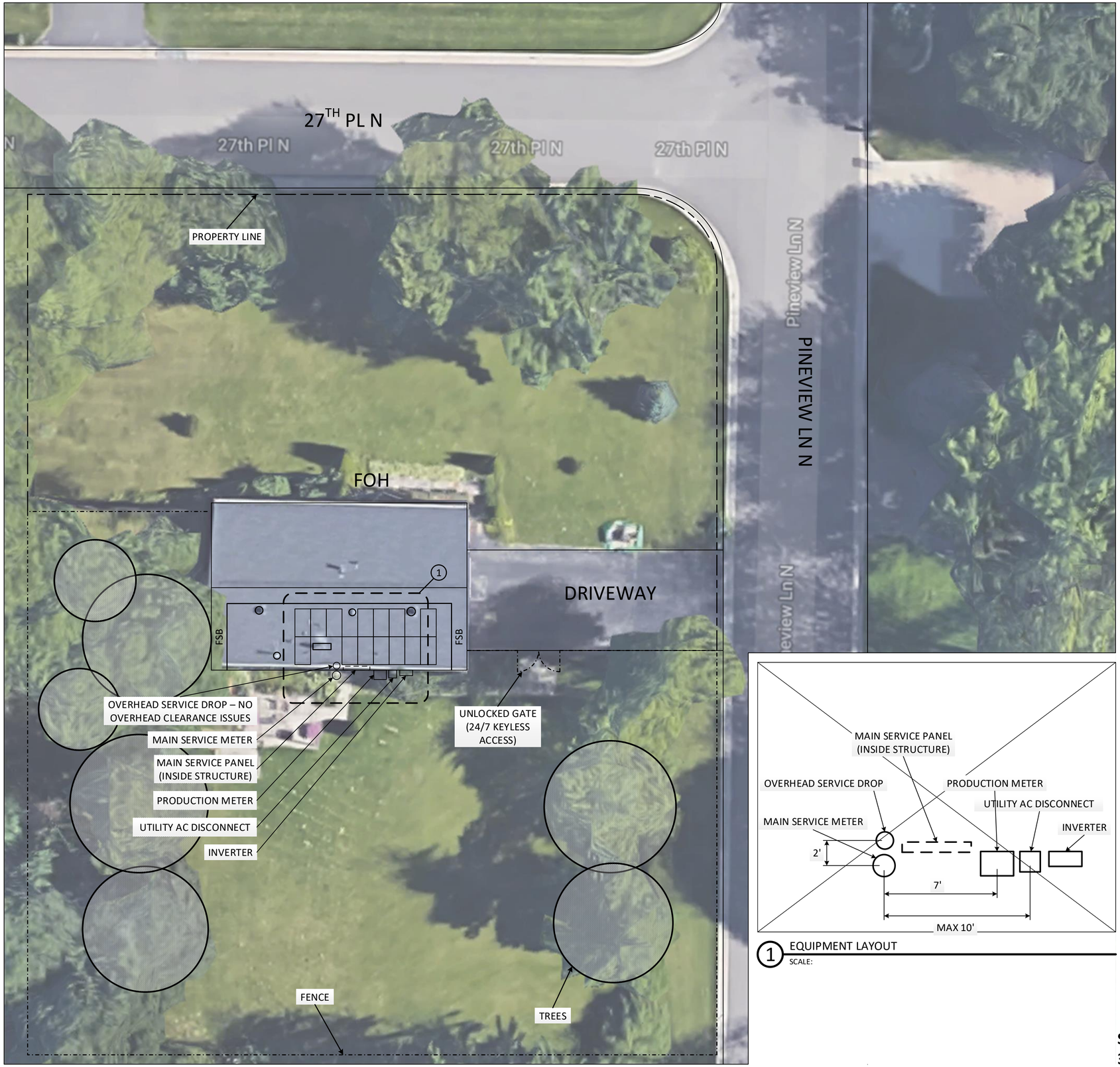

1 EQUIPMENT LAYOUT
SCALE:

NOTES:

1. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY!
2. ALL TESTING SHALL BE PERFORMED BY QUALIFIED PERSONNEL, WITH PROPER PERSONAL PROTECTIVE EQUIPMENT
3. THE PRODUCTION METER AND AC DISCONNECT SHOULD BE LOCATED TOGETHER IN A READILY ACCESSIBLE LOCATION WITHIN 10' OF THE MAIN SERVICE METER
4. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE METERS AND AC DISCONNECT
5. UTILITY AC DISCONNECT SHOULD BE LOCATED WITHIN 10 FEET OF THE MAIN SERVICE METER
6. NOTE ALL THE APPLICABLE NEC CODES
7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)

