Willington Solar One

Willington, Connecticut

PREPARED FOR

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Introduction

The purpose of this acoustical study is to evaluate the potential noise impacts associated with the operation of the proposed Willington Solar One Project (the Project) located at 41-43 Lohse Road in Willington, Connecticut. This acoustical assessment evaluated the potential sound levels generated by the mechanical equipment, including inverters and a transformer, that will be part of the Project. The acoustical assessment was based on the site plans titled "Willington Solar One", dated July 3, 2025, prepared by VHB. The sound levels were compared to the Connecticut Department of Energy and Environmental Protection's (CT DEEP) noise control regulations (Regulations of Connecticut State Agencies (RCSA), Title 22a, Section 22a-69-1 to 22a-69-7.

Project Description

The proposed Project consists of the development of a 1.975-Megawatt (MW) alternating current (AC) ground-mounted solar photovoltaic (PV) facility located on +/- 10-acres of a 20-acre parcel on Lohse Road in Willington, Connecticut (M/B/L 0046-004-00). This parcel is referred to herein as the Project Site.

Fundamentals of Noise

Noise is defined as unwanted or excessive sound. Sound becomes unwanted when it interferes with normal activities such as sleep, communication, work, or recreation. How people perceive sound depends on several measurable physical characteristics, which include the following:

- **Intensity** – Sound intensity is often equated to loudness.
- **Frequency** – Sounds are comprised of acoustic energy distributed over a variety of frequencies. Acoustic frequencies, commonly referred to as tone or pitch, are typically measured in Hertz. Pure tones have all their energy concentrated in a narrow frequency range.

Sound levels are most often measured on a logarithmic scale of decibels (dB). The decibel scale compresses the audible acoustic pressure levels which can vary from the threshold of hearing (zero dB) to the threshold of pain (120 dB). Because sound levels are measured in dB, the addition of two sound levels is not linear. Adding two equal sound levels creates a 3 dB increase in the overall level. Research indicates the following general relationships between changes in sound level and human perception:

- A 3 dB increase is a doubling of acoustic energy and is the threshold of perceptibility to the average person.
- A 10 dB increase is a tenfold increase in acoustic energy but is perceived as a doubling in loudness to the average person.

The human ear does not perceive sound levels from each frequency as equally loud. To compensate for this phenomenon in perception, a frequency filter known as A weighted (dBA) is used to evaluate environmental noise levels. **Table 1** presents a list of common outdoor and indoor sound levels.

Table 1. Common Outdoor and Indoor Sound Levels

Outdoor Sound Levels	Sound Pressure (μPa)*		Sound Level dB(A)**	Indoor Sound Levels
	6,324,555	-	110	Rock Band at 5 m
Jet Over Flight at 300 m		-	105	
	2,000,000	-	100	Inside New York Subway Train
Gas Lawn Mower at 1 m		-	95	
	632,456	-	90	Food Blender at 1 m
Diesel Truck at 15 m		-	85	
Noisy Urban Area—Daytime	200,000	-	80	Garbage Disposal at 1 m
		-	75	Shouting at 1 m
Gas Lawn Mower at 30 m	63,246	-	70	Vacuum Cleaner at 3 m
Suburban Commercial Area		-	65	Normal Speech at 1 m
	20,000	-	60	
Quiet Urban Area—Daytime		-	55	Quiet Conversation at 1 m
	6,325	-	50	Dishwasher Next Room
Quiet Urban Area—Nighttime		-	45	
	2,000	-	40	Empty Theater or Library
Quiet Suburb—Nighttime		-	35	
	632	-	30	Quiet Bedroom at Night
Quiet Rural Area—Nighttime		-	25	Empty Concert Hall
Rustling Leaves	200	-	20	
		-	15	Broadcast and Recording Studios
	63	-	10	
		-	5	
Reference Pressure Level	20	-	0	Threshold of Hearing

Source: Highway Noise Fundamentals. Federal Highway Administration, September 1980.

* mPA – MicroPascals, which describe pressure. The pressure level is what sound level monitors measure.

** dB(A) – A weighted decibels, which describe sound pressure logarithmically with respect to 20 mPa (the reference pressure level).

A variety of sound level indicators can be used for environmental noise analysis. These indicators describe the variations in intensity and sequential pattern of the sound levels. The indicators used in this analysis are defined as follows:

- Leq is the equivalent continuous A-weighted sound level, which is the value or level of a steady, non-fluctuating sound with the same acoustic energy as the actual time-varying sound levels over a given time period.

- L10 is the A-weighted sound level, which is exceeded for 10 percent of the time over a given time period.
- L90 is the A-weighted sound level, which is exceeded for 90 percent of the time over a given time period. The L90 is generally considered to be the background sound level.

Noise Impact Criteria

The CT DEEP has developed noise impact criteria that establish sound level thresholds deemed to prevent adverse impacts for new developments. The acoustic analysis for the Project used these criteria to evaluate whether the Project will generate sound levels that result in adverse impacts.

The CT DEEP's noise control regulations identify the limits of sound that can be emitted from specific premises and what activities are exempt. The noise control regulations (Title 22a, §§ 22a-69-1 to 22a 69-7) are contained in the Regulation of Connecticut State Agencies (RCSA). The proposed Project is considered a Class C (Industrial) Emitter by the CT DEEP. Nearby residences are Class A (Residential) Receptors. The land use in Class A noise zone is characterized as generally residential where human beings sleep, or areas where serenity and tranquility are essential to the intended use of the land.

The CT DEEP policy states that a source (Emitter) located in the various zones shall not emit noise exceeding the levels stated in **Table 2** at the adjacent noise zones.

