F.B. 33

2

LEVEL

33

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

MICROFILMED
DEC 4 1964

33

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

Book No 33

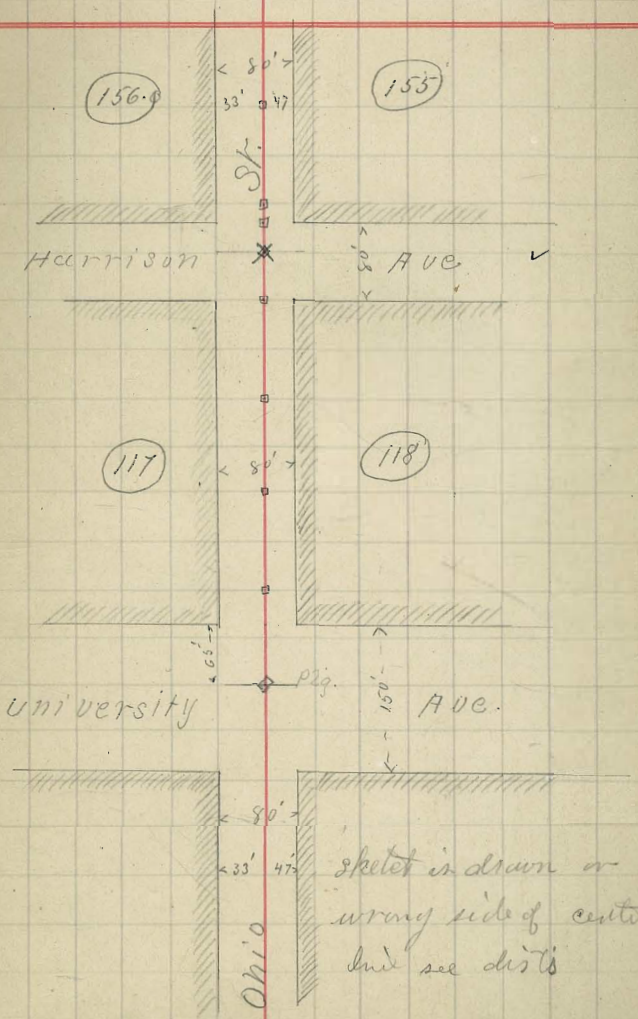
Name Date

Location of Orange Hill water main transit notes 3 - 22
Extension of 13th St 23
Extension of 15th St 24
Extension of 19th St 25
Extension of 22nd St 26
Extension of Irving ave 27
Extension of Sedgwick ave 28
Extension of Aqueduct ave 29
" of 21st St. 30
Extension of I ave 31
" of 11th St 32
P.L. 1178 34 - 37
S.I.R.R. Elec St R.R. 38
" " " " " " 40 - 43
Water pipes Orange hill levels
S of B.St. 44 - 48

30th Street pipe line still located
water main

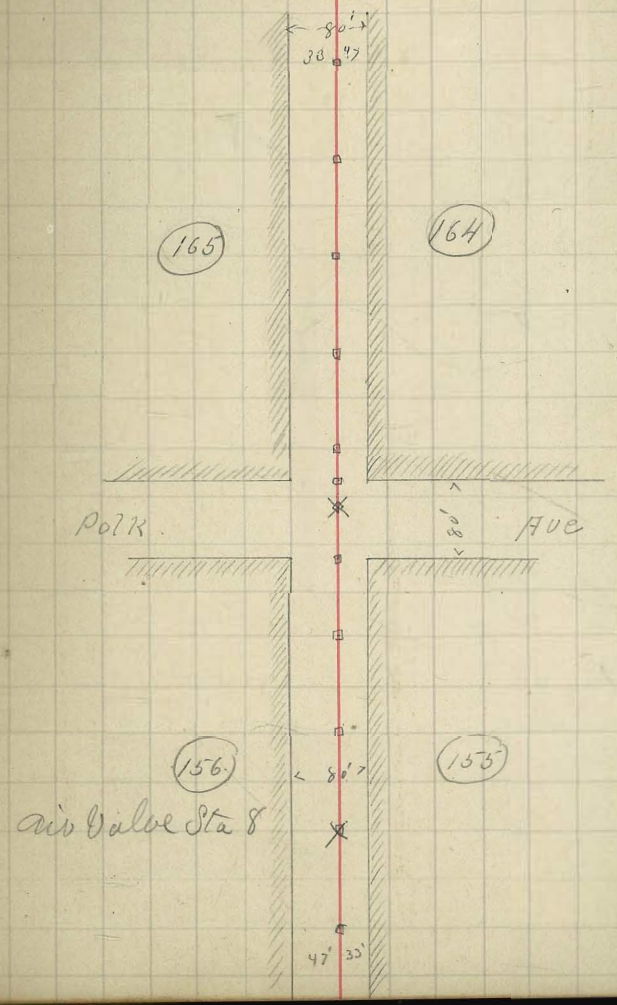
Sta	Def.	calc'd Course	Needle			
6						
5						
	+81.8			S. line of Harrison		
	+51.8			Branch		
4	+01.8			N. line of Harrison		
3						
2						
1						
0	0.0	314°30' E	314°30' E			

This line is 3' west of - South of pipe line as laid.
all bearings in this survey are magnetic, Sta 0 is a point on Univ ave pipe line 66.0 North of the South line of Univ ave and 47' East of West line of Ohio St



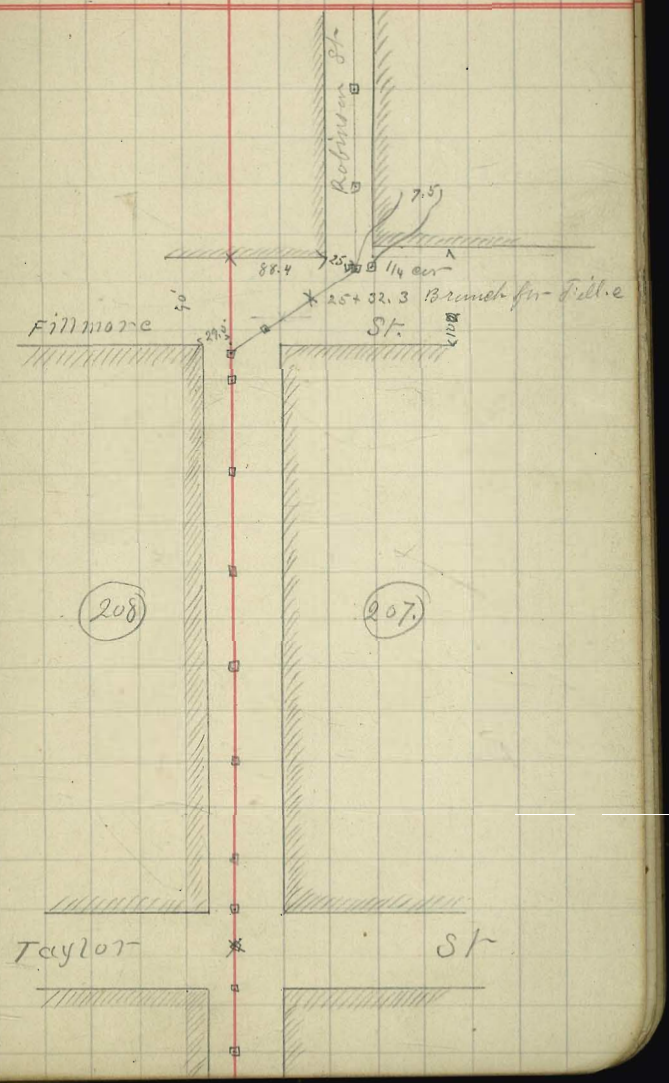
~~Sta~~ 30th Street ~~Grapevine Hill~~ Water Main Located.

Sta	Def	calc'd course	Needle		
16					
15					
14					
13					
12					
+62.				South line Polk St.	
+32.				Branch	
11 +82.				N. line Polk St	
10					
9					
8					
7					



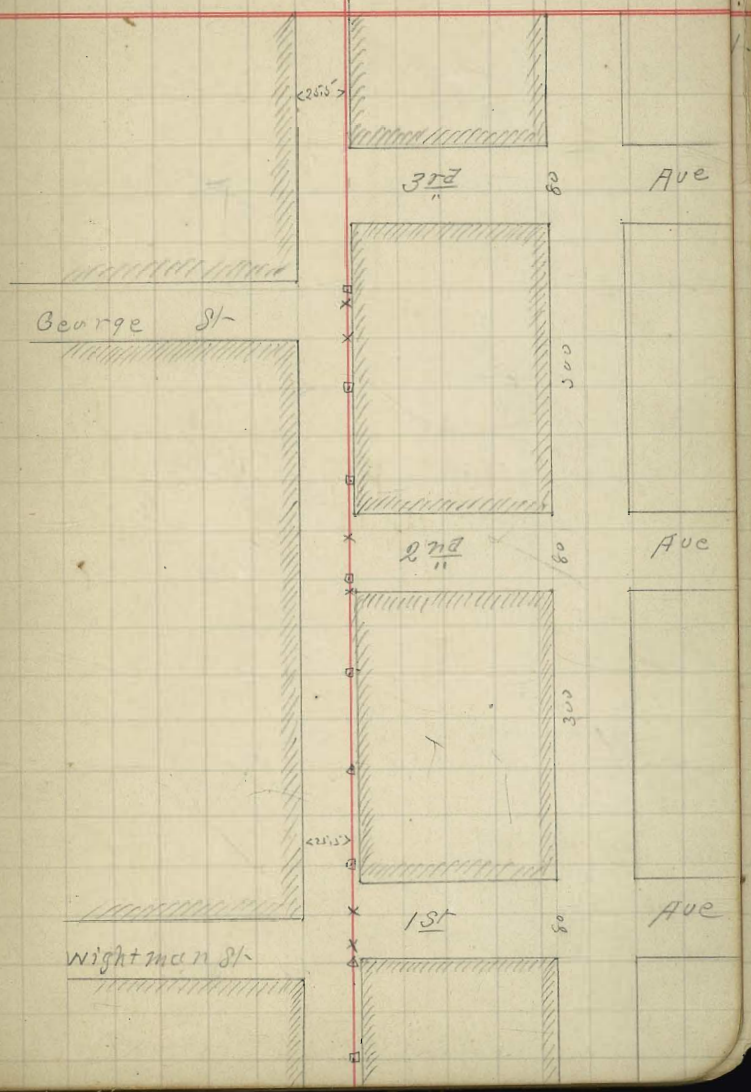
30th Street Apple Hill
water main located

Sta	Def.	Calc'd Course	Needle	
27				
26				
+82	South line of Fillmore ave			
25 +76.	50° 20' L	S 14° 03' W	S 14° 05' W	
24 +29.5	50° 47' R	S 36° 17' W	S 36° 15' E	
23				
22				
21				
20				
19				
+42				N. line of Taylor
18 +12				Branch
+62.0				S. line of Taylor
17				



