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ADDENDUM NO. 2

**FORT WAYNE CHILDREN'S ZOO
VELDT BARN REPLACEMENT
MSKTD Project No. 8063
Thursday, September 19, 2024**

This addendum is issued as a supplement to the drawings and specifications and shall be considered an integral part of the same.

<u>ITEM</u>	<u>LOCATION</u>	<u>DESCRIPTION</u>
2.1	General	Plywood walls above the FRP are untreated.
2.2	Specifications Section 084113	YKK AP America Inc. is approved as an "equal manufacturer" subject to complying with specifications and requirements.
2.3	Specifications Section 085113	Add attached Specification Section 085113 - Aluminum Windows to the Project. These are for the windows in Office 102.
2.4	Specifications Section 087100	1. Locks to be "C" Primus, Level 8, CIH P00042. 2. Cores by hardware supplier.
2.5	Drawings Sheets C401 & C402	Revise Site Plan Key Note #10 to read as follows: "PLANTING AREA OR TURF – SEE SHEET L101".
2.6	Questions from Bidders	See attached questions from the bidders with responses.

Respectfully submitted,

MSKTD & ASSOCIATES, INC.

Richard S. Rambo, Architect

RSR/lw

Attachments:

Specification Section 085113 - Aluminum Windows
Bidder Questions with Responses

cc: Eastern Engineering
Casie Shoaf (Casie.Shoaf@kidszoo.org)
RSR/ALK/KCS/LAK/PJB/KEB/JSH
File

SECTION 085113 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Aluminum windows.

1.2 DEFINITIONS

- A. Combination Assemblies: An assembly formed by a combination of two or more separate fenestration products whose frames are mulled together utilizing a combination mullion or reinforcing mullion.
- B. Combination Mullions: A horizontal or vertical member formed by joining two or more individual fenestration units together without a mullion stiffener.
- C. Reinforcing Mullions: A horizontal or vertical member with an added continuous mullion stiffener and joining two or more individual fenestration units along the sides of the mullion stiffener.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, glazing and fabrication methods, dimensions of individual components and profiles, hardware, and finishes.
- B. Shop Drawings:
 - 1. Plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- C. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.
- D. Samples for Verification: Actual sample of finished products for each type of exposed finish:
 - 1. Exposed Aluminum Finishes: Manufacturers' standard size.
 - 2. Exposed Hardware: Full-size units.
- E. Product Schedule: For aluminum windows. Use same designations indicated on Drawings.

- F. Delegated Design Submittals: For reinforcing mullions, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.4 INFORMATIONAL SUBMITTALS

- A. Test and Evaluation Reports:
 - 1. Product Test Reports: For each aluminum window, for tests performed by manufacturer and witnessed by a qualified testing agency.
- B. Qualification Statements: For manufacturer and Installer.
- C. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

- A. Warranty Documentation:
 - 1. Manufacturers' special warranties.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A manufacturer capable of fabricating aluminum windows that meet or exceed performance requirements indicated and of documenting this performance by test reports and calculations.
- B. Installer Qualifications: Authorized representative who is trained and approved by aluminum window manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver aluminum windows to Project site in original, unopened packages and store them in accordance with manufacturer's written instructions. Protect aluminum windows against damage from moisture, humidity, temperature extremes, direct sunlight, surface contamination, and other causes.
- B. Handle aluminum windows in a manner that prevents damage before, during, and after installation.

1.8 FIELD CONDITIONS

- A. Environmental Limitations: Do not install aluminum windows outside of limits recommended in writing by manufacturer.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - b. Structural failures, including excessive deflection, water leakage, condensation, and air infiltration.
 - c. Faulty operation of movable sash and hardware.
 - d. Deterioration of materials and finishes beyond normal weathering.
 - e. Failure of insulating glass.
 - 2. Warranty Period:
 - a. Window: 10 years from date of Substantial Completion.
 - b. Glazing Units: 10 years from date of Substantial Completion.
 - c. Hardware: Three years from date of Substantial Completion.
 - d. Aluminum Finish: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain aluminum windows from single source from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Product Standard: Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for definitions and minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
- B. Performance Class and Grade: AAMA/WDMA/CSA 101/I.S.2/A440 as follows:
 - 1. Minimum Performance Class: CW.
 - 2. Minimum Performance Grade: 30.
- C. Energy Performance: Certified and labeled by manufacturer for energy performance as follows:
 - 1. Thermal Transmittance (U-factor): As determined in accordance with NFRC 100:
 - a. Operable Windows: Not more than 0.54 Btu/sq. ft. x h x deg F.
 - 2. Condensation-Resistance Factor (CRF): Provide aluminum windows tested for thermal performance in accordance with AAMA 1503, showing a CRF of 52.

- D. Thermal Movements: Provide aluminum windows, including anchorage, which allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

- 1. Temperature Change: 120 deg F ambient; 180 deg F material surfaces.

2.3 ALUMINUM WINDOWS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer Company, Inc.; Arconic Corporation - 8400TL Horizontal Sliding or comparable product by one of the following:

- 1. EFCO Corporation
 - 2. Peerless Products Inc

- B. Provide manufacturer's standard aluminum window assemblies consisting of frames, sashes, glass, hardware, fasteners, and all components and accessories as required for a complete installation.

- C. Operating Types: Provide the following operating types in locations indicated on Drawings:

- 1. Horizontal sliding.

- D. Frames and Sashes: Aluminum extrusions of alloy, temper, and strength complying with AAMA/WDMA/CSA 101/I.S.2/A440.

