

Mr. Eric Allen  
Alternative Solar  
6700 Guada Coma Dr  
Schertz, Texas 78154

RE: Solar panel installation

5831 Providence Pl New Orleans, LA 70126

Mr.Allen:

The roof of the residence located at 5831 Providence Pl New Orleans, LA 70126 is standard wood framed gable roof. Standard wood construction requirements include the inclusion of dead load of the building materials, 20 pounds per square foot (psf) of live load, wind loads, rain loads, as well as contingent loads. The analysis of such a roof, built using common construction methods, provides a conservative method for size of primary roof support members.

Windstorm was added in consideration in the calculation and assessment (120 MpH).

A request has been made to determine the impact of the installation of solar panels weighing less than 50 pounds per panel to the roof. The solar panels have a dimension of approximately 39-3/8" x 78 1/4" resulting in a total footprint area of 21.3 square feet (sqft). The dimensions and configuration of the proposed installation result in each panel being supported by two rafters. The governing configuration exists in the interior section of installation where each rafter will have an added 100 pounds of load added at 4 distinct points, i.e. 25 lbs per point. Standard analysis methods show that the rafters remain within their design capacity. Addition of a load of this magnitude is well within the design capacity of the existing roofing and no additional bracing is required. All analyses are performed in accordance with and conform to the requirements of the 2018 International Building Code (IBC), and applicable codes.

The existing roof of the residence located at **5831 Providence Pl New Orleans, LA 70126** is adequate to support the new loads applied by the solar panels that are intended to be installed.

If there are any questions, or further information is required please feel free to contact me. Thank you for the opportunity to provide this service.

Respectfully,

**Edward Zabala, PE**

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