PV SYSTEM:

ROOF SLOPE: 20°
AZIMUTH: 180°
PV MODULES: 320W
TOTAL: 14
MODULES PER STRING: 14

RACK CONFIGURATION:

INVERTER INFORMATION:

3.8 KW UL CERTIFIED INTVERTER, (1)
DC/AC RATIO: 1.179

ABBREVIATIONS:

1. FOH: FRONT OF HOUSE
2. FSB: FIRE SET BACKS
3. (E): EXISTING
4. (N): NEW
5. PV: PHOTOVOLTAIC
6. MAX: MAXIMUM
7. OCPD: OVERCURRENT PROTECTION DEVICE
8. PCC: POINT OF COMMON COUPLING
9. PoC: POINT OF DER CONNECTION
10. RPA: REFERENCE POINT OF APPLICABILITY

SYSTEM SIZE:
3.8kW AC/4.48kW DC

CUSTOMER NAME
JOHN DOE

SCALE

0 10 20
SCALE IN FEET

PROJECT
EXAMPLE DRAWINGS FOR SMALL SOLAR INTERCONNECTIONS
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
SITE PLAN
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
2	12/15/2018	UTILITY COMMENTS
3	6/17/2019	CORRECTED SUBMITTAL

APPLICATION OID, SRC, OR CASE NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-01A

SYSTEM SIZE:
1000kW AC

NOTES:

1. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY!
2. ALL TESTING SHALL BE PERFORMED BY QUALIFIED PERSONNEL, WITH PROPER PERSONAL PROTECTIVE EQUIPMENT
3. INSTALLATION SHALL COMPLY WITH NEC 690 AND ALL APPLICABLE LOCAL, STATE, AND NATIONAL CODES AND STANDARDS
4. EQUIPMENT LABELS SHALL BE IN ACCORDANCE WITH NEC 690 AND XCEL ENERGY STANDARDS
5. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE METERS AND AC DISCONNECT
6. EQUIPMENT PAD SHALL CONTAIN INVERTER, GROUNDING TRANSFORMER, AND STEP-UP TRANSFORMER PER PROJECT SINGLE LINE DIAGRAM
7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)
8. PROVIDE FUSED, VISIBLE, LOCKABLE DISCONNECT MOUNTED ON DISCONNECT POLE. CLEARLY LABEL DISCONNECT PER XCEL ENERGY GUIDELINES.

ABBREVIATIONS:

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4. (N): NEW
5. PV: PHOTOVOLTAIC
6. MAX: MAXIMUM
7. OCPD: OVERCURRENT PROTECTION DEVICE
8. PCC: POINT OF COMMON COUPLING
9. PoC: POINT OF DER CONNECTION
10. RPA: REFERENCE POINT OF APPLICABILITY

	SERVICE METER	UTILITY DISCONNECT	CUSTOMER DISCONNECT
Location:			
Distance:			

CUSTOMER NAME
JOHN DOE

SCALE

0 10 20
SCALE IN FEET

PROJECT
EXAMPLE DRAWINGS FOR DEDICATED POWER PRODUCTION FACILITY
INTERCONNECTION
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
SITE PLAN
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
2	12/15/2018	UTILITY COMMENTS
3	6/17/2019	CORRECTED SUBMITTAL

APPLICATION OID, SRC, OR CASE NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

