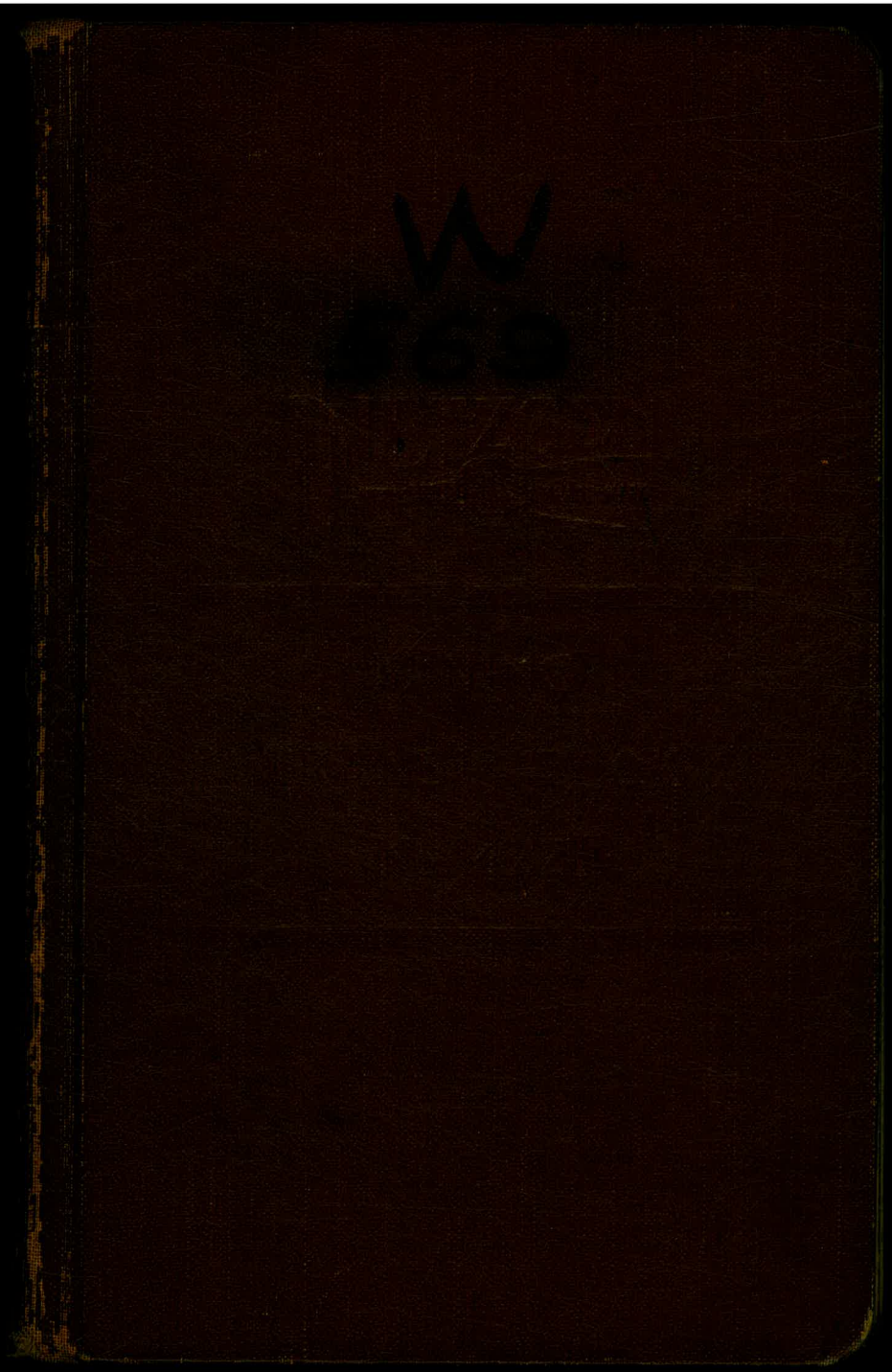


EUGENE DIETZGEN CO.

DRAWING MATERIALS, MATHEMATICAL and SURVEYING INSTRUMENTS

Chicago New York San Francisco New Orleans Pittsburg Toronto

Distances from Center of Roadway for Cross-Sectioning
Roadway 16 feet wide. Side Slopes 1 on 1.
For Single Track Embankment.

H	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.5	8.6	8.7	8.8	8.9	0
1	9.0	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8	9.9	1
2	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	2
3	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	3
4	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	4
5	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	5
6	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	6
7	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	7
8	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	8
9	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	9
10	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	10
11	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	11
12	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	12
13	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	13
14	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	14
15	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	15
16	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	16
17	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	17
18	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	18
19	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	19
20	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	20
21	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	21
22	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	22
23	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	23
24	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	24
25	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	25
26	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	26
27	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	27
28	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	28
29	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	29
30	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	30
31	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	31
32	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	32
33	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	33
34	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42.8	42.9	34
35	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	35
36	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	36
37	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	37
38	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	38
39	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	39
40	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 30.6. For same slopes but other widths of roadbed, correct above figures by one-half difference in width of roadbed; thus in example above, for 20 ft. roadbed distance will be 30.6+(20—16)÷2 or 2 ft. added to 30.6 =32.6. For slopes of 1 on 1½ see inside of back cover.

4/21507
2' from Pave.

569

The paper stock of this book is made of a **high grade 50% rag** paper having a **water resisting surface** and is sewed with Bing **Special Enamel Waterproof Thread.**

Made in U. S. A.

Index

LA JOLLA SHORES P.L.

Pipe line loc. through La Jolla Shores

3+50.00 E.C. 8°26' Lt (Backsight on B.C.)

3+50 - 9°09'
3+00 - 7°21'
2+50 - 5°32'
2+00 - 3°44'
1+50 - 1°56' Lt.
Defl.

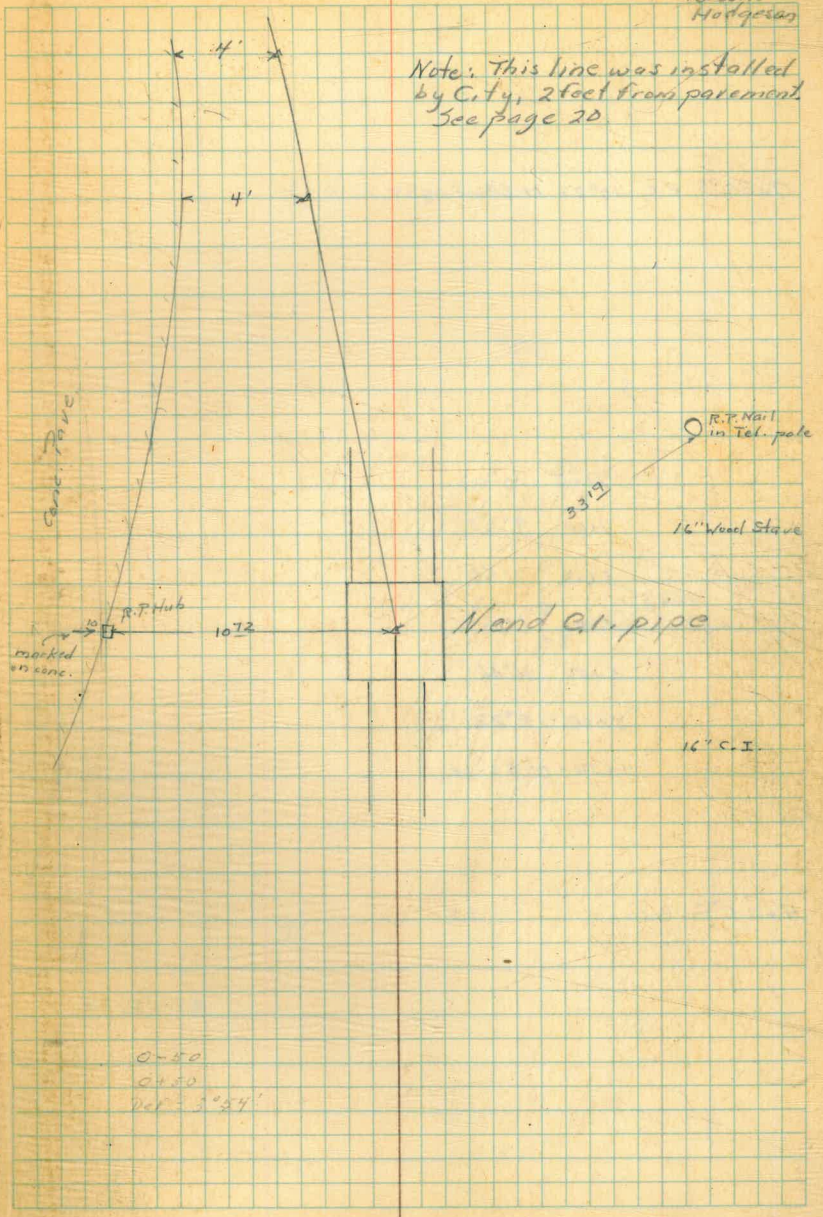
1+12.00 B.C.

0+00 9°20' Lt

0-50

1/13/41
Hill
Soper
Brooks
Hodgeson

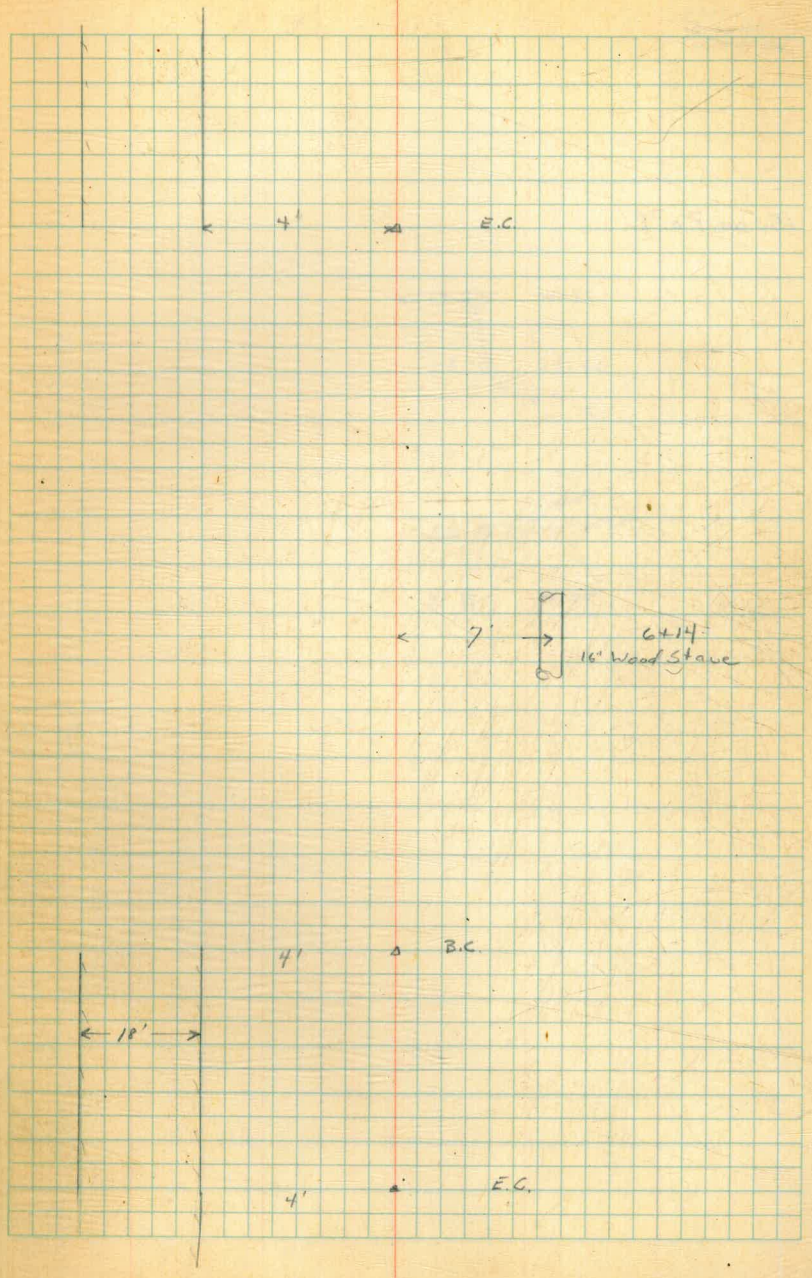
Note: This line was installed by City, 2 feet from pavement
See page 20.



7+05.00 E.C. 10°24' Lt (Backsight on B.C.)

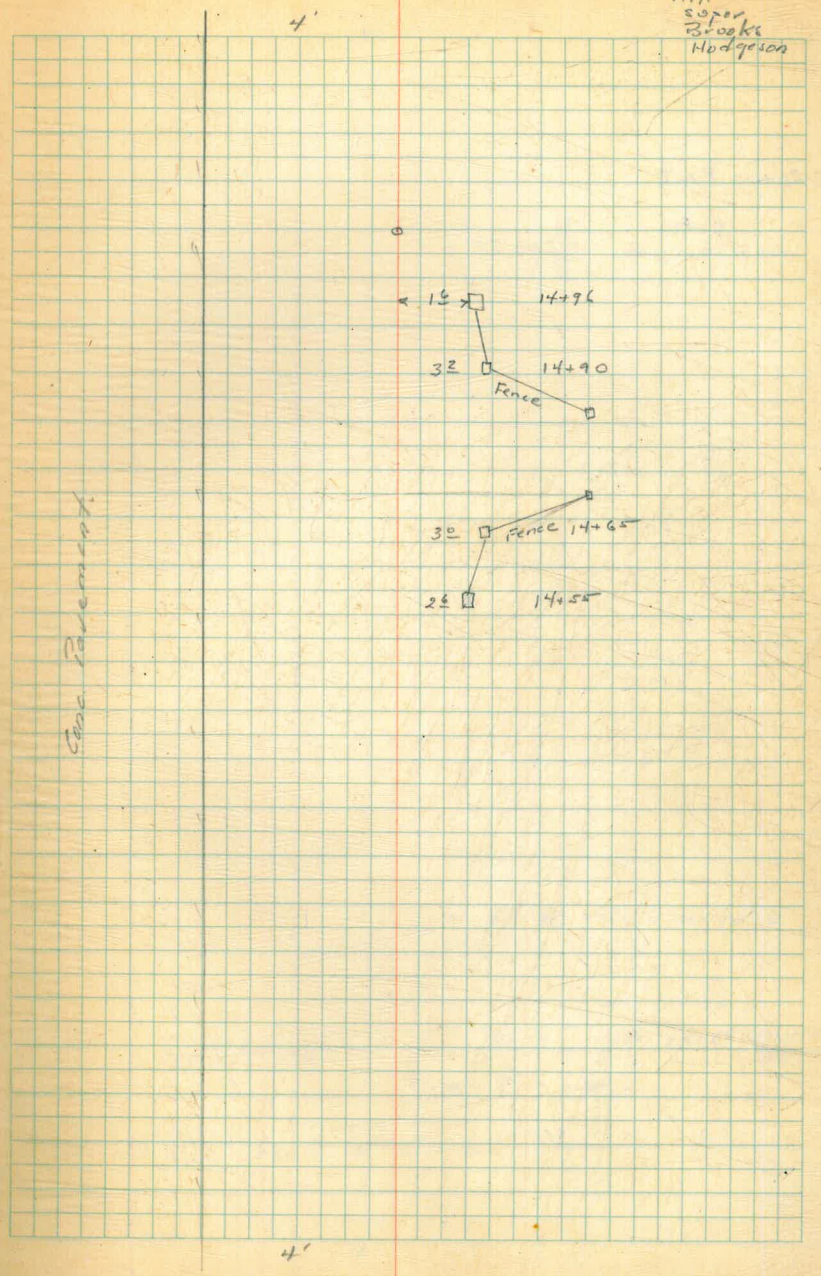
7+05 10°03'
7+00 9°52'
6+50 7°56'
6+00 6°00'
5+50 4°06'
5+00 - 2°22'
4+50 - 0°53' Lt

4+26.00 B.C.

