369

TRANSIT.

F.B.86

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

Minutes.	Links.	Minutes.	Links.	Minutes.	Links.
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

MICROFILMED DEC 7 1964

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

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TABLE FOR RUNNING ON SLOPES.

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

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

86

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Road to Old Jowon.

Notes of Survey

Hamlin
Shaw
Williams
Ferrar

Alignment of India St. road — May 29 1893

Center of road is in center of India Street

Sta 0 is north end of India St Bridge

Sta	13+64.6	Center of Olive St
Sta.	24+80	Center of Redwood St
Sta	28+60.3	" " Spruce "
Sta	38+21.4	"
Sta	43+40	line Plg
Sta	43+81.4	Center of
Sta	47+42.8	line Plug.
Sta	55+23.6	Center of Winder St
Sta	57+98	center of ~~Ind~~ Arctic.
Sta	60+16.6	Center of Second & Winder
Sta	65+71.7	" " " " Harasthy.
Sta	73+34.1	" " "
Second St. Bears W 75° 30' W mag.		
Sta	75+61	line Plug.
Sta	86+0	line plug.
96+37.5		center of 2nd & South of Witherbee

96+77.8	Center of 2nd & Witherbee
97+29.8	" " Witherbee & Hacock
+69.8	North line of Hacock & Witherbee
107+44.6	center of Hancock & Trias
107+94.4	" Trias & Moore
111+43.7	" Moore & Ampudia
114+92.7	" Ampudia & Stockton
115+11	crossed wire fence cor 7' North
118+11.5	" " " " 8' "
118+42.8	center of Stockton & Arista
121+92.8	" " Congress & Arista
135+46	crossed line of old fence
" +92.3	center of Mason & Congress
139+54.5	" " Mason & Stb. ave.
140+66	" Sandiego St & Stb ave.
145+73.8	" Juan & Stb. St " "
149+49	" Juan & Washington.
152+99.8	" Washington & Boyd.
162+36.9	" Webster & Taylor
165+87	" Taylor
169+37	"
171+40	End of Bridge

169.37
162.36.9
7.

171.40
169.37
2.03

165.87
162.36.9
3.50.1

63° 43' Left

171.40

Levels over Road to Old Town

Sta	+	H.I.	−	Elev	Grade	Cut.	Cross − Sections
	6.03	44.00		37.97			
Bridge			4.15	39.85			
0			12.4	31.6			
0.4			8.0	36.0			
1			5.9	38.1			
+50			4.35	39.65			
#	11.74	55.46	0.28	43.72			
2			11.15	45.31			
+60			0.9	54.56			
#			0.87	54.59			

Elevations closed

See Page 8

Levels over Road to Old Town on Indian Street

Sta	+	H.I.	−	Elev	Grade	cut Cross – Section
B.M.	6.03	44.00		37.97		Indian & Kalmia
0			4.15	39.85		Floor of Bridge
0			12.4	31.6	40.0	
+04			8.0	36.0		
#	11.74	55.46	0.28	43.72		
1			17.4	38.1	41.0	
2			10.15	45.3		
+60			0.9	54.6		
#	10.98	65.57	0.87	54.69		
3			3.2	62.4		
B.M.			4.78	60.79		
#	10.43	75.17	0.83	64.74		
4			4.1	71.1		
#	11.71	86.49	0.39	74.78		
5			10.4	76.1		
6			7.5	79.0		
7			1.4	85.1		
#			0.87	85.62		

Abandoned see page 8

Sewer over Road to Old Town on India Street

Sta	+	H.I.	−	Elev	Grade	cut	Cross Section		
B.M.	6.03	44.00		37.97		India & Kalmia			
0			4.15	39.85	40.0	Floor of Bridge			
0			12.4	31.6	40.0	−8.4		−8.4	
+04			8.0	36.00	40.1	−4.1	−5.9 / 20.8	−4.1	−5.6 / 20.4
+50					40.5				
1			5.9	38.1	~~42.5~~ 44.0	−5.9 ~~−4.4~~	−5.1 / 19.6	−4.4	−4.0 / 18.0
+88	Grade on west side						0.0		
#	11.74	55.46	0.28	43.72					
2			10.15	45.31	51.0 ~~45.0~~	−5.7 ~~+0.3~~	+1.9 / 12	+0.3	−0.6 / 12.9
#	10.98	65.57	0.87	54.59					
3			3.2	62.4	58.0 ~~55.0~~	+4.4 ~~+7.4~~	+7.2 / 12.0	+7.4	+6.8 / 12.0
B.M.	Laurel &	India	4.78	60.79					
#	10.43	75.17	0.83	64.74					
4			4.1	71.1	65.0 ~~65.0~~	+6.1 +6.1	+4.7 / 12.0	+6.1	+7.0 / 12.0
#	11.71	86.49	0.39	74.78					
5			10.4	76.1	72.0 ~~75.0~~	+4.1 +1.1	+0.4 / 12.0	+1.1	+1.1 / 12.0
			7						
6			7.5	79.0	79.0 ~~79.0~~	0.0			

Levels over Route to Old Town on India Street

Sta	+	HI	−	Elev	Grade	cut Cross Section
7		86.49	1.4	85.1	82.2	+2.9
#	10.83	96.45	0.87	85.62		
8			7.5	89.0	85.4	+3.6
9			10.9	85.6	88.6	−3.0
10			6.2	90.3	91.8	−1.5
11			1.0	95.5	95.0	+0.5
#	11.89	107.65	0.69	95.76		
12			6.5	101.1	100.0	+1.1
13			4.8	102.8	100.5	+2.3
+64.6	Center of Olive St		5.1	102.6	100.8	+1.8
14			6.7	101.0	101.0	0.0
15			5.4	102.3	~~100.5~~ 100.5	~~+1.8~~ +1.8
16			8.2	99.5	~~100.0~~ 97.4	~~−0.5~~ +2.1
#	2.77	102.62	7.80	99.85		

Levels over Road to Old Town on India Street

Sta	+	HI	−	Elev	Grade	cut	Cross-Section
16+50		102.62	5.3	97.3	~~99.8~~ 95.8	+ 1.5 ~~− 2.5~~	
17			10.1	92.5	~~99.5~~ 94.3	− 1.8 ~~− 7.0~~	
+40			12.2	90.4	~~99.3~~ 93.0	~~−8.9~~ −2.6	
18			8.7	93.9	~~99.0~~ 95.5	~~−5.1~~ − 1.6	
#	10.17	111.80	0.99	101.63			
19			3.8	108.0	~~99.2~~ 99.8	~~+8.8~~ + 8.2	
20			7.5	104.3	~~99.3~~ 104.0	~~+5.0~~ +0.3	
21			8.6	103.2	~~99.5~~ 101.9	~~+3.7~~ + 1.3	
22			12.1	99.7	~~99.7~~ 99.7	0.0 0.0	
23			12.0	99.8	99.8	0.0	
#	5.78	106.08	11.50	100.30			
24			5.2	100.9	100.0	+0.9	
+80			6.4	99.6	94.7	+4.9	

Levels over Road to Old Town on Andrew Street

Sta	+	HI	−	Elev	Grade	cut	Cross-Section
25		106.08	8.1	98.0	93.3	+4.7	
#	2.83	97.06	11.85	94.23			
26			6.8	90.3	86.7	+3.6	
#	0.88	86.66	11.28	85.78			
+50			5.3	81.41	83.4	−2.0	
#	2.50	77.61	11.55	75.11			
27			10.3	67.3	80.0	−12.7	
+15			11.8	65.8	80.3	−14.5	
+60			8.3	69.3	81.0	−11.7	
#	11.85	88.38	1.08	76.53			
28			10.7	77.7	81.7	−4.0	
+40			4.6	83.8	82.4	+1.4	
29			0.8	87.6	83.3	+4.3	
#	3.33	91.60	0.11	88.27			
30			4.3	87.3	85.0	+2.3	
31			7.0	84.6	83.5	+1.1	

Levels over Road to Old Town on Indian Street

Sta	+	H.I.	−	Elev	Grade	cut	Cross-Section
31+85		91.60	12.3	79.3	82.2	− 2.9	
32			15.3	76.3	82.0	− 5.7	
+ 20			15.8	75.8	82.4	− 6.6	
33			9.1	82.5	83.2	− 0.7	
34			7.4	84.2	84.3	− 0.1	
35			6.4	85.2	85.5	− 0.3	
36			3.9	87.7	86.7	+ 1.0	
#	6.60	94.92	3.28	88.32			
37			5.5	89.4	87.8	+ 1.6	
38			5.4	89.5	89.0	+ 0.5	
39			5.6	89.3	85.4	+ 3.9	
+ 50			8.8	86.1	83.6	+ 2.5	
#	0.20	83.81	11.31	83.61			

Levels over Road to Old Town on Indian Street

Sta	+	HI	−	Elev	Grade	cut	Cross-Section
40		83.81	5.4	78.4	81.8	− 3.4	
+ 20			13.8	70.0	81.1	− 11.1	
+ 50			111.0	69.8	80.0	− 10.2	
+ 80			13.4	70.4	80.8	− 10.4	
41			9.1	74.7	81.2	− 6.5	
#	10.28	93.38	0.71	83.10			
42			2.8	90.6	83.7	+ 6.9	
#	4.89	96.80	1.47	91.91			
+40			3.0	93.8	84.7	+ 9.1	
+ 50					85.0		
43			3.5	93.3	83.5	+ 9.8	
+40			3.9	92.9	82.3	+10.6	
44			10.9	85.91	80.5	+ 5.4	
B.M. top of Post (Vine St)			9.50	87.30			
BM spike in cw Post "			12.45	84.35			
#	1.31	86.45	11.66	85.14			

