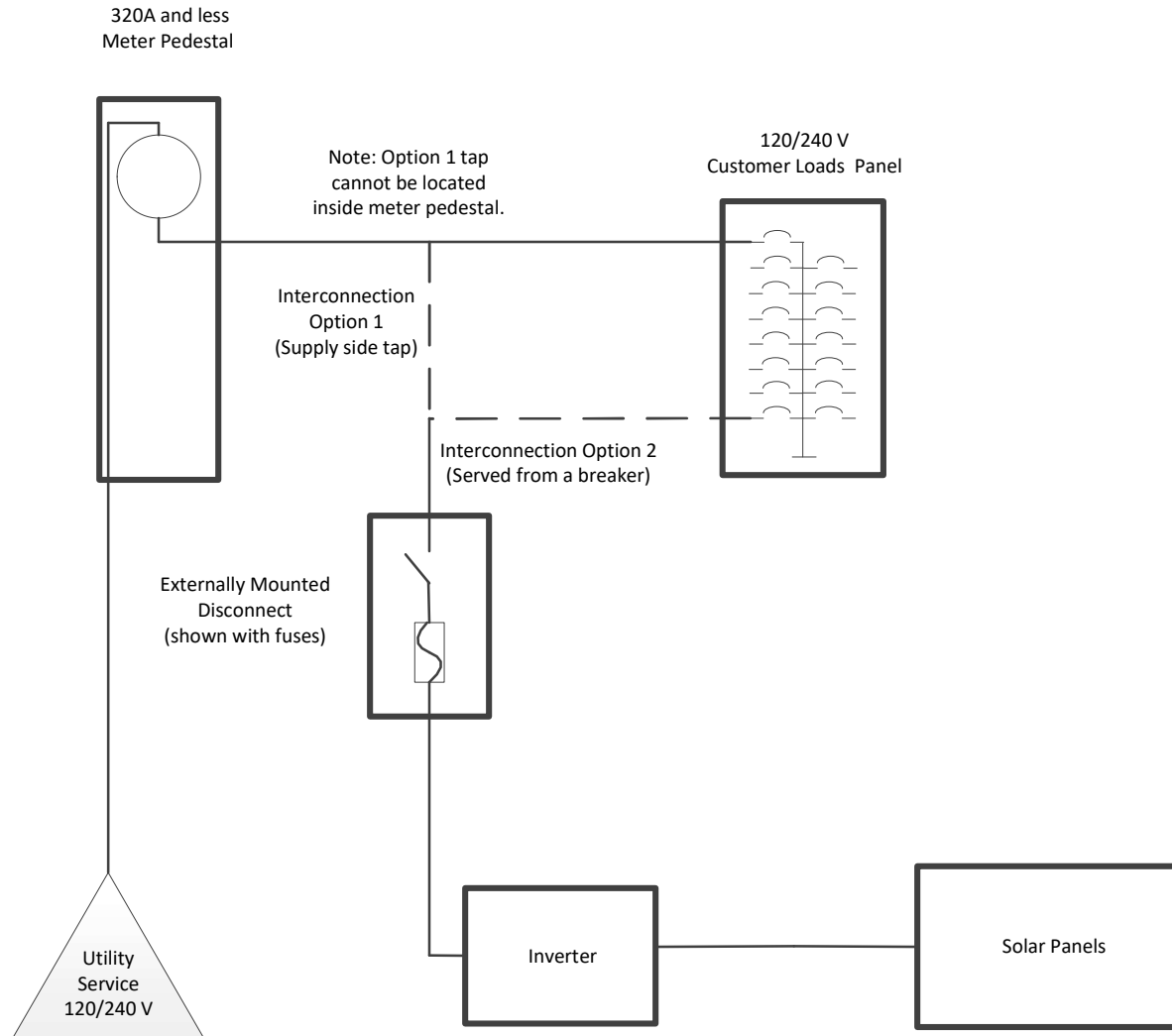


# UMERC underground service - customer owned generation

## solar one-line diagrams

- The inverter shall be UL 1741 compliant.
- The external disconnect shall provide a visible open between its contacts, have the ability to be locked in the open position and have 24/7 ready access for utility workers.
  - Breakers (including breakers integrated in metering equipment) and air conditioner “pull out” disconnects are not acceptable.
- If the PV Disconnect Switch is not located within sight of the Utility Meter, a placard must be placed at both the meter and disconnect switch indicating the location with respect to the other. In cases where a feeder serves generation on another building, both buildings require disconnects and placards.
- Please list the one-line diagram number (example: “U3”) that is referenced on the submitted one-line diagram.
- Example one-line diagrams show the minimum required alternating current disconnects.
- One-line diagram should be located near metering equipment and protected from the environment as a permanent placard or in a weather tight enclosure.
  - A one-line diagram must be posted onsite for energy storage systems or systems with multiple disconnect switches.
- All new service entrance equipment shall have a minimum short circuit current rating or ampere interrupting capacity (SCCR/AIC) of 22kA.
- Any load additions using supply side taps shall not exceed the service capacity.
- Customer owned generation will not be allowed for delta connected secondary services.
- Single phase inverters will not be allowed on three phase services.
- When an updated/new one-line is submitted for review that one-line shall take precedence over all previous one-lines and will need to comply with the current requirements.
- By installing customer owned generation the customer/installer agree to address any existing issues with metering/service equipment to meet current requirements.

Note: Conductors exiting the meter pedestal are not allowed to re-enter pedestal.

