



TOWN OF EAST GREENWICH

APPLICATION for LAND DEVELOPMENT & SUBDIVISION of LAND

Planning Department
125 Main Street
P.O. Box 111
East Greenwich, RI 02818

(401) 886-8645
FAX (401)886-8657

www.eastgreenwichri.com

COMPLETE ALL QUESTIONS PLEASE PRINT

Applicant Kevin P. LaMarco - National Roofing & Solar Corporation
Address 4 Kim Court Guilford CT 06437
Phone 203-457-3717

FAX
Email klamarco@roofingsolarcorp.com

Property Owner J2 Properties Commercial Real Estate LLC - 816 Middle Rd. LLC
Address 333 Main St., East Greenwich
Phone 401-297-2100

FAX
Email

Type: Minor Subdivision ___ Major Subdivision ___ Land Development ___
Pre-Application X Master Plan ___ Preliminary Plan ___ Final Plan ___

Application Date: 9/9/2021 Application Fee: ___ Paid: Yes ___ No ___

Applicant's Engineer/Land Surveyor SepiSolar
Address 3070 Osgood Ct, Fremont CA 94539
Phone 510-940-9750

FAX

Applicant's Attorney Walter Richardson
Address 1551 Centreville rd, warwick, RI 02886
Phone 401-821-3300

FAX

Map(s): 53 Plat(s): 11 Lot(s): 826

Frontage Road(s): Middle Rd Frontage (feet):

Street Address and/or Pole Number: 816 Middle Rd, East Greenwich

Current Zoning District(s): M/L10 Proposed Zoning:

CompPlan Amendment(s) Required:

ZBR approval(s) Required: Special Use Permit X Dimensional Variance(s) Use Variance

Development and Subdivision Review Regulations Waivers Required (Please list):

Total Project Area (acres) # of Units % Affordable Total Bedrooms

Square Footage of Commercial floor area:(gross) 14,500 SQ (net)

Location of Nearest Public Water Service

Location of Nearest Sanitary Sewer Service

Topography (describe)

Wetlands (describe)

Other Development(s) by the Applicant in East Greenwich - Name:

Location:

Name of Proposed Development or Subdivision (required):

(no duplication of existing names)

Attest: The information provided on this application is true and accurate:

Applicant's Signature Kevin LaMarco Date: 9/9/2021

Please Print Name Kevin P. LaMarco

Owner's Signature Jeff Cammans Date: Jeff Cammans

Please Print Name Jeff Cammans Rev. 4/11/08

STRUCTUROLOGY

CONSULTING STRUCTURAL ENGINEERS

Date: July 23, 2021

Client: SepiSolar
Project: 816 Middle Rd
Address: 816 Middle Rd,
East Greenwich, RI

RE: Structural Adequacy of Existing Roof and Building Structure for Proposed PV panel load

As per your instruction, Structurology has analyzed the existing building roof for the addition of proposed PV panel load based on the site data provided by SepiSolar. The existing roof framed with K joist and B deck.

Structurology has performed a whole building analysis from scratch with the limited site data and made appropriate engineering assumptions to propose an allowable PV load value.

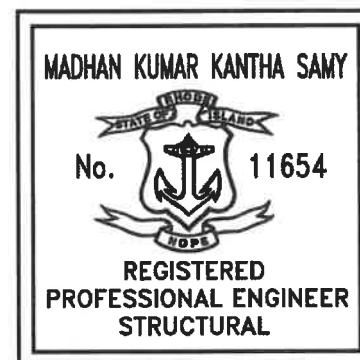
As per our analysis, we conclude that the existing roof and the building infrastructure has adequate capacity to carry the proposed PV panel loads listed in the attached calculation without additional reinforcement. We strongly recommend having the proposed PV ballast design load to be less than the recommended load (see next sheet).

If you have any questions or comments regarding this memo, please feel free to contact me at your earliest convenience.

