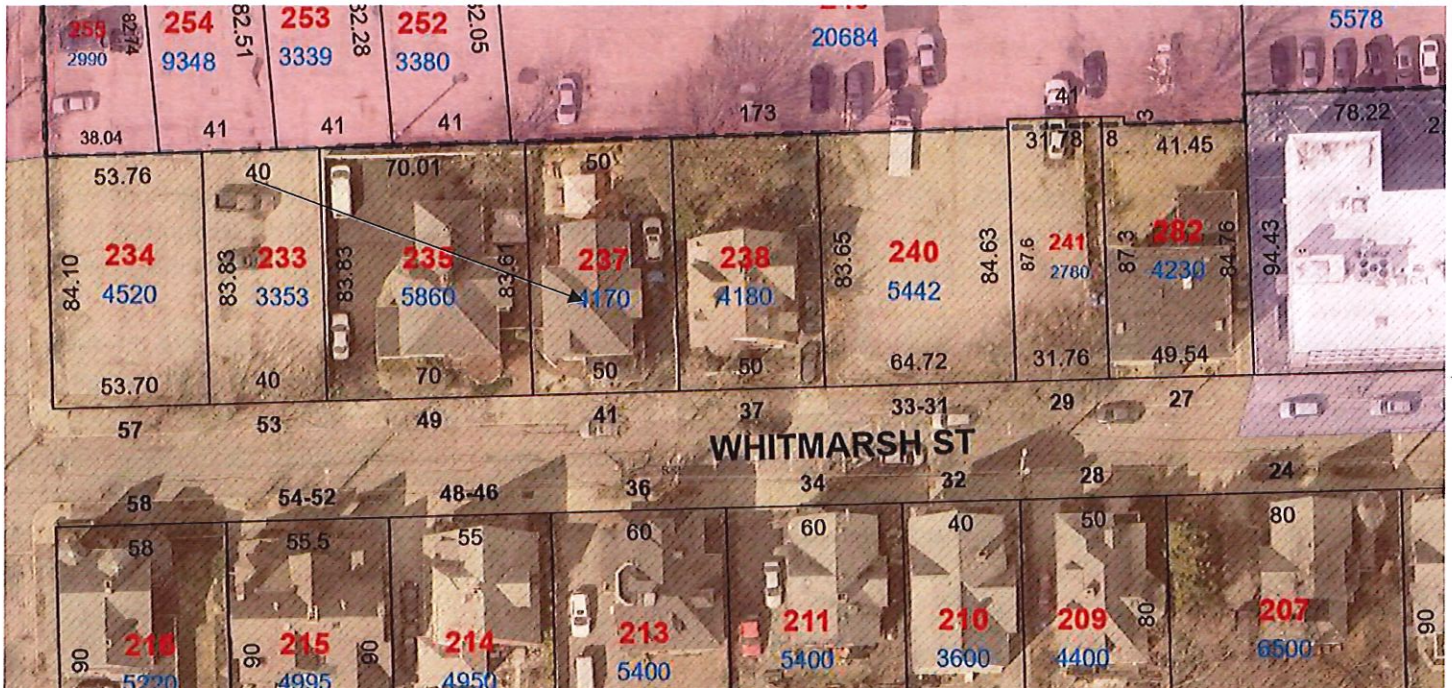


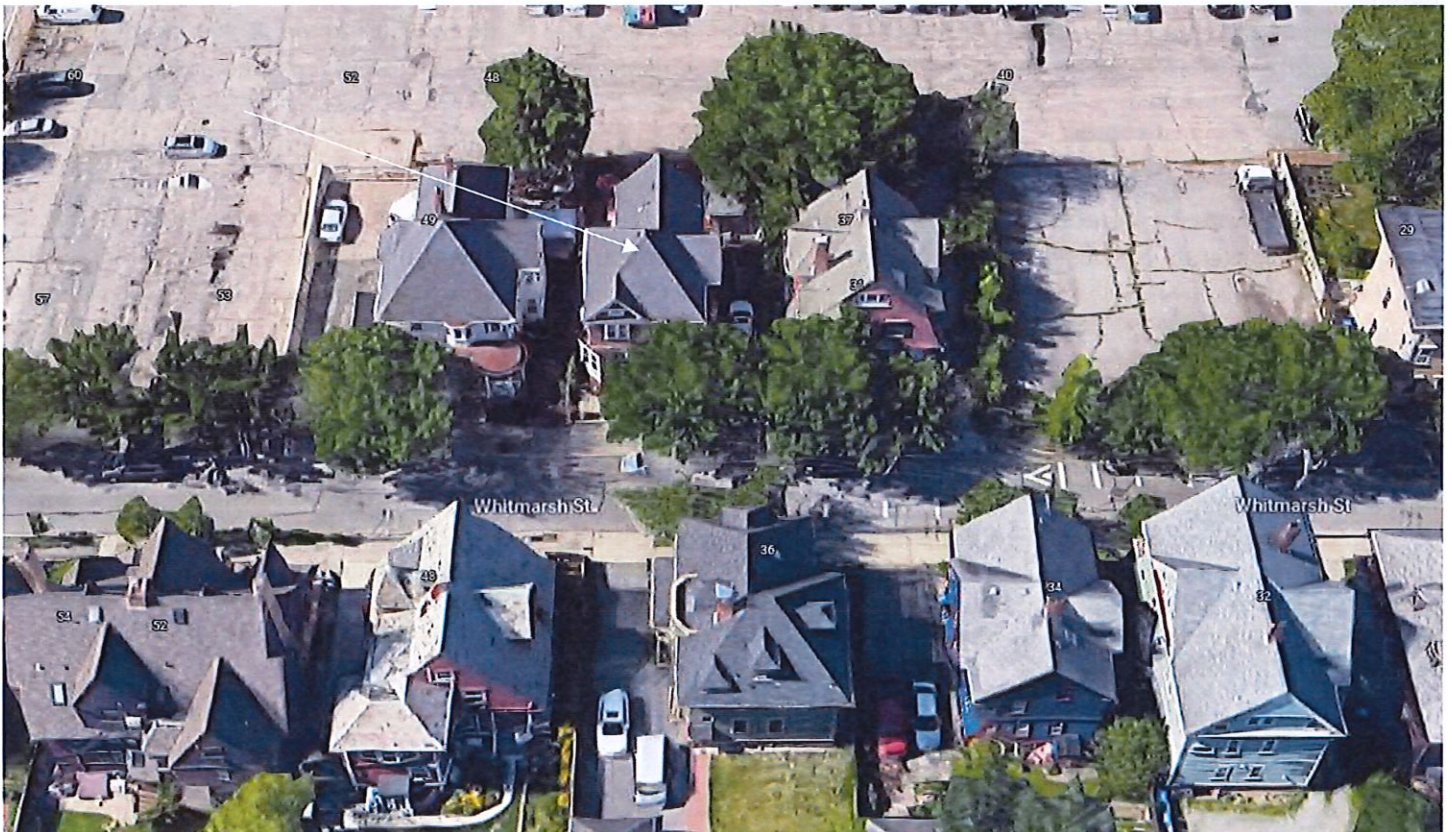
4. CASE 23.074, 41 WHITMARSH STREET, Alfred M. Williams House, c1889 (NORTH ELMWOOD)

Gable-fronted 2½-story-hip-roofed Queen Anne structure, with a Colonial Revival, Ionic column corner porch. Williams was Editor of The Providence Journal.

CONTRIBUTING



Arrow indicates 41 Whitmarsh Street.



Arrow indicates project location, looking north.

Applicant/Contractor: Bright Power Solar, Scott LeDuc, 1451 Grafton Street, Worcester, MA 01604
Owner: Evans Peralta, 41 Whitmarsh Street, Providence, RI 02907

Proposal: The scope of work proposed consists of Minor Alterations and includes:

- the installation of 18 solar panels to three slopes of the hip roof.

Issues: The following issues are relevant to this application:

- The applicant appeared at the June 26th meeting where it was discovered that the panels had already been installed; The Commission continued the matter with suggestions that panels should be reorganized from the proposed/installed installation. The applicants have submitted a revised layout that proposes 18 panels (previously was 22): four panels on Roof A (SW slope), eight panels on Roof B (NE slope) and six panels on Roof C (NW slope). Roof A would be the most visible from the public rights-of-way;
- The modifications as proposed may meet Minor Alterations: Solar Energy Systems Guidelines, Section 2, in the following manner: Panel layout shall be sympathetic or appropriate to design and scale of building. Rectangular configurations are preferred, with ample setback from edge of roof, dormers, chimneys, etc. (2.A); Panels shall be installed parallel to the existing roof slope and matched as closely as possible to the roof plane (2.B); Panels shall be installed without destroying or replacing original or historic materials or significantly compromising or altering the building's structural integrity (2.C); Panels shall be compatible in color to existing roofing insofar as possible (2.D); Installation of panels shall be as inconspicuous as possible when viewed from public right-of-way (2.E); Installation shall be reversible. Panels shall be removed when no longer viable or functioning and roofing restored to pre-existing conditions (2.F); and,
