The City of Winnipeg

THE WINNIPEG ELECTRICAL BY-LAW

BY-LAW NO. 36/2003

A By-law of THE CITY OF WINNIPEG adopting and varying the 2002 Canadian Electrical Code.

THE CITY OF WINNIPEG, in Council assembled, enacts as follows:

Title

1. This By-law shall be referred to as "The Winnipeg Electrical By-law".

Definitions

2. In this By-law:

"Code" means the 2002 Canadian Electrical Code, Part I, Nineteenth Edition, C22.1-02, Safety Standard for Electrical Installations adopted by this By-law or a subsequent and similar Code adopting by this By-law.

"Designated employee" means the Manager of Development and Inspections of the Planning, Property and Development Department of the City of Winnipeg and any employee of the City to whom he or she has delegated authority to administer or enforce all or part of this Code.

Adoption of Canadian Electrical Code

3(1) Except as varied by this By-law, the 2002 Canadian Electrical Code, Part I, Nineteenth Edition, C22.1-02, Safety Standard for Electrical Installations published by the Canadian Standards Association is hereby adopted as part of this By-law, and a violation or contravention of the Code is a violation or contravention of this By-law.

3(2) Where in this By-law reference is made to a Rule or Section number, the reference shall be understood to mean that rule or section in the Code.

3(3) In the event of any conflict, explicit or implied, between any rule or procedure set out in the Code and the provisions of this by-law, the provisions of this by-law shall prevail.

Application

4 No electrical wiring or electrical apparatus shall be installed nor electrical current used except as provided in this By-law.

Authority

5(1) Designated employees may conduct inspections and take steps to administer and enforce this By-law or remedy a contravention of this By-law in accordance with *The City of Winnipeg Charter* and, for those purposes, have the powers of a "designated employee" under *The City of Winnipeg Charter*.

5(2) The details of any construction which are not specifically dealt within this By-law shall be performed to the satisfaction of a designated employee.

5(3) Designated employees are hereby authorized to determine whether equipment, techniques, conditions, circumstances and all other matters meet the standards and requirements of this By-law or are otherwise acceptable and, where in this By-law such terms as "proper", "adequate", "sufficient", "ample", "suitable", "substantial", "secure", "necessary", "dangerous" and the like or derivatives thereof, are used, they mean "proper", "adequate", "sufficient", "ample", "suitable", "substantial", "secure", "necessary", "dangerous" to the satisfaction or in the opinion of the designated employee, and such terms as "where practicable", "where required", "as far as possible" shall have a like significance.

Authority to conduct certain Electrical Inspections

6. Electrical inspections of one and two family dwellings, row housing and related structures and equipment may be carried out by inspectors who are employed by the City of Winnipeg and who

(a) hold an electrician's journeyperson Licence; or

(b) have successfully completed an inspection training program provided by

(i) the City of Winnipeg

(ii) an educational institution approved by the Manager of Development and Inspections; or

(iii) a building code development, training and certification organization with a course content approved for the purpose of this section by the Manager of Development and Inspections.

Variations to the Code

7. The Code is varied by the provisions of Appendix "A" to this By-law, which is hereby incorporated into and forms part of this By-law.

Repeal of By-laws No. 7372/99 and No. 7436/99

8. By-law No. 7372/99 and By-law No. 7436/99 are hereby repealed.

Coming into effect

9. This By-law comes into effect on April 1, 2003.

SCHEDULE "A"
TO THE WINNIPEG ELECTRICAL BY-LAW
NO. 36/2003

The 2002 Canadian Electrical Code, Part I, Nineteenth Edition, C22.1-02, Safety Standard for Electrical Installations published by the Canadian Standards Association and adopted by the Winnipeg Electrical By-law No. **36/2003** is varied as follows:

Variations to Section 0 of the Code
Object, Scope and Definitions

Definitions

1 Section 0 is varied by:

(a) striking out the following definitions:
Acceptable
Approved
Electrical Contractor
Inspection Department .

(b) adding the following definitions in alphabetical order:

Acceptable means acceptable to a designated employee.

"approved", when used with reference to any electrical equipment means:

(a) that the equipment has been certified by an accredited certification organization as
(i) meeting CSA standards or,
(ii) where CSA Standards do not exist or are not applicable, other recognized standards; or

(b) that the equipment
(i) has been approved by the Minister of Labour of the Province of Manitoba or the Chief Electrical Inspector of the Manitoba Hydro and
(ii) is acceptable to the designated employee; or

(c) that the designated employee has determined it to be acceptable after carrying out a special inspection of the equipment.

"City" means the City of Winnipeg.

"construction" means the installation of electrical equipment in or about any building or premises and includes all electrical equipment installed;

"designated employee" means the Manager of Development and Inspections of the Planning, Property and Development Department of the City of Winnipeg and any employee of the City to whom he or she has delegated authority to administer or enforce all or part of this Code;

"electrical contractor" means an individual to whom an Electrical Contractor's Licence has been issued.

"examining committee" means the committee established pursuant to Rule 2-006(5).

"inspection department" means the Electrical Section of the Commercial Inspections Branch and the Housing Inspections Branch of the Development and Inspections Division of the Planning, Property and Development Department of the City of Winnipeg.

"licence" means an electrical contractor's licence as provided for in this Code.

