

April 18, 2024

Jonathan Kam  
Gentry Builders, LLC  
733 Bishop Street, Suite 1400  
Honolulu, HI 96813

**RE: Ka'ulu by Gentry ASTC-AIIC Testing - Acoustical Testing Results – (DLAA# 24-004)**

Jonathan:

DLAA has conducted four ASTM E336-17a and ASTM E1007-16 tests at the Ka'ulu by Gentry project in Kapolei, Hawaii on Thursday April 4, 2024. The three floor/ceiling assemblies tested were between the living and bedroom areas of Building 18, Unit 1 and 2.

### **Acoustical Concepts and Definitions**

#### *Airborne Noise*

The Sound Transmission Class (STC) is a single-number rating which grades how well an assembly attenuates airborne noise, such as conversation. STC is measured according to ASTM E90 and classified according to ASTM E413. The higher the STC rating, the more efficient the partition is at reducing airborne noise between spaces. STC is only determined in a laboratory where all paths by which sound could travel around the test specimen are strictly controlled, ensuring the measured sound is only that which travels through the test specimen. Field ratings of airborne sound isolation are measured according to ASTM E336-17a and classified according to ASTM E413. According to ASTM E336-17a, the "Standard Method for Measurement of Sound Isolation in Buildings", measurements of a partition in the field include all elements in the assembly that would otherwise be absent in a laboratory. The effects of site-specific field conditions are included in the field metric Apparent Sound Transmission Class (ASTC). The ASTC rating of a construction element is typically specified 5 points less than the corresponding laboratory rating.

#### *Impact Noise*

The Impact Insulation Class (IIC) is a single-number rating which grades how well a floor/ceiling assembly attenuates impact noise, such as footsteps. The higher the IIC rating, the more efficient the partition is at reducing impact noise between spaces. It should be noted that the IIC rating is limited in that it does not address low frequency noise below 125 Hz. This is generally not a concern when with concrete and/or steel structures. Field measurements of impact noise are classified as Apparent Impact Insulation Class (AIIC). Field measurements determine a single-number Apparent Impact Insulation Class (AIIC) rating, which is typically allowed to be 5 points less than the corresponding laboratory IIC rating. For example, a

floor/ceiling assembly with IIC 55 and AIIC 50 ratings would be considered to have equivalent impact insulation performance.

### **Testing Procedure & Equipment**

Impact sound insulation was measured in general accordance with ASTM E1007-16, Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structures. Impact sound insulation ratings are determined in accordance with ASTM E989-06 (2012), Standard Classification for Determination of Impact Insulation Class (IIC). The results include a single-number Apparent Impact Insulation Class (AIIC) rating.

Equipment used for AIIC testing included a Larson Davis Model 831 Type 1 Precision Integrating Sound Level Meter (S/N 004328) with a PCB Model PRM831 preamplifier (S/N 046469) and PCB Model 377B20 ½” random incidence microphone (S/N 168830). The sound level meter calibration was verified with a Larson Davis Model CAL200 (S/N 5955) before all measurements and at the conclusion of all measurements. The tapping machine is a Norsonic Model Nor-277 (S/N 2775671).

### **Test Conditions**

The purpose of these tests was to analyze the performance of resilient underlayment for the Hardwood and Carpet floor surfaces, as well as the ASTC performance of their assembly. The tested floor/ceiling constructions are as follows:

#### Unit 2

The floor/ceiling assembly in Unit 2 can be described as follows:

- One (1) layer Hardwood flooring in kitchen area, one (1) layer of carpet in Great Room, hallways and Bedrooms.
- ½” Exacor Underlayment
- Wood Truss Joist construction – R19 Batt insulation secured against subfloor
- (2) Layer 5/8” Type-X gypsum board with Resilient Channels.

#### Unit 1

The floor assembly in Unit 1 can be described as follows:

- One (1) layer Hardwood vinyl floor throughout Kitchen, Great Room and Bedrooms.
- Slab on grade concrete.

### Test Results Summary

A summary of the tests is provided here, and the detailed test results for each test are attached.

**Table 1: AIIC/ASTC Test Results**

| Test No. | Adjacency Tested  | AIIC Result | ASTC Result |
|----------|---|-------------|-------------|
| 1.1      | Unit 2 Great Room, Carpet to<br>Unit 1 Great Room/Kitchen | 66          | 41          |
| 1.2      | Unit 2 Kitchen, Hardwood to<br>Unit 1 Great Room/Kitchen  | 38          | 41          |
| 1.3      | Unit 2 Bed 3, Carpet to Unit 1<br>Bed 2                   | 68          | 41          |
| 1.4      | Unit 2 Bed 1, Carpet to Unit 1<br>Bed 1                   | 63          | 45          |

Please let us know if you have any questions.

Sincerely,



Jake Pfitsch  
Staff Consultant  
Encl: Test Results Reports

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIIC)

|               |                      |                |  |
|---------------|----------------------|----------------|--|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Great Room, Volume: 3949 cu. ft.         |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| DLAA Test No: | 1.1.1                | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.                   |
| Test Site:    | Ka'ulu by Gentry     |                |  |
| Client:       | Gentry Builders, LLC |                |  |

### STANDARDS

|                     |   |
|---------------------|---|
| ASTM E1007-14       | Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure |
| ASTM E989-06(2012)  | Standard Classification for Determination of Impact Insulation Class (IIC)  |
| 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 E1007-14, with all exceptions noted below. All requirements for measuring and reporting Absorption Normalized Impact Sound Pressure Level (ANISPL) and Apparent Impact Insulation Class (AIIIC) were met.

### TEST ENVIRONMENT:

The source room was 2nd Floor Great Room. The space was finished, unfurnished. The floor was Carpet. 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 3949 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 3949 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.

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIc)

|               |                |                |  |
|---------------|----------------|----------------|--|
| Report Date:  | April 18, 2024 | Source Room:   | 2nd Floor Great Room, Volume: 3949 cu. ft.         |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| DLAA Test No: | 1.1.1          | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.                   |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### TEST PROCEDURE:

The test was performed in general accordance with ASTM E1007-14. Determination of Space-Average Levels performed via the manually scanned microphones technique, described in ASTM E1007-14, Paragraph 11.4.2.2.

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 |
|-----------------------|--------------|--------------|---------------|---------------------------------|------------------------|
| Tapping Machine:      | Norsonics    | CAL200       | 2775671       | 9/19/2022                       | N/A                    |
| Sound Level Meter     | Larson Davis | 831          | 4328          | 10/24/2022                      | 4/4/2024               |
| Microphone Pre-Amp    | Larson Davis | PRM831       | 046469        | 10/24/2022                      | 4/4/2024               |
| Microphone            | Larson Davis | 377B20       | 168830        | 10/20/2022                      | 4/4/2024               |
| Calibrator            | Larson Davis | CAL200       | 5955          | 10/26/2022                      | N/A                    |
| Amplified Loudspeaker | QSC          | K10          | GAA530909     | N/A                             | N/A                    |
| Noise Generator       | NTi Audio    | MR-PRO       | 0162          | N/A                             | N/A                    |

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

|               |                      |                |  |
|---------------|----------------------|----------------|--|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Great Room, Volume: 3949 cu. ft.         |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| DLAA Test No: | 1.1.1                | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.                   |
| Test Site:    | Ka'ulu by Gentry     |                |  |
| Client:       | Gentry Builders, LLC |                |  |

### STATEMENT OF TEST RESULTS:

| Frequency | Absorption Normalized Impact Sound Pressure Level, ANISPL (dB) | Average Receiver Background Level | Average RT60 (Seconds) | Exceptions noted to ASTM E1007-14 |   |
|-----------|--|-----------------------------------|------------------------|-----------------------------------|---|
| 100 Hz    | 54.0   | 35.4                              | 0.62                   |                                   |   |
| 125 Hz    | 51.0   | 39.2                              | 0.85                   |                                   | 2 |
| 160 Hz    | 47.0   | 33.0                              | 0.63                   |                                   | 2 |
| 200 Hz    | 40.0   | 37.1                              | 1.00                   | 1                                 | 2 |
| 250 Hz    | 44.0   | 34.4                              | 1.02                   |                                   | 2 |
| 315 Hz    | 48.0   | 33.7                              | 1.14                   |                                   | 2 |
| 400 Hz    | 40.0   | 33.3                              | 1.34                   |                                   | 2 |
| 500 Hz    | 33.0   | 32.5                              | 1.26                   | 1                                 | 2 |
| 630 Hz    | 30.0   | 31.2                              | 1.14                   | 1                                 | 2 |
| 800 Hz    | 29.0   | 30.6                              | 1.12                   | 1                                 | 2 |
| 1000 Hz   | 27.0   | 29.6                              | 1.29                   | 1                                 |   |
| 1250 Hz   | 26.0   | 28.9                              | 1.46                   | 1                                 |   |
| 1600 Hz   | 26.0   | 28.5                              | 1.52                   | 1                                 |   |
| 2000 Hz   | 23.0   | 24.9                              | 1.46                   | 1                                 |   |
| 2500 Hz   | 20.0   | 20.6                              | 1.39                   | 1                                 |   |
| 3150 Hz   | 19.0   | 18.5                              | 1.40                   | 1                                 |   |
| 4000 Hz   | 18.0   | 17.6                              | 1.39                   |                                   |   |
| 5000 Hz   | 17.0   | 15.1                              | 1.32                   |                                   |   |

\*This test does not fully conform to the requirements of ASTM E1007-13, so the calculated AIIC rating should be considered a minimum.