Respectfully,



Madhan Kumar K, MS, PE
Principal/ Owner
Structurology INC



STRUCTUROLOGY

CONSULTING STRUCTURAL ENGINEERS

Allowable load calculation:

Roof Dead load:

Roof finish	- 1.5 psf
Roof deck	- 1.9 psf
K Joist	- 2 psf
Girder joist	-1.5 psf
MEP	- 2 psf
Misc	- 1.1 psf

Total = 10 psf

Vertical load:

Average vertical allowable load = 6 psf

Lateral load:

Total roof area = 14619 sq.ft [From drone survey report]

CMU wall weight = 52 psf

Wall height = 19'

Seismic weight N-S direction = 579 kips [See attached analysis]

Seismic weight E-W direction = 480 kips ←Governs

1% load redundant as limited as built details available

Allowable PV load = 9% x 480 = 43.2 kips say 43000 lbs

Project Name: 816 Middle Rd Engineer: SSG
Project Number: 21006.02 Date: 7/18/2021 Page No:
www.structurology.com contact@structurology.com 480.269.7679

SEISMIC DESIGN FORCES

Ordinary reinforced CMU wall
0.00
0.00

Building Occupancy Category = II	Table 1-1 of ASCE 7-16 -- Page 4	R = 2.00	Table 12.2-1 of ASCE 7-16 -- Page 90
$I_E = 1.00$	Table 1.5-2 of ASCE 7-16 -- Page 5	$T_L = 6.00$	Figure 22-15 of ASCE 7-16 -- Page 225
Site Class: D	Per Soils Report	$h_n = 19.00$	
Seismic Design Category: B	Tables 11.6-1 & 2 of ASCE 7-16 -- Page 85	$C_i = 0.02$	Table 12.8-2 of ASCE 7-16 -- Page 102
$S_S = 19.40\%$	From A1C web page	$x = 0.75$	Table 12.8-2 of ASCE 7-16 -- Page 102
$S_1 = 5.40\%$	From A1C web page	$T_a = C_i(h_n)^x = 0.18$	

Seismic Calculations:

$F_a = 1.60$	Table 11.4-1 of ASCE 7-16	$S_{DS} = (2/3)(F_a)(S_s) = 0.21$
$F_v = 2.40$	Table 11.4-2 of ASCE 7-16	$S_{D1} = (2/3)(F_v)(S_1) = 0.09$

Seismic Response Coefficient:

$C_s = (S_{DS})(I_E)/R = 0.10$ <----- Design Value

$C_{s-max} = (S_{D1})(I_E)/[(T_a)(R)] = 0.24$ [for $T \leq T_L$]

$C_{s-max} = (S_{D1})(I_E)(T_L)/[(T_a)(R)] = N.A.$ [for $T > T_L$]

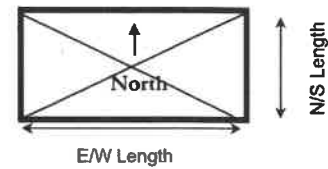
$C_{s-min} = 0.044(S_{DS})(I_E) \geq 0.01 = 0.01$

$C_{s-min} = (0.5)(I_E)(S_1)/(R) = N.A.$ [for $S_1 \geq 0.60$]

$C_s = 0.10$ [For ASD loading, $C_s/1.4 = 0.074$]

Building Information:

Roof Dead Load = 10 psf
Length (North/South) = 180 ft
Length (East/West) = 80 ft
Building Area = 14400 ft²
Wall Weight = 52 psf
Roof Height = 19 ft
Parapet Height = 0 ft



Seismic Base Shear:

$W_{NS} = (w_{roof})(L_{NS})(L_{EW}) + (w_{wall})(2)(L_{EW})(H_{parapet} + H_{wall})^2 / (2H_{wall}) + (w_{wall})(2)(L_{NS})(H_{parapet} + H_{wall}) = 579$ kips

$W_{EW} = (w_{roof})(L_{NS})(L_{EW}) + (w_{wall})(2)(L_{NS})(H_{parapet} + H_{wall})^2 / (2H_{wall}) + (w_{wall})(2)(L_{EW})(H_{parapet} + H_{wall}) = 480$ kips

$V_{NS} = (C_s/1.4) W_{NS} / L_{EW} = 59608$ plf

$V_{EW} = (C_s/1.4) W_{EW} / L_{NS} = 49432$ plf

Diaphragm Force:

$F_{pNS-min} = 0.2(S_{DS})(I_E)(W_{NS})/1.4 = 82$ plf

$F_{pEW-min} = 0.2(S_{DS})(I_E)(W_{EW})/1.4 = 53$ plf

$F_{pNS-max} = 0.4(S_{DS})(I_E)(W_{NS})/1.4 = 165$ plf <----- Design Value

$F_{pEW-max} = 0.4(S_{DS})(I_E)(W_{EW})/1.4 = 106$ plf <----- Design Value

$W_{NS} = [(w_{roof})(L_{NS}) + (w_{wall})(2)(H_{parapet} + H_{wall})^2 / (2H_{wall})] = 2788$ plf

$W_{EW} = [(w_{roof})(L_{EW}) + (w_{wall})(2)(H_{parapet} + H_{wall})^2 / (2H_{wall})] = 1788$ plf

$F_{pNS} = (C_s/1.4) W_{NS} = 287$ plf

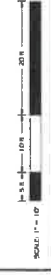
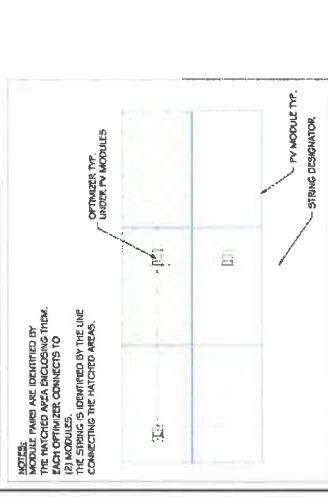
$F_{pEW} = (C_s/1.4) W_{EW} = 184$ plf

