DPS | Montgomery County
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax: (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

Permit Guidelines for Solar Photovoltaic (PV) Systems
2014 NEC Article 690

Please note: *Building and Electrical permits are required for PV systems. The following information must accompany all building permit applications. Commercial systems must be designed, stamped and sealed by Maryland P.E.*

1) Basic site plan diagram identifying location of major components—not to scale. This is a simple diagram to show where the equipment is located with the equipment clearly shown and identified on the plan. If PV array is ground-mounted, clearly show that system will be mounted within allowable zoned setbacks. **(Two copies)**

2) Electric diagram showing all major field-installed electrical components, wire identification and sizing, and grounding. This diagram needs to have sufficient detail to call out the electrical components, the wire types and sizes, number of conductors, and conduit type and size where needed. This will typically include detailed module information, series/parallel configuration of modules, details of the Photovoltaic Output Circuit, wire type and size of module wiring, type and size of any junction or combiner boxes, approximate length of conductors in PV array, approximate length of conductors from junction box to the photovoltaic power source disconnecting means. Other important information includes equipment grounding of the PV array and system grounding of the inverter. It will also include specific information on the PV inverter and all associated wire in and out of the inverter. The utility disconnect type and location and the means of connection to the building electrical system should be clearly identified. **(Two copies)** *Sample diagrams on pages 6-9.*

3) **Major component information:**

a) *Inverter information:*

I. Model number and manufacturer's *"cut sheets"* for the specific model.

II. Listing. Is the inverter listed by a Nationally Recognized Testing Laboratory (NRTL) such as UL 1741 and labeled "Utility-Interactive"? If the utility interactive labeling is not provided, does the device comply with the requirements of IEEE Std. 929-2000 (ANSI) as verified by the instruction manual and validated by the listing agency. The 2014 NEC [690.5 (C)] now requires labeling;

WARNING
ELECTRICAL SHOCK HAZARD
IF A GROUND FAULT IS INDICATED
NORMALLY GROUNDED CONDUCTORS
MAY BE UNGROUNDED AND ENERGIZED

This label is to appear on the inverter or near the ground fault indicator at a visible location

III. Maximum continuous output power at 40°C

IV. DC input voltage range

v. AC output voltage range

b) *Module information*:

I. Manufacturer's *"cut sheets"* for the specific model.

II. Listing. The module(s) should be listed to UL 1703.
Explanation: All electrical devices and components must be listed to UL® (Underwriters Laboratories) North American Standards

III. Open-circuit voltage. Note: When open-circuit voltage temperature coefficients are supplied in the instructions for listed PV modules, they shall be used to calculate the maximum PV system voltage as required by [110.3(B)] instead of using Table [690.7]

IV. Maximum permissible system voltage. [690.7(A-E)]

V. Short-circuit current rating.

VI. Maximum series fuse rating.

VII. Maximum power at Standard Test Conditions.

VIII. Operating voltage.

IX. Operating current.

Alternating-Current Photovoltaic Modules:
Alternating-current modules shall be marked with identification of terminals or leads and with identification of the following ratings:

I. Nominal operating ac voltage.

II. Nominal operating ac frequency.

III. Maximum ac power.

IV. Maximum ac current.

V. Maximum overcurrent device rating for ac module protection.

c) *Battery information (if used):*

I. Manufacturer's "cut sheets" for the specific model. Note storage and venting requirements.

II. Nominal battery voltage for the system.

4) **Array information:**

a) *Number of modules in series, number of parallel source circuits, and total number of modules.*

b) *Operating voltage (sum of series modules operating voltage in source circuit).*

c) *Operating current (sum of parallel source circuit operating currents). [690.8]*

d) *Maximum system voltage. [690.7]*

e) *Short-circuit current rating. [110.10]*

5) Wiring and Overcurrent Protection:

a) *Wire Type:*

PV module interconnections should be 90°C wet-rated conductors.
Allowable wire types are as follows:
USE-2 single conductor cable for exposed applications and single conductor cable listed and labeled for PV use. Type TC multiconductor cable for exposed applications with THWN-2 or XHHW-2 or RHW-2 or equivalent 90°C wet-rated conductors in the cable. Type THWN-2 or XHHW-2 or RHW-2 or equivalent 90°C wet-rated conductors in high temperature conduit (conduit rated for a minimum of 75°C wet conditions).

b) *Conductor Ampacity:*

Correct maximum current and ampacity calculations should be provided for each circuit. (Ampacity of conductors must be sufficient for application) [690.8]

I. The maximum PV source circuit current is the sum of parallel module rated short circuit currents multiplied by 125 percent [690.8(A)(1)].

II. The minimum source circuit conductor ampacity is 125 percent of the maximum PV source circuit current [690.8(B)(1)].

III. Minimum photovoltaic output circuit conductor ampacity is the sum of the maximum current of the parallel source circuits X1.25 [690.8(B)(1)]. Calculating ampacity of conductors used for the PV output circuit can be an involved process.

IV. Minimum inverter output circuit conductor ampacity must be equal to or greater than the inverter continuous output current rating times 1.25. *[690.8 (A)]*
Informational note: *Where the requirements of [690.8(A)(1)&(B)(1)] are both applied, the resulting multiplication factor is 156%.*

c) *Overcurrent protection:* Necessary fuses or circuit breakers must be properly sized and specified for each circuit.

I. PV source circuit, PV output circuit, inverter output circuit, overcurrent protection must be sized so that both the PV module and the conductor from the module to the overcurrent device are properly protected [690.9 (A), 240.15 (A)]. PV modules must be protected so that the maximum series fuse rating, printed on the listing label, is not exceeded. The module may be protected either by installing fuses or circuit breakers in a series string of modules or by the design of the PV system. Inverters listed with a Maximum utility back feed current that is well above 1 amp (typically equal to the maximum allowable output overcurrent protection) must be assumed to provide back feed current to the PV array. Each source circuit must have overcurrent protection that is greater than or equal to the minimum PV Source Circuit current rating and less than or equal to the maximum series fuse rating.

