

NOTES:

- A. MAIN SERVICE PANEL MUST COMPLY WITH CEC LATEST REVISION AND OPERATE IN A SAFE MANNER.
1. C.O.B. ELECTRIC UTILITY WILL NOT ALLOW INTERCONNECTION WITH ANY UNSAFE CONDITIONS.
- B. PRODUCTION METER PROVIDED AND INSTALLED BY C.O.B. ELECTRIC UTILITY AT CUSTOMERS EXPENSE, METER SOCKET PROVIDED BY INSTALLER. C.O.B. ELECTRIC UTILITY WILL ACTIVATE THE PV SYSTEM AFTER IT MEETS ALL REQUIREMENTS, AND PASSES ALL INSPECTIONS.
1. CENTER OF METER MUST BE INSTALLED BETWEEN 4'0" AND 6'3" ABOVE FINAL GRADE.
- C. LOCKABLE KNIFE-BLADE UTILITY A.C. DISCONNECT TO BE LOCATED WITHIN 10' AND LINE OF SIGHT OF SERVICE PANEL AND MUST COMPLY WITH EUSERC DWG 501.
- D. INVERTER MUST COMPLY WITH UL1741 REQUIREMENTS. GROUNDING ELECTRODE SYSTEM MUST COMPLY WITH LATEST REVISION OF CEC ARTICLE 690.47.
 1. SEPARATE D.C. DISCONNECT AT GRADE LEVEL REQUIRED ONLY IF INVERTER DOES NOT HAVE AN INTEGRATED D.C. DISCONNECT

NOTE: A LEASED SYSTEM MAY INCLUDE A SEPARATE METER PROVIDED AND INSTALLED BY THE LEASING COMPANY.

1. LEASED METER WILL NOT BE INSTALLED BETWEEN PRODUCTION METER AND MAIN SERVICE PANEL.
- ALL PV SYSTEMS MUST COMPLY WITH THE LATEST REVISION TO CEC ARTICLES 690 AND 705.
- ALL NECESSARY CLEARANCES SHALL COMPLY WITH CEC ARTICLE 110.26.
- ALL SIGNS OR DIRECTORIES SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (AS APPROVED BY THE AHJ).
- ALL SIGNS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
- ALL SIGNS SHALL BE PERMANENTLY ATTACHED BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED).
- ALL SIGNS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED LETTERS, MACHINE PRINTED LETTERS, OR ELECTRO-PHOTO PLATING LETTERS IN RED WITH WHITE LETTERING.

