

Table 1-14
(Repeated as Table 3-19)

Table of Housing Configurations Used in EWR Cost Optimization Program

Ident.	Ext. Wall	Roof	Window	Foundation	Door
One-story Houses:					
A	Stucco	VA	AL; 1/8 oper.	Crawl	SC
B	"	SJL	1/8 dual pane	Slab	SC
C	Brick	VA	AL; 1/8 oper.	Slab	SC
D	"	VA	1/8 dual pane	Basement	SC
E	"	VA	1/8 dual pane	Slab	SC
F	"	SJL	1/8 dual pane	Crawl	SC
G	"	SJH	1/8 dual pane	Crawl	SC
H	"	VA	1/8 oper.	Crawl	SC
I	Siding	VA	1/8 dual pane	Basement	SC
J	"	VA	1/8 oper.	Crawl	SC
K	"	VA	1/8 oper.	Slab	SGD
L	"	ECL	Jalousie	Slab	SGD
M	"	VA	1/8 oper.	Slab	SC
N	"	SJL	1/8 dual pane	Slab	SC
O	"	SJL	1/8 oper. w/st.	Basement	SC
P	"	ECL	1/8 dual pane	Crawl	SC
Q	"	SJL	1/8 oper.	Slab	SGD
R	Block	VA	AL; 1/8 oper.	Slab	SC
S	Concrete	VA	1/8 dual pane	Crawl	SC
T	"	SJL	1/8 dual pane	Crawl	SC
Manufactured Home:					
U	Siding	VA	1/8 oper.	Crawl	HC
Two-story Townhouses:					
V	Siding	VA	1/8 dual pane	Basement	SGD
W	Brick	VA	"	"	SGD
End Unit Townhouse:					
X	Siding	VA	1/8 dual pane	Basement	SGD
Two-story Detached Dwelling:					
Y	Siding	VA	1/8 dual pane	Basement	SC
Z	Brick	VA	"	"	SC

Notes:

- Where there is a sliding glass door (SGD), the other exterior door is solid core (SC).
- One side of all dwellings is "shielded", usually the back side.

VA = Vented Attic
 SJL = Single Joist, Light
 ECL = Exposed Ceiling, Light
 SC = Solid Core Door
 HC = Hollow Core Door
 SGD = Sliding Glass Door

Table 1-15
(Repeated as Table 3-47)

Most Common Dwelling Types in Each Region

Region	I	II	III	IV	V	VI	VIII	VII	IX	X	XI
Dwelling Type*	A	C	M	O	O	D	I	O	J	K	L
	B	E	R	I	I	I	O	I	I	E	Q
	J	B	C	T	F	F	S	D	O	J	K
	K	F	N	D	D	E	T	F	T	B	N
M	U	U	F	N	J	M	N	D	D		

* Ranked from most to least common.

Table 1-16
(Repeated as Table 3-20)

Housing Modification Description Codes

Door Modifications

Description

SC+SEald	Solid Core + Vinyl Bulb Seal
SC+WSTRP	Solid Core + Weatherstrip
SC+SE+ST	Solid Core + Vinyl Bulb Seal + Storm Door
SG+WSTRP	Sliding Glass + Weatherstrip
RSTC35	Door having an STC Rating of 35
RSTC40	Door having an STC Rating of 40
RSTC45	Door having an STC Rating of 45
HC+STORM	Hard Core + Storm Door
HC+WS+ST	Hard Core + Weatherstrip + Storm Door

Window Modifications

Description

8p+STORM	1/8-inch Pane + Storm Window
8p+STC25	1/8-inch pane + Window having an STC Rating of 25
RSTC35	Window having an STC Rating of 35
RSTC40	Window having an STC Rating of 40
RSTC45	Window having an STC Rating of 45

