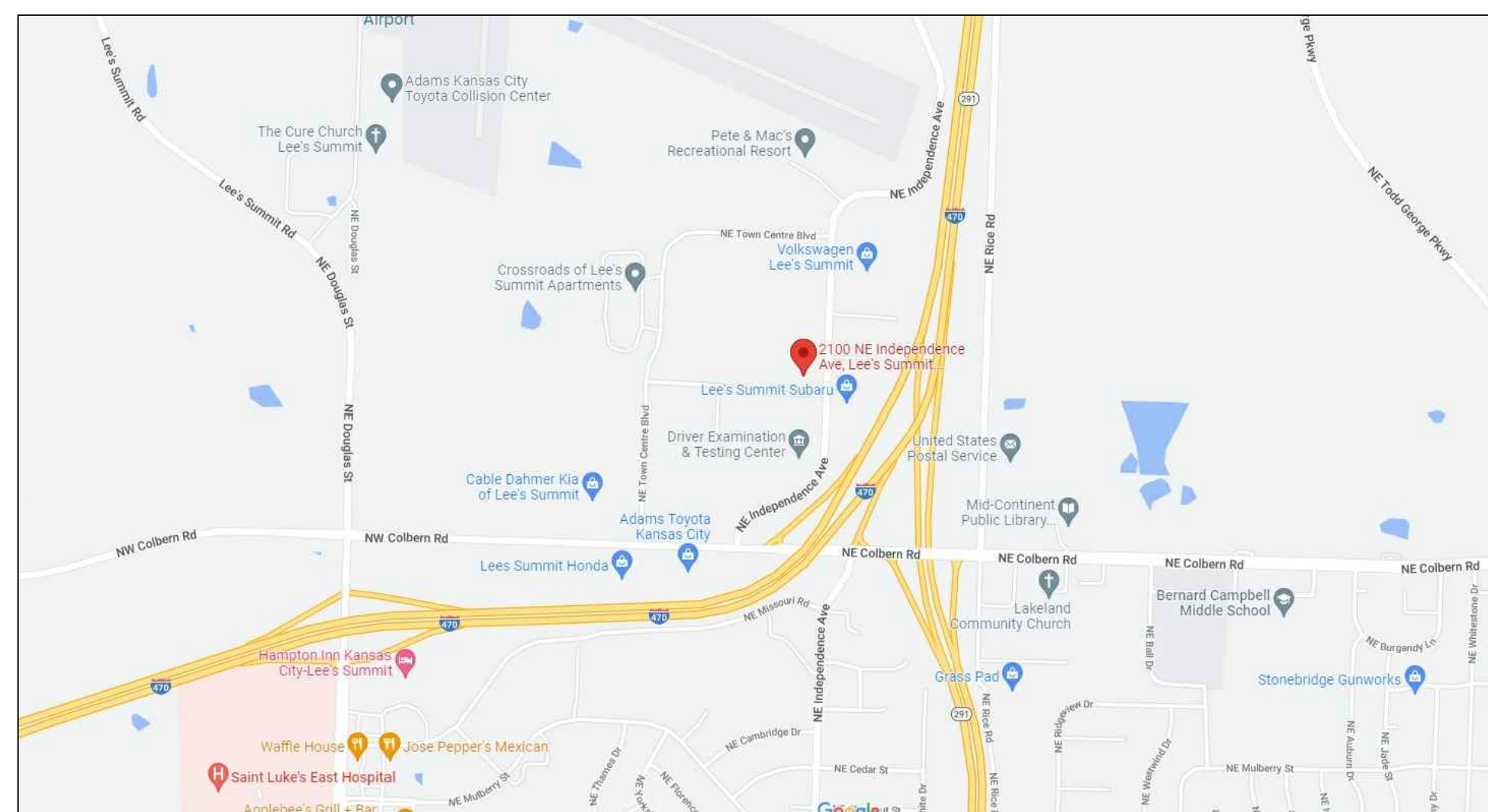


94.05 KW DC ROOFTOP PHOTOVOLTAIC SYSTEM

2100 NE INDEPENDENCE AVE, LEE'S SUMMIT, MO 64064, USA



① VICINITY MAP

Scale: NTS



② AERIAL VIEW

Scale: NTS

PROJECT INFORMATION

SCOPE OF WORK:

THE PROJECT IS TO INSTALL A ROOF MOUNT PHOTOVOLTAIC SYSTEM AND ALL ASSOCIATED POWER EQUIPMENT AT A COMMERCIAL PROPERTY. SYSTEM WILL BE INTERCONNECTED TO THE ELECTRICAL UTILITY GRID PER THE REQUIREMENTS OF THE UTILITY COMPANY AND ALL APPLICABLE LOCAL AND NATIONAL CODES.

SYSTEM SPECIFICATIONS

MODULE -	ZNSHINESOLAR
TOTAL MODULE COUNT	209
NOMINAL POWER	450W
TOTAL DC SYSTEM RATING	94.05 KW DC
INVERTER -	FRONIUS (SYMO 24.0-3 480)
TOTAL INVERTER COUNT	2
TOTAL INVERTER OUTPUT	48 KW AC
INVERTER -	FRONIUS (SYMO 20.0-3 480)
TOTAL INVERTER COUNT	1
TOTAL INVERTER OUTPUT	20 KW AC

DESIGN CRITERIA

DC DESIGN WILL BE BASED ON A 1000V DC.
ASHRAE DATA AVAILABLE FOR LEE'S SUMMIT MUNICIPAL IS AS FOLLOWS:

2% AVERAGE HIGHEST TEMP	38°C
EXTREME MINIMUM	-17.7°C

BUILDING NOTES

NO. OF STORIES	1
BUILDING HEIGHT	30'

NOTES

MODULE TILT	10°
MOUNTING TYPE	ROOFTOP
SOLAR ARRAY FOOTPRINT	4298.4 SQ. FT

LIST OF DRAWINGS / DOCUMENTS

DRAWINGS:

COVER SHEET	T-1
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SINGLE LINE DIAGRAM	E-3
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EQUIPMENT DATA SHEETS	D-2
EQUIPMENT DATA SHEETS	D-3

DOCUMENTS:

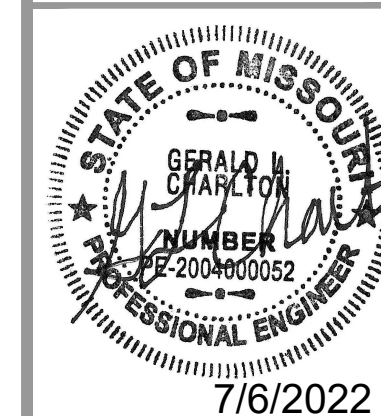
CALCULATIONS

GENERAL NOTES

THE DRAWINGS, SPECIFICATIONS AND ELECTRICAL DIAGRAMS CONTAINED HEREIN HAVE BEEN PREPARED BY DESIGN PROFESSIONALS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THE STATE OF MISSOURI, AND HAVE BEEN EXAMINED FOR:

- DESIGN INTENT
- APPLICABLE CODES, REGULATIONS, AND STANDARDS
- COORDINATION OF THE WORK SHOWN ON RELATED PLANS

THE WORK IS DETERMINED TO BE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.



NAME OF CUSTOMER	Lee's Summit Detail Shop
TITLE	COVER SHEET
SUBJECT	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

REV. #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1			


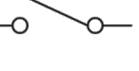
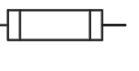
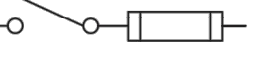

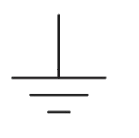
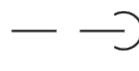
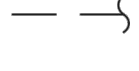
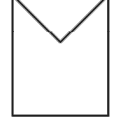



Artisun Solar
12916 5TH ST
GRANDVIEW, MO 64030
PH: (813) 601-0700

DWG NO: T-1
PROJ NO: NEI-210

ABBREVIATIONS

A	AMPERE
AC	ALTERNATING CURRENT
AFCI	ARC-FAULT CIRCUIT INTERRUPTER
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMERAGE INTERRUPTION CAPACITY
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
CB-#	COMBINER BOX
DAS	DATA AQUISITION SYSTEM
DC	DIRECT CURRENT
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
IBC	INTERNATIONAL BUILDING CODE
IFC	INTERNATIONAL FIRE CODE
KW	KILOWATT
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
NEC	NATIONAL ELECTRICAL CODE
NTS	NOT TO SCALE
OC	ON CENTER
OCPD	OVERCURRENT PROTECTION DEVICE
P	POLE
PH	PHASE
POC	POINT OF CONNECTION
PV	PHOTOVOLTAIC
RMC	RIGID METALLIC CONDUIT
SC	SOURCE CIRCUIT
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
V	VOLT OR VOLTAGE
W	WATT
XFMR	TRANSFORMER

SYMBOLS LEGEND

	ELECTRICAL BREAKER
	ELECTRICAL DISCONNECT SWITCH
	ELECTRICAL FUSE
	ELECTRICAL FUSED DISCONNECT SWITCH
	METER
	SYSTEM OR EQUIPMENT GROUND
	CONDUIT DOWN
	CONTINUATION OF CONDUIT
	PHOTOVOLTAIC (PV) MODULE
	DC/AC INVERTER
	POWER TRANSFORMER
	CONNECTED CONDUCTOR

APPLICABLE CODES

NATIONAL ELECTRIC CODE (NEC), 2017
INTERNATIONAL BUILDING CODE (IBC), 2018
INTERNATIONAL MECHANICAL CODE, 2018
INTERNATIONAL PLUMBING CODE, 2018
INTERNATIONAL FUEL GAS CODE, 2018
INTERNATIONAL FIRE CODE (IFC), 2018
ICC/ANSI A117.1-2009 AS AMENDED AND ADOPTED BY THE CITY OF LEE'S SUMMIT

CONSTRUCTION TYPE: TYPE 2
OCCUPANCY TYPE: B

*INCLUDES ALL LOCAL AND STATE AMENDMENTS

SYSTEM NOTES

- SOLAR ARRAY CONSISTS OF PV MODULES, CONNECTED IN SERIES.
- ARRAYS HAVE BEEN PLACED TO MINIMIZE OR ELIMINATE SHADING IMPACT FROM ADJACENT STRUCTURES AND/OR OBSTRUCTIONS.
- ALL ARRAY LAYOUTS ADHERE TO LOCAL AHJ REQUIREMENTS FOR SETBACKS AND PATHWAYS.
- MINIMUM 3 FOOT CLEARANCE PROVIDED FOR ALL ROOF TOP HVAC UNITS AND SERVICEABLE EQUIPMENT. MINIMUM 4 FOOT SETBACK TO ROOF EDGE.
- INVERTERS SHALL BE TRANSFORMERLESS STRING INVERTERS, LOCATION PER PLAN.

SITE INFORMATION

UTILITY COMPANY: Evergy
METER NUMBERS: 23396913

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND/OR APPRENTICES WORKING UNDER THE DIRECT SUPERVISION OF THE LICENSED CONTRACTOR.
- ALL WORK CARRIED OUT SHALL COMPLY WITH THE SPECIFICATIONS, APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF AN DISCREPANCIES NOTED AMONG SITE CONDITIONS, MANUFACTURER RECOMMENDATIONS, OR AUTHORITY HAVING JURISDICTION. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD A WRITTEN "RFI"(REQUEST FOR INFORMATION) PROPOSING AN ALTERNATIVE OR SEEKING CLARIFICATION.
- THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, ACCESSORIES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
- FALL ARREST PROTECTION PER OSHA REQUIREMENTS SHALL BE PROVIDED FOR ALL ROOF WORK.
- WHEN INSTALLING IN FIRE RATED AREAS, SEAL ALL PENETRATIONS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
- CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION. ALL DEBRIS AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES NOT PART OF THE SCOPE OF WORK AS IDENTIFIED IN THESE PLANS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
- DUE TO THE FACT THAT PV MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT, CONTRACTOR SHALL DISABLE THE ARRAY DURING INSTALLATION AND SERVICE BY SHORT CIRCUITING, OPEN CIRCUITING, OR COVERING ARRAY WITH AN OPAQUE COVER ACCORDING TO MANUFACTURER'S INSTRUCTION.
- CONSTRUCTION LOADING ON THE ROOF, SUCH AS MATERIAL STAGED ON THE ROOF, SHALL BE LIMITED TO 20 PSF. CONCENTRATED LOADING SHALL BE AVOIDED TO PREVENT LOCALIZED DAMAGE TO THE ROOF.

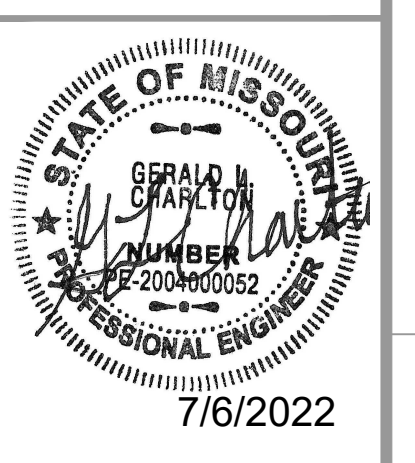
ELECTRICAL NOTES

- THE PV ELECTRIC SYSTEM IS INTENDED TO BE OPERATED IN PARALLEL WITH THE UTILITY ELECTRICAL SERVICE AND WILL BE CONNECTED TO THE EXISTING FACILITY POWER SYSTEM AT A SINGLE POC. THIS CONNECTION SHALL BE IN COMPLIANCE WITH NEC 705.12.
- ALL INVERTERS AND PANELBOARDS SHALL BE SECURED FROM UNAUTHORIZED ACCESS BY LOCK OR LOCATION.
- CONDUITS AND CABLES SHALL BE BOTTOM ENTRY ONLY TO ANY ENCLOSURE.
- FEEDERS SHALL MAINTAIN PHASE RELATIONSHIP THROUGHOUT THE SYSTEM. PHASES SHALL MATCH BUS OR CABLE ARRANGEMENTS IN EQUIPMENT TO WHICH THE FEEDERS ARE CONNECTED. COLOR CODING SHALL BE AS FOLLOWS:

	208/120 VAC	480/277 VAC		1000VDC
PHASE A	BLACK	BROWN	POSITIVE	RED
PHASE B	RED	ORANGE	NEGATIVE	BLACK
PHASE C	BLUE	YELLOW	GROUNDED CONDUCTOR	WHITE
GROUNDED CONDUCTOR	WHITE	WHITE	GROUND	GREEN
GROUND	GREEN	GREEN		
- PV STRING HOME RUNS MUST BE LABELED AT ALL TERMINATIONS. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, ACCESSORIES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- SUPPORT CONDUCTORS IN VERTICAL CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF NEC 300.19.

GROUNDING NOTES

- ONLY ONE CONNECTION TO AC CIRCUITS WILL BE USED FOR SYSTEM GROUNDING (NEC 690.42).
- RACKING AND STRUCTURAL COMPONENTS MUST BE ELECTRICALLY BONDED TOGETHER BY AN ACCEPTABLE MEANS. RACKING SYSTEM SHALL BE LISTED TO UL2703.
- MODULES SHALL BE GROUNDED WITH EQUIPMENT GROUNDING CONDUCTORS BONDED TO A LOCATION APPROVED BY THE MANUFACTURER WITH A MEANS OF BONDING LISTED FOR THIS PURPOSE.
- A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690.47 AND NEC 250.50 THROUGH NEC 250.166 SHALL BE PROVIDED. THE GROUNDING ELECTRODE SYSTEM OF THE BUILDING MAY BE USED AND BONDED TO AT THE SERVICE ENTRANCE.
- PV SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.21 AND ALL METAL PARTS OR MODULE FRAMES ACCORDING TO NEC 690.43.
- ALL CONDUIT BETWEEN THE UTILITY AC DISCONNECT AND THE POC SHALL HAVE GROUNDED BUSHINGS AT BOTH ENDS OR OTHER METHODS AS APPROVED IN NEC 250.92.



NAME OF CUSTOMER	Lee's Summit Detail Shop
TITLE	LEGENDS & GEN. NOTES
SUBJECT	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

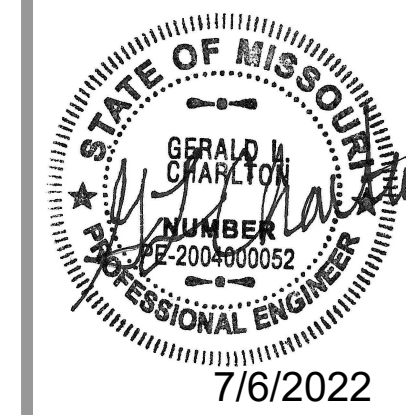
Rev #	1	DATE	05-27-2022	REMARKS	Lee's Summit Detail Shop - Rev 1
DESIGNED		CHECKED	APPROVED		

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PH: (813) 601-0700

DWG NO: **G-1**
PROJ NO: NEI-210

MODULE MAKE	ZNSHINESOLAR
MODULE TYPE	ZXM6-NHLDD144-450/M
MODULE DIMENSIONS	82.44" X 40.86" X 1.18"

MODULE COUNT PER ARRAY					
ARRAY	MODULE RATING (W)	AZIMUTH	TILT	MODULES	KWDC
ARRAY 1	450	180	10	209	94.05
		TOTAL		209	94.05



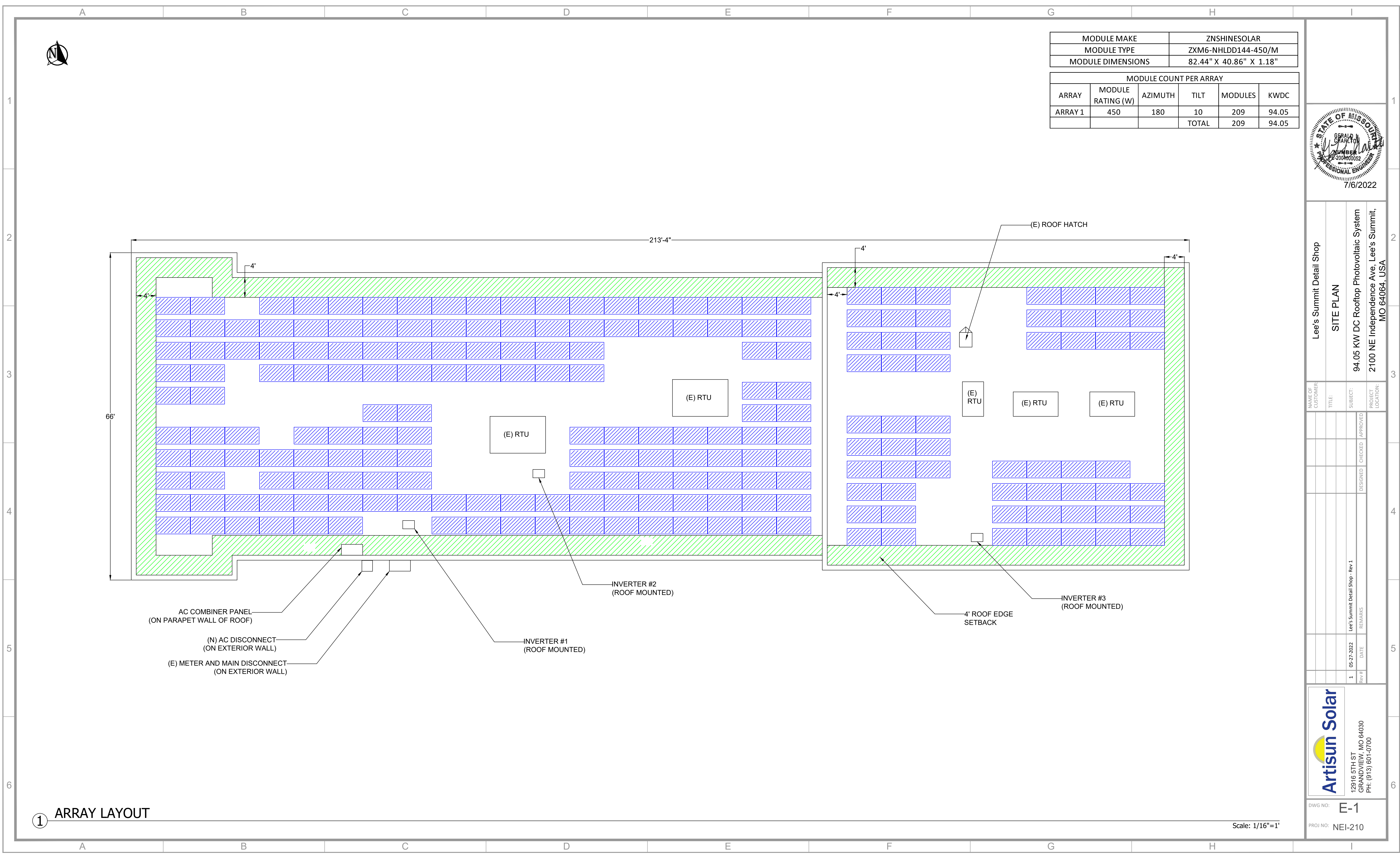
Lee's Summit Detail Shop
SITE PLAN
 94.05 KW DC Rooftop Photovoltaic System
 2100 NE Independence Ave, Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION
		Lee's Summit Detail Shop - Rev 1	

