

LEGEND	
X	- MODULE STRING ID
(E)	- EXISTING
(N)	- NEW
(M)	- UTILITY METER
(MSP)	- MAIN SERVICE PANEL
(ACD)	- AC DISCONNECT
(CB)	- COMBINER BOX
LC	- LOAD CENTER
SP	- SUBPANEL
JB	- JUNCTION BOX
SCT	- STRING CENTER TAP
---	- CONDUIT
BAT	- ENERGY STORAGE
ICD	- INTERCONNECTION DEVICE
BUL	- BACK UP LOADS PANEL

**ADHESIVE FASTENED SIGNS:**

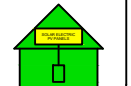
- ANSI Z535.4-2011 PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR SUITABLE FONT SIZES, WORDS, COLORS, SYMBOLS, AND LOCATION REQUIREMENTS FOR LABELS. NEC 110.21(B)(1).
- THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. NEC 110.21(B)(3).
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT.
- ALL LABELS AND MARKINGS FOR PHOTOVOLTAIC SYSTEMS WILL BE REFLECTIVE AND MEET ALL REQUIREMENTS.

**WARNING**  
ELECTRIC SHOCK HAZARD  
DO NOT TOUCH TERMINALS  
TERMINALS ON BOTH THE LINE AND  
LOAD SIDES MAY BE ENERGIZED  
IN THE OPEN POSITION

LABEL LOCATION:  
COMBINER BOX/ EMT  
ENCLOSURES/ AC DISCONNECT/  
MAIN SERVICE PANEL  
PER CODE: NEC 2017, 690.13(B)

**EMERGENCY RESPONDER**  
SOLAR PV SYSTEM EQUIPPED  
WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN  
SWITCH TO THE "OFF"  
POSITION TO SHUT  
DOWN THE ENTIRE PV  
SYSTEM



LABEL LOCATION:  
RAPID SHUTDOWN (AC DISCONNECT)  
PER CODE: NEC 690.56 (C)(1) &  
NFPA1 11.12.2.1.1.1.1, 11.12.2.1.4  
SHALL BE REFLECTIVE, WITH ALL  
LETTERS CAPITALIZED AND HAVING A  
MINIMUM HEIGHT OF 3/8 IN. (9.5 MM), IN  
WHITE ON RED BACKGROUND.

**WARNING: PHOTOVOLTAIC  
POWER SOURCE**

LABEL LOCATION:  
CONDUIT/ RACEWAY/ ENCLOSURES/  
COMBINER BOX/ AC DISCONNECT  
PER CODE: NEC2017, 690.31(G)(3)(4)

**PHOTOVOLTAIC  
AC DISCONNECT**

LABEL LOCATION:  
AC DISCONNECT/ BREAKER/  
POINTS OF CONNECTION  
PER CODE: NEC2017, 690.13(B)

**PHOTOVOLTAIC AC DISCONNECT**  
RATED AC OUTPUT CURRENT 60.0 A  
NOMINAL OPERATING AC VOLTAGE 240 V

LABEL LOCATION:  
AC DISCONNECT  
PER CODE: NEC2017, 690.54

**RAPID SHUTDOWN  
SWITCH FOR  
SOLAR PV SYSTEM**

LABEL LOCATION:  
RAPID SHUTDOWN  
(AC DISCONNECT)  
PER CODE: NEC 690.58 (C)(3)