- 1. Thermally Broken Construction: Fabricate frames, sashes, and muntins with an integral, concealed, low-conductance thermal barrier located between exterior materials and window members exposed on interior side in a manner that eliminates direct metal-to-metal contact.

- E. Glazing: See Section 088000 "Glazing".

- F. Hardware, General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with adjacent materials; designed to smoothly operate, tightly close, and securely lock windows, and sized to accommodate sash weight and dimensions.

- 1. Exposed Hardware Color and Finish: As selected by Architect from manufacturer's full range.

- G. Horizontal-Sliding Window Hardware:

- 1. Sill Cap/Track: Extruded-aluminum track with natural anodized finish of dimensions and profile indicated; designed to comply with performance requirements indicated and to drain to the exterior.

2. Locks and Latches: Allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only. Provide key-operated custodial locks.
 3. Roller Assemblies: Low-friction design.
- H. Weather Stripping: Provide manufacturer's standard full-perimeter weather stripping for each operable sash unless otherwise indicated.
- I. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
1. Exposed Fasteners: Avoid exposed fasteners to greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.
- 2.4 ACCESSORIES
- A. Subsills: Thermally broken, extruded-aluminum subsills in configurations indicated on Drawings.
- B. Interior Trim: Extruded-aluminum profiles in sizes and configurations indicated on Drawings.
- C. Panning Trim: Profiles in sizes and configurations indicated on Drawings.
- D. Nail Fins: Manufacturer's standard mounting flanges with holes pre-punched for mechanical fasteners.
- 2.5 INSECT SCREENS
- A. General: Fabricate insect screens to integrate with window frame. Provide screen for each operable exterior sash. Screen wickets are not permitted.
1. Type and Location: Half, outside for sliding sashes.
- B. Aluminum Frames: Manufacturer's standard aluminum alloy complying with SMA 1201. Fabricate frames with mitered or coped joints or corner extrusions, concealed fasteners, and removable PVC spline/anchor concealing edge of frame.
1. Tubular Framing Sections and Cross Braces: Roll formed from aluminum sheet.
- C. Aluminum Wire Fabric: 18-by-16 mesh of 0.011-inch- diameter, coated aluminum wire.
1. Wire-Fabric Finish: Charcoal gray.
- 2.6 FABRICATION
- A. Fabricate aluminum windows in sizes indicated. Include a complete system for assembling components and anchoring windows.

- B. Glaze aluminum windows in the factory.
- C. Weather strip each operable sash to provide weathertight installation.
- D. Weep Holes: Provide weep holes and internal passages to conduct infiltrating water to exterior.
- E. Provide water-shed members above side-hinged sashes and similar lines of natural water penetration.
- F. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.

2.7 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM/NOMMA AMP 500 "Metal Finishes Manual for Architectural and Metal Products," for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.8 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of sill plate, and operational clearances.
- C. Examine wall flashings, vapor retarders, air and weather barriers, and other built-in components to ensure weathertight window installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E2112.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction to produce weathertight construction.
- C. Install windows and components to drain water passing joints and condensation to the exterior.
- D. Separate aluminum from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING

- A. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.

3.4 CLEANING AND PROTECTION

- A. Clean exposed surfaces immediately after installing windows using manufacturer's written instructions. Avoid damaging finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- C. Protect window surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances do contact window surfaces, remove contaminants immediately in accordance with manufacturer's written instructions.

END OF SECTION 085113

BIDDER QUESTIONS

9-10-2024 Question Set

32. **Drawing page S501:** Are the brackets shown in detail 9, 10, & 15 galvanized, raw plate steel, or powder coated?
Response: **Galvanized.**
35. **Specification Section 087100:** What level of Primus locks are required? Are the owner's providing cores?
Response: **See Addendum No. 2.**

9-12-2024 Question Set

36. **Drawing page C503:** Is the PVC gate shown in detail 4 to be furnished and installed by the GC?
Response: **PVC gates are by Owner per detail.**
37. **Specification Section 08XXXX:** There is no specification for the sliding windows in Office 102. Can Kawneer's AA5450 Ultra Thermal Window be used for this? See attached product data sheet.
Response: **See Addendum No. 2.**
38. **Drawing page P501:** Detail No. 7 on this sheet is a detail/specification for a thermostatic mixing valve, but there is no mention of one in the plans or specifications other than this detail. Can the engineer confirm if we need this?
Response: **Provide mixing valve as shown on detail 7/P501 to meet code. The water heater shall be set to produce 140°F hot water to the minimize risk of legionella and to provide adequate temperature to the mixing valve. The mixing valve shall be set to deliver 110°F hot water to the building.**
39. **Specification Section 074113.13 – Standing Seam Metal Roof Panels:** Is McElroy's T238 standing seam metal roof panel an acceptable manufacturer for this specification section? McElroy is already an approved manufacturer in this spec section but the T238 profile is slightly different. See attached substitution request.
Response: **No.**

9-16-2024 Question Set

40. **Specification Section 084113 – Aluminum Storefront:** Is YKK's aluminum storefront and door system an acceptable manufacturer for this specification section? See attached substitution request and data sheets.
Response: **See Addendum No. 2.**
41. **Drawing page S401:** What species of wood are the 12x12 and 12x14 rafters/columns to be made from?
Response: **See Sheet S001.**

09-17-2024 Question Set

42. **Drawing page C402:** Note 10 on this page refers to sheet L001, which is not included in this drawing set. What profile needs to be provided for planting areas or turf where this note occurs?
Response: **See Addendum No. 2.**