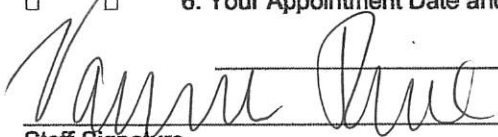




- 8. HOA Approval (if applicable)
- 9. Context or Locus Map (Show Surrounding Zoning Districts)
- 10. Existing Conditions Site Plan or Recorded Subdivision Plan to include well and septic location (may be found at Strafford County Registry of Deeds).
- 11. Existing Conditions Photo Exhibit (See instruction page for submitting photos)  
Up to four photos may be shown per 8 1/2" X 11" page size
  - a. Show all existing structures on site
- 12. List of Certified Abutters (Include Applicant and all licensed professionals, i.e., engineer, architect, land surveyor, or soil scientist, whose seals are affixed to the plan, as well as any holder of a conservation or agricultural easement)
- 13. Mailing Labels (4 sets)

**PART II – REQUIRED PLANS AND RELATED DATA**  
*All Graphics and Plans Shall be to Scale and Dimensioned*

- 1. Site Plan - *Drawn and Stamped by Registered Land Surveyor*
  - a. 24" X 36" – 2 Copies
  - b. 11' X 17" – 6 Copy
  - c. 8 1/2 " X 11" – 1 Copy
- 2. Elevations: Show all sides of building and indicate building heights
  - a. 24" X 36" – 2 Copies
  - b. 11' X 17" – 6 Copy
  - c. 8 1/2 " X 11" – 1 Copy
- 3. Floor Plans
  - a. 24" X 36" – 2 Copies
  - b. 11' X 17" – 6 Copy
  - c. 8 1/2 " X 11" – 1 Copy
- 4. All drawings and any revised drawings must be submitted in PDF format
- 5. OTHER: \_\_\_\_\_
- 6. Your Appointment Date and Time for Submitting the Complete Application is: \_\_\_\_\_


3/30/23  
 \_\_\_\_\_  
 Staff Signature Date

**Land Use Department**  
**Town of Barrington; 4 Signature Drive; Barrington, NH 03825**  
 vprice@barrington.nh.gov Phone: 603.664.5798

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PART III – PROJECT DESCRIPTION/VARIANCE DETAILS

Case No. 233-20-NR-23-Var

Project Name Barrington Home Solar

Location Address 72 Ramsdell Lane

Map and Lot 233 / Lot 20 03825

Zoning District (Include Overlay District if Applicable) Neighborhood Residential

Property Details:

- Single Family Residential
- Multifamily Residential
- Manufactured Housing
- Commercial
- Mixed Use
- Agricultural
- Other

Use: Living

Number of Buildings: 1 (Garage) Height: 25 Feet 4 1/4

Setbacks: Front 40 Back 30 Side 30 Side 30

Description of Request

Cite the Section of the Zoning Ordinance you are requesting a Variance or Special Exception for. If this is an Appeal from an Administrative Enforcement Order, Planning Board Decision, or Zoning Board of Adjustment Decision, please attach pertinent documentation:

Article 4 Dimension Requirements

Project Narrative: (Please type and attach a separate sheet of paper)

see attached

Barrington Zoning Ordinance Requirements:

see attached

Request: (You may type and attach a separate sheet of paper)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**PART IV – If this is a JUSTIFICATION FOR VARIANCE**

The Zoning Board of Adjustment may not authorize a zoning ordinance variation unless ALL of the following criteria are met. Please provide evidence that the requested Variance complies by addressing the issues below.

1. Special conditions exist such that literal enforcement of the Ordinance will result in unnecessary hardship to the applicant as defined under applicable law.

see attached

2. Granting the variance would be consistent with the spirit of the Ordinance.

see attached

3. Granting the variance will not result in diminution of surrounding property values.

see attached

4. Granting of the variance would do substantial justice.

see attached

5. Granting of the variance would not be contrary to the public interest.

\_\_\_\_\_

**PART V – If this is a JUSTIFICATION FOR SPECIAL EXCEPTION**

Please provide evidence that the requested Special Exception complies by addressing the issues below.

1. No detriment to property values in the vicinity of the proposed development will result on account of: the location or scale of buildings, structures, parking areas, or other access ways; the emission of odors, smoke, gas, dust, noise, glare, heat, vibration, or other pollutants; or unsightly outdoor storage of equipment, vehicles, or other materials.

not applicable

2. No hazard will be caused to the public or adjacent property on account of potential fire, explosion, or release of toxic materials.

not applicable

3. No creation of a traffic safety hazard or substantial traffic congestion will result in the vicinity of the proposed development.

not applicable

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4. No excessive demand on municipal services and facilities, including, but not limited to waste disposal, police and fire protection, and schools.


not applicable

5. The proposed use will not result in the degradation of existing surface and groundwater quality standards, nor will it have adverse effects on the natural functions of wetlands on the site that would result in the loss of significant habitat or flood control protection.

not applicable

**In addition to the guiding principles specified above, the ZBA may condition the granting of a special exception upon more stringent standards if the Board determines that such conditions are necessary to protect the health and welfare of the town and its residents. Such conditions may include the following and should be addressed in the Narrative:**

- 1. Front, side, or rear yards in excess of the minimum requirements of this Ordinance.
- 2. Screening of the premises from the street or adjacent property by walls, fences, or other devices.
- 3. Limitations on the size of buildings and other structures more stringent than minimum or maximum requirements of this Ordinance.
- 4. Limitations on the number of occupants and methods and times of operation.
- 5. Regulation of the design and location of access drives, sidewalks, and other traffic features.
- 6. Location and amount of parking and loading spaces in excess of existing standards.
- 7. Regulation of the number, size, and lighting of signs in excess of existing standards.

  
 Signature of Applicant David Vogel, CEO, 3-29-23 Date  
White-Vogel Industries,  
 X Letter of Authorization enclosed Inc.  
 Signature of Owner \_\_\_\_\_ Date

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**ABUTTER LIST**

Town of Barrington, NH  
Please Print or Type

Applicant: White-Vogue Industries, DEWEA SEAN + CLARK Phone 603-293-6074

Project Address: 72 Ramsdell Lane

List the names and addresses of all parties below. For abutting lot owners, list each owner whose lot adjoins or is directly across the street or a body of water from the subject property. This form may not be completed more than five (5) days prior to the application deadline.

