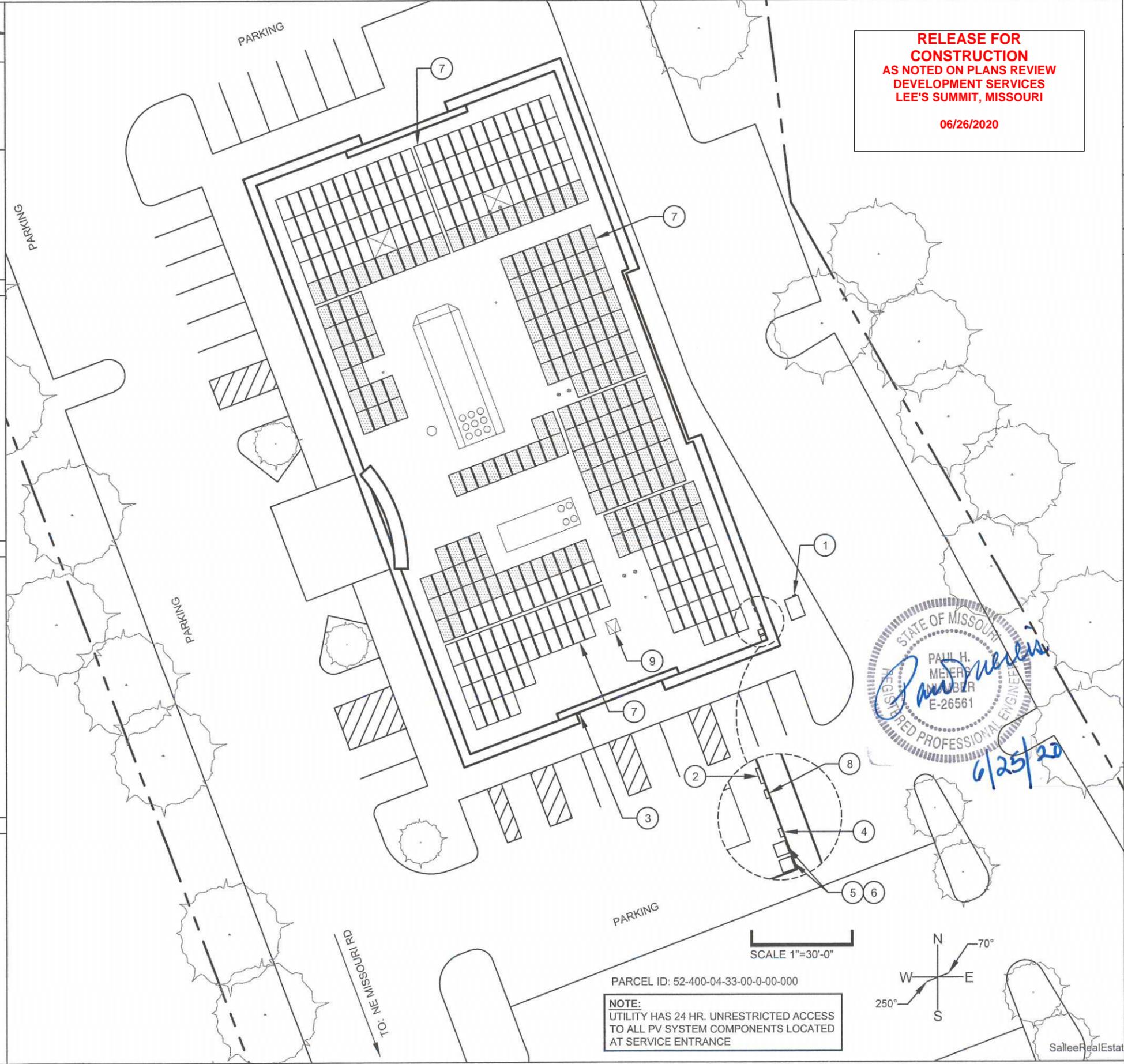


- EQUIPMENT LOCATION ELEVATION**
- ① ELECTRICAL SERVICE ENTRANCE AND UTILITY REVENUE METER # 18 599 454
 - ② EXISTING ELECTRICAL LOAD CENTER (MDP PANEL)
 - ③ PHOTOVOLTAIC SYSTEM DISCONNECT FOR UTILITY OPERATION
 - ④ DEDICATED PHOTOVOLTAIC SYSTEM AC COMBINER PANEL
 - ⑤ INVERTER (2 TOTAL)
 - ⑥ PV ARRAY 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

