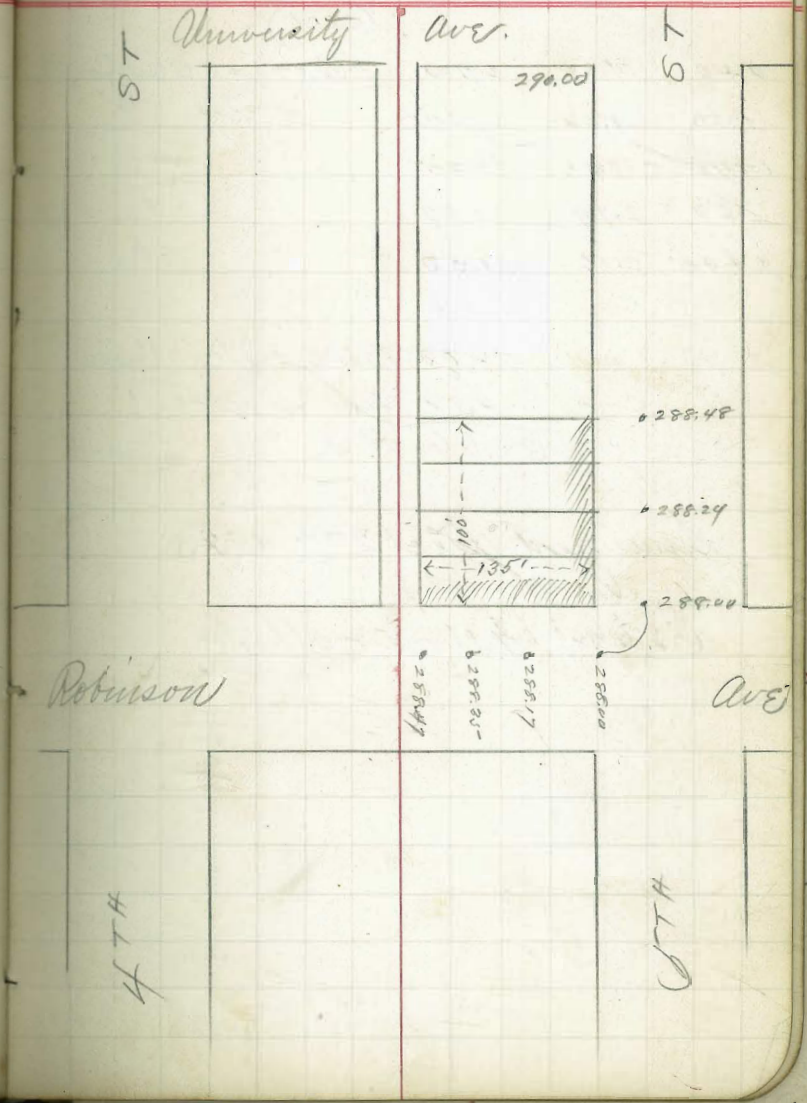
Sitting Curb grades for City Attorney Barber in Nutts Addition

Rod	El	Stat	
		(292.43)	
4.43	288.00	0+0	on 5th sheet
4.19	288.24	+50	
3.95	288.48	1+00	
4.43	288.00	0+0	Robinson Ave
4.26	288.17	50	
4.08	288.35	1+00	
3.96	288.47	+35	

Height B.M. 289.99 SW Cor Univ 5th
Rod on " " 2.44
Height Inst 292.43

Surveyed Nov 13th 1893

Capps Shaw, Williams



Setting Curb for County

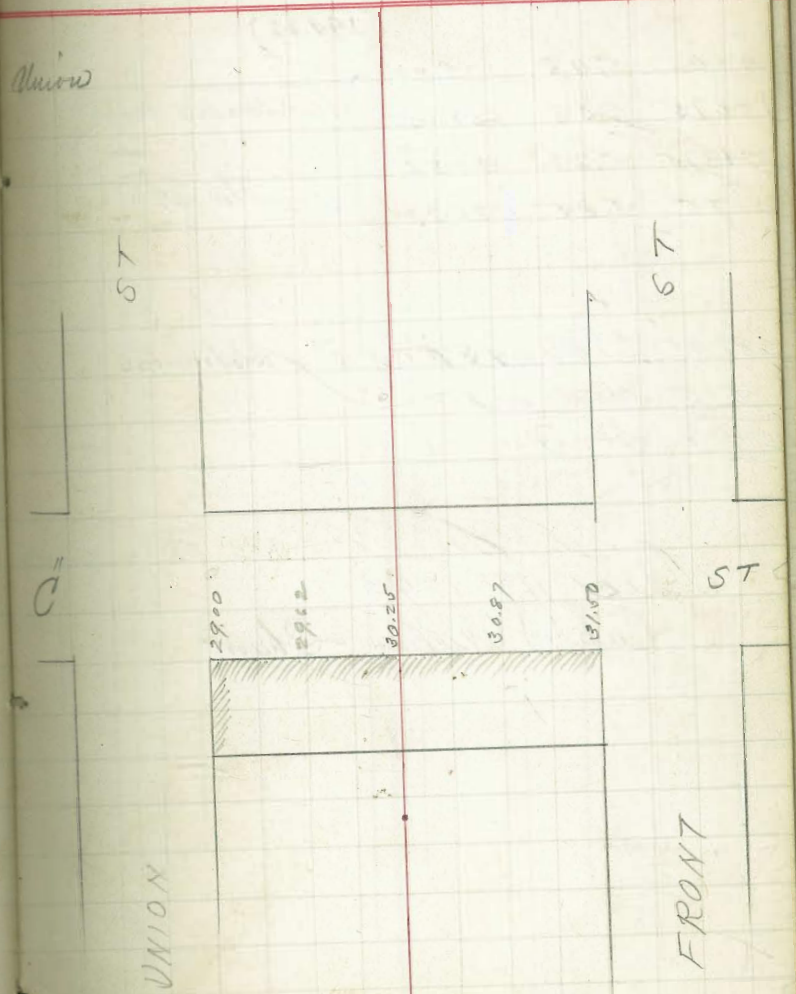
On South Side "C" Bet Union - Front st

Stat	Rod	El	
			(33.66)
0+0	4.66	29.00	Stat 0+0 = SE Cor C r Union
+50	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 Rod on BM.
33.66 H.S.

Surveyed Dec 2nd 1893

Capt. Williams - Shaw

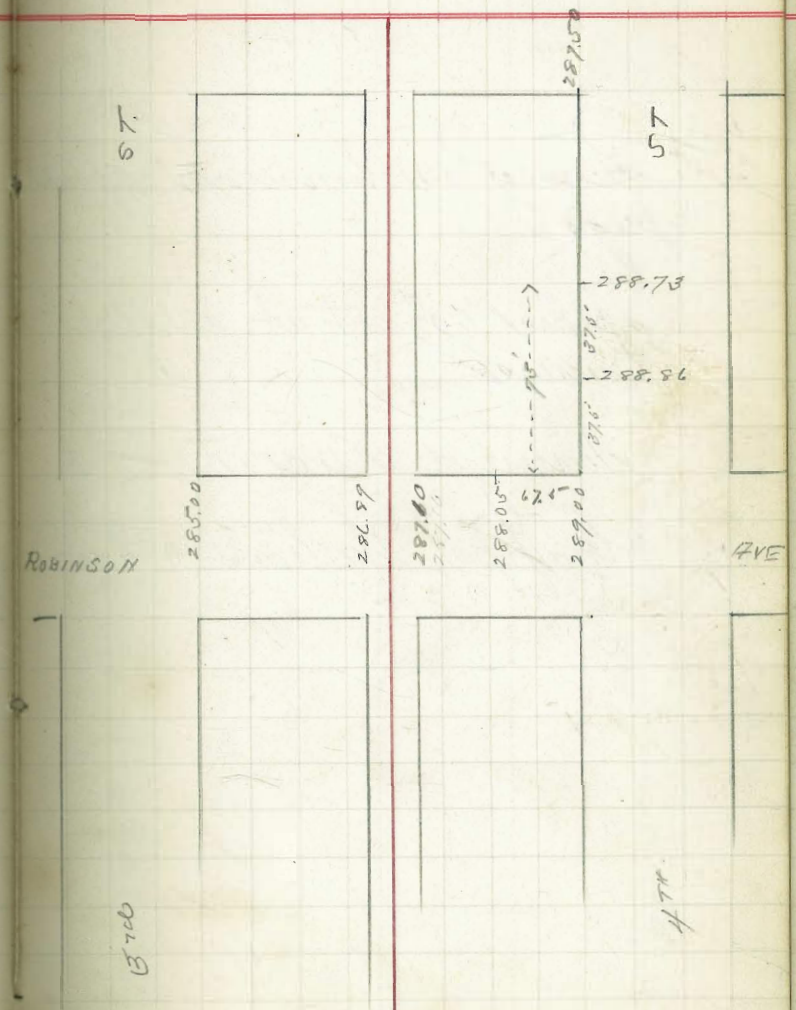


Setting Curb grade to Cor of Robinson & 4th St for J. H. Clinkscales

Stat	Rod	El	
		(294.08)	
0+0	5.08	289.00	Robinson Ave
+67.5	6.03	288.05	
0+37.5	5.22	288.86	Fourth St
0+75	5.35	288.73	

