

HISTORIC PRESERVATION COMMISSION STAFF REPORT

Address:	7120 Carroll Ave., Takoma Park	Meeting Date:	02/08/17
Resource:	Contributing Resource Takoma Park Historic District	Report Date:	02/01/17
Applicant:	Kamau Amen (Trevor Hogan, Agent)	Public Notice:	01/25/17
Review:	HAWP	Tax Credit:	n/a
Case Number:	37/03-171	Staff:	Dan Bruechert
Proposal:	Solar panel removal and re-installation		

STAFF RECOMMENDATION

Staff recommends that the HPC **DENY** the HAWP application.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Contributing to the Takoma Park Historic District
STYLE: Colonial Revival
DATE: c.1915-25

The subject property is a Contributing, three bay wide, two-story, front-gable, asbestos-sided Colonial revival house that has been converted into a business. There is a front hipped-roof porch that was enclosed sometime in the building's past. The west (left) side of the gable roof has several solar photovoltaic panel arrays, with additional panels on the shed roof to the rear, installed consistent with a HAWP issued in 2014.

The first floor has a hipped, asphalt-roofed porch with craftsman-style brackets, which wraps round to the side. There is a side, concrete porch covered by a shed roof with asphalt shingles.

PROPOSAL

The proposal calls for removing all (8) of the solar panels on the rear shed addition and installing seven (7) solar panels on the east (right) side of the gable roof. The panels are to be arranged in two groupings; four (4) panels in a rectangle at the rear and three (3) panels projecting to the front.

APPLICABLE GUIDELINES

Montgomery County Code, Chapter 24A Historic Resources Preservation

- (a) The commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate, inconsistent with or detrimental to the preservation, enhancement or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.
- (b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:
 - (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
 - (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
 - (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located;

Takoma Park Historic District Design Guidelines

There are two very general, broad planning and design concepts which apply to all categories. These are:

The design review emphasis will be restricted to changes that are at all visible from the public right-of-way, irrespective of landscaping or vegetation (it is expected that the majority of new additions will be reviewed for their impact on the overall district), and,

The importance of assuring that additions and other changes to existing structures act to reinforce and continue existing streetscape, landscape, and building patterns rather than to impair the character of the district.

Contributing Resources should receive a more lenient review than those structures that have been classified as Outstanding. This design review should emphasize the importance of the resource to the overall streetscape and its compatibility with existing patterns rather than focusing on a close scrutiny of architectural detailing. In general, however, changes to Contributing Resources should respect the predominant architectural style of the resource. As stated above, the design review emphasis will be restricted to changes that are *at all visible from the public right-of-way*, irrespective of landscaping or vegetation.

Some of the factors to be considered in reviewing HAWPs on Contributing Resources include:

All exterior alterations, including those to architectural features and details, should be generally consistent with the predominant architectural style and period of the resource and should preserve the predominant architectural features of the resource; exact replication of existing details and features is, however, not required

Alterations to features that are not visible from the public right-of-way should be allowed as a matter of course

All changes and additions should respect existing environmental settings, landscaping, and patterns of open space.

STAFF DISCUSSION

7120 Carroll Ave., Takoma Park, is listed as a Contributing resource to the Takoma Park Historic District. In 2014, the applicant submitted a HAWP for the approval of the extant solar installation, which the HPC approved. In making its recommendation to the HPC, the staff report (see attached) relied extensively on the Design Guidelines for Historic Sites and Districts in Montgomery County, Maryland for its guidance on solar panel installation. Additionally, Staff determined that the close proximity of the resource to the left (west) of 7120 Carroll Ave. mitigated the visual impact the solar panels had on the surrounding district. HPC approved the HAWP application by consent at the March 26, 2014 meeting.

In contrast to the proximity of the building to the left (west) of 7120 Carroll Ave., a driveway and large gravel parking lot to the right (east) make the entirety of the right (east) elevation of the building highly visible. This creates a situation where changes that occur on the right (east) side of the subject building have a more significant visual impact on 7120 Carroll Ave. and the surrounding district than changes to the left (west). While the right (east) elevation is a secondary elevation, changes to it will be highly visible and more consideration should be given the impact proposed changes will have on the surrounding district.



Figure 1: East side of 7120 Carroll Ave., note the highly visible nature of the elevation



Figure 2: West elevation of 7120 Carroll Ave., the proximity of 7118 Carroll mitigates the appearance of the solar panels.

The current proposal calls for the installation of four (4) panels at the rear of the building in a rectangular cluster, with the remaining three (3) panels and the necessary mechanical structure would be installed closer to the street. Due to the highly visible nature of the left (east) elevation of the building and the installation of these solar panels so close to the front of the building would result in a negative impact to the building that would detract from the surrounding district. Allowing all seven of the solar panels to be installed in their proposed location would significantly alter the historic roofline and would be detrimental to the streetscape (contra 24A-8(b)(1) and (2)). The left (east) roof plane consists of at the gable front, with a hipped jog about one-third of the way back. Allowing the installation of solar panels on this portion of the roof will introduce additional planes to the roof which will project and recede with the solar panels. This change in materials and plane will visually attract attention and would inappropriately detract from the historic fabric and the surrounding district, consistent with 24A-8(a).

Lastly, the changes that will result from this proposal will remove solar panels that are only visible from a secondary street (Park Ave.) and will relocate them in a location where they are highly visible from the primary street the building fronts (Carroll Ave.). The applicant did not include a justification for the necessity of removing an almost invisible element from the building while introducing a highly visible one. Absent some reasonable justification, Staff cannot support a proposal that would reverse 'good preservation' and result in an outcome that would be detrimental to the historic resource and surrounding district while providing no benefit. Thus, staff finds the proposal would be inappropriate, inconsistent with or detrimental to the preservation, enhancement or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.

Because of the distance from the front of the house and a change in the roof plane created by the cross-gable, the Commission might find that installation of some number of panels at the rear of the east roof plane would not significantly alter the historic roofline or have an adverse effect on the historic district.

Presented with some reasonable justification, the HPC could determine that 7120 Carroll Ave. could support a small number of solar panels (likely no more than 4) to the rear over the service portion of the historic building, installed in a manner that would aid in the private utilization of the building, consistent with 28A-8(b)(3).

STAFF RECOMMENDATIONS

Staff recommends that the Commission **deny** the HAWP application as being consistent with Chapter 24A-8(a),

The commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate, inconsistent with or detrimental to the preservation, enhancement or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.

and with the general condition applicable to all Historic Area Work Permits that **the applicant will present 3 permit sets of drawings to HPC staff for review and stamping prior to submission for permits (if applicable).** After issuance of the Montgomery County Department of Permitting Services (DPS) permit, the applicant will arrange for a field inspection by calling the DPS Field Services Office at 240-777-6370 prior to commencement of work and not more than two weeks following completion of work.

MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION
STAFF REPORT

Address:	7120 Carroll Avenue, Takoma Park	Meeting Date:	3/26/2014
Resource:	Contributing Resource Takoma Park Historic District	Report Date:	3/19/2014
Applicant:	Kamau Amen (Katie Hinkle, Agent)	Public Notice:	3/12/2014
Review:	HAWP [RETROACTIVE]	Tax Credit:	N/A
Case Number:	37/03-14D	Staff:	Josh Silver
PROPOSAL: Solar panel installation			

STAFF RECOMMENDATION

Staff recommends that the HPC **approve** the HAWP application.

ARCHITECTURAL DESCRIPTION

SIGNIFICANCE: Contributing Resource within the Takoma Park Historic District
STYLE: Colonial Revival
DATE: c1915-1925

PROPOSAL

NOTE: The HPC is to consider RETROACTIVE HAWP applications as if the work has not been completed.

The applicant is proposing to install (21) roof mounted solar panels and an associated rooftop mechanical unit at the subject property.

The panels are located primarily on southeast and southwest roof slopes of the house. The panels are installed as follows:

- Nine (9) solar panels are located on a shallow-pitched shed roof of a rear addition that contains evidence of non-historic alterations.
- Seven (7) solar panels are located on a shallow hipped roof section of the historic massing on the southwest (left) side of the house that is behind a steeply pitched forward facing gable that is parallel with the public right-of-way.
- Five (5) solar panels are located on the left southwest (left) roof field of a steeply pitched forward facing gable roof section of the historic massing.