GENERAL NOTES



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

06/26/2020

STATE OF MISSOURI
 REGISTERED PROFESSIONAL ENGINEER
 PAUL H. MEIERS
 MEMBER NUMBER E-26561
 6/25/20

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

ISSUED FOR REVIEW	NO.	BY	DATE	APPR.
A				
B				
C				

MINOR ELECTRICAL PLAN UPDATES
 UPDATE SOLAR PV INTERCONNECTION

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**

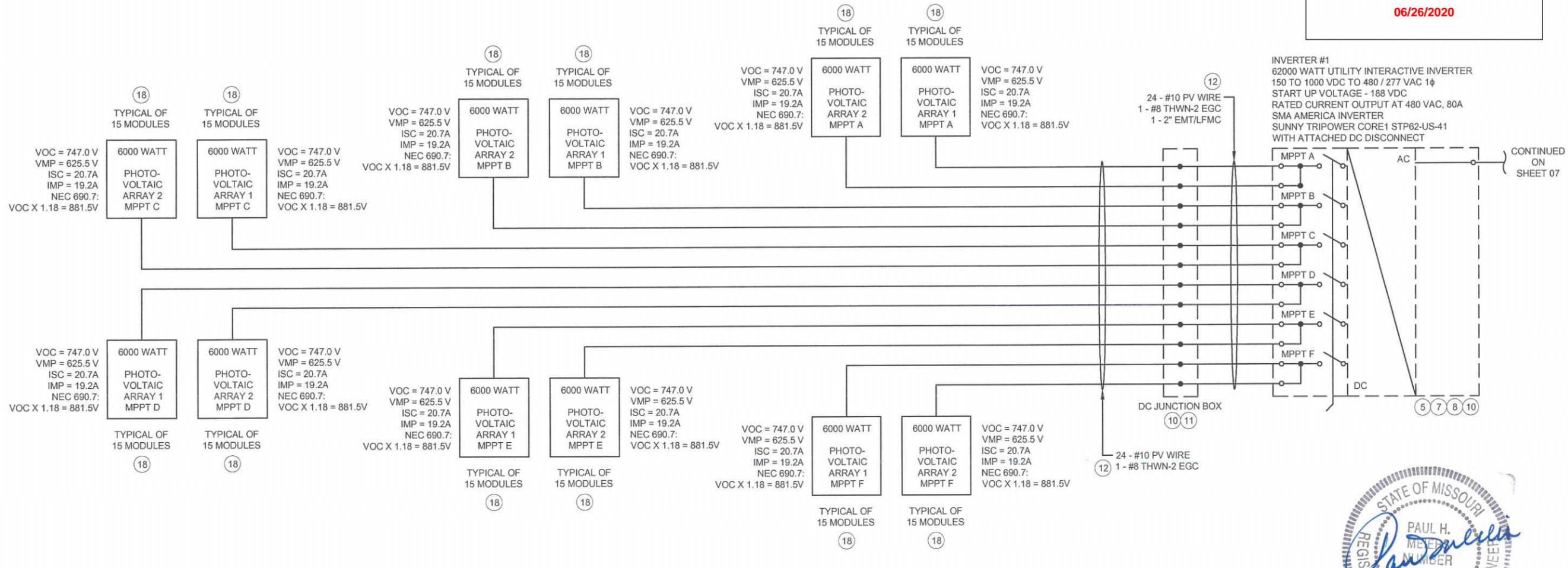
Project: **Investments200-MO**

Scale: **1" = 30'-0"** Sheet: **01**

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

06/26/2020

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



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



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

NO.	REVISION

