## 8.9 Movement Characteristics

Calculated STC Ratings for Medium Weight Concrete Masonry Walls§							
Nominal Wall	Density	Hollow	Grout	Sand	Solid		
Thickness (inches)		Units	Filled	Filled	Units		
4	105	44	46	46	46		
	110	44	46	46	46		
	115	44	47	46	46		
	120	45	47	46	47		
6	105	45	50	48	49		
	110	45	50	49	49		
	115	45	51	49	50		
	120	45	51	49	50		
8	105	46	54	51	52		
	110	47	54	52	53		
	115	47	55	52	53		
	120	47	55	52	54		
10	105	48	58	54	55		
	110	48	58	54	56		
	115	48	58	55	57		
	120	49	59	55	57		
12	105	49	62	57	59		
	110	49	62	57	59		
	115	49	62	58	60		
	120	50	63	58	61		

Based on grout density of 140 lb/ft³ and sand density of 90 lb/ft³. Percent solid thickness of units based on mold manufacturer's literature for typical units as follows: 4 in = 73.8% solid, 6 in = 55% solid, 8 in = 53% solid, 10 in = 51.7% solid, and 12 in = 48.7% solid. STC values for grout-filled and sand-filled units assume the materials completely fill all void areas in and around the units. STC values for solid units are based on bed and head joints solidly filled with mortar.

Figure 8-51 STC ratings for medium weight concrete masonry walls.

(Adapted from The Masonry Society's Standard Method for Determining the Sound Transmission Class Rating for Masonry Walls, TMS 0302-00.)

Chapter 8 Wall Types and Properties

Nominal Wall Thickness (inches)	Density	Hollow Units	Grout Filled	Sand Filled	Solid Units
4	125	45	47	46	47
	130	45	47	46	47
	135	45	47	47	47
	140	45	49	47	48
	145	46	48	47	48
	150	46	49	47	48
6	125	46	51	49	51
	130	46	51	49	51
	135	46	52	50	51
	140	46	52	50	52
	145	47	52	50	52
	150	47	52	50	53
8	125	47	55	52	54
	130	48	55	53	55
	135	48	56	53	55
	140	48	56	53	56
	145	49	56	54	56
	150	49	57	54	57

Calculated STC Ratings for Normal Weight Concrete Masonry Walls§

Figure 8-52 STC ratings for normal weight concrete masonry walls.

(Adapted from The Masonry Society's Standard Method for Determining the Sound Transmission Class Rating for Masonry Walls, TMS 0302-00.)

<sup>§</sup> Based on grout density of 140 lb/ft³ and sand density of 90 lb/ft³. Percent solid thickness of units based on mold manufacturer's literature for typical units as follows: 4 in = 73.8% solid, 6 in = 55% solid, 8 in = 53% solid, 10 in = 51.7% solid, and 12 in = 48.7% solid. STC values for grout-filled and sand-filled units assume the materials completely fill all void areas in and around the units. STC values for solid units are based on bed and head joints solidly filled with mortar.