#### Notes:

1. The signal-to-noise ratio is less < 5 dB at this frequency band.
2. Airborne sound flanking is within 10 dB of impact sound pressure measurements at this frequency band.

**AIIC: 66**

An Apparent Impact Insulation Class (AIIC) of 66 and an Impact Sound Rating (ISR) of 71 was calculated. The AIIC rating is based on Absorption Normalized Impact Sound Pressure Level (ANISPL), and includes the effects of noise flanking. The AIIC reference contour is shown on the next page, and has been "fit" to the ANISPL values, in accordance with the procedure of ASTM E989-06(2012).

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.

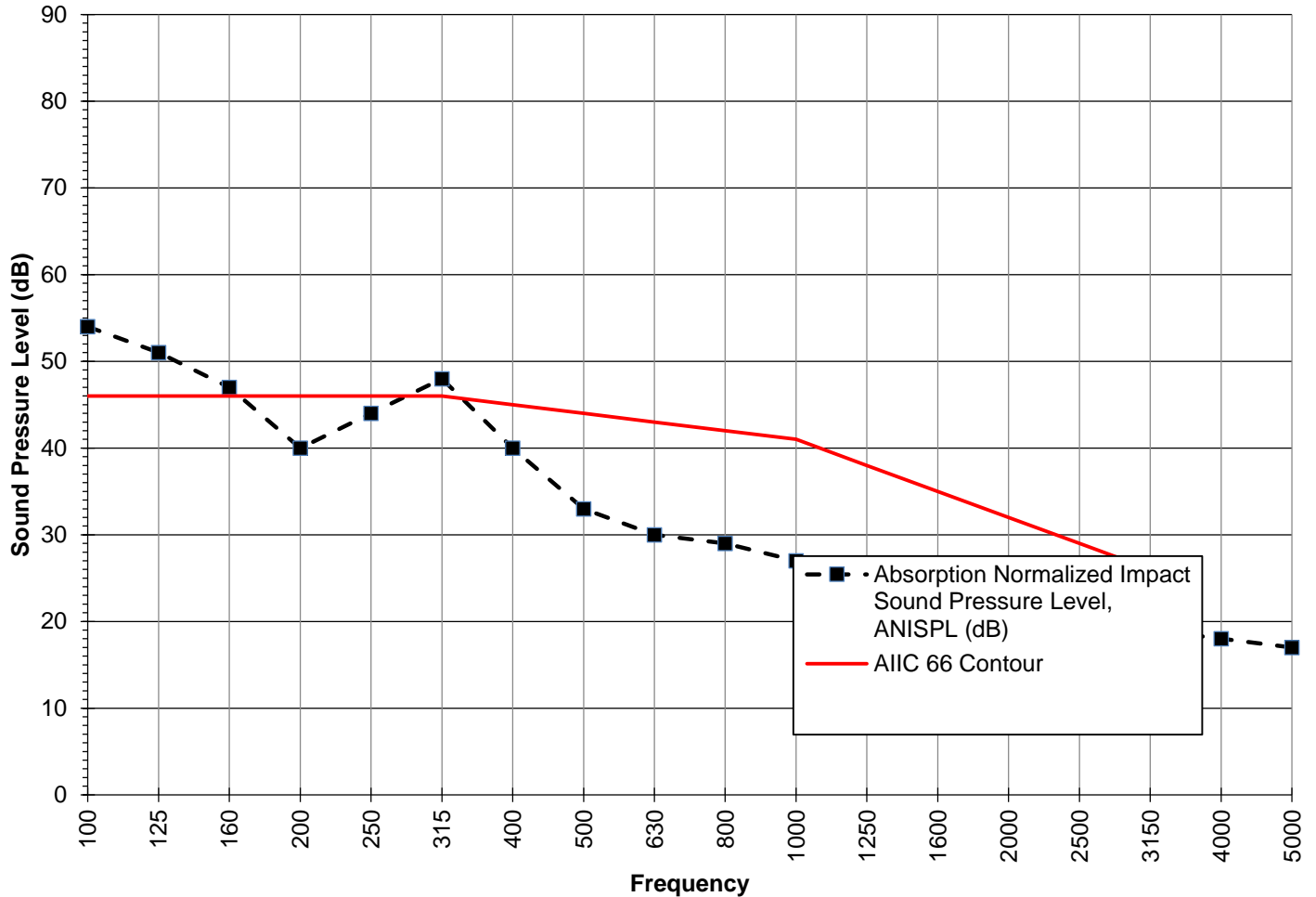
# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

Report Date: April 18, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.1.1

Source Room: 2nd Floor Great Room, Volume: 3949 cu. ft.  
Receiver Room: 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft.  
Test Assembly: Floor-ceiling, Area: 428 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**AIIC: 66**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIIC)

|               |                |                |  |
|---------------|----------------|----------------|--|
| Report Date:  | April 18, 2024 | Source Room:   | 2nd Floor Kitchen, Volume: 3949 cu. ft.            |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| 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 E1007-14       | Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure |
| ASTM E989-06(2012)  | Standard Classification for Determination of Impact Insulation Class (IIC)  |
| 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 E1007-14, with all exceptions noted below. All requirements for measuring and reporting Absorption Normalized Impact Sound Pressure Level (ANISPL) and Apparent Impact Insulation Class (AIIIC) were met.

### 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 3949 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 3949 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.



# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIc)

|               |                      |                |  |
|---------------|----------------------|----------------|--|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Kitchen, Volume: 3949 cu. ft.            |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| DLAA Test No: | 1.2.1                | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.                   |
| Test Site:    | Ka'ulu by Gentry     |                |  |
| Client:       | Gentry Builders, LLC |                |  |

### TEST PROCEDURE:

The test was performed in general accordance with ASTM E1007-14. Determination of Space-Average Levels performed via the manually scanned microphones technique, described in ASTM E1007-14, Paragraph 11.4.2.2.

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 |
|-----------------------|--------------|--------------|---------------|---------------------------------|------------------------|
| Tapping Machine:      | Norsonics    | CAL200       | 2775671       | 9/19/2022                       | N/A                    |
| Sound Level Meter     | Larson Davis | 831          | 4328          | 10/24/2022                      | 4/4/2024               |
| Microphone Pre-Amp    | Larson Davis | PRM831       | 046469        | 10/24/2022                      | 4/4/2024               |
| Microphone            | Larson Davis | 377B20       | 168830        | 10/20/2022                      | 4/4/2024               |
| Calibrator            | Larson Davis | CAL200       | 5955          | 10/26/2022                      | N/A                    |
| Amplified Loudspeaker | QSC          | K10          | GAA530909     | N/A                             | N/A                    |
| Noise Generator       | NTi Audio    | MR-PRO       | 0162          | N/A                             | N/A                    |

