

Work by Other Trades

(provided by Richmond Elevators)

The work described below is a summary of work to be performed by other Trades. This work may be required in conjunction with the elevator modernization performed by us.

Purchaser/Owner/Contractor shall provide any and all building electrical, structural and mechanical system upgrades required for code compliance, life safety, and proper equipment installation and operation. All required remedial or preparatory work shall be performed by other contractors in compliance with applicable codes.

Please contact your electrical/fire contractor NOW so you have a complete picture of related expenses.

Recommended:

Wespac Electrical - 604-522-1322,

Sasco Contractors - 604-299-1640

FinaGroup - 604-299-9211.

All these companies worked with us previously on similar projects and would be capable of providing you with a competitive bid for work outlined in “Work by Others”. Cost varies from building to building and are not included in the quote.

General

- 1) Access to the building to perform the work and for deliveries with dry, protected storage adjacent to the Hoistway.
- 2) Cutting of existing walls, floors and finishes, together with all repairs made necessary by such cutting or changes, removal, replacement, and/or repair of any mirrors, millwork, plaster, stone or other special hall finishes.
- 3) Our bid is based on suitable site conditions, material and tolling storage space, and bathroom access being available on site.
- 4) At least two parking spaces on site is to be provided for installers for duration of the project.

Electrical

- 1) Service or replace machine room electrical supply disconnects if required (Per power report which we will provide. Note power requirement will change based on type of machine we provide). A properly rated three phase fused disconnect switch, externally operable and lockable in the open position, located as required by code which will accommodate any

increases in motor size or feeder loads. The feeder wiring will need to be checked. A 'solid' electrical ground wire is required to the electrical disconnect. Provide feeder wiring from the disconnect to the new elevator transformers. Replacement of the old fuses is responsibility of others. RK1 fuses and circuit breakers are to be current limiting class RK1 or equivalent. HP of the current motor will increase due to changes in electrical and elevator safety codes. This will most likely require replacement of disconnect, fuses and verification of feeders from the main electrical room. **Note that the HP of the motor will be increased by 5-10 HP due to a change of safety in electrical standards and related elevator code changes. The same applies to disconnects and fuses. This may require increase of a service from 100A to 200A with 125A time delay fuse.**

- 2) A separate disconnect is required for elevator car cab lights - 120 VAC, 15 A fused disconnect switch, externally operable and lockable in the open position adjacent to the machine room door.
- 3) Provide outlets in machine room and pit need to be GFCI 120 VAC outlets, required by code.
- 4) Provide dedicated telephone line terminated next to the elevator controller in machine room for elevator emergency communication device. Please note that this will have to be in place to pass inspection.
- 5) All connections to our equipment (controllers etc.) should be done in flex (last two feet) to ensure vibration and noise isolation.
- 6) Any other electrical systems (security) which need to interface with elevator controller.
- 7) Conduit with pull boxes from each elevator bank to any remote fire control or communication panels specified.
- 8) Standby/emergency power feeders, transfer switches with time delay and auxiliary contact signal outputs to the controllers need to be sufficient size to provide power upon loss of regular power, with accordance with building code. Power transfer to occur within 30 seconds.

Elevator Machine Room

- 1) A code-compliant machine room. Provide or maintain fire rating as required by building code.
- 2) Fire-rated door for access into the machine room. Door shall be self-closing and self-locking, operable from inside the room without the use of a key, with different key than other rooms. A door threshold with smooth transitions (in and out) is required by code.
- 3) **Machine room ventilation is required.** Provide a suitably sized fan (output) and associated louvers (mesh cover) and ducting required to exhaust the machine room air to the outside of the machine room. Intake of machine room air is required (e.g. fire vent in machine room wall or doors). Independent ventilation or air conditioning system and heating element

(baseboard heater) for the elevator machine room, to assure temperature is maintained between 10 °C (50 °F) and 32 °C (90 °F) with humidity restrictions 5% to 95% with thermostat. Air out of the machine room needs to blow out not in.

