August 31, 2023

Bradley Parsons
Director of Design and Permitting
Verogy Solar Services
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Email: bparsons@verogy.com

Subject: **Environmental & Community Noise Assessment**
East Windsor Solar Two – 31 Thrall Road, East Windsor, CT
Verogy Solar Services – West Hartford, CT

Dear Mr. Parsons,

WSP USA Environment & Infrastructure, Inc. ("WSP") is pleased to submit the following environmental and community noise assessment for the East Windsor Solar Two, LLC site to Verogy Solar Services ("Verogy") for the proposed solar photovoltaic energy generating facility to be located at 31 Thrall Road, East Windsor, CT (herein the "Facility" and/or "Site").

This environmental noise assessment report is provided to summarize our findings to the Connecticut Siting Council ("CSC") in support of Petition No. 1572 for the East Windsor Solar Two facility. The report concludes that the proposed Facility, as designed and considered, will be in compliance with the requirements of the Regulations of Connecticut State Agencies ("RCSA") Department of Energy & Environmental Protection ("CT DEEP") Noise Control Regulations (i.e., RCSA §22a-69) at all of the residential property lines surrounding the Site.

BACKGROUND

East Windsor Solar Two, LLC ("EW Solar Two"), a Verogy subsidiary, proposes to construct, operate, and maintain a 4.0 megawatt ("MW") solar photovoltaic electric generating facility located at 31 Thrall Road, East Windsor, CT.

In accordance with CT General Statutes §4-176 and §16-50(k), EW Solar Two submitted a petition to the CSC on May 5, 2023 (Petition No. 1572). Appendix L of the petition is titled "Noise Study" and contains an acoustical engineering study prepared by Brooks Acoustics Corporation ("BAC") on April 26, 2023. The conclusion of the BAC report is that the proposed Facility, as designed and considered, will be in compliance with the requirements of the CT DEEP Noise Control Regulations (i.e., RCSA §22a-69). The purpose of WSP's assessment was to re-evaluate the predicted sound levels from the Site and validate or revise (as necessary) the conclusion reached by BAC.

WSP was contracted by Verogy for professional consulting services related to follow-up acoustical assessment of the proposed photovoltaic solar energy system (i.e., solar array). The goals of this assessment were to better understand the sound environment (i.e., background community sound levels) in the area, quantify the sound levels associated with the Facility, re-evaluate the predicted sound levels at the property lines surrounding the Site because of the daytime operation of the solar array, and potentially identify opportunities for sound attenuation, if deemed necessary.

Throughout this report there are numerous methods used to quantify and describe community sound levels. All of them use a logarithmic-scaled unit of measure known as the 'decibel' (i.e., dB). The 'decibel' is an essential scale for understanding perception of sound levels. Attachment A of this report provides a broad technical summary of the various sound terminology and statistical analysis methods used throughout this report.

APPLICABLE NOISE REGULATIONS

The Town of East Windsor does not specifically regulate environmental noise from this type of activity, and there are no other local noise ordinances that would apply to this Facility. However, an internet search revealed the 1993 draft version of a document title: "Town of East Windsor Connecticut Noise Control Ordinance." The final enacted version of this document could not be located nor is it referenced in the Town of East Windsor Ordinances or Zoning Regulations. The draft ordinance is currently only available on the CT DEEP website with a compilation of other CT municipal noise ordinances, which were collected prior to July 1, 2022 when municipalities were required to have their noise ordinances reviewed and approved by the DEEP. Nevertheless, WSP reviewed this ordinance and concluded that, if it were in effect, the Site shall not generate a sound level more than 58 dBA, which is the source *Industrial* -to- receptor *Residential* daytime excessive noise limit.

The CT DEEP prohibits the emission of continuous excessive noise beyond the boundaries of one's property such that the noise exceeds the following:

Table 1 – CT DEEP Noise Control Regulation – Excessive Noise Values

Source Property Land Use Class	Receptor Property Land Use Class Excessive Noise Values (dBA)			
	Class A (daytime) [1]	Class A (nighttime) [2]	Class B (all-day)	Class C (all-day)
Class A	55	45	55	62
Class B	55	45	62	62
Class C [3]	61 [4]	51	66	70

[1] CT DEEP daytime hours are between 7:00 AM and 10:00 PM
[2] CT DEEP nighttime hours are between 10:00 PM and 7:00 AM
[3] Photovoltaic installations are not explicitly classified in the definition of Class C Land Use Category (see RCSA §22.a-69-2.5). However, agricultural, and other resource production and extraction (not elsewhere classified) land uses are deemed to be Class C. Therefore, it is assumed that the EW Solar Two facility (i.e., source) must adhere to Class C requirements in terms of noise control.
[4] All residential property lines are to be considered Class A land use, and photovoltaic system is expected to operate only during the daytime. Therefore, the Site shall not generate a sound level in excess of 61 dBA.

Additionally, the CT DEEP specifies that noise sources which demonstrate one (1) or more discrete tones are subject to noise limits five (5) A-weighted decibels ("dBA") below the levels specified in the table above.

It should be noted that the *Land Use Classes* listed in the Noise Control Regulations do not necessarily correspond to Town approved zoning districts. Noise zone classifications in the CT DEEP Noise Regulation are defined by actual land use. For example, the Facility is to be located on a property that is currently zoned as single-family residential with much of the property used as farmland. The proposed usage of the land will be for a photovoltaic solar energy production, which is most appropriately defined as: "Other Resource Production and Extraction (not elsewhere classified, N.E.C.)," which is expected to be considered a Class C source property, per RSCA, §22.a-69-2.5. The properties immediately surrounding the Site are assumed to fit the category of Class A (i.e., residential, per RSCA §22.a-69-2.3) receptor properties with the closest sensitive receptor property located approximately 700 feet (210 m) to the west of the proposed location of the site's DC-AC power inverters (i.e., PL-4, the single-family residence located at 19 Thrall Road). Therefore, the Site shall not generate a sound level more than 61 dBA, which is the source *Class C* -to- receptor *Class A* daytime excessive noise limit shown in Table 1 above.

EXISTING ACOUSTIC ENVIRONMENT

The EW Solar Two facility is to be located on a 35.8-acre parcel of farmland bounded by undeveloped forested land to the north, single-family residential properties to the east, and a mix of single-family residential and agricultural properties to the south and west.

The Site is located near the intersection of Thrall Road and Middle Road in Broad Brook (i.e., East Windsor), which are single lane asphalt-paved town roads. The Site is approximately 2,000 ft (630 m) to the east of the Boutin & Sons Construction, Co., which operates an asphalt and aggregate mining and trucking operation at 121 Windsorville Road and was audible at times during the measurement period.

A major source of community sound in the area is the Bradley International airport ("KBDL") eastern approach corridor, as KBDL runways are located approximately 7.8 miles (12.5 km) to the west-northwest of the Site. The Site is located approximately 5 miles (8 km) away from both the I-91 (northwest) and I-84 (southeast) interstate highways.

A locus map for the Site is shown in Figure 1 (see Attachment B).

SOUND LEVEL MONITORING

On Monday, August 14, 2023, WSP personnel performed daytime sound level monitoring in the vicinity of four (4) property line locations at the Site. The daytime attended measurements were collected between 11:00 AM and 1:30 PM during what is considered a typical weekday operational period – this is, mostly sunny midday summer conditions during which the solar array would be expected to operate at near full capacity. The sections below summarize the methodologies employed by WSP personnel during the sound level measurement session, describe the measurement locations, and present the results of the community sound level monitoring.

MONITORING LOCATIONS

The daytime sound level measurements were collected at four (4) locations indicated in Figure 2 (see Attachment B).

PL-1: This property line location is near the eastern corner of the Site. The location is approximately 1,070 ft (326 m) to the east of the proposed location of the Facility's DC-AC power inverters and abuts the single-family residential property at 55 Thrall Road.

PL-2: This property line location is near the northeastern side of the Site. The location is approximately 820 ft (250 m) to the east-northeast of the proposed location of the Facility's DC-AC power inverters and abuts the single-family residential property at 57 Thrall Road.

PL-3: This property line location is near the south corner of the of the Site. The location is approximately 430 ft (130 m) to the south of the proposed location of the Facility's DC-AC power inverters and abuts the residentially zoned farm / pasture property at 17 Thrall Road.

PL-4: This property line location is near the western side of the Site. The location is approximately 720 ft (220 m) to the west-southwest of the of the proposed location of the Facility's DC-AC power inverters and abuts the single-family residential property at 19 Thrall Road.

The monitoring locations were selected to captured various sound level micro-environments that occur along the border of the Site property.

MONITORING METHODOLOGY

The community sound level measurements were collected at the locations indicated in Figure 2 (see Attachment A) during the daytime hours (i.e., 11:00 AM – 1:00 PM) on Monday, August 14, 2023. At the time of the monitoring survey the temperature was between 76°F to 80°F and the relative humidity varied between approximately 67% and 71%. There was relatively little ground level wind (0 – 3 miles per hour throughout the monitoring period), no precipitation, and the sky was mostly clear during all measurements.

At each of the four (4) monitoring locations a series of six (6) short-term (i.e., 5-minute) sound level measurements periods were recorded (i.e., total measurement time at each location was 30-minutes). Field notes and observations for each monitoring location are attached to this report (see Attachment C). These observations included traffic counts for vehicles driving on Thrall Road during the monitoring session.

All sound level measurements were conducted in general accordance with American National Standards Institute ("ANSI") S12.8-1994, Outdoor Measurement of Sound Pressure Level. Each measurement was 30 minutes in duration, and the L_{eq}, L_{90}, L_{50}, and L_{10} for each period was calculated from the measurement data.

All sound level measurements were collected with a calibrated Casella CEL-633C real-time octave band analyzer, which was equipped with precision condenser microphone having an operating range of 19 dB to 140 dB, and an overall frequency range of 12.5 Hz to 20 kHz. The sound level meter used meets or exceeds all requirements set forth by the ANSI for Type 1 quality and accuracy. Prior to and following all measurement sessions, the sound analyzer was calibrated with an ANSI Type 1 calibrator, which had accuracy traceable to the National Institute of Standards and Technology ("NIST"). All instrumentation was laboratory calibrated per ANSI recommendations within the last twelve (12) months. Copy of the equipment certificate of calibrations are attached (see Attachment D).

For all measurement sessions the microphone was fitted with an environmental windscreen to minimize the effects of air movement, and tripod mounted at a height of 1.3 meters above grade. All measurements were made away from the influence of vertical reflecting surfaces in compliance with ANSI S12.9-1992, Qualities and Procedures for Description and Measurement of Environmental Sound. All data were downloaded to a computer following the measurement session for post-processing and analysis.

MONITORING RESULTS

The following table provides the broadband sound level monitoring results for all locations. These results are useful in comparing difference sound micro-environments that occur along the property line.

Table 2 – Daytime Existing Sound Monitoring Results

Location ID	Date	Start	End	Cumulative Sound Pressure Level (dBA)			
				L_{eq}	L_{10}	L_{50}	L_{90}
PL-1	8/14/23	11:06 AM	11:36 AM	48.0	49.6	47.3	44.4
PL-2	8/14/23	11:45 AM	12:15 PM	41.1	43.7	38.9	37.0
PL-3	8/14/23	12:24 PM	12:54 PM	50.5	52.3	50.5	47.8
PL-4	8/14/23	1:00 PM	1:30 PM	50.6	51.5	50.5	49.4

The L_{90} monitoring results are summarized in Figure 2 (see Attachment B), and the detailed monitoring results data summaries are provided in Attachment C. The time-series plots shown in Attachment C provide an overall summary of how the recorded sound levels varied throughout the monitoring periods on a 5-minute and 1-second timescale.

Since the operative metric of the existing community sound levels to which the noise from the photovoltaic solar array operations must be compared is the L_{90}, the remainder of this analysis focuses on the L_{90} metric recorded during the monitoring session. The L_{90} metric is utilized because L_{90} sound levels are normally minimally affected by seasonal changes and variations in local conditions (e.g., roadway and airplane traffic, etc.). In other words, it is reasonable to assume that if the daytime sound levels were re-recorded the L_{90} sound level measurements would likely be indistinguishable from each other. This assumes that the follow-up study is conducted during 'typical' periods (i.e., relatively normal weather conditions and not during an extremely windy, extremely hot, or snowy weather conditions).

INSECT SOUND ADJUSTMENT

WSP analyzed the L_{90} frequency spectrum for each of the sound level monitoring results and concluded that the measurements were significantly affected by insect noise (i.e., cricket, cicada, etc.). In fact, on all four (4) monitoring field note sheets "Natural Sounds (e.g., insects, birds, etc.)" was listed as the most prominent generalized sound source observed during each measurement (see Attachment C). The corresponding 1/3 octave band frequency plots for the measurement periods support the conclusion that the insect noise was an obvious contributor to the measured sound level at the 5 – 10 kHz range. For example, at PL-1 the broadband L_{90} sound level measurement was measured approximately 10 dBA higher than what would be expected if the crickets and cicadas (i.e., "*Natural Sounds*") were not present during the monitoring period.

Accordingly, WSP performed a series of adjustments to the 1/3 octave band frequency spectrum results to predict the existing daytime background sound levels at each measurement position with the *Natural Sounds* minimized. The following table presents the adjusted sound level monitoring results with the *Natural Sounds* filtered / reduced. The sound spectrum adjustments were performed in accordance with standard acoustical engineering and spectrum correction techniques. Figure 3 (see Attachment B) provides a schematic summary of the spectrum adjustments.

Table 3 – Daytime Existing Sound Level Results (without insect noise)

Location ID	Date	Start	End	Background Sound Pressure Level (dBA)		
				L_{90} (w/ insects)	L'_{90} (w/o insects)	The following frequency adjustments were made:
PL-1	8/14/23	11:06 AM	11:36 AM	44.4	34.5	$L'p_{5.0kHz} = 0.8 \cdot Lp_{5.0kHz}$
PL-2	8/14/23	11:45 AM	12:15 PM	37.0	34.1	$L'p_{6.3kHz} = 0.5 \cdot Lp_{6.3kHz}$
PL-3	8/14/23	12:24 PM	12:54 PM	47.8	33.9	$L'p_{8.0kHz} = 0.5 \cdot Lp_{8.0kHz}$
PL-4	8/14/23	1:00 PM	1:30 PM	49.4	32.9	$L'p_{10.0kHz} = 0.8 \cdot Lp_{10.0kHz}$

The adjusted L_{90} monitoring results are summarized in Figure 4 (see Attachment B), and these are the sound level results that are considered most accurately representative of existing ambient L_{90} sound levels along the 31 Thrall Road property line. These baseline sound levels (i.e., L_{90} between 33 – 35 dBA) are typical of relatively rural areas with minimal human activity.

CALCULATED FUTURE SOUND LEVELS

This section describes the sound impact analysis methodologies and modeling results associated with WSP's review of the proposed EW Solar Two facility.

FACILITY OPERATIONS

The primary (and only) significant continuous source of Facility noise is emitted by the thirty-two (32) DC-AC power inverters. These units convert the 12-volt direct current ("DC") power produced by the photovoltaic panels to the high-voltage alternating current ("AC") power used by the electrical transmission grid. When operating, the DC-AC inverters emit an electrical humming type sound and have built in cooling fans which also emits some noise.

Other intermittent and relatively minor sources of facility sound (e.g., low-speed motors used to adjust solar panel angle) are not considered to be capable of generating enough sound to produce a nuisance noise condition at the property line.

DC-AC INVERTER SOUND POWER

The EW Solar Two facility proposes to utilize thirty-two (32) CPS SCH100/125KTL-DO/US-600 high performance inverters installed in two (2) banks of sixteen (16) units each. The site plan design calls for the inverter banks to be located in approximately the center of the 31 Thrall Road property, as shown in the figures in Attachment B. The CPS product data sheet is provided in Attachment E and specifies that the CPS inverter produces audible noise level less than 65 dBA (ea.) at 1 meter and 25 °C. Additional field sound level testing was performed on a CPS inverter by BAC on May 14, 2022. WSP reviewed the field-testing data provided in the BAC acoustical engineering study dated April 26, 2023, and determined it to be collected appropriately and in good agreement with the manufacturer's data sheet (i.e., <65 dBA).

The following table summarizes WSP's review of the CPS inverter sound level data, and the computation of sound power level ("Lw") for input into the sound propagation models. One notable difference between the WSP modeling analysis and the BAC modeling analysis, was that the sound power level ("Lw") for the inverters was utilized in the WSP propagation model, whereas BAC computed sound impacts based on the power pressure level ("Lp"). See Attachment A for a summary of the difference between Lw and Lp values.

Other discrepancies between the WSP and BAC approaches are discussed in the Sound Level Modeling Analysis section of this report.

Table 4 – Source Specific Sound Measurement Conversion to Sound Power Level

Source Sound Parameter	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband Sound Level	
	63	125	250	500	1K	2K	4K	8K	(dB)	(dBA)
BAC Measured Source Sound Pressure Level (Lp) @ 1 ft. [1]	69.3	68.7	64.0	65.1	66.4	61.5	52.1	44.1	74.4	69.2
WSP Calculated Source Sound Power Level (Lw) [2]	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	77.3	72.2
WSP Calculated Source Sound Pressure Level (Lp) @ 1 m [3]	64.2	63.6	58.9	60.0	61.3	56.4	47.0	39.0	69.3	64.2

[1] The CPS inverter near-field sound test was conducted at the East Windsor Solar One facility by Brooks Acoustics Corp. (BAC) on May 14, 2022. The octave band sound pressure level values (measured at 1 ft.) are provided in BAC's East Windsor Solar Two - Acoustical Design Study dated April 26, 2023.

[2] The CPS inverter sound power level (for use in sound modeling) was computed by WSP using standard procedures specified in ISO 3740, Acoustics – Determination of Sound Power Levels of Noise Sources.

[3] The CPS inverter sound pressure level at 1 m was calculated by WSP using the sound power value (calculated above) and using the procedures specified in ISO 9613-2, Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation. The calculated sound pressure level at 1 meter (i.e., 64.2 dBA) demonstrates good agreement with the sound pressure level specified by CPS in the manufacturer's data sheet (i.e., < 65 dBA @ 1 m) (see Attachment E).

Utilizing the source-specific monitoring data, WSP calculated the sound power level ("Lw") for each of the two (2) banks of sixteen (16) DC-AC inverters, as follows:

Table 5 – Source Specific Sound Power Levels

Source Sound Parameter	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband Sound Level	
	63	125	250	500	1K	2K	4K	8K	(dB)	(dBA)
Single-Unit CPS Inverter Lw	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	77.3	72.2
16-Unit, Bank CPS Inverter, Lw	84.2	83.6	78.9	80.1	81.4	76.5	67.1	59.1	89.4	84.2

See Attachment A for a summary of the methodology used to calculate the combined sound power level for each DC-AC inverter bank. The detailed sound power computation results are provided in Attachment F.

SOUND LEVEL MODELING ANALYSIS

The proposed EW Solar Two facility's sound impacts at the property line locations were modeled using both a simplified spreadsheet model (i.e., "WSP") and the more refined SoundPLAN (i.e., "SPLAN") computer software modeling program. Both of the sound modeling calculations use sound propagation algorithms and attenuation methodologies that are based on ANSI S12.62 and ISO 9613-2, Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation, and other industry accepted standards.

All sound propagation losses, such as geometric spreading, air absorption, ground absorption, and barrier shielding are calculated automatically in accordance with these recognized standards. Reflection from adjacent structures and terrain effects was accounted for in the SoundPLAN modeling; however, these effects are not included in the simplified WSP spreadsheet model.

Other notable differences between the WSP modeling analysis and the BAC modeling analysis, were as follows:

WSP propagation model did not include sound propagation losses caused by vegetation (i.e., foliage), whereas BAC computed sound reduction caused by vegetation.

WSP propagation model included higher ground reflectivity effects along the propagation path corresponding to more compacted ground surface with reflective solar panels, whereas BAC assumed much greater ground absorption coefficient.

The net affect of these differing modeling techniques is to make the WSP analysis more conservative (i.e., predicting high Facility sound impacts) than the BAC modeling analysis.

Discrete modeling receptors were chosen at the residential property line locations corresponding to where the ambient noise monitoring was conducted in order that direct comparison to existing noise levels could be assessed. The future maximum sound levels were calculated at the four (4) property line locations based on simultaneous operation of all thirty-two (32) DC-AC inverters at maximum load.

The following table presents the modeled sound level impact results for both the WSP spreadsheet model and the SoundPLAN software model.

Table 6 – Future Facility Sound Level Impact Results

Location ID	Minimum Background Sound Level (L'$_{90}$) (dBA)	Maximum Predicted Sound Level from Facility (dBA)		Total Predicted Sound Level (dBA)		Predicted Sound Level Increase (dBA)	
		WSP	SPLAN	WSP	SPLAN	WSP	SPLAN
PL-1	34.5	24.9	20.9	35.0	34.7	+0.5	+0.2
PL-2	34.1	27.4	29.0	34.9	35.3	+0.8	+1.2
PL-3	33.9	33.0	32.3	36.5	36.2	+2.6	+2.3
PL-4	32.9	29.1	29.6	34.4	34.6	+1.5	+1.7

A noise contour map for the entire property, which also depicts the SoundPLAN results for the residential receptors evaluated, is presented in Figure 5 (see Attachment B).

A review of the data in the above table reveals that the sound generated by the Facility will be well below the CT DEEP daytime noise standard at all residential locations (i.e., 61 dBA). Additionally, the sound generated by the Facility will also be below the more restrictive, but uncodified, 58 dBA noise limit contained in the draft Town of East Windsor Noise Ordinance. Slight increases in environmental and community sound levels will occur over the minimum (i.e., adjusted) daytime L'$_{90}$ levels, but the total property line sound level, even when added to ambient noise, will remain at or below the specified State noise standard (noting that the CT standard applies only to the source, not the total noise level). The magnitude of the increases in community sound level caused by the Facility are deemed to be barely perceptible (i.e., less than 3 dBA increase).

TONAL ANALYSIS

A discrete tone is a sound that consists primarily of a single pitch such that it is clearly audible against the normal broadband background sounds, even when the tone is at a lower level. Tones are generally more annoying than broadband noise. If an equipment source generates a discrete tone noise as defined in the Connecticut standards, the allowable overall level of noise is reduced by five (5) dBA.

It is generally not possible to model the potential for discrete tones since this would require the use of propagation algorithms applied to 1/3 octave band data, which are not available. The Facility design will therefore include a specification to all equipment vendors that discrete tone noise must be controlled.

The source specific measurement data for the CPS DC-AC inverter (i.e., field sound level testing was performed on a CPS inverter by BAC on May 14, 2022) showed <u>no</u> prominent discrete tone present. Therefore, it is highly unlikely that such a tone will develop via constructive and/or destructive interference as the equipment sound waves propagate from the source to the property line(s).

While discrete tones associated with the operation of the EW Solar Two facility are not indicated based on any of the available data for the CPS DC-AC inverters, a tonal analysis using the addition of the CT DEEP 'penalty' as described above is easily conducted by adding a five (5) dBA tonal penalty to the modeled noise levels shown in Table 6.

Table 7 – Future Facility Hypothetical Discrete Tonal Impact Results

Location ID	Minimum Background Sound Level (L'$_{90}$) (dBA)	Maximum Predicted Sound Level from Facility + 5 dBA Tonal Penalty (dBA)	Total Predicted Sound Level + 5 dBA Tonal Penalty (dBA)	Predicted Sound Level Increase w/ Tonal Penalty Applied (dBA)
PL-1	34.5	29.9	35.8	+1.3
PL-2	34.1	34.0	37.1	+3.0
PL-3	33.9	38.0	39.4	+5.5
PL-4	32.9	34.6	36.8	+3.9

A review of the data in the above table reveals that the sound generated by the Facility, even if it were to produce a prominent discrete tone, will be well below the CT DEEP daytime noise standard at all residential locations.

CONCLUSION

An environmental and community noise modeling analysis of the proposed EW Solar Two project was conducted to determine if operational sound levels from the proposed Facility would comply with the State of Connecticut noise standards. Ambient background sound levels were also measured and compared to proposed Facility sound levels.

