ENGINEERS'
LEVEL BOOK
No. 4121

#696

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 feet wide. Side Slopes 1 on 1.

For Single Track Embankment.

H	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	H
0	8.0	8.1	8.2	8.3	8.4	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.

542.51 542.51
6.12 582
536.39 5483
582
542.21
241
-39.73

Indexed to p. 48 - 2/7/46 mwd

" " " 56 - 2/14/46 mwd

INDEX

El Monte P.L. levels over spur track loc. to filter plant site
(RAILROAD SPUR - ALVARADO CANYON TO MURRAY)

B.M.	3.56	493.76		490.20	
T.P.	2.94	485.06	11.64	482.12	
B.M.	2.84	481.08	6.82	478.24	
0-200			1.78	479.30	
					.48
0-150			2.26	478.82	
					.61
0-100			2.87	478.21	
					.53
0-50			3.40	477.68	
					.50
0+00			3.90	477.18	
					.30
0+50			4.20	476.88	

Ginney 25' Rt 576+50 El Monte P.L. Bk. 690

No. 1 in T. Pole Rt. sta. 0-95

Top of Rail

Top of Rail

Top of Rail

Top of Rail

Top of Rail

Top of Rail

	481.08		
0+65 91		5.1	476.0
B.C. 0+78 74		4.8	476.3
1+00		5.7	475.4
1+22		7.3	473.8
1+50		7.2	473.9
2+00		8.1	473.0
2+50		9.5	471.6
3+00		9.1	472.0
3+50		9.3	471.8

Ground

		481.08			
T.P.	4.40	476.26 ✓	9.22	471.86 ✓	
4+00			5.1	471.2	
4+31			5.5	470.8	
E.C. 4+49			6.9	469.4	
4+75			6.9	469.4	
4+87			8.3	468.0	
4+98			8.7	467.6	Bottom Of Stream
5+03			8.4	467.9	
5+11			6.7	469.6	

		476.26		
5+50			6.9	469.4
6+00			7.7	468.6
B.C. 6+35.50			6.5	469.8
6+50			6.4	469.9
T.P.	6.56	476.94 ✓	5.88	470.38 ✓
7+00			6.9	470.0
7+50			7.1	468.8
8+00			6.8	470.1
8+50			6.7	470.2

Lt. ℄ Rt.

$-\frac{12}{50}$

$+0\frac{6}{15}$ $+50\frac{5}{0}$

℄

	476.94		
E.C. 8+88 83		6.0	470.9
9+00		5.4	471.5
9+50		5.3	471.6
10+00		6.6	470.3
10+22		8.8	468.1
10+30		6.3	470.6
10+50		5.4	471.5
B.C. 10+97 65		4.1	472.8
11+00		3.9	473.0

Lt	℄	Rt
-2 1/50°		+4 7/50°
-1 9/50°		+3 1/50°
-1°/50°	Rd. Under Constr.	+1°/50°
-1 5/50°		+1 2/50°
-2°/50°		+1 4/50°
-4°/50°	-1°/26°	+1 6/50°
-1 5/50°		+1 3/32° +4°/50°

℄

Sta.	B.S.	H.I.	F.S.	Elev.	Lt.	Lt.	¢	Rt	Rt
		476.94							
11+43			2.3	474.6	-3.0 / 50.0				+3.0 / 50.0
11+50			1.2	475.7	-3.0 / 50.0	-3.0 / 36.0			+3.7 / 50.0
T.P.	11.58	487.54 ✓	0.98	475.96 ✓					
11+64			10.6	476.9	-5.0 / 50.0	-4.6 / 39.0			+3.9 / 50.0
12+00			9.8	477.7	-3.9 / 50.0			+2.1 / 34.0	+4.7 / 50.0
12+50			8.6	478.9	-4.0 / 50.0				+5.3 / 50.0
13+00			5.5	482.0	-5.9 / 50.0				+6.0 / 50.0
13+50			3.3	484.2	-6.6 / 50.0				+6.4 / 50.0
14+00			3.4	484.1	-4.5 / 50.0			+3.8 / 22.0	+6.5 / 50.0

