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464

KEUFFEL & ESSER CO.

DRAWING MATERIALS
AND
SURVEYING INSTRUMENTS.
NEW YORK.

CHICAGO. ST. LOUIS. SAN FRANCISCO. MONTREAL.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.
ROADWAY 18 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

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MICROFILMED JAN 13 1965

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

Calculated by Julion A. Hall, M. Am. Soc. C. E.

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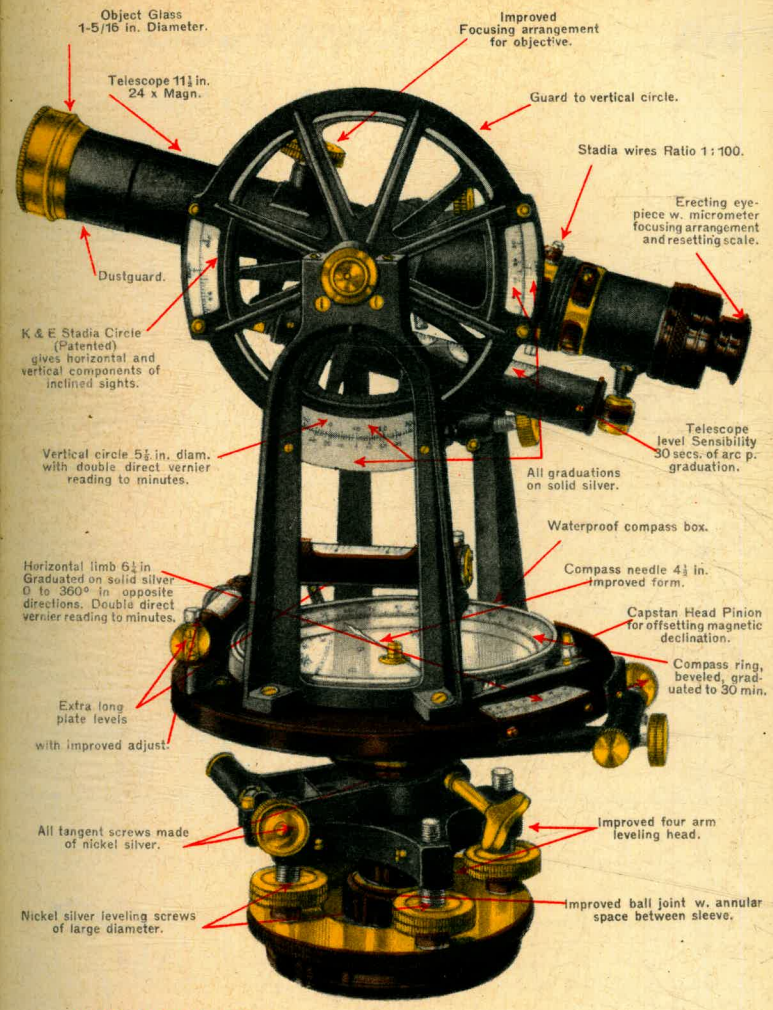
EXTRA FINE ENGINEERS' TRANSIT
No. 5060 S
KEUFFEL & ESSER CO., N.Y.



ALSO MADE WITH

INTERNAL FOCUSING TELESCOPE

PRACTICALLY DUST AND MOISTURE PROOF.

1339484

EL CAPITAN DAM

Computations for final Rock Embankment
from N 3730 to N 4060 P. 1 to 78
Cont in 462-78

East		N3730 U.S	Ht. (13.5)	Mean Ht.	Dist.	Area in Sq ft.
5340	575.4	547.7	27.7			
50	"	48.3	27.1			
60	"	48.3	27.1			
70	"	47.9	27.5			
80	"	48.1	27.3			
90	"	47.4	28.0			
5400	"	47.4	28.0			
10	"	47.2	28.2	453.25	x 10 =	4532.5
20	"	47.0	28.4			
30	"	47.0	28.4			
40	"	47.0	28.4			
50	"	47.5	27.9			
60	"	48.8	26.6			
70	"	45.9	29.5			
80	"	42.3	33.1			
90	"	42.3	33.1			
				32.9	x 5.6 =	184.2
95.6	575.4	542.7	32.7			
						26728.5 □'

East Above U.S.	Toe Wall	N3730 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5499.6	575.0	575.0	0.0			
				12.9	x 9.8 =	126.4
5509.4	71.8	46.0	25.8			
				25.55	x 1.4 =	35.8
10.8	71.3	46.0	25.3			
10.8	71.3	44.3	27.0			
				26.2	x 2.2 =	57.6
13	70.6	45.2	25.4			
				24.7	x 7. =	172.9
20	68.3	44.3	24.0			
30	65.0	45.8	19.2	38.	x 10. =	380.0
40	61.7	48.1	13.6			
				12.65	x 4. =	50.6
44	60.4	48.7	11.7			
				5.85	x 11. =	64.4
55	556.7	556.7	0.0			
						887.7 □'

East	Below D.S. Toe Wall	N3740 D.S	Ht	Mean Ht.	Dist	Area in Sq. ft.
4384	539.2	539.2	0.0			
				2.15	x 2 =	4.3
86	40.0	35.7	4.3			
				6.8	x 14 =	95.2
4400	44.3	35.0	9.3			
				11.3	x 13 =	146.9
13	48.3	35.0	13.3			
				11.65	x 4	46.6
17	49.6	39.6	10.0			
				10.7	x 3 =	32.1
20	550.5	539.1	11.4			
				12.6	x 10 =	126.0

East		N3740 DS	Ht.	Mean Ht.	Dist	Area
4430	553.7	539.9	13.8			
35	55.3	38.7	16.6	32.6	x 5 =	163.0
40	56.9	38.7	18.2			
50	60.0	39.1	20.9			
60	63.2	39.3	23.9	91.05	x 10. =	910.5
70	66.4	42.5	23.9			
80	69.6	43.1	26.5			
				27.1	x 5.6 =	151.8
85.6 ↓	71.3	43.6	27.7			
85.6 ↑	71.3	46.0	25.3			
				25.55	x 1.5 =	38.3
87.1	71.8	46.0	25.8			
				12.9	x 10.1 =	130.3
4497.2	575.0	75.0	0.0			1845.0 □'
4501.3	575.4	542.7	32.7			
				32.35	x 8.7 =	281.4
10	575.4	543.4	32.0			

East			N3740 D.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft.
4520	575.4	545.3	30.1				
30	"	45.3	30.1				
40	"	45.7	29.7				
50	"	48.1	27.3				
60	"	49.7	25.7				
70	"	48.4	27.0				
80	"	46.8	28.6				
90	"	47.9	27.5				
4600	"	49.1	26.3				
				458.65 × 10 = 4586.5			
10	"	49.6	25.8				
20	"	49.5	25.9				
30	"	49.7	25.7				
40	"	49.7	25.7				
50	"	54.9	20.5				
60	"	56.2	19.2				
70	"	57.5	17.9				
80	"	56.1	19.3				
90	"	54.7	20.7 ×				
				20.85 × 11.5 = 239.8			
4701.5	575.4 ✓	554.4 ✓	21.0 ✓	16.7 × 8.5 = 142.0 ✓	✓	✓	

East		N3740 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
4710	566.9	554.5	12.4			
				6.45 × 10 =		64.5
20	56.9	56.4	0.5			
				0.25 × 0.4 =		0.1
4720.4	556.5	556.5	0.0			

From 575.4 to 600.7 = $\frac{184.6 + 84.3}{2}$ (134.45) × 25.3 = 3401.6

0.2 +

3401.8 sq ft

" 600.7 to 651.3 = $\frac{75 + 60}{2}$ (67.5) × 50.6 = 3415.5 " "

" 651.3 to 702 = $\frac{50 + 40}{2}$ (45) × 50.9 = 2290.5 " "

14422.1 □

East

N3740
U.S.

From 651.5 to 702.2 = 89.9 + 43.5 (66.7) × 50.7 = 3381.7 sq ft
" 626.2 to 651.5 = 122.9 + 99.9 × 25.3 = 2818.4 " "
" 600.7 to 626.2 = 205.3 + 109.3 × 25.5 = 4011.1
0.9+
4012.0 sq ft
" 575.4 to 600.7 = 323.1 + 215.3 × 25.3 = 6810.8 " "

			Ht.	Mean Ht.	Dist.	Dist in sq. ft.
5132.7	548.7	548.7	0.0			
				2.75 × 7.3 =		20.1
40	54.3	48.8	5.5			
50	62.0	48.7	13.3	26.7 × 10 =		267.0
60	69.7	48.4	21.3			
				24.35 × 7.5 =		182.6
5167.5	575.4	548.0	27.4			
				27.45 × 2.5 =		68.6
70	575.4	47.9	27.5			
80	"	47.5	27.9			
90	"	47.0	28.4			
5200	"	47.3	28.1			
10	575.4	547.7	27.7			
	✓	✓	✓	✓	✓	✓

East

N3740
U.S.

JWW.
July 1934

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			Ht	Mean Ht.	Dist.	Area in Sq. ft.
5220	575.4	547.2	28.2			
30	"	47.0	28.4			
40	"	47.1	28.3			
50	"	48.4	27.0			
60	"	47.3	28.1			
70	"	46.9	28.5			
80	"	47.3	28.1			
				640.95 × 10 =		6409.5
90	"	47.1	28.3			
5300	"	47.2	28.2			
10	"	47.0	28.4			
20	"	47.8	27.6			
30	"	48.0	27.4			
40	"	48.3	27.1			
50	"	48.3	27.1			
60	"	48.0	27.4			
70	"	47.9	27.5			
80	"	47.7	27.7			
90	"	47.6	27.8			
5400	575.4	547.4	28.0 ×			
	✓	✓	✓	✓	✓	✓

East			N3740 U.S. Ht.	Mean Ht.	Dist.	Area in sq. ft.
5410	575.4	547.4	28.0			
20	"	47.4	28.0			
30	"	47.5	27.9			
40	"	47.5	27.9			
				255.8	×10 =	2558.0
50	"	47.5	27.9			
60	"	49.4	26.0			
70	"	48.7	26.7			
80	"	42.4	33.0			
90	"	42.6	32.8			
				32.5	×7.1 =	230.8
						2679.5 □
5497.1	575.4	543.2	32.2			
above U.S. Top. Wall						
5501.1	575.0	575.0	0.0			
				12.9	×9.9 =	127.7
11	71.8	46.0	25.8			
				25.65	×1 =	25.6
12	71.5	46.0	25.5			
12	71.5	44.9	26.6			
				25.9	×4 =	103.6
16	570.8	545.6	25.2			
				24	×4 =	96.0

East		N3740 U.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
5520	568.8	546.0	22.8			
30	65.5	47.2	18.3	36.6	×10 =	366.0
40	62.2	48.4	13.8			
				13.36	×2 =	26.7
42	61.6	48.7	12.9			
				6.45	×13 =	83.9
5555	557.3	557.3	0.0			
						829.5 □

East			N3750 D.S.			
Below	D.S. Toe Wall		Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4380.7	539.7	539.7	0.0			
				2.25	x 2.3 =	5.2
83	40.4	35.9	4.5			
				5.45	x 7 =	38.2
90	42.5	36.1	6.4			
				8.1	x 10 =	81.0
4400	45.5	35.7	9.8			
				11.55	x 13 =	150.2
13	49.5	36.2	13.3			
				11.8	x 4 =	47.2
17	50.8	40.5	10.3			
				11.8	x 13 =	153.4
30	54.8	41.5	13.3			
35	56.4	41.9	14.5	29.65	x 5 =	148.2
40	58.0	41.0	17.0			
50	61.1	41.2	19.9	61.85	x 10 =	618.5
60	64.3	42.0	22.3			
70	567.4	545.1	22.3	24.55	x 12.8 =	314.2

East			N3750 D.S.			
			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4482.8	571.5	544.9	26.8			
82.8	71.5	46.0	25.5			
				25.65	x 1.2 =	30.8
84	71.8	46.0	25.8			
				12.9	x 10.1 =	130.3
4494.1	575.0	575.0	0.0			1403.0 □'
4498.3	575.4	544.1	31.3			
				30.45	x 11.7 =	356.3
4510	575.4	545.8	29.6			
20	"	45.9	29.5			
30	"	46.4	29.0			
40	"	47.3	28.1			
50	"	47.5	27.9			
60	"	50.9	24.5	240.35	x 10 =	2403.5
70	"	50.3	25.1			
80	"	50.8	24.6			
90	"	50.9	24.5			
4600	575.4	550.7	24.7			

East

N3750
D.S

			Ht.	Mean Ht.	Dist	Area in sq. ft.
4610	575.4	550.8	24.6			
20	"	51.0	24.4			
30	"	57.6	22.8			
40	"	54.2	21.2			
				186.25	× 10 =	1862.5
50	"	56.5	18.9			
60	"	59.0	16.4			
70	"	57.8	17.6			
80	"	56.3	19.1			
90	"	57.6	17.8			
				17.3	× 11.5 =	199.0
4701.5	575.4	558.6	16.8			
				12.55	× 8.5 =	106.7
10	566.9	58.6	8.3			
				4.15	× 7.1 =	29.5
17.1	559.8	559.7	0.0			

From 575.4 to 600.7 = $\frac{184.6 + 84.3}{2}$ (134.45) × 25.3 = 3401.6 + 0.2 = 3401.8 sq ft

" 600.7 to 651.2 = $\frac{75 + 60}{2}$ (67.5) × 50.5 = 3408.8 " "

" 651.2 to 702.0 = $\frac{50 + 40}{2}$ (45) × 50.8 = 2286.0 " "

N3750
D.S.

14054.1 □'

East

N3750
U.S.

From 651.5 to 702.2 = $\frac{90.1 + 43.5}{2}$ (66.8) × 50.7 = 3386.8 sq. ft.

" 626.3 to 651.5 = $\frac{122.9 + 100.1}{2}$ (111.5) × 25.3 = 2821.0 " "

" 600.7 to 626.2 = $\frac{205.3 + 109.4}{2}$ (157.35) × 25.5 = 4012.4 + 0.9 = 4013.3 " "

" 575.4 to 600.7 = $\frac{323.1 + 215.3}{2}$ (269.2) × 25.3 = 6810.8 " "

			Ht.	Mean Ht.	Dist	Area in sq. ft.
5133.7	549.5	549.5	0.0			
				2.65	× 6.3 =	16.7
40	554.3	549.0	5.3			

East			N3750 U.S. Ht	Mean Ht.	Dist.	Area in sq. ft.
5150	562.0	549.1	12.9	25.95	x10 =	259.5
60	69.7	48.9	20.8	x24	x7.5 =	180.0
67.5	575.4	48.7	27.2	25.35	x2.5 =	63.4
70.0	"	47.9	27.5			
80	"	47.1	28.3			
90	"	46.7	28.7			
5200	"	47.1	28.3			
10	"	47.6	27.8			
20	"	47.1	28.3			
30	"	46.5	28.9			
40	"	47.2	28.2			
50	"	48.0	27.4			
60	"	46.9	28.5			
70	"	46.3	29.1			
80	"	46.5	28.9			
90	"	46.9	28.5			
5300	"	47.2	28.2			
10	"	47.3	28.1			
20	"	48.7	26.7			
30	575.4	549.3	26.1			

East		N3750 U.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
5340	575.4	548.0	27.4	892.8	x 10 =	8928.0
50	"	48.3	27.1			
60	"	48.2	27.2			
70	"	48.5	26.9			
80	"	47.3	28.1			
90	"	48.7	26.7			
5400	"	48.0	27.4			
10	"	47.5	27.9			
20	"	47.8	27.6			
30	"	47.8	27.6			
40	"	47.6	27.8			
50	"	48.2	27.2			
60	"	50.2	25.2			
70	"	48.5	26.9			
80	"	43.8	31.6			
90	"	42.5	32.9			
				32.15	x8.8 =	282.9
5498.8	575.4	544.0	31.4			26,762.4 □'

East — N3750 U.S.