APPLICABLE GUIDELINES

When reviewing alterations and new construction within the Takoma Park Historic District several documents are to be utilized as guidelines to assist the Commission in developing their decision. These documents include the historic preservation review guidelines in the approved and adopted amendment for the *Takoma Park Historic District (Guidelines)*, *Montgomery County Code Chapter 24A (Chapter*

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24A), and the *Secretary of the Interior's Standards for Rehabilitation (Standards)*. The pertinent information in these documents is outlined below.

Montgomery County Code; Chapter 24A-8

- (a) The commission shall instruct the director to deny a permit if it finds, based on the evidence and information presented to or before the commission that the alteration for which the permit is sought would be inappropriate, inconsistent with or detrimental to the preservation, enhancement or ultimate protection of the historic site or historic resource within an historic district, and to the purposes of this chapter.
- (b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to insure conformity with the purposes and requirements of this chapter, if it finds that:
 - (1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or
 - (2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or
 - (3) The proposal would enhance or aid in the protection, preservation and public or private utilization of the historic site or historic resource located within an historic district in a manner compatible with the historical, archeological, architectural or cultural value of the historic site or historic district in which an historic resource is located; or
 - (4) The proposal is necessary in order that unsafe conditions or health hazards be remedied; or
 - (5) The proposal is necessary in order that the owner of the subject property not be deprived of reasonable use of the property or suffer undue hardship; or
 - (6) In balancing the interests of the public in preserving the historic site or historic resource located within an historic district, with the interests of the public from the use and benefit of the alternative proposal, the general public welfare is better served by granting the permit.
- (c) It is not the intent of this chapter to limit new construction, alteration or repairs to any 1 period or architectural style.
- (d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord. No. 9-4, § 1; Ord. No. 11-59.)

Takoma Park Historic District Guidelines

A majority of structures in the Takoma Park Historic District have been assessed as begin "Contributing Resources". While these structures may not have the same level of architectural or historical significance as Outstanding Resources or may have lost some degree of integrity, collectively, they are the basic building blocks of the Takoma Park Historic District. However, they are more important to the overall character of the district and the streetscape due to their size, scale, and architectural character, rather for

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their particular architectural features.

Contributing Resources should receive a more *lenient* review than those structures that have been classified as **Outstanding**. This design review should emphasize the importance of the resource to the overall streetscape and its compatibility with existing patterns rather than focusing on a close scrutiny of architectural detailing. In general, however, changes to Contributing Resources should respect the predominant architectural style of the resource. As stated above, the design review emphasis will be restricted to changes that are *at all visible from the public right-of-way*, irrespective of landscaping or vegetation.

The *Guidelines* that pertain to this project are as follows:

- Alterations to features that are not visible at all from the public right-of-way should be allowed as a matter of course;
- All changes and additions should respect existing environmental settings, landscaping, and patterns of open space.

Secretary of the Interior's Standards for Rehabilitation:

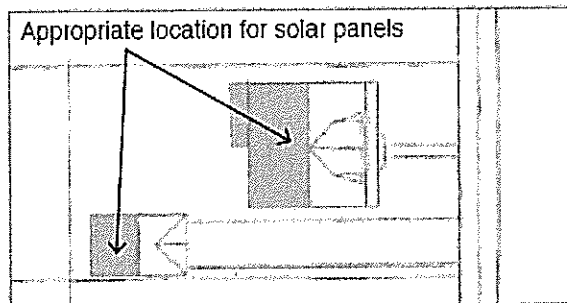
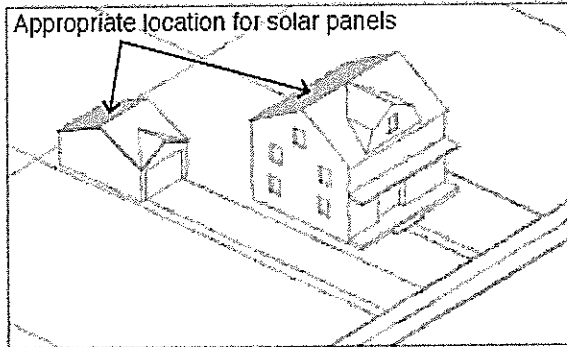
- #1 A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- #2 The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- #9 New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- #10 New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF DISCUSSION

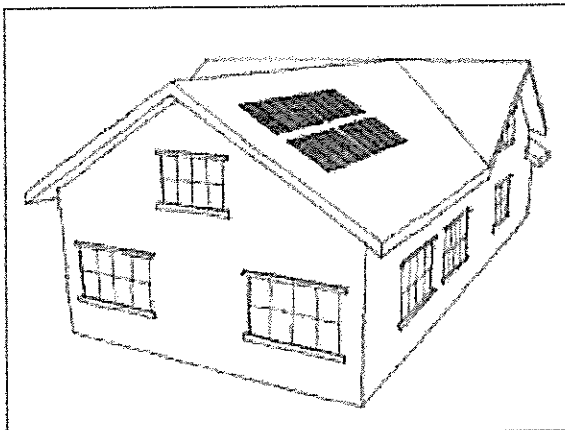
The Montgomery County Historic Preservation Commission (HPC) has adopted historic preservation design guidelines to assist property owners contemplating projects to repair, rehabilitate, or alter historic properties in Montgomery County. These guidelines are a tool for architects, contractors, local advisory panels and others who assist in the design and review process. The guidelines will also assist the HPC in their consideration of historic area work permit (HAWP) applications.

The guidelines supplement – not replace – the existing review criteria, established in the Historic Preservation Ordinance and Executive Regulations, the HPC uses in administering its review authority over designated historic sites. The guidelines use photographs, illustrations, and clear narrative to articulate nationally accepted historic preservation best practices consistent with the HPC's review criteria, and as such, the guidelines should be useful for owners of historic property throughout the County.

The Design Guidelines for Historic Sites and Districts in Montgomery County, Maryland recommend the following for solar panel installation projects:



Guideline 9.1: Solar panels should be located to the side or rear roof planes or on a secondary structure (all gray surfaces).



Guideline 9.1: Solar panels should be mounted flush with the roof.

9.0 SOLAR PANELS

Solar panels should be located in unobtrusive places. If it is necessary to mount solar panels on a historic building, rather than elsewhere on the site, it is essential that the panels are installed such that they do not change the character of the building. If solar panels are placed on a roof they should be designed and positioned to have a minimal effect on the character of the structure. Placement on rear facing roof planes of the primary structure should be considered first.

Design Objective

Solar panels should not adversely affect the historic character of the structure to which they are being added.

9.1 Reduce the visual impacts of solar panels as seen from the public right-of-way.

- Locate the solar panels away from public view when feasible.
- Solar panels should be mounted apart from the building or on secondary structures, such as a shed or garage, when feasible.
- Solar panels should be located on new construction, such as a new wing, where possible.
- Locate an attached solar panel in a manner such that it does not affect the primary roof facade elevations.
- Location on a primary or street facing roof plane is generally inappropriate.
- Where roof mounted, solar panels should be flush to the extent feasible.
- If not attached to the building, collectors should be located in side or rear yards. Exposed hardware, frames and piping should have a matte finish, and be consistent with the color scheme of the primary structure.
- Panels not attached to the building should be screened by landscaping to reduce their visibility. However, screening may diminish the effectiveness of the collectors to receive sunlight.
- Alternative technologies, such as photovoltaic shingles, may be appropriate in certain circumstances.

Based on a review of the Takoma Park Historic District *Guidelines* and *Standards* the information included in the applicant's submission, staff makes the following findings of fact:

- The subject property is a Contributing Resource.
- The *Guidelines* state that Contributing Resources are important to the overall character of the district and the streetscape due to their size, scale, and architectural character, rather for their

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particular architectural features.

