

780 CMR TABLE 5611.7(3)
MAXIMUM ALLOWABLE CLEAR SPANS FOR ICF LINTELS
FOR FLAT LOAD-BEARING WALLS^{a,b,c,d,f}
NO. 5 BOTTOM BAR SIZE

MINIMUM LINTEL THICKNESS, <i>T</i> (inches)	LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN, (feet-inches) (Number is Middle of Span, <i>A</i>) ^e					
		Supporting Roof		Supporting Light Framed 2nd Story and Roof		Supporting ICF Second Story and Roof	
		Ground Snow Load					
		30 psf	70 psf	30 psf	70 psf	30 psf	70 psf
3.5	8	4-9 (1-2)	4-2 (0-9)	3-11 (0-8)	3-7 (0-6)	3-7 (0-6)	3-5 (0-5)
	12	7-2 (1-11)	6-3 (1-3)	5-11 (1-1)	5-5 (0-10)	5-5 (0-10)	5-0 (0-8)
	16	9-6 (2-9)	8-0 (1-9)	7-4 (1-6)	6-6 (1-2)	6-7 (1-2)	5-11 (1-0)
	20	11-1 (3-5)	9-1 (2-3)	8-4 (1-11)	7-5 (1-6)	7-6 (1-7)	6-9 (1-3)
	24	12-2 (4-1)	10-0 (2-9)	9-3 (2-4)	8-2 (1-10)	8-4 (1-11)	7-6 (1-6)
5.5	8	5-6 (1-10)	4-10 (1-2)	4-7 (1-0)	4-2 (0-9)	4-2 (0-10)	3-10 (0-8)
	12	8-3 (3-0)	6-9 (2-0)	6-3 (1-9)	5-6 (1-4)	5-7 (1-4)	5-0 (1-1)
	16	9-9 (4-1)	8-0 (2-9)	7-5 (2-5)	6-6 (1-10)	6-7 (1-11)	6-0 (1-7)
	20	10-11 (5-3)	9-0 (3-6)	8-4 (3-1)	7-5 (2-4)	7-6 (2-5)	6-9 (2-0)
	24	12-0 (6-3)	9-11 (4-3)	9-3 (3-8)	8-2 (2-11)	8-3 (3-0)	7-6 (2-5)
7.5	8	6-1 (2-6)	5-2 (1-8)	4-9 (1-5)	4-3 (1-1)	4-3 (1-1)	3-10 (0-11)
	12	8-2 (4-0)	6-9 (2-8)	6-3 (2-4)	5-6 (1-10)	5-7 (1-10)	5-0 (1-6)
	16	9-7 (5-5)	7-11 (3-8)	7-4 (3-3)	6-6 (2-6)	6-7 (2-7)	6-0 (2-2)
	20	10-10 (6-10)	8-11 (4-8)	8-4 (4-2)	7-4 (3-3)	7-6 (3-4)	6-9 (2-9)
	24	11-10 (8-2)	9-10 (5-8)	9-2 (5-1)	8-1 (3-11)	8-3 (4-1)	7-5 (3-4)
9.5	8	6-4 (3-1)	5-2 (2-1)	4-10 (1-9)	4-3 (1-5)	4-4 (1-5)	3-11 (1-2)
	12	8-2 (5-0)	6-8 (3-4)	6-2 (3-0)	5-6 (2-4)	5-7 (2-5)	5-0 (1-11)
	16	9-6 (6-9)	7-11 (4-7)	7-4 (4-2)	6-6 (3-3)	6-7 (3-4)	5-11 (2-8)
	20	10-8 (8-4)	8-10 (5-10)	8-3 (5-4)	7-4 (4-2)	7-5 (4-3)	6-9 (3-6)
	24	11-7 (10-0)	9-9 (6-11)	9-0 (6-5)	8-1 (5-0)	8-2 (5-2)	7-5 (4-3)

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895kN/m², 1 pound per square foot = 0.0479kN/m².

a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.

b. This table is not intended to prohibit the use of ICF manufacturer’s tables based on engineering analysis in accordance with ACI 318.

c. Deflection criterion: *L*/240.

d. Design load assumptions:

Floor dead load is 10 psf

Floor live load is 30 psf

Building width is 32 feet

Light-framed wall dead load is 10 psf

Attic live load is 20 psf

Roof dead load is 15 psf

ICF wall dead load is 69 psf

e. No.3 stirrups are required at *d*/2 spacing except no stirrups are required for the distance, (*A*), shown in the middle portion of the span in accordance with 780 CMR Figure 5611.7(2) and 780 CMR 5611.7.3.2.

f. Interpolation is permitted between ground snow loads and between lintel depths.

780 CMR TABLE 5611.7(4)
MAXIMUM ALLOWABLE CLEAR SPANS FOR WAFFLE-GRID ICF WALL LINTELS^{a,b,c,d,f}
NO. 4 BOTTOM BAR SIZE

NOMINAL LINTEL THICKNESS, <i>T</i> ^{g, h} (inches)	LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN (feet-inches) (Number is Middle of Span, <i>A</i>) ^e					
		Supporting Roof		Supporting Light Framed 2nd Story and Roof		Supporting ICF Second Story and Roof	
		Ground Snow Load					
		30 psf	70 psf	30 psf	70 psf	30 psf	70 psf
6	8	5-2 (0-10)	4-2 (0-7)	3-10 (0-6)	3-5 (0-4)	3-6 (0-5)	3-2 (0-4)
	12	6-8 (1-5)	5-5 (0-11)	5-0 (0-9)	4-5 (0-7)	4-7 (0-8)	4-2 (0-6)
	16	7-11 (1-11)	6-6 (1-4)	6-0 (1-1)	5-3 (0-10)	5-6 (0-11)	4-11 (0-9)
	20	8-11 (2-6)	7-4 (1-8)	6-9 (1-5)	6-0 (1-1)	6-3 (1-2)	5-7 (0-11)
	24	9-10 (3-0)	8-1 (2-0)	7-6 (1-9)	6-7 (1-4)	6-10 (1-5)	6-2 (1-2)
8	8	5-2 (0-10)	4-3 (0-7)	3-11 (0-6)	3-5 (0-4)	3-7 (0-5)	3-2 (0-4)
	12	6-8 (1-5)	5-5 (0-11)	5-1 (0-9)	4-5 (0-7)	4-8 (0-8)	4-2 (0-6)
	16	7-10 (1-11)	6-5 (1-4)	6-0 (1-1)	5-3 (0-10)	5-6 (0-11)	4-11 (0-9)
	20	8-10 (2-6)	7-3 (1-8)	6-9 (1-5)	6-0 (1-1)	6-2 (1-2)	5-7 (0-11)
	24	9-8 (3-0)	8-0 (2-0)	7-5 (1-9)	6-7 (1-4)	6-10 (1-5)	6-2 (1-2)