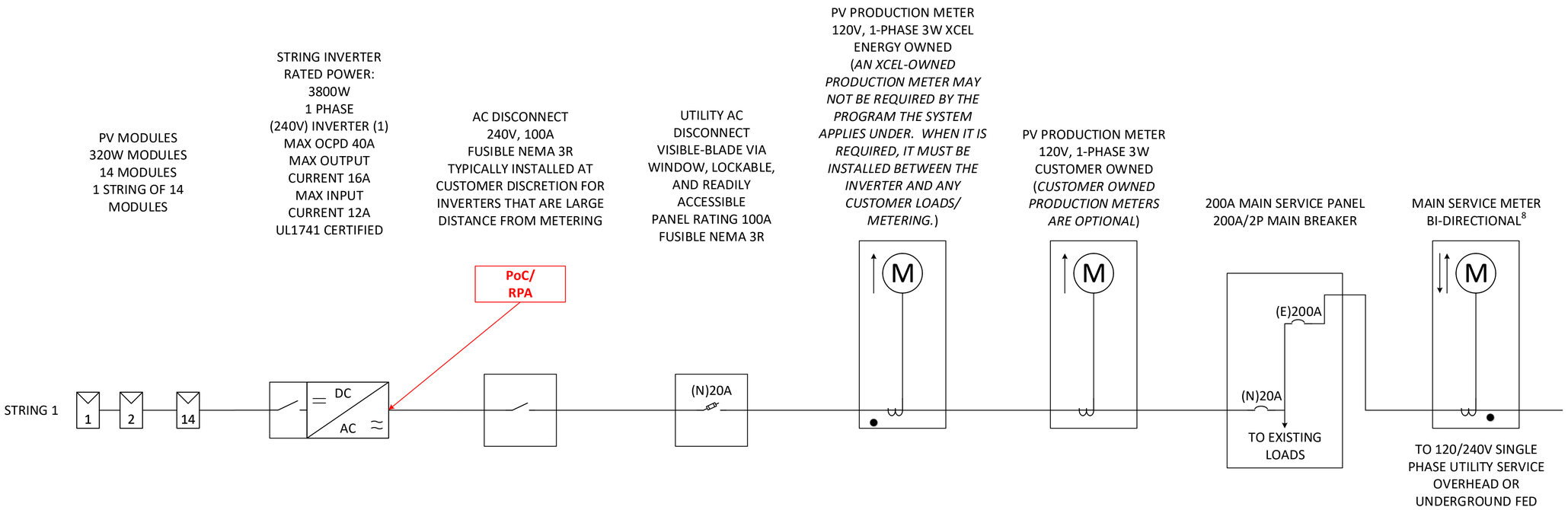
DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-01B

ONE LINE EXAMPLE A:

FOR SINGLE INVERTER SYSTEMS



	PV MODULE	INVERTER	UTILITY DISCONNECT	PV METER	MAIN SERVICE PANEL	INTERCONNECTION METHOD
Make:						
Model:						
Rating:						
Total:						

NOTES:

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4. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE METERS AND AC DISCONNECT
5. UTILITY AC DISCONNECT SHOULD BE LOCATED WITHIN 10 FEET OF THE MAIN SERVICE METER
6. NOTE ALL THE APPLICABLE NEC CODES
7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)
8. SERVICES <320A WILL USE SELF-CONTAINED MAIN SERVICE METERS. 320A SERVICES MUST INDICATE WHETEHER THE METERING WILL BE SELF-CONTAINED OR TRANSFORMER METERED. ALL SERVICES 400A OR GREATER MUST BE TRANSFORMER METERED

PV SYSTEM:

ROOF SLOPE: 20°
AZIMUTH: 180°
PV MODULES: 320W
TOTAL: 14
MODULES PER STRING: 14

RACK CONFIGURATION:

INVERTER INFORMATION:

3.8KW UL CERTIFIED INTVERTER, (1)
DC/AC RATIO: 1.179
1 PHASE

ABBREVIATIONS:

1. FOH: FRONT OF HOUSE
2. FSB: FIRE SET BACKS
3. (E): EXISTING
4. (N): NEW
5. PV: PHOTOVOLTAIC
6. MAX: MAXIMUM
7. OCPD: OVERCURRENT PROTECTION DEVICE
8. PCC: POINT OF COMMON COUPLING
9. PoC: POINT OF DER CONNECTION
10. RPA: REFERENCE POINT OF APPLICABILITY

SYSTEM SIZE:
3.8kW AC/4.48kW DC

CUSTOMER NAME
JOHN DOE

SCALE

PROJECT
EXAMPLE DRAWINGS FOR SMALL SOLAR INTERCONNECTIONS
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
ONE LINE DIAGRAM
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
2	12/15/2018	UTILITY COMMENTS
3	6/17/2019	CORRECTED SUBMITTAL

APPLICATION OID, SRC, OR CASE NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