"owner" means a person or the agent, servant or employee of a person who owns, manages or is in possession of land or a building to which this By-law applies, or who is in receipt of the whole or a part of any rents or profits therefrom, whether the rents and profits are received on the person's own account, or as agent or trustee for another person.

"person" includes an individual, corporation, partnership, firm or entity.

"structure" means anything constructed or erected with a fixed location on or in the ground or attached to something having a fixed location on the ground and includes but is not limited to buildings, walls, fences, signs, billboards, poster panels, light standards, and swimming pools.

Variations to Section 2 of the Code
General Rules

2 Section 2 is varied by striking out Rules 2-000 to 2-032 and substituting the following:

Administrative

2-000 Duty of Owner Regarding Design and Inspection
The owner shall appoint a Professional Engineer entitled to practice in the Province of Manitoba to be responsible for the preparation of electrical drawings, supervision of the electrical installation and certification that the installation has been installed in accordance with the applicable by-laws, on the following types of electrical installations:

(a) High Voltage;

(b) High buildings as defined by Subsection 3.2.6. of the Manitoba Building Code;

(c) Buildings where the electrical service requirements exceed 750 KVA;

(d) Power factor correction of electrical installations, other than individual motor applications; and

(e) Any other type of installation where it is deemed necessary in the opinion of the Designated employee.

2-002 Engineer's Responsibility
(1) Where in the opinion of a designated employee, the character of the proposed construction requires technical knowledge for the preparation of drawings and specifications, as provided in Rule 2-000, the drawings and specifications shall be prepared and the construction inspected and certified by a Professional Engineer entitled to practice in the Province of Manitoba.

(2) Before a Building Permit or, where a Building Permit is not required, an Electrical Permit is issued, the responsible Professional Engineer shall submit a certificate to the designated employee stating his/her responsibility for the preparation of drawings and specifications and

for the inspection of construction to ensure conformity with the accepted plans and specifications and the applicable Sections of the By-law.

(3) Before a Building Occupancy Permit is issued or, where a Building Occupancy Permit is not required, upon completion of the construction, the responsible Professional Engineer shall submit a certificate stating:

"I hereby certify that I have inspected the construction of the electrical facilities on the subject project and that, to the best of my knowledge, the electrical facilities of this project were constructed in accordance with the accepted plans and specifications and the requirements of the Winnipeg Electrical By-law and the Winnipeg Building By-law."

(4) The responsible Professional Engineer shall sign and seal all the documents referred to in this Rule.

2-004 Electrical Permit

(1) No person shall commence electrical construction or permit commencement of electrical construction until an electrical permit for the construction has been issued by the designated employee and no construction, connection, reconnection, alteration, repair or extension of any electrical installation may take place prior to an electrical permit being issued by the Designated employee for that construction.

(2) A Designated employee shall issue an electrical permit only

(a) to a person who holds an Electrical Contractor's Licence authorizing him to carry on his occupation, trade or business in the City of Winnipeg; or

(b) to an individual to do construction on a single dwelling owned by him or her and occupied by him or her as his domestic domicile provided that he or she has satisfied a designated employee that he or she is competent to perform such construction; or

(c) to an individual to do construction on a single dwelling owned by him or her which will be occupied by him or her upon completion as his domestic domicile provided that he or she has satisfied a designated employee that he or she is competent to perform such construction.

(3) An electrical permit expires if construction is not commenced within six months from the date of issue of the permit and is not reasonably continued without interruption thereafter.

(4) A permit is void and all rights under the permit are terminated if the negotiable instrument used for payment of the permit fee is returned for any reason.

(5) All construction being carried out under an electrical permit issued prior to the effective date of this By-law shall:

(a) be completed in accordance with the previous By-law requirements and any special conditions described on the electrical permit and approved plans; and

(b) proceed at a satisfactory rate in the opinion of a designated employee.

(6) If the requirements set out in Sub-rule (5) are not met, a designated employee may cancel the electrical permit, in which case,

(a) a new electrical permit shall be obtained before construction may be continued and

(b) all construction undertaken under the authority of the new permit shall comply with the provisions of this By-law.

2-006 Electrical Contractor's Licences

(1) Except for a homeowner who has obtained a permit under paragraphs (b) or (c) of Rule 2-004(2), no person may place, install, maintain, repair or replace any electrical equipment in the City of Winnipeg unless the person is operating under the authority of an Electrical Contractor's Licence issued under this By-law.

(2) An Electrical Contractor's Licence may only be issued to an individual; in order for a corporation, partnership, governmental department or some other legal entity to operate as an Electrical Contractor, an employee or officer of the entity shall obtain for an Electrical Contractor's Licence on behalf of the entity.

(3) An individual applying for a licence, whether on his or her own behalf or on behalf of a legal entity, shall satisfy the licensing requirements and pay the established licensing and examination fees before being issued a licence.

