

MISSION BAY

* 7

EUGENE DIETZGEN CO.

DRAWING INSTRUMENTS, THEODOLITES and SURVEYING INSTRUMENTS
 Chicago New York San Francisco New Orleans Pittsburg Toronto

MICROFILMED

JAN 7 1965

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 $30.6 + (20 - 16) \div 2$ or 2 ft. added to $30.6 = 32.6$. For slopes of 1 on $1\frac{1}{2}$ see inside of back cover.

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2:

MISSION BAY BRIDGE
REMOVAL OPERATIONS

OCT. 9-1946

The Johnson Western Co. began operations for the removal of center span of bridge this A.M.

Equipment on hand is one Compressor unit, belonging to the Hollywood House Movers Co. Carrying two Jack Hammer operators & one Compressor Operator

The Johnson Western Co. has the following manpower on hand for Preliminary Bridge work

One Superintendent

ELEVEN Men Classified as piledrivers are working on cutting of span to be raised free at North & South ends.

one welder with torch cutting bolts that secure girder beam to sec's of bridge at North & South end of removable span.

one flat rack truck with "A" frame & power wench & operator doing

(over)

PA
3-
8-
2
Miscellaneous lifting as needed
The barge to be used for
lifting the span was towed in
at 8:30 A.M. & Secured at the
west side of the removable
span.

Cribbing to be used is of
12'X12' Material

A six inch sec. of bridge
decking at the North & South
end is being removed by a
Power driven Skill Saw

OCT 10, 1946

The Johnson Western Co began
drifting the removable span
through to the E. Side at 6:40 A.M.
on an incoming Tide. The Tide
Staff on Mission Bay Bridge
reads 4.5 as the span went
through. Through at 6:50 A.M.

FRANKS DREDGING Co's. Cable
barge was towed through at 8:10 A.M.

THE Franks Dredging Co's
Dredge Dallas was Towed
through the open span at

9:15 A.M. On a Tide of 5.8
as smooth as you please
The Spud frame cleared
the high power lines by
approx. six feet.

The 1st sec. of Wave barracks
was taken through in three minutes
from 10:07 To 10:10 A.M. With the
tide just starting out.

Tugs used were the Malicious, Sister,
Mission Rock, Navy U.S.T #1031, &
Marriette

Labor crew is the same as
yesterday except, tugs,
operators & deck hands

11-25-46

MISSION BAY AREA
CHECK SOUNDINGS ON
PROJECT NO. 6 SIDE SLOPES

8 (7) 9

DIST.	SOUND		DIST.	SOUND	
42	0.0	+6.1	10	1.3	4.7
50	0.3	5.8	20	2.3	3.7
	0.6	5.5	(60)	3.1	2.9
	1.0	5.1	(60)	4.5	1.5
	1.3	4.8	50	5.1	0.9
	1.8	4.3		6.0	0.0
1+00	(7)	2.1		7.2	-1.2
	(9)	4.0		10.0	-4.0
	6.3	-0.2		13.6	-7.6
	8.4	-2.3	2+00	14.7	-8.7
	9.1	-3.0		14.5	-8.5
50	10.3	-4.2		14.3	-8.3
	13.3	-7.2		14.4	-8.4
	13.8	-7.7		15.1	-9.1
	14.1	-8.0	50	14.9	-8.9
	—	—		15.0	-9.0
2+00	14.6	-8.5		14.9	-8.9
				15.3	-9.3
# 126				15.2	-9.2
97	0.0	+6.1	3+00	15.4	-9.4
1+00	0.3	5.8		16.0	-10.0

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DIST	SOUND		DIST.	SOUND	
16.3	-10.3		#127		
16.3	10.3		1+55	12.4	-6.5
16.1	10.1		60	(5)	—
50	16.5	10.5	70	(5)	13.5 - 7.6
	16.5	10.5	80		14.0 - 8.1
	16.4	10.4	90		14.3 - 8.4
	16.0	10.0	2+00	14.6	-8.7
	14.5	8.5		14.8	-8.9
4+00	14.0	8.0		14.9	-9.0
	13.7	7.7		15.5	-9.6
	(6)	13.5	7.5	50	15.2 - 9.3
10:22	(6)	13.3	7.3		15.8 - 9.9
	13.0	7.0		16.0	-10.1
50	12.7	6.7		16.0	-10.1
60	9.9	3.9		15.4	-9.5
70	8.1	2.1	3+00	14.7	-8.8
80	7.0	1.0		14.6	-8.7
90	6.0	0.0		14.9	-9.0
5+00	2.6	+3.4		15.1	-9.2
10	1.8	+4.2		15.7	-9.8
20	1.2	+4.8	50	16.3	-10.4
30	0.8	+5.2		17.0	-11.1
40	0.4	+5.6		15.6	-9.7
50	0.0	+6.0	80	14.6	-8.7
				15.2	-9.3

DIST. SOUND

DIST SOUND

	15.0	- 9.1		9.9	- 4.1
4 +00	15.5	9.6		9.5	3.7
	15.6	9.7	50	9.8	4.0
	15.9	10.0		10.9	5.1
	15.7	9.8		11.6	5.8
	15.1	9.2		10.0	4.2
50	15.0	9.1		9.7	3.9
	14.9	9.0	7+00	9.6	3.8
	14.5	8.6		8.8	3.0
	14.5	8.6	(100)	9.4	3.6
	14.6	8.7	(50)	9.3	3.5
5+00	14.5	8.6		12.3	6.5
	14.7	8.8	50	13.3	7.5
	14.6	8.7		13.3	7.5
	14.8	8.9		13.1	7.3
	14.8	8.9		12.8	7.0
50	14.8	8.9		13.3	7.5
	14.8	?	8+00	13.5	7.7
	14.8	}		14.7	8.9
	14.8	}		14.5	8.7
	14.0	8.1		15.1	9.3
6+00	13.3	7.4		15.3	9.5
10	11.0	5.1	50	15.8	10.0
20	10.6	4.7		15.6	9.8

DIST SOUND

125

DIST SOUND

	15.5	- 9.7	95	0.0	+ 5.3
	15.7	9.9	1+00	0.4	0.4 4.9
	15.6	9.8	11.2	0.8	0.5 4.8
9+00	15.5	9.7		0.8	0.8 4.5
	15.5	9.7	(40)	1.5	1.0 4.3
	15.3	9.5		2.3	1.8 3.5
	15.1	9.3	50	2.9	2.3 3.0
	15.1	9.3		5.9	6.3 - 1.0
50	15.1	9.3		7.3	8.3 - 3.0
(50)	14.8	9.0		9.5	9.8 - 4.5
	14.6	8.8		10.3	10.0 - 4.7
	14.0	8.2	2+00	12.3	10.8 - 5.5
	12.8	7.0		13.0	12.8 7.5
10+00	10.3	4.5		13.5	13.0 7.7
10	11.5	5.7		13.7	13.5 - 8.2
20	9.0	- 3.2		12.9	13.5 - 8.2
30	5.2	+ 0.6	50	14.3	13.6 - 8.3
				14.2	13.6 - 8.3
				14.4	13.7 - 8.6
				13.6	14.1 - 8.8
				17.9	14.1 - 8.8
			3+00	19.8	14.3 - 9.0
				17.7	14.3 - 9.0
				14.9	14.3 - 9.0

11-26-46

(5)

MISSION BAY AREA

#18

CHECK SOUNDINGS ON SIDE SLOPES PROJECT #6

DIST	SOUND	DIST	SOUND	DIST	SOUND
10	0.4 +5.6			2.1	3.9
	0.8 5.2	1+00		2.9	3.1
	1.0 5.0			3.6	2.4
	1.2 4.8			4.8	1.2
50	1.6 4.4			9.7	-3.7
	2.0 4.0			9.9	3.9
	2.7 3.3	50		12.4	6.4
	3.3 2.7	60		13.0	7.0
	4.3 1.7	70		13.3	7.3
1+00	4.6 1.4				
	4.6 1.4	#20 (?)			
	4.8 1.2	0+55	0.0	+6.0	
	8.6 -2.6	65	0.2	5.8	
	10.7 4.7	75	0.4	5.6	
50	13.0 7.0	85	0.8	5.2	
60	14.6 8.6	95	1.0	5.0	
		1+05	1.6	4.4	
#19		15	3.1	2.9	
32	0.0 +6.0	25	7.8	-1.8	
40	0.4 5.6	35	8.3	2.3	
50	0.8 5.2	45	10.7	4.7	
	1.0 5.0	55	12.9	6.9	
	1.4 4.6	65	13.5	7.5	
	1.7 4.3	1+75	13.8	7.8	
		85	13.9	7.9	

