

## MONTGOMERY COUNTY HISTORIC PRESERVATION COMMISSION

<b>Address:</b>	3915 Prospect Street, Kensington	<b>Meeting Date:</b>	9/9/2020
<b>Resource:</b>	Primary One (contributing) Resource <b>Kensington Historic District</b>	<b>Report Date:</b>	9/2/2020
<b>Applicant:</b>	Eric ONeill	<b>Public Notice:</b>	8/26/2020
<b>Review:</b>	HAWP	<b>Tax Credit:</b>	n/a
<b>Case No.:</b>	31/06-20H	<b>Staff:</b>	Dan Bruechert
<b>Proposal:</b>	Solar Panel Installation		

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### RECOMMENDATION

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

### PROPERTY DESCRIPTION

SIGNIFICANCE: Primary One (contributing) Resource within the Kensington Historic District  
 STYLE: Colonial Revival  
 DATE: 1898



*Figure 1: 3915 Prospect St. has non-historic garage and rear additions.*

## **PROPOSAL**

The applicant proposes to install 25 (twenty-five) solar panels on the rear addition and non-historic garage.

## **APPLICABLE GUIDELINES**

When reviewing alterations and new construction within the Kensington Historic District several documents are to be utilized as guidelines to assist the Commission in developing their decision. These documents include the *Approved & Adopted Amendment to the Master Plan for Historic Preservation: Kensington Historic District, Atlas #31/6 (Amendment)*, *Vision of Kensington: A Long-Range Preservation Plan (Vision)*, *Montgomery County Code Chapter 24A (Chapter 24A)*, and the *Secretary of the Interior's Standards for Rehabilitation (Standards)*, and the *Historic Preservation Commission Policy No. 20-01: ADDRESSING EMERGENCY CLIMATE MOBILIZATION THROUGH THE INSTALLATION OF ROOF-MOUNTED SOLAR PANELS*. The pertinent information in these documents is outlined below.

### ***Montgomery County Code, Chapter 24A Historic Resources Preservation***

(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

### ***Kensington Historic District Design Guidelines***

The *Vision* was approved by the Montgomery County Council and was formally adopted by the Historic Preservation Commission. The goal of the *Vision* “was to establish a sound database of information from which to produce a document that would serve the HPC, M-NCPPC, their staff, and the community in wrestling with the protection of historic districts amidst the pressures of life in the 21<sup>st</sup> century.”

In addition, the *Vision* provides a specific physical description of the district as it was at the time of the study, an analysis of character-defining features of the district, a discussion of the challenges facing the district, and a discussion of proposed strategies for maintaining the character of the district, while allowing for appropriate growth and change.

The *Vision* identifies the following, as those features that help define the character of Kensington’s built environment:

- Building Setbacks: Residential and Commercial Patterns
- Rhythm of Spacing between Buildings
- Geographic and Landscape Features
- Scale and Building Height
- Directional Expression of Building
- Roof Forms and Material
- Porches
- Dominant Building Material
- Outbuildings

- Integrity of Form, Building Condition, and Threats
- Architectural Style

The *Amendment* notes that:

*The district is architecturally significant as a collection of late 19<sup>th</sup> and early 20<sup>th</sup> century houses exhibit a variety of architectural styles popular during the Victorian period including Queen Anne, Shingle, Eastlake, and Colonial Revival. The houses share a uniformity of scale, setbacks, and construction materials that contribute to the cohesiveness of the district's streetscapes. This uniformity, coupled with the dominant design inherent in Warner's original plan of subdivision, conveys a strong sense of both time and place, that of a Victorian garden suburb.*

***Secretary of the Interior's Standards for Rehabilitation:***

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

***Chapter 24A***

(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.
- (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.)

***Historic Preservation Commission Policy No. 20-01: ADDRESSING EMERGENCY CLIMATE MOBILIZATION THROUGH THE INSTALLATION OF ROOF-MOUNTED SOLAR PANELS***

Now, THEREFORE:

WHEREAS, Historic Area Work Permit decisions are guided by the criteria in Section 24A, The Secretary of the Interior's Standards for Rehabilitation, and pertinent guidance from applicable master plan amendments and/or site or district-specific studies;

WHEREAS, The Secretary of the Interior's Standards for Rehabilitation as interpreted by the National Park Service limit the placement of rooftop solar panels under Standards 2, 9, and 10 to less conspicuous locations;

WHEREAS, the County Council has established a Climate Emergency;

WHEREAS, the Historic Preservation is a body established by the County Executive and County Council;

WHEREAS, Section 24-8(b)(6) states, “In balancing the interest 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;”

WHEREAS, the widespread use of solar panels, both for hot water and for electricity production, will reduce greenhouse gases in the county, in accordance with the aims of the Emergency Climate Mobilization resolution (Resolution No.: 18-974), it shall be the policy of the Historic Preservation Commission that:

1. The preferred locations for solar panel installation(s) on a designated historic site or an historic resource located within an historic district is a) on the rear of the property, b) on non-historic building additions, c) on accessory structures, or d) in ground-mounted arrays;
2. If it is not feasible to install solar panels in one of the identified preferred locations due to resource orientation or other site limitations; and,
3. The roof is determined to be neither architecturally significant, nor a character-defining feature of the resource, nor is it a slate or tile roof, that unless it can be demonstrated that the solar array will be installed without damaging the historic character of the resource or historic fabric; then
4. The public welfare is better served by approving a Historic Area Work Permit for solar panels on all visible side or front roof slopes under Section 24A-8(b)(6).
5. A Historic Area Work Permit (HAWP) is required for all work referenced in this policy.

### **STAFF DISCUSSION**

The applicant proposes to install 25 (twenty-five) roof-mounted solar panels in four arrays on the non-historic rear addition and the non-historic attached garage (both the rear addition and garage appear to have been reviewed and approved by the HPC in 1987).

Twenty-two of the proposed solar panels are on the rear slope of the garage or on the non-historic addition and will not be visible from the public right-of-way. Three solar panels are proposed for the front-facing slope of the attached garage. The solar panels that will not be visible from the public right-of-way should be approved under the Adopted Solar Policy and 24A-8(b)(1) and (d). Staff finds that the remaining three panels should be approved under the Solar Policy which identifies “non-historic building additions” as a preferred location for roof-mounted solar panels. Even though these panels will be visible from the right-of-way, Staff finds they will not detract from the historic character of the house and recommends approval.





Figure 2: Front elevation of 3915 Prospect St.

## **STAFF RECOMMENDATIONS**

Staff recommends that the Commission approve the HAWP application under the Criteria for Issuance in Chapter 24A-8(b)(1) and (d), having found that the proposal, is consistent with and compatible in character with the purposes of Chapter 24A; The Kensington Historic District Amendment and the *Vision* for Kensington; the HPC Policy on Roof-Mounted Solar Panels;

and with the Secretary of the Interior's Standards for Rehabilitation #2;

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 final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff's discretion;

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 [dan.bruechert@montgomeryplanning.org](mailto:dan.bruechert@montgomeryplanning.org) to schedule a follow-up site visit.



FOR STAFF ONLY:  
HAWP# \_\_\_\_\_  
DATE ASSIGNED \_\_\_\_\_

# APPLICATION FOR HISTORIC AREA WORK PERMIT

HISTORIC PRESERVATION COMMISSION  
301.563.3400

## APPLICANT:

Name: ERIC ONEILL

E-mail: WOLFSRUN@HOTMAIL.COM

Address: 3915 PROSPECT ST

City: KENSINGTON Zip: 20895

Daytime Phone: 202-203-8265

Tax Account No.: 01020743

## AGENT/CONTACT (if applicable):

Name: AARON WILLIAMS

E-mail: AWILLIAMS@FUSIONSS.NET

Address: 3600 COMMERCE DR, #601

City: BALTIMORE Zip: 21227

Daytime Phone: 443-425-5988

Contractor Registration No.: MHIC30991

**LOCATION OF BUILDING/PREMISE:** MIHP # of Historic Property \_\_\_\_\_

Is the Property Located within an Historic District? ☒ Yes/District Name KENSINGTON-ARK  
\_\_\_\_\_ No/Individual Site Name \_\_\_\_\_

Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application.

Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information.