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

|               |                |                |  |
|---------------|----------------|----------------|--|
| Report Date:  | April 18, 2024 | Source Room:   | 2nd Floor Kitchen, Volume: 3949 cu. ft.            |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft. |
| DLAA Test No: | 1.2.1          | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.                   |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### STATEMENT OF TEST RESULTS:

| Frequency | Absorption Normalized Impact Sound Pressure Level, ANISPL (dB) | Average Receiver Background Level | Average RT60 (Seconds) | Exceptions noted to ASTM E1007-14 |
|-----------|--|-----------------------------------|------------------------|-----------------------------------|
| 100 Hz    | 82.0   | 35.4                              | 0.62                   |                                   |
| 125 Hz    | 83.0   | 39.2                              | 0.85                   |                                   |
| 160 Hz    | 79.0   | 33.0                              | 0.63                   |                                   |
| 200 Hz    | 76.0   | 37.1                              | 1.00                   |                                   |
| 250 Hz    | 77.0   | 34.4                              | 1.02                   |                                   |
| 315 Hz    | 74.0   | 33.7                              | 1.14                   |                                   |
| 400 Hz    | 69.0   | 33.3                              | 1.34                   |                                   |
| 500 Hz    | 63.0   | 32.5                              | 1.26                   |                                   |
| 630 Hz    | 56.0   | 31.2                              | 1.14                   |                                   |
| 800 Hz    | 50.0   | 30.6                              | 1.12                   |                                   |
| 1000 Hz   | 46.0   | 29.6                              | 1.29                   |                                   |
| 1250 Hz   | 47.0   | 28.9                              | 1.46                   |                                   |
| 1600 Hz   | 45.0   | 28.5                              | 1.52                   |                                   |
| 2000 Hz   | 45.0   | 24.9                              | 1.46                   |                                   |
| 2500 Hz   | 41.0   | 20.6                              | 1.39                   |                                   |
| 3150 Hz   | 38.0   | 18.5                              | 1.40                   |                                   |
| 4000 Hz   | 34.0   | 17.6                              | 1.39                   |                                   |
| 5000 Hz   | 31.0   | 15.1                              | 1.32                   |                                   |

**AIIC: 38**

An Apparent Impact Insulation Class (AIIC) of 38 and an Impact Sound Rating (ISR) of 42 was calculated. The AIIC rating is based on Absorption Normalized Impact Sound Pressure Level (ANISPL), and includes the effects of noise flanking. The AIIC reference contour is shown on the next page, and has been "fit" to the ANISPL values, in accordance with the procedure of ASTM E989-06(2012).

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.

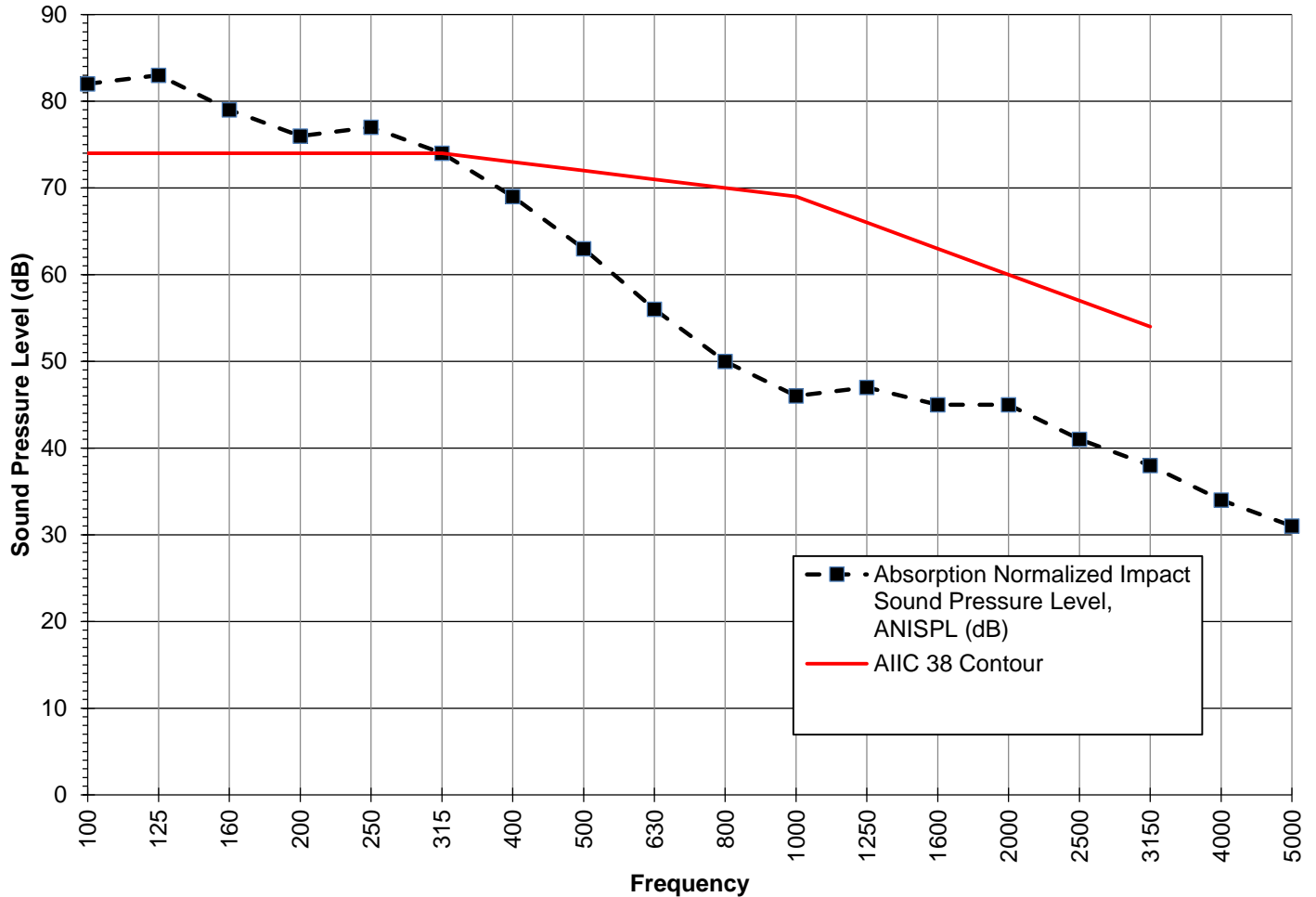
# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

Report Date: April 18, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.2.1

Source Room: 2nd Floor Kitchen, Volume: 3949 cu. ft.  
Receiver Room: 1st Floor Great Room/Kitchen, Volume: 3949 cu. ft.  
Test Assembly: Floor-ceiling, Area: 428 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**AIIC: 38**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIc)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Bed 3, Volume: 796 cu. ft.  |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 2, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.3.1                | Test Assembly: | Floor-ceiling, Area: 88 sq. ft.       |
| Test Site:    | Ka'ulu by Gentry     |                |                                       |
| Client:       | Gentry Builders, LLC |                |                                       |

### STANDARDS

|                     |   |
|---------------------|---|
| ASTM E1007-14       | Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure |
| ASTM E989-06(2012)  | Standard Classification for Determination of Impact Insulation Class (IIC)  |
| 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 E1007-14, with all exceptions noted below. All requirements for measuring and reporting Absorption Normalized Impact Sound Pressure Level (ANISPL) and Apparent Impact Insulation Class (AIIc) were met.

### TEST ENVIRONMENT:

The source room was 2nd Floor Bed 3. The space was finished, unfurnished. The floor was Carpet. 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 796 cu. ft.

The receiver room was 1st Floor Bed 2. 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 1413 cu. ft.

The test assembly measured approximately 9x9.8, and had an approximate area of 88 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.

## Field Impact Sound Transmission Test Report

### Apparent Impact Insulation Class (AIIIC)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024 | Source Room:   | 2nd Floor Bed 3, Volume: 796 cu. ft.  |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 2, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.3.1          | Test Assembly: | Floor-ceiling, Area: 88 sq. ft.       |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

#### TEST PROCEDURE:

The test was performed in general accordance with ASTM E1007-14. Determination of Space-Average Levels performed via the manually scanned microphones technique, described in ASTM E1007-14, Paragraph 11.4.2.2.

