

# RSIC ACOUSTIC ASSEMBLY

## NOISE CONTROL WALL ASSEMBLY

DIRECT FIX TO WOOD



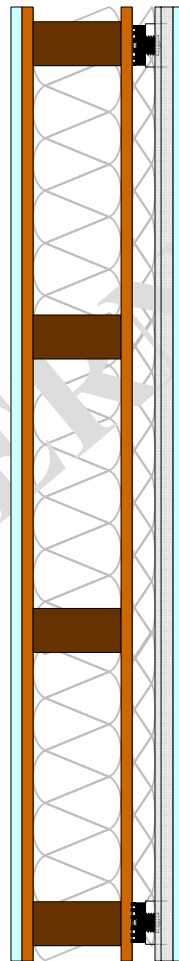
Toll Free 866-774-2100 • Telephone 503-649-7700

**WEAL 06-449 STC 53**

### CONSTRUCTION

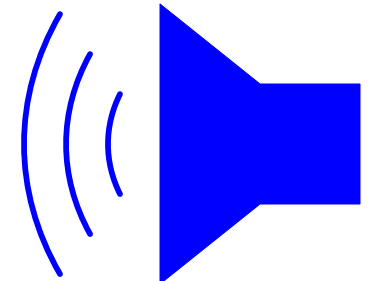
- 5/8" Gypsum Wall Board
- 1/2" Plywood
- 2x4 Wood Stud
- 3.5" Fiberglass Batt Insulation
- 1/2" Plywood
- RSIC-1 clips
- 1.5" Insulation
- 7/8" Drywall Furrign Channel
- 5/8" Gypsum Board

WEAL 06-449 STC 53



**1 Hour**

**U344**



**STC 53**



# 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. TL06-449

CLIENT: **Veneklasen Associates, Inc.**  
1711 16th Street  
Santa Monica, California 90404

Page 1 of 2  
17 November 2006

TEST DATE: 16 November 2006

### 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.

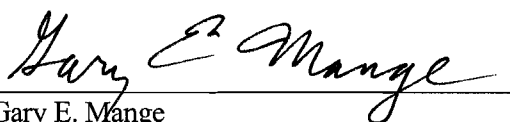
### DESCRIPTION OF TEST SPECIMEN

The test specimen was a wall assembly constructed from wood studs, plywood, and gypsum board. In this report, all wood stud dimensions are nominal. There was a double 2 x 4 head plate and a 3 x 4 sill plate. As viewed from the source room, from left to right the studs and spacings were: 2 x 4, 13" space, 3 x 4, 12" space, 3 x 4, 11" space, 2 x 4, 4 x 4, 3 x 4, 12" space, 3 x 4, 13" space, 3 x 4, 2 x 4, 5-1/2" space, flat 4 x 2, 2 x 4, 5-1/2" space, 2 x 4, 11" space, 3 x 4, 7-1/2" space, 2 x 4, 4 x 4, 3 x 4. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads on all sides. 3-1/2 inch (89 mm) thick plastic wrapped R-13 fiberglass batts were installed in the stud spaces. On both sides of the frame, one layer of 15/32 inch (11.9 mm) Structural-1 plywood was nailed to the studs with 10d nails at 2 inches (51 mm) O.C. around the perimeter and 12 inches (305 mm) O.C. in the field at two intermediate locations. The plywood was oriented vertically. The perimeter was sealed with a bead of caulking on both sides. On the receiving room side, one layer of 5/8 inch (15.9 mm) thick Type "X" gypsum board was screwed to the plywood at 12 inches (305 mm) O.C. around the perimeter and in the field. On the source room side, RSIC clips and hat channels were attached to the plywood at 48 inches (1.22 m) O.C. and 24 inches (610 mm) O.C. respectively. 2-1/2 inch (64 mm) thick fiberglass batts were installed against the plywood between the hat channels. One layer of 5/8 inch (15.9 mm) thick Type "X" gypsum board was screwed to the hat channels at 12 inches (305 mm) O.C. All gypsum board was oriented vertically and the joints were staggered from the plywood joints. On both sides, the joints and perimeter were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 127 inches (3.23 m) wide by 96 inches (2.44 m) high by 7-1/2 inches (191 mm) thick. The overall weight of the assembly was estimated to be 1303 lbs (591 kg) for a calculated surface density of 15.4 lbs./ft<sup>2</sup> (75.1 kg/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.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