DATE	REVISIONS	DESIGNED	CHECKED	APPROVED
05-27-2022				

Artisan Solar
 12916 5TH ST
 GRANDVIEW, MO 64030
 PH: (813) 601-0700

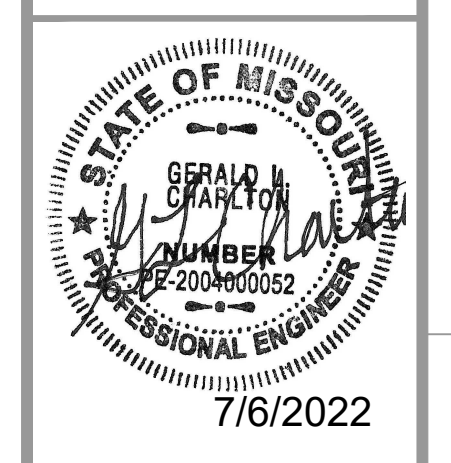
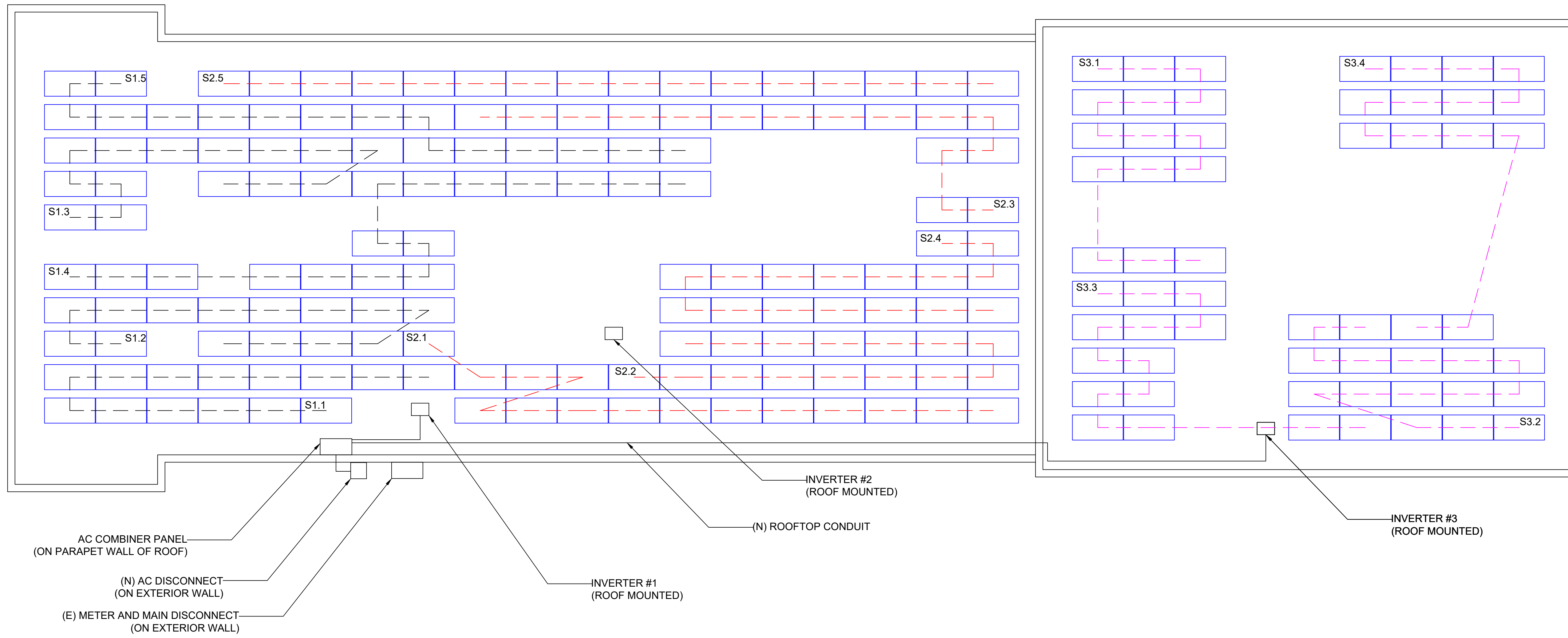
DWG NO: **E-1**
 PROJ NO: NEI-210



① ARRAY LAYOUT

Scale: 1/16"=1'

STRING CONFIGURATION									
Array	Inverter No.	Inverter Capacity (KW)	MPPT No.	String Size	No. of Strings	Total Modules	Module Wattage (W)	Total DC Capacity (KW)	Module Count Per Inverter
ROOFTOP	1	24	1	14	3	42	450	18.9	74
			2	16	2	32	450	14.4	
	2	24	1	15	3	45	450	20.25	77
			2	16	2	32	450	14.4	
	3	20	1	15	2	30	450	13.5	58
			2	14	2	28	450	12.6	
TOTAL		68			14	209		94.05	



Lee's Summit Detail Shop
STRING DIAGRAM
94.05 KW DC Rooftop Photovoltaic System
2100 NE Independence Ave, Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION
Lee's Summit Detail Shop - Rev 1	STRING DIAGRAM	94.05 KW DC Rooftop Photovoltaic System	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

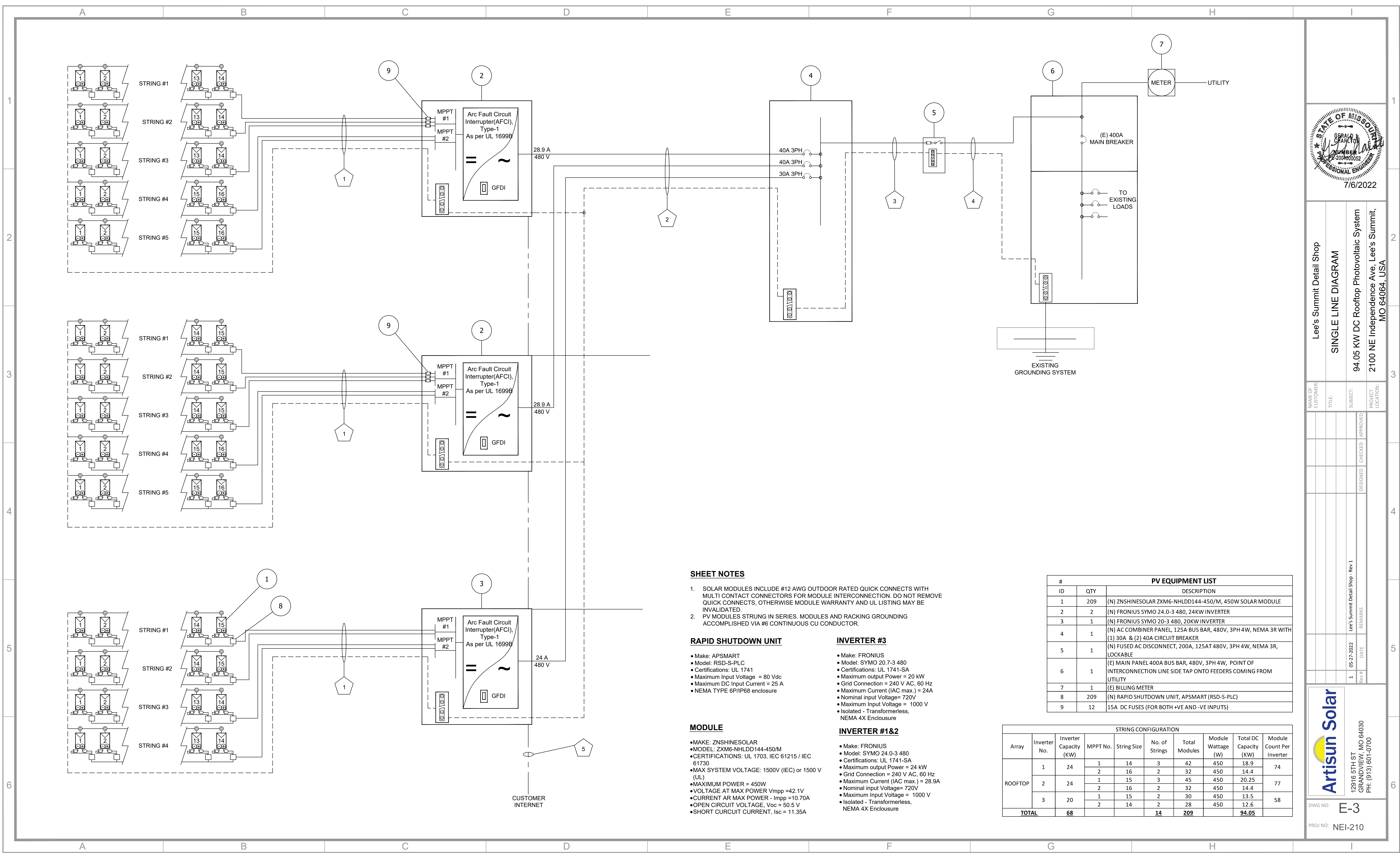
Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
1	05-27-2022				

1 STRING DIAGRAM

Scale: 1/8"=1'

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GRANDVIEW, MO 64030
PH: (816) 601-0700

DWG NO: E-2
PROJ NO: NEI-210



SHEET NOTES

- SOLAR MODULES INCLUDE #12 AWG OUTDOOR RATED QUICK CONNECTS WITH MULTI CONTACT CONNECTORS FOR MODULE INTERCONNECTION. DO NOT REMOVE QUICK CONNECTS, OTHERWISE MODULE WARRANTY AND UL LISTING MAY BE INVALIDATED.
- PV MODULES STRUNG IN SERIES. MODULES AND RACKING GROUNDING ACCOMPLISHED VIA #6 CONTINUOUS CU CONDUCTOR.

RAPID SHUTDOWN UNIT

- Make: APSMART
- Model: RSD-S-PLC
- Certifications: UL 1741
- Maximum Input Voltage = 80 Vdc
- Maximum DC Input Current = 25 A
- NEMA TYPE 6P/IP68 enclosure

INVERTER #3

- Make: FRONIUS
- Model: SYMO 20.7-3 480
- Certifications: UL 1741-SA
- Maximum output Power = 20 kW
- Grid Connection = 240 V AC, 60 Hz
- Maximum Current (IAC max.) = 24A
- Nominal input Voltage= 720V
- Maximum Input Voltage = 1000 V
- Isolated - Transformerless, NEMA 4X Enclosure

MODULE

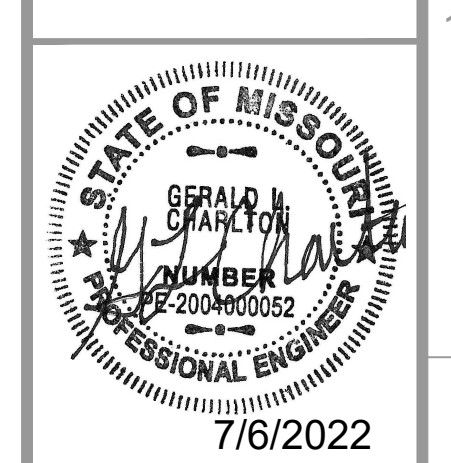
- MAKE: ZNSHINESOLAR
- MODEL: ZXM6-NHLD144-450/M
- CERTIFICATIONS: UL 1703, IEC 61215 / IEC 61730
- MAX SYSTEM VOLTAGE: 1500V (IEC) or 1500 V (UL)
- MAXIMUM POWER = 450W
- VOLTAGE AT MAX POWER Vmpp = 42.1V
- CURRENT AT MAX POWER - Impp = 10.70A
- OPEN CIRCUIT VOLTAGE, Voc = 50.5 V
- SHORT CIRCUIT CURRENT, Isc = 11.35A

INVERTER #1&2

- Make: FRONIUS
- Model: SYMO 24.0-3 480
- Certifications: UL 1741-SA
- Maximum output Power = 24 kW
- Grid Connection = 240 V AC, 60 Hz
- Maximum Current (IAC max.) = 28.9A
- Nominal input Voltage= 720V
- Maximum Input Voltage = 1000 V
- Isolated - Transformerless, NEMA 4X Enclosure

#	ID	QTY	DESCRIPTION
1	1	209	(N) ZNSHINESOLAR ZXM6-NHLD144-450/M, 450W SOLAR MODULE
2	2	2	(N) FRONIUS SYMO 24.0-3 480, 24KW INVERTER
3	3	1	(N) FRONIUS SYMO 20-3 480, 20KW INVERTER
4	4	1	(N) AC COMBINER PANEL, 125A BUS BAR, 480V, 3PH 4W, NEMA 3R WITH (1) 30A & (2) 40A CIRCUIT BREAKER
5	5	1	(N) FUSED AC DISCONNECT, 200A, 125AT 480V, 3PH 4W, NEMA 3R, LOCKABLE
6	6	1	(E) MAIN PANEL 400A BUS BAR, 480V, 3PH 4W, POINT OF INTERCONNECTION LINE SIDE TAP ONTO FEEDERS COMING FROM UTILITY
7	7	1	(E) BILLING METER
8	8	209	(N) RAPID SHUTDOWN UNIT, APSMART (RSD-S-PLC)
9	9	12	15A DC FUSES (FOR BOTH +VE AND -VE INPUTS)

STRING CONFIGURATION									
Array	Inverter No.	Inverter Capacity (KW)	MPPT No.	String Size	No. of Strings	Total Modules	Module Wattage (W)	Total DC Capacity (KW)	Module Count Per Inverter
ROOFTOP	1	24	1	14	3	42	450	18.9	74
			2	16	2	32	450	14.4	
	2	24	1	15	3	45	450	20.25	77
			2	16	2	32	450	14.4	
	3	20	1	15	2	30	450	13.5	
			2	14	2	28	450	12.6	
TOTAL		68			14	209		94.05	



Lee's Summit Detail Shop
SINGLE LINE DIAGRAM
 94.05 KW DC Rooftop Photovoltaic System
 2100 NE Independence Ave, Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION
Lee's Summit Detail Shop	SINGLE LINE DIAGRAM	94.05 KW DC Rooftop Photovoltaic System	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

Artisan Solar
 12916 5TH ST
 GRANDVIEW, MO 64030
 PH: (816) 601-0700

DWG NO: **E-3**
 PROJ NO: NEI-210

WIRES AND CONDUIT SCHEDULE

TAG	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	CONDUCTORS PER CONDUIT	CONDUIT	CONDUIT FILL %	OCPD	EGC PER CONDUIT	TEMP. CORR. FACTOR		# OF CURRENT CARRYING CONDUCTORS	CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP	DERATED AMP	TERM. TEMP. RATING
1	ARRAY	INVERTER	(2) 12 AWG PV WIRE COPPER*	FREE AIR	NA	NA	(1) 6 AWG THWN-2 COPPER	0.91	38°C	NA	NA	9.43	15	30	27.3	90°C
2	INVERTER #1, #2	AC COMBINER PANEL	(3) #10 PHASE, (1) #10 NEUTRAL, THWN-2 COPPER	0.75" DIA. EMT	25.35%	40	(1) 6 AWG THWN-2 COPPER	0.91	38°C	3	1	28.9	36.125	40	36.4	90°C
2	INVERTER #3	AC COMBINER PANEL	(3) #10 PHASE, (1) #10 NEUTRAL, THWN-2 COPPER	0.75" DIA. EMT	25.35%	30	(1) 6 AWG THWN-2 COPPER	0.91	38°C	3	1	24	30	40	36.4	90°C
3	AC COMBINER PANEL	AC DISCONNECT	(3) #3 PHASE, (1) #3 NEUTRAL, THWN-2 COPPER	1.25" DIA EMT	29.41%	125	(1) 6 AWG THWN-2 COPPER	0.91	38°C	3	1	82	102.25	115	104.65	90°C
4	AC DISCONNECT	MSP	(3) #3 PHASE, (1) #3 NEUTRAL, THWN-2 COPPER	1.25" DIA EMT	29.41%	125	(1) 6 AWG THWN-2 COPPER	0.91	38°C	3	1	82	102.25	115	104.65	90°C
5	CAT 5E COMMUNICATION WIRE FOR INVERTER SHALL BE INSTALLED IN SEPARATE CONDUIT OR OUTDOOR RATED AND ROUTED TO CLIENT INTERNET ROUTER															

* 1000V RATED

SYSTEM PROPERTIES		
No Of Modules	209	Nos
Max. Ambient temp @ Site	38	°C
Min Ambient Temp @ site	-17.7	°C
STC Temp	25	°C
No of Modules in a String	16	Nos
Ambient temp (for cable sizing)	36-40	°C

Module	ZNSHINE SOLAR	
Module Power	450	W
Module Voc	50.5	V
Module Vmp	42.1	V
Module Isc	11.35	A
Module Imp	10.7	A
Temp Coefficient for Voc	-0.29%	%/°C
Temp Coefficient for Vmp	-0.29%	%/°C
Temp Coefficient for Isc	0.05%	%/°C
Max. System Voltage	1500	V

Maximum System Voltage		
No of Modules in a String	16	
No of Strings	4	Nos
Voc @ Max. Ambient	48.60	V
Voc@ Min. Ambient	56.75	V
Vmp @ Max. Ambient	40.51	V
Vmp @ Min. Ambient	47.31	V
MPPT Lower Range	648.21	V
MPPT Upper Range	757.01	V
Min. Operating Voltage	648.21	V
Max. Operating Voltage	757.01	V
ISC/String	11.35	A
Isc @ Max. Ambient	11.42	A
Isc @ Min. Ambient	11.11	A
Max. System Voltage	908.05	V

Maximum System Voltage		
No of Modules in a String	15	
No of Strings	5	Nos
Voc @ Max. Ambient	48.60	V
Voc@ Min. Ambient	56.75	V
Vmp @ Max. Ambient	40.51	V
Vmp @ Min. Ambient	47.31	V
MPPT Lower Range	607.69	V
MPPT Upper Range	709.70	V
Min. Operating Voltage	607.69	V
Max. Operating Voltage	709.70	V
ISC/String	11.35	A
Isc @ Max. Ambient	11.42	A
Isc @ Min. Ambient	11.11	A
Max. System Voltage	851.30	V

Maximum System Voltage		
No of Modules in a String	14	
No of Strings	5	Nos
Voc @ Max. Ambient	48.60	V
Voc@ Min. Ambient	56.75	V
Vmp @ Max. Ambient	40.51	V
Vmp @ Min. Ambient	47.31	V
MPPT Lower Range	567.18	V
MPPT Upper Range	662.39	V
Min. Operating Voltage	567.18	V
Max. Operating Voltage	662.39	V
ISC/String	11.35	A
Isc @ Max. Ambient	11.42	A
Isc @ Min. Ambient	11.11	A
Max. System Voltage	794.55	V



Lee's Summit Detail Shop
WIRE SCHEDULE & CALCULATIONS
 94.05 KW DC Rooftop Photovoltaic System
 2100 NE Independence Ave, Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION

Artisun Solar
 12916 5TH ST
 GRANDVIEW, MO 64030
 PH: (913) 601-0700

DWG NO: **E-4**
 PROJ NO: NEI-210

Rev #	DATE	REMARKS
1	05-27-2022	Lee's Summit Detail Shop - Rev 1

DESIGNED	CHECKED	APPROVED

ALL LABEL MATERIAL SHALL BE WEATHER RESISTANT AND SUITABLE FOR THE ENVIRONMENT. LETTERS SHALL BE CAPITALIZED WITH A MIN. HEIGHT OF 3/8" (9.5MM) WHITE ON RED BACKGROUND. NOT ALL LABELS WILL BE APPLICABLE TO EVERY PROJECT

INCLUDE THE FOLLOWING LABELS ON ALL CONDUIT CONTAINING DC CONDUCTORS

PLACE EVERY 10' AND AFTER EACH BEND ON CONDUIT
PVLABELS.COM PLACARD 02-329

CAUTION: SOLAR CIRCUIT

INCLUDE THE FOLLOWING LABELS ON ALL SERVICEABLE EQUIPMENT

PVLABELS.COM LABEL 05-580



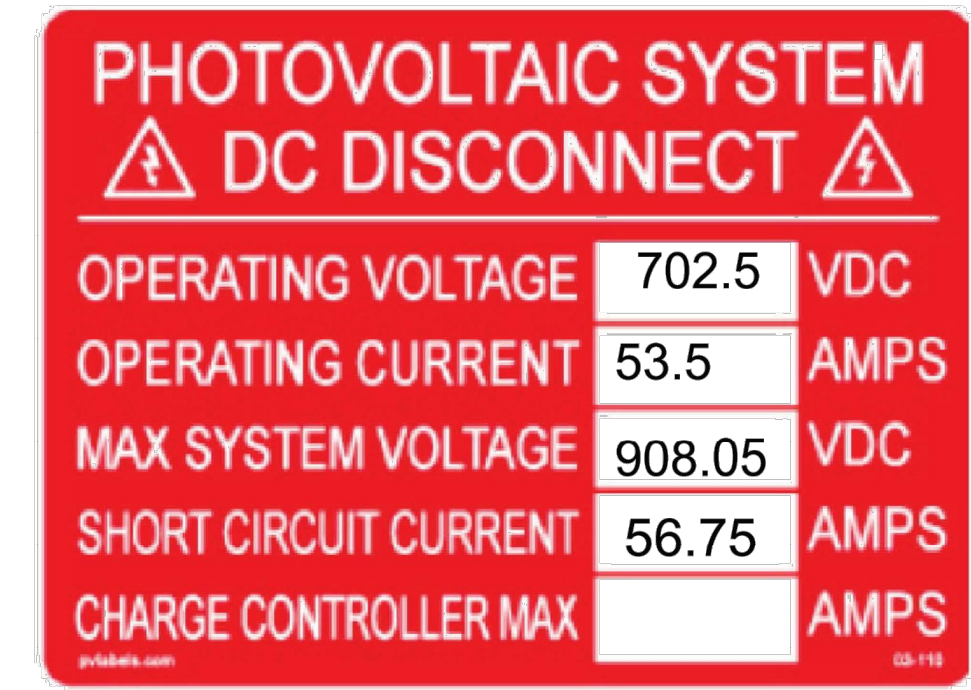
INCLUDE THE FOLLOWING LABELS ON ALL ROOFTOP DC JUNCTION BOXES

PVLABELS.COM LABEL 03-102

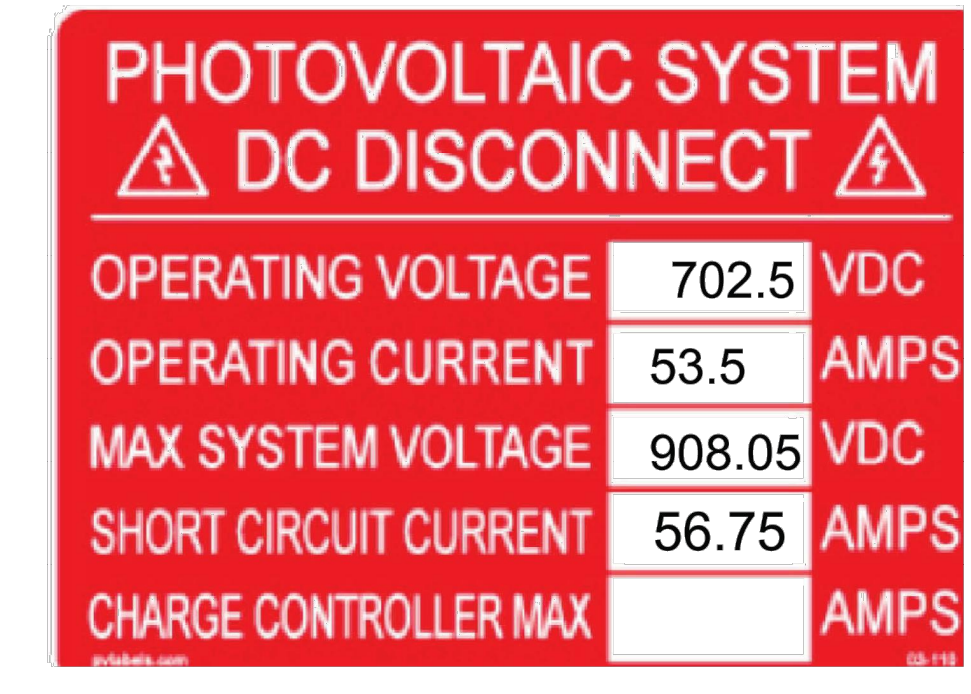


INCLUDE THE FOLLOWING LABELS ON INVERTERS

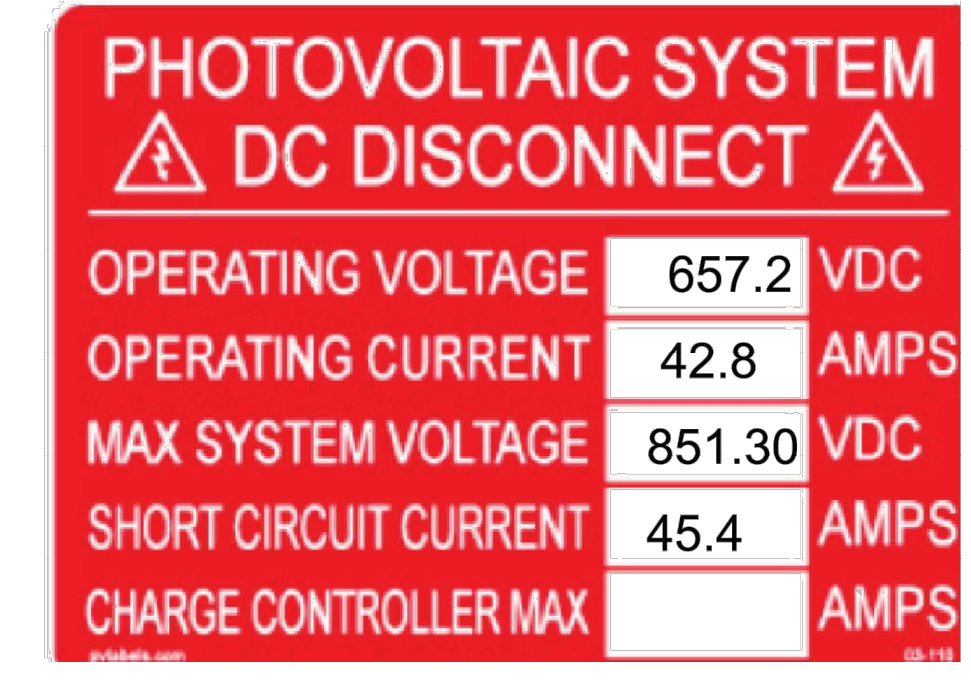
PVLABELS.COM LABEL 03-110
INVERTER #1



INVERTER #2



INVERTER #3



PVLABELS.COM LABEL 03-102



INCLUDE THE FOLLOWING LABELS ON POINT OF INTERCONNECTION EQUIPMENT

PVLABELS.COM LABEL 03-211



PVLABELS.COM LABEL 03-344



PVLABELS.COM LABEL 03-326

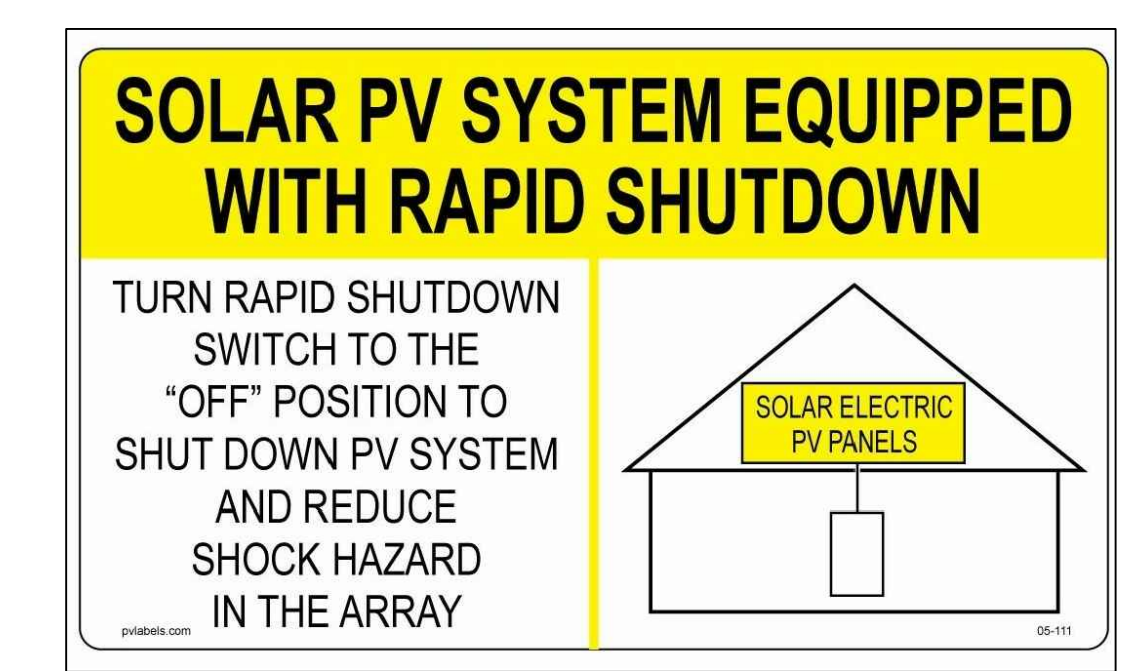
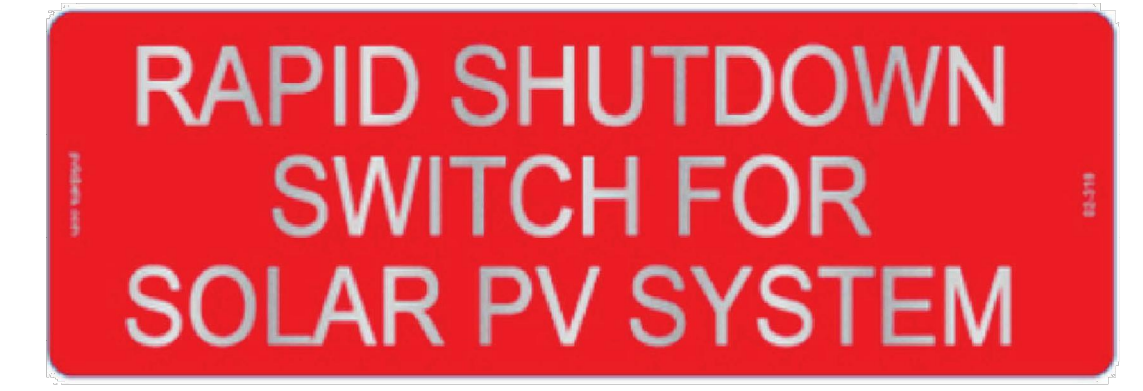


INCLUDE THE FOLLOWING LABELS ON AC DISCONNECTS

PVLABELS.COM LABEL 03-116



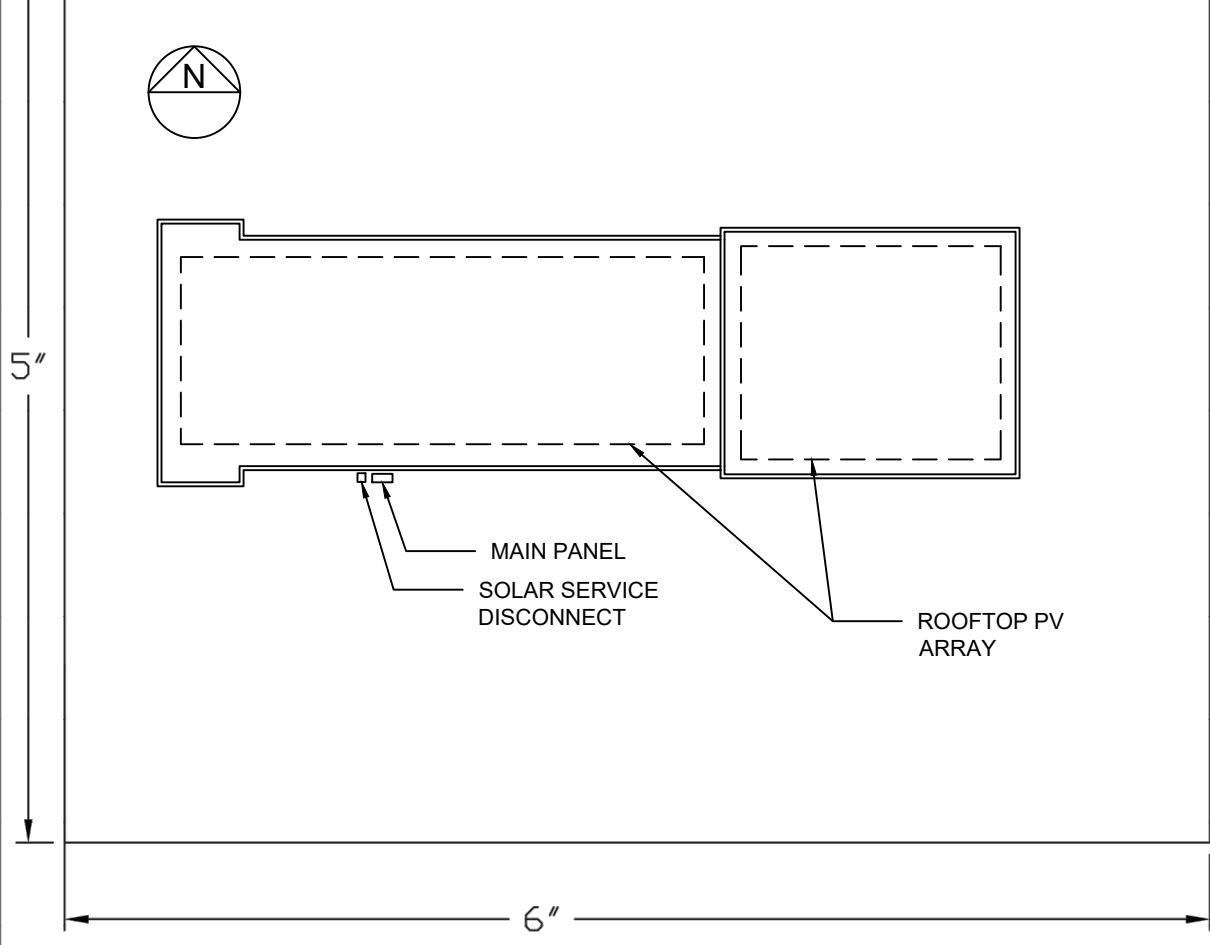
PVLABELS.COM LABEL 02-316



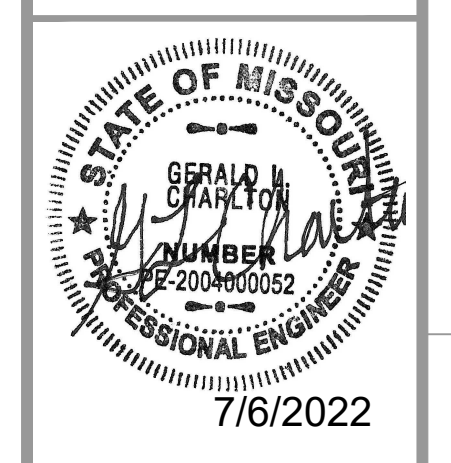
INCLUDE THE FOLLOWING LABELS ON UTILITY METER

A SITE DIRECTORY PLAQUE SHALL BE LOCATED ON OR BESIDE THE BI-DIRECTIONAL UTILITY BILLING METER PER NEC ARTICLE 705.10

CAUTION: POWER TO THIS BUILDING IS ALSO SUPPLIED FROM THE FOLLOWING SOURCES WITH A DISCONNECT LOCATED AS SHOWN



PVLABELS.COM LABEL 03-211

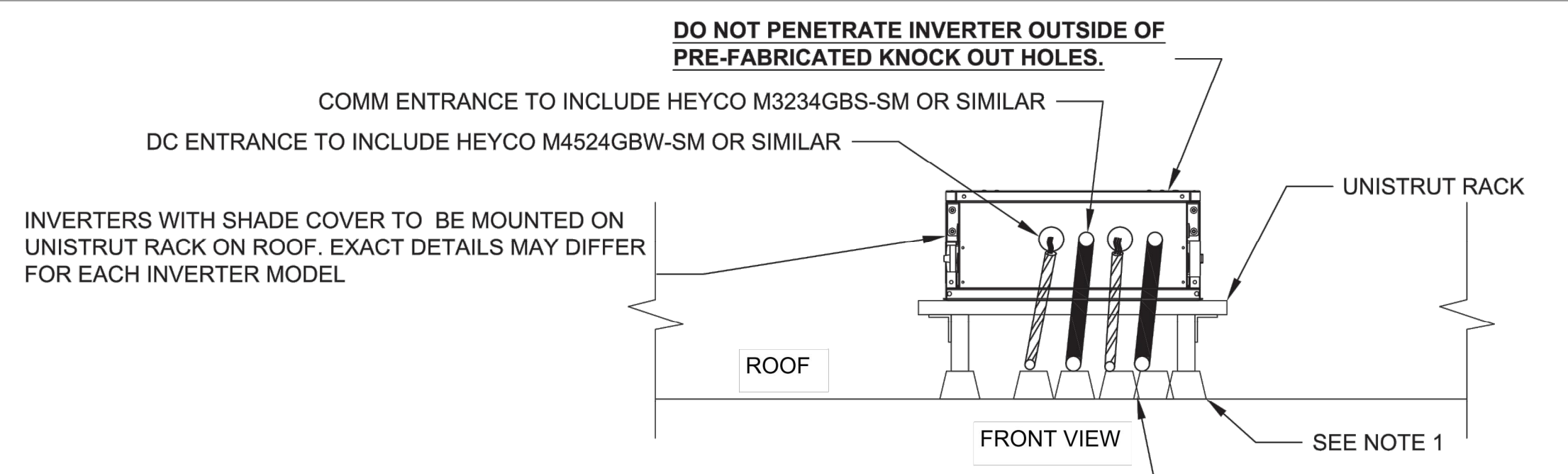


Lee's Summit Detail Shop
LABELS
94.05 KW DC Rooftop Photovoltaic System
2100 NE Independence Ave, Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION
		DESIGNED	CHECKED
		APPROVED	
1	05-27-2022	DATE	REMARKS