Levels over Road to Old Town on India Street

Sta	+	H.I.	−	Elev.	Grade	cut	cross section
44+50		86.45	11.5	75.0	74.0	+4.0	
#	0.50	76.22	10.73	75.72			
+80			9.7	66.5	78.1	+11.6	
45			15.6	60.6	77.5	+16.9	
46			3.2	73.0	74.5	+1.5	
#	6.19	79.34	3.07	73.15			
47			3.2	76.21	71.5	+4.6	
+43			2.5	76.8	70.1	+6.7	
48			9.3	~~69.9~~ 70.0	68.5	+1.5	
#	2.38	70.69	11.03	68.31			
49			9.0	61.7	65.5	−3.8	
50			8.1	62.6	62.5	+0.1	
51			2.9	67.8	~~66.1~~ ~~65.6~~	~~+1.8~~ +1.7	
52			0.9	69.8	~~69.7~~ ~~69.5~~	~~+0.3~~ +0.1	
#	10.81	80.51	0.89	69.80			

Levels over Road to Old Town

Sta	+	H.I.	−	Elev	Grade	cut	Cross-Section
				67.46			
B.M.		80.07	13.15	~~67.86~~			
53			9.8	70.8	73.3 ~~73.0~~	~~−1.2~~ −2.5	
54			5.1	75.~~#~~	76.8 ~~76.5~~	~~−1.0~~ −1.3	
~~#~~	2.31	82.54	0.38	80.23			
55			1.3	81.2	80.4 ~~80.0~~	~~+1.2~~ +0.8	
+23.6	Winder &	Judkin	0.1	82.~~4~~	81.2 ~~80.0~~	~~+2.4~~ +1.2	
O.M.			0.07	82.37			Judkin & Winder

Levels over Road to Old Town on Winder Street

Sta	+	HI	−	Elev	Grade
	Center of Winder & India				
55+23.6		82.55	0.1	82.4	
56.			5.1	77.4	
57			11.6	70.9	
#	0.30	71.45 ~~71.55~~	11.39	71.15	
58			7.9	63.6	
#	0.45	60.79	11.11	60.34	
59			4.5	56.2	
60			11.6	49.2	
#	0.65	50.02 ~~49.92~~	11.42	49.37	
B.M. Cul & Winder			2.72	47.30	
+74 R.R. Center of cul			5.6	44.4	
61			8.3	41.7	
+16.6	Center Winder & 2nd.		9.1	40.9	

cut Cross-Section

Levels over Road to Old Town on Second Street

Sta	+	HI	—	Elev	Grade	cut	cross Section
		50.02 ~~49.92~~					
61+16.6	center of Winder Street		9.1	40.9			
62			9.7	40.3			
63			9.8	40.2			
64			10.6	39.4			
65			10.7	39.3			
#	0.63	40.20	10.45	39.57			
+90			3.2	37.0			
66			6.0	34.2			
+20			10.8	29.4			
+30			4.7	35.5			
67			5.4	34.8			

Sta	+	HI	−	Elev
68		40.20	7.6	32.6
69			10.3	29.9
70			12.4	27.8
71			13.2	27.0
#	5.77	33.97	12.00	28.20
72			8.4	25.6
73			7.4	26.6
74			6.6	27.3
75			5.6	28.3
+ 70			4.5	29.4
+ 75			6.0	27.9
76			7.0	26.9

Sta	+	HI	−	Elev
77		33.97	8.6	25.3
78			9.2	24.7
79			9.1	24.9
~~79~~			~~9.7~~	~~24.3~~
~~79~~ 80			8.5	25.4
~~80~~ 81			8.4	25.5
#	3.55	29.09	8.43	25.54
~~81~~ 82			3.0	26.0
~~82~~ 83			1.4	27.6
~~82~~ 84			2.0	27.0
~~84~~ 85			4.0	25.0
~~86~~ 86			6.0	23.0
~~86~~ 87			8.1	20.9

Sta	+	HI	−	Elev
~~87~~ 88		29.09	10.1	18.9
~~88~~ 89			12.3	16.7
#	1.23	18.42	11.90	17.19
~~89~~ 90			3.7	14.6
~~90~~ 91			6.4	11.9
~~91~~ 92			7.5	10.8
~~92~~ 93			7.5	10.8
~~93~~ 94			7.6	10.7
~~94~~ 95			7.7	10.6
~~95~~ 96			7.8	10.5
+37.5			8.35	10.07
B.M. correct			95.15	

Sta	+	HI	−	Elev
Bm.	7.08	17.23		10.15
96 +77.8			8.7	8.5
97 ~~+29.8~~			7.0	10.2
97 +29.8			5.7	11.5
+69.8			6.6	10.6
~~98~~ 98			7.1	10.1
~~99~~ 99			9.1	8.1
~~99~~ 100			4.3	12.9
~~100~~ 101			2.1	15.1
#	11.43	28.18	0.48	16.75
~~101~~ 102			6.5	21.7
~~102~~ 103			4.5	23.7
~~103~~ 104			3.5	24.7
+44.6	9.36	33.34	4.20	23.98
~~104~~ 105			5.5	27.8
~~105~~ 106			4.5	28.8
~~106~~ 107			5.8	27.5
+94.4			8.40	24.94
~~107~~ 108			8.2	25.1
~~108~~ 109			4.0	29.3
~~109~~ 110			3.0	30.3

Second & Witherbee

Sta	+	HI	−	Elev		
		33.34				
114			4.45	28.89		
+43.7			5.8	27.5		
115			3.6	29.7		
#2	3.71	36.40	0.65	32.69		
116			3.3	33.1		
117			2.8	33.6		
+60			1.4	35.0		
+65			4.7	31.7		
+88			9.2	27.2		
+92.7			5.0	31.4		
118			5.5	30.9	31.0	0.0
119			10.0	26.4	28.0	− 1.6
#	7.78	32.15	12.03	24.37	~~24.0~~ 23.6	
120			8.6	~~24.6~~	25.0	− 1.4
121			9.0	23.2	24.2	− 1.0
+30 +42.8			10.90	21.2	24.0 24.0	
122			6.6	25.6	24.9	+ 0.7
123			2.9	29.2	27.0	+ 2.2
124			3.5	28.7	25.3	+ 3.4
124+80			6.37	25.78	24.0	

Sta.	+	HI	−	Elev
12X2		32.15	6.6	25.6
#	2.41	22.79	11.77	20.38
12X3			3.2	19.6
12X4			8.6	14.2
+10			11.7	11.1
+20			8.7	14.1
12X5			3.5	19.3
12X6			5.0	17.8
12X7			4.9	17.9
12X8			2.5	20.4
12X9			0.3	22.5
#	1.96	24.35	0.40	22.39
12X10			0.7	23.7
13X1			1.0	23.4
13X2			2.1	22.3
13X3			3.3	21.1
13X4			4.4	20.0
13X5			5.0	19.4
+92.3			5.61	18.74
13X6			5.7	18.7
13X7			5.2	19.2

24.0 24.0

− 3.0 21.1 21.1 − 1.5

− 6.9 × 18.0 18.0 − 3.8

− 5.9 18.3 18.1 − 7.0

− 6.7 18.7 18.3 − 4.2

− 0.3 × 19.0 18.3 + 1.0

− 0.2 20.5 18.7 − 0.9

× 22.0 19.0 − 1.1

20.5 20.5 − 0.1

× 22.0 22.0 +0.5

21.7 + 2.0

21.4 + 2.0

21.1 + 1.2

21.0 21.9 24.0

Sta	+	HI	−	Elev		
137 8		24.35	8.1	16.3		
138 9			3.7	20.7		
+ 54.5			2.3	22.1		
			0.9	23.5		on rail opposite Sta 138+54.5
~~139~~ 140			3.3	21.1		
+ 66			4.9	19.5		
# 141	5.91	25.74	4.52	19.83		
~~+ 94~~			4.4	21.3		
~~142~~ 142			4.9	20.8		
B.M.			4.68	21.06		Spk tel pole in cor of Plaza
~~142~~ 143			4.2	21.5		
144 4			0.7	25.0		
#	3.54	28.72	0.56	25.18		
145 5			2.9	25.8		
+ 73			2.7	26.0		
146 6			4.7	~~28.0~~ 24.03	24.5	−0.5
147 7			7.2	21.5	20.8	+0.7
148 8			11.1	17.6	17.0	+0.6
#	0.20	17.89	11.08	17.69	/	
149 9			4.6	13.3	13.3	0.6
+49			5.8	12.1		

Sta	+	HI	−	Elev		
B.M.		17.89	1.07	16.82		tack in post N.E. cor Juan & Washington
~~149~~ 150			6.0	11.9	11.6	+0.3
150 1			7.2	10.7	10.7	0.0
15X 2			9.2	8.7	9.8	−1.1
15X 3			10.50	7.39	8.9	−1.5
#	12.04	19.43	10.50	7.39		
15X 4			12.5	6.9	8.0	−1.1
15X 5			11.8	7.6	11.0	−3.4
+30			11.4	8.0	11.9	−3.9
15X 6			4.4	15.0	13.9	+1.1
+36 +49 +62			1.0	18.4	15.0	center of Washington & Webster
B.M.			2.21	17.22		
#	0.0	13.32	6.11	13.32		
15X 7			0.3	13.0	13.6	+0.6
15X 8			7.7	5.6	9.8	−4.2
15X 9			7.4	5.9	6.0	−0.1
~~159~~ 160			7.5	5.8	6.0	−0.2
16X 1			6.4	4.9	6.0	−1.1
16X 2			7.8	5.5	6.0	−0.5
+36.9 #	5.60	10.92	8.0	5.32	6.0	center of Taylor & Webster
16X 3			5.4	5.5	6.0	−0.5

Sta	+	HI	−	Elev		
16~~3~~4		10.92	5.5	5.4	6.0	− 0.6
16~~4~~5			5.3	5.6	× 6.0	− 0.4
16~~5~~6			4.6	6.3	70	− 07
16~~6~~7			2.6	8.3	80	+ 0.3
16~~7~~8			1.7	9.2	× 9.0	+ 0.2
#	6.57	18.46	1.03	9.89		
16~~8~~9			4.0	14.5	11.4	+ 3.1
+ 24						
+ 37			2.8	16.2	× 12.0	+ 4.2
+ ~~43~~ 50						
~~169~~ 176			5.7	12.8	12.5	+ 0.3
17~~0~~1			6.6	11.9	13.5	− 1.6
+ 40					13.9	End of Plank approach
			3.8	14.7		Floor of Bridge
B.M.			6.73	11.73		

