GS# 358-054, Rotunda Renovations
(Elevator and Fire Alarm Replacement)

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ADDENDUM NO. 2:

Date of Addendum:
January 02, 2020

This addendum forms a part of the Request for Qualification Documents and modifies the original Drawings and Project Manual dated 19 November 2019.

PROJECT MANUAL

Item No. 1	**Division 14, Section 142705, Passenger Elevator Renovation**
Add:	Add Specification Section 142705, Passenger Elevator Renovation, included with this Addendum as Attachment 1.

END OF ADDENDUM NO. 2

SECTION 142705
PASSENGER ELEVATOR RENOVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Motor replacement, controls replacement, equipment upgrades and ADA related upgrades to the self-service, passenger elevator in the Mississippi State Capitol.

1.02 EXISTING SYSTEM DESCRIPTION

A. Characteristics:
   1. Installation date: 1960
   2. Type: Geared Traction.
   3. Number of Stops: Four (4)
   4. Rated Capacity: 2,500 lbs
   5. Speed: 200 fpm
   6. Motion Control: Generator
   7. Group control: Simplex
   8. Selector: Vane/ Tab
   9. Door type: Center Opening
   10. Door opening size: 2'-8" x 6'-8"
   11. Door finish: Floors 1-3: decorative cast iron surround w/ glass transom and brass frame door panels w/ glass lites. Floor 4: Solid sheet steel with baked enamel paint finish.
   12. Door protection: Protector edge
   13. Door operator: G.A.L. Manufacturing
   14. Manufacturer: Westinghouse

1.03 RELATED REQUIREMENTS

A. Section 096500 - Resilient Flooring: Floor finish in cab.

1.04 REFERENCE STANDARDS

A. ANSI A117.1, Buildings and Facilities, Providing Accessibility and Useability for Physically Handicapped People.

B. Americans with Disabilities Act Accessibility Guidelines (ADA).

C. ASME A17.1 - Safety Code for Elevators and Escalators.

D. ASME A17.5 - Elevator and Escalator Electrical Equipment.

E. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2003.

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. CSA B44 - Safety Code for Elevators and Escalators.

I. NEMA LD 3 - High-Pressure Decorative Laminates; National Electrical Manufacturers Association; 2005.

J. NFPA 70 - National Electrical Code; National Fire Protection Association; 2008.

K. PS 1 - Structural Plywood; 2007.

L. Applicable building codes and elevator codes at the project site.

1.05 SUBMITTALS

A. See Section 01340 - Shop Drawings, Product Data and Submittals (BoB), for submittal procedures.

B. Product Data: Submit manufacturer's product data for each system proposed for use, including but not limited to the following:
   1. Motor
   2. Signal and operating fixture approval drawings.
   3. Infrared door protection system data
   4. Cab interiors
   5. Cab lighting
   6. Controls
   7. Equipment

C. Shop Drawings:
   1. Show typical details of assembly, erection and anchorage.
   2. Cab elevations
   3. Entrance surround elevations
   4. Include wiring diagrams for power, control, and signal systems.

D. Selection Samples: For each finished product specified provide, two (2) complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified submit three samples, minimum size 6 x 6 inches (150 x 150 mm), representing actual product, color, and patterns.

1.06 QUALITY ASSURANCE

A. Manufacturer: Refer to Request for Contractor Qualifications for minimum requirements. Company specializing in manufacturing the type of products specified in this section, with minimum 20 years of documented experience.

B. Installer: Elevator package shall be designed, engineered and manufactured by the installer.

C. Regulatory Requirements: Elevator system design and installation shall comply with the latest adopted version of ASME A17.1 and Americans with Disabilities Act Accessibility Guidelines (ADA).

D. Permits and Inspections: Provide licenses and permits and perform required inspections and tests.

1.07 DELIVERY, STORAGE AND HANDLING

A. A secure storage area shall be provided on the job site for the placement of new material, removed material and required tools. The designated area shall be in close proximity of the work location and shall not require materials or tools to be relocated during upgrade work.

B. Store products in manufacturer's unopened packaging until ready for installation.

C. Store components off the ground in a dry covered area, protected from adverse weather conditions.

1.08 WARRANTY

A. See Section 01700 - Contract Closeout, for additional warranty requirements.

B. Warranty: Manufacturer shall warrant the materials and workmanship for one year following the date of acceptance by the Owner.

C. Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

PART 2 PRODUCTS

2.01 BASIS OF DESIGN

A. Unless noted otherwise, elevator equipment and components by thyssenkrupp serve as the Basis of Design for this specification.

