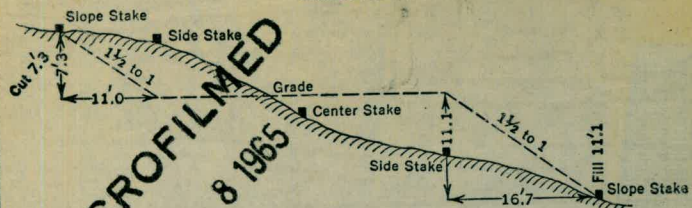


MB112

**DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING  
Roadway of any Width. Side Slopes 1½ to 1.**

In the figure below: opposite 7 under "Cut or Fill" and under .3 read 11.0, the distance out from the side stake at left. Also, opposite 11 under "Cut or Fill" and under .1 read 16.7, the distance out from the side stake at right.



Cut or Fill	Distance out from Side or Shoulder Stake									Cut or Fill	
	.1	.2	.3	.4	.5	.6	.7	.8	.9		
0	0.0	0.2	0.3	0.5	0.6	0.8	0.9	1.1	1.2	1.4	0
1	1.5	1.7	1.8	2.0	2.1	2.3	2.4	2.6	2.7	2.9	1
2	3.0	3.2	3.3	3.5	3.6	3.8	3.9	4.1	4.2	4.4	2
3	4.5	4.7	4.8	5.0	5.1	5.3	5.4	5.6	5.7	5.9	3
4	6.0	6.2	6.3	6.5	6.6	6.8	6.9	7.1	7.2	7.4	4
5	7.5	7.7	7.8	8.0	8.1	8.3	8.4	8.6	8.7	8.9	5
6	9.0	9.2	9.3	9.5	9.6	9.8	9.9	10.1	10.2	10.4	6
7	10.5	10.7	10.8	11.0	11.1	11.3	11.4	11.6	11.7	11.9	7
8	12.0	12.2	12.3	12.5	12.6	12.8	12.9	13.1	13.2	13.4	8
9	13.5	13.7	13.8	14.0	14.1	14.3	14.4	14.6	14.7	14.9	9
10	15.0	15.2	15.3	15.5	15.6	15.8	15.9	16.1	16.2	16.4	10
11	16.5	16.7	16.8	17.0	17.1	17.3	17.4	17.6	17.7	17.9	11
12	18.0	18.2	18.3	18.5	18.6	18.8	18.9	19.1	19.2	19.4	12
13	19.5	19.7	19.8	20.0	20.1	20.3	20.4	20.6	20.7	20.9	13
14	21.0	21.2	21.3	21.5	21.6	21.8	21.9	22.1	22.2	22.4	14
15	22.5	22.7	22.8	23.0	23.1	23.3	23.4	23.6	23.7	23.9	15
16	24.0	24.2	24.3	24.5	24.6	24.8	24.9	25.1	25.2	25.4	16
17	25.5	25.7	25.8	26.0	26.1	26.3	26.4	26.6	26.7	26.9	17
18	27.0	27.2	27.3	27.5	27.6	27.8	27.9	28.1	28.2	28.4	18
19	28.5	28.7	28.8	29.0	29.1	29.3	29.4	29.6	29.7	29.9	19
20	30.0	30.2	30.3	30.5	30.6	30.8	30.9	31.1	31.2	31.4	20
21	31.5	31.7	31.8	32.0	32.1	32.3	32.4	32.6	32.7	32.9	21
22	33.0	33.2	33.3	33.5	33.6	33.8	33.9	34.1	34.2	34.4	22
23	34.5	34.7	34.8	35.0	35.1	35.3	35.4	35.6	35.7	35.9	23
24	36.0	36.2	36.3	36.5	36.6	36.8	36.9	37.1	37.2	37.4	24
25	37.5	37.7	37.8	38.0	38.1	38.3	38.4	38.6	38.7	38.9	25
26	39.0	39.2	39.3	39.5	39.6	39.8	39.9	40.1	40.2	40.4	26
27	40.5	40.7	40.8	41.0	41.1	41.3	41.4	41.6	41.7	41.9	27
28	42.0	42.2	42.3	42.5	42.6	42.8	42.9	43.1	43.2	43.4	28
29	43.5	43.7	43.8	44.0	44.1	44.3	44.4	44.6	44.7	44.9	29
30	45.0	45.2	45.3	45.5	45.6	45.8	45.9	46.1	46.2	46.4	30
31	46.5	46.7	46.8	47.0	47.1	47.3	47.4	47.6	47.7	47.9	31
32	48.0	48.2	48.3	48.5	48.6	48.8	48.9	49.1	49.2	49.4	32
33	49.5	49.7	49.8	50.0	50.1	50.3	50.4	50.6	50.7	50.9	33
34	51.0	51.2	51.3	51.5	51.6	51.8	51.9	52.1	52.2	52.4	34
35	52.5	52.7	52.8	53.0	53.1	53.3	53.4	53.6	53.7	53.9	35
36	54.0	54.2	54.3	54.5	54.6	54.8	54.9	55.1	55.2	55.4	36
37	55.5	55.7	55.8	56.0	56.1	56.3	56.4	56.6	56.7	56.9	37
38	57.0	57.2	57.3	57.5	57.6	57.8	57.9	58.1	58.2	58.4	38
39	58.5	58.7	58.8	59.0	59.1	59.3	59.4	59.6	59.7	59.9	39
40	60.0	60.2	60.3	60.5	60.6	60.8	60.9	61.1	61.2	61.4	40

KEUFFEL & ESSER CO., N. Y.

MB No 112

THIS BOOK INDEXED 2/7/62

The paper in this book No. 373 A  
is made of 50% high grade rag stock  
with a WATER RESISTING surface sizing.

4-01-59 W064501			W159+00 CONTD NORTH			①						
SOUNDINGS REMEDIAL DREDGING						Dist	Sound	Elev	Dist	Sound	Elev	
AREA VENTURA POINT & VICINITY						2+40	10.5	8.7	5+40	10.0	8.1	
Sta. W. 159+00; 0+00 = N 6200 SOUND NORTH						3+50	10.5	8.7	5+50	10.0	8.1	
Dist	Sound	Elev	Dist	Sound	Elev							
1:35							10.7	8.9		10.5	8.6	
0+00	0	+1.7	1+70	12.5	-10.7		10.3	8.5		11.0	9.1	
(1.7)	0.8	+0.9		12.5	-10.7		10.3	8.5		10.8	8.9	
	2.3	-0.6		12.7	-10.9		10.5	8.7		10.5	8.6	
	2.7	-1.0	2+00	12.7	-10.9	4+00	10.5	8.7	6+00	10.5	8.6	
	4.8	-3.1		12.0	-10.2		10.2	8.4		10.5	8.6	
50	6.9	-5.2		12.0	-10.2		9.0	7.2		10.3	8.4	
	8.2	-6.5		12.0	-10.2		9.5	7.7		10.7	8.8	
	8.4	-6.7		11.9	-10.1		9.8	8.0		10.7	8.8	
	9.1	-7.4	2+50	11.5	-9.7	4+50	10.0	8.2	6+50	10.7	8.8	
	9.5	-7.8		11.2	-9.4		10.0	8.2		10.7	8.8	
1:40												
1+00	11.0	-9.2		11.0	-9.2		10.0	8.2		10.8	8.9	
(1.8)	12.5	-10.7		9.0	-7.2		10.0	8.2		10.5	8.6	
	13.0	-11.2		10.2	-8.4		10.3	8.5		10.0	8.1	
	13.0	-11.2	3+00	10.3	-8.5	1:45						
	12.9	-11.1		10.3	-8.5	5+00	10.3	8.4	7+00	9.5	7.6	
	1+50	12.5	-10.7		10.3	-8.5	(1.9)	10.0	8.1		9.1	7.2
	1+60	12.0	-10.7	3+30	10.3	-8.5		9.9	8.0		9.0	7.1
							5+30	10.0	8.1	7+30	9.0	7.1

## W159400 CONT'D NORTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
7+40	9.0	7.1	9+30	12.0	10.1
7+50	9.0	7.1		12.0	10.1
	9.0	7.1	11.50	11.8	11.9
	9.0	7.1	(1.9)	10.7	8.8
	9.5	7.6		10.2	8.3
	9.5	7.6		10.2	8.3
8+00	9.5	7.6		10.0	8.1
	9.7	7.8	10+00	9.0	7.1
	9.5	7.6		8.1	6.2
	9.7	7.8		7.0	5.1
	9.8	7.9		5.2	3.3
8+50	10.0	8.1		3.5	1.6
	9.5	7.6	10+50	3.1	1.2
	10.0	8.1		2.6	0.7
	10.5	8.6		2.5	0.6
	11.2	9.3		2.5	0.6
9+00	11.4	9.5		2.4	0.5
	12.0	10.1	11+00	2.2	0.3
9+20	12.1	10.2			

## W159400 CONT NORTH

②

DIST	SOUND	TIDE
11+10	2.2	0.3
	2.2	0.3
	2.0	0.1
	1.8	+0.1
11+50	1.5	+0.4
	1.0	+1.0
11.53	shore	
(2.0)	0.6	+1.4

Cont Page 46

N 6160

SOUND  
NORTH

STA W 160+00 CONT NORTH

3

STA W 160+00; 0+00 = N 6060.00

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
2:00			1+90	13.3	11.2	3+80	10.0	7.9	5+60	10.0	7.9
0+00											
(2.1)			2+00	13.0	10.9		10.2	8.1		10.1	8.0
0+10						4+00	10.5	8.4		10.0	7.9
0+20	1.0	11.1		12.7	10.6		10.7	8.6		10.0	7.9
	2.7	0.6		12.2	10.1		10.7	8.6		10.0	7.9
	3.5	1.4		11.7	9.6		10.7	8.6	2:10 6+00	10.0	7.9
0+50	5.7	3.6		11.7	9.6		10.7	8.6	(2.2)	10.3	8.1
	7.9	5.8	2+50	11.5	9.4		10.2	8.1		10.2	8.0
	9.1	7.0		11.5	9.4	4+50	10.5	8.4		10.2	8.0
	10.0	7.9		11.1	9.0		10.5	8.4		10.2	8.0
	11.0	8.9		11.3	9.2		10.4	8.4	6+50	10.9	8.7
1+00	11.9	9.8		11.0	8.9		10.8	8.4		11.0	8.8
	12.4	10.3	3+00	11.0	8.9		10.0	7.9		10.5	8.3
	12.4	10.3		10.8	8.7	5+00	10.6	8.5		10.7	8.5
	13.0	10.9		10.6	8.5		10.0	7.9		10.5	8.3
	13.3	11.2		10.3	8.2		10.0	7.9	7+00	10.5	8.3
2:05				10.2	8.1		10.0	7.9		10.3	8.1
1+50	13.8	11.7									
(2.2)			3+50	10.2	8.1		10.0	7.9		10.0	7.8
	14.0	11.9		10.0	7.9	5+50	10.0	7.9		9.9	7.7
1+80	13.7	11.6	3+70	10.1	8.0				7+40	9.2	7.0

STA W 160+00 CONT NORTH

STA W 160+00 CONT NORTH 4  
DIST Sound ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV
7+50	9.3	7.1	9+50	11.0	8.8
(2.2)	9.0	6.8		11.2	9.0
	9.0	6.8		11.2	9.0
	8.8	6.6		11.5	9.3
8+00	9.0	6.8		11.5	9.3
	10.0	7.8	2:15 10+00	11.7	9.4
	10.0	7.8	(2.3)	11.0	8.7
	9.7	7.5		10.5	8.3
	9.5	7.3		10.0	7.7
8+50	9.7	7.5		9.7	7.4
	10.0	7.8	10+50	6.2	3.9
	10.0	7.8		8.2	5.9
	9.7	7.5		3.5	1.2
	10.0	7.8		3.2	0.9
9+00	10.0	7.8		3.2	0.9
	10.3	8.1	11+00	3.0	0.7
	11.0	8.8		3.0	0.7
	11.0	8.8		2.7	0.5
9+40	11.3	9.1	11+30	2.5	0.2

See Page 46

4-1-59						STA W 161400 Cont North					
N			SOUND NORTH			SOUND NORTH			SOUND NORTH		
STA W 161400; 0+00 = 6080.00			DIST			DIST			DIST		
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
2:30						3+80	12.0	9.4	5+80	12.0	9.3
0+00	0.0	+2.6	1+90	15.5	12.9		12.3	8.7		12.2	9.5
(2.6)	0.2	+2.4	2+00	15.2	12.6	4+00	12.8	10.2	6+00	11.3	8.6
	0.5	+2.1		14.3	11.7		12.2	9.6		11.5	8.8
	0.7	+1.9		13.8	11.2		12.0	9.4		11.0	8.3
	1.0	+1.6		13.2	10.6		12.0	9.4		12.0	9.3
0+50	1.2	+1.4		12.9	10.3		12.0	9.4		12.0	9.3
	1.5	+1.1	2:35	12.0	9.4	4+50	11.8	9.2	6+50	12.0	9.3
	2.0	+0.6	(2.6)	12.0	9.4		11.5	8.9		12.0	9.3
	3.2	0.6		11.5	8.9		11.5	8.9		11.5	8.8
	4.7	2.1		11.7	9.1		11.5	8.9		11.0	8.3
1+00	9.0	6.4		11.5	8.9		12.0	9.4		10.5	7.8
	10.0	7.4	3+00	12.0	9.4	5+00	12.0	9.4	7+00	10.5	7.8
	11.2	8.6		12.0	9.4		11.8	8.2		10.0	7.3
	13.0	10.4		12.0	9.4		11.5	8.9		10.0	7.3
	14.0	11.4		12.0	9.4		11.5	8.9		10.0	7.3
1+50	14.5	11.9		12.0	9.4		11.5	8.9		10.0	7.3
	15.0	12.4	3+50	12.0	9.4	2:40	11.5	8.9	7+50	10.0	7.3
	15.2	12.6		11.2	8.6	(2.7)	11.5	8.8		10.9	7.2
1+80	15.5	12.9	3+70	11.0	8.4	5+70	11.2	8.5	7+70	11.0	8.3

