



MASTER ELECTRICIAN EXAM KIT 2021



**Safety
Codes
Council**

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Province of Alberta

SAFETY CODES ACT

ADMINISTRATIVE ITEMS REGULATION

Alberta Regulation 16/2004

With amendments up to and including Alberta Regulation 261/2020

Current as of March 15, 2021

Office Consolidation

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(Consolidated up to 261/2020)

ALBERTA REGULATION 16/2004

Safety Codes Act

ADMINISTRATIVE ITEMS REGULATION

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Interpretation

1 In this Regulation,

(a) “Act” means the *Safety Codes Act*;

- (b) repealed AR 53/2016 s2;
 - (c) repealed AR 261/2020 s2;
 - (d) repealed AR 261/2020 s2;
 - (e) “Fire Commissioner” means the Fire Commissioner employed by the Government within the Department of Municipal Affairs;
 - (e.1) “fire service organization” means a fire service organization as defined in the *Municipal Government Act*;
 - (f) “plans” include drawings;
 - (g) repealed AR 53/2016 s2;
 - (h) repealed AR 53/2016 s2.
- AR 16/2004 s1;35/2007;68/2008;170/2012;53/2016;261/2020

General

2 Repealed AR 53/2016 s3.

Safety codes officer identification

3 For the purposes of section 34(3) of the Act, the Administrator shall, in a form satisfactory to the Administrator, provide an identification card to every safety codes officer designated under section 31 of the Act.

AR 16/2004 s3;261/2020

Safety codes officer probationary certification

4(1) On receipt of an application for designation as a safety codes officer, an Administrator who is authorized to issue certificates of competency and to designate the powers that a safety codes officer may exercise may issue a probationary certificate of competency to the applicant if

- (a) the Administrator believes that the applicant’s training and experience are adequate to enable the applicant to function adequately as a safety codes officer in a specific discipline, or
- (b) the applicant has partial qualifications and is diligently undertaking the process of completing qualifications to permit a certificate of competency to be issued.

(2) The Administrator shall not include authorization to exercise the powers under section 49 of the Act in a designation of powers for a safety codes officer who holds a probationary certificate of competency.

(3) A probationary certificate of competency must contain an expiry date.

Service of orders and notices

5(1) An order issued, confirmed, revoked or varied under the Act and a written notice required by the Act to be issued must be served

(a) in the case of an individual,

- (i) by personal service,
- (ii) by leaving it for the individual with a person apparently at least 18 years of age at the individual's current or most usual dwelling place,
- (iii) by sending it by registered mail to the individual's last known address, or
- (iv) by sending it by facsimile or other form of electronic transmission to the individual's last known facsimile number or electronic address, if there is a record of so sending it,

and

(b) in the case of a corporation,

- (i) by leaving it with a director, manager or officer of the corporation, or the president, chairperson or other head officer, by whatever name that person is known, of the corporation,
- (ii) by leaving it at the corporation's registered office,
- (iii) by sending it by registered mail to the corporation's registered office, or
- (iv) in the case of an extra-provincial corporation, by leaving it with, at the address of, or by sending it by registered mail to the address of, the corporation's attorney for service appointed as required by the *Business Corporations Act*.

(2) The Safety Codes Council, a sub-council of the Safety Codes Council, an Administrator or a safety codes officer may request the assistance of a peace officer in the service of an order.

Format and content of orders**6** An order issued under the Act must

- (a) be in a written, printed or electronic form,
- (b) state that it is an order,
- (c) identify the section in the Act providing the authority under which the order is issued,
- (d) identify the safety codes officer who is issuing the order and the employer of the safety codes officer,
- (e) identify the contravention, if that is the subject-matter of the order, including the section of the code, standard or body of rules that has been contravened, if applicable, and
- (f) include
 - (i) the name of the person or persons to whom the order is issued,
 - (ii) the personal or business address of the person or persons to whom the order is issued,
 - (iii) the municipal address or legal description of the property on which the thing, process or activity that is the subject-matter of the order is located,
 - (iv) instructions and information regarding the procedure for requesting a review of the order by an Administrator,
 - (v) the contact information of the Administrator,
 - (vi) instructions and information regarding the procedure for starting an appeal of the order,
 - (vii) the contact information of the Safety Codes Council, and
 - (viii) notice that non-compliance with the instructions of the order is an offence under the Act.

AR 16/2004 s6;261/2020

Determining the date when a code is published

6.1(1) For the purposes of section 65(4) of the Act, the date on which an amendment or a replacement of a code, standard or body of rules is published is,

- (a) the day, month and year of publication printed or included in the amendment or replacement, if any,
 - (b) if only a month and year of publication are printed or included in the amendment or replacement, the last day of that month, and
 - (c) if only the year of publication is printed or included in the amendment or replacement or if no date is printed or included in the amendment or replacement, the date, assigned by the Administrator, by order, that the Administrator considers to be appropriate, considering the date when the code became available to the public.
- (2) An order referred to in subsection (1)(c) shall be published or posted on an information system as the Administrator considers to be appropriate.

AR 53/2016 s4

Information system

7(1) Repealed AR 261/2020 s5.

(2) Entries may be made to the information system by an Administrator or the Safety Codes Council.

(3) When a person requests a search of an information system for variances or outstanding orders pursuant to section 63(3) of the Act, the information must be issued if all the applicable fees have been paid.

AR 16/2004 s7;261/2020

Reporting Fires, Accidents and Unsafe Conditions**Reporting and investigating fires**

8(1) Subject to subsection (2), if the responding officer of a fire service organization knows of a fire within the jurisdiction of the fire service organization in which a person dies or suffers an injury that requires professional medical attention or in which property is damaged or destroyed, the reporting officer must report the fire to a safety codes officer for the fire discipline.

(2) A safety codes officer for the fire discipline must investigate the cause, origin and circumstances of every fire within the safety codes officer's jurisdiction in which a person dies or suffers injury that requires professional medical attention or in which property is damaged or destroyed.

(3) This section does not apply to forest fires.

AR 16/2004 s8;53/2016

Fire investigation report

9 A safety codes officer for the fire discipline who investigates the causes and circumstances of a fire must

- (a) within 30 days after the date of the fire started prepare and submit to the Fire Commissioner a report in a form satisfactory to the Fire Commissioner, and
 - (b) immediately notify the Fire Commissioner if the safety codes officer has information that indicates the fire,
 - (i) is or may be of incendiary origin, or
 - (ii) has resulted in loss of life,
- and
- (c) provide to the Fire Commissioner any further information respecting the investigation that the Fire Commissioner requests.

No fire insurance

10 A person, firm or corporation that sustains a loss by fire of property in Alberta on which no insurance is in effect must, within 10 days after the occurrence of the fire, submit to the Fire Commissioner a report in a form satisfactory to the Fire Commissioner.

Insurance companies reporting fires

11(1) An insurance company licensed to undertake contracts for fire insurance in Alberta must, within 7 days after the end of every month, submit to the Fire Commissioner a report in a form satisfactory to the Fire Commissioner regarding every fire that occurred in Alberta in the previous month and in which that company is interested as insurer.

(2) A person who sustains loss by fire of property in Alberta that is insured wholly or partially with an insurance company not licensed or registered under the *Insurance Act* must, within 10 days after complete proofs of the loss are submitted to the company with which the insurance is placed, submit a report to the Fire Commissioner in a form satisfactory to the Fire Commissioner.

(3) A person engaged in making adjustments of a loss or damage by fire in Alberta must, within 7 days after the end of every month, submit to the Fire Commissioner a report in a form satisfactory to the Fire Commissioner showing the adjustments made by the adjuster in the previous month.

(4) A person engaged in

- (a) making adjustments of a loss or damage by fire, or
- (b) investigating a fire, other than a peace officer or a person making an investigation under section 34 of the Act,

must immediately notify the Fire Commissioner if that person has information that indicates the fire is or may be of incendiary origin.

Reporting in the gas discipline

12(1) Subject to subsection (2), a person who knows of

- (a) a fatality involving a gas installation or gas equipment,
- (b) property damage estimated to exceed \$250, if it is caused by a fire or explosion, or
- (c) an accident involving a gas installation or gas equipment where the accident results in injury to a person that requires professional medical attention,

must notify a safety codes officer for the gas discipline of the circumstances and details of the accident and provide the safety codes officer with any other information that the safety codes officer requests and the safety codes officer must notify an Administrator for the gas discipline of the accident.

(2) Subsection (1) does not apply to a person who knows or has reasonable grounds to believe that the accident has been reported to a safety codes officer for the gas discipline.

Reporting in the plumbing discipline

13 An operator of a public water supply system who knows of an accident or an unsafe condition related to the supply or use of the public water supply system must, as soon as practicable, notify an Administrator for the plumbing discipline.

Reporting in the private sewage disposal discipline

14 A person who knows of an accident or unsafe condition related to the use of a private sewage disposal system must, as soon as practicable, notify an Administrator for the plumbing discipline.

Reporting in the electrical discipline

15(1) Subject to subsection (2), any person who knows of

- (a) an accident to a person, a fatal accident to livestock or a power line contact involving an electrical installation or electrical equipment, or
- (b) a fire of electrical origin or suspected electrical origin

must, as soon as practicable, report the accident, contact or fire to an Administrator for the electrical discipline or to a safety codes officer and the safety codes officer must notify an Administrator for the electrical discipline.

(2) Subsection (1) does not apply to a person who knows or has reasonable grounds to believe that the accident, contact or fire has already been reported to a safety codes officer or an Administrator for the electrical discipline.

(3) After an accident described in subsection (1), no person shall remove or interfere with anything in, on or about the place where the accident occurred until permission has been granted by a safety codes officer for the electrical discipline, unless it is necessary to do so to prevent death or injury, to protect property or to restore service.

Reporting in the elevating devices discipline

16 An owner of an elevating device or an owner's agent must

- (a) notify an Administrator for the elevating devices discipline or a safety codes officer and the safety codes officer must notify an Administrator for the elevating devices discipline as soon as practicable after an accident involving the elevating device that results in death or serious injury to a person or damage to equipment, and
- (b) if requested by an Administrator for the elevating devices discipline, submit, as soon as practicable, a full written report of any accident involving the elevating device that results in death or serious injury to a person or damage to equipment.

17 Repealed AR 49/2006 s47.

Seals and Stamps

Complex projects

18(1) If, in the opinion of a safety codes officer, the size or complexity of a project may give rise to safety concerns, the safety codes officer may require that all plans and specifications, or any part of them, for the project's

- (a) buildings,
- (b) electrical systems,
- (c) elevating devices,
- (d) gas systems,
- (e) plumbing and private sewage disposal systems, or
- (f) repealed AR 49/2006 s47;
- (g) fire protection systems and equipment,

be imprinted with a seal or stamp affixed in accordance with the *Engineering and Geoscience Professions Act* for engineering work, or the *Architects Act* for architectural work.

(2) If, in the opinion of a safety codes officer, the size or complexity of a project may give rise to safety concerns, the safety codes officer may require that the construction of any or all of the project's

- (a) buildings,
- (b) electrical systems,
- (c) elevating devices,
- (d) gas systems,
- (e) plumbing and private sewage disposal systems, or
- (f) fire protection systems and equipment,

be reviewed during construction in accordance with the *Engineering and Geoscience Professions Act* or the *Architects Act*.
AR 16/2004 s18;49/2006;53/2016;261/2020

19 Repealed AR 49/2006 s47.

Design of amusement rides

20 A safety codes officer may accept plans for the design of amusement rides with a seal affixed by an engineer who is registered in any jurisdiction.

21 to 24 Repealed AR 53/2016 s7.

Repeals and Coming into Force

Repeals

25 The following regulations are repealed:

- (a) the *Administrative Items Regulation* (AR 83/94);
- (b) the *Administration and Information Systems Regulation* (AR 55/95).

26 Repealed AR 53/2016 s9.

Coming into force

27 This Regulation comes into force on April 1, 2004.



Province of Alberta

SKILLED TRADES AND APPRENTICESHIP EDUCATION ACT

Statutes of Alberta, 2021
Chapter S-7.88

Current as of November 16, 2022

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Regulations

The following is a list of the regulations made under the *Skilled Trades and Apprenticeship Education Act* that are filed as Alberta Regulations under the Regulations Act

Alta. Reg.	Amendments
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Skilled Trades and Apprenticeship

Education Act

Apprenticeship Education and Industry	
Training Programs.....	160/2022
Designated Trades and Restricted	
Activities	161/2022
Skilled Trades and Apprenticeship	
Education General	156/2022

SKILLED TRADES AND APPRENTICESHIP EDUCATION ACT

Chapter S-7.88

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Preamble

WHEREAS the Government of Alberta recognizes that a skilled workforce is necessary for economic competitiveness and prosperity;

WHEREAS the Government of Alberta believes that expanding apprenticeship education programs to provide education and training for careers beyond designated trades professions is desirable to respond to labour market demands;

WHEREAS the Government of Alberta recognizes the importance of having clearly defined roles in the establishment and delivery of apprenticeship education programs, the issuance of credentials and the governance of skilled trades professions;

WHEREAS individuals who successfully complete an apprenticeship education program should receive a formal academic credential that confirms their knowledge and skills and opens pathways to further education and training;

WHEREAS the Government of Alberta is committed to ensuring that apprenticeship education is understood by Albertans to have as much value as other post-secondary education and that skilled trades professions are understood by Albertans to have as much value as other professions;

THEREFORE HER MAJESTY, by and with the advice and consent of the Legislative Assembly of Alberta, enacts as follows:

Definitions

1 In this Act,

- (a) “activity”, in respect of a designated trade, means a task or function that is recognized by an order of the Board as being associated with undertakings within the designated trade;
- (b) “Administrator” means the Administrator for Designated Trades appointed under section 17(1) and includes any individual designated as a deputy Administrator under section 17(2);
- (c) “apprentice” means an individual who is registered in an apprenticeship education program;
- (d) “apprenticeship education agreement” means an agreement between a sponsor and an individual respecting on-the-job instruction that the sponsor will provide to the individual under an apprenticeship education program in which the individual is registered;
- (e) “apprenticeship education program” means a program established under section 3(1)(a);
- (f) “Board” means the Alberta Board of Skilled Trades established under section 13;
- (g) “classroom instruction” means instruction provided by a post-secondary institution as part of an apprenticeship education program;
- (h) “Department” means the department administered by the Minister;
- (i) “designated trade” means a trade designated in the regulations under section 12;

- (j) “industry training program” means a program established under section 4(1)(a);
- (k) “Minister” means the Minister determined under section 16 of the *Government Organization Act* as the Minister responsible for this Act;
- (l) “officer” means an individual appointed as an officer under section 29;
- (m) “on-the-job instruction” means instruction provided to an apprentice through mentorship and work experience under an apprenticeship education agreement;
- (n) “personal information” has the meaning given to it in the *Freedom of Information and Protection of Privacy Act*;
- (o) “post-secondary institution” means a public post-secondary institution as defined in the *Post-secondary Learning Act* or the holder of a licence issued under the *Private Vocational Training Act*;
- (p) “Registrar” means the individual appointed as the Registrar under section 5(1) and includes any individual designated as a deputy Registrar under section 5(2);
- (q) “restricted activity” means an activity prescribed under section 22(2)(d);
- (r) “trade certificate”, in respect of a designated trade, means
 - (i) a certificate issued by the Administrator to an individual who the Administrator is satisfied has met the requirements under this Act for certification in the designated trade, or
 - (ii) a document that is issued outside Alberta and is recognized by order of the Board as being the equivalent of a certificate referred to in subclause (i);
- (s) “trainee” means an individual who is registered in an industry training program.

Part 1

Apprenticeship Education and Industry Training Programs

Definitions for Part 1

2 In this Part,

- (a) “credential”,
 - (i) in respect of an apprenticeship education program, means a certificate, diploma or other form of proof, established under section 3(1)(c) and issued in accordance with the regulations, of successful completion of the apprenticeship education program, and
 - (ii) in respect of an industry training program, means a form of proof, established under section 4(1)(c) and issued in accordance with the regulations, of successful completion of an industry training program;
- (b) “industry training provider” means a person or entity that provides an industry training program;
- (c) “registered” means registered with the Registrar;
- (d) “sponsor” means a person or entity who, pursuant to an apprenticeship education agreement, provides an apprentice with on-the-job instruction required as part of an apprenticeship education program.

Apprenticeship education programs, credentials**3(1)** The Minister may

- (a) establish programs to provide individuals with classroom instruction and on-the-job instruction in particular occupational fields,
- (b) engage post-secondary institutions to provide the classroom instruction components of apprenticeship education programs, and
- (c) establish credentials that may be issued to individuals who successfully complete an apprenticeship education program.

(2) The Minister may disestablish an apprenticeship education program at any time.

Industry training programs, credentials**4(1)** The Minister may

- (a) establish programs to provide individuals with training in particular occupational fields,
- (b) engage or approve persons or entities to provide training to trainees in industry training programs, and

- (c) establish credentials that may be issued to individuals who successfully complete an industry training program.

(2) The Minister may disestablish an industry training program at any time.

Registrar

5(1) The Minister may, in accordance with the *Public Service Act*, appoint an employee of the Department as the Registrar.

(2) The Registrar may designate one or more other individuals as deputy Registrars to exercise the powers and carry out the functions of the Registrar in accordance with the terms and conditions set out in their designations.

Powers and functions of the Registrar

6(1) The Registrar shall, for the purposes of this Part,

- (a) advise the Minister respecting apprenticeship education programs, industry training programs, the establishment of apprenticeship education programs or industry training programs or any other matter requested by the Minister,
- (b) establish
 - (i) the classroom instruction and on-the-job instruction requirements for apprenticeship education programs, and
 - (ii) the training requirements for industry training programs,
- (c) establish criteria that must be met by an individual in order to be accepted for registration in an apprenticeship education program or an industry training program,
- (d) establish the form and manner in which and the time or times at which applications for registration in an apprenticeship education program or an industry training program may be made,
- (e) consider applications for registration in an apprenticeship education program or an industry training program and, in respect of each application,
 - (i) accept the application and register the applicant in the apprenticeship education program or industry training program if the Registrar is satisfied that all applicable requirements for registration in the program are met, or

- (ii) reject the application if the Registrar is not satisfied that all applicable requirements for registration in the program are met,
- (f) administer the delivery of
 - (i) the classroom instruction and on-the-job instruction components of apprenticeship education programs, and
 - (ii) the training requirements for industry training programs,
- (g) set criteria for examinations and other assessments of learning or competencies to be conducted
 - (i) by post-secondary institutions providing classroom instruction and by sponsors providing on-the-job instruction to apprentices in apprenticeship education programs, and
 - (ii) by industry training providers providing training to trainees in industry training programs,
- (h) provide ongoing support, in accordance with any directions of the Minister, to sponsors in respect of the on-the-job instruction the sponsors provide to apprentices, the sponsors' assessment of apprentices' progress, learning and competencies and any other matter that may arise in respect of apprentices during the course of an apprenticeship education program,
- (i) provide ongoing support, in accordance with any directions of the Minister, to post-secondary institutions in respect of the classroom instruction the post-secondary institutions provide to apprentices, the assessment of apprentices' progress, learning and competencies and any other matter that may arise in respect of apprentices during the course of an apprenticeship education program,
- (j) provide support, in accordance with any directions of the Minister, to industry training providers in respect of the training they provide to trainees, their assessment of trainees' progress, learning and competencies and any other matter that may arise in respect of trainees during the course of an industry training program,
- (k) establish the requirements that an individual must meet to successfully complete an apprenticeship education program or an industry training program,

- (l) issue credentials to apprentices who successfully complete an apprenticeship education program and trainees who successfully complete an industry training program,
 - (m) maintain a register of apprentices in each apprenticeship education program and track the progress of each apprentice,
 - (n) maintain a register of trainees in each industry training program and track the progress of each trainee,
 - (o) establish processes requiring post-secondary institutions and sponsors to report apprentices' progress to the Registrar for the purposes of enabling the Registrar to track the apprentices' progress,
 - (p) establish processes requiring industry training providers to report trainees' progress to the Registrar for the purposes of enabling the Registrar to track the trainees' progress,
 - (q) maintain a register of the issuance of credentials, the names of individuals to whom they were issued, the dates on which they were issued and any suspensions or cancellations of credentials,
 - (r) establish processes for the resolution of disputes between sponsors and apprentices and between industry training providers and trainees, and
 - (s) carry out any other functions assigned to the Registrar by the regulations.
- (2) The Registrar may**
- (a) recognize education or instruction as being the equivalent of classroom instruction or on-the-job instruction that is required as part of an apprenticeship education program and award credit to apprentices who receive the recognized education or training before entering or while registered in the apprenticeship education program,
 - (b) recognize training that is not part of an industry training program as being the equivalent of training that is required as part of the industry training program and award credit to trainees who receive the recognized training before entering or while registered in the industry training program,
 - (c) engage persons to conduct the dispute resolution processes under subsection (1)(r),

- (d) engage persons knowledgeable about an occupational field to provide specialized or technical advice to the Registrar, and
- (e) exercise any other powers conferred on the Registrar by the regulations.

(3) Subject to the regulations, the Registrar may delegate any power or function of the Registrar to one or more employees of the Department.

Registrar may refuse, suspend or cancel registration

7 The Registrar may, in accordance with the regulations,

- (a) refuse to register an individual in an apprenticeship education program or an industry training program,
- (b) suspend, on any terms and conditions the Registrar considers appropriate in the circumstances, or cancel
 - (i) an individual's registration in an apprenticeship education program,
 - (ii) any approval of an apprenticeship education agreement that was given by the Registrar under the regulations, or
 - (iii) the registration of an individual in an industry training program,

or

- (c) suspend or revoke a credential issued to an individual.

Reconsiderations

8 Where the Registrar has made a decision

- (a) respecting an application for registration in an apprenticeship education program or an industry training program,
- (b) suspending or cancelling an individual's registration in an apprenticeship education program or an industry training program,
- (c) suspending or cancelling the Registrar's approval of an apprenticeship education agreement,
- (d) refusing to issue credentials to an individual, or

- (e) respecting any other matter for which a reconsideration may be requested under the regulations,

a person may, in accordance with the regulations, request that the Registrar reconsider the decision.

General responsibilities of the Minister

9(1) The Minister is responsible for the administration of this Part and for general administrative matters with respect to apprenticeship education programs, industry training programs and the issuance of credentials.

(2) Subject to the regulations, the Minister may delegate any power, duty or function of the Minister under this Part to the Registrar or an employee of the Department.

(3) The *Regulations Act* does not apply in respect of any documentation prepared by or on behalf of the Minister relating to the carrying out of any functions under this section.

Regulations for Part 1

10(1) The Lieutenant Governor in Council may make regulations

- (a) respecting matters to be considered by the Minister before establishing an apprenticeship education program or an industry training program;
- (b) respecting the delegation by the Minister of any power or function of the Minister under this Part;
- (c) respecting any other matter that the Lieutenant Governor in Council considers necessary or advisable for carrying out the purposes and intent of this Part.

(2) The Minister may make regulations

- (a) defining, for the purposes of this Act and the regulations, terms used but not defined in this Part;
- (b) further defining, for the purposes of this Act and the regulations, a term that is defined in this Part;
- (c) respecting the establishment by the Registrar of the classroom instruction and on-the-job instruction requirements of apprenticeship education programs and the training requirements of industry training programs;
- (c.1) respecting setting the ratio of apprentices to mentors for on-the-job instruction during different periods of an apprenticeship education program;

- (d) respecting apprenticeship education agreements, including, without limitation, regulations respecting
 - (i) circumstances in which an apprenticeship education agreement may or may not be entered into, provisions required to be included in an apprenticeship education agreement and requirements to be met for an apprenticeship education agreement to remain valid;
 - (ii) requirements for apprenticeship education agreements to be approved by the Registrar;
 - (iii) circumstances in which the Registrar may refuse to approve or may suspend or cancel the approval of an apprenticeship education agreement;
- (e) respecting eligibility criteria for sponsors;
- (f) imposing obligations on sponsors, apprentices and trainees;
- (g) respecting credentials, including, without limitation, regulations respecting
 - (i) the criteria for the issuance of credentials to apprentices who successfully complete an apprenticeship education program or trainees who successfully complete an industry training program;
 - (ii) the suspension or revocation of credentials by the Registrar;
 - (iii) steps that may be taken by the Registrar to alert the public or any person to the suspension or revocation of an individual's credentials;
- (h) respecting the powers and functions of the Registrar, including, without limitation, regulations
 - (i) setting limits or imposing requirements respecting the exercise by the Registrar of any power under this Part or the carrying out by the Registrar of any function under this Part;
 - (ii) conferring additional powers on the Registrar;
 - (iii) assigning additional functions to the Registrar;
- (h.1) subject to the *Employment Standards Code*, setting out the rates of wages for apprentices;

- (i) respecting reconsiderations or reviews of decisions made under this Part, other than decisions made by the Minister, including, without limitation, regulations prescribing or otherwise describing the decisions in respect of which a reconsideration or review is available and the persons who may request a reconsideration or review;
- (j) respecting the delegation by the Registrar of any power or function of the Registrar;
- (k) authorizing and respecting the collection, including indirect collection, of personal information and the use and disclosure of personal information by the Registrar.

2021 cS-7.88 s10;2021 c17 s2

Part 2 Designated Trades

Definitions for Part 2

11 In this Part,

- (a) “endorsement” has the meaning given to it in the regulations;
- (b) “undertaking”, in respect of a designated trade, means a type of work the Board considers to fall within the designated trade.

Regulations designating trades

12(1) The Minister may make regulations

- (a) subject to subsection (2), designating trades in respect of which a trade certificate may be issued;
- (b) notwithstanding anything in this Part, respecting any transitional matter that may result from the designation of a trade being rescinded as a result of the repeal or amendment of a regulation under clause (a).

(2) A profession that is regulated or eligible to be regulated under the *Health Professions Act* is not eligible to be designated as a designated trade.

2021 cS-7.88 s12;2021 c17 s2

Alberta Board of Skilled Trades

13(1) The Minister shall appoint a board to be known as the “Alberta Board of Skilled Trades” consisting of not more than 15 individuals who, in the opinion of the Minister, are knowledgeable with respect to the contribution of skilled trades professions to

Alberta's economic sectors and the needs of the Alberta labour market for skilled and trained individuals.

(2) The Minister shall designate one member as chair and one or more other members to act in the place of the chair when the chair is absent or is otherwise unable to carry out the duties of the chair.

(3) Members of the Board, other than employees of the Government of Alberta, may be paid

- (a) remuneration for the carrying out of their duties as members, and
- (b) travelling and living expenses necessarily incurred in the carrying out of their duties as members

at a rate prescribed by the Lieutenant Governor in Council in accordance with any applicable regulations under the *Alberta Public Agencies Governance Act*.

(4) If regulations under the *Alberta Public Agencies Governance Act* apply in respect of the rate of remuneration and expenses to be paid to members of the Board, those regulations prevail, to the extent of any conflict or inconsistency, over any regulations prescribing a rate under subsection (3).

(5) The Board is not an agent of the Crown.

Powers and functions of the Board

14(1) The functions of the Board are

- (a) to consult with industry and make recommendations to the Minister respecting the designation of trades and the rescission of the designation of trades,
- (b) to consult with industry respecting
 - (i) standards and requirements for certification in designated trades,
 - (ii) any other matters requested by the Minister, and
 - (iii) any other matters in respect of which the Board considers it should engage with industry,
- (c) to advise and make recommendations to the Minister respecting
 - (i) restricted activities and the classes of individuals who may perform them, and

- (ii) any other matter on which the Minister requests the input of the Board,
 - (d) to promote the value of designated trades careers and certification, and
 - (e) any other functions assigned by the regulations.
- (2)** The Board may make orders
- (a) specifying the undertakings and activities that fall within a designated trade;
 - (b) establishing standards and requirements for certification in respect of designated trades;
 - (c) recognizing documents issued outside Alberta as being the equivalent of a trade certificate, if the Board considers it appropriate to do so;
 - (d) recognizing the successful completion of education or training, other than an apprenticeship education program or an industry training program, as meeting some or all of the requirements for certification under this Part;
 - (e) respecting other matters in accordance with any additional order-making power conferred on the Board by the regulations.
- (3)** The *Regulations Act* does not apply
- (a) in respect of any documentation prepared by or on behalf of the Board relating to the carrying out of any functions under subsection (1), or
 - (b) to orders made under subsection (2).

Board committees

15(1) The Board may establish committees, or may recognize committees established by other organizations, associations or persons, to assist and advise the Board in exercising its powers and carrying out its functions.

- (2)** The Board may, with respect to a committee established under this section,
- (a) appoint individuals as members of the committee,
 - (b) set the terms of reference under which the committee operates, and

- (c) assign functions to be carried out by the committee.

(3) An individual appointed as a member of a committee established under this section

- (a) holds office for a term specified in the appointment in accordance with the regulations, and
- (b) subject to the regulations, is eligible to be appointed for one or more further terms of office.

(4) Members of a committee established under this section, other than employees of the Government of Alberta, may be paid one or both of the following at the rates prescribed by the Minister under section 22(2)(h):

- (a) remuneration for the carrying out of their duties as members;
- (b) travelling and living expenses necessarily incurred in the carrying out of their duties as members.

Assistance to the Board and committees

16 The Minister may provide to the Board or any committee of the Board, at no cost to the Board or committee, one or more of the following:

- (a) the services of employees of the Department to carry out duties and provide services that in the opinion of the Minister are reasonably required to enable the Board or committee to carry out its functions under this Part;
- (b) the services of experts or persons having special, technical or other knowledge to advise the Board or committee in respect of matters under this Part;
- (c) materials and other things that, in the opinion of the Minister, are reasonably required to enable the Board or committee to carry out its functions under this Part.

Administrator

17(1) The Minister may, in accordance with the *Public Service Act*, appoint an employee of the Department as the Administrator for Designated Trades.

(2) The Administrator may designate one or more individuals as deputy Administrators to exercise the powers and carry out the functions of the Administrator in accordance with the terms and conditions set out in their designations.

Functions of the Administrator

18(1) The Administrator shall, for the purposes of this Part,

- (a) advise the Minister respecting designated trades, the designation of trades or any other matter requested by the Minister,
- (b) establish the form and manner in which and the time or times at which applications for issuance of a trade certificate or endorsement may be made,
- (c) consider applications for trade certificates or endorsements and, in respect of each application,
 - (i) issue the trade certificate or endorsement if the Administrator is satisfied that all applicable requirements for the trade certificate or endorsement are met, or
 - (ii) reject the application and refuse to issue the trade certificate or endorsement if the Administrator is not satisfied that all applicable requirements for the trade certificate or endorsement are met,
- (d) provide for the evaluation of knowledge and levels of skills of individuals applying to the Administrator for a trade certificate or endorsement,
- (e) maintain a register of the issuance of trade certificates or endorsements, the names of individuals to whom they were issued, the dates on which they were issued and any suspensions or cancellations of trade certificates or endorsements,
- (f) if directed to do so by the Minister, assist and advise the Board in carrying out its functions, and
- (g) carry out any other functions assigned to the Administrator by the regulations.

(2) Subject to the regulations, the Administrator may delegate any power or function of the Administrator to one or more employees of the Department.

Administrator may suspend or revoke certification

19 The Administrator may, in accordance with the regulations, suspend, on any terms and conditions the Administrator considers appropriate in the circumstances, or revoke

- (a) a trade certificate issued under this Part, or
- (b) in respect of an individual, notwithstanding any order of the Board under section 14(2)(c), the recognition of a trade certificate issued to the individual outside Alberta.

Reconsiderations

20 Where the Administrator has made a decision

- (a) respecting an individual's application for a trade certificate or endorsement,
- (b) refusing to issue a trade certificate or endorsement to an individual, or
- (c) respecting any other matter for which a reconsideration may be requested under the regulations,

a person may, in accordance with the regulations, request that the Administrator reconsider the decision.

General responsibilities of the Minister

21(1) The Minister is responsible for the administration of this Part and for general administrative matters with respect to designated trades and the issuance of trade certificates and endorsements.

(2) Subject to the regulations, the Minister may delegate any power, duty or function of the Minister under this Part to the Administrator or an employee of the Department.

(3) The *Regulations Act* does not apply in respect of any documentation prepared by or on behalf of the Minister relating to the carrying out of any functions under this section.

Regulations for Part 2

22(1) The Lieutenant Governor in Council may make regulations

- (a) respecting matters to be considered by the Minister before designating a trade as a designated trade;
- (b) respecting the delegation by the Minister of any power or function of the Minister under this Part;
- (c) respecting any other matter that the Lieutenant Governor in Council considers necessary or advisable for carrying out the purposes and intent of this Part.

(2) The Minister may make regulations

- (a) defining, for the purposes of this Act and the regulations, terms used but not defined in this Part;
- (b) defining “endorsement” for the purposes of this Act and the regulations, providing for the issuance, suspension and revocation of endorsements and providing for the recognition of endorsements other than endorsements issued under the regulations;
- (c) further defining, for the purposes of this Act and the regulations, a term that is defined in this Part;
- (d) prescribing activities within a designated trade as restricted activities and providing that restricted activities may be performed only by prescribed classes of individuals;
- (e) prescribing classes of individuals for the purposes of clause (d);
- (f) respecting appointments to the Board, including, without limitation, regulations respecting the term of office for which an appointment may be made, whether individuals appointed to the Board are eligible to be appointed for one or more further terms of office and any maximum number of terms for which an individual may be appointed;
- (g) respecting the powers and functions of the Board, including, without limitation, regulations
 - (i) setting limits or imposing requirements respecting the exercise by the Board of any power under this Part or the carrying out by the Board of any function under this Part;
 - (ii) conferring additional order-making powers on the Board;
 - (iii) assigning additional functions to the Board;
- (h) prescribing the rates of remuneration for committees of the Board;
- (i) respecting the powers and functions of the Administrator, including, without limitation, regulations
 - (i) setting limits or imposing requirements respecting the carrying out by the Administrator of any function under this Part;
 - (ii) conferring additional powers on the Administrator;

- (iii) assigning additional functions to the Administrator;
- (j) respecting reconsiderations or reviews of decisions, other than decisions of the Minister, made under this Part, including, without limitation, regulations prescribing or otherwise describing the decisions in respect of which a reconsideration or review is available and the persons who may request a reconsideration or review;
- (k) respecting the delegation by the Administrator of any power or function of the Administrator;
- (l) respecting suspensions and revocations under section 19 and steps that may be taken by the Administrator to alert the public or any person to a suspension or revocation;
- (m) authorizing and respecting the collection, including indirect collection, of personal information and the use and disclosure of personal information by the Administrator.

Part 3

Prohibitions, Offences, Penalties, Compliance and Enforcement

Prohibitions

23(1) No person shall use the term “certified”, “journey person” or “trade certificate”, or any form or derivative of one of those terms, in any combination with the name of a designated trade in such a way as to represent, expressly or by implication, that the person holds a trade certificate in that designated trade, unless the person holds a valid trade certificate in that designated trade.

(2) No person shall, expressly or by implication, represent that the person holds a trade certificate in a designated trade unless the person holds a valid trade certificate in that designated trade.

(3) No person shall, expressly or by implication, represent that the person is permitted under this Act to perform a restricted activity in a designated trade unless the person is authorized under this Act to perform the restricted activity in that designated trade.

(4) No person shall perform a restricted activity unless the person falls within a prescribed class of persons authorized to perform the restricted activity.

(5) No person shall direct or allow an employee of the person to perform a restricted activity unless the employee falls within a prescribed class of persons authorized to perform the restricted activity.

Prohibition — false information

24 A person who provides information under this Act shall not provide information that is false.

Prohibition — disciplinary action

25 No person shall dismiss or take any other disciplinary action against another person by reason of that other person's acting in accordance with this Act, the regulations or an order made under this Act.

Prohibition — cheating

26(1) No individual who is taking or intends to take an examination or undergo any other learning assessment under this Act shall acquire or accept, before or during the examination or assessment, any of the contents of the examination or assessment.

(2) Where an individual is taking or intends to take an examination or undergo any other learning assessment under this Act, no person shall convey or disclose to the individual, directly or indirectly, before or during the examination or assessment, any of the contents of the examination or assessment.

Prohibition — impeding officer

27 No person shall impede an officer in the carrying out of any duty that the officer is empowered to carry out under this Act.

Offences and penalties

28(1) A person who contravenes section 23(1), (2), (3), (4) or (5) or section 24, 25 or 27 or a prescribed provision of the regulations is guilty of an offence and liable

- (a) for a first offence, to a fine of not more than \$15 000, or
- (b) for a 2nd or subsequent offence, to a fine of not more than \$50 000.

(2) A person who contravenes section 26(1) or (2) is guilty of an offence and liable to a fine of not more than \$50 000.

(3) An offence under any of the following provisions is an offence of absolute liability:

section 23(1), (2), (3) or (4);
section 26(1) or (2).

(4) An offence under any of the following provisions is an offence of strict liability:

section 23(5), 24 or 25;
section 27.

(5) A prosecution for an offence under this Act may not be commenced more than 3 years after the alleged commission of the offence.

(6) Notwithstanding the *Provincial Offences Procedure Act*, a person who is convicted of an offence under this Act, other than an offence for contravening section 23(5), 24, 25 or 27, is not subject to a term of imprisonment in respect of that offence or in default of payment of a fine.

Officers

29 The Minister may appoint individuals as officers for the purposes of compliance and enforcement under this Act.

2021 cS-7.88 s29;2022 c14 s16

Inspections

30(1) For the purposes of ensuring that this Act and the regulations are being complied with, an officer may, without an order under section 31 or a search warrant, at any reasonable time enter any premises or location at which

- (a) an individual is receiving classroom instruction or on-the-job instruction as part of an apprenticeship education program,
- (b) an individual is receiving training as part of an industry training program,
- (c) an individual is performing an activity in a designated trade, or
- (d) an individual is preparing for or participating in an examination or assessment

and carry out an inspection.

(2) In carrying out an inspection, an officer may do one or more of the following:

- (a) inspect
 - (i) the premises or location, and
 - (ii) any physical or electronic document, record or thing that is relevant to the inspection;

- (b) demand the production for inspection of any document, record or thing referred to in clause (a)(ii) and remove the document, record, object or thing for review and copying;
- (c) in order to produce a record in readable form, use any data storage, information processing or retrieval devices or systems that are on the premises and normally used in carrying on business on the premises;
- (d) take photographs, video recordings or other visual or audio recordings of anything relevant to the inspection;
- (e) make inquiries of any person with respect to any matter relevant to the inspection;
- (f) require any person to provide the officer with all reasonable assistance, including in the use of any computer hardware or software or any other data storage, processing or retrieval device or system to produce information or records;
- (g) exercise any other powers given to the officer by the regulations.

(3) Notwithstanding subsections (1) and (2), an officer shall not enter a residence without the permission of an adult resident of that residence.

(4) Where an officer removes any document, record or thing under subsection (2)(b), the officer shall

- (a) give a receipt for the items to the person from whom the items were taken, and
- (b) forthwith return the items to the person from whom they were taken when they have served the purposes for which they were taken.

2021 cS-7.88 s30;2022 c14 s16

Court order authorizing entry and inspection

31(1) If an officer

- (a) is refused entry into any premises or location that the officer is authorized to enter under section 30,
- (b) is not given consent to enter a residence,
- (c) has reasonable grounds to believe that
 - (i) permission to enter premises or a location that the officer is authorized to enter will be refused, or

(ii) consent to enter a residence will not be given,

or

(d) is impeded or has reasonable grounds to believe that the carrying out of an inspection or examination of any premises, location, record, document or thing that the officer is authorized to inspect or examine will be impeded,

the officer may apply to the Court of King's Bench for an order granting the relief provided for under subsection (4).

(2) On the filing of an application with the clerk of the Court of King's Bench, the Court may, if it considers it necessary in the circumstances, hear an interim application on 2 days' notice and make an interim order granting any relief that the Court considers appropriate pending the determination of the application.

(3) An interim order under subsection (2) may be made ex parte if the Court considers it appropriate in the circumstances.

(4) On hearing an application the Court may do one or more of the following:

- (a) authorize the officer to enter the premises, location or residence and carry out the inspection under section 30;
- (b) direct any occupant to assist the officer in any manner the Court prescribes;
- (c) restrain any person from impeding the officer from entering the premises, location or residence or from carrying out the officer's duties;
- (d) make its order subject to any terms or conditions that the Court considers appropriate in the circumstances;
- (e) dismiss the application;
- (f) award costs.

2021 cS-7.88 s31;AR 217/2022

Compliance order

32 If an officer is of the opinion that a person is not complying with this Act or the regulations, the officer may by written order direct that person to comply with this Act or the regulations within the time and in accordance with any directions set out in the order.

2021 cS-7.88 s32;2022 c14 s16

Court order for compliance

33(1) If an officer is of the opinion that a person is not complying with

- (a) this Act or the regulations, or
- (b) an order under section 32,

the officer may apply to the Court of King's Bench for an order granting the relief provided for under subsection (4).

(2) On the filing of an application with the clerk of the Court of King's Bench, the Court may, if it considers it necessary in the circumstances, hear an interim application on 2 days' notice and make an interim order granting any relief that the Court considers appropriate pending the determination of the application.

(3) An interim order under subsection (2) may be made ex parte if the Court considers it appropriate to do so in the circumstances.

(4) On hearing an application the Court may do one or more of the following:

- (a) direct the person to comply with this Act, the regulations or the order, as the case may be;
- (b) direct a person to cease carrying out any action that in the opinion of the Court does not comply with this Act, the regulations or the order, as the case may be;
- (c) give those directions that it considers necessary in order to ensure compliance with this Act, the regulations or the order, as the case may be;
- (d) make its order subject to any terms or conditions that the Court considers appropriate in the circumstances;
- (e) dismiss the application;
- (f) award costs.

2021 cS-7.88 s33;2022 c14 s16;AR 217/2022

Evidence

34(1) In a prosecution of an offence under this Act, a certificate purporting to be signed by the Registrar stating that on the date the offence occurred

- (a) an individual was not registered as an apprentice,

- (b) the registration of an individual as an apprentice was suspended or cancelled, or
- (c) the Registrar's approval of an apprenticeship education agreement had been suspended or cancelled

shall be admitted in evidence as proof, in the absence of evidence to the contrary, of the facts stated in the certificate without proof of the signature or the official character of the person signing the certificate.

(2) In a prosecution of an offence under this Act, a certificate purporting to be signed by the Administrator stating that on the date the offence occurred

- (a) an individual did not hold a valid trade certificate in a designated trade, or
- (b) an individual's trade certificate had been suspended or revoked

shall be admitted in evidence as proof, in the absence of evidence to the contrary, of the facts stated in the certificate without proof of the signature or the official character of the person signing the certificate.

(3) A copy of a document, record or other thing certified by an officer to be a true copy shall be admissible in evidence in any proceeding to the same extent and shall have the same evidentiary value as the document, record or thing itself.

Protection from liability

35 No action for damages may be commenced against any person for anything done or not done by that person in good faith while exercising the person's powers or carrying out that person's functions under this Act including, without limitation, any failure to do something when that person has discretionary authority to do something but does not do it.

Regulations for Part 3

36 The Lieutenant Governor in Council may make regulations

- (a) prescribing the provisions of the regulations the contravention of which constitutes an offence and prescribing whether the offence is one of absolute or strict liability;
- (b) respecting the powers and duties of officers, including, without limitation, regulations

- (i) setting limits or imposing requirements respecting the exercise by officers of any power under this Part or the carrying out by officers of any duty under this Part;
- (ii) conferring additional powers on officers;
- (iii) assigning additional duties to officers;
- (c) respecting any other matter that the Lieutenant Governor in Council considers necessary or advisable for carrying out the purposes and intent of this Part.

Part 4

General

Sending and service of documents

37(1) Where a notice, order or other document is required or permitted to be sent or served under this Act, the sending or service may be effected

- (a) by personal service,
- (b) by a method of recorded mail that provides proof of receipt and is sent to the address of the person on whom service is to be effected, or
- (c) in the case of service on a person by the Minister, the Registrar, the Board or the Administrator, by a method of recorded mail that provides proof of receipt and is sent to the latest address, as shown on the records of the Minister, Registrar, Board or Administrator, of the person on whom service is to be effected.

(2) In addition to the methods set out in subsection (1), the sending or service of any notice, order or other document that is required or permitted to be sent or served under this Act may be effected by sending the notice, order or other document by electronic means, in accordance with the *Electronic Transactions Act*, to an email or other electronic address, if any, provided to the Minister, Registrar, Board or Administrator by the person on whom service is to be effected or to an account, if any, established by the person on the Department's website.

Definitions for sections 39 to 41

38 In sections 39 to 41,

- (a) "former Act" means the *Apprenticeship and Industry Training Act*, RSA 2000 cA-42;

- (b) “former Board” means the Alberta Apprenticeship and Industry Training Board appointed under the former Act.

Transitional provisions respecting Part 1

39 On the coming into force of Part 1,

- (a) an apprenticeship program provided under the former Act and approved by the former Board is deemed to be an apprenticeship education program, and
- (b) an individual who is registered in an apprenticeship program under the former Act is deemed to be an apprentice registered in an apprenticeship education program under this Act.

Transitional provisions respecting Parts 2 and 3

40(1) On the coming into force of Part 2,

- (a) an occupation that was designated as a designated occupation or as a designated trade under the former Act is deemed to be a designated trade under this Act,
- (b) a trade certificate or occupational certificate granted under the former Act is deemed to be a trade certificate issued under Part 2,
- (b.1) a Certificate of Completion of Apprenticeship, a Certificate of Qualification or a Certificate of Proficiency
 - (i) that was issued, recognized or continued under the *Manpower Development Act*, RSA 1980 cM-3, and
 - (ii) that was deemed to be a trade certificate issued under the former Actis deemed to be a trade certificate issued under Part 2,
- (c) a document that was issued by another jurisdiction and recognized under the former Act as being the equivalent of a trade certificate or an occupational certificate is deemed to be recognized as being the equivalent of a trade certificate issued under Part 2, and
- (d) the Alberta Apprenticeship and Industry Training Board established under the former Act is dissolved and all appointments to that Board are rescinded.

(2) On the coming into force of Part 3, a compliance order that was issued under section 52 of the former Act and that is in effect on

the coming into force of this subsection is deemed to have been issued under Part 3.

2021 cS-7.88 s40;2022 c14 s16

Transitional regulations

41(1) The Lieutenant Governor in Council may make regulations

- (a) respecting the transition to this Act of anything from the former Act;
- (b) to deal with any difficulty or impossibility resulting from this Act or the transition to this Act from the former Act.

(2) The Lieutenant Governor in Council may, by regulation, amend regulations made under any Act of Alberta for the purposes of making any changes the Lieutenant Governor in Council considers necessary or advisable as a result of the transition to this Act from the former Act.

(3) Regulations authorized by subsection (2) may be made notwithstanding that the regulation being amended was made by a member of the Executive Council or some other person or body.

42 to 47 *(These sections amend other Acts; the amendments have been incorporated into those Acts.)*

Repeal

48 The *Apprenticeship and Industry Training Act* is repealed.

Coming into force

49 This Act comes into force on Proclamation.

(NOTE: Proclaimed in force July 20, 2022.)

Skilled Trades and Apprenticeship Education Act (STAEA)

Information for Apprentices

The *Skilled Trades and Apprenticeship Education Act* (STAEA) came into force in 2022. It has enabled Alberta to make some modern changes to our apprenticeship education and skilled trades system.

Modernized Language

Then	Now
Journeyman certificate	Journeyperson certificate
Employer	Sponsor
Supervisor / Journeyperson	Mentor / Journeyperson
Contract of Apprenticeship	Apprenticeship Education Agreement
Technical training	Classroom instruction
Record book	Competence portfolio
Compulsory and optional certification trades	Restricted activities and authorized individuals

Sponsorship

Your sponsor facilitates your on-the-job learning and helps you progress through your program.

A sponsor may be:

- your direct employer, or
- another organization that coordinates your employment and mentorship (such as a **union** or a **non-profit organization**).

Sponsors can coordinate with **multiple employers** for a single apprentice.

Pre-Sponsorship Registration

You may **attend first-year classroom instruction before you have sponsor**. All you need to do is register as an apprentice and meet the education entrance requirements for your trade.

However, you won't be able to start working and learning on the job until you have a sponsor.

Visit tradesecrets.alberta.ca/begin-an-apprenticeship for more information.

Education Credentials



When you graduate from your Apprenticeship Education Program, you will now receive both an Education Credential **and** a journeyperson certificate.

Education Credential

- Confirms your post-secondary learning achievement.
- Reflects the length and complexity of your program.
- Helps determine your eligibility for transfer credit for further post-secondary programs.
- Helps future employers (even outside of the trades) understand what level of education you have.

Journeyperson Certificate

- Authorizes you to work, unsupervised, in the full scope of the trade anywhere in Alberta.
- Recognizes that you are a skilled professional and have achieved a high level of competency and knowledge in your field.
- Is issued when you demonstrate that you have met Alberta's certification standards.

Visit tradesecrets.alberta.ca/credentials for more information.

Skilled Trades and Apprenticeship Education Act (STAEA) Information for Apprentices

Alberta Board of Skilled Trades

The new **Alberta Board of Skilled Trades** advises government on the direction of Alberta's designated trades certification system.

The board has **flexibility and autonomy** to determine how best to **engage with industry experts** and stakeholders to ensure the system is meeting needs.

Visit www.tradesecrets.alberta.ca/abst for more information.

Apprenticeship and Industry Training

The Government of Alberta manages the province's apprenticeship and skilled trades system under the **Apprenticeship and Industry Training (AIT)** banner.

AIT acts as both the registrar of apprenticeship education, and the administrator of designated trade certification.

Registrar

- Establishes apprenticeship education program requirements
- Administers apprenticeship education programs
- Issues education credentials to graduates
- Plays a role similar to that of a college, university, or polytechnic institution's plays in post-secondary programs outside of apprenticeship education

Administrator

- Assesses applicant's eligibility for journeyman certification
- Issues journeyman certificates
- Monitors compliance with restricted activities
- Plays a role similar to that of a professional regulatory body plays in regulated professions outside of the designated trades.

Restricted Activities

STAEA adds flexibility to how work within designated trades is regulated.

Who can work in a designated trade?

Before STAEA

Only registered apprentices or qualified tradespersons*

**trades were categorized as compulsory or optional depending on whether journeyman certification was required to be considered a qualified tradesperson.*

With STAEA

Restricted Activities

Only registered apprentices or qualified tradespersons*

Non-restricted Activities

Anyone.

** Visit tradesecrets.alberta.ca/trades to find out whether journeyman certification is required to be considered a qualified tradesperson in your trade.*

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Skilled Trades and Apprenticeship Education Act

Designated Trades' Activities and Certification Requirements Order

Board Order No. 1/2022

NOTE

This is an order of the Alberta Board of Skilled Trades pursuant to section 14 (2) of the *Skilled Trades and Apprenticeship Education Act*.

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Apprenticeship
and Industry
Training

APPENDIX
SKILLED TRADES AND APPRENTICESHIP EDUCATION ACT
Designated Trades' Activities and Certification Requirements Order (BO 1/2022)

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Definitions

1. In this Order,
 - (a) "Act" means the *Skilled Trades and Apprenticeship Education Act*;
 - (b) "activity", in respect of a designated trade or branch of a designated trade, means a task or function that is recognized by the Board as being associated with undertakings within the designated trade or the branch of a designated trade;
 - (c) "Administrator" means the Administrator for Designated Trades appointed under section 17(1) of the Act and includes any individual designated as a deputy Administrator under section 17(2) of the Act;
 - (d) "Alberta Journeyperson Certificate" means a trade certificate issued by the Administrator that indicates the holder of that trade certificate has successfully met the standards and requirements for certification in respect of the designated trade or the branch of a designated trade;
 - (e) "apprenticeship education program" means an apprenticeship education program established under section 3(1)(a) of the Act;
 - (f) "Board" means the Alberta Board of Skilled Trades established under section 13 of the Act;
 - (g) "board-recognized education or training" means education or training, other than an apprenticeship education program or an industry training program, recognized by the Board as meeting some or all of the standards and requirements for certification in respect of the designated trade or the branch of a designated trade;
 - (h) "credential",
 - (i) in respect of an apprenticeship education program, means a certificate, diploma or other form of proof, established under section 3(1)(c) of the Act and issued in accordance with the regulations, of successful completion of the apprenticeship education program, and
 - (ii) in respect of an industry training program, means a form of proof, established under section 4(1)(c) of the Act and issued in accordance with the regulations, of successful completion of the industry training program;
 - (i) "Department's website" means the website administered by the Minister for purposes of the Act;
 - (j) "designated trade" means a designated trade as listed in Schedule 1 of the Designated Trades and Restricted Activities Regulation (AR 161/2022);
 - (k) "industry training program" means an industry training program established under section 4(1)(a) of the Act;
 - (l) "undertaking", in respect of a designated trade or branch of a designated trade, means a type of work the Board considers to fall within the designated trade or the branch of a designated trade.

PART 1

Designated Trades' Undertakings and Activities

Undertakings and activities

2. The undertakings of each designated trade and branch of a designated trade and the activities performed while practicing or otherwise carrying out the undertakings of each designated trade or branch of a designated trade are set out in Schedule 1 to this Order.

PART 2

Alberta Journeyperson Certificate

Alberta Journeyperson Certificate

3. (1) An individual who successfully completes the applicable certification requirements in a designated trade or branch of a designated trade, as set out in Schedule 2 of this Order, may be issued an Alberta Journeyperson Certificate.
- (2) With respect to the certification requirements set out in Schedule 2, the Administrator may grant credit for related work experience.
- (3) Notwithstanding the certification requirements set out in Schedule 2, an individual with a recognized trade certificate under Part 3 of this Order with a Red Seal Endorsement in a designated trade or branch of a designated trade is not eligible for an Alberta Journeyperson Certificate in that designated trade.

PART 3

Recognized Trade Certificates for Equivalency

Definitions

4. In this Part
 - (a) "non-governmental body that exercises authority delegated by law" means any organization, corporation or association to whom the authority to regulate an occupation, administer a program of apprenticeship, or certify workers in an occupation has been delegated by provincial or territorial statute;
 - (b) "occupational standards" means the skills, knowledge and abilities required for an occupation as established by the regulatory authority and against which the qualifications of an individual in that occupation are assessed and confirmed by a document;
 - (c) "regulatory authority" means a
 - (i) department, ministry or agency of a Canadian province or territory, or
 - (ii) department, ministry or agency of a non-Canadian jurisdiction, or
 - (iii) non-governmental bodythat exercises authority delegated by law;
 - (d) "substantially similar" means 80 per cent or more similarity in the occupational standards of an occupation as compared to the occupational standards of a designated trade or branch of a designated trade.

General recognition of documents for trade certificate equivalency

5. A valid document issued by a regulatory authority in an occupation that is substantially similar to a designated trade or branch of a designated trade, may be recognized by the Board to be equivalent to an Alberta Journeyperson Certificate in that designated trade or that branch of a designated trade.

Documents recognized as equivalent to a trade certificate

6. A list of documents recognized by the Board as equivalent to an Alberta Journeyman Certificate for each designated trade and each branch of a designated trade is set out on the Department's website.

PART 4

Recognized Education or Training for Credit towards Certification Requirements

Definitions

7. In this Part "education or training document" means a document that indicates the holder of that document has successfully completed education or training and this education or training is not part of an apprenticeship education program or industry training program under Part 1 of the Act.

General recognition of education or training for credit

8. A list of education or training documents recognized by the Board for credit towards an Alberta Journeyman Certificate for each designated trade and each branch of a designated trade is set out in Schedule 2.

Coming into force

9. This Order comes into force on July 20, 2022.

Designated Trades' Activities and Certification Requirements Order 1/2022

Schedule 1 - Designated Trades' Undertakings and Activities

Designated Trade	Undertakings and Activities
Agricultural Equipment Technician	<p>1(1) In this section,</p> <p>(a) “agricultural equipment” means any self-propelled, towed or stationary agricultural machinery used in farming, including any equipment and components required for the operation of the machinery, and includes the following:</p> <ul style="list-style-type: none"> (i) internal combustion engines and components, both stationary and mobile; (ii) rubber tired and rubber or steel tracked towing equipment, commonly called tractors; (iii) towed primary and secondary tillage equipment commonly called ploughs (mouldboard, disk, chisel) and cultivators; (iv) towed and self-propelled equipment commonly called seeders, inclusive of all crops; (v) towed or self-propelled equipment commonly called sprayers or broadcasters; (vi) towed and self-propelled harvesting equipment commonly called balers, swathers, windrowers, combines or forage harvesters; (vii) miscellaneous equipment and components required in the production, distribution and transportation of farm produce; <p>(b) “undertakings of the designated trade” means the repair, maintenance and service of agricultural equipment.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of agricultural equipment technician:</p> <p>(a) repairing, maintaining and servicing of agricultural equipment, parts and components, including the following:</p> <ul style="list-style-type: none"> (i) internal combustion engines and components; (ii) power trains; (iii) electrical and electronic systems; (iv) hydraulic systems; (v) steering systems; (vi) braking systems; (vii) wheels and tracked undercarriages; (viii) heating and air conditioning systems; (ix) soil preparation systems; (x) harvesting systems; (xi) spraying systems;

	<ul style="list-style-type: none"> (xii) grain handling equipment; (xiii) miscellaneous equipment and systems used in the production, distribution and transportation of farm produce; (b) with respect to gasoline and diesel internal combustion 2- and 4-stroke cycle engines, <ul style="list-style-type: none"> (i) inspecting and testing engines and components before and after repair using a variety of hand and power tools and measuring and testing equipment, (ii) inspecting, testing, repairing and replacing components of the following: <ul style="list-style-type: none"> (A) liquid cooling systems; (B) air cooling filters or screening systems; (C) engine lubrication systems; (D) gasoline engine fuel systems; (E) diesel engine fuel systems; (F) air-induction systems on diesel engines, (iii) inspecting, adjusting and replacing gasoline engine ignition components, (iv) inspecting, testing, adjusting, repairing and replacing elements of engine governor systems, (v) inspecting and replacing elements of engine exhaust systems, (vi) dismantling, repairing, replacing and reassembling damaged or worn components of cylinder heads, and (vii) dismantling, cleaning, inspecting, rebuilding and reassembling the various types of cylinder block assemblies; (c) with respect to engine starting systems, inspecting, testing, replacing and repairing components of electric starter circuits; (d) with respect to electrical systems, <ul style="list-style-type: none"> (i) inspecting, testing, servicing and replacing storage batteries, (ii) testing, rebuilding, adjusting and replacing components of electrical charging systems, and (iii) testing, overhauling, adjusting and replacing components of lighting, warning and safety electrical systems; (e) with respect to clutches, hydraulic couplings, transmissions and transfer cases, <ul style="list-style-type: none"> (i) inspecting, adjusting or replacing the following: <ul style="list-style-type: none"> (A) clutches and components; (B) components of hydraulic couplings; (C) components of manual shift transmissions; (D) automatic gear change transmissions; (E) single and multiple speed transfer cases,
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	<ul style="list-style-type: none"> (ii) repairing clutches and components, (iii) rebuilding the following: <ul style="list-style-type: none"> (A) components of manual shift transmissions; (B) automatic gear change transmissions; (C) single and multiple speed transfer cases; (D) power shift transmissions, and (iv) installing single and multiple speed transfer cases; (f) with respect to drivelines, rear and front axle assemblies and differential and final drives, <ul style="list-style-type: none"> (i) inspecting and replacing the following: <ul style="list-style-type: none"> (A) drive shafts and universal joints and components; (B) components of front and rear differentials; (C) components of front and rear axles and final drives; (D) tires, wheels and components, (ii) adjusting components of front and rear differentials, and (iii) adjusting components of front and rear axles and final drives; (g) with respect to steering systems, <ul style="list-style-type: none"> (i) inspecting components of the following: <ul style="list-style-type: none"> (A) manually operated steering systems; (B) hydraulic and electronically assisted steering systems; (C) controlled differential (pivot) and articulated steering, (ii) reconditioning and replacing components of manually operated steering systems, (iii) testing, repairing, adjusting and replacing components of hydraulic and electronically assisted steering systems, and (iv) testing, repairing, replacing and adjusting components of controlled differential (pivot) and articulated steering; (h) with respect to braking systems and power take-offs, <ul style="list-style-type: none"> (i) inspecting, replacing, repairing and adjusting components of the following: <ul style="list-style-type: none"> (A) mechanical braking systems; (B) vehicle hydraulic braking systems; (C) air and electric braking systems, (ii) testing components of mechanical braking systems, (iii) rebuilding components of vehicle hydraulic braking systems, and (iv) repairing and replacing power take-offs;
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	<ul style="list-style-type: none"> (i) with respect to cabs, canopies and cab heating systems and air conditioning systems, <ul style="list-style-type: none"> (i) inspecting, repairing, replacing, installing and adjusting components of cabs or canopies and cab heating systems, and (ii) inspecting, repairing, replacing, and adjusting components of cab air conditioning systems; (j) operating tow trucks and related recovery equipment to assist in repair or moving equipment to a location where repairs can be performed; (k) with respect to agricultural equipment, inspecting, adjusting, aligning, repairing and replacing components of the following: <ul style="list-style-type: none"> (i) ploughs; (ii) spreaders; (iii) harrows; (iv) potato planters and grain drills; (v) sprayers; (vi) grain and pea combines; (vii) potato harvesters; (viii) balers; (ix) forage harvesters; (l) testing, removing and rebuilding components of grain and pea combines; (m) testing, removing and rebuilding components of potato harvesters.
Appliance Service Technician – Appliance Service Technician Branch	<p>2(1) In this section,</p> <ul style="list-style-type: none"> (a) “appliance” means the following: <ul style="list-style-type: none"> (i) a device or machine operated by electricity or gas that is designed and used or intended to be used for <ul style="list-style-type: none"> (A) the cooking or baking of food, (B) the washing or drying of dishes, utensils and cooking and baking equipment, (C) the washing or drying of clothes, (D) the disposal of garbage, (E) the filtration of air, or (F) the heating of water, including the following: <ul style="list-style-type: none"> (G) electric and gas ranges; (H) hood fans; (I) microwave ovens; (J) dishwashers;

	<p>(K) waste compactors and waste disposers;</p> <p>(L) clothes washers;</p> <p>(M) electric and gas clothes dryers;</p> <p>(N) electric hot water heaters;</p> <p>(O) electronic air filters;</p> <p>(ii) a device or machine operated by electricity or gas that is designed and manufactured as a self-contained, stand-alone unit used or intended to be used for</p> <p>(A) the cooling of food or of a space,</p> <p>(B) the making of ice, or</p> <p>(C) the dehumidification of air, including the following:</p> <p>(D) electric and gas refrigerators;</p> <p>(E) ice makers;</p> <p>(F) electric and gas freezers;</p> <p>(G) air conditioners;</p> <p>(H) dehumidifiers;</p> <p>(b) “commercial appliance” means a device or machine operated by electricity or gas that is designed and used or intended to be used for</p> <p>(i) the cooking or baking of food,</p> <p>(ii) the washing or drying of dishes, utensils and cooking and baking equipment,</p> <p>(iii) the washing or drying of clothes,</p> <p>(iv) the disposal of garbage,</p> <p>(v) the filtration of air, or</p> <p>(vi) the heating of water, and includes the following:</p> <p>(vii) electric and gas ranges;</p> <p>(viii) hood fans;</p> <p>(ix) microwave ovens;</p> <p>(x) dishwashers;</p> <p>(xi) waste compactors and waste disposers;</p> <p>(xii) clothes washers;</p> <p>(xiii) electric and gas clothes dryers;</p> <p>(xiv) electronic air filters;</p> <p>(xv) electric hot water heaters;</p> <p>(c) “undertakings of the branch of the designated trade” means the installation, service, maintenance, repair, removal and replacement</p>
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	<p>of appliances and commercial appliances and their related parts and components.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the appliance service technician branch of the designated trade of appliance service technician:</p> <ul style="list-style-type: none"> (a) installing appliances and commercial appliances, excluding initial installations governed by electrical, gas and plumbing codes and regulations; (b) servicing, maintaining and repairing of appliances and commercial appliances; (c) installing, removing, repairing and replacing parts and components of appliances and commercial appliances; (d) diagnosing problems respecting appliances and commercial appliances; (e) using hand tools, power tools and refrigeration tools while working on appliances and commercial appliances; (f) using, in relation to appliances and commercial appliances, electrical and other measuring and testing devices; (g) soldering and brazing on or in relation to appliances and commercial appliances; (h) wiring or installing or removing wiring in appliances and commercial appliances; (i) installing, removing or repairing hoses and piping in appliances and commercial appliances; (j) splicing similar and dissimilar metals used in or in relation to appliances and commercial appliances; (k) installing and removing gases and liquids used in appliances and commercial appliances.
Appliance Service Technician – Commercial Appliance Service Technician Branch	<p>3(1) In this section,</p> <ul style="list-style-type: none"> (a) “commercial appliance” means a device or machine operated by electricity or gas that is designed and used or intended to be used for <ul style="list-style-type: none"> (i) the cooking or baking of food, (ii) the washing or drying of dishes, utensils and cooking and baking equipment, (iii) the washing or drying of clothes, (iv) the disposal of garbage, (v) the filtration of air, or (vi) the heating of water, <p>and includes the following:</p> <ul style="list-style-type: none"> (vii) electric and gas ranges;

	<ul style="list-style-type: none"> (viii) hood fans; (ix) microwave ovens; (x) dishwashers; (xi) waste compactors and waste disposers; (xii) clothes washers; (xiii) electric and gas clothes dryers; (xiv) electronic air filters; (xv) electric hot water heaters; <p>(b) “undertakings of the branch of the designated trade” means the installation, service, maintenance, repair, removal and replacement of commercial appliances and their related parts and components.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the commercial appliance service technician branch of the designated trade of appliance service technician designated trade:</p> <ul style="list-style-type: none"> (a) installing commercial appliances, excluding initial installations governed by electrical, gas and plumbing codes and regulations; (b) servicing, maintaining and repairing of commercial appliances; (c) installing, removing, repairing and replacing parts and components of commercial appliances; (d) diagnosing problems respecting commercial appliances; (e) using hand tools, power tools and refrigeration tools while working on commercial appliances; (f) using, in relation to commercial appliances, electrical and other measuring and testing devices; (g) wiring or installing or removing wiring in commercial appliances; (h) installing, removing or repairing hoses and piping in commercial appliances; (i) splicing similar and dissimilar metals used in or in relation to commercial appliances.
Auto Body Technician – Auto Body Prepper Branch	<p>4(1) In this section,</p> <ul style="list-style-type: none"> (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied; (b) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the preparation of a substrate for a finish or topcoat application where the damage is not greater than 3 mm in depth; (ii) the removal and installation of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the auto body prepper branch of the auto body technician designated trade:</p> <ul style="list-style-type: none"> (a) preparing a substrate for a finish or topcoat application where the damage is not greater than 3 mm in depth; (b) removing and installing non-structural components of the body, unibody or frame of a motor vehicle to repair collision damage to the motor vehicle; (c) using hand, power and auto body tools to perform the activities set out in this section; (d) recognizing substrate; (e) filling and sanding substrate; (f) protecting surfaces from the unintended application of a primer product, finish or topcoat; (g) removing and installing trim and non-structural glass; (h) mixing paint and primer products; (i) applying primer, primer-surfacer, undercoating or corrosion protection material; (j) polishing, washing and cleaning substrate.
Auto Body Technician – Auto Body Refinisher Branch	<p>5(1) In this section,</p> <ul style="list-style-type: none"> (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied; (b) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the preparation of a substrate for a finish or topcoat application; (ii) the application of a finish or topcoat to a substrate; (iii) the removal and installation of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the auto body refinisher branch of the auto body technician designated trade:</p> <ul style="list-style-type: none"> (a) preparing a substrate for a finish or topcoat application; (b) applying a finish or topcoat to a substrate; (c) removing and installing of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle; (d) using hand, power and auto body tools to perform the activities set out in this section; (e) performing paint damage analyses and preparing refinishing estimates; (f) recognizing substrates;

	<ul style="list-style-type: none"> (g) managing paint and paint related materials and inventories; (h) filling and sanding substrate; (i) protecting surfaces from the unintended application of a primer product, finish or topcoat; (j) removing and installing trim and non-structural glass; (k) mixing paint and primer products; (l) applying primer, primer-surfacer, undercoating or corrosion protection material; (m) colour match paint; (n) applying a finish or topcoat; (o) polishing, washing and cleaning substrate.
Auto Body Technician – Auto Body Repairer Branch	<p>6(1) In this section,</p> <ul style="list-style-type: none"> (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied; (b) “support system” means any part of a motor vehicle, excluding the chassis, body, unibody, frame or substrate; (c) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the preparation of a substrate for a finish or topcoat application; (ii) the repair of the following components of a motor vehicle: <ul style="list-style-type: none"> (A) the chassis or frame; (B) the body or unibody; (C) a support system damaged in a collision. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the auto body repairer branch of the auto body technician designated trade:</p> <ul style="list-style-type: none"> (a) preparing a substrate for a finish or topcoat application; (b) repairing of the following components of a motor vehicle: <ul style="list-style-type: none"> (i) the chassis or frame; (ii) the body or unibody; (iii) a support system damaged in a collision; (c) using hand, power and auto body tools to perform the activities set out in this section; (d) performing body damage analyses and preparing repair estimates; (e) welding and cutting metal sections; (f) attaching components by welding or using adhesives or fasteners; (g) straightening, measuring or aligning motor vehicle components; (h) recognizing substrates;

	<ul style="list-style-type: none"> (i) filling and sanding substrate; (j) protecting surfaces from the unintended application of a primer product, finish or topcoat; (k) removing and installing trim and glass; (l) mixing paint and primer products; (m) applying primer, primer-surfacer, undercoating or corrosion protection material; (n) polishing, washing and cleaning substrate; (o) performing automotive detailing.
Auto Body Technician – Auto Body Technician Branch	<p>7(1) In this section,</p> <ul style="list-style-type: none"> (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied; (b) “support system” means any part of a motor vehicle, excluding the chassis, body, unibody, frame or substrate; (c) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the preparation of a substrate for a finish or topcoat application; (ii) the application of a finish or topcoat to a substrate; (iii) the repair of the following components of a motor vehicle: <ul style="list-style-type: none"> (A) the chassis or frame; (B) the body or unibody; (C) a support system damaged in a collision. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the auto body technician branch of the designated trade of auto body technician:</p> <ul style="list-style-type: none"> (a) preparing a substrate for a finish or topcoat application; (b) applying a finish or topcoat to a substrate; (c) repairing the following components of a motor vehicle: <ul style="list-style-type: none"> (i) the chassis or frame; (ii) the body or unibody; (iii) a support system damaged in a collision; (d) using hand, power and auto body tools to perform the activities set out in this section; (e) performing body damage analyses and prepare repair estimates; (f) welding and cutting metal sections; (g) attaching components by welding or using adhesives or fasteners; (h) straightening, measuring or aligning motor vehicle components;

	<ul style="list-style-type: none"> (i) performing paint damage analyses and preparing refinishing estimates; (j) recognizing substrates; (k) filling and sanding substrates; (l) managing paint and related materials and inventories; (m) protecting surfaces from the unintended application of a primer product, finish or topcoat; (n) removing and installing trim and glass; (o) mixing paint and primer products; (p) applying primer, primer-surfacer, undercoating or corrosion protection material; (q) colour match paint; (r) applying a finish or topcoat; (s) polishing, washing and cleaning substrate.
Automotive Service Technician	<p>8(1) In this section,</p> <ul style="list-style-type: none"> (a) “motor vehicle” means a vehicle that <ul style="list-style-type: none"> (i) is propelled by any power other than muscular power, (ii) is equipped with 2 or 3 axles, (iii) is not equipped with air brakes, (iv) may be registered to operate on a public highway, and (v) contains one or more of vehicle systems and related components, <p>but does not include a motorcycle as defined in section 52;</p> (b) “undertakings of the designated trade” means the diagnosis of problems and the repair of motor vehicles, including all vehicle systems and related components; (c) “vehicle maintenance services” includes <ul style="list-style-type: none"> (i) fluid and filter changes on any motor vehicle, (ii) tire and wheel service, (iii) replacement of engine accessory drive belts, (iv) battery testing, service or replacement, (v) exhaust system service or replacement, and (vi) installation and service of aftermarket electrical and electronic accessories; (d) “vehicle systems” includes the following: <ul style="list-style-type: none"> (i) vehicle propulsion systems; (ii) fuel systems; (iii) emission control systems;

	<ul style="list-style-type: none"> (iv) braking systems; (v) steering systems; (vi) suspension systems; (vii) drive train systems; (viii) vehicle management systems; (ix) electrical systems; (x) heating, ventilating and air conditioning systems; (xi) occupant restraint systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities performed within the designated trade of automotive service technician:</p> <ul style="list-style-type: none"> (a) diagnosing problems with motor vehicles, including vehicle systems and related components; (b) inspecting, testing, analyzing and repairing motor vehicles, including vehicle systems and utility trailers without air brakes; (c) heating and cutting with oxyfuel equipment; (d) operating and maintaining shop equipment and tools of the designated trade; (e) performing vehicle maintenance services.
Baker	<p>9(1) In this section,</p> <ul style="list-style-type: none"> (a) “baked goods” means breads, cakes, pies, pastries, cookies, doughnuts and specialty baked foods and includes any baked goods that are leavened mechanically, chemically or biologically; (b) “undertakings of the designated trade” means the preparation and the production of baked goods in commercial quantities for public consumption. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities performed within the designated trade of baker:</p> <ul style="list-style-type: none"> (a) sanitizing equipment and workspace; (b) applying computer knowledge, bookkeeping and trade terminology; (c) applying knowledge of the statutes and regulations pertaining to the food industry; (d) selecting, operating and maintaining tools and non-mechanized equipment; (e) selecting, operating and maintaining mechanized and computerized equipment; (f) developing and applying production techniques respecting the following: <ul style="list-style-type: none"> (i) freezer technology; (ii) par-baked products;

	<ul style="list-style-type: none"> (iii) pre-mixes and bases; (g) preparing doughs and batters; (h) preparing creams, icings, fillings, toppings, desserts, confections and ice cream; (i) applying good management techniques; (j) scaling and mixing ingredients; (k) practising baking methods; (l) applying one's knowledge with respect to the following: <ul style="list-style-type: none"> (i) properties of food; (ii) micro-organisms associated with foods; (iii) causes, effect and control of food borne illnesses; (iv) nutrients; (m) product labelling, including listing known allergens; (n) applying professional and personal skills; (o) applying trade calculations and mathematics.
Boilermaker	<p>10(1) In this section,</p> <ul style="list-style-type: none"> (a) “boilers, heat exchangers and related equipment” means the following: <ul style="list-style-type: none"> (i) water tube boilers; (ii) fire tube boilers; (iii) heat exchangers; (iv) condensers; (v) distillation towers; (vi) stacks and stack liners; (vii) storage tanks; (viii) penstocks; (ix) furnaces; (x) dust, air, steam, liquid tight containers and other equipment not referred to in subclauses (i) to (ix); (xi) platforms, ladders, walkways, floors, roofs, support structures or other structures related to or used in respect of the items referred to in subclauses (i) to (x); (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the fabrication, assembly, erection, repair, maintenance, inspection, servicing, preparation and testing of boilers, heat exchangers and related equipment; (ii) the stress relieving of vessels and ancillary equipment.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities performed within the designated trade of boilermaker:</p> <ul style="list-style-type: none"> (a) fabricating, assembling and erecting of boilers, heat exchangers and related equipment; (b) repairing, maintaining, inspecting and servicing of boilers, heat exchangers and related equipment; (c) preparing and testing of boilers, heat exchangers and related equipment; (d) stress relieving of vessels and ancillary equipment; (e) using detailed drawings and other specifications; (f) using all related standards, codes and regulations; (g) using hand tools, power tools and shop equipment, including post drills, radial drills, angle rolls, plate rolls, punches, shears, brakes and presses; (h) using, setting up and assembling of rigging equipment, including wire rope, block and tackle, gin poles, cranes, derricks, hoisting and jacking equipment and scaffolds; (i) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (j) using fiberglass-reinforced plastics <ul style="list-style-type: none"> (i) in respect of air handling systems, including scrubbers, ducting, breeching and stacks, and (ii) in respect of tanks, hoppers and vessels; (k) using new technology related to the activities set out in this section.
Bricklayer	<p>11(1) In this section,</p> <ul style="list-style-type: none"> (a) “masonry” includes the following: <ul style="list-style-type: none"> (i) all types of bricks; (ii) all types of blocks; (iii) all types of stone, including cut and dressed stone; (iv) structural tiles; (v) precast concrete components; (vi) mortars; (vii) waterproofing and damp-proofing materials; (viii) refractory systems and materials; (ix) prefabricated panels constructed of any materials referred to in subclauses (i) to (viii); (b) “undertakings of the designated trade” means the erection, installation, repair and maintenance of masonry.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities performed within the designated trade of the bricklayer:</p> <ul style="list-style-type: none"> (a) erecting, installing, repairing and maintaining masonry; (b) using detailed drawings, blueprints and other specifications; (c) using hand tools, power tools, levels and explosive actuated tools; (d) using mixers, masonry saws and forklifts; (e) using various mortars, units and accessories for bonding; (f) using, setting up and assembling rigging and hoisting equipment, ladders and scaffolds; (g) using any new innovative technological changes in the designated trade that relate to materials or methods of construction; (h) laying masonry; (i) installing anchoring systems; (j) placing steel reinforcing and grouts in cavities or cores; (k) pointing and cleaning masonry; (l) lining or relining chimneys, ovens, boilers and other vessels; (m) lining or relining combustion chambers in fireplaces, furnaces and kilns; (n) installing and caulking precast concrete products and prefabricated masonry panels; (o) installing insulation, waterproofing and damp-proofing materials and air-vapour barriers.
Cabinetmaker	<p>12(1) In this section,</p> <ul style="list-style-type: none"> (a) “millwork” means millwork of all types and includes the following: <ul style="list-style-type: none"> (i) joinery; (ii) framework; (iii) architectural fixture work, including the following: <ul style="list-style-type: none"> (A) stair work and balustrades; (B) special design doors and windows; (C) custom dining rooms, lounges and lobbies; (D) other similar work; (iv) custom millwork, including the following: <ul style="list-style-type: none"> (A) carcase units; (B) kitchen cabinets; (C) vanities, screens and planters; (D) shelf units; (E) other similar work;

	<p>(v) custom furniture, including the following:</p> <ul style="list-style-type: none"> (A) tables and chairs; (B) commercial furniture; (C) institutional furniture; (D) other similar work; <p>(b) “undertakings of the designated trade” means the fabrication and installation of millwork.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of cabinetmaker:</p> <ul style="list-style-type: none"> (a) fabricating and installing millwork; (b) setting up and operating woodworking machines and equipment; (c) making layouts and patterns; (d) cutting, shaping, moulding and assembling components of wood and wood substitutes in accordance with varying specifications; (e) using fasteners and adhesive; (f) using machines and equipment; (g) using laminating procedures; (h) using hardware; (i) building and installing doors, door frames and stairs; (j) interpreting blueprints; (k) developing production drawings using manual and computer-aided design (CAD); (l) packaging and shipping millwork; (m) using manual and computer design and layout; (n) using and maintaining hand and portable power-operated tools; (o) machining furniture and cabinet components; (p) bending and laminating cabinet and furniture components; (q) veneering, inlaying and applying laminated plastics; (r) sanding cabinets and furniture components; (s) fastening, clipping, glueing or otherwise applying non-wood materials to millwork pieces; (t) performing sub-assembly, final assembly and pre-finishing of cabinets, furniture and millwork; (u) preparing and applying finishes; (v) installing millwork and cabinets on site; (w) remodeling and refinishing furniture; (x) using and programming computer numerical controlled (CNC) machines, computer-aided design (CAD) and computer-aided manufacturing (CAM) processes.
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Carpenter	<p>13(1) In this section,</p> <ul style="list-style-type: none"> (a) “building envelope system” means the components of a building that separate heated space from unheated space or that are in contact with the exterior air or the ground; (b) “concrete reinforcement materials” includes metal or steel strands, wires, bars, mesh or sheets; (c) “structure” includes any type of residential, commercial, industrial, institutional or agricultural structure; (d) “undertakings of the designated trade” means the construction, installation and repair of structures or components of structures made of wood, concrete or other materials; (e) “wood” includes any by-product of wood, wood substitutes and similar materials. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of carpenter:</p> <ul style="list-style-type: none"> (a) working with or making things with wood in the construction, installation or repair of structures or components of structures; (b) preparing site and building layouts; (c) constructing foundations and concrete structures; (d) framing structures; (e) applying interior and exterior finishes; (f) reviewing and interpreting construction drawings, plans, specifications, building codes and related documentation; (g) inspecting sub-soil excavations of structures; (h) operating hand and power tools related to the designated trade; (i) shoring and underpinning of existing structures, parts of structures or excavations; (j) laying out and erecting batter boards, building lines and setting elevations; (k) installing, using and dismantling personnel handling devices, scaffolds, ropes, slings, hoists on rigging installations, ladders, shoring, covered walkways and barricades; (l) assembling, erecting, installing and dismantling structures; (m) setting up hoarding and other temporary structures; (n) framing the following: <ul style="list-style-type: none"> (i) exterior walls and interior partitions; (ii) architectural features; (iii) post and beam construction and timber framing; (iv) plank walls; (v) roof systems; (vi) blocking, nailers and firestops;
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	<ul style="list-style-type: none"> (vii) ceiling and floor systems; (o) installing the following: <ul style="list-style-type: none"> (i) preserved wood foundations; (ii) sill plates on foundation walls; (iii) drainage tile and pipe; (iv) beams and columns; (v) floor frames; (vi) wood stairways and railings; (vii) metal stud non-loadbearing walls; (viii) suspended ceiling systems; (ix) engineered pre-fabricated roof systems; (x) roof coverings; (xi) exterior and interior doors and windows; (xii) insulation materials in ceilings, walls and floors; (viii) air and vapour barriers; (xiv) caulking, adhesion and sealant materials; (xv) exterior wall finishes; (xvi) building envelope systems; (xvii) gypsum and non-gypsum products on interior walls and ceilings; (xviii) interior cabinets, display cases, mirrors, counters, laminates, panelling, mouldings and trim; (xix) prefabricated fireplaces; (xx) exterior attachments to structures including additions, porches, stoops and verandas; (xxi) timber bents to support ramps, platforms and heavy piping; (xxii) timber culverts; (p) placement of precast concrete panels; (q) building and stripping forms for the following: <ul style="list-style-type: none"> (i) beams and girders; (ii) piers and columns; (r) building forms, installing concrete reinforcement materials, placing and consolidating concrete and stripping forms for the following: <ul style="list-style-type: none"> (i) footings; (ii) walls; (iii) floors; (iv) sidewalks, driveways and curbs; (v) stairs;
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	<ul style="list-style-type: none"> (vi) built-in-place concrete manholes, catch basins, utility vaults and other underground service boxes; (vii) tilt-up precast concrete panels; (viii) void forms for grade or subterranean concrete.
Cathodic Protection Technician – Level One Branch	<p>14(1) In this section,</p> <ul style="list-style-type: none"> (a) “cathodic protection system” means an electrical system, as defined in section 23, that reduces the corrosion of a metal surface by making the metal surface into the cathode of an electrochemical cell; (b) “external electrical circuit” means the components of an impressed current cathodic protection system that are down line of the rectifier; (c) “galvanic anode cathodic protection system” means a cathodic protection system in which a metal provides cathodic protection to another metal that is more noble, when the metals are electrically coupled in an electrolyte; (d) “impressed current cathodic protection system” means a cathodic protection system in which a direct current is supplied by a power source; (e) “installed” means a state of being physically connected to a power source; (f) “rectifier” means the component of an impressed current cathodic protection system that starts with the input terminal of the internal breaker and includes all wiring, connections and components up to and including the output terminals, and the enclosure; (g) “undertakings of the branch of the designated trade” means the installation, commissioning, maintenance, repair and decommissioning of cathodic protection systems but does not include the maintenance and repair of a rectifier that is installed. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the level one branch of the designated trade of cathodic protection technician:</p> <ul style="list-style-type: none"> (a) installing, commissioning, monitoring, evaluating, maintaining, repairing and decommissioning the external electrical circuit portion of an impressed current cathodic protection system; (b) installing, commissioning, monitoring, evaluating, maintaining, repairing and decommissioning a galvanic anode cathodic protection system; (c) maintaining and repairing a rectifier that is not installed; (d) preparing for planned cathodic protection projects; (e) complying with all applicable regulations, codes and standards; (f) understanding the use and operation of testing equipment; (g) performing basic troubleshooting on cathodic protection systems; (h) conducting function tests; (i) gathering data;

	<ul style="list-style-type: none"> (j) preparing reports and records; and (k) troubleshooting and replacing components of a rectifier that is not installed.
Cathodic Protection Technician – Level Two Branch	<p>15(1) In this section,</p> <ul style="list-style-type: none"> (a) “cathodic protection system” means an electrical system, as defined in section 25, that reduces the corrosion of a metal surface by making the metal surface into the cathode of an electrochemical cell; (b) “external electrical circuit” means the components of an impressed current cathodic protection system that are down line of the rectifier; (c) “galvanic anode cathodic protection system” means a cathodic protection system in which a metal provides cathodic protection to another metal that is more noble, when the metals are electrically coupled in an electrolyte; (d) “impressed current cathodic protection system” means a cathodic protection system in which a direct current is supplied by a power source; (e) “installed” means a state of being physically connected to a power source; (f) “rectifier” means the component of an impressed current cathodic protection system that starts with the input terminal of the internal breaker and includes all wiring, connections and components up to and including the output terminals, and the enclosure; (g) “undertakings of the branch of the designated trade” means the installation, commissioning, maintenance, repair and decommissioning of cathodic protection systems but does not include the maintenance and repair of a rectifier that is installed. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the level two branch of the designated trade of cathodic protection technician:</p> <ul style="list-style-type: none"> (a) installing, commissioning, monitoring, evaluating, maintaining, repairing and decommissioning the external electrical circuit portion of an impressed current cathodic protection system; (b) installing, commissioning, monitoring, evaluating, maintaining, repairing and decommissioning a galvanic anode cathodic protection system; (c) maintaining and repairing a rectifier that is not installed; (d) preparing for planned cathodic protection projects; (e) complying with all applicable regulations, codes and standards; (f) understanding the use and operation of testing equipment; (g) performing basic troubleshooting on cathodic protection systems; (h) conducting function tests; (i) gathering data; (j) preparing reports and records;

	<ul style="list-style-type: none"> (k) troubleshooting and replacing components of a rectifier that is not installed; (l) overall responsibility for planning and completing cathodic protection projects; (m) ensuring safe practices and procedures; (n) conducting, verifying and evaluating the accuracy of test results; (o) preparing assignments and supervising a crew in cathodic protection system work; (p) managing inspection reports and log books; (q) performing advanced troubleshooting on cathodic protection systems and components; (r) educating stakeholders regarding cathodic protection systems; (s) co-ordinating the work of qualified tradespersons; (t) preparing and submitting cathodic protection system project estimates and bids; (u) providing assistance in the design and installation of cathodic protection systems; and (v) performing commissioning and decommissioning checks.
Communication Technician	<p>16(1) In this section,</p> <ul style="list-style-type: none"> (a) “communication system” means any type of industrial, commercial or domestic electrical, fibre or wireless communication system and includes transmission equipment, switching equipment and network management control equipment for the following: <ul style="list-style-type: none"> (i) video; (ii) voice; (iii) data; (iv) signaling; (b) “undertakings of the designated trade” means the installation, repair, maintenance and upgrade of communication systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of communication technician:</p> <ul style="list-style-type: none"> (a) installing, repairing, maintaining and upgrading communication systems; (b) using hand tools, power tools, testing equipment and tools required by the designated trade; (c) installing, terminating and testing copper and fibre optic cables in communication systems; (d) installing and laying out raceways and supporting framework for communication systems;

	<ul style="list-style-type: none"> (e) installing, troubleshooting, maintaining and commissioning equipment and apparatus used in communication systems; (f) interpreting and applying the provisions of the <i>Safety Codes Act</i> and the regulations under that Act; (g) interpreting communications systems drawings and prints.
Concrete Finisher	<p>17(1) In this section,</p> <ul style="list-style-type: none"> (a) “concrete” means cement products and includes the following: <ul style="list-style-type: none"> (i) cements; (ii) concrete; (iii) aggregate; (iv) grouts; (v) patching materials; (vi) toppings; (vii) admixtures; (viii) agents; (ix) epoxies; (x) protective coatings; (b) “undertakings of the designated trade” means the placing, finishing, restoring and repairing of concrete. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of concrete finisher:</p> <ul style="list-style-type: none"> (a) placing of concrete; (b) handling of concrete; (c) finishing concrete; (d) restoring concrete; (e) repairing and resurfacing concrete; (f) applying curing treatments to concrete; (g) applying surface treatments to concrete; (h) consolidating and compacting concrete; (i) edging, jointing and grooving concrete; (j) producing various finishes on concrete surfaces; (k) applying treatments to concrete; (l) cutting and coring hardened concrete; (m) scarifying concrete; (n) applying dry, wet and epoxy grouts; (o) using detailed drawings, blueprints and other specifications;

	<ul style="list-style-type: none"> (p) using hand tools, power tools, levels and explosive actuated tools; (q) using mixers, wall sawing, floor sawing, grooving, coring and grinding equipment; (r) using power consolidating, power screeding and power trowelling equipment; (s) using, setting up and assembling rigging and hoisting equipment, ladders and scaffolds; (t) using any new innovative technological changes in the designated trade in relation to the activities set out in this section.
Construction Craft Worker	<p>18(1) In this section,</p> <ul style="list-style-type: none"> (a) “buildings, structures or premises” includes the following: <ul style="list-style-type: none"> (i) municipal sewer and water mains; (ii) roads; (iii) dams; (iv) bridges; (v) tunnels; (vi) railways; (vii) canals and other similar works; (b) “undertakings of the designated trade” means the preparation, clean-up, material handling, demolition, excavation and compaction on or around buildings, structures or premises. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of construction craft worker:</p> <ul style="list-style-type: none"> (a) preparing, maintaining and cleaning up site; (b) excavating, subgrade working and compacting; (c) assisting with concrete and similar work and, without limiting the generality of the foregoing, includes: <ul style="list-style-type: none"> (i) placing, consolidating and striking-off of concrete and masonry; (ii) maintaining of curing conditions; (iii) demolition and removing of concrete and masonry; (iv) mixing and distribution of grout and mortar; (v) stock piling and distributing masonry units and building materials; (vi) installing edge forms; (d) cleaning and coating of formwork and stripping of non-reusable formwork; (e) installing concrete paving stones;

	<ul style="list-style-type: none"> (f) cleaning and securing the building site and containing construction refuse; (g) operating and maintaining gasoline, pneumatic, power actuated, electric and hydraulic tools related to the occupation; (h) flame cutting of mild non-tempered steel; (i) operating and maintaining stationary compressors and portable generators; (j) using and maintaining hand and power tools related to the designated trade; (k) using basic site management procedures; (l) assisting with survey and measurement activities; (m) excavating, trenching, backfilling and compacting around foundation structures with tools related to the designated trade; (n) preparing piles and bells; (o) installing subgrade drainage and foundation damp-proofing; (p) setting up and assembling ladders and scaffolding for use in the designated trade; (q) transporting scaffolding components to and from the site at which the scaffolds are to be erected; (r) assisting with the excavation shoring and placement of temporary enclosures; (s) performing rigging related to the designated trade; (t) signalling with respect to the operation of construction equipment; (u) installing, connecting, tying-in and testing works that make up municipal sewer and water mains.
Cook	<p>19(1) In this section, “undertakings of the designated trade” means the preparation and the cooking of a variety of full course meals including appetizers, starches, main courses, vegetables and desserts in commercial quantities for public consumption.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of cook:</p> <ul style="list-style-type: none"> (a) maintaining personal hygiene and applying sanitation and safe food handling techniques; (b) operating and maintaining kitchen tools and equipment; (c) identifying and preparing different types of food; (d) maintaining and applying cooking principles and methods with respect to all aspects of cooking from basic cooking to advanced cooking; (e) cleaning, preparing and cooking vegetables, fruits and fungi; (f) preparing stocks, sauces and soups;

	<ul style="list-style-type: none"> (g) using seasonings, herbs and spices; (h) preparing egg and dairy products; (i) preparing and cooking starches, farinaceous foods and cereals; (j) preparing, cooking and dressing fish and seafood; (k) preparing and cooking meats, poultry, game and variety meats; (l) producing baked pastry and dessert products; (m) preparing cold foods and buffets; (n) preparing and cooking value added products; (o) applying nutritional values and meeting special dietary needs; (p) using cooking and chilling systems; (q) preparing, cooking and storing food items for preservation; (r) applying purchasing and management control; (s) applying management skills.
Crane and Hoisting Equipment Operator – Boom Truck Operator Branch	<p>20(1) In this section,</p> <ul style="list-style-type: none"> (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that <ul style="list-style-type: none"> (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis, (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and (iii) is equipped with <ul style="list-style-type: none"> (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes); (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include <ul style="list-style-type: none"> (i) an overhead bridge-type crane, (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles, (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting,

	<ul style="list-style-type: none"> (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench, (v) an aerial device that is commonly known as a personnel lift or personnel hoist, (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment, (vii) equipment designed exclusively to move earth, (viii) a crane that <ul style="list-style-type: none"> (A) is operated at a mine site, (B) is used with a special attachment to move earth or material, and (C) meets the requirements of and is operated in accordance with the <i>Occupational Health and Safety Act</i> and the regulations under that Act, (ix) an aerial material handling device with or without live lines, or (x) equipment designed exclusively for drilling or driving piles and casings; (c) “hydraulic mobile crane” means any device or structure that <ul style="list-style-type: none"> (i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a telescoping boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and (v) may incorporate a ring assembly or a strand jacking system for hoisting; (d) “lattice boom mobile crane” means any device or structure that <ul style="list-style-type: none"> (i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a lattice boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater; (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck; (f) “mobile crane” means <ul style="list-style-type: none"> (i) a hydraulic mobile crane or a lattice boom mobile crane, and
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	<p>(ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);</p> <p>(g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;</p> <p>(h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;</p> <p>(i) “tower crane” means any mechanical device or structure that</p> <p>(i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,</p> <p>(ii) is of the travelling, fixed, climbing or self-erecting type, and</p> <p>(iii) is used exclusively for raising, lowering or moving material;</p> <p>(j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of boom trucks and wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;</p> <p>(k) “wellhead boom truck” means a boom truck that is used for one or more of the following:</p> <p>(i) wellhead pumping operations;</p> <p>(ii) wireline operations;</p> <p>(iii) perforating operations;</p> <p>(iv) coiled tubing operations;</p> <p>(v) snubbing operations;</p> <p>(vi) the rig up and rig out of slant service rigs.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the boom truck operator branch of the designated trade of crane and hoisting equipment operator:</p> <p>(a) operating, testing and performing routine maintenance of boom trucks or wellhead boom trucks;</p> <p>(b) using hand tools, power tools and specialized equipment while maintaining and operating boom trucks and related equipment;</p> <p>(c) recognizing and identifying malfunctions relating to boom trucks and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions;</p> <p>(d) recognizing and identifying conditions that are potentially hazardous to safe machine operation;</p> <p>(e) interpreting and applying visual and audio communications;</p> <p>(f) communicating with management, signallers and riggers using visual and audio systems;</p>
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	<ul style="list-style-type: none"> (g) inspecting and maintaining boom cranes and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities; (h) performing rigging related to the designated trade; (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts; (j) performing the activities of the wellhead boom truck operator branch of the designated trade as set out in section 23.
Crane and Hoisting Equipment Operator – Mobile Crane Operator Branch	<p>21(1) In this section,</p> <ul style="list-style-type: none"> (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that <ul style="list-style-type: none"> (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis, (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and (iii) is equipped with <ul style="list-style-type: none"> (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes); (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include <ul style="list-style-type: none"> (i) an overhead bridge-type crane, (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles, (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting, (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench, (v) an aerial device that is commonly known as a personnel lift or personnel hoist, (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment,

	<ul style="list-style-type: none"> (vii) equipment designed exclusively to move earth, (viii) a crane that <ul style="list-style-type: none"> (A) is operated at a mine site, (B) is used with a special attachment to move earth or material, and (C) meets the requirements of and is operated in accordance with the <i>Occupational Health and Safety Act</i> and the regulations under that Act, (ix) an aerial material handling device with or without live lines, or (x) equipment designed exclusively for drilling or driving piles and casings; (c) “hydraulic mobile crane” means any device or structure that <ul style="list-style-type: none"> (i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a telescoping boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and (v) may incorporate a ring assembly or a strand jacking system for hoisting; (d) “lattice boom mobile crane” means any device or structure that <ul style="list-style-type: none"> (i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a lattice boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater; (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck; (f) “mobile crane” means <ul style="list-style-type: none"> (i) a hydraulic mobile crane or a lattice boom mobile crane, and (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes); (g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question; (h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;
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	<ul style="list-style-type: none"> (i) “tower crane” means any mechanical device or structure that <ul style="list-style-type: none"> (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib, (ii) is of the travelling, fixed, climbing or self-erecting type, and (iii) is used exclusively for raising, lowering or moving material; (j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of mobile cranes, boom trucks and wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment; (k) “wellhead boom truck” means a boom truck that is used for one or more of the following: <ul style="list-style-type: none"> (i) wellhead pumping operations; (ii) wireline operations; (iii) perforating operations; (iv) coiled tubing operations; (v) snubbing operations; (vi) the rig up and rig out of slant service rigs. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the mobile crane operator branch of the designated trade of crane and hoisting equipment operator:</p> <ul style="list-style-type: none"> (a) operating, testing and performing routine maintenance of mobile cranes, boom trucks, and wellhead boom trucks; (b) using hand tools, power tools and specialized equipment while maintaining and operating mobile cranes and related equipment; (c) recognizing and identifying malfunctions relating to mobile cranes and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions; (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation; (e) interpreting and applying visual and audio communications; (f) communicating with management, signallers and riggers using visual and audio systems; (g) inspecting and maintaining mobile cranes and related equipment; (h) performing rigging related to the designated trade; (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts; (j) assembling mobile cranes and related equipment for lifts; (k) disassembling mobile cranes for transport; (l) performing the activities of the boom truck operator branch of the designated trade as set out in section 20;
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	(m) performing the activities of the wellhead boom truck operator branch of the designated trade as set out in section 23.
Crane and Hoisting Equipment Operator – Tower Crane Operator Branch	<p>22(1) In this section,</p> <p>(a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that</p> <ul style="list-style-type: none"> (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis, (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and (iii) is equipped with <ul style="list-style-type: none"> (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes); <p>(b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include</p> <ul style="list-style-type: none"> (i) an overhead bridge-type crane, (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles, (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting, (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench, (v) an aerial device that is commonly known as a personnel lift or personnel hoist, (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment, (vii) equipment designed exclusively to move earth, (viii) a crane that <ul style="list-style-type: none"> (A) is operated at a mine site, (B) is used with a special attachment to move earth or material, and

	<p>(C) meets the requirements of and is operated in accordance with the <i>Occupational Health and Safety Act</i> and the regulations under that Act,</p> <p>(ix) an aerial material handling device with or without live lines, or</p> <p>(x) equipment designed exclusively for drilling or driving piles and casings;</p> <p>(c) “hydraulic mobile crane” means any device or structure that</p> <p>(i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material,</p> <p>(ii) is equipped with a telescoping boom capable of moving in the vertical plane,</p> <p>(iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility,</p> <p>(iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and</p> <p>(v) may incorporate a ring assembly or a strand jacking system for hoisting;</p> <p>(d) “lattice boom mobile crane” means any device or structure that</p> <p>(i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material,</p> <p>(ii) is equipped with a lattice boom capable of moving in the vertical plane,</p> <p>(iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and</p> <p>(iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater;</p> <p>(e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;</p> <p>(f) “mobile crane” means</p> <p>(i) a hydraulic mobile crane or a lattice boom mobile crane, and</p> <p>(ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);</p> <p>(g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;</p> <p>(h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;</p> <p>(i) “tower crane” means any mechanical device or structure that</p> <p>(i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,</p> <p>(ii) is of the travelling, fixed, climbing or self-erecting type, and</p> <p>(iii) is used exclusively for raising, lowering or moving material;</p>
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	<p>(j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of tower cranes but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;</p> <p>(k) “wellhead boom truck” means a boom truck that is used for one or more of the following:</p> <ul style="list-style-type: none"> (i) wellhead pumping operations; (ii) wireline operations; (iii) perforating operations; (iv) coiled tubing operations; (v) snubbing operations; (vi) the rig up and rig out of slant service rigs. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the tower crane operator branch of the designated trade of crane and hoisting equipment operator:</p> <ul style="list-style-type: none"> (a) operating, testing and performing routine maintenance of tower cranes; (b) using hand tools, power tools and specialized equipment while maintaining and operating tower cranes and related equipment; (c) recognizing and identifying malfunctions relating to tower cranes and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions; (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation; (e) interpreting and applying visual and audio communications; (f) communicating with management, signallers and riggers using visual and audio systems; (g) inspecting and maintaining tower cranes and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities; (h) performing rigging related to the designated trade; (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts; (j) assembling tower cranes and related equipment for lifts; (k) disassembling tower cranes for transport.
Crane and Hoisting Equipment Operator – Wellhead Boom Truck Operator Branch	<p>23(1) In this section,</p> <ul style="list-style-type: none"> (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that <ul style="list-style-type: none"> (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis,

	<ul style="list-style-type: none"> (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and (iii) is equipped with <ul style="list-style-type: none"> (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes); (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include <ul style="list-style-type: none"> (i) an overhead bridge-type crane, (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles, (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting, (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench, (v) an aerial device that is commonly known as a personnel lift or personnel hoist, (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment, (vii) equipment designed exclusively to move earth, (viii) a crane that <ul style="list-style-type: none"> (A) is operated at a mine site, (B) is used with a special attachment to move earth or material, and (C) meets the requirements of and is operated in accordance with the <i>Occupational Health and Safety Act</i> and the regulations under that Act, (ix) an aerial material handling device with or without live lines, or (x) equipment designed exclusively for drilling or driving piles and casings; (c) “hydraulic mobile crane” means any device or structure that
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	<ul style="list-style-type: none"> (i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a telescoping boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and (v) may incorporate a ring assembly or a strand jacking system for hoisting; <p>(d) “lattice boom mobile crane” means any device or structure that</p> <ul style="list-style-type: none"> (i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material, (ii) is equipped with a lattice boom capable of moving in the vertical plane, (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater; <p>(e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;</p> <p>(f) “mobile crane” means</p> <ul style="list-style-type: none"> (i) a hydraulic mobile crane or a lattice boom mobile crane, and (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes); <p>(g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;</p> <p>(h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;</p> <p>(i) “tower crane” means any mechanical device or structure that</p> <ul style="list-style-type: none"> (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib, (ii) is of the travelling, fixed, climbing or self-erecting type, and (iii) is used exclusively for raising, lowering or moving material; <p>(j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;</p> <p>(k) “wellhead boom truck” means a boom truck that is used for one or more of the following:</p> <ul style="list-style-type: none"> (i) wellhead pumping operations;
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	<ul style="list-style-type: none"> (ii) wireline operations; (iii) perforating operations; (iv) coiled tubing operations; (v) snubbing operations; (vi) the rig up and rig out of slant service rigs. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the wellhead boom truck operator branch of the designated trade of crane and hoisting equipment operator:</p> <ul style="list-style-type: none"> (a) operating, testing and performing routine maintenance of wellhead boom trucks; (b) using hand tools, power tools and specialized equipment while maintaining wellhead boom trucks and related equipment; (c) recognizing and identifying malfunctions relating to wellhead boom trucks and related equipment and the proper procedures to be applied when recognizing and identifying such malfunctions; (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation; (e) interpreting and applying visual and audio communications; (f) communicating with management, signallers and riggers using visual and audio systems; (g) inspecting and maintaining wellhead boom trucks and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities; (h) performing rigging related to the designated trade; (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts.
Electric Motor Systems Technician	<p>24(1) In this section,</p> <ul style="list-style-type: none"> (a) “electrical machines, systems and equipment” means the following: <ul style="list-style-type: none"> (i) electrical measuring devices; (ii) electrical machine components; (iii) all types of electro-mechanical equipment whether or not it is <ul style="list-style-type: none"> (A) gear driven, (B) belt driven, or (C) direct coupled; (iv) electrical switching circuits; (v) electrical fans, blowers and pumps; (vi) transformers; (vii) single phase motors;

	<ul style="list-style-type: none"> (viii) magnetic switches and control circuits; (ix) phase converters; (x) three phase motors, starters and controllers; (xi) synchronous machines; (xii) industrial electronic controls; (xiii) electric welders; (xiv) eddy current clutches, couplings and brakes; (xv) inverter and vector drives; (xvi) static and dynamic balancing; (xvii) programmable controllers; <p>(b) “undertakings of the designated trade” means the repair, installation, replacement, modification and testing of electrical machines, systems and equipment.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of electric motor systems technician:</p> <ul style="list-style-type: none"> (a) installing electrical machines, systems and equipment; (b) repairing, replacing, modifying and testing of electrical machines, systems and equipment; (c) testing, repairing and reconditioning electric machines, motors and generators and AC and DC welders; (d) modifying motors, including windings, electrical connections and bearings; (e) rigging and hoisting related to the designated trade; (f) performing power measurement; (g) reconditioning and repairing motor-generator sets; (h) reconditioning and repairing transformers; (i) reconditioning and repairing electrical control components; (j) manufacturing, testing and repairing electrical control panels; (k) disconnecting, servicing and reconnecting electrical fans, blowers, pumps or electrical devices from existing consumer power supplies; (l) examining, testing and lubricating mechanical components of motors and generators; (m) examining, testing and checking the operation of electrical components of motors, generators, transformers and control equipment; (n) determining the need, extent and type of repairs required and preparing reports for time and costs estimations; (o) examining, servicing and aligning or replacing couplings; (p) performing predictive and preventative maintenance services; (q) examining, servicing or replacing bearings, seals and gaskets;
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	<ul style="list-style-type: none"> (r) repairing or replacing stators and motor windings in AC and DC motors and generators and welders; (s) repairing, replacing or reconditioning commutators and slip ring assemblies; (t) assembling and testing motors and generators for correct operation; (u) examining and testing controls and indicating instruments to determine the nature and extent of repairs required; (v) repairing or replacing control components and indicating instruments; (w) performing minor tune-ups of gasoline engines used for generator and welder drives; (x) inspecting and testing to establish condition of transformers; (y) removing transformer cores and coils from transformer housings; (z) repairing damaged insulators and insulating material in respect of transformers; (aa) repairing and replacing coil connections in respect of transformers; (bb) removing and rewinding primary windings and installing primary windings; (cc) removing and rewinding secondary windings and installing secondary windings; (dd) repairing or replacing tap changing switches; (ee) checking and repairing transformer cores; (ff) repairing transformer housings; (gg) testing, removing and replacing transformer oil; (hh) assembling transformers and placing in transformer housings; (ii) inspecting and testing condition of control components including relays, solenoids, contactors and similar components; (jj) dismantling, repairing and rewinding components and assembling and testing for correct operation; (kk) interpreting and evaluating customers' requirements, drawings and specifications; (ll) preparing and laying out materials for and manufacturing and assembling enclosures and panels; (mm) determining locations of components and installing and wiring the components in enclosures and panels; (nn) testing control panels for correct operation according to drawings and specifications; (oo) inspecting control panels for damage and faulty components; (pp) repairing and verifying certification of electrical equipment and components used in hazardous locations; (qq) painting and refinishing electrical apparatus.
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Electrician	<p>25(1) In this section,</p> <ul style="list-style-type: none"> (a) “electrical system” means any type of residential, commercial, institutional or industrial building or structural electrical system and includes the following: <ul style="list-style-type: none"> (i) fire alarm systems; (ii) signal systems; (iii) control systems; (iv) lighting systems; (v) heating and cooling systems; (vi) systems providing power; (vii) data systems; (viii) communication systems; (ix) fibre optic systems; (x) lightning protection systems; (xi) cathodic protection systems; (xii) grounding and bonding systems; (b) “undertakings of the designated trade” means the installation, alteration, repair, inspection, verification, commissioning, maintenance and operation of electrical systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of electrician:</p> <ul style="list-style-type: none"> (a) interpreting electrical industry codes, including the CSA Standard C22.1, <i>Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations</i> declared in force, as amended or replaced from time to time, by the <i>Electrical Code Regulation</i> (AR 209/2006); (b) erecting, assembling, removing, repairing, replacing and using scaffolding, handling devices, hoists, slings, ropes, rigging equipment and related hardware; (c) using hand tools, power tools, testing equipment and specialty tools required by the designated trade; (d) preparing holes and openings for conductors, cables, raceways, boxes and fittings, fasteners and devices and making panel backboards, box supports and similar items; (e) selecting and specifying location and planning layout of electrical systems, components and controls from drawings, specifications, contract documents and related information; (f) scheduling labour and material requirements for electrical work; (g) testing electrical and electronic equipment and components for continuity, current, voltage and resistance; (h) installing, repairing, examining, operating, removing, replacing, altering, maintaining, connecting, testing, energizing and cleaning the following:
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	<ul style="list-style-type: none"> (i) electric surface or flush mounted receptacles, junction, outlet and device boxes and components; (ii) feeder and distribution busways and busducts; (iii) lighting fixtures and related electrical equipment and components; (iv) dry cell and storage batteries and storage battery systems; (v) consumer's service entrance distribution and metering equipment for connection to overhead and underground supply; (vi) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution; (vii) power transformers, regulators, capacitors, phase converters and reactors; (viii) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls; (ix) alternating current to direct current conversion devices and power inverters for conversion of direct current to alternating current; (x) electrical appliances, electrical heating, solar heating, ventilation and air conditioning units, components and controls; (xi) oil, gas, coal, electric or wood burner control systems, or any combination of them, and associated wiring; (xii) infra-red heating units and other types of infra-red units, controls and components; (xiii) fire alarm systems; (xiv) security systems, intrusion alarms, access control, card key lock systems or similar equipment; (xv) clock systems, including self-correcting or synchronized master-slave equipment and programmable time devices for signals, energy management, lighting control and similar installations; (xvi) sound and visual communications systems; (xvii) fibre optic systems and components; (xviii) electronic devices, discrete devices, manual or automatic devices, control devices, limit switches, pilot or sensing devices, signal devices, circuits and indication lamps, panels or similar equipment and components; (xix) relay, static logic or programmable control components and systems; (xx) servo-mechanisms and associated circuitry, robotic systems and numerically controlled and computerized numerically controlled systems;
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	<ul style="list-style-type: none"> (xxi) electric motors, generators, controls, other electromechanical devices and auxiliary equipment; (xxii) motor starters, motor speed controllers and braking systems, direct current solid state drives, alternating current adjustable frequency drives, magnetic drive assemblies and controls; (xxiii) recording instruments and metering instruments; (xxiv) grid-connected solar photovoltaic systems, including systems using storage; (xxv) grid-isolated solar photovoltaic systems; (i) installing, repairing, examining, removing, replacing, altering, maintaining, terminating, splicing, connecting, testing, energizing and cleaning the following: <ul style="list-style-type: none"> (i) cable assemblies; (ii) underground and overhead wiring installations; (iii) high voltage conductors, cables, terminations and insulation materials; (iv) lighting fixtures and related electrical equipment and components; (v) dry cell and storage batteries and storage battery systems; (vi) electric heat tracing cable assemblies and controls; (j) installing, repairing, examining, removing, replacing, altering, maintaining, connecting, testing and cleaning the following: <ul style="list-style-type: none"> (i) raceway systems, including fittings; (ii) mechanical supports and protection for electrical systems; (iii) grounding and bonding systems; (k) terminating and splicing the following: <ul style="list-style-type: none"> (i) feeder and distribution busways and busducts; (ii) fibre optic systems and components; (l) terminating the following: <ul style="list-style-type: none"> (i) electric surface or flush mounted receptacles, junction, outlet and device boxes and components; (ii) lighting fixtures and related electrical equipment and components; (iii) dry cell and storage batteries and storage battery systems; (iv) consumer's service entrance distribution and metering equipment for connection to overhead and underground supply; (v) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution; (m) programming and calibrating the following:
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	<ul style="list-style-type: none"> (i) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls; (ii) relay, static logic or programmable control components and systems; (iii) servo-mechanisms and associated circuitry, robotic systems and numerically controlled and computerized numerically controlled systems; (n) calibrating the following: <ul style="list-style-type: none"> (i) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution; (ii) electrical heating, solar heating, ventilation and air conditioning units, components and controls; (iii) oil, gas, coal, electric or wood burner control systems, or any combination of them, and associated wiring; (iv) electric motors, generators, controls, other electromechanical devices and auxiliary equipment; (v) motor starters, motor speed controllers and braking systems, direct current solid state drives, alternating current adjustable frequency drives, magnetic drive assemblies and controls; (vi) recording instruments; (o) lubricating the following: <ul style="list-style-type: none"> (i) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution; (ii) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls; (iii) electric motors, generators, controls, other electromechanical devices and auxiliary equipment.
Elevator Constructor	<p>26(1) In this section,</p> <ul style="list-style-type: none"> (a) “elevator system” includes the following: <ul style="list-style-type: none"> (i) electric elevators; (ii) hydraulic elevators; (iii) escalators; (iv) workers’ passenger hoists or lifts; (v) dumbwaiters; (vi) hand operated elevators; (vii) parking garage elevators; (viii) moving walkways; (ix) stagelifts; (x) lifts for persons with physical disabilities;

	<ul style="list-style-type: none"> (xi) residential elevators; (xii) elevator entrances; (xiii) elevator doors and door operating equipment; (xiv) electrical wiring and conduits from controllers to <ul style="list-style-type: none"> (A) signals, (B) operating circuits, and (C) remote panels or signals; (xv) fireman service; (xvi) signal, lighting and control systems; (xvii) piping relative to hydraulic elevators; <p>(b) “undertakings of the designated trade” means the following:</p> <ul style="list-style-type: none"> (i) the installation, removal, alteration, repair, modification and maintenance of elevator systems and <ul style="list-style-type: none"> (A) motors, drives and motor controllers, and (B) emergency power systems and security systems associated with elevator systems; (ii) the operation of temporary and incomplete elevator systems; (iii) the testing of elevator systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of elevator constructor:</p> <ul style="list-style-type: none"> (a) installing, removing, altering, repairing, modifying and maintaining elevator systems and <ul style="list-style-type: none"> (i) motors, drives and motor controllers, and (ii) emergency power systems and security systems associated with elevator systems; (b) operating temporary and incomplete elevator systems; (c) testing elevator systems; (d) using hand tools, power tools, testing equipment and specialty tools required by the designated trade; (e) applying elevator, electrical and mechanical theory to the carrying out of the activities set out in this section; (f) drawing, pulling, terminating and testing of conductors or cables into controller or panel systems pertaining to elevators or escalators; (g) installing and laying out hoistways, raceways, conduits, cable trays or troughs, wireways and fittings in elevator systems; (h) installing, troubleshooting, testing and laying out controllers and remote panels in elevator systems; (i) interpreting electrical and mechanical drawings and prints;
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	<ul style="list-style-type: none"> (j) interpreting safety codes for elevators, escalators, dumbwaiters, moving walks and freight platform lifts; (k) coordinating elevator work with other construction trades; (l) installing all rail guides, beams, sheaves, templates, overhead work and all material used for mounting elevator systems in the machine room or below the machine room; (m) installing scaffolding for the erection of elevator systems; (n) installing and assembling elevator cabs and panels; (o) welding, drilling and rigging; (p) handling and hoisting elevator and escalator material.
Field Heat Treatment Technician	<p>27(1) In this section</p> <ul style="list-style-type: none"> (a) “heat treatable materials” include: <ul style="list-style-type: none"> (i) ferrous and non-ferrous alloy; (ii) refractory; (iii) coating; and (iv) glass. (b) “undertakings of the designated trade” means the field application of heat to heat treatable materials in order to intentionally alter the heat treatable materials’ properties. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of field heat treatment technician:</p> <ul style="list-style-type: none"> (a) applying codes, specifications and quality control programs; (b) interpreting blueprints or schematic drawings, and prepare sketches; (c) determining appropriate heat treatment method and set up; (d) setting up, calibrating, maintaining, operating and repairing heat treatment instruments and equipment; (e) annealing, normalizing, preheating, solution annealing, thermal stabilizing and stress relieving; (f) drying out, curing and baking out using gases or electricity; (g) degassing to remove hydrogen or other contaminants; (h) enhancement applications; (i) thermal alignment and expansion; (j) hardness testing; (k) line thawing; (l) maintaining appropriate documentation to support quality control specifications and processes; (m) complying with site and process specific safety procedures.

