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4 December 2025

Sentinel Green Fig, LLC
505 5th Avenue, Floor 27
New York, New York 10017
c/o Nick Marzorati
nmarzorati@sentineldatacenters.com

Re: Acoustical Evaluation of Proposed Data Centers
Sentinel Green Fig
East Whiteland, Pennsylvania.
LSG&A File 2025136

Dear Mr. Marzorati:

As requested, Lewis S. Goodfriend & Associates (LSG&A) has conducted an updated acoustical evaluation of the proposed chillers and generators for the proposed data centers in East Whiteland, Pennsylvania. This letter summarizes LSG&A's acoustical evaluation and noise control measures for the application. The results indicate that by implementing the proposed noise control measures, the sound levels due to the typical operation of the proposed equipment are expected to meet the limits of the noise regulation.

1.0 SITE LAYOUT

The site is located at 13 South Bacton Hill Road in East Whiteland Township, Pennsylvania. Two data center building are proposed with air-cooled chillers located on the roof of each building and emergency generators located to the east and west sides of each building. Residential properties are located to the north across Swedesford Road and to the east across South Bacton Hill Road. The PECO Planebrook Substation is located to the south of the site, commercial/industrial properties are located to the east of the site, and unimproved land and farmland are located to the west of the site in West Whiteland Township. The site and adjacent areas are shown in Figure 1, at the end of this letter.

2.0 REQUIREMENTS OF THE NOISE REGULATION

The local noise regulation is set forth in Chapter 133 of the Code of the Township of East Whiteland. Section 133-4.A provides the following sound level limits:

> *(1) No person, firm or business entity shall play, use or operate, or knowingly permit to be played, used or operated, any radio receiving set, musical instrument, phonograph, sound amplifier, bell, siren, firework, rocket, whistle, alarm, audio signaling device, loudspeaker, exhaust or other machine or device that generates or reproduces sound, upon real or personal property owned, occupied or controlled by him or it, in such a manner that the sound emanating from such machine or device equals or exceeds, at any boundary of such property: [Amended 1-9-2019 by Ord. No. 306-2019]*
>
> *(a) Ten decibels greater than the background noise level; or*
>
> *(b) Sixty-five decibels during the hours of 7:00 a.m. to 9:00 p.m., or 60 decibels during the hours of 9:00 p.m. to 7:00 a.m.*
>
> *(2) Noise levels shall be measured according to American National Standards Institute Methods for the Measurement of Sound Pressure Levels, ANSI SI.13-1971 (R. 1986), or other equivalent method.*

It is assumed that the decibel levels referred to in the code are the overall A-weighted[1] sound levels, as the code refers to the measurement procedure described in the ANSI standard S1.13, which requires that the A-weighted sound levels be reported.

In addition, Section 133-7 states the following:

> *It shall be unlawful for any person or business entity, or their agents or employees owning or occupying any building or premises in the Township of East Whiteland, to operate or permit to be operated any type of vehicle, machinery, appliance, equipment or hand tool which emits noise in violation of the decibel provisions of § 133-4A herein, between the hours of 9:00 p.m. and 7:00 a.m. (9:00 a.m. on Sundays and national holidays) local time. When the vehicle, machinery, appliance, equipment or hand tool is being used in conjunction with agricultural activities, an emergency, snow removal or repair of a public utility such as a gas main, water main or electrical power line, this section shall not apply.*

[1] A-weighting, noted as dB(A), is a standardized sound level meter setting having a frequency characteristic similar to the human ear/brain frequency sensitivity.

In discussion with the design team, LSG&A understands that a power outage causing all of the proposed generators to operate simultaneously would be extremely rare given the close proximity to the PECO Planebrook Substation. Further, based on the language of the noise regulation LSG&A believe that such an emergency situation would not be subject to noise code enforcement. Routine testing of the generators, however, would be subject to the limits of the noise regulation.

3.0 ACOUSTICAL EVALUATION & RECOMMENDATIONS

In order to calculate the sound levels due to the proposed equipment, LSG&A developed a model of the site with SoundPLAN 3D acoustical modeling software, using ISO Standard 9613-2 methodology for the calculations. This standard assumes favorable conditions for sound propagation including all receivers downwind of sources and nighttime atmospheric refraction. The acoustical model considered the propagation of sound over distance, the shielding and reflection of sound due to buildings and barriers, and the effect of topography. Additional attenuation due to ground absorption, air absorption, and foliage was not considered in the model, in order to produce conservative results. The following sound sources were incorporated into the analysis:

- 288 Rooftop Air-Cooled Chillers (144 for each building)
- 272 Emergency Generators (136 for each building)

The following considerations and noise control measures were incorporated into the model.