STA W 161+00 Cont NORTH					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
7+80	11.0	8.3	9+80	12.0	9.2
(2.7)	11.0	8.3		12.0	9.2
8+00	11.0	8.3	2:48 10+00	11.0	8.2
	10.8	8.1		11.2	8.4
	10.5	7.8		12.0	9.2
	10.0	7.3		12.0	9.2
	10.2	7.5		12.7	9.9
8+50	10.0	7.3	10+50	13.0	10.2
	10.0	7.3		13.0	10.2
	10.2	7.5		13.0	10.2
	10.0	7.3		13.0	10.2
	10.0	7.3		12.0	9.2
2:45 9+00	9.2	6.4	2:50 11+00	11.0	8.1
(2.8)	9.0	6.2	(2.9)	9.5	6.6
	9.2	6.4		7.5	4.6
	9.5	6.7		5.0	2.1
	10.5	7.7		4.0	1.1
9+50	10.7	7.9	11+50	3.5	0.6
	11.0	8.2		3.8	0.7
9+70	11.5	8.7	11+70	3.8	0.7

4-1-59 STA W 161+00 Cont NORTH		
DIST	SOUND	ELEV
H+80	3.4	0.5
	3.4	0.5
12+00	3.4	0.5
	3.2	0.3
	3.0	0.1
	2.5	+0.4
(2.9)	2.0	+0.9
2:53		
12+50	1.0	+1.9
See page 37		



4-1-59

SOUND

STA W162+00 CONT NORTH

7

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
3105						3+80	11.0	7.8	5+80	10.0	6.8
0+00	0.2	+2.9	1+90	13.0	9.9		11.0	7.8		10.0	6.8
(3.1)	2.5	+0.6	2+00	13.0	9.9	4+00	11.0	7.8	6+00	10.0	6.8
	2.7	+0.4		13.0	9.9		11.0	7.8		10.0	6.8
	2.7	+0.4		12.0	8.9		11.0	7.8		10.0	6.8
	5.5	2.4		12.0	8.9		11.0	7.8		10.5	7.3
0+50	8.5	5.4		10.5	7.4		11.0	7.8		11.0	7.8
	10.5	7.4	2+50	11.0	7.9	4+50	11.0	7.8	3115 6+50	12.2	9.0
	12.0	8.9		12.5	9.4		11.0	7.8	(3.3)	12.0	8.7
	13.0	9.9		12.5	9.4		11.0	7.8		11.0	7.7
	13.8	10.7		12.5	9.4		11.0	7.8		11.0	7.7
1+00	14.5	11.4		12.5	9.4		11.0	7.8		11.0	7.7
	15.0	11.9	3:10 3+00	12.5	9.4	5+00	10.5	7.3	7+00	11.0	7.7
	15.0	11.9	(3.2)	12.5	9.3		10.5	7.3		11.0	7.7
	15.0	11.9		11.5	8.3		11.0	7.8		11.0	7.7
	15.0	11.9		11.5	8.3		11.0	7.8		11.0	7.7
1+50	15.0	11.9		11.5	8.3		11.0	7.8		11.0	7.7
	14.6	11.5	3+50	11.5	8.3	5+50	11.0	7.8	7+50	10.6	7.3
	14.0	10.9		11.5	8.3		10.5	7.3		10.5	7.2
1+80	13.0	9.9	3+70	11.0	7.8	5+70	10.5	7.3	7+70	9.7	6.4

4-1-59  
 STA W 162+00 CONT NORTH

	DIST	SOUND	ELEV	DIST	SOUND	elev
7	7+80	9.0	5.7	9+60	11.5	8.1
	(3.3)	8.7	5.4			
8	8+00	9.0	5.7		12.2	8.8
		9.0	5.7		12.2	8.8
		9.0	5.7		12.0	8.6
		9.0	5.7	10+00	12.0	8.6
		9.3	6.0		12.2	8.8
		10.2	6.9		12.0	8.6
8	8+50	10.5	7.2		12.0	8.6
		10.7	7.4		12.0	8.6
		10.7	7.4	10+50	12.0	8.6
		10.5	7.2		12.0	8.6
		11.0	7.7		12.0	8.6
9	9+00	11.0	7.7		12.0	8.6
		11.3	8.0		10.5	7.1
		11.5	8.2	11+00	10.0	6.6
		11.5	8.2		7.2	3.8
	3:20	11.0	7.7		5.0	1.6
	9+50	11.5	8.1		4.5	1.1
	(3.4)			11+40	4.0	0.6

4-1-59  
 STA W 162+00 CONT NORTH

DIST SOUND ELEV

	11+50	4.2	0.8
		4.0	0.6
		4.0	0.6
		3.7	0.3
		3.5	+0.1
	3:25 12+00	3.0	+0.4
		2.8	+0.6
		2.0	+1.4
		1.7	+1.7

see page 37



STA. W163+00 Cont NLY -  
4-3-59

4-3-59

10

STA. W163+00			Cont NLY -			STA. W164+00			0+00 = N59°00.00			
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	
7	7+80	7.0	6.4	9+80	8.2	7.6						
		6.8	6.2		8.5	7.9	0+00		1+90	11.7	11.0	
8	8+00	7.0	6.4	10+00	8.0	7.4			2+00	11.0	10.3	
		7.0	6.4		8.0	7.4				10.5	9.8	
		7.2	6.6		8.0	7.4				10.0	9.3	
		7.5	6.9		8.0	7.4	11:50			10.2	9.5	
		7.5	6.9		8.5	7.9	11:50	0.7	0.8	0.1		
							+50	1.2	0.5		10.5	9.8
8	+50	8.0	7.4	11:35	8.7	8.1	+50	1.5	0.8	+50	10.2	9.5
		8.0	7.4	0.6	9.0	8.4		1.5	0.8		9.8	9.1
		8.0	7.4		9.2	8.6		1.7	1.0		10.0	9.3
		8.0	7.4		9.8	9.2		3.5	2.8		10.0	9.3
		8.0	7.4		9.5	8.9	1+00	8.5	7.8		10.0	9.3
	9+00	8.2	7.6	11+00	9.0	8.4		10.8	10.1	3+00	10.0	9.3
		8.5	7.9		7.7	7.1		12.5	11.8		9.7	9.0
		9.0	8.4		6.0	5.4		12.8	12.1		9.7	9.0
		9.0	8.4	11:33	4.0	3.4		12.8	12.1		9.7	9.0
		9.0	8.4				+50	12.5	11.8	0.8	9.8	9.0
	+50	8.5	7.9	11+50				12.2	11.5	11:55	9.8	9.0
		8.0	7.4	Page 38				12.0	11.3	+50	9.0	8.2
	9+70	8.0	7.4				1+80	11.5	10.8	3+70	10.5	9.7

STA W164+00 CONT NORTH

STA W164+00 CONT NORTH 4-3-54 11

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
3+80	10.0	9.2	5+80	7.0	6.2	7+80	6.0	5.2	9+80	6.7	5.9
	9.4	8.6		7.5	6.7		6.0	5.2		6.7	5.9
4+00	9.0	8.2	6+00	7.5	6.7	8+00	5.5	4.7	10+00	7.3	6.5
	8.5	7.7		7.0	6.2		5.5	4.7		7.5	6.7
	8.7	7.9		6.5	5.7		5.7	4.9		7.5	6.7
	8.5	7.7		6.5	5.7		5.7	4.9		7.5	6.7
	8.0	7.2		6.0	5.2		6.0	5.2		7.7	6.9
+50	8.0	7.2	+50	5.0	4.2	+50	6.0	5.2	+50	7.7	6.9
	8.0	7.2		5.0	4.2		5.5	4.7		8.0	7.2
	7.5	6.7		5.0	4.2		5.0	4.2		8.0	7.2
	8.0	7.2		5.0	4.2		5.5	4.7		8.0	7.2
	8.0	7.2		5.5	4.7		5.3	4.5		7.3	6.5
5+00	8.0	7.2	7+00	5.5	4.7	9+00	5.2	4.4	11+00	6.9	6.1
	8.0	7.2		6.5	5.7		5.5	4.7		6.5	5.7
	8.0	7.2		6.0	5.2		5.8	5.0		6.5	5.7
	8.0	7.2		6.7	5.9		5.8	5.0		6.7	5.9
	7.3	6.5	(0.8)	6.5	5.7		5.8	5.0	(0.9)	6.7	5.8
+50	7.0	6.2	<sup>2:00</sup> +50	6.5	5.7	+50	6.0	5.2	<sup>2:05</sup> +50	6.7	5.8
	7.0	6.2		6.5	5.7		6.3	5.5		6.7	5.8
5+70	7.0	6.2	7+70	6.5	5.7	9+70	6.5	5.7	11+70	6.5	5.6

STA W164+00 CONT North

4-3-59

STA W165+00; 0+00=N 5970.0

12  
SOUND  
North

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
11+80	6.5	5.6				0+00			1+90	11.2	10.3
	6.5	5.6							2+00	11.0	10.1
12+00	6.7	5.8							11.2	10.3	
	6.6	5.7				(0.9)			11.2	10.3	
	6.6	5.7				2.15			11.0	10.1	
	7.0	6.1				+50	2.5	1.6	11.0	10.1	
	6.9	6.0					2.7	1.8	11.0	10.1	
12+50	7.0	6.1					2.7	1.8	+50	11.0	10.1
	6.8	5.9					5.0	4.1	11.0	10.1	
	5.9	5.0					8.0	7.1	10.5	9.5	
	4.0	3.1					11.2	10.3	10.5	9.5	
	2.0	1.1				1+00	12.0	11.1	(1.0)	10.5	9.5
2.07	2.0	1.1					12.5	11.6	2.20	10.7	9.7
13+00	1.5	0.6					12.5	11.6	3+00	10.5	9.5
(0.9)	1.6	0.7					12.5	11.6		10.0	9.0
							12.5	11.6		10.0	9.0
						+50	12.0	11.1		8.3	7.3
							12.0	11.1	+50	8.0	7.0
+50							12.0	11.1		7.0	7.0
						1+80	11.5	10.6	3+70	6.0	5.0

CONT Page 38

STAW 165400 - CONT NORTH						STAW 165400 CONT NORTH						13
DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	
3+80	6.0	5.0	5+80	7.2	6.2	7+80	5.5	4.5	9+80	6.7	5.7	
	5.8	4.8		6.7	5.7		6.0	5.0		6.8	5.8	
4+00	5.8	4.8	6+00	6.2	5.2	8+00	6.0	5.0	10+00	6.5	5.5	
	6.0	5.0		6.0	5.0		6.0	5.0		5.7	4.7	
	5.7	4.7		6.5	5.5		5.5	4.5		6.0	5.0	
	6.0	5.0		6.0	5.0		5.0	4.0		5.5	4.5	
	6.0	5.0	(1.0)	5.5	4.5		4.5	3.5	(1.1)	6.0	4.9	
+50	5.7	4.7	2:25 +50	5.5	4.5	+50	4.7	3.7	2:30 +50	7.0	5.9	
	5.2	4.2		5.5	4.5		5.0	4.0		8.0	6.9	
	5.0	4.0		5.0	4.0		6.0	5.0		7.5	6.4	
	5.5	4.5		4.0	3.0		7.2	6.2		7.5	6.4	
	6.0	5.0		5.0	4.0		7.5	6.5		7.1	6.0	
5+00	6.0	5.0	7+00	4.8	3.8	9+00	7.0	6.0	11+00	6.8	5.7	
	6.0	5.0		5.2	4.2		6.5	5.5		6.5	5.4	
	6.2	5.2		5.5	4.5		6.0	5.0		6.7	5.6	
	6.5	5.5		6.0	5.0		5.0	4.0		6.8	5.7	
	7.0	6.0		6.5	5.5		5.5	4.5		7.1	6.0	
+50	7.0	6.0	+50	7.0	6.0	+50	6.0	5.0	+50	7.4	6.3	
	7.5	6.5		6.5	5.5		6.5	5.5		7.0	5.9	
5+70	7.2	6.2	7+70	6.3	5.3	9+70	6.7	5.7	11+70	7.0	5.9	

STA 165+00 CONT NORTH -

DIST	SOUND	ELEV	DIST	SOUND	ELEV
11+80	7.0	5.9	13+60	2.0	0.9
	6.7	5.6	(1.1)	1.5	0.4
			2:35		
12+00	6.5	5.4		1.1	0.0
	7.0	5.9		1.0	+0.1
	7.0	5.9	14+00	0.5	+0.6
	7.5	6.4	Page 39		
	7.5	6.4			
+50	7.2	6.1			
	7.2	6.1			
	7.0	5.9			
	7.0	5.9			
	7.7	6.6			
13+00	7.8	6.7			
	7.5	6.4			
	6.9	5.8			
	5.5	4.4			
	4.9	3.8			
+50	3.0	1.9			

4-3-59  
 STA W 166+00; 0+00-N 59+50.0  
 14  
 SOUND  
 NORTH

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00			14+90	12.0	10.6
			2:55		
			2+00	11.5	10.1
			(1.5)		
				11.0	9.5
			(1.4)		
			2:52		
			3.7	2.3	11.3
			+50	4.0	2.6
				3.7	2.3
			+50	11.2	9.7
				6.0	4.6
				9.5	8.1
				12.5	11.1
				10.5	9.0
			14+00	13.0	11.6
				10.0	8.5
				13.5	12.1
			3+00	10.0	8.5
				14.0	12.6
				9.0	7.5
				13.5	12.1
				9.0	7.5
				13.0	11.6
				8.2	6.7
			+50	13.0	11.6
				7.7	6.2
				13.0	11.6
			+50	7.0	5.5
				12.5	11.1
				6.5	5.0
			14+80	12.0	10.6
				3+70	6.2
					4.7



STA W 166+00 CONT NORTH

STA W 166+00 CONT NORTH 15  
DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	
						7+50	6.5	4.9	9+50	6.0	4.3	
11	3+80	5.9	4.4	5+60	6.5	4.9	10.3	8.7		6.0	4.3	
		5.5	4.0		6.2	4.6	9.5	7.9		6.7	5.0	
12	4+00	5.0	3.5		6.2	4.6	8.2	6.6		10.2	8.5	
		5.0	3.5		6.2	4.6	7.5	5.9		8.0	6.3	
		4.5	3.0	6+00	5.0	3.4	8+00	7.0	5.4	10+00	8.0	6.3
		4.7	3.2		6.0	4.4	6.5	4.9		7.5	5.8	
		4.7	3.2		5.5	3.9	7.5	5.9		6.0	4.3	
	7+50	5.0	3.5		4.8	3.2	7.7	6.6		5.7	4.0	
		5.5	4.0		5.0	3.4	7.2	5.6		5.5	3.8	
		5.5	4.0	7+50	5.0	3.4	7+50	7.5	5.9	7+50	6.0	4.3
		6.0	4.5		5.2	3.6	7.5	5.9		6.5	4.8	
		6.0	4.5		4.5	2.9	8.0	6.4		6.2	4.5	
1	5+00	6.0	4.5		4.5	2.9	8.0	6.4		6.0	4.3	
		6.7	5.2		4.5	2.9	7.0	5.4		7.0	5.3	
		6.2	4.7	7+00	5.0	3.4	9+00	6.4	4.8	11+00	7.0	5.3
		5.8	4.3		5.0	3.4	5.5	3.9		7.2	5.5	
	(1.6)	6.2	4.6		5.0	3.4	5.7	4.1		7.0	5.3	
	3:00	6.0	4.4		5.0	3.4	(1.7)	6.2	4.5	7.0	5.3	
	7+50				5.0	3.4	3:05	6.2	4.5	11+40	7.0	5.3
				7+40	5.0	3.4	9+40	6.2	4.5			

