

## EXHIBIT E NEW ELEVATOR SCOPE OF WORK

### I. Definitions.

- a. Modernization: The process of upgrading elevator systems to improve performance, efficiency, safety, and compliance with current codes and industry standards. This includes controller upgrades, door operator replacements, cab interior renovations, and structural modifications to meet accessibility and safety requirements.
- b. Availability: The percentage of time an elevator is fully operational and available for use following modernization. Measured as "maximum availability - down time/maximum availability - 100."
- c. Callback: Any request for service assistance related to the upgraded elevator system.
- d. Cleanliness: The Supplier is required to maintain the entire elevator system in a clean manner at all times. This includes but is not limited to: removal of oily rags-removal of dirt, grease, lint-maintaining the exterior of all equipment free of lint, dirt, oil, grease- clean all machine room equipment including, floors, controller/selector, governor, hoist machine, brake, sheave, hoist motor interior, deflector sheave, machine beams, car top, hoistway door track, hanger, interlock, header, strut, hoistway side of sills, spreader beam, entire counterweight, buffer, underside of car platform, car & counterweight guide, car safety, car door operator, track, hanger, inside area of header, crosshead, guide rail/bracket, fascia, dust cover, pit, inside car station/hall station/lantern and lobby panels. Machine room and elevator equipment shall comply with seismic performance requirements per ASCE 7 and ASME A17.1. Equipment shall remain operational after a seismic event and include seismic switches, vibration isolation (Mason Industries BR or equivalent), and maximum 80 dBA machine room noise levels. The cleaning must meet Elevator Industry Standards and shall be to the full satisfaction of (Member Name) and/or the third party consultant. If (Member Name) decides the cleaning level is below (Member Name) Standards, (Member Name) has the option of bringing in another elevator contractor to perform the cleaning (with notice provided per the Contract). All costs of the cleaning by another elevator contractor plus the cost of supervision by (Member Name) shall be paid by the Supplier that is performing the Preventive Maintenance under this Contract.
- e. Contract: All work, referenced herein as Specification, Scope of Services, Project and Contract are included in this scope and will be agreed upon under the standard (Member Name) Terms and Conditions.
- f. Elevator: a conveyance that serves two or more landings or levels in a building or structure and includes, but is not limited to, passenger and freight elevators, wheelchair lifts, dumbwaiters and material lifts.
- g. Elevator Apprentice: A person who is indentured in a State approved elevator apprenticeship program and provides assistance to elevator maintenance, testing, and repair tasks as directed by a Licensed Elevator Journeyman. Assistant Mechanics who have a journeyman elevator constructor's license and are not in a State approved apprenticeship program do not qualify as "Resident Mechanics" or meet the of Licensed Elevator Journey mechanics.
- h. Elevator Contractor: A company licensed by the State of (State) as an elevator contractor who employs Licensed Elevator Journeyman and Elevator Apprentices and regularly contracts to perform maintenance, testing, repairs, and alterations to elevator equipment. (Hereinafter known as the Supplier).
- i. Entrapments: An out of service elevator with passengers in the cab requiring the Supplier or other emergency personnel to release the passengers.
- j. Licensed Elevator Journeyman: A person who has been adequately trained and has demonstrated an

understanding of elevator systems and is licensed as such by the State of Oregon. The use of “Servicemen”, “Technician”, and “Mechanic” herein, shall be defined as a Licensed Elevator Journeyman, capable of troubleshooting and responding to callbacks independently.

- k. Code Compliance: Ensuring that all modernization efforts meet the latest ASME A17.1 and A17.2 safety codes, NFPA regulations, and ADA accessibility standards.
- l. Obsolescence: The condition in which an elevator component is no longer supported or available for purchase, necessitating modernization or replacement.
- m. Performance Metrics: The key criteria for assessing modernization effectiveness, including ride quality, response time, and operational efficiency.
- n. Project: The installation of new elevators as described in Attachment A, in accordance with the specifications outlined in this Exhibit.

Supplier expressly acknowledges that (Member Name) is relying on Supplier’s professional expertise in performance of Services to achieve and maintain the intent of the scope of services.

## II. REQUIREMENTS

- a. The Supplier shall furnish all labor, materials, tools, supervision, permits, licenses, and equipment required to install new elevator systems in accordance with the California Division of Occupational Safety and Health (Cal/OSHA), ASME A17.1, and applicable codes.
- b. All equipment shall be non-proprietary and fully maintainable by future elevator service providers without the need for proprietary tools or software.
- c. The Supplier shall coordinate with the general contractor and other trades to ensure smooth execution of the project.

### Scope of New Elevator Services

#### 1. Maintainability and Simplicity in Design:

- a. The elevator systems shall be designed and installed to minimize maintenance requirements and lifecycle costs. Designs shall avoid unnecessary complexity or customization, and shall utilize standard, readily available parts. Custom-sized components or configurations requiring specialized service tools or fabrication are not acceptable. All major elements shall be easily accessible and maintainable by any qualified technician.