- Plans, specifications and pictures have been submitted.

Recommendations: The staff recommends the PHDC make the following findings of fact:

- a) 41 Whitmarsh Street is a structure of historical and architectural significance that contributes to the significance of the North Elmwood local historic district, having been recognized as a contributing structure to the Elmwood National Register Historic District;
- b) The modifications as proposed meets Minor Alterations: Solar Energy Systems Guidelines, Section 2, and the application is considered complete; and,
- c) The work as proposed is in accord with PHDC Standards 8 & 9 as follows: 8) the work will be done so that it does not destroy the historic character of the property or the district as they are not on the primary elevation and will be minimally-to-not visible from the public rights-of-way; and, 9) Whenever possible... alterations to structures shall be done in such a manner that if removed in the future, the essential form and integrity of the structure and the site will be unimpaired.

Staff recommends a motion be made stating that: The application is considered complete. 41 Whitmarsh Street is a structure of historical and architectural significance that contributes to the significance of the North Elmwood local historic district, having been recognized as a contributing structure to the Elmwood National Register Historic District. The Commission grants Final Approval of the proposal as submitted as the proposed alteration is appropriate having determined that the proposed alteration does not destroy the historic character of the property or the district and are historically and architecturally compatible with the property and district as the proposed alteration meets Minor Alterations: Solar Energy Systems Guidelines, Section 2, is reversible and will not have an adverse effect on the property or district as they are not on the primarily on secondary elevations and will be minimally visible from the public rights-of-way (Standards 8 & 9), and the recommendations in the staff report, with staff to review any additional required details.

