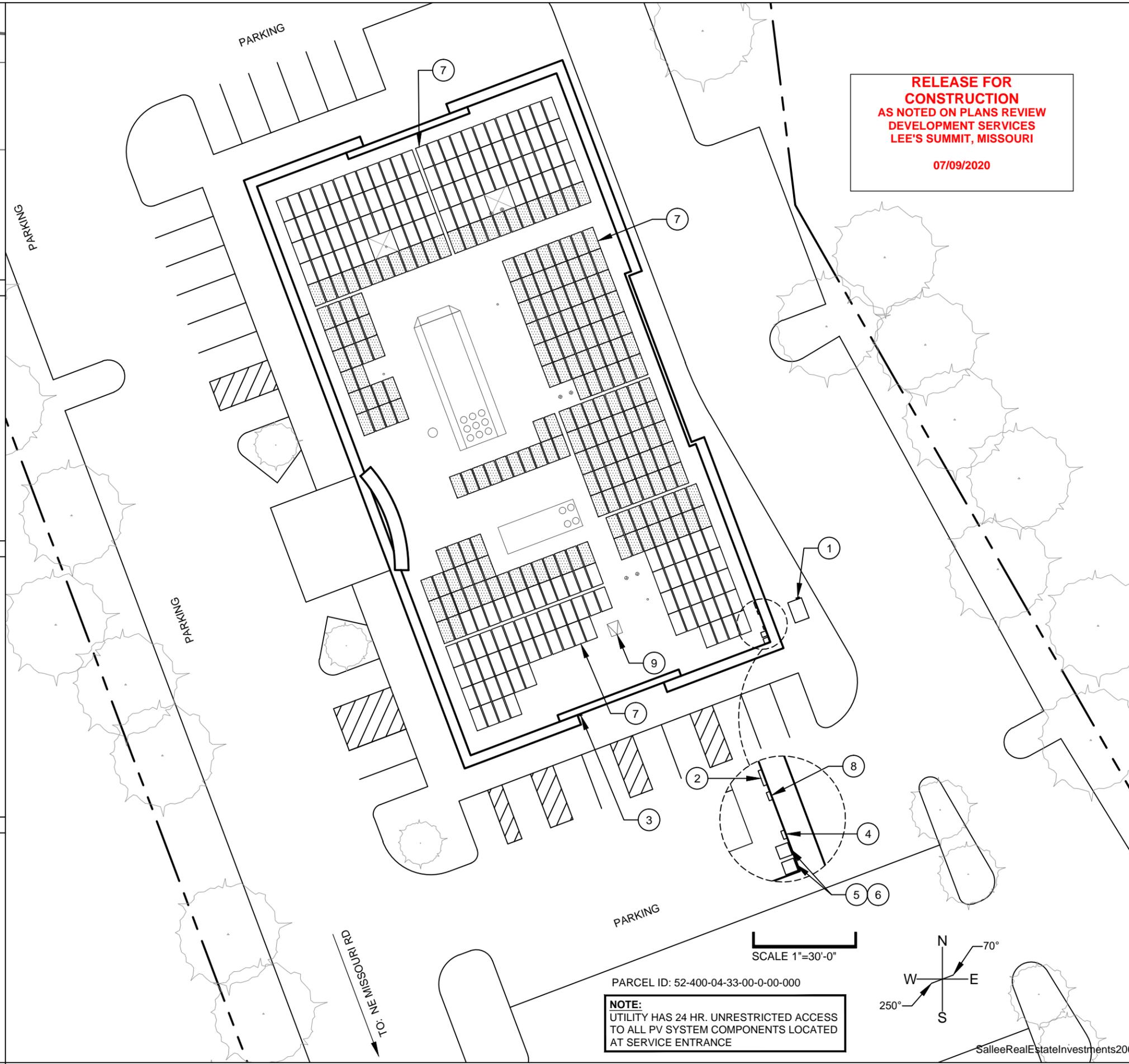


- GENERAL NOTES
- ① ELECTRICAL SERVICE ENTRANCE AND UTILITY REVENUE METER # 18 599 454
 - ② EXISTING ELECTRICAL LOAD CENTER (MDP PANEL)
 - ③ PHOTOVOLTAIC SYSTEM DISCONNECT FOR UTILITY OPERATION
 - ④ DEDICATED PHOTOVOLTAIC SYSTEM AC COMBINER PANEL
 - ⑤ INVERTER (2 TOTAL)
 - ⑥ PV ARRAY DC DISCONNECT (2 TOTAL)
 - ⑦ PHOTOVOLTAIC MODULE ARRAY MOUNTED ON FLAT ROOF (362 TOTAL SOLAR PANELS)
 - ⑧ JUNCTION BOX FOR EGUAGE MONITORING SYSTEM
 - ⑨ EXISTING ROOF ACCESS HATCH



**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI**

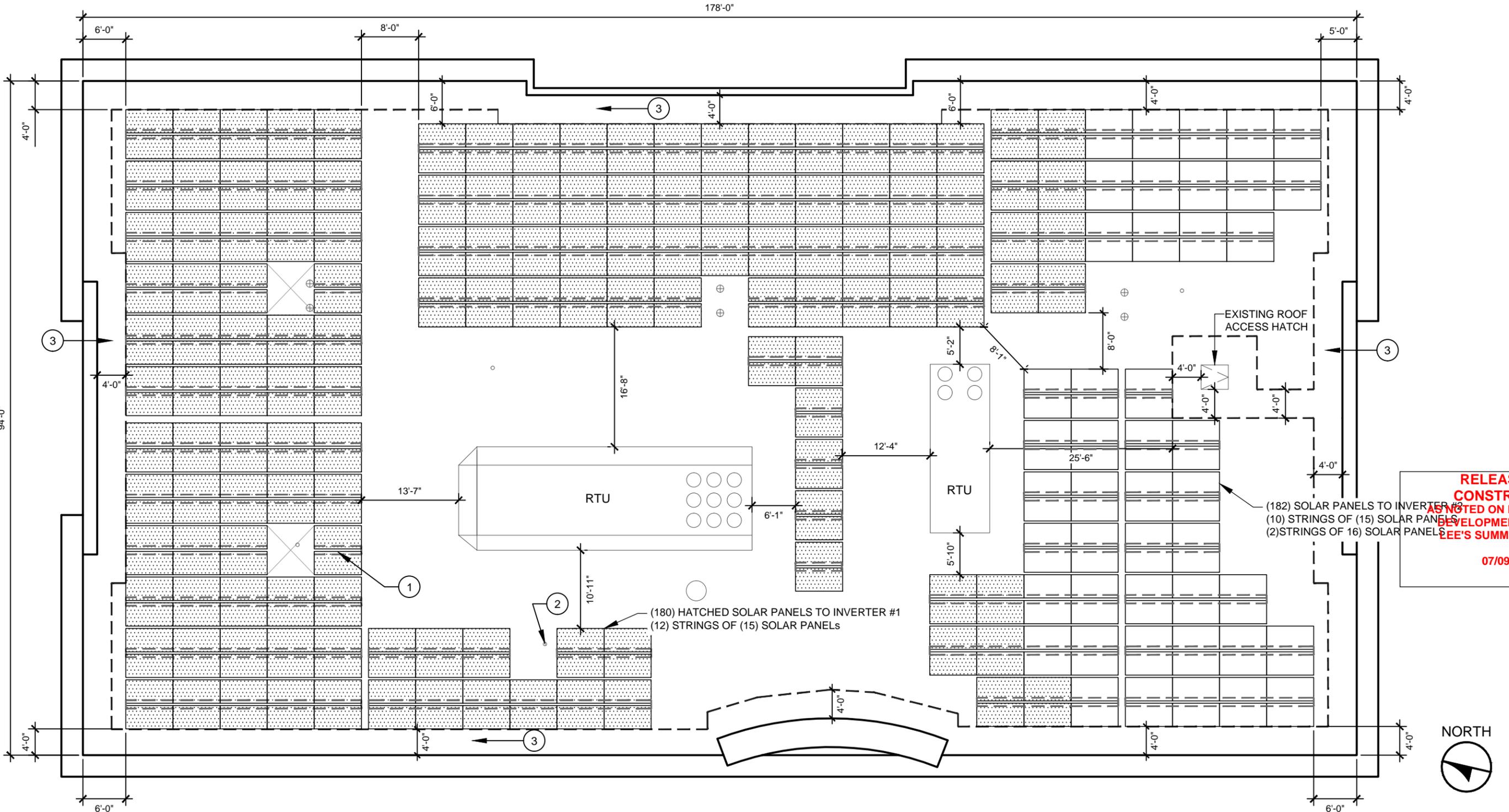
07/09/2020

Prepared For:
SUNSMART TECHNOLOGIES
701 NE 76th Street
Gladstone, MO 64118
816-388-9486

ISSUED FOR REVIEW	MES	PM	DATE	BY	REVISION	APPR.
A	05-06-2020	PM				
B	06-09-2020	PM				
C	06-18-2020	PM				

144.8 KW DC PV SYSTEM
124.0 KW AC PV SYSTEM
SOLAR ROOF PLAN
200 NE MISSOURI ROAD
LEES SUMMIT, MO 64086

Utility Company: **EVERGY**
Drawn By: **M. Sucharski**
Checked By: **P. Meiers**
Date: **05/06/2020**
Project: **MO_no RS modules**
Scale: **1" = 30'-0"** Sheet: **01**



RELEASE FOR CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

PV PANEL ARRAY PLAN

LANDSCAPE MOUNTED PANELS FLAT TPO ROOF

- ① ROOF TOP BALLASTED RACKING, REFER TO DETAIL SHEET 04
- ② VENTS (TYP.)
- ③ 4' CLEAR PATH FOR FIRE DEPT. ACCESS

NOTE:
 ALL CONSTRUCTION / INSTALLATION IS TO COMPLY WITH THE FOLLOWING:
 2018 IBC 2018 IFC 2017 NEC
 ALL DIMENSIONS ARE APPROXIMATE

NOTE:
 REFER TO SUPPLEMENTAL STRUCTURAL ANALYSIS REPORT FOR STRUCTURAL CALCULATIONS AND ROOF STRUCTURE DETAILS.