The modeling study utilized vendor obtained data and field measurement data for the major noise generating equipment sources (i.e., CPS DC-AC inverters), which were incorporated into the WSP and SoundPLAN computer propagation models. The modeling results reveal that the sound level from the proposed Facility will be in compliance with the State of Connecticut noise standards at all residential property lines. Increases in existing background (i.e., L_{90}) noise levels are expected to be minimal.

The broadband and tonal sound levels from the EW Solar Two facility are expected be in full compliance with State of Connecticut Noise Control Regulations (i.e., RCSA §22a-69) at all residences surrounding the Site.

The conclusions and calculations provided are based on the background sound level measurements collected on August 14, 2023 by WSP and on source-specific measurements collect on May 14, 2022 by BAC. The observations in this report were valid on the date and time of the investigation. Reported noise levels contained herein are a factor of operational conditions and environmental conditions present at the time of the assessment and may represent "normal" facility noise levels. Measurements and calculations in this report should be considered accurate to within one (1) decibel.

This report is intended to be used in its entirety for the purposes of Verogy Solar Services ("Verogy") as part of the company's petition to the Connecticut Siting Council ("CSC") for the East Windsor Solar Two ("EW Solar Two") facility filed under Petition No. 1572. Any use of this report, or portions thereof, out of context or any application of this report for purposes other than those explicitly expressed above is considered inappropriate and is done at the sole risk of the user.

If you have any questions, or require additional information, please contact me (860-966-4391, andy.roland@wsp.com), or Paul G. Richard, P.E. (781-552-9899, paul.richard2@wsp.com), at your earliest convenience.

Sincerely,

WSP

Andrew R. Roland
Senior Project Engineer

Paul G. Richard, P.E.
Principal/Senior Project Manager

Attachments:
- A. Environmental Acoustics Technical Background
- B. Environmental & Community Noise Assessment Figures
- C. Sound Level Monitoring Field Notes and Results
- D. Monitoring Equipment Certificates of Calibration
- E. CPS Inverter Manufacturer's Technical Data Sheet
- F. Environmental Noise Modeling Calculations

cc: Kenneth Baldwin (Robinson+Cole)

Attachment A

Environmental Acoustics Technical Background

Decibel Scale

All sounds originate from a source. The sound energy produced by a source creates variations in air pressure which travel in all directions, much like how a wave ripples across water. The "loudness" or intensity of a sound depends on the sound pressure level, defined as the ratio of two pressures: the measured sound pressure from the source divided by a reference pressure (i.e., the minimum threshold pressure of human hearing). This measured ratio is expressed using the decibel ("dB") scale, which is a logarithmic scale designed to accommodate the wide range of sound intensities the human ear can respond to – that is, approximately 20 micropascals ("µPa") up to 100 kilopascals ("kPa"). On the decibel scale, the threshold of human hearing is equal to 0 dB, while levels above 140 dB can cause immediate hearing damage.

The following formula is used to convert a sound pressure value measured in pascals into a decibel value:

$$Lp\ [dB] = 20 \cdot \log_{10}(P_{rms} / P_0)$$

where: Lp = sound pressure level in decibels (dB)

P_{rms} = root mean square of measured sound pressure waveform in pascals (Pa)

P_0 = 0.00002 Pa, reference sound pressure in pascals (Pa)

The table below provides some examples of common sources of sound and their sound pressure levels. All sound levels in this assessment are provided in A-weighted decibels, abbreviated "dBA." The A-weighted sound level reflects how the human ear responds to sound, by deemphasizing sounds that occur in frequencies (i.e., pitch) at which the human ear is least sensitive to sound and emphasizing sounds that occur in frequencies at which the human ear is most sensitive. In the context of environmental and community sound, noise is defined as "unwanted sound."

Comparison of Sound Levels and Sensation of Loudness

Sound Pressure Level (dBA)	Example Sound Source	Perceived Loudness
140	Gun Shot at 3 ft.	Physical Pain
130	Jet Aircraft at 200 ft.	
120	Rock Band (near stage)	Deafening
110	Motorcycle at 3 ft.	
100	Lawn Mower at 3 ft.	Very Loud
90	Noisy Factory Floor	
80	Heavy Truck at 50 ft.	Loud
70	Busy Restaurant	
60	Normal Conversation	Normal
50	Quiet Office	Quiet
40	Living Room	
30	Quiet Library	Faint
20	Empty Auditorium	
10	Soundproof Room	Barely Audible
0	-	Threshold of Hearing

One property of the logarithmic nature of the decibel scale is that the combined sound levels of multiple sound sources is not simply the sum of the contributing sound decibel levels. For example, if the sound of one source measured to have a sound level of 70 dBA is added to another source of 70 dBA, the total is only 73 dBA, not a doubling to 140 dBA. Another mathematical property of the decibel scale is that is one source of sound is at least 10 dB higher than another source, then the total sound is simply the sound level of the louder source. For example, if a sound source at 80 dBA is added to a source at 65 dBA, then the total sound level is 80 dBA.

The following formula is used to combine decibel sound level values:

$L\ [dB] = 10 \cdot \log_{10}(10^{L_1/10} + 10^{L_2/10})$

where: L = combined sound level of source 1 and source 2 in decibels (dB)

L_1 = sound level of sound source 1 in decibels (dB)

L_2 = sound level of sound source 2 in decibels (dB)

In terms of human perception of sound, a ±3 dB difference is considered a barely perceptible change for broadband sounds (i.e., sounds that include all frequencies). Similarly, a difference of ±10 dB is perceived as a halving or doubling of apparent sound loudness and the response that goes with it.

The tables below provide a summary comparison of sound pressure levels and loudness sensations.

Subjective Perception of Changes in Sound level

Change in Sound Level	Perceived Change in Loudness (Absolute Difference in Sound Energy)
± 3 dB	Barely Noticeable Change (2x [or 1/2] energy)
± 5 dB	Easily Noticeable Change (4x [or 1/4] energy)
± 10 dB	Double (or Half) as Loud (10x [or 1/10] energy)
± 20 dB	Very "Dramatic" Change (100x [or 1/100] energy)

Frequency / A-Weighting

Sound is transmitted by pressure variations in air – that is, the compression / release of gas pressure in air. Frequency of pressure waves is expressed in Hertz ("Hz"), which is defined as the number of complete wave cycles per second. Low frequency sound has fewer waves per second (longer wavelength) than high frequency sound (shorter wavelength) and is often described in musical terms as 'pitch' or 'tone'. The frequency range of audible sound that the human ear responds to is 20 to 20,000 Hz. This range is difficult to use to express individual sounds since most sounds created within the environment are composed of multiple frequencies being emitted simultaneously (i.e., broadband). Broadband sound is therefore divided into frequency "bands" called octaves which are identified by their center frequency to make using frequency measurements easier. Octave bands are necessary to evaluate environmental noise because the human ear responds differently to each octave band.

Environmental sound is commonly expressed in terms of an A-weighted sound decibel level ("dBA"). The A-weighting is a standard frequency filter used to make measured sound levels more nearly approximate the frequency response of the human ear, which is centered at a frequency of 1,000 Hz. The table below shows the approximate adjustments made within each octave band frequency to contour un-weighted octave band sound pressure levels in decibels ("dB" or "dBZ") to A-weighted sound pressure levels ("dBA").

A-Weighed Octave Band Adjustments

Octave (Hz)	32	64	125	250	500	1K	2K	4K	8K	16K
A-Adj. Value (dB)	-39.4	-26.2	-16.1	-8.6	-3.6	0.0	+1.2	+1.0	-1.1	-6.6

As shown above, the A-weighting sound levels emphasize the middle frequency sounds (i.e., 1 kHz – 4 kHz), and de-emphasize low- and high-frequency sounds. A 'broadband' sound includes sound pressures at all octave bands expressed as a single representative value.

The A-weighted broadband value is calculated by taking the logarithmic summation of all octave band sound pressure level according to the following formula:

$Lp\ [dBA] = 10 \cdot \log_{10}(\sum 10^{(L_x + Adj_x)/10})$

where: Lp = broadband sound pressure level in A-weighted decibels (dBA)

L_x = sound pressure level at octave band (x) in un-weighted decibels (dB)

Adj_x = octave band (x) adjustment to A-weighting (±dB) (see table above)

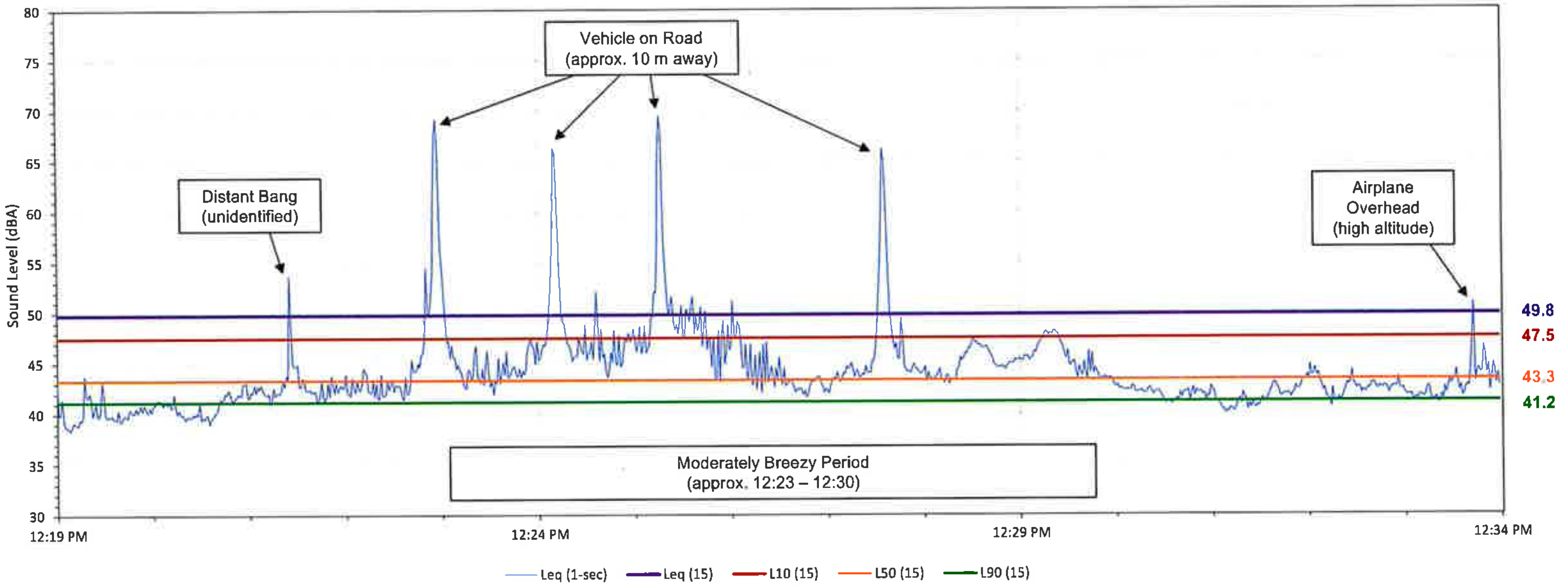
Temporal Sound Metrics

Environmental sound levels vary from moment to moment – that is, some sounds are sharp and impulsive lasting a very short time, while others rise and fall over much longer periods of time. These are termed "temporal" sound level variations, and there are various measures (i.e., metrics) which are designed to account for various levels of temporal variation in sound. The most commonly used in this analysis are the 90% exceedance level (i.e., L_{90}), and the equivalent sound level (i.e., L_{eq}).

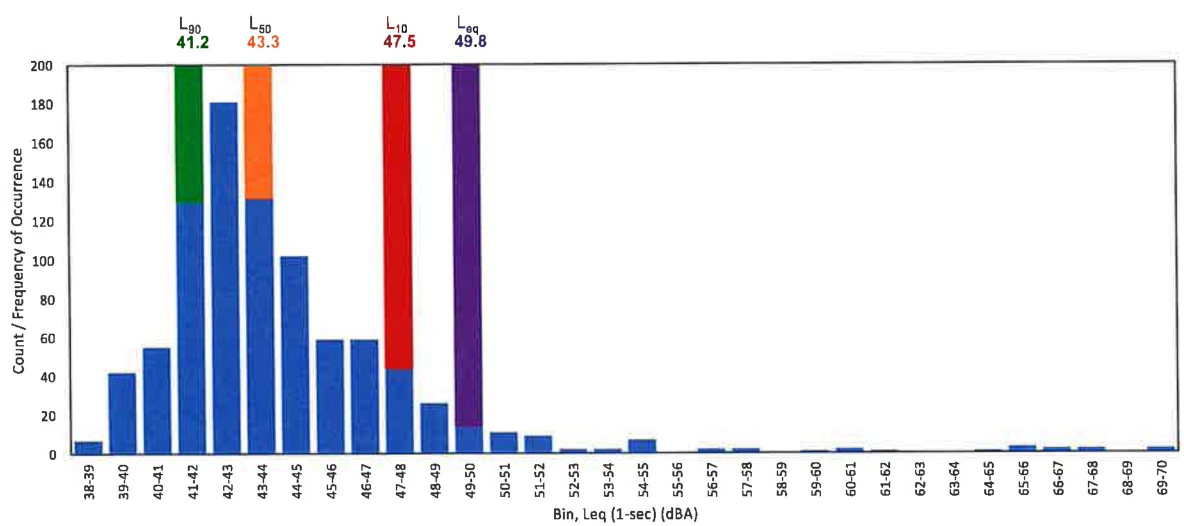
> L_{90} sound metric is a statistical value that calculates the steady-state sound pressure level that is exceeded during 90% of the measurement period. In other words, the L_{90} represents the "quietest" 10% of a sound measurement period and is normally considered the background sound level. The L_{90} calculation effectively eliminates nearly all temporal variation in recorded noise and is used to set baseline and continuous background sound levels. The L_{90} can be considered the "residual" sound level, which is the ambient sound leftover when nearly all obvious intermittent noise sources are eliminated from the measurement. This is known as an exceedance value, or the percent of time (n) during a measurement period a sound level value is exceeded (L_n). Conversely, the L_{10} sound level metric is the statistical value that calculates the "loudest" 10% of the measurement period (i.e., the sound pressure level that is exceeded for only 10% of the measurement period).
>
> L_{50} is the median sound level – that is, the sound level value that is exceeded by 50% (i.e., half) of the data sample. The L_{50} is not skewed by a small proportion of extremely high or low sound level values, and therefore provides a good representation of the most typical sound level recorded during the sample period.
>
> L_{eq}, or equivalent sound level, is the steady-state sound level over a period that has the same acoustic energy as the fluctuating sound that occurred during the same period of time. As an example, if two (2) sounds were measured, and one (1) sound had twice (2X) the sound energy but lasted for half as long, the two (2) sounds would be characterized as having the same equivalent sound level (since the energy released is equivalent). The L_{eq} is directly related to the effects of sound on peoples' perceived intrusiveness or level of annoyance since it expresses the equivalent magnitude of the sound as a function of occurrence frequency and time. The L_{eq} is commonly referred to as the average sound pressure level, although this is not necessarily an accurate description. In certain situations, the L_{eq} sound level should be considered overly conservative as the value is more significantly affected by short-duration loud noises. This is caused by the logarithmic nature of the decibel scale and that it is a time-integrated energy average (as opposed to a simple arithmetic average). For example, a 76 dB sound level equates to 'quadruple' (i.e., four times) the sound energy produced by a 70 dB source, therefore the L_{eq} value is mostly determined by loud sounds if there are fluctuations during a measurement period.

The L_{eq} and L_{90} (L_{50} and L_{10}) values are both automatically calculated with a sound level meter in accordance with the methods define in American National Standards Institute ("ANSI") S1.4-1983. The Figure A-1 below provides a visual description of how these sound level metrics are used to summarize fluctuating sound data during an example 15-minute measurement period. The figure also demonstrates how the 'skewness' of the data frequency distribution will generate a L_{eq} value which exceeds the L_{10} metric due to several loud, short-duration events.

Sound Level Time Series Plot



Sound Level Occurrence Distribution Plot



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VEROGY SOLAR SERVICES
124 LASALLE ROAD
WEST HARTFORD, CT 06107

PROJECT:
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CT 06016

PROJECT NO:	TBD
REVISION:	00
DRAWN BY:	ARR
CHECKED BY:	PGR
DATE:	8/14/2023

NOTES:

EXAMPLE SOUND LEVEL DATA (NOT SPECIFIC TO THIS PROJECT) TO BE USED TO DEMONSTRATE RELATIONSHIP BETWEEN VARIOUS SOUND LEVEL METRICS AND RECORDED SOUND LEVEL DATA.

L_{eq} = EQUIVALENT SOUND LEVEL
L_{90} = 90% EXCEEDANCE LEVEL
L_{50} = MEDIAN SOUND LEVEL
L_{10} = 10% EXCEEDANCE LEVEL

FIGURE TITLE:
SOUND METRIC EXPLANATORY DIAGRAM

FIGURE NUMBER:
A-1

Sound Power versus Sound Pressure

Sound power ("Lw") and sound pressure ("Lp") are two distinct and commonly confused descriptors of sound because both values are typically expressed in the decibel scale. Sound power is the acoustical energy emitted by the sound source and is an absolute value. It is not affected by the environment and is independent of distance to the source. On the other hand, sound pressure levels vary substantially with distance from the source and also are diminished by other environmental factors (e.g., obstacles, barriers, air absorption, wind, etc.). Sound pressure is what human ears experience (or hear), and what sound level meters measure.

The total acoustical power emitted by a sound source is given in terms of the sound power level (Lw). The sound power level of a source is an intrinsic property of the unit for a give set of operating conditions irrespective of the orientation of the source. Sound power is a theoretical value that is not directly measured. It is a characteristic of the sound source and is an estimate of the total sound power emitting in all directions by the source. The value of sound power level is determined by the following equation:

$$Lw\ (dB) = 10 \cdot \log_{10}(W / W_0)$$

where: Lw = sound power of source in decibels (dB)

W = acoustic power radiated by the source in watts (W)

$W_0 = 10^{-12}$ W, reference power in watts (W)

The sound pressure level (Lp) is a measure of the magnitude of the acoustical pressure wave at a specific receptor location. The magnitude of the sound pressure level is a result of how the sound power is distributed and influenced by the environment between the sound source and the receiver location. Environmental influences may include distance between the source and the receiver, atmospheric attenuation of the path of propagation, reflections from surfaces, as well as sound transmission and refraction through and around fluid/solid structures. In many instances these effects are frequency dependent necessitating an analysis that can account for the change in spectral distribution of the sound power during the propagation from the source to the receiver.

Sound Level Reduction Over Distance

The calculation to estimate environmental sound pressure value at a given location from a source value at a given sound power level is detailed in ISO 9613-2: Acoustics – Attenuation of Sound During Propagation Outdoors. This is the commonly accepted procedure for 'modeling' predicted sound level impact at a receptor location due to the introduction of a sound source. As mentioned above, this calculation is influenced by numerous factors – for example, geometric divergence (i.e., wave-spreading due to distance between source and receiver), atmospheric absorption, ground and surface reflection and absorption, and screening and refraction due to obstacles between source and receiver. The following section provides an explanation of the most basic of these 'factors' – that is, geometric divergence or sound level reduction over distance.

When traveling from a source to a receptor in an outdoor environment, sound energy levels decrease with increasing distance from source to receptor. This is due to geometric divergence (or wave-spreading), and the decrease in sound level from any source normally follows the "inverse-square law". The inverse-square law generally applies to energy as it is radiated outward in three-dimensions (i.e., spherically). As the emitted energy gets farther from the source it is spread out over an area that increases in proportion to the square of the distance from the source (i.e., r^2). The attenuation value due to spherical spreading in the free field is equal to:

$$A_{div}\ (dB) = 10 \cdot \log_{10}(4 \cdot \pi \cdot r^2) = 20 \cdot \log_{10}(r) + 11$$

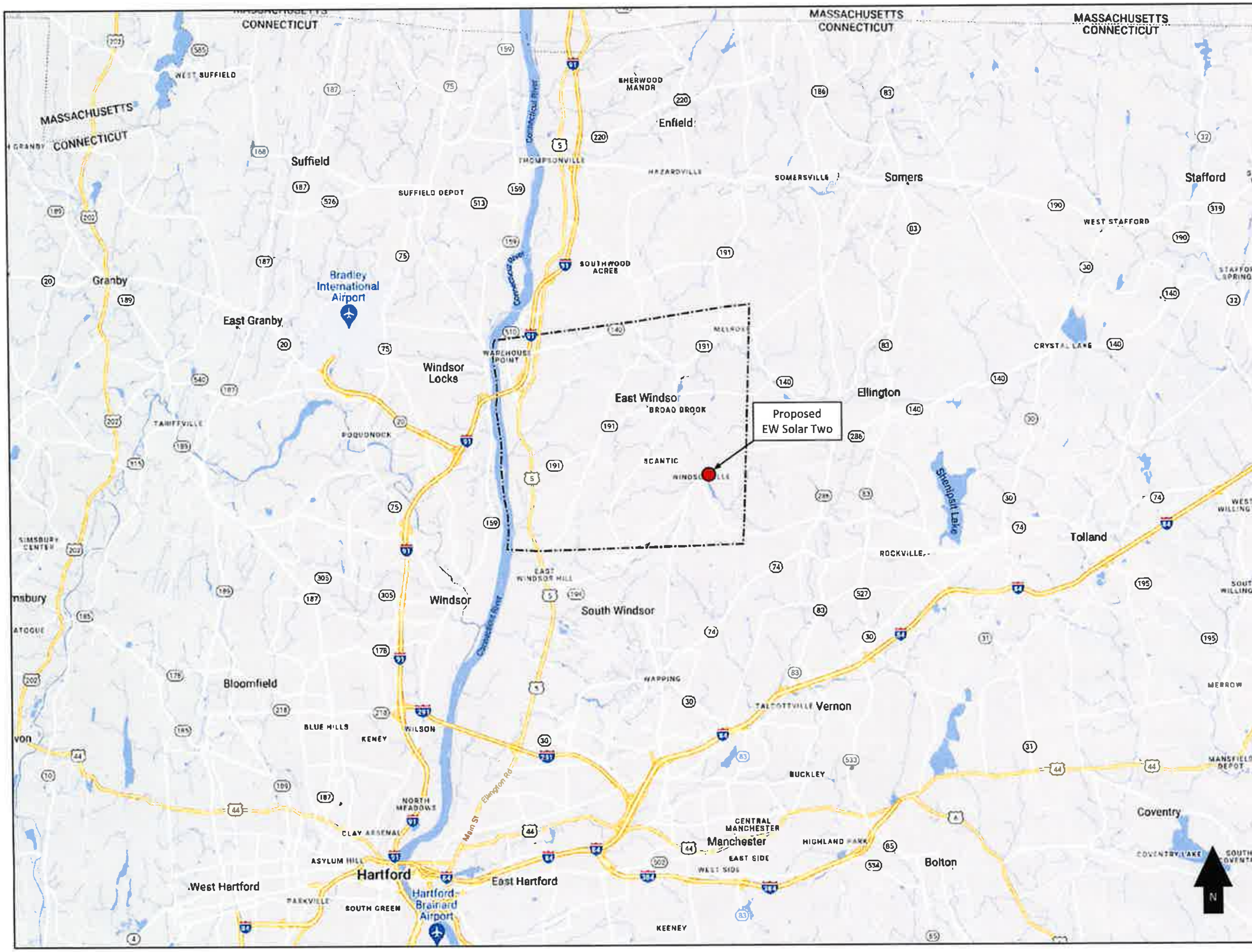
where: A_{div} = attenuation due to geometric divergence in decibels (dB)

r = distance from the source to the receiver in meters (m)

In general, at distances greater than 50 feet from a point source, every doubling of the distance between the source and the receiver produces a 6 dB reduction in sound level at the receptor. However, for heavy roadway traffic, which can be approximated as a line source, sound levels typically decrease by approximately 3 dB every time the distance between the road and the receptor is doubled due to the cylindrical spreading of the waves. In either case the actual reduction in sound levels over the distance is dependent on the characteristics of the source itself (e.g., frequency, directionality, etc.) and the conditions over which the sound travels (e.g., barriers, topography, groundcover, etc.).