(4) The holder of a licence or an agent authorized in writing to do so on behalf of the licence holder is eligible to obtain permits to perform electrical construction within the scope of the licence as follows:

(a) The holder of an Electrical Contractor's Licence "A" may obtain permits for any electrical construction governed by City of Winnipeg By-laws and The Electricians' Licence Act; and

(b) The holder of an Electrical Contractor's Licence "B" may obtain permits to install and maintain electrical facilities in premises owned, leased or managed by the corporation, firm, company or government department on behalf of whom the Licence is held as permitted by City of Winnipeg By-laws and The Electricians' Licence Act; and

(c) The holder of an Electrical Contractor's Licence "C" may obtain permits for limited electrical construction as authorized by the Limited Specialized Trade Electrician's Licence issued under The Electricians' Licence Act, and City of Winnipeg By-laws; and

(d) The holder of an Electrical Contractor's Licence "D" may obtain permits to install and maintain electrical facilities on premises regulated by the Canada Electrical Safety Regulations of the Canada Labour Code.

(5) In order to obtain a licence, an individual shall meet the following requirements:

(a) To qualify for an Electrical Contractor's Licence "A" the applicant shall:

(i) hold a valid, current Journeyman's Electrician's Licence as required by The Electrician's Licence Act of the Province of Manitoba; and

(ii) have passed an examination set out by the Examining Committee;

(b) To qualify for an Electrical Contractor's Licence "B", the applicant shall:

(i) hold a valid, current Journeyman Electrician's Licence as required by The Electrician's Licence Act of the Province of Manitoba; and

(ii) have passed an examination set out by the Examining Committee;

(c) To qualify for an Electrical Contractor's Licence "C", the applicant shall:

(i) hold a limited specialized trade electrician's Licence, issued under The Electrician's Licence Act of the Province of Manitoba; and

(ii) have passed an examination set out by the Examining Committee;

(d) To qualify for an Electrical Contractor's Licence "D", the applicant shall be a qualified person, as defined in the Electrical Safety Regulations of the Canada Labour Code.

(6) An Examining Committee consisting of the designated employee, a representative appointed by the Electrical Contractor's Association of Manitoba and another individual appointed by the designated employee is hereby established with responsibility to:

(a) prescribe the subjects on which candidates for the Electrical Contractor's Licence shall be examined;

(b) prepare, organize and conduct or supervise the examination of the candidates; and

(c) report on the results of the examinations to the designated employee.

(7) Every licence holder is responsible for construction carried out under the authority of a permit issued to him or her and, where an individual holds a licence on behalf of a corporation, partnership, governmental department or some other legal entity, the licence holder is responsible and may be prosecuted under this By-law for the activities of all individuals operating under that licence.

(8) Where it appears that a licence holder may have violated any provisions of this By-law or that construction carried on under the authority of a licence holder fails to meet the standards and requirements set out in this Code, the designated employee may hold a hearing to investigate the matter and may revoke or suspend any licence as a result of the hearing.

(9) Notwithstanding sub-rule (7), the designated employee may immediately suspend a licence for a period of up to 30 days where it appears that the licence holder has violated this By-law in a way that endangers the life or health of an individual or endangers property but the designated employee must reinstate the licence after 30 days unless a hearing to investigate the matter provides justification to further suspend or to revoke the licence.

(10) Licences may not be transferred, sold or assigned.

(11) A licence terminates on December 31 of each year and is renewable.

(12) A penalty equal to the amount of the licence fee shall be charged in addition to the licence fee where an application to renew a licence or payment for the renewal of a licence is received later than January 1 in any year.

(13) Where an individual is unlicenced for more than 12 months, he or she must re-qualify for a licence under Sub-rule (4).

(14) The examination fee and annual fee for the Electrical Contractor's Licence are set out in the Development Fees By-law.

2-008 Electrical Permit Fees

The electrical permit fees are set out in the Development Fees By-law.

2-010 Special Requirements

Requirements and standards in this Code that apply to particular types of installations are in addition to general requirements and standards in this Code and, in the event of a conflict between them, the requirements and standards that apply to particular types of installations shall prevail.

2-012 Inspection

An electrical contractor is responsible for notifying the inspection department when construction is ready for inspection and shall do so at such time or times as will permit inspection being made before any construction or portion thereof is concealed.

2-014 Plans and Specifications

(1) No construction may begin on

(a) wiring installations of public buildings, industrial establishments, factories, and other buildings in which public safety is involved; or

(b) large light and power installations and the installation of apparatus such as generators, transformers, switchboards, large storage batteries, etc.; or

(c) other installations specified by the designated employee

until the designated employee has reviewed and accepted plans and specifications for the construction.

(2) The owner is responsible for submitting the plans and specifications referred to in Sub-rule (1) in quantities required by the designated employee.

2-016 Connection

(1) No electrical installation, extension, alteration, or addition shall be connected or reconnected to any service or other source of electrical energy by a supply authority, electrical contractor, or other person, until the designated employee has issued an electrical permit and given authorization to make such connection or reconnection.

(2) Sub-rule (1) does not apply to Manitoba Hydro when it reconnects electrical power to a location where the service has been cut off for non-payment of bills or a change of occupant, provided there have been no alterations or additions to the installation subsequent to the last authorization.

2-018 Re-Inspection

The designated employee may re-inspect any installation if and when he or she considers such action to be necessary.

2-020 Use of Approved Equipment

(1) Electrical equipment used in electrical installations shall be approved, and shall be of a kind or type and rating approved for the specific purpose for which it is to be employed.

(2) Unapproved electrical equipment shall not be connected until approved.