Above U.S. Toe Wall			Ht.	Mean Ht.	Dist	Area in Sq. ft.
5502.8	575.0	575.0	0.0			
				12.85	×10 =	128.5
12.8	71.7	46.0	25.7			
				25.55	×0.9 =	23.0
13.7 ↓	71.4	46.0	25.4			
13.7 ↑	71.4	45.2	26.2			
				24.55	×6.3 =	154.7
20	69.4	46.5	22.9			
				20.9	×10 =	209.0
30	66.1	47.2	18.9			
				17.15	×9 =	154.4
39	63.1	47.7	15.4			
				7.7	×15.5 =	119.4
54.5	558.1	558.1	0.0			789.0

East — N3760 D.S.

Below D.S. Toe Wall			Ht	Mean Ht.	Dist	Area in Sq. ft.
4378.8	540.7	540.7	0.0			
				2.3	×2.2 =	5.1
81	41.3	36.7	4.6			
				7.7	×19 =	146.3
4400	47.0	36.2	10.8			
				12.65	×14 =	177.1
14	51.2	36.7	14.5			
				12.35	×4 =	49.4
18	52.4	42.2	10.2			
				11.55	×12 =	138.6
30	56.1	43.2	12.9			
40	59.3	44.8	14.5			
50	62.4	43.8	18.6	71.25	×10 =	712.5
60	65.4	44.8	20.6			
70	68.5	46.3	22.2			
				24	×9.6 =	230.4
79.6 ↓	71.6	45.8	25.8			
79.6 ↑	71.6	46.0	25.6			
				25.7	×0.8 =	20.6
80.4	571.8	546.0	25.8	12.9	×10.4 =	134.2

East			N3760 D.S.			
			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4490.8	575.0	575.0	0.0			1614.2
4495	575.3	546.5	28.8			
				28.9 × 5	=	144.5
4500	575.3	46.3	29.0			
10	"	46.0	29.3			
20	"	46.7	28.6			
30	"	46.7	28.6			
40	"	47.7	27.6			
50	"	48.8	26.5			
60	"	49.8	25.5			
70	"	51.7	23.6			
80	"	51.5	23.8			
90	"	51.4	23.9			
4600	"	51.7	23.6	418.4 × 10	=	4184.0
10	"	57.1	18.2			
20	"	58.2	17.1			
30	"	61.4	13.9			
40	575.3	561.5	13.8			
	✓	✓	✓	✓	✓	✓

East		N3760 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4650	575.3	561.6	13.7			
60	"	59.5	15.8			
70	"	60.2	15.1			
80	"	60.7	14.6			
90	"	61.5	13.8			
4700	"	61.5	13.8 ×			
				13.7 ×	1.6 =	21.9
4701.6	575.3	61.7	13.6			
				8.65 ×	8.4 =	72.7
10	566.9	63.2	3.7			
				1.85 ×	3.4 =	6.3
4713.4	563.5	63.5	0.0			

From 575.3 to 600.7 = $\frac{184.7}{2}$ + 84.3 × 25.4 = 3416.3 (1345)
0.2 +
3416.5 sq. ft.

" 600.7 to 651.2 = $\frac{75}{2}$ + 60 × 50.5 = 3408.8 (67.5) " "

" 651.2 to 701.9 = $\frac{50}{2}$ + 40 × 50.7 = 2281.5 (45) " "

13536.2 □'

East N3760 U.S.

From 651.5 to 702.2 = $\frac{89.9}{2} + 43.5$ (66.7) $\times 50.7 = 3381.7$ sq.ft

" 626.2 to 651.5 = $\frac{123}{2} + 99.9$ (111.45) $\times 25.3 = 2819.7$ " "

" 600.8 to 626.2 = $\frac{205.1}{2} + 109.5$ (157.3) $\times 25.4 = 3995.4$

0.94

3996.3 sq.ft

" 575.4 to 600.8 = $\frac{323}{2} + 215.1$ (269.05) $\times 25.4 = 6833.9$ " "

			Ht.	Mean Ht.	Dist.	Area in Sq.ft
5134.3	549.9	549.9	0.0			
				2.45	$\times 5.7 =$	14.0
40	54.3	49.4	4.9			
50	562.0	549.4	12.6	25.2	$\times 10 =$	252.0
	✓	✓	✓	✓	✓	✓

1389434

East N3760 U.S. "

			Ht.	Mean Ht.	Dist.	Area in Sq.ft
5160	569.7	549.4	20.3			
				23.25	$\times 7.7 =$	179.0
67.7	575.4	549.2	26.2			
				26.7	$\times 12.3 =$	328.4
80	575.4	48.2	27.2			
90	"	47.4	28.0			
5200	"	46.5	28.9			
10	"	46.5	28.9			
20	"	46.4	29.0			
30	"	46.8	28.6			
40	"	46.6	28.8			
50	"	47.0	28.4	395.45	$\times 10 =$	3954.5
60	"	46.7	28.7			
70	"	46.2	29.2			
80	"	46.7	28.7			
90	"	47.4	28.0			
5300	"	49.0	26.4			
10	"	48.4	27.0			
20	575.4	548.9	26.5			
	✓	✓	✓	✓	✓	✓

East		N3760 U.S.		J.W.W. July 1934		
			Ht	Mean Ht.	Dist	Area in Sq. ft.
5330	575.4	548.9	26.5			
40	"	48.4	27.0			
50	"	48.7	26.7			
60	"	48.3	27.1			
70	"	48.0	27.4			
80	"	47.5	27.9			
90	"	48.8	26.6			
5400	"	48.5	26.9			
10	"	48.1	27.3	458.65	x 10	= 4586.5
20	"	48.0	27.4			
30	"	48.3	27.1			
40	"	48.3	27.1			
50	"	49.1	26.3			
60	"	51.1	24.3			
70	"	51.3	24.1			
80	"	45.4	30.0			
90	"	44.0	31.4 x			
				31.25	x 10.7	= 334.4
						26 680.4 □'
5500.7	575.4	544.3	31.1			
	x ✓	✓	x ✓	✓		

East		N3760 U.S.				
Above U.S.	Toe Wall		Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5504.8	575.0	575.0	0.0			
				13.05	x 10.7	= 133.1
15.	71.7	45.6	26.1			
				24.75	x 5	= 123.8
20	70.1	46.7	23.4			
				21.45	x 10	= 214.5
30	66.8	47.3	19.5			
				18.7	x 4.5	= 84.2
34.5	65.4	47.5	17.9			
				8.95	x 18.5	= 165.6
5553	559.3	559.3	0.0			
	✓	✓	✓	✓	✓	721.2 □'

East

Below D.S.	Toe Wall	N3770 D.S.	Ht	Mean Ht.	Dist	Area in Sq. ft
4375.4	541.0	541.0	0.0			
				2.1	× 2.6 =	5.5
78.	41.8	37.6	4.2			
				6.7	× 12 =	74.4
90	45.3	37.1	8.2			
				9.75	× 10 =	97.5
4400	48.3	37.0	11.3			
				12.25	× 8 =	98.0
08	50.7	37.5	13.2			
				12.5	× 9 =	110.2
17	53.4	41.6	11.8			
				12.6	× 4 =	50.4
21	54.6	41.2	13.4			
				12.5	× 9 =	110.2
30	57.4	45.8	11.6			
40	60.5	46.9	13.6			
50	63.5	46.9	16.6	65.1	× 10 =	651.0
60	66.7	48.4	18.3			
70	569.7	548.1	21.6			
				22.55	× 6.7 =	139.8

		N3770 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4476.7	571.6	548.1	23.5			
76.7	71.6	49.0	22.6			
				22.85	× 1.6 =	36.6
77.8	72.1	49.0	23.1			
				11.55	× 9.4 =	108.6
87.7	575.0	575.0	0.0			1482.2 □'
4491.5	575.4	546.4	29.0			
				29.15	× 8.5 =	247.8
4500	575.4	546.1	29.3			
10	"	46.0	29.4			
20	"	48.7	26.7			
30	"	49.8	25.6			
40	"	55.6	19.8			
				210.6	× 10 =	2106.0
50	"	52.1	23.3			
60	"	54.4	21.0			
70	"	54.7	20.7			
80	"	55.7	19.7			
90	575.4	555.9	19.5			

N3770

East		D.S.	Ht.	Mean	Dist.	Area in Sq. ft.
4600	575.4	558.3	17.1			
10	"	62.3	13.1			
20	"	63.8	11.6			
30	"	63.9	11.5			
40	"	64.2	11.2			
50	"	63.6	11.8	134.25	× 10 =	1342.5
60	"	63.9	11.5			
70	"	63.5	11.9			
80	"	64.1	11.3			
90	"	65.8	9.6			
4700	"	567.6	7.8 ×			
				7.7	× 1.5 =	11.6
4701.5	575.4	567.8	7.6			
				3.8	× 6.5 =	24.7
4708	568.9	568.9	0.0			

From 575.4 to 600.6 = $\frac{184.6 + 84.4}{2}$ (134.5) × 25.2 = 3389.4
0.2+
3389.6 Sq. ft.

" 600.6 to 651.2 = $\frac{75 + 60}{2}$ (2) × 50.6 = 3415.5 " "

" 651.2 to 701.8 = $\frac{50 + 40}{2}$ × 50.6 = 2277.0 " "

N3770
D.S.

12814.7 □'

N3770
U.S.

East						
From 651.5 to 702.2 = $\frac{89.9 + 43.5}{2}$ (66.7) × 50.7 = 3381.7 sq. ft						
" 626.2 to 651.5 = $\frac{122.9 + 99.9}{2}$ (111.4) × 25.3 = 2818.4 " "						
" 600.7 to 626.2 = $\frac{205.3 + 109.4}{2}$ (157.35) × 25.5 = 4012.4						
0.9+						
4013.3 " "						
" 575.4 to 600.7 = $\frac{323.1 + 215.3}{2}$ (269.2) × 25.3 = 6810.8 " "						
			Ht.	Mean Ht.	Dist	Area in Sq. ft.
5135.4	550.7	550.7	0.0			
				1.95	× 4.6 =	9.0
40	554.3	550.4	3.9			

East		N3770 U.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft.
5150	562.°	550.3	11.7	23.4	× 10 =	234.0
60	69.7	50.2	19.5			
				22.35	× 7.5 =	166.9
67.5	575.4	550.4	25.0			
				25	× 2.5 =	62.5
70	575.4	550.4	25.0			
80	"	49.9	25.5			
90	"	48.0	27.4			
5200	"	46.7	28.7			
10	"	45.8	29.6			
20	"	45.9	29.5			
30	"	47.4	28.0			
40	"	49.8	25.6			
50	"	48.9	26.5			
60	"	47.7	27.7			
70	"	48.8	26.6			
80	"	49.6	25.8			
90	"	49.7	25.7			
5300	575.4	549.7	25.7			
	✓	✓	✓	✓	✓	✓

East		N3770 U.S	Ht.	Mean Ht	Dist	Area in Sq. ft
5310	575.4	550.3	25.1			
20	"	49.7	25.7			
30	"	49.5	25.9			
				877.15	× 10 =	8771.5
40	"	49.3	26.1			
50.	"	49.2	26.2			
60	"	48.4	27.0			
70	"	47.8	27.6			
80	"	47.8	27.6			
90	"	48.2	27.2			
5400	"	49.8	25.6			
10	"	48.8	26.6			
20	"	48.6	26.8			
30	"	48.6	26.8			
40	"	49.0	26.4			
50	"	49.3	26.1			
60	"	51.2	24.2			
70	"	53.2	22.2			
80	"	48.3	27.1			
90	575.4	547.5	27.9			
	✓	✓	✓	✓	✓	✓

East		N3770 U.S.	Ht.	Mean Dist.	Area in Sq. ft.
5500	575.4	546.9	28.5		
				28.95 x 2.8 =	81.1
02.8	"	46.0	29.4		26349.2 □'
above U.S. Toewall					
5507	575.0	575.0	0.0		
				11.55 x 8.9 =	102.8
15.9	72.1	49.0	23.1		
				22.95 x 1 =	23.0
16.9 ↓	71.8	49.0	22.8		
16.9 ↑	71.8	46.0	25.8		
				24.65 x 3.1 =	76.4
20	70.8	47.3	23.5		
				21.55 x 10. =	215.5
30	67.5	47.9	19.6		
				19.1 x 3. =	57.3
33	66.5	47.9	18.6		
				9.3 x 19.5 =	181.4
52.5	560.2	560.2	0.0		
					656.4 □

East Below U.S. Toewall		N3780 D.S.	Ht.	Mean Dist. Ht.	Area in Sq. ft.
4382.8	544.8	544.8	0.0		
				1.25 x 7.2 =	9.0
90	47.0	44.5	2.5		
				3.35 x 10 =	33.5
4400	49.8	45.6	4.2		
				7.9 x 4 =	31.6
04	51.0	39.4	11.6		
				13.2 x 10 =	132.0
14	54.0	39.2	14.8		
				11.45 x 4. =	45.8
18	55.3	47.2	8.1		
				9.1 x 12 =	109.2
30	58.9	48.8	10.1		
40	61.8	49.4	12.4		
				41.8 x 10 =	418.0
50	564.9	549.8	15.1		

		N3780 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4460	568.0	549.5	18.5 ×			
				20.45 ×	12.5 =	255.6
72.5	71.7	49.3	22.4			
				22.6 ×	1.3 =	29.4
73.8	72.1	49.3	22.8			
				9.5 ×	9.5 =	90.3
4483.3	575.0	575.0	0.0			1154.4 □'
4487.6	575.3	546.4	28.9			
				28.95 ×	12.4 =	359.0
4500	575.3	546.3	29.0			
10	"	47.5	27.8			
20	"	50.2	25.1			
30	"	53.9	21.4			
40	"	56.0	19.3			
50	"	57.4	17.9			
60	"	60.4	14.9			
70	"	62.0	13.3			
80	575.3	560.2	15.1			
	✓	✓	✓	272.85 ×	10 =	2728.5
				✓	✓	✓

East		N3780 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4590	575.3	560.7	14.6			
4600	"	62.4	12.9			
10	"	65.0	10.3			
20	"	65.6	9.7			
30	"	66.4	8.9			
40	"	65.6	9.7			
50	"	66.0	9.3			
60	"	67.1	8.2			
70	"	68.0	7.3			
80	"	69.5	5.8			
90	"	70.4	4.9			
4700	"	71.4	3.9 ×			
				3.9 ×	1.6 =	6.2
01.6	575.3	571.4	3.9			
				1.95 ×	3.7 =	7.2
05.3	571.6	571.6	0.0			

From 575.3 to 600.6 = $\frac{184.7 + 84.4}{2}$ (134.55) × 25.3 = 3404.1
0.2
3404.3 sq ft

" 600.6 to 651.2 = $\frac{75 + 60}{2}$ (67.5) × 50.6 = 3415.5 " "

" 651.2 to 701.7 = $\frac{50 + 40}{2}$ × 50.5 = 2272.5 " "

N3780
D.S.

12193.2 □'

East

N3780
U.S.