Floorcovering Installer	<p>28(1) In this section,</p> <ul style="list-style-type: none"> (a) “floorcovering” means resilient floorcoverings, carpets and cushion and other types of underlayments and includes the following: <ul style="list-style-type: none"> (i) linoleum; (ii) inlaid sheet vinyls; (iii) roto vinyls; (iv) tiles; (v) solid polyvinyl chloride; (vi) prefinished hardwood flooring; (vii) laminate flooring; (viii) accessories used in respect of floorcoverings; (b) “undertakings of the designated trade” means the preparation of floors and the lay out, fitting, installation, service, maintenance and repair of floorcoverings and accessories. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of floorcovering installer:</p> <ul style="list-style-type: none"> (a) preparing of floors; (b) laying out, fitting and installing floorcoverings and accessories; (c) servicing, maintaining and repairing floorcoverings and accessories; (d) using detailed drawings, blueprints and other specifications; (e) using hand tools and power tools to perform the activities set out in this section; (f) using shop equipment, including air tools, floor grinders, sanders, polishers, table saws, miter saws, power stretchers and explosive actuated tools; (g) conducting moisture tests; (h) using any new innovative technological changes in the designated trade that relate to materials or methods of construction.
Gas Utility Operator	<p>29(1) In this section,</p> <ul style="list-style-type: none"> (a) “gas utility systems” means any kind of gas transmission system or gas distribution system, including the gas meter and associated piping and fittings, and includes the following: <ul style="list-style-type: none"> (i) gas transmission systems or gas distribution systems of all pressures; (ii) gas mains and services; (iii) pressure controllers and regulators; (iv) meters and pressure factor meter sets;

	<p>(b) “undertakings of the designated trade” means the fabrication, installation, testing, operation, alteration, maintenance, inspection, repair and replacement of gas utility systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade of gas utility operator, the following activities are performed within the designated trade:</p> <ul style="list-style-type: none"> (a) fabricating and installing gas utility systems; (b) operating and maintaining gas utility systems; (c) testing and inspecting gas utility systems; (d) altering, repairing and replacing gas utility systems; (e) determining location, size and materials required from prints and specifications; (f) compiling material breakdown; (g) applying codes and regulations to installation, operation and maintenance requirements; (h) installing and maintaining cathodic protection; (i) locating underground gas systems and completing leak surveys; (j) installing, operating and maintaining regulating measuring and odorizing facilities; (k) following emergency response procedures; (l) operating trenching equipment; (m) assembling and installing pipe materials; (n) relighting gas fired appliances.
Gasfitter – Gasfitter (Class A) Branch	<p>30(1) In this section,</p> <ul style="list-style-type: none"> (a) “A gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance regardless of the BTU rating of the gas appliance, and the associated piping, fittings, air supply and venting, and includes the following: <ul style="list-style-type: none"> (i) low and high pressure natural gas supply systems; (ii) low and high pressure propane gas supply systems; (iii) gas fired appliances and equipment; (iv) natural draft ventilation systems; (v) power assisted ventilation systems; (vi) propane and natural gas dispensing systems; (vii) propane bulk storage systems; (b) “B gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance that does not exceed a rating of 400 000 BTUs, and the associated piping, fittings, air supply and venting, and includes the following: <ul style="list-style-type: none"> (i) low and high pressure natural gas supply systems;

	<ul style="list-style-type: none"> (ii) low and high pressure propane gas supply systems; (iii) gas fired appliances and equipment; (iv) natural draft ventilation systems; (v) power assisted ventilation systems; (vi) propane and natural gas dispensing systems; (vii) propane bulk storage systems; <p>(c) “undertakings of the branch of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance, repair and replacement of A gas systems and B gas systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the gasfitter (class A) branch of the designated trade of gasfitter:</p> <ul style="list-style-type: none"> (a) fabricating and installing A and B gas systems; (b) altering, adjusting and maintaining A and B gas systems; (c) repairing and replacing A and B gas systems; (d) determining, from prints and specifications, matters concerning location, size and material required in respect of A and B gas systems; (e) compiling material breakdown and takeoff; (f) identifying and using tools and special equipment that are used to carry out activities in the designated trade; (g) applying codes to installation and maintenance requirements; (h) rigging equipment and piping components; (i) installing and maintaining appliances, controls, equipment, piping and hangers; (j) examining and testing gas systems.
Gasfitter – Gasfitter (Class B) Branch	<p>31(1) In this section,</p> <ul style="list-style-type: none"> (a) “B gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance that does not exceed a rating of 400 000 BTUs, and the associated piping, fittings, air supply and venting, and includes the following: <ul style="list-style-type: none"> (i) low and high pressure natural gas supply systems; (ii) low and high pressure propane gas supply systems; (iii) gas fired appliances and equipment; (iv) natural draft ventilation systems; (v) power assisted ventilation systems; (vi) propane and natural gas dispensing systems; (vii) propane bulk storage systems;

	<p>(b) “undertakings of the branch of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance, repair and replacement of B gas systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the gasfitter (class B) branch of the designated trade of gasfitter:</p> <ul style="list-style-type: none"> (a) fabricating and installing B gas systems; (b) altering, adjusting and maintaining B gas systems; (c) repairing and replacing B gas systems; (d) determining, from prints and specifications, matters concerning location, size and material required in respect of B gas systems; (e) coupling material breakdown and takeoff; (f) identifying and using tools and special equipment that are used to carry out activities in the designated trade; (g) applying codes to installation and maintenance requirements; (h) rigging equipment and piping components; (i) installing and maintaining appliances, controls, equipment, piping and hangers; (j) examining and testing gas systems.
Glazier	<p>32(1) In this section,</p> <ul style="list-style-type: none"> (a) “glass” means any type of commercial, residential, decorative or auto glass or related material and includes <ul style="list-style-type: none"> (i) curtain walls, (ii) skylites and sloped glazing, (iii) frames and doors, (iv) automatic doors, (v) manual doors, and (vi) mirrors; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the glazing, setting, attachment, installation and removal of all types of glass on buildings, fixtures and other uses; (ii) the installation, fitting, fabrication and attachment of architectural metals or related products for all types of buildings; (iii) the cutting, preparation, fabrication or any other handling of glass for buildings, fixtures and other uses. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of glazier:</p> <ul style="list-style-type: none"> (a) diagnosing problems and making repairs related to glazing;

	<ul style="list-style-type: none"> (b) carrying out damaged lite removal procedures and installing and sealing new components; (c) storing and handling glass; (d) preparing and fabricating glass to specifications; (e) selecting, cutting and fitting glass; (f) cutting, etching and installing mirrors; (g) installing glass into window frames; (h) installing and renovating residential windows, tub enclosures, shower doors and related products; (i) interpreting drawings and specifications; (j) preparing, fabricating, installing and maintaining aluminum and glass doors, windows, storefronts, screens and associated hardware; (k) fabricating and installing curtain walls; (l) fabricating and installing skylites, sloped glazing, barrel vaults, solariums and other support structures; (m) preparing and installing building envelope materials and sealants; (n) installing structural glass, balustrades, handrails and smoke baffles; (o) installing and maintaining automatic and revolving doors; (p) operating hand and power operated equipment that is used in the designated trade.
Hairstylist – Barber Branch	<p>33(1) In this section,</p> <ul style="list-style-type: none"> (a) “hair” means the hair on a human head and includes <ul style="list-style-type: none"> (i) beards, (ii) mustaches, (iii) wigs, and (iv) hairpieces; (b) “undertakings of the branch of the designated trade” means the cutting, shaving and trimming of hair. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within that barber branch of the designated trade of hairstylist:</p> <ul style="list-style-type: none"> (a) cutting, shaving and trimming of hair; (b) using hand and power-operated equipment in respect of hair; (c) testing and analyzing the hair and scalp for treatment; (d) using hand manipulation in respect of scalp treatments; (e) cleansing and conditioning the hair and scalp.

<p>Hairstylist – Hairstylist Branch</p>	<p>34(1) In this section,</p> <ul style="list-style-type: none"> (a) “hair” means the hair on a human head and includes <ul style="list-style-type: none"> (i) beards, (ii) mustaches, (iii) wigs, and (iv) hairpieces; (b) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the cutting, shaving and trimming of hair; (ii) the waving, curling and straightening of hair; (iii) altering the natural colour of hair; (iv) the styling of hair; (v) facial and scalp treatment and massage; (vi) the servicing of wigs and hairpieces. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the hairstylist branch of the designated trade of hairstylist:</p> <ul style="list-style-type: none"> (a) cutting, shaving and trimming of hair; (b) waving, curling and straightening of hair; (c) altering the natural colour of hair; (d) styling of hair; (e) performing facial and scalp treatment and massage; (f) servicing of wigs and hairpieces; (g) using hand and power-operated equipment in respect of hair; (h) using rinses, tints, bleaches, heat and chemicals in respect of hair; (i) testing and analyzing the hair and scalp for treatment; (j) using hand manipulation in respect of scalp treatments; (k) applying make-up; (l) cleansing and conditioning the hair and scalp.
<p>Heavy Equipment Technician – Heavy Duty Equipment Mechanic (Off Road) Branch</p>	<p>35(1) In this section,</p> <ul style="list-style-type: none"> (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments; (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk good; (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include <ul style="list-style-type: none"> (i) transport trailer bodies, or

	<p>(ii) mobile refrigeration and heating equipment as defined in section 89;</p> <p>(d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of off-road equipment and transport trailers.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the heavy duty equipment mechanic (off road) branch of the designated trade of heavy equipment technician:</p> <ul style="list-style-type: none"> (a) maintaining, replacing components, diagnosing problems and repairing off-road equipment and transport trailers; (b) selecting, inspecting, using and maintaining various shop equipment and tools; (c) retrieving and inputting applicable information using service-related computer software programs; (d) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories; (e) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles; (f) inspecting, maintaining, diagnosing and repairing electrical system components and circuits; (g) inspecting, maintaining, diagnosing and repairing hydraulic and hydrostatic systems and components; (h) inspecting, maintaining, diagnosing and repairing air systems and components; (i) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components; (j) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures, wheels, undercarriages, cabs and accessories, heating and air conditioning systems, canopies and protective structures; (k) inspecting, maintaining, diagnosing and repairing attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings; (l) with respect to preventive maintenance, operational safety and equipment economy, <ul style="list-style-type: none"> (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance, (ii) identifying unsafe operating practices, and (iii) communicating <ul style="list-style-type: none"> (A) advice on maintenance to be performed, (B) maintenance safety precautions,
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	<p>(C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and</p> <p>(D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.</p>
Heavy Equipment Technician – Heavy Equipment Technician Branch	<p>36(1) In this section,</p> <p>(a) “off-road equipment” means industrial vehicles, engines, equipment and attachments;</p> <p>(b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk good;</p> <p>(c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include</p> <p>(i) transport trailer bodies, or</p> <p>(ii) mobile refrigeration and heating equipment as defined in section 89;</p> <p>(d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of off-road equipment, on-road equipment and transport trailers.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the heavy equipment technician branch of the designated trade of heavy equipment technician:</p> <p>(a) maintaining, diagnosing problems and repairing off-road equipment, on-road equipment and transport trailers;</p> <p>(b) replacing components on off-road equipment, on-road equipment and transport trailers;</p> <p>(c) selecting, inspecting, using and maintaining various shop equipment and tools;</p> <p>(d) retrieving and inputting applicable information using service-related computer software programs;</p> <p>(e) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories;</p> <p>(f) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles;</p> <p>(g) inspecting, maintaining, diagnosing and repairing electrical system components and circuits;</p> <p>(h) inspecting, maintaining, diagnosing and repairing hydraulic and hydrostatic systems and components;</p> <p>(i) inspecting, maintaining, diagnosing and repairing air systems and components;</p>

	<ul style="list-style-type: none"> (j) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components; (k) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures, wheels, undercarriages, cabs and accessories, heating and air conditioning systems, canopies and protective structures; (l) inspecting, maintaining, diagnosing and repairing attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings; (m) with respect to preventive maintenance, operational safety and equipment economy, <ul style="list-style-type: none"> (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance, (ii) identifying unsafe operating practices, and (iii) communicating <ul style="list-style-type: none"> (A) advice on maintenance to be performed, (B) maintenance safety precautions, (C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.
Heavy Equipment Technician – Transport Trailer Mechanic Branch	<p>37(1) In this section,</p> <ul style="list-style-type: none"> (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments; (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk good; (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include <ul style="list-style-type: none"> (i) transport trailer bodies, or (ii) mobile refrigeration and heating equipment as defined in section 89; (d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of transport trailers. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the transport trailer mechanic branch of the designated trade of heavy equipment technician:</p> <ul style="list-style-type: none"> (a) maintaining, diagnosing problems and repairing transport trailers; (b) replacing components on transport trailers;

	<ul style="list-style-type: none"> (c) retrieving and inputting applicable information using service-related computer software programs; (d) inspecting, maintaining, diagnosing and repairing <ul style="list-style-type: none"> (i) suspensions, undercarriages and frames, (ii) braking systems, (iii) trailer couplers and hitches, (iv) landing gear, (v) electrical systems, and (vi) hydraulic systems.
Heavy Equipment Technician – Truck and Transport Mechanic Branch	<p>38(1) In this section,</p> <ul style="list-style-type: none"> (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments; (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk good; (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include <ul style="list-style-type: none"> (i) transport trailer bodies, or (ii) mobile refrigeration and heating equipment as defined in section 89; (d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of on-road equipment and transport trailers. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the truck and transport mechanic branch of the designated trade of heavy equipment technician:</p> <ul style="list-style-type: none"> (a) maintaining, diagnosing problems and repairing on-road equipment and transport trailers; (b) replacing components on-road equipment and transport trailers; (c) selecting, inspecting, using and maintaining various shop equipment and tools; (d) retrieving and inputting applicable information using service-related computer software programs; (e) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories; (f) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles; (g) inspecting, maintaining, diagnosing and repairing electrical system components and circuits;

	<ul style="list-style-type: none"> (h) inspecting, maintaining, diagnosing and repairing hydraulic systems and components; (i) inspecting, maintaining, diagnosing and repairing air systems and components; (j) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components; (k) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures and components; (l) inspecting, maintaining, diagnosing and repairing attachments and working tools, structural members, cables, hooks and slings; (m) with respect to preventive maintenance, operational safety and equipment economy, <ul style="list-style-type: none"> (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance, (ii) identifying unsafe operating practices, and (iii) communicating <ul style="list-style-type: none"> (A) advice on maintenance to be performed, (B) maintenance safety precautions, (C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.
Industrial Construction Crew Supervisor	<p>39(1) In this section, “undertakings of the designated trade” means the supervision of a construction crew with respect to a construction project or maintenance for an industrial plant or pipeline, including the fabrication or assembly of components.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of industrial construction crew supervisor:</p> <ul style="list-style-type: none"> (a) maintaining a safe worksite and comply with worksite specific safety policies; (b) implementing the project plan and project schedule with respect to the construction crew; (c) managing construction crew meetings; (d) interpreting technical documents, drawings and specifications; (e) supervising a construction crew, assessing crew members’ skills and arranging for training of crew members; (f) complying with worksite policies and procedures with respect to materials, personnel or other resources; (g) maintaining project documentation with respect to progress, quality control and client specifications;

	(h) meeting industry and project quality and productivity standards.
Industrial Mechanic (Millwright)	<p>40(1) In this section,</p> <p>(a) “stationary rotating equipment” means any type of plant, industrial machinery or mechanical equipment and includes the following:</p> <ul style="list-style-type: none"> (i) stationary and industrial engines; (ii) steam and gas turbines; (iii) pumps; (iv) heat exchangers; (v) conveyor systems; (vi) gears and speed changers; (v) mining equipment; (vi) logging equipment; (vii) compressors; (viii) fluid power systems; (ix) air blowers and vacuum pumps and fans; (x) gas and air dryers; (xi) refrigeration; (xii) power transmissions; (xiii) couplings and clutches; (xiv) prime movers; <p>(b) “undertakings of the designated trade” means the following:</p> <ul style="list-style-type: none"> (i) the installation, maintenance, repair, removal and replacement of stationary rotating equipment; (ii) the diagnosis of problems relating to stationary rotating equipment. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of industrial mechanic (millwright):</p> <ul style="list-style-type: none"> (a) installing, maintaining, repairing, removing and replacing stationary rotating equipment; (b) dismantling, assembling and repairing parts and components in stationary rotating equipment; (c) removing and installing electric motors, excluding the electrical disconnecting or hookup of electric motors; (d) diagnosing problems relating to stationary rotating equipment; (e) fitting, aligning and testing parts and components in stationary rotating equipment; (f) condition monitoring, vibration analysis and laser alignment of stationary rotating equipment;

	<ul style="list-style-type: none"> (g) fitting bearings, aligning gears and shafts, attaching motors and connecting couplings and belts in relation to stationary rotating equipment; (h) using hand, power and other tools of the designated trade while working on stationary rotating equipment; (i) interpreting drawings and plans and laying out and developing projects according to specifications; (j) using precision instruments to measure, assemble and fit complex plant or industrial machinery or other related equipment; (k) setting up and operating standard machine tools, including saws, drill presses, lathes and milling machines, and their attachments, to facilitate the efficient completion of the assembly and repair of stationary rotating equipment; (l) using measuring and testing instruments and devices in relation to stationary rotating equipment; (m) using rigging equipment in relation to stationary rotating equipment; (n) heating and cutting with oxyfuel equipment; (o) tack welding with welding equipment.'
Instrumentation and Control Technician	<p>41(1) In this section,</p> <ul style="list-style-type: none"> (a) "instrument" means any type of industrial, commercial or domestic instrumentation and includes the following: <ul style="list-style-type: none"> (i) temperature, pressure, flow, analytical and level indicators, recorders, controllers and sensors; (ii) density indicators and sensors; (iii) weight indicators and sensors; (iv) viscosity and consistency indicators and sensors; (v) pH indicators and sensors; (vi) oxidation reduction potential indicators and sensors; (vii) oxygen analysis equipment; (viii) gas analyzers; (ix) turbidity and smoke density analyzers; (x) moisture and humidity sensing and indicating systems; (xi) electrical conductivity sensing and indicating systems; (xii) sensors and indicators for measurement of speed, position, proximity and time; (xiii) gas and liquid chromatographs; (xiv) spectrophotometer analyzers; (xv) spectrometers;

	<ul style="list-style-type: none"> (xvi) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic control devices and systems; (xvii) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic transmitters; (xviii) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic transducers; (xix) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic recorders; (xx) digital to analog and analog to digital converters; (xxi) data acquisition systems, telemetric systems, supervisory control and data acquisition (SCADA) systems, programmable logic controller systems and distributed control and display systems; (xxii) monitoring devices and alarm systems; (xxiii) valve positioners; (xxiv) electrical and pneumatic valve actuators; (xxv) control valves and final control elements; (xxvi) vibration sensing systems; (xxvii) ultra-violet and infra-red fire detection systems; <p>(b) “undertakings of the designated trade” means the installation, calibration, testing and maintenance of instruments.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of instrumentation and control technician:</p> <ul style="list-style-type: none"> (a) installing, calibrating, testing and maintaining the following: <ul style="list-style-type: none"> (i) process measurement sensing and indicating systems; (ii) analytical instrumentation; (iii) signal conversion and transmission devices; (iv) data acquisition and display systems; (v) monitoring devices and alarm systems; (vi) control devices and systems; (vii) final control elements; (b) installing, servicing, calibrating and maintaining equipment for calibration, reference or comparison standards; (c) installing, inspecting, testing, disconnecting and connecting electrical wiring to instrument installations; (d) maintaining, installing and testing air distribution systems; (e) installing, inspecting, testing, servicing and removing instruments; (f) installing and removing pneumatic tubing, process tubing and piping; (g) using hand tools, power tools, testing equipment and specialty tools required by the designated trade;
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	<ul style="list-style-type: none"> (h) incorporating modifications to systems and components; (i) applying knowledge and understanding of operating processes and their interrelationship with instrumentation.
Insulator (Heat and Frost)	<p>42(1) In this section,</p> <ul style="list-style-type: none"> (a) “insulation items” means the following: <ul style="list-style-type: none"> (i) insulation materials, reinforcing fabrics, metal lath and hexagonal wire; (ii) adhesives and fasteners; (iii) finishing materials; (iv) metal claddings, canvas, PVC, pit wrap, paint, finishing cement and other similar over insulation applications not referred to in subclauses (i) to (iii); (v) noise control materials; (vi) firestopping and fireproofing materials; (vii) utilidors; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the installation, service, maintenance, repair and removal of insulation items; (ii) the abatement and removal of asbestos. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of insulator (heat and frost):</p> <ul style="list-style-type: none"> (a) installing, servicing, maintaining, repairing and removing insulation items; (b) abating and removing asbestos; (c) using detailed drawings, blueprints and other specifications; (d) using all related standards, safety regulations and building codes and regulations; (e) working with insulation items and related equipment; (f) using hand tools, power tools, shop equipment and stud welding equipment; (g) cleaning up and removing insulation items; (h) assembling, erecting, installing and removing insulation materials and handling devices, scaffolds, ropes and slings; (i) estimating, preparing, scheduling and worksite planning; (j) handling, laying out, preparing, fabricating and assembling insulation items and all protective coatings and coverings; (k) using new technology relating to the activities set out in this section; (l) remediating mold and lead.

<p>Ironworker - Ironworker (Generalist) Branch</p>	<p>43(1) In this section,</p> <ul style="list-style-type: none"> (a) “Alberta Building Code” means the <i>National Building Code - 2019 Alberta Edition</i> declared in force, as amended or replaced from time to time, by the <i>Building Code Regulation</i> (AR 31/2015); (b) “concrete reinforcement” means metal, steel or synthetic strands, wires, mesh, fabric, bars or sheets, placed into concrete structures for the purpose of reinforcing, pre-tensioning or post-tensioning of concrete structures; (c) “metal building systems” means buildings that <ul style="list-style-type: none"> (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association, (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications, <p>but does not include Quonsets or other frameless metal buildings;</p> (d) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials; (e) “storey” has the meaning assigned to it in the Alberta Building Code; (f) “structures” means the following: <ul style="list-style-type: none"> (i) curtain walls; (ii) bridges, including abutments, decks, girders, piers and permanent guard rails; (iii) metal building systems; (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms; (g) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the field fabrication, assembly, erection and disassembly of structures, other than the demolition of structures; (ii) the service, maintenance and repair of structures; (iii) the field fabrication and erection of structural, miscellaneous and ornamental metal work; (iv) the placement of precast or prestressed concrete and concrete reinforcement materials. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the ironworker (generalist) branch of the designated trade of ironworker:</p> <ul style="list-style-type: none"> (a) fabricating, assembling, erecting and disassembling structures in the field;
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	<ul style="list-style-type: none"> (b) servicing, maintaining and repairing structures; (c) fabricating and erecting structural, miscellaneous and ornamental metal work in the field; (d) placing precast or prestressed concrete; (e) placing concrete reinforcement materials; (f) erecting concrete reinforcement materials; (g) attaching concrete reinforcement materials; (h) performing post-tensioning; (i) performing prestressing; (j) assembling, erecting and disassembling metal building systems; (k) using detailed drawings, blueprints and other specifications; (l) using hand tools, power tools and shop equipment, including transits, levels, explosive actuated tools, post drills, radial drills, angle rolls, punches, shears, brakes and presses; (m) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds; (n) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (o) using new technology in relation to the activities set out in this section; (p) placing mechanical equipment and components; (q) using and maintaining fall protection systems.
Ironworker – Ironworker (Metal Building Systems Erector) Branch	<p>44(1) In this section,</p> <ul style="list-style-type: none"> (a) “Alberta Building Code” means the <i>National Building Code - 2019 Alberta Edition</i> declared in force, as amended or replaced from time to time, by the <i>Building Code Regulation</i> (AR 31/2015); (b) “metal building systems” means buildings that <ul style="list-style-type: none"> (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association, (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications, <p style="margin-left: 40px;">but does not include Quonsets or other frameless metal buildings;</p> (c) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials;

	<p>(d) “storey” has the meaning assigned to it in the Alberta Building Code;</p> <p>(e) “structures” means the following:</p> <ul style="list-style-type: none"> (i) curtain walls; (ii) bridges, including abutments, decks, girders, piers and permanent guard rails; (iii) metal building systems; (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms; <p>(f) “undertakings of the branch of the designated trade” means the assembly, erection and disassembly of metal building systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the ironworker (metal building systems erector) branch of the designated trade of ironworker:</p> <ul style="list-style-type: none"> (a) assembling metal building systems; (b) erecting metal building systems; (c) disassembling metal building systems; (d) using detailed drawings, blueprints and other specifications; (e) using hand tools, power tools and shop equipment, including transits, levels and explosive actuated tools; (f) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds; (g) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (h) using new technology in relation to the activities set out in this section; (i) using and maintaining fall protection systems.
Ironworker – Ironworker (Reinforcing) Branch	<p>45(1) In this section,</p> <ul style="list-style-type: none"> (a) “Alberta Building Code” means the <i>National Building Code - 2019 Alberta Edition</i> declared in force, as amended or replaced from time to time, by the <i>Building Code Regulation</i> (AR 31/2015); (b) “concrete reinforcement” means metal, steel or synthetic strands, wires, mesh, fabric, bars or sheets, placed into concrete structures for the purpose of reinforcing, pre-tensioning or post-tensioning of concrete structures; (c) “metal building systems” means buildings that <ul style="list-style-type: none"> (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association,

	<ul style="list-style-type: none"> (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and (iii) are erected, assembled and installed in accordance with the manufacturer's instructions without modification to the manufacturer's specifications, but does not include Quonsets or other frameless metal buildings; (d) "reinforced concrete" means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials; (e) "storey" has the meaning assigned to it in the Alberta Building Code; (f) "structures" means the following: <ul style="list-style-type: none"> (i) curtain walls; (ii) bridges, including abutments, decks, girders, piers and permanent guard rails; (iii) metal building systems; (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms; (g) "undertakings of the branch of the designated trade" means the erection, placement, attachment, prestressing and post-tensioning of concrete reinforcement materials. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the ironworker (reinforcing) branch of the designated trade of ironworker:</p> <ul style="list-style-type: none"> (a) erecting concrete reinforcement materials; (b) placing concrete reinforcement materials; (c) attaching concrete reinforcement materials; (d) performing post-tensioning; (e) performing prestressing; (f) using detailed drawings, blueprints and other specifications; (g) using hand tools, power tools and shop equipment, including transits, levels and explosive actuated tools; (h) using, setting up and assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds; (i) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (j) using new technology in relation to the activities set out in this section; (k) using and maintaining fall protection systems.
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<p>Ironworker – Ironworker (Structural/Ornamental) Branch</p>	<p>46(1) In this section,</p> <ul style="list-style-type: none"> (a) “Alberta Building Code” means the <i>National Building Code - 2019 Alberta Edition</i> declared in force, as amended or replaced from time to time, by the <i>Building Code Regulation</i> (AR 31/2015); (b) “metal building systems” means buildings that <ul style="list-style-type: none"> (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association, (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications, <p style="margin-left: 40px;">but does not include Quonsets or other frameless metal buildings;</p> (c) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials; (d) “storey” has the meaning assigned to it in the Alberta Building Code; (e) “structures” means the following: <ul style="list-style-type: none"> (i) curtain walls; (ii) bridges, including abutments, decks, girders, piers and permanent guard rails; (iii) metal building systems; (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms; (f) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the field fabrication, assembly, erection and disassembly of structures, other than the demolition of structures; (ii) the service, maintenance and repair of structures; (iii) the field fabrication and erection of structural, miscellaneous and ornamental metal work; (iv) the erection and placement of precast or prestressed concrete structures. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the ironworker (structural/ornamental) branch of the designated trade of ironworker:</p> <ul style="list-style-type: none"> (a) fabricating, assembling, erecting and disassembling of structures in the field; (b) servicing, maintaining and repairing of structures;
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	<ul style="list-style-type: none"> (c) fabricating and erecting structural, miscellaneous and ornamental metal work in the field; (d) erecting and placing precast or prestressed concrete structures; (e) using detailed drawings, blueprints and other specifications; (f) using hand tools, power tools and shop equipment, including transits, levels, explosive actuated tools, post drills, radial drills, angle rolls, punches, shears, brakes and presses; (g) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds; (h) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (i) using new technology in relation to the activities set out in this section; (j) placing mechanical equipment and components; (k) using and maintaining fall protection systems; (l) installing exterior and interior doors and windows; (m) installing caulking, adhesives and sealant materials.
Landscape Horticulturist	<p>47(1) In this section, “undertakings of the designated trade” means the sale, growth, installation and maintenance of plant or related materials and includes the following:</p> <ul style="list-style-type: none"> (a) landscape construction; (b) landscape maintenance; (c) the operation of greenhouses, nurseries and garden centres; (d) arboriculture; (e) tree moving; (f) the sale, growth, installation and maintenance of turf grasses; (g) designing, installing and maintaining irrigation systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of landscape horticulturist:</p> <ul style="list-style-type: none"> (a) selling, growing, installing and maintaining plant or related materials; (b) applying principles of landscape design and construction; (c) constructing and installing landscape planters, walks and other accessories of various materials; (d) handling orders of plant and related materials; (e) operating and servicing the tools and machinery used in the designated trade; (f) applying the principles governing the following:

	<ul style="list-style-type: none"> (i) the operation of greenhouses, nurseries and garden centres; (ii) sod production; (iii) interior and exterior landscape maintenance; (iv) plant production; (v) the use of soils; (vi) the use of plant nutrients; (vii) the use of pesticides; (viii) the control of plant diseases and pests; (ix) tree care; (g) applying knowledge respecting botany and plant identification.
Lather (Interior Systems Mechanic)	<p>48(1) In this section,</p> <ul style="list-style-type: none"> (a) “lather interior systems” means any type of framework for gypsum materials in buildings and includes the following: <ul style="list-style-type: none"> (i) light gauge steel stud framing; (ii) load bearing steel stud wall and floor systems; (iii) unitized wall systems; (iv) demountable partitions; (v) suspended drywall ceilings; (vi) component ceilings; (vii) metal linear ceilings; (viii) specialized systems; (ix) drywall; (x) metal lath; (xi) radiation shielding; (xii) access floor systems; (xiii) membrane coatings; (xiv) thermal and acoustical systems; (xv) air and vapour barriers; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the assembly and installation of lather interior systems; (ii) the cutting, shaping, bending, fastening and spot welding of metal components to build support bases for plaster, cement, fireproofing, radiation or soundproofing materials; (iii) the cutting, shaping, aligning and securing of components in lather interior systems for gypsum or other products; (iv) the construction of various types of walls and ceilings or other related structures and the application of exterior and interior trim of metal and other materials.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of lather (interior systems mechanic):</p> <ul style="list-style-type: none"> (a) assembling and installing lather interior systems; (b) cutting, shaping, bending, fastening and spot welding metal components to build support bases for plaster, cement, fireproofing, radiation or soundproofing materials; (c) cutting, shaping, aligning and securing components in lather interior systems for gypsum or other products; (d) constructing various types of walls and ceilings or other related structures and applying exterior and interior trim of metal and other materials; (e) diagnosing and repairing any problems relating to the lather interior systems; (f) using all hand and power operated equipment required by the designated trade; (g) using blueprints, shop drawings and specifications; (h) applying gypsum lath, metal lath and stucco wire; (i) cutting, preparing, fastening, spot welding, fabricating or other handling of all lath materials.
Locksmith	<p>49(1) In this section,</p> <ul style="list-style-type: none"> (a) “locking device” means any mechanical or electrical device that provides a physical or psychological barrier preventing, delaying or inhibiting unauthorized entry; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the installation, replacement, rebuilding, rearrangement, repair or adjustment of locking devices or safes and their components; (ii) the making of keys by impression, code or other means involving specialized knowledge of locking devices or safes; (iii) the circumvention of locking devices by means other than the use of a key or combination. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of locksmith:</p> <ul style="list-style-type: none"> (a) handling orders for locks, safes and related equipment; (b) operating and servicing the tools and equipment used in the designated trade; (c) installing, replacing, rebuilding, rearranging, repairing and adjusting locking devices or safes, components and related equipment; (d) making keys by impression, code or other means;

	<ul style="list-style-type: none"> (e) circumventing locking devices by means other than use of key or combination; (f) identifying the operation of locking devices and safes; (g) identifying and applying the principles of locking devices; (h) identifying and applying the principles of safes and related equipment; (i) applying in-depth knowledge of codes and specifications; (j) applying knowledge of master keying; (k) using any new innovative technological changes in the designated trade that relate to materials or methods of construction.
Machinist	<p>50(1) In this section,</p> <ul style="list-style-type: none"> (a) “parts” means any type of industrial or mass production parts; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the set up or operation of metal removing machine tools to manufacture metals and other materials into precise shapes and sizes; (ii) the production of parts using mass production methods; (iii) the making and repair of parts, tools and machines made from metal, plastic or other materials. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of machinist:</p> <ul style="list-style-type: none"> (a) setting up or operating metal removing machine tools to manufacture metals and other materials into precise shapes and sizes; (b) producing parts using mass production methods; (c) making and repairing parts, tools and machines made from metal, plastic or other material; (d) setting up and operating standard machine tools used in machine shops, including the following: <ul style="list-style-type: none"> (i) saws; (ii) drill presses; (iii) lathes; (iv) milling machines; (v) grinding machines; (vi) boring mills; (vii) shapers; (viii) attachments and accessories to any item referred to in subclauses (i) to (vii); (ix) computerized numerical control (CNC) machine tools;

	<ul style="list-style-type: none"> (e) interpreting technical drawings, charts, specification measurement and layout drawings and samples; (f) reading and interpreting the information and specifications presented on drawings and sketches, in respect of physical shape, size, material, heat treatment, finish, hardness and other pertinent data; (g) verifying dimensions with precision measuring instruments; (h) forging, heat treating, cutting and joining metals; (i) setting up and operating machine tools and supporting equipment, including oxyfuel welding, cutting and brazing equipment and electric arc welding equipment.
Metal Fabricator (Fitter)	<p>51(1) In this section,</p> <ul style="list-style-type: none"> (a) “Alberta Building Code” means the <i>National Building Code - 2019 Alberta Edition</i> declared in force, as amended or replaced from time to time, by the <i>Building Code Regulation</i> (AR 31/2015); (b) “structures” means the following: <ul style="list-style-type: none"> (i) metal railings, ladders and platforms; (ii) metal conventional and spiral stairs; (iii) welded or bolted beams and columns; (iv) girders, trusses and built-up sections; (v) pressure vessels, multipurpose holding tanks and containers; (vi) structural metal or miscellaneous metal components that are subject to the Alberta Building Code; (c) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the fabrication, layout and assembly of structures; (ii) revisions to structures. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of metal fabricator (fitter):</p> <ul style="list-style-type: none"> (a) fabricating structures; (b) laying out and assembling structures; (c) revising structures; (d) using detailed drawings, blueprints and other specifications; (e) using layout and fitting hand tools and air and electric powered tools; (f) using shop equipment, including overhead cranes, fork lifts, drilling and threading equipment, grinders, power saws, angle rolls, plate rolls, punches, shears, press brakes, power benders, ironworkers and presses;

	<ul style="list-style-type: none"> (g) using, setting up and assembling rigging equipment, including wire rope, synthetic slings, block and tackle, hoisting equipment and scaffolds; (h) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals; (i) using new technology that is related to the designated trade.
Motorcycle Mechanic	<p>52(1) In this section,</p> <ul style="list-style-type: none"> (a) “motorcycle” means a multi-wheeled motor vehicle equipped with <ul style="list-style-type: none"> (i) astride seating for one or more persons, and (ii) handlebar controls, but does not include a moped as defined in the <i>Use of Highway and Rules of the Road Regulation</i> (AR 304/2002); (b) “undertakings of the designated trade” means the repair and maintenance of motorcycles. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of motorcycle mechanic:</p> <ul style="list-style-type: none"> (a) repairing and maintaining the following: <ul style="list-style-type: none"> (i) internal combustion engines and components; (ii) transmissions and power trains; (iii) fuel systems; (iv) exhaust systems; (v) electrical and electronic systems; (vi) vehicle management systems; (vii) wheels and tires; (viii) chassis; (ix) suspension components; (x) steering systems; (xi) braking systems; (xii) sidecar attachments; (xiii) accessories that affect weight distribution and handling; (b) selecting, inspecting, using and maintaining various hand and power tools, measuring tools, testing equipment and shop equipment; (c) selecting, installing and removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors; (d) selecting, installing, inspecting, adjusting and removing bearings, bushings and seals, belts, sheaves, pulleys, chains and sprockets; (e) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application;

	<ul style="list-style-type: none"> (f) accessing job-related information from service publications, records, shop controls and other materials and communicating the findings to the proper source; (g) retrieving and inputting applicable information using service related computer software programs; (h) inspecting, monitoring the performance of and operating machinery and equipment; (i) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs; (j) assembling new motorcycles according to manufacturers' specifications; (k) performing pre-delivery inspections as per manufacturers' specifications; (l) inspecting, replacing and servicing wheels and components; (m) inspecting, changing and servicing tires; (n) inspecting, testing, repairing, replacing and adjusting components of mechanical braking systems; (o) inspecting, testing, repairing, replacing, rebuilding, overhauling and adjusting components of hydraulic braking systems; (p) inspecting and testing 2- and 4-cycle engines and components before and after using a variety of hand and power tools and measuring and testing equipment; (q) inspecting, testing and repairing components of the following: <ul style="list-style-type: none"> (i) liquid cooling systems; (ii) air induction systems; (iii) cooling, filter or screening systems; (iv) engine lubrication systems; (v) engine fuel systems; (vi) electric starter circuits; (r) inspecting, adjusting and replacing engine ignition components; (s) inspecting and replacing elements of engine exhaust systems; (t) dismantling, repairing, replacing and reassembling damaged or worn components of cylinder heads; (u) dismantling, cleaning, inspecting, rebuilding and reassembling various types of cylinder block assemblies; (v) inspecting, testing and replacing storage batteries; (w) testing, rebuilding, adjusting and replacing components of electrical charging systems; (x) testing, overhauling, adjusting and replacing components of lighting, warning and safety electrical systems; (y) inspecting, adjusting, repairing and replacing
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	<ul style="list-style-type: none"> (i) clutches and components, (ii) kickstart systems and components, and (iii) primary drives, including simplex, duplex, triplex, hyvo chains and cush drives; (z) inspecting, adjusting and replacing <ul style="list-style-type: none"> (i) final drive components, including chains, belts, shaft drives and universal joints, and (ii) frames and suspension components, including forks, swing arms, and shock absorber units; (aa) installing, adjusting and testing sidecars and components; (bb) installing, adjusting and testing accessories and components that affect weight distribution and handling.
Natural Gas Compression Technician	<p>53(1) In this section,</p> <ul style="list-style-type: none"> (a) “compression” means the act of decreasing the volume and increasing the pressure of gas by mechanical means; (b) “compressor” means a mechanical device used in the natural gas industry that increases the pressure of gas; (c) “natural gas compression” refers to the means and methods used to facilitate the delivery of natural gas from the well head to the end user via a series of specific separation, treatment, injection, disposal and compression processes; (d) “natural gas compression equipment” means any type of fixed or stationary equipment used to gather, store and transmit natural gas and includes the following: <ul style="list-style-type: none"> (i) stationary and reciprocating internal combustion engines; (ii) motors; (iii) compressors; (iv) pumps; (v) power generators; (vi) mixers and agitators; (vii) coolers, chillers and heat exchangers; (viii) separator systems; (ix) dehydration systems; (x) air and gas dryers; (xi) processing systems including sweetening, treating and fractionation; (xii) artificial lift systems including pump jacks and submersible pumps; (xiii) valves and valve controls; (xiv) equipment protection and monitoring systems;

	<ul style="list-style-type: none"> (xv) local panel controls; (xvi) low voltage electrical control loops; (xvii) electronic processor and control loops; (xviii) instrumentation control loops; (xix) gearboxes; (xx) clutches; (xxi) drive systems; (xxii) turbines; <p>(e) “optimizing” means adjusting systems affecting the performance and efficiency of natural gas compression equipment;</p> <p>(f) “undertakings of the designated trade” means the installation, commissioning, maintenance and repair of natural gas compression equipment.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of natural gas compression technician:</p> <ul style="list-style-type: none"> (a) reading and interpreting drawings, schematics, related technical information and materials lists; (b) performing the assembly, installation, inspection, maintenance, repair and overhaul of natural gas compression equipment, including the following: <ul style="list-style-type: none"> (i) complete ignition analysis, fuel, air, exhaust and engine management systems testing, fault diagnoses and repair; (ii) complete reciprocating and rotating machinery analysis to determine equipment condition, prediction of failure, corrective and preventive measures and equipment performance to design intent; (iii) performing visual walk-around inspections to determine the external conditions and obvious operational or safety issues that need to be addressed; (c) using a variety of electrical, mechanical and specialty diagnostic test equipment to diagnose problems and adjust engine systems; (d) providing preventive and corrective field mechanical services on gas compression, processing and production equipment on site at client locations; (e) troubleshooting and diagnosing mechanical and general electronic control problems and all levels of compressor system failure; (f) repairing and rebuilding natural gas equipment; (g) inspecting malfunctioning or damaged equipment to determine the nature and scope of the problem using applied failure analysis principles; (h) performing combusted gas emissions measurement and extrapolating findings to correction requirement;
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	<ul style="list-style-type: none"> (i) assessing technical reports to determine operation problems, future design improvements and production improvements and providing recommendations for improved service and operation procedures; (j) rigging and hoisting using correct lifting procedures; (k) heating and cutting with oxyfuel equipment; (l) tack welding with electric arc welding equipment; (m) evaluating and optimizing the performance of natural gas compression equipment in respect of how the equipment is used and the conditions under which it operates; (n) performing reliability analysis; (o) performing risk assessments and applying learnings; (p) identifying and developing maintenance strategies based on reliability centred maintenance, condition-based maintenance, and preventive maintenance concepts; (q) adhering to regulations and standards related to natural gas compression systems to ensure the safety of all workers, the environment and equipment.
Oil and Gas Transportation – Bed Truck Operator Branch	<p>54(1) In this section,</p> <ul style="list-style-type: none"> (a) “bed truck” means a truck specifically designed with a flat deck, winch and optional gin poles used for the transportation of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources; (b) “undertakings of the branch of the designated trade” means <ul style="list-style-type: none"> (i) the pre-job planning, (ii) the preparation, dismantling, loading, unloading and assembling of equipment, (iii) the driving, and (iv) the post-job operations as they relate to bed trucks. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the bed truck operator branch of the designated trade of oil and gas transportation:</p> <ul style="list-style-type: none"> (a) performing bed truck pre-trip and post-trip inspections; (b) performing bed truck loading and unloading; (c) performing bed truck compliant transport; (d) operating auxiliary equipment; (e) driving professionally; (f) assembling and disassembling equipment; (g) contributing to the health and safety of the working environment; (h) contributing to the control of critical and emergency situations;

	<ul style="list-style-type: none"> (i) supporting environmental protection; (j) supporting effective communications and working relationships; (k) conducting equipment inspections and maintenance.
Oil and Gas Transportation – Bulk Haul Operator Branch	<p>55(1) In this section,</p> <ul style="list-style-type: none"> (a) “bulk truck” means any kind of truck with a vessel or a tank that is used for the transportation of liquid or gas products and other supplies used in the exploration, development and production of oil and gas resources; (b) “oil and gas transportation” means the transportation of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources using trucks equipped with auxiliary equipment designed for dismantling, transporting, loading, unloading and assembling oil and gas equipment; (c) “truck” means a self-propelled vehicle used both on and off highway for the transportation of various types of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources; (d) “undertakings of the branch of the designated trade” means <ul style="list-style-type: none"> (i) the pre-job planning, (ii) the preparation, dismantling, loading, unloading and assembling of equipment, (iii) the driving, and (iv) the post-job operations as they relate to bulk haul trucks. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the bulk haul operator branch of the designated trade of oil and gas transportation:</p> <ul style="list-style-type: none"> (a) performing bulk haul truck pre-trip and post-trip inspections; (b) performing bulk haul truck loading and unloading; (c) performing bulk haul truck compliant transport; (d) driving professionally; (e) contributing to the health and safety of the working environment; (f) contributing to the control of critical and emergency situations; (g) supporting environmental protection; (h) supporting effective communications and working relationships; (i) conducting equipment inspections and maintenance.
Oil and Gas Transportation – Multi-	<p>56(1) In this section,</p> <ul style="list-style-type: none"> (a) “multi-wheel truck” means a truck and trailer configuration that includes jeeps, trailers and boosters, used to transport goods,

<p>wheel Truck Operator Branch</p>	<p>equipment and supplies used in the exploration, development and production of oil and gas resource;</p> <p>(b) “oil and gas transportation” means the transportation of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources using trucks equipped with auxiliary equipment designed for dismantling, transporting, loading, unloading and assembling oil and gas equipment;</p> <p>(c) “truck” means a self-propelled vehicle used both on and off highway for the transportation of various types of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources;</p> <p>(d) “undertakings of the branch of the designated trade” means</p> <ul style="list-style-type: none"> (i) the pre-job planning, (ii) the preparation, dismantling, loading, unloading and assembling of equipment, (iii) the driving, and (iv) the post-job operations <p>as they relate to multi-wheel trucks.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the multi-wheel truck operator branch of the designated trade of oil and gas transportation:</p> <ul style="list-style-type: none"> (a) performing multi-wheel truck pre-trip and post-trip inspections; (b) performing multi-wheel truck loading and unloading; (c) performing multi-wheel truck compliant transport; (d) driving professionally; (e) contributing to the health and safety of the working environment; (f) contributing to the control of critical and emergency situations.
<p>Oil and Gas Transportation – Supervisor Branch</p>	<p>57(1) In this section,</p> <p>(a) “oil and gas transportation” means the transportation of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources using trucks equipped with auxiliary equipment designed for dismantling, transporting, loading, unloading and assembling oil and gas equipment;</p> <p>(b) “truck” means a self-propelled vehicle used both on and off highway for the transportation of various types of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources;</p> <p>(c) “undertakings of the branch of the designated trade” means the supervision and co-ordination of job operations and truck operators and other workers.</p>

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the supervisor branch of the designated trade of oil and gas transportation:</p> <ul style="list-style-type: none"> (a) ensuring a healthy and safe work environment; (b) ensuring safe work practices and procedures; (c) implementing environmental policy; (d) supporting relationships with customers; (e) managing job site performance; (f) driving professionally.
Oil and Gas Transportation – Winch Tractor Operator Branch	<p>58(1) In this section,</p> <ul style="list-style-type: none"> (a) “oil and gas transportation” means the transportation of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources using trucks equipped with auxiliary equipment designed for dismantling, transporting, loading, unloading and assembling oil and gas equipment; (b) “truck” means a self-propelled vehicle used both on and off highway for the transportation of various types of goods, equipment and other supplies used in the exploration, development and production of oil and gas resources; (c) “winch tractor” means a truck outfitted with a winch that is used to load and unload goods, equipment and other supplies used in the exploration, development and production of oil and gas resources. (d) “undertakings of the branch of the designated trade” means <ul style="list-style-type: none"> (i) the pre-job planning, (ii) the preparation, dismantling, loading, unloading and assembling of equipment, (iii) the driving, and (iv) the post-job operations as they relate to winch tractors. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the winch tractor operator branch of the designated trade of oil and gas transportation:</p> <ul style="list-style-type: none"> (a) performing bulk haul truck pre-trip and post-trip inspections; (b) performing winch tractor loading and unloading; (c) performing winch tractor compliant transport; (d) operating auxiliary equipment (e) driving professionally; (f) contributing to the health and safety of the working environment; (g) contributing to the control of critical and emergency situations; (h) supporting environmental protection;

	<ul style="list-style-type: none"> (i) supporting effective communications and working relationships; (j) conducting equipment inspections and maintenance.
Outdoor Power Equipment Technician – Power Equipment Branch	<p>59(1) In this section,</p> <ul style="list-style-type: none"> (a) “marine equipment” means <ul style="list-style-type: none"> (i) boats and trailers, (ii) jet drives in boats and personal water craft, (iii) outboard motors, (iv) inboard-outboard engines, and (v) stern drives; (b) “power equipment” means equipment, other than marine equipment or recreational equipment, that in the designated trade of outdoor power equipment technician is commonly known as outdoor power equipment or turf equipment and includes the following: <ul style="list-style-type: none"> (i) aerators; (ii) air compressors; (iii) chippers and shredders; (iv) compaction equipment; (v) generators; (vi) lawn and garden tractors; (vii) lift equipment; (viii) pressure washers; (ix) pumps; (x) mowers; (xi) chain saws; (xii) seeders; (xiii) sprayers; (xiv) tillers; (xv) trimmers; (xvi) snow removal equipment; (xvii) golf carts; (xviii) utility vehicles specifically designed for use on or with respect to turf; (c) “recreational equipment” means vehicles, including trailers designed for the transportation of the vehicles, that are not defined as power equipment in this section and that in the designated trade of outdoor power equipment technician are commonly known as <ul style="list-style-type: none"> (i) snowmobiles, (ii) marine equipment, and

	<p>(iii) outdoor recreational multi-wheeled utility vehicles that are not required to be registered under the <i>Traffic Safety Act</i> unless they are operated on a highway, but not including</p> <p>(A) a motorcycle as defined in section 52, or</p> <p>(B) any vehicle referred to in section 35(1)(a) or (b), 36(1)(a) or (b), 37(1)(a) or (b) or 38(1)(a) or (b);</p> <p>(d) “undertakings of the branch of the designated trade” means the diagnosis and repair of power equipment.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the power equipment branch of the designated trade of outdoor power equipment technician:</p> <p>(a) diagnosing and repairing power equipment;</p> <p>(b) selecting, inspecting, using and maintaining various hand and power tools, shop equipment, measuring tools and testing equipment;</p> <p>(c) retrieving and inputting applicable information using various media, including service-related computer software programs;</p> <p>(d) selecting, installing or removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors;</p> <p>(e) selecting, installing, inspecting, adjusting and removing bearings, bushings, seals, belts, sheaves, pulleys, chains and sprockets;</p> <p>(f) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application;</p> <p>(g) inspecting, monitoring performance of and operating machinery and equipment;</p> <p>(h) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs;</p> <p>(i) repairing, maintaining and inspecting the following:</p> <p>(i) cutting systems and components;</p> <p>(ii) trailer couplers and hitches on unlicensed, off-road trailers, with respect to the following:</p> <p>(A) coupling units;</p> <p>(B) fasteners, plungers, sliding fifth wheel plungers and control mechanisms and sliding racks;</p> <p>(C) air release cylinder lines, hoses and fittings;</p> <p>(D) fifth wheel saddles, bushings and pins, fifth wheel mounting components and fifth wheel compensators and components;</p> <p>(E) king pins and upper coupler assemblies and turntables;</p> <p>(F) rubber bushed hitch eyes, safety chains, cables and attachments, draw bars and attachments, pintle hooks and ball hitches;</p>
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	<ul style="list-style-type: none"> (iii) body units, with respect to structural integrity, including the following: <ul style="list-style-type: none"> (A) aluminum, steel and stainless steel components of body units; (B) doors, including door seals and rollers, tracks and hardware; (C) loose fasteners; (j) with respect to internal combustion 2- and 4-cycle engines that use gasoline, diesel or alternative fuels, and engine auxiliary systems and accessories, <ul style="list-style-type: none"> (i) inspecting and testing the following: <ul style="list-style-type: none"> (A) engines and engine components and engine systems in and out of chassis, before and after service or repair; (B) engine lubrication systems; (C) engine liquid cooling systems; (D) engine air cooling systems and air filtering or screening systems; (E) engine intake and exhaust systems; (F) fuel systems; (G) engine control systems, (ii) diagnosing engine problems, (iii) diagnosing malfunctions, (iv) repairing or replacing components, (v) analyzing parts for failure and determining the causes of the failure, and (vi) removing and installing engines; (k) with respect to power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting the following: <ul style="list-style-type: none"> (A) clutches; (B) fluid drives, fluid couplings, torque converters, hydraulic retarders and other connecting units; (C) manual transmissions; (D) variable speed transmissions, high-low speed units, reverse units and hydrostatic transmissions and their control systems; (E) transfer drives; (F) drive shafts, u-joints, belt, chain and gear drives, mechanical winch drives, power take-offs and other drive lines; (G) front and rear differentials and axles;
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	<ul style="list-style-type: none"> (H) steering clutches; (I) final drives, (ii) diagnosing malfunctions and irregular operation and performance, (iii) removing and installing the following: <ul style="list-style-type: none"> (A) complete components; (B) complete transmissions; (C) complete gear box drives; (D) complete assemblies, (iv) removing, inspecting, overhauling, repairing and replacing the following: <ul style="list-style-type: none"> (A) assemblies and their parts; (B) transmission parts and components; (C) transmission control systems and components, and (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts; (l) with respect to electrical systems and circuits, batteries, charging, starting, lighting and accessories systems, spark ignition systems, electronic systems and circuits, electronic monitoring systems and electronic control systems, <ul style="list-style-type: none"> (i) inspecting, testing, adjusting and replacing the following: <ul style="list-style-type: none"> (A) storage batteries; (B) components and circuits, (ii) diagnosing performance, (iii) isolating defects within the system or in another part of the machine, and (iv) analyzing failures and determining the causes of failures; (m) with respect to hydraulic and hydrostatic systems, open and closed centre hydraulic systems, open and closed loop hydrostatic systems and control systems, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting the following: <ul style="list-style-type: none"> (A) open and closed centre main hydraulic working systems; (B) open and closed hydrostatic drive and propel systems; (C) hydraulic control systems, (ii) diagnosing malfunctions, (iii) removing and installing components as a unit, (iv) testing, overhauling, repairing and replacing parts and components, and
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	<ul style="list-style-type: none"> (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts; (n) with respect to pneumatic systems and air supply and generating systems, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting air systems, (ii) diagnosing malfunctions, (iii) removing and installing components as a unit, (iv) testing, overhauling, repairing and replacing parts and components, and (v) analyzing the failure of parts and determining the causes of failures and reusability of parts; (o) with respect to steering, braking and suspension systems, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting the following: <ul style="list-style-type: none"> (A) manual steering systems; (B) manual braking systems and brake foundation assemblies; (C) hydraulic steering and braking systems; (D) electrical braking systems; (E) suspension systems, (ii) diagnosing malfunctions, (iii) removing and installing components as a unit, (iv) removing, testing, overhauling, repairing, replacing and installing parts and components, and (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts; (p) with respect to frames, chassis, supporting structures, wheels and tracked undercarriages, cabs, heating systems, canopies and protective structures, <ul style="list-style-type: none"> (i) inspecting, measuring, removing and installing the following: <ul style="list-style-type: none"> (A) frames, chassis, supporting structures and components of equipment and machinery; (B) wheels, rims and tires; (C) tracked undercarriages, components and parts; (D) cabs, canopies and protective structures, (ii) repairing and replacing the following: <ul style="list-style-type: none"> (A) frames, chassis, supporting structures and components of equipment and machinery; (B) wheels, rims and tires; (C) tracked undercarriages, components and parts,
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	<ul style="list-style-type: none"> (iii) adjusting and aligning frames, chassis, supporting structures and components of equipment and machinery, (iv) adjusting and aligning wheels where applicable and tracked undercarriages, components and parts, (v) adjusting, aligning and repairing assemblies, (vi) inspecting and testing heating systems, (vii) diagnosing and isolating problems and determining causes, and (viii) replacing components and making repairs; (q) with respect to attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings, <ul style="list-style-type: none"> (i) inspecting, adjusting, aligning, removing, installing, repairing and replacing equipment attachments and components, (ii) inspecting and measuring booms, arms, masts and structural members for signs of misalignment, cracking, loose bolts, metal fatigue and overloading, (iii) analyzing failures and determining causes and correcting where applicable or recommending speciality repair or welding, and (iv) inspecting, removing, installing and replacing equipment cables, hooks and slings; (r) with respect to preventive maintenance, operational safety and equipment economy, <ul style="list-style-type: none"> (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance, (ii) identifying unsafe operating practices, and (iii) communicating the following: <ul style="list-style-type: none"> (A) advice on maintenance to be performed; (B) maintenance safety precautions; (C) correct procedures for equipment inspections, operations, towing, loading, hauling, parking and storage; (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.
Outdoor Power Equipment Technician – Recreational Equipment Branch	<p>60(1) In this section,</p> <ul style="list-style-type: none"> (a) “marine equipment” means <ul style="list-style-type: none"> (i) boats and trailers, (ii) jet drives in boats and personal water craft, (iii) outboard motors,

	<ul style="list-style-type: none"> (iv) inboard-outboard engines, and (v) stern drives; <p>(b) “power equipment” means equipment, other than marine equipment or recreational equipment, that in the designated trade of outdoor power equipment technician is commonly known as outdoor power equipment or turf equipment and includes the following:</p> <ul style="list-style-type: none"> (i) aerators; (ii) air compressors; (iii) chippers and shredders; (iv) compaction equipment; (v) generators; (vi) lawn and garden tractors; (vii) lift equipment; (viii) pressure washers; (ix) pumps; (x) mowers; (xi) chain saws; (xii) seeders; (xiii) sprayers; (xiv) tillers; (xv) trimmers; (xvi) snow removal equipment; (xvii) golf carts; (xviii) utility vehicles specifically designed for use on or with respect to turf; <p>(c) “recreational equipment” means vehicles, including trailers designed for the transportation of the vehicles, that are not defined as power equipment in this section and that in the designated trade of outdoor power equipment technician are commonly known as</p> <ul style="list-style-type: none"> (i) snowmobiles, (ii) marine equipment, and (iii) outdoor recreational multi-wheeled utility vehicles that are not required to be registered under the <i>Traffic Safety Act</i> unless they are operated on a highway, but not including <ul style="list-style-type: none"> (A) a motorcycle as defined in section 52, or (B) any vehicle referred to in section 35(1)(a) or (b), 36(1)(a) or (b), 37(1)(a) or (b) or 38(1)(a) or (b); <p>(d) “undertakings of the branch of the designated trade” means the diagnosis and repair of recreational equipment.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the</p>
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	<p>recreational equipment branch of the designated trade of outdoor power equipment technician:</p> <ul style="list-style-type: none"> (a) diagnosing and repairing recreational equipment; (b) selecting, inspecting, using and maintaining various hand and power tools, shop equipment, measuring tools and testing equipment; (c) retrieving and inputting applicable information using various media, including service-related computer software programs; (d) selecting, installing or removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors; (e) selecting, installing, inspecting, adjusting and removing bearings, bushings, seals, belts, sheaves, pulleys, chains and sprockets; (f) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application; (g) inspecting, monitoring performance of and operating machinery and equipment; (h) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs; (i) with respect to internal combustion 2- and 4-cycle engines that use gasoline, diesel or alternative fuels, and engine auxiliary systems and accessories, <ul style="list-style-type: none"> (i) inspecting and testing the following: <ul style="list-style-type: none"> (A) engines, engine components and engine systems in and out of chassis, before and after service or repair; (B) engine lubrication systems; (C) engine liquid cooling systems; (D) engine air cooling systems and air filtering or screening systems; (E) engine intake and exhaust systems; (F) fuel systems; (G) engine control systems, (ii) diagnosing engine problems, (iii) diagnosing malfunctions, (iv) repairing or replacing components, (v) analyzing parts for failure and determining the causes of the failure, and (vi) removing and installing engines; (j) with respect to power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives, axles, stern drives, lower units and inboard jet drive motors, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting the following: <ul style="list-style-type: none"> (A) clutches;
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	<ul style="list-style-type: none"> (B) fluid drives, fluid couplings, torque converters, hydraulic retarders and other connecting units; (C) manual transmissions; (D) power shift transmissions, high-low speed units, reverse units and automatic transmissions and their control systems; (E) transfer drives; (F) drive shafts, u-joints, belt, chain and gear drives, mechanical winch drives, power take-offs and other drive lines; (G) front and rear differentials and axles, stern drives, lower units and inboard and jet drive motors, (ii) diagnosing malfunctions and irregular operation and performance, (iii) removing and installing the following: <ul style="list-style-type: none"> (A) complete components; (B) complete transmissions; (C) complete gear box drives; (D) complete assemblies, (iv) removing, inspecting, overhauling, repairing and replacing the following: <ul style="list-style-type: none"> (A) assemblies and their parts; (B) transmission parts and components; (C) transmission control systems and components, and (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts; (k) with respect to electrical systems and circuits, batteries, charging, starting, lighting and accessories systems, spark ignition systems, electronic systems and circuits, electronic monitoring systems and electronic control systems, <ul style="list-style-type: none"> (i) inspecting, testing, adjusting and replacing the following: <ul style="list-style-type: none"> (A) storage batteries; (B) components and circuits, (ii) diagnosing performance, (iii) isolating defects within the system or in another part of the machine, and (iv) analyzing failures and determining the causes of failures; (l) with respect to hydraulic and hydrostatic systems, open and closed centre hydraulic systems, open and closed loop hydrostatic systems and control systems, <ul style="list-style-type: none"> (i) inspecting, testing and adjusting,
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	<ul style="list-style-type: none"> (ii) diagnosing malfunctions, (iii) removing and installing components as a unit, (iv) testing, overhauling, repairing and replacing parts and components, and (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts; <p>(m) with respect to pneumatic systems and air supply and generating systems,</p> <ul style="list-style-type: none"> (i) inspecting, testing and adjusting air systems, (ii) diagnosing malfunctions, (iii) removing and installing components as a unit, (iv) testing, overhauling, repairing and replacing parts and components, and (v) analyzing the failure of parts and determining the causes of failures and reusability of parts; <p>(n) with respect to steering, braking and suspension systems, inspecting, testing and adjusting the following:</p> <ul style="list-style-type: none"> (i) manual steering systems; (ii) manual braking systems and brake foundation assemblies; (iii) hydraulic steering and braking systems; (iv) electrical braking systems; (v) suspension systems; <p>(o) with respect to frames, chassis, supporting structures and components,</p> <ul style="list-style-type: none"> (i) inspecting, repairing and replacing wheels, rims and tires, (ii) adjusting and aligning frames, chassis, supporting structures and components, (iii) adjusting and aligning wheels where applicable, (iv) adjusting, aligning and repairing assemblies, (v) inspecting and testing heating systems, (vi) diagnosing and isolating problems and determining causes, and (vii) replacing components and making repairs; <p>(p) with respect to attachments and working tools, structural members, cables, hooks and slings,</p> <ul style="list-style-type: none"> (i) inspecting, adjusting, aligning, removing, installing, repairing and replacing vehicle attachments and components, (ii) inspecting and measuring structural members for signs of misalignment, cracking, loose bolts, metal fatigue and overloading,
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	<ul style="list-style-type: none"> (iii) analyzing failures and determining causes and correcting where applicable or recommending speciality repair or welding, and (iv) inspecting, removing, installing and replacing equipment cables, hooks and slings; (q) with respect to preventive maintenance, operational safety and vehicle economy, <ul style="list-style-type: none"> (i) identifying and evaluating component failures and malfunctions relating to vehicles, (ii) identifying unsafe operating practices, and (iii) communicating the following: <ul style="list-style-type: none"> (A) advice on maintenance to be performed; (B) maintenance safety precautions; (C) correct procedures for vehicle inspections, operations, towing, loading, hauling, parking and storage; (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.
Overhead Door Technician – Level One Branch	<p>61(1) In this section,</p> <ul style="list-style-type: none"> (a) “specialty doors” means coiling doors, coiling and sliding steel fire doors, rubber doors, dock levellers, sliding and coiling grilles, high speed doors, gym dividers and rolling shutters; (b) “undertakings of the branch of the designated trade” means the installation, maintenance and repair of overhead doors and specialty doors. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the level one branch of the designated trade of overhead door technician:</p> <ul style="list-style-type: none"> (a) installing, maintaining and repairing overhead doors that <ul style="list-style-type: none"> (i) have a height of no more than 10 feet, (ii) open to an interior with a ceiling height of no more than 12 feet, and (iii) are installed on wooden, metal or composite door jambs; (b) installing auxiliary devices such as open-close buttons with a voltage not greater than 24 volts; (c) installing and maintaining prewired electrical operating systems; (d) identifying, selecting and operating hand tools, power tools and measuring devices used in the designated trade; (e) reviewing and reading construction drawings, plans, specifications and related contract documents to prepare for and complete a project; (f) contributing to the health and safety of the work environment.

<p>Overhead Door Technician – Level Two Branch</p>	<p>62(1) In this section,</p> <ul style="list-style-type: none"> (a) “specialty doors” means coiling doors, coiling and sliding steel fire doors, rubber doors, dock levellers, sliding and coiling grilles, high speed doors, gym dividers and rolling shutters; (b) “undertakings of the branch of the designated trade” mean the installation, maintenance and repair of overhead doors and specialty doors. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the level two branch of the designated trade of overhead door technician:</p> <ul style="list-style-type: none"> (a) the activities listed under the overhead door technician – level one branch of the designated trade of overhead door technician; (b) installing, maintaining and repairing overhead doors that <ul style="list-style-type: none"> (i) have a height of more than 10 feet, (ii) open to an interior with a ceiling height of more than 12 feet, and (iii) are installed on wooden, metal, composite or concrete jambs; (c) installing, maintaining and repairing specialty doors; (d) assembling, erecting, installing and dismantling material and personnel handling devices used for the installation, maintenance and repair of doors; (e) installing auxiliary devices such as open-close buttons with a voltage not greater than 24 volts; (f) installing and maintaining prewired electrical operating systems; (g) identifying, selecting and operating hand tools, power tools and measuring devices used in the designated trade; (h) reviewing and reading construction drawings, plans, specifications and related contract documents to prepare for and complete a project; (i) contributing to the health and safety of the work environment.
<p>Painter and Decorator</p>	<p>63(1) In this section,</p> <ul style="list-style-type: none"> (a) “finishing materials” means any type of residential, commercial and industrial finishing or coating materials and includes the following: <ul style="list-style-type: none"> (i) paints, stains, varnishes and other liquid finishes; (ii) paper, natural and synthetic fibre wall coverings; (iii) special finishes; (iv) fire proof and fire retardant coatings; (b) “undertakings of the designated trade” means the preparation of surfaces to receive finishing materials and the application of finishing materials.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of painter and decorator:</p> <ul style="list-style-type: none"> (a) using detailed drawings, blueprints and other specifications; (b) taping and crack filling drywall surfaces; (c) applying opaque and transparent liquid coatings by brush, roller, spray or dipping to interior and exterior surfaces of wood, metal, brick, concrete, plaster, stucco and stone; (d) applying wall coverings consisting of paper and natural or synthetic fibre to surfaces in buildings and other structures; (e) removing existing coatings of paper, fabrics, paints and varnishes to repair and prepare undersurfaces for refinishing; (f) transposing super graphics; (g) finishing surfaces using abrasive blasting or other mechanical methods for decorative or protective purposes; (h) diagnosing problems related to finishing materials; (i) using, setting up and assembling rigging equipment, including wire rope, block and tackle, hoisting equipment and portable and suspension scaffolding; (j) using and maintaining hand tools, power equipment and precision-built machinery; (k) handling hazardous materials; (l) using new technology related to the activities set out in this section.
Parts Technician – Materials Technician Branch	<p>64(1) In this section,</p> <ul style="list-style-type: none"> (a) “commodities” includes any product, substance or organism pertaining to the following: <ul style="list-style-type: none"> (i) consumer services or products; (ii) agricultural services or products; (iii) transportation services or products; (iv) natural resource products; (v) manufacturing products; (vi) services or products for all levels of government; (b) “undertakings of the branch of the designated trade” means the stock handling, inventory control, storing, securing, identifying, cataloguing, ordering, shipping, transporting, receiving, inspecting, pricing, purchasing, issuing, marketing and selling of commodities. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the materials technician branch of the designated trade of parts technician:</p> <ul style="list-style-type: none"> (a) assessing customer requirements and providing the commodities necessary for service, repair or replacement;

	<ul style="list-style-type: none"> (b) using electronic and non-electronic location systems, identification systems, communication systems and business procedures for the purpose of managing inventory and addressing customer needs; (c) selling and distributing commodities; (d) selecting, operating and basic maintenance of hand tools and material handling equipment; (e) wrapping, packaging, labelling and strapping commodities; (f) planning, maintaining and updating display areas; (g) operating and managing tool cribs.
Parts Technician – Parts Technician Branch	<p>65(1) In this section,</p> <ul style="list-style-type: none"> (a) “parts” means any part, assembly or accessory pertaining to the following: <ul style="list-style-type: none"> (i) automobiles and trucks; (ii) aviation; (iii) electronics; (iv) heavy duty vehicles and equipment; (v) agricultural equipment; (vi) industrial equipment; (vii) military equipment; (viii) motorcycles; (ix) outdoor power equipment; (x) recreational vehicles and equipment; (xi) marine equipment; (xii) turf equipment; (xiii) appliances; (b) “undertakings of the branch of the designated trade” means the stock handling, inventory control, storing, securing, identifying, cataloguing, ordering, shipping, transporting, receiving, inspecting, pricing, purchasing, issuing, marketing and selling of parts. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following are activities within the parts technician branch of the designated trade of parts technician:</p> <ul style="list-style-type: none"> (a) assessing customer requirements and providing the parts necessary for service, repair or replacement; (b) using electronic and non-electronic location systems, identification systems, communication systems and business procedures for the purpose of managing inventory and addressing customer needs; (c) selling and distributing parts; (d) selecting, operating and basic maintenance of hand tools and material handling equipment;

	<ul style="list-style-type: none"> (e) wrapping, packaging, labelling and strapping parts; (f) planning, maintaining and updating display areas; (g) operating and managing tool cribs.
Plumber	<p>66(1) In this section,</p> <ul style="list-style-type: none"> (a) “plumbing” means any kind of residential, commercial, institutional or industrial piping systems, including fixtures and fittings, and includes the following: <ul style="list-style-type: none"> (i) below ground storm and sanitary systems; (ii) above ground storm and sanitary systems; (iii) underground public water supply systems; (iv) water distribution systems; (v) fixtures, appliances and trim; (vi) water supply systems; (vii) hydronic systems; (viii) irrigation systems; (ix) compressed gas, medical gas, air and vacuum systems; (x) water treatment devices; (xi) fire protection systems other than commercial sprinkler systems; (xii) ornamental water systems; (xiii) fuel gas systems and appliances; (b) “undertakings of the designated trade” means the fabrication, installation, alteration, maintenance and repair of plumbing. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of plumber:</p> <ul style="list-style-type: none"> (a) fabricating, installing, altering, maintaining and repairing plumbing; (b) determining location, size and material required from prints and specifications; (c) compiling material breakdown and takeoff; (d) using tools and special equipment; (e) applying codes to installation requirements; (f) rigging equipment and piping components; (g) designing, installing and maintaining hydronic systems; (h) examining, installing, fabricating, testing, maintaining and replacing <ul style="list-style-type: none"> (i) water treatment equipment, piping and controls, (ii) drain, waste and vent piping systems,

	<ul style="list-style-type: none"> (iii) private and public water supply systems, (iv) water distribution systems, (v) plumbing fixtures, appliances and trim, (vi) rain water leaders, and (vii) supports and hangers; (i) ensuring that all installations, fixtures, equipment and hydronic and water treatment systems <ul style="list-style-type: none"> (i) are properly sized, aligned, supported and graded, (ii) meet the requirements of the appropriate codes and permits, (iii) meet the environmental protection requirements, and (iv) meet the requirements as specified by the manufacturer of the fixtures, equipment and systems; (j) maintaining and servicing private sewage systems.
Power System Electrician	<p>67(1) In this section,</p> <ul style="list-style-type: none"> (a) “power system” means any type of public or private electrical high voltage generation, transmission or distribution system and includes the following: <ul style="list-style-type: none"> (i) power system electrical equipment; (ii) power system metering apparatus; (iii) power system protection apparatus; (iv) power system control apparatus; (v) transportation control systems; (vi) electrical transportation systems; (vii) grounding and bonding systems; (b) “undertakings of the designated trade” means the installation, construction, maintenance, repair, monitoring and operation of power systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of power system electrician:</p> <ul style="list-style-type: none"> (a) installing and constructing power systems; (b) maintaining and repairing power systems; (c) monitoring power systems; (d) operating power systems; (e) using tools, power tools, testing equipment, computers and specialty tools required by the designated trade; (f) installing, troubleshooting, maintaining and commissioning public or private power system equipment and apparatus;

	<ul style="list-style-type: none"> (g) interpreting and applying the provisions of the <i>Safety Codes Act</i> and the regulations under that Act for the purposes of carrying out the activities set out in this section; (h) interpreting electrical drawings and prints.
Powerline Technician	<p>68(1) In this section,</p> <ul style="list-style-type: none"> (a) “power line electrical transmission and distribution systems” includes the following: <ul style="list-style-type: none"> (i) overhead and underground transmission and distribution systems; (ii) poles; (iii) towers; (iv) transformers; (v) switching equipment; (vi) capacitors; (vii) protective devices; (viii) metering equipment; (ix) voltage regulators; (x) portable generation systems; (xi) street lighting equipment; (xii) light rail transit and trolley systems; (b) “undertakings of the designated trade” means the installation, construction, maintenance and repair of power line electrical transmission and distribution systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of powerline technician:</p> <ul style="list-style-type: none"> (a) installing, constructing, maintaining and repairing power line electrical transmission and distribution systems; (b) using test equipment and specialty tools required by the designated trade; (c) operating vehicles and equipment related to the designated trade; (d) operating mobile lifting devices used in power line and electric utility services to auger holes and to set utility poles and place associated equipment; (e) giving directions respecting and supervising the placement of overhead and underground transmission and distribution lines; (f) inspecting, testing, disassembling, assembling, framing, erecting and setting poles, anchors, towers and associated equipment; (g) loading and offloading equipment, materials and supplies in overhead and underground systems;

	<ul style="list-style-type: none"> (h) installing, sagging, deadending, connecting, splicing, terminating, inspecting, testing, maintaining, repairing and locating overhead and underground primary and secondary conductors and cables; (i) installing, testing and maintaining the following: <ul style="list-style-type: none"> (i) transformers in overhead and underground systems; (ii) voltage regulators in overhead and underground systems; (iii) capacitors and switching equipment; (iv) isolating and protective devices on overhead and underground systems; (v) street lighting equipment; (vi) traffic signal systems; (vii) related metering equipment; (viii) light rail transit and trolley systems; (ix) precast vaults, pads, bases and duct work; (j) performing live line maintenance techniques; (k) operating, testing and re-fusing overhead and underground isolating and protective devices; (l) interpreting and applying regulations and standards related to power line electrical transmission and distribution systems.
Recreation Vehicle Service Technician	<p>69(1) In this section,</p> <ul style="list-style-type: none"> (a) “recreation vehicle” means any type of live-in recreation vehicle that is designed for travel, and includes the following: <ul style="list-style-type: none"> (i) travel trailers; (ii) truck campers; (iii) fifth wheel trailers; (iv) motor homes and conversions; (v) fold down camping trailers; (b) “undertakings of the designated trade” means <ul style="list-style-type: none"> (i) the diagnosis of problems relating to recreational vehicles, and (ii) the installation, service, maintenance, repair, removal, replacement and modification of parts, components, accessories, appliances and systems designed for recreational vehicles, <p>but does not include the following:</p> <ul style="list-style-type: none"> (iii) the service, maintenance, repair or overhaul of the engine or power train of a motor vehicle; (iv) the installation, removal or replacement of parts and components on the engine or power train of a motor vehicle;

	<p>(v) the diagnosis of problems relating to the engine or power train of a motor vehicle.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of recreation vehicle service technician:</p> <ul style="list-style-type: none"> (a) diagnosing problems relating to recreation vehicles; (b) installing, servicing, maintaining, repairing, removing, replacing and modifying parts, components, accessories, appliances and systems designed for recreation vehicles; (c) using hand tools, power tools, specialty tools and equipment while working on recreation vehicles; (d) using electrical, electronic and other measuring and testing devices while working on recreation vehicles; (e) installing, removing, modifying or repairing electrical wiring and components in recreation vehicles; (f) installing, removing, modifying or repairing hoses and piping in recreation vehicles; (g) diagnosing, installing, maintaining and servicing towing systems in recreation vehicles; (h) diagnosing, installing, maintaining and servicing chassis, frames, (i) suspension and mechanical components and systems in recreation vehicles; (i) repairing, modifying or replacing materials used in or in relation to recreation vehicles; (j) diagnosing, maintaining, modifying and installing gas and liquid components and systems used in recreation vehicles.
Refrigeration and Air Conditioning Mechanic	<p>70(1) In this section,</p> <ul style="list-style-type: none"> (a) “refrigeration and air conditioning system” means any type of primary or secondary refrigeration and air conditioning system, other than the duct work and sheet metal items associated with the system, and includes the following: <ul style="list-style-type: none"> (i) piping; (ii) compressor assemblies; (iii) condenser and cooling tower assemblies; (iv) evaporator assemblies and defrost systems; (v) system controls and control valves; (vi) air handling, distribution equipment and make up air and exhaust systems; (vii) heat recovery and indoor air quality systems; (viii) circulating pump assemblies; (ix) geo-thermal and heat pump systems;

	<ul style="list-style-type: none"> (x) packaged and central air conditioning systems; (xi) pre-fabricated walk in coolers, freezers and environmental panels; (xii) system accessories and ancillary components; (xiii) monitoring and control and detection systems that are part of or used in respect of refrigeration and air conditioning systems; (xiv) commercial and industrial refrigeration process equipment and control systems; (xv) specialized food service equipment; <p>(b) “undertakings of the designated trade” means the installation, maintenance, service, alteration, repair and decommission of refrigeration and air conditioning systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of refrigeration and air conditioning mechanic:</p> <ul style="list-style-type: none"> (a) installing, maintaining and servicing refrigeration and air conditioning systems; (b) altering, repairing and decommissioning refrigeration and air conditioning systems; (c) removing refrigerants from refrigeration and air conditioning systems; (d) installing, removing, recycling, storing and disposing of primary and secondary refrigerants; (e) transporting, handling and using refrigerants and other dangerous goods; (f) using electrical and other measuring and testing devices in relation to refrigeration and air conditioning systems; (g) carrying out soldering, brazing, welding and various other pipe joining techniques on or in relation to refrigeration and air conditioning systems; (h) maintaining and making electrical repairs to existing equipment from the breaker or disconnect switch as follows: <ul style="list-style-type: none"> (i) changing controls, contactors, motors and compressors; (ii) repairing burnt or broken wires; (iii) making minor upgrades of controls to existing refrigeration and air conditioning systems; (i) maintaining and repairing refrigeration and air conditioning units, appliances and accessories designed for the utilization of natural or propane gas as a fuel for heating or cooling that do not exceed 400 000 BTU (117 kW) input; (j) using tools specific to the designated trade, hand tools and power tools while working on refrigeration and air conditioning systems.
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Residential Construction Site Manager	<p>71(1) In this section,</p> <ul style="list-style-type: none"> (a) “residential construction site” means a residential construction site at which one or more new single- or multi-family homes that are not higher than four stories are being constructed; (b) “undertakings of the designated trade” means the management of a residential construction site. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of residential construction site manager:</p> <ul style="list-style-type: none"> (a) planning, organizing, directing, controlling and evaluating activities at a residential construction site; (b) selecting, engaging the services of and supervising subcontractors; (c) consulting with home buyers, architects, engineers, building inspectors and municipal authorities about plans, specifications and permits; (d) planning and preparing work schedules and co-ordinating the activities of subcontractors; (e) inspecting work performed by subcontractors to ensure quality and conformity with plans and specifications; (f) representing the prime contractor for a residential construction site under the <i>Occupational Health and Safety Act</i>.
Roofer	<p>72(1) In this section,</p> <ul style="list-style-type: none"> (a) “roof” means any type of residential, commercial or industrial roof that is built up or shingled or that is coated with a plastic membrane, and includes the following: <ul style="list-style-type: none"> (i) roof decks; (ii) roof structures; (iii) foundations; (iv) control and expansion joints; (v) copings and parapets; (vi) eaves; (vii) curbs; (b) “undertakings of the designated trade” means the following: <ul style="list-style-type: none"> (i) the preparation, application, service, insulation and replacement of roofs; (ii) the damp-proofing and waterproofing of roofs and coolers; (iii) the installation of roof tiles that are made of clay, concrete, steel, fiberglass, cement fibre or similar material; (iv) the installation of rigid pre-formed sheet roofing systems that are made of metal, vinyl or fiberglass.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of roofer:</p> <ul style="list-style-type: none"> (a) preparing, applying, servicing, insulating and replacing roofs; (b) damp-proofing and waterproofing roofs and coolers; (c) installing on roofs tiles that are made from clay, concrete, steel, fibreglass, cement fibre or similar material; (d) installing rigid pre-formed sheet roofing systems that are made of metal, vinyl or fiberglass; (e) removing existing roof; (f) preparing and repairing roof deck surfaces; (g) installing and repairing vapour barriers and insulation, whether flat or tapered; (h) applying conventional and invented built-up roofing systems hot and cold process materials; (i) installing single-ply sheet membrane roofing systems; (j) applying shingles to new and existing buildings, including asphalt, fibreglass, metal, wood, SBS modified, slate and cement fibre shingles; (k) diagnosing and repairing any problem relating to roofs; (l) using all hand and power operated equipment used to carry out the activities set out in this section; (m) working with roofing materials; (n) preparing, servicing and applying waterproofing materials; (o) interpreting blueprints and shop drawings; (p) laying out and developing projects according to blueprints and shop drawing specifications; (q) calculating roofing materials and quantities of roofing materials; (r) storing and handling roofing materials and equipment.
Sheet Metal Worker	<p>73(1) In this section,</p> <ul style="list-style-type: none"> (a) “heating system” means a system for heating and circulating air inside a building using a gas fired appliance; (b) “sheet metal items” means the following: <ul style="list-style-type: none"> (i) square or round duct lines and fittings; (ii) sheet metal containers; (iii) sheet metal roofs, roof flashings and accessories; (iv) sheet metal lagging; (v) all other custom fabricated objects constructed from sheet metal; (c) “undertakings of the designated trade” means the following:

	<ul style="list-style-type: none"> (i) the lay out, preparation, fabrication, assembly and installation of sheet metal items; (ii) the fabrication, installation, service, maintenance and upgrade of <ul style="list-style-type: none"> (A) fume and dust exhaust systems for residential, commercial and industrial sites, (B) heating systems, ventilation systems and venting systems for residential, commercial and industrial sites, (C) air conditioning systems of up to 5 tons total capacity per system for residential sites, and (D) equipment associated with the undertakings referred to in paragraphs (A) to (C); (d) “ventilation system” means a system for exchanging air inside a building with fresh outside air and circulating air within a building; (e) “venting system” means a system for exhausting combustion gases to the outside of a building and supplying air for combustion by heating systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following are activities within the designated trade of sheet metal worker:</p> <ul style="list-style-type: none"> (a) laying out, preparing, fabricating, assembling and installing sheet metal items; (b) fabricating, installing, servicing, maintaining and upgrading the following: <ul style="list-style-type: none"> (i) fume and dust exhaust systems for residential, commercial and industrial sites; (ii) heating systems, ventilation systems and venting systems for residential, commercial and industrial sites; (iii) air conditioning systems of up to 5 tons total capacity per system for residential sites; (iv) equipment associated with fabricating, installing, servicing, maintaining and upgrading any of the systems listed in subclauses (i) to (iii); (c) using sheet metal pattern development methods and standards; (d) using various types of sheet metal materials; (e) assembling and installing equipment, materials and system components on the job site; (f) laying out, preparing, assembling and installing venting systems and pre-fabricated components of venting systems; (g) installing, maintaining and repairing the following: <ul style="list-style-type: none"> (i) furnaces; (ii) heat pumps; (iii) unit heaters;
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	<ul style="list-style-type: none"> (iv) combination rooftop units; (v) make-up air units; (vi) heat recovery and indoor air quality systems; (vii) heating systems; (viii) ventilation systems; (ix) air conditioning systems of up to 5 tons total capacity per system; (x) appliances; (xi) accessories to any item listed in subclauses (i) to (x) and equipment similar to any item listed in subclauses (i) to (x) or used for sheet metal work; <p>(h) carrying out the following servicing on electrical components of heating systems, ventilation systems and air conditioning systems, along with the associated connection and disconnection of de-energized electrical supply circuits of the systems:</p> <ul style="list-style-type: none"> (i) servicing or changing controls, contactors and motors; (ii) repairing burnt or broken wires; (iii) making minor upgrades of controls to existing heating systems, ventilation systems and air conditioning systems; <p>(i) using sheet metal welding equipment in heat straightening, cutting and joining metals;</p> <p>(j) using sheet metal shop equipment, including rotary, bench and floor machines;</p> <p>(k) assembling, erecting, installing and removing material and personnel handling devices, scaffolds, ropes and slings;</p> <p>(l) using hand tools, power tools, transits, levels and explosive actuated tools;</p> <p>(m) using detailed drawings, blueprints and other specifications;</p> <p>(n) estimating, job planning, preparing and scheduling;</p> <p>(o) applying new innovative technological changes in the designated trade, including materials and methods of construction.</p>
Slickline Services – Assistant Operator Branch	<p>74(1) In this section,</p> <ul style="list-style-type: none"> (a) “braided line” means a multi-strand line or wire rope; (b) “slickline” means a solid single-strand line that is used for the selective placement, manipulation and retrieval of wireline tools and flow control equipment within a wellbore; (c) “specialty line” means a continuous length of sealed metal tube that is similar in handling and appearance to slickline and houses either wire or fibre optics at its core; (d) “undertakings of the branch of the designated trade” means the use of slickline, specialty line or braided line in conjunction with

	<p>operation-specific tools to perform completion, production and abandonment operations for the life cycle of a wellbore;</p> <p>(e) “wellbore” means a hole drilled for the purpose of exploration or extraction of natural gas, oil or water.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within assistant operator branch of the designated trade of slickline services:</p> <ul style="list-style-type: none"> (a) contributing to the health and safety of the work environment; (b) contributing to the control of critical and emergency situations; (c) supporting environmental protection; (d) contributing to an effective work environment; (e) maintaining and servicing slickline services equipment; (f) driving vehicles; (g) supporting pre-job, job and post-job operations; (h) performing the activities of the level one operator branch of the designated trade of slickline services as set out in section 75(2)(c)-(i) under the supervision of a level one operator.
Slickline Services – Level One Operator Branch	<p>75(1) In this section,</p> <ul style="list-style-type: none"> (a) “braided line” means a multi-strand line or wire rope; (b) “pressure control equipment” means equipment used to contain wellbore pressure at surface; (c) “slickline” means a solid single-strand line that is used for the selective placement, manipulation and retrieval of wireline tools and flow control equipment within a wellbore; (d) “specialty line” means a continuous length of sealed metal tube that is similar in handling and appearance to slickline and houses either wire or fibre optics at its core; (e) “undertakings of the branch of the designated trade” means the use of slickline, specialty line or braided line in conjunction with operation-specific tools to perform completion, production and abandonment operations for the life cycle of a wellbore; (f) “wellbore” means a hole drilled for the purpose of exploration or extraction of natural gas, oil or water. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level one operator branch of the designated trade of slickline services:</p> <ul style="list-style-type: none"> (a) performing the activities of the assistant operator branch of the designated trade of slickline services as set out in section 74(2)(a)-(g); (b) supervising assistant operators performing the activities of the level one operator branch of the designated trade of slickline services; (c) establishing operational requirements;

	<ul style="list-style-type: none"> (d) selecting, testing and transporting slickline services equipment; (e) rigging slickline services equipment; (f) operating pressure control equipment; (g) running tools; (h) removing sand and paraffin from a wellbore; (i) running instruments to record pressure and temperature at the bottom of a wellbore; (j) performing activities of the level two operator branch of the designated trade of slickline services as set out in section 76(2)(c)-(g) under the supervision of a level two operator.
Slickline Services – Level Two Operator Branch	<p>76(1) In this section,</p> <ul style="list-style-type: none"> (a) “bailing” means removing mud, sand, cuttings and other debris from the bottom of a wellbore with a bailer; (b) “braided line” means a multi-strand line or wire rope; (c) “fishing” means retrieving lost or stuck equipment from a wellbore; (d) “flow control equipment” means equipment to control well flow and includes plugs, test tools, chokes, standing valves, side door chokes, sleeves and shut-in tools; (e) “perforating” means creating holes in tubing to establish communication between the tubing and the casing of the wellbore’ (f) “slickline” means a solid single-strand line that is used for the selective placement, manipulation and retrieval of wireline tools and flow control equipment within a wellbore; (g) “specialty line” means a continuous length of sealed metal tube that is similar in handling and appearance to slickline and houses either wire or fibre optics at its core; (h) “swabbing” means lifting fluid from the wellbore through the use of a wire rope or slickline, a swab mandrel and a swab cup; (i) “undertakings of the branch of the designated trade” means the use of slickline, specialty line or braided line in conjunction with operation-specific tools to perform completion, production and abandonment operations for the life cycle of a wellbore; (j) “wellbore” means a hole drilled for the purpose of exploration or extraction of natural gas, oil or water. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within that level two operator branch of the designated trade of slickline services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level one operator branch of the designated trade of slickline services as set out in section 75(2)(a)-(i), (b) supervising level one operators performing activities of the level two branch of the designated trade of slickline services,

	<ul style="list-style-type: none"> (c) installing and retrieving flow control equipment; (d) bailing; (e) general fishing; (f) perforating; (g) swabbing; (h) performing activities of the level three operator branch of the designated trade of slickline services as set out in section 77(2)(c)-(g) under the supervision of a level three operator.
Slickline Services – Level Three Operator Branch	<p>77(1) In this section,</p> <ul style="list-style-type: none"> (a) “braided line” means a multi-strand line or wire rope; (b) “explosives” has the same meaning as in the <i>Occupational Health and Safety Regulation</i> (AR 62/2003); (c) “fishing” means retrieving lost or stuck equipment from a wellbore; (d) “flow control equipment” means equipment to control well flow and includes plugs, test tools, chokes, standing valves, side door chokes, sleeves and shut-in tools; (e) “high pressure well” means a well with a maximum potential wellbore surface pressure that is greater than 35MPa (5000 psi); (f) “slickline” means a solid single-strand line that is used for the selective placement, manipulation and retrieval of wireline tools and flow control equipment within a wellbore; (g) “specialty line” means a continuous length of sealed metal tube that is similar in handling and appearance to slickline and houses either wire or fibre optics at its core; (h) “undertakings of the branch of the designated trade” means the use of slickline, specialty line or braided line in conjunction with operation-specific tools to perform completion, production and abandonment operations for the life cycle of a wellbore; (i) “wellbore” means a hole drilled for the purpose of exploration or extraction of natural gas, oil or water. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level three operator branch of the designated trade of slickline services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level two operator branch of the designated trade of slickline services as set out in section 76(2)(a)-(g); (b) supervising level two operators performing activities of the level three operator branch of the designated trade of slickline services; (c) conducting operations with braided line or specialty line; (d) performing operations in a wellbore of a well designated as a critical sour well; (e) conducting high pressure well operations;

	<ul style="list-style-type: none"> (f) complex fishing; (g) conducting operations using explosives.
Snubbing Services – Assistant Operator Branch	<p>78(1) In this section,</p> <ul style="list-style-type: none"> (a) “tubing” means production pipe used to bring products to the surface; (b) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (c) “well” means a producing oil or gas well under pressure; (d) “wellbore” means the rock face that bounds an opening to a well. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the assistant operator branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) contributing to the health and safety of the work environment; (b) contributing to the control of critical and emergency situations; (c) contributing to the management of spills and waste products; (d) operating, inspecting and maintaining equipment and motorized vehicles; (e) identifying wellbore hydraulic parameters; (f) assisting with job operations.
Snubbing Services – Level One Operator Branch	<p>79(1) In this section,</p> <ul style="list-style-type: none"> (a) “tubing” means production pipe used to bring products to the surface; (b) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (c) “well” means a producing oil or gas well under pressure; (d) “wellbore” means the rock face that bounds an opening to a well. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level one operator branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) performing the activities of the assistant operator branch of the designated trade of snubbing services as set out in section 78; (b) crew training; (c) arranging job travel and logistics; (d) performing wellbore hydraulic calculations; (e) pre-job and post-job operations;

	<ul style="list-style-type: none"> (f) sing string completions in one or two zones; (g) applying industry recognized practices; and (h) operating a sweet well with a surface pressure less than 10 MPa.
Snubbing Services – Level Two Operator Branch	<p>80(1) In this section,</p> <ul style="list-style-type: none"> (a) “fishing” means using specialized tools and equipment to remove tools, debris, sand or fill from a well; (b) “lubricating” means fitting and removing pressure-control equipment to the wellhead to enable specialized tools to be used in the well; (c) “staging” means isolating a specialized tool between blowout preventers to enable the tool to be used in the well; (d) “stripping on or off” means placing specialized equipment over tubing to enable specialized equipment or tools to be used in the well; (e) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (f) “well” means a producing oil or gas well under pressure; (g) “zone” means a producing section or formation of a well. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level two operator branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level one operator branch of the designated trade of snubbing services as set out in section 79; (b) applying safety criteria for sour wells; (c) lubricating; (d) fishing; (e) staging; (f) stripping on or off; (g) multiple string completions in 2 or more zones; (h) operating a sweet or sour well with a surface pressure less than 21 MPa.
Snubbing Services – Level Three Operator Branch	<p>81(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (b) “well” means a producing oil or gas well under pressure.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level three operator branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level two operator branch of the designated trade of snubbing services as set out in section 80; (b) operating a sweet, sour or critical sour well with a surface pressure equal to or greater than 21 MPa.
Snubbing Services – Level One Supervisor Branch	<p>82(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (b) “well” means a producing oil or gas well under pressure; (c) “wellbore” means the rock face that bounds an opening to a well. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level one supervisor branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level two operator branch of the designated trade of snubbing services as set out in section 80; (b) ensuring the health and safety of the work environment and work practices; (c) implementing environmental policy; (d) identifying and utilizing wellbore hydraulic parameters; (e) supervising operations on a sweet or sour well with a surface pressure less than 21 MPa.
Snubbing Services – Level Two Supervisor Branch	<p>83(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means the use of snubbing equipment to insert or remove drill pipe, tubing or specialized equipment into or from a well when the blowout preventers are closed while containing well pressure; (b) “well” means a producing oil or gas well under pressure; (c) “wellbore” means the rock face that bounds an opening to a well. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level two supervisor branch of the designated trade of snubbing services:</p> <ul style="list-style-type: none"> (a) performing the activities of the level three operator branch of the designated trade of snubbing services as set out in section 81; (b) performing the activities of the level one supervisor branch of the designated trade of snubbing services as set out in section 82;

	<p>(c) supervising operations on a sweet, sour or critical well with a surface pressure less than 21 MPa.</p>
Sprinkler Systems Installer	<p>84(1) In this section,</p> <p>(a) “sprinkler system” means any kind of residential, commercial or industrial sprinkler system and includes the following:</p> <ul style="list-style-type: none"> (i) automatic fire suppression systems; (ii) automatic detection suppression systems; (iii) stand pipe and hose systems; (iv) fire protection water supply systems, including underground mains; (v) fire pumps and controls; (vi) fire extinguishers; (vii) fire hydrants and related equipment; (viii) fire stopping materials; (ix) piping, controls and fittings that are part of or ancillary to a sprinkler system; <p>(b) “undertakings of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance and repair of sprinkler systems.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following activities are performed within the designated trade of sprinkler systems installer:</p> <ul style="list-style-type: none"> (a) fabricating, installing, altering, adjusting, maintaining and repairing sprinkler systems, including the following: <ul style="list-style-type: none"> (i) wet sprinkler systems; (ii) dry sprinkler systems; (iii) preaction and deluge systems; (iv) foam systems; (v) CO2 and other gas extinguishing systems; (vi) dry chemical systems; (vii) exposure protection systems; (b) determining location, size and material required from prints and specifications; (c) compiling material breakdown and takeoff; (d) identifying and using tools and special equipment that are used to carry out the activities set out in this section; (e) erecting and using steel scaffolding, power-operated scaffolding and swing stages; (f) applying codes to installation, inspection and maintenance requirements;

	<ul style="list-style-type: none"> (g) rigging equipment and piping components; (h) installing and maintaining appliances, controls, equipment, piping and hangers; (i) examining, inspecting and testing sprinkler systems.
Steamfitter-Pipefitter	<p>85(1) In this section,</p> <ul style="list-style-type: none"> (a) “piping system” means any type of commercial or industrial piping system and includes the following: <ul style="list-style-type: none"> (i) hot liquid systems; (ii) high and low pressure steam systems; (iii) boilers and controls for boilers; (iv) control and indicating devices systems; (v) heating and cooling systems; (vi) heat exchanger systems; (vii) process systems; (viii) power plant systems; (ix) compressed gas systems; (x) vacuum, pneumatic and hydraulic systems; (xi) fire protection systems other than sprinkler systems; (xii) flue gas systems; (xiii) water treatment systems; (xiv) fuel systems; (xv) medical gas systems; (b) “undertakings of the designated trade” means the fabrication, installation, alteration, maintenance and repair of piping systems. <p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following activities are performed within the designated trade of steamfitter-pipefitter:</p> <ul style="list-style-type: none"> (a) fabricating, installing, altering, maintaining and repairing piping systems; (b) determining location, size and material required; (c) producing fabrication and layout drawings from prints and specifications; (d) compiling material breakdown and takeoff; (e) identifying and using tools and special equipment that are used to carry out the activities set out in this section; (f) applying codes to installation requirements; (g) rigging, hoisting and lifting equipment and piping components; (h) installing, maintaining, servicing and troubleshooting boilers and controls;

	<ul style="list-style-type: none"> (i) installing, maintaining and servicing heat exchange equipment and controls; (j) cutting, preparing, aligning and assembling piping; (k) installing, maintaining and servicing pumps, valves and related equipment; (l) installing, maintaining and servicing components in heating, ventilation and air conditioning systems; (m) fabricating and installing pipe supports, hangers and equipment supports.
Steel Detailer – Level One Branch	<p>86(1) In this section,</p> <ul style="list-style-type: none"> (a) “detailed drawings” includes: <ul style="list-style-type: none"> (i) detailed shop drawings; (ii) fabrication or installation drawings; (iii) electronic data; (iv) notes; (v) and specifications; (b) “structural steel components” means the following: <ul style="list-style-type: none"> (i) girders, trusses and built-up sections; (ii) welded or bolted beams and columns; (iii) metal conventional and spiral stairs; (iv) metal ladders and platforms; (v) metal railings; (vi) structural or miscellaneous steel or metal components not referred to in subclauses (i) to (v) (c) “undertakings of the branch of the designated trade” means the preparation and modification of detailed drawings used for the fabrication and installation of structural steel components. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level one branch of the designated trade of steel detailer:</p> <ul style="list-style-type: none"> (a) using drawings and specifications provided by engineers or architects, and information provided in government and industry codes, standards and guidelines; (b) using computers, computer networks, electronic data, storage devices, software and printers or plotters; (c) using manual drafting tools.
Steel Detailer – Level Two Branch	<p>87(1) In this section,</p> <ul style="list-style-type: none"> (a) “detailed drawings” includes: <ul style="list-style-type: none"> (i) detailed shop drawings;

	<ul style="list-style-type: none"> (ii) fabrication or installation drawings; (iii) electronic data; (iv) notes; (v) and specifications; <p>(b) “structural steel components” means the following:</p> <ul style="list-style-type: none"> (i) girders, trusses and built-up sections; (ii) welded or bolted beams and columns; (iii) metal conventional and spiral stairs; (iv) metal ladders and platforms; (v) metal railings; (vi) structural or miscellaneous steel or metal components not referred to in subclauses (i) to (v) <p>(c) “undertakings of the branch of the designated trade” means the preparation and modification of detailed drawings used for the fabrication and installation of structural steel components.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level two branch of the designated trade of steel detailer:</p> <ul style="list-style-type: none"> (a) using drawings and specifications provided by engineers or architects, and information provided in government and industry codes, standards and guidelines; (b) using computers, computer networks, electronic data, storage devices, software and printers or plotters; (c) using manual drafting tools.
Steel Detailer – Level Three Branch	<p>88(1) In this section,</p> <p>(a) “detailed drawings” includes:</p> <ul style="list-style-type: none"> (i) detailed shop drawings; (ii) fabrication or installation drawings; (iii) electronic data; (iv) notes; (v) and specifications; <p>(b) “structural steel components” means the following:</p> <ul style="list-style-type: none"> (i) girders, trusses and built-up sections; (ii) welded or bolted beams and columns; (iii) metal conventional and spiral stairs; (iv) metal ladders and platforms; (v) metal railings; (vi) structural or miscellaneous steel or metal components not referred to in subclauses (i) to (v)

	<p>(c) “undertakings of the branch of the designated trade” means the preparation and modification of detailed drawings used for the fabrication and installation of structural steel components.</p> <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level three branch of the designated trade of steel detailer:</p> <ul style="list-style-type: none"> (a) using drawings and specifications provided by engineers or architects, and information provided in government and industry codes, standards and guidelines; (b) using computers, computer networks, electronic data, storage devices, software and printers or plotters; (c) using manual drafting tools.
Transport Refrigeration Technician	<p>89 (1) In this section,</p> <ul style="list-style-type: none"> (a) “auxiliary power units” include mobile generator systems and other alternative power supplies, the main purpose of which is to support mobile refrigeration and heating equipment; (b) “mobile equipment” includes trucks, trailers and specialized shipping containers with heating and air conditioning systems; (c) “mobile refrigeration and heating equipment” means any type of primary or secondary refrigeration system used to supply optimal environmental conditions for transportation of goods by mobile equipment, including the following components: <ul style="list-style-type: none"> (i) piping; (ii) compressor assemblies; (iii) condenser assemblies; (iv) evaporator assemblies; (v) system controls and control valves; (vi) air handling and distribution equipment; (vii) humidifier assemblies; (viii) air cleaner assemblies; (ix) system accessories and ancillary components; (x) equipment used to monitor and control refrigeration systems and detect malfunctions in refrigeration systems; (xi) auxiliary heaters; (xii) mechanical generating systems; (xiii) electrical and hybrid power supply systems; (xiv) diesel engines and related systems; (d) “undertakings of the designated trade” means the installation, maintenance, service, alteration and repair of mobile refrigeration and heating equipment and auxiliary power units.

	<p>(2) When practicing or otherwise carrying out work in the undertakings of the designated trade, the following activities are performed within the designated trade of transport refrigeration technician:</p> <ul style="list-style-type: none"> (a) installing, maintaining, servicing, altering and repairing <ul style="list-style-type: none"> (i) mobile refrigeration and heating equipment, and (ii) auxiliary power units; (b) using hand tools, power tools and specialized tools and equipment while working on mobile refrigeration and heating equipment; (c) using mechanical, electrical, electronic and other measuring and testing devices in relation to mobile refrigeration and heating equipment; (d) carrying out soldering, brazing and welding on or in relation to mobile refrigeration and heating equipment; (e) maintaining and making electrical repairs to existing mobile refrigeration and heating equipment and auxiliary power units from the breaker or disconnect switch as follows: <ul style="list-style-type: none"> (i) repairing burnt, broken or damaged wires and connections; (ii) making upgrades to controls of existing mobile refrigeration and heating equipment; (f) installing, maintaining and repairing natural gas and propane gas auxiliary heating units as well as hybrid control systems; (g) installing, maintaining and repairing engines and compressors; (h) installing, removing, recycling, storing and disposing of primary and secondary refrigerants; (i) transporting, handling and using refrigerants and other dangerous goods related to mobile refrigeration and heating systems.
Water Well Driller – Earth Loop Technician Branch	<p>90(1) In this section,</p> <ul style="list-style-type: none"> (a) “earth loop” means any part, assembly or accessory pertaining to ground source heat exchange systems comprised of piping that is placed into the earth in a series of closed loops and transports fluid for the purpose of heating and cooling residential homes or commercial buildings or both; (b) “undertakings of the branch of the designated trade” means the designing, drilling, construction, installation, grouting, servicing, reconditioning and decommissioning of earth loops. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the earth loop technician branch of the designated trade of water well driller:</p> <ul style="list-style-type: none"> (a) drilling bore fields and holes and constructing horizontal trenches; (b) designing, drilling, constructing and installing earth loops; (c) grouting bore fields and holes; (d) servicing, reconditioning and decommissioning of earth loops;

	<ul style="list-style-type: none"> (e) completing earth loop records and reports as required by the Government of Alberta and the ground source heat exchange industry; (f) operating the tools of the designated trade; (g) operating and maintaining equipment and drilling systems for drilling earth loops; (h) heating and cutting metal using the appropriate equipment; (i) identifying and applying the standards and regulations governing the ground source heat exchange industry; (j) identifying and describing geological formations; (k) monitoring and managing natural gas in the drilling and completion of earth loop bore fields and holes; (l) monitoring groundwater.
Water Well Driller – Water Well Driller Branch	<p>91(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means the following: <ul style="list-style-type: none"> (i) the designing, drilling, construction, development, servicing, disinfecting, sanitation, reconditioning and decommissioning of water wells; (ii) the repairing, servicing, installing and disinfecting of water well pumps and systems; (b) “water well” means a hole or shaft sunk into the earth by means of a mobile rotary, boring or cable tool drilling rig to provide access to a water source for residential, commercial or industrial purposes or any combination of those purposes. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the water well driller branch of the designated trade of water well driller:</p> <ul style="list-style-type: none"> (a) designing, drilling, constructing, developing, servicing, disinfecting, sanitizing, reconditioning and decommissioning water wells; (b) repairing, servicing, installing and disinfecting water well pumps and systems; (c) completing a bore hole into a finished productive water well; (d) completing and grouting a bore hole; (e) completing water well records and reports as required by the Government of Alberta and the groundwater industry; (f) operating the tools of the designated trade; (g) operating and maintaining equipment and drilling systems for drilling water wells; (h) heating and cutting metal using the appropriate equipment;

	<ul style="list-style-type: none"> (i) connecting and installing electrical connections to water pumps; (j) identifying and applying the standards and regulations governing the groundwater industry; (k) identifying and describing geological formations; (l) exploring for groundwater; (m) recognizing groundwater flow; (n) interpreting chemical content of groundwater; (o) monitoring and managing natural gas in the drilling and completion of water wells; (p) monitoring groundwater.
Welder – Welder Branch	<p>92(1) In this section,</p> <ul style="list-style-type: none"> (a) “component” means any object that consists of ferrous or non-ferrous metal and includes the following objects that are made of or that consist of ferrous or non-ferrous metal: <ul style="list-style-type: none"> (i) structures; (ii) pipe; (iii) vessels; (iv) containers; (b) “undertakings of the branch of the designated trade” means the fabrication, service, maintenance and repair of components. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the welder branch of the designated trade of welder:</p> <ul style="list-style-type: none"> (a) fabricating components; (b) servicing, maintaining and repairing components; (c) setting up oxyfuel accessories using recommended installation procedures; (d) cutting, shaping and fitting steel using oxyfuel processes; (e) cleaning and inspecting cut surfaces; (f) fusion welding using manual oxyfuel processes; (g) brazing and braze welding using oxyfuel processes; (h) applying surfacing materials using oxyfuel processes; (i) joining metals using soldering processes; (j) setting up and welding using shielded metal arc, gas metal arc, flux core arc, submerged arc and gas tungsten arc welding processes; (k) cutting and gouging using electric arc welding processes; (l) welding and cutting using plasma arc processes; (m) setting up equipment and welding using resistance welding processes;

	<ul style="list-style-type: none"> (n) identifying metals and performing preparation and assembly tasks prior to welding; (o) performing supplementary and disassembly procedures; (p) using hand tools, power tools and shop equipment; (q) using new innovative technological changes in the designated trade with respect to <ul style="list-style-type: none"> (i) materials or method of construction, and (ii) the carrying out of the activities set out in this section.
Welder – Wire Process Operator Branch	<p>93(1) In this section,</p> <ul style="list-style-type: none"> (a) “component” means any object that consists of ferrous or non-ferrous metal and includes the following objects that are made of or that consist of ferrous or non-ferrous metal: <ul style="list-style-type: none"> (i) structures; (ii) pipe; (iii) vessels; (iv) containers; (b) “undertakings of the branch of the designated trade” means the fabrication, service, maintenance and repair of components using processes other than shielded metal arc and gas tungsten arc processes. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the wire process operator branch of the designated trade of welder:</p> <ul style="list-style-type: none"> (a) fabricating components using processes other than shielded metal arc and gas tungsten arc processes; (b) servicing, maintaining and repairing components using processes other than shielded metal arc and gas tungsten arc processes; (c) cutting steel using oxyfuel processes; (d) cleaning and inspecting cut surfaces; (e) setting up and welding using gas metal arc, flux core arc and submerged arc welding processes; (f) cutting and gouging using electric arc welding processes; (g) welding and cutting using plasma arc processes; (h) setting up equipment and welding using resistance welding processes; (i) identifying metals and performing preparation and assembly tasks prior to welding; (j) using new innovative technological changes in the designated trade with respect to <ul style="list-style-type: none"> (i) materials or method of construction, and (ii) the carrying out of the activities set out in this section.

<p>Well Testing Services Supervisor – Level Three Branch</p>	<p>94(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means <ul style="list-style-type: none"> (i) pre-job planning, (ii) trip management, (iii) rig-in, (iv) flowing the well, (v) recording data, (vi) rig-out, (vii) post-job management, and (viii) inspection and maintenance of well testing system; (b) “well testing” means <ul style="list-style-type: none"> (i) the continuous process by which well data is collected during the exploration, development and production of oil and gas resources in order to determine reservoir deliverability and identify fluids produced, and (ii) the various completion operations, including swabbing, frac flow back, acid stimulating, blow downs and circulating well bore returns, that are performed on a well to assist in its operation; (c) “well testing system” means any system that is used for well testing and is comprised of any or all of the following: <ul style="list-style-type: none"> (i) pressurized vessels; (ii) emergency shutdown valves; (iii) flow lines; (iv) choke manifolds; (v) line heaters; (vi) flare stacks; (vii) propane tanks and vaporizers; (viii) flow meters; (ix) test kits; (x) pumps; (xi) pipe skids; (xii) computers and data collection devices. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level three branch of the designated trade of well testing services supervisor:</p> <ul style="list-style-type: none"> (a) contributing to the safety environment; (b) contributing to control of critical and emergency situations; (c) supporting environmental protection;
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	<ul style="list-style-type: none"> (d) establishing communications and working relationships; (e) leading the shift and reporting to immediate supervisor; (f) supporting pre-job planning; (g) supporting rig-in; (h) flowing the well and recording program data; (i) supporting demobilization, rig-out and transport; (j) performing housekeeping and supplies requisition; (k) using system documentation; (l) conducting equipment inspections and maintenance; (m) supporting crew training; (n) the operation, inspection and maintenance of motorized vehicles; (o) managing critical and emergency situations; (p) supervising current shift and support cross-shift crew; (q) managing multi-equipment jobs; (r) testing sour wells; (s) operating high pressure systems; (t) testing wells with shut in pressure of not more than 34.5 MPa (5000 psi); (u) performing the activities of the level four branch of the designated trade of well testing services supervisor as set out in section 95(2)(b)-(d) under supervision of a person who holds a trade certificate in the level four branch of the designated trade of well testing services supervisor.
Well Testing Services Supervisor – Level Four Branch	<p>95(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings” means <ul style="list-style-type: none"> (i) pre-job planning, (ii) trip management, (iii) rig-in, (iv) flowing the well, (v) recording data, (vi) rig-out, (vii) post-job management, and (viii) inspection and maintenance of well testing system; (b) “well testing” means <ul style="list-style-type: none"> (i) the continuous process by which well data is collected during the exploration, development and production of oil and gas resources in order to determine reservoir deliverability and identify fluids produced, and

	<ul style="list-style-type: none"> (ii) the various completion operations, including swabbing, frac flow back, acid stimulating, blow downs and circulating well bore returns, that are performed on a well to assist in its operation; (c) “well testing system” means any system that is used for well testing and is comprised of any or all of the following: <ul style="list-style-type: none"> (i) pressurized vessels; (ii) emergency shutdown valves; (iii) flow lines; (iv) choke manifolds; (v) line heaters; (vi) flare stacks; (vii) propane tanks and vaporizers; (viii) flow meters; (ix) test kits; (x) pumps; (xi) pipe skids; (xii) computers and data collection devices. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level four branch of the designated trade of well testing services supervisor:</p> <ul style="list-style-type: none"> (a) performing the activities of the level three branch of the designated trade of well testing services supervisor as set out in section 94(2)(a)-(t); (b) supervising large well testing crews; (c) managing multi-stage separation testing; (d) testing critical sour wells; (e) performing the activities of the level five branch of the designated trade of well testing services supervisor as set out in section 96(2)(b)-(f) under supervision of a person who holds a trade certificate in the level five branch of the designated trade of well testing services supervisor.
Well Testing Services Supervisor – Level Five Branch	<p>96(1) In this section,</p> <ul style="list-style-type: none"> (a) “undertakings of the branch of the designated trade” means <ul style="list-style-type: none"> (i) pre-job planning, (ii) trip management, (iii) rig-in, (iv) flowing the well, (v) recording data,

	<ul style="list-style-type: none"> (vi) rig-out, (vii) post-job management, and (viii) inspection and maintenance of well testing system; <p>(b) “well testing” means</p> <ul style="list-style-type: none"> (i) the continuous process by which well data is collected during the exploration, development and production of oil and gas resources in order to determine reservoir deliverability and identify fluids produced, and (ii) the various completion operations, including swabbing, frac flow back, acid stimulating, blow downs and circulating well bore returns, that are performed on a well to assist in its operation; <p>(c) “well testing system” means any system that is used for well testing and is comprised of any or all of the following:</p> <ul style="list-style-type: none"> (i) pressurized vessels; (ii) emergency shutdown valves; (iii) flow lines; (iv) choke manifolds; (v) line heaters; (vi) flare stacks; (vii) propane tanks and vaporizers; (viii) flow meters; (ix) test kits; (x) pumps; (xi) pipe skids; (xii) computers and data collection devices. <p>(2) When practicing or otherwise carrying out work in the undertakings of the branch of the designated trade, the following activities are performed within the level five branch of the designated trade of well testing services supervisor:</p> <ul style="list-style-type: none"> (a) performing the activities of the level four branch of the designated trade of well testing services supervisor as set out in section 95(2)(a)-(d); (b) testing wells with shut in pressure of more than 34.5 MPa (5000 psi); (c) contributing to the planning and preparation of complex jobs and projects; (d) co-ordinating the running of complex jobs and projects; (e) co-ordinating complex jobs and projects; (f) contributing to the closure of complex jobs and projects.
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Designated Trades' Activities and Certification Requirements Order 1/2022

Schedule 2 - Designated Trades' Certification Requirements

- A. Further to **Section 3** of this Order, the Board established four streams of certification requirements for an Alberta Journeyperson Certificate in a designated trade or branch of a designated trade as follows:
1. For designated trades with an Alberta credential, **Stream A** certification requirements for an Alberta Journeyperson Certificate in a designated trade or branch of a designated trade is proof of an Alberta credential in that designated trade or that branch of a designated trade.
 2. For designated trades without an Alberta credential, **Stream B** certification requirements for an Alberta Journeyperson Certificate in a designated trade or branch of a designated trade is proof of the successful completion of education or training recognized and required by the Board for that designated trade or that branch of a designated trade, and if also required by the board, the following:
 - (a) minimum work experience in that designated trade or that branch of a designated trade, and
 - (b) one or more examinations.
 3. For specified designated trades or branches of a designated trade, **Stream C** certification requirements for an Alberta Journeyperson Certificate in a designated trade or branch of a designated trade is proof of
 - (a) minimum work experience in that designated trade or that branch of a designated trade,
 - (b) a satisfactory report from the person's current employer, or other evidence acceptable to the Administrator, confirming the person has the skill and knowledge in that designated trade or that branch of a designated trade, or in respect of one or more activities in that designated trade or that branch of a designated trade that is expected of person with a trade certificate in that designated trade or that branch of a designated trade,
 - (c) one or more examinations, and
 - (d) if required by the Board, successful completion of mandatory education or training for that designated trade or that branch of a designated trade.
 4. With respect to the minimum work experience certification requirement described in **Stream C**, individuals may receive credit for proof of the successful completion of the following
 - (a) education or training recognized by the Board for credit in that designated trade or that branch of a designated trade, other than education or training required under **Stream A** or **Stream B**; or
 - (b) a valid Alberta Journeyperson Certificate or valid recognized trade certificate under Part 3 of this Order
 - (i) in a different designated trade or branch of a designated trade recognized by the Board for credit in that designated trade or that branch of a designated trade, or
 - (ii) in a different branch of that designated trade recognized by the Board for credit in that branch of that designated trade.
 5. For specified designated trades or branches of a designated trade, **Stream D** certification requirements for an Alberta Journeyperson Certificate in a designated trade or branch of a designated trade is proof of the following
 - (a) a valid recognized trade certificate under Part 3 of this Order in that designated trade or that branch of a designated trade, and
 - (b) successful completion of one or more examinations.
 6. Notwithstanding the certification requirements in **Stream D**, proof of a recognized trade certificate under Part 3 of this Order with a Red Seal Endorsement in a designated trade or branch of a designated trade is not eligible for an Alberta Journeyperson Certificate in that designated trade or that branch of a designated trade.

B. The following table describes the four streams of certification requirements established by the Board for an Alberta Journeyman Certificate in each designated trade and branch of a designated trade.