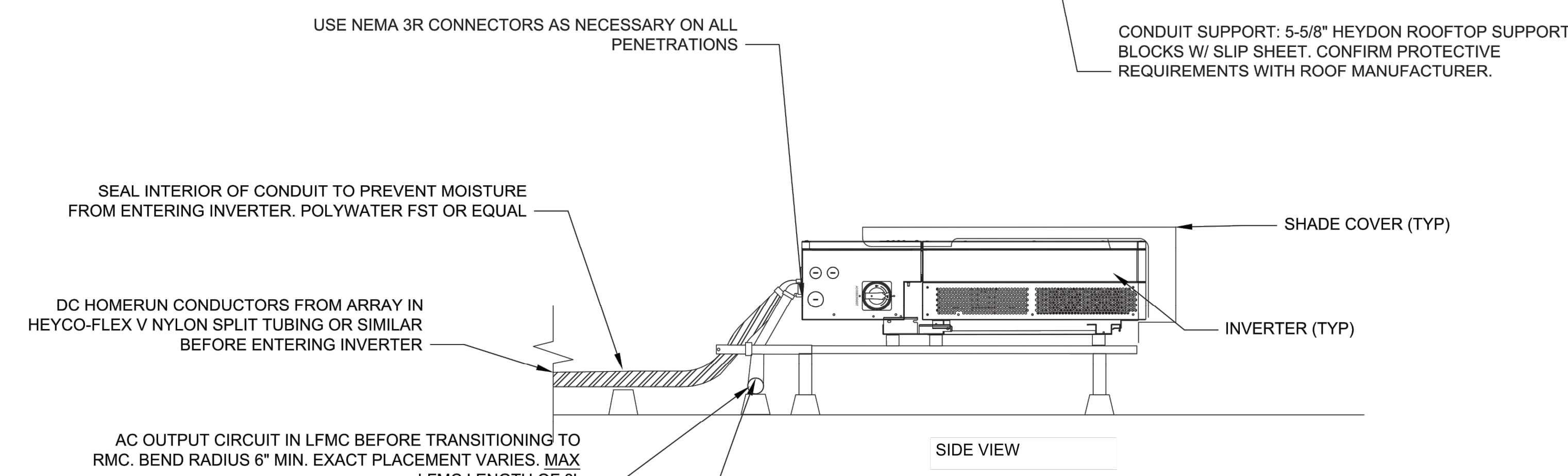
Artisan Solar
12916 5TH ST
GRANDVIEW, MO 64030
PH: (813) 601-0700

DWG NO: E-5
PROJ NO: NEI-210

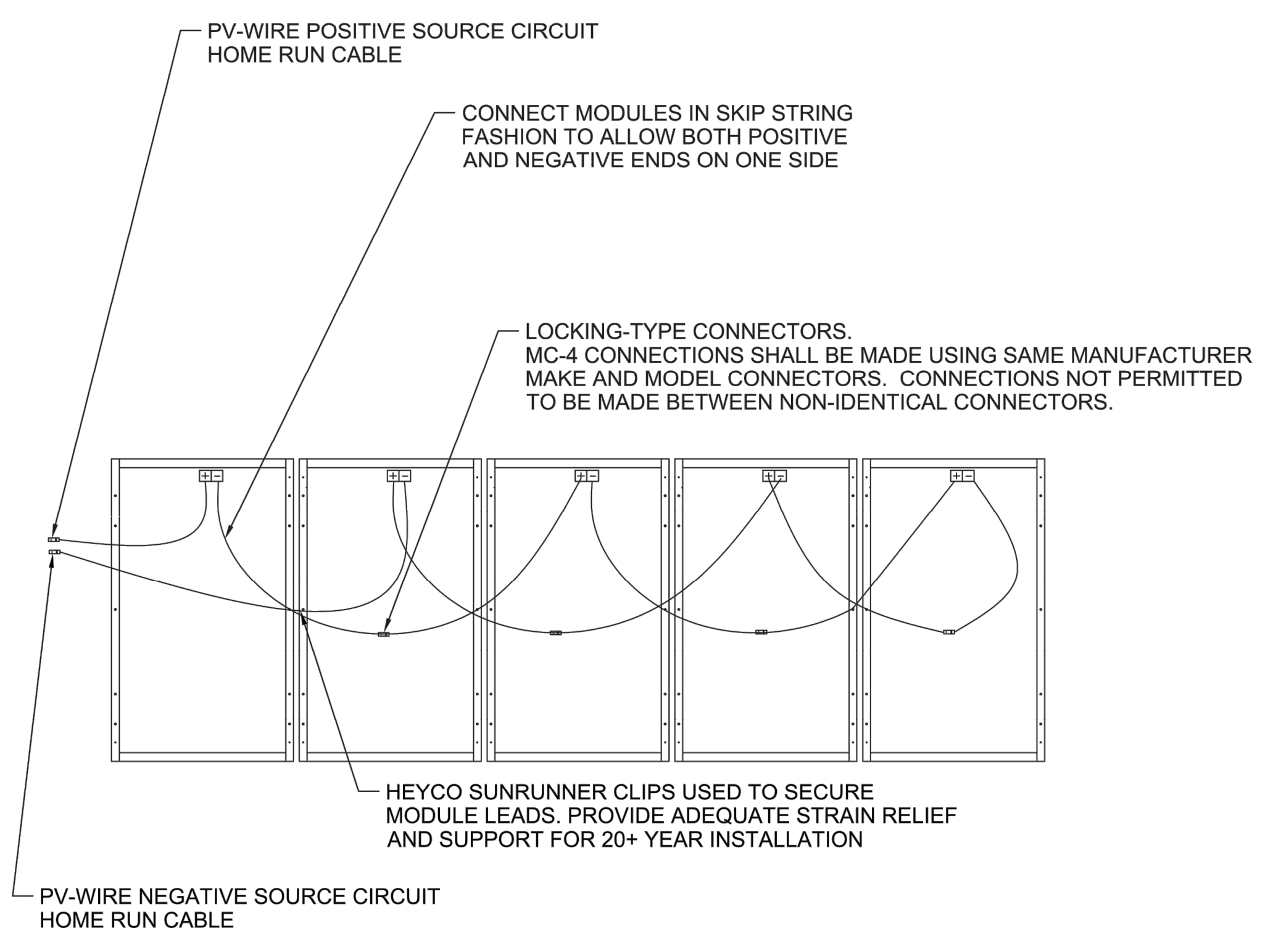


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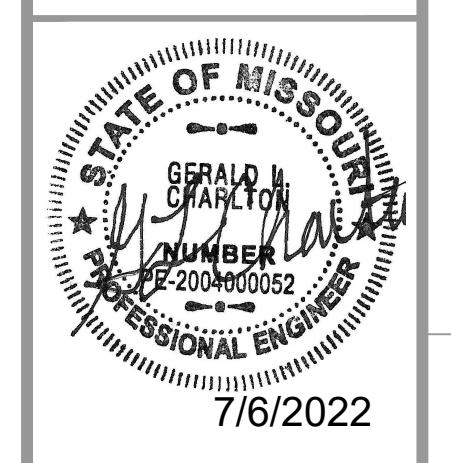
1. INVERTER RACK ROOF ATTACHMENT WILL VARY ACCORDING TO ROOF TYPE ACCORDINGLY:
 A. FLAT ROOF: (4) 5-5/8" HEYDON ROOFTOP SUPPORT BLOCKS OR SIMILAR W/ SLIP SHEET. CONFIRM PROTECTIVE REQUIREMENTS WITH ROOF MANUFACTURER.
 B. STANDING SEAM: (4) SS U CLAMPS CLAMPS
 C. CORRUGATED METAL: (4) VERSABRACKETS OR SIMILAR. **ATTACHMENT MUST LAND ON ROOF STRUCTURAL MEMBER.**
2. ALL CONDUITS TO BE PROPERLY BONDED PER NEC GUIDELINES.



1 INVERTER MOUNTING DETAILS
SCALE: NTS



2 PV STRING WIRING DETAIL
NTS

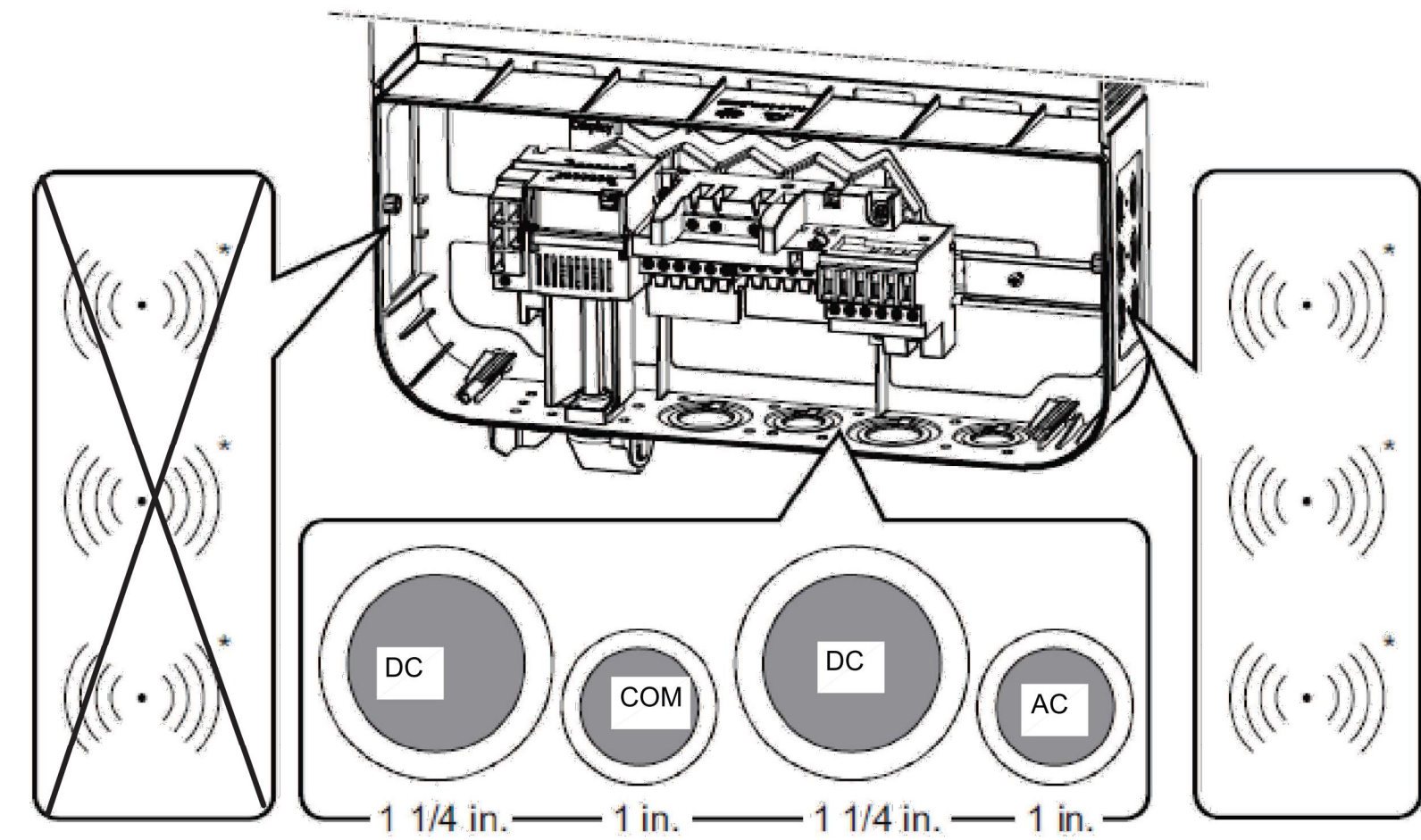
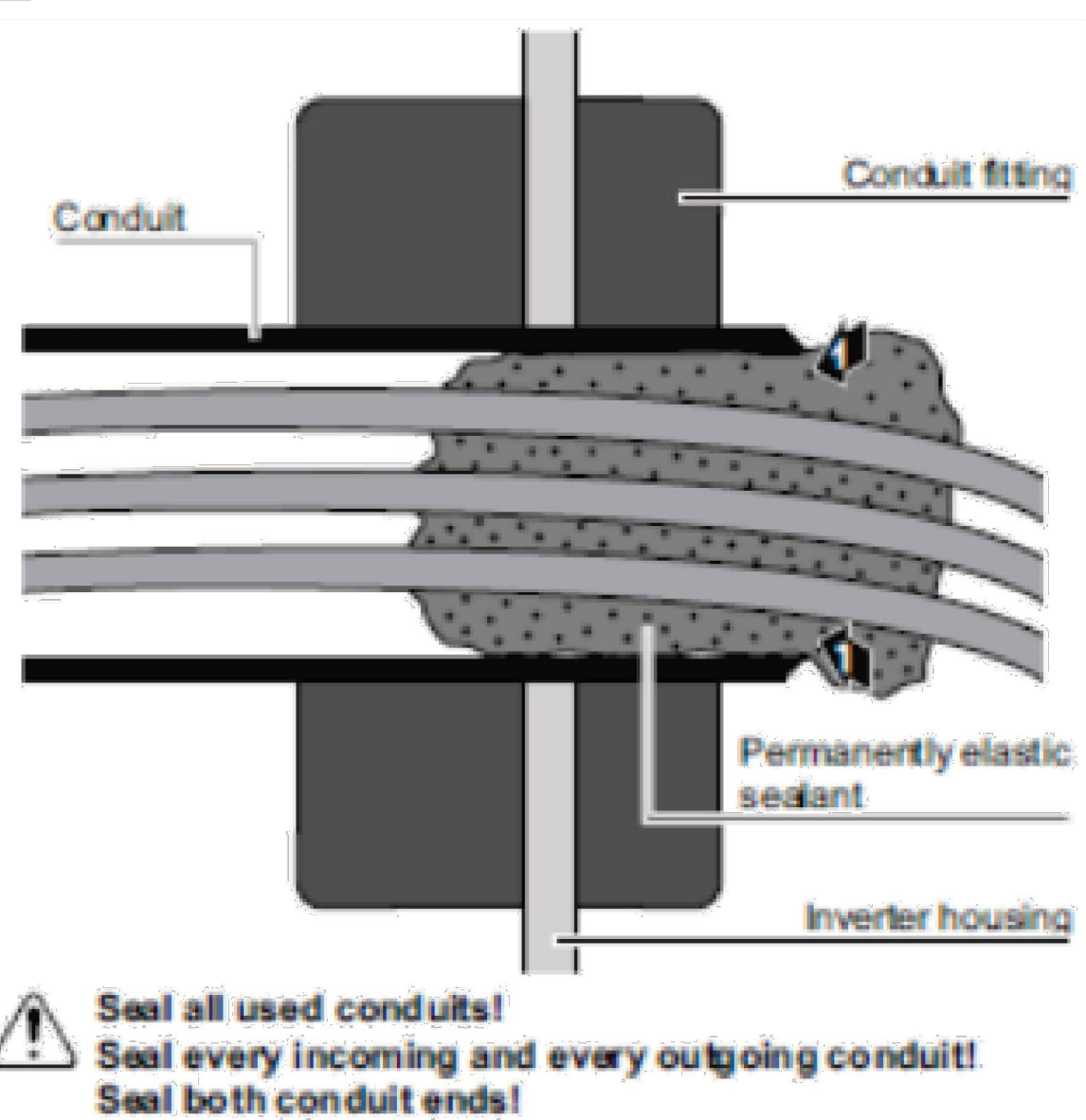
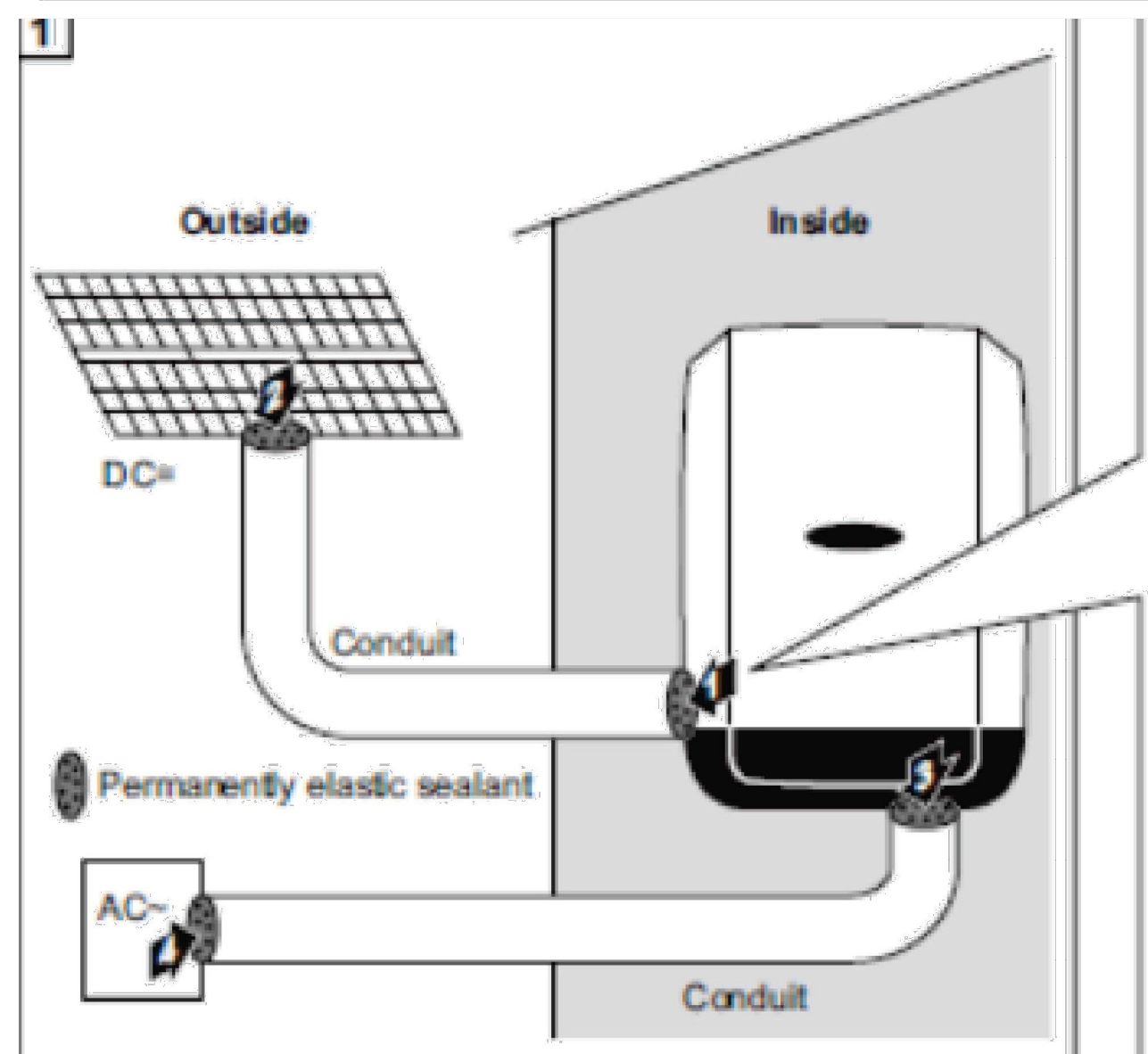
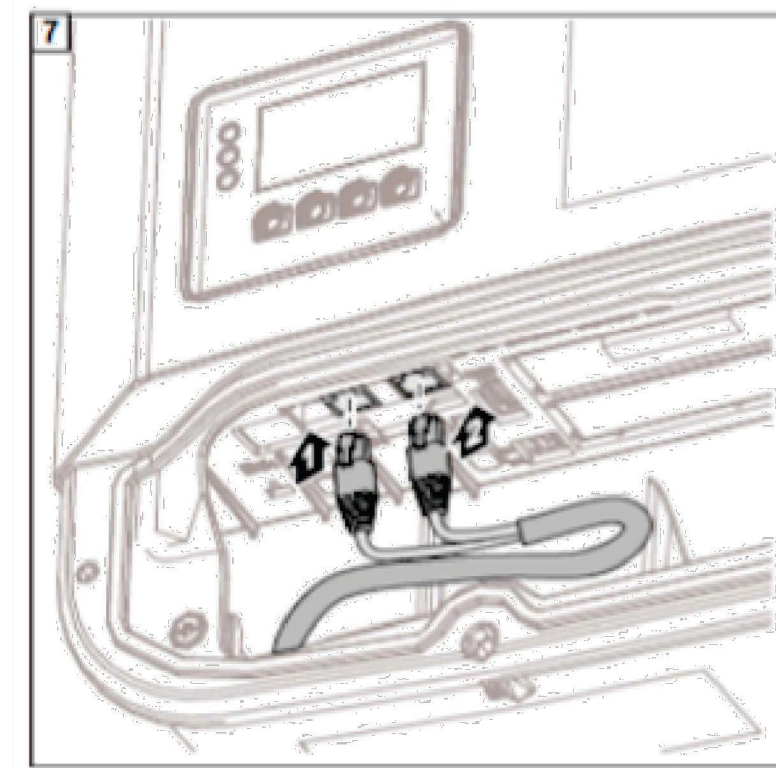
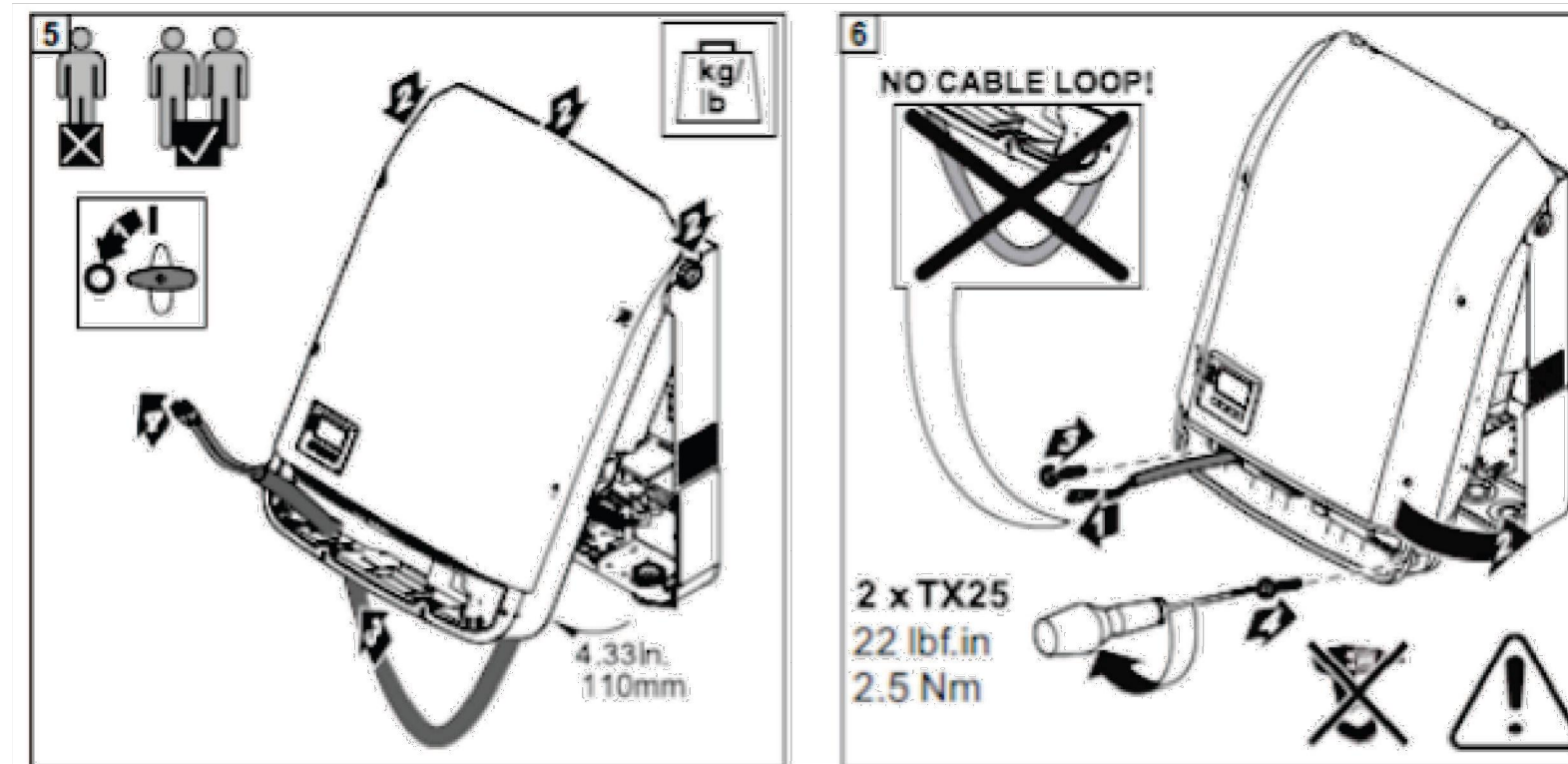
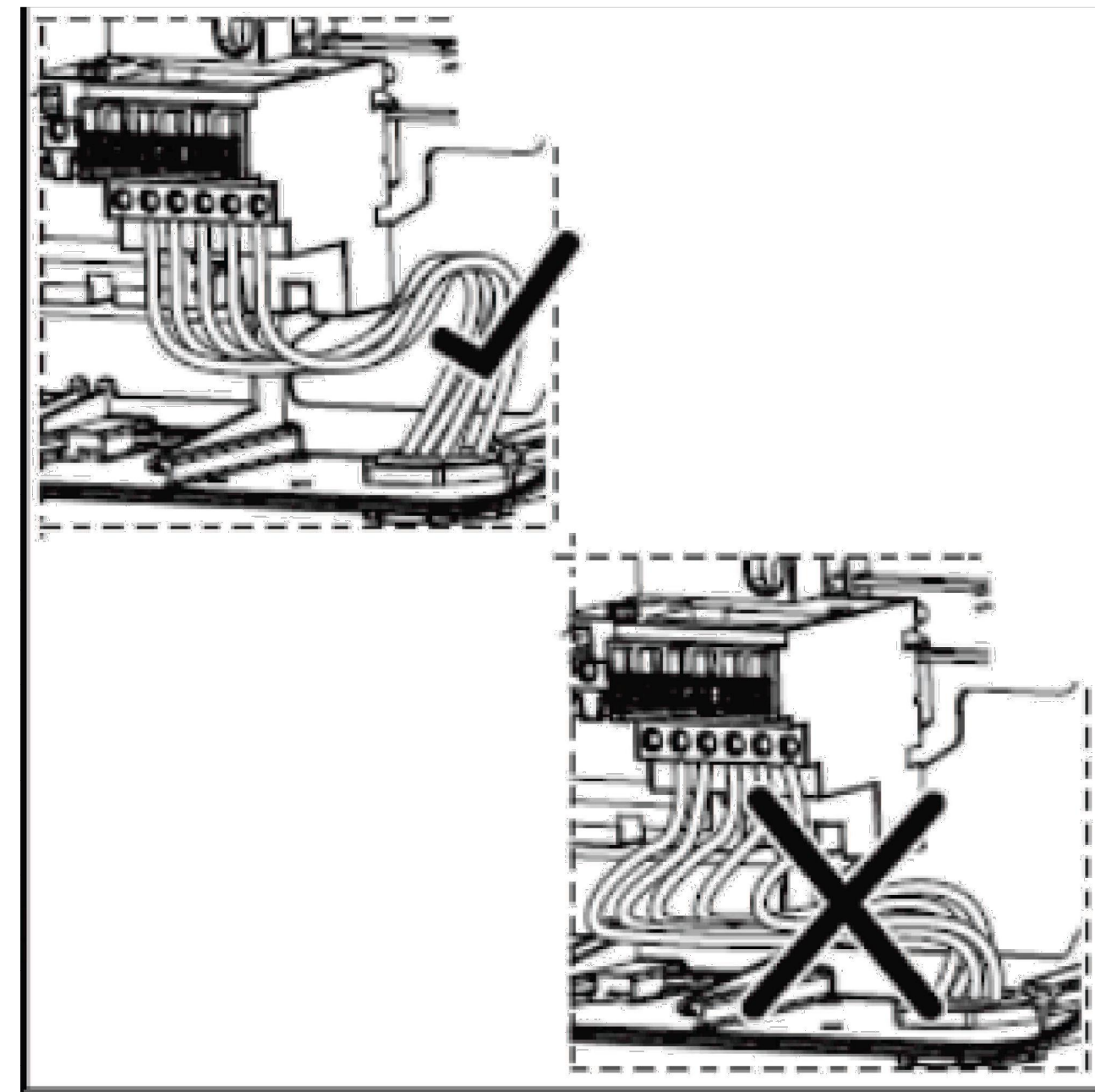


