VILLAGE OF PINECREST
Building & Planning Department

UNIFORM PERMIT SUBMITTAL GUIDELINES FOR "GREEN PERMITS" SOLAR THERMAL AND SOLAR ELECTRIC INSTALLATIONS

Revised 2/7/2017

12645 Pinecrest Parkway, Pinecrest, Florida 33156 | T: 305.234.2121 | F: 305.234.2133 | www.pinecrest-fl.gov

OWNER NOTIFICATION

Solar Thermal and Solar Electric
Permit Application Supplement

"Installation of roof mounted photovoltaic or solar support systems typically require roof system penetrations to allow attachments to the structure which may create additional long-term roof system maintenance requirements and/or jeopardize roof system manufacturer's warranties, roof mounted solar systems generally require removal and reinstallation of solar panels/arrays in order to perform routine roof maintenance, repair or replacement."

"Green permit applications for residential solar systems are expedited; as such they will be reviewed in (3) business days or less assuming all submittals are complete, accurate, and meeting the Village's permitting requirements. Please refer to permit checklist for more information on permit application submittal requirements required by the Village."

_____
ADDRESS

_____
OWNER NAME (PRINT)

_____ _____
SIGNATURE DATE

PERMIT CHECKLIST

For SOLAR THERMAL or SOLAR PHOTOVOLTAIC INSTALLATIONS

Permit Submittal Period Monday through Friday 8:00 a.m. to 2:00 p.m.

General Requirements

❑ **Permit Application** ***(Must be signed and notarized by the Owner)***

❑ **Solar Thermal Master Permit** - May be obtained by:

❑ Certified Solar Contractor (residential installation only)

❑ Certified and/or Registered Plumbing Contractor

❑ Sub-Permits (tied to a Master Permit)

❑ Building/Structural/Roofing

NOTE: If roofing work does not exceed 18" around penetration, a sub-permit is sufficient. Otherwise, a separate Building/Structural/Roofing permit is required.

❑ **Photovoltaic Master Permit** - May be obtained by:

❑ Certified Solar Contractor

❑ Certified and/or Registered Electrical Contractor

❑ Sub-Permits (tied to a Master Permit)

❑ Building/Structural/Roofing

NOTE: If roofing work does not exceed 18" around penetration, a sub-permit is sufficient. Otherwise, a separate Building/Structural/Roofing permit is required.

❑ Electrical

NOTE: If Master Permit is pulled by Certified Solar Contractor (and is not a Certified/Registered Electrical, Contractor), connections to FPL lines or house lines must be done by Electrical Contractor under separate permit.

❑ **Owner Notification** ***(Must be signed by the Owner)***

❑ **Two (2) sets plans** ***(Plans shall be dimensioned and drawn to scale)***

❑ **Complies with the Land Development Regulations:**

Division. 5.27. - Alternative energy systems and environmental conservation.
Click on the following link:

https://www.municode.com/library/fl/pinecrest/codes/code of ordinances?nodeId=COORVIPIFL CH30LADERE ART5ADRE DIV. 5.27ALENSYENCO

❑ **Construction documents/specifications:**

❑ **Solar Thermal:**

1. Provide plumbing riser diagram showing piping layout.

2. Provide specification sheets, installation manuals (if available) for all manufactured components including, but not limited to, solar modules, recirculation pumps, supporting frames and mounting.

3. Provide the attachment details, flashing details, construction design for the unit and any supporting frame members (sealed by the appropriate design professional) for the Wind Zone (both uplift and lateral forces), additional loading, and any site conditions.

❑ **Photovoltaic:**

1. Provide electrical diagram showing PV array configuration, wiring system, overcurrent protection, inverter disconnect, grounding, required signs and AC connection to building (see supplied standard electrical diagram). Design in accordance to the National Electrical Code Article 690 Solar Photovoltaic AC Systems, in its entirety.

2. Provide specification sheets, installation materials (if available) for all manufacture components including, but not limited to, PV modules, inverter(s), combiner box, disconnect and mounting system.

