



LITTLE BOOK

400

# H. S. CROCKER COMPANY

DRAWING MATERIALS AND  
SURVEYING INSTRUMENTS

SAN FRANCISCO

## TABLES FOR EXCAVATIONS AND EMBANKMENTS

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING

Roadway 18 Feet Wide. Side Slopes 1 to 1.  
For Single Track Excavation.

"Copyright, 1895, by Kueffel & Esser Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	0
1	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	1
2	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	2
3	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	3
4	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	4
5	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	5
6	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	6
7	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	7
8	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	8
9	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	9
10	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	10
11	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	11
12	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	12
13	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	13
14	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	14
15	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	15
16	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	16
17	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	17
18	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	18
19	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	19
20	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	20
21	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	21
22	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	22
23	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	23
24	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	24
25	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	25
26	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	26
27	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	27
28	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	28
29	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	29
30	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	30
31	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	31
32	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	32
33	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	33
34	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	34
35	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	35
36	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

*Sambert*

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

**LORING & CO., AGENTS.**  
**762 FIFTH STREET,**  
**SAN DIEGO, CALIFORNIA**

Note; - All Elevations in this book  
are based on Government Datum

U.S. Elev. for City Datum subtract. 5.819

Geol. ~~45.772~~ subtract 5.772

$$\begin{array}{r} 50.131 \\ - 5.819 \\ \hline 44.312 \end{array}$$

+	B	d	elev.	
0.000	27.0eye	91.0	42.000	Court House PBM-USC+G
4.683	12.0	123.2		
5.800	12.0	102.8		
6.331	12.0	146.0		
6.151	12.0	133.8		
6.096	12.0	67.7		
1.185	12.0	275.0		
3.302	12.0	196.5		
3.553	12.0	130.3		
1.049	12.0	100.6		
2.529	12.0	215.0		
4.945	0.5obj.	124.5		

45.624

Polygon #1

-	B	d	elev.	
1.800	27.0eye	91.0	40.200	BM (Star top fire hyd. Front+C)
3.681	12.0	123.2		
3.086	12.0	102.8		
2.687	12.0	146.0		
6.178	12.0	133.8		
2.960	12.0	67.7	55.669	BM (Fire hyd. 4 <sup>th</sup> +C nozzle 4 <sup>th</sup> pointing toward Bst.)
6.723	12.0	275.0	50.131	BM (Extreme SW cor. stone step SE cor 4 <sup>th</sup> +D)
4.888	12.0	196.5		
5.794	12.0	130.3		
6.220	12.0	100.6		
6.650	12.0	215.0		
0.000	0.5obj.	124.5	42.000	

41.957  
- 0.043 = error in closing  
polygon not distributed  
Entire Error occurred on return from  
BM 4<sup>th</sup>+C - see page 48

Feb. 4 1908.

Weather - Windy

K+E Precise Level #15105

2 piece Rod

Wheeler - Observer  
Elsworth - Rod.  
Thomas - Chain

+	B	d	BM	-	B	d	elev.
4.107	12.0	150.0	55.669 Noz. hyd. 4+	2.292	12.0	150.0	57.484 Nozzle fire hyd. 4 <sup>th</sup> +B
5.252	12.0	148.8	C-sec p #1	0.888	12.0	148.8	
7.054	12.0	91.8		1.583	12.0	91.8	
6.998	12.0	50.0		1.049	12.0	50.0	
7.056	12.0	50.0		1.096	12.0	50.0	
7.087	12.0	50.0		1.709	12.0	50.0	
				<del>5.560</del>	<del>12.0</del>	90.8	85.721 Nozzle hyd. 4 <sup>th</sup> +Ash
6.675	12.0	90.8		1.481	12.0	90.8	
6.901	12.0	75.0		0.335	12.0	75.0	
7.011	12.0	68.0		3.923	12.0	68.0	
3.735	12.0	68.0		1.948	12.0	68.0	
6.880	12.0	75.0		0.825	12.0	75.0	
6.782	12.0	64.0		1.501	12.0	64.0	
6.222	12.0	66.5		2.223	12.0	66.5	116.576 S.W. bolt Light Mast 4 <sup>th</sup> +Cedar
6.570	12.0	117.0		0.107	12.0	117.0	
6.951	12.0	123.0		0.510	12.0	123.0	
6.290	12.0	83.0		0.508	12.0	83.0	
101.571 ✓				21.978			

+	B	d	BM	-	B	d	elev.
6.550	12.0	73.2		0.927	12.0	73.2	
6.498	12.0	73.0		0.062	12.0	73.0	
5.456	12.0	49.5		1.981	12.0	49.5	
6.050	12.0	55.0		1.326	12.0	55.0	
6.794	12.0	69.7		0.609	12.0	69.7	
4.689	12.0	72.5		0.479	12.0	72.5	
5.607	12.0	26.0		1.955	12.0	26.0	169.567. Startop hyd. 4 <sup>th</sup> + Fir
41.644 ✓				7.339 ✓			

Feb. 5, 1908.

Weather - Windy

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

K. & E. Precise Level # 15105

2 piece rod

+	B	d	BM	-	B	d	elev.
5.897	11.5	76.0	169.567	0.763	11.5	76.0	
6.863	11.5	54.7	4 <sup>th</sup> +Fir see pp. #3	1.408	11.5	54.7	
7.009	11.5	58.1		1.087	11.5	58.1	
7.027	11.5	76.5		1.298	11.5	76.5	
6.868	11.5	70.9		1.342	11.5	70.9	
6.511	11.5	84.3		0.882	11.5	84.3	202.962 ✓ s.w. bolt hyd 4 <sup>th</sup> + Hawthorn
6.402	11.5	98.5		0.872	11.5	98.5	
6.875	11.5	127.0		1.257	11.5	127.0	
6.391	11.5	114.5		1.363	11.5	114.5	
5.948	11.5	80.0		4.221	11.5	80.0	
7.021	11.5	97.0		0.029	11.5	97.0	
6.538	11.5	65.0		0.097	11.5	65.0	
5.769	11.5	89.5		3.565	11.5	89.5	236.502 ✓ star-top hyd. 5 <sup>th</sup> + Juniper
				0.314	11.5	89.5	
7.107	11.5	94.8		0.130	11.5	94.8	
6.963	11.5	94.8		6.883	11.5	94.8	
5.941	11.5	100.0		1.640	11.5	100.0	
105.130 ✓				23.586 ✓			

+	B	d	BM	-	B	d	elev.
6.283	11.5	92.0		1.300	11.5	92.0	
6.328	11.5	155.0		4.168	11.5	155.0	258.254 ✓ Star Top hyd. 5th + Laurel
12.611 ✓				5.468 ✓			

Feb 6 1908

Weather - Windy + Clear

Wheeler - Observer

Elsworth - Rod

Thomas - Chain

M+E Precise Level #15105

2 piece Rod



+	B	d	BM	-	B	d	elev.
5.751	9.0	210.8	258.254	0.628	9.0	210.8	
6.204	9.0	132.8	5 <sup>th</sup> Laurel See page 5	1.981	9.0	132.8	
5.847	9.0	100.0		1.570	9.0	100.0	271.877 Star Top hyd. 5 <sup>th</sup> Nutmeg
5.860	9.0	200.0		0.624	9.0	200.0	
5.815	9.0	225.0		1.918	9.0	225.0	
5.737	9.0	178.5		2.644	9.0	178.5	
3.678	9.0	185.0		0.549	9.0	185.0	
1.469	9.0	199.0		3.502	9.0	199.0	
4.907	9.0	218.0		3.441	9.0	218.0	
6.947	9.0	173.8		3.259	9.0	173.8	
				1.773	9.0	162.5	292.684 Star Top hyd. 5 <sup>th</sup> Ugas
4.104	9.0	162.5		5.269	9.0	162.5	
1.925	9.0	300.0		4.540	9.0	300.0	
3.520	9.0	350.0		3.175	9.0	350.0	
6.850	9.0	264.0		2.227	9.0	264.0	
6.331	9.0	263.5		3.260	9.0	263.5	
4.619	9.0	65.5		1.121	9.0	65.5	298.110 Star Top hyd. 5 <sup>th</sup> University
79.564				39.708			

wrong reading 1.000 out

+	B	d	BM	-	B	d	elev.
0.703	9.0	100.0		5.981	9.0	100.0	
2.618	9.0	100.0		6.127	9.0	100.0	
3.321				12.108			

289.323 N.W. bolt Light Mast of University  
 289.339 = sec book second page 25  
 -0.016 = error

289.333 = bench book record

289.344 = corrected Elev.

Feb 7, 1908.

Weather - Windy + Clear

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

K&E Precise Level # 15405

2 piece Rod

+	B	d	BM	-	B	d	elev.
1.713	9.0	200.0	298.110	6.227	9.0	200.0	
3.201	9.0	150.0	<sup>5th Univ.</sup> See page 6	5.127	9.0	150.0	
4.720	12.0	250.0		3.286	12.0	250.0	
4.140	12.0	137.0		5.836	12.0	137.0	
				0.000	12.0	153.2	295.311
3.953	12.0	153.2		4.381	12.0	153.2	290.980
4.229	12.0	162.5		3.601	12.0	162.5	
				0.000	11.0	156.0	296.224
4.616	11.0	156.0		3.968	11.0	156.0	292.256
2.941	11.0	163.0		6.123	11.0	163.0	
4.341	11.0	125.5		5.069	11.0	125.5	288.346
33.854				43.618			

Brass tack cor. house SE cor. Washington + 2nd  
about 5' above ground.