For SI: 1 inch = 25.4 mm, 1 foot = 0.3048 m, 1 psi = 6.895kN/m², 1 psf = 0.0479 kN/m².

a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.

b. This table is not intended to prohibit the use of ICF manufacturer’s tables based on engineering analysis in accordance with ACI 318.

c. Deflection criterion: *L*/240.

d. Design load assumptions:
Floor dead load is 10 psf Attic live load is 20 psf
Floor live load is 30 psf Roof dead load is 15 psf
Building width is 32 feet ICF wall dead load is 55 psf
Light-framed wall dead load is 10 psf

e. No. 3 stirrups are required at *d*/2 spacing except no stirrups are required for the distance, (*A*), shown in the middle portion of the span in accordance with 780 CMR Figure 5611.7(2) and 780 CMR 5611.7.3.2.

f. Interpolation is permitted between ground snow loads and between lintel depths.

g. For actual wall lintel width, refer to 780CMR Table 5611.4(2)

h. Lintel width corresponds to the nominal waffle-grid ICF wall thickness with a minimum thickness of two inches.

780 CMR TABLE 5611.7(5)
MAXIMUM ALLOWABLE CLEAR SPANS FOR WAFFLE-GRID ICF WALL LINTELS^{a,b,c,d,f}
NO. 5 BOTTOM BAR SIZE

NOMINAL LINTEL THICKNESS, <i>T</i> ^{g, h} (inches)	LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN (feet-inches) (Number is Middle of Span, A) ^e					
		Supporting Roof		Supporting Light Framed 2nd Story and Roof		Supporting ICF Second Story and Roof	
		Ground Snow Load					
		30 psf	70 psf	30 psf	70 psf	30 psf	70 psf
6	8	5-4 (0-10)	4-8 (0-7)	4-5 (0-6)	4-1 (0-4)	4-5 (0-5)	3-10 (0-4)
	12	8-10 (1-5)	6-9 (0-11)	6-3 (0-9)	5-6 (0-7)	6-3 (0-8)	5-1 (0-6)
	16	9-9 (1-11)	8-0 (1-4)	7-5 (1-1)	6-6 (0-10)	7-5 (0-11)	6-1 (0-9)
	20	11-0 (2-6)	9-1 (1-8)	8-5 (1-5)	7-5 (1-1)	8-5 (1-2)	6-11 (0-11)
	24	12-2 (3-0)	10-0 (2-0)	9-3 (1-9)	8-2 (1-4)	9-3 (1-5)	7-8 (1-2)
8	8	6-0 (0-10)	5-2 (0-7)	4-9 (0-6)	4-3 (0-4)	4-9 (0-5)	3-11 (0-4)
	12	8-3 (1-5)	6-9 (0-11)	6-3 (0-9)	5-6 (0-7)	6-3 (0-8)	5-2 (0-6)
	16	9-9 (1-11)	8-0 (1-4)	7-5 (1-1)	6-6 (0-10)	7-5 (0-11)	6-1 (0-9)
	20	10-11 (2-6)	9-0 (1-8)	8-4 (1-5)	7-5 (1-1)	8-4 (1-2)	6-11 (0-11)
	24	12-0 (3-0)	9-11 (2-0)	9-2 (1-9)	8-2 (1-4)	9-2 (1-5)	7-8 (1-2)

For SI: 1 inch = 25.4 mm, 1 foot = 0.3048 m, 1 psi = 6.895 kN/m², 1 psf = 0.0479 kN/m².

a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.

b. This table is not intended to prohibit the use of ICF manufacturer’s tables based on engineering analysis in accordance with ACI 318.

c. Deflection criterion: *L*/240.

d. Design load assumptions:

Floor dead load is 10 psf

Floor live load is 30 psf

Building width is 32 feet

Light-framed wall dead load is 10 psf

Attic live load is 20 psf

Roof dead load is 15 psf

ICF wall dead load is 53 psf

e. No.3 stirrups are required at *d*/2 spacing except no stirrups are required for the distance, (A), shown in the middle portion of the span in accordance with 780 CMR Figure 5611.7(2) and 780 CMR 5611.7.3.2.

f. Interpolation is permitted between ground snow loads and between lintel depths.

g. For actual wall lintel width, refer to 780 CMR Table 5611.4(2)

h. Lintel width corresponds to the nominal waffle-grid ICF wall thickness with a minimum thickness of 2 inches.

780 CMR TABLE 5611.7(6)
MAXIMUM ALLOWABLE CLEAR SPANS FOR SCREEN-GRID ICF LINTELS
IN LOAD-BEARING WALLS^{a,b,c,d,e,f,g}
NO. 4 BOTTOM BAR SIZE

MINIMUM LINTEL THICKNESS, <i>T</i> (inches) ^{h,i}	MINIMUM LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN (feet-inches)					
		Supporting Roof		Supporting Light-Frame Second Story and Roof		Supporting ICF Second Story and Roof	
		Maximum Ground Snow Load (psf)					
		30	70	30	70	30	70
6	12	3-7	2-10	2-5	2-0	2-0	NA
	24	9-10	8-1	7-6	6-7	6-11	6-2

- For SI: 1 inch = 25.4 mm, 1 foot = 0.3048 m, 1 psi = 6.895kN/m², 1 psf = 0.0479 kN/m².
- a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.
 - b. This table is not intended to prohibit the use of ICF manufacturer’s tables based on engineering analysis in accordance with ACI 318.
 - c. Deflection criterion: *L/240*
 - d. Design load assumptions:
 - Floor dead load is 10 psf Attic live load is 20 psf
 - Floor live load is 30 psf Roof dead load is 15 psf
 - Maximum floor clear span is 32 ft ICF wall dead load is 53 psf
 - Light-frame wall dead load is 10 psf
 - e. Stirrup Requirements:
 - Stirrups are not required for lintels 12 inches deep.
 - One No. 3 stirrup is required in each vertical core for lintels 24 inches deep.
 - f. Interpolation is permitted between ground snow loads.
 - g. Flat ICF lintels may be used in *lieu* of screen-grid lintels.
 - h. For actual wall lintel width, refer to 780 CMR Table 5611.4(2).
 - i. Lintel width corresponds to the nominal screen-grid ICF wall thickness.