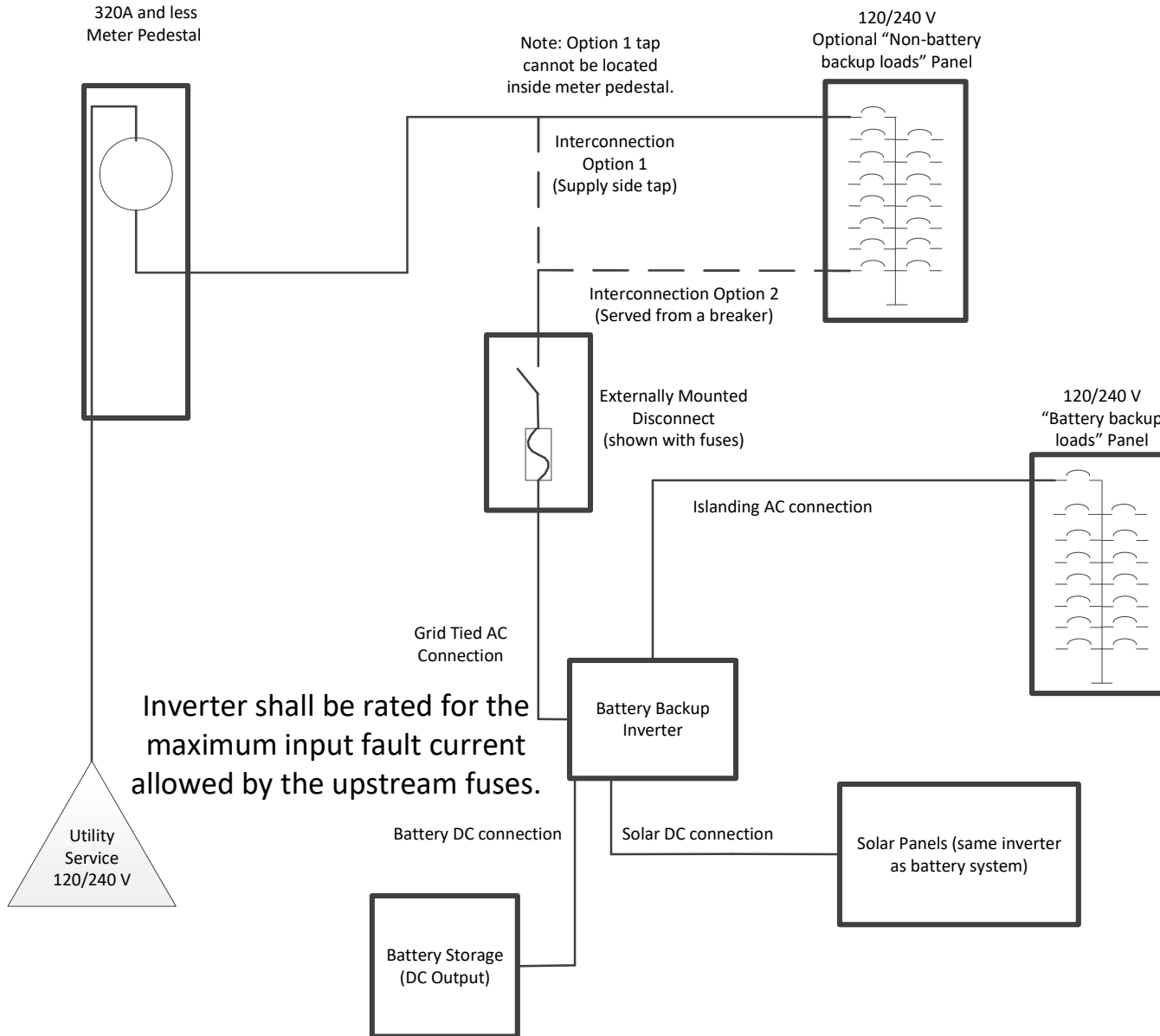


Inverter shall be rated for the maximum input fault current allowed by the upstream fuses.

Note: One-line diagram must show the metering equipment and disconnect catalog numbers.

<b>One Line Diagram - U1</b> Solar with a meter pedestal ( 320A and less, 240V 3-wire single phase service)		
Drawn: N. Bushman	Date: 8/1/2023	Page 1 of 7

