ARCHITECTURE + PLANNING + DESIGN

ADDENDUM NO. 2

Owner: **Snohomish County Fire District # 21**

Date: **4/4/22**

Project: **1744 – New Fire Station No. 50**

NOTICE TO BIDDERS

To the Prime Bidders and all "Plan Holders of Record":
You are hereby notified of the following additions, deletions, modifications or clarifications to the drawings and specifications for the above referenced project. This Addendum forms a part of the Contract Documents and shall be bound inside the front cover of the Project Manual.

BE SURE TO ACKNOWLEDGE THIS ADDENDUM ON YOUR BID / PROPOSAL FORM

The following information is to be issued to all plan holders of record. However, prior to the bid opening it is the specific responsibility of each general and separate contractor to notify his subcontractors, suppliers, etc., and to verify with all items covered by the Contract Documents, including addenda, as relating to their bids.

MITIGATION DRAWINGS

1. Refer to Sheet MIT-2 Final Mitigation Plan
    a. The only permanent fencing included in the scope of work is the CAPA split rail fence detailed on sheet MIT-2. Refer also to MIT-1, C1.0, C4.1, C5.0, C6.0 and A1.0 for delineation of fencing.

ARCHITECTURAL SPECIFICATION

2. Refer to Specification Section 05 5000 Metal Fabrications
    a. Add: 1.2.A.
        13 Removable Metal Bollards
3. Refer to Specification Section 08 3613 Sectional Overhead Doors
    a. Replace original Specification Section 08 3613 Overhead Doors with the attached revised Specification Section 08 3613 Overhead Doors
3. Refer to Specification Section 10 9000 Miscellaneous Specialties
    a. Omit: 1.2.A.7 Location & Televisions Mounts (OFOI).
    b. Wall mount monitors and brackets are OFCI as noted on interior elevations 2/A7.1, 2, 9 &14/A7.2, 15/A7.3, 8 & 10/A7.5 and 1/A7.7. Ceiling mount brackets are CFCI. Refer to Sheet E5.1 – Flag Note 12.

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MECHANICAL EQUIPMENT APPROVALS:

The following equipment is approved for bidding, subject to all requirements of the Plans and Specifications. Equipment is to provide the same performance, including acoustical performance, and have the same dimensions and weights as the equipment used for the basis of design.

EQUIPMENT APPROVALS – Mechanical		
SECTION	**ITEM**	**MANUFACTURER**
32 3700-2.9	Louvers	American Warming LE-23

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following types of overhead doors:

1. Steel Sectional Overhead Door
2. Sectional door tracks configured for the following types of lifts:

    a. Standard Lift

B. Related Sections:

1. Division 01 Section "Submittal Procedures" for submittal requirements.
2. Division 05 Section “Metal Fabrications” for metal jambs
3. Division 06 Section “Rough Carpentry” for blocking at bracing and supports
4. Division 07 Section “Joint Sealants” for perimeter sealants and back-up material
5. Division 26 Sections for electrical service and connections for powered operators and accessories.
6. Division 23 Sections for coordination with radiant heat.

1.3 DEFINITIONS

A. Operation Cycle: One cycle of a door is complete when it is moved from the closed position to the fully open position and returned to the closed position.

1.4 PERFORMANCE REQUIREMENTS

A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.

B. Structural Performance: Provide sectional overhead doors capable of withstanding the effects of gravity loads and the following loads and stresses without evidencing permanent deformation of door components:

1. Wind Loads: As indicated on drawings
2. Seismic Loads: As indicated on drawings

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00

B. Product Data: For each type and size of sectional overhead door and accessory. Include the following:

1. Details of construction relative to materials

2. Dimensions of individual components.
3. Profiles.
4. Finishes.
5. Performance values for each door type
6. Structural performance calculations

C. Provide roughing-in-diagram, operating instructions and maintenance information. Include the following:

1. Setting drawings, templates and installation instructions for built-in or embedded anchor devices.
2. Summary of forces and loads on walls and jambs.
3. Blocking requirements for track, springs and etc.
4. Push button locations heights and associated conduit requirements.
5. Motors: Show nameplate data and ratings; characteristics; mounting arrangements; size and location of winding treatment lugs, conduit entry and grounding lug; and coatings.

