



## **Addendum #2**

### **Bid Opportunity: 23-7367-RFT - King Edward Public School Accessibility Upgrade including Elevator and Washrooms**

**Closing Date: Tuesday, April 25, 2023 2:00 PM**

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The following issued by the Board shall form part of the Bid / Proposal Solicitation document. The revisions and additions noted herein along with any attachments shall be read in conjunction with all other related documents. This Addendum shall, take precedence over the previously issued documents where differences occur. Receipt of this addendum must be acknowledged in the Bidding System, bids&tenders.

If you have already submitted a Bid / Proposal, it will be automatically withdrawn as a result of this addendum. You must resubmit the Bid / Proposal acknowledging all addenda and revising your Bid / Proposal to comply with all addenda.

#### **Question 1:**

#### **Answer 1:**

Refer to Section 07461 ALUMINUM ARCHITECTURAL COMPOSITE PANEL SYSTEM attached to this Addendum.

**Question 2:**

The drawings do not call for blinds, can we assume that all blinds will be covered under the cash allowance provided in the specification?

**Answer 2:**

Refer to Question 2 of Addendum 1: No motorized blinds are required for this renovation.

**Question 3:**

Due to the religious holiday for most of our staff and subcontractors on Friday the 21, can you kindly change the closing date to the week after?

**Answer 3:**

The closing date for this tender will be extended for Tuesday, April 25<sup>th</sup>.

**AMENDMENT TO SPECIFICATIONS**

- **SECTION 00 21 13 INSTRUCTIONS TO BIDDERS**

**Item 7: Anticipated Project Schedule. Tender Timetable**

**Closing Date and Time ...CHANGE CLOSING DATE** for the Tender Form from April 21<sup>st</sup> **to April 25<sup>th</sup> 2023**. The time of closing remains 2:00:00 pm.

**The new closing date is April 25<sup>th</sup> at 2:00 pm.**

- Include Section 07461 ALUMINUM ARCHITECTURAL COMPOSITE PANEL SYSTEM attached to this Addendum to the Specifications.

**END OF ADDENDUM**

1. **GENERAL**

1. **GENERAL REQUIREMENTS**

1. Conform to sections of Division 1 as applicable.

2. **DESCRIPTION**

1. **Description of Work**

1. The work of this section shall be comprised of the fabrication, supply and installation of pre-fabricated Aluminum Architectural panel system as indicated on drawings and as specified herein. The specifications and drawings pertaining to this section's work are to portray the general design and particular building requirements. The Contractor will be responsible to ensure that the finished insulated metal wall system product meets or exceeds the general design requirements and finished usage of the building as specified herein.
2. The Contractor in conjunction with the Aluminum Architectural panel system Manufacturer will be required to ensure that the Aluminum wall cladding and their components are designed, engineered, adapted as required to satisfy the general design as indicated herein without significantly altering details, measurements, clearances, etc., while allowing for the proper installation of work of all other sections.

2. **Work Included**

1. Preformed Aluminum Architectural Panel System cladding, fascia, closures, flashings, miscellaneous trim
2. All subgirts (singular and bi-directional), support framing back to structure, spacers, clips and fasteners.
3. Sealants.

3. **SUBMITTALS**

1. **Shop Drawings**

1. Submit shop drawings in accordance with the General Conditions as per CCDC 2 2020.
2. Indicate dimensions of panel system, attachment methods, details of subgirts, anchorage details, framed openings, accessories, schedule of wall elevations, trim and closure pieces, loadings,

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fasteners and related work.

3. Indicate arrangement of panel system including joints, types and location of supports, fasteners, and any special shapes. Provide engineered support system where required.
4. Fully detail membrane air/vapour barrier, thermal barrier, insulation, corner details, flashings at top and bottom of walls, and all other components in the system.
5. Indicate detailed description of mechanical, electrical and other systems in work.
6. Describe requirements of other systems of components related to this work but provided by others. Obtain necessary information required to detail this work including methods of integration and securing
7. Design loading and accommodation for thermal expansion.
8. Each shop drawing shall be stamped by a Professional Engineer licenced in the Province of Ontario.

2. Samples

1. Submit samples according to Section 01300 and as follows:
  1. Submit preliminary 8" x 12" (200mm x 300mm) or larger colour sample of each prefinished aluminum panel.
  2. Submit interlocking panel assembly approximately 3'-0" x 3'-0" (900 mm x 900 mm) in size of all fabricated materials forming a part of the panel system. Show weatherproof sealed exterior and interior joints.

