

4. ELECTRICAL DESIGN SUMMARY

PROJECT: _____

Electrical By-Law (Including Canadian Electrical Code) *This MUST be completed and attached to the submission*

4.1 General

- a. Wiring methods suitable for non-combustible construction are required Yes No
- b. Electrical specification provided on drawings in spec. book
- c. Sprinklered Yes No
- d. Service: _____V _____A _____Phase _____Wire
- e. Service conductor routing: O/H U/G thru Wall other (describe routing details)

- f. Ground fault protection required Yes No
- g. Single line diagram provided Yes
- h. U/G cable ampacities: diagram:_____ detail:_____ table:_____
- i. Grounding conductor size: (specify) _____
- j. Grounding electrode: Metallic water pipe or Artificial
- k. Grounding detail provided Yes N/A

l. IC ratings:

- Service entry _____ KA
- 600V CDP _____ KA
- 600V panel _____ KA
- 208V CDP _____ KA
- 208V panel _____ KA

- m. Dielectric filled transformer clearance ≥3m or transformer as per 26-242(2) if <3m
- n. Working space requirements 2-308 (1m) and/or 2-310 (1.5m)
- o. Panel locations shown Yes
- p. Exits from electrical rooms as per 2-310 Yes
- q. Sprinkler shielding provided Yes N/A
- r. Flood plain requirement details _____ or N/A
- s. Landfill requirement details _____ or N/A
- t. Wiring and equipment in plenums meet MBC requirements Yes N/A

4.2 Exit Signage (see MBC Subsection 3.4.5) Check if not applicable

- a. Exit signs provided Yes
- b. Exit sign locations shown Yes
- c. Dedicated exit light cct./emergency lighting cct. Yes
- d. Type of signs provided red EXIT (to match existing)
 green pictogram
 photoluminescent green pictogram
 photoluminescent exit sign checklist attached

4.3 Emergency Lighting (see MBC Subsection 3.2.7) Check if not applicable

- a. Emergency lighting provided Yes
- b. Emergency lighting locations shown Yes
- c. Emergency power supply DC or Generator
- d. Emergency power duration ½ hr. 1 hr. 2hr
- e. WEB compliance 46-106 and 46-304(4)

4.4 Fire Alarm System (see MBC Subsection 3.2.4) *Check if not applicable*

- a. Fire alarm system required Yes No

4.8 Fire Pump *Check if not applicable*

- a. Shown on single line diagram Yes
- b. Required emergency generator provided Yes
- c. Remote trouble supervision provided Yes
- d. Fire alarm supervision provided Yes
- e. Dedicated transfer switch approved for fire pump service Yes
- f. Overcurrent protection for normal & emergency sources provided as per WEB Yes

4.9 Other Electrical Design Considerations

- a. High-rise requirements (see MBC Subsection 3.2.6) Yes No
- b. Hazardous locations (see WEB Sections 18 & 20) Yes No
If yes, locations/classifications specified on drawings (Check)
- c. Patient care areas (see WEB Section 24) Yes No
If yes, locations/classifications specified on drawings (Check)
or provided by facility administrator (Check)
- d. Wet and/or corrosive environments (see WEB Section 22) Yes No
If yes, locations specified on drawings (Check)

4.10 Barrier-Free Requirements *Check if not applicable*

- a. Fire-resistance for elevator conductors required/provided – MBC 3.3.1.7.(1)(a) Yes No
- b. Assistive listening system required/provided – MBC 3.8.3.7 Yes No

4.11 Residential Units *Check if not applicable*

- a. Voltage / phase Specify _____
- b. Smoke alarms – locations / circuiting / interconnection Yes
- c. Carbon monoxide alarms – locations / circuiting Yes N/A
- d. Heat detector provided / shown Yes N/A
- e. Fire alarm audible device(s) provided / shown Yes
- f. Fire alarm visible devices provided / shown Yes N/A
- g. GFCI protection provided Yes
- h. Switches/communication outlets in bathrooms not < 1m from tubs / showers Yes
- i. Mandatory circuits provided as per WEB Yes
- j. Electric heat control in each area Yes N/A