GENERAL NOTES

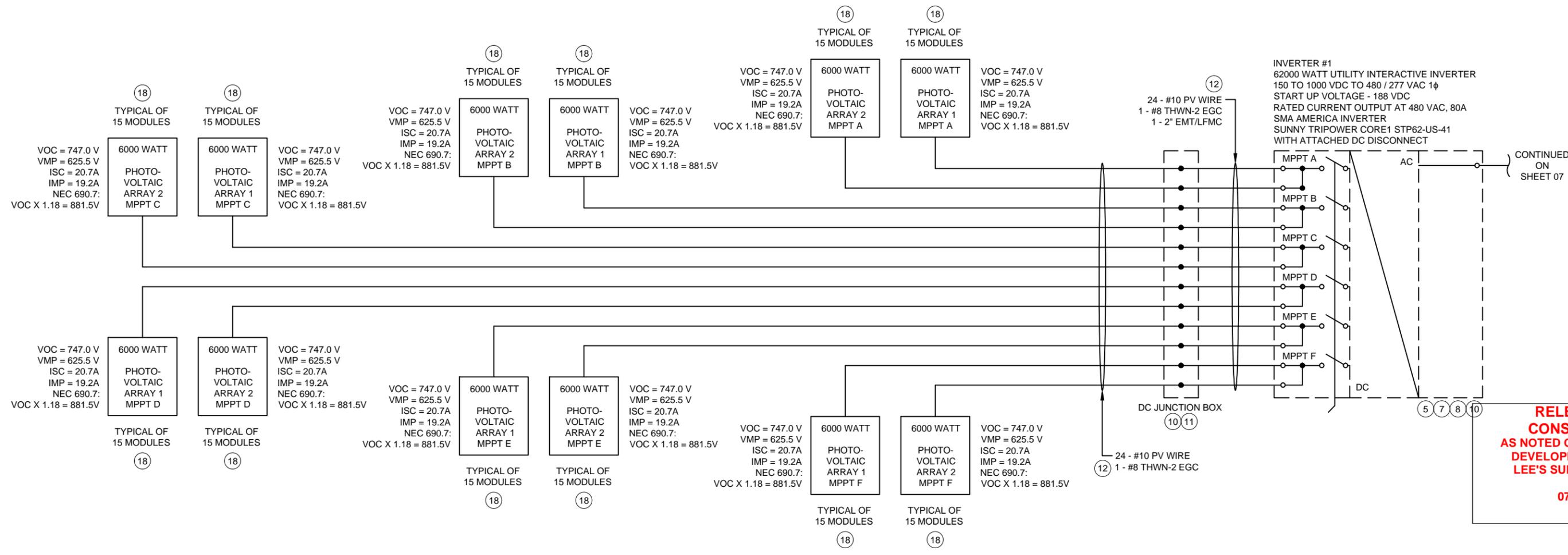
ARRAY CALCULATIONS

Prepared For:
SUNSMART TECHNOLOGIES
 701 NE 76th Street
 Gladstone, MO 64118
 816-388-9486

ISSUED FOR	DATE	BY	REVISION
A	05-06-2020	PM	APPR.
B	06-09-2020	PM	
C	06-18-2020	PM	

144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
PV LAYOUT DETAILS
 200 NE MISSOURI ROAD
 LEE'S SUMMIT, MO 64086

Utility Company:	EVERGY
Drawn By:	M. Sucharski
Checked By:	P. Meiers
Date:	05/06/2020
Project:	SalleeRealEstateInvestments200-MO_no RS modules
Scale:	
Sheet:	02

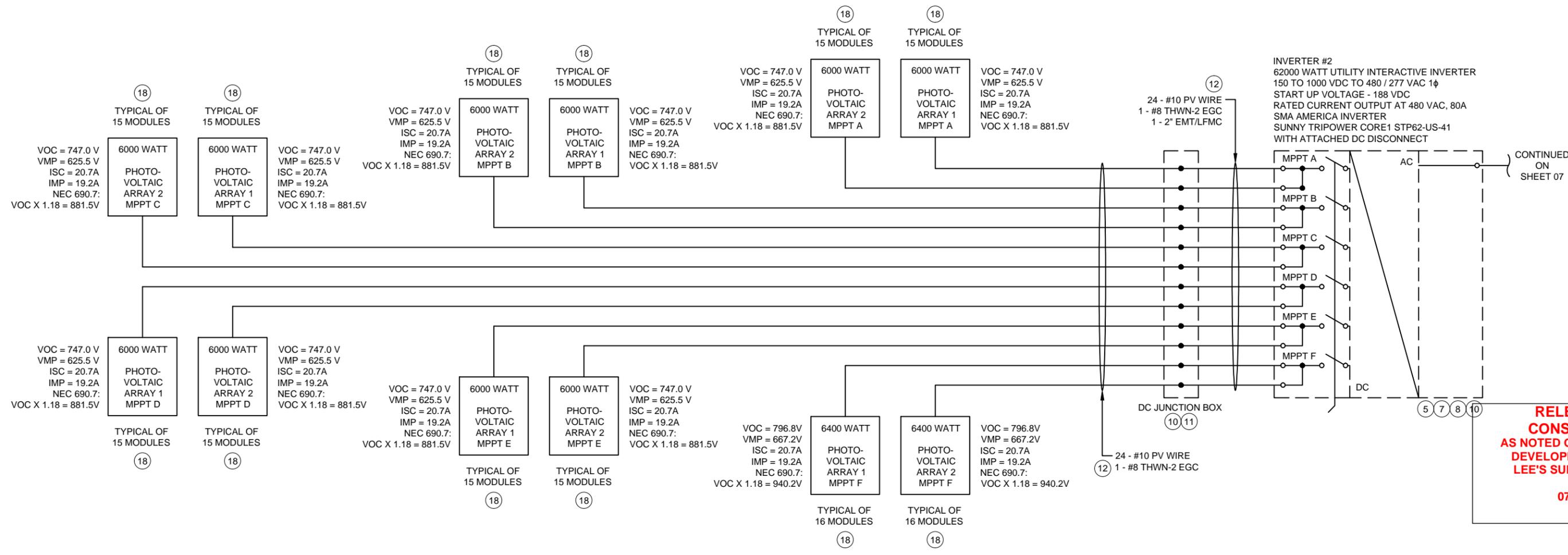


RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

NOTE:
 ALL TERMINATIONS TO BE RATED MINIMUM 75°C.
 ARTICLE.110.14 (C)(1)

<p>DIAGRAM</p> <ol style="list-style-type: none"> 1. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2017 AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRICAL UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION. 2. BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED) 3. PER NEC 705.10, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION (UTILITY METER). 4. LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC 110.3(B). 5. FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEM SHALL COMPLY WITH THE GROUND AND BONDING REQUIREMENTS OF NEC 690.47(A). 6. LABEL AS "PHOTOVOLTAIC SYSTEM AC DISCONNECT" WITH MAXIMUM SYSTEM CURRENT AND OPERATING VOLTAGE. 7. ANTI-ISLANDING PROTECTION ENSURES THE SYSTEM WILL NOT EXPORT POWER INTO A BALANCED 60 Hz RESONANT LOAD WHILE THE UTILITY IS DISCONNECTED. 8. LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D). 9. PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRICAL SHOCK HAZARD- DO NOT TOUCH TERMINALS- TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION." 10. PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED." 11. LABEL "WARNING: PHOTOVOLTAIC POWER SOURCE". PER THE INTERNATIONAL FIRE CODE 2018 EDITION, SECTION 1204 AND NEC 2017 SECTION 690.31(G)(3) (4). MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES EVERY 10 FEET, WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER 	<p>RESISTANT AND SUITABLE FOR THE ENVIRONMENT. THE MARKING SHALL ALSO BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.</p> <ol style="list-style-type: none"> 12. WHERE PV SYSTEM DC CIRCUITS RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS PER NEC 690.31(G). 13. PER NEC 705.12(B)(2)(3)(b), THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR. 14. DEDICATED 3 POLE 20 AMP BRANCH FEEDER CIRCUIT FOR E-GAUGE SYSTEMS MONITOR. REVENUE GRADE ELECTRICITY CONSUMPTION AND PRODUCTION MONITORING SYSTEM. 15. EGUAGE MONITORING SYSTEM WILL REQUIRE (3) 200A ROPE CT(S) FOR THE SERVICE BREAKERS AND (3) 200A ROPE CT(S) FOR THE L1, L2, L3 PHASE OF THE PV SYSTEM. 16. PER NEC 690.54 LABEL THE OVERCURRENT DEVICE "PHOTOVOLTAIC ELECTRIC POWER SOURCE" WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. PER NEC 705.12(B)(2)(3)(b) LABEL DEVICE "WARNING POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE". 17. LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL". 18. PER NEC 690.12(B)(2)(1): THE PV ARRAY SHALL BE LISTED OR FIELD LABELED AS RAPID SHUTDOWN PV ARRAY. 19. PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D). PER NEC 690.56(C)(3): A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3 FEET FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING: "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM". 20. SUNSMART TO CONFIRM A GROUND ROD IS INSTALLED. IF THERE IS NOT, SUNSMART SHALL INSTALL ONE PER THE NEC. 21. ALL WIRE TO BE COPPER CONDUCTOR UNLESS OTHERWISE NOTED 22. DERATE BREAKER TO 200A/3P. LABEL "BREAKER HAS BEEN DE-RATED PER NEC 705.12(B)(2)". 23. PER NEC 705.12 (B)(2)(2) & NEC 240.21 (B), A PHOTOVOLTAIC GENERATION SOURCE IS CONNECTED TO THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS. 	<p>CONDUCTOR SIZING PER NEC TABLE 310.15(B)(16) AND 310.15(B)(2)(A) AND ADJUSTMENT FACTORS 0.58 (56-60°C) AND 0.82 (41-45°C). OVERCURRENT DEVICE SIZING PER NEC 240.4(B) AND 240.6(A):</p> <p>AC CALCS:</p> <p>PER NEC 690.8(A)(3) AND (B)(1): 1 x 1.25</p> <p>INVERTER #1 => 80.0A x 1.25 = 100.0A INVERTER #2 => 80.0A x 1.25 = 100.0A</p> <p>SYSTEM => [1 + 2] = 200.0A</p> <p>ALL SUPPLIED EQUIPMENT IS UL LISTED EQUIPMENT TO BE INSTALLED PER LISTING AND / OR LABELING TO 2017 NEC REQUIREMENTS</p> <p>GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY</p> <p>ALL SOLAR PANELS ARE UL LISTED TO UL1703 AND HAVE A CLASS C FIRE RATING</p> <p>MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V NOMINAL POWER (Pnom) = 400W OPEN CIRCUIT VOLTAGE (Voc) = 49.8V MAX POWER VOLTAGE (Vmp) = 41.7V SHORT CIRCUIT CURRENT (Isc) = 10.36A MAX POWER CURRENT (Imp) = 9.6A SERIES FUSE RATING = 20A</p>
<p>KEY NOTES</p>	<p>EQUIPMENT NOTES</p>	<p>144.8 KW DC PV SYSTEM 124.0 KW AC PV SYSTEM</p> <p style="font-size: 2em; font-weight: bold; text-align: center;">ONE LINE WIRING DIAGRAM #1</p> <p>200 NE MISSOURI ROAD LEES SUMMIT, MO 64086</p> <p>Utility Company: EVERGY</p> <p>Drawn By: M. Sucharski</p> <p>Checked By: P. Meiers</p> <p>Date: 05/06/2020</p> <p>Project: SalleeRealEstateInvestments200</p> <p>Scale: NTS</p> <p>Sheet: 05</p>

ISSUED FOR	DATE	BY	REVISION
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RELEASE FOR CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