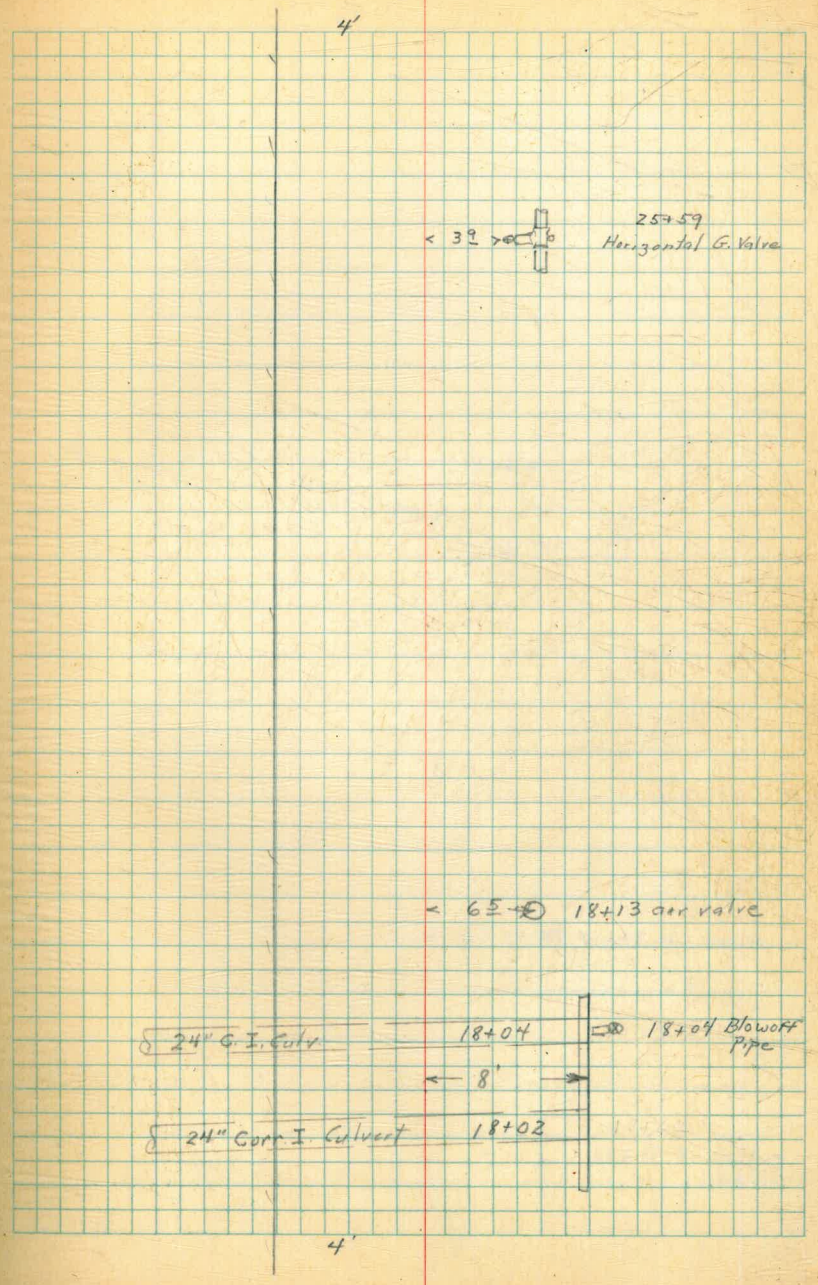


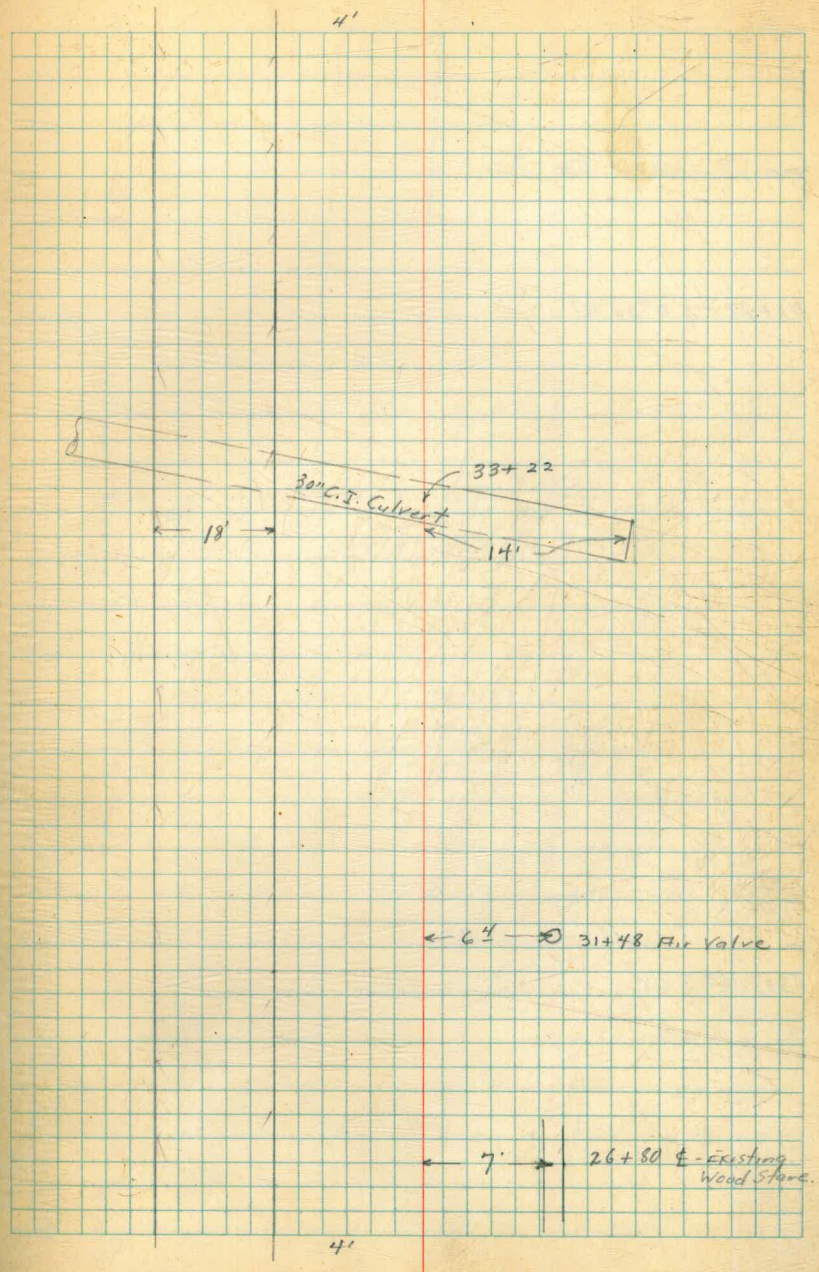
15+00 P.O.T.

1/14/41
Hill
Soper
Brooks
Hodgson



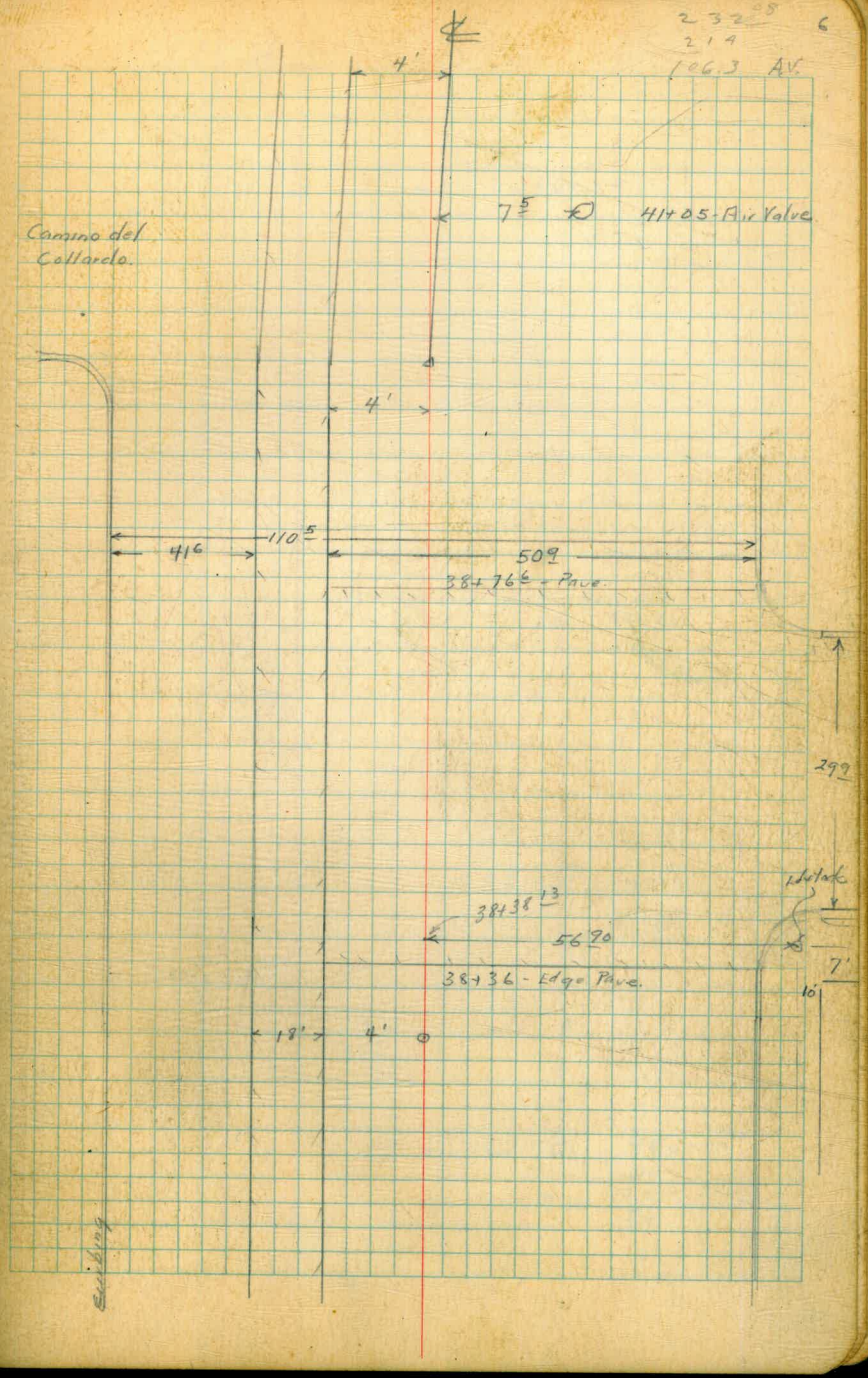
26+00 P.O.T.

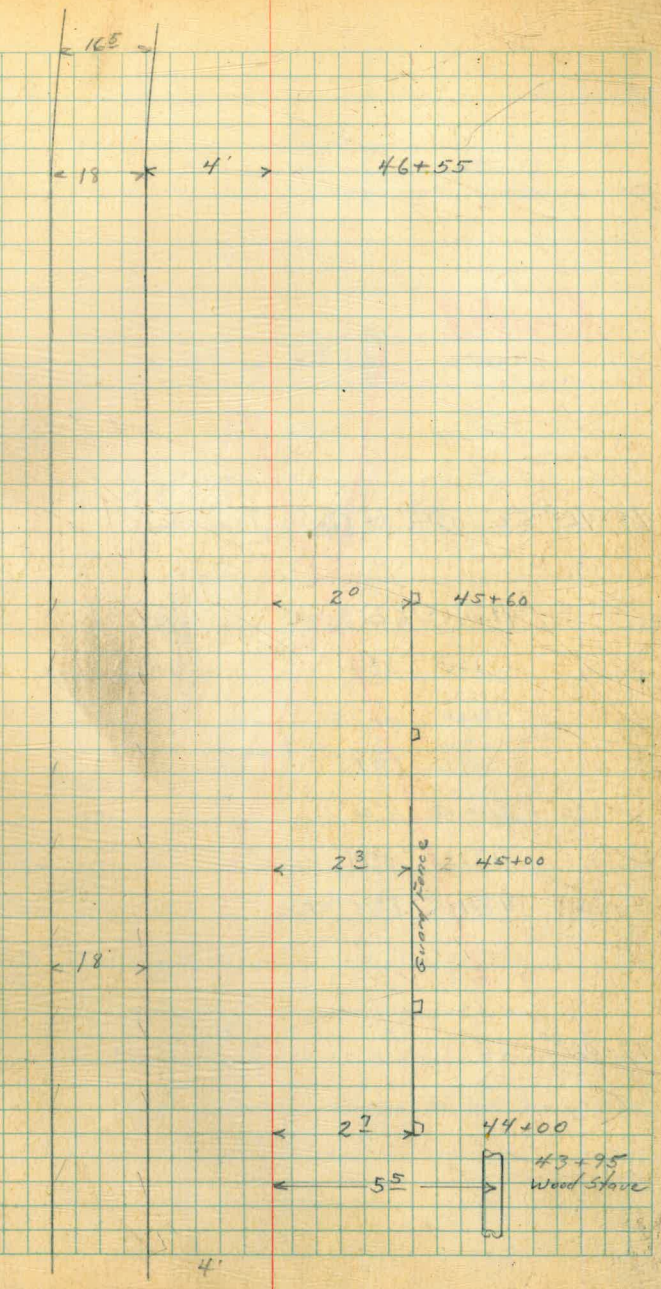

4'
39°
25+59
Horizontal G. Valve
65°
18+13 Gate valve
24" G. I. Culv.
18+04
18+04 Blowoff Pipe
8'
24" Corr. I. Culvert
18+02
4'


4'
33+22
30" C.I. Culvert
18'
14'
6½
31+48 Air Valve
7'
26+80 ℄ - Existing Wood Stave.
4'

40+48.00 ∠ 0°20' Rt.

38+30.85 P.O.T.



