Liscum McCormack VanVoorhis LLP
ARCHITECTURE PLANNING INTERIORS

Rombout Fire District
New Station No.2

1548 NYS Route 52
Fishkill, NY
Project Number: 18142

Notice to All Contractors:
The following amplifications, corrections, etc., to plans and specifications are hereby drawn to your notice and shall be incorporated in contract:

Addendum No. 1 (17 pages total, including cover sheet) **Date: December 21, 2022**

Att: Estimating Department

Sent By: Keith Scofield

Please sign and return that you have received this email:

Received By:_____

Date:_____

This Transmission is (1) PDF - 17 pages. Please contact LMV if all pages are not received.

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ROMBOUT FIRE DISTRICT - NEW FIRE STATION #2

1548 N.Y.S. Route 52, Fishkill, New York

ADDENDUM NO. 1

December 21, 2020

1. The Town of Fishkill allows the hours of construction to take place as follows:
   Monday thru Saturday – 7:00am to 9:00pm, Sundays – 8:00am to 8:00 pm.

2. All trades are responsible for their own excavation, backfill and compaction associated with their portions of work.

3. Contractors may request to provide a substitute item if they provide the proper documentation that shows the product meets or exceeds the originally specified item.

4. Insurance requirements may be found in the specifications under **Instruction to Bidders 000100 pg.3 / #17**.

5. AEHR-1 reels - AEHR-1 - MANUFACTURER COXREELS, MODEL # C-L-350-5012-A
   DUAL PURPOSE HOSE REELS C-SERIES - COMPRESSED AIR/ELECTRIC HOSE REEL, SPRING DRIVEN, 3/8" ID HOSE - 50 FEET LENGTH, 300 PSI. ELECTRIC CORD 12/3 - 50 FEET SINGLE INDUSTRIAL RECEPTACLE - 20 AMP. 1/2" HOSE CONNECTION WITH MOUNTING BRACKETS, HOSE INLET KIT, HOSE STOP KIT AND QUICK DISCONNECT AIR FITTING (AS SELECTED BY FIRE COMPANY). EXACT LOCATION AND MOUNTING HEIGHT AS DIRECTED BY ARCHITECT.

6. This fire station project is public bid with multiple prime contracts, prevailing wage, and a bondable project.

7. Above Ground Domestic Piping Fittings - Specification section 221116 Domestic Piping Part 3.13 Piping Schedule States that aboveground domestic water piping 4” & smaller shall be type “L” copper with solder-joint fittings. **Question:** Would the project engineer allow mechanical press copper fittings? ***Response:*** Mechanical press copper fittings will be acceptable.

8. Fire Suppression/ Sprinkler System - **Question:** Is the plumbing contractor responsible for including the fire suppression scope of work in their base bid? **Response:** The fire suppression system is not part of the plumbing contractor’s work.

9. The Proposed 2” Water Meter on P501 Detail #7 **Question:** Is the Fire Department responsible for supplying the 2” water meter with remote reader? **Response:** Yes, the Fire Department is responsible for supplying the 2" water meter with remote reader.

10. CA Quick Disconnect & TF Truck Fill Found on P601 Equipment Schedule - **Question:** Could you provide a model number or a unit price to carry into the plumbing base bid for each compressed air quick disconnect fitting & the truck fill stations? **Response:** Hose Rack, Wilson & Cousins IE 141 1.5 - color of rack as directed by fire company. Quick disconnect CA fitting: McMaster-Carr. BSPP female threaded pipe coupling size 3/8".

11. Trough Drain Shown on P100 in the Laundry Room & on P500 Detail #8 - **Question:** Which contractor is responsible for furnishing and installing the steel grate & concrete pit? **Response:** The plumbing contractor is responsible for furnishing and installing the steel grate and concrete pit.

12. Plumbing Fixtures on P100 - **Question:** Equipment symbols KS-1 & S-1 are shown on P100 but are not shown on the Plumbing Equipment Schedule found on P601. Will the owner be providing these fixtures?
Response:

- SINK (KS-1)
  JUST, MODEL #DLN-ADA-2133-A-GR
  DROP-IN DOUBLE COMPARTMENT SINK, 18 GAUGE TYPE 304 STAINLESS STEEL, 3-HOLE, ADA ACCESSIBLE, 33" LONG x 21" WIDE, (2) BOWL 16" LONG x 14" WIDE x 6 1/2" DEEP BOWL, FULLY UNDERCOATED. DRAINS CENTERED. INSTALL IN ACCORDANCE WITH ANSI A117.1 AND ADA STANDARDS FOR HANDICAP ACCESSIBILITY.
- FAUCET (KS-1)
  JUST, MODEL #JPO-250
  FAUCET, SINGLE LEVER HANDLE, PULL OUT SPRAY, ANGLE STOPS, CHROME FINISH, CERAMIC DISC CARTRIDGE, ADA COMPLIANT. QUARTER TURN BALL VALVE STOPS, BASKET STRAINERS. AND 17 GAUGE CHROME PLATED BRASS P-TRAP W/CLEANOUT.
- SINK (S-1)
  JUST, MODEL #DLN-ADA-2133-A-GR
  DROP-IN DOUBLE COMPARTMENT SINK, 18 GAUGE TYPE 304 STAINLESS STEEL, 3-HOLE, ADA ACCESSIBLE, 33" LONG x 21" WIDE, (2) BOWL 16" LONG x 14" WIDE x 6 1/2" DEEP BOWL, FULLY UNDERCOATED. DRAINS CENTERED. INSTALL IN ACCORDANCE WITH ANSI A117.1 AND ADA STANDARDS FOR HANDICAP ACCESSIBILITY.
- FAUCET (S-1)
  JUST, MODEL #JPO-250
  FAUCET, SINGLE LEVER HANDLE, PULL OUT SPRAY, ANGLE STOPS, CHROME FINISH, CERAMIC DISC CARTRIDGE, ADA COMPLIANT. QUARTER TURN BALL VALVE STOPS, BASKET STRAINERS. AND 17 GAUGE CHROME PLATED BRASS P-TRAP W/CLEANOUT.

13. Contract Add Alternate No. 5 has been reassigned to the GC. It will be the GC's responsibility to supply and install all 8-inch water line, valves, and fittings from the existing main located in the Dutchess Park Shopping Center and Office Park to the Rombout Fire District property as indicated on Drawing C14 and in the details included in the project plan set. See the revised attached Form for Bidding.

14. The GC is responsible for the installation of the gas main to 5' of the building. The HVAC Contractor is responsible for the gas main from inside the building to 5' of the exterior of the building.

15. The Pump Station is the responsibility of the GC, the oil and water separator is the responsibility of the GC, the Generator is installed by the Electrical contractor (Generator Purchase by Fire Department). Gas service piping to the Pump Station generator is the responsibility of the GC. The Gas meter and regulator is the responsibility of the HVAC Contractor.

16. Attached in this addendum is the Specification Section 08360 Overhead Doors and Section 08410 Metal Framed Storefront.

End of Addendum No. 1

SECTION 00300 – FORM FOR BIDDING

NOTE: To be considered, bids must be submitted using this Bid Form.

DATE: _____

Pursuant to, and in compliance with the invitation to Bid and the Instructions to Bidders relative thereto and all of the contract documents, including any Addenda issued by the Architect, whether received by the undersigned or not, we

_____

hereby propose to furnish all plant, labor, materials, supplies, equipment, and other facilities necessary or proper for, or incidental to the construction of the entire work, all in strict accordance with the provisions of the Drawing and Specifications entitled "Rombout Fire District, New Station #2" all to the satisfaction and approval of the Architect and the Owner in accordance with the terms and conditions of the Contract Documents for the following sum(s):

A. BASE BIDS

GENERAL CONSTRUCTION

1. Proposal for performing all necessary work for or incidental to completion of the **General Construction**

_____ Dollars

($_____) Base Bid

Alternate No. 1: The following amount shall be **deducted** from the GC Contract to not supply and install the entire snow melt system in the concrete slabs as shown in the documents.

_____Dollars (_____ . _____).

Alternate No. 2 : The following amount shall be **added** to the GC Contract to supply and install a Jib Crane onto the Apparatus Bay column (location to be determined)- Model # J-906-FCT-1F1A-W10 Abell-Howe Cranes, 16' span & 200 degree rotation 1,000lb. capacity accessory I beam trolley & chain hoist.

_____Dollars (_____ . _____).

Alternate No. 5: The following amount shall be **added** to the GC Contract to supply and install all 8-inch water line, valves, and fittings from the existing main located in the Dutchess Park Shopping Center and Office Park to the Rombout Fire District property as indicated on Drawing C14 and in the details included in the project plan set.