ONE LINE WIRING DIAGRAM #1

144.8 KW DC PV SYSTEM
124.0 KW AC PV SYSTEM
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**

Title: **NTS** Sheet: **05**

- 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

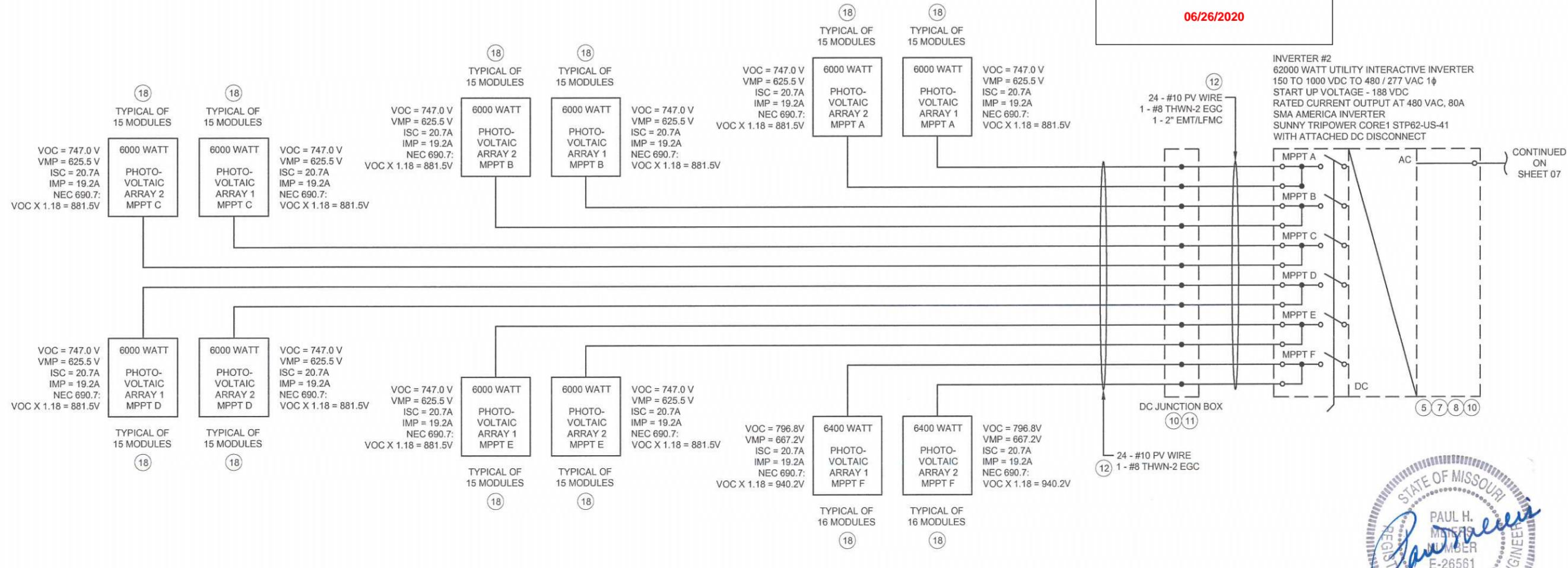
GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY

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

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

06/26/2020



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



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		

ONE LINE WIRING DIAGRAM #2
 144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
 200 NE MISSOURI ROAD
 LEE'S SUMMIT, MO 64086

- 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.
 - ANTH-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

