67

CROSS SECTIONS.

PARK

BOULEVARD.

and

2

Water Front Survey

F.B. 67

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

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅓
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

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STATIONERS AND PRINTERS,
SAN FRANCISCO, CAL.

MICROFILMED
DEC 1964

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

MEAN HIGH TIDE LINE
ALSO SEA FEB. 1950

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

Table showing the difference of latitude and departure in running 80 chains at any course from 1 to 60 minutes.

Minutes.	Lks.	Minutes.	Lks.	Minutes.	Lks.
1	2⅓	21	49	41	95⅔
2	4⅔	22	51⅓	42	98
3	7	23	53⅔	43	100⅓
4	9⅓	24	56	44	102⅔
5	11⅔	25	58⅓	45	105
6	14	26	60⅔	46	107⅓
7	16⅓	27	63	47	109⅔
8	18⅔	28	65⅓	48	112
9	21	29	67⅔	49	114⅓
10	23⅓	30	70	50	116⅔
11	25⅔	31	72⅓	51	119
12	28	32	74⅔	52	121⅓
13	30⅓	33	77	53	123⅔
14	32⅔	34	79⅓	54	126
15	35	35	81⅔	55	128⅓
16	37⅓	36	84	56	130⅔
17	39⅔	37	86⅓	57	133
18	42	38	88⅔	58	135⅓
19	44⅓	39	91	59	137⅔
20	46⅔	40	93⅓	60	140

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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

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

R. Cadwallader, A.B.

Plaintiff's exhibit No. 9

for IDENTIFICATION

Action No. 35473

Plaintiff's Exhibit 9.

In Case of

Plaintiff

vs

No.

Defendant

Filed

J. B. McLEES, Clerk

By

Deputy

Park Boulevard

Rod	Left	Rod	C 120.30	Rod	Right
			(120.98)		
13.0	107.3	6.09	114.71	1.9	118.6
10.9	109.5	3.20	115.30	1.1	119.3
13.4	113.3	6.28	(128.69) 122.5	7.80	125.9
(124.15) 8.10	120.6	6.30	(136.21) 129.9	3.40	132.8
(136.21) 10.30	121.0	2.20	132.0	(146.79) 7.30	139.5
(136.21) 8.31	127.9	7.40	(146.79) 139.4	(157.31) 10.00	147.2
1.60	145.2	6.40	(157.31) 140.4	(157.21) 4.40	147.8
6.9	150.3	5.2	(167.23) 152.0	3.1	154.1
11.0	156.2	9.4	157.8	9.2	158.0
3.8	163.4	3.40	(176.53) 164.4	4.60	162.6
8.6	167.9	10.8	166.3	10.6	165.9
6.8	169.7	6.4	170.1	5.8	170.7
3.0	173.5	3.1	(465.61) 173.4	3.4	173.1
9.0	176.6	8.5	177.1	9.9	175.7
7.1	178.5	6.7	178.9	7.7	177.9
4.1	181.5	3.9	181.7	5.6	180.0
1.5	184.1	1.6	184.0	3.0	182.6
1.4	184.2	2.3	(185.78) 183.3	2.8	182.8
9.9	185.9	10.2	185.6	11.7	184.1
16.9	186.9	9.2	186.6	8.7	187.1

Sta	+	BS	−	Elev
1 + 81.6	BM	11.23	116.51	105.28
2	#	1.09	120.99	114.39
3	#	9.99	128.69	118.50
4	#	8.20	136.21	128.01
5	#	11.30	146.79	135.49
6	#	11.17	157.21	146.04
7				
8				
9	#	11.47	167.23	155.76
10	BM at NW cor school yard			158.99
11	#	11.09	176.53	165.44
12				
13				
14	c/l 70' W of Sta 14 BM	10.69	185.61	174.92
15				
16				
+70				
17				
+50	#	11.17	195.78	184.61
18				

Rod	S	Rod	O	Rod	H
		195.78			
6.3	189.5	6.3	189.5	5.7	190.1
1.7	194.1	3.0	192.8	1.8	194.0
		205.48			
9.0	196.5	9.3	196.2	9.1	196.4
4.4	200.6	3.9	201.6	5.3	200.2
0.8	204.7	1.5	204.0	2.1	203.4
		215.27			
8.3	207.0	6.9	208.4	7.0	208.3
4.7	210.6	3.5	211.8	6.6	208.7
1.4	213.9	3.1	212.3	6.5	208.8
		219.43			
4.6	215.2	6.2	213.6	10.6	209.2
3.2	216.6	5.1	214.7	13.2	206.6
3.5	216.3	2.8	217.0	7.6	201.2
2.0	217.8	3.7	216.6	8.6	201.2
0.1	219.7	2.1	217.7	6.2	213.6
		227.7			
5.2	222.5	6.6	221.1	7.9	214.8
2.9	224.8	3.8	223.9	5.7	222.0
0.3	227.4	0.8	226.9	1.0	226.7
		238.6			
7.0	231.6	6.7	231.9	7.7	230.8
1.9	236.7	2.3	236.3	2.4	236.2
		247.4			
6.3	241.5	5.7	242.1	3.8	244.0
		257.7			
10.5	246.5	6.5	249.2	6.7	251.0
6.4	250.9	3.4	251.9	3.8	253.3

