

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

Report Date:	April 05, 2024	Source Room:	2nd Floor Kitchen, Volume: 3950 cu. ft.
Test Date:	April 04, 2024	Receiver Room:	1st Floor Great Room/Kitchen, Volume: 3950 cu
DLAA Test No:	1.2.1	Test Assembly:	Floor-ceiling, Area: 428 sq. ft.
Test Site:	Ka'ulu by Gentry		
Client:	Gentry Builders, LLC		

### STANDARDS

ASTM E336-16	Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings
ASTM E413-16	Classification for Rating Sound Insulation
ASTM E2235-04(2012)	Standard Test Method for Determination of Decay Rates for Use in Sound Insulation Test Methods

### STATEMENT OF CONFORMANCE:

Testing was conducted in general accordance with ASTM E336-16, with all exceptions noted below. All requirements for measuring and reporting Apparent Transmission Loss (ATL) and Apparent Sound Transmission Class (ASTC) were met.

The procedures of ASTM E336-16 Annex were not used.

### TEST ENVIRONMENT:

The source room was 2nd Floor Kitchen. The space was finished unfurnished. The floor was LVT. The ceiling was gyp. The walls were gyp. All doors and windows were closed during the testing period. The source room had a volume of approximately 3950 cu. ft.

The receiver room was 1st Floor Great Room/Kitchen. The space was finished unfurnished. The floor was LVT. The ceiling was gyp. The walls were gyp. All doors and windows were closed during the testing period. The receiver room had a volume of approximately 3950 cu. ft.

The test assembly measured approximately 14.8x29.583, and had an approximate area of 428 sq. ft.

### TEST ASSEMBLY:

The tested assembly was the Floor-ceiling. The assembly was not field verified, and was based on information provided by the client and drawings for the project. The client advised that no slab treatment or self-leveling was applied. Results may vary if slab treatment or self-leveling or any adhesive is used in other installations.

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### TEST PROCEDURE:

Determination of space-average sound pressure levels was performed via the manually scanned microphones technique, described in ASTM E336-16, Paragraph 11.4.3.3.

Flanking transmission was not evaluated.

To evaluate room absorption, 1 microphone was used to measure 4 decays at 4 locations around the receiving room for a total of 16 measurements, per ASTM E2235-04(2012).

### TEST INSTRUMENTATION:

Equipment Type	Manufacturer	Model Number	Serial Number	Last NIST Traceable Calibration	Last Local Calibration
Sound Level Meter 1	Larson Davis	831	3784	9/19/2022	Apr 2024
Microphone Pre-Amp:	Larson Davis	PRM831	051188	9/19/2022	Apr 2024
Microphone:	Larson Davis	377B20	301698	9/16/2022	Apr 2024
Calibrator:	Larson Davis	CAL200	2775671	9/19/2022	N/A
Sound Level Meter 2	Larson Davis	831	4328	10/24/2022	Apr 2024
Microphone Pre-Amp:	Larson Davis	PRM831	046469	10/24/2022	Apr 2024
Microphone:	Larson Davis	377B20	168830	10/20/2022	Apr 2024
Calibrator:	Larson Davis	CAL200	5955	10/26/2022	N/A
Amplified Loudspeakers (QTY 2)	QSC	K10	GAA530909	N/A	N/A
Noise Generator:	NTi Audio	MR-PRO	0162	N/A	N/A

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### STATEMENT OF TEST RESULTS:

Frequency	L1, Average Source Room Level (dB)	L2, Average Corrected Receiver Room Level (dB)	Average Receiver Background Level (dB)	Average RT60 (Seconds)	Noise Reduction, NR (dB)	Apparent Transmission Loss, ATL (dB)	Exceptions noted to ASTM E336-16
100 Hz	95.8	78.2	35.4	0.62	17.6	19.0	
125 Hz	95.0	79.5	39.2	0.85	15.5	18.2	
160 Hz	91.4	73.0	33.0	0.63	18.4	19.9	
200 Hz	90.0	65.6	37.1	1.00	24.4	27.8	
250 Hz	91.6	61.6	34.4	1.02	30.0	33.5	
315 Hz	89.7	57.6	33.7	1.14	32.1	36.1	
400 Hz	88.8	52.7	33.3	1.34	36.1	40.8	
500 Hz	84.7	47.5	32.5	1.26	37.2	41.7	
630 Hz	82.5	42.0	31.2	1.14	40.5	44.5	
800 Hz	84.5	39.9	30.6	1.12	44.6	48.5	
1000 Hz	83.0	33.7	29.6	1.29	49.3	53.9	
1250 Hz	83.8	30.4	28.9	1.46	53.4	58.5	
1600 Hz	81.4	28.2	28.5	1.52	53.2	58.5	
2000 Hz	79.8	25.5	24.9	1.46	54.3	59.4	
2500 Hz	82.4	22.1	20.6	1.39	60.3	65.2	
3150 Hz	84.0	19.6	18.5	1.40	64.4	69.3	
4000 Hz	85.0	17.7	17.6	1.39	67.3	72.2	
5000 Hz	84.3	16.1	15.1	1.32	68.2	72.8	