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Agricultural Equipment Technician	Advanced Diploma - Agricultural Equipment Technician	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none">Automotive Service Technician.Heavy Equipment Technician - Heavy Equipment TechnicianHeavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road)Heavy Equipment Technician - Truck and Transport MechanicHeavy Equipment Technician - Transport Trailer Mechanic	<ul style="list-style-type: none">National Craft Certificate Level 6 for Agricultural Mechanics issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI)	Yes	N/A	
Appliance Service Technician - Appliance Service Technician Branch	Diploma - Appliance Service Technician - Appliance Service Technician	N/A	7 200	54	N/A	Yes	N/A	<ul style="list-style-type: none">Appliance Service Technician - Commercial Appliance Technician	N/A	Yes	N/A	
Appliance Service Technician - Commercial Appliance Technician Branch	Certificate - Appliance Service Technician - Commercial Appliance Technician	N/A	7 200	54	N/A	Yes	N/A	N/A	N/A	Yes	N/A	
Auto Body Technician - Auto Body Prepper Branch	Certificate of Achievement - Auto Body Technician - Auto Body Prepper	N/A	5 130	36	N/A	Yes	N/A	N/A	N/A	Yes	N/A	
Auto Body Technician - Auto Body Refinisher Branch	Certificate - Auto Body Technician - Auto Body Refinisher	N/A	4 860	36	N/A	Yes	N/A	<ul style="list-style-type: none">Auto Body Technician - Auto Body RepairerAuto Body Technician - Auto Body Prepper	N/A	Yes	N/A	
Auto Body Technician - Auto Body Repairer Branch	Certificate - Auto Body Technician - Auto Body Repairer	N/A	7 200	36	N/A	Yes	Yes	<ul style="list-style-type: none">Auto Body Technician - Auto Body RefinisherAuto Body Technician - Auto Body Prepper	N/A	Yes	Yes	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Auto Body Technician - Auto Body Technician Branch	Advanced Diploma - Auto Body Technician - Auto Body Technician OR Certificate - Auto Body Technician - Auto Body Refinisher <u>and</u> Certificate - Auto Body Technician - Auto Body Repairer	N/A	9 630	72	N/A	Yes	Yes	<ul style="list-style-type: none"> Auto Body Technician - Auto Body Prepper 	<ul style="list-style-type: none"> National Craft Certificate Level 6 for Vehicle Body Repairs issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	Yes
Automotive Service Technician	Advanced Diploma - Automotive Service Technician	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none"> Agricultural Equipment Technician Heavy Equipment Technician - Heavy Equipment Technician Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road) Heavy Equipment Technician - Truck and Transport Mechanic Heavy Equipment Technician - Transport Trailer Mechanic Motorcycle Mechanic Natural Gas Compression Technician Transport Refrigeration Technician 	<ul style="list-style-type: none"> DND - Vehicle Technician QL5, QL5a or higher issued to a Regular Forces Member. National Craft Certificate Level 6 for Motor Mechanics issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A
Baker	Diploma - Baker	N/A	7 020	54	N/A	Yes	N/A	N/A	N/A	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Boilermaker	Diploma - Boilermaker	N/A	7 020	54	N/A	Yes	Yes	<ul style="list-style-type: none">• Ironworker• Metal Fabricator (Fitter)• Welder	<ul style="list-style-type: none">• Certificate of Accomplishment in the Boilermakers National Apprenticeship Program issued by the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers in the United States of America	Yes	Yes
Bricklayer	Diploma - Bricklayer	N/A	7 020	54	N/A	Yes	Yes	N/A	<ul style="list-style-type: none">• National Craft Certificate Level 6 for Brick & Stonelaying issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI)	Yes	Yes
Cabinetmaker	Advanced Diploma - Cabinetmaker	N/A	7 200	54	N/A	Yes	Yes	<ul style="list-style-type: none">• Carpenter	N/A	Yes	Yes
Carpenter	Advanced Diploma - Carpenter	N/A	8 160	72	N/A	Yes	Yes	<ul style="list-style-type: none">• Cabinetmaker• Concrete Finisher	<ul style="list-style-type: none">• DND - Construction Technician QL5, QL5a or higher issued to a Regular Forces Member.• National Craft Certificate Level 6 for the trade of Carpentry & Joinery issued by the Further Education and Training Awards Council (FETAC) in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI).	Yes	Yes

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Cathodic Protection Technician - Level One Branch	N/A	<ul style="list-style-type: none"> Enform Cathodic Protection Rectifier Course (previously the Corpro Authorization Course), AMPP (formerly NACE International) CP-1 Tester Course or the following equivalencies: <ul style="list-style-type: none"> AMPP (formerly NACE International) CP-2 Technician; AMPP (formerly NACE International) CP-3 Technologist; AMPP (formerly NACE International) CP-4 Specialist; combination of AMPP (formerly NACE International) Basic Corrosion Course and NACE Corrosion Prevention in Oil & Gas Production, 1 000 hours of work experience within 12 months, and Required examination 	1 500	18	Enform Cathodic Protection Rectifier Course (previously the Corpro Authorization Course).	Yes	N/A	N/A	N/A	N/A	N/A
Cathodic Protection Technician - Level Two Branch	N/A	<ul style="list-style-type: none"> Cathodic Protection Technician - Level One Branch certificate, and AMPP (formerly NACE International) CP-2 Technologist training, or the following equivalencies: <ul style="list-style-type: none"> AMPP (formerly NACE International) CP-3 Technologist; AMPP (formerly NACE International) CP-4 Specialist; combination of AMPP (formerly NACE International) Basic Corrosion Course, AMPP (formerly NACE International) Corrosion Prevention in Oil and Gas Production, and AMPP (formerly NACE International) Corrosion Prevention: Theory and Data Interpretation Course, and 1 000 hours of work experience within 12 months, and Required examination 	N/A	N/A	N/A	Yes	N/A	N/A	N/A	N/A	N/A
Communication Technician	Diploma - Communication Technician	N/A	9 000	72	N/A	Yes	N/A	<ul style="list-style-type: none"> Electrician Instrumentation and Control Technician 	N/A	Yes	N/A
Concrete Finisher	Certificate of Achievement - Concrete Finisher	N/A	5 040	36	N/A	Yes	N/A	<ul style="list-style-type: none"> Carpenter 	N/A	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Construction Craft Worker	N/A	<ul style="list-style-type: none"> Construction Craft Labourer Program Certificate from Keyano College, Construction Craft Labourer Certificate of Completion from Christian Labour Association of Canada (CLAC), Construction Craft Labourer Certificate of Completion from Alberta Labour Training Trust Fund (ALTTF), 2 000 hours of work experience within 12 months, and Required examination. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	N/A
Cook	Diploma - Cook	N/A	7 020	54	N/A	Yes	N/A	N/A	<ul style="list-style-type: none"> DND - Cook QL5, QL5a or higher issued to a Regular Forces Member. 	Yes	N/A
Crane and Hoisting Equipment Operator - Boom Truck Branch	Certificate of Achievement - Crane and Hoisting Equipment Operator - Boom Truck	N/A	1 800	18	N/A	Yes	Yes	N/A	N/A	Yes	Yes
Crane and Hoisting Equipment Operator - Hydraulic Mobile Crane Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane and Hoisting Equipment Operator - Mobile Crane Branch	Certificate - Crane and Hoisting Equipment Operator - Mobile Crane	N/A	7 560	54	N/A	Yes	Yes	<ul style="list-style-type: none"> Crane and Hoisting Equipment Operator - Boom Truck Crane and Hoisting Equipment Operator - Tower Crane Crane and Hoisting Equipment Operator - Wellhead Boom Truck 	N/A	Yes	Yes

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Crane and Hoisting Equipment Operator - Tower Crane Branch	Certificate of Achievement - Crane and Hoisting Equipment Operator - Tower Crane	N/A	4 230	36	N/A	Yes	Yes	<ul style="list-style-type: none">Crane and Hoisting Equipment Operator - Boom TruckCrane and Hoisting Equipment Operator - Mobile Crane	N/A	Yes	Yes	
Crane and Hoisting Equipment Operator - Wellhead Boom Truck Branch	Certificate of Achievement - Crane and Hoisting Equipment Operator - Wellhead Boom Truck	N/A	150	12	N/A	Yes	Yes	N/A	N/A	Yes	Yes	
Electric Motor Systems Technician	Advanced Diploma - Electric Motor Systems Technician	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none">Electrician	N/A	Yes	N/A	
Electrician	Advanced Diploma - Electrician	N/A	9 180	72	N/A	Yes	N/A	<ul style="list-style-type: none">Communication TechnicianElectric Motor Systems TechnicianInstrumentation and Control TechnicianPower System ElectricianPowerline TechnicianRefrigeration and Air Conditioner Mechanic	<ul style="list-style-type: none">DND - Electrical Distribution Technician QL5, QL5a or higher issued to a Regular Forces Member.Certificate of Completion for Journeyman Inside Wireman issued by the National Joint Apprenticeship and Training Committee for the International Brotherhood of Electrical Workers and the National Electrical Contractors Association in the United States of America.National Craft Certificate Level 6 for Electrical issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI)	Yes	N/A	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Elevator Constructor	Certificate of Achievement - Elevator Constructor	N/A	10 800	72	N/A	Yes	N/A	N/A	N/A	Yes	N/A
Field Heat Treatment Technician	N/A	<ul style="list-style-type: none"> • Training Trust, Quality Council of Canada training, • Confirmation of training by the Prairie Heat Treatment Training Trust Fund, • 7 200 hours of work experience within 48 month, and • Required examination 	10 800	72	N/A	Yes	N/A	N/A	N/A	N/A	N/A
Floorcovering Installer	Certificate - Floorcovering Installer	N/A	4 500	36	N/A	Yes	Yes	N/A	N/A	Yes	Yes
Gas Utility Operator	N/A	<ul style="list-style-type: none"> • Federation of Alberta gas Co-ops training, • 3 400 hours of work experience within 24 months, and • Required examination. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gasfitter - Class A Branch	Diploma - Gasfitter - Class A	N/A	7 020	54	1 000 hours working on appliances rated over 400 000 BTU's	Yes	N/A	<ul style="list-style-type: none"> • Appliance Service Technician • Gasfitter - Class B • Plumber • Refrigeration and Air Conditioner Mechanic • Sheet Metal Worker • Sprinkler Systems Installer • Steamfitter - Pipefitter 	N/A	Yes	N/A
Gasfitter - Class B Branch	Certificate - Gasfitter - Class B	N/A	4 680	36	N/A	Yes	N/A	<ul style="list-style-type: none"> • Appliance Service Technician • Plumber • Refrigeration and Air Conditioner Mechanic • Sheet Metal Worker • Sprinkler Systems Installer • Steamfitter - Pipefitter 	N/A	Yes	N/A
Glazier	Diploma - Glazier	N/A	9 720	72	N/A	Yes	Yes	N/A	N/A	Yes	Yes

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Hairstylist - Barber Branch	Certificate of Achievement - Hairstylist - Barber	N/A	2 175	18	N/A	Yes	Yes	N/A	N/A	Yes	Yes
Hairstylist - Hairstylist Branch	Certificate - Hairstylist - Hairstylist	N/A	4 350	36	N/A	Yes	Yes	• Barber	N/A	Yes	Yes
Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road) Branch	Diploma - Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road)	N/A	6 750	54	N/A	Yes	N/A	<ul style="list-style-type: none"> • Agricultural Equipment Technician • Automotive Service Technician • Heavy Equipment Technician - Transport Trailer Mechanic • Heavy Equipment Technician - Truck and Transport Mechanic 	<ul style="list-style-type: none"> • DND - Vehicle Technician QL5, QL5a or higher issued to a Regular Forces Member. 	Yes	N/A
Heavy Equipment Technician - Heavy Equipment Technician Branch	Advanced Diploma - Heavy Equipment Technician - Heavy Equipment Technician	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Heavy Equipment Technician – Transport Trailer Mechanic Branch	Certificate of Achievement - Heavy Equipment Technician - Transport Trailer Mechanic	N/A	4 950	36	N/A	Yes	N/A	<ul style="list-style-type: none"> • Agricultural Equipment Technician • Automotive Service Technician • Transport Refrigeration Technician 	<ul style="list-style-type: none"> • DND - Vehicle Technician QL5, QL5a or higher issued to a Regular Forces Member. 	Yes	N/A
Heavy Equipment Technician - Truck and Transport Mechanic Branch	Diploma - Heavy Equipment Technician - Truck and Transport Mechanic	N/A	6 750	54	N/A	Yes	N/A	<ul style="list-style-type: none"> • Agricultural Equipment Technician • Automotive Service Technician • Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road) • Heavy Equipment Technician - Transport Trailer Mechanic • Transport Refrigeration Technician 	<ul style="list-style-type: none"> • DND - Vehicle Technician QL5, QL5a or higher issued to a Regular Forces Member. • National Craft Certificate Level 6 for the trade of Heavy Vehicle Mechanic issued by the Further Education and Training Awards Council (FETAC) in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Industrial Construction Crew Supervisor	N/A	<ul style="list-style-type: none">Approved leadership training program “Alberta Construction Safety Association Leadership for Safety Excellence” (LSE) training program, andTraining from ONE of the following approved supervisor programs:<ul style="list-style-type: none">‘Better Supervision’ - Construction Labour Relations Association and the Building Trades of Alberta;‘Supervisor Training Program - Christian Labour Association of Canada;‘Supervisor Training’ - Merit Contractors Association;‘First Level Supervisor Training’ - BuildForce Canada (formerly Construction Sector Council);‘Foreman Certification Training Program’ - National Association of Union Schools and Colleges (NAUSC);orTraining from of either:<ul style="list-style-type: none">The Worley Leadership Development Program, orThe Worley Foreman Development Program (offered to Worley employees only), orThe Jacobs Foreman Development Program (offered to Jacobs employees only), AND <ul style="list-style-type: none">1 000 hours of work experience within 24 months (must be within 5 years of the date of the online application, andRequired examination.	1 000	24 (must be within 5 years of date of application)	Employer Assessment of Competency	N/A	N/A	N/A	N/A	N/A	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Industrial Mechanic (Millwright)	Advanced Diploma - Industrial Mechanic (Millwright)	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none"> • Machinist 	<ul style="list-style-type: none"> • DND - Marine Engineering Technician QL5, QL5a or higher issued to a Regular Forces Member. • National Craft Certificate Level 6 for Mechanical Automation & Maintenance Fitting issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A
Instrumentation and Control Technician	Advanced Diploma - Instrumentation and Control Technician	N/A	9 180	72	N/A	Yes	N/A	<ul style="list-style-type: none"> • Communication Technician • Electrician 	<ul style="list-style-type: none"> • National Craft Certificate Level 6 for Instrumentation issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) • National Craft Certificate Level 6 for Electrical Instrumentation issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Insulator (Heat and Frost)	Certificate - Insulator (Heat and Frost)	N/A	6 827	54	N/A	Yes	Yes	• Sheet Metal Worker	• National Craft Certificate Level 6 for Industrial Insulator issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI)	Yes	Yes
Ironworker - Ironworker Generalist Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	• Certificate of Completion of Apprenticeship in the Ironworker Apprenticeship Certification Program issued by a Local Union Apprenticeship Program that is certified by the Apprenticeship and Training Department of the International Association of Bridge, Structural, Ornamental and Reinforcing Ironworkers Union in the United States of America.	N/A	N/A
Ironworker - Ironworker (Metal Building Systems Erector) Branch	Certificate - Ironworker - Ironworker (Metal Building Systems Erector) Branch	N/A	4 860	36	N/A	Yes	N/A	• Ironworker - Ironworker (Reinforcing)	N/A	Yes	N/A
Ironworker - Ironworker (Reinforcing) Branch	Certificate - Ironworker - Ironworker (Reinforcing)	N/A	4 860	36	N/A	Yes	N/A	• Boilermaker • Ironworker - Ironworker (Metal Building Systems Erector) • Ironworker - Ironworker (Structural and Ornamental) • Metal Fabricator (Fitter)	N/A	Yes	N/A
Ironworker - Ironworker (Structural and Ornamental) Branch	Certificate - Ironworker - Ironworker (Structural and Ornamental)	N/A	7 290	54	N/A	Yes	N/A	• Boilermaker • Ironworker - Ironworker (Metal Building Systems Erector) • Ironworker - Ironworker (Reinforcing) • Metal Fabricator (Fitter)	N/A	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Landscape Horticulturist	Advanced Diploma - Landscape Horticulturist	N/A	7 560	72	N/A	Yes	N/A	N/A	N/A	Yes	N/A
Lather (Interior Systems Mechanic)	Diploma - Lather (Interior Systems Mechanic)	N/A	7 020	54	N/A	Yes	N/A	N/A	<ul style="list-style-type: none"> National Craft Certificate Level 6 for Plastering issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A
Locksmith <i>NOTE: As of June 1, 2010 locksmiths in Alberta are required to hold a license to offer locksmith services under Alberta's new Security Services and Investigators' Act. Employers must hold a company license and all technicians must hold individual licenses. It is a public offence under the Act to provide locksmith services to the public without this license.</i>	Diploma - Locksmith	N/A	7 020	54	<i>See NOTE</i>	Yes	Yes	N/A	N/A	Yes	Yes
Machinist	Advanced Diploma - Machinist	N/A	9 360	72	N/A	Yes	Yes	Industrial Mechanic (Millwright)	<ul style="list-style-type: none"> DND - Marine Engineering Technician QL5, QL5a or higher issued to a Regular Forces Member. National Craft Certificate Level 6 for Mechanical Automation & Maintenance Fitting issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	Yes

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Metal Fabricator (Fitter)	Diploma - Metal Fabricator (Fitter)	N/A	7 020	54	N/A	Yes	Yes	<ul style="list-style-type: none">• Boilermaker• Ironworker• Steamfitter - Pipefitter• Welder	N/A	Yes	Yes	
Motorcycle Mechanic	Diploma - Motorcycle Mechanic	N/A	8 340	72	N/A	Yes	N/A	<ul style="list-style-type: none">• Agricultural Equipment Technician• Automotive Service Technician• Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road)• Heavy Equipment Technician - Heavy Equipment Technician• Heavy Equipment Technician - Transport Trailer Mechanic• Heavy Equipment Technician - Truck and Transport Mechanic• Outdoor Power Equipment Technician - Power Equipment• Outdoor Power Equipment Technician - Recreational Equipment	N/A	Yes	N/A	
Natural Gas Compression Technician	Advanced Diploma - Natural Gas Compression Technician	N/A	9 000	72	N/A	Yes	N/A	<ul style="list-style-type: none">• Agricultural Equipment Technician• Automotive Service Technician• Heavy Equipment Technician - Heavy Equipment Technician• Industrial Mechanic (Millwright)• Instrumentation and Control Technician• Refrigeration and Air Conditioner Mechanic• Transport Refrigeration Technician	N/A	Yes	N/A	
Oil and Gas Transportation - Bed Truck Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Oil and Gas Transportation - Bed Truck Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Oil and Gas Transportation - Bulk Haul Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Oil and Gas Transportation - Bulk Haul Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Oil and Gas Transportation - Multi-wheel Truck Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Oil and Gas Transportation -Multi-wheel Truck Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Oil and Gas Transportation - Supervisor Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Oil and Gas Transportation - Supervisor Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Oil and Gas Transportation - Winch Truck Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Oil and Gas Transportation - Winch Truck Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Outdoor Power Equipment Technician - Power Equipment	Certificate - Outdoor Power Equipment Technician - Power Equipment	N/A	4 500	54	N/A	Yes	N/A	<ul style="list-style-type: none">• Agricultural Equipment Technician• Automotive Service Technician• Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road)• Heavy Equipment Technician - Heavy Equipment Technician• Heavy Equipment Technician - Transport Trailer Mechanic• Heavy Equipment Technician - Truck and Transport Mechanic• Motorcycle Mechanic• Outdoor Power Equipment Technician - Recreational Equipment	N/A	Yes	N/A	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Outdoor Power Equipment Technician - Recreational Equipment	Certificate - Outdoor Power Equipment Technician - Recreational Equipment	N/A	4 500	54	N/A	Yes	N/A	<ul style="list-style-type: none"> Agricultural Equipment Technician Automotive Service Technician Heavy Equipment Technician - Heavy Duty Equipment Mechanic (Off Road) Heavy Equipment Technician - Heavy Equipment Technician Heavy Equipment Technician - Transport Trailer Mechanic Heavy Equipment Technician - Truck and Transport Mechanic Motorcycle Mechanic Outdoor Power Equipment Technician – Power Equipment 	N/A	Yes	N/A
Overhead Door Technician - Level One Branch	N/A	<ul style="list-style-type: none"> Canadian Door Institute (CDI) training, 1 000 hours of work experience within 12 months, and Required examination. 	1 500	18	An employer assessment of competency	Yes	N/A	N/A	N/A	N/A	N/A
Overhead Door Technician - Level Two Branch	N/A	<ul style="list-style-type: none"> Canadian Door Institute (CDI) training, 1 000 hours of work experience within 12 months and Required examination. 	1 500	18	Overhead Door Technician - Level One branch trade certificate and an employer assessment of competency for Level Two Branch	Yes	N/A	N/A	N/A	N/A	N/A
			3 000	36	Employer assessment of competency for Level One and Level Two Branch						
Painter and Decorator	Diploma - Painter and Decorator	N/A	5 850	54	N/A	Yes	N/A	N/A	N/A	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Parts Technician - Materials Technician Branch	Certificate - Parts Technician - Materials Technician	N/A	6 750	54	N/A	Yes	N/A	<ul style="list-style-type: none">Warehousing Occupation - Warehousing Technician Occupational Certificate	<ul style="list-style-type: none">DND - Supply Technician QL6 or higher issued to a Regular Forces Member.	Yes	N/A	
Parts Technician - Parts Technician Branch	Certificate - Parts Technician – Parts Technician	N/A	6 750	54	N/A	Yes	N/A	<ul style="list-style-type: none">Parts Technician - Materials Technician	N/A	Yes	N/A	
Plumber	Advanced Diploma - Plumber	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none">Gasfitter - Class ASprinkler Systems InstallerSteamfitter - Pipefitter	<ul style="list-style-type: none">DND - Plumber and Heating Technician QL5, QL5a or higher issued to a Regular Forces Member.National Craft Certificate Level 6 for the trade of Plumbing issued by the Further Education and Training Awards Council (FETAC) in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI).	Yes	N/A	
Power System Electrician	Advanced Diploma - Power System Electrician	N/A	9 450	72	N/A	Yes	N/A	<ul style="list-style-type: none">ElectricianPowerline Technician	N/A	Yes	N/A	
Powerline Technician	Diploma - Powerline Technician	N/A	9 563	72	N/A	Yes	N/A	<ul style="list-style-type: none">ElectricianPower ElectricianPower System Electrician	N/A	Yes	N/A	
Recreation Vehicle Service Technician	Diploma - Recreation Vehicle Service Technician	N/A	7 750	54	N/A	Yes	N/A	<ul style="list-style-type: none">N/A	N/A	Yes	N/A	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Refrigeration and Air Conditioning Mechanic	Advanced Diploma - Refrigeration and Air Conditioning Mechanic	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none"> Electrician Gasfitter - Class A Gasfitter - Class B Transport Refrigeration Technician 	<ul style="list-style-type: none"> DND - Refrigeration and Mechanical Technician QL5, QL5a or higher issued to a Regular Forces Member. National Craft Certificate Level 6 for Refrigeration & Air Conditioning issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A
Residential Construction Site Manager	N/A	<ul style="list-style-type: none"> Professional Home Builders Institute of Alberta (PHBIA) training, 4 500 hours of work experience within 36 months, and Required examination. 	6 750	54	N/A	Yes	N/A	N/A	N/A	N/A	N/A
Roofer	Certificate - Roofer	N/A	8 790	72	N/A	Yes	N/A	N/A	N/A	Yes	N/A
Sheet Metal Worker	Advanced Diploma - Sheet Metal Worker	N/A	9 000	72	N/A	Yes	Yes	<ul style="list-style-type: none"> Gasfitter - Class A Gasfitter - Class B Insulator (Heat & Frost) 	N/A	Yes	Yes
Slickline Services - Assistant Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Slickline Services - Assistant Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Slickline Services - Level One Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Slickline Services - Level One Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Slickline Services - Level Two Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Slickline Services - Level Two Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Slickline Services - Level Three Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Slickline Services - Level Three Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Snubbing Services - Assistant Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Assistant Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Snubbing Services - Level One Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Level One Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Snubbing Services - Level Two Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Level Two Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Snubbing Services - Level Three Operator Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Level Three Operator Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Snubbing Services - Level One Supervisor Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Level One Supervisor Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Snubbing Services - Level Two Supervisor Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Snubbing Services - Level Two Supervisor Branch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sprinkler Systems Installer	Diploma - Sprinkler Systems Installer	N/A	9 900	72	N/A	Yes	N/A	<ul style="list-style-type: none"> Gasfitter - Class A Gasfitter - Class B Plumber Steamfitter - Pipefitter 	N/A	N/A	N/A
Steamfitter - Pipefitter	Advanced Diploma - Steamfitter - Pipefitter	N/A	9 360	72	N/A	Yes	N/A	<ul style="list-style-type: none"> Gasfitter - Class A Gasfitter - Class B Plumber Sprinkler Systems Installer Welder 	<ul style="list-style-type: none"> Certificate of Completion of Apprenticeship for Steamfitter-Pipefitter issued by the Joint Apprenticeship and Training Committee for the United Association in the United States of America. National Craft Certificate Level 6 for Plumbing issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI) 	Yes	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Steel Detailer - Level One Branch	N/A	<ul style="list-style-type: none"> Registrar's letter from the Alberta Chapter of the National Institute of Steel Detailing (NISD) confirming that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Steel Detailer - Level One Branch, CAD training offered through an Alberta PSI or the NISD, 1 800 hours of combined formal and on-the-job training within a 12 month period, and Required examination. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Steel Detailer - Level Two Branch	N/A	<ul style="list-style-type: none"> Steel Detailer - Level One Branch certificate, Registrar's letter from the Alberta Chapter of the National Institute of Steel Detailing (NISD) confirming that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Steel Detailer - Level Two Branch, CAD training offered through an Alberta PSI or the NISD, 1 800 of combined formal and on-the-job training within a 12 month period, and Required examination. 	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>								STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam	
Steel Detailer - Level Three Branch	N/A	<ul style="list-style-type: none">Steel Detailer - Level Two Branch certificate,Registrar's letter from the Alberta Chapter of the National Institute of Steel Detailing (NISD) confirming that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Steel Detailer - Level Three Branch,CAD training offered through an Alberta PSI or the NISD,3 600 hours of combined formal and on-the-job training within two 12 month periods, andRequired examination.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Transport Refrigeration Technician	Diploma - Transport Refrigeration Technician	N/A	7 020	54	N/A	Yes	N/A	<ul style="list-style-type: none">Refrigeration and Air Conditioner Mechanic	N/A	Yes	N/A	
Water Well Driller - Earth Loop Technician Branch	Certificate - Water Well Driller - Earth Loop Technician	N/A	5 400	36	N/A	Yes	N/A	N/A	N/A	Yes	N/A	
Water Well Driller - Water Well Driller Branch	Certificate - Water Well Driller – Water Well Driller	N/A	5 400	36	N/A	Yes	N/A	N/A	N/A	Yes	N/A	
Welder - Welder Branch	Diploma - Welder	N/A	7 020	54	N/A	Yes	Yes	<ul style="list-style-type: none">BoilermakerMetal Fabricator (Fitter)Steamfitter – PipefitterWelder – Wire Process Operator	<ul style="list-style-type: none">DND – Military Material Technician QL5, QL5a or higher issued to a Regular Forces Member.Certificate of Accomplishment in the Boilermakers National Apprenticeship Program issued by the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers in the United States of America.National Craft Certificate Level 6 for Metal Fabrication issued by FETAC in the Republic of Ireland and/or Quality and Qualifications Ireland (QQI).	Yes	Yes	

DESIGNATED TRADE	STREAM A ALBERTA CREDENTIAL <i>See Schedule 2, A., 1.</i>	STREAM B BOARD RECOGNIZED AND REQUIRED EDUCATION OR TRAINING <i>See Schedule 2, A., 2.</i>	STREAM C WORK EXPERIENCE ONLY <i>See Schedule 2, A., 3 and 4.</i>							STREAM D VALID RECOGNIZED TRADE CERTIFICATE <i>See Schedule 2, A., 5 and 6.</i>	
			Hours	Months	Additional Requirements	Theory Exam	Practical Exam	Credit for valid trade certificate in a related trade	Credit for Board-recognized education or training documents	Theory Exam	Practical Exam
Welder - Wire Process Operator Branch	Certificate of Achievement - Welder - Wire Process Operator	N/A	4 950	36	N/A	Yes	Yes	<ul style="list-style-type: none">• Boilermaker• Metal Fabricator (Fitter)• Steamfitter - Pipefitter	N/A	Yes	Yes
Well Testing Services Supervisor - Level Three Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Well Testing Services Supervisor - Level Three Branch.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Well Testing Services Supervisor - Level Four Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Well Testing Services Supervisor - Level Four Branch.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Well Testing Services Supervisor - Level Four Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Well Testing Services Supervisor - Level Four Branch.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Well Testing Services Supervisor - Level Five Branch	N/A	Confirmation from Energy Safety Canada that the individual satisfies the training, job skills, competencies and standards of performance that are approved for the Well Testing Services Supervisor - Level Five Branch.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



Province of Alberta

SKILLED TRADES AND APPRENTICESHIP
EDUCATION ACT

**APPRENTICESHIP EDUCATION
AND INDUSTRY TRAINING
PROGRAMS REGULATION**

Alberta Regulation 160/2022

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ALBERTA REGULATION 160/2022

**Skilled Trades and Apprenticeship
Education Act**

**APPRENTICESHIP EDUCATION AND INDUSTRY
TRAINING PROGRAMS REGULATION**

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Definitions

1 In this Regulation,

- (a) “Act” means the *Skilled Trades and Apprenticeship Education Act*;
- (b) “approved program” means a program authorized by the Registrar in which a person is provided with an opportunity to engage in an apprenticeship education program who may not otherwise have an opportunity or be able to engage in an apprenticeship education program;
- (c) “employer” means a person who employs an apprentice during the on-the-job instruction component of an apprenticeship education program;
- (d) “mentor” means a person who meets the criteria of a mentor established by the Registrar, with whom a sponsor has made arrangements for the mentorship of the apprentice;
- (e) “mentorship”, in relation to an apprenticeship education program, means the instruction, guidance and supervision provided by a mentor to an apprentice and includes the obligations of a mentor as determined by the Registrar;
- (f) “period” means a length of time, as determined by the Registrar, during which classroom instruction and on-the-

job instruction of an apprenticeship education program are to be completed;

- (g) “records of progress” means the records, as determined by the Registrar, to document the apprentice’s progress in respect of an apprenticeship education program;
- (h) “sponsor” means a sponsor as defined in Part 1 of the Act and may include a prospective sponsor.

Part 1

Program Requirements

Apprenticeship education program requirements

2(1) When establishing the classroom instruction and on-the-job instruction requirements of an apprenticeship education program, the Registrar shall include

- (a) the hours, competencies and assessments for classroom instruction,
- (b) the hours, competencies and assessments for on-the-job instruction, and
- (c) the total duration and number of periods of the apprenticeship education program.

(2) In addition to the requirements under subsection (1), the Registrar may include

- (a) a timeline for suitable progress by the apprentice, and
- (b) a minimum term of instruction.

Industry training program requirements

3(1) When establishing the training requirements of an industry training program, the Registrar shall set

- (a) the hours for training, and
- (b) the competencies for training.

(2) In addition to the requirements under subsection (1), the Registrar may include

- (a) the total duration of the industry training program, and
- (b) the assessments for training, and

- (c) any other training as determined by the Registrar.

Part 2

Apprenticeship Education Programs

Registration in an apprenticeship education program

- 4(1)** An individual may apply to the Registrar for registration in an apprenticeship education program.
- (2)** An application under subsection (1) must
 - (a) be submitted in a form and manner that are acceptable to the Registrar, and
 - (b) include the information required by the Registrar.
- (3)** The Registrar shall register an individual in an apprenticeship education program if
 - (a) the application meets the requirements under subsection (2), and
 - (b) the Registrar is satisfied that the individual meets the eligibility criteria established by the Registrar in order to be accepted in the apprenticeship education program.
- (4)** The Registrar shall notify the individual in writing of the Registrar's decision as to whether the individual is registered in an apprenticeship education program.
- (5)** On the registration of an individual in an apprenticeship education program, the individual
 - (a) becomes an apprentice, and
 - (b) is eligible to receive classroom instruction as part of the apprenticeship education program.

Refusal to register in an apprenticeship education program

- 5(1)** The Registrar may refuse to register an individual in an apprenticeship education program if
 - (a) the individual does not meet the eligibility criteria established by the Registrar for the apprenticeship education program,

- (b) the application is submitted in a form or manner that is not acceptable to the Registrar,
- (c) the application does not include the information required by the Registrar, or
- (d) the application is submitted in error.

(2) Where the Registrar refuses to register the individual in an apprenticeship education program, the Registrar shall

- (a) notify the individual in writing of the Registrar's decision,
- (b) provide the reasons for the decision, and
- (c) advise the individual that the individual may request a reconsideration of the decision in accordance with section 23.

**Suspension or cancellation of registration
in an apprenticeship education program**

6(1) The Registrar may suspend the registration of an apprentice in an apprenticeship education program

- (a) during the course of an inspection under section 30 of the Act, and
- (b) on any terms and conditions the Registrar considers appropriate.

(2) The Registrar may cancel the registration of an apprentice in an apprenticeship education program if

- (a) the apprentice, in the opinion of the Registrar, fails to progress in a timely manner in the apprenticeship education program,
- (b) there has been an irregularity in the taking of an assessment as part of the classroom instruction or on-the-job instruction requirements of the apprenticeship education program,
- (c) the apprenticeship education program was entered into due to an administrative or other error,
- (d) the apprentice ceases to participate in the apprenticeship education program,
- (e) the apprentice cannot be located,

- (f) the apprentice, in the case of an apprenticeship education program in a designated trade,
 - (i) ceases to work in the designated trade, and
 - (ii) requests that the apprentice's registration be cancelled,
 - (g) the apprentice fails to meet any terms or conditions imposed by the Registrar on the apprentice at the time of registration in the apprenticeship education program, or
 - (h) the registration was obtained fraudulently or by means of misrepresentation.
- (3)** Where the Registrar suspends or cancels the registration of an apprentice in an apprenticeship education program, the Registrar shall
- (a) notify the apprentice in writing of the Registrar's decision,
 - (b) provide the reasons for the decision, and
 - (c) advise the apprentice that the apprentice may request a reconsideration of the decision in accordance with section 23.

Part 3

Apprenticeship Education Agreements

Entering into an apprenticeship education agreement

7(1) An individual and a sponsor may enter into an apprenticeship education agreement only if

- (a) the individual is an apprentice, and
 - (b) the sponsor meets the eligibility criteria for sponsors.
- (2)** An apprenticeship education agreement must
- (a) be submitted in a form and manner that are acceptable to the Registrar,
 - (b) contain the apprenticeship education program requirements, and
 - (c) contain any other information the Registrar considers relevant.

- (3) If the Registrar is satisfied that all the requirements under this Part have been met, the Registrar shall approve an apprenticeship education agreement.
- (4) The Registrar shall notify the apprentice and the sponsor in writing of the Registrar's decision to approve an apprenticeship education agreement.
- (5) An apprenticeship education agreement does not come into effect until it is approved by the Registrar.

Transfer of apprenticeship education agreement

- 8(1)** An apprentice may, with the approval of the Registrar, transfer an apprenticeship education agreement from one sponsor to another sponsor.
- (2) The Registrar shall consider any transfer of an apprenticeship education agreement as if it were a new apprenticeship education agreement entered into between the apprentice and sponsor under section 7.

Refusal to approve apprenticeship education agreement

- 9(1)** The Registrar may refuse to approve an apprenticeship education agreement if
 - (a) the individual is not an apprentice in the apprenticeship education program for which the apprenticeship education agreement is submitted,
 - (b) the sponsor does not meet the eligibility criteria for sponsors, or
 - (c) the apprenticeship education agreement
 - (i) is submitted in a form or manner that is not acceptable to the Registrar,
 - (ii) does not contain the apprenticeship education program requirements, or
 - (iii) does not contain any other information the Registrar considers relevant.
- (2) Where the Registrar refuses to approve an apprenticeship education agreement, the Registrar shall
 - (a) notify the apprentice and the sponsor in writing of the Registrar's decision,

- (b) provide the reasons for the decision, and
- (c) advise the apprentice and the sponsor that the apprentice or the sponsor may request a reconsideration of the decision in accordance with section 23.

Suspension or cancellation of approval of an apprenticeship education agreement

10(1) The Registrar may suspend the approval of an apprenticeship education agreement during the course of an inspection under section 30 of the Act on any terms and conditions the Registrar considers appropriate.

(2) The Registrar may cancel the approval of an apprenticeship education agreement if

- (a) the apprentice is not receiving the classroom instruction or on-the-job instruction requirements of the apprenticeship education program,
- (b) the apprentice, in the opinion of the Registrar, fails to progress in a timely manner in the apprenticeship education program,
- (c) the sponsor fails to meet the sponsor's obligations under sections 13 and 14,
- (d) there has been an irregularity in the taking of an assessment as part of the classroom instruction or on-the-job instruction requirements of the apprenticeship education program,
- (e) the apprenticeship education agreement has been altered without the approval of the Registrar,
- (f) the apprenticeship education agreement was entered into due to an administrative or other error,
- (g) the apprenticeship education agreement has been used for any purpose by a person other than the apprentice or sponsor who is a party to the apprenticeship education agreement,
- (h) the apprenticeship education agreement has been transferred from one sponsor to another sponsor without the approval of the Registrar,
- (i) the apprentice ceases to participate in the apprenticeship education program,

- (j) the apprentice cannot be located,
- (k) the apprentice fails to meet any additional obligations of an apprentice as determined by the Registrar under section 16(g),
- (l) the approval was obtained fraudulently or by means of misrepresentation, or
- (m) the sponsor charges or collects a fee for acting as a sponsor in contravention of section 15.

(3) Notwithstanding subsections (1) and (2), an apprentice may continue to receive classroom instruction in an apprenticeship education program during the suspension or after the cancellation of the approval of an apprenticeship education agreement as long as the apprentice remains registered in the apprenticeship education program.

(4) Where the Registrar suspends or cancels the approval of an apprenticeship education agreement, the Registrar shall

- (a) notify the apprentice and the sponsor in writing of the Registrar's decision,
- (b) provide the reasons for the decision, and
- (c) advise the apprentice and the sponsor that the apprentice or the sponsor may request a reconsideration of the decision in accordance with section 23.

Ending an apprenticeship education agreement

11 An apprenticeship education agreement ends

- (a) when the Registrar notifies the apprentice in writing that the apprentice has successfully met all the requirements of the apprenticeship education program,
- (b) when the apprentice or sponsor notifies the Registrar in writing that the apprenticeship education agreement has ended, or
- (c) when the Registrar cancels the approval of an apprenticeship education agreement.

Part 4

Sponsors

Eligibility criteria for a sponsor

12 A person or entity is eligible to enter into an apprenticeship education agreement as a sponsor if

- (a) the Registrar is satisfied that the person or entity can meet the obligations under sections 13 and 14, and
- (b) in the case of an entity, the entity is recognized as a legal entity under the laws of Alberta.

Obligations of a sponsor

13 Every sponsor shall

- (a) ensure the apprentice is provided with mentorship relevant to the apprenticeship education program,
- (b) ensure the apprentice receives on-the-job instruction that enables the apprentice to meet the required competencies for the apprenticeship education program,
- (c) ensure the apprentice is paid wages for the on-the-job instruction component of an apprenticeship education program in accordance with section 20,
- (d) ensure the apprentice-to-mentor ratio for the on-the-job instruction component of the apprenticeship education program complies with section 21,
- (e) keep a record of the employment of the apprentice, including the names and addresses of all employers and the dates of employment with each employer,
- (f) provide the record referred to in clause (e) to the Registrar, on request,
- (g) encourage and enable the apprentice to regularly attend the classroom instruction component of the apprenticeship education program,
- (h) ensure that the appropriate competency assessments have been completed,
- (i) ensure records of the apprentice's successful completion of the requirements of the apprenticeship education program are submitted to the Registrar on a regular basis as determined by the Registrar,

- (j) submit to the Registrar any forms or other documents that are required by the Registrar,
- (k) ensure that mentors are able to meet their obligations under section 14,
- (l) immediately notify the Registrar of any change in the sponsor's contact information, and
- (m) meet any additional obligations that the Registrar considers appropriate.

Obligations of a sponsor re mentors

14 In addition to the obligations set out in section 13, a sponsor shall ensure that a mentor is available to the apprentice to

- (a) communicate with the apprentice as is appropriate for the level and ability of the apprentice within the apprenticeship education program,
- (b) educate the apprentice in respect of any activities being performed,
- (c) provide the apprentice with the information, knowledge, guidance, supervision and opportunities necessary for the apprentice to develop the skills and competencies to meet the on-the-job instruction component of the apprenticeship education program,
- (d) provide the apprentice with a learning environment that supports on-the-job instruction and continuous development,
- (e) provide the apprentice with continual evaluation and feedback in alignment with the apprenticeship education program requirements,
- (f) provide the apprentice with competency assessments in alignment with the on-the-job instruction component of the apprenticeship education program requirements,
- (g) provide the apprentice with on-the-job instruction that integrates with the knowledge and skills of the classroom instruction component of the apprenticeship education program, and
- (h) meet any additional obligations that the Registrar considers appropriate.

Charging sponsor fees prohibited

15 A person or entity shall not charge or collect any fee for acting as a sponsor.

Part 5

Apprentices and Trainees

Obligations of an apprentice

16 Every apprentice shall

- (a) demonstrate timely progress in the apprentice's apprenticeship education program as determined by the Registrar,
- (b) meet all the requirements for the apprentice's apprenticeship education program,
- (c) review with the apprentice's sponsor at the completion of each period of the apprenticeship education program
 - (i) the on-the-job instruction hours,
 - (ii) the on-the-job instruction assessments, and
 - (iii) the classroom instruction assessmentscompleted for that period,
- (d) ensure that the apprentice's records of progress in the apprenticeship education program are kept up to date,
- (e) immediately notify the Registrar of any change in the apprentice's contact information,
- (f) be able to produce proof of an approved apprenticeship education agreement on request, and
- (g) meet any additional obligations that the Registrar considers appropriate.

Obligations of a trainee

17 Every trainee shall

- (a) meet all the requirements for the trainee's industry training program,
- (b) ensure that records of the trainee's successful completion of the trainee's industry training program requirements are sent to the Registrar,

- (c) immediately notify the Registrar of any change in the trainee's contact information, and
- (d) meet any additional obligations that the Registrar considers appropriate.

Issuance of a credential to an apprentice, trainee

18 The Registrar shall issue a credential to

- (a) an apprentice who, in the opinion of the Registrar, has successfully met all the requirements of the apprenticeship education program, or
- (b) a trainee who, in the opinion of the Registrar, has successfully met all the requirements of the industry training program.

Refusal to issue, suspension or revocation of credentials

19(1) The Registrar may refuse to issue a credential, or may suspend or revoke a credential issued to an apprentice or trainee, if in the opinion of the Registrar,

- (a) the credential
 - (i) has been altered in any manner,
 - (ii) was granted due to an administrative or other error,
 - (iii) was obtained fraudulently or by means of misrepresentation, or
 - (iv) has been used for any purpose by a person other than the person to whom the credential was issued,

or

- (b) there has been an irregularity in the taking of an assessment required under an apprenticeship education program or industry training program.

(2) Where the Registrar refuses to issue a credential, or suspends or revokes a credential, the Registrar shall,

- (a) notify the apprentice or trainee in writing of the Registrar's decision,
- (b) provide the reasons for the decision, and

- (c) advise the apprentice or trainee that the apprentice or trainee may request a reconsideration of the decision in accordance with section 23.

Employment of apprentices — wages

20(1) Where Schedule 1 of this Regulation lists the percentage of wages to be paid to an apprentice for the on-the-job instruction component of an apprenticeship education program, an employer employing an apprentice in the apprenticeship education program shall, subject to the *Employment Standards Code*,

- (a) pay wages to the apprentice at a rate that is not less than the percentage listed in Schedule 1, and
- (b) ensure that the apprentice is paid the required rate increment commencing on the date that the Registrar is satisfied that the apprentice has completed all the requirements to advance into the next period of the apprenticeship education program.

(2) An apprentice in an apprenticeship education program that is not listed in Schedule 1 must be paid wages for the on-the-job instruction component of the apprenticeship education program in accordance with the *Employment Standards Code*.

(3) Nothing in this Regulation is to be construed to require an employer to pay wages or prohibit an employer from paying wages to an apprentice during the time that the apprentice is attending the classroom instruction component of the apprenticeship education program.

(4) An employer shall not employ an apprentice for the on-the-job instruction component of an apprenticeship education program except in accordance with this section.

(5) Notwithstanding subsections (1) and (2), but subject to the *Employment Standards Code*, where an apprentice is employed in an apprenticeship education program in an approved program, an employer employing that apprentice may, while the apprentice is participating in the approved program, pay to that apprentice wages at a rate approved by the Registrar that is less than the rate listed for the apprenticeship education program in Schedule 1.

(6) This section does not apply to an employer who employs an apprentice for the on-the-job instruction component of an apprenticeship education program if that employment is carried out in another province of Canada.

Employment of apprentices — apprentice-to-mentor ratios

21(1) Where an apprentice-to-mentor ratio is listed under Schedule 2 for an apprenticeship education program, the number of apprentices from an apprenticeship education program that an employer may employ for the on-the-job instruction component of the apprenticeship education program is determined in accordance with this section.

(2) Where

- (a) an employer is eligible to employ an apprentice for the on-the-job instruction component of an apprenticeship education program, and
- (b) the number of additional apprentices that the employer may employ is based on the number of additional mentors available to that employer,

that employer, in determining the number of additional apprentices that may be employed, shall take into account only those mentors who will be providing mentorship with respect to the work of the apprentices.

(3) This section does not apply to an apprentice

- (a) who is registered in an apprenticeship education program that has 3 or more periods, and
- (b) who has completed all the requirements, or has otherwise been approved by the Registrar, to advance to the final period of the apprenticeship education program.

(4) An employer shall not employ an apprentice for the on-the-job instruction component of an apprenticeship education program except in accordance with this section.

(5) This section does not apply to an employer who employs an apprentice registered in an apprenticeship education program

- (a) where the on-the-job instruction component of an apprenticeship education program is carried out in another province of Canada, or
- (b) that is not listed in Schedule 2.

Part 6

Registrar

Additional powers and functions of the Registrar

22 In addition to the powers and functions of the Registrar under section 6 of the Act, the Registrar may, for the purposes of Part 1 of the Act,

- (a) refuse to approve an apprenticeship education agreement,
- (b) refuse to issue a credential,
- (c) set terms and conditions on the suspension of a credential issued to an individual,
- (d) set criteria for examinations and other assessments of learning or competencies to be conducted by the Registrar with respect to apprenticeship education programs and industry training programs,
- (e) set eligibility criteria and obligations for mentors,
- (f) approve or recognize supplemental learning recognition programs, including
 - (i) the establishment of processes for the administration of those programs, and
 - (ii) the issuance of forms of proof to individuals who meet all the requirements of those programs,
- (g) authorize approved programs,
- (h) determine what records or documents form the records of progress,
- (i) determine the number of periods in an apprenticeship education program,
- (j) establish processes for the approval of transfers of apprenticeship education agreements from one sponsor to another sponsor,
- (k) define progression differently for an individual whose registration in an apprenticeship education program has previously been cancelled for failing to progress in a timely manner, and
- (l) make exceptions to, or set terms and conditions on, the criteria established under section 6(1)(c) of the Act when

it would be to the benefit of the apprentice to be registered in an apprenticeship education program.

Reconsideration of decision

23(1) In addition to the decisions set out in section 8 of the Act for which a person may request that the Registrar reconsider a decision, where the Registrar has made a decision

- (a) revoking the credential of an apprentice or trainee, the apprentice or trainee, as the case may be, may request that the Registrar reconsider the decision to revoke the credential, or
- (b) refusing to approve an apprenticeship education agreement, the apprentice or sponsor may request that the Registrar reconsider the decision to refuse to approve the apprenticeship education agreement.

(2) A request for the Registrar to reconsider a decision must

- (a) be in writing,
- (b) be served on the Registrar within 30 days of when the person is served the decision, and
- (c) include the following:
 - (i) the name and contact information of the person;
 - (ii) the decision to be reconsidered;
 - (iii) the reason for requesting the reconsideration;
 - (iv) if applicable, any other information
 - (A) requested by the Registrar, or
 - (B) that the person wishes the Registrar to take into account in the reconsideration.

(3) On being served a request that complies with subsection (2), the Registrar

- (a) may decide to confirm, reverse or vary the decision that is the subject of the reconsideration, and
- (b) within 60 days of being served the request, shall serve on the person the decision of the Registrar to confirm, reverse or vary the decision that is the subject of the reconsideration.

- (4) A decision of the Registrar under subsection (3) must be in writing and include
- (a) reasons for confirming, reversing or varying the decision that is the subject of the reconsideration, and
 - (b) a statement of the right of the person to request a review by the Minister under section 24 of the decision of the Registrar to confirm, reverse or vary the decision that is the subject of the reconsideration.
- (5) The Registrar shall not delegate any of the powers or functions of the Registrar under this section to any person.

Review of decision

- 24(1)** A person affected by a decision of the Registrar under section 23 to confirm, reverse or vary a decision that is the subject of a reconsideration may request a review by the Minister of the decision of the Registrar.
- (2) A request for the Minister to review a decision must
- (a) be in writing,
 - (b) be served on the Minister and the Registrar within 45 days of the date shown on the decision of the Registrar, and
 - (c) include the following:
 - (i) the name and contact information of the person;
 - (ii) the decision to be reviewed;
 - (iii) the reason for requesting the review;
 - (iv) if applicable, any other information
 - (A) requested by the Minister, or
 - (B) that the person wishes the Minister to take into account in the review.
- (3) On being served a request that complies with subsection (2), the Minister may decide to confirm, reverse or vary the decision of the Registrar.
- (4) A decision of the Minister under subsection (3) must be in writing and include reasons for confirming, reversing or varying the decision of the Registrar.
- (5) A decision of the Minister under this section is final.

Coming into force

25 This Regulation comes into force on the coming into force of section 10(2) of the *Skilled Trades and Apprenticeship Education Act*.

Schedule 1 Apprentice Wages

Column 1	Column 2	Column 3	Column 4			
Item Number	Apprenticeship Education Program	Number of Periods	Minimum Wage Rate Per Period (%)			
			1	2	3	4
1	Agricultural Equipment Technician	4	60	70	80	90
2	Appliance Service Technician					
	Appliance Service Technician Branch	3	55	70	85	—
	Commercial Appliance Service Technician Branch	3	55	70	85	—
3	Auto Body Technician					
	Auto Body Technician Branch	4	55	70	75	80
	Auto Body Repairer Branch	3	55	70	80	—
	Auto Body Refinisher Branch	2	55	70	—	—
	Auto Body Prepper Branch	2	55	70	—	—
4	Automotive Service Technician	4	55	70	80	90
5	Baker	3	65	75	85	—
6	Boilermaker	3	60	75	90	—
7	Bricklayer	3	60	80	90	—
8	Cabinetmaker	4	55	65	75	85
9	Carpenter	4	60	70	80	90
10	Communication Technician	4	40	50	60	75
11	Concrete Finisher	2	65	75	—	—
12	Cook	3	60	75	85	—
13	Crane and Hoisting Equipment Operator					
	Mobile Crane Operator Branch	3	70	80	90	—
	Tower Crane Operator Branch	2	70	85	—	—
	Boom Truck Operator Branch	1	70	—	—	—
	Wellhead Boom Truck Operator Branch	1	70	—	—	—
14	Electric Motor Systems Technician	4	55	65	75	85
15	Electrician	4	50	60	70	80
16	Gasfitter					
	Gasfitter — Class A Branch	3	50	60	80	—
	Gasfitter — Class B Branch	2	90	95	—	—
17	Glazier	4	55	60	65	70
18	Heavy Equipment Technician					
	Heavy Equipment Technician Branch	4	60	70	80	90

	Heavy Duty Equipment Mechanic (Off Road) Branch	3	60	70	80	—
	Truck and Transport Mechanic Branch	3	60	70	80	—
	Transport Trailer Mechanic Branch	2	60	70	—	—
19	Industrial Mechanic (Millwright)	4	60	70	80	90
20	Instrumentation and Control Technician	4	55	65	75	85
21	Insulator (Heat And Frost)	3	50	60	70	—
22	Ironworker					
	Ironworker (Generalist) Branch	4	60	70	80	90
	Ironworker (Metal Building Systems Erector) Branch	2	60	70	—	—
	Ironworker (Structural/Ornamental) Branch	3	60	70	80	—
	Ironworker (Reinforcing) Branch	2	60	70	—	—
23	Landscape Horticulturist	4	60	70	80	90
24	Lather (Interior Systems Mechanic)	3	55	70	80	—
25	Locksmith	3	60	70	80	—
26	Machinist	4	55	65	75	85
27	Metal Fabricator (Fitter)	3	60	75	90	—
28	Motorcycle Mechanic	4	55	65	75	90
29	Natural Gas Compression Technician	4	60	70	80	90
30	Painter and Decorator	3	55	75	85	—
31	Parts Technician					
	Materials Technician Branch	3	65	75	85	—
	Parts Technician Branch	3	65	75	85	—
32	Plumber	4	50	60	70	80
33	Powerline Technician	4	50	60	67.5	75
34	Power System Electrician	4	50	60	67.5	75
35	Recreation Vehicle Service Technician	3	55	65	75	—
36	Refrigeration and Air Conditioning Mechanic	4	50	60	75	85
37	Roofer	4	65	75	85	95
38	Sheet Metal Worker	4	50	65	75	85
39	Sprinkler Systems Installer	4	45	60	70	80
40	Steamfitter-Pipefitter	4	50	65	80	90
41	Transport Refrigeration Technician	3	60	75	90	—
42	Water Well Driller					
	Earth Loop Technician Branch	2	60	85	—	—
	Water Well Driller Branch	2	60	85	—	—
43	Welder					
	Welder Branch	3	60	75	90	—
	Wire Process Operator Branch	2	60	75	—	—

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3	Auto Body Technician	
	Auto Body Technician Branch	2:1
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5	Baker	2:1
6	Boilermaker	2:1
7	Bricklayer	2:1
8	Cabinetmaker	2:1
9	Carpenter	2:1
10	Communication Technician	2:1
11	Concrete Finisher	2:1
12	Cook	2:1
13	Crane and Hoisting Equipment Operator	
	Mobile Crane Operator Branch	2:1
	Tower Crane Operator Branch	2:1
	Boom Truck Operator Branch	2:1
	Wellhead Boom Truck Operator Branch	2:1
14	Electric Motor Systems Technician	2:1
15	Electrician	2:1
16	Elevator Constructor	2:1
17	Floorcovering Installer	2:1
18	Gasfitter	
	Gasfitter - Class A Branch	2:1
	Gasfitter - Class B Branch	2:1
19	Glazier	2:1
20	Hairstylist	
	Hairstylist Branch	2:1
	Barber Branch	2:1
21	Heavy Equipment Technician	
	Heavy Equipment Technician Branch	2:1
	Heavy Duty Equipment Mechanic (Off Road) Branch	2:1
	Truck and Transport Mechanic Branch	2:1
	Transport Trailer Mechanic Branch	2:1
22	Industrial Mechanic (Millwright)	2:1
23	Instrumentation and Control Technician	2:1
24	Insulator (Heat And Frost)	2:1
25	Ironworker	
	Ironworker (Generalist) Branch	2:1
	Ironworker (Metal Building Systems Erector) Branch	2:1

	Ironworker (Structural/Ornamental) Branch	2:1
	Ironworker (Reinforcing) Branch	2:1
26	Landscape Horticulturist	2:1
27	Lather (Interior Systems Mechanic)	2:1
28	Locksmith	2:1
29	Machinist	2:1
30	Metal Fabricator (Fitter)	2:1
31	Motorcycle Mechanic	2:1
32	Natural Gas Compression Technician	2:1
33	Painter and Decorator	2:1
34	Parts Technician	
	Parts Technician Branch	2:1
	Materials Technician Branch	2:1
35	Plumber	2:1
36	Powerline Technician	2:1
37	Power System Electrician	2:1
38	Recreation Vehicle Service Technician	2:1
39	Refrigeration and Air Conditioning Mechanic	2:1
40	Roofer	2:1
41	Sheet Metal Worker	2:1
42	Sprinkler Systems Installer	2:1
43	Steamfitter-Pipefitter	2:1
44	Transport Refrigeration Technician	2:1
45	Water Well Driller	
	Water Well Driller Branch	2:1
	Earth Loop Technician Branch	2:1
46	Welder	
	Welder Branch	3:1
	Wire Process Operator Branch	5:1



Province of Alberta

SKILLED TRADES AND APPRENTICESHIP
EDUCATION ACT

**SKILLED TRADES AND
APPRENTICESHIP EDUCATION
GENERAL REGULATION**

Alberta Regulation 156/2022

Filed on June 29, 2022, in force July 20, 2022

Extract

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ALBERTA REGULATION 156/2022

**Skilled Trades and Apprenticeship
Education Act**

**SKILLED TRADES AND APPRENTICESHIP
EDUCATION GENERAL REGULATION**

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Definitions

1 In this Regulation,

- (a) “Act”, except in the term “former Act”, means the *Skilled Trades and Apprenticeship Education Act*;
- (b) “Board”, except in the term “former Board”, means the Alberta Board of Skilled Trades appointed under section 13 of the Act;
- (c) “former Act” means the *Apprenticeship and Industry Training Act*;
- (d) “former Board” means the Alberta Apprenticeship and Industry Training Board appointed under section 2 of the former Act.

Part 1

Matters to be Considered

Apprenticeship education programs

2 Before establishing an apprenticeship education program, the Minister shall consider the following matters:

- (a) the educational outcomes to be delivered by the program;
- (b) whether the educational outcomes of the program are at a post-secondary level or standard of education;
- (c) whether, in the Minister’s opinion, the desired educational outcomes are best acquired through a combination of classroom instruction and on-the-job instruction;
- (d) whether, in the Minister’s opinion, the majority of instruction required to complete the program is best facilitated by on-the-job instruction;
- (e) whether, in the Minister’s opinion, the program would be sufficiently distinct from
 - (i) other apprenticeship education programs,
 - (ii) programs of study approved under the *Post-secondary Learning Act*, and
 - (iii) programs of instruction licensed under the *Private Vocational Training Act*;
- (f) whether, in the Minister’s opinion, there is sufficient labour market demand in the relevant occupational field to

enable apprentices to obtain the on-the-job instruction that would be required to complete the program;

- (g) whether, in the Minister's opinion, a sufficient number of persons or entities in the relevant occupational field are able and willing to act as sponsors;
- (h) whether, in the Minister's opinion, a sufficient number of persons in the relevant occupational field are able and willing to act as mentors;
- (i) any other matter the Minister considers relevant.

Industry training programs

3 Before establishing an industry training program, the Minister shall consider the following matters:

- (a) the training outcomes to be delivered by the program;
- (b) whether or not the training outcomes of the program are at a post-secondary level or standard of training;
- (c) whether, in the Minister's opinion, the desired training outcomes are best acquired through on-the-job training;
- (d) whether, in the Minister's opinion, the majority of training in the program is best facilitated through on-the-job training;
- (e) whether, in the Minister's opinion, there is sufficient labour market demand in the relevant occupational field to enable trainees to obtain the on-the-job training that would be required to complete the program;
- (f) whether, in the Minister's opinion, there is sufficient support for the program from employers, practitioners and others working in the relevant occupational field;
- (g) any other matter the Minister considers relevant.

Designated trades

4 Before making a regulation designating a trade, the Minister shall consider the following matters:

- (a) whether, in the Minister's opinion, the trade is sufficiently distinct from other trades already designated under the Act;

- (b) whether, in the Minister's opinion, there is sufficient support for the designation from employers, practitioners and others within the trade in Alberta;
- (c) whether, in the Minister's opinion, the demand for skilled labour in the trade is expected to grow and remain stable in the future;
- (d) whether the trade is designated or otherwise regulated elsewhere in Canada and, if so, whether in the Minister's opinion it is desirable to take a consistent approach;
- (e) any other matter the Minister considers relevant.

Restricted activities and classes of individuals

5 Before making a regulation prescribing an activity within a designated trade as a restricted activity and prescribing the classes of individuals who may perform the activity, the Minister shall consider the following matters:

- (a) whether the Minister is satisfied that
 - (i) the extent of technical knowledge and expertise required to safely perform the activity, or
 - (ii) the risk to the public from a service or product created by the activitywarrants restricting who may perform the activity;
- (b) any recommendation of the Board, including any evidence of industry support, in favour of restricting the activity and who may perform it;
- (c) any other matter the Minister considers relevant.

Part 2

Alberta Board of Skilled Trades

Board member remuneration and expenses

6 Members of the Board under section 13 of the Act are entitled to be paid

- (a) remuneration in accordance with Schedule 1, Part A of the *Committee Remuneration Order* (OC 466/2007), as amended or replaced from time to time, and
- (b) travelling and living expenses necessarily incurred in the carrying out of their duties as members in accordance with

any directive issued by the Treasury Board respecting travel, meal and hospitality expenses, as though the members were employees as defined in the *Public Service Act*.

Part 3

Offences and Penalties

Additional offences and penalties

7(1) A person who contravenes section 20(4) or 21(4) of the *Apprenticeship Education and Industry Training Programs Regulation* is guilty of an offence and liable

- (a) for a first offence, to a fine of not more than \$15 000, or
- (b) for a 2nd or subsequent offence, to a fine of not more than \$50 000.

(2) An offence under subsection (1) is an offence of strict liability.

(3) A prosecution for an offence under subsection (1) may not be commenced more than 3 years after the alleged commission of the offence.

Part 4

Transitional Provisions, Repeals and Coming into Force

Transitional — apprenticeship education programs

8(1) Where an application for registration in an apprenticeship program referred to in section 39(a) of the Act was made before the coming into force of this section but had not been decided by that time, the Registrar shall treat the application as if it were an application for registration in an apprenticeship education program.

(2) An individual to whom section 39(b) of the Act applies is deemed to have achieved the same stage of completion and level of progression in the apprenticeship education program that the individual had achieved in the apprenticeship program under the former Act.

(3) An individual to whom section 39(b) of the Act applies who had successfully completed the first, 2nd, 3rd or 4th period of technical training in an apprenticeship program under the former Act is deemed to have completed the same period of classroom instruction in the apprenticeship education program.

(4) An individual to whom section 39(b) of the Act applies who had received a number of hours of on-the-job training in an apprenticeship program under the former Act is deemed to have received that number of hours of on-the-job instruction in the apprenticeship education program.

Transitional — apprenticeship education agreements

9(1) A contract of apprenticeship that was registered under the former Act and in effect immediately before the coming into force of this section is deemed to be an apprenticeship education agreement approved and in effect under the Act until

- (a) a period of 2 years has elapsed following the coming into force of this section, or
- (b) the apprenticeship education agreement has ended in accordance with section 11 of the *Apprenticeship Education and Industry Training Programs Regulation* ,

whichever occurs first.

(2) An employer who was responsible for providing on-the-job training to an apprentice under a contract of apprenticeship to which subsection (1) applies is deemed to be a sponsor who is responsible for providing on-the-job instruction to the apprentice under the apprenticeship education agreement referred to in that subsection.

(3) Where a contract of apprenticeship to which subsection (1) applies was under a suspension immediately before the coming into force of this section, the suspension continues to operate after the coming into force of this section

- (a) as a suspension of the registration in an apprenticeship education program of the party who is the apprentice under the apprenticeship education agreement, and
- (b) as if it were a suspension of the Registrar's approval of the apprenticeship education agreement

until the suspension is cancelled or ceases to have effect according to its terms, whichever occurs first.

Transitional — authorizations

10 An authorization that was granted under section 23(1) of the former Act

- (a) to a person or a class of persons

- (i) to work in a designated trade, or
 - (ii) to work or to perform one or more tasks, activities or functions in that trade,
- or
- (b) to an employer or a class of employers to employ a person or class of persons under clause (a)

and that is in effect immediately before the coming into force of this section is deemed to be an authorization granted and in effect under the *Designated Trades and Restricted Activities Regulation*.

Transitional — trade certificate and equivalency applications

11(1) Where an application for a trade certificate or occupational certificate referred to in section 40(1)(b) of the Act was filed before the coming into force of this section but had not been decided by that time, the Administrator shall consider the application as if it were an application for a trade certificate under section 18(1)(c) of the Act.

(2) Where an application to have a document that was issued in another jurisdiction recognized as being the equivalent of a trade certificate or occupational certificate was filed before the coming into force of this section but had not been decided by that time, the application shall be deemed to be discontinued.

Transitional — designation of trades, occupations

12(1) Where an application was made to the Minister under section 3 of the *Apprenticeship and Industry Training Administration Regulation* (AR 257/2000) to have

- (a) an occupation designated as
 - (i) a compulsory certification trade under section 21 of the former Act, or
 - (ii) an optional certification trade under section 22 of the former Act,
- or
- (b) the designation of a designated trade changed or rescinded under section 30 of the former Act,

but was not concluded before the coming into force of this section, the application shall be deemed to be discontinued.

(2) Where an application was made to the Minister under section 25 of the *Apprenticeship and Industry Training Administration Regulation* (AR 257/2000) to have

- (a) an occupation designated as a designated occupation under section 36 of the former Act, or
- (b) the designation of a designated occupation rescinded under a regulation made under section 37(1)(c) of the former Act,

but was not concluded before the coming into force of this section, the application shall be deemed to be discontinued.

Transitional — appeals

13 Where an appeal was commenced under Part 4 of the former Act but was not concluded before the coming into force of this section, the appeal must be dealt with

- (a) as if it were a request under section 8 of the Act for reconsideration by the Registrar, in the case of an appeal from
 - (i) a refusal to register a person's contract of apprenticeship, or
 - (ii) a suspension or cancellation of a person's contract of apprenticeship,

or

- (b) as if it were a request under section 20 of the Act for reconsideration by the Administrator, in the case of an appeal from
 - (i) a refusal to grant a trade certificate or occupational certificate to a person, or
 - (ii) a suspension or cancellation of a person's trade certificate or occupational certificate.

Transitional — Board committees

14(1) On the coming into force of this section, all of the following committees that may have been established by the former Board under the former Act are dissolved, and all appointments to those committees are rescinded:

- (a) local apprenticeship committees;

- (b) provincial apprenticeship committees;
- (c) occupational committees;
- (d) provisional committees respecting the designation of an occupation as a designated trade;
- (e) provisional committees respecting the designation of an occupation as a designated occupation;
- (f) any other committees established under section 12.1 of the former Act.

(2) On the coming into force of this section, all of the following committees that may have been recognized by the former Board under the former Act are deemed to no longer be recognized in respect of matters that come under the Act:

- (a) occupational committees;
- (b) provisional committees respecting the designation of an occupation as a designated occupation;
- (c) any other committees recognized under section 12.1 of the former Act.

Transitional — Board orders

15 On the coming into force of this section, all orders made by the former Board under section 3(2) of the former Act are repealed.

Repeals

16 The following regulations are repealed:

- (a) *Agricultural Equipment Technician Trade Regulation* (AR 259/2000);
- (b) *Appeal Rules Regulation* (AR 58/99);
- (c) *Appliance Service Technician Trade Regulation* (AR 36/2007);
- (d) *Apprenticeship and Industry Training Administration Regulation* (AR 257/2000);
- (e) *Apprenticeship Program Regulation* (AR 258/2000);
- (f) *Auto Body Technician Trade Regulation* (AR 161/2008);
- (g) *Automotive Service Technician Trade Regulation* (AR 262/2000);

- (h) *Baker Trade Regulation* (AR 263/2000);
- (i) *Boilermaker Trade Regulation* (AR 264/2000);
- (j) *Bricklayer Trade Regulation* (AR 265/2000);
- (k) *Cabinetmaker Trade Regulation* (AR 266/2000);
- (l) *Carpenter Trade Regulation* (AR 267/2000);
- (m) *Cathodic Protection Technician Exception Regulation* (AR 16/2013);
- (n) *Cathodic Protection Technician Occupation Regulation* (AR 17/2013);
- (o) *Communication Technician Trade Regulation* (AR 312/2002);
- (p) *Concrete Finisher Trade Regulation* (AR 269/2000);
- (q) *Construction Craft Worker Occupation Regulation* (AR 270/2000);
- (r) *Cook Trade Regulation* (AR 271/2000);
- (s) *Crane and Hoisting Equipment Operator Trade Regulation* (AR 272/2000);
- (t) *Designation of Compulsory Certification Trades Regulation* (AR 224/2004);
- (u) *Designation of Occupations Regulation* (AR 285/2006);
- (v) *Designation of Optional Certification Trades Regulation* (AR 203/2000);
- (w) *Electric Motor Systems Technician Trade Regulation* (AR 273/2000);
- (x) *Electrician Trade Regulation* (AR 274/2000);
- (y) *Elevator Constructor Trade Regulation* (AR 276/2000);
- (z) *Field Heat Treatment Technician Occupation Regulation* (AR 123/2008);
- (aa) *Floorcovering Installer Trade Regulation* (AR 277/2000);
- (bb) *Gas Utility Operator Occupation Regulation* (AR 278/2000);

- (cc) *Gasfitter Trade Regulation* (AR 279/2000);
- (dd) *Glazier Trade Regulation* (AR 221/2014);
- (ee) *Hairstylist Trade Regulation* (AR 3/2020);
- (ff) *Heavy Equipment Technician Trade Regulation*
(AR 282/2000);
- (gg) *Industrial Construction Crew Supervisor Occupation Regulation* (AR 33/2008);
- (hh) *Industrial Mechanic (Millwright) Trade Regulation*
(AR 290/2000);
- (ii) *Instrumentation and Control Technician Trade Regulation*
(AR 283/2000);
- (jj) *Insulator (Heat and Frost) Trade Regulation*
(AR 284/2000);
- (kk) *Ironworker Trade Regulation* (AR 156/2006);
- (ll) *Landscape Horticulturist Trade Regulation*
(AR 286/2000);
- (mm) *Lather (Interior Systems Mechanic) Trade Regulation*
(AR 287/2000);
- (nn) *Locksmith Trade Regulation* (AR 288/2000);
- (oo) *Machinist Trade Regulation* (AR 289/2000);
- (pp) *Metal Fabricator (Fitter) Trade Regulation*
(AR 306/2000);
- (qq) *Motorcycle Mechanic Trade Regulation* (AR 291/2000);
- (rr) *Natural Gas Compression Technician Trade Regulation*
(AR 168/2011);
- (ss) *Oil and Gas Transportation Services Occupation Regulation* (AR 275/2004);
- (tt) *Outdoor Power Equipment Technician Trade Regulation*
(AR 47/2001);
- (uu) *Overhead Door Technician Occupation Regulation*
(AR 181/2014);
- (vv) *Painter and Decorator Trade Regulation* (AR 292/2000);

- (ww) *Parts Technician Trade Regulation* (AR 57/2008);
- (xx) *Plumber Trade Regulation* (AR 295/2000);
- (yy) *Power System Electrician Trade Regulation* (AR 297/2000);
- (zz) *Powerline Technician Trade Regulation* (AR 296/2000);
- (aaa) *Recreation Vehicle Service Technician Trade Regulation* (AR 299/2000);
- (bbb) *Refrigeration and Air Conditioning Mechanic Trade Regulation* (AR 300/2000);
- (ccc) *Residential Construction Site Manager Occupation Regulation* (AR 173/2011);
- (ddd) *Roofer Trade Regulation* (AR 301/2000);
- (eee) *Sheet Metal Worker Trade Regulation* (AR 303/2000);
- (fff) *Slickline Services Occupation Regulation* (AR 154/2013);
- (ggg) *Snubbing Services Occupation Regulation* (AR 286/2006);
- (hhh) *Sprinkler Systems Installer Trade Regulation* (AR 304/2000);
- (iii) *Steamfitter - Pipefitter Trade Regulation* (AR 305/2000);
- (jjj) *Steel Detailer Occupation Regulation* (AR 239/2001);
- (kkk) *Transport Refrigeration Technician Trade Regulation* (AR 307/2000);
- (lll) *Water Well Driller Trade Regulation* (AR 94/2014);
- (mmm) *Welder Trade Regulation* (AR 314/2006);
- (nnn) *Well Testing Services Supervisor Occupation Regulation* (AR 276/2004).

Coming into force

17 This Regulation comes into force on the coming into force of sections 10(1), 13(3), 22(1), 36(a) and 41(1) of the *Skilled Trades and Apprenticeship Education Act*.



Province of Alberta

SAFETY CODES ACT

CERTIFICATION AND PERMIT REGULATION

Alberta Regulation 295/2009

With amendments up to and including Alberta Regulation 157/2022

Current as of July 20, 2022

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(Consolidated up to 157/2022)

ALBERTA REGULATION 295/2009

Safety Codes Act

CERTIFICATION AND PERMIT REGULATION

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Interpretation

1 The definitions in the *Permit Regulation* (AR 204/2007) apply to this Regulation.

Purpose

2 The certificates of competency issued under this Regulation are for the purpose of obtaining a permit under the *Permit Regulation* (AR 204/2007).

AR 295/2009 s2;39/2012

Private sewage installer

3(1) The Administrator may issue or renew a private sewage installer certificate of competency to a person who has

- (a) training in private sewage systems or in water and sewer service piping, satisfactory to the Administrator, and
- (b) paid the appropriate fee.

(2) The Administrator shall

- (a) state the type of private sewage system or water and sewer service piping for which the holder of the certificate may obtain a permit based on the training of the holder of the certificate, and
- (b) state the term of the certificate of competency.

Master electrician

4(1) The Administrator may issue a master electrician certificate of competency to an applicant who

- (a) holds a trade certificate in the designated trade of electrician under the *Skilled Trades and Apprenticeship Education Act*,
- (b) has, in the 5 years preceding the application,
 - (i) obtained a minimum of 3 years of relevant experience in the electrical industry satisfactory to the Administrator, or
 - (ii) been actively engaged in electrical contracting for a minimum of 3 years under a restricted master electrician certificate,
- (c) has paid the appropriate fee, and
- (d) has attained a mark of at least 75% in a master electrician examination approved by the Administrator.

(2) The Administrator may issue a master electrician certificate of competency to an applicant who

- (a) satisfies the Administrator that the applicant holds a certificate that was issued in a Canadian jurisdiction and that is substantively equivalent to a master electrician certificate of competency,
- (b) has paid the appropriate fee, and
- (c) has attained a mark of at least 75% in an examination approved by the Administrator respecting the legislation applicable to electricians in Alberta.

(3) An examination fee may be refunded if, for any reason satisfactory to the Administrator, a person is unable to take the examination after having paid the examination fee.

(4) The Administrator may renew a master electrician certificate of competency issued under subsection (1) or (2) if the holder of the certificate

- (a) has paid the appropriate fee, and
- (b) has completed, to the satisfaction of the Administrator, any code update training that the Administrator requires the holder to complete.

(5) The Administrator may, in a master electrician certificate of competency issued under subsection (2), specify that the maximum voltage between conductors and the maximum capacity of the electrical systems for which the holder of the certificate may obtain a permit are the same as the maximums that are authorized by the certificate referred to in subsection (2)(a).

(6) The term of a master electrician certificate of competency issued or renewed under this section is one year from the date of the issuance or renewal unless the Administrator specifies a longer term.

AR 295/2009 s4;39/2012;193/2014;157/2022

Restricted master electrician, rural wireman — grandfathering

5(1) The Administrator may renew a restricted master electrician certificate of competency or a rural wireman certificate of competency originally issued or renewed under the *Certification and Permit Regulation* (AR 168/2002).

(2) In the case of a restricted master electrician certificate, the holder of the certificate may obtain a permit with respect to electrical installations of not more than 300 volts between conductors with an ampacity of not more than 200 amperes.

(3) In the case of a rural wireman certificate, the Administrator shall state the areas of Alberta where the rural wireman is permitted to perform electrical work, but the Administrator may adjust these areas at any time.

(3.1) The term of a certificate renewed under this section is one year from the date of the renewal unless the Administrator specifies a longer term.

(4) The term of the certificate of competency is

- (a) one year from the date of issue, or
- (b) for a period of not less than one year as specified by the Administrator.

AR 295/2009 s5;39/2012

ID card

6(1) The Administrator shall issue an identification card to a holder of a certificate of competency under this Regulation identifying the status of the holder in a form satisfactory to the Administrator.

(2) In the case of an ID card with respect to a rural wireman's certificate of competency, the card must indicate the area in which the holder may do electrical work.

Certificates to be displayed

7 The holder of a certificate of competency issued under this Regulation shall

- (a) prominently display it at the holder's place of business or employment, or
- (b) have it available to be produced immediately on the request of the Administrator or a safety codes officer.

Duplicate certificates

8 The Administrator may issue a duplicate certificate of competency under this Regulation if the Administrator is satisfied that the original has been lost, destroyed or mutilated or the name of the certificate holder has been legally changed.

Consequential amendment

9 The *Permit Regulation* (AR 204/2007) is amended in section 9(1)(a) by adding "within the scope of the master electrician's certification" after "system".

Repeal

10 The *Certification and Permit Regulation* (AR 168/2002) is repealed.

Expiry

11 For the purpose of ensuring that this Regulation is reviewed for ongoing relevancy and necessity, with the option that it may be repassed in its present or an amended form following a review, this Regulation expires on October 31, 2024.

AR 295/2009 s11;193/2014;229/2018



Province of Alberta

SAFETY CODES ACT

ELECTRICAL CODE REGULATION

Alberta Regulation 209/2006

With amendments up to and including Alberta Regulation 186/2018

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(Consolidated up to 186/2018)

ALBERTA REGULATION 209/2006

Safety Codes Act

ELECTRICAL CODE REGULATION

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Definitions

1(1) In this Regulation,

- (a) “Act” means the *Safety Codes Act*;
- (b) “certification body” means an organization accredited by the Standards Council of Canada as a certification body;
- (c) “inspection body” means an organization accredited by the Standards Council of Canada as an inspection body.

(2) The definitions in the Act and a code declared in force by this Regulation apply to the words used in this Regulation.

Electrical systems equipment

2(1) If a code, standard or body of rules declared in force under the Act with respect to electrical systems requires approved equipment, that equipment must meet the requirements of this section.

(2) No person shall manufacture, install, sell or offer for sale any equipment related to electrical systems for use in Alberta unless the equipment has been

- (a) certified by a certification body in accordance with the certification body’s terms of accreditation with the Standards Council of Canada, or

- (b) inspected by an inspection body in accordance with the inspection body's terms of accreditation with the Standards Council of Canada.

(3) Subsection (2) does not apply to electrical equipment of an electric distribution system or a transmission line as defined in the *Hydro and Electric Energy Act*.

Codes declared in force

3 The following codes, as amended or replaced from time to time, are declared in force in respect of electrical systems:

- (a) the CSA Standard C22.1-18 - 2018 Canadian Electrical Code, Part 1 (24th edition), Safety Standard for Electrical Installations, published by the CSA Group;
- (b) the Alberta Electrical Utility Code - 5th Edition, April 2016, published by the Safety Codes Council.

AR 209/2006 s3;14/2008;178/2009;176/2013;
126/2015;186/2018

Repeal

4 The *Electrical Code Regulation* (AR 145/2002) is repealed.

Coming into force

5 This Regulation comes into force on September 1, 2006.

Schedule Repealed AR 126/2015 s3.



Province of Alberta

SKILLED TRADES AND APPRENTICESHIP
EDUCATION ACT

**DESIGNATED TRADES
AND RESTRICTED
ACTIVITIES REGULATION**

Alberta Regulation 161/2022

Filed on July 6, 2022, in force July 20, 2022

Extract

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(no amdt)

ALBERTA REGULATION 161/2022

Skilled Trades and Apprenticeship Education Act

**DESIGNATED TRADES AND RESTRICTED
ACTIVITIES REGULATION**

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Definitions

1 In this Regulation,

- (a) “Act” means the *Skilled Trades and Apprenticeship Education Act*;
- (b) “employer” means a person who employs an individual to perform restricted activities within a designated trade or branch of a designated trade;
- (c) “student work training program” means a program
 - (i) under which an individual receives work experience and training in a designated trade or branch of a designated trade,
 - (ii) that is offered to the individual by or on behalf of
 - (A) a board as defined in the *Education Act*,
 - (B) an operator of a school that is a charter school as defined in the *Education Act*,
 - (C) a person responsible for the operation of a private school as defined in the *Education Act*,
 - (D) a university as defined in the *Post-secondary Learning Act*,
 - (E) a comprehensive community college as defined in the *Post-secondary Learning Act*,
 - (F) a polytechnic institution as defined in the *Post-secondary Learning Act*, or
 - (G) a person licensed to provide vocational training under the *Private Vocational Training Act*,
 - and
 - (iii) that is recognized by the Registrar under section 6(2)(a) and (b) of the Act as being the equivalent of
 - (A) classroom instruction or on-the-job instruction that is required as part of an apprenticeship education program, or
 - (B) training that is required as part of an industry training program.

Designated Trades and Restricted Activities

Designated trades

- 2(1)** The trades that are listed in Schedule 1 are designated trades under the Act.
- (2)** A designated trade includes any branches of the designated trade that are listed in Schedule 1.

Restricted activities

- 3** Where there are activities within a designated trade or branch of a designated trade that are restricted activities under the Act, those restricted activities and the classes of individuals who may perform those restricted activities are set out in Schedule 2.

Alberta Board of Skilled Trades

Board member term of office

- 4(1)** The term of an appointment as a member of the Board shall not exceed 3 years and an individual shall not hold office as a member of the Board for a continuous period exceeding 9 years.
- (2)** A member of the Board shall not hold a designation as chair of the Board under section 13(2) of the Act for a continuous period exceeding 6 years.
- (3)** An individual who has held office as a member of the Board for the maximum continuous period allowed by subsection (1) may not hold office as a member of the Board in the following 3-year period.
- (4)** The term of an appointment as a member of the Board or of a designation as chair of the Board continues, if applicable, after the end of the actual term for which the appointment or designation was made, regardless of the 9-year limitation under subsection (1) or the 6-year limitation under subsection (2), until the earliest of
- (a) the effective date of the appointment or reappointment replacing that appointment or the designation or redesignation replacing that designation,
 - (b) any other event that terminates the appointment or designation, and
 - (c) 3 months after the actual term of the appointment or designation ends.

Board bylaws

5(1) With the approval of the Minister, the Board shall make bylaws respecting

- (a) the conduct of the business and affairs of the Board in carrying out its duties and exercising its powers, and
- (b) the calling and conducting of and the procedures governing meetings of the Board.

(2) For greater certainty, and without limiting the generality of section 14(3) of the Act, the *Regulations Act* does not apply to bylaws made by the Board under subsection (1).

Additional functions of the Board

6(1) The additional functions of the Board referred to in section 14(1)(e) of the Act are

- (a) to promote the establishment and maintenance of welcoming and inclusive work environments for designated trades,
- (b) to advise the Minister on matters related to endorsements,
- (c) to advise the Administrator on suspensions or revocations of trade certificates or endorsements,
- (d) to advise the Registrar on competencies for apprenticeship education programs and industry training programs related to designated trades, and
- (e) if the Board considers it appropriate to do so, to designate one member of a committee established by the Board under section 15 of the Act as chair of the committee and one or more other members of the committee to act in the place of the chair when the chair is absent or is otherwise unable to carry out the duties of the chair.

(2) For greater certainty, and without limiting the generality of section 14(3) of the Act, the *Regulations Act* does not apply in respect of any documentation prepared by or on behalf of the Board relating to the carrying out of any functions under subsection (1).

Committee member term of office

7(1) The term of an appointment as a member of a committee established by the Board under section 15 of the Act shall not exceed 3 years and an individual shall not hold office as a member of such a committee for a continuous period exceeding 9 years.

(2) A member of a committee established by the Board under section 15 of the Act shall not hold a designation as chair of the committee under section 6(1)(e) for a continuous period exceeding 6 years.

(3) An individual who has held office as a member of a committee established by the Board under section 15 of the Act for the maximum continuous period allowed by subsection (1) may not hold office as a member of the committee in the following 3-year period.

(4) The term of an appointment as a member of a committee established by the Board under section 15 of the Act or of a designation as chair of such a committee continues, if applicable, after the end of the actual term for which the appointment or designation was made, regardless of the 9-year limitation under subsection (1) or the 6-year limitation under subsection (2), until the earliest of

- (a) the effective date of the appointment or reappointment replacing that appointment or the designation or redesignation replacing that designation,
- (b) any other event that terminates the appointment or designation, and
- (c) 3 months after the actual term of the appointment or designation ends.

Committee member remuneration and expenses

8 Members of a committee established by the Board under section 15 of the Act, other than any members who are employees of the Government of Alberta, are entitled to be paid

- (a) remuneration for the carrying out of their duties as members in accordance with section 1 of Part B of Schedule 1 to the Committee Remuneration Order in Appendix 3 to Order in Council numbered O.C. 466/2007, even where the member holds a designation as chair of the committee under section 6(1)(e), and
- (b) travelling and living expenses necessarily incurred in the carrying out of their duties as members in accordance with any directive issued by the Treasury Board respecting travel, meal and hospitality expenses, as though the members were employees as defined in the *Public Service Act*.

Administrator**Alberta Journeyperson Certificate****9** A trade certificate

- (a) referred to in section 1(r)(i) of the Act, and
- (b) issued by the Administrator under section 18(1)(c)(i) of the Act to an individual in a designated trade or branch of a designated trade

shall be known as an Alberta Journeyperson Certificate.

Endorsements

10(1) For the purposes of the Act and the regulations made under the Act, “endorsement”, in respect of a designated trade or branch of a designated trade, means the following:

- (a) a Red Seal Endorsement issued by the Administrator under section 18(1)(c)(i) of the Act and in accordance with section 11 of this Regulation;
- (b) a document issued outside of Alberta to an individual and recognized by the Administrator under section 12(d)(iv) as being the equivalent of an endorsement referred to in clause (a);
- (c) a Red Seal Endorsement recognized under subsection (2).

(2) For the purposes of the Act and the regulations made under the Act, a Red Seal Endorsement that was issued or recognized under the *Apprenticeship and Industry Training Act*, RSA 2000 cA-42, is recognized as being the equivalent of an endorsement referred to in subsection (1)(a).

Issuance of endorsements

11(1) The Administrator may issue under section 18(1)(c)(i) of the Act a Red Seal Endorsement in a designated trade or branch of a designated trade to an individual who has met the standards and requirements respecting that endorsement established by the Canadian Council of Directors of Apprenticeship under the Interprovincial Standards Red Seal Program.

(2) Only an individual who holds a trade certificate with the Red Seal Endorsement in a designated trade or branch of a designated trade may, in accordance with the standards and requirements established by the Canadian Council of Directors of Apprenticeship under the Interprovincial Standards Red Seal Program, use the “RSE” acronym (Red Seal Endorsement).

Additional functions of the Administrator

12 The additional functions of the Administrator referred to in section 18(1)(g) of the Act are

- (a) to administer the standards and requirements, respecting the Red Seal Endorsement in a designated trade or branch of a designated trade, established by the Canadian Council of Directors of Apprenticeship under the Interprovincial Standards Red Seal Program,
- (b) to consider applications for an authorization to perform restricted activities within a designated trade or branch of a designated trade under section 13 and, in respect of each application,
 - (i) grant the authorization if the Administrator is satisfied that all applicable requirements for the authorization are met, or
 - (ii) reject the application and refuse to grant the authorization if the Administrator is not satisfied that all applicable requirements for the authorization are met,
- (c) to determine whether a committee process is appropriate to evaluate the skills and knowledge in a designated trade or branch of a designated trade of an individual who, in the opinion of the Administrator, may have failed to demonstrate the skills and knowledge in the designated trade or branch of the designated trade expected of an individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade and, if the Administrator determines that such a process is appropriate, to establish such a process, and
- (d) if the Administrator considers it appropriate to do so,
 - (i) to suspend, on any terms and conditions the Administrator considers appropriate in the circumstances, or revoke an endorsement,
 - (ii) to award credit, in the form of time in an amount determined by the Administrator, for an individual's work experience in a designated trade or branch of a designated trade, which credit shall apply towards the individual's satisfaction of the standards and requirements for certification in the designated trade or branch of the designated trade established by order of the Board under section 14(2)(b) of the Act,

- (iii) to recognize an education or training program, other than an apprenticeship education program or an industry training program, as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate, and
- (iv) to recognize a document that is issued outside of Alberta to an individual as being the equivalent of an endorsement referred to in section 10(1)(a).

Authorization to perform restricted activities

13(1) Subject to subsection (6), the Administrator may grant an authorization to perform a restricted activity within a designated trade or branch of a designated trade to an individual or a group of individuals who are not otherwise permitted to perform a restricted activity within the designated trade or branch of the designated trade.

(2) The Administrator may impose any terms and conditions on an authorization granted under subsection (1) that the Administrator considers appropriate in the circumstances.

(3) At any time that the Administrator considers it appropriate in the circumstances, the Administrator may do the following:

- (a) revoke an authorization granted under subsection (1);
- (b) impose, alter or revoke any terms and conditions on an authorization granted under subsection (1).

(4) An individual who is performing a restricted activity within a designated trade or branch of a designated trade under an authorization granted under subsection (1) shall not perform the restricted activity except in accordance with the authorization.

(5) The *Regulations Act* does not apply in respect of any authorization granted by the Administrator under subsection (1) or documentation prepared by or on behalf of the Administrator relating to an authorization granted under subsection (1).

(6) The Administrator shall take into account the following factors when deciding whether to grant an authorization to an individual or a group of individuals under subsection (1):

- (a) the degree of risk resulting from the restricted activity to the public, the individual or group of individuals and the coworkers of the individual or group of individuals;

- (b) whether, at the time that the individual or group of individuals are to perform the restricted activity, the individual or group of individuals will have sufficient training
 - (i) to ensure proper and safe handling or application of any dangerous substances, destructive equipment or dangerous techniques or practices that the individual or group of individuals will use to perform the restricted activity, and
 - (ii) to maintain a standard of quality and skill satisfactory to the Administrator in the performance of the restricted activity;
- (c) the potential benefit to the individual or group of individuals resulting from the authorization;
- (d) whether the restricted activity relates to the carrying out of warranty work;
- (e) the rationale for having the individual or group of individuals, instead of an apprentice or individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade, perform the restricted activity;
- (f) the period of time during which the authorization is to be in effect;
- (g) any efforts to encourage the individual or group of individuals to meet the standards and requirements for issuance of a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade within a specified period of time;
- (h) any consultation between employee or employer groups affected by the authorization;
- (i) the potential effect of the authorization, or a refusal to grant the authorization, on the following:
 - (i) the designated trade or branch of the designated trade;
 - (ii) the operation, productivity and economic competitiveness and prosperity of a plant or business operation;
 - (iii) the economic competitiveness and prosperity of
 - (A) the Province of Alberta, and

- (B) competitors in the industry in which the restricted activity is to be performed;
- (j) any other factors that, in the opinion of the Administrator, are relevant.

**Factory mass production, in-plant assembly operations
and in-plant processing of natural resources**

14(1) In subsection (4), “shutdown” means the complete or partial stoppage of

- (a) the operation of a component or part of a component in a plant,
- (b) a piece of equipment in a plant,
- (c) a section of a plant or process within a plant, or
- (d) an entire plant

to allow for the expansion of a plant, the installation of new equipment in a plant or to upgrade or repair existing components or equipment in a plant.

(2) Subject to subsection (4) and any orders made by the Administrator under subsection (5), an individual may perform a restricted activity within a designated trade or branch of a designated trade if the individual is engaged in work that consists primarily of factory mass production or in-plant assembly operations where products or components are produced or assembled

- (a) through a pre-defined and documented set of steps,
- (b) in a controlled environment in a permanent facility,
- (c) by individuals who are trained appropriately in the opinion of the Administrator, and
- (d) under supervision and inspections that are appropriate in the opinion of the Administrator.

(3) Subject to subsection (4) and any orders made by the Administrator under subsection (5), an individual may perform a restricted activity within a designated trade or branch of a designated trade if the individual is engaged in in-plant processing, or operations supporting in-plant processing, of natural resources through the collection, refinement and transformation of these resources into a final product where the work consists of recurring or repetitive, documented operations and is performed

- (a) on site in a processing plant, along a pipeline or at an extraction, collection or harvesting site,
- (b) by individuals who are trained appropriately in the opinion of the Administrator, and
- (c) under supervision and inspections that are appropriate in the opinion of the Administrator.

(4) The construction or modification of

- (a) a component or part of a component in a plant,
- (b) a piece of equipment in a plant,
- (c) a process within a plant,
- (d) a section of a plant, or
- (e) an entire plant

during new construction or plant shutdown periods does not qualify as a type of work to which subsection (2) or (3) applies unless it already was occurring regularly while the plant was operational.

(5) Where a type of work referred to in subsection (2) or (3) is being carried out or is purportedly being carried out, the Administrator may, at any time, by order declare that subsection (2) or (3), as applicable, does not apply to the work and revoke or deny permission for the individual to perform a restricted activity within a designated trade or branch of a designated trade under subsection (2) or (3), as applicable, if the Administrator is of the opinion that

- (a) the training, supervision and inspections respecting the work are not appropriate, or
- (b) the work is not a type of work to which subsection (2) or (3) applies.

(6) The Administrator shall rescind an order made under subsection (5) if the Administrator is satisfied that

- (a) the training, supervision and inspections respecting the work that is the subject of the order are appropriate, and
- (b) if applicable, the work that is the subject of the order has been modified so that it is a type of work to which subsection (2) or (3) applies.

(7) The *Regulations Act* does not apply in respect of any order made by the Administrator under subsection (5) or documentation

prepared by or on behalf of the Administrator relating to an order made under subsection (5).

Reconsideration of decisions

15(1) In this section,

- (a) “Administrator” means the Administrator for Designated Trades appointed under section 17(1) of the Act;
- (b) “Deputy Administrator” means a deputy Administrator designated under section 17(2) of the Act.

(2) A person affected by any of the following decisions may request under section 20(c) of the Act that the Administrator reconsider the decision:

- (a) a decision of the Administrator or a Deputy Administrator under section 13 to reject an application for an authorization or to revoke an authorization;
- (b) a decision of the Administrator or a Deputy Administrator under section 14(5) to revoke or deny permission for an individual to perform a restricted activity within a designated trade or branch of a designated trade under section 14(2) or (3), as applicable;
- (c) a decision of the Administrator or a Deputy Administrator under section 17 to suspend a trade certificate or an endorsement;
- (d) a decision of the Administrator or a Deputy Administrator under section 18 to revoke a trade certificate or an endorsement.

(3) A request under section 20 of the Act for the Administrator to reconsider a decision may be made by a person affected by the decision and must

- (a) be in writing,
- (b) be served on the Administrator within 30 days of when the person is served the decision, and
- (c) include the following:
 - (i) the name and mailing address of the person;
 - (ii) the phone number or email address of the person;
 - (iii) the decision;

- (iv) the reason for requesting the reconsideration;
 - (v) if applicable, any other information
 - (A) requested by the Administrator, or
 - (B) that the person wishes the Administrator to take into account in the reconsideration.
- (4) On being served a request that complies with subsection (3), the Administrator
- (a) may decide to confirm, reverse or vary the decision that is the subject of the reconsideration, and
 - (b) within 60 days of being served the request, shall serve on the person the decision of the Administrator to confirm, reverse or vary the decision that is the subject of the reconsideration.
- (5) A decision of the Administrator under subsection (4) must be in writing and include
- (a) reasons for confirming, reversing or varying the decision that is the subject of the reconsideration, and
 - (b) a statement of the right of the person to request a review by the Minister under section 16 of the decision of the Administrator to confirm, reverse or vary the decision that is the subject of the reconsideration.
- (6) The Administrator shall not delegate any of the powers or functions of the Administrator under this section to any person, including to a Deputy Administrator.

Review of reconsiderations

16(1) In this section, “Administrator” means the Administrator for Designated Trades appointed under section 17(1) of the Act.

(2) A person affected by a decision of the Administrator under section 15 to confirm, reverse or vary a decision that is the subject of a reconsideration may request, by application, a review by the Minister of the decision of the Administrator.

(3) An application under subsection (2) must

- (a) be in writing,
- (b) be served on the Minister and the Administrator within 45 days of the date shown on the decision of the Administrator, and

- (c) include the following:
 - (i) the name and mailing address of the person;
 - (ii) the phone number or email address of the person;
 - (iii) the decision of the Administrator;
 - (iv) the reason for requesting the review;
 - (v) if applicable, any other information
 - (A) requested by the Minister, or
 - (B) that the person wishes the Minister to take into account in the review.
- (4) On being served an application that complies with subsection (3), the Minister may decide to confirm, reverse or vary the decision of the Administrator.
- (5) A decision of the Minister under subsection (4) must be in writing and include reasons for confirming, reversing or varying the decision of the Administrator.
- (6) A decision of the Minister under subsection (4) is final.

Suspension of trade certificates or endorsements

17(1) Subject to subsection (2), the Administrator may suspend, on any terms and conditions the Administrator considers appropriate in the circumstances, the following in respect of an individual:

- (a) an Alberta Journeyperson Certificate held by the individual;
- (b) an endorsement referred to in section 10(1)(a) or (c) held by the individual;
- (c) a recognition under section 14(2)(c) of the Act of a document issued outside of Alberta to the individual as being the equivalent of an Alberta Journeyperson Certificate;
- (d) a recognition under section 12(d)(iv) of a document issued outside of Alberta to the individual as being the equivalent of an endorsement referred to in section 10(1)(a).

(2) Subsection (1) only applies if, in the opinion of the Administrator, there is an inspection in progress related to

- (a) compliance by the individual with the Act or regulations made under the Act, or
- (b) failure by the individual to demonstrate the skills and knowledge in a designated trade or branch of a designated trade expected of an individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade.

(3) Where the individual has failed to demonstrate the skills and knowledge in a designated trade or branch of a designated trade expected of an individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade, a suspension under subsection (1) may continue after the completion of an inspection referred to in subsection (2)(b).

(4) An individual who is the subject of a suspension under this section may not, during the time that the suspension is subsisting, work within the designated trade or branch of the designated trade to which the suspension pertains except under the supervision of an individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade.

Revocation of trade certificates or endorsements

18(1) Subject to subsection (2), the Administrator may revoke the following in respect of an individual:

- (a) an Alberta Journeyperson Certificate held by the individual;
- (b) an endorsement referred to in section 10(1)(a) or (c) held by the individual;
- (c) a recognition under section 14(2)(c) of the Act of a document issued outside of Alberta to the individual as being the equivalent of an Alberta Journeyperson Certificate;
- (d) a recognition under section 12(d)(iv) of a document issued outside of Alberta to the individual as being the equivalent of an endorsement referred to in section 10(1)(a).

(2) Subsection (1) only applies if, in the opinion of the Administrator,

- (a) the individual has failed to comply with the Act or regulations made under the Act,

- (b) the individual has failed to demonstrate the skills and knowledge in a designated trade or branch of a designated trade expected of an individual who holds a trade certificate or, if applicable, an endorsement in the designated trade or branch of the designated trade,
- (c) the Alberta Journeyperson Certificate held by the individual, the endorsement referred to in section 10(1)(a) or (c) held by the individual or the recognition or document referred to in subsection (1)(c) or (d), as applicable,
 - (i) has been altered in any manner,
 - (ii) was obtained by means of misrepresentation or fraud,
 - (iii) was issued improperly due to an administrative or other error, or
 - (iv) has been used
 - (A) for any purpose other than the purpose for which it was issued, or
 - (B) by any individual other than the individual to whom it was issued,
- (d) there has been an irregularity in the taking of an assessment required under the Act, or
- (e) the document referred to in subsection (1)(c) or (d), as applicable, was revoked or canceled by the issuing jurisdiction.

General

Coming into force

19 This Regulation comes into force on the coming into force of section 22(2) of the *Skilled Trades and Apprenticeship Education Act*.

Schedule 1**Designated Trades**

- 1** The following trades are designated trades under the Act:
- (a) agricultural equipment technician;
 - (b) appliance service technician, including the
 - (i) appliance service technician branch, and
 - (ii) commercial appliance service technician branch of the trade;
 - (c) auto body technician, including the
 - (i) auto body prepper branch,
 - (ii) auto body refinisher branch,
 - (iii) auto body repairer branch, and
 - (iv) auto body technician branch of the trade;
 - (d) automotive service technician;
 - (e) baker;
 - (f) boilermaker;
 - (g) bricklayer;
 - (h) cabinetmaker;
 - (i) carpenter;
 - (j) cathodic protection technician, including the
 - (i) level one branch, and
 - (ii) level two branch of the trade;
 - (k) communication technician;
 - (l) concrete finisher;

- (m) construction craft worker;
- (n) cook;
- (o) crane and hoisting equipment operator, including the
 - (i) boom truck operator branch,
 - (ii) mobile crane operator branch,
 - (iii) tower crane operator branch, and
 - (iv) wellhead boom truck operator branchof the trade;
- (p) electric motor systems technician;
- (q) electrician;
- (r) elevator constructor;
- (s) field heat treatment technician;
- (t) floorcovering installer;
- (u) gas utility operator;
- (v) gasfitter, including the
 - (i) gasfitter (class A) branch, and
 - (ii) gasfitter (class B) branchof the trade;
- (w) glazier;
- (x) hairstylist, including the
 - (i) barber branch, and
 - (ii) hairstylist branchof the trade;
- (y) heavy equipment technician, including the
 - (i) heavy duty equipment mechanic (off road) branch,
 - (ii) heavy equipment technician branch,
 - (iii) transport trailer mechanic branch, and

- (iv) truck and transport mechanic branch
of the trade;
- (z) industrial construction crew supervisor;
- (aa) industrial mechanic (millwright);
- (bb) instrumentation and control technician;
- (cc) insulator (heat and frost);
- (dd) ironworker, including the
 - (i) ironworker (generalist) branch,
 - (ii) ironworker (metal building systems erector) branch,
 - (iii) ironworker (reinforcing) branch, and
 - (iv) ironworker (structural/ornamental) branch
of the trade;
- (ee) landscape horticulturist;
- (ff) lather (interior systems mechanic);
- (gg) locksmith;
- (hh) machinist;
 - (ii) metal fabricator (fitter);
 - (jj) motorcycle mechanic;
- (kk) natural gas compression technician;
- (ll) oil and gas transportation services, including the
 - (i) bed truck operator branch,
 - (ii) bulk haul operator branch,
 - (iii) multi-wheel truck operator branch,
 - (iv) supervisor branch, and
 - (v) winch truck operator branch
of the trade;
- (mm) outdoor power equipment technician, including the

- (i) power equipment branch, and
 - (ii) recreational equipment branchof the trade;
- (nn) overhead door technician, including the
 - (i) level one branch, and
 - (ii) level two branchof the trade;
- (oo) painter and decorator;
- (pp) parts technician, including the
 - (i) materials technician branch, and
 - (ii) parts technician branchof the trade;
- (qq) plumber;
- (rr) power system electrician;
- (ss) powerline technician;
- (tt) recreation vehicle service technician;
- (uu) refrigeration and air conditioning mechanic;
- (vv) residential construction site manager;
- (ww) roofer;
- (xx) sheet metal worker;
- (yy) slickline services, including the
 - (i) assistant operator branch,
 - (ii) level one operator branch,
 - (iii) level two operator branch, and
 - (iv) level three operator branchof the trade;
- (zz) snubbing services, including the

- (i) assistant operator branch,
 - (ii) level one operator branch,
 - (iii) level two operator branch,
 - (iv) level three operator branch,
 - (v) level one supervisor branch, and
 - (vi) level two supervisor branch
- of the trade;
- (aaa) sprinkler systems installer;
 - (bbb) steamfitter-pipefitter;
 - (ccc) steel detailer, including the
 - (i) level one branch,
 - (ii) level two branch, and
 - (iii) level three branch
- of the trade;
- (ddd) transport refrigeration technician;
 - (eee) water well driller, including the
 - (i) earth loop technician branch, and
 - (ii) water well driller branch
- of the trade;
- (fff) welder, including the
 - (i) welder branch, and
 - (ii) wire process operator branch
- of the trade;
- (ggg) well testing services supervisor, including the
 - (i) level three branch,
 - (ii) level four branch, and
 - (iii) level five branch

of the trade.

Schedule 2

Restricted Activities and Classes of Individuals

Agricultural Equipment Technician

Restricted activities

1(1) In this section,

- (a) “agricultural equipment” means any self-propelled, towed or stationary agricultural machinery used in farming, including any equipment and components required for the operation of the machinery, and includes the following:
 - (i) internal combustion engines and components, both stationary and mobile;
 - (ii) rubber tired and rubber or steel tracked towing equipment, commonly called tractors;
 - (iii) towed primary and secondary tillage equipment commonly called ploughs (mouldboard, disk, chisel) and cultivators;
 - (iv) towed and self-propelled equipment commonly called seeders, inclusive of all crops;
 - (v) towed or self-propelled equipment commonly called sprayers or broadcasters;
 - (vi) towed and self-propelled harvesting equipment commonly called balers, swathers, windrowers, combines or forage harvesters;
 - (vii) miscellaneous equipment and components required in the production, distribution and transportation of farm produce;
- (b) “undertakings of the designated trade” means the repair, maintenance and service of agricultural equipment.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of agricultural equipment technician:

- (a) repairing, maintaining and servicing of agricultural equipment, parts and components, including the following:

- (i) internal combustion engines and components;
 - (ii) power trains;
 - (iii) electrical and electronic systems;
 - (iv) hydraulic systems;
 - (v) steering systems;
 - (vi) braking systems;
 - (vii) wheels and tracked undercarriages;
 - (viii) heating and air conditioning systems;
 - (ix) soil preparation systems;
 - (x) harvesting systems;
 - (xi) spraying systems;
 - (xii) grain handling equipment;
 - (xiii) miscellaneous equipment and systems used in the production, distribution and transportation of farm produce;
- (b) with respect to gasoline and diesel internal combustion 2- and 4-stroke cycle engines,
- (i) inspecting and testing engines and components before and after repair using a variety of hand and power tools and measuring and testing equipment,
 - (ii) inspecting, testing, repairing and replacing components of the following:
 - (A) liquid cooling systems;
 - (B) air cooling filters or screening systems;
 - (C) engine lubrication systems;
 - (D) gasoline engine fuel systems;
 - (E) diesel engine fuel systems;
 - (F) air-induction systems on diesel engines,
 - (iii) inspecting, adjusting and replacing gasoline engine ignition components,

- (iv) inspecting, testing, adjusting, repairing and replacing elements of engine governor systems,
- (v) inspecting and replacing elements of engine exhaust systems,
- (vi) dismantling, repairing, replacing and reassembling damaged or worn components of cylinder heads, and
- (vii) dismantling, cleaning, inspecting, rebuilding and reassembling the various types of cylinder block assemblies;
- (c) with respect to engine starting systems, inspecting, testing, replacing and repairing components of electric starter circuits;
- (d) with respect to electrical systems,
 - (i) inspecting, testing, servicing and replacing storage batteries,
 - (ii) testing, rebuilding, adjusting and replacing components of electrical charging systems, and
 - (iii) testing, overhauling, adjusting and replacing components of lighting, warning and safety electrical systems;
- (e) with respect to clutches, hydraulic couplings, transmissions and transfer cases,
 - (i) inspecting, adjusting or replacing the following:
 - (A) clutches and components;
 - (B) components of hydraulic couplings;
 - (C) components of manual shift transmissions;
 - (D) automatic gear change transmissions;
 - (E) single and multiple speed transfer cases,
 - (ii) repairing clutches and components,
 - (iii) rebuilding the following:
 - (A) components of manual shift transmissions;
 - (B) automatic gear change transmissions;

- (C) single and multiple speed transfer cases;
 - (D) power shift transmissions,
- and
- (iv) installing single and multiple speed transfer cases;
- (f) with respect to drivelines, rear and front axle assemblies and differential and final drives,
 - (i) inspecting and replacing the following:
 - (A) drive shafts and universal joints and components;
 - (B) components of front and rear differentials;
 - (C) components of front and rear axles and final drives;
 - (D) tires, wheels and components,
 - (ii) adjusting components of front and rear differentials, and
 - (iii) adjusting components of front and rear axles and final drives;
- (g) with respect to steering systems,
 - (i) inspecting components of the following:
 - (A) manually operated steering systems;
 - (B) hydraulic and electronically assisted steering systems;
 - (C) controlled differential (pivot) and articulated steering,
 - (ii) reconditioning and replacing components of manually operated steering systems,
 - (iii) testing, repairing, adjusting and replacing components of hydraulic and electronically assisted steering systems, and
 - (iv) testing, repairing, replacing and adjusting components of controlled differential (pivot) and articulated steering;

- (h) with respect to braking systems and power take-offs,
 - (i) inspecting, replacing, repairing and adjusting components of the following:
 - (A) mechanical braking systems;
 - (B) vehicle hydraulic braking systems;
 - (C) air and electric braking systems,
 - (ii) testing components of mechanical braking systems,
 - (iii) rebuilding components of vehicle hydraulic braking systems, and
 - (iv) repairing and replacing power take-offs;
- (i) with respect to cabs, canopies and cab heating systems and air conditioning systems,
 - (i) inspecting, repairing, replacing, installing and adjusting components of cabs or canopies and cab heating systems, and
 - (ii) inspecting, repairing, replacing, and adjusting components of cab air conditioning systems;
- (j) operating tow trucks and related recovery equipment to assist in repair or moving equipment to a location where repairs can be performed;
- (k) with respect to agricultural equipment, inspecting, adjusting, aligning, repairing and replacing components of the following:
 - (i) ploughs;
 - (ii) spreaders;
 - (iii) harrows;
 - (iv) potato planters and grain drills;
 - (v) sprayers;
 - (vi) grain and pea combines;
 - (vii) potato harvesters;
 - (viii) balers;

- (ix) forage harvesters;
- (l) testing, removing and rebuilding components of grain and pea combines;
- (m) testing, removing and rebuilding components of potato harvesters.

Classes of individuals

2 Only the following classes of individuals may perform a restricted activity within the designated trade of agricultural equipment technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and*

Industry Training Programs Regulation in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and

ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Appliance Service Technician — Appliance Service Technician Branch

Restricted activities

3(1) In this section,

- (a) “appliance” means the following:
 - (i) a device or machine operated by electricity or gas that is designed and used or intended to be used for
 - (A) the cooking or baking of food,
 - (B) the washing or drying of dishes, utensils and cooking and baking equipment,
 - (C) the washing or drying of clothes,
 - (D) the disposal of garbage,
 - (E) the filtration of air, or
 - (F) the heating of water,

including the following:

- (G) electric and gas ranges;
 - (H) hood fans;
 - (I) microwave ovens;
 - (J) dishwashers;
 - (K) waste compactors and waste disposers;
 - (L) clothes washers;
 - (M) electric and gas clothes dryers;
 - (N) electric hot water heaters;
 - (O) electronic air filters;
- (ii) a device or machine operated by electricity or gas that is designed and manufactured as a self-contained, stand-alone unit used or intended to be used for

- (A) the cooling of food or of a space,
- (B) the making of ice, or
- (C) the dehumidification of air,

including the following:

- (D) electric and gas refrigerators;
 - (E) ice makers;
 - (F) electric and gas freezers;
 - (G) air conditioners;
 - (H) dehumidifiers;
- (b) “commercial appliance” means a device or machine operated by electricity or gas that is designed and used or intended to be used for
- (i) the cooking or baking of food,
 - (ii) the washing or drying of dishes, utensils and cooking and baking equipment,

(iii) the washing or drying of clothes,

(iv) the disposal of garbage,

(v) the filtration of air, or

(vi) the heating of water,

and includes the following:

(vii) electric and gas ranges;

(viii) hood fans;

(ix) microwave ovens;

(x) dishwashers;

(xi) waste compactors and waste disposers;

(xii) clothes washers;

(xiii) electric and gas clothes dryers;

(xiv) electronic air filters;

(xv) electric hot water heaters;

(c) “undertakings of the branch of the designated trade” means the installation, service, maintenance, repair, removal and replacement of appliances and commercial appliances and their related parts and components.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the appliance service technician branch of the designated trade of appliance service technician:

- (a) installing appliances and commercial appliances, excluding initial installations governed by electrical, gas and plumbing codes and regulations;
- (b) servicing, maintaining and repairing of appliances and commercial appliances;
- (c) installing, removing, repairing and replacing parts and components of appliances and commercial appliances;
- (d) diagnosing problems respecting appliances and commercial appliances;

- (e) using hand tools, power tools and refrigeration tools while working on appliances and commercial appliances;
- (f) using, in relation to appliances and commercial appliances, electrical and other measuring and testing devices;
- (g) soldering and brazing on or in relation to appliances and commercial appliances;
- (h) wiring or installing or removing wiring in appliances and commercial appliances;
- (i) installing, removing or repairing hoses and piping in appliances and commercial appliances;
- (j) splicing similar and dissimilar metals used in or in relation to appliances and commercial appliances;
- (k) installing and removing gases and liquids used in appliances and commercial appliances.

Classes of individuals

4 Only the following classes of individuals may perform a restricted activity within the appliance service technician branch of the designated trade of appliance service technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an

apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in

section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Appliance Service Technician — Commercial Appliance Service Technician Branch

Restricted activities

5(1) In this section,

- (a) “commercial appliance” means a device or machine operated by electricity or gas that is designed and used or intended to be used for
 - (i) the cooking or baking of food,

- (ii) the washing or drying of dishes, utensils and cooking and baking equipment,
- (iii) the washing or drying of clothes,
- (iv) the disposal of garbage,
- (v) the filtration of air, or
- (vi) the heating of water,

and includes the following:

- (vii) electric and gas ranges;
- (viii) hood fans;
- (ix) microwave ovens;
- (x) dishwashers;
- (xi) waste compactors and waste disposers;
- (xii) clothes washers;
- (xiii) electric and gas clothes dryers;
- (xiv) electronic air filters;
- (xv) electric hot water heaters;

- (b) “undertakings of the branch of the designated trade” means the installation, service, maintenance, repair, removal and replacement of commercial appliances and their related parts and components.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the commercial appliance service technician branch of the designated trade of appliance service technician:

- (a) installing commercial appliances, excluding initial installations governed by electrical, gas and plumbing codes and regulations;
- (b) servicing, maintaining and repairing of commercial appliances;
- (c) installing, removing, repairing and replacing parts and components of commercial appliances;
- (d) diagnosing problems respecting commercial appliances;

- (e) using hand tools, power tools and refrigeration tools while working on commercial appliances;
- (f) using, in relation to commercial appliances, electrical and other measuring and testing devices;
- (g) wiring or installing or removing wiring in commercial appliances;
- (h) installing, removing or repairing hoses and piping in commercial appliances;
- (i) splicing similar and dissimilar metals used in or in relation to commercial appliances.

Classes of individuals

6 Only the following classes of individuals may perform a restricted activity within the commercial appliance service technician branch of the designated trade of appliance service technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the appliance service technician branch of the designated trade;
- (b) any individual who holds an endorsement in the appliance service technician branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the appliance service technician branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the appliance service technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the appliance service technician branch of the designated trade if the application is subsisting and, during the time that the application is

subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade or the appliance service technician branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the appliance service technician branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in

section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Auto Body Technician — Auto Body Prepper Branch

Restricted activities

7(1) In this section,

- (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied;
- (b) “undertakings of the branch of the designated trade” means the following:

- (i) the preparation of a substrate for a finish or topcoat application where the damage is not greater than 3 mm in depth;
- (ii) the removal and installation of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the auto body prepper branch of the designated trade of auto body technician:

- (a) preparing a substrate for a finish or topcoat application where the damage is not greater than 3 mm in depth;
- (b) removing and installing non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle;
- (c) using hand, power and auto body tools to perform the restricted activities set out in this section;
- (d) recognizing substrate;
- (e) filling and sanding substrate;
- (f) protecting surfaces from the unintended application of a primer product, finish or topcoat;
- (g) removing and installing trim and non-structural glass;
- (h) mixing paint and primer products;
- (i) applying primer, primer-surfacer, undercoating or corrosion protection material;
- (j) polishing, washing and cleaning substrate.

Classes of individuals

8 Only the following classes of individuals may perform a restricted activity within the auto body prepper branch of the designated trade of auto body technician:

- (a) any individual who holds a trade certificate in any branch of the designated trade;
- (b) any individual who holds an endorsement in the auto body refinisher branch or the auto body technician branch of the designated trade;

- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in any branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in any branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in any branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in any branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in any branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;

- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

**Auto Body Technician — Auto Body
Refinisher Branch**

Restricted activities

9(1) In this section,

- (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied;
- (b) “undertakings of the branch of the designated trade” means the following:
 - (i) the preparation of a substrate for a finish or topcoat application;
 - (ii) the application of a finish or topcoat to a substrate;
 - (iii) the removal and installation of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the auto body refinisher branch of the designated trade of auto body technician:

- (a) preparing a substrate for a finish or topcoat application;
- (b) applying a finish or topcoat to a substrate;
- (c) removing and installing of non-structural components of the body, unibody or frame to repair collision damage to the motor vehicle;
- (d) using hand, power and auto body tools to perform the restricted activities set out in this section;
- (e) performing paint damage analyses and preparing refinishing estimates;
- (f) recognizing substrate;
- (g) managing paint and paint related materials and inventories;
- (h) filling and sanding substrate;

- (i) protecting surfaces from the unintended application of a primer product, finish or topcoat;
- (j) removing and installing trim and non-structural glass;
- (k) mixing paint and primer products;
- (l) applying primer, primer-surfacer, undercoating or corrosion protection material;
- (m) colour match paint;
- (n) applying a finish or topcoat;
- (o) polishing, washing and cleaning substrate.

Classes of individuals

10 Only the following classes of individuals may perform a restricted activity within the auto body refinisher branch of the designated trade of auto body technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the auto body technician branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade or the auto body technician branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the auto body technician branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the auto body technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the auto body technician branch of the

designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade or the auto body technician branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade or the auto body technician branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described

in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Auto Body Technician — Auto Body Repairer Branch

Restricted activities

11(1) In this section,

- (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied;
- (b) “support system” means any part of a motor vehicle, excluding the chassis, body, unibody, frame or substrate;

- (c) “undertakings of the branch of the designated trade” means the following:
 - (i) the preparation of a substrate for a finish or topcoat application;
 - (ii) the repair of the following components of a motor vehicle:
 - (A) the chassis or frame;
 - (B) the body or unibody;
 - (C) a support system damaged in a collision.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the auto body repairer branch of the designated trade of auto body technician:

- (a) preparing a substrate for a finish or topcoat application;
- (b) repairing of the following components of a motor vehicle:
 - (i) the chassis or frame;
 - (ii) the body or unibody;
 - (iii) a support system damaged in a collision;
- (c) using hand, power and auto body tools to perform the restricted activities set out in this section;
- (d) performing body damage analyses and preparing repair estimates;
- (e) welding and cutting metal sections;
- (f) attaching components by welding or using adhesives or fasteners;
- (g) straightening, measuring or aligning motor vehicle components;
- (h) recognizing substrate;
- (i) filling and sanding substrate;
- (j) protecting surfaces from the unintended application of a primer product, finish or topcoat;
- (k) removing and installing trim and glass;

- (l) mixing paint and primer products;
- (m) applying primer, primer-surfacer, undercoating or corrosion protection material;
- (n) polishing, washing and cleaning substrate.

Classes of individuals

12 Only the following classes of individuals may perform a restricted activity within the auto body repairer branch of the designated trade of auto body technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the auto body technician branch of the designated trade;
- (b) any individual who holds an endorsement in the auto body technician branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the auto body technician branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the auto body technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the auto body technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade or the auto body technician branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the auto body technician branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and

ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Auto Body Technician — Auto Body Technician Branch

Restricted activities

13(1) In this section,

- (a) “substrate” means any surface of a motor vehicle to which paint or other coatings may be applied;
- (b) “support system” means any part of a motor vehicle, excluding the chassis, body, unibody, frame or substrate;
- (c) “undertakings of the branch of the designated trade” means the following:
 - (i) the preparation of a substrate for a finish or topcoat application;
 - (ii) the application of a finish or topcoat to a substrate;
 - (iii) the repair of the following components of a motor vehicle:

- (A) the chassis or frame;
- (B) the body or unibody;
- (C) a support system damaged in a collision.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the auto body technician branch of the designated trade of auto body technician:

- (a) preparing a substrate for a finish or topcoat application;
- (b) applying a finish or topcoat to a substrate;
- (c) repairing the following components of a motor vehicle:
 - (i) the chassis or frame;
 - (ii) the body or unibody;
 - (iii) a support system damaged in a collision;
- (d) using hand, power and auto body tools to perform the restricted activities set out in this section;
- (e) performing body damage analyses and prepare repair estimates;
- (f) welding and cutting metal sections;
- (g) attaching components by welding or using adhesives or fasteners;
- (h) straightening, measuring or aligning motor vehicle components;
- (i) performing paint damage analyses and preparing refinishing estimates;
- (j) recognizing substrate;
- (k) filling and sanding substrates;
- (l) managing paint and related materials and inventories;
- (m) protecting surfaces from the unintended application of a primer product, finish or topcoat;
- (n) removing and installing trim and glass;
- (o) mixing paint and primer products;

- (p) applying primer, primer-surfacer, undercoating or corrosion protection material;
- (q) colour match paint;
- (r) applying a finish or topcoat;
- (s) polishing, washing and cleaning substrate.

Classes of individuals

14 Only the following classes of individuals may perform a restricted activity within the auto body technician branch of the designated trade of auto body technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section

1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Automotive Service Technician

Restricted activities

15(1) In this section,

- (a) “motor vehicle” means a vehicle that
 - (i) is propelled by any power other than muscular power,
 - (ii) is equipped with 2 or 3 axles,
 - (iii) is not equipped with air brakes,
 - (iv) may be registered to operate on a public highway, and
 - (v) contains one or more vehicle systems and related components,

but does not include a motorcycle as defined in section 91;

- (b) “undertakings of the designated trade” means the diagnosis of problems and the repair of motor vehicles, including all vehicle systems and related components;
- (c) “vehicle systems” includes the following:
 - (i) vehicle propulsion systems;
 - (ii) fuel systems;
 - (iii) emission control systems;
 - (iv) braking systems;
 - (v) steering systems;
 - (vi) suspension systems;
 - (vii) drive train systems;
 - (viii) vehicle management systems;
 - (ix) electrical systems;
 - (x) heating, ventilating and air conditioning systems;
 - (xi) occupant restraint systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of automotive service technician:

- (a) diagnosing problems with motor vehicles, including vehicle systems and related components;
- (b) inspecting, testing, analyzing and repairing motor vehicles, including vehicle systems and utility trailers without air brakes;
- (c) heating and cutting with oxyfuel equipment;
- (d) operating and maintaining shop equipment and tools of the designated trade.

Classes of individuals

16 Only the following classes of individuals may perform a restricted activity within the designated trade of automotive service technician:

- (a) any individual who holds a trade certificate in the designated trade;

- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;

- (i) any individual who is performing a restricted activity within the designated trade in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Baker

Restricted activities

17(1) In this section,

- (a) “baked goods” means breads, cakes, pies, pastries, cookies, doughnuts and specialty baked foods and includes any baked goods that are leavened mechanically, chemically or biologically;
- (b) “undertakings of the designated trade” means the preparation and the production of baked goods in commercial quantities for public consumption.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of baker:

- (a) sanitizing equipment and workspace;
- (b) applying computer knowledge, bookkeeping and trade terminology;
- (c) applying knowledge of the statutes and regulations pertaining to the food industry;
- (d) selecting, operating and maintaining tools and non-mechanized equipment;
- (e) selecting, operating and maintaining mechanized and computerized equipment;
- (f) developing and applying production techniques respecting the following:
 - (i) freezer technology;
 - (ii) par-baked products;
 - (iii) pre-mixes and bases;
- (g) preparing doughs and batters;
- (h) preparing creams, icings, fillings, toppings, desserts, confections and ice cream;

- (i) applying good management techniques;
- (j) scaling and mixing ingredients;
- (k) practising baking methods;
- (l) applying one's knowledge with respect to the following:
 - (i) properties of food;
 - (ii) micro-organisms associated with foods;
 - (iii) causes, effect and control of food borne illnesses;
 - (iv) nutrients;
- (m) product labelling, including listing known allergens.

Classes of individuals

18 Only the following classes of individuals may perform a restricted activity within the designated trade of baker:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;

- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and

- (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Boilermaker

Restricted activities

19(1) In this section,

(a) “boilers, heat exchangers and related equipment” means the following:

- (i) water tube boilers;
- (ii) fire tube boilers;
- (iii) heat exchangers;
- (iv) condensers;
- (v) distillation towers;
- (vi) stacks and stack liners;
- (vii) storage tanks;
- (viii) penstocks;
- (ix) furnaces;
- (x) dust, air, steam, liquid tight containers and other equipment not referred to in subclauses (i) to (ix);
- (xi) platforms, ladders, walkways, floors, roofs, support structures or other structures related to or used in respect of the items referred to in subclauses (i) to (x);

(b) “undertakings of the designated trade” means the following:

- (i) the fabrication, assembly, erection, repair, maintenance, inspection, servicing, preparation and testing of boilers, heat exchangers and related equipment;
- (ii) the stress relieving of vessels and ancillary equipment.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of boilermaker:

- (a) fabricating, assembling and erecting of boilers, heat exchangers and related equipment;
- (b) repairing, maintaining, inspecting and servicing of boilers, heat exchangers and related equipment;

- (c) preparing and testing of boilers, heat exchangers and related equipment;
- (d) stress relieving of vessels and ancillary equipment;
- (e) using detailed drawings and other specifications;
- (f) using all related standards, codes and regulations;
- (g) using hand tools, power tools and shop equipment, including post drills, radial drills, angle rolls, plate rolls, punches, shears, brakes and presses;
- (h) using, setting up and assembling of rigging equipment, including wire rope, block and tackle, gin poles, cranes, derricks, hoisting and jacking equipment and scaffolds;
- (i) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;
- (j) using fiberglass-reinforced plastics
 - (i) in respect of air handling systems, including scrubbers, ducting, breeching and stacks, and
 - (ii) in respect of tanks, hoppers and vessels;
- (k) using new technology related to the restricted activities set out in this section.