2-022 Special Acceptance Inspection
The designated employee may undertake a special acceptance inspection of electrical equipment

(a) that is not a regular line of manufacture,

(b) that is built to a customer's specification,

(c) that is manufactured or produced singly or in small quantities, or

(d) in other circumstances

if warranted in the opinion of the designated employee.

2-024 Availability of Construction for Inspection
No electrical construction may be rendered inaccessible by lathing, boarding, or other building construction until it has been inspected and approved by a designated employee.

2-026 Withdrawal of Approval (See Appendix B)
The designated employee may withdraw approval of electrical equipment at any time if

(a) the equipment is of lesser quality than the sample on which approval was based;

(b) the conditions of use indicate that the equipment is not suitable; or

(c) the terms of the approval agreement are not being carried out.

2-028 Damage and Interference with Electrical Equipment

(1) No person shall damage any electrical installation or a component of an electrical installation.

(2) Unless prior permission has been obtained from the designated employee, no person shall cut, break or interfere with any lock or seal that has been placed on any electrical equipment by or at the direction of the designated employee.

(3) No person shall interfere with any electrical installation or component of an electrical installation except when, in the course of alterations or repairs to non-electrical equipment or structures, it is necessary to disconnect or move components of an electrical

installation, it which case it is the responsibility of the person carrying out the alterations or repairs to ensure that the electrical installation is restored to a safe operating condition as soon as the progress of the alterations or repairs will permit.

2-030 Deviations or postponements

The designated employee may grant special permission to deviate from or postpone compliance with the requirements and standards of this Code where the deviation or postponement will not, in the opinion of the designated employee, jeopardize the safety of people or property and will permit substantial compliance with the objects of the requirement or standard, but such permission applies solely to the specific installation and circumstances for which it is granted.

2-032 Role of the Designated Employee

(1) The designated employee is responsible for the administration and enforcement of this By-law and for these purposes he or she and all individuals to whom he or she has delegated authority to administer or enforce all or part of this Code have all the powers of a "designated employee" under The City of Winnipeg Charter.

(2) An order requiring that construction be stopped on a project shall set out the conditions under which the construction may be resumed.

(3) The designated employee shall accept any construction or condition that lawfully existed prior to the effective date of this By-law, so long as the construction or condition does not constitute an unsafe condition.

(11) The designated employee may refuse to issue an electrical permit or permits:

(a) whenever information submitted is inadequate to determine compliance with the provision of this By-law; or

(b) whenever incorrect information is submitted; or

(c) to any person who has failed to pay any fee or payment due and owing to the City of Winnipeg under this By-law; or

(d) if a violation of another By-law, standard, act or regulation could result from the electrical construction permitted by it; or

(e) if, in the case of an addition, alteration, repair or extension to any wiring system, in, on or through any building or place, the existing wiring is not in accordance with the provisions of this By-law.

(12) The designated employee may cancel any electrical permit if:

(a) in the opinion of the designated employee, the privileges granted by that permit are being misused; or

(b) any condition under which the permit was issued is not being observed; or

(c) the permit was issued in error; or

(d) the permit was issued on the basis of incorrect information; or

(e) in the opinion of the designated employee, the electrical construction is not proceeding at a satisfactory rate.

2-034 Duties of the Owner

(1) Every owner shall make or have made at his own expense such tests or inspections as are necessary to satisfy the designated employee that the equipment or action proposed complies with this By-law.

(2) When required by the designated employee, every owner shall uncover and replace at his own expense any construction that has been covered contrary to an order issued by the designated employee.

(3) The owner shall maintain the electrical facilities associated with the property in a safe condition.

(4) When the electrical facilities on a property are in an unsafe condition, the owner shall immediately take all necessary action to put the building electrical facilities in a safe condition.

(5) The owner shall maintain in good working order all safeguards or devices that are required to be installed in the building by the Winnipeg Building By-law or this Code.

(6) Every owner shall ensure that no unsafe condition exists or will exist because of the work being undertaken and not completed, should occupancy exist or occur prior to the completion of any work being undertaking that requires a permit.

(7) When a "stop work" order is issued by a designated employee, the owner shall ensure that the person or persons to whom it is directed shall stop construction immediately, except for the installation or erection of covers or guards so as to be able to maintain the site in a safe condition.

(8) When required by the designated employee, every owner shall provide a letter to certify compliance with the requirements of this By-law and of any permits required.

(9) An owner shall ensure that that electrical installations on his or her premises are not overloaded, defective or being misused.

(10) An owner shall remove or cause to be removed from the premises

(a) unsafe electrical appliances or wiring;

(b) dead or unused electrical wires or equipment that are or may become a hazard.

(11) An owner shall comply with orders made by a designated employee.

2-036 Duties of the Electrical Contractor

(1) Every electrical contractor shall ensure that all construction safety requirements of this By-law are complied with.

(2) Every electrical contractor shall ensure that all construction is carried out in accordance with this By-law and all provisions as described on the permit and accepted drawings.

(3) Every electrical contractor shall give notice to a designated employee:

(a) of intent to do construction that has been ordered to be inspected during construction;

(b) of intent to cover construction that has been ordered to be inspected prior to covering; and

(c) when construction has been completed so that a final inspection can be made.