Attachment B

Environmental & Community Noise Assessment Figures



WSP USA ENVIRONMENT & INFRASTRUCTURE, INC. 100 APOLLO DRIVE, SUITE 302 CHELMSFORD, MA 01824	
CLIENT:	VEROGY SOLAR SERVICES 124 LASALLE ROAD WEST HARTFORD, CT 06107
PROJECT:	EAST WINDSOR SOLAR TWO 31 THRALL ROAD EAST WINDSOR, CT 06016
PROJECT NO:	TBD
REVISION:	00
DRAWN BY:	ARR
CHECKED BY:	PGR
DATE:	8/14/2023
SCALE:	0 — 2.0 — 4.0 MILES
NOTES:	
FIGURE TITLE:	SITE LOCUS MAP
FIGURE NUMBER:	1

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100 APOLLO DRIVE, SUITE 302
CHELMSFORD, MA 01824

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WEST HARTFORD, CT 06107

PROJECT:
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31 THRALL ROAD
EAST WINDSOR, CT 06016

PROJECT NO:	TBD
REVISION:	00
DRAWN BY:	ARR
CHECKED BY:	PGR
DATE:	8/14/2023

SCALE:
0 200 400
FEET

NOTES:

L_{90} = RESIDUAL (I.E., 90% EXCEEDANCE) SOUND LEVEL
dBA = A-WEIGHTED DECIBELS

EXISTING AMBIENT DAYTIME SOUND LEVEL MONITORING CONDUCTED BY ANDY ROLAND (WSP) ON MON., AUG. 14, 2023 BETWEEN 11:00 AM AND 1:30 PM.

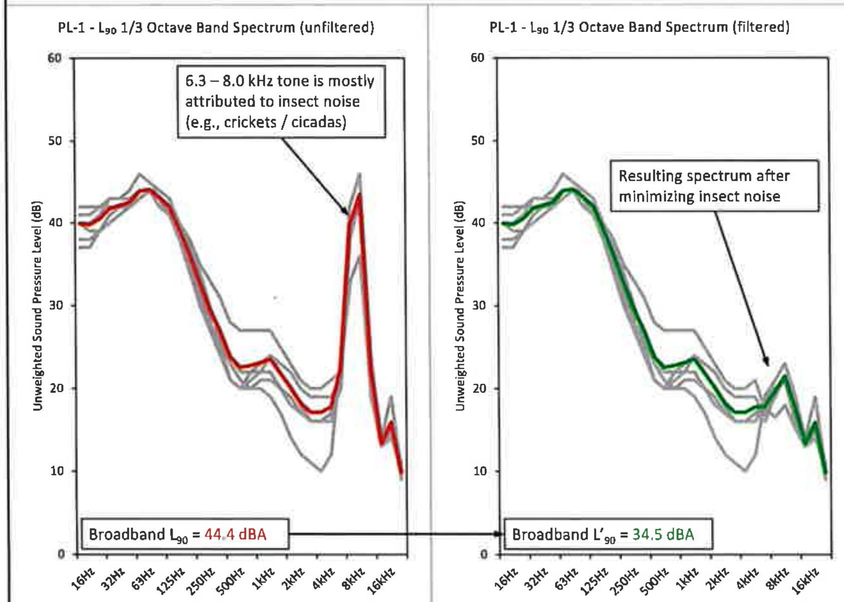
SOUND LEVELS MEASURED AT EACH LOCATION FOR 30-MINUTES USING CASELLA CEL-633C TYPE 1 OCTAVE BAND ANALYZER (SN: 2383045).

THE FOLLOWING WEATHER CONDITIONS WERE OBSERVED:
- TEMPERATURE = 76 – 80 °F
- WIND SPEED = 0 – 3 MPH (G: 5 MPH)
- WIND DIRECTION = NW-SW
- REL. HUMIDITY = 67 – 71%
- SKY TYPE = MOSTLY CLEAR
- PRECIPITATION = NONE

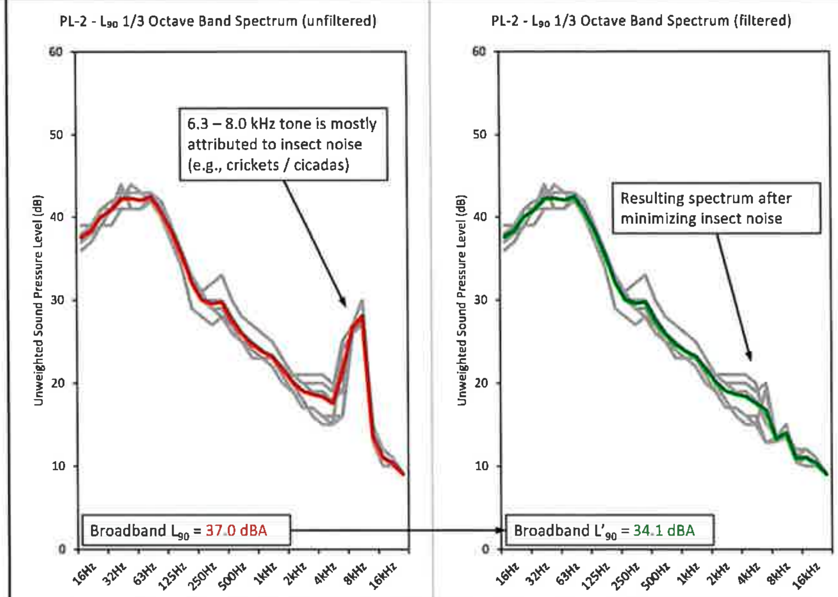
FIGURE TITLE:
SOUND MONITORING LOCATIONS & DAYTIME RESULTS SUMMARY

FIGURE NUMBER:
2

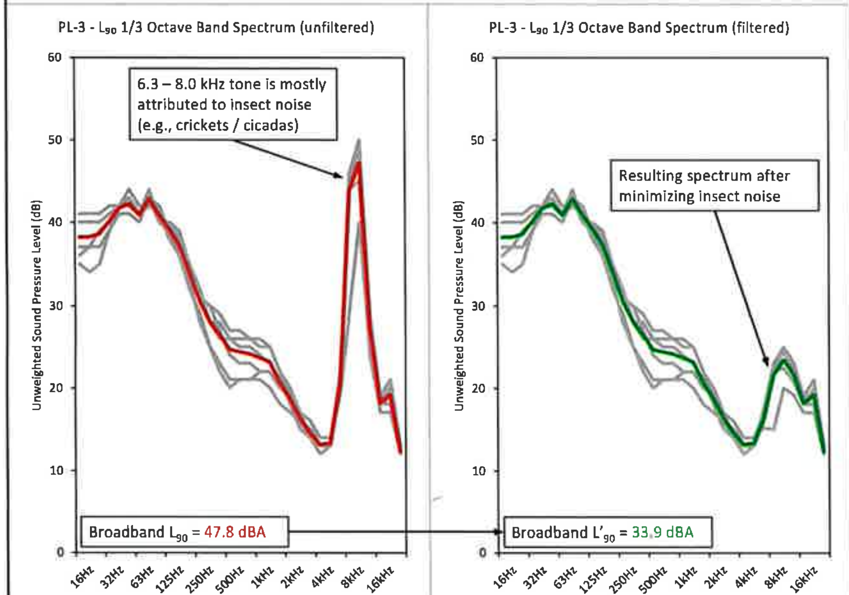
PL-1 – L_{90} Sound Level Adjustment (with and without insect noise)



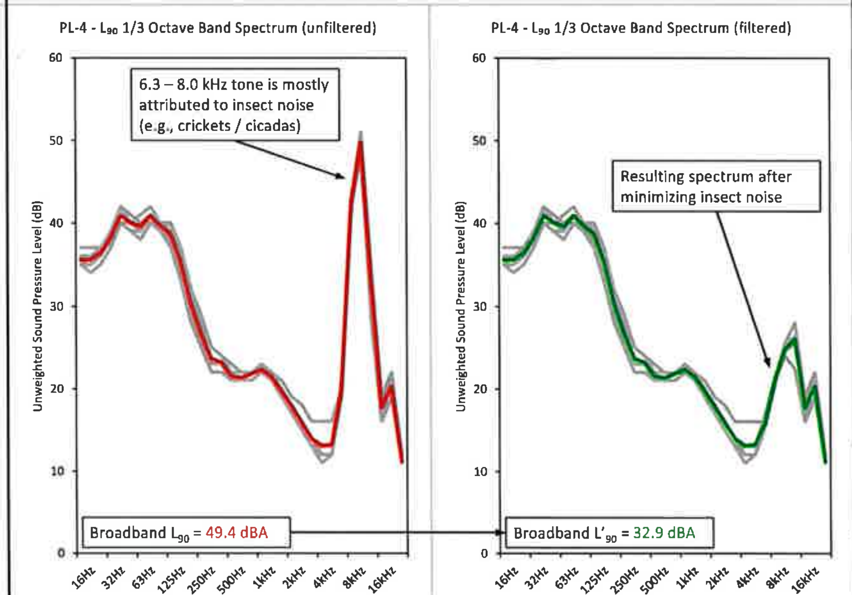
PL-2 – L_{90} Sound Level Adjustment (with and without insect noise)



PL-3 – L_{90} Sound Level Adjustment (with and without insect noise)



PL-4 – L_{90} Sound Level Adjustment (with and without insect noise)



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PROJECT:

EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CT 06016

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DATE:	8/14/2023

NOTES:

WSP performed a series of adjustments to the 1/3 octave band frequency spectrum results to predict the existing daytime background sound levels at each measurement position with the cricket and cicada noise minimized. The charts presents the pre-adjustment and post-adjustment sound level monitoring results with the insect noise minimized.

Broadband sound level results recomputed using standard formula:

$$L_p\,[dBA] = 10 \cdot \log 10(\sum 10(L_x + Adj_x)/10)$$

where: L_p = broadband sound pressure level in A-weighted decibels (dBA), L_x = sound pressure level at 1/3 octave band (x) in un-weighted decibels (dB), Adj_x = 1/3 octave band (x) adjustment to A-weighting (±dB)

FIGURE TITLE:

MONITORING RESULTS
SPECTRUM ADJUSTMENT

FIGURE NUMBER

3

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CHELMSFORD, MA 01824

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124 LASALLE ROAD
WEST HARTFORD, CT 06107

PROJECT:
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CT 06016

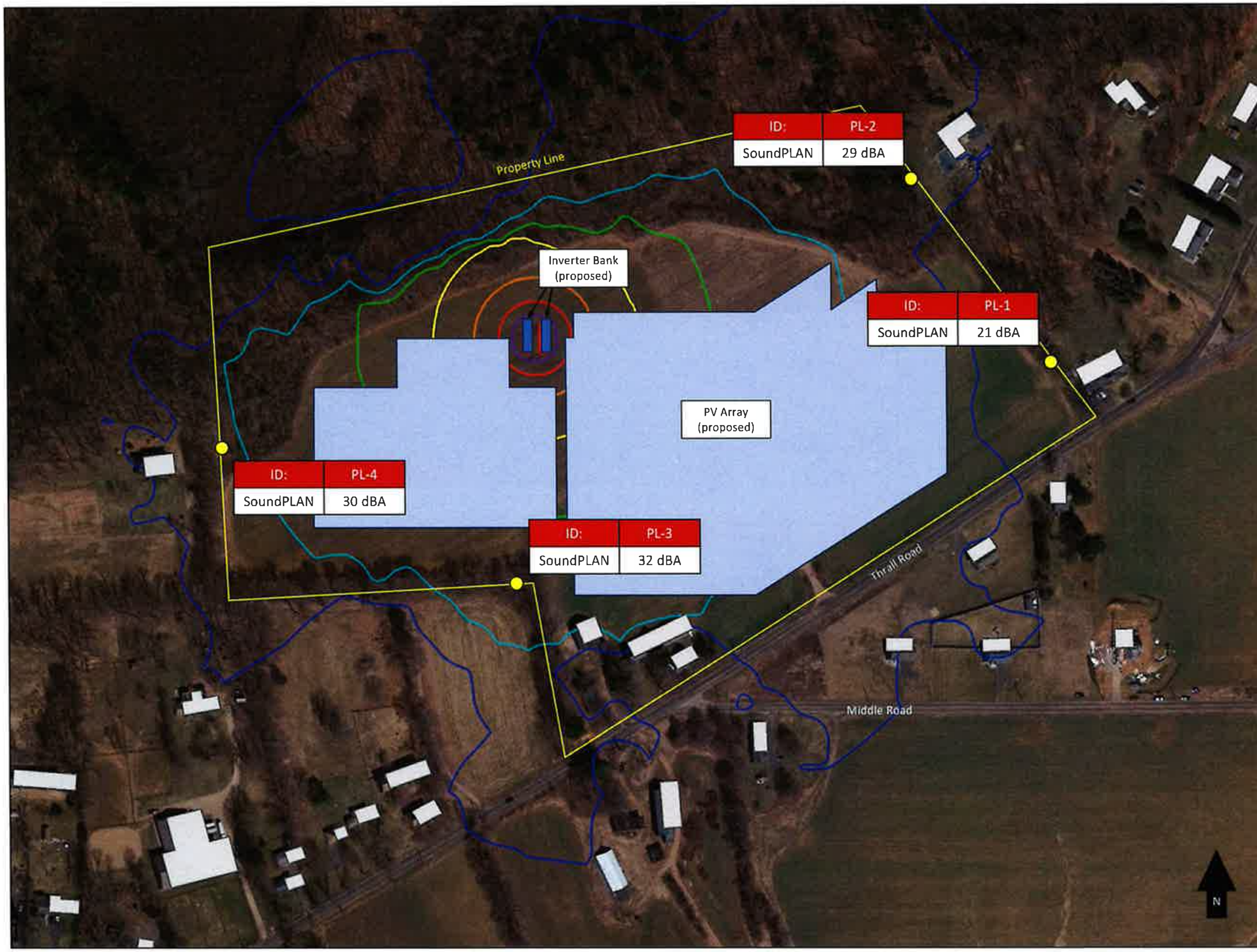
PROJECT NO:	TBD
REVISION:	00
DRAWN BY:	ARR
CHECKED BY:	PGR
DATE:	8/14/2023

SCALE:
0 200 400
FEET

NOTES:
L'_{90} = RESIDUAL (I.E., 90% EXCEEDANCE) SOUND LEVEL, ADJUSTED TO MINIMIZE INSECT NOISE
dBA = A-WEIGHTED DECIBELS

FIGURE TITLE:
SOUND MONITORING LOCATIONS & DAYTIME ADJUSTED RESULTS SUMMARY

FIGURE NUMBER:
4



WSP USA ENVIRONMENT & INFRASTRUCTURE, INC.
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CLIENT:
VEROGY SOLAR SERVICES
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WEST HARTFORD, CT 06107

PROJECT:
EAST WINDSOR SOLAR TWO
31 THRALL ROAD
EAST WINDSOR, CT 06016

PROJECT NO:	TBD
REVISION:	00
DRAWN BY:	ARR
CHECKED BY:	PGR
DATE:	8/15/2023

SCALE:
0 200 400
FEET

CONTOUR LEVELS (dBA):

25	
30	
35	
40	
45	
50	
55	

NOTES:
SPL = SOUND PRESSURE LEVEL (I.E., MODEL RESULT)
dBA = A-WEIGHTED DECIBELS

FIGURE TITLE:
SOUNDPLAN MODELING RESULTS SUMMARY

FIGURE NUMBER:
5

Attachment C

Sound Level Monitoring Field Notes and Results

WSP USA E&I, Inc.
Environmental Noise Monitoring Field Notes

Project Name:	Verogy - EW Solar Two
Performed By:	A. Roland

LOCATION INFORMATION	
Location ID:	PL-1
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	11:06:00 AM
End Time:	11:36:00 AM

WEATHER CONDITIONS	
Temperature:	76 °F
Wind Speed:	0 - 3 mph
Direction:	NW/SW
Humidity:	69%
Sky Type:	Mostly clear
Precipitation:	n/a

LOCATION SKETCH

GENERAL SOUND SOURCES (order by most prominent)	
1)	Natural sounds (e.g., insects, birds, etc.)
2)	Light breeze, occassional gust to 5 mph (rustling leaves)
3)	Local and distant roadway traffic
4)	
5)	

MONITORING NOTES / EVENTS	
Event Description:	Number of Instances, Start Time, End Time:
Airplane (high altitude)	11:07, 11:18, 11:25 11:27, 11:29, 11:30, 11:32-11:33, 1:34-11:35
Motorcycle (Thrall Rd.)	11:10, 11:28
Airplane (propeller)	11:14
Construction (distant)	11:23-11:24, 11:26

TRAFFIC COUNT (nearest roadway)

Thrall Rd.	11:06 AM	11:07 AM	11:08 AM	11:09 AM	11:10 AM	11:11 AM	11:12 AM	11:13 AM	11:14 AM	11:15 AM
			1	2	2	2	2		1	1
	11:16 AM	11:17 AM	11:18 AM	11:19 AM	11:20 AM	11:21 AM	11:22 AM	11:23 AM	11:24 AM	11:25 AM
	1	1	3	2	2	2	1	1	1	4
	11:26 AM	11:27 AM	11:28 AM	11:29 AM	11:30 AM	11:31 AM	11:32 AM	11:33 AM	11:34 AM	11:35 AM
	1	1	2	3		3	6	1	2	1

OTHER COMMENTS

Insect (e.g., crickets & cicadas) noise most pronounced in 6 - 8 kHz frequency range

Environmental Noise Monitoring Data Sheet

Project Name:	Verogy - EW Solar Two
Project No:	3652220385

MEASUREMENT INFORMATION	
Location ID:	PL-1
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	11:06:00 AM
End Time:	11:36:00 AM

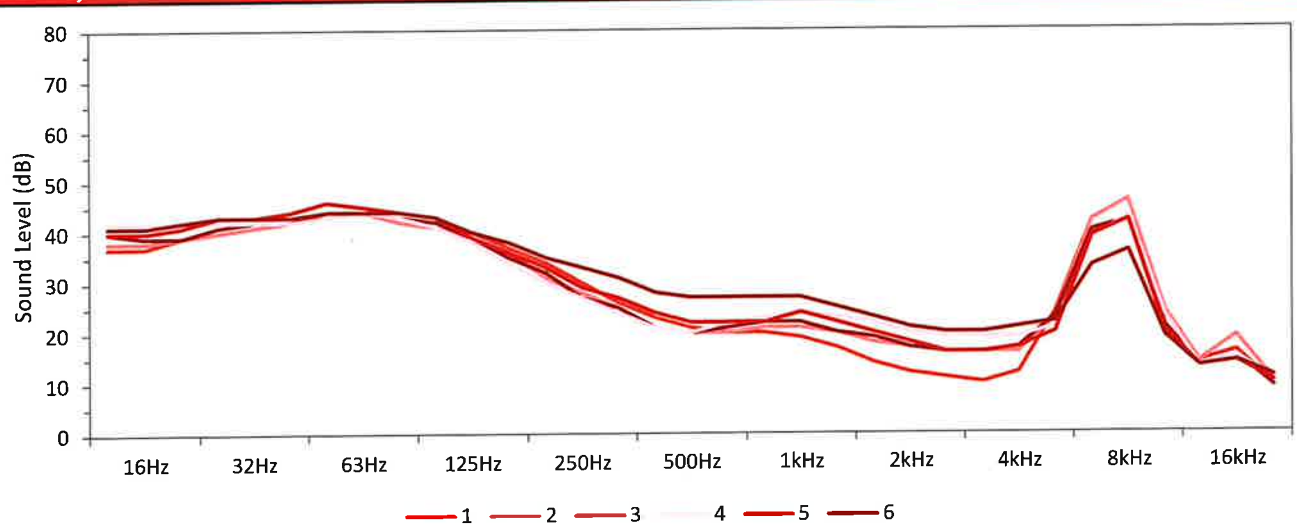
SUMMARY INFORMATION	
Duration:	00:30:00
Response:	Random
Overload:	FALSE
Cal. (Before):	11:05:22 AM
Cal. (After):	11:36:46 AM
Cal. Drift:	0.1