For an inverter listed with a Maximum utility back feed current that is zero, two source circuits can be connected to the inverter without requiring overcurrent protection on either circuit. [690.9 (A) exceptions (a)&(b)]

II. Storage Battery (if used) [690.71 A & B] Installation, [690.71 (H)] Disconnect and over current protection.

III. For requirements of Point of Connection of a *utility interactive* PV inverter to the building electrical system see [705.12].

6) **Rapid shutdown of PV systems on Buildings**

PV system circuits installed on or in buildings shall include a rapid shutdown function that controls specific conductors in accordance with [690.12 (1) through (5)]

7) **Provisions for the photovoltaic power source disconnecting means**

The 2014 NEC states in [690.13 A through E], *"Location. The photovoltaic disconnecting means shall be installed at a readily accessible location either outside of a building or structure or inside nearest the point of entrance of the system conductors...The photovoltaic system disconnecting means shall not be installed in bathrooms."*

I. Readily accessible—[Article 100] states, "*Accessible, Readily (Readily Accessible). Capable of being reached quickly for operation, renewal, or inspections without requiring those to whom ready access is requisite to climb over or remove obstacles or to resort to portable ladders, and so forth.*

II. A rooftop disconnect on a residential roof will normally not qualify as a readily accessible disconnect.

8) **Grounding:**

The NEC [690.41] requires all systems operating above 50 volts have one conductor referenced to ground unless the system complies with the requirements of [690.35 (A-G)] for ungrounded PV arrays. **All devices and components of grounding/bonding system must be listed for use.**

a) Equipment grounding conductor sizing. [690.45] The size of the equipment grounding conductor is dependent on whether the system has ground fault protection (GFP) equipment or not. The provisions for GFP equipment are stated in [690.5]. Many residential inverters have GFP equipment integral to the inverter and require that the PV array be grounded at the inverter only.

I. Systems with ground fault protection equipment. Size equipment grounding conductor according to NEC [Table 250.122].

II. DC System: Size grounding electrode conductor according to NEC [250.166].

9) **Array Mounting information: *You will need this information to obtain your building permit***

I. Provide two copies of the site plan showing the location of the house and PV equipment.

II. Provide two copies of the array layout and the supporting structure. ***If roof mounted;*** show anchorage to the roof and framing structure and schematic elevations. Identify methods of sealing all roof penetrations. ***If ground or pole mounted;*** show array supports, connection details, framing members, and foundation posts and footings. In either case the plans showing the supporting structure details must be signed and

sealed by a Maryland Licensed Professional Engineer certifying the design is in accordance with the applicable codes in Montgomery County, MD.

10) **Additional Ground Mounted Solar Panel Installation Requirements**

For ground mounted Residential Solar Panels the following will apply:

Clearances. A clearance of 10 feet around the ground-mounted photovoltaic installations shall be provided. (This does not mean the skirt or fence must be 10 feet away)

Noncombustible Base. A gravel base with a 4 mil poly, or weed screen under the gravel, or other non-combustible base acceptable to the AHJ shall be installed and maintained under and around the installation. (Other approved base material would be Concrete, or Asphalt)

Security Barriers. Fencing, or flame-retardant skirting around the entire array. (Fence must be at least 4 feet in height, not easily climbable, (to keep unqualified persons out), gates must swing out away from the array.

For zoning purposes, Ground Mounted Solar Panels must meet the required setbacks for an accessory structure for the Zone they are located in, and cannot produce more than 120% of the current being consumed onsite.

11) **Removal of Solar Panels from a Residential Roof**

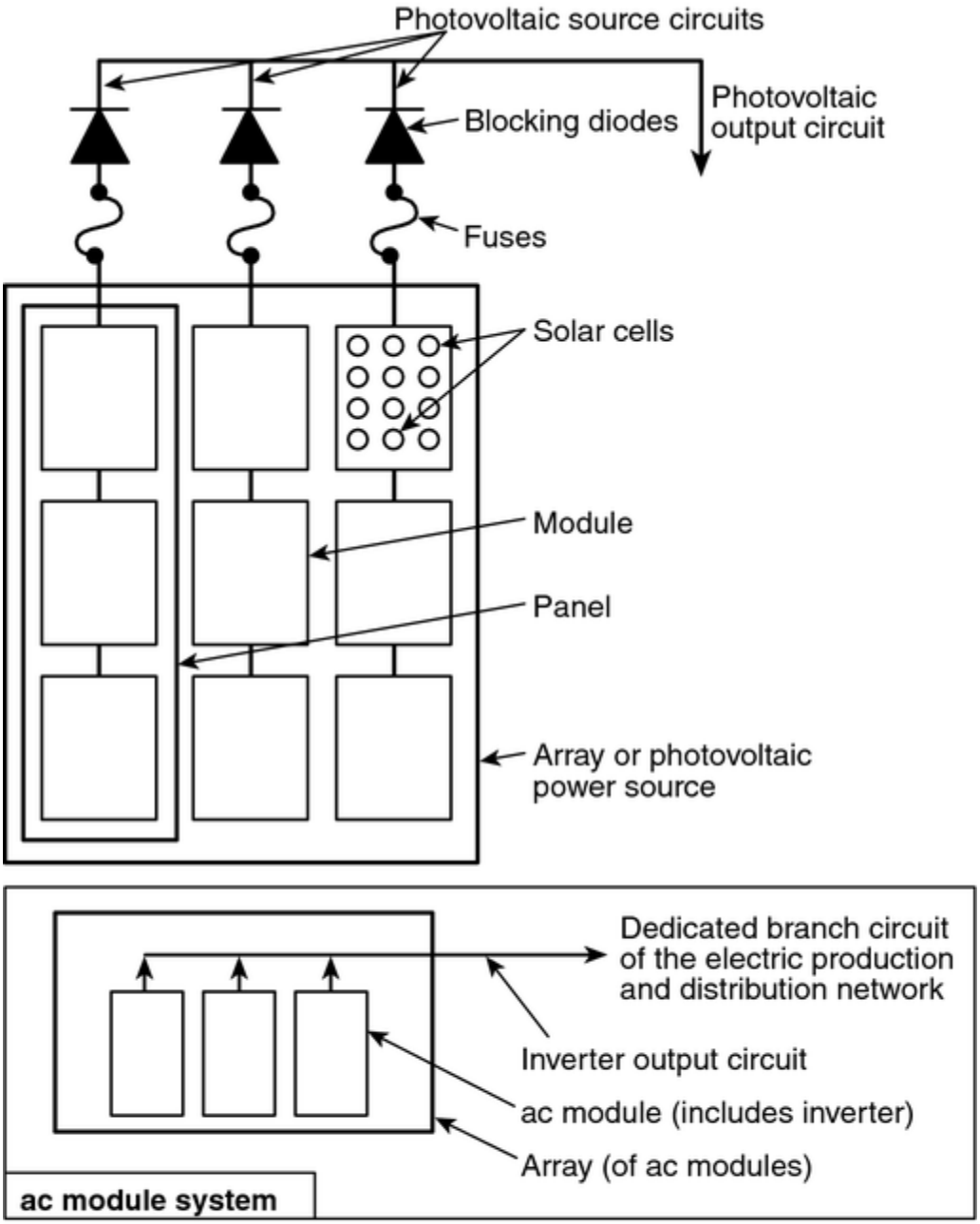
An **ALTERATION** Building Permit, and an Electrical permit will be required for the removal of solar panels from a Residential roof. The alteration plans must show how the roof penetrations will be repaired, and must include **ELECTRICAL** drawings showing how the electrical connections will be capped off or removed. For taps ahead of the main in the electrical panel; a new service entrance cable from the panel to the meter will be required.