Sta	Sta	+	H.I.	−	Elev
19			195.78		
			ofk 70' Sta 20. W.		
20		BM# 1134	205.48	1.64	194.14
21					
22					
23					
24	#	10.57	215.27	0.72	204.76
25					
26			ofk 70' W Sta 26		
27		BM# 6.25	219.33	1.69	213.58
28					
450			ofk 70' [illegible] Sta 29		
29		BM		1.90	217.43
30					
31		BM	10.30	227.73	217.45
32					
33			70' Right of Sta 33 ofk		
		BM		1.00	226.68
34		+	11.91	238.59	
35			BM 70' Right of Sta 33 ofk		
36			11.28	247.42	2.05 236.14
37	#		10.55	257.66	0.71 247.11
38					

Park Boulevard

Rod	Left	Rod	C	Rod	Right
		257.7			
6.1	251.6	4.9	252.8	3.7	254.0
4.3	253.4	3.9	253.8	4.7	253.0
8.7	255.3	264.0 8.3	255.7	7.8	256.2
6.4	257.6	2.9	261.1	3.8	260.2
9.8	261.3	271.1 6.0	265.1	5.6	265.5
1.4	269.7	2.7	268.4	5.8	265.3
7.6	272.0	279.6 6.9	272.7	0.9	268.7
5.4	274.2	3.7	275.9	4.8	274.8
3.3	276.3	1.7	277.9	1.6	278.0
7.3	277.9	285.2 5.3	279.9	6.9	278.3
7.4	277.8	4.6	280.6	6.3	278.9
7.2	278.0	4.7	280.5	6.3	278.9
10.0	275.2	5.3	279.9	5.8	279.4
7.9	277.3	3.2	282.0	5.5	279.7
4.0	281.2	2.2	283.0	6.0	279.2
3.9	281.3	2.2	283.0	4.1	281.1
9.6	283.4	293.0 5.1	287.9	8.0	285.0
9.8	283.2	3.0	290.0	2.9	290.1
9.7	283.3	2.7	290.3	1.9	291.1
6.1	289.2	295.3 4.8	290.5	4.0	291.3

Str	+	#	−	Elev
		257.66		
39	spk 70' right Str 40			
40	Bm# 11.33	263.97	5.02	252.64
41	spk 70' Right 42			
42	Bm# 11.50	271.14	4.23	259.64
43				
44				
45	# 11.33	279.64	2.83	268.31
46				
47	spk 70' Left Str 47			
48	Bm# 8.98	285.16	3.46	276.18
49				
50				
51				
+50				
52				
53	spk 70' Right 53			[illegible].09
54	Bm# 11.93	293.02	4.[illegible]	281.09
55				
56				
57	# 5.78	295.34	3.46	289.56
	Bm spk 70 Left Str 57		6.46	288.88

Park Boulevard

Rod	Left	Rod	C	Rod	Right
		(292.4)			
10.7	281.7	3.1	288.3	2.0	290.4
12.0	280.4	8.4	284.0	6.9	285.5
9.1	283.3	8.7	283.7	8.1	284.3
8.3	284.1	9.2	283.2	8.8	283.6
13.1	279.3	11.2	281.2	8.9	283.5
9.4	283.0	8.2	283.2	8.6	283.8
5.6	286.8	2.6	289.4	5.1	287.3
		(298.1)			
12.0	286.1	9.4	288.7	8.9	289.2
11.1	287.0	8.9	289.2	5.5	292.6
6.9	291.2	6.8	291.3	5.0	293.1
8.2	289.9	3.5	294.6	2.7	295.4
		(304.1)			
11.1	293.0	7.3	296.8	7.5	296.6
6.9	297.2	5.0	299.1	5.5	298.6
8.0	296.1	4.6	299.5	5.3	298.8
5.5	298.6	3.1	301.0	4.1	300.0
6.5	297.6	3.4	300.7	2.9	301.2
		(306.6)			
9.3	297.3	7.6	299.0	6.9	299.7
9.9	296.7	6.4	300.2	7.3	299.3
8.9	297.7	5.2	300.4	6.8	299.8
10.2	296.4	7.0	299.6	6.5	300.1

Sta	+	H.I.	−	Elev
58	3.53	292.41		288.88
59				
60				
+30				
61				
62				
63				
		spk 70 Right 17 63		
64	BM# 10.50	298.07	4.84	287.57
65				
66				
67				
68	# 8.31	304.06	2.32	295.75
69				
70				
71				
		spk 70 Right 72		
72	BM# 5.38	306.57	2.87	301.19
73				
74				
75				
76				