288.95 B.M on SE Cor 4th & Robinson
5.13 Rod on
294.08 H. I

Dec 11th 1893
Capps William & Shaw

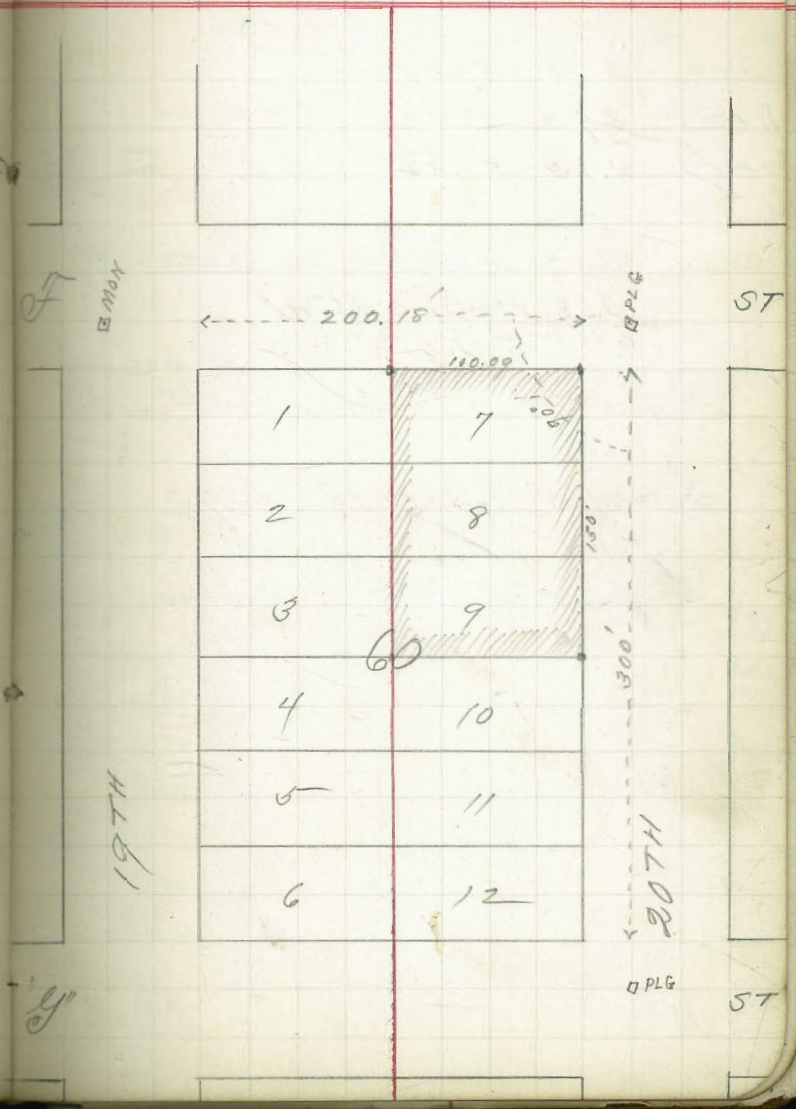


Survey of Lots 7-8-9-in Blk 60 of Otto Addition
Matthew Messner

Survey as shown on opposite page

spikes (60#) set at all four corners

Surveyed Dec 11th 1893
Capps, Williams & Shaw.



Setting Curb grades to Lot 4 Blk 12 of Shermans addition
A. P. Johnson Jr.

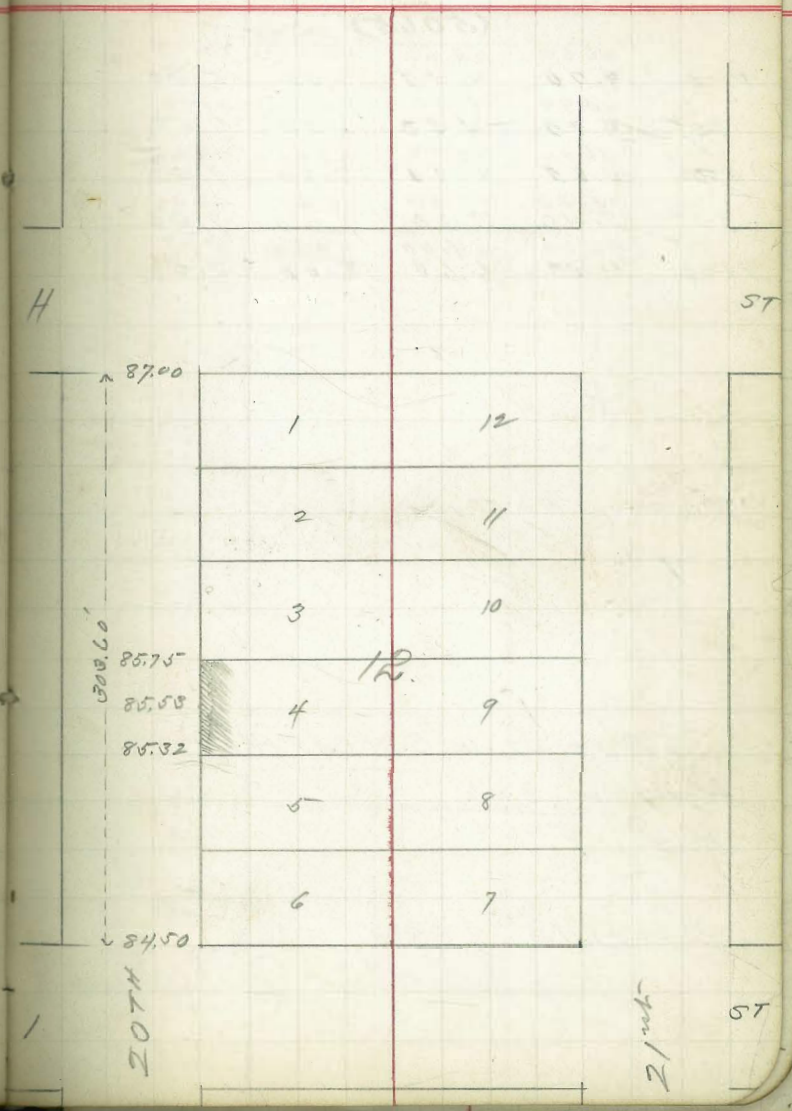
Stat	Rod	El			
			(89.45)		
0+0	3.70	85.75			
+25	3.92	85.53			
+50	4.13	85.32			

86.07 B.M. SW Cor 20TH - H
3.38 Rod on BM
89.45 H.I.

Stakes set 2 ft from Curb line

Surveyed Dec 14th 1893.

Capps Shaw Williams

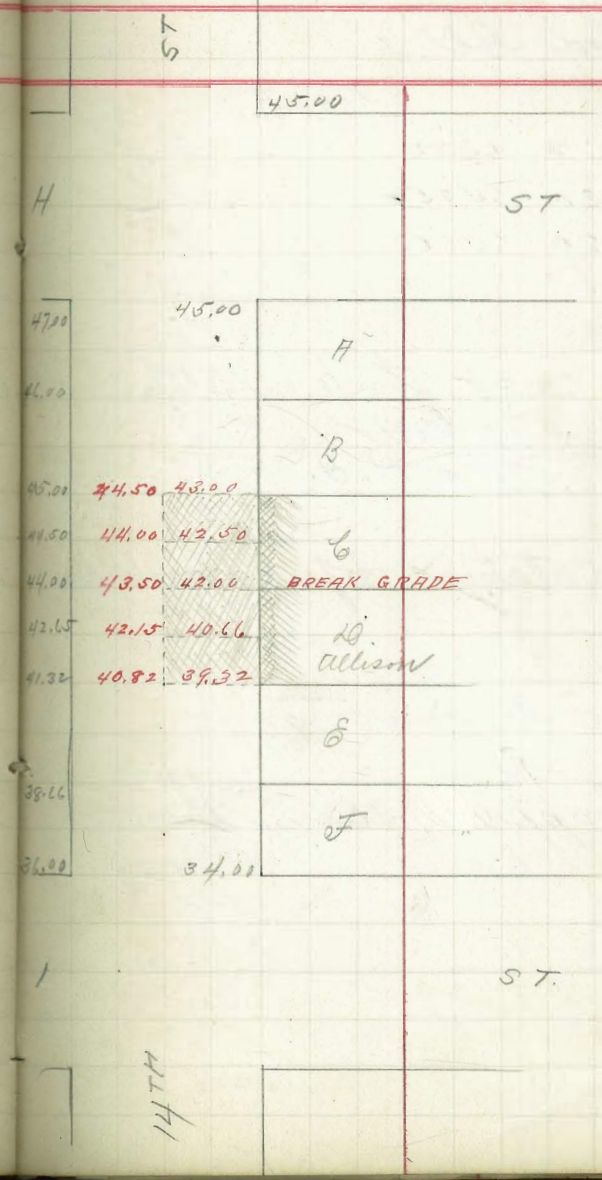


Setting Grade Stakes and cross section to Centre Allison

Station	East	Curb	Gutter	Centre
		(50.65)		
	46.60	46.20	44.60	44.80
0+0	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	45.60	43.60	43.60
50	4.60	5.00	7.00	7.00
	45.20	45.30	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

