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REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 105030300

Date: March 23, 2023

REPORT NO. 105030300CRT-007f

**SOUND TRANSMISSION LOSS TEST AND
CLASSIFICATION OF TEST NUMBER #295654
ID: DISTRICT PRO: 2.5MM/12 MIL LVP
OVER A WOOD JOIST FLOOR/CEILING ASSEMBLY
WITH A 0.75 INCH THICK GYPSUM CONCRETE TOPPING**

RENDERED TO

LIONS FLOOR

INTRODUCTION

This report gives the result of a Sound Transmission Loss test on flooring. The sample was selected and supplied by the client and received at the laboratories on March 22, 2023. The material appeared to be in new, unused condition upon arrival.

AUTHORIZATION

Signed Intertek Quotation No. Qu-01328860-4

TEST METHOD

The specimen was tested in general accordance with the American Society for Testing and Materials designation ASTM E90-09 (2016), "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" and classified in accordance with the American Society for Testing and Materials designation ASTM E413-22, "Classification for Rating Sound Insulation". The size of the source room for the measurements is smaller than the minimum recommended of 125m³. This leads to slightly elevated uncertainties in the measurement data at low frequencies and does not allow microphones to be placed in full accordance with section A.2.

GENERAL

The sound-insulating property of a partition element is expressed in terms of the sound transmission loss. The procedure for determining this quantity is to mount (and perimeter seal) the test specimen as a partition between two reverberation rooms. Sound is introduced in one of the rooms (the source room) and measurements are made of the noise reduction between source room and receiving room. The rooms are so arranged and constructed that the only significant sound transmission between them is through the test specimen.

The purpose of the Sound Transmission Class (STC) is to provide a single figure rating that can be used for comparing the sound-insulating properties of partition elements used for general building design purposes. The higher the rating (STC) the greater the sound insulating properties of the partition.

DESCRIPTION OF THE FLOOR/CEILING ASSEMBLY

The test floor is a 100 sq. ft. opening that forms the horizontal separation of the two rooms, one directly above the other. The materials used in the assembly from top to bottom are:

- 0.75 inch thick Gypsum Concrete
- $\frac{3}{4}$ inch thick tongue & groove OSB decking (glued and screwed)
- 18 inch high Open Web Trusses (spaced 24 inches on center)
- 3.5 inch, unfaced insulation installed at the top of the cavities
- Dietrich RC Deluxe Resilient Channels (spaced 16 inches on center) fastened at every intersection
- One layer of 5/8 inch thick Type C Gypsum Board (taped and finished with compound)

DESCRIPTION OF TEST SPECIMEN

The test specimen consisted of test number #295654 ID: District Pro: 2.5mm/12 mil LVP. The plank flooring measured 7-1/4 inches wide by 48 inches long and weighed 0.94 pounds per square foot.