Building Number: \_\_\_\_\_ Street: \_\_\_\_\_

Town/City: \_\_\_\_\_ Nearest Cross Street: \_\_\_\_\_

Lot: \_\_\_\_\_ Block: \_\_\_\_\_ Subdivision: \_\_\_\_\_ Parcel: \_\_\_\_\_

**TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:**

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> New Construction   | <input type="checkbox"/> Deck/Porch          | <input type="checkbox"/> Shed/Garage/Accessory Structure |
| <input type="checkbox"/> Addition           | <input type="checkbox"/> Fence               | <input type="checkbox"/> Solar                           |
| <input type="checkbox"/> Demolition         | <input type="checkbox"/> Hardscape/Landscape | <input type="checkbox"/> Tree removal/planting           |
| <input type="checkbox"/> Grading/Excavation | <input type="checkbox"/> Roof                | <input type="checkbox"/> Window/Door                     |
|   |  | <input checked="" type="checkbox"/> Other: <u>SOLAR</u>  |

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

Aaron Williams

8/11/2020

Signature of owner or authorized agent

Date

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

<b>Owner's mailing address</b> 3915 PROSPECT ST KENSINGTON, MD 20895	<b>Owner's Agent's mailing address</b> 3600 COMMERCE DR, # 601, BALTIMORE, MD 21227
<b>Adjacent and confronting Property Owners mailing addresses</b>	
3911 Prospect St Larry and Mary OTT ott.lawrence@gmail.com	3912 Prospect St Sarah and Jay Berkholtz john.a.berkholtz@gmail.com
3918 Prospect St John and Christina Blazina vjblazina@gmail.com	3923 Prospect St Helen and Charles Wilkes hcrettierwilkes@gmail.com

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

STANDARD 2 STORY SINGLE FAMILY HOME, CRAFTSMAN STYLE W/ FRONT AND BACK YARD

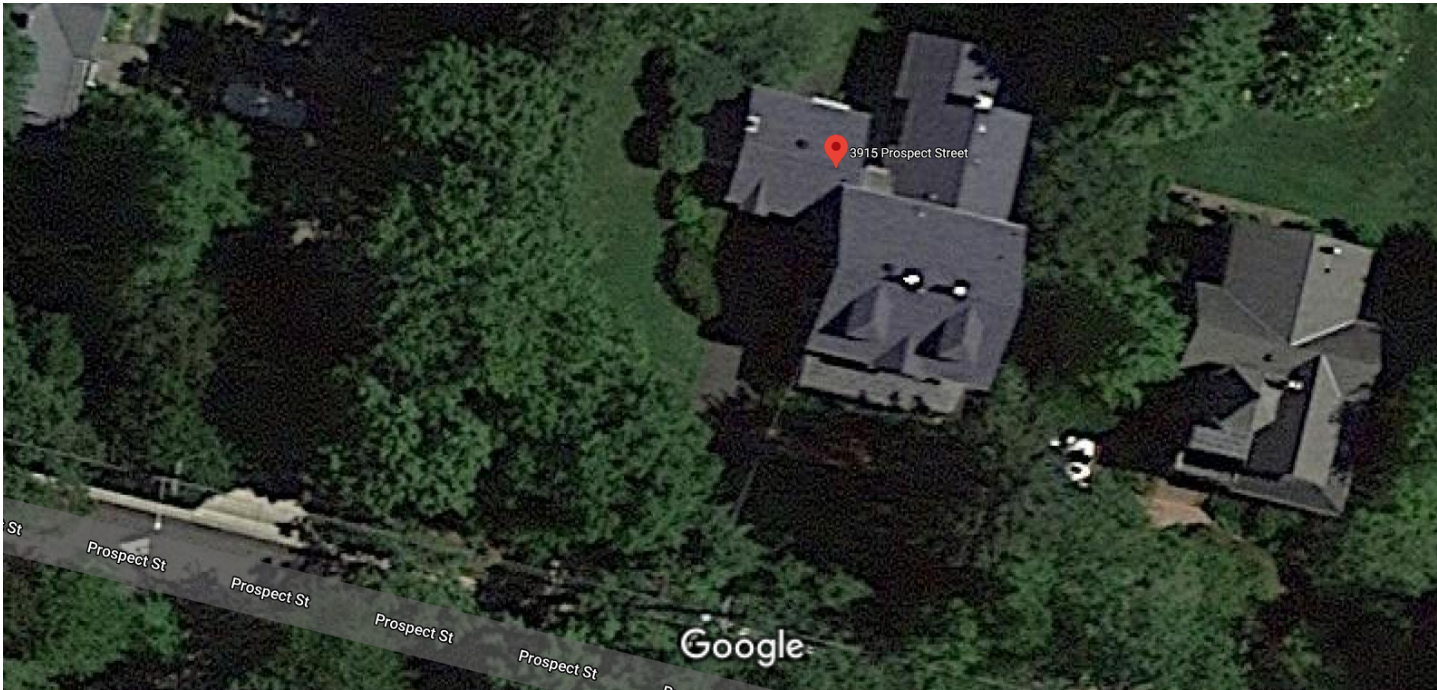
Description of Work Proposed: Please give an overview of the work to be undertaken:

INSTALLING 25 ROOF MOUNTED SOLAR PANELS ON 3 ROOF SURFACES ON THE REAR OF THE HOME, AND 3 PANELS ON THE FRONT OF THE GARAGE, WHICH WILL BE OBSCURED BY TREES.

Work Item 1: <u>SOLAR</u>	
Description of Current Condition:  HOME IN EXCELLENT CONDITION	Proposed Work:  INSTALL 25 SOLAR PANELS ON 4 ROOF SURFACES
Work Item 2: _____	
Description of Current Condition:	Proposed Work:
Work Item 3: _____	
Description of Current Condition:	Proposed Work:



Google Maps 3915 Prospect St



Imagery ©2020 Commonwealth of Virginia, U.S. Geological Survey, Map data ©2020 20 ft



3915 Prospect St

Kensington, MD 20895  
Building



Directions



Save



Nearby



Send to your  
phone



Share

Photos





**Scott A. Kirby**

Structural Consultant

2 Hedricks Ct.  
Parkton, MD 21120  
410-409-2079

July 30, 2020

To: Lumina Solar  
3701 Commerce Drive, Suite 108  
Baltimore, MD 21227

Subject: Certification Letter  
Eric Oneill Residence  
3911 Prospect Street  
Kensington, MD 20895

To Whom It May Concern,

A team provided by Lumina Solar performed a jobsite observation of the existing framing and it's condition at the above referenced address. The attached structural calculations are based upon this observation, and are only deemed valid if the information provided is true and accurate.

The purpose of this structural review is to determine the adequacy of the existing roof framing to support the additional loading due to the installation of the solar PV addition shown on the attached Lumina Solar drawings for the above referenced residence. This review applies to the section of roof that is directly supporting the solar PV system and its supporting elements.

The roof structure (Roof A, B, C & D) consists of asphalt shingles on plank decking on roofs A & B, and roof plywood on roofs C & D. The plank decking and plywood is supported by 2x10 rafters at 16" on center and pre-manufactured gable trusses that are spaced at 24" on center respectively. The rafters are sloped at approximately 31 degrees. The top chords of the trusses, which consist of 2x4 sections, are sloped at approximately 18 degrees. The bottom chord and web members also consist of 2x4 sections. The truss members are connected with steel gusset plates. The overall span of roof A & B, and B & C is approximately 23'-3" and 23'-2" respectively. The maximum unsupported projected horizontal top chord span on roof A & B, and B & C is approximately 13'-9" and 6'-3" respectively.

The existing roof structures (Roofs A, B, C & D) are judged to be adequate to resist the additional loading imposed by the installation of the solar panels. The spacing of the roof attachment points should be kept to a maximum of 48" on center with a staggered pattern to ensure proper distribution of loads.

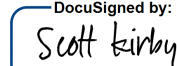

**Design Criteria:**

- Applicable Codes = 2018 IBC/IRC, ASCE/SEI 7-16, NDS-18
- Roof Dead Load = 9.41 psf
- Roof Live Load = 30 psf
- Wind Speed = 115 mph, Exposure B, Risk Category II
- Ground Snow Load = 30 psf
- Roof Snow Load = 30 psf

Please contact me with any further questions or concerns regarding this project.

Sincerely,

DocuSigned by:



  
CAD180010D814CD  
Scott A. Kirby, PE

Structural Engineer

DocuSigned by:

7/30/2020

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Maryland.

