



October 13, 2022

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Subject: Comstock Industrial Park Noise Evaluation - Peer Review Update
Cranston, RI
Acentech Project No.: J636144.00, Revision 1

Dear Doug:

As you know, we have been retained by the City of Cranston to provide peer review services related to the noise study of the proposed Comstock Industrial Park located on the Comstock Parkway in Cranston, Rhode Island (Project). We have reviewed the Tech Environmental (Tech) noise evaluation letter-report (Ref 4770), dated August 23, 2022, and supplied our comments in the first peer review letter dated October 4, 2022.

Subsequently, your office has received two additional documents relative to our review. The first is a letter with direct responses to our comments, and the second is a revised sound study; both documents are Tech Environmental Reference #4770 and dated October 7, 2022. We have reviewed the peer review response letter (3 page document) and do not have any further concerns. We thank Tech Environmental for the concise response to our comments in our October 4th peer review. We have reviewed the updated sound study and have the following comments on prior issues and a few additional minor concerns as given below.

NOISE REGULATIONS

This letter-report has, for the most part, properly identified noise limits that apply to this Project. We agree that the State of Rhode Island does not have applicable quantitative noise regulations. The Tech letter-report identifies the noise ordinance within the City of Cranston Code of Ordinances, Chapter 8.20 Noise Control. Table A within the letter-report provides limits based on the type of property (residential, commercial, industrial, or public) and time period with daytime defined as 7:00 am to 10:00 pm and nighttime defined as 10:00 pm to 7:00 am. Tables 3A and 3B within the letter-report identifies residential, commercial, public and industrial abutting properties that would limit sound levels to 50, 60, 70, and 75 dBA, respectively. Since the proposed Comstock Industrial Park would have nighttime operations these limits are those that apply at night.

In Section 2.2, the Tech letter-report states that the City of Cranston limits given in Table A of the letter-report "shall not apply to sounds emitted from...any motor vehicle designed for and operated on public streets...". Table B of the letter-report provides the sound level limits for motor vehicles.

In Section 2.3, the Tech letter-report provides the City of Cranston, Code of Ordinances (Title 17, Chapter 17.36) maximum allowable sound pressure levels at the property line of an industrial facility using frequency bands from 20 to 10,000 Hertz. These limits only apply between the hours of 11:00 pm and 7:00 am. This

ordinance used outdated frequency bands, and they need to be converted to the current/standardized octave bands. This process was shown in Appendix C of the updated Tech letter-report.

PROJECT DESIGN GOALS

In Section 3.3, Tech defines the Project design goals. The letter-report states that the sound limits of Tables 3A and 3B by property type apply to industrial sound sources. We understand these to be the mechanical equipment associated with the two buildings at the Project. The letter-report also states that the octave band limits given in Table 1 apply to continuous sounds.

The letter-report states that a secondary goal is for all truck traffic to comply with the limits given in Table B (maximum sound levels for motor vehicles). These are limits that apply to each vehicle and the letter-report states that the limits are achieved if certain speed limits are maintained. For example, at night no truck can operate greater than 15 miles per hour to maintain the sound level of 80 dBA at 25 feet.

The letter-report states that a third design goal is to “minimize the potential sound impacts” at the residential properties on Situate Avenue, Sweet Pea Drive, Sweet Corn Drive and a childcare facility at 210 Comstock Parkway.

PROJECT DESIGN FEATURES

Section 3.1 describes elements of the Project that will minimize sound. These include not allowing truck traffic to the south of Building 1 and putting all loading bays on the north side of that building. Thus, Building 1 becomes a sound barrier for most of the truck sound. This section also mentions landscape planting that would screen line-of-sight to the Project. Finally, Section 3.1 describes a solid screen wall that is incorporated into the Project to further block sound. It seems apparent that the screen fills the gap between the Building 1 and 2 at the point the Project roadway is the closest to the residential abutters to the south and west of the Project. Finally, we understand from an email with Tech that this solid wall was modeled as a sound barrier.

SOUND MODELING METHODOLOGY

The Tech evaluation used common noise modeling software to compute the sound levels at various points within the community. Tech has evaluated sound from two operating buildings with mechanical equipment on the roof. They have also evaluated trucks driving on the site. The predicted mechanical equipment (continuous source) sound levels are reported in the letter-report for fifteen different abutting receptor locations (Table 4A) at the nearest property line, and an additional four receptor locations (Table 4B) at the upper floors of the residences to the south of the project. The predicted sound levels from truck operations were not provided separately, but combined with the mechanical sources and reported in Tables 6A and 6B for the same fifteen receptor locations and four additional receptors, respectively. The results presented in this letter-report for the operational and truck sound sources are shown to be compliant with the City of Cranston noise limits.