**LEGAL OWNER OF SUBJECT LOT**

Map	Lot	Zone	Owner Name	Mailing Address

**ABUTTING LOT OWNERS**

Map	Lot	Owner Name	Owner Mailing Address (NOT property location)
		Paul + Judith DeWitt	78 Ramsdell LN
		Luhe + Stephanie Dimke	43 Stephen James Rd
		Pamela Talon	63 Ramsdell LN

**PROFESSIONALS AND EASEMENT HOLDERS.** Engineers, Surveyors, Soil Scientists, and Architects whose seal appears or will appear on the plans (other than any agent submitting this application); holders of conservation, preservation, or agricultural easements; and upstream dam owners/NHDES.

Name of Professional or Easement Holder	Mailing Address

I, the undersigned, acknowledge that it is the responsibility of the applicant or his/her agent to fill out this form. I understand that any error or omission could affect the validity of any approval. The names and address listed on this form were obtained from the Town of Barrington Assessing Office

on this date: 29, This is page 1 of 1 pages.

Applicant or Agent: [Signature]

Planning Staff Verification: Barbara Driscoll Date:   

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**Sean Clark**  
**72 Ramsdell Lane, Barrington NH 03825**

**603-605-4391**

**March 28, 2023**

**To Whom It May Concern,**

**Re: Authorization Letter for Property Representation**

**I, Sean Clark am the owner of the property located at 72 Ramsdell Lane, Barrington, NH. I hereby grant authorization to White-Vogue Industries, Inc., David Vogel, and/or Levi Carr to represent me in securing a zoning variance for a solar energy project on my property.**

**I authorize the above-named individuals to sign zoning variance applications on my behalf and on behalf of the property. Furthermore, I grant them the power of attorney to represent me in all matters related to securing the zoning variance for the solar energy project.**

**This authorization will remain in effect until I provide written notice of revocation or until the completion of the solar energy project, whichever comes first.**

**Please feel free to contact me if you require any further information or clarification on this matter. I trust that White-Vogue Industries, Inc., David Vogel, and Levi Carr will handle this project with the utmost professionalism and competence.**

**Sincerely,**

**Mr. Sean Clark**

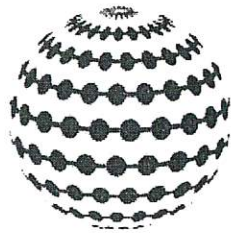
By: DocuSigned by:  
*Sean Clark*

Dated: 3/29/2023

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WHITE-VOGUE

I N D U S T R I E S

SAVING THE PLANET

**Additional Information Requested**

Specifically, you asked for supplemental information in the Narrative requesting specifically the relief we are requesting.

The ordinance I am requesting relief from is from Article 4 Dimensional Requirements, Table 2. As illustrated, the three solar ground mounts need to be placed within 2 feet of the property line. As opposed to a 30 foot setback, we are requesting a 2 foot setback. In other words, the edge of the solar array may be as little as 2 feet from the property line as opposed to 30 feet.

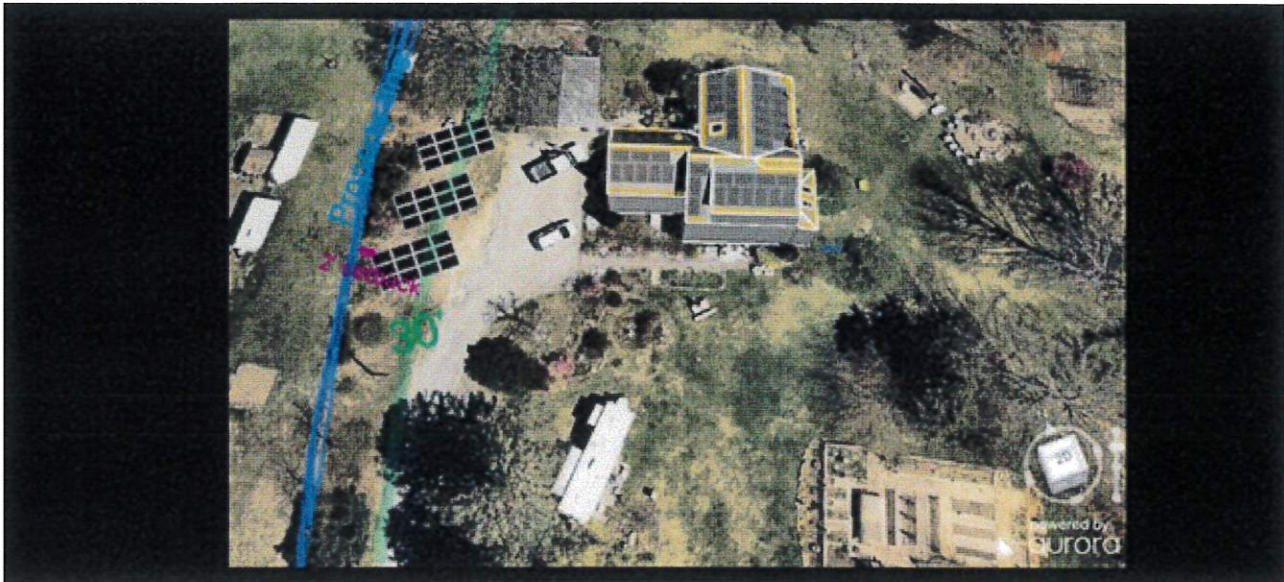
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Blue line is the property line. All structures are illustrate via a satellite photo. Green line represents 30 feet (where the setback should be) and the purple marker indicated the setback (no less than two feet from the property line). Obviously we are seeking a variance from the 30 foot requirement.

*David*



David Vogel, CEO  
Project SunRize  
Text/Phone: 603-293-6074  
[david@sunrize.homes](mailto:david@sunrize.homes)  
<https://sunrize.homes>



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**Project narrative:**

White-Vogue Industries, Inc. a Green Energy Solar Energy company has been contracted to install a 15.84 KiloWatt System for Mr. & Mrs. Sean Clark. The project address is 72 Ramsdell Lane, Barrington 03825.

Based on our original talk with the Deputy Inspector, we designed a ground mount system (design plan enclosed) that consisted of three ground mount units less than 200 square feet each. The Deputy communicated that this would make the project exempt from the setback requirement.

