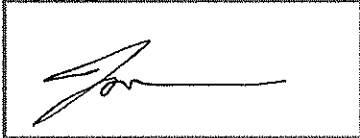


Signature Certificate

Reference number: HC7GY-IGHYX-XIUCR-WT9EW

Signer	Timestamp	Signature
Travis Sherman Email: tws@albanyсолarѕolutions.com Sent: 25 Oct 2022 12:54:42 UTC Signed: 25 Oct 2022 12:54:42 UTC		 IP address: 66.152.100.82 Location: Troy, United States
Todd Gibbs Email: todd.gibbs152@gmail.com Sent: 25 Oct 2022 12:54:42 UTC Viewed: 25 Oct 2022 13:07:36 UTC Signed: 25 Oct 2022 13:09:39 UTC		 IP address: 136.226.2.91 Location: Atlanta, United States
Recipient Verification: ✓Email verified	25 Oct 2022 13:07:36 UTC	

Document completed by all parties on:
25 Oct 2022 13:09:39 UTC

Page 1 of 1



Signed with PandaDoc

PandaDoc is a document workflow and certified eSignature solution trusted by 30,000+ companies worldwide.



Short Environmental Assessment Form

Part 1 - Project Information

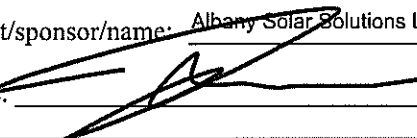
Instructions for Completing

Part 1 – Project Information. The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

Part 1 – Project and Sponsor Information							
Todd Gibbs - Solar PV Ground Mount - 616 Millers Corners Rd, Amsterdam NY 12010 - Albany Solar Solutions LLC builder							
Name of Action or Project: 616 Millers Corner Rd - Ground Mount Solar PV							
Project Location (describe, and attach a location map): 616 Millers Corners Rd, Amsterdam NY 12010							
Brief Description of Proposed Action: 21.75kW DC ground mounted solar array for onsite utility offset							
Name of Applicant or Sponsor: Albany Solar Solutions LLC - Travis Sherman		Telephone: 518-720-7779 E-Mail: info@albansolarsolutions.com					
Address: 15 Farrell Rd							
City/PO: Troy		State: NY	Zip Code: 12180				
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			<table border="1" style="width: 100%; text-align: center;"> <tr> <td>NO</td> <td>YES</td> </tr> <tr> <td>☒</td> <td>☐</td> </tr> </table>	NO	YES	☒	☐
NO	YES						
☒	☐						
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: Town Of Florida			<table border="1" style="width: 100%; text-align: center;"> <tr> <td>NO</td> <td>YES</td> </tr> <tr> <td>☐</td> <td>☒</td> </tr> </table>	NO	YES	☐	☒
NO	YES						
☐	☒						
3. a. Total acreage of the site of the proposed action?		0.02 acres					
b. Total acreage to be physically disturbed?		0.02 acres					
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		20 acres					
4. Check all land uses that occur on, are adjoining or near the proposed action:							
☐ Urban ☒ Rural (non-agriculture) ☐ Industrial ☐ Commercial ☐ Residential (suburban)							
☐ Forest ☒ Agriculture ☐ Aquatic ☐ Other(Specify):							
☐ Parkland							

5. Is the proposed action,	NO	YES	N/A
a. A permitted use under the zoning regulations?	☐	☒	☐
b. Consistent with the adopted comprehensive plan?	☐	☒	☐
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	☐	☒	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area?	NO	YES	
If Yes, identify: _____	☒	☐	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	☒	☐	
b. Are public transportation services available at or near the site of the proposed action?	☐	☒	
c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	☒	☐	
9. Does the proposed action meet or exceed the state energy code requirements?	NO	YES	
If the proposed action will exceed requirements, describe design features and technologies:			
Solar PV	☐	☒	
10. Will the proposed action connect to an existing public/private water supply?	NO	YES	
If No, describe method for providing potable water: _____	☒	☐	
11. Will the proposed action connect to existing wastewater utilities?	NO	YES	
If No, describe method for providing wastewater treatment: _____	☒	☐	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	☒	☐	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	☒	☐	
13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES	
	☒	☐	
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?	☒	☐	
If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____			

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply: ☐ Shoreline ☐ Forest ☒ Agricultural/grasslands ☐ Early mid-successional ☐ Wetland ☐ Urban ☐ Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
	☒	☐
16. Is the project site located in the 100-year flood plan?	NO	YES
	☒	☐
17. Will the proposed action create storm water discharge, either from point or non-point sources? If Yes, a. Will storm water discharges flow to adjacent properties? b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)? If Yes, briefly describe:	NO	YES
	☒	☐
	☒	☐
	☒	☐
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)? If Yes, explain the purpose and size of the impoundment:	NO	YES
	☒	☐
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility? If Yes, describe:	NO	YES
	☒	☐
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste? If Yes, describe:	NO	YES
	☒	☐
I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE		
Applicant/sponsor/name: <u>Albany Solar Solutions LLC - Travis Sherman</u> Date: <u>10/25/2022</u>		
Signature: <u></u> Title: <u>LLC Owner</u>		

PHOTOVOLTAIC SYSTEM

SYSTEM SIZE:

NAMEPLATE: 21.75 KW DC / 18 KW AC

EQUIPMENT:

- PV MODULES: (50) LG NEON R 435 LG435OAC-A6
INVERTER(S): (25) CHILICON POWER CP-720 MICROINVERTERS
AC COMPONENT(S): (1) 100A FUSED AC DISCONNECT
(1) 125A SOLAR SUB PANEL

TYPE OF INTERCONNECTION: LINE SIDE TAP IN THE MSP

SCOPE OF WORK:

INSTALLATION OF A CODE COMPLIANT, UTILITY INTERACTIVE PHOTOVOLTAIC ELECTRIC SYSTEM.