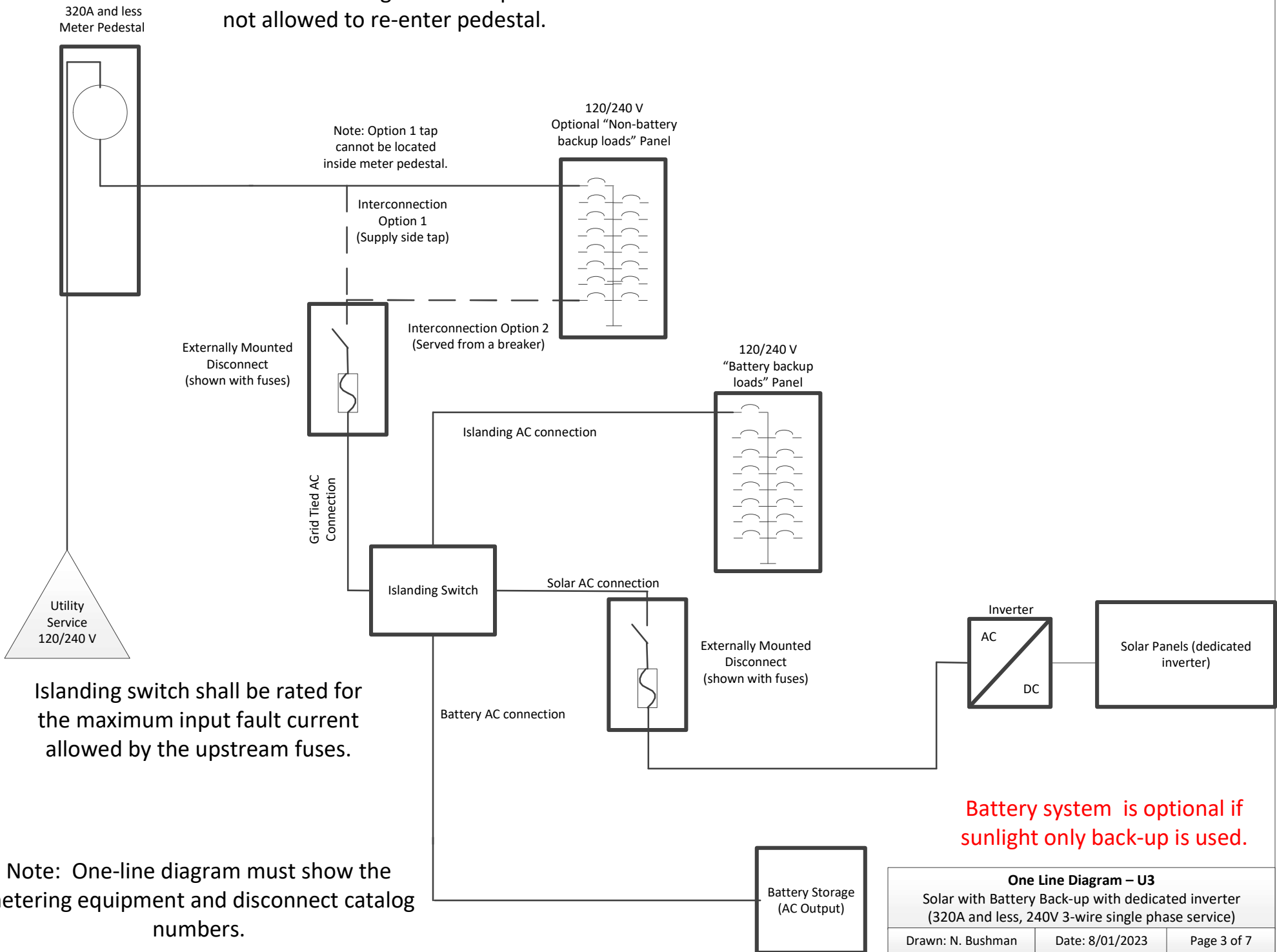
Note: Conductors exiting the meter pedestal are not allowed to re-enter pedestal.



Note: One-line diagram must show the metering equipment and disconnect catalog numbers.

<b>One Line Diagram -U2</b>		
Solar with Battery Back-up with shared inverter (320A and less, 240V 3-wire single phase service)		
Drawn: N. Bushman	Date: 8/1/2023	Page 2 of 7

