



Board of County Commissioners • Escambia County, Florida

Paul R. Nobles/Purchasing Manager  
Office of Purchasing

February 19, 2019

To: All Known Prospective Bidders

**ADDENDUM NUMBER 3:**

Re: PD 18-19.024, Escambia County Supervisor of Elections Warehouse Modification

All:

Your firm recently received an Invitation to Bid for the above-mentioned specification.

This Addendum Number 3 provides for:

1. **Bid Opening**

From: BIDS WILL BE RECEIVED UNTIL: 2:00 p.m., CDT, ~~February 19~~, 2019

To: BIDS WILL BE RECEIVED UNTIL: 2:00 p.m., CDT, February 22, 2019

2. **Response to RFI's**

Standing Seam Metal Roof - reference sheets a131 & a132 regarding keynote 6, trapezoidal structural standing seam metal roof of (on) retrofit subframing system. Provide specification to include approved manufacturers, gage, finish, color, wind speed uplift plan, etc. **See attached specification SECTION 074113 - STANDING-SEAM METAL ROOF PANELS**

This Addendum Number 3 is furnished to all known prospective bidders. Please sign and return one copy of this Addendum, with original signature, with your bid as an acknowledgement of your having received same. You may photo copy this form for your records.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul R. Nobles", is written over a horizontal line.

Paul R. Nobles  
Purchasing Manager

Acknowledgement of Receipt of Addendum 3:

SIGNED: \_\_\_\_\_

COMPANY: \_\_\_\_\_

213 South Palafox Place, 2<sup>nd</sup> Floor • Pensacola, Florida 32502  
P.O. Box 1591 • Pensacola, Florida 32591-1591  
850.595.4980 • [www.myescambia.com](http://www.myescambia.com)



**SECTION 074113 - STANDING-SEAM METAL ROOF PANELS**

## PART 1 - GENERAL

## 1.1 SUMMARY

- A. Section includes standing-seam metal roof panels and structural retrofit roof sub-framing system. The structural retrofit roof sub-framing system shall provide support for the new metal roofing system constructed over the existing building roof. It shall be engineered in accordance with all requirements of the Florida Building Code and design loading and shall transfer positive acting loads at each attachment location into an existing structural member.
- B. Design for retrofit roofing system shall be a complete retrofit sub-framing and metal roof panel assembly as a structural package. Coordinate design with the retrofit sub-framing manufacturer and metal roof panel manufacturer to perform as one engineered structural package where the metal roof system controls the placement of sub-framing members.
- C. Any additions / revisions to existing sub-framing members as a result of field conditions and / or demands, shall be the contractor's responsibility and shall be submitted for review and approval of the manufacturer.

## 1.2 PREINSTALLATION MEETINGS

- A. Pre-installation Conference: Conduct conference at Project site.
- B. Conduct a detailed inspection of the existing roof to identify any existing roof elements that are a cause for concern, such as, but not limited to: panel deterioration, structural deterioration, equipment curbs, plumbing and electrical penetrations, special flashing requirements and any other items that should be submitted to the Architect for review and evaluation.
- C. Perform a detailed survey of the existing roof and confirm the existing panel dimensions, type and profile.
- D. Record field measurements on the existing roof geometry including width, length, eave height, roof pitch and purlin spacing.

## 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
- C. Samples: For each type of metal panel indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Warranties: Sample of special warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
  - 1. Warranty Period: Ten years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Finish Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Energy Performance: Provide roof panels that are listed on the EPA/DOE's ENERGY STAR "Roof Product List" for low-slope roof products.
- B. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:
  - 1. Wind Loads: As indicated in the specification.
- C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 at the following test-pressure difference:
  - 1. Test-Pressure Difference: 2.86 lbf/sq. ft. (137 Pa).
- D. Hydrostatic-Head Resistance: No water penetration when tested according to ASTM E 2140.

- E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

- 1. Temperature Change (Range): 120 deg F (67 deg C), ambient.