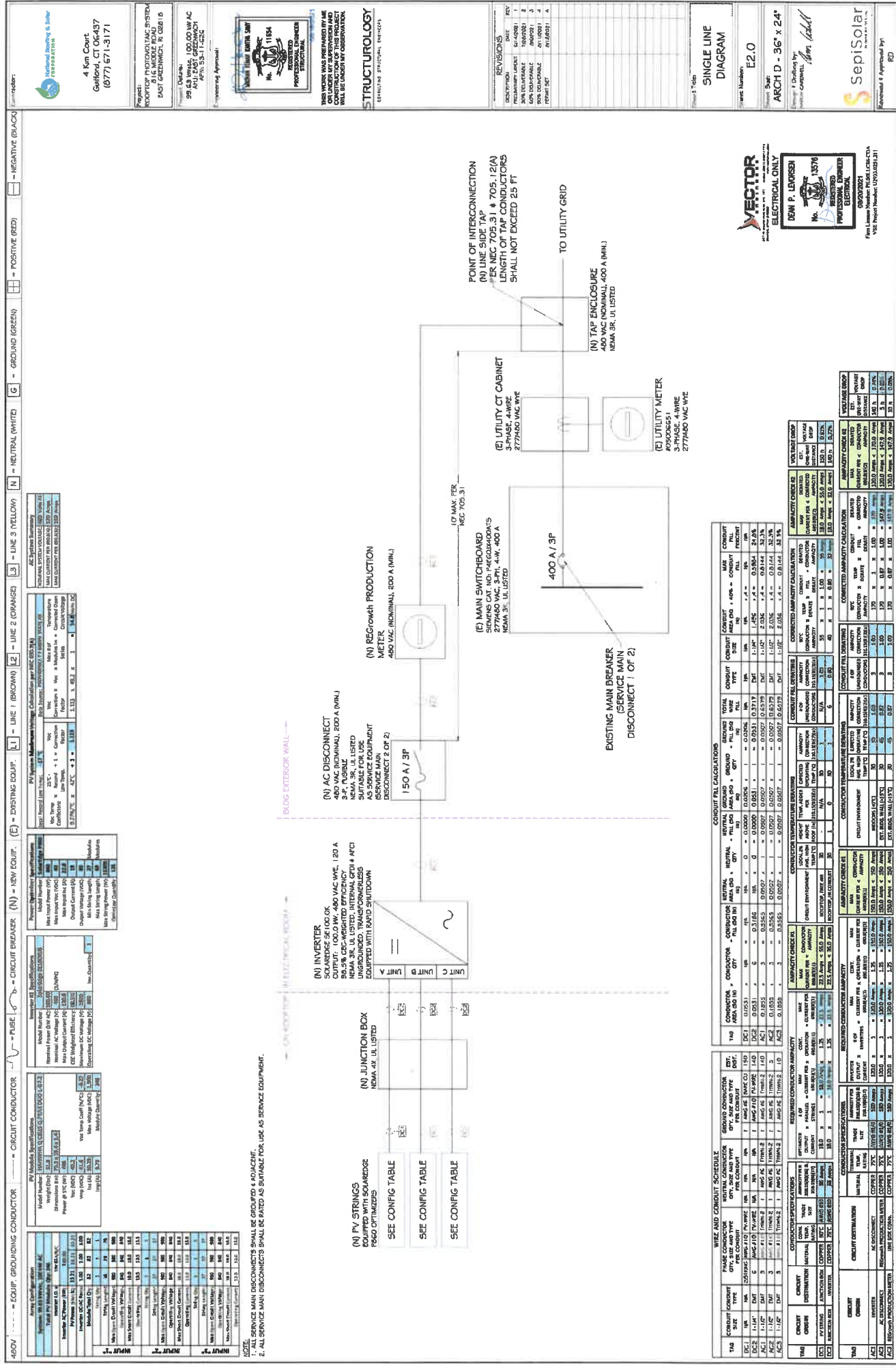
$F_{pNS} = 165$ plf

$F_{pEW} = 106$ plf

SYMBOL LEGEND

SYMBOL	NAME	DESCRIPTION
[Symbol]	ROOFTOP PV MOD.	HANWHA Q CELLS Q PAK D10 L47 2 40W
[Symbol]	ACNT	AC INVERTER
[Symbol]	HWAC UNIT	3" WORKING CLEARANCE





Panel Schedule

Panel No.	Panel Description	Panel Type	Panel Rating
1	MAIN SWITCHBOARD	MSB	400A
2	UTILITY CT CABINET	UC	277/480V
3	UTILITY METER	UM	3-Phase, 4-Wire

Conductor Schedule

Conductor No.	Conductor Description	Conductor Type	Conductor Rating
1	150A / 3P	CU	150A
2	400A / 3P	CU	400A

Equipment Schedule

Equip. No.	Equip. Description	Equip. Type	Equip. Rating
1	AC DISCONNECT	DC	480V
2	MAIN SWITCHBOARD	MSB	400A
3	UTILITY CT CABINET	UC	277/480V
4	UTILITY METER	UM	3-Phase, 4-Wire

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Conductor No.	Conductor Description	Conductor Type	Conductor Rating
1	150A / 3P	CU	150A
2	400A / 3P	CU	400A

Project: ROOF TOP PHOTO VOLTAGE SYSTEM
 EAST GREENWICH, RI 02810

Client: 4 Km Court
 Guilford, CT 06437
 (877) 671-3171

Scale: 1" = 1'-0"
 1/8" = 1'-0"

THIS WORK WAS PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND I AM A LICENSED PROFESSIONAL ELECTRICAL ENGINEER.

STRUCTUROLOGY
 ENGINEERING PROFESSIONAL SERVICES

REVISIONS

NO.	DATE	DESCRIPTION
1	01/08/21	ISSUED FOR PERMIT
2	01/15/21	REVISED PER STRUCTUROLOGY
3	01/22/21	REVISED PER STRUCTUROLOGY
4	01/29/21	REVISED PER STRUCTUROLOGY

Scale: 1" = 1'-0"
 1/8" = 1'-0"

Project: SINGLE LINE DIAGRAM
 Sheet Number: E2.0

Scale: ARCH D - 3/8" x 2 1/4"

Drawn by: [Signature]
 Checked by: [Signature]

Project: SINGLE LINE DIAGRAM
 Sheet Number: E2.0

Scale: ARCH D - 3/8" x 2 1/4"

Drawn by: [Signature]
 Checked by: [Signature]

Project: SINGLE LINE DIAGRAM
 Sheet Number: E2.0

VECTOR
 ELECTRICAL ONLY

DEAN P. LEVINSKI
 No. 063020201
 REGISTERED PROFESSIONAL ENGINEER
 State of Rhode Island & Providence Plantings
 VSE Project Number: 170101231