Park Boulevard

Rod	Left	Rod	C	Rod	Right
		306.6			
11.2	295.4	6.8	299.8	8.7	297.9
10.1	296.5	6.9	299.7	9.0	297.6
4.9	300.5	306.4 3.4	302.0	5.6	298.8
5.2	300.2	3.3	302.1	5.2	300.2
8.4	297.0	5.5	299.9	6.5	298.9
7.7	297.7	4.4	301.0	6.7	298.7
8.4	297.6	6.6	298.0	5.5	299.5
9.8	295.6	7.9	297.5	6.7	298.7
4.4	296.4	300.8 3.3	297.5	4.1	296.7
5.3	295.5	4.1	296.7	5.0	295.8
5.4	295.4	5.2	295.6	5.3	295.5
6.1	294.7	6.2	294.6	6.4	294.0
7.0	293.8	6.4	294.4	8.2	292.6
7.4	293.4	6.9	293.9	6.2	294.6
7.4	293.4	6.0	294.4	5.6	295.2
6.5	294.3	5.6	295.2	5.0	295.8

Sta	+	0+9	—	Elev
77		306.57		
78				
79	+ 7.33	305.44	8.46	298.11
80				
81				
82				
83				
84				
85	BM# 214	300.80	7.13	293.31
86				
87				
88				
89				
90				
91				
91+54.6	BM		7.12	293.64

Park Line

12

Sta.	B.S.	H.I.	Fore Sight	Elevation	Rod	check	Remarks
				18.03			Spk in tel. post Calif + Juniper
#	1.080	19.110					Bench Book, page 3
			4.595	14.515		14.50	On Spk in cw pile of Calif + Kalmia
#			6.415	12.695			
	4.390						
		17.085	8.09	8.995			
				12.710			
	2.245						
#		14.955					
#			7.89	7.065			at 265+50, 30 ft Left (cor of Fence)
				21.58			B.M in tel post on Spruce + Calif.
	4.155	25.735					
			3.975	21.760		21.76	B.M. in " " " Vine " "
#							
#			11.775	13.960			Placed BM.
	0.72	14.680					Added 100 to the city El.
			11.11	103.57			
	4.14	104.74					

95.25 = Mean H. Tide
97.85 = High Tide

Sta	B.S.	I.H.	F.S.	El. of Turn	Rod	Check
		104.74				
	0.59			103.57		
		104.16			6.31	
					8.91	
#			5.39			
				98.77		
	2.25	101.02			3.17	
					5.77	
291#			4.23	96.79		
	3.665	100.455			2.6	
					5.2	
#			6.04	94.415		
	4.83	99.245			4.00	
					1.40	
#			3.615	95.630		
	3.83	99.460			4.21	
					1.61	
			0.655	98.805		
#	11.385	110.190				

Remarks

Ran South

97.85
95.25
2.6

101.02
95.25
5.77

291 Sta

99.46
95.25
4.21

101.02
97.85
3.17

99.46
97.85
1.61
2.6
4.21

100.45
95.25
5.2

100.45
97.85
2.60

99.25
97.85
1.40
2.6

99.25
4.00

B.M. at N line of maple

95.25
97.85
K.S.

Sta	B.S.	I.H.	F.S	El. of Turn	Rod	Check
		110.190				
			3.245	106.945		7.065
				98.80	1.9 4.15	
	.95	99.75				
			2.45	97.30		
	3.84	101.14			3.29 5.89	
			1.11	100.03		

— Remarks —

Taken from Kalmia

Mistake of .10 in City Benches between Kalmia + Maple Sts.

B.M. in cor of fence continued South

B.M. on bank in cor of Kalmia

22 Levels to La Playa

R. Cadwallader - Sam. Williams

Sta.	B.S.	I.H.	F.S.	El.	Rod	Check
#	1.70	23.46		21.76		
#	2.16	18.645	6.975	16.485		
#	1.92	16.35	4.215	14.430		
#	3.015	10.425	8.94	7.41		
#	3.705	8.830	5.30	5.125		
#	3.593	5.523	6.90	1.93		
#	5.270	6.673	5.12	0.403 = 100.403		

Friday Feb. 7 18 8 — 11

—Remarks—

B.M. in tel pole California + Vine

See Book 2 - page 2

No 1

B.M. about 125' SW of break in old Ry grade

[Added 100 ft] No 2

B.M. at break of Ry grade 500' E of Slaughter Hse

Sta	B.S.	I H	F.S.	El	Rod
		105.673			
#			6.18	99.493	
	3.142	102.635			
#			4.56	98.075	
	3.96	102.035			
#			3.425	98.610	
	Saturday	Feb. 2	1889		
				98.61	
#	4.445	103.055			
#			3.975	99.080	
	4.423	103.503			
#			5.445	98.058	
	5.60	103.658			

—Remarks—

No 3

B.M. 25' S of Roseville Road, 25' S of line of South side of wire fence

See Book 2 - page 2

Sta	B.S.	I.H.	F.S.	El	Rod
		103.658			
#			1.008	102.650	
	3.692	106.342			
#			6.052	100.290 .31	
	1.395	101.685			
#			3.905	97.780	
	7.210	104.99			
#			.07	104.92	
	8.495	113.415			
#			3.042	110.373	
	4.585	114.958			
#			4.40	110.558	
	6.263	116.821			
#			8.757	108.064	
	5.925	113.989			

—Remarks—

See book 2 - page 2

No 4.

