

Tom Petersen

Architects • Planners

NYC Department of Buildings
Queens Borough Office
120-55 Queens Boulevard
Kew Gardens, NY 11424

August 19, 2015

Re: Solar Panel Installation
Chiang Residence
15615 Laburnum Avenue
Queens, NY 11355



Dear Sirs,

I've reviewed the proposed solar panel installation at this location to evaluate the existing roof structure and the connection of the panels to the roof.

Criteria: Applicable codes: 2010 Residential Code of New York
2001 Wood Frame Construction Manual
Design roof load: 30 psf live load, 15 psf dead load, 45 psf total load
Design wind load: 110 mph, 35 psf; Exposure Category 'B'

My findings are as follows.

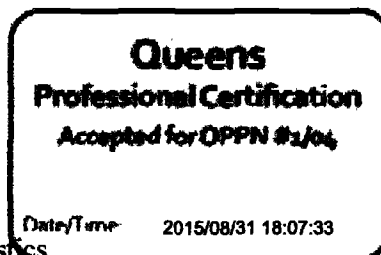
1. The new solar panels will imply an additional dead load of 3 psf. The existing roof structure (2x6 roof rafters @ 16" o.c., with 2x4 collar ties and 2x8 ridge, span = +/- 10'-4") is sufficient to bear this additional load. This analysis is based on the existing single layer of asphalt shingles but is also adequate for two layers of asphalt shingles.
2. The solar panels are attached to the roof with the SolarMount-1 rack system by UNIRAC. The rack system, roof connections and connection spacing are rated for 110 mph. This project requires the larger Solar Mount I-2.5 beam (2.5" high) and spacing of flange foot connection to roof at 48" o.c. maximum. Flange footing connections to the rail are not required to be staggered. The flange foot connections to the roof are 5/16" diameter x 4" long lag bolts. The total panel installation is no higher than 6" above the existing roof plane.

It is a violation of NYSED 7209 for any person, unless acting under the direction of a licensed professional, to alter an item in any way. If an item bearing the seal of a licensed professional is altered, the altering licensed professional must attach the notation 'altered by' with his seal, signature, date of alteration, and description of the alteration.

I therefore certify that this installation complies with the applicable codes and design loads mentioned above, as well as ASCE 7-05, and is acceptable for approval. Please let me know if you have any questions on this information. Thanks!

Sincerely yours,

Tom Petersen



Cc: Kelcy Pegler, Roof Diagnostics

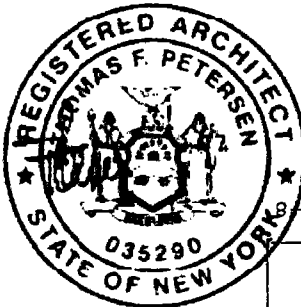
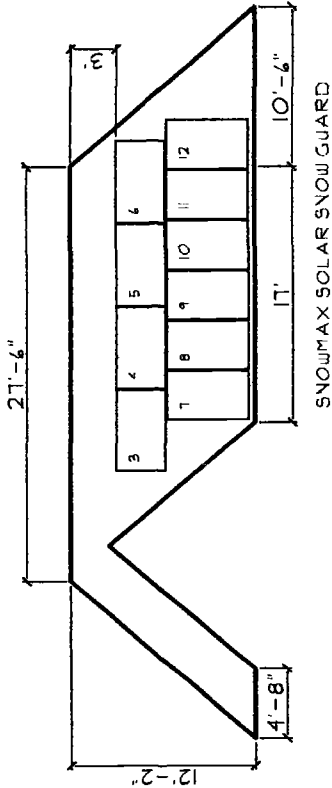


CLIENT INFORMATION CHIANG RESIDENCE 15615 LABURNUM AVENUE QUEENS, NY 11355	SOLAR SYSTEM 4,200 KW DC MICRO INVERTERS 15 V-250-60-2-LL-522 PANELS 5 MODULES @ 280W PER MODULE	 THOMAS F. PETERSEN ARCHITECT, LLC 4 COUNTY AVE FLORENCE, NY 11435 DATE: 08/31/15 Dwg No. 4509	DEPT OF BLDGS
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CHIANG
Queens

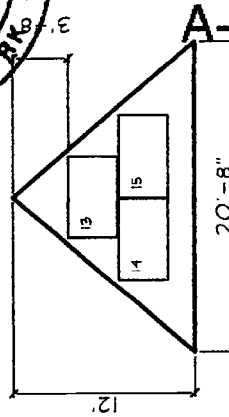
SITE 1
, New York

1st to 2nd FLOOR



ROOF B
10 PANELS
AZIMUTH: 185
TILT: 38
96% SHADING

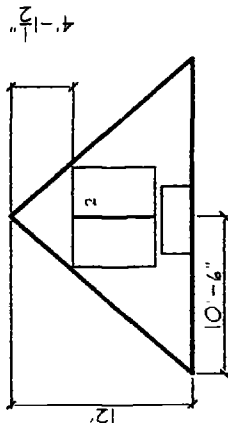
Date: 08/31/15
Project Number: 5375287
Drawing By: NRG
Drawing Number:



ROOF B
3 PANELS
AZIMUTH: 275
TILT: 37
90% SHADING

A-200-00

1 of 1



ROOF A
 2 PANELS
 AZIMUTH: 185
 TILT: 38
 96% SHADING
 Date/Time: 2015/08/31 18:07:33