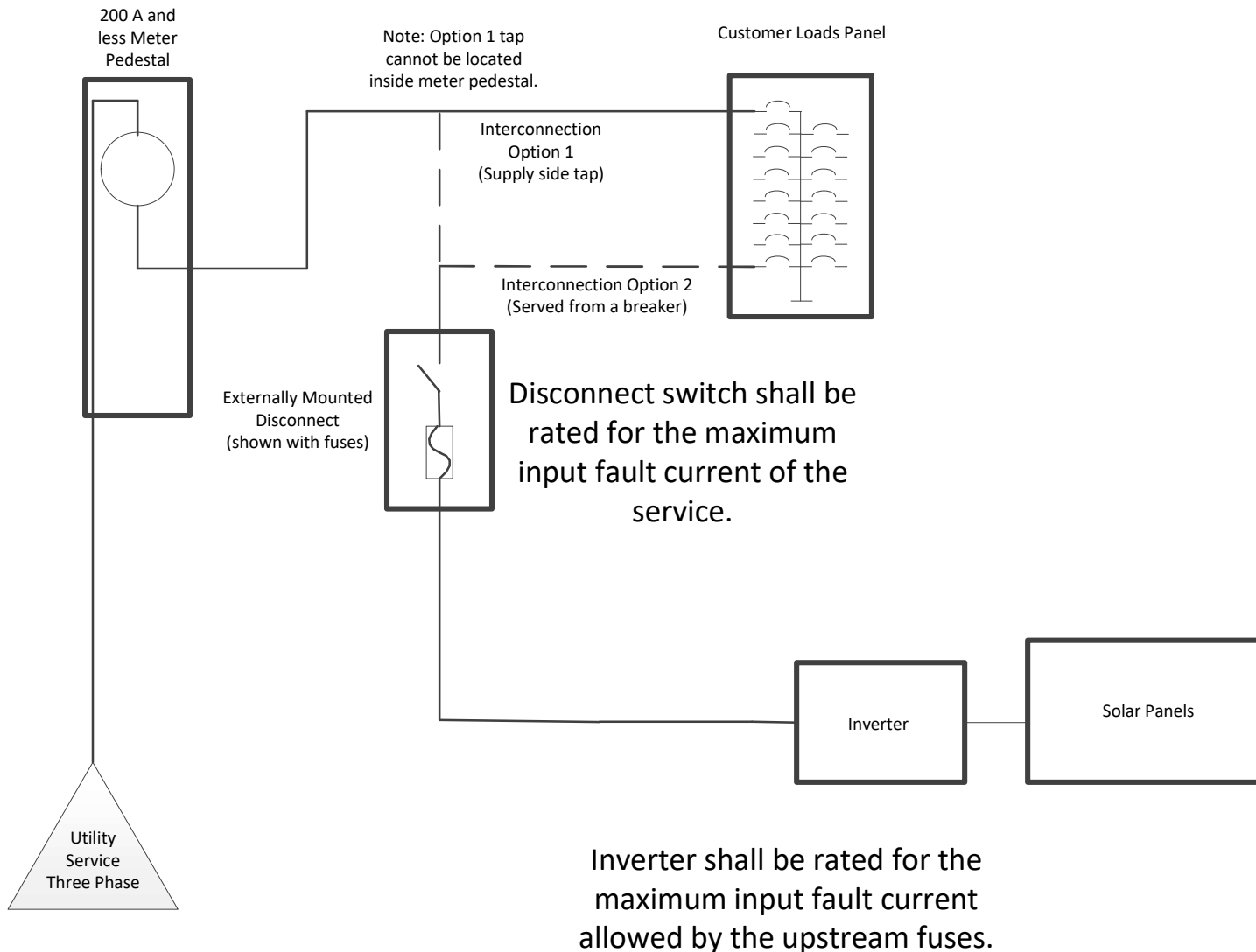
Note: Conductors exiting the meter pedestal are not allowed to re-enter pedestal.