NAME OF CUSTOMER	Lee's Summit Detail Shop
TITLE	EQUIPMENT DETAIL
SUBJECT	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

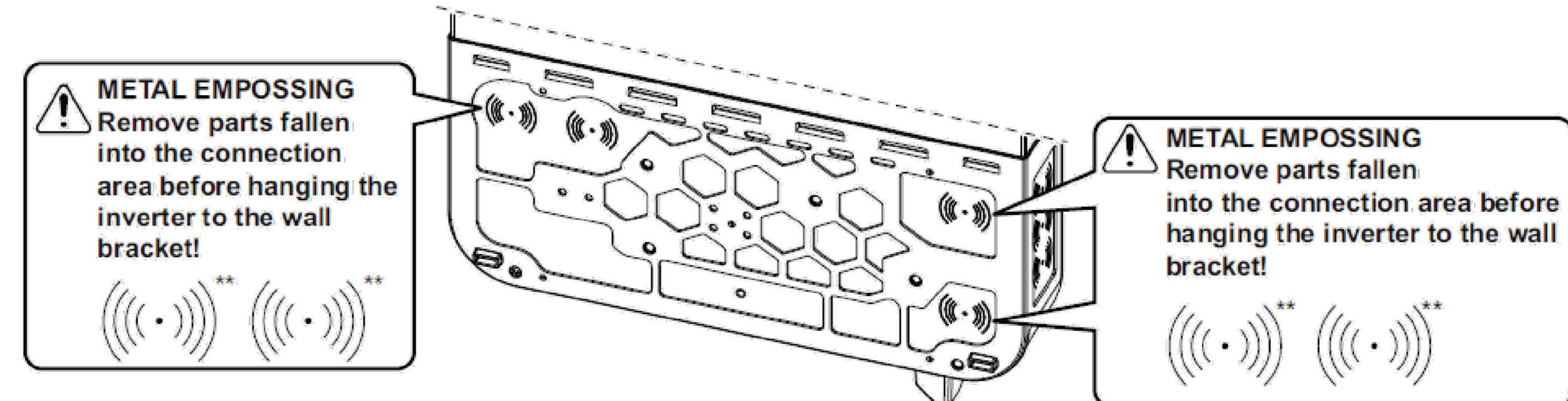
REV #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1			

Artisun Solar
12916 5TH ST
GRANDVIEW, MO 64030
PH: (813) 601-0700

DWG NO: E-6
PROJ NO: NEI-210

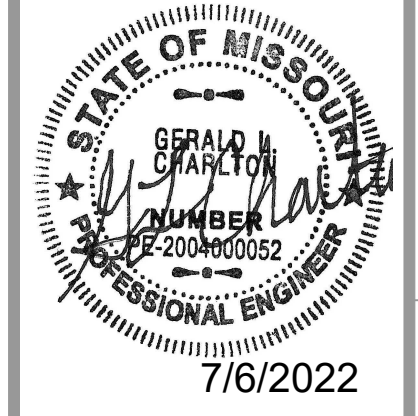


1/2 in. ... DATCOM
3/4 in. - 1 1/4 in. ... AC ~ / DC =
* Conduit size
1/2 in. / 3/4 in. / 1 in.
** Conduit size
1/2 in. / 3/4 in. / 1 in. / 1 1/4 in.



Seal all used conduits!
Seal every incoming and every outgoing conduit!
Seal both conduit ends!

1 INSTALLATION MANUAL DETAILS
NTS

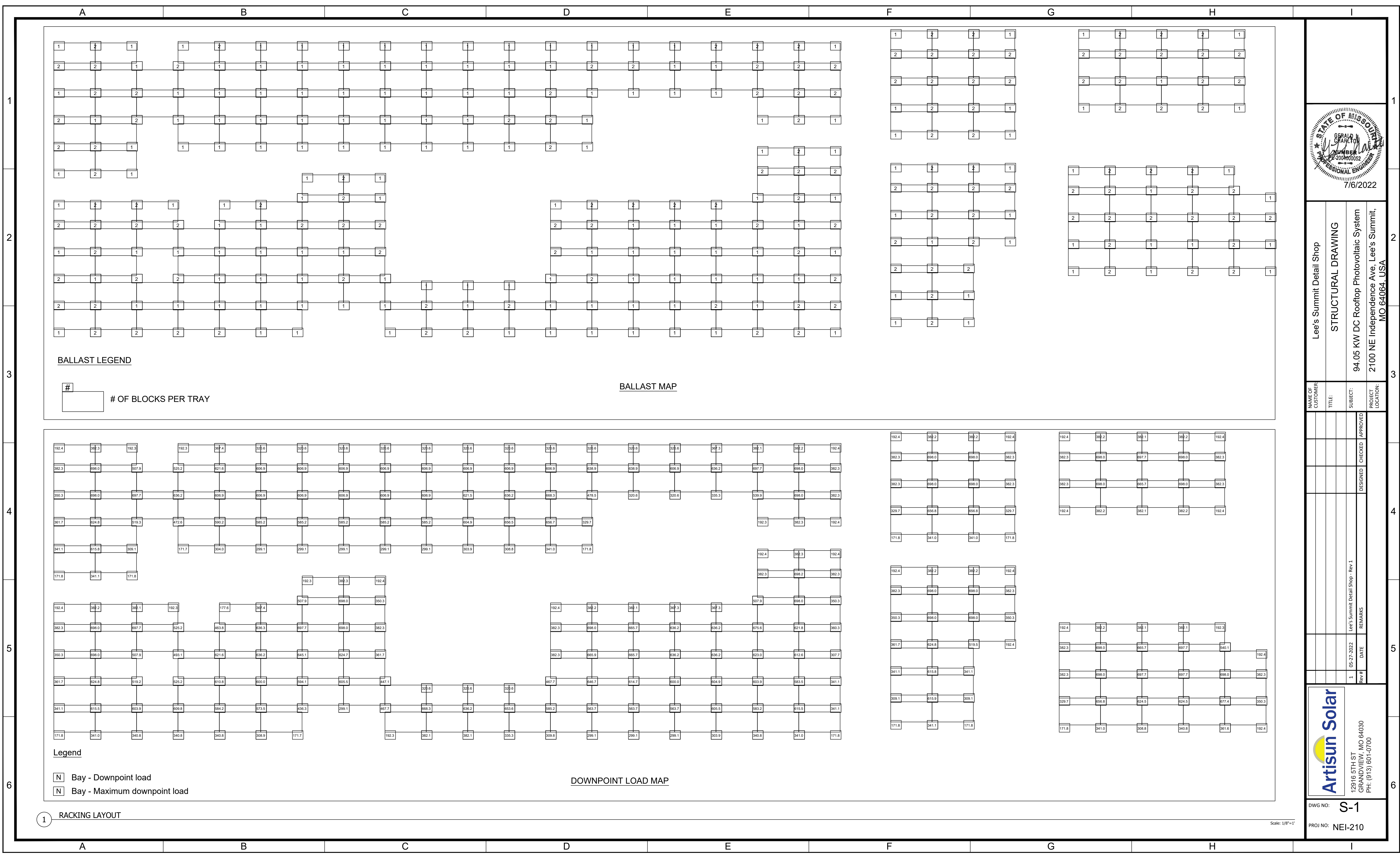


NAME OF CUSTOMER	Lee's Summit Detail Shop
TITLE	EQUIPMENT DETAIL
SUBJECT	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1
Rev #	DATE	REMARKS

Artisun Solar
12916 5TH ST
GRANDVIEW, MO 64030
PH: (813) 601-0700

DWG NO: E-7
PROJ NO: NEI-210



BALLAST LEGEND

OF BLOCKS PER TRAY

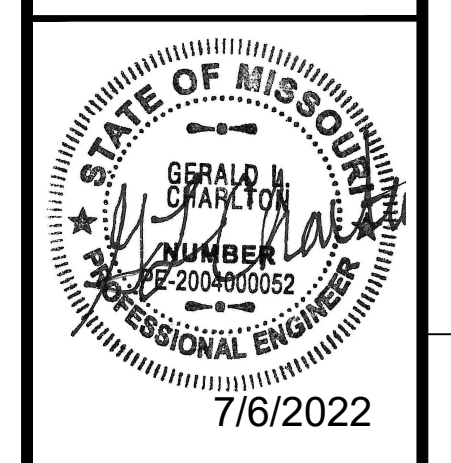
BALLAST MAP

Legend

N Bay - Downpoint load
N Bay - Maximum downpoint load

DOWNPOINT LOAD MAP

1 RACKING LAYOUT



Lee's Summit Detail Shop
STRUCTURAL DRAWING
 94.05 KW DC Rooftop Photovoltaic System
 2100 NE Independence Ave., Lee's Summit, MO 64064, USA

NAME OF CUSTOMER	TITLE	SUBJECT	PROJECT LOCATION
	Lee's Summit Detail Shop	94.05 KW DC Rooftop Photovoltaic System	2100 NE Independence Ave., Lee's Summit, MO 64064, USA

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1			

Artisun Solar
 12916 5TH ST
 GRANDVIEW, MO 64030
 PH: (816) 601-0700

DWG NO: **S-1**
 PROJ NO: NEI-210

Scale: 1/8"=1'

ZXM6-NHLDD144 Series | ZSHINESOLAR

Zshinesolar 98B HALF-CELL Bifacial Light-Weight Double Glass Mono PV Module

Mono | Poly | Solutions

425W | 430W | 435W | 440W | 445W | 450W

Made with selected materials and components to ensure quality, longevity, efficiency and stable outputs, the ZXM6-NHLDD144 monocrystalline modules by ZSHINE SOLAR represents a highly flexible solution for diverse installation types, from small home PV systems to industrial rooftop plants to large utility arrays. ZSHINE SOLAR'S ZXM6-NHLDD144 monocrystalline solar modules are tested and approved by internationally recognized laboratories so that we can offer our global customers a reliable and price-quality optimized product. The linear warranty on the product output further secures increased stability and financial returns on investments over time.

12 years product warranty/30 years output warranty 0.5% Annual Degradation over 30 years

Zshinesolar's DC Modules Linear Warranty
Zshinesolar's Standard
Industry Standard

More power output
Module RS decreases, FF (fill factor) increases, power gain is stable about 1.5%, and can be increased by 5-10W

Anti PID
Limited power degradation of ZXM6-NHLDD144 module caused by PID effect is guaranteed under strict testing condition for mass production

Bifacial technology
Enables additional energy harvesting from rear side (up to 25%)

High Efficiency
A high efficiency PERC solar cell with 9 busbars technology to ensure the efficiency of the solar module up to 20.70% and stable operation

Better Weak Illumination Response
Lower temperature coefficient and wide spectral response, higher power output, even under low-light settings

Grahpenne Coating(Optional)
Graphene coating modules can increase power generation and self-cleaning, also can save maintenance cost
*Can be customized

Zshinesolar PV-Tech Co., LTD, founded in 1988, is a world-leading high-performance PV module manufacturer. PV power station developer, EPC and power station operator. With its state-of-the-art production lines, the company boasts module output of 50W. Bloomberg has listed Zshinesolar as a global Tier 1 PV manufacturer and Top 4 reliable PV supplier.