	487.54		
14+50		2.9	484.6
15+00		3.4	484.1
15+33		3.3	484.2
15+50		4.8	482.7
15+84		7.5	480.0
15+92		9.1	478.4
16+00		9.6	477.9
EC 16+13.20		8.3	479.2
16+28		7.4	480.1

4

	LT	RT
	-5.7 50°	-2.7 29°	+6.0 50°
	-4.7 50°		+5.7 50°
	-4.3 50°	-3.4 24°	+5.0 50°
	-4.5 50°		+5.5 50°
	-3.6 50°		+5.1 50°
	-2.7 50°		+5.0 50°
	-1.7 50°		+4.4 50°
	-2.5 50°		+1.1 50°

4

						Lt.	℄	Rt.
		487.54						
16+35			5.3	482.2	-2^{5} / 50^{0}			$+1^{4}$ / 50^{0}
16+50			3.9	483.6	-3^{7} / 50^{0}			$+1^{6}$ / 50^{0}
16+85			2.1	485.4	-4^{0} / 50^{0}			$+3^{6}$ / 50^{0}
T.P.	11.70	498.45 ✓	0.79	486.75 ✓				
17+00			11.1	487.3	-3^{7} / 50^{0}			$+2^{7}$ / 50^{0}
17+21			9.7	488.7	-3^{8} / 50^{0}			$+4^{0}$ / 50^{0}
17+35			7.5	491.0	-5^{0} / 50^{0}	-2^{9} / 18^{0}		$+3^{0}$ / 50^{0}
17+50			6.5	492.0	-6^{0} / 50^{0}	-3^{5} / 20^{0}		$+3^{0}$ / 50^{0}
18+00			5.3	493.1	-5^{5} / 50^{0}	-3^{5} / 29^{0}		$+4^{3}$ / 50^{0}

℄

		498.45				Lt	℄	Rt
18+50			3.9	494.5		-5^{4} 50^{0}		$+4^{6}$ 50^{0}
19+00			3.3	495.1		-5^{7} 50^{0}		$+5^{1}$ 50^{0}
19+50			3.2	495.2		-4^{3} 50^{0}		$+5^{4}$ 50^{0}
19+56			3.3	495.1		-4^{3} 50^{0}		$+5^{4}$ 50^{0}
19+75			1.5	497.0		-6^{9} 50^{0}		$+4^{1}$ 50^{0}
B.C. $20+03^{05}$			2.4	496.0		-4^{9} 50^{0}		$+5^{5}$ 50^{0}
20+50			0.3	498.1		-5^{5} 50^{0}		$+4^{0}$ 50^{0}
T.P.	9.03	506.42 ✓	1.06	497.39 ✓				
21+00			6.9	499.5		-5^{3} 50^{0}		$+5^{2}$ 50^{0}

℄

		506.42		
21+50			4.8	501.6
22+00			3.8	502.6
22+50			3.4	503.0
E.C. 22+87.05			4.6	501.8
23+00			5.2	501.2
23+50			9.3	497.1
T.P.	1.57	495.57 ✓	12.42	494.00 ✓
24+00			3.8	491.8
24+25			7.5	488.1

℄ Lt

- 5 6/50
- 6 3/50
- 7 0/50
- 8 1/50
- 9 1/50
- 9 2/50
- 9 0/50

℄ Rt

+ 4 3/50
+ 5 3/50
+ 5 9/50
+ 7 4/50
+ 8 0/50
+ 8 0/50
+ 10 0/50

		495.57		
24+50			13.0	482.6
24+66			15.3	480.3
25+00			16.0	479.6
25+28			14.4	481.2
25+50			9.6	486.0
T.P.	12.84	507.28 ✓	1.13	494.44 ✓
26+00			11.2	496.1
26+50			2.8	504.5
T.P.	10.85	517.81 ✓	0.32	506.96 ✓

℄

LT		RT.
-5° 50°		+10° 50°
-2° 50°	-2° 21°	+10° 50°
+1° 50°	0° 19°	+4° 50°
+4° 50°		+0° 50°
+3° 50°	-4° 30°	-4° 50°
+4° 50°		-7° 50°
+3° 50°		-3° 50°