From 651.5 to 702.2 = $\frac{90.1 + 43.5}{2}$ (66.8) × 50.7 = 3386.8 □'

" 626.0 to 651.5 = $\frac{123.4 + 100.1}{2}$ (111.75) × 25.5 = 2996.2 □'

" 600.7 to 626.0 = $\frac{205.3 + 110.1}{2}$ (157.7) × 25.3 = 3989.8
0.7
3990.5 □'

" 575.4 to 600.7 = $\frac{323.1 + 215.3}{2}$ (269.2) × 25.3 = 6810.8 □'

			Ht	Mean Ht.	Dist.	Area in Sq. ft
5136.8	551.8	551.8	0.0			
				1.2	× 3.2 =	3.8
40	54.3	51.9	2.4			
50	562.0	551.0	11.0	21.6	× 10 =	216.0
	✓	✓	✓	✓	✓	✓

East

N3780
U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5160	569.7	550.9	18.8			
				21.6	× 7.5 =	162.0
67.5	575.4	51.0	24.4			
				24.45	× 12.5 =	305.6
80	"	50.9	24.5			
90	"	50.3	25.1			
5200	"	47.7	27.7			
10	"	46.4	29.0			
20	"	46.6	28.8			
30	"	50.9	24.5			
40	"	50.7	24.7			
				409.7	× 10 =	4097.0
50	"	50.1	25.3			
60	"	51.9	23.5			
70	"	51.6	23.8			
80	"	51.1	24.3			
90	"	50.0	25.4			
5300	"	49.8	25.6			
10	"	49.9	25.5			
20	"	49.9	25.5			
30	"	49.6	25.8			
40	575.4	549.5	25.9			
	✓	✓	✓	✓	✓	✓

East		N3780 U.S	Ht.	Mean Ht.	Dist	Area in Sq. ft.
5350	575.4	549.3	26.1			
60	"	48.4	27.0			
70	"	47.7	27.7			
80	"	47.7	27.7			
90	"	50.1	25.3			
5400	"	51.3	24.1			
10	"	50.3	25.1			
20	"	50.2	25.2	406.5	× 10 =	4065.0
30	"	49.6	25.8			
40	"	50.0	25.4			
50	"	52.5	22.9			
60	"	54.2	21.2			
70	"	53.0	22.4			
80	"	49.0	26.4			
90	"	47.7	27.7			
5500	"	48.3	27.1			
				27.55	× 5.2 =	143.3
05.2	575.4	547.4	28.0			
				14	× 4.1 =	57.4
						262 34.4 □

East Above U.S. Toe Wall		N3780 U.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft.
5509.3	575.0	575.0	0.0			
				11.55	× 9.1 =	105.1
18.4	72.1	49.0	23.1			
				23	× 0.7 =	16.1
19.1	71.9	49.0	22.9			
19.1	71.9	46.9	25.0			
				22.55	× 10.9 =	245.8
30	68.4	48.3	20.1			
40	65.1	49.0	16.1			
				37.75	× 10 =	377.5
50	61.9	51.4	10.5			
60	58.7	57.5	1.2			
				0.6	× 3.7 =	2.2
63.7	557.5	557.5	0.0			
						746.7 □

East below D.S. Toewall

		N3790 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4386.5	547.6	547.6	0.0			
				0.65	× 3.5 =	2.3
90	48.6	47.3	1.3			
4400	51.5	47.7	3.8			
10	54.4	49.8	4.6			
20	57.3	50.5	6.8	62.65	× 10 =	626.5
30	60.3	51.2	9.1			
40	63.2	51.3	11.9			
50	66.3	50.3	16.0			
60	69.3	49.7	19.6			
				20.5	× 8.6 =	176.3
68.6	71.9	50.5	21.4			
68.6	71.9	49.0	22.9			
				23.05	× 1. =	23.1
69.6	572.2	549.0	23.2			
				11.6	× 9.4 =	109.0

East

		N3790 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4479	575.0	575.0	0.0			937.2
4483.4	575.4	546.3	29.1			
				29.05	× 6.6 =	191.7
90	"	46.4	29.0			
				28.9	× 10 =	289.0
4500	"	46.6	28.8			
05	"	47.3	28.1	51.8	× 5 =	259.0
10	"	56.8	18.6			
20	"	59.2	16.2			
30	"	60.9	14.5			
40	"	60.0	15.4			
50	"	61.2	14.2			
60	"	62.7	12.7	122.25	× 10 =	1222.5
70	"	62.8	12.6			
80	"	63.4	12.0			
90	"	65.4	10.0			
4600	575.4	564.7	10.7			

N3790
D.S.

East			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4610	575.4	566.1	9.3			
20	"	66.6	8.8			
30	"	68.0	7.4			
40	"	68.6	6.8			
50	"	67.4	8.0	7.2	× 10 =	72.0
60	"	68.3	7.1			
70	"	68.9	6.5			
80	"	70.0	5.4			
90	"	71.3	4.1			
4700	"	72.5	2.9			
				2.8	× 1.5 =	4.2
01.5	575.4	572.7	2.7			
				1.35	× 2.4 =	3.2
03.9	573.0	573.0	0.0			

From 575.4 to 600.6 = $\frac{184.6 + 204.4}{2}$ (194.5) × 25.2 = 3389.4 + 0.2 = 3389.6 Sq. ft.

" 600.6 to 651.0 = $\frac{75 + 60}{2}$ (67.5) × 50.4 = 3402.0 " "

" 651.0 to 701.6 = $\frac{50 + 40}{2}$ (45) × 50.6 = 2277.0 " "

N3790
D.S.

11,740.5 □'

N3790
U.S.

From 651.5 to 702.2 = $\frac{90.1 + 43.5}{2}$ (66.8) × 50.7 = 3386.8 Sq. ft

" 626.0 to 651.5 = $\frac{123.3 + 100.1}{2}$ (111.7) × 25.5 = 2848.4 " "

" 600.6 to 626.0 = $\frac{205.4 + 110.0}{2}$ (157.7) × 25.4 = 4005.6 + 0.7 = 4006.3 " "

" 575.4 to 600.6 = 323.2 + 215.4 × 25.2 = 6786.4 " "

			Ht.	Mean Ht.	Dist	Area in Sq. ft.
5139.2	553.7	553.7	0.0			
				4.75	× 10.8 =	51.3
50	562.0	552.5	9.5			
				13.5	× 10 =	135.0

East	N	3790 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5160	569.7	552.2	17.5			
				20.35	x 7.5 =	152.6
67.5	575.4	552.2	23.2			
				23.55	x 12.5 =	294.4
80	575.4	551.5	23.9			
90	"	51.1	24.3			
5200	"	51.3	24.1			
10	"	50.6	24.8			
20	"	50.3	25.1			
30	"	50.9	24.5			
40	"	51.7	23.7			
50	"	51.3	24.1			
60	"	52.0	23.4			
70	"	51.8	23.6			
80	"	51.6	23.8			
90	"	49.2	26.2			
5300	"	48.9	26.5			
10	"	49.4	26.0			
20	575.4	549.5	25.9			

East	N	3790 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5330	575.4	549.6	25.8			
40	"	49.6	25.8			
				797.15	x 10 =	7971.5
50	"	49.0	26.4			
60	"	48.3	27.1			
70	"	48.9	26.5			
80	"	48.5	26.9			
90	"	49.1	26.3			
5400	"	52.2	23.2			
10	"	51.8	23.6			
20	"	51.6	23.8			
30	"	50.9	24.5			
40	"	51.2	24.2			
50	"	51.4	24.0			
60	"	52.0	23.4			
70	"	52.0	23.4			
80	"	52.1	23.3			
90	"	47.9	27.5			
5500	"	48.4	27.0			
				27	x 7.7 =	207.9
07.7	575.4	548.4	27.0	13.5	x 4.2 =	56.7

25,897.3 □'

East — N3790 U.S.

Above U.S. Toe Wall			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5511.9	575.0	575.0	0.0			
				12.05	× 9 =	108.4
20.9	72.1	48.0	24.1			
				24.05	× 0.4 =	9.6
21.3 ↓	72.0	48.0	24.0			
21.3 ↑	72.0	47.9	24.1			
				22.05	× 8.7 =	191.8
30	69.2	49.2	20.0			
40	66.0	50.3	15.7	33.8	× 10 =	338.0
50	62.8	55.0	7.8			
60	59.6	59.0	0.6			
				0.3	× 2 =	0.6
62	559.0	559.0	0.0			
						648.4 □

East — N3800 D.S.

Below D.S. Toe Wall			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4394.2	551.3	551.3	0.0			
				2.05	× 5.8 =	11.9
4400	53.0	48.9	4.1			
10	55.9	48.9	7.0			
20	58.8	49.5	9.3			
30	61.8	50.1	11.7	72.65	× 10 =	726.5
40	64.7	49.7	15.0			
50	67.7	50.2	17.5			
60	70.8	50.6	20.2 ×			
				20.4	× 3.9 =	79.6
63.9 ↓	71.9	51.3	20.6			
63.9	71.9	52.0	19.9			
				20.2	× 2 =	40.4
65.9	72.5	52.0	20.5			
				10.25	× 8.6 =	88.2
						946.6 □
74.5	575.0	575.0	0.0			
4478.7	575.4	546.4	29.0			
				28.8	× 11.1 =	319.7
90	575.4	546.8	28.6			

East		N3800 D.S.	Ht.	Mean Dist	Area in Sq.ft
				27.85 × 10 =	278.5
4500	575.4	548.3	27.1		
05	"	58.2	17.2	38.45 × 5 =	230.7
10	"	60.0	15.4		
20	"	64.8	10.6		
30	"	65.7	9.7		
40	"	65.2	10.2		
50	"	65.1	10.3		
60	"	66.1	9.3		
70	"	65.4	10.0		
80	"	70.9	4.5	113.45 × 10 =	1134.5
90	"	67.5	7.9		
4600	"	67.5	7.9		
10	"	69.3	6.1		
20	"	71.4	4.0		
30	"	71.3	4.1		
40	"	71.6	3.8		
50	"	71.8	3.6		
60	"	72.5	2.9		
70	575.4	573.7	1.7		
	✓	✓		1.4 × 6.9 =	9.7
			✓	✓ ✓	✓

East		N3800 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq.ft
4676.9	575.4	574.3	1.1			
76.9	600.0	74.3	25.7			
				24 × 3.1 =		74.4
80	596.9	74.6	22.3			
85	91.9	82.1	9.8	22.5 × 5 =		112.5
90	86.9	83.8	3.1			
				1.55 × 2.7 =		4.2
92.7	584.2	584.2	0.0			

From 575.4 to 600.5 = $\frac{160.0 + 84.5}{2}$ (122.25) × 25.1 = 3068.5 + 0.1 = 3068.6 sq.ft.

" 600.5 to 650.9 = $\frac{75 + 60}{2}$ (67.5) × 50.4 = 3402.0 " "

" 650.9 to 701.6 = $\frac{50 + 40}{2}$ (45) 50.7 = 2281.5 " "

✓ ✓ ✓ ✓ ✓ ✓

10916.3 □'

East N3800 U.S.

From 651.5 to 702.2 = $\frac{90 + 43.5}{2}$ (66.75) × 50.9 = 3384.2 □'

" 626.1 to 651.5 = $\frac{123.2 + 100}{2}$ (111.6) × 25.4 = 2834.6 □'

" 600.7 to 626.1 = $\frac{205.3 + 109.7}{2}$ (157.5) × 25.4 = 4000.5 + 0.8 = 4001.3 □'

" 575.4 to 600.7 = $\frac{323.1 + 215.3}{2}$ (269.2) × 25.3 = 6810.8 □'

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5139.1	553.6	553.6	0.0			
				0.3	× 0.9 =	0.3
40	54.3	53.7	0.6			
50	62.0	53.4	8.6	16.85	× 10 =	168.5
60	69.7	53.8	15.9			
				18.8	× 7.5 =	141.0
67.5	575.4	53.7	21.7			
				21.75	× 2.5 =	54.4
70	575.4 ✓	553.6 ✓	21.8 ✓	✓	✓	✓

East N3800 U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5180	575.4	552.8	22.6			
90	"	51.8	23.6			
5200	"	51.6	23.8			
10	"	52.1	23.3			
20	"	52.2	23.2			
30	"	51.7	23.7			
40	"	52.7	22.7			
50	"	52.1	23.3			
60	"	52.8	22.6	456.3	× 10 =	4563.0
70	"	52.6	22.8			
80	"	51.6	23.8			
90	"	50.6	24.8			
5300	"	49.5	25.9			
10	"	49.2	26.2			
20	"	49.6	25.8			
30	"	50.2	25.2			
40	"	51.0	24.4			
50	"	50.3	25.1			
60	575.4	550.2	25.2			
	✓	✓	✓	✓	—	—

East		N3800 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5370	575.4	550.0	25.4			
80	"	51.0	24.4			
90	"	52.1	23.3			
5400	"	52.8	22.6			
10	"	52.7	23.2			
20	"	52.6	22.8			
30	"	52.5	22.9	325.7	x 10 =	3257.0
40	"	52.6	22.8			
50	"	53.0	22.4			
60	"	53.5	21.9			
70	"	54.0	21.4			
80	"	54.2	21.2			
90	"	50.0	25.4			
5500	"	48.6	26.8			
				26.65	x 10.5 =	279.8 □
10.5	575.4	548.9	26.5			25494.9
5514.7	575.0	75.0	0.0			
				11.75	x 9.2 =	108.1
23.1	572.1	548.6	23.5			
				21.8	x 6.1 =	133.0

East		N3800 U.S	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5530	570.1	550.0	20.1			
40	67.0	50.7	16.7	32.7	x 10 =	322.0
50	63.8	59.1	4.7			
60	60.6	59.1	1.5			
				0.75	x 4.4 =	3.3
64.4	559.2	559.2	0.0			
						566.4 □'

East below D.S.	Toe Wall	N3810 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4394.2	553.2	553.2	0.0			
				1.05	x 5.8 =	6.1
4400	54.8	52.7	2.1			
10	57.6	50.4	7.2			
20	60.5	51.0	9.5			
				55.3	x 10 =	553.0
30	63.4	50.7	12.7			
40	66.2	50.5	15.7			
50	69.2	50.9	18.3			
				19.5	x 9.5 =	185.2
59.5 ↓	71.9	51.2	20.7			
59.5 ↑	71.9	52.0	19.9			
				20.1	x 1.5 =	30.2
61	72.3	52.0	20.3			
				10.15	x 8.5 =	86.3
69.5	575.0	75.0	0.0			860.8 □'
4474	575.4	543.7	31.7			
				29.95	x 6 =	179.7
80	575.4	547.2	28.2			
				28.05	x 10 =	280.5

East		N3810 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4490	575.4	547.5	27.9			
95	75.4	49.4	26.0	47.25	x 5 =	236.2
4500	75.4	60.8	14.6			
				13.8	x 10 =	138.0
10	75.4	62.4	13.0			
				10.75	x 6.9 =	74.2
16.9	75.4	63.9	11.5			
				11.65	x 3.1 =	36.1
20	76.4	64.6	11.8			
30	79.8	66.3	13.5			
40	83.1	67.9	15.2			
50	86.4	67.3	19.1			
				139.25	x 10 =	1392.5
60	89.8	68.3	21.5			
70	93.1	68.7	24.4			
80	96.4	70.3	26.1			
90	99.7	72.6	27.1 x			
				27.5	x 1.9 =	52.2
91.9	600.4	572.5	27.9			
				28.15	x 8.1 =	228.0

East

N3810
D.S.

			Ht	Mean Ht	Dist	Area in sq.ft.
4600	600.4	572.0	28.4			
10	"	72.6	27.8			
20	"	73.3	27.1			
30	"	74.4	26.0			
40	"	76.4	24.0	176.15	x10	= 1761.5
50	"	76.5	23.9			
60	"	77.9	22.5			
70	"	79.1	21.3			
				20.75	x6.9	= 143.2
76.9	600.4	580.2	20.2			
76.9	600.0	580.2	19.8			
				18	x3.1	= 55.8
80	596.9	580.7	16.2			
				9.3	x10	= 93.0
90	86.9	84.5	2.4			
				1.2	x2.1	= 2.5
92.1	584.8	584.8	0.0			

From 600.4 to 650.9 = $\frac{75 + 60}{2}$ (67.5) x 50.5 = 3408.8 sq.ft.

" 650.9 to 701.4 = $\frac{50 + 40}{2}$ (45) x 50.5 = 2272.5 " "

N3810
D.S.

10354.7 □'

East

N3810
U.S.

