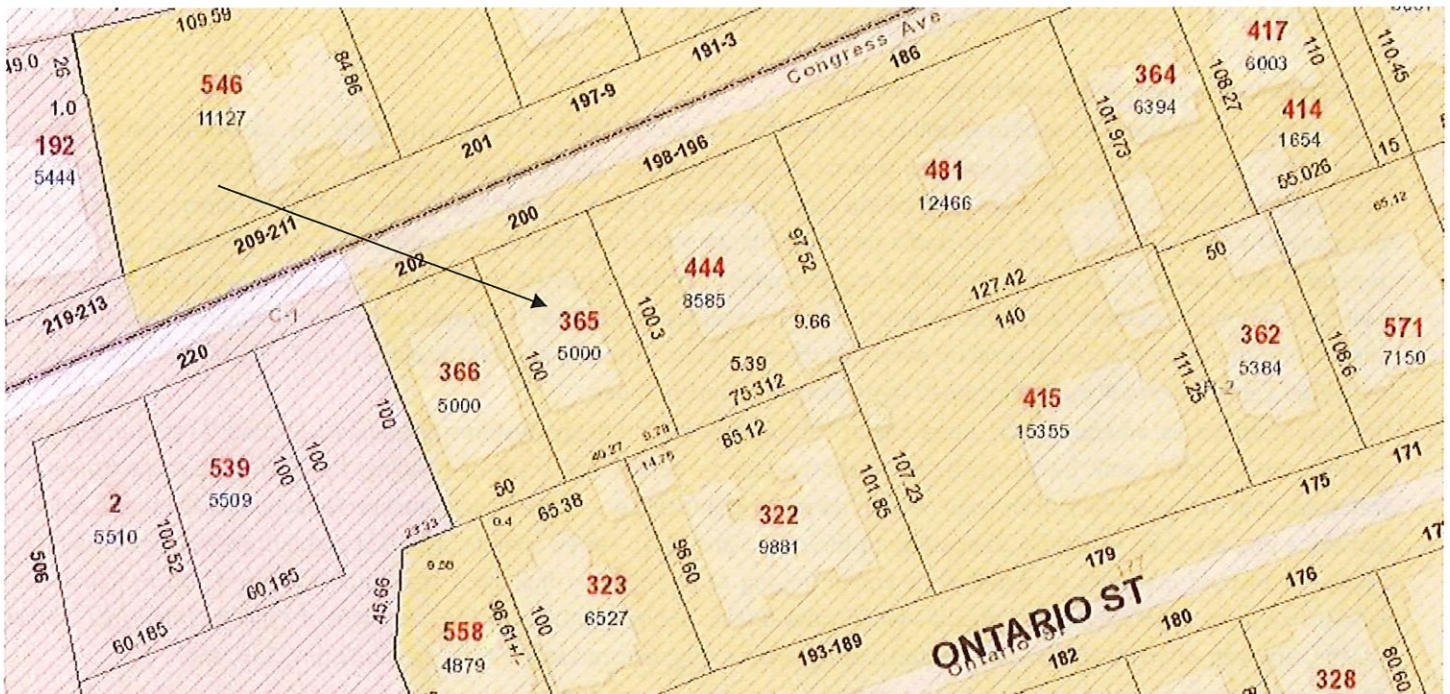
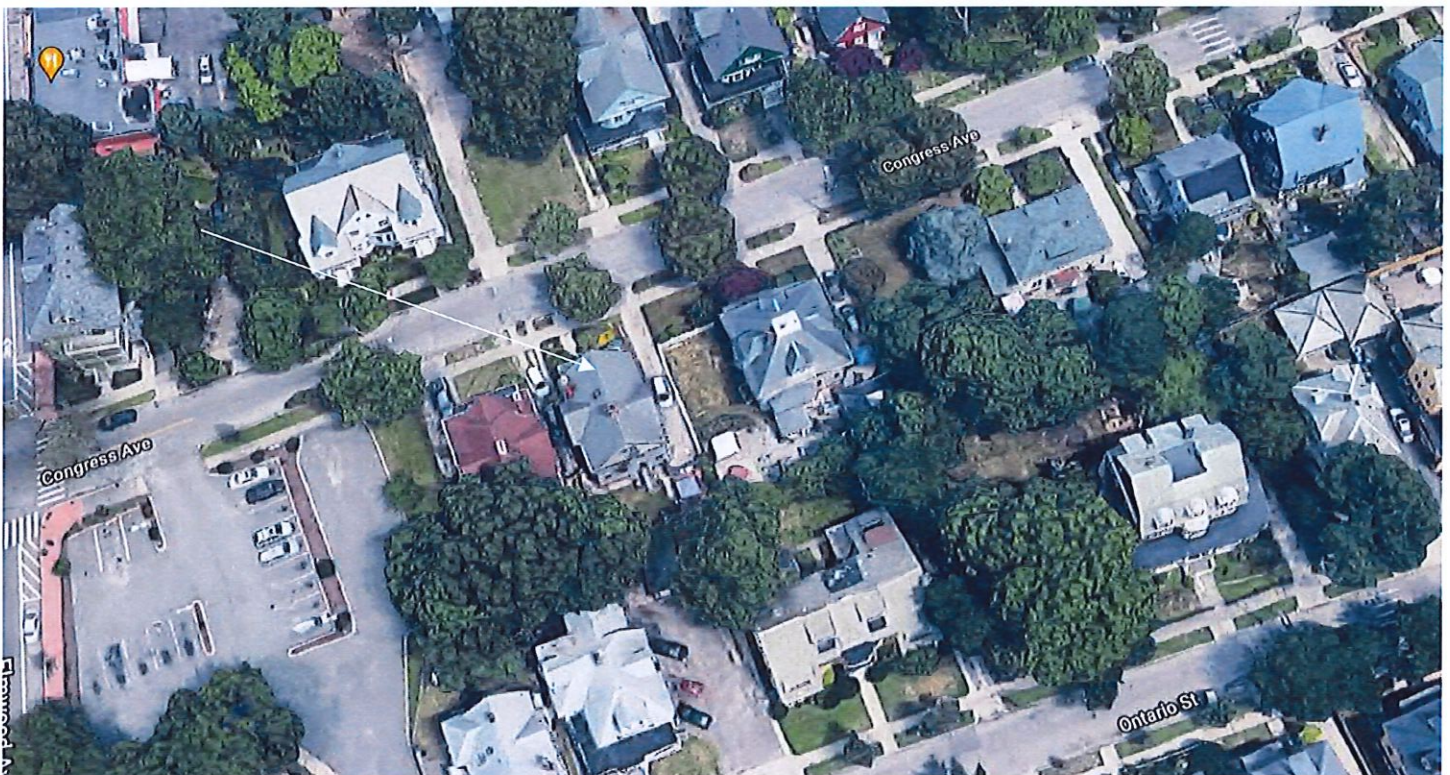