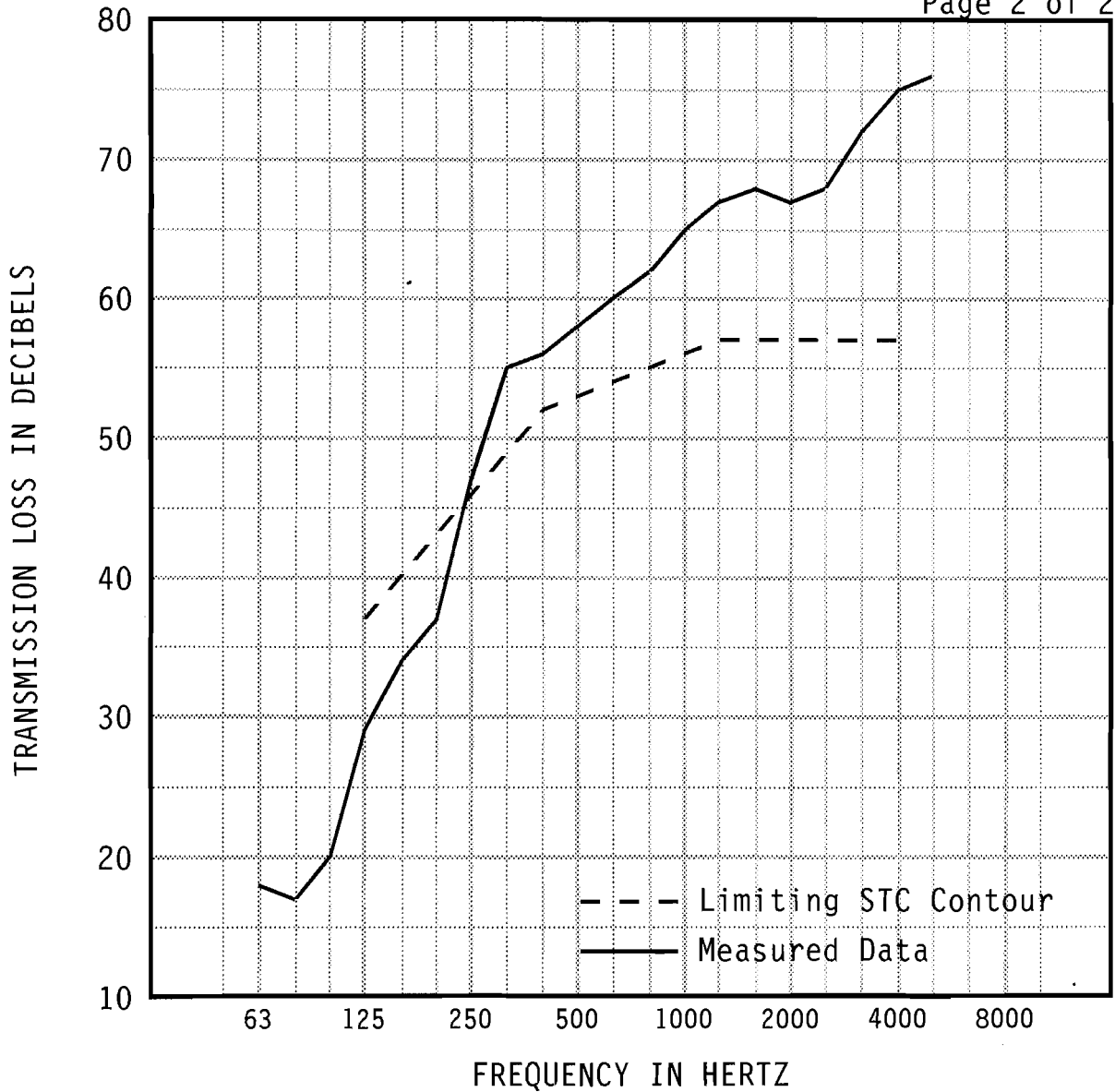
  
Gary E. Mange  
Laboratory Director

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# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL06-449



1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		18	17	20	29	34	37	47	55	56	58
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
					(8)	(6)	(6)				
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		60	62	65	67	68	67	68	72	75	76
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