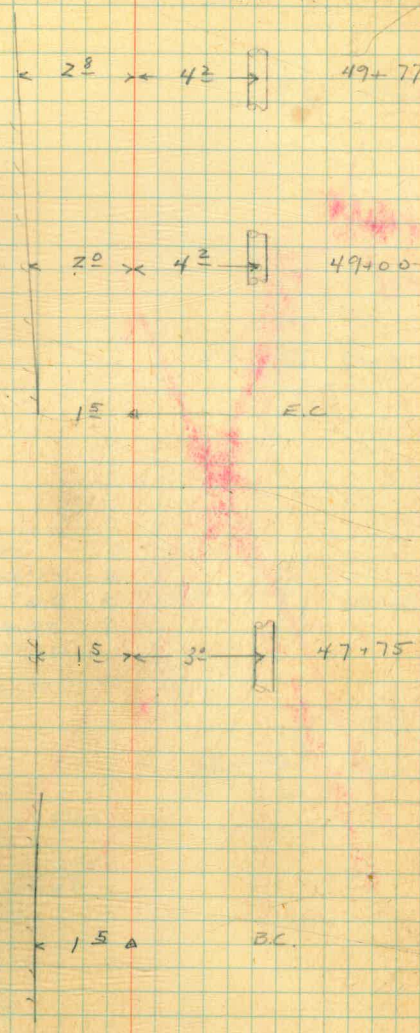

16.5
18
4'
46+55
2°
45+60
2.3
45+00
Grout Anchors
18'
2.7
44+00
43+95
Wood Stave
5.5
4'

Revised

48+46.50 E.C. 12°16' Rt (Backsight on B.C.)

48+46.5 E.C. 28°23'
+25 18°21'
48+00 12°10'
+75 3°43'
+50 11°00'
47+25 8°14'
47+18.5 7°16' Rt

47+02.80 B.C.



Line extended - Transit notes cont'd on page 26

54+20

Revised

10.70
52+11.42 E.C.

A = 12° 43' 39" Rt
R = 800'
T = ~~89.11~~ 88.68
L = ~~177.56~~ 176.63
P.I. = 51+22.75

34.07
50+~~33.61~~ B.C.

1/15/41
H.H.
Soper
Brooks
Hodgson

9

6° → 54+20

6 3/4 → 52+72 A.ivalue

For ties to P.L. line
see page 40

6 5/8 → 51+82

6 7/8 → 51+32

51+16

51+06

10 3/8

8" ? Gas line

Water line

3 3/8 → 4 3/8 → 50+36.5

LA JOLLA SHORES P. L.

B.M.	1.52	56.21 ✓		54.69
0+00			9.0	47.2 ✓
10' Lt - Pave			10.0	46.2 ✓
0+00			12.60	43.6 ✓
0+50			11.2	45.0 ✓
6' Lt - Pave			11.5	44.7 ✓
1+00			13.0	43.2 ✓
4' Lt Pave			13.0	43.2 ✓
FF	0.48	43.73 ✓	12.96	43.25 ✓
1+12 B.C.			1.0	42.7 ~~43.6~~
4' Lt Pave			1.0	42.7 ~~43.6~~

PROFILE -

B.P. N.E. Cor. Calle de Plata.

Top of C.I. Sleeve, joining wood stave and C.I. pipe

43.73

1+50	2.1	41.6	✓
4' Lt Pave	2.2	41.5	✓
2+00	3.6	40.1	✓
4' Lt Pave	3.6	40.1	✓
2+50	5.0	38.7	✓
4' Lt Pave	4.9	38.8	✓
3+00	6.0	37.7	✓
4' Lt Pave	5.9	37.8	✓
3+50 E.C.	6.7	37.0	✓
4' Lt Pave	6.6	37.1	✓
4+00	7.1	36.6	✓
4' Lt Pave.	7.1	36.6	✓
4+26 B.C.	7.3	36.4	✓
4' Lt Pave.	7.3	36.4	✓

		43.73			
4+50			7.4	36.3	✓
4' Lt Pave.			7.4	36.3	✓
5+00			7.7	36.0	✓
4' Lt Pave			7.6	36.1	✓
B.M.	3.50	36.84 ✓	10.39	33.34	✓
5+50			1.1	35.7	✓
4' Lt Pave			1.1	35.7	✓
6+00			1.6	35.2	✓
4' Lt Pave			1.8	35.0	✓
6+14 - 7' Rt			4.8	32.0	✓
6+50			2.8	34.0	✓
4' Lt Pave			2.8	34.0	✓
7+00			4.0	32.8	✓
4 Lt Pave			3.8	33.0	✓

Set B.M. - Nail in power pole - 65' Lt Sta 5+65

Top of 16" Wood Stave line

		36.84			
7+05.00 EC			4.1	32.7	✓
4' Lt Pave.			3.9	32.9	✓
8+00			7.1	29.7	✓
4' Lt Pave			6.7	30.1	✓
9+00			10.1	26.7	✓
Pave			9.8	27.0	✓
10+00			13.2	23.6	✓
Pave			12.9	23.9	
PI	0.81	24.90 ✓	12.75	24.09	✓
11+00			4.0	20.9	✓
Pave			3.7	21.2	✓
12+00			6.3	18.6	✓
Pave			6.1	18.8	✓

		24.90 ✓			
13+00			7.7	17.2	✓
Pave.			7.7	17.2	✓
13+17 – 7.3 Rt.			10.4	14.5	✓
14+00			8.9	16.0	✓
Pave			8.9	16.0	✓
15+00			9.5	15.4	✓
Pave.			9.7	15.2	✓
B.M.	2.53	17.29 ✓	10.14	14.76	✓
16+00			2.6	14.7	✓
Pave.			2.8	14.5 ~~12.1~~	
17+00			3.6	~~21.3~~	13.7
Pave.			3.5	~~21.1~~	13.5

Top of 16" Wood Stave Line

Set B.M. Nail in power pole 65' Lt Sta 15+37

17.29 ✓

17+29 - 7 3/4 Rt	6.2	11.1	✓
18+00	4.3	13.0	✓
Pave	4.3	13.0	✓
18+02 8' Rt	6.9	10.4	✓
18+04 8' Rt	6.9	10.4	✓
19+00	4.3	13.0	✓
Pave	4.3	13.0	✓
19+09 - 7 3/4 Rt	6.4	10.9	✓
19+40	4.2	13.1	✓
Pave	4.3	13.0	✓
20+00	3.5	13.8	✓
Pave	4.1	13.2	✓

Top of 16" Wood Stave Line

Fl. line 24" Con. T. Culvert

" " " " " "

Top of 16" Wood Stave Line

		17.29 ✓			
21+00			3.2	14.1 ✓	
Pave			3.2	14.1 ✓	
22+00			1.6	15.7 ✓	
Pave			1.5	15.8 ✓	
Pi	11.41	27.01 ✓	1.69	15.60 ✓	
23			9.0	18.0 ✓	
Part.			8.7	18.3 ✓	
23+26			9.9	17.1 ✓ Top of wood	stare pipe 7.8 R.
24			6.3	20.7 ✓	
Part.			6.0	21.0 ✓	
25			3.5	23.5 ✓	
Part.			3.5	23.5 ✓	
25+59			4.7	22.3 ✓ Top of	wood stare pipe at gate 7.7 R.
26			2.0	25.0 ✓	
Part.			1.9	25.1 ✓	

		27.01 ✓			
26+80			3.2	23.8 ✓	Top of wood stave pipe 7' R.
27			1.2	25.8 ✓	
Part			1.1	25.9 ✓	
28			0.4	26.6 ✓	
Part			0.2	26.8 ✓	
T.P.	6.86	33.53 ✓	0.34	26.67 ✓	
29			5.8	27.7 ✓	
Part			5.8	27.7 ✓	
30			5.2	28.3 ✓	
Part			5.0	28.5 ✓	
30+13			7.6	25.9 ✓	Top of wood stave pipe 7.1 R.
31			4.3	29.2 ✓	
Part			4.1	29.4 ✓	
32			4.7	28.8 ✓	
Part			4.4	29.1 ✓	

		33.35 ✓				
33			5.0	28.5	✓	
Par't			4.7	28.8	✓	
33+22			11.7	21.8	✓FL-.30'	C.I. culv. 14" R
34			4.0	29.3	✓	
Par't			4.1	29.4	✓	
34+13			6.9	26.6	✓Top of	wood stave pipe 7" R
35			2.6	30.9	✓	
Par't			2.4	31.1	✓	
B.M.	1104	4094 ✓	3.63	29.90	✓Nail	in pow. pole 65' L 31+65
35+32			11.2	29.7	✓Top of	wood stave pipe 6" R
36			7.7	33.2	✓	
Par't			7.4	33.5	✓	
36+69			7.2	33.7	Top of	wood stave pipe 5-7 R
37			3.8	37.1	✓	
Par't			3.6	37.3	✓	

		40.91 ✓			
38			0.3	40.6 ✓	
Part			0.0	40.9 ✓	
T.P.	7.85	48.53 ✓	0.26	40.68 ✓	
38+36			6.4	42.1 ✓	Edge of part S.
38+76			5.4	43.1 ✓	" " N
39			5.2	43.3 ✓	
Part			5.0	43.5 ✓	
39+77			4.1	44.4 ✓	
Part			4.1	44.4 ✓	
40			4.2	44.3 ✓	
Part			4.2	44.3 ✓	
40+48			4.2	44.3 ✓	
Part			4.3	44.2 ✓	
41			4.3	44.2 ✓	
Part			4.6	43.9 ✓	
41			7.2	41.3 ✓	Top of wood stave pipe 7.2R
B.M.			5.66	42.87 ✓	U.S.G.S. marked H 5-5 Elev. 49.0

Note: at Sta. 39+58 is the North end of a 22½° bend of the 16" C.I. pipe installed by City. The pipe continues on apparently tying into the wood stave. The top of the bend is elev. 41.6. The 16" C.I. pipe was installed 2 feet from the edge of pavement.

42.57
6.12
48.99

		48.53 ✓			
42			5.9	43.4 ✓	
Part			5.5	43.0 ✓	
42+65			8.25	40.3 ✓	Top of wood stave pipe 7'R
43			7.0	41.5 ✓	
Part			7.1	41.4 ✓	
44			6.1	42.4 ✓	
Part			7.2	41.3 ✓	
44+16			6.9	41.6 ✓	
Part			7.1	41.4 ✓	
44+44			18.9	29.6 ✓	Top of 4'x5' conc box culv. 25'R. (5.7 to flowline)
45			5.5	43.0 ✓	
Part			5.8	42.7 ✓	
46			3.9	44.6 ✓	
Part			3.8	44.7 ✓	
T.P.	12.72	57.43 ✓	3.82	44.71 ✓	
47			10.1	~~38.1~~	47.0
Part			10.1	~~38.1~~	47.0

		57.43 ✓			
47+75-0			9.1	48.0 ✓	
Part			9.3	48.1 ✓	
47+75			10.3	47.1 ✓	Top of wood stovepipe 3' R.
48			8.0	49.4 ✓	
Part			8.1	49.3	
48+46.5			6.6	50.8 ✓	
Part			6.8	50.6 ✓	
48+70			5.6	51.8 ✓	
Part			5.9	51.5 ✓	
49			3.7	53.7 ✓	
Part			4.7	52.7	
49+03			6.7	50.7 ✓	Top of wood stovepipe 4.1 R
49+77			3.2	54.2 ✓	" " " 4.2 R
T.P.	12.74	69.92 ✓	0.35	57.08 ✓	
50			12.3	57.5 ✓	
Part			12.5	57.3	

		69.82 ✓			
50+36			12.2	57.6 ✓	Top of wood stake pipe 4.8 R
50+50			9.4	60.4 ✓	
Part			9.4	60.4 ✓	
51			5.6	64.2 ✓	
51+32			3.3	66.5 ✓	
"			2.9	66.9 ✓	Top of wood stake pipe 6.2 R
B.M.	12.58	81.77 ✓	0.63	69.19 ✓	Nail in guy pole 24 R. at 51+05
51+52			10.1	71.7 ✓	
51+82			5.6	76.2 ✓	
"			7.8	74.0 ✓	Top of wood stake pipe 6.5 R.
52			2.6	79.2 ✓	
+11			0.9	80.9 ✓	
TP.	12.45	93.97 ✓	0.25	81.52 ✓	
52+50			8.1	85.9 ✓	

		93.97 ✓			
5-2+71			6.8	87.2 ✓	
+79			11.9	82.1 ✓	
"			6.1	87.9 ✓	Top of wood stave pipe 6' R
+92			3.8	90.2 ✓	
5-3			0.8	93.2 ✓	
T.P.	12.26	105.98 ✓ ~~104.98~~	0.25 ~~1.25~~	93.72 ✓ ~~92.72~~	checked between turns 7/26/41
5-3+06			12.6	93.4 ✓ 92.4	
"			13.8	92.2 ✓ 91.2	Top of wood stave pipe 6' R
+25			8.9	97.6 ✓ 96.6	
T.P.	12.75	118.67 ✓ ~~117.67~~	0.06	105.92 ✓ ~~104.92~~	
+54			11.2	107.5 ✓ ~~106.5~~	
"			13.1	105.6 ✓ ~~104.6~~	Top of wood stave pipe 6' R
+70			5.0	113.7 ✓ ~~112.7~~	
"			7.0	111.7 ✓ ~~110.7~~	" " " " 6' R

Previous turn = 81.52 + 12.82 = 94.34 − 0.62 = 93.72

		118.67 ✓ ~~117.67~~				
T.P	12.81	131.35 ✓ ~~130.35~~	0.13	118.54 ✓ ~~117.54~~		
5-3 +88			10.3	121.1 ✓ ~~120.1~~		
"			12.7	118.7 ✓ ~~117.7~~	Top of	wood stave pipe 6'R
54+02			5.6	125.8 ✓ ~~124.8~~		
"			7.6	123.8 ✓ ~~122.8~~	" "	" " 6'R
B.M.	8.0	134.1 ✓ ~~133.1~~	5.23	126.12 ✓ ~~125.12~~	Peg	20'R. of 5-4+00
5-4+20			2.4	131.7 ✓ ~~130.7~~		
"			3.7	130.4 ✓ ~~129.4~~	Top of	wood stave pipe 6'R

(Computations Checked by H.G. 3/8/41)

B.M	0.63	69.82		69.19	Nail in Guy pole 21'R. of 5+05
T.P	8.48	65.56	12.74	5-7.08	
B.M			10.87	54.69	

Check on starting B.M at Calle De La Plata

N.B. set target at 10.87 and shot back across valley.