BM = 47.19 S W Cor H. 14
Rod = 3.46
H.I. 50.65

Dec 14th 1893
Capt. Shaw Williams



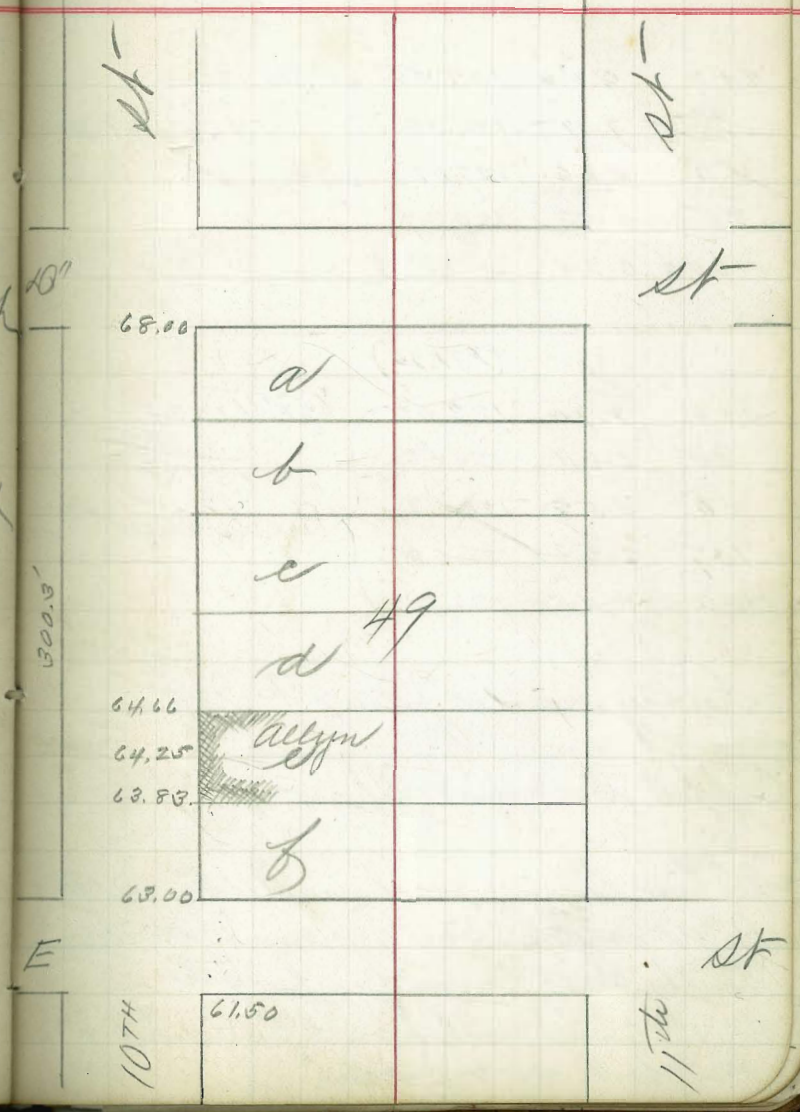
Selling Curb grades to Lot "E" Blk 49 Hodges Dr allyn

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

B.M. 62.85 tack on Step church
4.70 Rod
67.55 = H. I.

Set 3 stakes 2 feet from curb line

Surveyed Jan 8th 1894
Capps, Williams, Shaw



Setting Curb grades to Lots 7 & 8 B 15 Carruthers For I Kuhn,

Stat	Rod	El	(131.90)
0+0	9.40	122.50	B.M. 120.00
25	7.11	124.79	11.90
50	4.82	127.08	131.90 H.I.
75	2.53	129.37	9th Street
1+00.3	0.24	131.66	

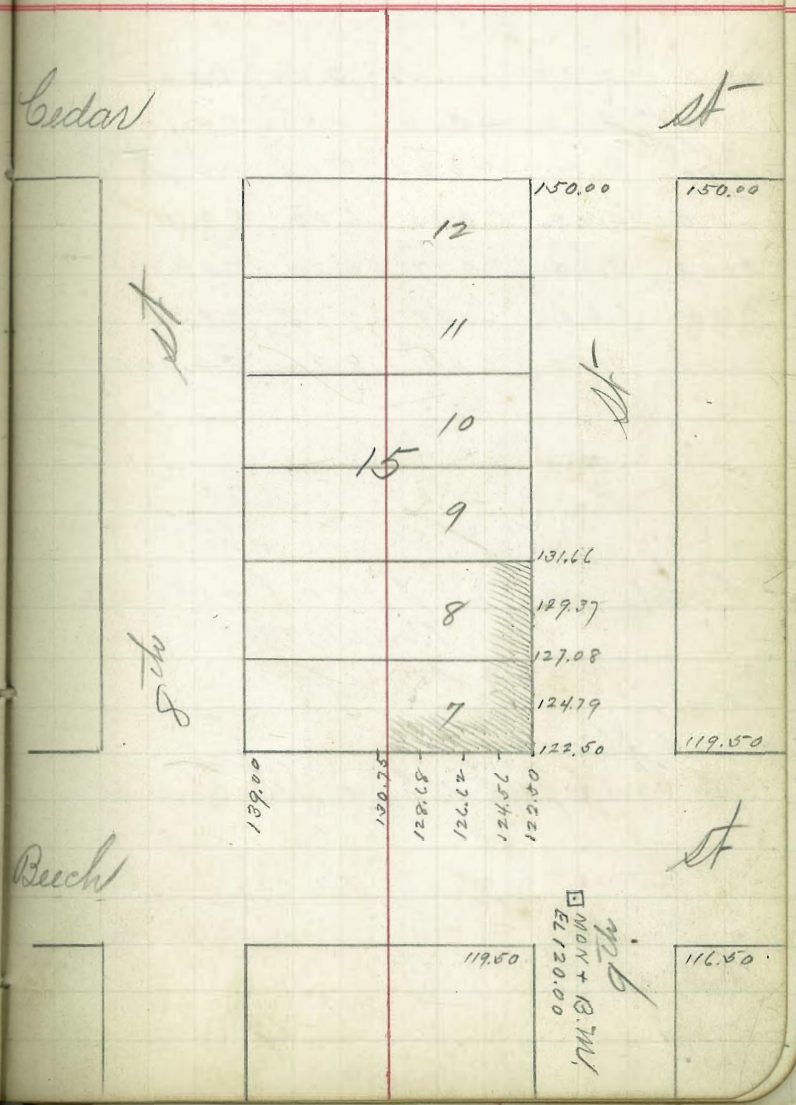
		(131.20)	
0+0	8.70	122.50	B.M. 120.00
25	6.64	124.56	11.20
50	4.58	126.62	131.20
75	2.52	128.68	Beech Street
1+00	0.45	130.75	

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

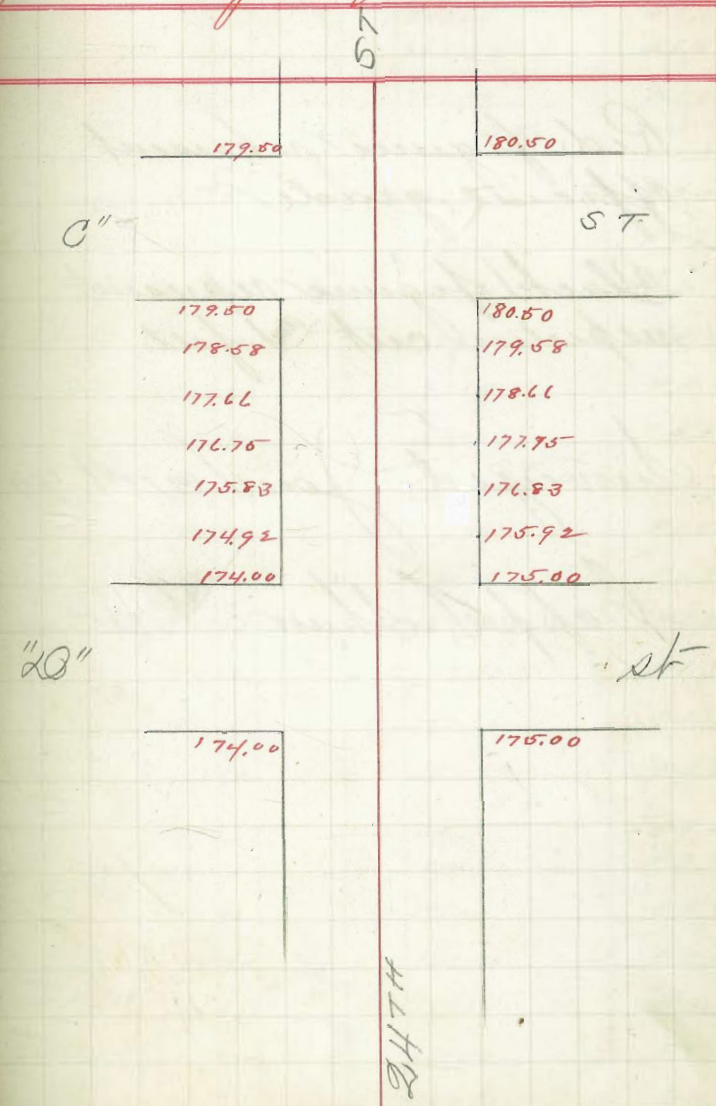


Setting check levels on 24th Bet "C" and "D" for D. Schyler. Jan 16 1893.

Stat	EAST Rod	EAST El C.F.	WEST Rod	WEST El C.F.
		(182.90)		
0+0	2.50	0.00	3.20	C0.20
50	3.10	C0.22'	4.00	C0.32
1+00	4.20	C0.04	5.00	C0.24
50	4.90	C0.25'	6.00	C0.15
2+00	5.80	C0.27'	6.70	C0.37
50	6.60	C0.38'	7.60	C0.38
3+00	7.50	C0.40'	8.70	C0.20

B.M. 174.16 S.W. Cor 24th & D"
8.74 Rod & B.M.
182.90 H.I.

Capps. Shaw. Williams



Setting Cut and Fill
for D Schyler

Red figures represent
official grade

Black figures represent
respective cut and fill

Surveyed Jan 31st 94

Capps, Shaw and Williams

Stakes on 25" Bet D"-Park

southline City Park

grade	203.00		203.00	C2.60
C0.20	202.50		202.50	C1.80
F1.00	202.00		202.00	C1.60
A			ST	
F2.00	201.00	Street	201.00	C1.20
F2.20	200.34		200.34	C0.40
F2.30	199.68		199.68	F0.10
F2.40	199.00		199.00	F0.10
F2.10	198.35		198.35	C0.20
F2.30	197.68		197.68	F0.40
F2.00	197.00		197.00	F0.80
B			ST	
F1.30	196.00		196.00	F1.00
F0.70	195.32		195.32	F1.00
C1.80	194.66		194.66	F1.50
C1.00	194.00		194.00	F1.80
C2.60	193.32		193.32	F1.80
C3.20	192.66		192.66	F1.10
C3.20	192.00		192.00	F1.60
C			ST	
C3.40	191.00		191.00	F2.50
C3.50	190.50		190.50	F2.10
C4.00	190.00		190.00	F2.80
C2.10	189.50	25th	189.50	F2.10
C3.80	189.00		189.00	F2.10
C4.50	188.50		188.50	F2.30
C4.50	188.00		188.00	Grade
D				