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 |
|-----------------------|--------------|--------------|---------------|---------------------------------|------------------------|
| Tapping Machine:      | Norsonics    | CAL200       | 2775671       | 9/19/2022                       | N/A                    |
| Sound Level Meter     | Larson Davis | 831          | 4328          | 10/24/2022                      | 4/4/2024               |
| Microphone Pre-Amp    | Larson Davis | PRM831       | 046469        | 10/24/2022                      | 4/4/2024               |
| Microphone            | Larson Davis | 377B20       | 168830        | 10/20/2022                      | 4/4/2024               |
| Calibrator            | Larson Davis | CAL200       | 5955          | 10/26/2022                      | N/A                    |
| Amplified Loudspeaker | QSC          | K10          | GAA530909     | N/A                             | N/A                    |
| Noise Generator       | NTi Audio    | MR-PRO       | 0162          | N/A                             | N/A                    |

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Bed 3, Volume: 796 cu. ft.  |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 2, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.3.1                | Test Assembly: | Floor-ceiling, Area: 88 sq. ft.       |
| Test Site:    | Ka'ulu by Gentry     |                |                                       |
| Client:       | Gentry Builders, LLC |                |                                       |

### STATEMENT OF TEST RESULTS:

| Frequency | Absorption Normalized Impact Sound Pressure Level, ANISPL (dB) | Average Receiver Background Level | Average RT60 (Seconds) | Exceptions noted to ASTM E1007-14 |   |
|-----------|--|-----------------------------------|------------------------|-----------------------------------|---|
| 100 Hz    | 50.0   | 31.9                              | 0.63                   |                                   |   |
| 125 Hz    | 52.0   | 33.2                              | 0.77                   |                                   | 2 |
| 160 Hz    | 47.0   | 35.2                              | 0.57                   |                                   |   |
| 200 Hz    | 45.0   | 36.9                              | 0.75                   |                                   |   |
| 250 Hz    | 44.0   | 30.5                              | 1.44                   |                                   | 2 |
| 315 Hz    | 47.0   | 27.9                              | 0.97                   |                                   |   |
| 400 Hz    | 39.0   | 23.0                              | 1.08                   |                                   | 2 |
| 500 Hz    | 34.0   | 21.1                              | 1.16                   |                                   | 2 |
| 630 Hz    | 29.0   | 20.7                              | 1.06                   |                                   | 2 |
| 800 Hz    | 26.0   | 19.8                              | 1.00                   |                                   | 2 |
| 1000 Hz   | 21.0   | 18.6                              | 1.08                   |                                   | 2 |
| 1250 Hz   | 20.0   | 16.2                              | 1.21                   |                                   | 2 |
| 1600 Hz   | 18.0   | 14.8                              | 1.26                   |                                   | 2 |
| 2000 Hz   | 16.0   | 11.0                              | 1.23                   |                                   | 2 |
| 2500 Hz   | 11.0   | 9.0                               | 1.10                   |                                   | 2 |
| 3150 Hz   | 9.0  | 8.4                               | 1.00                   | 1                                 | 2 |
| 4000 Hz   | 11.0   | 11.2                              | 1.05                   |                                   |   |
| 5000 Hz   | 9.0  | 9.8                               | 1.01                   |                                   |   |

\*This test does not fully conform to the requirements of ASTM E1007-13, so the calculated AIIC rating should be considered a minimum.

#### Notes:

1. The signal-to-noise ratio is less < 5 dB at this frequency band.
2. Airborne sound flanking is within 10 dB of impact sound pressure measurements at this frequency band.

**AIIC: 68**

An Apparent Impact Insulation Class (AIIC) of 68 and an Impact Sound Rating (ISR) of 69 was calculated. The AIIC rating is based on Absorption Normalized Impact Sound Pressure Level (ANISPL), and includes the effects of noise flanking. The AIIC reference contour is shown on the next page, and has been "fit" to the ANISPL values, in accordance with the procedure of ASTM E989-06(2012).

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.

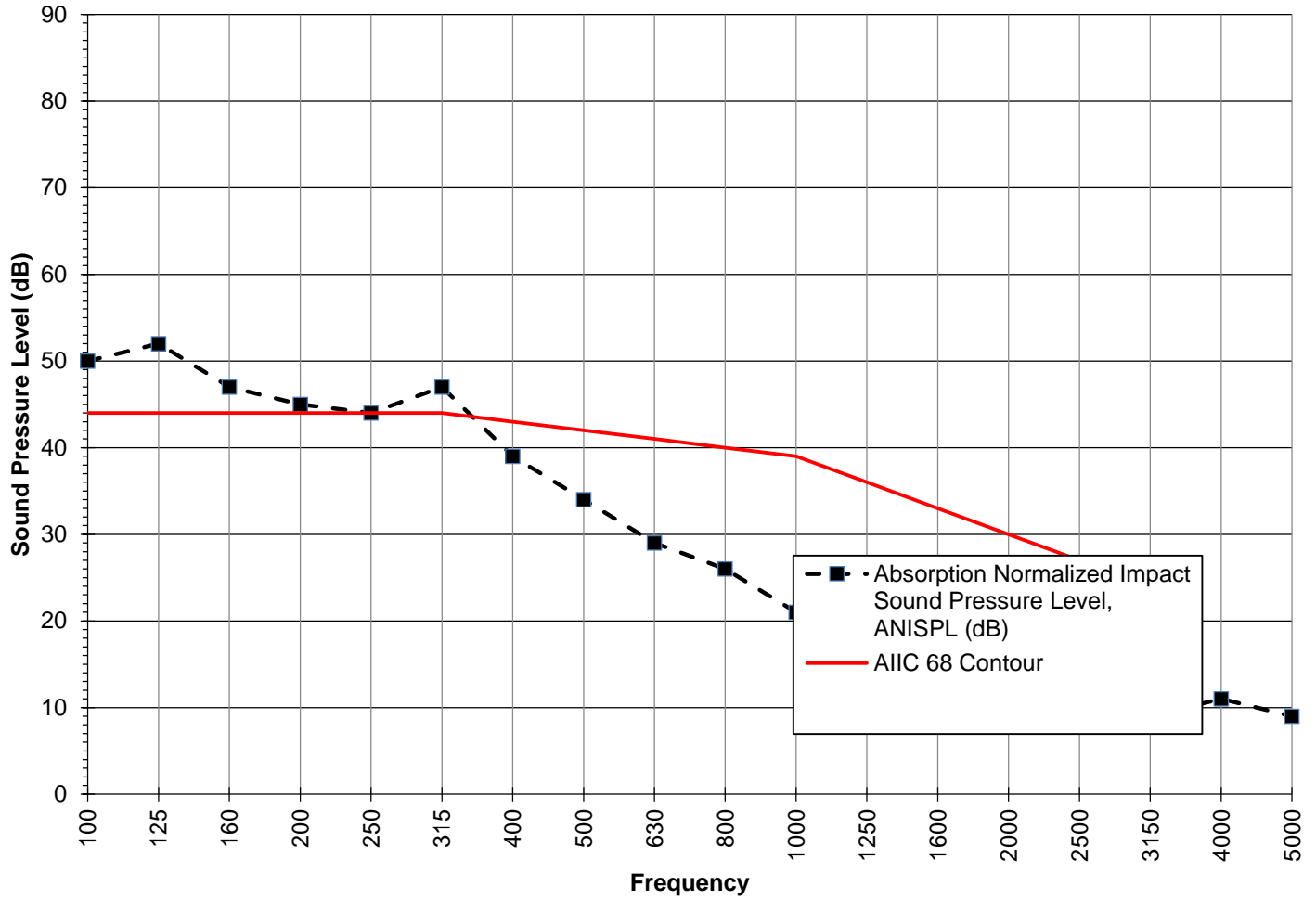
# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

Report Date: April 18, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.3.1

Source Room: 2nd Floor Bed 3, Volume: 796 cu. ft.  
Receiver Room: 1st Floor Bed 2, Volume: 1413 cu. ft.  
Test Assembly: Floor-ceiling, Area: 88 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**AIIC: 68**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIc)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024 | Source Room:   | 2nd Floor Bed 1, Volume: 1176 cu. ft. |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 1, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.4.1          | Test Assembly: | Floor-ceiling, Area: 130 sq. ft.      |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### STANDARDS

|                     |   |
|---------------------|---|
| ASTM E1007-14       | Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure |
| ASTM E989-06(2012)  | Standard Classification for Determination of Impact Insulation Class (IIC)  |
| 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 E1007-14, with all exceptions noted below. All requirements for measuring and reporting Absorption Normalized Impact Sound Pressure Level (ANISPL) and Apparent Impact Insulation Class (AIIc) were met.

### TEST ENVIRONMENT:

The source room was 2nd Floor Bed 1. The space was finished, unfurnished. The floor was Carpet. 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 1176 cu. ft.

The receiver room was 1st Floor Bed 1. 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 1413 cu. ft.

The test assembly measured approximately 12.3x10.6, and had an approximate area of 130 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.



# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIc)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Bed 1, Volume: 1176 cu. ft. |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 1, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.4.1                | Test Assembly: | Floor-ceiling, Area: 130 sq. ft.      |
| Test Site:    | Ka'ulu by Gentry     |                |                                       |
| Client:       | Gentry Builders, LLC |                |                                       |

### TEST PROCEDURE:

The test was performed in general accordance with ASTM E1007-14. Determination of Space-Average Levels performed via the manually scanned microphones technique, described in ASTM E1007-14, Paragraph 11.4.2.2.