From 651.4 to 702.1 = $\frac{90 + 43.5}{2}$ (66.75) x 50.7 = 3384.2

" 626.0 to 651.4 = $\frac{123.2 + 100}{2}$ (111.6) x 25.4 = 2834.6

" 600.6 to 626.0 = $\frac{105.4 + 109.7}{2}$ (107.55) x 25.4 = 4001.8 + 0.6 = 4002.4

" 575.4 to 600.6 = $\frac{323.1 + 215.4}{2}$ (269.25) x 25.2 = 6785.1

			Ht.	Mean Ht.	Dist.	Area in sq.ft.
51396	554.0	554.0	0.0			
				4.05	x10.4	= 42.1
50	562.0	553.9	8.1			
				11.95	x10	= 119.5

East		N3810 U.S.	Ht	Mean Ht	Dist.	Area in Sq. Ft.
5160	569.7	553.9	15.8			
				18.45	x 7.5 =	138.4
67.5	575.4	554.3	21.1			
				21.05	x 2.5 =	52.6
70	575.4	554.4	21.0			
80	"	53.6	21.8			
90	"	53.0	22.4			
5200	"	52.7	22.7			
10	"	52.9	22.5			
20	"	52.9	22.5			
30	"	52.9	22.5			
40	"	52.6	22.8			
50	"	53.2	22.2			
60	"	53.3	22.1			
70	"	53.5	21.9			
80	"	52.1	23.3			
90	"	51.1	24.3			
5300	"	50.7	24.7			
10	575.4	549.9	25.5			
	✓	✓	✓			

East		N3810 U.S.	Ht.	Mean Ht	Dist.	Area in Sq. Ft.
5320	575.4	549.9	25.5			
30	"	50.6	24.8			
				745.9	x 10 =	7459.0
40	"	52.5	22.9			
50	"	53.0	22.4			
60	"	53.2	22.2			
70	"	53.3	22.1			
80	"	53.2	22.2			
90	"	52.7	22.7			
5400	"	52.5	22.9			
10	"	53.8	21.6			
20	"	54.6	20.8			
30	"	54.5	20.9			
40	"	53.8	21.6			
50	"	53.7	21.7			
60	"	54.0	21.4			
70	"	54.0	21.4			
80	"	54.0	21.4			
90	"	52.8	22.6			
5500	575.4	549.2	26.2			
	✓	✓	✓			

x 10 x 26.15 = 261.5

East

N3810

		U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5510	575.4	549.3	26.1			
				26.3	x 3.5 =	92.1 □'
13.5	75.4	48.9	26.5			25171.5
above U.S. Toe Wall						
5517.7	575.0	575.0	0.0			
				9.8	x 7.8 =	76.4
25.5	72.6	53.0	19.6			
				19.35	x 1.5 =	29.0
27 ↓	72.1	53.0	19.1			
27 ↑	72.1	49.1	23.0			
				21.55	x 3 =	64.6
30	71.1	51.0	20.1			
40	68.0	51.7	16.3			
				33.65	x 10 =	336.5
50	64.8	58.8	6.0			
60	61.6	59.0	2.6			
				1.3	x 6.3 =	8.2
66.3	559.6	559.6	0.0			
	✓	✓	✓	✓		5147 □'

East

N3820

Below D.S. Toe Wall		D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4396	554.0	554.0	0.0			
				0.65	x 4 =	2.6
4400	55.3	54.0	1.3			
10	59.0	53.4	5.6			
20	61.8	51.8	10.0			
30	64.7	52.4	12.3	72.55	x 10 =	725.5
40	67.6	52.9	14.7			
50	70.8	52.5	18.3			
60	74.1	52.1	22.0			
62	74.5	52.0	22.5	45.	x 2 =	90.0
64	75.0	52.0	23.0			
				11.5	x 10.7 =	123.1 □'
74.7	575.0	575.0	0.0			941.2
	✓	✓	✓	✓		

East		N3820 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4480.5	575.4	548.5	26.9			
				26.7	× 4.5 =	120.2
85	75.4	48.9	26.5			
				25.7	× 5 =	128.5
90	75.4	50.5	24.9			
4500	75.4	66.0	9.4	25.95	× 10 =	259.5
10	75.4	67.2	8.2			
				8.2	× 6.9 =	56.6
16.9	75.4	67.2	8.2			
				8.7	× 3.1 =	27.0
20	76.4	67.2	9.2			
30	79.8	72.0	7.8			
40	83.1	70.4	12.7			
50	86.5	69.9	16.6	113.95	× 10 =	1139.5
60	89.8	70.9	18.9			
70	93.1	74.4	18.7			
80	96.4	74.6	21.8			
90	599.8	74.1	25.7			
				25.9	× 1.9 =	49.2
91.9	600.4	574.3	26.1	25.7	× 8.1 =	208.2

East		3820 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4600	600.4	575.1	25.3			
10	"	75.9	24.5			
20	"	76.9	23.5			
30	"	77.9	22.5	152.85	× 10 =	1528.5
40	"	79.0	21.4			
50	"	79.7	20.7			
60	"	81.0	18.4			
70	"	82.0	18.4			
				18.05	× 6.9 =	124.5
76.9	600.4	82.7	17.7			
				15.8	× 3.1 =	49.0
80	596.9	83.0	13.9	7.9	× 10 =	79.0
90	86.9	85.0	1.9			
				0.95	× 1.6 =	1.5
91.6	585.3	585.3	0.0			

From 600.4 to 650.9 = $\frac{75 + 60}{2}$ (67.5) × 50.5 = 3408.8 sq ft

" 650.9 to 701.3 = $\frac{50 + 40}{2}$ × 50.4 = 2268.0 " "

9448.0 □'

East N3820 U.S.

From 651.4 to 702.1 = $\frac{90 + 43.5}{2}$ (66.75) × 50.7 = 3384.2 sq.ft

" 626.0 to 651.4 = $\frac{123.2 + 100}{2}$ (111.6) × 25.4 = 2834.6 " "

" 600.6 to 626.0 = $\frac{205.4 + 109.7}{2}$ (157.55) × 25.4 = 4001.8 + 0.6 = 4002.4 " "

" 575.4 to 600.6 = $\frac{323.2 + 215.4}{2}$ (269.3) × 25.2 = 6786.4 " "

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5141.7	555.6	555.6	0.0			
				3.6	× 8.3 =	29.9
50	562.0	554.8	7.2			
				11.5	× 10 =	115.0

East N3820 U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5160	569.7	553.9	15.8			
				18.5	× 7.5 =	138.8
67.5	575.4	54.2	21.2			
				21.15	× 2.5 =	52.9
70	575.4	54.3	21.1			
80	"	54.1	21.3			
90	"	53.6	21.8			
5200	"	53.4	22.0			
10	"	53.5	21.9			
20	"	54.0	21.4			
30	"	53.3	22.1			
40	"	53.2	22.2			
				309.45	× 10 =	3094.5
50	"	53.3	22.1			
60	"	53.3	22.1			
70	"	53.6	21.8			
80	"	53.1	22.3			
90	"	52.2	22.2			
5300	"	51.8	23.6			
10	575.4	551.2	24.2			

East		N3820 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5320	575.4	551.0	24.4			
30	"	51.3	24.1			
40	"	51.8	23.6			
50	"	52.4	23.0			
60	"	52.8	22.6			
70	"	52.8	22.6			
80	"	52.8	22.6			
90	"	52.7	22.7			
5400	"	53.4	22.0	444.3	×10 =	4443.0
10	"	54.0	21.4			
20	"	54.6	20.8			
30	"	55.0	20.4			
40	"	54.6	20.8			
50	"	54.5	20.9			
60	"	54.5	20.9			
70	"	54.6	20.8			
80	"	54.7	20.7			
90	"	54.5	20.7			
5500	575.4	550.8	24.6			

East		N3820 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5510	575.4	550.2	25.2			
				25.6	×6.7 =	171.5
16.7	75.4	49.4	26.0			25053.2 □
above U.S. Toe wall						
5521	575.0	575.0	0.0			
				9.8	×7.7 =	75.5
28.7	72.6	53.0	19.6			
				19.4	×1.2 =	23.3
29.9 ↓	72.2	53.0	19.2			
29.9 ↑	72.2	49.4	22.8			
				19.5	×10.1 =	197.0
40	69.1	52.9	16.2			
45	67.5	60.0	7.5	18.5	×5 =	92.5
50	65.9	60.1	5.8	4.05	×10 =	40.5
60	62.8	60.5	2.3			
				1.15	×6.6 =	7.6
66.6	560.8	560.8	0.0			436.4 □

East below D.S.	Toe wall	N3830 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
4408.4	559.9	559.9	0.0			
				0.7	x 1.6	1.1
10	60.4	59.0	1.4			
20	62.4	57.5	5.9			
30	66.4	56.5	9.9			
40	69.4	56.3	13.1	65.2	x 10 =	652.0
50	72.4	59.1	13.3			
60	75.0	60.3	14.7			
70	575.0	559.8	15.2	18.15	x 2 =	36.3

East		N3830 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
4472	575.0	553.9	21.1			
72	75.0	52.0	23.0			
				23	x 2 =	46.0
74	75.0	52.0	23.0			
				11.5	x 11 =	126.5
85	575.0	575.0	0.0			861.9
4490.5	575.0	571.5	3.5			
				3.3	x 9.5 =	31.4
4500	75.0	71.9	3.1			
				3.1	x 10 =	31.0
10	75.0	71.9	3.1			
				2.45	x 6.9 =	16.9
16.9	75.0	73.2	1.8			
				2.05	x 3.1 =	6.4
20	76.0	73.7	2.3			
30	79.4	72.8	6.6			
40	82.8	71.6	11.2	39.75	x 10 =	397.5
50	86.2	72.4	13.8			
60	589.5	575.5	14.0			

East

N3830
D.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4570	592.9	577.5	15.4			
				51.2	× 10 =	512.0
80	96.3	78.1	18.2			
90	99.7	78.5	21.2 ×			
				21.35	× 1.9 =	40.6
91.9	600.3	78.8	21.5			
				21.	× 8.1 =	170.1
4600	"	79.8	20.5			
10	"	80.6	19.7			
20	"	82.1	18.2			
30	"	82.7	17.6			
				123.75	× 10 =	1237.5
40	"	83.2	17.1			
50	"	83.4	16.9			
60	"	84.2	16.1			
70	600.3	584.5	15.8 ×			
				14.55	× 6.9 =	100.4
76.9	600.3	587.0	13.3	11.05	× 3.1 =	34.2
80	596.9	588.1	8.8	4.4	× 7.4 =	32.6
4687.4	589.5	589.5	0.0			

From 600.3 to 650.7 = $\frac{75 + 60}{2}$ × 50.4 = 3402.0 sq. ft

" 650.7 to 701.2 = $\frac{50 + 40}{2}$ × 50.5 = 2272.5 sq. ft

N3830
D.S.

8257.2 □'

East

N3830
U.S.

From 651.5 to 702.1 = $\frac{90.1 + 43.5}{2}$ × 50.6 = 3380.1 Sq. ft

" 626.0 to 651.5 = $\frac{122.9 + 100.1}{2}$ × 25.5 = 2843.3 " "

" 600.7 to 626.0 = $\frac{205.3 + 109.6}{2}$ × 25.3 = 3983.5 + 0.6 = 3984.1 " "

" 575.3 to 600.7 = $\frac{323.3 + 215.3}{2}$ × 25.4 = 6840.2 sq ft

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5141.5	555.4	555.4	0.0			
				3.6	× 8.5 =	30.6
50	562.0	554.8	7.2			
				11.4	× 10 =	114.0

East		N3830 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5160	569.7	554.1	15.6			
				18.45	x 7.4 =	136.5
67.4	575.3	554.0	21.3			
				21.3	x 2.6 =	55.4
70	575.3	554.0	21.3			
80	"	54.1	21.2			
90	"	53.9	21.4			
5200	"	54.0	21.3			
10	"	54.2	21.1			
20	"	54.3	21.0			
30	"	53.8	21.5			
40	"	53.5	21.8			
50	"	53.4	21.9			
60	"	53.8	21.5			
70	"	53.8	21.5			
80	"	53.7	21.6			
90	"	53.0	22.3			
5300	"	52.5	22.8			
10	575.3	552.0	23.3			
	✓	✓	✓			

J.W.W.
May. 11. 34

East		N3840 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5320	575.3	551.7	23.6			
30	"	51.8	23.5			
40	"	51.5	23.8	708.95	x 10 =	7089.5
50	"	53.3	22.0			
60	"	53.8	21.5			
70	"	53.7	21.6			
80	"	53.5	21.8			
90	"	53.7	21.6			
5400	"	53.7	21.6			
10	"	54.2	21.1			
20	"	55.1	20.2			
30	"	55.1	20.2			
40	"	54.8	20.5			
50	"	55.2	20.1			
60	"	55.2	20.1			
70	"	55.1	20.2			
80	"	55.1	20.2			
90	"	55.2	20.1			
5500	575.3	554.5	20.8			
				21.5	x 10 =	215.0
	✓	✓	✓	✓	✓	✓

East

		N3830 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5510	575.3	553.1	22.2			
				22.85	x 10.2 =	233.1
20.2	75.3	51.8	23.5			24921.8 □'
above U.S. Toe Wall						
5524.5	575.0	575.0	0.0			
				9.3	x 8.8 =	81.8
33.3	71.6	53.0	18.6			
				18.6	x 0.2 =	3.7
33.5 ↓	71.6	53.0	18.6			
33.5 ↑	71.6	51.9	19.7			
				17.6	x 6.5 =	114.4
40	70.2	54.7	15.5			
50	67.1	62.0	5.1	13.45	x 10 =	134.5
60	64.0	62.8	1.2			
				0.6	x 2 =	1.2
62	563.4	563.4	0.0			
						3356 □'

East

		N3840 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
Below D.S. Toe Wall						
4425	566.5	566.5	0.0			
				1.45	x 12. =	17.4
37	70.2	67.3	2.9			
				3.3	x 3. =	9.9
40	71.2	67.5	3.7			
				5.1	x 10 =	51.0
50	74.4	67.9	6.5			
				7.05	x 2. =	14.1
52	75.0	67.4	7.6			
				8.7	x 8. =	69.6
60	75.3	65.5	9.8			
70	75.1	63.8	11.3	21.8	x 10 =	218.0
80	75.0	63.8	11.2			
				10.35	x 6.5 =	67.3
86.5	575.0	65.5	9.5			
86.5	575.0	567.0	8.0	8	x 4.5 =	36.0

East		N3840 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4491	575.0	567.0	8.0			
				4	× 3.7 =	14.8
94.7	575.0	575.0	0.0			498.1 □'
4500.5	575.5	569.0	6.5			
				5.45	× 9.5 =	51.8
10	75.4	71.0	4.4			
				4.4	× 6.9 =	30.4
16.92	75.3	70.9	4.4			
				4.9	× 3.1 =	15.2
20	76.3	70.9	5.4			
30	79.6	71.4	8.2			
40	83.0	73.2	9.8			
50	86.3	76.1	10.2			
				78.35	× 10 =	783.5
60	89.6	78.2	11.4			
70	93.0	79.5	13.5			
80	96.3	82.4	13.9			
90	99.6	82.3	17.3			
				17.5	× 1.9 =	33.2
91.9	600.3	582.6	17.7			
				17.15	× 8.1 =	138.9

May 12-34
J.W.W. (38)

East		N3840 D.S	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4600	600.3	583.7	16.6			
10	"	85.2	15.1			
20	"	86.9	13.4			
30	"	88.6	11.7			
				87.6	× 10 =	876.0
40	"	88.6	11.7			
50	"	89.2	11.1			
60	"	88.7	11.6			
70	"	90.9	9.4			
				9.1	× 6.9 =	62.8
76.9	600.3	91.5	8.8			
				7	× 3.1 =	21.7
80	596.9	591.7	5.2			
				2.6	× 3.7 =	9.6
83.7	593.2	93.2	0.0			

From 600.3 to 650.7 = $\frac{75+60}{2}$ × 50.4 = 3402.0 Sq. ft.

" 650.7 to 701.2 = $\frac{50+40}{2}$ × 50.5 = 2272.5 " "

7,697.6 □'

East N3840 U.S.

From 651.4 to 702.2 = $\frac{899 + 43.5}{2}$ (66.9) × 50.8 = 3388.4 sq.ft

" 626.0 to 651.4 = $\frac{122.9 + 99.9}{2}$ (111.4) × 25.4 = 2829.6 " "

" 600.7 to 626.0 = $\frac{205.3 + 109.6}{2}$ (157.45) × 25.3 = 3983.5 (0.6) 3984.1 " "

" 575.4 to 600.7 = $\frac{323.1 + 215.3}{2}$ (269.2) × 25.3 = 6810.8 " "

			HT	Mean Dist. Ht.		Area in Sq.ft
5143.5	557.0	557.0	0.0			
				2.8	× 6.5 =	18.2
50	62.0	56.4	5.6			
				10.3	× 10 =	103.0
60	69.7	54.7	15.0			
				17.95	× 7.5 =	134.6
67.5	575.4	54.5	20.9			
				20.9	× 2.5 =	52.2
70	75.4	54.5	20.9			
80	75.4	54.5	20.9			
90	"	54.4	21.0			
5200	"	54.7	20.7			
10	"	54.9	20.5			
20	575.4	554.7	20.7			

East N3840 U.S.