License No.: 41308 Expiration Date: 01-06-22

# Scott A. Kirby

Structural Consultant

2 Hedricks Ct.

Parkton, MD 21120

410-409-2079

## Gravity Loading

### Roof Snow Load Calculations

Ground Snow Load, $p_g$ =	30 psf	(Per Local Building Department)
Flat Roof Snow Load, $p_f = 0.7C_eC_tI_s p_g$		(ASCE 7, Eq. 7.3-1)
Exposure Factor, $C_e$ =	1.0	(ASCE 7, Table 7-2)
Thermal Factor, $C_t$ =	1.0	(ASCE 7, Table 7-3)
Importance Factor, $I_s$ =	1.0	(ASCE 7, Table 1.5-2)
	$p_f$ = 21 psf	(ASCE 7, Eq. 7.3-1)
Sloped Roof Snow Load, $p_s = C_s p_f$		(ASCE 7, Eq. 7.4-1)
Slope Factor, $C_s$ =	1.0	(ASCE 7, Figure 7-2a)
	$p_s$ = 21 psf	(ASCE 7, Eq. 7.4-1)
	$p_{s, min}$ = 30.0 psf	

### PV System Weight

Weight of PV System =	2.97 psf	(Per Lumina Solar)
X Standoff Spacing =	4.00 ft	(Per Lumina Solar)
Y Standoff Spacing =	4.00 ft	(Per Lumina Solar)
Standoff Tributary Area =	16.0 ft <sup>2</sup>	(Per Lumina Solar)
Point Load at Standoffs =	47.52 lb	

Note: PV Standoffs are staggered to ensure proper distribution of loading.

### Roof Live Load (Roof A & B)

Roof Live Load, RLL =	30 psf	
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Note: Roof Live Load is removed in areas covered by the PV array.

### Roof Dead Load (Roof A & B)

Asphalt Shingles =	2.70 psf	
Plank Decking =	2.50 psf	
2x10 Rafters @ 16" o/c =	3.21 psf	
Vaulted Ceiling =	0.00 psf	
Miscellaneous =	1.00 psf	
Total Roof Dead Load =	9.41 psf	
DL Adjusted to 31° Slope =	10.98 psf	(Worst Case)

### Roof Dead Load (Roof C & D)

Asphalt Shingles =	2.70 psf	
Roof Plywood =	1.77 psf	
2x4 Top Chords @ 24" o/c =	0.82 psf	
Vaulted Ceiling =	0.00 psf	
Miscellaneous =	1.00 psf	
Total Roof Dead Load =	6.29 psf	
DL Adjusted to 18° Slope =	6.61 psf	(Worst Case)

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**Wind Calculations****ASCE 7-16 - Components and Cladding****Input Variables**

Risk Category =	II	(ASCE 7, Table 1.5-1)
Wind Speed, V =	115 mph	(ASCE 7, Figure 26.5-1A)
Exposure Category =	B	(ASCE 7, Section 26.7)
Roof Shape =	Gable	
Roof Slope =	18 degrees	(Per Lumina Solar - MD)
Mean Roof Height =	20 ft	(Per Lumina Solar - MD)
Effective Wind Area =	50 ft <sup>2</sup>	(Per Lumina Solar - MD)

**Design Wind Pressure Calculations**

Velocity Pressure, $q_h = 0.00256 * K_z * K_{zt} * K_d * K_e * V^2$	(ASCE 7, Eq. 30.3-1)
Velocity Pressure Coefficient, $K_z = 0.701$	(ASCE 7, Table 30.3-1)
Topographic Factor, $K_{zt} = 1.0$	(ASCE 7, Figure 26.8-1)
Wind Directionality Factor, $K_d = 1.0$	(ASCE 7, Figure 26.6-1)
Ground Elevation Factor, $K_e = 1.0$	(ASCE 7, Figure 26.9-1)
$q_h = 23.72$ psf	(ASCE 7, Eq. 30.3-1)
$0.6 * q_h = 14.23$ psf	(ASD Load Factor)
Wind Pressure, $P = q_h * GC_p$	(ASCE 7, Eq. 30.4-1)

**Roof Attachment Uplift Calculations**

	Zone 1	Zone 2	Zone 3	Positive	
$GC_p =$	-0.85	-1.35	-2.2	0.4	(ASCE 7, Fig. 30.4-2B)
Uplift Pressure (psf) =	-12.10	-19.21	-31.31	5.69	(ASCE 7, Eq. 30.4-1)
X Standoff Spacing (ft) =	4.00	4.00	4.00	4.00	
Y Standoff Spacing (ft) =	4.00	4.00	2.00	4.00	
Tributary Area (ft <sup>2</sup> ) =	16.00	16.00	8.00	16.00	
Uplift Load (lbs) =	-193.55	-307.40	-250.47	91.08	

**Roof Attachment Uplift Check**

Maximum Design Uplift =	-308 lbs	
Standoff Uplift Capacity =	400 lbs	(Per Manufacturer)
308 lb demand < 400 lb capacity, <b>Therefore, OK</b>		

**Fastener Capacity Check**

Fastener =	5/16" dia. Lag	
Embedment Depth =	2.25 in	
Pullout Capacity per Inch =	296 lb	(NDS Table 12.2A)
Fastener Capacity =	666 lb	
w/ F.S. of 1.5 =	444 lb	
308 lb demand < 444 lb capacity, <b>Therefore, OK</b>		

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Framing Check (Roof A & B)

Loading

Dead Load = 10.98 psf  
PV Load = 2.97 psf  
Live Load = 30 psf (Removed at PV Array)  
Snow Load = 30.0 psf  
Wind Load = 5.69 psf

Governing Load Combination = DL + SL (ASCE 7, Eq. 2.4.1-3)  
Total Load = 43.9 psf

Member Properties

Member Size	S (in <sup>3</sup> )	I (in <sup>4</sup> )	Lumber Sp	Span (ft)	Member Spacing
2x10	21.39	98.93	DF#2	13.75	16 "o/c

Top Chord Bending Stress

F <sub>b</sub> (psi) =	f' <sub>b</sub>	x	C <sub>d</sub>	x	C <sub>f</sub>	x	C <sub>r</sub>
F <sub>b</sub> (psi) =	900	x	1.15	x	1.1	x	1.15

Allowable Bending Stress, F<sub>b</sub> (psi) = 1309 psi

Distributed Load, w = 58.6 plf  
Maximum Moment, M<sub>1,2</sub> = wL<sup>2</sup>/8, 9wL<sup>2</sup>/128  
M<sub>1</sub> = 1385 ft-lbs = 16618 in-lbs  
M<sub>2</sub> = 779 ft-lbs = 9348 in-lbs

Actual Bending Stress = M<sub>1</sub>/S                      M<sub>2</sub>/S  
Actual Bending Stress = 776.9 psi                      436.99 psi                      Ratio = 0.59  
Allowable Bending Stress > Actual Bending Stress --59.34% Stressed -- Therefore, OK

Check Deflection

Allowable Deflection, Δ<sub>all</sub> = L/120 (Total Load)                      E = 1,600,000 psi (Per NDS)  
Δ<sub>all</sub> = 1.375 in  
  
Actual Deflection, Δ<sub>actual</sub> = (5w\*L<sup>4</sup>)/(384\*E\*I) (Single Span)  
Δ<sub>actual</sub> = 0.298 in                      L/554                      Therefore, OK

Check Shear

Allowable Shear, F<sub>v</sub> = 180 psi (NDS Table 4A)  
Max Shear, V<sub>max</sub> = 5w\*L/8  
V<sub>max</sub> = 447.6 lbs                      Member Area = 13.875 in<sup>2</sup>  
Allowed Shear = F<sub>v</sub>\*A = 2498 lbs

Allowable Shear > Actual Shear -- 17.92% Stressed -- Therefore, OK

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2 Hedricks Ct.  
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Framing Check (Roof C & D)

Loading

Dead Load = 6.61 psf  
PV Load = 2.97 psf  
Live Load = 30 psf (Removed at PV Array)  
Snow Load = 30 psf  
Wind Load = 5.69 psf

Governing Load Combination = DL + SL (ASCE 7, Eq. 2.4.1-3)  
Total Load = 39.6 psf