Wall Modifications

Description

STUC+GYP	Stucco + 5/8-inch Gypsumboard
STUC+2GY	Stucco + 2 Layers Gypsumboard
STUC+MG	Stucco + Metal Stud + Gypsumboard
STUC+MGA	Stucco + Metal Stud + Gypsumboard + Absorption
WDGY+GYP	Wood/Gyp + 5/8-inch Gypsumboard
WDGY+2GY	Wood/Gyp + 2 Layers Gypsumboard
WDGY+RGA	Wood/Gyp + Resilient Chan. + Gypsumboard + Absorption
WDGY+MG	Wood/Gyp + Metal Stud + Gypsumboard
WDGY+MGA	Wood/Gyp + Metal Stud + Gypsumboard + Absorption
HBLK+GYP	Hollow Block + Gypsumboard
HBLK+2GY	Hollow Block + 2 Layers Gypsumboard
HBLK+RGA	Hollow Block + Resilient Chan. + Gypsumboard + Absorption
HBLK+MGA	Hollow Block + Metal Stud + Gypsumboard + Absorption
BRIK+GYP	4-inch Face Brick + Gypsumboard
BRIK+2GY	4-inch Face Brick + 2 Layers Gypsumboard
BRIK+MG	4-inch Face Brick + Metal Stud + Gypsumboard
BRIK+MGA	4-inch Face Brick + Metal Stud + Gypsumboard + Absorption

Roof Modifications

Description

VP+Absrp	Vented Pitched + Absorption
VP+Ab+GY	Vented Pitched + Absorption + Gypsumboard
SJL+GYP	Single Joist (Light) + Gypsumboard
SJL+A+RG	Single Joist (Light) + Resilient Chan. + Gypsumboard
ELt+GYP	Exposed Ceiling (Light Joist) + Gypsumboard
EL+Ab+GY	Exposed Ceiling (Light Joist) + Absorption + Gypsumboard
EL+Spc B	***** Needs Clarification *****

Floor Modifications

Description

FB+A+STd	Floorboard + Absorption + Storm Door (Basement)
----------	---

Table 1-17
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type A

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	19.8	19.8	19.8	19.8
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SEald RSTC45	RSTC35 RSTC45 RSTC35	RSTC40 RSTC45 RSTC45 STUC+MGA STUC+MG VP+Absrp
Dining Room	NR BEFORE	21.0	21.0	21.0	21.0
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		8P+STC25 8P+STC25 VP+Absrp	RSTC35 RSTC45	RSTC40 RSTC45 STUC+2GY STUC+MGA VP+Absrp
Kitchen	NR BEFORE	18.7	18.7	18.7	18.7
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	SC+SEald RSTC35	SC+SEald RSTC40 VP+Absrp	RSTC40 RSTC45	RSTC40 RSTC45 VP+Absrp
Bedroom #1	NR BEFORE	23.2	23.2	23.2	23.2
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC35 RSTC35 VP+Absrp	RSTC35 RSTC40	RSTC35 RSTC45 STUC+GYp STUC+MGA VP+Absrp
Bedroom #2	NR BEFORE	23.0	23.0	23.0	23.0
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC35 VP+Absrp	RSTC40	RSTC45 STUC+GYp VP+Absrp
Library/Den	NR BEFORE	19.5	19.5	19.5	19.5
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC35 VP+Absrp	RSTC45 STUC+GYp	RSTC45 STUC+GYp VP+Absrp
Cost Per Dwelling Sq. Ft.	C/D. Sq.Ft.	\$0.34	\$6.40	\$10.18	\$15.65

* 5 dB shielding assumed.

Table 1-18
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type B

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	21.0	21.0	21.0	21.0
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SEald RSTC35 RSTC35	RSTC35 RSTC35 RSTC35 STUC+GYP S JL+A+RG	RSTC40 RSTC45 RSTC45 STUC+RGA STUC+RGA S JL+A+RG
Dining Room	NR BEFORE	23.0	23.0	23.0	23.0
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC40 RSTC40 STUC+GYp	RSTC35 RSTC35 S JL+A+RG	RSTC45 RSTC40 STUC+2GY STUC+2GY S JL+A+RG
Kitchen	NR BEFORE	19.4	19.4	19.4	19.4
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		SC+SE+ST RSTC35	RSTC40 RSTC45 S JL+A+RG	RSTC40 RSTC45 S JL+A+RG
Bedroom #1	NR BEFORE	24.6	24.6	24.6	24.6
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC35 RSTC35	RSTC35 RSTC35 S JL+A+RG	RSTC40 RSTC40 STUC+RGA STUC+2GY S JL+A+RG
Bedroom #2	NR BEFORE	24.5	24.5	24.5	24.5
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC35	RSTC35 S JL+A+RG	RSTC40 STUC+2GY S JL+A+RG
Library/Den	NR BEFORE	21.5	21.5	21.5	21.5
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC35	RSTC35 STUC+GYp S JL+A+RG	RSTC45 STUC+RGA S JL+A+RG
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$7.29	\$11.33	\$17.46

* 5 dB shielding assumed.