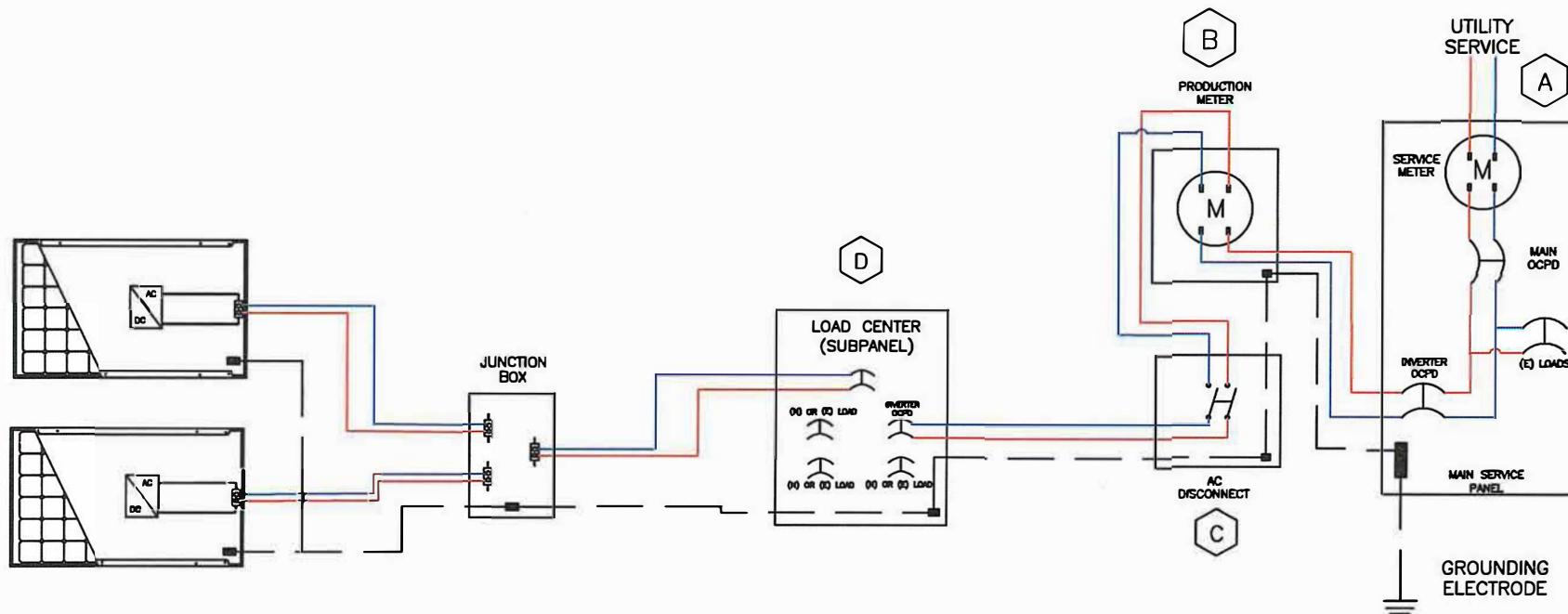


APPROVED: *Bob Kefley* DATE: 9/19/19

PHOTOVOLTAIC SINGLE-PHASE SYSTEM DIAGRAM CENTRAL INVERTER (RESIDENTIAL)

SD

600-80.1



NOTES:

- A. MAIN SERVICE PANEL MUST COMPLY WITH CEC LATEST REVISION AND MUST OPERATE IN A SAFE MANNER.
- 1. C.O.B. ELECTRIC UTILITY WILL NOT ALLOW INTERCONNECTION WITH ANY UNSAFE CONDITIONS.
- B. PRODUCTION METER PROVIDED AND INSTALLED BY C.O.B. ELECTRIC UTILITY AT CUSTOMERS EXPENSE, METER SOCKET PROVIDED BY INSTALLER. C.O.B. ELECTRIC UTILITY WILL ACTIVATE THE PV SYSTEM AFTER IT MEETS ALL REQUIREMENTS, AND PASSES ALL INSPECTIONS.
- 1. CENTER OF METER MUST BE INSTALLED BETWEEN 4'0" AND 6'3" ABOVE FINAL GRADE.
- C. LOCKABLE KNIFE-BLADE UTILITY A.C. DISCONNECT TO BE LOCATED WITHIN 10' AND LINE OF SIGHT OF SERVICE PANEL AND MUST COMPLY WITH EUSERC DWG 501.
- D. INVERTER MUST COMPLY WITH UL1741 REQUIREMENTS. GROUNDING ELECTRODE SYSTEM MUST COMPLY WITH LATEST REVISION OF CEC ARTICLE 690.47.
- 1. SEPARATE D.C. DISCONNECT AT GRADE LEVEL REQUIRED ONLY IF INVERTER DOES NOT HAVE AN INTEGRATED D.C. DISCONNECT
- NOTE. A LEASED SYSTEM MAY INCLUDE A SEPARATE METER PROVIDED AND INSTALLED BY THE LEASING COMPANY.
- 1. LEASED METER WILL NOT BE INSTALLED BETWEEN PRODUCTION METER AND MAIN SERVICE PANEL.
- ALL PV SYSTEMS MUST COMPLY WITH THE LATEST REVISION TO CEC ARTICLES 690 AND 705.
- ALL NECESSARY CLEARANCES SHALL COMPLY WITH CEC ARTICLE 110.26.
- ALL SIGNS OR DIRECTORIES SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (AS APPROVED BY THE AHJ).
- ALL SIGNS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
- ALL SIGNS SHALL BE PERMANENTLY ATTACHED BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED).
- ALL SIGNS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED LETTERS, MACHINE PRINTED LETTERS, OR ELECTRO-PHOTO PLATING LETTERS IN RED WITH WHITE LETTERING.

