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NOTICE TO ALL CONTRACTORS AND SUB-CONTRACTORS

8-16-2023

Salina Art Center – Renovations – Proj 21-3166

Bid Date: Thursday, August 24 at 3:00 pm

ADDENDUM NO. 1

YOU ARE INSTRUCTED TO READ AND TO NOTE THE FOLLOWING DESCRIBED CHANGES, CORRECTIONS, CLARIFICATIONS, OMISSIONS, DELETIONS, ADDITIONS, APPROVALS, AND STATEMENTS PERTINENT TO THE CONTRACT AND CONSTRUCTION DOCUMENTS. THIS ADDENDUM IS A PART OF THE CONTRACT AND CONSTRUCTION DOCUMENTS AND SHALL GOVERN IN THE PERFORMANCE OF THE WORK.

ARCHITECTURAL –Specifications

1. Section 01019: Special Provisions – Project shall have a Door Hardware Allowance of $20,000; Project shall also have an allowance of $20,000 to cover all structural supports, frames, platforms, modifications, etc. to accommodate new roof top equipment.
2. Section 01030: Alternates: Alternate #4 was removed.
3. Section 08410: Aluminum Entrances and Storefronts – Frame color shall be Dark Bronze. Door Hardware at exterior doors shall be provided by manufacturer/supplier.
4. Section 084113: Aluminum Bi-fold Door - frame color shall be dark bronze.
5. Section 08515: Curtain Walls – Frame Color shall be Dark Bronze
6. Section 08520: Aluminum Windows – Frame color shall be Dark Bronze
7. Section 08580: Aluminum Sliding Service Window – Frame color shall be dark bronze.
8. Section 08710: Door Hardware – Section 1.02 Allowances was added.
9. Section 09650: Resilient Flooring has been added.
10. Section 10431: Signage –
    a. Clarification – all materials, thicknesses, fonts, etc. shall be included in the Allowance. All signage included in the base bid, as listed in section 1.2 SUMMARY. To be determined: Final design, materials, colors, font, etc. will be coordinate and approved by the owner.
    b. Clarification: The 3-D "ART" letters on the west façade are to be provided by others. Contractor will need to supply electric needs to the sign and for the sign, plexi-glass sign front inserts and a means of connection to the concrete base/bench.

ARCHITECTURAL – Drawings

1. Sheet ADA has been added.
2. Sheet D2.1
    a. Demolition Notes: Notes 1, 2, 4, and Alt. #4 have been removed. Note 17 has been modified and Notes 24, 25 & 26 have been added.
    b. Demolition Plan
        i. Classroom and bathroom area in the North West corner of the building have been revised to show estimated floor removal for new plumbing, sewer and electrical install.
        ii. West façade area has been modified to show estimated floor and sidewalk removal for install of new sloped access to building and new bench along exterior of façade.
        iii. Note for Alternate #4 has been removed from west Gallery space.
3. Sheet A2.1
    a. First Floor Plan
        i. Note 20 has been added along the exterior of west façade.
        ii. New pull-down sun shade device has been added to the north of Door D01.
        iii. Dimension of veneered wall between coffee bar and Gift Shop has been modified.
        iv. Note 21 has been added next to Door D13
    b. Detail B, New Landings/Grading at Entry Door has been added.
    c. Detail C, Alternate #2 Partial First Floor Plan: Label has been modified, and Door Label D18 has been added to the plan.
4. Sheet A2.2 - Architectural Notes: Notes 20 & 21 have been added. Note Alt. #4 has been removed.

5. Sheet A3.1
    a. Detail A, Santa Fe Façade East Elevation: Elevation markers have been added and adjusted. Door D01 configuration has been modified.
    b. Detail F, Alternate #2 Santa Fe Façade East Elevation: Elevation markers have been added and adjusted. Door D18 configuration has been modified.
6. Sheet A4.4 - Detail A, Wall Section, Proposed New: Section has been modified to show new entry door work and grading.
7. Sheet A5.1 – new mechanical equipment has been added to the roof plan.
8. Sheet A7.1
    a. Reflected Ceiling Plan Notes: Note 4 has been revised, Note 11 has been eliminated and Note 13 has been added.
    b. Ceiling Type Chart: Type 2 ceiling has been removed.
    c. Reflected Ceiling Plan: Ceiling Types and Notes have been revised and added in Gallery 128.
9. Sheet A9.1
    a. Details B and C – Section Cut K-A9.2 has been added.
    b. Detail D – elevation is updated to show the new sloped entry, Door D01 modifications, and to show the new LED surface mounted lights on the curtain wall frame.
        i. Clarification: if Alternate #2 is selected, the LED lights will be installed around the existing frames/mullions.
10. Sheet A9.2 - Detail K has been added.
11. Sheet A9.3 - Detail B, Catering Kitchen #114 Casework Elevation: Casework shown in right corner has been eliminated.
12. Sheet A10.1
    a. First Floor Finish Plan, new concrete work at entry shown and concrete patching shown.
    b. Clarification: There is a small amount of new flooring (VCT) work in the corners of Galleries 128 & 129. This work is not associated with Alternate #3. This work is part of the base bid.
13. Sheet A10.2
    a. Door Schedule: Door D01 – Height has been modified; Door D18 has been added; Note 11 has been added
    b. Detail B, Frame Types: Type 4 has been modified; Type 7 has been added
    c. Detail C, Door Types: Type D has been modified

MECHANICAL – Drawings

1. Sheet M1.2: Detail 1, Floor Plan – Waste and Vent – Sewer line route has been modified.

ELECTRICAL – Drawings

1. Sheet E1.1:
    a. Lighting Plan Notes by Symbol – Notes 19 & 20 have been added
    b. Floor Plan – Lighting
        A. Notes 19 & 20 have been added to the East façade
        B. Emergency Light fixture 'E' has been added in the Kitchen

Receipt of this Addendum shall be noted on the Bid Form.

END OF ADDENDUM NO. 1

Attachments:

Specification Sections:

- Section 01019: Special Provisions
- Section 01030: Alternates
- Section 08410: Aluminum Entrances and Storefronts
- Section 084113: Aluminum Bi-fold Door
- Section 08515: Curtain Walls
- Section 08520: Aluminum Windows
- Section 08580: Aluminum Sliding Service Window
- Section 08710: Door Hardware
- Section 09650: Resilient Flooring
- Section 10431: Signage

Drawings – due to the number of revised sheets, all drawing sets are being re-issued. These can be found on JGR's Plan Room: jgrarchitects.com/plan-room/

SECTION 01019

SPECIAL PROVISIONS

1. GENERAL

Should conflict occur between these Special Provisions and the General Conditions, the requirements of the Special Provisions shall take precedence.

2. TIME OF CONSTRUCTION – PENALTY CLAUSE

a. Time of Construction – Construction commencement date shall be as specified in the AIA Document A133 – Standard Form of Agreement between Owner and Construction Manager as Constructor. The Contractor may commence bidding and project preparation upon the receipt of the Final Bid set of drawings and specifications and once the Architect has given the Contractor written notice to proceed to the satisfaction of the Owner. The time for completion shall be as specified in the AIA Document A133 – Standard Form of Agreement between Owner and Construction Manager as Constructor. This deadline may be extended for the period of any reasonable delay which is due exclusively to causes beyond the control and without the fault of the Contractor, including acts of God, fires, floods, and direction by the Architect. It is impractical to perform any operation of construction and acts of omissions of the Owner with respect to matters for which Owner is solely responsible; provided, however, that no such extension of time for completion shall be granted the Contractor, unless within ten (10) days after the happening of any event relied upon by the Contractor for such extension of time, the Contractor shall have made a request, therefore, in writing to the Architect. Extended time will be submitted with pay request for Owner's approval.

b. Penalty Clause - The time of completion of the construction of the project is of the essence of this Contract. Should the Contractor neglect, refuse, or fail to complete the project (100%) within the time herein agreed upon, after giving effect to extensions of time, if any, herein provided; the Owner shall have the right to deduct from and retain out of such money, which may then be due or which may become due and payable to the Contractor, the sum of TWO HUNDRED DOLLARS ($200.00) per day for each and every day that such construction is delayed in its completion beyond the specified time. If the amount due and to become due from the Contractor to the Owner is insufficient to pay in full any such penalites, the Contractor shall pay to the Owner the amount necessary to effect such payment in full; provided, however, that the Owner shall promptly notify the Contractor in writing of the manner in which the amount retained, deducted or claimed. No award is given to the Contractor for early completion.

c. Joint Responsibility - The General Contractor and/or Subcontractors causing the delay in completion of the project shall be responsible for payment of the penalty. In no case shall the total penalty for all contracts exceed the sum of daily penalty multiplied by the number of days of delay in completion.