Continued on Pg. 32

La Jolla Shores - Extension. (Cont. from page 9)

61+01.18
60+99.65 E.C.
2.12

Revised See Page 96

Δ = 11°35' Lt
R = 9000'
L = 202.17
S.T. = 101.43
P.I = 59+98.32

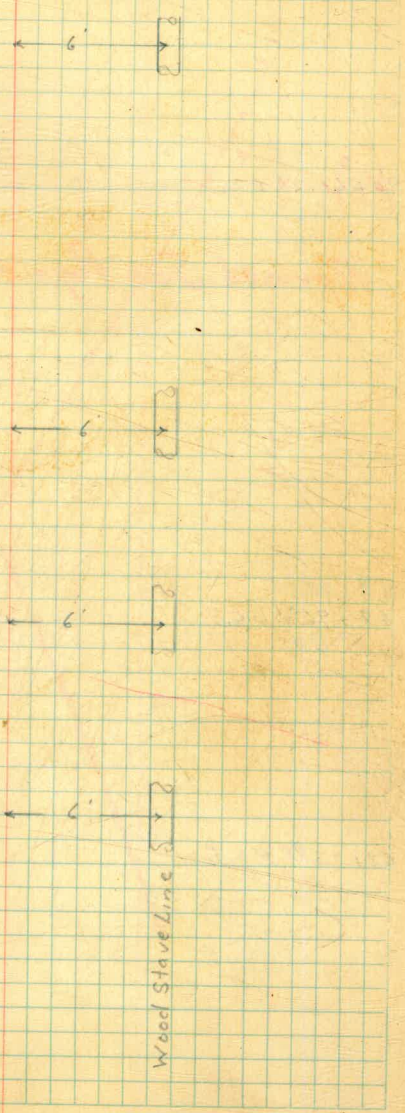
58+96.89 B.C.

57+71.22 P.O.T.

56+83.65 P.O.T.

Cont'd From page 9

2/5/41
Hill
Soper
Brooks -
Hodgeson



65-35
70+60.28 E.C.
5.07

Revised See Page 46

Δ = 9°24'30" Lt
R = 1000'
L = 164.21
S.T. = 82.28
P.I. = 69+78.35

68+98.88
68+96.21 B.C.
2.81

68+32.90 P.O.T.

78+70.25 E.C

Revised See Page 46

$\Delta = 4°38'30"$ Lt
$R = 3000'$
$L = 243.04$
$S.T = 121.59$
$T.I = 77+48^{80}$

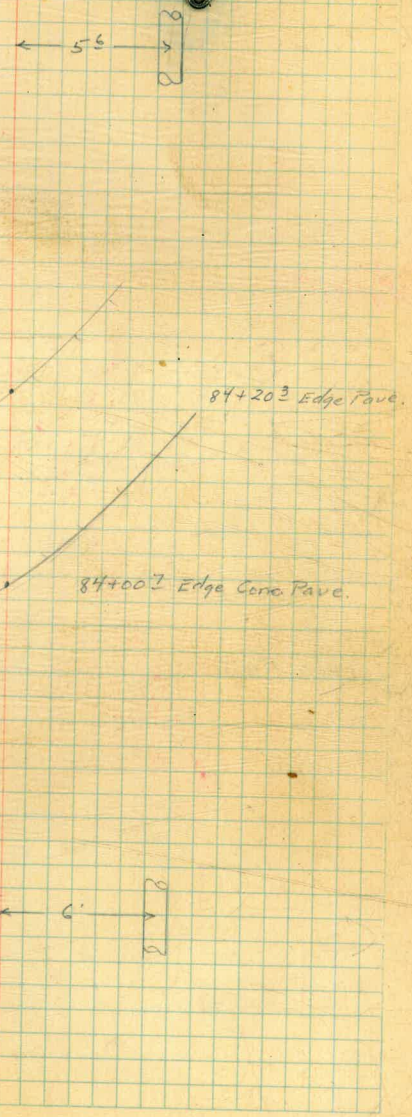
76 32 68
76+27.21 B.C.
05 A 7

$74+62^{43}$ P.O.T.

88+30.08 P.O.T.

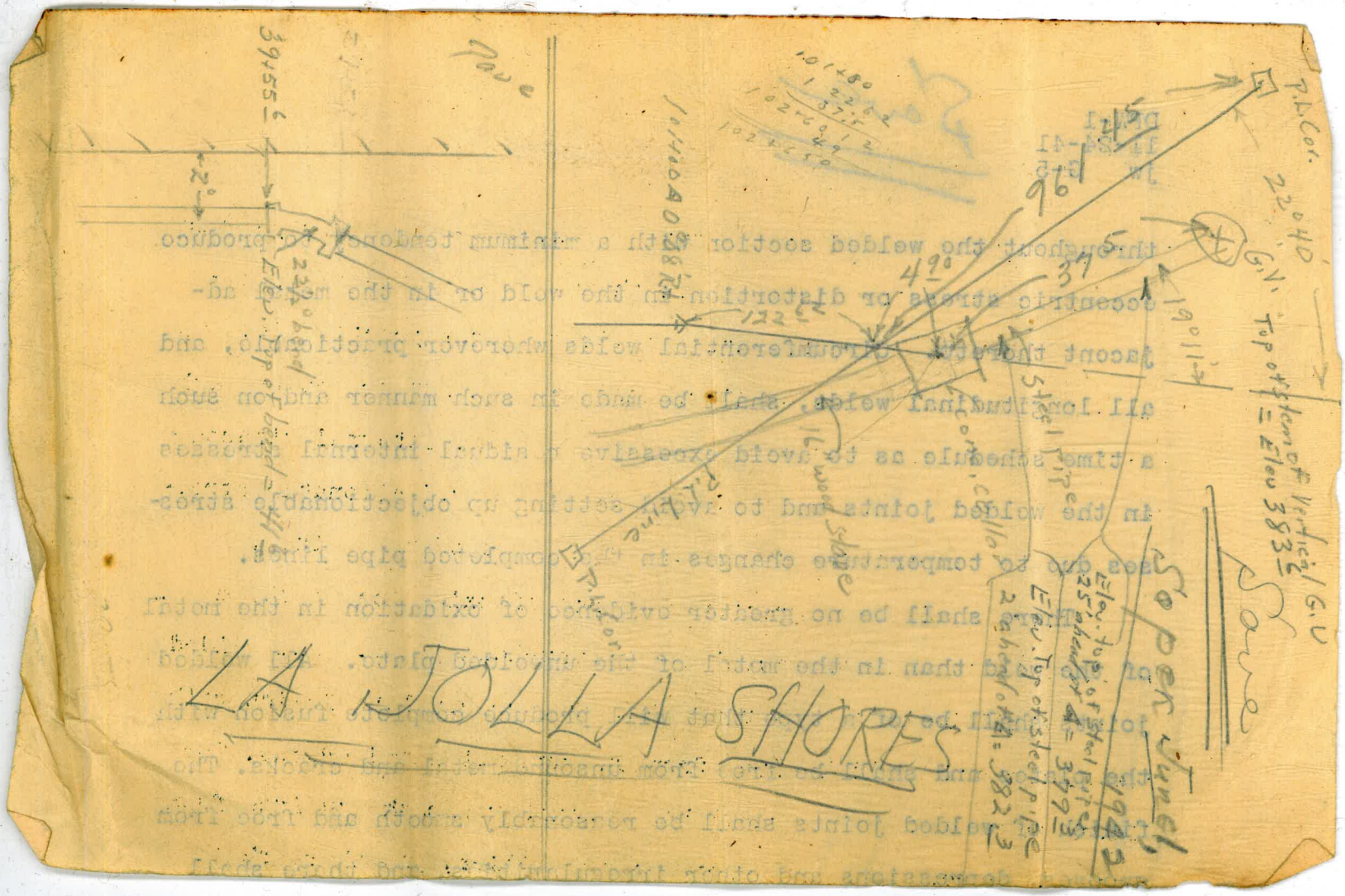
Revised See Page 46

83+71.80 P.O.T.

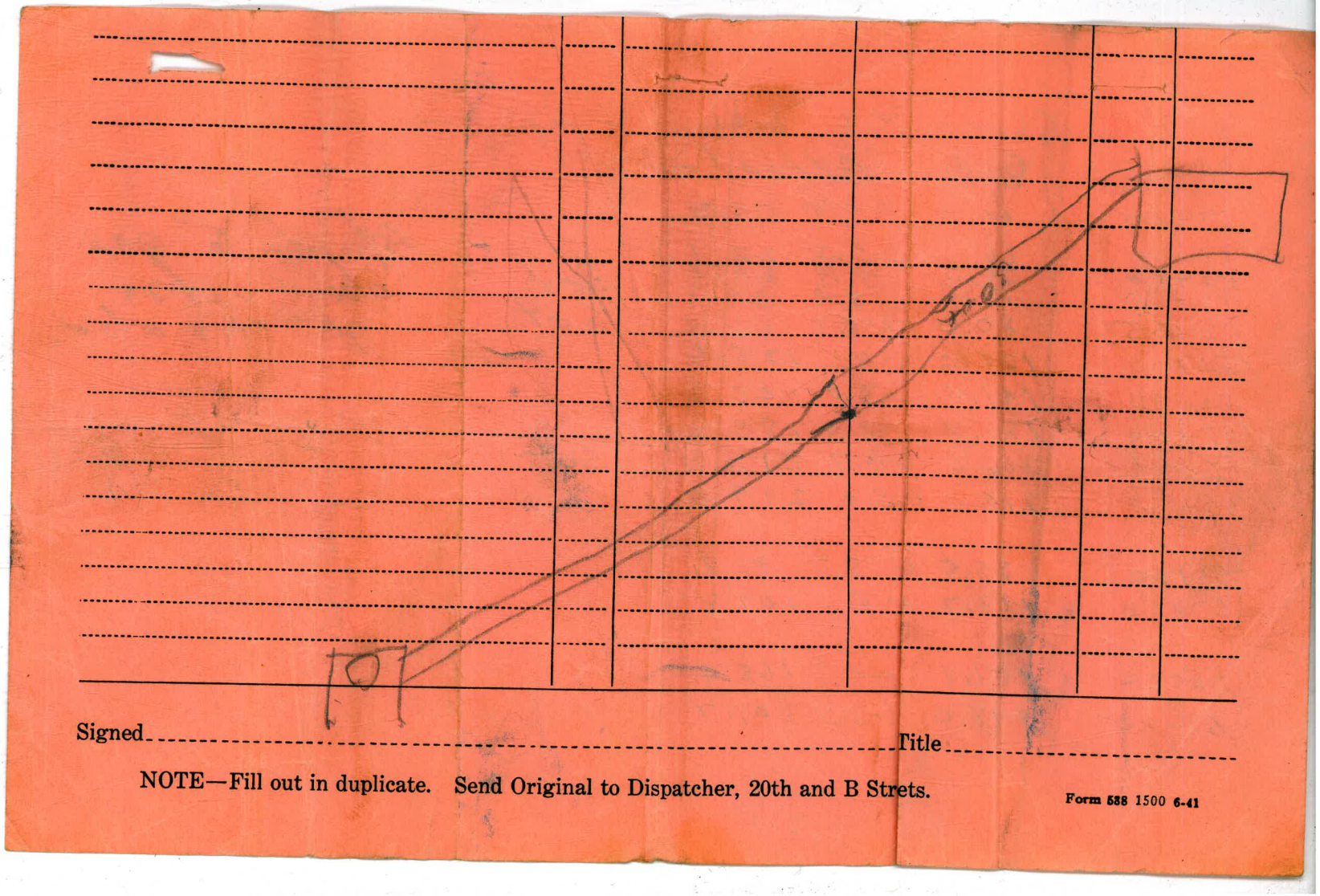


La Jolla Shores

Colladay



LA JOLLA SHORES



Signed _____ Title _____

NOTE—Fill out in duplicate. Send Original to Dispatcher, 20th and B Strets.

Form 588 1500 6-41

La Jolla Shores P.L. bottom of pipe :—

Station	Grade	Offset elev.		
51+00	60.6	C-5.7	66.3	
51+50	66.6	C-5.5	72.1	
52+00	74.7	C-5.4	80.1	Set
52+30	79.6	C-3.4	83.0	Set
52+85	80.0	C-6.5	86.5	
54+00	122.0	C-3.6	125.6	
54+50	141.4	C-3.8	145.2	
55+50	180.8	C-4.4	185.2	
56+23	206.6	C-3.7	210.3	Set
56+50	214.0	C-5.0	219.0	
53+00	85.5	C- 7.3	92.8	
53+50	103.7	C- 4.1	107.8	
55+00	161.1	C-4.3	165.4	
56+00	198.0	C-3.7	201.7	

Check 6" gas about 5'+75 get start elev.

Sta. 54+23.2
Inv. Elev. 70.1
4.0
76.1
6.1
70.0

8.1 / 6.1
5.4 / 2.9

Signed .....

NOTE— Fill out in duplicate. Send Original to Dispatcher, 201 and B Streets.

Form 888 1200 6-61

Sta.	Grade	Offset
56+50	214.0	219.0 C-5.0
56+75	220.4	224.9 C-4.5 Set
57+00	225.7	230.4 C-4.7
57+20	229.1	233.3 C-4.2
57+40	231.7	236.4 C-4.7
57+60	233.6	239.0 C-5.4
57+80	234.7	240.8 C-6.1
58+00	235.5	242.9 C-7.4
58+50	237.5	242.2 C-4.7
B.C. 58+96.11	239.3	244.3 C-5.0
59+00	239.5	
59+50	243.1	247.3 C-4.2
59+75	244.1	248.1 C-4.0
60+00	244.5	248.5 C-4.0
60+25	244.0	247.9 C-3.9
60+50	242.5	246.3 C-3.8
60+75	240.0	243.9 C-3.9
E.C. 61+01.18	236.9	240.4 3.5
61+25	234.0	237.5 3.5

Sta.	Grade	Offset
61+50	231.7	236.0 C-4.3
62+00	228.8	232.7 C-3.9
62+50	227.9	231.1 C-3.2
63+00	228.8	230.1 C-1.3
63+20	229.2	230.6 C-1.4
63+40	230.4	232.9 C-2.5
63+60	232.4	234.2 C-1.8

2/7/41

Profile levels over La Jolla Shores Ext.

