



August 1, 2025

Lunex Power

4721 N Grady Ave
Tampa , FL 33614

RE Kelly Residence
269 S W Thomas Rd, Lake City, FL 32024
Client Project #:269Kell
PFE Project #: 252111

On behalf of Lunex Power, Penn Fusion Engineering LLC (PFE) performed a structural analysis of the roof at the above referenced location. The purpose of our analysis was to determine if the existing roof system is structurally sufficient to support the new photovoltaic modules in addition to the code required design loads. Our analysis is based on the information provided by Lunex Power and is limited only to the areas where the modules are intended to be placed.

System Specifications

Panel Specs: (38) JA SOLAR - JAM54S31-405/MR
Racking System: Unirac - NXT Rail

The modules are to be located on the following roof planes:

Roof Planes						
Mounting Plane	Member Size	Member Spacing	Horizontal Span	Sheathing	Roofing Type	Roofing Layers
1	Truss	24"	37'-8"	CDX 1/2"	Asphalt Shingles	1
2	Truss	24"	37'-8"	CDX 1/2"	Asphalt Shingles	1
3	Truss	24"	37'-8"	CDX 1/2"	Asphalt Shingles	1
4	Truss	24"	37'-8"	CDX 1/2"	Asphalt Shingles	1
5	Truss	24"	37'-8"	CDX 1/2"	Asphalt Shingles	1

Design Criteria		
Building Code(s)	Ground Snow P _g	Wind Speed V
<ul style="list-style-type: none"> • 2023 Florida Building Code • 2023 Florida Residential Code • ASCE 7-22 	0 psf	120 mph

Analysis Results

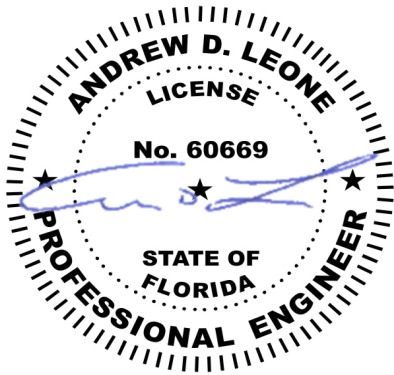
Mounting Plane	Attachment Hardware	Max Attachment Spacing	Rafter Pass/Fail
1	Unirac Stronghold	48"	Pass
2	Unirac Stronghold	48"	Pass
3	Unirac Stronghold	48"	Pass
4	Unirac Stronghold	48"	Pass
5	Unirac Stronghold	48"	Pass

This office has determined that the existing roof as specified above will meet the structural requirements of the above referenced codes in addition to the PV load when installed in accordance with the manufacture's instructions.

If you have any questions regarding this analysis, please feel free to contact us.

Best Regards,
Penn Fusion Engineering, LLC

Andrew D. Leone, P.E.
Principal



08/01/2025

This item has been digitally signed and sealed by Andrew D. Leone on the date adjacent to the seal.

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