Member Properties

Member Size	S (in <sup>3</sup> )	I (in <sup>4</sup> )	Lumber Sp	Span (ft)	Member Spacing
2x4	3.06	5.36	DF#2	6.25	24 "o/c

Top Chord Bending Stress

F <sub>b</sub> (psi) =	f'b	x	C <sub>d</sub>	x	C <sub>f</sub>	x	C <sub>r</sub>
F <sub>b</sub> (psi) =	900	x	1.15	x	1.5	x	1.15

Allowable Bending Stress, F<sub>b</sub> (psi) = 1785 psi

Distributed Load, w = 79.17 plf  
Maximum Moment, M<sub>1,2</sub> = wL<sup>2</sup>/8, 9wL<sup>2</sup>/128  
M<sub>1</sub> = 386.6 ft-lbs = 4639 in-lbs  
M<sub>2</sub> = 217.4 ft-lbs = 2609 in-lbs

Actual Bending Stress = M<sub>1</sub>/S                      M<sub>2</sub>/S  
Actual Bending Stress = 1515 psi                      852.01 psi                      Ratio = 0.85  
Allowable Bending Stress > Actual Bending Stress --84.84% Stressed -- Therefore, OK

Check Deflection

Allowable Deflection, Δ<sub>all</sub> = L/120 (Total Load)                      E = 1,600,000 psi (Per NDS)  
Δ<sub>all</sub> = 0.625 in  
  
Actual Deflection, Δ<sub>actual</sub> = (5w\*L<sup>4</sup>)/(384\*E\*I) (Single Span)  
Δ<sub>actual</sub> = 0.317 in                      L/237                      Therefore, OK

Check Shear

Allowable Shear, F<sub>v</sub> = 180 psi (NDS Table 4A)  
Max Shear, V<sub>max</sub> = 5w\*L/8  
V<sub>max</sub> = 274.9 lbs                      Member Area = 5.25 in<sup>2</sup>  
Allowed Shear = F<sub>v</sub>\*A = 945 lbs

Allowable Shear > Actual Shear -- 29.09% Stressed -- Therefore, OK

SOLAR PV SYSTEM: 8.125 kWp

ONEILL RESIDENCE

3911 PROSPECT STREET KENSINGTON, MD  
USA 20895

PROJECT INFORMATION

OWNER: ERIC ONEILL  
ADDRESS: 3911 PROSPECT STREET  
KENSINGTON, MD USA 20895

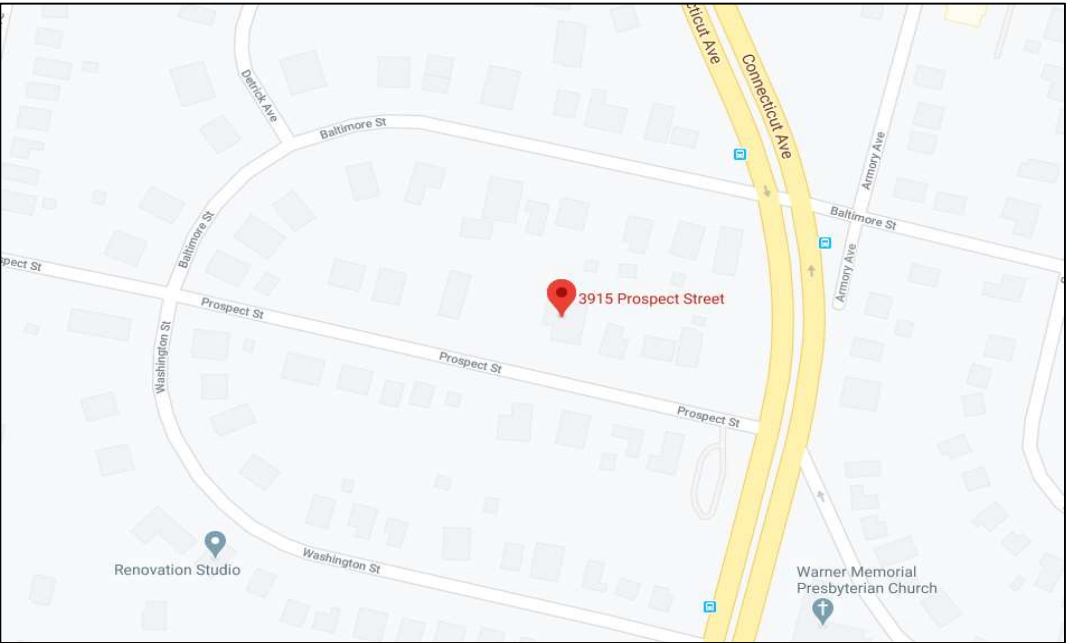
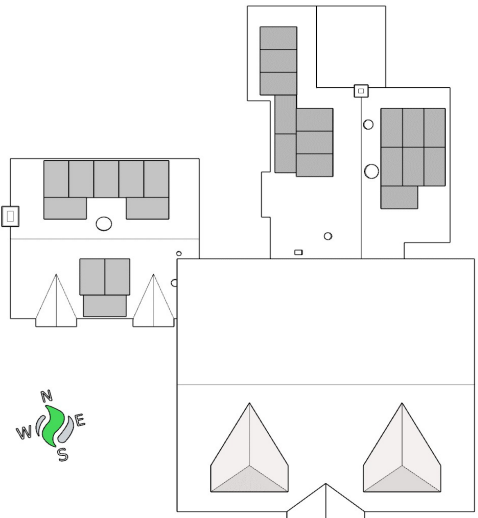
AHJ: MONTGOMERY  
ADDRESS: 255 ROCKVILLE PIKE, 2ND  
FLOOR ROCKVILLE, MD 20850

ZONING: RESIDENTIAL  
BUILDING CODE: IBC 2018  
ELECTRICAL CODE: NEC 2017  
ASCE VERSION: ASCE 7-16

SNOW LOAD: 30 PSF  
WIND SPEED: 115 MPH  
WIND EXPOSURE: B

DC RATING: 8.125 kW  
AC RATING: 6 kW  
RACKING: UNIRAC SM LIGHT RAIL  
MODULE: (25) CS1H-325MS  
INVERTER: (25) IQ7-60-2-US

BATTERY: (1) POWERWALL 2



PROJECT SCOPE

THIS PROJECT INVOLVES THE INSTALLATION OF (25) CANADIAN SOLAR 325W SOLAR MODULES. THE SOLAR MODULES WILL BE RACKED USING A PRE-ENGINEERED RACKING SYSTEM. THE RACKED MODULES WILL BE ELECTRICALLY CONNECTED TO (25) ENPHASE DC TO AC POWER INVERTERS, AND (1) TESLA POWERWALLS, AND INTERCONNECTED TO THE LOCAL UTILITY USING MEANS AND METHODS CONSISTENT WITH THE RULES ENFORCED BY THE LOCAL UTILITY AND PERMITTING JURISDICTION.

INDEX OF PAGES

Z001	COVER PAGE
A001	ATTACHMENT & SITE PLAN
S001	ASSEMBLY & LOAD CALCS
E001	ELECTRICAL - LINE DIAGRAM
E002	ELECTRICAL - WIRE CALCS
E003	STRING & CONDUIT LAYOUT
E004	EQUIP. RATINGS & SIGNAGE

APPENDIX

MODULE DATASHEET
INVERTER DATASHEET
RACKING DATASHEET
ANCHOR DATASHEET

FOR PERMITTING USE ONLY

PROJECT ADDRESS:

ERIC ONEILL  
3911 PROSPECT STREET  
KENSINGTON, MD USA  
20895

CONTRACTOR INFO:



FUSION  
SOLAR SERVICES

3701 COMMERCE DR  
SUITE 101  
BALTIMORE, MD 21227  
(443) 955-0779

LICENSE NUMBER:

MHIC-30991

REV	DATE
IFC	8/4/2020

COVER

Z001

DocuSigned by:



Professional Certification: I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No.: 41308 Exp. Date: 01-06-2022  
STAMPED AND SIGNED FOR STRUCTURAL ONLY

7/30/2020

DocuSigned by:

Scott Kirby

CAD180010D814CD...

GENERAL NOTES

1) THIS PHOTOVOLTAIC (PV) SYSTEM SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690, ALL MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION (AHJ).

2) PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION TO REDUCE SHOCK HAZARD FOR EMERGENCY RESPONDERS IN ACCORDANCE WITH 690.12(A) THROUGH (D).

3) THIS SYSTEM IS A UTILITY INTERACTIVE SYSTEM, AND THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE.

4) ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL BUILDING CODE AND AS REQUIRED BY THE NEC AND AHJ.

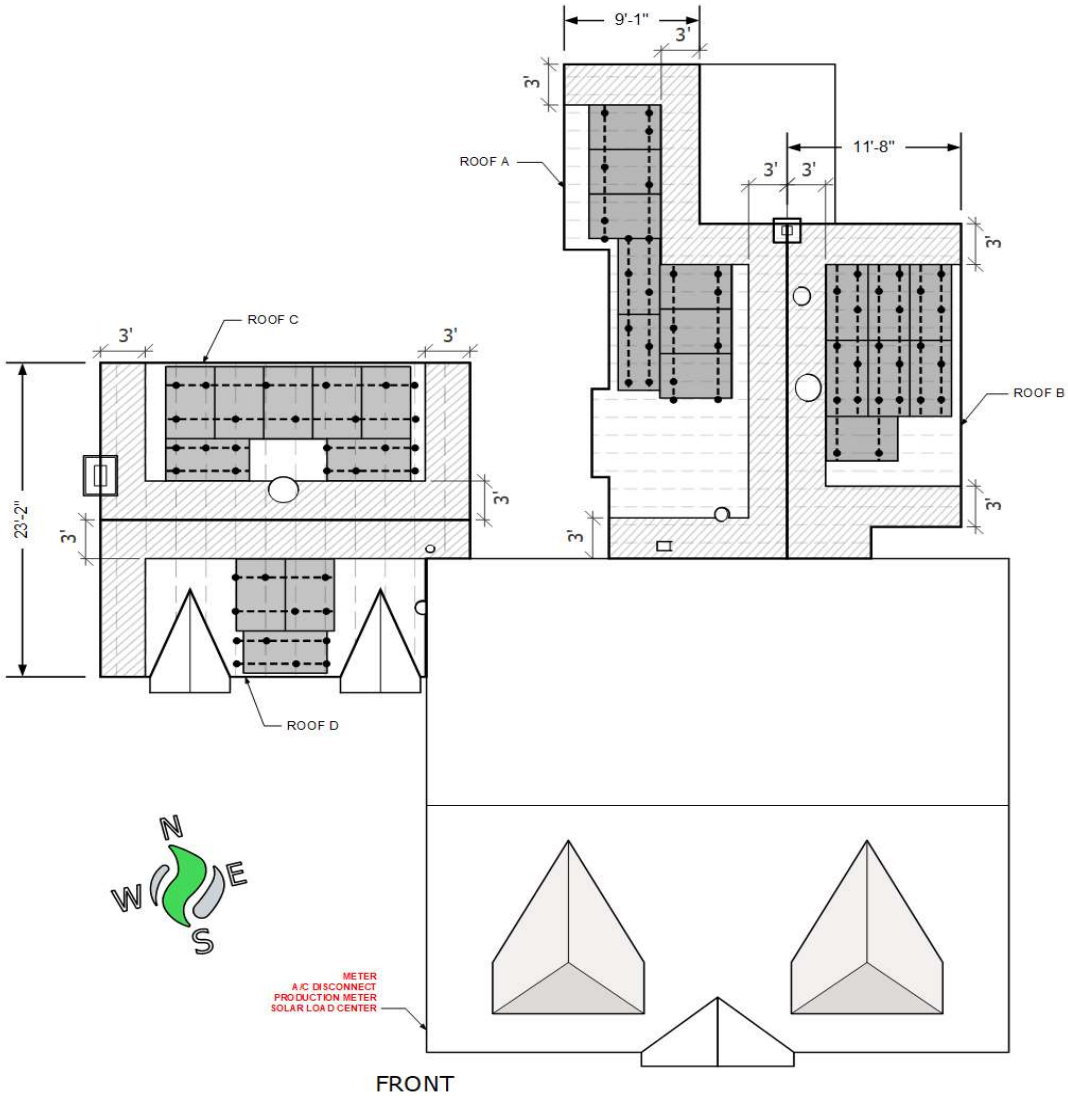
5) PV EQUIPMENT SHALL BE GROUNDED ACCORDING TO NEC 690.43 AND MINIMUM NEC TABLE 250.122.

FOR ENGINEERING USE ONLY



ROOF PROPERTIES	ROOF LABEL:	A	B	C	D
	MATERIAL:	Architectual Comp. Shingle	Architectual Comp. Shingle	Architectual Comp. Shingle	Architectual Comp. Shingle
	PITCH:	31°	31°	18°	18°
	AZIMUTH:	283°	103°	14°	194°
	PRIMARY SUPPORT:	2x10 RAFTERS	2x10 RAFTERS	2x4 TOP CHORD TRUSSES	2x4 TOP CHORD TRUSSES
	PRIMARY SUPPORT SPACING:	16"	16"	24"	24"
	LEAST HORIZONTAL DIMENSION:	26'	26'	23'	23'
	MEAN HEIGHT:	15'	15'	20'	20'
	RACKING:	UNIRAC SM LIGHT RAIL	UNIRAC SM LIGHT RAIL	UNIRAC SM LIGHT RAIL	UNIRAC SM LIGHT RAIL
	STANDOFF:	UNIRAC FLASHLOC	UNIRAC FLASHLOC	UNIRAC FLASHLOC	UNIRAC FLASHLOC

- ALL SOLAR MODULES SUPPORTED BY ROOF ATTACHMENTS 48" O.C.
- SOLAR PHOTOVOLTAIC SYSTEM INSTALLED PARALLEL TO ROOF SURFACE
- SOLAR PHOTOVOLTAIC SYSTEM INSTALLED AT A MAXIMUM HEIGHT OF 6" ABOVE ROOF SURFACE



ROOF SUPPORT

MOUNTING RAIL

ROOF ATTACHMENT

PV ARRAY

FIRECODE SETBACK

FOR PERMITTING USE ONLY

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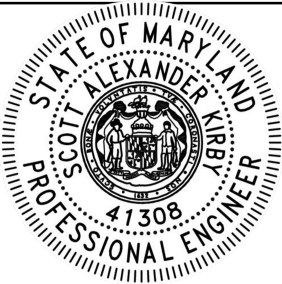
LICENSE NUMBER:

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REV	DATE
IFC	8/4/2020
ATTACHMENT & SITE PLAN	

A001

DocuSigned by:



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7/30/2020

DocuSigned by:

Scott Kirby

CAD180010D814CD...

INSTALLATION NOTES

- 1) ALL RACKING SHALL BE INSTALLED PER MANUFACTUER SPECIFICATIONS
- 2) ALL ROOFING PENETRATIONS SHALL EMBED IN STRUCTURAL MEMBERS AND PROPER FLASHING SEALANT SHALL BE USED TO PROVIDE WATERTIGHT ASSEMBLY
- 3) WHEN POSSIBLE, ALL RACKING STANDOFFS WILL BE STAGGERED AMONGST THE ROOF SUPPORT MEMBERS
- 4) REFER TO PAGE S001 FOR MAXIMUM ALLOWABLE RAIL SPAN AND MODULE OVERHANG, AND ATTACHMENT DETAILS
- 5) ALL RACKING AND STRUCTURAL WORK FOR THIS PROJECT SHALL COMPLY WITH BUILDING CODE, IBC 2018 AND ASCE 7-16