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 |
|-----------------------|--------------|--------------|---------------|---------------------------------|------------------------|
| Tapping Machine:      | Norsonics    | CAL200       | 2775671       | 9/19/2022                       | N/A                    |
| Sound Level Meter     | Larson Davis | 831          | 4328          | 10/24/2022                      | 4/4/2024               |
| Microphone Pre-Amp    | Larson Davis | PRM831       | 046469        | 10/24/2022                      | 4/4/2024               |
| Microphone            | Larson Davis | 377B20       | 168830        | 10/20/2022                      | 4/4/2024               |
| Calibrator            | Larson Davis | CAL200       | 5955          | 10/26/2022                      | N/A                    |
| Amplified Loudspeaker | QSC          | K10          | GAA530909     | N/A                             | N/A                    |
| Noise Generator       | NTi Audio    | MR-PRO       | 0162          | N/A                             | N/A                    |

# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 18, 2024       | Source Room:   | 2nd Floor Bed 1, Volume: 1176 cu. ft. |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 1, Volume: 1413 cu. ft. |
| DLAA Test No: | 1.4.1                | Test Assembly: | Floor-ceiling, Area: 130 sq. ft.      |
| Test Site:    | Ka'ulu by Gentry     |                |                                       |
| Client:       | Gentry Builders, LLC |                |                                       |

### STATEMENT OF TEST RESULTS:

| Frequency | Absorption Normalized Impact Sound Pressure Level, ANISPL (dB) | Average Receiver Background Level | Average RT60 (Seconds) | Exceptions noted to ASTM E1007-14 |   |
|-----------|--|-----------------------------------|------------------------|-----------------------------------|---|
| 100 Hz    | 57.0   | 39.7                              | 0.73                   |                                   |   |
| 125 Hz    | 49.0   | 38.6                              | 0.66                   |                                   |   |
| 160 Hz    | 47.0   | 34.0                              | 0.57                   |                                   |   |
| 200 Hz    | 41.0   | 38.4                              | 0.86                   |                                   |   |
| 250 Hz    | 39.0   | 34.2                              | 1.59                   |                                   | 2 |
| 315 Hz    | 44.0   | 25.8                              | 1.17                   |                                   |   |
| 400 Hz    | 38.0   | 23.5                              | 1.32                   |                                   | 2 |
| 500 Hz    | 32.0   | 23.8                              | 1.47                   |                                   | 2 |
| 630 Hz    | 26.0   | 21.1                              | 1.34                   |                                   | 2 |
| 800 Hz    | 23.0   | 19.2                              | 1.22                   |                                   | 2 |
| 1000 Hz   | 18.0   | 19.3                              | 1.35                   | 1                                 | 2 |
| 1250 Hz   | 17.0   | 16.5                              | 1.50                   |                                   | 2 |
| 1600 Hz   | 16.0   | 14.7                              | 1.64                   |                                   | 2 |
| 2000 Hz   | 16.0   | 11.9                              | 1.57                   |                                   | 2 |
| 2500 Hz   | 16.0   | 10.2                              | 1.46                   |                                   |   |
| 3150 Hz   | 14.0   | 9.4                               | 1.26                   |                                   |   |
| 4000 Hz   | 10.0   | 11.9                              | 1.33                   |                                   |   |
| 5000 Hz   | 9.0  | 10.6                              | 1.36                   |                                   |   |

\*This test does not fully conform to the requirements of ASTM E1007-13, so the calculated AIIC rating should be considered a minimum.

#### Notes:

1. The signal-to-noise ratio is less < 5 dB at this frequency band.
2. Airborne sound flanking is within 10 dB of impact sound pressure measurements at this frequency band.

**AIIC: 63**

An Apparent Impact Insulation Class (AIIC) of 63 and an Impact Sound Rating (ISR) of 70 was calculated. The AIIC rating is based on Absorption Normalized Impact Sound Pressure Level (ANISPL), and includes the effects of noise flanking. The AIIC reference contour is shown on the next page, and has been "fit" to the ANISPL values, in accordance with the procedure of ASTM E989-06(2012).

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.

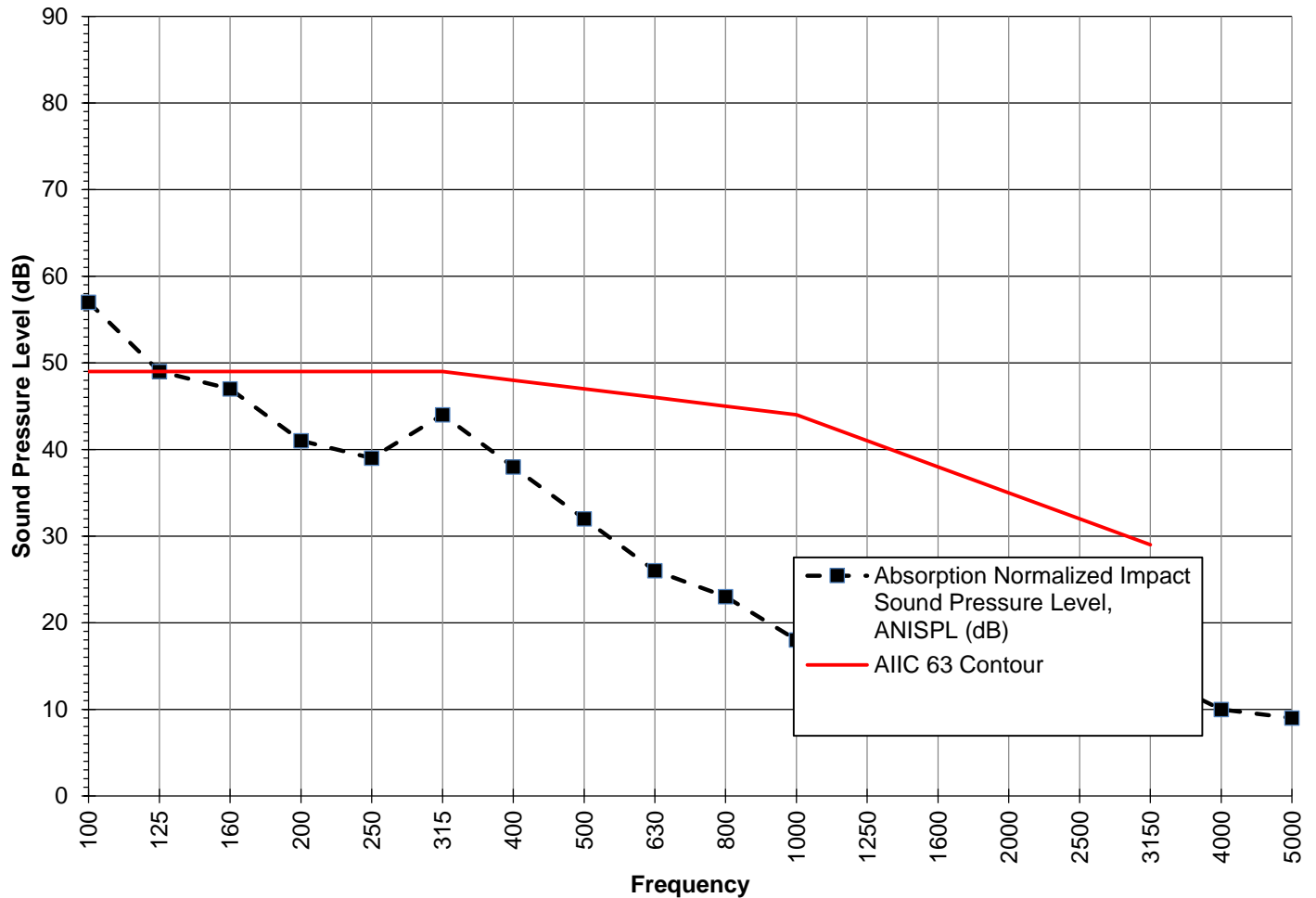
# Field Impact Sound Transmission Test Report

## Apparent Impact Insulation Class (AIIC)

Report Date: April 18, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.4.1

Source Room: 2nd Floor Bed 1, Volume: 1176 cu. ft.  
Receiver Room: 1st Floor Bed 1, Volume: 1413 cu. ft.  
Test Assembly: Floor-ceiling, Area: 130 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**AIIC: 63**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                      |                |   |
|---------------|----------------------|----------------|---|
| Report Date:  | April 05, 2024       | Source Room:   | 2nd Floor Great Room, Volume: 3950 cu. ft.    |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3950 cu |
| DLAA Test No: | 1.1.1                | 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 Great Room. The space was finished, unfurnished. The floor was Carpet. 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.