		517.81		
27+00			6.6	511.2
27+50			3.1	514.7
T. P.	6.58	523.99 ✓	0.40	517.41 ✓
28+00			4.7	519.3
P.O.T. 28+45 80			3.3	520.7
29+00			3.8	520.2
29+50			5.1	518.9
30+00			6.2	517.8
B.C. 30+35 66			6.6	517.4

CONT P. 35

℄

2+	R+
+3 3	+0 4
50	26
	-4
	50
0	+2
50	50
New Road Under Const.	
0	0
50	50

℄

523.99

30 +50		6.9	517.1
31+00		7.3	516.7
31+50		8.6	515.4
32+00		8.8	515.2
T.P.	10.48	9.14	514.85
32+50		10.0	515.3
33+00		11.0	514.3
33+50		10.8	514.5
34+00		9.5	515.8

Void

℄

-6 7/50	-6 5/44	-3 1/39	+3 9/50
-4 8/50	-5 0/36	-3 4/31	+4 3/50
-4 6/50	-5 4/34	-2 8/30	+4 5/50

℄

525.33

E.C. 34+09	6.2		9.6	515.7
		Void		
34+50			6.9	518.4
35+00			4.3	521.0
35+50			2.7	522.6
T.P.	9.71	533.03	2.01	523.32
36+00			7.7	525.3
36+50			6.2	526.8
37+00			5.4	527.6
B.C. 37+19	1.6		5.4	527.6

℄

-5 3/50°	-6°	-2 6/29°	+5 6/50°
-6 5/50°	-6 9/36°	-3°/28°	+5 1/50°
-6 9/50°	-6 6/34°	-2 4/27°	+5 3/50°
-8°/50°	-8°/35°	-3 5/30°	+5 3/50°
-8 2/50°	-8 2/37°	-3 5/31°	+6°/50°
-7 4/50°	-7 5/36°	-4 1/29°	+7 3/50°

533.03

37+50	5.4	527.6
38+00	4.4	528.6
38+50	3.9	529.1
38+87	3.2	529.8
39+00	6.1	526.9
39+12	7.1	525.9
39+32 70	6.1	526.9
39+50	5.6	527.4
E.C. 39+86 31	5.4	527.6

Void

JK

℄

-6° 50'	-6° 34'	-3' 30"		+8° 50'
-5.3 50'	-5' 28"	-2 3 22"		+6 8 50'
-5° 50'	-4 4 17"	-1° 9"		+7 6 50'
-4 3 50'	-5° 41"	-4 7 8"		+6° 50'
-1 7 50'	-2° 38"	-1° 3"	+3 7 4"	+7 9 50'

Edge Of Oil Paving

Edge Of Oil Paving

533.03

40+00			5.3	527.7
40+50		Void	3.1	529.9
T.P.	9.84	540.22	2.65	530.38
41+00			8.9	531.3
41+50			7.3	532.9
42+00			5.8	534.4
42+50			4.4	535.8
43+00			2.6	537.6
43+50			2.0	538.2

		540.22		
B.M.	0.80	540.61	0.41	539.81
44+00	Void		3.0	537.6
44+50			3.9	536.7
45+00			5.5	535.1
B.C. 45+24.62			6.1	534.5
45+50			7.5	533.1
46+00			10.6	530.0
46+50			12.7	527.9
T.P.	1.38	529.15	12.84	527.77

Nail in Tele. Pole At Sta. 43+81. Pole No. 76874

529.15'

47+00			4.8	524.3
47+50			8.9	520.2
E.C. 47+62.95'			10.5	518.6
47+85'			12.7	516.4
T.P.	0.96	517.07	13.04	516.11
48+00			4.9	512.2
48+39			11.0	506.1
48+50			14.7	502.4
48+61			16.7	500.4

Void

517.07

48+86			17.6	499.5
		Void		
49+00			16.4	500.7
		JK		
49+18			14.8	502.3
49+50			9.3	507.8
T.P.	12.20	527.69 ✓	1.58	515.49 ✓
49+80			14.1	513.6
49+90			10.8	516.9
50+00			10.6	517.1
50+09			10.0	517.7

527.69

50+17			6.8	520.9
50+50			5.6	522.1
51+00			2.1	525.6
51+50			0.1	527.6
I.P.	8.43	536.00	0.12	527.59
52+00			6.5	529.5
52+50			4.8	531.2
53+00			3.2	532.8
B.C. 53+44.38			1.9	534.1