SHEET INDEX	
PV1	TITLE SHEET
PV2	ROOF/SITE PLAN
PV3-PV3.1 & PV3.2	ELECTRICAL LINE DIAGRAM / DETAILS
PV4	EQUIPMENT LABELS
PV4.1	PACBOARD
PV5	ATTACHMENT PLAN
PV6	STRUCTURAL COMPONENTS
PV7	PROPERTY LINES
PV8-PV10	INSTALL DOCUMENTS STRUCTURAL ENGINEERING CALC (IF REQ.) EQUIPMENT DATA SHEETS

APPLICABLE CODES	
2020 NATIONAL ELECTRICAL CODE (NFPA 70)	
2020 NATIONAL ELECTRICAL CODE (NFPA 70)	
2020 NATIONAL ELECTRICAL CODE (NFPA 70)	
2020 NATIONAL ELECTRICAL CODE (NFPA 70)	

OCCUPANCY & CONSTRUCTION TYPE	
OCCUPANCY - N3	
CONSTRUCTION - 5B	

- ### CONSTRUCTION NOTES
- A LADDER SHALL BE IN PLACE FOR ANY INSPECTIONS IN COMPLIANCE WITH OSHA REGULATIONS.
 - ALL WIRING SHALL BE NON-COMBUSTIBLE IN NATURE.
 - THE GROUNDING SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH NEC 680.47 & 250.146. GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED WHEN BONDED AT THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE OR INADEQUATE, OR IS ONLY METALLIC WATER PIPING, A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED #87 GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONSTRUCTION SHALL BE NOT LESS THAN #6 AWG AND NO GREATER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE FOR A EACH MODULE WILL BE GROUNDING USING THE SUPPLIED CONNECTION POINTS IDENTIFIED IN THE MANUFACTURERS' INSTALLATION INSTRUCTIONS.
 - THE EXPOSED METALLIC TABS OF THE SOLARBEIG OPTIMIZERS SHALL BE BONDED AND GROUNDED PER NEC 680.43(A) AND THE MANUFACTURERS' INSTRUCTIONS.
 - PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER NEC 110.26.
 - ALL ELECTRICAL WIRING SHALL BE INSTALLED IN A CONTRASTING COLOR (WHITE). THIS PRACTICE WILL BE PERMANENTLY ATTACHED & UV RESISTANT.
 - ATTACHMENT POWER SOURCE PANELOID SHALL BE PLASTIC ENCASED IN A CONTRASTING COLOR (WHITE). THIS PRACTICE WILL BE PERMANENTLY ATTACHED & UV RESISTANT.
 - SMOKE DETECTOR APPROVED AND LISTED BY THE STATE FIRE MARSHAL, SHALL BE INSTALLED IN EACH DWELLING WHEN A PERMIT FOR ALTERATIONS, REPAIRS OR ADDITIONS EXCEEDS \$1,000.00. A BATTERY POWERED SMOKE DETECTOR SATISFIES THE REQUIREMENTS FOR A SMOKE DETECTOR. APPROVED COMBINED SMOKE ALARMS AND CARBON MONOXIDE ALARMS SHALL BE ACCEPTABLE. A CARBON MONOXIDE DETECTOR SHALL BE INSTALLED IN THE SPECIFIC DWELING UNIT THAT HAVE ATTACHED GARAGES OR REAR-BURNING APPLIANCES FOR WHICH A PERMIT IS ISSUED FOR ALTERATIONS, REPAIRS OR ADDITIONS EXCEEDING \$1,000.00. LISTED SINGLE OR EVERY LEVEL OF A DWELING UNIT INCLUDING BASEMENTS. COMBINED SMOKE/CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN EACH DWELING UNIT AND ON POWER FROM THE BUILDING WIRING EXCEPT IT IS PERMITTED TO BE SOLELY BATTERY OPERATED WHERE REPAIRS OR ALTERATIONS DO NOT RESULT IN THE REMOVAL OF WALL AND CEILING FINISHES OR THERE IS NO ACCESS BY MEANS OF AN ATTIC.
 - THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (ON INVERTER) IF WITHIN LISTED EQUIPMENT AS PER NEC 250.64C.
 - ROOF COVERINGS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE BUILDING CODE OF THE LOCAL JURISDICTION.
 - PV SYSTEMS CONNECTION IN THE SWITCH GEAR (PANEL) SHALL BE POSITIONED AT THE OPPOSITE END FROM THE INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION AS PER NEC 250.19(B).
 - PER NEC 250.19(B)(1), ALL PV SYSTEMS SHALL BE UL LISTED OR LISTED BY A LISTING AGENCY RECOGNIZED BY THE STATE IN WHICH THE SYSTEM IS CONSTRUCTED.
 - ALL DC CONDUCTORS SHALL BE 90° RATED THWN, THWN-2, USE-2 OR PV WIRE. ALL AC CONDUCTORS SHALL BE 75° RATED THWN WIRE.
 - THE UTILITY DISCONNECT HAS VISIBLE BLADES, IS LOCKABLE AND IS ACCESSIBLE TO THE UTILITY 24/7.
 - ALL BREAKERS SHALL BE SUITABLE FOR BACKFEED. WHEN BACKED BREAKER IS THE METHOD OF UTILITY INTERCONNECTION THE BREAKER SHALL NOT BEAD LINE AND COORDINATE ANY POWER OUTAGE WITH LOCAL UTILITY AND PROPERTY OWNER. NOTIFY UTILITY BEFORE ACTIVATION OF PV SYSTEM.
 - CITY BUILDING INSPECTOR SHALL INSPECT ACCESSIBLE STRUCTURAL CONNECTIONS AND THE HOUSE CURRENT SIDE OF THE METER. ALL OTHER EQUIPMENT SHALL BE UL LISTED AND APPROVED.
 - ALL MODULES SHALL NOT BE INSTALLED OVER ANY EXISTING PLUMBING, PLUMBING VENTS TO EXTEND A MIN OF 6" ABOVE ROOF OR ABOVE ROOF OR ABOVE ROOF AND BUILDING OR OVER ANY EXISTING PLUMBING, PLUMBING VENTS TO EXTEND A MIN OF 6" ABOVE ROOF OR ABOVE ROOF OR ABOVE ROOF OR ABOVE ROOF. ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER THE OPENINGS SUCH AS WINDOWS OR DOORS, AND THE DISCHARGE OF POLLUTANTS TO ANY STORM DRAINAGE SYSTEM IS PROHIBITED. NO SOLID WASTE, RETRIEVAL PRODUCTS, SOIL, PARTICULATE CONSTRUCTION STREET GUTTER OR STORM DRAIN SYSTEM.
 - ALL WIRING MUST BE PROPERLY SUPPORTED BY DEVICES OR MECHANICAL MEANS DESIGNED AND LISTED FOR SUCH USE AND WIRING MUST BE PERMANENTLY AND COMPLETELY HELD OFF OF THE ROOF SURFACE.
 - PAINT SURFACE MOUNTED CONDUIT TO MATCH EXISTING STRUCTURE.

