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# REQUEST FOR BIDS ADDENDUM NO. 2

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## Fern Ridge School District 28J

88834 Territorial Road  
Elmira, OR 97437

### ADDENDUM NO. 2

February 28, 2024

RE: **Elmira High School Restroom Remodel**

These addenda, together with the original request for bids shall form the complete request for bids. This addendum sets forth only the changes and additions, which are to be made in the original Request for Bids(RFB). The original documents remain in full force and effect except as specifically modified in these addenda.

1. INFORMATION REGARDING HVAC CONTROLS:

*The controls are currently an outdated Trane system. They are all unsupported by Trane and are 25-30 years old, there are three different Trane platforms running different parts of campus. Alliant Systems are in the middle of engineering a replacement/upgrade for the District. This process is in the preliminary stages and there are no specifics as of yet on what system they are planning. Since Alliant is Elmira School Districts HVAC support contractor it is probably best to sub with them. The account manager there is Matt Cooper, [m.cooper@alliant-systems.com](mailto:m.cooper@alliant-systems.com).*

2. Add the following attached specification section to the Bid Documents:

DIVISION 8 SECTION 08 41 13 ALUMINUM STOREFRONT

END OF ADDENDUM NO. 2

**SECTION 08 41 13 - ALUMINUM STOREFRONT DOORS & WINDOWS**

**PART 1 - GENERAL**

**RELATED DOCUMENTS:**

Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section as do the following related sections.

Section 07 90 00 - Joint Sealers: Sealant work between metal frame and building.

Section 08 70 00 – Door Hardware.

Section 08 80 00 - Glazing.

Section 08 92 00 - Glazed Aluminum Curtainwall Systems

**SUMMARY:**

**Extent** of aluminum storefront windows is indicated on drawings and schedules.

**Aluminum storefront types** required for the project include:

Storefront type framing system.  
Operable & Fixed Window units  
Exterior Entrance Doors

**Glazing:** Refer to "Glass and Glazing" section of Division 8 for glazing requirements for aluminum entrances and storefronts, including doors specified to be factory-preglazed.

**SYSTEM DESCRIPTION:**

**Performance Requirements:** Provide aluminum entrance and storefront assemblies that comply with specified performance characteristics. Each system shall be tested by a recognized testing laboratory or agency in accordance with specified test methods. Provide certified test results.

Performance Requirements:

**Delegated Design:** Design aluminum-framed storefronts, including comprehensive engineering analysis by a qualified professional engineer licensed in the State of Oregon, using performance requirements and design criteria indicated.

**Wind Loads:** Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.

Design Wind Loads: Comply with requirements of ASCE 7 and Structural Drawings.

Member Deflection: Limit member deflection to 1/175 when subject to the design wind load and a maximum permanent set of 0.1 percent or 0.2 percent of span after testing to 150 percent of design wind load in any direction, with full

recovery of glazing materials.

**Water Penetration Resistance:** No uncontrolled water on interior face, when tested in accordance with ASTM E 331 at pressure differential of **10 psf. No reduction shall be taken in test pressures for field installation.** Water penetration is defined as any water infiltrating the system or appearing on any interior surface from sources other than condensation. Water controlled by flashing and gutters that is drained to the exterior and cannot damage adjacent materials or finishes is not considered water leakage.

**Air Leakage:** Maximum of 0.06 cu ft/min sq ft of wall area, when tested in accordance with ASTM E 283 or NFRC 400 at 6.27 psf pressure differential across assembly.

Limit air infiltration at entrance doors and operable windows to 1.00 cu ft/min/sq ft of door or operable window area at 1.57 pounds per square foot pressure differential.

**Seismic Performance:** Shall withstand the effects of earthquake motions determined according to ASCE 7.

The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

Seismic Component Importance Factor: As indicated on Structural Drawings.

Testing to be done by an AAMA accredited testing lab provided by the Owner.

Conduct four separate regimes of testing. For each regime, except at mock-up, test a minimum of three installed aluminum-framed storefront units for water leakage and air infiltration with the storefront manufacturer, Contractor, Architect, Building Enclosure Consultant and Owner present. For mock-up, test a minimum of one unit. Locations will be randomly determined by the Architect.

Regime test dates to be determined by Architect in coordination with Contractor.