DIST	SOUND	DIST	SOUND
30	15.1 14.7-9.7	2.0	+3.1
	8.8 14.8-9.6	1.8	3.3
50	8.5 14.7-9.5	1.3	3.8
	6.0 14.4-9.2	3+00	1.0 4.1
	7.7 14.6-9.4	10	1.0 4.1
	8.1 14.4 6.2	20	0.8 4.3
	9.3 -4.1		0.4 4.7
4+00	8.4 -3.2		
	5.2 0.0		
	1.8 +3.4		

#124

1+46	0.0	+5.2
50	0.3	4.9
	0.4	4.8
	0.8	4.4
	1.0	4.2
	1.8	3.4
2+00	1.8	3.4
	1.8	3.4
	2.2	3.0
	2.3	2.9
	2.2	3.0
50	2.1	3.1
	2.5	2.7

DIST	SOUND		DIST	SOUND	
#21 (?)			30	10.1	- 4.3
0+57	0.0	+6.0	40	14.8	- 5.0
65	0.2	5.8	50	12.0	- 6.2
75	0.6	5.4	60	14.5	- 8.7
85	0.8	5.2			
95	1.0	5.0	# 9		
1+05	1.6	4.4	60	0.2	+ 5.4
15	4.4	1.6	70	0.5	5.1
25	7.1	-1.1	-	-	
35	8.0	2.0		1.0	4.6
45	9.2	3.2	1+00	1.7	3.9
55	13.0	7.0		3.3	2.3
				5.6	0.0
#10				8.2	- 2.6
31	0.0	+5.8		8.7	- 3.1
40	0.3	5.5	50	10.2	- 4.6
50	0.5	5.3		13.5	- 7.9
	0.8	5.0			
	1.0	4.8	#7		
	1.6	4.2	75	0.1	+ 5.4
	1.9	3.9	85	0.5	5.0
14 00	2.2	3.6	95	0.5	5.0
	3.8	2.0	1+05	2.5	3.0
	7.2	-1.4	15	5.0	0.5

DIST	SOUND		DIST	SOUND	
25	7.0	- 1.5	# 4		
35	8.8	3.3	90	0.1	+ 5.1
45	10.3	4.8	1+00	0.5	4.7
55	13.0	7.5		0.6	4.6
65	15.1	9.6		1.4	3.8
				7.1	- 1.9
# 2 - NORMAL TO CROSS SEC.				8.1	2.9
28	0.0	+5.4	50	8.8	3.6
30	0.8	4.6		12.4	7.2
	1.4	4.0		13.9	8.7
50	1.6	3.8		13.9	8.7
	1.8	3.6		13.9	8.7
	2.1	3.3	2+00	14.0	8.8
	1.7	3.7			
	2.0	3.4			
1+00	1.9	3.5			
	1.6	3.8			
	2.6	2.8			
	6.3	- 0.9			
	8.4	3.0			
50	8.2	2.8			
	8.6	3.2			
	12.2	6.8			
	13.7	8.3			
90	13.8	8.4			

MISSION BAY AREA Project #6
CHECK SOUNDINGS

#124

DIST	SOUND	
1+30	0.0	+4.2
	3.2	1.0
50	3.2	1.0
	3.2	1.0
	3.8	0.4
	5.0	-0.8
	5.0	-0.8
2+00	5.2	-1.0
	5.8	-1.6
	5.8	-1.6
	3.9	+0.3
	3.9	0.3
50	4.0	0.2
	3.5	0.7
	4.0	0.0
	4.0	0.0
	4.0	0.0
3+00	3.6	0.4
	3.2	0.8
	0.0	4.0

#125

DIST	SOUND	
1+35	0.0	+3.8
40	3.0	0.8
50	5.5	-1.7
	6.5	2.7
	7.0	3.2
	7.3	3.5
	8.5	4.7
2+00	10.2	6.4
	10.5	6.7
	10.1	6.3
	10.1	6.3
	10.5	6.7
50	10.9	7.1
	11.0	7.2
	11.1	7.3
	11.3	7.5
	11.8	8.0
3+00	11.7	7.9
	11.7	7.9
	11.7	7.9
	11.3	7.5
	12.0	8.4
50	10.5	6.7

#125 CONTD.

DIST.	SOUND	
	8.3	4.7
	7.8	4.2
3+00	7.2	3.6
	6.9	3.3
4+00	6.7	3.1
	6.0	2.4
	4.0	0.4
	0.0	+3.6

12-19-46
MISSION BAY AREA
CHECK SOUNDINGS
PROJECT #6

STA 126+50 0+00 = B/L

DIST.	SOUND		DIST	SOUND	
125 ^{10:40} _(8.9)	0.0	+3.9	50	14.4	10.7
30	0.6	+3.3	60	14.1	10.4
40	4.0	-0.1	70	13.0	9.3
50	6.7	2.8	80	12.7	9.0
60	11.2	7.3	90	12.5	8.8
70	11.3	7.4	4+00	13.0	9.3
80	12.4	8.5	10	12.4	8.7
90	11.8	7.9	20	12.1	8.4
1+00	12.3	-8.4	30	12.5	8.8
10	12.3	-8.4	40 ^(8.3)	12.2	8.5
20	12.0	-8.1	50	12.1	8.4
30	12.3	-8.4	60	12.1	8.4
40	12.4	-8.5	70	12.0	8.3
50	12.8	8.9	80	12.1	8.4
60	12.7	8.8	90	11.0	7.3
70	13.3	9.4	5+00	9.5	5.8
80	13.1	9.2	10	9.8	6.1
90	13.0	9.1	20	8.7	6.0
2+00	13.0	9.1	30	8.0	4.3
10	12.8	8.9	40	7.0	3.0
20	13.0	9.1	50	6.1	2.4
30	12.8	8.9	60	6.4	2.7
40	13.4	9.5	70	6.0	2.3

Indexed

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DIST	SOUND		DIST	SOUND	
80	5.8	2.2	60	7.7	4.2
90	5.1	1.5	70	7.8	4.3
4+00	5.0	1.4	80	10.6	7.1
10	5.2	1.6	90	12.0	8.5
20	5.0	1.4	9+00	12.0	8.5
30	4.9	1.3	10	12.0	8.5
40	4.7	1.1	20	12.0	8.5
50	4.5	0.9	30	12.1	8.6
60	4.3	0.7	40	12.2	8.7
70	4.0	0.4	50	12.2	8.7
80	3.5	+0.1	60	12.4	8.9
90	3.4	+0.2	3.5 70	12.4	8.9
7+00	3.1	+0.5	80	12.4	8.9
10:52 10-10	3.0	+0.6	90	12.2	8.7
20	3.0	+0.6	10+00	12.2	8.7
30	1.3	+2.3	10	12.1	8.6
40	1.5	2.1	20	12.0	8.5
90	1.8	+1.8	30	11.1	7.6
8+00	2.1	+1.5	40	7.5	4.0
10	3.6	0.0	50	3.4	+0.1
20	4.7	1.1	60		
30	5.8	2.2			
40	7.4	3.8			
50	8.0	4.4			

12-19-46

126+00

DIST	SOUND	DIST	SOUND
120 (3.6)	0.0 +3.6	60	14.2 10.7
11:07 30	1.0 +2.6	70	14.2 10.7
40	2.4 +1.2	80	13.3 9.8
50	3.0 +0.6	90	13.0 9.5
60	5.0 -1.4	4+00	12.0 8.5
70	9.5 -5.9	10	11.5 8.0
80	11.5 -7.9	20	11.7 8.2
90	12.4 -8.8	30	11.7 8.2
2+00	12.8 -9.2	40	11.4 7.9
10	12.0 -8.4	50	10.0 6.5
20	11.5 7.9	60 (3.3)	8.3 4.8
30	11.6 8.0	70	6.5 3.0
40	12.0 8.4	80	5.0 1.5
50	12.0 8.4	90	5.0 1.5
60	12.4 8.8	5+00	3.7 0.2
70	12.3 8.7	10	3.3 +0.2
80	12.8 9.2	20	3.1 +0.4
90	12.6 9.0	30	2.8 +0.7
3+00	13.0 9.4	40	1.5 +2.0
10	14.1 10.5	50	0.0 +3.5
20	14.3 10.7		
30	13.6 10.0		
40	14.0 10.4		
50	14.2 10.6		