12) **Inspections:**

a) *Building permit.*
   I. Footing, inspection code 001. (If applicable)
   II. Framing, inspection code 004. (If applicable)
   III. Final, inspection code 251.

b) *Electrical permit.*
   I. Concealment, inspection code 104 (For wiring in walls, ceilings and trenches).

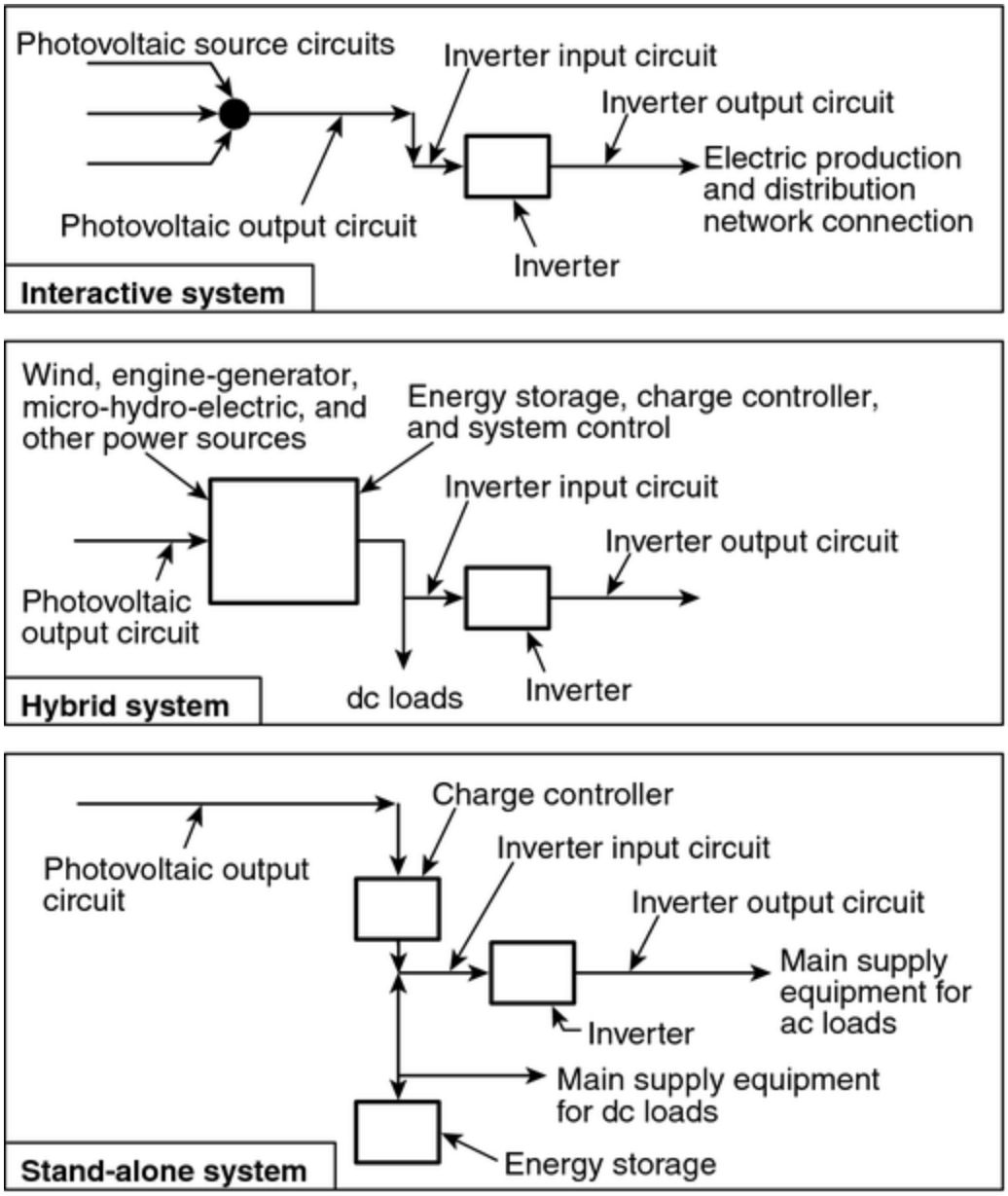
   II. Final, inspection code 251. Installer shall provide to the DPS inspector photos depicting the array support connections, module (PV panel) data plates, all electrical connectors, all ground connections, all conductor supports, and all sealed roof penetrations for all components that are not “readily accessible” (requiring ladder access) and, PV Field Inspection Checklist – COMPLETED BY INSTALLER



Notes:
1. These diagrams are intended to be a means of identification for photovoltaic system components, circuits, and connections.
2. Disconnecting means required by Article 690, Part III, are not shown.
3. System grounding and equipment grounding are not shown. See Article 690, Part V.

Figure 690.1(a) Identification of Solar Photovoltaic System Components.