WIRE AND CONDUIT SCHEDULE

WIRE NO.	CONDUCTOR	CONDUIT	CONDUIT TYPE	CONDUIT SIZE	CONDUIT LENGTH	CONDUIT WEIGHT	CONDUIT VOLUME
1	150A / 3P	CU	150A	1.5"	100'	1000'	1000'
2	400A / 3P	CU	400A	3.0"	100'	1000'	1000'

CONDUCTOR TEMPERATURE RISES

CONDUCTOR	TEMPERATURE RISE
150A / 3P	15°C
400A / 3P	15°C

CONDUIT TEMPERATURE RISES

CONDUIT	TEMPERATURE RISE
150A / 3P	15°C
400A / 3P	15°C

AMPERITY CHECKS

CONDUCTOR	AMPERITY CHECK
150A / 3P	150A
400A / 3P	400A

AMPERITY CHECKS

CONDUCTOR	AMPERITY CHECK
150A / 3P	150A
400A / 3P	400A

AMPERITY CHECKS

CONDUCTOR	AMPERITY CHECK
150A / 3P	150A
400A / 3P	400A

AMPERITY CHECKS

CONDUCTOR	AMPERITY CHECK
150A / 3P	150A
400A / 3P	400A

OFFICE USE ONLY
DATE APP'D _____
PERMIT NO. _____

PROJECT CERTIFICATION

PROPERTY OWNER OF RECORD _____ DATE 08/23/2021
PROJECT TITLE 816 Middle Rd PV Energy System PLAT _____ LOT _____
STREET ADDRESS 816 Middle Road TOWN East Greenwich
NAME OF BUILDING _____
SCOPE OF PROJECT Add 99.63 KWSTC Photovoltaic system to the existing
building with a load side connection

In accordance with Section 128.0 of the Rhode Island Building Code

I Dean Levorsen RI reg. no. 13576
being a registered professional Engineer hereby certify that I have prepared or directly supervised the preparation of drawings, computations and specifications concerning

ENTIRE PROJECT _____ ARCHITECTURAL _____ STRUCTURAL _____

FIRE PROTECTION _____ MECHANICAL _____ ELECTRICAL X

CIVIL/STATE _____ OTHER (specify) _____

for the above project and that to the best of my knowledge such drawings, computations and specifications meet all applicable provisions of the Rhode Island state building codes, all acceptable engineering practices and all applicable laws for the proposed project.

I further certify that I shall perform the necessary professional services and be present on the construction site on a regular and periodic basis to determine that the work is proceeding in accordance with the documents approved for the building permit and shall be responsible for the following as specified in Section 128.2.2:

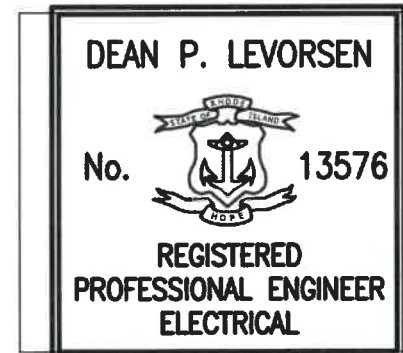
23-27.3-128.2.3 Responsibilities: A professional engineering or registered architect on behalf of the owner shall be responsible for the following:

1. Review of the shop drawings, samples and other submitted of the contractor as required by the construction contract documents submitted for permit and approval for conformance to the design concept.
2. All change orders to the contract documents shall be submittals to the Building Official after approval by the profession engineer or registered architect.
3. Review and approval of the testing procedures listed in Section 23-27.3-128.4 and Appendix A. The engineer or architect shall notify the owner, building official and contractor of the results of all tests and the required corrective measures which need to be taken.
4. Insure special engineering or architectural inspection of critical construction components requiring controlled materials or construction specified in the accepted engineering practice standards as listed in Appendix A.
5. The professional engineer or registered architect or his representative shall provide the necessary professional services and be present on the construction site on a regular and periodic basis to determine that generally, the work is proceeding in accordance with the documents approved for the permit.

(over)

PROJECT CERTIFICATION (cont.)

Pursuant to section 128.2.3, I shall submit weekly/bi-weekly/monthly, a progress report together with pertinent comments to the state/local building official. Upon completion of the work, I shall submit a final report as to the satisfactory completion and readiness of the project for occupancy.