Table 2. Noise Zone Standards (dBA)

	Receptor Noise Zone			
Emitter Zone	Class A (Daytime)	Class A (Nighttime)	Class B	Class C
Class A (Residential)	55	45	55	62
Class B (Commercial)	55	45	62	62
Class C (Industrial)	61	51	66	70

Source: Control of Noise (Title 22a, Section 22a-69-1 to 22a-69-7.4), RCSA, Revised 2015-3-6.
Daytime refers to 7:00 AM to 10:00 PM
Nighttime refers to 10:00 PM to 7:00 AM

The CT DEEP noise regulation also includes criteria for the presence of a prominent discrete tone, in which the level in a given one-third octave band exceeds the levels in the adjacent one-third octave bands by a stated amount (Title 22a, §§ 22a-69-1.2(r)). The manufacturer's specifications for the proposed equipment did not provide one-third octave band sound levels. As such, a 5-dBA penalty was applied to the criteria to conservatively evaluate the potential for tonal noise from the facility.

The noise control regulations (Title 22a, §§ 22a-69-3.6) take into consideration projects that are to be located in areas with high existing background noise. For such areas, the noise emitted by the project sources is considered to be excessive, if the sources emit levels 5 dBA above the background noise level. It was conservatively assumed that existing sounds levels in this area would not be above the CT DEEP criteria; as such, the sound levels in **Table 2**, with a 5 dBA penalty for tonal noise would be applicable to this Project. The Town of Willington does not have a noise ordinance, therefore, the project will be subject to CT DEEP's noise regulation and limited to 56 dBA daytime and 46 dBA nighttime sound level limits.

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Acoustical Assessment

Methodology

This acoustical assessment evaluated the sound levels from the Project's proposed mechanical equipment. The Project's noise sources consist of sixteen electrical inverters used to convert solar energy into usable electricity and on transformer. Equipment locations are presented in **Figure 1**.

The Project-generated sound levels were calculated using manufacturer's sound data and the principles of acoustical propagation of sound over distance were calculated for each sensitive receptor location. The sources of operational noise associated with the proposed project include:

- Sixteen (16) CPS 100/125 kW, 1500 Vdc Three-phase String Inverters for North America; and
- One (1) 2000 kVA Maddox Padmount Transformer.

The sound power level data for these pieces of equipment are provided in **Table 3**. The reference sound levels for the transformers are based on an empirical approach obtained from the literature that relates the kVA-rating of an air-cooled transformer to its sound power level.[1] The sound pressure level for the inverters was based on the manufacturer's specifications.[2] See **Attachment A** for manufacturer's specifications.

Table 3. Modeled Sound Power Levels

	Sound Power Levels (dB) by Octave Band Center Frequency (Hz)								Overall	
Equipment	**63**	**125**	**250**	**500**	**1k**	**2k**	**4k**	**8k**	**dB(A)**	**dB**
CPS 100/125 kW inverter[1]	--	--	--	--	--	--	--	--	76	79
2000 kVA transformer[2]	82	86	80	76	76	70	65	59	80	89

1 CPS 100/125 kW, 1500 Vdc String Inverters.
2 Barron, 2003.

[1] Barron, Randall F., "Industrial Noise Control and Acoustics," Marcel Dekker, Inc., Table 5-7, pp. 177-178, 2003.
[2] CPS 100/125 kW, 1500 Vdc String Inverters for North America.

The A-weighted sound pressure levels due to the operation of the Project were predicted at the receptor locations using the acoustic modeling software CadnaA[3] (Computer Aided Noise Abatement) by Datakustik. CadnaA is an internationally accepted sound prediction program that implements the International Standards Organization (ISO) 9613-2 (2024) sound propagation standard. The noise prediction model accounts for the sound emissions of equipment, the ground cover, terrain, and the geometry of the Project area. The assessment assumed all equipment operating simultaneously during all times of day. Sound propagation was assumed to occur over acoustically "soft" ground (G=1.0). The ground at the equipment pad – the location at which the inverters and transformers would be installed – was assumed to be acoustically "hard" ground (G=0.0). Receptors were modeled at a height of 1.5 m (5-feet) above the ground. The noise prediction model did not account for excess attenuation provided by trees, or by any on-site or off-site structures, lending some conservatism to the results. The results were compared to the CT DEEP noise impact criteria for determining compliance.

Receptor Locations

A total of eight receptor locations were identified in the vicinity of the Project Site (see **Figure 1**). The receptor locations were selected based on their proximity to the Project Site and their land use. These receptor locations represent the nearest property lines of the Project and nearest residential property lines.

[3] DataKustik GmbH, 2025. Computer Aided Noise Abatement Model.