2017 NATIONAL ELECTRIC CODE

2020 FIRE CODE OF NYS

2020 RESIDENTIAL CODE OF NYS

2020 BUILDING CODE OF NYS

APPLICABLE CODE PER LOCAL AUTHORITY HAVING JURISDICTION

APPLICABLE CODES

- PV1 COVER PAGE
PV2 SITE PLAN
PV3 ELECTRICAL DIAGRAMS
PV4 MARKING, LABELS & PLACARD

*ATTACHMENTS

MANUFACTURER'S SPECIFICATIONS

INDEX

NEW PV SYSTEM: 21.75 KW DC

TODD GIBBS
RESIDENCE
616 MILLERS CORNERS RD,
AMSTERDAM, NY 12010, USA
APN : 272600 117.28.2
TAXMAP ID : 117-2-8.2

GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC ONLY. THE LOCATION AND ROUTING OF RACEWAYS SHALL BE DETERMINED BY THE CONTRACTOR UNLESS OTHERWISE NOTED OR STANDARDIZED.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ANY LOCAL ORDINANCES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIALS AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS IN THE SPECIFICATIONS OR NOTED ON THE PLANS TO ENSURE COMPLETE COMPLIANCE WITH ALL CODES AND TO ENSURE THE LONGEVITY AND SAFETY OF THE OPERABLE SYSTEM.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ANY LOCAL ORDINANCES.
5. ALL CONDUIT AND ENCLOSURES SHALL BE USED WHERE PV SOURCE OR OUTPUT CIRCUITS ARE RUN INSIDE A BUILDING.
6. MODULES SHALL NOT BE PLACED OVER ANY PLUMBING VENTS AND AT LEAST 6" ABOVE FLUSH VENTS.
7. THE ELECTRICAL CONTRACTOR SHALL COMPLY WITH ANY AND ALL REQUIREMENTS GIVEN BY UTILITY COMPANIES.
8. FOR ADDITIONAL EQUIPMENT SPECIFICATIONS, SEE PROVIDED CUT SHEETS.
9. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ANY LOCAL ORDINANCES. ALL MAY HAVE SPECIAL USES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIALS AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS IN THE SPECIFICATIONS OR NOTED ON THE PLANS TO ENSURE COMPLETE COMPLIANCE WITH ALL CODES AND TO ENSURE THE LONGEVITY AND SAFETY OF THE OPERABLE SYSTEM.
10. ALL NEC REFERENCES SHALL BE DIRECTLY INTERCHANGEABLE WITH NEC REFERENCES.

STRUCTURAL NOTES:

1. MOUNTS ARE DIAGRAMMATIC AND EXACT LOCATION MAY CHANGE, BUT SHALL BE ACCURATELY SPACED.
2. MOUNTS SHALL BE STAGGERED WHEN NECESSARY TO AVOID UNNECESSARY LOAD AMONGST RAFTERS.
3. DO NOT SPICE RAFTS IN MIDDLE 50% OF SPAN BETWEEN TWO MOUNTS.

ELECTRICAL NOTES:

1. ALL EQUIPMENT IS LISTED FOR USE.
2. MAXIMUM VOLTAGE DOES NOT EXCEED 600VDC.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ANY LOCAL ORDINANCES.
4. AN INVERTER IN AN INTERACTIVE SOLAR PV SYSTEM SHALL AUTOMATICALLY DEENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THAT SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED.
5. ALL AC COMPONENTS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION.
6. ALL AC COMPONENTS SHALL MEET OR EXCEED THE AVAILABLE FAULT CURRENT CALCULATED AT THAT COMPONENT.
7. ALL MODULES AND ANY RELATED ROOF MOUNTED METALLIC EQUIPMENT SHALL BE PROPERLY GROUNDING.
8. DC EQUIPMENT SHALL BE 600VDC RATED MINIMUM.
9. MARKINGS SHALL BE PROVIDED TO INDICATE THAT ALL CONTACTS OF THE DISCONNECT EQUIPMENT MIGHT BE ENERGIZED.
10. ALL RACEWAYS SHALL BE PROVIDED WITH SUFFICIENT WEATHERPROOF PULL BOXES OR JUNCTION BOXES/COMBINER BOXES PER APPROPRIATE JURISDICTIONAL REQUIREMENTS.
11. FOR ANY UNGROUNDING PV SYSTEM, A LABEL READING: "WARNING - ELECTRICAL SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDING AND MAY BE ENERGIZED." SHALL BE PLACED AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT AND DEVICE WHERE ENERGIZED, UNGROUNDING CIRCUITS MAY BE EXPOSED DURING SERVICE.
12. ALL METALLIC RACEWAYS AND EQUIPMENT SHALL BE BONDED AND ELECTRICALLY CONTINUOUS.
13. ALL METALLIC RACEWAYS AND EQUIPMENT SHALL BE BONDED AND ELECTRICALLY CONTINUOUS.
14. THE POINT OF CONNECTION COUPLES WITH APPLICABLE CEILING.
15. BACKFED SOLAR BREAKER(S) SHALL BE INSTALLED AT THE OPPOSITE END OF THE CIRCUIT OR FURTHER AWAY FROM THE MAIN BREAKER.
16. ALL WIRE, VOLTAGES, AMPERAGES AND EQUIPMENT IS SIZED ACCORDING TO TEMPERATURE DERATING AND CIRCUMSTANCES.
17. ONLY COPPER (CU) CONDUCTORS SHALL BE USED. CONDUCTORS SHALL BE STRANDED OR SOLID WITH PROPERLY RATED CONNECTORS.
18. DISCONNECT SHALL BE WIRED SO NO BLADES ARE ENERGIZED.
19. ALL MODULES SHALL BE GROUNDING AS PER MANUFACTURER SPECIFICATIONS.
20. ALL EQUIPMENT SHALL BE GROUNDING, INCLUDING BONDING JUMPERS WHERE NECESSARY ACROSS RAIL SPLICE PLATES TO BOND INDIVIDUAL PIECES OF RAIL.