3. **CASE 22.128, 200 CONGRESS AVENUE, John A. Boyd House, 1905 (SOUTH ELMWOOD).**
2 ½-story cross-gable Colonial Revival structure, with a Palladian window in the center of a pedimented front gable and a paired Tuscan-column front porch.
CONTRIBUTING



Arrow indicates 200 Congress Avenue.



Arrow indicates project location, looking north.

Applicant/Contractor: Empower Energy Solutions, 30 Old Kings Highway S#1001, Darien, CT 06820

Owner: Michael Seely, 200 Congress Avenue, Providence, RI 02907

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

- the installation of 31 solar panels to slopes of the cross-gable roof.

Issues: The following issues are relevant to this application:

- Some of the modifications as proposed will be visible from the public rights-of-way, particularly the northwest and northeast slopes north of the side gables. It is proposed that six panels be installed on the northwest slope and 11 panels on the northeast slope, approximately 3' from the front edge of the roof. There are 10 panels proposed for the southwest slope of the gable and four panels to the southeast slope. It is staff's recommendation that the Commission request that the application be amended to remove four panels on the northwest slope and five panels on the northeast slope, further removing them from the line of sight from the public rights-of-way, with as many of the nine panels as possible relocated to the south slopes of the cross-gable, which under the current proposal have no panels on them. It is also unfortunate that the current roof, which is relatively new, is in a lighter color, which will make the panels more distinct in appearance;
- The modifications as amended 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); 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. The plans do not appear to have the proper proportions of the property.

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

- a) 200 Congress Avenue is a structure of historical and architectural significance that contributes to the significance of the South Elmwood local historic district having been recognized as a contributing structure to the Elmwood National Register Historic District;
- b) The modifications as amended may meet Minor Alterations: Solar Energy Systems Guidelines, Section 2, and the application is considered complete; and,
- c) The work as amended 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. 200 Congress Avenue is a structure of historical and architectural significance that contributes to the significance of the South 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 amended 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 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.





ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
BLDG	BUILDING
CONC	CONCRETE
C	COMBINER BOX
D	DISTRIBUTION PANEL
DC	DIRECT CURRENT
EGC	EQUIPMENT GROUNDING CONDUCTOR
(E)	EXISTING
EMT	ELECTRICAL METALLIC TUBING
GALV	GALVANIZED
GEC	GROUNDING ELECTRODE CONDUCTOR
GND	GROUND
HDG	HOT DIPPED GALVANIZED
I	CURRENT
Imp	CURRENT AT MAX POWER
INVS	INVERTERS
Isc	SHORT CIRCUIT CURRENT
KVA	KILOVOLT AMPERE
KW	KILOWATT
LBW	LOAD BEARING WALL
MIN	MINIMUM
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
P	PANEL BOARD
PL	PROPERTY LINES
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
S	SUBPANEL
SCH	SCHEDULE
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL DIAGRAMS
STC	STANDARD TESTING CONDITIONS
SWH	SOLAR WATER HEATER
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
Vmp	VOLTAGE AT MAX POWER
Voc	VOLTAGE AT OPEN CIRCUIT
W	WATT
3R	NEMA 3R, RAIN TIGHT

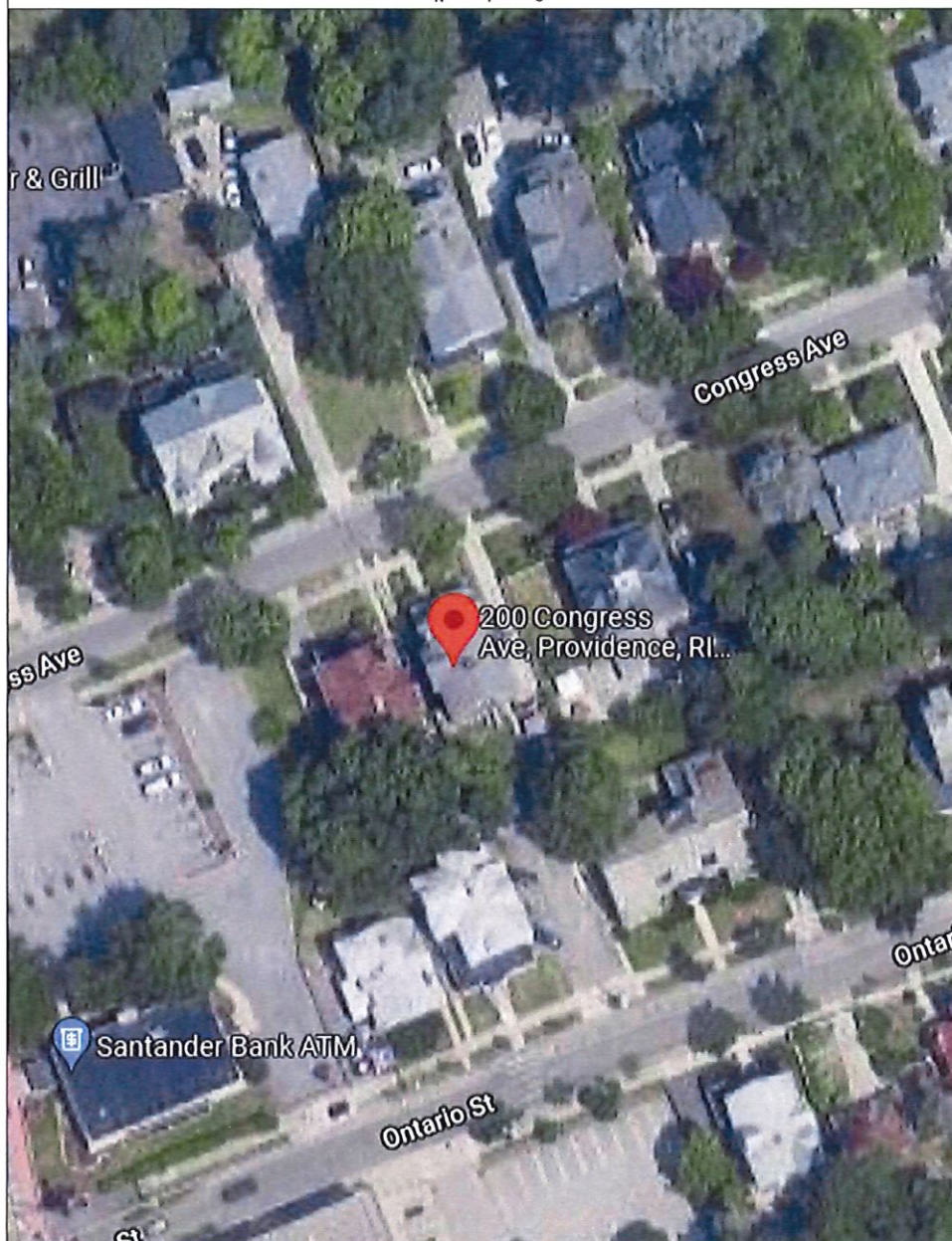
ELECTRICAL NOTES

- WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A SIGN WILL BE PROVIDED WARNING OF THE HAZARDS PER ART. 690.17.
- EACH UNGROUNDED CONDUCTOR OF THE MULTIWIRED BRANCH CIRCUIT WILL BE IDENTIFIED BY PHASE AND SYSTEM PER ART. 210.5.
- A NATIONALLY-RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH ART. 110.3.
- CIRCUITS OVER 250V TO GROUND SHALL COMPLY WITH ART. 250.97, 250.92(B)
- DC CONDUCTORS EITHER DO NOT ENTER BUILDING OR ARE RUN IN METALLIC RACEWAYS OR ENCLOSURES TO THE FIRST ACCESSIBLE DC DISCONNECTING MEANS PER ART. 690.31(E).
- ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY INTO BOXES AS REQUIRED BY UL LISTING.