Void

JK

		536.00	
53+50		1.8	534.2
B.M.	Void	0.05	535.95 ✓
B.M.	2.08	538.03 ✓	535.95 ✓
53+93		2.3	535.7
+98		1.60	536.43
54+00		1.57	536.46
54+18		1.79	536.24
+24		1.9	536.1
+25		1.2	536.8

Nail In Dead Tree 5' Lt of Sta. 53+75

DEC. 20, 1945
SOPER
WADELL
~~PHILLIPS~~

EDGE OF PAVING

EDGE OF PAVING

		538.03		
54+50			1.2	536.8
	Void			
55			1.7	536.3
	JK			
+50			3.0	535.0
56			3.8	534.2
+50			5.0	533.0
56+93.26 P.C			7.22	530.81
57			7.8	530.2
+50			10.4	527.6
58			12.6	525.4
TP	0.93	526.67	12.29	525.74

526.67

58+50		3.1	523.6
	Void		
58+96.90 B.C.		5.1	521.6
59		5.2	521.5
+50		8.8	517.9
PT	8.77	523.32	12.12	514.55
60		10.8	512.5
+07		11.3	512.0
+13		12.3	511.0
+22		12.8	510.5
+35		11.9	511.4

		523.32		
60+50			9.6	513.7
+55	Void		7.2	516.1
61			4.1	519.2
+50			1.4	521.9
R	12.79	535.65 ✓	0.46	522.86 ✓
62+00			11.2	524.4

CONT FROM P. 48

+08.01 EC			10.7	525.0
+50			8.3	527.4
63			5.1	530.5
+50			1.3	534.3

		535.65		
TP	11.96	547.33	0.28	535.37
64+00			8.7	538.6
+50			2.9	544.4
TP	12.00	559.00	0.33	547.00
65			7.9	551.1
+50			0.9	558.1
TP	12.92	571.70	0.22	558.78
65+50			6.6	565.1
66			3.8	567.9

℄

-6 4/50

+5 6/50

-7 3/50

+5 5/50

		571.70		
66+09			0.7	571.0
TP	12 23	583.82	0.11	571.59
66+20			10.9	572.9
+39			10.9	572.9
+40			8.1	575.7
+50			6.9	576.9
+64			3.8	580.0
+85			0.9	582.9
67+00			0.1	583.7

℄

9'-ABOVE THIS ELEV. IS FLOOR OF CHICKEN HOUSE

$-5\frac{2}{50}$ $+6\frac{1}{50}$

$-4\frac{5}{50}$ $+4\frac{8}{50}$

℄

		583.82		
67+16.12 P.O.T			0.41	583.41
+43			3.4	580.4
+50			5.2	578.6
+63			6.5	577.3
PT	0.10	571.48	12.44	571.38
68			1.9	569.6
+12			4.5	567.0
+20			8.0	563.5
+50			13.1	558.4
PT	0.14	559.04	12.58	558.90

℄

ON HUB

-6°
50°

+2!
50°

-7°
50°

+2!
50°

-4?
50°

+4?
50°

℄

		559.04		
69			6.1	552.9
+50			9.4	549.6
70			10.9	548.1
+50			10.6	548.4
71			9.6	549.4
+50			7.5	551.5
72			5.6	553.4
+50			4.2	554.8
TP	5.42	559.90	4.56	554.48

℄

$-4\frac{0}{50}$	$+4\frac{0}{50}$
$-4\frac{1}{50}$	$+5\frac{1}{50}$
$-5\frac{1}{50}$	$+7\frac{4}{50}$
$-5\frac{5}{50}$	$+8\frac{1}{50}$

℄

		559.90		
72+79			47	555.2
+85			3.5	556.4
+98			3.3	556.6
73+00			4.4	555.5
+50			5.3	554.6
74+05.45 BC			7.8	552.1
+50			9.6	550.3
75			11.2	548.7
+50			12.2	547.7
FP	5.17	553.47	11.60	548.30

-6° 50"

-5° 50"

+10° 50"

+5° 50"

