CG Architects

BIDDERS BULLETIN

PROJECT: North Park Elementary School – 2012 Addition and Renovation
Broken Bow, Nebraska

BULLETIN NUMBER
BB-2

ISSUED BY:
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PROJECT #: 11-0796

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This bulletin is issued by the Architect to all known bidders before receipt of proposals, for the purpose of explaining, interpreting, or modifying the original plans and specifications. When enumerated by the bidder upon the proposal sheet, the information or instructions given hereon will be equally binding upon all parties as if included in the original plans and specifications.
BIDDER MUST ENTER THE NUMBER OF THIS BULLETIN ON HIS PROPOSAL SHEET

THE FOLLOWING ITEMS ARE APPLICABLE TO THE DRAWINGS AND SPECIFICATIONS

BB-2, ITEM #1: Fire Suppression System: There are combustibles located above the existing ceiling spaces. It is the sprinkler contractor's responsibility, prior to bidding, to verify the amount and location of the combustibles and to provide the appropriate sprinkler coverage required for these areas.

THE FOLLOWING ITEMS ARE APPLICABLE TO THE ARCHITECTURAL SPECIFICATIONS

BB-2, ITEM #2: Specification Section 07222 – Roof Insulation

1) Add note to read: "All roof insulation sheets to be 4'-0" x 4'-0" max."
2) Add note to read: "All roof insulation to be adhered per manufacturers requirements."

BB-2, ITEM #3: Specification Section 08450 – See Supplemental Sheets

1) Add specification section for "Translucent Window Replacement Assembly."

BB-2, ITEM #4: Specification Section 08700 - Hardware

1) Aluminum door hardware as specified.

BB-2, ITEM #5: Specification Section 09900-7 - Painting

Schedule Of Coating Systems

1) Add: "System EXS, Exterior Sealer – Hydrozo Clear Double 7HD, priming and number of coats per manufacturers recommendations. Apply to the following surfaces: Exposed exterior split face cmu."

System SGE, Semi-Gloss Enamel

2) Delete "NOTE: Bryan LGH . . . . by contractor."

BB-2, ITEM #6: Specification Section 10540 – Athletic Equipment

1) Athletic equipment per specifications.

THE FOLLOWING ITEMS ARE APPLICABLE TO THE DRAWINGS

BB-2, ITEM #7: Drawing Sheets A103, A201 and A202

1) Add at all notes pertaining to siding: "Prefinished cement siding per manufacturers specifications."

BB-2, ITEM #8: Drawing Sheets A104

Room Finish Schedule

1) At rooms 103b Kitchen, 142c Changing, 145c Changing and 146c Referee Shower revise wall finish to be "glazed epoxy paint". Revise ceiling finish to be "glazed epoxy paint" only at exposed surfaces in the rooms above.

BB-2, ITEM #9: Drawing Sheets A106 and A107

1) Add note at all EPDM roofing areas to read: "All roof insulation sheets to be 4'-0" x 4'-0" max."
2) Add note at all EPDM roofing areas to read: "All roof insulation to be adhered per manufacturers requirements."

BB-2, ITEM #10: Drawing Sheet S101 - Continuous Footing and Grade Beam Schedule

Grade Beam Schedule

1) Add 12" wide x 3'-4" deep with (2)-#4's at top, middle, and bottom with #4 stirrups at 32" o.c.
Add 1'-8" wide x 3'-4" deep with (2)-#5's at top and bottom, (2)-#4's at middle, and #4 stirrups at 32" o.c.
Add 1'-10" wide x 3'-4" deep with (3)-#5's at top and bottom, (2)-#4's at middle, and #4 stirrups at 32" o.c.
Add 2'-10" wide x 3'-4" deep with (3)-#6's at top and bottom, (2)-#4's at middle, and #4 stirrups at 32" o.c.
Add 3'-0" wide x 3'-4" deep with (3)-#6's at top and bottom, (2)-#4's at middle, and #4 stirrups at 32" o.c.

Continuous Footing Schedule

2) Add 1'-8" wide x 1'-0" deep with (3)-#4's at bottom and #4's transverse at 32" o.c.
Add 1'-10" wide x 1'-0" deep with (3)-#4's at bottom and #4's transverse at 24" o.c.

END OF BB-2, See Attached

SECTION 08450 - TRANSLUCENT WINDOW REPLACEMENT ASSEMBILIES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Insulated translucent sandwich panel glazing system.