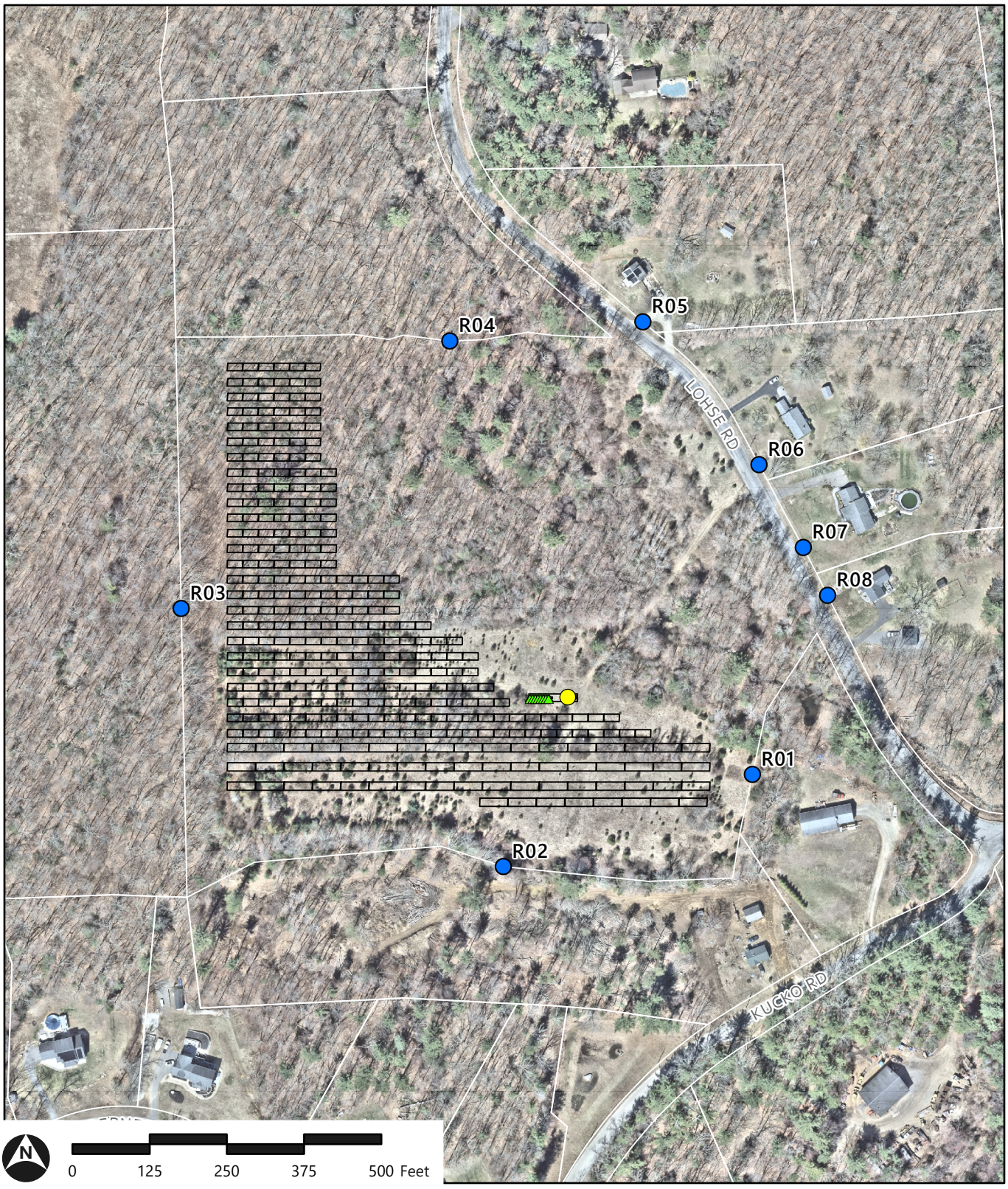

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Figure 1: Noise Receptor and Equipment Locations
Willington Solar 1
Willington, Connecticut
July 10, 2025

Source: CTDEEP, NearMap, and VHB 2025.

Future Conditions

VHB evaluated the potential sound level impacts associated with the Project's proposed mechanical equipment at the nearby sensitive receptor locations. This analysis evaluated the potential sound level impacts from 16 inverters and one transformer operating simultaneously.

The potential sound levels associated with the proposed equipment were determined by comparing the predicted Project generated sound levels to CT DEEP's noise standards with a 5-dBA penalty applied to account for potential tonal noise from the proposed mechanical equipment. The results of the acoustical analysis demonstrated that the operation of the proposed equipment will comply with CT DEEP's noise standards at the sensitive receptor locations. The sound levels attributed to the proposed equipment range from approximately 24 dBA at Receptor R05, 50 Lohse Road, to approximately 32 dBA at Receptor R02, 8 Kucko Road. These sound levels are below CT DEEP's daytime criteria of 56 dBA and the nighttime criteria of 46 dBA, which include the 5-dBA penalty applied for potential tonal noise. Due to the nature of the Project, the solar equipment will not be operating during the nighttime period and therefore would not make noise during the nighttime. However, the nighttime criteria comparison has been included for information purposes to demonstrate compliance. **Table 4** summarizes the Project generated sound levels due to the operation of the inverters and transformer at the receptor locations.

Table 4. Sound Levels at Receptor Locations Due to Inverters and a Transformer (dBA)

Receptor Locations	CT DEEP Noise Standard* (Daytime/Nighttime)	Project Generated Sound Levels
R01 – 4 Kucko Road	56/46	30
R02 - 8 Kucko Road	56/46	32
R03 – 96 Spak Road	56/46	25
R04 – 57 Lohse Road	56/46	25
R05 - 50 Lohse Road	56/46	24
R06 - 44 Lohse Road	56/46	26
R07 - 40 Lohse Road	56/46	27
R08 – 38 Lohse Road	56/46	27

* Noise standard for Class C emitter and Class A receptor, unless otherwise noted.
CT DEEP noise standard with 5 dBA penalty applied.

Figure 2 presents sound level contours (i.e., lines of equal sound level that are analogous to topographic contours that are lines of equal ground elevation) for the operation of the inverters and transformer. The sound level contours in **Figure 2** exclude contributions from off-site sources of sound.