STAW 166+00 cont NORTH

4-7-59-ALLEN

DIST	SOUND	ELEV	DIST	SOUND	ELEV	STAN 60+00	0+00 = W 16600	SOUND	ELEV	DIST	SOUND	ELEV	
L 11+50	7.2	5.5	<sup>3.10</sup> 13+50	8.5	6.8	DIST	SOUND	ELEV	DIST	SOUND	ELEV	SOUND WEST	
11	7.2		(1.8)	8.5	6.8	11:28	0+00	5.5	2.3	11:49	1490	17.5	14.3
	7.2			8.5	6.8	(3.2)		4.8	1.6	(3.2)			
10	7.2			9.0	7.3			4.9	1.7				
	7.2			9.5	7.8			5.3	2.1				
12+00	7.2		14+00	9.5	7.8			6.2	3.0				
	7.2			9.7	8.0	+50		7.0	3.8				
	7.2	5.5		9.8	8.1			8.0	4.8				
	7.5	5.8		10.5	8.8			8.2	5.0				
	7.5	5.8		10.5	8.8			9.0	5.8				
12+50	7.3	5.6	+50	11.0	9.3			10.5	7.3				
	7.2	5.5		8.8	7.1	1+00		11.0	7.8				
	7.5	5.8		7.5	5.8			12.0	8.8				
1	7.2	5.5		6.0	4.3			12.2	9.0				
	7.5	5.8		4.5	2.8			14.1	10.9				
13+00	8.0	6.3	15+00	3.0	1.3	11:47		14.8	11.6				
	8.0	1		2.8	1.1	+50		13.2	10.0				
	8.0	6.3		2.2	0.5			14.0	10.8				
	8.5	6.8	(1.9)	1.7	+0.2			15.0	11.8				
			15+40	1.0	+0.9								
13+40	9.0	7.3	<sup>3.15</sup> 15+50	0.5	+1.4	1+80		15.3	12.1				

4-7-59

STA N61+00; 0+00 = W 16600

Sound  
WEST

D	DIST	SOUND	ELEV	DIST	SOUND	elev
	11:47					
11	0+00 (3.1)	14.0	10.9	1+90	13.5	10.5
	11:51	14.0	10.9	2+00	13.6	10.6
12		14.2	11.1		12.5	9.5
		14.1	11.0		12.0	9.0
		14.2	11.1		13.0	10.0
	(3.0) +50	14.2	11.2	3:0	13.4	10.4
		14.7	11.7	11:55 +50	12.5	9.5
		14.0	11.0		11.5	8.5
		14.0	11.0		11.2	8.2
		14.0	11.0		11.5	8.5
	1+00	14.0	11.0	(2.9)	12.0	9.1
		13.2	10.2	3+00	12.5	9.6
1		13.5	10.5	11:56	15.0	12.1
		13.5	10.5			
		13.0	10.0			
	+50	13.5	10.5			
		13.5	10.5			
		13.0	9.9			
	1+80	13.4	10.4			

4-7-59

STAN 62+00; 0+00 = W 16600

16  
Sound  
WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
11:10					
0+00	10.3	8.6	1+90	10.2	8.5
(1.7)					
	10.9	9.2	2+00	10.0	8.3
	10.6	8.9		10.0	8.3
	10.0	8.3		10.0	8.3
	10.1	8.4		9.4	7.7
+50	10.2	8.5		9.9	8.2
	10.3	8.6	+50	10.0	8.3
	10.2	8.5		8.8	7.1
	10.2	8.5		9.4	7.7
	10.2	8.5		10.1	8.4
1+00	10.8	9.1		9.7	8.0
	11.3	9.6	3+00	10.0	8.3
	12.5	10.8		9.3	7.6
	11.4	9.7		9.1	7.4
	10.5	8.8		9.3	7.6
+50	10.9	9.2		9.4	7.7
	10.2	8.5	+50	9.4	7.7
	9.9	8.2		10.1	8.4
1+80	10.3	8.6	+70	10.2	8.5

4-7-59

STA N 62+00 Coast West

D.	DIST	SOUND	ELEV
11	3+80	10.0	8.3
		10.2	8.5
12	4+00	10.8	10.1
		11.7	11.0
	(1.7)	11.0	10.3
	1:15	12.8	12.1

4-7-59 Allen

STA N 63+00; D+00 = W 16600.

17  
SOUND  
WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00	6.7	5.1	1+90	7.2	5.6
1118	6.9	5.3	2+00	8.0	6.4
(1.6)	6.1	4.5		7.1	5.5
	6.2	4.6		7.1	5.5
	6.3	4.7		6.9	5.3
+50	6.1	4.5		6.3	4.7
	6.0	4.4	+50	8.0	6.4
	6.3	4.7		7.5	5.9
	6.4	4.7		8.1	6.5
	7.0	5.4		8.3	6.7
1+00	6.2	4.6		8.9	7.3
	6.3	4.7	3+00	8.9	7.3
	6.7	5.1		9.2	7.6
	6.6	5.0		9.8	8.1
	7.0	5.4		8.1	6.5
1:20	7.0	5.4		9.3	7.7
+50	6.8	5.2	+50	8.2	6.6
(1.6)	7.0	5.4		9.1	7.5
1+80	6.6	5.0	3+70	8.2	6.6

STAN 63400 Cont West

L DIST	Sound	ELEV
11 3480	8.2	6.6
	8.4	6.8
11 4400	7.9	6.3
	8.3	6.7
	9.4	7.8
	8.6	7.0
	9.0	7.4
+50	9.2	7.6
	8.2	6.6
	10.1	8.5
	8.8	7.2
	8.3	6.7
1 5400	9.0	7.4
	9.2	7.6
	10.5	8.9
(1.6)	11.4	9.8
1:25	13.0	11.4
+50		

4-7-59 - open

STAN 64400; 0+00 = W/6600 - Sound <sup>18</sup> West

DIST	SOUND	ELEV	DIST	SOUND	ELEV
11:30 0+00	4.4	2.9	1490	6.8	5.3
(1.5)	4.7	3.2	2+00	6.8	5.3
	5.0	3.5		7.3	5.8
	4.6	3.1		7.6	6.1
	4.9	3.4		7.3	5.8
+50	4.2	2.7		7.2	5.7
	4.3	2.8	+50	7.9	6.4
	4.1	2.6		7.0	5.5
	3.2	1.7		6.9	5.4
	4.1	2.6		6.9	5.4
1400	5.0	3.5		7.1	5.6
	3.9	2.4	3400	6.8	5.3
	4.7	3.2		6.3	4.8
	4.8	3.3		6.8	5.3
	6.0	4.5		7.2	5.7
+50	5.8	4.3		7.0	5.5
	5.2	3.7	+50	6.8	5.3
	6.6	5.1	(1.4)	7.0	5.6
1480	6.9	5.8	11:33 3+70	7.8	6.4

STA N 64+00 Cont West

4-7-59 - Allen  
STA N 65+00; D+00 = W 16600

19  
SOUND  
WEST

	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	
1	3+80	8.0	6.6	5+60	14.6	13.2	1:51 D+00	5.9	4.6	1+90	6.4	5.1	
		7.6	6.2		15.0	13.6	(1.3)	5.6	4.3	2+00	5.8	4.5	
1	4+00	7.5	6.1		16.4	15.0		5.8	4.5		5.6	4.3	
		8.1	6.7		21.3	19.9		6.2	4.9		5.5	4.2	
		8.2	6.8	6+00	22.7	21.3		6.0	4.7		5.5	4.2	
		8.1	6.7		23.6	22.2	+50	6.0	4.7		5.3	4.0	
	(1.4)	9.1	7.7		23.1	21.7		6.7	5.4	+50	4.9	3.6	
	1:35 +50	9.7	8.3		24.0	22.6		6.8	5.5		4.3	3.0	
		9.0	7.6		23.6	22.2		6.9	5.6		4.2	2.9	
		10.3	8.9	+50	23.5	22.1		8.0	6.7		5.0	3.7	
		10.5	9.1	(1.4)	21.0	19.6	1+00	8.6	7.3	(1.3)	5.0	3.7	
		10.5	9.1	1:37	20.9	19.5		8.3	7.0	1:55 3+00	6.5	5.2	
1	5+00	11.3	9.9					7.0	5.7		6.8	5.3	
		12.1	10.7					7.3	6.0		7.1	5.8	
		12.2	10.8	7+00				8.2	6.9		7.3	6.0	
		12.1	10.7				+50	6.9	5.6		8.1	6.8	
		13.0	11.6					7.0	5.7	+50	8.2	6.9	
	+50	14.5	13.1					7.7	6.4	(1.3)	9.1	7.8	
								1:56 1+80	5.8	4.5	3+70	9.3	8.0

STAN 65400 Cent West

STAN 65400 Cent West

	DIST	SOUND	ELEV	DIST	SOUND	ELEV
1	3+80	9.6	8.3	5+60	16.1	14.8
		10.3	9.0		16.8	15.5
1	4+00	10.8	9.5		16.8	15.5
		11.3	10.0		16.4	15.1
		12.2	10.9	6+00	16.4	15.1
		13.2	11.9		17.0	15.7
		13.0	11.7		17.1	15.8
	+50	13.1	11.8		17.6	16.3
		13.4	12.1		18.1	16.8
		14.1	12.8	+50	19.2	17.9
		15.0	13.7		19.2	17.9
		14.9	13.6		18.5	17.2
1	5+00	15.1	13.8		18.3	17.0
		14.5	13.2	(1.2)	18.6	17.4
		14.6	13.3	<sup>2,00</sup> 7+00	18.9	17.7
		15.0	13.7		19.0	17.8
		15.9	14.6		19.2	18.0
	+50	16.1	14.8		19.0	17.8
				7+40	19.2	18.0

	DIST	SOUND	ELEV
	7+50	18.8	17.6
		17.6	16.4
	(1.2)	17.4	16.2
	2,02	18.0	16.8

STAN 66+00; 0+00 = W16600

West

STAN 66+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
2:10 0+00	4.0	2.8	1+90	7.2	6.0	3+80	13.1	11.9	5+60	15.7	14.5
(1.2)	3.8	2.6	2:15 2+00	7.2	6.0		12.9	11.7		15.6	14.4
	4.2	3.0	(1.2)	7.4	6.2	4+00	12.4	11.2		15.2	14.0
	4.2	3.0		7.7	6.5		12.0	10.8		13.8	12.6
	4.0	2.8		7.8	6.6		12.2	11.0	6+00	13.9	12.3
+50	4.4	3.2		8.1	6.9		13.5	12.3		14.2	13.0
	5.0	3.8	+50	8.1	6.9		13.0	11.8		14.0	12.8
	4.4	3.2		8.2	7.0	+50	12.6	11.4		13.8	12.6
	4.4	3.2		9.2	8.0		12.6	11.4		13.0	11.8
	4.6	3.6		9.2	8.0		13.9	12.7	+50	12.0	10.8
1+00	4.2	3.0		10.0	8.8		14.1	12.9		11.2	10.0
	4.5	3.3	3+00	10.2	9.0		13.7	12.5		10.4	9.2
	5.2	4.0		10.7	9.5	5+00	14.2	13.0		10.0	8.8
	5.6	4.4		11.2	10.0		14.5	13.3		8.9	7.7
	6.0	4.8		11.3	10.1		14.9	13.6	7+00	9.2	8.0
+50	6.0	4.8		12.2	11.0		15.0	13.8		8.5	7.3
	6.7	5.5	+50	12.8	11.6		15.3	14.1		8.3	7.1
	7.2	6.0		12.9	11.7	+50	15.6	14.2	(1.1)	9.0	7.9
1+80	7.3	6.1	3+70	13.1	11.9				2:20 7+40	8.4	7.3



STA N66+00 Cont West

DIST	Sound elev	
2:20		
7+50	8.7	7.6
(1.1)	9.0	7.9
	9.2	8.1
	9.2	8.1
	9.2	8.1
8+00	9.8	8.7
	9.1	8.0
	8.1	7.0
	6.5	5.4
	3.6	2.5
+50	2.8	1.7
	3.0	1.9
(1.1)	2.4	1.3
2:22	2.4	1.3

9+00

FB = 111-P-7 4-7-59 ALLEN

DIST	SOUND	ELEV	DNT	SOUND	ELEV
0+00			2+00	9.5	8.5
2:57				10.2	9.2
				12.0	11.0
				12.2	11.2
2:57	1.7	0.7	(1.0)	11.3	10.3
			3:00		
+50	2.1	1.1	+50	12.4	11.4
(1.0)	2.3	1.3		12.9	11.9
	2.5	1.5		12.7	11.7
	2.8	1.8		12.6	11.6
	3.0	2.0		12.3	11.3
1+00	3.5	2.5	3+00	12.8	11.8
	5.2	4.0		12.7	11.7
	6.2	5.2		12.4	11.4
	6.3	5.3		12.9	11.9
	6.7	5.7		13.1	12.1
+50	7.1	6.1	+50	13.0	12.0
	7.2	6.2		12.9	11.9
	7.9	6.9		13.2	12.2
	8.0	7.0		12.3	11.3
1+90	9.3	8.3	3+90	11.9	10.9