EWR	OITC
53	33

Specimen Area: 84.67 sq.ft.  
 Temperature: 74.1 deg. F  
 Relative Humidity: 44 %  
 Test Date: 16 November 2006

STC
53
(20)

# RSIC ACOUSTIC ASSEMBLY

## NOISE CONTROL WALL ASSEMBLY

DIRECT FIX TO WOOD



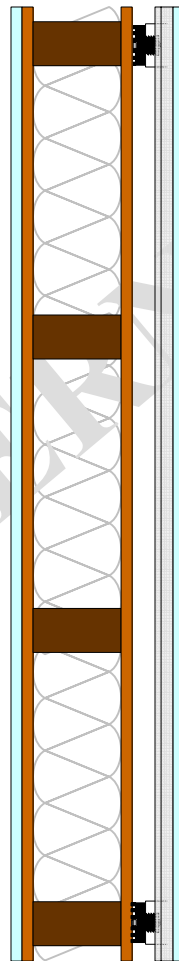
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WEAL 06-448 STC 47

### CONSTRUCTION

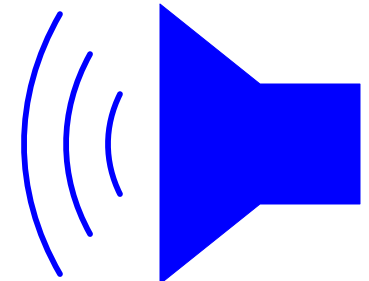
- 5/8" Gypsum Wall Board
- 1/2" Plywood
- 2x4 Wood Stud
- 3.5" Fiberglass Batt Insulation
- 1/2" Plywood
- RSIC-1 clips
- 7/8" Drywall Furrign Channel
- 5/8" Gypsum Board

WEAL 06-448 STC 47



**1 Hour**

**U344**



**STC 47**



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## SOUND TRANSMISSION LOSS TEST REPORT NO. TL06-448

CLIENT: **Veneklasen Associates, Inc.**  
1711 16th Street  
Santa Monica, California 90404

Page 1 of 2  
17 November 2006

TEST DATE: 16 November 2006

### 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 wood studs, plywood, and gypsum board. In this report, all wood stud dimensions are nominal. There was a double 2 x 4 head plate and a 3 x 4 sill plate. As viewed from the source room, from left to right the studs and spacings were: 2 x 4, 13" space, 3 x 4, 12" space, 3 x 4, 11" space, 2 x 4, 4 x 4, 3 x 4, 12" space, 3 x 4, 13" space, 3 x 4, 2 x 4, 5-1/2" space, flat 4 x 2, 2 x 4, 5-1/2" space, 2 x 4, 11" space, 3 x 4, 7-1/2" space, 2 x 4, 4 x 4, 3 x 4. The frame was isolated from the test opening with 1/4 inch (6.4 mm) neoprene pads on all sides. 3-1/2 inch (89 mm) thick plastic wrapped R-13 fiberglass batts were installed in the stud spaces. On both sides of the frame, one layer of 15/32 inch (11.9 mm) Structural-1 plywood was nailed to the studs with 10d nails at 2 inches (51 mm) O.C. around the perimeter and 12 inches (305 mm) O.C. in the field at two intermediate locations. The plywood was oriented vertically. The perimeter was sealed with a bead of caulking on both sides. On the receiving room side, one layer of 5/8 inch (15.9 mm) thick Type "X" gypsum board was screwed to the plywood at 12 inches (305 mm) O.C. around the perimeter and in the field. On the source room side, RSIC clips and hat channels were attached to the plywood at 48 inches (1.22 m) O.C. and 24 inches (610 mm) O.C. respectively. One layer of 5/8 inch (15.9 mm) thick Type "X" gypsum board was screwed to the hat channels at 12 inches (305 mm) O.C. All gypsum board was oriented vertically and the joints were staggered from the plywood joints. On both sides, the joints and perimeter were sealed with a bead of caulking and metal foil tape. All screw heads were covered with metal foil tape. The overall dimensions of the wall assembly were 127 inches (3.23 m) wide by 96 inches (2.44 m) high by 7-1/2 inches (191 mm) thick. The overall weight of the assembly was estimated to be 1291 lbs (586 kg) for a calculated surface density of 15.2 lbs./ft<sup>2</sup> (74.4 kg/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-47.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