FOR ENGINEERING USE ONLY

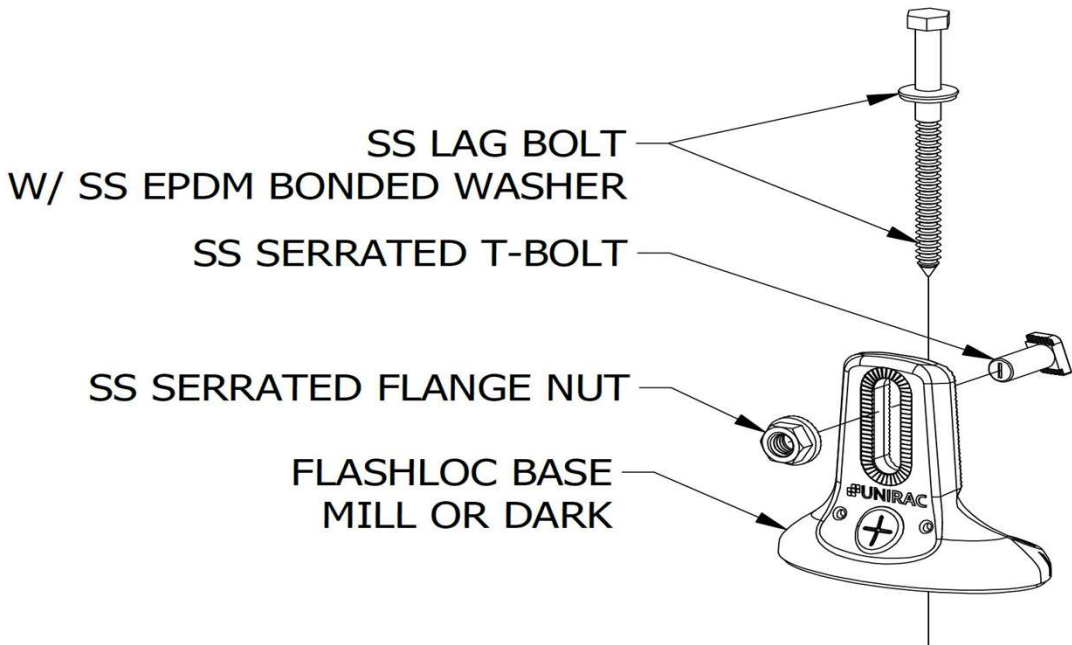
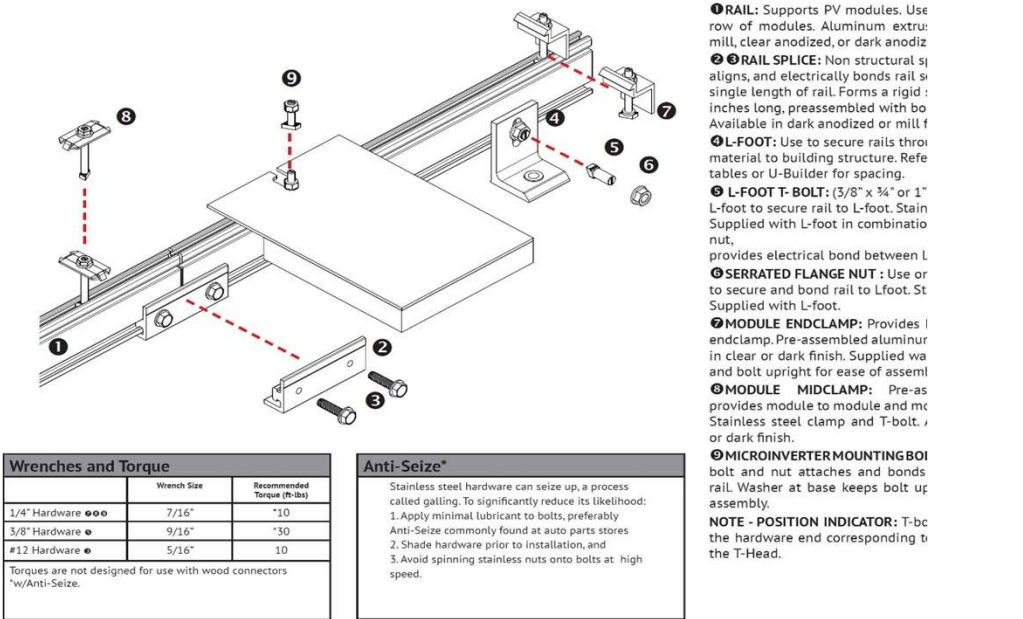


MOUNTING SYSTEM PROPERTIES	
RACKING	UNIRAC SM LIGHT RAIL
STANDOFF	UNIRAC FLASHLOC
FASTENING DETAILS	SEE NOTE 3
MAX. RAIL SPAN	48"
MIN. FASTENER DEPTH	2.25"
MAX. RAIL CANTILEVER	16"
MAX. ARRAY HEIGHT	6"

SITE CONDITIONS	
WIND SPEED	115 MPH
SNOW LOAD	30 PSF
ROOF ZONE (TYP.)	3
BUILDING CODE	IBC 2018
ELECTRICAL CODE	NEC 2017
ASCE VERSION	ASCE 7-16

DEAD LOAD CALCULATION			
LOAD	QTY. OR LIN. FT.	WEIGHT PER (LB)	TOTAL LBS.
MODULES	25	42.3	1057.50
M.L.E.'S	25	2.38	59.50
RACKING	226.4	0.81	183.40
STANDOFF	99	0.5	49.50
TOTAL ARRAY WEIGHT (LBS)			1349.9
TOTAL ARRAY AREA (SQ.FT.)			454.1
DISTRIBUTED LOAD (PSF)			2.97

POINT LOAD CALCULATION	
TOTAL ARRAY WEIGHT (LBS)	1349.90
TOTAL NUMBER OF STANDOFFS (TYP.)	99
POINT LOAD (LBS/STANDOFF)	13.64



① **RAIL**: Supports PV modules. Use row of modules. Aluminum extru: mill, clear anodized, or dark anodiz

② **RAIL SPLICE**: Non structural s; aligns, and electrically bonds rail si single length of rail. Forms a rigid : inches long, preassembled with bo Available in dark anodized or mill f

③ **L-FOOT**: Use to secure rails throu material to building structure. Refe tables or U-Builder for spacing.

④ **L-FOOT T-BOLT**: (3/8" x 3/4" or 1" L-foot to secure rail to L-foot. Stain Supplied with L-foot in combinatio nut, provides electrical bond between L

⑤ **SERRATED FLANGE NUT**: Use or to secure and bond rail to Lfoot. St Supplied with L-foot.

⑥ **MODULE ENDCLAMP**: Provides i endclamp. Pre-assembled aluminur in clear or dark finish. Supplied wa and bolt upright for ease of assem!

⑦ **MODULE MIDCLAMP**: Pre-as provides module to module and mc Stainless steel clamp and T-bolt. / or dark finish.

⑧ **MICROINVERTER MOUNTING BOI** bolt and nut attaches and bonds rail. Washer at base keeps bolt up assembly.

**NOTE - POSITION INDICATOR**: T-bc the hardware end corresponding to the T-Head.

FOR PERMITTING USE ONLY

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20895

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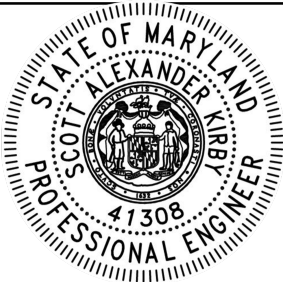
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ASSEMBLY &  
LOAD CALCS