CONTRACTOR / BUILDER
ALBANY SOLAR
SOLUTIONS
15 FARRELL RD,
TROY, NY 12180

COVER PAGE
TODD GIBBS
616 MILLERS CORNERS RD, AMSTERDAM,
NY 12010, USA
APN : 272600 117.28.2

SYSTEM
DC KW: 21.75
AC KW: 18
MODULES: 50

DATE
08/18/2021

DESIGNED BY:

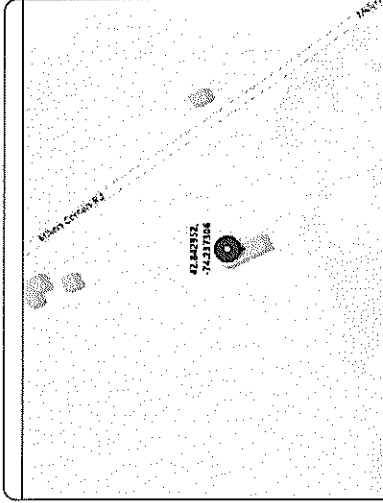
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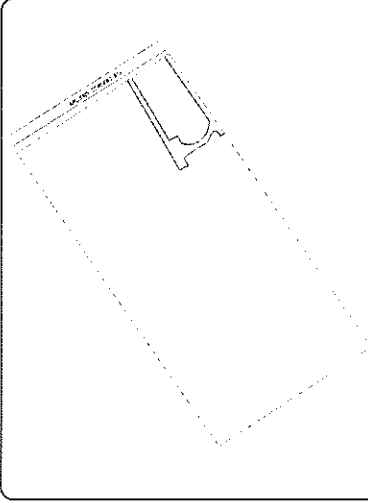
PV1