ZXM6-NHLDD144 Series | Zshinesolar 98B HALF-CELL Bifacial Light-Weight Double Glass Mono PV Module | ZSHINESOLAR

ELECTRICAL PROPERTIES | STC*

Module Type	ZXM6-NHLDD144-425W	ZXM6-NHLDD144-430W	ZXM6-NHLDD144-435W	ZXM6-NHLDD144-440W	ZXM6-NHLDD144-445W	ZXM6-NHLDD144-450W
Nominal Power Watt (Pmax)	425	430	435	440	445	450
Power Output Tolerance (PmaxTol)	0+3	0+3	0+3	0+3	0+3	0+3
Maximum Power Voltage (Vmp)	41.1	41.3	41.5	41.7	41.9	42.1
Maximum Power Current (Imp)	10.35	10.42	10.49	10.56	10.63	10.70
Open Circuit Voltage (Voc)	49.5	49.7	49.9	50.1	50.3	50.5
Short Circuit Current (Isc)	11.00	11.07	11.14	11.21	11.28	11.35
Module Efficiency (%)	19.55	19.78	20.01	20.24	20.47	20.70

MECHANICAL DATA

Solar cells: Mono 166*83mm
No. of Cells: 144 (6*24)
Module dimension: 2094*1038*30 mm (With Frame)
Weight: 28 kg
Glass: 2.0mm+2.0mm heat strengthened glass
Junction box: IP 68, 3 diodes
Cables: 4 mm², 350 mm or Customized Length
Connectors: MC4 compatible or Customized Connectors

PACKAGING INFORMATION

Packing Type: 40' HQ
Pallet Qty: 36
Pallet Dimensions: 1210*1100*1100 mm
Pallet Weight: 792 kg

TEMPERATURE RATINGS

INBOT: 44°C ±2°C
Temperature coefficient of Pmax: -0.36%/°C
Temperature coefficient of Vmp: -0.29%/°C
Temperature coefficient of Isc: 0.05%/°C

WORKING CONDITIONS

Maximum system voltage: 1500V DC
Operating temperature: -40°C ~ +85°C
Maximum series fuse: 20A
Maximum backsheet/tem: 5400 Pa / 2400 Pa

ENVIRONMENTAL DATA

Temperature range: -40°C to +185°C (-40°C to +85°C)
Dimensions (without cable & connectors): 5' x 12' x 0.8" (129 mm x 30 mm x 16 mm)
Cable Length: Input 250mm/Output 1200mm
Cable Cross Section Size: UL12AWG
Connector: Stäubli MC4 PV-KBT48KT4 or Customize
Enclosure Rating: NEMA Type 6P/IP68
Over Temperature Protection: Yes

FEATURES & COMPLIANCE

Communication: PLC
Safety Compliance: NEC 2017 & 2020 (690.12), UL1741, CSA C22.2 No. 330-17, IEC/EN62109-1, 2PFG2305
EMC Compliance: FCC Part15, ICES-003, IEC/EN61000-6-1/2/3/4

APsmart

Raising the bar in innovative DC MLPE solar power systems

RSD-S-PLC

- Meets NEC 2017 & 2020 (690.12) requirements
- Executes rapid shutdown of system when Transmitter-PLC signal is absent
- Meets SunSpec requirements

RSD-S-PLC TECHNICAL DATA

MODEL

RSD-S-PLC

INPUT DATA (DC)

Input Operating Voltage Range: 8-80V
Maximum Cont. Input Current (Imax): 15A
Maximum Short Circuit Current (Isc): 25A

OUTPUT DATA (DC)

Output Operating Voltage Range: 8-80V
Maximum System Voltage: 1000V/1500V
Maximum Series Fuse Rating: 30A

MECHANICAL DATA

Operating Ambient Temperature Range: -40°F to +185°F (-40°C to +85°C)
Dimensions (without cable & connectors): 5' x 12' x 0.8" (129 mm x 30 mm x 16 mm)
Cable Length: Input 250mm/Output 1200mm
Cable Cross Section Size: UL12AWG
Connector: Stäubli MC4 PV-KBT48KT4 or Customize
Enclosure Rating: NEMA Type 6P/IP68
Over Temperature Protection: Yes

FEATURES & COMPLIANCE

Communication: PLC
Safety Compliance: NEC 2017 & 2020 (690.12), UL1741, CSA C22.2 No. 330-17, IEC/EN62109-1, 2PFG2305
EMC Compliance: FCC Part15, ICES-003, IEC/EN61000-6-1/2/3/4

APsmart

RSD-S-PLC WIRING DIAGRAM

RSD-S-PLC
Transmitter-PLC
Inverter*

*If the inverter includes an integrated SunSpec-certified Rapid Shutdown Transmitter, remove the external Transmitter-PLC in the wiring diagram.

WORKING SCHEMATIC DIAGRAM

Diagram showing the connection between the RSD ASIC, Transmitter-PLC, and Inverter. Includes labels for PVI+, PVI-, PVI2, and PVI3.

ORDERING INFORMATION

415002	1500V UL, 1.2m cable, Stäubli MC4 PV-KBT48KT4
415001	1000V UL, 1.2m cable, Customized connector

APsmart

600 Erickson Ave NE, Suite 200 Seattle, WA 98110 | +1-737-218-8486 | +1-866-574-6538 | support@APsmartGlobal.com | APsmartGlobal.com

FRONIUS SYMO ADVANCED

Powering three-phase projects that last - now with integrated SunSpec PLC

TECHNICAL DATA FRONIUS SYMO ADVANCED (208-240 V VERSIONS)

INPUT DATA	SYMO 10.0-3 208-240		SYMO 12.0-3 208-240	
	208 V	240 V	208 V	240 V
Max. PV generator output (P _{g,max})	15 kW _{max}	18 kW _{max}	18 kW _{max}	21 kW _{max}
Max. input current (I _{g,max}) (1/2/3ph)	35 A / 16.5 A	43 A / 19.6 A	35 A / 16.5 A	43 A / 19.6 A
Max. short circuit current (MPP / MPPT)	33.2 A / 24.8 A	33.2 A / 24.8 A	33.2 A / 24.8 A	33.2 A / 24.8 A
Nominal input voltage	350 V	370 V	350 V	370 V
DC input voltage range (U _{in,min} ~ U _{in,max})	200 - 600 V			
Feed-in limit voltage (U _{in,lim})	380 V			
Usable MPPT voltage range (U _{mppt,min} ~ U _{mppt,max})	300 - 500 V			
Max. input current	30 A			
Admissible conductor size DC	AWG 14-8 AWG 8 copper direct, AWG 6 aluminum direct, AWG 4-8 AWG 2 copper or aluminum with input combiner			
Number of MPPT trackers	2			

TECHNICAL DATA FRONIUS SYMO ADVANCED (480 V VERSIONS)

INPUT DATA	SYMO 10.0-3 480		SYMO 12.0-3 480	
	208 V	240 V	208 V	240 V
Max. PV generator output (P _{g,max})	15 kW _{max}	18 kW _{max}	18 kW _{max}	21 kW _{max}
Max. input current (I _{g,max}) (1/2/3ph)	33 A / 25 A	40 A / 27.5 A	33 A / 25 A	40 A / 27.5 A
Max. short circuit current (MPP / MPPT)	33.2 A / 24.8 A	33.2 A / 24.8 A	33.2 A / 24.8 A	33.2 A / 24.8 A
Nominal input voltage	480 V	500 V	480 V	500 V
DC input voltage range (U _{in,min} ~ U _{in,max})	200 - 1000 V			
Feed-in limit voltage (U _{in,lim})	380 V			
Usable MPPT voltage range (U _{mppt,min} ~ U _{mppt,max})	300 - 500 V			
Max. input current	30 A			
Admissible conductor size DC	AWG 14 - 8 AWG 8 copper direct, AWG 6 aluminum direct, AWG 4 - 8 AWG 2 copper or aluminum with input combiner			
Number of MPPT trackers	2			

FRONIUS SYMO 24.0-3 480 CEC EFFICIENCY CURVE

FRONIUS SYMO 24.0-3 480 TEMPERATURE DERATING CURVE

TECHNICAL DATA FRONIUS SYMO (480 V VERSIONS)

PROTECTIVE DEVICES

DC reverse polarity protection: Yes
Anti-islanding: No
Over temperature protection: Output power derating / Active cooling
AFI: No
Rapid shutdown compliant: Yes
Ground Fault Protection with Isolation Monitor: Yes
Interrupter: Yes
DC disconnect: Yes

INTERFACES

USB (A socket): Data logging and inverter update possible via USB
2x RJ45 (BNC socket): Fronius Solar Net, media converter
Power Line Communication (PLC): Yes - SunSpec Rapid Shutdown communication standard
Wi-Fi (Ethernet/Serial) (Data logger and webserver): Wireless standard 802.11 b/g/n / Fronius Solar web, SunSpec Modbus TCP/200 / SunSpec Modbus RTU (8 inputs and 8 digital IO)
Load management/signaling, multipurpose IO

EFFICIENCY

Max. Efficiency	97%	98%	97.5%
CEC Efficiency	97%	98%	97.5%

FRONIUS SYMO 24.0-3 480 CEC EFFICIENCY CURVE

FRONIUS SYMO 24.0-3 480 TEMPERATURE DERATING CURVE

TECHNICAL DATA FRONIUS SYMO (480 V VERSIONS)

PROTECTIVE DEVICES

DC reverse polarity protection: Yes
Anti-islanding: No
Over temperature protection: Output power derating / Active cooling
AFI: No
Rapid shutdown compliant: Yes
Ground Fault Protection with Isolation Monitor: Yes
Interrupter: Yes
DC disconnect: Yes

INTERFACES

USB (A socket): Data logging and inverter update possible via USB
2x RJ45 (BNC socket): Fronius Solar Net, media converter
Power Line Communication (PLC): Yes - SunSpec Rapid Shutdown communication standard
Wi-Fi (Ethernet/Serial) (Data logger and webserver): Wireless standard 802.11 b/g/n / Fronius Solar web, SunSpec Modbus TCP/200 / SunSpec Modbus RTU (8 inputs and 8 digital IO)
Load management/signaling, multipurpose IO

EFFICIENCY

Max. Efficiency	97%	98%	97.5%
CEC Efficiency	97%	98%	97.5%

Artisan Solar

Perfect Welding / Solar Energy / Perfect Charging

THREE BUSINESS UNITS, ONE GOAL: TO SET THE STANDARD THROUGH TECHNOLOGICAL ADVANCEMENT.

What began in 1945 as a one-man operation now sets technological standards in the fields of welding technology, photovoltaics and battery charging. Today, the company has around 4,700 employees worldwide and 1,253 patents for product development show the innovative spirit within the company. Sustainable development means for us to implement environmentally relevant and social aspects equally with economic factors. Our goal has remained constant throughout: to be the innovation leader.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

Artisan Solar
12916 5TH ST
GRANDVIEW, MO 64030
PH: (813) 601-0700

FRONIOS USA LLC
6797 Fronius Drive
Paragon, IN 46368
USA
pv-support-usa@fronius.com
www.fronius-usa.jp

FRONIOS INTERNATIONAL GMBH
Froniunplatz 1
4600 Wels
Austria
pv-sales@fronius.com
www.fronius.com

Lee's Summit Detail Shop

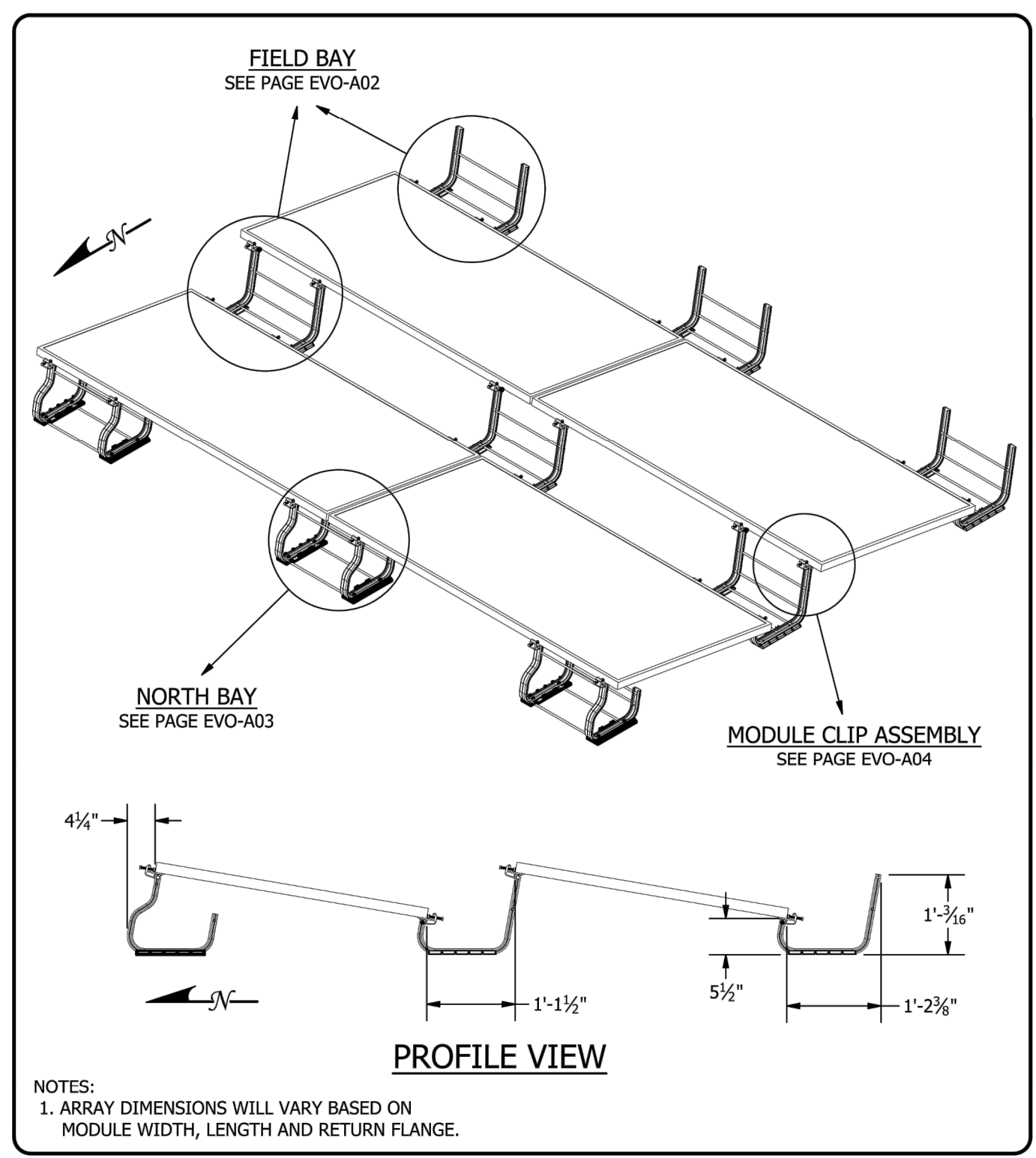
EQUIPMENT DATA SHEET

94.05 KW DC Rooftop Photovoltaic System
2100 NE Independence Ave, Lee's Summit, MO 64064, USA

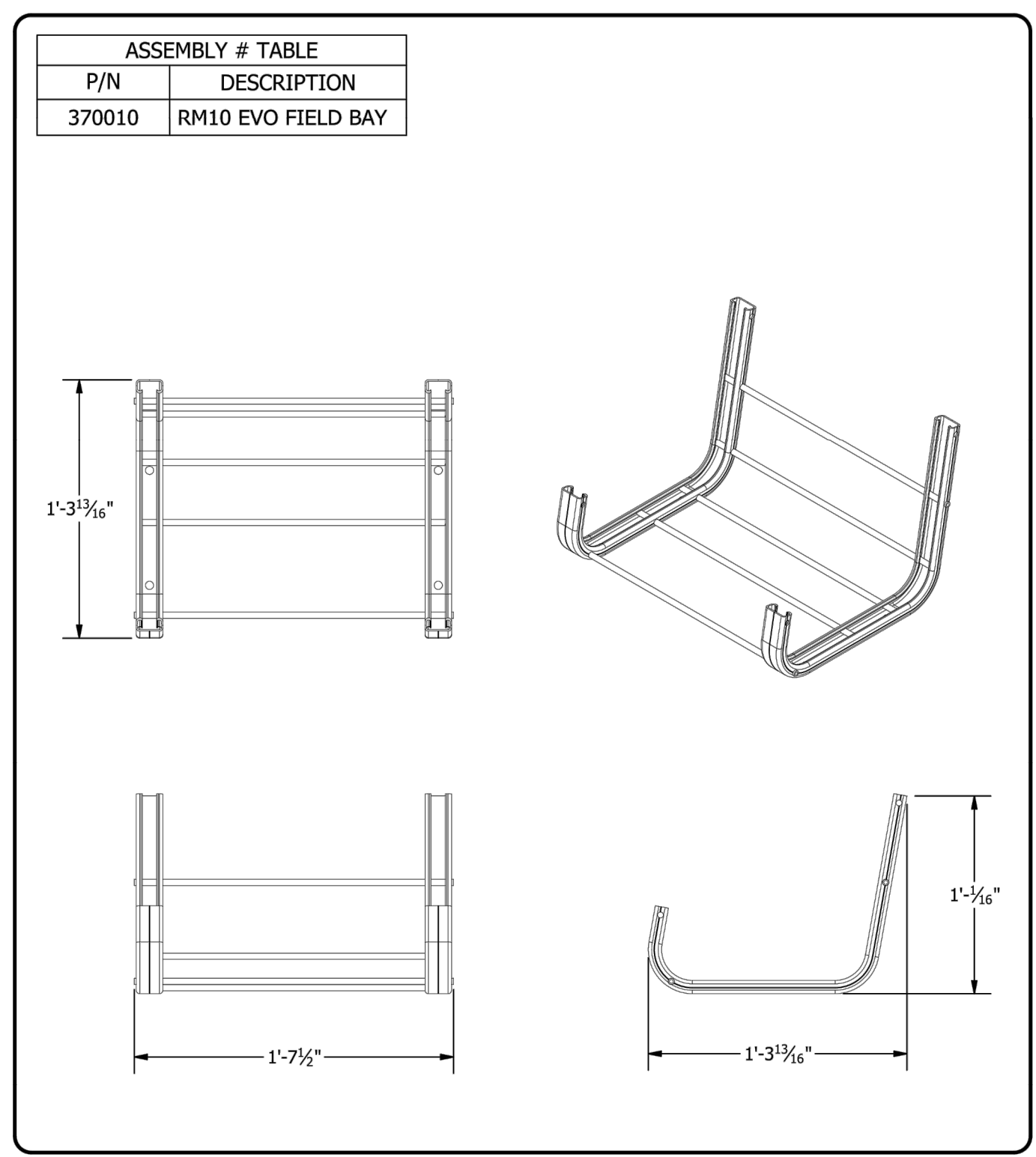
DATE: 05-27-2022
REV: #1

DESIGNED: []
CHECKED: []
APPROVED: []