STA 125+00

DIST	SOUND	DIST	SOUND
142+00	0.0 +3.4	50	10.0 6.7
20	2.5 +0.9	60	9.6 6.3
(3.4) 30	4.1 -0.7	70	9.6 6.3
40	5.0 -1.6	80	9.1 5.8
11:25 50	8.0 -4.6	90 (3.3)	8.3 5.0
60	8.8 5.4	4+00	7.4 4.1
70	9.3 5.9	10	6.5 3.2
80	9.5 6.1	20	6.0 2.7
90	9.8 6.4	30	5.8 2.5
2+00	10.1 6.7	40	5.9 2.6
10	10.4 7.0	50	5.9 2.6
20	10.5 7.1	60	5.5 2.2
30	10.3 6.9	70	1.5 +1.8
40	10.0 6.6	78	0.0 +3.3
50	12.0 8.6		
60	12.0 8.6		
70	12.1 8.7		
80	12.2 8.8		
90	12.0 8.6		
3+00	11.8 8.4		
10	11.7 8.3		
20	11.3 7.9		
30	10.8 7.4		
40	10.4 7.0		

124+50

DIST	SOUND		DIST	SOUND	
1+07	0.0	+3.2	40	8.2	5.1
10	1.0	+2.2	50	7.2	4.1
11:30 20	3.6	-0.4	60	6.5	3.4
30	5.0	-1.8	70	5.8	2.7
40	5.1	-1.9	80	5.8	2.7
50	5.4	-2.2	90	5.9	2.8
60	6.7	3.5	4+00	6.0	2.9
70	6.7	3.5	10	5.8	2.7
80	6.5	3.3	20	6.0	2.8
90	7.3	4.1	30	6.3	3.1
2+00	8.3	5.1	40	6.0	2.8
10	10.0	6.8	50	1.4	+1.5
20	10.1	6.9	60	1.4	+1.5
30	10.2	7.0	70	1.3	+1.8
40	10.0	6.8	80	1.1	+2.0
50	9.7	6.5	91	0.0	+3.1
60	9.1	5.9			
70	9.7	6.5			
80	12.3	9.1			
90	12.0	8.8			
3+00	11.0	7.8			
10	10.3	7.1			
20	10.1	6.9			
30	9.6	6.3			

12-23-46

(10)

124+50

PT

DIST	SOUND		DIST	SOUND	
89(9:10)	0.0	+6.2	30	8.3	2.1
1+00	0.7	+5.5	40	8.3	2.1
10	0.7	+5.5	50	8.2	2.0
20	2.3	+3.9	60	8.0	1.8
30	5.1	+1.1	70	7.0	0.8
40	6.5	-0.3	80	3.8	+2.4
50	8.1	-1.9	90	1.5	+4.7
60	8.3	-2.1	7+00	0.0	+6.2
70	8.4	2.2			
80	9.3	3.1			
90	9.8	3.6			
2+00	9.5	3.3			
10	9.2	3.0			
20	9.0	2.8			
30	8.8	2.6			
40	8.5	2.3			
50	9.3	3.1			
60	9.2	3.0			
70	8.5	2.3			
80	8.0	1.8			
90	7.8	1.6			
3+00	7.1	0.9			
10	8.0	1.8			
20	8.5	2.3			

12-23-46
123+50

DIST	SOUND		DIST.	SOUND	
85	0.0	+6.2	20	1.0	+5.2
90	0.5	+5.7	30	0.5	+5.7
1+00	1.0	+5.2	40	0.0	+6.2
10	1.0	+5.2			
20	1.6	+4.6			
30	1.8	+4.4			
40	1.8	+4.4			
50	1.8	+4.4			
60	2.8	+3.4			
70	4.1	+2.1			
80	4.3	+1.9			
90	4.4	+1.8			
2+00	4.5	+1.7			
10	4.3	+1.9			
20	4.3	+1.9			
30	4.6	+1.6			
40	4.4	+1.8			
50	2.8	+3.4			
60	2.8	+3.4			
70	2.8	+3.4			
80	2.2	+4.0			
90	2.0	+4.2			
3+00	1.7	+4.5			
10	1.4	+4.8			

12-23-46
121+00

PT

①

DIST	SOUND		DIST	SOUND	
140	0.0	+5.9	80	2.5	+3.4
50	0.3	+6.6	90	2.0	+3.9
60	0.4	+5.5	4+00	1.6	+4.3
70	0.8	+5.1	10	1.4	+4.5
80	2.8	+3.1	20	1.0	+4.9
90	4.1	+1.8	30	0.5	+5.4
2+00	4.8	+1.1	40	0.3	+5.6
10	5.4	+0.5	47	0.0	+5.9
20	5.4	+0.5			
30	5.5	+0.4			
40	5.2	+0.7			
50	5.0	+0.9			
60	5.0	+0.9			
70	4.8	+1.1			
80	5.0	+0.9			
90	5.0	+0.9			
3+00	4.6	+1.3			
10	4.3	+1.6			
20	3.9	+2.0			
30	3.5	+2.4			
40	3.3	+2.6			
50	3.5	+2.4			
60	3.5	+2.4			
70	3.2	+2.7			

12-23-46

120+50

DIST SOUND			DIST SOUND		
133 ^{10:30}	0.0	+5.8	70	8.4	2.7
40	2.7	+3.1	80	8.2	2.5
50	5.0	+0.8	90	8.0	2.3
55 60	5.5	+0.3	4+00	8.0	2.3
70	5.6	+0.2	10	7.0	1.3
80	5.7	+0.1	20	6.1	0.4
90	6.0	-0.2	30	5.9	0.2
2+00	7.2	-1.4	40	4.8	+0.9
10	7.3	-1.5	50	4.0	+1.7
20	7.4	-1.6	60	1.3	+4.4
32 30	7.6	-1.8	70	1.0	+4.7
40	9.0	-3.2	80	0.1	+5.6
50	9.4	3.6	82	0.0	+5.7
60	9.5	3.7			
70	9.8	4.0			
80	9.8	4.0			
90	9.0	3.2			
3+00	10.3	4.5			
10	10.5	4.7			
20	10.2	4.4			
30	10.0	4.2			
40	9.4	3.6			
50	9.0	3.2			
60	8.9	3.0			

12-23-46

120+00

(12)

DIST SOUND			DIST. SOUND		
130 ³	0.0	+5.6	70	14.6	9.0
40 ¹⁰	2.6	+3.0	80	14.6	9.0
50	5.0	+0.6	90	14.6	9.0
60	5.5	+0.1	4+00	14.0	8.4
4.9 70	5.8	-0.2	10	13.0	7.4
80	7.5	-1.9	20	12.2	6.6
90	8.0	2.4	30	11.5	5.9
2+00	8.0	2.4	40	10.4	4.8
10	8.0	2.4	50	7.3	1.7
20	10.7	5.1	60	6.0	0.4
5.6 30	14.5	8.9	70	5.1	+0.5
40	14.5	8.9	80	2.6	+3.0
50	14.5	8.9	90	1.3	+4.3
60	14.9	9.3	5+00	1.0	+4.6
70	15.2	9.6	10	0.7	+4.9
80	15.4	9.8	20	0.5	+5.1
90	15.5	9.9	30	0.3	+5.3
3+00	15.6	10.0	36	0.0	+5.6
10	15.5	9.9			
20	15.7	10.1			
30	15.8	10.2			
40	16.0	11.4			
50	16.0	11.4			
60	15.2	9.6			

12-23-46

119+00

P+

DIST	SOUND		DIST.	SOUND	
134	0.0	+5.5	70	14.4	-8.9
40	0.5	+5.0	80	14.0	-8.5
50	3.6	+1.9	90	13.3	-7.8
60	6.0	-0.5	4+00	13.3	-7.8
70	6.0	-0.5	10	13.1	-7.6
80	6.3	-0.8	20	13.0	-7.5
90	6.7	-1.2	30	13.0	-7.5
2+00	7.7	-2.2	40	13.0	-7.5
10	8.5	-3.0	50	12.8	-7.3
20	10.2	-4.7	60	12.5	-7.0
30	15.0	-9.5	70	11.5	-6.0
40	15.0	-9.5	80	8.0	-2.5
50	14.6	-9.1	90	6.2	-0.7
60	14.5	-9.0	5+00	5.5	0.0
70	14.5	-9.0	10	4.1	+1.4
80	14.8	-9.3	20	2.0	+3.5
90	14.8	-9.3	30	1.2	+4.3
3+00	15.0	-9.5	40	1.0	+4.5
10	15.0	-9.5	50	0.5	+5.0
20	14.7	-9.2	60	0.3	+5.2
30	14.7	-9.2	67+0	0.0	+5.5
40	14.4	-8.9	80		
50	14.5	-9.0			
60	14.8	-9.3			