- The *Guidelines* state that alterations to features that are not visible at all from the public right-of-way should be allowed as a matter of course.
- The *Guidelines* state that all changes and additions should respect existing environmental settings, landscaping, and patterns of open space.
- The subject property is situated between an Outstanding Resource to the left that is within very close proximity and another Outstanding Resource to the right. An expansive gravel parking area separates the subject property from the one on the right. The entire northeast (right) elevation and roof is readily visible from the public right-of-way. A secondary street, Park Avenue, runs behind the house. All elevations of the house are visible from the public right-of-way, with the front and right elevations being the most visible.
- Nine (9) of the proposed 21 solar panels are located on a shallow-pitched shed roof of a rear addition.
- Seven (7) of the proposed 21 solar panels are located on a shallow hipped roof section of the historic massing on the southwest (left) side of the house which is behind a steeply pitched forward facing gable that is parallel with the public right-of-way.
- Five (5) of the proposed 21 solar panels are located in the southwest (left) field of a steeply pitched forward facing gable roof section of the historic massing.
- The existing roof is fabricated from asphalt shingles and does not appear to be original to the house.
- The basic roof forms of the historic massing will remain unchanged as a result of the proposed solar panel installation project.

After full and fair consideration of the applicant's submission staff finds the proposal as being consistent with the Criteria for Issuance in Chapter 24A-8(b), having found the proposal is consistent with Takoma Park Historic District Guidelines for Contributing Resources and *Standards* identified above.

- The location of the nine (9) solar panels on the shallow pitched shed roof of the rear addition section will **NOT** be readily visible from the public right-of-way. These panels will only be visible when viewing the rear (secondary) elevation of the structure from Park Avenue.
- The remaining twelve (12) solar panels will **NOT** be visible from the public right-of-way when facing the primary façade of the structure (front elevation) or from the right elevation. Both the front and right elevations are highly visible from the public right-of-way.
- Visibility of the twelve (12) solar panels when viewed from the public right-of-way when standing on the left side of the property will be mitigated by the close proximity of the adjacent house and steeply pitched roof of the subject property.
- Installation of the solar panels will not cause distinctive materials, features, spaces and spatial relationships to be changed. The historic character of the property will be retained and preserved. The proposed undertaking involves the installation of manufactured specified attachment rails bolted into the existing roof rafters. The proposed installation method does not destroy or alter distinctive materials, features or spaces that characterize the property. The proposed solar panels are flush mounted to the extent feasible to mitigate visibility.
- The proposed solar panels are reversible, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF RECOMMENDATION

Staff recommends that the Commission **approve** the HAWP application, under the Criteria for Issuance in Chapter 24A-8(b), having found that the proposal is consistent with the Takoma Park Historic District Guidelines identified above, and therefore will not substantially alter the exterior features of the historic resource and is compatible in character with the district and the purposes of Chapter 24A;

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and with the Secretary of the Interior's Standards for Rehabilitation;

and with the general condition that the applicant shall present the **3 permit sets of drawings, if applicable to Historic Preservation Commission (HPC) staff for review and stamping** prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make **any alterations** to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or joshua.silver@mncppc-mc.org to schedule a follow-up site visit.



HISTORIC PRESERVATION COMMISSION
301/563-3400

DPS - #8

APPLICATION FOR HISTORIC AREA WORK PERMIT

Contact Email: T.HOGAN@SOLARCITY.COM OR T.GERUSON@SOLARCITY.COM Contact Person: TREVOR HOGAN/TERESA GERUSON
Daytime Phone No.: (240) 507-9220
Tax Account No.: 13-01075842
Name of Property Owner: KAMAU AMEN Daytime Phone No.: (301) 891-2488
Address: 7120 CARROLL AVE TAKOMA PARK MD 20912
Street Number City Street Zip Code
Contractor: SOLARCITY CORPORATION Phone No.: (888) 765-2489
Contractor Registration No.: 128948 (MHIC)
Agent for Owner: TREVOR HOGAN Daytime Phone No.: (240) 507-9220

LOCATION OF BUILDING/PREREQUISITE

House Number: 7120 Street: CARROLL AVE
Town/City: TAKOMA PARK Nearest Cross Street: PARK AVE
Lot: 4 Block: 2 Subdivision: DD25
Liber: 32696 Folio: 00553 Parcel: 0000

PART ONE: TYPE OF PERMIT ACTION AND USE

1A. CHECK ALL APPLICABLE:

☐ Construct ☐ Extend ☐ Alter/Renovate
☒ Move ☐ Install ☐ Wreck/Flaze
☐ Revision ☐ Repair ☐ Revocable

CHECK ALL APPLICABLE:

☐ A/C ☐ Slab ☐ Room Addition ☐ Porch ☐ Deck ☐ Shed
☒ Solar ☐ Fireplace ☐ Woodburning Stove ☐ Single Family
☐ Fence/Wall (complete Section 4) ☐ Other: _____

1B. Construction cost estimate: \$ 2000

1C. If this is a revision of a previously approved active permit, see Permit # 659829

PART TWO: COMPLETE FOR NEW CONSTRUCTION AND EXTEND/ADDITIONS

2A. Type of sewage disposal: 01 ☐ WSSC 02 ☐ Septic 03 ☐ Other: _____
2B. Type of water supply: 01 ☐ WSSC 02 ☐ Well 03 ☐ Other: _____

PART THREE: COMPLETE ONLY FOR FENCE/RETAINING WALL

3A. Height _____ feet _____ inches

3B. Indicate whether the fence or retaining wall is to be constructed on one of the following locations:

☐ On party line/property line ☐ Entirely on land of owner ☐ On public right of way/easement

I hereby certify that I have the authority to make the foregoing application, that the application is correct, and that the construction will comply with plans approved by all agencies listed and I hereby acknowledge and accept this to be a condition for the issuance of this permit.

[Signature]
Signature of owner or authorized agent

1/11/2017
Date

Approved: _____ For Chairperson, Historic Preservation Commission

Disapproved: _____ Signature: _____ Date: _____

Application/Permit No.: _____ Date Filed: _____ Date Issued: _____

**THE FOLLOWING ITEMS MUST BE COMPLETED AND THE
REQUIRED DOCUMENTS MUST ACCOMPANY THIS APPLICATION.**

1. WRITTEN DESCRIPTION OF PROJECT

- a. Description of existing structure(s) and environmental setting, including their historical features and significance:

2804 SF HOUSE BUILT IN 1906 LOCATED IN HISTORIC
DISTRICT. 9750 SF PLOT OF LAND. HOME IS 2 STORIES
W. 1 FULL, 3 HALF BATHS AND FINISHED BASEMENT

- b. General description of project and its effect on the historic resource(s), the environmental setting, and, where applicable, the historic district:

PANELS REMOVED FROM BACK OF HOUSE. 8 PANELS
TO BE MOVED TO NORTH FACING SIDE OF HOUSE.
TOTAL # OF FLUSH MOUNTED PANELS: 20 (REDUCED FROM
21)

2. SITE PLAN

Site and environmental setting, drawn to scale. You may use your plot. Your site plan must include:

- a. the scale, north arrow, and date;
- b. dimensions of all existing and proposed structures; and
- c. site features such as walkways, driveways, fences, ponds, streams, trash dumpsters, mechanical equipment, and landscaping.

3. PLANS AND ELEVATIONS

You must submit 2 copies of plans and elevations in a format no larger than 11" x 17". Plans on 8 1/2" x 11" paper are preferred.

- a. *Schematic construction plans*, with marked dimensions, indicating location, size and general type of walls, window and door openings, and other fixed features of both the existing resource(s) and the proposed work.
- b. *Elevations (facades)*, with marked dimensions; clearly indicating proposed work in relation to existing construction and, when appropriate, context. All materials and fixtures proposed for the exterior must be noted on the elevations drawings. An existing and a proposed elevation drawing of each facade affected by the proposed work is required.

4. MATERIALS SPECIFICATIONS

General description of materials and manufactured items proposed for incorporation in the work of the project. This information may be included on your design drawings.