		553.47		
76			5.3	548.2
+50			5.0	548.5
+58.62 ℄			4.89	548.58
77			4.6	548.9
+50			4.8	548.7
+86			4.9	548.6
78			5.5	548.0
℘	3.72	551.71 ✓	5.48	547.99 ✓
78+09			4.4	547.3

ON HUB

	551.71		
78+50		3.8	547.9
+64.70		4.0	547.7
79		4.2	547.5
+34		4.6	547.1
+50		4.4	547.3
+72		4.4	547.3
80		5.2	546.5
+50		6.3	545.4
81		6.0	545.7

EDGE OF OIL PAVING

EDGE OF OIL PAVING

		551.71			
81+50			5.3	546.4	
82			4.9	546.8	
					✓ Rec.
			6.08	545.63	539.73
B.M	2.48	548.11		545.63	
			5.82	542.29	Rec. 542.51

CK. ON B.M. NAIL IN POLE RT OF 79+25

539.73 City datum
6.12
545.85
545.63
.22

CK ON B.M. ON MURRAY DAM

542.51
542.29
.22 ERROR

NOTES REDUCED 1·2·46 JWK

CK. LEVELS TO PICKUP 0.21'

	2.28	538.23	~~535.95~~	535.95	
ck. on sta 54+00			1.77	536.46	Rec. 536.46
TP	12.45	538.19	12.49	525.74	Rec 525.74
ck on ℄ 63+50			3.9	534.3	Rec. 534.3
TP	12.48	549.91	0.76	537.43	
ck on ℄ 64+50			5.5	544.4	Rec 544.4
TP	12.69	562.43	0.17	549.74	
ck on ℄ 65+50			4.3	558.1	Rec 558.1
TP	12.35	574.59	0.19	562.24	
ck on TP			3.01	571.58	Rec 571.59
TP	1.79	576.10	0.28	574.31	

		576.10				
CK ON ℄ 66+00			6.6	569.5	Rec 569.6	
TP	0.20	563.40	12.90	563.20		
CK ON TP			4.52	558.88	Rec. 558.90	
TP	0.31	550.72	12.99	550.41		
CK ON B.M.			9.28	541.44		NAIL IN POLE
TP	7.60	551.57	6.75	543.97		
CK ON TP			3.57	548.00	Rec. 547.99	
CK ON B.M.			5.93	545.64	Rec. 545.63	NAIL IN POLE RT of 79+25 Rec. ELEV 539.73 (CITY datum) Corr 545.85

EL MONTE P.L.

CONT FROM P. 12

PROFILE OF ALTERNATE LOC. - SPUR TRACK

STA. 30+35.66 TO

B.M.	1.69	541.50		539.81	
TP	0.42	529.64	12.28	529.22	
TP	1.09	519.57	11.16	518.48	
30+35.66	(ON HUB)		2.13	517.44	REC 517.4
30+50			2.5	517.1	
31+00			3.0	516.6	
+50			4.5	515.1	
32+00			5.5	514.1	
+50			6.6	513.0	
+91			8.3	511.3	

SOPER X-NOTES
WADELL - ROD
PHILLIPS - TAPE

℄

NAIL IN POLE AT STA 43+81, #76874

B.C. OF FIRST LOC. = P.O.T. OF "A" LINE

-3.3 / 50.0 Edge Bank — +1.0 / 50.0

-7.3 / 50.0 Edge Pave. — -7.6 / 36.0 toe slope — -1.3 / 22.0 — +2.3 / 50.0

-4.6 / 50.0 — -4.0 / 20.0 Edge Pave. — -4.1 / 5.0 — +1.0 / 50.0

← TOP OF ROAD CUT

℄

519.57

32+93			12.4	507.2	Gutter
33+00			12.2	507.4	
+19.5			11.28	508.29	Edge Paving
+29.88 B.C			10.9	508.7	
+50			10.45	509.12	
+57.4			10.32	509.25	Edge Paving
+80			10.3	509.3	
34+00			12.9	506.7	
PI	10.08	517.77	11.88	507.69	
34+38			12.0	505.8	