Table 1-19
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type C

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	19.9	19.9	19.9	19.9
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SE+ST RSTC35	RSTC35 RSTC35 RSTC35 VP+Absrp	RSTC40 RSTC45 RSTC40 BRIK+GYP VP+Absrp
Dining Room	NR BEFORE	21.3	21.3	21.3	21.3
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		8P+STC25 8P+STC25	RSTC35 RSTC35 VP+Absrp	RSTC40 RSTC45 BRIK+2GYP VP+Absrp
Kitchen	NR BEFORE	19.0	19.0	19.0	19.0
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	SC+SE+ST 8P+STorm	SC+SEald RSTC35	RSTC35 RSTC40 VP+Absrp	RSTC40 RSTC45 VP+Absrp
Bedroom #1	NR BEFORE	23.6	23.6	23.6	23.6
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC35 RSTC35	RSTC35 RSTC35 VP+Absrp	RSTC40 RSTC40 BRIK+MGA VP+Absrp
Bedroom #2	NR BEFORE	23.3	23.3	23.3	23.3
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8P+STC25	RSTC35 VP+Absrp	RSTC40 VP+Absrp
Library/ Den	NR BEFORE	19.9	19.9	19.9	19.9
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8P+STC25	RSTC35 VP+Absrp	RSTC45 VP+Absrp
Cost Per Dwelling Sq.Ft.	C/D. Sq. Ft.	\$0.22	\$4.45	\$8.33	\$12.11

* 5 dB shielding assumed.

Table 1-20
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type D

Room	Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	21.5	21.5	21.5	21.5
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SE+ST 8G+STC25 8G+STC25 BRIK+GYp	RSTC35 RSTC40 RSTC40 VP+Absrp	RSTC40 RSTC45 RSTC40 BRIK+MGA BRIK+RGA VP+Absrp
Dining Room	NR BEFORE	24.1	24.1	24.1	24.1
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER			RSTC40 RSTC40 VP+Absrp	RSTC45 RSTC45 BRIK+MGA VP+Absrp
Kitchen	NR BEFORE	19.9	19.9	19.9	19.9
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		SC+SEald RSTC40	RSTC35 RSTC40 VP+Absrp	RSTC40 RSTC45 VP+Absrp
Bedroom #1	NR BEFORE	26.2	26.2	26.2	26.2
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER			8G+STC25 8G+STC25 VP+Absrp	RSTC40 RSTC45 VP+Absrp
Bedroom #2	NR BEFORE	26.0	26.0	26.0	26.0
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER			8G+STC25 VP+Absrp	RSTC40 BRIK+MG VP+Absrp
Library/Den	NR BEFORE	22.7	22.7	22.7	22.7
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8G+STC25	RSTC40 VP+Absrp	RSTC45 VP+Absrp
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$3.23	\$8.97	\$12.96

* 5 dB shielding assumed.

Table 1-21
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type E

Room	Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	21.6	21.6	21.6	21.6
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SE+ST 8G+STC25 8G+STC25 BRIK+GYP	RSTC35 RSTC35 RSTC35	RSTC35 RSTC35 RSTC40 BRIK+2GYP BRIK+GYP VP+Absrp
Dining Room	NR BEFORE	24.1	24.1	24.1	24.1
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER			RSTC35 RSTC35	RSTC35 RSTC35 BRIK+GYP BRIK+GYP VP+Absrp
Kitchen	NR BEFORE	20.0	20.0	20.0	20.0
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		SC+SE+ST 8G+STorm	SC+SE+ST RSTC35	RSTC40 RSTC45 VP+Absrp
Bedroom #1	NR BEFORE	26.3	26.3	26.3	26.3
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER			RSTC35 RSTC35	RSTC35 RSTC35 BRIK+GYP VP+Absrp
Bedroom #2	NR BEFORE	26.1	26.1	26.1	26.1
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER			RSTC35	RSTC35 BRIK+GYp VP+Absrp
Library/Den	NR BEFORE	22.8	22.8	22.8	22.8
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8G+STC25 BRIK+GYp	RSTC35	RSTC40 BRIK+GYp VP+Absrp
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$3.96	\$6.04	\$13.15

* 5 dB shielding assumed.