Sample of Electrical Diagram (From NEC)

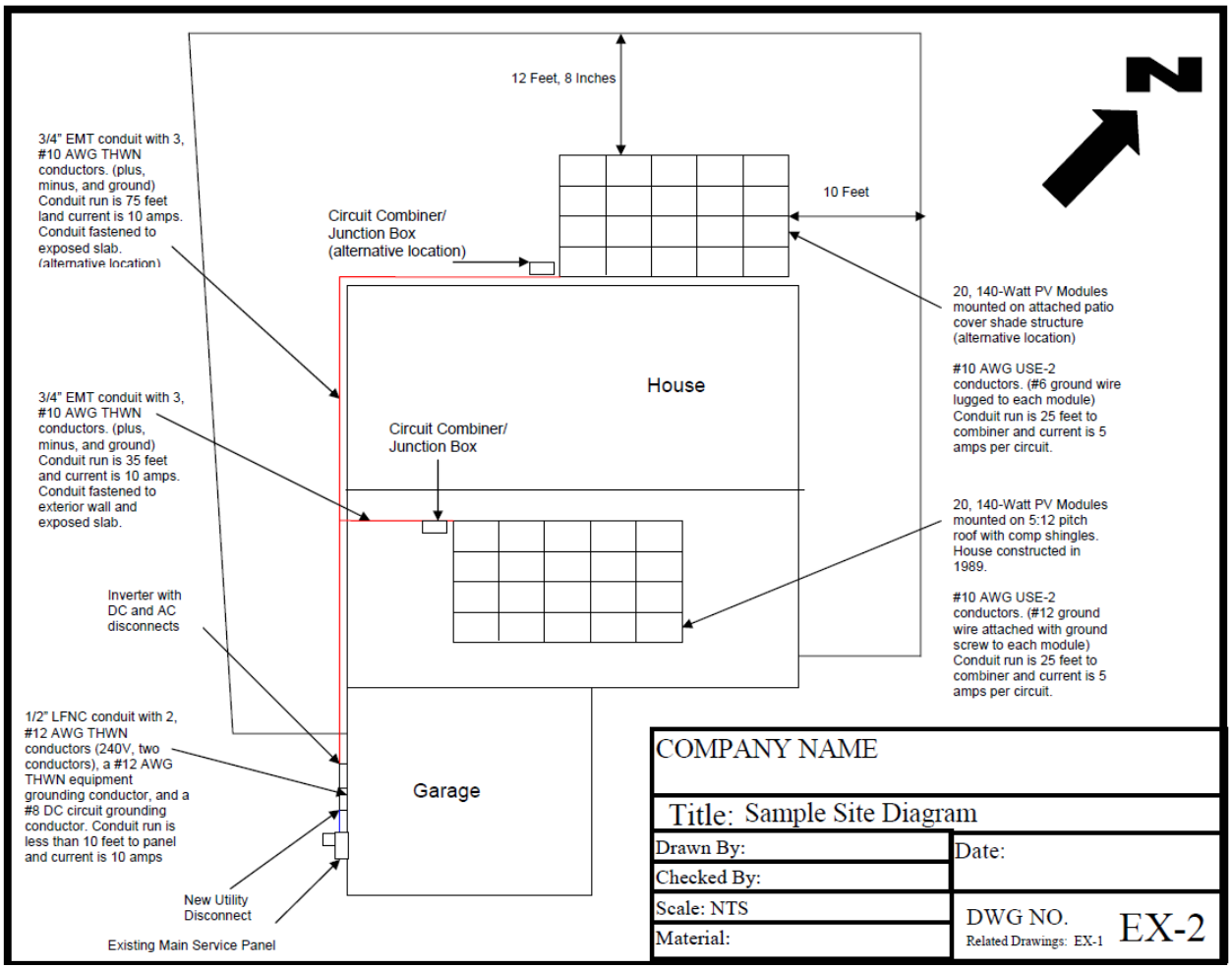


Notes:

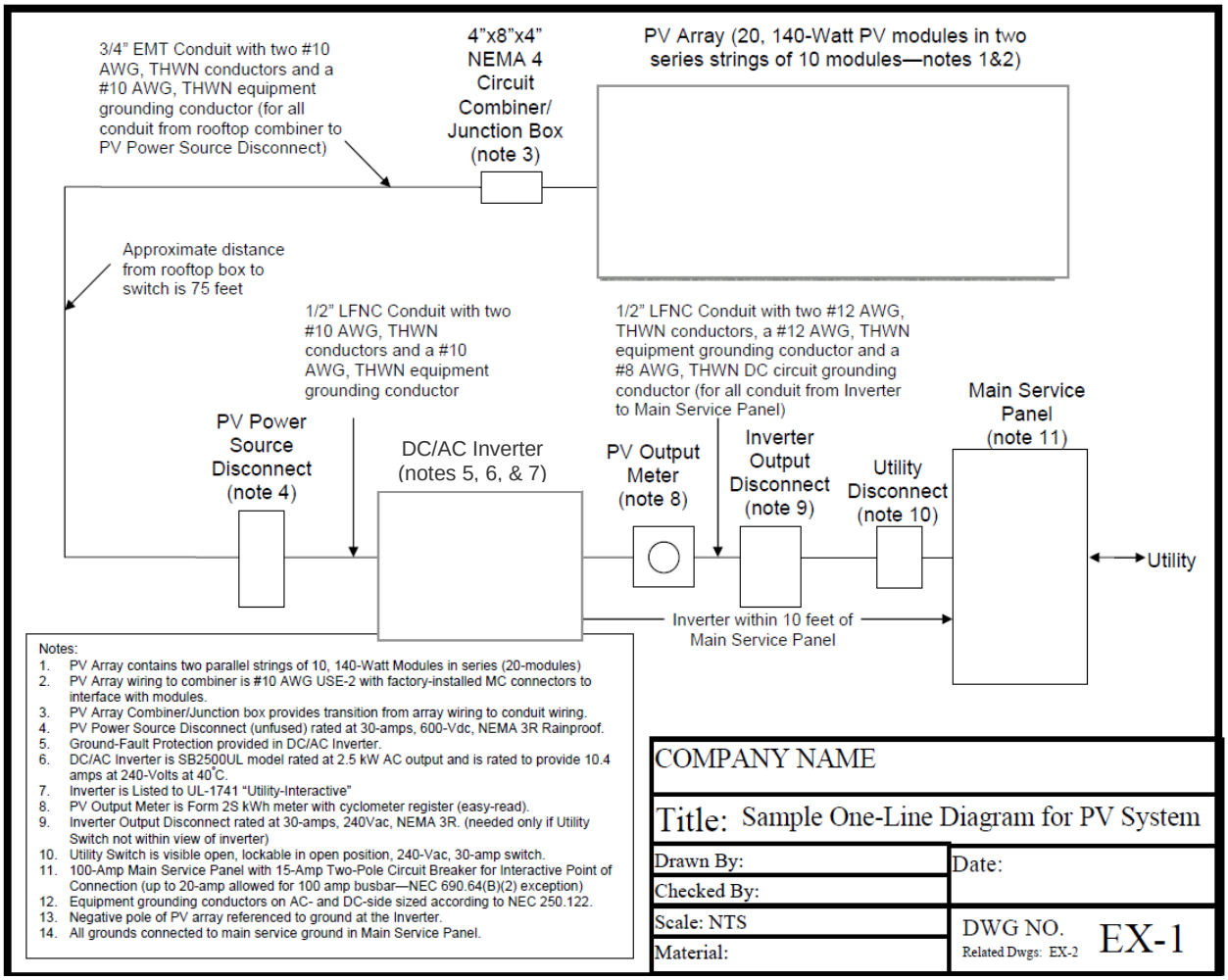
1. These diagrams are intended to be a means of identification for photovoltaic system components, circuits, and connections.
2. Disconnecting means and overcurrent protection required by Article 690 are not shown.
3. System grounding and equipment grounding are not shown. See Article 690, Part V.
4. Custom designs occur in each configuration, and some components are optional.