NOTE:
 ALL TERMINATIONS TO BE RATED MINIMUM 75°C.
 ARTICLE.110.14 (C)(1)

NO.	REVISION	DATE	BY	APPR.
A	ISSUED FOR PERMITS			
B	MINOR ELEMENT CHANGES			
C	UPDATE SERVICE DISCONNECT			

144.8 KW DC PV SYSTEM	124.0 KW AC PV SYSTEM
ONE LINE WIRING DIAGRAM #2	
200 NE MISSOURI ROAD LEES SUMMIT, MO 64086	
Utility Company:	EVERGY
Drawn By:	M. Sucharski
Checked By:	P. Meiers
Date:	05/06/2020
Project:	SalleeRealEstateInvestments200
Scale:	MO_no RS modules
Sheet:	NTS 06

DIAGRAM

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2017 AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRICAL UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED)
- PER NEC 705.10, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION (UTILITY METER).
- LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC 110.3(B).
- FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEM SHALL COMPLY WITH THE GROUND AND BONDING REQUIREMENTS OF NEC 690.47(A).
- LABEL AS "PHOTOVOLTAIC SYSTEM AC DISCONNECT" WITH MAXIMUM SYSTEM CURRENT AND OPERATING VOLTAGE.
- ANTI-ISLANDING PROTECTION ENSURES THE SYSTEM WILL NOT EXPORT POWER INTO A BALANCED 60 Hz RESONANT LOAD WHILE THE UTILITY IS DISCONNECTED.
- LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D).
- PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRICAL SHOCK HAZARD- DO NOT TOUCH TERMINALS- TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION."
- PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED."
- LABEL "WARNING: PHOTOVOLTAIC POWER SOURCE". PER THE INTERNATIONAL FIRE CODE 2018 EDITION, SECTION 1204 AND NEC 2017 SECTION 690.31(G)(3) (4). MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES EVERY 10 FEET, WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER

RESISTANT AND SUITABLE FOR THE ENVIRONMENT. THE MARKING SHALL ALSO BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.

- WHERE PV SYSTEM DC CIRCUITS RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS PER NEC 690.31(G).
- PER NEC 705.12(B)(2)(3)(b), THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR.
- DEDICATED 3 POLE 20 AMP BRANCH FEEDER CIRCUIT FOR E-GAUGE SYSTEMS MONITOR. REVENUE GRADE ELECTRICITY CONSUMPTION AND PRODUCTION MONITORING SYSTEM.
- EGUAGE MONITORING SYSTEM WILL REQUIRE (3) 200A ROPE CT(S) FOR THE SERVICE BREAKERS AND (3) 200A ROPE CT(S) FOR THE L1, L2, L3 PHASE OF THE PV SYSTEM.
- PER NEC 690.54 LABEL THE OVERCURRENT DEVICE "PHOTOVOLTAIC ELECTRIC POWER SOURCE" WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. PER NEC 705.12(B)(2)(3)(b) LABEL DEVICE "WARNING POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE".
- LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL".
- PER NEC 690.12(B)(2)(1): THE PV ARRAY SHALL BE LISTED OR FIELD LABELED AS RAPID SHUTDOWN PV ARRAY.
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D). PER NEC 690.56(C)(3): A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3 FEET FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING: "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM".
- SUNSMART TO CONFIRM A GROUND ROD IS INSTALLED. IF THERE IS NOT, SUNSMART SHALL INSTALL ONE PER THE NEC.
- ALL WIRE TO BE COPPER CONDUCTOR UNLESS OTHERWISE NOTED
- DERATE BREAKER TO 200A/3P. LABEL "BREAKER HAS BEEN DE-RATED PER NEC 705.12(B)(2)".
- PER NEC 705.12 (B)(2)(2) & NEC 240.21 (B), A PHOTOVOLTAIC GENERATION SOURCE IS CONNECTED TO THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS.

EQUIPMENT NOTES

CONDUCTOR SIZING PER NEC TABLE 310.15(B)(16) AND 310.15(B)(2)(A) AND ADJUSTMENT FACTORS 0.58 (56-60°C) AND 0.82 (41-45°C). OVERCURRENT DEVICE SIZING PER NEC 240.4(B) AND 240.6(A):

AC CALCS:
 PER NEC 690.8(A)(3) AND (B)(1): 1 x 1.25
 INVERTER #1 => 80.0A x 1.25 = 100.0A
 INVERTER #2 => 80.0A x 1.25 = 100.0A
 SYSTEM => [1 + 2] = 200.0A

ALL SUPPLIED EQUIPMENT IS UL LISTED EQUIPMENT TO BE INSTALLED PER LISTING AND / OR LABELING TO 2017 NEC REQUIREMENTS

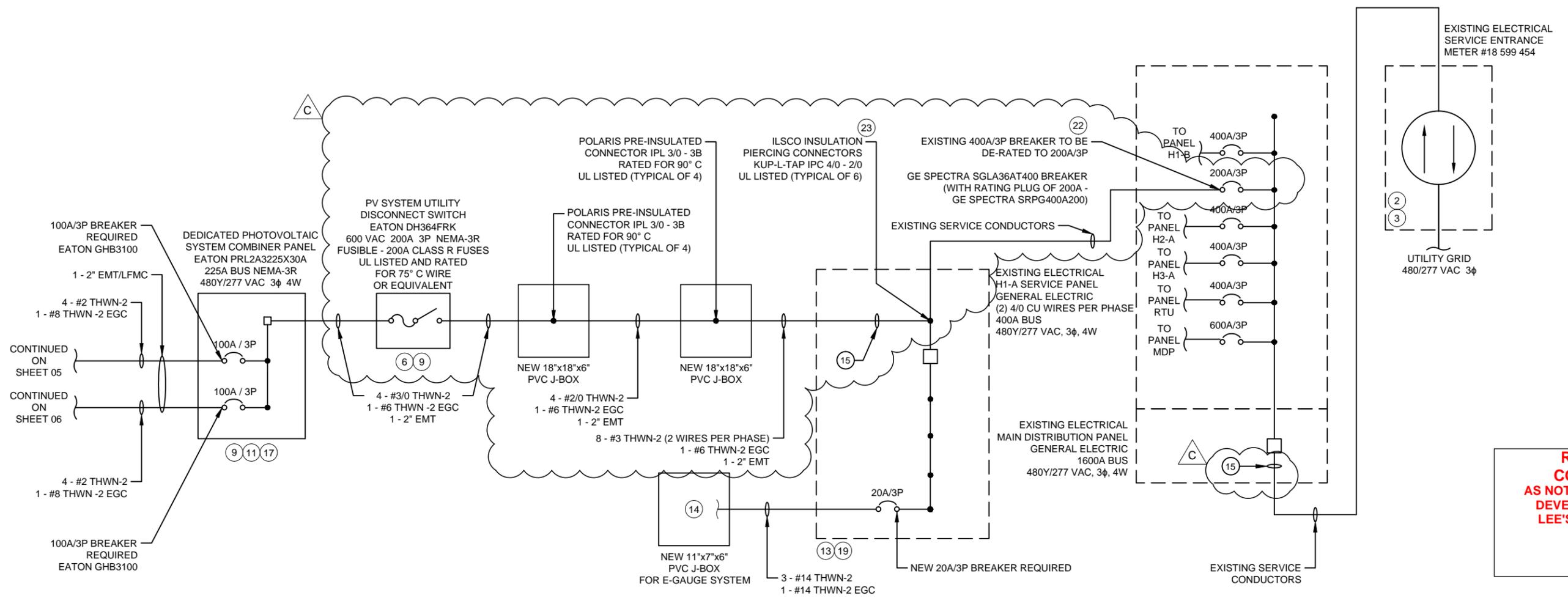
GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY

ALL SOLAR PANELS ARE UL LISTED TO UL1703 AND HAVE A CLASS C FIRE RATING

MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V
 NOMINAL POWER (Pnom) = 400W
 OPEN CIRCUIT VOLTAGE (Voc) = 49.8V
 MAX POWER VOLTAGE (Vmp) = 41.7V
 SHORT CIRCUIT CURRENT (Isc) = 10.36A
 MAX POWER CURRENT (Imp) = 9.6A
 SERIES FUSE RATING = 20A

ISSUED FOR	DATE	BY	REVISION
A	05-06-2020	PM	APPR.
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RELEASE FOR CONSTRUCTION
 AS NOTED ON PANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020



NOTE:
 ALL TERMINATIONS TO BE RATED MINIMUM 75°C.
 ARTICLE.110.14 (C)(1)

KEY NOTES	EQUIPMENT NOTES
<ol style="list-style-type: none"> EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2017 AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRICAL UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION. BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED) PER NEC 705.10, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION (UTILITY METER). LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC 110.3(B). FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEM SHALL COMPLY WITH THE GROUND AND BONDING REQUIREMENTS OF NEC 690.47(A). LABEL AS "PHOTOVOLTAIC SYSTEM AC DISCONNECT" WITH MAXIMUM SYSTEM CURRENT AND OPERATING VOLTAGE. ANTI-ISLANDING PROTECTION ENSURES THE SYSTEM WILL NOT EXPORT POWER INTO A BALANCED 60 Hz RESONANT LOAD WHILE THE UTILITY IS DISCONNECTED. LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D). PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRICAL SHOCK HAZARD- DO NOT TOUCH TERMINALS- TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION." PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED." LABEL "WARNING: PHOTOVOLTAIC POWER SOURCE". PER THE INTERNATIONAL FIRE CODE 2018 EDITION, SECTION 1204 AND NEC 2017 SECTION 690.31(G)(3) (4). MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES EVERY 10 FEET, WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER 	<p>RESISTANT AND SUITABLE FOR THE ENVIRONMENT. THE MARKING SHALL ALSO BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.</p> <ol style="list-style-type: none"> WHERE PV SYSTEM DC CIRCUITS RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS PER NEC 690.31(G). PER NEC 705.12(B)(2)(3)(b), THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR. DEDICATED 3 POLE 20 AMP BRANCH FEEDER CIRCUIT FOR E-GAUGE SYSTEMS MONITOR. REVENUE GRADE ELECTRICITY CONSUMPTION AND PRODUCTION MONITORING SYSTEM. EQUAGE MONITORING SYSTEM WILL REQUIRE (3) 200A ROPE CT(S) FOR THE SERVICE BREAKERS AND (3) 200A ROPE CT(S) FOR THE L1, L2, L3 PHASE OF THE PV SYSTEM. PER NEC 690.54 LABEL THE OVERCURRENT DEVICE "PHOTOVOLTAIC ELECTRIC POWER SOURCE" WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. PER NEC 705.12(B)(2)(3)(b) LABEL DEVICE "WARNING POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE". LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL". PER NEC 690.12(B)(2)(1): THE PV ARRAY SHALL BE LISTED OR FIELD LABELED AS RAPID SHUTDOWN PV ARRAY. PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D). PER NEC 690.56(C)(3): A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3 FEET FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING: "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM". SUNSMART TO CONFIRM A GROUND ROD IS INSTALLED. IF THERE IS NOT, SUNSMART SHALL INSTALL ONE PER THE NEC. ALL WIRE TO BE COPPER CONDUCTOR UNLESS OTHERWISE NOTED DERATE BREAKER TO 200A/3P. LABEL "BREAKER HAS BEEN DE-RATED PER NEC 705.12(B)(2)". PER NEC 705.12 (B)(2)(2) & NEC 240.21 (B), A PHOTOVOLTAIC GENERATION SOURCE IS CONNECTED TO THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS.
	<p>CONDUCTOR SIZING PER NEC TABLE 310.15(B)(16) AND 310.15(B)(2)(A) AND ADJUSTMENT FACTORS 0.58 (56-60°C) AND 0.82 (41-45°C). OVERCURRENT DEVICE SIZING PER NEC 240.4(B) AND 240.6(A):</p> <p>AC CALCS:</p> <p>PER NEC 690.8(A)(3) AND (B)(1): $I \times 1.25$</p> <p>INVERTER #1 => $80.0A \times 1.25 = 100.0A$ INVERTER #2 => $80.0A \times 1.25 = 100.0A$</p> <p>SYSTEM => $[1 + 2] = 200.0A$</p>
	<p>ALL SUPPLIED EQUIPMENT IS UL LISTED</p> <p>EQUIPMENT TO BE INSTALLED PER LISTING AND / OR LABELING TO 2017 NEC REQUIREMENTS</p> <p>GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY</p> <p>ALL SOLAR PANELS ARE UL LISTED TO UL1703 AND HAVE A CLASS C FIRE RATING</p> <p>MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V NOMINAL POWER (P_{nom}) = 400W OPEN CIRCUIT VOLTAGE (V_{oc}) = 49.8V MAX POWER VOLTAGE (V_{mp}) = 41.7V SHORT CIRCUIT CURRENT (I_{sc}) = 10.36A MAX POWER CURRENT (I_{mp}) = 9.6A SERIES FUSE RATING = 20A</p>