3. Provide the attachment details, flashing details, construction design for the unit and any supporting frame members (sealed by the appropriate design professional) for the Wind Zone (both uplift and lateral forces), additional loading, and any site conditions.

4. For battery backup systems, include a summary of all standby loads, including power ratings and estimated daily energy consumption for each load to show that inverter and battery selection will meet the standby needs.

5. Provide electrical calculations showing that all wire sizing has been determined with proper ampacity, conduit fill and ambient derating factors.

6. Plans must be signed and sealed by a Professional Engineer if:

   a) The system has a value of more than $50,000, or;

   b) The systems has an aggregate service capacity of 600 amperes (240 volts) or more for a residential electrical system, or;

   c) The system has an aggregate service capacity of 800 amperes (240 volts) or more for a commercial or industrial electrical system.

❑ **Hybrid Systems *(Combination of both Photovoltaic system with Solar Thermal System).*** This type of system shall meet the permitting requirements for both.

❑ **Roof Plan -** 2 sets to scale, indicating the location of solar panel installation.

❑ **Florida Solar Energy Center (FSEC) System Approval -** All solar systems drawings shall be accompanied with a FSEC System Certification Approval form for the proposed solar system.

REVISIONS

- ❑ Submit only the sheets that are being revised (2 sets)
- ❑ Narrative - Identifying purpose of revision and what is being revised (attached to each set) on company's letterhead paper.
- ❑ Application number and address of project.
- ❑ All revisions shall be identified and clouded.

CONTRACTORS

Each of these contractors may perform all work identified in their individual scopes of work including the installation of appurtenances, apparatus or equipment. However, such contractor shall subcontract all other work which is specified as being the work in the trade of another contractor. In all cases, please refer to Florida Statutes 489 andany properly enacted local licensing laws.

- ❑ Solar Contractor (PV) may obtain the Building permit in either the Solar Thermalor Photovoltaic categories.
- ❑ Plumbing Contractors may obtain the master permit in the Solar Thermal category.
- ❑ Electrical Contractors may obtain the Electrical permit in the Photovoltaic category, being that a building contractor shall obtain the Building permit for the installation of the modules.

INSPECTIONS

The Building Department shall inspect all Solar Thermal and Photovoltaic systems. More than one inspection may be performed during any inspection visit (by inspector properly licensed in the trade they are inspecting).

Solar Thermal:

- ❑ Building/Structural/Roofing - Time of Installation and Final
- ❑ Zoning - Final
- ❑ Plumbing - Final

Photovoltaic:

- ❑ Building/Structural/Roofing - In-progress Inspection for Fasteners and Final
- ❑ Zoning - Final
- ❑ *Electrical - Rough and Final (Normally a final inspection can cover everything on a retrofit residential installation. These installations are often completed in a day. Rough inspection for new construction and jobs larger than 20Kw.)
  ** Solar or Electrical Contractor must be on site for inspection*

Hybrid Systems:

- ❑ Building/Structural/Roofing - Time of Installation and Final
- ❑ Zoning - Final
- ❑ Electrical - Rough and Final
- ❑ Plumbing - Final

The following items are required prior to the issuance of permits:

Contractor Requirements:

❑ State of Florida Contractor's License

❑ Proof of Worker's Compensation Insurance

Notice of Commencement

A Notice of Commencement is required to be filed and recorded when the value of thepermitted work on your property is $2,500 or greater, per Florida Statute Chapter 713.

❑ A ***certified copy*** of the recorded Notice of Commencement or a notarized statementthat it has been recorded is required to be posted on the job site and provided to thisoffice prior to the first inspection.

SOLAR THERMAL PERMIT

Master Permit – May be obtained by:

1) Certified Solar Contractor (residential installations only)
2) Certified Plumbing Contractor
3) Registered Plumbing Contractor

Sub-Permits (tied to a Master Permit)

1) Building/Structural/Roofing*

Note: If Master Permit is pulled by Certified Solar Contractor, connections to FPL lines or house lines must be done by Electrical Contractor under separate permit.

