TECHNICAL MEMORANDUM

DATE: April 15, 2026

FOR: Web Portfolio / Project Showcase

FROM: Roofing Project Management Division

SUBJECT: Premium Metal Roof Installation

1. Overview & Property Details

This technical memorandum highlights the engineering and architectural execution of the premium metal roof installation completed at the new construction residential property located in Port Charlotte, FL. The project was delivered to meet strict local wind-uplift criteria and provide maximum coastal storm protection.

2. Material Specifications

The roofing assembly utilizes top-tier, corrosion-resistant materials engineered for architectural beauty and maximum longevity:

- Roofing Profile: 1.75" Mechanical Lock Standing Seam
- Material Gauge/Thickness: 0.032" Heavy-Gauge Aluminum
- Finish/Color: Slate Gray
- Underlayment Protection: Two (2) full layers of Titanium PSU 30 high-temperature, self-adhering (peel-and-stick) waterproofing barrier, providing robust, redundant moisture protection across the entire deck structure.

3. Fastener & Clip Spacing Verification

To satisfy strict local wind mitigation and engineering criteria, stainless steel heavy-duty standing seam clips were installed with enhanced fastening frequencies. Field measurements confirm compliance across all zones:

Perimeter Zones (High-Pressure Areas)

- Specification: Clips secured at 3 inches on center (OC).
- Field Evidence: Fasteners along the eave, rake, and perimeter boundaries follow an ultra-tight 3" interval grid to resist severe corner vortex wind pressures.

Field Zones (Interior Roof Areas)

- Specification: Clips secured at 6 inches on center (OC).
- Field Evidence: The internal roof field panels are anchored systematically at maximum intervals of 6" OC significantly exceeding standard residential installation minimums.

4. Advanced Craftsmanship & Technical Observations

Underlayment Technical Standards & Safety

- ASTM D1970 Compliance: The underlayment material meets and exceeds ASTM D1970 standards, certifying it as a premium-grade, self-adhering polymer-modified bitumen sheet designed for severe high-temperature environments and absolute ice/water damming protection.
- Sure-Foot® Technology: The underlayment features a patented modular walking surface. This high-traction grid system enhances safety for the field technicians and acts as a visual alignment matrix for uniform panel distribution.

Fastener and Clip Integrity

- Dual-Fastener Anchoring: Each mechanical lock clip is securely anchored using two (2) heavy-duty, corrosion-resistant pancake-head fasteners driven perfectly flush into the deck substrate. This configuration maximizes shear strength and prevents any fastener-head protrusion that could abrade the underside of the aluminum panels during thermal expansion cycles.

- Structural Clip Alignment: The clips are installed in a straight, linear path tracking perfectly along the panel ribs. This exact alignment eliminates binding stress on the standing seams, allowing the 0.032" aluminum to expand and contract smoothly under intense thermal shifts.

Substrate and Detail Execution

- Flawless Underlayment Layout: The double-layer peel-and-stick underlayment is installed completely flat, showing immaculate side/end laps with zero fishmouths, wrinkles, or air pockets. Eliminating these imperfections prevents "telescoping," ensuring that the finished metal panels remain completely smooth without bowing or telegraphing substrate flaws.
- Precision Geometric Field Cuts: At hip and valley transitions, the heavy-gauge slate gray panels exhibit ultra-clean, razor-sharp geometric cuts that perfectly mirror the roof slope lines. This precise panel tailoring ensures a uniform gap spacing beneath the future hip caps, maximizing weather-tight seal integrity at critical structural joints.

Conclusion: The metal roofing system at Santa Lucia Dr has been fully installed in a workmanlike manner according to manufacturer specifications, engineering uplift requirements, and local building codes. All structural fasteners and waterproof layers are verified as compliant.