3 WORK SEQUENCE, SCHEDULE FOR COMPLETION AND LIQUIDATED DAMAGES

A. Schedule requirements for each area are outlined as follows. Reference the AIA Document A133 – Standard Form of Agreement between Owner and Construction Manager as Constructor.

Work	Available Start	Substantial Completion	Liquidated Damages
Addition and Renovation	On or about November 7, 2023	On or about April 30, 2024	$200/Calendar Day

B. Schedule requirements for final completion – 14 days following substantial completion with liquidated damages equivalent to those identified for substantial completion.

4. ALTERNATES - Refer to Alternate Schedule, Section 01030

a. Alternates specified are not a part of Base Bid, but are Alternates to same, their acceptance being at option of Owner.

5. CASH ALLOWANCES

a. Costs included in Allowances: Cost of Product to Contractor or Subcontractor, less applicable trade discounts, delivery to site, except those taxes saved by use of Owner's tax exemption.
b. Costs Not Included in the Allowance: Fees for overhead and profit, product handling at the site, including unloading, uncrating, and storage; protection of Products from elements and from damage and labor for installation and finishing.

c. Architect Responsibilities:

1. Consult with Contractor in consideration and selection of Products, suppliers and installers.
2. Select Products in consultation with Owner and transmit decision to Contractor.
3. Prepare Proposal Requests and Change Orders.

d. Contractor Responsibilities:
1. Assist Architect/Engineer in selection of Products, suppliers and installers.
2. Obtain proposals from suppliers and installers and offer recommendations.
3. On notification of selection by Architect, execute purchase agreement with designated supplier and installer.
4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
5. Promptly inspect Products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
6. Product handling at the site, including unloading, uncrating and storage, protection of Products from elements and from damage and labor for installation and finishing.
7. The Contractor shall include in his Bid all fees for all cash allowances.

e. Funds will be drawn from Cash Allowances only by written authorization from Owner.

f. Cash Allowances:
1. Inspection and Testing Allowance – The contractor shall include in his bid, an allowance of **$15,000.00** for direct cost of testing by the approved testing companies. The contractor shall bear all costs associated with coordination, administration scheduling, and supervision of testing companies, and include those costs in his bid.
2. Section 08710 Door Hardware, **Amount $20,000**
3. Section 10431 Signage, **Amount $10,000.00**.
4. New supports, platforms, structural needs and modification to accommodate new roof-top mechanical equipment – **Amount $20,000.00**
5. Contingency Allowance – In addition to the specification sections listed above, include an allowance of **$40,000.00** in the general bid and contract amount to be included in the contractor's base bid. This allowance shall be used at the sole discretion of the Architect and/or Owner specifically for hidden conditions discovered in the field or on site, the addition of labor, parts, and/or materials required for timely completion in conjunction with the general scope of work.

6. ENUMERATION OF DRAWINGS AND SPECIFICATIONS

a. Correlation. Accompanying these Specifications are the Drawings, which jointly with these Specifications, are intended to explain each other and describe and coordinate the work to be performed under the Contract.

b. Verification of Documents. Before submitting his bid, each Bidder shall check his set(s) of Drawings and Specifications and advise the Architect if any sheets are missing.

c. Specifications Explanations. For convenience of reference, the Specifications are separated into Titled Divisions and Sections. Such separation shall not, however, operate to make the Architect an arbiter to establish limits between the Contractor and Subcontractor or Sub-Subcontractor.

d. Drawings. Refer to LIST OF DRAWINGS.

e. Specifications. Refer to TABLE OF CONTENTS.

7. WARRANTIES

Before being eligible for final payment, Contractor shall deliver to Owner, through Architect, all special warranties specified for materials, equipment, and installation.

8. OPERATING INSTRUCTIONS

Before being eligible for final payment, Contractor shall deliver to Owner, through Architect, three (3) copies of manufacturer's operating and maintenance instructions, and one (1) CD/DVD containing complete set or manufacturers operating instructions, a complete set of shop drawings on each piece of equipment. Electronic files shall be in PDF format with files organized into single documents for Architectural, Mechanical, and Electrical divisions.

9. AS-BUILT DRAWINGS

Before being eligible for final payment, the Electrical and Mechanical Contractors shall prepare and deliver to Owner, through Architect, One (1) CD/DVD containing AS-BUILT DRAWINGS in PDF format. These drawings shall consist of marked-up prints, and shall show the correct location of every item of equipment, piping, conduit, panel boards, ductwork, switches, valves, etc. If marked-up prints are used, and scanned, they shall be new white prints without miscellaneous markings. All markings shall be clearly legible and identified.

10. CERTIFICATE OF COMPLIANCE

Upon completion of project, Contractor is to furnish written Certification to the Architect that he has complied with every paragraph of the Specifications and Drawings.

11. CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS
Upon completion of project, Contractor shall submit to Owner a signed Contractor's Affidavit of Release of Liens prior to final payment.

12. CONTRACTOR'S MONTHLY APPLICATION FOR PAYMENT FORM
Contractor's monthly Application for Payment shall be submitted as per General Conditions. AIA Document G702, Application and Certificate for Payment is approved and acceptable.

13. FILING AND RECORDING OF BONDS
In addition to furnishing the number of combination Performance Bond and Labor and Materials Payment Bond, and Statutory Bond, if required, the Contractor shall file copies of such bonds with Clerk of the District Court and furnish Architect with receipt furnished by Clerk of the District Court, covering charges for filing and recording of said bonds.

14. STATUTORY BONDS
In addition to furnishing the combination Performance and Labor and Materials Payment Bond specified in General Conditions, the Contractor shall furnish Statutory Bond in an amount not less than 100% of the Agreement in such numbers and form stated in Sample Copy bound in the Specifications. Statutory Bond shall be filed and recorded with Clerk of the District Court, as specified in Paragraph - FILING AND RECORDING OF BONDS.

15. DOCUMENTS FURNISHED CONTRACTORS
The General Contractor will be furnished, free of charge, the following working drawings and specifications, including modifications for construction of the project - 20 sets. The General Contractor will be responsible for distribution of these sets to the Subcontractors and suppliers. The Contractor shall pay the actual cost of reproduction and postage for all additional sets requested by him.

16. TESTING AND INSPECTIONS
    a. The General Contractor shall be responsible for coordination and scheduling of all inspections and testing as required by the Contract documents. The Contractor shall include a testing and inspection allowance in his bid as described in paragraph 5.f.3 of this section. The Contractor shall pay all costs associated with testing and all direct costs from the testing/inspection company and shall be deducted from the testing and inspection allowance. Re-testing/inspection costs associated with incorrect or defective work shall be paid by the Contractor and such costs are not to be deducted from the allowance.
    b. All sampling and testing procedures shall be performed by the inspection company responsible for inspection and testing.

17. SALES TAX EXEMPTIONS
    a. Materials and equipment incorporated into this project **are not exempt** from the payment of sales tax under the laws of the State of Kansas and such sales tax shall be included in the Bid of the Bidder.

END OF SECTION 01019

SECTION 01030

ALTERNATES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 GENERAL

1. The General Contractor shall state in his Bid Form the amount of dollars to be ADDED or DEDUCTED from his Base Bid for the following Alternates.
2. Alternates are not in order of acceptance.
3. It shall be the responsibility of the General Contractor to advise all necessary personnel and suppliers as to the nature and extent of all alternates selected by the owner.
4. Circle Add or Deduct to indicate that the alternate price is to be added or subtracted from the base bid.

1.4 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.5 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

1. ALTERNATE NO. 1
The Contractor shall state the amount of dollars to be added to the Base Bid for all work, labor, and materials, associated with the demolition and new work at the West patio and West Façade Wall. This includes: related selective demolition; lower canopy column footings; floor slab patching; masonry wall modifications and patching; steel lintels; new steel upper canopies; new steel lower canopies and columns; new concrete patio pavement; new brick pavers; patio planters; patio guardrails; west exterior wall modifications; new aluminum windows F1/F2, C, D and E; new aluminum storefront pair of doors D13 and sidelights; new folding glass door D14; and the air curtain at the folding doors.

ADD $ _____

2. ALTERNATE NO. 2
The Contractor shall state the amount of dollars to be deducted to the Base Bid for all work, labor, and materials, associated with the modification of the East Storefront in lieu of full replacement. Replace only a portion of the East Elevation curtain wall. The new arched aluminum curtain wall windows A & B will be eliminated. The existing arched curtain wall system will remain with only the existing door being removed and a section removed at the north end of the east elevation to allow for installation of new pair of aluminum storefront doors D01. Where the existing glass door is removed, it will be replaced with new aluminum storefront and a short section of concrete wainscot wall to infill the opening below the sill elevation. The new ledge construction and tile from floor to sill on the interior will be eliminated, as well as the new exterior concrete bench and tile. In place of concrete bench and tile, a concrete housekeeping pad will be added for support for the 3d “ART” sign.

DEDUCT $ _____

3. ALTERNATE NO. 3
The Contractor shall state the amount of dollars to be added/deducted to the Base Bid for all work, labor, and materials, associated with the elimination of the opaque urethane coated concrete finish in the North building. Instead, provide floor substrate preparation and installation of VCT flooring.

ADD/DEDUCT$ _____

4. ALTERNATE NO. 4
As Added by Addendum

ADD/DEDUCT$ _____

5. ALTERNATE NO. 5
As Added by Addendum

ADD/DEDUCT$ _____

END OF SECTION 01030

SECTION 08410

ALUMINUM ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Aluminum doors and frames.
- B. Vision glass and glass.
- C. Door hardware.
- D. Integral air and vapor barrier.
- E. Perimeter sealant.

1.02 SYSTEM DESCRIPTION
- A. Aluminum entrances and storefront system includes tubular aluminum sections with supplementary internal support framing, shop fabricated, factory prefinished, vision glass, related flashings, anchorage, and attachment devices.

1.03 PERFORMANCE REQUIREMENTS
- A. Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as calculated in accordance with codes.
- B. Limit mullion deflection to flexure limit of glass; with full recovery of glazing materials.
- C. System to accommodate, without damage to components or deterioration of seals, movement within system, movement between system and peripheral construction, dynamic loading and release of loads, deflection of structural support framing.
- D. Limit air leakage through assembly to 0.06 cfm/min/sq. ft. of wall area, measured at a reference differential pressure across assembly of psf as measured in accordance with AAMA 501.
- E. Water Leakage: None, when measured in accordance with AAMA 501 with a test pressure difference of 2.86 lbs/sq. ft.
- F. Maintain continuous air and vapor barrier throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
- G. System to provide for expansion and contraction within system components caused by a cycling temperature range of 170 degrees F over a 12 hour period without causing detrimental affect to system components.
- H. Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to the exterior by a weep drainage network.

1.04 SUBMITTALS
- A. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work and expansion and contraction joint location and details.

1.05 DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, protect and handle products to site.
- B. Protect pre-finished aluminum surfaces. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

1.06 ENVIRONMENTAL REQUIREMENTS
- A. Do not install sealants when ambient temperature is less than 40 degrees F during and 48 hours after installation.

1.07 FIELD MEASUREMENTS
- A. Verify that field measurements are as indicated on shop drawings.

1.08 WARRANTY
- A. Provide three year warranty.
- B. Warranty: Include coverage for complete system for failure to meet specified requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS
- A. Storefront System
  1. Manko - Product series – 2450-CG, Door series – 100 Series Narrow Stile Door.
  2. Other acceptable manufacturers offering equivalent Products.
     a. Kawneer.
     b. TRACO
     c. EFCO.
  3. Substitutions: Under provisions of the General Requirements.

2.02 MATERIALS
- A. Extruded Aluminum: ANSI/ASTM B221; 6063 alloy, T5 temper.
  - Color: **Dark Bronze**
- B. Steel Sections: ANSI/ASTM A36; shaped to suit mullion sections.
- C. Fasteners: Galvanized steel.

2.03 COMPONENTS
- A. Frame: 4 1/2 x 2 inch nominal dimension; glazing stops; drainage holes; internal weep drainage system.
- B. Exterior Doors: 1-3/4 inches thick, 2-inch wide top rail, 2-inch wide vertical stiles, 4-inch wide bottom rail; square glazing stops.
- C. Flashings: Aluminum, finish to match mullion sections where exposed.

2.04 GLASS AND GLAZING MATERIALS
- A. Glass and Glazing Materials: As specified in Section 08800 of types described below:
  1. Glass at Exterior Lights: 1-inch insulated type (outer pane of ¼ inch tinted medium bronze at exterior, inner pane of ¼ inch clear). Tempered where required. **Low-E coating on third surface.**

2.05 SEALANT MATERIALS
- A. Sealant and Backing Materials: As specified in Section 07900.

2.06 HARDWARE
- A. Weather Stripping, Sill Sweep Strips, Thresholds, Hinges, Tubular Pull Handles, Panic Device, Closer: Type to suit application, and finish, all provided by storefront manufacturer / supplier.
- B. Door Hardware at exterior and vestibule doors shall include Rim Panic Devices, Closures, Full length Roton Hinges, all provided by manufacturer/supplier. Manufacturers standard pull (vertical bar style), All finishes to match Door/Storefront color.
- C. Center Mullion. Provide Removable keyed style center mullion at all pairs of doors with panic devices.
- D. Cost of Storefront hardware shall be included in the **BID PRICE** of the storefront system provider. These cost are NOT to be included in the Hardware Allowance.
- E. Cylinder locks by hardware supplier.
- F. Handicap Door Operators: (1 door total: D01)
  1. **Nabco Gyro-Tech, Model GT 500 Heavy Duty Auto-swing Door Operator;** Clear aluminum finish: Two remote push button operators (field verify mounting location); System must include sequential relay to properly interface with Access Control system.
     Contact Automatic Doors of Kansas, Wichita, KS (316) 722-1724. **Cost shall be included in the Contractor's Base Bid**

2.07 FABRICATION
- A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
- B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
- C. Prepare components to receive anchor devices. Fabricate anchors.
- D. Arrange fasteners and attachments to conceal from view.
- E. Prepare components with internal reinforcement for door hardware and door operator hinge

hardware.

F. Reinforce framing members for imposed loads.

2.08 FINISHES

A. Finish coatings to conform to AAMA

B. Exposed Aluminum Surfaces: **Color: Dark Bronze**

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify site opening conditions.

B. Verify dimensions, tolerances, and method of attachment with other work.

C. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.

3.02 INSTALLATION

A. Install wall system in accordance with manufacturer's instructions and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.

B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.

C. Provide alignment attachments and shims to permanently fasten system to building structure.

D. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

E. Provide thermal isolation where components penetrate or disrupt building insulation.

F. Install sill flashings.

G. Coordinate attachment and seal of perimeter air and vapor barrier materials.

H. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

I. Set thresholds in bed of mastic and secure.

J. Install hardware using templates provided.

K. Install glass in accordance with Section 08800, to glazing method required to achieve performance criteria.

L. Install perimeter sealant to method required to achieve performance criteria, backing materials, and installation criteria in accordance with Section 07900.

3.03 TOLERANCES

A. Maximum Variation from Plumb: 0.06 inches every 3 ft non-cumulative or 1/16 inches per 10 feet, whichever is less.

B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.

3.04 ADJUSTING

A. Adjust operating hardware and sash for smooth operation.

3.05 CLEANING

A. Remove protective material from prefinished aluminum surfaces.

B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

C. Remove excess sealant by method acceptable to sealant manufacturer.

3.06 PROTECTION OF FINISHED WORK

A. Protect finished Work from damage.

END OF SECTION 08410

SECTION 084113

ALUMINUM BI-FOLD DOOR
Manko Window Systems Inc. 2400i Series

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Furnish all necessary materials, labor, and equipment for the complete installation of aluminum bi-fold door systems as shown on the drawings and herein specified. Structural support of the framing system is not included.
2. All hinged glass doors shall be Manko Window Systems, Inc. 2400 Series Bi-Fold Door. Other manufacturers requesting approval to bid their product as an equal must submit the following information ten days prior to close of bidding.
   a. A sample hinged glass door (size and configuration) as per requirements of architect.
   b. Test reports documenting compliance with requirements of Section 1.02 Testing and Performance Requirements.
3. Glass and Glazing
   a. All units shall be factory glazed.
4. Single Source Requirement
   a. All products listed in Section 08400; 08500; 08800; and 08900 shall be by the same manufacturer.

1.02 SYSTEM PERFORMANCE REQUIREMENTS

A. Test Units

1. Air, water, and structural test unit shall conform to requirements set forth in AAMA/NWWDA 101/I.S.2-97.

B. Test Procedures and Performances

1. Hinged glass doors shall conform to all AAMA/NWWDA 101/I.S.2-97 requirements for the hinged glass door type referenced in 1.01.8. In addition, the following specific performance requirements shall be met.
2. Air Infiltration Test
   a. With door leaf closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 6.24 psf.
3. Water Resistance Test
   a. With door leaf closed and locked, test unit in accordance with ASTM E 331 and E 547.
4. Uniform Load Structural Test
   a. With door leaf closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 60.0 psf, both positive and negative pressure.
   b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners or hardware parts, nor any other damage that would cause the hinged glass door to be inoperable.
5. Condensation Resistance Test (CRF)
   a. With door leaf closed and locked, test unit in accordance with AAMA 1503.
6. Thermal Transmittance Test (Conductive U-Value)
   a. With door leaf closed and locked, test unit in accordance with AAMA 1503.

1.03 SUBMITTALS

A. General Requirements

1. Prepare, review, approve, and submit specified submittals in accordance with “Conditions of the Contract” and Submittals Sections. Product data, shop drawings, samples, and similar submittals are defined in “Conditions of the Contract.”

B. Shop Drawings
    1. Shop drawings must be prepared wholly by the window manufacturer, or a qualified engineering services firm under the direction of the manufacturer. Shop drawings for pre-engineered configurations may be prepared by installers authorized per 1.04 QUALITY ASSURANCE.
    2. Provide design details along with bid proposals to define system aesthetic and functional characteristics.
    3. Provide three photocopied sets of shop drawings, including half size details of all necessary conditions.
C. Samples
    1. Components: Submit samples of anchors, fasteners, hardware, assembled corner sections and other materials and components as requested by Architect.
    2. Finish: Submit color samples for Architect's approval as requested.
D. Test Reports and Calculations
    1. Submit certified independent laboratory test reports verifying compliance with all test requirements of 1.02 SYSTEM PERFORMANCE REQUIREMENTS as requested by Architect.

1.04 QUALITY ASSURANCE
A. Submit certified independent laboratory test reports verifying compliance with all test requirements of 1.02 System Performance Requirements as requested by architect.
B. Test reports shall be accompanied by the entrance door manufacturer’s letter of certification stating that the tested door meets or exceeds the referenced criteria for the appropriate AAMA door type.
C. Qualifications: Upon request, the manufacturer will provide written confirmation that the installer is authorized to install aluminum entrance products to be used on this project.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Packing, Shipping, Handling and Unloading
    1. Materials will be packed, loaded, shipped, unloaded, stored, and protected in accordance with AAMA CW-10.

1.06 WARRANTY
A. Aluminum Entrance Warranty
    1. Products: Submit a written warranty, executed by the aluminum entrance manufacturer, for a period of 2 years (10 years for insulated glass seal failure) from the date of manufacture, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements and industry standards, which results in premature failure of the aluminum entrance, finish, factory-glazed glass, or parts, outside of normal wear.
        a. In the event that the aluminum entrances or components are found defective, manufacturer will repair or provide replacements without charge at manufacturer’s option.
        b. Warranty for all components must be direct from the manufacturer (non-pass through) and non-prorated for the entire term. Warranty must be assignable to the non-residential owner, and transferable to subsequent owners through its length.
    2. Installation: Submit a written warranty, executed by the aluminum entrance installer, for a period of 2 years from the date of substantial completion, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements, which result in premature failure.
        a. In the event that installation of aluminum entrances or components is found to be defective, installer will repair or provide replacements without charge at the installer’s option.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer
   1. Drawings and specifications are based on:
      a. Manko Window Systems, Inc. 2400i Aluminum Bi-fold Doors
         i. Base bid will be Manko Window Systems, Inc.

B. Substitutions
   1. Other manufacturers' products that meet or exceed specified design requirements may be considered. Submit the following information with request for substitutions at least ten (10) working days prior to bid date.
      a. Test reports specified in 1.02 SYSTEM PERFORMANCE REQUIREMENTS
      b. Full proposal details and samples specified in 1.03 SUBMITTALS
      c. Copy of manufacturer's warranty specified in 1.06 WARRANTY
      d. Other information as requested for evaluation
   2. Substitute products not pre-approved by the Architect via addendum will not be considered.

2.02 MATERIALS

A. Aluminum
   1. Extruded aluminum shall be 6063-T5 6063-T6 alloy and temper.
      - Color: **Dark Bronze**

B. Hardware
   1. Locking mechanism shall be single point type drop bolt at head and sill as installed by the door manufacturer.
   2. Hinges shall have an integral pull handle. Systems are to be complete with a top, bottom and intermediate concealed pivot and carrier set.

C. Weatherstripping
   1. All doors shall be double weather-stripped with an extruded vinyl. The weatherstrip shall be uninterrupted and secured within extruded races at the interior and exterior points of contact with the frame.

D. Glass
   1. Insulated tempered glass shall be 1" as manufactured by Manko Window Systems, Inc. consisting of 1/4" exterior, 1/2" air spacer, and 1/4" interior. Refer to Section 08800 for glass types.

E. Thermal Barrier
   1 All exterior aluminum shall be separated from interior aluminum by using concealed low conductance twin polymide nylon strip reinforced with glass fibers.
   2 No thermal short circuits shall occur between the exterior and interior
   3 No "poured and de-bridged" thermal barriers will be allowed.

2.03 FABRICATION

A. General
   1. All aluminum frame and door leaf extrusions shall have a nominal wall thickness of .125". All glazing bead extrusions shall have a nominal wall thickness of .050".
   2. Mechanical fasteners, welded components, and hardware items shall not bridge thermal barriers. Thermal barriers shall align at all frame and door leaf corners.
   3. Depth of frame shall not be less than 4 1/8".
   4. Depth of door leaf shall not be less than 2".

B. Frame
   1. Frame components shall be neatly coped and mechanically fasten at each corner leaving only hairline joinery. Hairline joinery shall be weather sealed.

C. Door Leaf
   1. Door stiles and rails shall have mortise and tenon construction while secured with double tie rods. Heavy concealed reinforcement brackets shall be secured with screws.

D. Glazing
1. All units shall be glazed with the manufacturer's standard sealant process provided the glass is held in place by a removable, extruded aluminum, glazing bead. The glazing bead must be isolated from the glazing material by a gasket.

2.04 FINISHES
A. Finish of Aluminum Components
1. Finish of all exposed areas of aluminum windows and components shall be done in accordance with the appropriate AAMA Voluntary Guide Specification shown.
- Color: **Dark Bronze**

PART 3 EXECUTION

3.01 EXAMINATION
A. Site Verification of Conditions
1. Verify that building substrates permit installation of entrances according to the manufacturer's instructions, approved shop drawings, calculations, and contract documents.
2. Do not install entrances until unsatisfactory conditions are corrected.

3.02 INSTALLATION
A. Erection of Aluminum Framed Entrances
1. Install entrances with skilled tradesman in exact accordance with approved shop drawings, installation instructions, specifications, and AAMA 101 and 101/I.S.-2.
2. Entrances must be installed **plumb, square, and level** for proper weathering and operation.
3. All joints between framing and the building structure shall be sealed in order to secure a water tight installation.
4. Aluminum that is not organically coated shall be insulated from direct contact with steel, masonry, concrete, or dissimilar metals by bituminous paint, zinc chromate primer, non-conductive shims, or other suitable insulating material.

3.03 PROTECTION AND CLEANING
A. After completion of entrance installation, the General Contractor shall adequately protect exposed portions of aluminum surfaces from damage by grinding and polishing compounds, plaster, lime, acid, cement, or other contaminants. The General Contractor shall be responsible for the final cleaning. Manko Windows Systems, Inc. recommends mild soap and water to clean the aluminum surface of the doors.

END OF SECTION 084113

SECTION 08515

GLAZED ALUMINUM CURTAIN WALLS
Manko Window Systems Inc. 250 SERIES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. All exterior curtain walls systems furnished and installed as shown on drawings, specified in this section.
   2. All labor, materials, tools, equipment, and services needed to furnish and install Architectural Performance Class curtain walls.
   3. Components furnished with installed curtain walls.
   4. Installation accessories furnished and installed.
   5. Single Source Requirement
      a. All products listed shall be by the same manufacturer.

1.02 SYSTEM PERFORMANCE REQUIREMENTS

A. Design Wind Loads
   1. The design wind pressure for the project will be: Per local building codes
   2. All structural components, including meeting rails, mullions, and anchors shall be designed accordingly, complying with deflection and stress requirements of Paragraph 1.02.

B. Air, Water, and Structural Performance Requirements
   1. When tested in accordance with cited test procedures, curtain walls shall meet or exceed the following performance criteria for Architectural Performance Curtain Walls.
   2. Air Test Performance Requirements
      a. Air infiltration maximum 0.06 cfm per square foot at 6.24 psf pressure differential when tested in accordance with ASTM E283.
   3. Water Test Performance Requirements
      a. No uncontrolled water leakage at 15.00 psf static pressure differential, with water application rate of 5 gallons/hr/sq ft when tested in accordance with ASTM E331.
   4. Structural Test Performance Requirements
      a. Uniform Load Deflection Test
         i. No deflection of any unsupported span L of test unit (framing rails, muntins, mullions, etc.) in excess of L/175 at both a positive and negative load of 40 psf (design test pressure) when tested in accordance with ASTM E330.
         ii. Structural reinforcing that is not standard on units being furnished is not allowed.
      b. Uniform Load Structural Test
         i. Unit to be tested at 1.5 x design test pressure (60 psf), both positive and negative, acting normal to plane of wall in accordance with ASTM E330.
         ii. No glass breakage; permanent damage to fasteners, hardware parts, or anchors; damage to make windows inoperable; or permanent deformation of any main frame or ventilator member in excess of 0.2% of its clear span.

C. Condensation Resistance and Thermal Transmittance Performance Requirements
   1. Perform thermal tests in accordance with the configuration specified in AAMA 1503.1.
      a. Thermal Transmittance ("U" Factor) shall not exceed 0.40 BTU/hr/sf/deg F at 15 mph exterior wind.
      b. Condensation Resistance Factor (CRF) requirements: CRF minimum 72 (Frame) and CRF minimum 65 (specimen).

1.03 SUBMITTALS

A. General Requirements

1. Provide all submittals in a timely manner to meet the required construction completion schedule.

B. Shop Drawings

1. Shop drawings must be prepared wholly by the window manufacturer, or a qualified engineering services firm under the direction of the manufacturer. Shop drawings for pre-engineered configurations may be prepared by installers authorized per 1.04 QUALITY ASSURANCE.
2. Provide design details along with bid proposals to define system aesthetic and functional characteristics.
3. Provide three photocopied sets of shop drawings, including half size details of all necessary conditions.

C. Samples

1. Components: Submit samples of anchors, fasteners, hardware, assembled corner sections and other materials and components as requested by Architect.
2. Finish: Submit color samples for Architect's approval as requested.

D. Test Reports and Calculations

1. Submit certified independent laboratory test reports verifying compliance with all test requirements of 1.02 SYSTEM PERFORMANCE REQUIREMENTS as requested by Architect.

1.04 QUALITY ASSURANCE

A. Qualifications

1. Upon request, the window manufacturer will provide written confirmation that the installer is authorized to install window products to be used on this project.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Packing, Shipping, Handling and Unloading

1. Materials will be packed, loaded, shipped, unloaded, stored, and protected in accordance with AAMA CW-10.

1.06 WARRANTY

A. Aluminum Curtain Wall Warranty

1. Products: Submit a written warranty, executed by the window manufacturer, for a period of 2 years (10 years for insulated glass seal failure) from the date of manufacture, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements and industry standards, which results in premature failure of the curtain walls, finish, glass, or parts, outside of normal wear.
    a. In the event that curtain walls or components are found defective, manufacturer will repair or provide replacements without charge at manufacturer’s option.
    b. Warranty for all components must be direct from the manufacturer (non-pass through) and non-prorated for the entire term. Warranty must be assignable to the non-residential owner, and transferable to subsequent owners through its length.
2. Installation: Submit a written warranty, executed by the window installer, for a period of 2 years from the date of substantial completion, against defective materials or workmanship, including substantial non-compliance with applicable specification requirements, which result in premature failure.
    a. In the event that installation of windows or components is found to be defective, installer will repair or provide replacements without charge at the installer’s option.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturer
   1. Drawings and specifications are based on:
      a. Manko Window Systems, Inc. 250 Series Curtain Wall
         i. Base bid will be Manko Window Systems, Inc.

B. Substitutions
   1. Other manufacturers' products that meet or exceed specified design requirements may be considered. Submit the following information with request for substitutions at least ten (10) working days prior to bid date.

2.02 MATERIALS

A. Aluminum Members
   1. Extruded aluminum prime billet 6063-T5 or 6063-T6 alloy for primary components; 6063-T5, 6063-T6, or 6061-T6 for structural components; all meeting the requirements of ASTM B221.
   2. Aluminum sheet alloy 5005 H 32 (for anodic finish), meeting the requirements of ASTM B209 or alloy 3003 H 14 (for painted or unfinished sheet).
   3. Color: **Dark Bronze.**

2.03 MANUFACTURED UNITS

A. Materials
   1. Principal curtain wall frame members will be a minimum 0.094" in thickness at all structural areas, hardware mounting webs, and section flanges.
   2. Extruded or formed trim components will be a minimum 0.062" in thickness.

B. Fabrication
   1. Frame depth, 6-5/8" or as required to meet required loads.
   2. Face depth 2-1/2".
   3. Frame sections must be tubular.

2.04 COMPONENTS

A. All steel components including attachment fasteners to be 300 series stainless steel except as noted.
B. Extruded aluminum components 6063-T5 or 6063-T6.
C. Glazing gaskets shall comply with ASTM C864 and be extruded of a silicone compatible EPDM rubber, or other suitable compound.
D. Hardware:
   1. Fixed – All door hardware, selected from manufacturers standard line, submit for selections.
E. Sealants
   1. All sealants shall comply with applicable provisions of AAMA 800 and/or Federal Specifications FS-TT-001 and 002 Series.
   2. Frame joinery sealants shall be suitable for application specified and as tested and approved by window manufacturer.
F. Glass
   1. Provide in accordance with Section 08800.
   2. Sealed insulated glass shall meet ASTM E774 Class A.
   3. Glass at Exterior Lights: 1-inch insulated type (outer pane of ¼ inch tinted medium bronze at exterior, inner pane of ¼ inch clear). Tempered where required. **Low-E coating on third surface.**
G. Glazing
   1. Provide in general accordance with Section 08800.

2. Glazing method shall be in general accordance with the FGMA Glazing Manual for specified glass type, or as approved by the glass fabricator.

H. Glazing Materials
1. Setting Blocks/Edge Blocking: Provide in sizes and locations recommended by FGMA Glazing Manual.
2. Back-bedding tapes, expanded cellular glazing tapes, toe beads, heel beads, and cap beads shall meet the requirements of applicable specifications cited in AAMA 800.
3. Structural silicone sealant where used shall meet the requirements of ASTM C 1184.
4. Spacer tape in continuous contact with structural silicone shall be tested for compatibility and approved by the sealant manufacturer for the intended application. Gaskets in continuous contact with structural silicone shall be extruded silicone or compatible material.

I. Steel Components
1. Provide steel reinforcements as necessary to meet the system performance requirements of 1.02.
2. Concealed steel anchors and reinforcing shall be factory painted after fabrication with rust-inhibitive primer complying with Federal Specification TT-P-645.

2.05 FABRICATION

A. General:
1. Finish, fabricate and shop assemble frame and sash members into complete windows under the responsibility of one manufacturer.
2. No bolts, screws, or fastenings to bridge thermal barrier or impair independent frame movement.
3. Fabricate to allow for thermal movement of materials when subjected to a temperature differential from -30 degrees F to +180 degrees F.

B. Frames:
1. Mechanically fasten each horizontal over a solid extruded aluminum shear block leaving only hairline joinery, then seal weather tight.

C. Glass Drainage:
1. Provision shall be made to insure that water will not accumulate and remain in contact with the perimeter area of sealed insulated glass.

2.06 FINISHES

A. Finish of Aluminum Components
1. Finish of all exposed areas of aluminum windows and components shall be done in accordance with the appropriate AAMA Voluntary Guide Specification

PART 3 EXECUTION

3.01 EXAMINATION

A. Site Verification of Conditions
1. Verify that building substrates permit installation of windows according to the manufacturer's instructions, approved shop drawings, calculations, and contract documents.
2. Do not install windows until unsatisfactory conditions are corrected.

3.02 INSTALLATION

A. Erection of Aluminum Windows

1. Install windows with skilled tradesman in exact accordance with approved shop drawings, installation instructions, specifications, and AAMA 101/I.S.2.
2. Windows must be installed plumb, square, and level for proper weathering and operation. Jambs must not be “sprung”, bowed or warped during installation.
3. Aluminum that is not organically coated shall be insulated from direct contact with steel, masonry, concrete or other dissimilar metals by bituminous paint, zinc chromate primer, nonconductive shims or other suitable insulating material.

END OF SECTION 08515

SECTION 08520
ALUMINUM WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES
A. Extruded aluminum fixed windows; glass, shop glazed; panning systems.
B. Perimeter sealant.

1.02 SYSTEM DESCRIPTION
A. Windows: Tubular aluminum sections, shop fabricated, factory prefinished, vision glass, related flashings, anchorage and attachment devices.
B. Configuration: Fixed; with manufacturer's standard panning systems.

1.03 PERFORMANCE REQUIREMENTS
A. Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of wall as measured in accordance with ASTM E330.
B. Limit member deflection to 1/200; with full recovery of glazing materials.
C. System to accommodate, without damage to components or deterioration of seals, movement between window and perimeter framing, deflection of lintel.
D. Limit air leakage through assembly to 0.10 cfm/min/sq. ft. of wall area, measured at a reference differential pressure across assembly of 6 psf as measured in accordance with ASTM E283.
E. Water Leakage: None, when measured in accordance with ASTM E331 with a test pressure difference of 9 lb./sq. ft.
F. Maintain continuous air and vapor barrier throughout assembly, primarily in line with inside pane of glass and heel bead of glazing compound.
G. Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to the exterior by a weep drainage network.

1.04 SUBMITTALS
A. Shop Drawings: Indicate opening dimensions, framed opening tolerances, affected related work; installation requirements.
B. Product Data: Provide component dimensions, anchorage and fasteners, glass, internal drainage details.

1.05 DELIVERY, STORAGE, AND HANDLING
A. Protect prefinished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

1.06 ENVIRONMENTAL REQUIREMENTS
A. Do not install sealants when ambient temperature is less than 40 degrees F.
B. Maintain this minimum temperature during and after installation of sealants.

1.07 FIELD MEASUREMENTS
A. Verify that field measurements are as indicated on shop drawings.

PART 2 PRODUCTS

2.01 MANUFACTURERS
A. MANKO Product
1. 2727I Series fixed windows. **Windows shall have sill, head jamb panning and snap trim components.** Provide all operating hardware and hinging for maximum vertical opening of operable units.
B. TRACO
C. Substitutions: Submit for approval under provisions of the General Requirements.

2.02 MATERIALS
A. Extruded Aluminum: ASTM B221; 6063 alloy, T5 temper.
- Color: **Dark Bronze.**
B. Fasteners: Galvanized steel. Compatible with window and building materials to not cause corrosion of materials.
C. Insect Screens: FS RR-W-365, woven aluminum mesh, charcoal finish.
D. Operable Sash Weatherstripping: Neoprene; permanently resilient, profiled to effect weather seal.
E. Fasteners: Galvanized steel.
F. Any steel materials shall be properly isolated from aluminum.

G. All windows shall include manufacturer's sub-framing around perimeter of all openings and "T" mullions at between-window units.

2.03 GLASS AND GLAZING MATERIALS

A. Glass and Glazing Materials: Of Types described below:

1. Glass in Exterior Lights: 1 inch insulated 1/4 inch exterior tinted Dark Bronze (coordinate with all other exterior glass same manufacturer and tint), 1/4 inch interior clear and obscure where indicated. **Low-E coating on third surface.**

2.04 SEALANT MATERIALS

A. Sealant and Backing Materials: As specified in Section 07900.

2.05 HARDWARE

A. Sash lock: Lever handle with cam lock, white bronze.

2.06 FABRICATION

A. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
B. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
C. Prepare components to receive anchor devices. Fabricate anchors.
D. Arrange fasteners and attachments to ensure concealment from view.
E. Prepare components with internal reinforcement for operating hardware.
F. Provide internal reinforcement in mullions with galvanized steel members to maintain rigidity.
G. Permit internal drainage weep holes and channels to migrate moisture to exterior. Provide internal drainage of glazing spaces to exterior through weep holes.

2.07 FINISHES

A. Finish coatings to conform to AAMA 608.1.
B. **Exterior Exposed Aluminum Surfaces: Dark Bronze**

PART 3 EXECUTION

3.01 INSTALLATION

A. Install window frames, glass and glazing and hardware in accordance with manufacturer's instructions.
B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.
C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances, aligning with adjacent work.
D. Install sill and sill end angles (i.e. Standard panning system).
E. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
F. Coordinate attachment and seal of perimeter air and vapor barrier materials.
G. Install operating hardware.

3.02 TOLERANCES

A. Maximum Variation from Level or Plumb: 0.06 inch every 3 ft non-cumulative or 0.5 inch per 100 ft., whichever is less.

3.03 CLEANING

A. Remove protective material from prefinished aluminum surfaces.
B. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
C. Remove excess sealant by moderate use of mineral spirits or other solvent acceptable to sealant manuf.

END OF SECTION 08520

SECTION 08580

ALUMINUM SLIDING SERVICE WINDOW

PART 1 – GENERAL

1.01 SUMMARY

A. This section includes:
   1. Aluminum, heavy-duty commercial sliding service windows as indicated in drawings and in sections.

1.02 SUBMITTALS

A. Product Data: Submit Manufacturer's technical product data substantiating that products comply.
B. Shop drawings: Submit for fabrication and installation of windows. Include details, elevations, and installation requirement of finish hardware and cleaning.
C. Certification: Provide printed data in sufficient detail to indicate compliance with the contract documents.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Deliver windows crated to provide protection during transit and job storage
B. Inspect windows upon delivery for damage. Unless minor defects can be made to meet the Architect's specifications and satisfaction, damaged parts should be removed and replaced.
C. Store windows at building site under cover in dry location.

1.04 PROJECT CONDITIONS

A. Field measurements: Check opening by accurate field measurement before fabrication. Show recorded measurements on shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of work.

1.05 WARRANTY

A. All material and workmanship shall be warranted against defects for a period of one (1) year from the original date of purchase.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER'S

A. Basis of design: Design is based on aluminum (DW) series, deluxe sliding service window manufactured by **C.R. Laurence Co., Inc. (800) 421-6144**

2.02 MATERIALS

A. Frames: 4" Aluminum frame modules shall be constructed of 6063-T5 extruded aluminum. Replacement and servicing of glass shall be from the clerk side of the window by means of an access panel in the top header and does not require the removal of the frame from the opening. Window glides on top-hung heavy-duty ball bearing slides. Poly-pile weather stripping and self-latching handle. Overall frame sizes are to be in accordance with the contract drawings.
B. Finish: **Dark Bronze**
C. Glazing: The glazing is ¼" to ½" in thickness. Options include tempered, wire, laminated, tinted, and insulating glass (specify type of glazing material desired).
D. Options: Laminated Shelf, stainless steel shelf, keyed lock, full bottom track, or burglar bar. (specify desired options).

