



Florence County Government
Procurement Department

September 15, 2015

ADDENDUM NO.2 FOR BID NO. 08-15/16, FLEMING TOWN FIRE STATION

The attached drawing has been added to include Building Section 13 34 19 Metal Building.

IMPORTANT NOTE: The bid opening date has been changed. All bids must be hand carried or mailed in a sealed envelope to the Florence County Procurement Office, County Complex, 180 N. Irby Street – MSC-R, Rm. B-5, Florence, SC 29501-3431 later than Thursday, September 17, 2015 at 1:45 p.m. (EST).

The sealed bids will then be opened and read aloud in room 210-C of the County Complex at 2:00 p.m. (ET) Thursday, September 17, 2015.

PLEASE ACKNOWLEDGE THIS ADDENDUM BY SIGNING BELOW AND SUBMIT IT WITH YOUR BID.

I have read and acknowledged addendum no. 2 for bid no. 08-15/16.

Authorized Signature

Printed Name

Date

Company Name

SECTION 13 34 19 - METAL BUILDINGS

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes pre-engineered, shop fabricated structural steel building frame; insulated metal wall, metal wall liners, sloped roof system including gutters and downspouts, and exterior doors, overhead doors and louvers.

1.2 REFERENCES

- A. American Institute of Steel Construction:
 - 1. AISC S335 - Specification for Structural Steel Buildings Allowable Stress Design, and Plastic Design.
 - 2. AISC S342L - Load and Resistance Factor Design Specification for Structural Steel Buildings.
- B. ASTM International:
 - 1. ASTM A36/A36M - Standard Specification for Carbon Structural Steel.
 - 2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 4. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
 - 5. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 - 6. ASTM A501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
 - 7. ASTM A529/A529M - Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality.
 - 8. ASTM A572/A572M - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
 - 9. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 10. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
 - 11. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - 12. ASTM C991 - Standard Specification for Flexible Glass Fiber Insulation for Pre-Engineered Metal Buildings.
 - 13. ASTM C1107/C1107M - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
 - 14. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
 - 15. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
 - 16. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 17. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.

18. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
19. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.
20. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
21. ASTM E1980- Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.
22. ASTM E1996 - Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes.

C. American Welding Society:

1. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination.
2. AWS D1.1 - Structural Welding Code - Steel.

D. California Department of Health Services:

1. CA/DHS/EHLB/R-174 - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda.

E. Green Seal:

1. GC-03-2nd Edition, January 7, 1997 - Anti-Corrosive Paints.

F. Metal Building Manufacturers Association:

1. MBMA - Low Rise Building Systems Manual.

G. SSPC: The Society for Protective Coatings:

1. SSPC - Steel Structures Painting Manual.
2. SSPC Paint 20 - Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

H. Underwriters Laboratories Inc.:

1. UL - Building Materials Directory.

I. U.S. Environmental Protection Agency:

1. ENERGY STAR - ENERGY STAR Voluntary Labeling Program.

1.3 SYSTEM DESCRIPTION

A. Frame Description: Single slope clear span.

B. Bay Spacing: one bay at 20 feet and one bay at 30 feet (measured from steel line to center-line of interior frame).

C. Primary Framing: Welded rigid frame of rafter beams and columns, clear span type, with pinned or fixed end wall columns. Tapered or straight columns.

D. Secondary Framing: by-pass or inset girts, and other items detailed.

E. Wall System: Vertical PBR with sub-girt framing/anchorage assembly, insulation, liner sheets, and accessory components.

F. End Frames: bearing end frames, hot rolled type.

1. End frame shall be a post-and-beam design with rafter pin connected at corner post but continuous over, and supported by, end posts spaced at intervals along the end wall.
 2. Corner posts and end posts shall be designed as pinned both ends.
 3. Rafters, corner pots and end posts shall be either hot-rolled mill sections or welded-up "H" shaped, straight sections.
- G. Roof System: Preformed metal panels of upslope profile, interlocking roll formed standing seam, insulation and accessory components.
- H. Roof Slope: 1 inch in 12 inches

1.4 DESIGN REQUIREMENTS

- A. Thermal resistance of Installed Wall System: R-Value of 11
- B. Thermal Resistance of Installed Roof System: R-Value of 11.
- C. Design members to withstand dead load, vertical and horizontal seismic loads, and design loads due to pressure and suction of wind calculated in accordance with applicable code.
- D. Maximum allowable deflection: 1/180 of span with imposed loads for exterior wall and roof system.
- E. Provide drainage to exterior for water entering or condensation occurring within wall or roof system.
- F. Size and fabricate wall and roof systems free of distortion or defects detrimental to appearance or performance.

1.5 PERFORMANCE REQUIREMENTS

- A. Conform to applicable code for submission of design calculations, and reviewed shop and erection drawings as required for acquiring permits.
- B. Cooperate with regulatory agency or authority and provide data as requested authority having jurisdiction.
- C. Provide components of each type from one manufacturer compatible with adjacent materials.

1.6 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Indicate assembly dimensions, locations of structural members, connections, attachments, openings, cambers, and loads; wall and roof system dimensions, panel layout, general construction details, anchorages and method of anchorage, and method of installation; framing anchor bolt settings, sizes, and locations from datum, and foundation reaction package; indicate welded connections with AWS A2.4 welding symbols; indicate net weld lengths; provide professional seal and signature.
- C. Product Data: Submit data on profiles, component dimensions, and performance characteristics.

- D. Erection Drawings: Indicate members by label, assembly sequence, and temporary erection bracing.

