WESTERN ELECTRO - ACOUSTIC LABORATORY
A division of Veneklasen Associates, Inc.

TESTING • CALIBRATION • RESEARCH

25132 Rye Canyon Loop Santa Clarita, California 91355 Tel: (661) 775-3741 Fax: (661) 775-3742 www.weal.com

SOUND TRANSMISSION LOSS TEST REPORT NO. TL17-417

CLIENT: **CEMCO**
263 N Covina Lane
City of Industry, CA 91744

25 September 2017

TEST DATE: 17 August 2017

INTRODUCTION

The test was performed in accordance with ASTM E 90-09 (2016), *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04 (2012), *Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods*. 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 the United States Department of Commerce, National Institute of Standards and Technology under the National Voluntary Accreditation Program (NVLAP) Lab Code 100256-0 for this test procedure. This test report relates only to the item(s) tested. This report must not be used to claim product certification, approval, or endorsement by WEAL, NVLAP, NIST or any agency of the federal government.

DESCRIPTION OF TEST SPECIMEN

The test specimen was a single wall assembly constructed from 92 mm (3-5/8 inch) CEMCO Viper-X 18 mils (20EQ) metal studs with CEMCO TAB track 33 mils (20GA) and R-11 fiberglass insulation in the stud cavity, CEMCO HOTROD Type X compressible intumescent firestopping at the top of the wall on both sides with joint compound on the receiving side only, and National Gypsum Gold Bond® Fire-Shield® Type X Gypsum Board.

TEST CONFIGURATION

Layers Source Room Side	Stud	Insulation	Layers Receiving Room Side
1 layer 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® Gypsum Board with CEMCO HOTROD Type X without joint compound	92 mm (3-5/8 inch) CEMCO Viper-X 18 mils (20EQ) with CEMCO TAB track 33 mils (20GA)	R-11 Fiberglass	2 layers 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® Type X Gypsum Board with CEMCO HOTROD Type X with joint compound

- The metal studs were spaced at 406 mm (16 inches) on center (O.C.). The studs and track were isolated around the perimeter from the test chamber opening with 6 mm (1/4 inch) neoprene pads.
- On the source room side, one layer of 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® Type X Gypsum board was screwed 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) O.C. in the field.
- On the receiving room side, two layers of 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® Type X Gypsum Board was screwed 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) in the field.
- Along the top of both the source and receiving room gypsum board layers, a 13 mm (1/2 inch) gap was filled with CEMCO HOTROD Type X compressible intumescent firestopping. The optional joint compound was used on the receiving side only.
- All gypsum board was oriented vertically, and the joints were staggered on opposite sides of the wall and between layers. All the joints, with the exception of the top of wall joints, were sealed with a bead of latex caulking and metal foil tape. All screw heads were covered with metal foil tape.
- The overall dimensions of the wall assembly were 2.44 m (96 inches) wide by 2.44 m (96 inches) high by 140 mm (5-1/2 inches) thick.
- The overall weight of the assembly was estimated to be 214 kg (471 lbs) for a calculated surface density of 36.0 kg/m^2 (7.4 lbs./ft^2).

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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 Outdoor-Indoor Transmission Class rating determined in accordance with ASTM E 1332-10a was OITC-34. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-49.

Approved:

Stephen A. Martin, Ph.D., P.E.
Laboratory Director

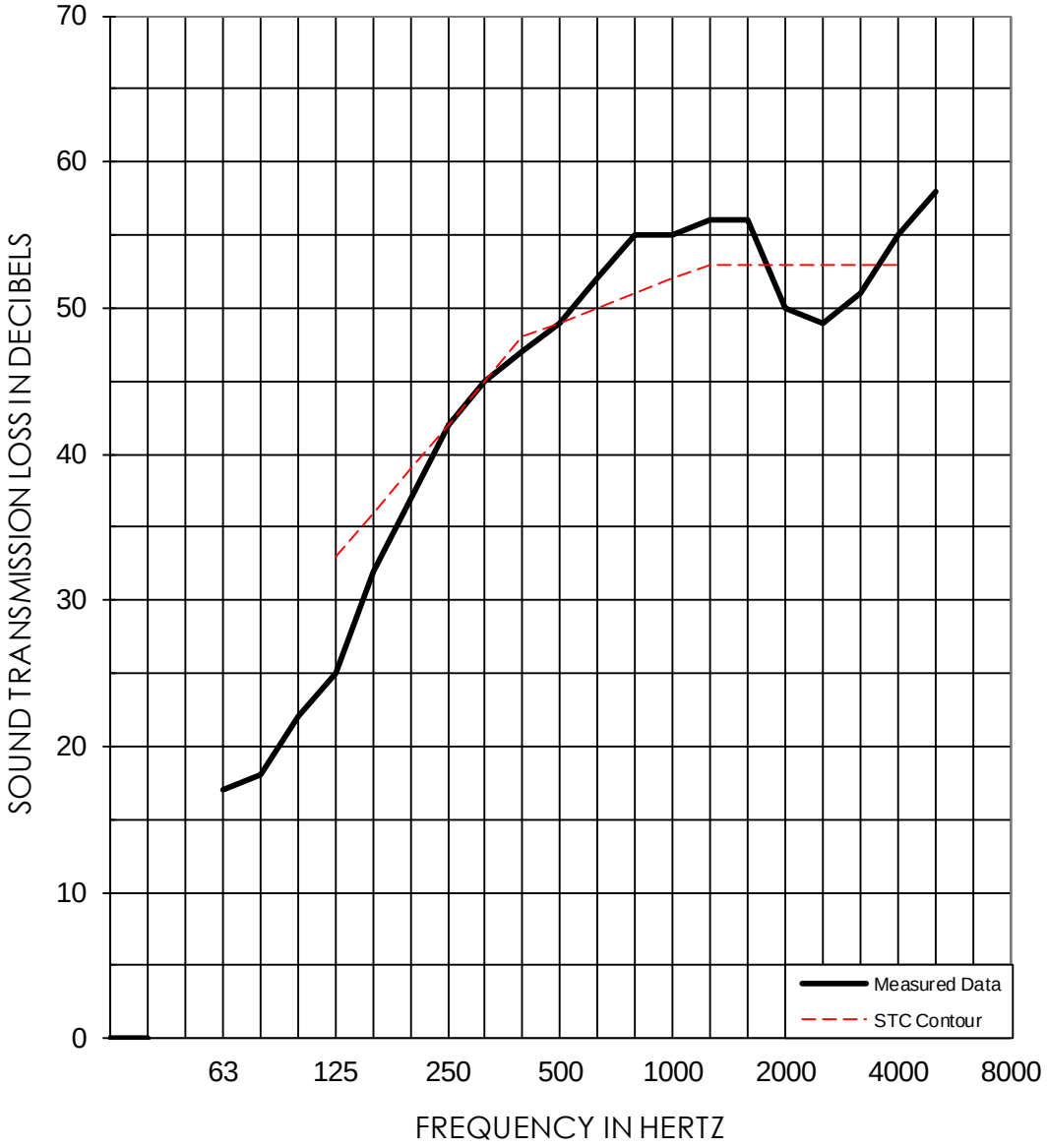
Respectfully submitted,
Western Electro-Acoustic Laboratory

Raul Martinez
Acoustical Test Technician

NVLAP LAB CODE 100256-0

WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL17-417



1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	17	18	22	25	32	37	42	45	47	49
95% Confidence in dB	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
deficiencies				(8)	(4)	(2)	(0)	(0)	(1)	(0)
1/3 OCT BAND CNTR FREQ	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**
TL in dB	52	55	55	56	56	50	49	51	55	58
95% Confidence in dB	0.29	0.44	0.38	0.39	0.36	0.56	0.55	0.31	0.32	0.50
deficiencies						(3)	(4)	(2)		

EWR	OITC
50	34

Test Date: 17 August 2017
Specimen Area: 64 sq.ft.
Temperature: 74.1 deg. F
Relative Humidity: 39 %

STC
49
(24)

NVLAP LAB CODE 100256-0