**WARNING**  
DUAL POWER SOURCE  
SOURCES: UTILITY GRID AND  
PV SOLAR ELECTRIC SYSTEM

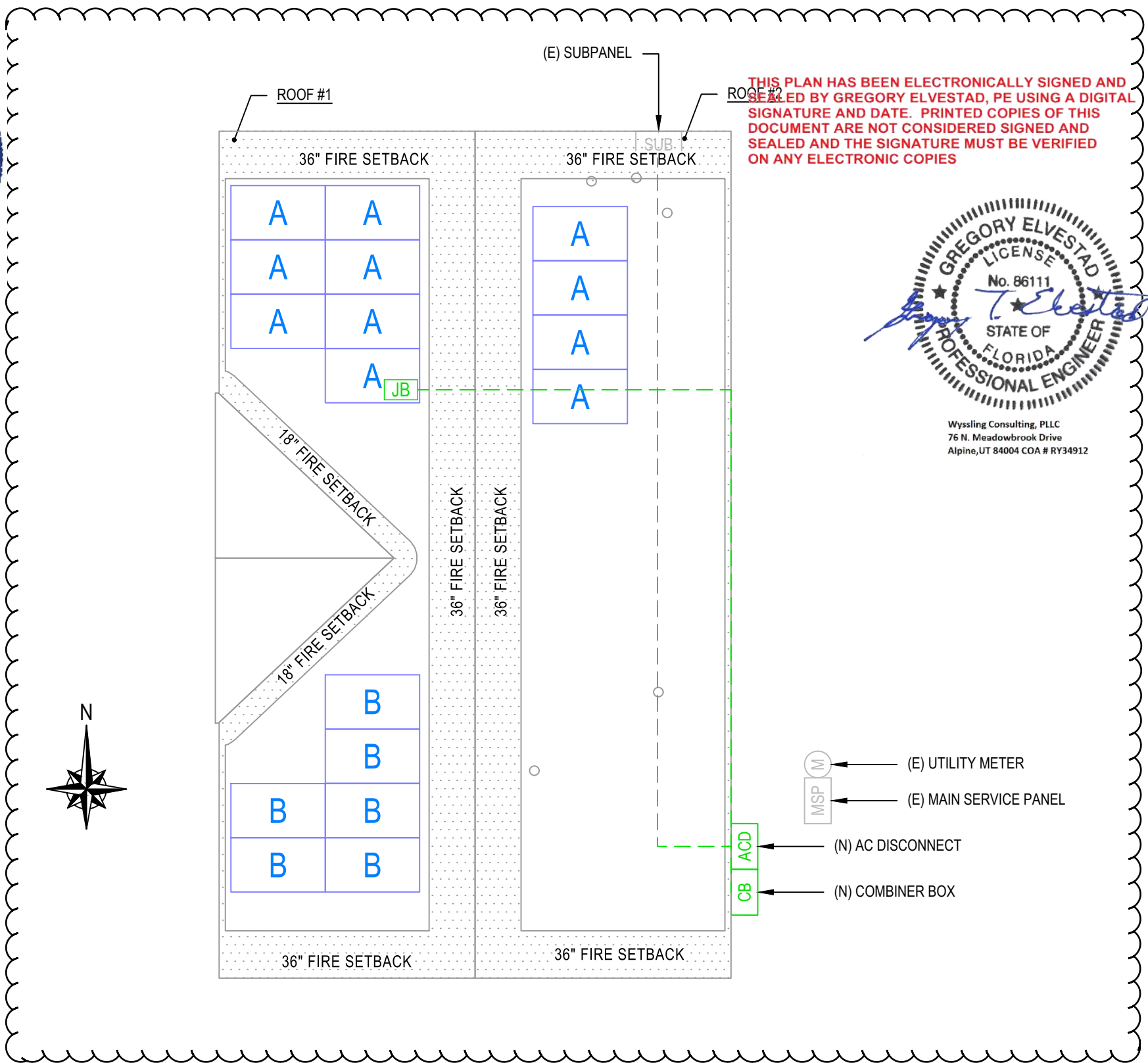
LABEL LOCATION:  
POINT OF INTERCONNECTION  
PER CODE: NEC 2017, 705.12(B)

**! WARNING !**  
INVERTER OUTPUT CONNECTION. DO NOT  
RELOCATE THIS OVERCURRENT DEVICE.

LABEL LOCATION:  
POINT-OF-INTERCONNECTION OR AT  
MAIN SERVICE DISCONNECT (MSP)  
PER CODE: NEC 705.12(B)(2)(3)(b)

**! WARNING !**  
EQUIPMENT FED BY MULTIPLE SOURCES.  
TOTAL RATING OF ALL OVERCURRENT DEVICES  
EXCLUDING MAIN SUPPLY OVERCURRENT  
DEVICE SHALL NOT EXCEED AMPACITY OF  
BUSBAR.