Based on a phone call with the Chief Inspector yesterday, we were told that the Deputy, who was well meaning, mistakenly interpreted the code. We were told we must have a variance.

Based on the drawings, photos, and reports, herein, we are requesting a variance and be allowed to install the system as originally designed and planned, without the required setback.

**Barrington Zoning Requirements:**

The Zoning Requirements dictate that a solar ground mount should be 30 feet back from the property line of the neighbor. We are asking Barrington to waive this requirement and allow the installation of the three ground mount units as indicated on the schematics enclosed. (\*updated narrative 3/30/23 rp\*)

**JUSTIFICATION FOR VARIANCE**

1. Special Conditions exist such that literal enforcement of the Ordinance will result in unnecessary hardship to the applicant as defined under applicable law.

Special conditions in this context refer to unique circumstances or characteristics of the property that make it difficult or impossible to adhere to the strict requirements of the

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ordinance. In the case of installing a solar ground mount system without the required setback, these special conditions include the topography, the structure of the property, and the presence of trees casting shadows on the area.

Utilizing scientific algorithms to analyze the property, it has been determined that the proposed location for the solar ground mount system is the only viable spot that ensures maximum efficiency and energy production. Any alternative location would result in significantly reduced performance due to shadows from the trees, making the solar installation less effective in generating green energy.

If the variance is not granted, the applicant would face an unnecessary hardship as they would be unable to install a solar ground mount system on their property. This would mean that they could not benefit from the use of green energy, contribute to a reduction of their carbon footprint, or potentially save on energy costs. Furthermore, this situation would hinder the broader goals of promoting sustainable energy solutions and combating climate change.

By granting the variance, the applicant would be able to overcome these hardships and contribute to a greener, more sustainable future, while still maintaining the overall intent and purpose of the ordinance.

## **2. Granting the variance would be consistent with the spirit of the Ordinance**

Granting the variance would be consistent with the spirit of the ordinance because the underlying purpose of the ordinance is to promote green energy and environmentally sustainable practices. In this particular case, the unique characteristics of the property make it challenging to comply with the strict requirements of the ordinance without compromising the effectiveness of the solar ground mount system.

The spirit of the ordinance is not to create unnecessary obstacles for property owners who wish to adopt green energy solutions but to ensure that these solutions are implemented in a way that is beneficial to the environment and the community. By taking into consideration the specific conditions of the property, it becomes clear that adhering to the ordinance in this instance would hinder the adoption of green energy and contradict the overall goals of the ordinance.

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Granting the variance would allow the applicant to install the solar ground mount system in the most efficient and effective location on their property, thereby maximizing the benefits of green energy and contributing to a more sustainable future. This outcome would align with the spirit of the ordinance, as it would encourage the use of renewable energy sources and support the broader objectives of environmental conservation and climate change mitigation.

In conclusion, granting the variance in this case would be consistent with the spirit of the ordinance, as it would enable the property owner to adopt green energy solutions despite the unique challenges posed by the property's topography and tree coverage. This decision would ultimately support the overarching goals of the ordinance by promoting sustainable energy practices and fostering a more environmentally conscious community.

3. Granting the variance would not result in the diminution of surrounding property values.

Granting the variance would not result in the diminution of surrounding property values, and here's why:

1. Solar energy systems are widely recognized as desirable additions to properties, as they generate clean energy, reduce dependence on fossil fuels, and contribute to lower energy bills. This, in turn, can increase the value of the property with the solar installation.
2. Studies conducted across the country have shown that properties with solar energy systems tend to have higher resale values compared to those without. This indicates that solar installations are considered valuable assets by prospective buyers, making them a positive factor in the real estate market.
3. Solar ground mount systems, when installed properly and with consideration for aesthetics, can blend seamlessly into the landscape. This minimizes any potential negative visual impact on the surrounding properties, ensuring that the solar installation does not detract from the overall appearance of the neighborhood.
4. The use of solar energy is widely supported as an environmentally responsible choice that contributes to a more sustainable future. As more people become aware of the environmental benefits associated with solar energy, the perception

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of solar installations as a valuable and desirable feature in a property is likely to continue to grow.

5. The installation of a solar ground mount system on one property does not impose any direct costs or inconveniences on neighboring properties. Consequently, there is no reasonable basis for the system to negatively affect the value of surrounding properties.

In summary, granting the variance for the solar ground mount system would not result in the diminution of surrounding property values. Instead, it is likely to increase the value of the property with the solar installation and have no adverse effects on the neighboring properties. Solar energy systems are increasingly viewed as valuable and environmentally responsible additions to properties, and their presence is unlikely to negatively impact the desirability of the area.

4. Granting the Variance would to substantial justice,

variance will indeed do substantial justice, as it supports the global movement towards green energy and a cleaner environment. By allowing the installation of the solar ground mount system, the decision will contribute to the reduction of greenhouse gas emissions and promote the use of sustainable energy sources.

Moreover, granting the variance will do justice to the property owners who have taken the initiative to invest in renewable energy. By installing a solar energy system, they will not only lower their carbon footprint but also save substantially on their electricity bills. This financial benefit serves as an incentive for more people to adopt green energy solutions and fosters a culture of environmental responsibility.

In conclusion, granting the variance aligns with the larger goals of environmental sustainability, cleaner energy production, and financial savings for property owners. By supporting these objectives, the decision to grant the variance will ultimately serve the cause of substantial justice.

5. Granting the variance would not be contrary to public interest.

Allowing the variance would align with the public interest, as it encourages the broader adoption of renewable energy solutions and contributes to the global effort to combat

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climate change. By granting the variance for the solar ground mount system installation, the decision demonstrates a commitment to promoting environmentally responsible practices, which ultimately benefits everyone.

Furthermore, supporting green energy initiatives like solar power is in line with the public interest, as it fosters a culture of sustainability and helps reduce our dependence on fossil fuels. This, in turn, leads to cleaner air, reduced greenhouse gas emissions, and a healthier environment for current and future generations.

In addition, the financial savings that property owners can achieve through solar energy installations can stimulate economic growth and encourage further investment in green technologies. This creates a positive cycle of environmentally conscious decisions that ultimately serve the public interest.