**One Line Diagram – U3**

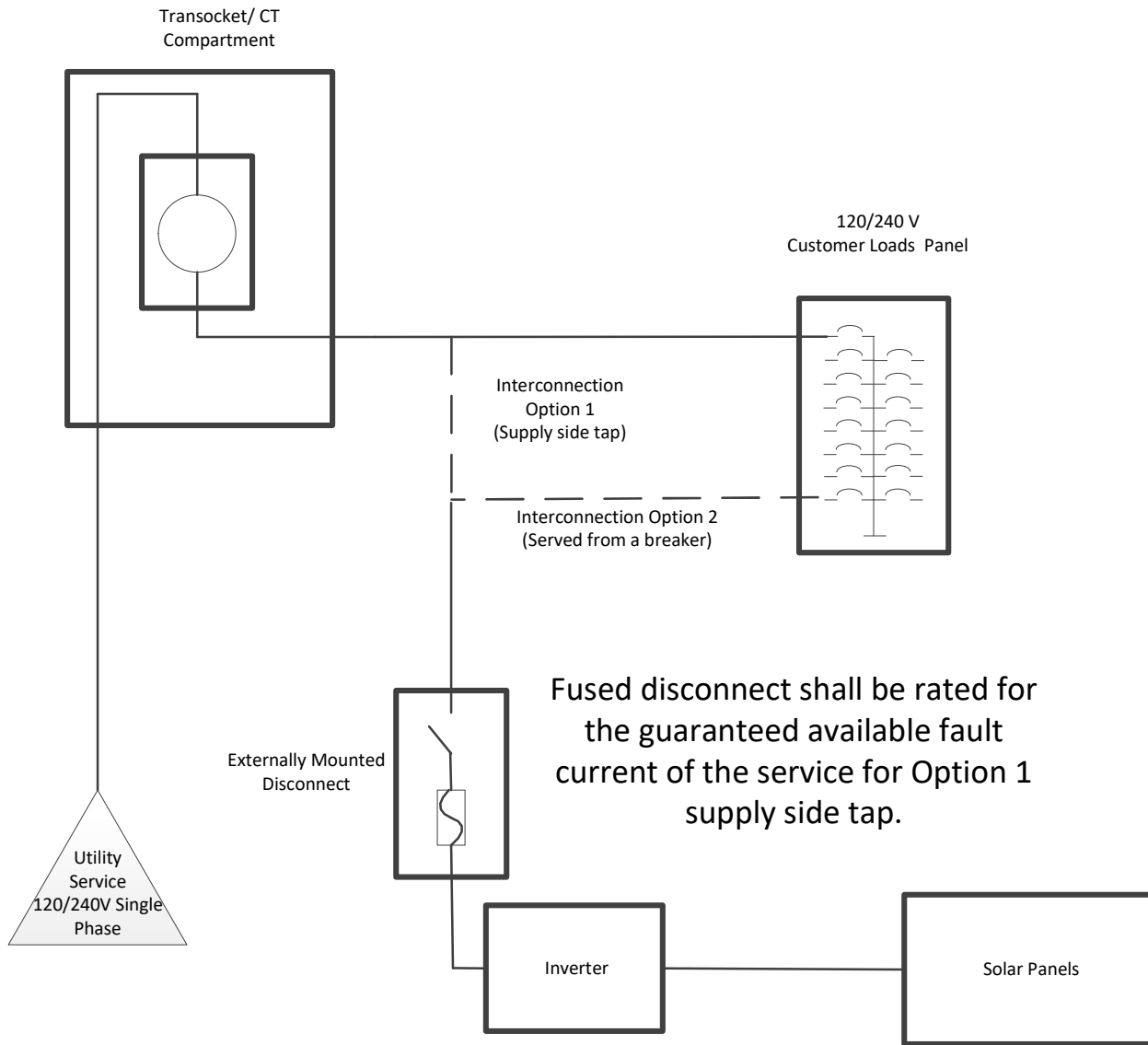
Solar with Battery Back-up with dedicated inverter (320A and less, 240V 3-wire single phase service)

Note: Conductors exiting the meter pedestal are not allowed to re-enter pedestal.



Three phase inverters are required on three phase services.