LABEL LOCATION:  
ANY ELECTRICAL PANEL THAT IS FED BY  
BOTH THE UTILITY AND THE PHOTOVOLTAIC  
SYSTEM (AC DISCONNECT, MSP)  
PER CODE: NEC 705.12(B)(2)(3)(C)



THIS PLAN HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY GREGORY ELVESTAD, PE USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES



Wyssling Consulting, PLLC  
76 N. Meadowbrook Drive  
Alpine, UT 84004 COA # RY34912

- (E) UTILITY METER
- (E) MAIN SERVICE PANEL
- (N) AC DISCONNECT
- (N) COMBINER BOX

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY OMAR TIRADO ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEAL, AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

1 | ROOF PLAN WITH STRING LAYOUT  
E-1 | SCALE: NTS

**AKE SOLAR**  
ATLANTIC KEY ENERGY LLC  
12600 CHALLENGER PARKWAY  
SUITE 200  
ORLANDO, FL 32826  
1 (407) 988-0273

**Lumio**  
PROJECT NAME & ADDRESS

PATRICK ROURKE  
RESIDENCE  
PROJECT # P-0032644  
121 SOUTHWEST NATHAN COURT  
LAKE CITY, FL 32024

SIGNATURE WITH SEAL

REVISIONS		
DESCRIPTION	DATE	REV
INTERCONNECTION	1/30/23	A

Drawn by: CM  
Date: 1/3/2023

SHEET NAME  
**STRING LAYOUT & SIGNAGE**  
SHEET NUMBER  
**E-1**

ID	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	MIN. CONDUCTOR SIZE (AWG)		MIN. DIA CONDUIT SIZE (IN.)	# OF PARALLEL CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	OCPD (A)	MIN. EGC SIZE (AWG)		TEMP. CORR. FACTOR	CONDUIT FILL FACTOR	CONT. CURRENT (A)	MAX. CURRENT (A)	BASE AMP. (A)	DERATED AMP. (A)	TERM. AMP. RATING (A)	LENGTH (FT)	VOLTAGE DROP (%)	
1	STRING A	JUNCTION BOX	12	Q CABLE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	13.31	16.64	30	N/A	N/A	53.00	0.47
2	STRING B	JUNCTION BOX	12	Q CABLE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	7.26	9.08	30	N/A	N/A	39.00	0.47
3	JUNCTION BOX	COMBINER BOX	10	THWN-2 COPPER	0.75 LTNM	2	4	20	10	THWN-2 COPPER	0.76	55°C	0.8	13.31	16.64	40	24.3	35	67.00	0.92
4	COMBINER BOX	AC DISCONNECT	10	THWN-2 COPPER	0.75 LTNM	1	3	N/A	10	THWN-2 COPPER	0.96	34°C	1	20.57	25.71	40	38.4	35	5.00	0.11
5	AC DISCONNECT	SUBPANEL	10	THWN-2 COPPER	0.75 LTNM	1	3	30	10	THWN-2 COPPER	0.96	34°C	1	20.57	25.71	40	38.4	35	50.00	1.07

**AKE SOLAR**  
**ATLANTIC KEY ENERGY LLC**  
 12600 CHALLENGER PARKWAY  
 SUITE 200  
 ORLANDO, FL 32826  
 1 (407) 988-0273