Table 1-22
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type F

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1	21.1	21.1 RSTC35 8G+STC25 8G+STC25 BRIK+GYp BRIK+GYp	21.1 RSTC35 RSTC40 RSTC40 S JL+GYp	21.1 RSTC40 RSTC45 RSTC45 BRIK+MGA BRIK+MGA S JL+A+RG
	NR AFTER	21.1	26.3	30.9	35.5
Dining Room	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	23.3	23.3 8G+STC25 8G+STC25 BRIK+2GY BRIK+GYp	23.3 RSTC35 RSTC35 S JL+GYp	23.3 RSTC40 RSTC40 BRIK+2GY BRIK+GYp S JL+A+RG
	NR AFTER	23.3	26.6	31.1	35.5
Kitchen	NR BEFORE Door 1 Window 1 Wall 1 Roof 1 Floor 1	19.6	19.6 SC+SE+ST 8G+STC25	19.6 RSTC40 RSTC40 S JL+GYp	19.6 RSTC40 RSTC45 S JL+A+RG
	NR AFTER	19.6	24.8	31.4	34.7
Bedroom #1	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	25.0	25.0	25.0 RSTC35 RSTC35 S JL+GYp	25.0 RSTC40 RSTC40 BRIK+2GY BRIK+GYp S JL+A+RG
	NR AFTER	25.0	25.0	31.4	35.8
Bedroom #2	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	24.9	24.9	24.9 RSTC35 S JL+GYp	24.9 RSTC40 BRIK+GYp S JL+A+RG
	NR AFTER	24.9	24.9	31.6	35.9
Library/Den	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	22.1	22.1 8G+STC25 BRIK+2GY	22.1 RSTC35 S JL+GYp	22.1 RSTC40 BRIK+GYp S JL+A+RG
	NR AFTER	22.1	25.8	30.4	34.9
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$6.71	\$9.69	\$16.50

* 5 dB shielding assumed.

Table 1-23
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type G

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1	21.4	21.4 SC+SE+ST 8G+STC25 8G+STC25 BRIK+GYP	21.4 RSTC35 RSTC40 RSTC35 BRIK+GYp	21.4 RSTC35 RSTC40 RSTC40 BRIK+2GY BRIK+2GY SJH+A+RG
	NR AFTER	21.4	26.3	30.8	34.6
Dining Room	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	23.8	23.8 8G+STC25 8G+STC25	23.8 RSTC35 RSTC35	23.8 RSTC40 RSTC35 BRIK+GYP BRIK+GYP SJH+A+RG
	NR AFTER	23.8	27.7	31.1	35.0
Kitchen	NR BEFORE Door 1 Window 1 Wall 1 Roof 1 Floor 1	19.8	19.8 SC+SE+ST 8G+STC25	19.8 RSTC35 RSTC35	19.8 RSTC40 RSTC45 SJH+A+RG
	NR AFTER	19.8	25.5	29.9	35.8
Bedroom #1	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	25.7	25.7	25.7 RSTC35 RSTC35	25.7 RSTC40 RSTC35 BRIK+GYP BRIK+GYP SJH+A+RG
	NR AFTER	25.7	25.7	31.4	36.1
Bedroom #2	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	25.6	25.6	25.6 RSTC35	25.6 RSTC35 BRIK+GYP SJH+A+RG
	NR AFTER	25.6	25.6	31.6	35.6
Library/Den	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	22.5	22.5 8G+STC25	22.5 RSTC35	22.5 RSTC40 BRIK+GYp SJH+A+RG
	NR AFTER	22.5	26.6	30.4	36.1
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$3.64	\$8.05	\$15.20

* 5 dB shielding assumed.

Table 1-24
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type H

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	19.9	19.9	19.9	19.9
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SE+ST 8P+STC25 8P+STC25 BRIK+GYp	RSTC35 RSTC35 RSTC35 BRIK+GYp	RSTC40 RSTC45 RSTC45 BRIK+GYp BRIK+GYp VP+Ab+GY
Dining Room	NR BEFORE	21.2	21.2	21.2	21.2
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		8P+STC25 8P+STC25 BRIK+GYp	RSTC40 RSTC35 BRIK+GYp	RSTC45 RSTC40 BRIK+GYp BRIK+GYp VP+Ab+GY
Kitchen	NR BEFORE	19.0	19.0	19.0	19.0
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC40 8P+STC25	RSTC35 RSTC35	RSTC40 RSTC45 VP+Ab+GY
Bedroom #1	NR BEFORE	23.5	23.5	23.5	23.5
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		8P+STC25 8P+STC25 BRIK+GYp BRIK+GYp	RSTC35 RSTC35	RSTC40 RSTC40 BRIK+GYp BRIK+GYp VP+Ab+GY
Bedroom #2	NR BEFORE	23.3	23.3	23.3	23.3
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8P+STC25 BRIK+GYp	RSTC35	RSTC40 BRIK+GYp VP+Ab+GY
Library/Den	NR BEFORE	19.9	19.9	19.9	19.9
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8P+STC25 BRIK+GYp	RSTC40	RSTC45 VP+Ab+GY
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$7.85	\$8.59	\$14.73