℄

-0.9 50.0	0.0 15.0		+3.6 7.9	+7.0 50.0
-0.9 50.0	0.0 11.0		+0.9 4.0	+3.5 9.9	+6.7 50.0
-6.0 50.0	-0.8 31.0		+0.5 24.0	+3.1 50.0
-8.1 50.0	-0.3 14.0		+0.9 34.0	+2.1 50.0
-8.9 50.0	-7.2 31.0			+1.0 50.0
-3.0 50.0	-4.0 39.0	-3.5 15.0	+2.1 6.0	+4.0 13.0	+4.7 50.0
+2.0 50.0		-2.1 27.0	+5.1 24.0	+5.9 50.0	

℄

	517.77		
34+50	11.1	506.7	
+56	10.7	507.1	
+64	9.0	508.8	
+76	9.0	508.8	
+82	10.0	507.8	
35+00	9.8	508.0	
+13	9.7	508.1	
+50	6.9	510.9	
35+79.18 E.C.	4.88	512.89	On Hub

℄

+2 4/50	-2 0/23			+5 2/30	+5 4/50
+2 7/50	-1 8/23	-1 6/9		+4 9/30	+5 5/50
+2 0/50				+4 0/33	+4 0/50
+2 0/50				-0 8/17	+4 4/34 +4 3/50
+4 0/50	+1 7/16	0 0/7		+2 0/25	0 0/41	0 0/50
+5 2/50		+0 2/11		+0 8/18	5 7/38	6 3/50
+5 5/50				0 0/19	+6 2/40	+6 2/50
+6 0/50				+2 3/15	-1 1/25	+4 6/44 +4 0/50
ON HUB						

℄

		517.77		
36+00			3.7	514.1
+50			1.2	516.8
TP	11.65	528.44	0.98	516.79
37+00			10.1	518.3
+50			8.4	520.0
38			7.0	521.4
+21.23 B.C.			6.41	522.03
+50			5.7	522.7
39			3.8	524.6

℄

$+7^{1}$ 50^{0}	-1^{0} 8^{0}	-0^{9} 35^{0}	$+2^{3}$ 43^{0}	$+2^{1}$ 50^{0}
$+6^{0}$ 50^{0}	-2^{1} 21^{0}	-1^{1} 36^{0}	$+1^{5}$ 43^{0}	$+1^{3}$ 50^{0}
$+6^{7}$ 50^{0}	-0^{3} 19^{0}	$+0^{5}$ 27^{0}	$+1^{1}$ 41^{0}	$+0^{8}$ 50^{0}
$+6^{0}$ 50^{0}	-0^{8} 15^{0}	$+0^{8}$ 41^{0}	$+0^{4}$ 50^{0} Edge Pave	
$+5^{2}$ 50^{0}			$+0^{3}$ 50^{0}	
ON HUB				
$+5^{3}$ 50^{0}	0^{0} 17^{0}	$+1^{0}$ 20^{0}	$+0^{3}$ 50^{0}	
$+7^{1}$ 50^{0}	-0^{8} 13^{0}	$+1^{0}$ 19^{0}	$+0^{3}$ 50^{0}	

℄

		528.44		
39+50			1.0	527.4
TP	12.39	540.33	0.50	527.94
40+00			11.1	529.2
+50			9.0	531.3
41			5.9	536.4
+50			4.5	535.8
+84.23 BK			3.06	537.27
42			2.7	537.6
+50			1.6	538.7

℄

+8 0/50	-2 0/26	-0 1/32	-0 1/50
+7 5/50	-1 7/30	-0 9/35	-0 9/50
+8 1/50			-1 5/50
+7 0/50			-2 5/50
+6 8/50		-2 0/45	-2 9/50
ON HUB			
+5 3/50		-1 4/39	-2 6/50
+4 8/50			-1 2/50

℄

		540.33			
43+00			1.7	538.6	
+32			1.3	539.0	
+39			2.5	537.8	
+50			3.0	537.3	
CK. ON B.M			0.54	539.79	REC. 539.81
44+00			4.3	536.0	
+03			6.8	533.5	
		✓		✓	
IP	0.34	533.96	6.71	533.62	
44+50			2.9	531.1	

+2 3/50 = 0

-0 4/50 = 0

		533.96			
45+00			5.4	528.6	
+50			7.8	526.2	
46			9.3	524.7	
+50			11.3	522.7	
PT	0.17	521.76 ✓	12.37	521.59 ✓	
47+00 P.O.T.			1.56	520.20	On Hub
+25			2.8	519.0	
+41			6.1	515.7	
+50			7.4	514.4	