ONE LINE WIRING DIAGRAM #3

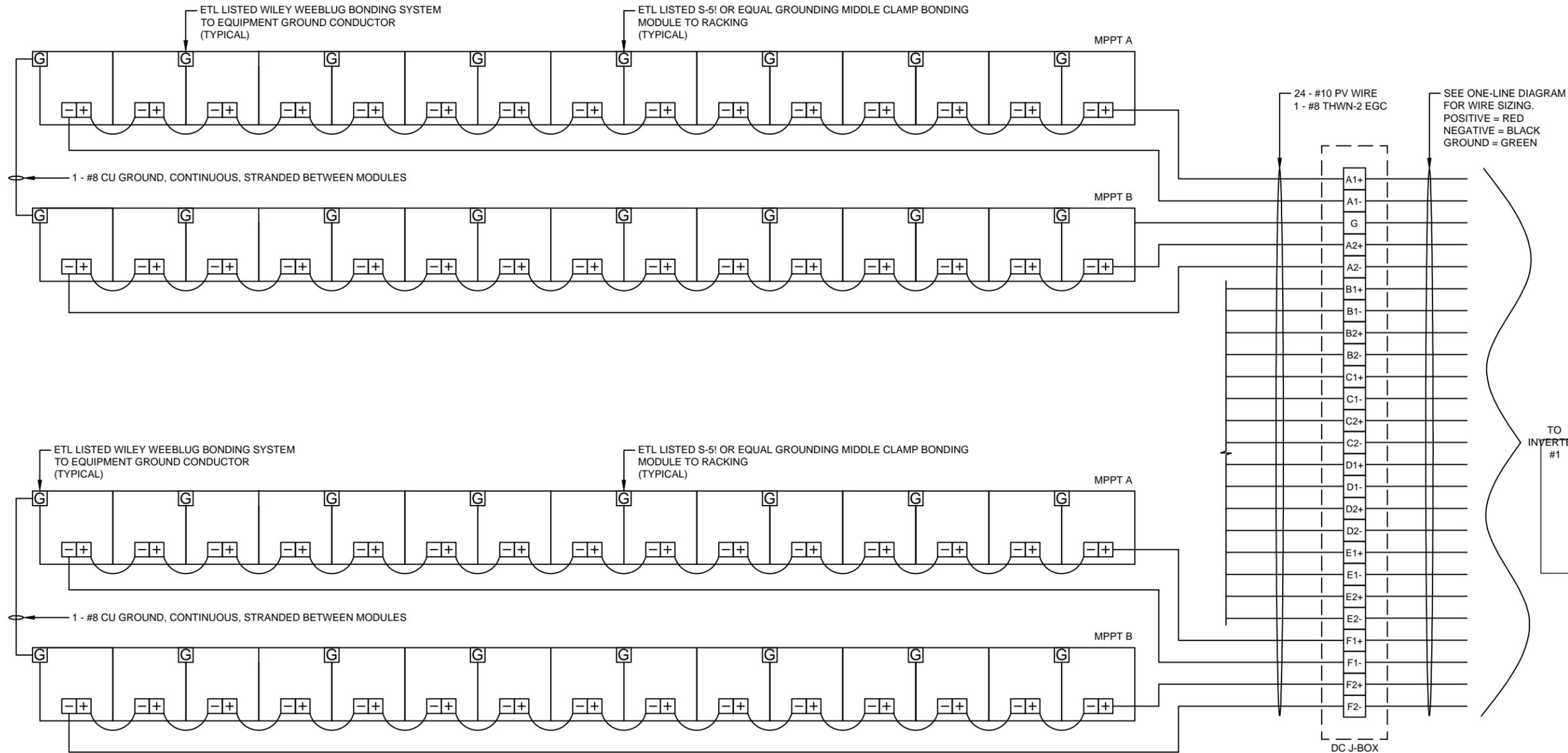
144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
 200 NE MISSOURI ROAD
 LEE'S SUMMIT, MO 64086

PM	DATE	BY	APPR.
PM	05-06-2020		
PM	06-09-2020		
PM	06-18-2020		

ISSUED FOR	REVISED	DATE	NO.
A			
B			
C			

144.8 KW DC PV SYSTEM	
124.0 KW AC PV SYSTEM	
ARRAY WIRING DIAGRAM #1	
200 NE MISSOURI ROAD LEES SUMMIT, MO 64086	
Utility Company:	EVERGY
Drawn By:	M. Sucharski
Checked By:	P. Meiers
Date:	05/06/2020
Project:	SalleeRealEstateInvestments200
Scale:	MO_no RS modules
Sheet:	NTS 08

TYPICAL OF (6) MPPT INPUTS (A, B, C, D, E, F)



TO INVERTER #1

RELEASE FOR CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

DIAGRAM

- ALL BACK COATED MULTICRYSTALLINE
- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2017 NEC AND ALL APPLICABLE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
 - GROUND WIRE MUST BE CONTINUOUS AND INSTALLED TO ALLOW FOR PANEL REMOVAL WITHOUT DISRUPTING CONTINUITY. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC 690-4 (C).
 - FOLLOW MANUFACTURERS SUGGESTED INSTALLATION PRACTICES AND WIRING SPECIFICATIONS.
 - WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT TEMPERATURES.
 - PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED."

MODULE INFORMATION:

MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V
 NOMINAL POWER (P_{nom}) = 400W
 OPEN CIRCUIT VOLTAGE (V_{oc}) = 49.8V
 MAX POWER VOLTAGE (V_{mp}) = 41.7V
 SHORT CIRCUIT CURRENT (I_{sc}) = 10.36A
 MAX POWER CURRENT (I_{mp}) = 9.6A
 SERIES FUSE RATING = 20A

NUMBER OF STRINGS = 12
 NUMBER OF MODULES PER STRING = 15
 TOTAL NUMBER OF MODULES = 180
 SYSTEM POWER DC (STC) = 72000 W
 V_{OC} = 747.0 V
 V_{Mp} = 625.5 V
 I_{SC} = 20.7A
 I_{Mp} = 19.2A
 NEC 690.7:
 V_{OC} X 1.18 = 881.5V

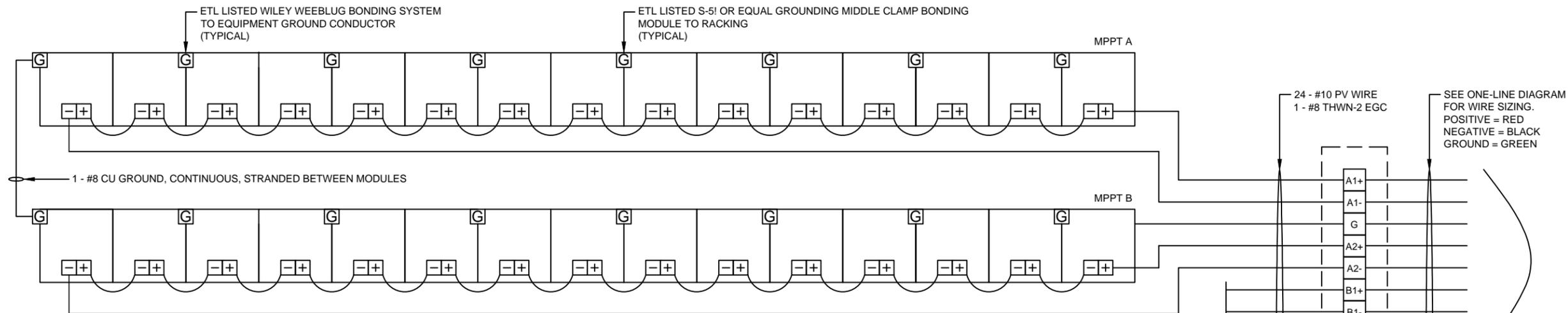
ARRAY CONFIGURATION - MPPT A, B, C, D, E, F

PM	DATE	BY	REVISION	APPR.
PM	05-06-2020			
PM	06-09-2020			
PM	06-18-2020			

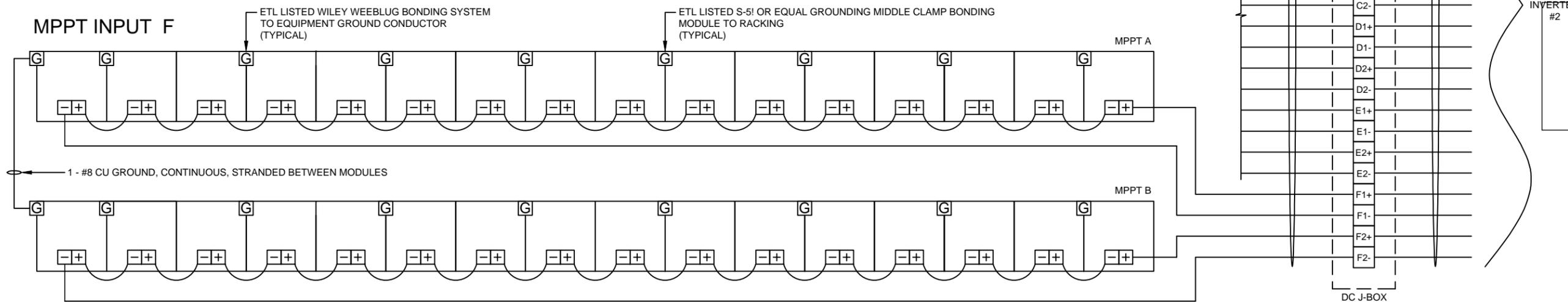
NO.	ISSUED FOR	DATE	DESCRIPTION
A	ISSUED FOR PV SYSTEM	07/09/2020	ARRAY WIRING DIAGRAM #2
B	MINOR ELECTRICAL CODE UPDATES		
C	UPDATE SPP CONNECTION		