_____Dollars (_____ . _____).

ELECTRICAL

2. Proposal for performing all necessary work for or incidental to completion of the **Electrical Work**

_____ Dollars

($_____) Base Bid

Alternate No. 1: The following amount shall be **deducted** from the Electrical Contract to not supply the electrical connections to pumps associated with the snow melt system in the concrete slabs as shown in the documents.

_____Dollars (_____ . _____).

Alternate No. 3: The following amount shall be **deducted** from the Electrical Contract to not supply the electrical connections to the four (4) apparatus Bay unit heaters as shown in the documents.

_____Dollars (_____ . _____).

Alternate No. 4: The following amount shall be **deducted** from the HVAC Contract to not make electric connections to the specified additional spare pumps on the Boiler System Schematic on Drawing (M506).

_____Dollars (_____ . _____).

PLUMBING

3. Proposal for performing all necessary work for or incidental to completion of the **Plumbing Work**

   _____ Dollars

   ($_____) Base Bid

HVAC

4. Proposal for performing all necessary work for or incidental to completion of the **HVAC Work**

   _____ Dollars

   ($_____) Base Bid

Alternate No. 1: The following amount shall be **deducted** from the HVAC Contract to not supply and install the entire snow melt system in the concrete slabs as shown in the documents.

_____Dollars (_____ . _____).

Alternate No. 3: The following amount shall be **deducted** from the HVAC Contract to not supply and install the four (4) apparatus Bay unit heaters as shown in the documents.

_____Dollars (_____ . _____).

Alternate No. 4: The following amount shall be **deducted** from the HVAC Contract to not supply

the specified additional spare pumps on the Boiler System Schematic on Drawing (M506).

_____Dollars (_____ . _____).

SIGNAL LIGHT

5. Proposal for performing all necessary work for or incidental to completion of the **SIGNAL LIGHT Work**

_____ Dollars

($_____) Base Bid

B. ALTERNATES

1. In accordance with the above understanding, the undersigned proposes to perform the Work, furnish all materials, and complete the Work in its entirety in the manner and under the conditions required in the Bid Documents and for the ALTERNATES listed IN THE Form for Bidding and as follow:
    a. Deduct Alternate #1- delete the snow melt system
    b. Add Alternate #2- add a Jib Crane
    c. Deduct Alternate #3- delete the Apparatus 4 heaters
    d. Deduct Alternate #4- deduct the spare pumps
    e. Add Alternate #5- add Site water connection

2. Alternates are all Lump Sum prices.

C. CHANGE ORDERS

1. We Propose and agree that the above lump sum base bid(s) shall be adjusted for changes in the contract work not included in unit prices by addition of the following costs:
    A. Profit and overhead allowed for all work performed by the Contractor: 15%; Subcontractor 15%.
    B. Profit and overhead allowed to the Contractor and/or Subcontractor work done by their Subcontractors: 7%.

D. AFFIRMS

1. The undersigned affirms and agrees that this proposal is a firm one which remains in effect and will be irrevocable for a period of forty-five (45) days after opening of Bids. This Bid may be withdrawn at anytime prior to the scheduled time for the opening of Bids or any authorized postponement thereof.

2. The undersigned further agrees, if awarded contract, to furnish to the Owner all submissions bonds required by the Bidding Documents.

E. EXECUTION OF CONTRACT

1. If written notice of acceptance of this bid is mailed, telegraphed, or delivered to the undersigned within forty-five (45) days after the date of the opening of the bids, or any time thereafter should the Proposal not be withdrawn, the undersigned will, within five (5) days of such notice, execute the Form of Agreement with the Owner as indicated in these Documents.

2. The undersigned further agrees, if awarded contract, to furnish to the Owner all submissions and Certificates of Insurance required by the Contract Documents, and to commence the work within _____ (_____) days subsequent to execution of the agreement, and to complete the Work within _____ (_____) days subsequent to commencement.

3. The undersigned agrees to comply with the requirements as to the conditions of employment, wage rates, etc., set forth in these Documents.

F. BID SECURITY

1. Attached hereto is Bid Security in the form of Bid Bond, in the amount of:
   _____DOLLARS

   ($_____).

   This Bid Security is in the amount of not less than five percent (5%) of the proposed Contract Sum.

G. ADDENDA

1. Any addenda issued by the Architect and mailed or delivered to the undersigned prior to the Bid opening date shall become part of the Contract Documents. The Bidder shall enter on this list any addenda issues after this form of Proposal has been received and shall record receipt of and date of each addendum.

