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. TL17-430

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

16 October 2017

TEST DATE: 24 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 double wall assembly constructed from 51 mm (2-1/2 inch) CEMCO Viper-X 18 mils (20EQ) metal studs with CEMCO TAB TRACK 33 MIL and R-11 fiberglass insulation in the stud cavity, CEMCO HOTROD Type X compressible intumescent firestopping at the top of the wall without joint compound, and National Gypsum Gold Bond® Fire-Shield® Gypsum Board.

TEST CONFIGURATION

Layers Source Room Side	Source Room Stud and Insulation	Air Gap	Source Room Stud and 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 Compressible Firestopping without joint compound	51 mm (2-1/2 inch) CEMCO Viper-X 18 mils (20EQ) with CEMCO TAB TRACK 33 MIL with R-11 Fiberglass	25.4 mm (1 inch)	51 mm (2-1/2 inch) CEMCO Viper-X 18 mils (20EQ) with CEMCO TAB TRACK 33 MIL with R-11 Fiberglass	1 layer 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® Gypsum Board with CEMCO HOTROD Type X Compressible Firestopping without joint compound

- The metal studs were spaced at 610 mm (24 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® Gypsum Board was screwed 203 mm (8 inches) O.C. around the perimeter and 305 mm (12 inches) in the field.
- On the receiving room side, one layer of 16 mm (5/8 inch) National Gypsum Gold Bond® Fire-Shield® 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 the receiving gypsum board layer, a 19 mm (3/4 inch) gap was filled with HOTROD Type X Compressible Firestopping. The optional joint compound was not used.
- All gypsum board was oriented vertically and the joints were staggered on opposite sides of the wall. All the joints, with the exception top of wall joint in both the source and receiving rooms, 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 184 mm (7-1/4 inches) thick.
- The overall weight of the assembly was estimated to be 164 kg (362 lbs.) for a calculated surface density of 27.6 kg/m^2 (5.7 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-44. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-60.

Respectfully submitted,
Western Electro-Acoustic Laboratory

Approved:

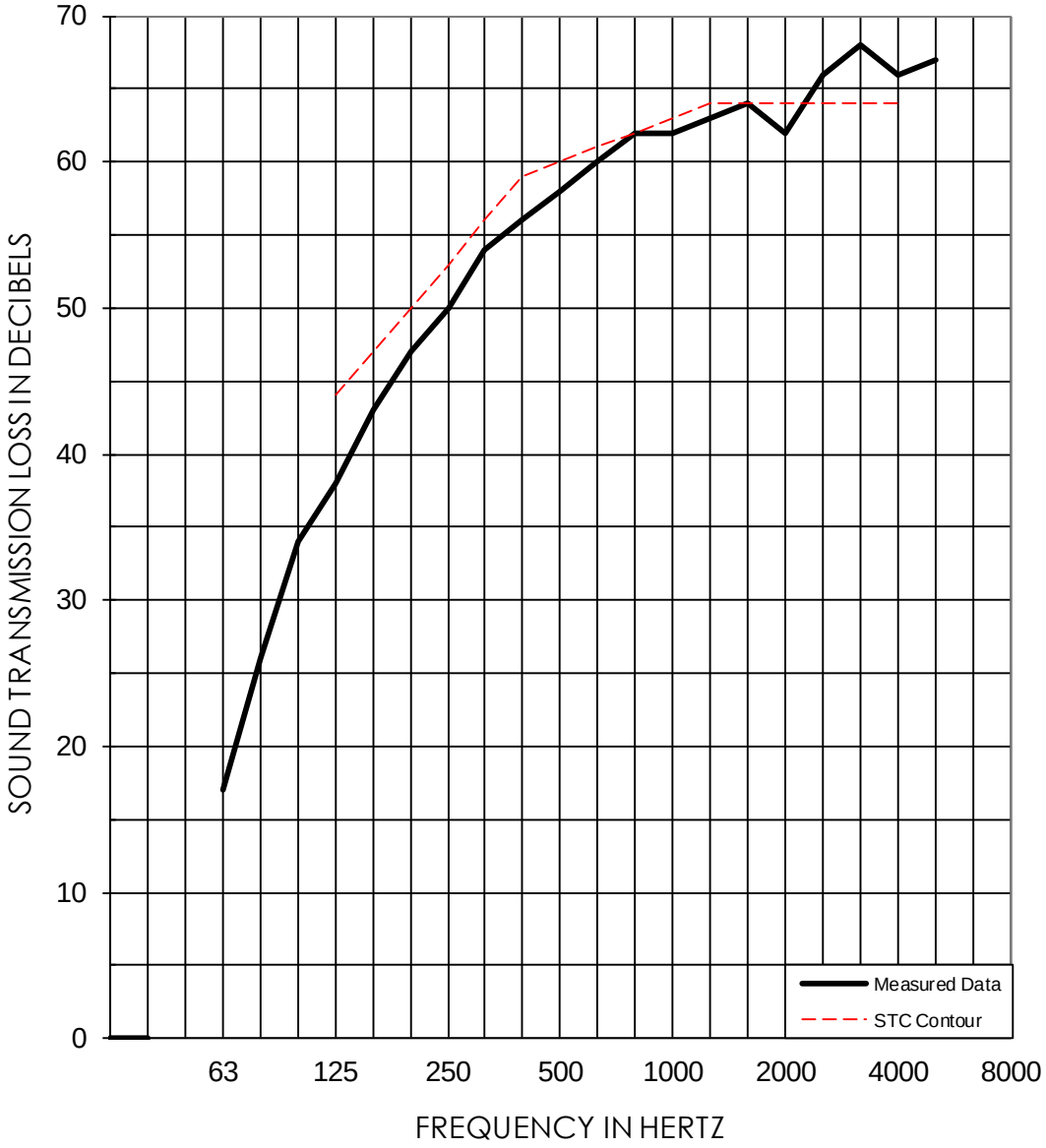
Stephen A. Martin, Ph.D., P.E.
Laboratory Director

Raul Martinez
Acoustical Test Technician

NVLAP LAB CODE 100256-0

WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL17-430



1/3 OCT BAND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	**17**	**26**	**34**	**38**	**43**	**47**	**50**	**54**	**56**	**58**
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				(6)	(4)	(3)	(3)	(2)	(3)	(2)
1/3 OCT BAND CNTR FREQ	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**
TL in dB	**60**	**62**	**62**	**63**	**64**	**62**	**66**	**68**	**66**	**67**
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	(1)	(0)	(1)	(1)	(0)	(2)				

EWR	OITC
60	44

Test Date: 24 August 2017
Specimen Area: 64 sq.ft.
Temperature: 72.5 deg. F
Relative Humidity: 40 %

STC
60
(28)

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