In summary, granting the variance is in harmony with the public interest because it advances environmental sustainability, supports clean energy adoption, and fosters economic benefits. By approving the variance, the decision sends a strong message that prioritizing our planet's well-being and the responsible use of resources are values held in high regard.

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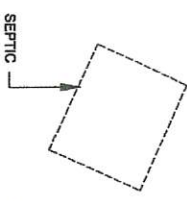
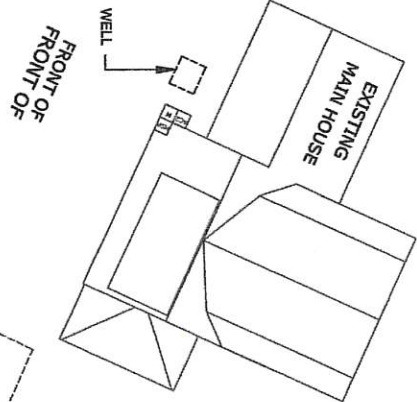
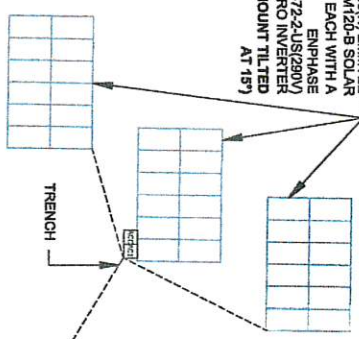


# DONNA CLARK

## 15.84 KW PHOTOVOLTAIC SYSTEM

### 72 RAMSDELL LN BARRINGTON, NH 03825

36(N) ENVIWE E440HQM120-B SOLAR MODULE, EACH WITH A ENPHASE IQ8PLUS-72-2-US(290) MICRO INVERTER (GROUND MOUNT TILTED AT 15°)



NOTE: ALL SCALES SET TO 1/16" = 1'-0" SHEET SIZE

LEGEND	
M	200A STANDARD ONE METERS UTILITY METERING
MSF	200A BUS NOT INSTALLED BY CONTRACTOR
ACC	NH 125A ENPHASE IQ COMBINER 4
ACC	NH 250V WEAK-AR
ACC1	NH 60A AC DISCONNECT 250V WEAK-AR
ACC2	NH 60A AC DISCONNECT 250V WEAK-AR
	36(N) ENVIWE E440HQM120-B SOLAR MODULE, EACH WITH A NEW ENPHASE IQ8PLUS-72-2-US(290) MICRO INVERTER (GROUND MOUNT TILTED AT 15°)

- APPLICABLE CODES AND STANDARDS:
- IBC - INTERNATIONAL BUILDING CODE 2018
  - IEBC - INTERNATIONAL EXISTING BUILDING CODE 2018
  - IECC - INTERNATIONAL ENERGY CONSERVATION CODE 2018
  - IMC - INTERNATIONAL MECHANICAL CODE 2018
  - IPC - INTERNATIONAL PLUMBING CODE 2018
  - IRC - INTERNATIONAL RESIDENTIAL CODE 2018
  - NEC - NATIONAL ELECTRICAL CODE 2020
  - ISpsc - INTERNATIONAL SWIMMING POOL AND SPA CODE 2018

SCOPE OF WORK:

- 36 - ENVIWE E440HQM120-B (N) SOLAR PANELS
- 36 - ENPHASE IQ8PLUS-72-2-US (290) (N) INVERTER
- 1 - 125A ENPHASE IQ COMBINER 4 (N) AC COMBINER

SHEET INDEX:

- E1 - SITE PLAN
- E2 - SINGLE LINE DIAGRAM

VICINITY MAP

SUNRISE  
  
 27 ROUTE 110,  
 ALTON, NH 03801

PROPOSED  
 SOLAR PHOTOVOLTAIC SYSTEM FOR:  
**DONNA CLARK**  
 09014-233-020-000  
 6036054396  
 72 RAMSDELL LN  
 BARRINGTON, NH 03825

PROJECT:  
 DONNA CLARK

DESIGNER:	SALVANI
DATE:	01/07/2023
SCALE:	1/16" = 1'-0"
NO. IN:	10/44


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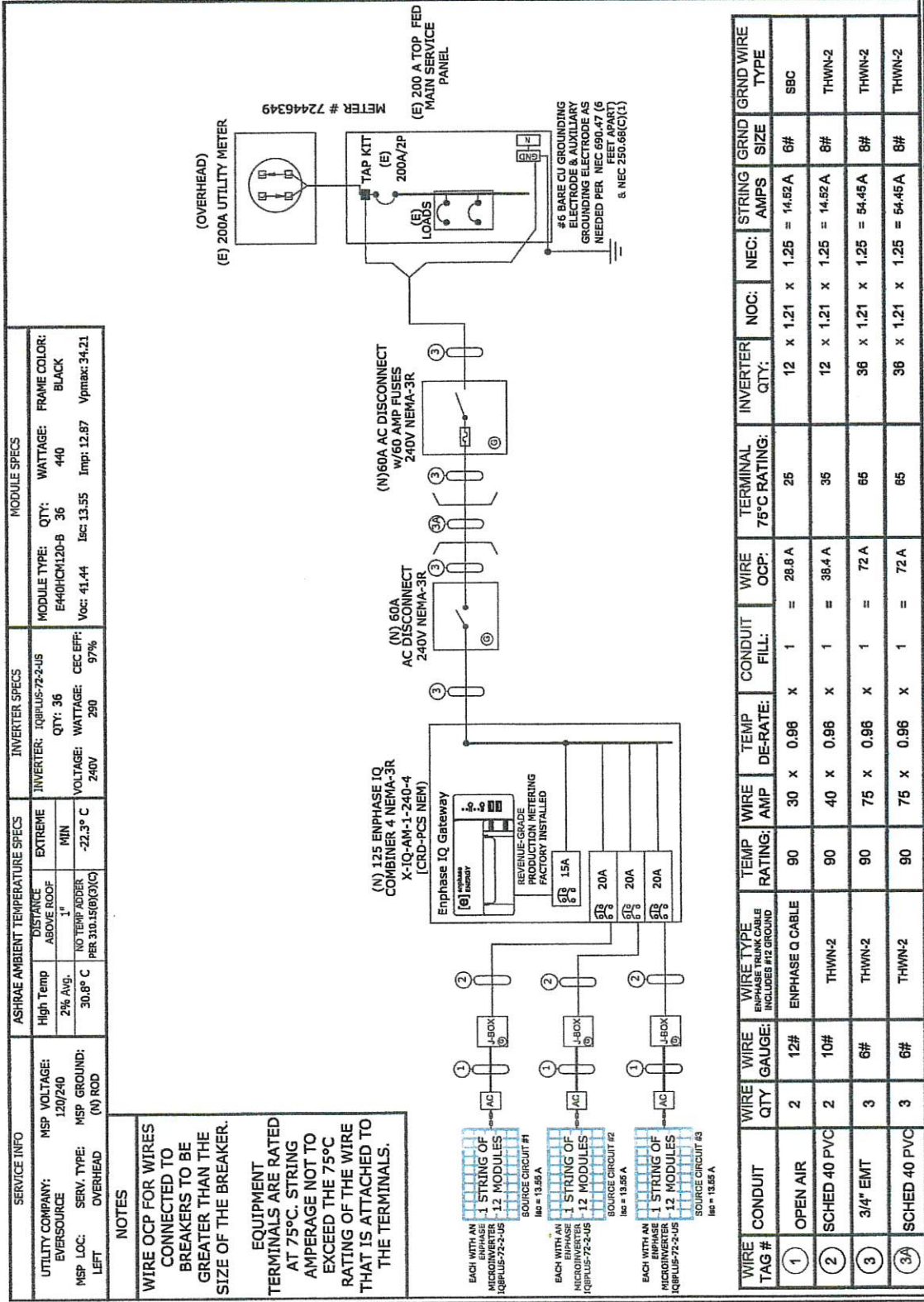
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**SUNRIZE**  
SOLAR PHOTOVOLTAIC SYSTEMS