12-23-46

118+00

P+

(13)

DIST	SOUND		DIST.	SOUND	
40	0.0	+5.3	50	13.0	-7.7
20	0.3	+5.0	60	12.7	-7.5
30	1.0	+4.3	70	12.3	-7.1
40	1.5	+3.8	80	12.3	-7.1
50	2.5	+2.8	90	12.3	-7.1
60	5.0	+0.3	4+00	12.4	-7.2
70	5.7	-0.4	10	12.4	-7.2
80	6.0	-0.7	20	12.5	-7.3
90	8.0	-2.7	30	12.8	-7.6
2+00	8.0	-2.7	40	12.5	-7.3
10	8.9	-3.6	50	12.2	-7.0
20	9.6	-4.3	60	12.1	-6.9
30	10.2	-4.9	70	12.0	-6.8
40	11.5	-6.2	80	12.0	-6.8
50	13.4	-8.1	90	12.3	-7.1
60	13.1	-7.8	5+00	10.2	-5.0
70	13.0	-7.7	10	7.0	-1.8
80	13.0	-7.7	20	5.0	+0.2
90	13.4	-8.1	30	3.5	+1.7
3+00	14.0	-8.7	40	1.0	+4.2
10	14.0	-8.7	50	0.7	+3.5
20	14.0	-8.7	60	0.3	+4.9
30	13.7	-8.4	70	0.0	+5.2
40	13.4	-8.1			

12:23-46

117+00

P+

DIST	SOUND		DIST	SOUND	
125	0.0	+5.1	60	12.0	-6.9
30	0.5	+4.6	70	11.8	-6.7
40	1.0	+4.1	80	11.7	-6.6
50	1.5	+3.6	90	12.4	-7.3
60	2.6	+2.5	4+00	12.5	-7.4
70	4.0	+1.1	10	12.2	-7.1
80	5.2	-0.1	20	11.8	-6.7
90	7.0	-1.9	30	11.8	-6.8
2+00	7.8	-2.7	40	11.7	-6.6
10	8.3	-3.4	350	11.8	-6.8
20	9.6	-4.5	60	11.8	-6.8
30	10.5	-5.4	70	11.7	-6.7
40	13.0	-7.9	80	11.7	-6.7
50	13.0	-7.9	90	11.7	-6.7
60	12.7	-7.6	5+00	11.3	-6.3
70	12.8	-7.7	10	11.3	-6.3
80	13.0	-7.9	20	11.3	-6.3
90	13.0	-7.9	30	11.4	-6.4
3+00	13.0	}	40	14.0	-9.0
10	13.0	}	50	14.5	-9.5
20	12.9	-7.8	60	14.0	-9.0
30	12.7	-7.6	70	13.0	-8.0
40	12.7	-7.6	80	11.5	-6.5
50	12.4	-7.3	90	10.5	-5.5

117+00

DIST	SOUND	
6+00	9.4	-4.5
10	6.0	-1.1
20	4.0	+0.9
30	2.5	+2.4
40	1.0	+3.9
50	0.0	+4.9

(14)

12-23-46

116+00 *pt*

DIST SOUND			DIST SOUND		
135	0.0	+4.8	70	14.0	9.3
40	0.3	+4.5	80	13.8	9.1
50	0.8	+4.0	90	13.5	8.8
60	1.5	+3.3	4+00	13.1	8.4
70	3.4	+1.4	10	13.0	8.3
80	5.6	-0.8	20	12.9	8.2
90	6.5	-1.7	30	12.8	8.1
2+00	7.3	+2.5	40	12.7	8.0
10	8.1	-3.3	50	12.7	8.0
20	9.0	-4.2	60	12.5	7.8
30	10.7	-5.9	70	12.4	7.7
40	12.0	-7.2	80	12.0	7.3
50	13.0	-8.2	90	12.0	7.3
60	13.3	-8.5	5+00	13.0	8.3
70	14.0	-9.2	10	14.8	10.1
80	14.0	-9.2	20	15.0	10.3
90	14.1	-9.3	30	15.0	10.3
3+00	14.0	-9.2	40	15.0	10.3
10	14.5	-9.7	50	15.0	10.3
20	14.5	-9.7	60	15.0	10.3
30	14.5	-9.7	70	14.8	10.1
40	14.5	-9.7	80	14.6	9.9
50	14.4	-9.6	90	15.0	10.3
60	14.3	-9.5	6+00	14.7	10.0
			10	14.0	9.3

set Gauge at 1.31

126+00

12-24-46 *pt*
0+00 = 71.0'E

DIST SOUND			DIST SOUND		
0+00	1.1	+4.8	40	14.4	8.5
10	1.3	+4.6	50	14.4	8.5
20	1.3	+4.6	60	14.4	8.5
30	1.4	+4.5	70	14.4	8.5
40	1.7	+4.2	80	14.4	8.5
50	1.9	+4.0	90	14.4	8.5
60	2.0	+3.9	3+00	14.2	8.3
70	2.1	+3.8	10	13.5	7.6
80	2.5	+3.4	20	10.5	4.6
90	3.2	+3.7	30	6.0	0.1
1+00	4.1	+1.8	40	5.7	+0.2
10	4.7	+1.2			
20	6.8	-0.9			
30	6.1	-0.2			
40	7.8	-1.9			
50	9.3	-3.4			
60	9.4	3.5			
70	11.0	5.1			
80	13.6	7.7			
90	14.0	8.1			
2+00	14.4	8.5			
10	14.3	8.4			
20	14.3	8.4			
30	14.3	8.4			

12-24-46

STA 125+00
0+00 = 768'E

PK

DIST	SOUND		DIST	SOUND	
0+11	0.0	+6.1	50	14.7	8.6
20	0.4	+5.7	60	14.5	8.4
30	0.8	+5.3	(6.1) 70	14.5	8.4
40	1.2	+4.9	80	13.0	6.9
50	1.5	+4.6	90	7.5	1.4
60	2.0	+4.1	3+00	6.3	0.2
(6.1) 70	2.6	+3.5	10	5.8	+0.3
80	3.5	+2.6			
90	4.5	+1.6			
1+00	5.0	+1.1			
10	7.5	-1.4			
20	9.0	-2.9			
30	11.3	-4.8			
40	13.0	6.9			
50	14.3	8.2			
60	14.2	8.1			
70	14.3	8.2			
(6.1) 80	14.8	8.7			
90	15.0	8.9			
2+00	15.0	8.9			
10	15.0	8.9			
20	15.0	8.9			
30	15.0	8.9			
40	15.0	8.9			

12-24-46

STA 124+00
0+00 = 778'E

PK

(16)

DIST	SOUND		DIST	SOUND	
0+26	0.0	+6.1	60	13.8	7.6
30	0.1	+6.0	(6.2) 70	13.5	7.3
40	0.8	+5.3	80	11.5	4.3
50	1.4	+4.7	90	6.3	0.1
60	2.7	+3.4	3+00	6.0	+0.2
70	4.0	+2.1			
80	4.5	+1.6			
90	4.6	+1.5			
1+00	4.7	+1.6			
(6.1) 10	7.0	+0.9			
20	10.0	+3.9			
30	12.7	+6.6			
40	12.1	-6.0			
50	12.0	5.9			
60	12.5	6.4			
70	13.0	6.9			
80	13.4	7.3			
90	13.4	7.3			
2+00	13.9	7.8			
10	14.0	7.9			
20	14.0	7.9			
30	14.0	7.9			
40	14.0	7.9			
50	14.0	7.9			

12-24-46
 STA 123+00
 0+00 = 772'E

PX

	DIST	SOUND		DIST	SOUND	
	0+27	0.0	+6.2	60	13.4	7.2
	30	0.2	+6.0	70	13.4	7.2
	40	1.0	+5.2	80	12.4	6.2
9:15	50	1.5	+4.7	90	6.7	0.5
	60	2.3	+3.9	3+00	5.9	+0.3
	70	3.1	+3.1			
	80	3.9	+2.3			
(6.2)	90	4.3	+1.9			
	1+00	5.0	+1.2			
	10	6.7	-0.5			
	20	9.7	-3.5			
	30	10.8	-4.6			
	40	13.2	-7.0			
	50	13.8	-7.6			
	60	13.5	7.3			
	70	13.5	7.3			
	80	13.5	7.3			
	90	13.5	7.3			
	2+00	13.5	7.3			
	10	13.8	7.6			
9:19	20	13.9	7.7			
	30	13.6	7.4			
	40	13.6	7.4			
	50	13.4	7.2			

12-24-46
 STA 122+00
 0+00 = 776'E

PX

(17)