   Receipt of the following addend is acknowledged:

   No. 1 _____ Date _____

   No. 2 _____ Date _____

   No. 3 _____ Date _____

   No. 4 _____ Date _____

   No. 5 _____ Date _____

   No. 6 _____ Date _____

   And the provision(s) therefor is (are) included in this Bid.

H. QUESTIONS

1. Email questions in writing to RVanvoorhis@LMVarchitects.com within 7 days of the bid in order to get a timely addendum back to all bidders.

I. ALLOWANCES

1. See drawings and specifications for allowances to be included in base bid.

J. TYPE AND PLACE OF BUSINESS

1. The undersigned hereby represents that is a (underline one) Corporation, Partnership, or a Sole Proprietorship. If a Corporation, the undersigned further represents that it is duly qualified as a Corporation under the laws of New York State and it is authorized to do business in this State.

Name _____

Title _____

Name of Firm _____

Address _____

_____

_____

Telephone _____

Seal:

END OF SECTION 00300

SECTION 08360

OVERHEAD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Overhead sectional doors, manually and electrically operated (Manual operable in power failure).

B. Operating hardware and supports.

C. Electrical controls.

1.02 RELATED REQUIREMENTS

A. Section 05500 - Metal Fabrications: Steel channel opening frame.

B. Section 06100 - Rough Carpentry: Rough wood framing for door opening.

C. Section 07900 - Joint Sealers: Perimeter sealant and backup materials.

D. Section 15065 - Motors for Mechanical Equipment.

1.03 REFERENCE STANDARDS

A. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2002 (Reapproved 2010).

B. DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors; Door & Access Systems Manufacturers' Association, International; 2004.

C. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 SUBMITTALS

A. See Section 01300 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.

C. Operation Data: Include normal operation, troubleshooting, and adjusting.

D. Maintenance Data: Include data for motor and transmission, shaft and gearing, lubrication frequency, spare part sources.

E. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

1.06 WARRANTY

A. See Section 01780 - Closeout Submittals for warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. OverheadDoor Corporation; Product Series 521 Aluminum Sectional Door.

2.02 ALUMINUM DOOR COMPONENTS

A. Aluminum Doors: Stile and rail aluminum with solid and glazed panels; standard lift operating style with track and hardware; complying with DASMA 102, Commercial application.
   1. Performance: Withstand positive and negative wind loads equal to 1.5 times design wind loads specified by local code without damage or permanent set, when tested in accordance with ASTM E330, using 10 second duration of maximum load.
   2. Door Nominal Thickness: 1-3/4 inches (45 mm) thick.
   3. Finish: Anodized, dark bronze.
   4. Glazed Lights: see exterior elevation for number of glazed lights per panel, typical for all rows except single insulation metal panel row at bottom; set in place with resilient glazing channel.
   5. Operation: Electric.

B. Door Panels: Paneled aluminum construction; extruded aluminum stiles and rails; 0.50" thick infill panels of sheet aluminum, insulated; stile and rail joints welded; rabbeted weather joints at meeting rails.

C. Glazing: Type Low E coated, 1/2" thick thermal pane tempered glass.

2.03 DOOR COMPONENTS

A. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel; floating hardened steel bearing rollers, located at top and bottom of each panel, each side.

B. Lift Mechanism: Torsion spring on cross head shaft, with braided galvanized steel lifting cables.
   1. For Manual Operation: Requiring maximum exertion of 25 lbs (110 N) force to open.

C. Sill Weatherstripping: Resilient hollow rubber strip, one piece; fitted to bottom of door panel, full length contact.

D. Jamb Weatherstripping: Roll formed steel section full height of jamb, fitted with resilient weatherstripping, placed in moderate contact with door panels.

E. Head Weatherstripping: EPDM rubber seal, one piece full length.

F. Panel Joint Weatherstripping: Neoprene foam seal, one piece full length.

G. Lock: Inside center mounted, adjustable keeper, spring activated latch bar with feature to retain in locked or retracted position; interior and exterior handle.

2.04 ELECTRICAL OPERATION

A. Electrical Characteristics:

B. Motor: Comply with requirements of Section 15065.

C. Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Enclose terminal lugs in terminal box sized to NFPA 70.

D. Disconnect Switch: Factory mount disconnect switch in control panel.

E. Electric Operator: Side mounted on cross head shaft, adjustable safety friction clutch; brake system actuated by independent voltage solenoid controlled by motor starter; enclosed gear driven limit switch; enclosed magnetic cross line reversing starter; mounting brackets and hardware.