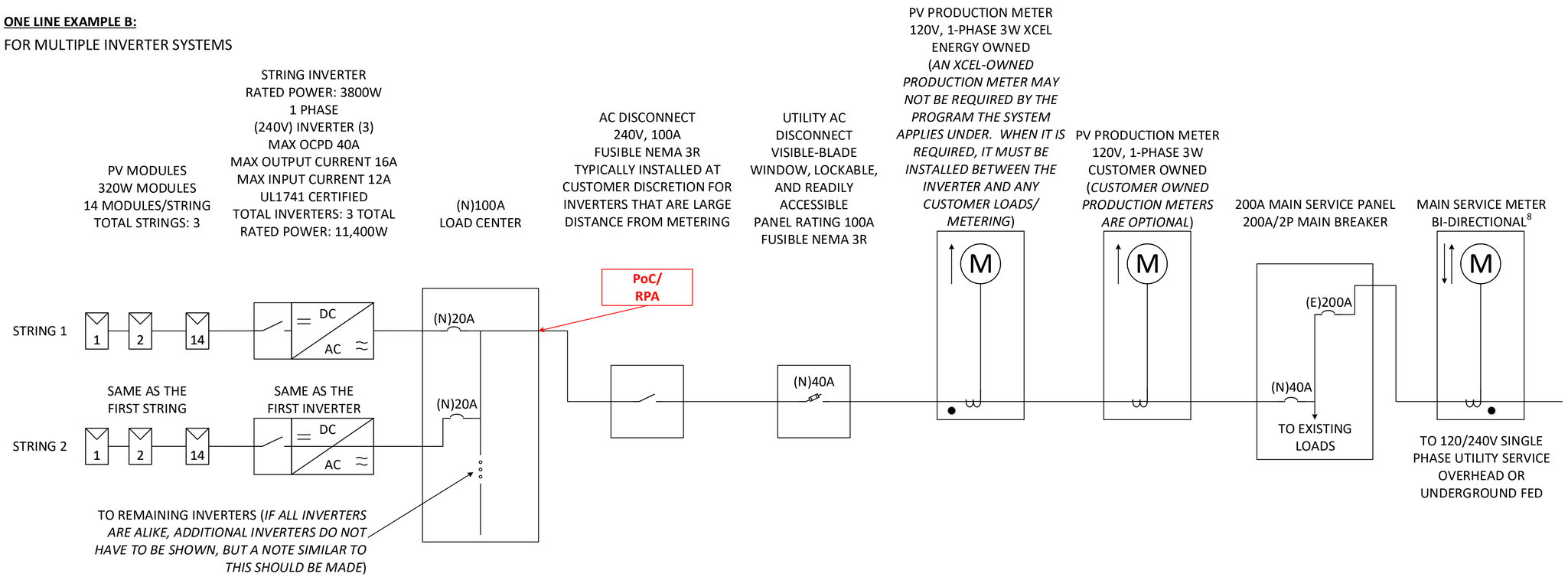
DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-02A

ONE LINE EXAMPLE B:

FOR MULTIPLE INVERTER SYSTEMS



	PV MODULE	INVERTER	UTILITY DISCONNECT	PV METER	MAIN SERVICE PANEL	INTERCONNECTION METHOD
Make:						
Model:						
Rating:						
Total:						

NOTES:

1. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY!
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4. 24/7 UNESCORTED KEYLESS ACCESS SHALL BE PROVIDED FOR THE METERS AND AC DISCONNECT
5. UTILITY AC DISCONNECT SHOULD BE LOCATED WITHIN 10 FEET OF THE MAIN SERVICE METER
6. NOTE ALL THE APPLICABLE NEC CODES
7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)
8. SERVICES <320A WILL USE SELF-CONTAINED MAIN SERVICE METERS. 320A SERVICES MUST INDICATE WHETEHER THE METERING WILL BE SELF-CONTAINED OR TRANSFORMER METERED. ALL SERVICES 400A OR GREATER MUST BE TRANSFORMER METERED

PV SYSTEM:

ROOF SLOPE: 20°
AZIMUTH: 180°
PV MODULES: 320W
TOTAL: 32
MODULES PER STRING: 14

RACK CONFIGURATION:

INVERTER INFORMATION:

3.8KW UL CERTIFIED INTVERTER, (3)
DC/AC RATIO: 1.179
1 PHASE

ABBREVIATIONS:

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3. (E): EXISTING
4. (N): NEW
5. PV: PHOTOVOLTAIC
6. MAX: MAXIMUM
7. OCPD: OVERCURRENT PROTECTION DEVICE
8. PCC: POINT OF COMMON COUPLING
9. PoC: POINT OF DER CONNECTION
10. RPA: REFERENCE POINT OF APPLICABILITY