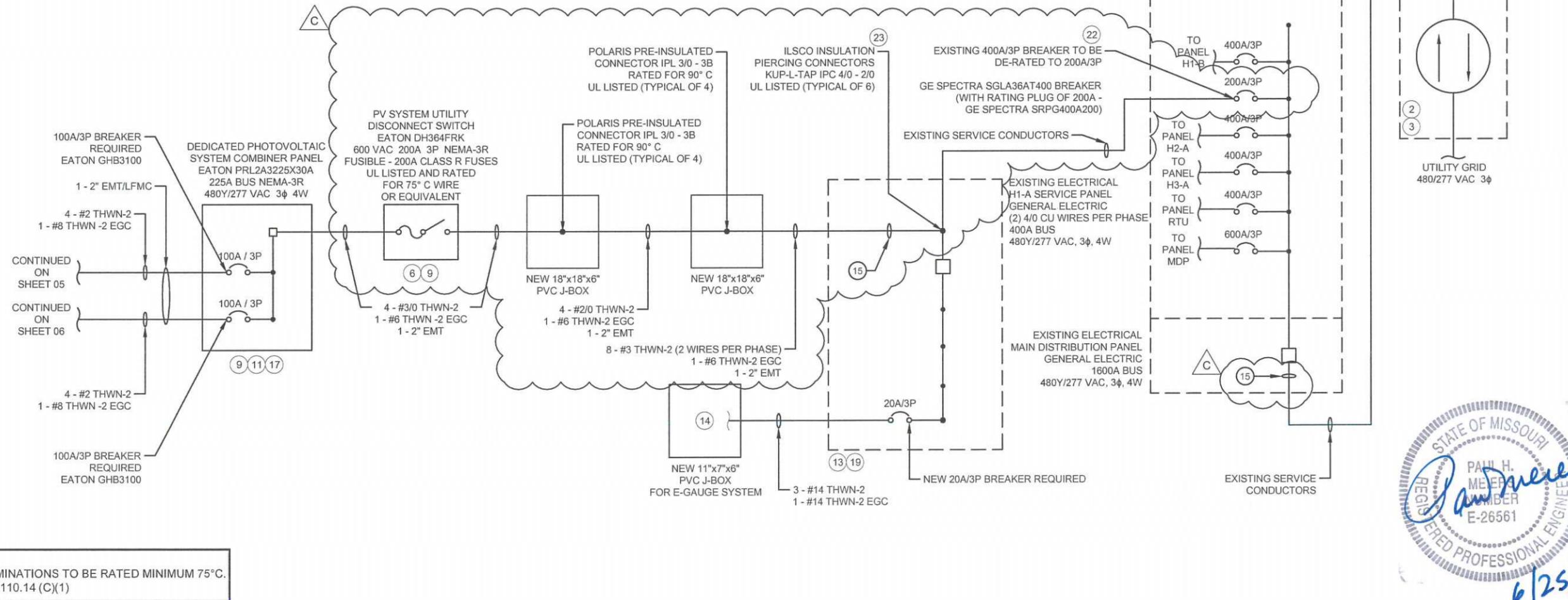
GROUNDING CONDUCTORS CONNECTED TO EACH MODEL FRAME AND RACK ASSEMBLY

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

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

06/26/2020



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

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

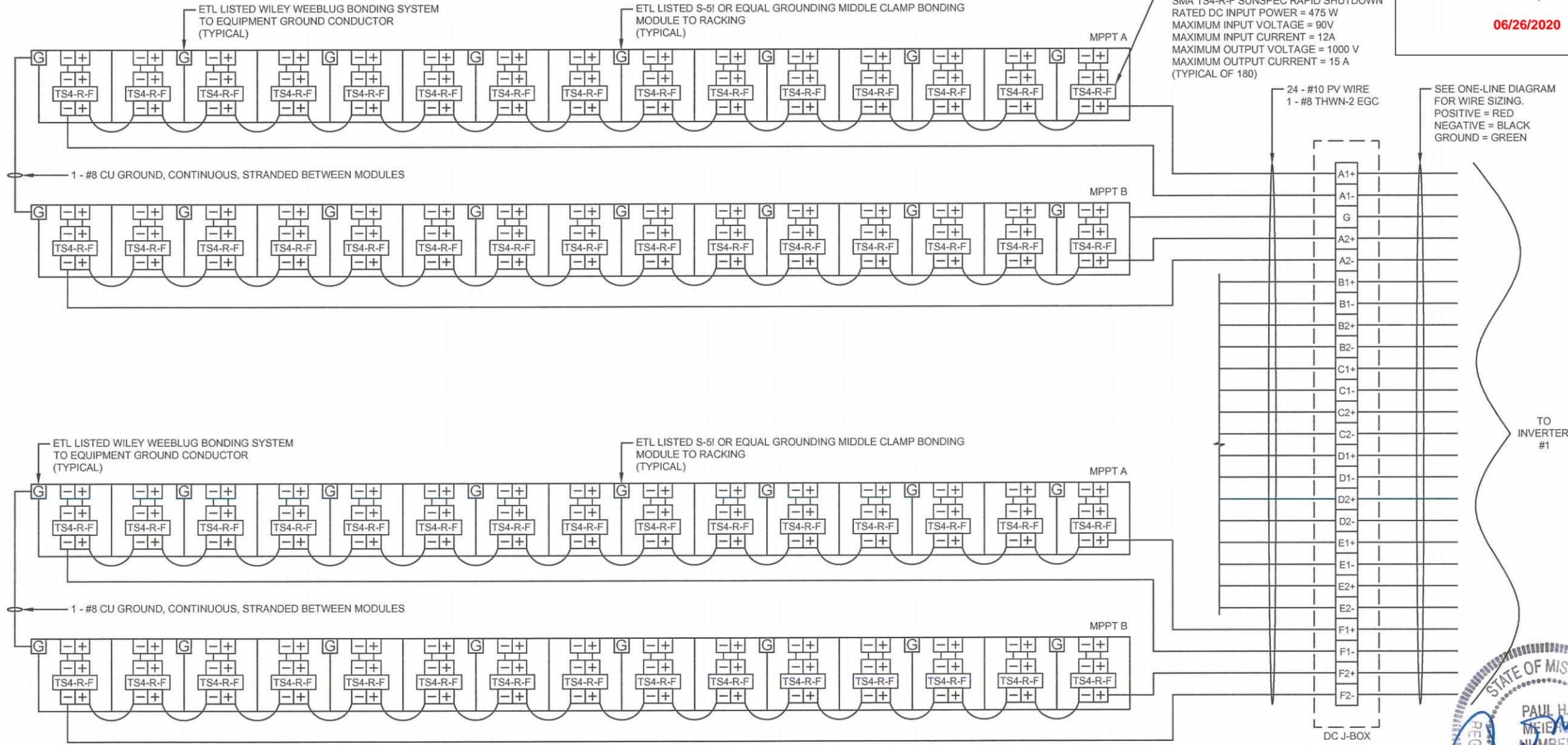
ISSUED FOR REVIEW	DATE	BY	DATE	APPR.
A	05-06-2020	PM		
B	06-05-2020	PM		
C	06-16-2020	PM		

144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
ONE LINE WIRING DIAGRAM #3
 200 NE MISSOURI ROAD
 LEE'S SUMMIT, MO 64086

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/CELING 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): 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 (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>

Utility Company: **EVERGY**
 Drawn By: **M. Sucharski**
 Checked By: **P. Meiers**
 Date: **05/06/2020**
 Project: **SalleeRealEstateInvestments200-MO**
 Scale: **NTS** Sheet: **07**

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



RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
06/26/2020

Prepared For:
SUNSMART TECHNOLOGIES
 701 NE 76th Street
 Gladstone, MO 64118
 816-385-9486

PM	PM	PM	BY	DATE	APPR.
MES	MES	MES			
05-06-2020	06-09-2020	05-18-2020			
ISSUED FOR REVIEW					
A	MINOR ELECTRICAL PLAN UPDATES				
B	UPDATE SOLAR PV INTERCONNECTION				
C					
NO.					