MONITOR PHOTO

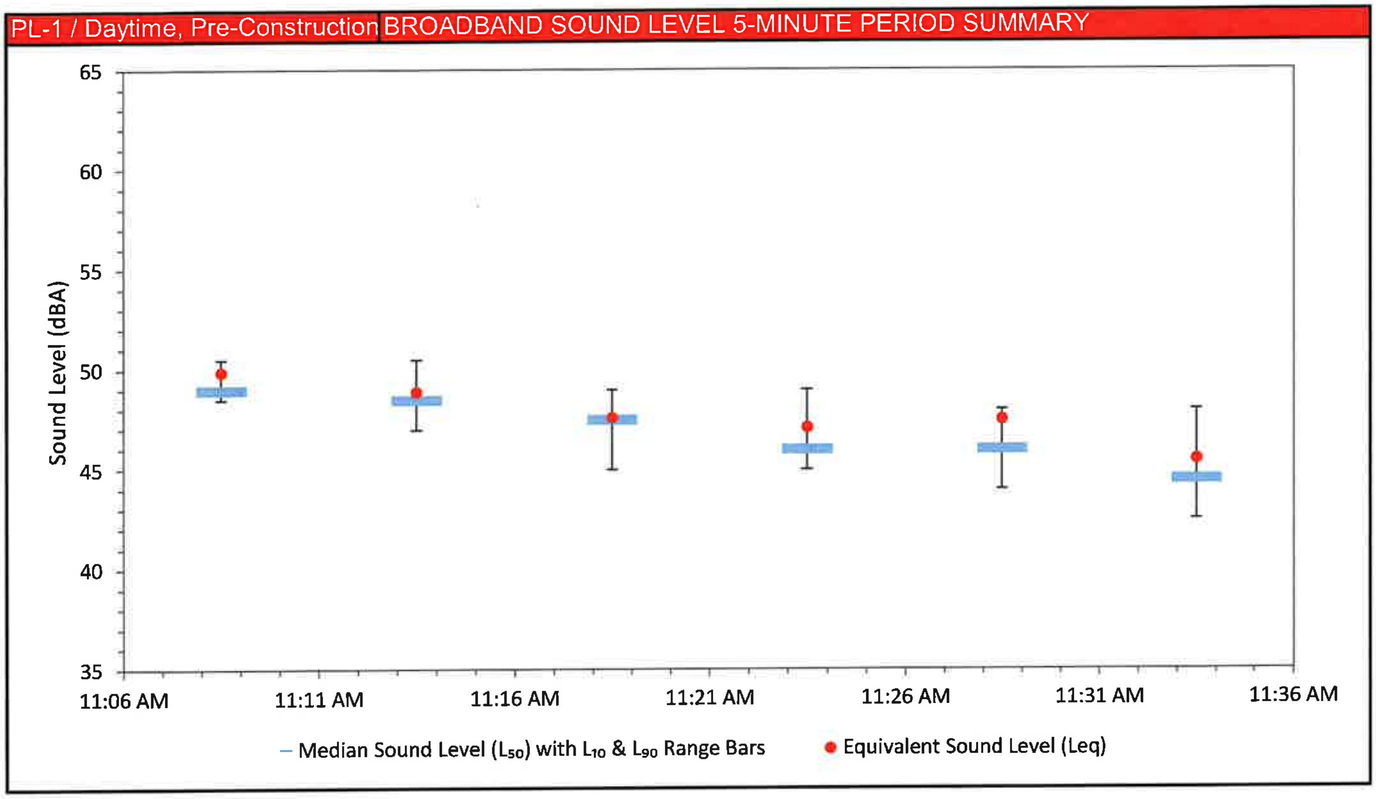
RESULTS SUMMARY

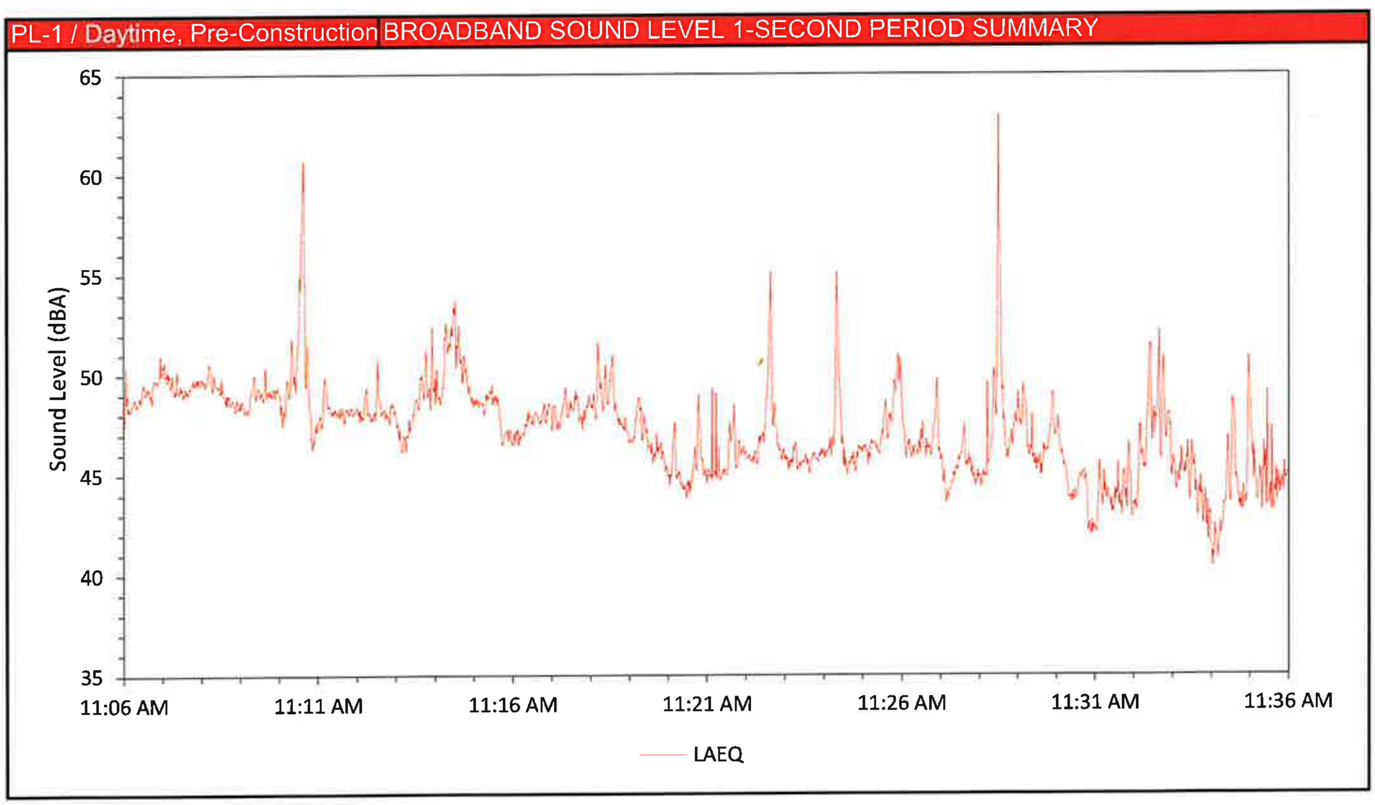
		Cumulative Results			
		L_{eq}	L_{10}	L_{50}	L_{90}
Octave Band SPL (dB)	32 Hz:	54.2	56.5	51.2	46.9
	63 Hz:	55.3	56.9	51.9	48.5
	125 Hz:	54.7	54.6	47.6	44.5
	250 Hz:	44.1	46.1	38.7	34.8
	500 Hz:	38.2	39.0	31.2	27.1
	1 kHz:	36.3	40.1	31.4	27.0
	2 kHz:	33.7	36.7	27.8	22.7
	4 kHz:	31.5	33.3	27.8	24.4
	8 kHz:	46.9	47.6	46.1	44.2
Broadband (dBA):		**48.0**	**49.6**	**47.3**	**44.4**

PL-1 / Daytime, Pre-Construction — LZ90,1/3 OCTAVE BAND SOUND LEVEL SUMMARY

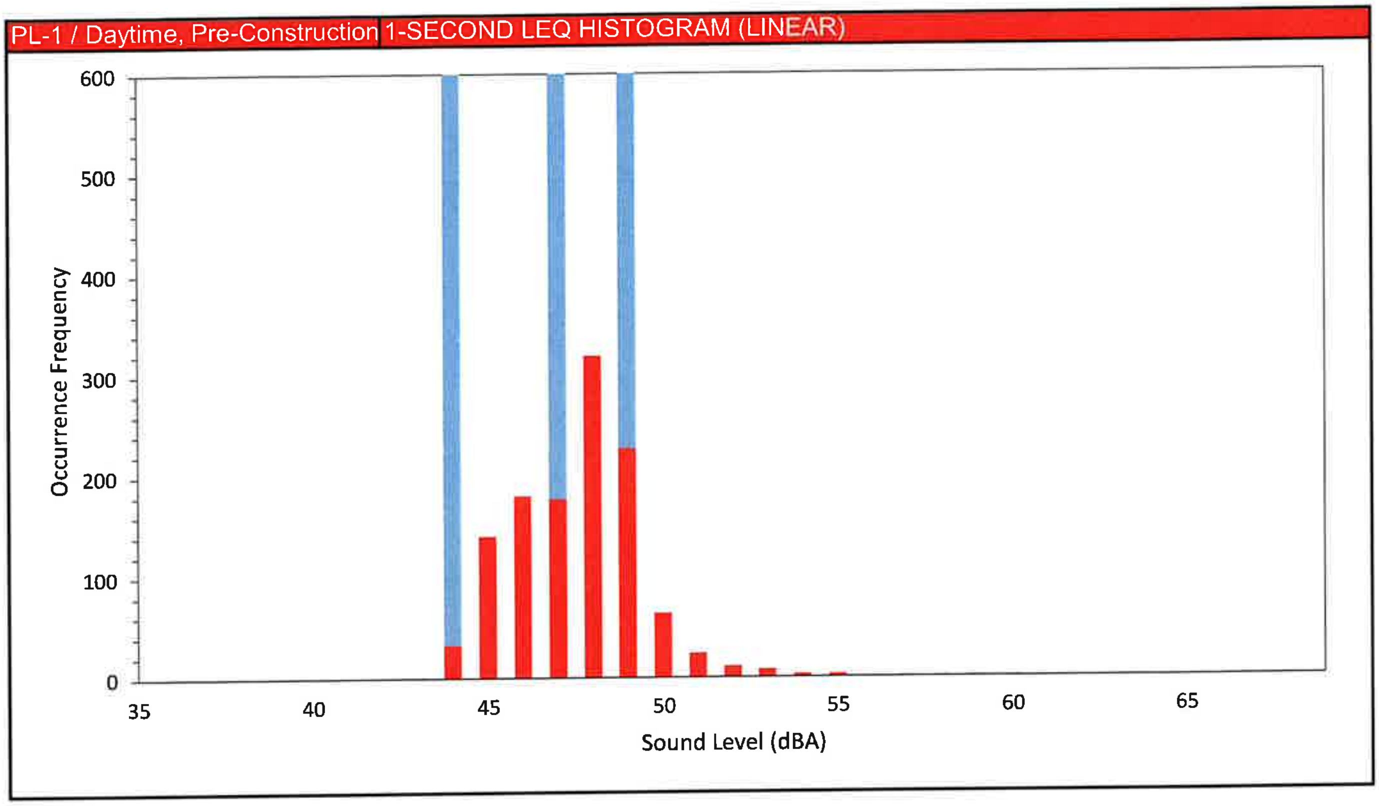


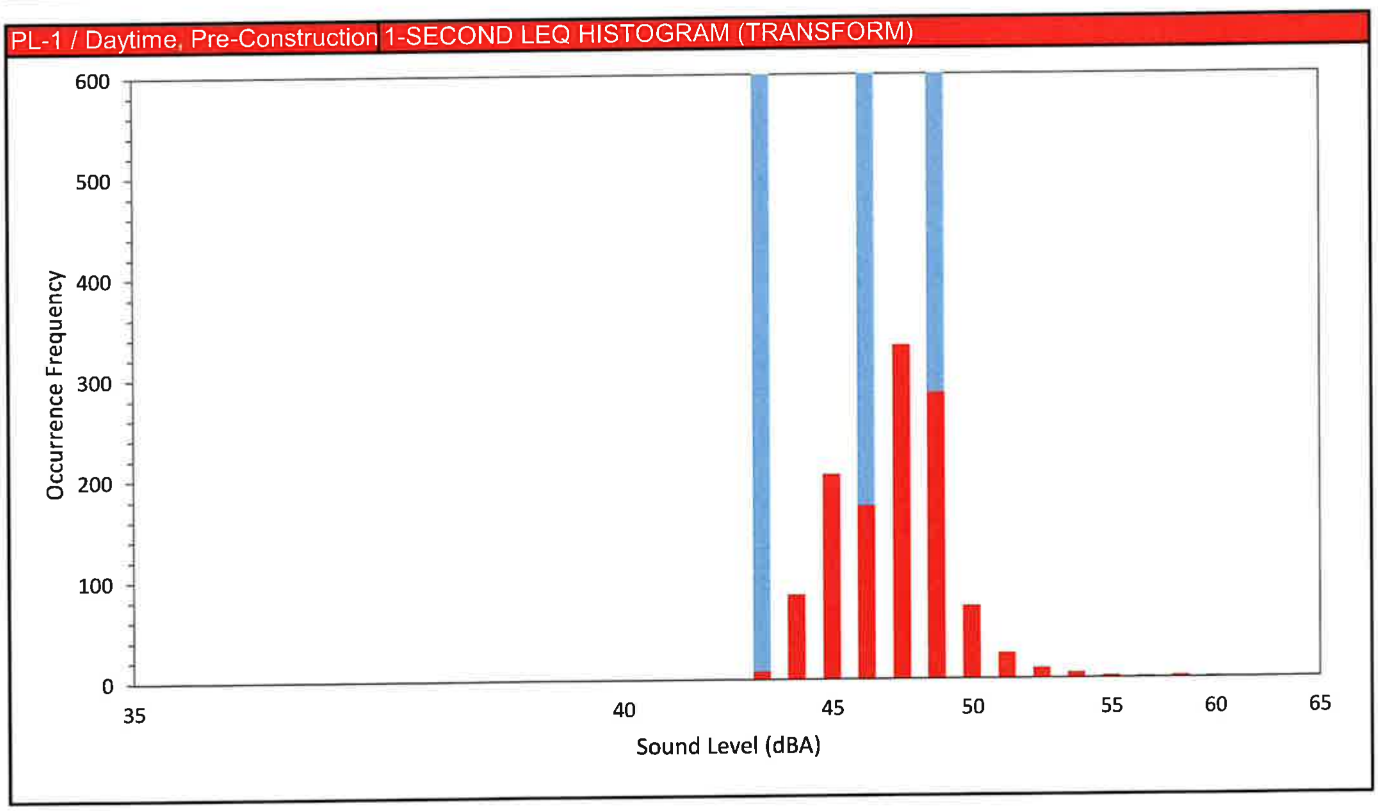
Environmental Noise Monitoring Summary Charts





Environmental Noise Monitoring Distribution Charts





WSP USA E&I, Inc.
Environmental Noise Monitoring Field Notes

Project Name:	Verogy - EW Solar Two
Performed By:	A. Roland

LOCATION INFORMATION	
Location ID:	PL-2
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	11:45:00 AM
End Time:	12:15:00 PM

WEATHER CONDITIONS	
Temperature:	77 °F
Wind Speed:	0 - 3 mph, g: 5 mph
Direction:	NW/SW
Humidity:	67%
Sky Type:	Mostly clear
Precipitation:	n/a

LOCATION SKETCH

GENERAL SOUND SOURCES (order by most prominent)	
1)	Natural sounds (e.g., insects, birds, etc.)
2)	Light breeze, occassional gust to 5 mph (rustling leaves)
3)	Aircraft traffic
4)	Distant roadway traffic
5)	

MONITORING NOTES / EVENTS	
Event Description:	Number of Instances, Start Time, End Time:
Airplane (high altitude)	11:45, 11:52, 11:55, 11:56, 11:59, 12:02-12:03, 12:05, 12:11
Loud cicada (near meter)	11:48-11:49
Airplane (propeller)	11:49
Construction (distant)	11:52, 12:02, 12:04, 12:14
Noticable gust (+5 mph)	11:55-11:58, 12:00-12:01, 12:06, 12:08, 12:11-12:12
Airplane (low altitude)	11:57-11:59, 12:00

TRAFFIC COUNT (nearest roadway)

Thrall Rd.	11:45 AM	11:46 AM	11:47 AM	11:48 AM	11:49 AM	11:50 AM	11:51 AM	11:52 AM	11:53 AM	11:54 AM
		1		3	1			1		1
	11:55 AM	11:56 AM	11:57 AM	11:58 AM	11:59 AM	12:00 PM	12:01 PM	12:02 PM	12:03 PM	12:04 PM
		2		3	1	1		1		1
	12:05 PM	12:06 PM	12:07 PM	12:08 PM	12:09 PM	12:10 PM	12:11 PM	12:12 PM	12:13 PM	12:14 PM
		1	1			1	1		1	1

OTHER COMMENTS

Insect (e.g., crickets & cicadas) noise not as prominent in the forest
Roadway noise less audible than PL-1

Environmental Noise Monitoring Data Sheet

Project Name:	Verogy - EW Solar Two
Project No:	3652220385

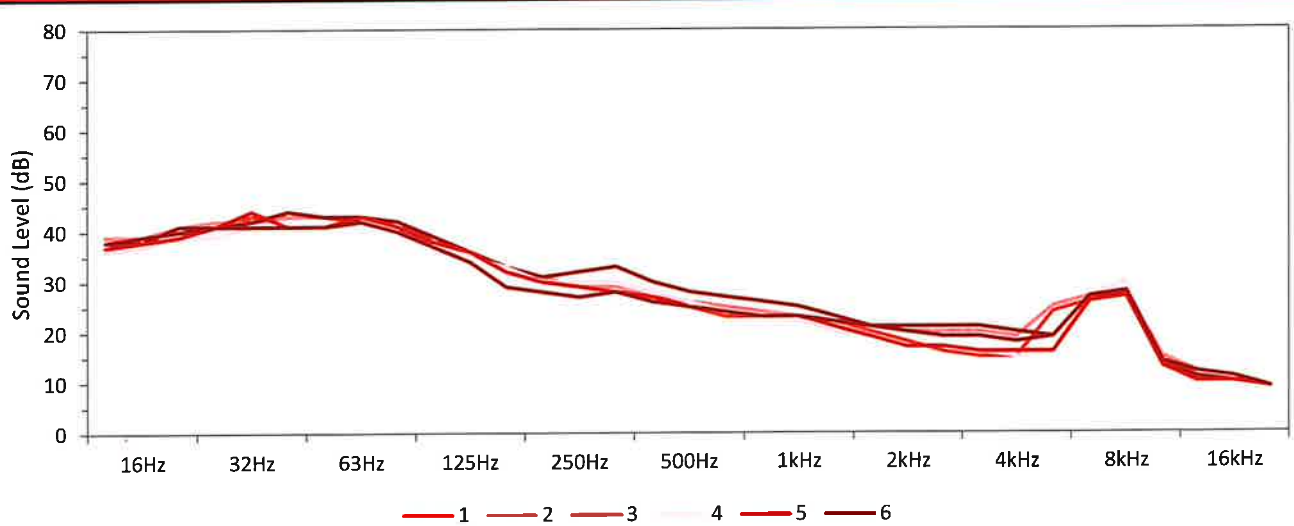
MEASUREMENT INFORMATION	
Location ID:	PL-2
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	11:45:00 AM
End Time:	12:15:00 PM

MONITOR PHOTO

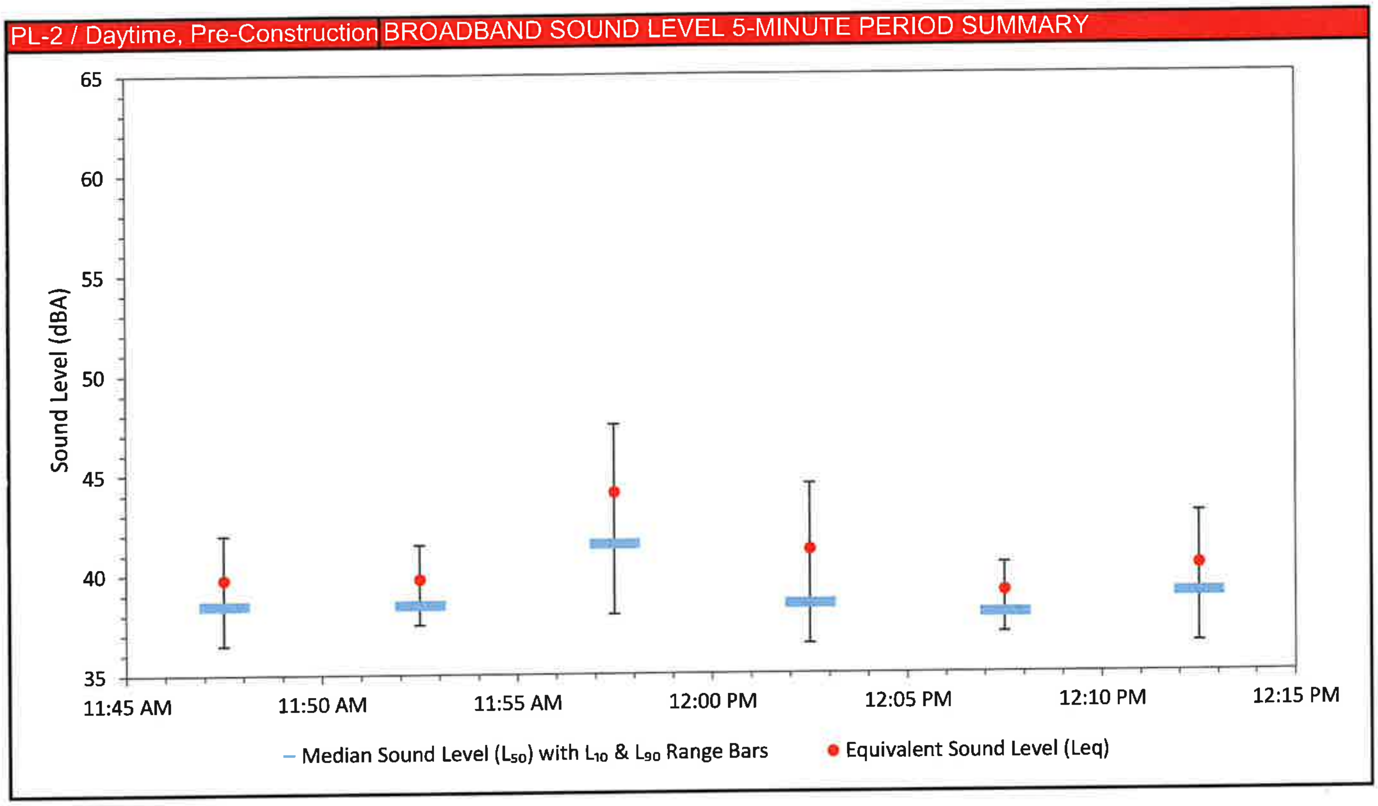
SUMMARY INFORMATION	
Duration:	00:30:00
Response:	Random
Overload:	FALSE
Cal. (Before):	11:43:53 AM
Cal. (After):	12:15:55 PM
Cal. Drift:	0.1

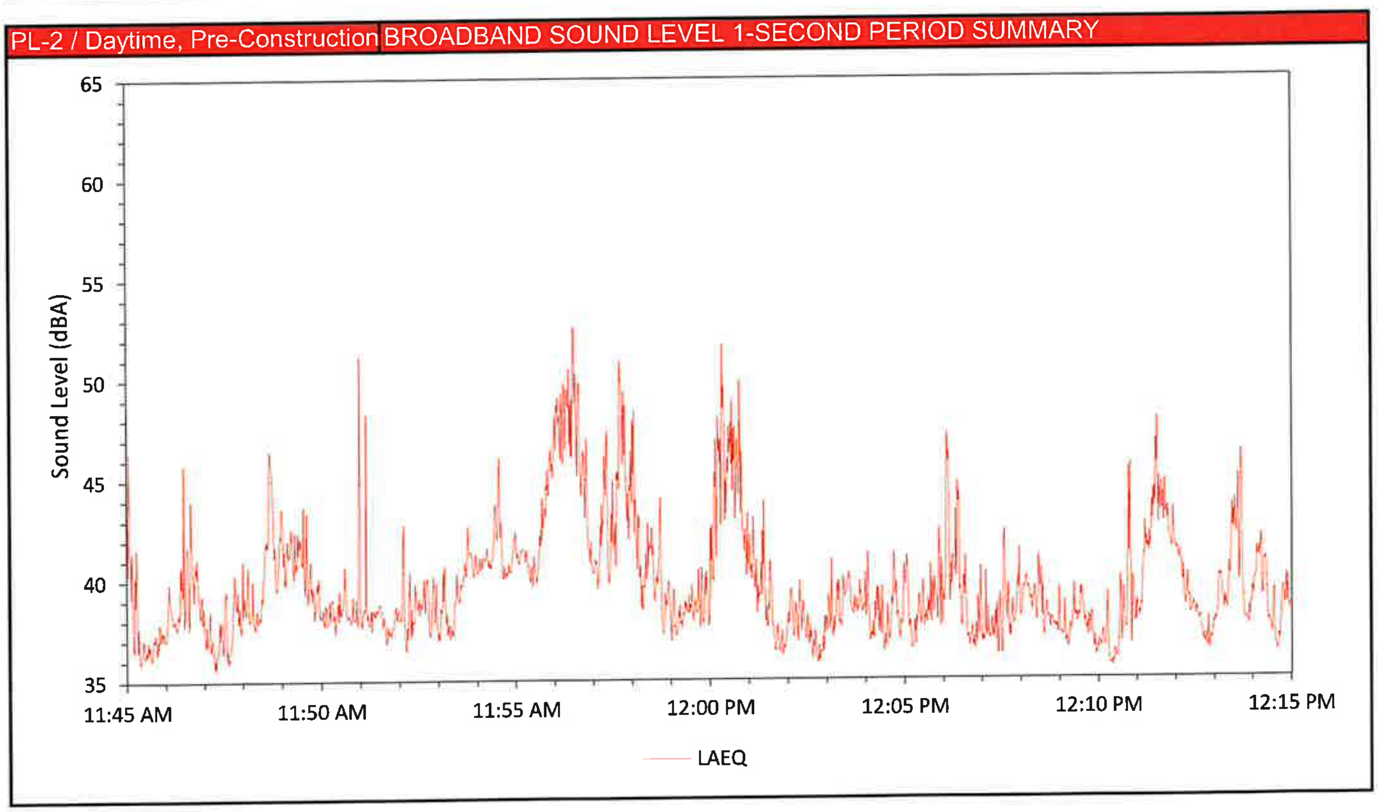
RESULTS SUMMARY					
		Cumulative Results			
		L_{eq}	L_{10}	L_{50}	L_{90}
Octave Band SPL (dB)	32 Hz:	51.6	54.4	50.4	46.6
	63 Hz:	51.8	54.1	49.9	46.6
	125 Hz:	47.1	50.0	44.2	40.8
	250 Hz:	42.4	44.9	37.7	34.4
	500 Hz:	38.5	39.6	34.2	30.8
	1 kHz:	33.3	36.0	30.9	27.7
	2 kHz:	29.4	32.4	27.5	24.0
	4 kHz:	29.6	32.1	27.8	23.6
	8 kHz:	32.6	33.3	31.6	30.5
Broadband (dBA):		**41.1**	**43.7**	**38.9**	**37.0**