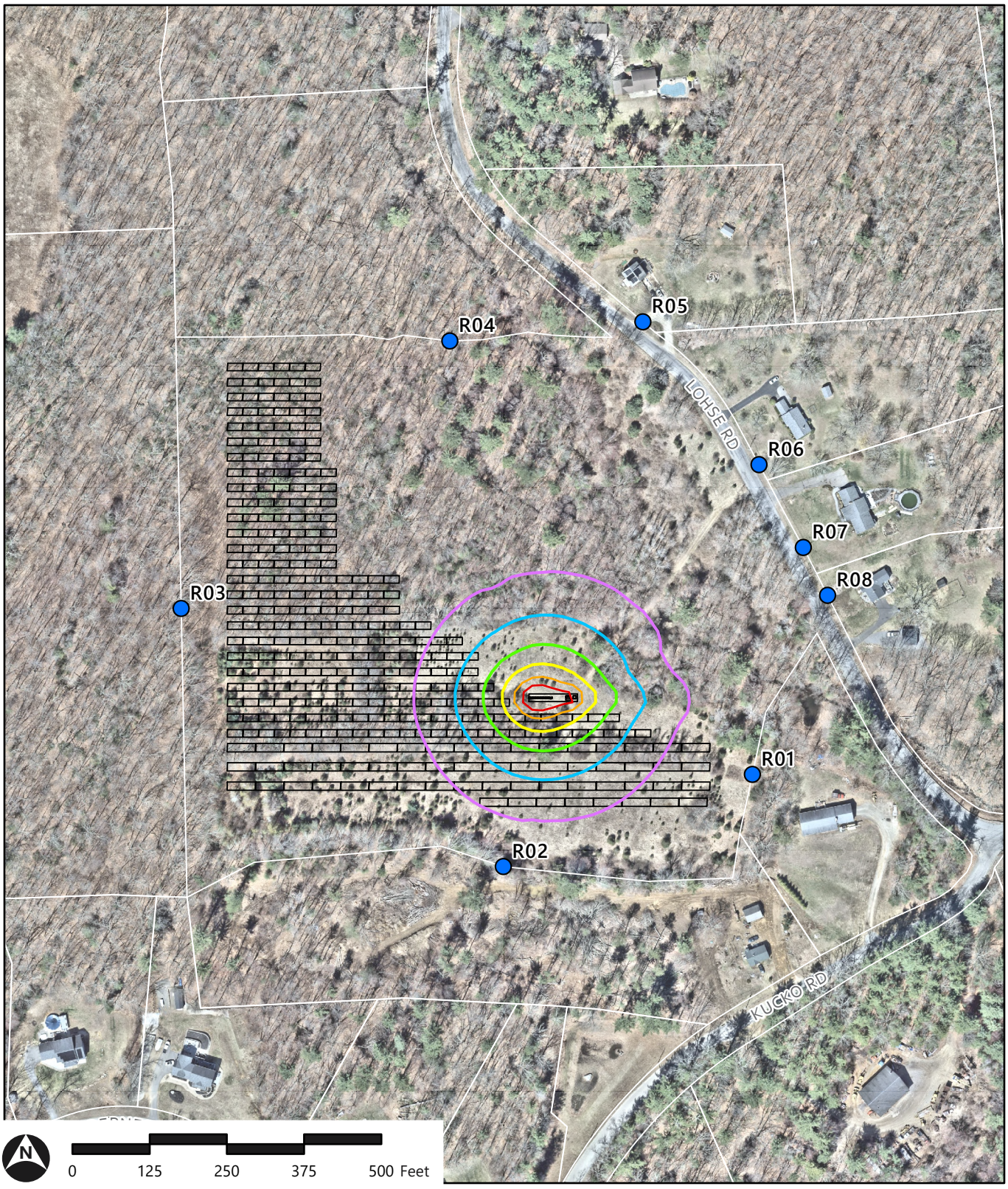

Figure 2: Modeled Sound Level Contours with Transformer and Inverters
Willington Solar 1
Willington, Connecticut
July 10, 2025

** CTDEEP Nighttime Standard with 5 dBA penalty;*
*** CTDEEP Daytime Standard with 5 dBA penalty.*

Source: CTDEEP, NearMap, and VHB 2025.

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3

Findings

Conclusion of Acoustical Assessment

In this acoustical analysis, VHB evaluated the sound levels associated with the Project's mechanical equipment which will include 16 inverters and one transformer. This analysis conservatively assumed that the properties abutting the Project Site currently experience sound levels below CT DEEP's noise standards and the high background noise areas guidance (Sec 22a-69-3.6) does not apply to the Project.

Due to the low noise equipment and sufficient distance between the proposed equipment and the nearby property boundaries, the sound levels associated with the Project's mechanical equipment are expected to comply with CT DEEP's noise standards and have no adverse noise impacts at nearby sensitive receptor locations. Noise mitigation is not necessary for the Project.

