

Solar Photovoltaic (PV) Systems

Inspection Checklist NEC Article 690

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INSTRUCTIONS: Use this checklist as a guide for Solar Photovoltaic (PV) Systems inspections.

INFORMATION

The following checklist may be used as a rough-in and final inspection guide for the installation of a Solar Photovoltaic (PV) System installed in the City of Raleigh. This checklist may be considered by the applicable contractors and subcontractors when planning their solar photovoltaic system installation. This checklist does not consider every field situation or storage system.

ELECTRICAL ROUGH-IN INSPECTION

Note: Rough-In inspections required where components will be covered by building finishes.

1. Plans, manufacturer's Data Sheet and installation instructions on site.
2. All equipment, inverters, PV modules, combiners, converters, and controllers are listed for the PV System Installation.
3. All PV system conductors and circuits are properly sized for their intended use, meet the wiring methods and be provided with overcurrent protection.
4. The PV system shall be protected by a grounding electrode system.
5. Verify working clearances.

ELECTRICAL FINAL INSPECTION

1. All electrical terminations have been completed.
2. Overcurrent devices are rated and calculated for continuous duty.
3. Each PV System disconnecting means shall be permanently marked "PV SYSTEM DISCONNECT."
4. All required identification shall be marked and labeled and must withstand the environment where installed.
5. PV System circuits installed in or on buildings shall include a rapid shutdown and be labeled.
6. PV System equipment exceeding 8 feet above grade must be clearly photographed or recorded and a hard copy provided for the inspector at the final inspection and downloaded to the permit file.
7. When tying into a panelboard the breaker shall be located at the opposite end of buss from the main breaker along with a warning label not to move this breaker.
8. The sum of 125% of the PV source breaker and breaker protecting the buss of a panelboard shall not exceed 120% of the buss rating.
9. Will require access to all indoor components, such as panels and wiring, in attics, garages, etc.

ELECTRICAL FINAL INSPECTION

Onsite Third-Party approvals are to be submitted on the NC Department of Insurance Office of the State Fire Marshall Appendix G.