

Date: 21 September 2023

To: Christina Attiyeh - Namdar Group

From: Ambrose Tang

CC: Gregory Miller - Cerami

Project Name: 35 Cottage Street Jersey City NJ

Reference: Mechanical Terrace Equipment Noise

1.0 Introduction

As part of the 35 Cottage project in Jersey City NJ, mechanical equipment is being installed on the third floor mechanical terrace and concern has been expressed regarding the potential noise impact of this equipment on nearby residences. This report addresses the review of potential noise issues and the recommendations to control noise impact as required.

2.0 Criteria

The Jersey City, NJ - Code of Ordinances Chapter 222-5.2 - NOISE requires no more than 65 dB(A) during the hours of 7am-10pm and no more than 50 dB(A) 10pm-7am emitted to the nearest residential property. Cerami will use 50 dB(A) as our criteria to recommend noise mitigation measures for the mechanical equipment to residences 36ft South of the project, as this equipment is expected to operate after 10pm.

3.0 Equipment Review Findings

From the data we have received, the Condensing Units and Air Cooled Condensing Units are the loudest noise producing mechanical equipment, rated for sound pressure levels at a 10ft. distance ranging from 52 dB(A) to 69 dB(A) as follows.

ACCU 1S	ACCU 1	CU 2S	CU 4S	CU 3S	CU 5S	
69 dB(A)	66 dB(A)	59 dB(A)	57 dB(A)	57 dB(A)	57 dB(A)	
CU 6S	CU 7SH	CU 8SH	CU 9SH	CU 10SH	ACCU 2S	ACCU 2
59 dB(A)	59 dB(A)	59 dB(A)	59 dB(A)	59 dB(A)	70 dB(A)	70 dB(A)

Taking into account the distance and elevation change from each piece of equipment to the property line occupied spaces on adjacent properties, we project the following overall noise levels with no additional applied noise control:

- Properties south of 35 Cottage (both backyard and building) - 66dBA
- Properties west of 35 Cottage (accessible roof area at 5th floor) - 56dBA

Note that this assumes all equipment operating at once, and so represents the “worst case” scenario that may or may not regularly occur.

4.0 Noise Control Recommendations

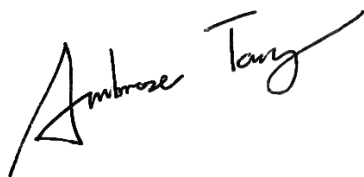
To meet the noise ordinance of 50dBA at the adjacent property lines, we recommend adding louvers infilling the opening from the mechanical terrace to the exterior along the south and west sides of the terrace:

- Louvers on the south façade should be acoustically-rated, as per Vibro-Acoustics ALF-MV-12 or similar (<https://noisecontrol.vibro-acoustics.com/product/flat-blade/>). These have an open area of 26%.
- Louvers on the west façade should be standard louvers (no acoustic rating required) selected with sufficient open area to meet the mechanical engineer’s airflow requirements, which we understand to be approximately 34% total open area for south and west facades.

With these noise control measures in place we project a maximum noise level of 49dBA at the south properties and 48dBA at the west property due to the equipment on the 3rd floor mechanical terrace.

This completes our comments at this time. Please do not hesitate to contact us should you have any questions or comments.

Regards,



Ambrose Tang
Associate

https://tciusa.sharepoint.com/sites/CeramiChicago/Shared Documents/_Projects/221408.0001 35 Cottage/221418.0001 35 Cottage Mechanical Terrace.docx