5. PHOTOGRAPHS

- a. Clearly labeled photographic prints of each facade of existing resource, including details of the affected portions. All labels should be placed on the front of photographs.
- b. Clearly label photographic prints of the resource as viewed from the public right-of-way and of the adjoining properties. All labels should be placed on the front of photographs.

6. TREE SURVEY

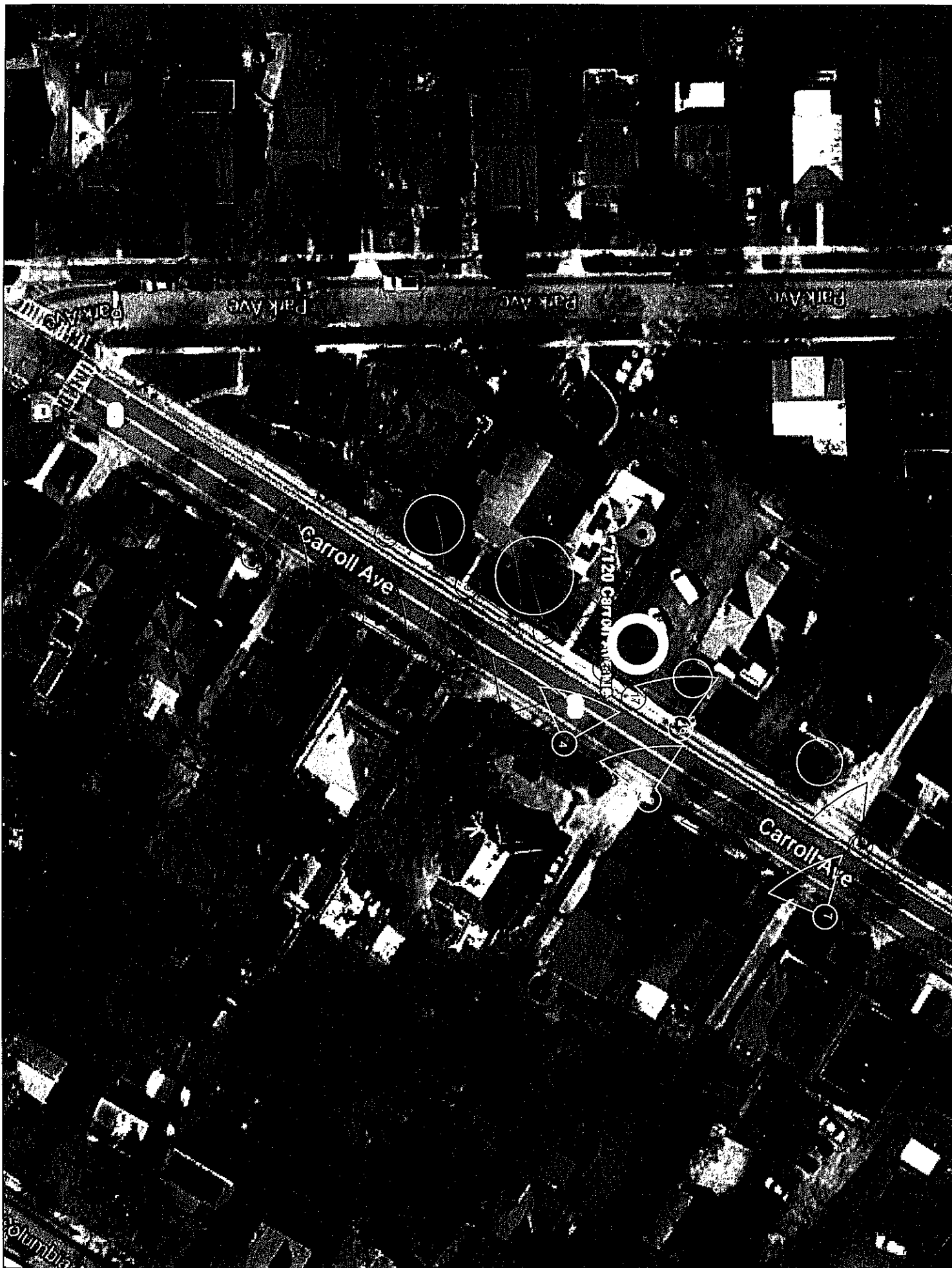
If you are proposing construction adjacent to or within the dripline of any tree 6" or larger in diameter (at approximately 4 feet above the ground), you must file an accurate tree survey identifying the size, location, and species of each tree of at least that dimension.

7. ADDRESSES OF ADJACENT AND CONFRONTING PROPERTY OWNERS

For **ALL** projects, provide an accurate list of adjacent and confronting property owners (not tenants), including names, addresses, and zip codes. This list should include the owners of all lots or parcels which adjoin the parcel in question, as well as the owner(s) of lot(s) or parcel(s) which lie directly across the street/highway from the parcel in question.

HAWP APPLICATION: MAILING ADDRESSES FOR NOTIFYING
[Owner, Owner's Agent, Adjacent and Confronting Property Owners]

Owner's mailing address 7120 CARROLL AVE TAKOMA PARK, MD 20912	Owner's Agent's mailing address 9000 VIRGINIA MANOR RD BELTSVILLE, MD 20705
Adjacent and confronting Property Owners mailing addresses	
7124 CARROLL AVE TAKOMA PARK, MD 20912	7118 CARROLL AVE TAKOMA PARK, MD 20912
117 PARK AVE TAKOMA PARK, MD 20912	7115 CARROLL AVE TAKOMA PARK, MD 20912
7117 CARROLL AVE TAKOMA PARK, MD 20912	7121 CARROLL AVE TAKOMA PARK, MD 20912



LOCATIONS OF PHOTOS TAKEN ON FOLLOWING PAGES

(15)



1



2

The following photos match up with the numbers on the site plan provided. Red view ports match with photos that proposed panels cannot be seen. Yellow are ports where proposed panels may be seen. Blue circles are trees that may obstruct the view.