2.02 ACCEPTABLE MANUFACTURER

A. thyssenkrupp, www.thyssenkruppelevator.com.

B. Otis Elevator Company, www.otis.com.

C. Shindler Elevator Corporation, www.schindler.com.

D. Kone Corporation, www.kone.com.

2.03 MINIMAL ACCEPTABLE STANDARDS

A. All car and hall fixtures shall be designed and manufactured by the installer. Third party fixture suppliers shall not be acceptable.

2.04 EQUIPMENT: MACHINE ROOM COMPONENTS

A. Machine limiting factors: Space available for the elevator machine is limited. The machine specified below was selected because its size and configuration allows it to be installed in the current machine location and utilize the current sheave and rope configuration with minimal alterations to the existing building fabric.

B. Machine: Provide a new elevator machine manufactured by Nidec/ Imperial Electric.

1. Model: Frame 478LS with 20" sheave
2. Rated torque: 833 ft-lb
3. Acceleration torque: 833 ft-lb
4. Total torque: 1666 ft-lb
5. Horsepower: 12.1
6. Rpm: 76
7. Rated Hz.: 12.7
8. Rated motor volts: 362
9. Rated Amps: 17.5
10. Peak amps: 35
11. Peak drive volts: 402
12. Btu/HR Elevator Duty: 1029
13. Cable size: 0.5 inch

C. Controller: Provide a new TAC-32 Microprocessor with a new solid state direct motor drive

D. AC Drive: Provide new Digital AC Drive

E. Sheave Brakes: Provide new sheave brakes

F. Governor: Provide new governor

G. Hoist rope: Provide a new hoist rope

2.04 HOISTWAY EQUIPMENT: MISCELLANEOUS

A. Wiring and travelling cable: Provide new

B. Guide rails: Existing to remain

C. Buffers: Existing to remain

D. Pit stop switches: Provide new

E. Loadweigher: Provide new

F. Rope gripper: Provide new

G. Car top inspection station: Provide new

H. Car top railings: Provide new

I. Leveling system: Provide new

J. Counterweights: Existing to remain

K. Counterweight roller guides: Provide new

L. Pit ladder: Provide new

2.05 HOISTWAY EQUIPMENT: ENTRANCES AND DOORS

A. Door operator: Provide new LD-16 state of the art operator

B. Door interlocks: Provide new

C. Door closers: Provide new

D. Door Tracks: Existing to remain

E. Door hangers: Existing to remain

F. Landing sills: Existing to remain

G. Hoistway doors: Existing to remain

H. Entrance surrounds: Existing to remain (see Drawings)

I. Door unlocking devices: Provide new

2.06 DOOR PROTECTION

A. Door Protection System

1. Elevator doors shall be provided with a new reopening device that shall stop and reopen the car door(s) and hoistway door(s) automatically should the door(s) become obstructed by an object or person.
2. Primary door protection shall consist of infrared beams projecting across the car door opening. Under normal operation the system shall detect as a blockage an opaque object that is equal to or greater than 1.3” (33 mm) in diameter when inserted between the car doors at vertical positions from between 15” (381 mm) and 71” (1800 mm) above the sill. Under degraded conditions (one or more blocked or failed beams), the primary protection shall detect opaque objects that are equal to or greater than 4” (100 mm) in diameter for the same vertical coverage. If the system performance is degraded to the point that a 4” object cannot be detected, the system shall maintain the doors open or permit closing under nudging force conditions.
3. Secondary, triangular door protection shall extend into the door landing zone to protect passengers approaching or exiting the car. Protection shall consist of 12 infrared beams extending into the entryway at a nominal 30º angle. If the beams strike an object in the entryway, light reflects off the object into photo-diode receivers mounted on the car door, prompting a reversal signal to open the doors. The maximum projection of the triangular protection zone is one-third of the door opening width (or door and strike plate for single-slide doors).
4. Door protection shall have an anti-nuisance feature which will ignore detection in the secondary zone after continual detection occurs for a significant time period without corresponding detection in the primary protection zone (i.e. a person/object is in the entryway but does not enter). Normal secondary protection shall be re-enabled whenever a detection occurs in the primary zone.
5. The reaction time of the door detector sub-system shall not exceed 60 milliseconds when both primary and secondary protection capabilities are active; nor 40 milliseconds when the secondary protection is disabled.

B. Provide evacuation deterrent devices on all landings.

C. Provide hoistway unlocking devices at all landings.

D. Weatherstripping: Weatherstrip hoistway doors and frames to minimize audible noise caused by air movement, imposed by car movement in the hoistway, and air pressure differential between hoistway and landing floors.

2.07 EQUIPMENT: ELEVATOR CAB

A. Car sling: Existing to remain

B. Car shell: Existing to remain

C. Car interior: Existing brass wall panels, brass framed and painted steel operable grills, brass ceiling, brass trim, brass rail and light fixtures to remain.