PROPOSED  
**DONNA CLARK**  
SOLAR PHOTOVOLTAIC SYSTEM FOR  
09014-23-020-000  
6036054396  
72 RAMSDELL LN  
BARRINGTON, NH 03825

PROJECT: DRAWN BY: SALMAN DATE: 1/7/2023  
 CHECKED BY: TEBKA PROJECT NO: 1044  
 SHEET NUMBER: **E2**



SERVICE INFO		ASHRAE AMBIENT TEMPERATURE SPECS		INVERTER SPECS		MODULE SPECS	
UTILITY COMPANY: MSP	VOLTAGE: 120/240	High Temp	DISTANCE ABOVE ROOF: 1"	INVERTER: IQIPUS-72-US	MODULE TYPE: E440HCK120-B	QTY: 36	WATTAGE: 440
EVERSOURCE		2% Avg.	NO TEMP ADJDR PER 310.15(B)(3)(C)	QTY: 36	FRAME COLOR: BLACK		
MSP LOC: LEFT	SERV. TYPE: OVERHEAD (N) ROD	30.8° C		VOLTAGE: 240V	Voc: 41.44	Isc: 13.55	Imp: 12.87
					Vmax: 34.21	Vpmax: 34.21	

**NOTES**

WIRE OCP FOR WIRES CONNECTED TO BREAKERS TO BE GREATER THAN THE SIZE OF THE BREAKER.

EQUIPMENT TERMINALS ARE RATED AT 75°C. STRING AMPERAGE NOT TO EXCEED THE 75°C RATING OF THE WIRE THAT IS ATTACHED TO THE TERMINALS.

WIRE TAG #	CONDUIT	WIRE QTY	WIRE GAUGE	WIRE TYPE	TEMP RATING	WIRE AMP	TEMP DE-RATE	CONDUIT FILL	WIRE OCP	TERMINAL 75°C RATING	INVERTER QTY	NOC	NEC	STRING AMPS	GRND SIZE	GRND WIRE TYPE
1	OPEN AIR	2	12#	ENPHASE Q CABLE	90	30	0.96	1	28.8 A	25	12	1.21	1.25	14.52 A	6#	SBC
2	SCHED 40 PVC	2	10#	THWN-2	90	40	0.96	1	38.4 A	35	12	1.21	1.25	14.52 A	8#	THWN-2
3	3/4" EMT	3	6#	THWN-2	90	75	0.96	1	72 A	65	36	1.21	1.25	54.45 A	8#	THWN-2
3A	SCHED 40 PVC	3	6#	THWN-2	90	75	0.96	1	72 A	65	36	1.21	1.25	54.45 A	8#	THWN-2



## Barbara Irvine

---

**From:** DAVID VOGEL <david@sunrize.homes>  
**Sent:** Wednesday, March 29, 2023 4:06 PM  
**To:** Barbara Irvine  
**Subject:** Per Your Request

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. Please forward this email to support@block5.com if you believe this email is suspicious.