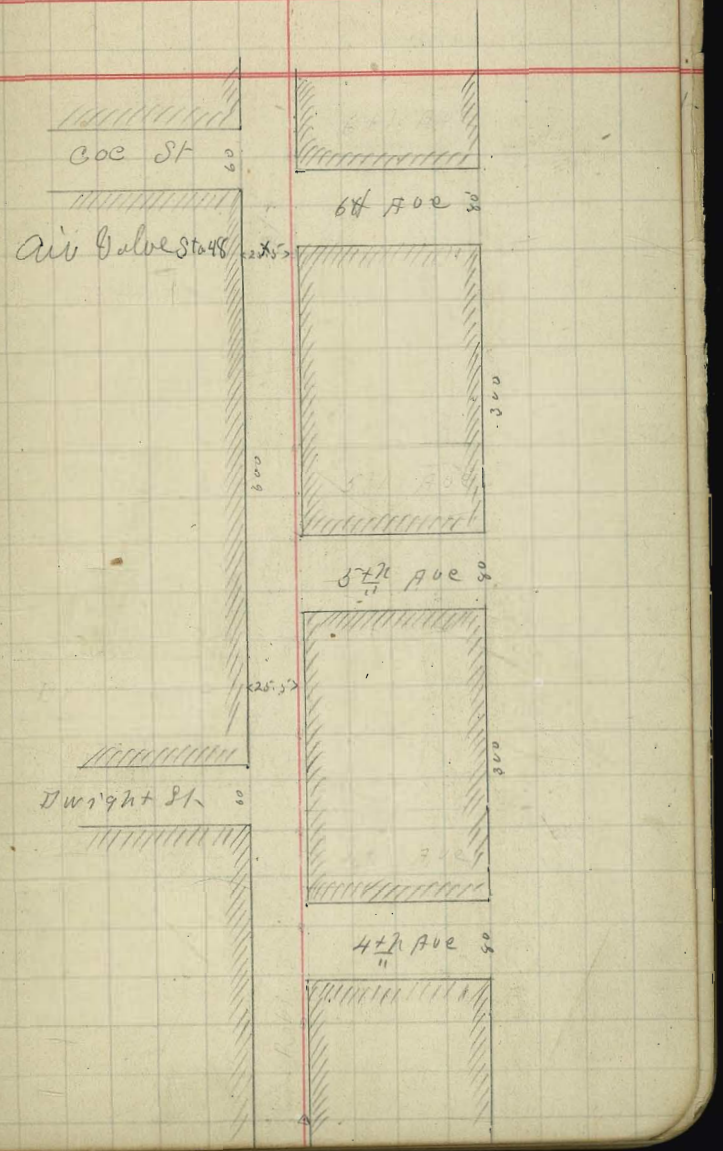
30th Street pipe line
water main Located

Sta	Def	Calcd Course	Needle
38			
37 +11.5	Branch west for 3rd ave		
+61.5	North line of 3rd ave		
36			
+83.6	Branch East for George St		
+43.6	North line of George St		
35			
34			
33 +34.4	Branch west for second ave		
+84.4	North line of second ave		
32			
31			
30			
+ +53.4	Branch for 1st ave west		
+23.5	Branch on Wightman St East		
+03.4	N line 1st ave 6.5 west of line		
29			
+83.5	N line of Wightman St 25.5 East of line		
28		S14°05'E	



30th Street pipe line & water main Located

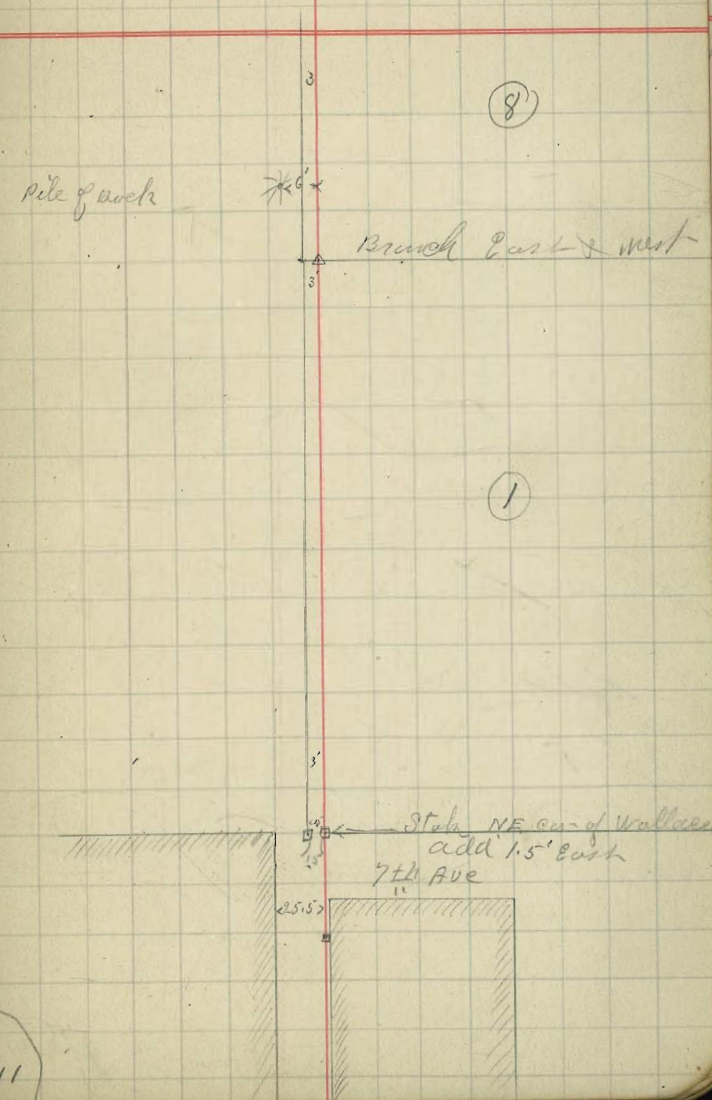
Sta	Def	Calcd Course	Needle		
49	+03.5	Branch East for Coe St			
	+63.5	N line of Coe St.			
	+32.5	Branch west for 6th ave			
48	+02.5	N line of 6th ave			
47					
46					
45					
	+72.5	Branch west for 5th ave.			
44	+22.4	N line of 5th ave			
43					
	+43.6	Branch east for Dwight St			
42					
41					
	+93	Branch west for 4th ave			
40	+43	North line of 4th ave			
39		S 14° 05' E			



30th St pipe line ~~Orange~~ ~~Kicaled~~ water main

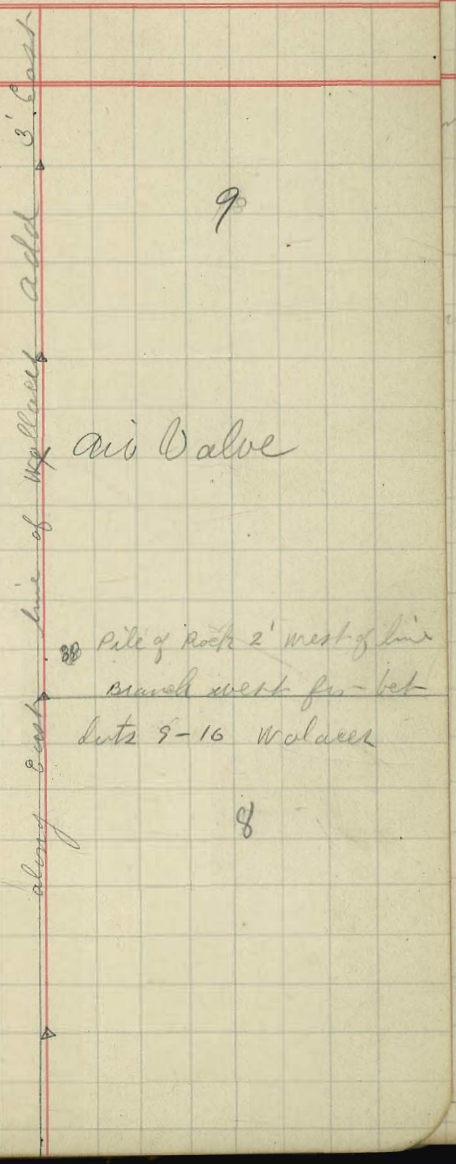
Sta	Def	Calcd Course	Needle			
60						
+36						
59						
+98.7						
58						
57						
56						
55						
54						
+41		S14°06'E				
53	E.C. of 1°37' curve thence South 3' West of East line Wallace add					
+41	+ P.R.C 1°37' curve Left angle 1°43' Left					
52						
+41	B.C. 1°37' curve Right angle 1°37 Right					
51	on account of securing Right of way					
	the pipe was laid 2' West of line					
50	in sledd of 3' East begining at Sta					

52+41



30th Street Pipe Line
water Main Located

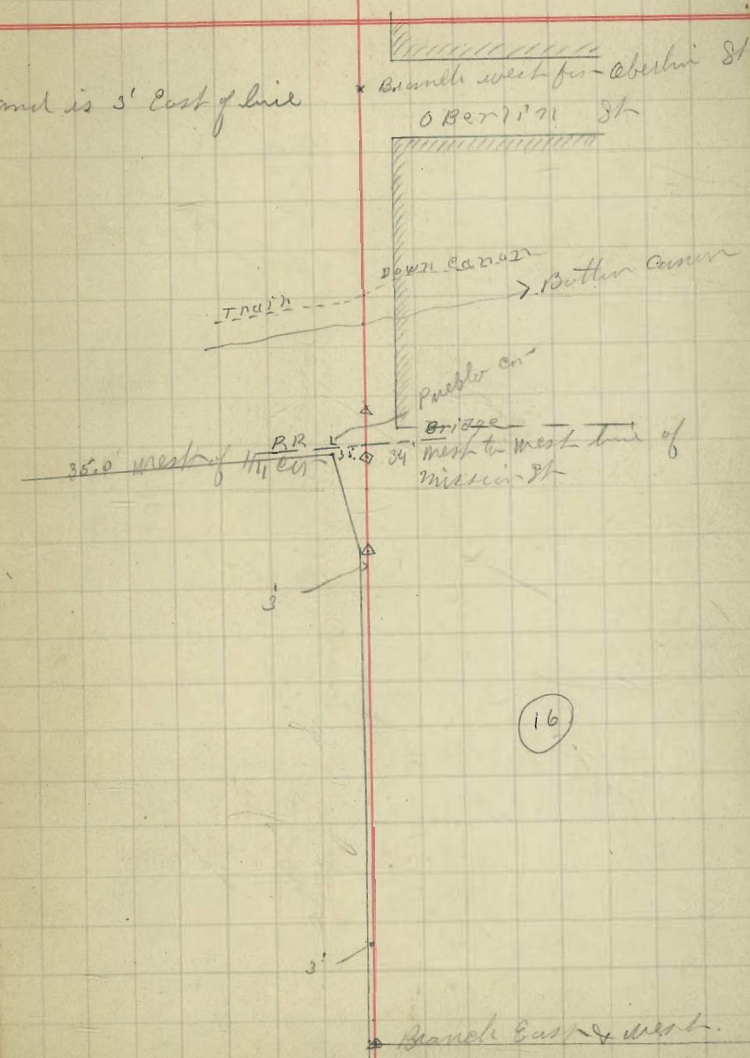
Sta	Def	Calcd Course	Needle			
71						
70						
69						
68						
67						
66						
+95						
4 56.5						
65						
64						
63						
62						
61						



30th Street pipe line
water main located

Sta	Def	Calc'd Course	Needle			
+74.5						
82						
81						
80 +17						
+42						
79						
+73.7	11° 33' L	S11° 53' E	S12° 05' E	← pipe crosses bet Sta 78 & 78+73.7 angle in pipe 9° 30'		
78						
+40	13° 46' R	S0° 20' E	S0° 30' E	← angle in pipe 11° 40'		
77						
76						
75						
74						
73						
+14						
72						

and is 3' East of line



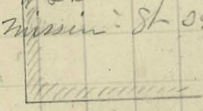
(16)

30th Street pipe line
Water Main Located

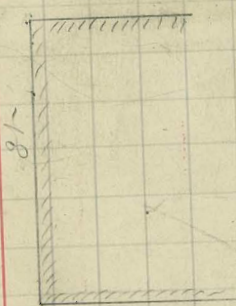
Sta	Def	Calc'd course	Needle			
92 +13.6	2° 02' L	S 13°55' E	S 14°05' E			
91						
90 +35						
89						
88						
87						
86 +55						
85						
84 + +45						
83						

23' East to East line of Hepard ave.