#### 2. Elevator System Components:

- a. Machine Room Equipment: Provide and install geared/gearless traction or hydraulic elevator drive systems as specified, including motors, controllers, and electrical panels.
- b. Hoistway Components: Install guide rails, door equipment, limit switches, governor, safety devices, and associated hoistway wiring.
- c. Car and Counterweight: Furnish and install car frame, platform, sling, counterweights, roller guides, and buffers. The car frame and platform shall support 125% of the rated load without permanent deformation. Ride quality shall meet ISO 18738 standards, with peak-to-peak horizontal and vertical acceleration limited to 15 mg in the 1–10 Hz frequency range. Acceleration and deceleration shall be smooth and not exceed 2.3 feet per second<sup>2</sup>, with sustained jerk limited to 8 feet per second<sup>3</sup> to ensure safe and comfortable operation under all loading and travel conditions.

- d. Doors and Operators: Provide automatic door operators with solid-state closed-loop circuitry for precise control, and full-height infrared door detection systems meeting ADA and emergency egress requirements. Include nudging operation with audible signals and adjustable timers.
- e. Fixtures: Install car operating panel, hall stations, hall lanterns, and position indicators with ADA-compliant features.
- f. All elevator system components provided under this Scope of Work shall be non-proprietary. Supplier must confirm that control software, diagnostic tools, and components are fully accessible to the Owner and any future service provider without the need for special licensing, software keys, or proprietary diagnostic equipment. This ensures long-term maintainability and minimizes lifecycle costs.

### 3. Electrical and Communication:

- a. Coordinate with the responsible party for electrical work—whether an electrical contractor or the Owner's Facilities team—to provide power supply to the elevator system. This includes ensuring proper disconnects, grounding, conduit, and dedicated circuits as required for code compliance and equipment specifications.
- b. Install elevator traveling cable, machine room disconnects, lighting, GFCI outlets, and car lighting.
- c. Provide emergency communication devices that comply with all applicable codes, including but not limited to ASME A17.1/CSA B44 (Safety Code for Elevators and Escalators), California Building Code (CBC), California Code of Regulations Title 8, and the Americans with Disabilities Act (ADA). Systems shall include a hands-free in-car telephone or intercom with automatic dialing and rollover capability, illuminated visual indicators, and audible confirmation of connection. Devices must support communication for passengers who are deaf, hard of hearing, or speech impaired, and integrate with the building's fire and emergency response systems as required by local jurisdiction and NFPA 72. Elevator systems shall include remote monitoring and diagnostic capabilities capable of interfacing with building management systems via open protocol (e.g., Modbus). Monitoring system shall display elevator operational status, fault logs, car position, and ride quality in real time.

### 4. Testing and Inspections:

- a. Perform all required testing including initial inspection, load test, and safety tests per ASME A17.1 and State of California requirements.
- b. Acceptance testing shall include 30-minute continuous full-load run to measure temperature rise and ride quality. Owner's elevator consultant may conduct independent tests to verify conformance with ASME A17.1 and ISO 18738 ride quality metrics.
- c. Schedule and coordinate third-party inspections as necessary. Obtain and deliver the final operating permit.

### 5. Documentation and Training:

- a. Submit Operation & Maintenance manuals, as-built drawings, test certificates, and warranty documentation.
- b. Provide training for Owner personnel on basic elevator operation, troubleshooting, and emergency procedures.
- c. As-built submittals shall include diagnostic tools, Modbus mappings, seismic load calculations stamped by a California-licensed structural engineer, and elevator noise/vibration performance test results.

### 6. Warranty:

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- a. Supplier shall provide a minimum two-year warranty from the project's date of substantial completion, covering all parts and labor associated with the new elevator installation.
  - b. If the warranty services provided fail to meet the service levels outlined in Exhibit C Elevator Maintenance Scope of Work during the warranty period, the Owner reserves the right to terminate the warranty. Upon termination, the Supplier shall refund a prorated portion of the contract amount corresponding to the remainder of the warranty period. This remedy shall be in addition to any other remedies available under the contract.

7. Cleanliness and Safety:

- a. Maintain cleanliness in hoistways, machine rooms, and elevator cars throughout installation.
- b. Follow all OSHA and site-specific safety protocols, including fall protection and lockout/tagout procedures.

8. Schedule:

- a. Supplier shall adhere to the construction schedule and notify the Owner promptly of any anticipated delays.

9. Acceptance:

- a. Final acceptance will be based on successful completion of inspections, delivery of documentation, and functional demonstration of elevator systems.

**Note**

This Scope of Work shall be incorporated into the final contract agreement for new elevator installations and shall be consistent with Exhibits C and D in formatting and expectations.