D. Shop Drawings: Include detailed plans, elevations, details, details of framing members, required clearances, anchors and accessories. Include relationship with adjacent materials. Include specified components and installation not dimensioned or detailed in manufacturer's data sheets.

1. Wiring Diagrams: Detail wiring for power, signal and control systems. Differentiate between manufacturer-installed and field-installed wiring and between components provided by door manufacturer and those provided by others.
2. Plans specific to this project, indicating mounting and support details coordinated with mechanical, electrical, fire protection and plumbing equipment.
3. Blocking requirements for track, springs, etc.
4. Push button location, heights and associated conduit requirements.
5. Include details and attachments including identified supports needed by others if not provided.

E. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for work. Where finishes involve normal color and texture variations, include sample sets showing the full range of variations expected.

1. Sectional door panel: 6 inches (150 mm) square min.

F. Manufacturer's Certificates: Signed by manufacturers certifying that they comply with requirements specified in "Quality Assurance" article. On request, submit evidence of manufacturing experience.

G. Provide installer qualification certificates

H. Maintenance Data: To include in maintenance manuals.

I. Warranties: Sample of warranties specified in this section to be included in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

1. Provide installer qualification certificates and demonstrate installer has experience in the installation of overhead doors for fire stations. Include list of a minimum of 3 northwest area fire stations with contact information, which have a successful track record of installation from installer using manufactures product.

B. Source Limitations: Obtain sectional doors from single source from single manufacturer.

1. Obtain operators and controls from sectional door manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of sectional overhead doors and accessories and are based on the specific system indicated. Other manufacturers' systems with equal performance and dimensional characteristics may be considered. Refer to Division 1 Section "Product Requirements."

D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100.

E. Review and Acceptance: Overhead Door Submittals and Installation will be reviewed for compliance with the contract documents by an approved manufacturer’s representative. The Contractor shall be required to correct defects and non-confirming work identified by the manufacturer’s representative. Acceptance of the completed Overhead Door installation and operation by the Manufacturer will be a requirement for Final Completion of the Work

1.7 DELIVERY, STORAGE AND HANDLING

A. Store Products in manufacturer’s unopened labeled packaging until ready for installation.

B. Protect materials from exposure to moisture until ready for installation

C. Store materials in a dry weather tight location.

PART 2 - PRODUCTS

2.1 STEEL SECTIONAL DOOR SECTIONS

A. Basis of Design Manufacturer: Overhead Door Corporation (Bellingham) – Thermacore 596 insulated sectional overhead steel doors. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include the following:

1. Wayne Dalton – Thermospan 200-20
2. Or approved equal.

B. Panel Thickness: 2-inches

C. Exterior Surface: Flush smooth.

D. Exterior Steel: 20 gauge, hot-dipped galvanized.

E. Panel Thickness: 2 inches (51 mm).

F. Thermal Values: R-value of 17.50; U-value of 0.057.

G. Air Infiltration: 0.08 cfm at 15 mph.

H. Sound transmission class 26 when tested in accordance with ASTM E 413.

I. Wind Load Design: ANSI/ DASMA 102 standards as required by code.

J. Insulation: CFC-free and HCFC-free polyurethane, fully encapsulated.

1. Insulated sections tested in accordance with ASTM E 84 and achieve a flame spread Index of 75 or less, and a Smoke Developed Index of 450 or less.
2. Insulation material tested in accordance with ASTM D 1929 and achieve a minimum Flash Ignition temperature of 698 degrees F, and a minimum Self Ignition temperature of 950 degrees F.

K. Performance Values:

1. Thermal Conductance: Provide steel overhead doors with less than 50% glazing areas having an average Unit U-factor of not more than **0.34 Btu/sq. ft. x h x deg F** maximum when tested according to AAMA 1503.
2. Solar Heat Gain Coefficient (SHGC) at steel overhead doors with less than 50% Glazing Area: Average Unit SHGC of not more than **0.40** maximum**.**

L. Construct door sections from galvanized, structural-quality carbon-steel sheets complying with ASTM A 653 (ASTM A 653M), commercial quality, with a minimum yield strength of 33,000 psi (225 MPa) and a minimum G40 (Z120) zinc coating.

