



TECHNICAL MEMORANDUM

DATE: June 11, 2026

FOR: Web Portfolio / Project Showcase

FROM: Roofing Project Management Division

SUBJECT: Premium Tile-to-Metal Retrofit Conversion Boca Raton, FL.

1. Project data summary

- Mean Roof Height: 15'
- Roof Pitch: 5/12
- Roof Geometry: Gable Roof
- Total Area: 32 Squares
- Exposure Category: C (Open terrain/Inland)

Project Overview & Design Criteria:

This residential tile re-roof project in Boca Raton, FL, is engineered to withstand 170 MPH winds (Exposure C, 20' mean height, hip roof) in strict compliance with the FBC 8th Edition (2023), ASCE 7-22, and RAS 110 protocols.

Approved System Components:

The high-performance assembly utilizes a Westlake Royal Tile Seal (NOA 23.1214.09) and Eagle Saxony 900 Low Profile roof tiles in Dark Charcoal Blend

(NOA 24-1008.12). All components are securely bonded using APOC Polyset AH-160 Single Component adhesive (NOA 23-0614.01).

Engineering & Wind Compliance:

The system vastly exceeds local wind load requirements. The Weather-Armor underlayment provides a maximum capacity of -112.5 psf, easily covering the maximum required corner and perimeter pressures of -63.5 psf. Furthermore, tile attachment moment calculations using a 24g medium adhesive pad deliver a substantial 18.2x safety margin in the field (Zone 1) and a 7.5x safety margin in high-pressure perimeter zones (Zones 2/3).

Conclusion: This roofing assembly significantly surpasses Boca Raton's structural wind mandates, providing 1.77x the required underlayment resistance and 7.5x the required tile attachment resistance. Final fastening includes 32-gauge metal tin caps on all underlayment laps per 170 MPH criteria, with installation following RAS 120 and RAS 109 protocols. Reviewed for code compliance.