

SOLAR PHOTOVOLTAIC (PV) SYSTEM GUIDELINE



SUBMITTAL REQUIREMENTS

The following documents must be electronically submitted with permit application via the Citizen Self-Service Portal (CSS): cityofallen.org/css

- Construction Plans
- Site Plans

Please check to ensure that the following are included in the plan submittal:

- Installed in accordance with the National Fire Protection Association National Electrical Code (NFPA 70) as adopted by the State of Texas, applicable ordinances, districts, and/or special use categories (e.g. zoning or special use, etc.); subject to plan approval.

NOTE: The National Electrical Code (NEC) is the Texas State Electrical Code. The state adopts the NEC as the State Code on September 1st of any year in which the new NEC Code book is published (every three years).

Construction Documents:

- Site specific, stamped engineering drawings (reviewed or designed, and sealed by a State of Texas licensed professional structural engineer), assembly installation plans, manufacturer's installation instructions, and/or equipment manufacturer's data sheets
- Make, model, and quantity of module, inverter, and racking system certified to the UL 2703, UL 62109, and UL 1741 standard by a Nationally Recognized Testing Laboratory as appropriate
- Framing plans
- Method of sealing/flashing for roof penetrations
- Connection details to building
- Structural calculations or load diagram
- Data cut sheets for battery storage if applicable (including type of battery)
- Site Plan: Include the PV array
- Roof plan showing location of equipment and, if required, fire setbacks
- Existing site easements, property lines, building setback lines, and zoning setbacks
- Typical side view detail of the solar PV system mount on the roof
- (COMMERCIAL ONLY)
- Location of all existing structures and proposed PV system equipment (including modules, disconnects, inverters, panel boards, combiner boxes, storage batteries, utility meters, etc.)
- Plumbing vent termination: Vent termination is not allowed under solar installations and must be relocated or modified in accordance with the International Plumbing Code (IPC) and/or the International Residential Code (IRC).

- **International Residential:** Installation complies with Section R234 in the 2021 International Residential code (IRC).
- **Fire Code Requirements:** Installation complies with the 2021 International Fire Code (IFC).

Electrical Plans:

- In addition to the construction documents, include a three line diagram, or a line diagram that meets the requirements of the NEC.
- A proper line diagram should include:
 - AC and/or DC circuit arc fault protection as required by the NEC or ordinance (if any)
 - Inverter listed to the UL 62109 or UL 1741 Safety Standard; photovoltaic module(s) listed to the UL 1703 safety standard
 - Listings conducted by a Nationally Recognized Testing Laboratory
 - Inverter AC output disconnect location, utility disconnect location, and AC output over-current protection device rating
 - Location of combiner box(es), disconnect switch, size of source circuit over-current protection, if required
 - Service panel bus rating and main circuit breaker/fuse ampere rating.
 - Circuit diagram with conduit, wire type and sizes, and/or cable type and wire sizes
 - Equipment grounding and bonding conductors and grounding electrode conductors, if applicable
 - Battery disconnect and overcurrent protection, if applicable
 - List of all appropriate labels and marking per NEC and IFC requirements