- MODULE FRAMES SHALL BE GROUNDED AT THE UL-LISTED LOCATION PROVIDED BY THE MANUFACTURER USING UL LISTED GROUNDING HARDWARE.
- ALL EXPOSED METAL PARTS (MODULE FRAMES, RAIL, BOXES, ETC.) SHALL BE GROUNDED USING UL LISTED LAY-IN LUGS LISTED FOR THE PURPOSE. POSTS SHALL BE MADE ELECTRICALLY CONTINUOUS WITH ATTACHED RAIL.
- MODULE FRAMES, RAIL, AND POSTS SHALL BE BONDED WITH EQUIPMENT GROUND CONDUCTORS AND GROUNDED AT THE MAIN ELECTRIC PANEL.
- THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO ART. 250.166(B) & 690.47.

GENERAL NOTES

- THIS SYSTEM IS GRID-INTERTIED VIA A UL-LISTED POWER-CONDITIONING INVERTER.
- THIS SYSTEM HAS NO BATTERIES, NO UPS.
- ALL INVERTERS AND ARRAYS ARE NEGATIVELY GROUNDED.
- SOLAR MOUNTING FRAMES ARE TO BE GROUNDED.

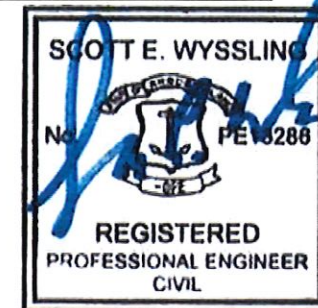
VICINITY
N T S



INDEX

PV1	COVER SHEET
PV2	SITE PLAN
PV3	ARRAY DETAIL
PV4	STRUCTURAL VIEWS
PV5	SINGLE LINE
PV6	LABEL SET

APPLICABLE CODES
2018 IBC/IRC
2020 NEC
2018 NFPA 1



Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
Rhode Island COA # 8841
Signed 9/9/2022

AHJ:
CITY OF PROVIDENCE
25 DORRANCE ST
PROVIDENCE, RI 02903
401-680-5000

UTILITY: RI ENERGY

EMPOWER ENERGY SOLUTION
30 OLD KINGS HWY S # 1001 , DARIEN
CT, 06820-4551

LICENSES
HIC: 43734
ELEC: A-003137



JOB NUMBER: 1391	UTILITY: RI ENERGY
RACKING: IRONRIDGE XR-100	UTILITY ACCT #: 88352-76034
MODULES: (31) HANWHA Q.PEAK DUO BLK ML - G10 400	
INVERTER: (1) SOLAREEDGE INVERTER SE10000H-US (10.00 kW)	