PL-2 / Daytime, Pre-Construction LZ90,1/3 OCTAVE BAND SOUND LEVEL SUMMARY

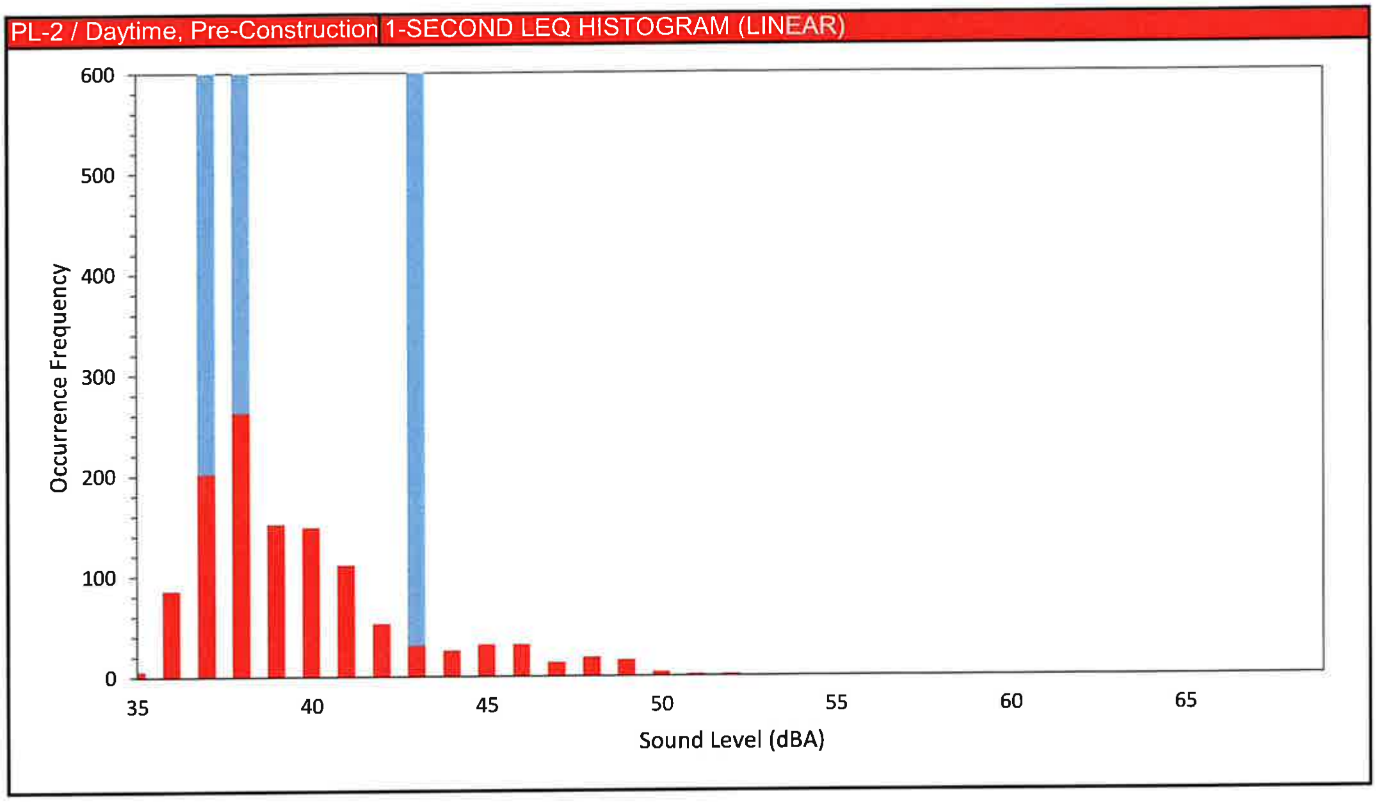


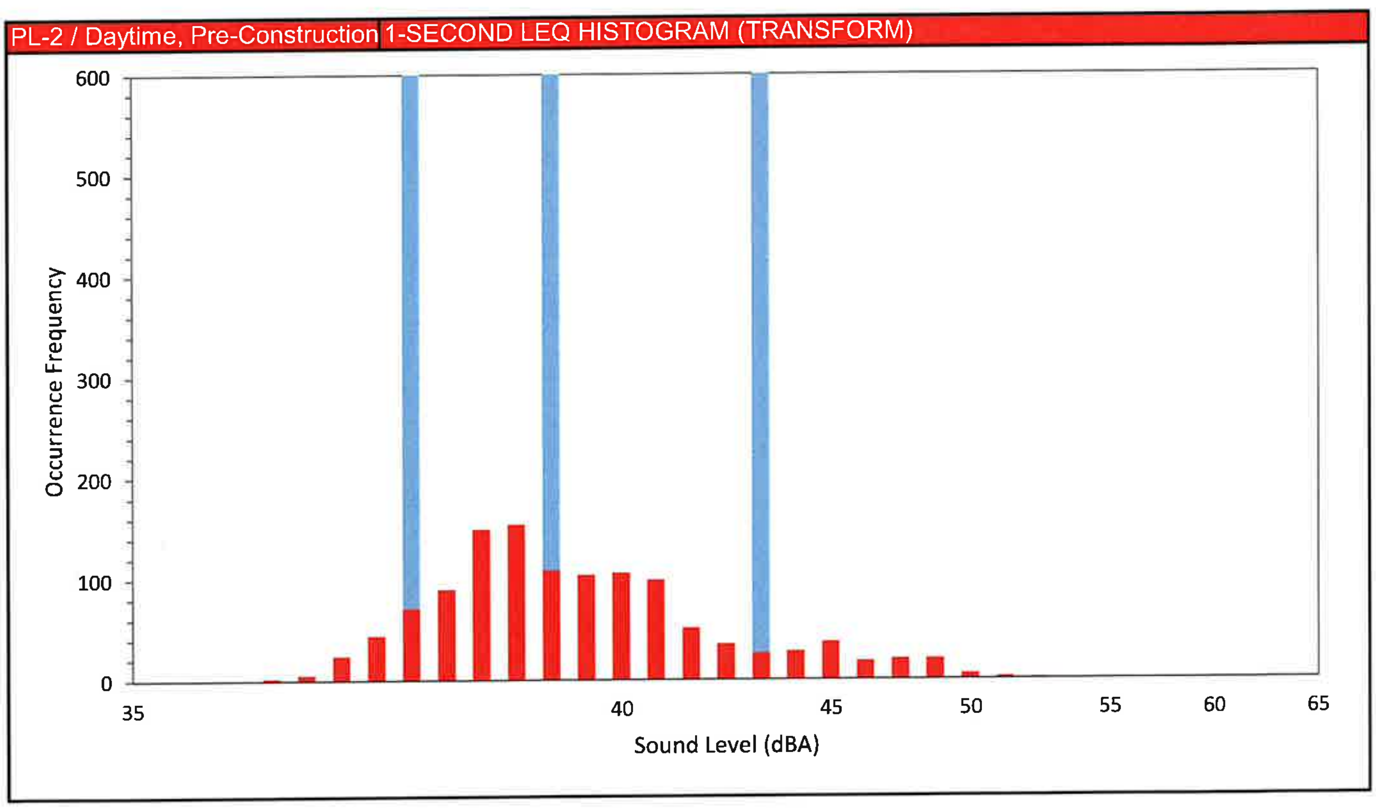
Environmental Noise Monitoring Summary Charts





Environmental Noise Monitoring Distribution Charts





WSP USA E&I, Inc.
Environmental Noise Monitoring Field Notes

Project Name:	Verogy - EW Solar Two
Performed By:	A. Roland

LOCATION INFORMATION	
Location ID:	PL-3
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	12:24:07 PM
End Time:	12:54:07 PM

WEATHER CONDITIONS	
Temperature:	79 °F
Wind Speed:	0 - 3 mph, g: 5 mph
Direction:	W/SW
Humidity:	71%
Sky Type:	Mostly clear
Precipitation:	n/a

LOCATION SKETCH

GENERAL SOUND SOURCES (order by most prominent)	
1)	Natural sounds (e.g., insects, birds, etc.)
2)	Light breeze, occassional gust to 5 mph (rustling leaves)
3)	Local and distant roadway traffic
4)	
5)	

MONITORING NOTES / EVENTS	
Event Description:	Number of Instances, Start Time, End Time:
Airplane (high altitude)	12:25, 12:30, 12:34, 12:36, 12:39, 12:45, 12:46-12:47
Mower / farm equip. (SW)	12:25 -12:29, 12:42-12:44, 12:50-12:53
Chainsaw (distant)	12:27-12:31
Noticable gust (+5 mph)	12:46-12:47
Airplane (propeller)	12:31, 12:35-12:36, 12:44, 12:51
Boutin & Sons (prominent)	12:38, 12:40, 12:42, 12:48, 12:51

TRAFFIC COUNT (nearest roadway)

Thrall Rd.	12:24 PM	12:25 PM	12:26 PM	12:27 PM	12:28 PM	12:29 PM	12:30 PM	12:31 PM	12:32 PM	12:33 PM
				2	2	1	2			1
	12:34 PM	12:35 PM	12:36 PM	12:37 PM	12:38 PM	12:39 PM	12:40 PM	12:41 PM	12:42 PM	12:43 PM
	2	3	2		2	1	3		1	1
	12:44 PM	12:45 PM	12:46 PM	12:47 PM	12:48 PM	12:49 PM	12:50 PM	12:51 PM	12:52 PM	12:53 PM
	3	1	1	3	2	4			1	2

OTHER COMMENTS

Insect (e.g., crickets & cicadas) noise most pronounced in 6 - 8 kHz frequency range
Activity from Boutin & Sons paving audible
Roadway seemingly more audible than PL-1 (possibly due to terrain)

Environmental Noise Monitoring Data Sheet

Project Name:	Verogy - EW Solar Two
Project No:	3652220385

MEASUREMENT INFORMATION	
Location ID:	PL-3
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	12:24:07 PM
End Time:	12:54:07 PM

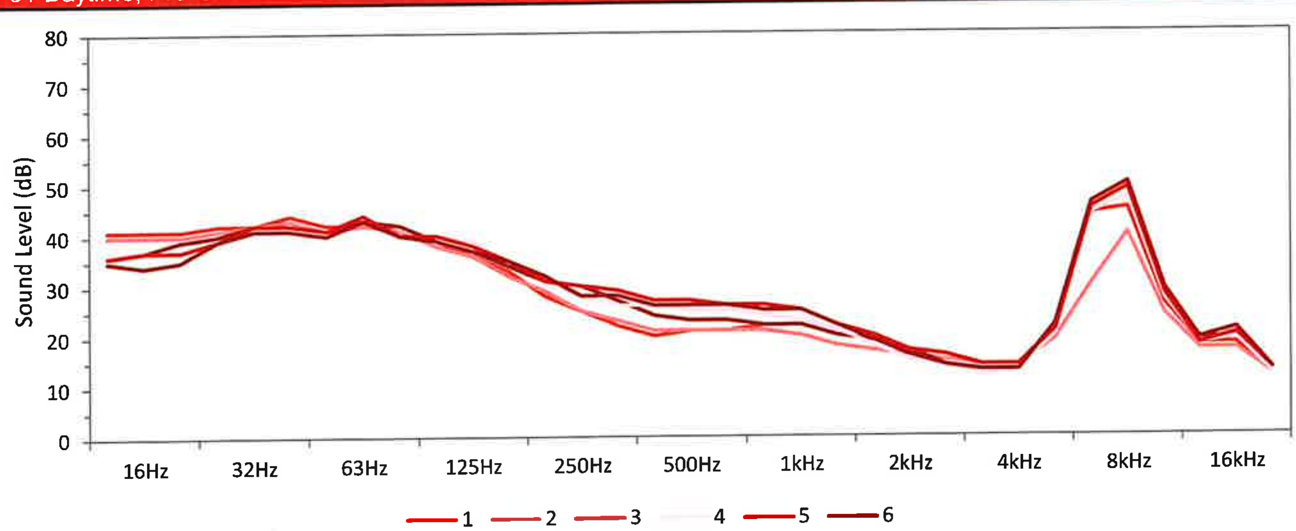
MONITOR PHOTO

SUMMARY INFORMATION	
Duration:	00:30:00
Response:	Random
Overload:	FALSE
Cal. (Before):	12:22:57 PM
Cal. (After):	12:54:27 PM
Cal. Drift:	0.1

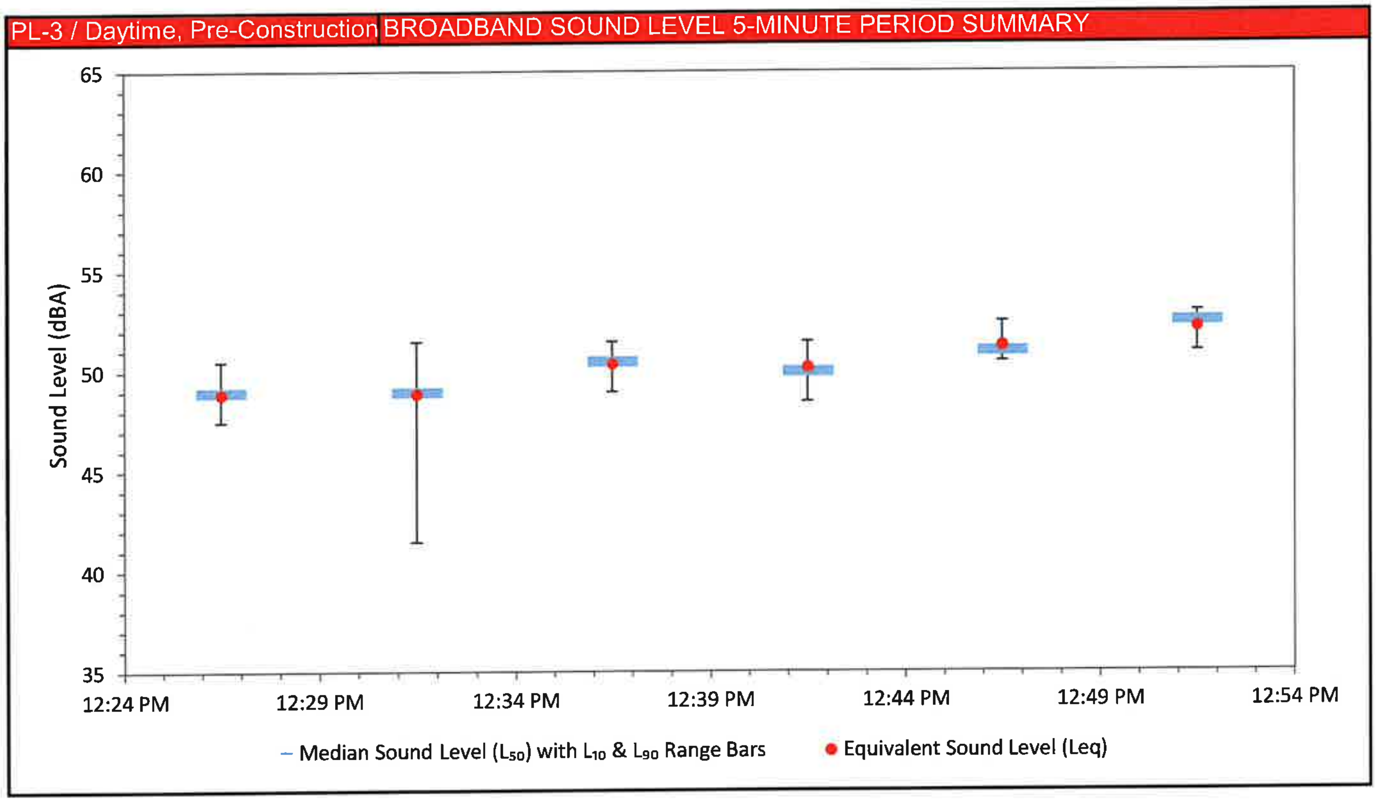
RESULTS SUMMARY

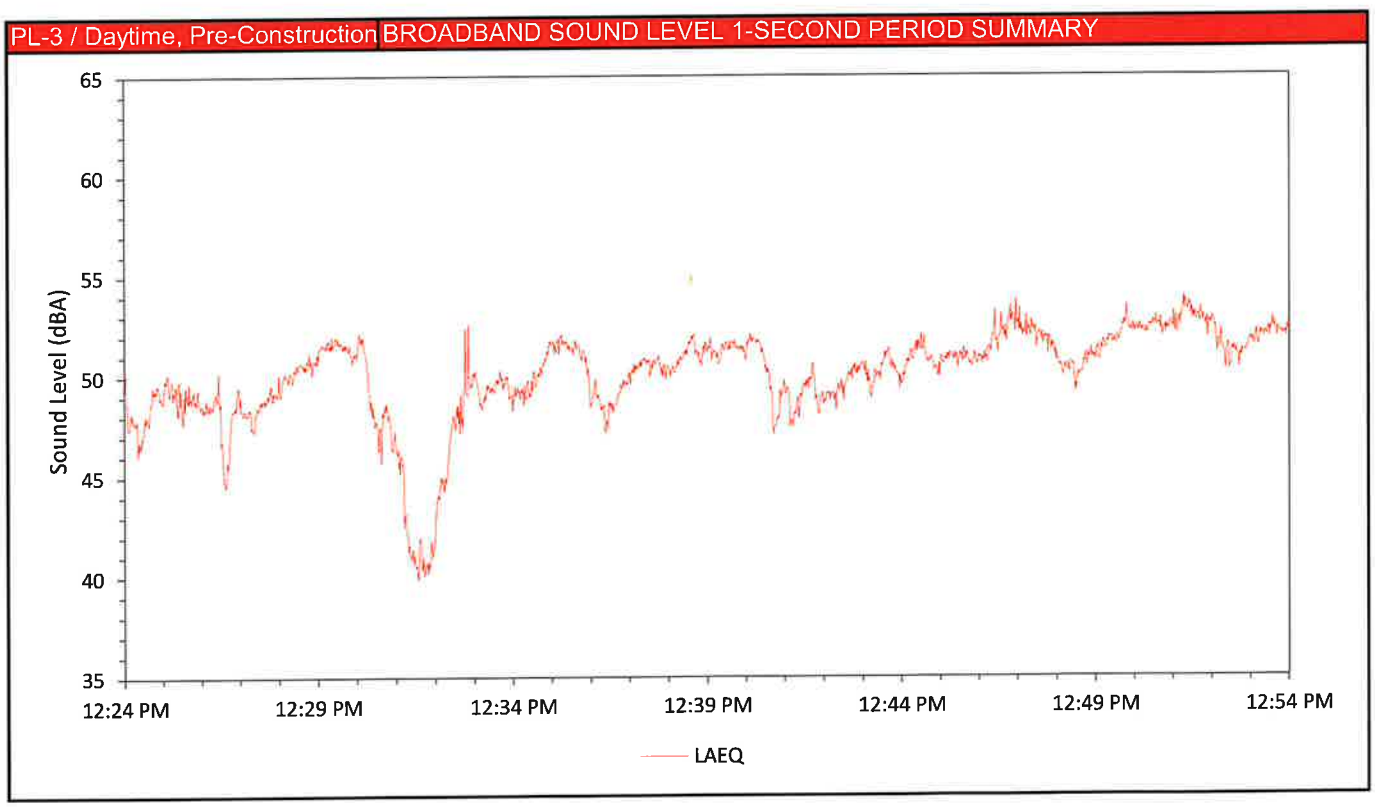
		Cumulative Results			
		L_{eq}	L_{10}	L_{50}	L_{90}
Octave Band SPL (dB)	32 Hz:	53.7	55.8	50.5	46.2
	63 Hz:	52.8	55.2	50.2	46.4
	125 Hz:	48.8	51.2	45.7	42.0
	250 Hz:	40.9	43.4	37.2	33.2
	500 Hz:	35.5	37.7	32.1	28.6
	1 kHz:	32.3	34.2	30.3	27.2
	2 kHz:	26.5	28.5	24.0	21.6
	4 kHz:	26.7	28.3	23.9	21.8
	8 kHz:	51.0	52.4	50.8	47.9
Broadband (dBA):		**50.5**	**52.3**	**50.5**	**47.8**

PL-3 / Daytime, Pre-Construction LZ90,1/3 OCTAVE BAND SOUND LEVEL SUMMARY



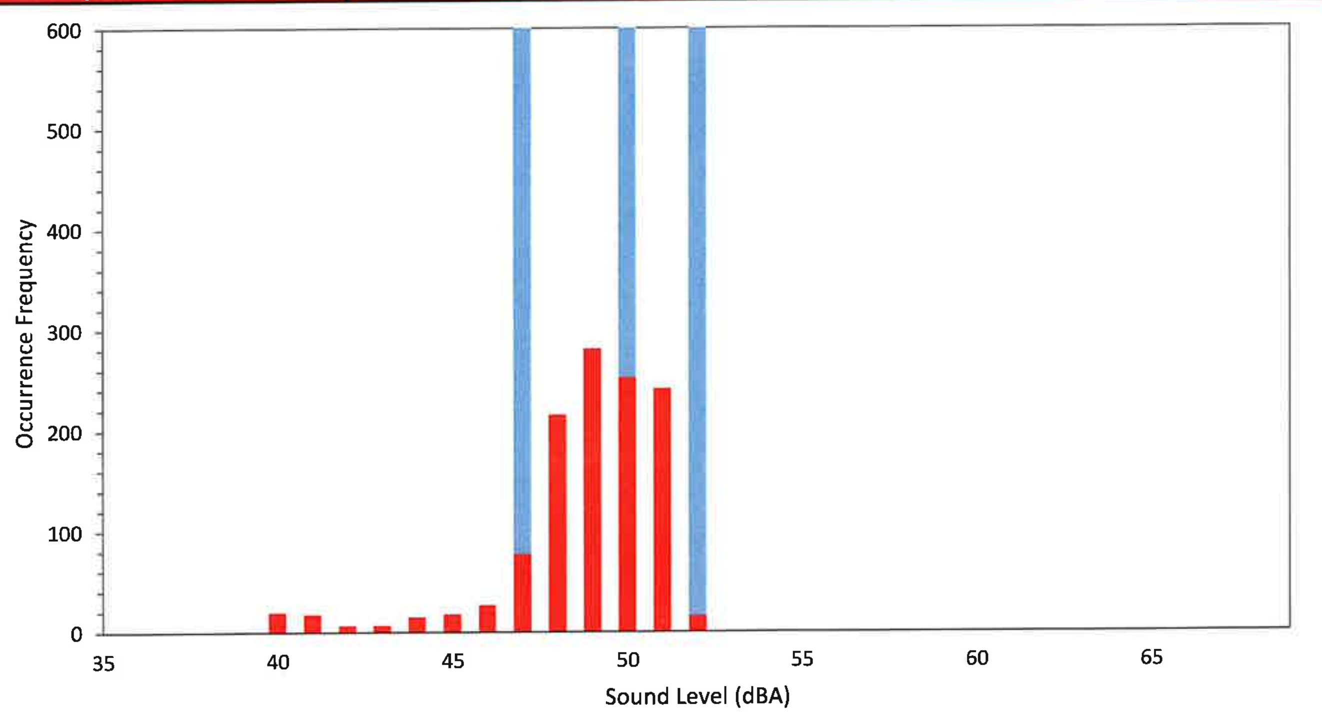
Environmental Noise Monitoring Summary Charts