VICINITY MAP



VECTOR
ENGINEERS
651 W. ALDINE AVE SUITE 101 PHOENIX, AZ 85011-7775
DANIELA UYAN 85020 WWW.VECTORENG.COM

07/05/2023

Firm License Number: PE.001LC86-COA
VSE Project Number: U1932.1020.231

Vector Structural Engineering has reviewed the existing structural drawings and specifications for the proposed PV system, including connections, and all other other nonstructural aspects of the design and by others. Electrical is by others, unless stamped by Dean Leverson.

BRIGHT PLANET SOLAR
103A MILLBURY ST,
AUBURN MA 01501
888-997-4469

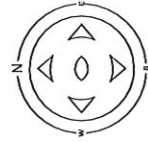
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DESIGNER:	DATE: 7/5/2023 12:32:07 PM

PROJECT #	REV	DATE
8P8275445		
72AWDC		
5AWAC		

DESCRIPTION	
ALEXANDRA SANCHEZ	TITLE SHEET
41 WHITMARSH ST	
PROVIDENCE, RI 02907	
PV1	

AZIMUTH AND TILT ANGLE		ROOF	
MODULE	ROOF AREA	ROOF D-1	ROOF D-2
ROOF-A	2092	18°	271°
ROOF-B	379.8	18°	271°
ROOF-C	2092	18°	271°
TOTAL AREA			
379.8	7082		
TOTAL PERCENTAGE			
18.2%			
SQUARE FEET		COUNT	
379.8	2092	1	20
TOTAL COUNT			
			21

RHODE ISLAND FIRE CODE SETBACKS



ROOF AREA CALCULATION
TOTAL AREA OF ARRAY(S) = 379.8 SQ. FT.
TOTAL AREA OF ROOF = 2092 SQ. FT.
PERCENTAGE OF ROOF COVERAGE = 18.2%