OWNER:
SEELY, MICHAEL
200 CONGRESS AVE
PROVIDENCE, RI, 02907
#1-970-367-6059

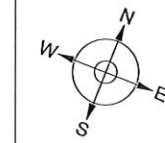
DESCRIPTION:
SEELY RESIDENCE
12.40 kW DC ROOF SOLAR SYSTEM
10.00 kW AC

DESIGNED BY:	MS
REVIEW BY:	HA
REV:	DATE: 9/8/2022

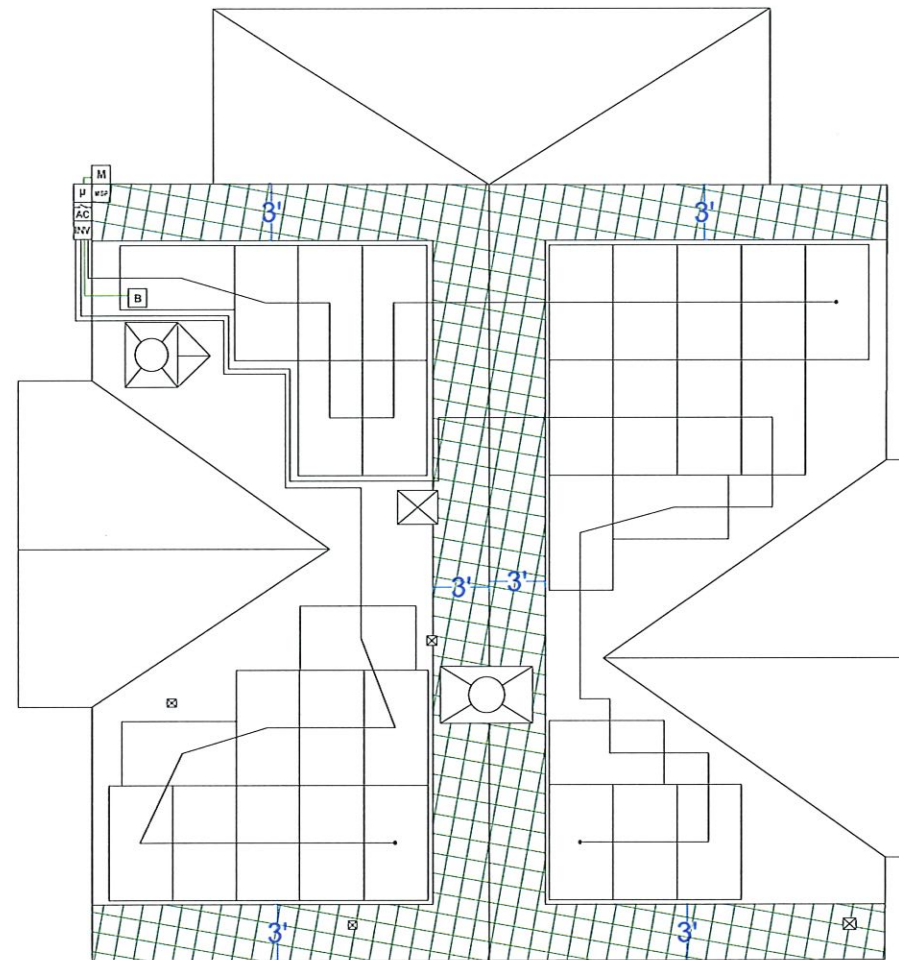
PAGE: **PV1**
PAGE NAME: COVER SHEET

CONGRESS AVE

FOH



SCALE: 1" = 10'



LEGEND

- M UTILITY METER
- INV INVERTER
- AC AC DISCONNECT
- MSP MAIN SERVICE PANEL
- B DC JUNCTION BOX
- μ MONITORING UNIT
- D DISTRIBUTION PANEL
- LC LOAD CENTER
- ATS AUTOMATIC TRANSFER SWITCH

———— CONDUIT

—○—○—○—○— FENCE



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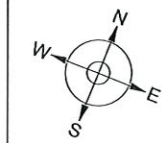
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RACKING: IRONRIDGE XR-100
MODULES: (31) HANWHA Q.PEAK DUO BLK ML - G10 400
INVERTER: (1) SOLAREEDGE INVERTER SE10000H-US (10.00 KW)

UTILITY: RI ENERGY
UTILITY ACCT #: 88352-76034
OWNER: SEELY, MICHAEL
200 CONGRESS AVE
PROVIDENCE, RI, 02907
1-970-367-6059