22  
SOUND  
EAST

STAN 67+00 Cont. Ely

STAN 67+00 Cont. East

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
4+00	12.0	11.0	5+90	11.2	10.2	7+80	8.1	7.0			
	12.2	11.2	6+00	11.0	10.0		8.1	7.0			
	12.4	11.4		10.3	9.3	8+00	9.0	7.9			
	11.4	10.4		9.4	8.4		9.5	8.4			
	11.9	10.9		10.0	9.0		10.0	8.9			
+50	12.3	11.3		10.0	9.0		9.9	8.8			
	10.9	9.9	+50	9.8	8.8		9.3	8.2			
	10.2	9.2		9.7	8.7	8+50	8.1	7.0			
	11.6	10.6		9.4	8.4		6.9	5.8			
	12.1	11.1		9.2	8.2		5.3	4.2			
5+00	12.6	11.6	(1.1)	9.2	8.1		4.8	3.7			
	13.0	12.0	3:05 7+00	8.3	7.2	(1.2)	4.3	3.1			
	13.0	12.0		7.5	6.4	3:07 7+00	4.0	2.8			
	12.8	11.8		7.5	6.4						
	12.10	11.0		7.6	6.5						
+50	12.10	11.0		7.0	5.9						
	12.3	11.3	+50	7.5	6.4						
	12.9	11.9		7.6	6.5						
5+80	12.6	11.6	7+70	7.6	6.5						

FOR SKETCH  
SEC FR 111-3

4-08-59

END. SECS. WLY. FROM ELY. SIDE OF

FOR RE SEC SEC FR 111-11 et al  
5-2-59

(24)

STANG 60+63.80; 0+00 = W. 16869.23 SOUND S40W

VENTURA BRIDGE SOUND 5.40 Dist Sound Elev Dist Sound Elev

STA. N 60+03.38; 0+00 = W 16797.22 0+00 18.0 13.4 (46) 25.0

Dist Sound Elev Dist Sound Elev (46) 19.1 14.5 2+00 25.0

0+00 21.2 16.5 (47) 24.1 10:25 20.7 16.1 24.5

(47) 21.2 16.5 24.0 21.0 16.4 24.7

10:15 21.2 16.5 24.0 19.5 14.9 25.5

20.0 15.3 24.2 50 17.7 13.1 25.5

18.4 13.7 2+00 24.7 17.5 12.9 50 25.5

50 17.5 12.8 24.5 18.3 13.7 25.3

16.5 11.8 24.5 19.0 14.4 10:30 25.0

16.7 12.0 24.5 19.8 15.2 25.2

20.4 15.7 10:18 24.5 1+00 20.0 15.4 24.5

21.3 16.6 50 23.4 20.0 15.4 3+00 25.0

1+00 22.0 17.3 23.6 23.4 18.8

22.1 17.4 24.0 25.0 20.4

23.2 18.5 24.7 25.0

25.0 20.3 24.7 50 24.2

25.0 3+00 25.0 24.2

50 24.8 24.2

24.2

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(25)

STAN. 61+37.72; 0+00=W17957.32 SOUND 540°W STAN. 61+98.78; 0+00=W17030.10, SOUND 5. 40°W

Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev
0+00	14.4	9.9	(45)	25.5		0+00	15.5	11.1	(44)	24.7	
(45)	15.0	10.5	2+00	26.0		(44)	17.2	12.8	2+00	24.0	
<u>10:37</u>	15.7	11.2		25.0		<u>10:47</u>	17.7	13.3		23.2	
	16.5	12.0		24.7			18.0	13.6		23.5	
	16.5	12.0		24.8			18.0	13.6	<u>10:52</u>	24.0	
50	15.2	10.7		25.3		50	17.5	13.1		24.0	
	15.3	10.8	50	25.3			17.0	12.6	50	24.0	
	15.7	11.2		25.0			17.3	12.9		24.0	
	16.0	11.5		25.0			18.1	13.7		24.0	
	19.7	15.2		25.2			19.2	14.8		24.0	
1+00	20.9	16.4	<u>10:43</u>	25.2		1+00	23.5	19.1		24.3	
	22.0	17.5	3+00	25.0		<u>10:48</u>	24.5	20.1	3+00	24.3	
	22.5	18.0					24.7	20.3			
	23.8	19.3					27.0	22.6			
<u>10:40</u>	24.5	20.0					27.0	22.6			
50	24.3	19.8				50	25.0	20.6			
	25.0	20.5					24.5	20.1			
	25.3						24.0	19.6			
	25.8						24.7	20.3			

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(26)

STA. N. 62+63.06; 0+00 = W. 171 D 6.70; SOUND 5.40° STA. N. 63+29.27; 0+00 = W. 171 85.60; SOUND 5.40° W

Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev
0+00	14.0	9.7	<u>1+00</u>	27.0		0+00	24.3	20.2	(40)	26.0	
(43)	13.7	9.4	2+00	26.2		(41)	25.2	21.1	2+00	27.2	
<u>10.57</u>	14.0	9.7	(42)	25.7		<u>11.07</u>	25.5	21.4		27.0	
	15.1	10.8		25.0			26.0	21.9		26.5	
	15.1	10.8		25.0			25.5	21.4		25.0	
50	15.3	11.0		25.3		50	23.0	18.9		24.5	
	15.5	11.2	50	26.0			20.0	15.9	50	24.5	
	15.7	11.4		26.8			22.0	17.9		25.5	
	16.0	11.7		25.5			26.0	21.9		25.1	
	17.0	12.7		25.5			27.0	22.9		25.1	
1+00	21.0	16.7		25.2		1+00	27.0	22.9		25.0	
	22.2	17.9	3+00	26.8			26.4	22.3	3+00	25.0	
	23.0	18.7					24.0	19.9			
	23.8	19.5					23.0	18.9			
	24.2	19.9				(40)	22.2	18.2			
50	25.3	21.0				50	24.4	20.4			
	26.5					<u>11.10</u>	25.2	21.2			
	27.2						25.0				
	27.2						26.0				

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(37)

STA. N 63+87.76; 0+00 = W 17255.31, SOUND 540°

STA. N. 64+64.40; 0+00 = W. 17341.88, SOUND 540° W

Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev	Dist	Sound	Elev
0+00	26.5	22.5	(39)	26.0		0+00	24.5	20.7	(38)	25.5	
(40)	27.2	23.2	2+00	26.0		(38)	26.5	22.7	2+00	25.5	
<u>11:16</u>	27.2	23.2		25.5		<u>11:23</u>	26.5	22.7		25.5	
	27.5	23.5		25.0			26.0	22.2		25.5	
	27.2	23.2		25.0			25.3	21.5		25.8	
50	23.0	19.0		26.0		50	23.9	20.1		25.1	
	21.0	17.0	50	26.3			21.0	17.2	50	25.0	
	25.0	21.0		27.0		<u>11:25</u>	21.2	17.4		25.0	
	27.0		<u>11:20</u>	26.5			23.7	19.9		25.0	
	27.7			25.7			26.2	22.4		24.7	
1+00	28.2			26.0		1+00	27.2			24.7	
	28.2		3+00	26.0			27.0		3+00	25.0	
	27.2						26.5				
	27.0						26.2				
	26.5						26.0				
50	26.5					50	26.0				
	26.5						26.0				
	26.2						26.0				
	26.0						25.5				

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STA. N. 65+21.46; 0+00=W 1741465, SOUND 5.46°W

Dist	Sound	Elev	Dist	Sound	Elev
0+00	19.0	15.3	(37)	24.0	
(37)	18.5	14.8	2+00	24.0	
<u>11:33</u>	19.0	15.3		24.0	
	18.0	14.3		24.0	
	16.5	12.8		24.0	
50	15.2	11.5		24.3	
	15.0	11.3	50	24.3	
	16.4	12.7		24.0	
	19.7	16.0		24.0	
	21.7	18.0		24.0	
1+00	23.0	19.3		23.8	
	23.5	19.8	3+00	23.2	
	24.8	21.1			
	24.5				
<u>11:35</u>	24.5				
50	24.5				
	24.0				
	24.0				
	24.0				

(28)

STA. N. 65+84.46; 0+00=W 17489.72, SOUND 5.46°W

Dist	Sound	Elev	Dist	Sound	Elev
0+00	4.5	0.9	(36)	8.5	4.9
(36)	4.5	0.9	2+00	8.5	4.9
<u>11:40</u>	4.7	1.1	<u>11:45</u>		
	3.5	+0.1			
	2.5	+1.1			
50	2.5	+1.1			
	3.5	+0.1	50		
<u>11:43</u>	4.5	0.9			
	5.0	1.4			
	5.0	1.4			
1+00	4.8	1.2			
	5.0	1.4	3+00		
	5.7	2.1			
	7.7	4.1			
	10.4	6.8			
50	12.1	8.5			
	12.0	8.4			
	11.0	7.4			
	8.2	4.6			

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 STA. N. 68+00: 0+00 = W. 174.40; SOUND EAST

Dist	Sound	Elev	Dist	Sound	Elev
0+30	2.0	70.2	1+10	14.5	12.3
	3.0	0.8		15.0	12.8
50	3.0	0.8		15.0	12.8
1+08	3.0	0.8	50	14.5	12.3
(2.2)	3.2	1.0		14.5	12.3
	3.2	1.0		14.7	12.5
	3.6	1.4		15.5	13.3
1+00	4.4	2.2		15.6	13.4
	4.4	2.2	3+00	16.0	13.8
	4.4	2.2		15.3	13.1
	5.0	2.8		14.0	11.8
	5.8	3.6		13.2	11.0
50	6.9	4.7		13.0	10.8
	9.5	7.3	50	12.5	10.3
	11.4	9.2		12.5	10.3
	12.0	9.8		12.6	10.4
	12.4	10.2		13.0	10.8
2+00	13.3	11.1		12.5	10.3
	14.0	11.8	4+00	12.0	9.8

N 68+00 CONTD EAST 29

Dist	Sound	Elev	Dist	Sound	Elev
	12.0	9.8		12.3	10.1
	10.8	8.4		12.0	9.8
	10.0	7.8		11.8	9.6
	11.0	8.8		11.5	9.3
50	12.0	9.8	50	11.0	8.8
(2.2)	12.6	10.4		11.0	8.8
1+15	13.0	10.8		10.2	8.0
	13.0	10.8		10.2	8.0
	13.3	11.1		10.0	7.8
5+00	13.5	11.3	7+00	10.0	7.8
	13.7	11.5		9.0	6.8
	13.4	11.2		9.0	6.8
	13.0	10.8		8.5	6.3
	13.5	11.3		8.0	5.8
50	14.0	11.8	50	7.5	5.3
	13.2	11.0		8.0	5.8
	13.5	11.3		8.1	5.9
	13.0	10.8		9.2	7.0
	12.7	10.5		9.3	7.1
6+00	12.4	10.2	8+00	9.3	7.1



STA. N. 68+00 CONTD EAST					
Dist	Sound	Elev	Dist	Sound	Elev
	8.5	6.3		6.5	
	8.0	5.8		7.0	
	8.5	6.3		7.0	
	9.5	7.3	10+40	7.0	
50	9.3	7.1	50	6.9	
	8.9	6.7		7.1	
(2.1)	8.5	6.4		7.1	
<u>1120</u>	8.0	5.9		8.0	
	7.1	5.0		7.8	
9+00	7.0	4.9	11+00	8.2	
	6.6	4.5		8.2	
	6.0	3.9		8.6	
	5.6	3.5		8.6	
9+40	5.2	3.1		8.7	
50	6.0	3.9	50	8.7	
	5.8	3.7	(2.1)	8.8	
	6.0	3.9	125	8.9	
	6.2	4.1	≈	8.9	
	6.6	4.5		9.0	
10+00	6.3	4.2	12+00	8.8	

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STA. N. 69+00; 0+00 = W. 17410; SOUND EAST					
Dist	Sound	Elev	Dist	Sound	Elev
0+30	0.5			14.3	
	2.0			14.8	
<u>50</u>	2.2			14.4	
(2.0)	2.6		50	14.5	
<u>1130</u>	2.6			14.0	
	2.6			14.0	
	2.7			15.5	
	2.7			15.1	
1+00	2.8			15.1	
	2.8		3+00	13.3	
	4.0		11.35	13.0	
	6.0		<u>2.0</u>	13.0	
	7.6			13.0	
50	10.0			13.6	
	11.0		50	13.6	
	12.5			12.1	
	13.2			11.5	
	13.7			11.0	
2+00	14.0			11.0	
	14.0		4+00	10.8	



FB 111-8			4-08-59			STA. N. 70+00 CONTD EAST						32
STA. N. 70+00, 0+00=W. 17,400; SOUND EAST			Dist Sound Elev			Dist Sound Elev			Dist Sound Elev			
						10.1	8.4		8.5	6.9		
0+30	2.2	0.4		14.2	12.4	10.8	9.1		8.2	6.6		
	1.0	+0.8		14.8	13.0	11.1	9.4		6.7	5.1		
50	1.1	+0.7		14.1	12.3	10.4	8.7		6.5	4.9		
11.57	1.3	+0.5	50	13.4	11.6	50	9.4	7.7	50	10.0	8.4	
<u>1.8</u>	1.9	0.1	<u>1.7</u>	13.0	11.2	<u>1.6</u>	9.0	7.3	<u>1.6</u>	7.4	5.8	
	1.9	0.1	<u>2.00</u>	11.5	9.8	<u>2.03</u>	8.7	7.1	<u>2.05</u>	8.0	6.4	
	1.9	0.1	<u>---</u>	11.1	9.4	<u>---</u>	9.3	7.7	<u>---</u>	8.0	6.4	
1+00	1.9	0.1		11.2	9.5		9.9	8.3		5.8	4.2	
1+00	2.0	0.2	3+00	11.2	9.5	5+00	8.9	7.3	7+00	5.7	4.1	
	3.5	1.7		11.8	10.1		9.6	8.0		7.1	5.5	
	7.1	5.3		11.3	9.6		10.0	8.4		7.3	5.7	
	9.4	7.6		9.8	8.1		10.0	8.4		6.7	5.1	
50	11.1	9.3		10.2	8.5		9.3	7.7		7.0	5.4	
	12.0	10.2	50	11.1	9.4	50	9.3	7.7	50	6.8	5.2	
	13.6	11.8		11.7	10.0		9.3	7.7		6.6	5.0	
	13.1	11.3		10.0	8.3		9.2	7.6		7.0	5.4	
	14.6	12.8		8.1	6.4		9.7	8.1		6.4	4.8	
2+00	14.6	12.8		7.6	5.9		10.2	8.6		6.4	4.8	
	14.4	12.6	4+00	9.1	7.4	6+00	9.6	8.0	8+00	6.0	4.4	