ARRAY WIRING DIAGRAM #1
 144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
 200 NE MISSOURI ROAD
 LEE'S SUMMIT, MO 64086

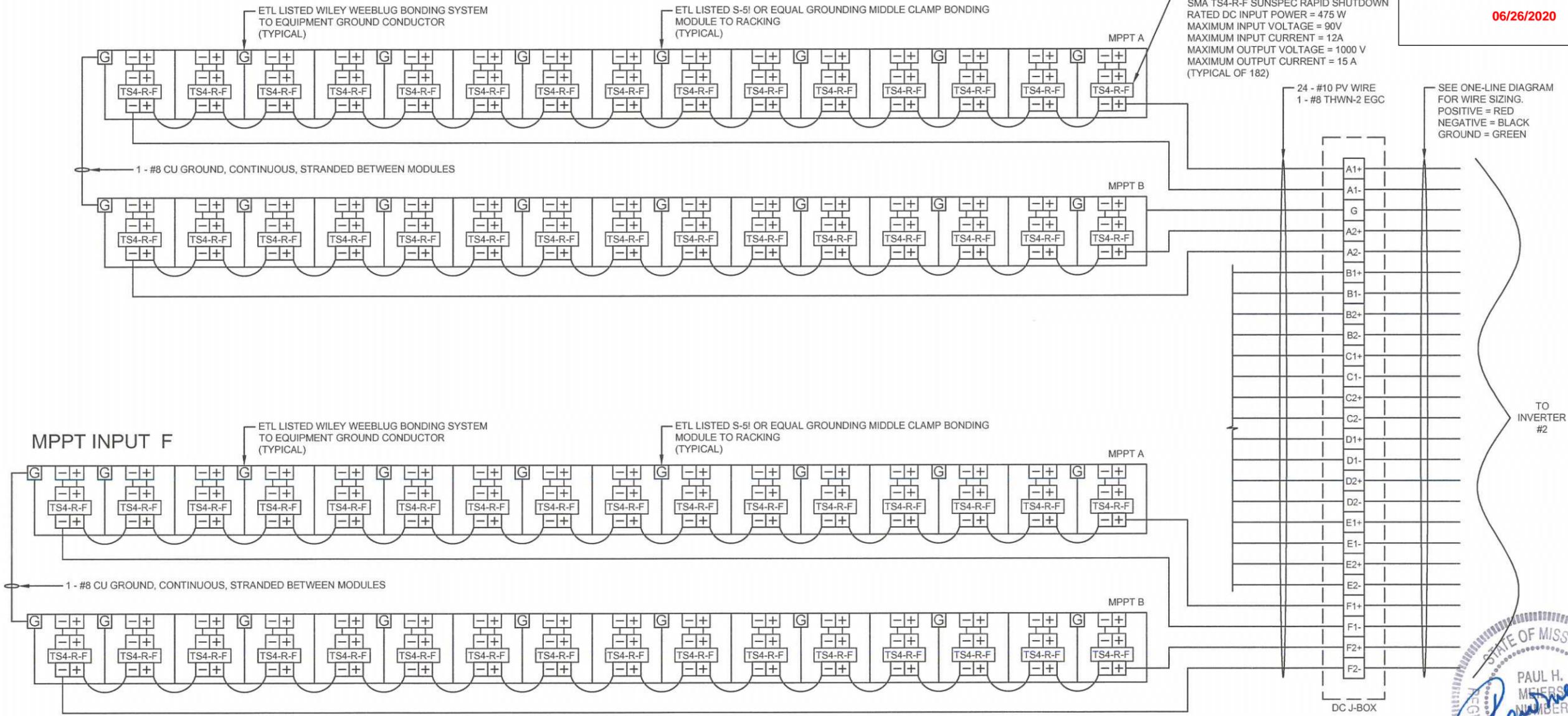
<p>DIAGRAM</p> <p>ALL BACK COATED MULTICRYSTALLINE</p> <ol style="list-style-type: none"> EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE 2017 NEC AND ALL APPLICABLE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION. GROUND WIRE MUST BE CONTINUOUS AND INSTALLED TO ALLOW FOR PANEL REMOVAL WITHOUT 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." 	<p>MODULE INFORMATION:</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>	<p>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</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-MO</p> <p>Scale: NTS Sheet: 08</p>
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RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