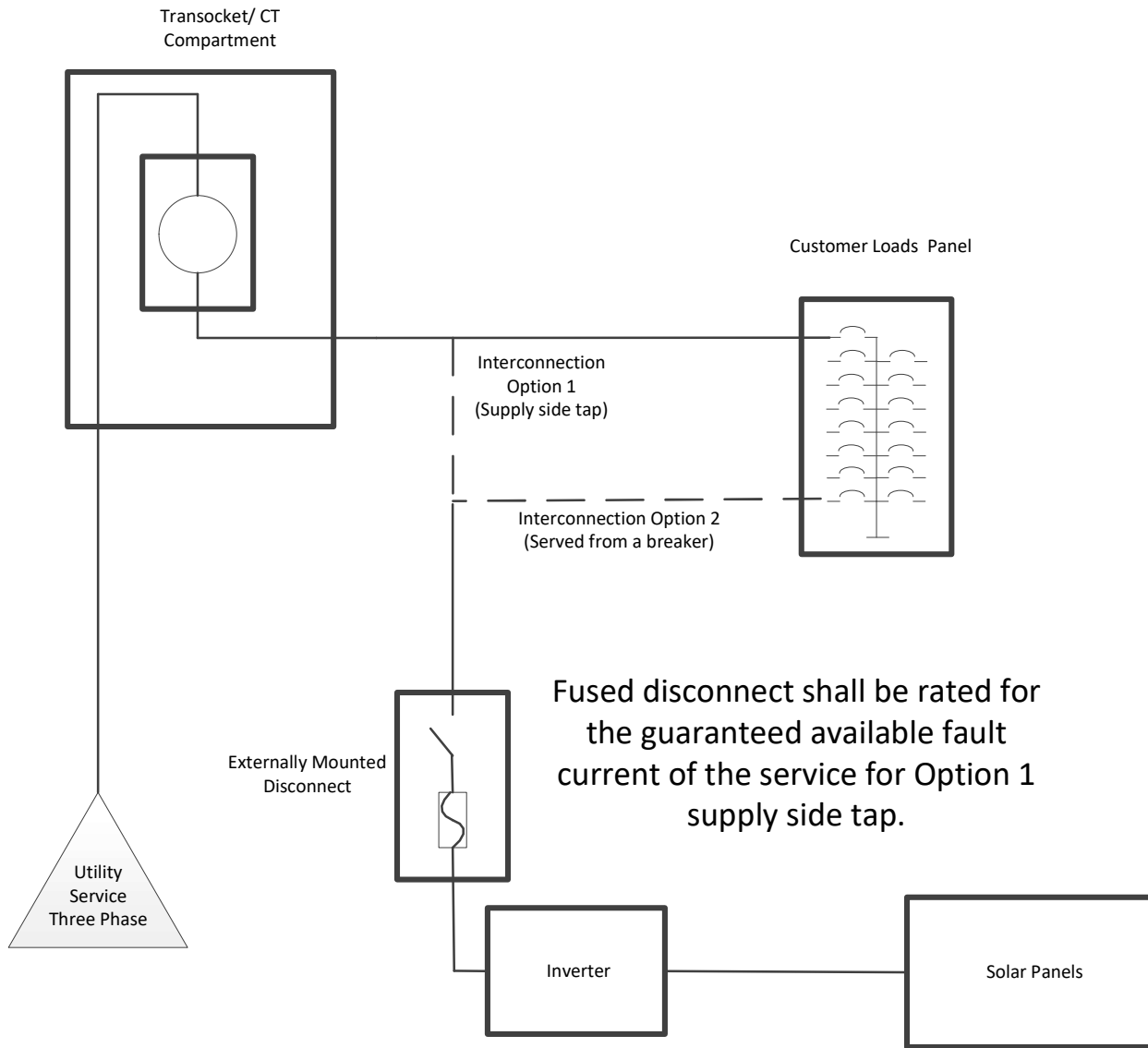
Note: One-line diagram must show the metering equipment and disconnect catalog numbers.



Fused disconnect shall be rated for the guaranteed available fault current of the service for Option 1 supply side tap.

Note: One-line diagram must show the metering equipment and disconnect catalog numbers.