B.M. - 200' S of Pueblo cor. 1/4 m W of House
Second line
Correct el = 100.30

No 5

BM 25' S of path + 100' S of Ry stake

Sta	B.S.	I.H.	F.S.	El	
		113.989			
#			7.725	106.264	
	2.365	108.629			
					No 6
#			6.145	102.484	B.M. 50' W of wash out on bay front
	5.885	108.369			
#			7.613	100.756	B.M.
		Monday, Feb. 4 1889			
	7.503	108.259			
#			3.437	104.822	
	3.990	108.812			
					No 7
#			2.665	106.147	B.M. 10' E of Roseville road, 300' N of Ry Crossing
	5.598	111.745			
#			4.768	106.977	
	2.44	109.417			

Sta	B.S.	I.H.	F.S.	El	
		109.417			
#			6.145	103.282	✓
	3.728	106.990			
#			4.728	102.262	
	6.425	108.687			
			1.335	107.352	No 8 BM 20' E of grade, 300' N of 1st annex at Hotel
	9.702	117.054			
#			0.820	116.234	
	8.08	124.314			
			5.175	119.139	
	1.515	123.654			
#			5.365	118.289	
	0.695	118.984			
					No 9
#			8.785	110.199	BM. 10' E of Road to Lab, 500' from Main works
	4.114	114.313			

32 2.6 - 3.85
2.6
1.25

Sta	B.S.	I.H.	F.S.	Et
		114.313		
#			3.075	111.238
	11.48	122.718		
#			0.778	121.940
	8.377	130.317		
#			1.065	129.252
	5.166	134.418		
#			10.178	124.240
	1.205	125.445		
#			10.797	114.648
	4.143	118.791		
#			11.60	107.191
	2.905	110.096		
#			7.800	102.296

NO 10
BM 5' W of road to La P., 300' N of wht. House

Gov. BM at La Playa marked Ref. Mark for Tides, U.S. Coast Survey, 1854-55-53.

Sta	B.S.	H.I.	F.S.	El			
		1.296					
	5.66	6.956					
			4.87	2.086	=		Stone Marked U.S.-M.R

Levels North From Juniper

Tuesday Feb 5th 1889 96.15 = Ordinary H. Tide

Sta	BS.	I.H.	F.S.	El	Rod	Chah
				98.805		
	0.58	99.385				
					3.235	
#			3.76	95.625		
	3.83	99.455			3.305	
#			4.525	94.930		
	4.70	99.63			3.48	
#			2.80	96.83		
	4.325	101.155			5.005	
			2.36	98.795		98.775
	2.385	101.180			5.03	

99.63
96.15
3.48

99.385 96.15
96.15
3.235

101.18
96.15
5.03

99.455
96.15
3.305

101.155
96.15
5.005

BM at vine Sit under fence

38 Thursday Feb 7 1889

96.15 = ordinary H. Tide

Sta	B.S.	I.H.	F.S.	Elev.	Rod	Dist. to Tide Line
				98.77		
#	2.36	101.13				
					4.98	
302						L 72.5
302+85						L 47.2
304						L 23.7
305						L 7.
T.P.			4.355	96.775		
	3.155	99.930			3.78	
306						R 6.8
307						R 14.4
308						R 19.5
309						R 20.6
310						R 21.4
311						R 14.5
312						0
T.P.			2.235	97.695		
	2.655	100.350			4.2	
313						L 13.1
314						0

B.M. on Vine on Lu Bank

40

96.16

20

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
315						L 6.1	
316						L 7.4	
317						L 11.1	
318						L 14.7	
319						L 16.5	
320						L 18.	
T.P.			1.021	98.83			B.M. 30' N 8 f △ at sta 320
	8.985	107.814					
					check		
T.P.			0.42	107.394	107.41		BM No 1 on line to Roseville
T.P			corrected = 98.846				
	1.947	100.793			4.643		
321						L 20.9	
322						R 10.8	
323						R 4.5	
324						R. 4.2	
325						L 20.5	
326						L 22.5	
327						L 41.9	

42 96.15

Sta	B.S.	I.H.	F.S.	El	Rd	Dist
328						R. 13.3
T.P.			3.230	97.558		
	4.96	102.518			6.368	
329						R. 26.3
330						R. 1.
331						R. 5.8
332						R 10.9
333						R. 13.3
334						L 15.7
335						L 78.5
336						L 113.3
T.P.			2.969	99.549		B.M. on dyke 75' E of Δ at sta 336+40
	1.176	100.725			4.593	Cen of Dyke Outside line
						L 43.8 L. 130.8
#	6.332	105.881				
#			4.865	101.016		
	4.922	106.938				
#			5.545	100.393	.403	BM 2 on line to Roseville

44 P.M. Thursday 7-6 7.1889
96.15

Sta	B.S.	I.H.	F.S.	El	Rod	Check	
# -				14.50			B.M. in Cen. pile Calif + Kalmia
	1,132	15.632					
#			11,222	4.410			
	0.690	5.080					
#			4.96	0.12		.03	B.M. Rundown from Calif + Vine

Friday Feb. 8, 1889 - [R.C. S.W.]