S001

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7/30/2020

RACKING AND STRUCTURAL NOTES

1) ALL RACKING SHALL BE INSTALLED PER MANUFACTUER SPECIFICATIONS

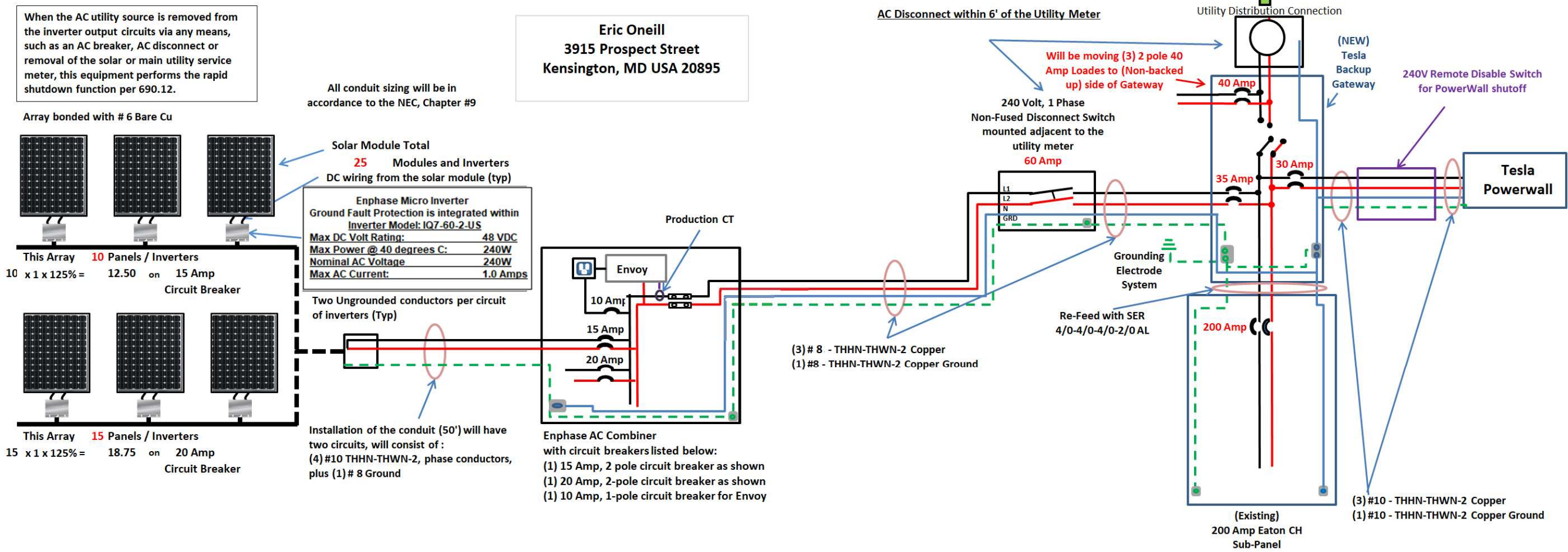
2) M.L.E.'S = MODULE LEVEL ELECTRONICS (IE, POWER OPTIMIZERS, MICRO-INVERTERS, CABELS, ETC)

3) USE 5/16" X 4"HEX HEAD STAINLESS STEEL LAG SCREWS

4) ALL RACKING AND STRUCTURAL WORK FOR THIS PROJECT SHALL COMPLY WITH BUILDING CODE, IBC 2018 AND ASCE 7-16

FOR ENGINEERING USE ONLY

Eric Oneill  
3915 Prospect Street  
Kensington, MD USA 20895



**ELECTRICAL NOTES**

- 1) ALL EQUIPMENT TO BE LISTED AND LABELED FOR ITS APPLICATION
- 2) WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC110.26
- 3) IF USED, PV POWER SOURCE BREAKER TO BE LOCATED AT BOTTOM OF BUS PER NEC690.64(b)(7)
- 4) LISTING AGENCY NAME AND NUMBER TO BE INDICATED ON INVERTERS AND MODULES PER NEC110.3(b)
- 5) AC COMBINER PANELS SHALL BE LABELED AS "INVERTER AC COMBINER PANEL"
- 5) PV POWER SOURCE TO BE SUITABLE FOR BACKFEED PER NEC690.64(b)(5)

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**REV DATE**

IFC 8/4/2020

**ELECTRICAL -  
LINE DIAGRAM**

E001



Interconnection  
Breaker-Tap  
Wire Size #8 AWG

WIRE SIZING CALCULATION  
2011/2014 NEC Article 310

Full Load Amperage ..... : 25  
Source Voltage ..... : 240  
Length of Run (Feet) ..... : 30  
Load Duty ..... : Continuous  
Conductor Type ..... : THWN-2  
Conductor Material..... : Copper  
Conductor Location ..... : Dry or Wet  
Conductor Insulation Temperature : 90 °C  
Ambient Temperature ..... : 26-30 °C = 78-86 °F  
Terminal Temperature Rating .... : 60 °C  
Circuit Type : Single Phase 3 Wire (2 phase conductors & neutral)  
Qty. of Circuit Current-Carrying Conductors : 2  
Conductor Requirement:  
Full Load Amps ..... : 25.0  
Load Duty Multiplier ..... : 1.25  
Ambient Temp. Multiplier . : 1.15  
Qty. Conductors Multiplier : 1.0  
-----  
Required Conductor Ampacity: 35.94  
Terminal Requirement:  
Full Load Amps ..... : 25.0  
Load Duty Multiplier ..... : 1.25  
-----  
Required Terminal Ampacity : 31.25  
Selected Conductor:  
Conductor Ampacity ..... : 55.0  
Ambient Temp. Derate ..... : 0.87  
Qty. Conductors Derate ... : 1.0  
-----  
Adjusted Ampacity ..... : 47.85  
SELECTED CONDUCTOR SIZE : 8 Awg  
2 x Ohms/MilFt x Length x Amps 2 x 0.778 x 30 x 35.94  
VD = ----- = 1.17  
1000 x Qty Wires per Phase 1000 x 1  
Volts At Load Terminals..... : 238.83  
Actual Percent Voltage Drop . : 0.49

Combiner to Array  
Wire Length 50'  
Wire Size #10 AWG

WIRE SIZING CALCULATION  
2011/2014 NEC Article 310

Full Load Amperage ..... : 15  
Source Voltage ..... : 240  
Length of Run (Feet) ..... : 50  
Load Duty ..... : Noncontinuous  
Conductor Type ..... : THWN-2  
Conductor Material..... : Copper  
Conductor Location ..... : Dry or Wet  
Conductor Insulation Temperature : 90 °C  
Ambient Temperature ..... : 26-30 °C = 78-86 °F  
Terminal Temperature Rating .... : 60 °C  
Circuit Type : Single Phase 2 Wire (2 phase conductors, or phase & neutral)  
Qty. of Circuit Current-Carrying Conductors : 2  
Additional Current-Carrying Conductors ..... : 2  
-----  
Total Qty. Current-Carrying Conductors ..... : 4  
Conductor Requirement:  
Full Load Amps ..... : 15.0  
Load Duty Multiplier ..... : 1.0  
Ambient Temp. Multiplier . : 1.15  
Qty. Conductors Multiplier : 1.25  
-----  
Required Conductor Ampacity: 21.56  
Terminal Requirement:  
Full Load Amps ..... : 15.0  
Load Duty Multiplier ..... : 1.0  
-----  
Required Terminal Ampacity : 15.0  
Selected Conductor:  
Conductor Ampacity ..... : 40.0  
Ambient Temp. Derate ..... : 0.87  
Qty. Conductors Derate ... : 0.8  
-----  
Adjusted Ampacity ..... : 27.84  
SELECTED CONDUCTOR SIZE : 10 Awg  
2 x Ohms/MilFt x Length x Amps 2 x 1.24 x 50 x 21.56  
VD = ----- = 1.86  
1000 x Qty Wires per Phase 1000 x 1  
Volts At Load Terminals..... : 238.14  
Actual Percent Voltage Drop . : 0.78

CALCULATION FOR PV BREAKER					
CALCULATION FOR MAIN PV BREAKER & CIRCUITS					
SYSTEM CURRENT:	1	x	25	=	25 A
DESIGN AMPERAGE:	25	x	125%	=	31.25 A
MAIN BUSS RATING:	200	x	120%	=	240 A
EXISTING MAIN BREAKER:					200 A
MAX SOLAR BREAKER:	240	-	200	=	40 A
CIRCUIT #1 =	10	x	1 x 125% =		12.5 A
CIRCUIT #2 =	15	x	1 x 125% =		18.75 A

ELECTRICAL NOTES

- 1) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 90°C AND WET ENVIRONMENT, UNLESS OTHERWISE NOTED.
- 2) ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- 3) MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER MANUFACTURER'S INSTRUCTION.

