



SOUND TRANSMISSION LOSS TEST REPORT NO. TL09-543

CLIENT: DMFCWBS, LLC
9100 Centre Pointe Drive, Suite 210
West Chester, OH 45069
TEST DATE: 15 September 2009

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8 October 2009

INTRODUCTION

The methods and procedures used for this test conform to the provisions and requirements of ASTM E 90-04, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions. Copies of the test standard are available at www.astm.org. The test chamber source and receiving room volumes are 204 and 148.4 cubic meters respectively. Western Electro-Acoustic Laboratory is accredited by NVLAP (National Voluntary Laboratory Accreditation Program) Lab Code 100256-0 for this test procedure. NVLAP is part of the United States Department of Commerce, National Institute of Standards and Technology (NIST). This test report relates only to the item(s) tested. Any advertising that utilizes this test report or test data must not imply product certification or endorsement by WEAL, NVLAP, NIST or the U.S. Government.

DESCRIPTION OF TEST SPECIMEN

The test specimen was a wall assembly constructed from metal studs, resilient channel, and type X gypsum board. The studs and tracks were ProSTUD-015 (25 GA equivalent) 3-5/8 inch (92 mm) metal. The studs were spaced horizontally at 24 inches (610 mm) O.C. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads. 3-1/2 inch (89 mm) thick, 23 inch (584 mm) wide R-13 unfaced fiberglass batts were installed in the stud cavities. On the receiving room side, Dietrich RCSD single leg resilient channels were screwed to the studs horizontally at 24 inches (610 mm) O.C. The center of the top channel was 2 inches (50.8 mm) below the top of the wall and the center of the bottom channel was 2 inches (50.8 mm) above the bottom of the wall. The top four channels were oriented with the resilient leg above the attachment flange and the bottom channel was oriented with the resilient leg below the attachment flange. Two layers of 5/8 inch (15.9 mm) thick type X gypsum board were screwed to the channels at 12 inches (305 mm) O.C. The first layer used 1 inch (25.4 mm) #6 drywall screws and the second layer used 1-5/8 inch (41.3 mm) #6 drywall screws. On the source room side, one layer of 5/8 inch (15.9 mm) thick type X gypsum board was screwed to the studs at 8 inches (203 mm) O.C. around the perimeter and 12 inches (305 mm) O.C. in the field with 1-1/4 inch (31.8 mm) #6 drywall screws. All gypsum board was oriented vertically and joints were staggered on opposite sides of the wall and between layers. All joints and perimeters were sealed with a bead of caulking and metal foil tape. Screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 96 inches (2.44 m) wide by 96 inches (2.44 m) high by 6 inches (152 mm) thick. The overall weight of the assembly was estimated to be 473 lbs (214 kg) for a calculated surface density of 7.39 lbs./ft² (36.1 kg/m²).

RESULTS OF THE MEASUREMENTS

One-third octave band sound transmission loss values are plotted and tabulated on the attached sheet. ASTM minimum volume requirements are met at 80 Hz and above. The Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-59.

Approved:

Gary E. Mange
Laboratory Director

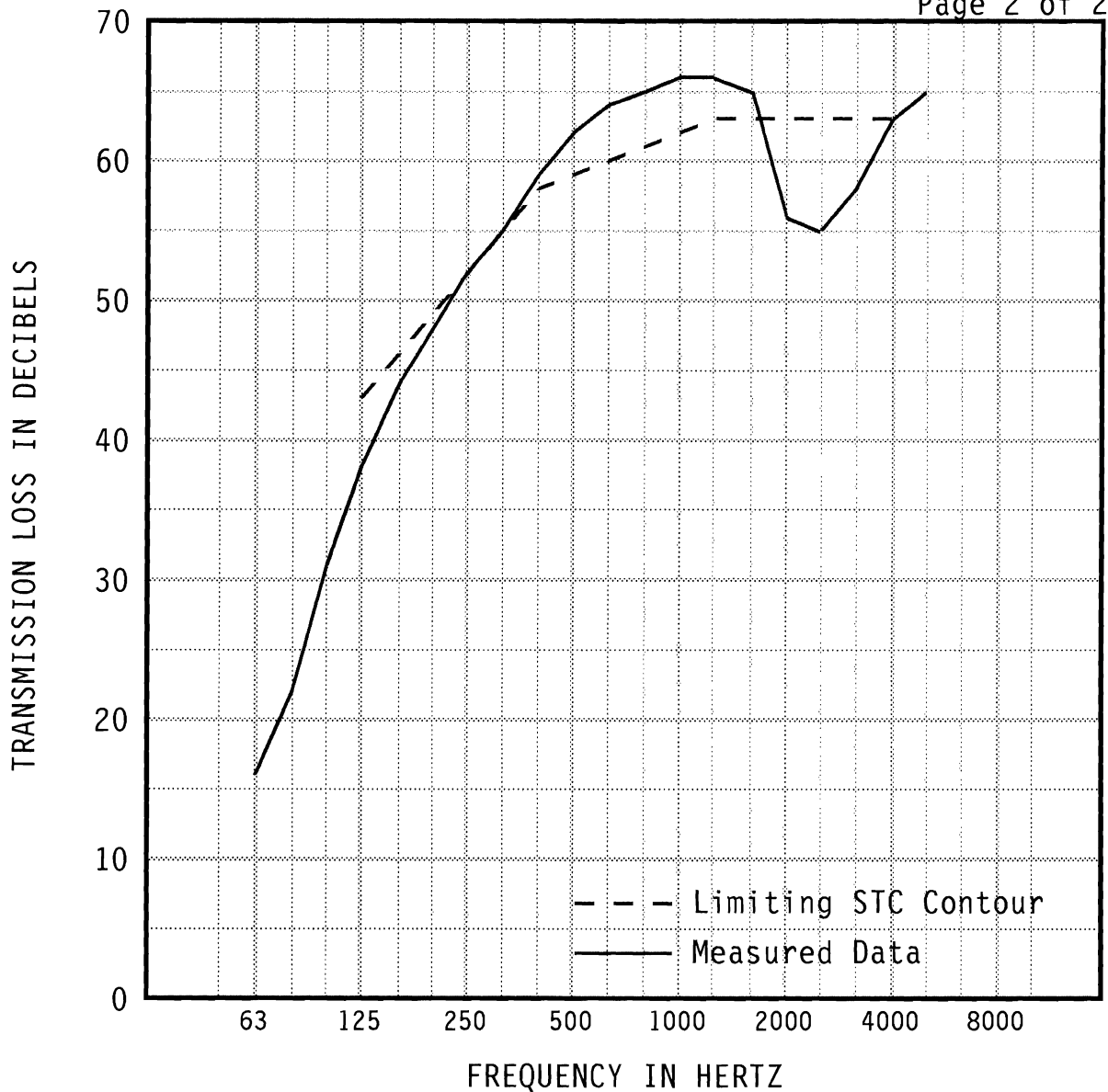
Respectfully submitted,
Western Electro-Acoustic Laboratory

Raul Martinez
Acoustical Test Technician

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WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL09-543



1/3 OCT BND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	16	22	31	38	44	48	52	55	*59	*62
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
				(5)	(2)	(1)	(0)	(0)		
1/3 OCT BND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	*64	*65	66	66	65	56	55	58	63	65
95% Confidence in dB deficiencies	0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
						(7)	(8)	(5)	(0)	

EWR 60	OITC 40	* Minimum estimate of transmission loss. Measurement limited by filler wall. Actual TL will be equal to or greater than value reported.	Specimen Area: 64 sq.ft.	STC 59 (28)
			Temperature: 75.9 deg. F	
		Relative Humidity: 49 %		
		Test Date: 15 September 2009		

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