DESCRIPTION:
SEELY RESIDENCE
12.40 kW DC ROOF SOLAR SYSTEM
10.00 kW AC

DESIGNED BY: MS
REVIEW BY: HA
REV: DATE: 9/8/2022

PAGE: PV2
PAGE NAME: SITE PLAN



SCALE: 1" = 10'

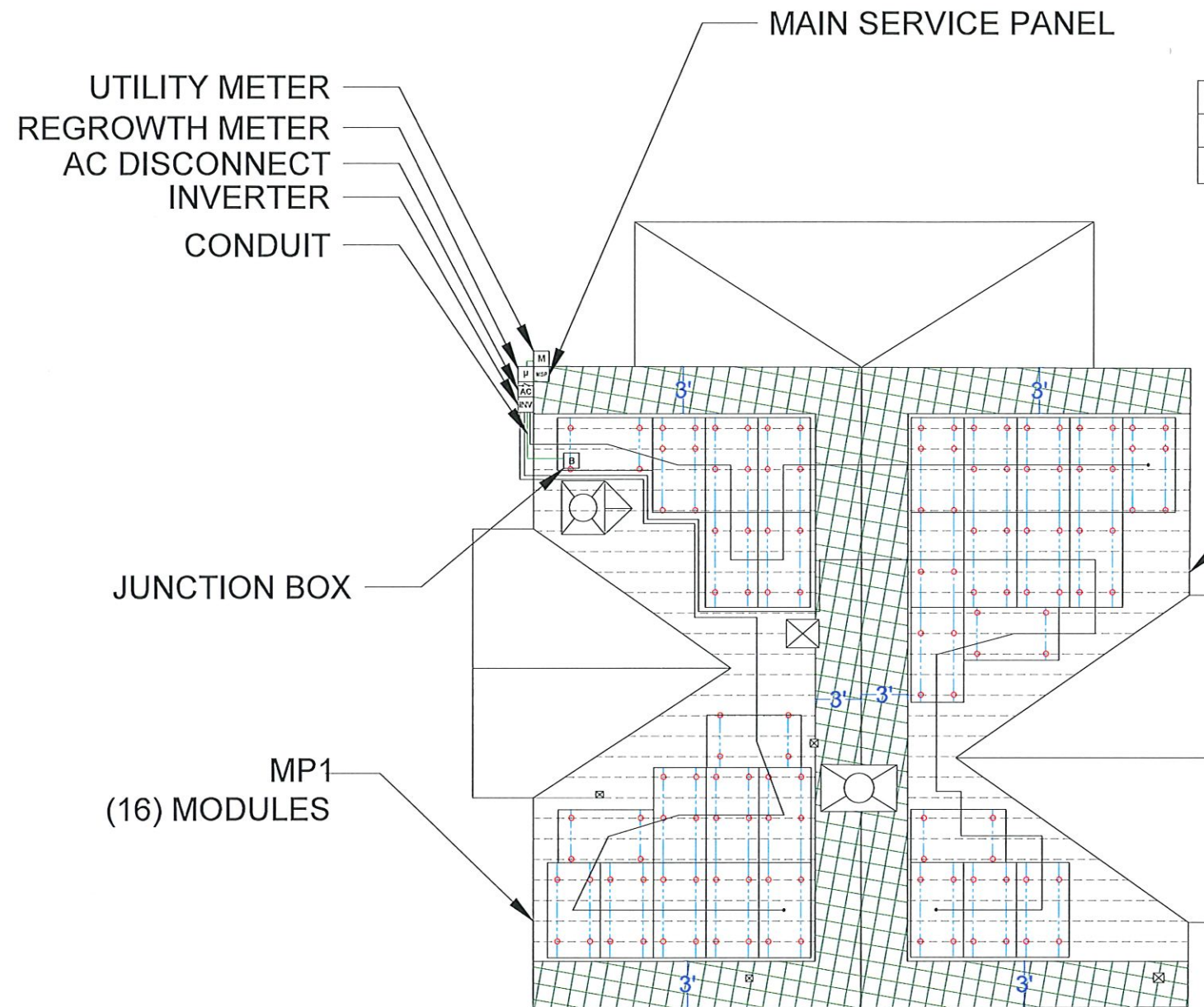
LEGEND

- ROOF
- RAFTERS
- RAIL
- MOUNT
- ⊗ OBSTRUCTION

ROOF AREA, (sq. ft)	1868
MODULES AREA, (sq. ft)	672
ROOF AREA COVERED BY MODULES (%)	36

TOTAL PENETRATION COUNT	130
-------------------------	-----

MP1	
RAFTER PROFILE	2X6
RAFTER SPACING	16"
C.J. SPACING	16"
ATTACHMENT SPACING	48"
ROOF PITCH	44°
ARRAY PITCH	44°
ROOF AZIMUTH	248°
ARRAY AZIMUTH	248°
ROOF SURFACE TYPE	ASPHALT SHINGLE