	DIST.	SOUND		DIST	SOUND	
	0+38	0.0	+6.2	70	13.5	7.3
	40	0.2	+6.0	80	13.0	6.8
9:30	50	1.0	+5.2	90	9.0	2.8
	60	2.4	+3.8	3+00	6.0	+0.2
	70	3.2	+3.0	10	6.0	+0.2
	80	4.0	+2.2			
	90	4.2	+2.0			
	1+00	4.5	+1.7			
	10	6.7	-0.5			
(6.2)	20	9.4	-3.2			
	30	9.4	-3.2			
	40	13.2	-7.0			
	50	13.8	-7.6			
	60	14.0	7.8			
	70	13.8	7.6			
	80	13.8	7.6			
	90	14.0	7.8			
	2+00	14.0	7.8			
	10	14.0	7.8			
	20	13.8	7.6			
	30	13.8	7.6			
	40	13.8	7.6			
	50	13.5	7.3			
	60	13.6	7.4			

12-24-46

STA 121+00
0+00 = 808'E

PX

	DIST	SOUND		DIST		
	0+42	0.0	+6.2	80	10.5	4.3
9:41	50	0.8	+5.4	90	6.0	+0.2
	60	2.0	+4.2	3+00	6.0	+0.2
	70	3.1	+3.1	(62)		
	80	3.7	+2.5			
(62)	90	4.2	+2.0			
	1+00	4.8	+1.4			
	10	6.2	0.0			
	20	9.7	-1.5			
	30	12.1	-5.9			
	40	13.1	-6.9			
	50	13.4	-7.2			
	60	13.5	7.3			
	70	13.8	7.6			
	80	13.9	7.7			
9:44	90	14.0	7.8			
	2+00	14.0	7.8			
	10	14.0	7.8			
	20	13.8	7.6			
	30	13.3	7.1			
	40	13.5	7.3			
	50	13.5	7.3			
	60	13.5	7.3			
	70	13.0	6.8			

12-24-46

STA 120+00
0+00 = 830'E

PX

(8)

	DIST	SOUND		DIST	SOUND	
	37	0.0	+6.2	70	13.3	7.1
9:59	40	0.2	+6.0	80	12.0	5.8
	50	1.0	+5.2	(62) 90	6.4	0.2
	60	1.6	+4.6	3+00	6.0	+0.2
	70	2.2	+4.0			
	80	2.4	+3.8			
	90	2.5	+3.7			
	1+00	3.1	+3.1			
	10	4.5	+1.7			
	20	8.4	-2.2			
(62)	30	9.1	-2.9			
	40	11.3	-5.1			
	50	13.4	-7.2			
	60	13.1	6.9			
	70	13.3	7.3			
	80	13.4	7.2			
	90	14.0	7.8			
	2+00	14.0	7.8			
	10	14.2	8.0			
	20	14.0	7.8			
	30	14.0	7.8			
	40	14.0	7.8			
	50	14.0	7.8			
	60	13.7	7.5			

RP 12-24-46
STA 119+00
0+00 = 840'E

DIST. SOUND DIST. SOUND

37	0.0	+6.2	70
40	0.2	+6.0	
50	1.0	+5.2	
60	1.7	+4.5	
70	2.1	+4.1	
10:07	80	2.4	+3.8
90	2.8	+3.4	
1+00	3.6	+2.6	
10	3.9	+2.3	
(62)	20	4.6	+1.6
30	6.1	+0.1	
40	7.0	-0.8	
50	10.0	-3.8	
60	12.1	-5.9	
70	12.9	-6.7	
80	13.0	6.8	
90	13.0	6.8	
2+00	13.5	7.3	
10	14.0	7.8	
20	14.0	7.8	
30	14.0	7.8	
40	13.8	7.6	
10:10	50	13.8	7.6
60			TANTOON LINE

12-24-46 (19) Px
STA 118+00
0+00 = 825'E

DIST. SOUND			DIST. SOUND			
0+5	0.0	+6.1	50	16.5	10.4	
20	0.4	+5.7	60	16.8	10.7	
30	1.3	+4.8	70	17.0	10.9	
20	40	1.8	+4.3	80	17.0	10.9
10:20	50	2.0	+4.1	90	16.7	10.6
60	2.4	+3.7	3+00	16.1	10.0	
70	2.6	+3.5	(61)	10	16.8	10.7
(61)	80	2.8	+3.3	20	16.7	10.6
90	3.0	+3.1	30	16.5	10.4	
1+00	3.0	+3.1	40	15.1	9.0	
10	3.4	+2.7	50	11.0	4.9	
20	3.7	+2.4	60	5.0	+1.1	
30	4.5	+1.6	70	4.7	+1.4	
40	4.9	+1.4				
50	7.0	-0.9				
60	9.8	-3.7				
70	11.8	-5.7				
80	11.5	-5.4				
90	11.7	5.6				
2+00	12.7	5.6				
10	12.8	6.7				
10:24	20	13.5	7.4			
30	14.3	8.2				
40	14.5	10.4				

12-30-46
STA 109+00

P.A.

DIST	SOUND		DIST	SOUND	
1+50	0.0	+4.0	190	10.4	6.4
60	1.0	+3.0	4+00	10.1	6.1
70	3		10	10.5	6.5
3:35 80	3.5	+0.5	20	11.0	7.0
90	4.0	0.0	30	11.5	7.5
2+00	5.0	-1.0	40	12.0	8.0
10	6.5	-2.5	3:35 50	12.0	8.0
20	7.0	3.0	60	11.8	7.8
30	7.7	3.7	70	11.5	7.5
40	8.2	4.2	80	11.5	7.5
50	10.6	6.6	90	11.5	7.5
(x.0) 60	11.5	7.1	5+00	11.5	7.5
70	11.8	7.8	10	12.0	8.0
80	12.2	8.2	20	11.7	7.7
90	12.2	8.2	30	12.0	8.0
3+00	12.2	8.2	(x.0) 40	11.5	7.5
10	12.2	8.2	50	11.0	7.0
20	12.1	8.1	60	11.0	7.0
30	12.0	8.0	70	10.0	6.0
40	11.4	7.4	80	9.5	5.5
50	11.0	7.0	90	9.2	5.2
60	10.8	6.8	6+00	9.0	5.0
70	10.7	6.7	10	9.0	5.0
80	10.0	6.0	20	9.0	5.0

STA 109+00

P.A.

(20)

DIST	SOUND		DIST	SOUND	
30	9.0	5.7	70	1.3	+2.6
40	9.0	5.1	80	1.0	+2.9
50	9.0	5.1	(m.9) 90	0.5	+3.4
60	10.0	6.1	97	0.0	+3.9
70	10.4	6.5			
80	10.5	6.6			
7 90	11.4	6.5			
10+00	10.3	6.4			
10	10.2	6.3			
20	10.1	6.2			
30	10.1	6.2			
40	10.1	6.2			
(3.9) 50	10.4	6.5			
60	10.5	6.6			
70	10.5	6.6			
80	11.0	7.1			
90	11.0	7.1			
8 7+00	11.0	7.1			
10	10.6	6.7			
20	10.5	6.4			
30	7.4	3.5			
40	5.6	1.7			
50	3.0	+0.9			
60	1.4	+2.5			

1-2-47

STA 110+00

PX

DIST	SOUND	DIST	SOUND
1+36	0.0 +3.5	70	12.0 -8.6
40	0.2 +3.3	80	12.4 -9.0
50	0.5 +3.0	90	12.5 -9.1
60	0.7 +2.8	4+00	12.2 -8.8
(35) 70	1.3 +2.2	10	12.3 -8.9
80	3.3 +0.2	20	12.4 -9.0
90	4.5 -1.0	30	12.6 -9.2
2+00	4.5 -1.0	40	13.0 -9.6
10	6.2 -2.7	50	13.1 -9.7
20	6.9 -3.4	60	13.5 -10.1
30	8.1 -4.6	(34) 70	13.6 -10.2
40	8.2 -4.7	80	14.0 -10.6
50	11.4 -7.9	90	14.0 -10.6
60	11.3 -7.8	5+00	14.0 -10.6
70	12.0 -8.5	10	13.4 -10.0
80	12.0 -8.5	20	13.4 -10.0
(34) 90	12.5 -9.0	30	13.4 -10.0
3+00	12.0 -8.5	40	13.2 -9.8
10	12.2 -8.8	50	13.2 -9.8
20	11.8 -8.4	60	13.2 -9.8
30	11.7 -8.3	70	13.4 -10.0
40	12.2 -8.8	80	13.8 -10.4
50	11.8 -8.4	90	14.2 -10.8
60	11.4 -8.2	6+00	14.2 -10.8

