

1410
M.H.Tide.
Bird Rock N.Y.

AASIS

FIELD BOOK

No. 385 F

ENGINEERING DEPARTMENT,
CITY OF SAN DIEGO,
CALIFORNIA.

MICROFILMED

DEC 23 1964

Our Leather Bound Engineers Note Books are carried in the following rulings:

- No. 380 LEVEL BOOK. Left and Right Hand Page the same as Left Hand Page of this Book.
- No. 382 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 4 x 4 to the inch, Center Line Red.
- No. 384 MINING TRANSIT BOOK. Left Hand Page as in this Book, Right Hand Page 8x8 to the inch, Center Line Red.
- No. 385 FIELD BOOK. Left Hand Page as in this Book, Right Hand Page 8 vertical and 4 horizontal lines to the inch, Center Line Red.

We also carry the Note Books listed above, bound in extra strong Fabri-Hide (otherwise the same quality of book), which can be furnished at a somewhat lower price.

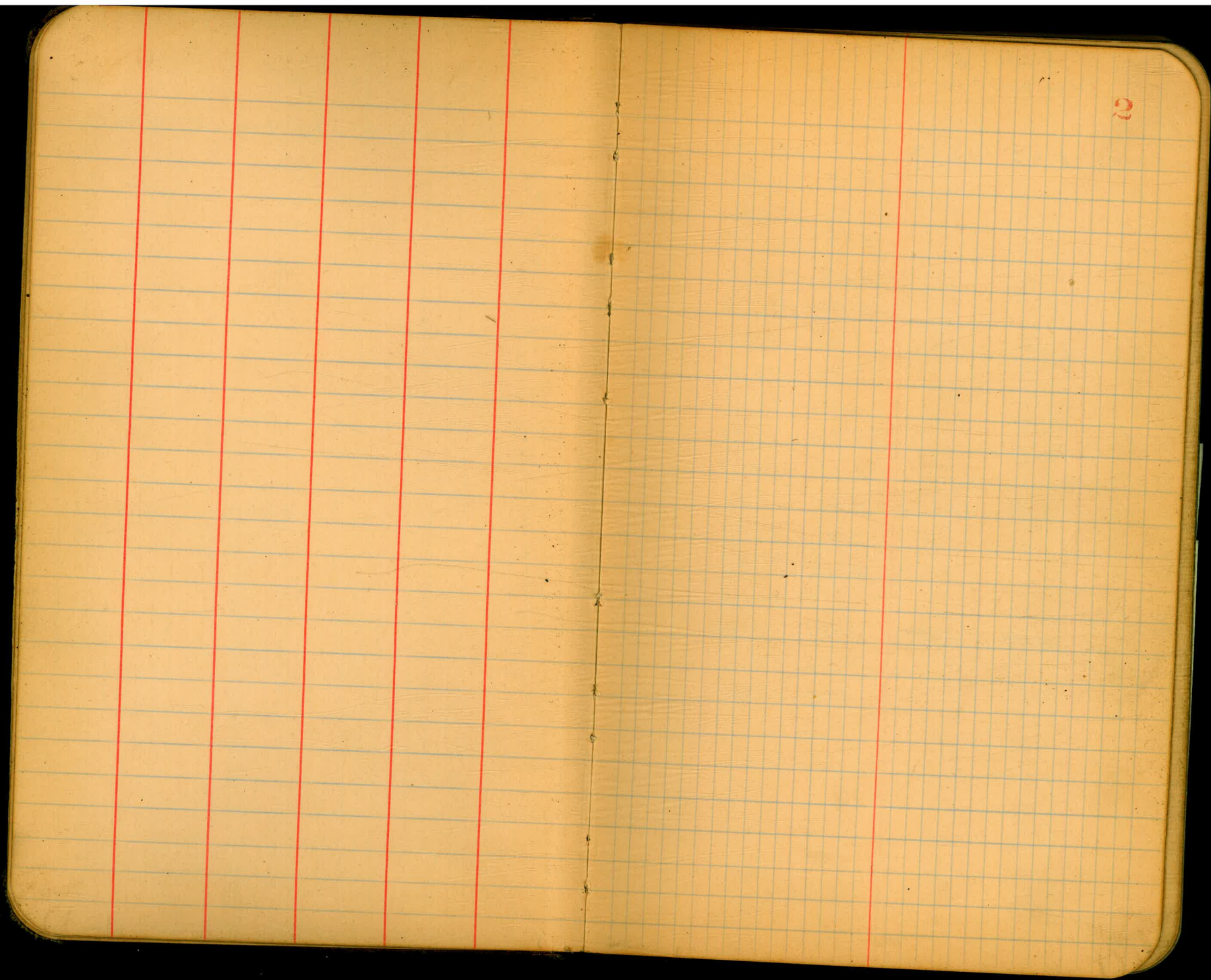
In ordering Fabri-Hide covered books, add the letter "F" to catalog number.

THE FREDERICK POST CO.
ENGINEERING and DRAFTING SUPPLIES
IRVING PARK STATION
CHICAGO, ILL.

	Slope Meas	Temp	Corrected Length.	Elev.	b = Supported a = Un- Supported
0	1 tape	80°			
1	"	"			a
2	"	"			a
3	"	"			a
4	"	"			a
5	"	78°			a
6	"	"			a
7	"	79°			b
8	"	"			b
9	"	78			b
10	"	"			a
11	"	75			a
12	"	75			a
13	"	"			a
14	"	"			b
15	"	"			b
16	95'	"			a

△ false point.

Tape held 1' above Men



2

Elevs Ch. stakes line
False point - Island pt.

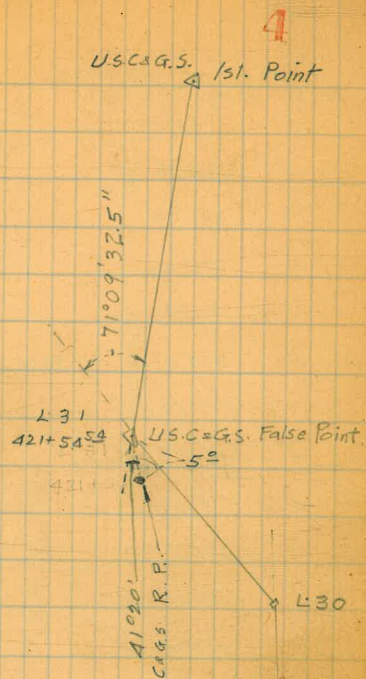
3

Mon.				
Falsept.	5.63	105.63		100.00
0			4.63	101.00
1			4.81	106.82
2			3.68	101.95
3			4.65	100.98
4			6.00	99.63
5	1.99	99.31	8.31	97.32
6			3.00	96.31
7			4.13	95.18
8			4.91	94.40
9			5.18	94.13
10	8.34	103.35	4.30	95.01
11			6.96	96.39
12			5.47	97.88
13			3.15	100.20
14	5.99	108.99	0.35	103.00
15			4.22	104.77
16			2.95	106.04

New course in Baseline from L 30
to L 31 or U.S.C. & G.S. Δ "False Point"

413+00 L 30 $62^{\circ}42'15''$ L
 414+00
 414+80
 415+80
 416+80
 417+80
 418+00
 419+00
 420+00
 421+00
 421+54⁵⁴ L 31

U.S.C. & G.S. Δ "False Point"



Inst at Back bay
Mission Bridge - Soledad.

- 1 94°07'
- 2 188°13'30"
- 3 282°20'
- 4 376°26'
- 5 470°32'30"
- 6 564°39'00" - 6 = 94°06'30"

Reversed

- 1 94°06'30"
- 2 188°13'
- 3 282°19'30"
- 4 376°25'30"
- 5 470°33'
- 6 564°38'40" - 6 = 94°06'27"

Mean = 94°06'28.5"

Inst at False Point

Reservation Line - Island point - Defl Lt. Soledad - Old Town

- 1 20°46'30"
- 6 124°41' ± 6 = 20°46'50"

Reversed

- 1 20°46'50"
- 6 124°42'15" - 6 = 20°41'02"

Mean = $\frac{20^{\circ}41'02" + 20^{\circ}46'56"}{2} = 20^{\circ}43'52"$

Inst at Miss. Bridge

Soledad - Back Bay

- 1 44°40'
- 6 268°00' - 6 = 44°40'00"

Reversed

- 1 44°39'30"
- 6 267°59' - 6 = 44°39'50"

Mean = 44°39'55"

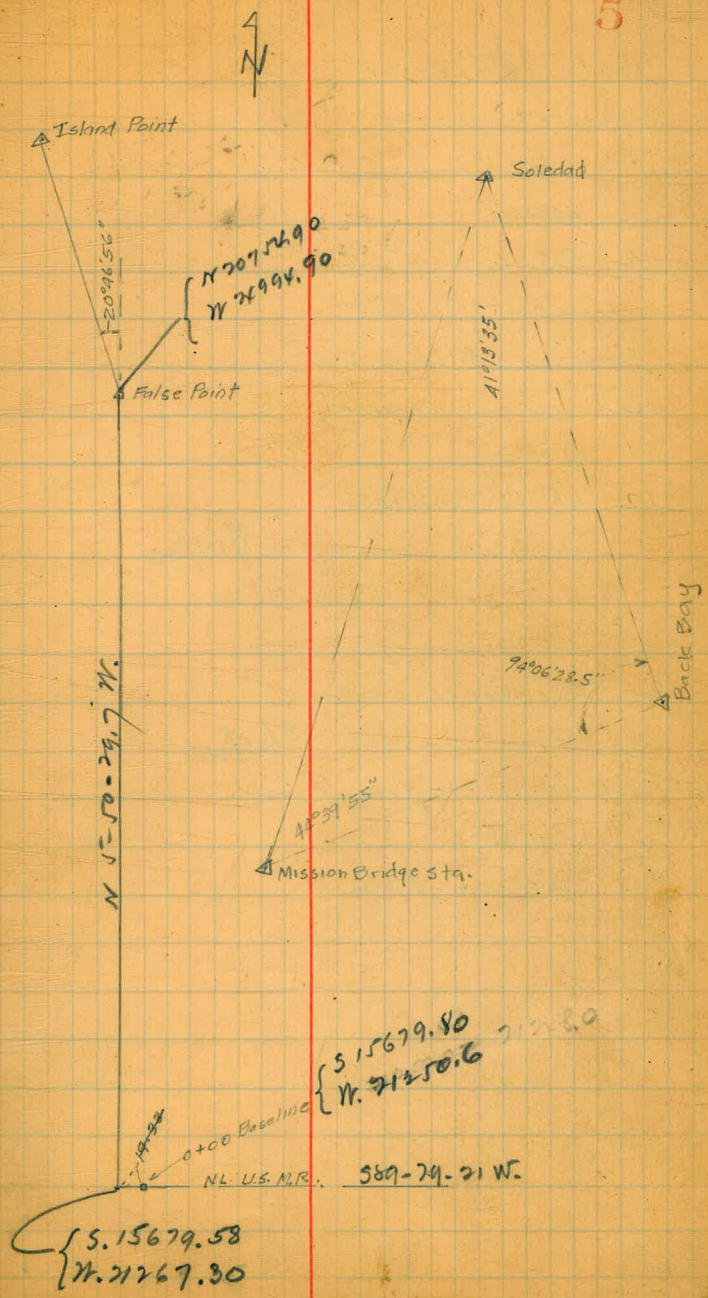
Back Bay - Old Town

Direct

- 1 59°01'
- 6 354°09' - 6 = 59°01'30"

Reversed

- 1 59°01'
- 6 354°09' - 6 = 59°01'30"



Angles 9/22/30

Inst at Miss Bridge

Soledad - Back Bay

1 C Direct - 6 Reversed

1 $44^{\circ}40'$

12 $535^{\circ}57' \div 12 = 44^{\circ}39'55''$

Inst at Soledad

Back bay - Miss. Bridge

6 Direct - C Reversed.

1 $41^{\circ}13'30''$

12 $494^{\circ}43' \div 12 = 41^{\circ}13'35''$

Inst at Soledad 9/25/30

Mission Bridge - New old Town

1 $27^{\circ}46'$

12 $333^{\circ}08'20'' \div 12 = 27^{\circ}45'16''$

Inst at Soledad 9/25/30

Pt Lima Lt. House - New old Town.

1 $27^{\circ}10'30''$

12 $326^{\circ}03' \div 12 = 27^{\circ}10'15''$

9 a.m. Sept. 24-1930- Loudon, Obs. Berger- 6 1/2"
30" Pl.

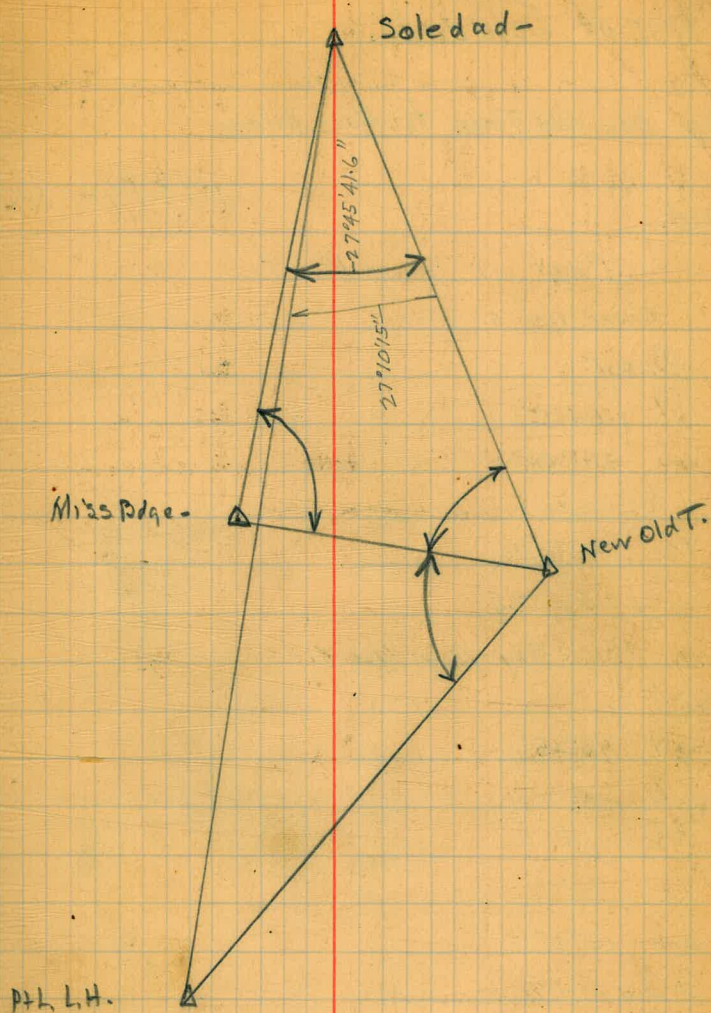
Inst. at New Old Town.

Ang. Miss. Bridge to Soledad- Soledad- Observed at
times by inst.

Direct.	Reverse.
1 48-33-00	1 48-33-00
2 97-05-45	2 97-05-30
3 145-39-	3 145-38-30
4 194-11-30	4 194-11-20
5 242-45-	5 242-44-20
6 291-16-30	6 291-16-50
Mean- 48-32-45.00	Mean- 48-32-48.33
	Mean- 48-32-46.67

Ang. Old Pt Loma Lt Hse to Miss Bridge

Direct.	Reverse
1 72-32-40	1 72-32-30
2 145-05-30	.
3	.
4	.
5	.
6 435-16-00	435-16-00
Mean 72-32-40	72-32-40



Angles.

Inst. at Soledad-

Ang. New Old Town to Miss Bridge

Direct.

10/2/30 Loudon.

Inst at Bay Point
Soledad - Back Bay.