## 2.2 STANDING-SEAM METAL ROOF PANELS

- A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

- 1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.

- B. Trapezoidal-Rib, Seamed-Joint, Standing-Seam Metal Roof Panels: Formed with raised trapezoidal ribs at panel edges and intermediate stiffening ribs symmetrically spaced between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of panels, engaging opposite edge of adjacent panels, and mechanically seaming panels together.

- 1. Aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, Class AZ50 (Class AZM150) coating designation; structural quality.

- a. Nominal Thickness: As required to meet structural loading.
- b. Exterior Finish: Galvalume Plus.

- 2. Clips: As standard with Manufacturer to accommodate thermal movement.

- a. Material: As required to meet structural loading, aluminum-zinc alloy-coated steel sheet.

- 3. Joint Type: As standard with manufacturer.

- 4. Panel Coverage: 24 inches.

- 5. Basis of Design: MBCI Ultra-Dek / Double-Lok 24", or approved equal.

## 2.3 RETROFIT STEEL SUB-PURLINS

- A. General: Provide factory-formed metal retrofit roof sub-framing system to provide support for the new roof panels constructed over the existing building roof. The sub-framing system shall be engineered in accordance with the Florida Building Code and the design loads indicated herein and shall transfer positive acting loads at each attachment location into an existing structural member. Include clips, cleats, pressure plates, and accessories required for weathertight installation.

- 1. Steel Systems: Unless more stringent requirements are indicated, comply with ASTM A 653 or A 1011, G-90 with a yield strength of 50 ksi. Thickness of members shall be as required to meet the structural loading indicated herein.

2. Sub-purlins shall be a 1 piece, custom notched and punched "Z" shaped section. Sub-purlins shall be pre-punched to nest over existing through fastened standing seam roof panels for low profile attachment. Sub-purlins shall fasten directly into existing purlins, joists or structural decking with fasteners. Provide anti-rotational arms as required. Web height, base flange width, top flange width and length shall be manufacturer's standard design as required to be installed over existing roof panels and as required to meet the structural loading indicated herein.
3. Fasteners shall be manufacturer's standard fasteners, number and size as required to meet the required structural loads indicated herein for a complete installation.
4. Basis of Design: Roof Hugger, LLC or approved equal.

#### 2.4 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Sub-framing and Furring: ASTM C 645; cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
  1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
  2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
  3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch thick, flexible closure strips; cut or pre-molded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with prefinished painted metal.
- D. Gutters and Downspouts: Formed from same material as roof panels according to SMACNA's "Architectural Sheet Metal Manual." Finish shall be prefinished painted metal.
- E. Panel Fasteners: Self-tapping screws designed to withstand design loads.
- F. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are non-staining, and do not damage panel finish.
  1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/2 inch wide and 1/8 inch thick.
  2. Joint Sealant: ASTM C 920; as recommended in writing by metal panel manufacturer.
  3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

## 2.5 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- C. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

## 2.6 FINISHES

- A. Panels and Accessories:
  - 1. Manufacturer's Standard galvalume finish for roof panels.
  - 2. Rake trim, gutters, downspouts and other exposed flashing shall be pre-finished paint coated metal.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Miscellaneous Supports: Install sub-framing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.
- B. Flashings: Install flashings to cover underlayment to comply with requirements specified in Section 076200 "Sheet Metal Flashing and Trim."

### 3.2 SUB-PURLIN INSTALLATION

- A. Install sub-purlins in accordance with manufacturer's instructions at locations indicated on the standard details or shop drawings.
- B. Limit installation of sub-purlin to amount that can be roofed over each day.
- C. Install sub-purlins directly over existing purlins and fasten to existing purlin through existing panel pan section. Provide fasteners as required by shop drawings to meet the structural loading indicated herein.