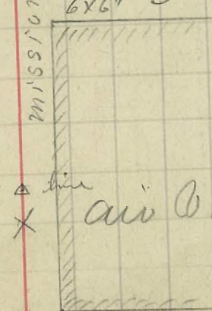
△ alley near north line of W & B add. west line of Mission St 39' West



Branch E & W for Union St 2x2" ✓



△ Branch west for Tufts St. 6x6" ✓



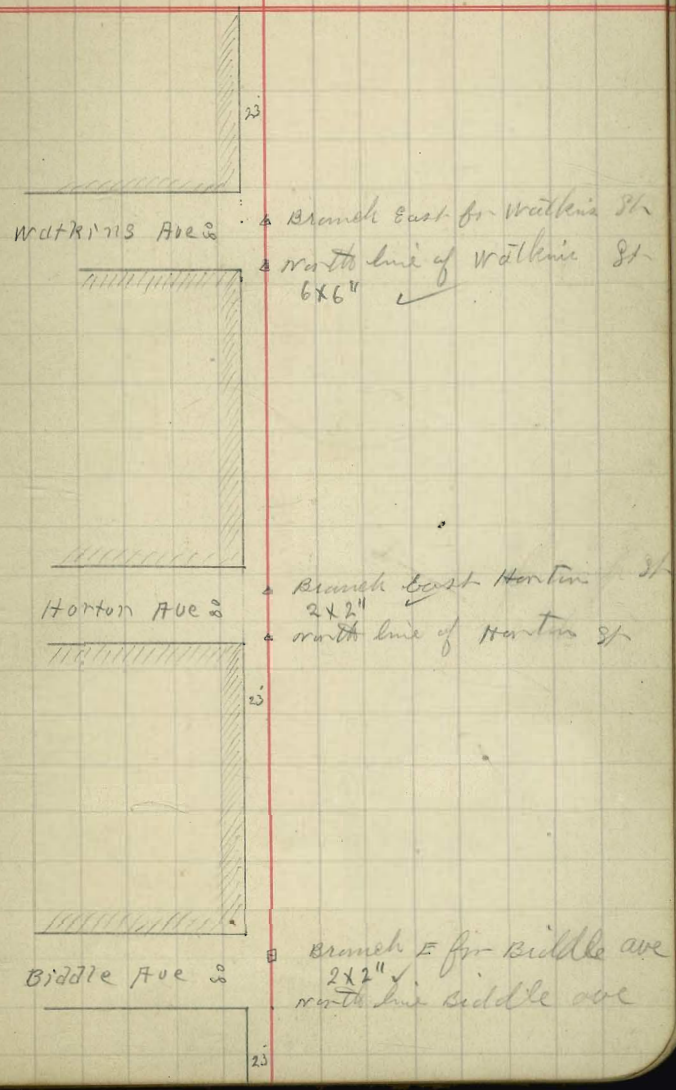
△ line
X air Valve

30th Street Pipe Line

Location of Orange Hill

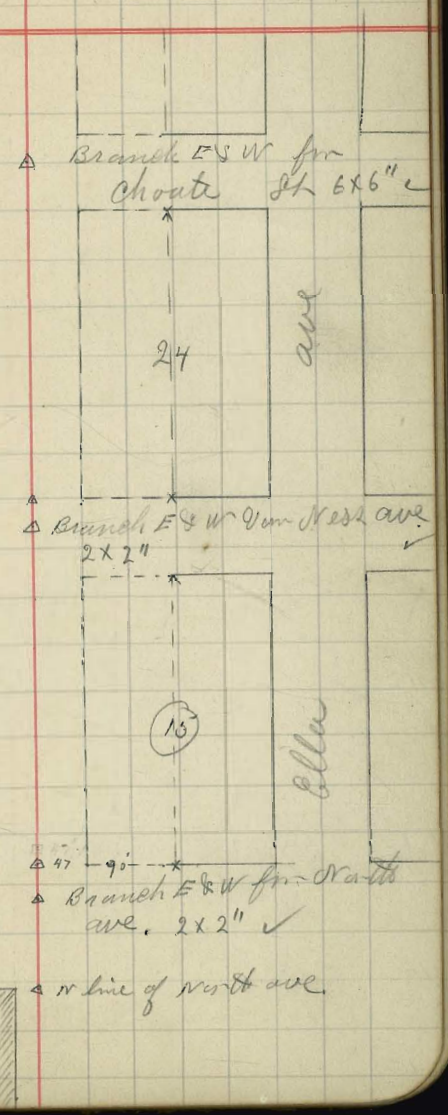
Water Main Located

Sta	Def.	Calc'd course	Needle			
103						
102						
+65						
+15						
101						
100						
99						
98						
+85						
+35						
97						
96						
95						
94 +04.5						
+54.5						
93						



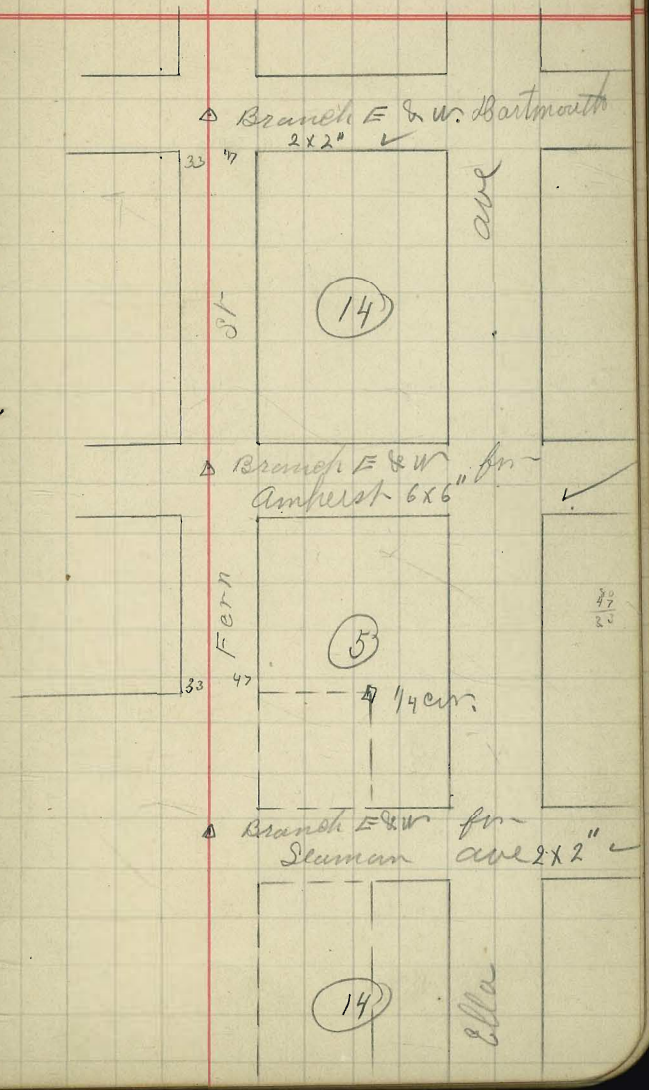
30 th in Street pipe line
Water main located

Sta	Def.	Calcd course	Needle			
117						
+52'						
113						
112						
111						
110						
+71						
109						
108						
107						
+21	52° 56' 15"	313° 42' E	S 13° 30' E			
106						
+73.5						
105						
+95.3	52° 43' 45"	366° 38' E	S 66° 45' E			
104						



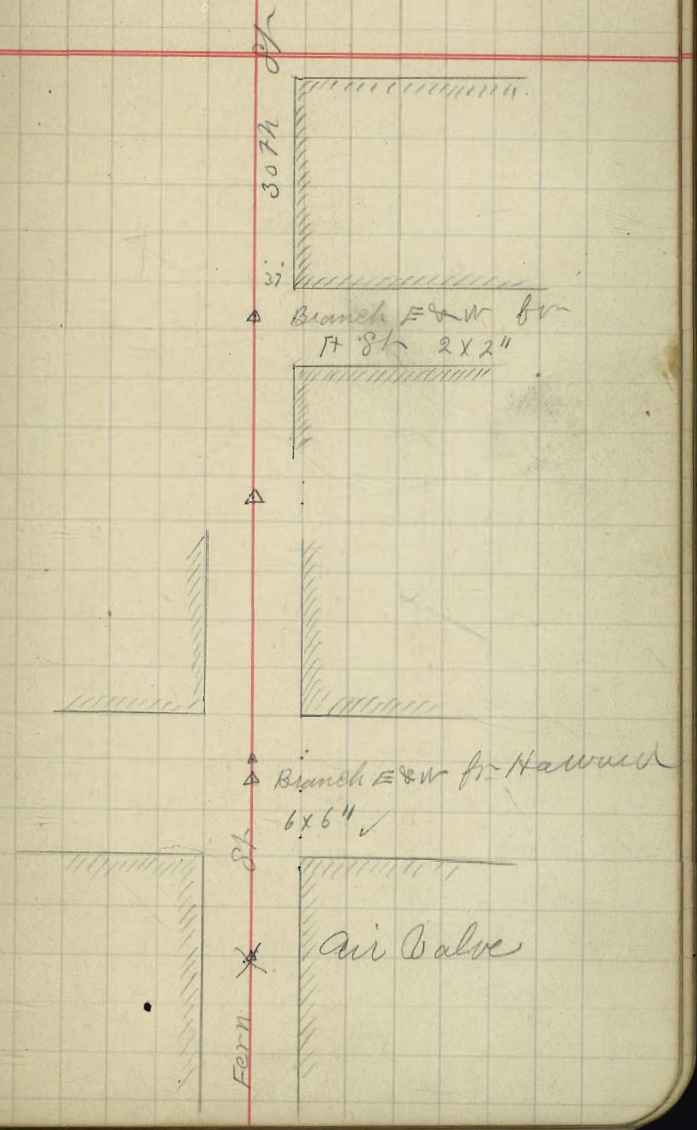
30th Street Pipe Line
Water main Located