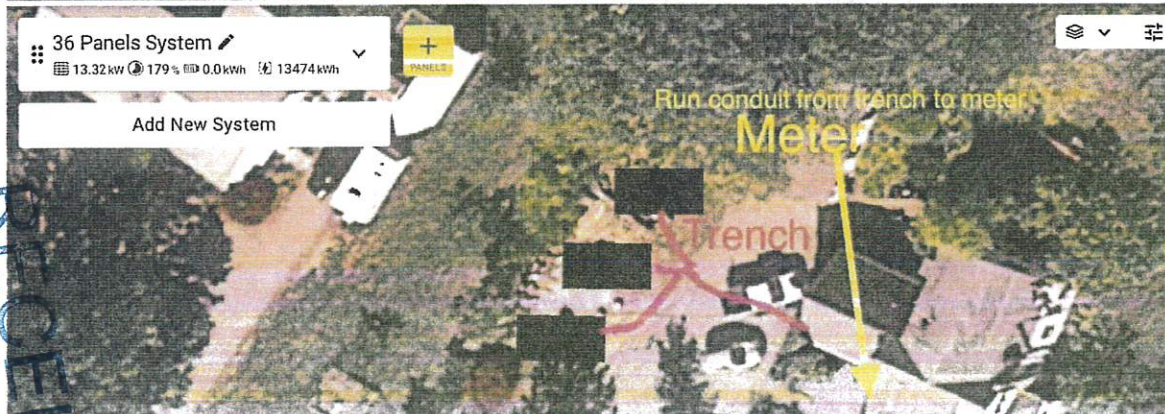
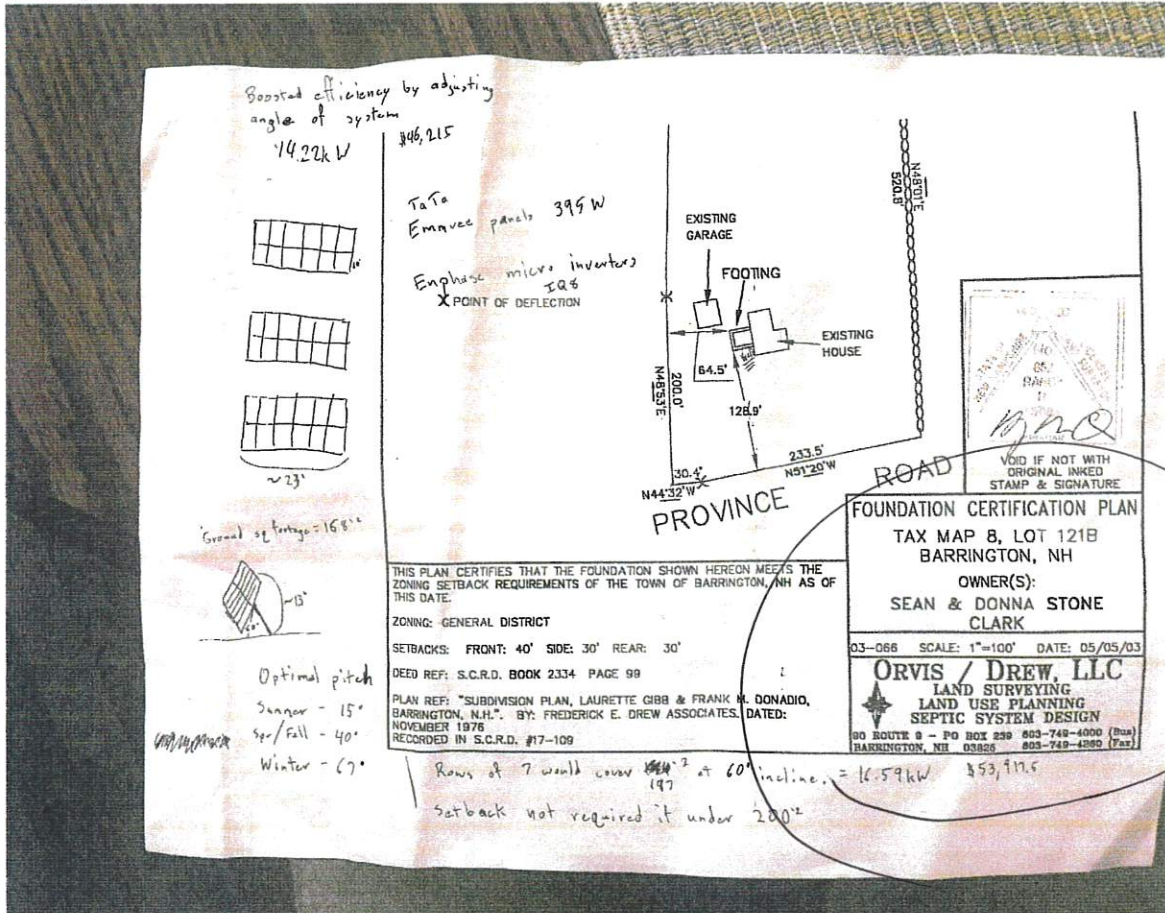


Property Lines



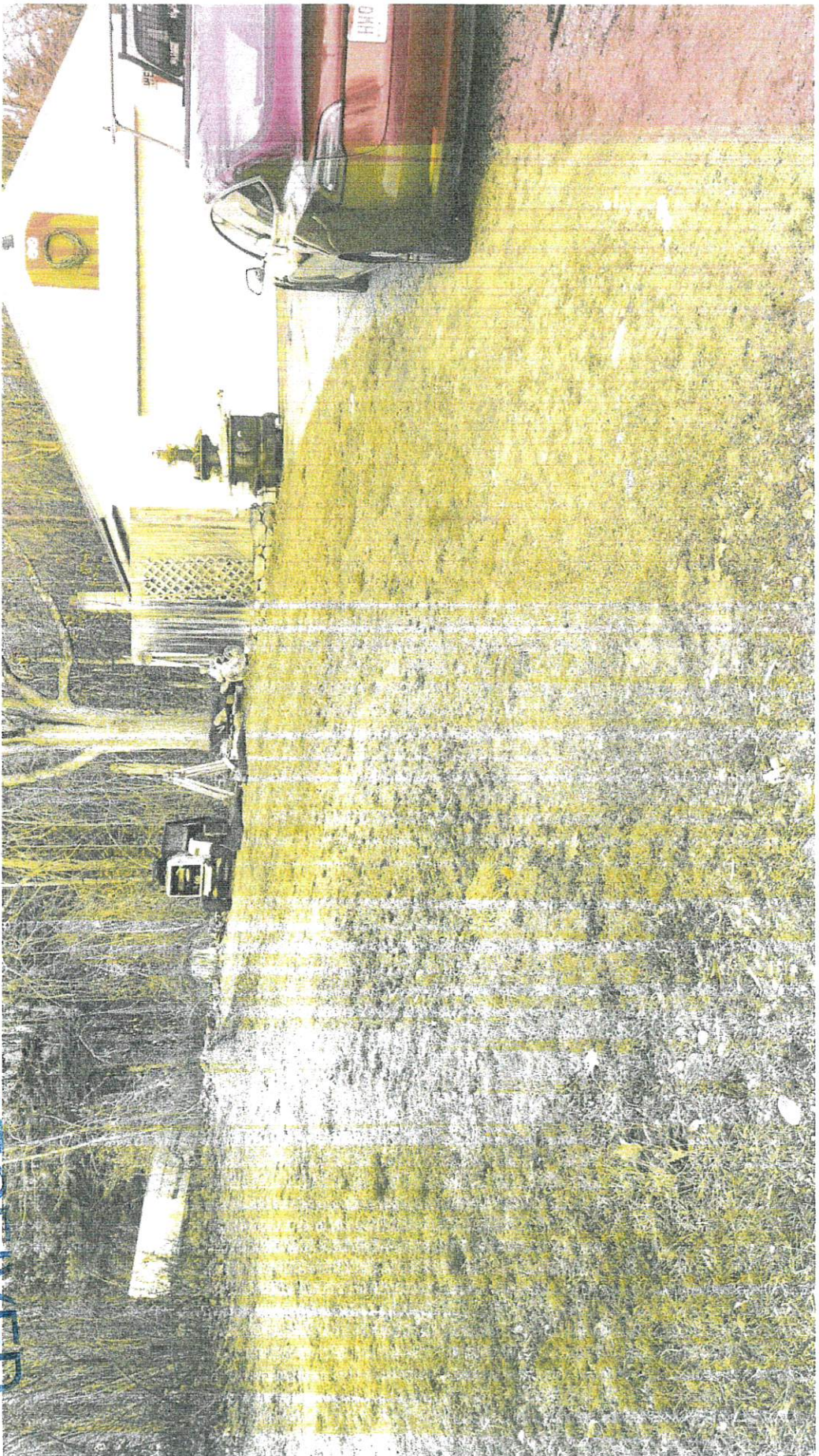
From: Levi Carr levicarr13@gmail.com  
 Subject: Pictures  
 Date: March 28, 2023 at 3:14 PM  
 To: david@sunrize.homes