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                      |                |   |
|---------------|----------------------|----------------|---|
| Report Date:  | April 05, 2024       | Source Room:   | 2nd Floor Great Room, Volume: 3950 cu. ft.    |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3950 cu |
| DLAA Test No: | 1.1.1                | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.              |
| Test Site:    | Ka'ulu by Gentry     |                |   |
| Client:       | Gentry Builders, LLC |                |   |

### 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                    |

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                |                |   |
|---------------|----------------|----------------|---|
| Report Date:  | April 05, 2024 | Source Room:   | 2nd Floor Great Room, Volume: 3950 cu. ft.    |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3950 cu |
| DLAA Test No: | 1.1.1          | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.              |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### 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**

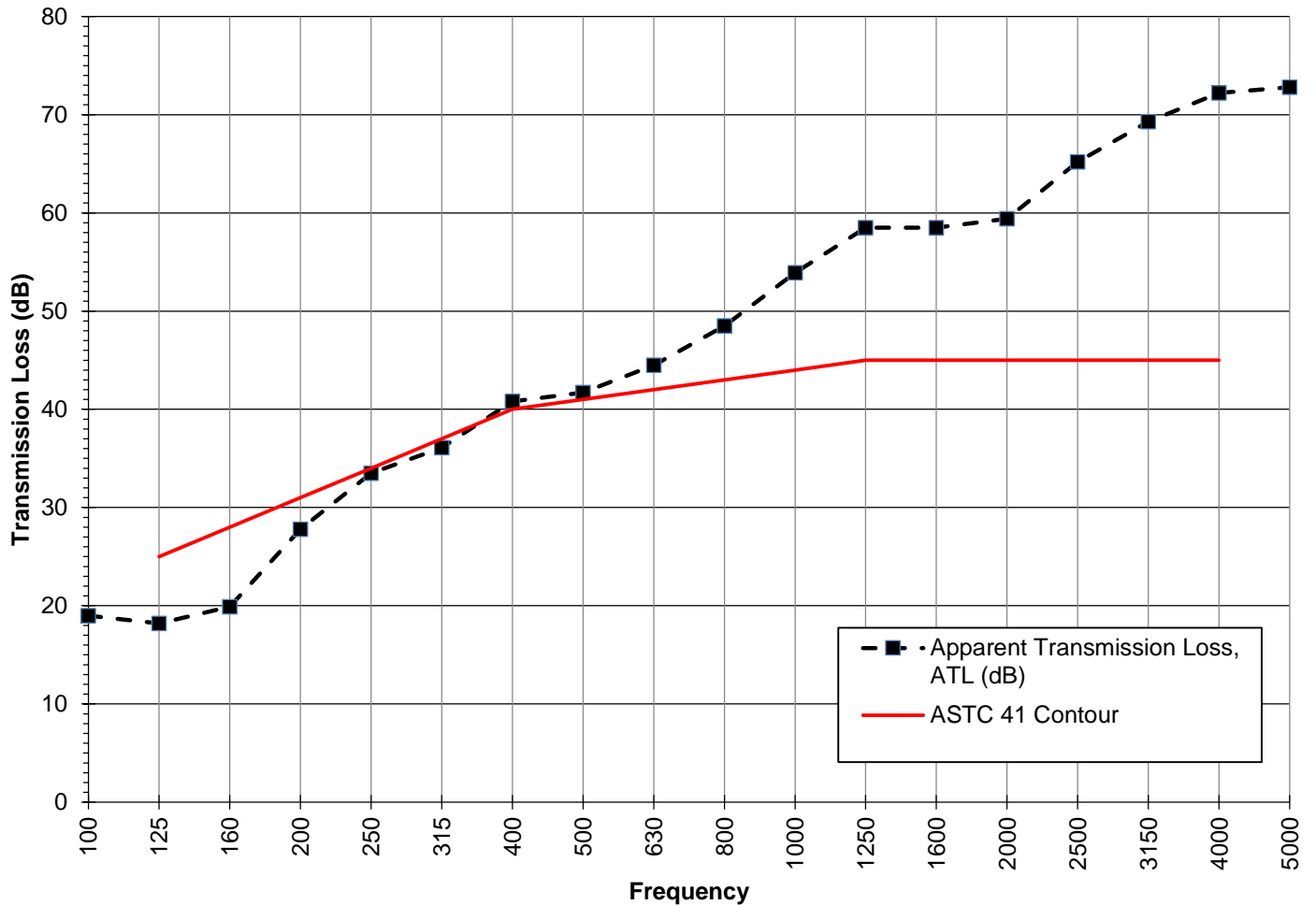
An Apparent Sound Transmission Class (ASTC) of 41, and a Noise Isolation Class (NIC) of 39 was calculated. The NIC rating is based on Noise Reduction (NR), and includes the effects of noise flanking. The NIC reference contour is shown on the next page, and has been "fit" to the Apparent Transmission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

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                      |                |   |
|---------------|----------------------|----------------|---|
| Report Date:  | April 05, 2024       | Source Room:   | 2nd Floor Great Room, Volume: 3950 cu. ft.    |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Great Room/Kitchen, Volume: 3950 cu |
| DLAA Test No: | 1.1.1                | Test Assembly: | Floor-ceiling, Area: 428 sq. ft.              |
| Test Site:    | Ka'ulu by Gentry     |                |   |
| Client:       | Gentry Builders, LLC |                |   |



**ASTC: 41**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# 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.



# 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 |                |   |

### 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                    |

# 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 |

### 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**

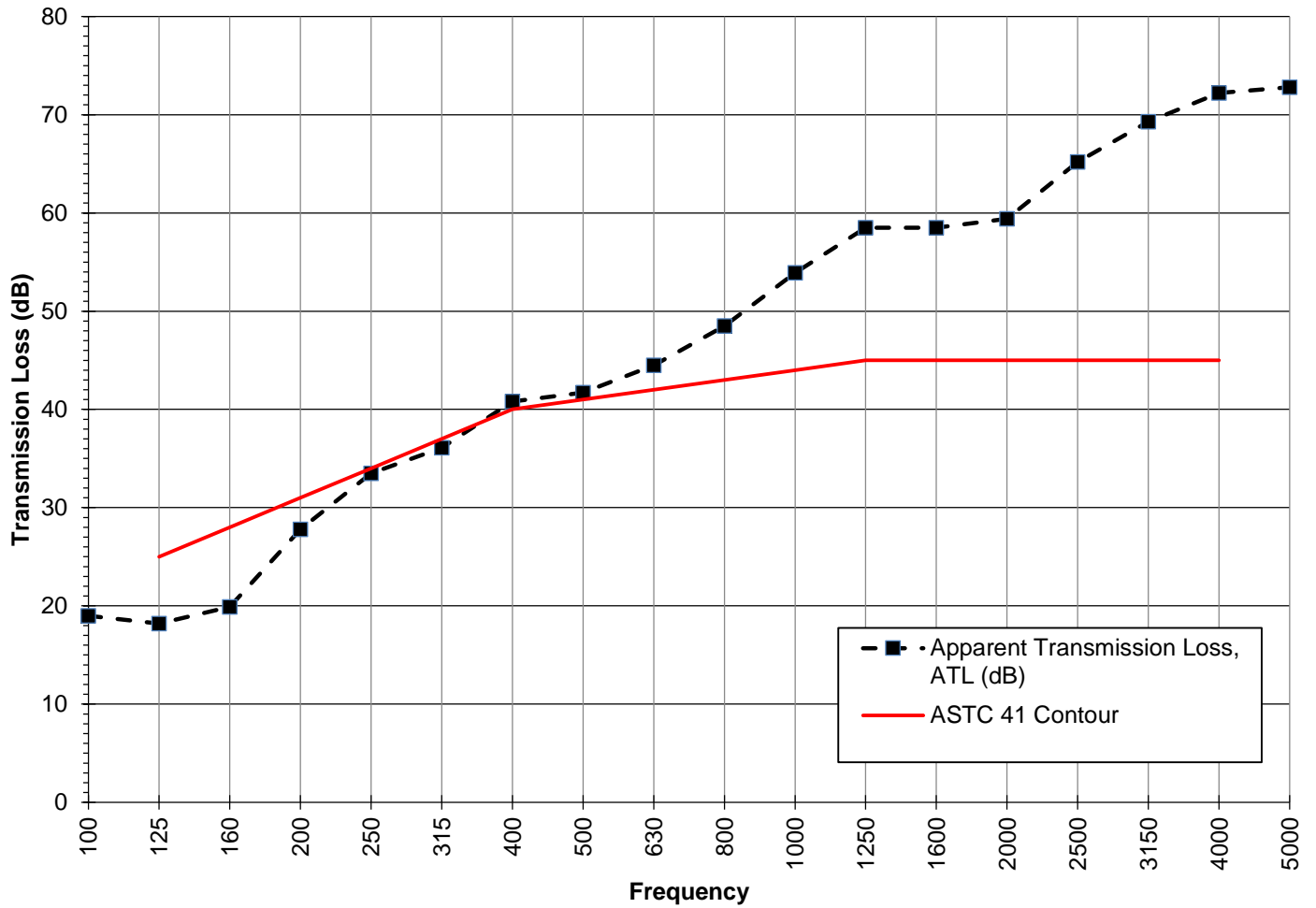
An Apparent Sound Transmission Class (ASTC) of 41, and a Noise Isolation Class (NIC) of 39 was calculated. The NIC rating is based on Noise Reduction (NR), and includes the effects of noise flanking. The NIC reference contour is shown on the next page, and has been "fit" to the Apparent Transmission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

# 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 |                |   |



**ASTC: 41**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024       | Source Room:   | 2nd Floor Bed 3, Volume: 800 cu. ft.  |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 2, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.3.1                | Test Assembly: | Floor-ceiling, Area: 88 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 Bed 3. The space was finished, unfurnished. The floor was Carpet. 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 800 cu. ft.