SYSTEM SIZE:
11.4kW AC/13.44kW DC

CUSTOMER NAME
JOHN DOE

SCALE

PROJECT
EXAMPLE DRAWINGS FOR SMALL SOLAR INTERCONNECTIONS
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
ONE LINE DIAGRAM
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
2	12/15/2018	UTILITY COMMENTS
3	6/17/2019	CORRECTED SUBMITTAL

APPLICATION OID, SRC, OR CASE NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-02B

ONE LINE EXAMPLE C:

FOR SINGLE OR MULTIPLE INVERTER SYSTEMS – DEDICATED POWER PRODUCTION FACILITY

PV MODULES:
MODULE RATING
MODULES/STRING
TOTAL STRINGS

INVERTER:
RATED POWER
PHASE
RATED VOLTAGE
MAX OCPD
MAX OUTPUT CURRENT
MAX INPUT CURRENT
UL1741 CERTIFIED
TOTAL INVERTERS
TOTAL RATED POWER

COMBINER PANEL, INVERTER, LOAD CENTER:
AC kW RATING
VOLTAGE
UL1741 CERTIFIED

GROUND REFERENCING EQUIPMENT:
VARIOUS CONFIGURATIONS AVAILABLE, SHALL MEET XCEL ENERGY REQUIREMENTS

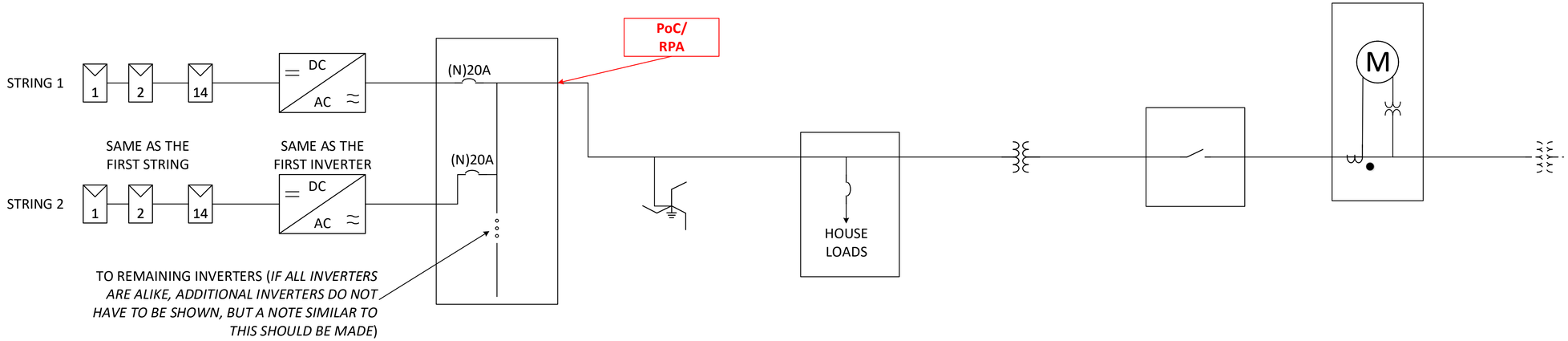
SERVICE PANEL:
PANEL RATING
BREAKER RATINGS

TRANSFORMER:
TRANSFORMER RATINGS
(TRANSFORMER LOCATION FOR PRIMARY SERVICE SHOWN)

PROTECTION EQUIPMENT:
PROTECTION RATINGS
PROTECTION DETAILS

METER:
SHALL MEET XCEL ENERGY REQUIEREMENTS

TRANSFORMER:
TRANSFORMER RATINGS
(TRANSFORMER LOCATION FOR SECONDARY SERVICE SHOWN)



	PV MODULE	INVERTER	UTILITY DISCONNECT	PV METER	MAIN SERVICE PANEL	INTERCONNECTION METHOD
Make:						
Model:						
Rating:						
Total:						

NOTES:

1. THIS DRAWING IS FOR ILLUSTRATIVE PURPOSES ONLY!
2. ALL TESTING SHALL BE PERFORMED BY QUALIFIED PERSONNEL, WITH PROPER PERSONAL PROTECTIVE EQUIPMENT
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5. UTILITY AC DISCONNECT SHOULD BE LOCATED WITHIN 10 FEET OF THE MAIN SERVICE METER
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7. SHOW ALL THE SYSTEMS INCLUDING STORAGE, EXISTING AND NEW (IF APPLICABLE)
8. SERVICES <320A WILL USE SELF-CONTAINED MAIN SERVICE METERS. 320A SERVICES MUST INDICATE WHETEHER THE METERING WILL BE SELF-CONTAINED OR TRANSFORMER METERED. ALL SERVICES 400A OR GREATER MUST BE TRANSFORMER METERED