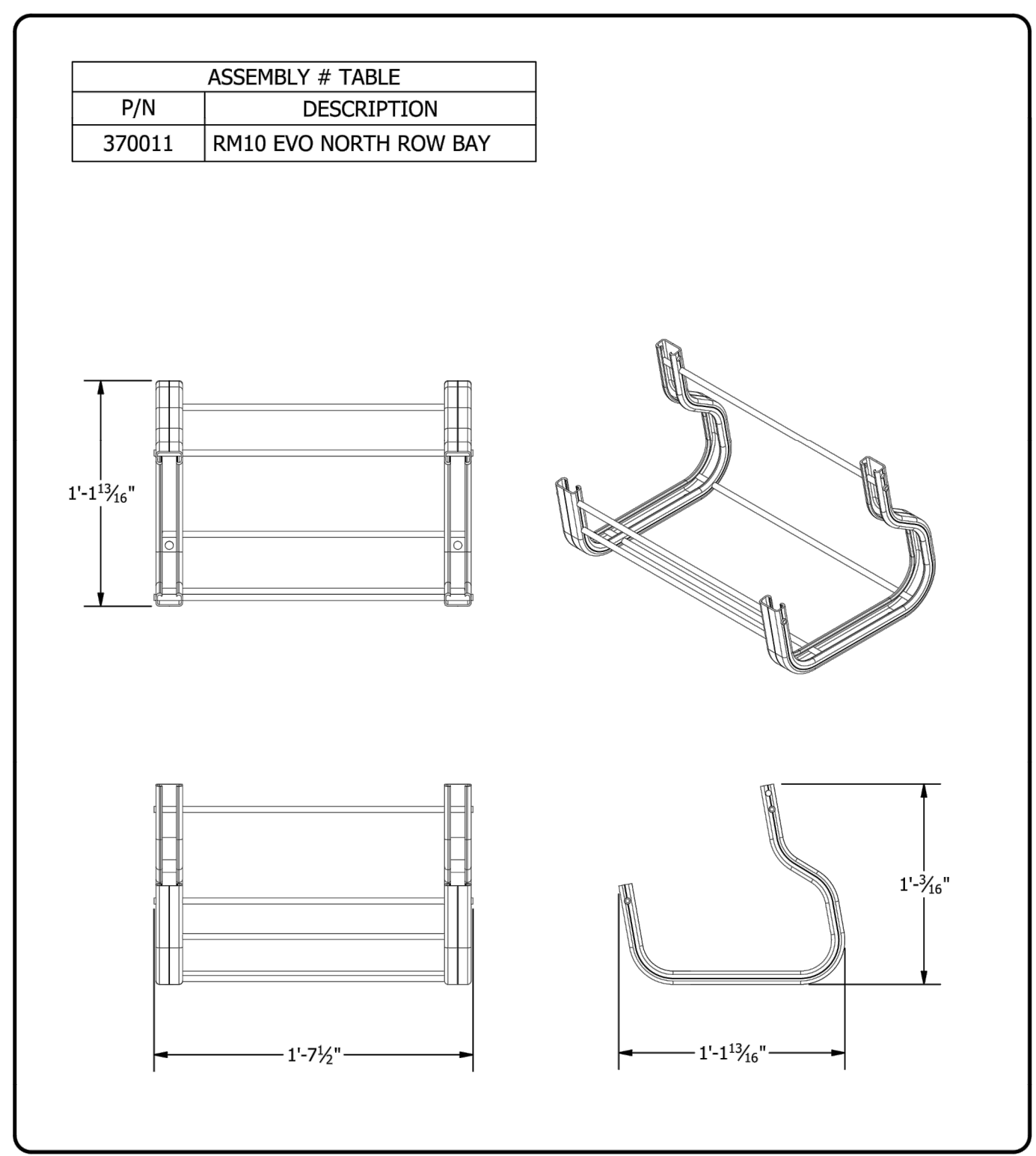
DWG NO: D-1
PROJ NO: NEI-210



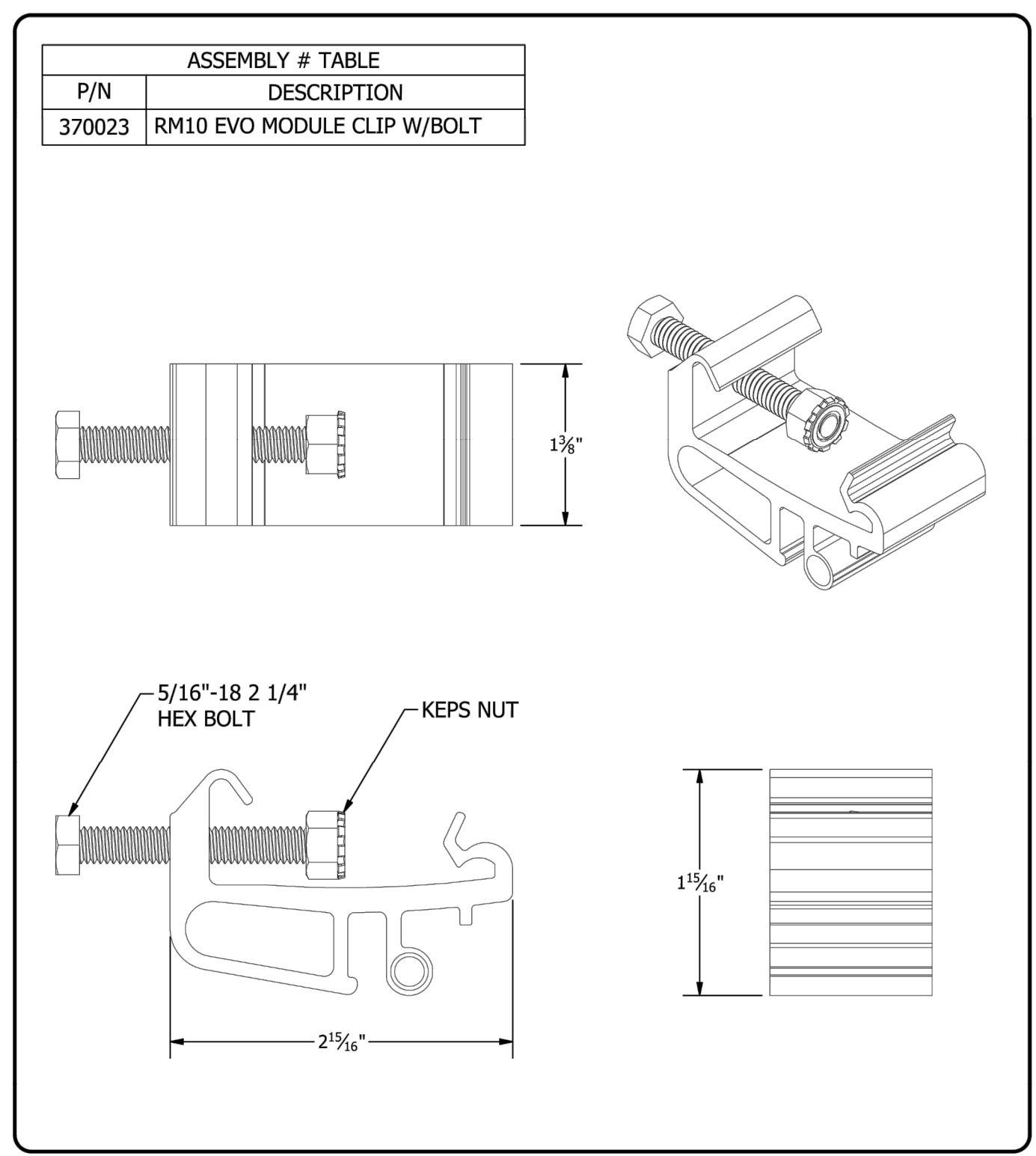
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A01 SHEET
	DRAWING TYPE:	SYSTEM ASSEMBLY		
	DESCRIPTION:	RM10 EVO		
	REVISION DATE:	12/10/2021		



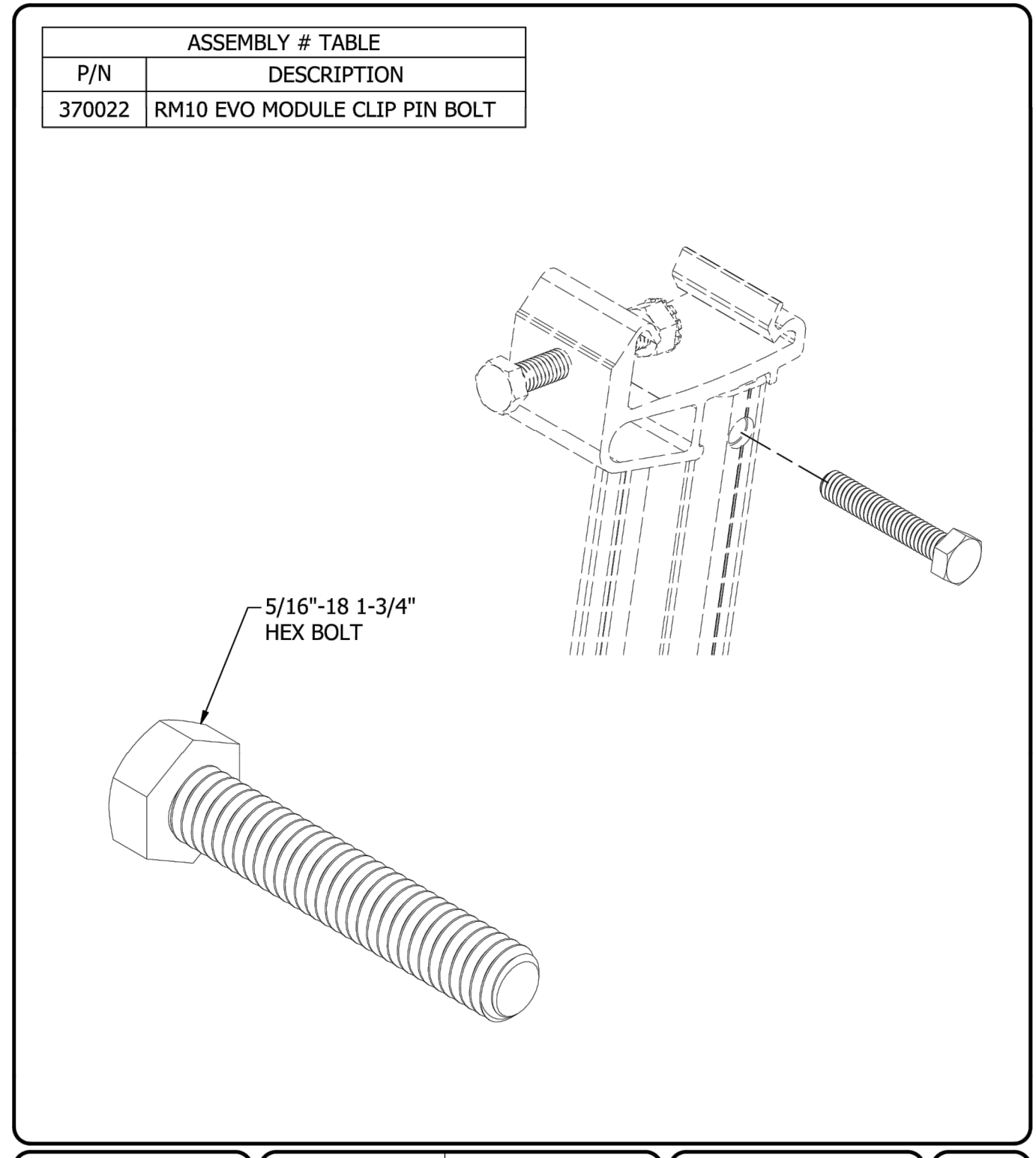
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A02 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	FIELD BAY ASSEMBLY		
	REVISION DATE:	12/10/2021		



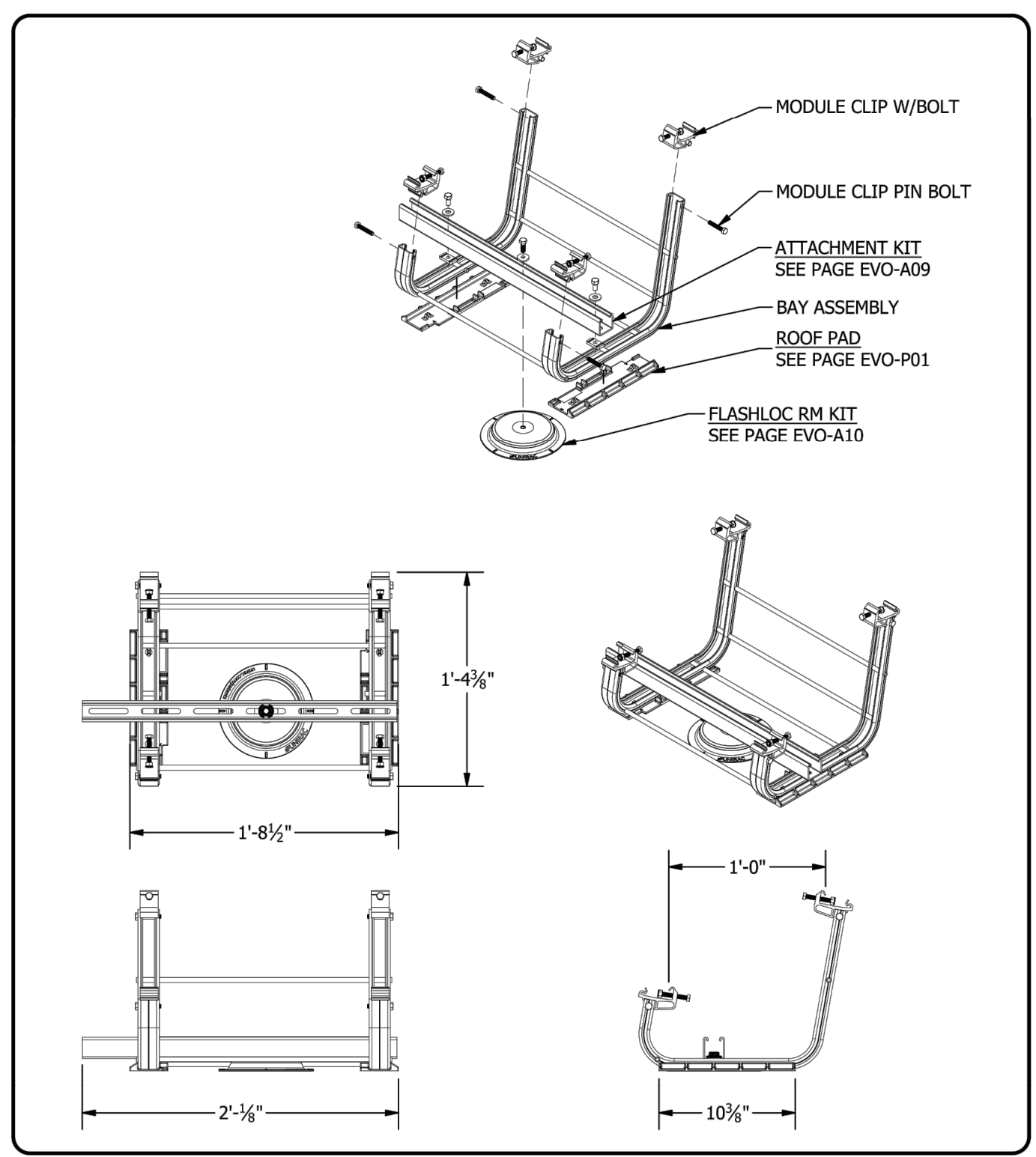
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A03 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	NORTH BAY ASSEMBLY		
	REVISION DATE:	12/10/2021		



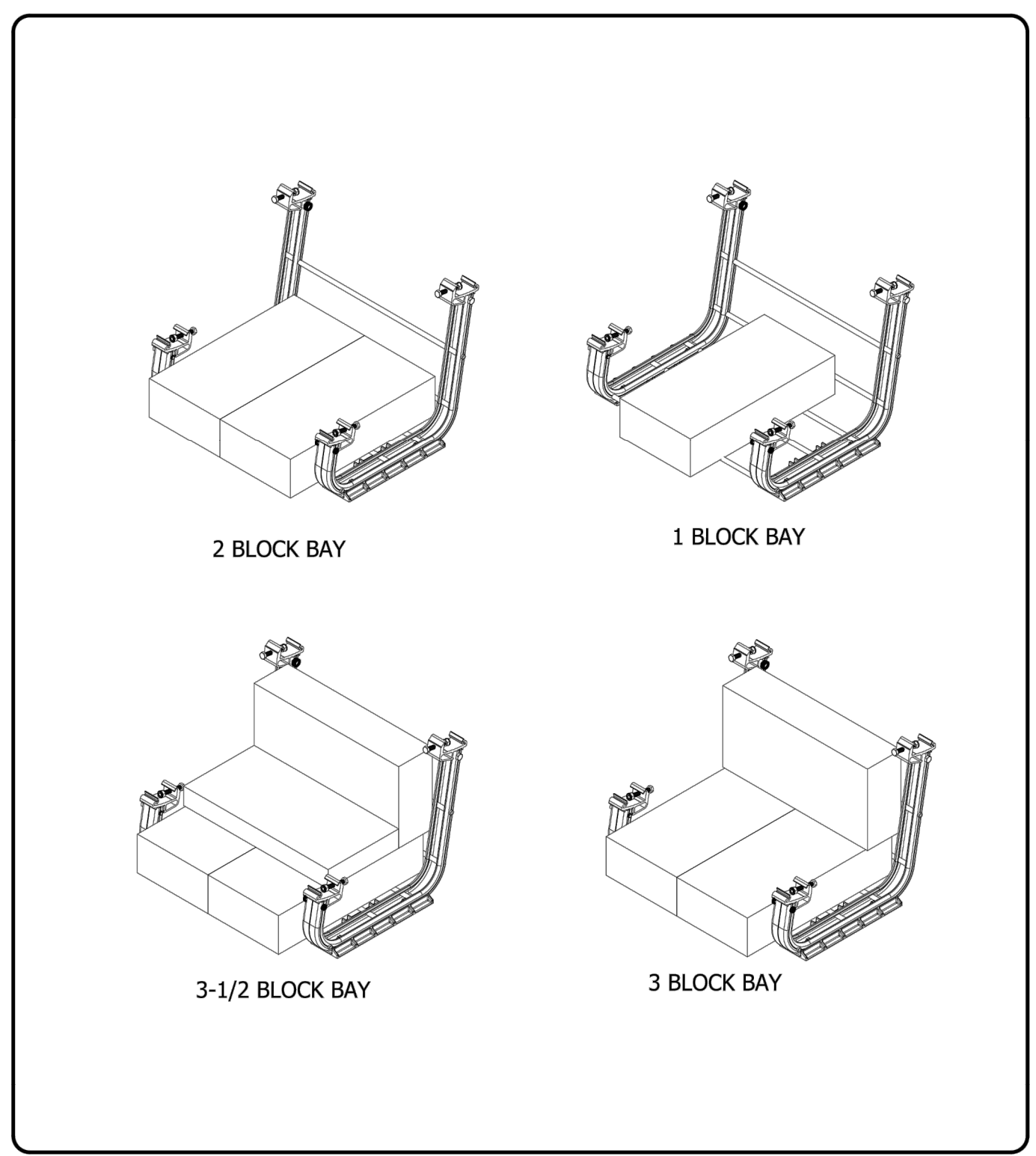
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A04 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	MODULE CLIP ASSEMBLY		
	REVISION DATE:	12/10/2021		



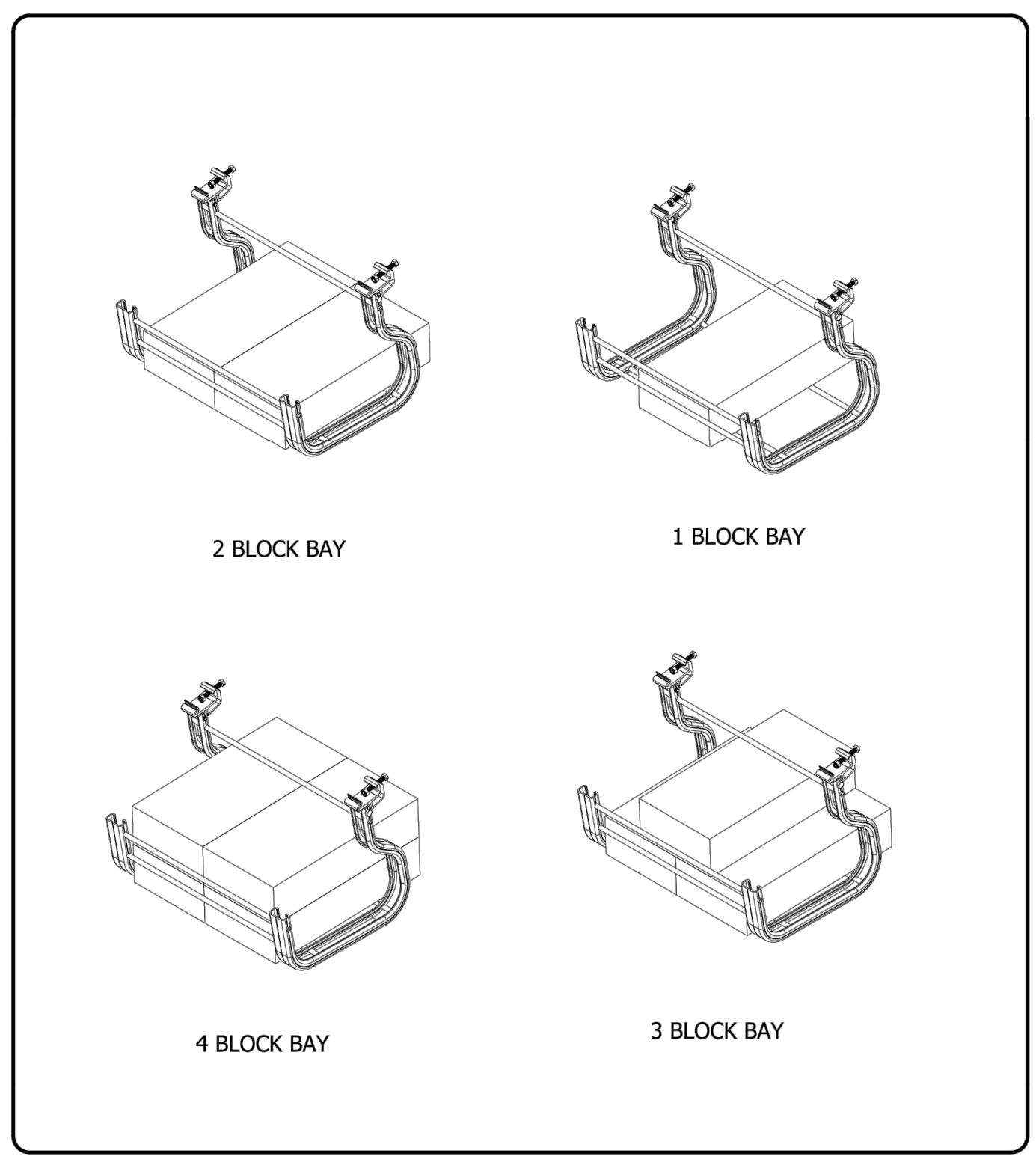
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A05 SHEET
	DRAWING TYPE:	PARTS		
	DESCRIPTION:	MODULE CLIP PIN BOLT		
	REVISION DATE:	12/10/2021		