Brass tack sw cor. of house #4082 First  
about 4' above ground.

50' from  
Splice fence post near ground for. Wash. Albatross

Feb. 8, 1908.

Weather - Windy + Clear

Wheeler - Observer  
Elsworth - Rod.  
Thomas - Chain

K+E Precise Level # 15105

2 piece Rod

+	B	d	B.M.	-	B	d	elev.
0.830	11.5	161.0	288.346	4.680	11.5	145.0	
2.408	12.5	173.5	Spike cap. Wash. + Albatross See page 8	6.910	12.5	173.5	
1.085	12.5	96.8		6.555	12.5	96.8	
3.640	12.5	192.0		5.048	12.5	192.0	
3.109	12.0	177.2		0.000	12.0	177.2	276.225
4.659	11.5	196.0		5.160	12.0	177.2	Copper Tack S.E. cor. house about 4' ground N.E. cor. Washington + Eagle
4.092	11.5	188.9		1.510	11.5	196.0	
4.729	11.0	255.0		6.760	11.5	188.9	
6.169	10.5	200.0		0.500	11.0	255.0	
5.689	10.5	165.0		0.000	10.5	200.0	281.944
2.615	10.5	295.0		3.160	10.5	200.0	Copper Tack SW cor. barn NW cor. Gettys + Ingle
4.213	11.0	250.0		2.175	10.5	165.0	278.784
1.957	11.0	306.0		4.087	10.5	295.0	Spike in tele. pole across street from above
6.969	11.0	181.0		4.420	11.0	235.0	280.619
0.151	11.0	129.0		4.221	11.0	306.0	Spike in Pole near forks of road in front of Sessions S.D. Nursery
1.961	11.0	173.0		2.709	11.0	181.0	
54.276				6.701	11.0	129.0	
				5.910	11.0	188.0	
				70.506			

+	B	d	BM	-	B	d	elev.
5.637	11.0	257.2		4.770	11.0	257.2	
2.560	11.0	110.5		3.383	11.0	110.5	272.160
				0.000	11.0	110.5	275.543
8.197							

Spike in root Eucalyptus tree cor.

Wetherby + Ft. Stockton Drive

Copper Tack in tele. pole near above

Feb. 11 1908

Weather - Windy + Cldy.

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H+E Precise Level #15105

2 piece Rod

All stations in soft ground no pavements

Route from BM out Wash. to Jackdaw thence to  
Getti thence to Ft. Stockton Drive thence to  
Madrona + Wetherby.

+	B	d	BM	-	B	d	elev.
5.776	11.5	166.0	278.784 Spike Betti + Ingols see page 9	3.140	11.5	166.0	
0.991	12.0	168.5		6.726	12.0	168.5	
1.226	12.0	113.0		6.587	12.0	113.0	
4.477	11.5	121.0		4.827	11.5	121.0	
5.460	11.5	129.5		0.431	11.5	129.5	275.003 ✓ Tap head spike NW cor. fence post Catholic Cemetery
				0.000	11.5	168.0	280.150 ✓ Copper Tack in pole 4 1/2' from ground near above
5.147	11.5	168.0		4.744	11.5	168.0	
4.385	11.0	169.5		6.780	11.0	169.5	
0.120	11.5	50.0		6.930	11.5	50.0	
1.050	11.5	50.0		6.652	11.5	50.0	
1.997	11.5	40.0		7.000	11.5	40.0	
1.439	11.5	35.0		6.719	11.5	35.0	
				0.000	11.5	80.0	250.590 ✓ Cap. Tack SE cor. barn 2' ground Peterbaugh + M'Hee
0.274	11.5	75.0		6.160	11.5	75.0	244.430 ✓ Spike fence post 3rd from corner post above property
0.188	11.5	64.0		5.823	11.5	64.0	
2.281	11.5	33.5		7.038	11.5	33.5	
1.100	11.5	30.0		6.803	11.5	30.0	
0.577	11.5	30.0		6.963	11.5	30.0	
36.488 ✓				93.323 ✓			

+	B	d	BM	-	B	d	elev.
1.532	11.5	20.0		6.982	11.5	20.0	216.499 Tie pin

Feb 12 1908

Weather - High wind

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

K+E Precise Level #15105

2 piece Rod

All stations inground soft from recent  
 rains - Route from BM out Getti to Stephens  
 thence to McKee thence to California thence  
 to Harasity x

+	B	d	BM	-	B	d	elev.
1.178	12.0	20.0	216.499 Tie pin	6.877	12.0	20.0	
0.516	12.0	30.0	See page 12	0.690	12.0	30.0	
0.703	13.0	30.0		5.094	13.0	30.0	
0.110	12.5	30.0		7.056	12.5	30.0	
0.396	12.5	30.0		6.990	12.5	30.0	
1.274	12.0	30.0		7.002	12.0	30.0	
1.257	12.0	25.0		7.012	12.0	25.0	
1.063	12.0	25.0		6.381	12.0	25.0	
0.702	12.0	25.0		6.876	12.0	25.0	
0.489	11.5	25.0		7.067	11.5	25.0	
0.301	11.5	25.0		6.981	11.5	25.0	
1.842	11.5	20.0		7.052	11.5	20.0	
1.479	11.5	20.0		7.050	11.5	20.0	
0.284	11.0	20.0		7.037	11.0	20.0	
0.267	11.0	20.0		6.762	11.0	20.0	
0.656	11.0	20.0		6.527	11.0	20.0	
12.517 ✓				102.452 ✓			



+	B	d	BM	-	B	d	elev.
1.122	11.0	20.0		6.882	11.0	20.0	
0.202	10.5	35.0		6.681	10.5	35.0	
2.522	10.5	30.0		6.950	10.5	30.0	
0.988	10.5	20.0		6.800	10.5	20.0	
1.699	10.5	15.0		6.067	10.5	15.0	
0.927	10.5	20.0		6.650	10.5	20.0	
0.668	10.5	30.0		6.817	10.5	30.0	
0.414	10.5	40.0		6.860	10.5	40.0	
1.000	10.5	30.0		0.000	10.5	30.0	82.395 Cap. Tack Pole NW cor California + M'Kee
				6.189	10.5	30.0	76.206 Head Spike bottom above Pole
1.125	10.5	50.0		6.893	10.5	50.0	
1.688	10.5	158.0		6.700	10.5	158.0	
0.090	10.5	165.0		6.968	10.5	165.0	58.548 Head Spike Pole California + LA + SDBRR track
12.745				80.457			

All stations in ground soft from recent rains -  
 Extremely steep hillside - Route from Tie Pin down M'Kee  
 to California thence LA + SDBRR,

Feb 13 1908

Weather - Wind & Cold

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

K + E Precise Level #15105

2 piece Rod

Note: - Feb 18 This BM seems to have been tampered  
 with & hence is now unreliable J.D.W.

+	B	d	BM	-	B	d	elev.
6.980	12.5	82.0	58.548	0.454	12.5	66.0	
6.352	12.5	41.5	Cal + EA + SDB RR see page #14	0.158	12.5	41.5	
6.358	12.0	54.5		0.161	12.0	70.5	
5.918	12.0	55.0		0.529	12.0	55.0	
5.588	12.0	150.0		6.860	12.0	145.0	
0.256	11.5	105.0		5.514	11.5	105.0	
0.650	11.5	188.0		1.613	11.5	188.0	
5.156	11.0	162.0		0.280	11.0	152.0	
6.749	11.0	83.0		0.530	11.0	133.0	
5.585	10.0	300.0		0.765	10.0	265.0	
5.264	10.0	181.0		5.470	10.0	181.0	
2.312	10.5	132.8		3.982	10.5	132.8	
4.422	10.5	160.0		3.727	10.5	160.0	
5.603	10.5	60.0		1.232	10.5	60.0	
5.987	10.5	45.0		0.882	10.5	45.0	
6.811	10.5	182.0		0.648	10.5	182.0	
79.991				32.804			

86.456 Hd. Spike gutter Trolley Pole India x Vine

+	B	d	BM	-	B	d	elev.
				0.000	10.5	191.0	111.179
5.444	10.5	191.0		3.703	10.5	191.0	Cap. Taal cor. post porch 2932 India
1.387	10.5	222.0		3.708	10.5	222.0	
3.087	10.5	126.2		7.009	10.5	120.0	
1.170	10.5	99.3		6.511	10.5	105.5	95.892 Hd. Spike gutter Trolley Poles. sw. cor India + Nutmeg
11.088				20.931			

All stations on ground—  
Route from BM up Harasty to India  
thence to Nutmeg

Feb. 14, 1908.