**lumio**  
 PROJECT NAME & ADDRESS

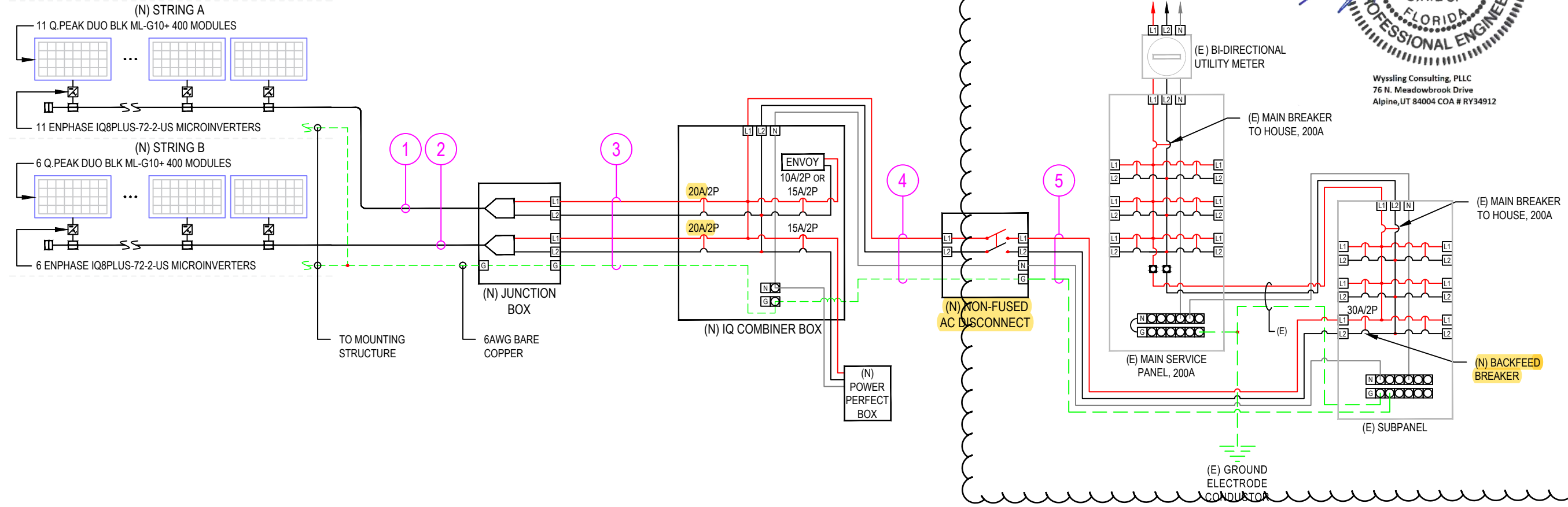
**Gregory Elvestad, PE**

Digitally signed by Gregory Elvestad, PE  
 DN: C=US, S=Utah, L=Alpine, O=Wysling Consulting PLLC, OU=Director of Electrical Engineering, CN="Gregory Elvestad, PE", E=gelvestad@wyslingconsulting.com  
 Reason: I am the author of this document  
 Location: your signing location here  
 Date: 2023.01.31 08:47:50-0700  
 Foxit PDF Editor Version: 11.1.0

**THIS PLAN HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY GREGORY ELVESTAD, PE USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES**



Wysling Consulting, PLLC  
 76 N. Meadowbrook Drive  
 Alpine, UT 84004 COA # RY34912



**PATRICK ROURKE**  
**RESIDENCE**  
**PROJECT # P-0032644**  
**121 SOUTHWEST NATHAN COURT**  
**LAKE CITY, FL 32024**

SIGNATURE WITH SEAL

REVISIONS		
DESCRIPTION	DATE	REV
REVISED INTERCONNECTION	1/30/23	A

Drawn by: CM  
 Date: 1/3/2023

SHEET NAME  
**ELECTRICAL LINE DIAGRAM & CALCS.**  
 SHEET NUMBER  
**E-2**

**NOTE:**  
 1. LTNM OR EQUIVALENT TYPE CONDUIT

**LEGEND**  
 (E) - EXISTING  
 (N) - NEW

DESIGN TEMPERATURE SPECIFICATIONS	
RECORD LOW TEMP	-5°C
AMBIENT TEMP. (HIGH TEMP. 2%)	34°C
CONDUIT HEIGHT	1.0"
CONDUCTOR TEMP. RATE (ROOF)	55°C

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY OMAR TIRADO ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEAL, AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES

**1** | **ELECTRICAL LINE DIAGRAM**  
 E-2 | SCALE: NTS