Completed June

B.M. 17.52 Cor Lyons fence

June 7 1892 Hamlin & Party 27

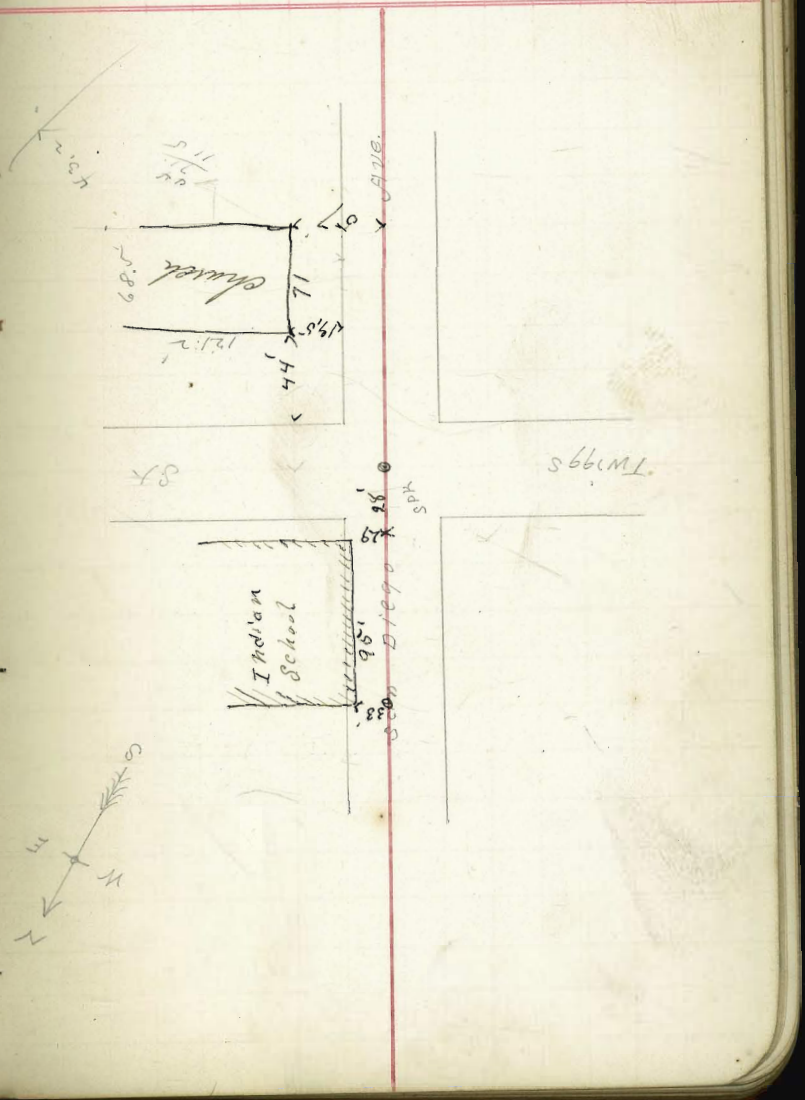
Levels over Old Town Road from Twiggs & Congress to Juan & S.Ls. St

Sta	+	HI	−	Elev		Sta 13R	
B.M.	8.80	31.10		22.30			
13~~1~~2 + 42.6			9.9	21.2		21.0	+0.2
13~~2~~3			9.2	21.8	+3.05% < +2.1%	21.9	+0.1 ✓
13~~3~~4			7.3	23.8		24.0	−0.2 ✓
13~~4~~5			4.2	26.9		27.1	+0.2 ✓
13~~5~~6			0.6	30.5		30.1	−0.4 ✓
+13.2~~4~~			0.6	30.5	×	30.5	0.0 Top of rail
#	11.33	41.83	0.6	30.50			
13~~6~~7			7.8	34.0		33.9	+0.0 ✓
13~~7~~8			4.3	37.5		37.9	+0.4 ✓
#	11.30	52.43	0.70	41.13		~~42~~	
13~~8~~9			10.5	41.9	+4.03%	42.0	+0.1 ✓
~~139~~ 140			3.9	48.5		46.0	+2.5 ✓
#	3.82	56.00	0.25	52.18			
14~~0~~1			1.7	54.3	✓	50	+4.3 ✓
+12.6			4.2	51.8	+26	−50	center Twiggs & Juan Sts
+30			3.8	52.2			
#	0.94	45.32	11.62	44.38			
14~~1~~2			3.2	42.1	−6.6%	45.2	+3.1
14~~2~~3			9.0	36.3		38.6	−2.3
#	2.03	35.57	11.78	33.54			

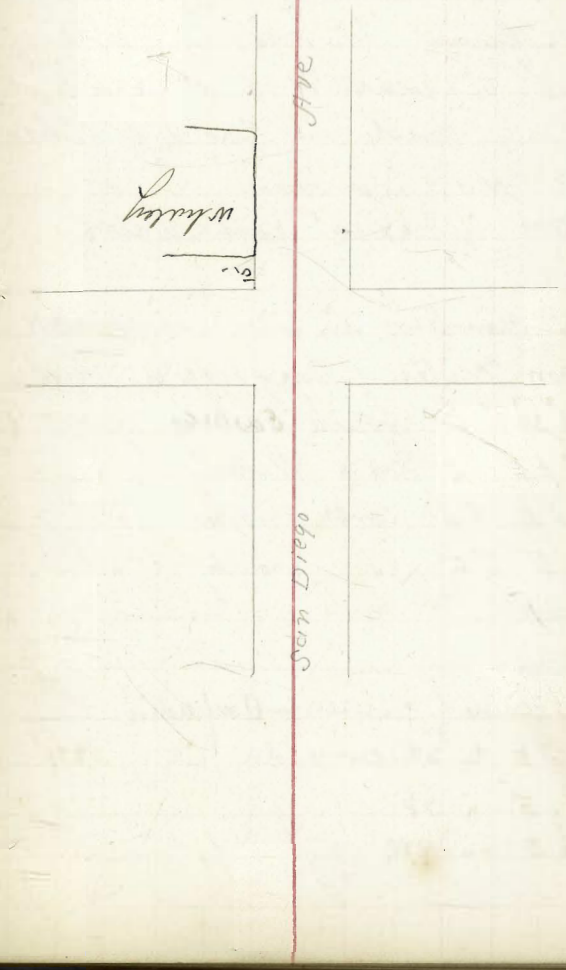
Sta	+	HI	−	Elev	
1484		35.57	3.7	31.9	32.0 −0.1
1485			6.5	29.1	28.3 +0.8
+73			9.5	26.1	— Center Juan & San Diego St

June 7 1852 Hamlin & Partch

Location of Church & School Building N. cor of San Diego Ave & Twigg St.



June 7 1852 Hamlin & Party



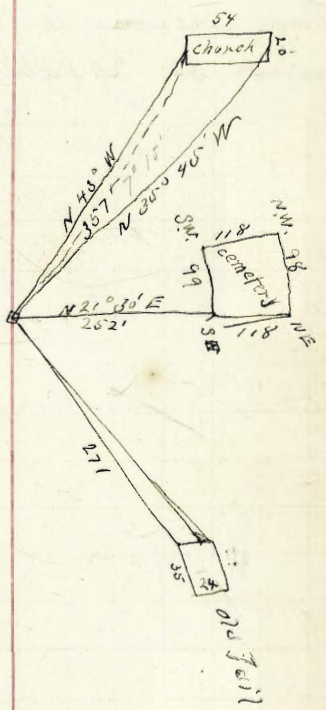
Location of buildings in Old Town — June 7 1858 — Hamlin & Darby

Location of new church at Old-town
Set up over center of Congress & Arista
and found the westerly gable of
church to bear N 43° W mag. distance
357 and the easterly gable to
bear N 35° 45' W mag
Church is 20 x 54' East & West

Old cemetery in San Diego Ave.
From center of Congress & Arista
N 21° 30' E to South Easterly corner (252')
N 3° 0' E " South Westerly "
N 14° 0' E " North Westerly "
N 28° E " " Easterly "

From center of Congress & Ampudia
N 65° E to S.W. cor of old jail 271'
N 70° 15' E " S.E.
N 61° 45' E " N.W.

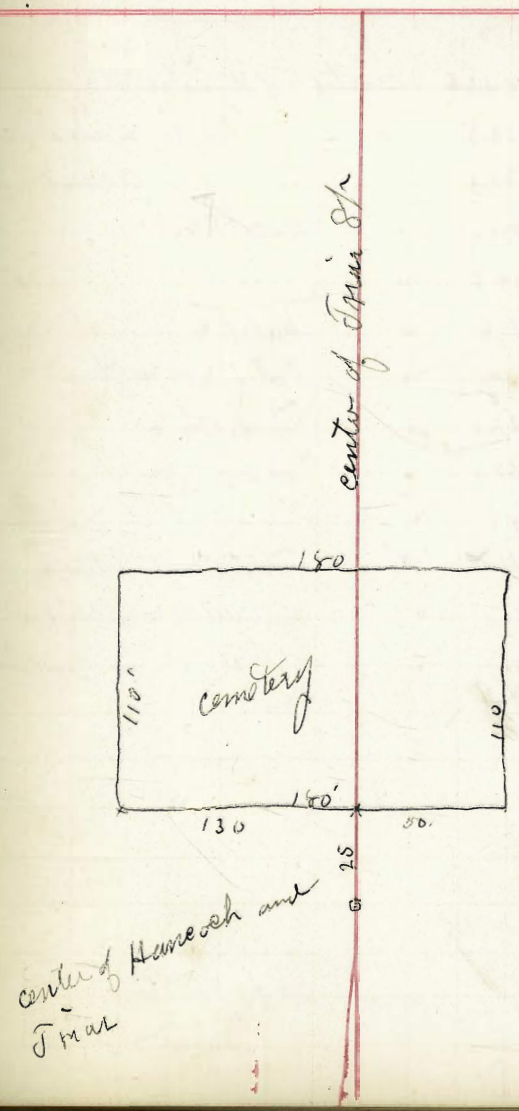
center of congress &
arista Streets



Old Cemetery near the Crossing of Hancock & Friar Streets

June 7 1898 Hamlin Party

Some of the graves are fenced and some are on the outside the above rectangle includes them all about 60 graves in all