1. Steel Sheet Thickness:
    a. Exterior 20 gauge galvanized
2. Exterior Section Face: Flush smooth

M. Fabricate door panels from a single sheet to provide sections not more than 24 inches (600 mm) high and nominally 2 inches (50 mm) deep. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.

1. Provide door sections with continuous thermal-break construction, separating faces of door.

N. Enclose open section with not less than 0.064-inch (1.6-mm) galvanized steel channel end stiles welded in place. Provide not less than 0.064-inch (1.6-mm) galvanized intermediate stiles, cut to door section profile, spaced at not more than 48 inches (1200 mm) o.c., and welded in place.

O. Reinforce bottom section with a continuous channel or angle complying with bottom section profile and allowing installation of astragal.

P. Reinforce sections with continuous horizontal reinforcement, as required to stiffen door and for wind loading. Provide galvanized steel bars, struts, trusses or strip steel, formed to depth and bolted or welded in place. Coordinate exact locations and requirements with architect prior to installation.

1. Do **not** install reinforcing across vision panels.
2. Provide reinforcement for hardware attachment.

Q. Foamed-in-Place Thermal Insulation: Insulate interior of steel sections with door manufacturer's standard CFC-free and HCFC-free polyurethane insulation, foamed in place to completely fill interior of section and pressure bonded to face sheets to prevent delamination under wind load, and with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively,

according to ASTM E 84. Enclose insulation completely within steel sections that incorporate the following interior facing material, with no exposed insulation:

1. Interior Facing Material: Zinc-coated (galvanized), cold-rolled, commercial steel (CS) sheet, complying with ASTM A 653/A 653M, with indicated thickness.

R. Fabricate sections so finished door assembly is rigid and aligned, with tight hairline joints, and free of warp, twist and deformation.

S. Track Type: Standard Lift.

T. Finish galvanized steel door sections as follows:

1. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

2. Surface Preparation: Clean galvanized surfaces with non-petroleum solvent so surfaces are free of oil and surface contaminants.

3. Pretreat zinc-coated steel, after cleaning, with a conversion coating of type suited to organic coating applied over it.

4. Apply manufacturer's standard primer to both door faces after forming, according to coating manufacturer's written instructions for application and minimum dry film thickness.

5. Apply manufacturer's standard primer and baked on polyester coats to interior and exterior door faces after forming, according to coating manufacturer's written instructions for application, thermosetting and minimum dry film thickness.

U. Finish and Color:

1. Two coat baked-on polyester:

a. Interior color: White
b. Exterior color: Custom color as selected by Architect from Manufacturers full range

V. Windows: Manufacturer's standard window units of shape and size and in locations indicated on Drawings. Set glazing in vinyl, rubber, or neoprene glazing channel. Provide removable stops of same material as door-section frames. Provide the following glazing:

W. Glazing: Solar Control Low-E Tinted Insulating Glass Units (1/2” overall unit thickness).

1. Basis of Design Product: PPG Industries Solarban 70 Low E on clear insulated glass or a comparable product subject to compliance with requirements.
2. Overall Unit Thickness and Thickness of Each Lite: 1/2” min.
3. Interspace Content: 95% Argon and 5%air.
4. Outdoor Lite: Class 2 (tinted) float glass.

a. Tint Color: As selected by Architect from samples of manufacture’s full line of colors. Where indicated.
b. Kind FT (fully tempered).

5. Indoor Lite: Class 1 clear float glass.

a. Kind FT (fully tempered).

6. Visible Light Transmittance (at tinted): 63 percent minimum.
7. Winter Nighttime U-Factor: 0.24 maximum.
8. Summer Daytime U-Factor: 0.21 maximum.

9. Solar Heat Gain Coefficient: 0.26 maximum.

2.2 TRACKS, SUPPORTS, AND ACCESSORIES

A. Tracks: Provide manufacturer's 3-inch reverse angle, galvanized-steel system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances shown on Drawings, and complying with ASTM A 653/A 653M for minimum G60 (Z180) zinc coating. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed. Weld or Bolt to track supports.

B. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members, complying with ASTM A 36/A 36M and ASTM A 123/A 123M. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors. Use of center support on track back-hang is required.

