



Community Development Department
4900 Village Commons
Matteson, IL 60443
(708) 283-4944

February 5, 2021

RE: Village of Matteson Solar Panel Installation Permit Procedures

The following process shall be followed for installation of Solar Panels in the Village of Matteson.

The Process is as Follows:

When applying for a solar panel installation permit the following items are required:

- Three (3) Sets of Plans
- One (1) copy of the cost estimate of construction
- Approval letter from HOA (if applicable)
- Application should include the Project Location, Owner and Contractor
- The Contractor shall note the Pre-Construction and Inspection Requirements as presented at the end of this document

Permit fees: Building: 1% of cost of construction (labor and materials)

Electrical: \$75.00

Plan Review: \$65.00

Inspections: Pre-Construction Meeting

Electrical Rough

Building Final

If any inspection is not completed, it is a \$125.00 fine.

Review takes up to 2 weeks.

Project Description:

This project is for the installation of ____ kW DC / ____ kW AC, ____ panel roof top solar system on existing single-family detached residence. The roof access shall not be located by any obstruction or windows. This will be field verified at the preconstruction meeting.

Applicable Codes:

Building Code	2012 International Residential Code
Energy Code	2012 International Energy Conservation Code with Local Amendments
Mechanical Code	2012 International Mechanical Code
Electric Code	2011 NEC
Fire Code	2012 International Fire Code
Fuel Gas Code	2012 International Fuel Gas Code
Accessibility Code	Most Current Illinois Accessibility Code.

Comments:

The contractor in charge of the installation shall schedule an onsite preconstruction meeting prior to starting installation of panels and/or equipment. All wire, disconnects, panels, and other equipment shall be on site at the time of the preconstruction meeting. The contractor shall be prepared to provide all licenses and certification at the preconstruction meeting. The Village requires a minimum 48-hour notice for all meetings and inspections.

All contractors and sub-contractors shall be licensed and bonded with the Village of Matteson.

Before installing solar panels, a rough and roof inspection installed completed. Solar panels install prior to inspection shall be removed for a roof inspection.

Roof repairs shall be completed by an Illinois licensed roofer.

IFC 605.11.3.1 Roof Access points- Roof access points shall be located in areas that do not require the placement of ground ladders over openings such as windows or doors and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs. **The path of access shall be clear of all conduits, wiring, or any objects that cause a possible tripping hazard.**

IFC 605.11.3.2.1 Residential building with hip roof layouts- Panels/modules installed on residential buildings with hip roof layouts shall be in a manner that provides a 3-foot-wide clear access pathway from each eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof. The access way shall be clear of all conduit, wiring or other devices that can create a tripping hazard.

IFC 605.11.3.2.2 Residential buildings with a single ridge - Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two, 3-foot-wide access pathways from the eave to the ridge on **each** roof slope where panels/modules are located. The panels/modules shall not be located closer than 3-foot to the edge of the roof eave perpendicular to the ridge and gutter/fascia. **Provide a 3-foot access next to walls and overhangs.**

IFC 605.11.3.2.3 Residential building with roof hips and valleys- Panels/modules installed on residential buildings with roof hips and valleys shall be located no closer than 18 inches to a hip or a valley where panels/modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley

IFC 605.11.3.2.4 Residential building smoke ventilation- Panels/modules installed on residential buildings shall be located no higher than 3 feet below the ridge in order to allow for fire department access and smoke ventilation operations. No conduit, wiring or any other obstruction shall be in the access way.

- Installation must comply with the specifications and cut sheets for solar panels and all components including module, inverter, racking and mounts, and other major electrical components.

- Must comply with the International Fire Code sections for Fire Department access for venting.

- o **2015 IRC R324.3 Photovoltaic systems.** Photovoltaic systems shall be designed and installed in accordance with Sections R324.3.1 through R324.7.2.5 and NFPA 70. Inverters shall be *listed* and *labeled* in accordance with UL 1741. Systems connected to the utility grid shall use inverters listed for utility interaction. All labels shall be sunlight resistance.

- **R324.3.1 Equipment listings.** Photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703.

- **R324.4 Rooftop-mounted photovoltaic systems.** Rooftop mounted photovoltaic panel systems installed on or above the roof covering shall be designed and installed in accordance with Section R907.

- **R324.4.1 Roof live load.** Roof structures that provide support for photovoltaic panel systems shall be designed for applicable roof live load. Roof structures that provide support for photovoltaic panel systems shall be designed for live load, LR, for the load case where the photovoltaic panel system is not present.

- o **IRC SECTION R907 - ROOFTOP-MOUNTED PHOTOVOLTAIC SYSTEMS**

- R907.1 Rooftop-mounted photovoltaic systems. Rooftop mounted photovoltaic panels or modules shall be installed in accordance with Section R324 and NFPA 70.