Sta	Dep	Calcd Course	Needle			
125						
+91						
124						
123						
122						
+11						
121						
120						
119						
118						
+32						
117						
116						
115						



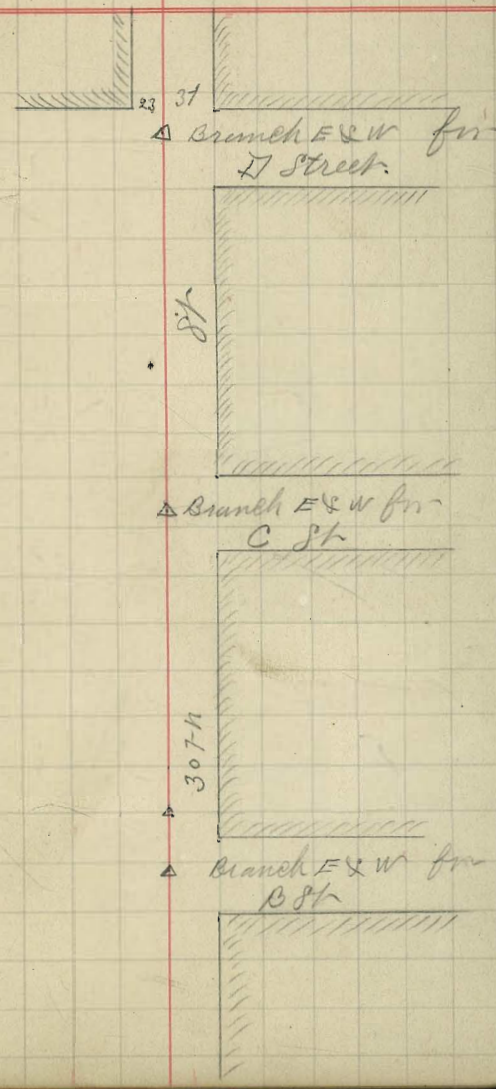
30th Street pipe line
Water Main Located

0						
135						
134						
+64.7						
133						
+84	45° 45' L.	S14°38'E	S14° 40'E			
132						
+73.5	45° 02' R.	S31° 07'W	S31° 10'W	✓		
131						
130						
129						
+71						
128						
127						
126						



30th Street pipe line
~~Located~~ in

+07.5	12" x 6" ✓	
145		
144		
143		
142		
+26.5	12" x 2"	
141		
140		
139		
138		
+45.5	15" x 8" ✓	
137		
136		



30th Street pipe line
water main located

+46.5 12" x 6"
156

155

154

153

+66.5 12" x 2"
152 +10.5 N line of F St

151

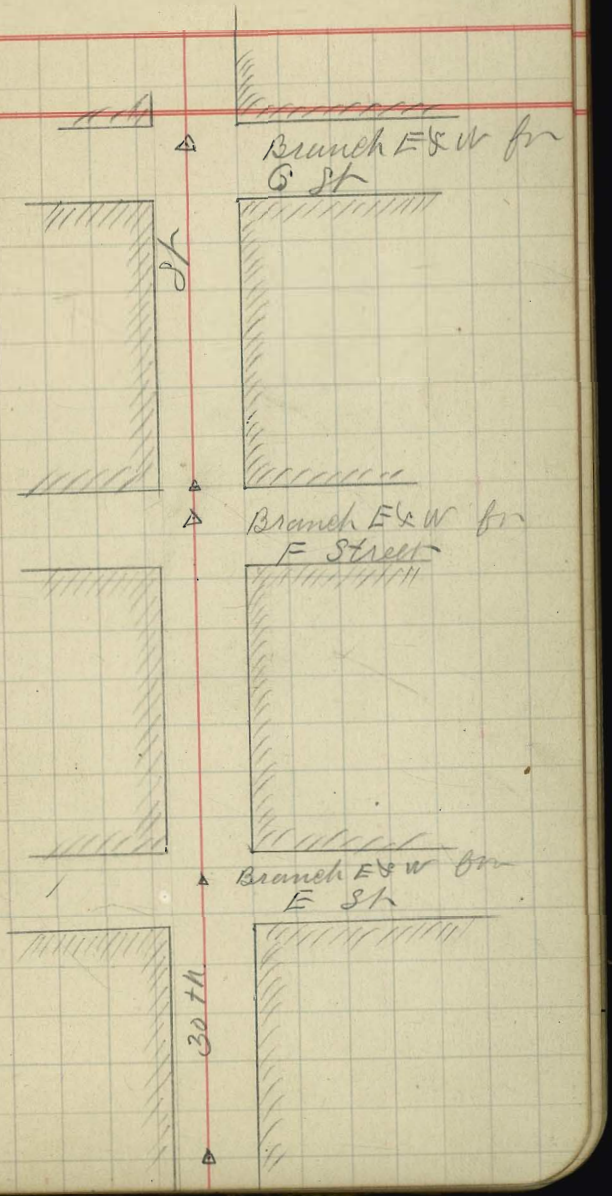
150

145

+87.3 12" x 6"
148

147

146



30th Street pipe hill water
Main located

16042.8
13745.5
2296.8

167							
166							
165							
+29	10" x 2"	10" x 6"					Branch for I St
164							
163							
162							
161							
+42.3	12" x 6"						Branch for H St
160							
159	air Valve						
158							
157							

30th Street pipe line
Location of Drum of Hill
water main located

178	✓	
177	✓	
176	✓	
+69.3	10" x 2" ✓	△ Branch for L St
175	air Valve at Sta 175 ✓	
174	✓	
173	✓	
172	✓	
+89	10" x 6" ✓	△ Branch for K St
171	✓	
170	✓	
169	✓	△ Branch for J St
+09	10" x 2" ✓	
168		

30th Street pipe line
Orange Hill
located
water Main

189 ✓	Air Valve 189	
188 ✓		
+11	10" x 2" ✓	△ Branch for Webster
187 ✓		
186 ✓		
185 ✓		
184 ✓		
+40.6	10" x 2"	△ Branch for M St
183 ✓		
182		
181 ✓		
180 ✓		
+50.4	10" x 6" ✓	△ Branch for M St
179	Air Valve Sta 179	

30th Street pipe line
water main Located

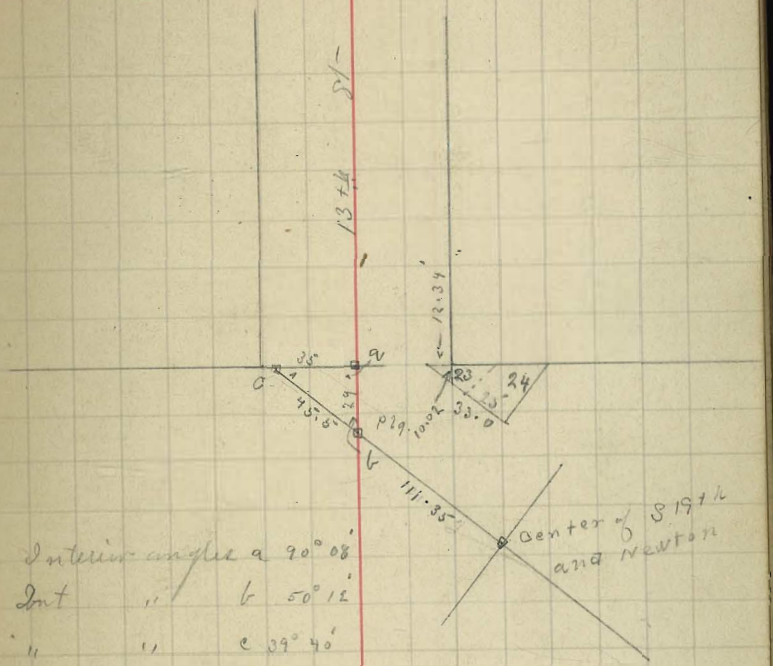
200 ✓						
199 ✓						
+54			10" x 8" x 6"			△ Branch for R. St.
+48	8° 15'	Left				
198 ✓						
+78	8° 14'	Right	air valve at angle			
197 ✓						
196 ✓						
195 ✓						
+71.8	10" x 2"					△ Branch for Sargent
194 ✓						
193 ✓						
192 ✓						
191 ✓						
+92 ✓	10" x 6"					△ Branch for Clay
190 ✓						

30th Street pipe line
water Main located

+54	End of line main on Nott & 30th	
217		
216 ✓		
215 ✓		
214 ✓		
+74.5	10" x 2"	△ Branch for Olive
213		
212		
211		
210		
+92.4	10" x 6" ✓	△ Branch for Union
209 ✓		
208 ✓	Air Valve	
207 ✓		
+12.5	10" x 2" ✓	△ Branch for T St
206		
205 ✓		
204 ✓		
203 ✓		
+33	10" x 2" ✓	△ Branch for S St
202		
201 ✓		

Sketch showing extension of 13th St to Newton ave

area necessary to condemn in lot 23 bll. Wannumbrier Cleveland add 61.82 sq ft.



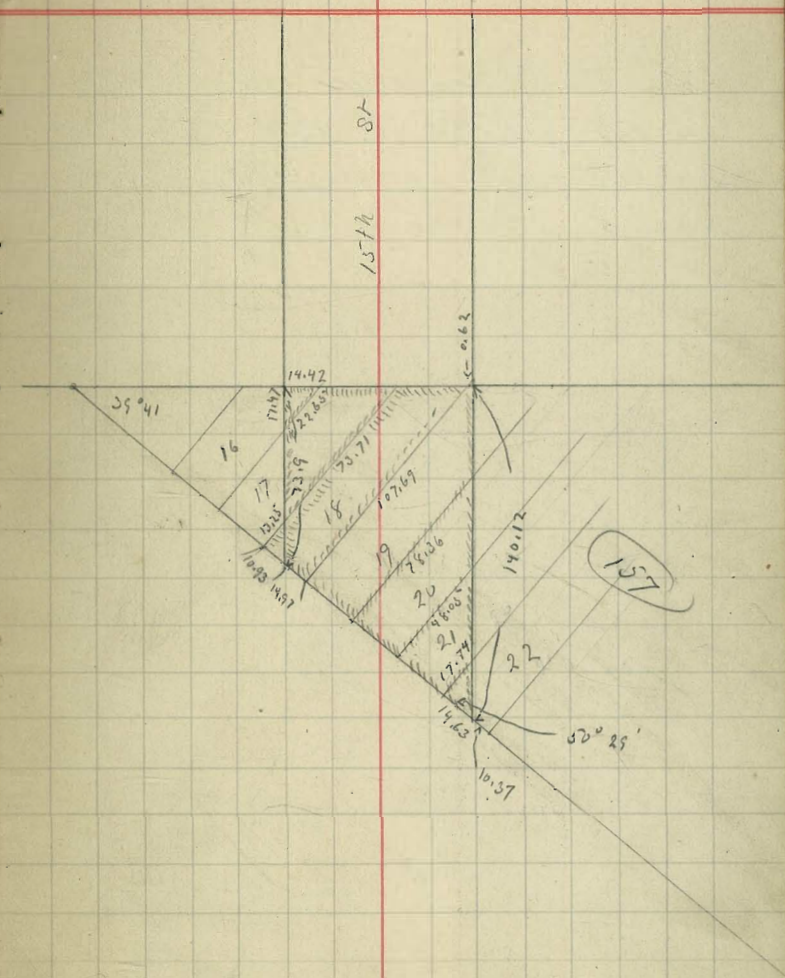
Interior angles a 90° 08'
Int " b 50° 12'
" " c 39° 40'