4. STANDARDS, DESIGN AND PERFORMANCE REQUIREMENTS

1. Design and test cladding system in accordance with the current edition of:
  1. National Building Code of Canada
  2. CAN3 S157 "Strength Design in Aluminum"
  3. ASTM E330 "Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference"

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4. CSA S136-94 "Cold Formed Steel Structural Members".
  5. ASTM E283 "Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls and Door Under Specified Pressure Differences Across the Specimen".
  6. ASTM E331 "Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference".
2. Deflection of the individual panels is not to exceed 1/180th of the span for the specified wind forces acting on it.
  3. Design panels as a floating system to accommodate thermal movement caused by ambient temperature range without causing deterioration of the cladding.
  4. Design expansion joints to accommodate movements in cladding and between cladding and structure to prevent permanent distortion or damage to the cladding.
  5. Design wall system as pressure equalized open "Rain Screen System". The panel system shall have internal drainage paths to collect moisture and direct it via weep holes or openings to the exterior.
  6. All fasteners on typical joints to be hidden from view where possible. Where fasteners must be exposed, heads must be countersunk.
  7. Design wall system to maintain the following erection tolerances:
    1. Maximum variation from plane or location shown on shop drawings 20mm/10m.
    2. Maximum offset from true alignment between two adjacent members abutting end to end in line: 1.0mm minimum normal thickness of 6mm.
5. QUALITY ASSURANCE
1. Qualification of Manufacturer

Standard for appearance and performance of rainscreen cladding system based on Riverside Group's R4-300 Pressure-Equalized Rainscreen System – 2610 Pillette Rd., Windsor, Ontario, Canada N8T 1R1 (519-945-1321)

    1. Manufacturer of cladding system and installer shall demonstrate at

least five year's experience in projects similar in scope.

2. This section establishes the standard of quality required for the cladding system. Proposed substitutions must meet this standard and will be considered as follows:

1. A written request for approval of a substitution is received at least ten (10) days prior to tender closing.
2. The request includes a complete item-by-item description comparing the proposed substitution to the specified system, together with manufacturer's literature, samples, test data, engineering standards and performance evaluation indicating comparable standards to those specified.

2. Requirements of Regulatory Agencies

1. In addition to requirements of authorities having jurisdiction, carry out insulated metal wall system work in accordance with the latest edition of the following specific applicable requirements of following:
  1. Latest Ontario Building Code, as currently amended
  2. CAN 3-S157 strength design in Aluminum
  3. CAN 3-136 Cold formed Steel Structural Members
  4. ASTM E330; E283 and E331

6. WARRANTY

1. Warrant work of this section against defects or deficiencies for a period of five (5) years from date work is certified as substantially performed in accordance with GC 24 of General Conditions of the contract.
2. The Contractor hereby warrants that the panel system enclosure will be water and weather tight, structurally sound and free from distortion; that the exterior finish will not craze, peel, corrode or discolour; that the exterior cladding will not develop excessive fading or non-uniformity of colour, and will be free from blemishes or distortion due to thermal movement of the wall or normal movements of the building structure; that the gaskets, tape and sealants will be free from deterioration from sunlight, weather or oxidation and from permanent deformation and free from leaks under load.

7. PRODUCT DELIVERY, STORAGE AND HANDLING

1. Provide necessary crating or bundling for shipment of components to site including protection against weather.

2. Mark and identify parts of panel system before shipping.
  3. Protect prefabricated panel system during fabrication, transportation, site storage and installation.
  4. Store materials in accordance with manufacturer's recommendations and protected from the elements at Site under protection to prevent staining from the ground or from collection of water on material, or both; and secure against wind damage. Provide air circulation around finished metal surfaces.
  5. Handle and protect galvanized materials from damage to zinc coating.
8. TESTING
1. Reports to cover tests described below shall be submitted. All test shall be conducted or witnessed by an independent agency without any financial or business interests in the wall system supplier. Testing on reasonable similar systems will be considered acceptable.
    1. The largest typical panel size shall be tested in both pressure and suction based on procedures shown in ASTM E330, procedure "B". The support system for the panel shall mimic the intended use for the project. Panel deflection under design load shall not exceed L/90. Panel ultimate strength shall be a minimum of two times the design load.
    2. Air leakage of the air barrier shall be tested based on ASTM E283. The air barrier shall have penetrating fasteners to match the highest typical density to be used on the project. Air leakage should not exceed 36L/min/m<sup>2</sup> (0.12cfm/ft<sup>2</sup>) at a pressure difference of 75 Pa (1.57 psf).

## 2. PRODUCTS

### 1. MATERIALS

#### 1. Plate Aluminum Panels

1. Fabricated panels from aluminum alloy 3105-H14 or 3003-H14 with minimum nominal thickness of 6mm factory formed. Note: 4 mm aluminum composite panels may be used in lieu of 6 mm solid aluminum panels (If solid aluminum panels are used, colour selection is to incorporate custom colours).
2. Acceptable Aluminum Composite Panel Product: Kanalco Ltd. With PPG Color Coating Dry Joint System.