June 7 1892 Hamlin & Parkes

Alignment of Road to Old Town north of Winder Street running to, and along Fourth Street

Sta	55+23.6	center of	Winder & Indiana
"	59+28.8	"	" Pierce & Indiana 90°
"	62+03.5	"	" " & Arctic 90°
"	65+84.7	"	Arctic &
"	69+64.6	"	" 90°
"	72+39.4	"	Calif & McDowell 90°
"	73+14	"	Calif & Fourth
"	78+27.5	"	Fourth & Axwell
"	89+69.5	"	Fourth &
"	96+81	"	Fourth & S of Witherbee
"	97+21.3	"	Fourth & Witherbee
"	99+18.7	"	Witherbee & Stockton
"	+58.7	"	Stockton & N of Witherbee
	109+83.8	"	Center of

June 8 1882 Hamlin & Party

Levels over Road to Old Town

Sta	+	HI	−	Elev	Grade
B.M.	6.13	88.50		82.37	
55+23.6			6.4	82.2	
56			4.4	84.2	
57			4.2	84.4	
58			4.0	84.6	
59			5.2	83.4	
+28.8 #	0.57	77.13	12.04	76.56	79.92
60			3.5	73.6	77.0
61			11.6	65.5	68.9
#	0.64	65.90	11.87	66.26	68.66
BM			1.67	64.23	67.63
62			7.1	58.8	62.2
+03.5			7.3	58.6	62.0
+18			11.2	54.7	58.1
+30			15.0	49.9	53.3
+38			14.5	51.4	54.8
+50			11.6	54.3	57.7
63			9.5	56.4	59.7
#	11.87	77.04	0.73	65.17	
+70			7.8	69.2	72.6
64			4.0	73.0	76.4

(corrected Elevs)

Fourth Street Line

Grade

India & Winder

84.0	+0.2
83.7	+0.7
83.3	+1.3
83.0	+0.4
84.1	− India & Pierce − 1.2
76.4	Mistake made bet. Sta 59 and 60 —
69.8	add 3.4 to all elevs, beyond Sta 60 −0.9 +0.6

Arctic & Pierce

63.0	− ~~1.0~~ 0.8
63.2	−1.2 Center of Pierce & Arctic
64.2	− 6.1
65.1	− 11.8
65.7	− 10.9
66.5	8.8
70.0	− 10.3
74.9	− 2.3
77.0	− 0.6

Levels over Road to Old Town — Fourth Street line

Sta	+	HI	−	Elev	~~Grade~~ Correct Elev	cut
		77.04				
#	11.94	88.77	0.21	76.83		
65			5.7	83.1	86.6	84.0 + 2.5
#	6.03	94.23	0.57	88.20		
+84.7			5.5	88.7	92.1	center of Arctic & Market
66			4.7	89.5	92.9	× 91.0 + 1.9
67			5.8	88.4	91.8	91.1 + 0.7
68			3.9	90.3	93.7	93.2 + 0.5
69			1.9	92.3	95.6	94.3 + 1.3
+64.6		add −	1.0	95.2	98.6	× 95.0 + 3.6
70 +78			4.5	89.7	93.1	95.0 92.8 + 0.3
#	2.46	84.62	12.07	82.16		
71			7.3	77.3	80.7	82.7 − 2.0
#	0.08	72.90	11.80	72.82		
72 +26			4.12	68.7	72.1	× 72.6 − 0.5
+39.4			7.9	65.0	68.4	70.0 center of Col &
73 +52			8.2	64.7	68.1	× 70.0 69.4 − 1.3
B.M.			5.15	67.75	71.15	
+14			8.7	64.2	67.6	69.2 − 1.6 center of Col. & Fourth St
74			11.4	61.5	64.9	× 68.0 − 3.1
75			11.8	61.1	64.5	68.5 − 4.0

Levels over Road to Old Town

Sta	+	H	−	Elev	~~Grade~~ Creek Elev
76		72.90	7.6	65.3	68.7
77			4.1	68.8	72.2
78			0.2	72.2	76.1
#	11.22	83.52	0.60	72.30	
79			7.2	76.3	79.7
+50			5.6	77.9	81.3
80			8.3	75.2	78.6
81			13.3	70.2	73.6
+85			15.2	68.3	71.7
82			14.5	69.0	72.4
83			7.2	76.3	79.7
84			7.5	76.0	79.4
85			4.6	78.9	82.3
#	6.40	85.23	4.69	78.83	
86			5.6	76.6	80.0
87			7.2	78.0	81.4
88			3.4	81.8	85.2
+65			4.8	80.4	83.8
89			7.0	78.12	80.6
+40			7.2	78.0	81.4
90			1.6	83.6	87.0

Fourth Street line

cut

+ 69	− 0.3
71.6	+ 0.6
74.2	+ 1.9
76.8	+ 2.9
× 78.0	+ 3.3
77.4	+ 1.2
76.2	− 2.6
75.1	− 3.4 Bottom of Creek
× 75.0	− 2.6
77.5	+ 2.2
× 80.0	− 0.6
81.0	+ 1.3
82.0	− 2.0
83.0	− 1.6
84.0	+ 1.2
84.7	+ 0.9
85.0	− 2.4
85.4	− 4.0
86	+ 1.0

Levels over Road to Old Town — Fourth Street line

Sta	+	HI	−	Elev	~~Grade~~ Correct Elev.	CUT		
		85.23						
#	1.81	86.33	0.71	84.52				
91			1.5	84.8	88.2	+ 2.0%	87.0	+1.2
92			3.7	82.6	86.0		85.0	+1.0
93			6.7	78.6	82.0		83.0	−1.0
94			11.4	74.9	78.3		79.3	−1.0
#	0.97	75.40	11.90	74.43				
95			2.6	72.8	76.2		75.5	+0.7
96			8.8	66.6	70.0	+ 2.0%	71.8	−1.8
+81 B.M.			13.75	61.65	65.05			South line of Witherbee St (center)
97			13.9	61.5	64.9		68.0	−3.1
+ 21.3			13.8	61.6	65.0			Center of 4th & Witherbee
~~+34~~							68.0	
#	12.00	87.03	0.37	75.03				
98			9.3	77.7	81.1		80.7	+ 0.4
#	11.67	98.82	0.08	86.95		+ 2.0%		
#	11.56	110.16	0.22	98.60				
99			7.0	103.2	106.6		100.0	+6.6
+18.7			2.2	108.0	111.4		100	Center of Witherbee & Stockton
100 +50			7.6	102.6	106.0		109	+6.0
#	0.58	99.12	11.64	98.52			100.	
101			7.0	92.1	95.5		93.4	+2.1

Levels over Road to Old Town — Fourth Street Line

Sta	+	HI	−	Elev	~~Grade~~ correct Elev.	CUT	
		99.12					
#	0.16	87.73	11.55	87.57			
102			10.2	77.5	80.9	80.2	+0.7
#	0.40	76.51	11.62	76.11			
#	1.01	66.23	11.27	65.24			
103			2.7	63.5	66.9	×67.0	0.0
+ 23						crossed pipe line	
#	0.80	55.08	11.95	54.28			
104			3.2	51.9	55.3	58.5	−3.2
105			9.5	45.6	49.0	×50.0	−1.0
#	0.56	44.12	11.52	43.56			
106			1.9	42.2	45.6	46.3	−1.3
107			3.7	40.4	43.8	42.5	+1.3
+95			7.3	36.8	40.2	38.7	+1.5
108			9.2	34.9	38.3	38.8	−0.3
+10			9.0	35.1	38.5	38.5	0.0 Rail Road Track
109			11.1	33.0	36.4	×35.0	+1.4
#	2.02	35.94	10.20	33.92			
109+83.4 = 113+92.7			7.8	28.1	31.5	~~39.0~~ 31.0	

Sta	+	HI	−	Elev
B.M.	5.61	88.08		82.47
55+23.6			5.9	82.2
56			3.9	84.2 ✓
57			3.8	84.3 ✓
58			3.6	84.5 ✓
59			4.7	83.4 ✓
+28.8			8.16	79.92 ✓
60			11.1	76.9 ✓
#	0.95	78.73	10.30	77.78
61			7.8	68.9 ✓
B.M.			11.14	67.59

Winder & Sudik

Archer. Pierce

Levels from South End of Bridge — South

Sta	+	HI	−	Elev	Rod	cut	
B.M.	4.70	44.70		40.00	40.0		Floor of bridge
+10			7.6	37.1	40.8	-3.7	
+50			0.8	43.9	44.4 ~~43.9~~	0.0	

Sta	+	HI	-	Elev	

Road to Old San Diego

Sta	Cubic Yards. Cut.	Fill.	End Areas Cut.	Fill.
0				128.2
+10				152.0
+50				
+67				

The above notes are for the street bridge; South end of

Sta	Cubic Yards. Cut.	Fill.	End Areas Cut.	Fill.
0				
+0.4				
+50				
1				
2				

India Street

Cross Section.