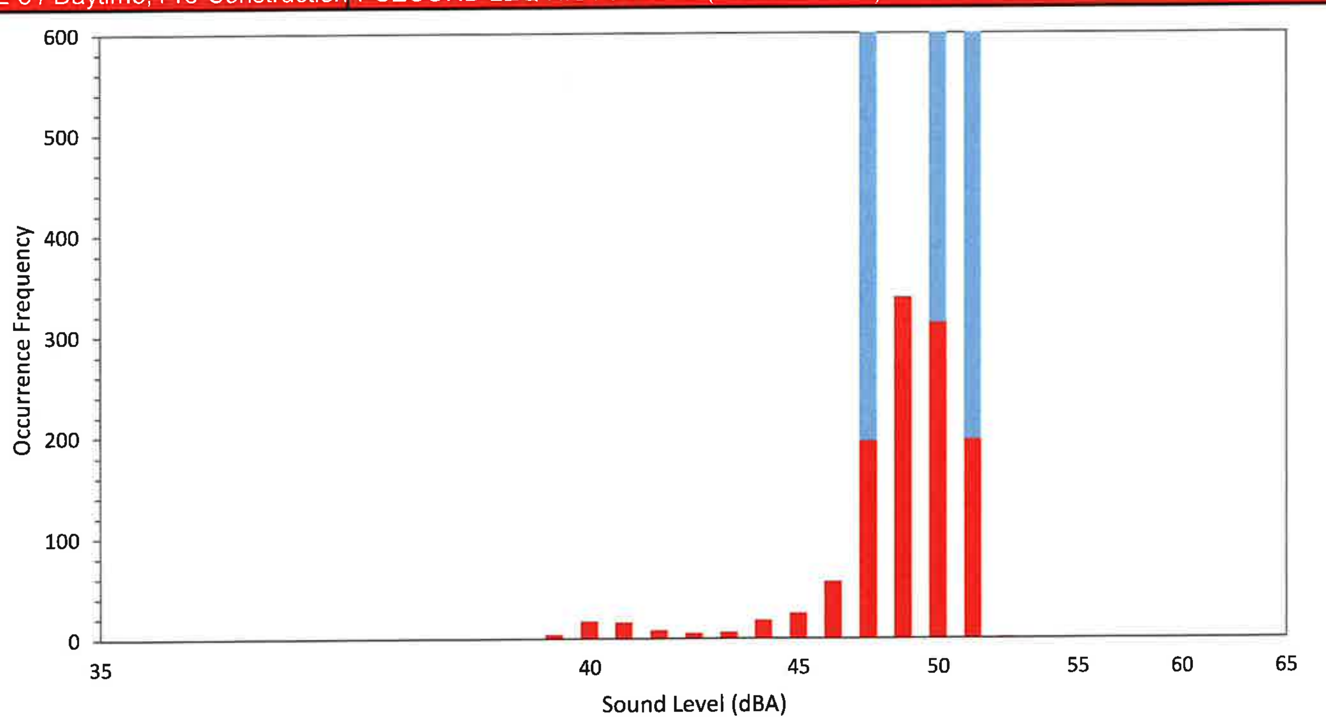


Environmental Noise Monitoring Distribution Charts

PL-3 / Daytime, Pre-Construction 1-SECOND LEQ HISTOGRAM (LINEAR)



PL-3 / Daytime, Pre-Construction 1-SECOND LEQ HISTOGRAM (TRANSFORM)



WSP USA E&I, Inc.
Environmental Noise Monitoring Field Notes

Project Name:	Verogy - EW Solar Two
Performed By:	A. Roland

LOCATION INFORMATION	
Location ID:	PL-4
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	1:00:00 PM
End Time:	1:30:00 PM

WEATHER CONDITIONS	
Temperature:	80 °F
Wind Speed:	0 - 3 mph
Direction:	NW/W
Humidity:	68%
Sky Type:	Mostly clear
Precipitation:	n/a

LOCATION SKETCH

GENERAL SOUND SOURCES (order by most prominent)	
1)	Natural sounds (e.g., insects, birds, etc.)
2)	Industrial activity to northwest (i.e., Boutin & Sons Paving)
3)	Light breeze, occassional gust to 5 mph (rustling leaves)
4)	Distant roadway traffic
5)	

MONITORING NOTES / EVENTS	
Event Description:	Number of Instances, Start Time, End Time:
Mower / farm equip. (SW)	1:00-1:04
Dog barking	1:01
Boutin & Sons (prominent)	1:05, 1:09, 1:16, 1:18-1:19, 1:22, 1:24, 1:27
Airplane (high altitude)	1:07, 1:19, 1:22-1:23, 1:25, 1:26, 1:28-1:29

TRAFFIC COUNT (nearest roadway)

Thrall Rd.	1:00 PM	1:01 PM	1:02 PM	1:03 PM	1:04 PM	1:05 PM	1:06 PM	1:07 PM	1:08 PM	1:09 PM
		2	3	1	1	2	2	1	2	1
	1:10 PM	1:11 PM	1:12 PM	1:13 PM	1:14 PM	1:15 PM	1:16 PM	1:17 PM	1:18 PM	1:19 PM
	1	1	1	1	2		1	2	2	1
	1:20 PM	1:21 PM	1:22 PM	1:23 PM	1:24 PM	1:25 PM	1:26 PM	1:27 PM	1:28 PM	1:29 PM
	2	4	1	4	2			1	1	

OTHER COMMENTS

Insect (e.g., crickets & cicadas) noise most pronounced in 6 - 8 kHz frequency range
Activity from Boutin & Sons paving audible
Roadway noise barely audible (no line of sight to Thrall Rd.) (traffic count estimated)

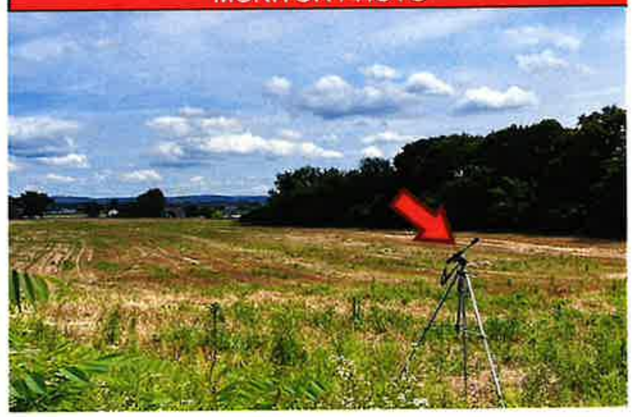
Environmental Noise Monitoring Data Sheet

Project Name:	Verogy - EW Solar Two
Project No:	3652220385

MEASUREMENT INFORMATION	
Location ID:	PL-4
Description:	Daytime, Pre-Construction
Date:	Mon. Aug 14, 2023
Start Time:	1:00:00 PM
End Time:	1:30:00 PM

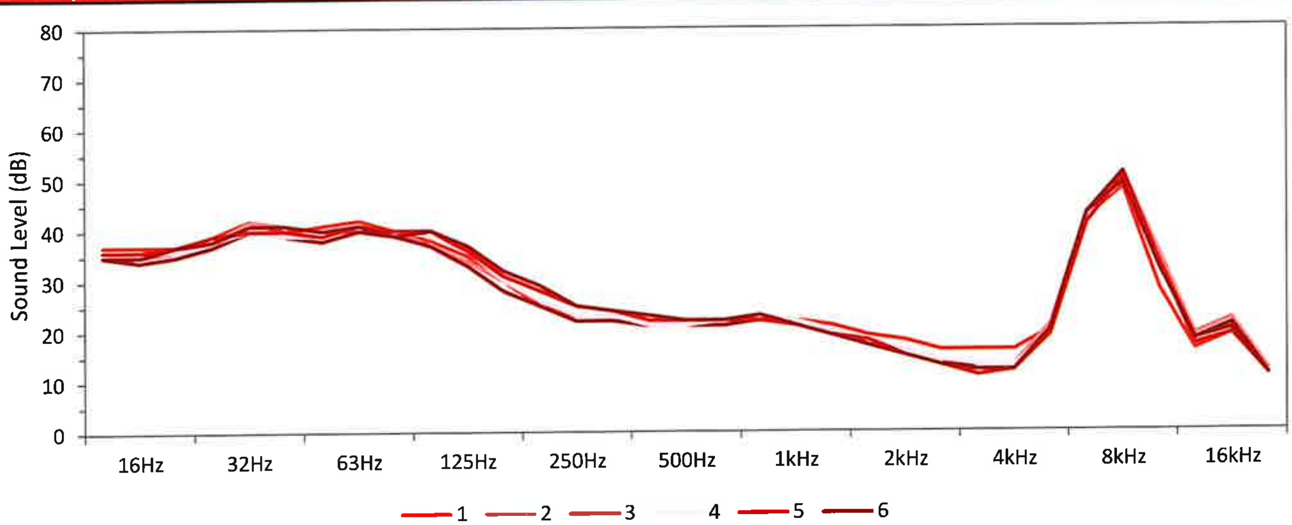
SUMMARY INFORMATION	
Duration:	00:30:00
Response:	Random
Overload:	FALSE
Cal. (Before):	12:59:32 PM
Cal. (After):	1:31:02 PM
Cal. Drift:	0.0

MONITOR PHOTO

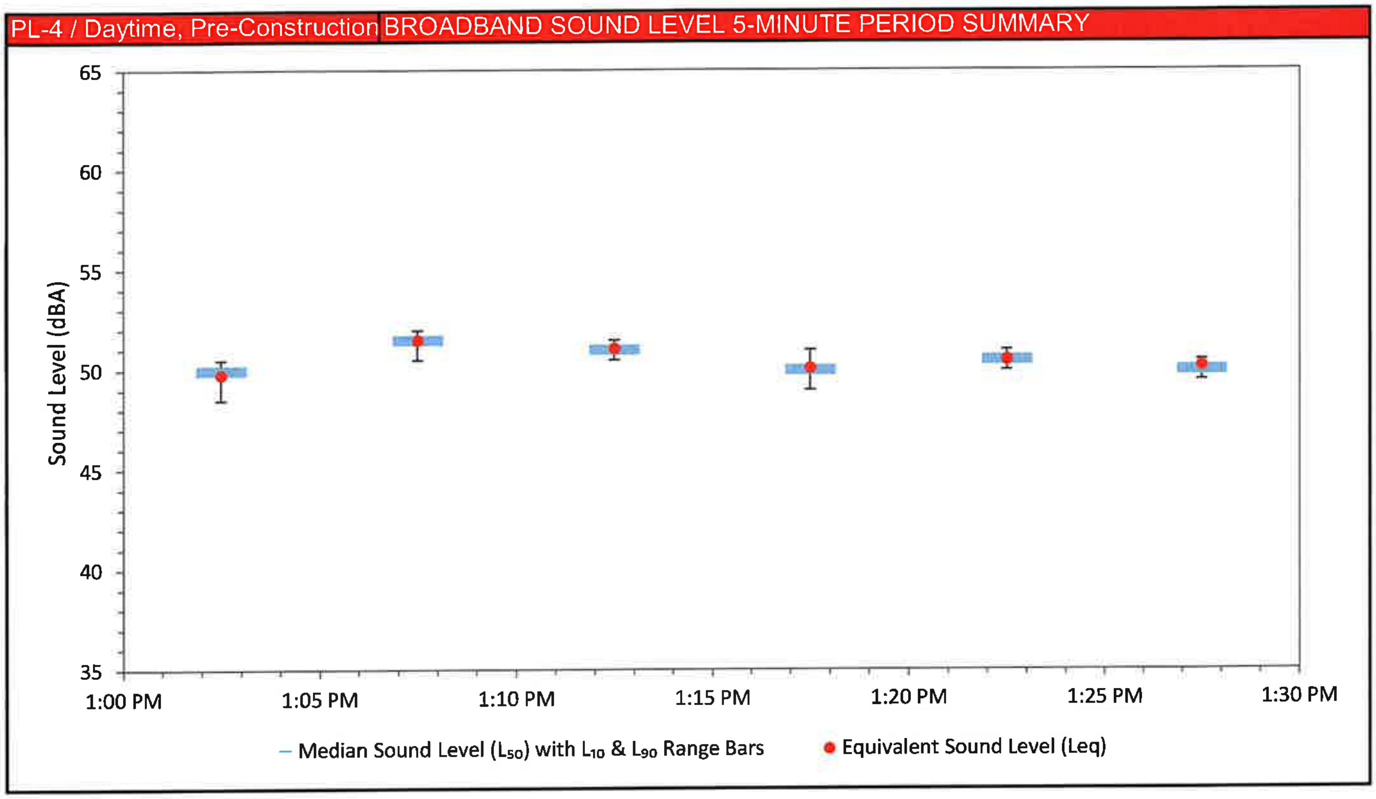


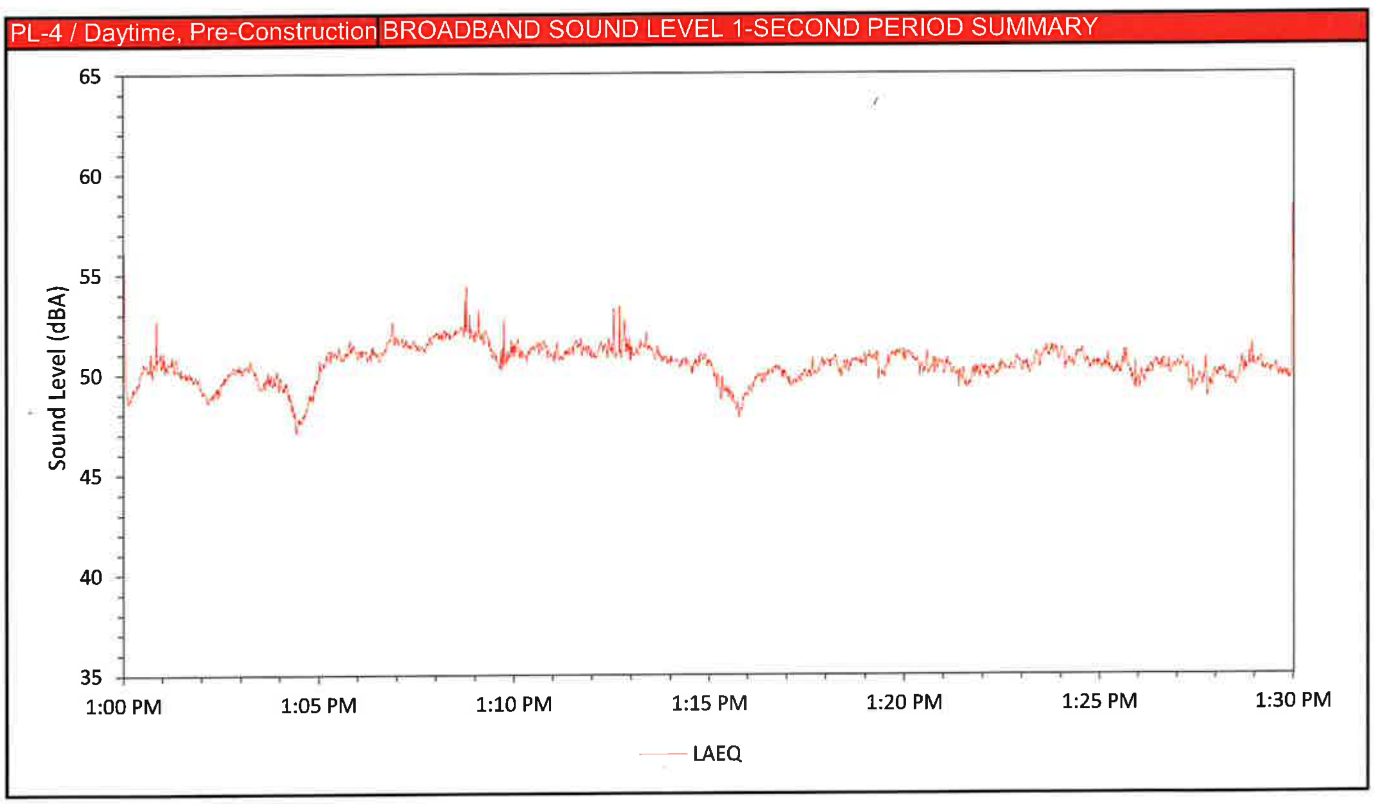
RESULTS SUMMARY					
		Cumulative Results			
		L_{eq}	L_{10}	L_{50}	L_{90}
Octave Band SPL (dB)	32 Hz:	49.5	52.2	48.4	44.6
	63 Hz:	51.1	53.3	48.5	44.8
	125 Hz:	46.8	48.9	43.9	40.6
	250 Hz:	35.5	37.8	32.6	29.5
	500 Hz:	31.4	33.1	28.9	26.3
	1 kHz:	29.9	31.5	28.3	26.1
	2 kHz:	26.9	27.6	23.5	20.9
	4 kHz:	29.7	28.0	23.3	21.2
	8 kHz:	51.3	51.9	51.1	50.5
Broadband (dBA):		**50.6**	**51.5**	**50.5**	**49.4**

PL-4 / Daytime, Pre-Construction — LZ90,1/3 OCTAVE BAND SOUND LEVEL SUMMARY

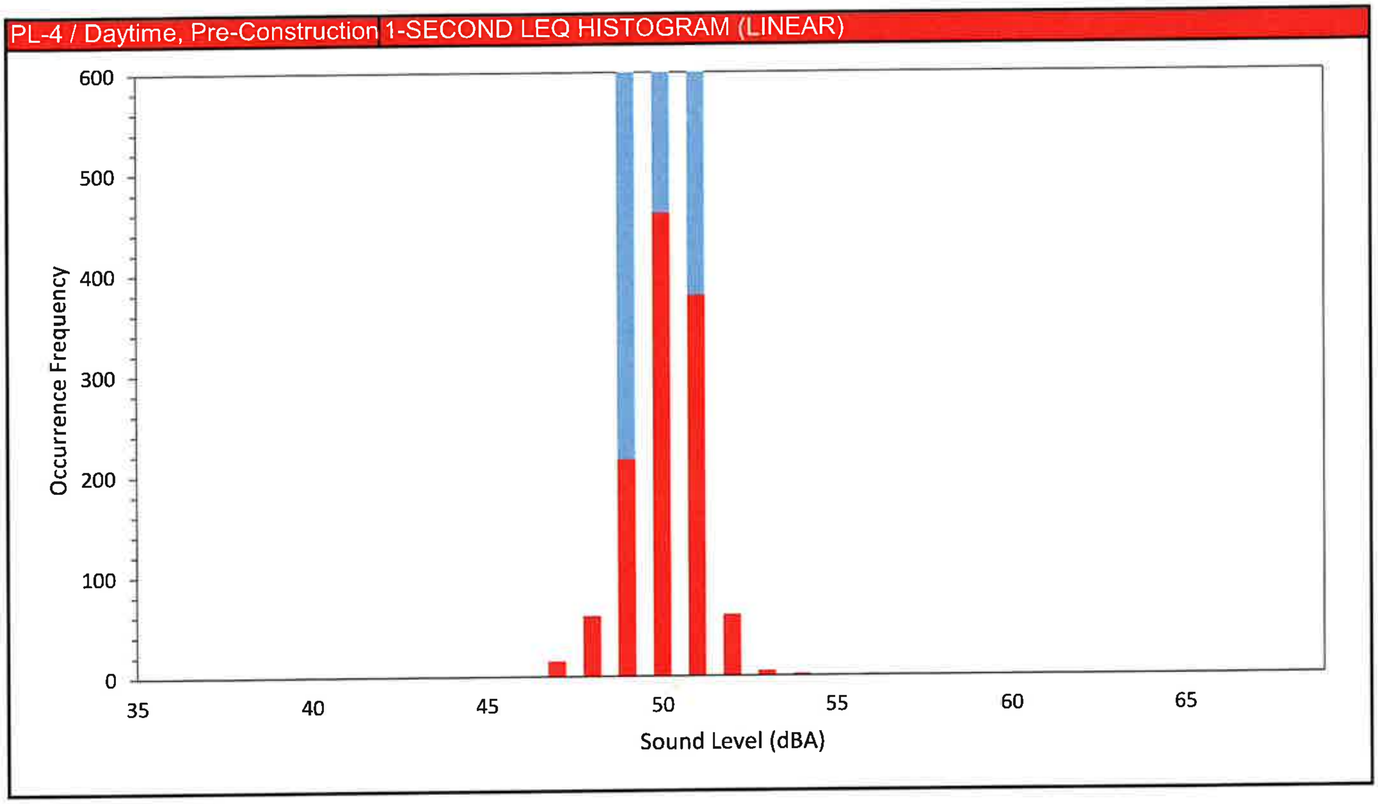


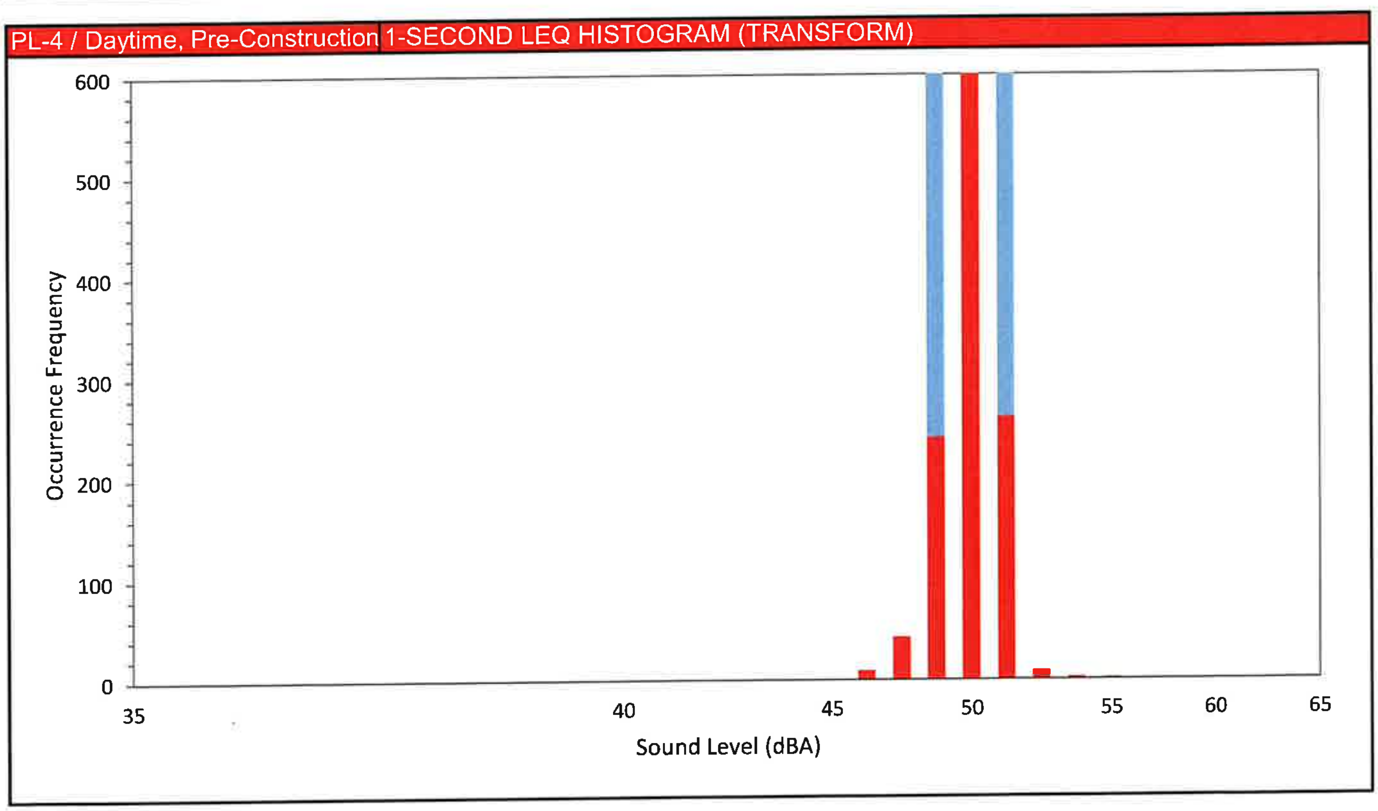
Environmental Noise Monitoring Summary Charts





Environmental Noise Monitoring Distribution Charts





Attachment D

Monitoring Equipment Certificates of Calibration

FA03873

www.casellasolutions.com CASELLA

Certificate of Conformity and Calibration

Instrument Model:- CEL-633C
Serial Number 2383045
Firmware revision V006-05

Microphone Type:- CEL-251
Serial Number 4335

Preamplifier Type:- CEL-495
Serial Number 005488

Instrument Class/Type:- 1

Applicable standards:-

IEC 61672: 2013 / EN 60651 (Electroacoustics - Sound Level Meters)
IEC 60651 1979 (Sound Level Meters), ANSI S1.4: 1983 (Specifications For Sound Level Meters)

Note:- The test sequences performed in this report are in accordance with the current Sound level meter *Standard - IEC61672. The combination of tests performed are considered to confirm the products electro-acoustic performance to all applicable standards including superceeded Sound Level Meter Standards - IEC60651 and IEC60804.*

Test Conditions:- 23 °C, 25 %RH, 995 mBar

Test Engineer:- TSzling
Date of Issue:- March 7, 2023

Declaration of conformity:-

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications. Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9001:2015 quality procedures. This product is certified as being compliant to the requirements of the CE Directive.