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LVP OVER A WOOD JOIST FLOOR/CEILING ASSEMBLY
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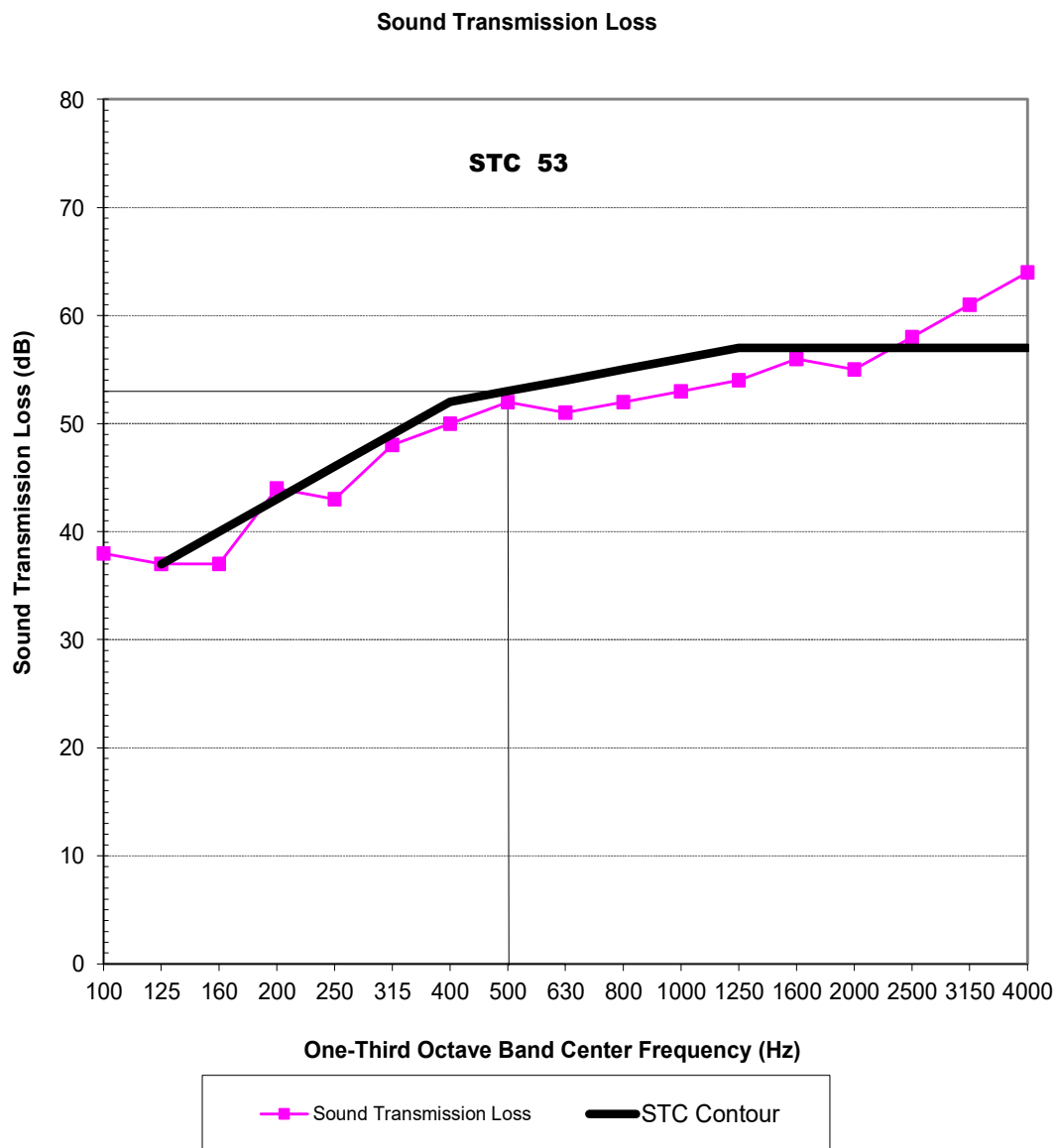
1/3 Octave Band Center Frequency <u>Hertz</u>	<u>Sound Transmission Loss in dB</u>
80	30
100	38
125	37
160	37
200	44
250	43
315	48
400	50
500	52
630	51
800	52
1000	53
1250	54
1600	56
2000	55
2500	58
3150	61
4000	64
5000	67
Sound Transmission Class	53

PRECISION

For the Intertek flooring test facility, the 95% confidence interval Δ TL, is as follows:

<u>Range of One-Third Octave Bands</u>	<u>Transmission Loss 95% Confidence Uncertainty, dB</u>
125 and 200	<4.0
250 and 315	<2.0
400 - 4000	<1.5

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REMARKS

1. Ambient Temperature: 70°F
2. Relative Humidity: 30%

CONCLUSION

The test method employed for this test has no pass-fail criteria; therefore, the evaluation of the test results is left to the discretion of the client.

Date of Test: March 23, 2023

Report Approved by:

A handwritten signature in black ink, appearing to read "Joey Esce".

Joey Esce
Project Engineer
Acoustical Testing

Report Reviewed By:

A handwritten signature in black ink, appearing to read "Brian Cyr".

Brian Cyr
Engineer
Acoustical Testing

Attachments: None