Classes of individuals

20 Only the following classes of individuals may perform a restricted activity within the designated trade of boilermaker:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the

supervision of an individual who holds a trade certificate or an endorsement in the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Bricklayer

Restricted activities

21(1) In this section,

- (a) “masonry” includes the following:
 - (i) all types of bricks;
 - (ii) all types of blocks;

- (iii) all types of stone, including cut and dressed stone;
 - (iv) structural tiles;
 - (v) precast concrete components;
 - (vi) mortars;
 - (vii) waterproofing and damp-proofing materials;
 - (viii) refractory systems and materials;
 - (ix) prefabricated panels constructed of any materials referred to in subclauses (i) to (viii);
- (b) “undertakings of the designated trade” means the erection, installation, repair and maintenance of masonry.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of bricklayer:

- (a) erecting, installing, repairing and maintaining masonry;
- (b) using detailed drawings, blueprints and other specifications;
- (c) using hand tools, power tools, levels and explosive actuated tools;
- (d) using mixers, masonry saws and forklifts;
- (e) using various mortars, units and accessories for bonding;
- (f) using, setting up and assembling rigging and hoisting equipment, ladders and scaffolds;
- (g) using any new innovative technological changes in the designated trade that relate to materials or methods of construction;
- (h) laying masonry;
- (i) installing anchoring systems;
- (j) placing steel reinforcing and grouts in cavities or cores;
- (k) pointing and cleaning masonry;
- (l) lining or relining chimneys, ovens, boilers and other vessels;

- (m) lining or relining combustion chambers in fireplaces, furnaces and kilns;
- (n) installing and caulking precast concrete products and prefabricated masonry panels;
- (o) installing insulation, waterproofing and damp-proofing materials and air-vapour barriers.

Classes of individuals

22 Only the following classes of individuals may perform a restricted activity within the designated trade of bricklayer:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and*

Industry Training Programs Regulation in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and

ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Cabinetmaker

Restricted activities

23(1) In this section,

- (a) “millwork” means millwork of all types and includes the following:
 - (i) joinery;
 - (ii) framework;
 - (iii) architectural fixture work, including the following:
 - (A) stair work and balustrades;
 - (B) special design doors and windows;
 - (C) custom dining rooms, lounges and lobbies;
 - (D) other similar work;
 - (iv) custom millwork, including the following:

- (A) carcass units;
- (B) kitchen cabinets;
- (C) vanities, screens and planters;
- (D) shelf units;
- (E) other similar work;
- (v) custom furniture, including the following:
 - (A) tables and chairs;
 - (B) commercial furniture;
 - (C) institutional furniture;
 - (D) other similar work;

- (b) “undertakings of the designated trade” means the fabrication and installation of millwork.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of cabinetmaker:

- (a) fabricating and installing millwork;
- (b) setting up and operating woodworking machines and equipment;
- (c) making layouts and patterns;
- (d) cutting, shaping, moulding and assembling components of wood and wood substitutes in accordance with varying specifications;
- (e) using fasteners and adhesive;
- (f) using machines and equipment;
- (g) using laminating procedures;
- (h) using hardware;
- (i) building and installing doors, door frames and stairs;
- (j) interpreting blueprints;
- (k) developing production drawings using manual and computer-aided design (CAD);

- (l) packaging and shipping millwork;
- (m) using manual and computer design and layout;
- (n) using and maintaining hand and portable power-operated tools;
- (o) machining furniture and cabinet components;
- (p) bending and laminating cabinet and furniture components;
- (q) veneering, inlaying and applying laminated plastics;
- (r) sanding cabinets and furniture components;
- (s) fastening, clipping, glueing or otherwise applying non-wood materials to millwork pieces;
- (t) performing sub-assembly, final assembly and pre-finishing of cabinets, furniture and millwork;
- (u) preparing and applying finishes;
- (v) installing millwork and cabinets on site;
- (w) remodeling and refinishing furniture;
- (x) using and programming computer numerical controlled (CNC) machines, computer-aided design (CAD) and computer-aided manufacturing (CAM) processes.

Classes of individuals

24 Only the following classes of individuals may perform a restricted activity within the designated trade of cabinetmaker:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the

*Apprenticeship Education and Industry Training
Programs Regulation* in the designated trade;

- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Carpenter**Restricted activities**

25(1) In this section,

- (a) “building envelope system” means the components of a building that separate heated space from unheated space or that are in contact with the exterior air or the ground;
- (b) “concrete reinforcement materials” includes metal or steel strands, wires, bars, mesh or sheets;
- (c) “structure” includes any type of residential, commercial, industrial, institutional or agricultural structure;
- (d) “undertakings of the designated trade” means the construction, installation and repair of structures or components of structures made of wood, concrete or other materials;
- (e) “wood” includes any by-product of wood, wood substitutes and similar materials.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of carpenter:

- (a) working with or making things with wood in the construction, installation or repair of structures or components of structures;
- (b) preparing site and building layouts;
- (c) constructing foundations and concrete structures;
- (d) framing structures;
- (e) applying interior and exterior finishes;
- (f) reviewing and interpreting construction drawings, plans, specifications, building codes and related documentation;
- (g) inspecting sub-soil excavations of structures;
- (h) operating hand and power tools related to the designated trade;
- (i) shoring and underpinning of existing structures, parts of structures or excavations;
- (j) laying out and erecting batter boards, building lines and setting elevations;

- (k) installing, using and dismantling personnel handling devices, scaffolds, ropes, slings, hoists on rigging installations, ladders, shoring, covered walkways and barricades;
- (l) assembling, erecting, installing and dismantling structures;
- (m) setting up hoarding and other temporary structures;
- (n) framing the following:
 - (i) exterior walls and interior partitions;
 - (ii) architectural features;
 - (iii) post and beam construction and timber framing;
 - (iv) plank walls;
 - (v) roof systems;
 - (vi) blocking, nailers and firestops;
 - (vii) ceiling and floor systems;
- (o) installing the following:
 - (i) preserved wood foundations;
 - (ii) sill plates on foundation walls;
 - (iii) drainage tile and pipe;
 - (iv) beams and columns;
 - (v) floor frames;
 - (vi) wood stairways and railings;
 - (vii) metal stud non-loadbearing walls;
 - (viii) suspended ceiling systems;
 - (ix) engineered pre-fabricated roof systems;
 - (x) roof coverings;
 - (xi) exterior and interior doors and windows;
 - (xii) insulation materials in ceilings, walls and floors;
 - (xiii) air and vapour barriers;

- (xiv) caulking, adhesion and sealant materials;
- (xv) exterior wall finishes;
- (xvi) building envelope systems;
- (xvii) gypsum and non-gypsum products on interior walls and ceilings;
- (xviii) interior cabinets, display cases, mirrors, counters, laminates, panelling, mouldings and trim;
- (xix) prefabricated fireplaces;
- (xx) exterior attachments to structures, including additions, porches, stoops and verandas;
- (xxi) timber bents to support ramps, platforms and heavy piping;
- (xxii) timber culverts;
- (p) placement of precast concrete panels;
- (q) building and stripping forms for the following:
 - (i) beams and girders;
 - (ii) piers and columns;
- (r) building forms, installing concrete reinforcement materials, placing and consolidating concrete and stripping forms for the following:
 - (i) footings;
 - (ii) walls;
 - (iii) floors;
 - (iv) sidewalks, driveways and curbs;
 - (v) stairs;
 - (vi) built-in-place concrete manholes, catch basins, utility vaults and other underground service boxes;
 - (vii) tilt-up precast concrete panels;
 - (viii) void forms for grade or subterranean concrete.

Classes of individuals

26 Only the following classes of individuals may perform a restricted activity within the designated trade of carpenter:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of

the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Communication Technician

Restricted activities

27(1) In this section,

- (a) “communication system” means any type of industrial, commercial or domestic electrical, fibre or wireless communication system and includes transmission equipment, switching equipment and network management control equipment for the following:
 - (i) video;
 - (ii) voice;
 - (iii) data;
 - (iv) signaling;
- (b) “undertakings of the designated trade” means the installation, repair, maintenance and upgrade of communication systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of communication technician:

- (a) installing, repairing, maintaining and upgrading communication systems;
- (b) using hand tools, power tools, testing equipment and tools required by the designated trade;
- (c) installing, terminating and testing copper and fibre optic cables in communication systems;

- (d) installing and laying out raceways and supporting framework for communication systems;
- (e) installing, troubleshooting, maintaining and commissioning equipment and apparatus used in communication systems;
- (f) interpreting and applying the provisions of the *Safety Codes Act* and the regulations under that Act;
- (g) interpreting communications systems drawings and prints.

Classes of individuals

28 Only the following classes of individuals may perform a restricted activity within the designated trade of communication technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and*

Industry Training Programs Regulation in the designated trade;

- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and

ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Concrete Finisher

Restricted activities

29(1) In this section,

- (a) “concrete” means cement products and includes the following:
 - (i) cements;
 - (ii) concrete;
 - (iii) aggregate;
 - (iv) grouts;
 - (v) patching materials;
 - (vi) toppings;
 - (vii) admixtures;
 - (viii) agents;

(ix) epoxies;

(x) protective coatings;

(b) “undertakings of the designated trade” means the placing, finishing, restoring and repairing of concrete.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of concrete finisher:

(a) placing of concrete;

(b) handling of concrete;

(c) finishing concrete;

(d) restoring concrete;

(e) repairing and resurfacing concrete;

(f) applying curing treatments to concrete;

(g) applying surface treatments to concrete;

(h) consolidating and compacting concrete;

(i) edging, jointing and grooving concrete;

(j) producing various finishes on concrete surfaces;

(k) applying treatments to concrete;

(l) cutting and coring hardened concrete;

(m) scarifying concrete;

(n) applying dry, wet and epoxy grouts;

(o) using detailed drawings, blueprints and other specifications;

(p) using hand tools, power tools, levels and explosive actuated tools;

(q) using mixers, wall sawing, floor sawing, grooving, coring and grinding equipment;

(r) using power consolidating, power screeding and power trowelling equipment;

- (s) using, setting up and assembling rigging and hoisting equipment, ladders and scaffolds;
- (t) using any new innovative technological changes in the designated trade in relation to the restricted activities set out in this section.

Classes of individuals

30 Only the following classes of individuals may perform a restricted activity within the designated trade of concrete finisher:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Cook

Restricted activities

31(1) In this section, “undertakings of the designated trade” means the preparation and the cooking of a variety of full course meals, including appetizers, starches, main courses, vegetables and desserts in commercial quantities for public consumption.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of cook:

- (a) maintaining personal hygiene and applying sanitation and safe food handling techniques;
- (b) operating and maintaining kitchen tools and equipment;
- (c) identifying and preparing different types of food;
- (d) maintaining and applying cooking principles and methods with respect to all aspects of cooking from basic cooking to advanced cooking;
- (e) cleaning, preparing and cooking vegetables, fruits and fungi;
- (f) preparing stocks, sauces and soups;

- (g) using seasonings, herbs and spices;
- (h) preparing egg and dairy products;
- (i) preparing and cooking starches, farinaceous foods and cereals;
- (j) preparing, cooking and dressing fish and seafood;
- (k) preparing and cooking meats, poultry, game and variety meats;
- (l) producing baked pastry and dessert products;
- (m) preparing cold foods and buffets;
- (n) preparing and cooking value-added products;
- (o) applying nutritional values and meeting special dietary needs;
- (p) using cooking and chilling systems;
- (q) preparing, cooking and storing food items for preservation;
- (r) applying purchasing and management control;
- (s) applying management skills.

Classes of individuals

32 Only the following classes of individuals may perform a restricted activity within the designated trade of cook:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,

- (ii) has possession of or control over, and
- (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

**Crane and Hoisting Equipment Operator —
Boom Truck Operator Branch**

Restricted activities

33(1) In this section,

- (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that
 - (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis,
 - (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and
 - (iii) is equipped with
 - (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or
 - (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes);
- (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include
 - (i) an overhead bridge-type crane,
 - (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles,
 - (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting,
 - (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench,
 - (v) an aerial device that is commonly known as a personnel lift or personnel hoist,
 - (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as

- digger derricks and radial boom derricks used to
auger holes and to set utility poles and place
associated equipment,
- (vii) equipment designed exclusively to move earth,
- (viii) a crane that
- (A) is operated at a mine site,
- (B) is used with a special attachment to move earth
or material, and
- (C) meets the requirements of and is operated in
accordance with the *Occupational Health and
Safety Act* and the regulations under that Act,
- (ix) an aerial material handling device with or without
live lines, or
- (x) equipment designed exclusively for drilling or
driving piles and casings;
- (c) “hydraulic mobile crane” means any device or structure
that
- (i) incorporates a hydraulic driven drum and cable or
rope used for raising, lowering or moving material,
- (ii) is equipped with a telescoping boom capable of
moving in the vertical plane,
- (iii) is mounted on a pedestal, base or chassis, either
crawler, trailer or wheel mounted, to provide
mobility,
- (iv) has a lifting capacity of 15 tons (13.6 tonnes) or
greater, and
- (v) may incorporate a ring assembly or a strand jacking
system for hoisting;
- (d) “lattice boom mobile crane” means any device or
structure that
- (i) incorporates a friction or hydraulic driven drum and
cable or rope used for raising, lowering or moving
material,
- (ii) is equipped with a lattice boom capable of moving in
the vertical plane,

- (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and
- (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater;
- (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;
- (f) “mobile crane” means
 - (i) a hydraulic mobile crane or a lattice boom mobile crane, and
 - (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);
- (g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;
- (h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;
- (i) “tower crane” means any mechanical device or structure that
 - (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,
 - (ii) is of the travelling, fixed, climbing or self-erecting type, and
 - (iii) is used exclusively for raising, lowering or moving material;
- (j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of boom trucks and wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;
- (k) “wellhead boom truck” means a boom truck that is used for one or more of the following:
 - (i) wellhead pumping operations;

- (ii) wireline operations;
- (iii) perforating operations;
- (iv) coiled tubing operations;
- (v) snubbing operations;
- (vi) the rig up and rig out of slant service rigs.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the boom truck operator branch of the designated trade of crane and hoisting equipment operator:

- (a) operating, testing and performing routine maintenance of boom trucks or wellhead boom trucks;
- (b) using hand tools, power tools and specialized equipment while maintaining and operating boom trucks and related equipment;
- (c) recognizing and identifying malfunctions relating to boom trucks and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions;
- (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation;
- (e) interpreting and applying visual and audio communications;
- (f) communicating with management, signallers and riggers using visual and audio systems;
- (g) inspecting and maintaining boom cranes and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities;
- (h) performing rigging related to the designated trade;
- (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts;
- (j) performing the restricted activities of the wellhead boom truck operator branch of the designated trade as set out in section 39.

Classes of individuals

34 Only the following classes of individuals may perform a restricted activity within the boom truck operator branch of the designated trade of crane and hoisting equipment operator:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the mobile crane operator branch of the designated trade;
 - (iii) the boom truck craft of the designated trade granted before September 1, 2018;
 - (iv) the conventional mobile crane craft of the designated trade granted before September 1, 2018;
 - (v) the hydraulic mobile crane craft of the designated trade granted before September 1, 2018;
 - (vi) the mobile crane branch of the designated trade granted before September 1, 2018;
- (b) subject to the original conditions set out in the identification card, any individual who, on September 1, 2018, held an identification card in respect of an approved training program under the *Boom Truck Operator Exception Regulation* (AR 87/2002);
- (c) any individual who holds an endorsement in the mobile crane operator branch of the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the mobile crane operator branch of the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the mobile crane operator branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;

- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the mobile crane operator branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (g) any individual who is registered in a student work training program in the branch of the designated trade or the mobile crane operator branch of the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the mobile crane operator branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and

- (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

**Crane and Hoisting Equipment Operator —
Mobile Crane Operator Branch**

Restricted activities

35(1) In this section,

- (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that
 - (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis,
 - (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and
 - (iii) is equipped with
 - (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or
 - (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes);
- (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include
 - (i) an overhead bridge-type crane,
 - (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles,
 - (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting,
 - (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench,
 - (v) an aerial device that is commonly known as a personnel lift or personnel hoist,
 - (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as

- digger derricks and radial boom derricks used to
auger holes and to set utility poles and place
associated equipment,
- (vii) equipment designed exclusively to move earth,
- (viii) a crane that
- (A) is operated at a mine site,
- (B) is used with a special attachment to move earth
or material, and
- (C) meets the requirements of and is operated in
accordance with the *Occupational Health and
Safety Act* and the regulations under that Act,
- (ix) an aerial material handling device with or without
live lines, or
- (x) equipment designed exclusively for drilling or
driving piles and casings;
- (c) “hydraulic mobile crane” means any device or structure
that
- (i) incorporates a hydraulic driven drum and cable or
rope used for raising, lowering or moving material,
- (ii) is equipped with a telescoping boom capable of
moving in the vertical plane,
- (iii) is mounted on a pedestal, base or chassis, either
crawler, trailer or wheel mounted, to provide
mobility,
- (iv) has a lifting capacity of 15 tons (13.6 tonnes) or
greater, and
- (v) may incorporate a ring assembly or a strand jacking
system for hoisting;
- (d) “lattice boom mobile crane” means any device or
structure that
- (i) incorporates a friction or hydraulic driven drum and
cable or rope used for raising, lowering or moving
material,
- (ii) is equipped with a lattice boom capable of moving in
the vertical plane,

- (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and
- (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater;
- (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;
- (f) “mobile crane” means
 - (i) a hydraulic mobile crane or a lattice boom mobile crane, and
 - (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);
- (g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;
- (h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;
- (i) “tower crane” means any mechanical device or structure that
 - (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,
 - (ii) is of the travelling, fixed, climbing or self-erecting type, and
 - (iii) is used exclusively for raising, lowering or moving material;
- (j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of mobile cranes, boom trucks and wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;
- (k) “wellhead boom truck” means a boom truck that is used for one or more of the following:
 - (i) wellhead pumping operations;

- (ii) wireline operations;
- (iii) perforating operations;
- (iv) coiled tubing operations;
- (v) snubbing operations;
- (vi) the rig up and rig out of slant service rigs.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the mobile crane operator branch of the designated trade of crane and hoisting equipment operator:

- (a) operating, testing and performing routine maintenance of mobile cranes, boom trucks, and wellhead boom trucks;
- (b) using hand tools, power tools and specialized equipment while maintaining and operating mobile cranes and related equipment;
- (c) recognizing and identifying malfunctions relating to mobile cranes and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions;
- (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation;
- (e) interpreting and applying visual and audio communications;
- (f) communicating with management, signallers and riggers using visual and audio systems;
- (g) inspecting and maintaining mobile cranes and related equipment;
- (h) performing rigging related to the designated trade;
- (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts;
- (j) assembling mobile cranes and related equipment for lifts;
- (k) disassembling mobile cranes for transport;
- (l) performing the restricted activities of the boom truck operator branch of the designated trade as set out in section 33;

- (m) performing the restricted activities of the wellhead boom truck operator branch of the designated trade as set out in section 39.

Classes of individuals

36 Only the following classes of individuals may perform a restricted activity within the mobile crane operator branch of the designated trade of crane and hoisting equipment operator:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the conventional mobile crane craft of the designated trade granted before September 1, 2018;
 - (iii) the hydraulic mobile crane craft of the designated trade granted before September 1, 2018;
 - (iv) the mobile crane branch of the designated trade granted before September 1, 2018;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education

agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or

- (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Crane and Hoisting Equipment Operator — Tower Crane Operator Branch

Restricted activities

37(1) In this section,

- (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that
 - (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis,
 - (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and
 - (iii) is equipped with
 - (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting

- capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
- (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or
 - (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes);
- (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include
- (i) an overhead bridge-type crane,
 - (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles,
 - (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting,
 - (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench,
 - (v) an aerial device that is commonly known as a personnel lift or personnel hoist,
 - (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment,
 - (vii) equipment designed exclusively to move earth,
 - (viii) a crane that
 - (A) is operated at a mine site,
 - (B) is used with a special attachment to move earth or material, and
 - (C) meets the requirements of and is operated in accordance with the *Occupational Health and Safety Act* and the regulations under that Act,

- (ix) an aerial material handling device with or without live lines, or
- (x) equipment designed exclusively for drilling or driving piles and casings;
- (c) “hydraulic mobile crane” means any device or structure that
 - (i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material,
 - (ii) is equipped with a telescoping boom capable of moving in the vertical plane,
 - (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility,
 - (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and
 - (v) may incorporate a ring assembly or a strand jacking system for hoisting;
- (d) “lattice boom mobile crane” means any device or structure that
 - (i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material,
 - (ii) is equipped with a lattice boom capable of moving in the vertical plane,
 - (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and
 - (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater;
- (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;
- (f) “mobile crane” means
 - (i) a hydraulic mobile crane or a lattice boom mobile crane, and
 - (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);

- (g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;
- (h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;
- (i) “tower crane” means any mechanical device or structure that
 - (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,
 - (ii) is of the travelling, fixed, climbing or self-erecting type, and
 - (iii) is used exclusively for raising, lowering or moving material;
- (j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of tower cranes but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;
- (k) “wellhead boom truck” means a boom truck that is used for one or more of the following:
 - (i) wellhead pumping operations;
 - (ii) wireline operations;
 - (iii) perforating operations;
 - (iv) coiled tubing operations;
 - (v) snubbing operations;
 - (vi) the rig up and rig out of slant service rigs.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the tower crane operator branch of the designated trade of crane and hoisting equipment operator:

- (a) operating, testing and performing routine maintenance of tower cranes;

- (b) using hand tools, power tools and specialized equipment while maintaining and operating tower cranes and related equipment;
- (c) recognizing and identifying malfunctions relating to tower cranes and related equipment or their operation and the proper procedures to be applied when recognizing and identifying such malfunctions;
- (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation;
- (e) interpreting and applying visual and audio communications;
- (f) communicating with management, signallers and riggers using visual and audio systems;
- (g) inspecting and maintaining tower cranes and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities;
- (h) performing rigging related to the designated trade;
- (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts;
- (j) assembling tower cranes and related equipment for lifts;
- (k) disassembling tower cranes for transport.

Classes of individuals

38 Only the following classes of individuals may perform a restricted activity within the tower crane operator branch of the designated trade of crane and hoisting equipment operator:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the boom truck craft of the designated trade granted before September 1, 2018;
 - (iii) the conventional mobile crane craft of the designated trade granted before September 1, 2018;
 - (iv) the hydraulic mobile crane craft of the designated trade granted before September 1, 2018;

- (v) the mobile crane branch of the designated trade granted before September 1, 2018;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the

Apprenticeship Education and Industry Training Programs Regulation in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual

- (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
- (B) has completed the training in respect of the restricted activity.

Crane and Hoisting Equipment Operator — Wellhead Boom Truck Operator Branch

Restricted activities

39(1) In this section,

- (a) “boom truck” means a crane consisting of a rotating superstructure operating machinery on a centre post or turntable that
 - (i) has one or more operator stations mounted on a frame attached to a commercial truck chassis or trailer chassis,
 - (ii) typically retains a payload hauling capacity and has a power source capable of powering the crane, and
 - (iii) is equipped with
 - (A) a boom that is capable of swinging, hoisting and booming up and down and that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (B) a telescoping boom that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes),
 - (C) an articulating boom possessing live lines that has a lifting capacity greater than 5 tons (4.5 tonnes) and equal to or less than 65 tons (59 tonnes), or
 - (D) an articulating boom without live lines that has a lifting capacity greater than 8 tons (7.3 tonnes) and equal to or less than 65 tons (59 tonnes);
- (b) “crane and hoisting equipment” means a mobile crane, a tower crane, a boom truck or a wellhead boom truck, but does not include

- (i) an overhead bridge-type crane,
- (ii) a crane that is used exclusively for raising, lowering and towing motor vehicles,
- (iii) a crane that is mounted on a motor vehicle that is used exclusively for firefighting,
- (iv) a machine, commonly known as a side-boom or pipe layer, that is used for pipeline work to lower pipes into a trench,
- (v) an aerial device that is commonly known as a personnel lift or personnel hoist,
- (vi) a mobile lifting device designed exclusively for use in power line and electric utility services, such as digger derricks and radial boom derricks used to auger holes and to set utility poles and place associated equipment,
- (vii) equipment designed exclusively to move earth,
- (viii) a crane that
 - (A) is operated at a mine site,
 - (B) is used with a special attachment to move earth or material, and
 - (C) meets the requirements of and is operated in accordance with the *Occupational Health and Safety Act* and the regulations under that Act,
- (ix) an aerial material handling device with or without live lines, or
- (x) equipment designed exclusively for drilling or driving piles and casings;
- (c) “hydraulic mobile crane” means any device or structure that
 - (i) incorporates a hydraulic driven drum and cable or rope used for raising, lowering or moving material,
 - (ii) is equipped with a telescoping boom capable of moving in the vertical plane,
 - (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility,

- (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater, and
- (v) may incorporate a ring assembly or a strand jacking system for hoisting;
- (d) “lattice boom mobile crane” means any device or structure that
 - (i) incorporates a friction or hydraulic driven drum and cable or rope used for raising, lowering or moving material,
 - (ii) is equipped with a lattice boom capable of moving in the vertical plane,
 - (iii) is mounted on a pedestal, base or chassis, either crawler, trailer or wheel mounted, to provide mobility, and
 - (iv) has a lifting capacity of 15 tons (13.6 tonnes) or greater;
- (e) “lifting capacity” means the highest capacity at the shortest lifting radius, as defined by the load chart installed on the mobile crane, tower crane, boom truck or wellhead boom truck;
- (f) “mobile crane” means
 - (i) a hydraulic mobile crane or a lattice boom mobile crane, and
 - (ii) a boom truck or a wellhead boom truck that has a lifting capacity greater than 65 tons (59 tonnes);
- (g) “routine maintenance” means the maintenance activities recommended by the manufacturer for the crane or hoisting equipment in question;
- (h) “testing” means a procedure, used in the course of normal operation only, to determine that the crane or hoisting equipment in question is functioning, and does not include routine maintenance or repair activities;
- (i) “tower crane” means any mechanical device or structure that
 - (i) is designed to incorporate a power driven drum and cable or rope and a vertical mast or tower and a jib,

- (ii) is of the travelling, fixed, climbing or self-erecting type, and
- (iii) is used exclusively for raising, lowering or moving material;
- (j) “undertakings of the branch of the designated trade” means the operation, testing and routine maintenance of wellhead boom trucks but does not include the installation or repair of crane and hoisting equipment by persons other than the operators of crane and hoisting equipment;
- (k) “wellhead boom truck” means a boom truck that is used for one or more of the following:
 - (i) wellhead pumping operations;
 - (ii) wireline operations;
 - (iii) perforating operations;
 - (iv) coiled tubing operations;
 - (v) snubbing operations;
 - (vi) the rig up and rig out of slant service rigs.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the wellhead boom truck operator branch of the designated trade of crane and hoisting equipment operator:

- (a) operating, testing and performing routine maintenance of wellhead boom trucks;
- (b) using hand tools, power tools and specialized equipment while maintaining wellhead boom trucks and related equipment;
- (c) recognizing and identifying malfunctions relating to wellhead boom trucks and related equipment and the proper procedures to be applied when recognizing and identifying such malfunctions;
- (d) recognizing and identifying conditions that are potentially hazardous to safe machine operation;
- (e) interpreting and applying visual and audio communications;
- (f) communicating with management, signallers and riggers using visual and audio systems;

- (g) inspecting and maintaining wellhead boom trucks and related equipment to determine that the crane or hoisting equipment in question is functioning, excluding routine maintenance or repair activities;
- (h) performing rigging related to the designated trade;
- (i) carrying out pre-lift planning and pre-lift tasks when preparing for lifts.

Classes of individuals

40 Only the following classes of individuals may perform a restricted activity within the wellhead boom truck operator branch of the designated trade of crane and hoisting equipment operator:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the boom truck operator branch of the designated trade;
 - (iii) the mobile crane operator branch of the designated trade;
 - (iv) the boom truck craft of the designated trade granted before September 1, 2018;
 - (v) the conventional mobile crane craft of the designated trade granted before September 1, 2018;
 - (vi) the hydraulic mobile crane craft of the designated trade granted before September 1, 2018;
 - (vii) the mobile crane branch of the designated trade granted before September 1, 2018;
 - (viii) the wellhead boom truck craft of the designated trade granted before September 1, 2018;
- (b) subject to the original conditions set out in the identification card, any individual who, on September 1, 2018, held an identification card in respect of an approved training program under the *Boom Truck Operator Exception Regulation* (AR 87/2002);
- (c) any individual who holds an endorsement in the mobile crane operator branch of the designated trade;

- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the mobile crane operator branch or boom truck operator branch of the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the mobile crane operator branch or boom truck operator branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the mobile crane operator branch or boom truck operator branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (g) any individual who is registered in a student work training program in the branch of the designated trade or the mobile crane operator branch or boom truck operator branch of the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the mobile crane operator branch or boom truck operator branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by

the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual

- (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
- (B) has completed the training in respect of the restricted activity.

Electric Motor Systems Technician

Restricted Activities

41(1) In this section,

- (a) “electrical machines, systems and equipment” means the following:
 - (i) electrical measuring devices;
 - (ii) electrical machine components;
 - (iii) all types of electro-mechanical equipment whether or not it is
 - (A) gear driven,
 - (B) belt driven, or
 - (C) direct coupled;
 - (iv) electrical switching circuits;
 - (v) electrical fans, blowers and pumps;
 - (vi) transformers;
 - (vii) single phase motors;
 - (viii) magnetic switches and control circuits;
 - (ix) phase converters;
 - (x) three phase motors, starters and controllers;
 - (xi) synchronous machines;
 - (xii) industrial electronic controls;
 - (xiii) electric welders;

- (xiv) eddy current clutches, couplings and brakes;
- (xv) inverter and vector drives;
- (xvi) static and dynamic balancing;
- (xvii) programmable controllers;
- (b) “undertakings of the designated trade” means the repair, installation, replacement, modification and testing of electrical machines, systems and equipment.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of electric motor systems technician:

- (a) installing electrical machines, systems and equipment;
- (b) repairing, replacing, modifying and testing of electrical machines, systems and equipment;
- (c) testing, repairing and reconditioning electric machines, motors and generators and AC and DC welders;
- (d) modifying motors, including windings, electrical connections and bearings;
- (e) rigging and hoisting related to the designated trade;
- (f) performing power measurement;
- (g) reconditioning and repairing motor-generator sets;
- (h) reconditioning and repairing transformers;
- (i) reconditioning and repairing electrical control components;
- (j) manufacturing, testing and repairing electrical control panels;
- (k) disconnecting, servicing and reconnecting electrical fans, blowers, pumps or electrical devices from existing consumer power supplies;
- (l) examining, testing and lubricating mechanical components of motors and generators;
- (m) examining, testing and checking the operation of electrical components of motors, generators, transformers and control equipment;

- (n) determining the need, extent and type of repairs required and preparing reports for time and costs estimations;
- (o) examining, servicing and aligning or replacing couplings;
- (p) performing predictive and preventative maintenance services;
- (q) examining, servicing or replacing bearings, seals and gaskets;
- (r) repairing or replacing stators and motor windings in AC and DC motors and generators and welders;
- (s) repairing, replacing or reconditioning commutators and slip ring assemblies;
- (t) assembling and testing motors and generators for correct operation;
- (u) examining and testing controls and indicating instruments to determine the nature and extent of repairs required;
- (v) repairing or replacing control components and indicating instruments;
- (w) performing minor tune-ups of gasoline engines used for generator and welder drives;
- (x) inspecting and testing to establish condition of transformers;
- (y) removing transformer cores and coils from transformer housings;
- (z) repairing damaged insulators and insulating material in respect of transformers;
- (aa) repairing and replacing coil connections in respect of transformers;
- (bb) removing and rewinding primary windings and installing primary windings;
- (cc) removing and rewinding secondary windings and installing secondary windings;
- (dd) repairing or replacing tap changing switches;
- (ee) checking and repairing transformer cores;
- (ff) repairing transformer housings;

- (gg) testing, removing and replacing transformer oil;
- (hh) assembling transformers and placing in transformer housings;
- (ii) inspecting and testing condition of control components, including relays, solenoids, contactors and similar components;
- (jj) dismantling, repairing and rewinding components and assembling and testing for correct operation;
- (kk) interpreting and evaluating customers' requirements, drawings and specifications;
- (ll) preparing and laying out materials for and manufacturing and assembling enclosures and panels;
- (mm) determining locations of components and installing and wiring the components in enclosures and panels;
- (nn) testing control panels for correct operation according to drawings and specifications;
- (oo) inspecting control panels for damage and faulty components;
- (pp) repairing and verifying certification of electrical equipment and components used in hazardous locations;
- (qq) painting and refinishing electrical apparatus.

Classes of individuals

42 Only the following classes of individuals may perform a restricted activity within the designated trade of electric motor systems technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;

- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual;
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Electrician**Restricted activities****43(1)** In this section,

- (a) “electrical system” means any type of residential, commercial, institutional or industrial building or structural electrical system and includes the following:
 - (i) fire alarm systems;
 - (ii) signal systems;
 - (iii) control systems;
 - (iv) lighting systems;
 - (v) heating and cooling systems;
 - (vi) systems providing power;
 - (vii) data systems;
 - (viii) communication systems;
 - (ix) fibre optic systems;
 - (x) lightning protection systems;
 - (xi) cathodic protection systems;
 - (xii) grounding and bonding systems;
- (b) “external electrical circuit” means the components of an impressed current cathodic protection system that are down line of the rectifier;
- (c) “impressed current cathodic protection system” means an electrical system that reduces the corrosion of a metal surface by making the metal surface into the cathode of an electrochemical cell by means of direct current supplied by a power source;
- (d) “rectifier” means the component of an impressed current cathodic protection system that starts with the input terminal of the internal breaker and includes all wiring, connections and components up to and including the output terminals and the enclosure;
- (e) “undertakings of the designated trade” means the installation, alteration, repair, inspection, verification,

commissioning, maintenance and operation of electrical systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of electrician:

- (a) interpreting electrical industry codes, including the CSA Standard C22.1, *Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations* declared in force, as amended or replaced from time to time, by the *Electrical Code Regulation* (AR 209/2006);
- (b) erecting, assembling, removing, repairing, replacing and using scaffolding, handling devices, hoists, slings, ropes, rigging equipment and related hardware;
- (c) using hand tools, power tools, testing equipment and specialty tools required by the designated trade;
- (d) preparing holes and openings for conductors, cables, raceways, boxes and fittings, fasteners and devices and making panel backboards, box supports and similar items;
- (e) selecting and specifying location and planning layout of electrical systems, components and controls from drawings, specifications, contract documents and related information;
- (f) scheduling labour and material requirements for electrical work;
- (g) testing electrical and electronic equipment and components for continuity, current, voltage and resistance;
- (h) installing, repairing, examining, operating, removing, replacing, altering, maintaining, connecting, testing, energizing and cleaning the following:
 - (i) electric surface or flush mounted receptacles, junction, outlet and device boxes and components;
 - (ii) feeder and distribution busways and busducts;
 - (iii) lighting fixtures and related electrical equipment and components;
 - (iv) dry cell and storage batteries and storage battery systems;

- (v) consumer's service entrance distribution and metering equipment for connection to overhead and underground supply;
- (vi) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution;
- (vii) power transformers, regulators, capacitors, phase converters and reactors;
- (viii) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls;
- (ix) alternating current to direct current conversion devices and power inverters for conversion of direct current to alternating current;
- (x) electrical appliances, electrical heating, solar heating, ventilation and air conditioning units, components and controls;
- (xi) oil, gas, coal, electric or wood burner control systems, or any combination of them, and associated wiring;
- (xii) infra-red heating units and other types of infra-red units, controls and components;
- (xiii) fire alarm systems;
- (xiv) security systems, intrusion alarms, access control, card key lock systems or similar equipment;
- (xv) clock systems, including self-correcting or synchronized master-slave equipment and programmable time devices for signals, energy management, lighting control and similar installations;
- (xvi) sound and visual communications systems;
- (xvii) fibre optic systems and components;
- (xviii) electronic devices, discrete devices, manual or automatic devices, control devices, limit switches, pilot or sensing devices, signal devices, circuits and indication lamps, panels or similar equipment and components;

- (xix) relay, static logic or programmable control components and systems;
- (xx) servo-mechanisms and associated circuitry, robotic systems and numerically controlled and computerized numerically controlled systems;
- (xxi) electric motors, generators, controls, other electromechanical devices and auxiliary equipment;
- (xxii) motor starters, motor speed controllers and braking systems, direct current solid state drives, alternating current adjustable frequency drives, magnetic drive assemblies and controls;
- (xxiii) recording instruments and metering instruments;
- (xxiv) grid-connected solar photovoltaic systems, including systems using storage;
- (xxv) grid-isolated solar photovoltaic systems;
- (i) installing, repairing, examining, removing, replacing, altering, maintaining, terminating, splicing, connecting, testing, energizing and cleaning the following:
 - (i) cable assemblies;
 - (ii) underground and overhead wiring installations;
 - (iii) high voltage conductors, cables, terminations and insulation materials;
 - (iv) lighting fixtures and related electrical equipment and components;
 - (v) dry cell and storage batteries and storage battery systems;
 - (vi) electric heat tracing cable assemblies and controls;
- (j) installing, repairing, examining, removing, replacing, altering, maintaining, connecting, testing and cleaning the following:
 - (i) raceway systems, including fittings;
 - (ii) mechanical supports and protection for electrical systems;
 - (iii) grounding and bonding systems;

- (k) terminating and splicing the following:
 - (i) feeder and distribution busways and busducts;
 - (ii) fibre optic systems and components;
- (l) terminating the following:
 - (i) electric surface or flush mounted receptacles, junction, outlet and device boxes and components;
 - (ii) lighting fixtures and related electrical equipment and components;
 - (iii) dry cell and storage batteries and storage battery systems;
 - (iv) consumer's service entrance distribution and metering equipment for connection to overhead and underground supply;
 - (v) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution;
- (m) programming and calibrating the following:
 - (i) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls;
 - (ii) relay, static logic or programmable control components and systems;
 - (iii) servo-mechanisms and associated circuitry, robotic systems and numerically controlled and computerized numerically controlled systems;
- (n) calibrating the following:
 - (i) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution;
 - (ii) electrical heating, solar heating, ventilation and air conditioning units, components and controls;
 - (iii) oil, gas, coal, electric or wood burner control systems, or any combination of them, and associated wiring;

- (iv) electric motors, generators, controls, other electromechanical devices and auxiliary equipment;
- (v) motor starters, motor speed controllers and braking systems, direct current solid state drives, alternating current adjustable frequency drives, magnetic drive assemblies and controls;
- (vi) recording instruments;
- (o) lubricating the following:
 - (i) loadcentres, panelboards, fused switch and breaker assemblies, switchboards, switchgear, protective relays, associated circuitry and other devices for power distribution;
 - (ii) generator sets, including auto start and transfer systems for standby use and synchronized systems and their controls;
 - (iii) electric motors, generators, controls, other electromechanical devices and auxiliary equipment.

(3) For greater certainty, the following activities are not restricted activities within the designated trade of electrician:

- (a) installing, commissioning, monitoring, evaluating, maintaining, repairing and decommissioning the external electrical circuit portion of an impressed current cathodic protection system;
- (b) troubleshooting and replacing components of a rectifier that is not installed.

Classes of individuals

44(1) In this section,

- (a) “Canadian Electrical Code” means the CSA Standard C22.1, *Canadian Electrical Code, Part 1, Safety Standard for Electrical Installations* declared in force, as amended or replaced from time to time, by the *Electrical Code Regulation* (AR 209/2006);
- (b) “disconnecting means” means a disconnecting means as defined in the Canadian Electrical Code;
- (c) “impressed current cathodic protection system” means an electrical system, as defined in section 43, that reduces the corrosion of a metal surface by making the metal surface

into the cathode of an electrochemical cell by means of direct current supplied by a power source;

- (d) “installed” means a state of being physically connected to a power source;
- (e) “locked out and tagged out” means a state in which the power source has been securely de energized in accordance with industry practice;
- (f) “rectifier” means the component of an impressed current cathodic protection system that starts with the input terminal of the internal breaker and includes all wiring, connections and components up to and including the output terminals and the enclosure;
- (g) “VAC” means volts of alternating current.

(2) Only the following classes of individuals may perform a restricted activity within the designated trade of electrician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and*

Industry Training Programs Regulation in the designated trade;

- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journey person Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and

ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity;
- (m) any individual who is performing the following restricted activities in respect of the installation, commissioning, maintenance and repair on impressed current cathodic protection systems if the individual holds a trade certificate in the designated trade of cathodic protection technician:
 - (i) with respect to a rectifier that is installed,
 - (A) taking output readings and making output adjustments,
 - (B) connecting and disconnecting the output terminations of the rectifier,
 - (C) troubleshooting,
 - (D) installing and removing current interrupters,
 - (E) measuring input voltage
 - (I) if the rectifier has a disconnecting means installed in compliance with the Canadian Electrical Code, up to a maximum of 600 VAC, and

(II) in any other case, up to a maximum of 240 VAC,

and

(F) performing commissioning;

(ii) with respect to a rectifier that is locked out and tagged out, replacing rectifier components and performing decommissioning checks.

(3) For greater certainty, only the classes of individuals set out in subsection (2)(a) to (l) may install or uninstall the power source wiring to a rectifier.

Elevator Constructor

Restricted activities

45(1) In this section,

(a) “elevator system” includes the following:

- (i) electric elevators;
- (ii) hydraulic elevators;
- (iii) escalators;
- (iv) workers’ passenger hoists or lifts;
- (v) dumbwaiters;
- (vi) hand operated elevators;
- (vii) parking garage elevators;
- (viii) moving walkways;
- (ix) stagelifts;
- (x) lifts for persons with physical disabilities;
- (xi) residential elevators;
- (xii) elevator entrances;
- (xiii) elevator doors and door operating equipment;
- (xiv) electrical wiring and conduits from controllers to
 - (A) signals,

- (B) operating circuits, and
- (C) remote panels or signals;
- (xv) fireman service;
- (xvi) signal, lighting and control systems;
- (xvii) piping relative to hydraulic elevators;
- (b) “undertakings of the designated trade” means the following:
 - (i) the installation, removal, alteration, repair, modification and maintenance of elevator systems and
 - (A) motors, drives and motor controllers, and
 - (B) emergency power systems and security systems associated with elevator systems;
 - (ii) the operation of temporary and incomplete elevator systems;
 - (iii) the testing of elevator systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of elevator constructor:

- (a) installing, removing, altering, repairing, modifying and maintaining elevator systems and
 - (i) motors, drives and motor controllers, and
 - (ii) emergency power systems and security systems associated with elevator systems;
- (b) operating temporary and incomplete elevator systems;
- (c) testing elevator systems;
- (d) using hand tools, power tools, testing equipment and specialty tools required by the designated trade;
- (e) applying elevator, electrical and mechanical theory to the carrying out of the restricted activities set out in this section;

- (f) drawing, pulling, terminating and testing of conductors or cables into controller or panel systems pertaining to elevators or escalators;
- (g) installing and laying out hoistways, raceways, conduits, cable trays or troughs, wireways and fittings in elevator systems;
- (h) installing, troubleshooting, testing and laying out controllers and remote panels in elevator systems;
- (i) interpreting electrical and mechanical drawings and prints;
- (j) interpreting safety codes for elevators, escalators, dumbwaiters, moving walks and freight platform lifts;
- (k) coordinating elevator work with other construction trades;
- (l) installing all rail guides, beams, sheaves, templates, overhead work and all material used for mounting elevator systems in the machine room or below the machine room;
- (m) installing scaffolding for the erection of elevator systems;
- (n) installing and assembling elevator cabs and panels;
- (o) welding, drilling and rigging;
- (p) handling and hoisting elevator and escalator material.

Classes of individuals

46 Only the following classes of individuals may perform a restricted activity within the designated trade of elevator constructor:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (c) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the

supervision of an individual who holds a trade certificate in the designated trade;

- (d) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who is registered in a student work training program in the designated trade;
- (f) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (h) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (i) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (j) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (k) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Floorcovering Installer

Restricted activities

47(1) In this section,

- (a) “floorcovering” means resilient floorcoverings, carpets and cushion and other types of underlayments and includes the following:
 - (i) linoleum;

- (ii) inlaid sheet vinyls;
- (iii) roto vinyls;
- (iv) tiles;
- (v) solid polyvinyl chloride;
- (vi) prefinished hardwood flooring;
- (vii) laminate flooring;
- (viii) accessories used in respect of floorcoverings;
- (b) “undertakings of the designated trade” means the preparation of floors and the lay out, fitting, installation, service, maintenance and repair of floorcoverings and accessories.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of floorcovering installer:

- (a) preparing of floors;
- (b) laying out, fitting and installing floorcoverings and accessories;
- (c) servicing, maintaining and repairing floorcoverings and accessories;
- (d) using detailed drawings, blueprints and other specifications;
- (e) using hand tools and power tools to perform the restricted activities set out in this section;
- (f) using shop equipment, including air tools, floor grinders, sanders, polishers, table saws, miter saws, power stretchers and explosive actuated tools;
- (g) conducting moisture tests;
- (h) using any new innovative technological changes in the designated trade that relate to materials or methods of construction.

Classes of individuals

48 Only the following classes of individuals may perform a restricted activity within the designated trade of floorcovering installer:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated

trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or

- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Gasfitter — Gasfitter (Class A) Branch

Restricted activities

49(1) In this section,

- (a) “A gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance regardless of the BTU rating of the gas appliance, and the associated piping, fittings, air supply and venting, and includes the following:
 - (i) low and high pressure natural gas supply systems;
 - (ii) low and high pressure propane gas supply systems;
 - (iii) gas fired appliances and equipment;
 - (iv) natural draft ventilation systems;
 - (v) power assisted ventilation systems;
 - (vi) propane and natural gas dispensing systems;
 - (vii) propane bulk storage systems;
- (b) “B gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance that does not exceed a rating of 400 000 BTUs, and the associated piping, fittings, air supply and venting, and includes the following:
 - (i) low and high pressure natural gas supply systems;
 - (ii) low and high pressure propane gas supply systems;
 - (iii) gas fired appliances and equipment;
 - (iv) natural draft ventilation systems;

- (v) power assisted ventilation systems;
- (vi) propane and natural gas dispensing systems;
- (vii) propane bulk storage systems;
- (c) “undertakings of the branch of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance, repair and replacement of A gas systems and B gas systems.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the gasfitter (class A) branch of the designated trade of gasfitter:

- (a) fabricating and installing A and B gas systems;
- (b) altering, adjusting and maintaining A and B gas systems;
- (c) repairing and replacing A and B gas systems;
- (d) determining, from prints and specifications, matters concerning location, size and material required in respect of A and B gas systems;
- (e) compiling material breakdown and takeoff;
- (f) identifying and using tools and special equipment that are used to carry out restricted activities in the designated trade;
- (g) applying codes to installation and maintenance requirements;
- (h) rigging equipment and piping components;
- (i) installing and maintaining appliances, controls, equipment, piping and hangers;
- (j) examining and testing gas systems.

Classes of individuals

50 Only the following classes of individuals may perform a restricted activity within the gasfitter (class A) branch of the designated trade of gasfitter:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;

- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the

other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Gasfitter — Gasfitter (Class B) Branch

Restricted activities

51(1) In this section,

- (a) “B gas system” means any kind of residential, commercial or industrial gas system, including any gas appliance that does not exceed a rating of 400 000 BTUs, and the associated piping, fittings, air supply and venting, and includes the following:
- (i) low and high pressure natural gas supply systems;
 - (ii) low and high pressure propane gas supply systems;
 - (iii) gas fired appliances and equipment;
 - (iv) natural draft ventilation systems;
 - (v) power assisted ventilation systems;
 - (vi) propane and natural gas dispensing systems;
 - (vii) propane bulk storage systems;
- (b) “undertakings of the branch of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance, repair and replacement of B gas systems.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the gasfitter (class B) branch of the designated trade of gasfitter:

- (a) fabricating and installing B gas systems;
- (b) altering, adjusting and maintaining B gas systems;
- (c) repairing and replacing B gas systems;
- (d) determining, from prints and specifications, matters concerning location, size and material required in respect of B gas systems;
- (e) coupling material breakdown and takeoff;

- (f) identifying and using tools and special equipment that are used to carry out restricted activities in the designated trade;
- (g) applying codes to installation and maintenance requirements;
- (h) rigging equipment and piping components;
- (i) installing and maintaining appliances, controls, equipment, piping and hangers;
- (j) examining and testing gas systems.

Classes of individuals

52 Only the following classes of individuals may perform a restricted activity within the gasfitter (class B) branch of the designated trade of gasfitter:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the gasfitter (class A) branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade or the gasfitter (class A) branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade, the gasfitter (class A) branch of the designated trade, the designated trade of plumber or the designated trade of sheet metal worker;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the gasfitter (class A) branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade, the gasfitter (class A) branch of the

designated trade, the designated trade of plumber or the designated trade of sheet metal worker if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade, the gasfitter (class A) branch of the designated trade, the designated trade of plumber or the designated trade of sheet metal worker;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the gasfitter (class A) branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Glazier

Restricted activities

53(1) In this section,

- (a) “glass” means any type of commercial, residential, decorative or auto glass or related material and includes
 - (i) curtain walls,

- (ii) skylites and sloped glazing,
 - (iii) frames and doors,
 - (iv) automatic doors,
 - (v) manual doors, and
 - (vi) mirrors;
- (b) “undertakings of the designated trade” means the following:
- (i) the glazing, setting, attachment, installation and removal of all types of glass on buildings, fixtures and other uses;
 - (ii) the installation, fitting, fabrication and attachment of architectural metals or related products for all types of buildings;
 - (iii) the cutting, preparation, fabrication or any other handling of glass for buildings, fixtures and other uses.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of glazier:

- (a) diagnosing problems and making repairs related to glazing;
- (b) carrying out damaged lite removal procedures and installing and sealing new components;
- (c) storing and handling glass;
- (d) preparing and fabricating glass to specifications;
- (e) selecting, cutting and fitting glass;
- (f) cutting, etching and installing mirrors;
- (g) installing glass into window frames;
- (h) installing and renovating residential windows, tub enclosures, shower doors and related products;
- (i) interpreting drawings and specifications;

- (j) preparing, fabricating, installing and maintaining aluminum and glass doors, windows, storefronts, screens and associated hardware;
- (k) fabricating and installing curtain walls;
- (l) fabricating and installing skylites, sloped glazing, barrel vaults, solariums and other support structures;
- (m) preparing and installing building envelope materials and sealants;
- (n) installing structural glass, balustrades, handrails and smoke baffles;
- (o) installing and maintaining automatic and revolving doors;
- (p) operating hand and power operated equipment that is used in the designated trade.

Classes of individuals

54 Only the following classes of individuals may perform a restricted activity within the designated trade of glazier:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;

- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described

in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Hairstylist — Barber Branch

Restricted activities

55(1) In this section,

- (a) “hair” means the hair on a human head and includes
 - (i) beards,
 - (ii) mustaches,
 - (iii) wigs, and
 - (iv) hairpieces;

- (b) “undertakings of the branch of the designated trade” means the cutting, shaving and trimming of hair.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the barber branch of the designated trade of hairstylist:

- (a) cutting, shaving and trimming of hair;
- (b) using hand and power-operated equipment in respect of hair;
- (c) testing and analyzing the hair and scalp for treatment;
- (d) using hand manipulation in respect of scalp treatments.

Classes of individuals

56 Only the following classes of individuals may perform a restricted activity within the barber branch of the designated trade of hairstylist:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the hairstylist branch of the designated trade;
- (b) any individual who holds an endorsement in the hairstylist branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the hairstylist branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the hairstylist branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the hairstylist branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the

individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade or the hairstylist branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the hairstylist branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Hairstylist — Hairstylist Branch

Restricted activities

57(1) In this section,

- (a) “hair” means the hair on a human head and includes
 - (i) beards,
 - (ii) mustaches,
 - (iii) wigs, and
 - (iv) hairpieces;

- (b) “undertakings of the branch of the designated trade” means the following:
 - (i) the cutting, shaving and trimming of hair;
 - (ii) the waving, curling and straightening of hair;
 - (iii) altering the natural colour of hair;
 - (iv) the styling of hair;
 - (v) facial and scalp treatment and massage;
 - (vi) the servicing of wigs and hairpieces.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the hairstylist branch of the designated trade of hairstylist:

- (a) cutting, shaving and trimming of hair;
- (b) waving, curling and straightening of hair;
- (c) altering the natural colour of hair;
- (d) styling of hair;
- (e) performing facial and scalp treatment and massage;
- (f) servicing of wigs and hairpieces;
- (g) using hand and power-operated equipment in respect of hair;
- (h) using rinses, tints, bleaches, heat and chemicals in respect of hair;
- (i) testing and analyzing the hair and scalp for treatment;
- (j) using hand manipulation in respect of scalp treatments;
- (k) applying make-up.

Classes of individuals

58 Only the following classes of individuals may perform a restricted activity within the hairstylist branch of the designated trade of hairstylist:

- (a) any individual who holds a trade certificate in the branch of the designated trade;

- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the

other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Heavy Equipment Technician — Heavy Duty Equipment Mechanic (Off Road) Branch

Restricted activities

59(1) In this section,

- (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments;
- (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk goods;
- (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include
 - (i) transport trailer bodies, or
 - (ii) mobile refrigeration and heating equipment as defined in section 123;
- (d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of off-road equipment and transport trailers.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the heavy duty equipment mechanic (off road) branch of the designated trade of heavy equipment technician:

- (a) maintaining, replacing components, diagnosing problems and repairing off-road equipment and transport trailers;
- (b) selecting, inspecting, using and maintaining various shop equipment and tools;
- (c) retrieving and inputting applicable information using service-related computer software programs;
- (d) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories;

- (e) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles;
- (f) inspecting, maintaining, diagnosing and repairing electrical system components and circuits;
- (g) inspecting, maintaining, diagnosing and repairing hydraulic and hydrostatic systems and components;
- (h) inspecting, maintaining, diagnosing and repairing air systems and components;
- (i) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components;
- (j) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures, wheels, undercarriages, cabs and accessories, heating and air conditioning systems, canopies and protective structures;
- (k) inspecting, maintaining, diagnosing and repairing attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings;
- (l) with respect to preventive maintenance, operational safety and equipment economy,
 - (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance,
 - (ii) identifying unsafe operating practices, and
 - (iii) communicating
 - (A) advice on maintenance to be performed,
 - (B) maintenance safety precautions,
 - (C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and
 - (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.

Classes of individuals

60 Only the following classes of individuals may perform a restricted activity within the heavy duty equipment mechanic (off road) branch of the designated trade of heavy equipment technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the branch of the designated trade or the heavy equipment technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the heavy equipment technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator

under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the heavy equipment technician branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Heavy Equipment Technician — Heavy Equipment Technician Branch

Restricted activities

61(1) In this section,

- (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments;
- (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk goods;
- (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include
 - (i) transport trailer bodies, or
 - (ii) mobile refrigeration and heating equipment as defined in section 123;
- (d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of off-road equipment, on-road equipment and transport trailers.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the heavy equipment technician branch of the designated trade of heavy equipment technician:

- (a) maintaining, diagnosing problems and repairing off-road equipment, on-road equipment and transport trailers;
- (b) replacing components on off-road equipment, on-road equipment and transport trailers;
- (c) selecting, inspecting, using and maintaining various shop equipment and tools;
- (d) retrieving and inputting applicable information using service-related computer software programs;
- (e) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories;
- (f) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles;
- (g) inspecting, maintaining, diagnosing and repairing electrical system components and circuits;
- (h) inspecting, maintaining, diagnosing and repairing hydraulic and hydrostatic systems and components;
- (i) inspecting, maintaining, diagnosing and repairing air systems and components;
- (j) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components;
- (k) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures, wheels, undercarriages, cabs and accessories, heating and air conditioning systems, canopies and protective structures;
- (l) inspecting, maintaining, diagnosing and repairing attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings;
- (m) with respect to preventive maintenance, operational safety and equipment economy,

- (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance,
- (ii) identifying unsafe operating practices, and
- (iii) communicating
 - (A) advice on maintenance to be performed,
 - (B) maintenance safety precautions,
 - (C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and
 - (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.

Classes of individuals

62 Only the following classes of individuals may perform a restricted activity within the heavy equipment technician branch of the designated trade of heavy equipment technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (c) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (d) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply

to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (e) any individual who is registered in a student work training program in the branch of the designated trade;
- (f) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (g) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (h) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (i) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (j) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or

- (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (k) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Heavy Equipment Technician — Transport Trailer Mechanic Branch

Restricted activities

63(1) In this section,

- (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments;
- (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk goods;
- (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include
 - (i) transport trailer bodies, or

(ii) mobile refrigeration and heating equipment as defined in section 123;

(d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of transport trailers.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the transport trailer mechanic branch of the designated trade of heavy equipment technician:

- (a) maintaining, diagnosing problems and repairing transport trailers;
- (b) replacing components on transport trailers;
- (c) retrieving and inputting applicable information using service-related computer software programs;
- (d) inspecting, maintaining, diagnosing and repairing
 - (i) suspensions, undercarriages and frames,
 - (ii) braking systems,
 - (iii) trailer couplers and hitches,
 - (iv) landing gear,
 - (v) electrical systems, and
 - (vi) hydraulic systems.

Classes of individuals

64 Only the following classes of individuals may perform a restricted activity within the transport trailer mechanic branch of the designated trade of heavy equipment technician:

- (a) any individual who holds a trade certificate in any branch of the designated trade;
- (b) any individual who holds an endorsement in the truck and transport mechanic branch or the heavy duty equipment mechanic (off road) branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in any branch of the designated trade;

- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in any branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in any branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in any branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in any branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

**Heavy Equipment Technician —
Truck and Transport Mechanic Branch****Restricted activities****65(1)** In this section,

- (a) “off-road equipment” means industrial vehicles, engines, equipment and attachments;
- (b) “on-road equipment” means on-highway truck and transport vehicles designed primarily for commercial use or for hauling bulk goods;
- (c) “transport trailer” means a commercial transport device connected to or moved by on-road or off-road equipment and does not include
 - (i) transport trailer bodies, or
 - (ii) mobile refrigeration and heating equipment as defined in section 123;
- (d) “undertakings of the branch of the designated trade” means the maintenance, component replacement, diagnosis and repair of on-road equipment and transport trailers.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the truck and transport mechanic branch of the designated trade of heavy equipment technician:

- (a) maintaining, diagnosing problems and repairing on-road equipment and transport trailers;
- (b) replacing components on-road equipment and transport trailers;
- (c) selecting, inspecting, using and maintaining various shop equipment and tools;
- (d) retrieving and inputting applicable information using service-related computer software programs;
- (e) inspecting, maintaining, diagnosing and repairing internal combustion engines and engine auxiliary systems and accessories;
- (f) inspecting, maintaining, diagnosing and repairing power trains, clutches, fluid drives, transmissions, transfer

- drives, drive lines, differentials, final drives and steering clutches and axles;
- (g) inspecting, maintaining, diagnosing and repairing electrical system components and circuits;
 - (h) inspecting, maintaining, diagnosing and repairing hydraulic systems and components;
 - (i) inspecting, maintaining, diagnosing and repairing air systems and components;
 - (j) inspecting, maintaining, diagnosing and repairing steering, braking and suspension systems and components;
 - (k) inspecting, maintaining, diagnosing and repairing frames, chassis, supporting structures and components;
 - (l) inspecting, maintaining, diagnosing and repairing attachments and working tools, structural members, cables, hooks and slings;
 - (m) with respect to preventive maintenance, operational safety and equipment economy,
 - (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance,
 - (ii) identifying unsafe operating practices, and
 - (iii) communicating
 - (A) advice on maintenance to be performed,
 - (B) maintenance safety precautions,
 - (C) correct procedures for equipment inspections, operation, towing, loading, hauling, parking and storage, and
 - (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.

Classes of individuals

66 Only the following classes of individuals may perform a restricted activity within the truck and transport mechanic branch of the designated trade of heavy equipment technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the heavy equipment technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the heavy equipment technician branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade or the heavy equipment technician branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the heavy equipment technician branch of the

designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Industrial Mechanic (Millwright)

Restricted activities

67(1) In this section,

- (a) “stationary rotating equipment” means any type of plant, industrial machinery or mechanical equipment and includes the following:
 - (i) stationary and industrial engines;
 - (ii) steam and gas turbines;
 - (iii) pumps;
 - (iv) heat exchangers;
 - (v) conveyor systems;
 - (vi) gears and speed changers;
 - (vii) mining equipment;
 - (viii) logging equipment;
 - (ix) compressors;
 - (x) fluid power systems;
 - (xi) air blowers and vacuum pumps and fans;
 - (xii) gas and air dryers;
 - (xiii) refrigeration;

- (xiv) power transmissions;
- (xv) couplings and clutches;
- (xvi) prime movers;
- (b) “undertakings of the designated trade” means the following:
 - (i) the installation, maintenance, repair, removal and replacement of stationary rotating equipment;
 - (ii) the diagnosis of problems relating to stationary rotating equipment.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of industrial mechanic (millwright):

- (a) installing, maintaining, repairing, removing and replacing stationary rotating equipment;
- (b) dismantling, assembling and repairing parts and components in stationary rotating equipment;
- (c) removing and installing electric motors, excluding the electrical disconnecting or hookup of electric motors;
- (d) diagnosing problems relating to stationary rotating equipment;
- (e) fitting, aligning and testing parts and components in stationary rotating equipment;
- (f) condition monitoring, vibration analysis and laser alignment of stationary rotating equipment;
- (g) fitting bearings, aligning gears and shafts, attaching motors and connecting couplings and belts in relation to stationary rotating equipment;
- (h) using hand, power and other tools of the designated trade while working on stationary rotating equipment;
- (i) interpreting drawings and plans and laying out and developing projects according to specifications;
- (j) using precision instruments to measure, assemble and fit complex plant or industrial machinery or other related equipment;

- (k) setting up and operating standard machine tools, including saws, drill presses, lathes and milling machines, and their attachments, to facilitate the efficient completion of the assembly and repair of stationary rotating equipment;
- (l) using measuring and testing instruments and devices in relation to stationary rotating equipment;
- (m) using rigging equipment in relation to stationary rotating equipment;
- (n) heating and cutting with oxyfuel equipment;
- (o) tack welding with welding equipment.

Classes of individuals

68 Only the following classes of individuals may perform a restricted activity within the designated trade of industrial mechanic (millwright):

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated

trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Instrumentation and Control Technician

Restricted activities

69(1) In this section,

- (a) “instrument” means any type of industrial, commercial or domestic instrumentation and includes the following:
 - (i) temperature, pressure, flow, analytical and level indicators, recorders, controllers and sensors;
 - (ii) density indicators and sensors;
 - (iii) weight indicators and sensors;
 - (iv) viscosity and consistency indicators and sensors;

- (v) pH indicators and sensors;
- (vi) oxidation reduction potential indicators and sensors;
- (vii) oxygen analysis equipment;
- (viii) gas analyzers;
- (ix) turbidity and smoke density analyzers;
- (x) moisture and humidity sensing and indicating systems;
- (xi) electrical conductivity sensing and indicating systems;
- (xii) sensors and indicators for measurement of speed, position, proximity and time;
- (xiii) gas and liquid chromatographs;
- (xiv) spectrophotometer analyzers;
- (xv) spectrometers;
- (xvi) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic control devices and systems;
- (xvii) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic transmitters;
- (xviii) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic transducers;
- (xix) pneumatic, fluidic, robotic, fibre-optic, hydraulic and electronic recorders;
- (xx) digital to analog and analog to digital converters;
- (xxi) data acquisition systems, telemetric systems, supervisory control and data acquisition (SCADA) systems, programmable logic controller systems and distributed control and display systems;
- (xxii) monitoring devices and alarm systems;
- (xxiii) valve positioners;
- (xxiv) electrical and pneumatic valve actuators;
- (xxv) control valves and final control elements;

- (xxvi) vibration sensing systems;
- (xxvii) ultra-violet and infra-red fire detection systems;
- (b) “undertakings of the designated trade” means the installation, calibration, testing and maintenance of instruments.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of instrumentation and control technician:

- (a) installing, calibrating, testing and maintaining the following:
 - (i) process measurement sensing and indicating systems;
 - (ii) analytical instrumentation;
 - (iii) signal conversion and transmission devices;
 - (iv) data acquisition and display systems;
 - (v) monitoring devices and alarm systems;
 - (vi) control devices and systems;
 - (vii) final control elements;
- (b) installing, servicing, calibrating and maintaining equipment for calibration, reference or comparison standards;
- (c) installing, inspecting, testing, disconnecting and connecting electrical wiring to instrument installations;
- (d) maintaining, installing and testing air distribution systems;
- (e) installing, inspecting, testing, servicing and removing instruments;
- (f) installing and removing pneumatic tubing, process tubing and piping;
- (g) using hand tools, power tools, testing equipment and specialty tools required by the designated trade;
- (h) incorporating modifications to systems and components;
- (i) applying knowledge and understanding of operating processes and their interrelationship with instrumentation.

Classes of individuals

70 Only the following classes of individuals may perform a restricted activity within the designated trade of instrumentation and control technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document

recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journey person Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Insulator (Heat and Frost)

Restricted activities

71(1) In this section,

- (a) “insulation items” means the following:
 - (i) insulation materials, reinforcing fabrics, metal lath and hexagonal wire;
 - (ii) adhesives and fasteners;
 - (iii) finishing materials;
 - (iv) metal claddings, canvas, PVC, pit wrap, paint, finishing cement and other similar over insulation applications not referred to in subclauses (i) to (iii);
 - (v) noise control materials;
 - (vi) firestopping and fireproofing materials;
 - (vii) utilidors;
- (b) “undertakings of the designated trade” means the following:
 - (i) the installation, service, maintenance, repair and removal of insulation items;
 - (ii) the abatement and removal of asbestos.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of insulator (heat and frost):

- (a) installing, servicing, maintaining, repairing and removing insulation items;
- (b) abating and removing asbestos;
- (c) using detailed drawings, blueprints and other specifications;
- (d) using all related standards, safety regulations and building codes and regulations;
- (e) working with insulation items and related equipment;
- (f) using hand tools, power tools, shop equipment and stud welding equipment;
- (g) cleaning up and removing insulation items;
- (h) assembling, erecting, installing and removing insulation materials and handling devices, scaffolds, ropes and slings;
- (i) estimating, preparing, scheduling and worksite planning;
- (j) handling, laying out, preparing, fabricating and assembling insulation items and all protective coatings and coverings;
- (k) using new technology relating to the restricted activities set out in this section.

Classes of individuals

72 Only the following classes of individuals may perform a restricted activity within the designated trade of insulator (heat and frost):

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the

*Apprenticeship Education and Industry Training
Programs Regulation* in the designated trade;

- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Ironworker — Ironworker (Generalist) Branch**Restricted activities**

73(1) In this section,

- (a) “Alberta Building Code” means the *National Building Code - 2019 Alberta Edition* declared in force, as amended or replaced from time to time, by the *Building Code Regulation* (AR 31/2015);
- (b) “concrete reinforcement” means metal, steel or synthetic strands, wires, mesh, fabric, bars or sheets, placed into concrete structures for the purpose of reinforcing, pre-tensioning or post-tensioning of concrete structures;
- (c) “metal building systems” means buildings that
 - (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association,
 - (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and
 - (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications,but does not include Quonsets or other frameless metal buildings;
- (d) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials;
- (e) “storey” has the meaning assigned to it in the Alberta Building Code;
- (f) “structures” means the following:
 - (i) curtain walls;
 - (ii) bridges, including abutments, decks, girders, piers and permanent guard rails;
 - (iii) metal building systems;
 - (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms;

- (g) “undertakings of the branch of the designated trade” means the following:
 - (i) the field fabrication, assembly, erection and disassembly of structures, other than the demolition of structures;
 - (ii) the service, maintenance and repair of structures;
 - (iii) the field fabrication and erection of structural, miscellaneous and ornamental metal work;
 - (iv) the placement of precast or prestressed concrete and concrete reinforcement materials.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the ironworker (generalist) branch of the designated trade of ironworker:

- (a) fabricating, assembling, erecting and disassembling structures in the field;
- (b) servicing, maintaining and repairing structures;
- (c) fabricating and erecting structural, miscellaneous and ornamental metal work in the field;
- (d) placing precast or prestressed concrete;
- (e) placing concrete reinforcement materials;
- (f) erecting concrete reinforcement materials;
- (g) attaching concrete reinforcement materials;
- (h) performing post-tensioning;
- (i) performing prestressing;
- (j) assembling, erecting and disassembling metal building systems;
- (k) using detailed drawings, blueprints and other specifications;
- (l) using hand tools, power tools and shop equipment, including transits, levels, explosive actuated tools, post drills, radial drills, angle rolls, punches, shears, brakes and presses;

- (m) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds;
- (n) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;
- (o) using new technology in relation to the restricted activities set out in this section;
- (p) placing mechanical equipment and components;
- (q) using and maintaining fall protection systems.

Classes of individuals

74 Only the following classes of individuals may perform a restricted activity within the ironworker (generalist) branch of the designated trade of ironworker:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the ironworker branch of the designated trade granted before September 1, 2017;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (e) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (g) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (h) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (i) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (j) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Ironworker — Ironworker (Metal Building Systems Erector) Branch

Restricted activities

75(1) In this section,

- (a) “Alberta Building Code” means the *National Building Code - 2019 Alberta Edition* declared in force, as amended or replaced from time to time, by the *Building Code Regulation* (AR 31/2015);
- (b) “metal building systems” means buildings that
 - (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association,
 - (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and
 - (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications,

but does not include Quonsets or other frameless metal buildings;

- (c) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials;
- (d) “storey” has the meaning assigned to it in the Alberta Building Code;
- (e) “structures” means the following:
 - (i) curtain walls;
 - (ii) bridges, including abutments, decks, girders, piers and permanent guard rails;
 - (iii) metal building systems;
 - (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms;
- (f) “undertakings of the branch of the designated trade” means the assembly, erection and disassembly of metal building systems.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the ironworker (metal building systems erector) branch of the designated trade of ironworker:

- (a) assembling metal building systems;
- (b) erecting metal building systems;
- (c) disassembling metal building systems;
- (d) using detailed drawings, blueprints and other specifications;
- (e) using hand tools, power tools and shop equipment, including transits, levels and explosive actuated tools;
- (f) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds;
- (g) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;

- (h) using new technology in relation to the restricted activities set out in this section;
- (i) using and maintaining fall protection systems.

Classes of individuals

76 Only the following classes of individuals may perform a restricted activity within the ironworker (metal building systems erector) branch of the designated trade of ironworker:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the ironworker (generalist) branch of the designated trade;
 - (iii) the ironworker (structural/ornamental) branch of the designated trade;
 - (iv) the ironworker branch of the designated trade granted before September 1, 2017;
 - (v) the metal building systems erector branch of the designated trade granted before September 1, 2017;
 - (vi) the structural/ornamental branch of the designated trade granted before September 1, 2017;
- (b) any individual who holds an endorsement in the ironworker (generalist) branch or the ironworker (structural/ornamental) branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the ironworker (generalist) branch or ironworker (structural/ornamental) branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the branch of the designated trade or the ironworker (structural/ornamental) branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the ironworker (generalist) branch or ironworker (structural/ornamental) branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade or the ironworker (structural/ornamental) branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade or the ironworker (generalist) branch or ironworker (structural/ornamental) branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,

- (ii) has possession of or control over, and
- (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

**Ironworker — Ironworker
(Reinforcing) Branch**

Restricted activities

77(1) In this section,

- (a) “Alberta Building Code” means the *National Building Code - 2019 Alberta Edition* declared in force, as amended or replaced from time to time, by the *Building Code Regulation* (AR 31/2015);
- (b) “concrete reinforcement” means metal, steel or synthetic strands, wires, mesh, fabric, bars or sheets, placed into concrete structures for the purpose of reinforcing, pre-tensioning or post-tensioning of concrete structures;
- (c) “metal building systems” means buildings that
 - (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association,
 - (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and
 - (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications,but does not include Quonsets or other frameless metal buildings;
- (d) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials;
- (e) “storey” has the meaning assigned to it in the Alberta Building Code;
- (f) “structures” means the following:
 - (i) curtain walls;
 - (ii) bridges, including abutments, decks, girders, piers and permanent guard rails;
 - (iii) metal building systems;
 - (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms;
- (g) “undertakings of the branch of the designated trade” means the erection, placement, attachment, prestressing and post-tensioning of concrete reinforcement materials.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the ironworker (reinforcing) branch of the designated trade of ironworker:

- (a) erecting concrete reinforcement materials;
- (b) placing concrete reinforcement materials;
- (c) attaching concrete reinforcement materials;
- (d) performing post-tensioning;
- (e) performing prestressing;
- (f) using detailed drawings, blueprints and other specifications;
- (g) using hand tools, power tools and shop equipment, including transits, levels and explosive actuated tools;
- (h) using, setting up and assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds;
- (i) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;
- (j) using new technology in relation to the restricted activities set out in this section;
- (k) using and maintaining fall protection systems.

Classes of individuals

78 Only the following classes of individuals may perform a restricted activity within the ironworker (reinforcing) branch of the designated trade of ironworker:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the ironworker (generalist) branch of the designated trade;
 - (iii) the ironworker branch of the designated trade granted before September 1, 2017;

- (iv) the reinforcing branch of the designated trade granted before September 1, 2017;
- (b) any individual who holds an endorsement in the branch of the designated trade or the ironworker (generalist) branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the ironworker (generalist) branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the ironworker (generalist) branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the ironworker (generalist) branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the

branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

**Ironworker — Ironworker
(Structural/Ornamental) Branch**

Restricted activities

79(1) In this section,

- (a) “Alberta Building Code” means the *National Building Code - 2019 Alberta Edition* declared in force, as amended or replaced from time to time, by the *Building Code Regulation* (AR 31/2015);
- (b) “metal building systems” means buildings that
 - (i) are non-residential, prefabricated metal structures, not more than 2 storeys, that meet Alberta Building Code requirements for certification by the Canadian Standards Association,
 - (ii) are constructed of an interior load-bearing framework and an outer non-load-bearing cladding, and
 - (iii) are erected, assembled and installed in accordance with the manufacturer’s instructions without modification to the manufacturer’s specifications,but does not include Quonsets or other frameless metal buildings;
- (c) “reinforced concrete” means concrete that is cast in place or precast and is reinforced with concrete reinforcement materials;

- (d) “storey” has the meaning assigned to it in the Alberta Building Code;
- (e) “structures” means the following:
 - (i) curtain walls;
 - (ii) bridges, including abutments, decks, girders, piers and permanent guard rails;
 - (iii) metal building systems;
 - (iv) buildings that are engineered and constructed of metal, steel or reinforced concrete, other than buildings constructed using insulated concrete forms;
- (f) “undertakings of the branch of the designated trade” means the following:
 - (i) the field fabrication, assembly, erection and disassembly of structures, other than the demolition of structures;
 - (ii) the service, maintenance and repair of structures;
 - (iii) the field fabrication and erection of structural, miscellaneous and ornamental metal work;
 - (iv) the erection and placement of precast or prestressed concrete structures.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the ironworker (structural/ornamental) branch of the designated trade of ironworker:

- (a) fabricating, assembling, erecting and disassembling of structures in the field;
- (b) servicing, maintaining and repairing of structures;
- (c) fabricating and erecting structural, miscellaneous and ornamental metal work in the field;
- (d) erecting and placing precast or prestressed concrete structures;
- (e) using detailed drawings, blueprints and other specifications;
- (f) using hand tools, power tools and shop equipment, including transits, levels, explosive actuated tools, post

drills, radial drills, angle rolls, punches, shears, brakes and presses;

- (g) using, setting up or assembling rigging equipment, including wire rope, block and tackle, cranes, derricks, hoisting equipment, swing stages, aerial platforms and scaffolds;
- (h) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;
- (i) using new technology in relation to the restricted activities set out in this section;
- (j) placing mechanical equipment and components;
- (k) using and maintaining fall protection systems.

Classes of individuals

80 Only the following classes of individuals may perform a restricted activity within the ironworker (structural/ornamental) branch of the designated trade of ironworker:

- (a) any individual who holds a trade certificate in any of the following:
 - (i) the branch of the designated trade;
 - (ii) the ironworker (generalist) branch of the designated trade;
 - (iii) the ironworker branch of the designated trade granted before September 1, 2017;
 - (iv) the structural/ornamental branch of the designated trade granted before September 1, 2017;
- (b) any individual who holds an endorsement in the branch of the designated trade or the ironworker (generalist) branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the ironworker (generalist) branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and,

during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the ironworker (generalist) branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the branch of the designated trade or the ironworker (generalist) branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual

- (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Landscape Horticulturist**Restricted activities**

81(1) In this section, “undertakings of the designated trade” means the sale, growth, installation and maintenance of plant or related materials and includes the following:

- (a) landscape construction;
- (b) landscape maintenance;
- (c) the operation of greenhouses, nurseries and garden centres;
- (d) arboriculture;
- (e) tree moving;
- (f) the sale, growth, installation and maintenance of turf grasses;
- (g) designing, installing and maintaining irrigation systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of landscape horticulturist:

- (a) selling, growing, installing and maintaining plant or related materials;
- (b) applying principles of landscape design and construction;
- (c) constructing and installing landscape planters, walks and other accessories of various materials;
- (d) handling orders of plant and related materials;
- (e) operating and servicing the tools and machinery used in the designated trade;
- (f) applying the principles governing the following:
 - (i) the operation of greenhouses, nurseries and garden centres;
 - (ii) sod production;
 - (iii) interior and exterior landscape maintenance;
 - (iv) plant production;
 - (v) the use of soils;

- (vi) the use of plant nutrients;
- (vii) the use of pesticides;
- (viii) the control of plant diseases and pests;
- (ix) tree care;
- (g) applying knowledge respecting botany and plant identification.

Classes of individuals

82 Only the following classes of individuals may perform a restricted activity within the designated trade of landscape horticulturist:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with

an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or

- (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Lather (Interior Systems Mechanic)

Restricted activities

83(1) In this section,

- (a) “lather interior systems” means any type of framework for gypsum materials in buildings and includes the following:
 - (i) light gauge steel stud framing;
 - (ii) load bearing steel stud wall and floor systems;
 - (iii) unitized wall systems;
 - (iv) demountable partitions;
 - (v) suspended drywall ceilings;
 - (vi) component ceilings;
 - (vii) metal linear ceilings;

- (viii) specialized systems;
 - (ix) drywall;
 - (x) metal lath;
 - (xi) radiation shielding;
 - (xii) access floor systems;
 - (xiii) membrane coatings;
 - (xiv) thermal and acoustical systems;
 - (xv) air and vapour barriers;
- (b) “undertakings of the designated trade” means the following:
- (i) the assembly and installation of lather interior systems;
 - (ii) the cutting, shaping, bending, fastening and spot welding of metal components to build support bases for plaster, cement, fireproofing, radiation or soundproofing materials;
 - (iii) the cutting, shaping, aligning and securing of components in lather interior systems for gypsum or other products;
 - (iv) the construction of various types of walls and ceilings or other related structures and the application of exterior and interior trim of metal and other materials.
- (2)** The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of lather (interior systems mechanic):
- (a) assembling and installing lather interior systems;
 - (b) cutting, shaping, bending, fastening and spot welding metal components to build support bases for plaster, cement, fireproofing, radiation or soundproofing materials;
 - (c) cutting, shaping, aligning and securing components in lather interior systems for gypsum or other products;

- (d) constructing various types of walls and ceilings or other related structures and applying exterior and interior trim of metal and other materials;
- (e) diagnosing and repairing any problems relating to the lather interior systems;
- (f) using all hand and power operated equipment required by the designated trade;
- (g) using blueprints, shop drawings and specifications;
- (h) applying gypsum lath, metal lath and stucco wire;
- (i) cutting, preparing, fastening, spot welding, fabricating or other handling of all lath materials.

Classes of individuals

84 Only the following classes of individuals may perform a restricted activity within the designated trade of lather (interior systems mechanic):

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and*

Industry Training Programs Regulation of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Locksmith

Restricted activities

85(1) In this section,

- (a) “locking device” means any mechanical or electrical device that provides a physical or psychological barrier preventing, delaying or inhibiting unauthorized entry;
- (b) “undertakings of the designated trade” means the following:
 - (i) the installation, replacement, rebuilding, rearrangement, repair or adjustment of locking devices or safes and their components;

- (ii) the making of keys by impression, code or other means involving specialized knowledge of locking devices or safes;
- (iii) the circumvention of locking devices by means other than the use of a key or combination.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of locksmith:

- (a) handling orders for locks, safes and related equipment;
- (b) operating and servicing the tools and equipment used in the designated trade;
- (c) installing, replacing, rebuilding, rearranging, repairing and adjusting locking devices or safes, components and related equipment;
- (d) making keys by impression, code or other means;
- (e) circumventing locking devices by means other than use of key or combination;
- (f) identifying the operation of locking devices and safes;
- (g) identifying and applying the principles of locking devices;
- (h) identifying and applying the principles of safes and related equipment;
- (i) applying in-depth knowledge of codes and specifications;
- (j) applying knowledge of master keying;
- (k) using any new innovative technological changes in the designated trade that relate to materials or methods of construction.

Classes of individuals

86 Only the following classes of individuals may perform a restricted activity within the designated trade of locksmith:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an

individual who holds a trade certificate in the designated trade;

- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;

- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Machinist**Restricted activities**

87(1) In this section,

- (a) “parts” means any type of industrial or mass production parts;
- (b) “undertakings of the designated trade” means the following:
 - (i) the set up or operation of metal removing machine tools to manufacture metals and other materials into precise shapes and sizes;
 - (ii) the production of parts using mass production methods;
 - (iii) the making and repair of parts, tools and machines made from metal, plastic or other materials.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of machinist:

- (a) setting up or operating metal removing machine tools to manufacture metals and other materials into precise shapes and sizes;
- (b) producing parts using mass production methods;
- (c) making and repairing parts, tools and machines made from metal, plastic or other material;
- (d) setting up and operating standard machine tools used in machine shops, including the following:
 - (i) saws;
 - (ii) drill presses;
 - (iii) lathes;
 - (iv) milling machines;
 - (v) grinding machines;
 - (vi) boring mills;
 - (vii) shapers;

- (viii) attachments and accessories to any item referred to in subclauses (i) to (vii);
- (ix) computerized numerical control (CNC) machine tools;
- (e) interpreting technical drawings, charts, specification measurement and layout drawings and samples;
- (f) reading and interpreting the information and specifications presented on drawings and sketches, in respect of physical shape, size, material, heat treatment, finish, hardness and other pertinent data;
- (g) verifying dimensions with precision measuring instruments;
- (h) forging, heat treating, cutting and joining metals;
- (i) setting up and operating machine tools and supporting equipment, including oxyfuel welding, cutting and brazing equipment and electric arc welding equipment.

Classes of individuals

88 Only the following classes of individuals may perform a restricted activity within the designated trade of machinist:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the

supervision of an individual who holds a trade certificate or an endorsement in the designated trade;

- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Metal Fabricator (Fitter)

Restricted activities

89(1) In this section,

- (a) “Alberta Building Code” means the *National Building Code - 2019 Alberta Edition* declared in force, as amended or replaced from time to time, by the *Building Code Regulation* (AR 31/2015);
- (b) “structures” means the following:

- (i) metal railings, ladders and platforms;
- (ii) metal conventional and spiral stairs;
- (iii) welded or bolted beams and columns;
- (iv) girders, trusses and built-up sections;
- (v) pressure vessels, multipurpose holding tanks and containers;
- (vi) structural metal or miscellaneous metal components that are subject to the Alberta Building Code;
- (c) “undertakings of the designated trade” means the following:
 - (i) the fabrication, layout and assembly of structures;
 - (ii) revisions to structures.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of metal fabricator (fitter):

- (a) fabricating structures;
- (b) laying out and assembling structures;
- (c) revising structures;
- (d) using detailed drawings, blueprints and other specifications;
- (e) using layout and fitting hand tools and air and electric powered tools;
- (f) using shop equipment, including overhead cranes, fork lifts, drilling and threading equipment, grinders, power saws, angle rolls, plate rolls, punches, shears, press brakes, power benders, ironworkers and presses;
- (g) using, setting up and assembling rigging equipment, including wire rope, synthetic slings, block and tackle, hoisting equipment and scaffolds;
- (h) using oxyfuel cutting and arc tack welding equipment in heat straightening, cutting and joining metals;
- (i) using new technology that is related to the designated trade.

Classes of individuals

90 Only the following classes of individuals may perform a restricted activity within the designated trade of metal fabricator (fitter):

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document

recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journey person Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Motorcycle Mechanic

Restricted activities

91(1) In this section,

- (a) “motorcycle” means a multi-wheeled motor vehicle equipped with
 - (i) astride seating for one or more persons, and
 - (ii) handlebar controls,

but does not include a moped as defined in the *Use of Highway and Rules of the Road Regulation* (AR 304/2002);

- (b) “undertakings of the designated trade” means the repair and maintenance of motorcycles.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of motorcycle mechanic:

- (a) repairing and maintaining the following:
 - (i) internal combustion engines and components;
 - (ii) transmissions and power trains;
 - (iii) fuel systems;
 - (iv) exhaust systems;
 - (v) electrical and electronic systems;

- (vi) vehicle management systems;
- (vii) wheels and tires;
- (viii) chassis;
- (ix) suspension components;
- (x) steering systems;
- (xi) braking systems;
- (xii) sidecar attachments;
- (xiii) accessories that affect weight distribution and handling;
- (b) selecting, inspecting, using and maintaining various hand and power tools, measuring tools, testing equipment and shop equipment;
- (c) selecting, installing and removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors;
- (d) selecting, installing, inspecting, adjusting and removing bearings, bushings and seals, belts, sheaves, pulleys, chains and sprockets;
- (e) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application;
- (f) accessing job-related information from service publications, records, shop controls and other materials and communicating the findings to the proper source;
- (g) retrieving and inputting applicable information using service related computer software programs;
- (h) inspecting, monitoring the performance of and operating machinery and equipment;
- (i) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs;
- (j) assembling new motorcycles according to manufacturers' specifications;
- (k) performing pre-delivery inspections as per manufacturers' specifications;

- (l) inspecting, replacing and servicing wheels and components;
- (m) inspecting, changing and servicing tires;
- (n) inspecting, testing, repairing, replacing and adjusting components of mechanical braking systems;
- (o) inspecting, testing, repairing, replacing, rebuilding, overhauling and adjusting components of hydraulic braking systems;
- (p) inspecting and testing 2- and 4-cycle engines and components before and after using a variety of hand and power tools and measuring and testing equipment;
- (q) inspecting, testing and repairing components of the following:
 - (i) liquid cooling systems;
 - (ii) air induction systems;
 - (iii) cooling, filter or screening systems;
 - (iv) engine lubrication systems;
 - (v) engine fuel systems;
 - (vi) electric starter circuits;
- (r) inspecting, adjusting and replacing engine ignition components;
- (s) inspecting and replacing elements of engine exhaust systems;
- (t) dismantling, repairing, replacing and reassembling damaged or worn components of cylinder heads;
- (u) dismantling, cleaning, inspecting, rebuilding and reassembling various types of cylinder block assemblies;
- (v) inspecting, testing and replacing storage batteries;
- (w) testing, rebuilding, adjusting and replacing components of electrical charging systems;
- (x) testing, overhauling, adjusting and replacing components of lighting, warning and safety electrical systems;
- (y) inspecting, adjusting, repairing and replacing

- (i) clutches and components,
- (ii) kickstart systems and components, and
- (iii) primary drives, including simplex, duplex, triplex, hyvo chains and cush drives;
- (z) inspecting, adjusting and replacing
 - (i) final drive components, including chains, belts, shaft drives and universal joints, and
 - (ii) frames and suspension components, including forks, swing arms, and shock absorber units;
- (aa) installing, adjusting and testing sidecars and components;
- (bb) installing, adjusting and testing accessories and components that affect weight distribution and handling.

Classes of individuals

92 Only the following classes of individuals may perform a restricted activity within the designated trade of motorcycle mechanic:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the

individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or

- (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Natural Gas Compression Technician

Restricted activities

93(1) In this section,

- (a) “compression” means the act of decreasing the volume and increasing the pressure of gas by mechanical means;
- (b) “compressor” means a mechanical device used in the natural gas industry that increases the pressure of gas;
- (c) “natural gas compression” refers to the means and methods used to facilitate the delivery of natural gas from the well head to the end user via a series of specific separation, treatment, injection, disposal and compression processes;
- (d) “natural gas compression equipment” means any type of fixed or stationary equipment used to gather, store and transmit natural gas and includes the following:

- (i) stationary and reciprocating internal combustion engines;
 - (ii) motors;
 - (iii) compressors;
 - (iv) pumps;
 - (v) power generators;
 - (vi) mixers and agitators;
 - (vii) coolers, chillers and heat exchangers;
 - (viii) separator systems;
 - (ix) dehydration systems;
 - (x) air and gas dryers;
 - (xi) processing systems, including sweetening, treating and fractionation;
 - (xii) artificial lift systems, including pump jacks and submersible pumps;
 - (xiii) valves and valve controls;
 - (xiv) equipment protection and monitoring systems;
 - (xv) local panel controls;
 - (xvi) low voltage electrical control loops;
 - (xvii) electronic processor and control loops;
 - (xviii) instrumentation control loops;
 - (xix) gearboxes;
 - (xx) clutches;
 - (xxi) drive systems;
 - (xxii) turbines;
- (e) “optimizing” means adjusting systems affecting the performance and efficiency of natural gas compression equipment;

- (f) “undertakings of the designated trade” means the installation, commissioning, maintenance and repair of natural gas compression equipment.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of natural gas compression technician:

- (a) reading and interpreting drawings, schematics, related technical information and materials lists;
- (b) performing the assembly, installation, inspection, maintenance, repair and overhaul of natural gas compression equipment, including the following:
 - (i) complete ignition analysis, fuel, air, exhaust and engine management systems testing, fault diagnoses and repair;
 - (ii) complete reciprocating and rotating machinery analysis to determine equipment condition, prediction of failure, corrective and preventive measures and equipment performance to design intent;
 - (iii) performing visual walk-around inspections to determine the external conditions and obvious operational or safety issues that need to be addressed;
- (c) using a variety of electrical, mechanical and specialty diagnostic test equipment to diagnose problems and adjust engine systems;
- (d) providing preventive and corrective field mechanical services on gas compression, processing and production equipment on site at client locations;
- (e) troubleshooting and diagnosing mechanical and general electronic control problems and all levels of compressor system failure;
- (f) repairing and rebuilding natural gas equipment;
- (g) inspecting malfunctioning or damaged equipment to determine the nature and scope of the problem using applied failure analysis principles;
- (h) performing combusted gas emissions measurement and extrapolating findings to correction requirement;
- (i) assessing technical reports to determine operation problems, future design improvements and production

- improvements and providing recommendations for improved service and operation procedures;
- (j) rigging and hoisting using correct lifting procedures;
 - (k) heating and cutting with oxyfuel equipment;
 - (l) tack welding with electric arc welding equipment;
 - (m) evaluating and optimizing the performance of natural gas compression equipment in respect of how the equipment is used and the conditions under which it operates;
 - (n) performing reliability analysis;
 - (o) performing risk assessments and applying learnings;
 - (p) identifying and developing maintenance strategies based on reliability centred maintenance, condition-based maintenance, and preventive maintenance concepts;
 - (q) adhering to regulations and standards related to natural gas compression systems to ensure the safety of all workers, the environment and equipment.

Classes of individuals

94 Only the following classes of individuals may perform a restricted activity within the designated trade of natural gas compression technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the

supervision of an individual who holds a trade certificate in the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Outdoor Power Equipment Technician — Power Equipment Branch

Restricted activities

95(1) In this section,

- (a) “marine equipment” means
 - (i) boats and trailers,
 - (ii) jet drives in boats and personal water craft,

- (iii) outboard motors,
 - (iv) inboard-outboard engines, and
 - (v) stern drives;
- (b) “power equipment” means equipment, other than marine equipment or recreational equipment, that in the designated trade of outdoor power equipment technician is commonly known as outdoor power equipment or turf equipment and includes the following:
- (i) aerators;
 - (ii) air compressors;
 - (iii) chippers and shredders;
 - (iv) compaction equipment;
 - (v) generators;
 - (vi) lawn and garden tractors;
 - (vii) lift equipment;
 - (viii) pressure washers;
 - (ix) pumps;
 - (x) mowers;
 - (xi) chain saws;
 - (xii) seeders;
 - (xiii) sprayers;
 - (xiv) tillers;
 - (xv) trimmers;
 - (xvi) snow removal equipment;
 - (xvii) golf carts;
 - (xviii) utility vehicles specifically designed for use on or with respect to turf;
- (c) “recreational equipment” means vehicles, including trailers designed for the transportation of the vehicles, that are not defined as power equipment in this section and

that in the designated trade of outdoor power equipment technician are commonly known as

- (i) snowmobiles,
- (ii) marine equipment, and
- (iii) outdoor recreational multi-wheeled utility vehicles that are not required to be registered under the *Traffic Safety Act* unless they are operated on a highway, but not including
 - (A) a motorcycle as defined in section 91, or
 - (B) any vehicle referred to in section 59(1)(a) or (b), 61(1)(a) or (b), 63(1)(a) or (b) or 65(1)(a) or (b);
- (d) “undertakings of the branch of the designated trade” means the diagnosis and repair of power equipment.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the power equipment branch of the designated trade of outdoor power equipment technician:

- (a) diagnosing and repairing power equipment;
- (b) selecting, inspecting, using and maintaining various hand and power tools, shop equipment, measuring tools and testing equipment;
- (c) retrieving and inputting applicable information using various media, including service-related computer software programs;
- (d) selecting, installing or removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors;
- (e) selecting, installing, inspecting, adjusting and removing bearings, bushings, seals, belts, sheaves, pulleys, chains and sprockets;
- (f) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application;
- (g) inspecting, monitoring performance of and operating machinery and equipment;

- (h) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs;
- (i) repairing, maintaining and inspecting the following:
 - (i) cutting systems and components;
 - (ii) trailer couplers and hitches on unlicensed, off-road trailers, with respect to the following:
 - (A) coupling units;
 - (B) fasteners, plungers, sliding fifth wheel plungers and control mechanisms and sliding racks;
 - (C) air release cylinder lines, hoses and fittings;
 - (D) fifth wheel saddles, bushings and pins, fifth wheel mounting components and fifth wheel compensators and components;
 - (E) king pins and upper coupler assemblies and turntables;
 - (F) rubber bushed hitch eyes, safety chains, cables and attachments, draw bars and attachments, pintle hooks and ball hitches;
 - (iii) body units, with respect to structural integrity, including the following:
 - (A) aluminum, steel and stainless steel components of body units;
 - (B) doors, including door seals and rollers, tracks and hardware;
 - (C) loose fasteners;
- (j) with respect to internal combustion 2- and 4-cycle engines that use gasoline, diesel or alternative fuels, and engine auxiliary systems and accessories,
 - (i) inspecting and testing the following:
 - (A) engines and engine components and engine systems in and out of chassis, before and after service or repair;
 - (B) engine lubrication systems;

- (C) engine liquid cooling systems;
- (D) engine air cooling systems and air filtering or screening systems;
- (E) engine intake and exhaust systems;
- (F) fuel systems;
- (G) engine control systems,
- (ii) diagnosing engine problems,
- (iii) diagnosing malfunctions,
- (iv) repairing or replacing components,
- (v) analyzing parts for failure and determining the causes of the failure, and
- (vi) removing and installing engines;
- (k) with respect to power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives and steering clutches and axles,
 - (i) inspecting, testing and adjusting the following:
 - (A) clutches;
 - (B) fluid drives, fluid couplings, torque converters, hydraulic retarders and other connecting units;
 - (C) manual transmissions;
 - (D) variable speed transmissions, high-low speed units, reverse units and hydrostatic transmissions and their control systems;
 - (E) transfer drives;
 - (F) drive shafts, u-joints, belt, chain and gear drives, mechanical winch drives, power take-offs and other drive lines;
 - (G) front and rear differentials and axles;
 - (H) steering clutches;
 - (I) final drives,

- (ii) diagnosing malfunctions and irregular operation and performance,
- (iii) removing and installing the following:
 - (A) complete components;
 - (B) complete transmissions;
 - (C) complete gear box drives;
 - (D) complete assemblies,
- (iv) removing, inspecting, overhauling, repairing and replacing the following:
 - (A) assemblies and their parts;
 - (B) transmission parts and components;
 - (C) transmission control systems and components,and
- (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts;
- (l) with respect to electrical systems and circuits, batteries, charging, starting, lighting and accessories systems, spark ignition systems, electronic systems and circuits, electronic monitoring systems and electronic control systems,
 - (i) inspecting, testing, adjusting and replacing the following:
 - (A) storage batteries;
 - (B) components and circuits,
 - (ii) diagnosing performance,
 - (iii) isolating defects within the system or in another part of the machine, and
 - (iv) analyzing failures and determining the causes of failures;
- (m) with respect to hydraulic and hydrostatic systems, open and closed centre hydraulic systems, open and closed loop hydrostatic systems and control systems,

- (i) inspecting, testing and adjusting the following:
 - (A) open and closed centre main hydraulic working systems;
 - (B) open and closed hydrostatic drive and propel systems;
 - (C) hydraulic control systems,
- (ii) diagnosing malfunctions,
- (iii) removing and installing components as a unit,
- (iv) testing, overhauling, repairing and replacing parts and components, and
- (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts;
- (n) with respect to pneumatic systems and air supply and generating systems,
 - (i) inspecting, testing and adjusting air systems,
 - (ii) diagnosing malfunctions,
 - (iii) removing and installing components as a unit,
 - (iv) testing, overhauling, repairing and replacing parts and components, and
 - (v) analyzing the failure of parts and determining the causes of failures and reusability of parts;
- (o) with respect to steering, braking and suspension systems,
 - (i) inspecting, testing and adjusting the following:
 - (A) manual steering systems;
 - (B) manual braking systems and brake foundation assemblies;
 - (C) hydraulic steering and braking systems;
 - (D) electrical braking systems;
 - (E) suspension systems,
 - (ii) diagnosing malfunctions,

- (iii) removing and installing components as a unit,
 - (iv) removing, testing, overhauling, repairing, replacing and installing parts and components, and
 - (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts;
- (p) with respect to frames, chassis, supporting structures, wheels and tracked undercarriages, cabs, heating systems, canopies and protective structures,
- (i) inspecting, measuring, removing and installing the following:
 - (A) frames, chassis, supporting structures and components of equipment and machinery;
 - (B) wheels, rims and tires;
 - (C) tracked undercarriages, components and parts;
 - (D) cabs, canopies and protective structures,
 - (ii) repairing and replacing the following:
 - (A) frames, chassis, supporting structures and components of equipment and machinery;
 - (B) wheels, rims and tires;
 - (C) tracked undercarriages, components and parts,
 - (iii) adjusting and aligning frames, chassis, supporting structures and components of equipment and machinery,
 - (iv) adjusting and aligning wheels where applicable and tracked undercarriages, components and parts,
 - (v) adjusting, aligning and repairing assemblies,
 - (vi) inspecting and testing heating systems,
 - (vii) diagnosing and isolating problems and determining causes, and
 - (viii) replacing components and making repairs;
- (q) with respect to attachments, ground engaging and working tools, booms, structural members, cables, hooks and slings,

- (i) inspecting, adjusting, aligning, removing, installing, repairing and replacing equipment attachments and components,
 - (ii) inspecting and measuring booms, arms, masts and structural members for signs of misalignment, cracking, loose bolts, metal fatigue and overloading,
 - (iii) analyzing failures and determining causes and correcting where applicable or recommending speciality repair or welding, and
 - (iv) inspecting, removing, installing and replacing equipment cables, hooks and slings;
- (r) with respect to preventive maintenance, operational safety and equipment economy,
- (i) identifying and evaluating equipment failures and malfunctions relating to machine maintenance,
 - (ii) identifying unsafe operating practices, and
 - (iii) communicating the following:
 - (A) advice on maintenance to be performed;
 - (B) maintenance safety precautions;
 - (C) correct procedures for equipment inspections, operations, towing, loading, hauling, parking and storage;
 - (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.

Classes of individuals

96 Only the following classes of individuals may perform a restricted activity within the power equipment branch of the designated trade of outdoor power equipment technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;

- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the

other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Outdoor Power Equipment Technician — Recreational Equipment Branch

Restricted activities

97(1) In this section,

- (a) “marine equipment” means
- (i) boats and trailers,
 - (ii) jet drives in boats and personal water craft,
 - (iii) outboard motors,
 - (iv) inboard-outboard engines, and
 - (v) stern drives;
- (b) “power equipment” means equipment, other than marine equipment or recreational equipment, that in the designated trade of outdoor power equipment technician is commonly known as outdoor power equipment or turf equipment and includes the following:
- (i) aerators;
 - (ii) air compressors;
 - (iii) chippers and shredders;
 - (iv) compaction equipment;
 - (v) generators;
 - (vi) lawn and garden tractors;
 - (vii) lift equipment;
 - (viii) pressure washers;
 - (ix) pumps;
 - (x) mowers;
 - (xi) chain saws;

- (xii) seeders;
 - (xiii) sprayers;
 - (xiv) tillers;
 - (xv) trimmers;
 - (xvi) snow removal equipment;
 - (xvii) golf carts;
 - (xviii) utility vehicles specifically designed for use on or with respect to turf;
 - (c) “recreational equipment” means vehicles, including trailers designed for the transportation of the vehicles, that are not defined as power equipment in this section and that in the designated trade of outdoor power equipment technician are commonly known as
 - (i) snowmobiles,
 - (ii) marine equipment, and
 - (iii) outdoor recreational multi-wheeled utility vehicles that are not required to be registered under the *Traffic Safety Act* unless they are operated on a highway, but not including
 - (A) a motorcycle as defined in section 91, or
 - (B) any vehicle referred to in section 59(1)(a) or (b), 61(1)(a) or (b), 63(1)(a) or (b) or 65(1)(a) or (b);
 - (d) “undertakings of the branch of the designated trade” means the diagnosis and repair of recreational equipment.
- (2)** The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the recreational equipment branch of the designated trade of outdoor power equipment technician:
- (a) diagnosing and repairing recreational equipment;
 - (b) selecting, inspecting, using and maintaining various hand and power tools, shop equipment, measuring tools and testing equipment;
 - (c) retrieving and inputting applicable information using various media, including service-related computer software programs;

- (d) selecting, installing or removing fasteners, tubing, piping, couplings, fittings, hoses, electrical wiring and connectors;
- (e) selecting, installing, inspecting, adjusting and removing bearings, bushings, seals, belts, sheaves, pulleys, chains and sprockets;
- (f) selecting proper fuels, lubricants, coolants, sealants, adhesives, plastics and plastic metals for intended application;
- (g) inspecting, monitoring performance of and operating machinery and equipment;
- (h) assembling, testing, igniting and adjusting oxyfuel cutting and heating equipment and performing minor cutting and heating repairs;
- (i) with respect to internal combustion 2- and 4-cycle engines that use gasoline, diesel or alternative fuels, and engine auxiliary systems and accessories,
 - (i) inspecting and testing the following:
 - (A) engines, engine components and engine systems in and out of chassis, before and after service or repair;
 - (B) engine lubrication systems;
 - (C) engine liquid cooling systems;
 - (D) engine air cooling systems and air filtering or screening systems;
 - (E) engine intake and exhaust systems;
 - (F) fuel systems;
 - (G) engine control systems,
 - (ii) diagnosing engine problems,
 - (iii) diagnosing malfunctions,
 - (iv) repairing or replacing components,
 - (v) analyzing parts for failure and determining the causes of the failure, and
 - (vi) removing and installing engines;

- (j) with respect to power trains, clutches, fluid drives, transmissions, transfer drives, drive lines, differentials, final drives, axles, stern drives, lower units and inboard jet drive motors,
 - (i) inspecting, testing and adjusting the following:
 - (A) clutches;
 - (B) fluid drives, fluid couplings, torque converters, hydraulic retarders and other connecting units;
 - (C) manual transmissions;
 - (D) power shift transmissions, high-low speed units, reverse units and automatic transmissions and their control systems;
 - (E) transfer drives;
 - (F) drive shafts, u-joints, belt, chain and gear drives, mechanical winch drives, power take-offs and other drive lines;
 - (G) front and rear differentials and axles, stern drives, lower units and inboard and jet drive motors,
 - (ii) diagnosing malfunctions and irregular operation and performance,
 - (iii) removing and installing the following:
 - (A) complete components;
 - (B) complete transmissions;
 - (C) complete gear box drives;
 - (D) complete assemblies,
 - (iv) removing, inspecting, overhauling, repairing and replacing the following:
 - (A) assemblies and their parts;
 - (B) transmission parts and components;
 - (C) transmission control systems and components,
- and

- (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts;
- (k) with respect to electrical systems and circuits, batteries, charging, starting, lighting and accessories systems, spark ignition systems, electronic systems and circuits, electronic monitoring systems and electronic control systems,
 - (i) inspecting, testing, adjusting and replacing the following:
 - (A) storage batteries;
 - (B) components and circuits,
 - (ii) diagnosing performance,
 - (iii) isolating defects within the system or in another part of the machine, and
 - (iv) analyzing failures and determining the causes of failures;
- (l) with respect to hydraulic and hydrostatic systems, open and closed centre hydraulic systems, open and closed loop hydrostatic systems and control systems,
 - (i) inspecting, testing and adjusting,
 - (ii) diagnosing malfunctions,
 - (iii) removing and installing components as a unit,
 - (iv) testing, overhauling, repairing and replacing parts and components, and
 - (v) analyzing the failure of parts and determining the causes of failures and the reusability of parts;
- (m) with respect to pneumatic systems and air supply and generating systems,
 - (i) inspecting, testing and adjusting air systems,
 - (ii) diagnosing malfunctions,
 - (iii) removing and installing components as a unit,
 - (iv) testing, overhauling, repairing and replacing parts and components, and

- (v) analyzing the failure of parts and determining the causes of failures and reusability of parts;
- (n) with respect to steering, braking and suspension systems, inspecting, testing and adjusting the following:
 - (i) manual steering systems;
 - (ii) manual braking systems and brake foundation assemblies;
 - (iii) hydraulic steering and braking systems;
 - (iv) electrical braking systems;
 - (v) suspension systems;
- (o) with respect to frames, chassis, supporting structures and components,
 - (i) inspecting, repairing and replacing wheels, rims and tires,
 - (ii) adjusting and aligning frames, chassis, supporting structures and components,
 - (iii) adjusting and aligning wheels where applicable,
 - (iv) adjusting, aligning and repairing assemblies,
 - (v) inspecting and testing heating systems,
 - (vi) diagnosing and isolating problems and determining causes, and
 - (vii) replacing components and making repairs;
- (p) with respect to attachments and working tools, structural members, cables, hooks and slings,
 - (i) inspecting, adjusting, aligning, removing, installing, repairing and replacing vehicle attachments and components,
 - (ii) inspecting and measuring structural members for signs of misalignment, cracking, loose bolts, metal fatigue and overloading,
 - (iii) analyzing failures and determining causes and correcting where applicable or recommending speciality repair or welding, and

- (iv) inspecting, removing, installing and replacing equipment cables, hooks and slings;
- (q) with respect to preventive maintenance, operational safety and vehicle economy,
 - (i) identifying and evaluating component failures and malfunctions relating to vehicles,
 - (ii) identifying unsafe operating practices, and
 - (iii) communicating the following:
 - (A) advice on maintenance to be performed;
 - (B) maintenance safety precautions;
 - (C) correct procedures for vehicle inspections, operations, towing, loading, hauling, parking and storage;
 - (D) the importance of the use of proper fuel, lubricants, coolants, filters and similar items and providing advice in respect of those matters.

Classes of individuals

98 Only the following classes of individuals may perform a restricted activity within the recreational equipment branch of the designated trade of outdoor power equipment technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work

of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,

- (ii) has possession of or control over, and
- (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Painter and Decorator

Restricted activities

99(1) In this section,

- (a) “finishing materials” means any type of residential, commercial and industrial finishing or coating materials and includes the following:
 - (i) paints, stains, varnishes and other liquid finishes;
 - (ii) paper, natural and synthetic fibre wall coverings;
 - (iii) special finishes;
 - (iv) fire proof and fire retardant coatings;
- (b) “undertakings of the designated trade” means the preparation of surfaces to receive finishing materials and the application of finishing materials.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of painter and decorator:

- (a) using detailed drawings, blueprints and other specifications;
- (b) taping and crack filling drywall surfaces;
- (c) applying opaque and transparent liquid coatings by brush, roller, spray or dipping to interior and exterior surfaces of wood, metal, brick, concrete, plaster, stucco and stone;
- (d) applying wall coverings consisting of paper and natural or synthetic fibre to surfaces in buildings and other structures;
- (e) removing existing coatings of paper, fabrics, paints and varnishes to repair and prepare undersurfaces for refinishing;
- (f) transposing super graphics;
- (g) finishing surfaces using abrasive blasting or other mechanical methods for decorative or protective purposes;
- (h) diagnosing problems related to finishing materials;
- (i) using, setting up and assembling rigging equipment, including wire rope, block and tackle, hoisting equipment and portable and suspension scaffolding;
- (j) using and maintaining hand tools, power equipment and precision-built machinery;
- (k) handling hazardous materials;

- (l) using new technology related to the restricted activities set out in this section.

Classes of individuals

100 Only the following classes of individuals may perform a restricted activity within the designated trade of painter and decorator:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;

- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted

activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Parts Technician — Materials Technician Branch

Restricted activities

101(1) In this section,

- (a) “commodities” includes any product, substance or organism pertaining to the following:
 - (i) consumer services or products;
 - (ii) agricultural services or products;
 - (iii) transportation services or products;
 - (iv) natural resource products;
 - (v) manufacturing products;
 - (vi) services or products for all levels of government;
- (b) “undertakings of the branch of the designated trade” means the stock handling, inventory control, storing, securing, identifying, cataloguing, ordering, shipping, transporting, receiving, inspecting, pricing, purchasing, issuing, marketing and selling of commodities.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the materials technician branch of the designated trade of parts technician:

- (a) assessing customer requirements and providing the commodities necessary for service, repair or replacement;
- (b) using electronic and non-electronic location systems, identification systems, communication systems and business procedures for the purpose of managing inventory and addressing customer needs;
- (c) selling and distributing commodities;
- (d) selecting, operating and basic maintenance of hand tools and material handling equipment;
- (e) wrapping, packaging, labelling and strapping commodities;
- (f) planning, maintaining and updating display areas;
- (g) operating and managing tool cribs.

Classes of individuals

102 Only the following classes of individuals may perform a restricted activity within the materials technician branch of the designated trade of parts technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Parts Technician — Parts Technician Branch

Restricted activities

103(1) In this section,

- (a) “parts” means any part, assembly or accessory pertaining to the following:
 - (i) automobiles and trucks;

- (ii) aviation;
 - (iii) electronics;
 - (iv) heavy duty vehicles and equipment;
 - (v) agricultural equipment;
 - (vi) industrial equipment;
 - (vii) military equipment;
 - (viii) motorcycles;
 - (ix) outdoor power equipment;
 - (x) recreational vehicles and equipment;
 - (xi) marine equipment;
 - (xii) turf equipment;
 - (xiii) appliances;
- (b) “undertakings of the branch of the designated trade” means the stock handling, inventory control, storing, securing, identifying, cataloguing, ordering, shipping, transporting, receiving, inspecting, pricing, purchasing, issuing, marketing and selling of parts.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the parts technician branch of the designated trade of parts technician:

- (a) assessing customer requirements and providing the parts necessary for service, repair or replacement;
- (b) using electronic and non-electronic location systems, identification systems, communication systems and business procedures for the purpose of managing inventory and addressing customer needs;
- (c) selling and distributing parts;
- (d) selecting, operating and basic maintenance of hand tools and material handling equipment;
- (e) wrapping, packaging, labelling and strapping parts;
- (f) planning, maintaining and updating display areas;

- (g) operating and managing tool cribs.

Classes of individuals

104 Only the following classes of individuals may perform a restricted activity within the parts technician branch of the designated trade of parts technician:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (g) any individual who is registered in a student work training program in the branch of the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section

1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (m) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Plumber

Restricted activities

105(1) In this section,

- (a) “plumbing” means any kind of residential, commercial, institutional or industrial piping systems, including fixtures and fittings, and includes the following:
 - (i) below ground storm and sanitary systems;
 - (ii) above ground storm and sanitary systems;
 - (iii) underground public water supply systems;
 - (iv) water distribution systems;
 - (v) fixtures, appliances and trim;
 - (vi) water supply systems;
 - (vii) hydronic systems;
 - (viii) irrigation systems;

- (ix) compressed gas, medical gas, air and vacuum systems;
- (x) water treatment devices;
- (xi) fire protection systems other than commercial sprinkler systems;
- (xii) ornamental water systems;
- (xiii) fuel gas systems and appliances;
- (b) “undertakings of the designated trade” means the fabrication, installation, alteration, maintenance and repair of plumbing.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of plumber:

- (a) fabricating, installing, altering, maintaining and repairing plumbing;
- (b) determining location, size and material required from prints and specifications;
- (c) compiling material breakdown and takeoff;
- (d) using tools and special equipment;
- (e) applying codes to installation requirements;
- (f) rigging equipment and piping components;
- (g) designing, installing and maintaining hydronic systems;
- (h) examining, installing, fabricating, testing, maintaining and replacing
 - (i) water treatment equipment, piping and controls,
 - (ii) drain, waste and vent piping systems,
 - (iii) private and public water supply systems,
 - (iv) water distribution systems,
 - (v) plumbing fixtures, appliances and trim,
 - (vi) rain water leaders, and
 - (vii) supports and hangers;

- (i) ensuring that all installations, fixtures, equipment and hydronic and water treatment systems
 - (i) are properly sized, aligned, supported and graded,
 - (ii) meet the requirements of the appropriate codes and permits,
 - (iii) meet the environmental protection requirements, and
 - (iv) meet the requirements as specified by the manufacturer of the fixtures, equipment and systems;
- (j) maintaining and servicing private sewage systems.

Classes of individuals

106 Only the following classes of individuals may perform a restricted activity within the designated trade of plumber:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;

- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Power System Electrician

Restricted activities

107(1) In this section,

- (a) “power system” means any type of public or private electrical high voltage generation, transmission or distribution system and includes the following:
 - (i) power system electrical equipment;
 - (ii) power system metering apparatus;
 - (iii) power system protection apparatus;
 - (iv) power system control apparatus;
 - (v) transportation control systems;
 - (vi) electrical transportation systems;
 - (vii) grounding and bonding systems;
- (b) “undertakings of the designated trade” means the installation, construction, maintenance, repair, monitoring and operation of power systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of power system electrician:

- (a) installing and constructing power systems;
- (b) maintaining and repairing power systems;
- (c) monitoring power systems;
- (d) operating power systems;
- (e) using tools, power tools, testing equipment, computers and specialty tools required by the designated trade;
- (f) installing, troubleshooting, maintaining and commissioning public or private power system equipment and apparatus;
- (g) interpreting and applying the provisions of the *Safety Codes Act* and the regulations under that Act for the purposes of carrying out the restricted activities set out in this section;
- (h) interpreting electrical drawings and prints.

Classes of individuals

108 Only the following classes of individuals may perform a restricted activity within the designated trade of power system electrician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the

supervision of an individual who holds a trade certificate in the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;

- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Powerline Technician

Restricted activities

109(1) In this section,

- (a) “power line electrical transmission and distribution systems” includes the following:
 - (i) overhead and underground transmission and distribution systems;

- (ii) poles;
 - (iii) towers;
 - (iv) transformers;
 - (v) switching equipment;
 - (vi) capacitors;
 - (vii) protective devices;
 - (viii) metering equipment;
 - (ix) voltage regulators;
 - (x) portable generation systems;
 - (xi) street lighting equipment;
 - (xii) light rail transit and trolley systems;
- (b) “undertakings of the designated trade” means the installation, construction, maintenance and repair of power line electrical transmission and distribution systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of powerline technician:

- (a) installing, constructing, maintaining and repairing power line electrical transmission and distribution systems;
- (b) using test equipment and specialty tools required by the designated trade;
- (c) operating vehicles and equipment related to the designated trade;
- (d) operating mobile lifting devices used in power line and electric utility services to auger holes and to set utility poles and place associated equipment;
- (e) giving directions respecting and supervising the placement of overhead and underground transmission and distribution lines;
- (f) inspecting, testing, disassembling, assembling, framing, erecting and setting poles, anchors, towers and associated equipment;

- (g) loading and offloading equipment, materials and supplies in overhead and underground systems;
- (h) installing, sagging, deadending, connecting, splicing, terminating, inspecting, testing, maintaining, repairing and locating overhead and underground primary and secondary conductors and cables;
- (i) installing, testing and maintaining the following:
 - (i) transformers in overhead and underground systems;
 - (ii) voltage regulators in overhead and underground systems;
 - (iii) capacitors and switching equipment;
 - (iv) isolating and protective devices on overhead and underground systems;
 - (v) street lighting equipment;
 - (vi) traffic signal systems;
 - (vii) related metering equipment;
 - (viii) light rail transit and trolley systems;
 - (ix) precast vaults, pads, bases and duct work;
- (j) performing live line maintenance techniques;
- (k) operating, testing and re-fusing overhead and underground isolating and protective devices;
- (l) interpreting and applying regulations and standards related to power line electrical transmission and distribution systems.

Classes of individuals

110 Only the following classes of individuals may perform a restricted activity within the designated trade of powerline technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;

- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the

other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Recreation Vehicle Service Technician

Restricted activities

111(1) In this section,

- (a) “recreation vehicle” means any type of live-in recreation vehicle that is designed for travel, and includes the following:
- (i) travel trailers;
 - (ii) truck campers;
 - (iii) fifth wheel trailers;
 - (iv) motor homes and conversions;
 - (v) fold down camping trailers;
- (b) “undertakings of the designated trade” means
- (i) the diagnosis of problems relating to recreational vehicles, and
 - (ii) the installation, service, maintenance, repair, removal, replacement and modification of parts, components, accessories, appliances and systems designed for recreational vehicles,

but does not include the following:

- (iii) the service, maintenance, repair or overhaul of the engine or power train of a motor vehicle;
- (iv) the installation, removal or replacement of parts and components on the engine or power train of a motor vehicle;
- (v) the diagnosis of problems relating to the engine or power train of a motor vehicle.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of recreation vehicle service technician:

- (a) diagnosing problems relating to recreation vehicles;
- (b) installing, servicing, maintaining, repairing, removing, replacing and modifying parts, components, accessories, appliances and systems designed for recreation vehicles;
- (c) using hand tools, power tools, specialty tools and equipment while working on recreation vehicles;
- (d) using electrical, electronic and other measuring and testing devices while working on recreation vehicles;
- (e) installing, removing, modifying or repairing electrical wiring and components in recreation vehicles;
- (f) installing, removing, modifying or repairing hoses and piping in recreation vehicles;
- (g) diagnosing, installing, maintaining and servicing towing systems in recreation vehicles;
- (h) diagnosing, installing, maintaining and servicing chassis, frames, suspension and mechanical components and systems in recreation vehicles;
- (i) repairing, modifying or replacing materials used in or in relation to recreation vehicles;
- (j) diagnosing, maintaining, modifying and installing gas and liquid components and systems used in recreation vehicles.