STA. N. 70+00 CONTD EAST 4-08-59

Dist	Sound	Elev	Dist	Sound	Elev
	6.0			8.0	
	6.1			8.0	
	5.5			8.3	
	5.0			8.4	
50	6.0		50	8.4	
(1.6)	6.8			8.6	
208	7.2			8.6	
	7.8			9.1	
	7.9			9.1	
9+00	8.0		11+00	9.1	
	8.2		(1.6)	9.6	
	8.3		2:10	9.7	
	8.4			9.8	
	8.7			9.3	
50	8.8		50	9.2	
	9.0			9.3	
	9.0			10.0	
	9.0			10.0	
	8.0			10.0	
10+00	8.3		12+00	10.0	

STA. N. 71+00; 0+00 = W. 17410; SOUND EAST

Dist	Sound	Elev	Dist	Sound	Elev
0+30				13.5	
2:20				13.5	
(1.5)	0.2			13.5	
50	1.0			13.5	
	1.0		50	13.2	
	1.0			13.3	
	1.2			12.9	
	1.1			12.9	
1+00	1.2			12.6	
	1.5		3+00	12.7	
	3.0			12.1	
	5.6			11.6	
(1.5)	9.5			12.0	
2:25				12.0	
50	12.7			12.0	
	14.0		50	11.0	
	14.0			11.5	
	14.0			10.0	
	15.0			9.9	
2+00	14.2			9.2	
	14.0		4+00	9.7	

STA. N. 71+00 CONTD. EAST 4-08-59

Dist	Sound	Elev	Dist	Sound	Elev
	9.6			9.6	
	8.9			10.5	
	8.7			10.7	
	8.9			8.9	
50	9.0		50	7.4	
	9.0			7.1	
	9.7			7.1	
	9.5			7.0	
	9.8			7.1	
5+00	9.7		7+00	7.1	
	9.7			7.2	
	9.7			7.0	
	9.3			6.5	
(1.5)	8.8			6.2	
2:30 50	8.1		50	6.7	
	7.6			6.7	
	8.5			6.8	
	7.7			6.8	
	8.0			7.0	
6+00	8.2		8+00	6.8	

STA. N. 71+00 CONTD. EAST

Dist	Sound	Elev	Dist	Sound	Elev
	6.9			7.8	
	6.8			8.1	
	6.7			8.1	
	6.6			8.5	
50	6.5			8.5	
	6.7			8.5	
	7.1			8.7	
	8.0			8.8	
	7.9			9.0	
9+00	7.3		11+00	9.0	
	7.2			8.8	
	7.2			9.0	
	7.4			9.2	
	8.0			9.5	
50	8.0		50	9.0	
	7.7			9.0	
	8.0			9.5	
	7.9			9.5	
	7.3			10.0	
10+00	7.3		12+00	10.0	

(1.5)  
2:35  
50

STAN 71 fms cont EAST  
4-8-59

DIST SOUND ELEV

10.0

10.0

(1.4) 10.1

2140 10.0

+50

Sta N 72+00 ; 0+00 = W 17440 East

25  
-Sound

Dist Sound Elev Dist Sound Elev

0+00

14.7 13.2

2+00 13.2 11.7

13.6 12.1

14.0 12.5

14.2 12.7

14.2 12.7

+50 14.5 13.0

+50

(1.5)

2153

0.3 +1.2

14.0 12.5

0.5 +1.0

14.2 12.7

(1.6)

0.6 +0.9

13.4 11.9

2155

+50

1.0 +0.5

13.0 11.5

2.5 1.0 3+00 12.3 10.8

5.4 3.9 11.6 10.1

7.4 5.9 11.0 9.5

9.5 8.0 10.6 9.1

+50 11.6 10.1 10.1 8.6

12.5 11.0 +50 10.2 8.7

13.5 12.0 10.2 8.7

13.7 12.2 10.5 9.0

N 72+00 Cont EAST				
DIST	SOUND	ELEV	DIST	SOUND ELEV
	10.6	9.1		9.0 7.5
	10.5	9.0		9.5 8.0
4+00	10.2	8.7	6+00	9.5 8.0
	10.0	8.5		9.6 8.1
	9.7	8.2		9.6 8.1
	9.0	7.5		9.7 8.2
	8.5	7.0	(1.5)	8.0 6.5
+50	8.0	6.5	3:00 +50	5.5 4.0
	8.0	6.5		6.8 5.3
	7.5	6.0		6.5 5.0
	7.5	6.0		6.6 5.1
	7.2	5.7		8.4 6.9
5+00	7.0	5.5	7+00	9.0 7.5
	6.6	5.1		9.0 7.5
	6.4	4.9		8.0 6.5
	5.7	4.2		7.8 6.3
	6.5	5.0		7.8 6.3
+50	7.5	6.0	+50	8.0 6.5
	7.5	6.0		8.0 6.5
	6.7	5.2		7.5 6.0

N 72+00 Cont EAST					34
DIST	SOUND	ELEV	DIST	SOUND ELEV	
	7.5	6.0		7.8	
	7.3	5.8		8.0	
8+00	7.0	5.5	10+00	7.8	
	6.7	5.2		7.8	
	6.9	5.4		7.2	
	7.0	5.5		7.0	
	6.5	5.0	(1.5)	7.0	
+50	6.5		3:05 +50	6.7	
	6.7			6.7	
	7.0			7.0	
	7.0			6.2	
	7.2			6.2	
9+00	7.5		11+00	6.2	
	7.5			6.2	
	7.5			8.0	
	7.7			9.5	
	7.7			9.5	
+50	7.7		+50	9.5	
	7.9		(1.5)	9.2	
	7.8		3:06	9.0	

4-9-59 - ALLEN  
 Sec F13 III - Page 11 et al For X - Sections  
 STA W161+00; 0+00=N7360

Sound  
 Sound

STA W162+00=N7340.00

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 Sound  
 Sound

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
9:25 0+00 (4.6)				12.8	82	0+00				12.7	8.1
			2+00	13.9	93	(4.6)			2+00 +50	12.8	8.2
				14.7	101	9:38	2.0	+2.6		12.5	7.9
9:25 +30 (4.6)	2.8	+1.8		14.9	103		3.2	+1.4		12.7	8.1
	3.6	+1.0		14.7	101		3.5	+1.1		12.9	8.3
+50	4.1	+0.5		14.3	97	+50	4.3	+0.3	(4.6)	13.1	8.5
	4.5	+0.1	+50	14.0	94		4.8	0.2	9:42 2+50	13.2	8.6
	5.0	0.4		13.8	92		5.1	0.5	Page 87.		
	5.3	0.7	(4.6)	13.0	84	(4.6)	5.2	0.6			
	5.2	0.6	9:33	12.7	81	9:40	5.1	0.5			
1+00	5.2	0.6				1+00	5.1	0.5			
	5.2	0.6	3+00				5.5	0.9			
	5.1	0.5	Page 6				6.0	1.4			
	6.0	1.4					6.1	1.5			
(4.6)	6.0	1.4					7.3	2.7			
9:30 +50	6.0	1.4				+50	10.3	5.7			
	9.8	5.2					11.2	6.6			
	10.5	5.9					12.0	7.4			
	12.0	7.4					12.5	7.9			



4-9-59- ALLEN

STAW 163+00; 0+00=N 7360

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00			(4.7)	13.2	8.5
			9:50		
			+50	13.0	8.3
(4.7)				12.8	8.1
9:48				12.8	8.1
0+30	0.5	+4.2		12.2	7.5
	2.1	+2.6		12.0	7.3
+50	2.9	+1.8		11.5	
	3.2	+1.5	2+00	11.5	
	4.1	+0.6		11.7	
	4.7	+0.0		12.0	
	4.9	-0.2		12.0	
1+00	5.1	0.4		11.8	
	5.2	0.5	+50	11.7	
	5.5	0.8		11.7	
	5.5	0.8		12.9	
	6.1	1.4		12.4	
+50	8.9	4.2	(4.7)	12.2	
			9:54		
	11.0	6.3	3+00		
	12.7	8.0			
	13.1	8.4			

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STAW 164+00; 0+00=N 7400.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				10.1	5.4
			2+00	10.0	5.3
				9.7	5.0
(4.7)				10.1	5.4
10:05				10.5	5.8
0+30	0.2	+4.5		10.5	5.8
	1.2	+3.5		11.0	6.3
+50	2.0	+2.7		10.6	5.9
	2.5	+2.2	+50	10.3	5.6
	3.1	+1.6		10.0	5.3
	3.6	+1.1			
	4.1	+0.6			
1+00	4.5	+0.2	(4.7)		
	5.0	0.3	10:10		
	5.0	0.3	3+00		
	5.8	1.1			
	6.2	1.5			
+50	8.0	3.3			
	9.5	4.8	3+50		
	9.1	4.4			
	10.2	5.5			

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SOUND  
SOUTH

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STAN 165+00; 0+00 = N 7490.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				7.1	2.5
			2+00	8.1	3.3
				9.5	4.9
				10.0	5.4
				10.3	5.7
+50				10.3	5.7
10:47	0.1	+4.5	+50	10.5	5.9
(4.6)	1.0	+3.6		10.6	6.0
	1.5	+3.1		10.5	5.9
	2.0	+2.6		10.7	6.1
1+00	2.1	+2.5	(4.6)	10.8	6.2
	2.6	+2.0	10:20	10.5	5.9
	3.0	+1.6	3+00	10.6	6.0
	3.3	+1.3			
	4.0	+0.6			
+50	4.7	0.1			
	5.0	0.4	+50		
	5.5	0.9			
	6.5	1.9			

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STAN 174+00; 0+00 = W 16400

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SOUND  
WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				6.9	2.4
			2+00	9.6	5.1
				11.0	6.5
				12.7	8.2
			10:23	0.1	+4.4
			+50	0.3	+4.2
			(4.5)	0.5	+4.0
				0.7	+3.8
				1.1	+3.4
			(4.5)	1.3	+3.2
			10:25	1.5	+3.0
			1+00	2.0	+2.5
			3+00	2.3	+2.2
				2.8	+1.7
				3.3	+1.2
				3.6	+0.9
			+50	4.0	+0.5
				4.2	+0.3
				5.3	0.8

STA N74+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
(4.3)	12.1	7.6		8.0	3.5
10:30	12.0	7.5		7.9	3.4
4+00	12.1	7.6		7.8	3.3
	11.6	7.1	6+00	9.5	5.0
	11.0	6.5		9.8	5.3
	10.8	6.3		7.7	3.2
	10.6	6.1		8.4	3.9
+50	10.0	5.5		9.3	4.8
	10.0	5.5	+50	12.2	7.7
	10.0	5.5		12.7	8.2
	10.5	6.0		12.6	8.1
	10.5	6.0		12.2	7.7
5+00	10.0	5.5		12.4	7.9
	9.2	4.7	7+00	11.6	7.1
	9.8	5.3		11.2	6.7
	9.4	4.9		10.9	6.4
	10.0	5.5		10.4	5.9
+50	10.0	5.5		11.0	6.5
	8.9	4.4	+50	10.8	6.3

STA N74+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.8	6.3	+50	16.0	11.6
	11.0	6.5		16.2	11.8
	11.6	7.1		16.5	12.1
(10:35)	11.4	6.9		16.5	12.1
8+00	12.0	7.5		16.6	12.2
(4.4)	12.0	7.6	10+00	16.7	12.3
	12.5	8.1		17.0	12.6
	12.8	8.4		17.0	12.6
	13.2	8.8		16.8	12.4
+50	13.2	8.8		16.4	12.0
	13.3	8.9	+50	15.6	11.2
	14.3	9.9	(10:40)	15.0	10.6
	14.2	9.8	(4.4)	13.9	9.5
	14.2	9.8		12.3	7.9
9+00	14.2	9.8		11.2	6.8
	15.2	10.8	11+00	9.2	4.8
	15.2	10.8			
	15.1	10.7			
	15.8	11.4			

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300

STAN 75+00 CONTINUED (H)

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West

STAN 75+00; 0+00 = W 16510

DIST SOUND ELEV DIST SOUND ELEV

DIST SOUND ELEV DIST SOUND ELEV

0+00

(4.3)

15.2

9.7

11.1

11:05

2+00

15.4

4+00

10.2

11.5

15.4

10.0

6+00

11.6

15.4

10.6

11.7

14.9

9.8

11.4

13.7

9.0

11.5

+50

9.1

(4.2)

11.0

11:00

1.1

+50

12.4

+50

8.2

11:10

+50

10.7

(4.3)

1.2

12.5

7.7

9.9

1.5

12.5

7.1

9.4

2.8

12.4

7.6

9.3

1+00

3.5

12.8

7.1

9.3

4.2

3+00

12.8

5+00

7.3

7+00

9.0

5.3

12.1

7.6

8.3

7.5

12.7

7.3

8.9

9.4

12.3

7.3

9.3

+50

10.2

12.1

9.3

9.3

12.0

+50

11.5

+50

8.2

+50

9.3

13.9

10.3

8.7

9.5

14.9

9.7

10.2

9.9

STA N 75+00 Cont West

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	9.9			15.3	
	10.0	(4.2)		15.5	
8+00	10.2	11.15 10+00		15.9	
	10.4			15.6	
	10.3			15.0	
	10.2			14.7	
	10.0	(4.1)		15.0	
+50	9.8	11.20 +50		15.0	
	9.7			14.9	
	9.3			14.6	
	9.3			14.1	
	9.8			13.5	
9+00	10.9	11.76.10 11+00		10.9	
	12.0				
	15.3				
	15.8				
	16.4				
+50	16.2				
	14.9				
	15.3				

STA N 76+00; 0+00=W 16 550.					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				14.8	10.9
			2+00	15.0	11.1
				15.0	11.1
				14.5	10.6
				13.2	9.3
				12.5	8.6
	0.2	+3.7		12.5	8.6
	1.0	+2.9	+50	12.2	8.3
	1.7	+2.2		12.0	8.1
	2.8	+1.1		12.2	8.3
	3.1	+0.8		12.0	8.1
	3.9	0.0		11.2	7.3
	4.7	0.8	3+00	10.7	6.8
	6.5	2.6		10.5	6.6
	8.1	4.2		9.8	5.9
	9.8	5.9		9.2	5.3
	12.5	8.6		10.1	6.2
	14.2	10.3	+50	10.3	6.4
	14.2	10.3		10.9	7.0
	14.5	10.6		10.8	6.9