1-2-47

STA 110+00

PX

(21)

DIST	SOUND	DIST	SOUND
6+10	14.1 -10.7	50	5.2 -1.9
20	14.0 -10.6	3 60	4.7 -1.4
30	13.5 -10.1	70	2.0 +1.3
40	13.0 -9.6	(33) 80	0.5 +2.8
50	13.0 -9.6	84	0.0 +3.3
60	13.0 -9.6		
70	13.4 -10.0		
(34) 80	13.4 -10.0		
90	13.0 -9.6		
7+00	12.5 -9.1		
10	12.3 -8.9		
20	12.3 -8.9		
30	12.4 -9.0		
40	12.5 -9.1		
50	12.8 -9.4		
60	12.8 -9.4		
70	12.8 -9.4		
80	12.4 -9.0		
90	12.1 -8.7		
8+00	11.0 -7.6		
10	10.5 -7.1		
20	9.5 -6.1		
30	9.3 -5.9		
40	7.5 -4.1		

1-2-47

PX

STA 111+00

DIST	SOUND		DIST	SOUND	
1+68	0.0	+3.1	10	14.0	-11.0
80	2.1	+1.0	20	14.0	-11.0
90	2.9	+0.2	30	13.5	-10.5
2+00	3.8	-0.7	40	13.6	-10.6
10	4.3	-1.2	50	13.4	-10.4
20	4.5	-1.4	60	13.4	-10.4
30	5.8	-2.7	70	13.4	-10.4
40	6.3	-3.2	80	13.0	-10.0
50	7.3	-4.2	90	12.5	-9.5
60	9.0	-6.0	5+00	12.7	-9.7
70	9.2	-6.1	10	12.5	-9.5
80	9.0	-5.9	20	12.5	-9.5
90	9.2	-6.1	30	12.5	-9.5
3+00	9.4	-6.3	40	12.4	-9.4
10	10.0	-7.0	50	12.2	-9.2
20	10.2	-7.2	60	12.0	-9.0
30	10.4	-7.4	70	12.0	-9.0
40	10.8	-7.8	80	12.4	-9.4
50	11.0	-8.0	90	12.8	-9.8
60	11.0	-8.0	6+00	13.0	-10.0
70	11.4	-8.4	10	13.3	-10.3
80	11.5	-8.5	20	13.8	-10.8
90	12.4	-9.4	30	13.6	-10.6
4+00	14.3	-11.3	40	13.4	-10.4

1-2-47

(22)

STA 111+00

PX

DIST	SOUND		DIST	SOUND		PX
6+50	13.0	-10.0	112+00			
60	13.0	-10.0	1+72	0.0	+2.8	
70	13.0	-10.0	80	2.3	+0.5	
80	12.7	-9.7	90	4.7	-1.9	
90	12.5	-9.5	2+00	5.0	-2.2	
7+00	12.4	-9.4	10	4.8	-2.0	
10	12.4	-9.4	20	5.3	-2.5	
20	12.0	-9.0	30	5.7	-2.9	
30	12.0	-9.0	40	5.4	-2.6	
40	12.2	-9.2	50	6.1	-3.3	
50	12.0	-9.0	60	7.0	-4.2	
60	12.3	-9.3	70	8.0	-5.2	
70	12.5	-9.5	80	8.1	-5.3	
80	12.5	-9.6	90	9.0	-6.2	
90	12.5	-9.6	3+00	9.4	-6.6	
8+00	12.3	-9.4	10	10.1	-7.3	
10	12.0	-8.9	20	10.5	-7.7	
20	9.2	-6.3	30	10.8	-8.0	
30	5.5	-2.6	40	11.0	-8.2	
40	3.2	-0.3	50	11.0	-8.2	
50	2.8	+0.1	60	11.1	-8.3	
60	1.5	+1.4	70	11.1	-8.3	
70	0.0	+2.9	80	11.0	-8.2	
			90	11.0	-8.2	

1-2-47
STA 112+00

pt

DIST SOUND			DIST SOUND		
4+00	11.7	-8.9	40	12.7	-10.0
10:21	10	12.0	50	12.8	-10.1
(2.2)	20	12.1	60	12.6	-9.8
	30	12.2	70	12.4	-9.6
	40	12.4	80	12.4	-9.6
	50	12.6	10:25 90	12.4	-9.6
	60	12.9	7+00	12.7	-9.9
	70	12.8	10	12.2	-9.5
	80	13.0	20	12.0	-9.3
	90	13.0	30	12.0	-9.3
5+00	12.7	-9.9	(2.7)	40	12.0
	10	12.6		50	11.5
	20	12.6		60	11.3
	30	12.5		70	11.5
	40	12.5		80	11.5
	50	12.2		90	11.3
10:23	60	12.0		8+00	10.5
	70	12.0		10	9.8
(2.1)	80	12.0		20	8.0
	90	12.0		30	5.6
6+00	12.0	-9.2		40	3.0
	10	12.5		50	1.1
	20	12.6		60	1.2
	30	12.7		70	1.0
				80	0.8

1-2-47
STA 113+00

pt

(23)

112+00 DIST SOUND			DIST SOUND		
90	0.0	+2.7	90	11.0	-8.5
1+65	0.0	+2.5	4+00	10.8	-8.3
10:26 70	0.5	+2.0	10	10.3	-7.8
80	2.0	+0.5	20	11.3	-8.8
90	3.0	-0.5	30	11.8	-9.3
2+00	4.5	-2.0	10:28 40	12.0	-9.5
10	4.7	-2.7	50	12.2	-9.7
20	6.0	-3.5	60	12.5	-10.0
30	5.1	-2.6	(2.5)	70	13.0
(2.5)	40	5.1		80	13.0
	50	6.0		90	12.7
	60	6.8		5+00	12.8
	70	8.0		10	12.8
	80	9.1		20	13.0
	90	10.1		30	13.0
3+00	10.8	-8.3		40	12.8
10	11.2	-8.7	(2.5)	50	12.8
20	10.0	-7.5		60	12.8
30	10.8	-8.3		70	12.8
40	11.0	-8.5	10:29	80	12.8
50	11.0	-8.5		90	12.7
60	11.2	-8.7		6+00	12.8
70	11.4	-8.9		10	13.4
80	11.1	-8.6		20	13.2

1-2-47

PT STA 113+00

PT

113+00			114+00		
DIST	SOUND		DIST	SOUND	
6+30	13.4	-10.9	1+73	0.0	+2.3
10:46 40	13.2	-10.7	11:03 80	2.0	+0.3
10:46 50	13.2	-10.7	90	3.5	-1.2
2:3 60	13.0	-10.5	2+00	4.0	-1.7
70	13.0	-10.5	2:3 10	3.5	-1.2
80	13.0	-10.5	20	4.0	-1.7
90	13.2	-10.7	30	4.4	-2.1
7+00	13.0	-10.5	40	8.0	-5.7
10	12.7	-10.3	50	8.0	-5.7
20	12.5	-10.1	60	7.8	-5.5
2:4 30	12.5	-10.1	70	8.0	-5.7
10:46 40	12.5	-10.1	80	9.4	-7.1
50	12.5	-10.1	90	10.2	-7.9
60	12.5	-10.1	3+00	10.3	-8.0
70	12.4	-10.0	10	10.3	-8.0
80	13.0	-10.6	20	10.4	-8.1
90	13.6	-11.2	30	10.8	-8.5
8+00	13.3	-10.9	40	10.9	-8.6
10	12.4	-10.0	50	10.9	-8.6
2:4 20	7.5	-5.1	60	10.9	-8.6
10:50 30	1.5	+0.9	70	11.0	-8.7
40	1.2	+1.2	80	11.0	-8.7
50			90	11.0	-8.7
			4+00	11.5	-9.2

1-2-47

PT STA 114+00

PT

(24)

114+00			115+00		
DIST	SOUND		DIST	SOUND	
10 10	13.2	-10.9	50	11.0	-8.7
11:01 20	13.2	-10.9	60	10.7	-8.4
30	13.3	-11.0	70	11.1	-8.8
2:3 40	12.5	-10.2	80	12.1	-9.8
50	12.2	-9.9	90	12.3	-10.0
60	12.5	-10.2	7+00	11.3	-9.0
70	13.5	-11.2	11:12 10	11.0	-8.7
80	13.5	-11.2	20	11.0	-8.7
90	13.8	-11.5	30	11.0	-8.7
5+00	13.8	-11.5	40	10.7	-8.4
10	13.5	-11.2	50	11.0	-8.7
20	13.0	-10.7	60	11.0	-8.7
30	12.3	-10.0	70	10.8	-8.5
40	12.3	-10.0	80	10.5	-8.2
11:09 50	12.3	-10.0	90	10.2	-7.9
60	12.3	-10.0	8+00	10.4	-8.1
70	12.3	-10.0	10	10.4	-8.1
2:3 80	12.3	-10.0			
90	12.3	-10.0			
6+00	12.3	-10.0			
10	12.5	-10.2			
20	13.0	-10.7			
30	12.3	-10.0			
40	12.0	-9.7			