Sketch showing extension of 15th St to Milton ave

Jan 10 1892 Hamlin

Area to be condemned in

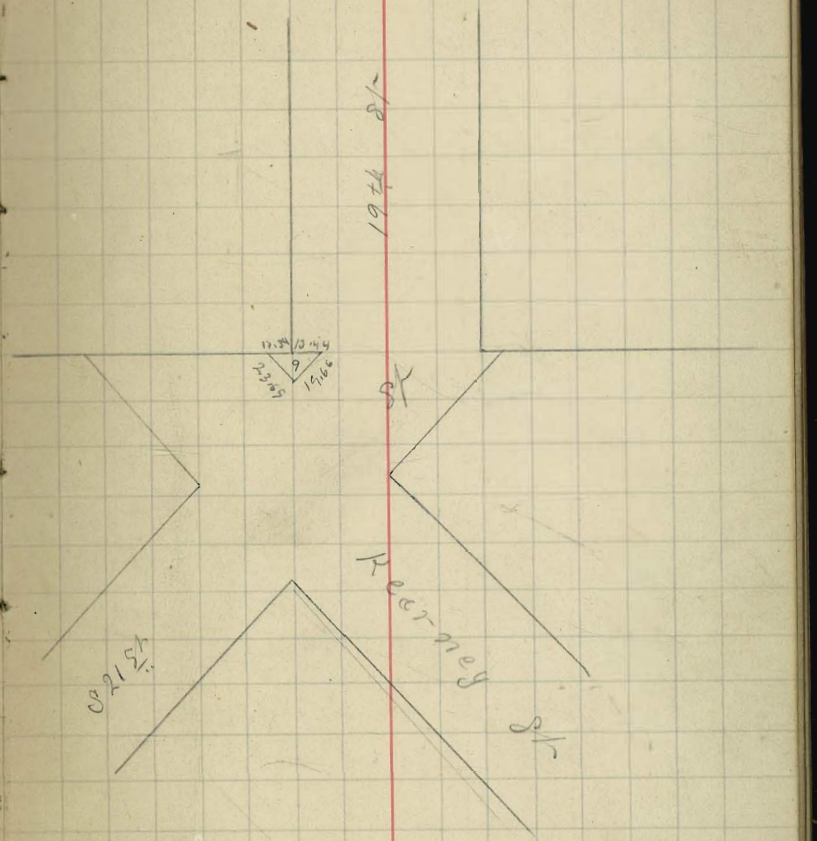
blk	157	M & S. add
Sub	16	125.96
"	17	1204.50
"	18	2360.84
"	19	2337.51
"	20	1580.13
"	21	822.25
"	22	129.77
		8560.96



Sketch showing extension of 19th St to S 21st St

Jan 11 1892 Hamblin

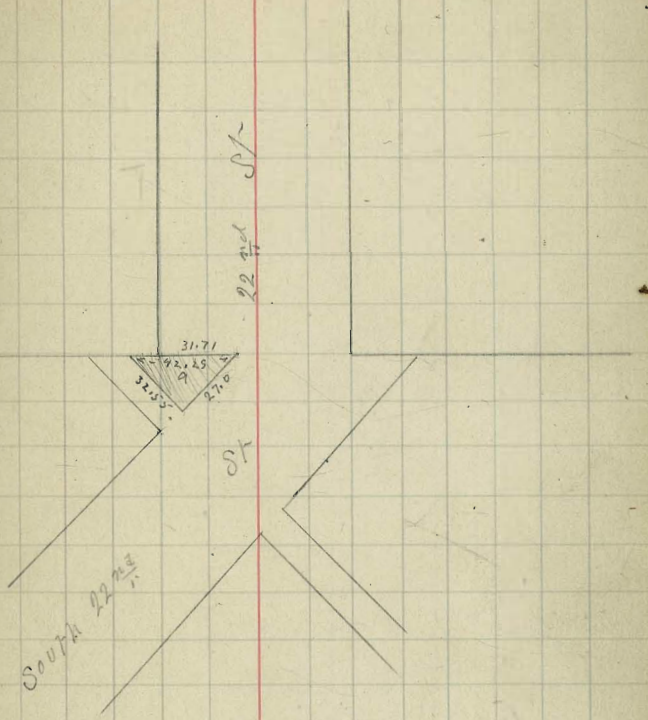
Area of triangular piece at the intersection of 19th & S 21st St (marked a in sketch is 232.3' sq ft:



Sketch showing extension of 22nd St to S 22nd St

area of triangular shaped piece marked a in sketch is 439.43 sq ft.

In 13th 228 M. & S Add



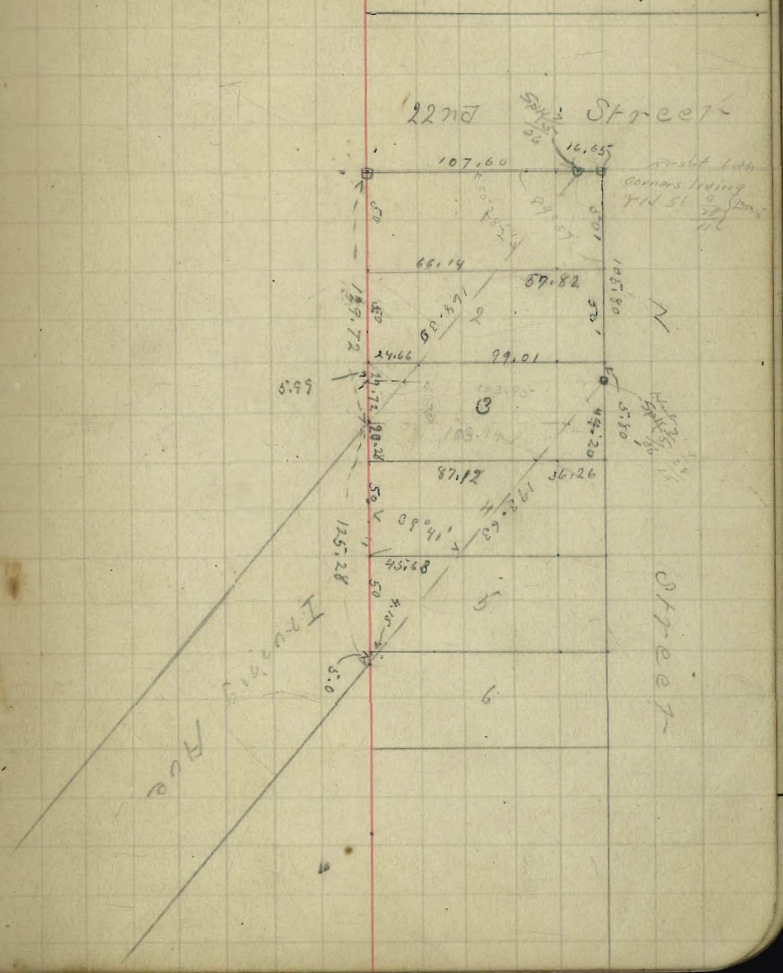
Sketch showing extension of Irving ave to N Street

Jan 12 1892 Hamlin

107.60
16.65
124.25

areas necessary to be condemned in blk 64 Sherman's Add for the opening of Irving ave to N Street

Lot	1	1861.75 sq ft
"	2	3920 75 " "
"	3	5258 45 " "
"	4	3068 25
"	5	1244.00
"	6	10.37
		15363.57 sq ft.