PV SYSTEM:
ROOF SLOPE: 20°
AZIMUTH: 180°
PV MODULES: 320W
TOTAL: 32
MODULES PER STRING: 14

RACK CONFIGURATION:

INVERTER INFORMATION:
3.8KW UL CERTIFIED INTVERTER, (3)
DC/AC RATIO: 1.179
PHASE

ABBREVIATIONS:

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8. PCC: POINT OF COMMON COUPLING
9. PoC: POINT OF DER CONNECTION
10. RPA: REFERENCE POINT OF APPLICABILITY

SYSTEM SIZE:
11.4kW AC/13.44kW DC

CUSTOMER NAME
JOHN DOE

SCALE

PROJECT
EXAMPLE DRAWINGS FOR DEDICATED POWER PRODUCTION FACILITY INTERCONNECTION
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
ONE LINE DIAGRAM
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
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3	6/17/2019	CORRECTED SUBMITTAL

APPLICATION OID, SRC, OR CASE NUMBER

PROFESSIONAL CERTIFICATION

DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-02C

1. PRODUCTION METER

2. Photovoltaic Power Source

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

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

5. WARNING
ELECTRIC SHOCK HAZARD
WHEN A *GROUND FAULT* IS ACTIVE CONDUCTORS THAT ARE NORMALLY GROUNDED MAY BE UNGROUNDED AND ENERGIZED

6. **CAUTION**
PHOTOVOLTAIC SYSTEM IS BACKFED

7. **WARNING**
Turn off AC disconnect prior to working inside panel

8. DO NOT DISCONNECT UNDER LOAD

9. PV SYSTEM DC DISCONNECT

10. MAIN PV SYSTEM AC DISCONNECT

11. **CAUTION**
PHOTOVOLTAIC ENERGY IS BEING FED INTO THIS SYSTEM

12. **CAUTION**
DUAL POWER SOURCE SECOND SOURCE IS A PV SYSTEM

13. **CAUTION**

MAXIMUM OPERATING CURRENT	16A
MAXIMUM OPERATING AC VOLTS	240V

14. **CAUTION**

NOMINAL OPERATING AC VOLTAGE	240V
NOMINAL OPERATING AC FREQUENCY	60Hz
MAXIMUM AC POWER	3.8kW
MAXIMUM AC CURRENT	16A
OVERCURRENT PROTECTION RATING	20A

NOTES:

1. ALL PLAQUES AND SIGNAGE REQUIRED BY 2014 NEC 690 WILL BE INSTALLED AS REQUIRED
2. LABELS, WARNING(S), AND MARKING(S) SHALL COMPLY WITH ANSI Z535.4
3. A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS IF NOT IN THE SAME LOCATION IN COMPLIANCE WITH NEC 690.56(B)

Label Locations/Details

1	Production Meter
2	PV System Utility AC Disconnect, Main Service Disconnect
3	DC BUS, DC Disconnect, Inverter(s)
4	PV System Utility AC Disconnect, Main Service Disconnect
5	DC BUS, DC Disconnect, Inverter(s)
6	PV System Utility AC Disconnect, PV-AC Disconnect load side and line side
7	PV-AC Disconnect
8	PV System Utility AC Disconnect
9	PV System DC Disconnect
10	PV System Utility AC Disconnect
11	Main Service Panel (House/Area Panel), Production meter
12	Main Service Panel (House/Area Panel), Production meter
13	PV-AC Disconnect, AC Panel combiner, Production meter
14	PV-AC Disconnect, AC Panel combiner, Production meter

SYSTEM SIZE:
3.8kW AC/4.48kW DC

CUSTOMER NAME
JOHN DOE

SCALE

PROJECT
EXAMPLE DRAWINGS FOR SMALL SOLAR INTERCONNECTIONS
INSTALLATION ADDRESS

INSTALLER NAME AND CONTACT

SHEET
LABELS
SUBMITTAL
EXAMPLE

#	DATE	REVISION
1	12/1/2018	INITIAL SUBMITTAL
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DRAWN BY
JANE DOE

CHECKED BY
UTE I. LITTY

DATE
6/17/2019

PROJECT NUMBER
2019-100.01

SHEET NUMBER
E-101-03