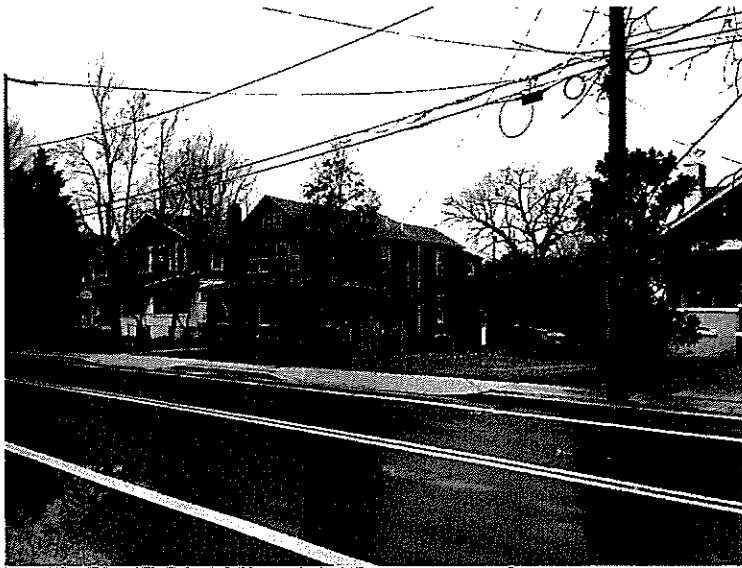
3



3A



4



5



6



7



13



14



15

19



16



17

20



18



18A



19



20

ABBREVIATIONS		ELECTRICAL NOTES		INDEX		LEGEND		LICENSE											
A BLOG CNC D DC ECG (E) EAT G GALV GEC GND HOG I IMP INVS ISC KVA KW LW MIN (N) NEC NIC NTS OC P PL PV PVC SCH SS SSD SIC SMH TYP UN UPS V Vmp Voc W WATT 3R	AMPERE ALTERNATING CURRENT BUILDING CONCRETE COMBINER BOX DISTRIBUTION PANEL DIRECT CURRENT EQUIPMENT GROUNDING CONDUCTOR EXISTING ELECTRICAL METALLIC TUBING SOLAR GUARD METER GALVANIZED GROUNDING ELECTRODE CONDUCTOR GROUND HOT DIPPED GALVANIZED CURRENT CURRENT AT MAX POWER INVERTERS SHORT CIRCUIT CURRENT KILOVOLT AMPERE KILOWATT LOAD BEARING WALL MINIMUM NEW NATIONAL ELECTRIC CODE NOT IN CONTRACT NOT TO SCALE ON CENTER PANEL BOARD PROPERTY LINES PHOTOVOLTAIC POLYVINYL CHLORIDE SUBPANEL SCHEDULE STAINLESS STEEL SEE STRUCTURAL DRAWINGS STANDARD TESTING CONDITIONS SOLAR WATER HEATER TYPICAL UNLESS OTHERWISE NOTED UNINTERRUPTIBLE POWER SUPPLY VOLT VOLTAGE AT MAX POWER VOLTAGE AT OPEN CIRCUIT WATT NEMA 3R, RAIN TIGHT	1. WHERE ALL TERMINALS OF THE DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A SIGN WILL BE PROVIDED WARNING OF THE HAZARDS PER ART. 690.17. 2. EACH UNGROUNDED CONDUCTOR OF THE MULTIMERE BRANCH CIRCUIT WILL BE IDENTIFIED BY PHASE AND SYSTEM PER ART. 210.5. 3. A NATIONALLY-RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH ART. 110.3. 4. CIRCUITS OVER 250V TO GROUND SHALL COMPLY WITH ART. 250.97, 250.97(B). 5. DC CONDUCTORS EITHER DO NOT ENTER BUILDING OR ARE RUN IN METALLIC RACEWAYS OR ENCLOSURES TO THE FIRST ACCESSIBLE DC DISCONNECTING MEANS PER ART. 690.31(E). 6. ALL WIRES SHALL BE PROVIDED WITH STRAIN RELIEF AT ALL ENTRY INTO BOXES AS REQUIRED BY UL LISTING. 7. MODULE FRAMES SHALL BE GROUNDED AT THE UL-LISTED LOCATION PROVIDED BY THE MANUFACTURER USING UL LISTED GROUNDING HARDWARE. 8. ALL EXPOSED METAL PARTS (MODULE FRAMES, RAIL, BOXES, ETC.) SHALL BE GROUNDED USING UL LISTED LAY-IN LUGS LISTED FOR THE PURPOSE. POSTS SHALL BE MADE ELECTRICALLY CONTINUOUS WITH ATTACHED RAIL. 9. MODULE FRAMES, RAIL, AND POSTS SHALL BE BONDED WITH EQUIPMENT GROUND CONDUCTORS AND GROUNDED AT THE MAIN ELECTRIC PANEL. THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE SIZED ACCORDING TO ART. 250.166(9) & 690.47.	PV1 COVER SHEET PV2 SITE PLAN PV3 STRUCTURAL WEBS PV4 STRUCTURAL WEBS - CONTINUED PV5 SINGLE LINE Cutsheets Attached	1. THIS SYSTEM IS GRID-INTEGRATED VIA A UL-LISTED POWER-CONDITIONING INVERTER. THIS SYSTEM HAS NO BATTERIES, NO UPS, AND INVERTER INPUT CIRCUIT ARE UNGROUNDED. 2. SOLAR MOUNTING FRAMES ARE TO BE GROUNDED. 3. ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2011 NATIONAL ELECTRIC CODE.	(U) (E) UTILITY METER (6) (IM) INVERTER W/ INTEGRATED DC DISCO & WARNING LABELS. (3),(4),(5),(6) (DC) DC DISCONNECT (4),(5) (AC) AC DISCONNECT (3),(4),(5),(6) (J) JUNCTION BOX (C) DC COMBINER BOX (7),(9) (D) DISTRIBUTION PANEL (1),(2) (LC) LOAD CENTER (3),(4),(5),(6) (U) DEDICATED PV SYSTEM METER CONDUIT RUN ON EXTERIOR GATE --- INTERIOR EQUIPMENT	<p>JURISDICTION NOTES</p> <p>- ALL ELECTRICAL WORK SHALL COMPLY WITH THE 2011 NEC - ALL WORK SHALL COMPLY WITH THE 2012 IRC.</p> <p>-Structural design for the supporting structure of the house was performed in accordance with IRC/IBC 2012 -Structural design for the rack system and mounting hardware was performed in accordance with IRC/IBC 2012</p>													
<p>CONSTRUCTION - THE INFORMATION HEREIN CONTAINED SHALL NOT BE USED FOR THE DESIGN OF ANY OTHER PROJECT. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY OTHER PROJECT. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY OTHER PROJECT.</p>		<p>200 NUMBER: JB-209125 00</p>		<p>PROJECT OWNER: KAMAU AMEN 7120 CARROLL AVE TAKOMA PARK, MD 20912 3018912488</p>		<p>DESCRIPTION: Karmou Amen RESIDENCE 4.8 KW PV ARRAY COVER SHEET</p>		<p>DESIGN: Alex Tos</p>											
<p>PROJECT: RESIDENTIAL PROJECT MANAGER: SC L-Foot: 1 Log - Downslope PAYMENT TYPE: PPA</p>		<p>MODULES: (20) YINGLI # Y1240P-29b WARRANTY: 10 ABB # PVI-6000-OUTD-US-2-A</p>		<p>REVISIONS:</p> <table><thead><tr><th>REV</th><th>BY</th><th>DATE</th><th>COMMENTS</th></tr></thead><tbody><tr><td>REV 8</td><td>TS</td><td>02/27/16</td><td>Modules relocated from 14'W to 14'F5</td></tr><tr><td>REV C</td><td>Atts</td><td>11/10/16</td><td>Modules relocated, domestic</td></tr></tbody></table>		REV	BY	DATE	COMMENTS	REV 8	TS	02/27/16	Modules relocated from 14'W to 14'F5	REV C	Atts	11/10/16	Modules relocated, domestic	<p>3065 Chandler Way San Marcos, CA 92069 T(800) 639-1028 F(650) 639-1029 (888) 506-0177 (705-248) www.solarcity.com</p>	
REV	BY	DATE	COMMENTS																
REV 8	TS	02/27/16	Modules relocated from 14'W to 14'F5																
REV C	Atts	11/10/16	Modules relocated, domestic																

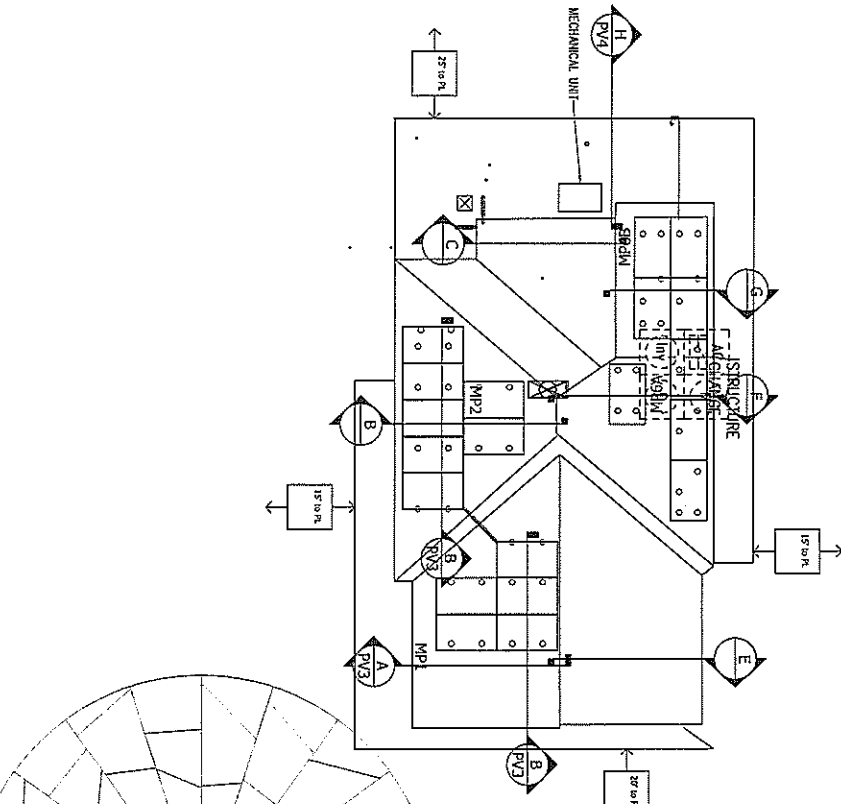
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MP3	- Roof Mounted SEE PV3, 4 DETAILS C,F,G PITCH: 33 ARRAY PITCH: 33 AZIMUTH: 212 ARRAY AZIMUTH: 212 MATERIAL: Comp Shingle STORY: Two Stories
MP1	- ROOF MOUNTED SEE PV3 DETAILS A,B,C PITCH: 33 ARRAY PITCH: 33 AZIMUTH: 212 ARRAY AZIMUTH: 212 MATERIAL: Comp Shingle STORY: 2 Stories