Weather - Cl. + Calm

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K + E Precise Level # 15105  
2 piece Rod

+	B	d	BM	-	B	d	elev.
2.057	12.0	90.0	95.892 Indiae N. Hwy	6.958	12.0	72.0	
1.116	11.5	78.5	see page 16	6.129	11.5	78.5	
2.140	11.5	95.0		7.026	11.5	81.0	
0.151	11.0	52.0		6.568	11.0	66.0	
1.154	11.0	46.0		6.917	11.0	46.0	
0.578	10.5	48.0		6.321	10.5	83.0	
				0.000	10.0	95.0	
2.343	10.0	95.0		7.094	10.0	88.0	Cap. Tackoon, post porch 2160 India
0.481	10.0	130.0		7.099	10.0	155.0	
4.201	10.5	196.0		1.781	10.5	196.0	
3.435	10.0	60.0		0.967	10.5	60.0	56.788 Nozzle hyd. India + Juniper
17.656		890.5		56.760		925.5	

All stations on ground.  
Route from BM on India to  
Juniper.

Saturday Feb 15 1908

Weather - Wind & Clear  
Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K & E Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
0.447	12.0	200.0	56.788 Indian Juniper	3.119	12.0	200.0	
4.000	12.0	250.0	see page 17	5.007	12.0	250.0	
3.878	11.5	125.5		4.819	11.5	125.5	
5.549	11.5	150.0		2.952	11.5	143.0 <sup>⑤</sup>	
2.948	11.5	143.0		2.960	11.5	143.0	54.753 <sup>✓</sup> Hd. Spike Pole gutter NE cor. India + Fir
3.570	11.0	143.0 <sup>⑤</sup>		5.512	11.0	150.0	
3.013	10.5	143.0 <sup>⑤</sup>		5.209	10.5	150.0	
0.882	10.5	143.0 <sup>⑤</sup>		7.040	10.5	150.0	
1.790	10.5	164.0		6.738	10.5	150.0 <sup>⑤</sup>	
2.520	10.5	150.0		6.543	10.5	150.0	
1.011	10.5	150.0		6.936	10.5	150.0	
1.750	10.5	177.0		6.546	10.5	177.0	24.765 <sup>✓</sup> NE bolt Light Mast cor. India + A
3.670	10.5	159.5		4.027	10.5	159.5	
6.121	10.5	224.0		2.400	10.5	224.0	
4.440	11.0	125.0		2.724	11.0	125.0	
5.855	11.5	205.0		0.588	11.5	205.0	
51.444 <sup>✓</sup>				73.120 <sup>✓</sup>			

+	B	d	BM	-	B	d	elev.
6.847	12.0	173.5		5.069	12.0	173.5	
5.101	1 dir. obj.	57.5		0.000	1 dir. obj.	57.5	42.000
11.948				5.069			41.991 USC+G.P.B.M. Court House
							-0.009 = error closing polygon not distributed

Route from BM on India  
to B thence to Columbia thence to  
C thence to Front thence to Court  
House USC+G.P.B.M.

Polygon #2

Feb. 17, 1908.

Weather - Calm + Partly Cldy.

Wheeler - Observer  
Elsworth - Rod.  
Thomas - Chain

K+E Precise Level #15105  
2 piece Rod

+	B	d	BM	-	B	d	elev.
2.490	12.0	178.5	76206 Calif. v M <sup>o</sup> Kee See page 14	5.348	12.0	178.5	
6.192	11.0	122.0		2.878	11.0	122.0	
6.423	10.0	123.0		2.443	10.0	123.0	
				0.000	9.5	124.0	86.324
5.682	9.5	124.0		0.282	9.5	124.0	86.042
							Cap. Tack 3' ground Pole 1100' NW BM Calif. v M <sup>o</sup> Kee La Jolla Ave Near Noell St. Hd. Spike W side Pole 2' ground as above
3.071	9.0	180.0		1.354	9.0	180.0	
5.021	9.0	190.0		1.068	9.0	190.0	
3.619	9.0	237.0		6.978	9.0	107.0	
				0.000	8.5	250.0	67.649
0.083	8.5	120.0		6.910	8.5	250.0	60.739
							San Diego Arc. Cap. Tack 7' ground cable braced Pole CORV Ground nr. Connors House Hd. Spike W side ground above Pole
0.208	8.5	177.0		6.980	8.5	177.0	
0.989	9.0	140.0		6.664	9.0	140.0	
0.809	8.5	72.0		6.747	8.5	72.0	
2.067	8.5	155.0		7.073	8.5	155.0	
0.927	9.0	91.0		6.502	9.0	64.0	
				0.000	10.0	80.0	53.228
0.668	10.0	53.0		6.885	10.0	80.0	46.343
							Cap. Tack Pole 7' ground E opposite ruins Old Town Jail Hd. Spike E ground - above Pole
1.031	10.0	98.0		7.020	10.0	98.0	
2.560	11.0	245.0		2.620	11.0	288.0	40.294
							Tie pin
41.840				77.752			

+ B d BM - B d elev.

21

Route from BM out California  
to La Jolla Ave. thence to Witherby St. thence  
to Congress St. thence to Arista St. thence to  
Payne St. Tie Pin

Feb. 18, 1908

Weather - Warm - clear - Calm

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K+E Precise Level # 15105

2 piece Rod



+	B	d.	BM	-	B	d	elev.	
				0.000	11.0	207.0	41.439	San Diego Ave. Cap. Taak W Pole ground S Bright Church Foundation
1.145	11.0	293.0	40.294 Tie Pin	2.740	11.0	207.0	38.699	Page St Old Town Hd. Spike W ground Pole as above
2.247	11.0	200.0	See page 20	6.740	11.0	200.0		
0.617	10.5	150.0		7.081	10.5	107.0		
3.634	10.5	100.0		1.093	10.5	143.0		
				0.000	10.0	140.0	36.399	Cap. Taak W Pole ground } Pole nr. Old Mission Olive Factory fence
6.116	10.0	140.0		5.189	10.0	140.0	31.210	Hd. Spike W ground } cor. San Diego + Juan Sts.
0.345	10.0	70.0		6.825	10.0	70.0		
0.489	10.0	80.0		6.800	10.0	80.0		
0.939	9.0	173.0		3.669	9.0	173.0		
4.061	9.0	85.0		0.184	9.0	56.0		
6.218	9.0	20.5		0.688	9.0	49.5	25.096	Hd. Spike Fire Hyd. Support W ground Whitman + Short
2.695	9.0	175.0		6.881	9.0	175.0		
1.752	9.0	72.5		6.622	9.0	72.5		
				0.000	9.5	151.5	17.970	Cap. Taak NW 4' } White Pole W side Taylor St. nr. old
1.930	9.5	151.5		4.348	9.5	151.5	13.622	Hd. Spike W ground } Palms 500' from bridge
6.187	9.0	145.0		1.137	9.0	145.0		
3.761	9.5	95.0		1.530	9.5	95.0		
4.470	10.0	330.0	See page 24	5.745	10.0	353.0	19.828	Tie Pin
46.606				67.072				

+ B d BM - B d elev.

Route from BM Tie Pin out  
 Payne St. to San Diego St. thence  
 to Whitman thence to Short thence  
 to Taylor thence to Bridge over  
 San Diego River to Tie Pin.

Feb 19 1908

Weather - Cldy. + Calm

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

M + E Precise Level #15105  
 2 piece Rod

+	B	d	BM	-	B	d	elev.
4.510	11.0	223.0	19.828 Tie Pin	3.960	11.0	177.0	see page 22
4.437	11.0	200.0	see page 22	4.502	11.0	200.0	
4.040	11.0	173.0		4.527	11.0	173.0	19.826 Hd. Spike City Hyd. on E side Old Town Dyke ground w support
5.369	11.0	200.0		4.660	11.0	200.0	
5.711	11.0	200.0		1.280	11.0	200.0	
				0.000	11.0	237.0	29.011 Cap. Tack 2 ground w
4.045	11.0	237.0		2.339	11.0	237.0	26.672 Hd. Spike ground w } Pole La Jolla Road opposite Foremans House Hardy Abatoir
5.000	11.0	300.0		4.928	11.0	300.0	26.744 Tie Pin "A"
2.210	11.0	300.0		4.820	11.0	300.0	
2.880	11.0	200.0		6.724	11.0	200.0	
0.416	11.0	125.0		7.023	11.0	125.0	
0.782	11.0	200.0		3.338	11.0	200.0	
5.880	11.0	200.0		2.513	11.0	200.0	
				0.000	11.5	160.0	19.715 Cap. Tack 2 ground w
5.220	11.5	160.0		2.457	11.5	160.0	17.258 Hd. Spike ground w } Pole N end of wood bridge N of Hardy Abatoir.
1.602	11.5	208.0		3.210	11.5	208.0	15.650 Tie Pin
52.103				56.281			

+ B. d BM - B d elev.

Route from BM San Diego River  
 Bridge out La Jolla Road to  
 Tie Pit x

Feb. 29, 1907.

Weather - Cldy - showers - calm.