The receiver room was 1st Floor Bed 2. 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 1410 cu. ft.

The test assembly measured approximately 9x9.8, and had an approximate area of 88 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.

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024 | Source Room:   | 2nd Floor Bed 3, Volume: 800 cu. ft.  |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 2, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.3.1          | Test Assembly: | Floor-ceiling, Area: 88 sq. ft.       |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### 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                    |

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024 | Source Room:   | 2nd Floor Bed 3, Volume: 800 cu. ft.  |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 2, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.3.1          | Test Assembly: | Floor-ceiling, Area: 88 sq. ft.       |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### 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    | 96.1                               | 76.2   | 31.9                                   | 0.63                   | 19.9                     | 18.9                                 |                                  |
| 125 Hz    | 96.0                               | 78.6   | 33.2                                   | 0.77                   | 17.4                     | 17.3                                 |                                  |
| 160 Hz    | 92.9                               | 67.9   | 35.2                                   | 0.57                   | 25.0                     | 23.6                                 |                                  |
| 200 Hz    | 88.8                               | 61.6   | 36.9                                   | 0.75                   | 27.2                     | 27.0                                 |                                  |
| 250 Hz    | 87.8                               | 60.2   | 30.5                                   | 1.44                   | 27.6                     | 30.2                                 |                                  |
| 315 Hz    | 88.4                               | 52.3   | 27.9                                   | 0.97                   | 36.1                     | 37.0                                 |                                  |
| 400 Hz    | 88.4                               | 50.3   | 23.0                                   | 1.08                   | 38.1                     | 39.5                                 |                                  |
| 500 Hz    | 84.2                               | 45.2   | 21.1                                   | 1.16                   | 39.0                     | 40.7                                 |                                  |
| 630 Hz    | 82.1                               | 44.6   | 20.7                                   | 1.06                   | 37.5                     | 38.8                                 |                                  |
| 800 Hz    | 84.2                               | 44.7   | 19.8                                   | 1.00                   | 39.5                     | 40.6                                 |                                  |
| 1000 Hz   | 82.2                               | 41.4   | 18.6                                   | 1.08                   | 40.8                     | 42.2                                 |                                  |
| 1250 Hz   | 82.8                               | 34.3   | 16.2                                   | 1.21                   | 48.5                     | 50.4                                 |                                  |
| 1600 Hz   | 80.1                               | 33.6   | 14.8                                   | 1.26                   | 46.5                     | 48.6                                 |                                  |
| 2000 Hz   | 78.6                               | 31.1   | 11.0                                   | 1.23                   | 47.5                     | 49.4                                 |                                  |
| 2500 Hz   | 81.0                               | 27.3   | 9.0                                    | 1.10                   | 53.7                     | 55.2                                 |                                  |
| 3150 Hz   | 82.5                               | 30.6   | 8.4                                    | 1.00                   | 51.9                     | 52.9                                 |                                  |
| 4000 Hz   | 83.3                               | 29.5   | 11.2                                   | 1.05                   | 53.8                     | 55.1                                 |                                  |
| 5000 Hz   | 82.7                               | 23.7   | 9.8                                    | 1.01                   | 59.0                     | 60.1                                 |                                  |

**ASTC: 41**

An Apparent Sound Transmission Class (ASTC) of 41, and a Noise Isolation Class (NIC) of 40 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.

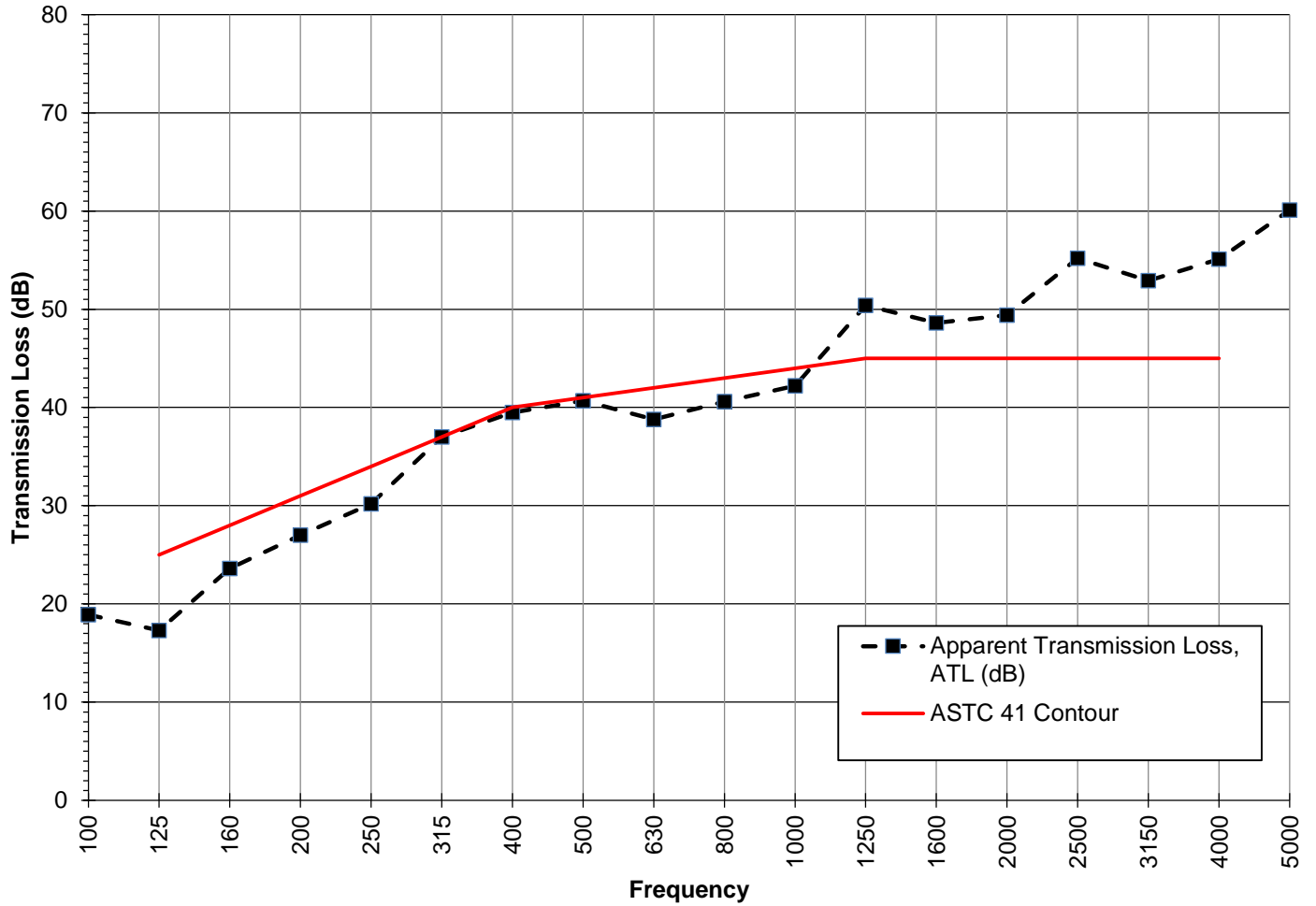
# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

Report Date: April 05, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.3.1

Source Room: 2nd Floor Bed 3, Volume: 800 cu. ft.  
Receiver Room: 1st Floor Bed 2, Volume: 1410 cu. ft.  
Test Assembly: Floor-ceiling, Area: 88 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**ASTC: 41**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                      |                |                                       |
|---------------|----------------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024       | Source Room:   | 2nd Floor Bed 1, Volume: 1180 cu. ft. |
| Test Date:    | April 04, 2024       | Receiver Room: | 1st Floor Bed 1, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.4.1                | Test Assembly: | Floor-ceiling, Area: 130 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 Bed 1. The space was finished, unfurnished. The floor was Carpet. 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 1180 cu. ft.