B. Fasteners, anchors, reinforcement.

C. All flashings including sill flashing assembly.

1.02 RELATED SECTIONS

A. Section 055000 - Metal Fabrications: Fabricated steel attachment devices.

B. Section 076200 - Sheet Metal Flashing and Trim: Skylight counter flashing.

C. Section 079005 - Joint Sealers.

1.03 REFERENCES

A. AAMA 501.2 - Field Check of Metal Storefronts, Curtain Walls, and Sloped Glazing Systems for Water Leakage; American Architectural Manufacturers Association; 2003.

B. ASTM E 283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004.

C. ASTM E 331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000.

1.04 PERFORMANCE REQUIREMENTS

A. Design and size components to withstand loads as required by 2006 IBC.

B. Maximum allowable deflection of any glazing support member: 1/180 of span.

C. Design system to accommodate thermal expansion and contraction over ambient temperature range of 100 degrees F, dynamic loading and release of loads, creep of concrete structural members, and deflection of structural support framing without damage to skylight system components or loss of weather tightness.

D. Limit air infiltration through assembly to 0.06 cu ft/min/sq ft for glazed area, measured at a reference differential pressure across assembly of 1.57 psf in accordance with ASTM E 283.

E. Water Leakage: None, when measured in accordance with ASTM E 331 at a test pressure difference of 2.86 lbf/sq ft.

F. Design and fabricate skylight system to prevent harmonic vibration, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system.

1.05 SUBMITTALS

A. See Section 013000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide manufacturer's specifications, standard details, and installation requirements.

C. Shop Drawings: indicate framed opening requirements and tolerances, spacing of all members, anticipated deflection under load, affected related work, expansion and contraction joint locations and details, and sizes and locations for field welding.

D. Selection Samples: Submit full range of aluminum finish samples for Architect's color selection.

E. Samples: Submit one sandwich panels, not less than 14 x 28 inch in size illustrating appearance of prefinished aluminum and specified glazing system, including glazed edge and corner.

F. Report of field testing for water leakage. 1.06

QUALITY ASSURANCE

A. Design skylight system under direct supervision of a professional structural engineer experienced in design of work of the type specified in this section and licensed in the State of Nebraska.

B. Skylight system must be listed by the International Code Council - Evaluation Service (ICC-ES) which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an approved agency.

1.07 DELIVERY, STORAGE, AND PROTECTION

A. Provide wrapping to protect prefinished aluminum surfaces. Do not use adhesive papers or spray coatings that bond when exposed to sunlight or weather.

B. Store skylight panels on the long edge, several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.

1.08 WARRANTY

A. See Section 017800 - Closeout Submittals, for additional warranty requirements.

B. Correct defective work, including leaks, discoloration, failure of *seal* at insulated glazing Units, and excessive thermal or structural movement, within a *five* year period after Date of Substantial Completion.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Metal Framed Skylights:
1. Kalwall Corporation. *www.kalwall.com*.
2. Substitutions: See Section 016000 - Product Requirements.

2.02 PANEL COMPONENTS

A. Face Sheets:
Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.
a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.
2. Flammability of interior face sheets:
a. *Flame* spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 50 (20) and smoke developed no greater than 250 (200) when tested in accordance with UL 723.
b. Burn extent by ASTM D-635 shall be no greater than 'I".
c. Face sheets shall not deform, deflect or drip when subjected to fire or flame.
d. Face sheets shall not delaminate when exposed to 200°F for 30 minutes per IBC and NBC (300°F for 25 minutes per IJBC and SBC).
3. Weatherability of exterior face sheets:
a. Color stability: Full thickness of the exterior *face* sheet shall not change color more than 3.0 (7.0) CIE Units DELTA E byASTM 0-2244 after 5 years (30 months) outdoor South Florida weathering at 5 degrees facing south, determined by the average of at least three (3) white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
b. Erosion barrier: Exterior face shall have a permanent glass erosion barrier embedded beneath the surface to provide long-term resistance to reinforcing fiber exposure.

Exterior face surface loss shall not exceed .7 mils and 40 mgs when tested in accordance with ASTM D-4060 employing CSI7 abrasive wheels at a head load of 500 grams for 1000 cycles. Sacrificial surface films or coatings are not acceptable erosion barriers.

4. Appearance:
   a. Exterior face sheets: Smooth, 0.070" thick and Crystal in color.
   b. Interior face sheets: Smooth, 0.045" thick and Crystal in color.
   c. Face sheets shall not vary more than +/- 10% in thickness and be uniform in color.
5. Strength: Exterior face sheet shall be uniform in strength, impenetrable by hand held pencil and repel an impact equal to 70 (230) ft. lbs. without fracture or tear when impacted by a 3-1/4" diameter, 5 lb. free-falling ball per UL 972.

B. Grid Core
1. Thermally broken (aluminum) I-beam grid core shall be of 6063-16 or 6005-T5 alloy and temper with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of 1- beam shall be no less than 7/16". The I-beam grid shall be machined to tolerances of not greater than +1- .002".
2. Thermal break: Minimum 1".