AERIAL VIEW 42.842933, -74.237290



VICINITY MAP



PLAT MAP

NOT TO SCALE

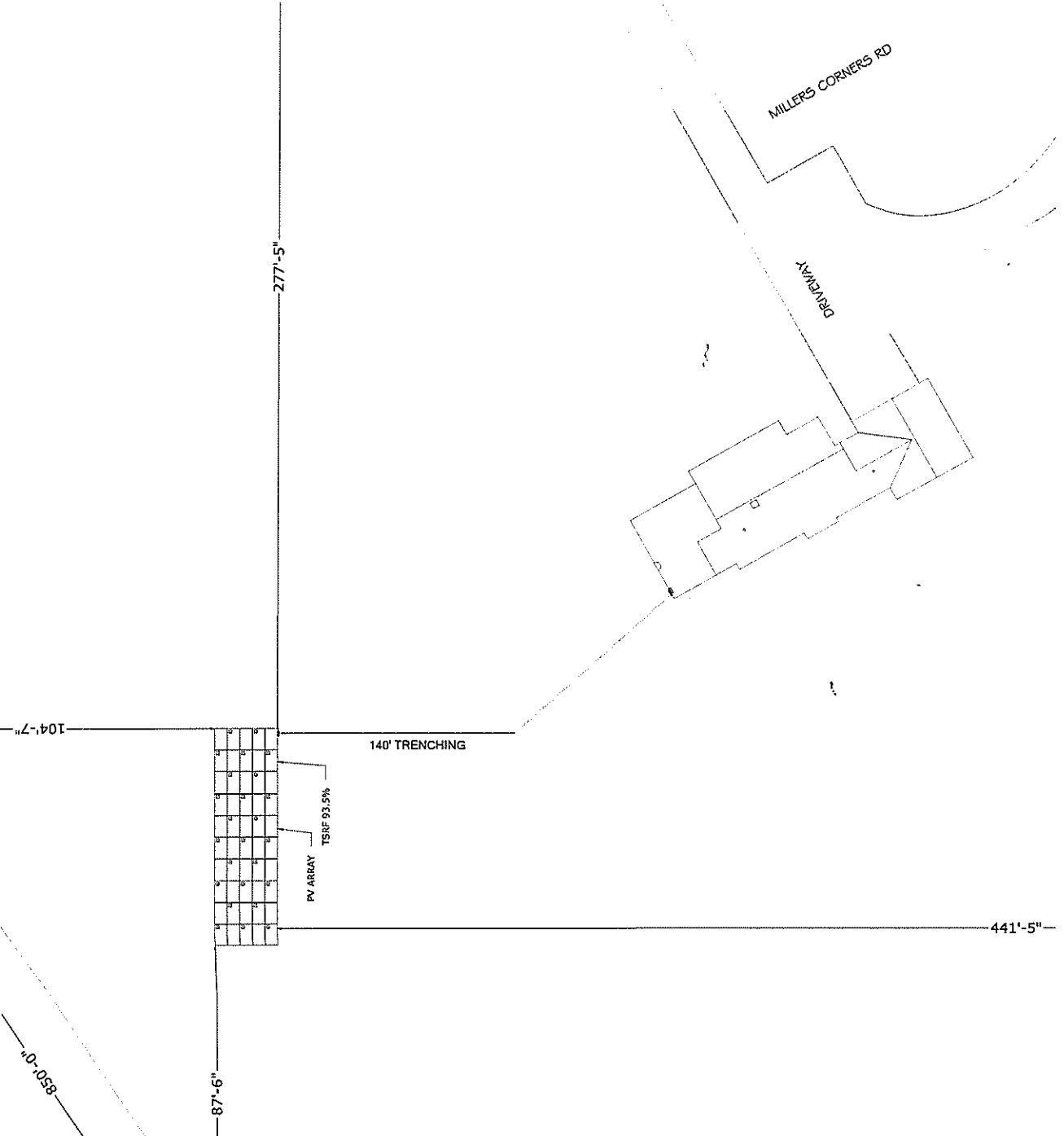
ARRAY 1

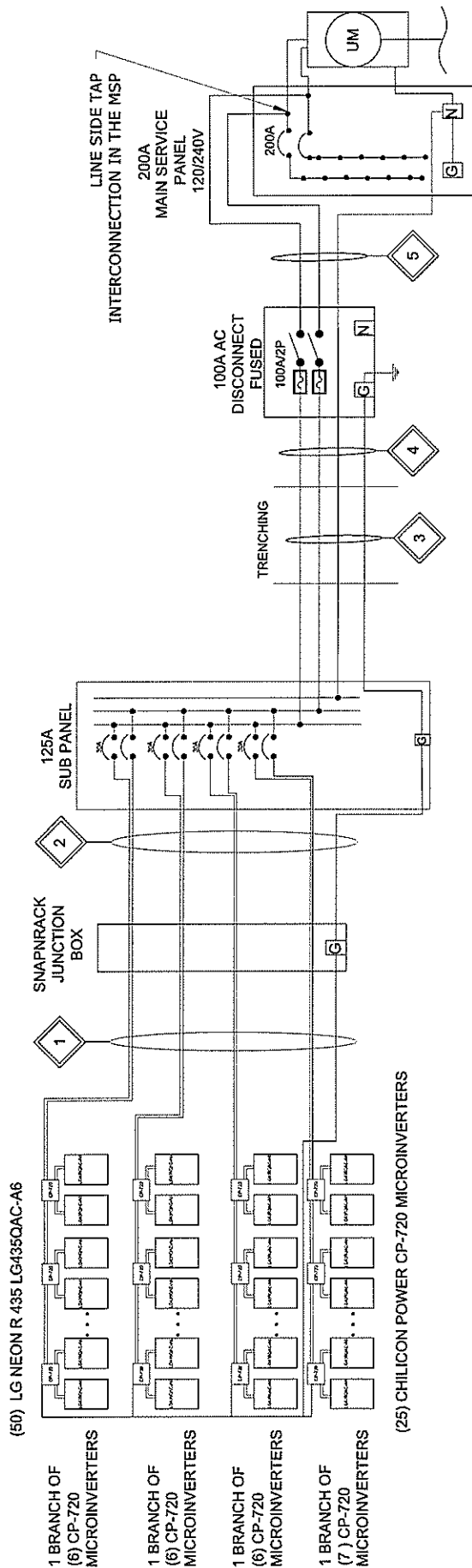
TILT: 30°
 AZIMUTH: 180°

ARRAY SPECIFICATIONS

- UTILITY METER
- AC DISCONNECT FUSED
- MAIN SERVICE PANEL
- SUB PANEL
- JUNCTION BOX
- MICROINVERTERS
- TRENCHING

LEGEND





MAX VOLTAGE DROP CALCULATION					
CABLE SIZE	CABLE DESCRIPTION	ONE WAY DISTANCE IN FEET (D)	BRANCH CURRENT (I)	RESISTANCE OF CONDUCTOR(S) VOLTAGE (V)	% VOLTAGE DROP=(I*P*100)/KV
#2 THHN-2	COMBINE PANEL TO ACB	140	75	0.194	240
					1.69

MODULES

(50) LG NEON R 435 LG435QAC-A6
WATTS STC: 435 W
ISC: 10.59 A
IMP: 11.20A
VOC: 48 V
VMP:41.1 V

CONDUCTORS AND CONDUIT

- 1 (8) #12 AWG
(1) #10 AWG GND
1" OPEN AIR
- 2 (8) #10 AWG THHN-2
(1) #10 AWG GND
3/4" EMT
- 3 (2) #2 AWG THHN-2
(1) #6 AWG GND
2-1/2" PVC
- 4 (3) #2 AWG
(1) #6AWG GND
1-1/4" EMT
- 5 (3) #2 AWG THHN-2
1" EMT

INVERTER(S)

CHILICON POWER CP-720
MICROINVERTERS
MAX AC OUTPUT: 3A
INVERTER OCPD CALC :25 X 3 X 1.25 =
93.75 A
MIN OCPD: 100A
WIRE AMPACITY: 115A @75° C TERMINAL
TEMPERATURE CORRECTION FACTOR:
31°-35°C = 0.96
CORRECTED WIRE AMPACITY: 110.40A

OTHER EQUIPMENT

100A FUSED AC DISCONNECT
125A SOLAR SUB PANEL

LABELING NOTES
1.1 LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRICAL CODE
1.2 INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, ANSI Z535
1.3 MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION
1.4 LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT
1.5 LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED
1.6 ALERTING WORDS TO BE COLOR CODED, "DANGER" WILL HAVE RED BACKGROUND, "WARNING" WILL HAVE ORANGE BACKGROUND, "CAUTION" WILL HAVE YELLOW BACKGROUND, [ANSI Z535]

**WARNING**

ELECTRICAL SHOCK HAZARD
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL 1
AT EACH DISCONNECTING MEANS FOR
PHOTOVOLTAGIC EQUIPMENT (2" X 4")
[NEC 690.13]

**PHOTOVOLTAGIC SYSTEM
AC DISCONNECT**

RATED AC OUTPUT CURRENT	75	A
NOMINAL OPERATING VOLTAGE	240	V

LABEL 3
AT POINT OF INTERCONNECTION, MARKED
AT DISCONNECTING MEANS (4" X 2")
[NEC 690.5]

PHOTOVOLTAGIC SOLAR AC
DISCONNECT

LABEL 4
AT EACH AC DISCONNECTING MEANS
(4" X 1")
[NEC 690.13(B)]

**WARNING**

THIS SERVICE METER IS ALSO
SERVED BY A PHOTOVOLTAGIC
SYSTEM

LABEL 4
AT EACH AC DISCONNECTING MEANS
(4" X 1")
[NEC 690]

**RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM**

LABEL 5
AT RAPID SHUTDOWN DISCONNECT
SWITCH (5 1/4" X 2")
[NEC 690.56(C)(6)]

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**



TURN RAPID SHUTDOWN SWITCH TO
THE "OFF" POSITION TO SHUT DOWN
PV SYSTEM AND REDUCE SHOCK
HAZARD IN ARRAY

LABEL 6
AT RAPID SHUTDOWN SYSTEM
(3 3/4" X 5 1/4"), [NEC 690.56(C)(1)(A)]

**WARNING**

DUAL POWER SUPPLY
SOURCES UTILITY GRID AND
PV SOLAR ELECTRIC SYSTEM

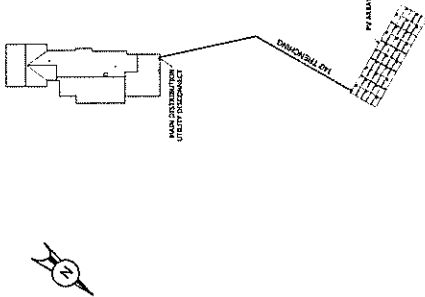
LABEL 7
AT POINT OF INTERCONNECTION
(3 3/4" X 1 5/8")
[NEC 705.12(B)(3)]

**CAUTION**

SOLAR ELECTRIC SYSTEM CONNECTED

LABEL 10
AT UTILITY METER (5 3/4" X 1 1/8")
[NEC 690.56(B)]

!CAUTION!
POWER TO THIS BUILDING IS ALSO SUPPLIED
FROM ROOF MOUNTED SOLAR ARRAYS WITH
SAFETY DISCONNECTS AS SHOWN:



INTERACTIVE PHOTOVOLTAGIC SYSTEM CONNECTED
PHOTOVOLTAGIC SYSTEM DISCONNECT LOCATED
SOUTH SIDE OF THE HOUSE

DIRECTORY
PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE
SERVICE
DISCONNECTING MEANS AND THE PHOTOVOLTAGIC SYSTEM DISCONNECTING
MEANS IF NOT IN THE SAME LOCATION (5 3/4" X 1 1/8")
[NEC 690.56(B)]
WHERE THE PV SYSTEMS ARE REMOTELY LOCATED FROM EACH OTHER, A
DIRECTORY IN ACCORDANCE WITH 705.10 SHALL BE PROVIDED AT EACH PV
SYSTEM DISCONNECTING MEANS.
PV SYSTEM EQUIPMENT AND DISCONNECTING MEANS SHALL NOT BE
INSTALLED IN
BATHROOMS
[NEC 690.4(D)(E)]

**WARNING: PHOTOVOLTAGIC
POWER SOURCE**

LABEL 9
AT AC COMBINER/SUBPANEL
[NEC 690 & 705]

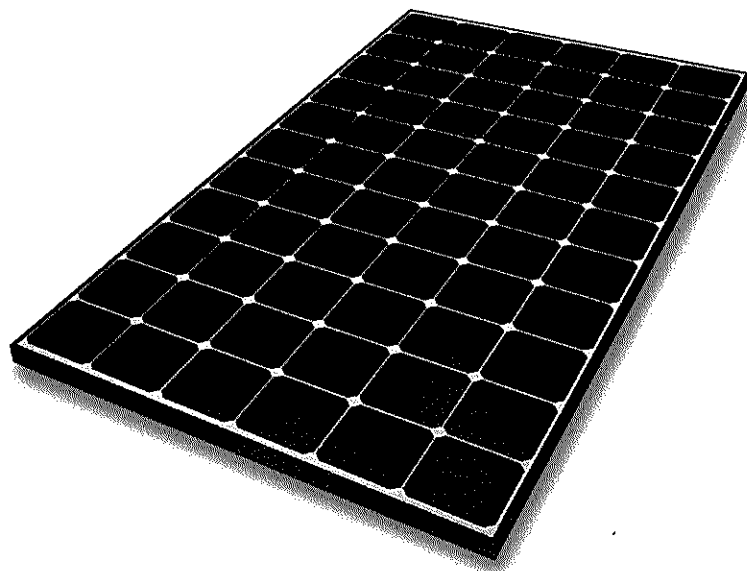
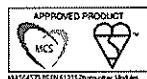
LG NeON[®] R

LG430QAC-A6 | LG435QAC-A6 | LG440QAC-A6

430W | 435W | 440W

LG NeON[®] R is powerful solar module that provides world-class performance. A new cell structure that eliminates electrodes on the front maximizes the utilization of light and enhances reliability.

LG NeON[®] R is a result of LG's efforts to increase customer's values beyond efficiency. LG NeON[®] R features enhanced durability, performance under real-world conditions, an enhanced warranty and aesthetic design suitable for roofs.



66

Features



Roof Aesthetics

LG NeON[®] R has been designed with aesthetics in mind: the lack of any electrodes on the front creates an improved, modern aesthetic.



25-Year Limited Product Warranty

The NeON[®] R is covered by a 25-year limited product warranty. In addition, up to \$450 of labor costs will be covered in the rare case that a module needs to be repaired or replaced.



Enhanced Performance Warranty

The LG NeON[®] R has an enhanced performance warranty. After 25 years, LG NeON[®] R is guaranteed at least 92.5% of initial performance.



More generation per square meter

The LG NeON[®] R has been designed to significantly enhance its output, making it efficient even in limited space.

When you go solar, ask for the brand you can trust: LG Solar

About LG Electronics USA, Inc.

LG Electronics is a global leader in electronic products in the clean energy markets by offering solar PV panels and energy storage systems. The company first embarked on a solar energy source research program in 1985, supported by LG Group's vast experience in the semi-conductor, LCD, chemistry and materials industries. In 2010, LG Solar successfully released its first MonoX[®] series to the market, which is now available in 32 countries. The NeON[®] (previous MonoX[®] NeON), NeON[®]2, NeON[®]2 BiFacial won the "Intersolar AWARD" in 2013, 2015 and 2016, which demonstrates LG's leadership and innovation in the solar industry.