I saved the message as a draft with two pictures from my iPad. Those two pictures might not go through



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ZONING: GENERAL DISTRICT  
SETBACKS: FRONT: 40' SIDE: 30' REAR: 30'

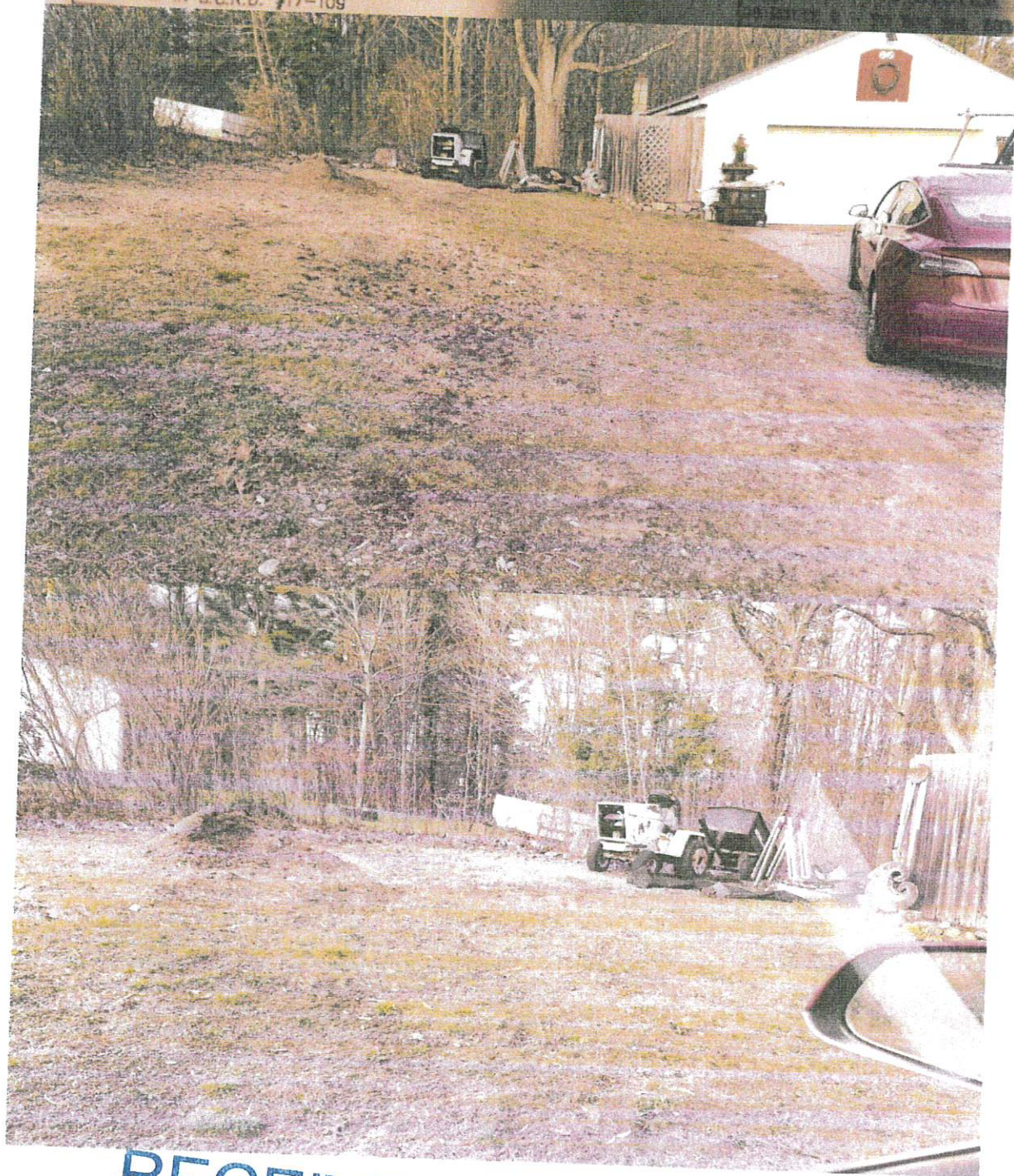
DEED REF: S.C.R.D. BOOK 2334 PAGE 99

PLAN REF: "SUBDIVISION PLAN, LAURETTE GIBB & FRANK W.  
BARRINGTON, N.H.". BY: FREDERICK E. DREW ASSOCIATES, P.A.  
NOVEMBER 1976  
RECORDED IN S.C.R.D. #17-109

SEAN & DUNNA S  
CLARK

03-066 SCALE: 1"=100' DA

ORVIS / DREW  
LAND SURVEYING  
LAND USE PLANNING  
SEPTIC SYSTEM DESIGN



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36 Panels System   
13.32 kW  179%  0.0 kWh  13474 kWh