1-2-47
STA 115+00

PX

DIST	SOUND		DIST	SOUND	
1+52	0.0	+2.2	90	10.8	-8.7
11:26 60	1.1	+1.1	4+00	10.8	-8.7
70	2.3	-0.3	10	10.8	-8.7
2.2 80	3.7	-1.5	20	10.8	-8.7
90	4.0	-1.8	30	10.8	-8.7
2+00	4.5	-2.3	40	10.6	-8.5
10	4.3	-2.1	50	10.6	-8.5
20	4.3	-2.1	60	10.8	-8.7
30	4.8	-2.6	70	11.1	-9.0
40	6.0	-3.8	80	11.3	-9.2
50	7.4	-5.2	90	11.3	-9.2
60	9.3	-7.1	5+00	11.1	-9.0
70	10.5	-8.3	10	11.1	-9.0
11:29 80	10.7	-8.5	20	11.0	-8.9
90	10.5	-8.3	30	11.0	-8.9
3+00	10.5	-8.3	40	11.0	-8.9
10	11.0	-8.8	50	11.1	-9.0
2.1 20	11.1	-8.9	60	11.1	-9.0
30	11.3	-9.1	70	11.0	-8.9
40	11.3	-9.1	80	11.0	-8.9
50	11.0	-8.9	90	11.0	-8.9
60	11.0	-8.9	6+00	11.2	-9.1
70	10.8	-8.7	70	11.5	-9.4
80	10.8	-8.7	20	11.3	-9.2

1-2-47
STA 115+00

(25)

1-3-46
108+00

DIST	SOUND		DIST	SOUND	
1+42	0.0	+4.6	90	12.3	-10.2
50	2.5	+2.1	40	12.5	-10.4
60	3.8	+0.8	50	12.0	-10.0
70	4.4	+0.2	60	10.0	-8.0
80	4.7	-0.1	70	12.0	-10.0
90	5.0	-0.4	80	11.8	-9.8
2+00	4.9	-0.3	90	11.5	-9.5
10	5.0	-0.4	7+00	12.0	-10.0
20	5.2	-0.6	10	12.0	-10.0
30	5.2	-0.6	20	11.8	-9.8
40	5.5	-0.9	30	11.6	-9.6
50	5.4	-0.8	40	11.8	-9.8
60	5.4	-0.8	50	11.8	-9.8
70	5.2	-0.6	60	11.8	-9.8
80	5.4	-0.8	70	11.8	-9.8
90	6.0	-1.4	90	3.0	+1.5
3+00	6.2	-1.6	4+00	2.7	+1.8
10	5.0	-0.4	10	3.0	+1.5
20	5.9	-1.3	20	2.7	+1.8
30	5.4	-0.8	30	2.4	+2.1
40	5.1	-0.5	40	2.1	+2.4
50	5.4	-0.8	50	2.1	+2.4
60	5.5	-0.9	60	2.0	+2.5
70	5.4	-0.8	70	1.9	+2.8
80	5.1	-0.5	80	1.6	+2.9
			90	1.8	+2.7
			5+00	1.6	+2.9
			10	1.5	+3.0

11:37
2.0
8:20
4.5

1.6
1.5

1-3-47
108+00 CONTD

DIST	SOUND	
5+20	1.5	+3.0
30	1.4	+3.1
40	1.4	+3.1
8:42 50	1.5	+3.0
60	1.5	+3.0
70	1.5	+3.0
80	1.4	+3.1
90	1.4	+3.1
6+00	1.0	+3.5
10	0.9	+3.6
20	0.5	+4.0
30	0.0	+4.5

DIST	SOUND	
127+00		
1+60	10.0	5.7
70	10.0	5.7
80	11.0	6.7
90	11.5	7.2
2+00	12.0	7.7
9:12 10	12.0	7.7
20	12.5	8.2
30	13.0	8.7
40	—	—
50	13.3	9.0
60	13.1	8.8

1-3-47 PX
127+00

DIST	SOUND	
70	13.0	8.7
80	13.0	8.7
90	12.8	8.5
3+00	12.4	8.1
10	12.5	8.2
20	12.7	8.4
30	13.2	8.9
40	13.4	9.1
50	13.3	9.0
60	13.0	8.7
70	13.0	8.7
80	13.0	8.7
90	12.6	8.3
4+00	12.6	8.3
10	13.0	8.7
6 20	13.0	8.7
30	13.0	8.7
40	12.7	8.4
50	12.5	8.2
60	12.3	8.0
70	12.8	8.5
80	13.0	8.7
90	13.0	8.7
5+00	13.0	8.7

1-3-47
STA 127+00

(26)

DIST	SOUND		DIST	SOUND	
5+10	13.2	9.0	50	11.8	7.7
20	12.9	8.7	60	12.0	7.9
30	12.9	8.7	70	12.1	8.0
40	12.0	7.8	80	12.5	8.4
9:1 50	13.1	8.9	90	12.2	8.1
60	13.2	9.0	8+00	12.1	8.0
70	13.0	8.8	10	11.7	7.6
80	12.8	8.6	20	12.1	8.0
90	12.4	8.2	30	12.4	8.3
6+00	12.0	7.8	40	12.8	8.5
10	12.0	7.8	50	13.2	9.1
20	12.0	7.8	60	13.4	9.3
30	11.5	7.3	70	13.5	9.4
40	11.9	7.7	80	13.5	9.4
50	11.9	7.7	90	13.5	9.4
60	12.0	7.8	9+00	13.3	9.2
70	11.8	7.6	10	13.2	9.1
80	11.4	7.2	20	13.2	9.1
90	11.3	7.1	30	13.0	8.9
7+00	11.8	7.6	40	12.8	8.7
10	11.8	7.6	50	12.5	8.4
20	11.8	7.6	60	12.3	8.2
30	12.0	7.8	70	12.1	8.0
40	11.5	7.3	80	11.5	7.4
			90	11.4	

127+00

1-3-47

DIST SOUND

10+00	11.0	4.9
4.1 9.24 10	8.5	4.4
20	3.5	+0.6
30	3.5	+0.6

117+00

PT

1+46

50

60

70

80

90

2+00

10

20

30

40

50

60

70

80

90

3+00

10

20

1-3-47

117+00

DIST SOUND

30	13.5	10.5
40	13.2	9.7
50	13.2	9.7
9.46 60	13.0	9.5

70

80

90

4+00

10

20

30

40

50

60

70

80

90

5+00

10

20

30

40

50

60

1-3-47

5TA 117+00

DIST SOUND

70	11.4	7.9
80	11.2	7.7
90	10.8	7.3
6+00	10.0	6.5

10

20

30

40

50

60

70

80

90

7+00

10

20

30

40

50

60

70

80

90

8+00

0.0

DIST SOUND

10	0.3	+3.2
20	0.8	+2.7
30	1.1	+2.4
40	1.5	+2.0

50

60

70

80

90

9+00

10

20

30

40

50

60

70

80

90

10+00

10

20

30

40

50

(27)

1-3-47

117+00

DIST SOUND

10+60	13.7	10.4	1+47	0.0	+ 3.0
70	14.3	11.0	50	0.2	+ 2.8
9:56 80	14.3	11.0	60	2.7	+ 0.3
90	14.4	11.1	70	3.7	- 0.9
11+00	14.5	11.2	80	4.0	- 1.0
10	14.8	11.5	90	6.0	- 3.0
20	14.6	11.3	2+00	6.0	3.0
30	14.2	10.9	10	6.7	3.7
40	13.4	10.1	20	7.7	4.7
50	12.8	9.5	30	8.5	5.5
60	12.8	9.5	40	10.6	7.6
70	12.8	9.5	50	11.4	8.4
80	12.6	9.3	60	11.2	8.2
90	12.2	8.9	70	13.0	10.0
12+00	12.5	9.2	80	12.7	9.7
10	12.5	9.2	90	12.8	9.8
20	12.5	9.2	3+00	12.9	9.9
30	9.0	5.7	10	13.0	10.0
40	2.0	+ 1.3	20	13.0	10.0
50	2.0	+ 1.3	30	13.1	10.1
			40	12.8	9.8
			50	12.8	9.8
			60	12.8	9.8
			70	13.1	10.1