**ASTC: 41**

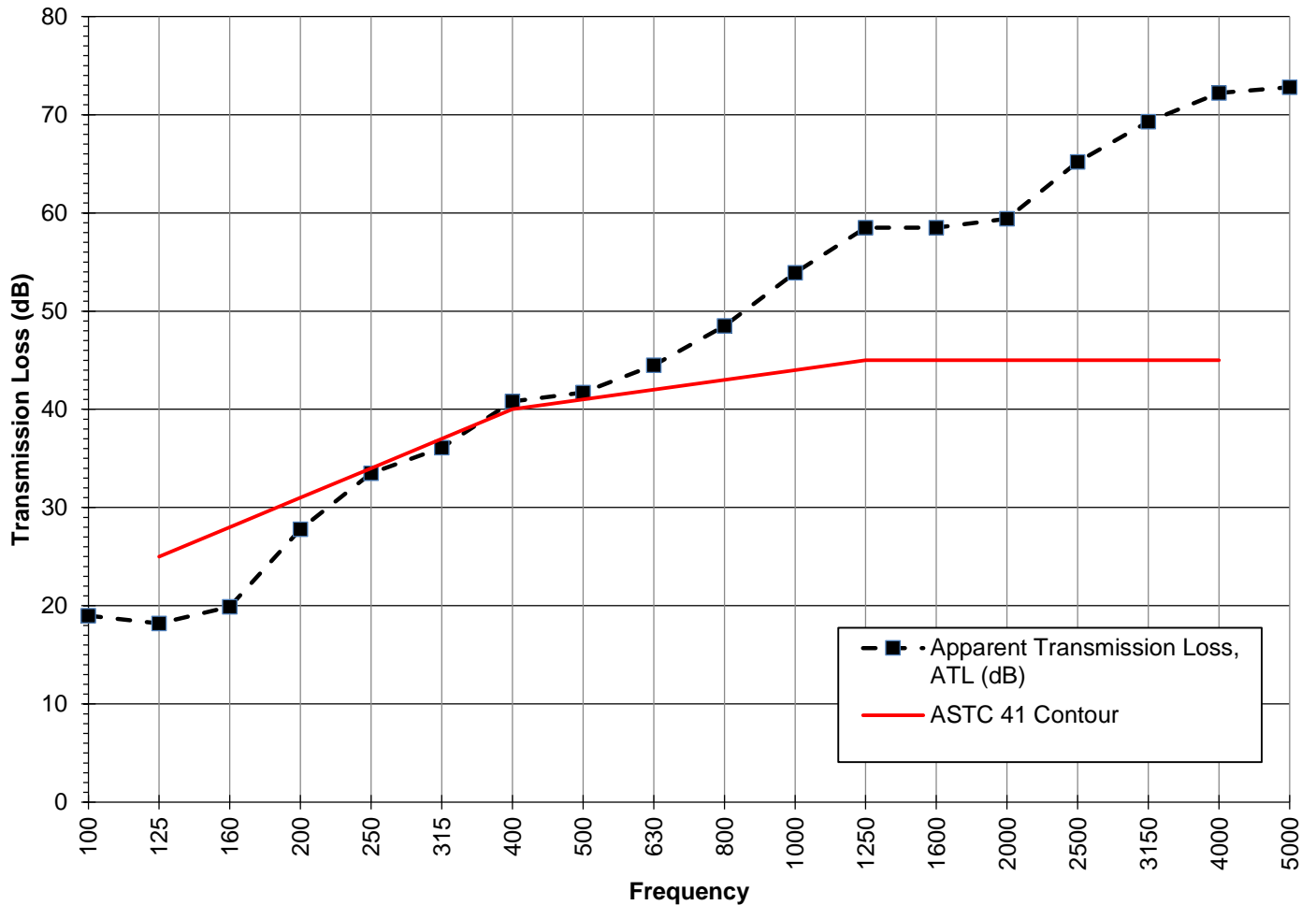
An Apparent Sound Transmission Class (ASTC) of 41, and a Noise Isolation Class (NIC) of 39 was calculated. The NIC rating is based on Noise Reduction (NR), and includes the effects of noise flanking. The NIC reference contour is shown on the next page, and has been "fit" to the Apparent Transmission Loss values, in accordance with the procedure of ASTM E413-16.

The results stated in this report represent only the specific construction and acoustical conditions present at the time of the test. Measurements performed in accordance with this test method on nominally identical constructions and acoustical conditions may produce different results.

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**ASTC: 41**

Test Conducted By:

Zane Wright, Project Consultant

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