Figure 690.1(b) Identification of Solar Photovoltaic System Components in Common System Configuration.

Sample of Electrical Diagram (From NEC)



Sample of Site Plan



Sample of One-Line Diagram

PV Quick Design and Installation Reference/NEC 2014.

Qualified Personnel [690.4 (C), 100] The installation of equipment and all associated wring and interconnections shall be performed only by qualified persons. *INFORMATIONAL NOTE:* See Article 100 for definition of ***qualified person***.

Use Open Circuit Voltage as the Rated Voltage in the PV Source Circuit [690.7 (A)]

Voltages shall be ≤ 600 Volts [690.7 (C)]

Live parts in Source and PV output circuits over 150 volts to ground shall not be accessible to other than qualified persons while energized. [690.7 (D)]

Ampacity and overcurrent device ratings in PV systems shall be considered continuous. [690.8 (B)]

Conductors and overcurrent devices shall be able to carry ≥ 125% of the short-circuit current of the source circuit [690.8 (B)(1)]

PV source circuit, inverter and battery conductors shall have overcurrent protection [690.9 (A) & (B)]

Grounded conductor to be white in color. [200.6]

A means to disconnect and isolate all source circuits shall be provided. [690.13]

All ungrounded conductors shall be able to be disconnected from the inverter and all other equipment. [690.15]

If fuses are used, you must be able to disconnect the power from both ends (isolate). [690.16]

Disconnects shall be accessible and clearly labeled. [690.17]

Single conductor cable is permitted for module connections only; cable exposed to sunlight must be sunlight resistant. [690.31 (C) (1)]

Connectors shall be polarized and guarded to prevent shock. [690.33]

Any wiring junction boxes shall be accessible. [690.34]

Marking: all modules shall be marked indicating the system operating voltage and current, the open circuit voltage, and the short circuit current, etc., shall be placed near the system disconnect point or as specified. [690.51, 690.52, 690.53]

All required labels shall comply with Articles [690.5 (C), 690.7 (E), 690.10 (C), 690.17(E), 690.31 (G) (3) (4), 690.35 (F), 690.56 (A) (B) (C)]

Photovoltaic Field Inspection Checklist: *To be completed by installer.*
Provide to DPS inspector at the final inspection

Electrical permit # _____

Building permit # _____

Premises address: _____

Date of inspection by installer: _____

Installed and inspected by: _____ Print name: _____

	Yes	No	Comments
Are the installation photos on site			
Are permit documents and plans on site			
Do the PV module model numbers match plans and cut-sheets			
Are the modules properly grounded per cut-sheets			
Does the array layout and associated wiring match plans			
Are cables and conduits properly supported			
Are all plug connectors used in the array fully engaged			
Does the inverter model number(s) match plans and cut-sheets			
Does the array support structure match plans			
If roof mounted, are all roof penetrations properly sealed			
If ground mounted, have the footings and structure been approved			
Are the required signs/labels durable enough for the environment			
Shock hazard warning label installed [690.5(C)]			
Shock hazard warning label, *ungrounded DC conductors* [690.35(F)]			
Marking identifying PV (DC) power source including the following: [690.53]			
Operating current (on plans)			
Operating voltage (on plans)			
Maximum system voltage [690.7]			
Short circuit current [690.8]			
Marking identifying AC point of connection including the following: [690.54]			
Maximum operating current (on plans)			
Operating AC voltage (on plans)			
Marking identifying disconnecting means for PV system [690.13(B)]			
Sign at main service disconnect for remote location of PV disconnect [690.56]			
Sign for buildings/structures w/both utility & PV systems, for Rapid Shutdown [690.56(C)]			
Warning label for disconnect of *ungrounded conductors* [690.17(E)]			
Sign for optional stand-by system [702.8]			
Signed Residential Photovoltaic Systems Installation Certification			
Carbon Monoxide detectors installed per IRC Section R315			
Installation meets the standards and requirements of the Montgomery County Fire Code			
Installation complies with plumbing and gas vents per WSSC Plumbing Code Section 106.1			

Received by DPS: _____ **Date:** _____

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255 Rockville Pike, 2nd Floor
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Fax: (240)777-6262
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Residential Photovoltaic Systems Installation Certification

To be completed by the Installer.

This certification report is submitted in conformance with procedures established by the Department of Permitting Services (DPS).

I certify this is a true report of jobsite conditions: all structural/mechanical attachments to the structure(s) are in conformance with the approved engineered plans and, that the Laws and Building Codes of Montgomery County are being followed.