780 CMR TABLE 5611.7(7)
MAXIMUM ALLOWABLE CLEAR SPANS FOR SCREEN-GRID ICF LINTELS
IN LOAD-BEARING WALLS^{a,b,c,d,e,f,g}
NO. 5 BOTTOM BAR SIZE

MINIMUM LINTEL THICKNESS, <i>T</i> (inches) ^{h,i}	MINIMUM LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN (feet-inches)					
		Supporting Roof		Supporting Light-Frame Second Story and Roof		Supporting ICF Second Story and Roof	
		Maximum Ground Snow Load (psf)					
		30	70	30	70	30	70
6	12	3-7	2-10	2-5	2-0	2-0	NA
	24	12-3	10-0	9-3	8-3	8-7	7-8

- For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895kN/m², 1 pound per square foot = 0.0479kN/m².
- a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.
 - b. This table is not intended to prohibit the use of ICF manufacturer’s tables based on engineering analysis in accordance with ACI 318.
 - c. Deflection criterion: *L/240*
 - d. Design load assumptions:
 - Floor dead load is 10 psf Attic live load is 20 psf
 - Floor live load is 30 psf Roof dead load is 15 psf
 - Maximum floor clear span is 32 ft ICF wall dead load is 53 psf
 - Light-frame wall dead load is 10 psf
 - e. Stirrup Requirements:
 - Stirrups are not required for lintels 12 inches deep.
 - One No. 3 stirrup is required in each vertical core for lintels 24 inches deep.
 - f. Interpolation is permitted between ground snow loads.
 - g. Flat ICF lintels may be used in *lieu* of screen-grid lintels.
 - h. For actual wall lintel width, refer to 780 CMR Table 5611.4(2).
 - i. Lintel width corresponds to the nominal screen-grid ICF wall thickness.

780 CMR TABLE 5611.7(8)
MAXIMUM ALLOWABLE CLEAR SPANS FOR ICF LINTELS WITHOUT STIRRUPS IN
LOAD-BEARING WALLS^{a,b,c,d,e,f,g,h}
(NO. 4 OR NO. 5) BOTTOM BAR SIZE

MINIMUM LINTEL THICKNESS, <i>T</i> (inches)	MINIMUM LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN (feet-inches)					
		Supporting Roof Only		Supporting Light-Frame Second Story and Roof		Supporting ICF Second Story and Roof	
		MAXIMUM GROUND SNOW LOAD (psf)					
30	70	30	70	30	70		
Flat ICF Lintel							
3.5	8	2-6	2-6	2-6	2-4	2-5	2-2
	12	4-2	4-2	4-1	3-10	3-10	3-7
	16	4-11	4-8	4-6	4-2	4-2	3-11
	20	6-3	5-3	4-11	4-6	4-6	4-3
	24	7-7	6-4	6-0	5-6	5-6	5-2
5.5	8	2-10	2-6	2-6	2-5	2-6	2-2
	12	4-8	4-4	4-3	3-11	3-10	3-7
	16	6-5	5-1	4-8	4-2	4-3	3-11
	20	8-2	6-6	6-0	5-4	5-5	5-0
	24	9-8	7-11	7-4	6-6	6-7	6-1
7.5	8	3-6	2-8	2-7	2-5	2-5	2-2
	12	5-9	4-5	4-4	4-0	3-10	3-7
	16	7-9	6-1	5-7	4-10	4-11	4-5
	20	8-8	7-2	6-8	5-11	6-0	5-5
	24	9-6	7-11	7-4	6-6	6-7	6-0
9.5	8	4-2	3-1	2-9	2-5	2-5	2-2
	12	6-7	5-1	4-7	3-11	4-0	3-7
	16	7-10	6-4	5-11	5-3	5-4	4-10
	20	8-7	7-2	6-8	5-11	6-0	5-5
	24	9-4	7-10	7-3	6-6	6-7	6-0
Waffle-Grid ICF Lintel							
6 or 8	8	2-6	2-6	2-6	2-4	2-4	2-2
	12	4-2	4-2	4-1	3-8	3-9	3-7
	16	5-9	5-8	5-7	5-1	5-2	4-8
	20	7-6	7-4	6-9	6-0	6-3	5-7
	24	9-2	8-1	7-6	6-7	6-10	6-2

For SI: 1 inch = 25.4 mm; 1 psf = 0.0479kN/m²; 1 ft = 0.3 m.

a. Table values are based on tensile reinforcement with a minimum yield strength of 40,000 psi (276 MPa), concrete with a minimum specified compressive strength of 2,500 psi (17.2 MPa), and a building width (clear span) of 32 feet (9.8m).

b. Spans located in shaded cells shall be permitted to be multiplied by 1.05 when concrete with a minimum compressive strength of 3,000 psi (20.7 MPa) is used or by 1.1 when concrete with a minimum compressive strength of 4,000 psi (27.6 MPa) is used.

c. Deflection criterion is $L/240$, where L is the clear span of the lintel in inches.

d. Linear interpolation shall be permitted between ground snow loads and between lintel depths.

e. Lintel depth, D , shall be permitted to include the available height of ICF wall located directly above the lintel, provided that the increased lintel depth spans the entire length of the opening.

f. Spans shall be permitted to be multiplied by 1.05 for a building width (clear span) of 28 feet (8.5 m).

g. Spans shall be permitted to be multiplied by 1.1 for a building width (clear span) of 24 feet (7.3 m) or less.

h. ICF wall dead load is 69 psf (3.3 kPa).