First Test: Testing of mock-up installation.

Second Test: Take at initial installation.

Third Test: Take at 50 percent completion.

Fourth Test: Take at 80 percent completion.

Test area shall extend beyond perimeter of glazing frame to include adjacent materials, flashing and sealants.

Test areas shall not have interior finishes installed so as to permit visibility of test area.

Water leakage tests shall be conducted in accordance with ASTM E1105, Procedure A, uniform pressure difference.

Air infiltration tests shall be conducted in accordance with ASTM E783.

Water Leakage: Testing pressure to be set at 8 psf Field test. No field reduction shall be permitted.

There shall be no uncontrolled water penetrating assemblies or water appearing on assemblies normally exposed interior surfaces from sources other than condensation. Water leakage does not include water controlled by flashing and gutters that is drained to exterior.

**Air Infiltration:** Areas shall be tested for air leakage of 1.5 times the rate specified for laboratory testing under "Performance Requirements" Article, but not more than 0.09 cfm/sq. ft., of fixed wall area at a minimum static-air-pressure difference of 6.24 lbf/sq. ft.

If unit(s) fail testing, correct assembly of failed unit and any other unit with the same problem at no additional cost to Owner. Re-test failed assemblies and perform additional test(s) until window assembly achieves a "pass" result from testing.

In the event of a failed test, at the discretion of the Architect, two additional locations for testing will be selected by the Architect. (These two areas shall be in addition to a re-testing the failed location)  
Procedure will be repeated until all tested areas pass.  
Additional testing from failed results shall be conducted at no extra cost to the Owner.

## **SUBMITTALS:**

**Product Data:** Submit manufacturer's product specifications, technical product data, standard details, and installation recommendations for each type of entrance and storefront product required. Include the following information:

Fabrication methods.  
Finishing.  
Accessories.

**Shop Drawings:** Submit shop drawings for fabrication and installation of entrances and storefronts, shall be to scale, shall be in compliance with Section 01 30 00, and shall include the following:

Elevations.  
Detail sections of typical composite members.  
Hardware, mounting heights.  
Anchorage and reinforcements.  
Expansion provisions.  
Glazing details.

**Samples:** Submit pairs of samples of each type and color of aluminum finish, on 12" long sections of extrusions or formed shapes and on 6" square sheets. Where color or texture variations are anticipated, include 2 or more units in each set of samples indicating extreme limits of variations. Submit as per Section 01300.

**Certification:** Provide certified test results showing that entrance and storefront systems have been tested by a recognized testing laboratory or agency and comply with specified performance characteristics.

**Delegated-Design Submittal:** For aluminum-framed storefront indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1. Submit submittals as "Deferred Submittals". Transmit a copy of each submittal indicating agency approval to the Architect for record.
2. Design Data: Provide framing member structural and physical characteristics and engineering calculations and identify dimensional limitations.

### **QUALITY ASSURANCE:**

**Single Source Responsibility:** Provide entrance and storefront produced by a single manufacturer capable of showing prior production of units similar to those required.

**Manufacturer's Qualifications:** Provide entrances and storefront produced by a single manufacturer with not less than 5 years successful experience in the fabrication of assemblies of the type and quality required.

**Installer's Qualifications:** Entrances and storefront shall be installed by a firm that has not less than 5-years successful experience in the installation of systems similar to those required.

**Design Criteria:** Drawings indicate sizes, spacings of members, profiles and dimensional requirements of entrance and storefront work. Minor deviations will be accepted in order to utilize manufacturer's standard products when, in the Architect's sole judgement, such deviations do not materially detract from the design concept or intended performances.

**Design Criteria:** Drawings are based on one manufacturer's entrance and storefront system. Another manufacturer's system of a similar and equivalent nature will be acceptable when, in the Architect's sole judgement, differences do not materially detract from the design concept or intended performance. Systems not specified herein, must complete the Substitution Process as per Section 01631.

**Pre-Installation Meetings:** Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

### **PROJECT CONDITIONS:**

**Field Measurements:** Check openings by field measurement before fabrication to ensure proper fitting of work; show measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay in the work. Where necessary, proceed with fabrication without field measurements, and coordinate fabrication tolerances to ensure proper fit.