Direct

1 65°15'

6 391°30'

Reversed

12 783°01'30"

Mean = 65°15'07.5"

Back Bay - New Old Town

Direct

1 73°45'

6 442°31'

Reversed

12 885°02'

Mean 73°45'10"

New old Town - Mission Bridge

Direct

1 79°09'

6 471°54'

Reversed

12 997°46'40"

Mean 79°08'53.33"

10/2/30 ⁸

Inst at Bay Point

Miss. Bridge - Soledad.

Direct

1 141°50'30"

6 851°04'

Reversed

12 1702°07'40"

Mean 141°50'38.3"

Inst at Soledad

Miss Bridge - Bay point

Direct 1 9°43'30"

6 38°20'30"

Reversed

12 116°40'40"

Mean 9°43'23.33"

Bay Pt. - Old Town

Direct 1,

6,

Reversed,

12,

Mean,

10/3/30

Inst at Soledad.

Bay Point - Back Bay

Direct 1, 31°30'00"

6, 188°58'

Reversed

12, 377°57'15"

Mean, - 31°29'46.5"

Old Town - Back Bay

Direct 1,

6,

Reversed,

12,

Mean,

Angles 10/3/30 Loudon

9

Inst. at Mission Bridge 10/2/30
 Soledad - Bay Point.
 Direct, 1 28° 26' 00"
 6 170° 35' 00"
 Reversed
 12 341° 10' 00"
 Mean. 28° 25' 50"

Back Bay - Exposition Tower
 Direct 1. 67° 31' 00"
 6. 405° 09' 00"
 Mean 67° 31' 30"
 Exposition Tower - Theo. Dome

Bay Point - Back Bay
 Direct 1 16° 14' 00"
 6 97° 24' 00"
 Reversed
 12 194° 48' 30"
 Mean 16° 14' 02½"

1 72° 35' 00"
 6 435° 34' 30"
 Mean 72° 35' 30"

Back Bay - Old Town
 Direct 1 59° 01' 30"
 6 354° 09' 00"
 Reversed 12 708° 17' 00"
 Mean 59° 01' 25"

Soledad - Old Town
 Direct
 1 103° 42'
 6 622° 10'
 Reversed
 12 1244° 18' 10"
 Mean - 103° 41' 30.83"

Old Town - Theo. Dome
 Direct 1 81° 06' 00"
 6 486° 36' 10"
 Reversed 12 973° 12' 00"
 Mean 81° 06' 00"

Inst at Old Town
 Soledad - Bay Point
 Direct 1, 22° 57' 00"
 7, 160° 40' 20"
 Reversed, 14, 321° 20' 30"
 Mean, 22° 57' 10.71"

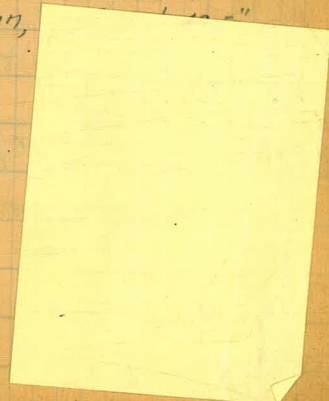
Inst at Back Bay
 Soledad - Bay Point.
 Direct, 1, 83° 15' 00"
 6, 499° 28' 30"
 Reversed, 12, 998° 57' 30"
 Mean, 83° 14' 47.5"

Bay Point - Mission Bridge
 Direct 1, 25° 35' 00"
 6, 153° 33' 00"
 Reversed, 12 307° 07' 15"
 Mean, 25° 35' 36.5"

Bay Point - Mission Bridge
 Direct, 1, 10° 52'
 6, 65° 11"
 Reversed, 12, 130° 22' 00"
 Mean, 10° 51' 50"

Mission Bridge - Theo. Dome.
 Direct, 1, 43° 25' 30"
 6, 260° 33' 00"
 Reversed, 12, 521° 07' 45"
 Mean, 43° 25' 38.75"

Inst at Back Bay 10/4/30
 Mission Bridge - Bay Point.
 Direct,
 1, 10° 52' 00"
 10, 108° 38' 30"
 Reversed,
 20, 217° 16' 30"
 Mean,



Inst. at New Old Town

Ct. House to Cor. Hotel

- 1st. - 23° 15' 30"
- 2nd - 46° 31'
- 3rd - 69° 46' + 23° 15' 16.7"
- 4th - 93° 02'
- 5th - 116° 17'
- 6th - 139° 31' 40"

Coronado Hotel to Tower on Administration Bldg. N. Isl.

- 1st. - 11° 55'
- 6th - 71° 29' = 11° 54' - 50" ^{329 300}

Coronado Hotel to Light-House

- 1st. - 36° 49' 30"
- 6th - 220° 57' 30" 36° 49' 35"

Light House to Theosophical Dome

- 1st - 29° 07'
- 6th - 174° 43' 00" ⁶⁰
- 29-07-10

Test of Tape at Navy Dept.

Temp: 68.5°F

Unsupported

#18 pull. Length = 100.0'

#25 " " = 100.03'

Supported.

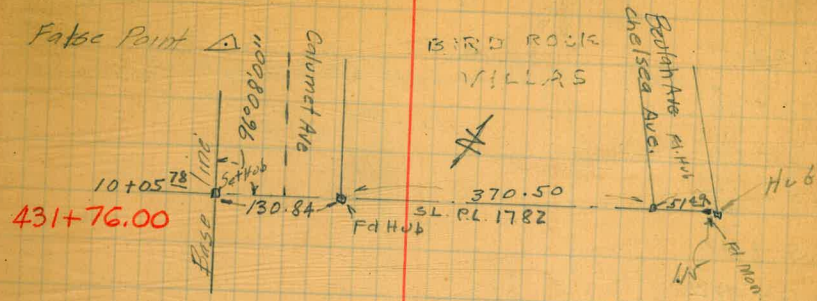
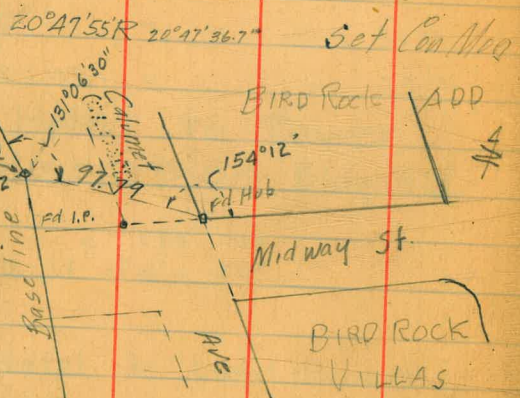
#18 pull " =

#25 " " = 100.02'

Base Line From False Point
 N¹/₄ False Point Eqn. $421+54.59 = 0+00$

Def. 1:
 F.S. 151. PL =
 1421.40 Lt.

- 0+00 L:31
- 1+00
- 2+00
- 3+00
- 4+00
- 5+00
- 5+58²²
- 6+00 L:1
- 7+00
- 8+00
- 9+00
- 10+00
- 11+00
- 12+00
- 14+80
- 13+70
- 14+50
- 15+25
- 16+20
- 16+91²¹ L:2
- 17+00
- 18+00
- 19+00
- 20+00
- 21+00

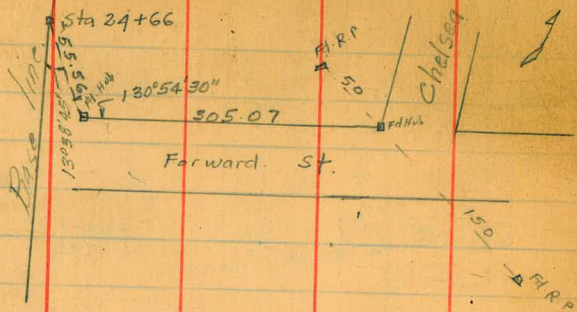


△ Island Point

△ L:1
 14°41'40" V
 N 26°37'26" W

0+00 △ False Point

446+36.13



- 22+00
- 27+66
- 23+66
- 24+66
- 25+60
- 26+40¹⁴
- 27+41
- 28+00
- 28+25⁶⁵
- 29+00
- 29+30
- 30+30
- 30+45²¹
- 31+00
- 32+00
- 32+24⁹⁸
- 33+15
- 33+82⁰⁸
- 34+71
- 35+70⁸⁸
- 36+10
- 37+00
- 38+00
- 39+00
- 39+85

L: 3 $45^{\circ}01'22''$ L $45^{\circ}01'15''$ Set Con. Man

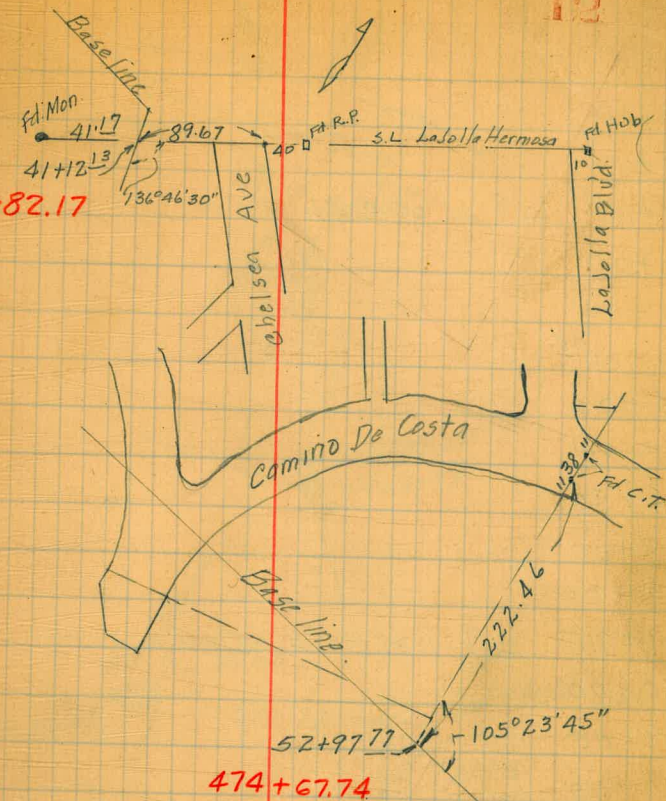
L: 4 $61^{\circ}50'38''$ R $61^{\circ}50'55''$ - Set Con. Man

L: 5 $30^{\circ}23'10''$ R $30^{\circ}23'00''$

L: 6 $32^{\circ}30'45''$ L $32^{\circ}20'15''$

L: 7 $59^{\circ}10'30''$ R $59^{\circ}10'25''$ Set Con. Man

462+82.17



474+67.74

Tadern walk back of House opposite Bird Rock

40+55

41+00

41+65²⁸ L: 8

69°41'53" L 67°41'50"

Set Con Mon

42+00

43+00

44+00²⁵

45+00

45+90

46+90

48+00

49+00

49+36²⁵ L: 9

39°14'21" L 39°14'35"

Set Con Mon

50+00

51+00

52+00

52+50

53+50

54+00

55+00

56+00

57+00

57+84⁶⁰ L: 10

53°07'25" R 53°07'30"

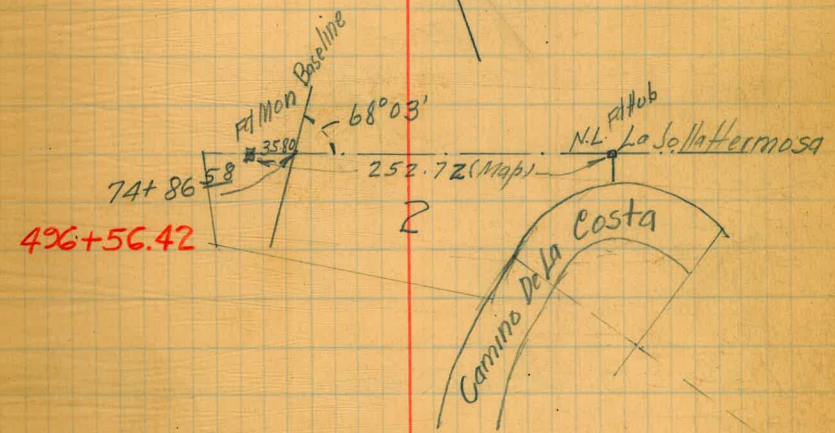
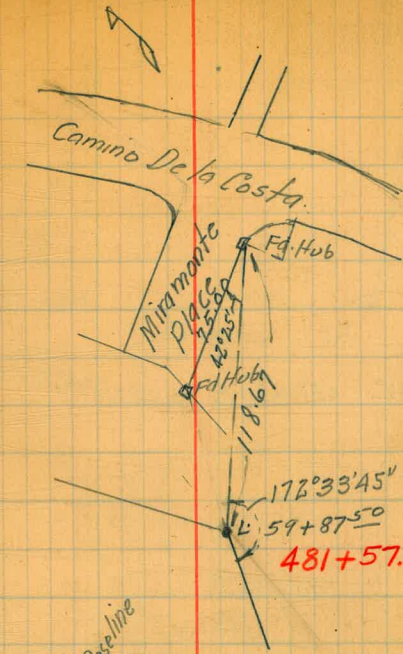
58+97

59+17

59+87⁵⁰ L: 11

41°59'30" L 41°59'35"

Set Con Mon



74 86.58
 73 13.07
 173.51

37.14
 174.70
 711.84

60+55
 61+55
 61+85
 63+00
 64+00
 64+16⁵⁶
 65+00
 66+00
 66+50
 67+20
 68+00
 69+00
 70+00
 71+00
 71+45²⁸
 72+00
 72+50
 73+13⁰²
 74+00
 75+00
 76+00
 76+40
 77+20
 78+02¹⁸
 79+00

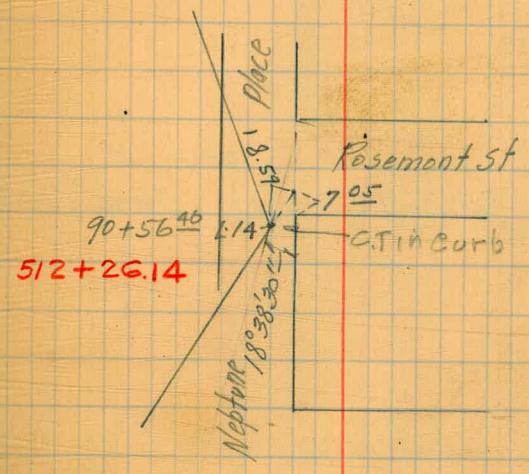
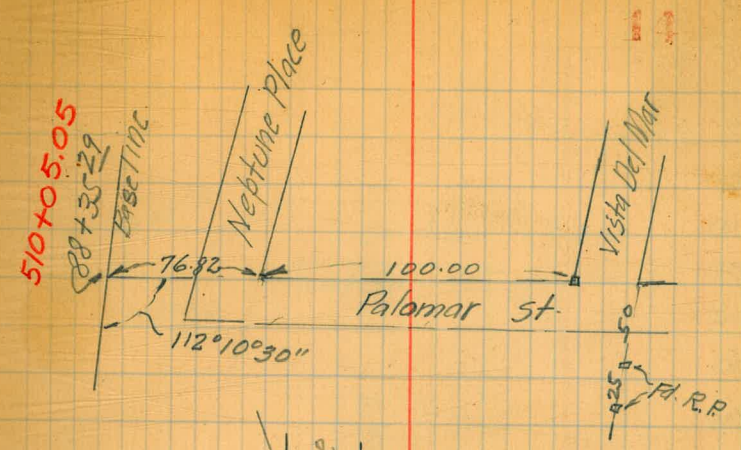
L: 12 25°08'30" R 25°08'20"