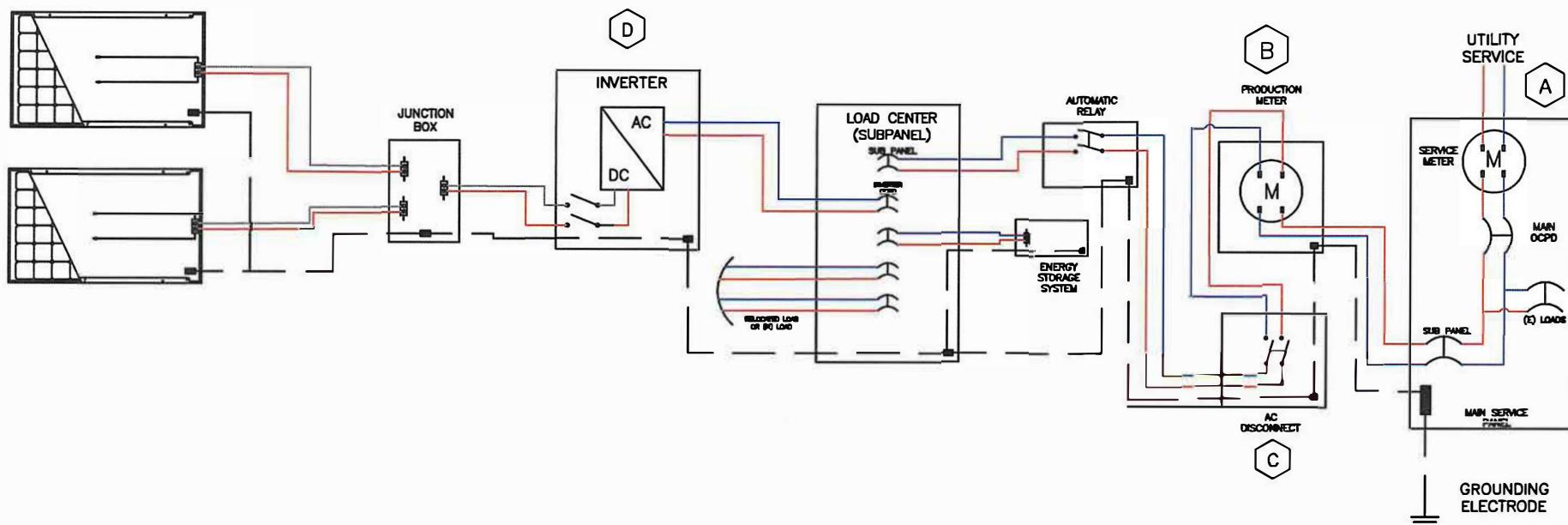


APPROVED: *Becky Kefish* DATE: 9/19/19

PHOTOVOLTAIC SINGLE-PHASE SYSTEM DIAGRAM MICRO INVERTER (RESIDENTIAL)

SD

600-80.2



NOTES:

- A. MAIN SERVICE PANEL MUST COMPLY WITH CEC LATEST REVISION AND MUST OPERATE IN A SAFE MANNER.
- 1. C.O.B. ELECTRIC UTILITY WILL NOT ALLOW INTERCONNECTION WITH ANY UNSAFE CONDITIONS.
- B. PRODUCTION METER PROVIDED AND INSTALLED BY C.O.B. ELECTRIC UTILITY AT CUSTOMERS EXPENSE, METER SOCKET PROVIDED BY INSTALLER. C.O.B. ELECTRIC UTILITY WILL ACTIVATE THE PV SYSTEM AFTER IT MEETS ALL REQUIREMENTS, AND PASSES ALL INSPECTIONS.
- 1. CENTER OF METER MUST BE INSTALLED BETWEEN 4'0" AND 6'3" ABOVE FINAL GRADE.
- C. LOCKABLE KNIFE-BLADE UTILITY A.C. DISCONNECT TO BE LOCATED WITHIN 10' AND LINE OF SIGHT OF SERVICE PANEL AND MUST COMPLY WITH EUSERC DWG 501.
- D. INVERTER MUST COMPLY WITH UL1741 REQUIREMENTS. GROUNDING ELECTRODE SYSTEM MUST COMPLY WITH LATEST REVISION OF CEC ARTICLE 690.47.
- 1. SEPARATE D.C. DISCONNECT AT GRADE LEVEL REQUIRED ONLY IF INVERTER DOES NOT HAVE AN INTEGRATED D.C. DISCONNECT

NOTE. A LEASED SYSTEM MAY INCLUDE A SEPARATE METER PROVIDED AND INSTALLED BY THE LEASING COMPANY.