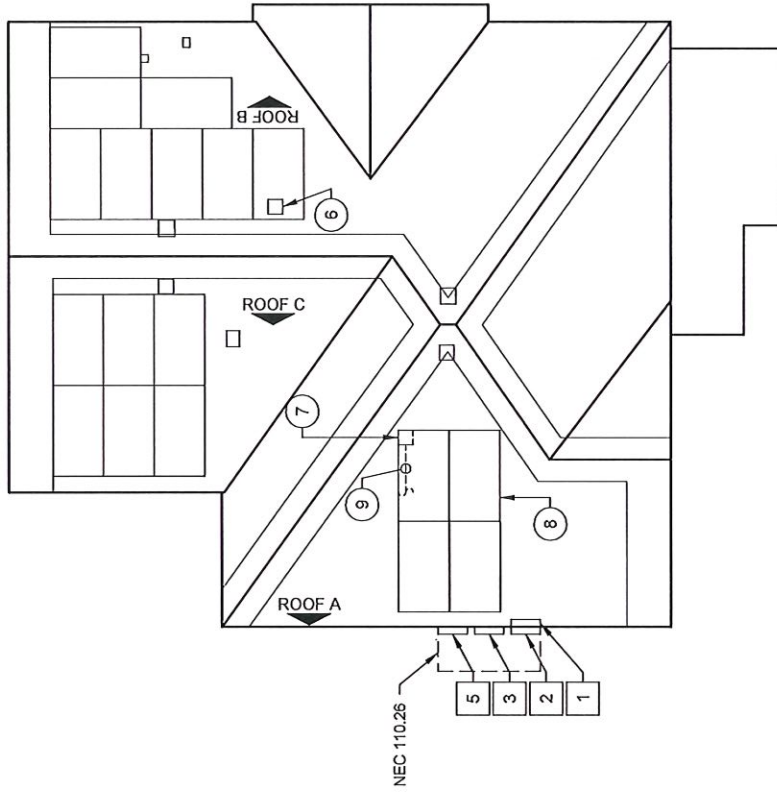


07/05/2023
Firm License Number: PE.0011286-COA
VSE Project Number: U1932.1020.231

Vector Structural Engineering has reviewed the existing structure and roof system to determine the suitability of the structure for the proposed solar PV system. The design of the mounting system, tracking connections, and all other structural is by others, Mechanical, architectural, and all other disciplines is by others, unless stamped by Dawn Lavonian, Electrical is by others, unless stamped by Dawn Lavonian.

WHITMARSH ST

COMPOSITION SHINGLES



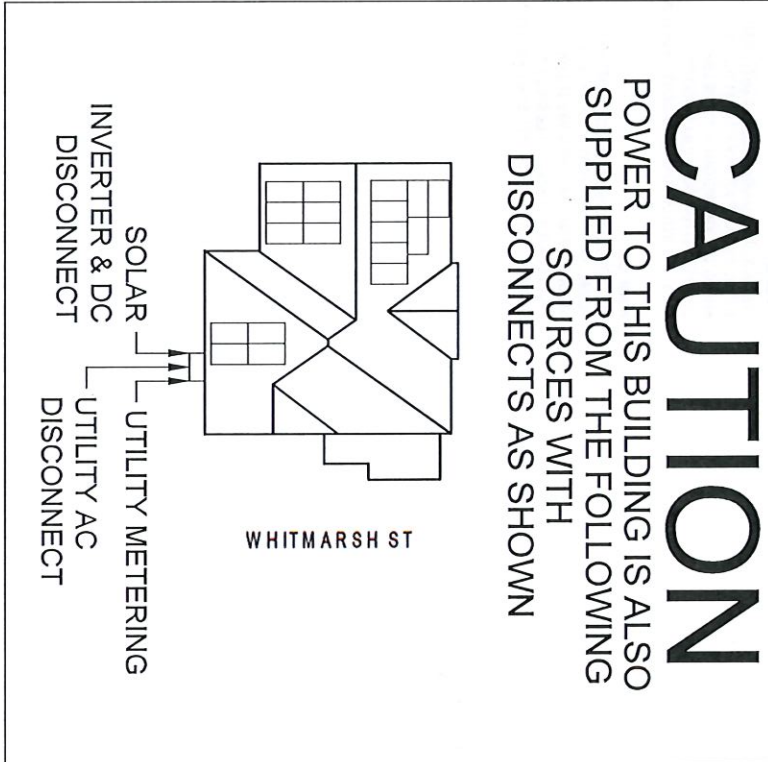
- SYMBOL LEGEND**
- = MECHANICAL VENT
 - = FLUE / PLUMBING VENT

- 1 MAIN SERVICE PANEL
- 2 UTILITY METER
- 3 AC DISCONNECT
- 4 NOT USED
- 4.1 NOT USED
- 5 INVERTER & INTEGRATED DC DISCONNECT
- 5.1 NOT USED
- 6 OPTIMIZER (TYPICAL FOR EACH MODULE)
- 7 JUNCTION BOX ROOF SIZED DETERMINED IN FIELD
- 8 PV MODULES
- 9 CONDUIT RUN IS SURFACE MOUNTED (ACTUAL CONDUIT RUNS TO BE DETERMINED IN THE FIELD)
- 10 NOT USED



 BRIGHT PLANET SOLAR 103A MILLBURY ST. ALBURN MA 01501 888-997-4469	SIGNATURE:	PROJECT #	BPS275945	REV	DATE	DESCRIPTION
	CONTRACTOR LICENSE: C-101020791 DATE: 7/5/2023 12:32:07 PM	SYSTEM SIZE	7.2KWDC	SAWAC		
		DATE:	7/5/2023 12:32:07 PM			
		DESIGNER:	DAPHNE COLON			
				ALEXANDRA SANCHEZ 41 WHITMARSH ST PROVIDENCE, RI 02907		
				ROOF/SITE PLAN PV2		