B.M.	12.91	139.03		126.12
T.P.	12.77	151.55	0.25	138.78
54+50			8.2	43.4
T.P.	13.02	164.99	0.08	151.97
T.P.	13.00	177.41	0.08	164.41
55			12.7	64.7
6'R			14.7	62.7
T.P.	13.04	190.41	0.04	177.37
55+50			5.0	85.4
6'R			8.2	82.2
T.P.	12.97	203.26	0.12	190.29
+75			9.4	193.9
56			1.9	201.4
T.P.	12.93	215.99	0.20	203.06
T.P.	12.95	228.86	0.08	215.91
+50			10.7	218.2
+84			1.3	27.6
6'R			4.5	24.4
T.P.	13.05	241.85	0.06	228.80
57			12.0	29.9
+50			4.4	37.5
+72			2.7	39.2
58			1.1	40.8
6'R			4.1	37.8
+13			3.2	36.7

Continued from Pg. 25

Hub 20'R. 54+00

Top of W.S. pipe

Top of W.S. pipe

Top W.S. pipe

Top W.S. pipe

		241.85		
5-6+38			2.8	239.1
+63			2.6	39.3
+80			1.0	40.9
T.P	10.57	251.93	0.49	241.36
B.M.			10.79	241.14
5-9			9.2	42.7
C'R			10.0	41.9
+50			5.3	46.6
6.0			1.4	50.5
C'R			4.6	47.3
+50			3.2	48.7
6.1			9.0	42.9
C'R			12.2	39.7
T.P	0.72	239.82	12.83	239.10
+50			4.8	35.0
6.2			7.2	32.6
+40			7.7	32.1
+53 C'R			9.5	30.3
6.3			5.9	33.9
+50			3.5	36.3
T.P.			0.27	239.56
	12.96	252.51		
6.4			11.1	41.4
+50			2.8	49.7
C'R			4.6	47.9
TP	12.85	265.30	0.06	252.45

→ Nail Euc tree 23'R 5-7+77

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

2/8/41
Soper
Brooks
Hodgeson

		265.30		
65			7.8	257.5
+ 35			1.4	63.9
TP	13.08	278.32	0.06	265.24
+ 50			8.8	69.5
TP	13.06	290.85	0.53	277.79
66			9.2	81.7
TP	12.83	303.58	0.10	290.75
+ 50			11.6	292.0
TP	12.72	316.27	0.03	303.55
67			12.2	04.1
+45-6'R			4.2	12.1
+ 50			1.6	14.7
TP	12.85	328.93	0.19	316.08
68			3.5	25.4
TP	12.77	341.65	0.05	328.88
+ 18			12.4	29.3
+ 32°			10.3	31.4
6'R			13.7	28.0
+96°07 B.C.			4.6	37.1
69			3.9	37.8
6'R			5.8	35.9
TP	12.86	354.38	0.13	341.52
+ 50			12.1	42.3
70			8.2	46.2
6'R			10.0	44.4

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

		354.38		
B.M. (set)			4.19	350.19
70+50			5.8	48.6
+60.28 E.C.			4.0	50.4
71			1.3	53.1
6'R			3.7	50.7
TP	11.14	365.47	0.05	354.33
71+30			11.9	53.6
72			7.8	57.7
+45-6'R			7.0	58.5
73			2.8	62.7
TP	11.61	376.57	0.51	364.96
74			6.8	69.8
6'R			8.2	68.4
+62.4			3.1	73.5
75			1.6	75.0
TP	12.98	389.30	0.25	376.32
76			10.0	79.3
+27.21 B.C			9.1	80.2
+50			7.5	81.8
6'R			10.2	79.1
77			7.0	82.3
+33			7.3	82.0
+50			5.3	84.0
78			4.0	85.3
6'R			7.8	81.5

Set B.M. Nail in Eucalyptus 47' Rt - 70+33

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

83+80 10'

		389.30		
78+15			5.0	384.3
+50			3.3	86.0
+70 25' E.C.			3.7	85.6
79			4.7	84.6
80			5.5	83.8
81			6.6	82.7
6'R			9.8	79.5
82			9.6	79.7
TT	1.97	381.74	9.53	379.77
83			3.1	78.6
+71.80			3.2	78.5
6'R			6.3	75.4
B.M.			3.08	378.66
84+00			5.1	76.6
+00 2			5.3	76.4
+20 3			5.8	75.9
+26			5.9	75.8
+32			4.5	77.2
+58			4.4	77.3
" 6'R			7.0	74.7
85			5.0	76.7
86			3.5	78.2
87			1.5	80.2
" 6'R			3.3	78.4
T.P.	2.51	383.70	0.55	381.19

Top W.S. pipe

Top W.S. pipe

Set B.M. Nail in Eucalyptus 10' Lt 83+80

Edge of Pave.

" " "

Top W.S. pipe

Top W.S. pipe

		383.70		
88			2.5	381.2
+30			2.1	81.6
+50			2.5	81.2
89			2.9	80.8
+50			3.9	79.8
90			7.6	76.1
" C'R			9.3	74.4
+ 28			9.4	74.3
+ 66			12.7	71.0
T.P.	7.81	378.65	12.86	370.84
+87			13.4	65.3
+97			20.5	58.2
" C'R			8.5	70.2
91+16			14.1	64.6
+50			9.0	69.7
+75			5.2	73.5
92			4.6	74.1
+18 C'R			6.2	72.5
+50			5.2	73.5
93			4.3	74.4
+50			2.6	76.1
94			2.1	76.6
T.P.	7.91	384.41	2.15	376.50
+50			7.2	77.2
95			5.6	78.8

Top W.S. pipe

Bot. drain

Top W.S. pipe (on a trestle)

Top W.S. pipe

		384.41		
95+10-6'R			7.6	376.8
+50			5.6	78.8
96			5.1	79.3
+50			4.7	79.7
97			4.3	80.1
+44-6'R			4.8	79.6
+50			3.4	81.0
98			2.7	81.7
+50			2.3	82.1
T.P.	9.50	393.22	0.69	383.72
99			9.6	83.6
+50			6.2	87.0
100			5.6	87.6
+37			5.2	88.0
" 6'R			6.4	86.8
101			5.5	87.7
+18-5$\frac{3}{4}$R			7.6	85.6
+50			8.6	84.6
102			9.8	83.4
+27			10.2	83.0
+37			10.8	82.4
B.M.			6.61	388.61
TP	6.00	395.02	4.20	389.02
			0.99	394.03

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Top W.S. pipe

Set B.M. Nail in Eucalyptus 30'R ler+50

Rec El. 393.88 B.M. "53 (Glover B.M. for concr. pipe const.)

Soil Samples - La Jolla Shores Location

Sta 0+00 - Adobe to 1°

Rest as per samples

Sta 15+00 - Adobe to 2°

As per 1st sample 2° to 5°

As per 2nd sample 5° to 6°

Sta 30+00 - Adobe to 3'

As per 1st sample 3° to 4½

As per 2nd sample 4½ to 6°

Sta 47+00 - Adobe to 2°

Rest as per samples

Sta 53+00 - As per samples

Sta 57+72 - Adobe to 1½

As per 1st sample 1½ to 5½ (water at 2½)

As per 2nd sample 5½ to 6°

Sta 64+15 - Adobe to 1½

As per 1st sample 1½ to 3½

As per 2nd sample 3½ to 4½

As per 1st sample 4½ to 5½

As per 2nd sample 5½ to 6°

Sta 68+75 - Adobe to 2½

As per 1st sample 2½ to 5°

As per 2nd sample 5° to 6°

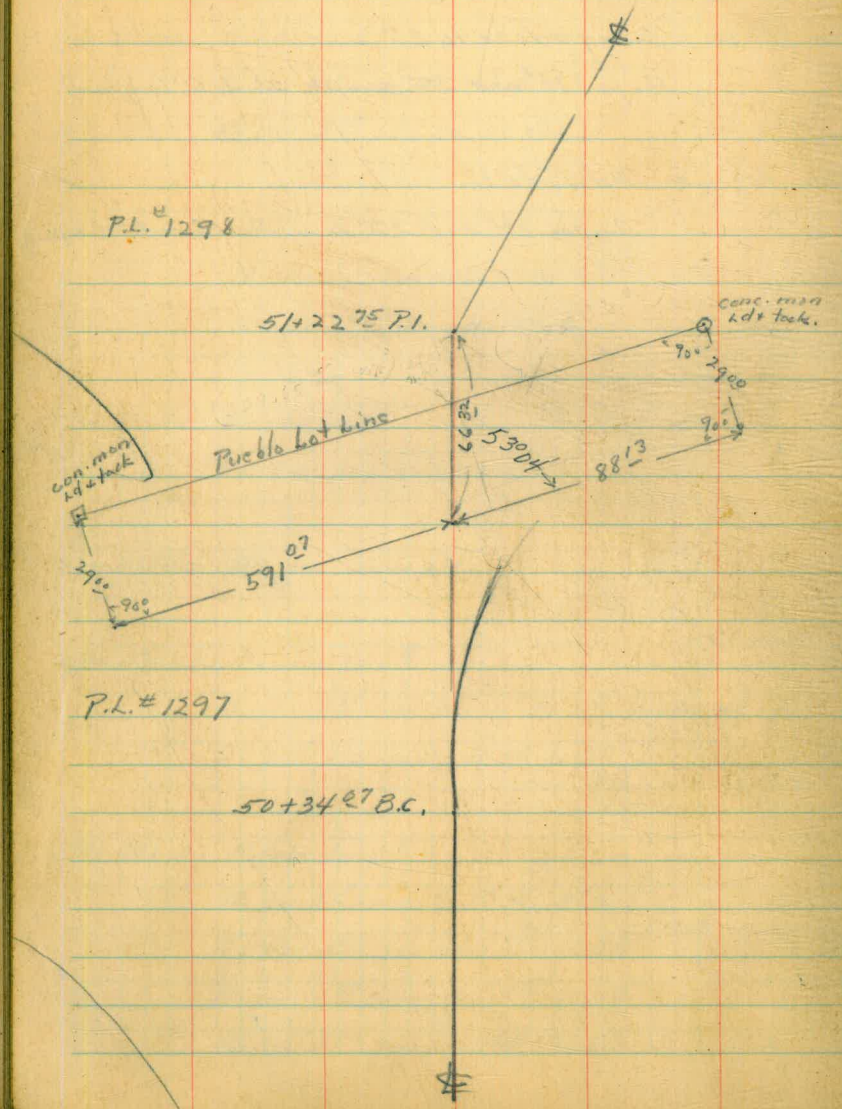
Sta 85+00 - Sandy adobe to 2°

As per 1st and 2nd sample 2° to 6° (very hard)

Sta 101+05 - Adobe to 1½

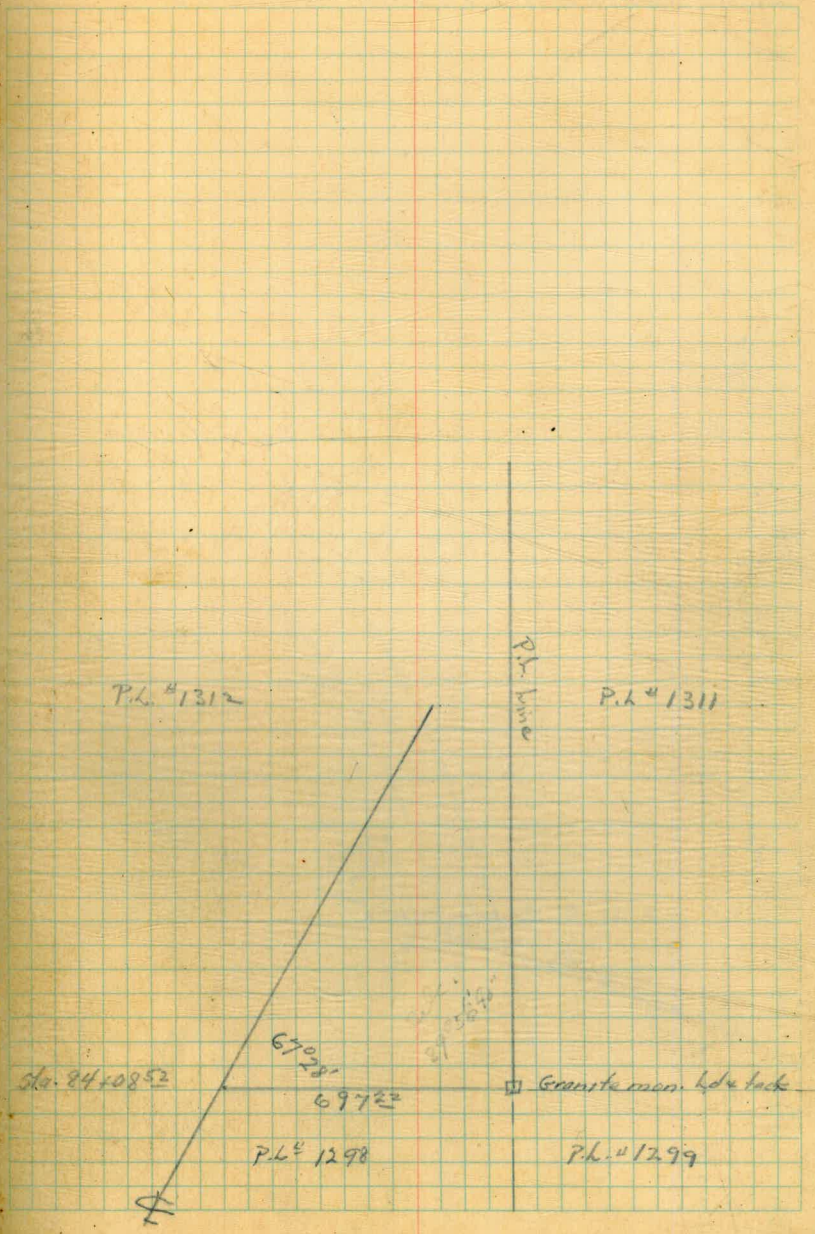
As per 1st and 2nd sample 1½ to 4½ (very hard)

6/29/42
Soper
King
Davis



6/30/42.
Soper
King
Davis

48

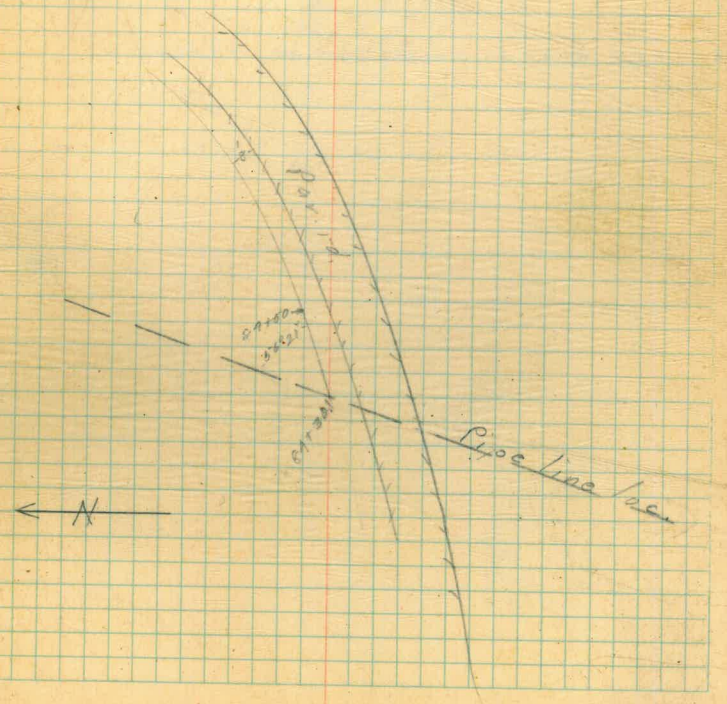


Line revision La Jolla Shores P/L

25°20 curv. & tan. at 11+00 as shown

11+30.1 56°21' R to sta. 8+75.0

9/20/43 Hill
Darby
King
Allen

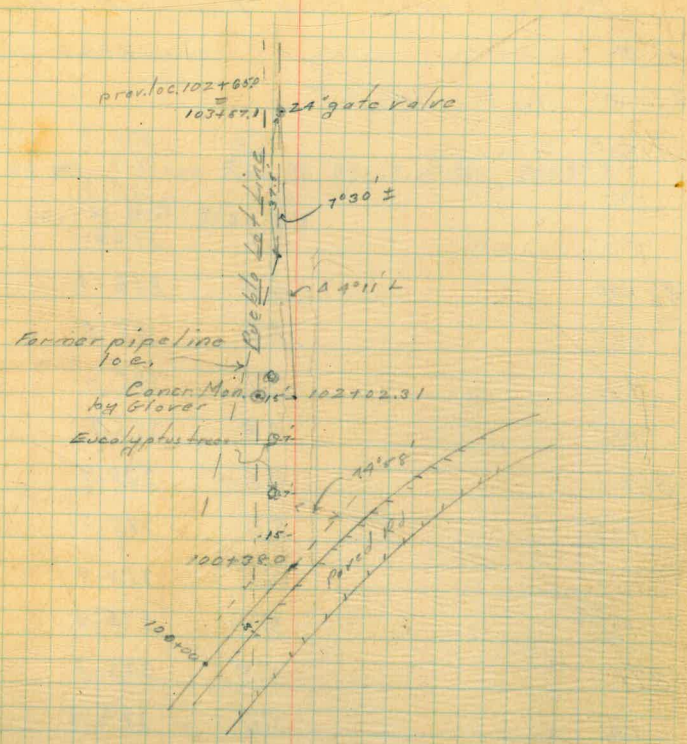


(cont.)