LG430QAC-A6 | LG435QAC-A6 | LG440QAC-A6

General Data

Cell Properties (Material/Type)	Monocrystalline / N-type
Cell Maker	LG
Cell Configuration	66 Cells (6 x 11)
Module Dimensions (L x W x H)	1,910mm x 1,042mm x 40mm
Weight	20.5 kg
Glass (Material)	Tempered Glass with AR Coating
Backsheet (Color)	White
Frame (Material)	Anodized Aluminium
Junction Box (Protection Degree)	IP 68 with 3 Bypass Diodes
Cables (Length)	1,250mm x 2EA
Connector (Type/Maker)	MC 4 / MC

Certifications and Warranty

Certifications	IEC 61215-1/-1-1/2: 2016, IEC 61730-1/2: 2016, UL 61730-1: 2017, UL 61730-2: 2017 ISO 9001, ISO 14001, ISO 50001 OHSAS 18001
Salt Mist Corrosion Test	IEC 61701:2011 Severity 6
Ammonia Corrosion Test	IEC 62716: 2013
Hail Test	25mm (1") diameter at 23m/s (52mph)
Module Fire Performance	Type 1 (UL 61730)
Fire Rating	Class C (UL 790, UL C / ORD C 1703)
Solar Module Product Warranty	25 Years
Solar Module Output Warranty	Linear Warranty*

*Improved: 1st year 98.5%, from 2-24th year: -0.25%/year down, 92.5% at year 25

Temperature Characteristics

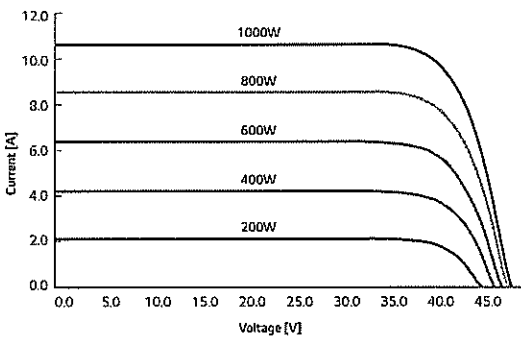
NMOT [*]	[°C]	44 ± 3
P _{max}	[%/°C]	-0.29
V _{oc}	[%/°C]	-0.24
I _{sc}	[%/°C]	0.04

*NMOT (Nominal Module Operating Temperature): Irradiance 800 W/m², Ambient temperature 20°C, Wind speed 1 m/s, Spectrum AM 1.5

Electrical Properties (NMOT)

Model		LG430QAC-A6	LG435QAC-A6	LG440QAC-A6
Maximum Power (P _{max})	[W]	326	330	334
MPP Voltage (V _{mpp})	[V]	38.6	38.8	39.1
MPP Current (I _{mpp})	[A]	8.45	8.49	8.53
Open Circuit Voltage (V _{oc})	[V]	45.7	45.8	46.0
Short Circuit Current (I _{sc})	[A]	9.02	9.02	9.03

I-V Curves



Electrical Properties (STC*)

Model		LG430QAC-A6	LG435QAC-A6	LG440QAC-A6
Maximum Power (P _{max})	[W]	430	435	440
MPP Voltage (V _{mpp})	[V]	40.8	41.1	41.4
MPP Current (I _{mpp})	[A]	10.54	10.59	10.64
Open Circuit Voltage (V _{oc} , ± 5%)	[V]	47.9	48.0	48.2
Short Circuit Current (I _{sc} , ± 5%)	[A]	11.19	11.20	11.20
Module Efficiency	[%]	21.6	21.9	22.1
Power Tolerance	[%]	0 ~ +3		

*STC (Standard Test Condition): Irradiance 1000 W/m², Cell temperature 25°C, AM 1.5
Measure Tolerance: ± 3%

Operating Conditions

Operating Temperature*	[°C]	-40 ~ +85
Maximum System Voltage	[V]	1,000
Maximum Series Fuse Rating	[A]	20
Mechanical Test Load** (Front)	[Pa/psf]	5,400
Mechanical Test Load** (Rear)	[Pa/psf]	4,000

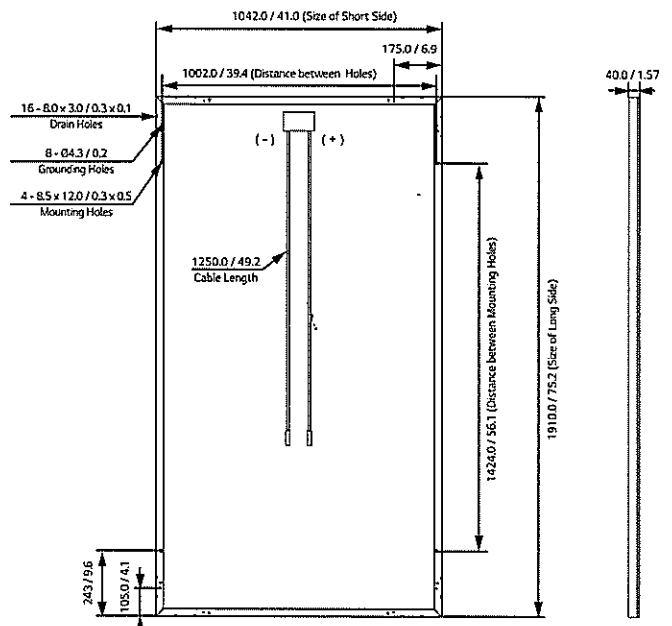
*The operating ambient temperature of these devices may exceed 40°C at full load for all wire sizes if it is determined suitable in the field use application.

