

ABDIAS H. SAENZ P.E.

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Tuesday, March 10, 2026

CONTRACTOR: A & E BROTHER ROOFING

JOB ADDRESS: 6610 SW 88th , Pinecrest, Florida, 33156

LOW PITCH ROOFS FASTENERS CALCULATIONS

Description

Flat Roof

Roof Mean Hight: 14.00 ft

NOA No: 25-0707.01

Roof System Manufacturer: GAF

Deck Type: Wood Deck Insulated

Top Sheet & Fastener Type: 1 ply EverGuard TPO, mechanically fastened thru 1/2" insulation EnergyGuard Polyiso, Minimum 1.5" thick with Drill-Tec # 14 Fasteners (1.75 in) and Drill-Tec 2-3/8" , Barbed XHD Barbed Plate. (UL requires versashield)

System Type D(3) /24

Maximum Design Preassure from the specific NOA: 45 psf

Scope of Activity & Findings:

- Minimum Design Wind Uplift Preassure from (RAS 128) Exposure "C"

		Rs	Lap spacing
Zone 1'=	-37.0 psf	8 in o.c. on laps and	@ 55.0 in
Zone 1=	-64.0 psf	11 in o.c. on laps and	@ 27.5 in
Zone 2=	-84.0 psf	8 in o.c. on laps and	@ 27.5 in
Zone 3=	-115.0 psf	6 in o.c. on laps and	@ 27.5 in

Number of fastener per square

sf x per fasteners f/sf: = 2.3 fasteners/sq

Fy= 52.50 psf * f/sf:

Fy = 120.31 lbf

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General Equation:

$$FS = F_y \times 144 / P \times R_s$$

Results:

$$\text{Field Area} = R_s = F_y \times \frac{144}{(\text{Field} \times \text{Lap space} - 1)} \quad R_s = 11 \text{ in}$$

$$\text{Perimeter Area} = R_s = F_y \times \frac{144}{(\text{Perimeter} \times \text{Lap space} - 1)} \quad R_s = 8 \text{ in}$$

$$\text{Corner Area} = R_s = F_y \times \frac{144}{(\text{Corner} \times \text{Lap space} - 1)} \quad f_a = 6 \text{ in}$$

ZONE DIMENSIONS:

Perimeter zone (P2) Width: 8.40 ft

Corner zone (P3) Length: 8.40 ft

(P3) Width : 2.80 ft



Abdias H. Saenz, State of Florida, Professional Engineer, License No. 69687

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