103+67.1 7°30' ± R. to exist Comp Callan 21" Concr. P.L.

102+02.31 4°11' L

100+38.0 44°58' L backsight on 100+00



Profile over line revision La Jolla

B.M.				378.66
	1.79	386.45		
84+30			4.8	375.7
+50			4.6	375.9
+75			4.1	376.4
85+00			4.4	376.1
+25			4.9	375.6
+50			5.1	375.4
+75			4.8	375.7
86+			4.6	375.9
+25			5.0	375.5
+50			5.5	375.0
+75			5.5	375.0
87+			5.3	375.2
+25			5.6	374.9
+50			4.4	376.1
T.P.	6.66	382.55	4.56	375.89
+75			6.2	376.4
88+			5.9	376.7
+50			5.4	377.2
89+			4.5	378.1
+50			4.3	378.3
90+			4.3	378.3
+50			4.0	378.6
91+			3.5	379.1

9/20/43

Shores P.L.

Nail in eucalyptus tree Lt. 83+80 (Page 36)

(Top of Wood Stave P.L. El. 374.7 at Sta. 84+37 ±
by Larray Hill 9/25/43)

E.C. of Road.

		382.55		
91+50			3.2	379.4
92+			2.7	379.9
+50			1.8	380.8
T.P.	7.36	388.46	1.45	381.10
93+			7.5	381.0
+50			6.7	381.8
94+			6.5	382.0
+50			6.2	382.3
95+			5.4	383.1
95+16			5.0	383.5
+50			4.7	383.8
96+			3.7	384.8
+50			3.4	385.1
97+			3.2	385.3
+50			2.4	386.1
98+			1.0	387.5
T.P.	10.82	398.88	0.40	388.06
+50			9.7	389.2
99+			8.2	390.7
+50			6.9	392.0
100+			5.6	393.3
+38			4.4	394.5
+50			4.9	394.0
101+			6.0	392.9
+50			6.8	392.1

B.C. of Road

		398.88 ✓		
102+			9.4	389.5
102+02.31		✓	9.5	389.4
BM	2.64	393.65	7.87	391.01 ✓
BM		✓	7.11	386.54 ✓
	4.20	390.74		
102+50			3.5	387.2
103+			6.3	384.4
+50			7.0	383.7
103+57.10			7.17	383.57

(L.S. 1880) ~~Bar Elev. 393.88~~
N.O. Glover - Conc. Mon. U.S. Leasehold Cor. No. 36
Elev 386.61
BM Nail in Eucalyptus 30' R 101+50 (Same Bk. Page 38)
(on old Stationing)

Top of Valve. (24" Gate)

La Jolla Shores Pipe Line

Revised Location (11-8-43)

70+65 35 E.C.

R = 1014'
Δ = 9°24'30" Lt.
Def per ft = 1.695'

68+98 88 B.C.

Sta	Def	Chd.
70+65 35	4°42.25	15.35'
+50	4°16.15'	50'
70+00	2°51.40'	50'
69+50	1°26.65'	51.12'

61+01 11 ~~61+01 18~~ E.C.

R = 1014'
Δ = 11°35' Lt.
Def per ft = 1.695'

58+96 11 B.C.

Sta	Def	Chd.
61+01 18	5°48'	51 18'
60+50	4°20.84'	50'
60+00	2°56.09'	50'
59+50	1°31.34'	53.89'

56+48 82 P.T.

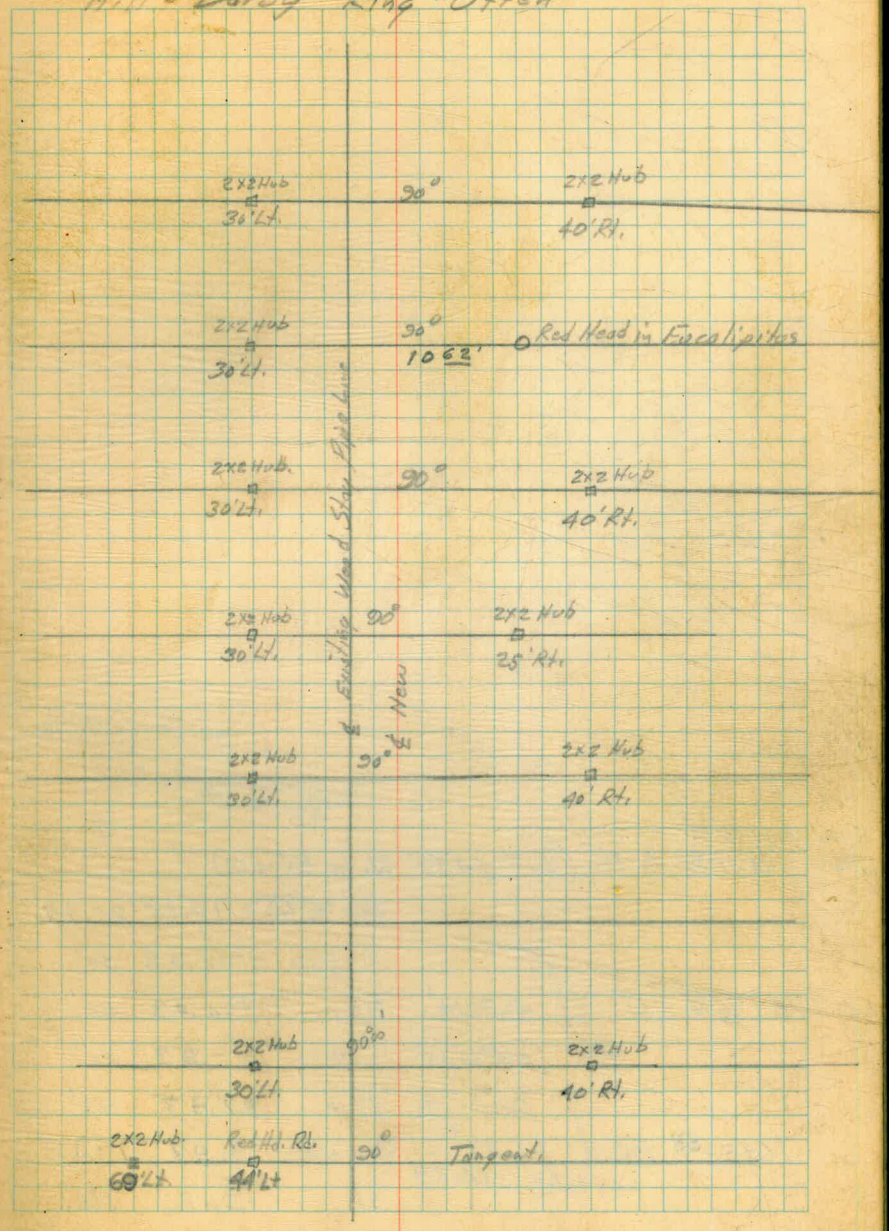
52+08 90 E.C. ~~52+09 13 E.C.~~

R = 786'
Δ = 12°39' Rt.

Sta	Def.	Chd.
50+50	0°31.97'	14 69
51+	2°21.32'	50'
+50	4°10.67'	50'
52+	6°00.02'	50
52+09 13	6°20'	9 13'

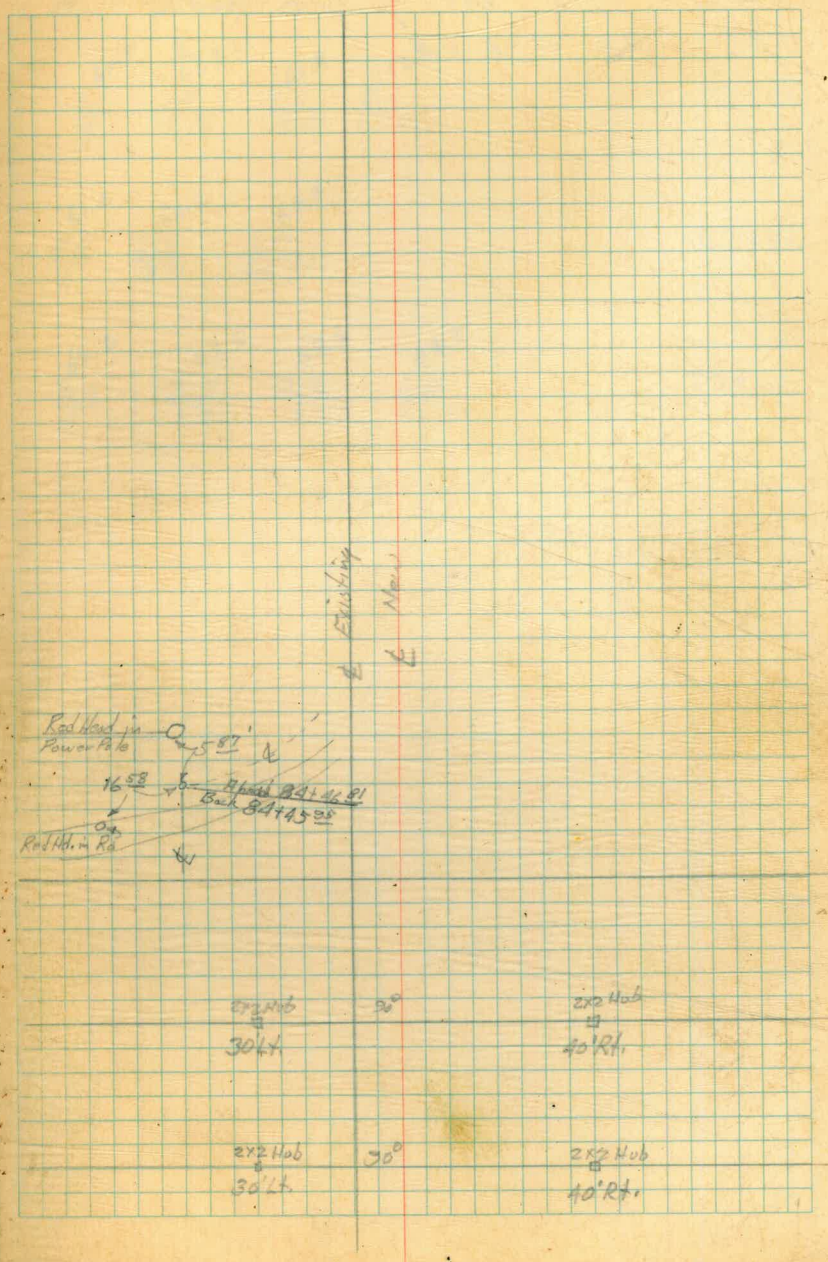
Δ 22½° Lt.
Ah. 50 +35 36 B.C.
B. 50 +37 68
49+98 88 Δ 22½° Rt.

Hill - Darby - King - Otten



Ahead 84+46.81
Back 84+45.25 Δ-BC (Def. 5°4'57" Rt. to 84+50)

			78+76.25	2°19.25	26.75
			+50.	2°02.93	50'
78+76.25 E.C.	R=3014'		78+	1°34.43	50'
	Δ=4°38'30"		+50	1°05.93	50'
	Def per ft		77+	37.43	50'
76+32.58 B.C.	=0.57'		76+50	9.93'	17.42'
	L=244.29		Sta	Def	Chd.



La Jolla Shores Pipe Line

Cross Sections for Pump House

T.B.M.	4.0	65.8	-	61.8
50+57				
50+63				
50+69				

11-26-43

Hill-Darby-King - other

60.7	61.9	62.8	63.7
5.1	3.9	3.2	2.1
℄	4 Rt.	13' Rt.	25' Rt.
61.4	62.2	64.4	
4.6	3.6	1.9	
℄	3' Rt.	25' Rt.	
62.2	62.5	63.6	64.8
3.6	3.3	2.2	1.2
℄	1' Rt.	12' Rt.	25' Rt.

Profile & Grades for New Location of La Jolla Shores Pipe Line

11-10-43

Hill-Darby-King-Olsen

				City Data.
U.S. BM	4.51	47.39		42.88
T.P.	11.75	57.17	0.97	46.42
T.P.	12.27	69.11	0.33	56.84
Set BM	12.69	80.49	1.31	67.80
T.P.	12.45	92.52	0.42	80.07
52+50 ℄			5.9	86.6
52+50 - offset			6.0	86.5
T.P.	12.73	104.44	0.81	91.71
52+79 ℄			14.0	90.4
52+83 ℄			20.5	83.9
52+97 ℄			11.0	93.4
53+00 ℄			11.6	92.8
			10.8	93.6
+08 ℄			7.8	96.6
+29 ± ℄			3.8	100.6
T.P.	12.42	116.74	0.12	104.32
53+50 ℄			8.9	107.8
			8.8	107.9
T.P.	12.54	128.80	0.48	116.26
53+85 ℄			7.1	121.7
T.P.	12.73	141.31	0.22	128.58
54+00 ℄			15.7	125.6
			14.8	126.5
T.P.	11.46	152.71	0.06	141.25

U.S.C.&G.S. BM - 49.00

Set BM No. 1 Tele. Pole. 20' Rt. of 51+15

		152.71		
54+50			7.5	145.2
℄			7.0	145.7
Set BM	13.00	163.17 ✓	2.54	150.17 ✓
54+70 ℄			10.0	153.2
T.P.	12.64	175.69 ✓	0.12	163.05 ✓
55			10.3	165.4
℄			9.7	166.0
T.P.	12.98	188.19	0.48	175.21 ✓
55+50			3.0	185.2
℄			2.8	185.4
T.P.	12.24	199.90 ✓	0.53	187.66 ✓
T.P.	12.85	211.93 ✓	0.82	199.08 ✓
55+83 ℄			14.8	197.1
56			10.2	201.7
℄			9.9	202.0
56+25 ℄			1.2	210.7
T.P.	11.98	223.88 ✓	0.03	211.90 ✓
56+50			4.9	219.0
℄			4.7	219.2
T.P.	12.32	235.92 ✓	0.28	223.60 ✓
56+81 ℄			9.5	226.4
57			5.5	230.4
℄			5.6	230.3
T.P.	10.83	246.51 ✓	0.24	235.68 ✓
57+50			8.6	237.9
℄			8.4	238.1