D. Car door contact: Provide new

E. Car roller guides: Provide new slide inserts

F. Car exhaust fan: Provide new

G. Car convenience outlet: Provide new

H. Car door operator: Provide new

I. Car hangers: Provide new

J. Car door track: Provide new

2.08 EQUIPMENT: SIGNAL DEVICES AND FIXTURES

A. Car-Operating Panel: Provide vandal resistant fixtures with brass buttons. Install new applied panels which contains all push buttons, key switches, and message indicators for elevator operation. Raised markings and Braille markings shall be provided for each push-button. One (1) main panel shall be provided per passenger car. New car panel faceplate to be designed to cover all holes in front return created from removal of existing devices and shall be one (1) continuous piece of brass matching the finish of the existing.

B. Car operating panel to contain an emergency light fixture able to provide emergency lighting in the elevator cab due to a loss of normal building 110V lighting feed.

C. Car Fixture Finish: satin brass
   1. Applied car operating panel shall contain a bank of round micro-motion halo illuminated buttons marked to correspond to the landings served, an emergency call button, door open and door close buttons, and switches for lights, inspection and the exhaust fan. The emergency call button shall be connected to a bell that serves as an emergency signal. All buttons to have both raised and Braille markings.
   2. All push button lighting to utilize LED bulbs.
   3. Car operating panels to be provided with new metal boxes that utilize hinges to allow for proper maintenance.
   4. Engrave and backfill with paint the following items into the main car operating panel: car #, capacity, NO SMOKING.

D. Car Position Indicator: A digital car position indicator shall be integral to each car operating panel. The existing multi-light device shall be removed from the car transom and replaced with a new satin stainless steel cover plate, to match the stainless steel of the new car operating panels.

E. In Car Lantern: One (1) new in car lantern shall be installed in the face of the front return panel of each elevator. The in car lantern shall be illuminated via LED's and shall indicate the direction of travel of the elevator at each respective landing. An electronic chime shall be furnished that shall chime once for up and twice for down to indicate the elevator direction of travel. Visual elements to be at least 2 ½" in the smallest dimension. Faceplate to be satin stainless steel.

F. Telephone: An integral ADA compliant telephone shall be furnished in the new main car operating panel. Phone line to be provided in the elevator machine room by others.

G. Hall Button Fixtures: See Drawings for design and details. Provide new, custom brass box designed to contain push buttons and key switches for elevator operation. Box shall be mounted to existing door surround frame Refurbish existing cast bronze plate to accommodate push buttons. The push button devices are to be brass and edge illuminated by utilizing LEDs.

Faceplate finishes to be cast brass or bronze. One (1) riser shall be installed per group. "In Case of Fire" signage shall be engraved in the new hall button faceplates.

H. Multi-Light Position Indicator at First Floor: Retain and reuse.

I. Landing Passing Signal: A chime bell shall sound in the car to tell a passenger that the car is either stopping at or passing a floor served by the elevator.

J. Hoistway access switch: Provide new

PART 3 EXECUTION

3.01 PREPARATION

A. Take field dimensions and examine conditions of substrates, supports, and other conditions under which this work is to be performed. Do not proceed with work until unsatisfactory conditions are corrected.

B. Prior to ordering and fabricating products and materials required by this Section, notify the General Contractor and the Architect of unsatisfactory conditions or discrepancies that interfere with proper installation or proper performance of the work of the Section.

3.02 INSTALLATION

A. The elevator supplier shall provide and properly manage all installation of elevator components.

B. All material deliveries to be scheduled in advance by the General Contractor with the Owner's Representative.

3.03 FIELD QUALITY CONTROL

A. Perform tests required by regulatory agencies.

B. Furnish test and approval certificates issued by authorities having jurisdiction.

C. Perform tests as required by ASME A17.2.

D. Provide the Owner and the Architect with two weeks written notice of date and time of tests.

E. Elevator installer shall determine that control systems, operating devices and elevators are functioning properly.

3.04 ADJUSTING

A. Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort.

B. Adjust automatic floor leveling feature at each floor to achieve 1/4 inch (6 mm) from flush.

3.05 CLEANING AND REPAIRS

A. Remove protective coverings from finished surfaces.

B. Clean surfaces and components ready for inspection.

C. Touch-up, repair or replace damaged products before Substantial Completion.

3.06 DEMONSTRATION

A. The elevator contractor shall make a final check of each elevator operation with the Owner and the Architect present prior to turning each elevator over for use.

B. Coordinate demonstration of elevators and elevator operation with the Owner and the Architect by requesting a date and time a minimum of two weeks in advance.

END OF SECTION