12 PLACARD



CAUTION
 POWER TO THIS BUILDING IS ALSO
 SUPPLIED FROM THE FOLLOWING
 SOURCES WITH
 DISCONNECTS AS SHOWN



651 W. SALMON MARK ROAD, APT. 101 PHONE (861) 990-1775
 OAKRIDGE, VT 05750 WWW.VECTORENGINEERS.COM

ELECTRICAL ONLY



07/05/2023

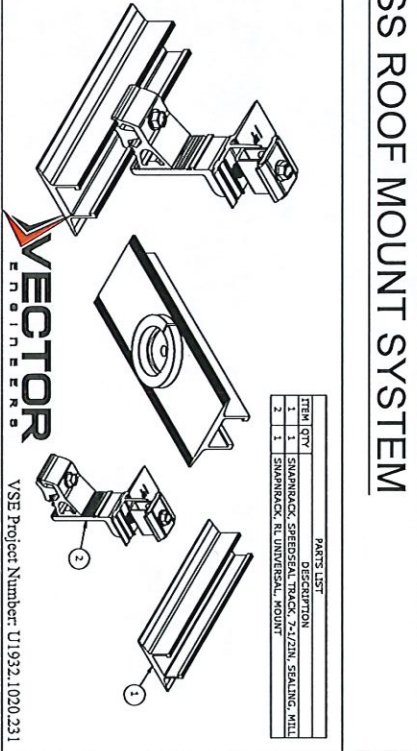
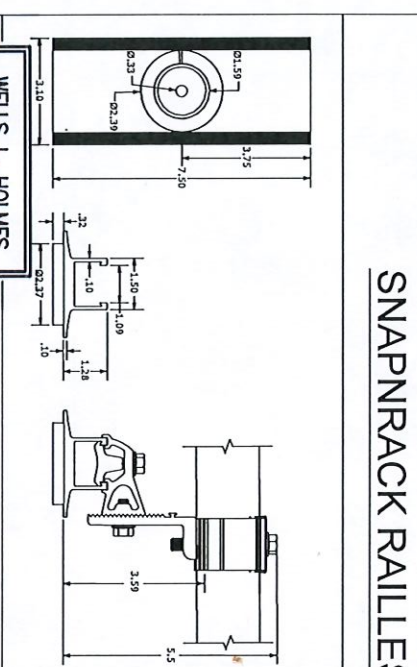
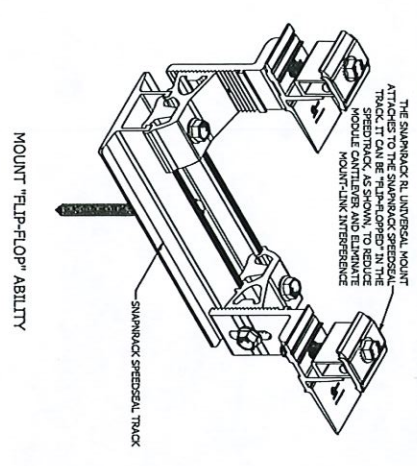
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	DATE:	7/5/2023 12:32:12 PM				
	DESIGNER:	DAFNE COLON				PV4.1

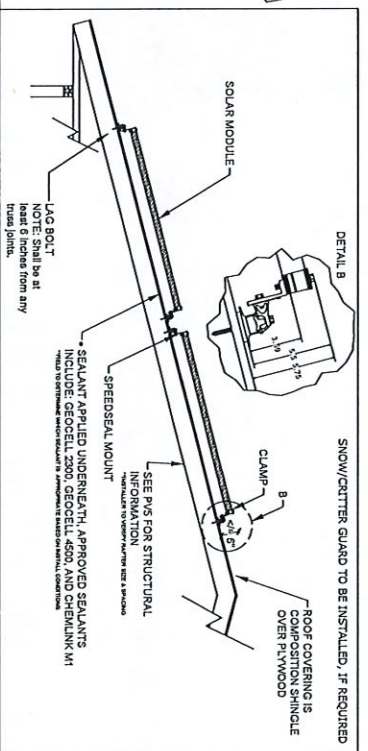
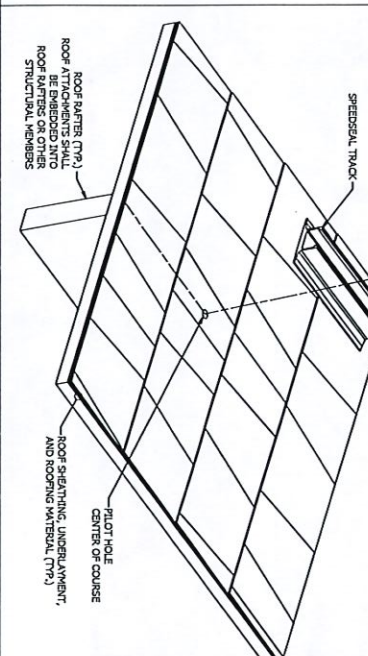
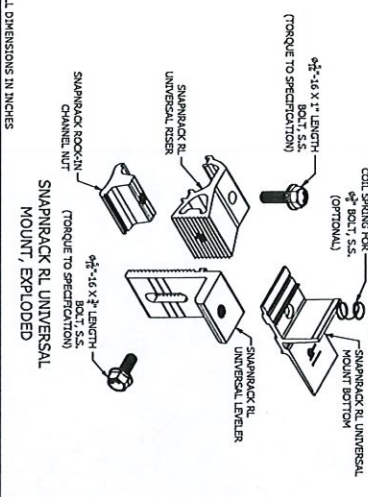
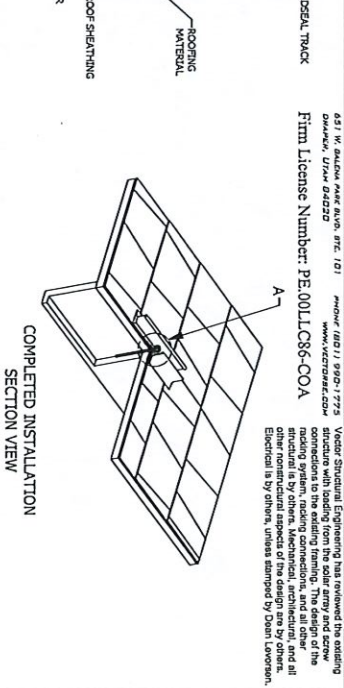
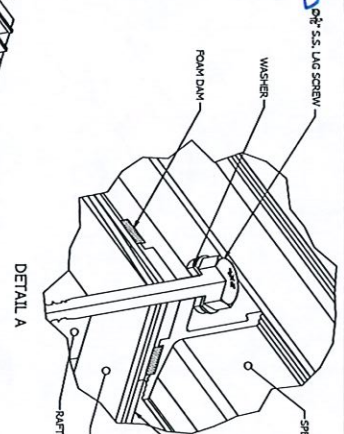
BRIGHT PLANET SOLAR
 103A WILLBURY ST.
 AUBURN MA 01501
 888-997-4469