			HT	Mean Dist. Ht.		Area in Sq.ft.
5230	575.4	554.6	20.8			
40	"	54.4	21.0			
50	"	54.5	20.9			
60	"	54.3	21.1			
70	"	54.5	20.9			
80	"	54.3	21.1			
90	"	54.4	21.0	497.	× 10 =	4970.0
5300	"	53.9	21.5			
10	"	53.3	22.1			
20	"	53.2	22.2			
30	"	52.9	22.5			
40	"	53.6	21.8			
50	"	56.5	18.9			
60	"	56.9	18.5			
70	"	55.8	19.6			
80	"	55.5	19.9			
90	"	55.7	19.7			
5400	"	56.0	19.4			
10	575.4	555.7	19.7			

East		N3840 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5420	575.4	555.5	19.9			
30	"	55.4	20.0			
40	"	55.6	19.8			
50	"	56.4	19.0			
60	"	57.2	18.2	210.85	x 10 =	2108.5
70	"	57.2	18.2			
80	"	57.2	18.2			
90	"	57.4	18.0			
5500	"	57.1	18.3			
10	"	55.2	20.2			
20	"	53.0	22.4 x			
				22.6	x 3.9 =	88.1
23.9	575.4	552.6	22.8			24,487.5 □'
	✓	✓				

Above U.S. Core Wall

5528.2	575.0	575.0	0.0			
				7.55	x 6.1 =	46.1
34.3	73.1	58.0	15.1			
				14.8	x 2. =	29.6
36.3	572.5	558.0	14.5			
	✓	✓	✓	✓	✓	✓

East		N3840 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5236.3	572.5	555.0	17.5			
				15.4	x 3.7 =	57.0
40	71.4	58.1	13.3			
				7.55	x 10 =	75.5
50	68.3	66.5	1.8			
				0.9	x 6. =	5.4
56	566.4	566.4	0.0			
	✓	✓	✓	✓	✓	✓
						213.6 □'

East		N3850 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
below D.S. Toe Wall						
4438	571.7	571.7	0.0			
				0.3	× 2. =	0.6
40	72.4	71.8	0.6			
				1.85	× 8. =	14.8
48	75.1	72.0	3.1			
				3.05	× 2. =	6.1
50	75.1	72.1	3.0			
60	75.2	73.4	1.8			
70	75.2	68.4	6.8	19.8	× 10 =	198.0
80	75.2	70.9	4.3			
90	75.2	71.6	3.6			
4500	75.2	71.6	3.6			
				4.2	× 4.5 =	18.9
						238 □'
04.5	575.2	570.4	4.8			
4510	575.0	573.4	1.6			
				2.4	× 6.9 =	16.6
16.92	75.0	71.8	3.2			
				4	× 3.1 =	12.4
20.	576.0	571.2	4.8			

J.W.W. July 1934

East		N3850 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4530	579.3	571.7	7.6			
40	82.9	72.4	10.5			
50	86.0	77.9	8.1	63.35	× 10 =	633.5
60	89.3	78.7	10.6			
70	92.7	81.1	11.6			
80	96.0	88.4	7.6			
90	5995	89.6	9.9			
				10.1	× 1.9 =	18.[illegible]
91.9	600.1	89.8	10.3			
				9.26	× 8.1 =	74.9
4600	600.1	91.9	8.2			
10	"	90.4	9.7			
20	"	92.0	8.1			
30	"	94.9	5.2	46.5	× 10 =	465.0
40	"	93.9	6.2			
50	"	94.8	5.3			
60	"	93.9	6.2			
70	"	96.7	3.4			
				1.9	× 6.9 =	12.4
vertical 76.9	600.1	599.7	0.4			

East N3850 D.S.

From 600.1 to 650.7 = $\frac{75+60}{2} \times 50.6$ = 3415.5 Sq.ft.

" 650.7 to 701.2 = $\frac{50+40}{2} \times 50.5$ = 2272.5 Sq.ft.

6921.0 □'

East N3850 U.S.

From 651.3 to 702.1 = $\frac{89.8 + 43.5}{2} \times 50.8$ = 3385.8 Sq.ft.
(66.65; 111.4)

" 626.0 to 651.3 = $\frac{173 + 99.8}{2} \times 25.3$ = 2818.4 " "
(157.55)

" 600.6 to 626.0 = 205.4 + 109.7 × 25.4 = 4001.8
0.6 +
4002.4 " "

" 575.1 to 600.6 = $\frac{323.5 + 215.4}{2} \times 25.6$ = 6897.9 " "
(269.45)

			Ht.	Mean Ht.	Dist.	Area
5147.1	559.8	559.8	0.0			
	✓	✓	✓	1.3	×2.9 =	3.8
				✓	✓	✓

East N3850 U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5150	562.0	559.4	2.6			
60	69.7	58.9	10.8	6.7	×10 =	67.0
				14.1	×7.1 =	100.1
67.1	575.1	57.7	17.4			
				17.65	×2.9 =	51.2
70	575.1	57.2	17.9			
80	"	56.0	19.1			
90	"	56.0	19.1			
5200	"	56.1	19.0			
10	"	56.1	19.0			
20	"	56.9	18.2			
30	"	56.1	19.0	247.6	×10 =	2476.0
40	"	55.8	19.3			
50	"	55.2	19.9			
60	"	56.0	19.1			
70	"	55.4	19.7			
80	"	55.9	19.2			
90	"	56.3	18.8			
5300	575.1	556.6	18.5			
	✓	✓	✓	✓	✓	✓

East		N3850 U.S.	Ht.	Mean Ht	Dist.	Area in Sq. ft.
5310	575.1	555.1	20.0			
20	"	56.1	19.0			
30	"	55.7	19.4			
40	"	57.0	18.1			
50	"	58.5	16.6			
60	"	59.8	15.3			
70	"	59.0	16.1			
80	"	59.1	16.0			
90	"	59.7	15.4			
5400	"	59.8	15.3			
10	"	59.1	16.0			
20	"	58.3	16.8	350.75 × 10 =		3507.5
30	"	58.4	16.7			
40	"	58.5	16.6			
50	"	59.8	15.3			
60	"	60.2	14.9			
70	"	62.4	12.7			
80	"	61.2	13.9			
90	575.1	562.2	12.9			

East		N3850 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5500	575.1	562.3	12.8			
10	"	60.8	14.3			
20	"	60.3	14.8			
				15.95 ×	7.9 =	126.0
27.9	"	58.0	17.1		23	436.1 □'
above U.S. Toe Wall						
5532.2	575.0	575.0	0.0			
				5.35 ×	4.3 =	23.0
36.5	73.7	63.0	10.7			
				10.15 ×	3.4 =	34.5
39.9	72.6	63.0	9.6			
39.9	72.6	67.2	5.4			
				2.7 ×	9.1 =	24.6
49	569.7	569.7	0.0			
						82.1

N3860 No Toe Wall

East

Vertical		D.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft
4560	589.4	588.7	0.7			
70	92.7	86.2	6.5	14.05	× 10 =	140.5
80	96.0	91.3	4.7			
90	99.4	94.4	5.0			
				5.35	× 1.9 =	10.2
91.9	600.0	94.3	5.7			
				5.85	× 8.1 =	47.4
4600	600.0	94.0	6.0			
				5.85	× 1.9 =	10.5
01.9	600.0	94.3	5.7			
				6.4	× 5 =	32.0
06.9	602.0	94.9	7.1			
				7.1	× 13.1 =	93.0
20	602.0	94.9	7.1			
30	"	95.9	6.1			
40	"	99.4	2.6			
50	"	99.1	2.9	16.95	× 10 =	169.5
60	"	600.2	1.8			
70	602.0	602.0	0.0			

East N3860 D.S.

			Ht.	Mean Ht.	Dist	Area in Sq. ft.
4680	602.0	601.8	0.2			
				0.1	× 1.3 =	0.1
81.3	602.0	602.0	0.0			

From 602 to 650.6 = $\frac{74.4 + 60}{2}$ (67.2) × 48.6 = 3265.9 sq.ft

" 650.6 to 700.9 = $\frac{50 + 40}{2}$ (45) × 50.3 = 2263.5 " "

6032.6 □'

East N3860 U.S.

From 651.3 to 701.9 = $\frac{90 + 43.5}{2}$ (66.75) × 50.6 = 3377.6 sq.ft.

" 625.9 to 651.3 = $\frac{123.9 + 100.}{2}$ (111.95) × 25.4 = 2843.5 " "

" 600.6 to 625.9 = $\frac{205.4 + 110.2}{2}$ (157.8) × 25.3 = 3992.3

1.1+

3993.4 sq.ft

East

N3860
U.S.

From 575.0 to 600.6 = 323.7 + 215.4 / 2 × 25.6 = 6900.5 sq ft

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5152.8	564.2	564.2	0.0			
				2.5	× 7.2 =	18.0
60	69.7	64.7	5.0			
				7.95	× 7 =	55.0
67	575.0	64.1	10.9			
				11.	× 3 =	33.0
70	575.0	63.9	11.1			
80	"	61.7	13.3			
90	"	60.8	14.2			
5200	"	58.8	16.2			
10	"	59.4	15.6			
20	"	59.6	15.4			
30	"	59.4	15.6			
40	"	59.6	15.4			
50	"	58.5	16.5			
60	"	58.2	16.8			
70	575.0	557.9	17.1			

East

N3860
U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5280	575.0	558.3	16.7			
90	"	59.0	16.0			
5300	"	59.6	15.4			
10	"	58.6	16.4			
20	"	59.1	15.9	418.	× 10 =	4180.0
30	"	59.1	15.9			
40	"	60.1	14.9			
50	"	59.9	15.1			
60	"	62.5	12.5			
70	"	64.6	10.4			
80	"	64.2	10.8			
90	"	63.5	11.5			
5400	"	62.3	12.7			
10	"	61.4	13.6			
20	"	60.8	14.2			
30	"	61.1	13.9			
40	"	61.5	13.5			
50	"	63.2	11.8			
60	575.0	564.7	10.3			

East		N3860 U.S.	Ht.	Mean Ht.	Dist	Area in sq. ft
5470	575.0	564.3	10.7			
80	"	62.8	12.2			
90	"	65.6	9.4			
				63.85	× 10 =	638.5
5500	"	65.0	10.0			
10	"	65.5	9.5			
20	"	68.1	6.9			
30	575.0	575.0	0.0			
	✓	✓	-	-		22039.5 □

Above Up Stream Toe Wall No

May 16 1934
JWW

East		N3870 D.S.	Ht.	Mean	Dist	Area in
4576.1	594.7	594.7	0			
4580	596.0	595.3	0.7	0.35	× 3.9 =	1.3
				1.95	× 10 =	19.5
90	99.7	96.5	3.2			
				3.25	× 1.9 =	6.2
91.9	600.0	96.7	3.3			
				3	× 8.1 =	24.3
4600	600.0	597.3	2.7			
				2.3	× 1.9 =	4.4
01.92	600.0	98.1	1.9			
				2.1	× 8.1 =	17.0
10	603.3	601.0	2.3			
20	07.3	01.9	5.4			
30	11.3	00.9	10.4	39.2	× 10 =	392.0
40	15.4	02.0	13.4			
50	19.4	01.7	17.7 ×			
				18	× 1.5 =	27.0
51.5	620.0	01.7	18.3			
				18.15	× 8.5 =	154.3
60	620.0	02.0	18.0			
70	"	03.7	16.3	33.7	× 10 =	337.0
80	620.0	603.2	16.8 ×			
	✓	✓	-	-	-	-

East N3870

		D.S.	Ht.	Mean Ht.	Dist		Area in Sq. ft.
4690	620.0	605.5	14.5	26.15	× 10	=	261.5
4700	"	613.5	6.5				
				5.7	× 2	=	11.4
02	"	615.1	4.9				
				4.4	× 8	=	35.2
10	"	16.1	3.9				
				3.75	× 4	=	15.0
14	"	16.4	3.6				
				1.8	× 6.6	=	11.9
20.6	620.0	620.0	0.0				

From 620 to 650.4 = $\frac{69+60}{2}$ × 30.4 = 1960.8

" 650.4 to 700.9 = $\frac{50+40}{2}$ × 50.5 = 2272.5

5551.3 ✓

East. N3870 U.S.

From 651.3 to 702.0 = $\frac{90+43.5}{2}$ (66.75) × 50.7 = 3384.2 Sq. ft

" 625.9 to 651.3 = $\frac{123.2+100}{2}$ (111.6) × 25.4 = 2834.6 " "

" 600.5 to 625.9 = $\frac{205.5+110}{2}$ (157.75) × 25.4 = 4006.8

1.1 +

4007.9 " "

" 575.0 to 600.5 = $\frac{323.7+215.5}{2}$ (269.6) × 25.5 = 6874.8 " "

			Ht.	Mean Ht.	Dist		Area in Sq. ft
5158.3	568.4	68.4	0.0				
				0.75	× 1.7	=	1.3
60	69.7	68.2	1.5				
				4.75	× 7	=	33.2
67	575.0	67.0	8.0				
				8.25	× 3	=	24.8
70	575.0	66.5	8.5				
80	"	65.5	9.5				
90	"	65.2	9.8				
5200	"	64.1	10.9	63.9	× 10	=	639.0
10	"	63.1	11.9				
20	"	63.2	11.8				
30	575.0	563.5	11.5				

East		N3870 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5240	575.0	563.3	11.7			
50	"	63.7	11.3			
60	"	63.3	11.7			
70	"	62.4	12.6			
80	"	62.2	12.8			
90	"	63.4	11.6	283.6 × 10 = 2836.0		
5300	"	62.2	12.8			
10	"	61.5	13.5			
20	"	61.2	13.8			
30	"	62.1	12.9			
40	"	62.7	12.3			
50	"	62.5	12.5			
60	"	64.8	10.2			
70	"	67.8	7.2			
80	"	68.0	7.0			
90	"	66.2	8.8			
5400	"	64.5	10.5			
10	"	64.3	10.7			
20	575.0	564.3	10.7			

East		N3870 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5430	575.0	567.2	7.8			
40	"	68.1	6.9			
50	"	68.8	6.2			
60	"	70.4	4.6			
70	"	68.8	6.2			
80	"	67.3	7.7			
90	"	65.8	9.2			
5500	"	68.1	6.9			
10	"	68.3	6.7			
20	"	72.9	2.1			
				1.05 × 3 = 3.2		
23	575.0	575.0	0.0			
						20638.8

East N3880 D.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
4606.2	601.7	601.7	0.0			
				0.3	x 3.8 =	1.1
10	03.2	01.6	1.6			
20	07.3	02.1	5.2			
30	11.2	02.4	8.8	30.1	x 10 =	301.0
40	15.4	03.4	12.0			
50	19.4	12.8	6.6			
				6.7	x 1.5 =	10.0
51.5	620.0	13.2	6.8			
				5.56	x 8.5 =	47.2
60	620.0	15.7	4.3			
70	"	15.6	4.4			
80	"	17.1	2.9			
				13	x 10 =	130.0
90	"	18.3	1.7			
4700	"	18.7	1.3			
10	"	18.9	1.1			
17.8	"	18.8	1.2	1.15	x 7.8 =	9.0
20	"	18.8	1.2	1.2	x 2.2 =	2.6
				0.6	x 0.5 =	0.3
20.5	620.0	620.0	0.0			

East N3880 D.S.

From 620 to 650.5 = $\frac{69 + 60}{2}$ x 30.5 = 1967.2 sq.ft

" 650.5 to 700.9 = $\frac{50 + 40}{2}$ x 50.4 = 2268.0 " "

4736.4 □'

East N3880 U.S.