- 1. LEASED METER WILL NOT BE INSTALLED BETWEEN PRODUCTION METER AND MAIN SERVICE PANEL.
- ALL PV SYSTEMS MUST COMPLY WITH THE LATEST REVISION TO CEC ARTICLES 690 AND 705.
- ALL NECESSARY CLEARANCES SHALL COMPLY WITH CEC ARTICLE 110.26.
- ALL SIGNS OR DIRECTORIES SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (AS APPROVED BY THE AHJ).
- ALL SIGNS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
- ALL SIGNS SHALL BE PERMANENTLY ATTACHED BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED).
- ALL SIGNS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED LETTERS, MACHINE PRINTED LETTERS, OR ELECTRO-PHOTO PLATING LETTERS IN RED WITH WHITE LETTERING.

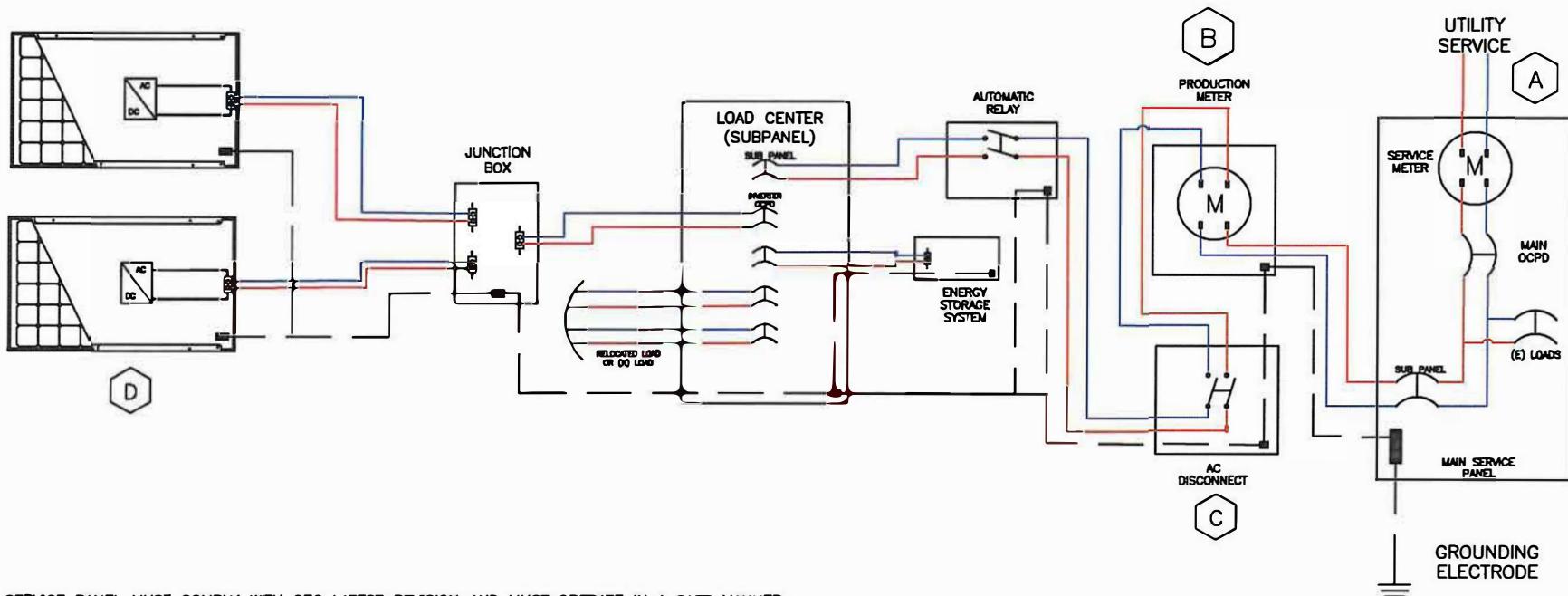
APPROVED: *Beth Kefish* DATE: 9/19/19



PHOTOVOLTAIC SINGLE-PHASE SYSTEM DIAGRAM ENERGY STORAGE (RESIDENTIAL)