SNAPNRACK RAILLESS ROOF MOUNT SYSTEM



WELLS L. HOLMES
 REGISTERED PROFESSIONAL ENGINEER
 STRUCTURAL
 No. 13066
 07/05/2023



BRIGHT PLANET SOLAR
 103A MILLEURY ST.
 AUBURN MA 01501
 888-997-4489

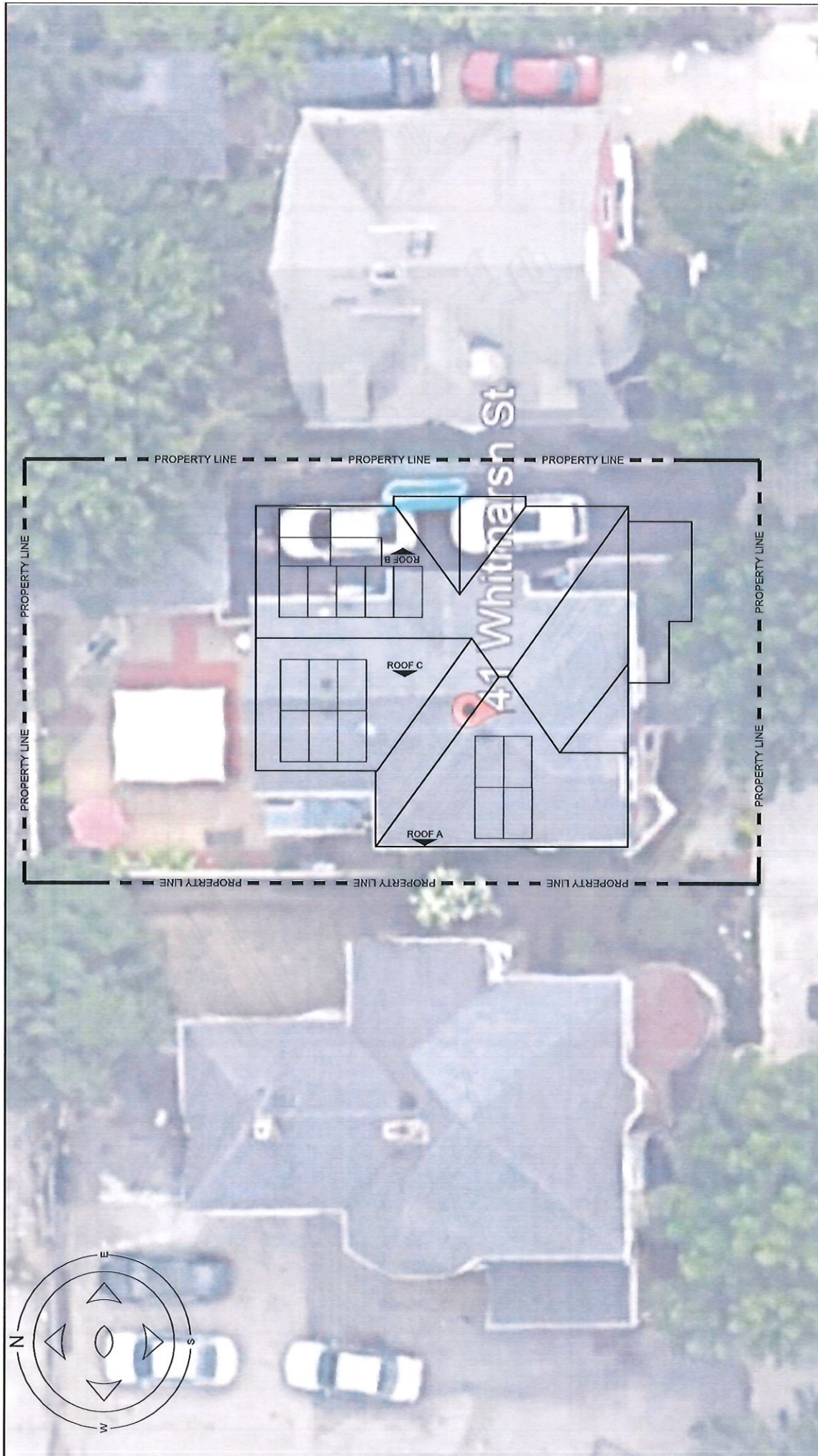
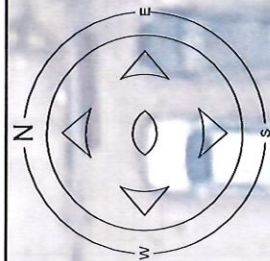
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	DESIGNER:	DA-PHNE COLON		
CONTRACTOR LICENSE: C-10M1020791				
DATE: 7/5/2023 12:32:14 PM				