Set BM 2" Iron Pipe 60'± Rt. of 54+60

T. P.	9.53	251.04	5.00	241.51	
57+80					234.70
58+00			8.1	242.9	235.00
℄			8.6	242.4	
58+25 ℄			10.5	240.5	
58+50			8.8	242.2	237.0
℄			9.6	241.4	
58+96.11	BC		6.7	244.3	239.3
59+00 ℄			7.6	243.4	
59+50			3.7	247.3	243.1
℄			3.9	247.1	
60+00			2.5	248.5	244.5
℄			1.7	249.3	
60+50			4.7	246.3	242.5
℄			4.2	246.8	
61+01.13	EC		10.6	240.4	
℄			9.8	241.2	237.1
I.P.	0.29	238.36	12.97	238.07	
61+25 ℄			1.0	237.4	
61+50			2.4	236.0	231.7
℄			2.7	235.7	
62+00			5.7	232.7	228.8
℄			5.6	232.8	
62+42 ℄			5.5	232.9	
62+50			7.3	231.1	227.9
℄			6.0	232.4	

Nat. Eng. Tree -25 R+ 57+77

C 5.2

C 5.0

1.2

C 4.0

C 3.8

C 4.3

C 3.9

C 3.2

		238.36			
63+00			8.3	230.1	228.8
℄			5.5	232.9	
63+23 ℄			5.1	233.3	
63+50			4.8	233.6	
℄			2.9	235.5	
T.P.	12.75	250.73	0.38	237.98	
63+60					232.4
64+00			7.4	243.3	238.1
℄			8.4	242.3	
64+05 ℄			6.5	244.2	
T.P.	12.81	263.46	0.08	250.65	
64+50			11.3	252.2	245.3
℄			14.2	249.3	
64+82 ℄			9.7	253.8	
64+80				257.9	249.6
65+00			3.1	260.4	253.2
℄			5.7	257.8	
~~65+06 ℄~~			~~4.9~~	~~258.6~~	
65+20				252.3	257.4
65+20 ℄			0.0	263.5	
T.P.	12.91	276.15	0.22	263.24	
65+40 ℄			9.8	266.4	
65+50			5.7	270.5	265.0
℄			6.6	269.6	
T.P.	12.61	288.56	0.20	275.95	
66+00			5.9	282.7	277.7
℄			6.9	281.7	
66+19 ℄			1.8	286.8	

C-5.2

C-6.9

C-8.3

C-7.2

C-4.9

C-5.5

C-5.0

		288.56			
T.P.	12.73	300.90	0.39	288.17	
66+50			7.5	293.4	288.8
℄			8.3	292.6	
66+65 ℄			5.4	295.5	
66+75 ℄			1.7	299.2	
T.P.	12.39	313.16	0.13	300.77	
67+00			8.4	304.8	300.0
℄			9.1	304.1	
T.P.	13.03	326.04	0.15	313.01	
67+50			10.2	315.8	310.5
℄			11.2	314.8	
67+85 ℄			4.2	321.8	
T.B.M.	12.30	338.10	0.24	325.80	
68+00			11.7	326.4	321.0
68+10 ℄			13.0	328.1 325.1	323.0
+18 ℄			8.5	329.6	
+25 ℄			7.3	330.8	
+32 ℄			5.3	332.8	
+41 ℄			6.0	332.1	
68+30				330.4	326.4
68+50			5.7	332.4	329.0
℄			4.5	333.6	
+59 ℄			4.5	333.6	
+85 ℄			1.5	336.6	
68+98.88 BC			0.6	337.5	334.3
℄			0.9	337.2	

C- 4.6

C- 4.8

C- 5.3

Nail in Euc. Tree. 35' Lt. Sta 68+00

C- 5.4

C- 5.1

C- 4.0

C- 3.4

C- 3.2

		338.10 ✓			
T.P.	11.05	349.05 ✓	0.10	338.00 ✓	
+37 ℄			8.0	341.1	
+38 ℄			8.3	340.8	
69+50			7.4	341.7	337.9
℄			7.1	342.0	
+56 ℄			5.9	343.2	
+59 ℄			6.5	342.6	
+76 ℄			3.9	345.2	
+91 ℄			3.2	345.9	
+95 ℄			1.6	347.5	
70+00			3.0	346.1	342.4
℄			2.7	346.4	
+14 ℄			1.5	347.6	
+31 ℄			0.5	348.6	
+33 ℄			0.9	348.2	
T.P.	8.57	357.35 ✓	0.27	348.78 ✓	
BM check			7.16	350.19 ✓	350.19
70+50			8.3	349.1	345.2
℄			8.6	348.8	
+57 ℄			8.0	349.4	
+61 ℄			7.0	350.4	
70+65	E.C.		7.0	350.4	
℄			7.2	350.2	
+85 ℄			6.1	351.3	

C- 3.8

C- 3.7

BM 70+33 - 33' Rt. Nail in Eucalyptus

C- 3.9

		35735				
71+00			5.3	352.1	348.1	C-4.0
	℄		4.1	353.3		
+23	℄		3.0	354.4		
+27	℄		3.7	353.7		
71+50			1.5	355.9	350.9	C-5.0
	℄		1.7	355.7		
+70	℄		1.0	356.4		
T.P.	11.21	368.38	0.18	357.17		
72+00			9.3	359.1	353.8	C-5.3
	℄		10.1	358.3		
+25	℄		9.2	359.2		
72+50			7.2	361.2	356.7	C-4.5
	℄		7.7	360.7		
+75	℄		7.1	361.3		
73+00			4.4	364.0	359.5	C-4.5
	℄		4.9	363.5		
+20	℄		3.4	365.0		
73+50			1.2	367.2	362.8	C-4.4
	℄		2.1	366.3		
+71	℄		0.3	368.1		
T.P.	11.67	379.84	0.21	368.17		
74+00			8.8	371.0	366.2	C-4.8
	℄		9.6	370.2		
+25	℄		8.0	371.8		

		379.84			
74+50			5.8	374.0	369.5
	℄		6.3	373.5	
	+55 ℄		5.3	374.5	
	+60 ℄		5.8	374.0	
75+00			4.1	375.7	371.4
	℄		4.5	375.3	
	+40 ℄		2.6	377.2	
	+46 ℄		0.8	379.0	
75+50			2.3	377.5	373.3
	℄		1.8	378.0	
	+52 ℄		2.2	377.6	
76+00			0.5	379.3	375.3
76+40	℄		0.5	380.4 379.3	375.8
T.P.	0.07	388.40	0.57	379.33	
	+16 ℄		8.4	380.0	
	+21 ℄		7.2	381.2	
76+32.58	BC.		8.0	380.4	
	℄		7.2	381.2	
	+38 ℄		8.0	380.4	
76+50			7.2	381.2	376.0
	℄		7.7	380.7	
	+80 ℄		5.9	382.5	
77+00			7.6	380.8	376.9
	℄		6.2	382.2	
	+24 ℄		5.4	383.0	

C-4.5

C-4.3

C-4.2

C-4.0

C-4.6

C-5.2

C-3.9

385.83

82+50			8.2	377.6	373.4
℄			7.9	377.9	
+72 ℄			7.2	378.6	
83+00			8.0	377.8	372.8
℄			7.2	378.6	
T.P.	3.36	381.33	7.86	377.97	
83+50			4.1	377.2	372.2
℄			2.7	378.6	
+66 ℄			4.2	377.1	
+91 ℄			3.7	377.6	
84+00			4.1	377.2	371.6
℄			4.7	376.6	
+09 $\frac{5}{}$ ℄			4.5	376.8	
+15 $\frac{50}{}$ ℄ Edge of Rd.			4.75	376.58	
+36 $\frac{65}{}$ ℄ Edge of Rd.			5.68	375.65	
Bk. 84+45 $\frac{95}{}$ Ahd. 84+46 $\frac{81}{}$ △ ℄			5.7	375.6	
" Rd			5.6	375.7	371.0
BM			2.65	378.68	378.66

C-4.2

C-5.0

C-5.0

C-5.6

C-4.7

BM Nail in Euc. Tree 24'Lt. 83+80

Profile & Elev. of Rd. on La Jolla Shores

Pipe Line — 11-13-43

				C/L Data	
BM	5.31	48.19		42.88	
39+55	6 pavement		3.9	44.3	40.1
℄			4.0	44.2	
40+00	P.		3.9	44.3	40.3
℄			3.9	44.3	
40+50	P		4.0	44.2	40.1 ~~4.3~~
℄			4.1	44.1	
41+00	P.		4.2	44.0	38.3 ~~39.2~~
℄			4.3	43.9	
41+50	P.		4.7	43.5	38.1 ~~39.3~~
℄			4.8	43.4	
42+00	P.		5.2	43.0	37.9 ~~39.1~~
℄			5.1	43.1	
42+50	P.		5.8	42.4	37.7 ~~38.3~~
℄			6.0	42.2	
43+00	P.		6.7	41.5	37.5
℄			6.8	41.4	
43+50	P.		6.9	41.3	37.4
℄			6.9	41.3	
44+00	P.		6.8	41.4	37.3
℄			6.9	41.3	
44+50	P.		6.5	41.7	38.1
℄			6.7	41.5	
45+00	P		5.5	42.7	39.0
℄			5.7	42.5	

Hill - Darby - King - Otten

U.S.G.S. 3.1 4.30

C - 4.2

C - 4.0

4.1
~~C - 3.9~~

5.7
~~C - 4.1~~

5.4
~~C - 4.0~~

5.1
~~C - 3.9~~

4.7
~~C - 4.1~~

C - 4.0

C - 3.9

C - 4.1

C - 3.6

C - 3.7

		48.19			
45+50 P.			4.5	43.7	39.8
℄			4.7	43.5	
46+00 P.			3.4	44.8	40.6
℄			3.5	44.7	
T.P.	11.12	56.15	3.16	45.03	
46+50 P.			10.4	45.8	41.7
℄			10.3	45.7	
46+61.88 B.C. P.			9.8	46.4	42.0
℄			9.8	46.4	
47+00 P.			9.1	47.1	42.9
℄			9.1	47.1	
47+50 P.			8.0	48.2	44.0
℄			8.0	48.2	
48+00 P.			6.8	49.4	45.6
℄			6.7	49.5	
48+46.50 E.C. P.			5.5	50.7	47.1
℄			5.2	51.0	
49+00 P.			3.6	52.6	48.8
℄			2.5	53.7	
+15 ℄			2.2	54.0	
49+50 P.			1.9	54.3	50.4
℄			1.5	54.7	
T.P.	13.05	68.85	0.35	55.80	
49+98.88 ⊙ P.			11.7	57.2	52.0
℄			11.6	57.3	

C - 3.9

C - 4.2

C - 4.1

C - 4.4

C - 4.2

C - 4.2

C - 3.8

C - 3.6

C - 3.8

C - 3.9

C - 5.2

		68.85				
50+00	88 ℄		12.87	55.98		Center of old Wood Stay Pipeline. (On top)
Ah 50+35	36					
Bk. 50+37	68 BC △		8.3	60.6	54.0	C-6.6
	℄		9.4	59.5		
50+50			7.1	61.8	55.5	C-6.3
	℄		8.2	60.7		
50+85	℄		5.8	63.1		
51+00			2.6	66.3	60.6	C-5.7
	℄		4.2	64.7		
ck.						
T.B.M.	12.60	80.32 ✓	1.13	67.72 ✓	67.80	B.M. Nail Tele. Pole 20'Rt 51+15
+33	℄		10.7	69.6		
51+40				71.0	64.7	C-6.3
51+50			8.2	72.1		
51+60	℄			75.4	67.2	C-8.2
			9.6	70.7		
51+80				78.3	70.5	C-7.8
52+00			0.2	80.1	74.6	C-5.5
	℄		1.4	78.9		
52+00 - 35' Rt.			———			SP.C.G.&E. Power Pole 600801
52+09	13 EC		+0.8	81.1	76.1	C-5.0
	℄		0.2	80.1		″
52+30				83.0	79.6	C-3.4

La Jolla Shores P.L.

Elev. of Pavement 11-26-43

BM	2.12	380.78		378.66	
Ad 84+46.2l					
BK 84+45.95	BC ℄ Pavement		5.1	75.7	371.0
85+			5.2	75.6	70.8
+50			5.4	75.4	70.6
86+			5.4	75.4	70.5
+50			5.6	75.2	70.3
87+			5.7	75.1	370.2
+50			5.7	75.1	70.9
88+			5.0	75.8	71.6
T.P.	7.64	383.56	4.86	375.92	
+50			7.0	376.6	72.3
89+			6.5	77.1	373.0
+50			5.9	77.7	73.3
90+			5.4	78.2	73.6
+50			5.0	78.6	73.9
91+			4.4	79.2	74.2
+50			3.9	79.7	374.5
92+			3.4	80.2	75.0
+50			2.8	80.8	75.6
93+			2.4	81.2	76.1
+50			2.1	81.5	76.7
94+			1.8	81.8	77.2
+50			1.3	82.3	77.8
T.P.	9.13	391.14	1.55	382.01	
95+			8.2	82.9	78.3

Darby - King - Offen

BM - Nail in Eucal. Tree 24' Lt 83+80

C-4.7
C-4.8
C-4.8
C-4.9
C-4.9
C-4.9
C-4.2
C-4.2

C-4.8
C-4.1
C-4.4
C-4.6
C-4.7
C-5.0
C-5.2
C-5.2
C-5.2
C-5.1
C-4.8
C-4.6
C-4.5

C-4.6

		391.14			
95+50			7.5	83.6	78.9
96+			6.8	84.3	79.4
+50			6.3	84.8	80.0
97+			5.7	85.4	80.5
+50			5.0	86.1	81.1
98+			3.7	87.4	81.6
+50			2.2	88.9	382.2
99+			0.8	90.3	82.4
T.P.	6.50	397.13	0.51	390.63	
+50			5.2	91.9	82.6
100+			3.8	93.3	82.8
+38	EC △ Pavement		2.6	94.5	83.0
+38	EC △ Offset Stk.		2.4	94.7	83.0
+50			2.2	94.9	383.0
101 ~~+02~~			3.5	93.6	82.8
+50			4.7	92.4	82.6
102+02 21	△		6.3	90.8	82.3
+50			9.4	87.7	80.4
103+			12.0	85.1	378.5
+50			12.6	84.5	77.7
BM			10.55	386.58	386.61

C- 4.7
C- 4.9
C- 4.8
C- 4.9
C- 5.0
C- 5.8
C- 6.7
C- 7.9

C- ~~9.3~~ 10.3
C- 10.5
C- 11.5
C- 11.7
C- 11.9
C- 10.8
C- 9.8
C- 8.5
C- 7.3
C- 6.6
C- 6.8

Nail in Focal Tree - 6' Lt 102+56

Level Notes for El. Pumping Plant La Jolla Shores

7.38	64.58		57.20
		0.61	63.97
		1.85	62.73
		0.94	63.64
		+0.38	64.96

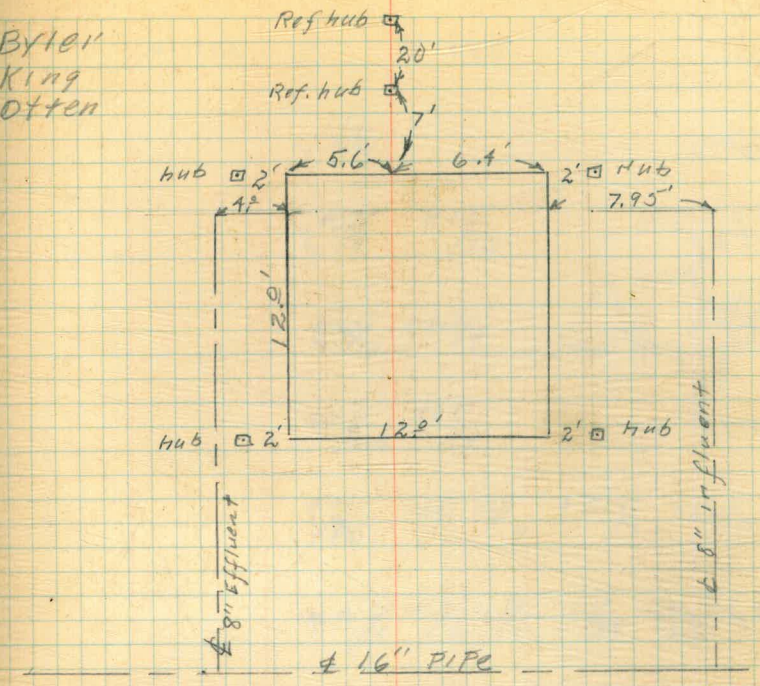
N W

S W

S E.