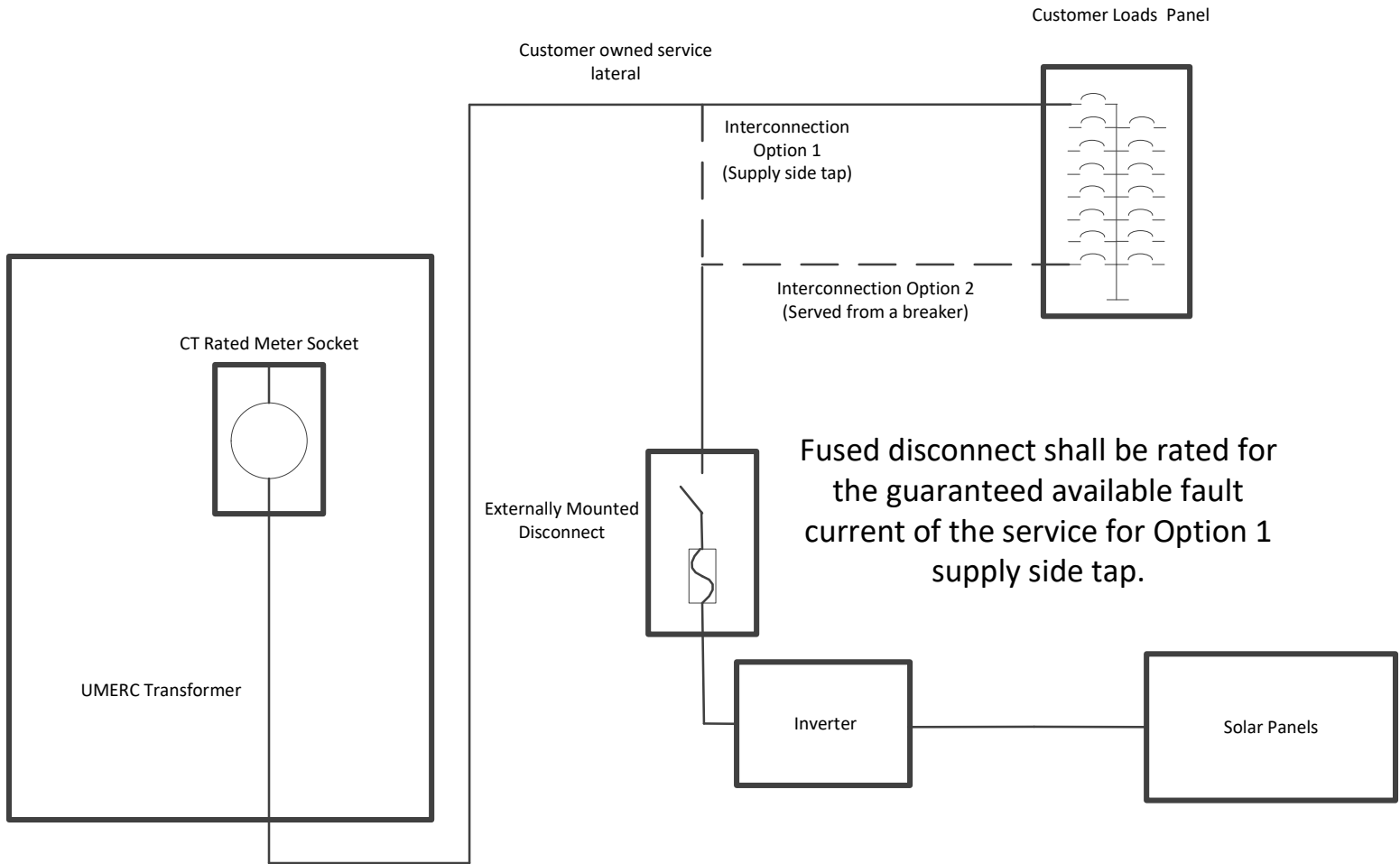
<b>One Line Diagram – U5</b> Solar with transocket (Single Phase Service 400-800A)		
Drawn: N. Bushman	Date: 8/1/2023	Page 5 of 7



Three phase inverters are required on three phase services.

Note: One-line diagram must show the metering equipment and disconnect catalog numbers.

<b>One Line Diagram – U6</b> Solar with transocket (Three Phase Service 400-3000A)		
Drawn: N. Bushman	Date: 8/1/2023	Page 6 of 7



Three phase inverters are required on three phase services.

Note: One-line diagram must show the metering equipment and disconnect catalog numbers.

<b>One Line Diagram – U7</b>		
Solar with metering in the transformer (Three Phase Service 400-3000A)		
Drawn: N. Bushman	Date: 8/1/2023	Page 7 of 7