### 3.3 METAL PANEL INSTALLATION

- A. Standing-Seam Metal Roof Panel Installation: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.
  - 1. Install clips to supports with self-tapping fasteners.
  - 2. Install pressure plates at locations indicated in manufacturer's written installation instructions.
  - 3. Snap Joint: Nest standing seams and fasten together by interlocking and completely engaging factory-applied sealant.
  - 4. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied sealant are completely engaged.
  - 5. Watertight Installation:
    - a. Apply a continuous ribbon of sealant or tape to seal joints of metal panels, using sealant or tape as recommend in writing by manufacturer as needed to make panels watertight.
    - b. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
    - c. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.
- B. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
- C. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.

### 3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074113

MAXIMUM ROOF COMPONENT & CLADDING ULTIMATE WIND PRESSURES				
EFFECTIVE WIND AREA (SQ. FT.)	ALL ZONES (+) PRESSURE (PSF)	ZONE 1 (-) SUCTION (PSF)	ZONE 2 (-) SUCTION (PSF)	ZONE 3 (-) SUCTION (PSF)
10	18	-44	-73	-109
20	17	-42	-65	-91
50	15	-41	-55	-66
100	14	-40	-47	-47

MAXIMUM WALL COMPONENT & CLADDING ULTIMATE WIND PRESSURES			
EFFECTIVE WIND AREA (SQ. FT.)	ALL ZONES (+) PRESSURE (PSF)	ZONE 4 (-) SUCTION (PSF)	ZONE 5 (-) SUCTION (PSF)
10	40	-43	-53
20	38	-41	-49
50	36	-39	-45
100	34	-37	-41
200	32	-35	-38
500	30	-33	-33

ULTIMATE WIND PRESSURE TABLES NOTES:

DESIGN WIND PRESSURES IN ACCORDANCE WITH THE SIXTH EDITION FLORIDA BUILDING CODE AND ASCE 7-10 AS FOLLOWS:

ULTIMATE DESIGN WIND SPEED = 155 MPH

NOMINAL DESIGN WIND SPEED = 120 MPH

RISK CATEGORY II

WIND EXPOSURE = B

ENCLOSURE CLASSIFICATION = ENCLOSED

INTERNAL PRESSURE COEFFICIENT =  $\pm 0.18$

COMPONENT AND CLADDING FORCES AS SCHEDULED ON THIS SHEET.

BUILDING IS LOCATED IN A WIND-BORNE DEBRIS REGION WHICH REQUIRES IMPACT PROTECTION FOR ALL GLAZED OPENINGS.

LINEAR INTERPOLATION FOR INTERMEDIATE VALUES OF EFFECTIVE AREAS IS ACCEPTABLE. OTHERWISE, USE THE LOAD ASSOCIATED WITH THE LOWER EFFECTIVE AREA.

ULTIMATE WIND LOAD PRESSURES ARE FOR USE IN LOAD COMBINATIONS LISTED IN FBC 2017 AND ASCE 7-10. THESE COMBINATIONS ARE LISTED IN FBC SECTION 1605 AND INCLUDE A WIND LOAD FACTOR OF 0.6 USING ALLOWABLE STRESS DESIGN. THEREFORE, ULTIMATE PRESSURES LISTED IN THE LOAD TABLE MAY BE REDUCED 40% WHEN USING ALLOWABLE STRESS DESIGN. REDUCED LOADS ARE THE "WORKING LOADS."

WIND PRESSURE ZONES 2, 3 & 5 ARE EDGE AND CORNER ZONES. WALL ZONE 5 IS WITHIN 7'-6" OF CORNERS. ROOF ZONE 2 IS WITHIN 7'-6" OF ROOF EDGES AND RIDGES. ROOF ZONE 3 IS AT ROOF CORNERS WITHIN 7'-6" OF ROOF CORNERS.

NET UPLIFT LOADS ARE CALCULATED FROM ALLOWABLE STRESS DESIGN LOAD COMBINATION .6D+.6W WHERE .6D = 6 PSF.