STAN 76+00 CONT WEST

STAN 76+00 CONT WEST

#3

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.8	6.9		10.5	6.7		7.6	3.8		8.8	5.1
	10.7	6.8		11.4	7.6		7.8	4.1		8.9	5.2
4+00	10.5	6.6	6+00	12.0	8.2	1155 8+00	7.6	3.9	10+00	9.2	5.5
	10.2	6.3		11.0	7.2		7.5	3.8		10.1	6.4
	10.0	6.1		10.0	6.2		7.5	3.8		10.3	6.6
	9.9	6.0		8.8	5.0		8.1	4.4		10.7	7.0
	9.0	5.1		9.0	5.2		8.2	4.5		11.1	7.4
+50	8.5	4.6	+50	9.3	5.5	+50	9.1	5.4	+50	11.4	7.7
	8.5	4.6		9.5	5.7		8.8	5.1		11.5	7.8
	9.0	5.1		8.3	4.5		7.7	4.0		11.2	7.5
	9.0	5.1		7.7	3.9		8.0	4.3		11.1	7.4
	8.8	4.9		8.0	4.2		8.0			11.1	7.4
5+00	8.4	4.5	7+00	8.0	4.2	9+00	8.0		12+00 11+00	11.3	7.6
	7.7	3.8		8.8	5.0		8.0				
	8.0	4.1		9.6	5.8		8.0				
	8.5	4.6		9.2	5.4		8.0	4.3			
3.8 1150	8.5	4.7		8.5	4.7		8.1	4.4			
+50	8.8	5.0	+50	7.5	3.7	+50	8.3	4.6			
	8.2	4.4		7.2	3.4		8.8	5.1			
	8.8	5.0		6.8	3.0		9.0	5.3			

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STAN 77+00; 0+00 = W 16580.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00			(2.4)	11.6	
			1:40		
			2+00	12.0	
				11.9	
				11.0	
				10.5	
+50				10.5	
1:35	0.2		+50	10.2	
(2.4)	0.9			10.5	
	1.2			10.8	
	1.6			10.7	
1+00	2.0			10.3	
	4.0		3+00	10.0	
	6.0			10.4	
	7.3			10.2	
	9.2			10.0	
+50	10.2			9.7	
	11.2		+50	9.2	
	12.0			9.3	
	12.0			9.0	

STAN 77+00 CONT, WEST (44)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
				9.2	
			(2.3)	9.3	
			1:45		
			4+00	9.6	6+00
				9.3	7.0
				9.2	6.1
				8.0	6.0
				8.0	7.3
			+50	8.1	+50
				7.6	7.0
				8.0	7.0
				8.0	6.9
				8.0	(2.3)
					1:50
			5+00	7.2	7+00
				7.2	8.0
				7.2	8.0
				7.7	8.0
				8.2	7.4
				8.3	7.3
			+50	8.5	+50
				8.1	7.4
				7.0	7.2

STAN 77+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
		7.2			7.6
		7.6		(2.2)	8.0
8+00		8.0	1:55 10+00		8.5
		8.5			8.8
		9.1			9.0
		9.5			9.1
		9.5			9.5
+50		9.2	+50		10.0
		9.0			9.8
		8.2			9.5
		7.8			9.1
		7.8		(2.2)	9.3
9+00		7.5	1:56 11+00		9.5
		8.0			
		7.5			
		7.2			
		7.0			
+50		7.2			
		7.5			
		7.5			

SOUND  
WEST

STAN 78+00 0+00=

DIST SOUND ELEV DIST SOUND ELEV

0+00

2+00

+50

+50

+50

3+00

+50

+50

*Handwritten notes and diagrams:*  
 A large green arrow points upwards and to the right.  
 The text "No. 10" is written vertically in green ink.  
 There are several scribbles and lines in green ink, possibly representing a profile or measurement points.



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SOUND

Page 4.

SOUND<sup>46</sup>

SOUTH

STAW 159+00; 0+00=N7440 -

SOUTH

STAW 160+00; 0+00=N7360.0

DIST SOUND ELEV DIST SOUND ELEV

DIST SOUND ELEV DIST SOUND ELEV

0+00 2+00 3.9 7.3

0+00 2.5 11.0 8.5

6.0 3.4

1:30 11.0 8.5

7.0 4.4

2+00 11.5 9.0

9.0 6.4

1:28 11.5 9.0

1:20 0.1 +2.5 9.2 6.6

0+20 1.3 +1.2 11.5 9.0

+50 0.3 +2.3 +50 10.1 7.5

2.0 +0.5 12.3 9.8

(2.6) 1.2 +1.4 10.3 7.7

2.5 0.0 11.8 9.3

2.0 +0.6 11.0 8.4

+50 2.8 0.3 11.7 9.2

2.4 +0.2 11.1 8.5

3.0 0.5 +50 11.1 8.6

2.8 0.2 12.1 9.5

3.0 0.5 11.0 8.5

1+00 2.8 0.2 3+00 12.1 9.5

2.9 0.4 11.0 8.5

2.5 +0.1 12.2 9.6

3.0 0.5 10.8 8.3

3.0 0.4 12.2 9.6

1+00 3.0 0.5 10.3 7.8

2.9 0.3 (2.5) 12.2 9.7

3.0 0.5 3+00 10.0 7.5

2.9 0.3 1:24 12.2 9.7

3.3 0.8 9.8 7.3

+50 3.1 1.5 +50 12.0 9.5

3.5 1.0 10.0 7.5

3.1 1.5

4.0 1.5 (2.4) 10.0 7.6

3.0 1.4

+50 4.0 1.5 1:34 10.4 8.0

3.3 1.7

7.7 5.2 +50 10.2 7.8

3.2 1.6

9.8 7.3

10.6 8.1

STAN 78+00; 0+00 = W 16580.0

West

DIST SOUND ELEV DIST SOUND ELEV

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
				9.0	6.9		8.0	5.9			
0+00				8.0	5.8		9.0	6.9		7.3	5.2
			2+00	7.6	5.4	4+00	9.0	6.9	6+00	7.4	5.3
				8.0	5.8		9.2	7.1		8.1	6.0
				8.7	6.5		9.2	7.1		8.0	5.9
				9.0	6.8		9.0	6.9		8.0	5.9
+50			(2.1)	9.0	6.9		9.2	7.1		7.7	5.6
			2:05								
			+50	10.1	8.0	+50	8.9	6.8	+50	7.0	4.9
(2.2)				10.5	8.4		9.0	6.9		7.0	4.9
2:00	0.1	+2.1		10.6	8.5		9.0	6.9		7.0	4.9
	0.5	+1.7		10.5	8.4		9.2	7.1		7.2	5.1
	1.0	+1.2		10.1	8.0		8.5	6.4		8.0	5.9
1+00	1.2	+1.0		10.0	7.9	5+00	8.0	5.9	7+00	8.8	6.7
	2.1	+0.1	3+00	10.1	8.0		7.7	5.6		9.5	7.4
	4.2	2.0		9.8	7.7		7.2	5.1		9.5	7.4
	5.8	3.6		9.2	7.1	(2.1)	7.3	5.2		9.0	6.9
	6.6	4.4		9.7	7.6	2:10	7.7	5.5		9.0	6.9
+50	8.0	5.8		10.0	7.9	+50	8.0	5.9	+50	9.0	6.9
	8.0	5.8	+50	9.2	7.1		8.0	5.9		9.0	6.9
	8.9	6.7		9.2	7.1		8.0	5.9		9.0	6.9
	9.0	6.8		9.2	7.1		8.0	5.9		9.0	6.9

STAN 78 +00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	9.0	6.9		8.0	6.0
	9.1	7.0		7.7	5.7
8 +00	9.4	7.3	10 +00	7.4	5.4
	9.1	7.0		7.7	5.7
	9.0	6.9		8.1	6.1
	9.0	6.9		8.5	6.5
	9.2	7.1		8.8	6.8
+50	9.3	7.2	+50	9.0	7.0
	9.0	6.9		9.0	7.0
	8.7	6.6		9.2	7.2
(2.0)	9.5	7.4	(2.0)	10.0	8.0
2:15	9.3	7.3	2:18	10.1	8.1
9+00	9.2	7.2	11+00	10.1	8.1
	9.2	7.2			
	9.2	7.2			
	9.0	7.0			
	9.0	7.0			
+50	9.0	7.0			
	8.8	6.8			
	8.5	6.5			

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STAN 79 +00' 0+00 = W16 5.80.0

48  
SOUND  
WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00			(1.9)		8.0
			2:30		8.0
			2+00		8.0
					8.0
					8.0
					7.5
			+50		7.0
			2:25	0.1	+50 6.8
			(1.9)	1.2	7.9
			2.3		8.8
			4.0		9.6
			1+00	4.4	10.2
			5.0		3+00 10.3
			5.3		9.8
			6.0		9.1
			6.7		8.0
			+50	7.1	7.3
			7.8		+50 7.8
			8.2		7.8
			8.2		8.2

STATION 79+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	8.2		(1.8)	7.1	
	8.3		2:35	7.2	
4+00	8.3		6+00	7.8	
	8.4			8.2	
	9.1			8.2	
	9.1			8.0	
	9.2			7.9	
+50	9.2		+50	7.6	
	9.2			7.2	
	9.2			7.0	
	9.2			7.0	
	9.2			6.9	
5+00	8.4		7+00	6.8	
	7.1			6.7	
	6.4			6.5	
	7.3			7.3	
	7.6			8.4	
+50	7.0		+50	8.3	
	7.0			7.2	
	7.0			7.9	

STATION 79+00 CONT WEST

(49)

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	7.9			9.8	
	7.1			8.9	
8+00	7.1		10+00	8.4	
	7.1			8.1	
	7.2			8.8	
	7.6			9.0	
	7.7			9.3	
+50	7.9		+50	9.2	
	8.2			9.3	
	8.1			9.0	
	8.3			9.6	
	8.3		(1.8)	10.2	
			2:40		
9+00	8.4		11+00	10.0	
	8.8				
	8.8				
	9.8				
	10.8				
+50	11.1		+50	10.5	
	10.9				
	10.7				

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SOUND

STAN 80+00 CONT West  
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(50)

STAN 80+00; 0+00 = W 165 70.0

WEST

DIST SOUND ELEV DIST SOUND ELEV

DIST SOUND ELEV DIST SOUND ELEV

0+00

(1.7)

8.1 6.4

2:55

2+00 8.5 6.8

4+00

8.9 7.2

9.0 7.3

8.5 6.8

8.3 6.6

8.1 6.4

8.3 6.6

8.2 6.5

+50 8.0 6.3

8.1 6.4

7.9 6.2

7.2 5.5

7.1 5.4

+50 7.1 5.4

7.3 5.6

7.0 5.3

7.1 5.4

6.9 5.2

+50 6.3 4.6

7.0 5.3

7.0 5.3

(1.7)

2:50 0.2 +1.5

10.2 8.5

1.2 +0.5

10.4 8.7

+50 2.0 0.3

10.7 9.0

3.3 1.6

+50 10.7 9.0

4.0 2.3

10.1 8.4

4.6 2.9

9.3 7.6

5.0 3.3

9.2 7.5

1+00 5.0 3.3

8.8 7.1

5.3 3.6

3+00 8.6 6.9

5.8 4.1

9.0 7.3

6.4 4.7

8.8 7.1

7.0 5.3

8.5 6.8

+50 7.2 5.5

8.5 6.8

7.2 5.5

+50 8.7 7.0

7.3 5.6

8.6 6.9

7.7 6.0

8.7 7.0

6+00

7.1 5.4

7.1 5.4

7.1 5.4

7.4 5.7

7.3 5.6

+50

7.0 5.3

7.0 5.3

7.1 5.4

7.7 6.0

7.6 5.9

7+00

7.8 6.1

7.8 6.1

7.8 6.1

7.3 5.6

(1.7)

7.0 5.3

3:00

+50

7.0 5.3

6.9 5.2

6.7 5.0

STAN 80+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	6.5	4.8		8.0	6.3
	6.7	5.0		8.1	6.4
8+00	6.8	5.1	10+00	8.2	6.5
	6.9	5.2		8.3	6.6
	7.0	5.3		8.2	6.5
	7.2	5.5		8.3	6.6
	7.9	6.2		8.2	6.5
+50	7.6	5.9	+50	8.0	6.3
	7.8	6.1		8.0	6.3
	8.0	6.3		8.1	6.4
	8.1	6.4		8.6	6.9
	8.5	6.8	(1.7)	9.0	7.3
			3.05		
9+00	8.6	6.9	11+00	9.4	7.7
	8.8	7.1			
	8.7	7.0			
	8.8	7.1			
	8.1	6.4			
+50	7.6	5.9			
	7.4	5.7			
	7.9	6.2			

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STAN 81+00; 0+00 = W/6510 Sound West

DIST	SOUND	ELEV	DIST	SOUND	ELEV
				10.2	
			2+00	10.7	
			10:30	0.2	10.9
			(4.2)	1.0	11.0
				1.8	11.3
			+50	2.5	11.3
				3.7	+50 10.9
				5.5	11.0
				6.7	11.1
				7.1	11.2
				7.8	(4.2) 10.8
			11:00		10:35
				8.0	3+00 10.6
				8.0	10.0
				8.1	10.9
				8.2	12.5
			+50	9.0	13.0
				9.5	+50 13.2
				10.0	13.0
				10.1	12.2

Sta 81+00 Cond West			
Dist	Sound	Elev	Dist
	12.0		8.2
	11.3		8.6
4+00	11.0		6+00 9.0
	10.8		9.0
	11.0		9.2
	11.0		9.7
	11.0		9.6
+50	10.8		+50 9.6
	10.7		9.1
	11.0		9.1
	10.9		9.0
	10.8		9.0
5+00	10.8		7+00 9.0
	10.5		9.4
	10.0		9.6
	9.2		(4.1) 9.9
	8.4		10:40 9.8
+50	8.4		+50 9.5
	8.5		9.9
	7.5		10.0

Sta N 81+00 Cond West			
Dist	Sound	Elev	Dist
	10.0		10.3
	10.1		(4.1) 10.0
			10:45
8+00	10.0		10+00 10.1
	9.9		10.7
	9.5		10.3
	9.3		10.8
	9.9		10.6
+50	9.8		+50 11.1
	9.9		10.8
	9.8		10.9
	9.9		10.8
	9.9		(4.1) 10.7
			10:46
9+00	10.0		11+00 10.6
	10.1		
	10.0		
	10.2		
	10.2		
+50	10.2		
	10.2		
	10.3		

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STAN 82+00; 0+00 = W 16500-

Sound  
West

STAN 82+00 CONT WEST (53)