Add New System

 PANELS

 Customer  
Top

+ View

 >  >


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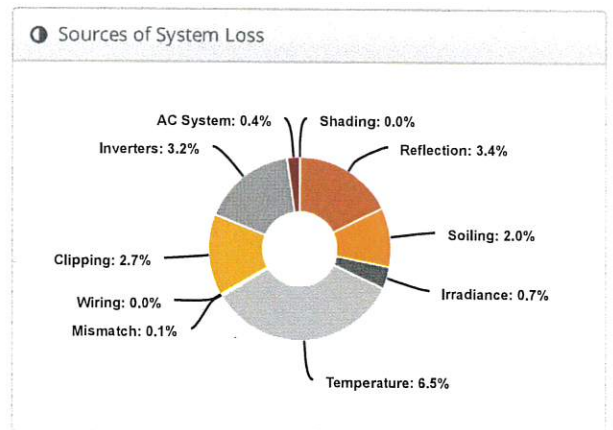
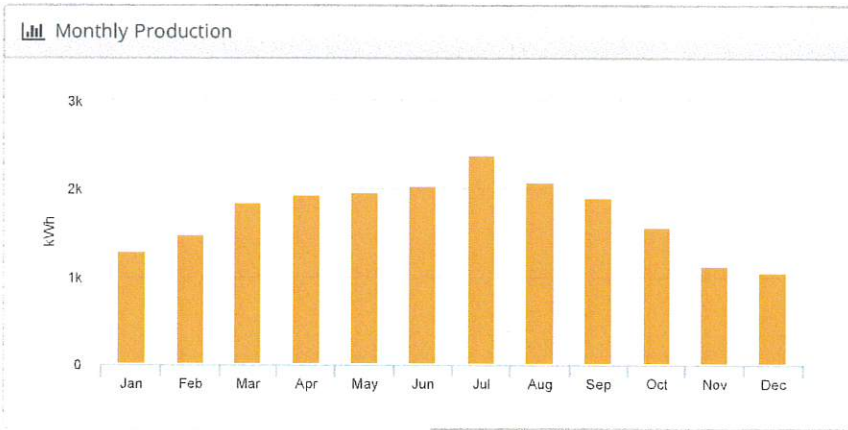
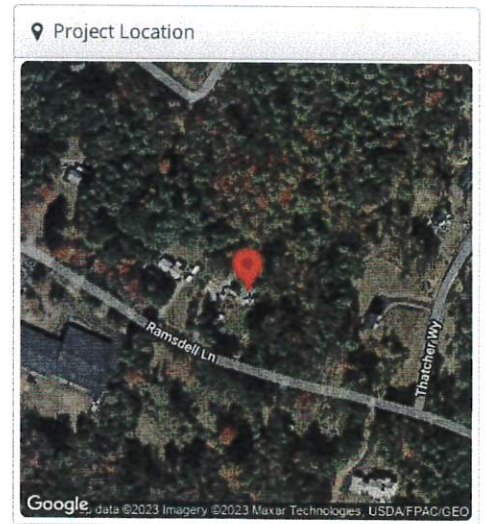
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## Design 1 Donna Clark, 72 Ramsdell lane,

Report	
Project Name	Donna Clark
Project Address	72 Ramsdell lane,
Prepared By	Levi Carr levicarr@1earthsolar.com

System Metrics	
Design	Design 1
Module DC Nameplate	15.8 kW
Inverter AC Nameplate	10.4 kW Load Ratio: 1.52
Annual Production	20.66 MWh
Performance Ratio	82.4%
kWh/kWp	1,304.2
Weather Dataset	TMY, 10km Grid (43.25,-71.05), NREL (prospector)
Simulator Version	014300ce24-47ca363289-119b672add-4ca3b8e664



⚡ Annual Production			
	Description	Output	% Delta
Irradiance (kWh/m <sup>2</sup> )	Annual Global Horizontal Irradiance	1,375.8	
	POA Irradiance	1,583.0	15.1%
	Shaded Irradiance	1,582.9	0.0%
	Irradiance after Reflection	1,529.8	-3.4%
	Irradiance after Soiling	1,499.2	-2.0%
	<b>Total Collector Irradiance</b>	<b>1,499.2</b>	<b>0.0%</b>
Energy (kWh)	Nameplate	23,762.6	
	Output at Irradiance Levels	23,585.3	-0.7%
	Output at Cell Temperature Derate	22,047.4	-6.5%
	Output After Mismatch	22,032.8	-0.1%
	Optimal DC Output	22,032.8	0.0%
	Constrained DC Output	21,430.6	-2.7%
	Inverter Output	20,747.1	-3.1%
	<b>Energy to Grid</b>	<b>20,658.4</b>	<b>-0.4%</b>
Temperature Metrics			
	Avg. Operating Ambient Temp		10.5 °C
	Avg. Operating Cell Temp		26.4 °C
Simulation Metrics			
	Operating Hours	4673	
	Solved Hours	4673	

☁ Condition Set													
Description		Condition Set 1											
Weather Dataset		TMY, 10km Grid (43.25,-71.05), NREL (prospector)											
Solar Angle Location		Meteo Lat/Lng											
Transposition Model		Perez Model											
Temperature Model		Sandia Model											
		Rack Type	a	b	Temperature Delta								
Temperature Model Parameters		Fixed Tilt	-3.56	-0.075	3°C								
		Flush Mount	-2.81	-0.0455	0°C								
		East-West	-3.56	-0.075	3°C								
		Carport	-3.56	-0.075	3°C								
Soiling (%)		J	F	M	A	M	J	J	A	S	O	N	D
		2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance		5%											
Cell Temperature Spread		4° C											
Module Binning Range		-2.5% to 2.5%											
AC System Derate		0.50%											
Module Characterizations		Module	Uploaded By		Characterization								
		E440H CM120-B (Emmvee Solar)	HelioScope		Spec Sheet Characterization, PAN								
Component Characterizations		Device	Uploaded By		Characterization								
		IQ8PLUS-72-2-US (2022) (Enphase)	HelioScope		Spec Sheet								

📦 Components		
Component	Name	Count
Inverters	IQ8PLUS-72-2-US (2022) (Enphase)	36 (10.4 kW)
AC Branches	1000 MCM (Aluminum)	2 (718.8 ft)
Module	Emmvee Solar, E440H CM120-B (440W)	36 (15.8 kW)

🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone	-	1-1	Along Racking

🏠 Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Portrait (Vertical)	18.4°	180°	0.0 ft	1x1	36	36	15.8 kW



Detailed Layout