SD

600-80.3



NOTES:

- A. MAIN SERVICE PANEL MUST COMPLY WITH CEC LATEST REVISION AND MUST OPERATE IN A SAFE MANNER.
- 1. C.O.B. ELECTRIC UTILITY WILL NOT ALLOW INTERCONNECTION WITH ANY UNSAFE CONDITIONS.
- B. PRODUCTION METER PROVIDED AND INSTALLED BY C.O.B. ELECTRIC UTILITY AT CUSTOMERS EXPENSE, METER SOCKET PROVIDED BY INSTALLER. C.O.B. ELECTRIC UTILITY WILL ACTIVATE THE PV SYSTEM AFTER IT MEETS ALL REQUIREMENTS, AND PASSES ALL INSPECTIONS.
- 1. CENTER OF METER MUST BE INSTALLED BETWEEN 4'0" AND 6'3" ABOVE FINAL GRADE.
- C. LOCKABLE KNIFE-BLADE UTILITY A.C. DISCONNECT TO BE LOCATED WITHIN 10' AND LINE OF SIGHT OF SERVICE PANEL AND MUST COMPLY WITH EUSERC DWG 501.
- D. INVERTER MUST COMPLY WITH UL1741 REQUIREMENTS. GROUNDING ELECTRODE SYSTEM MUST COMPLY WITH LATEST REVISION OF CEC ARTICLE 690.47.
- 1. SEPARATE D.C. DISCONNECT AT GRADE LEVEL REQUIRED ONLY IF INVERTER DOES NOT HAVE AN INTEGRATED D.C. DISCONNECT
- NOTE. A LEASED SYSTEM MAY INCLUDE A SEPARATE METER PROVIDED AND INSTALLED BY THE LEASING COMPANY.
- 1. LEASED METER WILL NOT BE INSTALLED BETWEEN PRODUCTION METER AND MAIN SERVICE PANEL.
- ALL PV SYSTEMS MUST COMPLY WITH THE LATEST REVISION TO CEC ARTICLES 690 AND 705.
- ALL NECESSARY CLEARANCES SHALL COMPLY WITH CEC ARTICLE 110.26.
- ALL SIGNS OR DIRECTORIES SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (AS APPROVED BY THE AHJ).
- ALL SIGNS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
- ALL SIGNS SHALL BE PERMANENTLY ATTACHED BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED).
- ALL SIGNS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED LETTERS, MACHINE PRINTED LETTERS, OR ELECTRO-PHOTO PLATING LETTERS IN RED WITH WHITE LETTERING.



APPROVED: *Beth Kofsis* DATE: 9/19/19

PHOTOVOLTAIC SINGLE-PHASE SYSTEM DIAGRAM ENERGY STORAGE (RESIDENTIAL)

SD

600-80.4

UTILITY INTERACTION POINT AC DISCONNECT

RATED AC OUTPUT CURRENT =

NOMINAL OPERATING AC VOLTAGE =

PV POWER SOURCE DC DISCONNECT

RATED MAXIMUM POWER-POINT CURRENT =

RATED MAXIMUM POWER-POINT VOLTAGE =

MAXIMUM SYSTEM VOLTAGE =

SHORT-CIRCUIT CURRENT =

NOTES:

- A. REQUIRED PLACARDS SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT WITHOUT COVERING MANUFACTURER LABELING OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (PER AHJ APPROVAL)
 1. ALL PLACARDS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
 2. ALL PLACARDS SHALL BE PERMANENTLY ATTACHED TO THE SURFACE OF THE ELECTRICAL EQUIPMENT BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED)
 3. ALL PLACARDS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED OR MACHINE PRINTED LETTERS OR ELECTRO-PHOTO PLATING IN RED WITH WHITE LETTERING.
 4. ALL PLACARDS SHALL NOT BE SMALLER THAN 2"X5" AND NO LARGER THAN 3"X6" (WITH THE EXCEPTION OF THE DIRECTORY PLACARD)
 5. ALL PLACARDS FONT STYLE SHALL BE ARIAL WITH THE FONT SIZE NO SMALLER THAN SIZE 12 OR NO LARGER THAN SIZE 28.
- B. EACH A.C. DISCONNECT SHALL HAVE ITS OWN PLACARD AND MUST COMPLY WITH NEC 690.15(A), CEC ARTICLES 690.13, 690.17, AND 690.54
- C. EACH D.C. DISCONNECT SHALL HAVE ITS OWN PLACARD AND MUST COMPLY WITH CEC ARTICLES 690.53, AND 690.7

REVISED: 03/22/2018

APPROVED:

Becki Tolosa 7/19/18

STANDARD DRAWINGS



PV DISCONNECT LABELS

SD

600-83

SERVICE PANEL COVER

DUAL POWER SUPPLY
PHOTOVOLTAIC SYSTEM

PLACE THIS LABEL ON THE
SERVICE PANEL COVER
ALONG WITH THE
DIRECTORY PLAQUE

DIRECTORY PLAQUE
(SEE C.O.B. STANDARD
DRAWING #600-85)

INSIDE SERVICE PANEL

MAIN BREAKER

SOLAR BREAKER

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

PV BREAKER

MAIN BREAKER AND SOLAR BREAKER
SHALL BE IN THE FARTHEST POSITION
FROM EACH OTHER IN SERVICE PANEL

WARNING LABEL SHALL BE NEXT TO
OR JUST BELOW SOLAR BREAKER

PV BREAKER LABEL SHALL BE NEXT
TO OR JUST BELOW SOLAR BREAKER

NOTES:

- A. REQUIRED PLACARDS SHALL BE ATTACHED TO THE ELECTRIC EQUIPMENT WITHOUT COVERING MANUFACTURER LABELING OR LOCATED ADJACENT TO THE IDENTIFIED EQUIPMENT (PER AHJ APPROVAL)
 1. ALL PLACARDS SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT.
 2. ALL PLACARDS SHALL BE PERMANENTLY ATTACHED TO THE SURFACE OF THE ELECTRICAL EQUIPMENT BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED)
 3. ALL PLACARDS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED OR MACHINE PRINTED LETTERS OR ELECTRO-PHOTO PLATING IN RED WITH WHITE LETTERING.
 4. ALL PLACARDS SHALL NOT BE SMALLER THAN 2"X5" AND NO LARGER THAN 3"X6" (WITH THE EXCEPTION OF THE DIRECTORY PLACARD)
 5. ALL PLACARDS FONT STYLE SHALL BE ARIAL WITH THE FONT SIZE NO SMALLER THAN SIZE 12 OR NO LARGER THAN SIZE 28.