From 651.3 to 701.8 = $\frac{90.1 + 43.5}{2}$ x 50.5 = 3373.4 sq.ft

" 625.9 to 651.3 = $\frac{123.2 + 100.1}{2}$ x 25.4 = 2835.9 " "

" 600.5 to 625.9 = $\frac{205.5 + 110}{2}$ x 25.4 = 4006.8

4007.9 " "

" 580 to 600.5 = $\frac{302.5 + 215.5}{2}$ x 20.5 = 5309.5 " "

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5168.6	576.2	576.2	0.0			
				0.8	x 1.4 =	1.1

East		N3880 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5170	577.3	575.7	1.6			
				3.65	× 3.5	= 12.8
73.5	580.0	74.3	5.7			
				6.95	× 6.5	= 45.2
80	580.0	71.8	8.2			
90	"	70.4	9.6			
5200	"	69.7	10.3			
10	"	68.1	11.9			
20	"	67.6	12.4			
30	"	67.5	12.5			
40	"	67.1	12.9			
50	"	67.2	12.8			
60	"	66.5	13.5			
70	"	65.3	14.7			
80	"	65.9	14.1			
90	"	66.8	13.2			
5300	"	65.8	14.2			
10	"	64.6	15.4			
20	580.0	564.6	15.4			
	✓	✓	✓	✓	✓	✓

East		N3880 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5330	580.0	566.1	13.9			
				302.65	× 10 =	3026.5
40	"	66.4	13.6			
50	"	69.6	10.4			
60	"	68.2	11.8			
70	"	69.8	10.2			
80	"	70.3	9.7			
90	"	69.2	10.8			
5400	"	69.7	10.3			
10	"	69.9	10.1			
20	"	73.7	6.3			
30	"	77.5	2.5			
40	"	79.0	1.0			
50	"	78.1	1.9			
60	"	78.7	1.3			
70	"	76.3	3.7			
[illegible]	"	[illegible]		4.25	× 6 =	25.5
5476	580.0	575.7	4.8			
[illegible]	[illegible]	[illegible]		4.45	× 4 =	17.8
5480	578.6	574.5	4.1			
				2.8	× 10 =	28.0
	✓	✓	✓	✓	✓	✓

E		N3880 4-5			
5490	575.2	573.7	1.5		
				1.5 × .67 =	1.0
5490.67	575.0	573.5	1.5		
				2.9 × 9.33 =	27.1
5500	575°	70.7	4.3		
				3.8 × 10 =	38.0
10	75.0	71.7	3.3		
				1.65 × 5.2 =	8.6
5515.2	575°	575.0	0.0		
					18758.3 □'

East		N3890 D.5.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4641.6	616.0	616.0	0.0			
				1.15 ×	8.4 =	9.7
50	19.4	617.1	2.3			
				3.45 ×	1.6 =	5.5
51.6	620.0	17.4	4.6			
				3.05 ×	8.4 =	25.6
60	620.0	18.5	1.5			
70	"	18.5	1.5			
80	"	18.7	1.3	6.8 ×	10 =	68.0
90	620°	618.7	1.3			

East		N3890 D.5.	Ht.	Mean Ht.	Dist.	Area in Sq. ft.
4700	620.0	618.7	1.3			
10	"	18.7	1.3			
				1.4 ×	6.2 =	8.7
16.2	"	18.5	1.5			
				1.55 ×	3.8 =	5.9
20	"	18.4	1.6			
				0.8 ×	0.5 =	0.4
20.5	620.0	620.0	0.0			

From 620 to 650.3 = $\frac{68.9 + 60}{2} \times 30.3$ (64.45) = 1952.8 Sq. ft.

" 650.3 to 700.9 = $\frac{50 + 40}{2} \times 50.9$ (45) = 2290.5 Sq. ft.

4367.1 □'

East N3890 U.S.

From 651.2 to 701.8 = $\frac{90.1 + 43.5}{2}$ (66.8, 111.7) × 50.6 = 3380.1

" 625.7 to 651.2 = $\frac{123.3 + 100.1}{2}$ (163.1) × 25.5 = 2848.3

" 600.3 to 625.7 = $\frac{205.8 + 110.4}{2}$ × 25.4 = 4015.4 (0.3)

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5174	580.3	580.3	0.0			
				2.3 × 6 =		13.8
80	85.0	80.4	4.6			
90	92.7	80.5	12.2			
5200	600.3	80.3	20.0			
10	"	79.3	21.0			
20	"	78.9	21.4			
30	"	76.8	23.5			
40	"	73.9	26.4			
50	"	73.2	27.1			
60	"	73.2	27.1			
70	"	72.9	27.4			
80	"	73.5	26.8			
90	"	73.5	26.8			
5300	600.3	572.5	27.8			
				568.5 × 10 =		5685.0

East N3890 U.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft.
5310	600.3	568.4	31.9			
20	"	67.8	32.5			
30	"	68.6	31.7			
40	"	70.9	29.4			
50	"	75.1	25.2			
60	"	74.3	26.0			
70	"	74.9	25.4			
80	"	74.7	25.6			
90	"	78.6	21.7			
5400	"	80.7	19.6			
10	"	80.9	19.4			
				19.95 × 5.7 =		113.7
15.7	"	79.8	20.5			
				20.1 × 4.3 =		86.4
20	598.8	79.1	19.7			
30	95.5	78.1	17.4			
40	92.1	78.0	14.1			
				60.1 × 10 =		601.0
50	88.7	78.1	10.6			
60	85.3	78.5	6.8			
70	82.0	79.3	2.7			
				1.35 × 6.5 =		8.8
76.5	579.8	579.8	0.0			

16713.8

East		N3900 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4647.8	618.5	618.5	0.0			
				0.45	× 2.2 =	1.0
50	19.4	18.5	0.9			
60	23.4	18.5	4.9			
70	27.4	18.5	8.9			
80	31.5	18.5	13.0			
				104.35	× 10 =	1043.5
90	35.5	18.4	17.1			
4700	39.5	18.4	21.1			
10	643.6	618.5	25.1			

East		N3900 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft.
4720	647.6	620.0	27.6			
				27.9	× 6.9 =	192.5
26.9	650.4	622.2	28.2			
				27.7	× 3.1 =	85.9
30	"	23.2	27.2			
40	"	28.4	22.0			
				54.4	× 10 =	544.0
50	"	36.5	13.9			
60	"	40.6	9.8			
				9.8	× 5.6 =	54.9
65.6	"	40.6	9.8			
				8.8	× 4.4 =	38.7
70	"	42.6	7.8			
				5.5	× 10 =	55.0
80	"	47.2	3.2			
				1.6	× 6.9 =	11.0
86.9	650.4	650.4	0.0			

From 650.4 to 700.8 = $\frac{50+40}{2}$ × 50.4 = 2268.0 sq. ft.

4294.5 □'

East. N3900 U.S.

From 651.° to 701.5 = $\frac{90 + 43.5}{2}$ (66.75) × 50.5 = 3370.9 Sq. ft.

" 625.7 to 651.° = $\frac{123 + 100}{2}$ (111.5) × 25.3 = 2821.° " "

" 600.3 to 625.7 = $\frac{205.8 + 110.1}{2}$ (157.95) × 25.4 = 4011.9

0.3

4012.2 Sq. ft.

			Ht.	Mean Ht.	Dist	Area in Sq. ft
5176.5	582.3	582.3	0.0			
				2.5	× 3.5 =	8.8
80	585.°	80.°	5.0			
90	92.7	80.5	12.2			
5200	600.3	80.5	19.8			
10	"	80.5	19.8			
20	600.3	580.5	19.8			
	✓	✓	✓	✓	✓	✓

East. N3900 U.S. J.W.W. July 14.34

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5230	600.3	580.3	20.°			
40	"	80.3	20.°			
50	"	80.3	20.0			
60	"	80.1	20.2			
70	"	80.1	20.2			
80	"	80.4	19.9	455.55	× 10 =	4555.5
90	"	80.4	19.9			
5300	"	78.2	22.1			
10	"	75.4	24.9			
20	"	73.9	26.4			
30	"	77.1	23.2			
40	"	79.6	20.7			
50	"	79.7	20.6			
60	"	82.°	18.3			
70	"	81.9	18.4			
80	"	81.5	18.8			
90	"	81.2	19.1			
5400	"	81.1	19.2			
10	600.3	581.2	19.1	19.2	× 5.7 =	109.4
	✓	—	✓	✓	✓	✓

East		N3900 U.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft
5415.7	600.3	581.0	19.3			
				18.65	× 4.3 =	80.2
20	598.8	80.8	18.0			
30	95.5	78.6	16.9			
40	92.1	79.4	12.7	46.65	× 10 =	466.5
50	88.7	82.8	5.9			
60	85.3	83.9	1.4			
70	82.0	80.5	1.5			
				0.75	× 4.9 =	3.7
74.9	580.3	580.3	0.0			
						1542 8.2

East		N3910 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft
4647.5	618.3	618.3	0.0			
				0.5	× 2.5 =	1.2
50	19.3	18.3	1.0			
60	23.3	19.0	4.3			
70	27.3	18.8	8.5			
80	31.3	23.2	8.1	56.05	× 10 =	560.5
90	35.3	21.8	13.5			
4700	39.3	24.4	14.9			
10	43.3	30.8	12.5			
15	45.3	35.3	10.0	22.25	× 5. =	111.2
20	47.3	35.3	12.0			
				12.05	× 6.9 =	83.1
26.9	650.1	38.0	12.1			
				11.75	× 3.1 =	36.4
30	650.1	38.7	11.4			
40	"	40.0	10.1	29.6	× 10 =	296.0
50	"	40.9	9.2			
60	"	40.9	9.2			
				9.2	× 6.7 =	61.6
66.7	650.1	640.9	9.2			
				8.45	× 3.3 =	27.9

May 18. 1934
J.W.W.

East		N3910 D.S.	Ht.	Mean Ht.	Dist	Area in sq. ft.
4770	650.1	642.4	7.7	5.4	× 10 =	54.0
80	"	47.0	3.1			
				1.55	× 6.9 =	10.7
86.9	650.1	650.1	0.0			

From 650.1 to 700.5 = $\frac{50+40}{2} \times 50.4 = 2268$ sq ft

3510.6

East		N3910 U.S.	Ht.	Mean Ht.	Dist	Area in sq. ft.
5200	600.2	600.2	0.0			
				1.5	× 3 =	4.5
03	600.2	597.2	3.0			
				2.7	× 7 =	18.9
10	600.2	97.8	2.4			
				2.25	× 10 =	22.5
20	"	98.1	2.1			
20	"	89.2	11.0			
30	"	81.1	19.1			
40	"	80.8	19.4			
50	"	80.6	19.6			
60	"	80.5	19.7			
70	"	80.5	19.7			
80	"	80.5	19.7			
				249.6	× 10 =	2496.0
90	"	80.7	19.5			
5300	"	80.9	19.3			
10	"	80.6	19.6			
20	"	77.7	22.5			
30	"	81.8	18.4			
40	"	81.8	18.4			
50	600.2	581.8	18.4			

East N3910 U.S.

From 651.0 to 701.3 = $\frac{90.2 + 43.5}{2}$ (66.85) × 50.3 = 3362.6 sq ft

" 625.6 to 651.0 = $\frac{123.2 + 100.2}{2}$ (111.7) × 25.4 = 2837.2 " "

" 600.2 to 625.6 = $\frac{205.7 + 110.4}{2}$ (158.05) × 25.4 = 4014.5

0.2+

4014.7 sq ft

East		N3910 U.S.	Ht.	Mean Ht.	Dist	Area in sq ft
5360	600.2	581.9	18.3			
70	"	82.0	18.2			
80	"	82.1	18.1	104.5	x 10 =	1045.0
90	"	83.6	16.6			
5400	"	83.6	16.6			
10	"	85.2	15.0			
				14.25	x 5.7 =	81.2
15.7	600.2	586.7	13.5			
				12.15	x 4.3 =	52.2
20	598.7	587.9	10.8			
				5.4	x 5 =	27.0
25	597.1	597.1	0.0			
						13961.8 □'

East		N3920 D.S.	Ht.	Mean Ht.	Dist	Area in sq ft
4691.2	635.7	635.7	0.0			
				0.75	x 8.8 =	6.6
4700	39.2	37.7	1.5			
10	43.2	39.0	4.2	8.5	x 10 =	85.0
20	47.2	40.1	7.1			
				8.3	x 6.9 =	57.3
26.9	650.0	40.5	9.5			
				9.35	x 10 =	93.5
36.9	650.0	40.8	9.2			
				10	x 3.1 =	31.0
40	51.6	40.8	10.8			
50	56.6	40.9	15.7	54.7	x 10 =	547.0
60	61.6	40.9	20.7			
70	66.7	40.9	25.8			
				27.4	x 6.6 =	180.8
76.6	670.0	41.0	29.0			
				28.95	x 3.4 =	98.4
80	670.0	41.1	28.9			
90	670.0	646.0	24.0	44.65	x 10 =	446.5

East N3920

		D.S.	Ht.	Mean Ht.	Dist	Area in sq. ft
4800	670.°	657.6	12.4			
				8.9	× 6 =	53.4
06	70.°	64.6	5.4			
				5	× 4 =	20.°
10	70.°	65.4	4.6			
				3.1	× 10 =	31.°
20	70.°	68.4	1.6			
				0.8	× 2.7 =	2.2
22.7	670.°	670.°	0.0			

From 670 to 700.4 = $\frac{46.1 + 40}{2}$ (43.05) × 30.4 = 1308.7 □ft.

2961.4

East N3920 U.S.

From 651.° to 701.2 = $\frac{90.6 + 43.5}{2}$ (67.05) × 50.2 = 3365.9 sq ft

" 625.3 to 651.° = $\frac{123.7 + 100.6}{2}$ (112.15) × 25.7 = 2882.3 " "

			Ht.	Mean Ht.	Dist	Area in sq ft
5203.3	602.9	602.9	0.0			
				3.25	× 6.7 =	21.8
10	608.1	601.6	6.5			
20	15.8	02.3	13.5	27.8	× 10 =	278.°
30	23.5	01.4	22.1			
				23.2	× 2 =	46.4
32 ↓	25.°	00.7	24.3			
32 ↑	25.3	00.7	24.6			
				26.05	× 8 =	208.4
40	625.3	597.8	27.5			
50	"	82.7	42.6			
60	"	81.6	43.7			
70	"	81.4	43.9	254.7	× 10 =	2547.°
80	"	81.°	44.3			
90	"	81.°	44.3			
5300	625.3	581.°	44.3			

East		N3920 U.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft
5310	625.3	581.0	44.3			
20	"	80.7	44.6	177.05	x10	= 1770.5
30	"	81.2	44.1			
40	"	81.5	43.8			
				43.4	x3.7	= 160.6
43.7	625.3	582.3	43.0			
				41	x6.3	= 258.3
50	622.7	583.7	39.0			
60	18.6	87.0	31.6			
70	14.5	89.7	24.8	106.7	x10	= 1067.0
80	10.5	88.9	21.6			
90	06.4	88.0	18.4			
				17.75	x3	= 53.2
93	05.2	88.1	17.1			
				8.55	x1.8	= 15.4
94.8	604.4	604.4	0.0			
						12,674.8 □

East		N3930 D.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft
4702.4	640.2	640.2	0.0			
				1.45	x7.6	= 11.0
10	43.2	40.3	2.9			
				4.8	x10	= 48.0
20	47.2	40.5	6.7			
				8.05	x6.9	= 55.5
26.9	650.0	40.6	9.4			
				9.3	x10	= 93.0
36.9	650.0	40.8	9.2			
				9.95	x3.1	= 30.8
40	51.6	40.9	10.7			
50	56.6	41.0	15.6			
				48.9	x10	= 489.0
60	661.6	642.1	19.5			

East

N3930
D.S.

			Ht.	Mean Ht.	Dist	Area in Sq. ft
4770	666.7	649.8	16.9			
				16	× 6.6 =	105.6
76.6	670.0	54.9	15.1			
				9.95	× 13.4 =	133.3
90	70.0	65.2	4.8			
				3.3	× 10 =	33.0
4800	70.0	68.2	1.8			
				0.9	× 6 =	5.4
06	670.0	670.0	00			

From 670.0 to 700.4 = $\frac{46 + 40}{2}$ × 30.4 = 1307.2 sq ft
2311.8

East

N3930
U.S.