Classes of individuals

112 Only the following classes of individuals may perform a restricted activity within the designated trade of recreation vehicle service technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time

that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;

- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and

- (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Refrigeration and Air Conditioning Mechanic

Restricted activities

113(1) In this section,

- (a) “refrigeration and air conditioning system” means any type of primary or secondary refrigeration and air conditioning

system, other than the duct work and sheet metal items associated with the system, and includes the following:

- (i) piping;
- (ii) compressor assemblies;
- (iii) condenser and cooling tower assemblies;
- (iv) evaporator assemblies and defrost systems;
- (v) system controls and control valves;
- (vi) air handling, distribution equipment and make up air and exhaust systems;
- (vii) heat recovery and indoor air quality systems;
- (viii) circulating pump assemblies;
- (ix) geo-thermal and heat pump systems;
- (x) packaged and central air conditioning systems;
- (xi) pre-fabricated walk in coolers, freezers and environmental panels;
- (xii) system accessories and ancillary components;
- (xiii) monitoring and control and detection systems that are part of or used in respect of refrigeration and air conditioning systems;
- (xiv) commercial and industrial refrigeration process equipment and control systems;
- (xv) specialized food service equipment;
- (b) “undertakings of the designated trade” means the installation, maintenance, service, alteration, repair and decommission of refrigeration and air conditioning systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of refrigeration and air conditioning mechanic:

- (a) installing, maintaining and servicing refrigeration and air conditioning systems;
- (b) altering, repairing and decommissioning refrigeration and air conditioning systems;

- (c) removing refrigerants from refrigeration and air conditioning systems;
- (d) installing, removing, recycling, storing and disposing of primary and secondary refrigerants;
- (e) transporting, handling and using refrigerants and other dangerous goods;
- (f) using electrical and other measuring and testing devices in relation to refrigeration and air conditioning systems;
- (g) carrying out soldering, brazing, welding and various other pipe joining techniques on or in relation to refrigeration and air conditioning systems;
- (h) maintaining and making electrical repairs to existing equipment from the breaker or disconnect switch as follows:
 - (i) changing controls, contactors, motors and compressors;
 - (ii) repairing burnt or broken wires;
 - (iii) making minor upgrades of controls to existing refrigeration and air conditioning systems;
- (i) maintaining and repairing refrigeration and air conditioning units, appliances and accessories designed for the utilization of natural or propane gas as a fuel for heating or cooling that do not exceed 400 000 BTU (117 kW) input;
- (j) using tools specific to the designated trade, hand tools and power tools while working on refrigeration and air conditioning systems.

Classes of individuals

114 Only the following classes of individuals may perform a restricted activity within the designated trade of refrigeration and air conditioning mechanic:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the

*Apprenticeship Education and Industry Training
Programs Regulation* in the designated trade;

- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Roofer**Restricted activities****115(1)** In this section,

- (a) “roof” means any type of residential, commercial or industrial roof that is built up or shingled or that is coated with a plastic membrane, and includes the following:
 - (i) roof decks;
 - (ii) roof structures;
 - (iii) foundations;
 - (iv) control and expansion joints;
 - (v) copings and parapets;
 - (vi) eaves;
 - (vii) curbs;
- (b) “undertakings of the designated trade” means the following:
 - (i) the preparation, application, service, insulation and replacement of roofs;
 - (ii) the damp-proofing and waterproofing of roofs and coolers;
 - (iii) the installation of roof tiles that are made of clay, concrete, steel, fiberglass, cement fibre or similar material;
 - (iv) the installation of rigid pre-formed sheet roofing systems that are made of metal, vinyl or fiberglass.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of roofer:

- (a) preparing, applying, servicing, insulating and replacing roofs;
- (b) damp-proofing and waterproofing roofs and coolers;
- (c) installing on roofs tiles that are made from clay, concrete, steel, fibreglass, cement fibre or similar material;

- (d) installing rigid pre-formed sheet roofing systems that are made of metal, vinyl or fiberglass;
- (e) removing existing roof;
- (f) preparing and repairing roof deck surfaces;
- (g) installing and repairing vapour barriers and insulation, whether flat or tapered;
- (h) applying conventional and invented built-up roofing systems hot and cold process materials;
- (i) installing single-ply sheet membrane roofing systems;
- (j) applying shingles to new and existing buildings, including asphalt, fibreglass, metal, wood, SBS modified, slate and cement fibre shingles;
- (k) diagnosing and repairing any problem relating to roofs;
- (l) using all hand and power operated equipment used to carry out the restricted activities set out in this section;
- (m) working with roofing materials;
- (n) preparing, servicing and applying waterproofing materials;
- (o) interpreting blueprints and shop drawings;
- (p) laying out and developing projects according to blueprints and shop drawing specifications;
- (q) calculating roofing materials and quantities of roofing materials;
- (r) storing and handling roofing materials and equipment.

Classes of individuals

116 Only the following classes of individuals may perform a restricted activity within the designated trade of roofer:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the

individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;

- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the

other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Sheet Metal Worker

Restricted activities

117(1) In this section,

- (a) “heating system” means a system for heating and circulating air inside a building using a gas fired appliance;
- (b) “sheet metal items” means the following:
 - (i) square or round duct lines and fittings;
 - (ii) sheet metal containers;
 - (iii) sheet metal roofs, roof flashings and accessories;
 - (iv) sheet metal lagging;
 - (v) all other custom fabricated objects constructed from sheet metal;
- (c) “undertakings of the designated trade” means the following:
 - (i) the lay out, preparation, fabrication, assembly and installation of sheet metal items;
 - (ii) the fabrication, installation, service, maintenance and upgrade of
 - (A) fume and dust exhaust systems for residential, commercial and industrial sites,
 - (B) heating systems, ventilation systems and venting systems for residential, commercial and industrial sites,
 - (C) air conditioning systems of up to 5 tons total capacity per system for residential sites, and
 - (D) equipment associated with the undertakings referred to in paragraphs (A) to (C);

- (d) “ventilation system” means a system for exchanging air inside a building with fresh outside air and circulating air within a building;
- (e) “venting system” means a system for exhausting combustion gases to the outside of a building and supplying air for combustion by heating systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of sheet metal worker:

- (a) laying out, preparing, fabricating, assembling and installing sheet metal items;
- (b) fabricating, installing, servicing, maintaining and upgrading the following:
 - (i) fume and dust exhaust systems for residential, commercial and industrial sites;
 - (ii) heating systems, ventilation systems and venting systems for residential, commercial and industrial sites;
 - (iii) air conditioning systems of up to 5 tons total capacity per system for residential sites;
 - (iv) equipment associated with fabricating, installing, servicing, maintaining and upgrading any of the systems listed in subclauses (i) to (iii);
- (c) using sheet metal pattern development methods and standards;
- (d) using various types of sheet metal materials;
- (e) assembling and installing equipment, materials and system components on the job site;
- (f) laying out, preparing, assembling and installing venting systems and pre-fabricated components of venting systems;
- (g) installing, maintaining and repairing the following:
 - (i) furnaces;
 - (ii) heat pumps;
 - (iii) unit heaters;

- (iv) combination rooftop units;
- (v) make-up air units;
- (vi) heat recovery and indoor air quality systems;
- (vii) heating systems;
- (viii) ventilation systems;
- (ix) air conditioning systems of up to 5 tons total capacity per system;
- (x) appliances;
- (xi) accessories to any item listed in subclauses (i) to (x) and equipment similar to any item listed in subclauses (i) to (x) or used for sheet metal work;
- (h) carrying out the following servicing on electrical components of heating systems, ventilation systems and air conditioning systems, along with the associated connection and disconnection of de-energized electrical supply circuits of the systems:
 - (i) servicing or changing controls, contactors and motors;
 - (ii) repairing burnt or broken wires;
 - (iii) making minor upgrades of controls to existing heating systems, ventilation systems and air conditioning systems;
- (i) using sheet metal welding equipment in heat straightening, cutting and joining metals;
- (j) using sheet metal shop equipment, including rotary, bench and floor machines;
- (k) assembling, erecting, installing and removing material and personnel handling devices, scaffolds, ropes and slings;
- (l) using hand tools, power tools, transits, levels and explosive actuated tools;
- (m) using detailed drawings, blueprints and other specifications;
- (n) estimating, job planning, preparing and scheduling;

- (o) applying new innovative technological changes in the designated trade, including materials and methods of construction.

Classes of individuals

118 Only the following classes of individuals may perform a restricted activity within the designated trade of sheet metal worker:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta

Journey person Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Sprinkler Systems Installer

Restricted activities

119(1) In this section,

- (a) “sprinkler system” means any kind of residential, commercial or industrial sprinkler system and includes the following:
 - (i) automatic fire suppression systems;
 - (ii) automatic detection suppression systems;
 - (iii) stand pipe and hose systems;
 - (iv) fire protection water supply systems, including underground mains;
 - (v) fire pumps and controls;
 - (vi) fire extinguishers;
 - (vii) fire hydrants and related equipment;
 - (viii) fire stopping materials;
 - (ix) piping, controls and fittings that are part of or ancillary to a sprinkler system;
- (b) “undertakings of the designated trade” means the fabrication, installation, alteration, adjustment, maintenance and repair of sprinkler systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of sprinkler systems installer:

- (a) fabricating, installing, altering, adjusting, maintaining and repairing sprinkler systems, including the following:
 - (i) wet sprinkler systems;
 - (ii) dry sprinkler systems;
 - (iii) preaction and deluge systems;
 - (iv) foam systems;
 - (v) CO2 and other gas extinguishing systems;
 - (vi) dry chemical systems;
 - (vii) exposure protection systems;
- (b) determining location, size and material required from prints and specifications;
- (c) compiling material breakdown and takeoff;
- (d) identifying and using tools and special equipment that are used to carry out the restricted activities set out in this section;
- (e) erecting and using steel scaffolding, power-operated scaffolding and swing stages;
- (f) applying codes to installation, inspection and maintenance requirements;
- (g) rigging equipment and piping components;
- (h) installing and maintaining appliances, controls, equipment, piping and hangers;
- (i) examining, inspecting and testing sprinkler systems.

Classes of individuals

120 Only the following classes of individuals may perform a restricted activity within the designated trade of sprinkler systems installer:

- (a) any individual who holds a trade certificate in the designated trade;

- (b) any individual who holds an endorsement in the designated trade;
- (c) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (d) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (e) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (f) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (g) any individual who is registered in a student work training program in the designated trade;
- (h) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement

approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (i) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (j) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (k) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (l) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (m) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar

under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Steamfitter-Pipefitter

Restricted activities

121(1) In this section,

- (a) “piping system” means any type of commercial or industrial piping system and includes the following:
- (i) hot liquid systems;
 - (ii) high and low pressure steam systems;
 - (iii) boilers and controls for boilers;
 - (iv) control and indicating devices systems;
 - (v) heating and cooling systems;
 - (vi) heat exchanger systems;
 - (vii) process systems;
 - (viii) power plant systems;
 - (ix) compressed gas systems;
 - (x) vacuum, pneumatic and hydraulic systems;
 - (xi) fire protection systems other than sprinkler systems;
 - (xii) flue gas systems;
 - (xiii) water treatment systems;
 - (xiv) fuel systems;
 - (xv) medical gas systems;
- (b) “undertakings of the designated trade” means the fabrication, installation, alteration, maintenance and repair of piping systems.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of steamfitter-pipefitter:

- (a) fabricating, installing, altering, maintaining and repairing piping systems;
- (b) determining location, size and material required;
- (c) producing fabrication and layout drawings from prints and specifications;
- (d) compiling material breakdown and takeoff;
- (e) identifying and using tools and special equipment that are used to carry out the restricted activities set out in this section;
- (f) applying codes to installation requirements;
- (g) rigging, hoisting and lifting equipment and piping components;
- (h) installing, maintaining, servicing and troubleshooting boilers and controls;
- (i) installing, maintaining and servicing heat exchange equipment and controls;
- (j) cutting, preparing, aligning and assembling piping;
- (k) installing, maintaining and servicing pumps, valves and related equipment;
- (l) installing, maintaining and servicing components in heating, ventilation and air conditioning systems;
- (m) fabricating and installing pipe supports, hangers and equipment supports.

Classes of individuals

122 Only the following classes of individuals may perform a restricted activity within the designated trade of steamfitter-pipefitter:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who holds an endorsement in the designated trade;

- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the designated trade if, during the time that the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;

- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Transport Refrigeration Technician**Restricted activities****123(1)** In this section,

- (a) “auxiliary power units” include mobile generator systems and other alternative power supplies, the main purpose of which is to support mobile refrigeration and heating equipment;
- (b) “mobile equipment” includes trucks, trailers and specialized shipping containers with heating and air conditioning systems;
- (c) “mobile refrigeration and heating equipment” means any type of primary or secondary refrigeration system used to supply optimal environmental conditions for transportation of goods by mobile equipment, including the following components:
 - (i) piping;
 - (ii) compressor assemblies;
 - (iii) condenser assemblies;
 - (iv) evaporator assemblies;
 - (v) system controls and control valves;
 - (vi) air handling and distribution equipment;
 - (vii) humidifier assemblies;
 - (viii) air cleaner assemblies;
 - (ix) system accessories and ancillary components;
 - (x) equipment used to monitor and control refrigeration systems and detect malfunctions in refrigeration systems;
 - (xi) auxiliary heaters;
 - (xii) mechanical generating systems;
 - (xiii) electrical and hybrid power supply systems;
 - (xiv) diesel engines and related systems;
- (d) “undertakings of the designated trade” means the installation, maintenance, service, alteration and repair of

mobile refrigeration and heating equipment and auxiliary power units.

(2) The following activities, when performed within undertakings of the designated trade, are restricted activities within the designated trade of transport refrigeration technician:

- (a) installing, maintaining, servicing, altering and repairing
 - (i) mobile refrigeration and heating equipment, and
 - (ii) auxiliary power units;
- (b) using hand tools, power tools and specialized tools and equipment while working on mobile refrigeration and heating equipment;
- (c) using mechanical, electrical, electronic and other measuring and testing devices in relation to mobile refrigeration and heating equipment;
- (d) carrying out soldering, brazing and welding on or in relation to mobile refrigeration and heating equipment;
- (e) maintaining and making electrical repairs to existing mobile refrigeration and heating equipment and auxiliary power units from the breaker or disconnect switch as follows:
 - (i) repairing burnt, broken or damaged wires and connections;
 - (ii) making upgrades to controls of existing mobile refrigeration and heating equipment;
- (f) installing, maintaining and repairing natural gas and propane gas auxiliary heating units as well as hybrid control systems;
- (g) installing, maintaining and repairing engines and compressors;
- (h) installing, removing, recycling, storing and disposing of primary and secondary refrigerants;
- (i) transporting, handling and using refrigerants and other dangerous goods related to mobile refrigeration and heating systems.

Classes of individuals

124 Only the following classes of individuals may perform a restricted activity within the designated trade of transport refrigeration technician:

- (a) any individual who holds a trade certificate in the designated trade;
- (b) any individual who does not hold a trade certificate in the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the supervision of an individual who holds a trade certificate in the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;
- (f) any individual who is registered in a student work training program in the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyman Certificate in the designated trade if, during the time that

the individual is registered in the program, the work of the individual in the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or

- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Water Well Driller — Earth Loop Technician Branch

Restricted activities

125(1) In this section,

- (a) “earth loop” means any part, assembly or accessory pertaining to ground source heat exchange systems comprised of piping that is placed into the earth in a series of closed loops and transports fluid for the purpose of heating and cooling residential homes or commercial buildings or both;
- (b) “undertakings of the branch of the designated trade” means the designing, drilling, construction, installation, grouting, servicing, reconditioning and decommissioning of earth loops.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the earth loop technician branch of the designated trade of water well driller:

- (a) drilling bore fields and holes and constructing horizontal trenches;
- (b) designing, drilling, constructing and installing earth loops;
- (c) grouting bore fields and holes;
- (d) servicing, reconditioning and decommissioning of earth loops;
- (e) completing earth loop records and reports as required by the Government of Alberta and the ground source heat exchange industry;
- (f) operating the tools of the designated trade;

- (g) operating and maintaining equipment and drilling systems for drilling earth loops;
- (h) heating and cutting metal using the appropriate equipment;
- (i) identifying and applying the standards and regulations governing the ground source heat exchange industry;
- (j) identifying and describing geological formations;
- (k) monitoring and managing natural gas in the drilling and completion of earth loop bore fields and holes;
- (l) monitoring groundwater.

Classes of individuals

126 Only the following classes of individuals may perform a restricted activity within the earth loop technician branch of the designated trade of water well driller:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the

designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journey person Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual

- (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Water Well Driller — Water Well Driller Branch

Restricted activities

127(1) In this section,

- (a) “undertakings of the branch of the designated trade” means the following:
 - (i) the designing, drilling, construction, development, servicing, disinfecting, sanitation, reconditioning and decommissioning of water wells;
 - (ii) the repairing, servicing, installing and disinfecting of water well pumps and systems;

- (b) “water well” means a hole or shaft sunk into the earth by means of a mobile rotary, boring or cable tool drilling rig to provide access to a water source for residential, commercial or industrial purposes or any combination of those purposes.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the water well driller branch of the designated trade of water well driller:

- (a) designing, drilling, constructing, developing, servicing, disinfecting, sanitizing, reconditioning and decommissioning water wells;
- (b) repairing, servicing, installing and disinfecting water well pumps and systems;
- (c) completing a bore hole into a finished productive water well;
- (d) completing and grouting a bore hole;
- (e) completing water well records and reports as required by the Government of Alberta and the groundwater industry;
- (f) operating the tools of the designated trade;
- (g) operating and maintaining equipment and drilling systems for drilling water wells;
- (h) heating and cutting metal using the appropriate equipment;
- (i) connecting and installing electrical connections to water pumps;
- (j) identifying and applying the standards and regulations governing the groundwater industry;
- (k) identifying and describing geological formations;
- (l) exploring for groundwater;
- (m) recognizing groundwater flow;
- (n) interpreting chemical content of groundwater;
- (o) monitoring and managing natural gas in the drilling and completion of water wells;
- (p) monitoring groundwater.

Classes of individuals

128 Only the following classes of individuals may perform a restricted activity within the water well driller branch of the designated trade of water well driller:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who does not hold a trade certificate in the branch of the designated trade but who, in the opinion of the individual's employer, possesses the skills and knowledge in performing the restricted activity expected of an individual who holds a trade certificate in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyman Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document

recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;

- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated

trade and the other designated trade or branch of a designated trade if

- (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
- (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Welder — Welder Branch

Restricted activities

129(1) In this section,

- (a) “component” means any object that consists of ferrous or non-ferrous metal and includes the following objects that are made of or that consist of ferrous or non-ferrous metal:
 - (i) structures;
 - (ii) pipe;
 - (iii) vessels;
 - (iv) containers;
- (b) “undertakings of the branch of the designated trade” means the fabrication, service, maintenance and repair of components.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the welder branch of the designated trade of welder:

- (a) fabricating components;
- (b) servicing, maintaining and repairing components;
- (c) setting up oxyfuel accessories using recommended installation procedures;

- (d) cutting, shaping and fitting steel using oxyfuel processes;
- (e) cleaning and inspecting cut surfaces;
- (f) fusion welding using manual oxyfuel processes;
- (g) brazing and braze welding using oxyfuel processes;
- (h) applying surfacing materials using oxyfuel processes;
- (i) joining metals using soldering processes;
- (j) setting up and welding using shielded metal arc, gas metal arc, flux core arc, submerged arc and gas tungsten arc welding processes;
- (k) cutting and gouging using electric arc welding processes;
- (l) welding and cutting using plasma arc processes;
- (m) setting up equipment and welding using resistance welding processes;
- (n) identifying metals and performing preparation and assembly tasks prior to welding;
- (o) performing supplementary and disassembly procedures;
- (p) using hand tools, power tools and shop equipment;
- (q) using new innovative technological changes in the designated trade with respect to
 - (i) materials or method of construction, and
 - (ii) the carrying out of the restricted activities set out in this section.

Classes of individuals

130 Only the following classes of individuals may perform a restricted activity within the welder branch of the designated trade of welder:

- (a) any individual who holds a trade certificate in the branch of the designated trade;
- (b) any individual who holds an endorsement in the branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the

Apprenticeship Education and Industry Training Programs Regulation in the branch of the designated trade;

- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate or an endorsement in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (f) any individual who is registered in a student work training program in the branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;

- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or
 - (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and

- (B) has completed the training in respect of the restricted activity.

Welder — Wire Process Operator Branch

Restricted activities

131(1) In this section,

- (a) “component” means any object that consists of ferrous or non-ferrous metal and includes the following objects that are made of or that consist of ferrous or non-ferrous metal:
 - (i) structures;
 - (ii) pipe;
 - (iii) vessels;
 - (iv) containers;
- (b) “undertakings of the branch of the designated trade” means the fabrication, service, maintenance and repair of components using processes other than shielded metal arc and gas tungsten arc processes.

(2) The following activities, when performed within undertakings of the branch of the designated trade, are restricted activities within the wire process operator branch of the designated trade of welder:

- (a) fabricating components using processes other than shielded metal arc and gas tungsten arc processes;
- (b) servicing, maintaining and repairing components using processes other than shielded metal arc and gas tungsten arc processes;
- (c) cutting steel using oxyfuel processes;
- (d) cleaning and inspecting cut surfaces;
- (e) setting up and welding using gas metal arc, flux core arc and submerged arc welding processes;
- (f) cutting and gouging using electric arc welding processes;
- (g) welding and cutting using plasma arc processes;
- (h) setting up equipment and welding using resistance welding processes;

- (i) identifying metals and performing preparation and assembly tasks prior to welding;
- (j) using new innovative technological changes in the designated trade with respect to
 - (i) materials or method of construction, and
 - (ii) the carrying out of the restricted activities set out in this section.

Classes of individuals

132 Only the following classes of individuals may perform a restricted activity within the wire process operator branch of the designated trade of welder:

- (a) any individual who holds a trade certificate in the branch of the designated trade or the welder branch of the designated trade;
- (b) any individual who holds an endorsement in the welder branch of the designated trade;
- (c) any apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade or the welder branch of the designated trade;
- (d) any individual who has filed an application for issuance of an Alberta Journeyperson Certificate in the branch of the designated trade or the welder branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the supervision of an individual who holds a trade certificate in the branch of the designated trade;
- (e) any individual who has filed an application for approval by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* of an apprenticeship education agreement in the branch of the designated trade or the welder branch of the designated trade if the application is subsisting and, during the time that the application is subsisting, the work of the individual in the branch of the designated trade is carried out under the same conditions as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship*

Education and Industry Training Programs Regulation in the branch of the designated trade;

- (f) any individual who is registered in a student work training program in the branch of the designated trade or the welder branch of the designated trade;
- (g) any individual who is registered in an education or training program that is recognized by the Administrator under section 12(d)(iii) of this Regulation as a program that, on successful completion, will result in a document recognized by order of the Board under section 14(2)(c) of the Act as being the equivalent of an Alberta Journeyperson Certificate in the branch of the designated trade or the welder branch of the designated trade if, during the time that the individual is registered in the program, the work of the individual in the branch of the designated trade is carried out under a mentor and the same supervision and ratio requirements as those that apply to an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the branch of the designated trade;
- (h) any individual who is performing the restricted activity in accordance with an authorization granted by the Administrator under section 13 of this Regulation;
- (i) any individual who is performing the restricted activity in accordance with section 14(2) or (3) of this Regulation;
- (j) any individual who is performing the restricted activity in respect of any property that the individual
 - (i) owns,
 - (ii) has possession of or control over, and
 - (iii) intends only for personal and not-for-profit use by the individual;
- (k) any individual who is performing the restricted activity in respect of a farming and ranching operation, as described in section 1.1(1) and (2) of the *Occupational Health and Safety Code* (AR 191/2021), if the individual
 - (i) is not paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work, or

- (ii) is paid wages, as defined in the *Employment Standards Code*, for the performance of farming or ranching work and, in respect of the farming and ranching operation, is a person referred to in section 1(cc)(i)(B)(I), (II), (III) or (IV) of the *Occupational Health and Safety Act*;
- (l) any individual who is performing a restricted activity within the branch of the designated trade that is the same as a restricted activity within another designated trade or branch of a designated trade and for which the same training is provided in both the branch of the designated trade and the other designated trade or branch of a designated trade if
 - (i) the individual holds a trade certificate or, if applicable, an endorsement in the other designated trade or branch of a designated trade, or
 - (ii) the individual
 - (A) is an apprentice with an apprenticeship education agreement approved by the Registrar under the *Apprenticeship Education and Industry Training Programs Regulation* in the other designated trade or branch of a designated trade, and
 - (B) has completed the training in respect of the restricted activity.

Employer's guide to occupational health and safety

OHS information for employers

The purpose of this guide is to help you understand Alberta's occupational health and safety (OHS) legislation and your role - as an employer - in ensuring health and safety at the work site. This guide introduces what you need to do to comply with legislation and make your work site a healthier and safer place.

Key information

- The internal responsibility system is the foundation of Alberta's OHS legislation.
- It is the employer's responsibility to protect the health and safety of their workers.
- A joint work site health and safety committee (HSC) or health and safety (HS) representative, a health and safety program, and hazard assessments are fundamental employer responsibilities.
- OHS officers have authorities that enable them to enforce OHS legislation.

Our goal – health and safety

The internal responsibility system is a foundational principle of OHS legislation. Its core premise is that everyone – including employers and workers – is accountable for workplace health and safety, each according to their authority and level of control.

Alberta's *OHS Act* is an important piece of legislation that affects you. It outlines your responsibilities as an employer, as well as the rights and responsibilities of others working at or involved with the work site. The *OHS Act* sets minimum standards to protect and promote the health and safety of workers throughout Alberta. OHS legislation also includes regulations made under the *OHS Act*.

These regulations set specific rules and work together with the *OHS Act*.

Does Alberta's OHS legislation apply to me?

The *OHS Act*, Regulations and Code apply to most workers and employers in Alberta, unless you are:

- under federal jurisdiction (for example, Canadian chartered banks, interprovincial transportation companies, television and radio broadcasters), or
- a farm and ranch operations owner, family member of the owner or non-waged individual.

You are an employer if:

- you employ or engage one or more workers, including workers from a temporary staffing agency,
- you are designated to represent an employer, or
- you are responsible for overseeing workers' health and safety for your corporation or employer.

An employer, along with other work site parties, has OHS responsibilities. Part 1 of the *OHS Act* defines the roles and responsibilities of each work site party, including supervisors, workers, suppliers, service providers, owners, contractors, prime contractors, self-employed persons, and temporary staffing agencies. While each work site party may have a different role, health and safety is a shared responsibility.

If you employ waged, non-family workers in a farm and ranch operation, you have employer obligations. You must follow the basic health and safety standards set out in the *OHS Act*. If you employ a domestic worker (such as nanny or housekeeper), you must also comply with the *OHS Act* and its regulations.

The *OHS Act*, Regulations and Code

The *OHS Act*, Regulations and Code provide rules to help keep your work site healthy and safe.

The *OHS Act* gives the government authority to make regulations and codes (or rules) about health and safety in the workplace.

The regulations address requirements related to general administrative matters and broad health and safety rules.

The OHS Code specifies detailed technical standards and health and safety rules that work site parties must comply with to fulfill their obligations. Technical requirements cover areas such as chemical hazards, equipment safety, first aid, harassment, violence and noise, to name a few.

Role of Alberta OHS

OHS administers and enforces the Alberta government's OHS legislation. Alberta OHS has resources available to help you:

- understand work site parties' rights and responsibilities,
- meet the requirements of the legislation, and
- prevent injuries, illnesses and fatalities.

If you have questions related to OHS legislation or workplace health and safety, call the Alberta OHS Contact Centre.

- 1-866-415-8690 anywhere in Alberta
- 780-415-8690 in Edmonton and surrounding area

Alberta WCB

Sometimes people mistake Alberta OHS for the Workers' Compensation Board (WCB). While both report to the Minister responsible for Labour and Immigration, Alberta OHS is separate from the WCB.

The WCB's role is to see that the *Workers' Compensation Act* is followed, provide rehabilitation programs for workers suffering from job-related injuries and illnesses, and work with Alberta OHS, industry and labour to help reduce the number of workers getting hurt or sick. The WCB oversees the insurance plan funded by employers that pays

workers who are injured on the job or develop illness caused by their work.

OHS officers

OHS officers conduct inspections and investigations to enforce the OHS legislation. The officers are authorized to:

- enter your work site,
- look at and copy relevant documents,
- require you or others to provide reasonable assistance or produce information,
- inspect or take samples of any material, product or equipment or other thing being produced,
- bring along any equipment, materials or persons with expert knowledge to assist the officer,
- conduct tests, take pictures, measurements or recordings,
- require you or your designate to demonstrate the use of machinery, equipment, appliance, or other thing at the work site, and
- interview and take statements from any person at the work site or others who are not present at the work site.

If an officer believes a work site is unhealthy or unsafe, they can take steps (including issuing compliance orders, stop use orders, stop work orders), where appropriate, to monitor compliance with the legislation.

Read more in [Role and duties of government occupational health and safety officers](#).



Your responsibilities

The *OHS Act* states that you, as an employer, must do everything you reasonably can to:

- protect the health, safety and welfare of your workers, other workers at your work site and other persons at or in the vicinity of the work site,
- make your workers aware of their rights and responsibilities under the OHS legislation and of any workplace health and safety issues,
- protect your workers from harassment or violence at the work site and ensure that workers do not participate in harassment or violence,
- ensure workers are supervised by supervisors who are competent and familiar with relevant

OHS legislation that applies to the work performed,

- ensure workers are properly trained,
- work with an HSC or an HS representative, as applicable, to share health and safety information and resolve issues in a timely manner,
- resolve health and safety concerns in a timely manner,
- provide a prime contractor, if one is required at the work site, names of all the supervisors,
- cooperate with any person exercising a duty under the OHS legislation, and
- comply with the OHS legislation.

In addition to the obligations in the *OHS Act*, an employer has other responsibilities. Some examples of these are:

- Maintaining equipment at your work site in safe working order.
- Ensuring hazardous products (such as dangerous substance or chemicals) are properly labeled and stored, and safety data sheets are readily available to workers.
- Ensuring workers have the skills and training they need to do their jobs safely, including but not limited to training on:
 - work practices and procedures,
 - how to safely use equipment, and
 - how to select and use personal protective equipment that they require.



According to the *OHS Act*, to 'train' means to give information and explanation to a worker with respect to a particular subject matter and to

require a practical demonstration that the worker has acquired knowledge or skill related to the subject matter.

You must also provide health and safety information. This is information that may affect the health and safety of a person at a work site. It includes information about hazards at the work site, hazard controls and work practices and procedures. Health and safety information does not include personal

information about an identifiable individual, confidential proprietary information or trade secrets.

You have the duty to:

- make OHS information readily available to the HSC or HS representative, workers and the prime contractor,
- make OHS legislation readily available,
- ensure OHS reports, plans or procedures are in writing and readily available,
- ensure OHS orders or notices are posted or readily available, and
- ensure HSC minutes are posted or readily available.



Employers must address harassment or violence at the work site to ensure workers are not subject to, or do not participate in, harassment or violence at the work site.

Note that the above represents only some highlighted responsibilities of the employer. There are many other employer obligations found throughout the *OHS Act*, Regulations and Code. As an employer, you must ensure compliance with all such obligations.

Workers' rights and responsibilities

Employers need to be aware of workers' rights and responsibilities under the internal responsibility system. Under the *OHS Act*, workers have three fundamental rights:

- the right to know
- the right to participate
- the right to refuse dangerous work

Workers also have duties under the *OHS Act*. These include but are not limited to, the following:

- work in a manner that ensures the health and safety of themselves and others,
- cooperate with you, the supervisor or any other person to protect their health and safety,
- use safety devices and wear personal protective equipment,
- refrain from causing or participating in harassment or violence,
- report concerns about unsafe or harmful work site acts or conditions,
- cooperate with any person exercising a duty under the OHS legislation, and
- comply with the OHS legislation.

Learn more about workers' rights and responsibilities in [Worker's guide to occupational health and safety](#).



HSCs and HS representatives

The purpose of the HSC or HS representative is to ensure worker participation in health and safety, and encourage worker and employer cooperation. HSCs and HS representatives help serve as internal monitoring to ensure ongoing effectiveness of OHS at the work site.

Larger employers (with 20 or more full-time and part-time workers) must establish an HSC for work lasting 90 days or more. HSCs consist of worker and employer representatives who meet on a regular basis to discuss and resolve work site health and safety issues.

If you're a smaller employer (with five to 19 full-time and part-time workers), you must designate an HS representative for work lasting 90 days or more.

HSCs and HS representatives have similar duties. These include inspecting the work site at regular intervals, participating in hazard identification and incident investigations, and making recommendations respecting the health and safety of workers. HSC and HS representative duties are set out in the OHS legislation, including but not limited to sections 19 and 20 of the *OHS Act*.



As an employer, you are required to ensure the co-chairs of the HSC or the HS representative receive appropriate training.

During an Alberta OHS work site inspection, an OHS officer will request the HSC co-chair who represents the workers or the co-chair's designates, or the HS representative to be present.

Find more about HSCs and HS representatives in the publication [Health and safety committees and representatives](#).



Health and safety program

If you have 20 or more workers, you must set up a health and safety program in consultation with the HSC, and implement the program. A health and safety program is a coordinated system of procedures, processes and other measures that is designed to be implemented in order to promote continuous improvement in workplace health and safety and reduce injuries and illnesses.

The *OHS Act* requires the program to include certain elements and the program must be reviewed and updated at least every three years. The required elements are:

- a health and safety policy,
- hazard assessment and control,
- an emergency response plan,
- a statement of OHS responsibilities of the employer, supervisors and workers at the work site,
- a schedule and procedures for inspection of the work site,
- procedures for when another employer or self-employed person is working at the work site,
- health and safety orientation and training for workers and supervisors,
- procedures for investigating incidents, injuries and refusals to work,
- procedures for worker participation in work site health and safety, including inspections and

investigation of incidents, injuries and refusals to work,

- procedures for reviewing and revising the health and safety program, and
- any other elements required by the regulations.

If you employ fewer than 20 workers, no program is required. However, you must still have documentation in place that meets the requirements established by the legislation. This includes but is not limited to, hazard assessment and control and an emergency response plan.

Learn more in the publications [Health and safety programs](#) and [Participation in health and safety for small business owners and workers](#).



Hazard assessment

You must conduct a hazard assessment of your work site and implement measures to eliminate or control the hazards identified, even when you're not required to set up a health and safety program.

Every workplace has situations, conditions or things that may be dangerous to health and safety of workers. The hazard assessment and control process is a documented approach to prevent work-related injury or illness.

A team approach is necessary when doing hazard assessments. If you have an HSC or an HS representative, they must get involved. You must also involve workers affected by the hazards.

In addition, you must ensure that all workers who may be affected by the hazards are familiar with the necessary health and safety measures or procedures to keep themselves and others healthy and safe on the job.

Read more and find customizable hazard assessment templates in [Hazard Assessment and Control: a handbook for Alberta employers and workers](#).



Right to refuse dangerous work

A worker has a right to refuse work if they believe on reasonable grounds that there is a dangerous condition at the work site, or that the work is a danger to themselves or others. OHS considers that dangerous conditions include health and safety hazards that are not normal for the job, or normal hazards that are not properly controlled.

A work refusal is a last resort to address work site dangers. Employer and worker obligations in the OHS legislation should make work refusals unnecessary. As an employer, you have an obligation under the *OHS Act* to address health and safety concerns raised by workers and other work site parties, and under the OHS Code, to control any hazards at the work site. You must ensure your workers understand the hazards at the workplace, know what needs to be reported and have the support to exercise their right.

If a worker determines that they need to refuse to do particular work, they must promptly report the refusal and the reasons for it to the employer, supervisor or another designated person. As an employer, you are required to look into and eliminate the danger if it exists.

The worker is entitled to the same wages and benefits that they would have received had the refusal not taken place. You may temporarily re-assign the worker to alternate work while the work refusal situation is being resolved.

You may reassign the work to other workers after you determine that no dangerous condition exists. When reassigning the work, you must advise the other workers (in writing) of the refusal and the reason for it, and make them aware of their own right to refuse the work.

Unless the dangerous condition is remedied immediately, you must prepare a written report of the worker's refusal to work, the employer's investigation into the refusal and any actions taken. A copy of the report must be given to the worker who refused the work and the HSC or HS representative, if one exists. The report cannot contain any personal information about the worker who refused to work.

If they are not satisfied that the employer has addressed the dangerous condition, workers or other persons present during an inspection of the dangerous conditions may file a complaint with Alberta OHS. An OHS officer will investigate the complaint and issue a written report to the worker, the employer, the HSC or HS representative if one exists, and any other person who filed the complaint.

For more information on work refusals, read [Right to refuse dangerous work](#).



Discriminatory action complaints



An employer cannot take discriminatory action (such as termination, layoff, demotion, transfer, change in job location, etc.) against a worker for exercising their rights and duties under OHS legislation.

Workers may file a complaint with Alberta OHS if they have been subjected to discriminatory action.

For more on this topic, read [Discriminatory action complaints](#).



Reporting injuries and incidents



You must report an injury or incident to Alberta OHS if it falls into any of the following categories:

- reportable serious injury or incident,
- potentially serious incident (PSI), or
- incident at a mine or mine site.

You must call reportable serious injuries or incidents in to the OHS Contact Centre as soon as possible.

- 1-866-415-8690 anywhere in Alberta

- 780-415-8690 in Edmonton and surrounding area

Reportable serious injuries or incidents include:

- an injury or incident that results in the death of a worker,
- an injury or incident that results in a worker being admitted to a hospital,
- an unplanned or uncontrolled explosion, fire or flood that causes or may cause a serious injury,
- the collapse or upset of a crane, derrick or hoist,
- the collapse or failure of any component of a building or structure necessary for structural integrity, or
- an injury or incident or a class of injuries or incidents specified in the regulations.

You must report potentially serious incidents (PSIs) using the [online incident reporting](#) service. A PSI is any event where a reasonable and informed person would determine that under slightly different circumstances, there would be a high likelihood for a serious injury to a person.

A PSI is not limited to workers and it does not require the occurrence of an injury.

When determining whether an incident is a PSI, consider the following factors:

- actual circumstances of the incident (person, place, time, work practices being followed),
- hazards present at the time of the incident,
- appropriate controls in place at the time of the incident,
- slightly different circumstances (timing, distance, body position, etc.) that may have resulted in a serious injury, and
- similar incidents that have occurred within the employer or prime contractor's operations in the past two years that resulted in a serious injury.

If you are an employer at a mine or mine site, you must report certain incidents. To learn more, visit the [Report mine or mine site incidents](#) web page.



An OHS officer may investigate. The officer may conduct interviews and gather evidence to determine what happened. The *OHS Act* defines the powers of the officers. You, your workers and

other work site parties are required to cooperate with the officer. The officer will prepare an investigation report summarizing the circumstances of the incident.

You are also required to carry out your own independent investigation of the incident with the participation of the HSC or HS representative, as applicable. Once the investigation is complete, you must provide a copy of the report to the HSC or HS representative. If there is no HSC or HS representative, you must share the report with your workers.

You must ensure the investigation report of serious injuries or incidents is readily available and provided to Alberta OHS upon request. For PSIs, the employer must submit the investigation report to Alberta OHS using the online reporting service.

Notification to Alberta OHS is separate from any notice you are required to give to the WCB or other local authorities, like the police.

For more information, see the publications: [Reporting and investigating injuries and incidents](#) and [Reporting and investigating potentially serious incidents](#).



Acceptances and approvals

The OHS legislation may specify mandatory procedures, processes, standards, requirements, substance control, service, first aid service, first aid equipment and equipment. If you want to do things in a different way, you may apply for an acceptance requesting permission to use alternative approaches. If you can satisfy Alberta OHS that your choice offers equal or greater protection to workers than the requirements specified in the legislation, an acceptance may be issued. Acceptance applications must be in writing and provide specific details for Alberta OHS to make a decision.

Acceptance applications process must include the results of consultations with the HSC, HS representative and/or other affected workers, as applicable. You must also make your workers and

other parties aware of the acceptance. This includes posting a copy of the application at the work site and sharing a copy of the application with the HSC or HS representative, if one exists. Once you receive the acceptance, you must post it at the work site or inform the workers who are affected by the acceptance.

Some specific provisions of OHS legislation require Alberta OHS to approve a process, equipment, standard, course or training agency, among other things. Practices or procedures for HSCs that differ from those listed in the *OHS Act* also require an approval. Approval applications must be in writing and provide specific details for Alberta OHS to make a decision.

When considering an approval request, Alberta OHS can require you to consult with the HSC or the HS representative, individual workers and other parties about the application.

For more information, read [Applying for an OHS acceptance or approval](#).



Non-compliance

It is in everyone's best interests to provide healthy and safe work sites and proper training, and to make sure that your workers follow safe and healthy practices. However, if you, your workers or other work site parties don't take the necessary steps to do so, the *OHS Act* can be used to compel all parties to follow the rules.

OHS orders

The *OHS Act* gives OHS officers authority to issue orders, which require work site parties to take measures that result in compliance with the OHS legislation. Types of orders include:

- Compliance orders – note instances of observed non-compliance and the actions required to be taken to achieve compliance by a specified date.
- Stop use orders – require equipment be shut down or taken out of service if it appears unhealthy or unsafe to operate.
- Stop work orders – stop work that is being done in an unhealthy or unsafe manner and can apply

to an entire work site, multiple work sites of a single employer or to a certain activities or areas of work site.



The person who receives a compliance order must report back to Alberta OHS on the corrective measures taken. They must also provide a copy of the report to their HSC or HS representative and post the report at the work site.

Ticketing and administrative penalties

OHS officers have authority to write immediate, on-the-spot tickets for specific contraventions of OHS legislation against employers, workers, supervisors and self-employed persons who put their own or others' health and safety at risk. Ticket amounts range from \$100 to \$500 per violation. A 15% victim surcharge is applied to each ticket.

Preventive in nature, administrative penalties encourage compliance and are issued by Alberta OHS for serious or repeat non-compliance with OHS legislation. An officer may refer a regulated work site party for an administrative penalty when the OHS officer is of the opinion that a person has contravened the OHS legislation, has failed to comply with an order, acceptance or approval, or makes a false statement or gives false or misleading information to an officer.

Administrative penalty amounts are a maximum of \$10,000 per day, per contravention, and are determined on a case-by-case basis.

Some of the factors that are considered in deciding an administrative penalty are:

- the severity of the contravention,
- risk of harm resulting from the contravention,
- the regulated party's compliance history, including orders, violation tickets, other interactions with OHS, and
- whether there is a demonstrated commitment to health and safety.

For more information, see [OHS orders](#), [OHS violation tickets](#) and [OHS administrative penalties](#) on the [OHS Compliance and enforcement](#) web page.



Prosecutions

If you, your workers or other work site parties (for example, supervisors) break the rules of the *OHS Act*, the regulations or the OHS Code, or ignore what an OHS officer says, charges can be laid. Problems may be resolved in court if people ignore the law or do not cooperate and fix workplace health and safety problems. Conviction on a first offense can lead to a fine up to \$500,000, plus \$30,000 each day an offence continues and/or a jail term of up to six months per violation. A second conviction can result in a fine of up to \$1,000,000 plus \$60,000 each day an offense continues and/or a jail term of up to one year per violation.

In certain cases involving serious injury or death, criminal negligence charges can be laid. In such cases, the maximum jail penalties are 10 years for each person injured and life imprisonment for each person killed. Federal legislation amended the Canadian Criminal Code that established legal duties for workplace health and safety and imposed serious penalties for violations that result in injuries or death.

For more information, see the [OHS investigations](#) web page.



Review and appeal an OHS order, decision or action

If you receive an order from OHS or disagree with an OHS decision, you can take steps to have the matter reviewed.

Director review

A person receiving an order or decision from an OHS officer may request a review by a Director of Inspection (with exception of discriminatory action orders.)

A Director of Inspection has the authority to:

- confirm, vary or revoke an order or decision,
- make any other order the director considers reasonable, and
- refer the matter to the Alberta Labour Relations Board (ALRB).



If you want to have an order reviewed, you must file a request for a director review within 30 days of receiving the order.

Alberta Labour Relations Board appeals

The ALRB hears appeals of various matters including orders or decisions by a Director of Inspection, discriminatory action orders, administrative penalties, decisions from director reviews, etc.

The ALRB has the authority to:

- confirm, vary or revoke an order or decision, and
- reject to hear an appeal when it determines the matter is without merit.

For more information, see [Request a review of an OHS order or decision](#) and [Appeal an OHS action](#) on the [OHS Compliance and enforcement](#) web page.



Contact us

OHS Contact Centre

Report serious incidents, make immediate danger complaints, ask OHS questions

Anywhere in Alberta

- 1-866-415-8690

Edmonton and surrounding area

- 780-415-8690

Deaf or hearing impaired

- 1-800-232-7215 (Alberta)
- 780-427-9999 (Edmonton)

File a complaint online

[ohsComplaintsPortal.labour.alberta.ca](https://ohs-complaints-portal.labour.alberta.ca)

Online incident reporting

Potentially serious, mine or mine site incidents

oir.labour.alberta.ca

Website

alberta.ca/OHS

Get copies of the *OHS Act*, Regulations and Code

Alberta Queen's Printer

qp.gov.ab.ca

Occupational Health and Safety

alberta.ca/ohs-act-regulation-code.aspx

For more information

Applying for an OHS acceptance or approval (LI030-3)

ohs-pubstore.labour.alberta.ca/li030-3

Discriminatory action complaints (LI061)

ohs-pubstore.labour.alberta.ca/li061

Hazard assessment and control (BP018)

ohs-pubstore.labour.alberta.ca/bp018

Health and safety committees and representatives (LI060)

ohs-pubstore.labour.alberta.ca/li060

Health and safety programs (LI042)

ohs-pubstore.labour.alberta.ca/li042

OHS compliance and enforcement

alberta.ca/ohs-compliance-enforcement.aspx

OHS investigations

<https://www.alberta.ca/ohs-investigations.aspx>

Participation in health and safety for small business owners and workers (LI055)

ohs-pubstore.labour.alberta.ca/li055

Report mine or mine site incidents

alberta.ca/report-mine-or-mine-site-incidents.aspx

Reporting and investigating injuries and incidents (LI016)

ohs-pubstore.labour.alberta.ca/li016

Reporting and investigating potentially serious incidents (LI016-1)

ohs-pubstore.labour.alberta.ca/li016-1

Right to refuse dangerous work (LI049)

ohs-pubstore.labour.alberta.ca/li049

Role and duties of government OHS officers (LI046)

ohs-pubstore.labour.alberta.ca/li046

Workers' Compensation Board

wcb.ab.ca

Worker's guide to occupational health and safety (LI008)

ohs-pubstore.labour.alberta.ca/li008

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MASTER ELECTRICIAN CODE OF ETHICS

A. Preamble

Master electricians are expected to conduct themselves in a way that aligns with this Code of Ethics (code). The code does not cover every scenario that master electricians may encounter, but all master electricians are expected to guide their action by the spirit and intent of this code.

It is recognized that master electricians may be subject to more than one code of ethics through professional associations or employment. This code is not intended to conflict with any other code of ethics, and master electricians shall discuss any potential conflicts with the Administrator of Certification.

B. Alberta Master Electricians

Master electricians shall:

1. conduct themselves in an ethical, professional, and responsible manner;
2. carry out their duties in accordance with the *Safety Codes Act* and other applicable legislation, regulations, bylaws, and policies;
3. promote and uphold the overriding value of safety in regard to themselves, public well-being, and property;
4. perform their duties with integrity, independence, and objectivity;
5. conduct work only in areas in which they are qualified;
6. maintain competence and endeavor to extend their technical and business knowledge, skills, and abilities through ongoing education and professional development;
7. model a positive regard for the profession and a commitment to the safety codes system in Alberta;
8. preserve confidentiality with respect to all information that comes to their knowledge from employment, unless the law requires or authorizes disclosure; and
9. avoid any real or reasonably perceived conflicts of interest.



Province of Alberta

SAFETY CODES ACT

Revised Statutes of Alberta 2000
Chapter S-1

Current as of April 1, 2023

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Note

All persons making use of this consolidation are reminded that it has no legislative sanction, that amendments have been embodied for convenience of reference only. The official Statutes and Regulations should be consulted for all purposes of interpreting and applying the law.

Regulations

The following is a list of the regulations made under the *Safety Codes Act* that are filed as Alberta Regulations under the Regulations Act

	Alta. Reg.	<i>Amendments</i>
Safety Codes Act		
Administrative Items	16/2004	49/2006, 35/2007, 68/2008, 52/2011, 170/2012, 53/2016, 261/2020
Administrative Penalties	207/2017	139/2021, 182/2021, 218/2022
Alberta Safety Codes Authority Order	29/2016	56/2020
Amusement Rides Standards	223/2001	32/2005, 283/2006, 180/2012, 206/2016, 200/2019
Building Code	31/2015	20/2019
Certification and Permit	295/2009	39/2012, 193/2014, 229/2018, 157/2022
Electrical Code	209/2006	14/2008, 178/2009, 176/2013, 126/2015, 186/2018
Elevating Devices Codes	192/2015	205/2021, 157/2022
Elevating Devices, Passenger Ropeways and Amusement Rides Permit	28/2012	170/2012, 39/2015, 16/2017, 206/2021

Exemption	351/2003	1/2008, 209/2010, 22/2012, 159/2013, 156/2015, 217/2016, 29/2019, 296/2020, 241/2021
Fire Code.....	32/2015	21/2019
Gas Code.....	111/2010	227/2012, 193/2015 65/2022
Motor Vehicle Gas Conversion.....	210/2001	221/2004, 177/2006, 179/2015, 262/2020, 157/2022
Passenger Ropeways and Passenger Conveyors Standards.....	190/2008	227/2012, 78/2017
Permit.....	204/2007	266/2009, 295/2009, 223/2010, 40/2012, 212/2013, 17/2015, 31/2015, 194/2015, 99/2016, 207/2016, 207/2017, 208/2017, 22/2019, 157/2022
Plumbing Code.....	119/2007	154/2012, 227/2012, 208/2016, 23/2019
Power Engineers	85/2003	270/2004, 24/2013, 218/2013, 45/2014, 84/2014, 20/2018
Pressure Equipment Exemption Order	56/2006	158/2014, 262/2018, 206/2019
Pressure Equipment Safety.....	49/2006	150/2008, 238/2009, 138/2011, 227/2012, 218/2013, 85/2014, 158/2014, 195/2015
Pressure Welders.....	169/2002	97/2009, 71/2010, 103/2014, 35/2020, 66/2022, 157/2022
Private Sewage Disposal Systems.....	229/97	119/99, 354/2003, 8/2007, 264/2009, 170/2012, 227/2012, 196/2015

SAFETY CODES ACT

Chapter S-1

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HER MAJESTY, by and with the advice and consent of the
Legislative Assembly of Alberta, enacts as follows:

Interpretation

1(1) In this Act,

- (a) “accredited agency” means a person designated as an accredited agency under this Act;
- (b) “accredited corporation” means a corporation designated as an accredited corporation under this Act;
- (c) “accredited municipality” means a municipality that is designated as an accredited municipality under this Act;
- (d) “accredited regional services commission” means a regional services commission established under the *Municipal Government Act* that is designated as an accredited regional services commission under this Act;
- (d.1) “administrative penalty” means an administrative penalty referred to in section 57.1;
- (e) “Administrator” means an Administrator appointed under this Act;
- (e.1) “Authority” means the Alberta Safety Codes Authority established under section 30.1;
- (f) “building” includes a structure and any part of a building or structure, but does not include any thing excluded by the regulations from the definition of building;
- (g) “construction” includes alteration, installation, repair, relocation, demolition and removal;
- (h) “contractor” means a person or organization that does or undertakes to do, either for the person’s or organization’s own use or benefit or for that of another, whether or not for the purposes of gain, any process or activity to which this Act applies;

- (i) “Council” means the Safety Codes Council established under this Act;
- (j) “design” includes plans, diagrams, drawings and specifications depicting the arrangement and operation of any thing, process or activity to which this Act applies;
- (k) “electrical system” means an assembly or any part of an assembly of electrical equipment or components used or intended to be used for the generation, transmission, distribution, control or utilization of electric energy, but does not include any thing excluded by the regulations from the definition of electrical system;
- (l) “elevating device” means a passenger elevator, freight elevator, dumbwaiter, emergency elevator, escalator, inclined passenger lift, manlift, passenger ropeway, material lift, moving walk, personnel hoist, lift for persons with disabilities, or amusement ride, as defined in the regulations, or anything designated by the regulations as an elevating device;
- (m) “evaluation” includes load, destructive and non-destructive tests;
- (n) “fire protection” includes fire detection, prevention and suppression;
- (o) “gas” means any gas or compressed gas or any mixture or dilution of gases and includes any combustible or flammable fluid, but does not include any gas, mixture or dilution of gases or combustible or flammable fluid excluded by the regulations from the definition of gas;
- (p) “gas system” means any equipment or installation used or intended to be used in or in conjunction with the processing, transmission, storage, distribution, supply or use of gas, but does not include any thing excluded by the regulations from the definition of gas system;
- (q) “information system” means an information system maintained under section 58;
- (r) “local authority” means
 - (i) a council of a city, town, village, summer village or municipal district,
 - (ii) for the purposes of this Act, a settlement council of a Metis settlement,

- (iii) a board of administrators of a new town,
- (iv) the Minister responsible for the *Municipal Government Act*, in the case of an improvement district, or
- (v) the Minister responsible for the *Special Areas Act*, in the case of a special area;
- (s) “Metis patented land” means patented land as defined in the *Metis Settlements Act*;
- (t) “Minister” means the Minister determined under section 16 of the *Government Organization Act* as the Minister responsible for this Act;
- (u) “municipality” includes, for the purposes of this Act, a Metis settlement;
- (v) “owner” includes a lessee, a person in charge, a person who has care and control and a person who holds out that the person has the powers and authority of ownership or who for the time being exercises the powers and authority of ownership;
- (w) “person” includes a partnership and a band as defined in the *Indian Act* (Canada);
- (x) “plumbing system” means the whole or any part of a drainage system, a venting system or a water system, but does not include any thing excluded by the regulations from the definition of plumbing system;
- (y) “pressure equipment” means a boiler, a fired-heater pressure coil, a thermal liquid heating system and other equipment designed to contain expansible fluid under pressure, including, but not limited to, pressure vessels, pressure piping systems and fittings, as defined in the regulations;
- (z) “private sewage disposal system” means the whole or any part of a system for the management, treatment and disposal of sewage on the site where the sewage is generated, but does not include anything excluded by the regulations;
- (aa) “quality management system” means all the documented, planned and systematic actions needed to ensure that this Act is complied with;
- (bb) “safety codes officer” means an individual designated as a safety codes officer under section 31;

- (cc) repealed 2015 c10 s2;
 - (cc.1) “sub-council” means a sub-council of the Council established under section 16.1(3);
 - (cc.2) “tele-warrant” means a tele-warrant issued under section 48.1;
 - (dd) “variance” means a variance issued under this Act;
 - (ee) “vendor” includes a lessor.
- (2) In this Act, a reference to “this Act” includes the regulations and bylaws made under this Act and any code, standards or body of rules declared to be in force pursuant to this Act.
- (3) This Act is to be interpreted in a manner consistent with the principles of barrier-free design and access to allow persons with physical and sensory disabilities to more easily and safely access and use buildings, facilities and services to which this Act applies.

RSA 2000 cS-1 s1;2015 c10 s2

Application of Act

2(1) This Act applies to fire protection, barrier-free design and the design, manufacture, construction, installation, use, operation, occupancy and maintenance of

- (a) buildings,
- (b) electrical systems,
- (c) elevating devices,
- (d) gas systems,
- (e) plumbing systems,
- (f) pressure equipment, and
- (g) private sewage disposal systems.

(2) The Minister may, by order, exempt any person or municipality or any thing, process or activity from any or all provisions of this Act and attach terms and conditions to the exemption.

(3) An exemption order made under subsection (2) may be made to apply generally or specifically and to all or a particular area of Alberta.

(4) The *Regulations Act* applies to an exemption order made under subsection (2).

RSA 2000 cS-1 s2;2004 c19 s2;2015 c10 s3

Validation of orders

2.1(1) The following orders are, as of the date they came into force, validated and declared for all purposes to have been validly made under section 2:

- (a) Ministerial Order No. P:002/04, an exemption regarding the GP3 Generation Facility;
- (b) Ministerial Order No. P:007/10, an exemption regarding the application of sentence 9.10.15.3(1) of Division B of the Alberta Building Code 2006.

(2) Everything done under or pursuant to the orders referred to in subsection (1) is validated and declared for all purposes to have been validly done.

2015 c10 s4

Suspension or modification of Act or regulations

2.2(1) On the making of

- (a) an order under section 52.1 or 52.2(1) of the *Public Health Act*, or
- (b) an order under section 18(1) or 21(1) of the *Emergency Management Act*,

and for up to 60 days following the lapsing of that order, the Minister may, by order, modify or suspend any or all provisions of this Act in relation to any thing, process or activity and may attach terms and conditions to the modification or suspension.

(2) An order of the Minister under subsection (1) may be made retroactive to a date not earlier than the date on which the order referred to in subsection (1)(a) or (b) was made.

(3) An order of the Minister under subsection (1) may be made to apply generally or specifically and to all or a particular area of Alberta.

(4) An order of the Minister under subsection (1) lapses 60 days after the order referred to in subsection (1)(a) or (b) lapses, unless

- (a) the order of the Minister provides that the order of the Minister lapses on an earlier date, or

(b) the Minister terminates the order of the Minister on an earlier date.

(5) The Minister shall publish and make available an order of the Minister under subsection (1) in the manner the Minister considers appropriate.

(6) The *Regulations Act* does not apply to an order of the Minister under subsection (1).

2020 c13 s13;2022 c14 s15

Crown bound

3 The Crown is bound by this Act.

1991 cS-0.5 s3

Part 1 Responsibilities

Government

4(1) The Minister shall, in accordance with this Act, co-ordinate and encourage the safe management and control of any thing, process or activity to which this Act applies.

(2) The Minister shall, in accordance with this Act, co-ordinate and encourage the principles of barrier-free design and access for any thing, process or activity to which this Act applies.

RSA 2000 cS-1 s4;2004 c19 s3

Owners, care and control

5 The owner of any thing, process or activity to which this Act applies shall ensure that it meets the requirements of this Act, that the thing is maintained as required by the regulations and that when the process or activity is undertaken it is done in a safe manner.

1991 cS-0.5 s5

Design duties

6 A person who creates, alters, has care and control of or owns a design or offers a design for use by others shall ensure that the design complies with this Act and that it is submitted for review or registered if required by this Act, and if the design is deregistered, the person shall provide notice of its deregistration in accordance with the regulations.

1991 cS-0.5 s6

Manufacturers' duties

7 A person who manufactures any thing or undertakes a process or activity to which this Act applies shall ensure that the thing, the process or the activity complies with this Act.

1991 cS-0.5 s7

Contractors' duties

8 A contractor who undertakes construction, operation or maintenance of or builds or installs any thing to which this Act applies shall ensure that this Act is complied with.

1991 cS-0.5 s8

Vendors' duties

9(1) A person who is a vendor in the ordinary course of business, other than as an employee or an agent, shall not advertise, display or offer for sale, for lease or for other disposal, or sell, lease or otherwise dispose of, any thing to which this Act applies unless that thing complies with this Act.

(2) A person who sells, leases or otherwise disposes of a thing referred to in subsection (1) shall provide any warnings or instructions required by this Act.

(3) No person shall advertise, display or offer for sale, for lease or for other disposal, or sell, lease or otherwise dispose of, any thing that is prohibited from being sold by the regulations.

1991 cS-0.5 s9

Use of variances

10(1) An owner, vendor, contractor, manufacturer or designer of a thing, or a person who authorizes, undertakes or supervises any process or activity, to which a variance applies shall ensure that the terms and conditions of the variance are complied with.

(2) Compliance with a variance is deemed to be compliance with this Act.

1991 cS-0.5 s10

Professional services

11 A person permitted to affix stamps or seals pursuant to the *Architects Act* or the *Engineering and Geoscience Professions Act* shall ensure that any professional service the person renders to which this Act applies, including the affixing of stamps and seals, complies with this Act.

RSA 2000 cS-1 s11;2011 c3 s33

Liability exemption

12(1) No action lies against the Crown, the Council, members of the Council, employees or officers of the Council, safety codes officers, accredited municipalities or their employees or officers, accredited regional services commissions or their employees or officers, accredited agencies or their employees or officers or Administrators for anything done or not done by any of them in good faith while exercising their powers and performing their duties under this Act.

(2) The Crown, the Council, an accredited municipality, an accredited regional services commission and an accredited agency acting in good faith under this Act are not liable for any damage caused by a decision related to the system of inspections, examinations, evaluations and investigations, including but not limited to a decision relating to their frequency and the manner in which they are carried out.

(3) The Crown, the Council, an accredited municipality and an accredited regional services commission that engage the services of an accredited agency are not liable for any negligence or nuisance of the accredited agency that causes an injury, loss or damage to any person or property.

(4) Subject to this section, nothing done pursuant to this Act affects the liability of any person for injury, loss or damage caused by any thing, process or activity to which this Act applies.

RSA 2000 cS-1 s12;2015 c10 s5

Part 2

Administration

Overall administration

13(1) The Minister administers this Act but an accredited municipality, an accredited regional services commission, an accredited corporation and the Authority shall provide for the administration of this Act in accordance with

- (a) the order that designated the accredited municipality, accredited regional services commission or accredited corporation, or
- (b) the order referred to in section 18(d.1) authorizing the establishment of the Authority.

(2) The Minister or the Council may, in accordance with the regulations, establish and operate safety information and education programs or services related to any thing, process or activity to which this Act applies.

RSA 2000 cS-1 s13;2015 c10 s6

Administrator

Administrator appointed

14(1) The Minister may appoint persons as Administrators and prescribe their powers and duties and may make an order fixing or governing the terms and conditions of service, including remuneration and expenses, applicable to an Administrator if the person is not an employee as defined in the *Public Service Act*.

- (2) The Minister may direct, in writing,
- (a) that an Administrator report to the Council with respect to exercising the powers and performing the duties of an Administrator, and
 - (b) that the Council direct the Administrator in exercising the powers and performing the duties of an Administrator.
- 1991 cS-0.5 s14

Deemed an officer

15 An Administrator may, in accordance with the appointment under section 14, exercise any or all of the powers and perform any or all of the duties of a safety codes officer.

1991 cS-0.5 s15

Safety Codes Council**Council**

16(1) There is hereby established a corporation to be known as the “Safety Codes Council”.

(2) On the coming into force of this subsection, a person who, immediately before the coming into force of this subsection, held an appointment as a member of the Council continues as a member of the Council until the term of office stated in the member’s appointment expires or the appointment is terminated, revoked or rescinded.

(3) Subject to subsection (2), the Council consists of the persons appointed to the Council by the Minister and the persons appointed to the Council by the Board of Directors in accordance with this section.

(4) The persons appointed to the Council by the Board of Directors must include persons who are experts in fire protection, buildings, barrier-free building design, electrical systems, elevating devices, gas systems, plumbing systems, private sewage disposal systems or pressure equipment.

(5) The Board of Directors shall ensure that representatives of municipalities, business, labour and persons with disabilities are appointed to the Council from among the persons described in subsection (4).

(6) An Administrator is not eligible to be appointed to the Council.

(7) A person appointed under subsection (3)

- (a) holds office for a term not exceeding 3 years, as set out in the appointment, and
- (b) continues to hold office after the expiry of the term of office until the person is reappointed or a successor is appointed.

(8) If a member of the Council resigns or the appointment terminates, that person may, in relation to an appeal in which the person participated as a member of the Council, perform and complete the duties or responsibilities and continue to exercise the powers that the person would have had if the person had not ceased to be a member of the Council, until the appeal is completed.

(9) Subject to subsection (7)(b) and (11), a member of the Council may not hold office for a period exceeding 9 consecutive years.

(10) Breaks in service of less than 2 years shall be disregarded in determining the number of consecutive years for the purposes of subsection (9).

(11) The Minister may make an order providing that subsection (9) does not apply in respect of a specified appointment to the Council if in the opinion of the Minister that order is necessary to ensure the effective operation of the Council.

RSA 2000 cS-1 s16;2004 c19 s4;2015 c10 s7

Board of Directors and sub-councils

16.1(1) On the coming into force of this section,

- (a) the Co-ordinating Committee of the Safety Codes Council as it existed immediately before the coming into force of this section is continued as the Board of Directors;
- (b) a person who, immediately before the coming into force of this section, held an appointment as a member of the Co-ordinating Committee of the Safety Codes Council continues as a member of the Board of Directors until the term of office stated in the member's appointment expires or the appointment is terminated, revoked or rescinded;
- (c) a person who, immediately before the coming into force of this section, held the designation as the Chair of the Council continues as the chair of the Board of Directors until the term of office stated in the designation expires or the designation is terminated, revoked or rescinded;
- (d) a person who, immediately before the coming into force of this section, held a designation as an alternate to chair the Council continues as vice-chair of the Board of Directors

until the term of office stated in the designation expires or the designation is terminated, revoked or rescinded.

(2) Subject to subsection (1), the Board of Directors shall consist of

- (a) a chair appointed by the Minister as a member of the Council and as the chair of the Board of Directors,
- (b) one or more members of the Council appointed by the Board of Directors as a vice-chair of the Board of Directors, and
- (c) the members of the Council appointed by the Board of Directors as directors.

(3) The Board of Directors may establish sub-councils of the Council, including, without limitation, sub-councils relating to any thing, process or activity to which this Act applies.

(4) A sub-council shall consist of

- (a) the members of the Council appointed by the Board of Directors as members of the sub-council, and
- (b) a member of the public appointed by the Minister as a member of the Council and as the public member of the sub-council.

2015 c10 s8

Expenses

17 The Council may pay members of the Council travelling and living expenses while away from their ordinary places of residence in the course of their duties as members of the Council at the rates provided for in the regulations under the *Public Service Act*.

1991 cS-0.5 s17; 1993 c7 s4

Duties and powers

18 The Council

- (a) shall perform its duties and responsibilities under this Act,
- (b) shall hear appeals under Part 5,
- (c) shall, on the request of the Minister, provide information about any matter related to this Act,
- (d) shall carry out any activities that the Minister directs,

- (d.1) shall, on the order of the Minister, establish the Authority referred to in section 30.1,
- (e) may promote uniformity of safety standards for any thing, process or activity to which this Act applies,
- (e.1) may promote the principles of barrier-free design and access for any thing, process or activity to which this Act applies,
- (f) may provide a liaison between the Minister and any person or organization interested in safety or barrier-free design and access matters governed by this Act,
- (g) may review and formulate classifications of certificates of competency and qualifications required of a person to hold a certificate of competency,
- (h) may, with the consent of the Minister, review and formulate codes and standards for accreditation, safety standards and barrier-free design and access for any thing, process or activity to which this Act applies and promulgate those codes and standards, and
- (i) may
 - (i) provide advice and recommendations to the Minister about safety information, barrier-free design and access information, education programs and services, accreditation and other information and services related to this Act, and
 - (ii) with the consent of the Minister, publish or provide to the public the information and services referred to in subclause (i).

RSA 2000 cS-1 s18;2004 c19 s5;2015 c10 s9

Bylaws**19** The Council may make bylaws

- (a) respecting the Board of Directors, sub-councils and committees of the Council and the delegation of any power or duty conferred or imposed on it, except the power to make bylaws, to the Board of Directors, a sub-council or committee of the Council or a member of the Council;
- (b) respecting the Authority and the exercise of its powers and performance of its duties under this Act;

- (c) governing the calling of its meetings and the meetings of the Board of Directors, sub-councils and committees of the Council, and regulating the conduct of those meetings;
- (d) governing the practice and procedure applicable to appeals before it;
- (e) governing the business, property, operation and affairs of the Council.

RSA 2000 cS-1 s19; 2015 c10 s10

Staff

20(1) The Council may enter into agreements to engage the services of persons it considers necessary and may prescribe their duties and conditions of employment and pay their salary, remuneration and expenses.

(2) The Council may enter into agreements to engage the services of agents, advisors or persons providing special, technical or professional services of a kind required by the Council in connection with its business and affairs and may pay their remuneration, fees and expenses.

1991 cS-0.5 s20

Money

21(1) The Council, in connection with the powers conferred and duties imposed on it under this Act, may acquire real property, construct buildings or improvements or hold or dispose of real property.

(2) The Council, in connection with the powers conferred and duties imposed on it under this Act, may acquire, hold and dispose of personal property.

(3) Any money that is derived from donations that is not immediately required for the operation of the Council may, subject to the regulations, be invested only in accordance with the *Trustee Act*.

(3.1) Subsection (3) is subject to any trust or condition that applies to the donation.

(4) The Council may spend money only for purposes related to the powers conferred and duties imposed on it under this Act.

(5) Notwithstanding the *Financial Administration Act*, any money received by the Council belongs to the Council.

RSA 2000 cS-1 s21; 2001 c28 s19; 2006 c9 s17

Fees

22 The Council may establish and charge fees

- (a) for anything issued or for any material, information, education program or service the Council provides,
- (b) with respect to the conduct of appeals, and
- (c) for any research that is carried out that relates to any thing, process or activity to which this Act applies.

1993 c7 s6

Levies

23(1) The Council may, with the approval of the Minister, for the purpose of enabling the Council to carry out activities and services it is directed or authorized to carry out under this Act, collect money by the levy of assessments on persons who apply for, or hold, certificates or permits or who apply to register, or register, designs.

(2) The Council may require an accredited municipality, accredited regional services commission, accredited corporation, accredited agency or other organization that issues certificates or permits or registers designs to collect the money referred to in subsection (1) and to remit it to the Council.

1994 c44 s2;1999 c26 s23

Levies

24(1) An accredited agency may, with the approval of the Minister, for the purpose of enabling the accredited agency to carry out activities and services it is directed or authorized to carry out under this Act, collect money by the levy of assessments on persons who apply for, or hold, certificates or permits or who apply to register, or register, designs.

(2) An accredited agency may, with the approval of the Minister, require an accredited municipality, accredited regional services commission, accredited corporation, accredited agency or other organization that issues certificates or permits or registers designs, to collect the money referred to in subsection (1), and the accredited municipality, accredited regional services commission, accredited corporation, accredited agency or other organization shall collect the money and remit it as directed by the accredited agency.

1994 c44 s2;1999 c26 s23

Reports

25(1) The Council shall, after the end of each fiscal year, prepare and submit to the Minister an annual report consisting of a general summary of its activities in that year and a financial report.

(2) The Council may, at any time, report to the Minister on any matter related to this Act.

(3) The Minister shall lay a copy of the report described in subsection (1) before the Legislative Assembly if it is then sitting, and if it is not then sitting, within 15 days after the commencement of the next sitting.

1991 cS-0.5 s22

Accreditation**Accredited municipalities**

26(1) On the application of a local authority, the Minister may, by order,

- (a) designate a municipality as an accredited municipality authorized to administer all or part of this Act with respect to any or all things, processes or activities to which this Act applies within the boundaries of the municipality, or
- (b) designate 2 or more municipalities as accredited municipalities authorized to administer in common all or part of this Act with respect to any or all things, processes or activities to which this Act applies within the boundaries of those municipalities.

(2) The Minister may include terms and conditions in an order under this section.

(3) If the Minister, on reasonable and probable grounds, is of the opinion that an accredited municipality does not comply with the requirements of this Act or the terms and conditions of its designation, or that any thing, process or activity to be administered by the accredited municipality may constitute a serious danger to persons or property, the Minister may

- (a) request the local authority to take the action necessary to correct the situation;
- (b) direct a safety codes officer appointed under section 33(1) to undertake the administration of this Act in that accredited municipality and to charge fees, in the amount provided for by the regulations,

- (i) to the accredited municipality for any permit issued by the safety codes officer and for any material or service that is provided by the safety codes officer,
 - (ii) to the owner of a premises or place for any material or services provided by the safety codes officer, and
 - (iii) to the recipient of any permit issued by the safety codes officer;
- (c) by order, cancel or suspend the municipality's designation as an accredited municipality.
- (4) An order under this section shall be published in The Alberta Gazette.
- (5) The Minister may delegate any or all of the Minister's powers under this section to the Council, and if the Council refuses to designate a municipality as an accredited municipality or cancels or suspends the designation of an accredited municipality, the municipality may appeal the refusal, cancellation or suspension to the Minister.

1991 cS-0.5 s23

Accredited regional services commission

- 27(1)** On the application of a regional services commission established under the *Municipal Government Act*, the Minister may, by order, designate a regional services commission as an accredited regional services commission authorized to administer all or part of this Act with respect to any or all things, processes or activities to which this Act applies within the boundaries of its members.
- (2) The Minister may include terms and conditions in an order under this section.
- (3) If the Minister, on reasonable and probable grounds, is of the opinion that an accredited regional services commission does not comply with the requirements of this Act or with the terms and conditions of its designation, or that any thing, process or activity to be administered by the accredited regional services commission may constitute a serious danger to persons or property, the Minister may
- (a) request the board of directors of the accredited regional services commission to take the action necessary to correct the situation;

- (b) direct a safety codes officer appointed under section 33(1) to undertake the administration of this Act on behalf of that accredited regional services commission and to charge fees, in the amount provided for by the regulations,
 - (i) to the accredited regional services commission for any permit issued by the safety codes officer and for any material or service that is provided by the safety codes officer,
 - (ii) to the owner of a premises or place for any material or services provided by the safety codes officer, and
 - (iii) to the recipient of any permit issued by the safety codes officer;
 - (c) by order, cancel or suspend the regional services commission's designation as an accredited regional services commission.
- (4) An order under this section must be published in The Alberta Gazette.
- (5) The Minister may delegate any or all of the Minister's powers under this section to the Council, and if the Council refuses to designate a regional services commission as an accredited regional services commission or cancels or suspends the designation of an accredited regional services commission, the regional services commission may appeal the refusal, cancellation or suspension to the Minister.

1999 c26 s23

Accredited corporations

- 28(1)** On the application of a corporation an Administrator may, by order, designate it as an accredited corporation authorized to administer all or part of this Act with respect to any or all things, processes or activities to which this Act applies that are owned by or are under the care and control of the corporation.
- (2) If an Administrator refuses to designate a corporation as an accredited corporation, the Administrator shall serve written notice of the refusal on the corporation.
- (3) An Administrator may include terms and conditions and specify locations and facilities in an order under this section.
- (4) If an Administrator, on reasonable and probable grounds, is of the opinion that an accredited corporation does not comply with the requirements of this Act or with the terms and conditions of its

designation, the Administrator may, by order, suspend or cancel the designation as an accredited corporation and shall serve the corporation with a written notice of the suspension or cancellation.

(5) A corporation may appeal to the Council in accordance with the Council's bylaws

- (a) a refusal of designation as an accredited corporation, and
- (b) a suspension or cancellation of a designation as an accredited corporation.

(6) An order under this section shall be published in The Alberta Gazette.

1991 cS-0.5 s24

Accreditation overlap

29(1) If an accredited municipality, an accredited regional services commission and an accredited corporation are authorized to administer the same part of this Act with respect to the same thing, process or activity at the same location, the Minister may direct whether the accredited municipality, the accredited regional services commission or the accredited corporation may administer this Act with respect to that thing, process or activity.

(2) If the Minister considers it expedient and in the public interest, the Minister may delegate the Minister's powers under this section to another individual.

(3) The Land and Property Rights Tribunal established under the *Land and Property Rights Tribunal Act* shall, at the request of the Minister, provide recommendations regarding a question or matter relating to an accreditation overlap referred to in subsection (1).

RSA 2000 cS-1 s29;2015 c10 s11;2020 cL-2.3 s39

Accredited agencies

30(1) On the application of a person, an Administrator may, by order, designate the person as an accredited agency authorized to provide services pursuant to all or part of this Act with respect to any or all things, processes or activities to which this Act applies.

(2) If an Administrator refuses to designate a person as an accredited agency, the Administrator shall serve the person with a written notice of the refusal.

(3) An Administrator may include terms and conditions in an order under this section.

(4) An accredited agency may enter into an agreement with the Minister, the Council, an accredited municipality, an accredited

corporation or another person approved by the Minister to provide services under this Act that the agency is authorized to provide.

(5) If an Administrator, on reasonable and probable grounds, is of the opinion that an accredited agency does not comply with the requirements of this or any other Act or with the terms and conditions of its designation, the Administrator may, by order, suspend or cancel the designation as an accredited agency and shall serve the agency with a written notice of the suspension or cancellation.

(6) A person may appeal to the Council in accordance with the Council's bylaws

- (a) a refusal of designation as an accredited agency, and
- (b) a suspension or cancellation of a designation as an accredited agency.

(7) An order under this section shall be published in The Alberta Gazette.

RSA 2000 cS-1 s30;2015 c10 s12

Alberta Safety Codes Authority

Establishment and powers of Authority

30.1(1) On the order of the Minister, the Council shall establish a division of the Council to be known as the "Alberta Safety Codes Authority" to oversee the provision of services pursuant to all or part of this Act identified by the order in areas to be administered by the Crown.

(2) The membership, powers and duties of the Authority shall be established in accordance with the order referred to in subsection (1).

(3) The Authority may enter into contracts on behalf of the Council that the Authority considers appropriate for the exercise of its powers and performance of its duties under this Act.

(4) The Authority may appear as an applicant or respondent in legal proceedings concerning the services that it provides or oversees pursuant to this section.

(5) The *Regulations Act* applies to an order made under this section.

2015 c10 s13

Safety Codes Officers

Designation

31(1) On receipt of an application, an Administrator may

- (a) designate a person who holds an appropriate certificate of competency and meets the requirements of the regulations as a safety codes officer with respect to all or part of this Act, and
- (b) designate the powers that a safety codes officer referred to in section 33(2) to (6) may exercise.

(2) If an Administrator refuses to designate a person as a safety codes officer, the Administrator shall serve the person with a written notice of the refusal.

(3) If an Administrator, on reasonable and probable grounds, is of the opinion that a safety codes officer contravenes this Act or the terms of the person's designation as a safety codes officer, the Administrator may suspend or cancel the designation and shall serve the safety codes officer with a written notice of the suspension or cancellation.

(4) A safety codes officer may appeal to the Council a refusal of designation and a suspension or cancellation of a designation as a safety codes officer in accordance with the Council's bylaws.

RSA 2000 cS-1 s31;2015 c10 s14

Officer's powers and duties

32 A safety codes officer designated in accordance with section 31(1)(a) may exercise the powers and perform the duties of a safety codes officer only in accordance with

- (a) a designation of powers under section 31(1)(b) and the safety codes officer's terms of employment, or
- (b) an appointment referred to in section 33(1) and the safety codes officer's terms of employment.

RSA 2000 cS-1 s32;2015 c10 s15

Employment

33(1) The Minister may, in accordance with the *Public Service Act*, appoint safety codes officers for the administration of all or part of this Act anywhere in Alberta and shall prescribe the powers and duties of the safety codes officers.

(2) A local authority shall provide for safety codes officers for the purpose of administering all or part of this Act that an accredited municipality is authorized to administer.

(3) An accredited regional services commission shall provide for safety codes officers for the purpose of administering all or part of this Act that it is authorized to administer.

(4) An accredited corporation shall provide for safety codes officers for the purpose of administering all or part of this Act that it is authorized to administer.

(5) An accredited agency shall provide for safety codes officers for the purpose of providing services under this Act that it is authorized to provide.

(6) The Authority shall provide for safety codes officers for the purpose of providing services under this Act that it provides or oversees pursuant to section 30.1.

RSA 2000 cS-1 s33;2015 c10 s16

Inspections

34(1) For the purpose of ensuring that this Act and any thing issued under this Act are complied with, a safety codes officer may, without a warrant, at any reasonable time, enter any premises or place, except a private dwelling place that is in use as a dwelling, in which the officer has reason to believe there is something to which this Act applies and may, using reasonable care, carry out an inspection, review designs and examine and evaluate quality management systems and manufacturing and construction processes.

(2) For the purpose of ensuring that this Act and any thing issued under this Act are complied with, a safety codes officer may, at any reasonable time and on reasonable notice, enter a private dwelling place that is in use as a dwelling in which the officer has reason to believe there is something to which this Act applies and, using reasonable care, may carry out an inspection and review designs

(a) with the consent of the owner or occupant, or

(b) with a warrant from a justice.

(3) On entering a premises or place, a safety codes officer shall, on request, produce identification in accordance with the regulations and provide advice on the powers to carry out inspections, review designs and examine and evaluate quality management systems and manufacturing and construction processes.

(4) In carrying out an inspection, review, examination or evaluation under this Act, a safety codes officer may

- (a) be accompanied by a police officer, a peace officer or any other person or with any thing that the safety codes officer considers appropriate,
 - (b) inspect, review, examine and evaluate any thing, process or activity to which this Act applies and photograph or otherwise record any thing, process or activity that the safety codes officer considers would be of assistance,
 - (c) require any person on the premises or at the place to be interviewed and to make full disclosure either orally or in writing about any matter concerning any thing, process or activity to which this Act applies,
 - (d) if necessary for safety reasons and on providing notice when practical, temporarily close or disconnect, or require temporary closure or disconnection of, any thing, process or activity to which this Act applies for the purpose of making the inspection, review, examination or evaluation, and
 - (e) review, perform or require to be performed any tests and evaluations the safety codes officer considers necessary on any thing, process or activity to which this Act applies and remove any thing, if necessary, for the purpose of having tests or evaluations performed.
- (5) The owner or occupier of premises or a place or thing shall ensure, during an inspection, review, examination or evaluation, that
- (a) on the request of a safety codes officer, there is a person in attendance who is capable of taking all the necessary precautions and providing reasonable assistance to ensure the safety of the safety codes officer, and
 - (b) any necessary safety equipment, including but not limited to that requested by a safety codes officer, is immediately available for the officer's use.
- (6) A safety codes officer who has reviewed, detained or removed any thing shall, on completion of the inspection, review, examination or evaluation, return the thing to the person entitled to it unless it is impossible, unsafe or impractical to return that thing.
- (7) On completion of an inspection, review, examination or evaluation, the safety codes officer may provide, to the owner, occupier, vendor, contractor, manufacturer or designer, advice or a report on the thing, process or activity that was inspected, reviewed, examined or evaluated.

(8) Notwithstanding subsection (6), a safety codes officer may,

- (a) on obtaining a warrant, or
- (b) without a warrant if the safety codes officer believes on reasonable and probable grounds that it is not practical to obtain a warrant because the necessary delay may result in the loss of evidence,

detain or remove for the purposes of evidence any thing that the officer discovers during an inspection, review, examination or evaluation that the officer believes on reasonable and probable grounds may provide evidence of the commission of an offence under this Act.

RSA 2000 cS-1 s34;2015 c10 s17

Production of documents

35(1) For the purpose of ensuring that this Act and any thing issued under this Act are complied with, a safety codes officer may demand the production, within a reasonable time, of any record or document pertaining in any manner to compliance with this Act and may on giving a receipt for it remove it for not more than 48 hours for the purpose of making copies of it.

(2) If a person on whom a demand is made under subsection (1) refuses or fails to comply, the safety codes officer may apply to a judge of the Court of King's Bench and the judge may make any order that the judge considers necessary to enforce compliance with subsection (1).

(3) A copy of the application and a copy of each affidavit in support shall be served not less than 3 days before the day named in the application for the hearing.

RSA 2000 cS-1 s35;2009 c53 s167;AR 217/2022

Incriminating disclosures

36 A person who makes a disclosure under section 34(4)(c) has the right not to have any incriminating disclosure so given used to incriminate the person in a prosecution under this Act except in a prosecution under section 67(2).

1991 cS-0.5 s32

Officer hindered

37(1) If a person refuses to allow a safety codes officer to exercise that officer's powers under this Act or interferes or attempts to interfere with a safety codes officer in the exercise of that officer's powers under this Act, an Administrator, an accredited municipality, an accredited regional services commission, the

Authority or the Council may apply to the Court of King's Bench for an order

- (a) restraining that person from preventing or in any manner interfering with a safety codes officer in the exercise of that officer's powers under this Act, and
- (b) for the purposes of providing protection, authorizing a police officer to accompany the safety codes officer on an inspection, review, examination or evaluation under this Act.

(2) A copy of the application and a copy of each affidavit in support shall be served not less than 3 days before the day named in the application for the hearing.

RSA 2000 cS-1 s37;2009 c53 s167;2015 c10 s18;AR 217/2022

Part 3

Standards

Variances

38(1) An Administrator or a safety codes officer may issue a written variance with respect to any thing, process or activity to which this Act applies if the Administrator or officer is of the opinion that the variance provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by this Act.

(2) An Administrator or a safety codes officer may include terms and conditions in the variance.

(3) A safety codes officer on issuing a variance shall notify an Administrator.

(4) The *Regulations Act* does not apply to variances issued under this section.

(5) A decision of the Administrator under subsection (1) is final and not subject to appeal.

(6) If a safety codes officer refuses to issue a written variance, the applicant shall be served with a written notice of the refusal.

(7) An applicant who receives a notice referred to in subsection (6) may, within 30 days after the date on which the notice is received, appeal the refusal to the Council in accordance with the Council's bylaws.

RSA 2000 cS-1 s38;2015 c10 s19

Quality management system

39(1) An owner, occupier, vendor, contractor, manufacturer or designer of a thing, or a person who authorizes, undertakes or supervises a process or activity, to which this Act applies may be required by a written order of an Administrator or by this Act to have and maintain a quality management system that meets the requirements of the regulations.

(2) No person shall make a change to a quality management system without first notifying an Administrator of the change if it is a type of change of which an Administrator requires notification.

(3) A person who has or maintains a quality management system shall, on the request of an Administrator or a safety codes officer, make available a copy of a written description of the quality management system and submit reports respecting the quality management system.

1991 cS-0.5 s35

Design registration

40(1) An Administrator or safety codes officer may register the design of any thing, process or activity that is required by this Act to be registered if the submitted design meets the requirements of this Act.

(2) If this Act requires that the design of any thing, process or activity be registered, no person shall construct or manufacture the thing or undertake or operate the process or activity unless the design is registered.

(3) If an application to have a design registered is refused

- (a) by an Administrator, the Administrator shall serve the applicant with a written notice of the refusal, or
- (b) by a safety codes officer, the safety codes officer shall serve the applicant with a written notice of the refusal.

(4) If an Administrator is of the opinion that a registered design does not meet the requirements of this Act or is unsafe, the Administrator may deregister the design and shall as soon as practicable notify the person who submitted the design for registration.

(5) If a person's application to have a design registered is refused or if a person's registered design is deregistered, the person may appeal the refusal or deregistration to the Council in accordance with the Council's bylaws.

RSA 2000 cS-1 s40;2014 c18 s3

Certificate required

41(1) No person shall, without a certificate of competency, control or operate any thing to which this Act applies or supervise, operate or undertake any process or activity to which this Act applies if this Act requires that the person hold a certificate of competency to do so.

(2) No person shall employ or authorize a person who does not hold a certificate of competency to control or operate any thing or to supervise, operate or undertake a process or activity if this Act requires that an employed or authorized person hold a certificate of competency.

1991 cS-0.5 s37

Certificate issues

42(1) On receipt of an application, an Administrator may issue a certificate of competency to a person who complies with the requirements of this Act.

(2) A certificate of competency is valid for the length of time specified in it unless it is cancelled or suspended earlier.

(3) An Administrator may suspend or cancel a certificate of competency if the Administrator, on reasonable and probable grounds, is of the opinion that

- (a) the person no longer complies with the requirements of this Act for a certificate of competency, or
- (b) the person does not comply with this Act when acting pursuant to the certificate of competency.

(4) The Administrator shall serve written notice of a refusal to issue a certificate of competency or of the suspension or cancellation of a certificate of competency on the applicant for or the holder of the certificate of competency.

(5) A person who is refused a certificate of competency or whose certificate of competency is suspended or cancelled may appeal the refusal, suspension or cancellation to the Council in accordance with the Council's bylaws.

1991 cS-0.5 s38

Permits required

43(1) If this Act requires a person to have a permit to sell, construct, control or operate any thing or supervise, operate or undertake any process or activity, no person shall do so unless the person has the appropriate permit.

(2) If any thing to which this Act applies is approved by the regulations for a certain use or purpose, no person shall use that thing for any other use or purpose unless a safety codes officer issues a permit for that other use or purpose or it is an innocuous use or purpose.

(3) If the regulations require that any thing be approved before it is installed or operated, no person shall install or operate that thing unless a safety codes officer issues a permit for it.

(4) A permit under this Act does not authorize a person to do any thing, implement any process or engage in any activity that does not comply with any other enactment.

1991 cS-0.5 s39

Permit issues

44(1) On receipt of an application, a safety codes officer or other person designated by an Administrator may issue a permit to a person who complies with the requirements of this Act or issue a permit with respect to a thing, process or activity if it complies with the requirements of this Act.

(2) A safety codes officer or other person designated by an Administrator may include terms and conditions in a permit.

(3) If a safety codes officer or other person designated by an Administrator refuses to issue a permit, the safety codes officer or other person designated by an Administrator shall serve the applicant with a written notice of the refusal.

(4) A person who acts pursuant to a permit shall do so in accordance with this Act and shall comply with this Act and any terms or conditions contained in the permit.

(5) A person who is refused a permit may appeal the refusal to the Council in accordance with the Council's bylaws.

1991 cS-0.5 s40; 1994 c23 s42

Stamps, seals

45(1) If the regulations require the design of any thing, process or activity to which this Act applies to be submitted for review or to be registered and

- (a) to have a stamp or seal affixed to it and to be signed pursuant to the *Architects Act*, or
- (b) to have a seal affixed to it and to be signed pursuant to the *Engineering and Geoscience Professions Act*,

no permit may be issued with respect to the design unless the design is submitted for review or registered and is signed, stamped and sealed in accordance with the regulations.

(2) Despite subsection (1), a permit may be issued on or before April 1, 2016 with respect to a design submitted on or before April 1, 2016 that does not bear the signatures referred to in subsection (1).

RSA 2000 cS-1 s45;2011 c3 s33;2015 c10 s20

Permit suspended, etc.

46(1) A safety codes officer may suspend or cancel a permit if the safety codes officer, on reasonable and probable grounds, is of the opinion that the permit holder does not comply with this Act when acting pursuant to the permit or that the thing, process or activity does not comply with this Act.

(2) The safety codes officer shall serve written notice of the suspension or cancellation on the permit holder and shall also notify an Administrator.

(3) A person whose permit is suspended or cancelled may appeal the suspension or cancellation to the Council in accordance with the Council's bylaws.

1991 cS-0.5 s42

Part 4 Unusual Situations

Emergency

47(1) If a safety codes officer is, on reasonable and probable grounds, of the opinion that there is an imminent serious danger to persons or property because of any thing, process or activity to which this Act applies or because of a fire hazard or risk of an explosion, the officer may take any action that the officer considers necessary to remove or reduce the danger.

(2) An action taken under subsection (1) may include ordering the evacuation of persons from the affected premises and disconnecting or requiring the disconnection of an electrical, gas, sewage or plumbing system.

(3) A safety codes officer may request the assistance of a police officer, a peace officer or any other person as the safety codes officer considers appropriate when taking an action under subsection (1).

(4) If an action is taken under subsection (1) in respect of land that is not Metis patented land, the local authority may place an amount

equal to the expense incurred in carrying out the action on the tax roll as an additional tax against the land concerned, and that amount

- (a) forms a lien on the land in favour of the local authority,
- (b) is, for all purposes, deemed to be a tax imposed and assessed on the land and in arrears under the *Municipal Government Act* from the date the amount was placed on the tax roll, and
- (c) the *Municipal Government Act* applies for the purposes of the enforcement, collection and recovery of that amount.

(5) If an action is taken under subsection (1) by a safety codes officer appointed under section 33(1) or (6), or in respect of a subject-matter that is not under the administration of an accredited municipality or an accredited regional services commission, an amount equal to the expense incurred in carrying out the investigation is a debt due to the Crown jointly and severally by the owners of the land concerned, but those persons may only include

- (a) the owners of the land concerned as registered under the *Land Titles Act*, or
- (b) in the case of Metis patented land, the persons registered in the Metis Settlements Land Registry as owners of the Metis title, provisional Metis title or an allotment in the land.

(6) Nothing in this section precludes the owners of the land concerned from seeking indemnity from a third party for the removal or reduction of a danger or any expense incurred in carrying out an investigation.

RSA 2000 cS-1 s47;2015 c10 s21

Investigation

48(1) A safety codes officer may investigate an unsafe condition, accident or fire to determine its cause and circumstances and make recommendations related to safety.

(2) For the purposes of investigating an unsafe condition, accident or fire, a safety codes officer may whenever necessary

- (a) exercise any of the powers of a safety codes officer under sections 34, 35 and 48.1, and
- (b) for 48 hours or any extended period of time authorized by a justice, close all or part of the affected premises and prohibit any person from entering or remaining on the closed premises except a police officer or a person who enters to

prevent injury or death or to preserve property if, in the opinion of the safety codes officer, there are dangerous or emergency circumstances and the action is necessary for safety reasons or to preserve evidence.

(3) A safety codes officer shall, as soon as possible after the completion of the investigation, return to the person entitled to it any thing removed during the investigation unless it is impossible, unsafe or impractical to return that thing.

(4) A safety codes officer who conducts an investigation shall provide a report to an Administrator.

RSA 2000 cS-1 s48;2015 c10 s22

Tele-warrants

48.1(1) In carrying out an investigation under section 48, if

- (a) a safety codes officer has reasonable grounds to believe that there is in a place anything that will afford evidence as to the investigation,
- (b) a person refuses to allow a safety codes officer to exercise that officer's powers under this Act or interferes or attempts to interfere with a safety codes officer in the exercise of that officer's powers under this Act, and
- (c) it would be impracticable to appear personally before a justice to make an application for a search warrant,

the safety codes officer may submit an information on oath to a justice by telephone or other means of telecommunication.

(2) An information submitted by telephone or other means of telecommunication must be recorded verbatim by the justice, who must, as soon as practicable, cause to be filed with the clerk of the Alberta Court of Justice nearest to the area in which the tele-warrant is intended for execution, the record or a transcription of the record certified by the justice as to time, date and contents.

(3) For the purposes of subsection (2), an oath may be administered by telephone or other means of telecommunication.

(4) An information on oath submitted by telephone or other means of telecommunication must include

- (a) a statement of the circumstances that make it impracticable for the safety codes officer to appear personally before a justice,

- (b) a statement of the place to be searched and the things alleged to be liable to seizure in respect of the investigation,
- (c) a statement of the safety codes officer's grounds for believing that things liable to seizure in respect of the investigation will be found in the place to be searched, and
- (d) a statement as to any prior application under this section or any other warrant or order issued or applied for in respect of the same matter of which the safety codes officer has knowledge.

(5) A justice who is satisfied that an information on oath submitted by telephone or other means of telecommunication

- (a) is in respect of an investigation under this Act and conforms to the requirements of subsection (4),
- (b) discloses reasonable grounds for dispensing with an information presented personally and in writing, and
- (c) discloses reasonable grounds for the issuance of a search warrant in respect of the investigation,

may issue a tele-warrant to a safety codes officer and may require that the tele-warrant be executed within any time period that the justice may order.

(6) A tele-warrant issued under this section may confer the same authority as may be conferred by a warrant issued by a justice before whom the safety codes officer appears personally.

(7) If a justice issues a tele-warrant under subsection (5),

- (a) the justice must complete and sign the tele-warrant in the form prescribed in the regulations, noting on its face the date, time and place of issuance,
- (b) the safety codes officer, on the direction of the justice, must complete, in duplicate, a facsimile of the tele-warrant in the form prescribed in the regulations, noting on its face the name of the issuing justice and the date, time and place of issuance, and
- (c) the justice must, as soon as practicable after the tele-warrant has been issued, cause the tele-warrant to be filed with the clerk of the Alberta Court of Justice nearest to the area in which the tele-warrant is intended for execution.

(8) A safety codes officer who executes a tele-warrant issued under subsection (5) must, before entering the place to be investigated, or as soon as is practicable afterwards, give a facsimile of the tele-warrant to any person present and ostensibly in control of the place.

(9) A safety codes officer who, in any unoccupied place, executes a tele-warrant issued under subsection (5) must, on entering the place or as soon as is practicable afterwards, cause a facsimile of the tele-warrant to be suitably affixed in a prominent location within the place.

(10) A safety codes officer to whom a tele-warrant is issued under subsection (5) must file a written report with the clerk of the Alberta Court of Justice nearest to the area in which the tele-warrant was executed as soon as is practicable but not more than 7 days after the tele-warrant was executed, which report must include

- (a) a statement of the time and date the tele-warrant was executed, or if the tele-warrant was not executed, a statement of the reasons why it was not executed,
- (b) a statement of the things, if any, that were seized pursuant to the tele-warrant and the location where they are being held, and
- (c) a statement of the information, data, records, reports, documents and things, if any, that were seized in addition to the things mentioned in the tele-warrant and the location where they are being held, together with a statement of the safety codes officer's grounds for believing that those additional things provide evidence relevant to the unsafe condition, accident or fire under investigation.

(11) The clerk of the Alberta Court of Justice with whom a written report is filed pursuant to subsection (10) must, as soon as is practicable, cause the report, together with the information on oath and a copy of the tele-warrant to which it pertains, to be brought before a justice to be dealt with in respect of anything that was seized and is referred to in the report, in the same manner as if the things were seized pursuant to a search warrant issued by a justice on an information presented personally by a safety codes officer.

(12) In any proceeding in which it is material for a court to be satisfied that a search or seizure was authorized by a tele-warrant issued under subsection (5), the absence of a copy of the information on oath, transcribed and certified by the justice as to the time, date and contents, or a copy of the tele-warrant, signed by

the justice and carrying on its face a notation of the time, date and place of issuance, is, in the absence of evidence to the contrary, proof that the search or seizure was not authorized by a tele-warrant issued under subsection (5).

2015 c10 s23;AR 75/2023

Part 5

Orders, Appeals

Order

49(1) A safety codes officer may issue an order if the safety codes officer believes, on reasonable and probable grounds, that

- (a) this Act is contravened, or
- (b) the design, construction, manufacture, operation, maintenance, use or relocation of a thing or the condition of a thing, process or activity to which this Act applies is such that there is danger of serious injury or damage to a person or property.

(2) An order may be issued to a person who provides services that are the subject-matter of the order or to the owner, occupier, vendor, contractor, manufacturer or designer of the thing or to the person who authorizes, undertakes or supervises the process or activity that is the subject-matter of the order, or may be issued to any 2 or more of them.

(3) An order

- (a) shall set out what a person is required to do or to stop doing in respect of the thing, process or activity and a reasonable time within which it must be done or stopped;
- (b) may direct a method of work, construction, manufacturing, operation, maintenance, use or relocation that must be followed;
- (c) may direct that the use of the thing, process or activity be stopped in whole or in part in accordance with the order;
- (d) may direct that a design be altered;
- (e) may direct that an altered design be submitted to an Administrator for review or for registration;
- (f) may direct compliance with this Act, a permit, a certificate or a variance;

- (g) shall meet the requirements of the regulations on format and contents.

(4) On issuing an order, the safety codes officer shall serve a copy on the person to whom it is issued in accordance with the regulations and send a copy of it to an Administrator in a form and within the time satisfactory to the Administrator.

(5) A person who is served with an order under subsection (4) may, within 14 days after being served, submit a written request to the Administrator for a review of the order.

(6) If an Administrator receives a request, in accordance with subsection (5), from a person on whom an order is served and if the Administrator considers that the order

- (a) is improper, impractical or unreasonable,
- (b) contains incorrect references or typographical errors, or
- (c) does not correct or satisfy concerns about safety,

the Administrator may, by order, revoke or vary the original order within 21 days from when the original order was served.

(7) If an Administrator issues an order under subsection (6), the Administrator shall serve it, in accordance with the regulations, on all the persons on whom the original order was served and on the safety codes officer who issued the original order.

1991 cS-0.5 s45;1999 c26 s23

Appeal of orders

50(1) A person to whom an order is issued may, if the person objects to the contents of the order, appeal the order to the Council in accordance with the Council's bylaws within 35 days after the date the order was served on the person.

(2) The Council, on receipt of a notice of appeal in the form approved by the Council, shall

- (a) send a copy of the notice of appeal to
 - (i) the relevant Administrator,
 - (ii) the safety codes officer who issued the order being appealed, and
 - (iii) an accredited municipality, accredited regional services commission or the Authority, as the case may be, if the subject-matter of the order is administered by the

accredited municipality, accredited regional services
commission or the Authority,

and

- (b) notify the persons listed in clause (a) and the appellant of the time and place of the appeal.

(3) An appeal may proceed under this section regardless of whether a request was made in accordance with section 49(5).

RSA 2000 cS-1 s50;AR 49/2002 s8;
2002 c30 s28;2015 c10 s24

Appeal of refusals, suspensions, cancellations

51(1) The Council, on receipt of a notice of appeal with respect to

- (a) a refusal to designate a corporation as an accredited corporation or a person as an accredited agency,
- (a.1) a refusal by a safety codes officer to issue a written variance,
- (b) a refusal to register a design or a deregistration of a design, or
- (c) a suspension or cancellation of a designation of accreditation, a certificate of competency or a permit,

shall send a copy of the notice of appeal to the relevant Administrator and the safety codes officer, if any, who issued the suspension or cancellation, and notify them and the appellant of the time and place of the appeal.

(2) In order for an appeal to proceed, the Council must receive a notice of appeal in the form approved by the Council within 30 days after the date the corporation or person was served with the written notice of the refusal to designate, refusal by a safety codes officer to issue a written variance, refusal to register, deregistration, suspension or cancellation.

RSA 2000 cS-1 s51;2015 c10 s25

Council considers appeal

52(1) When the Council is considering an appeal,

- (a) it may, at the direction of the chair of the Board of Directors or in accordance with the Council's bylaws, sit in one or more divisions, and the divisions may sit simultaneously or at different times;
- (b) 3 members constitute a quorum of a division of the Council;

- (c) an order of a division is an order of the Council and binds all members of the Council;
- (d) evidence may be given before the Council in any manner the Council considers appropriate and the Council is not bound by the rules of law respecting evidence applicable to judicial proceedings.

(2) The Council may by order

- (a) confirm, revoke or vary an order, suspension or cancellation appealed to it and as a term of its order may issue a written variance with respect to any thing, process or activity related to the subject-matter of the order if in its opinion the variance provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by this Act,
- (b) confirm a refusal or direct that a designation, certificate or permit be issued and direct the inclusion of terms and conditions in the designation, certificate or permit,
- (b.1) confirm the refusal by a safety codes officer to issue a written variance or revoke the refusal by a safety codes officer to issue a written variance and issue a written variance on the terms and conditions that the Council considers appropriate, or
- (c) confirm a deregistration of a design, confirm a refusal to register a design or direct that a design be submitted for review or be registered and that changes be made to the design before it is submitted for review or is registered.

(3) The Council may include terms and conditions in a variance and shall, on issuing a variance, notify an Administrator.

(4) The *Regulations Act* does not apply to a variance issued under this section.

(5) The Council shall serve a copy of its order on the appellant and the Administrator and on the accredited municipality, the accredited regional services commission, the Authority and the safety codes officer if they were sent a copy of the notice of appeal.

RSA 2000 cS-1 s52;2015 c10 s26

Appeal to Court

53(1) An appeal lies from an order of the Council to the Court of King's Bench only on a question of law or jurisdiction.

- (2) An appeal under this section may be commenced within 30 days after receipt of service of the Council's decision
- (a) by filing an application with the clerk of the Court, and
 - (b) by serving a copy of the application
 - (i) on the Council and on the respondent, if the appellant is the person to whom the order under appeal is directed, or
 - (ii) on the Council and on the person to whom the order under appeal is directed, if the appellant is an Administrator, an accredited municipality, an accredited regional services commission or the Authority.
- (3) The Court may, on application either before or after the time referred to in subsection (2), extend that time if it considers it appropriate to do so.
- (4) The Court may, in respect of an appeal under subsection (2),
- (a) determine the issues to be resolved on the appeal, and
 - (b) limit the evidence to be submitted by the Council to a copy of the Council's decision certified by the person who was the chair when the appeal was heard and those materials necessary for the disposition of those issues.
- (5) On hearing the appeal, the Court may confirm, revoke or vary the order of the Council.

RSA 2000 cS-1 s53;2009 c53 s167;2015 c10 s27;AR 217/2022

Stay pending appeal

- 54(1)** An appeal taken under section 50 or 51 does not operate as a stay of the order, suspension or cancellation appealed from unless a person who may chair the Council, on receipt of a written application, so directs.
- (2) An appeal taken under section 53 does not operate as a stay of the order of the Council unless a judge of the Court of King's Bench so directs.
- (3) A stay directed under this section may include terms and conditions and shall be in writing.

RSA 2000 cS-1 s54;AR 217/2022

Enforcement of order

- 55(1)** An Administrator or a safety codes officer appointed under section 33(1) or referred to in section 33(2) or (3), together with a police officer, a peace officer or any other person as the safety

codes officer considers appropriate, may enter, at any reasonable time, any premises or place for the purpose of carrying out an order unless the owner refuses to allow or interferes with the entry or the carrying out of an order

- (a) if a person to whom the order is issued under section 49, 52 or 53 with respect to any thing, process or activity under the administration of an accredited municipality or accredited regional services commission does not commence an appeal of the order within the time set out for the commencement of the appeal and the order is not carried out within the time set out in the order, and
- (b) if the owner of the land concerned as registered under the *Land Titles Act* or, in the case of Metis patented land, the settlement member registered in the Metis Settlements Land Registry as owner of the Metis title, provisional Metis title or an allotment in the land has been given written notice of the intention of the accredited municipality, the accredited regional services commission or the Authority to carry out the order.

(2) When an order is carried out under subsection (1) in respect of land that is not Metis patented land, the local authority may place the amount of the expenses incurred in carrying out the order on the tax roll as an additional tax against the land concerned, and that amount

- (a) forms a lien on the land in favour of the municipality, and
- (b) is, for all purposes, deemed to be taxes imposed and assessed on the land and in arrears under the *Municipal Government Act* from the date the amount was placed on the tax roll, and that Act applies to the enforcement, collection and recovery of the amount.

(3) When an order is carried out under subsection (1) in respect of Metis patented land, the settlement council may place the amount of the expenses incurred in carrying out the order on the tax roll as an additional tax against the land concerned, and that amount is, for all purposes, deemed to be taxes imposed and assessed on the land and in arrears under the *Metis Settlements Act* from the date the amount was placed on the tax roll, and that Act applies to the enforcement, collection and recovery of the amount.

(4) In addition to the power granted under subsection (3), when an order is carried out under subsection (1) in respect of Metis patented land, the settlement council may record a notification of the amount of the expenses incurred in carrying out the order in the

Metis Settlements Land Registry against the Metis title, provisional Metis title or an allotment in the land, and

- (a) the expenses are a debt due to the Metis settlement by the settlement member who is registered as owner of the Metis title, provisional Metis title or allotment, and
- (b) no dealings in respect of the land by the settlement member may be recorded in the Registry without the consent of the settlement council until the recording of the notification is cancelled.

(5) A Metis settlement may, in addition to the rights under this section, exercise any rights granted under a General Council Policy to collect the expenses incurred in carrying out an order under subsection (1) that are payable by a settlement member.

RSA 2000 cS-1 s55;2015 c10 s28

Enforcement of order

56(1) An Administrator or a safety codes officer appointed under section 33(1) or referred to in section 33(6) and designated by the Administrator, together with a police officer, a peace officer or any other person as the safety codes officer considers appropriate, may enter, at any reasonable time, any premises or place for the purpose of carrying out an order unless the owner refuses to allow or interferes with the entry or the carrying out of an order

- (a) if a person to whom an order is issued under section 49, 52 or 53 with respect to a subject-matter that is not under the administration of an accredited municipality or an accredited regional services commission does not commence an appeal of the order within the time set out for the commencement of the appeal and the order is not carried out within the time set out in the order, and
- (b) if the owner of the land concerned as registered under the *Land Titles Act* or, in the case of Metis patented land, the person registered in the Metis Settlements Land Registry as owner of the Metis title, provisional Metis title or an allotment in the land and the persons named by the Minister under subsection (2) have been given written notice of the intention to carry out the order.

(2) When an order is carried out under subsection (1), the amount of the expenses incurred in carrying out the order is a debt due to the Crown jointly and severally by the persons named by the Minister prior to the carrying out of the order, but those persons may only include

- (a) the owner of the land concerned as registered under the *Land Titles Act*,
 - (b) in the case of Metis patented land, the person registered in the Metis Settlements Land Registry as owner of the Metis title, provisional Metis title or an allotment in the land, and
 - (c) the persons to whom the order was issued.
- (3) The Minister may delegate any or all of the Minister's powers under this section to the Council.

RSA 2000 cS-1 s56;2015 c10 s29

Order of the Court

57(1) If a person refuses to allow an Administrator or a safety codes officer or a person lawfully accompanying either of them to carry out an order under section 55 or 56 or interferes with or attempts to interfere with the carrying out of that order, the Administrator, the accredited municipality, the accredited regional services commission or the Authority, as the case may be, may, whether or not that person has been prosecuted under section 67(1) or 67(4)(c) or (d), make an application to the Court of King's Bench for an order

- (a) requiring that person to comply with the order issued under this Act, or
 - (b) restraining that person from interfering in any manner with the carrying out of an order in accordance with section 55 or 56.
- (2) A copy of the application and each affidavit in support shall be served not less than 3 days before the day named in the application for the hearing or within any shorter time that the Court may direct.

RSA 2000 cS-1 s57;2009 c53 s167;2015 c10 s30;AR 217/2022

Part 5.1

Administrative Penalties

Administrative penalties

57.1(1) An Administrator may impose an administrative penalty in accordance with this section and the regulations if the Administrator is of the opinion that a person has failed to comply with or contravened

- (a) section 5, 6, 7, 8, 9, 10(1), 11, 35, 39(2) or (3), 40, 41, 43, 44(4), 45(1), 59 or 67(1), (2) or (3),
- (b) an order made under this Act, or

- (c) a condition in a permit, certificate or variance issued under this Act.
- (2)** An administrative penalty may be
 - (a) a single amount, or
 - (b) an amount for each day or part of a day on which the contravention or failure to comply continues.
- (3)** The total amount of an administrative penalty must not exceed
 - (a) in the case of a penalty referred to in subsection (2)(b), the maximum daily amount of \$10 000, and
 - (b) the maximum cumulative amount of \$100 000.
- (4)** A notice of administrative penalty must be in writing and contain the following information:
 - (a) the name of the person required to pay the administrative penalty;
 - (b) the particulars of the contravention or failure to comply;
 - (c) the amount of the administrative penalty and whether it is imposed as a single amount or as an amount applicable to each day that the contravention or failure to comply has continued or will continue;
 - (d) the date on which the notice is issued;
 - (e) the date by which the administrative penalty must be paid;
 - (f) a statement that the person otherwise liable to pay the administrative penalty may, under section 57.3, appeal the imposition of or the amount of the administrative penalty, or both;
 - (g) any other information required by the regulations.
- (5)** A notice of administrative penalty may be served within 3 years from the date on which the contravention or failure to comply is alleged to have occurred, but not afterward.
- (6)** A notice of administrative penalty must be served on the person alleged to have contravened or failed to comply.
- (7)** Except as otherwise provided in this Part, a person who has been served with a notice of administrative penalty shall pay the

amount of the penalty on or before the date specified in the notice of administrative penalty, which must be at least 30 days after the day on which the notice of administrative penalty is served.

(8) A person who pays an administrative penalty in respect of a contravention or failure to comply shall not be charged with an offence under this Act in respect of the contravention or failure to comply described in the notice of administrative penalty.

2015 c10 s31;2020 c25 s16

Discretion to suspend, reduce or withdraw

57.2 After imposing an administrative penalty under section 57.1, if the person served with a notice of administrative penalty has not submitted a notice of appeal and the Administrator is of the opinion that the person is taking reasonable measures to remedy the contravention or failure to comply, the Administrator may, in writing, as the Administrator considers appropriate, and in accordance with the regulations,

- (a) suspend, reduce or withdraw the administrative penalty, and
- (b) impose terms and conditions concerning a suspension.

2015 c10 s31

Appeal of administrative penalty

57.3(1) A person served with a notice of administrative penalty may appeal the imposition of or the amount of the administrative penalty, or both, by submitting a notice of appeal of administrative penalty in accordance with the regulations to the appeal body established or designated by the regulations.

(2) Subject to the regulations, the appeal body referred to in subsection (1) may make rules governing its own procedure and business.

(3) The *Regulations Act* does not apply to rules made under subsection (2).

(4) The appeal referred to in subsection (1) shall be dealt with in accordance with the regulations and the rules made under subsection (2).

(5) Any subsequent actions before a court following a notice of administrative penalty shall be dealt with in accordance with the regulations.

2015 c10 s31

Enforcement of administrative penalty

57.4 Subject to the right to appeal, where a person fails to pay an administrative penalty in accordance with a notice of

administrative penalty and any suspension or reduction of an administrative penalty referred to in section 57.2, the Administrator may file a copy of the notice of administrative penalty together with the written suspension or reduction of an administrative penalty, if any, with the clerk of the Court of King's Bench, and on being filed, they have the same force and effect and may be enforced as a judgment of the Court.

2015 c10 s31;AR 217/2022

Part 6

Information

Information systems

58 An Administrator or the Council may, in accordance with the regulations, maintain one or more information systems with respect to

- (a) the administration of and exercise of powers and performance of duties under this Act, and
- (b) any matter to which this Act applies.

RSA 2000 cS-1 s58;2015 c10 s32

Accident notification

59 If there is an unsafe condition, accident or fire that involves a thing, process or activity to which this Act applies, the owner or person designated in the regulations shall, if required by the regulations, forthwith report it to an Administrator, or to the accredited municipality, the accredited regional services commission or the Authority, as the case may be, if the thing, process or activity is under the administration of the accredited municipality, the accredited regional services commission or the Authority.

RSA 2000 cS-1 s59;2015 c10 s33

Information compilation

60 If any information is required to be prepared, submitted or retained under this Act, the regulations and the terms and conditions of a permit may state the qualifications required to be held by the person who prepares, submits or retains it and may provide for how the information is to be prepared, submitted and retained.

1991 cS-0.5 s56

Outstanding orders

61 If a person to whom an order is issued under this Act

- (a) does not commence an appeal of the order within the time set out in this Act for commencement of an appeal, and

- (b) does not carry out the order within the time set out in the order,

an Administrator may place an entry on the relevant information system that briefly indicates the subject-matter of the outstanding order, the name of the owner and the location of the thing, process or activity that is the subject-matter of the outstanding order.

RSA 2000 cS-1 s61;2015 c10 s34

Variance register

62 An Administrator may place an entry on the relevant information system that briefly indicates the subject-matter of a variance and the location of the thing, process or activity to which the variance applies.

RSA 2000 cS-1 s62;2015 c10 s35

Release of information

63(1) Any person employed or assisting in the administration of this Act shall preserve confidentiality with respect to personal information, as defined in the *Freedom of Information and Protection of Privacy Act*, that comes to the person's attention under this Act and shall not disclose or communicate that information except as follows:

- (a) an accredited municipality, an accredited regional services commission, an accredited agency and the Authority must, on request by a municipality, release information, including personal information, to the municipality with respect to the administration of this Act within the municipality;
- (b) a person may disclose personal information in accordance with the *Freedom of Information and Protection of Privacy Act*.

(2) An accredited municipality, an accredited regional services commission, an accredited corporation and an accredited agency must, on the request of the Council, release information to the Council with respect to any matter related to this Act.

(3) Subsection (2) does not authorize the release of personal information as defined in the *Freedom of Information and Protection of Privacy Act*.

(4) Subject to the regulations, a person may request a search of a relevant information system for variances, orders and records related to the issuance of variances and orders, and the search request may be granted in accordance with the regulations and the *Freedom of Information and Protection of Privacy Act*.

RSA 2000 cS-1 s63;2015 c10 s36

Part 7 General

Fees

64(1) The Government may charge fees, in accordance with an order of the Minister,

- (a) for anything issued or for any material, information, education program, publication or service provided by the Minister under this Act,
- (b) for any research that is carried out by the Minister that relates to any thing, process or activity to which this Act applies, and
- (c) for the filing of a notice of appeal of an administrative penalty referred to in section 57.3(1).

(2) The Minister may make orders respecting the payment of fees to witnesses and interpreters and for reporting fires.

RSA 2000 cS-1 s64;2015 c10 s37

Service

64.1 If a document is required to be served on a person under this Act, the service must be effected in accordance with the regulations.

2015 c10 s38

Regulations

65(1) The Lieutenant Governor in Council may make regulations

- (a) governing fire protection and the safe design, manufacture, construction, sale, installation, use, operation, occupancy and maintenance of
 - (i) buildings,
 - (ii) electrical systems,
 - (iii) elevating devices,
 - (iv) fire protection systems and equipment,
 - (v) gas systems,
 - (vi) plumbing systems,
 - (vii) pressure equipment, and
 - (viii) private sewage disposal systems;

- (b) respecting the requirements for designs to be signed or have stamps or seals affixed by persons licensed or registered under the *Architects Act* or the *Engineering and Geoscience Professions Act* or any other enactment governing a profession or occupation;
- (c) respecting exclusions from the definitions of
 - (i) building,
 - (ii) electrical system,
 - (iii) gas,
 - (iv) gas system,
 - (v) plumbing system, and
 - (vi) private sewage disposal system,for the purposes of this Act;
- (d) respecting the designation of any thing as an elevating device;
- (e) defining for the purposes of this Act
 - (i) a passenger elevator, freight elevator, dumbwaiter, emergency elevator, escalator, inclined passenger lift, manlift, passenger ropeway, material lift, moving walk, personnel hoist, lift for persons with disabilities or amusement ride, and
 - (ii) boilers, pressure vessels, pressure piping systems and fittings, fired-heater pressure coils and thermal liquid heating systems;
- (e.1) governing barrier-free design and access;
- (e.2) defining for the purposes of this Act principles of barrier-free design and access;
- (f) governing the qualifications and the evaluation of the qualifications of safety codes officers and applicants for and holders of permits and certificates of competency;
- (g) designating things, processes or activities with respect to which a certificate of competency or permit is required and establishing the classifications of certificates of competency and permits;

- (h) governing the issuance, display, making available, suspension, renewal and cancellation of permits and certificates of competency;
- (i) governing the provision of identification of safety codes officers and the use of the identification;
- (i.1) respecting the investment of money for the purpose of section 21(3);
- (i.2) respecting the request of the Minister and recommendations regarding a question or matter relating to an accreditation overlap referred to in section 29(3);
- (i.3) respecting the administrative penalties referred to in section 57.1, including regulations
 - (i) respecting notices of administrative penalty, their form and contents;
 - (ii) respecting the amount of an administrative penalty;
 - (iii) respecting any other matter the Lieutenant Governor in Council considers necessary or advisable to carry out the intent and purpose of the system of administrative penalties;
- (i.4) respecting the suspension, reduction and withdrawal of administrative penalties under section 57.2;
- (i.5) respecting the form and contents of a notice of appeal of administrative penalty referred to in section 57.3(1);
- (i.6) designating a body as the appeal body for the hearing of appeals from notices of administrative penalty referred to in section 57.3(1) or respecting the establishment of an appeal body for the hearing of appeals from notices of administrative penalty referred to in section 57.3(1);
- (i.7) respecting the conduct of appeals before the appeal body referred to in section 57.3, including
 - (i) adjournments of matters before the appeal body;
 - (ii) the attendance of witnesses before the appeal body;
 - (iii) the applicability of the rules of evidence in judicial proceedings to hearings before the appeal body;
 - (iv) the receiving and recording of evidence;

- (v) empowering the appeal body to proceed when a party to the appeal fails to appear at or attend a hearing;
- (vi) empowering the appeal body to require the production of any record, object or thing;
- (vii) the reconsideration of decisions made by the appeal body;
- (viii) costs;
- (i.8) respecting the subsequent actions before a court following a notice of administrative penalty referred to in section 57.3(5);
- (i.9) respecting the enforcement of administrative penalties under section 57.4;
- (j) respecting forms for the purposes of this Act;
- (k) governing the information systems referred to in section 58, including
 - (i) the information, including personal information, to be included in an information system,
 - (ii) the release of information, including personal information, from an information system under section 63, and
 - (iii) the portion of the information in an information system, including personal information, that may be made available to the public in response to a search request referred to in section 63(4);
- (k.1) governing
 - (i) the content of a municipal bylaw referred to in section 66(2)(b.1) respecting private sewage disposal systems, and
 - (ii) the manner in which a municipality may make a municipal bylaw referred to in section 66(2)(b.1) respecting private sewage disposal systems;
- (l) governing orders and the service of orders, notices and other documents;

- (m) governing the preparation, submission and retention of reports and information and the reporting of unsafe conditions, accidents and fires;
- (n) governing designs;
- (o) governing quality management systems;
- (p) governing accredited municipalities, accredited regional services commissions, accredited corporations, accredited agencies and the Authority.