C. Support and attach tracks to opening jambs with continuous angle welded to tracks and attached to wall. Support horizontal (ceiling) tracks with continuous angle welded to track and supported by laterally braced attachments to overhead structural members at curve and end of tracks. Stability and location of support is responsibility of the door hanger. The contractor will coordinate all required backing and blocking during framing.

D. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door.

1. Color as selected by Architect from manufacturer's full range of colors.
2. Provide motor-operated doors with combination bottom, EPDM bulb type weatherseal and sensor edge.
3. In addition, provide continuous flexible seals at door jambs and head for a weathertight installation. Provide color as selected by architect.

2.3 HARDWARE

A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.

B. Hinges: Heavy-duty, galvanized-steel hinges of not less than 0.079-inch- (2.01-mm-) nominal coated thickness at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails with bolts and lock nuts or lock washers and nuts. Use rivets or self-tapping fasteners where access to nuts is not possible. Provide double-end hinges where required, for doors over 16 feet (4.88 m) wide unless otherwise recommended by door manufacturer.

C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Extend roller shaft through both hinges where double hinges are required. Provide 3-inch- (76-mm-) diameter roller tires with 3-inch- (76-mm-) wide track.

2.4 COUNTERBALANCE MECHANISM

A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs fabricated from oil-tempered-steel wire complying with ASTM A 229/A 229M, Class II, mounted on a cross-header tube or steel shaft. Connect to door with galvanized aircraft-type lift cables with cable safety factor of at least 5 to 1. Provide springs calibrated for a minimum of 100,000 cycles.

B. Cable Drums: Cast-aluminum or gray-iron casting cable drums grooved to receive cable. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of shaft. Provide one additional midpoint bracket for shafts up to 16 feet (4.87 m) long and two additional brackets at one-third points to support shafts more than 16 feet (4.87 m) long unless closer spacing is recommended by door manufacturer.

C. Cable Safety Device: Include a spring-loaded, steel or bronze cam mounted to bottom door roller assembly on each side and designed to automatically stop door if either cable breaks.

D. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level shaft and prevent sag.

E. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.5 ELECTRIC DOOR OPERATORS

A. General: Provide electric door operator assemblywith 1-hp electric motor and factory-prewired motor controls, starter, gear-reduction unit, solenoid-operated brake, clutch, remote-control stations, and specified control devices, integral gearing for locking door, and accessories required for proper operation. Verify capacity recommend by manufacturer prior to installation

B. Provide control equipment complying with NEMA ICS 1, NEMA ICS 2, and NEMA ICS 6, with NFPA 70, Class 2 control circuit, maximum 24-V, AC or DC.

C. Emergency Operation Disconnect Device: Equip operator with hand-operated disconnect mechanism for automatically engaging manual operator and releasing brake for emergency manual operation while disconnecting motor without affecting timing of limit switch. Mount mechanism so it is accessible from floor level. Include interlock device to automatically prevent motor from operating when emergency operator is engaged.

D. Emergency Manual Operation: Equip each electrically powered door with capability for emergency manual operation. Design manual mechanism so required force for door operation does not exceed 25 lbf (111 N).

E. Design operator so motor may be removed without disturbing limit-switch adjustment and without affecting emergency auxiliary operator.

A. Electric Door Operator:

1. Usage Classification: **Standard duty, up to 25 cycles per hour and up to 90 cycles per day**.
   a. Basis of Design: RSX Trolley 1 HP, Single Phase. Provide operations and control accessories as required for operation requirements specified.
2. Operator Type: **Trolley with Pusher Spring**

3. Safety: Listed according to UL 325 by a qualified testing agency for commercial or industrial use**; moving parts of operator enclosed or guarded if exposed and mounted at 8 feet (2.4 m) or lower**.
4. Motor Exposure: **Interior, clean, and dry**.
5. Emergency Manual Operation: **Chain** Hoist type.

B. Coordinate wiring requirements and current characteristics of motors with building electrical system. Provide all power and control wiring from point of connection.

C. Provide additional control to enable automatic door actuator to close door 4 minutes after being fully opened (Verify closing time with owner and adjust as needed)

D. Recessed remote Control Station: Provide momentary-contract, recessed (flush mount) NEMA 1 three-phase control station with push button controls labeled “Open”, “Close” “Stop” and control wiring at each door and where shown on electrical drawings. LCE-3, MMTC, INC.

E. Electric Motors: High-starting torque, reversible, continuous-duty, Class A insulated, electric motors complying with NEMA MG 1, with overload protection, sized to start, accelerate, and operate door in either direction from any position, at not less than 2/3 fps (0.2 m/s) and not more than 1 fps (0.3 m/s), without exceeding nameplate ratings or service factor.

1. Type: Single phase
2. Service Factor: Comply with NEMA MG 1, unless otherwise indicated.
3. Coordinate wiring requirements and electrical characteristics of motors with building electrical system.
4. Provide open drip proof-type motor, and controller with NEMA ICS 6, Type 1 enclosure.
5. Provide totally enclosed, nonventilated or fan-cooled motor, fitted with plugged drain, and controller with NEMA ICS 6, Type 4 enclosure

F. Obstruction Detection Device: Provide each motorized door with indicated external automatic safety sensor capable of protecting full width of door opening. Activation of sensor immediately stops and reverses downward door travel.

1. Photoelectric Sensor (monitored): Manufacturer's heavy duty commercial photo eye system designed to detect an obstruction in door opening without contact between door and obstruction. Provide (2-sets at each door)
    a. Mount one set of photo sensors at 34-inches above finish floor and one set (monitored) at 6-inches above finish floor with adjustable brackets for alignment
    b. NEMA 4X protection class enclosure
    c. Infrared transmitter and receiver sensors.
2. Pressure-Sensor Edge (unmonitored): Provide each motorized door with an automatic safety sensor edge, located within astragal or weather stripping mounted to bottom bar. Contact with sensor immediately stops and reverses downward door travel.
    a. Connect to control circuit using take-up reel cable.
    b. Pneumatic actuated automatic bottom bar.

G. Provide auxiliary open and auxiliary closed limit switches wired to terminals.

H. Limit Switches: Adjustable switches interlocked with motor controls and set to automatically stop door at fully opened and fully closed positions.

I. Radio Control: Provide Radio control system consisting of the following:

1. Three-channel, universal coaxial receiver to open, close, and stop door; two per operator.
2. Multifunction remote control.
3. Remote antenna mounting kit. Coordinate location with architect prior to installation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for substrate construction including all required blocking and other conditions affecting performance of the Work.

B. Verify locations and characteristics of electrical connections.

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

3.2 INSTALLATION

A. General: Install door, track, and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports according to approved Shop Drawings, manufacturer's written instructions, and as specified. Contractor to verify height of door operator with the Owner prior to installation.

1. Door installer shall be responsible for the complete system for smooth operation of the doors. Due to the standard frame spacing, additional support framing may be required. It is the responsibility of the door installer to verify and provide adequate support for the doors including additional support framing coordinated between the framing contractor, door manufacture and all other trades including but not limited to electrical lighting, mechanical venting and heating, and building insulation systems.

B. Fasten vertical track assembly to framing, spaced not less than 24 inches (600 mm) apart. Hang horizontal track from structural overhead framing with angle or channel hangers fastened to framing by welding or bolting or both. Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment.

C. Locate remote antenna on exterior of building with mounting kit and weather head, to be tested and approved by Owner prior to final acceptance.

D. Power-Operated Doors: Install automatic overhead doors openers in accordance with UL 325.

1. Door manufacturer shall supply controls only.
2. Electrical contractor shall install controls and furnish and install conduits and wiring for jobsite power and control wiring. All control wiring shall be brought to the point of connection by the electrical contractor.
3. Connections to the control devices shall be by the door installer.

3.3 STARTUP SERVICES

A. Engage a factory-authorized service representative to perform startup services.

1. Complete installation and startup checks according to manufacturer's written instructions.

2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

B. Coordinated with the Overhead Door Service Company for final acceptance of the completed Overhead Door installation and operation.

3.4 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free from warp, twist, or distortion and with weathertight fit around entire perimeter.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional overhead doors. Refer to Division 1 Section "Contract Closeout" and “Operation and Maintenance”.

B. Test transmission frequency of apparatus at substantial completion with owner to verify doors will not activate without a deliberate action.

END OF SECTION