Set Cor. Mark

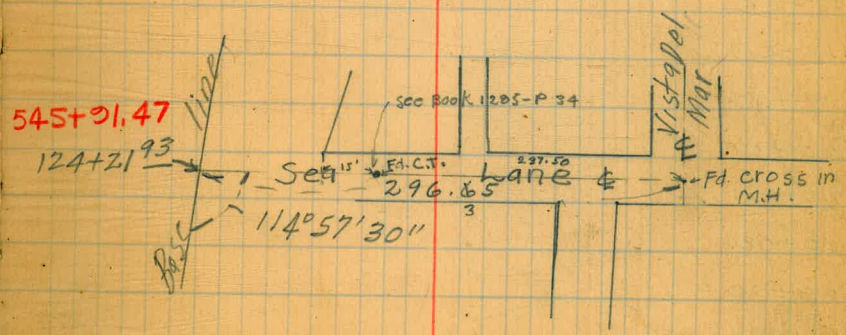
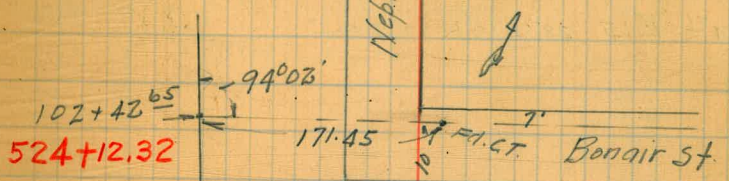
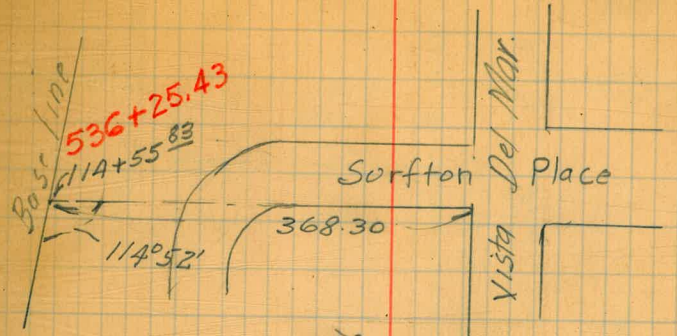
L: 13 47°24'07" R 47°24'30"

Set Cor. Mark

Nail



- 80+00 R.W. Hub
- 81+00
- 82+00
- 83+00
- 84+00
- 85+00
- 86+00
- 88+00
- 89+22
- 90+00
- 90+56⁴⁰ L:14 26°21'00" L 28°30'51" C.T. in Ecb Neptune
- 91+00
- 92+00
- 93+00
- 94+00
- 95+00
- 96+00
- 97+00
- 98+00
- 99+00
- 100+00
- 101+00
- 102+00
- 103+00
- 104+00



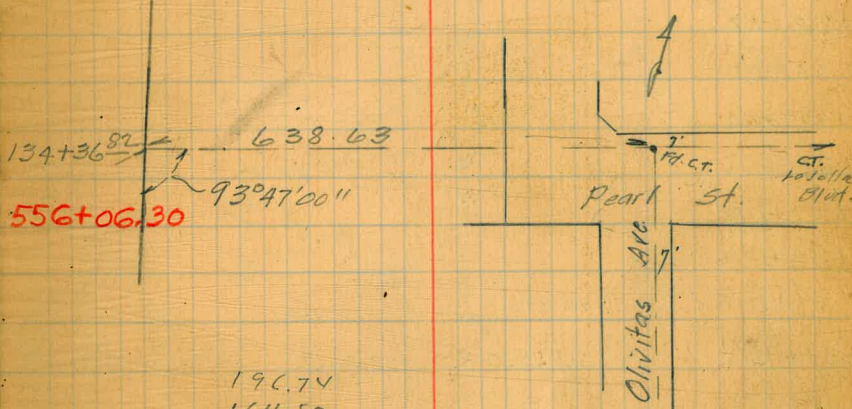
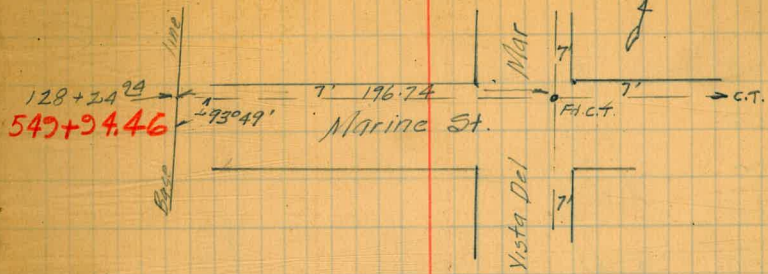
- 105+00
- 106+00
- 107+00
- 108+00
- 109+00
- 110+00
- 111+00
- 112+00
- 112+54^{LL}
- 113+00
- 114+00
- 115+00
- 116+00
- 117+00
- 118+00
- 119+00
- 120+00
- 121+00
- 122+00
- 123+00
- 124+00
- 125+00
- 126+00
- 126+83²³
- 127+00

L 15 28°52'15" R 28°52'02.5"

Set Con Mon

L 16 21°09'12" L 21°09'20"

Set Con Mon



196.74
154.50
30.24

134+36.82	556.06.30
128 24.94	549.94.46
<u>611.88</u>	<u>611.84</u>

128+00
 129+00
 130+00
 131+00
 132+00
 133+00
 134+00
 135+00
 136+00
 137+00
 138+00
 139+00
 139+93²¹
 140+00
 141+00
 142+00
 143+00
 144+00
 145+00
 146+00
 147+00
 148+00
 149+00
 150+00
 151+00

This value most probable

Set Conc. Mon.



L 17 $25^{\circ}58'20''$ R

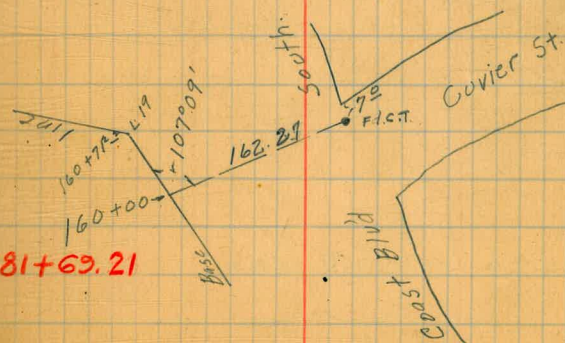
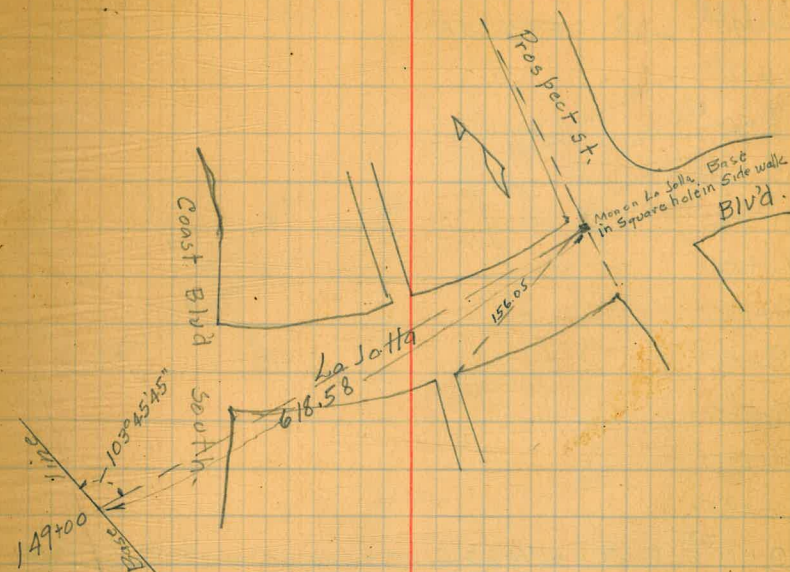
$25^{\circ}59'56.66''$?

Set Con. Mon ✓

570+69.39

Set Con. Mon

581+69.21



151+74²⁸ L18 37°35'20"R ✓

Set Con Man

152+00

153+00

154+00

155+00

156+00

157+00

158+00

158+60

159+00

160+00

160+71²² L19 50°16'25"L 50°16'30"

Set Con Man

161+00

162+00

163+00

164+30

165+20

166+00

166+85

167+85

167+90⁹⁵ L20 45°05'26"R 45°05'00"

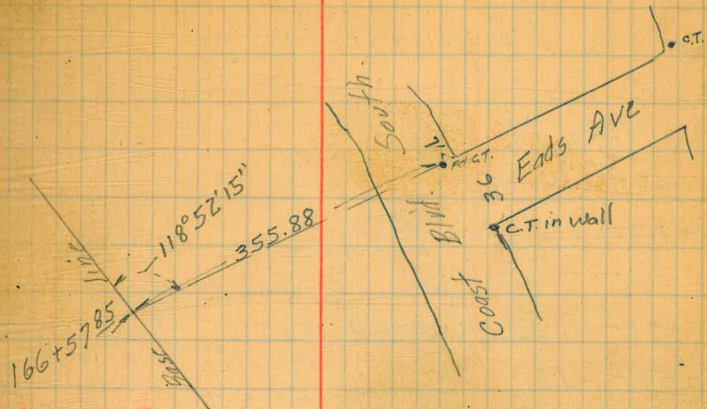
Set Con Man

168+00

169+00

170+00

171+00



588+27.03

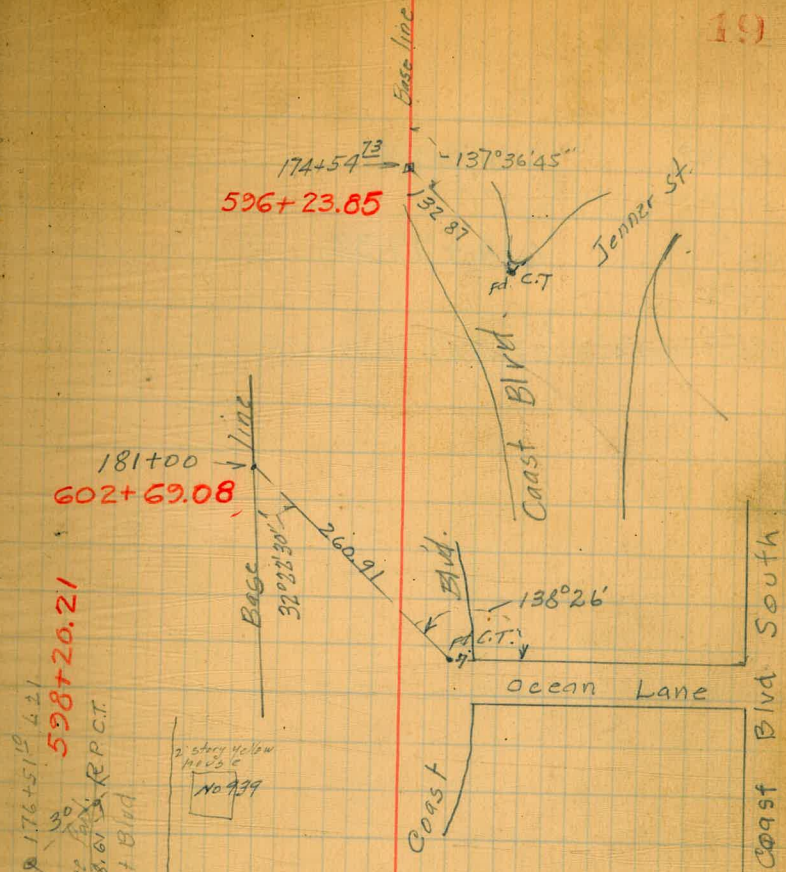
Add 0.12 from here

$$\begin{array}{r}
 167.9095 \\
 166.5785 \\
 \hline
 133.10
 \end{array}$$

172+00
 172+57
 173+55⁹⁴
 174+54⁷³
 175+00
 176+00
 176+51¹⁰ L 21 10°30'43" L 10°31'00"
 177+44⁶³
 178+44⁶³
 179+00
 179+80
 180+76⁵⁸
 181+00
 182+00
 182+12⁶⁹ L 22 5°59'43" R 5°59'45"
 183+08⁴
 184+00
 185+00
 186+00
 187+00
 188+00
 189+00
 189+88⁷⁴
 190+82⁶² L 23 97°28'45" R 97°28'37.5"
 191+10

Set Con. Mon

Set Con. Mon



192+00⁶⁰

613+69.57

Set Con. Mon.

192+99⁶⁰

193+08⁴¹

614+77.38

Set Con. Mon.

194+04⁶²

194+71⁰⁹

L 24

33° 48' 44"

33° 49' 05" L to 2+01⁶⁰

616+40.06

194+71⁰⁷

L 24

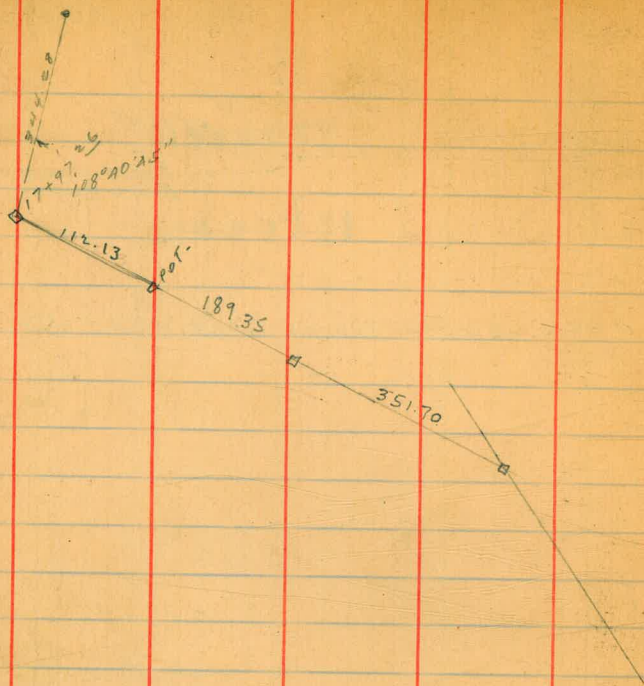
= 0+00

Fl. G.W. Log Screw
2+01¹⁶ 20

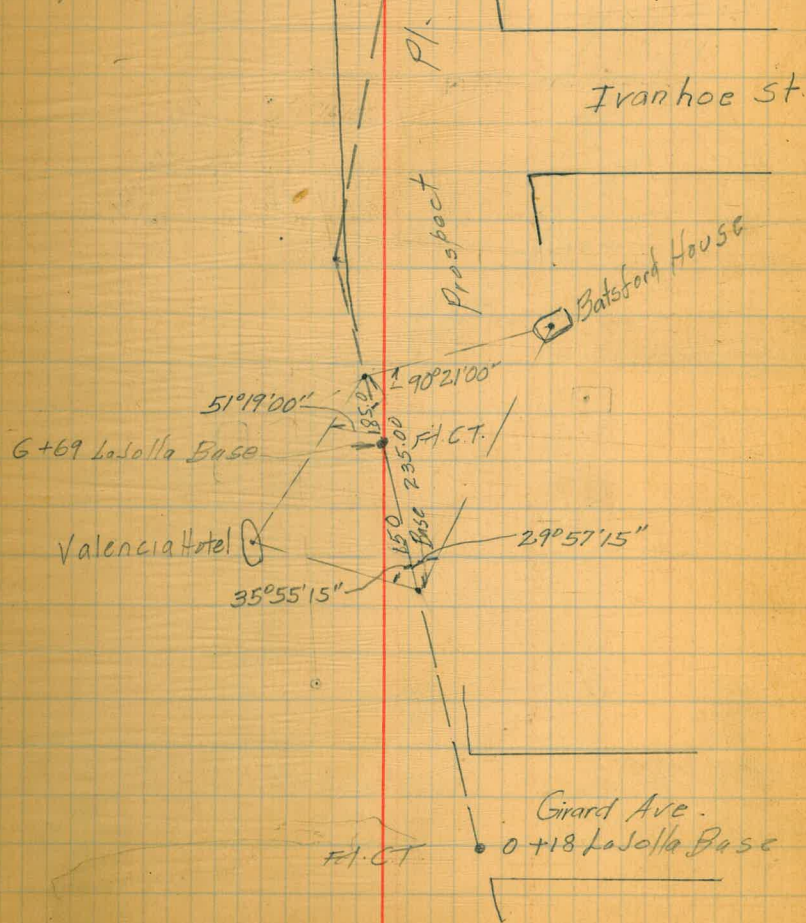


Reset front ties
Book 1285 P. 2

= 0+00 Lajolla-Torrey Pines M.H.T. Baseline



Ties of spires of Batsford house and
 Valencia Hotel to LaJolla base line.
 See P22 for connecting line to Δ Sta. at
 Prospect St. and Park Row



$$L \text{ ① } \begin{array}{r} 182-96-10 \\ 4 \overline{) 384-41} \text{ 6v } \\ \underline{96-10-15} \end{array}$$

$$L \text{ 3 } \begin{array}{r} 182-70-30-45 \\ 4- \overline{282-02-30} \\ \underline{70-30-37.5} \end{array}$$

$$L \text{ 4 } \begin{array}{r} 182-93-24-0 \\ 4 \overline{373-34-20} \\ \underline{93-23-37.5} \end{array}$$

$$L \text{ 5 } \begin{array}{r} 125^{\circ} 30' 00'' \\ 4 \overline{102^{\circ} 01' 00''} \\ \underline{25^{\circ} 30' 15''} \end{array}$$