Permit #_____

Date installation completed: _____

Address:_____

Photos included:_____Yes_____No Inspection Checklist included: _____Yes _____No

Note: Final inspection approval will not be given without photos of the installation and the inspection checklist.

Name of Company/Installer:_____Phone:_____

Signature:_____Printed name:_____Date: _____

Photovoltaic Field Inspection Checklist: <u>To be completed by installer.</u>

Provide to DPS inspector at the final inspection.

Electrical permit # ___XXXXXX_____
Building permit # ___XXXXXX_____

Premises address: _____

Date of inspection by installer: _____
Installation inspected by: _____ Print name: _____

	Yes	No	Comments
Are the installation photos on site	X		
Are permit documents and plans on site	X		
Do the PV module model numbers match plans and cut-sheets	X		
Are the modules properly grounded per cut-sheets	X		
Does the array layout and associated wiring match plans	X		
Are cables and conduits properly supported	X		
Are all plug connectors used in the array fully engaged	X		
Does the inverter model number(s) match plans and cut-sheets	X		
Does the array support structure match plans	X		
If roof mounted, are all roof penetrations properly sealed	X		
If ground mounted, have the footings and structure been approved			Not applicable
Are the required signs/labels durable enough for the environment	X		
Shock hazard warning label installed [690.5(C)]	X		
Shock hazard warning label, *ungrounded DC conductors* [690.35(F)]	X		
Sign identifying PV (DC) power source including the following: [690.53]	X		
Operating current (on plans)	X		
Operating voltage (on plans)	X		
Maximum system voltage [690.7]	X		
Short circuit current [690.8]	X		
Sign identifying AC point of connection including the following: [690.54]	X		
Maximum operating current (on plans)	X		
Operating AC voltage (on plans)	X		
Sign identifying disconnecting means for PV system [690.14]	X		
Sign at main service disconnect noting remote location of PV disconnect [690.56]	X		
Warning label for disconnect of *ungrounded conductors* [690.17]	X		
Sign for optional stand-by system [702.8]			Not applicable
Signed Residential Photovoltaic Systems Installation Certification	X		
Carbon Monoxide detectors installed per IRC Section R315	X		
Installation meets the standards and requirements of the Montgomery County Fire Code	X		
Installation complies with plumbing and gas vents per WSSC Plumbing Code Section 106.1	X		

Received by DPS: _____ **Date:** _____

SAMPLE

DPS | Montgomery County Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240)777-0311
Fax: (240)777-6262
http://www.montgomerycountymd.gov/permittingservices

Residential Photovoltaic Systems Installation Certification

To be completed by the Installer.

This certification report is submitted in conformance with procedures established by the Department of Permitting Services (DPS).

I certify this is a true report of jobsite conditions: all structural/mechanical attachments to the structure(s) are in conformance with the approved engineered plans and, that the Laws and Building Codes of Montgomery County are being followed.

Permit # XXXXXX

Date installation completed: XX/XX/XXXX

Address: XXXXXXXXXXXXXXXXXXXXX

Photos included: X Yes ____ No Inspection Checklist included: _X____Yes _____No

Note: Final inspection approval will not be given without photos of the installation and, the Inspection Checklist.

Name of Company/Installer: _____ Phone: _____

Signature: _____ Printed name: _____ Date: _____

SAMPLE

[Solar Company Letterhead]

Property Owners Name: _____

Property Owners Address: _____

Address of installation if different than owners address:

_____

I certify that:

□ I prepared or approved the electrical drawings and related documents for the photovoltaic (PV) system at the above location.

□ The design of the PV system, and all electrical installations and equipment, meets the standards and requirements of the National Electrical Code as adopted by Montgomery County in COMCOR 17.02.01.

_____
Maryland PE License Number

Date_____ Seal

Signature_____

_____
Montgomery County Master Electrician License Number

Date_____

Signature_____

Must Be Submitted With Plans

[Company Letterhead]

Project_____ Property Owner _____

Address_____

□ I reviewed the design of the photovoltaic (PV) system, as designed by the manufacturer, and the design criteria utilized for the mounting equipment and panel mounting assembly (rack system) for the installation of __(#)__ panels supported by the rack system, as shown on the drawings prepared for the above referenced address. I certify that the configurations and design criteria meet the standards and requirements of the International Residential Code (IRC) and International Existing Building Code (IEBC) adopted by Montgomery County in COMCOR 08.00.02.

□ The attachment of the rack system to the building at the above address, including the location, number, and type of attachment points; the number of fasteners per attachment point; and the specific type of fasteners (size, diameter, length, minimum embedment into structural framing, etc.) meets the standards and requirements of the IRC and IEBC adopted by Montgomery County in COMCOR 08.00.02.

□ I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. I certify that no structural modifications of the existing roof structure are required. The existing roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02, necessary to support the PV system.

□ I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. Structural modifications of the existing roof structure are required. I certify that the roof structure, as modified on the drawings for this project, will support the additional loads imposed by the PV system. I further certify that design of the modified roof structure meets the standards and requirements of the IRC and IEBC, adopted by Montgomery County in COMCOR 08.00.02.

□ I prepared or approved the construction documents for the mounting equipment, rack system, roof structure for this project.

_____
Maryland PE License Number

Date_____ Seal

Signature_____

Must be submitted with plans

DPS | Montgomery County
Department of Permitting Services
255 Rockville Pike, 2nd Floor
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ADMINISTRATIVE/OPERATING PROCEDURE

Year -	Procedure
2016	Permit Application and Plan Review for Residential Rooftop Solar Panels Installations (RSP)

Purpose

1.0 To specify requirements and procedures for processing and tracking RSP applications for building and electrical permits.

General

2.0 RSP projects require two type of permits: Residential Building and Electrical

3.0 RSP construction drawings must be signed and sealed by a Maryland licensed structural engineer. A Maryland licensed electrical engineer or Master electrician must sign and seal electrical plans. Electronic submissions must be digitally signed as required by the state.