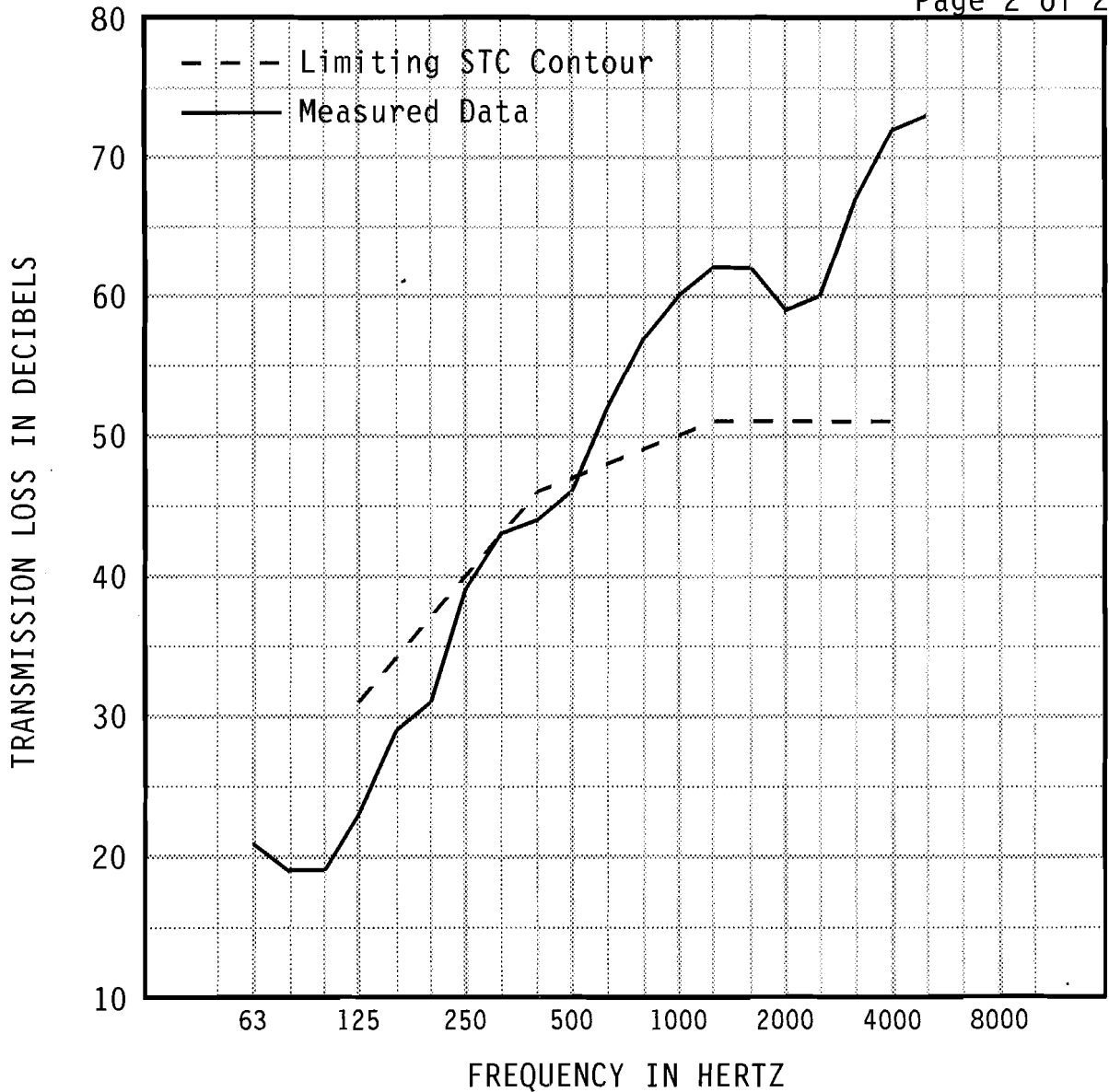
  
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Gary E. Mange  
Laboratory Director

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# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL06-448



1/3 OCT BND CNTR FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB	21	19	19	23	29	31	39	43	44	46
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
				(8)	(5)	(6)	(1)	(0)	(2)	(1)
1/3 OCT BND CNTR FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB	52	57	60	62	62	59	60	67	72	73
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