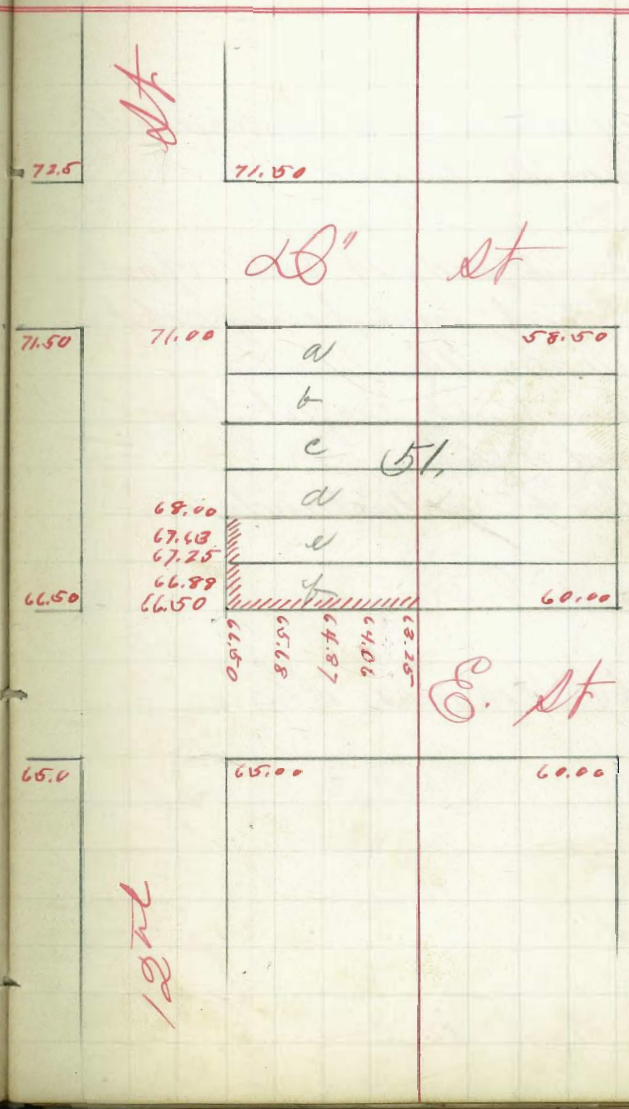
Setting Cut grade on 12th and to Lots E & F Blk 51 Horton

Stat	Rod	El.		
		(71.78)		
0+0	5.28	66.50		
25	4.90	66.88		
50	4.53	67.25	12th sheet	
75	4.15	67.63		
1+00	3.78	68.00		
		(71.78)		
0+0	3.60	66.50	+1.68	
25	3.10	65.68	+3.00	
50	3.30	64.87	+3.60	Cut on "E" Sheet
75	3.80	64.06	+3.90	
1+00	4.90	63.25	+3.63	

B.M. 69.79 N.W. Cor 12th & E"
Rod 1.99
H. I. 71.78

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

Cut & Fill stakes on "E" St for Williamson



Survey of South 1/2 of Lot

Survey made as indicated on opposite page

Front point set one (1) foot in the sheet, and being copper tack in sidewalk

Rear point set 1.10 feet from rear end of lot

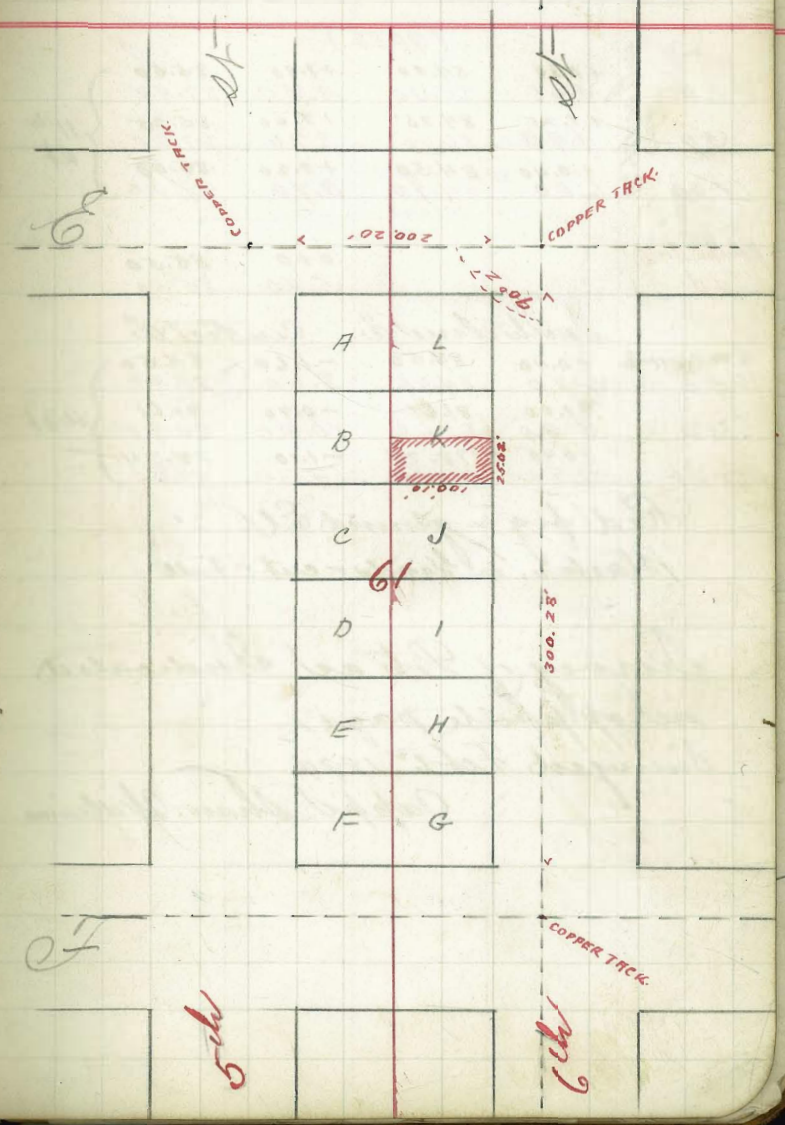
So Clark understands it

Surveyed Feb 5th 1894

Capps, Williams & Shaw.

"K" Blk 61 Horton's add

For C. M. Clark.



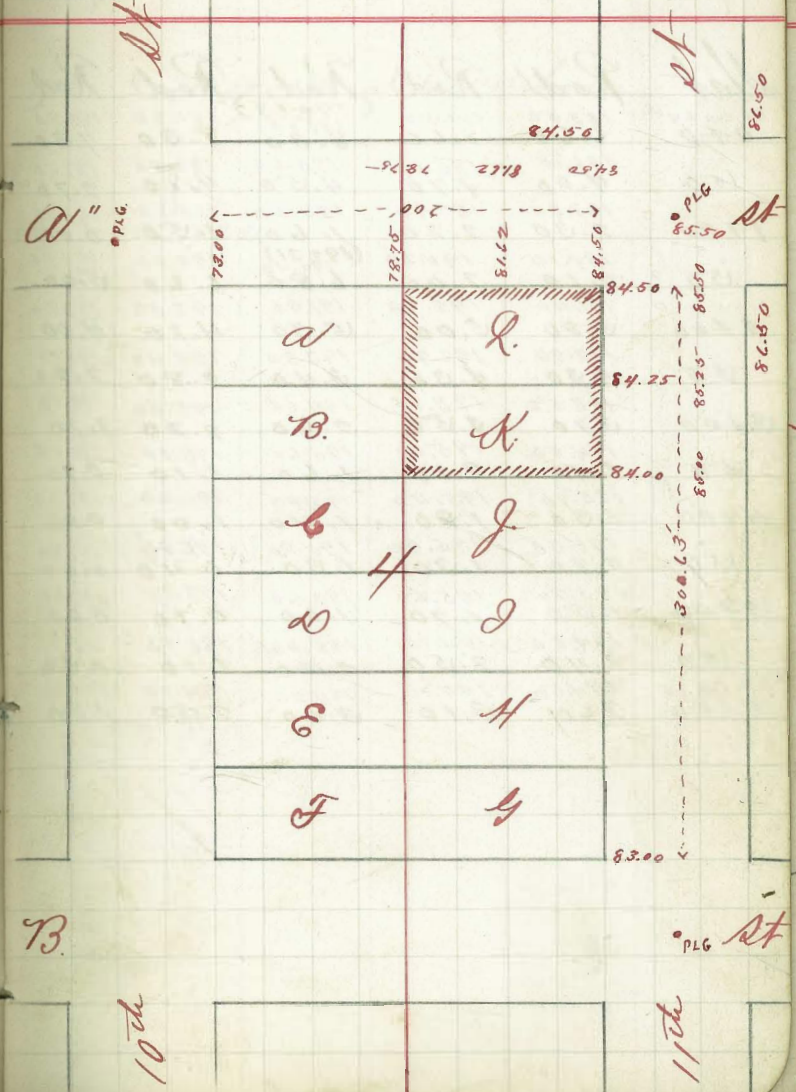
Survey and Cut and fill to Lots K & L. Blk 4 Horton for Samuel Fox

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

cut 294.00 yds

Red fig = ground El
Black " = Grade & cut & Fill

Survey of Lots as Indicated on opposite page
Surveyed Feb 6th 1894
Capps. Shaw. Williams



"C" Street × Section - Bet 24th - 25th streets
for Golden Hill Land and Building Co Feb 12th 1894

Capps.