−2.5 / 15.7	2.5 / 12	−3.8	−9.5 / 12.0
−1.7 / 14.6		−3.7	−10.5 / 28.7
0.0 / 0		0.0	−3.0 / 13.0
		0.0	0.0 / 12.0

fill South of the India bridge is Sta 0

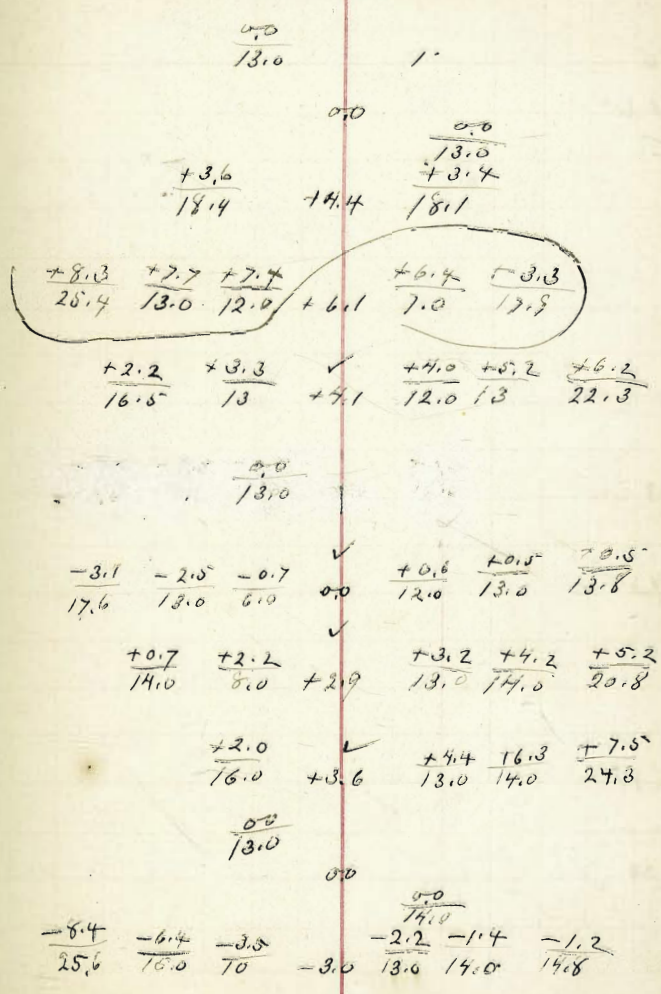
−8.4		−8.4	−8.6
−5.9 / 20.8		−4.1	−4.0 / 20.4
−2.6 / 16.9		−2.1	−2.0 / 16.0
−6.5 / 22.7		−5.9	−7.7 / 20.7
−3.3 / 17.9		−5.7	−7.7 / 24.0

Road to Old San Diego

Sta	cubic yards Cut	cubic yards Fill	End Areas Cut	End Areas Fill
+ 42				
+ 68				
+ 75				
3				
4				
5				
+ 60				
5				
6				
7				
8				
+ 35				
+ 40				
+ 70				
9				

India Street

Cross Sections



Road to Old San Diego

Sta	cubic yards Cut	cubic yards Fill	End Areas Cut	End Areas Fill
10				
+35				
11				
12				
13				
+30				
+64.6				
14				
~~15~~				
+50				
+90				

India Street.

Cross Sections

-2.4 -2.3 -1.1 0.0
16.6 13 13.0 17.0
-1.5
0.0 0.0
13.0 13.0

-3.3 -2.1 0.0 +1.0
17.9 13.0 5.0 +0.5 14.5

-4.4 -2.8 0.0 +1.2 +1.1 +3.1 +4.2
19.6 13 5.4 4.5 12.0 13.0 19.3

0.0 +2.4 +3.9 +4.6 +6.3
13.0 4.0 +2.3 12.0 13.0 22.5

+0.3 +1.1 +3.0 +3.2 +7.0 +8.3
13.0 4.0 5.0 12.0 18 25.5

0.0 +1.7 +2.1 +3.3 +5.0
13.0 8.0 +1.8 8.0 9.0 18.5

-3.5 -2.4 -0.3 0.0 +0.7 +1.4 +3.1
18.3 14 8.3 10.0 12.0 16.1

-0.7 -0.6 0.0 +1.7 +1.8 +1.9 +3.8 +6.3
14.0 13.0 10 5.0 10.0 12.0 20.9

+0.3 +2.3 +2.3 +2.7 +4.1 +5.4
13 6.0 11.0 12.0 21.1

-1.1 -1.1 0.0 +1.0 +1.0 +1.4 +2.8 +3.9
14.7 13.0 8.0 6.0 11 12.0 18.8

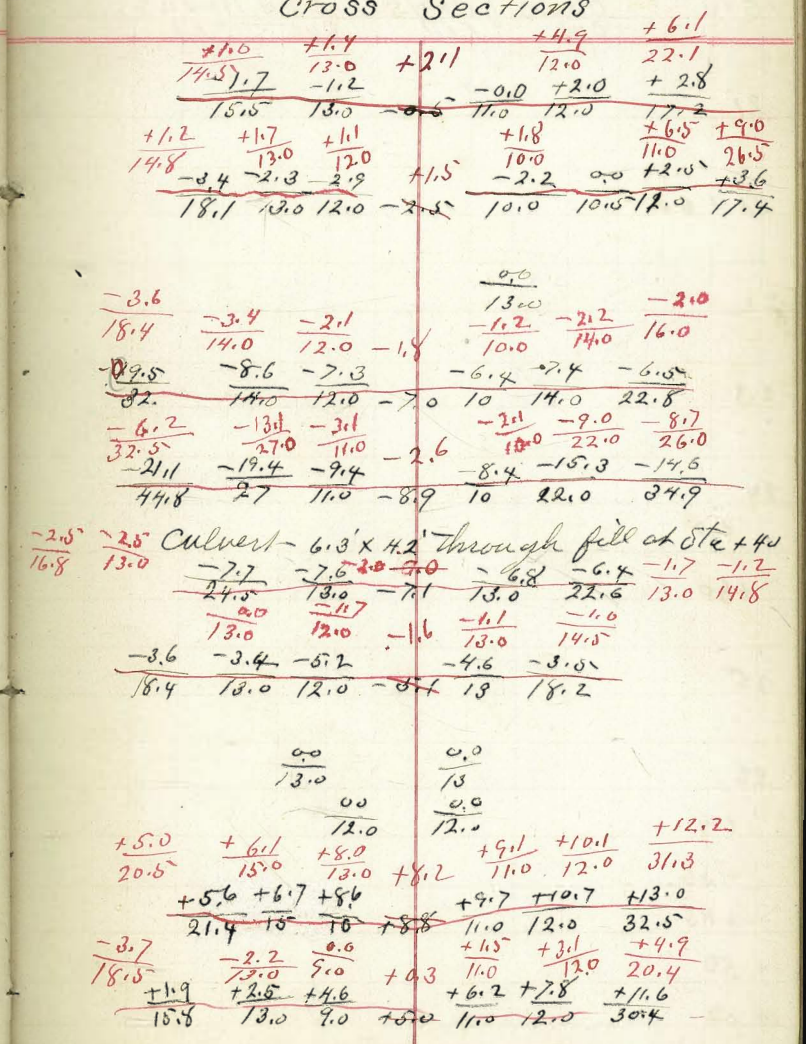
Road to Old San Diego

Sta	Cubic Yards Cut	Cubic Yards Fill	End Areas Cut	End Areas Fill
16.0				
+60 ✓				
+62				
17				
+40				
+80 ✓				
18				
+8				
+37				
19				
20				

Grade changed after x sees were Token; those in red ink are Token from a diagram

India Street

Cross Sections



+1.0 / 14.5 — +1.4 / 13.0 — +2.1 — +4.9 / 12.0 — +6.1 / 22.1

1.7 / 15.5 — -1.2 / 13.0 — -0.5 — -0.0 / 11.0 — +2.0 / 12.0 — +2.8 / 17.2

+1.2 / 14.8 — +1.7 / 13.0 — +1.1 / 12.0 — +1.5 — +1.8 / 10.0 — +6.5 / 11.0 — +9.0 / 26.5

-3.4 / 18.1 — -2.3 / 13.0 — -2.9 / 12.0 — -2.5 — -2.2 / 10.0 — 0.0 / 10.5 — +2.5 / 12.0 — +3.6 / 17.4

0.0 / 13.0

-3.6 / 18.4 — -3.4 / 14.0 — -2.1 / 12.0 — -1.8 — -1.2 / 10.0 — -2.2 / 14.0 — -2.0 / 16.0

-9.5 / 32. — -8.6 / 14.0 — -7.3 / 12.0 — -7.0 — -6.4 / 10 — -7.4 / 14.0 — -6.5 / 22.8

-6.2 / 32.5 — -13.1 / 27.0 — -3.1 / 11.0 — -2.6 — -2.1 / 10.0 — -9.0 / 22.0 — -8.7 / 26.0

-21.1 / 44.8 — -19.4 / 27 — -9.4 / 11.0 — -8.9 — -8.4 / 10 — -15.3 / 22.0 — -14.6 / 34.9

-2.5 / 16.8 — -2.5 / 13.0 — Culvert - 6.3' x 4.2' through fill at Sta +40

-7.7 / 24.5 — -7.6 / 13.0 — -2.0 — -7.0 — -7.1 — -6.8 / 13.0 — -6.4 / 22.6 — -1.7 / 13.0 — -1.2 / 14.8

0.0 / 13.0 — -1.7 / 12.0 — -1.6 — -1.1 / 13.0 — -1.0 / 14.5

-3.6 / 18.4 — -3.4 / 13.0 — -5.2 / 12.0 — -5.1 — -4.6 / 13 — -3.5 / 18.2

0.0 / 13.0 — 0.0 / 13

0.0 / 12.0 — 0.0 / 12.0

+5.0 / 20.5 — +6.1 / 15.0 — +8.0 / 13.0 — +8.2 — +9.1 / 11.0 — +10.1 / 12.0 — +12.2 / 31.3

+5.6 / 21.4 — +6.7 / 15 — +8.6 / 16 — +8.8 — +9.7 / 11.0 — +10.7 / 12.0 — +13.0 / 32.5

-3.7 / 18.5 — -2.2 / 13.0 — 0.0 / 9.0 — +0.3 — +1.5 / 11.0 — +3.1 / 12.0 — +4.9 / 20.4

+1.9 / 15.8 — +2.5 / 13.0 — +4.6 / 9.0 — +5.0 — +6.2 / 11.0 — +7.8 / 12.0 — +11.6 / 30.4

Road to Old San Diego

Sta	Cubic Yards Cut	Cubic Yards Fill	End Areas Cut	End Areas Fill
21				
21 + 60				
22				
23				
24				
+10				
+80				
25				
26				
+14				
+36				
+45				
+50				
+55				

Cross Sections

-1.4 / 15.1 | -0.2 / 13.0 | 0.0 / 12.0 | +0.6 / 11.0 | +1.3 | +2.1 / 1.1 | +3.5 / 13.0 | +4.6 / 20.0