EWR	OITC	Specimen Area: 84.67 sq.ft. Temperature: 74.5 deg. F Relative Humidity: 52 % Test Date: 16 November 2006	STC
47	32		47 (23)

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# ACOUSTIC ASSEMBLY

## NOISE CONTROL WALL ASSEMBLY

DIRECT FIX TO WOOD



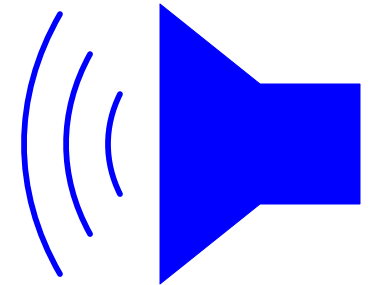
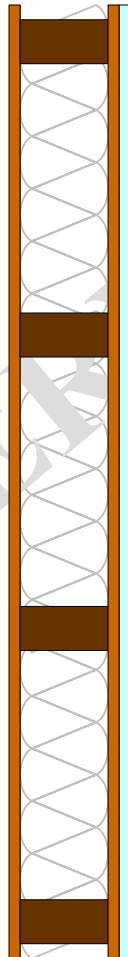
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WEAL 06-447 STC 41

### CONSTRUCTION

- 5/8" Gypsum Wall Board
- 1/2" Plywood
- 2x4 Wood Stud
- 3.5" Fiberglass Batt Insulation
- 1/2" Plywood

WEAL 06-447 STC 41



STC 41



# WESTERN ELECTRO - ACOUSTIC LABORATORY

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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. TL06-447

CLIENT: Veneklasen Associates, Inc.  
1711 16th Street  
Santa Monica, California 90404

Page 1 of 2  
17 November 2006

TEST DATE: 16 November 2006

### 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.


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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 Sound Transmission Class rating determined in accordance with ASTM E 413-04 was STC-41.