F. Safety Edge: At bottom of door panel, full width; electro-mechanical sensitized type, wired to stop door upon striking object; hollow neoprene covered to provide weatherstrip seal.

G. Control Station: Standard three button (open-close-stop) momentary type control for each electric operator.
   1. 24 volt circuit, verify and coordinate with Electrical Contractor.
   2. Surface mounted.
   3. Locate at inside door jamb.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.

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

3.02 PREPARATION

A. Prepare opening to permit correct installation of door unit to perimeter air and vapor barrier seal.

B. Apply primer to wood frame.

3.03 INSTALLATION

A. Install door unit assembly in accordance with manufacturer's instructions.

B. Anchor assembly to wall construction and building framing without distortion or stress.

C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.

D. Fit and align door assembly including hardware.

E. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

3.04 TOLERANCES

A. Maximum Variation from Plumb: 1/16 inch (1.5 mm).

B. Maximum Variation from Level: 1/16 inch (1.5 mm).

C. Longitudinal or Diagonal Warp: Plus or minus 1/8 inch (3 mm) from 10 ft (3 m) straight edge.

D. Maintain dimensional tolerances and alignment with adjacent work.

3.05 ADJUSTING

A. Adjust door assembly for smooth operation and full contact with weatherstripping.

3.06 CLEANING

A. Clean doors and frames and glazing.

B. Remove temporary labels and visible markings.

3.07 PROTECTION

A. Protect installed products from damage during subsequent construction.

B. Do not permit construction traffic through overhead door openings after adjustment and cleaning.

END OF SECTION

SECTION 08410

METAL-FRAMED STOREFRONTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Aluminum-framed storefront, with vision glass.

B. Infill panels of metal and glass.

C. Aluminum doors and frames.

D. Weatherstripping.

E. Perimeter sealant.

1.02 RELATED REQUIREMENTS

A. Section 05120 - Structural Steel: Steel attachment members.

B. Section 07260 - Weather Barriers: Perimeter air and vapor seal between glazing system and adjacent construction.

C. Section 07900 - Joint Sealers: Perimeter sealant and back-up materials.

D. Section 08710 - Door Hardware: Hardware items other than specified in this section.

E. Section 08800 - Glazing: Glass and glazing accessories.

1.03 REFERENCE STANDARDS

A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; American Architectural Manufacturers Association; 2004.

B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; American Architectural Manufacturers Association; 1998.

C. AAMA 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections; American Architectural Manufacturers Association; 2009.

D. ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2007.

E. ASTM B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2007.

F. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2008.

G. ASTM B 221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2007.

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

I. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference; 2002 (Reapproved 2010).

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with installation of other components that comprise the exterior enclosure.

1.05 SUBMITTALS

A. See Section 01300 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide component dimensions, describe components within assembly,

anchorage and fasteners, glass and infill, door hardware, internal drainage details.

C. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected related Work, expansion and contraction joint location and details, and field welding required.

D. Design Data: Provide framing member structural and physical characteristics, engineering calculations, dimensional limitations. Provide shop drawings signed and sealed by an Engineer licensed in New York State for the imposed loads for the exterior system.

E. Hardware Schedule: Complete itemization of each item of hardware to be provided for each door, cross-referenced to door identification numbers in Contract Documents.

1.06 QUALITY ASSURANCE

A. Manufacturer and Installer Qualifications: Company specializing in manufacturing aluminum glazing systems with minimum three years of documented experience.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Handle products of this section in accordance with AAMA CW-10.

B. Protect finished aluminum surfaces with wrapping. Do not use adhesive papers or sprayed coatings that bond to aluminum when exposed to sunlight or weather.

1.08 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C). Maintain this minimum temperature during and 48 hours after installation.

1.09 WARRANTY

A. See Section 01780 - Closeout Submittals, for additional warranty requirements.

B. Correct defective Work within a five year period after Date of Substantial Completion.

C. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

D. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: See below under description of products.

B. Kawneer Company Inc,; Product Trifab 601T THERMALLY BROKEN STOREFRONT Door and Window framing SYSTEM FOR 1" GLAZING with 2" X 6" Nominal Dimensions, For Exterior applications with a Series 350 Door with Paneline exit device. Provide with high performance sill flashing.