PEER REVIEWER COMMENTS

Our comments on the October 7th letter-report are as follows:

Mechanical Equipment Assumptions

In the updated report additional Office HVAC Units were added to include sound from equipment that provides cooling for the office spaces. While denoted “office” units, we assume that they would provide cooling for the warehouse space, or that these spaces are left without air conditioning. We understand from the updated report that the warehouse is not intended to be cold storage, thus not requiring extra mechanical equipment. Still the warehouse would likely be temperature and humidity controlled through air conditioning. As such, we assume this equipment is part of the new “Office” HVAC units. Lastly, we understand that these facilities will not be served by backup generators, and thus it is not necessary to evaluate sound from such equipment.

Truck Operations – Applicable Noise Limits

The authorities at the City of Cranston Planning Department have stated that truck operations within this site must be added to all Project sound levels and then comply with the City of Cranston noise limits given in Table A of the letter-report. More specifically, the lowest sound level will be at the residential abutters to the south and west. The daytime limit at residential properties is 55 dBA and the night limit is 50 dBA.

In the updated report additional truck operations for idling (stationary) trucks and trucks with backup alarms were evaluated for sound contribution. We understand that this facility would not have refrigeration trucks and that personal cars were deemed by the applicant to not be regulated sound emitters.

In our prior review, we did not recognize that Building 2 will have thirteen loading bays on the eastern side. Both stationary noise sources were located north of Building 1 which will provide significant shielding. However, both idling trucks and backup alarms could occur east of Building 2 where it is not blocked by either building, has closer line of sight to Receptor ID #6, but will be blocked by the solid screen wall. It remains to be evaluated if idling truck and backup alarms at the loading bays of Building 2 will be compliant especially at nearest residential receptor ID #6.

Truck Operations – Reference Sound Power Levels

According to footnote 5 on page 18 of the letter-report, the reference sound power levels given in Appendix A are based on vehicles meeting the City of Cranston noise limits given in Table B. This is a reasonable assumption, but compliance then assumes the facility operator will require all vehicles to meet those limits, and take actions when trucks have excessive sound. This seems to put the operator in an unlikely situation of monitoring sound from the vehicles that visit the facility.

Sound Mitigation

Section 3.1 noted that landscape and plantings would be used to screen line-of-sight to the Project. It is widely known that one or even two layers of any type of tree (mature or other) provides no sound reduction. We do not believe any sound attenuation was attributed to the plantings within the study. However, the Tech letter-report had significant description and emphasis of these plantings, even though they provide no acoustical benefit.

This same section also describes a solid screen as a method of mitigation. We understand the height of the screen to be 6 feet. At this height the screen will not block any sound from the rooftop equipment. It will block tire and engine noise from vehicles, but not block sound from truck engine exhausts, which can be at least 10 feet above the ground. In order for the screen provide any benefit, it must be solid without any gaps and have a minimum surface density of 1 lb./square foot.

Background Sound Level Not Measured

The last paragraph of Section 3.1 points to the proximity of residential abutters to Comstock Parkway and notes that the traffic sound from that road should have greater impact than the Project. The Tech letter-report did not provide measured background sound levels and we assume no such measurements were performed as part of this evaluation. Without knowledge of background sound levels particularly in the early morning hours (2:00 am to 4:00 am), it is not appropriate to make claims that Comstock Parkway will have greater impact than the Project.

SUMMARY

As a matter of documentation, the Tech letter-report informally makes the following commitments on Project elements in order to achieve compliance with the City of Cranston noise limits:

- Building 1 to only have loading bays on the north side of the building.
- All mechanical equipment to have equipment sound power levels no greater than given in Appendix A of the letter-report.
- Backup generators will not be used at either Building 1 or 2.
- All trucks to be compliant with the City motor vehicular noise limits¹
- All truck operations at night to be limited to speeds less than 15 miles per hour
- Truck idling and backup alarms only to occur north of Building 1
- Noise wall with appropriate height, density and composition noted above.

With the modifications made in the October 7, 2022 issue of the Sound study letter-report and the project commitments noted above, we believe this evaluation is sufficient and complete to demonstrate that the Comstock Industrial Park will be compliant with City of Cranston noise limits.

For this or any project, achieving the City noise limits does not necessarily make the project complaint-free. Thus, it is ever more a reason that the project achieve these limits in actuality, and the developer/operator will need to be cognizant of many factors in order for the project to achieve these limits operationally.

Please contact me at 617-499-8058 or mBahtiarian@acentech.com with any questions or comments.

Sincerely,
ACENTECH INCORPORATED



Michael Bahtiarian, INCE Bd. Cert.
Principal Consultant

cc: Jim Barnes, Marc Newmark, Acentech

¹ City of Cranston Code of Ordinances Chapter 8.20 Noise Control, Section I. Chapter 8.20(l)