MP2	- ROOF MOUNTED SEE PV3, 4 DETAILS C,D,E PITCH: 33 ARRAY PITCH: 33 AZIMUTH: 212 ARRAY AZIMUTH: 212 MATERIAL: Comp Shingle STORY: 2 Stories
MP3	- Roof Mounted SEE PV3, 4 DETAILS C,F,G PITCH: 33 ARRAY PITCH: 33 AZIMUTH: 212 ARRAY AZIMUTH: 212 MATERIAL: Comp Shingle STORY: Two Stories

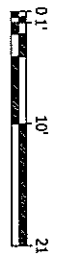
LEGEND

- (E) UTILITY METER (6)
- INVERTER W/ INTEGRATED DC DISCO & WARNING LABELS (3)(4)(5)(6)
- DC DISCONNECT (4)(5)
- AC DISCONNECT (3)(4)(5)(6)
- JUNCTION BOX
- DC COMBINER BOX (7)(9)
- DISTRIBUTION PANEL (1)(2)
- LOAD CENTER (3)(4)(5)(6)
- DEDICATED PV SYSTEM METER
- CONDUIT RUN ON EXTERIOR
- CONDUIT RUN ON INTERIOR
- GATE
- INTERIOR EQUIPMENT

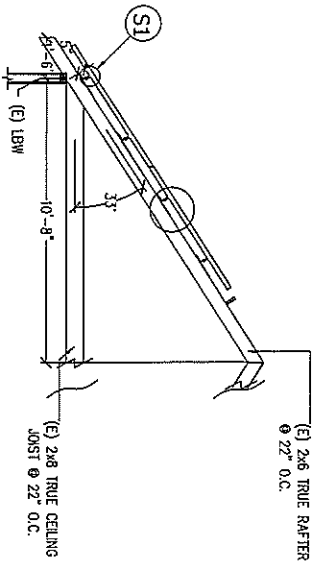


SITE PLAN

Scale: 3/32" = 1'



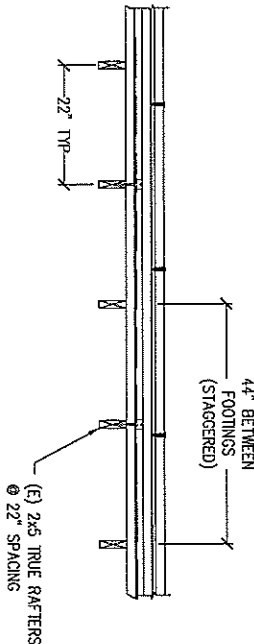
COMPONENTS - THE INFORMATION HEREIN CONTAINED SHALL NOT BE USED FOR THE BENEFIT OF ANYONE EXCEPT SOLARITY INC. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SOLARITY INC.	
JOB NUMBER: JB-209125 00	PROJECT NAME: KAMAU AMEN 7120 CARROLL AVE TAKOMA PARK, MD 20912
MARKET: RESI	WORKS: (20) VINYL # M240P-29b
PROJECT MANAGER: [blank]	WORKING STYLE: SC 1 - Foot: 1 Log - Downslope
PAYMENT TYPE: PPA	INTEREST: ABB # PV-6000-OUTD-US-Z-A
PROJECT OWNER: KAMAU AMEN 7120 CARROLL AVE TAKOMA PARK, MD 20912	
DESIGNER: Kamau Amen RESIDENCE 4.8 KW PV ARRAY	
SHEET: PV 2	DATE: 11/10/2016
REV: c	DATE: 11/10/2016
3555 GARDEN WAY T16501 (630-638-1023) F16501 (630-638-1023) (888) 524-CTEC (766-7489) www.solarity.com	



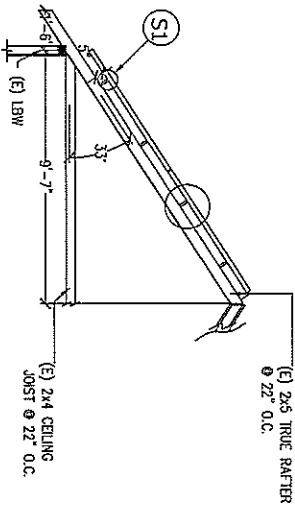
B SIDE VIEW OF MP2 NTS

MP2	X-SPACING	X-CANTILEVER	Y-SPACING	Y-CANTILEVER	NOTES
LANDSCAPE	24"	24"			
PORTRAIT	24"	24"			
RAFTER	2"x6" @ 22" OC		ROOF AZ: 213	PITCH: 33	STORIES: 2
C.I.	2"x8" @ 22" OC		Array AZ: 212	PITCH: 33	Comp Shingle - Solid Sheathing

RAFTER: 2x6
SUPPORT: 2x8
MAX SPAN: 10'-8"
ALL MEMBERS ARE TRUE



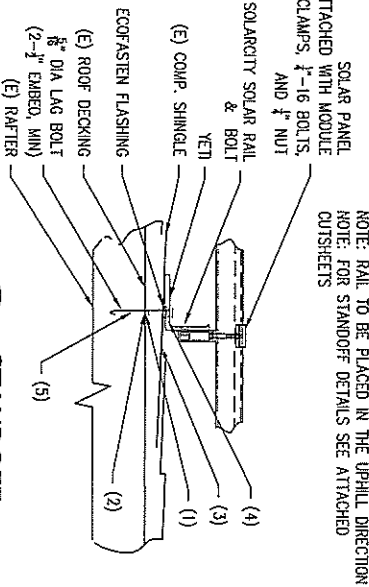
B FRONT VIEW OF MP1, MP2
Scale: 1/2" = 1'



A SIDE VIEW OF MP1 NTS

MP1	X-SPACING	X-CANTILEVER	Y-SPACING	Y-CANTILEVER	NOTES
LANDSCAPE	24"	24"			
PORTRAIT	24"	24"			
RAFTER	2"x5" @ 22" OC		ROOF AZ: 213	PITCH: 33	STORIES: 2
C.I.	2"x4" @ 22" OC		Array AZ: 212	PITCH: 33	Comp Shingle - Solid Sheathing

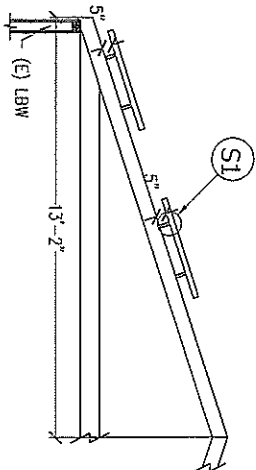
RAFTER: 2x5 TRUE
SUPPORT: 2x5 TRUE, 2x4
MAX SPAN: 9'-7"



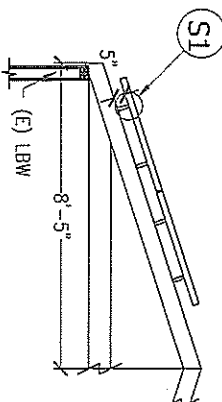
C STANDOFF
Scale: 1/2" = 1'