(4) Every electrical contractor is jointly and severally responsible with the owner for any construction actually undertaken.

(5) When required by the designated employee, the electrical contractor shall provide a statutory declaration that the electrical installation was constructed in accordance to the accepted plans, specifications and requirements of the Winnipeg Electrical By-law and the Winnipeg Building By-law.

(6) When a "stop work" order is issued by a designated employee, an electrical contractor shall ensure that the construction ceases immediately, except for the installation or erection of covers or guards so as to be able to maintain the site in a safe condition.

(7) An electrical contractor shall comply with orders made by a designated employee.

2-038 Service of orders and other documents

Orders to remedy a contravention of this By-law or a decision made by the designated employee shall be served in accordance with The City of Winnipeg Charter and, where an address for sending an order or decision is required, one of the following shall be used:

(a) if the person to be served is the owner of real property, the address maintained by the tax collector for the purpose of issuing the tax notice for that property; and

(b) if the person to be served is the occupant of real property, the street address for that property; and

(c) if the document to be served relates to a permit, licence or other document for which the person to be served has applied, the address provided by the person in the application.

2-040 Appeals

An appeal from an order to remedy a contravention of this By-law or a decision made by the designated employee may be made to the Standing Policy Committee on Property and Development in accordance with The City of Winnipeg Charter.

Variations to Section 6 of the Code

Services and Service Equipment
Metering Equipment

6-400 Metering Equipment

3 Section 6 of the Code is varied by renumbering the present Rule 6-400 as Rule 6-400(1) and by adding the following Sub-rule immediately after it:

(2) For determining the type of metering equipment required by the Supply Authority, reference shall be made to Supply Authority Metering Standards which shall be amendatory or additional to Rules 6-402 to 6-412 inclusive.

Variations to Section 10 of the Code

Grounding and Bonding
Grounding Electrodes

10-702 Artificial Grounding Electrodes

4 Section 10 of the Code is varied by striking out Sub-rule 10-702(3), paragraph (a) and substituting the following:

(3) (a) Be copper clad, not less the 15.8mm in diameter; and

10-804 Grounding and Bonding Conductors

5 Section 10 of the Code is varied by striking out Rule 10-804, paragraph (d), subparagraph (iii) and substituting the following:

(d) (iii) Is installed outdoors to supply receptacles for parking stalls.

Variations to Section 12 of the Code

Wiring Methods
Exposed Wiring on Exteriors of Buildings and Between Buildings on the Same Premises

12-300 Exterior Exposed Wiring Rules

6 Section 12 of the Code is varied by: renumbering the existing Rule 12-300 as Rule 12-300(1) and by adding the following sub-rule immediately after it:

(2) Exposed overhead wiring on the exteriors of buildings and between buildings or structures on the same premises shall not be permitted, except by special permission from the designated employee.

Cable Trays

12-2208 Provisions for Bonding

7 Section 12 of the Code is varied by striking out su-rules 12-2208(1) and (2) and substituting the following:

(1) Metal cable trays shall be adequately bonded at intervals not exceeding 15 m and the size of bonding conductors shall be based on the maximum rating or setting of an overcurrent device in the circuits carried by the cable tray in accordance with the requirements of Rule 10-814.

Variations to Section 22 of the Code

Locations in which Corrosive Liquids or Vapours Or Excessive Moisture are Likely to be Present

8 Section 22 of the Code is varied by adding the following sub-section after subsection 22-600:

Sewage Lift and Treatment Plants

22-700 Scope

(1) Rules 22-702 to 22-710, both inclusive, apply to the installation of electrical facilities in:

(a) Sewage Lift and Pumping Stations; and

(b) Primary and Secondary Sewage Treatment Plants.

22-702 Definitions

(1) **"Dry well"** means a below-ground location which is isolated from a wet well location so as to prevent the migration of gases and vapours into the dry well.

(2) **"Continuous Positive Pressure Ventilation"** means a ventilation system capable of maintaining a positive pressure in a room or area and changing the air in the room or area at least 6 times an hour with means for detecting ventilation failure.

(3) **"Suitably cut off"** means that an area is cut off from adjoining areas with no communication such as doors, windows or ventilation grills between the areas.

(4) **"Wet well"** means a below-ground location into which the raw sewage is collected prior to passing through the lift pumps or being processed in a treatment plant.

22-704 Classification of Areas (see Appendix B)

(1) Except as permitted by paragraph (c) of Sub-rule 3 of this Rule, all below-ground locations suitably cut off from locations in which sewage gases shall be classified Category 1.

(2) All locations in which sewage gases are present shall be classified Category 2.

(3) The following areas shall be permitted to be classified as ordinary locations:

(a) All locations suitably cut off from a Category 2 location and not classified as a Category 1 location; and

(b) All locations not suitably cut off from a Category 2 location but with adequate continuous positive pressure ventilation; and

(c) Below-ground dry well locations where adequate heating and ventilation is installed.

22-706 Wiring Method

(1) Wiring methods in a Category 1 or a dry Category 2 location shall be in accordance with the applicable requirements of the Code.

