

FILE NAME: 201314V00.dwg DATE: 2014.02.26 PROJECT No: SHEET TITLE: ADDRESS: 6 FERMOR AVENUE

SECTION 14210 - Electric Traction Elevators

Part 1 - GENERAL

1.01 SUMMARY

- A. Applicable Codes: Comply with applicable building and elevator codes at the project site, including but not limited to the following
 1. ANSI A117.1, Buildings and Facilities, Providing Accessibility and Usability for Physically Handicapped People.
 2. ADAAG, Americans with Disabilities Act Accessibility Guidelines.
 3. ANSINFPFA 70, National Electrical Code.
 4. ANSINFPFA 80, Fire Doors and Windows.
 5. ASME/ANSI A17.7, Safety Code for Elevators and Escalators.
 6. ANSIUL 10B, Fire Tests of Door Assemblies.
 7. CAN/CSA C22.1, Canadian Electrical Code.
 8. CAN/CSA-B44, Safety Code for Elevators and Escalators.
 9. EN 12016 (May 1998); "EMC Product Family Standards for lifts, escalators, and passenger conveyors Part 2 - Immunity"
 10. Local Building Codes
 11. All other local applicable codes.

1.02 SYSTEM DESCRIPTION

- A. Equipment Description: Gen2® gearless traction elevator with Machine-Roomless application
- B. Equipment Control: Elevonic® Control System.
- C. Drive: Regenerative
- D. Quantity of Elevators: 1
- E. Elevator Stop Designations: Front Only At B,M,2
- F. Stops : 3
- G. Openings: Front Only
- H. Travel: 20 ft 0 in 0
- I. Rated Capacity: 2500 lbs Passenger
- J. Rated Speed: 150 fpm
- K. Platform Size: 6' 9-1/2" wide x 4' 3-3/4" deep
- L. Clear Inside Dimensions: 6' 5-9/16" wide x 4' 3-9/16" deep
- M. Cab Height: 93"
- N. Clear Cab Height 8' 0 1/16"
- O. Entrance Type and Width: One Speed Side Slide 42" doors
- P. Entrance Height: 84"
- Q. Main Power Supply: 240 Volts + or - 5% of normal, single-Phase, with a separate equipment grounding conductor.
- R. Car Lighting Power Supply: 120 Volts, Single-phase, 15 Amp, 60 Hz.
- S. Signal Fixtures: Manufacturer's standard with metal button targets.
- T. Controller Location: Machine-Roomless Controller(s) shall be located at the front opening of the top terminal landing in the entrance frame
- U. Performance:
 1. Car Speed: ± 3 % of contract speed under any loading condition or direction of travel.
 2. Car Capacity: Safely lower, stop and hold up to 120% of rated load. (code required).
- V. Ride Quality:
 1. Vertical Vibration (maximum): 20 milli-g
 2. Horizontal Vibration (maximum): 12 milli-g
 3. Vertical Jerk (maximum): 4.59 1.0 ft/ sec³ (1.4 0.3 m/ sec³)
 4. Acceleration/Deceleration (maximum): 2.62 ft/ sec² (0.8 m/ sec²)
 5. In Car Noise: 55 - 60 dB(A)
 6. Stopping Accuracy: ± 0.375 in. (± 10 mm) max, ± 0.25 in. (± 6 mm) Typical
 7. Re-leveling Distance: 0.5 in. (12 mm)
- W. Simplex Collective Operation:
 1. Using a microprocessor-based controller, operation shall be automatic by means of the car and hall buttons. If all calls in the system have been answered, the car shall park at the last landing served.
- X. Operating Features - Standard
 1. Full Collective Operation
 2. Anti- nuisance.
 3. Fan and Light Protection.
 4. Load Weighing Bypass.
 5. Full Collective Operation.
 6. Firefighters' Service Phase I and Phase II:
 7. Top of Car Inspection.
 8. Zoned Access at Bottom Landing.
 9. Zoned Access at Upper Landing.
- Y. Door Control Features:
 1. Door control to open doors automatically when car arrives at a landing in response to a normal hall or car call.
 2. Elevator doors shall be provided with a reopening device that will stop and reopen the car door(s) and hoistway door(s) automatically should the door(s) become obstructed by an object or person.
Door protection shall consist of a two dimensional, multi-beam array projecting across the car door opening.
 3. Door nudging operation to occur if doors are prevented from closing for an adjustable period of time.
- Z. Provide equipment according to: Seismic Zone 0

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each system proposed for use. Include the following:
 1. Signal and operating fixtures, operating panels and indicators.
 2. Cab design, dimensions and layout.
 3. Hoistway-door and frame details.
 4. Electrical characteristics and connection requirements.
 5. Expected heat dissipation of elevator equipment in control room space and machine space (BTU).
 6. Color selection chart for Cab and Entrances.
- B. Shop Drawings: Submit approval layout drawings. Include the following:
 1. Car, guide rails, buffers and other components in hoistway.
 2. Maximum rail bracket spacing.
 3. Maximum loads imposed on guide rails requiring load transfer to building structure.
 4. Clearances and travel of car.
 5. Clear inside hoistway and pit dimensions.
 6. Location and sizes of access doors, hoistway entrances and frames.
- C. Operations and Maintenance Manuals: Provide manufacturer's standard operations and maintenance manual.