The receiver room was 1st Floor Bed 1. 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 1410 cu. ft.

The test assembly measured approximately 12.3x10.6, and had an approximate area of 130 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.



# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024 | Source Room:   | 2nd Floor Bed 1, Volume: 1180 cu. ft. |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 1, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.4.1          | Test Assembly: | Floor-ceiling, Area: 130 sq. ft.      |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### 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                    |

# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

|               |                |                |                                       |
|---------------|----------------|----------------|---------------------------------------|
| Report Date:  | April 05, 2024 | Source Room:   | 2nd Floor Bed 1, Volume: 1180 cu. ft. |
| Test Date:    | April 04, 2024 | Receiver Room: | 1st Floor Bed 1, Volume: 1410 cu. ft. |
| DLAA Test No: | 1.4.1          | Test Assembly: | Floor-ceiling, Area: 130 sq. ft.      |

|            |                      |
|------------|----------------------|
| Test Site: | Ka'ulu by Gentry     |
| Client:    | Gentry Builders, LLC |

### 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    | 97.3                               | 78.2   | 39.7                                   | 0.73                   | 19.1                     | 20.5                                 |                                  |
| 125 Hz    | 93.8                               | 71.5   | 38.6                                   | 0.66                   | 22.3                     | 23.3                                 |                                  |
| 160 Hz    | 93.2                               | 69.3   | 34.0                                   | 0.57                   | 23.9                     | 24.2                                 |                                  |
| 200 Hz    | 88.3                               | 58.2   | 38.4                                   | 0.86                   | 30.1                     | 32.2                                 |                                  |
| 250 Hz    | 89.8                               | 55.3   | 34.2                                   | 1.59                   | 34.5                     | 39.3                                 |                                  |
| 315 Hz    | 89.6                               | 51.9   | 25.8                                   | 1.17                   | 37.7                     | 41.1                                 |                                  |
| 400 Hz    | 89.4                               | 52.4   | 23.5                                   | 1.32                   | 37.0                     | 40.9                                 |                                  |
| 500 Hz    | 84.5                               | 46.5   | 23.8                                   | 1.47                   | 38.0                     | 42.4                                 |                                  |
| 630 Hz    | 83.6                               | 41.1   | 21.1                                   | 1.34                   | 42.5                     | 46.5                                 |                                  |
| 800 Hz    | 85.1                               | 39.0   | 19.2                                   | 1.22                   | 46.1                     | 49.7                                 |                                  |
| 1000 Hz   | 83.0                               | 37.3   | 19.3                                   | 1.35                   | 45.7                     | 49.8                                 |                                  |
| 1250 Hz   | 83.6                               | 29.9   | 16.5                                   | 1.50                   | 53.7                     | 58.2                                 |                                  |
| 1600 Hz   | 81.0                               | 27.1   | 14.7                                   | 1.64                   | 53.9                     | 58.8                                 |                                  |
| 2000 Hz   | 79.6                               | 25.2   | 11.9                                   | 1.57                   | 54.4                     | 59.1                                 |                                  |
| 2500 Hz   | 82.2                               | 23.7   | 10.2                                   | 1.46                   | 58.5                     | 62.9                                 |                                  |
| 3150 Hz   | 83.7                               | 19.7   | 9.4                                    | 1.26                   | 64.0                     | 67.7                                 |                                  |
| 4000 Hz   | 84.5                               | 13.8   | 11.9                                   | 1.33                   | 70.7                     | 74.7                                 |                                  |
| 5000 Hz   | 83.8                               | 12.1   | 10.6                                   | 1.36                   | 71.7                     | 75.8                                 |                                  |

**ASTC: 45**

An Apparent Sound Transmission Class (ASTC) of 45, and a Noise Isolation Class (NIC) of 43 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.

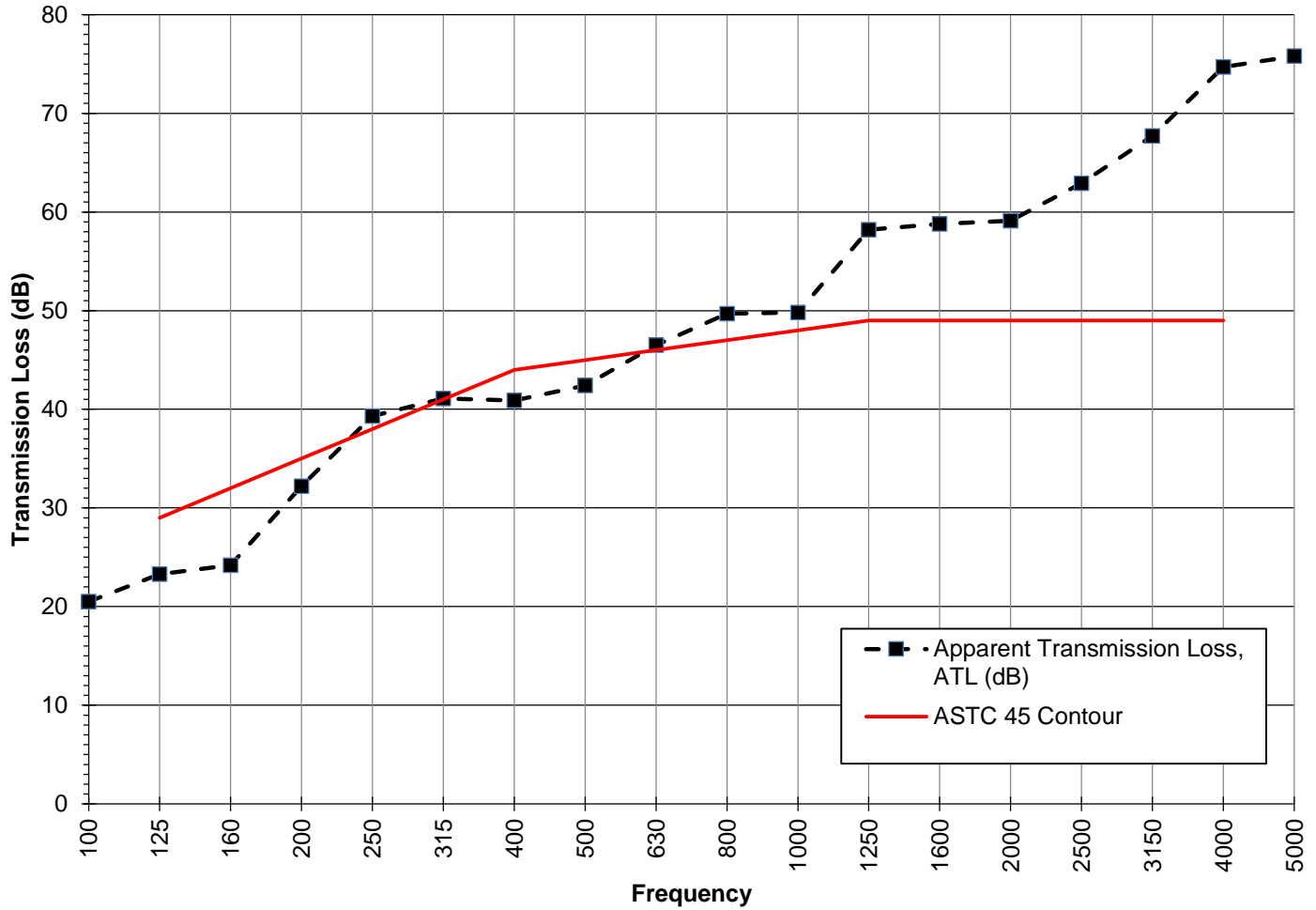
# Field Airborne Sound Transmission Test Report

## Apparent Sound Transmission Class (ASTC)

Report Date: April 05, 2024  
Test Date: April 04, 2024  
DLAA Test No: 1.4.1

Source Room: 2nd Floor Bed 1, Volume: 1180 cu. ft.  
Receiver Room: 1st Floor Bed 1, Volume: 1410 cu. ft.  
Test Assembly: Floor-ceiling, Area: 130 sq. ft.

Test Site: Ka'ulu by Gentry  
Client: Gentry Builders, LLC



**ASTC: 45**

Test Conducted By:

Zane Wright, Project Consultant

Jake Pfitsch, Project Consultant