-2° 50'	0° 42'			+0° 50'
-3° 50'	-2° 25°	+1° 19°	-1° 33'	0° 50'
-2° 50'		+0° 32'	+3° 50'	
-2° 50'				+3° 50'

		521.76			
47+71			9.4	512.4	
+82			12.2	509.6	Top of Bank
BP	1.17	509.95 ✓	12.98	508.78 ✓	
47+92			6.3	503.7	
+98			14.3	495.7	
48+00			14.8	495.2	Bottom of Creek
+02			14.3	495.7	
+07			13.1	496.9	
+38			13.3	496.7	

℄

-3 8/50°		0° 19°	+2 1/50°
-2 2/50°			+3 0/50°
-1 0/50°	-4 4/43°	+3 7/20°	+4 7/50°
-0 2/50°		+1 8/17°	+7 9/26° +10 4/50°
-0 2/50°		-0 6/25°	+5 8/36° +7 0/50°

		509.95		
48+42			14.2	495.8
+47			13.1	496.9
+50			12.9	497.1
+84			9.5	500.5
+92			7.7	502.3
49+00			6.9	503.1
PI	12.51	522.16 ✓	0 30	509.65 ✓
49+50			10.4	511.8
+67			7.0	515.2
+88			3.2	519.0

		522.16		
50+00			1.9	520.2
PT	12.41	534.18 ✓	0.39	521.77 ✓
50+50			11.1	523.1
51			9.0	525.2
+50			7.7	526.5
52			6.0	528.2
+50			4.1	530.1
53			2.4	531.8
+50			1.4	532.8

		534.18			
53+70			0.9	533.3	
+74			0.1	534.1	
+76			0.5	533.7	
+80.3			0.16	534.02	EDGE OF PAVING
SET B.M.	3.10	536.75 ✓	0.53	533.65 ✓	SPIKE IN ROOT OF 30" PEPPER TREE, 26 LT 53+79
54+00.3			2.88	533.87	EDGE OF PAVING
+03			3.3	533.4	
+04			2.5	534.2	
+24.79 BC			2.00	534.7	ON HUB

		536.75		
54+50			2.1	534.6
55+00			3.1	533.6
+50			3.4	533.3
56			3.8	533.0
+50			5.5	531.2
57			8.2	528.5
+50			10.5	526.2
58			12.5	524.2
TP	0.77	525.13 ✓	12.39	524.36 ✓

		525.13		
58+50			2.6	522.5
59			5.3	519.8
+29			7.8	517.3
+50			10.4	514.7
R	9.25	522.18 ✓	12.20	512.93 ✓
59+80			10.2	512.0
+84			11.2	511.0
+94			11.7	510.5
60+00			11.9	510.8

		522.18		
60+09			10.5	511.7
+21			8.6	513.6
+27			6.3	515.9
+50			4.0	518.2
61			1.3	520.9
BT	12.85	534.12 ✓	0.91	521.27 ✓
61+50			10.8	523.4
61+82.01 E.C. BACK = 62+09.71 B.S. AHEAD		✓	8.97	525.15 ✓
FS	10.13	541.52 ✓	2.73	531.39 ✓
BT	5.05	546.05	0.52	541.00
			~~2.73~~	~~531.39~~ ✓
CK. ON B.M. #5			2.58	543.47

CONT. P. 24

NOTES REDUCED
1.2.46 JWK

ON HUB

Rec. elev. 543.72 Book 669/13
Rec. elev. 543.51 " 690/34

El Monte R.L.
Profile for Pipe line
Parallel TO SPUR R.R. "B" Route
Shots taken from ℄ of R.R.