Red Bluff - B

$$\begin{array}{r} 1 \quad 42^{\circ} 20' 30'' \\ 4 \quad 169^{\circ} 20' - 42^{\circ} 20' 00'' \end{array}$$

$$L \text{ ⑥ } \begin{array}{r} 1 \quad 16^{\circ} 06' \\ 6 \quad 64^{\circ} 23' \\ \underline{16^{\circ} 05' 45''} \end{array}$$

$$\begin{array}{r} 70-30-37.5 \\ 93 \quad 23 \quad 37.5 \\ \underline{16-05-41} \end{array}$$

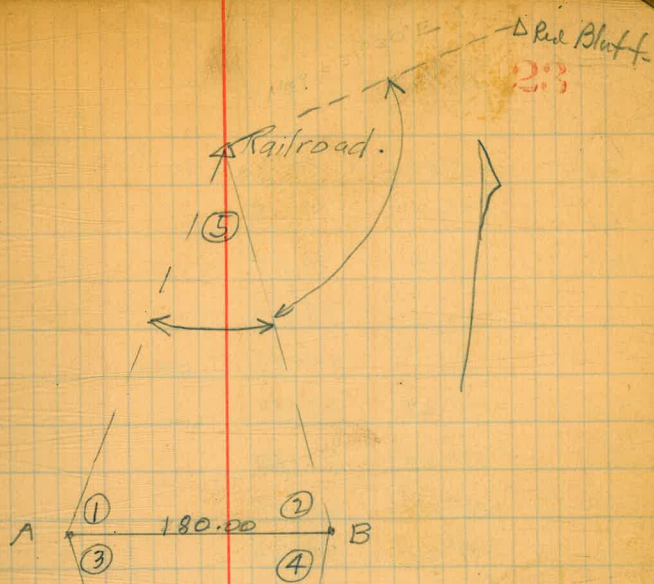
$$\text{①} \begin{array}{r} 1 \quad 96^{\circ} 10' 30'' \\ 4 \quad 384^{\circ} 40' 30'' \\ \underline{96^{\circ} 10' 07.5''} \end{array}$$

$$\text{②} \begin{array}{r} 1 \quad 58^{\circ} 19' \\ 4 \quad 233^{\circ} 17' \\ \underline{58^{\circ} 19' 15''} \end{array}$$

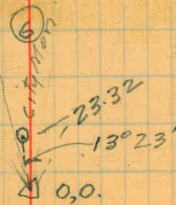
Inst at Railroad
Red bluff - 0,0

$$\begin{array}{r} 1 \quad 59^{\circ} 16' \\ 4 \quad 237^{\circ} 04' 20'' \\ \underline{59^{\circ} 16' 05''} \end{array}$$

70-30
280-120
282-02

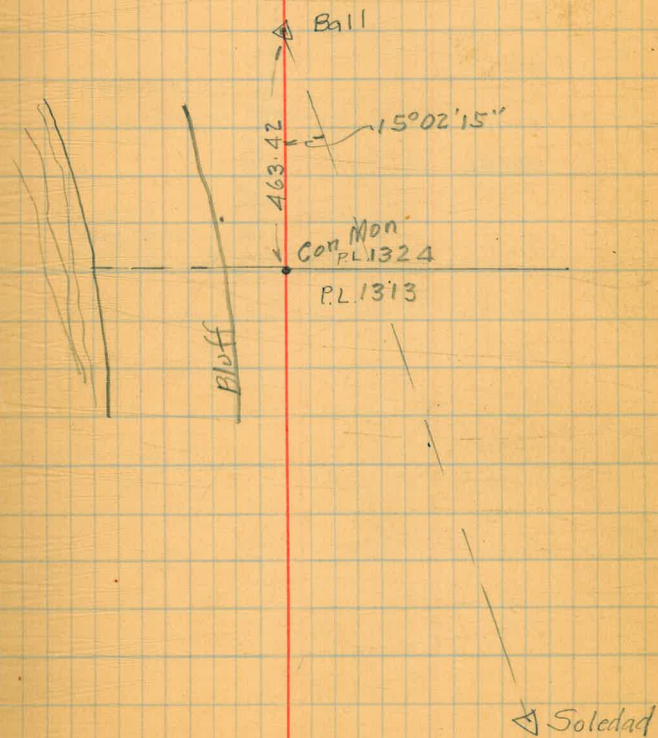


prec. 0.0



Changing from Railroad to
D.O. on City Line

100	6°47'	99.30 - .
100	7°20'	99.18
100	7°53'	99.05
		38.02
		20.35 - A.R.R.
100	11°47'	97.89
100	12°03'	97.80
70	12°00'	68.47
100	9°25'	98.65
100	9°07'	98.74
		30.00
100	18°23'	94.90
		32.23 - City Mon.
		<u>974.58</u>



4
N
F

Red Bluff

Shell Mound

139°10'48.75"

Con Mon.

PL 1332

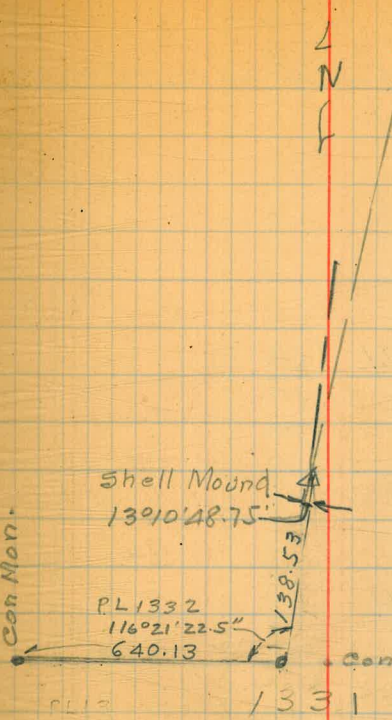
116°21'22.5"

640.13

Con Mon

PL 1338

1331



3 Point of SE Cor PL 1333

26

Inst at Point 67' East of SE Cor PL 1333.

Soledad - Ball

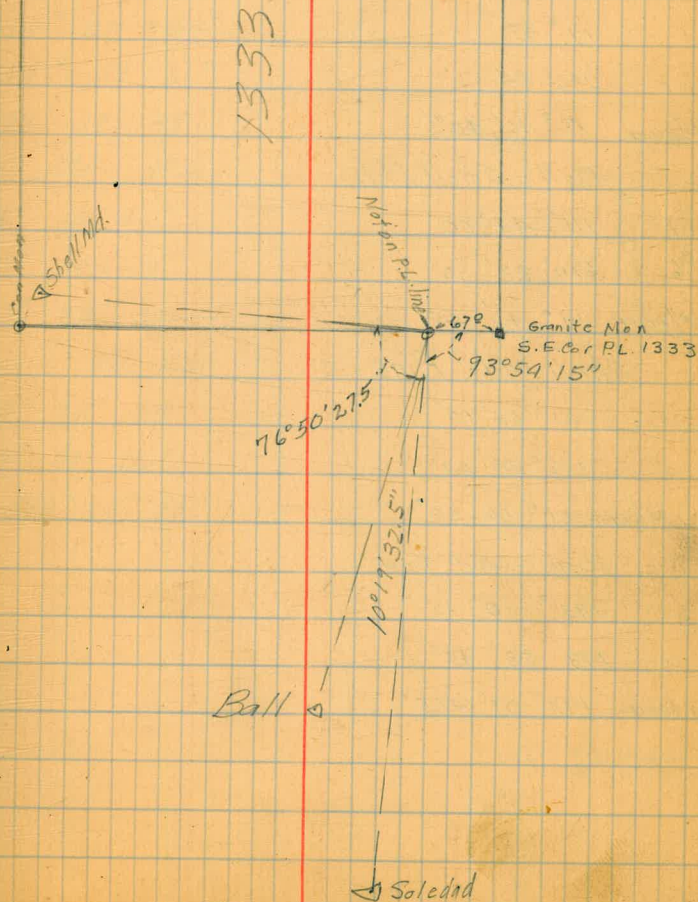
1 - $10^{\circ} 20' 00''$
6 - $61^{\circ} 57' 30''$
12 - $123^{\circ} 54' 30''$
Mean $10^{\circ} 19' 32.5''$

Ball - Shell Md.

1 - $76^{\circ} 50' 30''$
6 - $461^{\circ} 02' 30''$
12 - $922^{\circ} 05' 30''$
Mean $76^{\circ} 50' 27.5''$

Soledad - Shell Md

1 - $87^{\circ} 10' 00''$
6 - $523^{\circ} -00' 00''$
Mean - $87^{\circ} 10' 00''$



Angles to stations from
S.E. Cor 1331

Inst at S.E. Cor PL 1331

Rd. Top - Soledad

1 - $16^{\circ} 13' 30''$

7 - $113^{\circ} 35' 00''$

Mean $16^{\circ} 13' 34.3''$

Soledad - Ball

1 - $17^{\circ} 47'$

6 - $106^{\circ} 40' 00''$

Mean $17^{\circ} 46' 40''$

Ball - Shell Md.

1 - $111^{\circ} 44' 00''$

6 - $670^{\circ} 22' 30''$

Mean $111^{\circ} 43' 45''$

Shell Md - Pine

1 - $21^{\circ} 06' 00''$

6 - $126^{\circ} 38' 00''$

Mean $21^{\circ} 06' 30''$

Pine - Rd. Top

1 - $193^{\circ} 10' 15''$

6 - $1158^{\circ} 58' 45''$

Mean - $193^{\circ} 09' 47.5''$

27

Inst at S.E. Cor PL 1325

Rd. Top - Ball.

1 - $62^{\circ} 36' 30''$

6 - $375^{\circ} 39' 00''$

Mean - $62^{\circ} 36' 30''$

Ball - Shell Md.

1 - $109^{\circ} 20' -00''$

6 - $655^{\circ} 58' 30''$

Mean, $109^{\circ} 19' 45''$

Shell Md - Pine

1 - $8^{\circ} 28' 45''$

6 - $50^{\circ} 51' 00''$

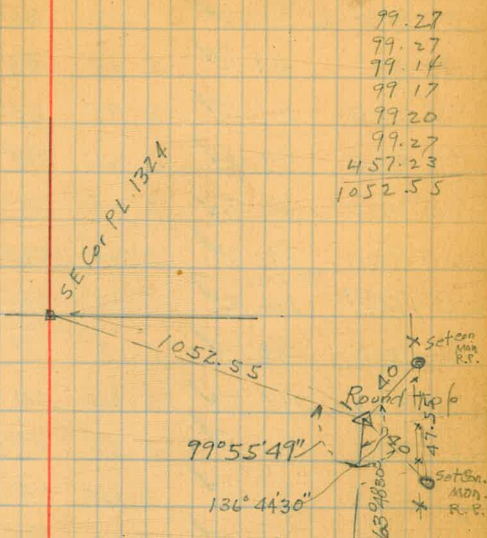
Mean $8^{\circ} 28' 30''$

Pine - Rd. Top

1 - $179^{\circ} 35' 30''$

6 - $1077^{\circ} 31' 00''$

Mean, - $179^{\circ} 35' 10''$

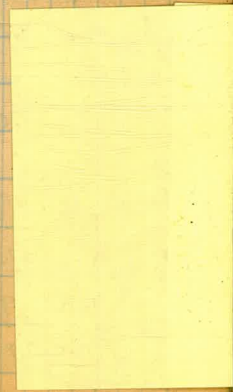


99.27
99.27
99.14
99.17
99.20
99.27
457.23
1052.55

Soledad

Perpendicular offsets from Base line
to M.H.T. North of False Point.

Sta.	offset	stadia	Vert L	Additional Measurement	Dist. to Bluff.	
0+00	L 50.0 ✓	1.02	26°49'	-32.0	L 19	25' high Vertical.
1+00	61.6 ✓	0.78	43°46'	+20.0	29	
2+00	57.3 ✓	0.95	25°30'	-21.0	30	
3+00	58.4 ✓	0.66	48°47'	+29.0	33	
4+00	51.3 ✓	0.68	41°05'	+12.0	32	
5+00	37.0 ✓	0.64	53°00'	+12.0	15	
L 5+58 ²²	Mean L 30.2 ✓	0.71	33°28'	-20.0	7	
6+00	38.0 ✓	1.13	18°17'	-65.0	15	
7+00	44.0 ✓	0.60	54°17'	+23.0	24	
8+00	45.5 ✓	0.54	47°23'	+20.0	40	30' high Vertical.
9+00	52.7 ✓	0.60	47°55'	+25.0	25	
10+00	46.2 ✓	0.62	51°59'	+22.0	30	
11+00	43.3 ✓	0.60	49°07'	+17.0	25	20' high Vertical.
12+00	38.8 ✓	0.61	37°50'		14	
13+00	40.0	0.70	37°	-5.0	10	
14+00	34.6 ✓	0.72	36°16'	-13.0	5	25' high
15+00	56.1 ✓	0.86	36°39'		15	
16+00	85.0 ✓	0.68	42°16'	+47.0	52	
17+00	112.2 ✓	0.77	36°47'	+62.0	73	
18+00	107.5 ✓	0.70	41°09'	+67.0	74	
19+00	96.0 ✓	0.78	47°44'	+60.0	70	
20+00	77.6 ✓	0.96	37°34'	+29.0	34	
21+00	53.6 ✓	0.97	26°37'	-25.0	10	
22+00	42.1 ✓	1.10	26°29'	-47.0	10	
23+00	34.0 ✓	0.76	47°00'	-2.0	3	



Sta.	offset	stadia	Vert. L	Add. Mens.	Dist. to Bluff.
40+00	L 26.7 ✓	0.93	54°43'	-5.0	0
42+00	126.6	1.03	29°39'	+53.0	L 80
43+00	98.1 ✓	1.43	27°35'	-15.0	38
44+00	82.0 ✓	0.95	36°00'	+19.0	22
45+00	69.8 ✓	0.95	38°32'	+11.0	15
46+00	62.6	0.98	36°27'		5
47+00	59.3 ✓	1.31	25°10'	-50.0	15
48+00	63.0 ✓	0.85	47°19'	+23.0	33
49+00	86.0 ✓	0.93	32°28'	+19.0	42
50+00	79.0 ✓	1.02	36°59'	+13.0	16
51+00	46.8 ✓	0.95	48°48'	+5.0	26
52+00	71.8	1.17	25°21'	+1.0	46
53+00	260.6 ✓	1.55	14°16'	+114.0	134
54+00	147.6 ✓	0.64	23°32'	+93.0	120
55+00	206.4 ✓	1.22	15°19'	+92.0	140
56+00	120.6 ✓	0.85	13°04'	+39.0	96
57+00	77.2 ✓	0.89	24°55'	-2.0	68
57+84 ⁶⁰ L	64.0 ✓ <small>Normal to back course</small>	0.94	16°49'	-23.0	12
57+84 ⁶⁰	50.4 ✓ <small>Normal to course ahead.</small>	0.63	32°47'		12
58+10	49.7 ✓	0.57	22°22'		10
59+00	34.3 ✓	0.41	25°26'		5
59+32	63.0 ✓	0.79	22°44'	-5.0	69
61+00	22.0				70
62+00	10.0				R 5
63+00	64.0 ✓	0.82	16°39'	-12.0	L 45

