

**DRAFT 4-27-2017**

## EXPRESS PERMIT

### EXPRESS PERMITS FOR RESIDENTIAL AND SMALL COMMERCIAL ROOFTOP SOLAR ARRAYS UNDER 25KVA

#### SOLAR ROOF INSTALLATION - PERMIT SUBMITTAL INFORMATION

#### SCOPE:

The installation of solar photovoltaic on a roof of a structure can be simple to complex. There are several items needed when submitting for a solar photovoltaic roof permit to determine that the finished project complies with the minimum requirements of the 2012 International Residential Code (2012 IRC) and 2014 National Electrical Code (2014 NEC). Commercial projects must comply with the 2012 International Building Code (2012 IBC) and the 2014 NEC.

In order for a project to be considered for the Residential and Small Commercial Solar Building Express Permit Process, which is a review process that relies on accurate information within the construction documents and the applications in order to ensure that the permit can be issued within the prescribed timeframe, the array must not exceed 25 Killowats and must meet the requirements of the pre-submittal checklist.

#### CONTRACTOR QUALIFICATIONS:

For residential installations, the contractor *performing the work* shall:

1. Be a licensed electrical contractor in Georgia
2. Be NABCEP certified
3. Be a licensed general contractor in Georgia

Copies of these certifications must be submitted along with the application.

#### PRE-SUBMITTAL CHECKLIST

**1.** Items for consideration when submitting for a photovoltaic panel array on a roof.

- ✓ No shadows will be cast on the array from trees, other buildings, etc. The trimming or removal of trees in order to provide an area that affords you direct sunlight must involve the County Arborist.

The County Arborist may be reached at (404) 371-2685 or via email:  
rwtonning@dekalbcountyga.gov

- ✓ Roof decking is solid sheathing of ½" or greater thickness;

NOTE: Structures having more than one-layer of roofing materials will require a re-roof permit independent of this application

**2.** Eligibility for Commercial Solar Building Permitting Process requires the following:

- ✓ The array is mounted on a code-compliant structure;

- ✓ The mounting structure is an engineered product designed to mount photovoltaic modules.
- ✓ The array's electrical load must exceed 25 Kilowatts.

**Submit to:**

- 330 West Ponce DeLeon Avenue, Second Floor – Monday through Friday, 8:30 AM to 3:00 PM.

**Required approvals, as applicable to your scope of work:**

- Zoning
- Building
- Electrical
- Submit an Arborist Photovoltaic Tree Affidavit. The contractor must acknowledge that no more than 5 trees will be removed and/or that no more than 20% of the live canopy will be removed as part of the installation.

**Required Inspections:**

- Final Electrical (and Building) – Photovoltaic System complete, with all signage required by the 2012 International Fire Code and 2014 National Electrical Code in place. The installation is complete. The roof properly flashes and sealed to prevent water intrusion.

**Permits required:**

- Electrical Trade Permit. This can be obtained online. The cost for the Trade Permit shall be \$120.00 minimum and can be increased by number of devices.

**PERMIT SUBMITTAL REQUIREMENTS:**

**The customer must provide a minimum of two (2) complete plan sets, with the following:**

**1. Submit an Arborist Photovoltaic Tree Affidavit:**

- This form is notarized and affirms that the contractor recognizes that no more than 5 trees will be removed and/or that no more than 20% of the live canopy will be removed as part of the installation. For a copy of this form, please see the last sheet within this packet.

**2. Plan Cover Sheet, with:**

- Project Address;
- Owners's name and contact information;
- Scope of project in the form of a brief narrative;
- Applicable codes, as adopted and amended by the State of Georgia;
- Contractors' name and contact information;

**3. Roof Plan showing the layout of the photovoltaic panel array, with the following:**

- Indicate the roof pitch (Ex.: 4:12, 6:12, etc.)
- Indicate the roof sheathing type and thickness
- Indicate if the roof is conventional framing or pre-engineered trusses
- Dimension the separation distance between panels
- Show location of any roof mounted disconnecting means

**4. Electrical One-Line Diagram** – This is a line drawing, which shows the components of the system, and their relationship to each other in the installation. This is not a scaled drawing, but is merely a conceptual representation of the system design used to verify compliance.