Nelson Notes 49
Leonard Hand level
Rice Rod

3-11-46 Cloudy Cool Windy

11+50			
		-3.0 67	-3.2 53
12+00	-4.5 67		
			-4.4 67
+50			
13+00		-6.6 67	
			-7.6 67
+50			
14+00			-5.8 67
		-7.3 67	
+50			
15+00			-7.2 67
		-5.9 63	
+50			
16+00			-1.8 63
		-3.5 63	
+50			
17+00			-4.4 67
		-6.8 67	
+50			
18+00			-6.8 67
		-6.4 67	
+50			
19+00			-6.3 67
		-5.4 67	
+50			

20+03 05				
+50			-7.2 67	
21+00		-7.4 67		
+50			-6.8 67	
22+00		-7.0 67		
50			-7.8 67	
23+00		-9.4 67		
+50			-10.4 63	
24+00	-13.5 88	-10.4 63		
+50			-14.2 88	
25+00		-4.6 88		
+50			+5.4 88	
26+00		+7.6 88		
+50	+6.7 88		+4.7 63	
27+00		+4.2 63		
+50			+3.1 67	
28+00		-1.9 ← 67		Lower than ℄ at 28+00
+45 80			+0.4 67	
		-1.0 67		

29+00		
+50		
30+00		
+50		
31+00		
+50		
+79		
+84		
32+00		
+50		
+67		
33+00		
+50		
34+00		
+50		
35+00		
+50		
36+00		
	-1.4 67	
-2.0 67		
	-1.9 67	
-2.6 67		
	-3.6 67	
-3.7 67		
	-4.7 67	Lower than ℄ @ 32+00
-9.2 67		" " " "
	-9.6 67	
-7.0 67		West edge pavement
	-6.8 67	Lower than ℄ @ 32+00
-4.3 63		
	-8.9 63	bottom of draw
+0.2 63		
	+4.6 67	
+5.7 67		
	+8.0 67	
+8.5 67		

36+50	
37+00	+9.0 67
+50	+9.0 67
38+00	+8.0 67
+50	-7.5 67
39+00	+8.3 67
+50	+9.9 67
40+00	+10.6 67
+50	+11.4 67
41+00	+11.4 67
+50	+11.0 67
42+00	+10.2 67
+50	+9.0 67
43+00	+6.2 67
+50	+4.3 67
44+03	+1.4 67
+50	+0.1 67
45+00	-1.7 67
	-2.5 67

+50	Wall plowed out			
46+00			-2.4 67	
+50		-2.2 63		
47+00			-2.4 63	
+50	-4.1 88	-2.0 63		
+66			-6.0 88	Lower than ℄ @ 47+50
48+07		+0.1 88		
+50			-2.4 88	
49+00		+2.4 88		
+50	+1.2 88		+1.5 73	
50+00		0.0 73		
+50			-1.1 73	
51+00		-2.0 73		
+50			-2.2 73	
52+00	-2.4 73	-1.8 53		
+50			-2.0 53	
53+00		-2.2 53		
+50			-1.6 53	
54+00		-2.7 53		West edge Pavemt

Nelson Notes SK
Leonard Hand Level
Rice Rod

3-11-46
clear-warm

54+50			
55+00			-2.9 53
+50		-2.8 53	
56+00			-2.4 53
+50	-2.9 73	-2.4 53	
57+00			-3.4 73
+50		-2.1 73	
58+00			-2.1 73
+50		-1.0 73	
58+96.90 "A" Line			-0.4 73
59+00	-0.3 88	0.0 73	
+50			-0.4 88
60+00		-0.3 88	
+50			-1.3 88
61+00	-8.6 88	-6.0 73	
+50			-2.18 73
61+82.01 BAK = 62+09.71 AH		-2.2 73	
+50			-2.0 73
		-0.8 73	

63+00			-0.9 73
+50	-2.0 73	-0.9 63	
64+00			-1.8 63
+50		-3.1 63	
65+00			-9.7 63
+50	-9.2 73	-8.0 63	
66+00			-10.8 73
+50		-9.4 73	
67+00			-7.3 73
+16 12		-7.0 73	
+50			-7.2 73
68+00		-7.0 73	
+50	-5.1 73		-4.9 63
69+00		-4.3 63	
+50			-3.6 63
70+00		-3.8 63	
+50			-4.6 63
71+00		-5.0 63	

71+50			-5.1 63	
72+00		-6.2 63		
+50			-6.4 63	
73+00		-6.8 63		
+50			-6.2 63	
74+05	-4.4 63	-3.8 53		
+50			-3.1 53	
75+00		-2.0 53		
+50			-1.5 53	
76+00		-1.8 53		
+50			-1.9 53	

G.

H
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40

to
of
ple
.9.

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.