30' high ✓
131.7 ✓
Use 1+70

64.2 ✓

27.4 ✓
15' high.
" "

10' high 70.3
15' high
45.4 ✓
10' high

Sta	offset	Stadia	Vert. L	Add Meas.	Dist to Bluff
64+00	L 59.7	0.64	16°19'		L 35
	<i>Normal to course ahead.</i>				
64+16 ⁵⁰ -L	46.6	0.51	18°37'		
65+00	32.0			0	0
66+00	18.0				10
67+00	13.0				R 5
68+00	178.4	1.84	10°46'		L 35
69+00	132.0	1.71	13°19'	-31.0	100
70+00	239.3	2.30	11°35'	+18.0	123
71+00	139.8	1.57	16°45'	-5.0	140
72+00	120.5	2.15	13°22'	-84.0	115
73+00	102.2	0.84	25°28'	+33.0	65
	<i>Normal to course ahead.</i>				
73+13 ²⁰ -L	223.4	2.27	9°25'		30
74+00	231.0	2.37	9°16'		60
75+00	206.0	2.13	11°13'		33
76+00	144.5	1.48	10°23'		R 55
77+00	108.0	1.18	5°47'		80
78+00	89.3	1.00	20°07'		L 5
79+00	121.0	1.36	20°05'		10
80+00	194.0	2.05	13°57'		10
81+00	131.4	0.99	23°17'	+47.0	50
82+00	53.7	0.66	26°25'		10
83+00	58.8	0.71	25°21'		0
84+00	80.7	0.85	14°10'		15
85+00	83.0				R 20
86+00	77.0				50

239.7 ✓

221.9 ✓

231.8 ✓

117.8 ✓

Sta.	Offset	Stadia	Vert.	Add Mens	Dist to Bluff
87+00	L 85.0				R 75
88+00	97.0				25
89+00	145.0				10
90+00	162.0 ✓	1.66	10°00'		
91+00	166.0 ✓	1.70	9°40'		
92+00	147.5 ✓	1.52	10°40'		L 10
93+00	135.5 ✓	1.40	11°18'		25
94+00	125.0				R 10
95+00	107.0				5
96+00	96.0				43
97+00	82.0				40
98+00	50.0				70
99+00	75.0				10
100+00	48.0				5
101+00	46.0				15
102+00	61.0				60
103+00	23.0				50
104+00	0.0				100
105+00	R 20.0				
106+00	L 33.0				140
107+00	R 35.0				
108+00	22.0				
109+00	25.0				
110+00	9.0				102
111+00	L 21.0				

508+70

517+70

162.0

112+00	L 88.0
L 112+54 ²	108.0 Mean L
113+00	139.0
114+00	150.0
115+00	137.6
116+00	100.0
117+00	60.0
118+00	40.0
119+00	50.0
120+00	30.0
121+00	43.0
122+00	59.0
123+00	75.0
124+00	92.0
125+00	105.0
126+00	120.0
127+00	156.0
128+00	124.0
129+00	88.0
130+00	55.0
131+00	43.0
132+00	23.0
133+00	5.0
134+00	R 7.0
135+00	14.0

D. to
Bluff

R12

20

30

0

0

L 6

R 35

38

94

75

47

50

36

10

39

39

80

92

86

98

137

Sea Wall.

" "

" "

" "

" "

" "

Wall

Wall

533+70

Sta.	offset		
136+00	R 8.0	R 50	
137+00	L 12.0	55	
138+00	32.0	30	
139+00	63.0	35	wall
L 139+93 ²¹	0.0	40	wall
140+00	0.0		
141+00	73.0	33	wall
142+00	62.0	39	
143+00	64.0	18	house
144+00	104.0	60	
145+00	88.0	30	
146+00	93.0	34	
147+00	72.0	40	
148+00	57.0	43	
149+00	66.0	43	
150+00	74.0	48	
151+00	90.0	54	
L 151+74 ²⁸	100.0 Mean L	25	
152+00	88.0	15	
153+00	50.0	10	
154+00	94.0	10	
155+00	87.0	27	
156+00	57.0	20	
157+00	34.0	10	
158+00	38.0	20	

Sta.	Offset	Stadia	Vert L	Add. Meas.	Dist to Bluff.	
159+00	L 8.0				R 15	
160+00	56.0				0	
161+00	107.0					
162+00	87.0				10	
163+00	71.0					
164+00	67.0				10	
165+00	59.0				5	
166+00	123.0				L 44	
167+00	68.0					
L 167+90 ⁵	48.0	Normal to back course				
168+00	35.0					
168+50	38.0 ✓	0.39	38°52'	+14.0		
168+50	133.3 ✓	1.27	15°10'	+14.0	20	
168+80				+111.0		
169+00	236.0			+218.0	218	
170+00	219.6 ✓	1.03	15°43'	+123.6	123	
171+00	116.7	0.37	48°28'	+95.0	100	
171+25	139.0				100	
172+00	140.0				120	
173+00	16.0				R 5	
174+00	35.0				15	
175+00	50.0				L 15	
176+00	42.0 ✓	0.93	34°36'	-22.0		
177+00	13.0				R 6	
178+00	29.0				72	
179+00	34.0				50	

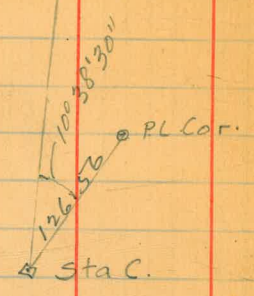
Add 0.12 from here

111.9 ✓

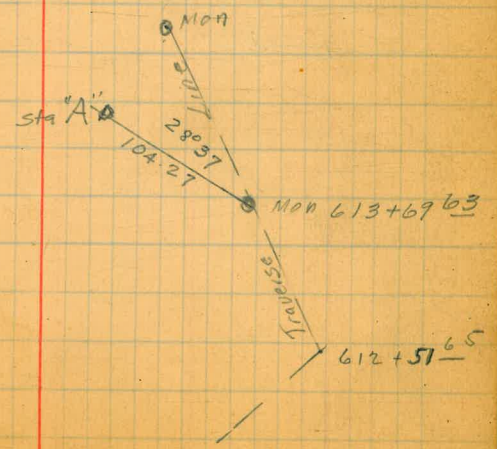
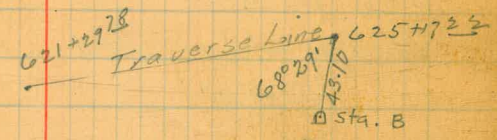
Sta	offset	Stadia	Vert. L	Add Mens.
180+00	L 38.0			
181+00	90.0			L 50
182+00	71.0			5
183+00	30.0			R 80
184+00	24.0			58
185+00	10.0			29
186+00	0.0			10
187+00	R 11.0			15
188+00	6.0			25
189+00	0.0			40
190+00	L 60.0			
L 190+82 ⁶²	46.0		Normal to back course	
190+82 ⁶²	40.0		Normal to course ahead	
191+00	43.0			70
192+00	88.0			L 10
193+00	66.0			40
194+00	0.0			R 56

Control points
for sounding LaJolla
yacole basin.

Shell Mt.



20 21 137



3 Point for Sta C.

38

Inst at sta C.

Shell Md. - Ball

1 - $6^{\circ}26'$

6 - $38^{\circ}32'$

Mean $6^{\circ}25'20''$

Ball - Baranca

1 - $14^{\circ}49'$

6 - $88^{\circ}55'$

Mean $14^{\circ}49'10''$

Valencia Hotel - Shell Md

1 - $109^{\circ}38'40''$

6 - $657^{\circ}51'30''$

Mean $109^{\circ}38'66.6''$

Sta A - Baranca

1 - $116^{\circ}29'$

6 - $698^{\circ}49'$

Mean $116^{\circ}28'10''$

Inst at Baranca

Ball - Sta C.

1 - $156^{\circ}37'30''$

6 - $940^{\circ}01'$

$156^{\circ}40'10''$

Sta C - Sta - A

1 - $22^{\circ}05'45''$

215 6 - $132^{\circ}33'15''$

Mean $22^{\circ}05'32.5''$

Inst at Sta "A"

Baranca - Sta "C"

1 - $41^{\circ}26'30''$

6 - $298^{\circ}39'30''$

Mean $41^{\circ}26'35''$

March 2, 1931

Angles to soundings LaJolla Yacht basin.

Loudon π
Duermit - Reg. 59.

Inst No 2 at Sta B.

Angler F.S. Sta A

No

1	10-36-00	Time 9 ²⁰
2	13-58	
3	14-43	
4	17-27	
5	22-22	
6	28-32	
7	31-36	
8	35-32	
9	41-14	
10	37-30	
11	33-17	
12	29-12	
13	24-53	
14	21-33	
15	20-00	
16	18-47	
17	15-41	
18	13-06	
19	11-14	Time 9 ⁵⁵
20	10-29	
21	16-07	
22	22-08	
23	27-01	
24	32-05	
25	36-47	

No.

Angle.

26	42-09	
27	46-47	
28	51-09	
29	58-42	
30	53-23	Time 10 ⁰⁰
31	44-56	
32	37-30	
33	30-18	
34	23-58	
35	18-30	
36	14-04	
37	10-00	
38	6-28	
39	0-54	Left.
40	7-10	
41	14-18	
42	21-47	
43	29-21	
44	32-54	
45	45-10	
46	51-25	Time 10 ¹⁵
47	57-04	
48	63-03	
49	68-56	
50	73-36	

No.	Angle	
51	77-42	
52 ✓	93-10	
53	91-40	
54	89-54	
55 ✓	87-27	
56	82-31	
57	76-47	
58 ✓	68-42	
59	58-23	
60	47-17	Time 10 ²⁵
61	34-06	
62	24-12	
63	16-17	
64	10-13	
65	30-53	
66	52-20	
67 ✓	73-35	
68	86-40	
69	92-25	
70	97-18	
71	100-05	
72 ✓	102-11	
73	104-09	
74	105-49	
75	107-29	

Angles to soundings.

40

No.	Angle	
76 ✓	108-53	
77	119-26	
78	120-15	
79	120-51	
80	121-25	
81 ✓	121-47	
82	122-41	
83	123-46	
84	124-48	
85 ✓	126-10	
86	127-23	Time 10 ⁴⁵
87	126-49	
88	127-17	
89	126-55	
90	126-50	
91	125-27	
92 ✓	123-11	Time 10 ⁵⁰

Inst #2 at Sta "B" Foresight Sta "C"

Angles Left Time 12¹⁵

93	5-00 Rt.
94	14-03
95	16-52
96	19-48
97	22-15
98	22-25

No	Angle	Time.
99	23-23	
100 ✓	23-32	
101	24-30	
102	25-52	
103	27-20	
104	27-55	
105	28-20	
106	28-32	
107	28-40	
108	29-00	
109	29-07	
110 ✓	29-21	
111	25-05	
112	24-35	
113	23-56	
114	23-20	
115 ✓	22-40	
116	22-00	12 ³³
117	21-17	
118	18-56	
119	15-36	
120	10-36	
121	4-46	
122	4-20	Rt.
123	5-34	Rt.
124	29-52	Rt.

Angles to Soundings

41

No	Angle	
125	22-40	Rt.
126	18-05	Rt.
127	10-22	Rt.
128	5-15	Rt.
129	0-42	Rt.
130	2-58	
131	5-53	
132	7-49	
133 ✓	8-17	
134	9-34	
135	10-25	
136	11-38	
137	12-25	
138	12-58	
139	13-22	
140 ✓	14-01	Time 12 ²⁹
141	11-16	
142	10-19	
143	8-48	
144	8-23	
145	7-04	
146 ✓	5-44	
147	4-08	
148	1-53	
149	2-00	Rt.

No	Angle
150	5-00 Rt.
151	11-38 Rt.
152	16-02 Rt.
153	20-27 Rt. Time 12 ⁵⁷
154	
155	

Stadia for topog. features of La Jolla Cove.

3/2/31
Laudon, Jr. 43
Duermil Rec.
Isbell

+	H.I.	-	C & G.S.
3.79	40.51	36.72	B.M.
		9.22	Sta. "A"

(Control points)
Page 37

Inst at Sta "A" Hgt. 5³⁰ F.S. Baranca
H.I. = 36.59

Elev "A" 31.29 C & G.S.

No.	Def.	Stadia	V. Angle	Rod	Elev.	Hor. Dist.
1	26°40 H	0.96	-14°45		7.7	90.0
2	46-13 H	0.22	-15-04		25.8	70.5
3	126-36 Rt	0.24		4.8	31.8	24.0
4	155-20 Rt	0.96		4.1	32.5	96.0
5	144-38 Rt	1.48		4.2	32.4	148.0
6	125-52 Rt	2.26		3.6	33.0	226.0
7	122-12 Rt	2.50		7.8	28.8	250.0
8	122-12 Rt	2.50		1.5	35.1	250.0
9	109-30 Rt	2.45		5.0	31.6	245.0
10	103-30 Rt	2.63		5.9	30.7	263.0
11	103-27 Rt	2.82		9.0	27.6	282.0
12	100-43 Rt	3.15		8.1	28.5	315.0
13	92-37 Rt	3.32	+1-14		38.5	332.0
14	84-57 Rt	3.36		6.8	29.8	336.0
15	71-40 Rt	3.16	-4-06		8.8	316.0
16	72-31 Rt	3.10	-6-24		-3.2	310.0
17	79-21 Rt	3.28	-5-19		0.8	328.0
18	89-14 Rt	3.30	-4-00		8.3	330.0
19	99-46 Rt	3.13	-2-36		17.1	313.0
20	102-20 Rt	2.55	-4-54		9.5	255.0
21	109-53 Rt	2.24	-4-47		12.7	224.0

Ground
Top Wall

On Beach

No	Ref.	Stadia	V. Angle	Rod.	Elev.	Hor Dist.
22	120-32 Rt.	2.45	-2-39		19.9	245
23	117-45 Rt.	1.99	-5-31		12.3	199
24	123-42 Rt.	1.86	-5-11		14.5	186
25	123-43 Rt.	1.63	-6-39		12.5	163
26	136-00 Rt.	1.33	-7-57		13.1	133
Sta "A1"	83-20 Rt.	0.56	-14-14		17.7	56
Trest at "A1" Hgt. 53 ³ B.S. "A"						
"A"		0.57	+14-12		31.3	56
1	97-30 Rt.	0.66	-8-28		8.0	66
2	26-58 Lt.	0.30	-47-02		2.0	14.6
3	173-32 Rt.	0.29	-32-00		4.6	21
4	163-39 Lt.	0.65	-13-00		3.5	62
5	163-35 Lt.	1.03	-9-46		0.5	100
6	156-34 Lt.	1.06	-9-40		0.1	103
7	145-23 Lt.	0.77	-12-20		1.7	74
8	132-52 Lt.	1.25	-9-09	Up 1 ²	-2.9	122
9	119-12 Lt.	0.93	-12-27		-1.9	89
10	108-58 Lt.	0.96	-10-04	Up 2 ²	-0.9	93
11	105-37 Lt.	0.93	-7-31		5.7	93
12	114-00 Lt.	1.38	-8-43		-3.0	136
13	113-38 Lt.	1.36	-6-26		2.5	136
14	109-57 Lt.	1.37	-8-40		-2.7	137
15	103-12 Lt.	1.22	-10-08	Up 1 ²	-4.4	118
16	103-45 Lt.	1.21	-8-10		0.7	120
17	98-25 Lt.	0.86	-13-53		-2.3	85

Cont. on Page 46

On Rocks

Levels from B.M.s to M.H.T.