N E.

Byler
King
Otten



X-Sections

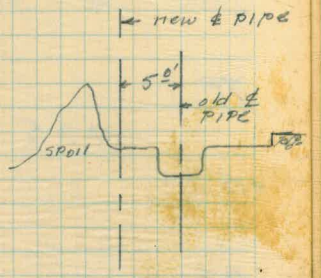
	5.00	382.10	377.10
96+00		10.0	
+25		9.5	
+50		9.6	
+75		9.5	
87		8.1	
+25		7.4	
+50		7.1	
88		6.9	
+50		6.1	
89		5.0	
+50		4.8	
90		4.3	

+1.9/11

+1.7/9 +1.7/10

+1.5/10 +1.7/9

+1.1/10.4 +2.5/10



0.0/8.5 −1.5/2 −1.8/4 +0.7/7 −1.1/11

−0.6/5 −0.3/2 −1.7/2 −1.7/5.5 −0.3/6 +0.9/13

−0.5/6.8 −0.2/2.7 −1.7/2.7 −1.7/6.2 −0.1/7 +0.2/14

−0.1/6 +0.1/3 −1.9/3 −1.9/6.5 +0.2/7 +0.6/13.3

−0.1/5 +0.2/4 −1.8/4 −1.8/7.5 +0.7/7.5 +0.6/13

0.0/4 −2.5/4 −2.5/7.5 +0.2/13

0.0/4 −1.6/4 −1.6/7.5 +0.6/13

0.0/4 −2.1/4 −2.1/7.5 +0.6/13

		382.10		
90+50			3.6	
91			3.7	
TP			2.83	379.27
	7.35	386.62		
+50			7.	
92			7.0	
+50			6.5	
93			6.0	
+50			5.8	
94			4.9	
+50			4.7	
95			4.7	
+25			3.8	

$0.0/4$ $-3.0/4$ $-3.0/7.5$ $+0.9/13$

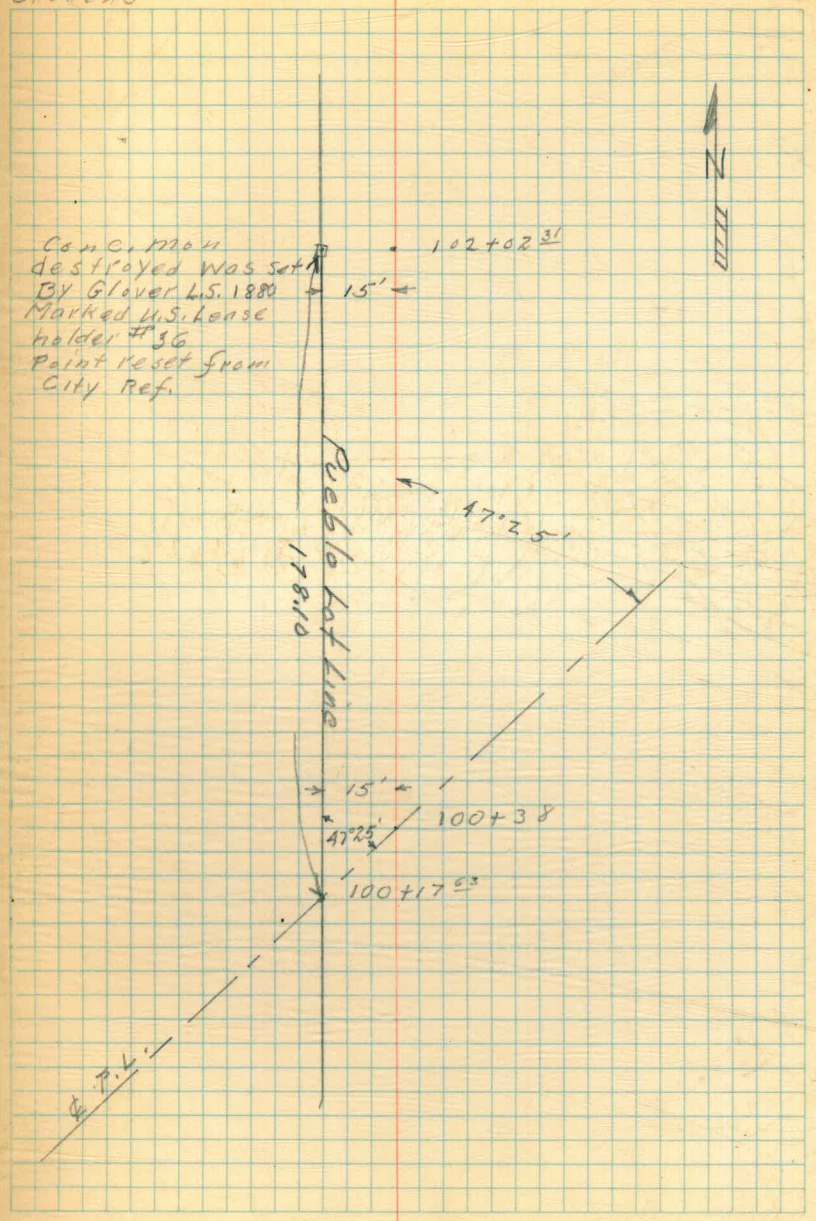
$-0.0/4$ $-3.1/4$ $-3.1/7.5$ $+1.0/13$

		386.62		
+30			5.0	
+50			4.6	
+70			4.0	
96			3.0	
+25			2.3	
+50			3.1	
+75			1.6	
97			1.1	
TP			0.77	385.85
	10.32	396.17		
+50			10.6	
98			9.9	
+50			7.7	

99	6.2
+50	4.6
100	2.5
100+2808	1.9
100+2889	

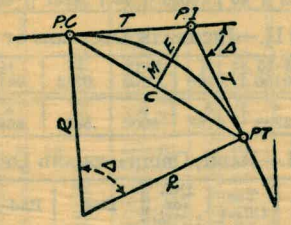
Ties to La Jolla Shores 6-21-14
P.L. Pueblo lot cor.

Byler
Otten
Stevens



BM. RP. seawall Avenida De La Playa, El 3.94
" N. curb " Calle Frescoba El. 3.815

DIETZGEN'S RAILROAD CURVE AND REDUCTION TABLES



CURVE FORMULAS

Radius=R=$\frac{50}{\text{sin. D/2}}$ (1) Degree of Curve=D and sin. $\frac{D}{2}=\frac{50}{R}$ (2)

Tangent=T=R tan $\frac{\Delta}{2}$ (3) Length of Curve=L=$100\frac{\Delta}{D}$ (4)

Middle ordinate=M= R(1—cos. $\frac{\Delta}{2}$) (5) =R vers $\frac{\Delta}{2}$ (6)

External=E=T tan $\frac{\Delta}{4}$ (7) =R÷cos. $\frac{\Delta}{2}$—R (8)=R exsec $\frac{\Delta}{2}$ (9)

Long Chord=C=2 R sin. $\frac{\Delta}{2}$ (10) Δ=Central Angle

EXPLANATION AND USE OF TABLES

Stations.—Given P. I.=Sta. 161 +60.35 to find Sta. of P. C. and P. T. Δ=62° 10′ D=8° 20′. From Table IV for 1° curve T=3454.1 and ÷8⅓=414.49 ft. From Table V correction=.36 or T=414.85 ft. P. C.=Sta. P.I.—T=157 +45.50. Also from (4) L=746.00 and P. T.=Sta. P. C. +L=164 +91.50.

Offsets.—Tangent offsets vary (approximately) directly with D and with square of the distance. Thus tangent offset for Sta. 158 on above curve is 2.16 ft. found as follows. From Table III tangent-offset for 100 ft.=7.27 ft. Distance=158—Sta. P. C.=54.50, hence offset=7.27 (54.50÷100)²=2.16 ft. Also square of any distance divided by twice the radius equals (approximately) the distance from tangent to curve. Thus (54.50)²÷(2 x 688.26)=2.16 ft.

Deflections.—Deflection angle=½ D for 100 ft., ¼ D for 50 ft., etc. For c ft.=(in minutes) .3 x C x D° or=defl. for 1 ft. from Table III x C. For Sta. 158 of above curve=.3 x 54.5 x 8⅓=136.2′ or 2° 16.2′, or=2.50 x 54.5=136.2′ from Table III. For Sta. 159 deflection angle=2° 16.2′ +8° 20′ ÷2=6° 26.2′, etc.

Externals.—May be found in similar manner to tangents. Thus E for curve above is 91.37. For from Table IV for 1° curve E=960.6 for 8° 20′=960.6÷8⅓=91.27 and from Table V correction=.10 or E=91.37 ft. Or suppose Δ=32° and E is measured and found to be 42 ft. What is D? From Table IV E=230.9 and ÷42=5.5 or D=5° 30′.

86+00

84+46.81

48
29
19

63+00 228.8
63+60 232.9

2.3

2372 231.1
6
237.1
228.8
8.3

2922
35
2457
38
419
352
67

3742
29
934

396.2
8.7
87.5

87.4

5041.8
1.0
0.3
28 5.0

293.8
11.4
282.4
3.7
4.7

+26 257.4
65+00 253.2

257.9
6.6
264.5
5.3
259.2

264.5
1.6
262.9
57.4
5.5

2383.2
4764
2382
2.858 4

2433
285.5
63
5 78
28

1.6

1433
45
7165
5732
6.849

232.4
239.80

238.1
72
245.3

25.375
19
228375
25375
4.8 2125

25.375
X80
20.30000

277.7 6.6

71

384.8
79
5.8

5.5
5.1
.4

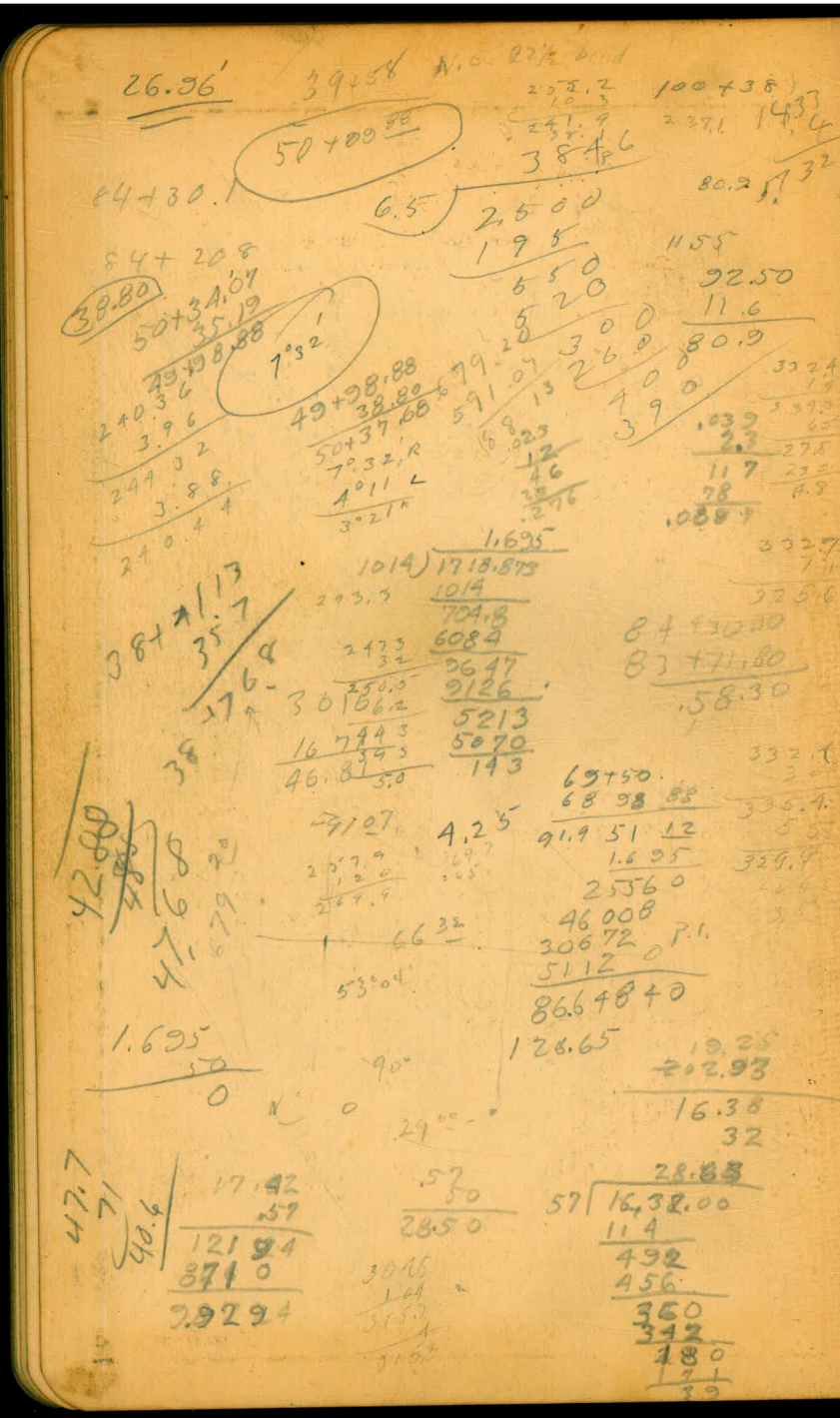
373.1
7.2
9.7

84+08.52

67°28'

89°36'40"

697.22



DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1½

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	26.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Example—If point is 22.6 ft. above grade, how far should it be from center line to be a slope stake point? Ans. from Table 41.9. For same slopes but other widths of roadbed correct above figures by one-half difference in width of roadbed; thus in example above for 20 ft. roadbed distance will be 41.9+(20—16)÷2 or 2 ft. added to 41.9 =43.9. For slopes of 1 on 1 see inside of front cover.

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