



Hampton, Lenzini and Renwick, Inc.

Civil Engineers • Structural Engineers • Land Surveyors • Environmental Specialists
www.hlrengineering.com

To: Sara Kopinski – City of Naperville

From: Erica Spolar - Hampton, Lenzini and Renwick, Inc.

Date: October 2, 2025

Re: Karis Critical Development (1960 W. Lucent Lane) – Review of Noise Impact Assessment Report and Recommendations

The City of Naperville has requested that Hampton, Lenzini, and Renwick, Inc. (HLR) review the Noise Impact Assessment for the Karis Critical Development dated July 10, 2025, prepared by Jacob & Hefner Associates (JHA) and provide recommendations regarding noise reduction options.

It is our understanding that a future data center facility is proposed by Karis Critical at the northwest corner of the intersection of Warrenville Road and Naperville Road. The site consists of one parcel totaling approximately 41 acres and is within an office, research, and light industrial district. The proposed development plan was originally for two buildings that will each house a data center but the plan has recently been revised to include only the southernmost building (Building 1). The building will be developed with associated parking lots, truck docks, and access roads/drives. Additionally, generator yard will be located on the north side of the proposed building and will be visually screened using a 22-foot-high screen wall. Rooftop HVAC units will be screened using a 5 foot parapet wall along the entire rooftop perimeter. The rooftop HVAC units will be situated so that all equipment is at least 6 inches below the top of the concrete parapet. Access to the site would be provided from Freedom Drive (West Lucent Lane) and Weatherbee Lane. Parking lot facilities would consist of 60 stalls for Building 1 and 114 stalls for land banked parking. There are adjacent residences approximately 600 feet to the west and 980 feet to the north of Building 1.

Jacobs & Hefner Associates set up sound meters at four separate locations along the site boundaries (N1 through N4) on March 28th, 2025 through April 1, 2025. The monitored levels were conducted during weekend days Friday through Sunday. Since this area is predominantly office commercial the predominant traffic would be occurring during rush hour weekdays and not during the weekends. It is our understanding that Jacob and Hefner chose this time span to obtain both weekday and weekend background noise since the facility will operate 24-7.

Jacobs & Hefner Associates used a computer software called SoundPlan. The number of cars and trucks used in the model and the assumptions made regarding vehicles entering and leaving the facility correlate with the traffic projections presented in the Traffic Impact Study report. Eight locations (R1 through R8) were modeled using this software. **Please confirm that the ‘auxiliary’ building representing the substation is accurate size and shape in SoundPlan to ensure accurate shielding effects.**

The manufacturer specification sheet for the HVAC and generator was reviewed in regard to noise and describes the octave bands at 30 feet from the noise source. The nearest residential building is located approximately 600 feet west of the proposed Phase 1 building.

Jacobs & Hefner Associates have compared the noise levels to the City of Naperville noise ordinance. Typically, predicted noise levels are also compared to the Illinois Pollution Control Board (PBC) Standards. The

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Illinois PBC Standards Title 35: Environmental Protection, Subtitle H: Noise, Chapter I: Pollution Control Board Part 901 Sound Emission Standards and Limitations for Property Line-Noise-Sources apply to this project. These standards ensure that the allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land from a Class B Land will not be exceeded for each of the nine octave bands listed for both daytime and nighttime hours. This is especially important for noise sources that may exhibit different frequencies of noise. It is our understanding that City of Naperville specifically requested that the noise study provided ensures compliance with the Naperville Municipal Code Section 6-14-4:1 which sets the Naperville noise guidance. Based on the petitioner's plans and what they have represented, their proposal complies with the requirements of Naperville Municipal Code Section 6-14-4:1 which sets the Naperville noise guidance. **While not required by the City's ordinance, as a best practice we would recommend that Jacob and Heffner compare the proposed noise levels to the Illinois Pollution Control Board (PCB) Standards to ensure that none of the nine octave bands are exceeded, at the closest residential receptor, R1-1. If there are any exceedances to any of the nine octave bands, please provide proposed mitigation.**

It was assumed for purposes of the study that the HVAC unit would only be running at 50-60%. We were under the impression that data centers are known to run hot and asked Jacobs and Heffner if this was a valid assumption. Based on information received, the HVAC running capacity utilized in the study was provided by the MEP team and accounts for the HVAC unit selection, unit count, and running capacity. The MEP design specifically incorporates extra units to reduce demand across all the units, providing a more efficient operation, reducing wear-and-tear on systems, and providing built-in redundancy.

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