Firm name: Vector Engineers

Address: 651 W Galena Park Blvd
Draper, UT 84020

Phone: 801-990-1775

(Signature of Engineer)

08/23/2021

I hereby acknowledge the above and agree to notify the Building Official of any changes to the above agreement.

(Signature of Owner)

END OF DOCUMENT

**TAX CREDIT ELIGIBILITY AND PROJECT SEGMENTATION AFFIDAVIT
ALL APPLICANTS EXCEPT SMALL-SCALE SOLAR PROJECTS**

STATE OF Rhode Island)
) ss.
COUNTY OF Kent)

I, [NAME], being sworn upon oath depose and say as follows:

1. I am the Owner for ("Seller"), and as such, I am authorized to execute this Affidavit. I further represent that I have personal knowledge of the facts set forth in this Affidavit.


2. In my role as [Owner] of Seller, I am familiar with Seller's bid submission (the "Bid") for the Rhode Island Renewable Energy Growth Program relating to Seller's [816 Middle Rd. LLC, 816 Middle Rd. East Greenwich, RI 02818] (the "Facility").

3. I am familiar with the federal tax credits and bonus depreciation that are available to renewable energy generation facilities under the U.S. Internal Revenue Code, as amended through the date hereof (the "Code"), and the qualifications for those tax credits.

4. The DG Project:

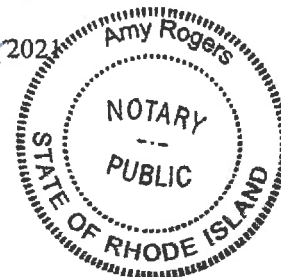
- (a) consists of a single facility located on a single parcel of land; or
- (b) consists of multiple facilities on a single parcel of land that each use different renewable energy resources; or
- (c) consists of multiple facilities on a single parcel of land: (i) that use the same renewable energy resource; (ii) that are electrically segregated; (iii) that are separately metered; and (iv) at least 24 months have elapsed between the commencement of operation of the immediately previously constructed unit and the commencement of construction of a subsequent unit on the parcel; or
- (d) consists of facilities on contiguous parcels of land that serve different Non-Residential Customers and both Customers receive bill credits through a combination of direct payment and a Customer bill credit, in which the value of the bill credit is based upon the On-Site Use, up to, but not exceeding, the metered generation of the DG Project.

5. The foregoing statements are true and correct to the best of my knowledge, information, and belief.


Name: Jeff Cammans -816 Middle Rd. LLC
Title: Owner
Date: 08/30/2021

SUBSCRIBED before me this 10 day of September 2021.


Notary Public



exp. 6/19/2025

**TAX CREDIT ELIGIBILITY AND PROJECT SEGMENTATION AFFIDAVIT
ALL APPLICANTS EXCEPT SMALL-SCALE SOLAR PROJECTS**

STATE OF Rhode Island)

COUNTY OF Kent) ss.

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2. In my role as [Owner] of Seller, I am familiar with Seller's bid submission (the "Bid") for the Rhode Island Renewable Energy Growth Program relating to Seller's [30-60 Quaker Ln, LLC at 30- 60 Quaker Ln, Warwick, RI 02886] (the "Facility").

3. I am familiar with the federal tax credits and bonus depreciation that are available to renewable energy generation facilities under the U.S. Internal Revenue Code, as amended through the date hereof (the "Code"), and the qualifications for those tax credits.

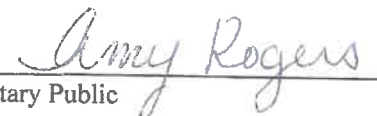
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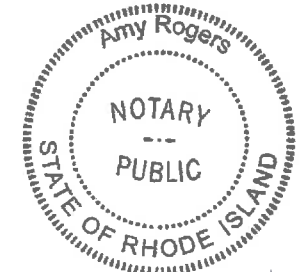
- (a) consists of a single facility located on a single parcel of land; or
- (b) consists of multiple facilities on a single parcel of land that each use different renewable energy resources; or
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5. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