* Roofing work is restricted to 18" around the penetration

Inspections Required:

1) Building/Structural/Roofing (Time of installation and final)
2) Plumbing Final

Inspectors will provide a two hour time frame inspection window when requested by the contractor. Note that plumbing and electrical inspections are performed between 9:00 a.m. and 12:00 noon only.

SOLAR ELECTRIC PERMIT

Master Permit – May be obtained by:

1) Certified Solar Contractor
2) Certified Electrical Contractor
3) Registered Electrical Contractor

Sub-Permits (tied to a Master Permit)

1) Building/Structural/Roofing*
2) Electrical

Note: If Master Permit is pulled by Certified Solar Contractor, connections to FPL lines or house lines must be done by Electrical Contractor under separate permit.

* Roofing work is restricted to 18" around the penetration

Inspections Required:

1) Building/Structural/Roofing (Time of installation)
2) Electric Rough
3) Electric Final
4) Building/Structural/Roofing Final

Inspectors will provide a two hour timeframe inspection window when requested by the contractor. Note that plumbing and electrical inspections are performed between 9:00 a.m. and 12:00 noon only.

Miami-Dade County
Boards of Rules and Appeals
Solar Thermal/Electric
Instructions and Recommendations

The Uniform Permit Submittal Matrix for Solar Thermal and Solar Electric Installations in the High Velocity Hurricane Zone is adopted as a "BORA Approved Guideline" establishing minimum code requirements regarding permit application submittals, thereby creating and instituting countywide uniformity. In addition:

A.) Building Departments shall establish an individual master permit for both Solar Thermal and Solar Electric installations to which applicable subsidiary categories are to be tied. Adding additional categories to the master permit may not require an additional permit obtained by a separate contractor, but will require a separate trade review in every instance.

B.) It is established that Certified Solar Contractors may obtain the master permit in either the Solar Thermal or Solar Electric categories. Certified or Registered Plumbing Contractors may obtain the master permit in the Solar Thermal category. Certified or Registered Electrical Contractors may obtain the master permit in the Solar Electric category. Registered Solar Contractors may obtain the master permit in the solar thermal category, restricted to residential installations only. Each of these contractors may perform all work identified in their individual scopes of work including the installation of appurtenances, apparatus, or equipment. However, such contractor shall subcontract all other work which is specified as being the work in the trade of another contractor.

C.) Building Departments shall provide inspections of solar thermal and solar electric systems. More than one inspection may be performed during any inspection visit.

Solar Thermal

Building/Structural/Roofing - Time of Installation and Final

Plumbing - Final

Solar Electric

Building/Structural/Roofing - Time of Installation and Final

Electrical - Rough and Final
Hybrid Systems (Complete PV Panel System combined with integral solar water panels)

Building/Structural/Roofing - Time of Installation and Final

Electrical - Rough and Final

Plumbing - Final

D.) The Board recommends Building Departments establish an inspection procedure to ensure all required inspections are completed within a specified two hour time frame.

E.) Recommend that Building Departments include an Owner notification on all solar thermal or solar electric permit applications, for existing structures, using substantially the language provided below:

> *"Installation of roof mounted photo voltaic or solar support systems typically require roof system penetrations to allow attachment to the structure which may create additional long-term roof system maintenance requirements and/or jeopardize roof system manufacturer's warranties. Roof mounted solar systems generally require removal and reinstallation of solar panels/arrays in order to perform routine roof system maintenance, repair or replacement."*

F.) Building Departments shall maintain accurate records regarding the type, number and location of Solar Energy installations.

G.) Recommend and encourage Building Departments to expand access of renewable energy technology to the community by not imposing needless or excessive oversight measures and through a program of streamlined permitting and inspections.

H.) Recommend and encourage Manufacturers to pursue optional product approval as a means of accelerating the permit approval process by ensuring a less complicated and less expensive process for consumers.