3.1 Generators

The generators are proposed to be installed in a two-level stacked arrangement on the east and west sides of each building. LSG&A understands that each generator will be housed in an acoustical enclosure with a sound level rating of 72 dB(A) at 23 feet. Two generator scenarios were considered: a routine testing scenario with the northernmost top level generators operating (four operating simultaneously) during daytime hours, and an emergency scenario with all of the generators operating. Sound barriers were included at the north and south ends of each generator area, with a top height of 50 feet above grade for further mitigating potential generator noise. Figure 1, at the end of this letter, shows the sound barrier placement.

3.2 Chillers

LSG&A understands that full building utilization would have each chiller operating at 70.4% name-plate load with a sound power level of 94.5 dB(A). LSG&A also considered a partial building utilization scenario (lower electrical usage in line with industry standards for utilization) with each chiller operating at 52.8% name-plate load with a sound power level of 92.5 dB(A). In addition, LSG&A understands that each chiller will be equipped with BRD Standard SC jacketing, which reduces the sound power level of the chiller by approximately 4 dB(A). Sound barriers were also included on the north roof perimeter and portions of the east and west roof perimeter with a top height four feet above the top of the chillers. Figure 1, at the end of this letter, shows the sound barrier placement.

4.0 RESULTS AND DISCUSSION

The tables below show the expected sound levels due to the proposed equipment and noise control measures in various operating conditions. The results are compared to the applicable limits of the noise regulation, and indicate that the proposed equipment operating under typical conditions with the proposed noise control measures is expected to meet the applicable limits of the noise regulation.

Table 1, below shows the expected sound levels under a worst-case building electrical utilization.

Table 1 – Results of Worst-Case Operating Scenario (Chillers Operating at a 100% Building Utilization), Sentinel Green Fig Data Centers, East Whiteland, Pennsylvania.

Location	Sound Level, dB(A)	
	Chillers Only	Chillers & Generator Maintenance Testing
1: Northeast Property Line	45	49
2: North Property Line	49	53
3: Northeast Road	49	51
4: East Residences	49	49
5: Northwest Property Line	44	50
6: Northwest Property Line	45	50
7: Northwest Property Line	50	54
8: North Residences	52	53
9: North Residences	51	52
10: South Property Line	57	57
11: West Property Line	49	50
Limit	60	65

However, the anticipated operating conditions are very unlikely to be 100% the building. Table 2, below, shows the results of the anticipated loading of the chillers for the buildings based on industry standard building utilization (approximately 75% electrical power utilization) which is the actual expected noise output for these facilities

Table 2 – Results of Anticipated Operating Scenario (Chillers Operating at a 75% Building Utilization), Sentinel Green Fig Data Centers, East Whiteland, Pennsylvania.

Location	Sound Level, dB(A)	
	Chillers At Part Load	Chillers & Generator Maintenance Testing
1: Northeast Property Line	42	48
2: North Property Line	47	52
3: Northeast Road	47	50
4: East Residences	47	48
5: Northwest Property Line	42	49
6: Northwest Property Line	43	50
7: Northwest Property Line	48	54
8: North Residences	50	51
9: North Residences	49	50
10: South Property Line	55	56
11: West Property Line	48	49
Limit	60	65

The emergency generators would only all be operating simultaneously in the event that the site loses electrical utility power entirely, which would be considered a catastrophic emergency and very unlikely to occur as:

- This campus is fed electrically by (2) redundant and highly reliable 230kV High Voltage distribution circuits, and both circuits would need to be out of service for generators to be on (concurrent failures is very unlikely)
- These distribution circuits are fed by PECO's Planebrook substation, which sits directly adjacent to the site and therefore are very short distances.
- These distribution circuits are physically diverse (one circuit is on one end of the site and overhead, the other circuit is on the other end of the site and underground).
- The PECO Planebrook substation is a 230kV high Voltage switching substation which is fed by (4) 230kV High Voltage transmission lines and considered the highest reliability in the transmission system. For reference, PECO's Planebrook substation record of storm related power loss such as during Hurricane Sandy, was caused by distribution lines downed by wind and tree damage, which would not affect the high voltage lines.

For informational purposes, Table 3, below, shows the results of this emergency scenario during a complete power failure with all generators operating. While not explicitly subject to the noise regulation, the emergency scenario with all generators operating is below 65 dB(A) at the adjacent residential locations, and only slightly above this benchmark at some site boundaries.

Table 3 – Results of Emergency Operating Scenario, Sentinel Green Fig Data Centers, East Whiteland, Pennsylvania.