Wheeler - Observer  
 Elsworth - Rod  
 Thomas - Chain

M + E Precise Level #15105  
 2 piece Rod

+	B	d	BM	-	B	d	elev.
4741	11.0	180.0	15.650	0.217	11.0	180.0	
6.120	10.5	58.0	Tie Pin See page 24	0.060	10.5	58.0	
6.635	10.5	64.0		0.510	10.5	64.0	
6.382	10.0	66.0		0.306	10.0	66.0	
6.134	10.0	45.0		0.247	10.0	45.0	
6.006	10.0	53.0		0.464	10.0	53.0	
5.638	9.5	150.0		0.000	9.5	150.0	55.502 Cap. Tack 1/4 ground E
3.669	9.5	150.0		3.669	9.5	150.0	51.833 Hd. Spille ground E } Pole Top of hill along fence 9th pole from BM Wood Bridge
3.669	9.5	150.0		3.331	9.5	150.0	
1.959	10.5	150.0		5.970	10.5	150.0	
1.797	10.5	100.0		6.845	10.5	76.0	
0.273	10.5	65.0		6.754	10.5	89.0	
0.650	10.5	150.0		6.895	10.5	100.0	
1.456	10.0	150.0		6.782	10.0	150.0	
0.863	10.5	83.0		0.000	10.5	133.0	25.923 Cap. Tack 1/6 ground W } Pole at turn La Jolla Road near LA & SDBRR Morena
3.000	10.5	214.0		5.913	10.5	133.0	20.010 Hd. Spille ground W
2.330	11.0	325.0		5.232	10.5	214.0	
57.653				0.000	11.0	325.0	20.108 Cap. Tack 1/5 ground E } 2nd Santa Fe Pole S of Switch block Morena Station
				5.290	11.0	325.0	14.818 Hd. Spille ground E
				58.485			

Route from Wood Bridge out La Jolla  
Road to Morena RR Station

Feb. 21, 1908.

Weather - clear + Wind

Wheeler - observer  
Elsmerth - Rod  
Thomas - Chain

K+E Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
6.130	11.0	75.0	25.096	0.088	11.0	71.0 <sup>Ⓢ</sup>	
6.826	11.0	35.0	Whitman- Short Sts. See page 22	0.201	11.0	35.0	
6.654	10.5	35.0		0.030	10.5	35.0	
6.963	10.5	35.0		0.047	10.5	29.0 <sup>Ⓢ</sup>	
6.744	10.5	20.0 <sup>Ⓢ</sup>		0.044	10.5	38.0	
6.586	10.0	40.0 <sup>Ⓢ</sup>		0.089	10.0	32.0 <sup>Ⓢ</sup>	
6.418	10.0	20.0 <sup>Ⓢ</sup>		0.038	10.0	35.0	
6.627	9.5	35.0 <sup>Ⓢ</sup>		0.154	9.5	42.0	
7.053	9.5	30.0 <sup>Ⓢ</sup>		0.170	9.5	37.0	
6.881	10.0	35.0 <sup>Ⓢ</sup>		0.072	10.0	35.0	
7.008	10.0	30.0 <sup>Ⓢ</sup>		0.076	10.0	33.0	
6.772	10.0	25.0 <sup>Ⓢ</sup>		0.081	10.0	40.0	
7.084	10.0	35.0 <sup>Ⓢ</sup>		0.357	10.0	35.0	
6.418	10.0	21.0 <sup>Ⓢ</sup>		0.155	10.0	51.0 <sup>Ⓢ</sup>	
6.175	10.0	30.0		0.094	10.0	24.0 <sup>Ⓢ</sup>	
7.017	10.0	51.0		0.072	10.0	40.0 <sup>Ⓢ</sup>	
107.356 <sup>✓</sup>		550.0 <sup>✓</sup>		1.768 <sup>✓</sup>		612.0 <sup>✓</sup>	

+	B	d	BM	-	B	d	elev.
7.022	10.5	31.0		0.171	10.5	54.0	
5.918	10.5	19.0		0.101	10.5	28.0	
6.537	11.0	35.0		0.069	11.0	37.0	
6.898	11.0	34.0		0.044	11.0	28.0	
6.782	11.0	33.0		0.144	11.0	25.0	
4.722	11.0	50.0		1.563	11.0	18.0	166.471 Tie Pin
37.879 <sup>✓</sup>		202.0 <sup>✓</sup>		2.092 <sup>✓</sup>		190.0 <sup>✓</sup>	

Route on steep hillside from  
BM over Ft. Stockton Drive to  
Tie Pin x

F.S. Residual = 50'

Feb. 24 1908.

Weather - High Wind - clear

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K+E Precise Level #15105  
2 piece Rod



+	B	d	BM	-	B	d	elev.
6.884	11.0	58.0	166.471	0.135	11.0	32.0	⑤
6.478	10.5	22.0	Tie Pin See page 29	0.072	10.5	37.0	
6.379	10.0	28.0		0.200	10.0	36.0	
6.505	10.0	38.0		0.123	10.0	62.0	⑤
5.894	10.0	71.0		0.195	10.0	38.0	⑤
6.349	10.0	32.0		0.073	10.0	36.0	⑤
5.416	9.5	96.0		0.141	9.5	24.0	⑤
6.688	9.0	36.0		0.173	9.0	39.0	
6.205	9.0	25.0		1.150	9.0	50.0	221.007 Hd. spike cor. fence post ground 2' Groff Place Summit Ft. Stockton Drive
6.376	8.5	183.0		0.170	8.5	103.0	⑤
6.815	9.5	30.0		0.182	9.5	27.0	
6.364	10.0	43.0		0.107	10.0	59.0	
4.680	9.5	43.0		0.069	9.5	65.0	⑤
6.131	9.5	43.0		0.040	9.5	33.0	⑤
6.282	10.0	98.0		0.204	10.0	74.0	⑤
5.892	10.0	139.0		1.638	10.0	150.0	
92338		985.0		4.672		965.0	

+	B	d	BM	-	B	d	elelev.
6,118	10.0	122.0		0,070	10,0	132.0	
5,230	10.0	62.0		2,218	10,0	52.0	270.197 Hd. spike cor. fence post Dr. Menier Place Ft. Stockton Drive.
5,447	10.0	107.0		1,706	10,0	259.0	
2,820	10.5	132.0		6,253	10,5	106.0	
1,731	10.5	274.0		0,101	10,5	148.0	272.160 272.135 Spike Wetherby + Ft. Stockton Drive see page 10 - 0.025 = diff. - 0.012 = final correction applied to Residual - 0.013 = error in closing Polagon #3 not distributed
21,346		697.0		10,348		697.0	

Route from Tie Pin on Ft. Stockton  
Drive to BM in tree cor. Ft. Stockton  
Drive + Wetherby Sts.

Polagon #3

B.S. Residual = 20'

Correction Residual for Polagon = F.S. 30'

Feb. 25, 1908.

Weather - High Wind - clear

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chair

K+E Precise Level # 15105  
2 piece Rod

+	B	d	BM	-	B	d	elev.
6.070	11.0	300.0	14.818 Morena Station	6.270	11.0	300.0	
2.240	10.5	250.0	See page 26	5.178	10.5	250.0	
3.693	10.0	200.0		1.362	10.0	200.0	
				0.000	9.5	219.0	20.768
6.757	9.5	219.0		2.180	9.5	219.0	18.588
							Cp. Tac Mc ground E } Corner Pole W side Road where line of Poles Hd. Spitze ground E } crosses RR Track N of Morena Station
0.028	5.0-Obj.	88.8		5.297	5.0-Obj.	88.8	
3.628	9.0	168.0		3.389	9.0	168.0	
1.882	8.5	200.0		0.970	8.5	200.0	
5.982	8.0	150.0		3.077	8.0	150.0	
1.784	8.0	117.0		5.240	8.0	117.0	
1.742	8.0	183.0		2.971	8.0	221.0	
2.438	8.5	197.0		2.017	8.5	144.0	
3.420	9.0	135.0		4.073	9.0	165.0	
3.637	9.0	200.0		3.965	9.0	200.0	
3.081	9.5	229.0		3.014	9.5	229.0	12.197 Tie Pin
46.582				49.002			
3.738	10.5	166.0		0.633	10.5	66.0	
		2802.9				2717.8	

Route from BM along  
La Jolla Road to Tie Pin

Stations mostly in soft ground  
heat waves bad.

Feb. 26 1908

Weather - Heat Waves - clear

Wheeler - Observer  
Elsworth - Rod  
Thomas - chain

K & E Precise Level #15105  
2 piece Rod

+	B	d	BM	-	B	d	elev.
3.417		103.0	12,197 Tie Pin	0.307		103.0	
1.668		203.0	See page 32	3.285		203.0	
4.149		184.0		5.050		184.0	12.789
5.695		125.0		2.210		125.0	
6.042		194.0		3.637		194.0	
1.932		201.0		5.187		201.0	15.424
3.070		200.0		3.943		200.0	
4.737		200.0		4.040		200.0	
3.821		148.0		3.595		148.0	
4.244		200.0		2.821		200.0	
5.806		188.0		1.562		188.0	
3.960		150.0		1.789		150.0	
4.400		126.0		2.791		126.0	

error between  
these points  
Line run

Route from Tie Pin along  
Lower Road to Mission Bay Park  
to USC + GPBM

Stations in soft ground high  
wind x

Line abandoned + rerun under  
more favorable conditions

See pages 36 + 37

Mar. 2 1908.