* 5 dB shielding assumed.

Table 1-25
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type I

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	21.0	21.0	21.0	21.0
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER		SC+SEald RSTC40 RSTC40	RSTC35 RSTC45 RSTC40 WDGY+2GY	RSTC40 RSTC45 RSTC45 WDGY+MGA WDGY+MGA VP+Ab+GY
Dining Room	NR BEFORE	22.4	22.4	22.4	22.4
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC40 RSTC45 WDGY+GYp	RSTC40 RSTC45 WDGY+MGA	RSTC45 RSTC45 WDGY+RGA WDGY+MGA VP+Ab+GY
Kitchen	NR BEFORE	18.9	18.9	18.9	18.9
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	RSTC35 RSTC40	RSTC35 RSTC45	RSTC40 RSTC45	RSTC40 RSTC45 VP+Ab+GY
Bedroom #1	NR BEFORE	24.1	24.1	24.1	24.1
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER			RSTC40 RSTC45 WDGY+RGA	RSTC45 RSTC45 WDGY+2GY WDGY+MGA VP+Ab+GY
Bedroom #2	NR BEFORE	24.1	24.1	24.1	24.1
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER			RSTC45 WDGY+GYp	RSTC45 WDGY+MGA VP+Ab+GY
Library/Den	NR BEFORE	20.3	20.3	20.3	20.3
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		8G+STC25 WDGY+GYp	RSTC45 WDGY+RGA	RSTC45 WDGY+MGA VP+Ab+GY
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$1.02	\$7.62	\$13.40	\$18.15

* 5 dB shielding assumed.

Table 1-26
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type J

Room	Building Element	Modification by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	17.9	17.9	17.9	17.9
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER	HC+WS+ST 8P+STC25 8P+STorm 22.8	HC+WS+ST RSTC40 RSTC35 24.9	RSTC35 RSTC45 RSTC40 WDGY+2GY 30.2	RSTC40 RSTC45 RSTC45 WDGY+MGA WDGY+MGA VP+Ab+GY 35.7
Dining Room	NR BEFORE	20.3	20.3	20.3	20.3
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER	 20.3	RSTC35 RSTC35 25.5	RSTC40 RSTC45 WDGY+MGA 30.3	RSTC45 RSTC45 WDGY+RGA WDGY+MGA VP+Ab+GY 35.2
Kitchen	NR BEFORE	15.8	15.8	15.8	15.8
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	HC+WS+ST 8P+STC25 20.7	RSTC35 RSTC45 24.5	RSTC40 RSTC45 24.7	RSTC40 RSTC45 VP+Ab+GY 25.0
Bedroom #1	NR BEFORE	22.2	22.2	22.2	22.2
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER	 22.2	RSTC35 RSTC40 26.9	RSTC40 RSTC45 WDGY+RGA 30.2	RSTC40 RSTC45 WDGY+2GY WDGY+MGA VP+Ab+GY 34.9
Bedroom #2	NR BEFORE	22.2	22.2	22.2	22.2
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	 22.2	RSTC40 27.4	RSTC45 WDGY+GYp 29.8	RSTC45 WDGY+MGA VP+Ab+GY 37.0
Library/Den	NR BEFORE	18.5	18.5	18.5	18.5
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	RSTC40 23.4	RSTC35 WDGY+GYp 26.7	RSTC45 WDGY+RGA 29.9	RSTC45 WDGY+MGA VP+Ab+GY 34.7
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$3.34	\$9.13	\$13.40	\$18.06

* 5 dB shielding assumed.

