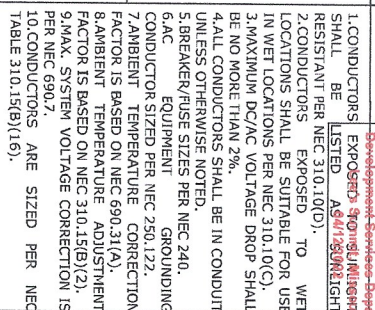


RELEASED FOR
CONSTRUCTION

ELECTRICAL NOTES



**RISING SUN
SOLAR**

ADDRESS:1509 SOUTHWEST
GEORGETOWN DRIVE, LEES SUMMIT, MO
64082
38.841118, -94.409673

AHJ:MO-CITY OF LEE'S SUMMIT

UTILITY:ENERGY-M

PRN NUMBER: RGS-47106



SINGLE LINE DIAGRAM

DRAFTED BY: N. KUMAR	PADED SIZE: 420x440
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QC'D BY: S. KISHORE

SCALE:AS NOTED

DATE: 4/7/2022

E-01

ELECTRICAL CALCULATION

CONDUIT SCHEDULE

TAG ID	CONDUIT SIZE	CONDUCTOR	NEUTRAL	GROUND
1	NONE	(2) 12AWG ENPHASE Q CABLE PER BRANCH CIRCUIT	NONE	(1) 10AWG BARE COPPER
2	3/4" EMT	(4) 10AWG THHN/THWN-2	NONE	(1) 10AWG THHN/THWN-2
3	3/4" EMT	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	(1) 10AWG THHN/THWN-2
4	1-1/4" EMT	(2) 1 AWG THHN/THWN-2	(1) 1 AWG THHN/THWN-2	(1) 6AWG THHN/THWN-2
5	3/4" EMT	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	(1) 10AWG THHN/THWN-2
6	3/4" EMT	(2) 10 AWG THHN/THWN-2	(1) 10 AWG THHN/THWN-2	NONE

NOTE:
MAIN PANEL RATING: 200A, MAIN BREAKER RATING: 200A
LINE SIDE TAP: 100% ALLOWABLE BACKFEED IS = 200A

OCPD CALCULATIONS:
INVERTER OVERCURRENT PROTECTION= INVERTER O/P 1 X CONTINUOUS LOAD(1.25)
= 1.21x1.25x20= 30.25A=>PV BREAKER = 100A
TOTAL REQUIRED PV BREAKER SIZE / FUSE SIZE=>100A PV BREAKER

ELECTRICAL CALCULATIONS

AC WIRE SIZING CALCULATIONS BASED ON FOLLOWING EQUATIONS >>

- REQUIRED CONDUCTOR AMPACITY: INVERTER OUTPUT CURRENT X # OF INVERTERS = MAX CURRENT PER 690.8(A)(3) X 125% = MAX CURRENT PER 690.8(B)(1)
- CORRECTED AMPACITY CALCULATIONS: AMPACITY X TEMPERATURE DERATE FACTOR X CONDUIT FILL DERATE = DERATED CONDUCTOR AMPACITY PER 690.8(B)(2)
- DERATED CONDUCTOR AMPACITY CHECK: MAX CURRENT PER 690.8(A)(3) < DERATED CONDUCTOR AMPACITY

AC WIRE CALCULATIONS:- MATERIAL:COPPER & TEMPERATURE RATINGS:90°C																			
TAG ID		REQUIRED CONDUCTOR AMPACITY					CORRECTED AMPACITY CALCULATION					DERATED CONDUCTOR AMPACITY CHECK							
1	1.21	X	10	=	12.10	X	1.25	=	15.13A	30	X	0.87	X	1	=	26.10A	15.13A	<	26.10A
2	1.21	X	10	=	12.10	X	1.25	=	15.13A	40	X	0.87	X	0.8	=	27.84A	15.13A	<	27.84A
3	1.21	X	20	=	24.20	X	1.25	=	30.25A	40	X	0.87	X	1	=	34.80A	30.25A	<	34.80A
4	1.21	X	20	=	24.20	X	1.25	=	30.25A	145	X	0.87	X	1	=	126.15A	30.25A	<	126.15A



CUSTOMER INFORMATION

NAME: MICHAEL HANLEY

ADDRESS: 1509 SOUTHWEST
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64082
38.841118, -94.409673

AHJ: MO-CITY OF LEE'S SUMMIT

UTILITY: EVERGY-M

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ELECTRICAL CALCULATION

DRAFTED BY: N. KUMAR
QC'D BY: S. KISHORE

SCALE: AS NOTED

DATE: 4/7/2022

REV: G
E-02