



LEADING THE WAY
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Mr. Darren Quelette

October 23, 2019

Yes! Solar Solutions of the Triangle

E-mail: dquelette@yessolarsolutions.com

Subject: Proposed roof solar panels – Johnson Residence
7695 NC 27 West
Lillington, North Carolina 27546

File No.: RB-195904

Dear Darren:

RB Engineering, Inc. is pleased to provide the following summary engineering letter concerning the subject project. The existing house roof system is constructed with 2-inch by 6-inch timber rafters at 24 inches on center, an OSB roof deck and a composition asphalt shingle roof. There is attic bracing of the rafters. We have reviewed the proposed solar layout and have structurally evaluated the additional proposed roof loading with the following conclusions:

- The total surface area of the proposed solar array (24 PV modules) is approximately 420 SF. The solar panel installation has been evaluated for a maximum design wind loading of 115 mph.
- The subject roof mounted PV system attachment method is structurally adequate to transfer the design uplift loads in accordance with the current North Carolina residential building code.
- The existing roof systems are structurally adequate to transfer the applicable design loads - including the additional design loading (dead load and wind load) due to the proposed solar panel installation - in accordance with the current North Carolina residential building code.

Our services were provided in accordance with the standard of practice for structural engineering and within the limits imposed by scope, schedule, and budget. If you have any questions or if I can be of further assistance to you on this project, please contact me at (919) 677-9662.

Respectfully submitted,

Ron Bittler, PE
President / Structural Engineer
RB Engineering, Inc.



10.23.2019