

11/2/2021

Steven Reichert, P.E.
Fuss & O'Neill, Inc.
The Gateway Building
50 Commercial Street, Unit 25
Manchester, NH 03101

Transmitted via email to: SReichert@fando.com

Re: Peer Review of the Sound Study for the Proposed Lowell Road Warehouse Facility in Hudson, New Hampshire

Reference: HMMH Project No. 312910

Dear Mr. Reichert,

Harris Miller Miller & Hanson Inc. (HMMH) was retained by Fuss & O'Neill, Inc. (F&O) to review and provide our professional opinion on the sound study prepared by Tech Environmental for the proposed industrial facility on Friars Drive/Lowell Road in Hudson, New Hampshire. This review was undertaken on behalf of the Planning Board of the Town of Hudson. As part of this undertaking, I reviewed the following documents:

- "Sound Study of 161 Lowell Road, Hudson, NH," prepared by Marc C. Wallace, Ref 4686, October 15, 2021, i.e. the "Report".
- The Code of the Town of Hudson, NH, Part II: General Legislation, Chapter 249 Noise (accessed at <https://ecode360.com/14323784>), i.e. the "Noise Ordinance".
- "Site Plan Friars Drive, Tax Map 209, Lot 001-000, 161 Lowell Drive, Hudson, NH," prepared by The Dubay Group, Inc., dated August 3, 2021, i.e. the "Plans".

It is my professional opinion that the applicant has not fully demonstrated a finding that operation of the proposed facility "will fully comply with the Hudson Noise Ordinance." Based on my review of the above referenced documents, I offer the following preliminary comments and findings for your consideration.

1. ANSI/ASA S3/SC1.100-2014 and ANSI/ASA S12.100 "Methods to Define and Measure the Residual Sound in Protected Natural and Quiet Residential Areas", 2014 presents an acceptable method to filter high-frequency natural sounds (HFNS), such as inset noise and other biogenic sounds, from measurement data for the purpose of establishing baseline ambient sound levels.
2. The results of the long-term noise monitoring demonstrated that the lowest hourly sound levels (described in terms of the sound level exceeded 90-percent of the time, or L₉₀) occurred on Sunday, October 10, 2021, for the five one-hour periods from 1:00 AM to 5:00 AM. The measured hourly L₉₀ during this period was 39 dBA, as shown in Table 3 of the Report. In comparison, the lowest measured hourly sound level for the six one-hour periods from 12:00 AM to 5:00 AM was 40 dBA L₉₀ on Wednesday, October 6, 2021.
3. Table 4 presents measured short-term sound level data collected at four supplemental sites on the evening of Wednesday, October 13, 2021. The four supplemental sites are identified as: Location #1 (800 Fox Hollow Drive); Location #2 (500 Fox Hollow Drive); Location #3 (Hickory Street & Locust Street); and Location #4 (Hickory Street & Juniper Street). In the first paragraph

on page 6, Mr. Wallace presented an estimate of the lowest ambient sound levels at each of the four short-term sites that is 3 dBA less than the measured levels presented in Table 4. I believe that this is an appropriately conservative estimate of the ambient sound level.

4. The Report should present the reference sound levels for all noise sources that were used in the Cadna-A model. The reference sound levels should be presented as overall A-weighted sound levels and as octave-band sound levels.
5. The Report should present the graphical output from the Cadna-A model that shows the locations of all noise sources (trucks to-from the facility, trucks at loading docks, roof-mounted HVAC equipment, and rooftop units) superimposed on the site plan of the proposed facility that shows the location of the warehouse and paved surfaces, along with the locations of noise-sensitive receptors in the community.
6. The Report should include graphics that show sound level contours due to the operation of the facility, separately for continuous operational sound (roof-mounted HVAC equipment, rooftop units, trucks traveling to/from the facility, and trucks idling at loading docks) and background operational sound (roof-mounted HVAC equipment and rooftop units).
7. The Report should include a table of predicted octave band sound levels at noise-sensitive sites in the surrounding community to demonstrate compliance with the pure tone condition in the Noise Ordinance.

Please let me know if you have any questions.

Sincerely yours,

Harris Miller Miller & Hanson Inc.



Christopher Bajdek, INCE
Principal Consultant

cc:

enclosures:

