

Addendum #2

Project Name: LPS Early Childhood Additions – Humann Elementary School

Lincoln, Nebraska

SHA Project No.: 23004 **LPS Bid No.:** 10899

Issued: January 12, 2024

Bid Date: 2:00 pm, Thursday, January 18, 2024

Bid Opening: LPS Operations Department

Location: 800 South 24th Street, Lincoln, NE 68510

This Addendum is issued to all known bidders before receipt of proposals. This Addendum is to authorize the use of the following information in preparing proposals for the above named project. The bidder **must** enter the number of this Addendum on the **Proposal Sheet**.

GENERAL QUESTIONS AND CLARIFICATIONS

ADD 2-1. Pre-Bid Meeting Sign-In Sheet

Question: Can the Pre-Bid Meeting Sign-In Sheet be shared with potential

bidders

Response: See Attachment #1 for the LPS Early Childhood Additions Humann

Elementary School Pre-Bid Meeting Sign-In Sheet.

ADD 2-2. Location of 1-sided and 2-sided single scored CMU block.

Question: Could you please clarify all elevations where the single scored CMU

is to be installed? Both 1-sided and 2- sided single scored CMU is a

special order.

Response: All cmu walls that are exposed on the corridor side of the wall and the

classroom side of the wall should be 2-sided single scored CMU block. All cmu walls that are exposed on the classroom side of the wall and the storage room side of the wall should be a 1-sided single scored CMU block and the single score should be located on the

classroom side.

ADD 2-3. Concave joints or raked joints in restroom cmu walls.

Question: Per our conversation at the pre-bid meet, please confirm if you want

the bathroom to have concave joints or raked joints to match existing.

Response: All cmu walls in Restroom 150A can be 1-sided single scored CMU

block. The single scored face of the CMU wall should be on the classroom side. The face of the cmu wall on the Restroom side can have a concave joint since the restroom walls are covered with

ceramic wall tile full height.

ADD 2-4. List of Plan Holders

Question: Can you share the list of plan holders from A&D Technical Supply Co.

Online Planroom?

Response: See the following website link for the list of plan holders at A&D

Technical Supply Co. Online Planroom;

https://plans.adtechsupply.com/View/ViewJob.aspx?job_id=13538&vi

ew=ph

MODIFICATIONS TO THE SPECIFICATIONS

ADD 2-5. Refer to Section 042000 – Unit Masonry, Paragraph 2.5 B. 6.; delete this paragraph and replace with the following:

Brick to match original building: provide face brick matching color range, texture, and size of existing adjacent brickwork.

- **ADD 2-6.** Refer to Section 042000 Unit Masonry, Paragraphs 2.5 B. 6. a. and 2.5 B. 6. b.; delete these two paragraphs in their entirety.
- ADD 2-7. Refer to Section 084113 Aluminum Framed Entrances and Storefronts.: This Section shall be deleted and replaced with the attached Section 084113 Aluminum Framed Entrances and Storefronts.

MODIFICATIONS TO THE DRAWINGS

- ADD 2-8. Refer to Sheet AD100 First Level Demolition Plan Drawing A1 First Level Demolition Plan; see the clouded revised Sheet Notes 22 and 24.
- ADD 2-9. Refer to Sheet AD100 First Level Demolition Plan, Sheet AD100 Sheet Specific Notes; see the revised Sheet Notes 11 and 22 and the new Sheet Note 24.

- **ADD 2-10.** Refer to Sheet AD102 First Level Demolition Reflected Ceiling Plan, Drawing A1 First Level Demolition Reflected Ceiling Plan; see the additional existing suspended acoustical panel ceiling to be demolished.
- **ADD 2-11.** Refer to Sheet AD102 First Level Demolition Reflected Ceiling Plan, Sheet AD102 Sheet Specific Notes; see the new Sheet Note 16.
- **ADD 2-12.** Refer to Sheet A700 First Level Reflected Ceiling Plan, Drawing A1 First Level Reflected Ceiling Plan; see the additional clouded new suspended acoustical panel ceiling.
- **ADD 2-13.** Refer to Sheet A700 First Level Reflected Ceiling Plan, Sheet A700 Sheet Specific Notes; see the new Sheet Note 9.

ARCHITECTURAL PRIOR APPROVALS / SUBSTITUTIONS

- **ADD 2-14.** The following substitutions have <u>NOT</u> been approved for use on this project.
 - a. 084113 Aluminum Framed Entrances and Storefronts, Paragraph 2.2 A: Approved Manufacturers; Tubelite Aluminum Framed Entrances and Storefronts.

Reason: Proposed Manufacturer is not included on the LPS Guidelines Aluminum Framed Entrances and Storefronts Approved Manufacturer List.

ELECTRICAL PRIOR APPROVALS / SUBSTITUTIONS

ADD 2-15. The manufacturers listed herein will be considered approved for bidding. However, the proposed substitution must meet the intent of the specifications and will be subject to shop submittal approval during construction. Burden of Proof is on Proposer. Bidders shall bear all responsibility for coordinating and performing related changes in the Work necessitated by such substitution and include such costs in the Bid:

Proposed Equipment / Fixture		<u>Manufacturer</u>
a.	Light Fixture #7	Interlux
b.	Light Fixture #X1	Sure-Lites

ATTACHMENTS

ADD 2-16. The following attachments are included as part of this addendum:

	<u>Attachment</u>	Description	# of Pages	
•	Attachment #1	Pre-Bid Meeting Sign-In Sheet	2	
•	Section 084113	Replacement Section	1	

LPS Early Childhood Additions – Humann Elementary School

•	AD100	Replacement Sheet	1
•	AD102	Replacement Sheet	1
•	A700	Replacement Sheet	1

End of Addendum #2



Pre-Bid Meeting Attendance Sheet

Date and Time: Tuesday, January 11, 2024, 4:00 pm

LPS Early Childhood Additions

Humann Elementary School

Name	Phone #	E-mail address
Blake Brumbaugh	402-438-3230	estimating @ hausmanuconstruction.com
Ubaldo Valdez	402-739-1456	Service in Fo @ brooken band framing.com
Waylon Hallingar	402-416-5073	waylone coder burg demo- com
Justin Schulz	4102-875-3527	ischulz a bicconstruction net
Bryan Adams	402 670 4359	bryan adams @ melsingisine : com.
John Krama	402-499-5190	Kramer Duitio mechanical com
Casa Leit	402-366-5119	Casey L@genesis contractinggroup.com
George Lose	402-840-3613	Syper cornelocop amilion
Ryan Bannegart	407-830-2691	Rhanngart@controlservices.com
Bill Fleithman	402-476-1273	lofleischmanget engineers.com
Mick Hall	402-525-3681	nickahallnglass, con
Matt Feldner	308-627-7359	Mattfablucor-cq.com
Listian Martin	40z-441-3100	bids @ rogge inc. com
BOB ARMSTrong	402-217-1952	banstrong 627. Yehoo



Pre-Bid Meeting Attendance Sheet

Date and Time:

Project:

Tuesday, January 11, 2024, 4:00 pm LPS Early Childhood Additions Humann Elementary School

Name	Phone #	E-mail address
Justin Mommers	402-432-7405	I monmers & more contractors, com
Brian Wehrs	402 -840-2508	brin Wa Kuabulders - com
Jen bowher	402-610-1175	jen@kuobuilders.com
Dan Througer	402-570-1123	dthroope @ ecco inc. con
MATT TURKS	402-366-5640	mturek@ turekelectric com
Necl Collen	402 890 7874	nizhcole sclectvizinc, com
Will Dean	402 309 6204	Nillo as Dean & haco electron com
Josh Thompson	402-730-9419	thompson Ostone brookexterior com
/		

SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

- 1. Exterior and interior storefront framing.
- 2. Exterior and interior manual-swing entrance doors and door-frame units.
- 3. Insulated Spandrel Panels.
- 4. Preparation for access control hardware.

B. Related Requirements:

- 1. Section 079200 "Sealants" for sealant work at aluminum entrances and storefront.
- 2. Section 087100 "Door Hardware" for door hardware, except weatherstripping to be installed in aluminum framing and entrances.
- 3. Section 088000 "Glazing" for requirements for glass installed in aluminum framing and entrances.
- 4. See Division 28 Sections and Electrical Drawings for installation of conduit for access control hardware.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
- C. Samples for Verification: For each type of exposed finish required.
- D. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.
 - 1. Coordinate hardware to be supplied under Section 087100 "Door Hardware" into Door Hardware Schedule.
- E. Delegated-Design Submittal: For aluminum-framed entrances and storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- F. Energy Performance Certificates: For aluminum-framed entrances and storefronts, accessories, and components, from manufacturer.
 - Basis for Certification: NFRC-certified energy performance values for each aluminumframed entrance and storefront.
- G. Field quality control reports.

H. Sample Warranties: For special warranties.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For aluminum-framed entrances and storefronts to include in Operation & Maintenance manuals.
- B. Warranty Data: For aluminum-framed entrances and storefronts to include in Operation & Maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
 - 1. Do not change intended aesthetic effects, as judged solely by Engineer, except with Engineer's approval. If changes are proposed, submit comprehensive explanatory data to Engineer for review.

1.6 WARRANTY

- A. Special Warranty: Manufacturer and Installer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including, but not limited to, excessive deflection.
 - b. Noise or vibration created by wind and thermal and structural movements.
 - c. Deterioration of metals and other materials beyond normal weathering.
 - d. Water penetration through fixed glazing and framing areas.
 - e. Failure of operating components.
 - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer to design aluminum-framed entrances and storefronts, using the performance requirements and design criteria indicated.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

- 1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
- 2. Failure also includes the following:
 - a. Thermal stresses transferring to building structure.
 - b. Glass breakage.
 - c. Noise or vibration created by wind and thermal and structural movements.
 - d. Loosening or weakening of fasteners, attachments, and other components.

C. Structural Loads:

- 1. Wind Loads: As indicated on Drawings.
- 2. Other Design Loads: As indicated on Drawings.
- D. Deflection of Framing Members: At design wind pressure, as follows:
 - 1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane not exceeding 1/175 of the glass edge length for each individual glazing lite or an amount that restricts edge deflection of individual glazing lites to 3/4 inch (19.1 mm), whichever is less.
 - 2. Deflection Parallel to Glazing Plane: Limited to amount not exceeding that which reduces glazing bite to less than 75 percent of design dimension and that which reduces edge clearance between framing members and glazing or other fixed components to less than 1/8 inch (3.2 mm).
- E. Structural: Test according to ASTM E 330 as follows:
 - 1. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.
 - 2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
 - 3. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
 - 1. Fixed Framing and Glass Area:
 - a. Maximum air leakage of 0.06 cfm/sq. ft. (0.30 L/s per sq. m) at a static-air-pressure differential of 6.24 lbf/sq. ft. (300 Pa).
 - 2. Entrance Doors:
 - a. Pair of Doors: Maximum air leakage of 1.0 cfm/sq. ft. (5.08 L/s per sq. m) at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).
 - b. Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. (2.54 L/s per sq. m) at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).
- G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:
 - 1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft. (300 Pa).
- H. Energy Performance: Certify and label energy performance according to NFRC as follows:
 - 1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.45 Btu/sq. ft. x h x deg F (2.55 W/sq. m x K) as determined according to NFRC 100.
 - a. Entrance Door Framing: U-factor of not more than 0.80 Btu/sq. ft. x h x deg F.

- 2. Solar Heat Gain Coefficient: Fixed glazing and framing areas shall have a solar heat gain coefficient of no greater than 0.40 as determined according to NFRC 200.
- 3. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 35 as determined according to NFRC 500.
- I. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes:
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 MANUFACTURERS

- A. Manufacturers: Provide products from one of the following manufacturers, or from a manufacturer approved as a substitution during bidding:
 - 1. EFCO Corporation
 - 2. Kawneer Company, Inc.
- B. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing, and accessories, from single manufacturer.

2.3 STOREFRONT FRAMING

- A. Products Provide one of the following products, or a substitution approved during bidding:
 - Thermal Broken Framing (Exterior Openings);
 - a. EFCO Corporation, 403 (T) series.
 - b. Kawneer, VG 451T series.
 - 2. Non-Thermal Broken Framing (Interior Openings or as required);
 - a. EFCO Corporation, Series 402 (NT).
 - b. Kawneer. VG 451 series.
- B. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 - 1. Construction: Thermally broken, except at interior framing or where non-thermal members are required for strength and hardware attachment at entrances.
 - 2. Glazing System: Retained mechanically with gaskets on four sides.
 - 3. Glazing Plane: Center.
 - 4. Finish: High-Performance Organic Finish (70% PVDF), AAMA 2605, Fluoropolymer Coating
 - a. Color: Bone White to match existing.
- C. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.
- D. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with non-staining, nonferrous shims for aligning system components.
- E. Materials:
 - 1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - a. Sheet and Plate: ASTM B 209 (ASTM B 209M).
 - b. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
 - c. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
 - d. Structural Profiles: ASTM B 308/B 308M.

- Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.
 - a. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - b. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
 - c. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

2.4 ENTRANCE DOOR SYSTEMS

- A. Products Provide one of the following products, or a substitution approved during bidding:
 - 1. Entrance Doors;
 - a. EFCO Corporation, Series D500 Wide Stile Door.
 - b. Kawneer, Series 500 Wide Stile Entrance.
- B. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing operation.
 - 1. Door Construction: 1-3/4-inch (44.5-mm) overall thickness, with minimum 0.125-inch- (3.2-mm-) thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.
 - 2. Door Design: Wide stile; 5-inch (127-mm) nominal width.
 - a. Top Rail: Eight (8) inches wide.
 - b. Bottom Rail: Ten (10) inches wide.
 - c. Middle Rail: Six (6) inches wide, with center line of rail 39-1/2" above floor elevation.
 - 3. Glazing Stops and Gaskets: Beveled, snap-on, extruded-aluminum stops and preformed gaskets.
 - a. Provide non-removable glazing stops on the outside of door.
 - 4. Finish: High-Performance Organic Finish (70% PVDF), AAMA 2605, Fluoropolymer Coating
 - Color: Bone White to match existing.

2.5 ENTRANCE DOOR HARDWARE

- A. Entrance Door Hardware: Hardware not specified in this Section is specified in Section 087100 "Door Hardware."
- B. Weather Stripping: Manufacturer's standard replaceable components.
 - Compression Type: Made of ASTM D 2000, molded neoprene, or ASTM D 2287, molded PVC.
 - 2. Sliding Type: AAMA 701/702, made of wool, polypropylene, or nylon woven pile with nylon-fabric or aluminum-strip backing.
- C. Silencers: BHMA A156.16, Grade 1.
- D. Drip Cap: Manufacturer's aluminum drip cap with finish to match framing to be installed at the head of all exterior door openings in storefront framing.

2.6 GLAZING

A. Glazing: Comply with Section 088000 "Glazing."

- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- C. Glazing Sealants: As recommended by manufacturer.
- D. Sealants used inside the weatherproofing system shall have a VOC content of 250 g/L.

2.7 INSULATED SPANDREL PANELS

- A. Insulated aluminum infill panels in lieu of glazing, 1 inch thick insulation covered on both sides with prefinished aluminum panels, (084113.D01). Basis-of-Design Product: Subject to compliance with requirements, provide Mapes Industries, Inc.; Mapes-R
 - 1. Laminated, metal-faced flat panels with no deviations in plane exceeding 0.8 percent of panel dimension in width or length.
 - a. Overall Panel Thickness: 1 inch (25.4 mm)
 - b. Edge: Square
 - c. Exterior Skin: Aluminum
 - 1) Thickness: Manufacturer's standard for finish and texture indicated.
 - 2) Finish: Standard two-coat PVDF.
 - a) Color Standard PVDF: Bone white.
 - 3) Texture: Smooth.
 - 4) Backing Sheet: 0.125-inch- (3.2-mm-) thick, tempered hardboard.
 - d. Interior Skin: Aluminum.
 - 1) Thickness: Manufacturer's standard for finish and texture indicated
 - 2) Finish: Standard two-coat PVDF.
 - a) Color Bone white.
 - 3) Texture: Smooth
 - 4) Backing Sheet: 0.125-inch- (3.2-mm-) thick, tempered hardboard.
 - e. Thermal Insulation Core: Manufacturer's standard rigid, closed-cell, polyisocyanurate board, 2 lbf (8.9 N) density
 - f. Surface-Burning Characteristics: Comply with ASTM E84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1) Flame-Spread Index: 25 or less.
 - 2) Smoke-Developed Index: 250 or less.

2.8 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
 - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - a. <u>Do not use self-tapping screws for installation of door hardware. Use "Nutserts" or "Nut-grippers".</u>
 - 2. Reinforce members as required to receive fastener threads.
 - 3. Use exposed fasteners with countersunk Phillips screw heads, fabricated from 300 series stainless steel.

- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch (25.4 mm) that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
 - 1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil (0.762-mm) thickness per coat.

2.9 FABRICATION

- Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.
 - 2. Accurately fitted joints with ends coped or mitered.
 - 3. Physical and thermal isolation of glazing from framing members.
 - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 - 5. Provisions for field replacement of glazing from interior.
 - 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- E. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.
 - 1. At exterior doors, provide compression weather stripping at fixed stops.
 - At interior doors, provide silencers at stops to prevent metal-to-metal contact. Install three silencers on strike jamb of single-door frames and two silencers on head of frames for pairs of doors.
- F. Entrance Doors: Reinforce doors as required for installing entrance door hardware.
 - 1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
 - 2. At exterior doors, provide weather sweeps applied to door bottoms.
- G. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed hardware before applying finishes.
- H. Preparation for Electronic Access Control Hardware (to be installed by Owner at a later date): Factory prepare hollow-metal work to receive access control hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates, and according to LPS Design Guidelines illustrations for Access Control Installation and as follows.
 - 1. <u>At all exterior doors, frames are to be prepped and hardware installed for future installation</u> by the Owner of access control system.
 - 2. Door Position Switch: Provide a factory prepared cutout in the head of the door frame for installation of a door position switch, centered 6" from the lock edge of the frame. Verify

- the exact size of the device to be used with Lincoln Public Schools. On frames not immediately receiving door position switches, provide a cover plate for the cutout.
- 3. Electric Power Transfer: Provide a frame cutout to fit a Von Duprin EPT-10_electric power transfer. On frames not immediately receiving an EPT, provide a flush cover plate installed with machine screws.
- 4. Electric Strikes: Provide manufacturer's recommended standard preparation on frames to receive electric strikes.
- 5. Latch Bolt Monitor Switch: Provide a cutout in the frame jamb, behind the strike plate for a latch bolt monitor switch.
- 6. Provide a wiring pathway in the frame for the hardware listed above with 3/4" conduit to be installed from the frame head to a conveniently located accessible common junction box above the ceiling.
- 7. Refer to the LPS Design Guidelines attachments for installation of access control for additional information.
- I. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.10 ALUMINUM FINISHES

- A. High-Performance Organic Finish, Two-Coat PVDF: Fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in color coat.
 - 1. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 2. Color and Gloss: It is the intent of this section to match existing finishes, shown by existing documents to be "Bone White".

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General:

- 1. Comply with manufacturer's written instructions.
- 2. Do not install damaged components.
- 3. Fit joints to produce hairline joints free of burrs and distortion.
- 4. Rigidly secure nonmovement joints.
- 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
- 6. Seal perimeter and other joints watertight unless otherwise indicated.

B. Metal Protection:

- 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
- 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.

- C. Set continuous sill members and flashing in full sealant bed as specified in Section 079200 "Joint Sealants" to produce weathertight installation.
- D. Install components plumb and true in alignment with established lines and grades.
- E. Install glazing as specified in Section 088000 "Glazing."
- F. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.
 - Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
 - 2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.
 - a. <u>Do not use self-tapping screws for installation of door hardware. Use "Nutserts" or "Nut-grippers".</u>

3.3 ERECTION TOLERANCES

- A. Erection Tolerances: Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:
 - 1. Plumb: 1/8 inch in 10 feet (3.2 mm in 3 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
 - 2. Level: 1/8 inch in 20 feet (3.2 mm in 6 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
 - 3. Alignment:
 - a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch (12.7 mm) wide, limit offset from true alignment to 1/16 inch (1.6 mm).
 - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch (12.7 to 25.4 mm) wide, limit offset from true alignment to 1/8 inch (3.2 mm).
 - c. Where surfaces are separated by reveal or protruding element of 1 inch (25.4 mm) wide or more, limit offset from true alignment to 1/4 inch (6 mm).
 - 4. Location: Limit variation from plane to 1/8 inch in 12 feet (3.2 mm in 3.6 m); 1/2 inch (12.7 mm) over total length.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Field Quality-Control Testing: Perform the following test on representative areas of aluminum-framed entrances and storefronts.
 - 1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
 - a. Perform a minimum of three tests in areas as directed by Architect.
 - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 70 percent completion.
 - 2. Air Leakage: ASTM E783 at 1.5 times the rate specified for laboratory testing in "Performance Requirements" Article but not more than 0.09 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
 - a. Perform a minimum of three tests in areas as directed by Architect.
 - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 70 percent completion.

- 3. Water Penetration: ASTM E1105 at a minimum uniform static-air-pressure differential of 0.67 times the static-air-pressure differential specified for laboratory testing in "Performance Requirements" Article, but not less than 6.24 lbf/sq. ft., and shall not evidence water penetration.
- C. Aluminum-framed entrances and storefronts will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports.

3.5 ADJUSTING AND CLEANING

- A. Adjust entrance doors and hardware to produce smooth operation and tight fit at contact points and weather stripping.
- B. Remove excess sealant and glazing compounds and dirt from surfaces.

END OF SECTION 084113