1.7 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Record actual locations of concealed components and utilities.

1.8 QUALITY ASSURANCE

- A. Perform Work in accordance with Florence County standards.

1.9 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Erector: Company specializing in performing Work of this section approved by manufacturer.
- C. Design structural components, develop shop drawings, and perform shop and site work under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of South Carolina.

1.10 WARRANTY

- A. Furnish five year manufacturer warranty for pre-engineered building systems and components.
- B. Furnish five year warranty to include coverage for exterior pre-finished surfaces color coat against chipping, cracking or crazing, blistering, peeling, chalking, or fading. Include coverage for weather tightness of building enclosure elements after installation.

PART 2 PRODUCTS

2.1 PRE-ENGINEERED BUILDINGS

- A. Furnish materials in accordance with State of South Carolina standards.

2.2 COMPONENTS - FRAMING

- A. Structural Steel Members: ASTM A529/A529M Grade 50.
- B. Structural Tubing: ASTM A500/A500M, Grade B.
- C. Plate or Bar Stock: ASTM A529/A529M Grade 50.
- D. Bracing Rods: ASTM A529/A529M Grade 50.
- E. Bracing Cable: Zinc-coated steel wire, 7-strand, in conformance with ASTM A475 EHS, Class A.
- F. Anchor Bolts: ASTM A307 Grade A, unprimed.

- G. Bolts, Nuts, and Washers: ASTM A325 uncoated.
- H. Welding Materials: AWS D1.1; type required for materials being welded.

2.3 COMPONENTS - WALL AND ROOF SYSTEM

- A. Purlins and Girts: Roll-formed 8" "Z" sections
- B. Wall Panels: PBR
 1. 1-1/4" deep major ribs which are trapezoidal in shape, and are spaced 12" on center.
 2. Between each major rib are two minor stiffening ribs.
 3. The "leading edge" rib has a bearing leg.
 4. Each panel shall provide 36" of lateral coverage.
 5. Panel finish shall be blue.
- C. Roof Panels: DoubleLok Standing Seam Roof Panel
 1. Panels shall be roll formed 24" wide.
 2. Each edge corrugation shall be one half of a major rib and shall have a standing leg on top of the half rib that interlocks with the adjacent panel.
 3. Edge corrugation shall be 2" high (3" including the standing leg).
 4. All major ribs shall taper in from 1-1/2" at top to 4-5/8" at base. interlocking standing legs at side laps shall be field seamed together into a Pittsburgh double fold, lock joint by use of an electric seaming machine.
 5. Factory applied sealant shall be provided in the overlapping standing seam leg to assure weather-tightness of the seamed joint.
 6. Concealed clips shall be seamed into the panel side lap to fasten panels to structural members.
 7. Panel finish shall be Galvalume Plus.
- D. Insulation: Batt glass fiber type, faced with reinforced white vinyl, friction fit, 4 inches thick.
- E. Joint Seal Gaskets: Manufacturer's standard.
- F. Fasteners: Manufacturer's standard type, galvanized, finish to match adjacent surfaces when exterior exposed.
- G. Sealant: Manufacturer's standard.
- H. Trim, Closure Pieces, Caps, Flashings, and eaves: Same material, thickness and finish as exterior sheets; brake formed to required profiles. Color: White.

2.4 COMPONENTS - METAL DOORS AND FRAMES

- A. Doors and Frames: Manufacturer's standard.

2.5 COMPONENTS - BAY DOORS

- A. Doors and Frames: Manufacturer's standard.

2.6 FABRICATION - FRAMING

- A. Fabricate members in accordance with AISC Specification for plate, bar, tube, or rolled structural shapes.
- B. Provide framing for door, louver, and bay door openings.
- C. Wall Louvers: See Mechanical Drawings.

2.7 FABRICATION - GUTTERS AND DOWNSPOUTS

- A. Fabricate of same material and finish as roofing metal.
- B. Form gutters and downspouts to collect and remove water. Fabricate with connection pieces.
- C. Form sections in maximum possible lengths. Hem exposed edges. Allow for expansion at joints.
- D. Fabricate support straps of same material and finish as roofing metal, color as selected.

PART 3 EXECUTION**3.1 EXAMINATION**

- A. Verify foundation, floor slab, mechanical and electrical utilities, and placed anchors are in correct position.

3.2 ERECTION - FRAMING

- A. Erect framing in accordance with AISC Specification.
- B. Provide for erection and wind loads. Provide temporary bracing to maintain structure plumb and in alignment until completion of erection and installation of permanent bracing. Locate braced bays as indicated on Drawings.
- C. Do not field cut or alter structural members without approval of Architect/Engineer.
- D. Install Work in accordance with Florence County standards.

3.3 ERECTION - WALL AND ROOFING SYSTEMS

- A. Exercise care when cutting prefinished material to ensure cuttings do not remain on finish surface.
- B. Install Work in accordance with Florence County standards.

3.4 ERECTION - GUTTER AND DOWNSPOUTS

- A. Rigidly support and secure components. Joint lengths with formed seams sealed watertight. Flash and seal gutters to downspouts.



- B. Apply bituminous paint on surfaces in contact with cementitious materials.
- C. Install splash pads under each downspout.

3.5 ERECTION - ACCESSORIES

- A. Install Work in accordance with Florence County standards.

3.6 ERECTION TOLERANCES

- A. Framing Members: 1/4 inch from level; 1/8 inch from plumb.
- B. Siding and Roofing: 1/8 inch from indicated position.

END OF SECTION