Sketch showing extension of Logan Ave to Olive St

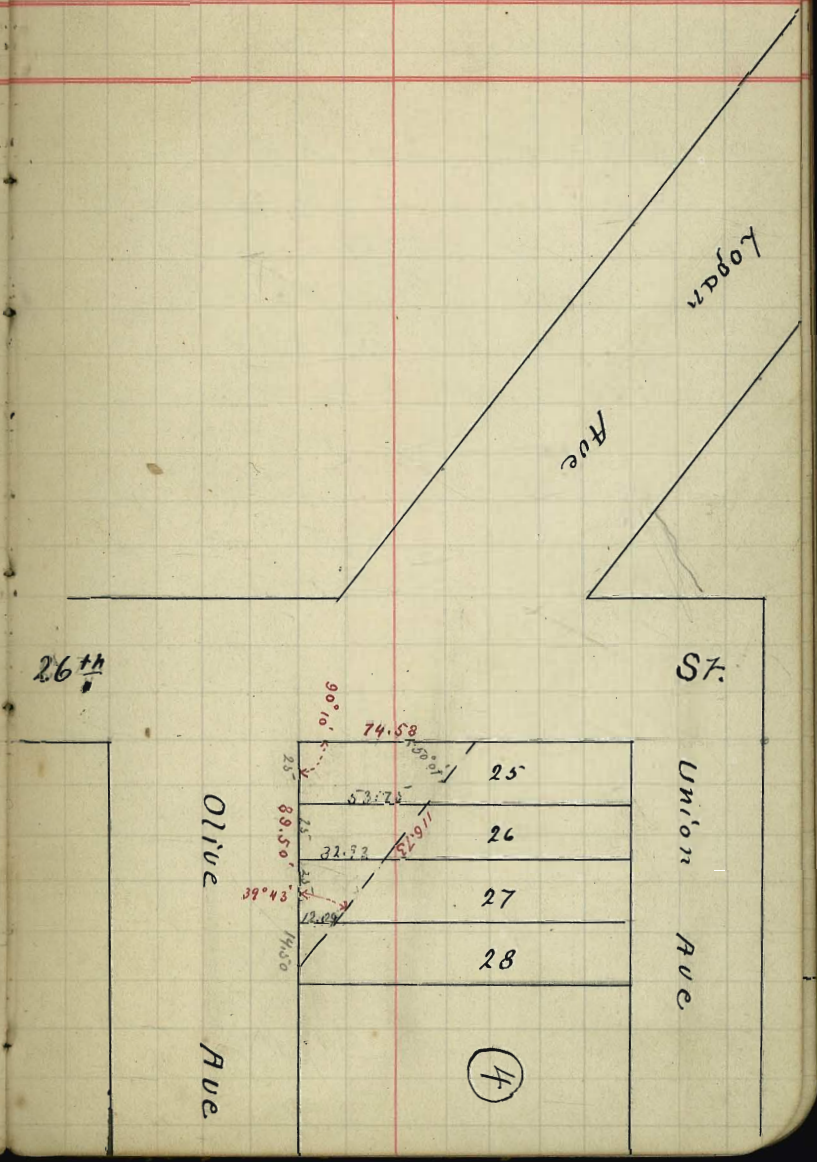
Jan 13 1892 Hamlin & Patt

27

amount of land necessary to condemn in order to open Logan Ave to Olive St

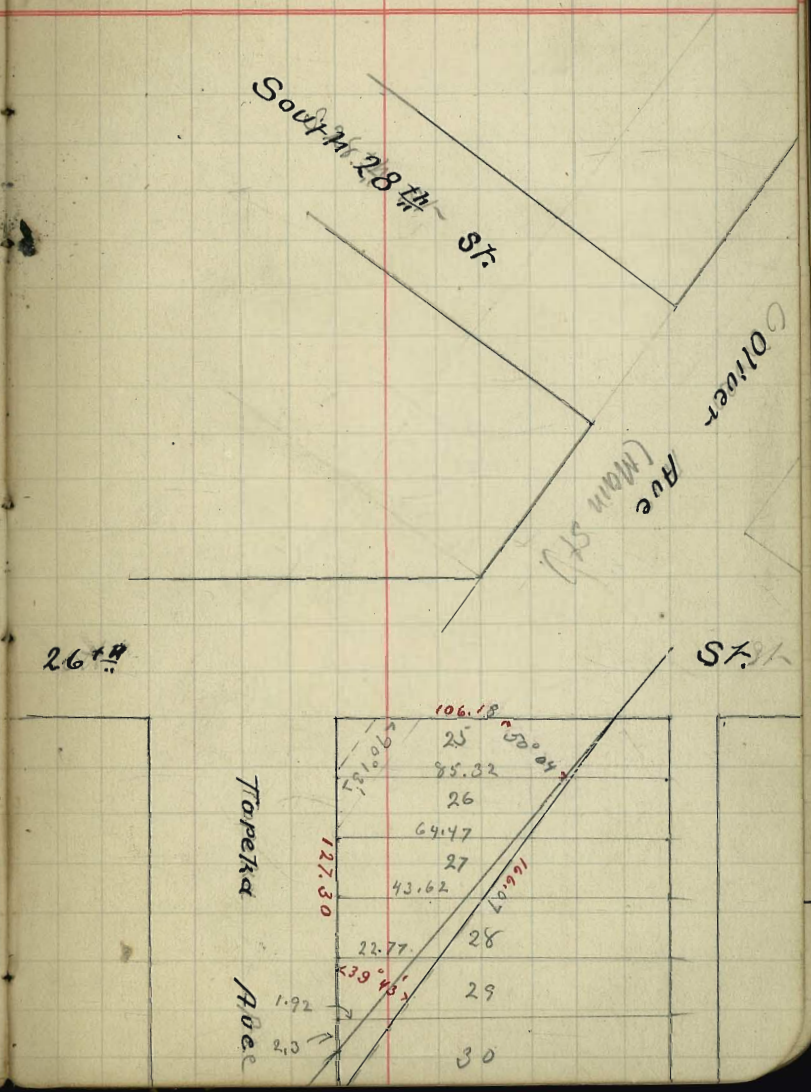
Blk 4 Reed & Hubbell Add

Sect	25	1604.13
"	26	1088.38
"	27	562.62
"	28	87.65
		3337.77



amount of land necessary to condemn in the opening of Oliver St through blk 20 Reed & Hubbell add

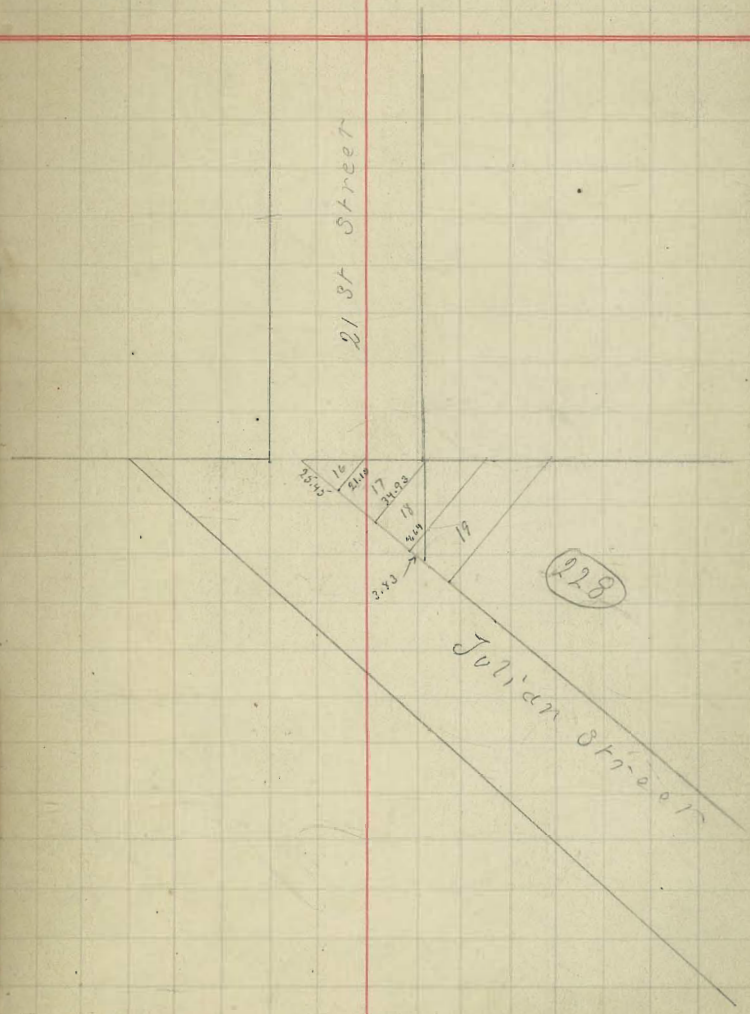
Lot	25	2393.75	Sq ft
"	26	1872.37	"
"	27	1351.13	"
"	28	829.88	"
"	29	308.61	"
"	30	2.22	"
"		6757.96	Sq ft



Jun 11 1892

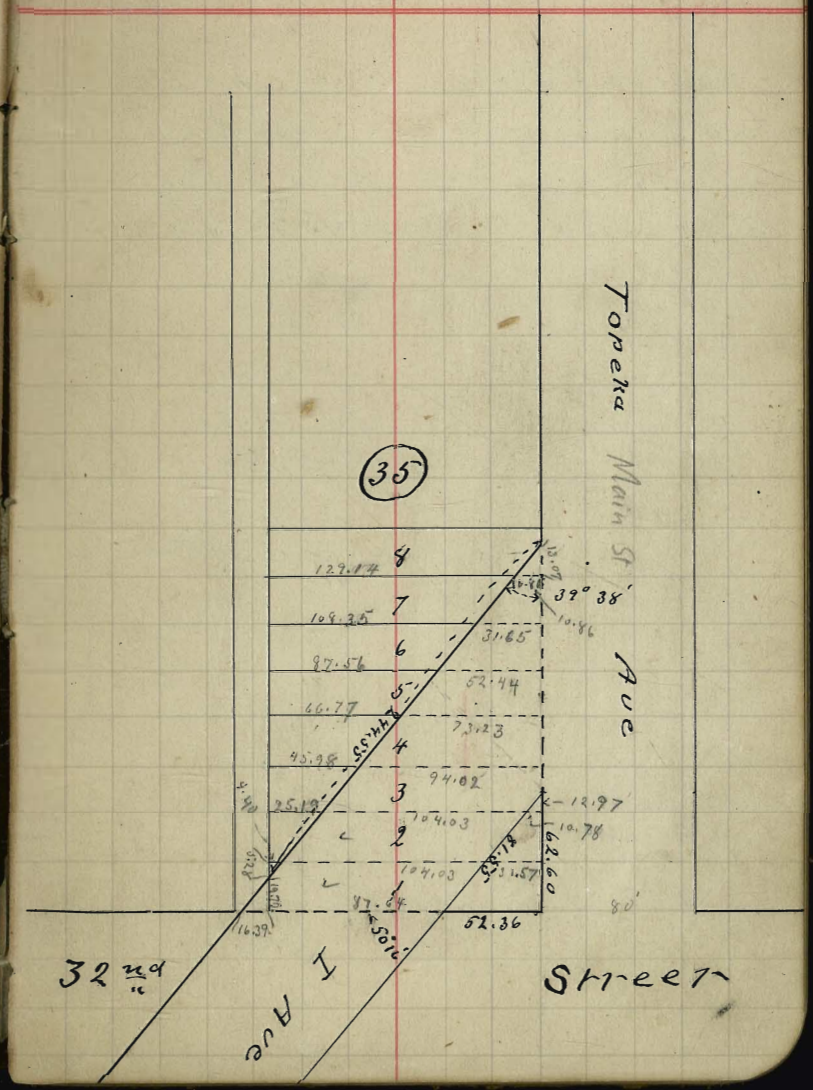
Sketch showing amount of land necessary to condemn in the opening of 21st St to Julian ave.

In blk	228	M & S Add		
Lot	16	268.50	sq ft	
"	17	774.89	"	"
"	18	494.62	"	"
"	19	8.88	"	"
		1546.89		



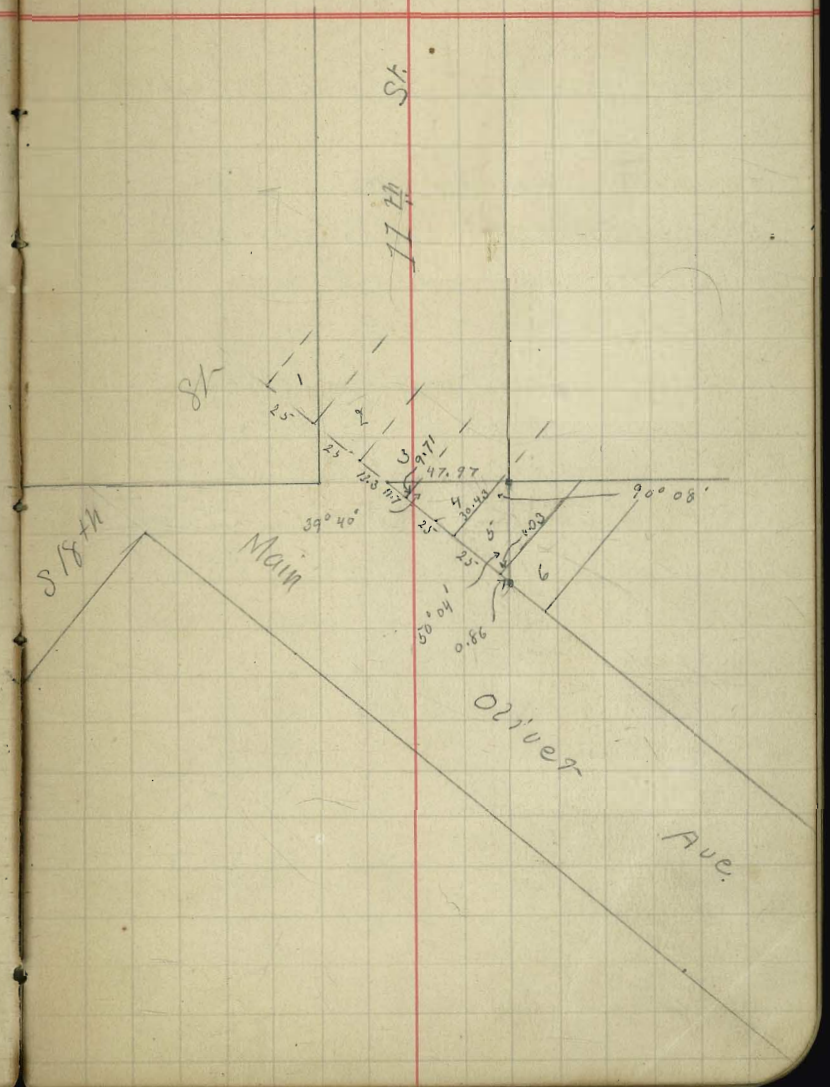
Sketch showing amount of land necessary to condemn in Blk 35 of Whitneys add for the opening of I ave.

