

TEST REPORT

For

Metroflor Corporation
15 Oakwood Ave., 2nd Floor
Norwalk, CT 06850
Arthur R. Clarke III / 203-299-3113

Impact Sound Transmission Test

ASTM E 492 – 09 / ASTM E 989 – 06

On

**6 Inch (152 mm) Concrete Slab Floor- Ceiling Assembly
With a Suspended-Gypsum Board Ceiling
With 3-1/2 Inch Fiberglass Insulation
Overlaid with Prevail® GDP Underlayment and
Dryback LVT (2.5 mm Gauge) Flooring**


Report Number: NGC 7016107

Assignment Number: G-1297


Test Date: 06/06/2016

Report Date: 06/27/2016

Submitted by: _____


Anthony J. Rivers
Test Technician

Reviewed by: _____


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Director

The results reported above apply to specific samples submitted for measurement. No responsibility is assumed for performance of any other specimen. The laboratory's accreditation or any of its test reports in no way constitute or imply product certification, approval, or endorsement by NVLAP, NIST or any agency of the Federal Government. This report may not be reproduced except in full, without written approval of the laboratory.

Revision Summary:

Date	SUMMARY
Approval Date: 06/27/2016	Original issue date: 06/27/2016 Original NGCTS report: NGC 7016107

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Test Method: This test method is in accordance with American Society for Testing and Materials Standard Test Method for Laboratory Measurement of Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine – Designation: E 492-09/ E 989-06.

The uncertainty limits of each tapping machine location met the precision requirements of section A1.4 of ASTM E 492-09.

Specimen Description: 6 inch concrete slab floor-suspended ceiling assembly overlaid with, according to client, Prevail® GDP Underlayment and Dryback LVT (2.5 mm Gauge) flooring.

The test specimen was a floor assembly and was observed to consist of the following:
All weights and dimension are averaged:

- 1 layer of, according to client, Dryback LVT (2.5 mm Gauge) flooring. The flooring was adhered to the Prevail® GDP Underlayment using Prevail® 6000 PSA adhesive. A 1.59 mm x 0.794 mm x 0.794 mm (1/16 in. x 1/32 in. x 1/32 in.) trowel was used to apply the adhesive. The flooring size was 609.6 mm x 609.6 mm (24 in. x 24 in.). The measured thickness of the flooring was 2.51 mm (0.099 in.), Measured weight of 4.05 kg/m² (0.83 PSF).
- 1 layer of, according to client, Prevail® GDP Underlayment. The underlayment was adhered to the concrete slab using Prevail® 6000 PSA adhesive. A 1.59 mm x 0.794 mm x 0.794 mm (1/16 in. x 1/32 in. x 1/32 in.) trowel was used to apply the adhesive. The measured thickness of the underlayment was 1.02 mm (0.04 in.), Measured weight of the underlayment was 0.098 kg/m² (0.02 PSF).
- 152.4 mm (6 in.) thick reinforced concrete slab, weighing: 366.2 kg/m² (75.0 PSF)
- 1 layer of, 88.9 mm (3.5 in.) unfaced fiberglass batt insulation which was laid over the suspended grid system parallel to the main tees. Sample weight: 0.78 kg/m² (0.16 PSF)
- Gypsum wallboard ceiling grid suspension system. System is comprised of main tees and cross tees. The main tees were placed 1219.2 mm (48 in.) o.c. and the cross tees were placed 609.6 mm (24 in.) o.c. 16 gauge galvanized tie wire was used to attach the main tees to concrete anchors, located 1219.2 mm (48 in.) o.c. along the longitudinal axis, suspending the grid 304.8 mm (12 in.) below the concrete slab.
- 1 layer of, 15.9 mm (5/8 in.) Type X gypsum wallboard. The wallboard was attached parallel to the suspended grid suspension system mains, using 28.6 mm (1-1/8 in.) Type S drywall screws spaced 304.8 mm (12 in.) o.c. The wallboard joints were taped. Suspended gypsum wallboard grid ceiling weighed: 11.23 kg/m² (2.30 PSF)

The overall weight of the test assembly is: 382.31 kg/m² (78.31 PSF)

The perimeter of the test frame was sealed with a rubber gasket and a sand filled trough.

The test frame was structurally isolated from the receiving room.

Specimen size: 3657.6 mm x 4876.8 mm (12 ft. x 16 ft.)

Conditioning: Concrete slab cured for a minimum of 28 days. Adhesive cured for a minimum of 24 hours.

Test Results: The results of the tests are given on pages 4 and 5 of the report.