Weather - High Wind - cold

Wheeler - observer  
Elsworth - Rod  
Thomas - Chain

H + E Ord. Y Level # 14906

2 piece Rod

+	B	d	BM	-	B	d	elev.
0.507		75.0	18.588	5.837		75.0	
4.264		255.0	Morena Station See page 32	5.443		255.0	
3.072		245.0		3.480		245.0	
3.033		212.0		2.232		212.0	
3.194		225.0		3.292		225.0	
4.217		200.0		4.580		200.0	
3.713		167.0		2.568		167.0	
2.982		190.0		4.418		190.0	
5.330		225.0		1.743		225.0	
1.812		225.0		3.420		225.0	
3.610		185.0		4.516		185.0	12.793 Hd. spike Pole front Rice Place Lower Road ground.
5.041		125.0		1.550		125.0	
6.098		193.0		3.702		193.0	
1.672		202.0		4.940		202.0	15.412 Hd. spike Pole N Slader Place Lower Road ground
2.953		193.0		3.664		193.0	
4.391		128.0		4.052		128.0	
55.889				59.437			

+	B	d	BM	-	B	d	elev.
4192		225.0		3.760		225.0	
4224		200.0		2.730		200.0	
6290		188.0		2.020		188.0	21,236 Hd. spike ground white Pole NE cor. Magnolia & Grand Ave.
3898		150.0		1.998		150.0	
4779		126.0		2.896		126.0	25.000 25.019 U.S.C. + G.P.B.M. American Park +0.019 = error line from Court House
23383'				13.404'			

Route from BM Morena  
over Lower Road to U.S.C. + G.P.B.M.  
at American Park

Mar. 3, 1908,

Weather - Calm + Cloudy

Wheeler - observer  
Elsworth - Rod  
Thomas - Chain

NE ORD. LEVEL # 14906

2 piece Rod



+	B	d	BM	-	B	d	elev.
1863		176.0	116.576	6.470		176.0	
- 0.192		38.0	Lt. Mast 4 <sup>th</sup> + Cedar. See page 2	1.560		38.0	110.601 Hd. spike blk Pole ground SW cor 3 <sup>rd</sup> + Cedar
1.560		38.0		5.507		38.0	
0.088		30.0		6.444		30.0	
- 1.678		50.0		4.803		50.0	97.173 Hd. spike wht Pole ground NE cor 2 <sup>nd</sup> + Cedar
1.009		66.0		7.074		76.0	
0.066		42.0		6.688		32.0	
0.321		54.0		6.395		54.0	
- 2.188		56.0		6.646		56.0	73.954 Hd. spike Phone Pole ground NW cor 1 <sup>st</sup> + Cedar
- 1.430		100.0		6.927		100.0	68.457 Hd. spike Phone Pole ground NE cor Front + Cedar
0.437		225.0		7.017		225.0	
- 1.180		196.0		2.135		196.0	60.922 Hd spike Elect Pole ground SW cor Front + Beech
- 2.135		196.0		3.128		196.0	59.927 NW bolt fire hyd. SE cor Front + Ash
0.733		169.0		6.718		169.0	
- 0.373		150.0		1.141		150.0	53.176 Hd spike ground Elect Pole SW cor Front + A
- 1.141		150.0		6.656		150.0	47.661 Hd spike ground Pole SW cor Union + A
16.394				85.309			

S +	B	d	BM	-	B
2.262		94.0		5.754	
0.400		122.0		6.985	
0.084		63.0		5.180	
0.072		123.0		6.601	
3.356		26.0		4.567	
6.174				29.087	

Route from BM on Cedar to  
Front thence to Athens to  
India

d	elev.
94.0	44.169 Noz Hyd Sec of Columbia + A
122.0	
63.0	
123.0	
26.0	24.765 24.748 Lt. Mast India + A - 0.017 = ERROR

Mar. 5, 1908.

Weather - windy + cold

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K + E Ord Level # 14906

2 piece Rod

+	B	d	BM	-	B
5.004		173.0	169.5770	4.938	
0.017		150.0	4th + Fir See page 3	7.026	
0.452		20.0		3.483	
3.482		20.0		6.412	
0.668		33.0		7.052	
1.263		33.0		6.840	
2.378		33.0		3.343	
6.422		130.0		2.722	
0.310		75.0		1.181	
1.191		75.0		5.485	
1.008		35.0		6.991	
0.001		39.0		6.384	
1.512		33.0		6.031	
1.521		97.0		6.860	
0.130		76.0		6.245	
0.248		75.0		6.857	
				6.711	
25.608				88.316	

d	elev.	
173.0	169.643	Hd spike root tree NW cor 3rd + Fir
150.0		
20.0	159.603	Hd spike sp. Pole ground SW cor 2nd + Fir
20.0		
33.0		
33.0		
33.0	143.748	Hd spike ground Pole NE cor 1st + Fir
130.0		
75.0	146.577	Hd spike Phone Pole ground NW cor 1st + Grape
50.0		
60.0		
39.0		
33.0	125.398	Hd spike ground Pole NE cor Front + Grape
97.0		
76.0	113.944	Hd spike ground Pole NE cor Albatross + Grape
76.0		
70.0		

+	B	d	BM	-	B
1.456		97.0		5.899	
0.519		86.0		6.457	
0.523		77.0		6.859	
0.176		54.0		5.882	
2.054		65.0		6.586	
0.589		45.0		6.708	
0.572		70.0		6.648	
0.303		62.0		6.900	
0.091		55.0		6.474	
6.283 <sup>d</sup>				58.413 <sup>d</sup>	

Route from BM on Fir to 1<sup>st</sup>  
 thence to Grape thence to Albatross  
 thence to Fir thence to India

d	elev.	
97.0	102.426	Noz fire hyd NE cor Albatross + Fir
86.0	96.488	Hd spike ground Pole sw cor Union + Fir
77.0		
54.0	84.446	Hd spike ground Trolley Pole NE cor State + Fir
65.0		
45.0		
70.0	67.719	Hd spike ground B need Pole sw cor Columbia + Fir
62.0	54.753	
55.0	54.739	BM India + Fir
	-0.014	error

Mar 6 1908

Weather - wind + cool

Wheeler - observer  
 Elsworth - Rod  
 Thomas - chain

H + F Ord Level # 14906

2 piece Rod

+	B	d	BM	-	B
2.015		112.0	24765	6183	
1.217		131.0	Indio + A See page 18	5820	
4.936		188.0		3219	
5.158		200.0		1822	
3.677		250.0		2922	
6.138		210.0		4901	
5.354		100.0		3965	
28.495				28832	

Route from BM on A to California  
thence to Fir

d	elev	
112.0	20597	Noz. hyd SE cor California + A
131.0	15994	Hd spille ground Santa Fe road Pole NE cor California + A
188.0	17711	Hd spille ground Santa Fe Pole NE cor California + Ash
200.0	21047	Hd spille ground Santa Fe Pole NE cor California + Beech
250.0	21802	Hd spille Santa Fe road Pole NE cor California + Cedar
210.0		
100.0	24428	Hd spille road Santa Fe Pole SE cor California + Fir

Mar. 7, 1908.

Weather - fair + calm

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

N + E Ord. Level #74906

2 piece Rod

+	B	d	BM	-	B	d	elev.
6.046		46.0	24.428 Calif. + Fir	1152		46.0	
6.564		35.0	See page 42	2021		35.0	
6.837		32.0		2404		32.0	
6.525		66.0		0282		66.0	
6.840		51.0		1356		51.0	
6.709		55.0		1968		55.0	
29.521				2183			54.753 54.766 BM India + Fir + 0.013 = error entire line pages 42 + 43
2.477		157.0	56.788 India + Juniper	4645		157.0	54.620 Hd spike ground Trolley Pole NE cor India + Ivy
6.961		56.0	See page 47	0071		56.0	
6.917		56.0		0013 6.120		56.0 87.0	68.737 Hd spike ground Trolley Pole NW cor Columbia + Ivy
6.443		87.0		0070		87.0	
6.914		56.0		0979		56.0	80.722 Hd spike ground Trolley Pole sw cor State + Ivy
7.017		197.0		1847		197.0	85.892 Hd spike sawed off Pole flush with walk sw cor State + Hawthorn
6.424		85.0		0089		85.0	
5.880		45.0		0590		45.0	
6.714		40.0		0104		40.0	
55.747				8408			

+	B	d	BM	-	B	d	elev
				0.407		75.0	105.937
2.217		75.0		2.248		75.0	Hdspittleground Pole s <sup>o</sup> r <sup>o</sup> Union & Hawthorn
2.720		170.0		5.205		170.0	101.611
6.415		74.0		0.341		74.0	Nbolt firchyd s <sup>o</sup> r <sup>o</sup> Union & Grape
6.910		63.0		0.514		63.0	
3.221		55.0		3.336		55.0	113.958
21.485				11.044			113.966
							+0.008 = error see page 47