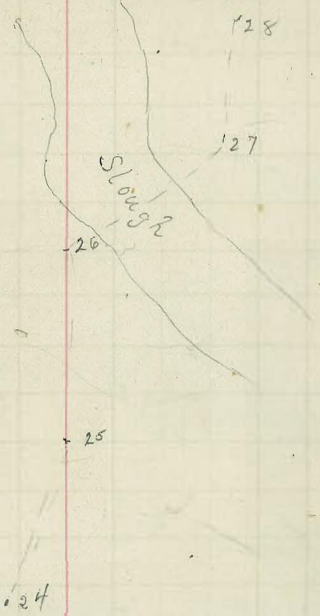
96.15

Sta	B.S.	F.H.	F.S.	El	Rod	Dis
				99.55		
#	0.955	100.505			4.355	
0					=	to
1						164
3-4-5-6-7						
T.P.			2.696	97.810		
	3.505	101.315			5.165	
8						
9 to 15						
T.P.			4.540	96.775		
	3.82	100.595			4.445	
16						
18 to 20						
T.P.			4.025	96.570		
	4.485	101.055			4.905	
21						
22 - 30						
T.P.			4.555	96.565		
	4.490	100.935			4.785	

Contour line of marsh 100' apart beginning at 936+40. Angles run from this point by the transit. This line is outside of the dyke

B.M. on dyke near Sta 936+40

Sta 936+40 South

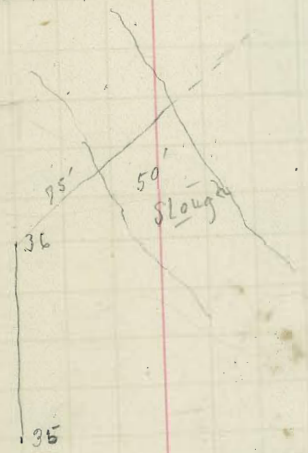


48

96.15

Sta	B.S.	I.H.	F.S.	El	Rod
		100.935			
36					
45					
T.P.			4.522	96.413	
	46 05	101.068			4.868
46					
54					
T.P.			4.750	96.268	
	4.46	100.728			4.54 78
55					
62					
T.P.			3.989	96.739	

From 36 to 37 = 228'



B.M. on top of plug of sta 358, base line

50 Saturday Feb 9th 1889

96.15

Sta	B.S.	I.H.	F.S.	El	Rod
T.P.	4.560	101.299		96.739	5.149
63					
69					
T.P.			4.502	96.797	
	4.440	101.237			5.1
70					
78					
T.P.			4.517	96.720	
	4.582	101.302			5.152
79					
81					
85					
T.P.			5.315	95.987	
	6.270	102.257			
#			1.22	101.037	
	4.76	105.797			

Contour line continued

BM. on sta 358

From 81 to 82, 197 ft, spanning low ground cut up with a number of creeks

B.M. – 150' E of coast survey sta 15'S of board in ground on blk corner – 50' W of sta 85 of cont. line

Sta	B.S.	I.H.	F.S.	El	Check
		106.797			
#			4.608	101.189	
	4.14	105.329			
#			4.075	101.254	101.29

B.M. No 4 on Roseville line el
101.29 old line
101.31 Second line

.30
.255
.045

54 Monday Feb 11th 1889

T.M. 96.10

Sta	B.S.	I.H.	F.S.	El.	Rod	Dist
#				100.12		Looking S
	0.11	100.23			4.08	
258						R168.3
257						R179.5
256						R145.1
255						R113.0
254						R. 97.5
253						R94.5
252						R82.4
T.P.			6.590	93.640		
	8.952	97.592				
T.P.			1.594	95.998		
	4.609	100.597			4.447	
247						R41.2
246						R36.5
245						R35.6
244						R33.2
243						R30.0

B.M. On bank cen. of Kalmia Ran down from B.M. El of 14.5 in Kalmia + California Sts

The back of the block running from 255 to 251 has been filled up some

Intermediate Sta are taken up by the wharf of the Undependent Lumber Co. which is 50' or more

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		100.597				
242						R 27.9
241						R 20.5
240						R 10.3
239						R 7.5
T.P.			5.30	95.297		
	11.760	107.057				
#			6.700	106.357		
	11.62	117.977				
			0.97	117.007		
				95.24	Cor. El	
T.P.						
	5.785	101.025			4.875	
238						R 11.1
237						R 16.
236						R 19.6
235						R 27.
234						R 34.6
233						R 29.7

16.94 B.M. in tel post 75' N of Oate + California .06 error

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		101.025				
232						45.2
T.P.			5.505	95.520		
	4.872	100.032			3.882	
231						R36.9
230						R32.5
229						R17.7
228						R14.5
227						R10.4
226						R10.9
225						R.11.6
T.P.			1.214	98.818		

BM On Sewer, under bank, 50' S of old 2 masted schooner

60

Tuesday Feb 12 th 1889.