Stat	South Rod	Cent Rod	Centre Rod	Cent Rod	North Rod	B.S.	F.S.	EL	
S.E. COR 24th	183.50	181.50	(190.13) 181.80	181.80	182.80	11.75		178.38	BM on step of house
0+0	6.60	8.60	8.30	8.30	7.30				
	186.10	185.40	185.60	186.00	187.40				
50	4.00	4.70	4.50	4.10	2.70				
	187.80	187.90	188.50	188.60	190.10				
1+00	2.30	2.20	1.60	1.50	0.00	8.30	1.22	188.91	
	190.10	190.20	(197.21) 190.40	190.60	192.20				
50	7.10	7.00	6.80	6.60	5.00				
	191.40	192.20	191.90	192.50	193.20				
2+00	5.80	5.00	5.30	4.70	4.00				
	192.90	192.90	193.80	194.40	195.00				
50	4.30	4.30	3.40	2.80	2.20				
	193.50	193.70	194.60	195.00	195.50				
3+00	3.70	3.50	2.60	2.20	1.70				
	194.80	195.10	195.60	196.10	196.50				
50	2.40	2.10	1.60	1.10	0.70				
	195.90	195.40	195.80	196.20	197.20				
4+00	1.30	1.80	1.40	1.06	0.00				
	196.80	195.90	195.90	196.80	197.20				
50	0.90	1.30	1.30	0.40	0.00				
	195.70	195.50	195.60	196.50	197.20				
5+00	1.50	1.70	1.60	0.70	0.00				
	194.80	194.70	195.00	196.10	196.70				
50	2.40	2.50	2.20	1.10	0.50				
S.W. COR 25	194.60	194.10	194.20	194.70	195.40				
6+00	2.60	3.10	3.00	2.50	1.80				

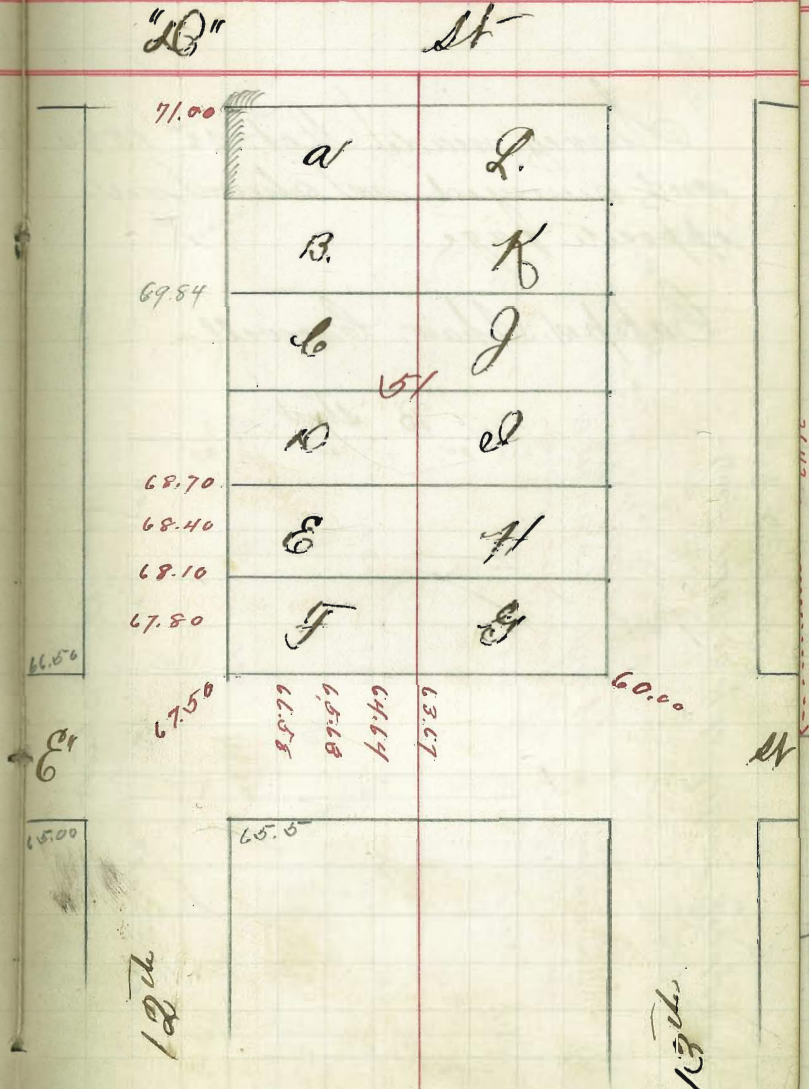
Setting Grade stakes to Lots E & F Blk 51 Horton
stakes set on E" & 12th according to the 12th sheet Grade.
Ordinance 2 Dec 1886.

Stat	Rod	El grade		
		(71.82)		
0+0	4.32	67.50	12th 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	5.33	64.64		C 1.95
1+00	5.58	63.67		C 2.57

This survey is made according to the Grade of 12th st and takes the place of the survey on Page 62.

Surveyed Feb 14th 1894 Capps.

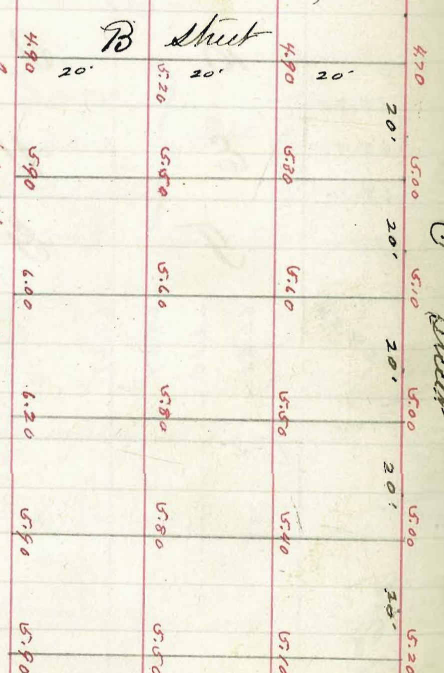
For A. Williamson



Survey of Lots K. and L. in Block 17 Hortons
Silas Burnap—

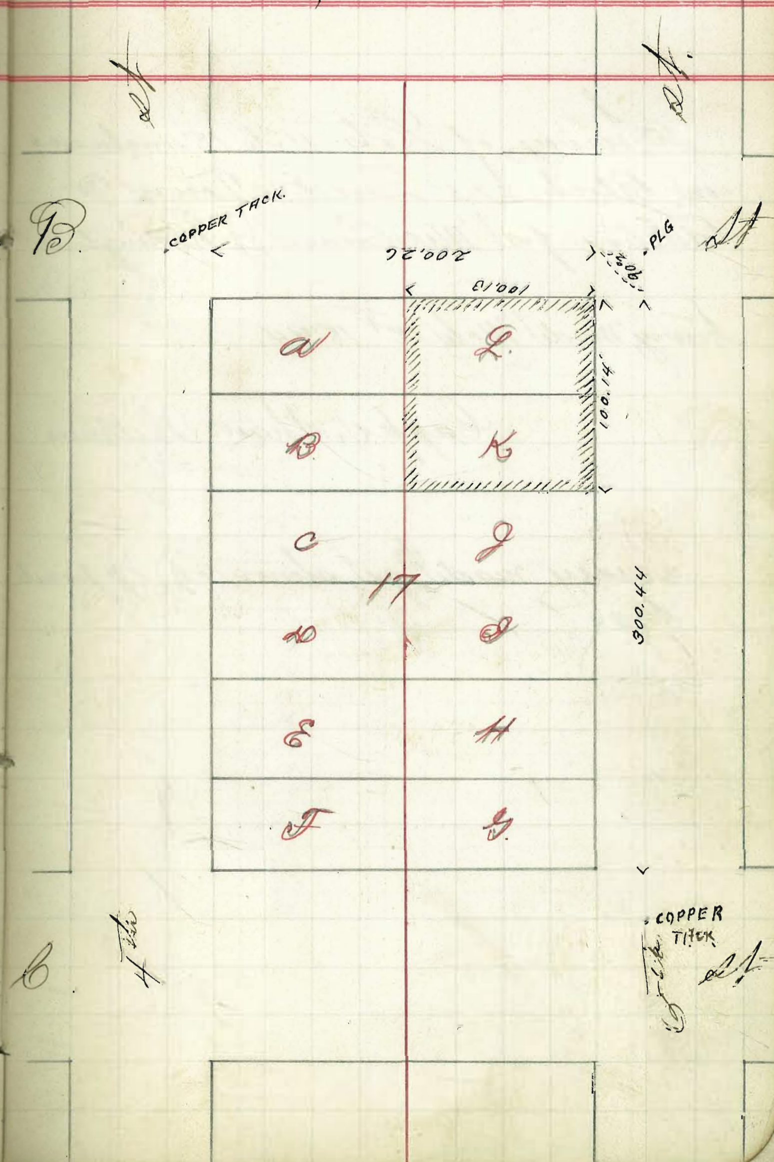
Survey made Feb 26th 1894
and surveyed as shown on
opposite page.

Capps. Shaw, Crowell—



Cross sections of Lot K & L. B 17 Horton
B.M. 55.57
0.15
H.I. 55.72
Red figures = Rod readings

Cut 1407.00 yds below Grade at
N.W. cor. 5-13.



Survey of Lots 11 to 18 inclusive in Block 275 Land & Town Co 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

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 NW cor Union & Dale
3.02 Rod
73.60 H.D.

Set Mch 15 1894
Capps. Shaw. Williams

Set for Wm Scharnhorst
Contractor

Lot 7 Blk 33. Middletown
Mch 15 1894
Capps.

69

Dale

1	12
2	11
3	10
4	9
5	8
6	7

33

69.00
66.50
65.66
64.00

Cedar.