780 CMR TABLE 5611.7(9)

MINIMUM BOTTOM BAR ICF LINTEL REINFORCEMENT FOR LARGE CLEAR SPANS

IN LOAD-BEARING WALLS^{a,b,c,d,e,f,h}

MINIMUM LINTEL THICKNESS, <i>T</i> ^{e,g} (inches)	MINIMUM LINTEL DEPTH, <i>D</i> (inches)	MINIMUM BOTTOM LINTEL REINFORCEMENT					
		Supporting Light-Frame Roof Only		Supporting Light-Frame Second Story and Roof		Supporting ICF Second Story and Light-Frame Roof	
		Maximum Ground Snow Load (psf)					
		30	70	30	70	30	70
Flat ICF Lintel, 12 Feet- 3 inches Maximum Clear Span							
3.5	24	1 #5	1 #7	D/R	D/R	D/R	D/R
5.5	20	1 #6	1 #7	D/R	D/R	D/R	D/R
	24	1 #5	1 #7	1 #7	1 #8	1 #8	D/R
7.5	16	1 #7; 2 #5	D/R	D/R	D/R	D/R	D/R
	20	1 #6; 2 #4	1 #7; 2 #5	1 #8; 2 #6	D/R	D/R	D/R
	24	1 #6; 2 #4	1 #7; 2 #5	1 #7; 2 #5	1 #8; 2#6	1#8; 2#6	1#8; 2#6
9.5	16	1 #7; 2 #5	D/R	D/R	D/R	D/R	D/R
	20	1 #6; 2 #4	1 #7; 2 #5	1 #8; 2 #6	1 #8; 2#6	1#8; 2#6	1#9; 2#6
	24	1 #7; 2 #4	1 #7; 2 #5	1 #7; 2 #5	1 #7; 2#6	1#8; 2#6	1#9; 2#6
Flat ICF Lintel, 16 Feet-3 inches Maximum Clear Span							
5.5	24	1 #7	D/R	D/R	D/R	D/R	D/R
7.5	24	1 #7; 2 #5	D/R	D/R	D/R	D/R	D/R
9.5	24	1#7; 2 #5	1 #9; 2 #6	1 #9; 2 #6	D/R	D/R	D/R
Waffle-Grid ICF Lintel, 12 Feet-3 inches Maximum Clear Span							
6	20	1 #6	D/R	D/R	D/R	D/R	D/R
	24	1 #5	1 #7; 2 #5	1 #7; 2 #5	1 #8; 2#6	1#8; 2#6	D/R
8	16	1#7; 2 #5	D/R	D/R	D/R	D/R	D/R
	20	1#6; 2 #4	1 #7; 2 #5	1 #8; 2 #6	D/R	D/R	D/R
	24	1 #5	1 #7; 2 #5	1 #7; 2 #5	1 #8; 2 #6	1 #8; 2 #6	1 #8; 2 #6
Screen-Grid ICF Lintel, 12 Feet - 3 Inches Maximum Clear Span							
6	24	1 #5	1 #7	D/R	D/R	D/R	D/R

- For SI: 1 inch = 25.4 mm, 1 foot = 0.3048 m, 1 psi = 6.895kN/m², 1 psf = 0.0479 kN/m².
- a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section. When reinforcement with a minimum yield strength of 60,000 psi is used the span lengths in the shaded cells shall be increased by 1.2 times the table values.
 - b. This table is not intended to prohibit the use of ICF manufacturers tables based on engineering analysis in accordance with ACI 318.
 - c. D/R indicates design is required.
 - d. Deflection criterion: $L/240$.
 - e. Interpolation is permitted between ground snow loads and between lintel depths.
 - f. No. 3 stirrups are required a maximum $d/2$ spacing for spans greater than four feet.
 - g. Actual thickness is shown for flat lintels while nominal thickness is given for waffle-grid and screen-grid lintels. Lintel thickness corresponds to the nominal waffle-grid and screen-grid ICF wall thickness. Refer to 780 CMR 5611.4(2) for actual wall thickness.
 - h. ICF wall dead load varies based on wall thickness using 150 pcf concrete density.

780 CMR TABLE 5611 .7(9A)
MINIMUM SOLID END WALL LENGTH REQUIREMENTS FOR FLAT ICF WALLS
(WIND PERPENDICULAR TO RIDGE)^{a,b,c}