Location	Sound Level, dB(A)
	Chillers & All Generators Under Catastrophic Emergency / Complete 230kV Transmission Line Utility Outage
1: Northeast Property Line	56
2: North Property Line	65
3: Northeast Road	66
4: East Residences	56
5: Northwest Property Line	64
6: Northwest Property Line	66
7: Northwest Property Line	66
8: North Residences	64
9: North Residences	60
10: South Property Line	67
11: West Property Line	62

I trust that this information is sufficient for your present needs. Please call if you have any questions regarding this report.

Very truly yours,

LEWIS S. GOODFRIEND & ASSOCIATES

Jack A. Zybura, P.E., INCE Bd. Cert.
Associate Principal

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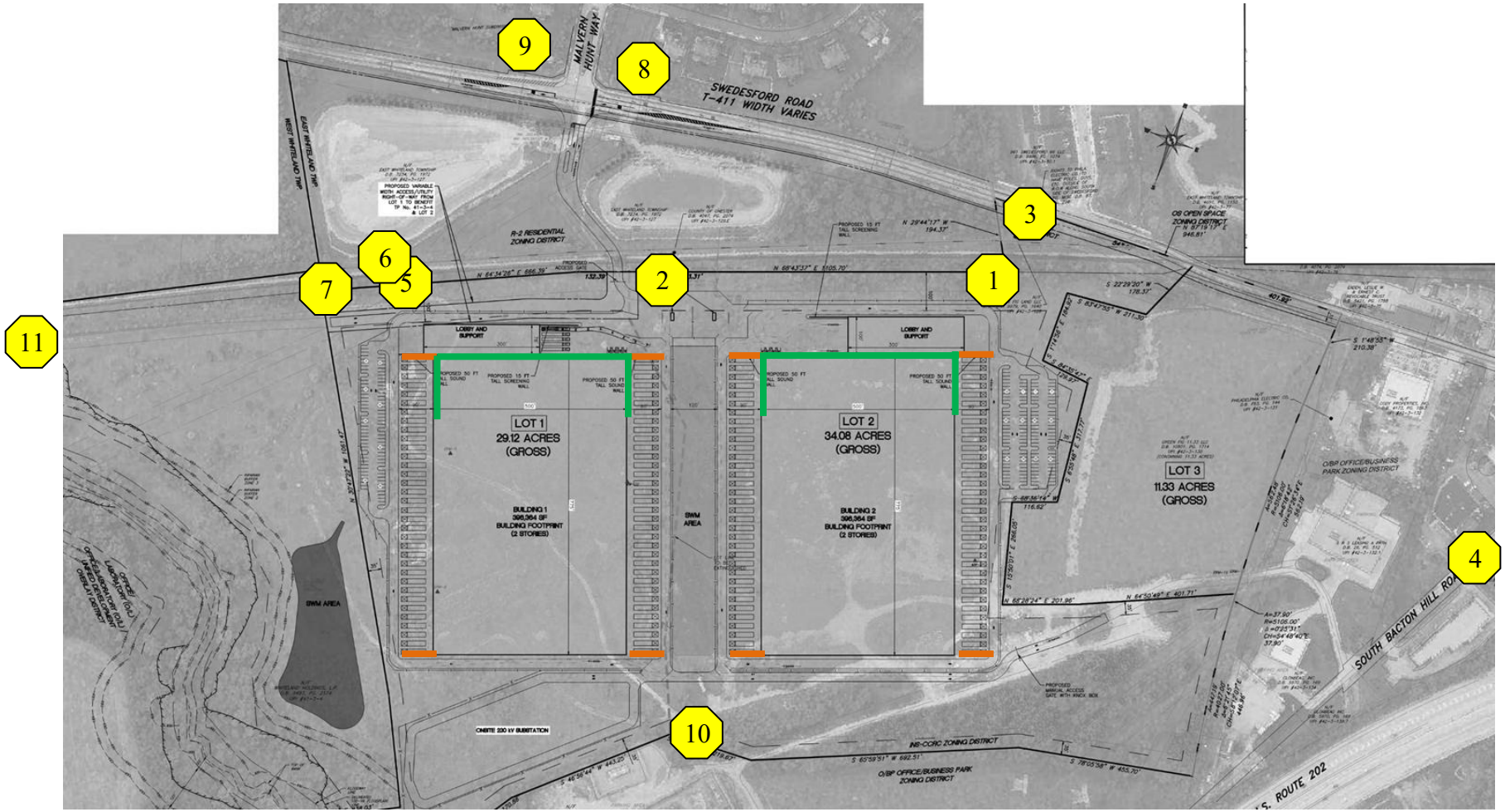
Figure 1 – Partial Site Plan Acoustical Evaluation and Sound Barrier Locations, Sentinel Green Fig Data Centers, East Whiteland, Pennsylvania.



All Locations Approximate
Not to Scale
Not for Construction

Evaluation Location
Chiller Sound Barrier
Generator Sound Barrier