State

Union

Checked up Mch 24 94

Cross section of North 1/2 of "E"

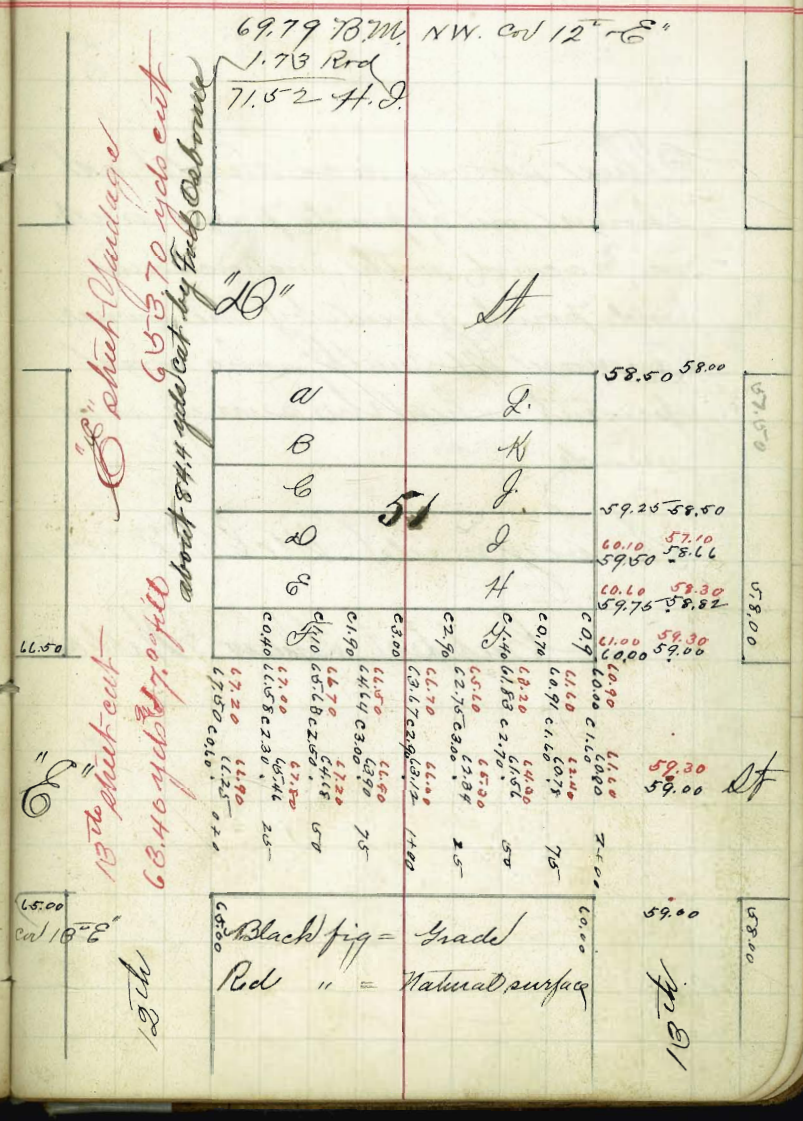
Between 12th & 13th
Williamson March 12th 1894. Capps.

Station	North	Curb.	Center.	Property cut	Center cut
			(71.52)		
0+0	67.20 4.30	67.20 4.30	66.90 4.60	0.00	C 0.60
25	67.00 4.50	67.00 4.50	67.80 3.70	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 5.50	C 3.03	C 2.90
25	65.60 5.90	65.90 5.60	65.86 6.20	C 2.90	C 3.00
50	63.20 8.30	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	60.80 11.20	61.60 9.90	C 0.90	C 1.60

69.79 B.M. NW Cor 12th & E. Cross Section on E" st
1.73
71.52 H.I. Black fig = Road
Red " = Ground Elevation

Station Center of 13th and E" st	West	Curb	Center (65.45) 59.30 6.20	Property cut	Center
0+0	61.00 4.50	60.20 5.30	59.30 6.20	C 1.00	C 0.30
50	60.60 4.90	59.90 6.60	58.30 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 13th st West 1/2 of street
100 ft from NW Cor 13th & E'
59.14 B.M. NE
6.31
65.45 H.I.
Black fig = Road
Red = Ground Elevation

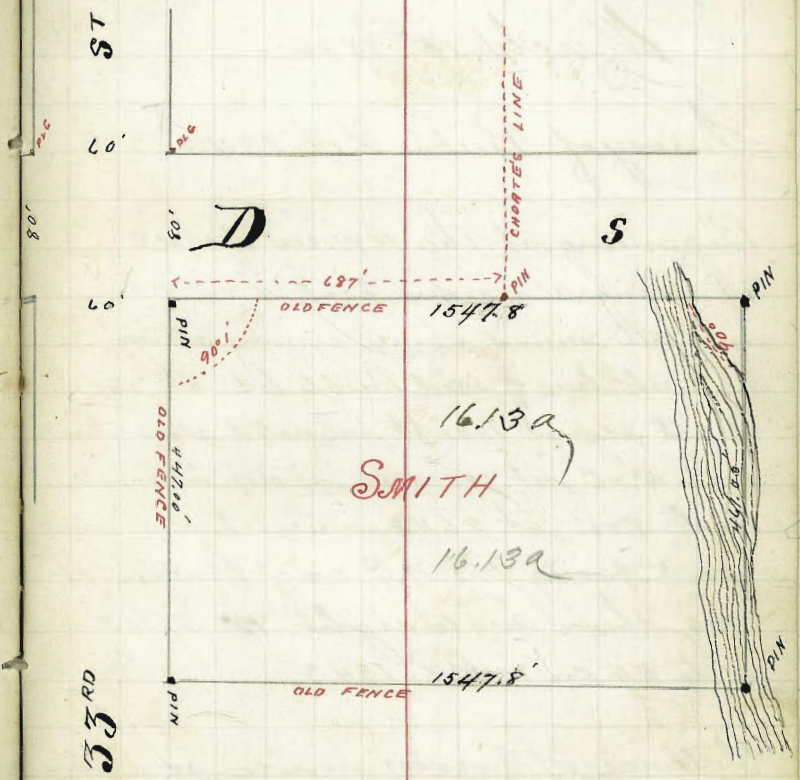


Survey of Acre tract at South East Cor 33rd and O" Street for Truman M. Smith Mch 14th 1894

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



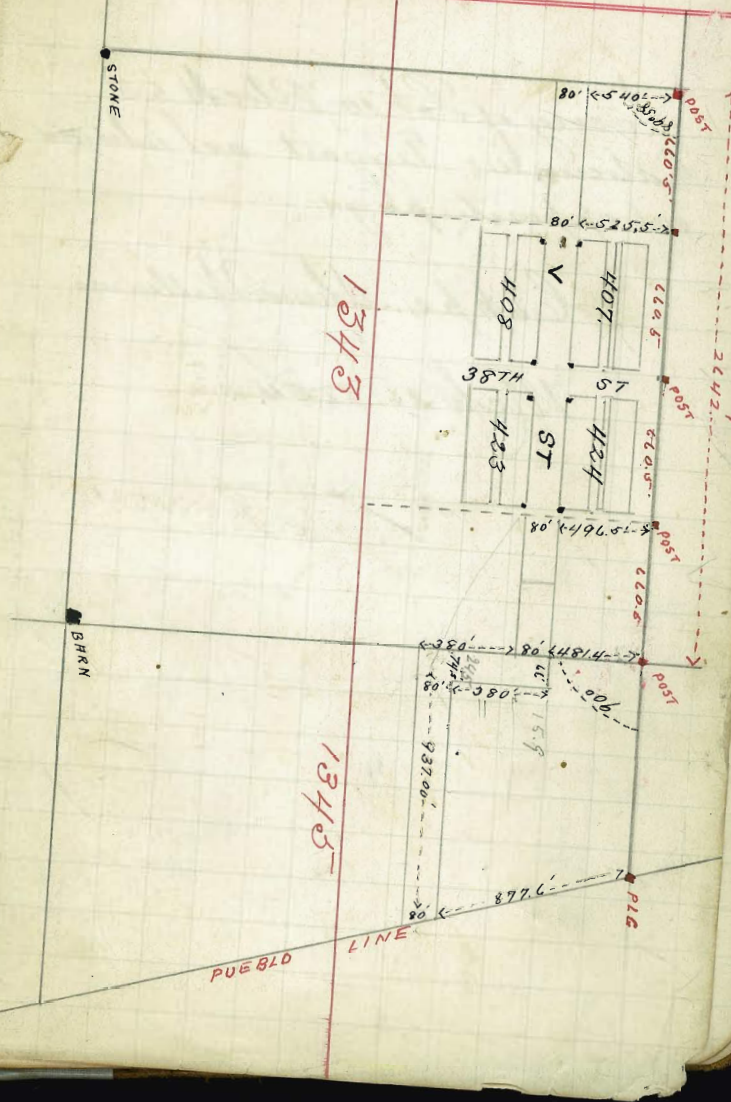
March 15th 1894

Survey of Pueblo Lot 1343.

Beginning at the NW cor of 1343 it being a wooden post 4"x4"x1' in earth mound thence running along the North line of said Pueblo lot at 660.5 ft set plg at 1321 ft intersected a wooden post 4"x6" at 1981.5 ft intersect a wooden post 4"x6" at 2642 intersect a wooden post being the NE. cor of Pueblo lot 1343, thence angled right 90° on to SE cor of P.L. 1343

Balance of Survey made as shown on opposite page

Capps, Shaw. William

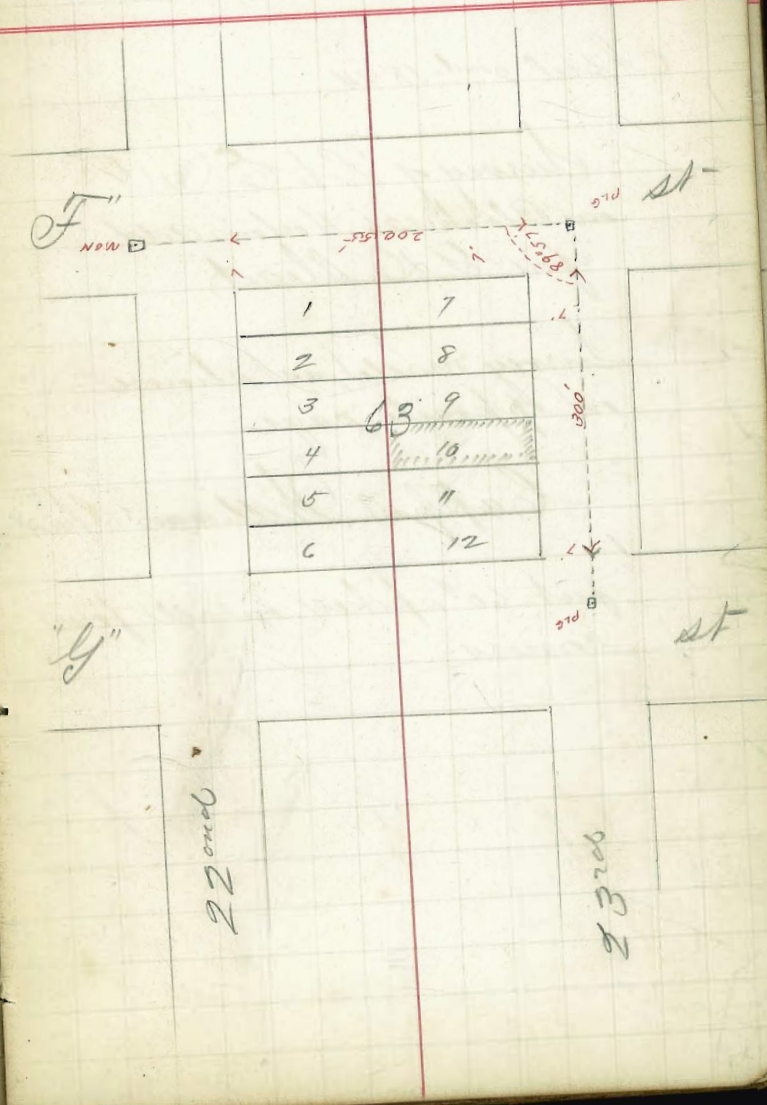


Survey of Lot 10 Block 63. Culverwell and Taggart Capps.
Jacob Ranen Mch 26th 1894