Set on other circuit.

T.P.x	2.32	10.92		8.60
T.P.	5.60	11.17	5.35	5.57
T.P.	5.00	9.17	7.00	4.17
T.P.	5.47	8.51	6.13	3.04
T.P.	3.19	6.85	4.85	3.66
T.P.	4.46	8.60	2.71	4.14
T.P.	3.76	8.46	3.90	4.70
Foot of steps				
T.P.	10.41	18.65	0.22	8.24
T.P.	2.98	10.40	11.23	7.42
T.P.	7.95	12.18	6.17	4.23
T.P.	1.70	10.35	3.53	8.65
Rock				
T.P.			5.36	4.99
T.P.	12.16	21.92	0.59	9.76
T.P.	12.17	33.43	0.66	21.26
T.P.	12.79	45.74	0.48	32.95
T.P.	12.55	57.78	0.51	45.23
T.P.	12.92	70.24	0.46	57.32
T.P.	9.68	79.14	0.78	69.46
T.P.	11.16	89.61	0.69	78.45
To Jolla Blvd & La Canada.				
B.M.			3.82	85.79
			(85.78)	

45

T.P.	2.63	7.62		4.99 Rock
T.P.	7.34	12.37	2.59	5.63
T.P.	7.92	14.62	5.67	6.70
T.P.	3.01	10.43	7.20	7.42
T.P.	5.37	15.16	0.64	9.79
T.P.	5.23	7.46	12.93	2.23
T.P.	2.79	7.04	3.21	4.25
T.P.	6.81	12.28	1.57	5.47
T.P.	11.17	17.59	5.86	6.42
T.P.	0.72	17.70	0.61	16.98
T.P.	8.63	15.64	10.69	7.01
T.P.	6.95	14.42	8.17	7.47
Sta 152+00				
T.P.	4.80	17.71	1.51	12.91
T.P.	9.01	25.25	1.47	16.24
T.P.	0.13	13.19	12.19	13.06
T.P.	4.28	17.47	0.00	13.19
T.P.	0.01	12.42	5.06	12.41
T.P.	3.28	14.20	1.50	10.92
T.P.	8.65	16.78	6.07	8.13
T.P.	0.59	16.83	0.54	16.24
T.P.	10.39	19.04	8.18	8.65
T.P.	12.40	28.80	2.64	16.40
T.P.	11.71	39.83	0.68	28.12
B.M. W. end Con.			2.99	36.84
Wall at La Jolla Bathing Cove.			(36.72)	

	Def.	Stadia	V-Angle	Rod	Elev.	Hor. Dist
18	101-37 Lt.	0.83	-7-16		7.3	83
19	109-14 Lt.	0.53	-19-55		0.7	47
20	111-33 Lt.	0.58	-10-28		7.3	56
21	133-31 Lt.	0.65	-15-25		1.0	61
22	116-50 Lt.	0.62	-10-01		7.1	60
23	128-38 Lt.	0.46	-22-12		1.6	40
24	90-00 Lt.	0.85	-14-13		-2.6	80
25	84-47 Lt.	1.11	-10-07		-1.3	104
26	81-13 Lt.	0.92	-9-10		3.2	89
27	60-51 Lt.	0.93	-12-47		-3.8	88
28	60-51 Lt.	0.92	-9-34		2.6	89
29	49-22 Lt.	0.58	-17-23		1.2	53
30	58-37 Lt.	0.59	-10-42		6.9	57
31	61-54 Lt.	0.50	-19-14		2.2	44
32	62-12 Lt.	0.50	-12-20		7.2	48
33	80-50 Lt.	0.62	-6-34		10.6	60
34	72-54 Lt.	0.65	-10-59		5.5	63
35	72-58 Lt.	0.80	-13-46		-0.8	75
36	72-01 Lt.	0.76	-10-24		4.1	74
37	36-00 Lt.	1.00	-11-10		-1.3	97
38	6-21 Rt.	1.03	-10-57		-1.5	100
39	3-30 Rt.	1.54	-7-11		-1.4	150
40	23-58 Rt.	0.64	-14-57		0.7	64
41	64-22 Rt.	0.37	-19-49		5.9	33
42	60-55 Lt.	0.32	-23-26		6.0	27

OK

Water's Edge Time 2³⁵

OK

" "

	Def.	Stadia	V. Angle	Rod.	Elev.	Hor. Dist.
43	166-06 Lt.	0.56	+10-00	.	27.3	54
44	161-18 Rt.	0.20	+16-15		23.1	18
45	94-31 Rt.	0.36	-3-24		15.5	36
46	114-53 Rt.	0.45	+3-00		20.0	45
47	95-58 Rt.	0.83	-2-00		14.8	83
48	133-30 Rt.	0.06		4.5	13.2	6
49	121-46 Lt.	0.04		5.6	12.1	4
50	12-57 Lt.	0.06		8.0	9.7	6

Stadia Topog. LaJolla yacht

Basin (cont from)
P 47

3/3/31

Loudon
Duermitt
Isbell

48

Defⁿ L stadia. V angle Rod Elev

Hor. Dist.

Inst at sta 'A' FS. Baranca

El. Sta A =

31.29 C & G S. Datum.

Ht. Inst = 5.3

F + C = 1.0

	Def ⁿ L	stadia.	V angle	Rod	Elev	Hor. Dist.	
1	105°18'	2.75	+1°06'		36.6	275	S end wall (ground)
2	100°55'	3.15	+1°28'		39.4	315	L in wall (grd.)
3	93°03'	3.33	+1°26'		39.6	333	N end wall grd
A	84°13'	3.74	+1°33'		41.8	374	
5	81°04'	4.38	+1°29'		42.7	438	
6	76°12'	4.89	+1°38'		45.2	489	
7	66°41'	5.47	+1°53'		49.3	547	
8	60°49'	5.73	+1°52'		50.0	573	
9	57°27'	5.71	-0°46'		24.6	571	
10	57°01'	5.38	-0°42'		24.7	538	
11	68°47'	5.00	-0°21'		28.2	500	
12	76°23'	4.50	-0°16'		29.2	450	
13	79°16'	4.12	-0°13'		29.7	412	
14	82°18'	3.33	-0°30'		28.4	333	
15	76°16'	3.39	-2°05'		18.9	339	
16	73°56'	4.24	-1°15'		22.0	424	
17	66°18'	4.53	-0°56'		23.9	453	
18	60°31'	4.83	-1°15'		20.7	483	
19	56°01'	4.70	-1°53'		15.9	470	
20	56°23'	5.52	-0°55'		22.5	552	
21	55°10'	6.00	-0°46'		23.3	600	
22	54°40'	5.76	-1°06'		20.3	576	
23	54°21'	5.78	-2°23'		7.3	578	

cont from P. 48

	Def'l L	stadia	v angle	Rod	Elev.	Hor. Dist.
24	55°32'R	5.56	-2°13'	up 4.0	5.8	556
25	55°02'	4.73	-3°05'		5.8	473
26	58°36'	4.71	-3°21'		3.8	471
27	58°43'	4.67	-1°57'		15.5	467
28	60°02'	4.48	-3°40'		2.7	448
29	60°24'	4.47	-3°17'		13.7	447
30	65°08'	4.52	-2°33'		11.3	452
31	66°23'	4.44	-3°44'		2.3	444
32	68°23'	4.21	-3°14'		7.5	421
33	68°47'	4.25	-2°34'		12.2	425
34	70°54'	4.23	-3°30'	up 5.0	0.5	423
35	71°06'	3.80	-4°07'		4.3	380
36	71°30'	3.83	-2°50'		12.4	383
37	72°37'	3.25	-3°30'		11.5	325

Topog LaSalle yacht Basin -

49

Inst at Sta 'B' F.S. Baranag. Ht. Inst = 5.4 Elev. Sta 'B' = 49.83 C & G.S.

	Def'l	stadia	angle	Rod	Elev.	Hor. Dist.	
1	105°20'R	0.71		1.4	48.4	71	
2	34°44'	0.05		5.3	44.5	5	
3	118°54'L	0.57		6.7	43.1	57	
4	103°10'	0.70	-9°06'	up 6.0	32.9	70	
5	49°10'	0.37	-25°40'		35.3	30	
6	28°06'R	0.37	-25°05'		35.6	30	
7	82°32'	0.59	-15°30'	up 4°	30.6	55	
8	58°20'	1.00	-21°00'	up 5°	11.3	87	
9	41°13'	0.97	-24°13'		13.3	81	
10	46°05'	0.61	-22°10'		28.5	53	
11	22°24'	0.62	-22°00'		28.3	53	top. vert. cliff 25'
12	9°06'L	0.67	-21°50'		26.6	58	" " " "
13	72°20'	0.53	-23°56'		30.2	44	" " " 30'
14	61°01'	0.74	-20°01'		26.0	65	" " " 30'
15	85°19'	0.72	-16°27'		30.2	66	" " " 30'
16	81°54'	0.87	-14°23'		28.9	82	" " " 30'
17	92°18'	1.14	-12°55'		24.9	104	" " " 25'
Sta B1	144°01'	0.70		13.4	36.4	70	" " " 30'

Stadia Topog LaJolla

yecht Basin

51

Def'l	Inst	stadia	Angle	Rod.	Elcy.	Hor. Dist.
		at Sta 'B1'	B.S.	Sta 'B'		
1	178°12'L	0.27	+25°28'		46.9	22
2	100°40'	0.50	+17°02'		50.4	46
3	96°44'	1.02	+10°22'		54.4	99
4	96°28'	1.71	+8°14'		60.7	168
5	87°57'	1.82	+8°00'		61.5	178
6	81°45'	2.33	+10°26'		77.9	226
7	68°02'	2.21	+10°13'		75.3	215
8	71°48'	1.93	+7°37'		61.7	192
9	43°42'	1.77	+11°13'		69.4	174
10	5°24'	1.61	+9°03'		61.4	156
11	1°38'R	1.29		1.6	34.8	129
12	18°56'	2.06	+1°30'		41.2	206
13	17°51'	2.46	+2°26'		46.8	246
14	26°42'	3.07	+1°37'		45.0	307
15	33°47'	3.00	-3°04'		20.0	300
16	30°14'	2.77	-3°00'		21.8	279
17	29°29'	2.52	-2°35'		25.0	252
18	22°20'	2.34	-3°03'		23.9	234
19	23°53'	2.06	-3°10'		25.0	206
20	20°03'	1.62	-4°36'		23.5	162
21	3°31'L	1.11	-13°37'		10.9	106
21	3°08'	1.10	-19°58'		11	97
22	10°51'R	1.20	-10°50'		14.0	116
23	28°57'	1.90	-4°40'		21.0	190
24	25°35'	2.14	-4°00'		21.5	214

Hgt Inst = 5.1 El. "B1" = 36.4

Cont from p 51

	Def'l.	Stadia	V angle	Red	Elev.	Hor. Dist.
25	33°36'R	2.35	-4°31'		18.0	235
26	36°42'	2.72	-4°05'		17.1	272
27	33°53'	1.80	-10°18'		4.6	174
28	34°48'	1.86	-11°40'	up 5°	-5.6	180
29	27°16'	1.48	-11°45'		6.9	142
30	27°16'	1.51	-17°34'	up 2°	-9.1	138
31	82°15'L	1.51	-10°35'		9.3	147
32	74°20'	1.83	-7°55'		11.4	180
33	84°20'	1.20	-19°04'		-0.6	106
34	46°10'	1.27	-17°25'		0.1	116

Topog La Jolla Yacht Basin.

52

Remarks.

top Vert cliff 20' high
 " " " 20' high

36.72 BM wall of Co. VC.

15.72
 52.44
 - 2.61
 49.83 Sta B

M.H.T. Base 1102
gt 603 + 81

F.S. 612 + 51 ⁶⁵

Angles to soundings
Yacht Basin A/1/31
La Jolla
London
Duermitt.

53

April 1, 1931

No	Defl. Left	Time
1	19° 17'	10 ²⁰
2	22° 45'	
3	24° 52'	
4	27° 24'	
5 ✓	30° 11'	
6	31° 28'	
7	32° 40'	
8	33° 18'	
9 ✓	33° 21'	
10	29° 45'	
11	28° 01'	
12	26° 35'	
13	24° 44'	
14	22° 57'	
15 ✓	21° 02'	10 ³¹
16	18° 36'	
17	16° 34'	
18	14° 49'	
19	13° 07'	
20 ✓	11° 38'	
21	8° 07'	
22	9° 27'	
23	11° 28'	
24	13° 43'	
25	14° 43'	

No	Time
26	15° 10'
27	16° 53'
28	18° 20'
29	20° 37'
30 ✓	21° 15' 10 ⁴³
31	15° 15'
32	14° 02'
33	12° 36'
34	11° 03'
35	11° 18'
36 ✓	9° 56'
37	9° 00'
38	8° 00'
39	7° 13'
40	5° 40'
41	4° 01'
42 ✓	0° 24'
43	3° 16'
44	5° 46'
45	7° 18'
46	7° 21'
47 ✓	7° 30' 11 ⁴
48	8° 54'
49	10° 02'
50 ✓	10° 37'

No	Left.	Time.
51	7° 43'	
52	7° 02'	
53	5° 41'	
54	5° 10'	
55 ✓	4° 15'	11 ²¹
56	4° 10'	
57	2° 39'	
58	1° 54'	
59 ✓	1° 09'	
60 ✓	0° 44' Rt.	11 ²⁶

Instat. Sta. B. F.S. - Sta. A"

No	Left.	Time.
61	46° 50'	12 ²³
62	52° 15'	
63 ✓	57° 25'	
64	62° 57'	
65 ✓	66° 50'	
66	72° 18'	
67	78° 00'	
68	76° 49'	
69	75° 06'	
70 ✓	73° 42'	12 ⁵¹
71	71° 25'	
72	65° 47'	
73 ✓	62° 08'	
74 ✓	67° 20'	

No.	Left.	Time.
75	73° 13'	
76	77° 28'	
77	79° 40'	
78	82° 35'	
79	84° 25'	
80 ✓	87° 22'	
81	89° 00'	
82 ✓	89° 56'	
83	94° 18'	
84	94° 10'	
85 ✓	93° 15'	
86	92° 15'	
87	90° 23'	
88 ✓	88° 59'	
89	87° 17'	
90 ✓	86° 14'	1 ¹⁰
91	91° 12'	
92	93° 06'	
93	93° 50'	
94	95° 53'	
95 ✓	96° 49'	
96	97° 44'	
97	104° 38'	
98	104° 25'	
99	104° 50'	

No.	Right.	Time.
100 ✓	103° 37'	
101	101° 31'	
102	100° 41'	
103	101° 05'	
104 ✓	100° 33'	1.37
105	110° 21'	
106	111° 53'	
107	112° 25'	
108	113° 30'	
109	113° 09'	
110 ✓	113° 20'	
111	112° 50'	
112	112° 21'	
113 ✓	115° 37'	
114	115° 26'	
115	114° 46'	
116	114° 50'	
117	114° 27'	
118	113° 25'	
119	114° 11'	
120 ✓	114° 48'	
121	115° 41'	
122	116° 18'	
123	116° 24'	
124	116° 51'	
125	117° 27'	