- 4) Properly hang ABC fire extinguisher by the entrance door inside of machine room.
- 5) Elevator machine need to have minimum 40 ft² per elevator code requirements.
- 6) Suitable electrical lighting that provides a minimum lighting intensity of at least 200 lx (19fc) at the floor level in elevator machine room, elevator pit and roof walkways.
- 7) Where the passage is over a roof having a slope exceeding 15 deg from the horizontal, or over a roof where there is no parapet or guardrail at least 1 070 mm (42 in.) high around the roof or passageway, a permanent, unobstructed and substantial walkway not less than 600 mm (24 in.) wide, equipped on the side sloping away from the walk with a hand railing is to be provided. Properly lit during night.
- 8) Removal of any non-elevator related equipment and materials from within the machine room and proper disposal of oil and other hazardous or non-hazardous substances and materials.

Elevator Hoistway

- 1) A code-compliant hoistway. Provide or maintain fire rating as required by building code.
- 2) Patch of all holes in hoistway with fire rated material.
- 3) Beveling all ledges with hoistway measuring over 4”.
- 4) Removal of any non-elevator related equipment and materials from within the hoistway and proper disposal of oil and other hazardous or non-hazardous substances and materials.
- 5) A guarded light fixture and light switch in pit. Switch must be located 42” above the lowest landing floor level.
- 6) A means of displacing water located in the pit and containing and disposing of oil, chemicals, and other substances in compliances with environmental laws and regulations (Richmond Elevator Maintenance Ltd. assumes no responsibility for discharge of oil, chemicals, and other substances into storm water systems, sanitary sewer systems, retention pond, etc.)
- 7) Elevator hoistway ventilation to the outside atmosphere as required by building code.

Fire Service

- 1) Fire alarm smoke detectors with wiring and relays in the machine room terminating at elevator controller.
- 2) Fire alarm initiating device must be located in front of each elevator entrance (If any new devices are to be added they cannot be greater than 6.4 meter from any elevator entrance,

per code.) as well in the machine room, at the top of the elevator hoistway and in the elevator pit.

- 3) To provide automatic fire recall to permit the elevator to “Home” to the main floor in the event of a building fire alarm will require the following signals:

Elevator Hoistway *2 devices - heat detector in pit and smoke detector on top of the hoistway*

Elevator Machine Room *1 device, smoke detector*

Main Lobby *1 device, smoke detector to send elevator to alternate floor*

All Other Floors Served *1 device per floor- smoke detector*

- 4) Electrician/Fire company to assist with the fire panel verification at the time of inspection.

Access Integration/Security

- 1) Security card readers and/or any additional required hardware and software for proper function of access, control/security systems(s) shall be the responsibility of others.
- 2) Security system must have provisions to deactivate during Phase 2 fire fighter operation.
- 3) Means (toggle switch) in machine room (on security system box) to deactivate security system for elevators.
- 4) All security equipment provided in elevator machine room is to be suitable for machine room environment.
- 5) Any additional software required to ensure proper communication between elevator controllers and building system(s) shall be the responsibility of others.
- 6) A designated 115V 15A circuit is required at each of the remote monitoring stations.
- 7) Wiring from security boxes to our fixtures or controllers is by others.

Other

- 1) Our work shall not include the identification, detection, abatement, encapsulation or removal of asbestos, polychlorinated biphenyl (PCB), or products or materials containing asbestos, PCB's, oil, or any other hazardous substances in soil, water or elsewhere. Identification of these substances (inventory of hazardous materials, mainly asbestos) should be provided prior to work and its responsibility of owner per WCB Section 6.4 and Section 20.
- 2) Fee of \$1750.00 per elevator applies if inspection date cancelled less than 48 hours prior to inspection.
- 3) Fee of \$2,450.00 per elevator applies if inspection fails due to Contractor's deficiencies or additional inspection is required (this cost may vary). Cost will increase if this is repeated failure due to Contractor's deficiencies.