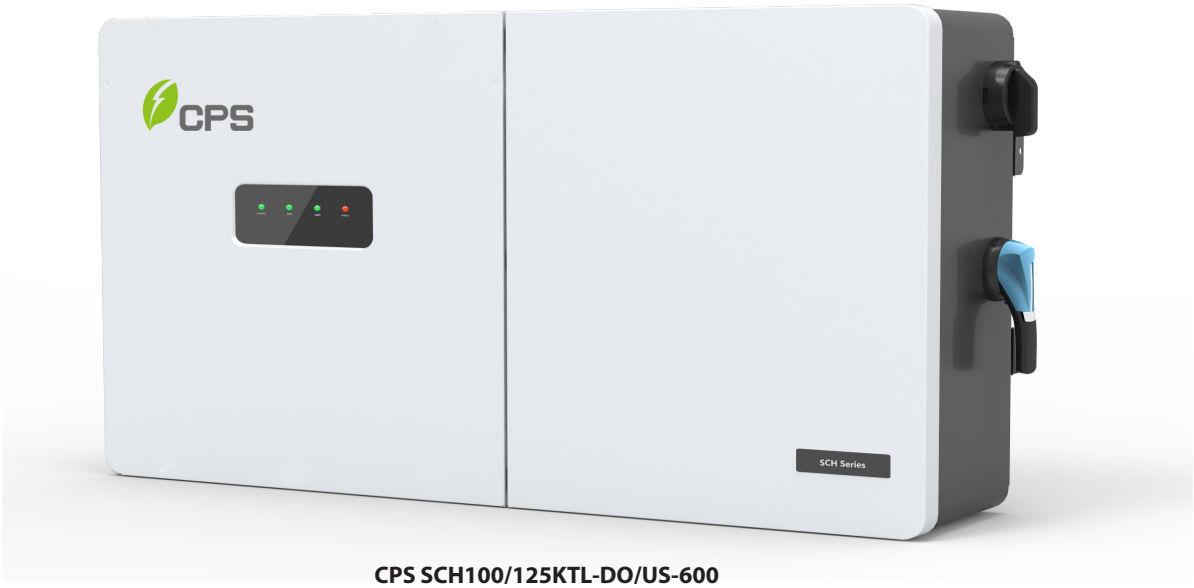
Construction Activities

Construction activities, including the intermittent use of heavy machinery, may result in temporary increases in nearby sound levels at the proposed Project. The Project is expected to generate typical sound levels from construction activities, including truck movements, heavy equipment operations, and general construction activities. Heavy machinery, such as front-end loaders, graders, bull dozers, and backhoes, would be used intermittently throughout the proposed Project's construction.

Section 22a-69-1.8(g) of the CT DEEP's noise control regulation states that noise associated with construction activities are exempt from the regulation. However, even though construction noise is exempt from the regulation, construction activities such as site excavation/grading and installation of the solar panel systems would typically be limited to normal daytime working hours. Construction activities beyond normal daytime work hours would be minimized to the extent practicable.

ATTACHMENT A – Equipment Specs

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

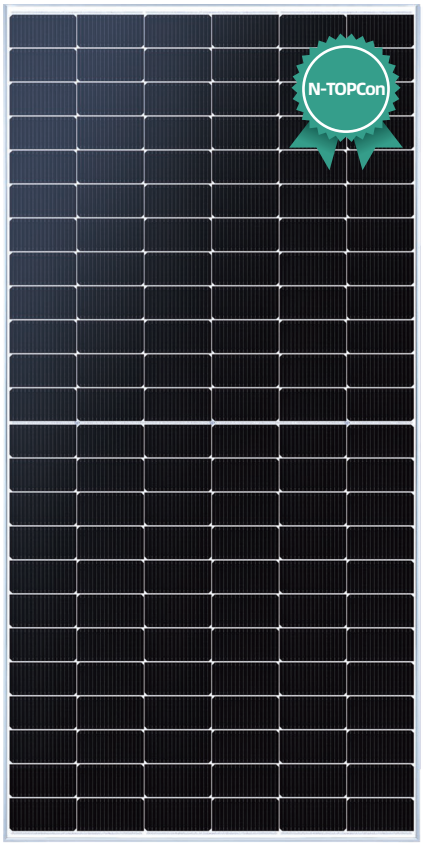
C SP US

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

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: #1AWG - 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.



PHONO

565-585W

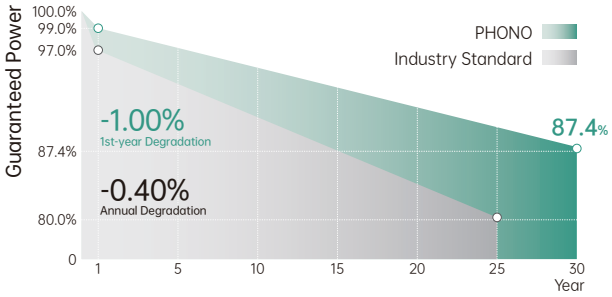
Draco Module Series

N-TOPCON HIGH EFFICIENCY MONO BM6-16B-G

Bloomberg NEW ENERGY FINANCE Tier1 TOP PERFORMER 2023 PVEL kiwa PV MODULE RELIABILITY SCORECARD

Extraordinary Product Performance

- Up to 30% additional power yield benefited from bifacial technology and up over 80% cell bifaciality
- Competitive high-temperature performance with ameliorated temperature coefficient
- Better weak illumination response, higher power generation with N-TOPCon technology



15-year Product Warranty

30-year Linear Performance Warranty

Higher Quality Reliability

- Zero Light Induced Degradation(LID), can increase power generation
- Industry-leading cell processing technology and dual glass contributes to excellent anti-PID characteristic
- First-year degradation is less than 1.0%, with linear degradation of 0.4% per year for 30 years

Wider Application Conditions

- BIPV, vertical installation, snowfield, high-humid area, windy and dusty area
- Safer and easier handling during transportation and installation

MANAGEMENT SYSTEM CERTIFICATES

IEC 61215, IEC 61730, UL 61730

ISO 9001
2015 / Quality management system

ISO 14001
2015 / Standards for environmental management system

ISO 45001
2018 / International standards for occupational health & safety

us.phonosolar.com / usa@phonosolar.com

Electrical Typical Values

Model	1000V	PS565M8GF-24/TNH		PS570M8GF-24/TNH		PS575M8GF-24/TNH		PS580M8GF-24/TNH		PS585M8GF-24/TNH	
	1500V	PS565M8GFH-24/TNH		PS570M8GFH-24/TNH		PS575M8GFH-24/TNH		PS580M8GFH-24/TNH		PS585M8GFH-24/TNH	
Testing Condition		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Rated Power (Pmpp)		565	433	570	436	575	440	580	444	585	448
Rated Current (Impp)		13.24	10.66	13.30	10.71	13.36	10.76	13.42	10.81	13.48	10.86
Rated Voltage (Vmpp)		42.68	40.57	42.86	40.74	43.04	40.92	43.22	41.09	43.40	41.26
Short Circuit Current (Isc)		13.89	11.19	13.95	11.24	14.04	11.31	14.11	11.36	14.18	11.42
Open Circuit Voltage (Voc)		51.49	49.30	51.73	49.53	51.97	49.98	52.20	50.21	52.44	50.44
Module Efficiency (%)		21.87		22.07		22.26		22.45		22.65	

STC(Standard Testing Conditions): Irradiance 1000W/m², AM 1.5, Cell Temperature 25°C