Lot 1	2434.31	Sq ft.
" 2	2600.75	" "
" 3	2540.38	" "
" 4	2090.62	" "
" 5	1570.88	" "
" 6	1051.13	" "
" 7	531.28	" "
" 8	70.87	" "
	12890.32	Sq ft



amount of land necessary to condemn in Block of Cleveland Add for the extension of 11th St to Oliver Ave

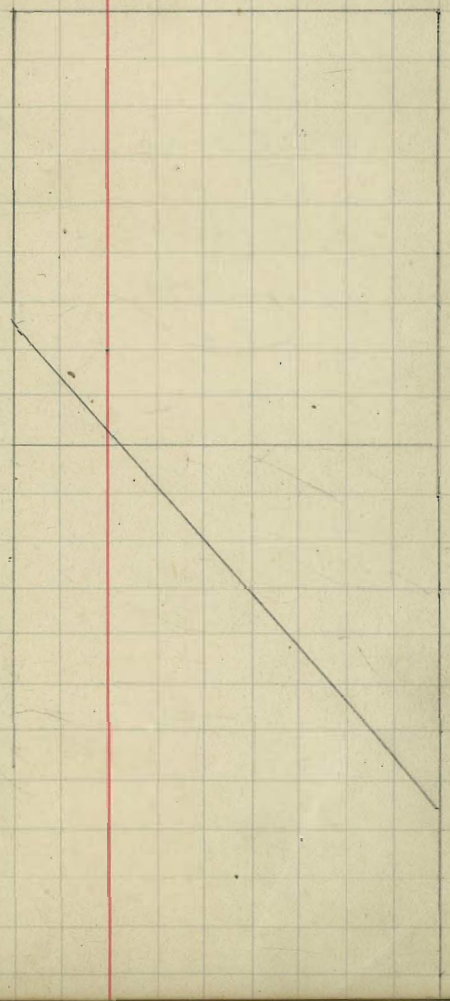
Lot	3	36.80 sq ft
"	4	501.75 "
"	5	393.87 "
"	6	4.43 "
		936.85 sq ft



Beginning at a stake

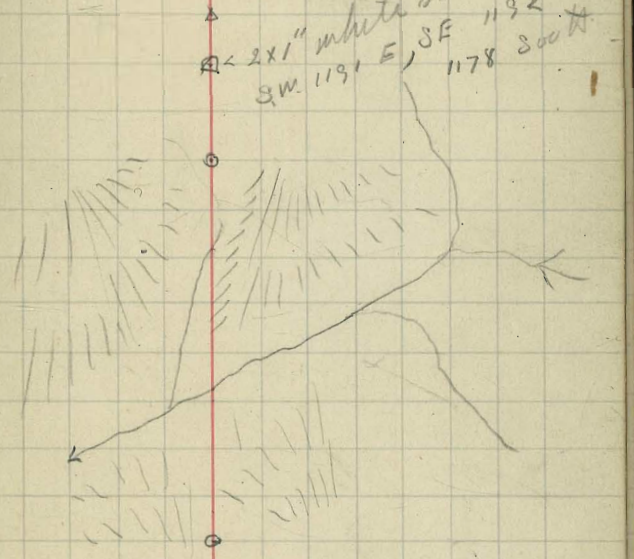
Marked 1192 on N 255 on West
255 on South and 1178 on East
run east on a random line
Mag Course N 76° 0' E

13+09 Point top of hill
18+0 Point top of hill
29+00 Point Turned 7° 15' R
N 82° 0' E Sta 31+73.5 Stake
S.W. Cor of 1191 on East S.E. Cor of
1192 on west face and (1178.?) on
South

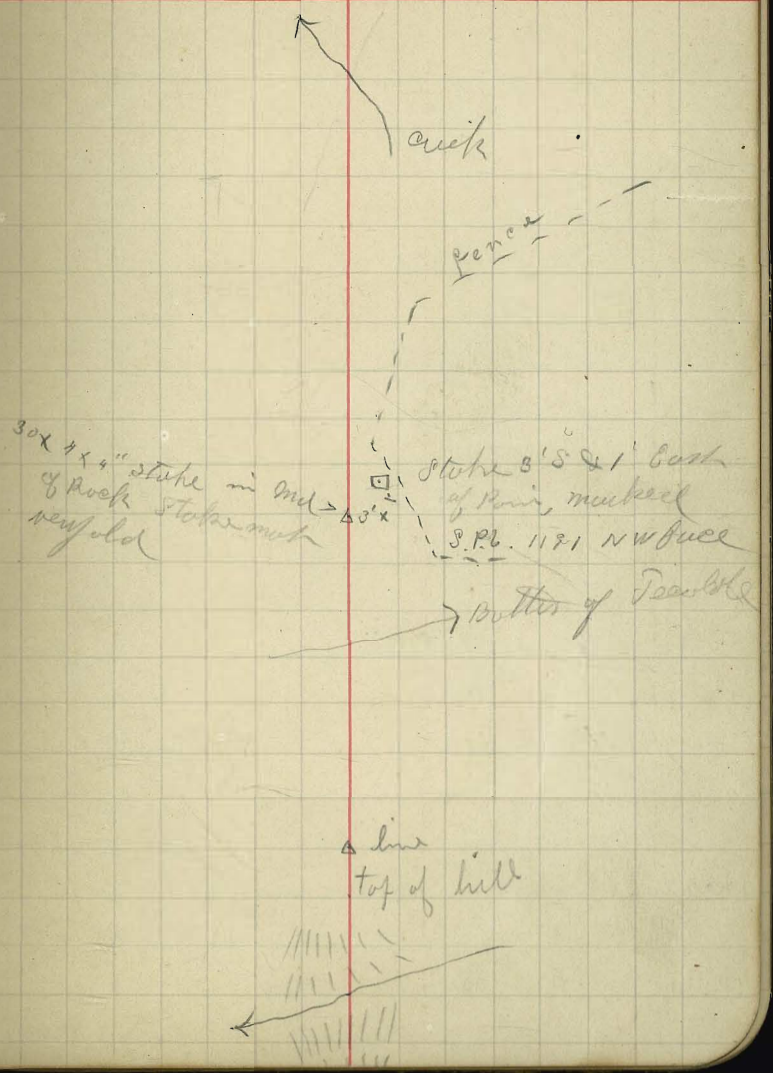


Survey of North & East lines of 1178

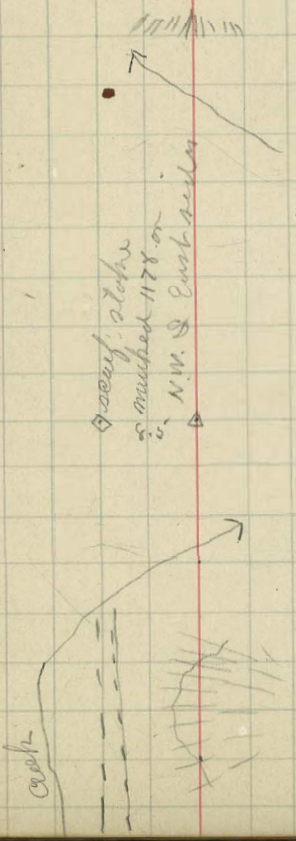
1					
31+70.5=0	6°38' L	S89°23'E	N76°15'E	L	
29	7°15' R	S82°45'E	N82°0'E	+	Some local attraction at this point
29					
19+35		Bottom of Canyon			
16+0		Point on Top of hill			
13+09		Point on Top of hill			
0					
Begun					



Sta	Bkd.	Course	M.C.			
400						
0		S 0° 37' W				
26 + 28 = 0	90° 0' R	S 0° 37' W				
25 + 0						
+70						
17 + 0						
6 + 40						



13+0	Station	
10+80	Top of Bank	
10+40	foot of Bank	
4+50	Creek	
0		N 89°20' W
26+32.5 = 0	90° R	N 89°20' W
17		
12+75		
10+50		



Lines for Electric R.R. on Sogan ave from N St to South 22 St

South ~~West~~ track

Feb 1 1892

Hamlin
Williams
Shaw
Van Hook

Sta	Dist	Def.	Index	Tang.
	19.10	5° 13'		
	18.3	5° 0'		
	18.3	5° 0'		
	18.3	5° 0'		
	18.3	5° 0'		
+40				
0				

Sta 0' is a point on the north line of N St 5' west of the center line

Both P.C's tied out 21' each way.