(2) Wiring methods in a wet or damp Category 2 location shall be in accordance with the applicable requirements of this Code except that:

(a) Rigid steel conduit and electrical metallic tubing shall not be used;

(b) Mineral insulated cable and aluminium sheathed cable shall be permitted to be used provided it is spaced from walls at least 12 mm, the cable has a corrosion resistant jacket and the cable connectors are suitably sealed from the corrosive atmosphere;

(c) Liquid tight flexible metal conduit shall be permitted to be used where permitted in accordance with Rule 12-1300, provided connectors suitable for the location are used; and

(d) Grounding conductors shall be insulated or otherwise protected from corrosion and the point of connection to ground, if exposed to a corrosive atmosphere, shall be protected from corrosion by a suitable sealant.

22-708 Electrical Equipment

(1) Electrical equipment installed in a Category 1 or a dry Category 2 location shall be in accordance with the applicable requirements of the Code.

(2) Electrical equipment installed in a wet or damp Category 2 location shall be in accordance with the applicable requirements of the Code except that:

(a) Receptacles shall be fitted with self-closing covers, and if, of the duplex type, have individual covers over each half of the receptacle;

(b) Lighting switches shall have weatherproof covers;

(c) Lighting fixtures shall be totally enclosed;

(d) Unit emergency lighting equipment and emergency lighting control units with the exception of remote lamps, shall not be located in such locations;

(e) Heating equipment shall be approved for such locations or installed outside the corrosive location;

(f) Motors shall be totally enclosed, fan cooled and shall not incorporate dissimilar metals relative to the motor frame and connection box; and

(g) Electrical equipment in wet well areas shall not contain devices which will cause an open arc or spark during normal operation.

22-710 Grounding of Structural Steel

Below ground structural steel in contact with the surrounding earth shall be bonded to the system ground.

Variations to Section 26 of the Code

Installation of Electrical Equipment
General

26-008 Sprinklered Equipment

9 Section 26 of the Code is varied by striking out Rule 26-008 and substituting the following:

Electrical service and distribution equipment with ventilation openings located in sprinklered buildings or spaces shall be protected where needed by non-combustible hoods or shields so arranged as to minimize interference with the sprinkler equipment.

Receptacles

26-700 General

10 Section 26 of the Code is varied by

(a) striking out sub-rule 26-700(11) and substituting the following**:**

(11) Except for receptacles installed in accordance with Rule 26-710(h), receptacles located within 2 metres of washbasins in bathrooms and washrooms or located with 3 metres of bathtubs or shower stalls, shall be protected by a ground fault circuit interrupter of the Class A type.

(b) adding the following sub-rule to rule 26-700:

(12) Where a sump pump is required by the Winnipeg Building By-law for the control of water from a subsurface drainage (weeping tile) system:

(a) A receptacle shall be installed for the connection of the sump pump; and

(b) The receptacle for the sump pump shall be supplied from a branch circuit that supplies no other outlets or equipment.

Receptacles in Residential Occupancies

26-714 Receptacles in Single Dwellings

11 Section 26 of the Code is varied by striking out paragraph 26-714(c) and substituting the following**:**

(c) At least one receptacle shall be provided for each driveway and each car space in a garage or carport of a single dwelling.

Variations to Section 30 of the Code

Installation of Lighting Equipment
Luminaires in Buildings of Residential Occupancy

30-504 Stairways

12 Section 30 of the Code is varied by adding the following Sub-rule to Rule 30-504:

(4) Notwithstanding Sub-rule (3) and Appendix G, provision for 3-way switches shall be installed for stairway lighting to basements.

30-510 Garages and Carports

13 Section 30 of the Code is varied by striking out Sub-rule 30-510(3) and substituting the following:

(3) Where the luminaire required in Sub-rule (1) is ceiling mounted above an area not normally occupied by a parked car, or is wall mounted, a luminaire with a built-in switch accessible to an adult of average height is permitted to be used.

Variations to Section 36 of the Code

High Voltage Installations
General

36-006 Warning Notices

14 Section 36 of the Code is varied by adding the following paragraph to Sub-rule 36-006(1):

(e) on all fences guarding stations

(i) on all gates; and

(ii) at intervals of not more than 15 m of horizontal distance; and

(iii) 1.5 meters above finished grade; and

(iv) in a manner that is visible on all sides.

Variations to Section 46 of the Code

Emergency Systems, Unit Equipment, and Exit Signs
General

46-108 Method of Wiring

15 Section 46 of the Code is varied by deleting Sub-rule 46-108(2) and substituting the following:

(2) Conductors installed in buildings of combustible construction in accordance with the Rules of Section 12 shall be:

(a) Non-metallic Sheathed cable; or

(b) Installed in totally enclosed non-metallic raceway.

Variations to Section 60 of the Code

Electrical Communication Systems
Outside Conductors

60-500 Overhead Conductors on Poles

16 Section 60 of the Code is varied by renumbering Rule 60-500 as Sub-rule 60-500(1) and adding the following Sub-rule immediately after it:

(2) Exposed overhead wiring on the exteriors of buildings and between buildings or structures on the same premises shall not be permitted, except by special permission from the designated employee.

Variations to Section 68 of the Code

Pools, Tubs and Spas
Hydromassage Bathtubs

68-302 Control

17 Section 68 of the Code is varied by adding the following Sub-rule (3) to Rule 68-302:

(3) Subject to Sub-rule (2) and not withstanding Sub-rule 68-068(6), ground fault circuit interrupters shall be permitted to be closer to the hydromassage tub than 3 metres but not less than 1.5 metres from the hydromassage tub wall.