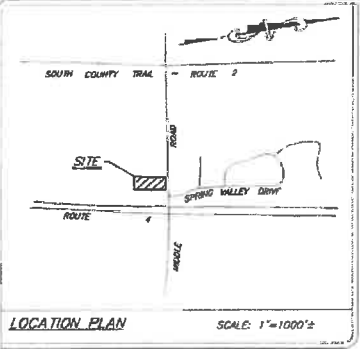

Name: Jeff Cammans -30- 60 Quaker Ln, LLC
Title: Owner
Date: 08/30/2021

SUBSCRIBED before me this 10 day of September 2021


Notary Public



exp 01/01/2025



ZONING: INDUSTRIAL M 110

MINIMUM LOT AREA	2 ACRES
MINIMUM FRONTSET	100 FEET
MINIMUM LOT COVERAGE STRUCTURE	30 %
MINIMUM LOT COVERAGE PAVEMENT	60 %
BUILDING SETBACKS	
FRONT YARD	100 FEET
SIDE YARD	40 FEET
REAR YARD	50 FEET
MAXIMUM STRUCTURE HEIGHT	35 FEET

EXISTING & PROPOSED PARKING COUNT

77 STANDARD SPACES
2 HANDICAPPED SPACES
79 EXISTING SPACES
+ 3 PROPOSED SPACES
84 TOTAL EXISTING & PROPOSED SPACES

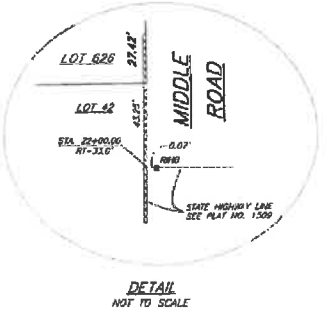
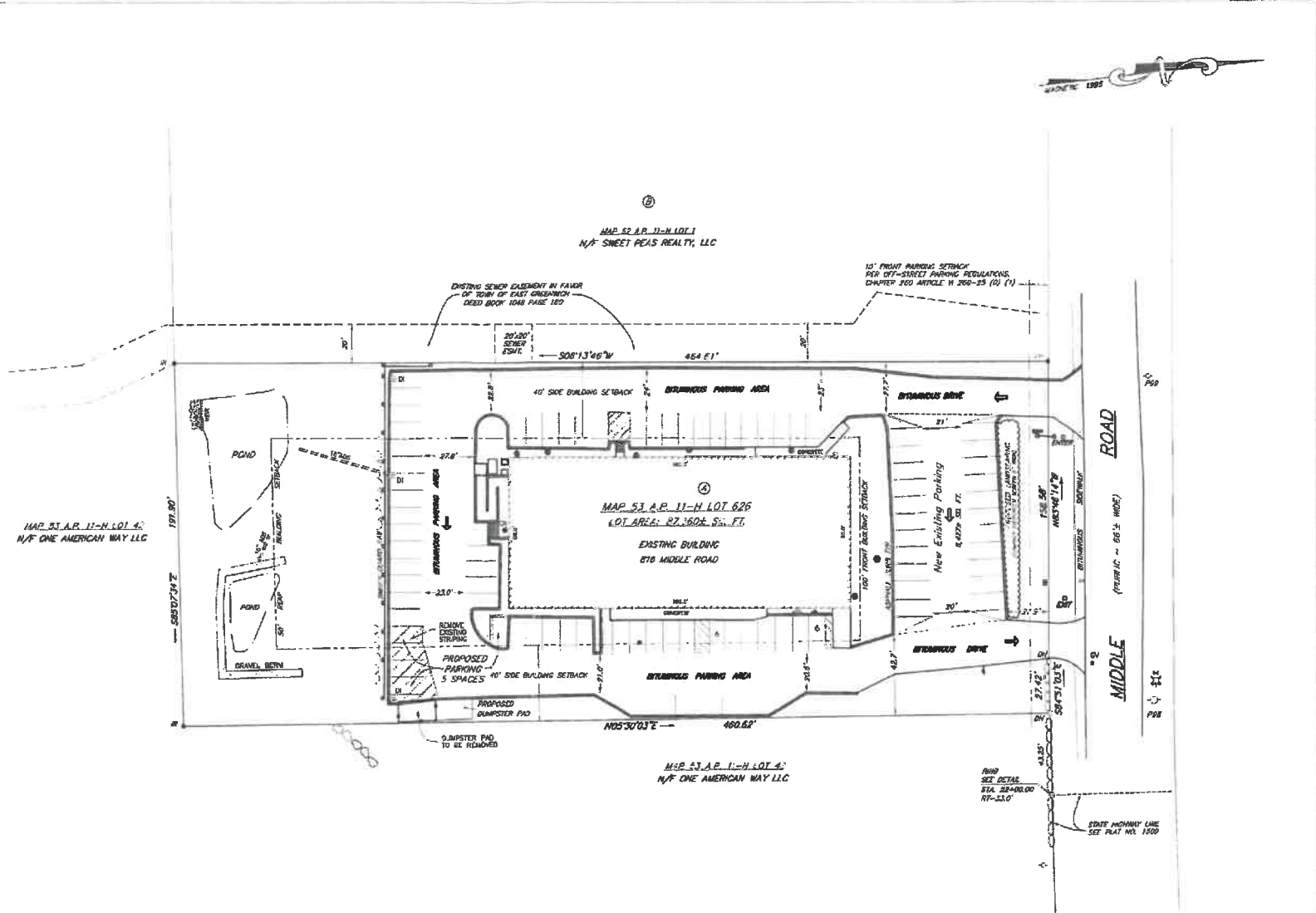
REQUIRED PARKING COUNT