Include the following:

- The photovoltaic panels make and model,
- Conduit sizes and types,
- Conductor sizes and types,
- Over Current Protection Device (OCPD) type rating and size (circuit breaker, fuse, etc.),
- The inverter type and rating;
- The type and size of all system batteries, if provided

NOTE: Indicate if the photovoltaic panels will be wired in series (voltage multiplied – individual module multiplied by the voltage) or parallel (current multiplied – individual module multiplied by the ampere). If this information is not provided, staff will assume that the modules are wired in parallel.

**5. Provide a Load Calculation of the total ampere and voltage generated by the photovoltaic array.**

NOTE: A 125% short circuit increase is required on the photovoltaic array, and a further 125% increase is required on the conductor size. (2014 NEC 690.8)

**6. Provide a minimum of two (2) complete bound or stapled sets of the Manufacturer's Specification for:**

- AC Voltage electrical equipment and/or panels,
- Inverter,
- Photovoltaic
- DC Voltage equipment and/or panels,
- Over Current Protection Devices (OCPD),
- Panel mounting hardware.

**NOTE:** Photovoltaic Systems on buildings shall include a rapid shutdown function that controls specific conductors. Once the rapid shutdown is initiated, the conductors shall be limited to not more than 30 Volts and 240 Volt-Amperes within 10-seconds. (2014 NEC 690.12)

**7. A minimum of two (2) sets of structural design details, sealed by a Georgia licensed Professional Engineer for any required structural modifications to the existing roof system - IF REQUIRED.**

These may be on 8-1/2 x 11 paper, showing the necessary structural design changes to the pre-engineered trusses.

# COUNTY ARBORIST - PHOTOVOLTAIC TREE AFFIDAVIT

DEKALB COUNTY DEPARTMENT OF PLANNING AND SUSTAINABILITY

Date: \_\_\_\_\_

Property Owner(s): \_\_\_\_\_

Project Address: \_\_\_\_\_

Please check or or more initial one of the following:

\_\_\_\_ I certify that no trees will be removed or pruned for the installation of PV system.

\_\_\_\_ I understand that no more than 20% (twenty percent) of the live canopy may be pruned. Pruning/removing up to 20% (twenty percent) of the live canopy must not make the tree lopsided or unbalanced. Proper pruning cuts must be made in accordance to ANSI standards.

\_\_\_\_ I certify that I am removing up to five (5) healthy trees on your property per calendar year for the installation of PV system, *provided that those trees are not specimen trees.*

**NOTE:** The DeKalb County Ordinance Section 14-39 9(g) (8) defines a specimen tree as

A specimen tree is defined as a tree with a life expectancy of 15 years or more, relative sound trunk with no extensive decay or hollow and less than 20% trunk dieback. No major insect or pathological problem. In addition to a specimen tree must meet the following size guidelines:

- For Overstory (large) trees, ex.: Oak ,poplar & pine- diameter at breast height (4 ½ feet up from the ground) is greater than or equal to 30 inches (which equates to a circumference of 94.2 inches)
- For Understory (small) trees, ex: Dogwood - diameter at breast height (4 ½ feet up from the ground) is greater than or equal to 10 inches (which equates to a circumference of 31.4 inches)

**I understand that if I provide false or misleading information in this form, I will be in violation of the DeKalb Tree Protection Ordinance and will be subject to the payments and penalties set forth therein.**

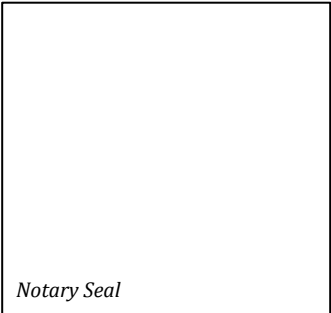
I hereby affirm that the information provided is true and accurate. I hereby affirm that approval of this application does not constitute approval for any other permit that may be required by the county or other agency having jurisdiction.

I, (Owner's / Contractor's Signature) \_\_\_\_\_, attest that, to the best of my knowledge, all of the above information is true.

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
*Signature of Notary Public*

\_\_\_\_\_  
*My Commission Expires*



**Relationship to project (Circle):** Property Owner Contractor Design Professional