WALL CATEGORY	BUILDING SIDE WALL LENGTH, L (feet)	Roof Slope	WIND VELOCITY PRESSURE FROM TABLE 5611.7.4 (psf)							
			20	25	30	35	40	45	50	60
			Minimum Solid Wall Length on Building End Wall (feet)							
One-Story or Top Story of Two-Story	16	≤ 1:12	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
		5:12	4.00	4.00	4.00	4.00	4.00	4.00	4.25	4.50
		7:12 ^d	4.00	4.25	4.25	4.50	4.75	4.75	5.00	5.50
		12:12 ^d	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.25
	24	≤ 1:12	4.00	4.00	4.00	4.00	4.00	4.00	4.25	4.50
		5:12	4.00	4.00	4.00	4.25	4.25	4.50	4.50	4.75
		7:12 ^d	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.25
		12:12 ^d	4.75	5.00	5.25	5.75	6.00	6.50	6.75	7.50
	32	≤ 1:12	4.00	4.00	4.00	4.00	4.25	4.25	4.50	4.75
		5:12	4.00	4.00	4.25	4.50	4.50	4.75	5.00	5.25
		7:12 ^d	4.50	5.00	5.25	5.50	6.00	6.25	6.50	7.25
		12:12 ^d	5.00	5.50	6.00	6.50	7.00	7.25	7.75	8.75
	40	≤ 1:12	4.00	4.00	4.25	4.25	4.50	4.50	4.75	5.00
		5:12	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50
		7:12 ^d	4.75	5.25	5.75	6.00	6.50	7.00	7.25	8.00
		12:12 ^d	5.50	6.00	6.50	7.25	7.75	8.25	8.75	10.00
	50	≤ 1:12	4.00	4.25	4.25	4.50	4.75	4.75	5.00	5.50
		5:12	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00
		7:12 ^d	5.25	5.75	6.25	6.75	7.25	7.75	8.25	9.25
		12:12 ^d	6.00	6.75	7.50	8.00	8.75	9.50	10.25	11.50
	60	≤ 1:12	4.00	4.25	4.50	4.75	5.00	5.25	5.25	5.75
		5:12	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.75
		7:12 ^d	5.50	6.25	6.75	7.50	8.00	8.50	9.25	10.25
		12:12 ^d	6.50	7.25	8.25	9.00	9.75	10.50	11.50	13.00
First Story of Two-Story	16	≤ 1:12	4.00	4.25	4.50	4.75	5.00	5.25	5.25	5.75
		5:12	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.75
		7:12 ^d	4.50	5.00	5.25	5.75	6.00	6.25	6.75	7.25
		12:12 ^d	5.00	5.25	5.75	6.25	6.50	7.00	7.25	8.25
	24	≤ 1:12	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.75
		5:12	4.75	5.25	5.50	6.00	6.25	6.75	7.00	7.75
		7:12 ^d	5.25	5.75	6.25	6.75	7.00	7.50	8.00	9.00
		12:12 ^d	5.50	6.25	6.75	7.25	8.00	8.50	9.00	10.25
	32	≤ 1:12	4.75	5.00	5.50	5.75	6.25	6.50	6.75	7.50
		5:12	5.25	5.75	6.25	6.75	7.25	7.50	8.00	9.00
		7:12 ^d	5.75	6.50	7.00	7.75	8.25	9.00	9.50	10.75
		12:12 ^d	6.25	7.00	7.75	8.50	9.25	10.00	10.75	12.25
	40	≤ 1:12	5.00	5.50	5.75	6.25	6.75	7.25	7.50	8.50
		5:12	5.50	6.25	6.75	7.25	8.00	8.50	9.00	10.25
		7:12 ^d	6.25	7.00	7.75	8.75	9.50	10.25	11.00	12.50
		12:12 ^d	7.00	8.00	8.75	9.75	10.75	11.50	12.50	14.25
	50	≤ 1:12	5.50	6.00	6.50	7.00	7.50	8.00	8.50	9.50
		5:12	6.00	6.75	7.50	8.25	9.00	9.75	10.50	11.75
		7:12 ^d	7.00	8.00	9.00	10.00	10.75	11.75	12.75	14.50
		12:12 ^d	7.75	9.00	10.00	11.25	12.25	13.50	14.75	17.00
	60	≤ 1:12	5.75	6.50	7.00	7.50	8.25	8.75	9.50	10.75
		5:12	6.75	7.50	8.25	9.25	10.00	10.75	11.75	13.25
		7:12 ^d	7.75	9.00	10.00	11.00	12.25	13.25	14.50	16.75
		12:12 ^d	8.75	10.00	11.50	12.75	14.00	15.50	16.75	19.50

For SI: 1 foot = 0.3048 m; 1 inch = 25.4 mm; 1 psf = 0.0479kN/m².

a. Table values are based on a 3.5 in (88.9 mm) thick flat wall. For a 5.5 in (139.7 mm) thick flat wall, multiply the table values by 0.9. The adjusted values shall not result in solid wall lengths less than four feet.

b. Table values are based on a maximum unsupported wall height of ten feet (3.0 m).

c. Linear interpolation shall be permitted.

d. The minimum solid wall lengths shown in the table are based on a building with an end wall length “W” of 60 feet and a roof slope of less than 7:12. For roof slopes of 7:12 or greater and end wall length “W” greater than 30 feet, the minimum solid wall length determined from the table shall be multiplied by: 1 + 0.4[(W-30)/30].

780 CMR TABLE 5611 .7(9B)
MINIMUM SOLID SIDEWALL LENGTH REQUIREMENTS FOR FLAT ICF WALLS
(WIND PARALLEL TO RIDGE) ^{a,b,c,d}

WALL CATEGORY	BUILDING END WALL WIDTH, W(feet)	WIND VELOCITY PRESSURE FROM TABLE 5611.7.4 (psf)							
		20	25	30	35	40	45	50	60
One-Story or Top Story of Two-Story		Minimum Solid Wall Length on Building Side Wall (feet)							
	16	4.00	4.00	4.00	4.00	4.25	4.25	4.50	4.75
	24	4.00	4.25	4.50	4.75	4.75	5.00	5.25	5.50
	32	4.50	4.75	5.00	5.25	5.50	6.00	6.25	6.75
	40	5.00	5.50	5.75	6.25	6.75	7.00	7.50	8.25
	50	5.75	6.25	7.00	7.50	8.25	8.75	9.50	10.75
	60	6.50	7.50	8.25	9.25	10.00	10.75	11.75	13.25
First Story of Two-Story	16	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.50
	24	4.75	5.25	5.50	6.00	6.25	6.75	7.00	8.00
	32	5.50	6.00	6.50	7.00	7.50	8.00	8.75	9.75
	40	6.25	7.00	7.50	8.25	9.00	9.75	10.50	12.00
	50	7.25	8.25	9.25	10.25	11.25	12.25	13.25	15.25
	60	8.50	9.75	11.00	12.25	13.50	15.00	16.25	18.75

For SI: 1 foot = 0.3048 m; 1 inch = 25.4 mm; 1 psf = 0.0479kN/m².

a. Table values are based on a 3.5 in (88.9mm) thick flat wall. For a 5.5 in (139.7mm) thick flat wall, multiply the table values by 0.9. The adjusted values shall not result in solid wall lengths less than four feet.

b. Table values are based on a maximum unsupported wall height of ten feet (3.0 m).

c. Table values are based on a maximum 12:12 roof pitch.

d. Linear interpolation shall be permitted.