#### 1. Approved Alternate Manufacturer:

1. Dri-Design Wall panel system
  2. Alucabond;
  3. Emburite;
  4. Reynobond by Alcoa Dry System
  5. Alpolic;
  6. Vic-West
3. Finishes: All to be EcoClean
- .1 Aluminum Composite Panels Color Coating:
- .1 Duranar Coating (2-coat system). Base Colour Selection:
1. Wood Look - Design Line
  2. Solid colour - Colourweld 500XL
- Colours to be selected / confirmed by architect from the manufacturer's full range of colours. Thickness as recommended by manufacturer after factory forming of panels. Allow for 3 color selections – 1 wood look finish and 2 solid colours.
4. Sheets are to be formed into a pan like profile complete with welded corners excluding 1.905mm aluminum panel which are stiffened by in clips and sealed. Welded corners are to be suitably ground to allow a smooth finish for painting.
5. Panels are to be stiffened with z-shaped aluminum stiffeners with a maximum spacing of 610mm.
2. Extrusions: Fabricated from aluminum alloy 6063, temper T54 with minimum thickness of 2mm (0.080") or as required for structural adequacy.
3. Subgirts, Clips, Spacers: minimum 1.2 mm (0.048") thick formed galvanized steel; ASTM 653M Grade 230 with Z275 coating.
4. Supporting Girts for Aluminum Composite Panel System: aluminum extrusions of manufacturer's proprietary design, shaped, and sized to suit panel sizes and location of supporting substructure.
5. Fastening Systems:
1. Fasteners connection aluminum components to aluminum or galvanized steel be 304 stainless steel.
  2. Other fasteners to be stainless steel.
6. Insulation: Vapour Barrier and sprayed foam insulation/air barrier at back up block by Section 04200 masonry contractor supplied and installed as



per section 07214.

7. Closures: Flashing and Trim: Fabricate to profiles indicated on shop drawings or as required to meet performance requirements. Material to match panels in exposed locations, galvanized material in concealed locations.
8. Bituminous Paint: Best grade, quick drying, non-staining alkali resistant asphalt utility enamel
9. Sealants:
  1. Concealed Locations: tape or compound, non-skinning, non-drying, butyl rubber.
  2. Exposed Locations: one part silicone to CGSB CAN 2-19.13.
  3. Primer: as recommended by sealant manufacturer.

## 2. FABRICATION

1. Spacer of Girt System: galvanized steel girt anchor or clip system designed to meet performance requirements specified. Design system to minimize direct heat transfer; avoid direct metal to metal contact wherever possible.
2. Fabricate wall components to comply with dimensions, thickness and details as shown on the shop drawings, including fascia and soffit panels and all companion flashing.
3. Fabricate all components of the system in the factory, ready for field installation.
4. Tolerances of the finished panels shall meet the following limitations.
  1. Maximum variation from specified length and width of panel measure at perimeter:
    1. +/-0.8mm up to 1219mm
    2. +/-1.6mm up to 3048mm
  2. Maximum variation from theoretical diagonal of finished panel is 5mm.
  3. Maximum out of flatness (bow) of finished panel surface is 1/360 times longest dimension up to a maximum of 6.4mm for panels up to 3 square meters and 12.7mm for panels up to 9 square meters.
5. Flashings, Trim, Closures: fabricated to profiles indicated and as required

to meet design and performance requirements. Use preformed corner pieces only. Use same material as exterior skin where exposed. Use galvanized sheet steel in concealed locations. Double back exposed edges.

### 3. EXECUTION

#### 1. PREPARATION

1. Prior to start of erection, examine existing work and report to Architect any unsatisfactory conditions.
2. Provide secondary steel framing for support of panel system, where such framing is required but not provided by structural steel Section. Install secondary framing in accordance with applicable requirements of CAN3-S16. 1 and CAN3-S136.

#### 2. ERECTION

1. Install panel system in accordance with manufacturer's directions and as detailed on drawings.
2. Prior to installing subgirts/spacers to support work, Spray-on insulation/air vapour barrier Contractor to install air barrier membranes. (by Sections 07214 and 04200)
3. Fasten subgirts/spacers to supporting work. Provide additional framing at terminations, openings and penetrations.
4. Allow Spray foam insulation/air vapour barrier Contractor to install spray foam insulation/air vapour barrier prior to installing exterior skin.
5. Install exterior wall panel system with vertical and horizontal joints accurately aligned and tight fitting to conform with system tolerances.
6. Provide sealants, flashings, closures, covers and trim as indicated and as required to render work complete and finished in accordance with specified requirements. Install sealants in accordance with Section 07900, Sealants.
7. Coordinate installation of panel system with all other Trade Contractors working in the surrounding area.

#### 3. TOUCH-UP AND CLEANING

1. Touch-up minor paint abrasions with matching touch-up paint.
2. Installer shall clean panel surfaces by dry wiping in the course of product installation.

Waterloo District School Board  
WRDSB No. 23-7367-RFT PHASE 2  
King Edward Public School Accessibility  
Upgrade including Elevator and  
Washrooms  
709 King Street West, Kitchener, ON  
+VG Project No. 22059

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Section 07461  
**ALUMINUM ARCHITECTURAL  
COMPOSITE PANEL SYSTEM**  
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**END OF SECTION**