STORIES	2
MP2	
RAFTER PROFILE	2X6
RAFTER SPACING	16"
C.J. SPACING	16"
ATTACHMENT SPACING	48"
ROOF PITCH	45°
ARRAY PITCH	45°
ROOF AZIMUTH	67°
ARRAY AZIMUTH	67°
ROOF SURFACE TYPE	ASPHALT SHINGLE
STORIES	2



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76 N Meadowbrook Drive Alpine UT 84004
Rhode Island COA # 8841

Signed 9/9/2022

ROOF LEAD
SIGN OFF: _____



JOB NUMBER: 1391
RACKING: IRONRIDGE XR-100
MODULES: (31) HANWHA Q.PEAK DUO BLK ML - G10 400
INVERTER: (1) SOLAREEDGE INVERTER SE10000H-US (10.00 KW)

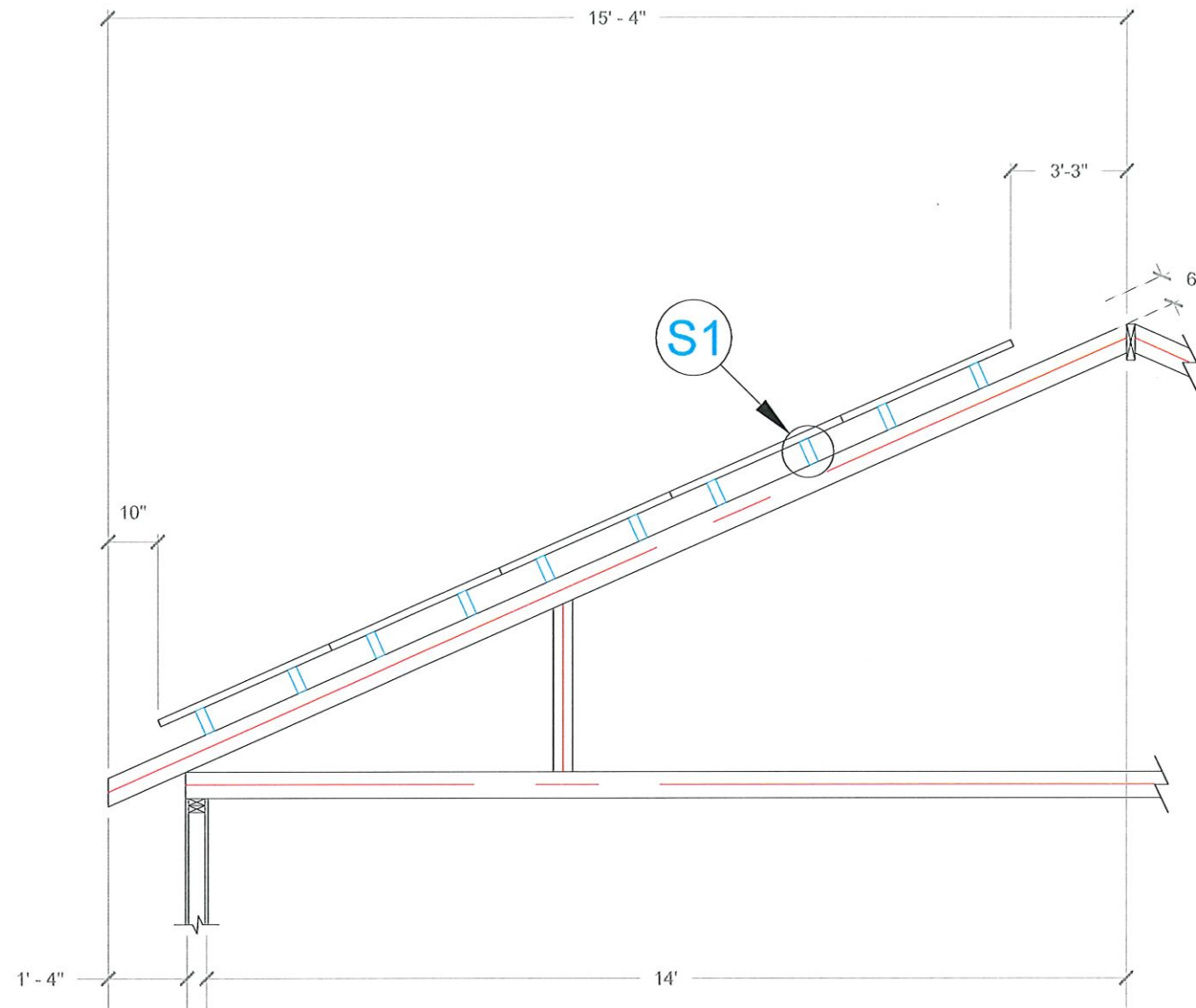
UTILITY: RI ENERGY
UTILITY ACCT #: 88352-76034