Respectfully submitted,  
Western Electro-Acoustic Laboratory

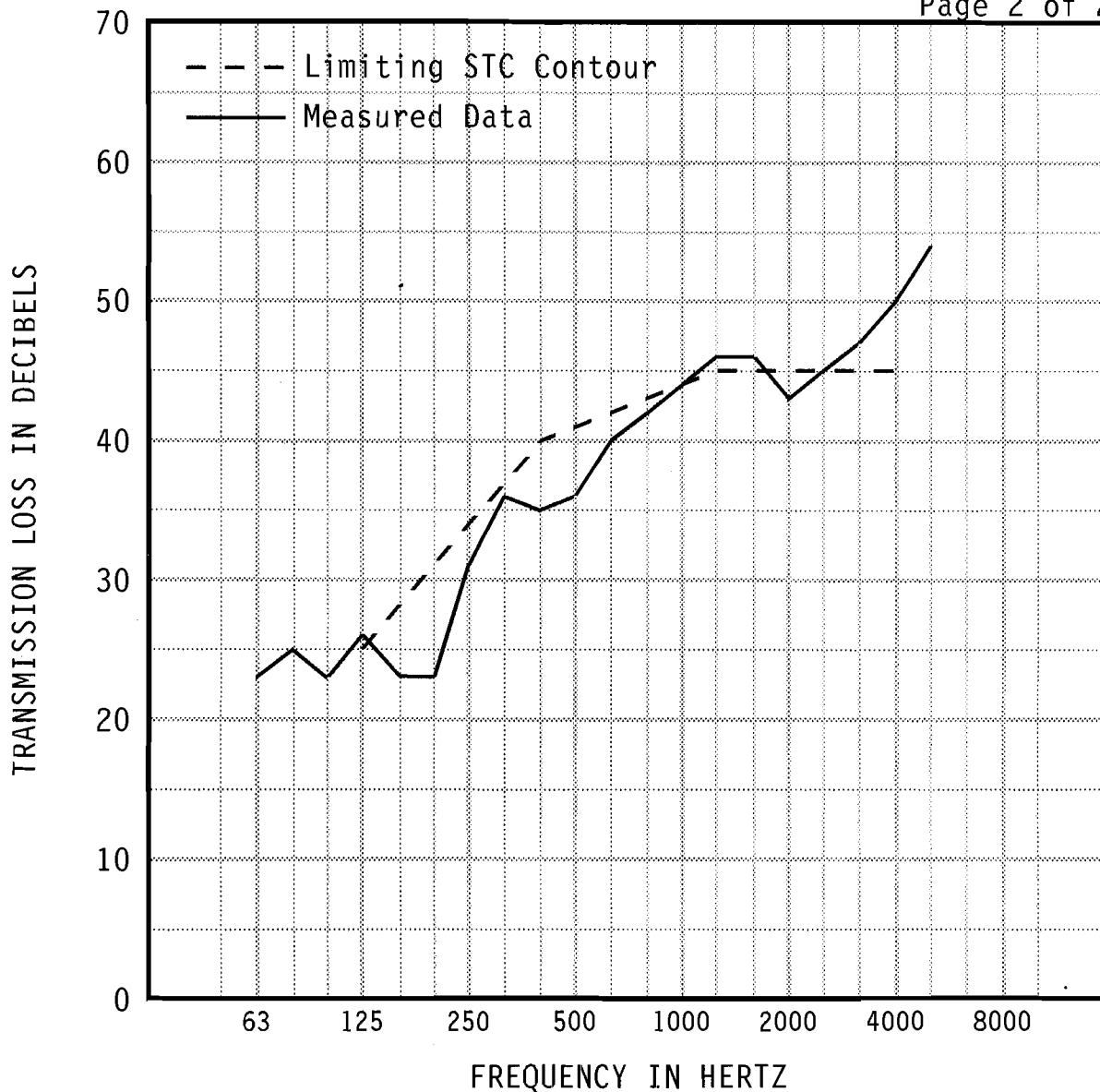
  
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Gary E. Mange  
Laboratory Director

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# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL06-447



1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		23	25	23	26	23	23	31	36	35	36
95% Confidence in dB deficiencies		1.42	1.92	2.07	1.47	0.89 (5)	0.76 (8)	0.80 (3)	0.52 (1)	0.36 (5)	0.38 (5)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		40	42	44	46	46	43	45	47	50	54
95% Confidence in dB deficiencies		0.29 (2)	0.44 (1)	0.38 (0)	0.39	0.36	0.56 (2)	0.55 (0)	0.31	0.32	0.50

EWR	OITC
40	32

Specimen Area: 84.67 sq.ft.  
 Temperature: 72.9 deg. F  
 Relative Humidity: 45 %  
 Test Date: 16 November 2006

STC
41 (32)

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# ACOUSTIC ASSEMBLY

## NOISE CONTROL WALL ASSEMBLY

DIRECT FIX TO WOOD



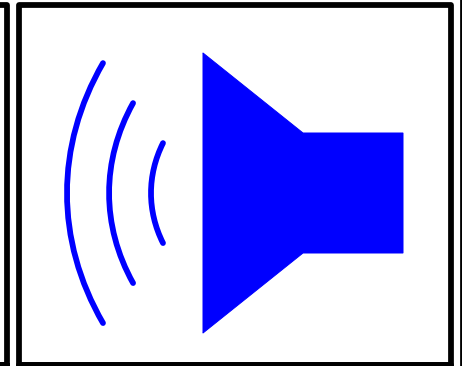
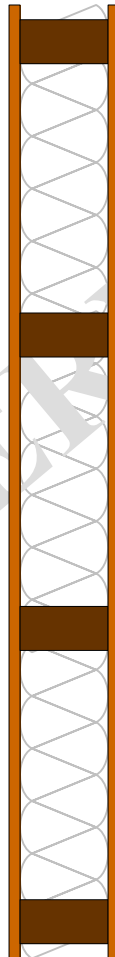
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WEAL 06-446 STC 36