(2) The Lieutenant Governor in Council may, by regulation,

- (a) declare in force a code, standard or body of rules relating to the matters set out in subsection (1) and require compliance;
- (b) amend or repeal a code, standard or body of rules declared in force before or after the coming into force of this subsection.

(3) A code, standard or body of rules may be declared in force under subsection (2)

- (a) in whole or in part and with variations or disclaimers, and
- (b) as it read on a specified day or as amended or replaced from time to time.

(4) If a code, standard or body of rules is declared in force as amended or replaced from time to time, any amendments to the code, standard or body of rules or replacement of the code, standard or body of rules comes into force on the first day of the month following the expiry of 12 months after the date on which the amendment or replacement is published, unless the Minister publishes an order in Part I of The Alberta Gazette declaring

- (a) that the amendment or replacement will not be in force on the expiry of 12 months following the date on which the amendment was published, or
- (b) that the coming into force of the amendment or replacement is to occur on an earlier or later date.

(5) Regulations under this section may apply generally or specifically and may provide for which provision of which regulation prevails in the case of a conflict between the regulations.

(6) Before making a regulation under this section, the Lieutenant Governor in Council shall ensure that the Council has the

opportunity to review the proposed regulation for a period of 90 days prior to the regulation's being made unless the Council has waived or reduced that period.

(7) Before making a regulation referred to in subsection (2), the Lieutenant Governor in Council shall ensure that the code, standard, body of rules, amendment or replacement is published, whether by the Council or another association or person, and available to the public.

(8) The Lieutenant Governor in Council may make regulations respecting

- (a) the determination of the date on which an amendment or replacement of a code, standard or body of rules was published;
- (b) the timely review, amendment, repeal and replacement of codes, standards and bodies of rules;
- (c) the timely commencement of codes, standards and bodies of rules, amendments, repeals and replacements.

RSA 2000 cS-1 s65;2001 c28 s19;2004 c19 s6;
2011 c3 s33;2015 c10 s39

Implementation amendments to regulations

65.01(1) The Lieutenant Governor in Council may, by regulation, amend other regulations made under this Act

- (a) for consistency with this Act as amended from time to time;
- (b) to declare more than one code, standard or body of rules in force as amended or replaced from time to time under section 65(3), (4) and (5).

(2) An amendment under subsection (1) may be made notwithstanding that the regulation being amended was made by a member of the Executive Council or some other person or body.

2015 c10 s40

65.1 Repealed 2019 c22 s12.

Bylaws

66(1) Except as provided in this section, a bylaw of a municipality that purports to regulate a matter that is regulated by this Act is inoperative.

(2) Notwithstanding subsection (1), a municipality may make bylaws

- (a) to carry out its powers and duties under the *Forest and Prairie Protection Act*;
- (b) respecting minimum maintenance standards for buildings and structures;
- (b.1) in the manner and to the extent authorized by the regulations, respecting private sewage disposal systems;
- (c) respecting unsightly or derelict buildings or structures.

(3) Notwithstanding subsection (1), an accredited municipality may make bylaws

- (a) respecting fees for anything issued or any material or service provided pursuant to this Act, and
- (b) respecting the carrying out of its powers and duties as an accredited municipality.

RSA 2000 cS-1 s66;2015 c10 s41

Prohibitions

Offences

67(1) A person who interferes with or in any manner hinders an Administrator or a safety codes officer in the exercise of the Administrator's or officer's powers and performance of the Administrator's or officer's duties under this Act is guilty of an offence.

(2) A person who knowingly makes a false or misleading statement under section 34(4)(c) either orally or in writing is guilty of an offence.

(3) A person who fails to prepare, submit or retain any information that the person is required by this Act to prepare, submit or retain is guilty of an offence.

(4) A person who

- (a) contravenes this Act,
- (b) contravenes a condition in a permit, certificate or variance,
- (c) contravenes an order, or

- (d) fails to carry out any action required in an order to be taken within the time specified in it,

is guilty of an offence.

(5) A person who is guilty of an offence under this Act is liable on conviction for each day or part of a day on which the offence occurs or continues.

RSA 2000 cS-1 s67;2015 c10 s42

Penalty

68(1) A person who is guilty of an offence is liable

- (a) for a first offence,
 - (i) to a fine of not more than \$100 000 and, in the case of a continuing offence, to a further fine of not more than \$1000 for each day during which the offence continues after the first day or part of a day, or
 - (ii) to imprisonment for a term not exceeding 6 months,
or to both fines and imprisonment, and
- (b) for a 2nd or subsequent offence,
 - (i) to a fine of not more than \$500 000 and, in the case of a continuing offence, to a further fine of not more than \$2000 for each day or part of a day during which the offence continues after the first day, or
 - (ii) to imprisonment for a term not exceeding 12 months,
or to both fines and imprisonment.

(2) If a person is guilty of an offence under this Act, the court may, in addition to any other penalty imposed or order made, order the person to comply with this Act or any order, permit, certificate or variance, or all or any one or more of them, as the case requires.

RSA 2000 cS-1 s68;2012 c7 s3

Prosecution time limit

68.1(1) A prosecution of an offence under this Act may not be commenced more than 3 years after the day on which evidence of the offence first came to the attention of a safety codes officer.

(2) This section applies only in respect of offences that are committed on or after the day on which this section comes into force.

2012 c7 s3

Proof by certificate

69 For the purpose of a prosecution for a contravention of any provision of this Act requiring a person to hold a certificate of competency, permit or variance, a certificate purporting to be signed by an Administrator stating that a person was or was not on a named day the holder of a certificate of competency, permit or variance is proof, in the absence of evidence to the contrary, of the facts stated in it, without proof of the signature or official character of the person signing the certificate.

1991 cS-0.5 s65

Penalty proceeds

70 If a fine results from an offence under this Act with respect to a matter that an accredited municipality is authorized to administer, the fine may, on the application of the accredited municipality when the fine is assessed, accrue to the benefit of the municipality.

1991 cS-0.5 s66

Transitional Provisions**Permits, etc., continue**

71(1) On March 31, 1994, a permit, licence, certificate, approval, registration or order under the

- (a) *Fire Prevention Act*, SA 1982 cF-10.1, or
- (b) *Uniform Building Standards Act*, RSA 1980 cU-4,

continues as a permit, certificate, registration or order under this Act until it would have expired under the Act under which it was issued or it is suspended or cancelled.

(2) On October 1, 1994, a permit, licence, certificate, approval, registration or order under the

- (a) *Electrical Protection Act*, RSA 1980 cE-6,
- (b) *Elevator and Fixed Conveyances Act*, RSA 1980 cE-7,
- (c) *Gas Protection Act*, RSA 1980 cG-2,
- (d) *Plumbing and Drainage Act*, RSA 1980 cP-10, or
- (e) *Boilers and Pressure Vessels Act*, RSA 1980 cB-8,

continues as a permit, certificate, registration or order under this Act until it would have expired under the Act under which it was issued or it is suspended or cancelled.

(3) In accordance with section 36(1)(e) of the *Interpretation Act*, all or any part of a code, standard or body of rules and the revisions, variations and modifications to it that have been adopted or declared in force by a regulation under an Act referred to in subsection (1) or (2) is deemed to be a regulation that has been made under this Act.

1991 cS-0.5 s67

Inspectors, local assistants

72(1) On March 31, 1994, a person who is appointed as an inspector under the

(a) *Fire Prevention Act*, SA 1982 cF-10.1, or

(b) *Uniform Building Standards Act*, RSA 1980 cU-4,

is deemed, in accordance with the regulations, to be appointed as a safety codes officer for the period of time set out in the regulations with the powers and duties of an inspector that the person had under the previous Act.

(2) On October 1, 1994, a person who is appointed as an inspector under the

(a) *Electrical Protection Act*, RSA 1980 cE-6,

(b) *Elevator and Fixed Conveyances Act*, RSA 1980 cE-7,

(c) *Gas Protection Act*, RSA 1980 cG-2,

(d) *Plumbing and Drainage Act*, RSA 1980 cP-10,

(e) *Boilers and Pressure Vessels Act*, RSA 1980 cB-8, or

(f) bylaws passed pursuant to section 159(i) of the *Municipal Government Act*, RSA 1980 cM-26,

is deemed, in accordance with the regulations, to be appointed as a safety codes officer for the period of time set out in the regulations with the powers and duties of an inspector that the person had under the previous Act.

(3) On March 31, 1994, a person who is designated or appointed as a local assistant under the *Fire Prevention Act*, SA 1982 cF-10.1, is deemed, in accordance with the regulations, to be designated or appointed as a safety codes officer under this Act for the period of time set out in the regulations with the powers and duties that the person had under the *Fire Prevention Act*.

1991 cS-0.5 s68; 1994 c44 s5

Municipal duties

73(1) A local authority, as defined in the *Uniform Building Standards Act*, RSA 1980 cU-4, that is authorized to enforce that Act is deemed to be an accredited municipality under this Act with all the powers and duties it had under the *Uniform Building Standards Act*.

(2) On March 31, 1994, a municipality with any powers or duties under the *Fire Prevention Act*, SA 1982 cF-10.1, relating to matters regulated under this Act is deemed to be an accredited municipality with those powers and duties.

(3) On October 1, 1994, a municipality with any powers or duties under the

- (a) *Electrical Protection Act*, RSA 1980 cE-6,
- (b) *Elevator and Fixed Conveyances Act*, RSA 1980 cE-7,
- (c) *Gas Protection Act*, RSA 1980 cG-2,
- (d) *Plumbing and Drainage Act*, RSA 1980 cP-10,
- (e) *Boilers and Pressure Vessels Act*, RSA 1980 cB-8, or
- (f) bylaws passed pursuant to section 159(i) of the *Municipal Government Act*, RSA 1980 cM-26,

relating to matters related under this Act is deemed to be an accredited municipality with those powers and duties.

1991 cS-0.5 s69;1994 c23 s42;1994 c44 s6

ALBERTA ELECTRICAL UTILITY CODE



Safety
Codes
Council

Sixth Edition - August 2022

ALBERTA ELECTRICAL UTILITY CODE

Established by the
Electrical Utilities Sub-Council,
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PREFACE

- ▲ This sixth edition of the *Alberta Electrical Utility Code* supersedes the previous editions published in 2016, 2013, 2007, 2002, and 1999.
- ▲ For this Code to be comprehensive and complete, users must have access to two CSA Standards, namely CSA Standard C22.3 No. 1:20, *Overhead Systems*, and CSA Standard C22.3 No.7:20 *Underground Systems*.

General arrangement

The *Alberta Electrical Utility Code* (the AEUC) is divided into numbered Sections, each covering a specific topic related to the work. The Sections are divided into numbered Rules, with captions for easy reference, as follows:

- (a) **Numbering system** - Even numbers have been used throughout to identify Sections and Rules. Rule numbers consist of the Section number separated by a hyphen from the 3-digit figure. The intention is that odd numbers may be used for new Rules required by interim revisions. Due to the introduction of some new Rules and the deletion of some existing Rules during the revision of each edition, the Rule numbers for any particular requirement are not always the same in successive editions.
- (b) **Subdivision of Rules** - Rules are subdivided as follows:
 - 00-000 Rule
 - (1) Subrule
 - (a) Item
 - (i) Item
 - (A) Item
- (c) **Tables** - Tabulated information has been included in order to best organize information and to avoid unnecessary repetition of information. Tabulated information is not intended to be a mandatory requirement. Information provided in Tables may be made a requirement of the AEUC by the Rule which references the Table.
- (d) **Figures** - Several figures have been included in this edition of the AEUC. Users are reminded that the included figures are intended only as examples of the requirements of the AEUC and are not intended to be mandatory requirements.
- (e) **Appendices** - Notes on Rules have been grouped into appendices. Informational notes are not intended to be mandatory requirements. Notes on Rules located in the AEUC are found in Appendix B. Notes on Rules found in CSA C22.3 No. 1 are included in Appendix C. Notes on Rules found in CSA C22.3 No. 7 are found in Appendix D. Information included in Appendix B, C, or D may be made a requirement of the AEUC by a Rule which references the informational note.

Identification of Changes

Changes from the last edition of the AEUC are indicated with a triangle ▲ where a requirement has been added or amended. A triangle ▲ is not included where the change to a Rule is due to simple re-numbering, grammar correction, text formatting, or other non-functional change. The null symbol ∅ denotes the removal of a requirement. Care must be taken not to rely on the change markers to determine the current requirements of the AEUC.

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SECTION 0 - OBJECT, SCOPE, AND DEFINITIONS

Object

- ▲ The object of this **Code** is to establish a minimum safety standard for the installation and maintenance of electrical utility systems in Alberta. Enhancing safety for electrical utility installations by minimizing the potential risk of shock and fire hazards have been guiding principles in its preparation.

Compliance with this **Code** coupled with proper maintenance will provide an essentially safe installation. This **Code** is not intended as an instructional manual for untrained persons.

This **Code** and any standards referenced herein do not make or imply any assurance or guarantee by the authority adopting this **Code**, with respect to life expectancy, durability, or operating performance of equipment and materials referenced herein.

Scope

(See Appendix B.)

This **Code** applies to

- (1) The construction, maintenance, and replacement of:
 - (a) electrical utility systems that are used to transform, transmit, distribute, and deliver electrical power or energy to consumers' services or their equivalent, including street lighting;
 - (b) the portion of generation facilities that are used to provide inter-connection to an electrical utility system up to the demarcation point as established between the generator and the electrical utility system; and
 - (c) **transmission lines** and **electric distribution systems** connected to the Alberta Interconnected Electric System meeting the following conditions:
 - (i) this **Code** is applied only insofar as it applies to high-voltage **transmission lines** and **electric distribution systems** designed under the care and control of a **registered engineering professional** experienced in the application of this **Code**, and
 - (ii) the installation, design, and selection of the equipment is documented by a **registered engineering professional** experienced in the application of this **Code**;
- (2) other objects located in such proximity to electrical utility systems that safety hazards or physical or inductive interference may result, and
- (3) activities conducted in such proximity to electrical utility systems that safety hazards or physical or inductive interference may result.

Existing installations, including maintenance replacements, maintenance additions, and additions that meet the original design that currently comply with prior editions of this **Code** need not be modified to comply with this edition of the **Code** except as might be required for safety reasons by the **authority having jurisdiction**.

- ▲ Communication lines, circuits, and systems under the scope of this **Code** include **communication systems** owned by **electric utilities** for the sole purpose of the operation of the electrical utility system.
- ▲ **Communication utilities** which fall under federal jurisdiction are excluded from the scope of this **Code**. This notwithstanding, the clearances identified in this **Code** shall apply to **communication systems** owned or maintained by **communication utilities** but installed on electrical utility infrastructure.

Definitions

(See Appendix B.)

- ▲ For the purpose of correct interpretation, certain terms have been identified in this **Code** in bold text. Where such terms or their derivatives appear throughout this **Code**, they shall be understood to have the meanings shown below. For terms not specifically defined below, the meaning shall come from the latest revision of C22.3 No. 1 or C22.3 No.7 if the term is defined therein, and from an ordinary dictionary if not.

acceptable – acceptable to the **operator of the utility system**.

activity or **activities** – the execution of a task or action by a person or persons.

approved – equipment that has been:

- (a) certified by a certification body in accordance with the certification body's terms of accreditation with the Standards Council of Canada, or
- (b) inspected by an inspection body in accordance with the inspection body's terms of accreditation with the Standards Council of Canada.

- ▲ **authority having jurisdiction** – the organization, office, or individual legally authorized to enforce this **Code**, unless otherwise noted, and having jurisdiction over specified territory. (See Appendix B.)

Code – the Alberta Electrical Utility Code (AEUC).

- ▲ **combustible dust** – dust particles that present a fire or explosion hazard when dispersed and ignited in air.

- ▲ **combustible flyings** – solid particles, including fibres that may be suspended in air and can settle out of the atmosphere under their own weight.

- ▲ **communication system(s)** – any physical apparatus, device, line, network segment, or other thing that is used or is capable of being used for electronic transmission of information over distances. The information may be in the form of voice telephone calls, data, text, images, or video. Transmission may be by wire, radio, optical cable, electromagnetic, or other similar means.

- ▲ **communication utility** – any corporation, company, individual or association of individuals, or its lessees, trustees or receivers, that owns, operates, manages or controls all or a part of any plant or equipment for the provision of telecommunications service, directly or indirectly to or for the public.

- ▲ **competent** – adequately qualified, suitably trained and with sufficient experience to safely perform work without supervision or with only a minimal degree of supervision.

conductive dust – combustible metal dust.

electric distribution system – as defined in the Alberta Hydro and Electric Energy Act. (See Appendix B.)

electric utility – an entity as defined in the Electric Utilities Act. (See Appendix B.)

fire point – the lowest temperature of a liquid in an open container at which vapours are evolved fast enough to support continuous combustion.

gradient control conductor(s) – a buried conductor used to control **touch potential** and **step potential**.

ground potential – the voltage between the point in the earth under consideration and a point in the earth considered to be at zero voltage.

ground potential gradient – the rate of change with respect to the distance along or through the earth, expressed in volts per unit distance.

ground resistance – the ohmic resistance measured by the two-probe method or equivalent measuring method.

guarded – covered, fenced, enclosed, or otherwise protected by means of suitable covers or casings, barrier rails or screens, mats or platforms, designed to limit the likelihood, under normal conditions, of dangerous approach or accidental contact by persons or objects.

isolated – to disconnect completely a device or circuit from other devices or circuits, separating it physically, electrically, and mechanically from all sources of electrical energy. (See Appendix B.)

non-propagating liquid – an insulating liquid that, when subjected to a source of ignition, may burn but the flame does not spread from the source of ignition.

▲ **operator of a utility system or operator of the utility system** – the owner of the electrical utility system, and may include an organization, office, or individual designated by the owner to make policy decisions affecting the utility.

registered engineering professional – an individual who is authorized to engage in the practice of engineering under the Alberta Engineering and Geoscience Professions Act and its Regulations.

special permission – the written permission of the **authority having jurisdiction**.

step potential – the difference in voltage level from one foot of a person to the opposite foot. This can be felt when a person steps across an energized path of earth. The worker forms a parallel path to the earth and current flows through the worker as well as the earth. This can result in harmful current levels in some situations.

substation(s) – as defined in the Alberta Hydro and Electric Energy Act. (See Appendix B.)



transmission line – as defined in the Alberta Hydro and Electric Energy Act. (See Appendix B.)

touch potential – the difference in voltage level between energized electric lines or equipment and the earth. This may be felt by a person standing on the ground when they contact the electric lines or equipment and complete a parallel path to earth. The voltage may be supplied by a power system element such as a portable generator, or by unintentional energization, or by induction. **Touch potential** can vary greatly, as it depends on the distance from where the worker is standing to the location of the source voltage.

SECTION 2 - GENERAL RULES

2-002 Prohibition

- (1) No person shall construct, maintain, or replace objects, or conduct activities near electrical utility systems or other objects described in the Scope, except in accordance with this **Code**.

2-004 Unsafe Conditions

If a person contravenes any of the Rules of this **Code** and an unsafe condition exists, then the system, object or **activity** shall be altered in a manner and within time limits specified by the **authority having jurisdiction**.

2-006 Canadian Electrical Code, Part I

If there is any conflict between any provisions of CSA Standard C22.1, *Canadian Electrical Code, Part I*, and this **Code**, the provincial ministry responsible for the adoption of these codes shall determine which provision shall apply.

2-008 Referenced Standards

If standards or other documents referenced in this **Code** have been amended, revised, or supplemented, the amendments, revisions, or supplements may be used where **special permission** has been granted.

2-010 Responsibility for Alterations (See Appendix B.)

If any installation, construction, building or other improvement, or equipment has been installed, placed, or erected and the installation, placing, or erection results in some other existing installation, construction, building or other improvement, or equipment being in contravention of this **Code**, then the installation, construction, building or other improvement, or equipment last placed in point of time shall be considered as being in contravention of this **Code**.

2-012 Interference with Systems

- (1) No person shall interfere with, tamper with, or wilfully damage electrical utility systems covered by this **Code**.
- (2) Electrical utility system poles and structures shall be kept free of all materials and equipment not required for the system, unless permitted by the **operator of the utility system**.
- (3) No person shall make attachments to electrical utility system poles and structures unless authorization has been received from the **operator of the utility system**.
- (4) No person shall climb electrical utility system poles or structures or make connections or disconnections to electrical utility system equipment unless the person has been authorized to do so by the **operator of the utility system**.
- (5) No person shall enter an electrical utility system generating station, **substation**, subsurface chamber, equipment room, or similar location unless that person is authorized to enter by the **operator of the utility system**.

2-014 Activities near Overhead Power Lines (See Appendix B.)

- (1) This Rule applies to activities near overhead powerlines and not the movement of persons, equipment, buildings, vehicles, or objects under overhead powerlines.
- (2) A person must contact the **operator of the utility system** before activities other than those in Subrule (1) are undertaken or equipment is operated within 7.0 meters of an energized overhead line to:
 - (a) determine the voltage of the power line; and
 - (b) establish the appropriate safe limit of approach distance listed in Table 1.
- (3) Except as provided for in Subrule (4), a person must ensure that the safe limit of approach distance, as established in Subrule (2), is maintained and that no activities are undertaken and no equipment is operated at distances less than the established safe limit of approach distance.
- (4) A person must notify the **operator of the utility system** before activities are undertaken or equipment is operated in the vicinity of the power line at distances less than the safe limit of approach distances listed in Table 1, and obtain the operator's assistance in protecting persons involved.
- ▲ (5) Notwithstanding Subrules (1) through (4), Table 1 does not apply to utility workers falling under the OH&S Code, Part 40 Utility Workers – Electrical.
- (6) A person must ensure that earth or other materials are not placed under or beside an overhead power line if doing so reduces the safe clearance to less than the *Minimum Vertical Design Clearances above Ground or Rails* as defined in Table 5 of this **Code** and the safe limit of approach distances listed in Table 1.
- (7) A person must follow the direction of the **operator of the utility system** in maintaining the appropriate safe clearance when conducting activities near an overhead power line.
- ▲ (8) If an **activity** is being carried out near the safe limits of approach distances specified in Table 1, the person completing the **activity** shall assign a **competent** person to act as an observer whose only responsibility is to ensure that the safe limit of approach distances will be maintained.
- ▲ (9) A person shall not excavate or perform similar operations in the vicinity of an overhead or underground power line if it reduces the electrical and structural integrity of the power line including associated grounding equipment.

2-016 Buildings or Objects near Overhead Equipment or Lines

No person shall construct or place buildings or other objects within the minimum clearances from overhead equipment or lines prescribed by this **Code** unless it is **acceptable** to the **authority having jurisdiction** and the **operator of the utility system**.

2-018 Moving Equipment or Buildings

(1) The safe limit of approach distances listed in Table 1 do not apply to a transported load, equipment, or building that is transported under energized overhead power lines.

(2) If the total height, including equipment transporting it, is less than 4.15 m, the load can be moved under lines.

- ▲ (3) If the height of the equipment, building, or object exceeds 4.15 m and the equipment, building, or object must be moved under overhead power lines or communication lines, the following precautions shall be taken:
- ▲ a) the person or persons responsible for moving the equipment, building, or object shall contact the operators of the overhead lines before the move has started and request assistance;
 - ▲ b) the operators of the overhead lines shall comply with the request for assistance as soon as possible; and
 - ▲ c) the operators of the overhead lines shall provide assistance in accordance with the requirements of the Occupational Health and Safety Act and the Safety Codes Act.

2-020 Excavation Activities in the Vicinity of Underground Power Lines (See Appendix B.)

- ▲ (1) Before an excavation is started, the person responsible for the excavation shall contact the operator of the underground cables in the area to determine:
- (a) if underground cables are present at the excavation site;
 - (b) if direct supervision is required during the excavation activity; and
 - (c) if specific safety measures are required to complete the excavation activity.
- (2) Before an excavation is commenced, the operator of the underground cables shall identify and mark any underground cables that could be interfered with when the excavation is undertaken at the proposed excavation site.
- ▲ (3) The person responsible for an excavation shall ensure that no excavations are undertaken within 1 m of any underground utility cable unless:
- (a) the excavation is done under the care and control of the operator of the underground cables; and
 - (b) the excavation method is **acceptable**.

2-022 Amusement Rides and High Equipment

The minimum clearance between the highest point of an amusement ride or area where high equipment may be displayed and an overhead power line, measured horizontally between the nearest vertical planes formed by the amusement ride or the displayed equipment and the overhead power line, shall be:

- (a) the height of the amusement ride or displayed equipment, or 8 m, whichever is greater for overhead power lines operated at voltages above 750 V phase to phase;
- (b) as specified in Clause (a) for overhead power lines with bare conductors operated at voltages below 750 V phase to phase; and
- (c) 3 m for overhead power lines with insulated or polyethylene-covered conductors operated at voltages below 750 V phase to phase.

2-024 Consumer's Service Connection

The **operator of a utility system** shall not connect, or allow to be connected, an electrical consumer's service to the electrical utility system unless:

- (a) the attachment point for conductors used on overhead systems to supply the consumer's service is located so that the conductors maintain required clearances;

- ▲ (b) the metering equipment and location are **acceptable**;
- ▲ (c) the **operator of the utility system** has assurance from the owner or the owner's agent that the installation is ready for connection and no obvious hazards should result;
- ▲ (d) the **operator of the utility system** has received a copy of a valid permit or authorization issued by the consumer's authority having jurisdiction; and
- ▲ (e) for existing service re-connections, and at the discretion of the **operator of the utility system**, a re-inspection of the consumer's service is performed.

2-026 Decorative Fixtures and Circuits

- (1) No person shall install lighting fixtures, lighting circuits, garlands, or any other apparatus used for decorative purposes on electrical utility system poles or structures unless the **operator of the utility system** approves the installation.
- (2) The installation and removal of decorative lighting on electrical utility system poles and structures shall be controlled by the **operator of the utility system**.
- (3) Decorative lighting equipment installed on electrical utility system poles and structures must be **approved**.

▲ 2-028 Plans

The **operator of the utility system** shall maintain, and produce when required by the **authority having jurisdiction**, documents, including but not limited to drawings and specifications, covering new construction of or alterations to an electrical utility system.

2-030 Other Lines in Rural Areas

- (1) If underground pipelines are installed in rural areas, the **operator of the utility system** shall ensure that a separation of 8 m is maintained from:
 - (a) the poles and structures of an overhead power line operating at voltages above 750 V phase to phase; or
 - (b) an electrical utility system pole with earth return system grounding and conductors operating below 750 V phase to phase.
- (2) If the separation described in Subrule (1) cannot be met, the separation may be reduced if:
 - (a) the **operator of the utility system** locates buried ground conductors; and
 - (b) the installation is **acceptable**.

▲ 2-032 Operation and Maintenance (See Appendix B.)

- (1) The **operator of a utility system** shall ensure that the equipment and lines are:
 - (a) not energized unless the equipment and lines meet the requirements of this **Code**; and
 - (b) inspected at regular intervals, as required; and
 - (c) maintained in accordance with this **Code**.
- (2) The **operator of an electrical utility system** shall ensure that equipment or lines not in use are maintained in accordance with this **Code**.
- (3) The operator of a **communication system** shall ensure that equipment or lines not in use are maintained in accordance with this **Code**.

SECTION 6 - GROUNDING OF OTHER THAN OVERHEAD AND UNDERGROUND POWERLINES

6-000 Scope (See Appendix B.)

This Section applies to the grounding of:

- (a) generating stations and **substations** covered by this **Code**; and
- (b) other objects in proximity to electrical utility systems where the operation of the electrical utility systems may cause unsafe or objectionable voltages to appear on the other objects.

6-002 Object (See Appendix B.)

All electrical utility and **communication systems** covered by this **Code** shall be grounded in order to:

- (a) reduce the risk of exposure to harmful voltages and the danger of electrical shock;
- (b) stabilize system voltages;
- (c) facilitate the operation of protective devices to reduce the risk and duration of harmful voltages; and
- (d) protect communication circuits, control circuits, and other equipment.

Grounding of Generating Stations and Substations

6-100 Scope

- ▲ (1) Rules 6-100 to 6-120 apply to:
 - (a) generating stations; and
 - (b) **substations**
- ▲ (2) The requirements of Rules 6-100 to 6-120 do not apply to:
 - (a) electrical equipment at generating stations that is required to operate the station but is not a part of an electrical utility system; and
 - (b) power supplies, lighting circuits, or similar equipment located in **substation** buildings that are required to operate the **substation** but are not a part of an electrical utility system.

6-102 Generating Station, Substation Grounding

Substation and generating station grounding shall follow the grounding principles and practices outlined in the latest publication of IEEE 80 or CAN/CSA-C22.3 No. 61936-1, Section 10.

▲ 6-104 Generating Station, Substation Ground Resistance (See Appendix B.)

- (1) The **ground resistance** of a generation station or **substation** grounding system shall be established so that the **ground potential** rise resulting from the fault current flowing from the grounding system to earth does not exceed 3 kV peak.
- (2) If the requirements of Subrule (1) cannot be met, the grounding system must be designed, engineered, and constructed in accordance with recognized industry standards.
- (3) A generation station or **substation** shall have a measured **ground resistance** value for the grounding system.

▲ **6-106 Grounding Generator and Transformer Neutrals**

- (1) Subject to Subrule (2), at generation stations and **substations**, generator and transformer neutrals of star grounded systems shall be grounded with a ground conductor connected to the ground grid.
- (2) Subrule (1) does not apply where an impedance grounded system is used.

6-108 Grounding Neutral Conductors

- (1) Neutral conductors entering generating stations or **substations** shall be grounded with a ground conductor connected to the ground grid.

- ▲ (2) Impedance grounding devices may be used for the grounding system required by Subrule (1).

▲ **6-110 Grounding Metallic Equipment (See Appendix B.)**

- (1) All current and non-current-carrying metallic equipment located within 3 m of a generation station or **substation**, or located within a **substation**, shall be grounded or bonded in accordance with this Rule.
- (2) All metallic structures contained within the station or **substation** shall be bonded to the grounding grid at a minimum of one point.
- (3) All non-current-carrying metallic equipment shall be grounded or bonded.
- (4) All current-carrying metallic equipment shall be grounded to the ground grid.

6-112 Grounding Metallic Equipment Entering a Station or Substation

- (1) Non-current-carrying metallic equipment that enters a generating station or **substation** shall be grounded or **isolated** in accordance with this Rule.
- (2) Lightning protection wires that terminate at generation stations or **substations** shall be grounded to the ground grid.
- (3) Railway tracks entering generating stations or **substations** shall be **isolated** at the station or **substation** boundary to prevent the transfer of unsafe potentials to the tracks outside the station or substation.
- (4) Guy wires shall be grounded or bonded in accordance with Section 10 of this **Code**.
- (5) All other non-current-carrying metallic equipment entering a generating station or **substation** shall be effectively **isolated**, or precautions shall be taken where necessary to control unsafe potential transfers.

6-114 Communication and Control Circuits

Communication and control circuits entering a generating station or **substation** shall be **isolated** where necessary to prevent the transfer of unsafe potentials out of the station or **substation**.

6-116 Grounding of Generating Station and Substation Fences (See Appendix B.)

Fences enclosing substations and metallic fences located in proximity to generating stations where unsafe **touch potential** or **step potential** may be transferred to the fence or area adjacent to the fence shall be grounded in accordance with this rule. See Figures 7 and 8 for:

- (1) A ground electrode shall be placed at:
 - (a) all corner posts and hinged gate posts; and
 - (b) line posts at intervals not exceeding 12 m.
- (2) A ground conductor not smaller than No. 4 AWG shall connect the ground electrodes required by Subrule (1) to:
 - (a) the base of the fence post;
 - (b) two places on the chain link fabric; and
 - (c) each barbed wire strand.
- (3) An extra flexible conductor not smaller than No. 2 AWG shall be used to ground hinged gates to the gate post.
- (4) A ground grid conductor or **gradient control conductor** connected to the gate post ground conductor shall be placed across all gate openings.
- (5) If fences are located less than 3.0 m horizontally from generating station equipment, **substation** equipment, ground grid conductors, **gradient control conductors**, or where unsafe **touch potential** or **step potential** may be transferred to the fence or the area adjacent to the fence:
 - (a) a **gradient control conductor** shall be installed around the fence at a horizontal distance of 500 to 1000 mm from the fence;
 - (b) a **gradient control conductor** connected to the conductor required by Clause (a), shall be installed 500 to 1000 mm beyond the area where gates in the open position extend beyond the **gradient control conductor** required by Clause (a); and
 - (c) two or more physically separated ground grid conductors shall be used to connect the **gradient control conductor** enclosing the fence to the generating station or **substation** ground grid.
- (6) The **gradient control conductor** required by Subrule (5) shall be connected to the ground conductors required by Subrule (2).
- (7) At generating stations or **substations** where the ground grid is extensive, the ground electrodes required at the line posts may be omitted where:
 - (a) additional physically separated interconnecting ground grid conductors are installed to connect the fence **gradient control conductor** to the ground grid; and
 - (b) no unsafe **touch potential** or **step potential** will be transferred to the fence or the area adjacent to the fence.
- (8) If buildings are used to enclose generating stations or **substations** or to form part of the enclosure:
 - (a) metallic structural parts shall be grounded to the ground grid; and
 - (b) if metallic surfaces are used on the outside of the building and unsafe **touch potential** or **step potential** may be transferred to the metallic surface, or the area adjacent to the metallic surface, a **gradient control conductor** connected to the ground grid shall be installed around the building or part of the building at a horizontal distance of 500 to 1000 mm from the building.

- (9) A surface material layer of suitable resistivity may be used to supplement the gradient control protection required by Subrules (5) and (8) or to eliminate the requirement for **gradient control conductors**.
- (10) The composition of the surface material described in Subrule (9) shall not include conducting material.

6-118 Grounding Other Equipment at Stations, Substations

Electrical equipment referred to in Rule 6-100(2) at generating stations or located within **substation** buildings that is required to operate the station or **substation** but is not a part of an electrical utility system shall be grounded in accordance with the requirements of CSA Standard C22.1, Canadian Electrical Code, Part I.

6-120 Sizing of Grounding Conductor

Grounding conductor used for grounding current-carrying equipment or ground grid conductor shall be sized such that overall energy does not cause:

- (a) mechanical failure,
- (b) annealing, or
- (c) thermal damage.

Grounding of Buildings, Pipelines, Fences, and Other Objects in Proximity to Generating Stations or Substations

▲ 6-200 Scope

Rules 6-200 to 6-210 apply to the grounding of buildings, pipelines, fences, and other objects in proximity to a generating station or **substation**.

6-202 Buildings

If buildings are located in proximity to generating stations or **substations** or form part of a generating station or **substation** enclosure, the buildings shall be grounded in accordance with Rule 6-116 (8) to (10).

6-204 Pipelines

- (1) All pipelines in proximity to a generating station or **substation** shall be effectively **isolated** or precautions shall be taken where necessary to control unsafe potential transfers.
- (2) Specific considerations with pipelines are the transfer of potential to cathodic protection systems or coating stress levels under fault conditions.

6-206 Metallic Fences

- (1) Metallic fences located in proximity to generating station or **substation** fences where unsafe **touch potential** or **step potential** may be transferred to the fence or area adjacent to the fence shall be grounded in accordance with Rule 6-116.

- (2) Metallic fences joining generating station or **substation** fences shall have insulating sections not less than 3 m in length installed between the metallic fence and the generating station or **substation** fence.

6-210 Close Metallic Objects

All other non-current-carrying metallic equipment in proximity to a generating station or **substation** shall be effectively **isolated**, or precautions shall be taken where necessary to control unsafe **touch potential** or **step potential**.

SECTION 8 - SUBSTATIONS AND ELECTRICAL EQUIPMENT INSTALLATIONS

8-000 Scope

This Section applies to **substations** and electrical equipment installations used by an **operator of the utility system** in the exercise of its function as a utility, in:

- (a) the portion of generation facilities that are used to provide interconnection to a utility system up to the demarcation point, as established between the generator and utility;
- (b) **substations** that are enclosed with fencing or enclosed in a building;
- (c) a mobile or temporary **substation** application; and
- (d) **substations** that have some or all components individually enclosed with no overall exterior fence.

8-004 General

All **substations** and electrical equipment shall be designed, engineered, and constructed in accordance with recognized industry standards, and shall be installed to reduce the hazard as far as practicable.

8-006 Maintenance

- (1) **Substations** and electrical equipment shall comply with this **Code** when placed in service and shall thereafter be periodically maintained and inspected as required.
- (2) **Substations** and electrical equipment shall be maintained in good working order.

8-008 New Equipment

New equipment shall be thoroughly inspected and tested before being put into service.

8-010 Idle Equipment

Infrequently used equipment or wiring maintained for future service shall be inspected and tested before use in order to determine its fitness for service.

8-012 Emergency Equipment

Equipment or wiring used for emergency electrical services shall be inspected and tested in accordance with the manufacturer's specifications, or with the specifications authenticated by a **registered engineering professional** to determine its fitness for service.

Electrical Equipment Buildings

8-014 Buildings

In **substation** buildings, all rooms or spaces in which electrical supply equipment is installed shall comply with the following requirements:

- (a) they shall be non-combustible as far as practicable;
- (b) they shall not be used for the storage of unnecessary materials;
- (c) they shall be free from **combustible dust, conductive dust, combustible flyings**, flammable gas, or acid fumes in dangerous quantities;

- (d) they shall be well ventilated;
- (e) they shall be kept dry as far as practicable unless the equipment is suitably designed to withstand prevailing conditions;
- (f) they shall be adequately illuminated;
- (g) illumination shall be provided, both for the front and rear of equipment, so that the equipment may be readily operated and instruments conveniently read;
- (h) a separate emergency source of illumination shall be provided in every station;
- (i) all external entries into buildings shall be secured; and
- (j) active ventilation or evacuation of gas for buildings containing equipment capable of gas release.

8-016 Floors, Passageways, Guardrails, Handrails, Permanent Ladders, and Toe Boards

Floors, passageways, guardrails, handrails, permanent ladders, and toe boards shall be installed and maintained in accordance with the applicable Occupational Health and Safety standards.

8-018 Supporting Surfaces above Live Parts

- (1) The supporting surfaces above live parts shall be without openings.
- (2) Toe boards at least 150 mm high shall be provided at all edges, and the lower edge of the toe board shall be flush with the platform.

8-020 Exits

- (1) Each room or space and each working space around equipment shall have a suitable means of exit, which shall be kept clear of all obstructions.
- (2) Where the size of the room or space or the arrangement of cables and equipment is such that one means of exit may become inaccessible, two or more exits shall be provided and located to best serve the intended purpose.
- (3) Where doors are used for emergency exits, panic hardware shall be provided to permit easy exit.

8-022 Dimensions of Working Space near Live Parts on Panelboards and Control Panels Indoors

The horizontal dimensions of the working space in front of exposed live parts operating at a maximum potential of 750 V phase to phase shall be not less than the following and as per Figure 5:

- (a) for parts on one side of more than 150 V to ground, and no exposed live or grounded parts on the other side of the working space, 0.9 m;
- (b) for parts on one side of more than 150 V to ground, and exposed live or grounded parts of the other, 1.2 m;
- (c) for parts on one side of less than 150 V to ground, and no exposed live or grounded parts on the other side, a minimum of 0.75 m; and
- (d) for parts on one side of less than 150 V to ground, and exposed live or grounded parts on the other side, 0.9 m.

8-024 Fire Extinguishers

- (1) Fire extinguishers **approved** for use on electrical fires shall be provided near every **substation** building exit door.

- (2) Notwithstanding Subrule (1), a fire extinguisher **approved** for use on electrical fires shall be provided at each interior exit where the nature of the work warrants it, or as required by Rule 8-020 (2).

Working Space near Electrical Equipment

8-030 General Requirements

- (1) Adequate and readily accessible working space with secure footing shall be maintained about all electrical parts or equipment which require adjustment or examination while in service.
- (2) Where necessary, steps and handrails shall be installed on or about large electrical equipment to allow ready access to controls or ancillaries.
- (3) A minimum working space 0.9 m by 0.9 m by 2.2 m high shall be provided outside the guard zone. (See Figure 3.)

8-040 Exposed Parts of More Than 750 V

- (1) No current-carrying parts of more than 750 V phase to phase shall be exposed (unguarded) unless those parts are effectively **isolated** by elevation.
- (2) Subrule (1) does not apply where such parts are occasionally left exposed by the removal of covers of entrances into enclosures such as switch and instrument transformer cells or switchgear compartments.
- (3) When exposing energized parts per Subrule (2) for any purpose (including buses and disconnections in compartments), the working space shall be provided in accordance with the requirements of Rule 8-030(3).

8-042 Elevated Parts

Separation or clearance about normally elevated or **isolated** parts requiring occasional adjustment shall be provided so that persons need not come within the guard zone near adjacent energized parts unless they are **guarded** in accordance with Rule 8-200.

8-044 Transmission Machinery

Pulleys, belts, and other equipment used in the mechanical transmission of power shall be safeguarded in accordance with the applicable Occupational Health and Safety standards.

8-046 Guarding of Suddenly Moving Parts

Parts of equipment, such as handles, levers, and operating arms, which may move suddenly in such a way that persons in the vicinity are liable to be injured by being struck, shall be **guarded** or **isolated**.

Liquid-Filled Electrical Equipment

8-100 Scope

Rules 8-102 and 8-104 apply to any liquid-filled electrical equipment.

8-102 Electrical Equipment Containing Flame Propagating Liquids

This rule applies to electrical equipment containing insulating liquids with a **fire point** of less than 300° C.

- ▲ 1) If liquid-filled electrical equipment is installed outdoors, the **operator of the utility system** shall ensure that:
 - a) the electrical equipment is not placed on a pad or foundation at ground level unless all live parts are enclosed, fenced or elevated so as to be inaccessible to unauthorized persons;
 - b) the electrical equipment is arranged or protected to minimize fire hazards in proportion to the amount of liquid contained by one or more of the following methods as applicable:
 - i) space separations;
 - ii) fire resistant barriers;
 - iii) automatic extinguishing systems;
 - iv) crushed-rock absorption beds;
 - v) enclosures which confine the liquid of a ruptured tank; or
 - vi) sloping grade away from buildings; and
 - c) if the electrical equipment is located adjacent to a building, it shall be installed in accordance with the requirements of CSA Standard C22.1, *Canadian Electrical Code, Part I*.
- 2) If the liquid-filled electrical equipment is installed indoors, the **operator of the utility system** shall ensure that the installation:
 - a) meets the requirements of CSA Standard C22.1, *Canadian Electrical Code, Part I*; and
 - b) is equipped with fireproof doors where the doorways provide an opening from the outside of the building to the enclosure containing the equipment.

8-104 Electrical Equipment Containing Non-propagating Liquids

This rule applies to electrical equipment containing insulating liquids that are non-propagating and have a **fire point** of 300° C or greater.

- ▲ (1) If the liquid-filled electrical equipment is installed outdoors, the **operator of the utility system** shall ensure that:
 - (a) the electrical equipment is spaced a minimum of 6 m from any building ventilation, window, or door; and
 - (b) if a barrier is in place to prevent spray of liquid to areas listed in Clause (a), then the spacing requirement of Clause (a) does not apply.
- ▲ (2) If the liquid-filled electrical equipment is installed indoors, the **operator of the utility system** shall ensure that:
 - (a) the installation meets the requirements of CSA Standard C22.1, *Canadian Electrical Code, Part I*; and
 - (b) each pressure relieving device is separately vented to the outside of the building if the liquid is capable of producing explosive or toxic gases.

▲ 8-106 Electrical Liquid-Filled Equipment Containing Harmful Material

The **operator of the utility system** shall ensure that liquid-filled electrical equipment containing harmful material capable of causing adverse environmental or health effects:

- (a) is provided with the means to prevent or mitigate the propagation of the liquid; and

- (b) bears appropriate warning signs concerning any health or environmental hazards associated with the liquid; and provides reference to information indicating the proper methods of using, handling, and disposing of the liquid.

Guarding and Protection of Live Parts

8-200 Guarding of Live Parts

- (1) Guards shall be provided near all live parts that operate above 150 V phase to ground without an adequate insulating covering, unless their location gives sufficient horizontal or vertical separations or clearances, or a combination thereof, in order to eliminate the possibility of accidental human contact.
- (2) Separations or clearances from any live part to permanent supporting surface for persons shall equal or exceed those shown in Figure 3 and Table 3.
- (3) The application of the distances in Table 3 and use in Figure 3 are absolute values from the reference surface plane.

8-202 Strength of Guards

Guards shall be sufficiently strong and shall be supported securely enough to prevent them from being displaced or deflected by a person slipping and falling against them.

8-204 Guarding by Location or Isolation

- (1) Parts having clearances equal to or greater than those specified in Table 3, Columns 3 and 4 shall be considered **guarded** by location.
- (2) Parts shall be considered **guarded** by isolation where all entrances to enclosed spaces, runways, and ladders are kept locked, and warning signs are posted at all entrances, in which case no other permanent guards need be supplied.
- (3) Effectively grounded metal cable sheaths are suitable guards. Metal conduit or other suitable protection shall be provided where cables are exposed to mechanical damage.
- (4) Guards less than 0.1 m outside of the guard zone shall completely enclose the parts from contact up to the heights listed in Column 3 of Table 3.
- (5) Guards shall not be closer to the live parts than the limits listed in Column 5 of Table 3, unless suitable insulating material is used with circuits of less than 2.5 kV to ground.
- (6) Where they are more than 0.1 m outside the guard zone, the guards shall be a minimum of 2.5 m above the floor for indoor applications.
- (7) Covers or guards that may be removed while the parts they guard are energized shall be arranged so that they cannot readily be brought into contact with energized parts.
- (8) If the vertical separation or clearance in Column 3 of Table 3 cannot be obtained, guardrails may be used.

- (9) Guardrails used in Subrule (8) shall be a minimum of 1 m in height.
- (10) Where guardrails are used, they shall be located at a horizontal separation or clearance of at least 1 m (and preferably not more than 1.2 m) from the nearest point of the guard zone which is less than 2.5 m above ground, and shall be fitted with a suitable warning sign. (See Figure 4.)
- (11) Fences may serve as guards. (See Rule 8-300.)
- (12) The insulation covering energized conductors or parts exceeding 750 V phase to phase, on its own, shall not be considered to be a guard.
- (13) For parts less than 750 V phase to phase, positive barriers, enclosures, or similar arrangements shall be used, but in dry places which are not exposed to mechanical damage, other insulation suitable for the voltage involved may be used as a guard.
- (14) Notwithstanding this Rule, on circuits where other guarding is impracticable, such as at the back of switchboards or in equivalent sheltered locations, insulating mats or platforms with an insulating value suitable for the voltage involved may be used so that a person is **isolated** from other live parts or ground.

Electrical Equipment and Station Yard

8-206 Identification of Electrical Equipment and Circuits

- (1) Electrical equipment and circuits shall be identified for safety purposes, and the method of identification shall be uniform throughout the electrical utility system.
- (2) Identification marks shall not be placed on removable covers or casings where the interchanging of these removable parts would result in incorrect identification.
- (3) All signage shall be clearly visible, securely fastened, and maintained in legible condition.

8-208 Storage Batteries

CSA Standard C22.1, *Canadian Electrical Code, Part I*, applies to the installation of storage batteries.

8-210 Current Transformer Secondary Circuit Protection

Provision shall be made for shorting the secondary circuits of current transformers and the current transformer secondary winding, except where functional requirements do not permit the shorting of such circuits.

8-212 Grounding Secondary Circuits of Instrument Transformers

The secondary circuits of instrument transformers shall be effectively grounded, except where functional requirements do not permit the grounding of such circuits.

8-214 Surge Arresters

- (1) Suitable precautions shall be taken to protect station equipment from lightning which might enter from associated overhead lines.

- (2) Where surge arresters are installed in a building, they shall be located well away from passageways, combustible parts of the building, and all equipment other than the equipment they protect unless they are of the non-fragmenting type.
- (3) The conductor between an arrester and any monitoring device shall be treated as an indeterminate potential and **guarded** as such.

8-216 Dry Core Transformers

Dry type transformers installed in a building shall be installed in accordance with the requirements of CSA Standard C22.1, *Canadian Electrical Code, Part I*.

8-218 Warning Signs

All **substation** fences, switching enclosures, padmount transformers and similar equipment shall display suitable high voltage warning signs at all gates and doors; all enclosures over 2.5 m in any dimension shall have additional signs displayed on all sides at least once every 12 m.

8-220 Locking

All enclosures shall be made secure from entry by unauthorized persons by locking or other **acceptable** means.

8-222 Illumination of Equipment

Adequate illumination shall be provided to enable proper operation and maintenance of electrical equipment.

8-224 Capacitor Banks

- (1) Provision for dissipation of stored charge of disconnected capacitors shall be present.
- (2) Stored energy warning signs shall be installed on the capacitor enclosure entrance or the capacitor-elevated support structure.

8-226 Air Core Reactors

Air core reactors shall be installed such that:

- (a) the magnetic fields generated by short circuit currents will not draw nearby metallic objects into the coil; and
- (b) foundation steel, support structure, and fences shall not be subject to excessive temperature rise under normal operation conditions due to induced circulating eddy currents.

8-228 Enclosed Air Insulated Switchgear

- (1) All switchgear components shall be secured and levelled in a manner consistent with service conditions and manufacturer's instructions.
- (2) Switchgear surfaces shall not be used as physical support for any item unless specifically designed for that purpose.
- (3) Switchgear interior areas shall not be used as storage areas unless specifically designed for that purpose.

- (4) When installed, switchgear arc flash discharge plenums for gaseous and molten decomposition products shall be installed to exit the building away from doors, stairwells, and outdoor equipment, and a controlled no-entry discharge zone shall be established outside the building.
- (5) Notwithstanding Subrule (4), if other safety devices are used to reduce the internal switchgear pressure resulting from a fault, they must be arranged and installed with consideration for their potential hazards to personnel. The accumulation of dangerous concentrations of gas decomposition products in switching room areas shall be prevented.

8-240 Grounding


All non-current-carrying metal parts of electrical equipment shall be grounded or bonded in accordance with Section 6 of this **Code**.

8-242 Minimum Separations or Clearances from Unguarded Live Parts

- (1) For the purpose of ensuring safety to operating and construction personnel walking under or adjacent to energized circuits, minimum separations or clearances between live parts and finished grade, as outlined in Table 3, shall be observed.
- (2) The separations or clearances referred to in Subrule (1) may be used as a guide for **substation** design, but in no case shall the unguarded live parts be located at separations or clearances less than the minimums outlined in Table 3.
- (3) In areas where vehicles may travel in **substation** yards, separation or clearance in accordance with Column 5 of Table 3, plus 4.2 m vehicle height shall be provided.

Fences

8-300 General Requirements of Substation Fences (Appendix B)

- (1) Electrical utility system equipment with exposed energized parts that are not individually enclosed, located in a building or on an elevated platform in accordance with the requirements of Section 10 of this **Code** shall be enclosed within a fence constructed in accordance with this rule.
-  (2) The horizontal separation between the exterior fence and exposed energized parts shall not be less than 2.5 m for voltages up to and including 200 kV (phase to phase), and no less than 4 m for voltages greater than 200 kV (phase to phase) for the area, as defined in Figure 6.
- (3) The fence, excluding barbed wire, shall be not less than 1.8 m high.
- (4) Subject to Subrule (5), fence posts shall be set at a depth of not less than 1.0 m.
- (5) Subrule (4) does not apply where lesser setting depths are required due to ground conditions, or portable fencing is used, and methods designed, engineered, and constructed in accordance with recognized industry standards are used to brace and anchor the fence.
- (6) If soil conditions are unstable, fences shall be braced or foundations designed to provide the same stability provided in stable soil conditions.
- (7) The maximum spacing between posts shall be 3.0 m.

- (8) If a building that is not owned by the operator of the utility system is located within 2.0 m of the fence or forms parts of the fence, a guard system shall be designed, engineered, and constructed in accordance with recognized industry standards. The guard shall be placed on the building where there is danger that persons accessing the building roof may fall into the fenced enclosure or inadvertently place conductive objects into the fenced enclosure.

▲ 8-302 Metallic Chain Link Fences

- (1) Metal posts shall be of 80 mm nominal pipe size (11.3 kg/m) for corner, terminal, and gate posts and 50 mm nominal size (5.4 kg/m) for line posts. For gate openings greater than 6 m the metal gate posts shall be 100 mm nominal pipe size (16.1 kg/m).
- (2) Chain link fabric shall be made with minimum 3.6 mm nominal wire size and have a mesh not greater than 50 mm.
- (3) Chain link fabric shall be securely attached to all posts, gate frames, and rails.
- (4) Chain link fabric shall be reinforced as necessary at top and bottom to prevent distortion and shall extend to within 50 mm of the ground.
- (5) Top rails shall be of 32 mm nominal pipe size (3.35 kg/m) and shall be provided with suitable expansion joints, where necessary.
- (6) Three or more separate strands of barbed wire supported by the posts or brackets on the posts shall be placed at the top of the fence and gates, extending vertically or obliquely out from the fenced enclosure.

▲ 8-304 Other Fencing Types

- ▲ (1) Other materials, combination of material, or style of fencing may be used for electrical utility system fencing enclosing electrical equipment if:
- (a) the material(s) and construction method(s) are designed, engineered, and constructed in accordance with recognized industry standards;
 - (b) The fence has features that guard against and discourage unauthorized entry access;
 - (c) Non-flame-propagating materials are used; and
 - (d) Any exposed metallic components are bonded in accordance with Section 6 of this **Code**.
- (2) Subrule (1)(c) does not apply to the section of isolation fence required by Rule 6-206(2).

8-306 Gates (Appendix B)

- ▲ (1) Gates should open outwardly but, where it is necessary that they open inwardly:
- (a) they shall not come within 1.5 m of the frame or enclosure of any electrical equipment; and
 - (b) shall have a separate outward opening personnel gate installed.
- (2) Gates shall be adequately braced as necessary and double gates should be used where the width of the opening exceeds 1.5 m.
- (3) Centre stops shall be provided for double gates.

- (4) Gates shall be provided with locks.
- (5) Notwithstanding Subrules (1), (2), and (3), cantilever sliding gates are acceptable provided that:
 - (a) a manual opening method is provided;
 - (b) the slide mechanism is on the interior of the **substation** fence; and
 - (c) supporting posts shall meet or exceed requirements of 8-300 and 8-302.

8-308 Preservative Treatment

- (1) Steel or iron parts shall be either hot dipped galvanized or electroplated with non-ferrous metal.
- (2) Aluminium parts shall be suitably treated against corrosion where they will come in contact with the earth or with concrete.
- (3) Wooden isolation fence parts shall be made from preserved wood to prevent wood rot. Current utility wood preservation practices shall be followed.

8-310 Substation Yards

- ▲ (1) **Substation** yards shall be drained to afford secure footing for vehicular/personnel access and inhibit the growth of weeds.
- ▲ (2) **Substations** enclosures shall not be used for storage of unnecessary materials.

8-312 Grounding of Substation Fences

The grounding of **substation** fences shall meet the requirements of Section 6 of this **Code**.

Circuit Breakers, Fuses, and Switches

8-400 Where Switches are Required

- (1) Suitable circuit breakers, disconnects, or switches shall be inserted in the leads to all supply equipment and all outgoing supply circuits in accordance with this Rule.
- (2) Any load breaking or interrupting device which has no visual means to determine if contacts are open shall be preceded by a visual disconnecting means or proven positive means of determining that the circuit or system is de-energized.
- (3) Where two or more pieces of electrical supply equipment or supply lines are operated as a single unit, no switch is necessarily required between them.
- (4) Where a local emergency or stand-by system could operate in conjunction with the **operator of the utility system**, suitable **approved** equipment shall be installed to prevent the possibility of feedback from one system to the other.

8-402 Overcurrent Protection

- ▲ (1) Each conductor (except neutral conductors, grounded conductors, bonding & grounding conductors, and conductors of circuits, the opening of which may cause a special hazard by the interruption of service or removal of protection) shall be protected against excessive current by a suitable fuse or other automatic circuit breaking device or by the design of the system.
- (2) All outgoing circuits shall be protected by suitable current limiting or interrupting equipment, or by the design of the system except for:
 - (a) a motor driven generator or rotary converter not operated in parallel with other machines or batteries if the supply leads to such apparatus are already protected by fuses or automatic circuit breakers;
 - (b) grounded conductors;
 - (c) circuits for field excitation;
 - (d) leads of alternating-current generators;
 - (e) leads connecting two or more pieces of electrical supply equipment operated as a single unit; and
 - (f) leads of series transformers;
 - (g) secondary leads of current transformers or other similar circuits when the opening of such circuits may cause hazard to life or property through interruption of service; or
 - (h) conductors run between the secondary of a transformer and the nearest downstream distribution centre provided the conductors are suitably protected by protection on the primary side of the transformer.

8-404 Accessibility of Isolating Devices

- (1) All switches, fuses, automatic circuit breakers, and other control devices shall be:
 - (a) readily and safely accessible to authorized persons;
 - (b) arranged or marked to identify the equipment controlled by them; and
 - (c) except for fuses, shall indicate whether they are open or closed.
- (2) All switches which are accessible to unauthorized persons shall have provision for locking them in both the open and closed positions.
- (3) Cutouts, fuses, disconnects, or switches which are pole mounted shall be located so that they are readily accessible from climbing and working spaces.
- (4) Such devices or their connecting leads shall not extend into the climbing space but may extend wholly, or in part, into the working space of poles.
- (5) Adequate switching spaces or aisles shall be provided to allow safe hookstick operation of all **substation** overhead switches.

8-406 Accidental Operation

- (1) Switches shall be installed and maintained so as to prevent the danger of accidental operation.
- (2) For switching devices that can be operated remotely and automatically, the control circuit shall be provided with a positive disconnecting means near the switching device.

8-408 Suitability

- (1) All switches shall have adequate voltage, current-carrying, current-interrupting, and short-circuit rating for their application.
- (2) An acceptable insulated live line tool designed and manufactured to industry-recognized standards shall be provided for the operation of all disconnects and fuses where required.

8-410 Uniform Position

- (1) The handles or control mechanism for all switches throughout any system shall have, insofar as practical, the same position when open and a uniformly different position when closed in order to minimize operating errors.
- (2) Where it is necessary to depart from the practice prescribed in Subrule (1), the switches shall be marked to minimize the possibility of mistakes in operation.

8-412 Protection by Disconnection

Electrical equipment which requires maintenance work upon it shall have an industry recognized means of disconnecting it from all ungrounded conductors of its supply circuit.

8-414 Enclosures for Switches, Fuses and Circuit Breakers

All enclosures or parts of enclosures such as doors, covers, and tanks shall be firmly secured in place.

8-416 Spacing Between or from Switches

- (1) Switches used to disconnect transformers, cables, and lines having magnetic or capacitive de-energization currents shall be spaced to comply with the minimum requirements (live part to live part and live part to grounded structure) prescribed in Table 4.
- (2) Minimum electrical clearances for switches shall take into consideration all potential positions of the live parts before, during, and after switch operation.
- (3) Metal-clad gear is not subject to this Rule.

8-418 Disconnection of Fuses

- (1) Fuses shall be capable of being disconnected from the source of supply before being removed or replaced.
- (2) Notwithstanding Subrule (1), where fuses cannot be disconnected from the source of supply before handling, acceptable insulating tools or handles designed and manufactured to industry-recognized standards shall be used.

8-420 Vented Fuses

All vented fuses for the expulsion of gases, arc plasma, and molten metal shall have:

- (1) Clearances for vented material from any operating equipment, adjacent fuse, or controls; or
- (2) A protective barrier to prevent or divert the vented material away from any operating equipment, adjacent fuse, or controls.

SECTION 10 - OVERHEAD SYSTEMS

▲ 10-002 Standard to be Used

CSA Standard C22.3 No.1:20, Overhead Systems, shall be the standard for the construction and maintenance of overhead electrical utility and **communication systems**, with amendments to that standard as follows:

(1) **Remove Clause 1.2 and refer to AEUC Section 0, Scope.**

(2) **Amend Clause 4.1.7 by adding the following Subclause:**

(a) For supply-line conductors that do not have a jacket and are over 750V, add a minimum vertical and horizontal clearance of 1.0 m to the distances indicated in CSA C22.3 No. 1, Table 35.

(3) **Amend Clause 4.3 by adding the following:**

4.3.5 Switching Devices

Switching devices that electrically isolate a line operated above 750 V phase to phase shall be identified for safety purposes by numbering, lettering, or a combination of both, using a permanent sign.

(4) **Amend Clause 4.3 by adding the following:**

4.3.6 Crossing Special Areas

(1) Subject to Subclause (2), overhead power lines shall not be constructed across a school ground, recreational area, boat launching area, storage yard where equipment is used that could contact the lines, or similar area where the risk of contacts is high.

(2) Subclause (1) does not apply if the risk of locating the overhead power line in the area described in Subclause (1) can be reduced to an acceptable level and the inspection **authority having jurisdiction** approves the installation.

(5) **Replace Table 2 (Clause 5.3.1.1) with Table 5 attached.**

(Minimum Vertical Design Clearances above Ground or Rails)

▲ (6) **Remove Table 4 (Clause 5.3.1.1) and refer to Column VIII of Table 5 attached.**

(Minimum Vertical Design Clearances above Ground or Rails)

(7) **Replace Table 8 (Clause 5.7.2) with Table 6 attached.**

(Minimum Design Clearances of Supply Conductors Attached to Buildings)



(8) **Replace Table 9 (Clause 5.7.3) with Table 7 attached.**

(Minimum Design Clearances from Wires and Conductors not Attached to Buildings, Signs, and Similar Plant)

▲ (9) Replace Clause 5.7.8 as follows:

5.7.8 Clearances to Hazardous Locations

An overhead power line shall not cross over a Zone 0, Zone 1, Zone 20, Zone 21 or Class I - Division 1, Class II - Division 1, or Class III – Division 1 hazardous location in accordance with CSA C22.1, *Canadian Electrical Code, Part I*.

An overhead power line adjacent to a hazardous area as described above shall maintain a horizontal clearance from the hazardous area equal to the height of the supporting structure unless:

- (a) The supporting structure is of H-Frame or Grade 1 construction; or
- (b) The supporting structure is guyed away from the hazardous area.

Where a power line adjacent to a hazardous area described above is deflected towards the hazardous area, additional precautions shall be taken to prevent conductors from entering the hazardous area due to failure of a conductor fastening.

Devices that can emit sparks or glowing embers, such as fuses and arrestors, where practicable, shall not be located on poles adjacent to the hazardous locations identified above.

(10) Replace Table 27 (Clause 6.3.1) with Table 9 attached.

(Minimum grades of construction for crossings)

(11) Amend 8.19 as follow:

8.19 Communication and power line hardware

Clause 8.19 is not mandatory in Alberta.

▲ 10-004 Grounding Methods for Supply Systems

- (1) **Buildings:** If buildings are located in proximity to supply lines and unsafe or objectionable potentials exist or may exist on or adjacent to the metallic parts of the building as a result of the supply lines, the metallic parts shall be grounded at 2 or more physically separated locations with a minimum size No. 6 AWG ground conductor connected to a ground electrode.
- (2) **Pipelines:** If pipelines are located in proximity to supply lines, the pipelines shall be grounded or controlled in accordance with CSA Standard C22.3 No. 6-13, *Principles and Practices of Electrical Coordination Between Pipelines and Electric Supply Lines*. (See Appendix B.)
- (3) **Metallic Fences Subjected to Objectionable Potentials:** Where unsafe or objectionable potentials may be present on metallic fences located in parallel with supply lines, the metallic fences shall be grounded at appropriate intervals with a minimum size No. 6 AWG ground conductor connected to a ground electrode.
- (4) **Close Metallic Objects:** Where unsafe or objectionable potentials may be present on other metallic objects located in proximity to supply lines, the metallic objects shall be grounded with a minimum size No. 6 AWG ground conductor connected to a ground electrode.

SECTION 12 - UNDERGROUND SYSTEMS

▲ 12-002 Standard to be Used

CSA Standard C22.3 No.7:20, *Underground Systems*, shall be the standard for the construction and maintenance of underground electrical utility and communication systems with amendments to that standard as follows:

(1) **Replace Clause 1.1 as follows:**

1.1 Scope

This Standard applies to the lines and equipment associated with underground electric supply and **communication systems** located entirely outside buildings and fenced supply stations.

This Standard, which forms part of the *Canadian Electrical Code, Part III*, covers the requirements for construction of underground systems and includes electric supply and communication circuits that are installed alone, in joint use, or in proximity to each other or other facilities.

(2) **Remove Clause 1.2 and refer to AEUC Section 0, Scope.**

▲ (3) **Replace Clause 4.9 as follows:**

Corrosion control shall be considered in the design of underground installations. Methods for corrosion control include material selection, coatings, and cathodic protection (see CSA C22.3 No. 4). Corrosion control methods may be adjusted based on facility testing and maintenance and by engineering judgement.

(4) **Add Clause 15.5.4 as follows:**

15.5.4 Interconnecting Ground Electrodes and Grids

Where different systems serve the same consumer, the grounds of the different systems shall be bonded. A single grounding conductor may be used for both supply and communication grounding, provided that the ground connection is of sufficiently low impedance and of sufficient current-carrying capacity to prevent the buildup of voltages that can result in a hazard to persons or equipment.



▲ (5) **Add Clause 15.9 as follows: (See Appendix B.)**

15.9 Ground Resistance Requirements

15.9.1 Multi-Grounded Systems

The neutral shall be of sufficient size and ampacity for the intended use, and shall be connected to a ground electrode at each piece of active electrical equipment and a sufficient number of additional ground electrodes (not including grounds at consumer's services) to prevent electric shock hazard to persons caused by the buildup of excessive steady-state neutral-to-earth voltage.

15.9.2 Earth Return Systems**15.9.2.1**

When designing the grounding of an earth return system, the following factors shall be considered:

- (a) soil resistivity,
- (b) **touch potential** and **step potential** under steady-state and fault conditions,
- (c) magnitude of fault currents, and
- (d) frequency and number of ground electrodes installed.

15.9.2.2

Where earth return systems are used the following criteria shall be met:

- (a) the resistance-to-ground of any individual electrode shall not exceed 25 Ω and the resistance of the grounding installation without interconnection to the consumer's service grounding system shall not exceed 6 Ω . Where these readings cannot be achieved, an additional two electrodes connected in parallel or two deep-driven electrodes shall be used. If the required readings cannot be achieved with the two additional electrodes, the grounding system shall be extended into a multi-grounded system until the 6 Ω interconnected reading can be obtained;
- (b) measures shall be taken to prevent electric shock hazard to persons caused by the buildup of steady-state neutral-to-earth voltage;
- (c) the grounding installation shall consist of a redundant grounding system with ground electrodes separated by a distance greater than their depth that are located on different sides of the pole or on separate poles;
- (d) the transformer primary neutral terminal, transformer case, lightning arrester, grounded conductor, and secondary neutral terminal shall:
 - (i) be connected to the ground electrode using the appropriate ground conductor; or
 - (ii) have a suitable warning placed on the pole where primary and secondary neutrals are not connected.

(6) Add Clause 15.10 as follows:**15.10 Maintenance of Grounding System**

Grounding systems shall be periodically tested for resistance, and periodically inspected and maintained, to ensure that the grounding systems comply with the requirements of this **Code**.

(7) Add Clause 15.11 as follows:**15.11 Objectionable Currents**

If unsafe or objectionable ground current flows or may flow on other equipment, steps shall be taken to mitigate such current to safe or unobjectionable levels.

(8) Add Clause 15.13 as follows:**15.13 Grounding Sheaths, Raceways, Trays**

- (1) Power cable sheaths and metallic raceways shall be grounded at both ends unless circulating current flow on the cable sheath or raceway causes problems or cannot be tolerated, in which case the cable sheath or raceway shall be grounded at one end only.

- (2) Subject to Subrule (5), the electrical conductivity of metallic raceways and cable trays shall be continuous throughout their length.
- (3) Subject to Subrule (5), the current-carrying capacity of conductors or connections used to make metallic raceways or cable trays electrically continuous shall be:
 - (a) capable of carrying the electrical utility system fault current; or
 - (b) equal to or greater than the current-carrying capacity of the metallic raceway or cable tray.
- (4) Subject to Subrule (5), metallic cable trays shall be grounded at intervals not exceeding 15 m.
- (5) Subrules (2) to (4) do not apply where **isolated** grounding systems designed, engineered, and constructed in accordance with recognized industry standards are used.

FIGURES

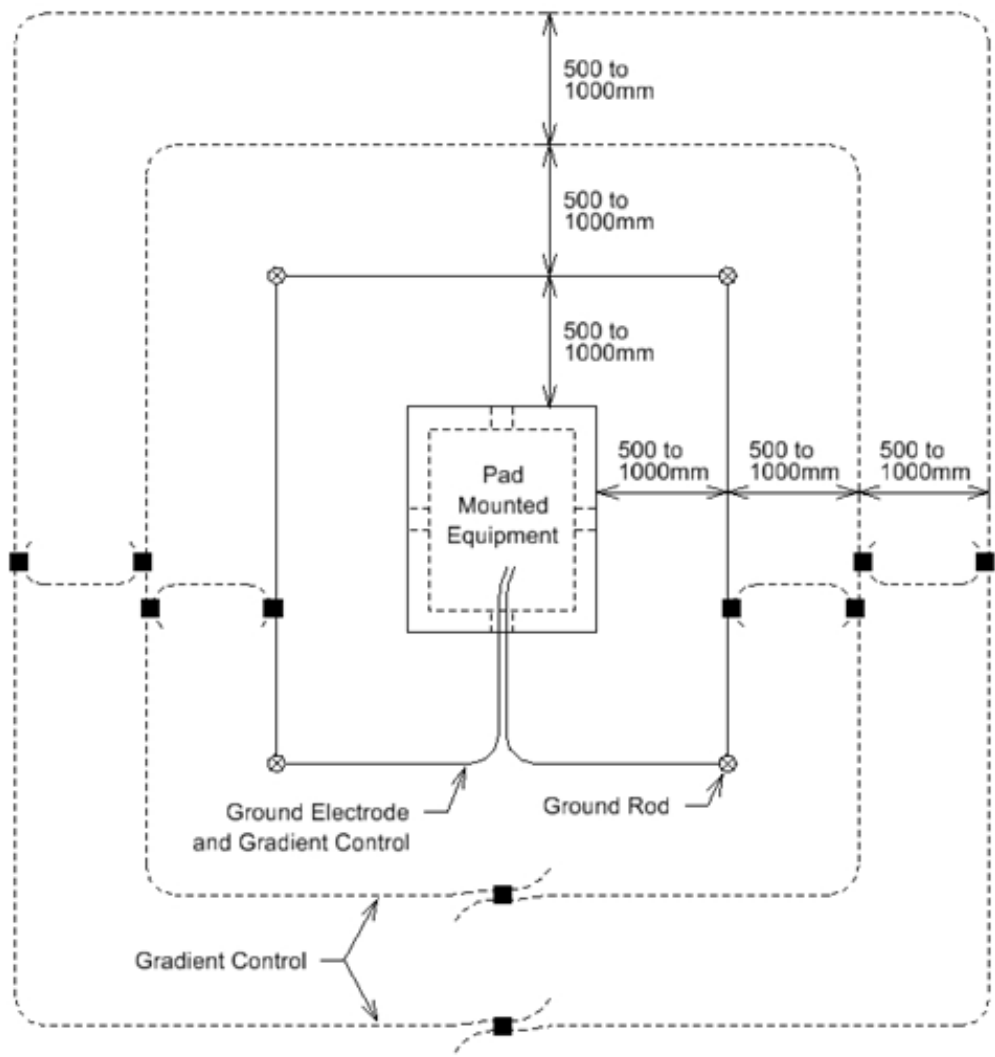


Figure 1 ~ Ground Electrode and Gradient Control
(See Appendix D.)

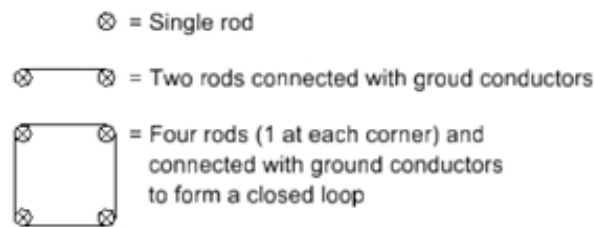


Figure 2 ~ Examples of Ground Electrodes
(See Appendix D.)

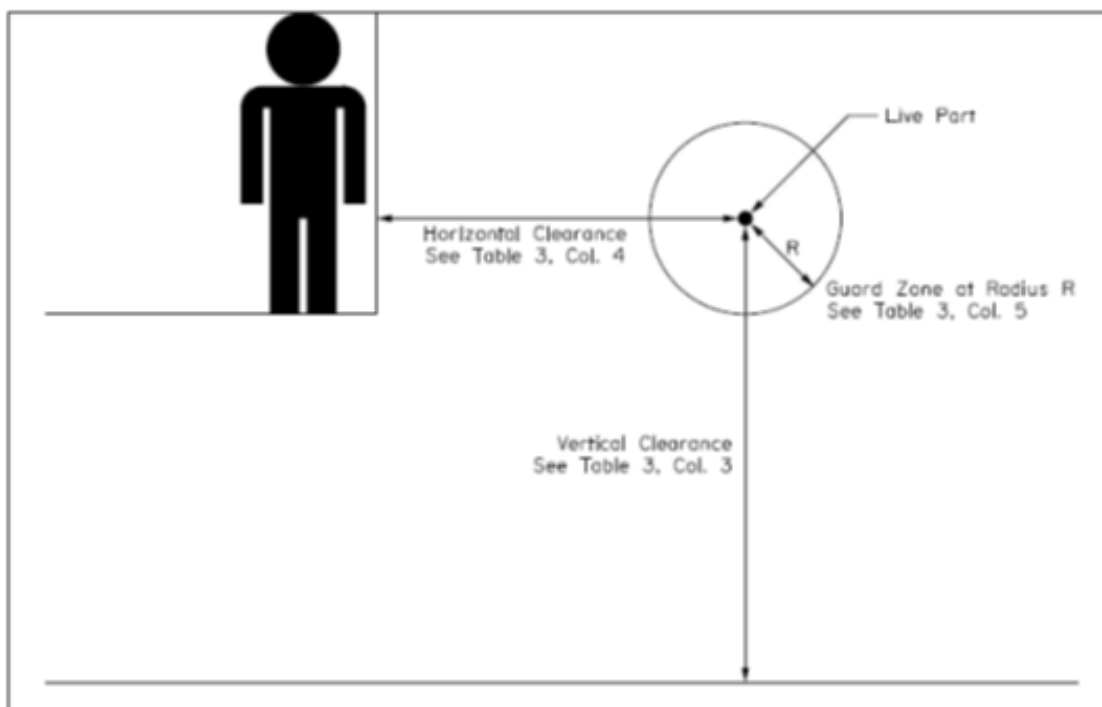


Figure 3 ~ Minimum Clearances about Live Parts
(See Table 3.)

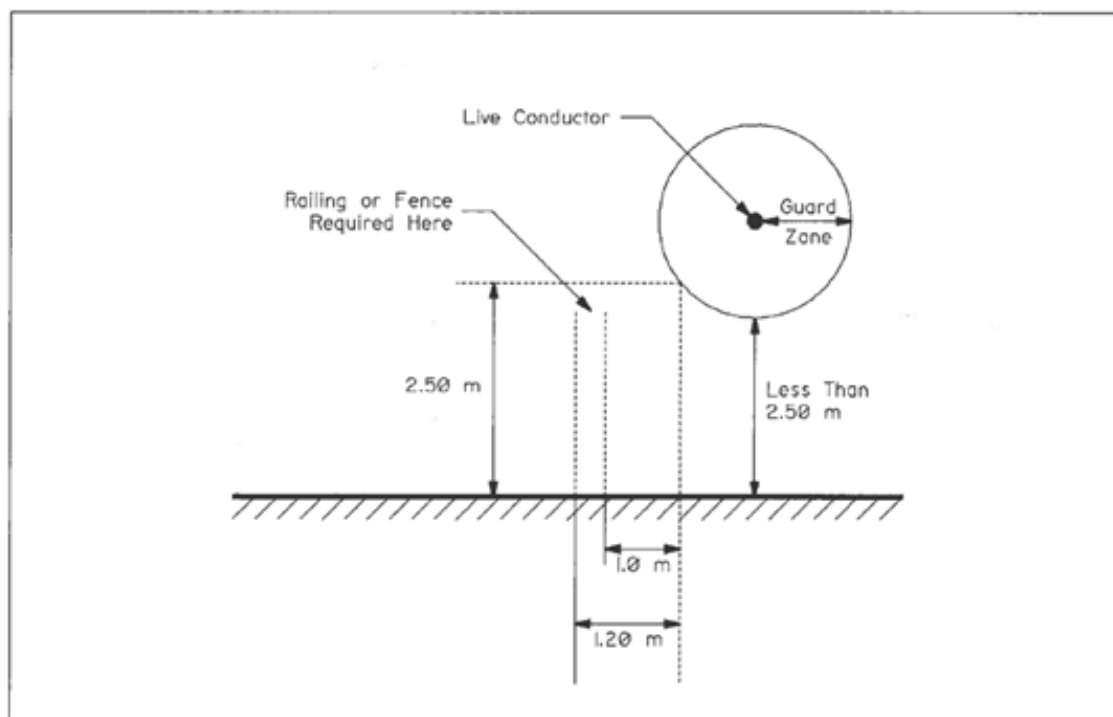


Figure 4 ~ Guarding of Live Parts

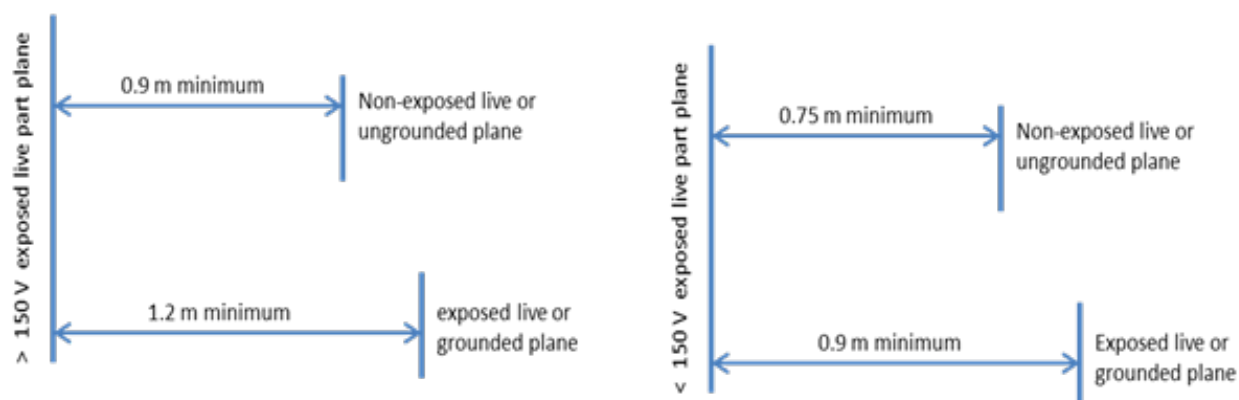


Figure 5 ~ Dimensions of Working Space near Live Parts on Panelboards and Control Panels Indoors
(See Rule 8-022.)

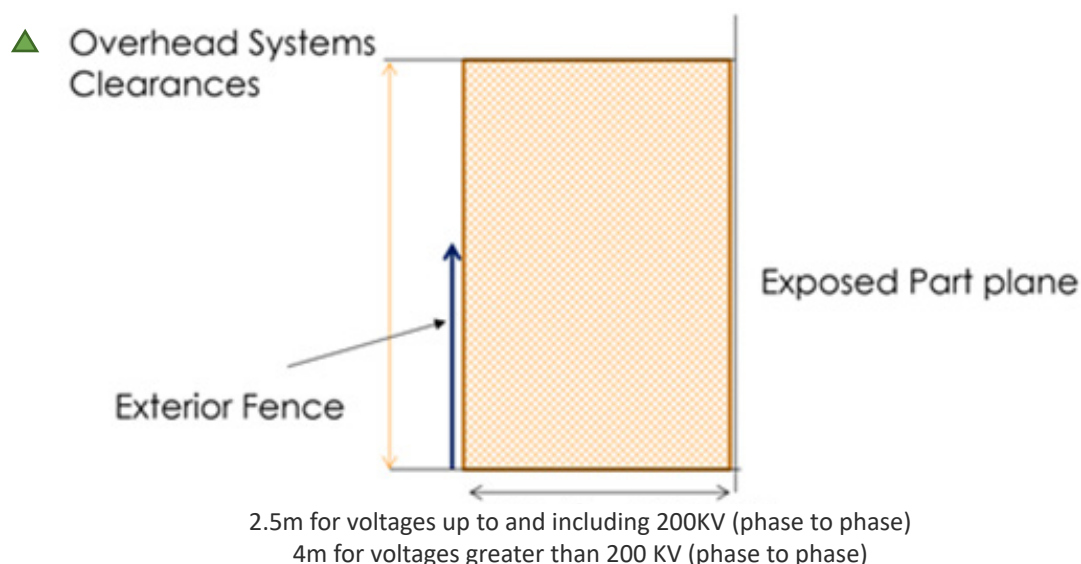


Figure 6 ~ Substation Fence Horizontal Separation for Exposed Parts
The horizontal separation between the exterior fence and exposed energized parts shall not be less than 2.5 m for voltages up to and including 200 kV (phase to phase), and no less than 4 m for voltages greater than 200 kV (phase to phase) for the area.
(See Rule 8-300(2).)

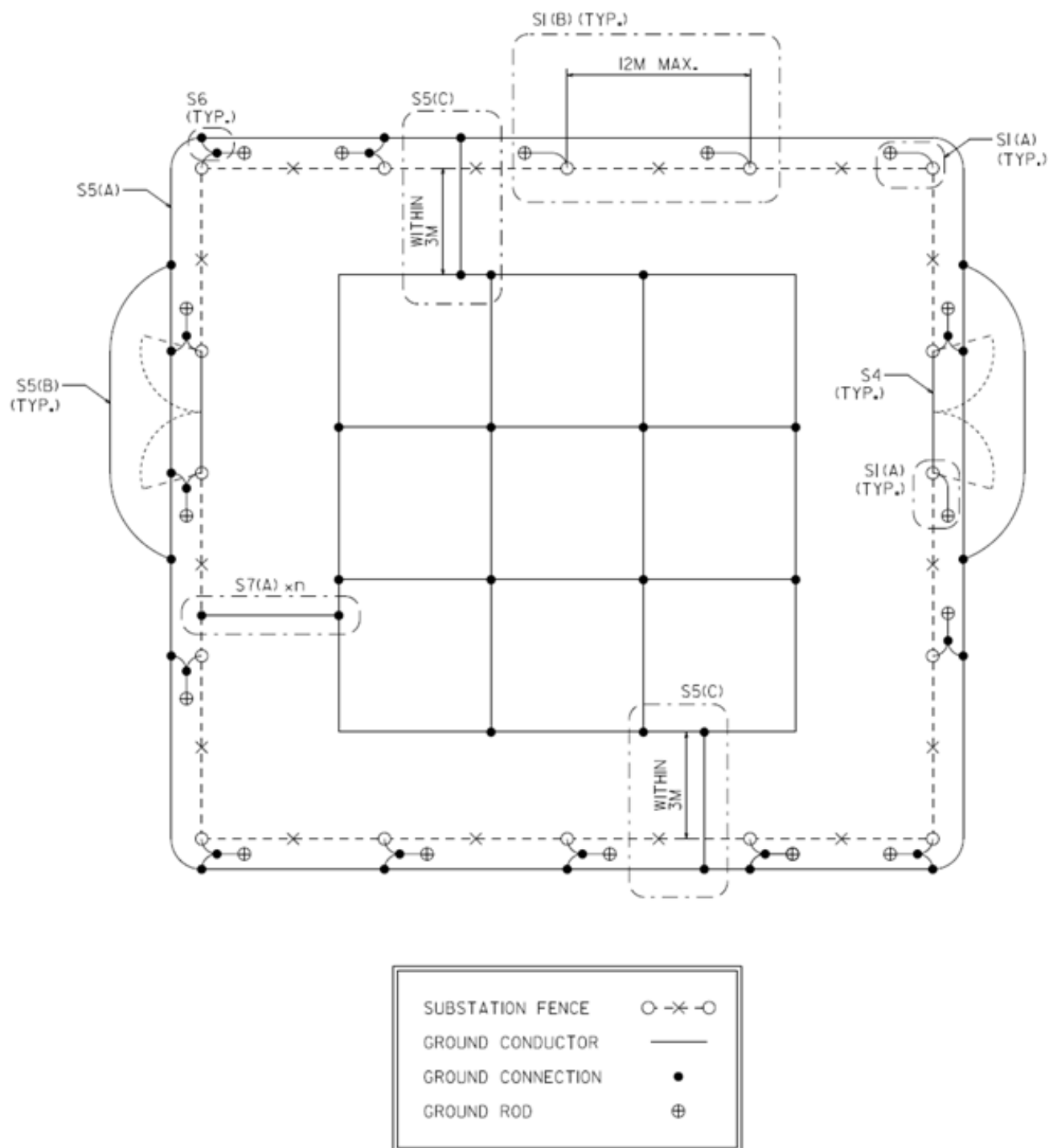
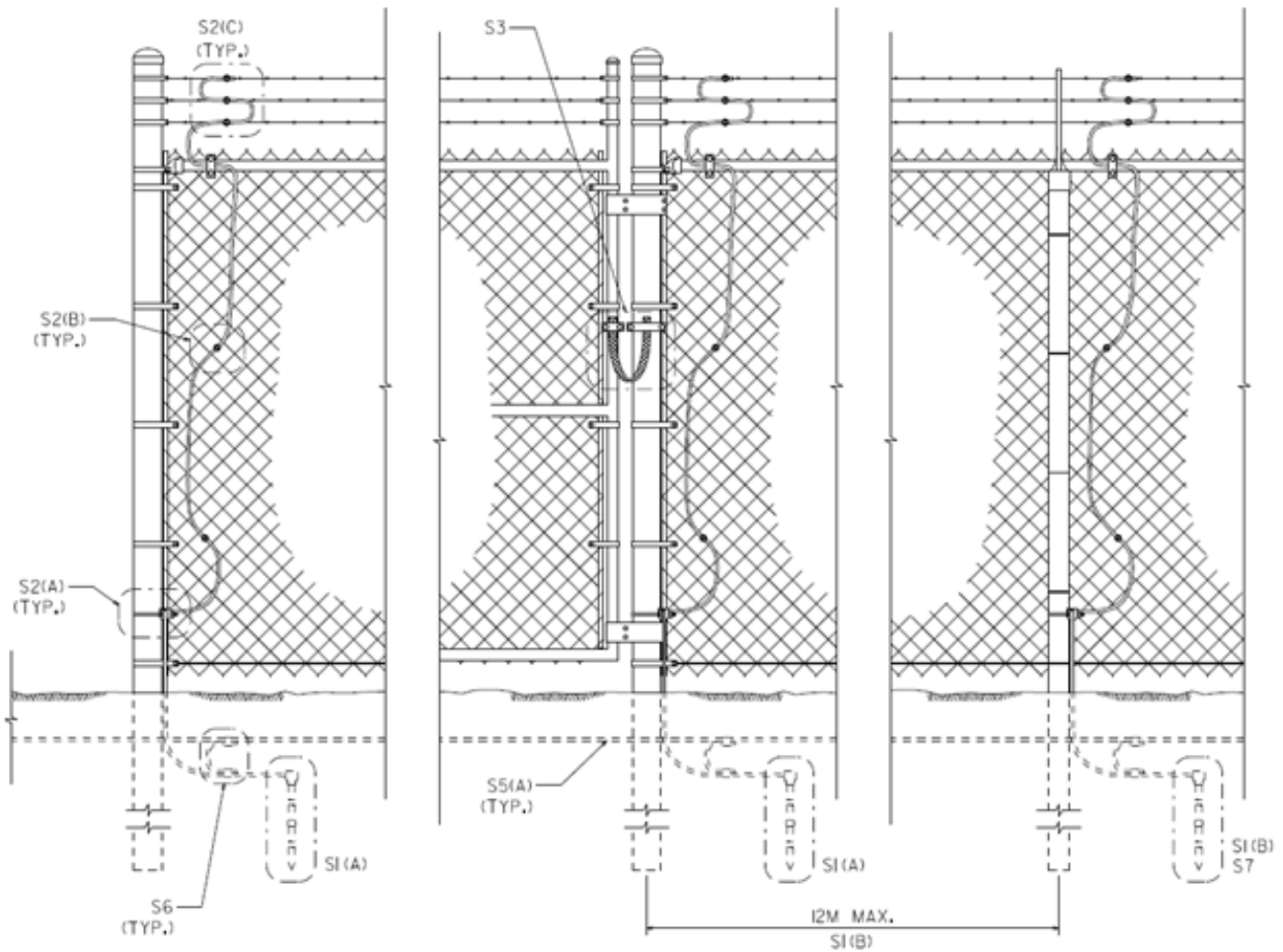


Figure 7 ~ Typical Grounding Plan View – Fence Grounding Interconnection
(See Rule 6-116.)



▲ **Figure 8 ~ Typical Substation Chain Link Fence Grounding Application**
(See Rule 6-116.)

TABLES

Table 1 ~ Safe Limits of Approach Distances from Overhead Power Lines for Persons and Equipment
(See Rule 2-014.)

Operating voltage of overhead power line between line conductors unless otherwise specified	Safe limit of approach distance for persons and equipment
0 - 750 V insulated or polyethylene covered conductors ¹	0.3 m
0 - 750 V bare, uninsulated	1.0 m
Above 750 V insulated conductors ^{1,2}	1.0 m
0.75 kV - 40 kV	3.0 m
69 kV, 72 kV	3.5 m
138 kV, 144 kV	4.0 m
230 kV, 260 kV	5.0 m
500 kV	7.0 m
500 kV DC Pole-Ground	7.0 m

¹ Conductors must be insulated or covered throughout their entire length to comply with these groups.

² Conductors must be manufactured to rated and tested insulation levels.

- ▲ Table 2, *Stranded Copper Conductor Sizes Required to Conduct Electrical Utility System Fault Current*, has been deleted. Table numbers for Tables 3 through 9 have not been adjusted so as to maintain table numbering consistency with previous AEUC revisions.

Table 3 ~ Minimum Separation or Clearance from Live Parts

- ▲ (See Rules 8-200, 8-204 and 8-242.)

Column 1		Column 2	Column 3	Column 4	Column 5
Line to ground voltage (maximum) (kVrms)		Equivalent phase to phase voltage (kVrms)	Minimum vertical separation or clearance to unguarded parts (m)	Minimum horizontal separation or clearance to unguarded parts (m)	Minimum separation or clearance to guard live parts (guard zone) (m)
AC Systems	----	0.75	2.5	1.0	---
	5	9	2.6	1.1	0.10
	16	28	2.7	1.2	0.20
	23	40	2.8	1.3	0.30
	50	87	3.2	1.7	0.70
	90	156	3.5	2.0	1.00
	145	250	4.1	2.6	1.60
	165	285	4.5	2.9	2.00
	320	550	6.2	4.7	3.70
DC	500		5.2	3.6	2.7

¹ The separations or clearances in Column (5) of this table are solely for guidance in installing guards without definite engineering design, and are not to be considered as a requirement for such engineering design; i.e., the minimum separations or clearances in the above table are not intended to refer to the separations or clearances between live parts and the walls of cells, compartments, or enclosing structures. They do not apply to the separations between bus bars and supporting structures, or to the clearances between the blade of a disconnecting switch and its base.

TABLES

² Minimum separations or clearances shall satisfy either switching surge or B.I.L. duty requirements, whichever is greater. Switching surge factor is an expression of the maximum Switching Surge Crest Voltage in terms of the maximum Line to Neutral Crest Voltage of the power system. Basic Insulation Level B.I.L. - represents the insulation level of the System.

³ Parts over or near passageways through which material may be carried, or in or near spaces such as corridors, storerooms, and boiler rooms used for non-electrical work, shall be **guarded** or given separations or clearances in excess of those specified, such as may be necessary to secure reasonable safety. The guards shall be substantial and, where practical, completely shield or enclose, without openings, the live parts. When in spaces used for non-electrical work, covers shall be removable only by means of tools or keys.

⁴ Parts of indeterminate potential, such as telephone wires exposed to induction from high voltage lines, ungrounded neutral connections, ungrounded frames, ungrounded parts of lightning arresters, ungrounded instrument cases connected directly to the high voltage circuit, ungrounded parts of power cable terminations and cable shields, and other **substation** components subject to voltage build-up if not grounded shall, where practical, be **guarded** on the basis of the maximum voltage which may be present.

⁵ Refer also to Scope and General Requirements.

⁶ Clearances shown for 500 kV HVDC are based on a TOV factor of 1.5.

Table 4 ~ Minimum Spacing for Outdoor Switches in Free Air
(Live Part to Live Part and Live Part to Grounded Structure ²)
 (See Rule 8-416.)

Maximum System Voltage (phase to phase) (kVrms)	Spacing ¹ (mm)
9	300
15	400
30	550
40	650
50	750
80	1000
156	1800
275	3000
300	3300
550	6600

¹ These spacing requirements do not apply to **approved** switchgear assemblies.

² "Live Part to Grounded Structure" is the horizontal distance from any switch blade position to the switch support structure or any adjacent structure.

Table 5 ~ Minimum Vertical Design Clearances above Ground or Rails¹

(See Rule 10-002 (5) and (6), Appendix C and CSA C22-3 No. 1-15 Clause 5.3.1.1.)

Location of Wires or Conductors ²	Guys, Messengers, Span & Lightning Protection Wires and Communication Wires and Cables	Voltage of Open Supply Conductors And Service Conductors Voltages Line to Ground kVAC except where noted (Values in Parentheses represent AC Phase to Phase voltages typically used in Alberta)						
		0 to 0.75	0.75 to 22	22 to 50	50 to 90	120 to 150	318	+/- 500 kVDC
		(120 -600 V)	(4, 13 & 25 kV)	(35, 69 & 72 kV)	(138 & 144 kV)	(240 kV)	(500 kV)	1000 kVDC Pole-to-Pole
	Column I	Column II	Column III	Column IV	Column V	Column VI	Column VII	Column VIII
Over walkways or land normally accessible only to pedestrians, snowmobiles, and all terrain vehicles not exceeding 3.6m.	3.7	4.0 (6)	4.3	4.7	5.0	5.6	9.9	6.5
Over rights of way of underground pipelines operating at a pressure of over 700 kilopascals; equipment not exceeding 4.15m.	4.5	4.5	4.8	5.2	5.5	6.1	9.9	7.7
Over land likely to be travelled by road vehicles (including roadways, streets, lanes, alleys, driveways, and entrances); equipment not exceeding 4.15m. ³	4.5	4.5	4.8	5.2	5.5	6.1	15.4	7.7
Over land likely to be travelled by road vehicles (including highways, roadways, streets, lanes, alleys, driveways, and entrances); equipment not exceeding 5.3m. ⁴	5.6	5.7	6.0	6.4	6.7	7.3	16.6	8.9
Over land likely to be travelled by agricultural or other equipment; equipment not exceeding 5.3m. ⁵	5.6	5.7	6.0	6.4	6.7	7.3	12.2	8.9
Above top of rails at railway crossings, equipment not exceeding 7.2m.	7.3	7.5	7.8	8.2	8.5	9.1	11.1	10.7

¹ Includes Alternating Current and Direct Current Voltages commonly found in Alberta.² Where a line runs parallel to land accessible to vehicles but is over land not requiring clearance for vehicles, the wire can swing out over the area accessible to vehicles or, at voltages over 200 kV AC, vehicles can be subjected to a hazard from induced voltages. These vertical clearances apply where the conductor (in the swing condition, where specified) is over, or within the following horizontal distances from the edge of, land accessible to vehicles:

- (a) 0.0 m for communication circuits and 0 to 50 kV phase to phase AC supply circuits;
- (b) 0.9 m for 50 to 90 kV phase to phase AC supply circuits;
- (c) 1.7 m for 120 to 150 kV phase to phase AC supply circuits; (Table continues on next page)
- (d) 6.1 m for 250 to 350 kV phase to phase AC supply circuits;

³ Generally restricted to Urban areas.⁴ Provincial and municipal authorities may designate certain roads and highways as high load corridors and set specific ground clearances for these routes.⁵ This category includes farm fields and access roads to farm fields, as well as entrances to farm yards.⁶ This clearance can be reduced to 3.5 m in the last span connecting the overhead supply to the consumer's service point of attachment.

Table 6 ~ Minimum Design Clearances of Supply Conductors Attached to Buildings

(See Rule 10-002 (7) and CSA C22-3 No. 1-10 Clause 5.7.2.)

Conductor attached to building ¹		Minimum clearances (m)		
		Horizontal to surface	Vertical to normally inaccessible surface	Vertical to readily accessible surface
0 to 750 V	Insulated or grounded	1.0 ²	1.0	2.5
	Enclosed in effectively grounded metallic sheath	0.0	0.0	0.0
	Neither insulated, nor grounded, nor enclosed in effectively grounded metallic sheath	1.0 ²	1.0	2.5
Over 0.75 to 5 kV	Not enclosed in effectively grounded metallic sheath	3.0 ³	1.2	2.7
	Enclosed in effectively grounded metallic sheath	0.0	0.0	0.0
Over 5 to 22 kV	Not enclosed in effectively grounded metallic sheath	3.0 ⁵	1.5 ³	3.0 ³
	Enclosed in effectively grounded metallic sheath	0.0	0.0	0.0
Over 22 kV		3.0 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV ^{3, 4}	3.6 plus 0.01 m/kV over 22 kV ^{3, 4}

¹ The tabulated clearances are applicable to nonmetallic buildings or buildings whose metallic parts are effectively grounded.

Otherwise, a study to determine suitable greater clearances may be necessary, because of electrostatic induction.

² For inaccessible surfaces, this may be reduced to 0.08 m. At the service attachment point, this may be further reduced to 0.02 m.³ Carrying conductors of these voltage classes over buildings should be avoided if other suitable construction can be carried out.⁴ Where it is deemed necessary to carry conductors of these voltage classes over buildings, investigations should be made to determine if additional measures, including increased clearances, are required to ensure that safe and suitable use can be made of the building crossed over.⁵ This value may be reduced to 1.5 m when windows that can be opened, fire escapes, and balconies are not present on the building adjacent to the conductor.

Table 7 ~ Minimum Design Clearances from Wires and Conductors Not Attached to Buildings, Signs, and Similar Plant

(See Rule 10-002 ⁸ and CSA C22-3 No. 1-10 Clauses 5.7.3.1, 5.7.3.3.)

Wire or Conductor		Minimum clearances (meters) from wire to:			
		Buildings ^{1, 2}		Signs, billboards, lamp and traffic sign standards, above-ground pipelines, and similar plant	
		Horizontal to surface ³	Vertical to surface	Horizontal to object ³	Vertical to object
Guys, communication cables, and drop wires		0.0	0.08	0.0	0.08
Supply conductors					
0 to 750 V	Insulated or grounded	1.0	2.5 ⁴	0.3	0.5
	Enclosed in effectively grounded metallic sheath	0.0	0.0	0.0	0.08
	Neither insulated nor grounded, nor enclosed in effectively grounded metallic sheath	1.0	2.5 ⁴	1.0	0.5
Over 0.75 to 22 kV	Not enclosed in effectively grounded metallic sheath	3.0 ⁷	3.0 ⁵	3.0	3.0
	Enclosed in effectively grounded metallic sheath	0.0	0.0	0.0	0.08
Over 22 kV ^{5, 6}		3.0 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV	3.0 plus 0.01 m/kV over 22 kV	3.6 plus 0.01 m/kV over 22 kV

¹ Clearances over or adjacent to portions of a building normally traversed by pedestrians or vehicles are covered by Tables 5 and 6.

² The tabulated clearances are applicable to nonmetallic buildings or buildings whose metallic parts are effectively grounded. Otherwise, a study to determine suitable greater clearances may be necessary, due to electrostatic induction. (See Clause 54.7.3.3.)

³ To these values the conductor swing must be added, in accordance with Clause 5.7.3.1.

⁴ This clearance may be reduced to 1 m for portions of the building considered normally inaccessible.

⁵ Carrying conductors of these voltage classes over buildings should be avoided if other suitable construction can be carried out.

⁶ Where it appears necessary to carry conductors of these voltage classes over buildings, additional measures should be investigated, including increased clearances, to ensure that safe and suitable use can be made of the building crossed over.

⁷ This value may be reduced to 1.5 m when windows that can be opened, fire escapes, and balconies are not present on the building adjacent to the conductor.

⁸ Voltages are rms line-to-ground unless otherwise noted.

⁹ See Table 1 for safety work clearances.

▲ **Table 9 ~ Minimum Grades of Construction for Crossings**

(See Rule 10-002(11) and

CSA C22.3 No. 1-15 Clauses 6.3.1, 6.3.2.1, 7.8.1.1, 7.8.2, 7.8.3, 7.9.1, A.7.8.2, and A.8.1.)

Item at lower level	Minimum grade of construction where the conductors, messengers, or cables are at the upper level		
	Communication	0–750 V	> 750 V
Railway control facilities and tracks	1	1	1
Limited access or controlled access highways	1	1	1
Roads and highways — General	3	3	3
Over rights of way of underground pipelines at a pressure of over 700 kilopascals	3	3	3
Above-ground pipelines	1	1	1
Navigable waterways requiring permits	1	1	1
Aerial tramways	1	1	1
Other private or public property	3	3	3
Communications			
Cable	3	3	1 ¹
Open wire — General	3	3	1 ¹
Drop wire	3	3	3
Supply			
0–750 V	2 ²	3	2 ³
> 750 V	1 ²	2	2

¹ The grade of construction may be Grade 2 where one of the following conditions exists:

- (a) the supply and communication lines have coordinated electrical protection (see Clause 4.4.);
- (b) where coordinated electrical protection is not practical, the supply conductors have a rated tensile strength of 12.4 kN or greater; or
- (c) the supply conductors are enclosed in effectively grounded continuous metallic sheathed cable.

² The communication line may be Grade 3 where the supply conductors are in effectively grounded continuous metallic sheathed cable.

³ Grade 3 construction may be used where the supply conductors at the upper level are in effectively grounded continuous metallic sheathed cable.

APPENDIX A - SAFETY RULES

(formerly Section 4)

- ▲ Alberta's 2013 Occupational Health and Safety (OH&S) Code, *Part 40, Utility Workers – Electrical*, refers to the Safety Rules in Section 4 of the 2002 edition of the Electrical and Communication Utility Code (ECUC). In 2007, the ECUC was renamed the Alberta Electric Utility Code (AEUC) and the Safety Rules were moved to Appendix A. These rules were carried in Appendix A for subsequent revisions, however the 2002 rules morphed over the years and no longer reflected the exact reference in the OH&S Code. To eliminate ambiguity and potential conflict, and until the OH&S Code is updated, readers should refer to the 2002 revision of the Electrical and Communication Utility Code (ECUC) for safety rules.

APPENDIX B - NOTES ON RULES

Note: This Appendix forms an informational (non-mandatory) part of this Code.

▲ Authority Having Jurisdiction

In Alberta, “authorities having jurisdiction” may include: an accredited municipality for areas within the boundaries of the municipality, an accredited corporation for areas owned by or under the care and control of the corporation, and Alberta Safety Codes Authority (ASCA) for un-accredited areas of the province. (See Safety Codes Act)

▲ Electric Distribution System

The Province of Alberta Hydro and Electric Energy Act (2000 ed., current as of December 5, 2019) (HEEA) defines an electric distribution system as follows:

“electric distribution system” means any system, works, plant, equipment or service for the delivery, distribution or furnishing of electric energy directly to the consumers, but does not include a power plant or transmission line;

The HEEA definitions for “power plant” and “transmission line” are provided below.

▲ Electric Utility

The Province of Alberta Electric Utilities Act (2003 ed., current as of May 12, 2020) defines electric utility as follows:

“electric utility” means an isolated generating unit, a transmission facility, or an electric distribution system that is used

- (i) directly or indirectly for the public, or*
- (ii) to supply electricity to members of an association whose principal object is to supply electricity to its members,*

the owner of which

- i. is required by this Act or the regulations to apply to the Commission for approval of a tariff,*
- ii. is permitted by this Act or the regulations to apply to the Commission for approval of a tariff, and has applied for that approval, or*
- iii. passes a bylaw that has been approved by the Lieutenant Governor in Council under section 138, but does not include an arrangement of conductors intended to distribute electricity solely on property of which a person is the owner or a tenant, for use solely by that person and solely on that property of a facility exempted by Commission rules made under section 117.*

Isolated

Such separation may not eliminate all of the effects of electromagnetic induction.

▲ Power Plant

The Province of Alberta Hydro and Electric Energy Act (2000 ed., current as of December 5, 2019) defines a power plant as follows:

“power plant” means the facilities for the generation and gathering of electric energy from any source.

▲ Substation

The Province of Alberta Hydro and Electric Energy Act (2000 ed., current as of December 5, 2019) defines a substation as follows:

“substation” means a part of a transmission line that is not a transmission circuit and includes equipment for transforming, compensating, switching, rectifying or inverting of electric energy flowing to, over or from the transmission line.

▲ Transmission Line

The Province of Alberta Hydro and Electric Energy Act (2000 ed., current as of December 5, 2019) defines a transmission line as follows:

“transmission line” means a system or arrangement of lines of wire or other conductors and transformation equipment, wholly in Alberta, whereby electric energy, however produced, is transmitted in bulk, and includes

- (i) transmission circuits composed of the conductors that form the minimum set required to so transmit electric energy,*
- (ii) insulating and supporting structures,*
- (iii) substations,*
- (iv) operational and control devices, and*
- (v) all property of any kind used for the purpose of, or in connection with, or incidental to, the operation of the transmission line,*

but does not include a power plant or an electric distribution system.

Note that HEEA considers a substation to be within the definition of a transmission line.

▲ Scope

The rules of this code are not considered to be retroactive, and therefore existing installations are not generally required to be upgraded to meet the new or revised requirements of this Code unless an unsafe condition exists or the existing installation is being renovated or altered. This item should be coordinated with the authority having jurisdiction prior to design/construction.

2-010 Responsibility for Alterations

Unobstructed working space around, near, and in front of utility equipment, such as padmount transformers and pedestals, must be maintained to the requirements of the operator of the utility system.

2-014 Activities near Overhead Powerlines

Rule 2-014 applies to the transportation of equipment, vehicles, people, or other objects under powerlines. A distinction is to be made between construction and maintenance activities related to the powerline and simple movement of material or personnel under the powerline. This Rule makes clear that the requirements for clearance allowances do not apply to the transportation of equipment, etc., which are not involved with any activities related to the powerlines. For example, the movement of digging equipment under a powerline is not subject to the restrictions of this Rule provided that the digging equipment is not being used for excavation under the powerline. Note that there are additional requirements in other Rules that deal with the movement of equipment or buildings. (See Rule 2-018.)

▲ 2-020 Excavation Activities in the Vicinity of Underground Powerlines

The operator of the utility system's determination of the requirement for direct supervision will be based on several factors, including the reliability of the excavator and the type of installation involved.

6-000 Scope

Grounding of overhead and underground electrical utility and communication systems are covered under Sections 10 and 12 of this Code.

6-002 Object**Objectives of Grounding****(1) Purposes of Grounding**

- (a) Adequate grounding is required to prevent dangerous conditions which may arise at electrical installations. Structures and equipment may become energized from a power circuit by failure of insulation, operation of protective devices, breakage or displacement of a conductor, arcing from the power circuit, or induction.
- (b) There is always some resistance between a complete grounding connection and the earth, and fault currents passing through this resistance may cause a potential difference between grounded apparatus and the earth and may create a hazard. For example, with a ground rod in soil of uniform resistivity, the greatest potential gradient exists in the region immediately adjacent to the rod. Measurements show that 90 % of the total potential difference may exist within 6 to 10 feet from the rod that is approximately within the reach or stride of a person, so that a potential difference exists between their feet when placed apart. Moreover, any metallic connection to the rod may transfer the potential at the rod to points remote from the rod itself.
- (c) Potential difference may be created in ungrounded systems without large fault currents. For example, accidental contact of non-current-carrying equipment by a phase conductor could impose a potential on the equipment with, perhaps, negligible fault current. It is therefore imperative to provide a low resistance path between the grounding connection and earth in order to control potential differences.

(2) Public Safety

For public safety it is required that facilities and equipment accessible to the public be free from hazardous potentials. This applies particularly to metallic fences surrounding supply stations and to metallic facilities such as communication circuits, railway tracks, and pipelines entering a supply station.

(3) Personnel Safety

- (a) For the safety of personnel, a grounding system must ensure that accessible non-current-carrying metal parts are maintained at the same potential, and that the difference between this potential and that of the surrounding earth is not dangerous.
- (a) Obviously it is impossible to prevent at all times, in all places, and under all conditions, the presence of dangerous voltages. However, in most cases the hazard can be reduced to an extremely low value by careful, intelligent design. Hazardous potential differences usually occur only when fault current flows. These potential differences can occur within electrical supply stations as well as at other locations.

(4) Equipment Protection

An adequate grounding system is essential to protect equipment by discharging into the earth the energy released by lightning discharges, fault currents, and other system disturbances. Otherwise these disturbances may cause extensive damage to equipment and apparatus, including non-associated equipment such as communication cables, etc. Such damage might include insulation breakdown, electrically ignited explosions, and fires, all of which may present hazards to personnel.

(5) System Operating Requirements

An adequate grounding system is essential also for the proper operation of the supply system. The grounding system must, at times, carry heavy power and fault currents without being damaged and without causing dangerous potential gradients on the surface of the earth. The severity of ground potential rise, in terms of duration and magnitude, is dependent on many things, such as operation of protective devices, system conditions, and effectiveness of overhead ground cables, etc. These in turn are dependent on the effectiveness of the grounding system.

6-104 Generating Station, Substation Ground Resistance

- (1) & (2) The specification of ground potential rise (GPR) value does not imply that substation or generating station safety is achieved. The purpose for the GPR limit specified is to provide a point where consideration of the external assets such as telecommunication personnel and assets may become a concern. Refer to IEEE 487 for further discussion on the purpose of having a 3kV_{peak} limit. In all cases, consideration of the influence of transferring voltages to external assets should be evaluated.
- (3) Measurement of the ground resistance of the grounding systems provides a base point of historical reference to evaluate the performance of the grounding system after construction. Seasonal variations in the soil conditions can significantly influence the resistance of the substation. Therefore, resistance testing for the substations are typically performed in seasons when the influence of frozen soil is not present.

▲ 6-110 Grounding Metallic Equipment

The definitions and applications of grounding and bonding are as per Section 0, Section 10-000 Series, and Section 36-000 Series of CSA Standard C22.1, *Canadian Electrical Code, Part I*.

▲ 6-116 Grounding Generating Station and Substation Fences

This rule is intended as a progressive evaluation of all subrules and not intended as standalone requirements. Subrules may supersede specific previous subrules requirements.

Figures 7 and 8 show the progression of the fencing grounding interconnections requirements. Figures outline where the subrules of 6-116 are applied.

References to minimum conductor size in subrules (2) and (3) are based on minimum electrical characteristics for grounding/bonding a fence. A #4 AWG minimum conductor matches commentary found in the AEUC Appendix D (§15.2) for current-carrying capacity.

The primary purpose of fence grounding is to prevent or mitigate touch and step potential hazards. If these hazards are shown not to be present or the potential mitigated, a fencing system may be isolated from the grounding system.

6-206 Metallic Fences

The 3 m minimum section requirement is for the prevention of:

- (1) direct metallic connection to the utility fence and;
- (2) physical bridging of a person between the two fences.

The installation of insulation fence section described in Subrule (2) may lower the transfer of potential through the soil to interconnected fence to acceptable levels in place of or in conjunction with Subrule (1).

8-014 Buildings

Electrical equipment often contains gases for insulation medium, or DC equipment can have gas generation under certain conditions. Subrule 8-14(j) is intended to cover the appropriate gas release scenario by either having active ventilation to prevent build up or triggered ventilation for specific scenarios. This is all determined by the gas scenario created by the equipment installed in the building.

Building code definition for non-combustible is to be used.

8-300 General Requirements of Substation Fences

Where extreme local environmental conditions exist, higher fences shall be considered to prevent:

- (a) inadvertent entry of pedestrian and animal traffic; and
- (b) blown conductive debris from nearby facilities.

8-306 Gates

Fences with only inward opening vehicle gates shall have a separate personnel gate installed adjacent to the inward opening gate, or a personnel gate built into the main vehicle gate to enable personnel entry into the substation for emergency access and snow removal.

8-310 Substation Yards

The substation yards should not contain material that is not required for equipment replacement/ sparing for speed of restoration, and should not include any consumables / general construction material (e.g., copper wiring,). These consumable items are targets for theft and the intention is to limit the access or entries into a live substation.

8-406 Accidental Operation

Locking, rather than blocking, is recommended for remotely controlled equipment.

8-414 Enclosures for Switches, Fuses, and Circuit Breakers

Securing firmly requires some form of latching, physical interlock, clasp, bolting, or screwing, and shall not solely rely on the weight of part of the enclosure or friction fit.

8-416 Spacing Between or from Switches

The measurement point is from any point along the switch path from the blade to neighbouring structures and other live parts. The intention is to consider the dynamic distance during switch operation, as the blade may be energized and arcing may occur.

10-004 Grounding Methods for Supply Systems above 22 kV

(2) Pipelines

Guidance for pipelines located in proximity to electrical utility system HVDC transmission lines can be found in *Influence of High Voltage DC Power Lines on Metallic Pipelines*, published by Canadian Association of Petroleum Producers and available on the CAPP website.

Guidance for pipelines located in proximity to distribution lines can be found in *Inductive Coordination of Distribution Lines and Pipelines*, published by Alberta Power Industry Consortium.

12-002 Standard to be Used

(1) Add Clause 15.9 as follows:

Multi-grounded neutral systems that extend over a substantial distance depend more on the multiplicity of grounding electrodes than on the resistance-to-ground of one individual electrode. Therefore, no specific values are prescribed for the resistance of individual electrodes.

APPENDIX C - NOTES ON RULES FOUND IN C22.3 NO. 1:20, OVERHEAD SYSTEMS

Note: This Appendix forms an informational (non-mandatory) part of this Code.

▲ *Note: Reference numbers found in this Appendix correlate to the Rule numbers found in C22.3 No. 1:20.*

▲ 5.3.1.1 Basic Clearances

The Electrical Utilities Sub-Council (EUSC) agreed that the descriptions in the AEUC Table 5 (CSA C22.3 No.1 Table 2) under the column “Location of Wires or Conductors” were vague and interpretation was difficult and required clarification. Reference to the heights of vehicles that may be passing under the aerial lines was added to the AEUC Table 5 for clarity. It was also determined that clearances in the 2002 edition were more appropriate, so the values in the chart were changed back to that edition.

Trolley systems were prevalent in Alberta up to the year 2010. The Trolley transportation systems are not prevalent in Alberta, so this column was removed. Refer to CSA C22.3 No. 1 for further information.

Voltages were modified in the 2013 edition of the AEUC to reflect what is considered standard in Alberta. References to voltages that are not used in Alberta were removed.

The description at the top of Table 5 was modified in the 2013 edition of the AEUC to identify the voltage as line to ground, and the DC column for 500kV DC was added for clarity. DC transmission voltages were not referenced in the 2007 edition.

Table 5 notes were redone based on recalculation of transmission voltages and the following sample calculations.

Sample Calculation for max 150kV AC line to ground Flashover (260kV AC Line to Line)

From CSA C22.3 No.1 Table A.1, the switching surge factor or switching overvoltage (SOV) for a maximum line to ground voltage of 150kV is 2.75p.u. (per unit).

150kV is a root mean square (RMS) value that must be converted to a peak voltage value. For a sinusoid wave form, this conversion factor is the square root of 2.

$$V_{peak} = (\sqrt{2})(V_{rms})$$

$$V_{peak} = (\sqrt{2})(150) kV = 212.13 kV$$

The overvoltage on the line is 2.75 p.u.

$$V_{SOV} = (SOV)(V_{peak})$$

$$V_{SOV} = (2.75)(212.12 kV) = 583.36 kV$$

The flashover distance as per CSA C22.3 No.1 is calculated as:

$$D_{flash} = (500)(2.54) + (583.36 - 500)(3.81) = 1588 mm$$

(Note that Table A.1 of the CSA C22.3 No.1 shows 1586 mm)

Example, for a road crossing allowing a 5.3m vehicle and load combined height:

$$DV = 5.3m + 1.588 m + 0.3 m = 7.2 m$$

This clearance is close to what the current version of the AEUC requires (7.3 m).

500kV AC (line to line) Clearances

These clearances are governed by induction.

Minimum ground clearance as specified in ISO Rule 502.2 for Alberta is 12.2m.

Minimum clearance over rail is governed by flash over due to rail cars being well grounded.

Minimum clearance over rail as per CSA C22.3 No. 1 Table 5, CSA Clause 5.3.1.1 does not appear to be included, i.e. additional 0.3m clearance to permit normal ballast adjustments.

+/- 500 kV DC Clearances

Overall, the clearances derived from the CSA C22.3 No. 1, Table 4 converted to Alberta equipment heights exceed the calculated clearances; therefore, CSA C22.3 No. 1, Table 4 clearances were used for the AEUC Table 4. Steady state DC voltages do not induce currents and voltages that would require greater clearances where large vehicles or objects are expected.

+/- 500 kV DC governed by DC electric field level limits for general public exposure. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) suggests a limit for general public exposure of less than 28 kV/m, which will result in ground clearance of 12.2m

Sample Calculation for +/- 500 kV DC line to ground Flashover

From CSA C22.3 No. 1, Table A.2, the switching surge factor or switching overvoltage (SOV) for a maximum line to ground voltage of +/- 500 kV DC is 1.6p.u. (per unit). For up to 144 kV the air gap withstand is 2.0 mm/kV, and greater than 144 kV the air gap withstand is 2.92 mm/kV.

$V_{peak}=500kV$ Pole to Ground

The overvoltage on the line is 1.6 p.u.

$$V_{SOV} = (SOV)(V_{peak})$$

$$V_{SOV} = (1.6)(500kV) = 800kV$$

The flashover distance as calculated per CSA is:

$$D_{flash} = (144kV)(200 mm/kV) + (800kV - 144kV)(2.92 mm / kV) = 2204 mm$$

Example, for a road crossing allowing a 5.3m vehicle and load combined height:

$$DV = 5.3 m + 2.204 m + 0.3 m = 7.8 m$$

Alternate calculation: use +/- 450 kV clearance and add 0.005 m/kV for each kV over 450 kV (as recommended by note on CSA C22.3 No. 1, Table 4.)

$$DV = 5.3 m + 1.970 m + 0.3 m + 0.005 m = 7.8 m$$

The description was changed in Table 5 under "Location of Wires or Conductors" (Column 1) based on the height of equipment, building, or object being transported on the highways in Alberta.



APPENDIX D - NOTES ON RULES FOUND IN C22.3 NO. 7:20, UNDERGROUND SYSTEMS

Note: This Appendix forms an informational (non-mandatory) part of this Code.

▲ *Note: Reference numbers found in this Appendix correlate to the Rule numbers found in C22.3 No. 7:20.*

15.1 General

- (1) For bare grounding conductors, the short time ampacity is the current that the conductor can carry for the time during which the current flows without melting or affecting the design characteristics of the conductor.
- (2) For insulated grounding conductors, the short time ampacity is the current that the conductor can carry for the applicable time without affecting the design characteristics of the insulation.
- (3) Where grounding conductors at one location are paralleled, the increased total current capacity may be considered.

15.2 Current-carrying capacity

Typically, grounding conductors should have a minimum current-carrying capacity of #4 AWG copper size or equivalent.