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Normalized impact sound pressure level						
Test: ASTM E 492 - 09 / ASTM E 989 - 06						
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Specimen Size [m²]: 17.8						Date: 6/7/2016
Source room				Receiving room		
Rm Temp [°C]: 22				Volume [m³]: 124		
Humidity [%]: 54				Rm Temp [°C]: 22		
				Humidity [%]: 55		
Impact Insulation Class IIC [dB]: 70						
Sum of Unfavorable Deviations [dB]: 31						
Max. Unfavorable Deviation [dB]: 8				at 125 Hz		
Frequency	L _n	L2	d	Corr.	u.Dev.	ΔL _n
[Hz]	[dB]	[dB]	[dB/s]	[dB]	[dB]	
80	54	54.0	28.07	0.0		1.05
100	47	48.1	23.48	-1.1	5	1.88
125	50	52.5	18.55	-2.5	8	0.79
160	50	52.6	15.12	-2.6	8	1.23
200	49	52.4	14.00	-3.4	7	0.56
250	45	47.6	14.93	-2.6	3	0.64
315	42	45.1	14.93	-3.1		0.59
400	38	41.2	15.52	-3.2		0.47
500	31	35.6	17.00	-4.6		0.64
630	27	31.0	17.26	-4.0		0.48
800	23	26.9	17.96	-3.9		0.59
1000	23	27.1	16.95	-4.1		1.22
1250	21	25.7	17.91	-4.7		1.50
1600	21	25.4	19.24	-4.4		1.64
2000	19	22.1	22.41	-3.1		1.82
2500	13	16.2	25.21	-3.2		1.07
3150	15	17.3	26.43	-2.3		1.75
4000	12	14.2	29.44	-2.2		1.31
5000	11	12.0	33.75	-1.0		0.99

L _n	=	Normalized Sound Pressure Level, dB
L2	=	Receiving Room Level, dB
d	=	Decay Rate, dB/second
ΔL _n	=	Uncertainty for 95% Confidence Level

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Normalized impact sound pressure level

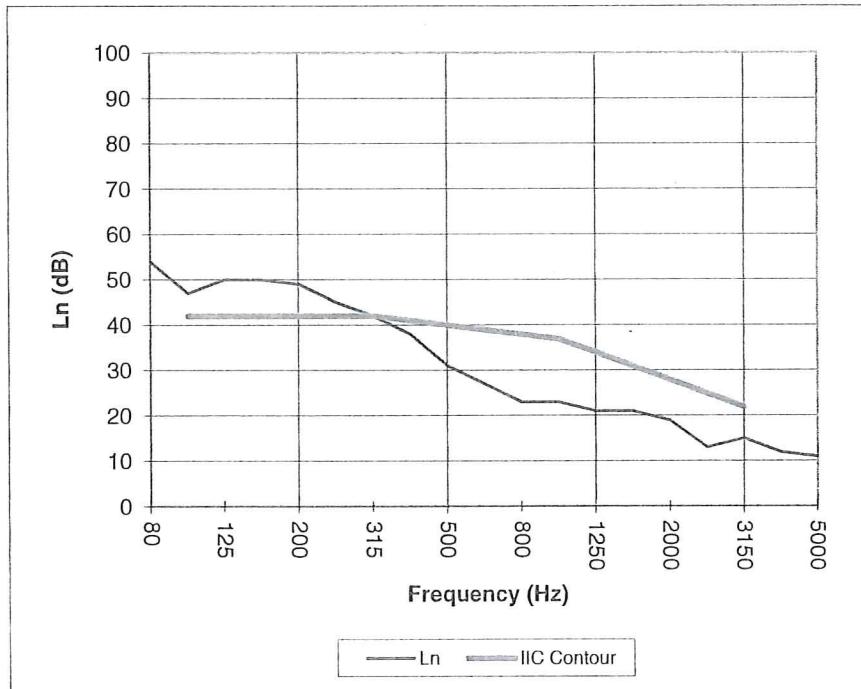
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 Test Date: 6/7/2016
 Specimen Size [m²]: 17.8

Impact Insulation Class IIC [dB]: 70

Frequency [Hz]	L _n [dB]
80	54
100	47
125	50
160	50
200	49
250	45
315	42
400	38
500	31
630	27
800	23
1000	23
1250	21
1600	21
2000	19
2500	13
3150	15
4000	12
5000	11



* Due to high insulating value of specimen, background levels limit results at these frequencies.

L_n = Normalized Sound Pressure Level, dB

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