+1.3 / 14.9 | +1.7 / 13.0 | +3.0 / 11.0 | +3.7 | +4.5 / 11.0 | +5.9 / 13.0 | +7.7 / 24.5

0.0 / 13.0

-3.5 / 18.3 | 0.0 | +4.2 / 19.3

-3.4 / 18.1 | 0.0 | +3.9 / 16.9

-1.5 / 15.3 | -1.1 / 13.0 | 0.0 / 5.0 | +0.9 | +3.6 / 18.4

0.0 / 13.0

+1.7 / 15.5 | +4.9 | +9.7 / 27.5

+1.8 / 15.7 | +4.7 | +11.3 / 30

+1.1 / 14.7 | +3.6 | +7.5 / 24.3

0.0 / 13.0

0.0 / 0.0

0.0 / 13.0

-2.8 / 17.2 | -2.0 | -0.8 / 14.2

Road To Old San Diego

Sta	Cubic yards Cut	Cubic yards Fill	End areas Cut	End areas Fill
-				
27				
+ 15				
+ 60				
28				
+ 14				
+ 22				
+ 40				
29				
30				
31				
+ 20				

Cross Section

-14.0 / 34.0 -12.7 -11.1 / 29.7

Culvert to be placed at Sta 27+15

-15.6 / 36.4 -14.5 -12.5 / 31.7

-14.1 / 34.1 -11.7 -10.2 / 28.3

-6.9 / 23.3 -4.0 -1.5 / 15.3

-1.0 / 14.5 0.0 / 13.0

0.0

-1.0 -1.0 / 14.5 13 0.0 / 8.0 +1.4 +4.0 / 19.0

+0.5 / 13.0 +4.3 +6.8 / 13.0 +8.0 / 25.0

0.0 / 13.0 +2.3 +8.4 / 25.6

-2.1 / 15.1 -1.5 / 13.0 0.0 / 6.0 +1.1 +6.8 / 23.2

0.0

Road to Old San Diego

Sta	cubic yards Cut	Fill	End area Cut	Fill
1 64				
31+85				
32				
32				
+20				
+62				
33				
34				
35				
36				
37				
38				

Cross Section

0.0 / 13.0

−5.0 / 20.5 — −2.9 — −1.0 / 14.5 ✓

Culvert at Sta 32+10

−8.8 / 26.2 — −5.7 — −3.0 / 17.5

−7.9 / 27.9 — −6.6 — −4.3 / 19.5

0.0 / 13.0

−5.1 / 20.7 — −0.7 — 0.0 / 3.0 — +2.2 / 13.0 — +3.0 / 17.5

−5.6 / 21.4 — −2.1 — +3.9 / 16.8

−4.4 / 19.6 — −0.3 — 0.0 / 1.5 — +3.1 / 17.7

−3.6 / 18.4 — −2.3 / 13.0 — 0.0 / 4.0 — +1.0 — +7.7 / 24.5 ✓

−4.1 / 19.1 — −2.3 / 13 — 0.0 / 5.0 — +1.6 — +8.0 / 25

−5.3 / 20.9 — 0.0 / 2.0 — +0.6 — +6.9 / 23.5

Road to Old San Diego

Sta	cubic yards Cut	Fill	End areas Cut	Fill
39				
+ 50				
+ 93				
40				
+20				
+ 50				
+ 80				
41				
+ 18				
+ 51				
42.0				
+ 50				
43				

Cross Sections

+ 0.5 / 13.0 + 3.3 + 13.6 / 33.6

− 0.9 / 14.3 0.0 / 7.0 + 2.5 + 9.9 / 27.8

0.0 / 13.0

− 9.4 / 27.1 − 3.4 − 7.0 / 14.5

− 15.0 / 35.5 − 11.1 − 8.9 / 25.4

− 14.8 / 35.2 − 10.2 − 7.5 / 24.2

− 13.5 / 33.2 − 10.4 − 6.7 / 28.0

− 8.8 / 26.2 − 6.5 − 4.7 / 20.0

0.0 / 13.0

20 / 13.0

+ 2.5 / 16.8 + 3.6 / 13.0 + 6.9 + 10.1 / 13.0 + 3.8 / 34.0

+ 3.9 / 18.8 + 5.2 / 13.0 + 8.8 + 15.4 / 36.1

+ 4.8 / 20.2 + 9.8 + 17.9 / 39.8

Road to Old San Diego

Sta	Cubic yards Cut	Cubic yards Fill	End Areas Cut	End Areas Fill
43+40				
44				
+18				
+34				
+50				
+80				
45				
46				
+68				
47				
+43				
+58				

Cross Sections

+5.6 / 21.4 +10.6 +17.8 / 39.7

+2.3 / 16.4 +2.7 / 13.0 +5.4 +8.5 / 25.7

0.0 / 13.0

0.0 / 13.0

~~4.0~~

-6.6 / 22.9 -4.0 -2.5 / 16.8

-13.4 / 33.1 -11.6 -11.0 / 29.5

-19.4 / 42.1 -16.9 -15.1 / 35.7

-4.7 / 20.0 -1.5 0.0 / 13.0

0.0 / 13.0

+1.9 / 15.8 +4.6 +9.5 / 27.2

+1.1 / 14.7 +6.7 +10.5 / 13.0 +12.4 / 31.6

0.0 / 13.0

Road to Old San Diego

Sta	cubic yards Cut	Fill	End Areas Cut	Fill
48				
+ 68				
49				
+ 75				
50				
+ 50				
51				
+ 70				
52				
+ 20				
53				
54				
+ 75				
+ 20				
55				

Cross Sections

-5.4 / 21.1 — -2.4 / 13.0 — 0.0 / 4.0 — +1.5 — +9.5 / 27.2

0.0 / 13.0

-9.1 / 26.7 — -3.8 — -0.7 / 14.0

0.0 / 13.0

-0.6 / 13.9 — 0.0 / 3.0 — +0.6 — +1.9 / 15.8

0.0 / 13.0

+0.5 / 13.7 — +1.7 — +3.5 / 18.4

0.0 / 13.0

-0.8 / 14.2 — 0.0 / 2.0 — +0.1 — +1.4 / 15.1

0.0 / 13.0

-3.3 / 18.0 — -2.6 — -1.8 / 15.7

-2.0 / 16.0 — -1.3 — -1.2 / 14.8

0.0 / 13.0

0.0 / 13.0

0.0 / 13.0 — +0.8 — +1.6 / 15.4

+0.3 / 13.3 +1.2 +2.3 / 16.4

-0.7 / 14.0 0.0 / 3.0 +0.2 +1.1 / 14.7

0.0 / 13.0 +0.7 +1.9 / 15.8

0.0 / 13.0 +1.3 +3.0 / 17.5

-0.8 / 14.2 0.0 / 4.0 +0.4 +1.9 / 15.8

0.0 / 13.0

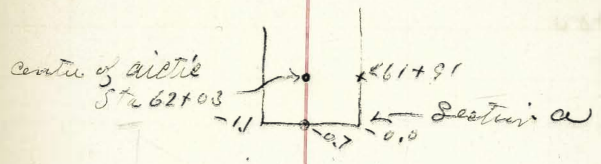
0.0 / 18.5 -1.2 -1.9 / 18.5 -2.0 / 21.5

+1.5 / 15.2 +0.6 0.0 / 4.0 -2.4 / 13.0 -3.3 / 17.9

+1.6 / 15.4 +0.5 0.0 / 13.0

0.0 / 13.0 -0.9 -1.7 / 15.5

0.0 / 13.0 -1.2 -3.6 / 19 -9.5 / 27.6



a			
	$\frac{-1.1}{14.7}$	-0.7	$\frac{-0.0}{13.0}$
62+03.5	$\frac{-1.9}{15.8}$	-1.2	$\frac{-0.9}{14.8}$
+18	$\frac{-6.1}{22.1}$	-6.1	$\frac{-4.6}{19.9}$
+30	$\frac{-13.5}{34.2}$	-12.2	$\frac{-11.2}{29.8}$
	Culvert to be placed at Sta +30		
+40	$\frac{-12.0}{31.0}$	-9.8	$\frac{-8.6}{25.9}$
63	$\frac{-11.1}{29.7}$	-10.3	$\frac{-9.1}{26.6}$
+70	$\frac{-4.5}{19.8}$	+2.3	$\frac{-1.1}{14.7}$
+78			$\frac{0.0}{13.0}$
64.0	$\frac{-2.5}{16.7}$	-0.6	$\frac{0.0}{8.0}$ $\quad \frac{+1.1}{14.7}$

+80
65

66

67

68

69

~~+64.6~~
+52

(av) +65

0.0
13.0

+0.9
14.3 +2.5 +4.3
19.4

0.0
13.0 +1.9 +4.6
19.9

-1.9 -1.4 0.0 +4.5
15.8 13.0 5.0 +0.7 19.7

-2.8 0.0 +4.4
17.2 13.0 5.0 +0.5 19.6

0.0 +3.3
13.0 +1.3 18.9

+3.6 90° left
(+1.1 / 14.7) +1.3 +6.3
13.0 +2.9 22.4

+1.9 +11.0 7.9
13.0 +0.4 24.8

= 69+65

+52

70

+0.6

71

72

+26 ← 13 East of ℄ of cal

+52

13' West of center of California St

73

+14

74

+75 +60 ~ Bridge or culvert

75

+70

76

+0.7 / 14.0 +0.3 0.0 / 13.0

0.0 / 13.0

-1.8 / 15.7 -2.0 -2.1 / 16.1

-0.4 / 13.0 -0.5 -0.7 / 14.0

-0.5 / 13.0 -0.2 -0.3 / 13.0

-3.0 / 17.5 -2.4 -2.1 / 16.1

-1.7 / 15.5 -1.3 -0.9 / 14.4

-1.8 / 16.0 -1.6 -1.6 / 18.0

-3.9 / 19.0 -3.1 -2.7 / 17.0

-6.0 / 22.0 -4.6 -3.2 / 17.8

-6.0 / 22.0 -4.0 -2.6 / 16.9

0.0 / 13.0

-2.0 / 16.0 -0.3 0.0 / 3.0 +1.6 / 15.4

77						−1.0 / 14.5	−0.7 / 13.0	0.0 / 7.0	+0.6	+1.8 / 15.7			
78						−1.1 / 14.6	−0.8 / 13.0	0.0 / 10.0	+1.9	+5.0 / 20.5			
79					× 2.6 %			0.0 / 13.0	+2.9	+9.0 / 26.5			
+50					×			0.0 / 13.0	+3.3	+8.8 / 26.2			
80						−4.2 / 19.3	−2.4 / 13.0	0.0 / 4.0	+1.2	+7.2 / 24.8			
81								−7.2 / 23.8	−2.6	0.0 / 9.0	+1.1 / 13.0	+2.0 / 16.0	
+65 grade											0.0 / 13.0		
+85					−1.2 %			−3.6 / 18.4	−3.4	−1.1 / 13.0	−0.8 / 14.2		
82					×			−3.4 / 18.1	−2.6	−1.2 / 14.8			
+80					×			0.0 / 13.0					
83								+1.0 / 14.5	+2.2	+0.0 / 14.0			
+20					× +2.5 %			0.0 / 13.0	+1.7	+3.5 / 18.5			
84								−1.6 / 15.5	−0.6	0.0 / 5.0	+0.4 / 13.6		
85								−0.4 / 13.6	0.0 / 10.0	+1.3	+3.1 / 17.6		