4.0 Adequate applications will be processed within seven (7) business days.

5.0 Each applicant is allowed maximum five (5) hardcopy applications per day.

6.0 RCIPT – Permit Technician processing building permits

7.0 CMA - Customer Management Application

8.0 BPA - Building Plan Review Administrator

9.0 ZA - Zoning Administrator

10.0 ZPSS – Zoning Plan Reviewer

11.0 BCSP – Building Construction Solar Panels bin

Policy

Permits Processing – Hardcopies

12.0 Information Counter staff will place the applicant in the Solar queue of CMA. The information in the purpose box must include that this is a rooftop solar panel (RSP) submission. RCIPT monitors this list and works with applicants to create the residential building permit in permitting system. Incomplete permit packages will be rejected.

13.0 When the RCIPT has accepted the application package and created the permit in permitting system, RCIPT

will put the applicant in the Zoning ePlans Review queue of CMA for zoning review. The second set of drawings will have all staples removed and each sheet of each set will have the permit number stamped on it for processing by document imaging.

14.0 The Zoning Manager will assign the plans to a ZPSS to perform the zoning review.

15.0 RCIPT will then route the plans to BRB for the Building Plan Reviewer to complete the building reviews. Senior Building Permitting Services Specialist (BPSS) assigns Architectural and Structural reviews to a building plan reviewer next business day. After the building reviews are approved the plan reviewer will track application to BCSP for electrical plan review.

16.0 The electrical plan reviewer reviews the application and after the electrical review is approved will place at least one stamp on the cover page indicating that the electrical review is approved. Then plan reviewer will track application to Solar Only PUBF1 bin.

17.0 If building or electrical review is not approved, reviewer notifies in writing the applicant about deficiencies. If applicant does not respond within five (5) business days from notification date, reviewer asks RCIPT to void application.

18.0 If same type of review is denied twice for an application, application will be voided. An applicant who reaches three (3) voided permits in a year will be excluded from this program.

19.0 The RCIPT will inform applicant that building permit is ready for issuance and remind applicant to obtain electrical permit online. If the customer does not pick up the permit and pay any additional fees due within five (5) business days of notification the permit will be voided and the applicant will have to reapply. Fees paid under the voided permit will not be credited to a new permit.

20.0 RCIPT will issue the permit and plan track first set of drawings to CUST bin and the second to DIB1 wherefrom imaging staff will process it for electronic storage.

21.0 Applicant must apply online for the electrical permit.

Permits Processing – ePlans

22.0 Applicant submits permit applications through the ePermits and ePlans.

23.0 If applicant does not complete Applicant Upload task (upload the required documents) within five (5) business days from permit creation, RCIPT voids application in ePlans and permitting system. Otherwise RCIPT perform the Screening Review task same day.

24.0 RCIPT rejects incomplete submissions. If applicant does not complete the Screening Corrections Resubmit task within five (5) business days from the date the task is send to the applicant to correct deficiencies, RCIPT voids application in ePlans and permitting system.

25.0 After RCIPT has accepted the submission, BPA performs the Building Screening Review task. If approved, RCIPT assigns Department PreReview tasks to Zoning Administrator and Well and Septic Reviewer, if required. If not approved, BPA sends Building Screening Corrections Resubmit task to applicant. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies, BPA asks RCIPT to void application in ePlans and permitting system.

26.0 Zoning Administrator assign the Zoning Review task to a ZPSS who will perform the task the same day. ZPSS enters the review results in permitting system immediately.

27.0 Well and Septic reviewer performs Well and Septic Review task, if required, the same day. Reviewer enters the review results in permitting system immediately.

28.0 If both Zoning Review and Well and Septic Reviews are approved, RCIPT assigns the Begin Review task to

BPA who will assign the Building Review task to electrical plan reviewer. If not approved, applicant is notified in writing to perform the Department PreReview Resubmit task. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies RCIPT voids application in ePlans and permitting system.

29.0 If Building Review task is approved, go to item 31. If not approved, reviewer notifies the applicant about deficiencies. If applicant does not complete Building Review Resubmit task within five (5) business days from the date the task is send to the applicant to correct deficiencies, BPA asks RCIPT to void application in ePlans and permitting system.

30.0 If same type of review (Screening, Building Screening, Zoning, DepartmentPreReview, Building, PreApprovalQA) is denied twice for an application, application will be voided. An applicant who reaches three (3) voided permits in a year will be excluded from this program.

31.0 RCIPT performs the PreApproval QA task and marks it Approved if possible. If not possible, RCIPT marks the review Denied and applicant is notified in writing about deficiencies, PreApprovalQAResubmit task. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies, RCIPT voids application in ePlans and permitting system.

32.0 If RCIPT approves Preapproval QA task and all permit conditions are met in permitting system, RCIPT batch stamps the plans.

33.0 ePlans informs applicant (via email) that permit is ready for issuance. If the customer does not pick up the permit and pay any additional fees due within five (5) business days of notification the permit will be voided and the applicant will have to reapply. Any fees paid under the voided permit will not be credited to a new permit.

34.0 Applicant must apply online for the electrical permit.

Date	**Chief Operations Officer**
9.6.2016	

DPS | Montgomery County
Department of Permitting Services
255 Rockville Pike, 2nd Floor
Rockville, MD 20850-4166
Phone: 311 in Montgomery County or (240) 777-0311
Fax: (240) 777-6262
http://www.montgomerycountymd.gov/permittingservices

ADMINISTRATIVE/OPERATING PROCEDURE

Year	Procedure
2016	Permit Application and Plan Review for Residential Refer-back Rooftop Solar Panels Installations (RRSP)

Purpose

1.0 To specify requirements and procedures for expediting processing applications for RRSP Building and Electrical Permits. Applications for electrical permits qualify for this process if service size is no larger than 200 amps and has maximum 40-amp overcurrent device, the arrays for the entire system have a maximum output of 10KW (10,000watts), and there are no taps ahead of the main disconnecting means.

General

2.0 Model electrical permit submissions must comply with items 12.0 to 15.0 of this Administrative Procedure.

3.0 RRSP projects require two type of permits: Residential Building and Electrical

4.0 RRSP construction drawings must be signed and sealed by a Maryland licensed structural engineer. Electronic submissions must be digitally signed (encrypted digital signature) as required by the state.