Heat Waves

Route 1<sup>st</sup> Line from BM on Fir to IndiaRoute 2<sup>nd</sup> Line from BM on India

to Ivy thence to State thence to

Hawthorn thence to Union thence to

Grape thence to Albatross

Mar 9 1908

Weather - Calm &amp; Clear

Wheeler - observer  
 Elsworth - Rod  
 Thomas - Chain

K + E Ord Level # 14906

2 piece Rod

+	B	d	BM	-	B	d	elev.
0.618		82.0	258.254	6.970		82.0	
1.224		98.0	5 <sup>th</sup> Laurel Seepage <sup>25</sup>	4.682		98.0	
0.265		141.0		0.338		141.0	248.371 NW cor 4 <sup>th</sup> Laurel Pole hd spike ground
0.338		141.0		6.273		141.0	242.436 SW cor 3 <sup>rd</sup> Laurel Pole hd spike ground
1.144		109.0		6.482		109.0	
0.730		138.0		1.753		138.0	236.075 SE cor 2 <sup>nd</sup> Laurel hd spike ground Pole
1.753		138.0		6.524		138.0	
1.114		80.0		2.416		80.0	230.002 1 <sup>st</sup> Laurel NE cor hd spike Pole ground
2.416		80.0		6.602		80.0	
0.946		130.0		7.005		130.0	
0.481		115.0		2.742		115.0	217.496 1 <sup>st</sup> Kalmia NW cor hd spike Trolley Pole ground
2.742		115.0		6.770		115.0	
0.560		120.0		4.861		120.0	209.167 1 <sup>st</sup> Juniper secor star Tap fire hyd
0.020		75.0		6.592		75.0	
0.416		80.0		6.881		80.0	
1.976		42.0		5.865		42.0	192.241 1 <sup>st</sup> Ivy SW cor hd spike Trolley Pole
16.743				82.756			



+	B	d	BM	-	B	d	elev.
2.430		66.0		6.847		66.0	
0.149		31.0		6.969		31.0	
1.441		70.0		6.923		70.0	
0.166		40.0		2.157		40.0	173.531 ✓
2.157		40.0		5.069		40.0	1 <sup>st</sup> Hawthorn NE cor. 1 <sup>st</sup> spittle Tralley Gate
0.530		48.0		6.844		48.0	
0.690		55.0		5.500		55.0	
0.042		50.0		6.321		50.0	
2.036		75.0		5.990		75.0	
1.959		50.0		4.617		50.0	146.591 ✓
11.600 <sup>d</sup>				57.237 <sup>d</sup>			146.604 BM 1 <sup>st</sup> Grape +0.013 error

Route from B Mon Laurel to 1<sup>st</sup>  
thence to Grape

Mar 10 1908

Weather - Wind  
Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

N & E Ord Level # 14906

2 piece Rod

+	B	d	BM	-	B	d	elev.
4.048		162.0	101.611 Union + Grape	3.055		162.0	
4.140		75.0	See page 44	0.811		75.0	
0.811		75.0		5.856		75.0	
0.708		45.0		6.958		45.0	
0.807		51.0		6.520		51.0	
2.236		128.0		5.270		128.0	
5.270		128.0		5.921		128.0	
2.137		77.0		6.647		77.0	
1.620		55.0		6.510		55.0	
0.240		90.0		6.965		90.0	
0.676		45.0		6.905		45.0	
0.040		56.0		6.927		56.0	
3.173		157.0		4.552		157.0	
4.552		157.0		2.392		157.0	
30.458				75.289			

Line pages 43 + 44 Herun

56.788  
 56.780 / BM India + Juniper  
 - 0.008 error

Mar 11 1908

Party etc as page 46

+	B	d	BM	-	B	d	elev.
3842		160.0	24.765 India + A	4195		160.0	24.412 Noz. fire hyd NE cor India + B
2475		220.0	see page 18	3685		220.0	
5930		100.0		6418		100.0	22.714 Brass plug end return NE cor India + C
6418		100.0		2910		100.0	26.222 Columbia + C brass plug NW cor
6257		139.0		2685		139.0	29.794 State + C NW cor brass plug end return
5878		138.0		1856		138.0	33.816 Union + C NW cor brass plug end return
6604		135.0		3140		135.0	37.280 Front + C NW cor brass plug end return
5680		75.0		2776		75.0	40.200 40.184 BM Front + C
43.084				27.665			-0.016 = error
2776		75.0	40.200 Front + C	3378		75.0	
5132		67.0	see page #1	3946		67.0	40.784 1 <sup>st</sup> + C NW cor brass plug end return
6008		140.0		2523		140.0	44.269 2 <sup>nd</sup> + C NW cor brass plug end return
5852		140.0		2343		140.0	47.778 3 <sup>rd</sup> + C NW cor brass plug end return
6937		150.0		0942		150.0	53.773 4 <sup>th</sup> + C NW cor brass plug end return
4046		55.0		2148		55.0	55.669 55.671 BM 4 <sup>th</sup> + Chyd
30.751				15.280			+0.002 = error

+	B	d	BM	-	B
5133		106.0	55.669 4th + C	2.225	
5690		140.0	Scopys 1	2.029	
5500		140.0		2.922	
16.323				7.176	

Route 1<sup>st</sup> Line from BM on India  
to C thence to Front

Route 2<sup>nd</sup> Line from BM on C to 7<sup>th</sup>

d	elev.	
106.0	58.577	5 <sup>th</sup> + C NW cor brass plug end return
140.0	62.238	6 <sup>th</sup> + C NW cor brass plug end return
140.0	64.816	7 <sup>th</sup> + C NW cor brass plug end return

Mar 12 1908

Weather-

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K & E Precise Level #15105

2 piece Rod

+	B	d.	BM	-	B	d	elev.
0.603	7.0	90.0	25.000 USC+GPBM see page 37	7.025	7.0	110.0	
3.004	7.5	145.0		4.142	7.5	145.0	
2.840	8.0	145.0		3.580	8.0	125.0	
3.403	8.0	143.0		3.365	8.0	143.0	16.738 Mission Bay Park Hd sp M 7.8 P Pole E of Bridge Grand Ave
5.530	8.5	175.0		4.570	8.5	175.0	Tic Pit 10"
2.602	8.5	165.0		3.880	8.5	165.0	
4.680	9.0	164.0		5.170	9.0	164.0	
4.612	9.5	133.0		4.563	9.5	133.0	
6.673	9.5	130.0		3.372	9.5	130.0	19.280 Grand nr. Lee w side Hd sp pole opp. city hyd.
33.947				39.667			

Route from BM American Park on Grand  
Ave to BM near Lee St.

Mar. 13 1908

K+E Precise Level #15105

2 piece Rod

Wheeler - Observer  
Esworth - Rod  
Thomas - Chain

+	B	d	BM	-	B	d	elev.
6.770	11.0	106.0	19.280 ✓	0.496	11.0	106.0	
6.812	11.5	130.0	Grandm. Lee Seepage #50	0.503	11.5	130.0	
5.635	11.0	150.0		0.490	11.0	150.0	
5.895	11.0	139.0		1.979	11.0	139.0	
6.295	11.0	125.0		1.117	11.0	125.0	
6.982	11.0	131.0		1.398	11.0	131.0	
5.757	10.0	200.0		4.535	10.0	200.0	
3.155	10.0	150.0		0.817	10.0	150.0	
6.712	10.0	75.0		1.027	10.0	75.0	
4.552	10.0	200.0		2.015	10.0	200.0	
6.146	10.0	101.0		3.953	10.0	101.0	65.661 ✓ Lamont's Hardblend swear brass plug end return
6.110	10.0	178.0		0.062	10.0	178.0	71.709 ✓ Lamont's Garnet swear brass plug end return
4.567	11.0	200.0		5.033	11.0	200.0	
4.401	11.0	90.0		5.000	11.0	90.0	70.644 ✓ Garnet's Kendall swear brass plug end return
79.789			28.425 ✓				

Route from BM on Grand  
Ave. to Noyes thence to Hornblend  
thence to Lamont thence to Garnet  
thence to Hendall

Mar 16 1908

Weather - Calm & Cldy.

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

M+E Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
6284	11.0	273.0	70.644 Garnett Wendell	2.740		273.0	
6615	11.0	228.0	see page 51	0.398		228.0	
6759	11.0	97.0		0.858		97.0	
3570	11.0	250.0		6.810		250.0	
7033	11.0	205.0		0.680		205.0	89.419 Diamond Broadway NW cor hd split Pol/c grd.
0540	11.0	131.0		5.865		131.0	
3267	11.0	200.0		4.847		200.0	
1160	11.0	200.0		6.693		200.0	
2868	11.0	200.0		5.626		200.0	
3251	11.0	200.0		6.208		200.0	
1883	11.0	200.0		5.320		200.0	
5545	11.0	200.0		2.862		200.0	
5563	11.0	125.0		0.343		125.0	75.732 Missouri & Dawes NE cor hd split NW cor fence post grd.
0750	11.0	210.0		7.047		210.0	
0782	11.0	168.0		5.695		168.0	
55870				↓ 61.992			



+	B	d	BM	-	B	d	elev.
1.017	11.0	160.0		6.000	11.0	160.0	
1.230	11.0	180.0		6.706	11.0	180.0	54.065 Bayard & Missouri NE cor hd spk Pole grd.
2.247				12.706			

Route from BM on Garnet  
to Broadway thence to Diamond  
thence to Dawes thence to Missouri  
thence to Bayard

Mar. 17. 1908.

Weather - Calm & Cldy.