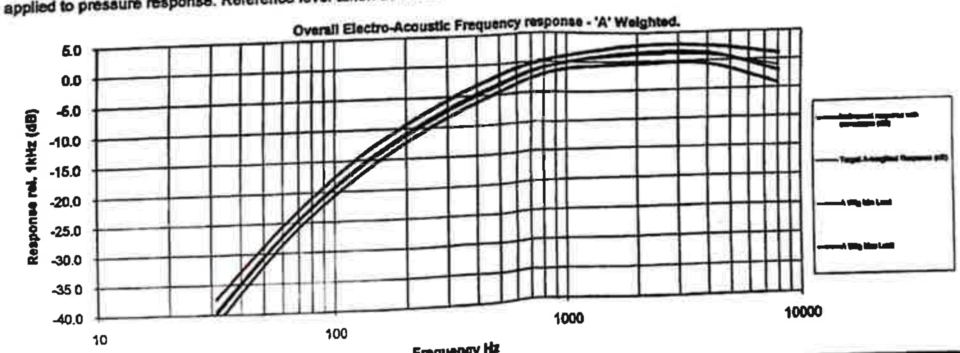
Test Summary:-

Self Generated Noise Test	All Tests Pass
Electrical Signal Test Of Frequency Weightings	All Tests Pass
Frequency & Time Weightings At 1 kHz	All Tests Pass
Level Linearity On The Reference Level Range	All Tests Pass
Toneburst Response Test	All Tests Pass
C-peak Sound Levels	All Tests Pass
Overload Indication	All Tests Pass
Acoustic Tests	All Tests Pass

Combined Electro-Acoustic Frequency Response - A Weighted

Combined Electro-Acoustic Frequency Response - A Weighted (IEC 61672-3:2006)

The following A-Weighted frequency response graph shows this instruments overall frequency response based upon the application of multi-frequency pressure field calibrations. The microphones Pressure to Free field correction coefficients are applied to pressure response. Reference level taken at 1kHz.



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Fax: +44(0) 1234 841490
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Fax: +86-21-61005906
Email: info@casellasolutions.cn

CASELLA

FA03873

Certificate of Conformity and Calibration

Customer:	Eco-Rental Solutions
Instrument:	CEL-120/1
Serial Number:	2383722
Job Number:	27139
Date of Issue:	07-Mar-2023
Engineer:	TSzling

Traceable Equipment: Reference Calibrator EQ11084
DVM type Fluke 45 EQ00691

Test Conditions:
- Ambient Temperature 24.0 °C
- Ambient Humidity 24.0 %RH
- Ambient Pressure 1027 mBar

Results:

	Level 1	Level 2	Frequency
Initial Reading	114.08 dB	94.04 dB	1.0000 kHz
Final Reading	114.00 dB	94.07 dB	1.0000 kHz

Uncertainty:
- Level ± 0.15 dB
- Frequency ± 0.5 Hz

This test certificate confirms that the instrument specified above has been successfully tested to comply with the manufacturer's published specifications.
Tests are performed using equipment traceable to national standards in accordance with Casella's ISO 9000:2015 quality procedures.
The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing a level of confidence of approximately 95%.
This certificate may not be reproduced other than in full, except with prior written approval of the issuing laboratory.

Attachment E

CPS Inverter Manufacturer's Technical Data Sheet

Datasheet

100/125 kW, 1500 Vdc String Inverters for North America

CPS SCH100/125KTL-DO/US-600

The 100 and 125 kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125 kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch-safe fusing for up to 20 strings. The CPS FlexOM Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Touch-safe DC Fuse holders add convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC and DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper- and Aluminum-compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100 kW @ 0.9 PF and 125 kW @ 0.95 PF
- Generous 1.87 (100 kW) and 1.5 (125 kW) DC/AC inverter load ratios
- Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years

100/125KTL Standard Wire-box

100/125KTL Centralized Wire-box

C US

This device complies with part 15 of the FCC Rules

Chint Power Systems America
1380 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Mail: AmericaSales@chintpower.com Web: www.chintpowersystems.com

CPS

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5 kW	
Max. DC input voltage	1500 V	
Operating DC input voltage range	860-1450 Vdc	
Start-up DC input voltage / power	900 V / 250 W	
Number of MPP trackers	1	
MPPT voltage range[1]	870-1300 Vdc	
Max. PV input current (Isc x 1.25)	275 A	
Number of DC inputs	Standard Wire-box: 20 PV source circuits, pos. and neg. fused Centralized Wire-box: 1 input circuit, 1-2 terminations per pole, non-fused	
DC disconnection type	Load-rated DC switch	
DC surge protection	Type II MOV (with indicator/remote signaling)	
AC Output		
Rated AC output power	100 kW	125 kW
Max. AC output power[2]	100 kVA (111 kVA @ PF>0.9)	125 kVA (132 kVA @ PF>0.95)
Rated output voltage	600 Vac	
Output voltage range[3]	528-660 Vac	
Grid connection type[4]	3Φ / PE / N (neutral optional)	
Max. AC output current @ 600 Vac	96.2 / 106.8 A	120.3 / 127.0 A
Rated output frequency	60 Hz	
Output frequency range[3]	57-63 Hz	
Power factor	>0.99 (±0.8 adjustable)	>0.99 (±0.8 adjustable)
Current THD	<3%	
Max. fault current contribution (1-cycle RMS)	41.47 A	
Max. OCPD rating	200 A	
AC disconnection type	Load-rated AC switch	
AC surge protection	Type II MOV (with indicator/remote signaling)	
System		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
Stand-by / night consumption	<4 W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range	-22°F to +140°F / -30°C to +60°C (derating from +108°F / +42°C)	
Non-operating temperature range[5]	-40°F to +158°F / -40°C to +70°C maximum	
Operating humidity	0-100%	
Operating altitude	8202 ft / 2500 m (no derating)	
Audible noise	<65 dBA @ 1 m and 25°C	
Display and Communication		
User interface and display	LED indicators, WiFi + APP	
Inverter monitoring	Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	SunSpec / CPS	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W x H x D)	Standard Wire-box: 45.28 x 24.25 x 9.84 in (1150 x 616 x 250 mm) Centralized Wire-box: 39.37 x 24.25 x 9.84 in (1000 x 616 x 250 mm)	
Weight	Inverter: 121 lbs (55 kg) Standard Wire-box: 55 lbs (25 kg) Centralized Wire-box: 33 lbs (15 kg)	
Mounting / installation angle	15 - 90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal [3Φ] (wire range: 1/0 AWG - 500 kcmil CU/AL; lugs not supplied) Screw clamp terminal block [N] (#12 - 1/0 AWG CU/AL)	
DC termination	Standard Wire-box: Screw clamp fuse holder (wire range: #12 - #6 AWG CU) Centralized Wire-box: Busbar, M10 bolts (wire range: #1 AWG - 500kcmil CU/AL [1 termination per pole], #1 AWG - 300 kcmil CU/AL [2 terminations per pole]; lugs not supplied)	
Fused string inputs	20 A fuses provided (fuse values up to 30 A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15	
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018[6], CA Rule 21, ISO-NE	
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt	
Warranty		
Standard[7]	5 years	
Extended terms	10, 15 and 20 years	

1) See user manual for further information regarding MPPT voltage range when operating at non-unity PF.
2) "Max AC apparent power" rating valid within MPPT voltage range and temperature range of -30°C to +40°C (-22°F to +104°F) for 100 kW PF≥0.9, and 125 kW PF≥0.95.
3) The "output voltage range" and "output frequency range" may differ according to the specific grid standard.
4) Wye neutral-grounded; delta may not be corner-grounded.
5) See user manual for further requirements regarding non-operating conditions.
6) Firmware version 12.0 or later required.
7) 5-year warranty effective for units purchased after October 1, 2019.

Attachment F

Environmental Noise Modeling Calculations

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Source Specific Sound Pressure Level Measurements at Reference Location

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband Z-Weighted	Broadband A-Weighted
	63	125	250	500	1000	2000	4000	8000		
CPS Inverter	**69.3**	**68.7**	**64.0**	**65.1**	**66.4**	**61.5**	**52.1**	**44.1**	**74.4 dB**	**69.2 dBA**

Notes:
The CPS Inverter near-field sound test was conducted at the East Windsor Solar One facility by Brooks Acoustics Corp. (BAC) on May 14, 2022.
Octave band sound pressure level un-weighed decibel values (measured at 1 ft.) are provided in BAC, East Windsor Solar Two - Acoustical Design Study dated April 26, 2023

Converting Source Specific Sound Pressure Level (Lp) to Sound Power Level (Lw)

Measurement Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.25 m	4.10 ft
Horizontal Offset (d_h)	0.30 m	1.00 ft
Measurement Distance (d_p)	0.39 m	1.29 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	50.0 %	
Water Vapor Content (H)	15,957 ppmv	
Ground at Source (G_s)	0.00 -	
Ground at Receiver (G_r)	0.00 -	
Ground in Middle (G_m)	0.00 -	

* as reported by Brooks Acoustics Corp.

* near-field data most appropriately modeled w/ Q = 1

Parameters	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband Z-Weighted	Broadband A-Weighted
	63	125	250	500	1000	2000	4000	8000		
Sound Pressure Level (L_p)	69.3	68.7	64.0	65.1	66.4	61.5	52.1	44.1	74.4 dB	69.2 dBA
Geometric Divergence (A_{div})	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9		
Atmospheric Absorption (A_{atm})	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Atmospheric Absorption Coefficient (α)	0.01	0.04	0.13	0.32	0.57	1.02	2.55	8.50		
Ground Absorption (A_{gr})	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Source Region Parameters (a', b', c', d')		1.5	1.5	1.5	1.5					
Source Region Ground Attenuation (A_s)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5		
Receptor Region Parameters (a', b', c', d')		1.5	1.5	1.5	1.5					
Receptor Region Ground Attenuation (A_r)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5		
Middle Region Ground Attenuation (A_m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Power Level (L_w)	**72.2**	**71.6**	**66.9**	**68.0**	**69.3**	**64.4**	**55.0**	**47.0**	**77.3 dB**	**72.2 dBA**

Notes:
Each CPS inverter unit is expected to produce sound power level (Lw) 72.2 dBA when operating at full-load

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Comparing Calculated Sound Power Level (Lw) with Vendor Supplied Sound Pressure Level (Lp)

Projection Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.50 m	4.92 ft
Horizontal Offset (d_h)	1.00 m	3.28 ft
Measurement Distance (d_p)	1.00 m	3.28 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	70.0 %	
Water Vapor Content (H)	22,484 ppmv	
Ground at Source (G_s)	0.00 -	
Ground at Receiver (G_r)	0.00 -	
Ground in Middle (G_m)	0.00 -	

* as reported in Chint Power Systems (CPS) Technical Data Sheet

* near-field data most appropriately modeled w/ Q = 1

Parameters	Octave Band Center Frequency (Hz)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
Sound Power Level (L_w)	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	77.3 dB	72.2 dBA
Geometric Divergence (A_{div})	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0		
Atmospheric Absorption (A_{atm})	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1		
Atmospheric Absorption Coefficient (α)	0.01	0.03	0.10	0.30	0.62	1.05	2.18	6.50		
Ground Absorption (A_{gr})	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0		
Source Region Parameters (a', b', c', d')		1.5	1.6	1.6	1.5					
Source Region Ground Attenuation (A_s)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5		
Receptor Region Parameters (a', b', c', d')		1.5	1.6	1.6	1.5					
Receptor Region Ground Attenuation (A_r)	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5	-1.5		
Middle Region Ground Attenuation (A_m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Pressure Level (L_p)	**64.2**	**63.6**	**58.9**	**60.0**	**61.3**	**56.4**	**47.0**	**39.0**	**69.3 dB**	**64.2 dBA**

Notes:
CPS Technical Data Sheet specifies unit noise <65 dBA @ 1 m, which is shown to be consistent with sound level values measured by Brooks Acoustics Corp.

Propagation Model Source Sound Power Levels

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
CPS Inverter - West Bank (16 units)	**84.2**	**83.6**	**78.9**	**80.1**	**81.4**	**76.5**	**67.1**	**59.1**	**89.4 dB**	**84.2 dBA**
CPS Inverter - East Bank (16 units)	**84.2**	**83.6**	**78.9**	**80.1**	**81.4**	**76.5**	**67.1**	**59.1**	**89.4 dB**	**84.2 dBA**

Notes:
Combined unit sound power level = $Lw_{total} = 10 \cdot \log(n \cdot 10^{Lw/10})$, where n = number of units (i.e., 16)

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Sound Propagation Modeling

Modeling Location: PL-1 (i.e., 55 Thrall Road) Residential Receptor

Projection Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.25 m	4.10 ft
Horizontal Offset (d_h)	320.00 m	1049.60 ft
Measurement Distance (d_p)	320.00 m	1049.60 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	70.0 %	
Water Vapor Content (H)	22,484 ppmv	
Ground at Source (G_s)	0.50 -	
Ground at Receiver (G_r)	0.50 -	
Ground in Middle (G_m)	0.50 -	

* Model each inverter bank's impact result at PL-1 (i.e., eastern property line receptor)
- West Bank = 333 m; East Bank = 320 m

* model as free radiating source (i.e., no directivity)

Parameters	Octave Band Center Frequency (Hz)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
Sound Power Level (L_w)	84.2	83.6	78.9	80.1	81.4	76.5	67.1	59.1	89.4 dB	84.2 dBA
Geometric Divergence (A_{div})	61.1	61.1	61.1	61.1	61.1	61.1	61.1	61.1		
Atmospheric Absorption (A_{atm})	0.0	0.1	0.3	1.0	2.0	3.3	7.0	20.8		
Atmospheric Absorption Coefficient (α)	0.01	0.03	0.10	0.30	0.62	1.05	2.18	6.50		
Ground Absorption (A_{gr})	-5.2	-0.8	4.6	3.3	-1.7	-2.6	-2.6	-2.6		
Source Region Parameters (a', b', c', d')		3.3	8.5	6.5	2.2					
Source Region Ground Attenuation (A_s)	-1.5	0.2	2.8	1.7	-0.4	-0.8	-0.8	-0.8		
Receptor Region Parameters (a', b', c', d')		3.3	9.0	8.3	2.7					
Receptor Region Ground Attenuation (A_r)	-1.5	0.1	3.0	2.7	-0.1	-0.8	-0.8	-0.8		
Middle Region Ground Attenuation (A_m)	-2.2	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Pressure Level (L_p)	28.4	23.3	12.9	14.7	19.9	14.6	1.6	-20.2	30.3 dB	22.1 dBA

Propagation Model Sound Impact Results (copy and paste after each model iteration)

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
West Bank Contribution	28.0	22.8	12.6	14.3	19.5	14.2	1.0	-21.4	30.0 dB	21.6 dBA
East Bank Contribution	28.4	23.3	12.9	14.7	19.9	14.6	1.6	-20.2	30.3 dB	22.1 dBA
Sound Level Impact Result	**31.2**	**26.1**	**15.7**	**17.5**	**22.7**	**17.4**	**4.3**	**-17.7**	**33.2 dB**	**24.9 dBA**

Notes:

The combined sound level impact caused by (32) CPS inverters operating simultaneously upon the sound environment at the PL-1 residential property line located approximately 1,054-1,095 ft (320-333 m) to the east of the sound source is less than 25 dBA.

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Sound Propagation Modeling

Projection Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.25 m	4.10 ft
Horizontal Offset (d_h)	245.00 m	803.60 ft
Measurement Distance (d_p)	245.00 m	803.60 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	70.0 %	
Water Vapor Content (H)	22,484 ppmv	
Ground at Source (G_s)	0.50 -	
Ground at Receiver (G_r)	0.50 -	
Ground in Middle (G_m)	0.50 -	

Modeling Location: PL-2 (i.e., 57 Thrall Road) Residential Receptor

* Model each inverter bank's impact result at PL-2 (i.e., northeastern property line receptor)
- West Bank = 265 m; East Bank = 245 m

* model as free radiating source (i.e., no directivity)

Parameters	Octave Band Center Frequency (Hz)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
Sound Power Level (L_w)	84.2	83.6	78.9	80.1	81.4	76.5	67.1	59.1	89.4 dB	84.2 dBA
Geometric Divergence (A_{div})	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8		
Atmospheric Absorption (A_{atm})	0.0	0.1	0.3	0.7	1.5	2.6	5.3	15.9		
Atmospheric Absorption Coefficient (α)	0.01	0.03	0.10	0.30	0.62	1.05	2.18	6.50		
Ground Absorption (A_{gr})	-5.0	-1.1	4.7	3.4	-1.6	-2.5	-2.5	-2.5		
Source Region Parameters (a', b', c', d')		2.9	8.5	6.4	2.2					
Source Region Ground Attenuation (A_s)	-1.5	0.0	2.7	1.7	-0.4	-0.8	-0.8	-0.8		
Receptor Region Parameters (a', b', c', d')		2.8	8.9	8.3	2.7					
Receptor Region Ground Attenuation (A_r)	-1.5	-0.1	3.0	2.6	-0.1	-0.8	-0.8	-0.8		
Middle Region Ground Attenuation (A_m)	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Pressure Level (L_p)	30.4	25.9	15.2	17.2	22.6	17.6	5.4	-13.1	32.6 dB	24.8 dBA

Propagation Model Sound Impact Results (copy and paste after each model iteration)

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
West Bank Contribution	29.8	25.2	14.5	16.5	21.8	16.8	4.4	-15.1	32.0 dB	24.0 dBA
East Bank Contribution	30.4	25.9	15.2	17.2	22.6	17.6	5.4	-13.1	32.6 dB	24.8 dBA
Sound Level Impact Result	**33.2**	**28.6**	**17.9**	**19.8**	**25.3**	**20.2**	**7.9**	**-11.0**	**35.3 dB**	**27.4 dBA**

Notes:

The combined sound level impact caused by (32) CPS inverters operating simultaneously upon the sound environment at the PL-2 residential property line located approximately 804-869 ft (245-265 m) to the east of the sound source is less than 28 dBA.

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Sound Propagation Modeling

Modeling Location: PL-3 (i.e., 17 Thrall Road) Residential Receptor

* Model each inverter bank's impact result at PL-3 (i.e., southern property line receptor)
- West Bank = 140 m; East Bank = 145 m

* model as free radiating source (i.e., no directivity)

Projection Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.25 m	4.10 ft
Horizontal Offset (d_h)	140.00 m	459.20 ft
Measurement Distance (d_p)	140.00 m	459.20 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	70.0 %	
Water Vapor Content (H)	22,484 ppmv	
Ground at Source (G_s)	0.50 -	
Ground at Receiver (G_r)	0.50 -	
Ground in Middle (G_m)	0.50 -	

Parameters	Octave Band Center Frequency (Hz)								Broadband Z-Weighted	Broadband A-Weighted
	63	125	250	500	1000	2000	4000	8000		
Sound Power Level (L_w)	84.2	83.6	78.9	80.1	81.4	76.5	67.1	59.1	89.4 dB	84.2 dBA
Geometric Divergence (A_{div})	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9		
Atmospheric Absorption (A_{atm})	0.0	0.0	0.1	0.4	0.9	1.5	3.1	9.1		
Atmospheric Absorption Coefficient (α)	0.01	0.03	0.10	0.30	0.62	1.05	2.18	6.50		
Ground Absorption (A_{gr})	-4.2	-1.3	4.7	3.4	-1.2	-2.1	-2.1	-2.1		
Source Region Parameters (a', b', c', d')		2.4	8.1	6.2	2.1					
Source Region Ground Attenuation (A_s)	-1.5	-0.3	2.5	1.6	-0.4	-0.8	-0.8	-0.8		
Receptor Region Parameters (a', b', c', d')		2.3	8.5	7.9	2.7					
Receptor Region Ground Attenuation (A_r)	-1.5	-0.4	2.8	2.5	-0.2	-0.8	-0.8	-0.8		
Middle Region Ground Attenuation (A_m)	-1.2	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Pressure Level (L_p)	34.6	31.0	20.2	22.3	27.8	23.2	12.2	-1.8	37.2 dB	30.1 dBA

Propagation Model Sound Impact Results (copy and paste after each model iteration)

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband Z-Weighted	Broadband A-Weighted
	63	125	250	500	1000	2000	4000	8000		
West Bank Contribution	34.6	31.0	20.2	22.3	27.8	23.2	12.2	-1.8	37.2 dB	30.1 dBA
East Bank Contribution	34.3	30.7	19.9	22.0	27.5	22.9	11.8	-2.4	36.9 dB	29.8 dBA
Sound Level Impact Result	**37.4**	**33.8**	**23.1**	**25.1**	**30.7**	**26.0**	**15.0**	**0.9**	**40.0 dB**	**33.0 dBA**

Notes:
The combined sound level impact caused by (32) CPS inverters operating simultaneously upon the sound environment at the PL-3 residential property line located approximately 461-475 ft (140-145 m) to the south of the sound source is 33 dBA.

WSP USA E&I, Inc. - Environmental Noise Modeling Calculations
East Windsor Solar Two - 31 Thrall Road
Verogy Solar Services - West Hartford, CT

Sound Propagation Modeling

Modeling Location: PL-4 (i.e., 19 Thrall Road) Residential Receptor

* Model each inverter bank's impact result at PL-4 (i.e., western' property line receptor)
- West Bank = 205 m; East Bank = 225 m

* model as free radiating source (i.e., no directivity)

Projection Configuration		
Source Height (h_s)	1.50 m	4.92 ft
Measurement Height (h_r)	1.25 m	4.10 ft
Horizontal Offset (d_h)	205.00 m	672.40 ft
Measurement Distance (d_p)	205.00 m	672.40 ft
Boundary Condition Factor (Q)	1 -	
Temperature (T)	25.0 °C	
Pressure (P)	101.3 kPa	
Relative Humidity (RH)	70.0 %	
Water Vapor Content (H)	22,484 ppmv	
Ground at Source (G_s)	0.50 -	
Ground at Receiver (G_r)	0.50 -	
Ground in Middle (G_m)	0.50 -	

Parameters	Octave Band Center Frequency (Hz)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
Sound Power Level (L_w)	84.2	83.6	78.9	80.1	81.4	76.5	67.1	59.1	89.4 dB	84.2 dBA
Geometric Divergence (A_{div})	57.2	57.2	57.2	57.2	57.2	57.2	57.2	57.2		
Atmospheric Absorption (A_{atm})	0.0	0.1	0.2	0.6	1.3	2.1	4.5	13.3		
Atmospheric Absorption Coefficient (α)	0.01	0.03	0.10	0.30	0.62	1.05	2.18	6.50		
Ground Absorption (A_{gr})	-4.8	-1.3	4.7	3.4	-1.5	-2.4	-2.4	-2.4		
Source Region Parameters (a', b', c', d')		2.7	8.4	6.4	2.1					
Source Region Ground Attenuation (A_s)	-1.5	-0.2	2.7	1.7	-0.4	-0.8	-0.8	-0.8		
Receptor Region Parameters (a', b', c', d')		2.6	8.8	8.2	2.7					
Receptor Region Ground Attenuation (A_r)	-1.5	-0.2	2.9	2.6	-0.1	-0.8	-0.8	-0.8		
Middle Region Ground Attenuation (A_m)	-1.8	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9		
A-Weighting Adjustment (ADJ_A)	26.2	16.1	8.6	3.6	0.0	-1.2	-1.0	1.1		
Sound Pressure Level (L_p)	31.8	27.6	16.8	18.8	24.3	19.5	7.8	-9.1	34.1 dB	26.6 dBA

Propagation Model Sound Impact Results (copy and paste after each model iteration)

Source Equipment	Octave Band Center Frequency (Hz) Sound Level (dB)								Broadband	Broadband
	63	125	250	500	1000	2000	4000	8000	Z-Weighted	A-Weighted
West Bank Contribution	31.8	27.6	16.8	18.8	24.3	19.5	7.8	-9.1	34.1 dB	26.6 dBA
East Bank Contribution	31.1	26.7	16.0	17.9	23.4	18.5	6.6	-11.1	33.3 dB	25.6 dBA
Sound Level Impact Result	**34.5**	**30.2**	**19.4**	**21.4**	**26.9**	**22.0**	**10.2**	**-7.0**	**36.8 dB**	**29.1 dBA**

Notes:
The combined sound level impact caused by (32) CPS inverters operating simultaneously upon the sound environment at the PL-4 residential property line located approximately 672-738 ft (205-225 m) to the west of sound source is less than 30 dBA.