780 CMR TABLE 5611.7(10)
MAXIMUM ALLOWABLE CLEAR SPANS FOR ICF LINTELS IN NON-LOAD-BEARING
WALLS WITHOUT STIRRUPS^{a,b,c,d}
NO. 4 BOTTOM BAR

MINIMUM LINTEL THICKNESS, <i>T</i> (inches)	MINIMUM LINTEL DEPTH, <i>D</i> (inches)	MAXIMUM CLEAR SPAN	
		Supporting Light-Frame Non-Bearing Wall (feet-inches)	Supporting ICF Second Story and Non-Bearing Wall (feet-inches)
Flat ICF Lintel			
3.5	8	11-1	3-1
	12	15-11	5-1
	16	16-3	6-11
	20	16-3	8-8
	24	16-3	10-5
5.5	8	16-3	4-4
	12	16-3	7-0
	16	16-3	9-7
	20	16-3	12-0
	24	16-3	14-3
7.5	8	16-3	5-6
	12	16-3	8-11
	16	16-3	12-2
	20	16-3	15-3
	24	16-3	16-3
9.5	8	16-3	6-9
	12	16-3	10-11
	16	16-3	14-10
	20	16-3	16-3
	24	16-3	16-3
Waffle-Grid ICF Lintel			
6 or 8	8	9-1	2-11
	12	13-4	4-10
	16	16-3	6-7
	20	16-3	8-4
	24	16-3	9-11
Screen-Grid Lintel			
6	12	5-8	4-1
	24	16-3	9-1

For SI: 1 foot = 0.3048 m; 1 inch = 25.4 mm; 1 psf = 47.8804 Pa.

a. This table is based on concrete with a minimum specified compressive strength of 2,500 psi, reinforcing steel with a minimum yield strength of 40,000 psi and an assumed equivalent rectangular cross section.

b. This table is not intended to prohibit the use of ICF manufacturers tables based on engineering analysis in accordance with ACI 318.

c. Deflection criterion is $L/240$, where L is the clear span of the lintel in inches.

d. Linear interpolation is permitted between lintel depths.

780 CMR TABLE 5611.7(10A)
MINIMUM SOLID END WALL LENGTH REQUIREMENTS FOR WAFFLE AND
SCREEN-GRID ICF WALLS (WIND PERPENDICULAR TO RIDGE)^{a,b,c}

WALL CATEGORY	BUILDING SIDE WALL LENGTH, <i>L</i> (feet)	ROOF SLOPE	WIND VELOCITY PRESSURE FROM TABLE 5611.7.4							
			20	25	30	35	40	45	50	60
			Minimum Solid Wall Length on Building End Wall (feet)							
One-Story or Top Story of Two-Story	16	≤1:12	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.25
		5:12	4.00	4.00	4.00	4.00	4.00	4.25	4.25	4.50
		7:12 ^d	4.00	4.25	4.50	4.75	5.00	5.25	5.50	6.00
		12:12 ^d	4.25	4.75	5.00	5.50	5.75	6.00	6.50	7.00
	24	≤1:12	4.00	4.00	4.00	4.00	4.00	4.25	4.25	4.50
		5:12	4.00	4.00	4.00	4.25	4.50	4.50	4.75	5.00
		7:12 ^d	4.50	4.75	5.00	5.50	5.75	6.25	6.50	7.25
		12:12 ^d	5.00	5.50	6.00	6.50	7.00	7.25	7.75	8.75
	32	≤1:12	4.00	4.00	4.00	4.25	4.25	4.50	4.75	5.00
		5:12	4.00	4.00	4.25	4.50	4.75	5.00	5.25	5.75
		7:12 ^d	4.75	5.25	5.75	6.25	6.50	7.00	7.50	8.50
		12:12 ^d	5.50	6.25	6.75	7.50	8.00	8.75	9.25	10.50
	40	≤1:12	4.00	4.00	4.25	4.50	4.50	4.75	5.00	5.50
		5:12	4.00	4.25	4.50	5.00	5.25	5.50	5.75	6.25
		7:12 ^d	5.25	5.75	6.25	7.00	7.50	8.00	8.50	9.75
		12:12 ^d	6.00	6.75	7.75	8.50	9.25	10	10.75	12.25
	50	≤1:12	4.00	4.25	4.50	4.75	5.00	5.25	5.50	6.00
		5:12	4.25	4.75	5.00	5.25	5.50	6.00	6.25	7.00
		7:12 ^d	5.75	6.50	7.00	7.75	8.50	9.25	9.75	11.25
		12:12 ^d	6.75	7.75	8.75	9.75	10.75	11.50	12.50	14.50
	60	≤1:12	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.50
		5:12	4.50	5.00	5.25	5.75	6.00	6.50	6.75	7.75
		7:12 ^d	6.25	7.00	8.00	8.75	9.50	10.25	11.25	12.75
		12:12 ^d	7.50	8.75	9.75	11.00	12	13.25	14.25	16.50
First Story of Two-Story	16	≤1:12	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.50
		5:12	4.50	5.00	5.25	5.75	6.00	6.50	6.75	7.75
		7:12 ^d	4.75	5.25	5.75	6.25	6.75	7.25	7.75	8.75
		12:12 ^d	5.25	5.75	6.50	7.00	7.50	8.00	8.75	9.75
	24	≤1:12	4.50	5.00	5.25	5.75	6.25	6.50	7.00	7.75
		5:12	5.00	5.75	6.25	6.75	7.25	7.75	8.25	9.25
		7:12 ^d	5.75	6.25	7.00	7.75	8.25	9.00	9.75	11.00
		12:12 ^d	6.25	7.00	7.75	8.50	9.50	10.25	11.00	12.75
	32	≤1:12	5.00	5.50	6.00	6.50	7.00	7.50	8.00	9.00
		5:12	5.75	6.25	7.00	7.75	8.25	9.00	9.75	11.00
		7:12 ^d	6.50	7.25	8.25	9.00	10.00	10.75	11.75	13.50
		12:12 ^d	7.25	8.25	9.25	10.25	11.25	12.50	13.50	15.50
	40	≤1:12	5.50	6.00	6.50	7.25	7.75	8.50	9.00	10.25
		5:12	6.25	7.00	7.75	8.75	9.50	10.25	11.00	12.75
		7:12 ^d	7.25	8.25	9.25	10.50	11.50	12.50	13.75	15.75
		12:12 ^d	8.00	9.50	10.75	12.00	13.25	14.50	15.75	18.25
First Story of Two-Story	50	≤1:12	6.00	6.75	7.50	8.00	8.75	9.50	10.25	11.75
		5:12	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.75
		7:12 ^d	8.25	9.50	10.75	12.25	13.50	14.75	16.00	18.75
		12:12 ^d	9.25	11.00	12.50	14.00	15.50	17.25	18.75	22.00
	60	≤1:12	6.50	7.25	8.25	9.00	10.00	10.75	11.75	13.25
		5:12	7.75	8.75	10.00	11.25	12.25	13.50	14.75	17.00
		7:12 ^d	9.25	10.75	12.25	14.00	15.50	17.00	18.50	21.75
		12:12 ^d	10.50	12.25	14.25	16.25	18.00	20.00	21.75	25.50

