



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL16-370

CLIENT: Clark Dietrich  
6510 General Rd.  
Riverside, CA 92509  
TEST DATE: 08 August 2016

13 Sep 2016

### INTRODUCTION

The test was performed in accordance with ASTM E 90-09, *Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions* and ASTM E2235-04<sup>E1</sup>, *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](http://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 wall assembly constructed from 3-5/8" Clark Dietrich Prostud 33 mil track and studs. The following components were used in the construction of the specimen:

Prostud 33 mil track and studs, ClarkDietrich RC—Deluxe resilient channel, 3-1/2" R-13 unfaced insulation, and 5/8 inch type "X" gypsum panels.

### Test Configuration


Source Side Components		Frame Assembly	Receive Side Components
2 Layers 5/8" Type "X"	RC-Deluxe	3-5/8" 33 mil Prostud w/ Insulation	5/8" Type "X"

- Screw spacing was at 203 mm (8 inches) on center (O.C.) around the perimeter and 610 mm (24 inches) O.C. in the field.
- All gypsum board was oriented vertically. All the joints were sealed with a bead of latex caulking and 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 124 mm (4-7/8 inches) thick.
- The overall weight of the assembly was estimated to be 225 kg (496 lbs) for a calculated surface density of 37.8 kg/m<sup>2</sup> (7.75 lbs./ft<sup>2</sup>).


### 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-42. The Sound Transmission Class rating determined in accordance with ASTM E 413-10 was STC-56.

Approved:

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

Respectfully submitted,  
Western Electro-Acoustic Laboratory

  
Raul Martinez  
Acoustical Test Technician

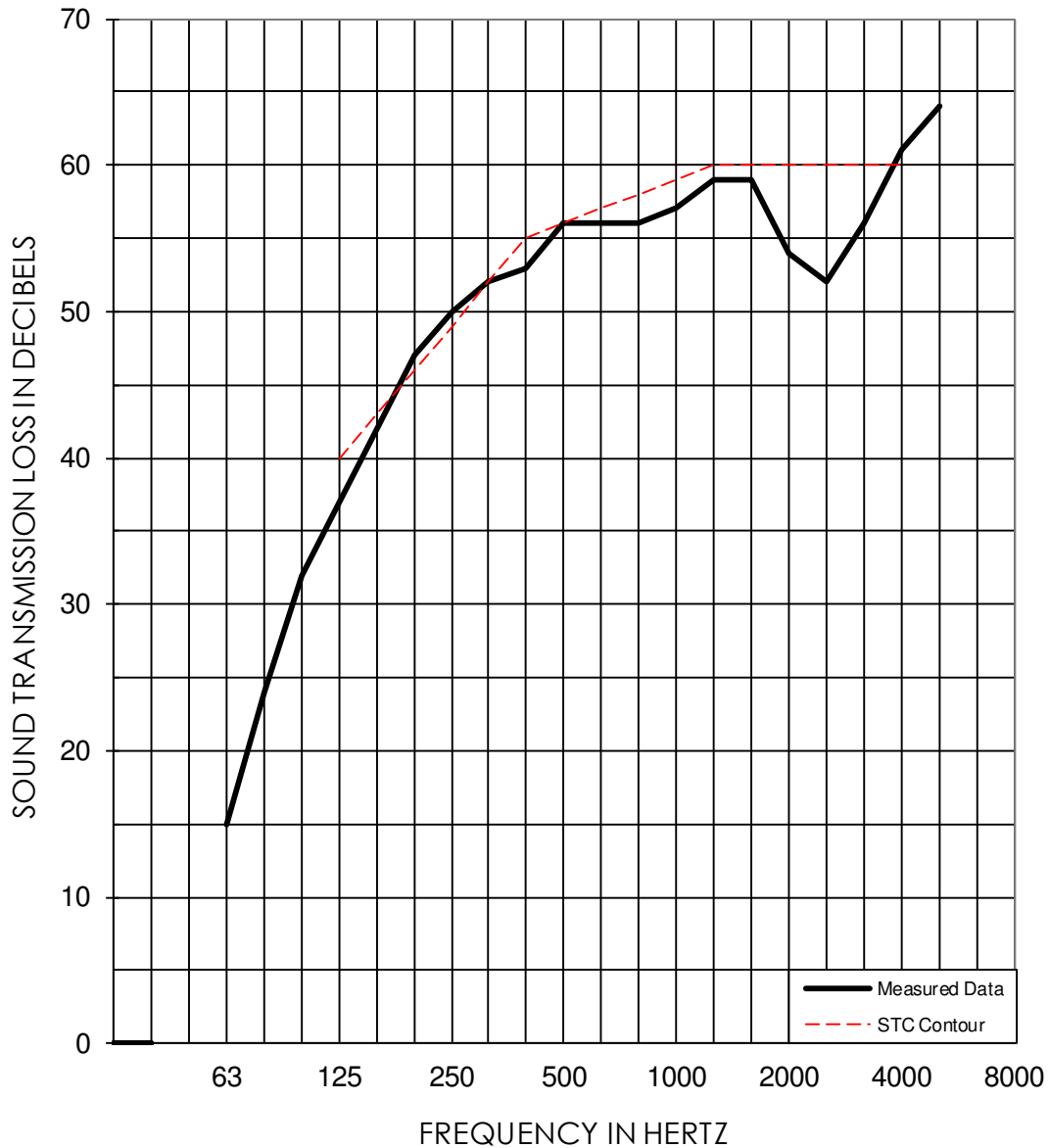
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<b>1/3 OCT BAND CNTR FREQ</b>	<b>63</b>	<b>80</b>	<b>100</b>	<b>125</b>	<b>160</b>	<b>200</b>	<b>250</b>	<b>315</b>	<b>400</b>	<b>500</b>
TL in dB	15	24	32	37	42	47	50	52	53	56
95% Confidence in dB deficiencies	1.42	1.92	2.07	1.47	0.89	0.76	0.80	0.52	0.36	0.38
				(3)	(1)			(0)	(2)	(0)
<b>1/3 OCT BAND CNTR FREQ</b>	<b>630</b>	<b>800</b>	<b>1000</b>	<b>1250</b>	<b>1600</b>	<b>2000</b>	<b>2500</b>	<b>3150</b>	<b>4000</b>	<b>5000</b>
TL in dB	56	56	57	59	59	54	52	56	61	64
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
	(1)	(2)	(2)	(1)	(1)	(6)	(8)	(4)		
<b>EWR</b>	<b>OITC</b>	Test Date: 08 August 2016								<b>STC</b>
57	42	Specimen Area: 64 sq.ft.								56
		Temperature: 78.4 deg. F								(31)
		Relative Humidity: 46 %								

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