REVISED: 03/22/2018

APPROVED: *Bud Tolosa 7/19/18*

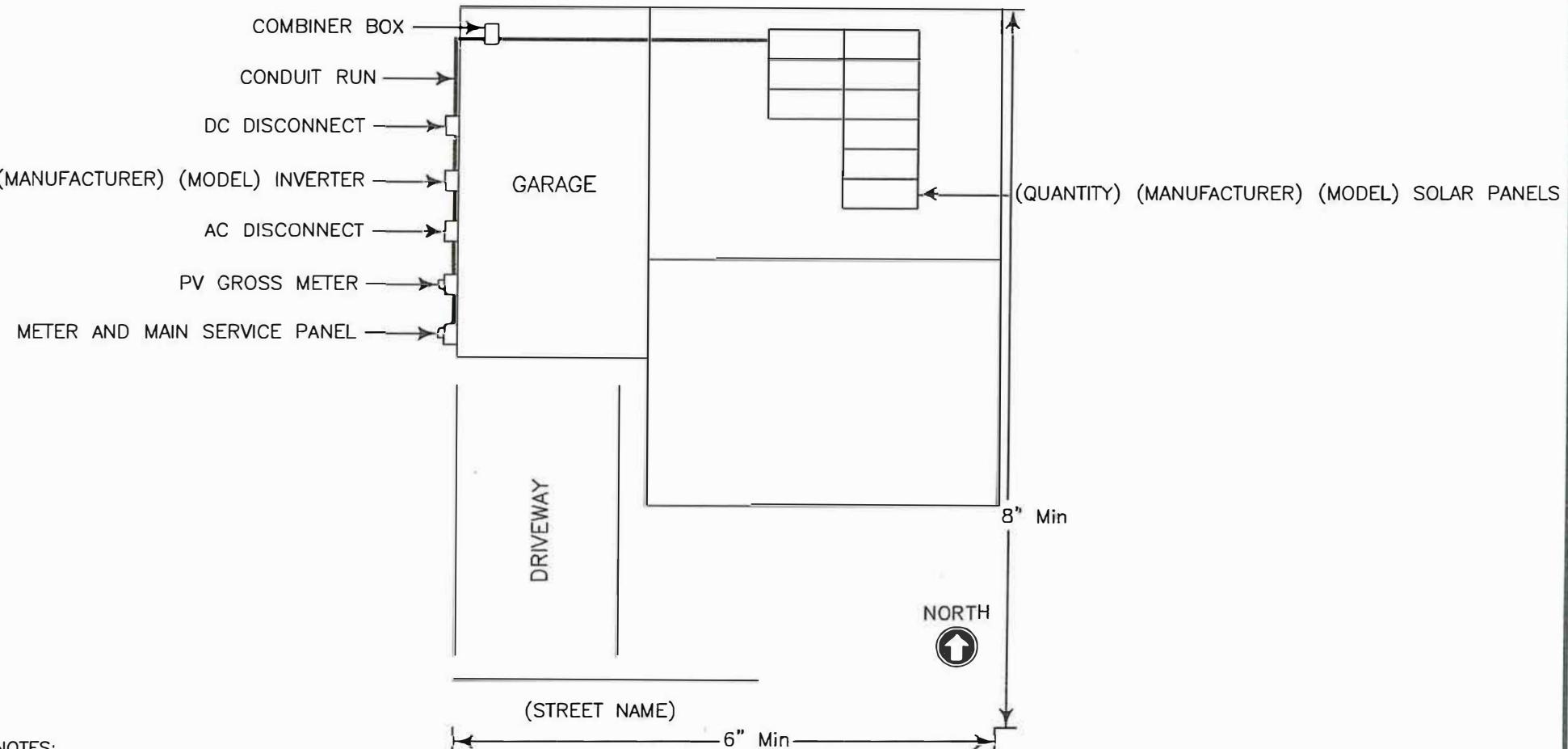
STANDARD DRAWINGS



PV SERVICE PANEL WARNING LABELS

SD

600-84



NOTES:

1. LABELS LISTED ABOVE WITH PARENTHESSES INDICATE THAT THE SPECIFIC NAME MUST BE INSERTED IN PLACE OF THOSE GENERAL TERMS.
2. DIRECTORY PLACARD MUST BE PLACED ON THE CUSTOMER SIDE OF THE SERVICE PANEL IN CLEAR VIEW WITHOUT COVERING MANUFACTURER LABELING.
3. DIRECTORY PLACARD MUST BE UNIQUE TO EACH HOUSE IT REPRESENTS (I.E. ROOF LAYOUT, EQUIPMENT LOCATION, ETC.)
4. DIRECTORY PLACARD MUST BE A MINIMUM SIZE OF 6" x 8".
5. FONT STYLE SHALL BE ARIAL AND FONT SIZE SHALL NOT BE SMALLER THAN SIZE 12 AND NO LARGER THAN SIZE 28.
6. PLACARD SHALL BE RED WITH WHITE LETTERING.
7. PLACARDS SHOULD BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT, PERMANENTLY ATTACHED TO SURFACE OF ELECTRICAL EQUIPMENT BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED), AND SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED OR MACHINE PRINTED LETTERS.