4.11a Additional Requirements for Dwelling Units

- a. Panel location shown Yes
- b. Kitchen receptacles and circuits as per WEB Yes
- c. Lighting / switched outlets provided / shown in each room Yes
- d. AFCI protection provided Yes

4.12 Electrical systems installed under separate permit *Check if not applicable*

- a. _____
- b. _____
- c. _____

4. ELECTRICAL DESIGN SUMMARY cont'd. **PROJECT:** _____

Professional Certificate

This certificate is both applicable and limited to the scope of work defined in the plans and drawings under my seal and signature.

In submitting sealed plans for demolition or construction associated with this project, I am making the following statements:

- I am an architect or engineer entitled to practice as such in the Province of Manitoba and am competent to design and review the plans submitted under my seal.
- I am aware that the City of Winnipeg will rely upon the plans signed and sealed by me and upon this certificate, and will not conduct any plan examination or plan inspection of the plans except by way of possible screening for completeness or audit for code compliance, as they relate to the current editions of the Manitoba Energy Code for Buildings (MECB), the Canadian Electrical Code – Part I, as adopted and varied by the Winnipeg Electric Bylaw, and the following provisions of the Manitoba Building Code (MBC), Division B:
 - Section 3.7 – Health Requirements
 - Section 3.8 – Barrier-Free Design
 - Part 5 – Environmental Separation
 - Article 6.2.2.1. – General ventilation requirements
 - Part 7 – Plumbing Services
- I recognize that, if the City becomes aware that the attached plans are not complete or fail to comply with the Winnipeg Electrical By-law or the Winnipeg Building By-law, which includes the applicable editions of the Manitoba Building Code, the Manitoba Energy Code for Buildings, the Manitoba Fire Code, and the Manitoba Plumbing Code, the City may provide this information to the Manitoba Association of Architects (MAA) or the Association of Professional Engineers and Geoscientists of Manitoba (APEGM) by way of a complaint or otherwise.
- I understand that any negligence, misrepresentation or falsification of facts contained in this certificate or in the plans under my seal may result in a finding of legal liability against me. I understand that the City of Winnipeg does not accept responsibility for any errors and omissions in the sealed plans.
- I further understand that the City of Winnipeg recommends that I periodically review my professional liability exposures, including those posed by potential third party claims, and that I carry an appropriate level of insurance. I understand that this review should include this specific project, including the building's occupancy type and classification, value, size and complexity, the extent of my professional involvement with it, and the City of Winnipeg's reliance on my certificate.
- **NOTE: PERIODIC REVIEWS.** The architect or engineer submitting the drawings must complete (or have a suitably qualified person reporting to him or her complete) periodic reviews of the project at appropriate stages of construction, and must be prepared at the completion of the work to sign and seal a letter of certification on the project, unless the architect or engineer
 - a. obtains written acknowledgement by the City that Manitoba Building Code Division C - 2.2.2.3. and 2.2.7.2., the Winnipeg Electrical By-law Subrule 2-000(1) and the Winnipeg Building By-law 4555/87 subsection 5.1 do not apply to the project, and
 - b. indicates on his or her drawings that he/she does not intend to be involved in construction reviews

Please note: The fact that the City has acknowledged that periodic reviews are not required for its purposes does not relieve the professional from any construction reviews that may be required by professional regulatory bodies or client contracts.

By affixing my seal, I am representing that:

- I am fully aware of the provisions of the Manitoba Building Code, the Manitoba Energy Code for Buildings and the Winnipeg Electrical By-law that are applicable to these plans and drawings;
- I have applied a professional standard of care to ensure compliance of these plans and drawings with the applicable provisions of the Manitoba Building Code, the Manitoba Energy Code for Buildings and the Winnipeg Electrical By-law.

Affix seal with signature and date