**Based on IEC 61215-2: 2016 (Test Load = Design Load x Safety Factor (1.5))

Packaging Configuration

Number of Modules per Pallet	[EA]	25
Number of Modules per 40' Container	[EA]	600
Number of Modules per 53' Container	[EA]	800
Packaging Box Dimensions (L x W x H)	[mm]	1,960 x 1,120 x 1,221
Packaging Box Dimensions (L x W x H)	[in]	77.2 x 44.1 x 48.1
Packaging Box Gross Weight	[kg]	549
Packaging Box Gross Weight	[lb]	1,210

Dimensions (mm/inch)





Highest Power Density

Enhanced Monitoring

Modular Trunk Cabling

Single SKU All Major Module Types

AC Coupling with Freq-Watt and Volt-Watt Modes

CP-720-60-72-208/240-MC4 Microinverter Specifications

INPUT DATA (DC)

Recommended input power (STC)	(190 - 420 W) x 2; (380 - 840 W) x 1
Maximum DC input voltage	120 V
MPPT voltage tracking range	52 – 82 V
Operating range	47 – 82 V
Min./Max. start voltage	44 – 96 V
Max. DC input short circuit current	16 A
Max. DC input current	13.5 A
Ground fault protection	Transformer isolated 2000 Vrms input/output/chassis

OUTPUT DATA (AC)

	@ 208 V	@ 240 V
Max. continuous output power	713 W	720 W
Max. continuous output current	3.43 A	3.0 A
Nominal output voltage / range	208 / 183 – 229 V	240 / 211 – 264 V
Extended output voltage range	133 / 150 / 166 – 250 V	153 / 173 / 192 – 288 V
Nominal frequency / range	60.0 / 59.3 – 60.5 Hz	60.0 / 59.3 – 60.5 Hz
Extended frequency range	54.22 – 66.75 Hz	54.22 – 66.75 Hz
Power factor	-0.6 to 0.6 programmable	-0.6 to 0.6 programmable
Maximum units per 30 A branch circuit	7 (14 modules)	8 (16 modules)
Maximum output overcurrent protection	6.3 A	6.3 A

EFFICIENCY

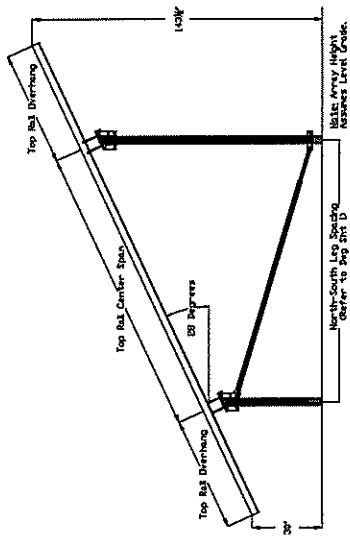
CEC weighted efficiency	96.5 %
Peak inverter efficiency	97 %
Static MPPT efficiency (EN 50530)	99.5 % - 99.8 %
Night time power consumption	50 mW @ 208V, 100 mW @ 240 V

MECHANICAL DATA

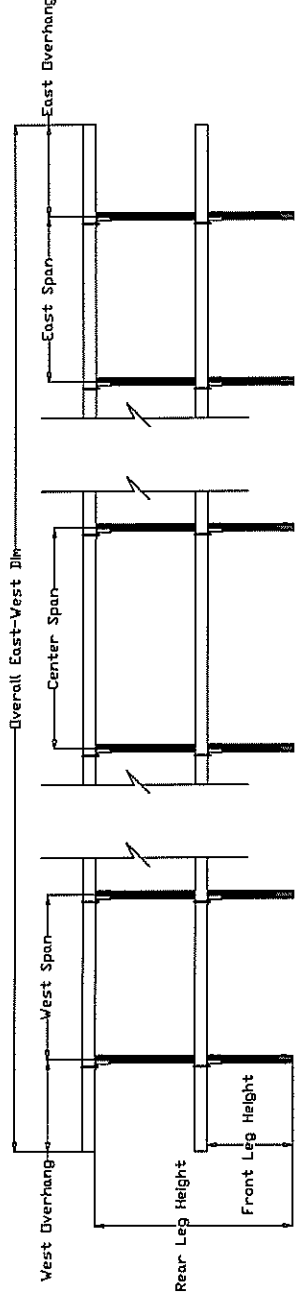
Ambient temperature range	-40°C to +65°C
Dimension (W x H x D) including connectors	12" x 8" x 1.8"
Weight	1.81 kg (4.0 lbs)
Enclosure rating	NEMA 6

FEATURES

Communication	Mesh Networked Power Line (130.2 kHz carrier)
Monitoring	Monitoring via CP-100 gateway and Online Cloud
Certifications	UL1741, IEEE std 1547, IEEE std C62.41.2, CSA C22.2 NO. 107.1 CISPR 22 Class B; HECO Rule14H (Advanced Inverter), HECO Rule 22 (Self-Supply) Rule 21 / UL1741SA
Compatibility (Single SKU)	2 x Series 60/72 Cell Mono or Poly PV modules 2 x Parallel HV Panasonic Modules; 2 x Parallel 96/128 Cell SunPower Modules

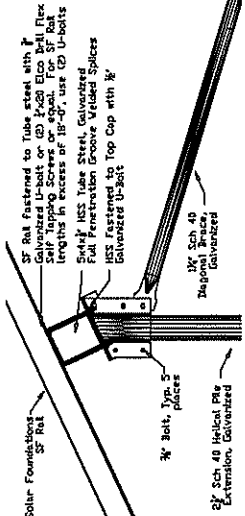


SIDE ELEVATION
N.T.S

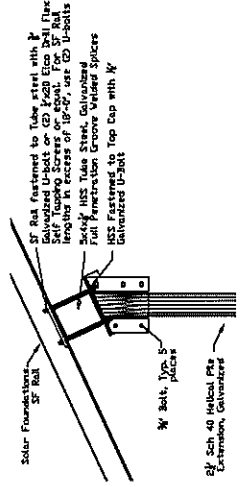


Refer to Dwg Sheet 1 for East-West Pile Spans and Front and Rear Leg Heights.