- R907.2 Wind resistance. Rooftop-mounted photovoltaic panel or modules systems shall be installed to resist the component and cladding loads specified in Table R301.2(2), adjusted for height and exposure in accordance with Table R301.2(3).
- R907.3 Fire classification. Rooftop-mounted photovoltaic panels or modules shall have the same fire classification as the roof assembly required in Section R902.
- R907.4 Installation. Rooftop-mounted photovoltaic panels or modules shall be installed in accordance with the manufacturer's instructions.
- R907.5 Photovoltaic panels and modules. Rooftop-mounted photovoltaic panels and modules shall be listed and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's printed instructions.

Electrical Plan

- Power riser diagram and panel schedules. Show location and size of electrical service, meter, disconnects, panels, transformer, etc. in accordance with NEC Article 690.5. The diagram must show the meter base separate from the panel. The meter should be shown schematically as self-contained with the service passing through meter. The PV connection cannot be made inside the utility meter base. Inverters should be equipped with integrated ARC-fault and rapid shutdown per NEC 690.5.
 - A lockable **service rated disconnect** shall be located within 6' of the utility meter on an exterior wall and accessible to utility personnel at all times.
 - Power riser must state "In the event of a Utility power outage the PV system will automatically disconnect from the utility." Maximum Voltage per NEC 690.7 (A-E) and circuit sizing NEC 690.8. **All labels and values shall be sunlight resistance.**

Notes:

1. ComEd Requires an Interconnection Agreement prior to system start up. Provide copy of the application with ComEd.
2. All electric work shall be installed by licensed solar certified electrical contractor.
3. All electric shall be in conduit. All electric in attics shall be 18 inches below the roof sheathing.
4. Call for preconstruction inspection.
5. Schedule a rough inspection prior to panel installation
6. Call to schedule a final electric inspection.
7. Installer certificates for qualified persons. A licensed electrical contractor shall be on the site at all times. Other certificates include NABCEP, UL Certified, all other certificate shall be from a governing body recognized by the us department of labor or the Illinois Department of Education stating qualified person for distributed generation.

This review is limited to a review of the information submitted and no responsibility is implied or accepted for results of construction. Failure to identify a code violation does not relieve the owner of the obligation to compliance. Final construction and installations must be in conformance with the applicable codes adopted by the Village of Matteson and State of Illinois.

This review has been complete for construction of the project note above. The reviewer takes no responsibility for construction or design.

Thank you for your corporation, and please let us know if you have any question or concerns on this issue.

Sincerely,
Leo Hogan

Senior Building Inspector
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Cell (708) – 417-6812
E-mail lhogan@villageofmatteson.org

CC: Ernest R. Roberts III, P.E., PMP - Director of Community Development

Village of Matteson

Solar installation Guidelines for Pre-Construction Meeting and Required Inspections

Due to the hazardous nature of distributed generation installations the Village of Matteson, along with many other municipalities in the county, state, and country require the following safeguards to protect the building occupants:

1. The contractor shall schedule a pre-construction meeting with the electrical inspector and all installers present.
2. At the pre-construction meeting the contractor shall provide a complete set of approved drawings and a complete permit pack containing all manufactures specifications for all equipment, components, labels, and any/all ancillary materials to be installed.
3. At the pre-construction meeting the electrical inspector shall review all drawing and documents to verify all components to be installed correspond with the approved documents, all applicable listings, and all manufactures specifications.
4. At the pre-construction meeting the electrical inspector shall verify the credentials of all workers present on the job site. All workers on the job site shall meet the requirements of "qualified persons" as defined by NFPA 70 and NFPA 70E.
5. At the pre-construction meeting acceptable documentation would include NABCEP PV installer specialist certification, NABCEP PV installation professional certification or equivalent. Any equivalent documentation shall be recolonized by the department of labor or the department of education and shall include training in all applicable OSHA requirements included in the NABCEP certification program.
6. Upon satisfactory completion of pre-construction meeting work shall be allowed to begin.
7. The contractor shall schedule a rough inspection. A rough inspection shall be performed prior to the installation of any panels.
8. At the rough inspection the inspector shall examine all conduits, boxes, building wiring, service connections, combiner boxes, inverters, railing/racking components and connections, all flashings, and any other equipment or components which fall under the usual categorization of a rough inspection.
9. At the rough inspection the inspector shall confirm all service grounding and bonding comply with current standards.
10. At the rough inspection the contractor shall supply the inspector with any/all PPE required by OSHA.
11. At the rough inspection the contractor shall provide the inspector with safe access to the roof and attic to perform his/her duties.
12. Upon approval of rough inspection, work shall be allowed to continue.
13. Upon completion of all work the contractor shall schedule a final inspection.
14. At the final inspection the system shall be energized for a short period of time to allow for inspection. A short period of time shall be defined as less the two hours.

15. Upon approval of the final inspection and submittal of all additional documentation required by the Illinois Commerce Commission and the utility provider the system then shall be allowed to be energized and remain in its normal operating condition.

Note:

- Due to the complex nature of the inspections required additional inspection fees may be required.
- With proper notification inspections can be scheduled the same day as pre-construction meeting to accommodate contractor's schedule.

(Approved 2/5/2021)