OWNER:
SEELY, MICHAEL
200 CONGRESS AVE
PROVIDENCE, RI, 02907
*1-970-367-6059

DESCRIPTION:
SEELY RESIDENCE
12.40 kW DC ROOF SOLAR SYSTEM
10.00 kW AC

DESIGNED BY: MS
REVIEW BY: HA
REV: DATE: 9/8/2022

PAGE: **PV3**
PAGE NAME: ARRAY DETAIL



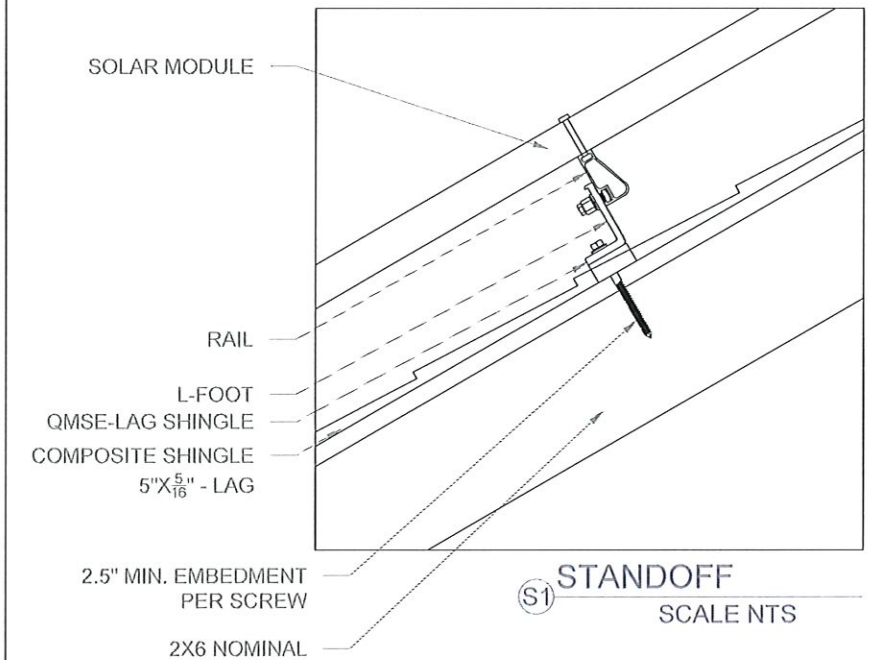
MP1 & 2 SIDE VIEW
NTS

RAFTERS: 2X6 @ 16" O.C.
MAX SPAN ~ 14'



Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
Rhode Island COA # 8841

Signed 9/9/2022



JOB NUMBER: 1391
RACKING: IRONRIDGE XR-100
MODULES: (31) HANWHA Q.PEAK DUO BLK ML - G10 400
INVERTER: (1) SOLAREEDGE INVERTER SE10000H-US (10.00 KW)

UTILITY: RI ENERGY
UTILITY ACCT #: 88352-76034

OWNER:
SEELY, MICHAEL
200 CONGRESS AVE
PROVIDENCE, RI, 02907
1-970-367-6059

DESCRIPTION:
SEELY RESIDENCE
12.40 KW DC ROOF SOLAR SYSTEM
10.00 KW AC

DESIGNED BY: MS
REVIEW BY: HA
DATE: 9/8/2022

PAGE: PV4
PAGE NAME: STRUCTURAL VIEWS