NOCT (Nominal Operation Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C , Spectra at AM1.5, Wind at 1m/s

BSTC

Maximum Power (Pmax)	620	625	630	635	640
Optimum Operating Current (Impp)	14.53	14.58	14.64	14.69	14.75
Optimum Operating Voltage (Vmpp)	42.68	42.86	43.04	43.22	43.40
Short Circuit Current (Isc)	15.24	15.29	15.28	15.33	15.38
Open Circuit Voltage (Voc)	51.49	51.73	52.20	52.44	52.68

BSTC:Front Side Irradiation 1000W/m², Back Side Reflection Irradiation 135W/m² , AM 1.5, Ambient Temperature 25°C

Mechanical Characteristics

Cell Type	N Type Monocrystalline
Dimension (L × W × H)	Length: 2278mm (89.69 inch) Width: 1134mm (44.65 inch) Height: 30mm (1.18 inch)
Weight	32.0kg (70.55 lbs)
Glass	2.0mm/2.0mm toughened glass
Frame	Anodized Aluminium Alloy
Cable (Including Connector)	12AWG(UL)/4mm²(IEC), (+): 450mm,(-): 250mm or Customized Length
Junction Box	IP 68 Rated

Temperature Ratings

Voltage Temperature Coefficient	-0.25%/°C
Current Temperature Coefficient	+0.04%/°C
Power Temperature Coefficient	-0.29%/°C
Power Tolerance	0~+3%
NOCT	42±2°C
Bifaciality	80±5%

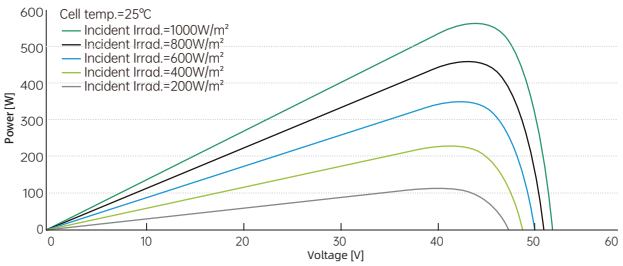
Absolute Maximum Rating

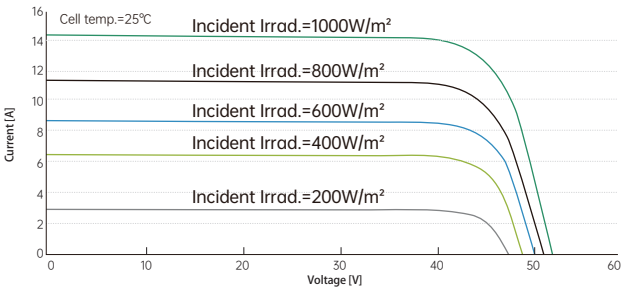
Operating Temperature	From -40 to + 85°C
Hail Diameter @ 80km/h	Up to 25mm
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Maximum Series Fuse Rating	30A
PV Module Classification	II
Fire Rating (UL61730)	Type29
Maximum System Voltage	DC 1000V/1500V

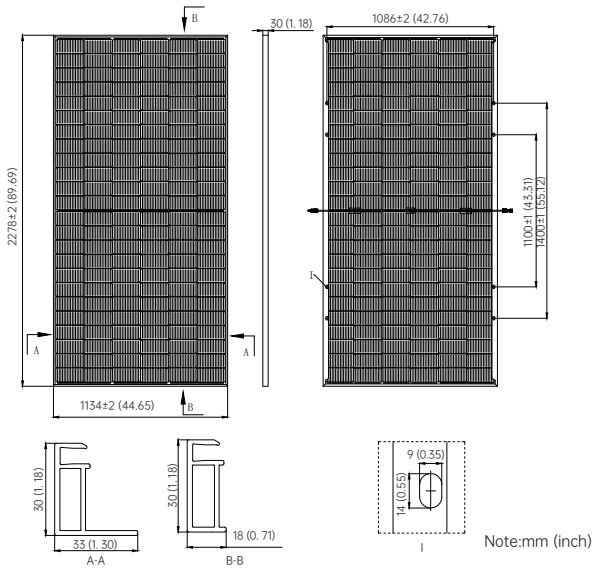
Packing Configuration

Container	20' GP	40' HQ
Pieces/Container	180	720
Pcs/Pallet	36	36
Pallets/Container	5	20

Electrical Characteristics







Note:mm (inch)

THREE PHASE PADMOUNT TRANSFORMERS

Short for "Tamper-proof, compartmentalized, liquid-filled, pad mounted transformer", all padmount designs feature fully enclosed tamper-proof terminal compartments and can be supplied with dead-front or live-front configuration, for loop or radial feed applications, with Type II mineral oil, or environmentally friendly and high flash-point Envirotemp™ FR3™.

All new Maddox padmount transformers are constructed of the highest quality materials and built in the US to heavy duty industrial standards, making them ideal for commercial and industrial applications such as data centers, solar step-up, manufacturing facilities, shopping centers, etc. Our padmounts are designed to the latest department of energy efficiency standards built and tested in accordance with industry standards including NEMA, ANSI C.57, DOE, and IEEE as applicable.

With thousands of new units in stock and ready-to-ship, and the manufacturing ability to produce almost any custom design, Maddox stands ready to meet your transformer need(s). Maddox stocks all standard configurations to match most common applications and deliver on short notice.