86									$\frac{-4.3}{19.4}$	-2.0	$\frac{0.0}{13.0}$		
87									$\frac{-5.3}{21.0}$	-1.6	$\frac{0.0}{9.0}$	$\frac{+0.8}{13.0}$	$\frac{+1.2}{14.8}$
88								$\frac{-2.3}{16.4}$	$\frac{-1.3}{13.0}$	$\frac{0.0}{7.0}$	$+1.2$	$\frac{+5.7}{21.5}$	
+65									$\frac{-3.6}{18.4}$	-0.9	$\frac{0.0}{8.0}$	$\frac{+0.7}{13.0}$	$\frac{+0.9}{14.5}$
+70											$\frac{0.0}{13.0}$		
89									$\frac{-8.4}{25.6}$	-4.4	$\frac{-2.8}{17.2}$		
+40									$\frac{-9.5}{27.2}$	-4.7	$\frac{-1.4}{15.1}$		
+50											$\frac{0.0}{13.0}$		
90								$\frac{-3.0}{17.5}$	$\frac{-2.4}{13.0}$	$\frac{0.0}{4.0}$	$+1.0$	$\frac{+3.5}{13.0}$	$\frac{+4.9}{20.4}$
91								$\frac{-1.9}{15.8}$	$\frac{-1.3}{13.0}$	$\frac{0.0}{5.0}$	$+1.2$	$\frac{+5.9}{21.8}$	
92								$\frac{-4.0}{19.0}$	$\frac{-3.1}{13.0}$	$\frac{0.0}{4.0}$	$+1.0$	$\frac{+6.4}{22.6}$	
93								$\frac{-4.8}{20.2}$	$\frac{0.0}{4.0}$	-1.0	$\frac{0.0}{4.0}$	$\frac{+4.1}{19.1}$	
94								$\frac{-5.7}{20.8}$		-1.0	$\frac{0.0}{5.0}$	$\frac{-4.4}{19.6}$	

+1.0 %

x

x

-2.0 %

x

95				−2.4 / 16.6	0.0 / 4.0	+0.7	+5.1 / 20.7	
96				−6.4 / 22.6		−1.8	0.0 / 8.0	+1.4 / 13.0 +2.4 / 16.6
97				−7.2 / 23.8		−3.1	0.0 / 13.0	
+08	13' South of center of Walthenbee			−6.7 / 23.0		−3.1	0.0 / 13.0	no slope on Rig't
+34	13' North of center of Walthenbee			−7.9 / 24.9		−3.4	−1.5 / 13.0	
				culvert slope on north of this crossing				
97+34	13' East of center of Trout Rd			+.5 / 16.2	−1.5 / 13.0		0.0 / 13.0	
98				+0.4 / 13.6		+0.4	+1.1 / 14.5	
99				+6.2 / 22.3		+6.6	+7.8 / 13.0	+7.2 / 23.8
+06				+7.8 / 24.8		+8.2	+8.9 / 13.0	+8.4 / 25.6

+32

+32 ← on Stockton Sh

100

+50

101

102

103

+40

104

+92

105

106

107

x 95

+18.1 — 12' East of Sta 99+32

12' East of Sta 99+32

(+19.8)

		+15.3 / 13.0	+15.9	+16 / 37.0	
	+6.0 / 22.0	+8.8 / 13.0	+12.2	+18.1 / 25.0	
	+1.5 / 15.2	+2.2 / 13.0	+6.0	+13.0 / 25	
	+0.5 / 13.7	0.0 / 11.0	+2.4	9.1 / 25	
−13.2%	−3.6 / 18.4	−1.9 / 13.0	0.0 / 7.0	+2.1	+9.1 / 25.0
	−4.5 / 19.8	−3.3 / 13.0	0.0 / 2.0	+0.7	+8.4 / 25.0
		−5.0 / 20.5	0.0	+6.0 / 22.0	
				0.0 / 13.0	
−8.5%		−5.7 / 21.5	−3.2	−1.5 / 15.2	
				0.0 / 13.0	
		−2.1 / 16.1	−1.0	0.0 / 9.0	+0.6 / +3.9
		−2.5 / 16.7	−1.3	−0.8 / 14.2	
	+85 →	0.0 / 13.0		0.0 / 13.0 ←	+10
3.75%		+0.6 / 13.9	+1.3	+2.1 / 16.1	
		+1.8 / 15.7	+1.5	+1.5 / 15.2	

~~+16~~

108

+10

109

+84 = 114+93 centre of Stretcher & amphibian

91.0 ← This Sta is 91 long.

115

16

17

18

-4.4 %

-0 %

-8 %

0.0 / 13.0 — 0.3 — 0.0 / 13.0

0.0 / 13.0 — +0.0 — 0.0 / 13.00

+1.3 / 15.0 — +1.4 — +1.8 / 15.7

30.0 back to grade

+1.8 / 15.7 — +1.2 / 13.0 — 0.0 / 8.0 — -3.8 / 4.0 — 0.0 — +0.9 / 14.3

+15 → 0.0 / 13.0 — 0.0 / 13.0 + 50' ← about 35% of road

-1.9 / 15.8 — -1.6 — -1.1 / 14.7

0.0 / 13.0 ← +58

-2.5 / 16.8 — -1.4 — 0.0 / 8.0 — +0.7 / 13.0 — +1.0 / 14.5

-4.6 / 20.0 — -1.0 — 0.0 / 4.0 — +0.9 / 13.0 — +2.2 / 16.3

118+30								−4.3 / 19.4	−1.3	0.0 / 9.0	+0.7 / 13.0	+1.0 / 14.5 No slope here
+56								−5.1 / 20.7	−3.0	0.0 / 13.0	−1.5 / 13.0	−1.3 / 15.0
119								0.0 / 13.0	+0.7	+1.8 / 15.7		
120								+2.4 / 16.6	+2.2	+2.3 / 16.4		
121								+1.9 / 15.8	~~+3.0 / 17.5~~	2.3' ~~+3.4~~	~~+4.4 / 19.6~~	+3.1 / 17.6
+80								−0.6 / 13.9	0.0 / 7.0	+0.4	~~+3.0 / 17.5~~	+0.9 / 14.4
122+06								−0.4 / 13.6	0.0 / 4.0	+0.3	+0.8 / 14.2	
123								−2.5 / 16.8	−2.5	−2.6 / 16.9		
124								−4.5 / 19.8	−3.8	−3.8 / 2.0	−6.7 / 6.0	−6.4 / 22.6
+10								Bridge of Sta 124+10 −7.4 / 24.1	−7.0	−6.0 / 13.0	−4.3 / 19.4	
+20								−5.3 / 20.9	−4.2	−3.5 / 18.2		

+.33% − ~~+0~~ / 0 ~~−3.1%~~ / −4.1% × 0.0 × ~~−1.7%~~ / −0.6% × +2.1% × 0.0

						124+95 →	0.0 / 13.0	0.0 / 13.0	← 124+82	
125							+0.3 / 13.3	+ 1.0	+2.1 / 16.1	
						125+50 →	0.0 / 13.0		~~0.0 / 13.0~~ ← 126	
126						−1.7 / 15.5	−4.7 / 13.0	−1.3 / 12.0	− 0.9	0.0 / 13.0
127							−1.8 / 15.7	− 1.1	−0.8 / 14.2	
128							−0.3 / 13.4	− 0.1	−0.6 / 13.9	
						128+84 →	0.0 / 13.0		0.0 / 13.0	28+70
129							+0.3 / 13.6	+ 0.5	+0.5 / 13.7	
130							+2.1 / 16.1	+ 2.0	+2.0 / 16.0	
131							+2.3 / 16.4	+ 2.0	+2.0 / 16.0	
132							+1.2 / 14.8	+ 1.2	+1.1 / 14.6	
+ 30							+1.0 / 14.5	+ 0.3	+0.4 / 13.6	
+ 56							−0.8 / 14.2	0. 0.0	+0.2 / 13.0	