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
							11.1	7.0		10.0	5.9
0+00			(4.1)	11.1	7.0		11.1	7.0	(4.1)	10.1	6.0
			10:55						11:00		
(4.1)			2+00	11.5	7.4	4+00	11.1	7.0	6+00	10.0	5.9
10:52	0.3	+3.8		12.1	8.0		11.1	7.0		9.7	5.6
	1.0	+3.1		12.0	7.9		11.2	7.1		9.7	5.6
	1.7	+2.4		12.0	7.9		11.6	7.5		9.9	5.8
+50	2.9	+1.2		12.0	7.9		11.5	7.4		10.1	6.0
	4.0	+0.1	+50	11.4	7.3	+50	11.5	7.4	+50	10.0	5.9
	6.5	2.4		11.0	6.9		11.2	7.1		9.0	4.9
	7.1	3.0		10.6	6.5		11.8	7.7		8.9	4.8
	7.9	3.8		10.6	6.5		11.6	7.5		8.8	4.7
1+00	8.0	3.9		10.4	6.3		11.7	7.6		8.8	4.7
	8.3	4.2	3+00	10.2	6.1	5+00	11.2	7.1	7+00	8.6	4.5
	8.8	4.7		10.2	6.1		11.1	7.0		8.5	4.4
	9.5	5.4		10.2	6.1		11.2	7.1		8.6	4.5
	9.8	5.7		10.1	6.0		11.0	6.9		9.0	4.9
+50	10.0	5.9		9.9	5.8		10.5	6.4		9.0	4.9
	10.0	5.9	+50	9.6	5.5	+50	10.5	6.4	+50	8.9	4.8
	10.0	5.9		10.4	6.3		10.0	5.9		9.2	5.1
	10.3	6.2		10.8	6.7		10.1	6.0		9.2	5.1



STAN 82+00 CONT WEST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	9.8	5.7		10.2	6.1
	9.6	5.5	(4.0)	10.1	6.1
8+00	9.4	5.3	11:05 10+00	10.0	6.0
	9.7	5.6		10.3	6.3
	9.7	5.6		10.0	6.0
	9.3	5.2		10.1	6.1
	9.5	5.4		10.0	6.0
+50	9.8	5.7	+50	10.0	6.0
	10.7	6.6		10.3	6.3
	10.9	6.8		10.1	6.1
	10.8	6.7		10.2	6.2
	10.4	6.3	(4.0)	10.5	6.5
9+10	10.1	6.0	11:06 11+00	10.7	6.7
	10.1	6.0			
	10.6	6.5			
	10.1	6.0			
	10.5	6.4			
+50	10.0	5.9			
	10.0	5.9			
	10.1	6.0			

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54  
SOUND  
WEST

STAN 83+00; 0+00; W 16 510

DIST	SOUND	ELEV	DIST	SOUND	ELEV	
				10.8	6.8	
			11:10 0+00			
			2+00	11.0	7.0	
				11.0	7.0	
	(4.0)	0.1	+3.9	11.3	7.3	
		0.4	+3.6	11.4	7.4	
	+50	1.0	+3.0	(4.0) 11:15 +50	11.5	7.5
		1.5	+2.5	+50	11.0	7.0
		2.2	+1.8		10.5	6.5
		3.5	+0.5		10.3	6.3
		6.0	2.0		10.5	6.5
		7.1	3.1		10.6	6.6
		8.0	4.0	3+00	10.7	6.7
		9.0	5.0		10.7	6.7
		10.0	6.0		10.6	6.6
		11.1	7.1		10.5	6.5
	+50	11.7	7.7		10.5	6.5
		11.0	7.0	+50	10.5	6.5
		10.8	6.8		11.0	7.0
		11.2	7.2		11.0	7.0

STAN 83700 CONT WEST

DIST	Sound	ELEV	DIST	Sound	ELEV
	11.2	7.2		10.2	6.2
	12.0	8.0		10.0	6.0
4+00	11.8	7.8	6+00	10.3	6.3
	12.0	8.0		9.5	5.5
	12.0	8.0		10.7	6.7
	12.3	8.3		12.0	8.0
	13.0	9.0		12.0	8.0
+50	13.5	9.5	+50	11.9	7.9
	13.4	9.4		12.0	8.0
	12.9	8.9		11.8	7.8
	12.6	8.6		11.2	7.2
	12.0	8.0		11.0	7.0
5+00	11.3	7.3	7+00	10.3	6.3
	11.5	7.5		9.3	5.3
	10.9	6.9		8.8	4.8
	10.2	6.2		8.9	4.9
(4.0)	10.5	6.5		9.5	5.5
11+20	10.1	6.1	+50	9.5	5.5
+50	10.5	6.5		9.7	5.7
	10.3	6.3		10.0	6.0

STAN 83700 CONT WEST (55)

DIST	Sound	ELEV	DIST	Sound	ELEV
	10.5	6.5		10.7	6.7
	11.8	7.8		10.5	6.5
8+00	12.0	8.0	10+00	10.9	6.9
	8.0	4.0		10.9	6.9
	9.2	5.2		11.0	7.0
	9.5	5.5		11.0	7.0
	10.0	6.0		11.1	7.1
+50	9.7	5.7	+50	11.2	7.2
	9.0	5.0		11.6	7.6
	9.3	5.3		10.8	6.8
(4.0)	10.2	6.2	(3.9)	11.4	7.4
11+25	10.0	6.0	11+28	11.1	7.2
9+00	10.0	6.0	11+00	11.0	7.1
	10.2	6.2			
	10.9	6.9			
	11.4	7.4			
	11.0	7.0			
+50	10.7	6.7			
	10.4	6.4			
	10.5	6.5			

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Sound  
EAST

STAN 73+00; 0+00 = WIT 480.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				14.8	12.0
			2+00	14.8	12.0
				15.0	12.2
				15.2	12.4
				15.5	12.7
+50	0.3	+2.5		15.5	12.7
1:35			+50	15.0	12.2
(2.8)	0.7	+2.1		14.7	11.9
	1.5	+1.3		14.2	11.4
	3.5	0.7		14.2	11.4
	6.7	3.9		13.0	10.2
1+00	8.0	5.2		13.0	10.2
	10.0	7.2	3+00	13.0	10.2
	11.3	8.5		12.5	9.7
	12.6	9.8		11.5	8.7
(2.8)				11.0	8.2
1:35	13.5	10.7		11.2	8.4
+50	13.8	11.0		11.1	8.3
	14.1	11.3	+50	11.1	8.3
	14.3	11.5		11.2	8.4
	14.5	11.7		11.0	8.2

STAN 73+00 CONT EAST

156

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.9	8.1		7.2	4.5
	11.0	8.2		7.7	5.0
4+00	10.8	8.0	6+00	8.0	5.3
	10.2	7.4		7.3	4.6
	10.0	7.2		7.1	4.4
	10.0	7.2		7.1	4.4
	9.1	6.3		9.2	6.5
+50	9.3	6.5	+50	9.0	6.3
	8.1	5.3		8.0	5.3
	8.0	5.2		7.2	4.5
	8.0	5.2		9.8	7.1
(2.7)				10.1	7.4
1+00	8.5	5.8		8.5	5.8
5+00	8.5	5.8	7+00	9.9	7.2
	6.8	4.1		10.2	7.5
	7.0	4.3		10.2	7.5
	8.6	5.9		10.2	7.5
	8.5	5.8		10.3	7.6
+50	9.1	6.4	+50	9.5	6.8
	8.2	5.5		9.5	6.8
	7.1	4.4		9.5	6.8



4-10-59

SOUND  
NORTH

STA W 175+00; 0+00=N 7330

DIST	SOUND	ELEV
0+00		
2:00	0.2	
(2.5)	2.2	
	2.8	
	2.8	
+50	3.0	
	5.0	
	7.0	
	9.2	
	10.5	
1+00	11.6	
	13.2	
	13.9	
	14.3	
(2.4)	14.3	
2:05	14.3	
+50	14.3	

4-10-59

(58)  
SOUND  
NORTH

STA W 176+00; 0+00=N 7300

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00					
				8.5	
(2.4)			2+00	11.0	
2:10	0.2			11.8	
	0.6			11.6	
	1.0			11.8	
+50	1.1		(2.4)	10.0	
	1.2		2:15	9.1	
	1.5		+50	9.7	
	1.7			9.0	
	2.0			9.2	
1+00	2.6		(2.4)	9.8	
	3.5		2:17	10.3	
	4.9		3+00		
	7.1				
	8.7				
+50	9.0				
	9.5				
	8.9				
	8.8				

STAN W177+00; 0+00 = N 73 10

STAN 74+00; 0+00 = W 18 170-

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				12.5		0+00				12.0	9.8
			2+00	12.2		(2.2)			2+00	12.2	10.0
				11.8		2:38	0.3	+1.9		12.5	10.3
2:25	0.4			11.1			0.8	+1.4		12.2	10.0
(2.3)	1.8			11.0			1.0	+1.2		11.5	9.3
+50	2.8		(2.3)	11.0		+50	1.2	+1.0		10.2	8.0
	4.0		2:30 +50	10.8			1.8	+0.4	+50	10.9	8.7
	5.2			10.5			2.5	0.3		10.5	8.3
	6.1			10.5			5.3	3.1		10.4	8.2
	7.0			11.0		(2.2)	7.0	4.8		9.9	7.7
1+00	8.8			11.5		2:40 1+00	8.1	5.9		9.0	6.8
	8.9		3+00	11.7			9.2	7.0	3+00	9.0	6.8
	9.0						9.9	7.7		9.2	7.0
	9.1						10.2	8.0		9.2	7.0
	9.2						10.8	8.6		9.5	7.3
+50	10.2					+50	11.1	8.9	(2.2)	10.1	7.9
	10.5						11.6	9.4	2:45 +50	10.5	8.3
	11.4						12.0	9.8		11.2	9.0
	12.0						12.0	9.8		11.4	9.4

STAN 74+00 CONT EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.2	9.0		2.0	+0.2
	11.2	9.0	(2.2)	2.1	+0.1
			2:50		
4+00	9.6	7.4	6+00	2.1	+0.1
	9.0	6.8		2.1	+0.1
	9.1	6.9		2.2	+0.1
	9.2	7.0		2.5	0.3
	10.0	7.8		2.5	0.3
+50	9.0	6.8	+50	2.8	0.6
	8.0	5.8		3.2	1.0
	7.0	4.8		4.1	1.9
	6.0	3.8		6.0	3.8
	4.8	2.6	(2.2)	7.8	5.6
			2:52		
5+00	3.5	1.3	7+00	9.5	7.3
	3.2	1.0			
	3.5	1.3			
	2.0	+0.2			
	1.9	+0.3			
+50	1.7	+0.5			
	1.7	+0.5			
	1.8	+0.4			

4-10-59 See Page 41 (60)

STAN 75+00; 0+00=W 18300 EAST					
DIST	SOUND	ELEV	DIST	SOUND	ELEV
			2+00	10.0	7.9
				10.2	8.1
				10.5	8.4
				10.9	8.8
3:05					
+50	0.3	+1.8		10.9	8.8
(2.1)	1.0	+1.1	+50	10.9	8.8
	1.9	+0.2		10.8	8.7
	4.0	1.9		10.8	8.7
	4.9	2.8		10.8	8.7
4+00	5.0	2.9	(2.0)	10.8	8.8
			3:10		
	6.0	3.9	3+00	10.5	8.5
	7.0	4.9		10.1	8.1
	7.8	5.7		9.9	7.9
	7.8	5.7		9.8	7.6
+50	8.3	6.2		9.8	7.6
	8.3	6.2	+50	10.0	8.0
	8.3	6.2		10.5	8.5
	9.0	6.9		10.5	8.5
	9.5	7.4		10.3	8.3

STAN 75+00 CONT. EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	9.0	7.0		12.1	10.1
4+00	8.6	6.6	6+00	12.1	10.1
	8.5	6.5		11.9	9.9
	8.5	6.5		11.1	9.1
	8.4	6.2		9.8	7.8
	8.3	6.3		9.0	7.0
+50	8.9	6.9	+50	8.5	6.5
	10.2	8.2		8.2	6.2
	11.8	9.8		8.4	6.4
	12.8	10.8		8.0	6.0
	12.0	10.0		8.0	6.0
5+00	12.0	10.0	7+00	8.4	6.4
	11.5	9.5		8.4	6.4
	11.0	9.0		10.8	8.8
	11.0	9.0		12.0	10.0
(2.0)	11.5	9.5	(2.0)	13.0	11.0
3:15 +50	11.5	9.5	3:20 +50	13.2	11.2
	11.8	9.8		13.4	11.2
	12.0	10.0			
	12.0	10.0			

4-13-52  
P. 1 = 42

(6)  
SOUND  
EAST

STAN 76+00; 0+00=W 183 10.0

DIST	SOUND	ELEV	DIST	SOUND	ELEV
				10.2	8.2
			2+00	10.2	8.2
				10.5	8.5
				10.5	8.5
				10.5	8.5
				10.4	8.4
			2.0	0.0	+50 10.2 8.2
			3.9	1.9	10.0 8.0
			5.9	3.9	10.0 8.0
			7.5	5.5	10.3 8.3
			(2.0)		10.1 8.1
			1+00 9.0	7.0	9:15 3+00 10.0 8.0
			9.6	7.6	10.0 8.0
			10.0	8.0	10.0 8.0
			9.9	7.9	10.1 8.1
			9.8	7.8	11.0 9.0
			+50 10.2	8.2	11.1 9.1
			9.9	7.9	+50 11.3 9.3
			9.9	7.9	11.0 9.0
			10.0	8.0	11.0 9.0



## STAN 76+00 Cont EAST

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DIST SOUND ELEV DIST SOUND ELEV