Survey of Lot 10 Block 63
Culverwell & Teggart as shown
on opposite page

Capps. Shaw. Williams

Mch 26 1894.



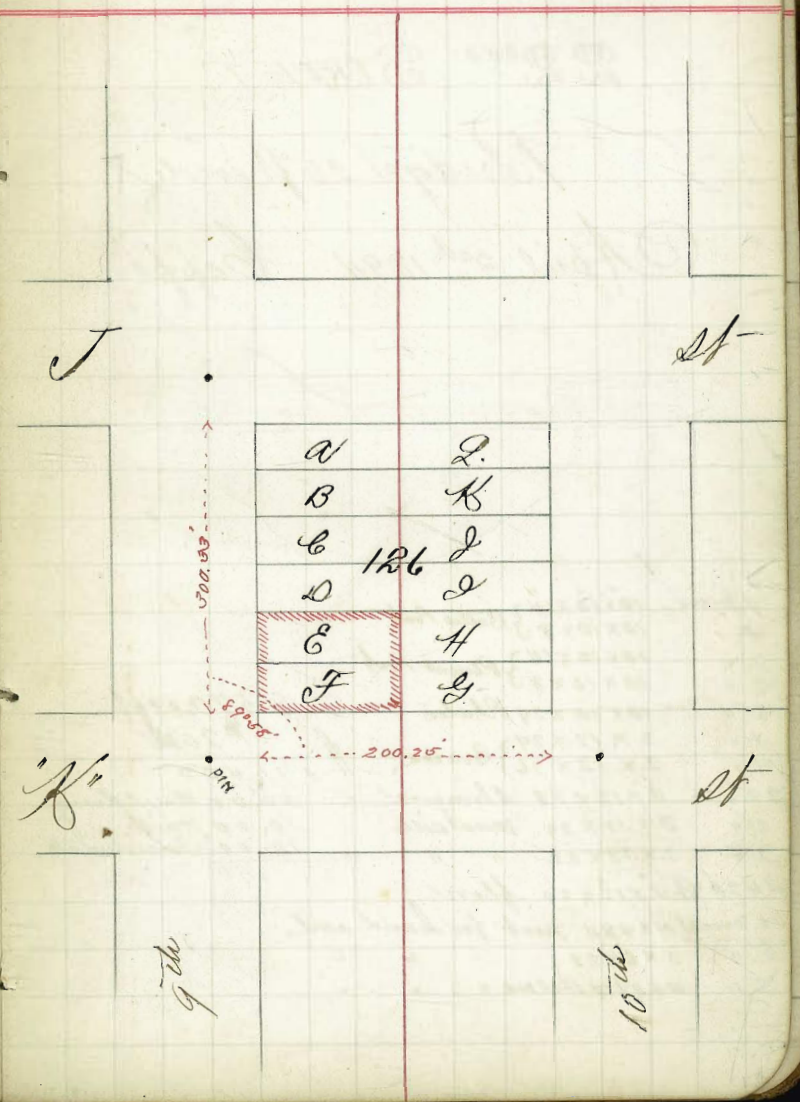
April 2nd 1894

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

Survey made as shown on opposite page

Capps Williams & Shaw.

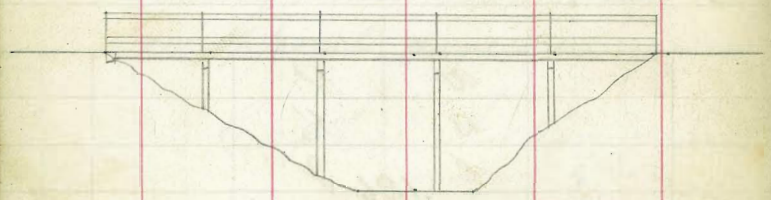
put 60# spikes on all four corners.



22nd Street

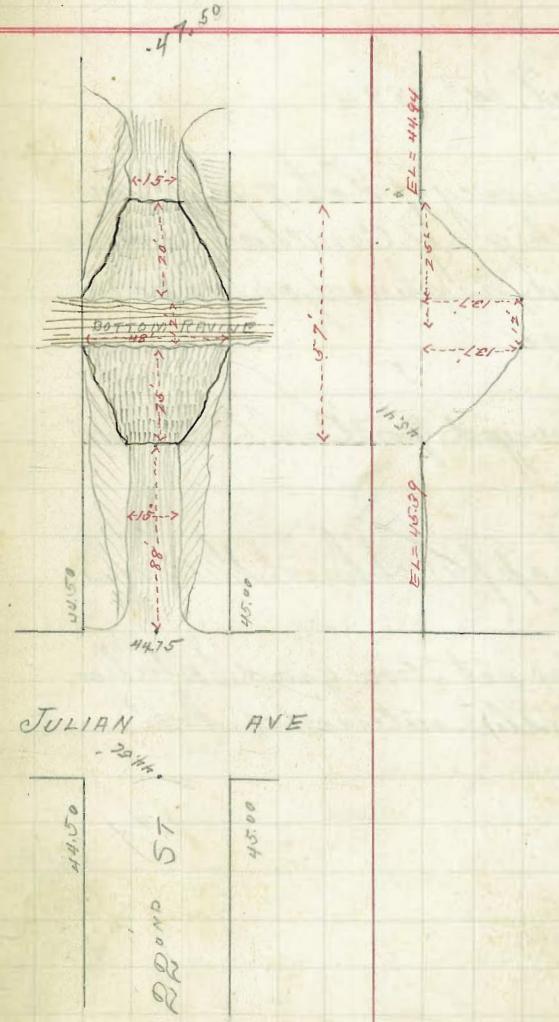
Bridge 20 ft wide

April 3rd 1894 Capps



4 pieces	10"x10"x14'	Batter Post
4 "	10x10x8	Batter Post
2 "	10x10x14	Plumb Post
2 "	10x10x8	Plumb Post
6 "	10x10x24	Plate
4 "	2x12x24	Braces
4 "	2x12x26	Braces
22 "	3x12x28	Stringers
2 "	3x12x24	Mud sills
2 "	3x12x22	" "
3420 ft	3"x12"x20'	floor
12 pieces	4x4x4	post for hand rail
8 "	2x6x28	" " "
12 "	4x4x14	Braces " " "

8570.00 ft
$20 M
$171.400
50.00 Building
10.00 Nails
10.00 Incidentals
$241.40



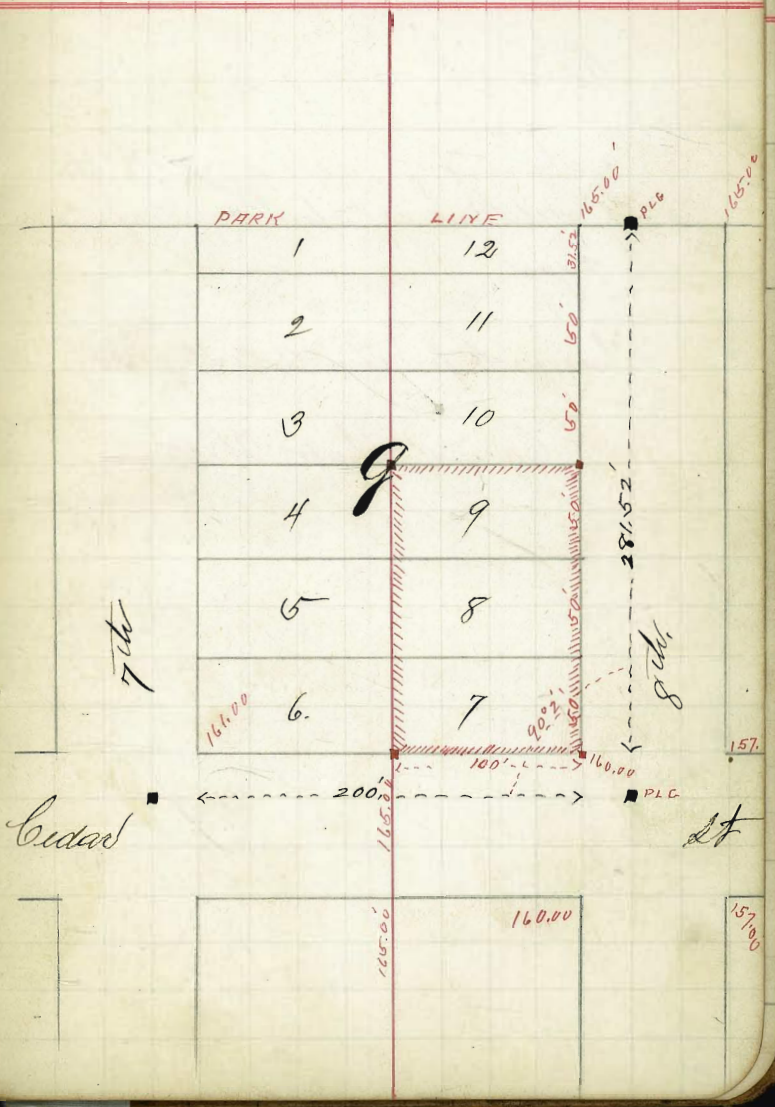
April 14th 1894

Survey of Lots 7-8-9 in Blk 9 of Carruthers Addition and as shown on opposite page