+.00 %

+1.5 %

−3.05 %

+0.0

133					
134					
135					
136					
137					
138					
139					
140					
141					

0.0 / 13.0 +0.1 0.0 / 13.0

−0.3 / 13.0 −0.2 0.0 / 13.0

+0.3 / 13.0 +0.2 0.0 / 13.0

+0.3 / 13.0 +0.4 +0.6 / 13.9

+0.2 / 13.0 +0.4 +0.5 / 13.7

0.0 / 13.0 0.0 0.0 / 13.0

13.0 / +0.6 / 13.9 +1.0 13.0 / +1.0 / 14.0

0.0 / 13.0 +0.1 0.0 / 13.0

+0.3 / 13.0 +0.4 +0.6 / 13.9

+0.5 0.0 / 13.7 6.0 −0.1 0.0 / 13.0 +0.4 / 13.6

+1.6 / 15.4 +2.6 +3.8 / 18.7

+2.1 / 16.1 +4.0 / 13.0 +4.3 +4.0 / 13.0 +5.6 / 21.9

141 + ~~26~~ 13						5/0	+2.4 / 16.6	3.1 / 13.0	+2.1	×2.4 / 8.0	+5.4 / 13.0	+5.5 / 20.2
141 + 26							+3.2 / 17.5	+3.7 / 14.0	+0.5 / 7.0	+2.1	+2.8 / 8.0	+4.7 / 13.0	+6.0 / 19.0
141 + 30							0.0 / 13.0	+0.0 ~~+1.2~~	0.0 / 13.0			
142						−6.6 %	−2.7 / 17.0	−3.1	−3.5 / 18.2			
+40							Reversed of this Sta → −4.5 / 19.7	−4.3 / 7.0	−3.7	−3.5 / 17.2		
143							−3.0 / ~~16.0~~ 17.5	−2.3	−3.0 / ~~16.0~~ 17.5			
144						×	+0.4 / 13.6	0.0 / 8.0	−0.1	~~0.0 / 8.0~~	~~+0.4 / 13.0~~	−0.2 / 13.3
145							+1.4 / 15.1	+1.7 / 15.5	+0.8	0.0 / 13.0		
+30							145 + 85 → 0.0 / 13.0	+0.3 / 13.5	+2.5	0.0 / 13.0	0.0 / 13.0	
146 + 73							−0.4 / 13.6		+0.5	−0.5	−0.5 / 13.7	
							146 + 60 → 0.0 / 13.0					
147						−3.73 %	+0.5 / 13.7		+0.7	0.0 / 13.0		
148							+0.4 / 13.6		+0.6	+0.4 / 13.6		
149							~~+0.3~~ / 13.0		0.0	+0.2 / 13.0		

149+36				+0.8 / 14.2	+0.8 / 14.2
149+52				+0.7 / 14.0	0.0 / 13
150				0.0 / 13.0	0.0 / 13.0
151				-0.2 / 13.3	+0.3 / 13.5
152				-1.1 / 14.7	-1.5 / 15.2
153				-1.5 / 15.5	-1.5 / 15.5
154				-1.0 / 14.5	-0.4 / 14.2
155				against fence -3.1 / 16.0	-3.1 / 17.7
+30				" -2.6 / 16.0	-2.6 / 16.9
156				0.0 / 13.0	+2.5 / 16.8
+36 +52				0.0 / 8.6	+4.8 / 20.2

+70 ← 0.0 / 13.0

8.6

~~+6.9~~

25' beyond Sta 156+62 on Right cut +8.8

156+62						x 0.0	+4.6 (70 [illegible]) Sta 156.62	+3.7 / 13.0	+4.8	+7.6 / 24.4
157								0.0 / 13.0	+0.6	0.0 / 13.0
158							* Hole odd 5.0 cu yds	−4.6 / 19.9	−4.2	−3.3 / 17.9
+30								−3.7 / 18.5	−3.5	−2.9 / 17.4
159						x −3.78 %		0.0 / 13.0	−0.1	0.0 / 13.0
160								−0.3 / 13.0	−0.2	−0.5 / 13.7
161								−1.1 / 14.3	−1.1	−0.8 / 14.2
162						0.0 %		−0.2 / 13.0	−0.5	−0.6 / 13.9
+24								−0.7 / 14.0	−0.8	−0.8 / 14.2
+50								0.0 / 13.0	−0.3	−0.5 / 13.7

(~~+6.9~~ ~~+4.6~~ 7.0 ~~Max~~ ~~Left~~ of Sta 156+62

163							$\frac{-0.7}{14.0}$	-0.5	$\frac{-0.6}{13.9}$			
164							$\frac{-0.1}{13.0}$	-0.6	$\frac{-0.1}{13.0}$			
165						×	$\frac{0.0}{13.0}$	-0.4	$\frac{0.0}{13.0}$			
166							$\frac{-0.6}{13.9}$	$+0.07$	$\frac{-0.6}{13.9}$			
167						× 1.0 %	$\frac{0.0}{13.0}$	$+0.3$	$\frac{+0.4}{13.6}$			
168						×	$\frac{+0.2}{13.0}$	$+0.2$	$\frac{+1.0}{14.5}$			
169						× 2.4 %	$\frac{+1.7}{15.6}$	$+3.1$	$\frac{+4.0}{10.0}$	$\frac{+6.4}{16.0}$	$\cancel{30}$	$\frac{23.3}{30}$
+29							$\frac{+1.3}{15.2}$	$+3.8$	$\frac{+5.0}{8.0}$	$\frac{+7.5}{14.0}$	$\frac{20.3}{19.0}$	
+37							$\frac{+1.9}{15.8}$	$+4.2$	$\frac{+6.7}{6.0}$	$\frac{21.7}{17}$	$\frac{+22.0}{30}$	
+50							$\frac{+1.7}{15.6}$	$+2.7$	$\frac{+5.0}{20.5}$			
170							$\frac{0.0}{13.0}$	$+0.3$	$\frac{+0.5}{13.0}$	$\frac{0.0}{13.0}$	$+26$	

171								
+40								

$\frac{-11.7}{15.5}$ -1.6 $\frac{-2.0}{16.0}$

0.0

Completed June 15 1893

Hamlin

Shaw

Ferrar

Transit notes of road from Centre of Witherbee & 4th to Concord & Stockton

Set up over center of Fourth & Witherbee B.S. along Fourth St which Bears N 75° 30 W mag.
Thence N 48¾ W to
Sta 58+50
Thence N 44° W to
Sta 99+26 — 0.6 Left to rear stake
Sta 99+50
Thence N 34° W to 101+52 = 103.

June 23 1893 Hamlin
Shaw
Derrow

Level notes & Cross sections of road from center of Witherbee & Fourth to center of Witherbee & Stockton

Sta	+	H.I.	−	Elev	Grade
B.M. 98	11.45	76.50		65.05	
98			10.1	66.4	67.8
+50			9.6	66.9	67.7
99			8.2	68.3	67.5
+50			9.0	67.5	67.3
100			9.2	67.3	67.2
101			9.7	66.8	67.1
+52			9.5	67.0	67.0

Left		center +or−	Right	
play south side of Witherbee & Fourth				
−6.6 / 21.4		−1.4	0.0 / 8.3	+1.7 / 15.6
−4.9 / 20.8		−0.8	0.0 / 4.5	+3.0 / 17.5
+3.5 / 18.2	0.0 / 3.0	+0.8	+4.7 / 20.0	
−2.6 / 18.9	0.0 / 1.0	+0.2	+3.6 / 18.4	
−3.4 / 18.1		+0.1	+3.5 / 18.3	
−3.0 / 17.5		−0.3	+3.0 / 17.5	
		0.0		

Level Notes & cross section Notes of road from center of Witherbee & Fourth to center of Stockton & Concordia

Sta	+	HI	−	Elev Grade	Left	center cut or fill	Right

sta	Left 20' South	10	Center	10	Right 20' North
			(69.95)		
51+435	1.4	0.9	0.9	0.6	0.0
	68.95	69.05	69.05	69.35	69.95
52	5.9	5.8	5.4	5.2	5.1
	64.05	64.15	(60.49) 64.65	64.75	64.85
53	4.2	4.0	3.3	3.1	2.8
	56.3	56.5	57.2	57.4	57.7
54	9.7	9.3	8.8	8.7	8.3
	50.8	51.2	51.7	51.8	52.2
54+181	11.8	10.3	9.9	9.4	9.1
	49.7	50.2	50.6	51.1	51.4
54+181	11.0	10.5	9.9	9.6	8.6
	49.5	50.0	50.6	50.9	51.9
55	7.9	7.7	7.0	6.6	6.2
	52.6	52.8	53.5	53.9	54.3
56	4.9	4.2	3.6	3.0	2.8
	55.6	56.3	(67.55) 56.9	57.5	57.7
57	8.6	7.8	6.8	6.2	6.7
	58.5	59.7	60.7	61.3	61.6
57+985	5.1	4.5	3.8	3.0	2.4
	62.4	63.0	63.7	64.5	65.1
58		Check	on St	58	

	+	H	−	E
				Calmers and India
BM	2.37	69.95		67.58
	2.48	60.49	11.94	58.01
	"	"	"	"
	Center Line of Attick St			
	9.45	67.53	2.61 =	57.84
			3.85	63.68
	Center Line attick st			

Feet	0	.1	.2	.3	.4	.5	× .6	× .7	× .8	× .9
0	0.0	0.007	0.03	0.07	0.13	0.19	0.26	0.37	0.48	0.61
1	0.75	0.91	1.08	1.27	1.47	1.69	1.92	2.17	2.43	2.71
2	3.00									
3	6.75									
4	12.00									
5	18.75									
6	27.00									
7	36.75									
8	48.00									
9	60.75									
10	75.00									
11	90.75									
12	108.00									
13	126.75									
14	147.00									
15	168.75									
16										
17										
18										
19										
20										

Comencing at a point 350' S68° E from the corner of Moore & Friar Streets, as indicated on the plat of the town Sem Sheign as afore said Thence along the North East line of Said Moore Street S68° E 150' Thence N22° E 150', Thence S68° W 150' Thence N68° West 150' Thence S22° W 150 to said Moore Street the point of beginning

Filed Book B. Sutherland. deed

~~0~~	~~1~~	~~2~~	~~3~~	~~4~~	~~5~~	~~6~~ x ~~7~~ x ~~8~~ x ~~9~~ x
Sta	+	H.I	−	Elev	Grade.	
B.M.	11.40	76.45		65.05		Wetherbee & Trout Rd.
103.0			9.50	67.0		
					67.2	9.2
				~~68~~	67.5	9.0

Blk 409 in Old Town
House in N.E. corner and fence
through the Blk halfway bet
Jay Iles and Washington 8½

City Property

School lot D. ~~111~~ N.W.L ?

Sta	+	HI	−	Elev
76	3.79	30.6		26.9
77			4.7	26.9
78			5.0	25.6

BM

24.7
25.3
.6

Fenced lots belong to Wolff
bought on Tax title

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

3/118
5

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.		¾ DEGREE.		½ DEGREE.		¼ DEGREE.		

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