1.04 QUALITY ASSURANCE

- A. Manufacturer: Elevator manufacturer shall be ISO 9001 certified.
- B. Installer: Elevators shall be installed by the manufacturer.
- C. Permits, Inspections and Certificates: The Elevator Contractor shall obtain and pay for necessary Municipal or State Inspection and permit as required by the elevator inspection authority, and make such tests as are called for by the regulations or such authorities. These tests shall be made in the presence of such authorities or their authorized representatives.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Should the building or the site not be prepared to receive the elevator equipment at the agreed upon date, the Contractor will be responsible to provide a proper and suitable storage area on or off the premises.
 1. Should the storage area be off-site and the equipment not yet delivered, then the elevator contractor, upon notification from the Contractor, will divert the elevator equipment to the storage area. If the equipment has already been delivered to the site, then the Contractor shall transport the elevator equipment to the storage area. The cost of elevator equipment taken to storage by either party, storage, and redelivery to the job site shall not be at the expense of the elevator contractor.

1.06 WARRANTY

- A. The elevator contractor's acceptance is conditional on the understanding that their warranty covers defective material and workmanship. The guarantee period shall not extend longer than one (1) year from the date of completion or acceptance thereof by beneficial use, whichever is earlier, of each elevator. The guarantee excludes: ordinary wear and tear, improper use, vandalism, abuse, misuse, or neglect or any other causes beyond the control of the elevator contractor and this express warranty is in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.

1.07 MAINTENANCE and SERVICE

- A. Maintenance service consisting of regular examinations and adjustments of the elevator equipment shall be provided by the elevator contractor for a period of 12 months after the elevator has been turned over for the customer's use. This service shall not be subcontracted but shall be performed by the elevator contractor. All work shall be performed by competent employees during regular working hours of regular working days and shall include emergency 24-hour callback service. This service shall not cover adjustments, repairs or replacement of parts due to negligence, misuse, abuse or accidents caused by persons other than the elevator contractor. Only genuine parts and supplies as used in the manufacture and installation of the original equipment shall be provided.
- B. The periodic lubrication of elevator components shall not be required, including: Sheaves, Rails, Belts, Ropes, Car and CWT guides, etc.
- C. The elevator control system must:
 1. Provide in the controller the necessary devices to run the elevator in inspection operation.
 2. Provide on top of the car the necessary devices to run the elevator in inspection operation.
 3. Provide in the controller an emergency stop switch. This emergency stop switch when opened disconnects power from the brake and prevents the motor from running.
 4. Provide in the event of a power outage, means from the controller to electrically lift and control the elevator brake to safely bring the elevator to the nearest available landing.
 5. Provide the means from the controller to reset the governor over speed switch and also trip the governor.
 6. Provide the means from the controller to reset the emergency brake when set because of an unintended car movement or ascending car over speed.
- D. Provide system capabilities to enable a remote expert to create a live, interactive connection with the elevator system to enable the following functions:
 1. Remotely diagnose elevator issues with a remote team of experts
 2. Remotely return an elevator to service
 3. Provide real-time status updates via email
 4. Remotely make changes to selected elevator functions including:
 - a. Control building traffic: Restrict floor access, remove car from group operation, shut down elevator, select up peak/down peak mode, activate independent service
 - b. Conserve energy: Activate cab light energy save mode, activate fan energy save mode, shut down car(s)
 - c. Improve passenger experience: Extend door open times, change parking floor, activate auto car full, activate anti- nuisance, advance door opening, door nudging, extend specific floor extended opening time, release trapped passengers

Part 2 - PRODUCTS

2.01 DESIGN AND SPECIFICATIONS

- A. Provide Provide machine-roomless Gen2™ traction passenger elevators from Otis Elevator Company. The control system and car design based on materials and systems manufactured by Otis Elevator Company. Specifically, the system shall consist of the following components:
 1. Controller located entirely inside the hoistway. No extra machine room or control closet space required.
 2. An AC gearless machine using embedded permanent magnets mounted at the top of the hoistway.
 3. Polyurethane Coated-Steel Belts for elevator hoisting purposes.
 4. Regenerative drive that captures normally wasted energy and feeds clean power back into the building's power grid.
 5. LED lighting standard in ceiling lights and elevator fixtures.
 6. Sleep mode operation for LED ceiling lights and car fan.
- B. Approved installer: Otis Elevator Company

2.02 EQUIPMENT: CONTROLLER COMPONENTS

- A. Controller: A microcomputer based control system shall be provided to perform all of the functions of safe elevator operation. The system shall also perform car and group operational control.
 1. All high voltage (110V or above) contact points inside the controller shall be protected from accidental contact when the controller doors are open.
 2. Controller shall be separated into two distinct halves; Motor Drive side and Control side. High voltage motor power conductors shall be routed so as to be physically segregated from the rest of the controller.
 3. Field conductor terminations points shall be segregated; high voltage (>30 volts DC and 110 VAC) and low voltage (< 30 volts DC).
 4. Controllers shall be designed and tested for Electromagnetic Interference (EMI) immunity according to the EN 12016 (May 1998); "EMC Product Family Standards for lifts, escalators, and passenger conveyors Part 2 - Immunity"
 5. Controller shall be located inside the wall next to the top landing entrance frame. Emergency access shall be provided through an access panel in the entrance frame secured by a key lock.
 6. A separate control room or cabinet should not be required.
- B. Drive: A Variable Voltage Variable Frequency AC drive system shall be provided. The drive shall be set up for regeneration of AC power back to the building grid.

NOTES:

No.	REVISION/DESCRIPTION	BY	DATE
SEAL			



DRAWN	CHK	CHECKED	DESIGNED	APPROVED
DATE 2014.07.11				

THE CITY OF WINNIPEG
 PLANNING, PROPERTY AND
 DEVELOPMENT DEPARTMENT
 MUNICIPAL ACCOMMODATIONS DIVISION
 3-65 GARRY STREET, R3C 4K4

PROJECT
 ST. VITAL LIBRARY
 NEW ELEVATOR INSTALLATION

6 FERMOR AVENUE
 SHEET TITLE

ELEVATOR SPECIFICATIONS

SCALE	PROJECT No:	SHEET No:
AS SHOWN		A9