118+00

DIST SOUND

1+47	0.0	+ 3.0
50	0.2	+ 2.8
60	2.7	+ 0.3
70	3.7	- 0.9
80	4.0	- 1.0
90	6.0	- 3.0
2+00	6.0	3.0
10	6.7	3.7
20	7.7	4.7
30	8.5	5.5
40	10.6	7.6
50	11.4	8.4
60	11.2	8.2
70	13.0	10.0
80	12.7	9.7
90	12.8	9.8
3+00	12.9	9.9
10	13.0	10.0
20	13.0	10.0
30	13.1	10.1
40	12.8	9.8
50	12.8	9.8
60	12.8	9.8
70	13.1	10.1

118+00

1-3-47

DIST SOUND

10:27 80	13.2	10.3
90	13.0	10.1
4+00	12.8	9.9
10	12.5	9.6
20	12.4	9.5
30	12.2	9.3
40	12.5	9.6
50	12.5	9.6
60	12.4	9.5
70	12.3	9.4
80	12.0	9.1
90	12.0	9.1
5+00	10.4	7.5
10	7.8	4.9
20	5.5	2.6
30	4.6	1.7
40	0.3	+ 2.6

(28)

Indexed

MISSION BAY PROJECT NO. 7
 LAYOUT FOR REVISED LOCATION OF
 CURVE "C" AS CONTROL FOR DREDGING
 OFFSET LINE

STA	DIST	OBJ.	ANGLE
"C"	400	15	0°00'
"	"	16	21°10'
"	"	17	42°20'
"	"	18	63°30'
"	"	19	84°40'
"	"	20	105°50'
"	"	21	127°00'
"	426.97	22	147°28'20"

π - RADIUS

DUNE
 C. LARGE CIR. } 96°09' R.

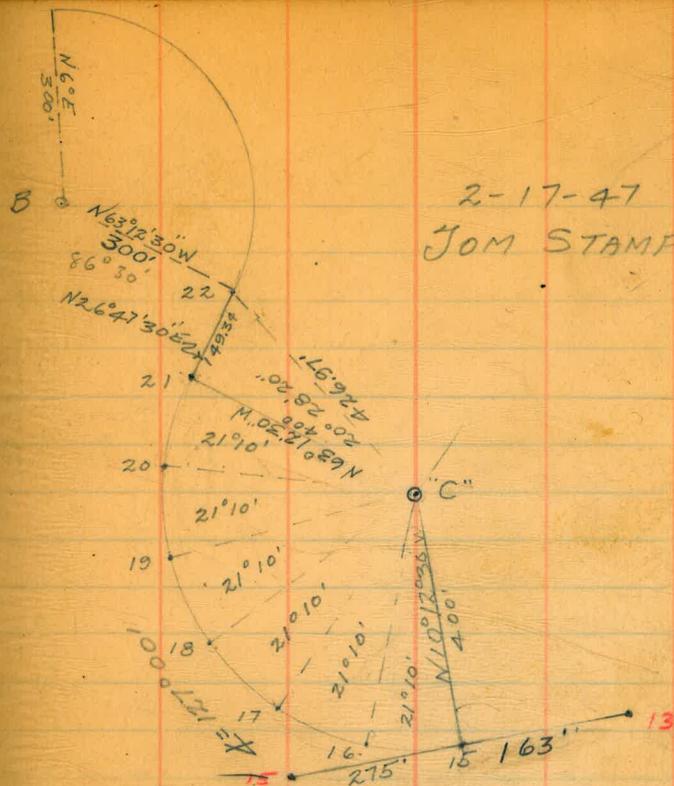
TOP ROLLER
 COASTER } 19°14' R. $\frac{263}{273}$
 538

π # 22

DUNE } 31°34' R.

COASTER
 MON.

π - # 22
 TAN 2
 MAJOR TANG. } 98°49' L.
 SMA. CIRCLE RADIUS } 86°30' R.
 RADIUS } 69°26' L.
 LARGE CIR.



30

3-P.M.

2-17-47

OLD CUT

PI TO PENT 69°40'

PENT TO RC. 48°05'

DREDGE

PI PENT 64°16'

P TO RC. 44°29'

Morgan Thurs. Fri.
Zinc " "

Gas 1/2 Fri

Garrett - Sewer - M.H. \$1.50 Per

Lowe } Gas
Barber }

Sta 32150 should be Elev. 27.16

30 - 1/2

9 - 1

10 - 1

1 - 1

**IMPROVED TABLES
AND
INFORMATION**

7450 2266
4.31
3835

3673
431
41.04
351
3753

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 level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

TABLE No. 9.

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 I may be found by dividing tangent, (or external), opposite I 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.

38
35
1.90
114
1330
39
52
19

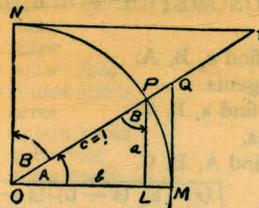
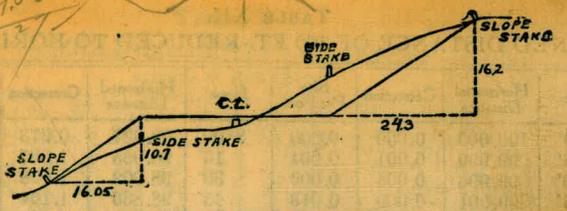


TABLE II
TRIGONOMETRIC FORMULÆ.

$$\begin{aligned} \angle A &= \angle MOP & \angle B &= \angle PON = \angle OPL \\ R &= OB = c = 1 \\ \sin A &= \frac{a}{c} = \frac{a}{1} = a = \cos B = LP \\ \cos A &= \frac{b}{c} = \frac{b}{1} = b = \sin B = OL \\ \tan A &= \frac{a}{b} = \frac{MQ}{OM} = \frac{MQ}{1} = MQ = \cot B = MQ \\ \cot A &= \frac{NT}{ON} = \frac{NT}{1} = NT = \tan B = NT \\ \sec A &= \frac{OQ}{OM} = \frac{OQ}{1} = OQ = \csc B = OQ \\ \csc A &= \frac{OT}{ON} = \frac{OT}{1} = OT = \sec B = OT \\ \text{vers } A &= \frac{LM}{OP} = LM = \text{covers } B \# \\ \text{covers } A &= \frac{OP - LP}{OP} = OP - LP = \text{vers } B \\ \text{exsec } A &= PQ = \text{coexsec } B \\ \text{coexsec } A &= PT = \text{exsec } B \\ \sin \frac{1}{2} A &= \sqrt{\frac{1 - \cos A}{2}} & \cos \frac{1}{2} A &= \sqrt{\frac{1 + \cos A}{2}} \\ \sin 2A &= 2 \sin A \cos A & \cos 2A &= \cos^2 A - \sin^2 A \\ \text{Law of Sines} & \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c} \\ \text{Law of Cosines} & c^2 = a^2 + b^2 - 2ab \cos C \\ \text{Law of Tangents} & \frac{a+b}{a-b} = \frac{\tan \frac{1}{2}(A+B)}{\tan \frac{1}{2}(A-B)} \end{aligned}$$

7933
1906



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING

SLOPE 1 1/2 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 50	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 50	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.

Dyke - R 2981 (Home)

34 60
19160 4.74
39.34
34 62
4.12
33.12 - 17100
4.98
3810
33.83
4.27

39.34
34.35
4.99
39.34
34.33
5.01

33.16
4.21
37.37
32.62
4.77

32.55
5.01
37.56
33.02
4.54

27.24
4.98
32.22
28.16
4.06

27.09
5.12
32.27
4.98
27.23

32.22
26.84
4.38

32.22
27.16
5.06

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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Handwritten calculations and diagrams on the left page of the notebook.

Top left: 32.0
 20.5

 57.5

Top middle: 29.62
 28.87

 29.85

Top right: 67
 30

 1.860
 38

 30.34
 30

 30.41
 30.52

Middle left: 29.7 (circled)

Middle right: 29.62
 28.10

 168) 1.52 (90
 1512

Bottom left: $4+30 = 34.36$
 $2+15 = 35.53$

 $2+15 = 1.17 = .545$

Bottom middle: 38
 39

 792

Bottom right: 33.12
 320

 36.32
 39

Bottom right: 36.32
 372

 32.60
 29.82

 2.78

Diagrams: Two hand-drawn cross-sections of a roadway embankment, showing the roadway width and the sloped sides.