**Protection:** Protect exposed surfaces, hardware, material, and finishes from damage as required. Cover completely to ensure no mortar or grout can get on any aluminum surface during construction. Protect as required from other trades to ensure top quality product at project completion.

### **WARRANTY:**

Provide installer warranty to correct defective Work within a five-year period after the Date of Substantial Completion.

Provide manufacturer warranty from Date of Substantial Completion against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Warranty period to be 2 years for Class II clear anodized, 5 years for Class I anodized, 10 years for Kynar type finishes.

## **PART 2 - PRODUCTS**

### **MANUFACTURERS:**

**Acceptable Manufacturers for Aluminum Storefront Window Wall Systems:** Subject to compliance with requirements, provide products of one of the following:

Kawneer Company, Inc. 451 T (Basis of specification and details) 2" x 4.5" Center Glazed framing members with 451THPO37 Sill Flashings.

Equal products from US ALUMINUM and Oldcastle will be considered.

**Acceptable Manufacturers for Aluminum Entrance Doors:** Subject to compliance with requirements, provide products of one of the following:

Kawneer Company, Inc .Insulclad 560 Swing Doors

The door stile and rail face dimensions of the Insulclad 560 Swing Door entrance door will be as follows:

Insulclad™ 560 Swing Door:

Vertical face dimension: 5-9/16" (141.3 mm)

Top Rail: 5-9/16" (141.3 mm)

Bottom Rail: 10" (254.0 mm)

Major portions of the door members shall be 0.125" (3.2 mm) nominal thickness.

Glazing molding shall be 0.05" (1.3 mm) thick.

Glazing gaskets shall be either EPDM elastomeric extrusions or a thermoplastic elastomer.

Provide adjustable glass jacks to help center the glass in the door opening.

**U Value required: 0.33.**

Other manufacturers must comply with Section 01 63 00 Substitutions **prior to bidding.**

## **DOOR HARDWARE**

General Hardware Requirements: Coordinate with door hardware section 08 71 00 for door preparation for hardware by others along with stand

1. Provide manufacturer's standard hardware.
2. Hardware shall be fabricated from aluminum, stainless steel, or other corrosion-resistant material that is compatible with aluminum.
3. Hardware shall be designed to smoothly operate, tightly close, and securely lock aluminum-framed entrance doors.

Standard Hardware:

Weather-Stripping:

Meeting stiles on pairs of doors shall be equipped with an adjustable astragal using wool pile with polymeric fin.

The door weathering on a single-acting offset pivot or butt hung door and frame (single or pairs) shall be comprised of a thermoplastic elastomer weathering on a tubular shape with a semi-rigid polymeric backing.

Sill Sweep Strips:

EPDM blade gasket sweep strip in an aluminum extrusion applied to the interior exposed surface of the bottom rail with concealed fasteners (necessary to meet specified performance tests)

Threshold:

Extruded aluminum  
One piece per door opening  
Ribbed surface  
Butt Hinge: Kawneer® standard stainless steel with powder coating and non-removable pin (NRP).  
Push/Pull: See 08 71 00  
Closer: See 08 71 00  
Lock: See 08 71 00  
Cylinder: See 08 71 00

## **MATERIALS:**

**Aluminum Members:** Provide alloy and temper of 6063-T6 aluminum alloy and temper as recommended by the manufacturer for strength, corrosion resistance, and application of required finish; comply with ASTM B 221 alloy G.S. 10A-T5 for extrusions and ASTM B 209 for sheet or plate.

**Fasteners:** Provide fasteners of aluminum, nonmagnetic stainless steel, or other materials warranted by the manufacturer to be noncorrosive and compatible with aluminum components, hardware, anchors, and other components. Perimeter anchors shall be aluminum. When steel anchors are used, provide insulation between steel materials and aluminum material to prevent galvanic action. If fastening to steel, provide insulation between materials to prevent galvanic action.

**Reinforcement:** Where fasteners screw-anchor into aluminum less than 0.125" thick, reinforce the interior with aluminum or nonmagnetic stainless steel to receive screw threads, or provide standard noncorrosive pressed-in splined grommet nuts.

**Exposed Fasteners:** Except where unavoidable for application of hardware, do not use exposed fasteners. For the application of hardware, use fasteners that match the finish of member or hardware being fastened.