PART 3 – EXECUTION

3.01 INSTALLATION

A. Install window in accordance with manufacturer's printed instructions and recommendations. Repair damaged units as directed (if approved by the manufacturer and the architect) or replace with new units.

3.02 CLEANING

A. Clean frame and glazing surfaces after installation, complying with requirements contained in the manufacturer's instructions. Remove excess glazing sealant compounds, dirt or other substances.

3.03 PROTECTION

A. Institute protective measures required throughout the remainder of the construction period to ensure that all the windows do not incur any damage or deterioration, other than normal weathering, at the time of acceptance.

END OF SECTION 08580

SECTION 08710

DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Hardware for wood, hollow steel, metal insulated and aluminum doors.
- B. Thresholds.
- C. Weatherstripping, seals and door gaskets.

1.02 ALLOWANCES
- A. Cash Allowance: This contractor shall install and furnish all Finish Hardware not specified in other sections, such as millwork. This contractor shall allow the sum of **$20,000.00** for the purchase and delivery of hardware only.
- B. Allowance includes purchase and delivery of hardware only. Installation is included in the Contractor's Bid price, not the allowance. Any differential in the allowance listed and the original invoices from suppliers will be adjusted in the contract price.

1.03 REFERENCES
- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.

1.04 OPERATION AND MAINTENANCE DATA
- A. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

1.05 QUALIFICATIONS
- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum 3 years' documented experience.
- B. Hardware Supplier: Company specializing in supplying commercial door hardware with 3 years' documented experience approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, protect, and handle products to site.
- B. Package hardware items individually; label and identify each package with door opening code to match hardware schedule.
- C. Deliver keys to Owner by security shipment direct from hardware supplier.

1.07 WARRANTY
- A. Provide five year warranty.

1.08 MAINTENANCE MATERIALS
- A. Provide special wrenches and tools applicable to each different or special hardware component.
- B. Provide maintenance tools and accessories supplied by hardware component manufacturer.

PART 2 PRODUCTS

2.01 KEYING
- A. Door Locks: Master keyed. Include construction keying, and key to existing keying system.

2.02 HNGES
- A. Butts and Hinges: BHMA A156.1.
- B. Template Hinge Dimensions: BHMA A156.7.
- C. Manufacturers:
  1. Baldwin Hardware Corporation (BH).
  2. Bommer Industries, Inc. (BI).
  3. Cal-Royal Products, Inc. (CRP).
  4. Hager Companies (HAG).
  5. Lawrence Brothers, Inc. (LB).
  6. McKinney Products Company; an ASSA ABLOY Group company (MCK).
  7. PBB, Inc. (PBB).
  8. Stanley Commercial Hardware; Div. of The Stanley Works (STH).

2.03 LOCKS AND LATCHES, GENERAL

A. Accessibility Requirements: Comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)." ANSI A117.1. FED-STD- 795, "Uniform Federal Accessibility Standards."
1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22 N).

B. Latches and Locks for Means of Egress Doors: Comply with NFPA 101. Latches shall not require more than 15 lbf (67 N) to release the latch. Locks shall not require use of a key, tool, or special knowledge for operation.

2.04 MECHANICAL LOCKS AND LATCHES

A. Lock Functions: Function numbers and descriptions indicated in door hardware sets comply with the following:
1. Bored Locks: BHMA A156.2.
2. Mortise Locks: BHMA A156.13.
3. Interconnected Locks: BHMA A156.12.

B. Bored Locks:
1. Manufacturers:
a. Best Access Systems; Div. of The Stanley Works (BAS).
b. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
c. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
d. Schlage Commercial Lock Division; an Ingersoll-Rand Company (SCH).
e. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

2.05 KEYING

A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference, and as follows:
1. Master Key System: Cylinders are operated by a change key and a master key.

B. Keys: Nickel silver.
1. Quantity: In addition to one extra key blank for each lock, provide the following:
a. Cylinder Change Keys: Three.
b. Master Keys: Five.
c. Grand Master Keys: Five.
d. Great-Grand Master Keys: Five.

2.06 CLOSERS

A. Accessibility Requirements: Where handles, pulls, latches, locks, and other operating devices are indicated to comply with accessibility requirements, comply with [the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).", ANSI A117.1., FED-STD-795, "Uniform Federal Accessibility Standards."
1. Comply with the following maximum opening-force requirements:
a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

B. Door Closers for Means of Egress Doors: Comply with NFPA 101. Door closers shall not require more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.

C. Hold-Open Closers/Detectors: Coordinate and interface integral smoke detector and closer device with fire alarm system.

D. Flush Floor Plates: Provide finish cover plates for floor closers unless thresholds are indicated. Match door hardware finish, unless otherwise indicated.

E. Recessed Floor Plates: Provide recessed floor plates with insert of floor finish material for floor closers unless thresholds are indicated. Provide extended closer spindle to accommodate thickness of floor finish.

F. Power-Assist Closers: As specified in Division 8 Section "Automatic Door Operators" for access doors for people with disabilities or where listed in the door hardware sets.

G. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

H. Surface Closers: Provide type of arm required for closer to be located on non-public side of door, unless otherwise indicated.
   1. Manufacturers:
      a. Corbin Russwin Architectural Hardware; an ASSA ABLOY Group company (CR).
      b. LCN Closers; an Ingersoll-Rand Company (LCN).
      c. Norton Door Controls; an ASSA ABLOY Group company (NDC).
      d. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
      e. Yale Commercial Locks and Hardware; an ASSA ABLOY Group company (YAL).

I. Concealed Closers:

   1. Manufacturers:
      a. LCN Closers; an Ingersoll-Rand Company (LCN).
      b. Norton Door Controls; an ASSA ABLOY Group company (NDC).
      c. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).

2.07 STOPS AND HOLDERS

A. Stops and Bumpers:
   1. Provide floor stops for doors unless wall or other type stops are scheduled or indicated. Do not mount floor stops where they will impede traffic. Where floor or wall stops are not appropriate, provide overhead holders.

B. Silencers for Wood Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum 5/8 by 3/4 inch (16 by 19 mm); fabricated for drilled-in application to frame.

C. Silencers for Metal Door Frames: BHMA A156.16, Grade 1; neoprene or rubber, minimum diameter 1/2 inch (13 mm); fabricated for drilled-in application to frame.

D. Manufacturers:
   1. Baldwin Hardware Corporation (BH).
   2. Cal-Royal Products, Inc. (CRP).
   3. Glynn-Johnson; an Ingersoll-Rand Company (GJ).
   4. Hager Companies (HAG).
   5. Hiawatha, Inc. (HIA).
   6. IVES Hardware; an Ingersoll-Rand Company (IVS).
   7. Rockwood Manufacturing Company (RM).
   8. SARGENT Manufacturing Company; an ASSA ABLOY Group company (SGT).
   9. Stanley Commercial Hardware; Div. of The Stanley Works (STH).

2.08 DOOR GASKETING

A. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
   1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
   2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
   3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

B. Air Leakage: Not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.

C. Smoke-Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated, based on testing according to ASTM E 1408.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Gasketing Materials: ASTM D 2000 and AAMA 701/702.

G. Manufacturers:
1. Hager Companies (HAG).
2. National Guard Products (NGP).
3. Pemko Manufacturing Co. (PEM).
4. Zero International (ZRO).

2.09 THRESHOLDS

A. Accessibility Requirements: Where thresholds are indicated to comply with accessibility requirements, comply with [the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).", ANSI A117.1., FED-STD-795, "Uniform Federal Accessibility Standards."

B. Thresholds for Means of Egress Doors: Comply with NFPA 101. Maximum 1/2 inch (13 mm) high.

C. Manufacturers:
1. Hager Companies (HAG).
2. National Guard Products (NGP).
3. Pemko Manufacturing Co. (PEM).
4. Zero International (ZRO).

2.10 FABRICATION

A. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

B. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. Steel Machine or Wood Screws: For the following fire-rated applications:
   a. Mortise hinges to doors.
   b. Strike plates to frames.
   c. Closers to doors and frames.
3. Steel Through Bolts: For the following fire-rated applications unless door blocking is provided:
   a. Surface hinges to doors.
   b. Closers to doors and frames.
   c. Surface-mounted exit devices.
4. Spacers or Hex Bolts: For through bolting of hollow-metal doors.
5. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.11 FINISHES

A. Standard: BHMA A156.18, as indicated in door hardware sets.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that doors and frames are ready to receive work and dimensions are as indicated on shop drawings.