144.8 KW DC PV SYSTEM 124.0 KW AC PV SYSTEM
ARRAY WIRING DIAGRAM #2
200 NE MISSOURI ROAD LEES SUMMIT, MO 64086
Utility Company: EVERGY
Drawn By: M. Sucharski
Checked By: P. Meiers
Date: 05/06/2020
Project: SalleeRealEstateInvestments200
Scale: MO_no RS modules
Sheet: NTS 09

TYPICAL OF (5) MPPT INPUTS (A, B, C, D, E)



MPPT INPUT F



TO INVERTER #2

RELEASE FOR CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

DIAGRAM

ALL BACK COATED MULTICRYSTALLINE

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2017 NEC AND ALL APPLICABLE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- GROUND WIRE MUST BE CONTINUOUS AND INSTALLED TO ALLOW FOR PANEL REMOVAL WITHOUT DISRUPTING CONTINUITY. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC 690-4 (C).
- FOLLOW MANUFACTURERS SUGGESTED INSTALLATION PRACTICES AND WIRING SPECIFICATIONS.
- WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT TEMPERATURES.
- PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED."

MODULE INFORMATION:

MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V
 NOMINAL POWER (P_{nom}) = 400W
 OPEN CIRCUIT VOLTAGE (V_{oc}) = 49.8V
 MAX POWER VOLTAGE (V_{mp}) = 41.7V
 SHORT CIRCUIT CURRENT (I_{sc}) = 10.36A
 MAX POWER CURRENT (I_{mp}) = 9.6A
 SERIES FUSE RATING = 20A

NUMBER OF STRINGS = 10
 NUMBER OF MODULES PER STRING = 15
 TOTAL NUMBER OF MODULES = 150
 SYSTEM POWER DC (STC) = 60000 W
 VOC = 747.0 V
 VMP = 625.5 V
 ISC = 20.7A
 IMP = 19.2A

NEC 690.7:
 VOC X 1.18 = 881.5V

NUMBER OF STRINGS = 2
 NUMBER OF MODULES PER STRING = 16
 TOTAL NUMBER OF MODULES = 32
 SYSTEM POWER DC (STC) = 12800 W
 VOC = 796.8V
 VMP = 667.2V
 ISC = 20.7A
 IMP = 19.2A

NEC 690.7:
 VOC X 1.18 = 940.2V

ISSUED FOR REV/REV	DATE	BY	REVISION
A	05-06-2020	PM	APPR.
B	06-09-2020	PM	
C	06-18-2020	PM	
D			
E			
F			
G			

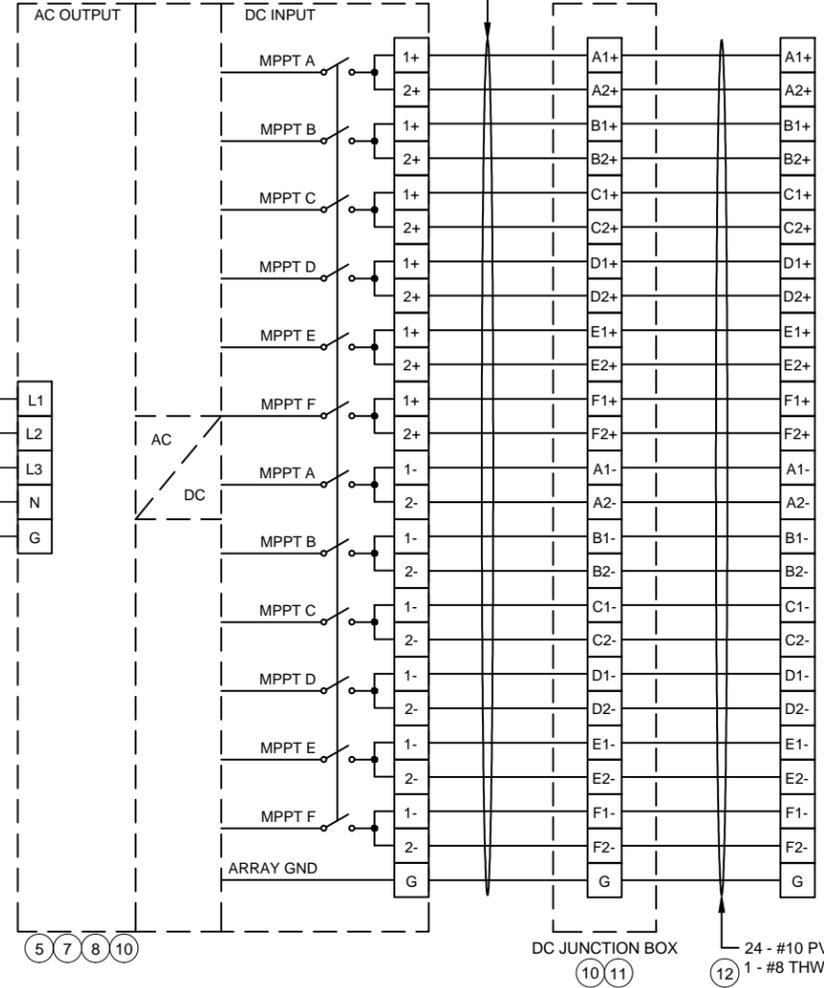
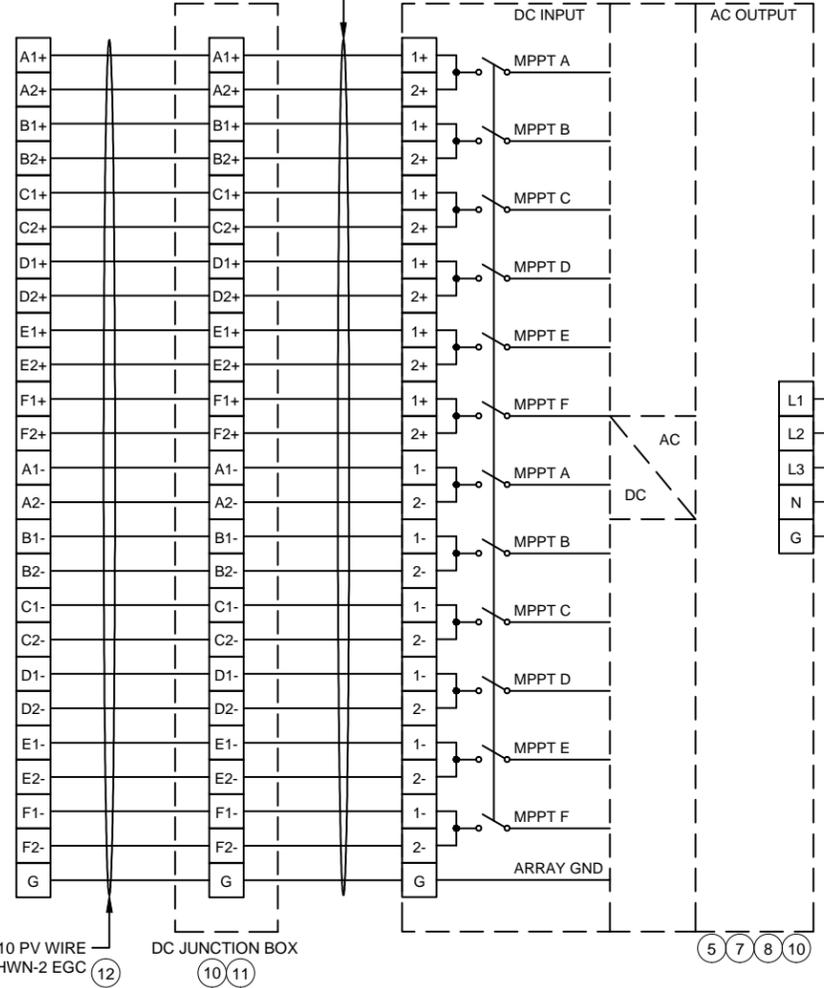
NO.	REVISION	DATE	BY
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144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
THREE LINE WIRING DIAGRAM #1
 200 NE MISSOURI ROAD
 LEES SUMMIT, MO 64086

Utility Company: **EVERGY**
 Drawn By: **M. Sucharski**
 Checked By: **P. Meiers**
 Date: **05/06/2020**
 Project: **SalleeRealEstateInvestments200**
 Scale: **MO_no RS modules**
 Sheet: **NTS 10**

INVERTER #1
 62000 WATT UTILITY INTERACTIVE INVERTER
 150 TO 1000 VDC TO 480 / 277 VAC 1φ
 START UP VOLTAGE - 188 VDC
 RATED CURRENT OUTPUT AT 480 VAC, 80A
 SMA AMERICA INVERTER
 SUNNY TRIPOWER CORE1 STP62-US-41
 WITH ATTACHED DC DISCONNECT

INVERTER #2
 62000 WATT UTILITY INTERACTIVE INVERTER
 150 TO 1000 VDC TO 480 / 277 VAC 1φ
 START UP VOLTAGE - 188 VDC
 RATED CURRENT OUTPUT AT 480 VAC, 80A
 SMA AMERICA INVERTER
 SUNNY TRIPOWER CORE1 STP62-US-41
 WITH ATTACHED DC DISCONNECT



NOTE:
 ALL TERMINATIONS TO BE RATED MINIMUM 75°C.
 ARTICLE.110.14 (C)(1)

RELEASE FOR CONSTRUCTION
 AS NOTED ON PLAN REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT MISSOURI
 07/09/2020

DIAGRAM

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2017 AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRICAL UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED)
- PER NEC 705.10, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION (UTILITY METER).
- LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC 110.3(B).
- FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEM SHALL COMPLY WITH THE GROUND AND BONDING REQUIREMENTS OF NEC 690.47(A).
- LABEL AS "PHOTOVOLTAIC SYSTEM AC DISCONNECT" WITH MAXIMUM SYSTEM CURRENT AND OPERATING VOLTAGE.
- ANTI-ISLANDING PROTECTION ENSURES THE SYSTEM WILL NOT EXPORT POWER INTO A BALANCED 60 Hz RESONANT LOAD WHILE THE UTILITY IS DISCONNECTED.
- LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D).
- PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRICAL SHOCK HAZARD- DO NOT TOUCH TERMINALS- TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION."
- PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED."
- LABEL "WARNING: PHOTOVOLTAIC POWER SOURCE". PER THE INTERNATIONAL FIRE CODE 2018 EDITION, SECTION 1204 AND NEC 2017 SECTION 690.31(G)(3) (4). MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES EVERY 10 FEET, WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER

- RESISTANT AND SUITABLE FOR THE ENVIRONMENT. THE MARKING SHALL ALSO BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.
- WHERE PV SYSTEM DC CIRCUITS RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS PER NEC 690.31(G).
- PER NEC 705.12(B)(2)(3)(b), THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR.
- DEDICATED 3 POLE 20 AMP BRANCH FEEDER CIRCUIT FOR E-GAUGE SYSTEMS MONITOR. REVENUE GRADE ELECTRICITY CONSUMPTION AND PRODUCTION MONITORING SYSTEM.
- EGUAGE MONITORING SYSTEM WILL REQUIRE (3) 200A ROPE CT(S) FOR THE SERVICE BREAKERS AND (3) 200A ROPE CT(S) FOR THE L1, L2, L3 PHASE OF THE PV SYSTEM.
- PER NEC 690.54 LABEL THE OVERCURRENT DEVICE "PHOTOVOLTAIC ELECTRIC POWER SOURCE" WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. PER NEC 705.12(B)(2)(3)(b) LABEL DEVICE "WARNING POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE".
- LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL".
- PER NEC 690.12(B)(2)(1): THE PV ARRAY SHALL BE LISTED OR FIELD LABELED AS RAPID SHUTDOWN PV ARRAY.
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D). PER NEC 690.56(C)(3): A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3 FEET FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING: "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM".
- SUNSMART TO CONFIRM A GROUND ROD IS INSTALLED. IF THERE IS NOT, SUNSMART SHALL INSTALL ONE PER THE NEC.
- ALL WIRE TO BE COPPER CONDUCTOR UNLESS OTHERWISE NOTED
- DERATE BREAKER TO 200A/3P. LABEL "BREAKER HAS BEEN DE-RATED PER NEC 705.12(B)(2)".
- PER NEC 705.12 (B)(2)(2) & NEC 240.21 (B), A PHOTOVOLTAIC GENERATION SOURCE IS CONNECTED TO THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS.

CONDUCTOR SIZING PER NEC TABLE 310.15(B)(16) AND 310.15(B)(2)(A) AND ADJUSTMENT FACTORS 0.58 (56-60°C) AND 0.82 (41-45°C). OVERCURRENT DEVICE SIZING PER NEC 240.4(B) AND 240.6(A):

AC CALCS:
 PER NEC 690.8(A)(3) AND (B)(1): 1 x 1.25
 INVERTER #1 => 80.0A x 1.25 = 100.0A
 INVERTER #2 => 80.0A x 1.25 = 100.0A
 SYSTEM => [1 + 2] = 200.0A

ALL SUPPLIED EQUIPMENT IS UL LISTED EQUIPMENT TO BE INSTALLED PER LISTING AND / OR LABELING TO 2017 NEC REQUIREMENTS

GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY

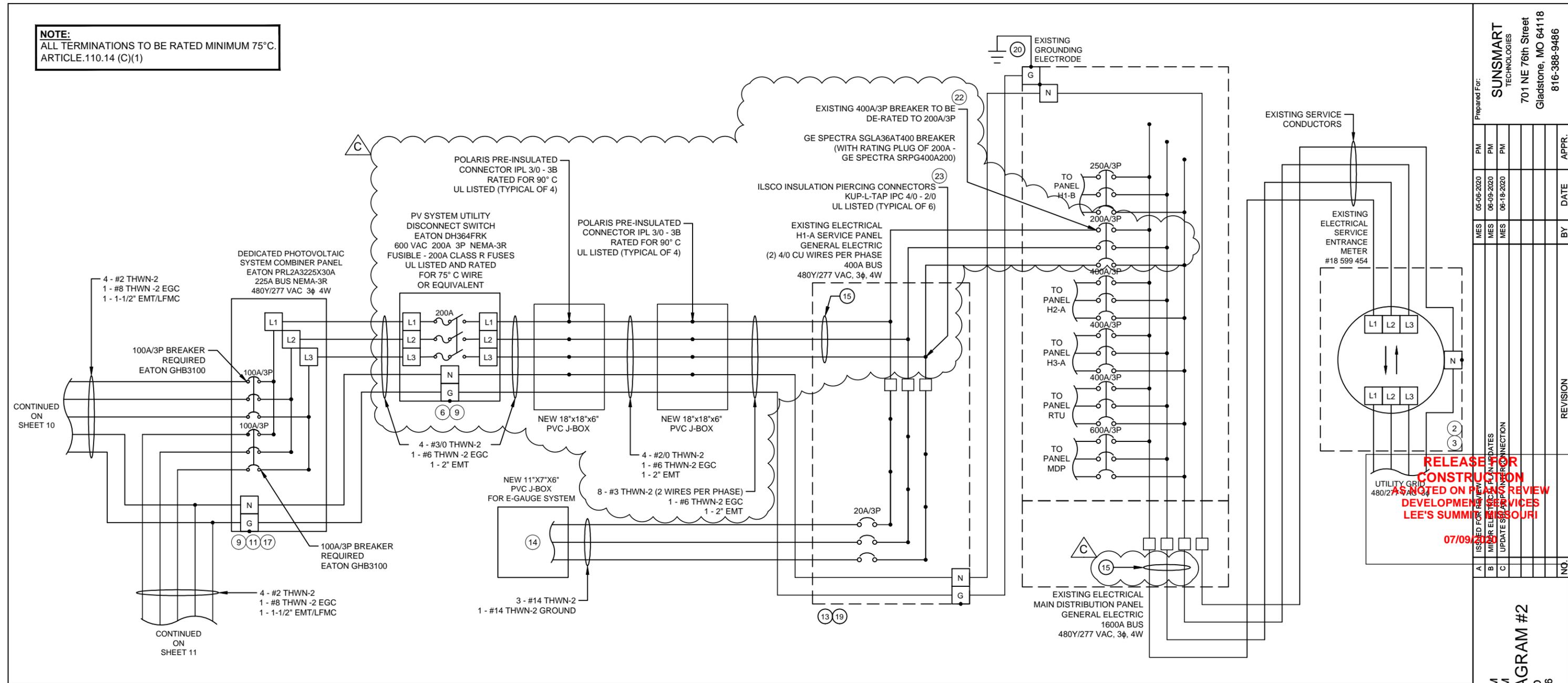
ALL SOLAR PANELS ARE UL LISTED TO UL1703 AND HAVE A CLASS C FIRE RATING

MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V
 NOMINAL POWER (P_{nom}) = 400W
 OPEN CIRCUIT VOLTAGE (V_{oc}) = 49.8V
 MAX POWER VOLTAGE (V_{mp}) = 41.7V
 SHORT CIRCUIT CURRENT (I_{sc}) = 10.36A
 MAX POWER CURRENT (I_{mp}) = 9.6A
 SERIES FUSE RATING = 20A

KEY NOTES

EQUIPMENT NOTES

NOTE:
ALL TERMINATIONS TO BE RATED MINIMUM 75°C.
ARTICLE.110.14 (C)(1)



DIAGRAM

- EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE NEC 2017 AND ALL APPLICABLE REQUIREMENTS OF THE SERVING ELECTRICAL UTILITY COMPANY AND OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY (WHEN REQUIRED)
- PER NEC 705.10, A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION (UTILITY METER).
- LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC 110.3(B).
- FUNCTIONALLY GROUNDED PHOTOVOLTAIC SYSTEM SHALL COMPLY WITH THE GROUND AND BONDING REQUIREMENTS OF NEC 690.47(A).
- LABEL AS "PHOTOVOLTAIC SYSTEM AC DISCONNECT" WITH MAXIMUM SYSTEM CURRENT AND OPERATING VOLTAGE.
- ANTI-ISLANDING PROTECTION ENSURES THE SYSTEM WILL NOT EXPORT POWER INTO A BALANCED 60 Hz RESONANT LOAD WHILE THE UTILITY IS DISCONNECTED.
- LABEL "PHOTOVOLTAIC ARRAY DC DISCONNECT SWITCH" PER NEC 690.14(C)(2). LABEL WITH OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, AND SHORT CIRCUIT CURRENT PER NEC 690.53. SWITCH TO BE LOCKED PER NEC 690.7(D).
- PROVIDE WARNING SIGN PER NEC 690.17 READING "WARNING-ELECTRICAL SHOCK HAZARD- DO NOT TOUCH TERMINALS- TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OFF POSITION."
- PER NEC 690.35(F): THE PHOTOVOLTAIC POWER SOURCE SHALL BE LABELED WITH THE FOLLOWING WARNING AT EACH JUNCTION BOX, COMBINER BOX, DISCONNECT, AND DEVICE WHERE ENERGIZED, UNGROUNDED CIRCUITS MAY BE EXPOSED DURING SERVICE: "WARNING ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED."
- LABEL "WARNING: PHOTOVOLTAIC POWER SOURCE". PER THE INTERNATIONAL FIRE CODE 2018 EDITION, SECTION 1204 AND NEC 2017 SECTION 690.31(G)(3) (4). MARKING IS REQUIRED ON INTERIOR AND EXTERIOR DC CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES EVERY 10 FEET, WITHIN 1 FOOT OF TURNS OR BENDS AND WITHIN 1 FOOT ABOVE AND BELOW PENETRATIONS OF ROOF/CEILING ASSEMBLIES, WALLS OR BARRIERS, JUNCTION BOXES, COMBINER BOXES AND DISCONNECTS. THE MATERIALS USED FOR MARKING SHALL BE REFLECTIVE, WEATHER