**Provide Phillips** flat-head machine screws for exposed fasteners.

**Concealed Flashing:** Provide 24 gage minimum dead-soft stainless steel, or 0.024" minimum extruded aluminum of alloy and type selected by manufacturer for compatibility with other components.

**Brackets and Reinforcements:** Where feasible, provide high-strength aluminum brackets and reinforcements; otherwise provide nonmagnetic stainless steel or hot-dip galvanized steel complying with ASTM A 386.

**Concrete/Masonry Inserts:** Provide concrete and masonry inserts fabricated from cast-iron, malleable iron, or hot-dip galvanized steel complying with ASTM A 386.

**Compression Weatherstripping:** Provide the manufacturer's standard replaceable compressible weatherstripping gaskets of molded neoprene complying with ASTM D 2000 or molded PVC complying with ASTM D 2287.

**Glass and Glazing Materials:** Glass and glazing materials shall be EPDM extrusions.

## **COMPONENTS:**

**Storefront Framing System:** Provide inside-outside matched resilient flush-glazed storefront framing system with provisions for glass replacement. Shop-fabricate and preassemble frame components where possible.

**Thermal-Break Construction:** Fabricate storefront framing system with integrally concealed, low conductance thermal barrier, located between exterior materials and exposed interior members to eliminate direct metal-to-metal contact. Use manufacturer's standard construction that has been in use for similar projects for period of not less than 5 years. Kawneer IsoLock® Thermal Break with a 1/4" (6.4) separation consisting of a two-part chemically curing, high-density polyurethane, which is mechanically and adhesively joined to aluminum storefront sections.

Thermal Break shall be designed in accordance with AAMA TIR-A8 and tested in accordance with AAMA 505.

## **FABRICATION:**

**General:** Sizes of door and frame units, and profile requirements, are indicated on drawings. Variable dimensions are indicated, with maximum and minimum dimensions required to achieve design requirements and coordination with other work.

**Prefabrication:** Before shipment to the project site, complete fabrication, assembly, finishing, hardware application, and other work to the greatest extent possible. Disassemble components only as necessary for shipment and installation.

**Do not drill** and tap for surface-mounted hardware items until time of installation at project site.

**Perform fabrication** operations, including cutting, fitting, forming, drilling, and grinding of metal work to prevent damage to exposed finish surfaces. For hardware, perform these operations prior to application of finishes.

**Welding:** Comply with AWS recommendations; grind exposed welds smooth and restore mechanical finish.

**Reinforcing:** Install reinforcing as required for hardware and necessary for performance requirements, sag resistance and rigidity.

**Dissimilar Metals:** Separate dissimilar metals with zinc chromate primer, bituminous paint, or other separator that will prevent corrosion.

**Continuity:** Maintain accurate relation of planes and angles, with hairline fit of contacting members.

**Uniformity of Finish:** Abutting extruded aluminum members shall not have an integral color or texture variation greater than half the range indicated in the sample pair submittal.

**Fasteners:** Conceal fasteners wherever possible.

**Prepared for Door Hardware** by others, see Hardware Schedule and coordinate.

## **ACCESSORIES**

### **Custom Covers/Flashings Closure panels:**

It is the intent of this specification for the Storefront Installer to provide and install these units as part of the system. These units shall be made of 0.050" thick aluminum with a finish to match the storefront and shall be secured as per the aluminum storefront manufacturer. Contractor shall review the existing window details as well as the proposed details and shall visit the site to determine the various



conditions, all of which may not be shown, and to provide these units as required in each case. Custom Sill shape must match exactly the detail provided and can be provided by Pacific Northwest Doors and Hardware.

Provide 452 145 Filler and continuous caulking with backer rod at all jambs, typical.

Provide 451T-037 Sub Sill Typical at all sills.

Provide 451-VG 570 & 572 Head Cans typical at all heads.

**Glazing Sealants:**

Glazing Gaskets: Manufacturer's standard fixed resilient elastomeric glazing spline.  
Sealant Requirements: Comply with requirements of 08800 glazing.

**Framing Sealants:**

Concealed joints between framing members and adjacent surfaces: Butyl caulking.  
Exposed joints between framing members and adjacent surfaces: Polyurethane  
Small, exposed joints between framing members: small joint caulking.  
Sealant Requirements: Comply with requirements in Section 07900, Joint Sealers.