Surveyed for Dr S. E. Winn

Capps. Shaw. Williams

Also set two grade stakes on the interior of lots

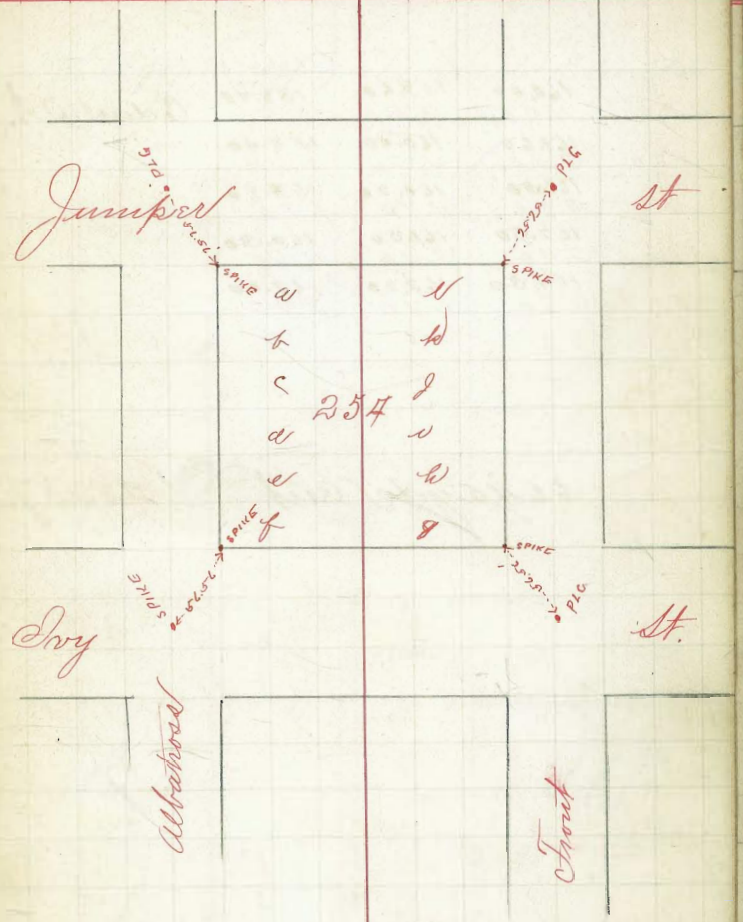


April 14th 1894

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

Surveyed for Geo A C Ducat.

Capps Shaw Williams

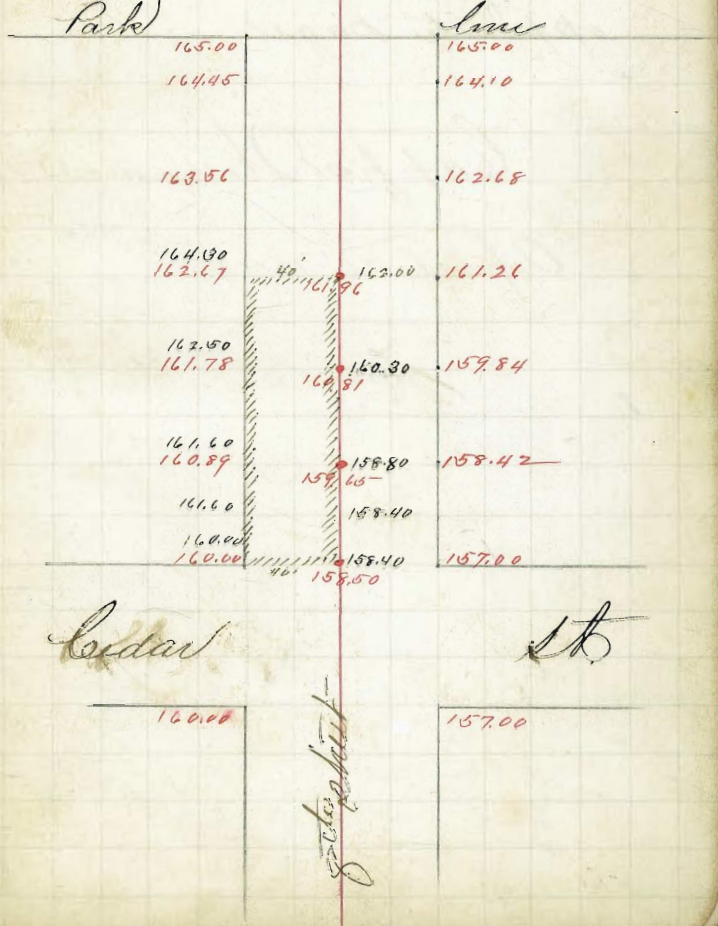


Cross Section of 8th Bet Cedar & Park line
Dr J. E. Winn April 26th 1894

Stat	West	Curb	Centre	
			(164.86)	
	160.00	159.60	158.40	
0+0	4.90	5.30	6.50	Cedar St.
	161.60	160.40	158.40	
+20	3.30	4.50	6.50	
	161.50	160.20	158.80	
+50	3.40	4.70	6.10	
	162.50	161.50	160.30	
1+00	2.40	3.40	4.60	
	164.30	163.20	162.00	
50	0.60	1.70	2.90	

66.40 yds Cut and 28.10 fill

Red fig = official grade Elevation
Black " = Ground Elevations



Survey of Lots "G" and "H"

Survey made as shown on opposite page

Capps. Williams & Shaw.

April 26th 1894

Blk 25 Hortons Addition

A.M. McCowoughy. April 26-94

Sur

Surv
oppo

a

258.05
7349
18456 | 3076
600 / 1800
4560
4200
3600

3076
75
15380
21532
230700
181.15
204.22

.307
20
61400
7349
134.89

3076
200
615200
7349
135.01

3076
350
153800
9228
1076600
73.49
181.15

204.15
181.15
23.00

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

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

TRAVERSE TABLE FOR TRANSIT BOOK.

From 1° to 90° for a distance of 100.

Degrees.	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		Degrees.
	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	
0			100.00	0.44	100.00	0.87	99.99	1.31	89
1	99.98	1.75	99.98	2.18	99.97	2.62	99.95	3.05	88
2	99.94	3.49	99.92	3.93	99.91	4.36	99.88	4.80	87
3	99.86	5.23	99.84	5.67	99.81	6.10	99.79	6.54	86
4	99.76	6.98	99.73	7.41	99.69	7.85	99.66	8.28	85
5	99.62	8.72	99.58	9.15	99.54	9.58	99.50	10.02	84
6	99.45	10.45	99.41	10.89	99.36	11.32	99.31	11.75	83
7	99.25	12.19	99.20	12.62	99.14	13.05	99.09	13.49	82
8	99.03	13.92	98.97	14.35	98.90	14.78	98.84	15.21	81
9	98.77	15.64	98.70	16.07	98.63	16.50	98.56	16.93	80
10	98.48	17.36	98.40	17.79	98.33	18.22	98.25	18.65	79
11	98.16	19.08	98.08	19.51	97.99	19.94	97.90	20.36	78
12	97.81	20.79	97.72	21.22	97.63	21.64	97.53	22.07	77
13	97.44	22.50	97.34	22.92	97.24	23.34	97.13	23.77	76
14	97.03	24.19	96.92	24.62	96.81	25.04	96.70	25.46	75
15	96.59	25.88	96.48	26.30	96.36	26.72	96.25	27.14	74
16	96.13	27.56	96.00	27.98	95.88	28.40	95.76	28.82	73
17	95.63	29.24	95.50	29.65	95.37	30.07	95.24	30.49	72
18	95.11	30.90	94.97	31.32	94.83	31.73	94.69	32.14	71
19	94.55	32.56	94.41	32.97	94.26	33.38	94.12	33.79	70
20	93.97	34.20	93.82	34.61	93.67	35.02	93.51	35.43	69
21	93.36	35.84	93.20	36.24	93.04	36.65	92.88	37.06	68
22	92.72	37.46	92.55	37.86	92.39	38.27	92.22	38.67	67
23	92.05	39.07	91.88	39.47	91.71	39.87	91.53	40.27	66
24	91.35	40.67	91.18	41.07	91.00	41.47	90.81	41.87	65
25	90.63	42.26	90.45	42.66	90.26	43.05	90.07	43.44	64
26	89.88	43.84	89.69	44.23	89.49	44.62	89.30	45.01	63
27	89.10	45.40	88.90	45.79	88.70	46.17	88.50	46.56	62
28	88.29	46.95	88.09	47.33	87.88	47.72	87.67	48.10	61
29	87.46	48.48	87.25	48.86	87.04	49.24	86.82	49.62	60
30	86.60	50.00	86.38	50.38	86.16	50.75	85.94	51.13	59
31	85.72	51.50	85.49	51.88	85.26	52.25	85.04	52.62	58
32	84.80	52.99	84.57	53.36	84.34	53.73	84.10	54.10	57
33	83.87	54.46	83.63	54.83	83.39	55.19	83.15	55.56	56
34	82.90	55.92	82.66	56.28	82.41	56.64	82.16	57.00	55
35	81.92	57.36	81.66	57.71	81.41	58.07	81.16	58.42	54
36	80.90	58.78	80.64	59.13	80.39	59.48	80.13	59.83	53
37	79.86	60.18	79.60	60.53	79.34	60.88	79.07	61.22	52
38	78.80	61.57	78.53	61.94	78.26	62.25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73.43	67.88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		

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