C. Other Acceptable Manufacturers: or equal.
   1. Substitutions: See Section 01600 - Product Requirements.

2.02 STOREFRONT

A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.
   1. Glazing Position: Centered.
   2. Vertical Mullion Dimensions: 2 inches wide by 6 inches deep for exterior applications.
   3. Finish: Permanodic Dark Bronze anodized finish #40.

B. Performance Requirements:
   1. Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E 330, using loads 1.5 times the design wind loads and 10 second duration of maximum load.
      a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials.
   2. Movement: Accommodate movement between storefront and perimeter framing and

deflection of lintel, without damage to components or deterioration of seals.

3. Air Infiltration: Limit air infiltration through assembly to 0.06 cu ft/min/sq ft (0.3 L/s/sq m) of wall area, measured at specified differential pressure across assembly in accordance with ASTM E 283.
4. Condensation Resistance Factor: Measure in accordance with AAMA 1503 with 1 inch (25 mm) insulating glass installed.
5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.
6. Expansion/Contraction: Provide for expansion and contraction within system components caused by cycling temperature range of 170 degrees F (95 degrees C) over a 12 hour period without causing detrimental effect to system components, anchorages, and other building elements.

2.03 COMPONENTS

A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system.
   1. Framing members for interior applications need not be thermally broken.
   2. Structurally Reinforced Members: Extruded aluminum with internal reinforcement of structural steel member.
   3. Color to match as specified on drawings

B. Infill Panels: 1" thick aluminum sheet where indicated.
   1. Finish: Same as storefront.
   2. Exterior Finish: Class I natural anodized.
   3. Interior Finish: Clear anodized.

C. Doors: Glazed aluminum as shown on elevations.
   1. Thickness: 1-3/4 inches (43 mm).
   2. Top Rail: 4 inches (100 mm) wide.
   3. Vertical Stiles: 4-1/2 inches (115 mm) wide.
   4. Bottom Rail: 12 inches wide.
   5. Glazing Stops: Square.
   6. Finish: Same as storefront.

2.04 MATERIALS

A. Extruded Aluminum: ASTM B 221 (ASTM B 221M).

B. Sheet Aluminum: ASTM B 209 (ASTM B209M).

C. Fasteners: Stainless steel.

D. Perimeter Sealant: Type as required and specified in Section 07900.

E. Glass: As specified in Section 08800.
   1. Glass in Exterior Framing and Doors: Type insulated 1" thick low e.
   2. Glass in Interior Framing: Type tempered 1/4" thick.
   3. Glass in Interior Doors: Type tempered 1/4" thick.

F. Glazing Gaskets: Type to suit application to achieve weather, moisture, and air infiltration requirements.

G. Glazing Accessories: As specified in Section 08800.

2.05 FINISHES

A. Permanodic Dark Bronze Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating or AAMA 612 clear anodic coating with electrolytically deposited organic seal; not less than 0.7 mils (0.018 mm) thick, or baked Kynar finish as per Elevations.

2.06 HARDWARE

A. Door Hardware: As specified in Section 08710 coordinate type with hardware section information.

B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.

C. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors.

D. Threshold: Extruded aluminum, one piece per door opening, ribbed surface; provide on all doors.

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. Coat concealed metal surfaces that will be in contact with cementitious materials or dissimilar metals with bituminous paint.

E. Arrange fasteners and attachments to conceal from view.

F. Reinforce components internally for door hardware.

G. Reinforce framing members for imposed loads.

H. Finishing: Apply factory finish to all surfaces that will be exposed in completed assemblies.
   1. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

PART 3 EXECUTION

3.01 EXAMINATION

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

B. Verify that 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.

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. Turn up ends and edges; seal to adjacent work to form water tight dam.

G. Where fasteners penetrate sill flashings, make watertight by seating and sealing fastener heads to sill flashing.

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

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

J. Install glass and infill panels in accordance with Section 08800, using glazing method required to achieve performance criteria.

K. Install perimeter sealant in accordance with Section 07900.

L. Touch-up minor damage to factory applied finish; replace components that cannot be satisfactorily repaired.

3.03 TOLERANCES

A. Maximum Variation from Plumb: 0.06 inches every 3 ft (1.5 mm/m) non-cumulative or 1/16 inches per 10 ft (1.5 mm/3 m), whichever is less.

B. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch (0.8 mm).

3.04 ADJUSTING

A. Adjust operating hardware and sash for smooth operation.

3.05 CLEANING

A. Remove protective material from pre-finished 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

A. Protect installed products from damage during subsequent construction.

END OF SECTION