For SI: 1 foot = 0.3048 m; 1 inch = 25.4 mm; 1 psf = 0.0479kN/m².

a. Table values are based on a six inch (152.4mm) thick nominal waffle-grid wall. For an eight inch (203.2 mm) thick nominal waffle-grid wall, multiply the table values by 0.90.

b. Table values are based on a maximum unsupported wall height of ten feet (3.0 m).

c. Linear interpolation is permitted.

d. The minimum solid wall lengths shown in the table are based on a building with an end wall length “W” of 60 feet and a roof slope of less than 7:12. For roof slopes of 7:12 or greater and end wall length “W” greater than 30 feet, the minimum solid wall length determined from the table shall be multiplied by: 1 + 0.4 [(W-30)/30].

780CMR TABLE 5611.7(10B)
MINIMUM SOLID SIDE WALL LENGTH REQUIREMENTS FOR 6-INCH WAFFLE
AND SCREEN-GRID ICF WALLS (WIND PARALLEL TO RIDGE)^{a,b,c,d}

WALL CATEGORY	BUILDING END WALL WIDTH, W(feet)	WIND VELOCITY PRESSURE FROM TABLE 5611.7.4 (psf)							
		20	25	30	35	40	45	50	60
One-Story or Top Story of Two-Story		Minimum Solid Wall Length on Building Side Wall (feet)							
	16	4.00	4.00	4.00	4.25	4.25	4.50	4.75	5.00
	24	4.00	4.25	4.50	5.00	5.25	5.50	5.75	6.25
	32	4.50	5.00	5.50	5.75	6.25	6.75	7.00	8.00
	40	5.25	6.00	6.50	7.00	7.75	8.25	8.75	10.00
	50	6.50	7.25	8.00	9.00	9.75	10.75	11.50	13.25
	60	7.75	8.75	10.00	11.25	12.25	13.5	14.50	17.0
First Story of Two-Story	16	4.50	4.75	5.25	5.5	5.75	6.25	6.50	7.25
	24	5.00	5.75	6.25	6.75	7.25	7.75	8.25	9.50
	32	6.00	6.75	7.5	8.25	9.00	9.75	10.50	12.00
	40	7.00	8.00	9.00	10.0	11.00	12.00	13.00	15.00
	50	8.50	9.75	11.25	12.50	14.00	15.25	16.75	19.5
	60	10.25	12.00	13.75	15.50	17.25	19.00	21.00	24.50

For SI: 1 foot = 0.3048 m; 1 inch = 25.4 mm; 1 psf = 0.0479kN/m².

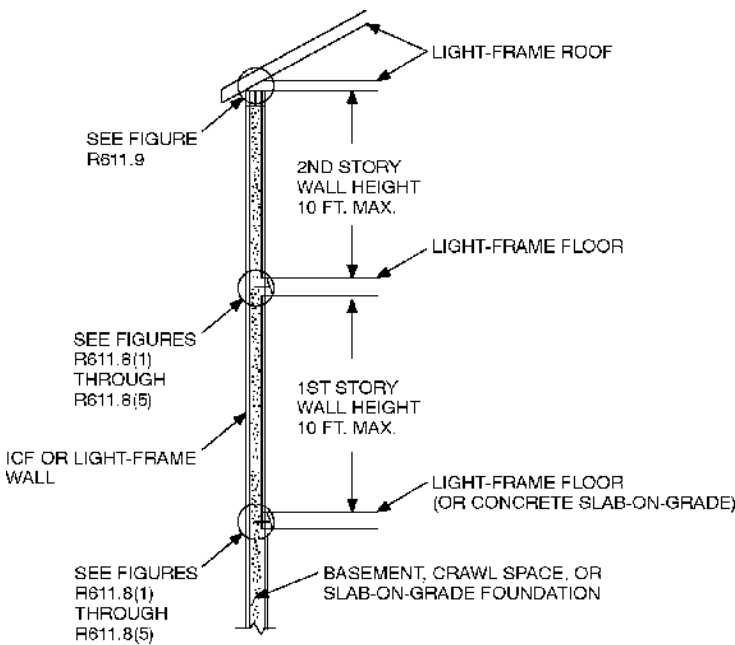
a. Table values are based on a six inch (152.4mm) thick nominal waffle-grid wall. For an eight inch (203.2 mm) thick nominal waffle-grid wall, multiply the table values by 0.90.

b. Table values are based on a maximum unsupported wall height of ten feet(3.0 m).

c. Table values are based on a maximum 12:12 roof pitch.

d. Linear interpolation shall be permitted.