06/26/2020

Prepared For:
SUNSMART TECHNOLOGIES
 701 NE 76th Street
 Gladstone, MO 64118
 816-385-9486

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



NO.	REVISION	DATE	BY	APPR.
A	ISSUED FOR REVIEW	05-06-2020	PM	
B	MINOR ELECTRICAL PLAN UPDATES	06-09-2020	PM	
C	UPDATE SOLAR PV INTERCONNECTION	06-18-2020	PM	

ARRAY WIRING DIAGRAM #2
 144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
 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
Scale:	NTS
Sheet:	09

GENERAL NOTES	MODULE INFORMATION	ARRAY CONFIGURATION - MPPT A, B, C, D, E	ARRAY CONFIGURATION - MPPT F
<p>ALL BACK COATED MULTICRYSTALLINE</p> <ol style="list-style-type: none"> 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." 	<p>MODULE INFORMATION:</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>	<p>NUMBER OF STRINGS = 10 NUMBER OF MODULES PER STRING = 15 TOTAL NUMBER OF MODULES = 150 SYSTEM POWER DC (STC) = 60000 W V_{OC} = 747.0 V V_{MP} = 625.5 V I_{SC} = 20.7A I_{MP} = 19.2A</p> <p>NEC 690.7: V_{OC} X 1.18 = 881.5V</p>	<p>NUMBER OF STRINGS = 2 NUMBER OF MODULES PER STRING = 16 TOTAL NUMBER OF MODULES = 32 SYSTEM POWER DC (STC) = 12800 W V_{OC} = 796.8V V_{MP} = 667.2V I_{SC} = 20.7A I_{MP} = 19.2A</p> <p>NEC 690.7: V_{OC} X 1.18 = 940.2V</p>

06/26/2020

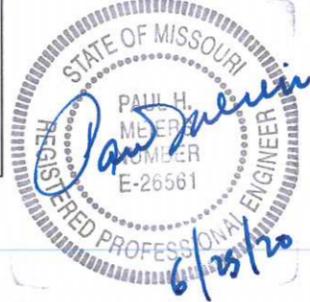
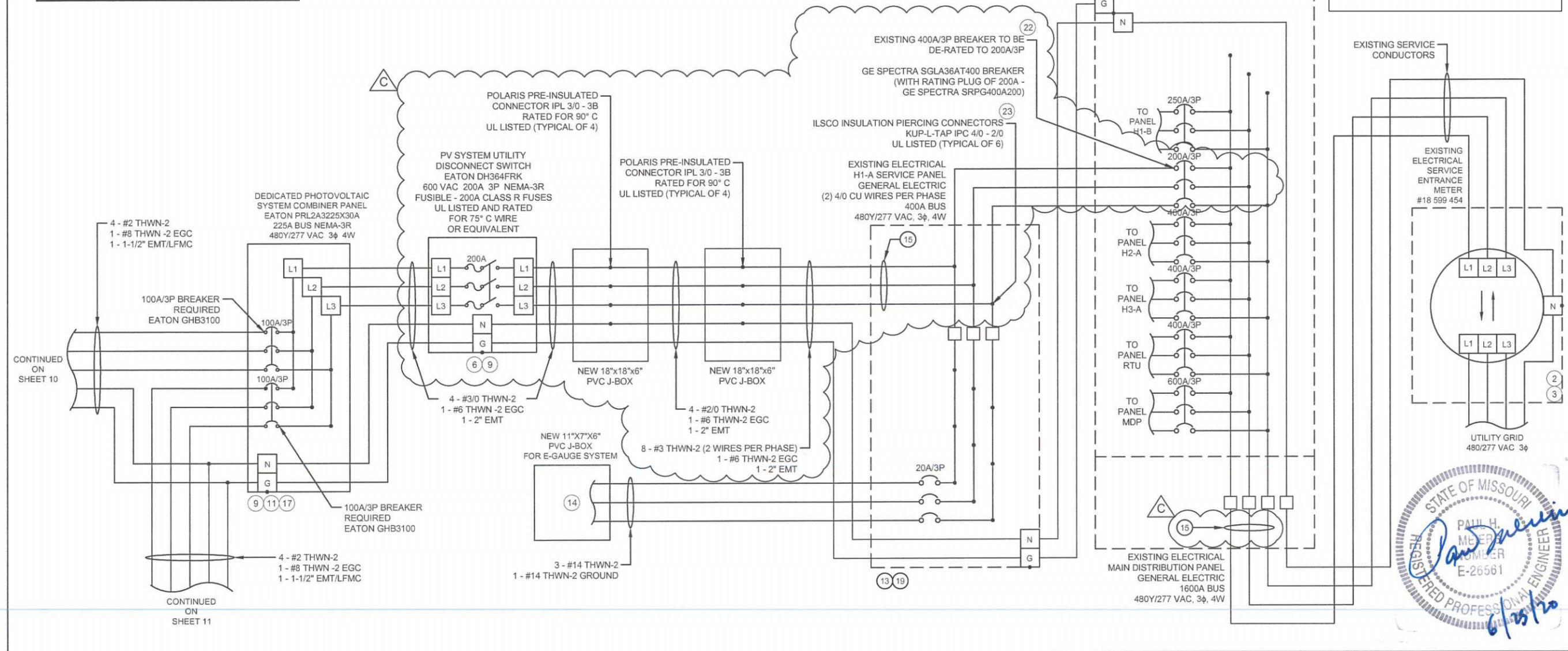
Prepared For:
SUNSMART TECHNOLOGIES
 701 NE 76th Street
 Gladstone, MO 64118
 816-388-9486