STAN 77+00; 0+00 = W 18240.0 EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV	DIST	SOUND	ELEV
	11.0	9.0		11.8	9.8						
	10.3	8.3		11.9	9.9	1+00				9.7	
4+00	10.2	8.2	6+00	11.8	9.8				2+00	10.0	
	9.9	7.9		11.5	9.5	9:30	0.1			10.0	
	10.0	8.0		11.0	9.0	(2.1)	1.1			10.0	
	10.0	8.0		10.7	8.7		1.9			10.3	
	10.2	8.2		10.9	8.9	+50	2.5			11.0	
+50	11.5	9.5	+50	10.3	8.3		5.0		+50	11.0	
	11.3	9.3		10.0	8.0		6.1			11.0	
	11.5	9.5		9.8	7.8		6.9			11.1	
	11.4	9.4		9.8	7.8		7.8			11.0	
	11.1	9.1	(2.0)	9.9	7.9		8.8		(2.2)	11.0	
			9:20	9.9	7.9	1+00	8.8		9:35	11.0	
5+00	10.9	8.9	7+00	9.7	7.7		9.2		3+00	11.4	
	11.0	9.0					9.3			11.3	
	11.0	9.0					9.5			10.9	
	11.0	9.0					9.5			11.0	
	11.2	9.2				+50	9.2			10.9	
+50	11.6	9.6					9.5		+50	10.8	
	11.6	9.6					9.7			10.7	
	11.5	9.5					9.7			10.6	

STAN 77+00 CONT EAST  
 DIST SOUND ELEV DIST SOUND ELEV

	10.6			9.3	
	10.3		(2.2)	9.5	
4+00	10.5		9.38 6+00	9.6	
	11.0			10.0	
	11.2				
	11.3				
	11.5				
+50	11.7				
	11.7				
	12.0				
	12.0				
	12.0				
5+00	11.5				
	11.0				
	10.5				
	10.6				
	10.5				
+50	10.0				
	9.8				
	9.3				

STAN 78+00; 0+00 = W 182.00.0 EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
0+00				10.0	7.7
			2+00	10.0	7.7
				10.0	7.7
				10.0	7.7
				10.2	7.9
+50				10.3	8.0
9.50	0.5	+1.8	750	10.2	7.9
(2.3)	1.7	+0.6		10.8	8.5
	2.5	0.2		11.5	9.2
	4.2	1.9		11.5	9.2
1+00	6.0	3.7		11.0	8.7
	7.6	5.3	3+00	10.5	8.2
	8.7	6.4		10.5	8.2
	9.8	7.5		10.5	8.2
	10.0	7.7		10.0	7.7
+50	10.9	8.6		9.7	7.4
	10.5	8.2	+50	9.8	7.5
	10.7	8.4		10.0	7.7
	10.3	8.0		10.0	7.7

## STAN 78+00 CONT EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
	10.0	7.7		9.5	7.1
	9.5	7.2		9.0	6.6
4+00	9.5	7.2	6+00	8.5	6.1
	9.5	7.2	(2.4)	8.1	5.7
	9.8	7.5	9:57	8.2	5.8
(2.4)	10.0	7.7			
9:55	10.0	7.7			
+50	10.5	8.2			
	10.6	8.3			
	10.7	8.4			
	10.8	8.4			
	10.8	8.4			
5+00	10.9	8.5			
	11.0	8.6			
	11.2	8.8			
	10.7	8.3			
	10.5	8.1			
+50	10.1	7.7			
	9.8	7.4			
	9.7	7.3			

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SOUND<sup>(64)</sup>

## STAN 79+00; 0+00 = W 18/00.0 EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
				10.9	
			2+00	11.0	
				10.9	
10:05	0.2			10.5	
(2.5)	1.4			10.3	
	1.7			10.5	
+50	2.5			10.6	
	5.4		+50	10.6	
	7.3			10.5	
	8.8			10.5	
	9.0			10.5	
	9.2		(2.5)	10.5	
+00	9.2		10:10	10.5	
	9.5		3+00	10.3	
	9.5			10.4	
	9.2			10.7	
	9.5			10.8	
+50	10.3			10.2	
	10.3		+50	10.3	
	10.3			10.5	
	10.6			10.5	

STAN 79+00 CONT EAST

DIST	SOUND	FLEV	DIST	SOUND	FLEV
	11.0				
	11.0				
4+00	11.2				
	11.1				
	11.0				
	10.8				
	10.5				
+50	10.3				
	10.3				
	10.0				
	9.8				
	9.7				
8+00	9.0				
	8.0				
(2.6)	8.1				
10:15	8.7				

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SOUND EAST

STAN 80+00; 0+00=W/8050.							
DIST	SOUND	FLEV	DIST	SOUND	FLEV	DIST	SOUND
0+00				10.0	7.4		
10:20	0.1	+2.5	2+00	10.1	7.5		
(2.6)	0.8	+1.8		10.0	7.4		
	1.2	+1.4		10.0	7.4		
	1.8	+0.8		10.5	7.9		
+50	2.6	0.0		10.5	7.9		
	4.5	1.9	+50	10.5	7.9		
	6.0	3.4		10.6	7.8		
	7.2	4.6		10.7	8.1		
	8.0	5.4		10.9	8.3		
+100	8.5	5.9		11.0	8.4		
	8.6	6.0	3+00	11.5	8.9		
	8.5	5.9		11.5	8.9		
	8.4	5.8		11.4	8.8		
	9.3	6.7	(2.7)	11.0	8.3		
+150	8.3	5.7	10:25	11.2	8.5		
	9.0	6.4	+50	11.1	8.4		
	9.1	6.5		11.5	8.8		
	10.1	7.5		11.5	8.8		

STA 80+00 CONT EAST  
DIST SOUND ELEV

	11.0	8.3
	10.4	7.7
4+00	9.8	7.1
	9.1	6.4
	9.0	6.3
	8.8	6.1
	9.0	6.3
+50	9.1	6.4
	9.1	6.4
	9.5	6.8
(2.7)	9.2	6.5
9:27	9.5	6.8
5+00	9.5	6.8
	8.9	6.2

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STA 181+00; 0+00 = W 18010.0

(66)  
SOUND  
EAST

DIST	SOUND	ELEV	DIST	SOUND	ELEV
1+00				10.5	
10:35	0.5		2+00	10.3	
(2.7)	1.4			10.2	
	2.0			10.0	
	2.9			9.9	
+50	4.9			11.1	
	6.5		+50	11.5	
	7.5			11.8	
	8.2			12.0	
	8.5			11.8	
1+00	9.0			11.5	
	10.1		3+00	11.2	
	9.9			10.6	
	10.1			10.2	
	10.2			10.0	
+50	10.1			9.9	
	10.2		+50	10.0	
	10.5			10.0	
	10.5			10.1	

## STAN 81+00 CONT EAST

DIST SOUND FLEV

	9.6
	9.4
4+00	9.4
	9.4
	9.7
	9.7
	9.7
+50	9.6
	9.2
	9.3
(2.8)	9.0
10:40	9.2
5+00	9.0

ALLEN Page 53 - 4-13-59

Sound

STAN 82+00; 0+00=W 18000.0 EAST

DIST SOUND FLEV DIST SOUND FLEV

0+00				12.0	9.2
			2+00	12.0	
10:45	0.5	+2.3		12.0	
(2.8)	1.0	+1.8		12.0	
	2.3	+0.5		12.0	9.2
	3.0	0.2		11.9	9.1
	6.2	3.4	+50	11.8	9.0
	8.0	5.2		11.5	8.7
	9.1	6.3		11.0	8.2
	10.6	7.8		10.5	7.7
1+00	11.7	8.9		10.2	7.4
	11.4	8.6	3+00	10.2	7.4
	10.8	8.0		9.9	7.1
	11.6	8.8		9.5	6.7
	11.5	8.7		9.5	6.7
T58	12.0	9.2		9.5	6.7
	12.0	9.2	+50	9.5	6.7
	12.0	9.2		9.3	6.5
	12.0	9.2		9.4	6.6

STA N 82+00 Cont EAST

DIST SOUND ELEV

	9.4	6.6
	9.4	6.6
4+00	9.5	6.7
	9.5	6.7
	9.5	6.7
(2.9)	9.0	6.2
10:50	9.2	6.4
+50	9.1	6.3
	9.0	6.2
	9.2	6.4
	9.0	6.2
	9.0	6.2
5+00	9.0	6.2

STA N 83+00; 0+00=W 18000.0 Sound EAST

DIST SOUND ELEV DIST SOUND ELEV

0+10			12.3	9.4	
			2+00	12.5	9.6
				11.6	8.7
10:55	0.5	+2.4		11.8	8.9
(2.9)	1.4	+1.5		11.6	8.7
+50	2.6	+0.3		11.7	8.8
	3.5	0.6	+50	11.6	8.7
	7.1	4.2		11.0	8.1
	9.8	6.9		10.5	7.6
	10.8	7.9		10.5	7.6
			(2.9)		
4+00	11.5	8.6	11:00	10.3	7.4
	11.0	8.1	3+00	10.0	7.1
	11.8	8.9		10.1	7.2
	12.0	9.1		10.3	7.4
	11.6	8.7		10.3	7.4
+50	12.0	9.1		10.3	7.4
	12.0	9.1	+50	10.0	7.1
	12.1	9.2		9.6	6.7
	12.3	9.4		9.5	6.6

## STAN 83400 CENTER EAST

DIST SOUND ELEV

9.3 6.4

9.4 6.5

4400 10.7 7.8

10.3 7.4

10.5 7.6

10.7 7.8

10.6 7.7

450 10.3 7.4

10.3 7.4

10.0 7.1

(3.0) 10.0 7.1

9.8 6.9

11:03

5400 10.0 7.1

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STA N73400; 0400 = W 18070.0

Sound<sup>69</sup>  
EAST

DIST SOUND ELEV DIST SOUND ELEV

0400 11.9 8.9

11:15 0.2 +2.8 2400 11.1 8.1

(3.0) 0.5 +2.5 11.0 8.0

1.0 +2.0 10.6 7.6

1.2 +1.8 8.2 5.2

450 1.9 +1.1 7.7 4.7

2.3 +0.7 450 6.3 3.3

2.8 +0.2 5.2 2.2

3.6 0.6 3.7 0.7

6.9 3.9 1.8 +1.2

1400 9.0 6.0 (3.1) 0.7 +2.4

10.5 7.5 3400- 11:20 0.2 +2.9

11.0 8.0

12.4 9.4

12.0 9.0

450 11.9 8.9

11.7 8.7

12.0 9.0

12.1 9.1





W 159+00 = N 7391.27 (N 7370) ✓

W 160+00 = N 7365.26 (N 7210)

W 161+00 = N 7347.26 (N 7330) ✓

W 162+00 = N 7342.67 (N 7320)

W 163+00 = N 7363.73 (N 7230)

W 164+00 = N 7415.40 (N 7290)

W 165+00 = N 757.95 (N 7370)

W 166-00 - skip

N 74+00 = W 16376.65 ✓

N 75+00 = W 16487.15 ✓

N 76+00 = W 16542.38

N 77+00 = W 16566.06 ✓

N 78+00 = W 16563.89 ✓

N 79+00 = W 16535.02 ✓

N 80+00 = W 16485.73 ✓

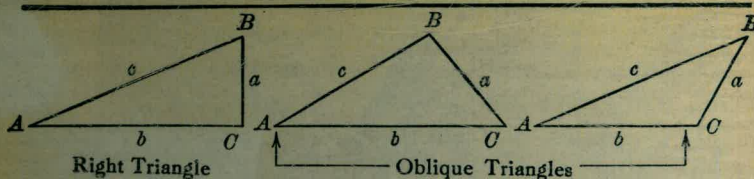
N 81+00 = W 16435.75

N 82+00 = W 16411.67

N 83+00 = W 16422.08

Pickup N72 to 400 + N73 400 to west in cove

### TRIGONOMETRIC FORMULÆ



Right Triangle

Oblique Triangles

#### Solution of Right Triangles

For Angle A.  $\sin = \frac{a}{c}$ ,  $\cos = \frac{b}{c}$ ,  $\tan = \frac{a}{b}$ ,  $\cot = \frac{b}{a}$ ,  $\sec = \frac{c}{b}$ ,  $\operatorname{cosec} = \frac{c}{a}$

Given	Required	Formulas
$a, b$	$A, B, c$	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2} = a \sqrt{1 + \frac{b^2}{a^2}}$
$a, c$	$A, B, b$	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)} = c \sqrt{1 - \frac{a^2}{c^2}}$
$A, a$	$B, b, c$	$B = 90^\circ - A, b = a \cot A, c = \frac{a}{\sin A}$
$A, b$	$B, a, c$	$B = 90^\circ - A, a = b \tan A, c = \frac{b}{\cos A}$
$A, c$	$B, a, b$	$B = 90^\circ - A, a = c \sin A, b = c \cos A$

#### Solution of Oblique Triangles

Given	Required	Formulas
$A, B, a$	$b, c, C$	$b = \frac{a \sin B}{\sin A}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
$A, a, b$	$B, c, C$	$\sin B = \frac{b \sin A}{a}, C = 180^\circ - (A + B), c = \frac{a \sin C}{\sin A}$
$a, b, C$	$A, B, c$	$A + B = 180^\circ - C, \tan \frac{1}{2}(A - B) = \frac{(a - b) \tan \frac{1}{2}(A + B)}{a + b}$ $c = \frac{a \sin C}{\sin A}$
$a, b, c$	$A, B, C$	$s = \frac{a + b + c}{2}, \sin \frac{1}{2}A = \sqrt{\frac{(s - b)(s - c)}{bc}}$ $\sin \frac{1}{2}B = \sqrt{\frac{(s - a)(s - c)}{ac}}, C = 180^\circ - (A + B)$
$a, b, c$	Area	$s = \frac{a + b + c}{2}, \text{area} = \sqrt{s(s - a)(s - b)(s - c)}$
$A, b, c$	Area	$\text{area} = \frac{bc \sin A}{2}$
$A, B, C, a$	Area	$\text{area} = \frac{a^2 \sin B \sin C}{2 \sin A}$

#### REDUCTION TO HORIZONTAL

Horizontal distance = Slope distance multiplied by the cosine of the vertical angle. Thus: slope distance = 319.4 ft. Vert. angle =  $5^\circ 10'$ . From Table, Page IX.  $\cos 5^\circ 10' = .9959$ . Horizontal distance =  $319.4 \times .9959 = 318.09$  ft.  
Horizontal distance also = Slope distance minus slope distance times (1 - cosine of vertical angle) With the same figures as in the preceding example, the following result is obtained.  $\text{Cosine } 5^\circ 10' = .9959, 1 - .9959 = .0041, 319.4 \times .0041 = 1.31, 319.4 - 1.31 = 318.09$  ft.  
When the rise is known, the horizontal distance is approximately:—the slope distance less the square of the rise divided by twice the slope distance. Thus: rise = 14 ft., slope distance = 302.6 ft. Horizontal distance =  $302.6 - \frac{14 \times 14}{2 \times 302.6} = 302.6 - 0.32 = 302.28$  ft.