- RESISTANT AND SUITABLE FOR THE ENVIRONMENT. THE MARKING SHALL ALSO BE PLACED ADJACENT TO THE MAIN SERVICE DISCONNECT IN A LOCATION CLEARLY VISIBLE FROM THE LOCATION WHERE THE DISCONNECT IS OPERATED.
- WHERE PV SYSTEM DC CIRCUITS RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS PER NEC 690.31(G).
- PER NEC 705.12(B)(2)(3)(b), THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR SHALL NOT EXCEED 120 PERCENT OF THE AMPACITY OF THE BUSBAR.
- DEDICATED 3 POLE 20 AMP BRANCH FEEDER CIRCUIT FOR E-GAUGE SYSTEMS MONITOR. REVENUE GRADE ELECTRICITY CONSUMPTION AND PRODUCTION MONITORING SYSTEM.
- E-GAUGE MONITORING SYSTEM WILL REQUIRE (3) 200A ROPE CT(S) FOR THE SERVICE BREAKERS AND (3) 200A ROPE CT(S) FOR THE L1, L2, L3 PHASE OF THE PV SYSTEM.
- PER NEC 690.54 LABEL THE OVERCURRENT DEVICE "PHOTOVOLTAIC ELECTRIC POWER SOURCE" WITH THE RATED AC OUTPUT CURRENT AND THE NOMINAL OPERATING AC VOLTAGE. PER NEC 705.12(B)(2)(3)(b) LABEL DEVICE "WARNING POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE".
- LABEL "DEDICATED PHOTOVOLTAIC SYSTEM COMBINER PANEL" AND "DO NOT ADD LOADS TO THIS PANEL".
- PER NEC 690.12(B)(2)(1): THE PV ARRAY SHALL BE LISTED OR FIELD LABELED AS RAPID SHUTDOWN PV ARRAY.
- PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH NEC 690.12(A) THROUGH (D). PER NEC 690.56(C)(3): A RAPID SHUTDOWN SWITCH SHALL HAVE A LABEL LOCATED ON OR NO MORE THAN 3 FEET FROM THE SWITCH THAT INCLUDES THE FOLLOWING WORDING: "RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM".
- SUNSMART TO CONFIRM A GROUND ROD IS INSTALLED. IF THERE IS NOT, SUNSMART SHALL INSTALL ONE PER THE NEC.
- ALL WIRE TO BE COPPER CONDUCTOR UNLESS OTHERWISE NOTED
- DERATE BREAKER TO 200A/3P. LABEL "BREAKER HAS BEEN DE-RATED PER NEC 705.12(B)(2)".
- PER NEC 705.12 (B)(2)(2) & NEC 240.21 (B), A PHOTOVOLTAIC GENERATION SOURCE IS CONNECTED TO THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS.

CONDUCTOR SIZING PER NEC TABLE 310.15(B)(16) AND 310.15(B)(2)(A) AND ADJUSTMENT FACTORS 0.58 (56-60°C) AND 0.82 (41-45°C). OVERCURRENT DEVICE SIZING PER NEC 240.4(B) AND 240.6(A):

AC CALCS:
PER NEC 690.8(A)(3) AND (B)(1): $I \times 1.25$

INVERTER #1 => $80.0A \times 1.25 = 100.0A$
INVERTER #2 => $80.0A \times 1.25 = 100.0A$

SYSTEM => $[1 + 2] = 200.0A$

ALL SUPPLIED EQUIPMENT IS UL LISTED EQUIPMENT TO BE INSTALLED PER LISTING AND / OR LABELING TO 2017 NEC REQUIREMENTS

GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY

ALL SOLAR PANELS ARE UL LISTED TO UL1703 AND HAVE A CLASS C FIRE RATING

MODEL NUMBER = JINKO SOLAR EAGLE JKM400-72HL-V
NOMINAL POWER (P_{nom}) = 400W
OPEN CIRCUIT VOLTAGE (V_{oc}) = 49.8V
MAX POWER VOLTAGE (V_{mp}) = 41.7V
SHORT CIRCUIT CURRENT (I_{sc}) = 10.36A
MAX POWER CURRENT (I_{mp}) = 9.6A
SERIES FUSE RATING = 20A

Utility Company: **EVERGY**

Drawn By: **M. Sucharski**

Checked By: **P. Meiers**

Date: **05/06/2020**

Project: **SalleeRealEstateInvestments200 MO_no RS modules**

Scale: **NTS** Sheet: **11**

KEY NOTES

EQUIPMENT NOTES

Prepared For:
SUNSMART TECHNOLOGIES
701 NE 76th Street
Gladstone, MO 64118
816-388-9486

ISSUED FOR REVIEW	DATE	BY	REVISION	APPR.
A	05-06-2020	PM		
B	06-09-2020	PM		
C	06-18-2020	PM		
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RELEASE FOR CONSTRUCTION AS NOTED ON PLAN REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI 07/09/2020

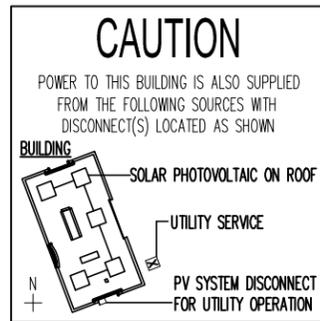
THREE LINE WIRING DIAGRAM #2
144.8 KW DC PV SYSTEM
124.0 KW AC PV SYSTEM
200 NE MISSOURI ROAD
LEES SUMMIT, MO 64086

PV LOAD CENTER/ COMBINER PANEL

PHOTOVOLTAIC SYSTEM
COMBINER PANEL
DO NOT ADD LOADS

WARNING
- ELECTRIC SHOCK HAZARD -
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

DIRECTORY



JBOX

WARNING: PHOTOVOLTAIC
POWER SOURCE

CONDUIT

WARNING: PHOTOVOLTAIC
POWER SOURCE

UTILITY METER

WARNING
THIS SERVICE METER
IS ALSO SERVED BY A
PHOTOVOLTAIC SYSTEM

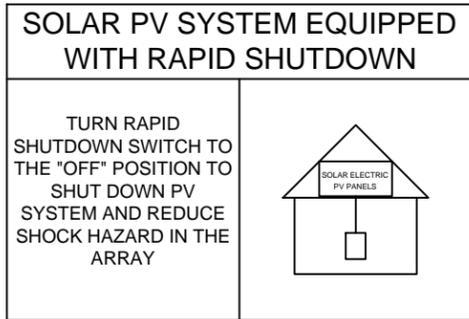
H1-A PANEL

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

WARNING
POWER SOURCE OUTPUT
CONNECTION
DO NOT RELOCATE THIS
OVERCURRENT DEVICE

WARNING
- ELECTRIC SHOCK HAZARD -
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

E-GAUGE BREAKER



PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT	160.0	AAC
NOMINAL OPERATING AC VOLTAGE	480	VAC

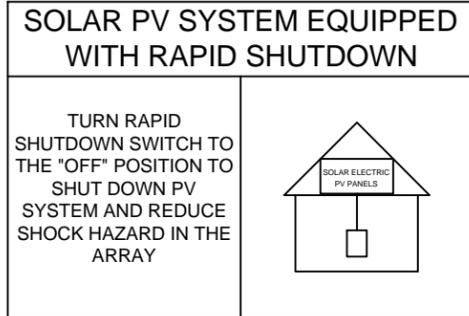
AC DISCONNECT

PV SYSTEM DISCONNECT

WARNING
- ELECTRIC SHOCK HAZARD -
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT	160.0	AAC
NOMINAL OPERATING AC VOLTAGE	480	VAC



RAPID SHUTDOWN SWITCH FOR
SOLAR PV SYSTEM

MDP PANEL

MAIN BREAKER HAS BEEN
REPLACED AND TRIP RATING MUST
NOT EXCEED 200A ACCORDING TO
NEC 2014 705.12(D)(2)(b)

DC DISCONNECT/INVERTER

**PHOTOVOLTAIC SYSTEM #1
DC DISCONNECT**

RATED MPP CURRENT	120	AMPS
RATED MPP VOLTAGE	800	VOLTS
MAX SYSTEM VOLTAGE	881.5	VDC
MAX CIRCUIT CURRENT	20.7	AMPS

WARNING
ELECTRIC SHOCK HAZARD.
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE UNGROUNDED
AND MAY BE ENERGIZED.

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

WARNING
- ELECTRIC SHOCK HAZARD -
IF A GROUND FAULT IS INDICATED, NORMALLY
GROUNDED CONDUCTORS MAY BE UNGROUNDED
AND ENERGIZED

**PHOTOVOLTAIC SYSTEM #2
DC DISCONNECT**

RATED MPP CURRENT	120	AMPS
RATED MPP VOLTAGE	800	VOLTS
MAX SYSTEM VOLTAGE	940.2	VDC
MAX CIRCUIT CURRENT	20.7	AMPS

Prepared For:
SUNSMART
TECHNOLOGIES
701 NE 76th Street
Gladstone, MO 64118
816-388-9486

ISSUED FOR	DATE	BY	REVISION
A	05-06-2020	PM	
B	06-09-2020	PM	
C	06-18-2020	PM	
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**RELEASE FOR
CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
07/09/2020**

144.8 KW DC PV SYSTEM
124.0 KW AC PV SYSTEM
EQUIPMENT LABELING
200 NE MISSOURI ROAD
LEES SUMMIT, MO 64086

Utility Company:
EVERGY
Drawn By:
M. Sucharski
Checked By:
P. Meiers
Date:
05/06/2020

NOTE:
ALL LABELS TO BE ENGRAVED AND MECHANICALLY
BONDED UNLESS OTHERWISE STATED

Project:
SalleeRealEstateInvestments200-MO_no RS modules

PHOTOVOLTAIC SYSTEM SHALL BE INSTALLED ACCORDING TO THE 2017 NATIONAL ELECTRIC CODE WITH REFERENCE TO THE FOLLOWING:
 ARTICLE 690, AND SECTIONS 200.6, 210.6, 230.70, 240.3, 250.26, 250.50, 250.122 TO INCLUDE REFERENCED SECTIONS AND TABLES
 ALL EQUIPMENT PROVIDED SHALL BE LISTED BY AN INDEPENDENT TESTING AGENCY.

PARTICULAR NOTE TO THE FOLLOWING:

NEC 240.4(B) OVERCURRENT DEVICES RATED 800 AMPERES OR LESS. THE NEXT HIGHER STANDARD OVERCURRENT DEVICE RATING (ABOVE THE AMPACITY OF THE CONDUCTORS BEING PROTECTED) SHALL BE PERMITTED TO BE USED, IF:
 (1) THE CONDUCTORS BEING PROTECTED ARE NOT PART OF A BRANCH CIRCUIT SUPPLYING MORE THAN ONE RECEPTACLE FOR CORD-AND-PLUG-CONNECTED PORTABLE LOADS.
 (2) THE AMPACITY OF THE CONDUCTORS DOES NOT CORRESPOND WITH THE STANDARD AMPERE RATING OF A FUSE OR A CIRCUIT BREAKER WITHOUT OVERLOAD TRIP ADJUSTMENTS ABOVE ITS RATING.
 (3) THE NEXT HIGHER STANDARD RATING SELECTED DOES NOT EXCEED 800 AMPERES.

NEC 240.6(A) FUSES AND FIXED-TRIP CIRCUIT BREAKERS. THE STANDARD AMPERE RATINGS FOR FUSES AND INVERSE TIME CIRCUIT BREAKERS SHALL BE CONSIDERED AS SHOWN IN TABLE 240.6(A): 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110,125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 800, 1000, 1200, 1600, 2000, 2500, 3000, 4000, 5000 AND 6000 AMPERES.