Variations to Section 72 of the Code

Mobile Home and Recreational Vehicle Parks

72-110 Connection Facilities for Recreational Vehicles and Mobile Homes

18 Section 72 of the Code is varied by striking out Sub-rule (4) of Rule 72-110 and substituting the following:

(4) The receptacle described in Sub-rule (1), Paragraphs (a) or (b) shall be protected by a ground fault circuit interrupter of the Class A type.

Variations to Section 76 of the Code

Temporary Wiring

19 Section 76 of the Code is varied by deleting Rule 76-008 and substituting the following:

76-008 Service Entrance Equipment

(1) Service entrance equipment shall be permitted to be in a temporary building adjacent to the construction or demolition site but if such a building is not available the equipment shall be:

(a) Accessible to authorized persons only; and

(b) Capable of being locked; and

(c) Protected against the weather and mechanical damage.

(2) If not in or on a building, the temporary service shall be mounted:

(a) On a pole, or solid wood post measuring at least 89 mm X 140 mm nominal and adequately braced for services not exceeding 200 amperes; or

(b) On a substantial pole structure for services exceeding 200 amperes; or

(c) On an adequately braced post for services supplied from underground distribution.

Variations to Appendix B of the Code

20 Section 22 of Appendix B of the Code is varied by adding the following:

22-704 Sewage Lift and Treatment Plants

(a) Diagrams 11, 12, 13 and 14 detail typical installations and area classifications for sewage lift and treatment plants.

(b) Sewage lift and treatment plants produce a combination of conditions which may require specialized attention to the electrical installation. The wet well area normally contains an atmosphere of high humidity and corrosive hydrogen sulphide vapours. Abnormal hazardous conditions may occur in the west wells due to spills of chemicals, gasoline or other volatile liquids into the sewer system.

(c) An extreme hazard to personnel working in wet wells exists because of the presence of sewer gas (hydrogen sulphide). This gas is treacherous as the ability to sense it by smell is quickly lost. If a person ignores first notice of the gas, his sense will give him no further warning. If the concentration is high enough, unconsciousness and death may result.

(d) Before working in wet well locations, the air in the wet well area should be purged and ventilation with fresh air should be continued while working in the area.

Variations to the Diagram Section of The Code

21 The section in the Code on Diagrams is varied by adding the following diagrams 11, 12, 13, 14:

DIAGRAM 11
Typical Sewage Lift Station (Self-Contained)

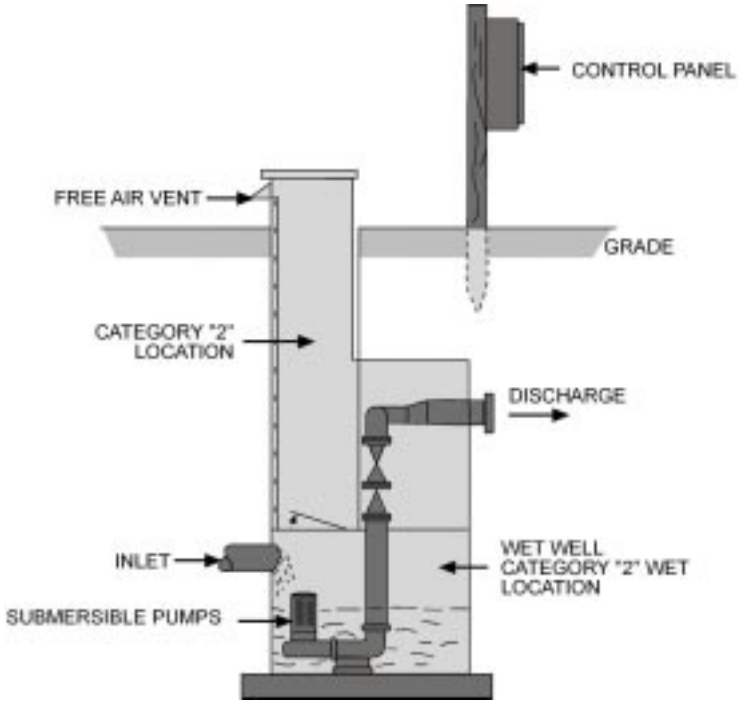


Diagram 12
Typical Sewage Lift Station
(Control Building on top of wet well)