DISCREPANCY - THE INFORMATION HEREIN CONTAINED SHALL NOT BE USED FOR THE BENEFIT OF ANYONE EXCEPT SOLARITY INC. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SOLARITY INC.		JOB NUMBER: JB-209125 00 PROJECT: KAMAU AMEN 7120 CARROLL AVE TAKOMA PARK, MD 20912 PROJECT OWNER: KAMAU AMEN 7120 CARROLL AVE TAKOMA PARK, MD 20912 PROJECT ARCHITECT: KAMOU AMEN RESIDENCE 4.8 KW PV ARRAY PROJECT ENGINEER: Alex Tos PROJECT DATE: 11/10/2016 PROJECT NAME: STRUCTURAL VIEWS	
DRAWN BY: PPA CHECKED BY: ABB # PV-6000-OUTD-US-2-A	WORKSHEET: (20) YINGLI # 11240P-29b HOUSING STYLE: SC L-Foot: 1 Log - Downslope FINISH TYPE: PPA	PROJECT NUMBER: 3018912488	PROJECT NAME: STRUCTURAL VIEWS

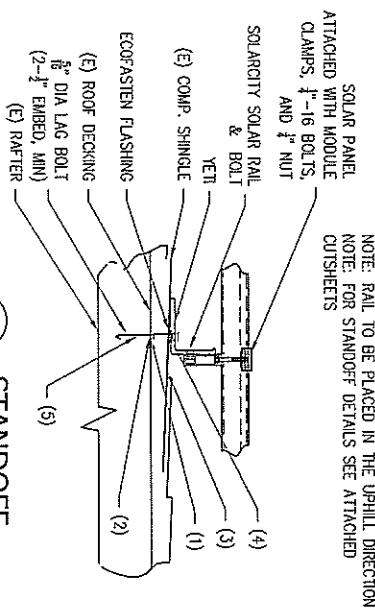
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				NOTES
MP6A	X-SPACING	X-CANTILEVER	Y-SPACING	Y-CANTILEVER
LANDSCAPE	66"	24"		
PORTRAIT	66"	24"		
RAFTER	2x6 @ 22" OC		ROOF AZL	180 PITCH 18
C.I.	2x8 @14" OC		WALL AZL	180 PITCH 18
			Comp Shingle	STORIES: 2



			NOTES
MPJB	X-SPACING	X-CANTILEVER	
LANDSCAPE	72"	24"	
PORTRAIT	72"	24"	STAGGERED
RAFTER	2x6 @ 24" OC	ROOF AZ	180 PITCH 18
C.J.	2x8 @24" OC	ARROW AZ	160 PITCH 18
		Comp Shingle	STORIES: 2



- | | |
|-----|--|
| | INSTALLATION ORDER |
| (1) | LOCATE RASTER, MARK HOLE LOCATION, AND DRILL PILOT HOLE. |
| (2) | SEAL PILOT HOLE WITH POLYURETHANE SEALANT. |
| (3) | INSERT EPOFASTEN FLASHING. |
| (4) | PLACE THE LEVELING FOOT. |
| (5) | INSTALL LAG WITH SEALING WASHER. |

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WARNING: PHOTOVOLTAIC POWER SOURCE

Label Location:
(C)(CB)

Per Code:

NEC 690.31.G.3

Label Location:

(DC) (INV)

Per Code:

NEC 690.14.C.2

PHOTOVOLTAIC DC DISCONNECT

MAXIMUM POWER
POINT CURRENT (ImP) A
MAXIMUM POWER
POINT VOLTAGE (VmP) V
MAXIMUM SYSTEM
VOLTAGE (Voc) V
SHORT-CIRCUIT
CURRENT (Isc) A

Label Location:

(DC) (INV)

Per Code:

NEC 690.53

WARNING

ELECTRIC SHOCK HAZARD
IF A GROUND FAULT IS INDICATED
NORMALLY GROUNDED
CONDUCTORS MAY BE
UNGROUNDING AND ENERGIZED

Label Location:

(DC) (INV)

Per Code:

NEC 690.5(C)

WARNING

ELECTRICAL SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION
DC VOLTAGE IS
ALWAYS PRESENT WHEN
SOLAR MODULES ARE
EXPOSED TO SUNLIGHT

Label Location:

(DC) (CB)

Per Code:

NEC 690.17(4)

PHOTOVOLTAIC AC DISCONNECT

MAXIMUM AC
OPERATING CURRENT A
MAXIMUM AC
OPERATING VOLTAGE V

Label Location:

(AC) (POI)

Per Code:

NEC 690.54

WARNING

ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

Label Location:

(AC)(POI)

Per Code:

NEC 690.17.E

WARNING

ELECTRIC SHOCK HAZARD
THE DC CONDUCTORS OF THIS
PHOTOVOLTAIC SYSTEM ARE
UNGROUNDING AND
MAY BE ENERGIZED

Label Location:

(DC) (INV)

Per Code:

NEC 690.35(F)

TO BE USED WHEN
INVERTER IS
UNGROUNDING

PHOTOVOLTAIC POINT OF INTERCONNECTION

WARNING: ELECTRIC SHOCK
HAZARD. DO NOT TOUCH
TERMINALS. TERMINALS ON
BOTH THE LINE AND LOAD SIDE
MAY BE ENERGIZED IN THE OPEN
POSITION FOR SERVICE
DEFECTION AND MAIN BREAKER
PI/POWER SOURCE
MAXIMUM AC
OPERATING CURRENT A
MAXIMUM AC
OPERATING VOLTAGE V

Label Location:

(POI)

Per Code:

NEC 690.17.4; NEC 690.54

CAUTION

DUAL POWER SOURCE
SECOND SOURCE IS
PHOTOVOLTAIC SYSTEM

Label Location:

(POI)

Per Code:

NEC 690.64.B.4

CAUTION

PHOTOVOLTAIC SYSTEM
CIRCUIT IS BACKFEED

Label Location:

(D) (POI)

Per Code:

NEC 690.64.B.4

WARNING

INVERTER OUTPUT
CONNECTION
DO NOT RELOCATE
THIS OVERCURRENT
DEVICE

Label Location:

(POI)

Per Code:

NEC 690.64.B.7

DISCLAIMER: THE INFORMATION HEREIN CONTAINED SHALL NOT BE USED FOR
THE DESIGN OF ANY ELECTRICAL SYSTEM WITHOUT THE GUIDANCE OF A
LICENSED PROFESSIONAL ENGINEER OR ARCHITECT. THE REPUTATION OF SOLARCITY
IN WHOLE OR IN PART TO OTHERS OUTSIDE THE REPUTATION OF SOLARCITY
EXCEPT IN CONNECTION WITH THE SALE AND USE OF THE RESPECTIVE
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Label Set



3055 Glenview Way
San Jose, CA 95128
T: (408) 504-1020 F: (408) 438-1020
(800) 504-CITY (755-2489) www.solarcity.com

YGE240 SERIES

YL240P-29b
YL235P-29b
YL225P-29b



COMPANY

Yingli Green Energy (NYSE:YGE) is one of the world's largest fully vertically integrated PV manufacturers. With over 2 GW of modules installed globally, we are a leading solar energy company built upon proven product, reliability and sustainable performance. Founded in 1998, Yingli Green Energy serves customers through our U.S. subsidiary, Yingli America, co-headquartered in New York and San Francisco. We are the first renewable energy company and the first Chinese company to sponsor the FIFA World Cup™.

PERFORMANCE

Industry leading in-house manufacturing of polycrystalline, ingots, wafers, cells and modules ensures tight control of our material and production quality.

High performance, multicrystalline solar cells deliver a module series efficiency of up to 14.7%, reducing installation costs and maximizing the kWh output per unit area.

Power tolerance of +/-3% minimizes PV system mismatch losses.

QUALITY & RELIABILITY

Robust, corrosion resistant aluminum frame independently tested to withstand wind and snow loads of up to 50 psf and 113 psf, respectively, ensuring a stable mechanical life.

Manufacturing facility certified to ISO 9001 Quality Management System standards.

Module packaging optimized to protect product during transportation and minimize on-site waste.

WARRANTIES

Extensive 5-year limited product warranty and a 25-year limited power warranty.

Limited power warranty* = 90% of the minimum rated power output for 10 years, 80% of the minimum rated power output for 25 years.

*In compliance with our warranty terms and conditions.

