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May 13, 2021

Stephen Carlidge, AIA
Shore Point Architecture, PA
108 South Main Street
Ocean Grove, NJ 07756

**Ref: Mechanical Equipment Noise Levels - Acoustic Analysis
Monmouth University Police Headquarters
400 Cedar Ave, West Long Branch, NJ 07764**

Dear Mr. Carlidge:

We have reviewed the Daikin 12-Ton Heat Recovery Unit (HRU) as well as gas Generac 100kW Industrial Spark-Ignited Generator (with Level 2 Sound Attenuated Enclosure) to be located adjacent to the proposed Police Headquarters at Monmouth University. Additionally, we have coordinated with the design team to confirm the location of each mechanical unit as well as sound barrier fence construction and dimensions. Our analysis compares equipment sound levels at the nearest property line to nighttime limits (50 decibels) per New Jersey noise regulations and shows that the design meets acoustical code requirements.

Equipment Locations

The Police Headquarters is proposed to be located on N.J.S.H Route 71, between Elmwood and Pinewood Avenues. Directly adjacent (plan east) of the headquarters are the coordinated locations for the HRU and generator. The Route 71 street line of University-owned property is considered the nearest residential property line for purposes of this analysis. The property line is approximately 82 feet from the HRU and 80 feet from the generator. Figure 1, provided below, depicts the site layout and distances from each sound source to the property line. We have reviewed the proposed layout (Layout, Circulation & Parking - 1; Sheet 7 of 30; Prepared by William E Fitzgerald, PE; Dated 12-03-19; Revised thru: 05-12-21) and confirm the distances between each unit and the property line are acoustically acceptable in conjunction with sound barrier fence construction as coordinated.

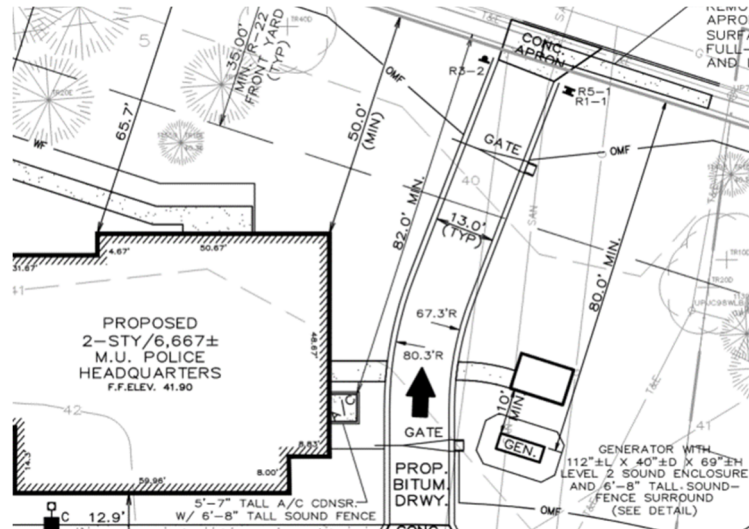


Figure 1: Monmouth University Police Headquarters Site

Sound Barrier Fence Construction

As previously mentioned, sound barrier fences surrounding the HRU and generator are required to meet noise regulation limits. Fence construction as outlined below has been coordinated by the design team and meets all acoustic requirements.

- 1) Fence will be 6.5 feet in height or higher.
- 2) Fence will not include gaps at the bottom.
- 3) Fence will be constructed of solid faced timber (board-and-batten style) with no gaps between boards.

The fencing around the mechanical units will be of similar construction to the example pictured in Figure 2 below.

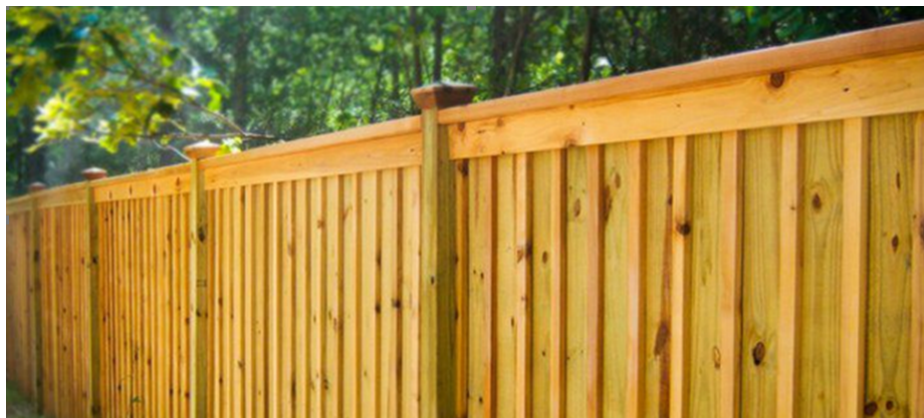


Figure 2: Proposed Sound Barrier Fence

Acoustic Analysis

Based on manufacturer data, the proposed equipment locations, generator enclosure, and sound barrier fence construction, the sound pressure level at the property line is expected to meet the nighttime noise regulation criterion of 50 dBA (re: 20 μ Pa). Anticipated sound pressure levels at the property line for the HRU and generator are 41 dBA and 47 dBA, respectively and are acoustically acceptable.

The above summarizes our comments at this time. If you have any additional questions, please do not hesitate to contact us.

Sincerely,



Isaac Gadikian
Junior Associate



Christopher A. Peltier, PE
Partner

CC: Bill Fitzgerald | William E Fitzgerald, PE