15.5 Supply ground electrodes and connections

See Figures 1 and 2 for examples of Ground Electrode and Gradient Control

15.5.1 Corrosion of Grounding System

When the cross sectional area or mass of the grounding system equipment/assembly has been reduced by corrosion to less than 80% of the original amount, the grounding system equipment/assembly should be replaced.

15.6.2 Gradient Control

- (1) The conductor used in gradient control to form loops and connections to grounding conductors or electrodes on electrical utility systems should be sufficient to prevent burn-off of the gradient control conductors when fault currents flow on the grounding conductors or electrodes.
- (2) If gradient conductors are required at pad-mounted electrical equipment locations, the loops should:
 - (a) be placed not less than 500 mm nor more than 1000 mm apart; and
 - (b) be located not less than 200 mm below grade level.
- (3) If gradient control conductor loops are placed around pad-mounted electrical equipment, two or more physically separated gradient control conductors should be used to interconnect the gradient loops to the grounding system.

15.9.1 Multi-Grounded Systems

(Note: These clauses have been taken from the CSA C22.3 No. 1:20, Overhead Systems.)

Where a single electrode resistance exceeds 25 Ω , up to two additional electrodes connected in parallel or up to two deep-driven electrodes should be used unless it is clear that additional electrodes will not significantly reduce the resistance.

The intent of the 25 Ω limit is to provide a starting point (or target) to confirm the interconnected resistance is below 6 Ω .

15.11 Objectionable Current

The following steps are recommended to mitigate current described in Clause 15.11:

- (a) grounding the other equipment;
- (b) improving the grounding system;
- (c) changing the locations of ground connections or ground electrodes;
- (d) eliminating parallel paths; or
- (e) using other mitigation methods designed, engineered, and constructed in accordance with recognized industry standards.

16.3 Identification of Direct Buried Ducts

CSA C22.3 No.7:20, Section 16.3 permits the use of coloured ducts for identification of different systems, and defines the colours that are suggested for different systems. Coloured ducts are not required by Section 16.3, but may be required by the utility.



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Province of Alberta

SAFETY CODES ACT

PERMIT REGULATION

Alberta Regulation 204/2007

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Note

All persons making use of this consolidation are reminded that it has no legislative sanction, that amendments have been embodied for convenience of reference only. The official Statutes and Regulations should be consulted for all purposes of interpreting and applying the law.

(Consolidated up to 157/2022)

ALBERTA REGULATION 204/2007

Safety Codes Act

PERMIT REGULATION

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Interpretation**1(1)** In this Regulation,

- (a) “Act” means the *Safety Codes Act*;
- (b) “Administrator” means an Administrator appointed under section 14 of the Act with respect to the applicable discipline;
- (c) repealed AR 31/2015 s5;
- (d) “Alberta Electrical Utility Code” means the Alberta Electrical Utility Code declared in force by the *Electrical Code Regulation* (AR 209/2006);
- (e) “Alberta Fire Code” means the *National Fire Code - 2019 Alberta Edition* declared in force by the *Fire Code Regulation* (AR 32/2015);
- (f) “Electrical Code” means the Canadian Electrical Code, Part I, declared in force by the *Electrical Code Regulation* (AR 209/2006);

- (g) “electrician” means a person who holds a trade certificate in the designated trade of electrician under the *Skilled Trades and Apprenticeship Education Act*;
- (h) “electronic signature” means information that a person creates, adopts, records, transmits or stores in digital or other intangible form in order to effect a signature on a document and that is either in, attached to or associated with that document;
- (i) “farm building” means a building located on agricultural land as defined in the *Agricultural Operation Practices Act* that is occupied for an agricultural operation as defined in the *Agricultural Operation Practices Act*, including, but not limited to,
 - (i) housing livestock,
 - (ii) storing, sorting, grading or bulk packaging of agricultural products that have not undergone secondary processing, and
 - (iii) housing, storing or maintaining machinery that is undertaken in the building;
- (j) “gasfitter” means a person who holds a trade certificate
 - (i) in the gasfitter — Class A branch, or
 - (ii) in the gasfitter — Class B branchof the designated trade of gasfitter under the *Skilled Trades and Apprenticeship Education Act*;
- (k) “master electrician” means a person who holds a master electrician certificate of competency issued pursuant to the Act;
- (l) “parcel of land” means a parcel of land as defined in section 616 of the *Municipal Government Act*;
- (m) “permit issuer” means a safety codes officer or a person designated to issue permits pursuant to section 44 of the Act;
- (n) “plumber” means a person who holds a trade certificate in the designated trade of plumber under the *Skilled Trades and Apprenticeship Education Act*;
- (o) “private sewage installer” means a person who holds a private sewage installer certificate of competency issued pursuant to the Act;

- (p) “relocatable industrial accommodation” means a building to which Part 10 of the *National Building Code - 2019 Alberta Edition* declared in force by the *Building Code Regulation* (AR 31/2015) applies;
- (q) “restricted master electrician” means a person who holds a restricted master electrician certificate of competency issued pursuant to the Act;
- (r) “restricted private sewage installer” means a person who holds a restricted private sewage installer certificate of competency issued pursuant to the Act;
- (s) “rural wireman” means a person who holds a rural wireman certificate of competency issued pursuant to the Act;
- (s.1) “sheet metal worker” means a person who holds a trade certificate in the designated trade of sheet metal worker under the *Skilled Trades and Apprenticeship Education Act*;
- (t) “sign installation technician” means a person who is authorized to perform sign installation activities in the designated trade of electrician under the *Skilled Trades and Apprenticeship Education Act*;
- (u) “single family residential dwelling” means a residential dwelling for a single family that includes, if applicable, a residential garage or accessory structure associated by use to the dwelling, if the garage or structure is situated on the same parcel of land as the dwelling;
- (v) “undertaking” means the construction of a thing or the control or operation of a thing, process or activity to which the Act applies.

(2) Unless otherwise defined in the Act or this Regulation, the definitions in a code, standard or body of rules relating to the building, electrical, gas plumbing or private sewage discipline declared in force under the Act apply to this Regulation.

(3) For greater certainty, in this Regulation a building includes a stage and a tent, including an overhead structure used or intended to be used in conjunction with a stage or tent

AR 204/2007 s1;40/2012;17/2015;31/2015;194/2015;22/2019;157/2022

Exemptions

2 This Regulation does not apply to the following:

- (a) an accredited corporation operating within the scope of its terms of accreditation;
- (b) equipment and materials regulated under the *Elevating Devices, Passenger Ropeways and Amusement Rides Permit Regulation* (AR 28/2012);
- (c) equipment, materials and systems regulated under the *Pressure Equipment Safety Regulation* (AR 49/2006).

AR 204/2007 s2;17/2015

Part 1 Permits

Permit required

3(1) Subject to subsection (2), a person shall not start any undertaking for which a permit is required under this Regulation unless a permit has been issued.

(2) If a permit issuer is not readily available and there is imminent serious danger to, or imminent serious danger of damage to, persons or property because of any thing, process or activity to which this Act applies or because of a fire hazard or risk of an explosion, a person may, without a permit, start an undertaking for which a permit is required under this Regulation but that person must apply for a permit as soon as a permit issuer is available.

Permit not required

4 A permit is not required for

- (a) an undertaking that a body accredited by the Standards Council of Canada has inspected pursuant to the body's terms of accreditation and has certified, or
- (b) an undertaking governed by a quality control program acceptable to an Administrator.

Liability

5 A permit issued under this Regulation does not make or imply any assurance or guarantee about the life expectancy, durability, operating performance or workmanship of the equipment, materials or undertaking nor shall the permit be construed as an approval or acceptance of the undertaking.

Building Discipline

Building permit

6(1) A permit in the building discipline is required for the following:

- (a) the construction of a building, including the renovation of or addition to a building;
- (b) a change in the occupancy classification of a building.

(2) A permit issuer may require a separate permit for specific parts of the undertaking to which the relevant building code declared in force under the *Building Code Regulation* (AR 31/2015) applies if the specific parts involve performing restricted activities in a designated trade under the *Skilled Trades and Apprenticeship Education Act*.

(3) Despite subsection (1), a permit is not required for the following:

- (a) construction of a building, including a renovation or an addition to a building, if
 - (i) the building is not a stage or tent or an overhead structure that is used in or intended to be used in conjunction with a stage or tent,
 - (ii) the construction, renovation or addition does not exceed \$5000 in prevailing market value, and
 - (iii) matters affecting health or safety are not at risk;
- (b) painting or decorating if
 - (i) matters affecting health or safety are not at risk, and
 - (ii) there is no structural change to the building;
- (c) re-roofing or re-siding if
 - (i) the re-roofing or re-siding is undertaken for aesthetic purposes or for the purposes of maintaining the building,
 - (ii) the re-roofing or re-siding is being replaced with roofing or siding of a similar type,
 - (iii) matters affecting health or safety are not at risk, and
 - (iv) there is no structural change to the building;

- (d) to replace or alter ducting serving a space heating appliance if
 - (i) it is located in a single family residential dwelling, and
 - (ii) there is no design change required to the heating and ventilation system;
- (e) construction of, including a renovation of or an addition to, a stage if the platform of the stage is not at a distance greater than 1200 mm above the adjacent surface on any side;
- (f) construction of, including a renovation of or an addition to, a tent
 - (i) that is
 - (A) located on property that is designated for residential use by municipal land use bylaws and used as a single family residential dwelling, and
 - (B) not used for a commercial purpose,
 - or
 - (ii) that is located on a campsite or campground or more than 3 m from any other structure if the tent
 - (A) does not cover, and is not part of a group of tents that collectively cover, more than 60 m² of ground, and
 - (B) does not contain, and is not intended to contain, commercial cooking equipment;
- (g) construction of an exterior deck that is attached to or detached from a single family dwelling that is not greater than 600 mm from that adjacent grade on all sides of the deck.

(4) Despite subsection (1), a permit is not required with respect to the relocation of a relocatable industrial accommodation if the relocatable industrial accommodation is at the relocation site for not more than 28 days.

AR 204/2007 s6;223/2010;31/2015;194/2015;22/2019;157/2022

Building permit for new home

6.1(1) In this section,

- (a) “authorization” means an authorization as defined in the *New Home Buyer Protection Act*;
 - (a.1) “licence” means a licence as defined in the *New Home Buyer Protection Act*;
 - (a.2) “operator’s licence” has the same meaning as in section 1(1)(bb) of the *Traffic Safety Act*;
 - (b) “new home” means a new home as defined in the *New Home Buyer Protection Act*;
 - (c) “owner builder” means an owner builder as defined in the *New Home Buyer Protection Act*;
 - (d) “Registrar” means the person appointed under section 8 of the *New Home Buyer Protection Act* as the Registrar for the purposes of that Act;
 - (e) “required home warranty coverage” means required home warranty coverage as defined in the *New Home Buyer Protection Act*.
- (2)** A permit issuer shall not issue a building permit for a proposed new home unless the applicant provides evidence to the permit issuer, in a form acceptable to the Registrar, that the proposed new home
- (a) complies with the requirements of the *New Home Buyer Protection Act*, and
 - (b) will be built by a person that holds the appropriate licence or authorization or is exempt from the requirement for a licence or authorization.
- (2.1)** Before issuing a building permit to an applicant, a permit issuer may require the applicant to produce the applicant’s operator’s licence or another form of identification that is issued by the government of Canada or a province, is satisfactory to the Registrar and shows the applicant’s date of birth.
- (3)** On request of the Registrar, a permit issuer shall forward to the Registrar information provided by applicants for permits under subsection (2).
- (4)** Where a permit issuer issues a building permit for a proposed new home, the permit issuer shall indicate on the permit the date that it was applied for.

AR 212/2013 s2;99/2016;208/2017

Building discipline permit holder

7(1) A permit issuer may issue a permit in the building discipline to an owner of the building or to the owner's agent.

(2) A permit issuer may issue a permit for an undertaking referred to in section 6(2) to the following:

- (a) a person having the appropriate certification to carry out the undertaking as required by the *Skilled Trades and Apprenticeship Education Act*;
- (b) an owner who resides or intends to reside in a single family residential dwelling for the installation of building systems in the dwelling.

(3) Without limiting the generality of section 44(2) of the Act, for the purpose of achieving the level of safety intended by the Act and the regulations, a permit issuer may limit the type and scope of the undertaking for which a permit is issued under subsection (2)(b).

AR 204/2007 s7;17/2015;157/2022

Electrical Discipline**Electrical permit**

8(1) A permit in the electrical discipline is required to install, alter or add to an electrical system.

(2) Despite subsection (1), a permit is not required for the following:

- (a) communication systems;
- (b) electrical installations to which the CSA Standard CAN/CSA M421-00(R2000) The Use of Electricity in Mines applies;
- (c) electrical installations related to an elevating device;
- (d) extra low voltage, Class 2 electrical circuits unless they are for any of the following:
 - (i) safety control;
 - (ii) locations described as hazardous in the Electrical Code;
 - (iii) electro-medical purposes;
 - (iv) lighting;

- (e) the replacement of electrical equipment with units of a similar type if the replacement is made for the purpose of maintaining the system and does not modify the ratings or characteristics of the electrical installation.

AR 204/2007 s8;194/2015

Electrical discipline permit holder

9(1) A permit issuer may issue a permit in the electrical discipline to the following:

- (a) a master electrician for any electrical system within the scope of the master electrician's certification;
- (b) a restricted master electrician for any electrical system within the scope of the restricted master electrician's certification;
- (c) a rural wireman for an electrical undertaking in a residence, farm building or similar structure, in an area of Alberta prescribed by an Administrator, if the service ampacity does not exceed 100 amperes and 300 volts single phase;
- (d) an owner who resides or intends to reside in a single family residential dwelling where the electrical system serves that dwelling;
- (e) an owner of a farm building served by a single phase electrical system;
- (f) an owner, operator or designate of a power line construction company or an electrical utility for the construction of an overhead or underground power system governed by the Alberta Electrical Utility Code;
- (g) a sign installation technician to perform electrical undertakings within the scope of the technician's duties as permitted by the *Skilled Trades and Apprenticeship Education Act*;
- (h) an owner or operator if the requirements of section 23 are met.

(2) Without limiting the generality of section 44(2) of the Act, for the purpose of achieving the level of safety intended by the Act and the regulations, a permit issuer may limit the type and scope of the undertaking for which a permit is issued under subsection (1)(d) or (e).

AR 204/2007 s9;295/2009;17/2015;157/2022

Fire Discipline

Storage tank system permit

10 A permit in the fire discipline is required to install, alter or remove a storage tank system to which the Alberta Fire Code applies.

Fire discipline permit holder

11 A permit issuer may issue a permit in the fire discipline to the owner of the parcel of land on which the storage tank system is to be installed.

Gas Discipline

Gas permit

12(1) A permit in the gas discipline is required to install, alter or add to a gas system.

(2) Despite subsection (1), a permit is not required for the following:

- (a) a gas system that uses propane or natural gas as an alternate or principal fuel for motive power on a motor vehicle;
- (b) a gas system that uses propane or natural gas to provide conditioned air in a cargo transport unit;
- (c) the replacement of a dryer, range, water heater or space heating appliance if
 - (i) it is located in a single family residential dwelling, and
 - (ii) no design change is required to any gas piping or venting system;
- (d) the relocation, by a gas utility company, of a gas meter, including any piping changes that may be required for the relocation;
- (e) a container having a propane capacity of not more than 454 litres water capacity or when containers are manifolded together, the aggregate capacity of the containers does not exceed 454 litres water capacity;
- (f) a propane container and installation serving a pump jack, flare stack or oil tank heater at an oil field well site.

Gas discipline permit holder

13(1) A permit issuer may issue a permit in the gas discipline to the following:

- (a) a gasfitter;
- (b) an owner who resides or intends to reside in a single family residential dwelling if the gas system serves the dwelling;
- (c) an owner of a farm building if the gas system serves the farm building;
- (d) a person who has satisfactorily completed a course of training acceptable to the Administrator for the installation of liquefied petroleum tanks;
- (e) a person who has satisfactorily completed a course of training acceptable to the Administrator for the installation of natural gas secondary lines;
- (f) an owner or operator if the requirements of section 23 are met;
- (g) a sheet metal worker if the permit is for the replacement of a furnace in a single family residential dwelling including, if applicable, the replacement of the gas piping downstream of the shut-off valves for the furnace.

(2) Without limiting the generality of section 44(2) of the Act, for the purpose of achieving the level of safety intended by the Act and the regulations, a permit issuer may limit the type and scope of the undertaking for which a permit is issued under subsection (1)(b) or (c).

AR 204/2007 s13;17/2015;157/2022

Plumbing Discipline**Plumbing permit**

14(1) A permit in the plumbing discipline is required to install, alter or add to a plumbing system.

(2) Despite subsection (1), a permit is not required for the following:

- (a) to install a water service that connects a building to a municipal or private water supply;
- (b) to install a building sewer or storm sewer outside of a building;

- (c) to change a fixture, water heater, faucet, trap or valve if a design change to the piping system is not required;
- (d) to install plumbing fixtures in a single family residential dwelling if roughed-in piping has been completed under another permit;
- (e) to install residential water treatment devices in a single family residential dwelling.

Plumbing permit holder

15(1) A permit issuer may issue a permit in the plumbing discipline to the following:

- (a) a plumber;
- (b) an owner who resides or intends to reside in a single family residential dwelling if the plumbing system serves the dwelling;
- (c) an owner of a farm building if the plumbing system serves the farm building;
- (d) an owner or operator if the requirements of section 23 are met;
- (e) a person holding a valid private sewage installer certificate of competency, in respect of a portion of a plumbing system that is
 - (i) located outside a building, and
 - (ii) required for the treatment, flow control or pressure delivery of wastewater from a plumbing system that discharges into a municipal sewage collection system.

(2) Without limiting the generality of section 44(2) of the Act, for the purpose of achieving the level of safety intended by the Act and the regulations, a permit issuer may limit the type and scope of the undertaking for which a permit is issued under subsection (1)(b) or (c).

AR 204/2007 s15;17/2015;194/2015

Private Sewage Discipline**Private sewage disposal permit**

16(1) A permit in the private sewage discipline is required for a private sewage disposal system undertaking.

(2) Despite subsection (1), a permit is not required for the replacement of any equipment of a private sewage disposal system with units of a similar type if the replacement is made for the purpose of maintaining the system and does not modify the design of the system.

(3) Despite subsection (1), a permit is not required for basic privies that are not connected to a holding tank.

AR 204/2007 s16;266/2009

Private sewage system permit holder

17(1) A permit issuer may issue a permit in the private sewage discipline to the following:

- (a) a private sewage installer for any private sewage system;
- (b) a restricted private sewage installer for the installation of holding tank;
- (c) an owner who resides or intends to reside in a single family residential dwelling for any private sewage system if the private sewage disposal system serves the dwelling;
- (d) an owner of a farm building for any private sewage system if the private sewage disposal system serves the farm building.

(2) Without limiting the generality of section 44(2) of the Act, for the purpose of achieving the level of safety intended by the Act and the regulations, a permit issuer may limit the type and scope of the undertaking for which a permit is issued under subsection (1)(c) or (d).

AR 204/2007 s17;17/2015

Utility Connections

Gas, electricity, water

18(1) A supply of gas or electricity shall not be provided to a gas or electrical system unless

- (a) the permit issued in respect of that installation is presented to the supplier,
- (b) the permit issuer notifies the supplier that the required permit has been obtained, or
- (c) the permit issuer authorizes a temporary connection.

(2) Despite subsection (1), a permit or notification from a permit issuer does not obligate a supplier of gas or electricity to supply gas or electricity to an installation.

(3) A permit or notification from a permit issuer does not obligate a supplier of water to supply water to a plumbing system.

Information System

Permit information

19(1) A permit issuer shall, on request, provide an Administrator or the Council with permit information for use in an information system.

(2) The Administrator or the Council may disclose the permit information in accordance with section 63 of the Act.

AR 204/2007 s19;17/2015

Part 2 Permit Administration

Form of permit application

20 An application for a permit and any information required to be included with the application must be submitted in a form and in a manner satisfactory to the permit issuer and the application must

- (a) state the use or proposed use of the premises,
- (b) clearly set forth the address or location at or in which the undertaking will take place,
- (c) include the owner's name and mailing address,
- (d) include any further information as required to enable the permit issuer to determine the permit fee,
- (e) describe the undertaking, including information, satisfactory to the permit issuer, regarding the technical nature and extent of the undertaking,
- (f) set out the name, complete address, telephone number and evidence of credentials required of the permit applicant, together with the written or electronic signature of the permit applicant,
- (g) for a permit for the building discipline,
 - (i) state the type of occupancy,

- (ii) set out the prevailing market value of the undertaking, and
- (iii) if a structure is to be installed on a temporary basis, as determined by the permit issuer, state the period for which the structure will be installed,
- (h) include a method of payment of fees acceptable to the permit issuer, and
- (i) include any further information that the permit issuer considers necessary, including the provision of
 - (i) a site plan that shows the actual dimensions of the parcel of land and the location of the proposed undertaking in relation to the boundaries of the parcel of land and other buildings on the same parcel of land,
 - (ii) copies of plans and specifications for the proposed undertaking, and
 - (iii) documentation required to verify information provided by the applicant.

AR 204/2007 s20;223/2010;17/2015

Required permit issued - terms**21** A permit issued under this Regulation

- (a) must include a unique identifier that has been assigned by the permit issuer to the undertaking,
- (b) must state the date on which the permit is issued,
- (c) must state the name of the owner and the person to whom the permit has been issued,
- (d) must state where the undertaking is to take place,
- (e) must describe the undertaking or portion of the undertaking governed by the permit, and
- (f) may contain any other information that the permit issuer considers necessary.

Terms and conditions of permit

22 A permit issuer may issue a permit for an undertaking, or part of the undertaking, and may, without limiting the generality of section 44(2) of the Act and subject to the applicable policies of the Minister and of the accredited municipality or accredited regional

services commission, impose terms and conditions on the permit that are consistent with the purpose and intent of the Regulation, including, but not limited to,

- (a) requiring that permission be obtained from the permit issuer before the occupancy or use of the construction, process or activity under the permit,
- (b) setting the date on which the permit expires,
- (c) setting a condition that causes the permit to expire,
- (d) setting the period of time that the undertaking may be occupied, used or operated,
- (e) setting out the scope of the undertaking being permitted,
- (f) setting the location or locations of the undertaking being permitted,
- (g) setting the qualifications of the person responsible for the undertaking,
- (h) requiring an identification number or label to be affixed to the undertaking, and
- (i) requiring the approval of a safety codes officer before any part of the building or system is covered or concealed.

Annual permit

23 A permit issuer may issue a permit in the electrical, gas or plumbing discipline allowing the owner or operator of the premises to effect minor repairs, alterations or additions on the premises under the following conditions:

- (a) a person who holds a trade certificate in the appropriate designated trade under the *Skilled Trades and Apprenticeship Education Act* carries out the undertaking;
- (b) the permit does not entitle the owner or operator to effect major alterations in or additions to the premises;
- (c) the owner or operator maintains on the premises an accurate record of all repairs for the previous 2 years and makes the record available to a safety codes officer on request;
- (d) the permit is limited to a one-year term, subject to renewal by the permit issuer.

AR 204/2007 s23;17/2015;157/2022

Responsibilities of the permit holder

24 On the issuance of a permit, the permit holder must

- (a) comply with the terms and conditions of the permit,
- (b) undertake the construction, process or activity in accordance with the Act and applicable codes and standards,
- (c) notify the permit issuer
 - (i) if the permit holder does not intend to complete the undertaking, or
 - (ii) if there is a change in ownership from the owner as stated on the permit application,
- (d) ensure that all plans and specifications required to apply for the permit are available at the construction site at all reasonable times for inspection by a safety codes officer, and
- (e) ensure that a permit for the building discipline is posted or readily available at the construction site.

AR 204/2007 s24;17/2015

Term of a permit

25(1) In the absence of a different term set under section 22, a permit expires if the undertaking to which it applies

- (a) is not commenced within 90 days from the date of issue of the permit,
- (b) is suspended or abandoned for a period of 120 days, or
- (c) is in respect of a seasonal use residence and the undertaking is suspended or abandoned for a period of 240 days after the undertaking is started.

(2) Despite subsection (1), when the term of a permit has not expired, a permit issuer may, in writing, and on the request of the permit holder, extend the permit for an additional fixed period of time that the permit issuer considers appropriate.

Refusal to issue, suspension or cancellation

26 Without restricting the generality of section 46 of the Act, a permit issuer may refuse to issue a permit and, without restricting the generality of section 44 of the Act, a safety codes officer may suspend or cancel a permit that has been issued if

- (a) in the case of an addition or alteration, the existing undertaking is unsafe or will reduce the level of safety of the undertaking governed by the permit to below that which is intended by the Act and regulations, codes, standards or body of rules declared to be in force pursuant to the Act,
- (b) incorrect or insufficient information is submitted with respect to the permit or the undertaking to be governed by the permit,
- (b.1) incorrect or insufficient information is provided under section 11 of the New Home Buyer Protection (General) Regulation or section 2 of the New Home Buyer Protection (Regional Municipality of Wood Buffalo) Regulation,
- (b.2) evidence provided under section 6.1(2) was incorrect or is no longer correct,
- (c) in the opinion of the permit issuer, the undertaking for which the permit would be or has been issued would or does contravene the Act or another enactment,
- (d) the permit fee has not been paid,
- (e) there is a contravention of any condition under which the permit was issued, or
- (f) the permit was issued in error,
- (g) an administrative penalty has been issued, to the person who submitted the permit application, and was not paid within 30 days, if
 - (i) no appeal was filed under section 57.3 of the Act, or
 - (ii) an appeal was filed under section 57.3 of the Act and the penalty was upheld in whole or in part.

AR 204/2007 s26;99/2016;207/2017

Deviation from permit conditions

27 No person shall deviate or authorize a deviation from a permit or terms or conditions of a permit without first obtaining the written permission of the permit issuer.

Permit transfer, termination

28(1) If a holder of a permit relinquishes the holder's interest or participation in the undertaking governed by the permit before the

undertaking is completed, the permit or any label or identification number issued as part of a permit

- (a) is terminated, and
- (b) applies only to the part of the undertaking completed before the termination unless the permit issuer authorizes the permit or label or identification number to be transferred.

(2) A permit is not transferable to any other person unless the transfer is authorized in writing by the permit issuer.

Part 3 Coming into Force

29 Repealed AR 208/2017 s4.

Coming into force

30 This Regulation comes into force on April 1, 2008.



WCB-Alberta

Employer Handbook

Your responsibilities when a work-related injury or illness happens:

Report the injury

- ✓ If you have been advised that one of your employees has been injured, **it is the law to report the injury to us within 72 hours.**
- ✓ **Report fatalities immediately.**
- ✓ **Provide your worker with a *Worker Report of Injury Form* and a copy of your *Employer Report of Injury or Occupational Disease*.**

Treatment

- ✓ **Provide any first aid treatment required at the scene of the accident.**
Keep a record of the treatment and provide your worker with a copy.
- ✓ **If required, send your worker for immediate medical attention.**
You are responsible to arrange and pay for transportation if there is a cost associated (e.g., ambulance fees or taxi fare).

Wages and health benefits

- ✓ **Pay your injured worker's full wages for the day the injury occurred.**
If they are unable to work beyond the day of the accident, compensation payments start the first regular working day afterward. Cheques are issued every two weeks.
- ✓ **If you continue to pay your worker full wages during the period of disability, the compensation they are eligible to receive will be paid to you.** Please advise your adjudicator or case manager that you are paying your worker directly to avoid duplicate wage-loss payments.
- ✓ **Notify us within 24 hours of your worker's return to work.**
- ✓ If your worker was injured between September 1, 2018 and March 31, 2021 and you were paying into their employment benefit plan before their accident or illness, you're also required to continue paying for your injured workers' health benefits while they are absent from work for up to one year following the date of the accident. This is no longer required for claims occurring on or after April 1, 2021, though you may voluntarily choose to extend health benefits for your worker while they're away from work.

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What is workers' compensation?



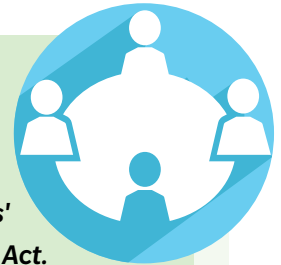
The *Workers' Compensation Act* is the provincial legislation that regulates the workers' compensation system and the assistance workers receive following a workplace accident.



The workers' compensation system defines the income and medical support for workers injured on the job.



The Workers' Compensation Board – Alberta (WCB-Alberta) is a neutral body tasked with administering the *Workers' Compensation Act*.



WCB-Alberta's responsibility

To provide high quality service and fair compensation to employers and injured workers.

Employer's responsibility

- To report workplace injuries to WCB-Alberta;
- To maintain an account and pay premiums;
- To work with employees to prevent injuries and help injured workers return to work.
- To return their injured workers to the same job or an alternative job after a workplace accident.
- Cooperate with both WCB and your worker in all aspects of your workers' safe return to work.

IMPORTANT: When a workplace injury happens, it is the law for you to report it. It is illegal for an employer/supervisor to ask your injured worker to not report an injury. Please see page 7 for the types of injuries that require reporting.

Worker's responsibility

- To file a WCB claim if they are hurt at work;
- To maintain regular contact with their employer, WCB-Alberta and their health care provider to help coordinate their return to work.
- Cooperate with both WCB and their employer in all aspects of their recovery and return to work.

Health care provider's responsibility

To work with employers, injured workers, other health care providers and WCB-Alberta to assist in recovery and return-to-work planning.

To view the Act online, visit our website at [About WCB > Policy and legislation > Legislation](#).

Principles of the workers' compensation system

- Workers are eligible to receive benefits for work-related injuries no matter who is at fault.
- Employers and workers are protected against lawsuits for work-related accidents by others who are also protected under the system.
- Employers throughout the province share the cost of compensating injured workers so individual employers don't have to bear the full cost of claims alone.
- WCB funding is provided entirely by employers through the premiums they pay. Premiums should be fair and competitive. They should cover the full costs of claims, today and into the future.
- WCB-Alberta has exclusive legal authority to make all decisions arising under the *Workers' Compensation Act*.
- Compensation should be fair and take into account both the nature of the injury and the impact on employment earnings.
- Adjudication decisions are made in favour of the injured worker where all evidence for and against is equally balanced.
- The system provides a comprehensive range of services to both prevent injuries and manage disabilities.
- The system is structured and operated to ensure its long-term stability and financial security as well as its overall cost-effectiveness.

Working with WCB-Alberta

Our priority is to help injured workers get back on the job safely—but we don't do this alone. The entire claims process is made better when we can collaborate with you and your worker, and health care providers to make it happen.

Once your worker's claim is approved, we develop a case plan with your worker and you, the employer. A case plan lists clear return-to-work goals and how we will work together to achieve them.

Protection from lawsuit

As an employer with workers' compensation coverage for your workers, you are protected from lawsuits by them or by any other workers covered by workers' compensation if they are injured on the job.

If you are a business owner, you are not automatically covered by workers' compensation legislation—only your workers are. Employers should consider purchasing personal coverage as well.

Who is covered?

Employers and workers in most industries are covered by the workers' compensation system. However, some industries are exempt and do not require coverage. These are listed on our website. Visit www.wcb.ab.ca and search "exempt". If you are not sure, call us at 1-866-922-9221.

Workers

Most employers in Alberta are required by law to have workers' compensation coverage for all their workers, including:

- full-time employees
- temporary or casual employees (including foreign workers)
- part-time employees
- unpaid workers (working for for-profit companies)*
- contract workers (unless they are covered by workers' compensation from another employer)
- subcontractors who are considered by WCB-Alberta to be your workers

**Volunteers (working for not-for-profit companies) are not covered unless the employer chooses optional coverage to protect them.*

Most employers not required to have workers' compensation coverage can apply for optional coverage.

Farm workers

Farm and ranch employers with six or more employees are required to ensure their waged, non-family workers are covered either through WCB-Alberta or private insurance.

Detailed information about optional coverage with WCB-Alberta for farm and ranch owners can be found on our website or by calling us at 1-866-922-9221.

Employers

By having workers' compensation coverage for your workers, you are protected from lawsuits by them or by any other workers covered by workers' compensation if they are injured at work. As an employer, you are not automatically eligible for compensation benefits yourself. To protect yourself in the event of a workplace injury, you may wish to consider purchasing personal coverage.

Directors

Directors are registered officers of a corporation. Where a corporation is the employer, directors of the corporation are not automatically protected from lawsuits by injured workers covered by workers' compensation, nor are they covered for their own work-related injuries. However, they may apply for voluntary personal coverage that provides both forms of protection (see Personal coverage, page 5).

Contractors and subcontractors

WCB-Alberta coverage for contractors and subcontractors varies depending on whether they are contractors with or without workers.

If you contract your services and also employ workers, you are considered an employer and must maintain your own WCB-Alberta account. In most cases, you are not considered a worker of the principal and are responsible for your own workers' compensation coverage. Coverage may be extended under the principal's account in cases where you employ workers on a strictly casual or intermittent bases and when WCB-Alberta deems you to be a worker.

Proprietors

For WCB-Alberta purposes, a proprietor is an individual who may own and operate a business and does not employ any workers. Proprietors are not covered unless they are eligible to purchase personal coverage.

Hiring proprietors

If you hire proprietors to perform work for you and they do not maintain their own WCB-Alberta accounts, they are considered to be your workers and are covered through your account. This means you must pay premiums to cover the work they perform for your business. It also means that your experience record will reflect any injury claims they have while working for you.

Hiring contractors

If you hire contractors with their own WCB-Alberta coverage, you should ensure their accounts are in good standing. If a contractor's account is in arrears, you may be liable for their unpaid premiums related to the work they do for you even if they are not considered your workers. You can obtain a clearance letter from us online verifying your contractor's coverage and protecting you from this liability (see page 15).

Coverage for workers outside Alberta

If your employees work outside Alberta, even for a short period, contact us to determine whether your Alberta workers' compensation coverage extends outside the province. You should also contact the workers' compensation board in the jurisdiction where your employees will be working to determine whether you need to establish coverage for your workers there.

Personal coverage

If you are a business owner, you are not automatically covered by workers' compensation benefits—only your workers are. Don't worry though, optional personal coverage is available to:

- business owners or proprietors with or without workers
- partners in a partnership, with or without workers
- directors of a corporation and members of a society, board, authority, commission or foundation

If you are eligible, personal coverage is flexible, and it can be opened and changed at any time. It automatically renews every year on January 1. You can also customize the amount of coverage you hold based on confirmed earnings. Call us for details.

Benefits of personal coverage

- Protection against loss of employment income. E.g., if your injury or illness is work related and you are unable to work, you can receive compensation for lost earnings.
- Medical and rehabilitation services. Unlike other coverage, WCB-Alberta offers a variety of specialized services to assist you with your return to work, with no preset limits.
- The only coverage that offers protection from lawsuit for you and other parties protected under the system. If you do not have personal coverage, you (as a director) may not be personally protected from lawsuit even though your company may be protected.

Personal coverage may be a contract requirement of bidding on and/or being awarded a contract.



Choosing a coverage amount

Cost will vary based on the amount of coverage you purchase and the industry you're in. The minimum annual premium on a WCB account is \$200. It's important to base the coverage on your actual employment earnings (before tax, CPP and EI deductions). This amount will be used to determine the amount you receive if you're hurt at work.

If your income exceeds the maximum earnings covered by WCB, you may also consider carrying additional private insurance to make up the difference.

If injured, you will need to verify your self-employment earnings. This is done through records such as T4 slips, T5 slips, tax returns (T1 General), income and expense statements or payroll stubs. If your records do not match the amount of coverage purchased, compensation benefits will be based on the lesser amount of coverage purchased, guaranteed coverage amount (if applicable) or verified earnings.

If you're a new business owner, we will request a copy of the previous year's tax information. If you do not have a history of self-employed income, you may want to purchase minimum coverage until your business is established and you're able to provide proof of personal employment income.

Visit our website for current wage replacement benefit rates.

Go to www.wcb.ab.ca/insurance-and-premiums/types-of-coverage/personal-coverage.html.

Guaranteed coverage amount

An extension of personal coverage, the guaranteed coverage amount allows business owners to be covered, at a set level, without providing earnings information if injured.

There are guaranteed coverage amounts for more than 150 industries. Visit our website under [Resources > For employers > Fact sheets > Coverage](#) for details.

Registering for coverage

To register for personal coverage, you first have to open a WCB-Alberta account. Signing up is easy. Visit our website under [Resources > For employers > Online services](#).

If you have any questions about additional personal coverage, please call our Contact Centre at 1-866-922-9221.

Working in more than one industry

Personal coverage gives you the option of splitting coverage between industries, companies and locations. This can all be done with one policy. If you're an owner in more than one industry, company or location, the distribution of the personal coverage cost is split based on the percentage of time spent in each.

Personal coverage, like all workers' compensation, is based on the overall operations of your business. If your business operations change or expand, please contact us so we can make sure your personal coverage is complete and covers you for all of your work-related activities. Coverage is valid only in the approved industries.



Reporting an injury

By law, employers are required to report injuries that their workers suffer while on the job. If your worker has been injured, you have 72 hours after becoming aware of an injury or illness to submit the Employer Report of Injury form. The sooner we receive your information, the faster we can determine entitlement to benefits and services for your worker.

You need to submit a report to WCB if the accident results in, or is likely to result in:

- lost time or the need to temporarily or permanently modify work beyond the date of accident.
- death or permanent disability (amputation, hearing loss, etc.)
- a disabling or potentially disabling condition caused by occupational exposure or activity (such as a mental health concern, poisoning, infection, respiratory disease, dermatitis, etc.)
- the need for medical or mental health treatment beyond first aid (assessment by physician, psychologist, physiotherapist, chiropractor, etc.)
- incurring medical aid expenses (dental treatment, eyeglass repair or replacement, prescription medications, etc.)

Option 1:

Report online using myWCB

myWCB provides you with access to a number of online services, including reporting. Through myWCB, electronic injury reporting will guide you through the reporting process and provide you with help along the way.

To learn more about myWCB, visit our website under [Resources > For employers > Online services](#).

Option 2:

Submit a one-time injury report

If you are unable to sign up for online services you can still submit a one-time injury report online. Visit our website under [Claims > Report an injury > For employers](#).

Option 3:

Report by fax

If you are unable to access our online services you can submit the Employer Report of Injury form by fax to:

780-427-5863 (Edmonton)
1-800-661-1993 (within Canada)

If you fax the report, do not send another copy by mail.

If you have questions or need help reporting, call us.

Inside Alberta: 1-866-922-9221
Outside Alberta: 1-800-661-9608 (in Canada)

Return-to-work planning

Every successful return to work starts with a great plan.

Employers and workers are expected to work together towards a return to the same job or alternative job after a workplace incident.

We are here to support you during your employee's recovery and help you arrange for a safe return to work for him or her. Your worker's adjudicator or case manager will work with you, your employee and health care providers along the way.

To help your injured employee get back on the job sooner, first you need to know what they can do while recovering. If the injury has already happened and you have a myWCB account, you can access a wide range of return-to-work information by logging in.

There is also return-to-work planning information that can be accessed on our website under [Return to Work > Return-to-work planning > For employers](#).

Occupational Injury Service

Occupational Injury Service (OIS) clinics are specially designated to help injured workers return to work quickly and safely by providing expedited care. Injured workers are typically seen within 30 minutes of arriving at the clinic and are seen by a doctor with experience in work-related injuries and WCB-Alberta processes.

OIS is a great support for in-depth return-to-work plans. Quick treatment and a safe and early return to work can reduce claim costs and can help you lower your premiums. In addition to fast access to physicians, return-to-work services offered by OIS include:

- Same-day completion and submission of reports.
- Fast-tracked diagnostic and treatment services for injured workers.
- Return-to-work plan development.
- Retention of skilled and productive workers.
- Coordination of assessment and treatment communication.
- Follow-up support.

Employers must register for OIS in order to access these services. To sign up and to learn more about the program, including fees, please visit our website under [Treatment and Recovery > Get treatment > Occupational Injury Service clinics and doctors](#).

Modified work

Under legislation, offering your worker modified work is no longer an option, it's your responsibility. Modified work is a way of adjusting your employee's job so they can return to work while recovering.

Modified work can include:

- Changes in job tasks or functions (e.g., less lifting or bending).
- Changes in workload (e.g., hours worked per day or the work schedule).
- Alterations to the work area and environment (e.g., work in the office, shop or front counter) or the equipment used.
- Work normally performed by others (e.g., administrative work).
- Cross training or job shadowing.
- Work that needs to be done but you currently do not have an employee assigned to complete the work.

When considering a task as a modified work option for your worker, it is important you make sure the modified task is:

- **Achievable** – given your worker's injury, are they able to do the job physically?
- **Safe** – your modified work plan should not endanger your worker's recovery or safety, or the safety of others.

- **Constructive** – your modified work plan should contribute to your worker's skill development and return to full duties and not cause difficulty or additional expense to your employee (e.g., a shift change that requires additional child care costs).
- **Productive** – your worker's duties should be meaningful to your organization.

How you benefit from providing modified work:

- You retain an experienced worker and reduce any additional hiring or training costs.

- You decrease your worker's time away from work and reduce costs associated with claims.
- You strengthen worker relations by showing an injury doesn't threaten job security.
- You boost worker morale.

To formalize a modified work program for your business, visit our website under [Return to Work > Return-to-work planning > Formalizing a modified work program](#).

BEST PRACTICES in implementing a successful return-to-work program

1. With WCB-Alberta, develop a modified work policy that reflects your company's commitment to return to work. It will also ensure you are meeting your obligations after a workplace injury.

- ✓ Ensure that modified work is meaningful, of value to the organization and meets the employee's medical restrictions and physical limitations.
- ✓ Ensure your employees know that they are expected to participate and you will do everything possible to assist them in getting back to work.
- ✓ Make the program flexible so it can accommodate a variety of different situations.
- ✓ Ensure the program is available to employees who have work-related and non-work-related injuries.
- ✓ Ensure union representatives (if applicable) are aware of the benefits of return-to-work programs.

2. Identify modified work in your company.

- ✓ Ask for input from employees regarding modified work opportunities.
- ✓ Consider using outside resources to help identify modified work within the organization.

- ✓ Observe employees' job tasks and note the physical demands of each, then determine how they could be changed to accommodate an injured employee and document this information.

3. Educate employees about return-to-work practices.

- ✓ Ensure everyone in the organization understands the organization's return-to-work philosophy.
- ✓ Educate management about the needs of injured workers who are returning to work.
- ✓ Ensure employees are aware of the benefits of return-to-work programs.

4. Follow modified work policies and procedures.

- ✓ If your employee performs modified work past the day of the accident to accommodate an injury, you must report the accident to WCB-Alberta, even if there is no lost time or loss of earnings.
- ✓ Ensure all modified work offers are medically approved and documentation is provided to the case manager.
- ✓ Maintain regular contact with your employee, their doctor and WCB-Alberta.

Managing claims

Claim classification

After reporting—required reporting forms are submitted by you, your worker and a doctor, your worker's injury will be classified and a decision will be made regarding the status of the claim. We work to process claims as quickly as possible to determine the appropriate compensation benefits for your worker.

We will register your worker's claim as one of the following:

1. **No-time-lost claim**
2. **Lost-time claim**
3. **Interjurisdictional claim**

No-time-lost claim

If your worker did not miss work past the day of injury, a claim process team will monitor medical treatment.

Lost-time claim

Your worker's claim will be assigned to an adjudicator who makes the initial benefit decisions. If they need additional rehabilitation support to return to work, the claim may be transferred from an adjudicator to a case manager.

Interjurisdictional claim

If a worker is injured in a province that they work in, but is not a resident of, they can choose to have the claim started in the province of employment or their home province.

For example, a worker who lives in British Columbia, but gets injured on the job while working in Alberta can have their claim initiated in B.C. if they prefer. If so, the workers' compensation board in B.C. can request reimbursement costs from WCB-Alberta.

Claim decision

Depending on the information submitted to WCB, the status of your worker's claim may be:

- accepted
- not accepted
- pending (a decision has not been made yet)

- processed (a claim has been registered and medical costs are being paid, but the claim has not been reviewed for a decision)
- forwarded for medical investigation (further medical assessments are required before a decision can be made)

Notifying WCB of a worker's injury and partnering with us to provide safe return-to-work options are important ways that employers are involved in the claims process.

Benefits

Once your worker's claim is accepted they may be entitled to benefits. These can vary depending on the seriousness of their work injury as well as the impact of it on their ability to continue working. The adjudicator and/or case manager will review the claim to ensure they receive the right benefits at the right time during their recovery.

Medical benefits

These include but are not limited to:

- care and reporting from their doctor
- medications to manage their injury*
- physiotherapy
- chiropractic treatment
- prescriptions
- hospital care
- dental—for dental injuries
- optometry—for eye injuries
- medically related treatments and tests
- acupuncture
- rehabilitation programs
- psychology services

- hospital-related costs (like casting)
- splints
- crutches
- wheelchairs
- braces
- orthotics
- dental treatment or dentures
- hearing aids—for hearing loss injuries
- lump-sum payment for permanent disability or impairment
- bandages

**Opioid medications have specific limitations.*

These may be discussed with your worker's adjudicator or case manager.

Return-to-work services, vocational rehabilitation

If your worker's injuries prevent them from returning to their job, their case manager will talk to them about training and skills development opportunities. Here are some of the services we offer:

- return-to-work skills profile
- resumé development/review
- job planning
- Training-on-the-Job (TOJ) program
- academic assessment
- job coaching
- supported job search

How the Freedom of Information and Protection of Privacy (FOIP) Act affects you

The Workers' Compensation Board is subject to the *Freedom of Information and Protection of Privacy (FOIP) Act*. The FOIP Act aims to balance the public's right to know and the individual's right to privacy, as these rights relate to information held by public bodies in Alberta. WCB-Alberta is required to protect personal information of workers and employers from unauthorized collection, use and disclosure.

As an employer, you have the right to access your injured worker's claim file for the limited purposes of:

- facilitating return-to-work planning
- understanding medical and vocational rehabilitation and decisions made by WCB-Alberta
- contemplating or advancing a review or appeal

To ensure their privacy is protected, WCB-Alberta will provide only the information relevant to the case, not necessarily the entire claim file.

Survey data

To help WCB-Alberta improve services, we hire an independent research company to survey a sample of employers. The research company may contact you to take part in the survey. The research company does not tell us who has been contacted and no names are attached to any of the survey responses.



Manage your WCB account with the myWCB mobile app for employers

With the myWCB app, you can:

- Request real-time clearance letters on an account and view your account's status.
- Check the balance on your account, make payments, update payroll, and change to a monthly payment installment plan by signing up for pre-authorized debit.
- Connect with us directly, by sending a message or requesting a callback.

...all through your phone.

Download the app to get started today. Now available in Google Play and the App Store.

Premiums and your account

All employers covered by the *Workers' Compensation Act* must establish and maintain an account with WCB-Alberta. As an employer, the premiums you pay help fund the workers' compensation system, protecting you and your workers against the impacts of workplace accidents and injuries. The premium rate-setting process promotes fairness and accountability—today's employers pay the full cost of today's claims, securing future benefits for injured workers.

Industry classifications

You're classified in an industry with other employers who have similar businesses and risks as you do, with a premium rate set annually for that industry. A premium rate is the amount you pay per \$100 of assessable earnings. The rates vary from industry to industry, reflecting the loss experience for each group.

All employer accounts are subject to a minimum annual premium of \$200.

Employer annual return

Your workers' compensation coverage is renewed annually. Reporting the assessable earnings paid to your workers for the current year and estimate of what you expect to pay in the upcoming year will ensure that you have the correct WCB-Alberta coverage in place. Through filing your annual return, the information you provide will help make sure you are paying the correct premium amount and receiving a fair and accurate invoice.

The annual return must be submitted before the last day in February of each year.

Assessable earnings

Assessable earnings are the portion of your workers' gross earnings which you must report on and on which you pay WCB-Alberta premiums. Assessable earnings include the following:

- wages (including overtime)
- salaries
- fair market value for volunteer or unpaid workers
- piece work

- commissions
- training-on-the-job earnings
- bonuses
- holiday pay
- recorded tips and gratuities
- pay in lieu of notice
- taxable benefits

You should review your assessable earnings estimate throughout the year. If your actual assessable earnings vary significantly from your estimate at any time, you should provide a revised estimate to WCB-Alberta to avoid under-reporting penalties.

For farming and ranching operations, some workers are not automatically covered (such as family members of the owner). Assessable earnings need to be reported for these farm and ranch workers only if the farm or ranch owner has purchased optional coverage for them. For more details on who is covered on farming and ranching operations, please visit our website and [Insurance and Premiums > Types of coverage > Farming coverage](#) or call us at 1-866-922-9221.

Premium audits

To ensure you pay a fair premium and are in compliance with the Act, WCB-Alberta conducts mandatory premium audits. Premium auditors review employer records of workers' assessable earnings to ensure employers are meeting their reporting requirements, and also review business operations to ensure employers are classified in the correct industry.

It is against the law to take deductions, directly or indirectly, from your workers' earnings to pay the cost of WCB-Alberta coverage.

How your accident experience affects your premium

Under the performance-based pricing model used by WCB-Alberta, employers with poor performance pay higher premiums; employers with fewer injuries in their operations pay less. All employers participate in these programs; however, WCB-Alberta has developed different pricing programs for different size employers.

Experience rating plan for small employers

Employers with less than \$15,000 in premiums over a three-year period can earn discounts or surcharges based on the number of lost-time claims they've had in the previous five years.

Experience rating plan for large employers

This plan is designed for those employers paying \$15,000 or more in premiums over a three-year period. Employers pay premium rates higher or lower than the industry rate, based on their company's claims experience. An employer's claim costs are compared to an industry average to determine a discount or surcharge.

Those employers with consistently poor accident records may receive additional surcharges through the Poor Performance Surcharge program. WCB-Alberta works with those employers to help them reduce injuries and manage claims better.

Industry Custom Pricing (ICP)

Industry Custom Pricing (ICP) lets your industry take greater control of the premiums you pay. It's a voluntary, flexible option that allows industries to customize various features of their pricing program.

It's an industry-based option that can be chosen only if the majority of the industry agrees to change the base performance pricing program. Employers in the industry are polled, and if 50% of the industry (as measured by assessable earnings) votes in favour, the ICP program will start the next rate year.

Features from the standard performance pricing model that can be customized with ICP include:

- **Experience ratio** – This is your accident experience compared to other employers in your industry. This can be changed allowing more of your performance to be recognized.
- **Participation** – Every employer in the experience rating program is given a participation rate. The larger an employer is (as measured by premiums), the larger their participation factor. This can be changed to allow greater opportunities for bigger discounts or surcharges.
- **Maximum discounts and surcharges** – These can be increased from the standard 40% to 60%.
- **Costs used to measure performance** – If an industry chooses to no longer have cost relief (used to pay for claims that involve the aggravation of injuries from pre-existing claims), the levy required to fund these costs is removed. The result? A decrease to your base industry rate and a more accurate assessment of performance within your industry.

Depending on the ICP options your industry selects, employers doing well will likely pay less, and those who are doing poorly will pay more. All employers will get a lower base premium rate if the industry chooses to remove the cost relief levy.

Partnerships in Injury Reduction (PIR)

Partnerships in Injury Reduction (PIR) is designed to help you lower your premiums by encouraging prevention and effective workplace health, safety and return-to-work plans.

It is a voluntary program that operates through the combined efforts of WCB, the Ministry of Labour, industry partners, safety associations, employers and labour groups.

All employers can participate in the program and be eligible for refunds up to 20% by maintaining a Certificate of Recognition (COR).

For more information on WCB-Alberta's pricing programs, visit us on our website under Insurance and Premiums or give our Underwriting team a call at 780-498-7936.

Past due accounts

If you are unable to pay by the due date stated on your invoice, please call 1-866-922-9221 for assistance.

Services for employers

If an injury happens at work, we're here to help you and your worker, every step of the way—but don't forget, we're here to help you manage your WCB-Alberta account, too. Call us, or visit the Resources section of our website for details on any of the following topics.

Managing your account

- premium information
- personal coverage
- payment arrangements
- clearances for subcontractors
- experience rating
- appeal process
- regulatory requirements
- classification changes
- reporting information

Reporting and managing claims

- injury reporting
- case management
- claims registration
- return-to-work programs and adjudication
- injury prevention and management

Claims audits/evaluation tools

WCB-Alberta's claims audit team audits employers and provides resources to help you evaluate your injury management process. The team educates employers on the importance of legislative compliance when a work-related accident happens, and offers support to effectively manage your employees' return to work. They provide self-assessment tools that can help you monitor or identify gaps to help you improve your overall injury management processes.

For information, email claims_audit@wcb.ab.ca.

Employer education seminars

Creating a solid return-to-work plan and lowering your premiums doesn't happen by accident, it happens by design. And we can help. We offer a variety of workshops and seminars in Edmonton, Calgary and various locations throughout the province to help you take a look at your programs and your costs. All of the seminars are free to employers with a valid WCB account.

For more information, please call 780-498-4694 or toll free in Alberta 1-866-498-4694. You can also email us at mailbox.cs.seminars&workshops@wcb.ab.ca.

Please note: You must register 48 hours prior to the seminar date.

Employer information seminar

This half-day workshop is designed for people who are new to working within the workers' compensation system and have a position in human resources, payroll or finance within their organization.

Return-to-work (modified work) seminar

When an injury happens, it's your responsibility to offer your employees modified work. Return-to-work planning helps you make sure a solid plan is in place to get your injured workers back to work safely. This half-day program is designed for people in management, as well as people involved in health and safety coordination and claims/disability management within your organization.

Action planning seminar

Learn more about reducing the costs of workplace injuries and paying the lowest premium for your account. This half-day program is designed for people involved in managing health and safety and disability management programs within your organization.

Pre-requisite: You must be registered in the claims administrator/manager role on myWCB—access to myWCB is needed for this course. You must also have completed the return-to-work seminar within the past 24 months.

Appeals system seminar

This half-day seminar gives you a closer look at the WCB review and appeal system. It's designed for people in management, and people who are involved in health & safety coordination and claims/disability management within your organization.

To register, visit us on our website under [Resources > For Employers > Seminars and workshops](#)

Clearances

Before hiring contractors or subcontractors, we can advise you whether or not their WCB accounts are in good standing. If a contractor defaults on their WCB-Alberta account, you may be liable for unpaid premiums on your project.

You can verify that a contractor or subcontractor has a WCB-Alberta account by requesting a clearance from us. Before releasing final payment to contractors or subcontractors, you should obtain a final clearance letter that states their accounts are in good standing and paid to date. A clearance letter relieves you of your liability for that contractor or subcontractor should they default on their WCB-Alberta premium payment.

Requesting and receiving clearances is done in our [myWCB employer mobile app](#) or on our website under [Insurance and Premiums > Clearance letters > Get a clearance letter](#).

Health care and rehabilitation services

Treating workplace illnesses and injuries may require a variety of health care services. We have partnered with various health care providers to help your injured workers get quick access to the services they need to recover and get back to work.

Authorized health care providers

A province-wide network of health care professionals under contract with WCB-Alberta is available to provide services to injured workers. This network ensures injured workers receive timely and appropriate medical treatment without compromising service quality.

Occupational Injury Service

Occupational Injury Service (OIS) gives injured workers access to a doctor with experience in work-related injuries. Injured workers are typically seen within 30 minutes of arriving at the clinic. The clinics help injured workers return to work quickly and safely by providing expedited care.

Millard Health

Proudly operated by WCB-Alberta, Millard Health is a leading provider of occupational rehabilitation and disability management services in Alberta. We use a successful model with the right combination of experts to help your injured workers return to work. This approach treats the needs of the whole person—physically, psychologically and occupationally.

Review and appeals

We are committed to treating you fairly and to making fair decisions. We want to make sure you understand all the decisions that affect your worker's claim or your account.

We know that sometimes you may not agree with some of our decisions, and we're here to help. It is important that you know your rights when it comes to questioning a decision made on a claim that affects your policy. We will make every attempt to resolve disagreements whenever possible.

The Fair Process Review Centre (FPRC)

We're here to help you and will work with you to resolve any fairness concerns you may have with respect to the process of making a decision or the behaviour of the decision maker. If you disagree with the decision, we have a separate process to independently review your concern.

Fairness is assessed in two main categories: procedural and behavioural.

- Procedural fairness looks at **how decisions are made**.
- Behavioural fairness looks at **how you were treated**, including whether WCB staff followed the [Code of Rights and Conduct](#).

Please give us a call

It is important to us that your concerns are resolved at the earliest opportunity. If your fairness concern relates to your account, we encourage you to call the person who made the account decision. If you feel you have been treated unfairly, we encourage you to call the assigned adjudicator or case manager as soon as possible. You can also ask to speak to a supervisor or manager at any time during your claim.

If this does not resolve your concerns, you can request a formal fairness review by the Fairness Review Officer (FRO) through the Fair Process Review Centre (FPRC).

Note: While raising issues with the supervisor or manager is often an effective way to resolve concerns, it is **not a pre-requisite** to accessing support from the FRO and FPRC.

What is a fairness review?

Requests for fairness reviews are addressed by the **Fair Process Review Centre (FPRC)**, an independent office within WCB. The FPRC is overseen by a **Fairness Review Officer (FRO)** who is accountable to the Chair of WCB's Board of Directors. The FRO and the FPRC provide neutral, impartial and independent assistance to employers, workers, and their dependants who feel they were treated unfairly. There is no cost to this service.

How to request a fairness review

We encourage you to reach out as soon as possible if you are concerned about fairness so that we can come to a mutually agreed upon resolution.

You have 60 days from the event or behaviour that led to your fairness concern to complete the Fairness Review form. You will find this form on our website using the quick search bar under [Resources > For Employers > Forms and Guides](#) or you can request a paper version by calling our contact centre at 1-866-922-9221.

If you complete the form after 60 days, the Fairness Review Officer may consider extending the time period, provided there is a reasonable explanation for the delay.

Get help from the Employer Appeal Consulting service

If you're unsure how a decision may impact your account, we can help. Our Employer Appeal Consulting service offers assistance with submitting your review request, and will look at the unique situation for your account to help you understand the impact of the decision(s) in question. We'll provide you with information that can help to either resolve the issue or to provide you advice on how to present your position. This service was established by WCB to help employers understand the facts, policies and legislation used to make a decision, with a focus on resolution. There is no charge for this service. To request this service, complete the Request for Employer Appeal Consulting form on our website under [Claims > Reviews and appeals > For employers](#).

Role of the Appeals Commission

The Appeals Commission for Workers' Compensation is an external appeals body, which is independent from WCB-Alberta. It is the final level of appeal and its decisions are final. The Appeals Commission will, however, reconsider a matter if new information, which might affect a previous decision, is introduced.

Role of the Advisor Office

If you decide to pursue an appeal after your review, the **Advisor Office** provides independent advice, assistance and advocacy services for eligible employers. There is no charge for their services. You can access this assistance by calling 1-866-427-0115.

Key terms

Claim

The application for compensation under the terms of the *Workers' Compensation Act* and WCB-Alberta policy.

Employer

An individual, firm, association, body or corporation that has, or is considered by WCB-Alberta to have, one or more workers in its service.

Assessable earnings

The portion of workers' gross earnings on which employers must report and pay WCB-Alberta premiums.

Premium

The amount employers pay to WCB-Alberta for workers' compensation coverage or optional personal coverage.

Premium rate

The basic rate at which employers can be assessed for workers' compensation coverage based on their industry and claim history.

Principal

A person or entity who hires a contractor or subcontractor to perform work or services.

Proprietor

An individual operating a business without any workers.

Rate group

A grouping of one or more industries with similar activities, claim types and costs per claim. The rate group is the primary level at which premium rates are determined.

Subcontractor (contractor)

An individual, partners in a partnership or limited company hired by a principal to perform work or services.

Worker

A person who enters into or works under a contract of service or apprenticeship, paid or unpaid, written or oral, express or implied, whether by way of manual labour or otherwise, or considered by WCB-Alberta to be a worker.

myWCB for Employers



Your gateway to the information and services you need to work with WCB-Alberta

<https://my.wcb.ab.ca/ess/signup>

Apply for a WCB-Alberta account

Simply enter your information and we take care of the rest.

Report an injury

No paperwork, no faxing, quick turn-around.

Obtain your account statistics

This self-service system allows you to electronically request and receive claim cost history and pricing program reports. At a glance you can see the impact workplace injuries have on your premiums.

Obtain a clearance certificate

Hiring someone with their own WCB-Alberta account? You may be liable for any unpaid premiums on your subcontractor's WCB-Alberta account. To avoid this, find out quickly if they maintain a WCB-Alberta account and confirm it is in good standing by obtaining a clearance letter.

File your annual return

This system tailors itself to your needs by showing only relevant screens. The built-in error checking and prorating ensure premium rate accuracy. You can also save your work in progress.

Pay your premiums

Six options are available for employers to pay premiums.

Maintain/close your WCB-Alberta account

Update your mailing address, contact information, assessable earnings and more.

Need help with online services?

Email **ebusiness.support@wcb.ab.ca** or call 780-498-7688.

How to reach us

If you need more information or have questions about the information in this handbook, please call one of the numbers below. **Please have your WCB-Alberta account number ready when you call.**

You can also **request a callback through our [myWCB employer mobile app](#)** and someone from WCB will reach out to you within one business day.

Employer Account Services

Edmonton

Mailing address

PO Box 2415
Edmonton, AB T5J 2S5

Inquiries

Phone: 780-498-3999
Fax: 780-498-7999
Claims fax: 780-427-5863
E-mail: contactcentre@wcb.ab.ca
Hours: 8 a.m. to 4:30 p.m.,
Monday through Friday

Street address

9912-107 Street
Edmonton, AB T5K 1G5

Access to Information

Phone: 780-498-3999
Fax: 780-498-7867

Calgary

Mailing address

PO Box 2415
Edmonton, AB T5J 2S5

Inquiries

Phone: 403-517-6000
Fax: 403-517-6201
Hours: 8 a.m. to 4:30 p.m.,
Monday through Friday

Street address

150, 4311-12 Street N.E.
Calgary, AB T2E 4P9

Toll free

Inquiries

Phone within Alberta: 1-866-922-9221 to reach the contact centre or enter the area code and seven digit number of the office you wish to reach
Phone outside Alberta: 1-800-661-9608
Fax within Canada: 1-800-661-1993
Fax outside Canada: Not available—please fax claims to 780-427-5863
Hours: 8 a.m. to 4:30 p.m., Monday through Friday

Millard Health

131 Airport Road
Edmonton, AB T5G 0W6

Phone: 780-498-3200
Fax: 780-498-3907
Hours: 7 a.m. to 7 p.m., Monday through Thursday
7 a.m. to 5 p.m., Friday



www.wcb.ab.ca

STANDATAs

ELECTRICAL

Updates to February 2023

INTRODUCTION

Electrical STANDATAs provide interpretation, clarifications, and recommended practices pertaining to legislation, codes, and standards under the Safety Codes Act. It is important to note that information provided in STANDATA is not regulation and that you should consult current legislation along with adopted codes and standards for the purposes of applying the law.

The following are Bulletins, Interpretations, and Variances regarding the 2021 Canadian Electrical Code Part 1, as of February 2023. Keep current, subscribe: [Electrical STANDATA | Alberta.ca](#)

Legislation Information Bulletins

LEG-CPR-g1 [rev-3] - General — Responsibilities for Work

21-LEG-SCA-059 [REV4] — Reporting of electrical incidents

18-LEG-ECR-002 - Section 2 — Electrical systems equipment

LEG-ECR-003 — Electric Railways

22-LEG-PR-008 - Section 8 — Circuit loading and demand factors

21-ECB-001 - General — Permit Regulation, specific requirements

Bulletins

21-ECB-000 - Section 0 — Object, scope, and definitions

21-ECB-002 [REV1] - Section 2 — General rules

21-ECB-004 (REV1) - Section 4 — Conductors

21-ECB-006 - Section 6 — Services and service equipment

21-ECB-008 - Section 8 — Circuit loading and demand factors

21-ECB-010 (REV1) - Section 10 — Grounding and bonding

21-ECB-012 - Section 12 — Wiring methods

21-ECB-016 - Section 16 — Class 1 and Class 2 circuits

21-ECB-018 - Section 18 — Hazardous locations

21-ECB-020 - Section 20 — Flammable liquid and gasoline dispensing, service stations, garages, bulk storage plants, finishing processes, and aircraft hangars

21-ECB-024 - Section 24 — Patient care areas

21-ECB-026 - Section 26 — Installation of electrical equipment

21-ECB-028 - Section 28 — Motors and generators

21-ECB-030 - Section 30 — Installation of lighting equipment

21-ECB-032 - Section 32 — Hire alarm systems, smoke alarms, carbon monoxide alarms, and fire pumps

21-ECB-036 - Section 36 — High-voltage installations

21-ECB-060 - Section 60 — Electrical communication systems

21-ECB-062 - Section 62 — Fixed electric heating systems

21-ECB-068 - Section 68 — Pools, tubs, and spas

21-ECB-076 - Section 76 — Temporary wiring

Interpretations

21-ECI-046 - Section 46 — Emergency power supply, unit equipment, exit signs, and life safety systems

21-ECI-064 - Section 64 — Renewable energy systems

21-ECI-084 - Section 84 — Interconnection of electric power production sources

21-ECI-086 - Section 86 — Electric vehicle charging systems

Joint Code Interpretations

19-BCI-025 (Rev1)/21-ECI-009 — Lightning Protection Systems

19-FCI-007/19-BCI-015/18-CECI-009 — Existing Fire Alarm Systems

19-FCI-006 — Mobile/Temporary Cooking Equipment

21-ECI-086 - Section 86 — Electric vehicle charging systems

Variances

21-ECV-064-900-ESS/19-BCB-010-MMTE — 2021 Canadian Electrical Code, Part 1, Section 64

21-ECV-002-024-ESP - Rule 2-024 — Use of approved equipment – Oil and Gas Industry Electrical Submersible Pumps

21-ECV-002-024-LFT - Rule 2-024 — Use of approved equipment – Liquid-filled Transformers

21-ECV-002-024-MMTE - Rule 2-024 — Use of approved equipment – Meter mounted transfer equipment

21-ECV-006-112 - Rule 6-112 — Support for the attachment of overhead supply or consumer's service conductors or cables

21-ECV-010-102-GE - Rule 10-102 — Grounding Electrodes (number of rods)

21-ECV-018-150 - Rules 18-150 and J18-150 — Equipment in classified areas

21-ECV-064-216 - Rule 64-216 — Arc-fault protection requirements for ground-mounted solar photovoltaic systems

21-ECV-064-218 - Rule 64-218 — Photovoltaic rapid shutdown

[More on variances \(videos, forms, appeals\)](#)

Alberta Electrical Utility Code

16-AEUC-ERRATA— Re-Introduction of Missing Former Section 10 Code Clause Section 2

16-AEUC-2 – Section 2 — General Rules – Rule 2-024 Consumer’s Service Connection

Legislation Information Bulletins

LEGISLATION Certification and Permit Regulation

SUBJECT: General - Responsibilities for Work

The *Certification and Permit Regulation*¹ has been amended by the removal of all requirements associated with permits (Parts 1 and 2) while maintaining Status Quo regarding certification (Part 3). The *Certification and Permit Regulation* Part 3 mandates the requirements for certificates issued to Master Electricians, Restricted Master Electricians and Rural Wiremen.

Permit requirements are mandated by the new *Permit Regulation AR204/2007*¹ with Part 1 mandating “Required Permits”, “Permit Eligibility” and “Conditions” for obtaining permits and Part 2 mandating the “Administrative” requirements for permits. Rule 2-004 of the Canadian Electrical Code also supports the regulatory requirements.

The intent of the Code Rule is primarily to emphasize that permits are required. In identifying the electrical contractor or other person responsible for the work, the rule does not attempt to regulate who must physically do the work. Nor does it override any requirements in the Act or regulations regarding who may take out permits or who is responsible for compliance.

The *Safety Codes Act*¹ does not define who can work within a trade or occupation. Part 1 of the *Safety Codes Act* does however identify persons responsible for ensuring that a thing, process or activity complies with the requirements of the Act (i.e., owners, designers, manufacturers, contractors, etc.).

It is the *Apprenticeship and Industry Training Act*¹, administered by Advanced Education and Technology², which sets the framework legislation establishing who can conduct work in a trade or occupation. Furthermore, the *Apprenticeship and Industry Training Act*¹ provides for special authorizations allowing individuals to perform specific tasks within a designated trade. For example, a Luminaire Service Worker is permitted to perform specific electrical tasks in luminaire maintenance work without having to become a journeyman electrician. Another example is the water well drilling occupation.

¹ Copies of the noted Acts and Regulations are available from Alberta Queen’s Printer:

Main Floor, Park Plaza
10611 – 98th Avenue
Edmonton, AB T5K 2P7
Phone: 780 427-4952

Web Site: <http://www.qp.alberta.ca/index.cfm>

² For information concerning trade and occupational designations or authorizations, contact the Apprenticeship and Industry Training Branch at Advanced Education and Technology:

General Inquiries (Head Office)
7th fl Commerce Place 10155 - 102 Street
Edmonton, AB T5J 4L5
Phone: 780 427-8765

Web Sites: <http://www.advancededandtech.gov.ab.ca/>
<http://www.tradesecrets.gov.ab.ca/>

The permit serves as a tool for the inspection authority to gather information about the location, type of installation, the owner, contractors, etc. in order to determine adequate resources for conducting inspections. Inspection authorities also use the permit to set terms and conditions.

Accredited corporations usually use alternatives to permits for identifying activities that require inspection.

STANDATA bulletin 21-LEG-SCA-059[REV4]

Electrical

Legislation

Safety Codes Act, Administrative Items Regulation - Reporting of electrical incidents

Date Issued: July 2022

Page 1 of 3

Purpose

To remind industry stakeholders and members of the public in Alberta that all electrical incidents are required to be reported to the Provincial Electrical Administrator.

Discussion

Under the provisions of Section 59 of the *Safety Codes Act* "if there is an unsafe condition, accident or fire that involves a thing, process or activity to which this Act applies, the owner or person designated in the regulations shall, if required by the regulations, forthwith report it to an Administrator, or to the accredited municipality or accredited regional services commission if the thing, process or activity is under the administration of the accredited municipality or accredited regional services commission."

References

Administrative items regulation

Reporting in the electrical discipline

- 15(1) Subject to subsection (2), any person who knows of
- (a) an accident to a person, a fatal accident to livestock or a power line contact involving an electrical installation or electrical equipment, or
 - (b) a fire of electrical origin or suspected electrical origin must, as soon as practicable, report the accident, contact or fire to an Administrator for the electrical discipline or to a safety codes officer and the safety codes officer must notify an Administrator for the electrical discipline.

Issued by the Provincial Electrical Administrator

[Original Signed]

Clarence C. Cormier, P.Eng.

Alberta Municipal Affairs – Technical and Corporate Services

Email: safety.services@gov.ab.ca

Phone: 1-866-421-6929

To sign up for our List Subscription Service: municipalaffairs.gov.ab.ca/am_list_subscription_services

alberta.ca/electrical-codes-and-standards.aspx

What needs to be reported?

The *Safety Codes Act* (SCA) requires anyone designated by a regulation under the SCA to report any incident that involves anything governed by the SCA. The Administrative Items Regulation defines the “person designated in the regulations” as “any person who knows of” any electrical incident.

The Administrative Items Regulation further defines an incident to be any of the following:

- an accident to a person
- a fatal accident to livestock
- a power line contact involving an electrical installation or electrical equipment
- a fire of electrical origin

What is an accident to a person?

In the electrical discipline, an accident to a person means any situation where a person has contacted a live electrical part, whether that electrical contact causes death, injury or no injury to the person(s) involved. All contacts between people and any live electrical parts are considered a reportable incident under the *Safety Codes Act*.

What is a fatal accident to livestock?

In the electrical discipline, a fatal accident to livestock means any situation where a domesticated animal has been killed as a result of contact with a live electrical part.

What is a power line contact?

In the electrical discipline, a power line contact is any situation where a person or piece of equipment has contacted any part of an overhead or underground electrical circuit. This contact may involve the conductors, the supporting structures for the conductors or any other piece of electrical equipment involved in transmitting electricity such as (but not limited to): poles, light standards, guy wires, transformers, switching devices and overhead or underground lines.

What is a fire of electrical origin?

In the electrical discipline, a fire of electrical origin occurs when the source of the fire is a consequence of the failure of an electrical appliance or circuit.

What does “any person who knows of” actually mean?

The Administrative Items Regulation states that anyone who has knowledge of an electrical incident must report that incident, unless that person knows (or has reasonable grounds to believe) the incident has already been reported by another person. The phrase “any person” means no person in the Province of Alberta is exempt from this requirement.

Some examples include (but are not limited to):

- a health care professional treating a person for electrical burns in an emergency room is required to report the incident which caused the electrical injury;
- a police officer investigating a traffic accident where a car has knocked down a wooden power line support is required to report the incident;
- a construction worker who witnesses a colleague receive a shock from a hand-held electrical tool is required to report the incident even if the affected worker is not injured.

Are there any consequences for not reporting an incident?

Section 67 of the SCA states that “a person who fails to prepare, submit or retain any information that the person is required by this Act to prepare, submit or retain is guilty of an offence.”

The penalties for offences under the SCA (Section 68) have recently increased to a maximum of \$100,000.00 for the first offence and an additional \$2,000.00 per day for a continuing offence. In addition, subsequent offences carry a maximum fine of \$500,000.00 and an additional \$1,000.00 per day for continuing offences.

Administrative Penalties may also apply:

<https://www.alberta.ca/safety-codes-administrative-penalties.aspx>

How are incidents to be reported?

Municipal Affairs has developed a standard form for use in reporting incidents. This form is available as a fillable pdf document for download at:

<https://www.alberta.ca/assets/documents/ma-safety-codes-incident-report-form.pdf>

Municipal Affairs staff members are available to assist with the completion of this form. Staff can be reached by telephone at 1-866-421-6929 or by email at safety.services@gov.ab.ca

What is the purpose of an incident report?

The data from the reports is collected by Municipal Affairs for several reasons.

The data is used to produce an annual report of electrical incidents, which is made available to the public. Reports are available online at:

<https://open.alberta.ca/publications/statistics-electrical-incidents-in-alberta-date>

The data is also used to review the requirements for electrical installations in Alberta; occasionally changes in the national or provincial Codes and Standards are brought about as a result of incidents that are reported by Albertans.

The data can also be used to warn other provinces of unapproved products that have caused incidents in Alberta.

In addition, the data can be used by training facilities for trade's people to give students up-to-date information on acceptable practices and problems that result from incorrect installations.

No personally identifying information is released to anyone outside of the Ministry of Municipal Affairs, unless the release of this information is required by law.

STANDATA bulletin 18-LEG-ECR-002

Electrical

Section 2 – Electrical systems equipment

Date Issued: June 2022

Page 1 of 2

Purpose

This clarifies Section 2 of the Electrical Code Regulation.

Discussion

Rule 2-024 of the CSA C22.1 Canadian Electrical Code (CE Code) requires that electrical equipment be approved. The CE Code defines “approved” in Section 0.

In Alberta, section 2 of the Electrical Code Regulation prescribes the conditions for the use of equipment related to electrical systems and applies these requirements to the term “approved” as referenced in the CE Code. Section 2 of the *Electrical Code Regulation* reads as follows:

Electrical systems equipment

- 2(1)** If a code, standard or body of rules declared in force under the Act with respect to electrical systems requires approved equipment, that equipment must meet the requirements of this section.
- (2)** No person shall manufacture, install, sell or offer for sale any equipment related to electrical systems for use in Alberta unless the equipment has been
- (a) certified by a certification body in accordance with the certification body’s terms of accreditation with the Standards Council of Canada, or
 - (b) inspected by an inspection body in accordance with the inspection body’s terms of accreditation with the Standards Council of Canada.
- (3)** Subsection (2) does not apply to electrical equipment of an electric distribution system or a transmission line as defined in the *Hydro and Electric Energy Act*.

Issued by the Provincial Electrical Administrator

[Original Signed]

Clarence C. Cormier, P.Eng.

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alberta.ca/electrical-standata.aspx

The regulation defines “certification body” and “inspection body” as follows:

- “Certification body” means an organization accredited by the Standards Council of Canada as a certification body.
- “Inspection body” means an organization accredited by the Standards Council of Canada as an inspection body.

Products certified by an accredited certification body are approved; also, products deemed acceptable by an inspection body through a field evaluation process, such as SPE-1000, or SPE-3000 for medical equipment, are also approved.

A directory of certification bodies and inspection bodies and their respective scope of accreditation can be found on the Standards Council of Canada’s website at:

Certification:

www.scc.ca/en/accreditation/product-process-and-service-certification/directory-of-accredited-clients

Inspection:

www.scc.ca/en/accreditation/inspection-bodies/directory-of-accredited-clients

Recognized Canadian Electrical Product or Equipment Approval Marks:

<https://www.scc.ca/en/accreditation/approval-marks-electrical-products-safety>

Disclaimer:

The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

ELECTRIC RAILWAYS

PURPOSE

To clarify which electrical safety codes apply to an electric railway, and more specifically, the traction power system (circuits that supply the motive power).

DISCUSSION

In Alberta, electrical installation safety is regulated under the Safety Codes Act and applicable regulations, codes, and standards.

The Electrical Code Regulation adopts two electrical codes:

1. The Alberta Electrical Utility Code (AEUC), and
2. The Canadian Electrical Code (CE Code), Part 1.

In general, electrical installations on the supply authority side of the demarcation point are regulated by the AEUC whereas electrical installations on the consumer side of the demarcation point are regulated by the CE Code, Part 1. The intent is that there are no unregulated electrical installations.

Electric railways have been operating successfully in Alberta for decades. The LRT in Edmonton and the CTrain in Calgary are typical examples. Which electrical codes apply to these installations?

The AEUC, including C22.3 No. 1 & 7, makes no reference to electric railways. The CE Code, Part 1 excludes electric railways from its scope. Does this mean that electric railways are unregulated in Alberta?

Both the City of Edmonton and the City of Calgary, as accredited municipalities, have taken a proactive approach to LRT Electrical Installations, relying on engineering professionals to integrate the latest applicable codes & standards to maintain electrical safety in design, construction, maintenance, and operation.

Therefore, electric railway installations in Alberta are regulated through mandatory engineering involvement and the application of the latest electrical safety codes & standards applicable to electric railways in Canada, the US, or internationally. In the absence of a Canadian standard, a US standard may be utilized. In the absence of a Canadian or US standard, an international standard may be utilized.

Issue of this STANDATA is authorized by
the Provincial Electrical Administrator

[Original Signed]

Clarence C. Cormier, P.Eng.

The logo for the province of Alberta, featuring the word "Alberta" in a stylized script font, followed by a small blue square.

CODE REFERENCES**C22.1 Canadian Electrical Code (CE Code), Part 1****Scope**

This Code applies to all electrical work and electrical equipment operating or intended to operate at all voltages in electrical installations for buildings, structures, and premises, including factory-built relocatable and non-relocatable structures, and self-propelled marine vessels stationary for periods exceeding five months and connected to a shore supply of electricity continuously or from time to time, with the following exceptions:

b) equipment and facilities that are used in the operation of an electric railway and are supplied exclusively from circuits that supply the motive power;

Disclaimer:

The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

STANDATA bulletin 22-LEG-PR-001

Electrical

General – Permit Regulation, specific requirements

Date Issued: February 2023

Page 1 of 4

Purpose

To clarify permit requirements for the electrical discipline in Alberta as related to communications systems and travelling carnival, entertainment and show facilities.

Discussion

The Permit Regulation AR 204/2007, as amended from time to time, mandates permit requirements, including those for the electrical discipline and administration for permits.

A permit:

- provides the owner with access to expert advice before costly mistakes are made;
- provides the owner with a record of having done their due diligence to comply with codes and standards;
- informs the local authority having jurisdiction (AHJ), which is responsible for administering the *Safety Codes Act*, that the project is taking place;
- provides additional oversight at the early stages of a project through services such as plans or design review; and
- initiates an inspection process by a trained and certified safety codes officer (SCO).

To find the AHJ in your area, see the Get a Permit information provided by the Safety Codes Council at safetycodes.ab.ca/.

Communication Systems

Communication circuits are audio, video, or data circuits. These systems are exempt from requiring a permit.

Even though a permit may not be required for communication systems, the systems must still meet the requirements of the Canadian Electrical Code, Part I (CE Code) Section 60 and the *Safety Codes Act*. Owners are responsible for the care and control of communication systems on their side of the connection point between the customer and the utility, including making sure they comply with the relevant sections of the CE Code.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part I.

Issued by the Provincial Electrical Administrator

[Original Signed]
Kevin Glubrecht

Alberta Municipal Affairs – Technical and Corporate Services
Email: safety.services@gov.ab.ca Phone: 1-866-421-6929

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alberta.ca/electrical-standata.aspx

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Travelling Carnival, Entertainment and Show Facilities

The amusement ride industry in Alberta is concerned that the cost imposed by frequent inspections on a facility as it travels within Alberta is unwarranted. Part 1 of the *Safety Codes Act* defines the responsibilities for owners/operators of such facilities. By fulfilling that responsibility, the safety of Albertans can be assured without imposing undue cost.

The facilities involved, including their power supply and distribution systems, are those that travel between inspection jurisdictions within the province and may or may not have evidence of inspection and approval by a recognized certification body.

The facilities intended to be set up for a local show and not relocated to another jurisdiction do not fall within this policy outlined below. Similarly, the facilities governed by the amusement ride standards are the responsibility of the Alberta Elevating Devices and Amusement Rides Safety Association and do not fall within this policy.

Policy Statement

Owners of travelling carnival, entertainment, and show facilities touring Alberta must be able to demonstrate evidence of inspection in the form of:

- an authorized label of an accredited certification body, or
- an inspection report, issued within the current year by a SCO designated with the power to perform inspections under the *Safety Codes Act*.

Sponsoring organizations must ensure owners of these facilities can demonstrate evidence of inspection and adequate maintenance procedures. Sponsoring organizations are to report to the AHJ where this evidence cannot be produced or where there is an identified safety concern.

Process

Once travelling carnival, entertainment, or show facilities enter a community, the sponsoring organization will determine if the owners have evidence of inspection and if there are any obvious safety concerns.

The sponsoring organization will notify the AHJ when they identify safety concerns. The AHJ will determine whether further inspections are required. Owners must comply with the *Safety Codes Act* before they operate their facilities.

Responsibilities

Owner's Responsibility

Sections 5 through 9 of the *Safety Codes Act* outline the responsibilities or duties of the various persons involved. An owner is responsible:

- to ensure facilities under its care and control are safe from electrical hazards,
- to ensure the facility bears evidence of inspection in the form of:
 - an authorized label of an accredited certification body, or
 - an inspection report, issued within the current year by a SCO designated with the power to perform inspections under the *Safety Codes Act*,
- to ensure documentation is available for review by a SCO or the sponsoring organization, and
- to ensure the facility is maintained in a manner that provides for continued safety.

alberta.ca/electrical-standata.aspx

Sponsoring Organization's Responsibility

By nature of the relationship between the owner of the facility covered by this policy and the sponsoring organization, the sponsor shares the responsibility for safety with the owner. In most cases, the sponsor will be obtaining the services of a contractor to install electrical systems, or to ensure local facilities are ready for use. This person is already on site and can visually check for 'evidence of inspection' on all of the travelling facilities and note any obvious safety concerns that may be present. The sponsoring organization is responsible:

- to ensure all local facilities comply with the *Safety Codes Act*,
- to ensure all travelling facilities bear evidence of inspection and there are no obvious hazards present,
- to ensure facilities that do not have evidence of inspection or show possible safety concerns are inspected by the AHJ before they are connected to the power supply, and
- to ensure the power supply, if a generator, and the distribution system used for the facilities are installed in a safe manner.

AHJ's Responsibility:

- Work with the sponsoring organization to ensure this policy is implemented.
- Provide inspections when required to address an identified safety concern or to provide a facility with evidence of inspection.

For information on Certification Bodies, see STANDATA bulletin Electrical Code Regulation see alberta.ca/electrical-standata.aspx.

Copies of the noted Acts and Regulations are available from Alberta King's Printer at alberta.ca/alberta-kings-printer.aspx.

Bulletins

STANDATA bulletin 21-ECB-000

Electrical

2021 Canadian Electrical Code, Part I, Section 0 - Object, scope, and definitions

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies how code updates impact existing electrical installations.

Discussion

Generally, an existing installation in compliance with the code(s) in force at the time of the installation does not require upgrading to meet the requirements of the new code edition.

However, where an existing installation is deemed to pose an unacceptable risk, despite having met the requirements in force at the time it was constructed, new legislation may be introduced to mandate that the installation be brought to current code requirements. For example, a mandate was issued in the late 1970s that smoke alarms be installed retroactively in all homes – old and new.

Modifications to an existing installation that introduce changes to its characteristics may require that part or all of the installation be made to comply with the code in force at the time the modifications are made. This should be discussed with the Authority Having Jurisdiction (AHJ) prior to design/construction.

Street Lighting and Primary Metered Installations

Supply authorities have traditionally installed, operated and maintained street-lighting and high voltage distribution facilities. Due to deregulation, some supply authorities have divested themselves of the street-lighting portion of their operations or allowed for the primary metering of high voltage distribution systems. Other organizations, such as municipal and/or provincial transportation departments, are taking over these installations. It is not always clear which electrical code applies, the Canadian Electrical Code (CE Code), Part I or the Alberta Electrical Utility Code (AEUC).

In Alberta, two electrical codes are adopted and in force:

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

Issued by the Provincial Electrical Administrator

[Original Signed]

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- The CE Code, Part I for use by other than the supply authority in the exercise of its function as an electric utility;
- The Alberta Electrical Utility Code, which indirectly adopts the Canadian Electrical Code, Part III, Numbers 1 and 7 with amendments, for use by the supply authority in the exercise of its function as an electric utility.

Ownership notwithstanding, if the street lighting installation or primary metered distribution system is under the care and control of the supply authority, it shall meet the requirements of the AEUC. If, however, these installations are under the care and control of an organization other than the supply authority, they shall meet the requirements of the CE Code, Part I.

Accredited corporations authorized to provide services under both the CE Code, Part I and the AEUC may do so according to the applicable scope.

Disclaimer:

The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

STANDATA bulletin 21-ECB-002 (REV1)

Electrical

2021 Canadian Electrical Code, Part I, Section 2 – General rules

Date Issued: June 2022

Page 1 of 11

Purpose

This clarifies how to apply the general rules in Section 2 of the Canadian Electrical Code, Part I.

Discussion

The *Safety Codes Act* and associated regulations, supplemented by the policies of Alberta Municipal Affairs, the Safety Codes Council and accredited organizations, detail Alberta's administrative requirements for enforcing the Canadian Electrical Code, Part I (CE Code). Because rules stemming from legislation take precedence, the administrative rules of the CE Code will generally not apply.

The intent of the CE Code administrative rules (rules 2-000 to 2-032) was to guide provincial authorities in developing their own administrative requirements to enforce the Code (see latest edition of the CE Code Handbook). Where a regulatory authority has established administrative requirements through legislation, they supersede the administrative requirements in a national code.

Following is an accounting of how Alberta legislation affects the administrative rules in the CE Code:

Rule 2-000 Authority for rules

The Electrical Code Regulation is the legislation through which electrical codes are adopted in Alberta.

Rule 2-002 Special requirements

This is an information statement on the relationship between the supplementary and amendatory sections of the Code and the general requirements of the Code.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part I, 2021

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[Original signed]

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Rule 2-004 Permit

The Permit Regulation supersedes this rule. Part 1 of the regulation sets the requirements for whom permits may be issued and under what conditions, as well as where permits are required throughout the province. Part 2 sets the requirements for administration of the Permit Regulation.

Rule 2-006 Application for inspection

This rule refers the user to the “inspection department”. In Alberta, the permit has traditionally been used for this purpose, but an Authority Having Jurisdiction (AHJ) may set its own requirements for a separate application for inspection form.

Rule 2-008 Fees

This rule refers the user to the “inspection department”. Each AHJ is responsible for setting its own fee structure.

Rule 2-010 Posting of permit

The Permit Regulation overrides this rule. The absence of a requirement to post an electrical permit in the Permit Regulation allows AHJs the ability to address the requirement through bylaw or policy.

Rule 2-012 Notification of inspection

The AHJs in Alberta set inspection requirements through bylaw or policy. That policy will define whether they require notification for inspection.

Rule 2-014 Plans and specifications

This rule refers the user to the “inspection department”. The AHJ may set its own requirements around “plans and specifications” through policy.

Rule 2-016 Current-permits

The Alberta Electrical Utility Code (AEUC) requires that a supply authority obtain a copy of the electrical permit before service connection. The local AHJ may require additional information before allowing an installation to be energized.

Rule 2-020 Re-inspection

The AHJ may set their own requirement.

Rule 2-022 Renovation of existing installations

The AHJ may set their own requirement.

Rule 2-024 Use of approved equipment

This rule mandates the use of approved equipment and is more of a technical requirement than an administrative one. The term approved, as suggested in the definitions of the CE Code, is otherwise defined by the Electrical Code Regulation. It sets the conditions for use of any equipment related to electrical systems in Alberta.

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Minor equipment alterations

Minor modifications to electrical equipment such as when adding certified devices or kits (i.e., indicating lights, control switches, or monitoring devices, etc.) would not generally require the equipment to be re-certified. The devices must be suitable for the application and approved for use with the particular piece of equipment.

Modifications falling outside these parameters should be re-evaluated for safety through Special Inspection by an accredited inspection body or Field Certification by a certification body.

Installations of metering equipment (revenue or energy management systems)

Concern has been expressed about the installation of devices into certified electrical distribution and control equipment for the purpose of metering. Often these are installed in larger capacity installations in either existing installations or at the initial construction stage. Industry is reminded that any alterations of certified equipment may void the original certification.

Where metering devices (revenue or energy management) are to be incorporated in a new installation, the equipment must form part of an approved switchgear assembly constructed by the manufacturer of the switchgear, or be installed in separate enclosures connected to the switchgear by recognized wiring methods. Where it is proposed to add metering devices (revenue or energy management) to an existing installation, approved devices are to be used and the AHJ should be contacted prior to the installation to determine the acceptability of the proposed modifications.

Appendix A

Appendix A of the CE Code lists Standards used to certify electrical equipment for the purpose of being “Approved” as defined in Section 0 of the CE Code and the *Electrical Code Regulation*.

Beginning with the 25th Edition of the CE Code, and to keep the list of safety standards for electrical equipment current, the following Appendix A annexes have been moved online:

- (a) Annex A.1 — CSA Canadian Electrical Code, Part II Safety Standards for Electrical Equipment; and
- (b) Annex A.2 — Other Canadian Safety Standards for Electrical Equipment.

To view the latest versions of these annexes, visit <https://community.csagroup.org/community/electrical/electrical-installation-and-maintenance-canadian-electrical-code-pt-i/appendix-a-canadian-electrical-code-part-i>

Misapplication of Approval Marks or Labels

The application of an electrical approval identifier (Certification Mark or Field Evaluation Label) on industrial structures or buildings has become increasingly apparent. Structures or buildings are not generally considered as “electrical equipment” and therefore, careful consideration should be given before requesting or accepting an approval marking.

Like manufactured homes or mobile homes, industrial buildings may be eligible for an overall approval in accordance with Canadian Standards Association (CSA) A277 Procedure for factory certification of buildings. Such approvals take into consideration safety codes compliance for all disciplines (building, electrical, gas, and plumbing).

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Manufactured homes, prefabricated buildings, modules, and panels certified to CSA A277 Procedure for certification of prefabricated buildings, modules, and panels may have an overall certification with a marking distinct from an 'electrical approval mark'. The certifications are an overall assessment of the structure for compliance to structural and installation requirements of the associated disciplines, including electrical.

Individual electrical products (electrical equipment) are interconnected with wiring to form an electrical installation on or in a structure or building. Each individual piece of electrical equipment is required to be approved. The interconnection of that equipment forms an electrical installation that is required to comply with the installation requirements of the CE Code.

To recognize if the electrical approval identifier has been properly applied, it is important we make the distinction between what constitutes 'electrical equipment' and what constitutes an 'electrical installation'. These are defined terms in the CE Code, Part I, Section 0.

In short, an electrical installation is the interconnection of approved electrical equipment. The Appendix B note for the term "Approved" provides further clarification in this regard by stating that approved electrical equipment is certified to product standards listed in Appendix A. The Appendix B note also describes the field evaluation approval process for electrical equipment (with some exceptions) that has not been subject to a certification program can be evaluated for conformance to the CSA Model Code SPE-1000. Note: the SPE-1000 sets limitations on the types of electrical equipment that the field evaluation process can be applied to, e.g. equipment rated for use in hazardous locations is not included.

A structure or building may have an electrical installation comprised of the interconnection of electrical equipment but in and of itself may not be electrical equipment.

Verification of the electrical installation for compliance to the CE Code is the responsibility of the electrical inspection by the AHJ where the building or structure will be located or used. This verification includes that all electrical equipment forming part of the installation is approved.

It should be noted that some assemblies of mechanical and electrical equipment such as air compressors, lube oil packages (skids) and similar equipment may be eligible for an approval marking if they have been evaluated by a certification body or special inspection body in accordance with the corresponding applicable standard(s). For these types of equipment, the certification standards prescribe the requirements for the exposed wiring or make a normative reference to the CE Code.

The certification body or special inspection body is meant to work together with the AHJ as part of the regulatory process in Alberta. Restricting the access of a safety codes officer (SCO) to electrical components, equipment, or installations is a direct violation of Section 34 of the *Safety Codes Act*.

Unapproved Baby Spa Equipment

There have been reports of unapproved baby spa equipment (hydrotherapy tubs or pools, etc.) being sold and used in Canada. Please ensure only approved baby spa equipment is sold or used.

Field evaluations will not be accepted in Alberta for unapproved baby spa equipment and similar products unless already certified to the Underwriters' Laboratories (UL) 1563 Standard (Standard for Electric Spas, Equipment Assemblies, and Associated Equipment) for the US market.

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Replacement Breakers

There appears to be confusion in the industry as to which breakers are allowed to be used in specific panelboards. Some have argued that, if the breaker is approved, it can be used in any panelboard. This is not the case.

This is to remind industry that a breaker installed in a panelboard must be “approved for the specific purpose for which it is to be employed.” This usually means the breaker must be of the same manufacturer and approved for the specific panelboard. The burden of proof for exceptions lies with the installer, not with the SCO.

Rule 2-028 Availability of work for inspection

The local AHJ may set their own requirement.

Rule 2-030 Deviation or postponement

Section 38, of the *Safety Codes Act* outlines provisions for allowing a variance. A deviation or postponement is considered a variance. Section 38 of the *Safety Codes Act* reads as follows:

- 38(1)** An Administrator or a safety codes officer may issue a written variance with respect to any thing, process or activity to which this Act applies if the Administrator or officer is of the opinion that the variance provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by this Act.
- (2)** An Administrator or a safety codes officer may include terms and conditions in the variance.
- (3)** A safety codes officer on issuing a variance shall notify an Administrator.
- (4)** The *Regulations Act* does not apply to variances issued under this section.

Where any rule in the CE Code is varied, or where a particular rule in the CE Code requires ‘special permission’ by referencing Rule 2-030, section 38 of the *Safety Codes Act* applies. Where safety performance is not a factor, the Administrator or SCO may choose to not issue a variance. Regardless of whether a variance is issued, owners, designers, manufacturers, contractors, and vendors (as specified in Part 1 of the *Safety Codes Act*) are responsible for ensuring that a thing, process, or activity under their care and control is safe.

NOTE: See **Notice: Variances under the Safety Codes Act [2019]** for Guidelines on Variances Issued by a Safety Codes Officer. open.alberta.ca/publications/notice-variances-under-the-safety-codes-act-2019

Rule 2-032 Damage and interference

Electrical equipment that has been exposed to ingress of water

Rule 2-032 3) requires that electrical equipment that has been exposed to the ingress of water be subjected to evaluation to ascertain whether or not the equipment may be placed back into service. Electrical equipment may be damaged by exposure to water through flooding, fire-fighting activities, storms, and other events. The Appendix B Note to Rule 2-032 3) states the equipment should be evaluated by an organization acceptable to the AHJ for compliance with the applicable standards to which the equipment was originally approved. The Appendix B Note goes on to list resources that may be consulted when performing such an evaluation. It is important to note this list is not exhaustive. The following graphic provides guidance when deciding whether to replace or recondition electrical equipment that has been subjected to the ingress of water:

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Replace or Recondition?

Water Exposed Electrical Equipment

Water and electricity do not mix. Follow this guide to quickly see what electrical equipment exposed to water ingress should be replaced and what equipment may be reconditioned.

Any electrical equipment exposed to water ingress, even if thoroughly dried, may pose serious long-term safety and fire risk if not properly reconditioned.



















Returning power to water damaged electrical equipment without proper evaluation could result in fire or shock.

Water Damaged Electrical Equipment

X Should be replaced



May be Reconditioned












	Arc-Fault and Ground-Fault Circuit Interrupters	X		Panelboards see NEMA Standard: PB 1.1-2013	
	Batteries	X		Receptacles	X
	High Voltage AC Circuit Breakers			Signaling, Protection and Communication Systems	X
	Lighting, Ballasts and LED Drivers	X		Surge Protective Devices	X
	Low and Medium Voltage Fuses	X		Switchboards See NEMA Standard: PB 2.1-2013	
	Low and Medium Voltage Switchgear			Switches and Dimmers	X

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	Low Voltage Power Circuit Interrupters			Transformers All Dry Type, Control Circuit, Liquid Filled, Cast Resin	X
	Molded Case Circuit Breakers	X		Uninterruptable Power	X
	Rotating Machines See Standard ANSI/IEEE 43-2013, A2 & A3, ANSI EASA AR100			Wire or Cable for dry areas	X
	Outlet and Junction Boxes see NEMA standard OS 1-2008	X		Wire or Cable for wet Areas that have not been damaged or ends exposed	
For more information, please see “Evaluating Water-Damaged Electrical Equipment” published by the National Electrical Manufacturers Association (NEMA): https://www.nema.org/standards/view/evaluating-water-damaged-electrical-equipment					

For detailed information on administrative requirements, contact the AHJ in your area or contact the Technical and Corporate Services Division at 1-866-421-6929 or e-mail safety.services@gov.ab.ca

Technical

Rule 2-100 Marking of equipment

Factory-built structures (skid units) - definition

The term “skid”, “relocatable structure” and “module” are used interchangeably to refer to a factory-built structure intended for relocation to a site either as a temporary or as a permanent facility. As a large percentage of these units are installed in a permanent manner, the term “relocatable” becomes redundant. The term “factory-built structure” should be used and is defined as follows:

Factory-built structure — a collection of elements such as buildings, process equipment and electrical equipment interconnected together into a pre-manufactured product intended to be transported to a site separate from the fabrication facility and installed either temporarily (relocatable) or permanently (non-relocatable) at that site.

Factory-built structures require adequate information for end-users and for the AHJ to facilitate verification of compliance to codes, standards, drawings and specifications. This information is divided into 2 groups, “nameplate data” and “documentation”.

Nameplate Data

1. Nameplate requirements for non-relocatable factory built structures (intended/designed for permanent foundations, includes modules)
 - (a) Minimum requirements on the Nameplate: Manufacturer’s Name (or Identification Means), Date of Manufacture, ID of the “Structure” (i.e. a basic Description).
 - (b) All the “Documentation” items 1 through 4 below need to be available within the user’s document control system or provided with the unit.

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(Note: this documentation may be included on the Nameplate, or may be provided via separate documentation such as Drawings, Specifications, Reports, and Manuals readily available for the Installer, Inspector, Operator, Maintainer, and Designer, or a combination)

2. Nameplate requirement for relocatable factory built structures

- (a) Minimum nameplate requirements as per CE Code Rule 70-128, and;
- (b) Indication of wiring methods used as per the CE Code (e.g. Zone, Group, Temperature Code, etc.).
- (c) All the “Documentation” items 1 through 4 below need to be provided with the unit.

(Note: It may be included on the Nameplate, or may be located with the structure as it moves (i.e., self contained) via separate documentation such as Drawings, Specifications, Reports, and Manuals readily available for the Installer, Inspector, Operator, Maintainer, and Designer, or a combination)

Manufacturer: Skids Manufacturing Ltd.
Contact: (780) 555-5555
Phase & Voltage: 3Ø, 120-208V or 208Y/120V
Rated Load Amperes: N/A
Frequency: 60 Hz
Equipment/Wiring Method:
 Inside of structure – Zone 1
 Outside of Structure – Zone 2
 Group – IIA
 Temperature Code – T6

Documentation

The following documentation on a factory-built structure must be readily available by having it permanently attached to the structure and/or located within the user's document control system:

1. Site installations instructions (e.g. drawings and specifications)

- (a) Electrical ratings as applicable to enable a safe installation at the site, such as voltage, amperage, power consumption, etc.
- (b) In more complex situations, detailed information on schematic, wiring, single line, riser, or similar drawings will be required and may be integrated into the site's overall document control system.
- (c) If the factory-built structure is “permanent (or non-relocatable)”, the documentation should be integrated into the overall site electrical documentation.
- (d) If the factory-built structure is “temporary (or relocatable)”, the documentation needs to be retained, readily available, and located with the structure as it moves (i.e. self contained).

2. Sufficient information to verify compliance to electrical codes and standards:

- (a) If a hazardous area exists, then a hazardous area classification must be performed and documented by a licensed engineering professional. All skid electrical equipment and wiring must be rated to meet the skid and site hazardous area classification requirements, including, but not limited to, zone, group, and temperature code.
- (b) Environmental data as applicable, e.g. temperature min/max, indoor/outdoor, underground/wet.

3. Approval

- (a) If a factory or fabrication shop approval (certification agency, special inspection body, or inspection authority) has been performed, then evidence needs to be provided (e.g. certification reports complete with approval labels, or inspection reports complete with appropriate identification such as an inspection label or permanent tag).

4. Manufacturers Name (or Identification Means), Date of Manufacture, ID of the “Structure”, i.e. a basic Description.

Additional responsibilities

1. Responsibility for maintenance, alterations or modifications of the factory-built structure are under the care and control of the owner as per the definition of ‘owner’ within the *Safety Codes Act*.
 “owner” includes a lessee, a person in charge, a person who has care and control, and a person who holds out that the person has the powers and authority of ownership or who for the time being exercises the powers and authority of ownership;
2. The original documentation as outlined above needs to be maintained.
3. Any changes to the structure need to have the documentation updated, which then becomes the new “Documentation” for the structure:
 - (a) If an accredited corporation, follow their Quality Management Plan (QMP) process; or
 - (b) If other than an accredited corporation, work needs to be by ‘permit’ and therefore re-inspected, or re-approved (if previously certified or by Special Inspection).
4. Maintenance – follow standard practices – CE Code rules, maintenance instructions, etc.

Rule 2-106 Rebuilt equipment

Repair of motors and generators for use in hazardous locations

Electrical equipment in Alberta must be approved. Approval is usually through certification by a body accredited by the Standards Council of Canada. Repairs to certified equipment, if not done properly, may void certification. Rule 2-106 requires repair work of electrical equipment to be done to the applicable Canadian standards.

To preserve equipment certification, repairs that can potentially alter the ratings, characteristics or integrity of the equipment must be done by the manufacturer or by a qualified facility. A “qualified facility” is one that meets the requirements of a certification body for carrying out such repairs.

In situations of routine maintenance where the ratings, characteristics and integrity of the equipment are not affected, owners are responsible for ensuring trained persons using proper tools, materials, and applicable standards do the work.

To maintain the integrity of the equipment and of the certification mark for all types of repairs, the manufacturer and the certification body should be consulted for advice.

Retrofitting luminaires for energy conservation or similar programs

As indicated above, repairs or alterations to certified equipment, if not done properly, may void certification. The following guideline is recommended to facilitate the process of modifying luminaires for energy conservation purposes and intended for luminaires located in non-hazardous locations.

- *REMOVED FOR MODIFICATION*

When all luminaires are removed from the ceiling and modified either on site or at a remote location, these locations can be termed a 'defined factory location'. The luminaires are eligible for re-inspection and labelling through equipment approval procedures, by an acceptable certification body.

- *IN-SITU MODIFICATION*

It may be more practicable to modify the luminaires without removing them from the ceiling. In this case, the following procedure is recommended:

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A detailed description of the intended modification for each model of luminaire is to be submitted for an evaluation by the certification body whose mark appears on the product. The certification body should be able to confirm the intended procedure for modifying each model of luminaire is acceptable.

A suitable label showing the following information is to be placed on each luminaire:

- (a) Identification of the party responsible for the modifications
- (b) New electrical ratings
- (c) New bulb type and size (if applicable)
- (d) Date code
- (e) Reference to the certification body's file number

Please contact the local AHJ to obtain the required permits.

Rule 2-200 General

Protection of automobile heater receptacles and electric vehicle supply equipment (EVSE)

Electrical installations must have adequate protection from mechanical damage. You can reduce the risk of damage by installing the equipment in such a way that it is protected by location or with mechanical protection.

- Protection by location can be achieved by installing the equipment on structures of adequate strength (i.e., fences, walls, etc.). You should also ensure the equipment is located in such a way that it is not subject to accidental damage from vehicles. (e.g., minimum 750 millimetres above grade, on the side of a guard-rail not subject to damage by vehicles, etc.)
- Mechanical protection for freestanding equipment can be provided in a number of ways, the most common being wheel stops and reinforced concrete posts.
 - Wheel stops should be 150 millimetres wide by 150 millimetres high and located not less than 900 millimetres from the equipment. They should be properly secured using 16 millimetre rods driven 300 millimetres into the parking surface or 16 millimetre bolts set into a concrete slab.
 - Reinforced concrete posts should be no less than 300 millimetres in diameter with the equipment:
 - (a) mounted on the face of the post opposite the vehicle; or
 - (b) cast into concrete posts with the equipment no less than 750 millimetres above grade where facing the vehicles; or
 - (c) mounted on rigid conduit extending beyond the top of the concrete post allowing for the installation of the equipment.

To ensure an acceptable installation, consult with the AHJ before proceeding.

Rule 2-302 Maintenance in hazardous locations

Multi-wire circuits

Rule 2-302 redirects the reader to Rule 18-010. Rule 18-010 prohibits unauthorized repairs or alterations on any live equipment in hazardous locations. Extra precautions must be taken in situations where there is an intention to work on equipment supplied from an overcurrent device on one phase of a multi-wire circuit as permitted by Rule 14-010. Although the device for the phase supplying the equipment can be opened, the neutral conductor can potentially carry current from other phases of the same multi-wire circuit and is considered live unless all phases of that multi-wire circuit are de-energized.

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Persons conducting repairs or maintenance on these types of circuits in hazardous locations are cautioned to de-energize all phases of a multi-wire circuit supplying equipment despite the equipment being only connected to one phase.

Rule 2-304 Disconnection

As in Rule 2-302 above, the same precautions should be observed for working on equipment in non-hazardous locations.

Testing of protective equipment

Protective equipment should be certified, maintained, and tested to industry recognized standards and the manufacturer's instructions. For further information regarding protective equipment, contact Occupational Health and Safety.

Rule 2-306 Shock and arc flash protection

Below is an example of a label that meets the minimum requirements of field marking electrical equipment as per Rule 2-306. Additional marking for shock and arc flash protection is beyond the requirements of the CE Code.



Example – Simple Label that is Compliant with Rule 2-306

Rule 2-328 Electrical equipment near combustible gas equipment

Rule 2-328 instructs the Code user to refer to CSA B149 (Natural Gas and Propane Installation Codes) to determine the correct clearance distance between arc-producing electrical equipment and a combustible gas relief device or vent. The Appendix B note to this Rule provides distance requirements for commonly found gas equipment; however, the Appendix B note is not an exhaustive list of all equipment found in CSA B149, such as those devices certified to CSA 6.18 or CSA 6.22.

Disclaimer:

The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

STANDATA bulletin 21-ECB-004(REV1)

Electrical

2021 Canadian Electrical Code, Part I, Section 4 - Conductors

Date Issued: June 2022

Page 1 of 3

Purpose

This clarifies select rules of Section 4 of the Canadian Electrical Code, Part I (CE Code), which applies to conductors for services, feeders and photovoltaic circuits

Discussion

Rule 4-004 Ampacity of wire and cables

Underground Installations

The Appendix B note on this item references “defined assumptions”...

It is the intent of this Rule that where ampacities of underground installations of cable size 1/0 and larger are based on conditions of use other than those set out in the foregoing notes or the defined assumptions preceding them, they should be justified by precise calculation based on IEEE 835.

While these assumptions are not detailed in the current code, they are referred to in Appendix B of the 1994 (seventeenth edition) as follows:

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part I, 2021

Issued by the Provincial Electrical Administrator

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*Assumptions used in the Calculation of Cable
Ampacity Rating for Direct Buried and Underground
Conduit installations*

General

<i>Load factor</i>	<i>-100%</i>
<i>Ambient Soil Temperature</i>	<i>-20°C</i>
<i>Conductor Temperature</i>	<i>-90°C</i>
<i>Soil Thermal Resistivity</i>	<i>$\frac{-90^{\circ}\text{C} - \text{CM}}{\text{Watt}}$</i>
<i>Insulation/Jacket Thermal Resistivity</i>	<i>$\frac{-400^{\circ}\text{C} - \text{CM}}{\text{Watt}}$</i>
<i>Shield or Sheath Operation</i>	<i>-Open Circuit</i>
<i>Voltage Rating</i>	<i>-0 to 5 kV</i>

Direct Buried Installation

<i>Cable Depth of Burial</i>	<i>-915mm (36")</i>
<i>Cable Types</i>	<i>-RWU90 -RA90 -TECK90 -ACWU90</i>

Conduit Installation

<i>Diameter of Conduit</i>	<i>-127mm (5")</i>
<i>Depth of Concrete from Surface</i>	<i>-760mm (30")</i>
<i>Concrete Thermal Resistivity</i>	<i>$\frac{-85^{\circ}\text{C} - \text{CM}}{\text{Watt}}$</i>
<i>Cable Type</i>	<i>-RW90</i>

In determining the maximum current which copper or aluminum conductors may carry in underground runs, paragraphs 1) d) (*for copper*) and 2) d) (*for aluminum*) of Rule 4-004 requires that, for conductors No. 1/0 American Wire Gauge (AWG) and larger, diagrams D8 to D11 and Tables D8A to D11B assist the Code user in determining the maximum conductor ampacity. The results arrived at when using diagrams D8 to D11 and tables D8A to D11B are based on the assumptions above.

Otherwise, to determine precise maximum ampacities for conductors No. 1/0 AWG and larger, the detailed calculations in the Institute of Electrical and Electronics Engineers (IEEE) Standard 835 should be applied as advised in the Appendix B note to Rule 4-004.

Cable Arrangements

The Appendix B note to Rule 4-004 indicates where Tables D8A to D11B may be used to determine ampacities of conductors for the cable arrangements shown in diagrams D8 to D11. Where other cable configurations are used, the cable manufacturer or a registered engineering professional should be consulted to verify the cable ampacities.

Metallic vs. Non-metallic Raceway

Note (1) of Tables D9A and D9B refers to non-metallic underground raceways. These tables apply to an installation configuration of a single conductor per raceway. The values in the table do not take into consideration heating effects of circulating currents that would be imposed on metallic conduit, hence the reference to only non-metallic raceways.

Removal of Table 39

Users of the CE Code are reminded that Table 39 has been removed from the 2021 edition of the CE Code (Table 39 "Minimum permitted size for 3-wire 120/240 Volt and 120/208 Volt service conductors for single dwellings and feeder conductors or cables supplying single dwelling units of row housing, apartment, or similar

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buildings and terminating on equipment having a conductor termination temperature of not less than 75° Celsius”).

Rule 4-018 Size of neutral conductor

Neutral conductor size for single family dwellings

For a single family dwelling with provisions for a 120/240 volt electric range, a 120/240 volt electric dryer or other balanced loads, the neutral conductor of the consumer's service, or feeder, may be sized in accordance with Subrule 3).

This concept may be equally applied to a feeder or service supplying more than one unit of row housing or similar installations.

As explained in Rule 4-004 4), the common conductor of a consumer's service or feeder connected to each of two phase wires and the neutral of a 4-wire, 3-phase system carries approximately the same current as the other conductors and therefore must not be reduced.

Neutral overload from the effect of harmonics on a system

When designing an installation that will incorporate a number of electronic devices, a registered engineering professional should review the design to ensure conductors will not be subject to an overload condition due to harmonic effect.

Note: The standard averaging type clamp-on ammeter cannot measure the overload imposed on a system from the effect of harmonics accurately. A “True Root Mean Squared” (True RMS) type must be used.

Rule 4-022 Installation of identified conductor

Identified conductor An identified conductor is a conductor that has a white covering, or in the case of certain flexible cords, a raised longitudinal ridge. In either case, the identified conductor is the grounded circuit conductor or a neutral.

Pigtailing of identified conductor Where a device, such as a receptacle or a lampholder, is fed from a 2-wire circuit employing an identified conductor, pigtailing the identified conductor is not required. Where a device is fed from a multi-wire branch circuit employing an identified conductor, pigtailing of the identified conductor is required as per Rule 4-030 4).

Rule 4-032 Identification of insulated conductors

This rule allows for the use of red, black, & blue (RBB) colour coding of circuits. Section 24 also allows orange, brown, & yellow (OBY) for isolated systems in patient care areas.

OBY colour coding allows for safer installation when a panelboard cover is removed—the voltage of various wires is very clear. As a result, some have used OBY for the colour coding of 480Y/277V and 600Y/347V (slash voltage) circuits to differentiate them from 208Y/120V circuits in other than isolated systems in patient care areas. Unfortunately, this is not code compliant. A code change request has been sent to CSA to allow this practice.

In the meantime, the following practices are recommended:

- New installations are to use RBB exclusively, even when there are multiple slash voltages being utilized within a building. The installers should adequately identify raceways, junction boxes and panelboards of the voltages that are contained within.
- New circuits that are RBB can enter an existing panelboard that contains OBY circuits.
- Existing OBY circuits that are being reused should continue to be OBY. Please note that an existing 480Y/277V or 600Y/347V lighting panelboard can service more than one floor in a building.
- Always confirm with the AHJ before proceeding with design/construction.

Disclaimer: The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

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STANDATA bulletin 21-ECB-006

Electrical

2021 Canadian Electrical Code, Part I, Section 6 - Services and service equipment

Date Issued: 1 February 2022

Page 1 of 5

Purpose

This clarifies Section 6 of the Canadian Electrical Code, Part I, which outlines the installation requirements for services, service equipment, and metering equipment.

Discussion

Rule 6-102 Number of supply services permitted

Row housing type residential dwelling units

Rule 6-102 permits a multi-unit residential building of the row housing type to have more than one supply service, one to each self-contained occupancy, provided:

- a fire-separation, meeting the requirements of the National Building Code of Canada – Alberta Edition, separates each occupancy, and
- each occupancy has a separate entrance with direct access to ground level.

Rule 6-200 Service equipment

Service equipment

Equipment approved as switchgear, industrial control equipment, or distribution panelboards may not incorporate the features necessary to comply with the Canadian Electrical Code, Part I (CE Code) definition of a "service box". To meet this code definition the equipment used should conform with the applicable requirements of Canadian Standards Association (CSA) Standards. The following is a general guide for determining the suitability of a switch or circuit breaker forming part of an assembly for use as a service entrance:

1. The main switch or circuit breaker is separated from the feeder or branch circuit distribution compartment by sheet metal barriers or equivalent with bushed holes for the necessary wiring between compartments;
2. The main switch or circuit breaker compartment has a separate access cover with means for locking or sealing the cover in the closed position;

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3. The service disconnecting means is manually operable with the cover closed and no bare live parts are exposed;
4. The operating handle of the switch or circuit breaker is capable of being locked in the "OFF" position;
5. The service enclosure has a neutral assembly with an adequate number of wire connectors for individual conductors;
6. A solderless connector, clamp, or other suitable means for bonding the enclosure to the neutral assembly in the main compartment when required. The CE Code allows the grounded conductor to be bonded to the grounding conductor once only. If this is done in the meter socket, it would not be allowed to be done in the service box as well; and
7. The equipment is factory labeled as "SUITABLE FOR USE AS SERVICE EQUIPMENT".

In some jurisdictions in Alberta, rural properties with services up to 200 amperes have been permitted to use the utility-owned equipment as the consumer service disconnect. This has led to inconsistent application of CE Code requirements in the province. It is now recognized that the previously permitted installation is not compliant with the CE Code requirement for consumers' services. Utility-owned equipment such as the commonly-used "economizer/totalizer" for rural services typically does not comply with the definition of "service box" and, therefore, cannot be considered acceptable as a consumer service disconnect.

Several code-compliant installation methods exist and should provide sufficient flexibility for rural services under 200 amperes. The installation of the utility-owned equipment is not restricted under the requirements of the CE Code and the installation of an "economizer/totalizer" is not prevented by this bulletin. However, this piece of equipment cannot be considered to be the consumer's service disconnect required by Rule 6-200 1). Users are reminded to consider Sections 6 and 10 requirements when planning any consumer's service.

Rule 6-206 Consumer's service equipment location

Length of service conductors in buildings

Rule 6-206 1) c) requires service equipment be located as close as practicable to the point where the service conductors enter the building. Rule 6-208 outlines where the conductors must be located. Both rules recognize service conductors must enter the building to make connection to the service equipment. While it is generally agreed that, in the interest of safety, the unfused conductors within the building should be as short as possible, this distance is not clear.

A recommended practice in Alberta is to limit the length of service conductor in the building to 3 metres. Where this is not practical, service conductors may extend further inside the building provided they are mechanically protected in rigid metal conduit. The maximum distance for service conductors inside a building should not exceed 7.5 metres.

Alternatively, Rule 6-206 3) may be applied in situations when the service panel cannot be located near the point of entry of the consumer's service conductors. In this case, a safety codes officer must evaluate each situation on an individual basis.

Service equipment in areas prone to flooding

Rule 6-206 1) v) prohibits the installation of service boxes or other consumer's service equipment in areas below the flood elevation. Flood elevation is defined in Section 0 as the elevation of surface water resulting from a flood event designated in accordance with the National Building Code of Canada or applicable local legislation. Users of the CE Code are reminded to check with local planning departments regarding flood elevation in the area of concern.

Rule 6-300 Installation of underground consumer's service conductors

Underground service entrance facilities on the consumer's premises

Electrical utilities do not always install underground service entrance facilities (conductors, cable, raceway) on the consumer's premises. In these situations, it is necessary for the property owner, developer or contractor to arrange for the safe and reliable installation of these facilities. The following guidelines are recommended:

1. Only qualified persons should install underground service entrance facilities.
2. Obtain the appropriate electrical permits from the authority having jurisdiction.
3. To facilitate connection to the utility distribution system, terminate the supply end of the service conductors in a location and manner acceptable to the supply authority.
4. Seal the exposed supply end of the consumer's service conductors to prevent the entry of moisture.
5. Provide mechanical protection as necessary to prevent damage pending connection by the supply authority.
6. The supply authority is responsible for connecting the consumer's service conductors to the supply service.
7. Ensure service conductors and cables are approved and suitable for the application in accordance with Rule 2-024, 6-300 and Table 19.
8. Where settlement of earth is likely to occur, position conductors in a manner that will prevent settlement of the surrounding earth from placing any strain on the conductors entering the meter socket or building. Trench to a depth where the conductors will be laid on solid undisturbed ground.
9. To prevent strain on the connections in the meter socket, arrange the service conductors to form an inverted "U" before connecting to the line side terminals.
10. Label the service box with wording similar to:

Warning - This building is supplied by an
underground electric service.

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YOU DIG

1-800-242-3447 (Toll Free)

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11. To avoid inconvenience and unnecessary costs to the customer, coordinate the installation of the power conductors with telecommunications services (telephone, television, internet).
 - Telecommunications cables may be installed without a fixed minimum separation from the power service conductors, provided:
 - a concentric neutral cable or metal covered cable is used for the power conductors, or
 - the power conductors are installed in a conduit or plastic pipe.
 - Otherwise, the separation between the telecommunication cables and the power service conductors should be not less than 300 millimetre of well-tamped earth, 100 millimetre of brick, or 75 millimetre of concrete.
12. Place service conductors loosely on undisturbed earth and install and protect them in accordance with Rule 12-012.