QUALIFICATIONS & CERTIFICATES

UL 720 and UL 1703, UL Fire Safety Case, CEC, FSEC, ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007, 254000



YGE240 SERIES

ELECTRICAL PERFORMANCE

Electrical Parameters at Standard Test Conditions (STC)

Module name	YGL 240	YGL 235	YGL 230	YGL 225
Module type	YL240P-29b	YL235P-29b	YL230P-29b	YL225P-29b
Power output (Watt/meter)	240	235	230	225
Power output (Watt/meter)	240	235	230	225
Module efficiency	14.7	14.4	14.1	13.8
Voltage at Pmax	30.2	29.5	29.0	28.5
Current at Pmax	7.95	7.95	7.95	7.95
Short-circuit current	8.45	8.34	8.10	8.03

Thermal Parameters at Thermal Operating Cell Temperature (NOCT)

Module name	YGL 240	YGL 235	YGL 230	YGL 225
Module type	YL240P-29b	YL235P-29b	YL230P-29b	YL225P-29b
Power output (Watt/meter)	240	235	230	225
Module efficiency	14.7	14.4	14.1	13.8
Voltage at Pmax	30.2	29.5	29.0	28.5
Current at Pmax	7.95	7.95	7.95	7.95
Short-circuit current	8.45	8.34	8.10	8.03

THERMAL CHARACTERISTICS

Parameter	YGL 240	YGL 235	YGL 230	YGL 225
Maximum operating cell temperature	44 ± 1.2	44 ± 1.2	44 ± 1.2	44 ± 1.2
Temperature coefficient of Pmax	-0.45	-0.45	-0.45	-0.45
Temperature coefficient of Voc	-0.37	-0.37	-0.37	-0.37
Temperature coefficient of Isc	0.06	0.06	0.06	0.06

OPERATING CONDITIONS

Max. system voltage	600Vdc
Max. system current	15A
Operating temperature range	-40 to 119°F (-40 to 48°C)
Max. static load (front & rear)	113 psf (5000 Pa)
Max. static load (back)	59 psf (2500 Pa)
Hailstone Impact	1 in (25 mm) at 50 mph (80 km/h)

CONSTRUCTION MATERIALS

Front cover (polycrystalline silicon)	Low iron glass (tempered) 2.3 mm
Cell (polycrystalline silicon)	401 polycrystalline / monocrystalline / 156 mm x 156 mm / 60 W
Encapsulant (front & back)	Ethylene vinyl acetate (EVA)
Frame (anodized aluminum)	Aluminum alloy / anodized layer of black
Antireflection (monocrystalline silicon)	99.5
Cells (polycrystalline silicon)	99.5
Back cover (polycrystalline silicon)	99.5
Ring connector (monocrystalline silicon)	99.5

* The specifications in this datasheet are not guaranteed and are subject to change without prior notice.

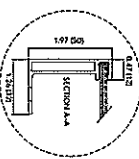
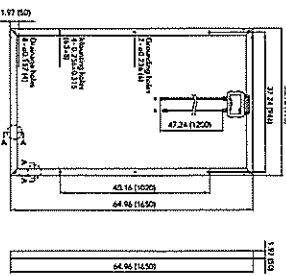
GENERAL CHARACTERISTICS

Dimensions (LxWxH)	445x1650mm / 24.9x10.9 ft
Weight	42.0 kg (92.6 lb)

PACKAGING SPECIFICATIONS

Number of modules per pallet	20
Number of pallets per 35 container	35
Packing box dimensions (LxWxH)	41 x 110 x 110 cm / 16.1 x 43.3 x 43.3 in
Box weight	941 kg (2075 lb)

Unit: inch (mm)



Warning: Read the installation and User Manual in its entirety before handling, installing, and operating Yingli modules.

YINGLISOLAR.COM | Yingli America

Yingli Green Energy America, Inc.
info@yinglisolar.com
Tel: +1 (888) 566-8820
YINGLISOLAR.COM | NYSE:YGE



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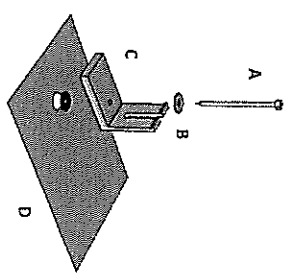
Yeti with Eco-Fasten GreenFasten Flashing

The SolarCity Yeti with Eco-Fasten GreenFasten flashing optimizes strength, performance and aesthetics while structurally attaching solar panels to composition shingle roofs. This engineered connection uses Eco-Fasten's patented, JAPMO-certified "green faster" technology to achieve a watertight seal. 6000 series aluminum offers superb structural and fatigue strength, which in conjunction with anodization offers excellent corrosion resistance even in coastal environments.

- JAPMO-ES-certified for waterproofing – Tested to ICC-609
- Tested in accordance with UL 441 – Waterproofing for rooftop penetrations
- Anodized for long term corrosion resistance and best aesthetics
- No shingle cutting required
- Fast and error-proof installation reduces overall impact on roof
- Compatible with SolarCity Canopy Rail
- Rail is attached using Stainless Steel Fasteners

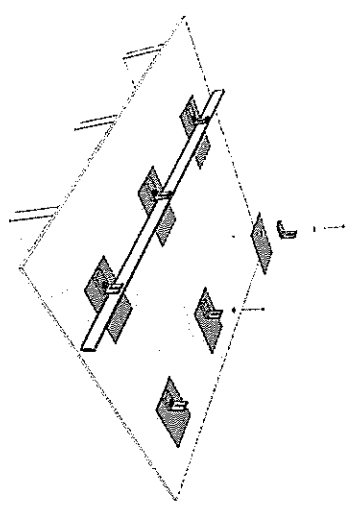
Components

- 5/16" Lag Screw
- Stainless Steel + EPDM Sealing Washer
- Yeti (1-ft-00)
- Eco-Fasten GreenFasten Flashing

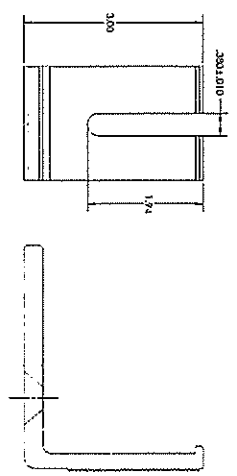
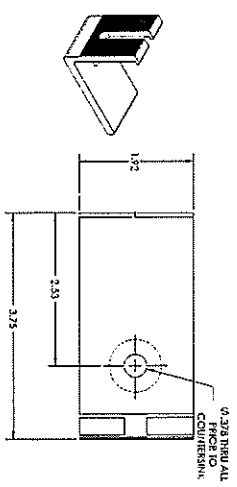


Installation Instructions

- Drill pilot hole in rafter
- Seal pilot hole with roofing sealant
- Insert Eco-Fasten flashing under upper layer of shingle
- Place SolarCity Yeti
- Install lag with sealing washer



Yeti with Eco-Fasten GreenFasten Flashing





Certificate of Compliance

Certificate: 1841082 Master Contract: 173688
Project: 2550432 Date Issued: August 20, 2012
Issued to: Power-One, Inc
740 Calle Plano
Camarillo, CA 93012
USA
Attention: Robert White

*The products listed below are eligible to bear the CSA
Mark shown with adjacent indicators 'C' and 'US' for
Canada and US or with adjacent indicator 'US' for
US only or without either indicator for Canada only.*



By: *Aggarwal*
Issued by: *Brig Aggarwal, P.Eng.*

PRODUCTS

CLASS 5311 09 - POWER SUPPLIES - Distributed Generation Power Systems Equipment
CLASS 5311 89 - POWER SUPPLIES - Distributed Generation - Power Systems Equipment
- Certified to U.S. Standards
Utility Interactive Inverter, Models PVI-6000-OUTD-US, PVI-6000-OUTD-US-W and PVI-5000-OUTD-US,
permanently connected.

Notes:

1. All above models in this series may include expansion board with wireless antennae option and will be identified with model designation including "-Z" suffix at the end.
2. For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record, Annex A of the Certificate of Compliance, or the Descriptive Report.

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