NO.	REVISION	BY	DATE	APPR.
A	ISSUED FOR REVIEW			
B	MINOR ELECTRICAL PLAN UPDATES			
C	UPDATE SOLAR PV INTERCONNECTION			

THREE LINE WIRING DIAGRAM #2
 144.8 KW DC PV SYSTEM
 124.0 KW AC PV SYSTEM
 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
Scale:	NTS
Sheet:	11

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. 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.
	<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</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>

PV LOAD CENTER/ COMBINER PANEL

PHOTOVOLTAIC SYSTEM
COMBINER PANEL
DO NOT ADD LOADS

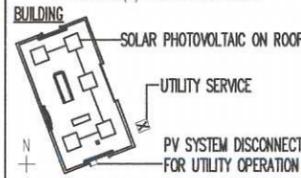
WARNING

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

DIRECTORY

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED
FROM THE FOLLOWING SOURCES WITH
DISCONNECT(S) LOCATED AS SHOWN



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

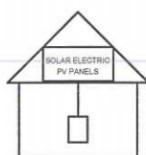
WARNING

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

E-GAUGE BREAKER

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID
SHUTDOWN SWITCH TO
THE "OFF" POSITION TO
SHUT DOWN PV
SYSTEM AND REDUCE
SHOCK HAZARD IN THE
ARRAY



PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT	160.0	AAC
NOMINAL OPERATING AC VOLTAGE	240	VAC

AC DISCONNECT

PV SYSTEM DISCONNECT

WARNING

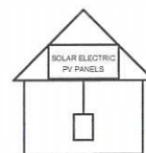
- ELECTRIC SHOCK HAZARD -
TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC OPERATING CURRENT	160.0	AAC
NOMINAL OPERATING AC VOLTAGE	240	VAC

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID
SHUTDOWN SWITCH TO
THE "OFF" POSITION TO
SHUT DOWN PV
SYSTEM AND REDUCE
SHOCK HAZARD IN THE
ARRAY



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

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06/26/2020



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

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		05-06-2020		
		06-06-2020		
		06-16-2020		

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

Utility Company:
EVERGY
Drawn By:
M. Sucharski
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