3. CASE 24.017, 87 PRINCETON AVENUE, Harold Sutton House, c1913 (NORTH ELMWOOD)

Unpretentious 2½-story flank-gable shingled structure, with a screened-in shingled porch at the street-end. Sutton was a dentist. CONTRIBUTING

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Arrow indicates 87 Princeton Avenue.



Arrow indicates project location, looking north.

PHDC Staff Report February 26, 2024

Applicant/Contractor: SmartGreen Solar, 33 Broad Street, Unit 500, Providence, RI 02903

Owner: Daniel Schleifer, 87 Princeton Avenue, Providence, RI 02907

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

• the installation of sixteen solar panels on the east and west slopes of the modified-gable roof.

Issues: The following issues are relevant to this application:

- The application as submitted will be minimally-to-not visible from the public rights-of-way;
- The modifications as proposed meets 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) 87 Princeton Avenue 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,
- 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. 87 Princeton Avenue 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. 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 primary elevation and will be minimally-to-not 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.

O INSTALL A ROOF MOUNTED SOLAR PHOTOVOLTALC SYSTEMA AT THE OWNER RESIDENCE OCATED AT 18 PRINCETON AME, PROVIDENCE IN 02897, USA. HE POWNER GENERATED BY THE POWSYSTEM WILL BE INTERCONNECTED WITH THE UTILITY SHID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT. HE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES.

EQUIPMENT SUMMARY

6 REC REC405AA PURE MODULES

ENPHASE IQ8PLUS -72-2-US (240V) MICROINVERTERS

- NERAL NOTES

 **RESE CONSTRUCTION DOCUMENTS HAVE BEEN BASED ON FIELD INSPECTIONS AND THESE CONSTRUCTION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS
- CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAIN ALL PERMITS, LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION.
- CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS, ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK, ANY WORK STATED BEFORE CONSULTATION AND ACCEPTANCE BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY THEM WITHOUT ADDITIONAL COMPENSATION.
- DAMAGE CAUSED TO THE EXITING STRUCTURE. PIPES, DUCTS, WINDOWS, WALL, FLOORS, ETC, SHALL BE REPAIRED THE ORIGINAL CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION AND COMPLETION OF THE WORK WITH APPROVED MATERIALS.
- ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST OUALITY AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE MATIONAL BUILDING CODE. THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES. CONTRACTOR SHALL OBTAIN BULDING PERMIT. NO WORK TO START UNLESS BUILDING PERMIT IS PROPERLY DISPLAYED.
- IT IS ESSENTIAL THAT ALL WORK PROCEED WITH THE MAXIMUM COOPERATION OF ALL PARTIES AND WITH MINIMUM INTERFRENCE TO THE OCCUPANTS WITHIN THE BUILDING. THE OWNER'S DIRECTIONS IN THIS REGARD SHALL BE FULLY COMPLIED WITH.
- THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE WITH THE LOCAL LAWS, REGULATIONS AND THE NATIONAL ELECTRIC CODE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.

CONTRACTORS SHALL OBTAIN FIRE CERTIF. UPON COMPLETION OF WORK

- ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION. ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
- WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26. WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
- WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURERS INSTRUCTION. ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- MODULE SUPPORT RAIL SHALL BE BONDED TO THE MODULE

GOVERNING CODES

2018 INTERNATIONAL RESIDENTIAL CODE 2018 INTERNATIONAL FIRE CODE 2018 INTERNATIONAL ELECTRICAL CODE 2020 NATIONAL ELECTRICAL CODE 2021 RHODE ISLAND STATE BUILDING CODE

4.640 KWAC SYSTEM RATING

5.480 KWDC

CLASSIFICATION LISTING IN ACCORDANCE WITH UL 1703

SMART GREEN 33 BROAD ST SUITE 500, PROVIDENCE, RI 02903, USA PH#: (774) 502-59-18

SMART GREEN

AHJ NAME: CITY OF PROVIDENCE

WIRING AND CONDUIT NOTES

ALL CONDUIT SIZES AND TYPES SHALL BE LISTED FOR ITS PURPOSE AND APPROVAL FOR THE SITE APPLICATIONS

STRING LAYOUT & BOM ATTACHMENT DETAILS

- ALL PV CABLES AND HOMERUN WIRES BE #10AWG "USE-2, PV WIRE, OR PROPRIETARY SOLAR CABLING SPECIFIED BY MFR, OR EQUIVALENT, ROUTED TO SOURCE CIRCUIT COMBINER BOXES AS REQUIRED
- ALL PV DC CONDUCTORS IN CONDUIT EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO AS PER LATEST NEC CODE.
- EXPOSED ROOF PV DC CONDUCTORS SHALL BE USE-2, 90°C RATED, WET AND UV RESISTANT, AND ULLUSTED RATED FOR 600V, UV RATED SPIRAL WRAP SHALL BE USED TO PROTECT WIRE FROM SHARP EDGES
- PHASE AND NEUTRAL CONDUCTORS SHALL BE DUAL RATED THHNITHWIN-2 INSULATED, 90°C RATED, WET AND UV RESISTANT, RATED FOR 1000V AS PER APPLICABLE NEC
- 4-WIRE DELTA CONNECTED SYSTEMS HAVE THE PHASE WITH THE HIGHER VOLTAGE TO GROUND MARKED ORANGE OR IDENTIFIED BY OTHER EFFECTIVE
- ALL SOURCE CIRCUITS SHALL HAVE INDIVIDUAL SOURCE CIRCUIT PROTECTION
- **VOLTAGE DROP LIMITED TO 2%**
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED: PHASE A OR L1- BLACK PHASE B OR L2- RED, PHASE C OR L3- BLUE, NEUTRAL- WHITE/GRAY





ROJECT NAME & ADURESS

HOUSE PHOTO

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S Apsara Asian PROJECT SITE Dexiet St Bucklin St merwwo'ob La Gran Parada potters ave $\{-\}$ Prairie A PR

76 N Meadowbrook Drive, Alpine UT 84004 Wyssling Consulting, PLLC

Rhode Island COA #9333 Signed 2/12/2024

REGISTERED
PROFESSIONAL ENGINEER
CIVIL

PHONE NO. (401) 489-3977

87 PRINCETON AVE, PROVIDENCE, RI 02907, USA EMAIL ID: DANIEL.SCHLEIFER@GMAIL.COM

DANIEL SCHLEIFER

(16) ENPHASE (2:10V) SYSTEM SIZE: 6.48 KWD SYSTEM SIZE: 4.640 KWAC

REC40SAA PURI

SHEET NUMBER PV-1

VICINITY MAP

SCALE: NTS

ANSI B 11" X 17"

SHEET SIZE

COVER PAGE

SHEET NAME DATE: 2/9/202-