Design

HV Bushing Config.:
- Dead front or live front
- Loop feed or radial feed

Fluid Options:
- Type II Mineral Oil
- Envirotemp™ FR3™

Standard Gauge/Accessory Package:
- Pressure relief valve
- Pressure vacuum gauge
- Liquid temp & level gauges
- Drain & sample valve
- Adjustment taps

Switch Options:
- 2 Position LBOR Switch
- 4 Position LBOR Switch (V-blade or T-blade)
- (3) 2 Position LBOR Switches

Fusing Options:
- Bayonets w/ isolation links or CLFs

Construction:
- 5-legged core
- Rectangular wound copper or aluminum windings
- Carbon rienforced or stainless steel tank
- Steel divider between HV and LV cabinets
- Penta-head captive bolt

Optional Design Features & Accessories:
- Gauges w/ Contacts
- External drain and sample valve
- Electrostatic Shielding
- Step-up Design
- Surge-Arresters

Available Ratings

Table 1. Typical Transformer Ratings

Sizes (kVA)	45, 75, 112.5, 150, 225, 300, 500, 750, 1000, 1500, 2000, 2500, 3000, 3750, 5000
Frequency	60 Hz or 50 Hz
Cooling Class	ONAN or KNAN
Temp Rise	55°C, 65°C, 55/65°C, 75°C
Voltages	*Available in Δ or Y configuration*
600V	208
	240
	416
	480
	600
2.5kv – 5kv	2400
	4160
	4800
15kV	12000
	12470
	13200
	13800
	14400
25kV	20780
	21600
	22900
	24940
	26400
35kV	33000
	34500

Fig 1. Padmount Transformer Outline

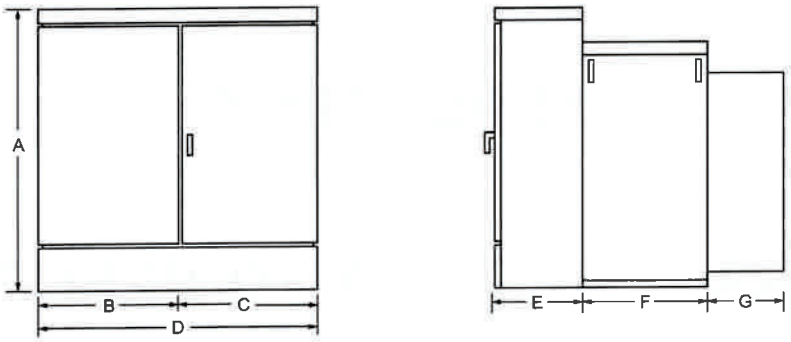


Table 2. Approximate Transformer Dimensions

kVA	A	B	C	D	E	F	G	Gallons	Weight (Lbs)
300	59"	29.5"	22"	51.5"	20.5"	24"	10"	196	4,056
500	59"	33"	26.5"	59.5"	24"	26.5"	10"	210	5,023
750	73"	36"	29"	65"	24"	26.5"	10"	358	7,664
1000	73"	36"	29"	65"	24"	27"	10"	354	8,530
1500	73"	36"	35.5"	71.5	24"	33.5"	10"	410	10,782
2000	75"	39.5"	28"	67.5	24"	35"	27"	433	12,490
2500	78"	39.5"	35.5"	75.5"	24"	37.5"	22.5"	545	14,246
3000	84"	30.5"	32"	62.5"	24"	37.5"	38"	550	14,014
3750	75"	50.5"	30"	80.5"	25.5"	42"	38"	730	17,785

Fig 2. Three Phase Maddox Padmount Transformer

Table 3. Common Accessories

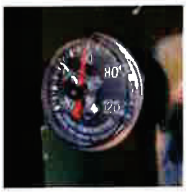
1. Bayonet Fuses

2. Loadbreak Switch

3. Tap-changer

4. Bushings

5. Parking Stand



6: Gauges

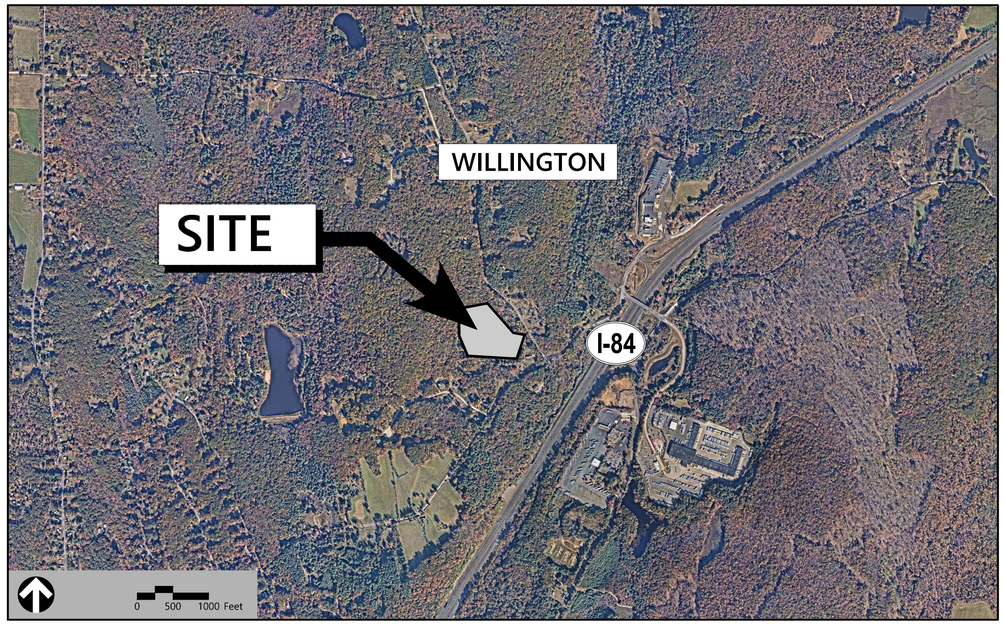
ATTACHMENT B – Site Plans

Site Plans

Issued for	**Permitting**
Date Issued	**July 3, 2025**
Latest Issue	**July 3, 2025**

