
Traction Elevator Specification

City of Quesnel
410 Kinchant St
Quesnel, BC

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Section 1

1.1 Description of Elevator

Item	Description
Address	410 Kinchant St, Quesnel, BC
Manufacturer	Otis
Elevator Type	Traction
Designation	Passenger
Installation Year	1981
Arrangement	Simplex
Elevator ID	Car 1
BC ID	8846
Capacity	2,500 lbs.
Speed	150 fpm
Floors Served	B, 1, 2, 3, 4, 5
Door Detector	Infrared Light Curtain
Door Size (W x H)	3' 6" x 7' 0"
Door Type	Single Speed, Side Opening
Door Openings	Front
Car Guides	Roller
Buffer Type	Spring
Firefighters Emergency Operation	No
Emergency Power	No

1.2 Scope of Work

The Work described within this document shall include for all labour and material to modernize one (1) traction elevator located at Quesnel City Hall, 410 Kinchant St, Quesnel, BC. The elevator contractor is to provide all work required for a completed project, including all permits and inspections as required by the Authority Having Jurisdiction, including:

1.2.1 Component List

Machine Room Equipment			
Component	Replace	Retain	Provide New
Elevator Controller and Position Feedback	X		
Drive			X
Isolation Transformer			X
Emergency Battery Rescue Unit			X
Security Interface			X
Machine	X		
Auxiliary Braking Device			X
Hoist Ropes	X		
Component Isolation	X		
Wiring	X		
Travelling Cables	X		
Governor	X		

Hoistway, Car Top, and Pit Equipment			
Levelling System	X		
Limit Switches		X	
Deflector Sheave	X		
Counterweight		X	
Counterweight Roller Guides	X		
Car Roller Guides	X		
Guide Rails and Brackets		X	
Door Operator	X		
Car Door Restrictor			X
Door Re-Opening Device	X		
Car Door Track		X	
Car Door Rollers	X		
Top of Car Inspection Station	X		
Top of Car Data Tag	X		
Top of Car Guard Rails			X
Car Safeties		X	
Fascia		X	
Floor Markings		X	
Door Interlocks	X		
Hall Door Tracks		X	
Hall Door Rollers	X		
Door Retainers	X		
Hall Door Gibs	X		
Hall Door Closers	X		
Drop Key Access			X
Buffers		X	
Pit Stop Switch	X		
Pit Ladder	X		
Apron Guard	X		
Cab Interior			
Car Operating Panel	X		
In-Car Telephone	X		
Voice Announcer			X
In-Car Position Indicator	X		
In-Car Direction Lanterns	X		
In-Car Emergency Light and Alarm Bell	X		
In-Car Ventilation			X
Cab Interior Finishes	X		
Cab Interior Protective Pads	X		
Car Sill		X	
Elevator Lobby			
Hall Stations	X		
Hall Position Indicators - All Floors	X		
Hall Station at Main Lobby (Designated Level)	X		
Hoistway Access Switches	X		
Signage and Markings	X		
Hall Door Entrances		X	

1.2.2 Controller

- .1 The existing controller shall be replaced with a new control system. The controller shall include but not limited to the following:
 - .1 Telephone Technical Support shall be provided for customers at no charge.
 - .2 The Controller Manufacturer shall have a track record of over 25 years in business manufacturing Microprocessor based elevator controllers.
 - .3 PLC-based controllers shall not be accepted.
 - .4 User Interaction Switchgear shall be consolidated in a single physical area or dashboard.
 - .5 The System Human Interface shall be comprised of a high resolution color display, with functions navigated and selected using a single, multi-function knob.
 - .6 Multiple Locations for System Access shall be provided, including the machine room, cartop, and cab.
 - .7 Local Diagnostics shall function regardless of whether a particular access point has an active system network connection.
 - .8 A Help System shall be incorporated and embedded in the control system.
 - .9 A Help Button shall be provided. When pressed, this function shall cause context relevant help to be displayed on screen.
 - .10 Provide software and terminations in the control system to interface easily with a security system.
- .2 The make/model of the controller shall be EC Controls / Pixel AC or equivalent as approved by the owner.
- .3 The controller system shall use a variable voltage, variable frequency (VVVF) AC Drive.
 - .1 Provide an alternate price for a regenerative drive
- .4 Provide an isolation transformer between each mainline disconnect and the elevator control/drive system
- .5 An emergency battery rescue unit shall be provided

1.2.3 Operating Fixtures

- .1 A new car operating panel shall be provided. The panel shall be:
 - .1 Brushed Stainless-Steel #4
 - .2 Equipped with push buttons for each floor served