B. Verify that electric power is available to power operated devices and of the correct characteristics.

C. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

D. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Install hardware in accordance with manufacturer's instructions.

B. Use templates provided by hardware item manufacturer.

C. Mounting heights for hardware from finished floor to center line of hardware item:

1. Locksets: 40"
2. Push/Pulls: 45"
3. Dead Locks: 54"
4. Exit Devices: 42"

D. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.03ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.Requirements in paragraph below increase cost but are recommended as a good investment on substantial projects even though they may be difficult to monitor.

Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

END OF SECTION 08710

SECTION 09650

RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES
- A. Resilient base.

1.02 SUBMITTALS
- A. Product Data: Provide data on specified products, describing physical characteristics; sizes, patterns and colors available.
- B. Samples: Submit one sample, illustrating color and pattern for each floor material.
- C. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and seaming recommendations.

1.03 REGULATORY REQUIREMENTS
- A. Conform to code for flame/smoke rating requirements in accordance with ASTM E84.

1.04 DELIVERY, STORAGE, AND HANDLING
- A. Deliver, store, protect and handle products to site under provisions of the General Requirements.
- B. Protect roll materials from damage.

1.05 ENVIRONMENTAL REQUIREMENTS
- A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- B. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.

1.06 MAINTENANCE DATA
- A. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

1.07 EXTRA MATERIALS
- A. Provide 10 lineal feet of base material specified.

PART 2 PRODUCTS

2.01 MATERIALS – VINYL COMPOSITION TILE FLOORING
- A. Vinyl Composition Tile: ASTM F1066, Armstrong. Any/all standard Excelon and Excelon Tile series.
  1. Size: 12 x 12 inch.
  2. Thickness: 1/8 inch
  3. Five colors to be selected. Reference drawings for tile patterns
- B. Accent/Feature Tile: Armstrong Feature Tile and Strips. 2" Strip and 12x12 inch. Thru-color tile. Reference drawings for layout.
- C. Substitutions: Kentile, Azrock.

2.02 MATERIALS - BASE
- A. Base: FS SS-W-40. Rubber; coved; premolded external corners:
  1. Height: 4 inch
  2. Thickness: 1/8 inch thick
  3. Length: Roll. Strips are not acceptable.
  4. Manufacturers:
     a) Roppe.
     b) Johnsonite
     c) Or as approved equal.
  5. Color to be selected from manufacturer full range
- B. Base: Rubber; Non-cove at base of columns.

2.03 ACCESSORIES

A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.
C. Edge Strips: Flooring material as approved.
D. Sealer and Wax: Same type as used by USD 305. **4-coats minimum at vinyl composition tile areas.**

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify concrete floors are dry to a maximum moisture content of 7 percent, and exhibit negative alkalinity, carbonization, or dusting.
B Verify floor and lower wall surfaces are free of substances that may impair adhesion of new adhesive and finish materials.

3.02 PREPARATION

A. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
B. Prohibit traffic until filler is cured.
C. Vacuum clean substrate.
D. Apply primer as recommended by manufacturer.

3.03 INSTALLATION - BASE

A. Fit joints tight and vertical. Maintain minimum measurement of 18 inches between joints.
B. Miter internal corners. At external corners, use premolded units or "V" cut back of base strip to 2/3 of its thickness and fold. At exposed ends, use premolded units.
C. Install base on solid backing. Bond tight to wall and floor surfaces.
D. Scribe and fit to door frames and other interruptions.

3.04 INSTALLATION - TILE FLOORING

A. Install in accordance with manufacturer's instructions.
B. Mix tile from container to ensure shade variations are consistent when tile is placed.
C. Spread only enough adhesive to permit installation of materials before initial set.
D. Set flooring in place, press with heavy roller to attain full adhesion.
E. Lay flooring with joints and seams parallel to building lines to produce symmetrical tile pattern.
F. Install tile to basket weave pattern. Allow minimum 1/2 full size tile width at room or area perimeter.
G. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar.
H. Install resilient edge strips at unprotected or exposed edges, and where flooring terminates.
I. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

3.05 CLEANING

A. Clean all work as described in the General Requirements.
B. Remove excess adhesive from floor, base, and wall surfaces without damage.
C. Clean, seal, wax (**4-coats at vinyl composition tile areas**) and buff floors in accordance with manufacturer's instructions.

3.06 PROTECTION OF FINISHED WORK

A. Protect finished Work.
B. Prohibit traffic on floor finish for 48 hours after installation.

END OF SECTION 09650

SECTION 10431

SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Santa Fe Ave Signage
      a. Vinyl window decal Letters for “Salina” & “Center” – reference drawings for sizes, coordinate with owner for font and typeface to match marketing and logos.
      b. Metal 3-D “art” letters – metal frame and box **provided by others**. Contractor to supply electric needs to sign, plexiglass sign front and to coordinate installation with supplier.
      c. Vinyl widow decal for hours and business information (located by front door). Contractor to coordinate all sign information and logo/marketing with owner.
   2. Patio Signage
      a. Pin-mounted letters for “Salina” and “Center” - reference drawings for sizes, coordinate with owner for font and typeface to match marketing and logos.
      b. 3D “art” sign – lit from within. Reference drawings for sizes, coordinate with owner for font and typeface to match marketing and logos.
      c. Vinyl widow decal for hours and business information (located by back door or on back door). Contractor to coordinate location, and all sign information and logo/marketing with owner.
   3. Interior Signage
      a. Pin mounted Logo by front desk. Contractor to coordinate with owners on font, colors, and typeface to match marketing and logos. Ref. drawings for overall sizes.
   4. Allowance for additional interior room signage (offices, restrooms, mechanical rooms, etc.)

1.02 ALLOWANCES

A. Cash Allowance: This contractor shall install and furnish the following signage types, and shall allow the sum of **$10,000.00** for the purchase and delivery of all signage as indicated in this section. Interior signage included in this allowance shall also include:
   1. All Offices and Rooms Signage
   2. Restroom Signage
   3. Required accessible signage

B. Allowance includes purchase and delivery of only. Installation of such signage shall be included in the Contractor’s Bid price (approximately 40 hours), not the allowance. Any differential in the allowance listed and the original invoices from suppliers will be adjusted in the contract price.

1.3 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show fabrication and installation details for signs.
   1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
   2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.

C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors.

D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
   1. Plaque Casting: 6 inches (150 mm) square including border.
   2. Dimensional Characters: Full-size Samples of each type of dimensional character letter, number, and graphic element.
   3. Aluminum: For each form, finish, and color, on 6-inch- (150-mm-) long sections of extrusions and squares of sheet at least 4 by 4 inches (100 by 100 mm).
E. Sign Schedule: Use same designations indicated on Drawings.
F. Maintenance Data: For signs to include in maintenance manuals.
G. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE
A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
B. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
C. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.6 PROJECT CONDITIONS
A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
B. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 COORDINATION
A. Coordinate placement of anchorage devices with templates for installing signs.

1.8 WARRANTY
A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Deterioration of metal and polymer finishes beyond normal weathering.
      b. Deterioration of embedded graphic image colors and sign lamination.
   2. Warranty Period: **Five** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.
B. Rooms, Offices & Restroom - Tactile and Braille Signage: **Per Allowance,** Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks; Braille dots with domed or rounded shape.
   1. Panel Material: **Opaque and translucent acrylic sheet**.
   2. Raised-Copy Thickness: Not less than 1/32 inch (0.8 mm).
   3. Changeable sign inserts.

2.2 ACCESSORIES
A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.3 FABRICATION

A. General: Provide manufacturer's standard signs of configurations indicated.
   1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
   2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
   3. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
   4. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.4 FINISHES, GENERAL

A. Comply with NAAMM's "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: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.5 ACRYLIC SHEET FINISHES

A. Colored Coatings for Acrylic Sheet: For copy **and background** colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for **three** years for application intended.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
B. Verify that items**, including anchor inserts** are sized and located to accommodate signs.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
   1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
   2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches (75 mm) of sign without encountering protruding objects or standing within swing of door.

3.3 CLEANING AND PROTECTION

A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

END OF SECTION 10431