NEC 250.64(C) CONTINUOUS. EXCEPT AS PROVIDED IN 250.30(A)(5) AND (A)(6), 250.30(B)(1) AND 250.68(C), GROUNDING ELECTRODE CONDUCTOR(S) SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH WITHOUT A SPLICE OR JOINT. IF NECESSARY, SPLICES OR CONNECTIONS SHALL BE MADE AS PERMITTED IN (1) THROUGH (4):

NEC 250.64(C)(1) (1) SPLICING OF THE WIRE-TYPE GROUNDING ELECTRODE CONDUCTOR SHALL BE PERMITTED ONLY BY IRREVERSIBLE COMPRESSION-TYPE CONNECTORS LISTED AS GROUNDING AND BONDING EQUIPMENT OR BY THE EXOTHERMIC WELDING PROCESS.

NEC 250.64(C)(2) (2) SECTIONS OF BUSBARS SHALL BE PERMITTED TO BE CONNECTED TOGETHER TO FORM A GROUNDING ELECTRODE CONDUCTOR.

NEC 250.97 FOR CIRCUITS OVER 250 VOLTS TO GROUND, THE ELECTRICAL CONTINUITY OF METAL RACEWAYS AND CABLES WITH METAL SHEATHS THAT CONTAIN ANY CONDUCTOR OTHER THAN SERVICE CONDUCTORS SHALL BE ENSURED BY ONE OR MORE OF THE METHODS SPECIFIED FOR SERVICES IN 250.92(B), EXCEPT FOR (B)(1).

PART VIII GENERAL. DIRECT-CURRENT SYSTEMS SHALL COMPLY WITH PART VIII AND OTHER SECTIONS OF ARTICLE 250 NOT SPECIFICALLY INTENDED FOR AC SYSTEMS.

NEC 422.30 DISCONNECTING MEANS.

NEC 422.60 NAMEPLATE MARKING.

NEC 422.62(B) ADDITIONAL NAMEPLATE MARKING.

NEC 690.4(C) QUALIFIED PERSONNEL. THE INSTALLATION OF EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTIONS SHALL BE PERFORMED ONLY BY QUALIFIED PERSONS. IN ACCORDANCE WITH NEC 690.4(C). SEE ARTICLE 100 FOR THE DEFINITION OF QUALIFIED PERSON.

NEC 690.8(A)(1)(1) PHOTOVOLTAIC SOURCE CIRCUIT CURRENTS. THE MAXIMUM CURRENT SHALL BE THE SUM OF THE PARALLEL CONNECTED MODULE-RATED SHORT-CIRCUIT CURRENTS MULTIPLIED BY 125 PERCENT.

NEC 690.8(A)(3) INVERTER OUTPUT CIRCUIT CURRENT. THE MAXIMUM CURRENT SHALL BE THE INVERTER CONTINUOUS OUTPUT CURRENT RATING.

NEC 690.8(A)(5) DC-TO-DC CONVERTER SOURCE CIRCUIT CURRENT. THE MAXIMUM CURRENT SHALL BE THE DC-TO-DC CONVERTER CONTINUOUS OUTPUT CURRENT RATING.

NEC 690.8(B) CONDUCTOR AMPACITY. PV SYSTEM CURRENTS SHALL BE CONSIDERED TO BE CONTINUOUS. CIRCUIT CONDUCTORS SHALL BE SIZED TO CARRY NOT LESS THAN THE LARGER OF 690.8(B)(1) OR (B)(2).

NEC 690.8(B)(1) (1) ONE HUNDRED AND TWENTY-FIVE PERCENT OF THE MAXIMUM CURRENTS CALCULATED IN 690.8(A) BEFORE THE APPLICATION OF ADJUSTMENT AND CORRECTION FACTORS.

NEC 690.8(B)(2) (2) THE MAXIMUM CURRENTS CALCULATED IN 690.8(A) AFTER THE APPLICATION OF ADJUSTMENT AND CORRECTION FACTORS.

NEC 690.12 RAPID SHUTDOWN OF PV SYSTEMS ON BUILDINGS. PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).

EXCEPTION. GROUND MOUNTED PV SYSTEM CIRCUITS THAT ENTER BUILDINGS, OF WHICH THE SOLE PURPOSE IS TO HOUSE PV SYSTEM EQUIPMENT, SHALL NOT BE REQUIRED TO COMPLY WITH 690.12.

NEC 690.12(C) INITIATION DEVICE. THE INITIATION DEVICE(S) SHALL INITIATE THE RAPID SHUTDOWN FUNCTION OF THE PV SYSTEM. THE DEVICE "OFF" POSITION SHALL INDICATE THAT THE RAPID SHUTDOWN FUNCTION HAS BEEN INITIATED FOR ALL PV SYSTEMS CONNECTED TO THAT DEVICE.

NEC 690.13(A) LOCATION. THE PV SYSTEM DISCONNECTING MEANS SHALL BE INSTALLED AT A READILY ACCESSIBLE LOCATION.

NEC 690.13(B) MARKING. EACH PV SYSTEM DISCONNECTING MEANS SHALL PLAINLY INDICATE WHETHER IN THE OPEN (OFF) OR CLOSED (ON) POSITION AND BE PERMANENTLY MARKED "PV SYSTEM DISCONNECT" OR EQUIVALENT.

FOR PV SYSTEM DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION, THE DEVICE SHALL BE MARKED WITH THE FOLLOWING WORDS OR EQUIVALENT:

WARNING
 ELECTRIC SHOCK HAZARD
 TERMINALS ON THE LINE AND LOAD
 SIDES MAY BE
 ENERGIZED IN THE OPEN POSITION

NEC 690.31(B) GROUPING. PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS SHALL NOT BE CONTAINED IN THE SAME RACEWAY, CABLE TRAY, CABLE, OUTLET BOX, JUNCTION BOX, OR SIMILAR FITTING AS CONDUCTORS, FEEDERS, BRANCH CIRCUITS OF OTHER NON-PV SYSTEMS, OR INVERTER OUTPUT CIRCUITS, UNLESS THE CIRCUITS ARE SEPARATED BY A PARTITION.

NEC 690.33 CONNECTORS. CONNECTORS, OTHER THAN THOSE COVERED BY 690.32, SHALL COMPLY WITH 690.33(A) THROUGH (E).

(A) CONFIGURATION.

(B) GUARDING.

(C) TYPE.

(D) GROUNDING MEMBER.

(E) INTERRUPTION OF CIRCUIT.

NEC 690.41(B) GROUND-FAULT PROTECTION. DC PV ARRAYS SHALL BE PROVIDED WITH DC GROUND-FAULT PROTECTION MEETING THE REQUIREMENTS OF 690.41(B)(1) AND (2) TO REDUCE FIRE HAZARDS.

NEC 690.53 DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE. A PERMANENT LABEL FOR THE DC PV POWER SOURCE INDICATING THE INFORMATION SPECIFIED IN (1) THROUGH (3) SHALL BE PROVIDED BY THE INSTALLER AT PV SYSTEM DISCONNECTING MEANS REQUIRED BY 690.15. WHERE A DISCONNECTING MEANS HAS MORE THAN ONE DC PV POWER SOURCE, THE VALUES IN 690.53(1) THROUGH (3) SHALL BE SPECIFIED FOR EACH SOURCE.

(1) MAXIMUM VOLTAGE [REF: 690.7]

(2) MAXIMUM CIRCUIT CURRENT [REF: 690.8(A)]

(3) MAXIMUM RATED OUTPUT CURRENT OF THE CHARGE CONTROLLER OR DC-TO-DC CONVERTER (IF INSTALLED)

NEC 690.56(B) FACILITIES WITH UTILITY SERVICES AND PHOTOVOLTAIC SYSTEMS. PLAQUES OR DIRECTORIES SHALL BE INSTALLED IN ACCORDANCE WITH 705.10.

NEC 690.56(C) BUILDINGS WITH RAPID SHUTDOWN. BUILDINGS WITH PV SYSTEMS SHALL HAVE PERMANENT LABELS AS DESCRIBED IN 690.56(C)(1) THROUGH (C)(3).

NEC 705.10 DIRECTORY. A PERMANENT PLAQUE OR DIRECTORY DENOTING THE LOCATION OF ALL ELECTRIC POWER SOURCE DISCONNECTING MEANS ON OR IN THE PREMISES SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION AND AT THE LOCATION(S) OF THE SYSTEM DISCONNECT(S) FOR ALL ELECTRIC POWER PRODUCTION SOURCES CAPABLE OF BEING INTERCONNECTED. THE MARKING SHALL COMPLY WITH 110.21(B).

NEC 705.12 POINT OF CONNECTION. THE OUTPUT OF AN INTERCONNECTED ELECTRIC POWER SOURCE SHALL BE CONNECTED AS SPECIFIED IN 705.12(A) OR (B).

NEC TABLE 250.66 SIZE OF ALTERNATING-CURRENT GROUNDING ELECTRODE CONDUCTOR. THE SIZE OF THE GROUNDING ELECTRODE CONDUCTOR AT THE SERVICE, AT EACH BUILDING OR STRUCTURE WHERE SUPPLIED BY A FEEDER(S) OR BRANCH CIRCUIT(S), OR AT A SEPARATELY DERIVED SYSTEM OF A GROUNDED OR UNGROUNDED AC SYSTEM SHALL NOT BE LESS THAN GIVEN IN TABLE 250.66, EXCEPT AS PERMITTED IN 250.66(A) THROUGH (C).

NEC TABLE 310.15(B)(16) (FORMERLY TABLE 310.16) ALLOWABLE AMPACITIES OF INSULATED CONDUCTORS RATED UP TO AND INCLUDING 2000 VOLTS, 60°C THROUGH 90°C (140°F THROUGH 194°F), NOT MORE THAN THREE CURRENT-CARRYING CONDUCTORS IN RACEWAY, CABLE, OR EARTH (DIRECTLY BURIED), BASED ON AMBIENT TEMPERATURE OF 30°C (86°F)
 *REFER TO 310.15(B)(2) FOR THE AMPACITY CORRECTION FACTORS WHERE THE AMBIENT TEMPERATURE IS OTHER THAN 30°C (86°F).
 **REFER TO 240.4(D) FOR CONDUCTOR OVERCURRENT PROTECTION LIMITATIONS.

RELEASE FOR
 CONSTRUCTION
 AS NOTED ON PANS REVIEW
 DEVELOPMENT SERVICES
 LEE'S SUMMIT, MISSOURI
 07/09/2020

Prepared For:
SUNSMART
 TECHNOLOGIES
 701 NE 76th Street
 Gladstone, MO 64118
 816-388-9486

PM	PM	PM	DATE	APPR.
05-06-2020	06-09-2020	06-18-2020		

MES	MES	MES	BY

ISSUED FOR (REV)	DATE	REVISION

A	B	C	NO.

144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
NOTES & REFERENCES
 200 NE MISSOURI ROAD
 LEES SUMMIT, MO 64086

Utility Company:
EVERGY
 Drawn By:
M. Sucharski
 Checked By:
P. Meiers
 Date:
05/06/2020

Project:
 SalleeRealEstateInvestments200-MO_no RS modules

Scale:
 NTS
 Sheet:
 13