60

From 650.9 to 701.2 = $\frac{66.95 + 43.5}{2}$ × 50.3 = 3367.6 sq ft

" 625.3 to 650.9 = 123.$\frac{5 + 100.4}{2}$ × 25.6 = 2865.9 " "
111.95

			Ht.	Mean Ht.	Dist	Area in Sq. ft
5206.9	605.7	605.7	0.0			
				1.9	× 3.1 =	5.9
10	08.1	04.3	3.8			
20	15.8	03.2	12.6	24.65	× 10 =	246.5
30	23.5	03.2	20.3			
				21.25	× 2. =	42.5
32	625.0	02.8	22.2			
32	625.3	02.8	22.5			
				23.2	× 8. =	185.6
40	625.3	01.4	23.9			
50	"	596.2	29.1			
60	"	94.3	31.0			
70	"	92.8	32.5	188.05	× 10 =	1880.5
80	"	91.5	33.8			
90	"	91.1	34.2			
5300	625.3	594.3	31.0			

East		N3930 U.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft
5310	625.3	588.3	37.0			
20	"	84.9	40.4	144.25	× 10 =	1442.5
30	"	90.7	34.6			
40	"	91.8	33.5			
				33.05	× 3.5 =	115.7
43.5	625.3	92.7	32.6			
				30.3	× 6.5 =	197.0
50	22.7	94.3	28.0			
60	18.6	91.0	27.6	76.15	× 10 =	761.5
70	14.5	90.7	24.3			
80	10.4	89.9	20.5			
				18.45	× 9 =	166.1
89	06.8	90.4	16.4			
				8.2	× 1.9 =	15.6
90.9	606.0	606.0	0.0			
						11,292.9 □'

East		N3940 D.S	Ht.	Mean Ht.	Dist.	Area in Sq. ft
4702	640.0	640.0	0.0			
				1.55	× 8. =	12.4
10	43.7	40.1	3.1			
				5	× 10 =	5.0
20	47.2	40.3	6.9			
				8.15	× 6.9 =	56.2
26.9	650.0	40.6	9.4			
				9.35	× 3.1 =	29.0
30	50.0	40.7	9.3			
				9.2	× 5 =	46.0
35	50.0	40.9	9.1			
				8.05	× 1.9 =	15.3
36.9	650.0	643.0	7.0			
				6	× 3.1 =	18.6

East		N3940 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq.ft
4740	651.5	646.5	5.0			
50	56.5	56.5	0.0			
60	61.5	59.0	2.5	12.15	× 10 =	121.5
70	66.5	62.7	3.8			
80	71.6	64.9	6.7 ×			
85	74.1	69.8	4.3	11.05	× 5 =	55.2
90	76.6	69.8	6.8			
4800	81.6	69.8	11.8			
10	86.6	69.8	16.8	60.6	× 10 =	606.0
20	91.7	70.0	21.7			
30	96.7	82.9	13.8 ×			
				15	× 6.9 =	103.5
36.9	700.2	84.0	16.2			
				16	× 3.1 =	49.6
40	700.2	84.4	15.8			
50	"	92.6	7.6	18.85	× 10 =	188.5
60	700.2	693.5	6.7 ×			
	✓	✓	✓	7.3	× 2.7 =	19.7

East		N3940 D.S.	Ht.	Mean Ht.	Dist.	Area in Sq.ft
4862.7	700.2	692.3	7.9			
				5.9	× 7.3 =	43.1
70	700.2	96.3	13.9			
				1.95	× 6.9 =	13.4
76.9	700.2	700.2	0.0			
	✓	✓				1383.0 □'

East		N3940 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq.ft
From	650.7 to 701.0 =	$\frac{90.2 + 43.5}{2}$ (66.6)	× 50.3 =	3362.6 Sq.ft.		
"	625.3 to 650.7 =	$\frac{123.3 + 100.2}{2}$ (111.75)	× 25.4 =	2838.5 Sq.ft.		
5209.1	607.4	607.4	0.0			
	✓	✓	✓	0.55	× 0.9 =	0.5

East		N3940 U.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft
5210	608.1	607.0	1.1			
20	615.8	606.0	9.8	19.85	10	= 198.5
30	623.5	604.5	19.0			
				19.85	× 2	= 39.7
32	625.0	604.3	20.7			
32	625.3	604.3	21.0			
				21.45	× 8	= 171.6
40	625.3	603.4	21.9			
50	"	597.7	27.6			
60	"	99.4	25.9	132.2	× 10	= 1322.0
70	"	97.4	27.9			
80	"	95.8	29.5			
90	"	94.6	20.7			
95	"	94.7	31.1	60.75	× 5	= 303.8
5300	"	86.7	38.6			
10	"	81.6	43.7			
20	625.3	581.2	44.1	172.35	× 10	= 1723.5

East		N3940 U.S.	Ht.	Mean Ht.	Dist	Area in Sq. ft
5330	625.3	581.4	43.9			
40	"	82.6	42.7			
				40.75	× 3.3	= 134.5
43.3	"	86.5	38.8			
				33.5	× 6.7	= 224.4
50	622.6	94.4	28.2			
60	18.5	92.2	26.3	73.0	× 10	= 730.0
70	14.5	91.8	22.7			
80	10.4	91.5	18.9			
				17.4	× 3	= 52.2
83	09.2	93.3	15.9			
				7.95	× 6.1	= 48.5
89.1	606.8	606.8	0.0			

1150-3

East — N3950 D.S.

			Ht.	Mean Ht.	Dist	Area in Sq. ft
4777.2	670.1	670.1	0.0			
				0.7	× 2.8 =	2.0
80	71.5	70.1	1.4			
90	76.5	69.8	6.7	26.9	× 10 =	269.0
4800	81.5	70.0	11.5			
10	86.5	70.5	16.0 ×			
				11.95	× 8 =	95.6
18	90.5	82.6	7.9			
				6.25	× 12 =	75.0
30	96.5	91.9	4.6			
				6.3	× 6.9 =	43.5
36.9	700.0	92.0	8.0			
				8.0	× 3.1 =	24.8
40	"	92.0	8.0			
				7.7	× 10 =	77.0
50	700.0	92.6	7.4 ×			
				7.05	× 4 =	28.2
54	"	93.3	6.7			
				8.3	× 5 =	41.5
59	700.0	69.1	9.9			
	✓	✓	✓	4.95	× 17.9 =	88.6

East — N3950 D.S.

			Ht.	Mean Ht.	Dist	Area in Sq. ft
4876.9	700.0 ✓	700.0 ✓	0.0			
						745.2 □'

East — N3950 U.S.

From 650.7 to 701.0 = $90.\frac{2}{2} + \frac{66.85 + 43.5}{111.75} \times 50.3 = 3362.6$ Sq. ft

" 625.3 to 650.7 = $123.\frac{3 + 100.2}{2} \times 25.4 = 2838.4$ " "

			Ht.	Mean Ht.	Dist	Area in Sq. ft
5215.8	612.6	612.6	0.0			
				2.45	× 4.2 =	12.7
20	15.8	10.9	4.9			
				11.05	× 10 =	110.5
30	623.5	606.3	17.2 ×			
	✓	✓	✓	18.25	× 2 =	36.5

East		N3950 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5232	625.3	606.0	19.3			
				19.9	× 8.	= 159.2
40	"	048	20.5			
50	"	054	19.9			
60	"	038	21.5			
70	"	021	23.2	1429	× 10	= 1429.0
80	"	600.0	25.3			
90	"	597.5	27.8			
5300	"	954	29.9			
				34.7	× 4	= 138.8
04	"	858	39.5			
				40.7	× 6	= 244.2
10	"	834	41.9			
20	"	828	42.5	84.65	× 10	= 846.5
30	"	829	42.4			
				41.35	× 8.	= 330.8
38	"	850	40.3			
				38.6	× 2.	= 77.2
40	625.3	588.4	36.9			
				35.9	× 3.3	= 118.5

East		N3950 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5343.3	625.3	590.4	34.9			
				31.45	× 6.7	= 210.7
50	22.6	94.6	28.0			
60	18.5	93.7	24.8			
				49.25	× 10	= 492.5
70	14.5	93.6	20.9			
				18.95	× 8.	= 151.2
78	611.2	594.3	16.9			
80	10.4	99.0	11.4	19.85	× 2.	= 39.7
82	599.3	599.3	0.0			
					10	599.0

East — N3960 D.S. — May 21 1934 JWW.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
4778	670.6	670.6	0.0			
				0.5	× 2 =	1.0
80	71.5	70.5	1.0			
90	76.5	70.3	6.2	12.5	× 10. =	121.5
4800	81.5	70.6	10.9			
				9.85	× 9. =	88.6
09	86.0	77.2	8.8			
				4.4	× 1.7 =	7.5
10.7	86.8	86.8	0.0			
21.2	92.1	92.1	0.0			
				2.25	× 8.8 =	19.8
30	96.5	92.0	4.5			
				6.2	× 6.9 =	42.8
36.9	700.0	92.1	7.9			
				7.7	× 9.1 =	70.1
46	700.0	92.5	7.5			
				6.85	× 6.9 =	47.3
46.9	700.0	693.8	6.2			
				4	× 3.1 =	12.4

E — N3960 D.S.

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
4850	700.0	698.2	1.8			
				0.9	× 2 =	1.8
52	700.0	700.0	0.0			
						412.8 □'

East — N3960 U.S.

From 650.7 to 701.0 = $\frac{90.2 + 43.5}{2}$ (66.85) × 50.3 = 336.6

" 625.3 to 650.7 = $\frac{123.3 + 100.2}{2}$ (111.75) × 25.4 = 2838.5

			Ht.	Mean Ht.	Dist.	Area in Sq. ft
5215.2	612.2	612.2	0.0			
				3.85	× 4.8 =	18.5
20	615.8	608.1	7.7			
				11.95	× 10 =	119.5

East		N3960 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5230	623.5	607.3	16.2			
				16.75	× 2 =	33.5
32	625.0	607.7	17.3			
32	625.3	607.7	17.6			
				16.75	× 8 =	134.0
40	625.3	09.4	15.9			
50	"	08.8	16.5			
60	"	06.4	18.9			
70	"	04.9	20.4			
80	"	02.2	23.1	250.6	× 10 =	2506.0
90	"	599.9	25.4			
5300	"	97.4	27.9			
10	"	96.0	29.3			
20	"	90.5	34.8			
30	"	93.4	31.9			
40	"	96.4	28.9			
				28.95	× 3.3 =	95.5
43.3	625.3	596.3	29.0			
				27.75	× 6.7 =	185.9

East		N3960 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5350	622.6	596.1	26.5			
60	18.5	95.5	23.0	24.75	× 10 =	247.5
70	14.5	95.3	19.2			
				17.75	× 4 =	71.0
74	12.8	96.5	16.3			
				8.15	× 5.4 =	44.0
79.4	610.6	610.6	0.0			
						9867.5 □'

East

N3970
D.S.

			Ht.	Mean Ht.	Dist	Area in sq.ft
4778.6	670.8	670.8	0.0			
				0.4	× 1.4 =	0.6
80	71.5	70.7	0.8			
				3.35	× 10 =	33.5
90	76.5	70.6	5.9			
				5.6	× 8 =	44.8
98	80.5	75.2	5.3			
				3.55	× 7 =	24.9
4805	84.0	82.2	1.8			
				0.9	× 1.1 =	1.0
06.1	84.5	84.5	0.0			
21.2	92.2	92.2	0.0			
				2.2	× 8.8 =	19.4
30	96.5	92.1	4.4			
				5.3	× 4. =	21.2
34	98.5	92.3	6.2			
				5.1	× 2.9 =	14.8
36.9	700.0	96.0	4.0			
				2.1	= 3.1 =	6.5
40	700.0	699.8	0.2	0.1	× 0.5 =	0.0
40.5	700.0	700.0	0.0			

N3970
D.S.

166.7 □

East

N3970
U.S.

From 650.6 to 700.9 = $\frac{90.2 + 43.5}{2}$ (66.85) × 50.3 = 3367.6 sq.ft

" 625.2 to 650.6 = $\frac{123.4 + 100.2}{2}$ (111.8) × 25.4 = 2839.7 " "

			Ht.	Mean Ht.	Dist	Area in sq ft
5217.6	614.0	614.0	0.0			
				1.55	× 2.4 =	3.7
20	15.8	12.7	3.1			
				8.8	× 10 =	88.0
30	23.5	09.0	14.5			
				14.75	× 2. =	29.5
32	625.0	610.0	15.0			

East		N3970 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5232	625.2	610.0	15.2			
				13.3	x 8. =	106.4
40	"	13.8	11.4			
50	"	12.4	12.8			
60	"	11.1	14.1			
70	"	09.4	15.8			
80	"	06.1	19.1			
90	"	03.9	21.3	198.2	x 10 =	1982.0
5300	"	00.8	24.4			
10	"	02.3	22.9			
20	"	00.0	25.2			
30	"	00.6	24.6			
40	"	00.6	24.6			
				25.05	x 3.4 =	85.2
43.4	625.2	599.7	25.5			
				25	x 6.6 =	165.0
50	622.5	598.0	24.5			
				22.7	x 10 =	227.0
60	18.5	597.6	20.9			
				18.85	x 8. =	150.8
68	615.2	598.4	16.8			
				14.95	x 2 =	29.9

East		N3970 U.S.	Ht.	Mean Ht.	Dist.	Area in Sq. ft
5370	614.4	601.3	13.1			
				6.55	x 3 =	19.6
5373	613.2	613.2	0.0			

Σ 9089.4

East — N3980 D.S. — No Rock below El. 700

East — N3980 U.S.

From 650.4 to 700.9 = $\frac{90.1 + 43.5}{2}$ (66.8) × 50.5 = 3373.4 sq. ft.

" 625.0 to 650.4 = $\frac{123.7 + 100.1}{2}$ (111.9) × 25.4 = 2842.3 sq. ft.

			Ht	Mean Ht.	Dist	Area in sq. ft
5222.5	617.7	617.7	0.0			
				4.5	× 7.5 =	33.8
30	623.5	614.5	9.0			
				9.75	× 2. =	19.5
32	625.0	614.5	10.5			
				10.4	× 8. =	83
40	625.0	614.7	10.3			
				8.65	× 6. =	51.9

East — N3980 U.S.

			Ht.	Mean Ht.	Dist	Area in sq. ft
5246	625.0	618.0	7.0			
				4.4	× 4 =	17.6
5250	"	623.2	1.8			
60	"	621.7	3.3			
70	"	619.9	5.1			
80	"	617.8	7.2			
90	"	611.0	14.0			
				116.35	× 10 =	1163.5
5300	"	608.6	16.4			
10	"	606.2	18.8			
20	"	604.1	20.9			
30	"	603.9	21.1			
40	"	607.7	17.3			
				18.1	× 3.7 =	67.0
5343.7	625.0	606.1	18.9			
				19	× 6.3 =	119.7
50	622.4	603.3	19.1			
				17.8	× 10 =	178.0
60	618.4	601.9	16.5			
				15.8	× 3 =	47.4
63	617.2	602.1	15.1			
				7.55	× 6.1 =	46.1
69.1	614.7	614.7	0.0			8043.4

East N3990 D.S. No Rock below El. 700.0

East N3990 U.S.