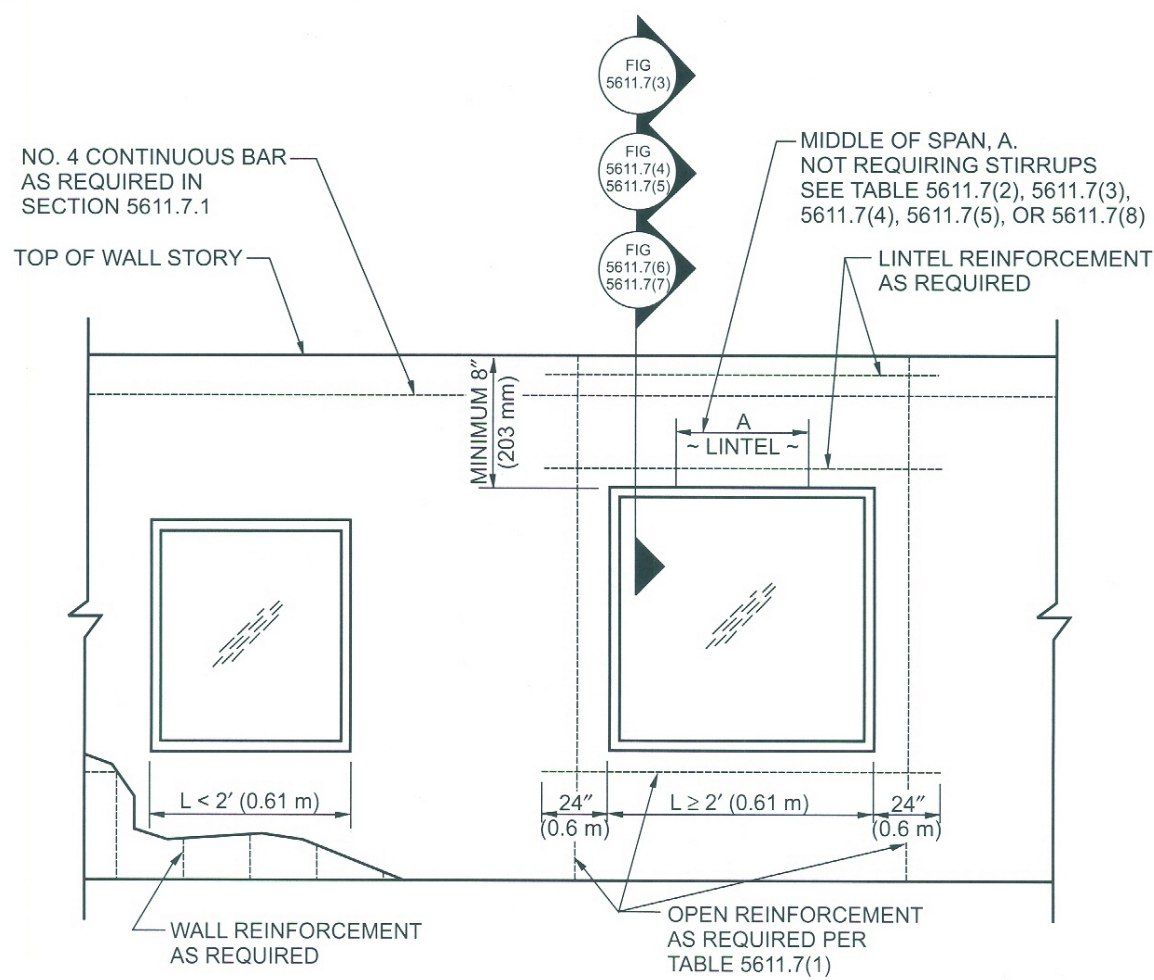
780 CMR 5611.7(1)
ICF WALL CONSTRUCTION



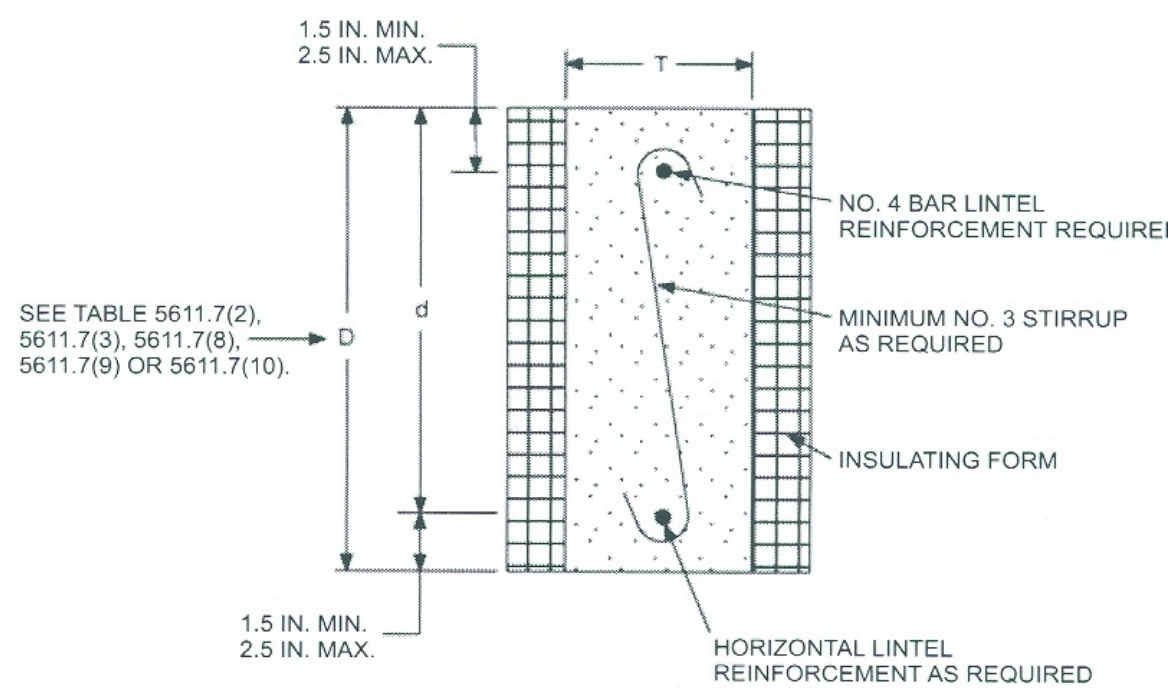
For SI: 1 foot = 304.8 mm.

Note: Section cut through flat wall or vertical core of waffle- or screen-grid wall.

780 FIGURE 5611.7(2)
REINFORCEMENT OF OPENINGS



780 CMR FIGURE 5611.7(3)
ICF LINTELS FOR FLAT AND SCREEN-GRID WALLS



For SI: 1 inch = 25.4 mm.
NOTE: Section cut through flat wall.