96.15

Sta	B.S.	I.H.	F.S.	Gl	Rod	Dist
				98.818		
#	7.772	106.590			10.44	
224						R9.5
223						R14.
222						R18.5
221						R20.7
T.P.			5.415	101.175		
	3.04	104.215				
#			3.45	100.765		
	5.890	106.655			10.505	
220						R28.9
219						R26.9
218						R22.7
217						R21.5
216						R26.6
215						R23.9
214						R23.6
T.P.			3.37	102.321		
	2.624	105.945				

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
		105.945					
#					9.795		
213						R29.9	
212						R34.	
211						R26.1	
210						R16.	
209						R20.5	
208						R21.	
T.P.			4.488	101.457			
			1.585	104.360			
	6.32	110.68					
			2.24	8.44			8.43 B.M. in Tel pole SE Cor of Calif + D
				101.457			
	3.446	104.903			8.753		
207						R35.5	
B25		("C" line on map. Bartlett)				R46.(?)	
B24						R49.3	
B23						R50.4(?)	Wentscher's beer estab. in the way
B22							building in the way

64

96.15

Sta	BS.	I. H.	F.S.	El	Rod	Dist		
		104.903						
T.P.			5.034	99.869				
	5.216	105.085			8.935			
B21+50						R43.8		
B21+60						R43.9		
B20						R43.		
B19						R44.8		4.375
T.P.								
			4.815	100.270				
	4.690	104.960			8.41			
B18						R49.7		
B17						R53.5	also 25' Sand bar	
B15+30						R24.		
B15						R23		
T.P.			3.365	101.575				
	2.355	103.930			7.78			
B14						R25.4		
B13						R18.		
B12								

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		103.93				
T.B.			4.375	99.555		
#				99.635		
	4.300	103.935			7.785	
B12						R 23.1
T.P.			5.005	98.930		
	1.523	100.453			4.303	
B10+90						R 36.4
B10						R 23.1
B9						L 2.9
B8						L 34.4
B7						L 22.
T.P.			6.00	94.453		
	4.568	99.021			2.87	
B6						L 12.7
B5						0
B4						R 10.5
B3						R 9.8

B.M. SE cor of Atlantic + H st = 99.635

Sta	B.S.	I.H.	F.S.	El	Rod	Dist		
		99.021						
B2						R9.4		
T.P.			0.80	98.221				
	9.090	107.311			11.16			
			("C" line on map)					
B1						R11.6		
B0=						R27.2		
186						R19.9		
TP			3.832	103.479				
	8.964	112.443						
#			3.84	8.603			BN in NE cor of H + State 8.62	
							.017	
			103.479					
			.017					
			103.496					

Wednesday Feb 13th 1889

96.15

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
				103.496	Carried B M -		
T.P.	1.742	105.238			9.088		From 186 & the ordinary Tide line follows closely the base of the rip-rap of the California southern, but seems to be on the base stones
185						R 17.2	
184						R 15.8	
183						R 13.9	
T.P.			3.565	101.673			
	2.782	104.455			8.305		
182						R 13.5	
181						R 14.3	
180						R 15.3	
179+15						R 15.6	
178							Wharf in the way
T.P.			2.923	101.532			
	3.70	105.232			9.082		B M, pin at 177
177						R 16.	
176						R 15.2	
175						R 16.3	
174						R 15.5	
173						R 15.6	

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
		105.232					
172						R 15.9	
171						R 16.	
170						R 14.7	
T.P.			4.153	101.079			
	4.561	105.640			9.49		
169						R 13.8	
168						R 12.4	
167						R 15.3	
166+20						R 14.5	
165						R 13.7	
164						R 17	
163						R 13.5	
T.P.			4.715	100.925			
	7.434	108.359					
#			3.957	104.402			
	5.254	109.660					
#			2.260	7.400			BM 7.39 SE cor of 15+K

96,15

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
				100.92			
T.P.	5.215	106.135			9.985		
162						R15.1	
161						R13.6	
160						R13.6	
158+75						R25.9	
158						R13.3	
157						R14.	
156						R17.7	
155						R28.4	
T.P.			4.813	101.322			
	4.363	105.685			9.535		
154						R60.5	
153						~~R20.4~~	— R 78.2
152						~~R42.1~~	— R 86.8
T.P.			4.605	101.080			
	5.598	106.678					
#			4.245	102.433			B.M. in SE cor of Ninth + N = 2.43

96.13

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
				101.080		
T.P.	4.490	105.570			9.42	
151						R 65
150						R 61.1
149						R 61.9
147+45						R 72.5
146+45						R 58.1
T.P.			4.098	101.472		
	3.132	104.604			8.484	
146						R 43.7
145						R 22.
144						R 14.6
143						R 14.3
142						R 15.8
141						R 15.9
140						R 14.6
139						—
138						R 15.7
T.P.			3.612	100.992		
	5.190	106.182			10.052	

