





# WESTERN ELECTRO - ACOUSTIC LABORATORY

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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL07-646

CLIENT: **PAC International**  
7310 Smoke Ranch Road Suite E  
Las Vegas, NV 89128

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29 November 2007

TEST DATE: 16 October 2007

### 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](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 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 steel studs, isolation clips, and type "C" gypsum board. The studs were 3-5/8 inch (92.1 mm) 20 gauge metal and were spaced at 24 inches (610mm) O.C. The head and sill tracks were also 3-5/8 inch (92.1 mm) 20 gauge metal. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads. 6 inch (152.4 mm) unfaced fiberglass batts were installed in the stud spaces. On both sides one layer of 5/8 inch (15.9 mm) thick Fire Code type "C" gypsum board was screwed to the studs using drywall screws at 12 inches (305 mm) O.C. around the perimeter and in the field. The gypsum board was oriented vertically. On the source room side, RSIC-1 RETRO-FIT claws were screwed through the gypsum board to the studs using needlepoint wafer head screws at a vertical spacing of 24 inches (610 mm) and a horizontal spacing of 48 inches (1.22 mm) O.C. 2-1/2 inch (63.5 mm) by 7/8 inch (22.2 mm), 25 gauge drywall furring channels were installed into the RSIC-1 RETRO-FIT claws. The 1-5/8 inch (41.3 mm) cavity created by the RSIC-1 RETRO-FIT and drywall furring channels was insulated with Fiberglass batt approximately one inch (25.4 mm) thick. One layer of 5/8 inch (15.9 mm) thick Fire Code type "C" gypsum board was screwed to the channels using drywall screws at 12 inches (305 mm) O.C. The gypsum board was oriented vertically and the joints were staggered. On both sides, the joints and perimeter were sealed with a bead of caulk and metal foil tape. All 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 7-1/4 inches (184.2 mm) thick. The overall weight of the assembly was estimated to be 496 lbs (225 kg) for a calculated surface density of 7.75 lbs./ft<sup>2</sup> (37.8kg/m<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 Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-53.

Approved:

Respectfully submitted,  
Western Electro-Acoustic Laboratory

Gary E. Marge  
Laboratory Manager

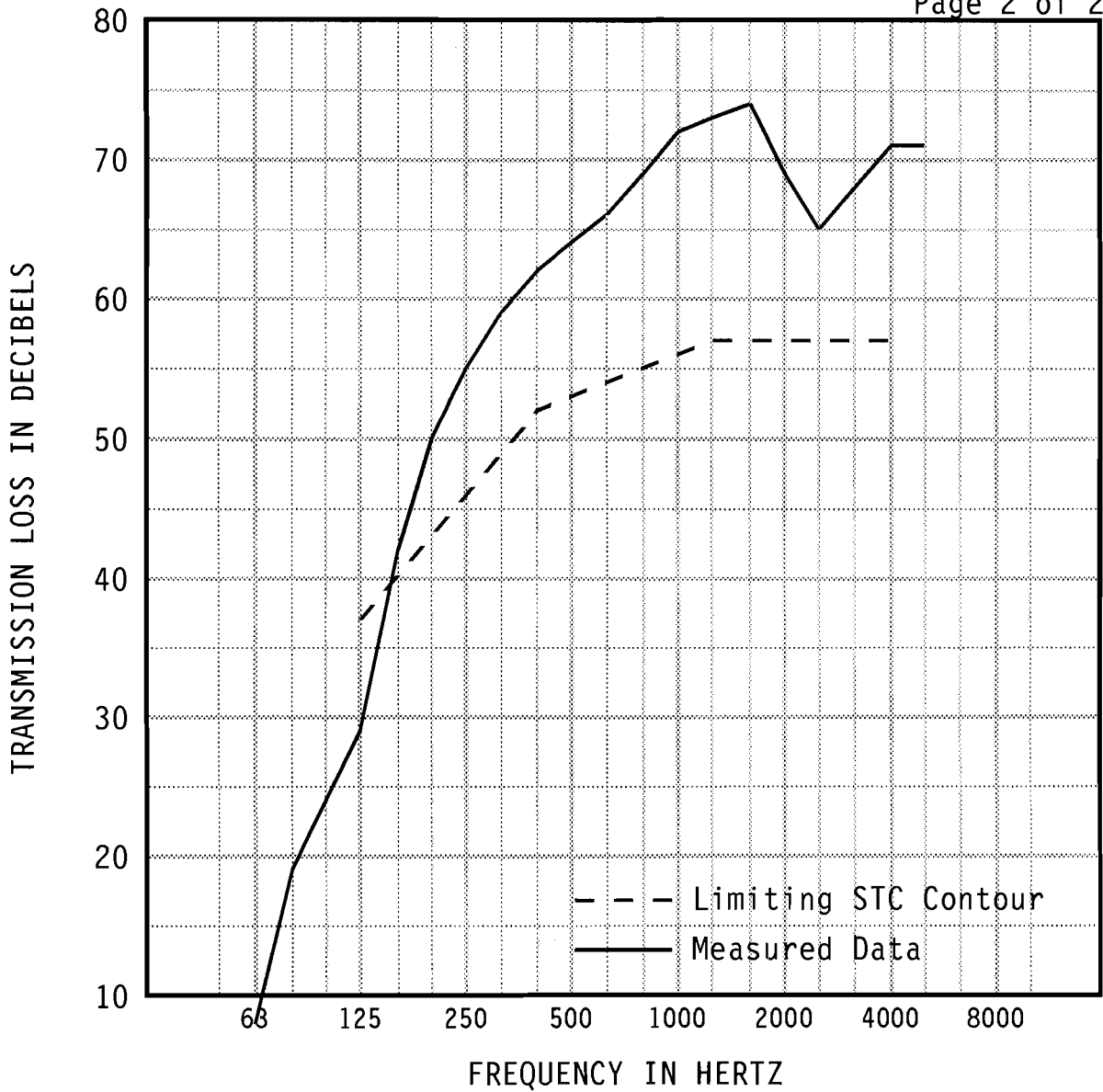
Raul Martinez  
Acoustical Test Technician

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Report No. TL07-646



|                      |              |      |      |      |      |      |      |      |      |      |      |
|----------------------|--------------|------|------|------|------|------|------|------|------|------|------|
| 1/3 OCT BND CNTR     | FREQ         | 63   | 80   | 100  | 125  | 160  | 200  | 250  | 315  | 400  | 500  |
| TL in dB             |              | 8    | 19   | 24   | 29   | 42   | *50  | *55  | *59  | *62  | *64  |
| 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)  |      |      |      |      |      |      |
| 1/3 OCT BND CNTR     | FREQ         | 630  | 800  | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
| TL in dB             |              | *66  | *69  | *72  | *73  | *74  | 69   | 65   | 68   | 71   | 71   |
| 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 |      |      |      |      |      |      |      |      |      |      |

|     |      |   |                            |     |     |
|-----|------|---|----------------------------|-----|-----|
| EWR | OITC | * 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 |     |
| 61  | 36   |   | Temperature: 75.6 deg. F   |     | 53  |
|     |      |   | Relative Humidity: 44 %    |     | (8) |
|     |      |   | Test Date: 16 October 2007 |     |     |

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