Table 1-27
 Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
 One-Story House: Type K

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	19.6	19.6	19.6	19.6
	Door 1 Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		SG+WS+SG 8P+STC25 8P+STC25	SG+WS+SG RSTC45 RSTC40 WDGY+2GY	SG+WS+SG RSTC45 RSTC45 WDGY+MGA WDGY+MGA VP+Ab+GY
Dining Room	NR BEFORE	20.3	20.3	20.3	20.3
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC35 RSTC35	RSTC40 RSTC45 WDGY+MGA	RSTC45 RSTC45 WDGY+MGA WDGY+MGA VP+Ab+GY
Kitchen	NR BEFORE	18.1	18.1	18.1	18.1
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	SC+SE+ST RSTC40	RSTC35 RSTC45	RSTC40 RSTC45	RSTC40 RSTC45 VP+Ab+GY
Bedroom #1	NR BEFORE	22.3	22.3	22.3	22.3
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER		RSTC40 RSTC45	RSTC35 RSTC45 WDGY+RGA	RSTC35 RSTC40 WDGY+MG WDGY+MGA VP+Ab+GY
Bedroom #2	NR BEFORE	22.2	22.2	22.2	22.2
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER		RSTC35	RSTC45 WDGY+GYp	RSTC40 WDGY+MG VP+Ab+GY
Library/Den	NR BEFORE	18.5	18.5	18.5	18.5
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	8P+STC25 WDGY+2GY	RSTC45 WDGY+GYp	RSTC45 WDGY+RGA	RSTC45 WDGY+MGA VP+Ab+GY
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$2.96	\$8.97	\$13.30	\$17.79

* 5 dB shielding assumed.

Table 1-28
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type L

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE	16.2	16.2	16.2	16.2
	Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1 NR AFTER	SG+WStrp RSTC35 RSTC30 ELt+GYp 23.2	SG+WS+SG RSTC45 RSTC35 WDGY+GYp ELt+GYp 25.8	SG+WS+SG RSTC45 RSTC45 WDGY+MGA WDGY+RGA EL+Ab+GY 29.9	SG+WS+SG RSTC45 RSTC45 WDGY+MGA WDGY+MGA EL+Spc B 33.6
Dining Room	NR BEFORE	16.5	16.5	16.5	16.5
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER	RSTC30 RSTC30 ELt+GYp 22.5	RSTC35 RSTC45 WDGY+GYp ELt+GYp 25.3	RSTC40 RSTC45 WDGY+2GY WDGY+MGA EL+Ab+GY 30.5	RSTC45 RSTC45 WDGY+MGA WDGY+MGA EL+Spc B 36.0
Kitchen	NR BEFORE	15.7	15.7	15.7	15.7
	Door 1 Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	SC+WStrp RSTC40 ELt+GYp 20.4	RSTC40 RSTC45 ELt+GYp 23.4	RSTC40 RSTC45 EL+Ab+GY 24.3	RSTC40 RSTC45 EL+Spc B 25.0
Bedroom #1	NR BEFORE	17.9	17.9	17.9	17.9
	Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1 NR AFTER	RSTC30 RSTC35 ELt+GYp 24.2	RSTC30 RSTC45 WDGY+GYp ELt+GYp 25.2	RSTC40 RSTC45 WDGY+GYp WDGY+MGA EL+Ab+GY 30.2	RSTC40 RSTC45 WDGY+MG WDGY+MGA EL+Spc B 35.6
Bedroom #2	NR BEFORE	17.8	17.8	17.8	17.8
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	RSTC30 ELt+GYp 23.6	RSTC45 WDGY+GYp ELt+GYp 26.4	RSTC45 WDGY+MGA EL+Ab+GY 31.5	RSTC45 WDGY+MG EL+Spc B 35.1
Library/Den	NR BEFORE	15.2	15.2	15.2	15.2
	Window 1 Wall 1 Roof 1 Floor 1 NR AFTER	RSTC30 ELt+GYp 20.6	RSTC45 WDGY+2GY ELt+GYp 25.7	RSTC45 WDGY+MG EL+Ab+GY 29.5	RSTC45 WDGY+MGA EL+Spc B 34.6
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$7.39	\$10.27	\$18.15	\$22.77

* 5 dB shielding assumed.