Ry rip-rap - mud flat on the north

under Ry trestle rod read 11.8

Sta	B.S.	I.H.	F.S.	El	Rod	dist	
		106.182					
137						R.17.	
136						R 15.1	
135						R15	mud flat on the N
134						R14.7	
133						R14.1	
132						R16.	
131						R22.6	
T.P.							
			6.936	99.246			
	7.289	106.535			10.385		
130						R21	— 130 is to the Right of the Ry track on at Traverse line
129+40						R40	
128+40						R78	
127						R99.6	
126						R98.5	
125						R83.4	
124						R 75.	
123						R 50	
122+5						R29.9	
121+30						R.19.4	

96.15

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		106.535				
T.P.			4.249	102.286		
	2.341	104.627			8.477	
121						R 22,4
120						R 30
119						R 34
118						R 36
117						R 27
116+55						R 24,1
116						R 23,6
115						R 22,3
114						R 19,5
113						R 24,7
T.P.			1.746	102.881		
	10.268	113.149				
#			0.433	112.716		
	10,555	122.871				
#			0.425	22.446		
	11,246	33.692				

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		93.692				
#			0.963	32.729		
	9.356	42.085				
#			4.15	37.935		
	4.100	42.035				
#			4.34	37.695		

Thursday, Feb 14, 1889

102.9

T.P.	4.700	107.600			11.45	
112						R26.4
111						R28.3
110						R21.5
109						R24.8
108						R35.
107						R40.8
106						R39.2

BM on Chinese Laundry Milton. 422nd
Could not find its El.

37.715 — B.M. in S guy post
37.695 of Elec. Light-mast
.020

Sta	B.S.	F.H.	F.S.	El	Rod	Dist
		107.6				
105						R31.9
104						R25.7
103						R25.2
102						R21.
101						R17.6
T.P.			9.74	97.86		
	4.095	101.955			5.805	
100						R23.2
98+75						R21.5
98						R24
97						R23.5
96						R25.2
95						R22
T.P.						
			2.850	99.105		B.M. in S.W. pile of L+T wharf
	11.22	110.325				
#			1.620	108.705		
	12.00	120.705				
#						

86

Check

	B.S.	I.H.	F.S.	El.	
				102.9	
#	5.265	108.165			
#			4.484	103.681	
	6.372	110.053			
#			2.386	107.667	
	3.894	111.561			
#			2.888	108.673	- 108.705 108.673 .032
	9.287	117.960			
#			1.711	116.249	
	7.237	23.486			
#			1.772	21.714	
				108.673	
	1.775	110.448			
			11.373	99.105 99.075 .030	

99.105
32
99.073

B.M. on Ry track towards the house of — —

B.M. on car of Olive + 26th St marked el of 20.701

110.448
99.10
11.345
11.35

88 Monday Feb 18th 1889

96.15

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
				99.075		
T.P.	2.595	101.670			5.52	
94						R22.6
93+50						R22.9
92+93						R19.
91+93						R 20.
91						R26.7
90+50						R26.1
90						R29.3
89						R45.5
88						R54.5
87						R56.9
86						R59.
85						R92.
84						R69.4
83						R43.
82						R23.5
82-65'		7 A				R15.2
82-165		6 A				R4.6
82-265'		5 A				R4.1
82-365		4 A				R5.5

"A" Line

B.M. on L & T Co's wharf spk

- Guard stakes are all washed out

A random line is run on the (beach)

This sta. is on the beach 65' of sta 82

Sta	B.S.	I.H.	F.S.	El	Rod	Dist	
		101.67					
T.P.			4,000	97.67			
	4.490	102.160			6.01		
82-465		3 - A				R 9.3	
82-515		2+50 A				R 8.5	This is about an ∠ point in line
82-565		1 A				R 3.1	but the sta in each side ditches were washed
82-665		1 A				R 10.2	out.
75						R 52.	Main line
74						R 42.	
73						R 36.	
T.P.			1.075	101.085			
	6.735	107.820			11.67		
72						R 27.5	
71						R 23.1	Rip-rap of Ry.
70						R 21.	
69						R 18.5	
T.P.			5.000	102.820			B.M. in the top of the SE pile of Ry bridge - 3/4
	2.720	105.540			9.39		
68						R 18.4	

Sta	B.S.	I.H.	F.S.	El	Rod	Dist-
		105.54				
67						R 17.6
66						R 17.5
65						R 16.8
64						R 19.7
63						R 28.
62						R 33.7
61						R 43.
60						R 51.5
T.P.			5.880	99.660		
				99.686		
T.P	3.260	102.946			6.8	
59						
58+44						R 81.4
58						R 68.8
57						R 35.4
56						R 9.0
55						R 1.5
54						L 2.5
53						R 1.5
52						R 14.5
51						R 31