Willington Solar One

41-43 Lohse Road
Willington, Connecticut



Applicant/Developer

Verogy
124 LaSalle Road, 2nd Floor
West Hartford, CT 06107

Map-Block-Lot:

0046-004-00

Property Owner

Grimaldi, Grace Trustee
121 Spruce Street
Manchester, CT 06040

Sheet Index

No.	Drawing Title	Latest Issue
C-1.0	Legend and General Notes	July 3, 2025
C-2.0	Layout and Materials Plan	July 3, 2025
C-3.0	Grading and Drainage Plan	July 3, 2025
C-4.0	Erosion and Sediment Control Plan	July 3, 2025
C-5.0	Site Details	July 3, 2025

Reference Drawings

No.	Drawing Title	Latest Issue
1 of 1	Plan of Land in Willington, CT	January 16, 2025

vhb.com

vhb

100 Great Meadow Road
Suite 200
Wethersfield, CT 06109
860.807.4300

Licensed Land Surveyor
Northeast Survey Consultants
3 Ferry Street, Studio 1
Easthampton, MA 01027
413-203-5144

PROJECT INFORMATION

ZONE DESIGNATION: R80 - RESIDENTIAL

PARCEL ACREAGE: ±18.4 ACRES

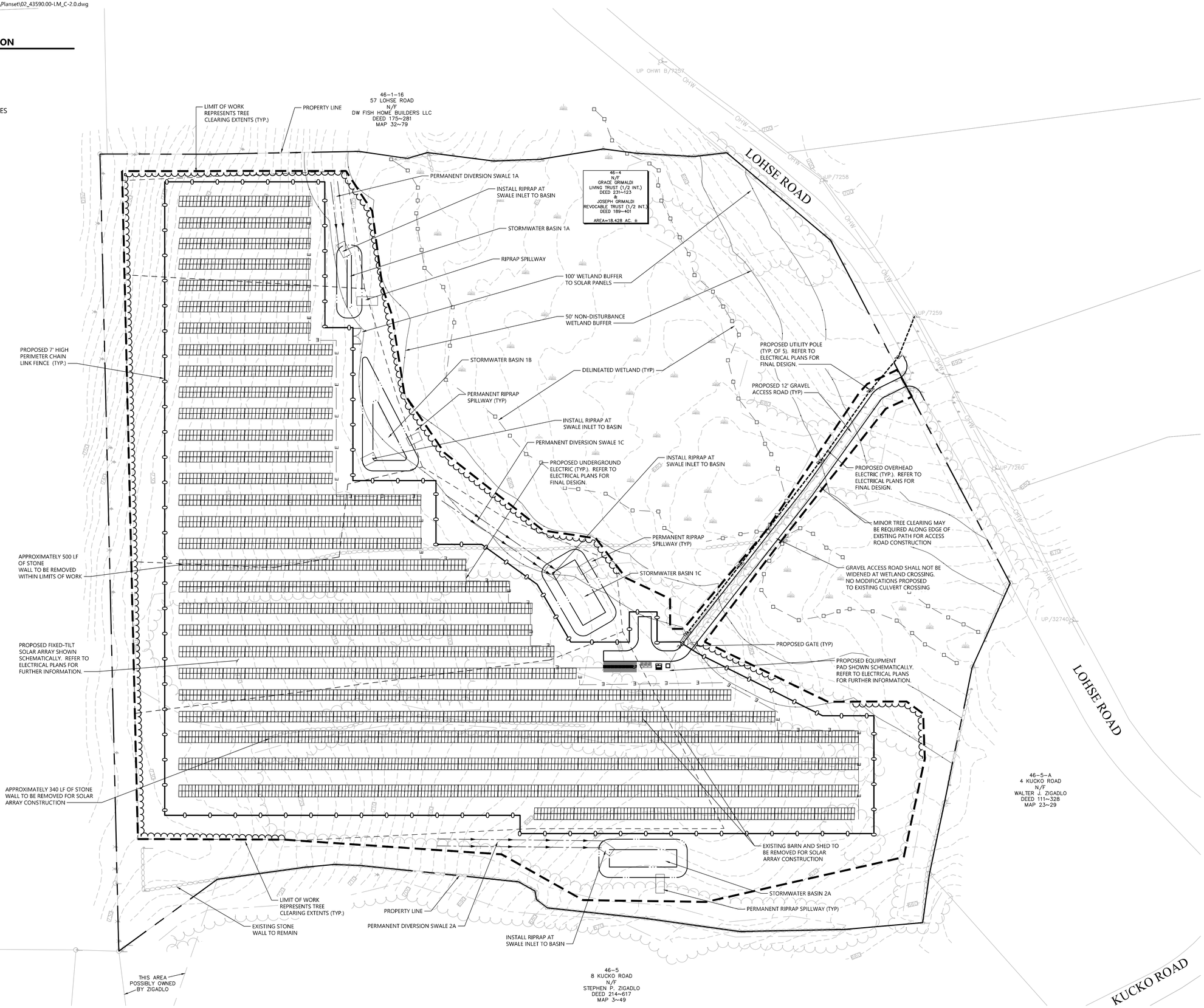
LIMITS OF WORK: ±10 ACRES

AREA OF PROPOSED TREE CLEARING: ±5 ACRES

ROW CLEAR SPACING: ±12.7 FEET

GROUND COVER RATIO: ±48.5%

SYSTEM POWER: ±1.975 MW-AC



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100 Great Meadow Road
Suite 200
Wethersfield, CT 06109
860.807.4300

Willington Solar One

41-43 Lohse Road
Willington, Connecticut

No.	Revision	Date	Appvd.

Designed by DRB | Checked by SJK

Issued for: Permitting

Date: July 3, 2025

Layout and Materials Plan

Drawing Number: C-2.0

Sheet 2 of 5

Project Number: 43590.00