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H. & E. Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
6.471	10.5	173.0	54.063 Bayard, Missouri	0.337	10.5	173.0	
6.976	10.5	176.0	See page 54	0.151	10.5	176.0	
6.184	10.5	150.0		0.298	10.5	112.0	Ⓢ
6.830	10.0	125.0		0.054	10.0	115.0	Ⓢ
6.620	10.0	100.0		0.195	10.0	131.0	
6.980	10.0	100.0		0.880	10.0	100.0	
6.920	10.0	141.0		0.156	10.0	158.0	
6.991	10.0	158.0		1.053	10.0	158.0	
0.584	9.0	200.0		4.525	9.0	200.0	
6.366	9.0	85.0		1.325	9.0	85.0	
5.970	9.0	52.0		2.179	9.0	52.0	
6.561	9.5	55.0		2.196	9.5	55.0	
6.253	10.0	55.0		1.765	10.0	55.0	
2.802	10.0	171.0		7.065	10.0	171.0	114.392 Glendol Bridge 1 <sup>st</sup> Pole w hdspt/grd.
0.320	10.0	133.0		6.930	10.0	133.0	107.782 "Tic Pin" S
0.026	10.0	200.0		6.180	10.0	100.0	Ⓢ
82.854				35.289			

Nail bent 0.020  
114.412 = cor. elev.

+	B	d	BM	-	B	d	elev.
0.340	10.0	150.0		7047	10.0	150.0	
0.401	10.0	200.0		4668	10.0	200.0	
3937	10.0	250.0		3810	10.0	250.0	
2.610	10.0	267.0		3487	10.0	267.0	89.904 Electric + Colima NE corhd split Pole grd
7.288				19.012			

Route from BM on Bayard to  
Turquoise thence to Electric thence to  
Colima

Mar 18 1908

Weather - Calm + Cldy

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H + E Precise Level #15105

2 piece Rod

T	B	d	BM	-	B	d	elev.
1.237	9.5	250.0	89.904 Elect. + Colima	4.863	9.5	250.0	
4.814	9.5	200.0	see page 56	3.638	9.5	200.0	
1.168	9.0	242.0		6.372	9.0	242.0	
2.957	9.5	190.0		4.039	9.5	190.0	81.168 { Oiled Boulevard between Colima + Midway Hd spK grd round braced Pole
4.039	9.5	190.0		4.242	9.5	190.0	75.146 Old Bench 75. + ?
4.148	8.5	195.0		0.629	8.5	195.0	
5.440	8.0	199.0		3.662	8.0	199.0	
2.981	8.0	199.0		5.165	8.0	199.0	84.078 Bird Rock Bridge 6th Pole SE Hd. split grd.
26.784				32.610			
5.165	8.0	199.0	84.078 Bird R. Bridge	2.981	8.0	199.0	
3.645	9.0	199.0	see page 57	5.422	9.0	199.0	
0.016	9.0	195.0		3.535	9.0	195.0	
4.272	9.5	190.0		4.070	9.5	190.0	
2.205	9.0	223.0		5.108	9.0	223.0	
5.654	9.0	183.0		1.076	9.0	183.0	
6.427	9.5	138.0		5.635	9.5	138.0	83.635 Oiled Boulevard + Colima NE cart hd split grd Pole
27.384				27.827			

+	B	d	BM	-	B	d	elev.
1.060	9.5	128.0		6.950	9.5	128.0	
1.653	10.0	200.0		3.824	10.0	200.0	75.574 Tie Pin
2.713				10.774			

Route 1<sup>st</sup> Line from BM on  
Colima to Oiled Boulevard thence  
to Bird Rock Bridge

Route 2<sup>nd</sup> Line from BM on  
Oiled Boulevard to Tie Pin

58

Mar. 19, 1908.

Weather - Calm + Cldy.

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

M + E Precise Level # 15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
3.450	9.5	268.0	75574 <sup>✓</sup> Tie Pin	3.312	9.5	268.0	
5.633	9.5	177.0	See page 58	0.387	9.5	177.0	
5.985	9.5	135.0		0.430	9.5	135.0	w of Electric 86.513 Oiled Boulevard 2 <sup>nd</sup> round Pole w of RR Trac M hd spl grd
6.165	9.0	171.0		4.881	9.0	171.0	
2.874	9.0	158.0		3.210	9.0	158.0	
0.412	9.0	222.0		6.970	9.0	222.0	
4.285	9.5	268.0		5.280	9.5	268.0	
5.248	9.5	125.0		2.007	9.5	125.0	83.149 (altura between Allison & Bayard - Burkie Place SEC or braced Pole hd spl grd
6.280	9.0	112.0		2.038	9.0	112.0	
5.468	9.5	95.0		2.730	9.5	95.0	
2.462	9.5	130.0		6.806	9.5	130.0	
0.187	10.0	120.0		6.887	10.0	120.0	
0.712	10.0	120.0		6.893	10.0	120.0	
0.556	10.0	111.0		0.960	10.0	111.0	
0.960	10.0	111.0		6.525	10.0	111.0	
50.077 <sup>✓</sup>				59.316 <sup>✓</sup>			

+	B	d	BM	-	B	d	elev.
1.676	10.0	173.0		6.941	10.0	173.0	
0.030	10.0	167.0		6.664	10.0	167.0	55.036 Tie Pin
1.706				13.605			

Route from Tie Pin on Oiled  
Boulevard to LA + SDBRR thence  
to Altura thence to Bayard thence  
to Tie Pin

Mar 20 1908

Weather - Heat Waves morn  
High Wind PM

Wheeler - observer  
Elsworth - Rod  
Thomas - Chain

M+E Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
5.752	11.5	140.0	64816 7 <sup>th</sup> +C	3.285	11.5	140.0	67.283 8 <sup>th</sup> +CNW cor brass plug end return
2.083	11.5	195.0	See page 49	6.162	11.5	195.0	63.204 8 <sup>th</sup> +DNE cor hd spk grd Pole
0.627	11.5	187.0		6.846	11.5	187.0	
0.135	11.5	192.0		1.815	11.5	192.0	55.305 8 <sup>th</sup> +ENW cor brass plug end return
2.368	11.0	140.0		6.417	11.0	140.0	51.256 7 <sup>th</sup> +ENW cor brass plug end return
6.862	11.0	89.0		2.126	11.0	89.0	
6.268	11.0	110.0		2.824	11.0	110.0	59.436 7 <sup>th</sup> +DNW cor brass plug end return
6.611	11.0	83.0		1.228	11.0	83.0	64.816 BM 7 <sup>th</sup> +C +0.003 = error
30.706 ✓				30.703 ✓			

Route from BM on C Street to  
8<sup>th</sup> thence to E thence to 7<sup>th</sup> thence  
to BM

Mar 21 1908

Weather - Clear + Calm

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H + E Precise Level #15105

2 piece Rod



f.	B	d	BM	-	B	d	elev.
0404	9.0	128.0	55036	1383	9.0	128.0	
1383	9.0	128.0	Tie Pin	6987	9.0	128.0	
0010	9.0	183.0	See page 60	6878	9.0	183.0	
0302	9.0	138.0		6869	9.0	138.0	
1942	9.0	195.0		6882	9.0	195.0	
2600	9.0	193.0		6419	9.0	193.0	Alley Block 224 Second Pole End Bayard
6912	8.5	194.0		2775	8.5	194.0	26.259 hd. splk. grd.
5765	8.5	198.0		2677	8.5	198.0	
5477	8.5	200.0		2070	8.5	200.0	
3452	9.0	200.0		5368	9.0	200.0	
2562	8.5	161.0		3294	8.5	161.0	
6477	9.0	200.0		1027	9.0	200.0	
5725	9.0	135.0		2492	9.0	135.0	Grand N side nr. Fanuel hd splk in
6460	9.0	150.0		2426	9.0	150.0	42.926 root central Cedar Tree group of 3.
6142	10.0	140.0		1491	10.0	140.0	51.611 Tie Pin
55613				59.038			

+ B d BM - B d elev.

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Route from BM Bayard St.  
to Grand Ave thence to Tie Pin

Mar 23 1908

Weather - Windy

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

K+E Precise Level #15105

2 piece Rod

+	B	d	BM	-	B	d	elev.
7.110	9.0	90.0	51.611 Tie Pin	0.217	9.0	143.0	
6.952	10.0	266.0	see page 12	2.675	10.0	213.0	
6.390	9.0	176.0		6.677	9.0	176.0	
2.836	8.5	150.0		3.664	8.5	150.0	Broadway + Grand NE cor brass plug end return
3.664	8.5	150.0		5.780	8.5	150.0	
3.428	9.0	120.0		5.315	9.0	120.0	Jewell + Grand NW cor brass plug end return
4.696	9.0	150.0		4.212	9.0	150.0	
3.947	9.0	141.0		4.769	9.0	141.0	Mendall + Grand NW cor brass plug end return
4.465	9.0	150.0		4.455	9.0	150.0	
3.218	9.0	142.0		4.361	9.0	142.0	Lamont + Grand NW cor brass plug end return
6.747	9.0	68.0		1.419	9.0	68.0	
6.570	9.0	62.0		2.449	9.0	62.0	65.661 65.641 -0.020 = error BMLamont + Hornblend
60.023				45.993			
1.720	9.0	200.0	56.192 Grand + Lamont	6.967	9.0	200.0	
4.320	9.0	106.0	see page 14	4.033	9.0	106.0	Grand + Morell NE cor hd split grad Pole
3.572	9.0	185.0		1.900	9.0	185.0	
5.120	9.5	200.0		6.341	9.5	200.0	51.683 Tie Pin
14.732				19.241			

Route 1<sup>st</sup> Line from Tie Pin on  
Grand Ave. to Lamont thence to  
BM Hornblend

Route 2<sup>nd</sup> Line from BM on  
Grand Ave to Tie Pin

Mar 24 1908

Weather - Windy.