I.) The Regulatory and Economic Resources Department to continue the ongoing awareness program designed to ensure all certified personnel understand the process of permitting and inspecting Solar Thermal and Solar Electric installations.

J.) The Regulatory and Economic Resources Department will provide guidance and assistance to the Solar Energy industry, provide mediation, and assist with the BORA appeal process as necessary.

UNIFORM PERMIT SUBMITTAL MATRIX
for
SOLAR THERMAL AND SOLAR ELECTRIC INSTALLATIONS
In
THE HIGH VELOCITY HURRICANE ZONE
(Revised January 2017)

General Requirement	Submittal Requirements	F.S./Code Section
1. Permit Application		
		FBCB 105.3 BCAP 105.3
2. Building/Equipment Layout Plan		
		FBCB 107 BCAP 106
3. Structural Design		
• Photovoltaic Roof Mounted Panel & Solar Thermal Equipment	Submit signed and sealed drawings & design calculations by licensed Professional Engineer or Registered Architect showing: • Documentation/verification exposed solar panel equipment meet wind loads. • Documentation/verification support framing meets both uplift and lateral forces. • Design of connections for the wind loads. • Documentation/verification structural supports will accommodate additional dead loads.	**PBCB 1522.1** FBCEB 504 **PBCB 1616.1.2** FBCES 706 **PBCB 1605** **FBCB 1620.1** **FBCB 1620.2** **FBCS 1620.3** **PSCS 1621** Note: Dead load compliance with the Exception contained in the FBCEB Section 706.2 may be demonstrated by Providing the Dead Load criteria from the original plans.
4. Roof Design		**(FBCEB 708 3 References Sec. 1512-1525 FBC)**
• Building Integrate Photovoltaic (BIPV)	Submit a Uniform HVHZ Permit Application.	PSCS 1512.3 PSCS 1512.2.1 FSCB 1516.2
• Photovoltaic Roof Mounted Panel	Submit a detail of the roof penetration flashing Submit clearance requirements.	FBCS 1514 FSCS 1522.3.1
• Solar Thermal	Submit a detail of the roof penetration flashing. Submit clearance requirements.	PSCB 1514 FSCS 1522.3.1

5. System Components		
• Solar Water Heater	Submit FSEC Approval/Listing and System Reference Drawing.	FBCB 107 FBCEC R40 3.4.3 BCAP 101
• **Solar Water Heater using PV powered pump**	**Submit listing for PV panel and pump.**	NEC Article 690
• Solar Swimming Pool Water Heater	Manufacturers selected system installation manual/detail and system specifications.	FBCB 107 BCAP 106
• **Solar Swimming Pool Water Heater**	**Submit FSEC Approval/Listing and System Reference Drawing.**	FBCB 107 F.S.377.705 BCAP 101
• Photovoltaic System • Electrical Engineer Requirements	Plans must be signed and sealed by a Professional Engineer if: a.) The system has a value of more than $50.000. or; b.) The systems has an aggregate service capacity of 600 amperes (240 volts) or more for a residential electrical system, or; c.) The system has an aggregate service capacity of 800 amperes (240 volts) or more for a commercial or industrial electrical system.	F.S.471.003(h)
• Statutory Requirement	FSEC will generate a System Certification Approval Form.	F.S. 377 .705
• Electrical Diagram	Submit electrical diagram designed in accordance to the National Electrical Code Article 690 Solar Photovoltaic Systems and include components interconnects, conductor types and sizes, conduit types and sizes, disconnects, and point of interconnection.	NEC Article 690
• Component Documentation	FSEC Certification.	F.S.377.705
Abbreviations	BCAP - Broward County Administrative Provisions FBCB - Florida Building Code, Building Volume FBCEB - Florida Building Code, Existing Building Volume FBCEC - Florida Building Code, Energy Conservation Volume F.S - Florida Statute FSEC - Florida Solar Energy Center NEC - National Electric Code	