Table 1-29
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type M

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1	19.5	19.5 RSTC35 RSTC40	19.5 RSTC35 RSTC45 RSTC40 WDGY+2GY	19.5 RSTC40 RSTC45 RSTC45 WDGY+MGA WDGY+MG VP+Absrp
	NR AFTER	19.5	25.0	30.4	35.2
Dining Room	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	20.3	20.3 RSTC35 RSTC35	20.3 RSTC40 RSTC45 WDGY+MGA	20.3 RSTC45 RSTC45 WDGY+RGA WDGY+MGA VP+Absrp
	NR AFTER	20.3	25.6	30.5	35.0
Kitchen	NR BEFORE Door 1 Window 1 Wall 1 Roof 1 Floor 1	18.1 RSTC35 8P+STC25	18.1 RSTC40 RSTC40	18.1 RSTC40 RSTC45	18.1 RSTC40 RSTC45 VP+Absrp
	NR AFTER	23.0	24.7	24.8	25.0
Bedroom #1	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	22.3	22.3 RSTC35 RSTC40	22.3 RSTC35 RSTC45 WDGY+RGA	22.3 RSTC40 RSTC45 WDGY+MG WDGY+MGA VP+Absrp
	NR AFTER	22.3	27.0	30.1	35.6
Bedroom #2	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	22.2	22.2 RSTC35	22.2 RSTC45 WDGY+GYp	22.2 RSTC45 WDGY+MGA VP+Absrp
	NR AFTER	22.2	26.8	30.0	36.7
Library/Den	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	18.5 RSTC40	18.5 RSTC35 WDGY+GYp	18.5 RSTC45 WDGY+RGA	18.5 RSTC45 WDGY+MGA VP+Absrp
	NR AFTER	23.5	24.9	30.1	35.4
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.72	\$8.02	\$13.24	\$17.00

* 5 dB shielding assumed.

Table 1-30
Noise Reductions, Modifications, and Cost/Dwelling Sq.Ft.,
One-Story House: Type IV

Room	Building Element	Modifications by Noise Zone			
		60 - 65 dB	66 - 70 dB	71 - 75 dB	76 - 80 dB
Living Room	NR BEFORE Door 1 Window 1 Window 2 * Wall 1 Wall 2 * Roof 1 Floor 1	20.6	20.6 SC+SEald RSTC35 RSTC35	20.6 RSTC35 RSTC40 RSTC35 WDGY+GYp WDGY+GYp	20.6 RSTC40 RSTC45 RSTC45 WDGY+MG WDGY+MG
	NR AFTER	20.6	SJL+A+RG 26.3	SJL+A+RG 30.7	SJL+A+RG 35.0
Dining Room	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	21.9	21.9 RSTC40 RSTC40	21.9 RSTC40 RSTC40 WDGY+GYp WDGY+GYp	21.9 RSTC45 RSTC45 WDGY+MGA WDGY+MG
	NR AFTER	21.9	SJL+A+RG 26.9	SJL+A+RG 29.5	SJL+A+RG 35.2
Kitchen	NR BEFORE Door 1 Window 1 Wall 1 Roof 1 Floor 1	18.6	18.6 RSTC40 RSTC45	18.6 RSTC40 RSTC45	18.6 RSTC40 RSTC45
	NR AFTER	18.6	SJL+A+RG 25.0	SJL+A+RG 25.0	SJL+A+RG 25.0
Bedroom #1	NR BEFORE Window 1 * Window 2 Wall 1 * Wall 2 Roof 1 Floor 1	23.3	23.3 RSTC40 RSTC35 WDGY+GYp	23.3 RSTC40 RSTC40 WDGY+GYp WDGY+GYp	23.3 RSTC45 RSTC45 WDGY+MG WDGY+MG
	NR AFTER	23.3	SJL+A+RG 28.0	SJL+A+RG 30.1	SJL+A+RG 35.0
Bedroom #2	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	23.4	23.4 RSTC40 WDGY+GYp SJL+A+RG	23.4 RSTC40 WDGY+GYp SJL+A+RG	23.4 RSTC40 WDGY+MGA SJL+A+RG
	NR AFTER	23.4	30.5	30.5	36.1
Library/Den	NR BEFORE Window 1 Wall 1 Roof 1 Floor 1	20.0	20.0 RSTC35 WDGY+GYp SJL+A+RG	20.0 RSTC40 WDGY+RGA SJL+A+RG	20.0 RSTC45 WDGY+MGA SJL+A+RG
	NR AFTER	20.0	26.1	30.6	35.5
Cost Per Dwelling Sq.Ft.	C/D. Sq.Ft.	\$0.00	\$12.01	\$15.45	\$18.34

* 5 dB shielding assumed.