E.C. Left 105' radius

B.C. Left Rad. 105'

Center of N St

Intersec angle 50° 26' Left
apex dist 49.45'
length of curve on chords 92.3'

Lines for electric R.R. on Logan ave
from N St to S 22nd St
East track

Feb 1 1892

Hamlin
Williams
Shaw
Van Hook

Sta	Dist	Def	Index	Tang		
			X			
	17.28	5° 15'				
	16.56	5° 0'				
	16.56	5° 0'				
	16.56	5° 0'				
	16.56	5° 0'				
+40						
0						

Sta 0 is a point on the north line
of N St 5' east of the centre line

E.C. 95' radius

curve 95' radius
Intersection angle
50° 26' left
apex dist 44.74

B.C. 95' radius
centre of N St

Length of curve
on chords 83.52

Levels over South track of electric RR
from N. line of N St to west line 21 st

Sta	+	HI	-	Elev
B.M.	1.74	14.69		12.95
0			3.13	11.56
			3.45	11.24
+40			3.43	11.26
			3.57	11.12
0+60.6			3.74	10.95
+78.9			4.22	10.47
+97.2			4.50	10.19
1+15.5			4.71	9.98
+33.8			4.84	9.85
+52.9			4.54	10.15
+98.4			4.64	10.05
2+48.4			4.88	9.81
+98.4			4.75	9.94
3+48.4			4.40	10.29
+98.4			4.27	10.42
4+48.4			3.33	11.36
+98.4#	10.11	22.52	2.28	12.41
5+48.4			8.33	14.19
+98.4			5.69	16.83
6+48.4#	10.31	30.57	2.76	19.76

South & Logan
North line of N St 16th St
Rail - C & E RR
Cent. of N St
Top rail Coronado RR
B.C. Sept 105' Radius

E.C. 11.24
10.75
.49

Sta	+	H I	-	Elev		
6+98.4		30.57	7.91	22.66		
7+48.4			4.93	25.64		
7+98.4 #	5.11	33.32	2.36	28.21		West line of S 21st St
B.M. #	8.56	40.38	1.54	31.78	31.79	South of S 21st
8+28.4			11.31	29.04		S 21st St
0			10.62	29.73		East line of S 21st
+50			9.10	31.25		
1			7.50	32.85		
+50			5.96	34.39		
2			4.43	35.92		
+50			3.65	36.70		
3			2.78	37.57		
+50			2.44	37.91		
4			1.83	38.53		
+50 #	6.21	45.26	1.30	39.05		
5			5.57	39.69		
+50			4.79	40.47		
6			4.33	40.93		W of S 22nd
+30			4.06	41.20		
0			4.24	41.02		E of S 22nd
B.M.			3.60	41.66	41.70	drive in 22nd S Logan

Sta	+	H.I.	—	Elev	Grade
6 + 50		45.26	4.14	41.12	
1			3.96	41.30	
+ 50			3.87	41.39	
2			3.73	41.53	
+ 50			3.71	41.55	
3 #	5.06	46.79	3.53	41.73	
+ 50			4.74	42.05	
4			4.82	41.97	
+ 50			4.74	42.05	
5			4.64	42.75	
+ 50			4.20	42.59	
6			3.70	43.09	
+ 30			3.64	43.15	South 22nd St.
0			3.74	43.05	
B.M.			2.26	44.53	Bryan & 22nd St.
+ 50			3.50	43.29	
1			3.24	43.55	
+ 50			2.76	44.03	
2 #	6.67	51.17	2.29	44.50	
+ 50			5.97	45.20	
3			5.73	45.44	

Sta	+	HO	−	Elev		
3+50		51.17	5.14	46.03		
4			4.55	46.62		
+50			4.09	47.08		
5			3.64	47.53		
+50			3.27	47.90		
6			2.76	48.41		West of S 24th St
B.M.			11.31	39.86	39.86	Milton & S 24th St

Levels on Orange Hill pipe line
South of B Street

Sta	+	HI	−	Elev	Grade	Cut	
B.M.	3.36	218.62		215.26			B.M. 30 ft S B St
138			0.17	218.45	215.00	3.45	3' 6"
139			3.58	215.04	212.00	3.04	3' 1"
#	0.87	207.52	11.97	206.65			
140			2.01	205.51	203.00	2.51	2' 6"
#	0.90	196.40	12.02	195.50			
141			6.17	190.23	187.00	3.23	2' 3"
#	1.85	187.50	10.75	185.65			
+20			3.4	184.1			
+90			8.8	178.7			
142			11.07	176.43	175.00	1.43	1' 5" Bottom of canon
143			5.45	182.05	179.00	3.05	3' 1"
144	11.93	197.60	1.83	185.67	183.00	2.67	2' 8"
145			7.45	190.15	187.75	2.40	2' 5"
146			0.87	196.73	192.50	4.23	4' 3" top of hill
147			4.38	193.22	189.25	3.97	4' 0"
148			8.54	189.06	186.00	3.06	3' 1"
B.M.			9.72	187.88			
#	0.02	185.76	11.86	185.74			
149			1.05	184.71 / 184.01	—		
150			4.82	180.94			

Sta	+	HI	−	Elev		
		185.76				
151			9.63	176.13		
#	0.34	174.34	11.76	174.00		
152			2.0	172.38		
BM			2.55	171.83	171.83	171.831
153			7.05	167.33		
#	1.38	168.98	11.78	162.60	162.60	
154			2.38	161.60		
155			7.10	156.88		
156			7.48	156.50		
157			10.66	153.32		
#						
158	5.37	162.55	6.80	157.18		
159			2.18	160.37		
160			3.39	159.16		
#	0.19	151.41	11.33	151.22		
			1.92	149.49	149.49	149.5
161			4.10	147.31		
#	0.01	139.66	11.76	139.65		
#	0.07	127.73	12.0	127.66		
162			4.50	123.23		
#	0.61	116.35	11.99	115.74		

top Hill

BM 30 and K 9

Sta	+	HI	−	Elev			
		116.85					
163			9.46	106.89	✓		
#	0.47	104.87	11.95	104.40			
164			9.77	95.10			
#	1.48	95.07	11.26	93.59			
165			8.30	86.77			
#	0.87	87.94	12.0	87.07		+	
166			3.35	84.59			
167			6.11	78.83			
168			9.6	74.34			
169			10.07	73.87			
# 170	4.34	77.62	10.66	73.28			
171			4.68	72.94			
172			5.44	72.18			
173			5.82	71.80			
174			4.96	72.66			
175			4.33	73.29			
176			4.64	72.98			
			4.70	72.92	72.92	72.94	B M 30 and L St
177			4.80	72.82			
# 178	6.62	80.45	3.79	73.83			

Sta	+	HI	-	Elev
		80.45		
179			4.74	75.71
180			5.41	75.04
181			6.14	74.31
182			7.89	72.56
183			7.96	72.49
184			8.93	71.52
# 185	6.25	78.85	7.85	72.60
186			7.3	71.55
187			6.74	72.11
188			6.1	72.75
189			4.35	74.50
190			7.83	71.02
191			5.95	72.90
# 192	11.38	86.98	3.25	75.60
193			7.03	79.95
194			3.48	83.50
195			3.73	83.25
196			3.26	83.72
#	6.95	93.13	0.80	86.18
197			5.77	87.36

Sta	+	HI	−	Elev	check	
		93.13				
198			4.80	88.33		
			6.10	87.03	87.41	Bch cos 30 and R Plug in ground cos fence
159	3.32	163.49		163.37		
160			4.53	159.16		
160+42			6.41	157.28		Brake of Hill H st
162	0.22	123.45		123.23		
	0.54	112.52	11.47	111.98		
163			5.61	106.91		Check on sta 163
	0.98	101.84	11.66	100.86		
164			6.74	95.10		
165	2.88	89.65		86.77		
165+50			6.85	82.80		Road foot of Hill
166			9.08	80.57		
189	4.49	78.99		74.50		
189+50			5.76	73.23		
190+40			9.0	69.99		
190+75			5.4	73.59		
193	6.48	86.43		79.95		
193+44		2	2.58	83.85		
194			2.93	83.50		

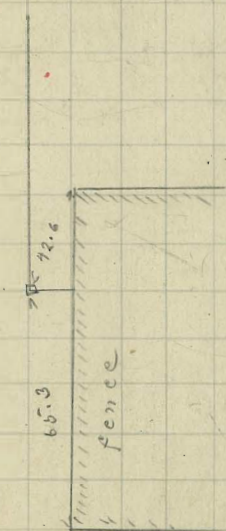
Sta	+	HI	−	Elev		

Logan Ma	21st	N hng. Hyd	31.79
" "	22nd	Spk Tel pole S.E. cor	41.70
" "	23 "	" fence post NW	44.61
"	24	copper tack in plug 2' NE of N.E. cor	49.30

2' west	Sta	78+73.7	.5'	lower
2 "	"	77+40	1.5	lower
		77	0.5	"

From B.St. to Natl ave 8020' on the natural slope
From Sta 62 to B.St 7569' on the natural slope.

25th	Street	B to K	3448.5
H	"	22nd to 25th	1128.0
J	"	24th " 25th	660.0
K	"	22nd to 24th	447.0
K	"	24th " 25th	687.0
24th	" and alley		1008.0



P29 S.E. cor. of S18 & Olive

3240

2' Dist on slope from 106+21 to ~~137+48~~ 137+45
2 is 3122 feet ~~gain~~ loss 2'

Dist from Sta 85 to 137+45 = 5245
on slope 5240
Dist Sta 62 to 13745
on slope 7569

from cor under bridge 25' to line

from B St to Natl ave 8020.0
on slope.

~~23746~~
~~10621~~
~~125~~

54
46
8

~~13~~

13745
8500
5245

13746
10621
3125

13745

13745
10621
3124

13745
62
7545

7569
45
24
5
30

54.0

8020

IIIIIIII

~~IIII~~ ~~IIII~~ ~~IIII~~ IIII

84.5 from 1/4 cor to line of along.

Plaza

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

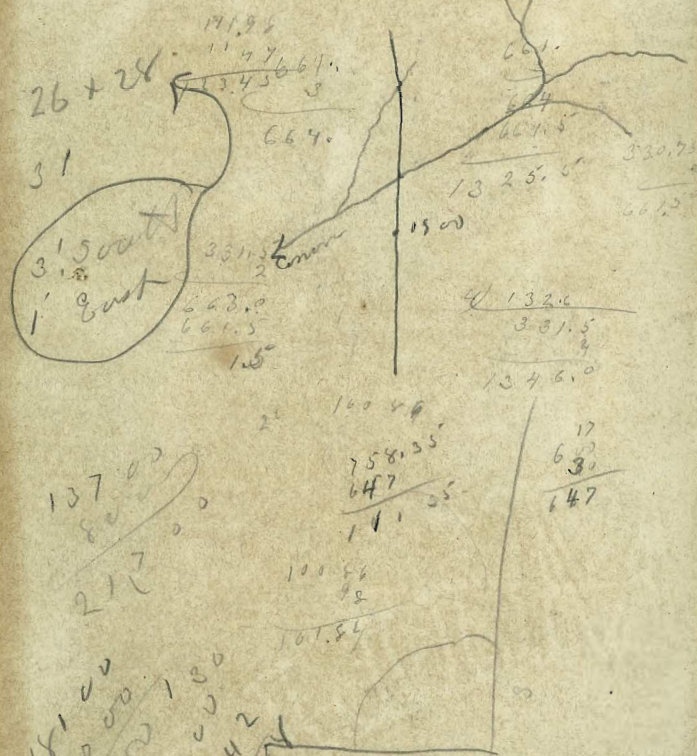
660

63.40 from N.E. cor of 3181 ~~3~~ & Olivee

661

to Pueblo line South

661.5



26 + 28

31

3' South
1' East

141.98
1147
1343

661.
3
664.

661.
664
661.5
1325.5

330.75
661.5

331.5
2
663.0
661.5
1.5

132.6
331.5
4
1346.0

160.86

758.35
647
111.35

17
600
30
647

137.00
80.00
217.00

100.86
98
161.86

181.00
160.00
21.00

130
181.00
160.42
20.58

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

72+

13173.5
34

3122

13207.5
12871
26.5

3.1

3.0

1.5

60

41.35
717
758.35
617
141.35
30
111.35

111.98
54
112.52

13207.5
12871
336.5
3

30
10
29.6

116.35
9.46
106.89

112.52
11.66
100.86

168.30
71.1
117.2 — 120
193.6 —

300
30
330

160.42
137.46
22.96