B.M. on Whitney's wharf el = 99.686
660
.026

Whitney's wharf on the road
angle point

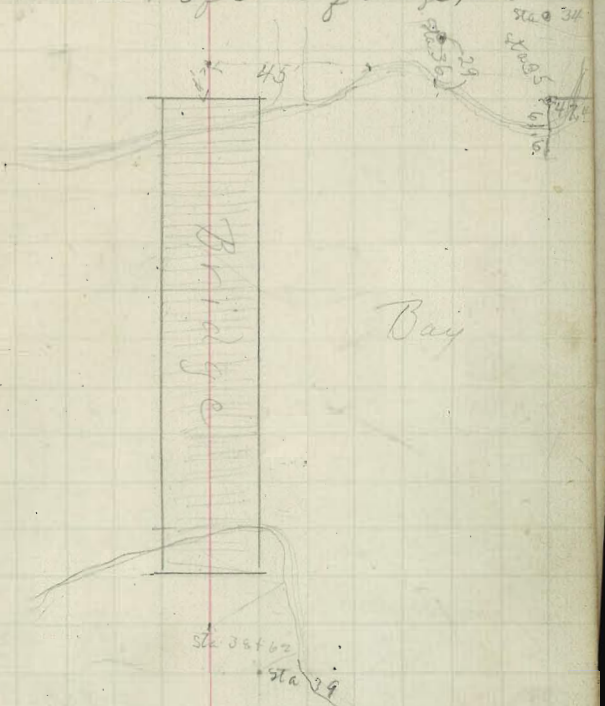
Sta	B.S.	I.H.	F.S.	El	Rod	Dist-	
		102.946					
T.P.							
			4.311	98.635			
	3,441	102.076			5.926		
50						R40.3	Along the beach
49						R 44.8	
48						R 41.	
47						R 34.3	
46						R30.7	
45						R 22.4	
44						R 25.8	17.5
T.P.			4.723	97.353			
	5.518	102.871			6.721		
43						R20.5	
42						R 18.6	
41						R 20.7	
40						R 4.4	Base of rip rap of Ry.
39						R 9.4	
T.P.							
			0.690		102.181		B.M. on end of Ry bridge end left on S side W. end.
	1.241	103.422					

Sta	B.S.	I.H.	F.S.	El	Rod	Dist
		103.422			7.272	
38+62						R18.6
						R45.
36						R29
35						R61.6 R47.4
34						R19.7
33						L2.5
32						L6.5
31						R1.8
30						R19.9
29						R26.8
T.P.			6.709	96.713		
	5.418	102.131			5.981	
28						R49.7
27						R59.7
26						R62.6
25						R66.1
24						R60.3
23						R55.1
22						R53.[illegible]
21						52.5
T.P.			5.489	96.642		

(the bridge

-angle point (25' E is the outlet under

-Sta not marked 4' E of E end of bridge, ⊥r to track



Sta	B.S.	I.H.	F.S.	El	Rod	Dial
	4.582	101.224			5.074	
20						R45.4
19						R38.4
18						R34.
17						R34.1
16						R32.
15						R39.5
14						R36.3
T.P.			4.297	96.927		
	4.226	101.153			5.003	
13						R40.4
12						R48
11						R50
10						R64.9
9						R80.2
8						R87.
T.P.			1.479	99.674		
	0.933	100.607			4.457	
7						R199.1 (?) uncertain
6						110.6

25.6
85
110.6

100

Bay side

Sta	B.S.	I.H.	F.S.	El	~~Rod~~ Dist	Dist
5						R124.9
4						R93.5
3					R64.	
2					R49.8	
1					R38	
0					R27.1	
		100.607				
#			0.945	99.662		
			933			
	0.24	99.902	.012			
#			3.889	96.013		
	3.432	99.445				
#			3.175	96.270		
	5.192	101.462				
#			5.614	95.848		
	9.948	105.796				
			3.68	102.116		
#			4.900	100.896		
	3.49	104.386				

Sta	B.S.	I.H.	F.S.	Elevation
#			3.230	101.156
	4.79	105.940		
			6.370	99.57
				99.69
				.12

99.57
.012
.582

99.686
.582
.104 error

in checking back on the B.M. in Whitney's bridge

105.93
19.686
6.264
58

181
116
.065

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	61.91	78 26	62 25	77.99	62.59	51
39	77.71	62.93	77.44	63.27	77.16	63.61	76.88	63.94	50
40	76.60	64.28	76.32	64.61	76.04	64.94	75.76	65.28	49
41	75.47	65.61	75.18	65.93	74.90	66.26	74.61	66.59	48
42	74.31	66.91	74.02	67.24	73.73	67.56	73 43	67 88	47
43	73.14	68.20	72.84	68.52	72.54	68.84	72.24	69.15	46
44	71.93	69.47	71.63	69.78	71.33	70.09	71.02	70.40	45
45	70.71	70.71							
Degrees.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Dep.	Lat.	Degrees.
	DEGREES.		¼ DEGREE.		½ DEGREE.		¾ DEGREE.		

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