4) MODULE SUPPORT RAIL TO BE BONDED TO CONTINUOUS COPPER GEC VIA WEEB LUG PER NEC690.4(c)

FOR PERMITTING USE ONLY

PROJECT ADDRESS:

ERIC ONEILL  
3911 PROSPECT STREET  
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3701 COMMERCE DR  
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BALTIMORE, MD 21227  
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REV	DATE
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ELECTRICAL -  
WIRE CALCS

E002





SOLAR MODULE RATINGS		
Canadian Solar 325 Specifications		
Length:	66.9	in
Width:	39.1	in
Thickness:	1.38	in
Weight:	42.3	lbs
Imp:	8.88	A
Vmp:	36.6	V
Voc:	44.1	V
Isc:	9.45	A
OCPD:	15	A
Pmax:	325	W
Vmax:	1000	V
Temp. Coefficient:	-0.29	%Voc/°C

INVERTER 1 RATINGS		
IQ7-60-2-US Specifications		
Max # Per String:	16	
I <sub>max</sub> (ac):	1	A
V <sub>max</sub> (dc):	48	V
P <sub>max</sub> :	240	W
Nom. AC Voltage:	240/208	V
OCPD:	20	A
Weight (Optimizer):	2.38	lbs
I <sub>max</sub> (Input):	15	A
P <sub>max</sub> (dc) Input:	N/A	V

WARNING: PHOTOVOLTAIC  
POWER SOURCE

LABEL TO BE INSTALLED AT EXPOSED  
RACEWAYS, CABLE TRAYS, AND OTHER WIRING  
METHODS; SPACED AT MAXIMUM 10FT SECTION  
OR WHERE SEPARATED BY ENCLOSURES,  
WALLS, PARTITIONS, CEILINGS, OR FLOORS.  
[NEC 690.31(G)]  
LETTERS AT LEAST 3/8 INCH; WHITE ON RED  
BACKGROUND; REFLECTIVE [IFC 605.11.1.1]

PHOTOVOLTAIC  
DC DISCONNECT

LABEL TO BE INSTALLED AT EACH DC  
DISCONNECTING MEANS [NEC 690.13(B)]

PHOTOVOLTAIC  
AC DISCONNECT

LABEL TO BE INSTALLED AT EACH AC  
DISCONNECTING MEANS [NEC 690.13(B)]

PHOTOVOLTAIC SYSTEM  
EQUIPPED WITH RAPID  
SHUTDOWN

LABEL TO BE INSTALLED AT RAPID SHUTDOWN  
SWITCH  
[NEC 690.56(C)]  
LETTERS AT LEAST 3/8 INCH; WHITE ON RED  
BACKGROUND; REFLECTIVE [IFC 605.11.1.1]

SOLAR PV SYSTEM DISCONNECT

RATED AC OUTPUT CURRENT: 25 A

NOMINAL OPERATING AC VOLTAGE: 240 V

LABEL TO BE INSTALLED AT AN ACCESSIBLE LOCATION AT THE DISCONNECTING MEANS  
AS A POWER SOURCE  
[NEC 690.54]

WARNING

ELECTRICAL SHOCK HAZARD

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

LABEL TO BE INSTALLED AT EACH DISCONNECTING MEANS FOR  
PHOTOVOLTAIC EQUIPMENT [NEC 690.13 AND 690.15]

WARNING

ELECTRICAL SHOCK HAZARD

IF GROUND FAULT IS INDICATED  
NORMALLY GROUNDED  
CONDUCTORS MAY BE  
UNGROUND AND ENERGIZED

LABEL TO BE INSTALLED AT EACH DISCONNECTING MEANS FOR  
PHOTOVOLTAIC EQUIPMENT [NEC 690.13 AND 690.15]

WARNING

DUAL POWER SOURCE SECOND SOURCE IS  
PHOTOVOLTAIC SYSTEM

LABEL TO BE INSTALLED ON EXTERIOR OF MAIN  
ELECTRICAL PANEL

WARNING

INVERTER OUTPUT CONNECTION. DO NOT  
RELOCATE THIS OVERCURRENT DEVICE

LABEL TO BE APPLIED TO THE DISTRIBUTION  
EQUIPMENT [NEC 690.64(B)(7)]

INTERACTIVE PHOTOVOLTAIC  
SYSTEM CONNECTED

LABEL TO BE INSTALLED AT UTILITY METER  
[NEC 690.56(B)]

SOLAR PV LOADCENTER

8.125 kW DC SOLAR ARRAY

240 VOLT AC SYSTEM

INSTALLED COMPONENTS

(25) Canadian Solar 325W Modules

(25) IQ7-60-2-US Inverters

CIRCUIT CALCULATIONS					
SYSTEM CURRENT:	1	x	25	=	25 A
DESIGN AMPERAGE:	25	x	125%	=	31.25 A
CIRCUIT #1 =	10	x	1 x 125% =		12.5
CIRCUIT #2 =	15	x	1 x 125% =		18.75

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DATE

IFC

8/4/2020

EQUIP. RATINGS  
& SIGNAGE

E004

SIGNAGE NOTES

1) ALL PLAQUES AND LABELS SHALL HAVE A RED BACKGROUND (OR AS  
SHOWN HERE)

2) ALL LETTERING SHALL BE WHITE AND HAVE A MINIMUM HEIGHT OF 3/8"  
(OR AS SHOWN HERE)

3) FONT SHALL BE ARIAL (OR SIMILAR ) AND ALL LETTERING SHALL BE  
CAPITALIZED

4) ALL PLAQUES AND LABELS SHALL BE OF A MATERIAL SUITABLE FOR THE  
ENVIRONMENT INSTALLED

## Real Property Data Search

## Search Result for MONTGOMERY COUNTY

[View Map](#) [View GroundRent Redemption](#) [View GroundRent Registration](#)

**Special Tax Recapture: None****Account Identifier:** District - 13 Account Number - 01020743

## Owner Information

<b>Owner Name:</b>	ONEILL ERIC MICHAEL ONEILL JULIANA SCHWITZKE	<b>Use:</b>	RESIDENTIAL
<b>Mailing Address:</b>	3915 PROSPECT ST KENSINGTON MD 20895-	<b>Principal Residence:</b>	YES
		<b>Deed Reference:</b>	/48806/ 00209

## Location &amp; Structure Information

<b>Premises Address:</b>	3915 PROSPECT ST KENSINGTON 20895-0000	<b>Legal Description:</b>	PT LT 9 KENSINGTON P ARK
--------------------------	---	---------------------------	-----------------------------

<b>Map:</b>	<b>Grid:</b>	<b>Parcel:</b>	<b>Neighborhood:</b>	<b>Subdivision:</b>	<b>Section:</b>	<b>Block:</b>	<b>Lot:</b>	<b>Assessment Year:</b>	<b>Plat No:</b>
HP43	0000	0000	13070015.16	0015		11	8	2019	<b>Plat Ref:</b> / 4

**Town:** KENSINGTON

<b>Primary Structure Built</b>	<b>Above Grade Living Area</b>	<b>Finished Basement Area</b>	<b>Property Land Area</b>	<b>County Use</b>
1898	4,014 SF	460 SF	15,525 SF	111

<b>Stories</b>	<b>Basement</b>	<b>Type</b>	<b>Exterior</b>	<b>Quality</b>	<b>Full/Half Bath</b>	<b>Garage</b>	<b>Last Notice of Major Improvements</b>
2 1/2	YES	STANDARD UNIT	FRAME/	7	3 full/ 1 half	1 Attached	

## Value Information

	<b>Base Value</b>	<b>Value</b>	<b>Phase-in Assessments</b>	
		As of 01/01/2019	As of 07/01/2020	As of 07/01/2021
<b>Land:</b>	515,800	515,800		
<b>Improvements</b>	666,600	646,000		
<b>Total:</b>	1,182,400	1,161,800	1,161,800	1,161,800
<b>Preferential Land:</b>	0			0

## Transfer Information

<b>Seller:</b> ONEILL ERIC MICHAEL	<b>Date:</b> 06/23/2014	<b>Price:</b> \$0
<b>Type:</b> NON-ARMS LENGTH OTHER	<b>Deed1:</b> /48806/ 00209	<b>Deed2:</b>
<b>Seller:</b> O'NEILL JOHN H JR IRRV TRUST	<b>Date:</b> 12/03/2013	<b>Price:</b> \$400,000
<b>Type:</b> ARMS LENGTH IMPROVED	<b>Deed1:</b> /48022/ 00018	<b>Deed2:</b>
<b>Seller:</b> O'NEILL JOHN H JR	<b>Date:</b> 01/10/2013	<b>Price:</b> \$0
<b>Type:</b> NON-ARMS LENGTH OTHER	<b>Deed1:</b> /45765/ 00215	<b>Deed2:</b>

## Exemption Information

<b>Partial Exempt Assessments:</b>	<b>Class</b>	07/01/2020	07/01/2021
<b>County:</b>	000	0.00	
<b>State:</b>	000	0.00	
<b>Municipal:</b>	000	0.00 0.00	0.00 0.00

**Special Tax Recapture: None**

## Homestead Application Information

**Homestead Application Status:** Approved 12/30/2014

## Homeowners' Tax Credit Application Information

**Homeowners' Tax Credit Application Status:** No Application **Date:**