From 650.4 to 700.9 = $\frac{90.1 + 43.5}{2}$ (66.8) × 50.5 = 3373.4 sq. ft

" 625.0 to 650.4 = $\frac{123.7 + 100.1}{2}$ (111.9) × 25.4 = 2842.3 − 10.1 = 2832.2 sq. ft

5230.3	623.7	623.7	0.0			
5232.0	625.0	624.2	0.8	0.4 × 1.7 =	0.7	
5234.7	625.0	625.0	0.0	0.4 × 2.7 =	1.1	
5247.3	625.0	625.0	0.0			
5250	625.0	624.4	0.6	0.3 × 2.7 =	0.8	
60	"	23.3	1.7			
70	"	22.0	3.0			
80	"	20.6	4.4			
90	"	19.4	5.6			
5300	"	18.8	6.2	67.8 × 10 =	678.0	
10	"	16.6	8.4			
20	625.0	611.3	13.7			

			Ht.	Mean Dist. Ht.	Area in sq. ft.
5330	625.0	607.7	17.3		
40	"	10.6	14.4		
				15.1 × 3.7 =	55.9
5343.7	"	609.2	15.8		
				15.65 × 6.3 =	98.6
50	622.4	606.9	15.5		
				12.05 × 8. =	96.4
58	619.2	610.6	8.6		
				4.3 × 3.4 =	14.6
5361.4	617.8	617.8	0.0		

7151.7 □

East — N4000 D.S. — No Rock below El. 700.°

East — N4000 U.S.

From 650.4 to 700.9 = $90.\frac{1}{2} + 43.5 \times 50.5 = 3373.4$ sq ft (66.8)

" 625.° to 650.4 = $123.\frac{7}{2} + 100.1 \times 25.4 = 2842.3$ sq ft (111.9)

9.1 −

2833.2 sq ft.

			Ht.	M. Ht.	Dist.	Area in Sq. ft.
5246.°	625.°	625.°	0.0			
				0.05 × 4. =		0.2
50.°	625.°	624.9	0.1			
60	"	623.°	2.0			
70	"	622.4	2.6			
80	"	620.9	4.1			
90	"	20.1	4.9			
				59.1 × 10 =		591.0
5300	625.°	619.2	5.8			
	✓	✓	✓	✓	✓	✓

N4000 U.S.

			Ht.	M. Ht.	Dist.	Area in Sq. ft.
5310	625.°	618.3	6.7			
20	"	14.5	10.5			
30	"	09.4	15.6			
40	"	11.3	13.7 ×			
				12.35 × 3.7 =		45.7
5343.7	"	14.°	11.0			
				10.25 × 1.3 =		13.3
45	24.5	15.°	9.5			
				6.4 × 7. =		44.8
52.	621.7	618.4	3.3			
				1.65 × 2.8 =		4.6
5254.8	620.6	620.6	0.0			
	✓	✓	✓	✓		6906.2

East | N4010 U.S.

From 650.4 to 700.8 = $\frac{90.2 + 43.5}{2} \times 50.8$ = 3369.2 □' (66.85; 4)

" 628.2 to 650.4 = $\frac{120.7 + 100.2}{2} \times 22.2$ = 2452.0 □' (110.45)

			Ht	Mean Ht.	Dist.	Area in sq ft
5215	628.2	628.2	0.0	0.15	× 5 =	0.8
20	628.2	627.9	0.3			
30	"	27.2	1.0			
40	"	26.7	1.5			
50	"	25.2	3.0			
60	"	24.0	4.2			
70	"	22.9	5.3	65	× 10 =	650.0
80	"	21.9	6.3			
90	"	20.5	7.7			
5300	"	19.5	8.7			
10	"	18.6	9.6			
20	"	18.1	10.1			
30	"	13.3	14.9	13.3	× 5.7 =	75.8
35.72	628.2	16.5	11.7	9.45	× 4.3 =	40.6
40	26.1	18.9	7.2	3.6	× 6.7 =	24.1
5346.7	623.4	623.4	0.0			6612.5 □'

✓ ✓ ✓ ✓

East | N 4020 D.S. No Rock below El. 700 | 72 1/2

East N4020 U.S

From 650.3 to 700.6 = $\frac{90.1 + 43.5}{2}$ (66.8) x 50.3 = 3360 sq. ft

			Ht.	Mean Ht.	Dist.	Area in sq. ft.
5180.57	650.3	650.3	0.0			
				5.55	x 17.2 =	95.5
97.8	650.3	639.2	11.1			
				11.1	x 22 =	24.4
5200	50.3	639.2	11.1			
				11	x 10 =	110.0
10	50.3	39.4	10.9			
				11	x 7. =	77.0
17	50.3	39.2	11.1			
				12.8	x 3. =	38.4
20	50.3	35.8	14.5			
30	50.3	32.5	17.8			
40	50.3	27.0	23.3			
50	50.3	25.6	24.7	134.05	x 10 =	1340.5
60	50.3	25.8	24.5			
70	50.3	25.9	24.4			
80	50.3	26.1	24.2			
				24.2	x 0.67 =	16.2
80.67	650.3	626.1	24.2	22.5	x 9.33 =	209.9

East — N 4020 U.S

			Ht.	Mean Ht.	Dist.	Area in sq. ft
5290	646.6	625.8	20.8			
5300	42.5	20.0	22.5			
10	38.5	18.7	19.8	83.25	× 10 =	832.5
20	34.5	18.4	16.1			
30	30.5	17.8	12.7			
40	26.4	22.9	3.5			
				1.75	× 4.2 =	7.4
44.2	624.7	624.7	0.0			6111.8 □'

East — N 4030 D.S. — No rock below El. 700.0

East — N 4030 U.S.

From 650.2 to 700.6 = $\frac{89.9 + 43.5}{2}$ (66.7) × 50.4 = 3361.7 □'

			Ht	Mean Ht.	Dist.	Area in sq. ft
5180.7	650.2	650.2	0.0			
				5.5	× 17.1 =	94.1
5197.8	50.2	639.2	11.0			
				10.9	× 12.2 =	133.0
5210	50.2	39.4	10.8			
20	50.2	39.5	10.7			
30	50.2	39.6	10.6			
40	50.2	39.3	10.9	82.9	× 10 =	829.0
50	50.2	37.8	12.4			
60	50.2	38.3	11.9			
70	50.2	36.5	13.7			
80	50.2	35.6	14.6			
				14.8	× 0.67 =	9.9
80.67	50.2	35.2	15.0			
				16.1	× 9.33 =	150.2
90	46.5	29.3	17.2			
				16.5	× 10. =	165.0
5300	642.4	626.6	15.8			
				18.5	× 3. =	55.5

East

N4030
U.S.

			Ht	Mean Ht.	Dist	Area in sq ft
5303	641.2	620.0	21.2			
				20.35	× 7.	= 142.4
10	38.4	18.9	19.5			
20	34.4	18.8	15.6	30.3	× 10	= 303.0
30	30.4	20.5	9.9			
				4.95	× 8.1	= 40.1
38.1	627.2	627.2	0.0			5283.9

East

N4040
D.S.

No rock emb. below El. 700

East

N4040
U.S.

From 650.2 to 700.5 = 90 $\frac{+43.5}{2}$ (66.75) × 50.3 = 3357.5

			Ht.	Mean Ht.	Dist	Area in sq. ft.
5180.7	650.2	650.2	0.0			
				2.3	× 7.3	= 16.8
88	50.2	45.6	4.6			
				5.9	× 4.	= 23.6
92	50.2	43.0	7.2			
				8.7	× 4.7	= 40.9
96.7	50.2	40.0	10.2			
				10.35	× 3.3	= 34.2
5200	50.2	39.7	10.5			
10	50.2	40.2	10.0			
20	50.2	44.9	5.3			
30	50.2	44.0	6.2	61.55	× 10	= 615.5
40	50.2	41.5	8.7			
50	50.2	40.1	10.1			
60	50.2	39.6	10.6			
70	50.2	39.4	10.8			
				10.75	× 5.	= 53.8
75	650.2	639.5	10.7	11.85	× 5	= 59.2

East — N4040 U.S.

			Ht	Mean Ht	Dist	Area in Sq. ft
5280	650.2	637.2	13.0			
				13.15	× 0.67 =	8.8
80.67	50.2	36.9	13.3			
				13.4	× 9.33 =	125.0
90	46.5	33.0	13.5			
				13.15	× 9. =	118.4
99	42.8	30.0	12.8			
				16.3	× 2. =	32.6
5301	42.0	22.2	19.8			
				19.15	× 9. =	172.4
10	38.4	19.9	18.5	16.65	× 10. =	166.5
20	34.4	19.6	14.8			
				13.25	× 7. =	92.8
27	31.6	19.9	11.7			
				9.6	× 3. =	28.8
30	30.4	22.9	7.5			
				3.75	× 6.2 =	23.2
36.2	627.9	627.9	0.0			4970.0

East — N4050 D.S. — No rock Emb. below El. 700

East — N4050 U.S.

			Ht	Mean Ht	Dist	Area in Sq. ft
5102.17	700.4	700.4	0.0			
				13.9	× 43.5 =	604.6
5145.67	700.4	672.6	27.8			
				28.35	× 4.33 =	122.8
50	698.7	669.8	28.9			
				29.3	× 3.1 =	90.8

East		N4050 U.S.	Ht.	Mean Ht.	Dist.	Area in sq. ft
5153.1	697.5	667.8	29.7			
5160	694.6	665.7	28.9	29.3	× 6.9 =	202.2 ✓
				70.6	× 10 =	706.5
70	90.6	59.8	30.8	61.75	× 10 =	617.5
80	86.6	53.6	33.0			
85	84.6	50.5	34.1	66.9	× 5 =	334.5
90	82.6	50.0	32.6			
5200	78.5	47.9	30.6			
10	74.5	48.7	25.8			
20	70.5	44.9	25.6	156.8	× 10 =	1568.0
30	66.5	44.2	22.3			
40	62.4	44.5	17.9			
50	58.4	44.8	13.6			
60	54.4	45.0	9.4			
				8.6	× 4. =	34.4
64	52.8	45.0	7.8			
				9.25	× 6. =	55.5
70	50.4	39.7	10.7			
				10.55	× 0.7 =	7.4
70.7	650.1 ✓	639.7 ✓	10.4 ✓	10.55 ✓	× 10 = ✓	105.5 ✓

East		N4050 U.S.	Ht	Mean Ht.	Dist.	Area in sq. ft
5280.7	650.1	639.4	10.7			
				8.85	× 9.3 =	82.3
90	46.4	39.4	7.0			
5300	42.4	35.9	6.5			
10	38.3	30.6	7.7	26.8	× 10. =	268.0
20	34.3	26.2	8.1			
30	30.3	28.3	2.0			
				1.0	× 2. =	2.0
32	629.5 ✓	629.5 ✓	00 ✓	✓	✓	4095.5

East		N4060 D.S.					
			No rock emb below El. 700.0				

East		N4060 U.S.	Ht.	Mean Ht.	Dist	Area in sq. ft.
5102.17	700.4	700.4	0.0			
				13.9	× 43.5	= 604.6
5145.67	700.4	672.6	27.8			
50	698.7	669.8	28.9			
50.5	98.5	69.5	29.0	127.5	× 10	= 1275.0
60	94.6	69.5	25.1			
70	90.6	68.0	22.6			
80	86.6	70.6	16.0			
85	84.6	54.0	30.6	51.85	× 5	= 259.2
90	682.6	656.1	26.5			

East		N4060 U.S.	Ht.	Mean Ht	Dist	Area in sq. ft.
5200	678.5	654.5	24.0			
10	74.5	54.6	19.9			
20	70.5	50.0	20.5			
30	66.5	48.5	18.0	139.	× 10	= 1390.0
40	62.4	45.0	17.4			
50	58.4	44.7	13.7			
60	54.4	44.9	9.5			
70	50.4	44.9	5.5			
				5.35	× 0.7	= 3.7
70.7	50.1	44.9	5.2			
				5.25	× 3.3	= 17.3
74	50.1	44.8	5.3			
				7.85	× 6	= 47.1
80	50.1	39.7	10.4			
				10.4	× 0.7	= 7.3
80.7	50.1	39.7	10.4			
				8.75	× 9.3	= 81.4
90	46.4	39.3	7.1			
				5.15	× 10	= 51.5
5300	642.3	639.1	3.2			
				1.6	× 9	= 14.4

East		N4060 U.S.	See Field Book 465			
			Ht.	Mean Ht.	Dist	Area in Sq ft
5309	638.7	638.7	0.0			
	✓	✓				3751.5

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 14 FEET WIDE. SIDE SLOPES $1^1/_2$ TO 1.

FOR SINGLE TRACK EMBANKMENT.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	7.0	7.2	7.3	7.5	7.6	7.8	7.9	8.1	8.2	8.4	0
1	8.5	8.7	8.8	9.0	9.1	9.3	9.4	9.6	9.7	9.9	1
2	10.0	10.2	10.3	10.5	10.6	10.8	10.9	11.1	11.2	11.4	2
3	11.5	11.7	11.8	12.0	12.1	12.3	12.4	12.6	12.7	12.9	3
4	13.0	13.2	13.3	13.5	13.6	13.8	13.9	14.1	14.2	14.4	4
5	14.5	14.7	14.8	15.0	15.1	15.3	15.4	15.6	15.7	15.9	5
6	16.0	16.2	16.3	16.5	16.6	16.8	16.9	17.1	17.2	17.4	6
7	17.5	17.7	17.8	18.0	18.1	18.3	18.4	18.6	18.7	18.9	7
8	19.0	19.2	19.3	19.5	19.6	19.8	19.9	20.1	20.2	20.4	8
9	20.5	20.7	20.8	21.0	21.1	21.3	21.4	21.6	21.7	21.9	9
10	22.0	22.2	22.3	22.5	22.6	22.8	22.9	23.1	23.2	23.4	10
11	23.5	23.7	23.8	24.0	24.1	24.3	24.4	24.6	24.7	24.9	11
12	25.0	25.2	25.3	25.5	25.6	25.8	25.9	26.1	26.2	26.4	12
13	26.5	26.7	26.8	27.0	27.1	27.3	27.4	27.6	27.7	27.9	13
14	28.0	28.2	28.3	28.5	28.6	28.8	28.9	29.1	29.2	29.4	14
15	29.5	29.7	29.8	30.0	30.1	30.3	30.4	30.6	30.7	30.9	15
16	31.0	31.2	31.3	31.5	31.6	31.8	31.9	32.1	32.2	32.4	16
17	32.5	32.7	32.8	33.0	33.1	33.3	33.4	33.6	33.7	33.9	17
18	34.0	34.2	34.3	34.5	34.6	34.8	34.9	35.1	35.2	35.4	18
19	35.5	35.7	35.8	36.0	36.1	36.3	36.4	36.6	36.7	36.9	19
20	37.0	37.2	37.3	37.5	37.6	37.8	37.9	38.1	38.2	38.4	20
21	38.5	38.7	38.8	39.0	39.1	39.3	39.4	39.6	39.7	39.9	21
22	40.0	40.2	40.3	40.5	40.6	40.8	40.9	41.1	41.2	41.4	22
23	41.5	41.7	41.8	42.0	42.1	42.3	42.4	42.6	42.7	42.9	23
24	43.0	43.2	43.3	43.5	43.6	43.8	43.9	44.1	44.2	44.4	24
25	44.5	44.7	44.8	45.0	45.1	45.3	45.4	45.6	45.7	45.9	25
26	46.0	46.2	46.3	46.5	46.6	46.8	46.9	47.1	47.2	47.4	26
27	47.5	47.7	47.8	48.0	48.1	48.3	48.4	48.6	48.7	48.9	27
28	49.0	49.2	49.3	49.5	49.6	49.8	49.9	50.1	50.2	50.4	28
29	50.5	50.7	50.8	51.0	51.1	51.3	51.4	51.6	51.7	51.9	29
30	52.0	52.2	52.3	52.5	52.6	52.8	52.9	53.1	53.2	53.4	30
31	53.5	53.7	53.8	54.0	54.1	54.3	54.4	54.6	54.7	54.9	31
32	55.0	55.2	55.3	55.5	55.6	55.8	55.9	56.1	56.2	56.4	32
33	56.5	56.7	56.8	57.0	57.1	57.3	57.4	57.6	57.7	57.9	33
34	58.0	58.2	58.3	58.5	58.6	58.8	58.9	59.1	59.2	59.4	34
35	59.5	59.7	59.8	60.0	60.1	60.3	60.4	60.6	60.7	60.9	35
36	61.0	61.2	61.3	61.5	61.6	61.8	61.9	62.1	62.2	62.4	36

Calculated by Julien A. Hall, M. Am. Soc. C. E.

MADE IN GERMANY.