55

No.	Right.	Time
126	118° 05'	1.56
127		
128		
129		
130		

544 EI 3129 G2G3

3.20
34.47
12.77
21.72
0.24
21.96
12.45
9.51

4/1/38
London

M.H.T. Baseline

Post at 612 + 51.65 F.S. on 616 + 40.06

	Def'l	Stadia	V. angle	Rod	Elev
1	17°11' L	1.87	+6°15'		29.8 ✓
2	11°48'	1.40	+8°18'		29.5 ✓
3	A°00' R	1.16	+10°10'		29.8 ✓
4	20°59'	1.18	+9°58'		29.6 ✓
5	41°38'	1.12	+10°09'		28.9 ✓
6	55°03'	1.78	+6°30'		29.5 ✓
7	72°14'	1.67	+3°55'	up 12	16.9 ✓
8	76°01'	1.19	+4°25'		18.6 ✓
9	65°28'	0.89	+8°40'		22.8 ✓
10	30°58'	0.88	+7°06'		20.3 ✓
11	15°29'	0.96	+8°16'		19.9 ✓
12	13°27' L	1.10	+6°15'		21.4 ✓
13	20°59' L	1.68	+3°35'		20.0 ✓
14	23°43'	1.91	+3°46'		22.0 ✓
15	31°01'	1.94	+1°36'		14.9 ✓
16	30°25'	1.35	+3°09'		16.9 ✓
17	17°34'	0.87		1.4	13.3 ✓
18	20°54' R	0.37		2.3	12.4 ✓
19	60°12'	0.35		4.6	10.1 ✓
20	60°40'	0.54	+6°39'		15.7 ✓
21	65°45'	0.67	+5°16'		15.6 ✓
22	90°50'	0.90	+2°52'		14.0 ✓
23	107°42'	0.55		6.1	8.6 ✓
24	105°50'	0.74		8.6	6.1 ✓

Stadia Topog of shore La Jolla Yacht Basin 56

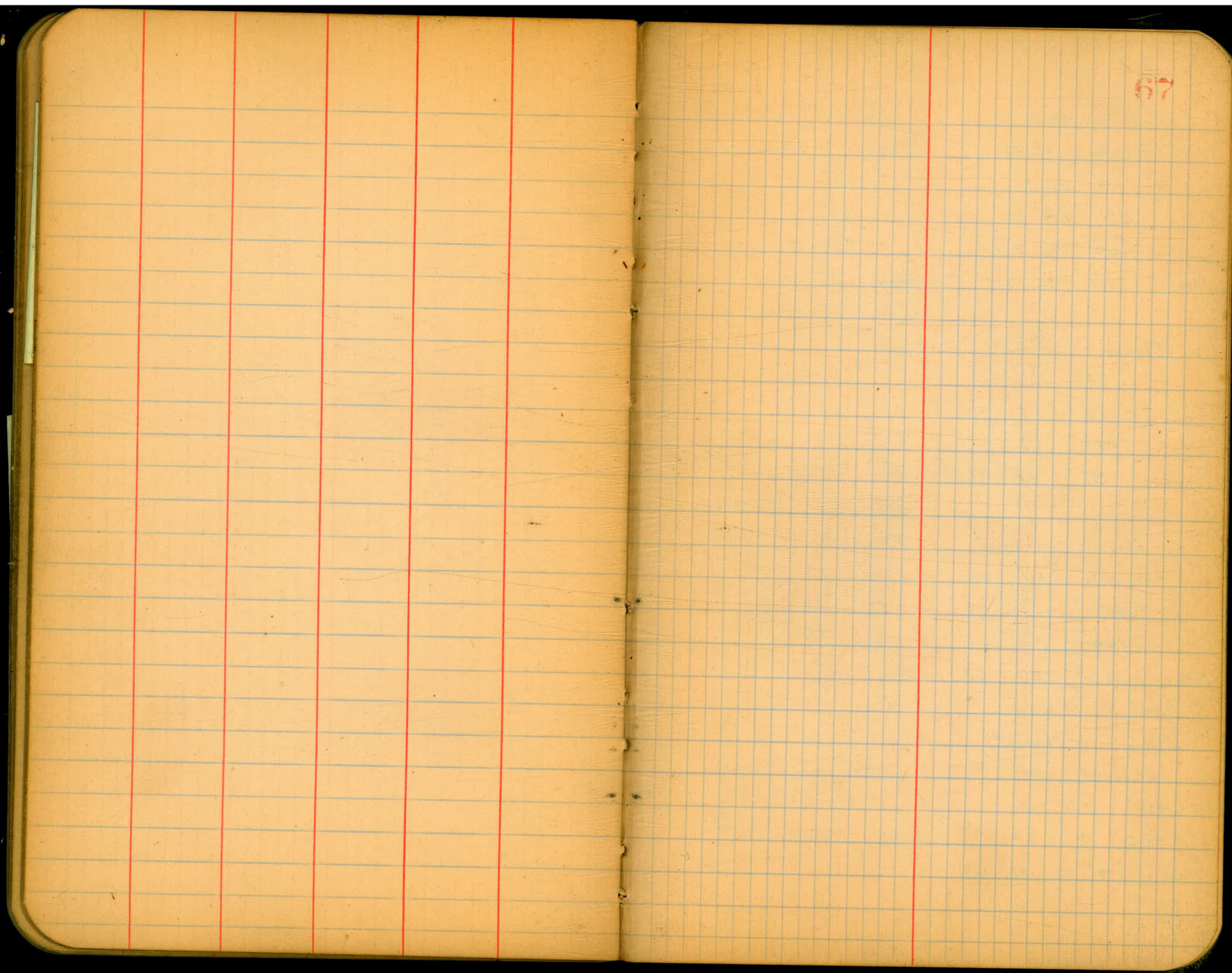
Elev. 9.51 E & G.S. Ht inst = 5.2

Hor Dist	Elev	Description
	185.8	top of bluff
	138.1	" " "
	113.4	" " "
	115.5	" " "
	109.5	top of bench
	176.7	" " "
	167.0	on slope
	119.0	" " "
	88.0	" " "
	87.6	" " "
	97.0	" " "
	109.7	" " "
	168.0	" " "
	191.0	" " "
	194.0	top vert bench 14' high
	135.0	on slope
	87.0	" " "
	37.0	bottom slope
	35.0	" " "
	54.0	change slope
	67.0	" " "
	90.0	on slope
	55.0	bottom slope
	74.0	bottom bench

	Def't	Stadia	Angle	Rod	Elev.	Hor. Dist.	
25	104°37'	R.O. 74		2.5	12.2✓	74	
26	117°40'	1.00		2.3	12.4✓	100	top bench
27	118°18'	1.00		11.5	3.2✓	100	bottom bench
28	102°45'	1.33		3.3	11.4✓	133	top bench
29	113°32'	1.25		12.1	2.6✓	125	bottom bench
30	100°47'	1.11		2.3	12.4✓	111	on slope
31	98°41'	1.34		6.1	8.6✓	134	" "
32	99°38'	1.36		11.8	2.9✓	136	
33	91°50'	1.28		6.6	8.1✓	128	
34	91°20'	1.30		11.7	3.0✓	130	
35	87°02'	1.12	+1°33'		12.5✓	112	
36	77°40'	1.17	+2°57'	up 6"	9.5✓	117	bottom bench
37	119°50'	1.77	-2°25'		2.0✓	177	on rock at sea.
38	145°31'	1.32	-3°11'		2.2✓	132	" " " "
39	165°00'	1.04	-3°33'		3.0✓	104	" " " "
40	206°03'	0.68	-5°32'		3.0✓	68	" " " "
41	152°22'	0.59	-2°14'		7.2✓	59	on nose
42	122°00'	0.57		11.0	3.7✓	57	bottom slope
43	126°33'	0.36		5.6	9.1✓	36	top of bench
44	275°22'	0.36		5.3	9.4✓	36	" " " "
45	273°24'	0.40	-5°00'	up 5"	1.0✓	40	bottom of bench.
46	297°47'	0.78		4.9	9.8✓	78	top of bench 11' high.
47	310°43'	0.93		3.7	11.0✓	93	" " " " 12' "
48	305°02'	1.13		6.7	8.0✓	113	top of bench
49	304°40'	1.13		11.8	2.9✓	113	bottom of bench.

	Def'l	Stadia	Angle	Rod	Elev.	Hor. Dist.	
50	277° 37' R	1.10		11.8	2.9 ✓	110	on rock at sea
51	285° 18'	1.58		10.2	4.5 ✓	158	" " " 11.5' high
52	301° 18'	1.70		12.2	2.5 ✓	170	" " " " 8' high
53	324° 48'	1.27		1.3	13.4 ✓	127	at end of pipe
54	331° 58'	1.30	+3° 11'		16.7 ✓	130	" Junction of pipes
55	105° 40'	0.48		6.7	8.0 ✓	48	on pipe
56	126° 00'	0.69		11.5	3.2 ✓	69	" "
57	129° 11'	1.28		13.1	1.6 ✓	128	at end of pipe
58	315° 09'	1.00		3.5	11.2 ✓	100	top of crevice
59	315° 09'	1.00		12.5	2.5 ✓	100	bottom of "
60	323° 27'	1.30		3.2	11.5 ✓	130	top of crevice
61	323° 27'	1.30		11.2	3.5 ✓	130	bottom of crevice
62	308° 22'	1.07		5.3	9.4 ✓	107	top of crevice
63	308° 22'	1.07		14.3	0.4 ✓	107	bottom " "
64	315° 23'	1.31		4.3	10.4 ✓	131	top of crevice
65	315° 23'	1.31		14.3	0.4 ✓	131	bottom " "
66	315° 10'	1.37		4.0	10.7 ✓	137	top " "
67	315° 10'	1.37		15.0	-0.3 ✓	137	bottom " "
68	310° 07'	1.40		5.0	9.7 ✓	140	
69	310° 07'	1.40		13.0	1.7 ✓	140	
70	310° 40'	1.47		6.7	8.0 ✓	147	
71	310° 40'	1.47		14.7	0.0 ✓	147	
72	316° 06'	1.42		5.0	9.7 ✓	142	
73	316° 06'	1.42		15.0	-0.3 ✓	142	
74	326° 03'	1.44		3.8	10.9 ✓	144	
75	326° 03'	1.44		13.8	0.9 ✓	144	

62



67

Angles 11/1/30 London

(3 readings direct - 3 reversed.)

Inst at Baranca.

Prospect - Bush

1 110°22'15"

3 331°06'

6 662°11'

Mean 110°21'50"

Bush - Ball

1 99°30'30"

3 298°32'

6 597°04'

Mean 99°30'40"

Ball - Prospect

1 150°07'30"

3 450°22'45"

6 900°45'30"

Mean = 150°07'35"

Inst at Prospect.

Bush - Baranca

1 15°33'45"

3 46°40'15"

6 93°20'30"

Mean = 15°33'25"

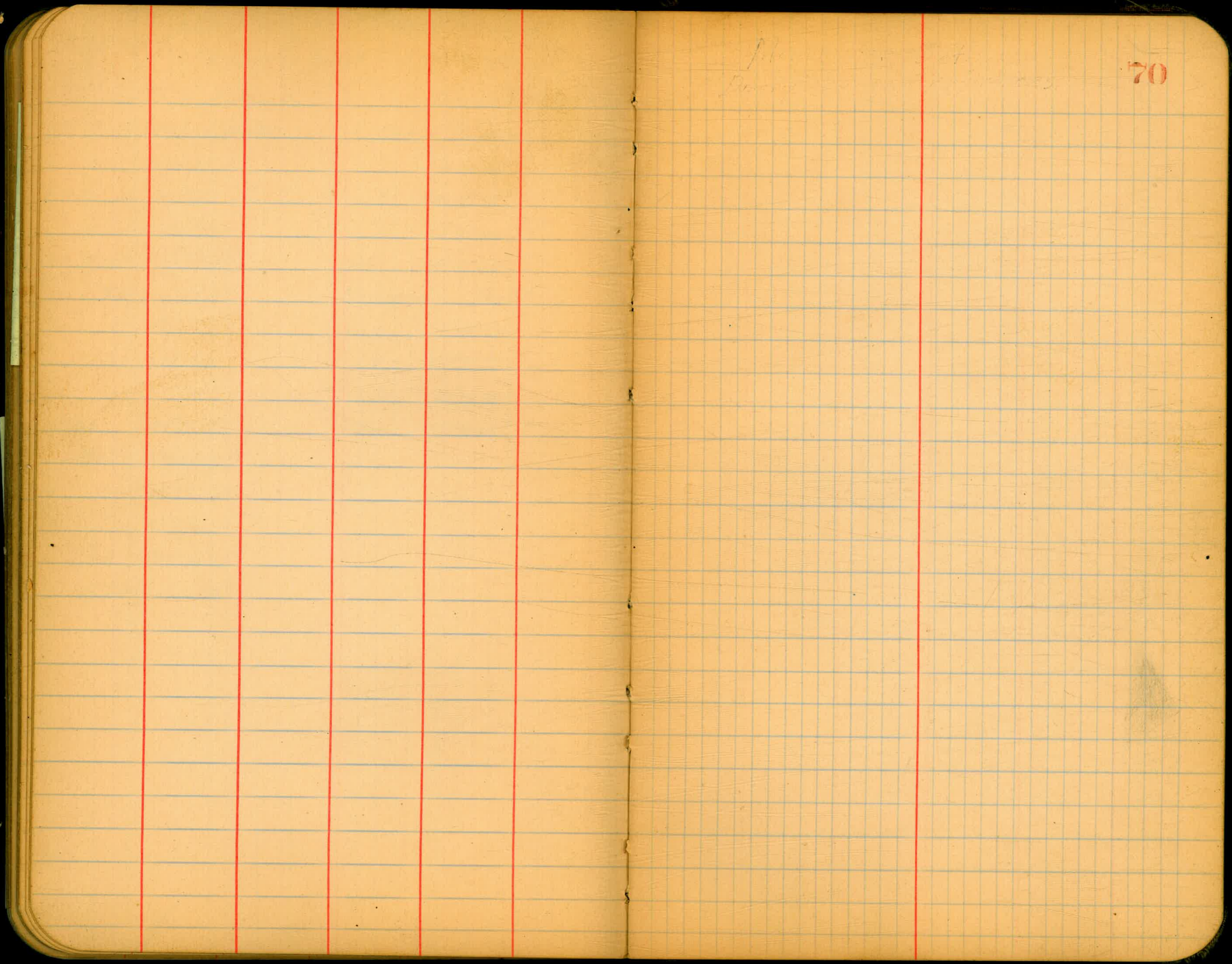
Baranca - Ball

1 17°10'30"

3 51°31'30"

6 108°02'30"

Mean = 17°10'25"



[Faint, illegible handwriting]

Check Levels From U.S.G.S Bench H60
At Seaside + West Point Loma Blvd to B.P. East Curb
9' So. of So. End of Mission Bay Bridge Ocean Beach

	USC19	USGS		
BM H60	5.523	42.834	37.311	34.421
	3.650	40.944	5.54	37.294
	4.74	42.916	2.768	38.176
	2.018	40.672	4.262	38.654
	1.970	37.750	4.892	35.780
BM	2.210	36.305	4.655	33.095
	3.005	33.458	5.852	30.453
BM	2.862	31.197	5.123	28.335
	0.355	22.632	8.920	22.277
	4.808	19.915	7.525	15.107
	2.108	16.348	5.675	14.240
BM			4.30	12.048

Jan 7-1974
SUNSON T
BLIND ROD

72

U.S.G.S Std. Disc on South Side W. Pt. Loma Blvd 44' W of 2
Seaside 4' S of Curb 9' W of Fire Hydr. Conc Post 1938 H60

S.W. B.P. So End Cb Rd Sunset Cliffs + West Point Loma

N.E. B.P. E end Cb Rd Lotus St + West Point Loma

B.P. East Curb 9' So. of So End Mission Bay Bridge Ocean Beach

Check Levels From West Point Loma Blvd
And Bacon St. to West End of Harrogan St. etc

Jan. 8 - 1944

Sisson
Bliss T
Begg Rod

Clear
Cool
No wind

73

#1	Field Book #1652-5			Adjusted		
BM #1 Datum	5.135	20.605	15.47	15.47	B.P. in Curb N.E. of Bacon & West Point Loma N.E.S. of old RR	
	2.685	16.185	7.105	13.50		
BM #2	2.785	14.965	4.005	12.180	12.18	B.P. East Curb 9' So. of So. End Mission Bay Bridge Ocean Beach
	4.580	15.860	3.685	11.280		
	5.650	16.560	4.950	10.910		
BM #3	4.595	16.095	5.060	11.500	11.50	Set B.P. S.W. Curb Return W. End Voltair St & Abbott St.
BM #4	5.910	16.815	5.190	10.905	10.905	N.W. B.P. N. End Cb. Ret. Muir Ave. & Abbott St.
BM #5	8.045	20.325	4.535	12.280	12.28	N.E. B.P. N. End Curb Return Long Branch Ave. & Abbott St.
BM #6	4.21	23.25	1.285	19.040	19.035	N.W. B.P. W. End Curb Return Brighton Ave. & Abbott St.
BM #7	3.37	21.185	5.435	17.815	17.805	N.W. B.P. N. End Curb Return Cape May Ave. & Abbott St.
BM #8	5.225	19.285	7.125	14.060	14.045	N.W. 7' Lead & Tack Saratoga Ave. & Abbott St.
	6.285	19.790	5.78	13.505		
BM #9	6.295	21.790	4.295	15.495	15.44	N.E. B.P. E. End Curb Return Newport & Abbott St.