**FINISHES:**

**Color Finish:** Provide factory color and finish:

Kawneer Permanodic® AA-M10C21A31, AAMA 611, Architectural Class II Clear Anodic Coating  
(Color #17 Clear) (Standard) @ all locations UNO.

**PART 3 - EXECUTION**

**INSTALLATION:**

**Comply with manufacturer's instructions** and recommendations for installation.

**Inspection:** Before starting installation work, examine the parts of the building affecting work under this section. If previous work prevents proper execution of work in this Section, have work corrected by trades responsible for the incorrect work. Do not proceed with work under this Section, until all corrections have been made. Beginning of installation means acceptance of existing conditions.

**Set units plumb,** level, and true to line, without warp or rack of framing members, doors, or panels. Provide proper support and anchor securely in place.

**Separate aluminum** and other corrodible metal surfaces from sources of corrosion of electrolytic action at points of contact with other materials. Comply with requirements specified under paragraph "Dissimilar Materials" in the Appendix to AAMA 101-85.

**Erection Tolerances:** Maximum deviation from true vertical or horizontal or designated position, 1/8 inch in 12 feet of length in only one member, ¼ inch in any total run of members in any line. Maximum offset from

true alignment at joints between abutting members in line end to end, 1/16 inch. When moldings are joined, they shall be accurately fitted to result in tightly closed joint.

**Erect frames** and their structural stiffeners where shown, to true vertical and horizontal lines, corners square on angled as shown, in alignment with adjacent structure. Firmly anchor to adjacent construction in methods shown on approved shop drawings.

**Sealing Material:** Seal all joints, exposed, or concealed with sealing compound or preformed material of type specified herein.

**Drill and tap** frames and doors and apply surface-mounted hardware items. Comply with hardware manufacturer's instructions and template requirements. Use concealed fasteners wherever possible.

**Set sill members** and other members in bed of sealant as indicated, or with joint fillers or gaskets as indicated to provide weathertight construction. Comply with requirements of Division 7 for sealants, fillers, and gaskets.

**Refer to "Glass and Glazing"** section of Division 8 for installation of glass and other panels indicated to be glazed into doors and framing, and not preglazed by manufacturer.

#### **ADJUSTING:**

**Adjust operating hardware** to function perfectly, for smooth operation without binding, and for weathertight closure. Make minor adjustments required for a period of one-year after full completion without additional costs to owner.

#### **Field Quality Control**

**Field Tests:** Architect shall select storefront units to be tested as soon as a representative portion of the project has been installed, glazed, perimeter caulked and cured. Conduct tests for air infiltration and water penetration with manufacturer's representative present. Tests not meeting specified performance requirements and units having deficiencies shall be corrected as part of the contract amount.

**Testing:** Testing shall be performed by a qualified independent testing agency. Refer to Testing Section for payment of testing and testing requirements. Testing Standard per AAMA 503, including reference to ASTM E 783 for Air Infiltration Test and ASTM E 1105 Water Infiltration Test. Testing shall occur at the following intervals: When approximately 10% of the windows have been installed; and when approximately 50% of the windows have been installed, and again when 90% of the windows have been installed. This testing shall be coordinated and paid for as part of this contract.

**Water Infiltration Tests:** Conduct tests in accordance with ASTM E 1105. No uncontrolled water leakage is permitted when tested at a static test pressure of two-thirds the specified water penetration pressure but not less than 6.24 psf (300 Pa).

**Manufacturer's Field Services:** Upon Owner's written request, provide periodic site visit by manufacturer's field service representative.

#### **CLEANING:**

**Clean the completed system,** inside and out, promptly after installation, exercising care to avoid damage to coatings.

**Clean glass surfaces** after installation, complying with requirements contained in the "Glass and Glazing" section for cleaning and maintenance. Remove excess glazing and sealant compounds, dirt, and other substances from aluminum surfaces.

**PROTECTION:**

**Institute protective measures** required throughout the remainder of the construction period to ensure that aluminum entrances and storefronts will be without damage or deterioration, other than normal weathering, at time of acceptance.

**END OF SECTION 08 41 13**