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

M+E Precise Level #15105

2 piece Rod

t	B	d	BM	-	B	d	elev.
1.618	10.0	132.0	51.683 <sup>1</sup>	6.800	10.0	132.0	
0.567	9.5	120.0	Tie Pin See page 64	6.037	9.5	120.0	
1.866	9.5	150.0		6.966	9.5	150.0	
1.123	10.0	144.0		5.188	10.0	144.0	
1.286	10.0	112.0		5.160	10.0	112.0	
0.083	10.0	103.0		7.004	10.0	145.0	
1.908	10.0	147.0		6.993	10.0	105.0	
3.845	10.0	133.0		3.896	10.0	133.0	
4.863	10.0	165.0		4.400	10.0	165.0	
3.862	10.5	165.0		2.585	10.5	165.0	
4.520	10.5	179.0		5.478	10.5	172.0	
3.197	10.0	140.0		3.235	10.0	147.0	
3.355	10.0	133.0		2.616	10.0	133.0	
3.697	9.5	150.0		2.560	9.5	150.0	
6.532	9.5	102.0		0.110	9.5	102.0	
42.322 <sup>1</sup>				69.020 <sup>1</sup>			

25.000  
 24.977<sup>1</sup> BM American Park  
 - 0.023 = error

Route from Tie Pin on  
Grand Ave to BM at  
American Park

Mar 25 1908

Weather - High Wind

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H & E Precise Level #15105

2 piece Rod

	+	B	d	BM	-	B	d	elev.
	2443	9.5	258.0	84.078 BR Bridge	7.092	9.5	258.0	
	2660	9.5	168.0	See page 57	0.392	9.5	168.0	81.697 Oiled Boulevard 2nd round Pole N Bird Roof Bridge hd split grd
	4508	9.5	250.0		1.882	9.5	250.0	
	3620	9.0	189.0		1.855	9.0	189.0	
	3627	10.0	167.0		2.186	10.0	167.0	
	0948	9.5	195.0		0.900	9.5	195.0	
	2945	9.5	255.0		1.715	9.5	255.0	
	3748	9.5	187.0		4.727	9.5	187.0	87.828 Oiled Boulevard 2nd Poles of braced Pole 1st corner of Bird Roof Bridge hd split grd
	0256	10.0	157.0		6.952	10.0	157.0	
	0883	10.0	194.0		5.600	10.0	194.0	
	1755	10.0	188.0		6.570	10.0	188.0	
	1157	10.0	125.0		5.260	10.0	125.0	
	0668	10.0	130.0		6.232	10.0	130.0	
	4467	10.0	187.0		0.397	10.0	185.0	66.003 Tie Pin
	33685				51.760			

Route from BM on Oiled  
Boulevard to Bonair Ave.  
Tie Pin

Mar 27 1908

Weather - Windy

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

M+E Precise Level #15105

2 piece Rod



+	B	d	BM	-	B	d	elev
6.707	10.0	100.0	66.003 Tie Pin	5.762	10.0	100.0	66.948 ✓ SE cor Oiled Boulevard + Bonair Ave. hd spk brac. rd. Pale grd
5.762	10.0	100.0	See page 67	2.130	10.0	100.0	
6.701	9.0	100.0		1.704	9.0	100.0	
6.669	9.0	100.0		2.108	9.0	100.0	
6.981	9.0	100.0		2.383	9.0	100.0	
4.623	8.5	105.0		4.280	8.5	105.0	85.079 { La Jolla Boulevard + Westbourne Ave. SW cor hd spille cor fence post grd
3.639	8.5	192.0		6.135	8.5	192.0	
0.220	8.5	232.0		4.180	8.5	232.0	
1.175	8.5	200.0		2.288	8.5	200.0	
3.744	8.0	192.0		3.784	8.0	192.0	77.470 { La Jolla Boulevard E side bet. Sea + Marine Avenues hd spk grd brac Pale Alley
4.380	7.5	179.0		5.601	7.5	179.0	
2.798	8.0	200.0		6.827	8.0	200.0	
1.704	8.5	175.0		5.741	8.5	175.0	
1.020	8.5	120.0		3.907	8.5	120.0	
5.689	8.5	75.0		0.025	8.5	75.0	
6.620	8.5	80.0		2.553	8.5	80.0	
68.432 ✓				59.408 ✓			

+	B	d	BM	-	B	d	elev.	
6.064	8.5	190.0		6.102	8.5	190.0	74.989	Prospect & Parina Sts South side split Phone Tele. grid
6.102	8.5	190.0		1.559	8.5	190.0		
				1.790	9.0	219.0	77.190	old Bench top at interval in post
5.267	9.0	219.0		5.000	9.0	219.0	79.799	Prospect & Currier Sts NW cor brass plug end return
6.967	9.0	125.0		1.103	9.0	125.0		
6.315	9.5	108.0		1.900	9.5	108.0	90.078	Prospect & Connecticut No cor brass plug center return
30.715				15.662				

Route from Tie Pin on Old Boulevard  
to Bonair Ave thence to La Salle  
Boulevard thence to Olive (R)  
thence to Prospect Ave thence  
to Connecticut St. BM

Mar 30 1908

Weather - Calm - Clear

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H & E. Precise Level # 15105  
2 piece Rod

T	B	d	BM	-	B	d	elev.
6.667	10.5	175.0	90.078	3020	10.5	175.0	93.725 Prospect Ave + Eads St. SE cor brass plug end return
4.394	10.5	200.0	Prospect + Conn Scepage #70	2097	10.5	200.0	
4.882	10.0	164.0		2800	10.0	164.0	Prospect Ave + Girard St. NW cor brass Plug in cement step point of property line intersection
4.060	9.5	140.0		1254	9.5	140.0	100.910
4.182	9.0	200.0		0936	9.0	200.0	
6.660	9.0	150.0		2180	9.0	150.0	
6.663	9.0	215.0		3030	9.0	215.0	
6.073	9.0	113.0		1635	9.0	113.0	
6.920	9.0	142.0		1705	9.0	142.0	121.922 Care St. + Exchange Place cor hd split wide end brass Pole
4.668	9.0	125.0		6732	9.0	125.0	
2.802	9.5	117.0		3127	9.5	117.0	
2.572	9.5	135.0		4437	9.5	135.0	
5.428	9.5	185.0		3200	9.5	185.0	
3.722	9.5	137.0		4266	9.5	137.0	118.852 Herschel + Connecticut Sts. SW cor hd split rot Eucalyptus Tree
1.085	10.0	150.0		6415	10.0	150.0	113.522 Girard + Connecticut Sts. NE cor hd split Pole grd
70.778				47.334			5.819 107.703

Route from BM on Prospect  
Ave.

Mar 31 1908

Weather - Windy

Wheeler - Observer  
Elsworth - Rod  
Thomas - Chain

H & E Precise Level #15105

2 piece Rod

+

B

d

BM

-

B

d

eler.

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$E_1$	$E_2$	$O_1$	$O_2$	$d$
12.0	12.5	12.0	11.5	79.2
12.0	12.0	12.0	12.0	
12.0		12.0		
12.0	12.25	12.0	11.75	

$$l = \frac{\left(\frac{E_2 - O_2}{2} - \frac{E_1 - O_1}{2}\right)}{2} = 0.125$$

	$E_1$	$E_2$	$O_1$	$O_2$	$R_2$	$R_1$	$D$
①	22.0	02.	02.	22.0	6.974	6.872	
	17.0	07.	07.	17.0	6.948	6.898	
	24.0	00.	00.	24.0	6.983	6.862	79.2
	17.0	07.	07.	17.0	6.950	6.898	
	22.0	02.	02.	22.0	6.975	6.873	
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	
	20.4	3.6	3.6	20.4	6.966	6.881	

$$V = \frac{R_2 - R_1}{D \left( \frac{E_1 - O_1}{2} - \frac{E_2 - O_2}{2} \right)}$$

②	22.0	.01	01.	22.0	1.641	1.449	
	22.0	.01	01.	22.0	1.641	1.449	
	22.0	.01	01.	22.0	1.641	1.449	143.0
	22.0	.01	01.	22.0	1.641	1.449	
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	

① = .00007 unit dist.

② = .00006 " " mean  
.000065 " " mean

25' = .00163  
50' = .00325  
100' = .00625  
150' = .00975  
200' = .01300  
300' = .01950

$R_2$   $R_1$   $d$

$$C = \frac{R_2 - R_1}{2d}$$

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Final correction to be applied  
to residuals =

$$C = E [C + V(1 + P)]$$

Diff. between old City Bench +  
USC + GPBM on Court House  
City Bench = -5.819<sub>x</sub>





DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

FOR SINGLE TRACK EMBANKMENT.

ROADWAY 14 FEET WIDE. SIDE SLOPES  $1\frac{1}{2}$  TO 1.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.