Jan. 10-1944

cloudy
cold
No wind

74

Adjusted

	21.79					
	6.09	24.855	3.525	18.265		
B.M. #10	6.41	26.455	4.31	20.045	19.985	N.E. BP E End Curb Return New York Ave & Bacon St
B.M. #11	7.44	29.425	4.47	21.985	21.92	N.W. BP N End Curb Return Niagara Ave & Bacon St
B.M. #12	6.46	34.605	1.28	28.145	28.085	N.W. BP N End Curb Return Narragansett Ave & Bacon St
	6.00	35.010	5.595	29.010		
	10.425	42.555	2.88	32.13		
	8.27	50.20	0.725	41.830		
B.M. #13			4.795	45.405	45.345	BP in Cross Curb 2 Narragansett Ave W of Bacon

Re Check of Levels From West End of
Harragansett Ave to West Point Linn H 10
and Bacon St.

Jan. 11-44
Sisson
Bliss
Bogg Rod

Clear
Cool
No Wind

75

				Adjusted		
BM #13	3.605	49.01	45.405	45.345	B.P. in Cross Curb of Harragansett W of Bacon St	
	0.295	37.855	11.45	37.56		
	4.385	34.540	7.70	30.155		
	4.755	33.675	5.620	28.920		
BM #12	1.07	29.215	5.530	28.145	28.085	NW B.P. NE End Cb Ret. Harragansett + Bacon
BM #11	4.495	26.475	7.235	21.980	21.92	NW B.P. NE End Cb Ret. Niagara H 11 + Bacon St
BM #10	4.050	24.095	6.43	20.045	19.985	NE B.P. E End Cb Ret. Newport Ave + Bacon St
	3.690	21.745	6.040	18.055		
BM #9	4.365	19.865	6.245	15.500	15.44	NE B.P. E End Cb Ret. Newport Ave + Abbott St
	5.925	19.490	6.300	13.565		
BM #8	7.225	21.330	5.285	14.105	14.045	NW 7' Lead + Tack Saratoga Ave + Abbott St
BM #7	5.895	23.760	2.465	17.865	17.805	NW B.P. NE End Cb Ret. Cape May Ave + Abbott St

		23.760			Adjusted	
BM #6	1.90	20.995	4.665	19.095	19.035	NW BP N End Cb Ret. Brighton Ave + Abbott St
BM #5	4.575	16.915	8.655	12.340	12.28	NE BP N End Cb Ret. Long Branch Ave + Abbott St
BM #4	5.31	16.275	5.950	10.965	10.905	NW BP N End Cb Ret. Muir Ave + Abbott St
BM #3	4.41	15.975	4.710	11.565	11.50	SW BP N End Cb Ret. Voltair + Abbott St
	5.10	16.200	4.875	11.100		
	4.47	14.925	5.745	10.455		
BM #2	4.61	16.86	2.675	12.250	12.18	B.P. East Curb 9.50 of So. End Minion Bay Bridge O.B
	6.990	20.720	3.13	13.730		
BM #1			5.19	15.53	15.47	B.P. in Curb N. E. N. Bacon St West Point Lane Blvd 115 St old RR.

Adjustment of Bench Marks From
West Point Loma Ave to West End of Harrington St. No

Jan. 11-44
518807

77

	1st	2nd	Loudon 1407.99 $\frac{1}{2}$	Adjusted
BM #1	15.47 3.29 \checkmark	15.53 3.28		15.47
BM #2	12.18 0.68 \checkmark	12.25 0.685	12.23	12.18
BM #3	11.50 0.595 \checkmark	11.565 0.60		11.50
BM #4	10.905 1.375 \checkmark	10.965 1.375		10.905
BM #5	12.28 6.76	12.34 6.755 \checkmark	12.28 6.76	12.28
BM #6	19.04 1.225	19.095 1.23 \checkmark	19.04 1.23	19.035
BM #7	17.815 3.755	17.865 3.76 \checkmark	17.81 3.77	17.805
BM #8	14.06 1.435	14.105 1.395 \checkmark	14.04 1.40	14.045
BM #9	15.495 4.55	15.50 4.545 \checkmark	15.44	15.44
BM #10	20.045 1.94	20.045 1.935 \checkmark	20.045 19.985	19.985
BM #11	21.985 6.16	21.98 6.165 \checkmark	21.92 6.09	21.92
BM #12	28.145 17.26	28.145 17.26 \checkmark	28.01 17.32	28.085
BM #13	45.405	45.405	45.33	45.345

78

10/6/30

Trist at Mission Bridge

Bay Point - Back Bay

Direct
1, 16° 14' 00"
6, 97° 23' 00"
Reversed
12, 194° 47' 15"
Mean, 16° 13' 56.25"

Back Bay - Old Town.

1, 59° 02' 00"

6,

Reversed.

12,

Mean,

Soledad - Bay Point.

1, 28° 25' 30"

6, 170° 34' 30"

Reversed.

12, 341° 09' 00"

Mean, 28° 25' 45"

Soledad - Back Bay

1, 44° 41' 00"

6, 268° 00' 00"

Reversed

12, 536° 00' 00"

Mean, 44° 40' 00"

Soledad - Back Bay

1, 44° 40' 00"

6, 267° 59' 00"

Reversed.

12, 535° 58' 00"

Mean, 44° 39' 50"

10/4/30

Trist at Bay Point

Old Town - Mission Bridge

Direct
1, 79° 09' 00"

6, 474° 54' 10"

Reversed.

12, 949° 47' 50"

Mean, 79° 08' 59.16"

10/6/30

Old Town - Mission Bridge

Direct.

1, 79° 09' 00"

6, 474° 53' 00"

Reversed.

12, 949° 45' 20"

Mean 79° 08' 46.67"

Mission Bridge - Soledad.

Direct.

1,

6,

Reversed

12, 1702° 10' 20"

Mean, 141° 50' 51.83"

10/6/30

Trist at Bay Point

Back Bay - Old Town.

Direct
1, 73° 46' 00"

6, 442° 33' 30"

Reversed.

12, 885° 06' 15"

Mean, 73° 45' 31.25"

Mission Bridge - Soledad.

Direct

1, 141° 51' 00"

6, 851° 04' 00"

Reversed

12, 1702° 09' 00"

Mean, 141° 50' 45"

Back Bay - Old Town

Direct

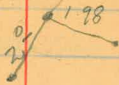
1, 73° 46' 00"

6, 442° 32' 30"

Reversed

12, 885° 05' 30"

Mean, 73° 45' 27.5"



DIRECTIONS FOR USE OF TABLES

TABLE No. 1

Distance of slope stake from side or shoulder stake for any width roadway, slope $1\frac{1}{2}$ to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body

of table in same row and column gives distance from side stake to slope stake. If ground is not

IMPROVED TABLES

AND

INFORMATION

necessary.

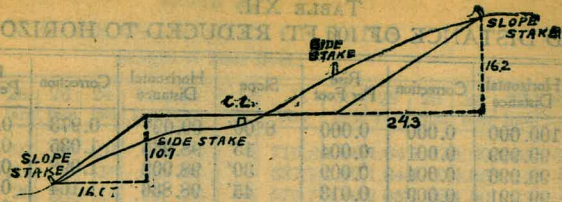
TABLE No. 2

To find Tangent and External for curve of any other degree, divide by degree of curve and add correction found in column of corrections.

Degree of curve with a given T may be found by dividing tangent (or external), opposite T by given tangent (or external).

The distance from a point on the tangent to the curve is very nearly the square of the tangent length divided by twice the radius.

TABLE XII
 DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.
 SLOPE 1 1/4 TO 1. ROADWAY OF ANY WIDTH.



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

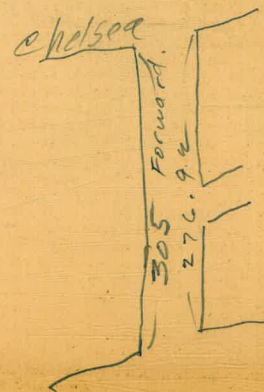
SLOPE 1 1/4 TO 1. ROADWAY OF ANY WIDTH.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	0 00	0 15	0 30	0 45	0 60	0 75	0 90	1 05	1 20	1 35	0
1	1 50	1 65	1 80	1 95	2 10	2 25	2 40	2 55	2 70	2 85	1
2	3 00	3 15	3 30	3 45	3 60	3 75	3 90	4 05	4 20	4 35	2
3	4 50	4 65	4 80	4 95	5 10	5 25	5 40	5 55	5 70	5 85	3
4	6 00	6 15	6 30	6 45	6 60	6 75	6 90	7 05	7 20	7 35	4
5	7 50	7 65	7 80	7 95	8 10	8 25	8 40	8 55	8 70	8 85	5
6	9 00	9 15	9 30	9 45	9 60	9 75	9 90	10 05	10 20	10 35	6
7	10 50	10 65	10 80	10 95	11 10	11 25	11 40	11 55	11 70	11 85	7
8	12 00	12 15	12 30	12 45	12 60	12 75	12 90	13 05	13 20	13 35	8
9	13 50	13 65	13 80	13 95	14 10	14 25	14 40	14 55	14 70	14 85	9
10	15 00	15 15	15 30	15 45	15 60	15 75	15 90	16 05	16 20	16 35	10
11	16 50	16 65	16 80	16 95	17 10	17 25	17 40	17 55	17 70	17 85	11
12	18 00	18 15	18 30	18 45	18 60	18 75	18 90	19 05	19 20	19 35	12
13	19 50	19 65	19 80	19 95	20 10	20 25	20 40	20 55	20 70	20 85	13
14	21 00	21 15	21 30	21 45	21 60	21 75	21 90	22 05	22 20	22 35	14
15	22 60	22 65	22 80	22 95	23 10	23 25	23 40	23 55	23 70	23 85	15
16	24 00	24 15	24 30	24 45	24 60	24 75	24 90	25 05	25 20	25 35	16
17	25 50	25 65	25 80	25 95	26 10	26 25	26 40	26 55	26 70	26 85	17
18	27 00	27 15	27 30	27 45	27 60	27 75	27 90	28 05	28 20	28 35	18
19	28 60	28 65	28 80	28 95	29 10	29 25	29 40	29 55	29 70	29 85	19
20	30 00	30 15	30 30	30 45	30 60	30 75	30 90	31 05	31 20	31 35	20
21	31 50	31 65	31 80	31 95	32 10	32 25	32 40	32 55	32 70	32 85	21
22	33 00	33 15	33 30	33 45	33 60	33 75	33 90	34 05	34 20	34 35	22
23	34 50	34 65	34 80	34 95	35 10	35 25	35 40	35 55	35 70	35 85	23
24	36 00	36 15	36 30	36 45	36 60	36 75	36 90	37 05	37 20	37 35	24
25	37 50	37 65	37 80	37 95	38 10	38 25	38 40	38 55	38 70	38 85	25
26	39 00	39 15	39 30	39 45	39 60	39 75	39 90	40 05	40 20	40 35	26
27	40 50	40 65	40 80	40 95	41 10	41 25	41 40	41 55	41 70	41 85	27
28	42 00	42 15	42 30	42 45	42 60	42 75	42 90	43 05	43 20	43 35	28
29	43 50	43 65	43 80	43 95	44 10	44 25	44 40	44 55	44 70	44 85	29
30	45 00	45 15	45 30	45 45	45 60	45 75	45 90	46 05	46 20	46 35	30
31	46 50	46 65	46 80	46 95	47 10	47 25	47 40	47 55	47 70	47 85	31
32	48 00	48 15	48 30	48 45	48 60	48 75	48 90	49 05	49 20	49 35	32
33	49 50	49 65	49 80	49 95	50 10	50 25	50 40	50 55	50 70	50 85	33
34	51 00	51 15	51 30	51 45	51 60	51 75	51 90	52 05	52 20	52 35	34
35	52 50	52 65	52 80	52 95	53 10	53 25	53 40	53 55	53 70	53 85	35
36	54 00	54 15	54 30	54 45	54 60	54 75	54 90	55 05	55 20	55 35	36
37	55 50	55 65	55 80	55 95	56 10	56 25	56 40	56 55	56 70	56 85	37
38	57 00	57 15	57 30	57 45	57 60	57 75	57 90	58 05	58 20	58 35	38
39	58 50	58 65	58 80	58 95	59 10	59 25	59 40	59 55	59 70	59 85	39
40	60 00	60 15	60 30	60 45	60 60	60 75	60 90	61 05	61 20	61 35	40
41	61 50	61 65	61 80	61 95	62 10	62 25	62 40	62 55	62 70	62 85	41
42	63 00	63 15	63 30	63 45	63 60	63 75	63 90	64 05	64 20	64 35	42
43	64 50	64 65	64 80	64 95	65 10	65 25	65 40	65 55	65 70	65 85	43
44	66 00	66 15	66 30	66 45	66 60	66 75	66 90	67 05	67 20	67 35	44
45	67 50	67 65	67 80	67 95	68 10	68 25	68 40	68 55	68 70	68 85	45
46	69 00	69 15	69 30	69 45	69 60	69 75	69 90	70 05	70 20	70 35	46
47	70 50	70 65	70 80	70 95	71 10	71 25	71 40	71 55	71 70	71 85	47
48	72 00	72 15	72 30	72 45	72 60	72 75	72 90	73 05	73 20	73 35	48
49	73 50	73 65	73 80	73 95	74 10	74 25	74 40	74 55	74 70	74 85	49
50	75 00	75 15	75 30	75 45	75 60	75 75	75 90	76 05	76 20	76 35	50

Computed by L. Leland Locke.



35
41
576.92



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0-20
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To find

132.99
 227.55
 233.34
 106.7

146 270
 6/ 291-16-20
 48-32-45.00

156 270
 291-16-50
 48-32-48.33

93.33
 46.67

291-16-20
 291-16-50
 12/ 582-33-20
 48-32-46.67

29 07
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103-41-30
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 152-14-16
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 27-45-44

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 220-57

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 94.5 5638

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 179-59-60
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 27-10-15

96	10	15
25	30	15
174	59	60
121	40	30
58	19	30

ENGINEERING DEPARTMENT,
 CITY OF SAN DIEGO,
 CALIFORNIA.