### CONSTRUCTION

- ½" Plywood
- 2x4 Wood Stud
- 3.5" Fiberglass Batt Insulation
- ½" Plywood

WEAL 06-446 STC 36

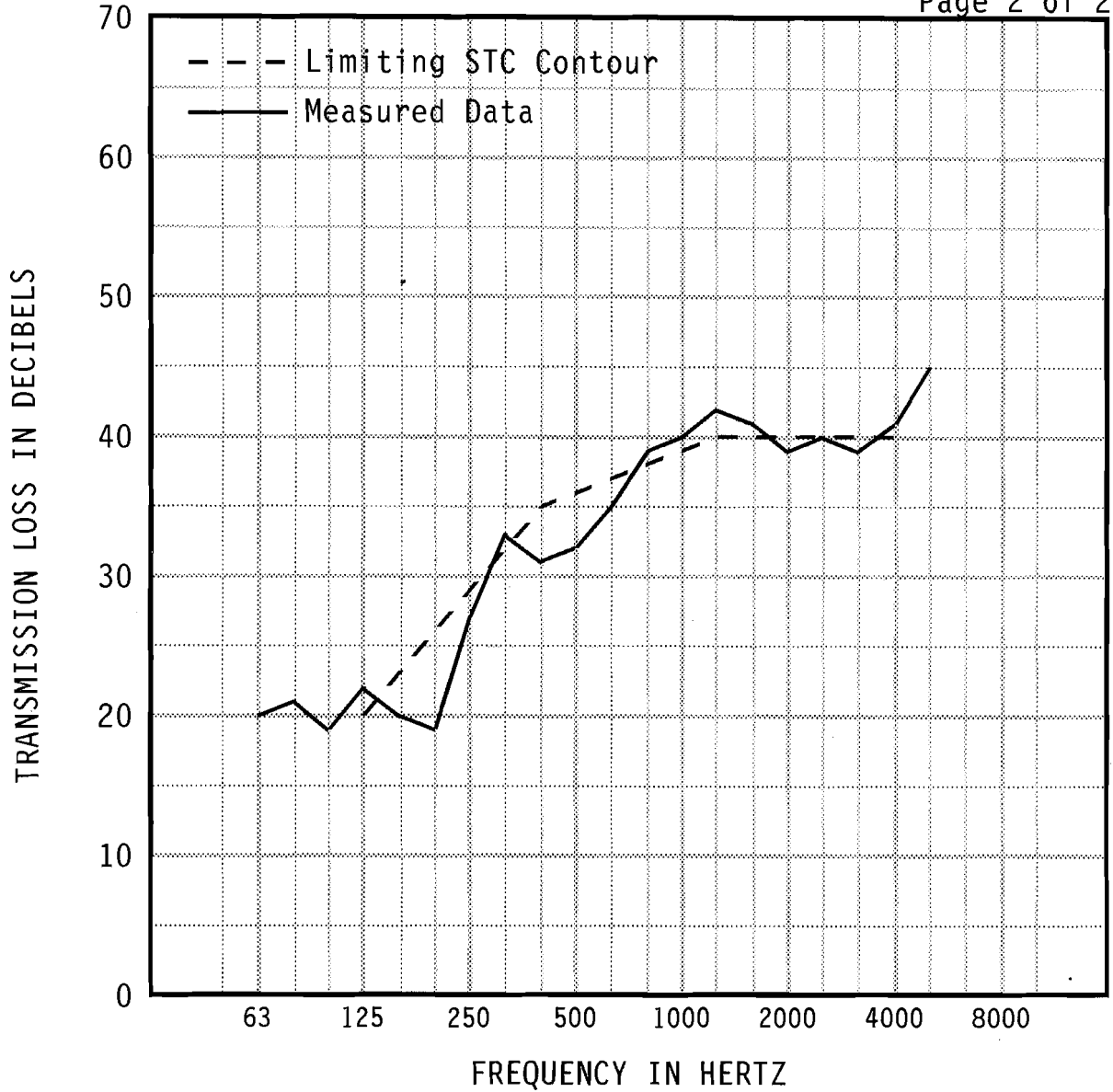


**STC 36**



# WESTERN ELECTRO-ACOUSTIC LABORATORY

Report No. TL06-446



1/3 OCT BND CNTR	FREQ	63	80	100	125	160	200	250	315	400	500
TL in dB		20	21	19	22	20	19	27	33	31	32
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)	(7)	(2)		(4)	(4)
1/3 OCT BND CNTR	FREQ	630	800	1000	1250	1600	2000	2500	3150	4000	5000
TL in dB		35	39	40	42	41	39	40	39	41	45
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
		(2)					(1)	(0)	(1)		

EWR	OITC	Specimen Area: 84.67 sq.ft. Temperature: 73.9 deg. F Relative Humidity: 40 % Test Date: 16 November 2006	STC
36	28		36 (24)

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