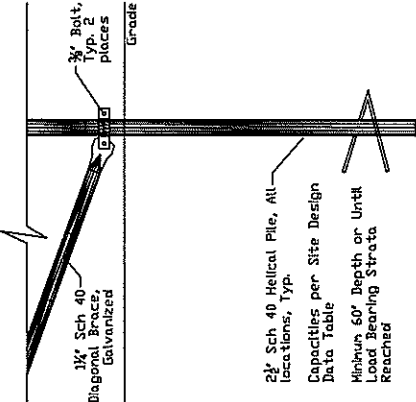
PILE SPACING ELEVATION
N.T.S



LOWER CAP DETAIL
N.T.S

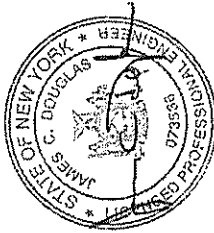


UPPER CAP DETAIL
N.T.S



HELICAL PILE DETAIL
N.T.S

James C
Douglas



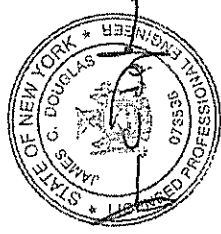
Date	Revision	Drawn By:	Review By:
08/18/2022	Original	JB	JD

Project:
Gibbs Residence
616 Millers Corners Road
Amsterdam, NY 12010

- Specification Requirements:**
- The following material specification requirements pertain to the fabrication of the Solar Foundations USA ground mount solar support structure as indicated on these drawings.
- Solar Foundation aluminum rails shall conform to ASTM B221.
 - Structural steel tubing shall be ASTM A500 High Yield (60 ksi).
 - Steel pipe for piles shall conform to ASTM A500 Grade C.
 - Steel pile extensions shall be ASTM A53 Grade B.
 - Steel pipe for diagonal bracing shall be ASTM A53 Grade A.
 - Fabricated steel plate for column cap assemblies, bracing clamps, etc. shall be ASTM A36 or A1011.
 - Steel bolts for cap fasteners shall conform to SAE J429 Grade 5. All other bolts shall conform to SAE J429 Grade 5 or better.
 - Steel U-bolts shall conform to ASTM 1018.
 - USS flat steel washers shall conform to ASTM F844 and nuts for steel connections shall conform to ASTM A563 Grade A.
 - All field welding shall conform to AWS D11.1M - Structural Welding Code requirements.
 - All steel shall be hot-dip galvanized per ASTM A123 or A153 after all fabrication has been completed.
- Installation Requirements:**
- The minimum average installation torque required to obtain the required indicated capacities and the minimum installation depth shown on the plans shall be satisfied prior to termination of the installation. The installation torque shall be an average of the installation torques indicated during the last 1 Foot of installation.
 - The torsional strength rating of the torque anchor shall not be exceeded during the installation. If the torsional strength limit of the anchor has been reached, but the anchor has not reached the target depth, perform the following:
 - If the torsional strength limit is achieved prior to reaching the target depth, the installation may be acceptable if reviewed and approved by the engineer.
 - The installer may remove the torque anchor and install a new one with smaller diameter helical plate.
 - If using a continuous flight pile, pre-drill the pile location with a 3-1/2" rock auger or 3-5/8" rock drill as needed.
 - If the target depth is achieved, but the torsional requirement has not been met the installer may do one of the following:
 - Install the torque anchor deeper to obtain the required capacity.
 - Remove the torque anchor and install a new one with a larger diameter helical plate or one with multiple helical plates.
 - Reduce the load capacity on the individual torque anchor by providing additional torque anchors at a reduced spacing.



James C
Douglas



HELICAL PILE DETAIL
N.T.S.

Albany Solar Solutions LLC

Sheet 3 of 3

Solar Foundations USA

1142 River Road, New Castle, DE 19720 Ph: (855) 738-7200 Fax: (866) 644-5665

Project:
Gibbs Residence
616 Millers Corners Road
Amsterdam, NY 12010

Date	Revision	Drawn By:	Review By:
08/18/2022	Original	JB	JD

Application #: _____

Date: _____

Project Name: _____

Page 1 of 2

**Town of Florida
Planning Board
Application to the Planning Board**

A completed Application must be filed at least ten (10) days prior to the meeting at which it is to be considered by the Planning Board, including all applicable attached information.

Applicant: Travis Sherman Property Owner: Todd Gibbs
 Address: 15 Farrell Rd Troy NY 12180 (if different) Address: 616 Millers Corners Rd, Amsterdam NY 12010

Phone: () 518-720-7779 Phone: () 518-256-1265

Professional Advisor: NA Other: NA
 (if appropriate, please specify)

Address: NA Address: NA

Phone: () NA Phone: () NA

1) **Property Location:** 616 Millers Corners Rd, Amsterdam NY 12010
 Address: _____
 General Location: Field located ~200' north of main house

 Zoning District: Rural Res
 Tax Parcel ID# (SBL): 117.-2-8.2

2) **Type of Application (please check appropriate box(s)):**

☐ Major Subdivision/	\$500
☐ Minor Subdivision	\$100
☐ Major Site Plan	\$500
☐ Minor Site Plan	\$100
☒ Special Permit	\$100
☐ Lot Line Adjustment	\$100

3) **Project Description:** 21.75kW DC Ground mounted solar array for onsite consumption

For each type of application a checklist detailing the required information has been attached. These checklists are only intended to be a guide to the applicant, for specifics on submission requirements, procedures, timeframes, etc., the applicant should refer to the applicable Town Ordinance (Zoning, Subdivision, etc.), and or State Law (SEQR, Ag & Markets, etc.).

Applicant Signature: _____

Date: 10 / 25 / 2022Property Owner's Signature: Todd GibbsDate: 10 / 25 / 2022