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- .1 Layout to match the actual vertical layout of the building
 - .2 The lowest button shall not be lower than 35" above finished floor
 - .3 The highest button shall not be higher than 48" above finished floor
 - .4 The push buttons shall have LED illumination in red
 - .5 The push buttons shall be identified by both raised characters and Braille located directly to the left of each pushbutton
 - .6 Pre-Approved Fixture manufactures are: Dupar, MAD Elevator, or equivalent as approved by the owner
- .3 The COP shall contain full provisions for the future addition of fire service
 - .4 The COP shall include a service cabinet containing:
 - .1 Independent Service KeySwitch
 - .2 Run/Stop KeySwitch
 - .3 Access Enable Keyswitch
 - .4 Fan
 - .1 May be a KeySwitch or Toggle Switch
 - .5 Light
 - .1 May be a KeySwitch or Toggle Switch
 - .6 Emergency Light Test Switch
 - .7 Two (2) blank slots for future addition of KeySwitch or buttons
 - .8 One (1) 120 VAC GFCI outlet
 - .9 Control dial to set the volume of the voice announcer
 - .10 The service cabinet door shall be engraved with the TSBC identification number, the car number, and the capacity.
 - .5 The COP shall include an emergency light
 - .6 The COP shall include a dark lens to allow space for the future installation of a card reader
 - .7 The COP shall contain an in-car hands-free emergency telephone. The emergency telephone shall be:

- .1 Equipped with an auto-dialer programmed to dial the number of the 24 hour monitoring station that is set up to answer the phone
- .2 Able to operate with an analog telephone line
- .3 Capable of sending an outgoing message describing the specific location of the elevator to the answering service
- .4 Equipped with a visual indicator acknowledging:
 - .1 The phone is dialing
 - .2 The call has been answered
- .5 Mounted flush to the COP
- .8 The COP shall include an-car position voice announcer
- .9 Provide new in-car direction arrows mounted in the door jamb of the front return
- .10 Provide new code required lobby call station

1.2.4 Machine and Deflector Sheaves

- .1 The existing machine shall be replaced with a new AC Permanent Magnet Gearless Traction Machine. Pre-approved manufactures are: Torin, Hollister-Whitney, or Imperial.
- .2 The new machine shall sized accordingly to match the speed and capacity of the elevator
- .3 The existing deflector sheave shall be replaced with new.

1.2.5 Governor

- .1 The existing over-speed governor shall be replaced with new
- .2 The governor shall be calibrated to suit the speed of the elevator

1.2.6 Ropes

- .1 New hoist ropes shall be provided and must match the machine manufactures specifications for type, diameter, quantity, and rope arrangement.
- .2 New governor ropes shall be provided and must match the governor manufactures specifications for type and diameter
- .3 New shackles to be provided, springs for counter weight side only

1.2.7 Wiring

- .1 All wiring and interconnections between the controller, isolation transformers, motors shall be replaced with new
- .2 The existing traveling cables shall be replaced with new and shall have a minimum of six (6) shielded pairs for the controls and for future installation of security including card reader, camera or other functions

1.2.8 Cab Interior

- .1 Install new fire-rated raised plastic laminate panels on all non-accessible sides of car cab. Provide separate panels above and below the handrail. Provide panels of equal width on each wall and provide stainless steel reveals between panels. Provide stainless steel trim to protect edges of panels on all sides. Provide choices of laminate colours and finishes to the owner for approval.
- .2 Provide new suspended ceiling system in stainless-steel #4 with six (6) low-voltage LED pot lights
- .3 Provide new 1-1/2" round stainless-steel #4 handrail on all non-accessible sides of car cab. Mount handrails 35-1/2" above finished floor. Provide a matching set of bumper rails located 5" above finished floor
- .4 Re-skin entrance return panels, header, door jambs, and car doors.
- .5 Provide an alternate price to add a mirror panel above the handrail on the rear wall
- .6 Provide an alternate price to replace the entire car cab including the car doors (existing platform and sling to be retained)
- .7 When complete weigh cab and install new car top data tag

1.2.9 Car & Counterweight Roller Guides

- .1 Replace existing car & counterweight guides with ElSCO or Delco Roller Guides. Minimum 6" roller for car and 3" on counter weight.