C. Laminate Adhesive
1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council "Acceptance Criteria for Sandwich Panel Adhesives."
2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C-297 after two (2) exposures to six (6) cycles each of the aging conditions prescribed by ASTM D-1037.
3. Minimum shear strength of the panel adhesive by ASTM D-1002 after exposure to five (5) separate conditions:
   a. 50% Relative Humidity at 73° F: 540 PSI
   b. 182° F: 100 PSI
   c. Accelerated Aging by ASTM D-1037 at room temperature: 800 PSI
   d. Accelerated Aging by ASTM 0-1037 at 182° F: 250 PSI.
   e. 500 Hour Oxygen Bomb by ASTM D-572: 1400 PSI

2.03 PANEL CONSTRUCTION

A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets resin laminated to a grid core of mechanically interlocking thermally broken (aluminum) I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.
1. Thickness: 2-3/4"
2. Light transmission: 50%
3. Solar heat gain coefficient: 0.23.
4. U- factor by NFRC certified laboratory: 0.23 thermally broken
5. Grid pattern: Nominal 12" x 24" shoji. See drawings for locations where grid patterns are oriented vertically and other locations where grid pattern is oriented horizontally.

B. Panels shall deflect no more than 1.9" at 30 psf in 10'-O" span without a supporting frame by ASTM E-72.

C. Panels shall withstand 1200°F fire for minimum one (I) hour without collapse or exterior flaming.

D. Thermally broken panels:
1. Minimum Condensation Resistance Factor of 80 by AAMA 1503 measured on the bond line.
2. Minimum CRF of 90 at center of grid cell.

E. Skylight system shall pass Class A Roof Burning Brand Test by ASTM E-108. (OR Skylight system shall be UL listed as a Class A Roof by UL 790 which requires periodic unannounced inspections and retesting by Underwriters Laboratories.)

2.04 BATTENS AND PERIMETER CLOSURE SYSTEMS

A. Closure system: Extruded 6063-T6 and 6063-T5 alloy and temper clamp-tite screw type closure system. (Curved closure system may be roll formed.)
   1. Skylight perimeter closures shall be factory sealed to panels.
   2. Aluminum sill flashing assembly.

B. Sealing tape: Manufacturer's standard, pre-applied to closure system at the factory under controlled conditions.

C. Fasteners: 300 series stainless steel screws for aluminum closures, excluding final fasteners to the building.

D. Finish: Exposed aluminum to be manufacturer's factory applied finish that meets the performance requirements of AAMA 2604. (Mill)
   1. Color selected from manufacturer's standard colors.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, supporting structure and installation conditions. Do not proceed with skylight erection until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Apply 1 coat of protective coating, sealant or tape to concealed aluminum and steel surfaces in contact with dissimilar materials in accordance with manufacturer's recommendations.

B. Where aluminum will contact pressure-treated wood, separate dissimilar materials by methods recommended by manufacturer.

3.03 INSTALLATION

A. install the skylight system in accordance with manufacturers instructions.

B. Set skylight structure plumb, level, and true to line, without warp or rack of frames or glazing panels. Anchor securely in place in accordance with approved shop drawings.

C. Maintain assembly dimensional tolerances, aligning with adjacent work.

D. Install sill and header flashings.

E. Anchor component parts securely in place by permanent mechanical attachment system.

F. Accommodate thermal and mechanical movements.

G. Set sill and curb members in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction.

H. Install joint sealants at perimeter joints and within the skylight system in accordance with manufacturer's installation instructions.

I. Mask adjacent surfaces, clean joint surfaces, and install backing and field-applied sealants in accordance with requirements of Section 079005.

3.04 ERECTION TOLERANCES

A. Maximum Variation from Plumb, Level, or Line: 1/8 inch per 10 feet, or 3/8 inch total in overall 'dimension.

B. Alignment of Two Adjoining Members Abutting in Plane: Within 1/16 inches.

3.05 FIELD QUALITY CONTROL

A. See Section 014000 - Quality Requirements, for general requirements for testing and inspection.

B. Repair or replace work that does not pass testing or that is damaged by testing and retest work.

C. Test installed skylight for water leakage in accordance with AAMA 501.2.

3.06 CLEANING

A. Remove protective material from prefinished aluminum surfaces.

B. Wash down exposed surfaces; wipe surfaces clean.

C. Remove excess sealant by methods recommended by skylight manufacturer.

D. Touch up damaged finishes so repair is imperceptible from 6 feet. Remove and replace components that cannot be satisfactorily touched up.

END OF SECTION