Additional Model Notes

Horizontal Offset (d_h), is the distance from the center of the source to the measurement point transposed onto the x/y-plane.

Boundary Condition Factor (Q), accounts for the reflective planes or boundaries around the source of the noise. These planes act as reflectors focusing the sound into a certain direction. For general modeling, Q has the following values:

- Q = 1 -- Point source freely radiating in all directions (e.g. chimney)
- Q = 2 -- Point source with a single reflective plane (e.g. source on ground)
- Q = 4 -- Point source with two reflective planes (e.g. floor & wall)
- Q = 8 -- Point source with three reflective planes (e.g. floor corner)

Ground Effect Factor (G), introduced to represent ground reflectivity (0 = hard, 1 = soft) along the propagation path (i.e. source region, receptor region & middle region). For general modeling, G has the following values:

- G = 0 -- Pavement or Water
- G = 0.1 -- Packed Ground
- G = 0.6 - 0.8 -- Lawn or Field of Grass
- G = 0.7 - 0.9 -- Forest (w/ leaves) or Plowed Field
- G = 1.0 -- Fresh Snow

Geometric Divergence (A_{div}) = $10 \cdot \log[(4 \pi r^2) / Q]$

Atmospheric Absorption (A_{atm}) = $\alpha \cdot d_p / 100$

East Windsor Solar Two - SoundPLAN Model
Noise Emissions of Sources

Source name	Reference	Level Day dB	Frequency spectrum [dB] 63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Corrections Cwall dB	CI dB	CT dB
AC-Inverter1	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter2	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter3	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter4	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter5	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter6	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter7	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter8	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter9	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter10	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter11	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter12	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter13	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter14	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter15	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter16	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter17	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter18	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter19	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter20	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter21	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter22	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter23	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter24	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter25	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter26	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter27	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter28	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter29	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter30	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter31	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-
AC-Inverter32	Lw/unit	-	72.2	71.6	66.9	68.0	69.3	64.4	55.0	47.0	-	-	-

East Windsor Solar Two - SoundPLAN Model
Receiver List

No.	Receiver name	Building side	Floor	Limit Day dB(A)	Level Day dB(A)	Conflict Day dB
1	1	-	GF	-	20.9	-
2	2	-	GF	-	29.0	-
3	3	-	GF	-	32.3	-
4	4	-	GF	-	29.6	-

East Windsor Solar Two - SoundPLAN Model
Spectra of the Receivers

No.	Name	Floor	Time slice	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
1	1	GF	Day	0.0	4.9	6.7	12.6	18.4	14.0	-0.3	-28.3
2	2	GF	Day	6.6	12.0	9.1	17.2	27.1	22.9	9.4	-15.6
3	3	GF	Day	10.3	16.7	13.5	21.7	30.0	26.4	14.5	-4.1
4	4	GF	Day	8.2	14.0	10.9	19.1	27.4	23.5	10.9	-10.7

East Windsor Solar Two - SoundPLAN Model
Mean Propagation

Source	Source type	Time slice	L'w dB(A)	Lw dB(A)	KI dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADI dB	dLrefl dB	Ls dB(A)	Cmet dB	dLw dB	ZR dB	Lr dB(A)
1. GF																				
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	341.11	-61.7	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	341.11	-61.7	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	340.98	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.98	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	340.88	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.88	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter4	Point	Day	72.2	72.2	0.0	0.0	0.0	340.83	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.83	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter5	Point	Day	72.2	72.2	0.0	0.0	0.0	340.75	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.75	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter6	Point	Day	72.2	72.2	0.0	0.0	0.0	340.69	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.69	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter7	Point	Day	72.2	72.2	0.0	0.0	0.0	340.65	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.65	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter8	Point	Day	72.2	72.2	0.0	0.0	0.0	340.63	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	5.6
		Night	72.2	72.2	0.0	0.0	0.0	340.63	-61.6	1.5	-4.5	-1.9	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
AC-Inverter9	Point	Day	72.2	72.2	0.0	0.0	0.0	338.62	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.62	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.48	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.48	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.36	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.36	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.31	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.31	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.23	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.23	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.17	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.17	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.13	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.13	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	338.15	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7
		Night	72.2	72.2	0.0	0.0	0.0	338.15	-61.6	1.4	-4.5	-1.9	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	330.40	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.40	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	330.31	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.31	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	330.23	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.23	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	330.18	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.18	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	330.14	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.14	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	330.08	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.08	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	330.18	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.18	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	330.21	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	5.9
		Night	72.2	72.2	0.0	0.0	0.0	330.21	-61.4	1.4	-4.5	-1.9	0.0	0.0	0.0	5.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	327.77	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.77	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	327.72	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.72	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	327.65	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.65	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	327.64	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.64	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	327.61	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.61	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	327.44	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.44	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	327.39	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0
		Night	72.2	72.2	0.0	0.0	0.0	327.39	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	327.57	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	6.0

East Windsor Solar Two - SoundPLAN Model
Mean Propagation

Source	Source type	Time slice	L'w dB(A)	Lw dB(A)	KI dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADI dB	dLrefl dB	Ls dB(A)	Cmet dB	dLw dB	ZR dB	Lr dB(A)
AC-Inverter3	Point	Night	72.2	72.2	0.0	0.0	0.0	327.57	-61.3	1.4	-4.5	-1.9	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0
2, GF																				
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	266.60	-59.5	1.4	0.0	-1.6	0.0	0.0	1.5	13.9	0.0	0.0	0.0	13.9
		Night	72.2	72.2	0.0	0.0	0.0	266.60	-59.5	1.4	0.0	-1.6	0.0	0.0	1.5	13.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	267.52	-59.5	1.4	0.0	-1.6	0.0	0.0	1.5	13.9	0.0	0.0	0.0	13.9
		Night	72.2	72.2	0.0	0.0	0.0	267.52	-59.5	1.4	0.0	-1.6	0.0	0.0	1.5	13.9	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	268.48	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	268.48	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	0.0
AC-Inverter4	Point	Day	72.2	72.2	0.0	0.0	0.0	269.48	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	269.48	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	0.0
AC-Inverter5	Point	Day	72.2	72.2	0.0	0.0	0.0	270.43	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	270.43	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	0.0
AC-Inverter6	Point	Day	72.2	72.2	0.0	0.0	0.0	271.41	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	13.7
		Night	72.2	72.2	0.0	0.0	0.0	271.41	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	0.0
AC-Inverter7	Point	Day	72.2	72.2	0.0	0.0	0.0	272.44	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	13.7
		Night	72.2	72.2	0.0	0.0	0.0	272.44	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	0.0
AC-Inverter8	Point	Day	72.2	72.2	0.0	0.0	0.0	273.45	-59.7	1.4	0.0	-1.7	0.0	0.0	1.5	13.6	0.0	0.0	0.0	13.6
		Night	72.2	72.2	0.0	0.0	0.0	273.45	-59.7	1.4	0.0	-1.7	0.0	0.0	1.5	13.6	0.0	0.0	0.0	0.0
AC-Inverter9	Point	Day	72.2	72.2	0.0	0.0	0.0	264.30	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	14.0
		Night	72.2	72.2	0.0	0.0	0.0	264.30	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	265.21	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	13.9
		Night	72.2	72.2	0.0	0.0	0.0	265.21	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	266.18	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	13.9
		Night	72.2	72.2	0.0	0.0	0.0	266.18	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	267.17	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	13.9
		Night	72.2	72.2	0.0	0.0	0.0	267.17	-59.5	1.4	0.0	-1.6	0.0	0.0	1.4	13.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	268.13	-59.6	1.4	0.0	-1.6	0.0	0.0	1.4	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	268.13	-59.6	1.4	0.0	-1.6	0.0	0.0	1.4	13.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	269.10	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	269.10	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	270.14	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	13.8
		Night	72.2	72.2	0.0	0.0	0.0	270.14	-59.6	1.4	0.0	-1.6	0.0	0.0	1.5	13.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	271.24	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	13.7
		Night	72.2	72.2	0.0	0.0	0.0	271.24	-59.7	1.4	0.0	-1.6	0.0	0.0	1.5	13.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	256.62	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	256.62	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	257.66	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	257.66	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	258.72	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	258.72	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	259.76	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	259.76	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	260.75	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	260.75	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	261.76	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	261.76	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	262.93	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	14.0
		Night	72.2	72.2	0.0	0.0	0.0	262.93	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	264.07	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	14.0
		Night	72.2	72.2	0.0	0.0	0.0	264.07	-59.4	1.3	0.0	-1.6	0.0	0.0	1.4	14.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	254.19	-59.1	1.3	0.0	-1.5	0.0	0.0	1.4	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	254.19	-59.1	1.3	0.0	-1.5	0.0	0.0	1.4	14.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	255.26	-59.1	1.3	0.0	-1.5	0.0	0.0	1.4	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	255.26	-59.1	1.3	0.0	-1.5	0.0	0.0	1.4	14.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	256.33	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	256.33	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	257.47	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	257.47	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	258.43	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	258.43	-59.2	1.3	0.0	-1.6	0.0	0.0	1.4	14.2	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	259.41	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	259.41	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	260.42	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	260.42	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0

East Windsor Solar Two - SoundPLAN Model
Mean Propagation

Source	Source type	Time slice	L'w	Lw	KI	KT	Ko	S	Adiv	Agr	Abar	Aatm	Amisc	ADI	dLrefl	Ls	Cmet	dLw	ZR	Lr
			dB(A)	dB(A)	dB	dB	dB	m	dB	dB	dB	dB	dB	dB	dB	dB(A)	dB	dB	dB	dB(A)
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	261.7	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	261.7	-59.3	1.3	0.0	-1.6	0.0	0.0	1.4	14.1	0.0	0.0	0.0	0.0
3, GF																				
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	167.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	16.8
		Night	72.2	72.2	0.0	0.0	0.0	167.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	164.8	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	16.9
		Night	72.2	72.2	0.0	0.0	0.0	164.8	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	162.3	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1
		Night	72.2	72.2	0.0	0.0	0.0	162.3	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	0.0
AC-Inverter4	Point	Day	72.2	72.2	0.0	0.0	0.0	159.8	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	17.2
		Night	72.2	72.2	0.0	0.0	0.0	159.8	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0
AC-Inverter5	Point	Day	72.2	72.2	0.0	0.0	0.0	157.3	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	17.3
		Night	72.2	72.2	0.0	0.0	0.0	157.3	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	0.0
AC-Inverter6	Point	Day	72.2	72.2	0.0	0.0	0.0	154.8	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	17.5
		Night	72.2	72.2	0.0	0.0	0.0	154.8	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	0.0
AC-Inverter7	Point	Day	72.2	72.2	0.0	0.0	0.0	152.3	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.6	0.0	0.0	0.0	17.6
		Night	72.2	72.2	0.0	0.0	0.0	152.3	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0
AC-Inverter8	Point	Day	72.2	72.2	0.0	0.0	0.0	149.8	-54.5	1.0	0.0	-0.9	0.0	0.0	0.0	17.8	0.0	0.0	0.0	17.8
		Night	72.2	72.2	0.0	0.0	0.0	149.8	-54.5	1.0	0.0	-0.9	0.0	0.0	0.0	17.8	0.0	0.0	0.0	0.0
AC-Inverter9	Point	Day	72.2	72.2	0.0	0.0	0.0	167.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	16.8
		Night	72.2	72.2	0.0	0.0	0.0	167.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	165.0	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	16.9
		Night	72.2	72.2	0.0	0.0	0.0	165.0	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	162.4	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1
		Night	72.2	72.2	0.0	0.0	0.0	162.4	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	159.9	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	17.2
		Night	72.2	72.2	0.0	0.0	0.0	159.9	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	157.4	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	17.3
		Night	72.2	72.2	0.0	0.0	0.0	157.4	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	155.0	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	17.5
		Night	72.2	72.2	0.0	0.0	0.0	155.0	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	152.5	-54.7	1.0	0.0	-0.9	0.0	0.0	0.0	17.6	0.0	0.0	0.0	17.6
		Night	72.2	72.2	0.0	0.0	0.0	152.5	-54.7	1.0	0.0	-0.9	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	149.9	-54.5	1.0	0.0	-0.9	0.0	0.0	0.0	17.8	0.0	0.0	0.0	17.8
		Night	72.2	72.2	0.0	0.0	0.0	149.9	-54.5	1.0	0.0	-0.9	0.0	0.0	0.0	17.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	168.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	16.7
		Night	72.2	72.2	0.0	0.0	0.0	168.4	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	165.8	-55.4	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	16.9
		Night	72.2	72.2	0.0	0.0	0.0	165.8	-55.4	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	163.1	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	17.0
		Night	72.2	72.2	0.0	0.0	0.0	163.1	-55.2	1.1	0.0	-1.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	160.6	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	17.2
		Night	72.2	72.2	0.0	0.0	0.0	160.6	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	158.2	-55.0	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	17.3
		Night	72.2	72.2	0.0	0.0	0.0	158.2	-55.0	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	155.8	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.4	0.0	0.0	0.0	17.4
		Night	72.2	72.2	0.0	0.0	0.0	155.8	-54.8	1.0	0.0	-1.0	0.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	153.3	-54.7	1.0	0.0	-1.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	17.6
		Night	72.2	72.2	0.0	0.0	0.0	153.3	-54.7	1.0	0.0	-1.0	0.0	0.0	0.0	17.6	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	150.7	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.7	0.0	0.0	0.0	17.7
		Night	72.2	72.2	0.0	0.0	0.0	150.7	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.7	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	168.7	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	16.7
		Night	72.2	72.2	0.0	0.0	0.0	168.7	-55.5	1.1	0.0	-1.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	166.1	-55.4	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	16.9
		Night	72.2	72.2	0.0	0.0	0.0	166.1	-55.4	1.1	0.0	-1.0	0.0	0.0	0.0	16.9	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	163.5	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	17.0
		Night	72.2	72.2	0.0	0.0	0.0	163.5	-55.3	1.1	0.0	-1.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	160.9	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	17.1
		Night	72.2	72.2	0.0	0.0	0.0	160.9	-55.1	1.0	0.0	-1.0	0.0	0.0	0.0	17.1	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	158.6	-55.0	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	17.3
		Night	72.2	72.2	0.0	0.0	0.0	158.6	-55.0	1.0	0.0	-1.0	0.0	0.0	0.0	17.3	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	156.1	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.4	0.0	0.0	0.0	17.4
		Night	72.2	72.2	0.0	0.0	0.0	156.1	-54.9	1.0	0.0	-1.0	0.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	153.7	-54.7	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	17.5

East Windsor Solar Two - SoundPLAN Model
Mean Propagation

Source	Source type	Time slice	L'w dB(A)	Lw dB(A)	KI dB	KT dB	Ko dB	S m	Adiv dB	Agr dB	Abar dB	Aatm dB	Amisc dB	ADI dB	dLrefl dB	Ls dB(A)	Cmet dB	dLw dB	ZR dB	Lr dB(A)
AC-Inverter3	Point	Night	72.2	72.2	0.0	0.0	0.0	153.71	-54.7	1.0	0.0	-1.0	0.0	0.0	0.0	17.5	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	151.13	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.7	0.0	0.0	0.0	17.7
		Night	72.2	72.2	0.0	0.0	0.0	151.13	-54.6	1.0	0.0	-0.9	0.0	0.0	0.0	17.7	0.0	0.0	0.0	0.0
4., GF																				
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	211.23	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	211.23	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	210.37	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	210.37	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	209.51	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	209.51	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter4	Point	Day	72.2	72.2	0.0	0.0	0.0	208.67	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	14.8
		Night	72.2	72.2	0.0	0.0	0.0	208.67	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
AC-Inverter5	Point	Day	72.2	72.2	0.0	0.0	0.0	207.91	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	14.8
		Night	72.2	72.2	0.0	0.0	0.0	207.91	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
AC-Inverter6	Point	Day	72.2	72.2	0.0	0.0	0.0	207.18	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	14.8
		Night	72.2	72.2	0.0	0.0	0.0	207.18	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
AC-Inverter7	Point	Day	72.2	72.2	0.0	0.0	0.0	206.45	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.9	0.0	0.0	0.0	14.9
		Night	72.2	72.2	0.0	0.0	0.0	206.45	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.0
AC-Inverter8	Point	Day	72.2	72.2	0.0	0.0	0.0	205.78	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.9	0.0	0.0	0.0	14.9
		Night	72.2	72.2	0.0	0.0	0.0	205.78	-57.3	1.2	0.0	-1.3	0.0	0.0	0.0	14.9	0.0	0.0	0.0	0.0
AC-Inverter9	Point	Day	72.2	72.2	0.0	0.0	0.0	213.54	-57.6	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	14.6
		Night	72.2	72.2	0.0	0.0	0.0	213.54	-57.6	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	212.71	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	14.6
		Night	72.2	72.2	0.0	0.0	0.0	212.71	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	211.86	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	14.6
		Night	72.2	72.2	0.0	0.0	0.0	211.86	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.6	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	211.05	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	211.05	-57.5	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	210.30	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	210.30	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	209.59	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	14.7
		Night	72.2	72.2	0.0	0.0	0.0	209.59	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	208.87	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	14.8
		Night	72.2	72.2	0.0	0.0	0.0	208.87	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	208.14	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	14.8
		Night	72.2	72.2	0.0	0.0	0.0	208.14	-57.4	1.2	0.0	-1.3	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	221.31	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	221.31	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	220.41	-57.9	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	220.41	-57.9	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
AC-Inverter1	Point	Day	72.2	72.2	0.0	0.0	0.0	219.54	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	219.54	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	218.73	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	218.73	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	218.00	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4
		Night	72.2	72.2	0.0	0.0	0.0	218.00	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	217.31	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4
		Night	72.2	72.2	0.0	0.0	0.0	217.31	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	216.49	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4
		Night	72.2	72.2	0.0	0.0	0.0	216.49	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	215.78	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.5	0.0	0.0	0.0	14.5
		Night	72.2	72.2	0.0	0.0	0.0	215.78	-57.7	1.2	0.0	-1.3	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	223.78	-58.0	1.3	0.0	-1.4	0.0	0.0	0.0	14.1	0.0	0.0	0.0	14.1
		Night	72.2	72.2	0.0	0.0	0.0	223.78	-58.0	1.3	0.0	-1.4	0.0	0.0	0.0	14.1	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	222.86	-58.0	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	222.86	-58.0	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	222.00	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	222.00	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	221.12	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	14.2
		Night	72.2	72.2	0.0	0.0	0.0	221.12	-57.9	1.3	0.0	-1.4	0.0	0.0	0.0	14.2	0.0	0.0	0.0	0.0
AC-Inverter2	Point	Day	72.2	72.2	0.0	0.0	0.0	220.43	-57.9	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	220.43	-57.9	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	219.81	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	219.81	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0

East Windsor Solar Two - SoundPLAN Model
Mean Propagation

Source	Source type	Time slice	L'w	Lw	KI	KT	Ko	S	Adiv	Agr	Abar	Aatm	Amisc	ADI	dLrefl	Ls	Cmet	dLw	ZR	Lr
			dB(A)	dB(A)	dB	dB	dB	m	dB	dB	dB	dB	dB	dB	dB	dB(A)	dB	dB	dB	dB(A)
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	219.1	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	14.3
		Night	72.2	72.2	0.0	0.0	0.0	219.1	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0
AC-Inverter3	Point	Day	72.2	72.2	0.0	0.0	0.0	218.3	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	14.4
		Night	72.2	72.2	0.0	0.0	0.0	218.3	-57.8	1.3	0.0	-1.3	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0

East Windsor Solar Two - SoundPLAN Model
Contribution Levels of the Receivers

Source name	Level Day dB(A)
1 GF	20.9
AC-Inverter1	5.6
AC-Inverter2	5.6
AC-Inverter3	5.6
AC-Inverter4	5.6
AC-Inverter5	5.6
AC-Inverter6	5.6
AC-Inverter7	5.6
AC-Inverter8	5.6
AC-Inverter9	5.7
AC-Inverter10	5.7
AC-Inverter11	5.7
AC-Inverter12	5.7
AC-Inverter13	5.7
AC-Inverter14	5.7
AC-Inverter15	5.7
AC-Inverter16	5.7
AC-Inverter17	5.9
AC-Inverter18	5.9
AC-Inverter19	5.9
AC-Inverter20	5.9
AC-Inverter21	5.9
AC-Inverter22	5.9
AC-Inverter23	5.9
AC-Inverter24	5.9
AC-Inverter25	6.0
AC-Inverter26	6.0
AC-Inverter27	6.0
AC-Inverter28	6.0
AC-Inverter29	6.0
AC-Inverter30	6.0
AC-Inverter31	6.0
AC-Inverter32	6.0
2 GF	29.0
AC-Inverter1	13.9
AC-Inverter2	13.9
AC-Inverter3	13.8
AC-Inverter4	13.8
AC-Inverter5	13.8
AC-Inverter6	13.7
AC-Inverter7	13.7
AC-Inverter8	13.6
AC-Inverter9	14.0
AC-Inverter10	13.9
AC-Inverter11	13.9
AC-Inverter12	13.9
AC-Inverter13	13.8
AC-Inverter14	13.8
AC-Inverter15	13.8
AC-Inverter16	13.7
AC-Inverter17	14.2
AC-Inverter18	14.2
AC-Inverter19	14.2
AC-Inverter20	14.1
AC-Inverter21	14.1
AC-Inverter22	14.1
AC-Inverter23	14.0
AC-Inverter24	14.0
AC-Inverter25	14.3
AC-Inverter26	14.3
AC-Inverter27	14.3
AC-Inverter28	14.2
AC-Inverter29	14.2

East Windsor Solar Two - SoundPLAN Model
Contribution Levels of the Receivers

Source name		Level Day dB(A)
AC-Inverter30		14.1
AC-Inverter31		14.1
AC-Inverter32		14.1
3	GF	32.3
AC-Inverter1		16.8
AC-Inverter2		16.9
AC-Inverter3		17.1
AC-Inverter4		17.2
AC-Inverter5		17.3
AC-Inverter6		17.5
AC-Inverter7		17.6
AC-Inverter8		17.8
AC-Inverter9		16.8
AC-Inverter10		16.9
AC-Inverter11		17.1
AC-Inverter12		17.2
AC-Inverter13		17.3
AC-Inverter14		17.5
AC-Inverter15		17.6
AC-Inverter16		17.8
AC-Inverter17		16.7
AC-Inverter18		16.9
AC-Inverter19		17.0
AC-Inverter20		17.2
AC-Inverter21		17.3
AC-Inverter22		17.4
AC-Inverter23		17.6
AC-Inverter24		17.7
AC-Inverter25		16.7
AC-Inverter26		16.9
AC-Inverter27		17.0
AC-Inverter28		17.1
AC-Inverter29		17.3
AC-Inverter30		17.4
AC-Inverter31		17.5
AC-Inverter32		17.7
4	GF	29.6
AC-Inverter1		14.7
AC-Inverter2		14.7
AC-Inverter3		14.7
AC-Inverter4		14.8
AC-Inverter5		14.8
AC-Inverter6		14.8
AC-Inverter7		14.9
AC-Inverter8		14.9
AC-Inverter9		14.6
AC-Inverter10		14.6
AC-Inverter11		14.6
AC-Inverter12		14.7
AC-Inverter13		14.7
AC-Inverter14		14.7
AC-Inverter15		14.8
AC-Inverter16		14.8
AC-Inverter17		14.2
AC-Inverter18		14.3
AC-Inverter19		14.3
AC-Inverter20		14.3
AC-Inverter21		14.4
AC-Inverter22		14.4
AC-Inverter23		14.4
AC-Inverter24		14.5
AC-Inverter25		14.1
AC-Inverter26		14.2

East Windsor Solar Two - SoundPLAN Model
Contribution Levels of the Receivers

Source name	Level Day dB(A)
AC-Inverter27	14.2
AC-Inverter28	14.2
AC-Inverter29	14.3
AC-Inverter30	14.3
AC-Inverter31	14.3
AC-Inverter32	14.4