OFFICE (A PER SQ. FT.) SPACES
100 (1000 SQ. FT.) = 10 SPACES
TOTAL REQUIRED = 117 SPACES

PLAN REFERENCE
 "SURVEY PLAN SHOWING PROPOSED DIVISION OF LAND, ASSESSOR'S PLAT 111-L-1, MIDDLE ROAD, EAST GREENWICK, RHODE ISLAND, PREPARED FOR RESERVE CORPORATION, SCALE: 1"=50', DATE: MARCH 1, 1980, PROJECT NO.: 520304, JOB NO.: 100, SHEET 1 OF 1" BY SOUTH RE SURVEYS, INC., RECORDED IN THE TOWN OF EAST GREENWICK, LAND RECORDS, RECORD AS PLAN 106.

LEGEND

A.P.	ASSESSOR'S PLAT
⊙	IRON ROD FOUND
⊙	DRILL HOLE FOUND
⊙	RHODE ISLAND HIGHWAY BOUND FOUND
TYP.	TYPICAL
-	UTILITY POLE/CONCRETE WIRE
○	GAS VALVE
⊙	GAS METER
⊙	FIRE HYDRANT
⊙	WATER VALVE
⊙	WATER METER
⊙	DRINK WATER / CATCH BASIN
⊙	MANHOLE
⊙	CELESTIAL
⊙	HANDICAP PARKING
⊙	SIGN
⊙	ELECTRIC METER
⊙	TREE LINE
⊙	STONE WALL
⊙	CHAIN LINK FENCE
⊙	CLUMP PALM
⊙	PAVEMENT MARKING ARROWS (ONE-WAY)
⊙	PARCEL DESIGNATION ON RECORD PLAN



SEE STREET WORK FILE UNDER MIDDLE ROAD

SOUTH RE SURVEYS, INC.
 110 LIGGUE AVENUE
 COVENTRY, RHODE ISLAND 02816
 (401) 821-0101
 LEAD SURVEYOR/PAAPING JAYTE PALMISANO

SCALE IN FEET: 0 10 20 30 40 50 60 70 80 90 100

PROFESSIONAL SEAL AND SIGNATURE OF SURVEYOR
 JAYTE PALMISANO
 LEAD SURVEYOR

PROFESSIONAL SEAL AND SIGNATURE OF LAND SURVEYOR
 ANDREW H. BROADBENT
 LAND SURVEYOR

PARKING AS-BUILT AND SITE PLAN
 OF LAND OF
 J.P. PROPERTIES
 MAP 53 ASSESSOR'S PLAT 11-H LOT 626
 MIDDLE ROAD
 EAST GREENWICK, RHODE ISLAND

DATE: FEBRUARY 5, 2019 REVISION: MAY 14, 2018
 SCALE: 1"=10'

PROJECT NO.: SS1354.04 SHEET 1 OF 1
 DRAWING NO.: SS1689