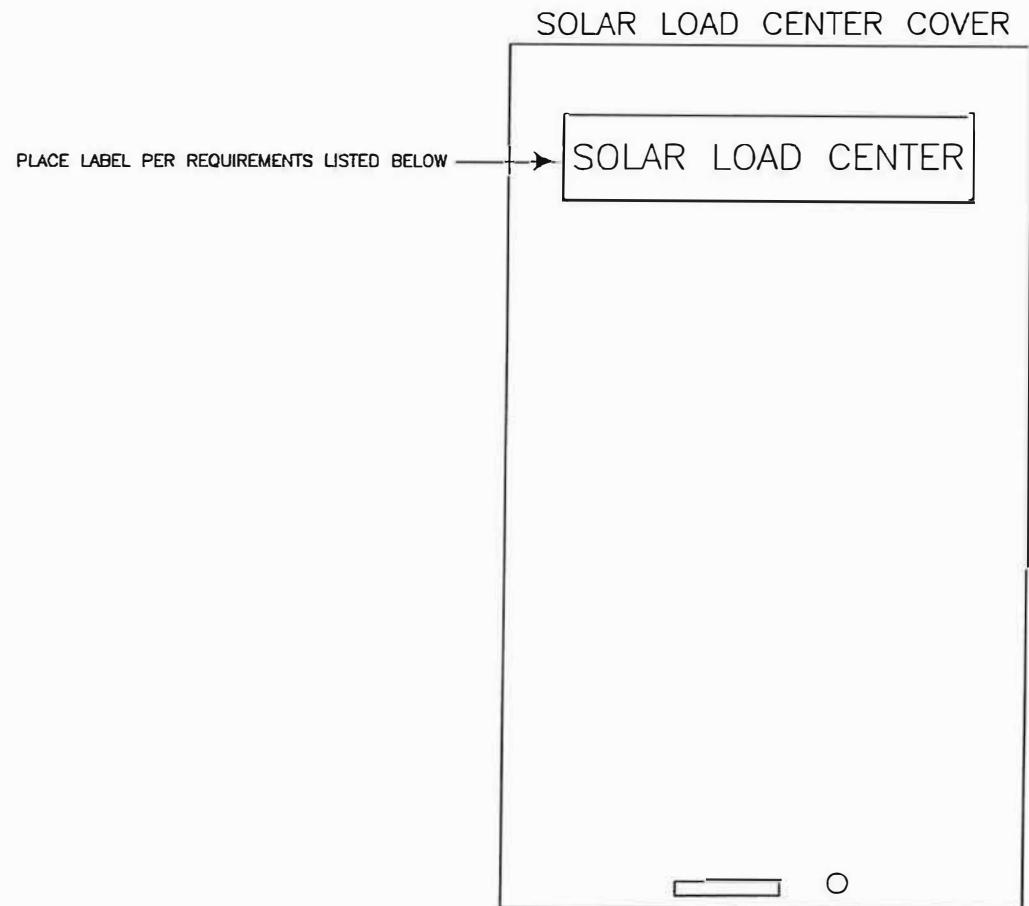
REVISED: 03/22/2018

APPROVED: *Bruce Tolosa* 7/19/18 STANDARD DRAWINGS

PV DIRECTORY PLAQUE

SD

600-85



NOTES:

1. SOLAR LOAD CENTER LABEL SHOULD BE LOCATED CENTRALLY ON THE TOP HALF OF THE PANEL'S FRONT COVER.
2. PLACARD SHALL BE PLACED IN CLEAR VIEW ON ELECTRICAL EQUIPMENT WITHOUT COVERING MANUFACTURER LABELING.
3. FONT STYLE SHALL BE ARIAL AND FONT SIZE SHALL NOT BE SMALLER THAN SIZE 12 AND NO LARGER THAN SIZE 28.
4. PLACARD SHALL BE RED WITH WHITE LETTERING.
5. PLACARDS SHOULD BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT. ALL PLACARDS SHALL BE PERMANENTLY ATTACHED TO SURFACE OF ELECTRICAL EQUIPMENT BY MEANS OF EPOXY OR EQUIVALENT SUITABLE FOR THE ENVIRONMENT (SCREWS OR RIVETS ARE NOT ALLOWED). OUTDOOR SIGNS SHALL BE EITHER METAL OR PLASTIC WITH ENGRAVED OR MACHINE PRINTED LETTERS.



REVISED: 03/22/2018

APPROVED: *Bud Kiser* 7/19/18

STANDARD DRAWINGS

SOLAR LOAD CENTER LABEL

SD

600-86