1.2.10 Door Operator and Related Equipment

- .1 Replace the existing door operator with a new non-proprietary closed-loop system. Pre-approved products are GAL Canada MOVFR-II and GAL Canada MOVFE-HH
- .2 Replace interlocks and pick-up assemblies
- .3 Replace all door hardware including rollers and gibs
- .4 Replace top retainers, provide new bottom retainers
- .5 Replace all door closers

- .6 Provide new drop-key access holes
- .7 Provide a new door re-opening device. Pre-approved products are Formula Systems FCU47 or equivalent as approved by the Owner

1.2.11 Pit Repairs

- .1 Waterproof the pit to prevent the ingress of water
- .2 Paint pit with low VOC, good quality light grey paint up to basement sill level on all walls
- .3 Paint all existing steel in paint excluding counterweight guard with a high quality rust protection black paint

1.2.12 Machine Room

- .1 Paint ceiling and wall with white (kills) paint
- .2 Paint machine room floor with two coats low VOC, good quality light grey paint

1.3 Non-Proprietary Guarantee

- .1 Provide a written guarantee from the manufacturer of the equipment, including controller, that the equipment is non-proprietary. This includes:
 - .1 Extra spare parts are available for purchase not just exchange
 - .2 Parts are available for purchase by anyone, not just the owner
 - .3 All wiring diagrams, diagnostics, documentation, and special tools required for maintenance are supplied with the elevator as the Owner's property.

1.4 Standards

- .1 All elevator work to be performed to the following minimum standards:
 - .1 ASME A17-2016/CSA B44-2016 Safety Code for Elevators and Escalators
- .2 All related contractor and subcontractor work to be performed to the applicable in force codes which may include but are not limited to
 - .1 National Building Code
 - .2 Canadian Electrical Code
 - .3 Canada Labour Code

1.5 Permits & Inspection

- .1 Obtain and pay for necessary permits and inspections called for by the Authority Having Jurisdiction, Technical Safety BC.

Section 2

2.1 Related Work by Owner

- .1 Arrange for a live telephone line to the elevator machine room if none exists. Phone line to be dedicated and monitored 24/7

2.2 Other Work to be completed by Elevator Contractor

- .1 Elevator contractor to sub-contract the below work to a licensed contractor or by red seal electricians:
 - .1 Electrical:
 - .1 Provide new main line disconnect including auxiliary switch and fuses as per electrical code based of power sheet. Terminate wires from new disconnect to isolation transformer.
 - .2 Provide new lighting in the elevator machine room, operated by new GFCI switch. Lighting to provide a minimum of 200 lux measured across the machine room floor.
 - .3 Provide a minimum of one (1) 120V GFCI outlet in the machine room and pit
 - .4 Arrange for connection of the Owner's emergency cab communication system to the new telephone line. Include for any required assistance by the Owner's communications Contractor to make the system functional
 - .5 Accomplish all required conductor and conduit runs; run new grounds as needed specifically from vault to main line disconnect
 - .6 Provide stainless steel drop pans with drainage where new equipment is installed directly under a sprinkler line, roof drain, or any other existing pipes containing liquid
 - .7 Retain and make operative any related elevator fixtures not covered elsewhere in this specification
 - .8 Make all necessary modifications to the electrical services relating to the elevator such as the supplementary disconnect devices and connections to the controller.

Section 3

3.1 Warranty

- .1 Contractor to provide a one (1) year warranty on all parts and workmanship

- .2 Bidder to acknowledge that the successful proponent is not guaranteed any long-term maintenance and acceptance of the proponent's tender does not mean the acceptance of a long-term maintenance contract
- .3 Proponent to provide three (3) months of warranty maintenance at no additional cost to cover any/all call-backs 24/7

3.2 Owner's Manual

- .1 Contractor to provide a one (1) hard copy and one (1) soft-copy of the Operation and Maintenance manuals including complete Maintenance Control Program (MCP). The Manual must include the following
 - .1 Contacts
 - .2 Cab Interior Drawings
 - .3 Fixture Prints
 - .4 Controller Power Report
 - .5 Controller Prints
 - .6 Door Operator Adjustment Procedure
 - .7 Car & Cwt Roller Guides
 - .8 AHJ Permit & Inspection
 - .9 Written Warranty
- .2 Owner to be provided with a copy of the software

3.3 Other

- .1 Crane, provide all crane work with planning to be approved by owner
- .2 All shipping and handling materials by Elevator Contractor
- .3 Storage space for materials and tools to be approved by owner
- .4 The Elevator Contractor shall be responsible for the disposal of all elevator equipment and all other ancillary rubbish directly related to completing the work.

Section 4

4.1 Price

- .1 Provide total cost for all work excluding GST on the Bid Form provided.

4.2 Alternate price

- .1 Provide cost of sale and installation of a Regenerative Drive
- .2 Provide cost of sale and installation of a New Cab
- .3 Provide cost of New Cab with a Mirror
- .4 Provide cost of a mirror on refurbished cab

Section 5

5.1 Confirmation of material

- .1 Machine manufacturer & model proposed
- .2 Controller manufacturer & model proposed
- .3 Fixture manufacturer & model proposed
- .4 Door operator model proposed