ALEXANDRA SANCHEZ
 41 WHITMARSH ST
 PROVIDENCE, RI 02907

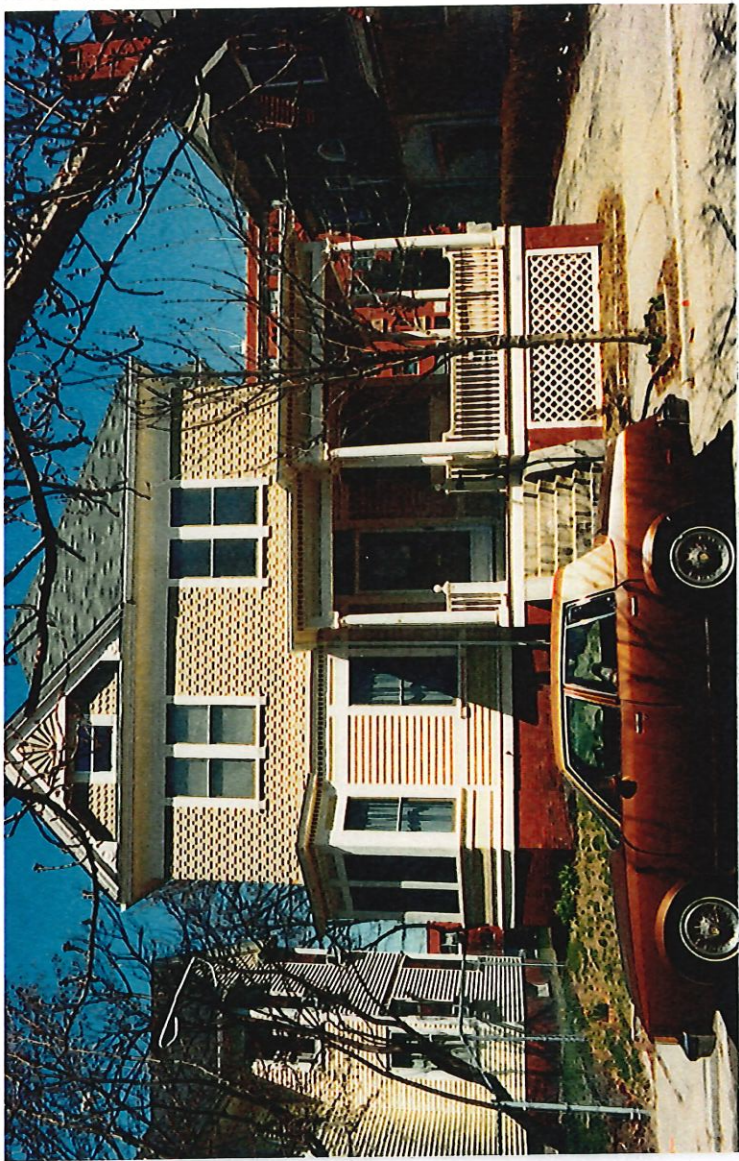
PV6

STRUCTURAL COMPONENTS

VECTOR ENGINEERING
 VSE Project Number: U1932.1020.231
 621 N. BROADWAY, 2ND FLOOR, PROVIDENCE, RI 02907
 401-451-7775
 www.vector-engineering.com
 DESIGN: URM 04/2023
 FIRM LICENSE NUMBER: PE.001LC86-COA
 The design of this system is the property of Vector Engineering, Inc. and is not to be reproduced or used in any other project without the written consent of Vector Engineering, Inc. The design of all other nonstructural aspects of the design are by others. Electrical is by others, unless stamped by Dean Lawson.



		BRIGHT PLANET SOLAR 103A MILLBURY ST, AUBURN MA 01501 888-997-4469		SIGNATURE: CONTRACTOR LICENSE: C-094120761 DATE: 7/5/2023 12:32:14 PM		PROJECT # SYSTEM SIZE DATE: DESIGNER:		BPS275945 72kWDC 7/5/2023 12:32:14 PM DAPHNE COLON		REV DATE DESCRIPTION		ALEXANDRA SANCHEZ 41 WHITMARSH ST PROVIDENCE, RI 02907		PROPERTY LINES PV7	
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41
WATMARSH
ST