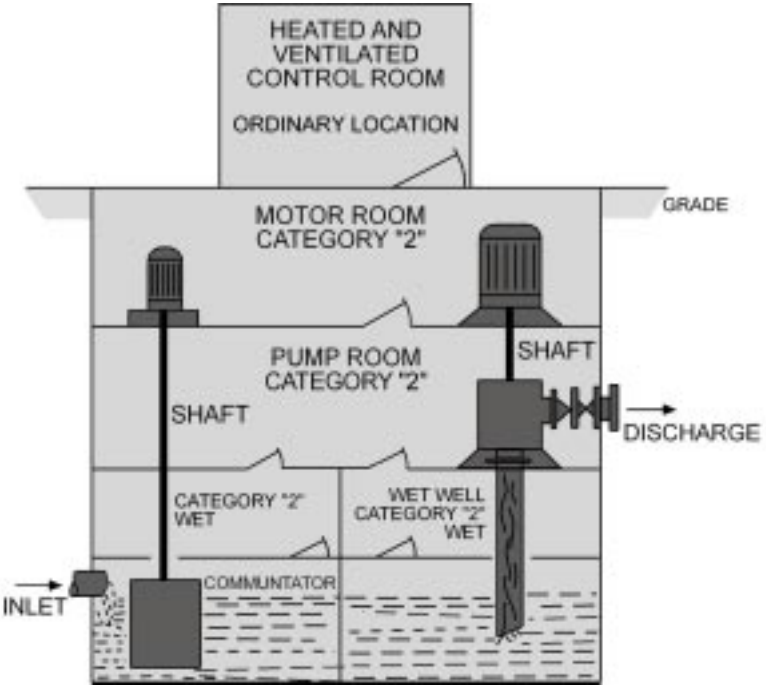


Diagram 13
Typical Sewage Lift Station
(Side-by-Side)

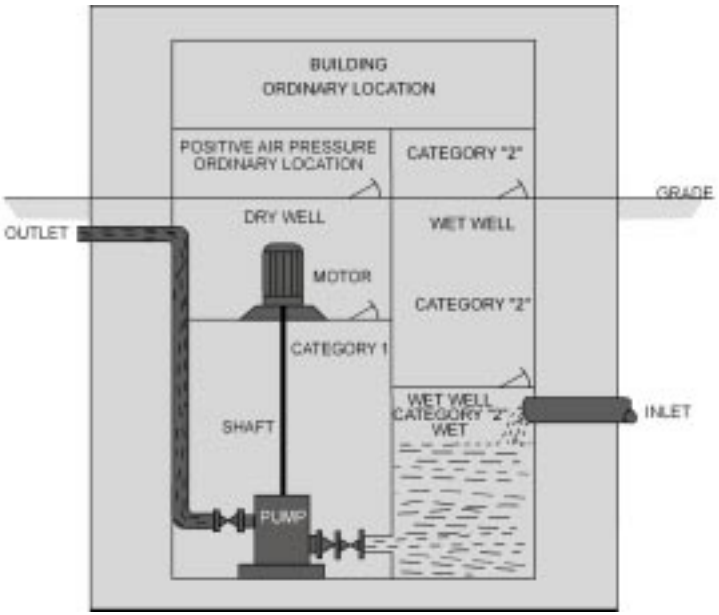
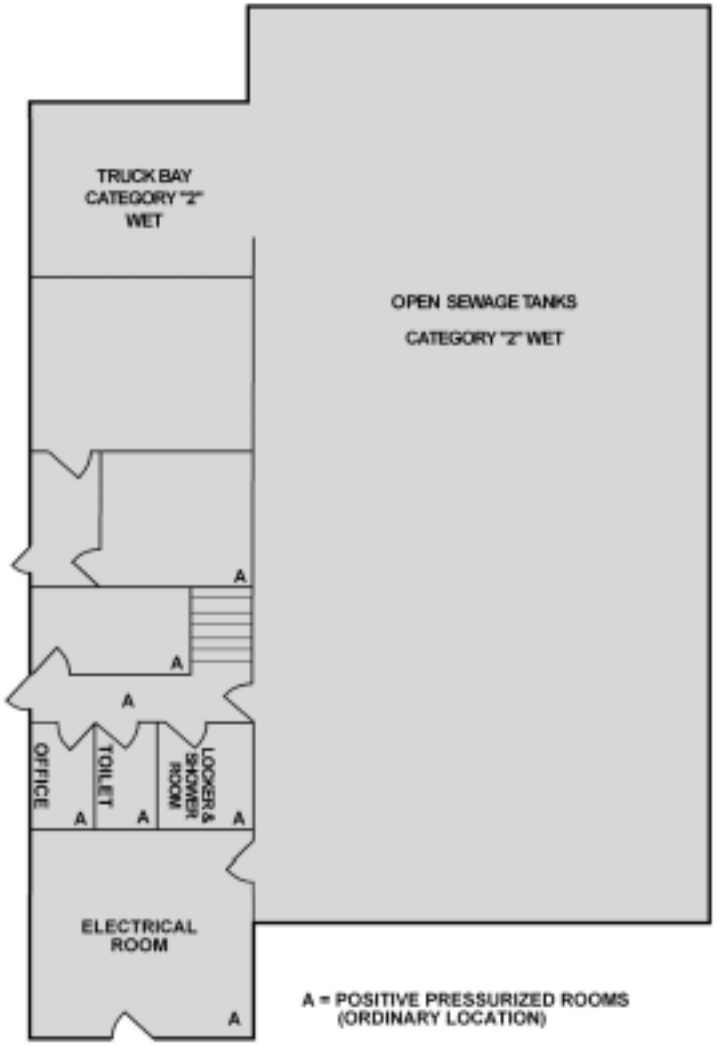


Diagram 14
Typical Sewage Treatment Plant



DONE AND PASSED in Council assembled this
____ day of _____ A.D., 2003.

_____
Mayor

_____
City Clerk

Approved as to content:

.....
Director of Planning, Property
and Development

Certified as to form:

.....
for City Solicitor/
Manager of Legal Services



Planning, Property & Development Department

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