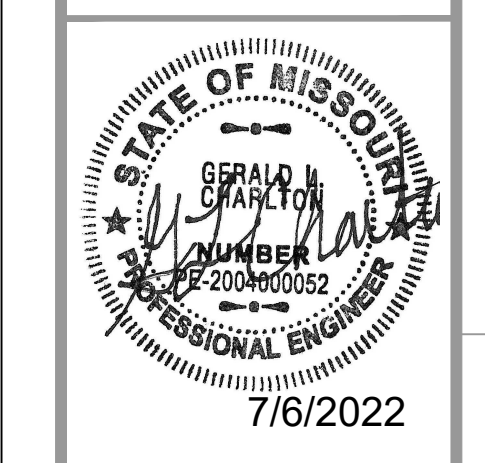
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A06 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	ROOF ATTACHMENT ASSEMBLY		
	REVISION DATE:	12/10/2021		



 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A07 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	FIELD BAY BALLAST LAYOUT		
	REVISION DATE:	12/10/2021		



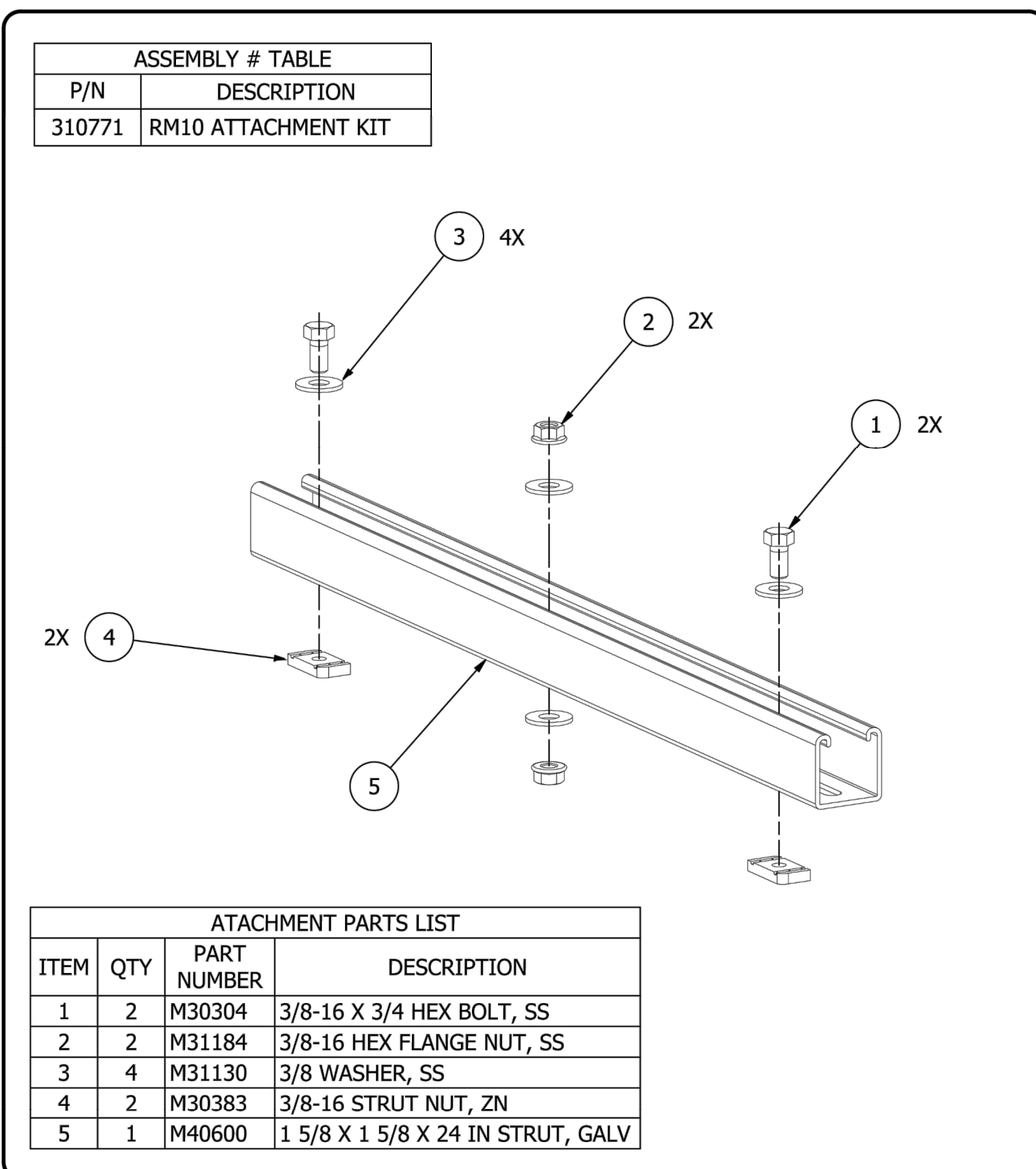
 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE:	RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL PRODUCT PROTECTED BY ONE OR MORE US PATENTS LEGAL NOTICE	EVO-A08 SHEET
	DRAWING TYPE:	PARTS ASSEMBLY		
	DESCRIPTION:	NORTH BAY BALLAST LAYOUT		
	REVISION DATE:	12/10/2021		




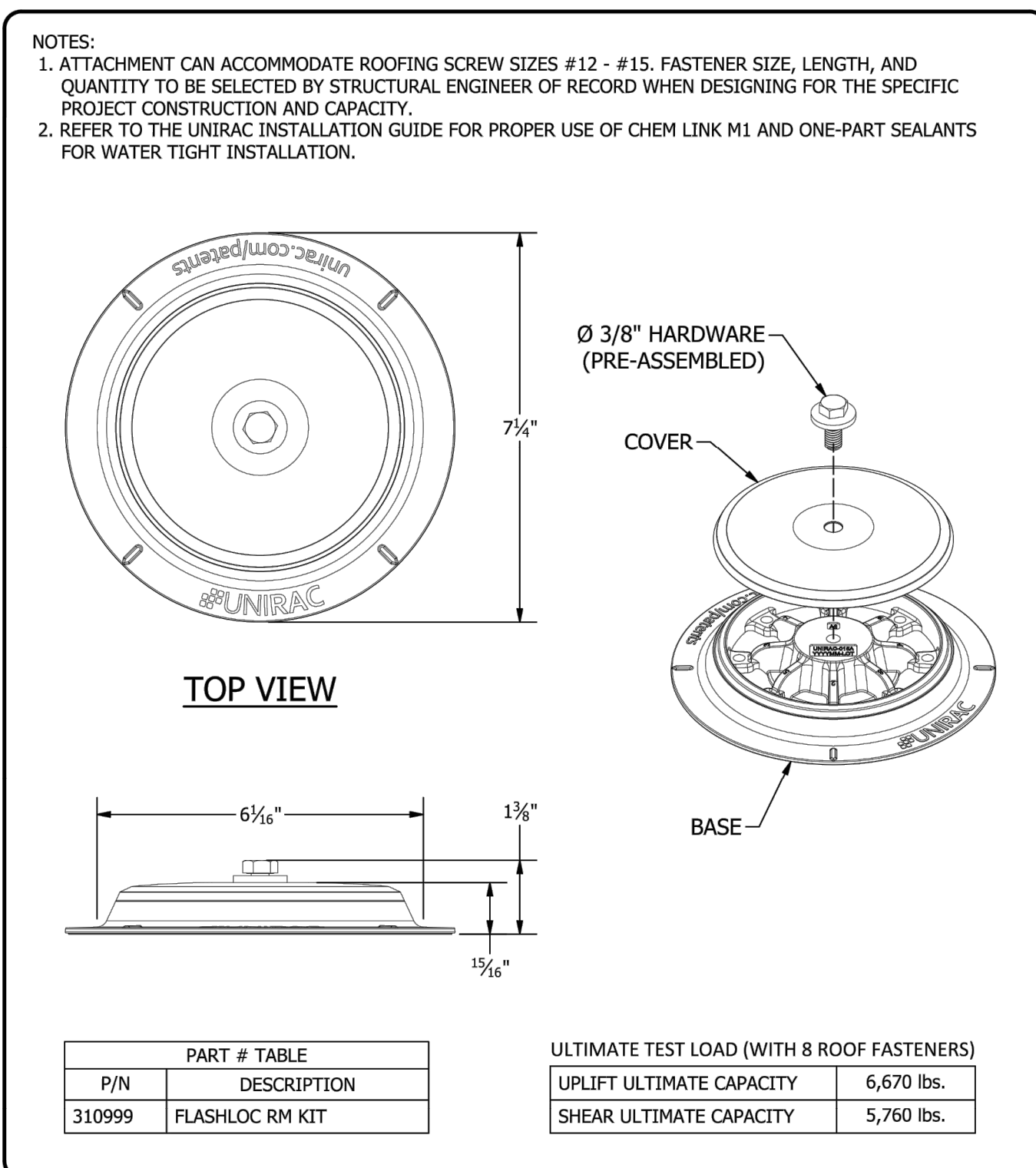
NAME OF CUSTOMER:	Lee's Summit Detail Shop
TITLE:	EQUIPMENT DATA SHEET
SUBJECT:	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION:	2100 NE Independence Ave, Lee's Summit, MO 64064, USA


REV #	DATE	REVISIONS	DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1			

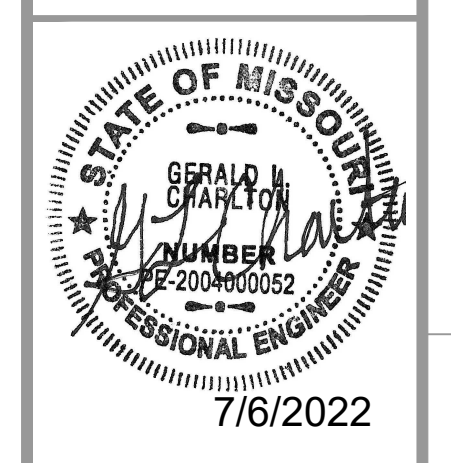
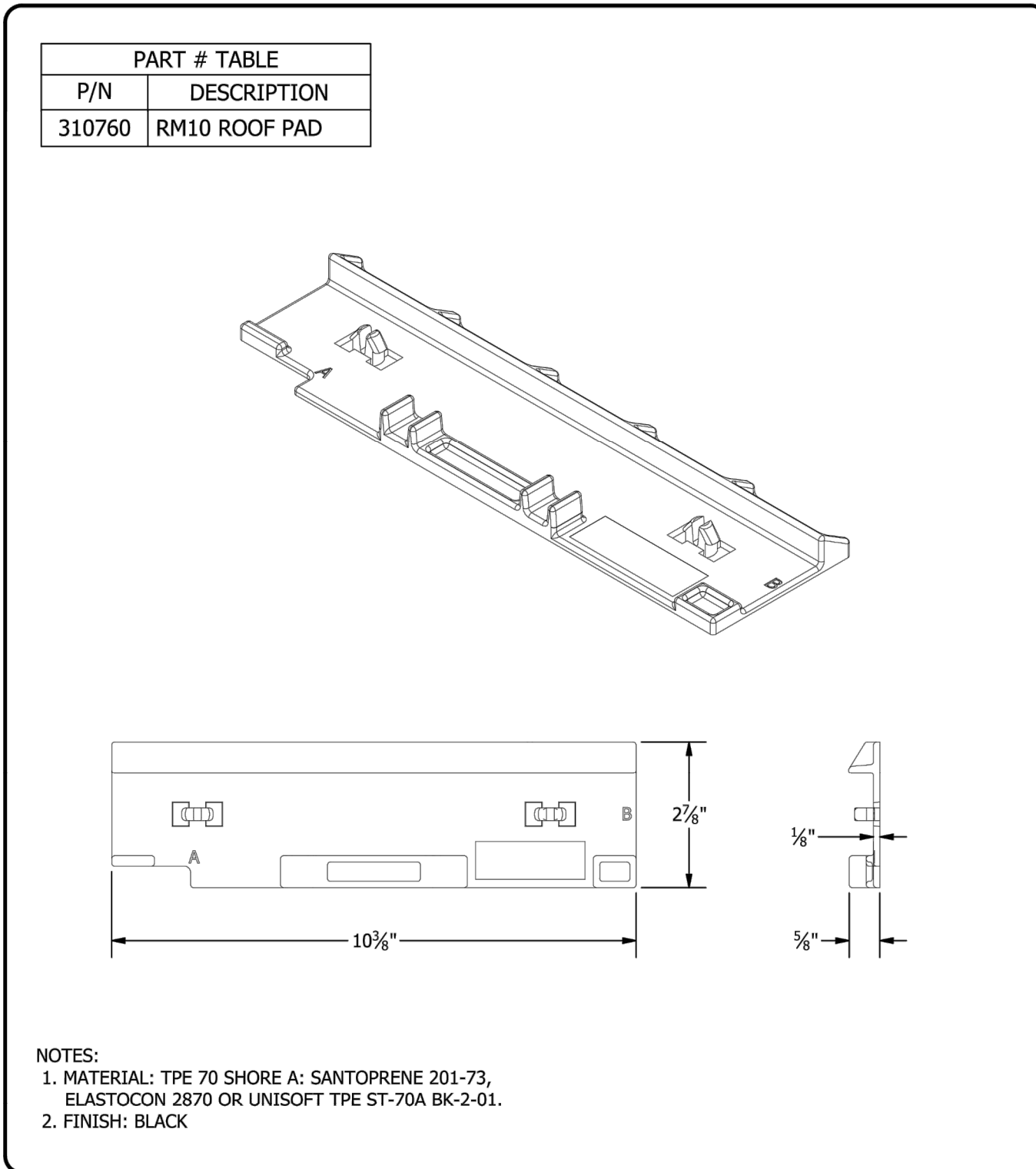
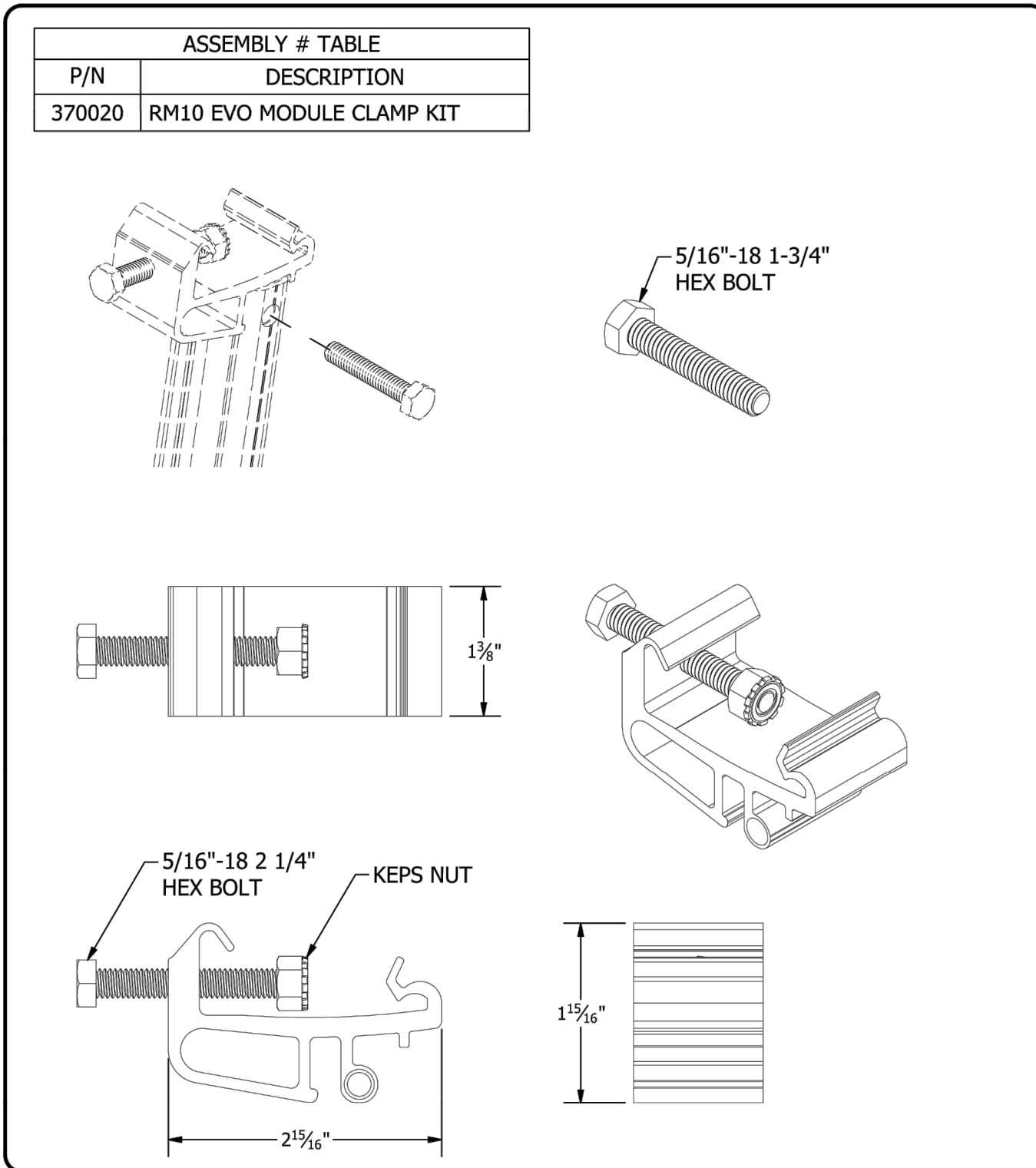
12916 5TH ST
 GRANDVIEW, MO 64030
 PH: (816) 601-0700



 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE: RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	EVO-A09 SHEET
	DRAWING TYPE: ASSEMBLY	PRODUCT PROTECTED BY ONE OR MORE US PATENTS	
	DESCRIPTION: RM10 ATTACHMENT KIT	LEGAL NOTICE	
	REVISION DATE: 12/10/2021		




 1411 BROADWAY BLVD. NE ALBUQUERQUE, NM 87102 USA PHONE: 505.242.6411 WWW.UNIRAC.COM	PRODUCT LINE: RM10 EVO	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL	EVO-A10 SHEET
	DRAWING TYPE: ASSEMBLY DETAIL	PRODUCT PROTECTED BY ONE OR MORE US PATENTS	
	DESCRIPTION: FLASHLOC RM KIT	LEGAL NOTICE	
	REVISION DATE: 12/10/2021		



NAME OF CUSTOMER	Lee's Summit Detail Shop
TITLE	EQUIPMENT DATA SHEET
SUBJECT	94.05 KW DC Rooftop Photovoltaic System
PROJECT LOCATION	2100 NE Independence Ave, Lee's Summit, MO 64064, USA

Rev #	DATE	REMARKS	DESIGNED	CHECKED	APPROVED
1	05-27-2022	Lee's Summit Detail Shop - Rev 1			

 12916 5TH ST GRANDVIEW, MO 64030 PH: (816) 601-0700	DWG NO: D-3
	PROJ NO: NEI-210