5.0 Adequate applications will be processed within three (3) business days.

6.0 Each solar company is allowed maximum five (5) hardcopy applications per day.

7.0 RCIPTs – Permit Technicians processing building permits.

8.0 CMA - Customer Management Application

9.0 BPA - Building Plan Review Administrator

10.0 ZA - Zoning Administrator

11.0 ZPSS – Zoning Plan Review Specialist

Policy

Initial Submittal for Model Electrical Permit

12.0 The initial application to establish an MODEL ELECTRICAL PERMIT NUMBER - INITIAL APPLICATION (IA) in Hansen - requires that the electrical design shall specify a service size no larger than 200 amps and a maximum 40-amp overcurrent device. The arrays for the entire system shall have a maximum output of 10KW, (10,000 watts), and they shall have no taps ahead of the main disconnecting means. The plans shall

specify the range and types of inverters that can be utilized within the system design as well as the types of modules (solar panels) along with cut sheets and model numbers. Clear drawings showing the number of arrays and the line diagram of the wiring and grounding requirements shall be provided.

13.0 Letter of certification from the electrical engineer or master electrician shall be included in the permit submittal.

14.0 This initial submittal will establish the MODEL ELECTRICAL PERMIT NUMBER (IA) to be referenced in subsequent permit submissions for building and electrical permits.

15.0 The application must be in electronic format.

Permits Processing – Hardcopies

16.0 Obtain the model electrical permit (IA).

17.0 Permit applications are submitted through the Fast Track process. Permit application MUST reference the model electric permit number (IA).

18.0 Information Counter staff will place the applicant in the Solar queue of CMA. The information in the purpose box must include that this is a rooftop solar panel (RSP) submission. RCIPT monitors this list and works with applicants to create the residential building permit in permitting system. Incomplete permit packages will be rejected.

19.0 When the RCIPT has accepted the application package and created the permit in permitting system RCIPT will put the applicant in the Zoning ePlans Review queue of CMA for zoning review. The second set of drawings will have all staples removed and each sheet of each set will have the permit number stamped on it for processing by document imaging.

20.0 The Zoning Manager will assign the plans to a ZPSS to perform the zoning review.

21.0 RCIPT will then route the plans to BRB for the Building Plan Reviewer to complete the building reviews. Senior Building Permitting Services Specialist (BPSS) assigns Architectural and Structural reviews to a building plan reviewer next business day. After the building reviews are approved, the plan reviewer returns the permit package to the RCIPT for issuance. Plan reviewer will track application to Solar Only PUBF1 bin.

22.0 If building review is not approved, reviewer notifies in writing the applicant about deficiencies. If applicant does not respond within five (5) business days from notification date, reviewer asks RCIPT to void application.

23.0 If same type of review is denied twice for an application, application will be voided. An applicant who reaches three (3) voided permits in a year will be excluded from this program.

24.0 The RCIPT will inform applicant that building permit is ready for issuance and remind applicant to obtain electrical permit online. If the customer does not pick up the permit and pay any additional fees due within five (5) business days of notification the permit will be voided and the applicant will have to reapply. Fees paid under the voided permit will not be credited to a new permit.

25.0 RCIPT will issue permit and plan track first set of drawings to CUST bin and the second to DIB1 wherefrom imaging staff will process it for electronic storage.

26.0 Applicant must apply online for the electrical permit referring back to the model electric permit (IA).

Permits Processing – ePlans

27.0 Obtain the model electrical permit number (IA).

28.0 Applicant submits permits applications through the ePermits and ePlans. Both residential and electrical permit application MUST reference the model electric permit number (IA).

29.0 If applicant does not complete Applicant Upload task (upload the required documents) within five (5) business days from permit creation, RCIPT voids application in ePlans and permitting system. Otherwise RCIPT perform the Screening Review task same day.

30.0 RCIPT rejects incomplete submissions. If applicant does not complete the Screening Corrections Resubmit task within five (5) business days from the date the task is send to the applicant to correct deficiencies, RCIPT voids application in ePlans and permitting system.

31.0 After RCIPT has accepted the submission, BPA performs the Building Screening Review task. If approved, RCIPT assigns Department PreReview tasks to Zoning Administrator and Well and Septic Reviewer, if required. If not approved, BPA sends Building Screening Corrections Resubmit task to applicant. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies, BPA asks RCIPT to void application in ePlans and permitting system.

32.0 Zoning Administrator assign the Zoning Review task to a ZPSS who will perform the task the same day. ZPSS enters the review results in permitting system immediately.

33.0 Well and Septic reviewer performs Well and Septic Review task, if required, the same day. Reviewer enters the review results in permitting system immediately.

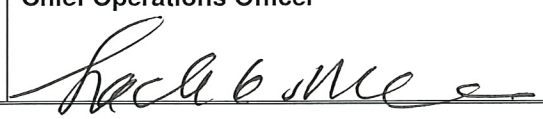
34.0 If both Zoning Review and Well and Septic Reviews are approved, RCIPT assigns the Begin Review task to BPA who will assign the Building Review task to a plan reviewer. Plan reviewer will waive this review and RCIPT is assigned the PreApproval QA task. If not approved, applicant is notified in writing to perform the Department PreReview Resubmit task. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies RCIPT voids application in ePlans and permitting system.

35.0 If same type of review (Screening, Building Screening, Zoning, DepartmentPreReview, PreApprovalQA) is denied twice for an application, application will be voided. An applicant who reaches three (3) voided permits in a year will be excluded from this program.

36.0 RCIPT performs the PreApproval QA task and marks it Approved if possible. If not possible, RCIPT marks the review Denied and applicant is notified in writing about deficiencies, PreApprovalQAResubmit task. If applicant does not complete this task within five (5) business days from the date the task is send to the applicant to correct deficiencies, RCIPT voids application in ePlans and permitting system.

37.0 If RCIPT approves Preapproval QA task and all permit conditions are met in permitting system, RCIPT batch stamps the plans.

38.0 ePlans informs applicant (via email) that permit is ready for issuance. If the customer does not pick up the permit and pay any additional fees due within five (5) business days of notification the permit will be voided and the applicant will have to reapply. Any fees paid under the voided permit will not be credited to a new permit.

39.0 Applicant must apply online for the electrical permit referring back to the model electric permit (IA).

Date	**Chief Operations Officer**
9.6.2016