Depth of burial

Rule 6-300 1) b) i) references Rule 12-012 for underground installation requirements. Rule 12-012 1) further references Table 53 for proper burial depths. Because of potentially much larger fault currents, it is recommended the minimum cover requirements for direct buried service entrance conductors, cables or raceways meet the requirements for vehicular areas as shown in Table 53, even in non-vehicular areas.

Connection of consumer's service conductors to utility pad mount transformers

The supply authority is responsible for the safety and acceptability of secondary terminations on their pad mount transformers regardless of who makes the actual connections. The following guidelines are recommended regarding safety procedures for the connection of a consumer's service to the secondary terminals of a utility pad mount transformer:

1. Obtain written authorization and supplementary instructions from the supply authority before commencing electrical work in the pad mount transformer enclosure.
2. Supply and install terminating lugs: approved for the type of conductors used, and compatible with the secondary terminals or bus of the transformer.
3. Ensure the supply authority inspects the terminations prior to energizing the transformer.

Maintenance of underground consumer's services

If breakdown occurs in underground service conductors or repairs become necessary, the local electrical utility company must be contacted to disconnect and isolate the consumer's service conductors from the power supply. Also disconnect and isolate renewable or back-up power sources where applicable.

The electrical utility companies have an agreement with "Utility Safety Partners" to locate and mark the location of the underground service conductors for digging postholes or other excavation and digging operations.

Electrical conductors and gas services in the same trench

The CE Code, does not establish specific requirements for installing electrical conductors in the same trench as gas-lines. Gas services installed by gas utilities are subject to requirements administered by the Industry Governance and Rural Utilities Branch of Alberta Agriculture, Forestry and Rural Economic Development. If you wish to install electrical conductors in the same trench as a gas service, consult the local gas utility for advice.

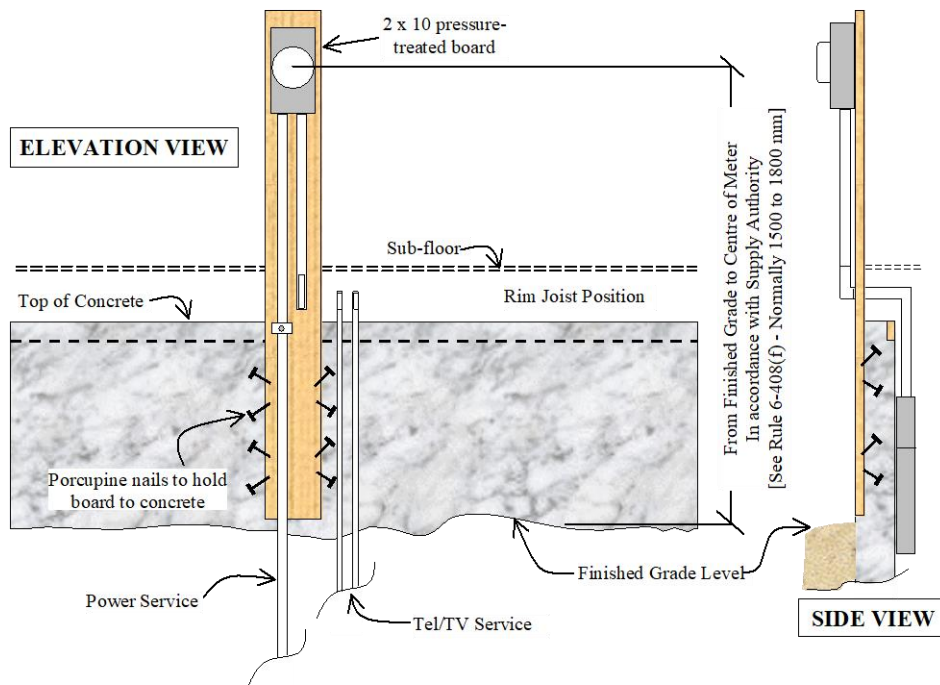
Gas sub-service lines (i.e., house to garage) are an owner responsibility under the Gas Code Regulation. When electrical conductors are installed in the same trench, it is recommended the two systems be separated by 300 millimetres of well tamped earth or a 50 millimetre pressure treated plank.

Rule 6-312 Condensation in consumer's service raceway

The industry has expressed concern with the use of fibreglass thermal insulation for sealing service raceways. The insulation often becomes saturated with moisture making it no longer effective and increasing the potential for rupture of the raceway during "freeze/thaw" cycles. Rule 2-126 2) does not permit the use of thermal insulation for this purpose. "Duct Seal" or other approved compounds are acceptable.

Rules 6-400 to 6-412 Metering equipment

The location and type of metering equipment must be acceptable to the supply authority. Consult the local supply authority for metering requirements to avoid costly changes and delays in getting a power connection.

Residential Permanent Meter Socket Support

Normally, the meter socket and service equipment are installed once the outside walls are constructed. Some contractors, however, have introduced alternate means of supporting the meter prior to outside walls being constructed in order to provide electrical service earlier during the construction phase of the residence. In these circumstances, consideration must be given to ensuring the meter is effectively supported. The diagram above shows one acceptable method of supporting the meter.

In addition to effective meter support, precautions must be taken to protect the panelboard from the effects of rain until the sub-floor is in place.

Installation of current transformers

For protection and safety of workers, the industry is reminded to short circuit the terminals of current transformers before opening the metering circuit while the system is energized. By design, current transformers may produce an extremely high open circuit voltage with the potential for serious shock hazard and equipment damage.

At installation, an accessible shorting block or similar mechanism should be provided for workers to be able to readily short circuit the current transformer circuit prior to opening the circuit.

Disclaimer:

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STANDATA bulletin 21-ECB-008

Electrical

2021 Canadian Electrical Code, Part I, Section 8 – Circuit loading and demand factors

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies the rules of Section 8 of the Canadian Electrical Code, Part I (CE Code), which applies to maximum circuit loading, load calculations for sizing services, feeders, branch circuits, the use of demand factors, branch circuit positions for dwelling units, and heater receptacles for vehicles.

Discussion

Rule 8-100 Current calculations

120/208 volt, 3-wire feeders from a 120/208 volt, three-phase, 4-wire supply

To obtain the voltage divisor for calculating the minimum ampacity of 120/208 volt, 3-wire feeders, use the voltage between a phase and the identified conductor (120 volts) multiplied by two (120 volts x 2 = 240 volts).

The voltage divisor for calculating the minimum ampacity of the 120/208 volt, three-phase, 4-wire service conductors is 1.73 x 208 volts.

Rule 8-200 Single dwellings

Electric Water Heaters

When performing load calculations for single dwellings as per Rule 8-200 1), domestic hot water storage tank heaters should be included as per Rule 8-200 1) a) vii). Electric tankless water heaters or electric water heaters for steamers, swimming pools, hot tubs, or spas should be included as per Rule 8-200 1) a) v).

Calculating Additional Loads in Excess of 1500 Watts

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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To determine the minimum ampacity of service conductors or feeder conductors in accordance with Rule 8-200 1) a) vii), the nameplate rating of each load with a rating greater than 1500 watts is to be used in the calculations.

Rule 8-202 Apartment and similar buildings

Electric Water Heaters

When performing load calculations for single dwellings as per Rule 8-202 1), domestic hot water storage tank heaters should be included as per Rule 8-202 1) a) vii). Electric tankless water heaters or electric water heaters for steamers, swimming pools, hot tubs, or spas should be included as per Rule 8-202 1) a) vi).

Calculating Additional Loads in Excess of 1500 Watts

To determine the minimum ampacity of service conductors or feeder conductors in accordance with Rule 8-202 1) a) vii), the nameplate rating of each load with a rating greater than 1500 watts is to be used in the calculations.

Rule 8-400 Branch circuits and feeders supplying heater receptacles for vehicles powered by flammable or combustible fuels

The minimum ampacity of service or feeder conductors for a building should be calculated by using Rules 8-202 to 8-208 as applicable for the type of occupancy, and separately calculating the load for the automobile heater receptacles according to Rule 8-400. These two figures, each with its own demand factor already applied, are then added together to determine the total load.

Where the parking lot receptacles are supplied from individual dwelling units of an apartment or similar multi-family building, the above method of calculating total demand should also be applied. The 75% demand factor in Rule 8-202 3) e) is not to be applied, because a demand factor is included in the load as determined in compliance with Rule 8-400.

For the application of Rule 8-106 3), an automobile heater receptacle load may be considered similar to an "electric space heating" load. In applying this rule, ensure the air conditioning load will not be operated in conjunction with the heating equipment and/or with the automobile heater receptacle load.

Disclaimer:

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STANDATA bulletin 21-ECB-010(REV1)

Electrical

2021 Canadian Electrical Code, Part I, Section 10 – Grounding and bonding

Date Issued: July 2022

Page 1 of 7

Purpose

This clarifies Section 10 of the Canadian Electrical Code (CE Code), Part 1, which deals with the grounding of electrical systems and the bonding of its associated equipment. Grounding and bonding minimizes the hazard of electric shock to persons and animals, and also protects against property damage.

Discussion

Rule 10-102 Grounding electrodes

Replacing metal water service lines with non-metal type

The replacement of existing metal water service lines with a non-metal type and the insertion of non-metal devices such as water softeners in the water line may result in a loss of adequate service grounding.

To ensure grounding is not compromised:

- a. Where a metal water service line serving as the grounding electrode is replaced with a non-metal line, an alternate ground electrode should be installed.
- b. Where non-metal devices are inserted into a water line serving as the grounding electrode, a grounding jumper sized in accordance with Rule 10-114 should be installed.

When utilizing a metal water pipe as an electrode, connection as per Rule 10-118 should be made on the street side of the water meter and as close as practicable to the point of entrance of the water service.

Unless stated otherwise, all Code references in this STANDATA are to the 2021 CE Code, Part 1

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Plate electrode

Rule 10-102 2) c) requires that a plate electrode be buried at least 600 mm below finished grade level. Safety codes officers have encountered situations where plate electrodes have been placed just below the concrete slab in basements, apparently due to a misunderstanding of the term “finished grade level”.

Finished grade level is the anticipated final elevation of the surface directly above the plate electrode. Plate electrodes in basements should be buried at least 600 mm below the expected final surface elevation of the basement floor.

Grounding electrodes provided by the supply authority

Grounding electrodes and associated grounding conductors owned by the supply authority fall under the Alberta Electrical Utility Code (AEUC), not under the CE Code. As such, they cannot be utilized by the consumer. A separate grounding electrode owned by the consumer and falling under the CE Code is required to establish single point grounding on the consumer's side of the demarcation point. The consumer's grounding electrode must be connected to the grounded conductor terminal of the consumer's service equipment as per Rule 10-210.

Note: see end of this STANDATA for information on Grounding and Bonding at Oil and Gas Drilling or Servicing Operations.

Rule 10-210 Grounding connections for solidly grounded ac systems supplied by the supply authority

Installation of grounded service conductor

The bonding conductor in a cable assembly is intended to be used as an equipment-bonding conductor. Where armoured cables are installed as consumer's service conductors in compliance with Rule 6-300 or Rule 6-302, the bonding conductor does not necessarily meet the minimum size requirements of Rule 10-114 and it may be necessary to use a 4-conductor cable.

Elimination of stray voltage in areas housing livestock

Where stray voltages are severe enough to present a problem in facilities housing livestock, neutral to earth reactors (commonly known as “tingle voltage filters”) are permitted by Rule 10-116 2).

Neutral to earth reactors should not be used until it has been determined that improperly installed or improperly maintained electrical systems or equipment have been corrected to eliminate them as a possible cause of the stray voltage problems.

Rule 10-212 Grounding connections for solidly grounded separately derived ac systems

Circuits supplied from two sources

Where circuits are supplied from two sources, certain grounding arrangements may affect the operation of ground fault sensing devices. Following are some guidelines for effectively grounding two sources supplying circuits through a transfer switch or tie.

Grounding at both sources of supply

Where two ground electrodes are used, one for each source of supply (e.g., utility power and power from a standby or emergency generator), it would be good design practice to isolate the grounded circuit conductor for each system through an extra pole at the transfer switch. This arrangement would reduce the potential for nuisance tripping of ground-fault sensing equipment.

Grounding at a single point

Subrule 1) a) iii) permits a single connection to a grounding conductor to be connected to the tie point of the grounded circuit conductors in the transfer switch or at the service equipment.

Rule 10-214 Grounding connections for portable generator assemblies and vehicle-mounted or mobile generators

Neutral Connections

Portable generators are being used more often by homeowners as back-up or stand-by power. It is important the electrical system is properly grounded. Generators are available with the neutral bonded to the frame or without (floating neutral). The following is recommended:

Neutral bonded to frame

If the generator has a neutral bonded to the frame, the neutral should also be grounded to a grounding electrode and the transfer switch should have an extra pole to switch the neutral. Switching the neutral will ensure that, at any given time, the neutral is only grounded at one point (either the main switch or the generator).

Floating neutral

If the generator has a floating neutral, it should not be grounded to a grounding electrode nor should it be switched in the transfer switch. The generator frame is bonded to ground as a result of the “equipment bonding” requirements of the CE Code and the neutral connection to the electrode is maintained at the main service via a solid neutral connection in the transfer switch.

Because of the variety of emergency and standby power systems, it is not always feasible to provide fixed recommended practices. Each installation should be evaluated and designed to satisfy specific load, customer and code requirements. Furthermore, in situations where it may be necessary to remove bonding screws or jumpers in the service switch or at the generator, you should follow manufacturers’ instructions.

Rule 10-600 Bonding for fixed electrical equipment

Rule 10-610 Bonding means – fixed equipment

Stainless steel mineral-insulated electrical-heat-trace cable bonding requirements

It is common practice to install stainless steel mineral-insulated electrical heat trace cable (SS MI EHT cable), for modular fabrication of piping systems, with splices between portions of cables made in the field. Where SS MI EHT cable is spliced in the field, confusion exists regarding the bonding to ground of metallic junction boxes. To assist industry in determining bonding requirements for metallic junction boxes, the following requirements must be observed:

1. Rule 10-600 1) requires all non-current carrying parts of electrical equipment to be connected to a bonding conductor.
2. Rule 10-614 outlines the acceptable means of achieving equipment bonding.

In the application of these requirements, distinction must be made between SS MI cable & SS MI EHT cable:

1. For SS MI cable supplying power to electrical equipment, the sheath is not considered as a suitable bonding conductor, and therefore the MI cable requires a bonding conductor incorporated within the cable.

2. For SS MI EHT cable being supplied power as electrical equipment, the stainless steel sheath is not serving as a bonding conductor, but rather as a metallic enclosure. Therefore this stainless steel metallic sheath must be bonded as required by Rule 62-104 2).

Guidelines for field installed SS MI EHT cable splices/junctions:

1. Metallic junction boxes used in conjunction with SS MI EHT, to interconnect various sections, must be bonded to ground as required by Rule 10-600 1).
2. Fiberglass/plastic junction boxes used in conjunction with SS MI EHT will not require a bonding conductor to the junction box; however, the continuity between the connectors/cable sheaths must be maintained. Bonding jumpers installed as per Rule 10-616 will be acceptable.
3. SS MI EHT male and female cold lead assemblies attached to the SS MI EHT are certified for that purpose and no additional bonding is required.

Rule 10-700 Equipotential bonding of non-electrical equipment

Bonding of Fuel Tank Systems

Where fuel storage tanks are required to be bonded to ground, e.g. NFC(AE) 4.3.13.12, the minimum installation safety requirements contained in the 10-700 series of rules apply.

Code References

2019 NFC(AE) 4.3.13.12. Bonding and Grounding

- 1) Where storage tanks for flammable liquids or combustible liquids are installed inside buildings, tanks, piping and discharge equipment shall be bonded and grounded.

Bonding of gas piping systems

Bonding of gas piping systems should not interfere with any cathodic protection forming part of the gas piping system. The bonding of the gas line should therefore be made on the consumer side of the gas meter. Common practice in residential applications has been to bond the gas piping system to the cold water pipe at the hot-water tank. With the increasing use of plastic water lines, it is recommended the gas piping system be bonded to the main distribution panel or the grounding conductor or the grounding electrode. When bonding soft copper propane lines and other similar tubing, care should be taken to ensure the piping is not damaged.

Grounding and bonding at oil and gas drilling or servicing operations

Rule 10-102 1) requires that grounding electrodes shall consist of a manufactured, field-assembled or in-situ type.

When setting up a service rig or a drilling rig, the use of manufactured or field-assembled electrodes as described in Rules 10-102 2) and 10-102 3) can be impractical. The following is considered acceptable for meeting the intent of an in-situ type grounding electrode:

a. The rig guyline anchor (usually the closest one to the rig generator)



b. The well casing



For equivalency to conventional electrodes, the portion of the anchor or well casing below 600 mm from finished grade should present an equivalent surface area in contact with earth as do manufactured electrodes.

Equipotential bonding of non-electrical equipment

Although the CE Code does not specifically require that non-electrical equipment around drilling or service rig installations be bonded, the intent of Rule 10-700 is to have the metal parts of non-electrical equipment bonded to ground to prevent dangerous potentials in the event of electrical faults (see the Appendix B note to this Rule).

The nature of the activity around drilling operations (i.e., wet conditions and the potential for explosive atmospheres) is a strong factor to support the need for bonding non-electrical metal equipment to minimize shock hazards and potential static discharges.

EXAMPLES OF BONDING



Note: single metal-to-metal connection



Note: double metal-to-metal connection

Equipotential bonding and grounding conductor requirements

Rules 10-702 to 10-708 serve as a guideline for bonding non-electrical equipment to ground. To protect against loss of bonding, approved lugs are required for a positive connection. Due to the possibility of damage, a bonding conductor no smaller than No. 6 American Wire Gauge (AWG) copper or No. 4 AWG aluminum should be used.

Rule 10-706 requires that equipotential bonding connections are made secure and are suitable for the conditions to which they may be subjected. For grounding and bonding of rigs, the use of a suitably rated copper or aluminum lug with associated buss is acceptable. Pliers-style, screw-type or spring enabled booster cable clamps are not considered acceptable as they may be easily dislodged.

It is important the installation and connections of the grounding and bonding conductors are reliable. The connections or lugs should make good metal-to-metal contact to the non-electrical equipment being bonded. The conductors should be well secured to the connectors. In addition, Rule 10-116 of the CE Code requires the grounding conductor be electrically continuous throughout its length.

Extra precautions should be taken to ensure conductors and connectors are not subject to damage that could result in a loss of continuity. Contractors should incorporate measures to prevent circumstances within operations that could result in a loss of continuity. This may include altering traffic patterns, flagging or other means of protecting the grounding and bonding conductors and their connections.

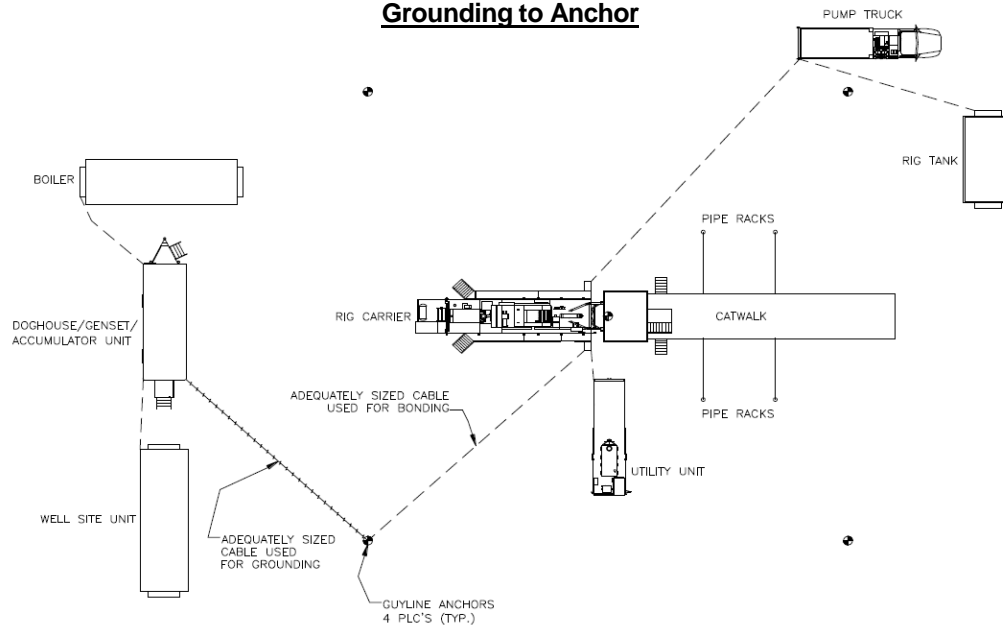
Typical grounding and bonding layout

1. Alternating Current (AC) system grounding conductor run to an aluminum lug or buss attached to a rig anchor or the wellhead.
2. The remaining “non-electrical equipment” (i.e., rig, utility skid, mud pump, mud tank, generator building, boiler, etc.) bonded to ground with:
 - a. a bonding conductor interconnecting each piece of equipment back to the ground electrode; or
 - b. a bonding conductor from each piece of equipment to the ground electrode; or
 - c. a combination of a. and b. above.

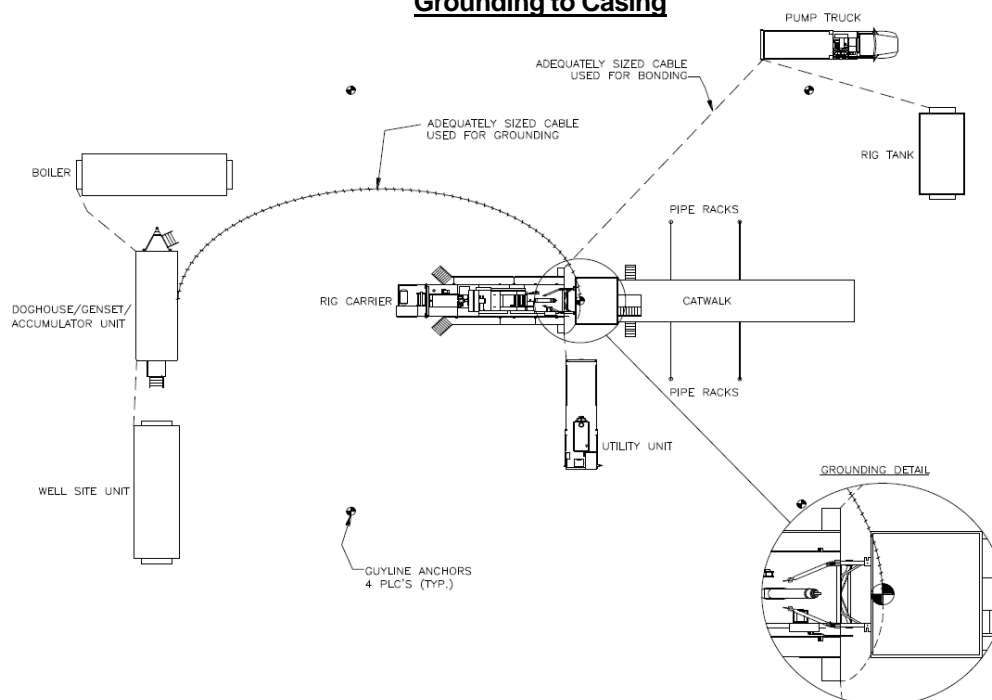
A No. 4 AWG copper welding cable provides an excellent type of flexible cable for bonding purposes and AC system ground for most applications on service rigs.

Refer to the following diagrams as examples of typical rig grounding and bonding layouts.

Typical Layout #1 **Grounding to Anchor**



Typical Layout #2 **Grounding to Casing**



Disclaimer:

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STANDATA bulletin 21-ECB-012

Electrical

2021 Canadian Electrical Code, Part I, Section 12 – Wiring methods

Date Issued: 1 February 2022

Page 1 of 4

Purpose

This clarifies select rules of section 12 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 12-012 Underground installations

Protection of conductors and cables

A review of Rule 12-012 5) indicates it is intended to apply to cables other than armoured cable, mineral-insulated cable and aluminum-sheathed cable. Requirements for mechanical protection of these cables are stipulated in Rules 12-604 and 12-710 (see comments on Rule 12-604).

Rule 12-306 Insulated conductor and cable supports

When using wood poles to support overhead conductors, the following guidelines are recommended:

The poles should be treated with an acceptable preservative to prevent premature rotting and:

- (a) Be of sufficient length to provide the conductor clearances specified in Rule 6-112;
- (b) Be guyed where necessary to maintain the specified clearances;
- (c) Have a minimum circumference at the top of 430 millimetres;
- (d) Have a minimum circumference measured at a point 1.8 metres from the butt of:
 - (i) 700 millimetres - for poles not exceeding 7.7 metres in length; or
 - (ii) 760 millimetres - for poles exceeding 7.7 metres but not exceeding 9.2 metres; or
 - (iii) 810 millimetres - for poles exceeding 9.2 metres but not exceeding 11.0 metres; or
 - (iv) 860 millimetres - for poles exceeding 11.0 metres but not exceeding 12.2 metres; and

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Issued by the Provincial Electrical Administrator

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(e) Be set in the ground a minimum depth of:

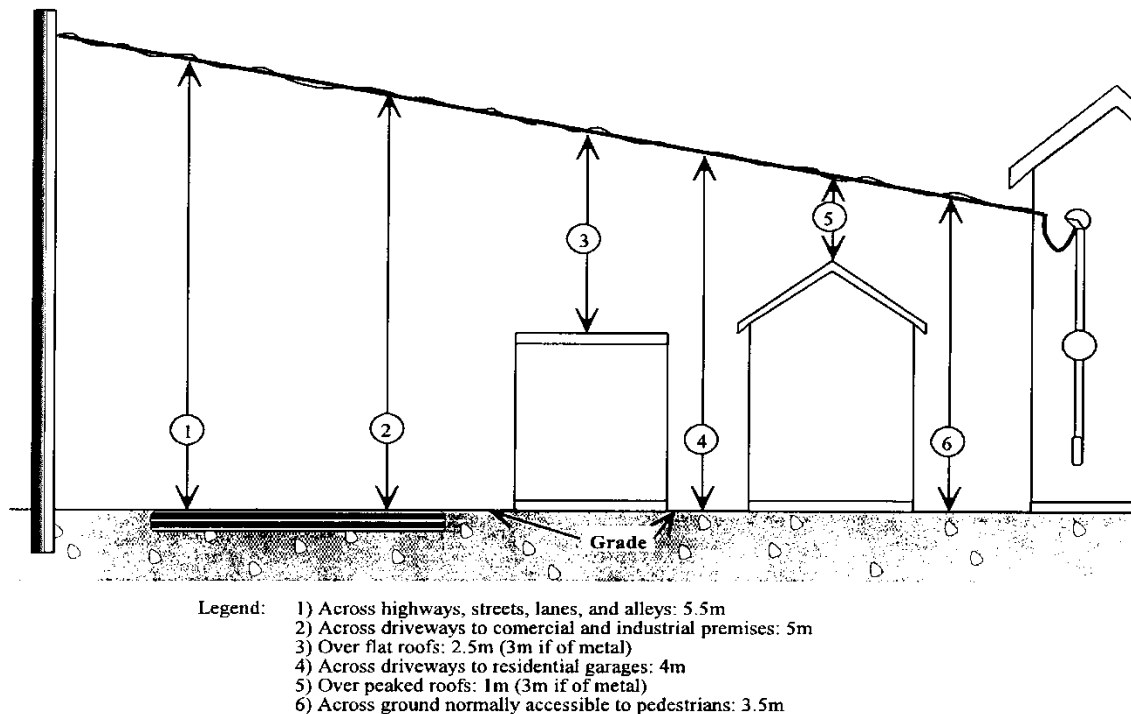
- (i) 1.5 metres - for poles not exceeding 7.7 metres in length; or
- (ii) 1.6 metres - for poles exceeding 7.7 metres but not exceeding 9.2 metres; or
- (iii) 1.8 metres - for poles exceeding 9.2 metres but not exceeding 12.2 metres;

except that for poles set in rock, concrete, or fabricated bases, this depth may be reduced.

Rule 12-310 Clearance of insulated conductors and cables

Although the Canadian Electrical Code, Part I (CE Code) does not specifically prescribe clearances for overhead conductors that are not service conductors, the clearance requirements of Rule 6-112 for service conductors should be used. Farms may be interpreted as commercial or industrial premises and the 5 metre clearance in Rule 6-112 is recommended.

Clearances for conductors over buildings are required to be 2.5 metres over flat roofs and at least 1 metre over peaked roofs. Where metal roofing is involved, a 3 metre clearance is recommended. Buildings of this type may require a supporting mast so that at least a 3 metre clearance over the roof can be maintained.



Conductor clearances for electrical utility installations are prescribed in the Alberta Electrical Utility Code (AUEC).

Rule 12-402 Uses of flexible cord

Portable multi-outlet assemblies

Approved indoor power poles of the portable type are available with a flexible supply cord. The installation of receptacle outlets above suspended ceilings for the connection of cord connected portable indoor power poles is considered acceptable. The installation however, is normally concealed in the ceiling space resulting in a potential for proper maintenance to be overlooked. Therefore, the use of extension cords or "cube" taps are discouraged and the power pole flexible supply cord should be plugged directly into the receptacle outlet.

Rule 12-516 Protection for cable in concealed installations

Non-metallic sheathed cable should not be run horizontally through sections of a building where it is known that cupboards or other fixtures will be installed that may require the use of long mounting nails or screws that could pierce the cable. Unless the wall construction is such that horizontally run cables are at least 50 millimetres from the outer edges of the wooden members, cables should be protected by protection plates or sleeves of No. 16 Manufacturer's Standard Gauge (MSG) steel or the equivalent.

Rule 12-604 Protection for armoured cables in lanes

Rule 12-604 indicates that unless otherwise protected, armoured cables must be protected with steel guards where located less than 2 metres above grade in lanes and driveways. However, cables may also be subject to similar damage in other locations. To meet the intent of Rule 12-604, armoured cables located in areas where they may be damaged from vehicles or equipment should have mechanical protection for 2 metres above grade.

Where underground cables extending to an overhead supply system are intended to be installed on a supply authority's pole, mechanical protection should be provided by non-metallic conduit or similar non-metallic material. Please contact the local supply authority before placing cables on their pole.

Rule 12-606 Use of thermoplastic-covered armoured cable

Armoured cables having an overall outer covering, such as Type ACWU and Type TECK, must be provided with mechanical protection where necessary to ensure the outer covering is not damaged as stated in Rule 12-606. Cables having an overall outer covering that are used in hazardous areas must be installed in a manner that will not subject the covering to mechanical damage either during or after installation.

Rule 12-1114 Maximum spacing of conduit supports

Use of Stand-offs To Support Conduit Risers on Supply Authority Poles

The AEUC has requirements for mounting equipment on poles to discourage unauthorized climbing. Where the supply authority requires stand-offs and the required distance between supports exceeds that required in the CE Code for the raceway, the following is recommended:

Rigid PVC (polyvinyl chloride) or HFT (halogen free, fire resistant, temperature stability) conduit with a trade size of 63 or larger will be acceptable with spacing between supports of 2.5 metres, at one point only, to comply with the AEUC requirement. Spacing between supports for the balance of the riser is to comply with Rule 12-1114. This raceway may be installed as a continuous run, or as a sleeve to support a raceway with a smaller trade size. Please contact the supply authority before placing any equipment on their pole.

Rule 12-1404 Restrictions on use (of Electrical Metallic Tubing)

Installations where Electrical Metallic Tubing (EMT) is subject to excessive vibration are considered "subject to mechanical damage" as referenced in paragraph a) of this rule. You are cautioned to avoid using EMT in these situations. Some examples of where vibration may be "excessive" are gravel crushers, saw mills, planer mills, etc.

Rule 12-2202 Insulated conductors and cables in cable trays

Installation of Bonding Conductors in Cable Tray

Although a green insulated single conductor is permitted as the bonding conductor in cable trays, it must be flame tested in compliance with Rule 2-126. Wire and cable certified to Canadian Standards Association (CSA) Standard C22.2 No. 75 Thermoplastic Insulated Wires and Cables (i.e.: Type TW, TWU, etc.) has been flame tested to the Vertical Flame Test, equivalent of that recognized by the FT1 mark.

Wire and cable certified to CSA Standard C22.2 No. 38, Thermoset Wire and Cable, (i.e.: RW, RWU XLPE), however, has no mandatory flame test requirement. Such wires or cable would not be acceptable for installation in a cable tray unless specifically tested and marked accordingly.

The National Building Code - Alberta Edition contains flame spread requirements for wire and cables as indicated in Rule 2-126 of the CE Code. To meet the requirements for wire and cable in non-combustible buildings, it will be necessary to use materials or installation methods specifically approved for those applications.

Support – GeneralRules 12-1010, 12-1406, 12-3010, 12-3012

Rules 12-1010 and 12-1406 indicate that conduit and EMT must be securely fastened. Rules 12-3010 and 12-3012 stipulate the conditions under which boxes, cabinets and fittings are to be firmly secured to fixed structural units. The use of suspended ceiling support wires for this purpose is not considered as meeting the intent of these rules.

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STANDATA bulletin 21-ECB-016

Electrical

2021 Canadian Electrical Code, Part I, Section 16 – Class 1 and Class 2 circuits

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies Rules 16-010 and 16-212 of Section 16 of the Canadian Electrical Code, Part I, dealing with Class 1 and Class 2 circuits.

Discussion

Rule 16-010 Circuits to safety control devices

Even though a remote-control circuit may have the power characteristics of a Class 2 circuit, where the failure to operate a remote-control circuit to a safety control device introduces a direct fire or life safety hazard, the remote-control circuit shall be deemed to be a Class 1 circuit.

Examples of safety control devices which may introduce a direct fire or life safety hazard include boiler safety control devices, such as high limit switches and pressure switches, or ski lift safety circuit devices, such as limit switches or stop switches.

Energy management systems designed to control all heating, air conditioning, and ventilation functions in a building may have both Class 1 and Class 2 circuits. Power requirements, wiring method, application, and design may determine the actual circuit classification; however, remote-control circuits to any safety control device that may introduce a direct fire or life safety hazard must be installed as a Class 1 circuit.

For clarification on whether a remote-control circuit with Class 2 power characteristics should be deemed a Class 1 circuit, the installation owner and designer should be consulted to identify if failure of the circuit controlling the safety device will introduce a direct fire or life safety hazard.

Rule 16-212 Separation of Class 2 circuit conductors from other circuits

Principal Exhaust Fans

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

Issued by the Provincial Electrical Administrator

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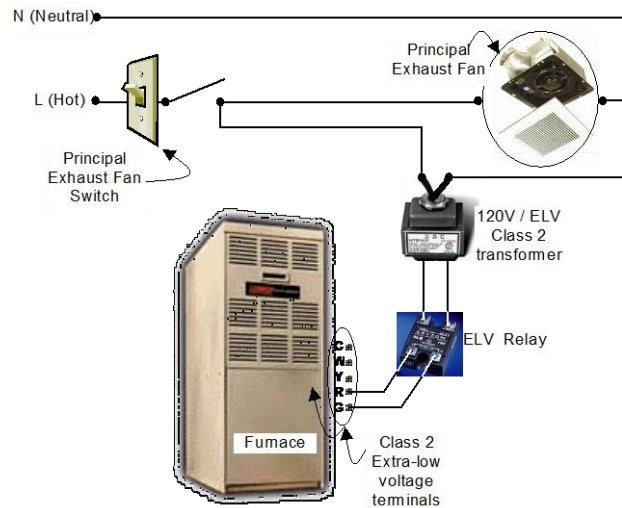
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The National Building Code – Alberta Edition (Article 9.32.3.4.) requires the mechanical ventilation system in residential occupancies serving only one dwelling unit to incorporate a principal exhaust fan interconnected with a make-up-air supply fan. The principal exhaust fan is controlled by a centrally located control switch, which simultaneously starts the ventilation system supply fan. Where the dwelling uses a forced-air heating system, the principal exhaust fan must be interlocked with the furnace fan.

Most furnaces have a Class 2 circuit, which controls the furnace fan through a relay. It is important when interlocking the principal exhaust fan with the furnace fan not to mix the Class 2 furnace control circuit with the power circuit for the principal exhaust fan. Rule 16-212 3) indicates Class 2 circuits and power circuits must not be in the same enclosure or raceway.

The diagram depicts one example of a proper method for interlocking the Class 2 furnace fan control circuit with the power circuit of the principal exhaust fan. Other methods may also be acceptable.



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STANDATA bulletin 21-ECB-018

Electrical

2021 Canadian Electrical Code, Part I, Section 18 – Hazardous locations

Date Issued: 1 February 2022

Page 1 of 4

Purpose

This clarifies select rules of Section 18 of the Canadian Electrical Code, Part I (CE Code) which addresses electrical installations where explosive gas atmospheres or explosive dust atmospheres are likely to occur.

Discussion

Rule 18-004 Classification of hazardous locations

The purpose of area classification, as outlined in the CE Code, is to determine the proper equipment, materials, and wiring methods for electrical installations in hazardous locations.

Rule 18-004 requires that hazardous location classification be carried out and documented by qualified persons, and that the person assuming responsibility for the classification authenticate the hazardous area classification. In Alberta, this person is a registered engineering professional who is authorized to engage in the practice of engineering under the *Engineering and Geoscience Professions Act* and its regulations. See the CE Code, Part I, Appendix B Note to Rule 18-004 3) for further information.

Subrule 4) of Rule 18-004 allows electrical installations within the scope of Section 20 to be classified in accordance with Section 20.

In determining if an area is required to be classified as a hazardous location, consideration should be given to:

- the definition of 'Hazardous location' in Section 0;
- the divisions of explosive atmospheres into Zones based on frequency of occurrence and duration of the explosive atmosphere as prescribed in Rules 18-006 and 18-008; and
- the definitions of Zones in Rule 18-002.

Once it is determined that an explosive atmosphere could exist in an area, an area classification would be performed in compliance with 18-004.

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Due to the nature of hazardous locations and the risk of fires and explosions associated with them, involvement by various individuals who understand the relevance and significance of the properties of the hazardous materials involved, are knowledgeable in the appropriate classification standards and guidelines, and who are familiar with the process and equipment is essential to ensure that appropriate measures are taken to properly classify the hazardous locations. For a small or simple facility, this may only require the input of a single discipline, whereas for a large or complex facility, this may involve more than one discipline such as electrical, mechanical, process, safety, and operations specialists.

Documentation is an essential element in classifying hazardous locations, and typically includes items such as drawings and specifications, studies and calculations, reports and operating descriptions. This documentation should be maintained and updated over the life of the facility.

Appendix L of the CE Code contains more details on area classification guidelines.

For area classification requirements at oil and gas facilities permitted or constructed prior to February 1, 2019, the use of the "Code for Electrical Installations at Oil and Gas Facilities" published by the Safety Codes Council is permitted. For oil and gas facilities permitted on or after February 1, 2019, the prescriptive requirements contained in Rule 18-004 of the currently in force edition of the CE Code apply.

For classification requirements at sewage lift and treatment plants, see Rule 22-704.

Rule 18-050 Electrical Equipment

Ammonia machinery rooms

Ammonia is listed in Rule 18-050 as a Group IIA hazardous gas. Canadian Standards Association (CSA) Standard B52-Mechanical Refrigeration Code includes installation requirements for refrigerating systems that use ammonia. Where a refrigerating system uses ammonia in a "Machinery Room", the room is normally considered a hazardous location.

However, when a refrigerating system using ammonia is installed in a "Class T Machinery Room", the room shall not be considered a hazardous location. One of the requirements for a Class T machinery room is that where the independent mechanical ventilation system is not operated continuously, a gas monitoring system shall be installed to automatically start up the ventilation system and actuate a remote alarm at the lowest practical instrument-detection level not exceeding 25% of the lower explosive limit.

To be acceptable as a non-hazardous location, it may be necessary to provide the appropriate Authority Having Jurisdiction written confirmation that the refrigerating system is installed in a "Class T Machinery Room" in conformance with CSA Standard B52.

Installation of transducers and similar devices

Transducers are devices used to convert one form of energy into another, such as pressure-to-current (P/I) or vice versa (I/P). In a typical application, the transducer converts an electrical output signal, usually 4-20 milliamps (mA) from a controller to a pneumatic signal necessary to operate a control valve actuator or pneumatic positioner (I/P). Another application may be to monitor the flow and/or pressure of process fluids with transducers that convert pressure to a 4-20mA signal (P/I).

Careful consideration must be given to the selection of an appropriate transducer if a flammable gas, vapour, or liquid (explosive fluid) is intended as the medium for operation. Using transducers designed only to be operated with "normal air" poses significant safety hazards when they are actually operated by an explosive fluid. In these situations, the device has not been designed or tested for use with an explosive fluid and is not suitable for the application, thus voiding its certification and is in non-compliance with the CE Code.

When a "normal air" transducer is operated with an explosive fluid, there is a significant risk that the explosive fluid will migrate into the wiring system with potentially increased pressures within the equipment and the wiring system further compounding the hazard. Even though the wiring system and equipment enclosure may be explosion proof, they may not have been designed for use where there is a combination of an explosive fluid at elevated pressures. Therefore, the "normal air" transducer is not suitable for the application.

When selecting a transducer (or similar device) intended for operation with an explosive fluid, be sure to specify to the supplier/manufacturer its intended application and that it may require a process seal. At existing transducer installations, where an explosive fluid is the medium used to operate the device, you are encouraged to review documentation and consult with the manufacturer to determine whether the device incorporates an appropriate

process seal. Where it is identified that these installations have a transducer that is not suitable for the application, you are advised to take all necessary actions to resolve a potentially hazardous situation.

Note: Although the installation of this type of equipment is prevalent in hazardous locations, there are certainly situations where a transducer operated by an explosive fluid is located in a non-hazardous location. In those cases, the above information is also equally applicable.

Relocatable structures (skid units)

See STANDATA 21-ECB-002, Item “Rule 2-100 Marking of Equipment”.

Assemblies in hazardous locations

Industry is reminded that, where individual components are certified but the entire assembly is not certified, CAN/CSA C22.2 No. 60079-46 (requirements for the design, construction, assembly, testing, inspection, marking, documenting and assessment of equipment assemblies for use in explosive atmospheres under the responsibility of the manufacturer of the equipment assembly) should be used.

Rule 18-064 Pressurized equipment or rooms

Rule 18-064 allows equipment and associated wiring pressurized with a protective gas to be located in an explosive atmosphere. The Appendix B note to this Rule suggests three possible references that could be used to meet the requirements of this Rule. The National Fire Protection Association (NFPA) standard 496 “Standard for Purged and Pressurized Enclosures for Electrical Equipment” is frequently used as a guide in designing systems to meet the requirements of Rule 18-064 in Zone 2 or Class 1, Division 2 Hazardous Locations. The purpose of this STANDATA item is to highlight a common error that is made in applying this standard, as outlined in the following:

The pressurization system used by the standard to pressurize enclosures in Zone 2/Class 1, Division 2 Hazardous Locations is a type Z purge. Three requirements of type Z pressurizing in the standard read as follows:

4.8* Type Z Purging

4.8.1 Detection shall be provided to indicate failure to maintain positive pressure within a protected enclosure

4.8.1.1 Failure to maintain positive pressure within a protected enclosure shall be communicated by an alarm or an indicator.*

4.8.1.2 It shall not be required to de-energize the protected equipment upon detection of the failure to maintain positive pressure within the protected enclosure.

Note that when reading the standard, an asterisk (*) at the beginning of a paragraph indicates that explanatory material on the paragraph can be found in Appendix A of the standard.

In some cases, designers have interpreted paragraph 4.8.1.2 to mean that while loss of pressurization requires an alarm, it will not be necessary to de-energize the protected equipment. It should be noted that the wording in paragraph 4.8.1.2 should be understood to mean that while it may not be necessary to de-energize the protected equipment immediately “upon” loss of pressurization, if the pressurization cannot be restored within a short period, the protected equipment should be de-energized.

This interpretation is confirmed by the Appendix A note to the definition for an alarm, which reads as follows:

A.3.3.1 Alarm. *An alarm is intended to alert the user that the pressurizing system should be immediately repaired or that the electrical equipment protected by the failed pressurizing system should be removed from service.*

If the protected equipment is critical to the operation of a facility, installation of backup pressurization means should be considered as a part of the design.

Rule 18-074 Bonding in hazardous locations

For sizing bonding conductors or bonding jumpers in hazardous locations, Rule 10-616 (Size of system bonding jumper or bonding conductor) should be used.

Rules 18-104 Sealing, Zone 1 & 18-154 Sealing, Zone 2Sealing of control cables with bundled sub-assemblies

CSA Standards C22.2 No.174 (Cables and cable glands for use in hazardous Locations) and C22.2 No.230 (Tray Cables) have provisions to test and mark cables with bundled sub-assemblies for extending through a sealing fitting or gland without removing the shield. Cables that meet the requirements of these standards will bear the mark "HL" (for cables approved for Hazardous Locations) or "TC" (for Tray Cable), followed by the appropriate group designation.

Only those cables tested and marked in accordance with the appropriate CSA Standards will be acceptable when extended through a seal without removing the shield and separating the individual conductors of the pairs, triads, etc.

Sealing underground conduits and cables

Areas in earth below grade are normally considered non-hazardous, although the areas above grade have been classified as hazardous locations. In some cases however, spilled flammable liquids or heavier than air gases seeping through the earth can enter conduits and cables. Examples of such locations may be service stations, bulk storage plants, refineries, tank farms, and batteries.

To prevent the transfer of ignitable vapours into non-hazardous areas, conduits and cables located in such areas should be sealed at the point of emergence in the non-hazardous area. Cables may be sealed at the first point of termination in the non-hazardous area. The holes through which such conduits and cables enter the building should be made vapour-tight to prevent ignitable vapours from entering the building around the outside of the conduits or cables.

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STANDATA bulletin 21-ECB-020

Electrical

2021 Canadian Electrical Code, Part I, Section 20 – Flammable liquid and gasoline dispensing, service stations, garages, bulk storage plants, finishing processes, and aircraft hangars

Date Issued: 1 February 2022

Page 1 of 6

Purpose

This clarifies rules in section 20 of the Canadian Electrical Code, Part I which contains the requirements for electrical installations for flammable liquid and gasoline dispensing, service stations, garages, bulk storage plants, finishing processes, and aircraft hangars.

Discussion

Rule 20-004 Hazardous areas

Rule 20-004 8) should not be interpreted as classifying the earth below the surface of the Zone 1 and Zone 2 areas around gasoline dispensing pumps as being a hazardous area. The rule stipulates that electrical wiring and equipment below the surface of areas defined as hazardous must be considered to be within a Zone 1 location that extends to the point of emergence above grade. Therefore, electrical wiring extending from a pit or depression below the surface of the Zone 1 or Zone 2 hazardous area around gasoline dispensing pumps to the point of emergence are Zone 1 wiring.

Seals are to be located in accordance with the requirements of Section 18 for the hazardous location involved.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

Issued by the Provincial Electrical Administrator

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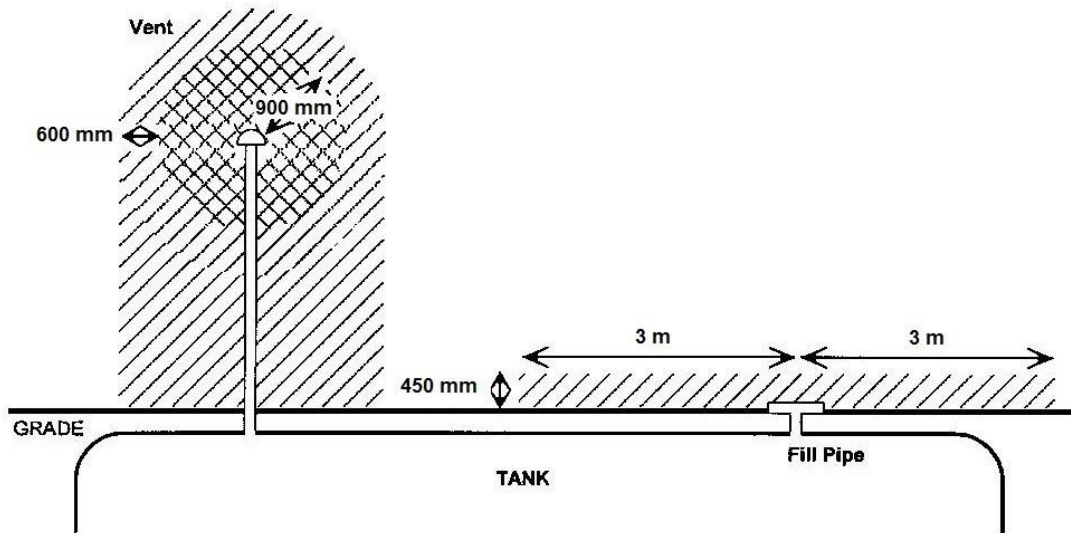


GASOLINE STORAGE TANKS

HAZARDOUS AREA CLASSIFICATION



See Rule 20-004 7) & 8)

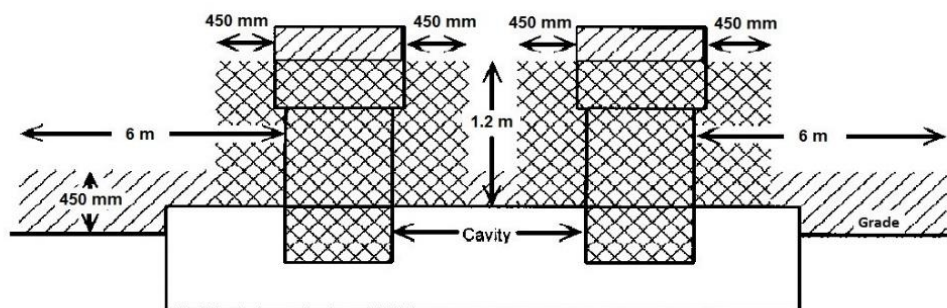


GASOLINE DISPENSING STATION

HAZARDOUS AREA CLASSIFICATION



See Rule 20-004



Outdoor aboveground gasoline storage tanks and dispensing

Some gasoline dispensing operations and service stations employ aboveground gasoline storage tanks. Industry has expressed concerns that Section 20 does not clearly identify hazardous area classifications in the vicinity of aboveground gasoline storage tanks when used in conjunction with gasoline dispensing operations.

Where a registered engineering professional has not classified an installation, the following guidelines may be used for the classification of outdoor aboveground gasoline storage tanks and dispensing operations:

Location	Zone	Extent of Classified Area
Tank – interior (including interstitial space)	0	Area within the tank.
Tank – exterior (single and double walled tanks)	2	Area extending 3 metres in all directions from the tank surface.
Pumps, valves, manifolds etc.	2	Area within 3 metres of a potential source of leakage.
Underground tank fill opening	1	Area within the spill containment box.
	2	Area within 3 metres of tank fill opening extending upward to a level 450 millimetres above driveway or ground level.
Aboveground tank fill opening	1	Area within a 900 millimetre radius of the fill connection or fill opening.
	2	Area beyond the 900 millimetre extending to a radius of 3 metres from the fill connection or opening
Vent discharging upwards	1	The spherical volume within a 900 millimetre radius from the point of discharge.
	2	The spherical volume between 900 millimetres and 1.5 metre radius from point of discharge.

Vent that does not discharge upwards		The cylindrical volume below both the Zone 1 and Zone 2 locations extending to the ground shall be considered a Zone 2 location.
Spill containment / Dike	2	The area within the perimeter extending to the top of the spill containment.
Dispenser		Refer to Rules 20-002 to 20-014

Propane vehicle dispensers, container filling, and storage

The scope of this part of Section 20 does not cover consumer's propane storage tanks. For full information regarding these installations, consult your gas inspection authority.

As a general guideline for electrical installations near consumer's propane storage tanks, the following applies:

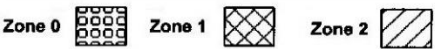
The area around a consumer propane storage tank is considered a Zone 2 hazardous location:

- (a) Within 3 metres of a tank having a capacity of 125 US Water Gallons (USWG) (over 475 Litres) to not more than 1000 USWG (3800 Litres); and
- (b) Within 7.5 metres of a tank having a capacity in excess of 1000 USWG (over 3800 Litres).

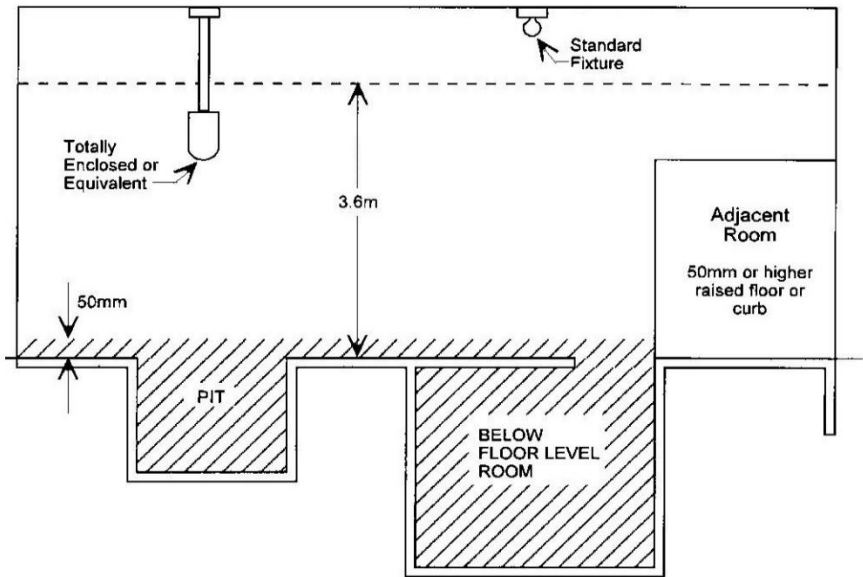
A "consumer" propane storage tank is a tank used to supply propane gas for propane burning appliances and equipment, and is not used for the purpose of transferring liquid propane to other containers.

COMMERCIAL REPAIR GARAGES

HAZARDOUS AREA CLASSIFICATION



See Rule 20-102



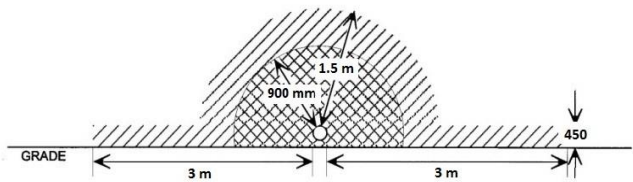
Bulk storage plants (See Table 69)

FLAMMABLE LIQUIDS
BULK PLANTS

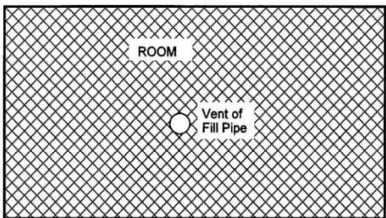
HAZARDOUS AREA CLASSIFICATION



Outdoor Transfer of Flammable Liquids to Individual Containers

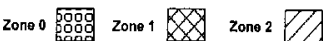


Transfer of Flammable Liquids to Individual Containers Indoors Without Mechanical Ventilation

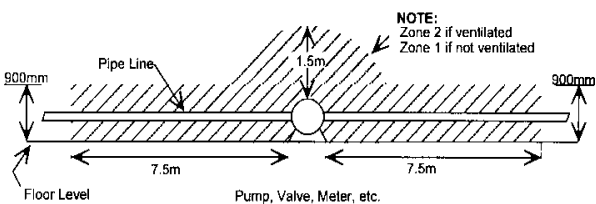


FLAMMABLE LIQUIDS
BULK PLANTS

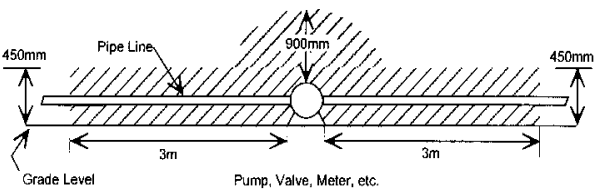
HAZARDOUS AREA CLASSIFICATION



INDOOR AREA



OUTDOOR AREA



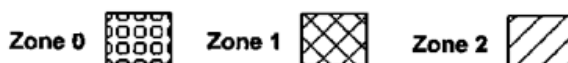
Aircraft hangars

Rule 20-400 Scope

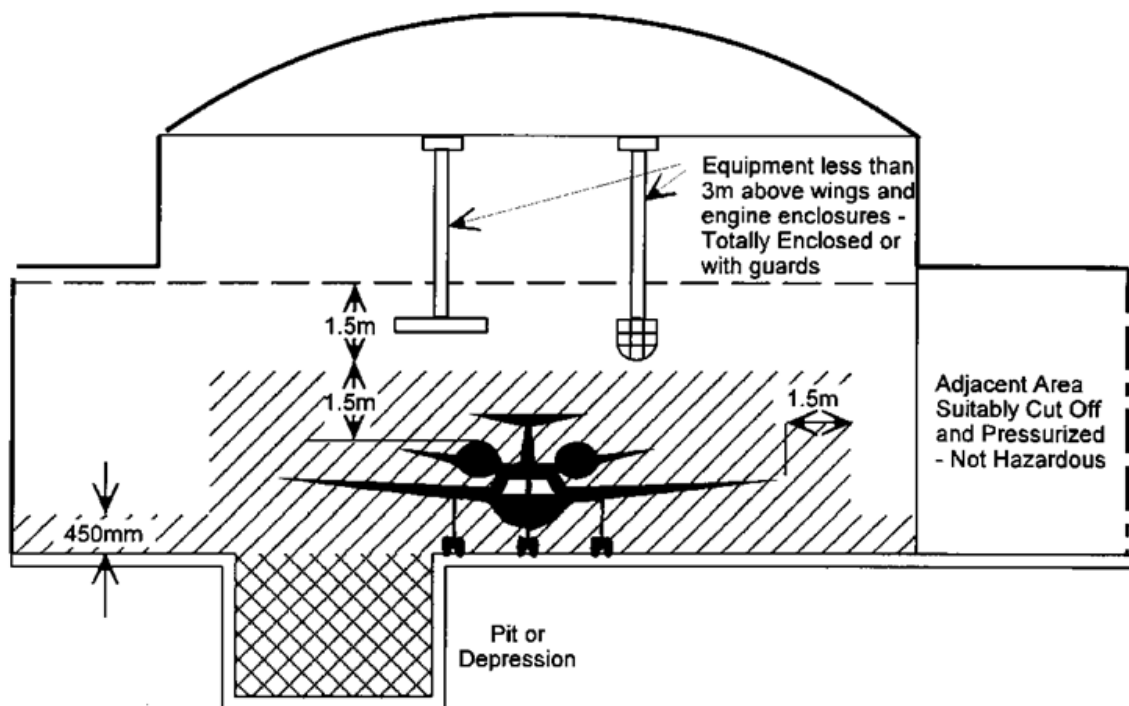
Although all aircraft hangars are considered to fall within the scope of this section, there are some cases where strict compliance is not warranted. For instance, small storage sheds used for private aircraft at private airstrips, flying clubs, and the like are not considered to present the same hazard as larger commercial hangars and often wiring methods outlined in Section 12 would be acceptable. For these types of facilities, please contact the local Authority Having Jurisdiction for assistance in determining an acceptable wiring method and to obtain any required variances.

AIRCRAFT HANGAR

HAZARDOUS AREA CLASSIFICATION



See Rule 20-402



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STANDATA bulletin 21-ECB-024

Electrical

2021 Canadian Electrical Code, Part I, Section 24 – Patient care areas

Date Issued: 1 February 2022

Page 1 of 1

Purpose

This clarifies select rules of Section 24 of the Canadian Electrical Code, Part I, which applies to the installation of electrical wiring and equipment within patient care areas of health care facilities and the portions of the electrical systems of health care facilities designated as essential electrical systems.

Discussion

Rule 24-000 Scope

Section 24 rules are to be applied to health care facilities beyond the traditional hospital locations including, but not limited to, dental clinics, physician's offices, and chiropractic clinics.

Contractors should reference CAN/CSA-Z32 and consult with the facility practitioners or the licensing body to determine the different patient care areas in a facility when these areas have not been designated by a registered architect or registered engineering professional.

Increasingly, health care activities are being moved into residential settings. Contractors should note that where health care equipment is installed in a dwelling unit, there may be special installation requirements for that equipment. Examples include: dialysis machines, electric hospital beds, pneumatic pumps, feeding pumps, suction machines, oxygen concentrators, cold nebulizer machines, pulse oximeters, curlin pumps, blood pressure monitors, and other similar types of medical equipment. Where such equipment is installed in a dwelling unit, the circuit(s) and device(s) supplying the equipment should comply with the requirements of Section 24. Contractors are also reminded to comply with the equipment manufacturer's installation guidelines and requirements.

The requirements of Section 24 need not apply to circuits or devices that do not supply home-based medical equipment.

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Issued by the Provincial Electrical Administrator

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STANDATA bulletin 21-ECB-026

Electrical

2021 Canadian Electrical Code, Part I, Section 26 – Installation of electrical equipment

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of section 26 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 26-600 Location of panelboards

Concerns have been expressed with the requirement for mounting panelboards in dwelling units with no overcurrent device being more than 1.7 metres above finished floor level. This could create a situation where the non-metallic-sheathed branch circuit cables may come within the 1.5 metres from the floor described in Rule 12-518.

The rationale for Rule 26-600 is for panelboards to be located in areas where they will not be subject to damage and are readily accessible. The rationale for Rule 12-518 is to protect cables from mechanical damage when they come within 1.5 metres of the floor unless protected by location. Given that panelboards are intended to be installed in an area not subject to damage, then the non-metallic-sheathed cable entering the panelboard would meet the intent of Rule 12-518, not requiring additional mechanical protection.

Rule 26-658 Arc-fault protection of branch circuits for dwelling units

Rule 26-658 1) a) ii) provides an exemption from Arc-fault Circuit Interrupter (AFCI) protection for refrigerators in kitchens. Concerns have been expressed regarding the refrigerator AFCI exemption not applying to freezers. Insight can be obtained from the rationale and intent in the Canadian Electrical Code Handbook for another residential branch circuit rule:

Canadian Electrical Code Handbook Rule 26-654

Item a) requires that a separate branch circuit for every refrigerator be installed in the kitchen. Some refrigerators draw a relatively high current, and plugging in another appliance on the same circuit can cause the overcurrent device to open. If this goes unnoticed, there is no electrical hazard, but the food in the refrigerator can spoil.

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Since the reason refrigerators are exempt from AFCI protection is to prevent any possible nuisance tripping and the associated food spoilage, the same exemption can also apply to freezers.

Rule 26-706 Tamper-resistant receptacles

Receptacles in child care facilities

A childcare facility is a facility that requires a license under the *Early Learning and Child Care Act* and its regulations.

Rule 26-722 Receptacles for dwelling units

Safety codes officers have raised concerns about the possibility of damage to non-metallic sheathed cable feeding receptacles in island counters not permanently fixed to the building structure.

Some building contractors are designing island counters so that they may be easily moved to different locations in a kitchen. A movable island counter is not a “fixed island counter” and therefore does not require a receptacle as outlined in Rule 26-722 d) iv). Island counters are deemed to be “fixed” when secured to the structure with nails, screws or equivalent method.

Electrical contractors should consult with the building contractor to determine if the kitchen island counter is movable or fixed, and should only install receptacles in fixed island counters.

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STANDATA bulletin 21-ECB-028

Electrical

2021 Canadian Electrical Code, Part I, Section 28 – Motors and generators

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 28 of the Canadian Electrical Code, Part I which applies to the installation, wiring methods, conductors, protection, and control of electric motors and generators.

General

Motors controlled by variable frequency drives (VFDs)

Motors that have not been specifically tested as suitable to be operated by VFDs can cause various problems to both the customer's electrical system and the utility supply. Some of these concerns include motor overheating from reduced cooling capabilities due to slower fan speeds and from harmonic wave distortion. Harmonic wave distortion can reduce motor efficiency due to increased losses, increased heating of motors, circuit conductors and transformers, and increased stress on motor insulation. Consideration should also be given to what effects harmonic distortion could have on other areas of the plant such as power quality degradation, voltage dips, premature equipment failure, and interference with telephone or computer equipment.

Canadian Standards Association (CSA) Standard C22.2 No. 100-14 (R2019), Clause 13.4 states that in addition to the normal marking requirements, inverter duty machines (motors) shall be permanently marked. It reads as follows:

13.4 Marking

13.4.1

In addition to the marking requirements of Clause 6 and Clauses 8 to 10, inverter-duty machines shall be permanently marked with the following:

- a) the machine application, e.g., inverter-duty motor;

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- b) the speed range over which the machine is designed to operate or, if marked with a nominal speed at a nominal frequency, the frequency range over which the machine is designed to operate;
- c) the type(s) of torque application for which the machine is designed, e.g., VT (variable torque), CT (constant torque), CHp (constant horsepower), or the equivalent; and
- d) the type(s) of inverter with which the machine is intended to be used, e.g., VSI or VVI (6-step voltage-source), CSI (6-step current-source), VPWM (voltage-source pulse width modulated), CPWM (current-source pulse width modulated), LCI (load commutated), cycloconverter, or the equivalent.

13.4.2

Machines equipped with an integral inverter need not be marked in accordance with Clause 13.4.1 c) and d).

Considering that:

- motors intended for use with a Variable Frequency Drive should be suitable for operation by a VFD;
- Rule 2-024 of the Code requires that electrical equipment “be of a kind or type and rating approved for the specific purpose for which it is to be employed.”; and
- CSA Standard C22.2 No. 100-14 has marking requirements for VFD rated motors,

For new installations, we should therefore ensure that motors and VFDs intended for use in a variable speed application be compatible and that motors are marked accordingly.

For existing installations, where motors are retrofitted to incorporate VFDs, owners are responsible for assessing the compatibility of the motor with the corresponding VFD. To facilitate ongoing operation and maintenance, owners are also encouraged to maintain a record of the compatibility assessment information.

Rule 28-106 Insulated conductors - Individual motors, and

Rule 28-108 Insulated conductors - Two or more motors

Table 27 Duty Cycle

The insulated branch circuit conductors for an individual motor are normally sized to those values specified in Table D16 for the full load current rating of the motor. The exception is where a motor is designed and used for short-time, intermittent, periodic or varying duty, under the specific conditions as shown in Table 27. In addition, a motor application is considered one of continuous duty unless the nature of the apparatus that it drives is such that the motor will not operate continuously under load during any condition of use.

Caution is advised where Table 27 is being applied, particularly when the use of insulated conductors rated less than 125% of the motor nameplate current rating are being considered. It would usually be necessary, in such cases, to have complete manufacturer's technical data for the motor and the apparatus driven to ensure that the operational conditions and design characteristics would be compatible with the reduced size of conductors.

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STANDATA bulletin 21-ECB-030

Electrical

2021 Canadian Electrical Code, Part I, Section 30 – Installation of lighting equipment

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 30 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 30-302 Supports

Luminaires on suspended ceilings

Consult the designer or building architect to confirm that adequate load-bearing characteristics are inherent in the suspended ceiling design to support the additional weight of the lighting fixtures.

Where lighting fixtures form part of an existing ornamental or suspended ceiling, they should be independently supported unless it can be established that the ceiling will suitably support the fixtures and any associated wiring material.

Rule 30-308 Circuit connections

Disconnect and retrofit/renovation installations for luminaires with double-ended lamps

Retrofit and renovation installations have consistently required clarification regarding the need for disconnects in existing luminaires utilizing double-ended lamps connected to a ballast or driver.

Any existing luminaires utilizing double-ended lamps connected to a ballast or driver and rated over 150 volts-to-ground, which are disconnected then reconnected (at the same location or not) are considered to be installed as a new luminaire and therefore require disconnects.

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Retrofit jobs whereby luminaires utilizing double-ended lamps connected to a ballast or driver and rated over 150 volts-to-ground, having modifications made for energy conservation purposes will also require disconnects (Re-approval as per STANDATA 21-ECB-002 may also be required).

Simple ballast or driver replacements for maintenance purposes would not be considered as requiring a disconnect by the literal interpretation of the code rule, however, owners and contractors are encouraged to provide luminaire disconnects in these situations.

Rule 30-314 Minimum height of low luminaires

Following are guidelines for applying Rule 30-314:

- (a) A rigidly mounted ceiling luminaire in a readily accessible location should be no less than 2.1 metres above the floor if the lamp is not guarded.
- (b) A rigidly mounted ceiling luminaire should be located so that the bottom of the luminaire is no less than 2 metres above the floor.
- (c) Rigidly mounted wall luminaires with outer globes or other enclosures may be located at a lesser height, since the wall provides some protection against people walking directly under or adjacent to them. In no case should the bottom of the luminaire be less than 1.8 metres above the floor. Where a wall-mounted luminaire is installed over a cabinet or vanity, it is considered to be protected by location. A luminaire over the vanity in a bathroom should be kept at least 1 metre from the tub or shower enclosure.

Rule 30-320 Lighting equipment in damp locations or near grounded metal

Switches in bathrooms

Although the rule references only switches controlling lampholders and luminaires, it is also considered to apply to switches controlling heat lamps, exhaust fans, and other equipment.

Note: A steam room is considered the equivalent of a shower or bathtub for the purposes of Rule 30-320 3).

Rule 30-500 Reserved for future use

Location of lighting equipment and controls in buildings of residential occupancy

Requirements for the placement and control of lighting equipment for residential occupancies has been removed from the Canadian Electrical Code, Part I, beginning with the 2021 edition. The requirements for the location and control of lighting equipment in buildings of residential occupancy can be found in the latest edition of the National Building Code – Alberta Edition. The change was made to delete duplication between the two Codes and also removes an obstacle to new technologies such as wireless switching.

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STANDATA bulletin 21-ECB-032

Electrical

2021 Canadian Electrical Code, Part I, Section 32 – Fire alarm systems, smoke alarms, carbon monoxide alarms, and fire pumps

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 32 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 32-000 Scope

Regarding fire pumps, all pumping equipment used in sprinkler, hose and standpipe systems that are required by the National Building Code – Alberta Edition to either boost the pressure or to pump from a standing water source are considered to be “fire pumps”. This includes pumps used at various levels in high rise buildings, but does not include maintenance pumps (jockey or makeup).

Rule 32-200 Installation of smoke alarms and carbon monoxide alarms in dwelling units

The National Building Code – Alberta Edition sets the requirements for the location of smoke alarms within dwelling units. This includes provisions for smoke alarms on each floor level of a dwelling unit, including basements and sleeping rooms. Where more than one smoke alarm is installed in a residence, the National Building Code – Alberta Edition requires that they must be interconnected.

Where a smoke alarm circuit in a combustible building is supplied from a Class 2 power supply, the interconnection of the smoke alarms is permitted to be an approved Class 2 wiring method. However, extra-low-voltage control cable (such as Type LVT, rated 30 volts maximum) is not permitted to enter boxes, fittings or enclosures containing insulated conductors connected to circuits of a higher voltage.

Regular residential smoke alarms normally require a 120 volt connection from a 15 ampere circuit. Rule 32-100 requires that the insulated conductors be of copper with an ampacity adequate to carry the maximum current provided by the circuit; therefore No. 14 American Wire Gauge (AWG) or larger.

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Interconnection of smoke alarms with carbon monoxide Alarms

Some manufactures supply smoke alarms and carbon monoxide alarms that can be interconnected. Although the Canadian Electrical Code, Part I does not specifically address this practice, the installation may be permitted provided certain precautions are taken:

1. Each device is approved.
2. Each device is suitable for interconnection with each other (consult manufacturers' literature for each device).
3. Each device is installed according to Rule 32-200 and the manufacturers' instructions.

Rule 32-304 Service box for fire pumps

When separate consumer services are installed for fire pumps, the installation should be coordinated with the electric utility concerned.

For further information pertaining to the electrical installation of fire pumps, reference should be made to the current National Building Code – Alberta Edition, which references the National Fire Protection Association (NFPA) Standard #20 Centrifugal Fire Pumps.

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STANDATA bulletin 21-ECB-036

Electrical

2021 Canadian Electrical Code, Part I, Section 36 – High-voltage installations

Date Issued: 1 February 2022

Page 1 of 1

Purpose

This is to clarify Rule 36-308 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 36-308 Connections to the station ground electrode

The boundary of a station located indoors is limited to the equipment and the equipment enclosure. For the purposes of bonding non-current-carrying metal parts inside the building not deemed part of the station, Section 10 applies.

Industry is reminded to consider limiting touch and step potential according to the tolerable levels specified in Table 52.

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STANDATA bulletin 21-ECB-060

Electrical

2021 Canadian Electrical Code, Part I, Section 60 – Electrical communication systems

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 60 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 60-000 Scope

Section 60 applies to wiring and equipment of the consumer's portion of a communication installation. Before installing an electrical communication system on a consumer's premises intended to be connected to a communication network, the appropriate communication utility should be consulted. The communication utility will provide the necessary information for an acceptable demarcation point between the consumer's and the utility's portion of the installation.

Rules 60-302 to 60-334 Inside conductors

Although rules regarding the installation of communication circuits inside do not specifically state that boxes and enclosures are required, note that Section 60 is supplementary to other rules of the code. Rule 2-202 states that bare live parts shall be guarded against accidental contact and applies to communication circuits as well as others.

Connections for communication circuits are, therefore, to be enclosed in a suitable manner to prevent accidental contact.

Rule 60-314 Communication conductors in ducts and plenum chambers

A raceway is sometimes used to enclose communication cables run in plenums (described in Rule 12-010 3)) because the cables do not have the proper flame spread requirements of Rule 2-130. Concern has been expressed regarding the difficulty in terminating the conduit and cable at the top of a pole type multi-outlet assembly.

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Discussions with the building discipline have concluded it is acceptable to terminate the raceway adjacent to the pole and run the cables open for a distance not exceeding 300 millimetres to facilitate entry.

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STANDATA bulletin 21-ECB-062

Electrical

2021 Canadian Electrical Code Part I, Section 62 – Fixed electric heating systems

Date Issued: 1 February 2022

Page 1 of 3

Purpose

This clarifies select rules of Section 62.

Discussion

Rule 62-126 Field repair, modification, or assembly of series trace heater sets

Industry has requested clarification of required information on permanent tags. The following information is provided to assist industry with permanent tag information and installation.

Field repair

As per Rule 62-126 2) b) for industrial establishments, when the total length of the heating portion of the trace heater sets is not changed by more than three percent, no additional tag is required.

Field modification or assembly

Rule 62-126 2) c) i) requires a permanent tag with new design information to be installed on series trace heater sets for industrial establishments that have been field modified or field assembled. Although the design information is not specified in the rule, Canadian Standards Association (CSA) Standard C22.2 No. 130-16 provides guidance as to the marking of field-assembled trace heater sets. Minimum marking requirements on the permanent tag should include:

1. the manufacturers name
2. the word "series" and usage markings
3. the rated voltage

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4. the rated output in watts per unit length or area and the specified temperature for that output for those trace heating devices that vary their power output with temperature
5. the maximum permissible steady-state current
6. a reference number or other similar identification which relates to a permanent record of the assembly or modification

Nameplates bearing the original markings must not be removed. The new permanent tag should be installed directly beside the original nameplate.

The permanent tag must be clearly legible and suitable for the environment (outdoors, corrosive environment, etc.).

For repairs of series trace heater sets in other than industrial establishments, Rule 62-126 3) applies. It requires a repair tag, supplied by the original manufacturer, be permanently attached beside the original tags.

Rule 62-212 Installation of trace heater sets and heating panel sets

Flexible Heating Panels

Several fires in Canada have been attributed to the improper installation of flexible heating panels. Although the actual cause for such fires is yet to be determined, investigations have revealed the need for extreme care with installation practices.

The following practices are necessary to reduce the risk of fire or product failure:

1. Flexible heating panels are to be installed by qualified persons.
2. The work of the various trades involved in the installation process must be coordinated. The installation of the electric heating panels, the construction practices involved in the area where the panels are located, the type of insulation used, etc. are critical to the safety of the final installation.
3. It is strongly recommended that the heating panel manufacturer or representative be directly involved in the installation to ensure the product, building construction, and the insulation type are correct for the heating product to operate safely.
4. Permits for a flexible heating panel installation should identify the type of heating panel used.
5. Resistance measurements taken in compliance with the manufacturer's instructions are to be in the form of a permanent record at either the panelboard location or the thermostat location.

Other heating systems

Rule 62-400 Trace Heater sets and heating panel sets installed within pipes, ducts, or vessels

Immersion heaters

An incident involving an immersion heater installed in an oilfield tank is cause to alert industry of a potential problem with the installation of immersion heaters. An investigation of the incident has revealed the level of the liquid was lowered to a point where some of the heater elements were exposed. The flashpoint of the fluid in the tank was approximately 60°celcius and its auto-ignition temperature was 380°celcius. When temperature control called for the heater to operate, the elements near the surface caused the fluid to vaporize (flash). The vaporized fluid, mixed with the air present in the tank, created a flammable atmosphere and some of the elements of the immersion heater were exposed to the flammable atmosphere. The heater elements are mineral insulated (MI) construction (typical for immersion heaters) that can operate at high temperatures, significantly above the ignition temperature of the flammable gas mixture. The oilfield tank atmosphere was ignited, resulting in an explosion and the collapse of the tank. Personnel were able to vacate the area with no injury. Failure or misapplication of an electric immersion heater was determined to be responsible for the ignition. An unofficial survey within the oil and

gas sector has identified a number of similar incidents where immersion heaters were suspected to be the cause of an unwanted fire/explosion.

Since there is no Canadian standard specific for process immersion heaters, certification bodies certify them to an "Other Recognized Document" (ORD). In the testing procedures, the heating elements are assumed to be immersed in a liquid all the time, and the testing for maximum temperature (or temperature code) is for those parts of the heater that are exposed to the atmosphere. The heating elements themselves are not temperature tested. Additionally, tests for conductor temperature rating at the heater connection point are made. Since these specific types of process heaters are semi-custom, the certifier engages in technical discussions with the manufacturer on specifics for testing such as the materials or range of materials for immersion and the environment. It was suggested that a test be made for the heater element temperature in air, however it was deemed unnecessary because:

- a) the heater elements are assumed to always be within the liquid, and
- b) the current test procedure is consistent with other certification bodies.

As part of the certification, the manufacturer is required to put warning statements in the instruction manual and a caution label on the product that a **liquid level and/or high temperature limit control must be used to de-energize the heater**. Manufacturer documentation contains these instructions and warnings, and therefore they become a requirement for installation. The certification body verifies that the documentation contains the appropriate instructions and warnings.

It is a user responsibility to ensure the elements remain immersed while in operation by installing level controls and/or have a high temperature limit control on the elements. Therefore:

1. Electric immersion heaters need to be installed with a high integrity liquid level control to ensure the element does not become un-immersed and/or a surface temperature limit device to de-energize the heater if the elements become un-immersed.
2. Other installations of process immersion heaters should be investigated for potential similar misapplications.



62-402 Overcurrent protection of storage-tank water heaters and conductors

Users are reminded that Rule 62-402, and the subsequent reference to Rule 64-114, is intended to be used for determining the rating or setting of overcurrent devices and to ensure proper protection for insulated conductors supplying only heating equipment. Demand factors for determining service calculations are contained in the appropriate Rules of Section 8, Circuit loading and demand factors.

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STANDATA bulletin 21-ECB-068

Electrical

2021 Canadian Electrical Code, Part I, Section 68 – Pools, tubs, and spas

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 68 of the Canadian Electrical Code, Part 1.

Discussion

Rule 68-058 Bonding

Although there may be no electrical equipment or electrical wiring associated with a pool during the initial stages of construction, the likelihood of introducing electrical equipment in the future is high. When electrical equipment is added later, it becomes very difficult, if not impossible, to bond the structural or reinforcing steel at that time. It is therefore recommended that the structural and reinforcing steel be bonded for all swimming pools at the initial stages of construction in accordance with Rule 68-058, even though electrical equipment or electrical wiring is not involved.

Rule 68-308 Other electric equipment

Pumps for hydromassage bathtubs

The location of the pump for hydromassage bathtubs must comply with Rule 2-122. It states: “Electrical equipment shall be so installed as to ensure that after installation there is ready access to nameplates and access to parts requiring maintenance.”

To comply with Rule 2-122, pumps, or any other electrical equipment, for hydromassage bathtubs are to be readily accessible. This could be in the form of a removable panel or other similar arrangement that will provide suitable access.

Spas and hot tubs

Rule 68-400 General

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There are two options for installing a spa or hot tub. One is to apply the requirements of Rule 68-408 for field assembled units and the other is to install a pre-manufactured unit and supply power to it accordingly.

Pre-manufactured units must be certified as a complete package to the appropriate Canadian recognized standard (CAN/CSA-C22.2 No. 218.1 – *Spas, Hot Tubs, and Associated Equipment*). This standard contains the requirement for ground fault circuit interrupter (GFCI) protection. The manufacturer has the option of either including GFCI protection as an integral part of the hot tub or providing a cautionary marking to the effect that GFCI protection must be provided by the installer. Regardless of which method is chosen by the manufacturer, you are cautioned to ensure that a ground fault circuit interrupter ultimately protects any electrical equipment and forms an integral part of a manufactured spa or hot tub. This is consistent with the requirements of Rule 68-068.

Furthermore, *certified* pre-manufactured spas and hot tubs are identified as certified by an acceptable certification mark found on the nameplate located on the outside of the spa or hot tub. Certification marks located on associated equipment identify the equipment as certified but do not suggest that the entire spa or hot tub unit is certified. In situations where a certification mark cannot be found on an exterior nameplate, even though the associated equipment is certified, the spa or hot tub must be considered a field assembled unit subject to the requirements of Rule 68-408.

Field-Assembled Units are normally assembled or built on the site where it is intended to operate. There may be situations where spas and hot tubs are assembled in a manufacturing setting and transported for permanent installation at a field site. In either case, the spa or hot tub must meet the requirements of Rule 68-408 with all associated equipment specifically approved for use with spas and hot tubs in accordance with Rule 68-408 2).

The Code requirements for field-assembled spas and hot tubs are in keeping with standard CAN/CSA-C22.2 No. 218.1. It is important to note that the General Rules of Section 68 (Rules 68-050 to 68-070) apply to all pools, including hot tubs and spas, as outlined in Rule 68-000. This includes the requirement for GFCI as per Rule 68-068.

Electrical permits, regardless of whether the spa or hot tub is pre-manufactured or field-assembled, are required from the inspection authority having jurisdiction. Inspectors will be responsible for determining the depth of inspection based on the type of installation.

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STANDATA bulletin 21-ECB-076

Electrical

2021 Canadian Electrical Code, Part I, Section 76 – Temporary wiring

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies select rules of Section 76 of the 2021 Canadian Electrical Code, Part 1.

Discussion

Rule 76-006 Service entrance equipment

Support for temporary construction service equipment

Inadequate support of service entrance equipment for temporary power on construction or demolition sites often results in equipment damage and failure and presents a potential safety hazard. To minimize the occurrence of an incident, modifications to the supporting structure should be done on de-energized equipment. The following guidelines are recommended for supporting temporary services:

1. Temporary services of 200 amperes or less, not mounted on a building and intended for overhead connection, should be mounted on a pole, or solid wood post not less than 89 millimetres by 140 millimetres.
2. Set the pole or post solidly into the earth to a depth of at least 1.2 metres. Brace as necessary to provide enough strength to support the supply service conductors and to support the potential for a person on a ladder making a power connection.
3. Maintain required clearances for overhead supply conductors in compliance with Rule 6-112 3).
4. Provide additional supporting structures for service equipment larger than 200 amperes; self-supporting, weatherproof, skid-mounted units are also acceptable.
5. Mount service equipment intended for connection to an underground supply service on a solidly braced post or structure.

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Issued by the Provincial Electrical Administrator

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6. Coordinate the installation of the consumer's service conductors and the supply service conductors in accordance with the requirements of the supply authority.

Disclaimer:

The information in this bulletin is not intended to provide professional design advice. If professional expertise is required with respect to a specific issue or circumstance, the services of a professional should be sought.

Interpretations

STANDATA interpretation 21-ECI-046

Electrical

2021 Canadian Electrical Code, Part I, Section 46 – Emergency power supply, unit equipment, exit signs, and life safety systems

Date Issued: 1 February 2022

Page 1 of 3

Purpose

This clarifies the allowable circuit configurations for exit signs and the activation of emergency lighting when supplied by unit equipment.

Discussion

Industry has requested clarification on the allowable circuit configurations for the installation of unit equipment (emergency lighting) and exit signs. A compliant installation requires application of several code rules together.

The information covered here deals with exit signs and emergency lighting provided from battery power and deals only with internally illuminated exit signs and unit equipment constructed in conformance to CSA C22.2 No. 141 Emergency Lighting Equipment. The following information is provided to assist industry.

Code Reference

C22.2:21 – 2021 Canadian Electrical Code, Part I

Unit equipment

46-304 Supply connections

- 1) Receptacles to which unit equipment is to be connected shall be not less than 2.5 m above the floor, where practicable, and shall be not more than 1.5 m from the location of the unit equipment.
- 2) Unit equipment shall be permanently connected to the supply if

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- a) The voltage rating exceeds 250 V; or
- b) The marked input rating exceeds 24 A.
- 3) Where the ratings in Subrule 2) are not exceeded, the unit equipment shall be permitted to be connected using the flexible cord and attachment plug supplied with the equipment.
- 4) Unit equipment shall be installed in such a manner that it will be automatically actuated upon failure of the power supply to the normal lighting in the area covered by that unit equipment.

Exit signs

46-400 Exit signs (see Appendices B and G)

- 1) Where exit signs are connected to an electrical circuit, that circuit shall be used for no other purpose.
- 2) Notwithstanding Subrule 1), exit signs shall be permitted to be connected to a circuit supplying emergency lighting in the area where these exit signs are installed.
- 3) The exit signs in Subrules 1) and 2) shall be illuminated by an emergency power supply where emergency lighting is required by the *National Building Code of Canada*.
- 4) The circuitry serving luminaires used to illuminate exit signs that are not connected to an electrical circuit shall comply with Subrules 1) to 3), as required by the *National Building Code of Canada*.

Objective of these rules

The objective of the rules for emergency lighting and exit signs is to provide a clear and recognizable path of travel for evacuation without persons being impeded or delayed in moving to a safe space. A minimum level of lighting must be maintained during an emergency or in a power failure condition.

Application

This interpretation applies to the installation and operation of internally illuminated exit signs and unit equipment constructed in conformance to CSA C22.2 No. 141 Emergency Lighting Equipment.

Interpretation

Canadian Electrical Code, Part I, Rule 46-304 4)

- Rule 46-304 4) requires unit equipment (emergency lighting) to be installed in such a manner that it will automatically activate upon failure of the power supply to the normal lighting in the same area covered by that unit equipment.
- Connecting unit equipment to a different circuit on the same panelboard as the normal lighting without provisions to automatically activate the unit equipment on failure of the power supply to the normal lighting does not meet the objective of the code.
- In order for emergency lighting to be activated when lighting in the affected area is interrupted, when battery power (unit equipment) is used, it must be on or controlled by the circuit that also serves the normal lighting in that area.
- For large open areas with multiple normal power lighting circuits serving them, a possible design uses a dedicated normal power lighting circuit connected to luminaires along the means of egress. The unit equipment (emergency lighting) is connected to this dedicated normal power lighting circuit so it is activated whenever this circuit fails. This ensures that the means of egress will always be adequately illuminated. It is recommended that designs for large areas be reviewed with the local Authority Having Jurisdiction.

- How the circuits can be configured is covered by Rule 46-400 which must work in conjunction with the requirements of Rule 46-304 4).

Canadian Electrical Code, Part I, Rule 46-400

- Rule 46-400 1) requires the power supply for the exit sign be provided from a branch circuit that is used for no other purpose – a dedicated circuit for exit signs only.
- However, Rule 46-400 2) waives the dedicated circuit requirement under specific conditions. The exit sign may also be supplied from a circuit that supplies emergency lighting in the same area where the exit signs are installed. Unit equipment fits into the category of emergency lighting, so a circuit supplying unit equipment could also supply exit signs.
- Under Rule 46-400 2), there is another exemption for what source circuit can supply an exit sign. To meet the requirements of Rule 46-304 4) for unit equipment to activate when the normal lighting in the same area fails, the normal lighting circuit serving that area will typically supply or control the unit equipment. In order to allow this to happen, a key interpretation of Rule 46-400 2) is:
 - The notwithstanding sub-rule 46-400 2) allows use of a lighting circuit supplied from the normal ac power source to feed both the normal area lighting and the unit equipment for emergency lighting located in that particular area and to also feed the electrically connected exit signs located in that area.

Canadian Electrical Code, Part I, Rule 2-100 3) a) Marking of equipment.

- It is important to be able to identify these circuits for testing purposes. At each branch circuit panelboard, equipment is to be marked that it controls emergency lighting unit equipment and/or exit signs.

This INTERPRETATION is applicable throughout the Province of Alberta.

STANDATA interpretation 21-ECI-064

Electrical

2021 Canadian Electrical Code, Part I, Section 64 – Renewable energy systems

Date Issued: 1 February 2022

Page 1 of 8

1. Rules 64-210, 64-216, and 2-200

Purpose:

This clarifies the requirement for solar photovoltaic (PV) direct current (dc) arc-fault protection and how it relates to rodent damage.

Discussion:

Solar PV system dc arc-fault protection is designed to detect and mitigate the effects of arcing faults that can pose a risk of fire ignition under certain conditions if the arcing persists. This may be the result of a failure of (or damage to) a conductor, connection, PV module or other system component.

The dc arc-fault protection required under Rule 64-216 provides series arc-fault protection. This position is supported by the rule's requirement to detect and interrupt arcing faults resulting from a "failure of the intended continuity of a conductor".

Solar PV inverters sold in Canada are manufactured under a number of standards. Standard CSA C22.2 No. 292 dc arc-fault protection for photovoltaic applications has recently been published. Prior to its development, manufacturers followed CSA Technical Information Letter T.I.L. M-07 and the UL1699B standard for photovoltaic dc arc-fault circuit protection. These standards describe testing for both Type 1 series arc-fault protection and Type 2 parallel arc-fault protection.

However, only series faults are required to be detected and protected against by current electrical codes. For this reason, today's Type 1 PV inverters are only certified to detect and interrupt series arc-faults. When the inverter senses a series arc-fault within the specified fault value (≥ 300 watts), the inverter shuts down and stops current flow in the entire circuit feeding into that inverter, effectively quenching the arc. This arc-fault protection is provided for the entire run of dc conductors from the inverter to the module, inside the module and the

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connections between modules. When this occurs, the inverter provides a fault message and must be reset manually. Each string in the PV system feeding that inverter must be inspected for faults as per the manufacturers' installation manual.

A certified dc arc-fault protective device can also be embodied in a number of ways such as in a combiner box. Module integrated products are in development stages, but are not yet readily available due to a number of technical challenges.

Code Reference

C22.1:21 – 2021 Canadian Electrical Code, Part I

2-200 General

Electrical equipment shall be installed and guarded so that adequate provision is made for the safety of persons and property and for the protection of the electrical equipment from mechanical or other damage to which it is liable to be exposed.

64-210 Wiring method

5) Where the dc arc-fault protection referred to in Rule 64-216 is not located at the module, photovoltaic source circuit conductors and cables installed on or above a building, and installed in accordance with Subrules 1), 2), and 3) shall be provided with mechanical protection, in the form of an enclosed raceway or other acceptable material to protect against damage from rodents.

64-216 Photovoltaic dc arc-fault circuit protection

- 1) Solar photovoltaic systems with a dc source or dc output circuit voltage of 80 V or greater when calculated in accordance with Rules 64-202 1) or 2) shall be protected by
 - a) a dc arc-fault circuit interrupter; or
 - b) other system equipment that provides equivalent protection.
- 2) The protection required in Subrule 1) shall
 - a) detect and interrupt arcing faults resulting from a failure in the intended continuity of a conductor, connection, photovoltaic module, or other system component in the dc photovoltaic source and output circuits;
 - b) not have the capability of being automatically restarted;
 - c) have annunciation, without an automatic reset, that provides a visual indication that the circuit interrupter has operated; and
 - d) disable or disconnect
 - i) inverters or charge controllers connected to the faulted circuit when the fault is detected; or
 - ii) the photovoltaic dc source circuits or dc output circuits either within the combiner, at the module junction box, or at the module cable connectors.

Application

This interpretation applies to rodent protection of photovoltaic source circuit conductors and cables installed on or above a building.

Interpretation:

Subrule 64-210 5)

This Subrule indicates that where the dc arc-fault protection referred to in Rule 64-216 is not located at the module, PV source circuit conductors and cables installed on or above a building require mechanical protection against damage from rodents. Detection and interruption of arc-faults provided by shutdown of an approved Type 1 inverter (or other certified component) referenced in Rule 64-216 are required to quench a series arc-fault. This is accomplished throughout all of the PV source circuits and PV output circuits connected to that inverter. Because of the protection provided by the inverter (or other certified component), up to and including at the module, there is no requirement for additional rodent protection **above what would be normally required by Rule 2-200 to protect equipment and cables from damage from environmental hazards which may be present (such as the presence of rodents and wildlife)**, when equipment compliant with Rule 64-216 is installed.

Rule 2-200

Even when arc-fault protection has been provided under the terms of Rule 64-216, **Rule 2-200 requires that electrical equipment be guarded from mechanical or other damage to which it is liable to be exposed.** For solar PV systems, the owner and designer are responsible to identify the likelihood of damage from any means (including rodents) on the specific site of installation. Those specific individual site conditions will dictate the requirement for installation of protection.

For example, a solar array installed on a roof of a house surrounded by mature trees would be a strong candidate for rodent protection compared to an installation on the roof of an industrial building of non-combustible construction.

Caution must be exercised in the application of rodent protection in certain conditions. In flat roof ballasted systems, there is a potential risk of increased wind loading. Racking systems have specific wind tunnel testing to generate wind coefficients but may not include additional mesh/fencing that could create wind drag and change the wind behavior and dynamics of the original design. This could potentially void the engineered racking design. There is also a high likelihood that energy production would be reduced and temperatures increased due to restricted air movement under the array during warmer weather.

For projects with professional involvement, this responsibility to identify the risks and the protection system should fall on the designer and should be fully acknowledged by the owner. It is strongly recommended that the installer consult the local Authority Having Jurisdiction well in advance to discuss the need for, and the type(s) of, additional protection required. No matter what type of equipment is installed, the owner should be made aware that regular inspections of the system are essential.

2. Rules 64-218 sub rules 1) through 4)

Purpose:

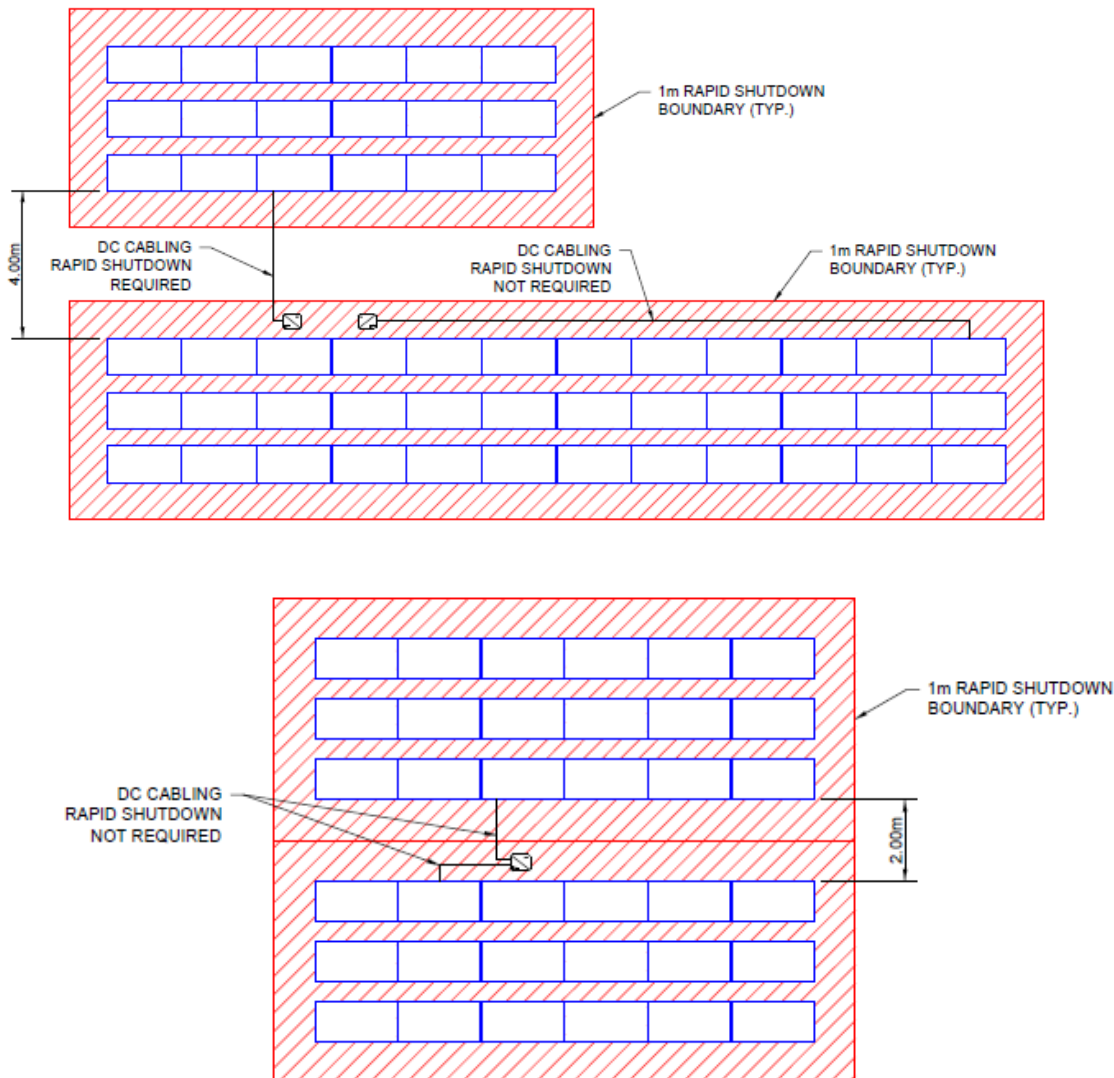
This clarifies which systems require photovoltaic rapid shutdown (RSD) as well as the approval requirements for equipment and systems used for this purpose.

Discussion:

It is important to consider that RSD rules specifically deal with shutdown to mitigate electrical and fire safety hazards **for emergency responders**. Other rules of the Canadian Electrical Code, Part I (CE Code) deal with disconnecting means and isolation for fire and shock hazards for maintenance and operation. The changes include controlling conductors extending from a PV array to a new specific level (not actually fully shut down), a tighter and more clearly defined boundary for controlled conductors, and new location requirements for rapid

shutdown initiation devices. There are also newly referenced product standards for the RSD equipment and systems.

Rapid shutdown boundary illustrations:



Code Reference

C22.1:22 – 2021 Canadian Electrical Code, Part I

64-218 Photovoltaic rapid shutdown (see Appendix B)

- 1) Photovoltaic rapid shutdown shall be provided for a photovoltaic system installed on or in buildings where the photovoltaic source or output circuit insulated conductors or cables installed on or in buildings are more than 1 m from a photovoltaic array.
- 2) Notwithstanding Subrule 1), photovoltaic rapid shutdown shall not be required for ground-mounted photovoltaic system circuits that enter a building whose sole purpose is to house photovoltaic system equipment.

- 3) Photovoltaic rapid shutdown shall limit photovoltaic source or output circuits located more than 1 m from the photovoltaic array to not more than 30 V within 30 s of rapid shutdown initiation.
- 4) A device used to initiate photovoltaic rapid shutdown shall be readily accessible and located
 - a) for single dwelling units, at the supply authority meter location;
 - b) for other than single dwelling units, at the consumer's service equipment or supply authority meter location, and
 - i) at a permanent access to a building roof where an array(s) is installed; or
 - ii) within sight and within 9 m of the array(s); and
 - c) for a stand-alone system, in accordance with Items b) i) and ii).
- 5) The location of the device used to initiate photovoltaic rapid shutdown shall be shown on the diagram required in Rule 84-030 2).
- 6) A label indicating that the photovoltaic system is equipped with photovoltaic rapid shutdown shall be installed at the supply authority meter location and at the consumer's service equipment location.

Appendix B

Rule 64-218

The requirements for a photovoltaic rapid shutdown system are given in CSA C22.2 No. 330.

Rule 64-218 3)

The intent of Subrule 3) is to limit photovoltaic source or output circuits to not more than 30 V within 30 s of rapid shutdown initiation, where the voltage and power are measured between any two photovoltaic source or output circuit conductors, and between any photovoltaic source or output circuit conductors and ground.

Application

This interpretation applies to photovoltaic rapid shutdown for photovoltaic systems installed on or in buildings.

Interpretations:

Is rapid shutdown function required on every system?

It is important to consider which systems require rapid shutdown. Once the controlled conductors extend beyond 1 metre from the PV array inside or outside a building, rapid shutdown control of these conductors is required. If a string inverter or micro-inverters are placed inside the boundary, this would result in no controlled conductors leaving the boundary. As such, no rapid shutdown functionality is necessary and none of the initiating devices required by Rule 64-218 4) would be required. See sub-rule 2) for ground mount systems.

What equipment can be used for Rapid Shutdown?

Devices that act as photovoltaic rapid shutdown systems (PVRSS) or photovoltaic rapid shutdown equipment (PVRSE) must be certified to CSA C22.2 No. 330-17. The scope of the standard specifies requirements for PVRSS and PVRSE (components) intended to be used in ordinary locations in accordance with the CE Code and rated 1500 volts or less. This standard is intended to be used in conjunction with the inverter standard CSA C22.2 No. 107.1-16 (R2021) Power Conversion Equipment.

Off-the-shelf components (such as an ordinary contactor) cannot be used as rapid shutdown equipment. However, initiation devices that would interrupt the inverter ac (alternating current) output circuit such as a certified disconnect switch, circuit breaker or control switch do not specifically need to be certified as RSD equipment. Some existing service equipment may be able to provide dual function.

Can you use rapid shutdown components from different manufacturers to make a system?

Certified rapid shutdown equipment on its own does not guarantee CE Code compliance. If only each piece of equipment is certified, it is unknown whether it will work as a system. Each piece of equipment must interact with other pieces of equipment to perform Rapid Shutdown. This includes the inverter, which must also be evaluated for compatibility with the respective equipment or system. The C22.2 No. 330-17 standard indicates that the operability of complete rapid shutdown systems built from individual devices covered under the standard has not been determined. These compatibility evaluations are up to the manufacturers, and equipment that can be used together must be referenced in the installation manuals for the equipment.

What can be used as a rapid shutdown initiator?

The system needs a switching device which is “manually activated by an operator” to initiate rapid shutdown process.

The RSD initiator must have a visual status indication that the PV conductors are in the controlled state. This could be a status light, a display readout or permanent marking on a switch to identify its current position. The status indicator “shall be located near the actuator to ensure the operator can view the system status in a timely manner” - C22.2 No. 330.

The initiator could be:

- A control switch that is a part of a complete rapid shutdown system;
- Service disconnecting means (the main breaker) on a load side connected system;
- PV system disconnecting means (the dc switch on the inverter);
- A properly rated switch that plainly indicates whether it is in the “off” or “on” position; or
- Depending on system capacity, a small ac disconnect switch up to a large ac disconnect switch with integral shunt trip capability.

The location of the initiation device must meet Rule 64-218 4).

The initiator cannot be:

- A pull-out type of switch (such as those used for air conditioners)
- The electrical meter (pulling the meter)

3. Rule 64-222 and Electrical Code Regulation, Section 2

Purpose:

This clarifies the approval requirements for photovoltaic systems racking and rails.

Discussion:

PV racking products have appeared in Alberta that have no evidence of approval and without manufacturer's installation instructions.

The racking of a modern PV system is part of a bonding grid with the rail or rack itself utilized as a bonding path. Modules are attached with clamps complete with bonding clips that, when bolted down, simultaneously secure the equipment to the rail and electrically bond adjacent modules and the underlying rail. Module level power electronics such as micro-inverters and dc-dc optimizer bonding can also be accomplished utilizing this method. This system eliminates separate bonding conductors connected to each piece of equipment and minimizes running equipment bonding conductors throughout PV arrays. A single bonding conductor is run to the array and would be connected at one or more points of the rack or rail following the manufacturer's installation instructions.

Code Reference

C22.1:21 – 2021 Canadian Electrical Code, Part I

64-222 Photovoltaic module bonding (see Appendix B)

- 1) Exposed, non-current-carrying metal parts of photovoltaic modules shall be bonded in accordance with Section 10.
- 2) Module bonding connections shall be as specified in the module installation manual.
- 3) Notwithstanding Subrule 2), bonding connectors intended for bonding photovoltaic modules and installed in accordance with the manufacturer's instructions shall be permitted to be used.
- 4) The connections to a photovoltaic module shall be arranged so that removal of a single photovoltaic module from a photovoltaic source circuit does not interrupt bonding continuity to the inverter or controller.
- 5) The connections to an inverter or controller shall be arranged so that removal of either the inverter or controller does not interrupt bonding continuity.

Appendix B

Rule 64-222

CAN/CSA-C22.2 No. 61730-1 requires all conductive parts of a module that are accessible during normal use to be bonded together and the method of bonding to be detailed in the installation manual. During the approval process, all components, such as bonding clips, brackets, hardware, lugs, etc., used for bonding are tested in accordance with CAN/CSA-C22.2 No. 61730-2.

Application

This interpretation applies to photovoltaic racking systems for use in Alberta.

Interpretation:

PV module racking systems are required to be approved. Any one of these approval processes are currently acceptable for PV racking systems:

- a) Certified by a certification body accredited by the Standards Council of Canada;
- b) Special inspection by an inspection body accredited by the Standards Council of Canada under SPE 1000 to test for bonding/grounding with a separate structural engineering evaluation for the structural capabilities of the racking.

An array is an assembly of specific compatible components that have been tested as a system. All the parts of an array such as modules, racks and clamps are listed as “components” intended for use in end-product equipment. When an end-product evaluation is conducted by a certification organization, the suitability of these components is determined in that evaluation. Standards UL 2703 for racking, ULC/ORD-C1703 for modules and CSA-C22.2 No. 41 bonding and grounding equipment are all used together to investigate products as a system.

In order for the terms of the equipment approval agreement to be met, the manufacturer must provide installation instructions, and those instructions must be followed. The instructions will address the structural and electrical installation along with information about compatibility of components for use with their racking system.

For example, the installation manual may have a list of specific manufacturer’s modules that are compatible with the racking system. You may also be able to use any ULC/ORD-C1703 module as long as they are within specific dimensional tolerances. Only those modules that meet the criteria laid out in the installation manual can be used with that racking system. Bonding must be completed using the methods and devices (such as lay-in lugs and washers) as specified in the manuals.

When applying for a PV system permit, applicants should provide the Authority Having Jurisdiction with a complete list of all equipment. Installation manuals should be reviewed pre-construction and referenced during the installation to ensure that the system has been installed according to the manufacturer’s instructions and all the equipment is compatible.

Ground Mount Systems and Carports

It is common for ground mount system manufacturers to utilize UL 2703 racking equipment and CSA-C22.2 No. 41 bonding and grounding equipment. The structural element requirements would be met with professional involvement with a site specific stamped structural drawing. Large ground mount systems are custom designed for the site with local consideration for terrain, wind pressures, snow loads, as well as racking layout for the most efficient design. For smaller low-risk ground mount systems such as those found on farms, professional involvement is normally not required for the mounting structure.

This INTERPRETATION is applicable throughout the Province of Alberta.

STANDATA interpretation 21-ECI-084

Electrical

2021 Canadian Electrical Code, Part I, Section 84 – Interconnection of electric power production sources

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This clarifies Rule 84-024 1) c) as it relates to “contact operation verifiable by visible means”.

Discussion

Rule 84-024 Disconnecting means – General

The intent for Rule 84-024 1) c) is described in the Canadian Electrical Code Handbook as “able to visually verify that the contact of the disconnecting means is open...”¹. The definition of *Visible-break disconnect* in Part I of the Alberta Distributed Generation Interconnection Guide states that the design of the disconnect “must allow adequate visible inspection of the contacts in the open position.”²

- The Canadian Electrical Code, Part I (CE Code) does not prescribe how visible verification should be achieved in either Rules 84-024 or 36-214.
- Section 84 was introduced at a time when high-voltage (HV - > 1000 volts) electric power production sources were the norm for interconnected systems. Low-voltage (LV - ≤ 1000 volts) interconnected systems (solar photovoltaic, fuel cell) are becoming increasingly popular.

¹ “CE Code Handbook” – published by the Canadian Standards Association

² “Alberta Distributed Generation Interconnection Guide” – developed by the Alberta Distributed Generation Technical and Policy Committee

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- Because of the higher degrees of safety risk associated with high-voltage switchgear, transparent windows are a common industry practice for high-voltage applications.
- Aside from installations of interconnected electric power production sources, the CE Code does not require visual verification of contact position in low-voltage disconnecting means.

Application

- This interpretation applies to disconnecting means provided to disconnect simultaneously all ungrounded conductors of any electric power production source of an interconnected system from all circuits supplied by the electric power production source equipment.
- This interpretation applies to disconnecting means provided to disconnect simultaneously all the electric power production sources from the supply authority system.

Interpretation

The intent of Rule 84-024 c), which requires that the disconnecting means “have contact operation verifiable by direct visible means...”, is better described as “have contacts in the open position visually verifiable...” and is considered to have been met when:

1. The output of the electric power production source is 1000 volts or less and the open position of the contacts can be visually verified by opening the door of the disconnecting means enclosure, unless of the draw-out type.
2. The output of the electric power production source is greater than 1000 volts and the open position can be visually verified through a suitable transparent opening of the disconnecting means or otherwise meets Rule 36-214 of the CE Code.

This interpretation is provided specifically to address the visual verification requirement of Rule 84 024 c) in the CE Code. Requests to use alternative disconnecting means that do not have ‘contact position visually verifiable’ as described in the interpretation should be addressed through a variance with the local inspection authority having jurisdiction, with input from the local supply authority.

This INTERPRETATION is applicable throughout the Province of Alberta.

STANDATA interpretation 21-ECI-086

Electrical

2021 Canadian Electrical Code, Part I, Section 86 - Electric vehicle charging systems

Date Issued: 1 February 2022

Page 1 of 2

Purpose:

This clarifies branch circuit conductor ampacities and overcurrent device settings for electric vehicle charging systems supplied with adjustable ampacity settings.

Discussion:

Some electrical vehicle charging stations are equipped with a variable load option. For example, the maximum load may be 100 amperes, 240 volts, single-phase whereas a lower demand load may be set, e.g. 40 amperes, 240 volts, single-phase.

Concerns have been expressed that if the branch circuit, including the overcurrent device and circuit ampacity, feeding the electric vehicle charging station is sized according to the lower demand load, the consumer may increase the demand load in the future to increase the charging rate, thereby overloading the branch circuit.

Code References

C22.1:22 – 2021 Canadian Electrical Code, Part I

86-200 Warning sign

Permanent, legible signs shall be installed at the point of connection of the electric vehicle supply equipment to the branch circuit wiring, warning against operation of the equipment without sufficient ventilation as recommended by the manufacturer's installation instructions.

Application

This interpretation applies to electric vehicle charging systems with adjustable ampacity settings.

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Interpretation:

Research indicates that manufacturer's instructions require that an electrician set the load. This may be acceptable provided that, in addition to any code required warning signs, a warning sign is provided to indicate the maximum demand load setting of the electric vehicle charging station.

This INTERPRETATION is applicable throughout the province of Alberta.

Joint Code Interpretations

STANDATA interpretation 19-BCI-025(Rev1)/21-ECI-009

Building/Electrical

Lightning Protection Systems

Date Issued: April 2022

Page 1 of 3

Purpose

Clarifies requirements for installing, altering, or adding to lightning protection systems. This clarification is for building owners, operators, designers, electricians, as well as safety codes officers (SCO's) in the building and electrical disciplines.

Discussion

The National Building Code - 2019 Alberta Edition (NBC(AE)) provides requirements for lightning protection systems. The Electrician Trade Regulation classifies lightning protection systems as an electrical system. The Permit Regulation requires an electrical permit to install, alter or add to an electrical system.

1) CSA B72 Code References

Sentence 3.6.1.3.(1) of the NBC(AE) requires lightning protection systems conform to CAN/CSA-B72-M, "Installation Code for Lightning Protection Systems". Rule 10-108 (Appendix B) of the 2021 Canadian Electrical Code (CE Code) lists the CAN/CSA-B72 standard as a recommended practice for the installation of lightning protection systems.

2) CSA B72 Code Edition

The 2021 CE Code references the latest edition which is CSA B72:20 Installation code for lightning protection systems.

Issued by the Provincial Building and Electrical Administrators

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3) Professional Involvement

Section 18 of the Administrative Items Regulation allows an SCO to request professional involvement for electrical systems if, in the opinion of the SCO, there are special safety concerns due to the size or complexity of the project. Professional involvement may also be required by the *Engineering and Geoscience Professions Act* or the *Architects Act*.

4) Permits

Per Section 18 of the Permit Regulation, an electrical permit is required to install, alter, or add to an electrical system. As a lightning protection system is defined as an electrical system, it requires a permit.

5) Inspections & Maintenance

Appendix B of the CAN/CSA B72 standard contains guidelines for the inspection and maintenance of lightning protection systems.

Code References

National Building Code – 2019 Alberta Edition Division B, Sentence 3.6.1.3.(1) states:

3.6.1.3. Lightning Protection Systems

1) A lightning protection system, when provided, shall conform to the requirements of CAN/CSA-B72-M, "Installation Code for Lightning Protection Systems."

2021 Canadian Electrical Code, Part 1 states:

Rule 10-108 (Appendix B)

Recommended practices for the installation of a lightning protection system, including lightning rods, interconnecting conductors, and ground electrodes, are given in CAN/CSA-B72. Other national and international industry-recognized Standards on lightning protection are also available. It should be noted that the *National Building Code of Canada* mandates the use of CAN/CSA-B72 as the Standard for lightning protection systems.

Electrician Trade Regulation

Definitions

1 In this Regulation,

- (c) "electrical systems" means any type of residential, commercial, institutional or industrial building or structural electrical system and without limiting the generality of the foregoing includes
- (x) lightning protection systems;

Permit Regulation

Electrical permit

8(1) A permit in the electrical discipline is required to install, alter or add to an electrical system.

Administrative Items Regulation

Complex projects

18(1) If, in the opinion of a safety codes officer, the size or complexity of a project may give rise to special safety concerns, the safety codes officer may require that all plans and specifications, or any part of them, for the project's

(b) electrical systems,
be imprinted with a seal or stamp affixed in accordance with the *Engineering and Geoscience Professions Act* for engineering work, or the *Architects Act* for architectural work.

(2) If, in the opinion of a safety codes officer, the size or complexity of a project may give rise to special safety concerns, the safety codes officer may require that the construction of any or all of the project's

(b) electrical systems,
be reviewed during construction in accordance with the *Engineering and Geoscience Professions Act* for engineering work, or the *Architects Act* for architectural work.

Application

This interpretation applies to all structures where a lightning protection system is installed.

INTERPRETATION

- 1) The installation, alteration, or addition to a lightning protection system is required to comply with the CAN/CSA-B72:20 standard.
- 2) An electrical permit is required for the installation, alteration, or addition to a lightning protection system. A building permit is not required.

This INTERPRETATION applies throughout the province of Alberta

EXISTING ELEVATOR MODERNIZATION/FIRE ALARM INTERFACE

PURPOSE

This interpretation provides clarity when a new Elevator Recall Control Supervisory Panel (ERCSP) or Firefighter Emergency Operation (FEO) is installed on existing elevators as per the Elevating Devices Codes Regulation AR 192/2015 and the ASME A17.1/CSA B44 Safety Code for Elevators and Escalators. This clarification is for building owners, operators, designers, fire alarm installers, fire alarm technicians, electricians, elevator constructors as well as Safety Codes Officers in the Elevator, Building, Fire and Electrical disciplines.

DISCUSSION

Changes to the Elevating Devices Code have resulted in some confusion between the Elevating Devices Code, the National Building Code – 2019 Alberta Edition (NBC(AE)) and the National Fire Code – 2019 Alberta Edition (NFC(AE)) related to upgrading existing elevators when installing new ERCSPs.

Some of the questions raised are:

- 1) What are the concerns for a building, regarding changes to the Fire Alarm System (FAS)?
- 2) What types of equipment and standards must be used to deal with the detection and notification portions of the FEO?
- 3) What are the requirements for “professional involvement” and permitting?
- 4) What are the requirements for verification or re-verification of the FAS after FEO is installed?
- 5) What are the inspection, testing and maintenance requirements for detection and notification equipment?

APPLICATION

This interpretation applies to all buildings where an existing elevator is upgraded or modernized to the current standards with a new ERCSP and the mandatory requirements for FEO.

INTERPRETATION

Issuance of this STANDATA is authorized
by the Provincial Fire, Building, Elevating Devices and
Electrical Administrators



This interpretation will provide clarity when upgrading an elevator to have FEO, the FEO upgrade requirements, the FAS requirements that correspond with an FEO upgrade, and the inspection, testing and maintenance requirements for the ERCSP and FAS. This document will also provide different examples of modification types for further clarification.

Building owners are not required to upgrade the elevator controller; however, when the owner of an existing elevator decides to perform an alteration or modernize the elevators to current standards, the elevator(s) shall have FEO.

The requirement to have FEO does not, create a requirement to install an FAS in a building. Conversely having an FAS in the building does not, create any requirement to upgrade the elevator system to include FEO.

Where the elevator in an existing building which has an FAS is modernized and FEO is added, all of the additional detection devices, components and wiring, which are required when upgrading the elevator system to FEO, shall be part of the FAS.

Note: It is not acceptable to have two systems for detecting combustion products in a building. This would lead to confusion among owners, occupants and servicing personnel and creates unreasonable operational difficulties for building operators and the responding fire department.

Requirements:

- 1) All equipment used to detect products of combustion and control elevators shall meet the appropriate referenced CAN/ULC Standards* (CAN/ULC-S527 for control panels, CAN/ULC-S529 for smoke detectors) referenced in the current NBC(AE) and the current NFC(AE). The spacing, wiring, and installation shall comply with the appropriate portions of CAN/ULC-S524 Installation of Fire Alarm Systems, as referenced in the current version of the NBC(AE).
- 2) Where the building is of a size/type where its design and construction requires (or would have required) professional involvement as per the NBC(AE) the design and installation of additional fire alarm equipment shall also require professional involvement.
- 3) Where devices are added to a building with a fire alarm system, to accommodate FEO, the FAS shall have its operation verified as per the current requirements of the NBC(AE), NFC(AE) and CAN/ULC-S537. If this addition required professional involvement for design and installation, the verification shall also require professional involvement.
- 4) Only smoke detectors that conform to CAN/ULC-S529 shall be used for smoke detection in an FEO system (smoke alarms are not permitted).
- 5) All FEO detection and notification systems shall be maintained annually in accordance with CAN/ULC-S536, either as part of the FAS or, where no FAS exists, as the independent ERCSP. Records of this maintenance shall be retained on-site for at least two years as per the NFC(AE).
- 6) Installation of new devices and wiring for FEO, both in a stand alone system, in a building with no FAS, and where the FEO devices are part of the existing FAS, shall require the owner, designer or installer to obtain a Building Permit from the authority having jurisdiction

(AHJ). If a new circuit or additional wiring to existing circuits is installed, an Electrical Permit from the AHJ shall be required as well.

- 7) Elevators without emergency backup power supplied shall be identified to firefighters by signage in each car, in symbols and text no less than 30 mm in height on a contrasting background, as below:



Normal Power”.

- 8) FEO upgraded elevators with emergency backup power supplied shall be identified to firefighters in each car with symbols and text no less 30 mm in height on a contrasting background as below:



Emergency Power”.

Possible Modernization Types

- 1) Existing building where the owner decides to upgrade to FEO and the building does not have a FAS
- a. FEO smoke detectors mounted in elevator lobbies (within 6.4 m of all hoistway entrances), hoist way and machine room,
 - b. The FEO does not require the installation of an FAS,
 - c. An ERCSP shall be installed in a building mechanical/electrical room but not in the elevator machine room. This panel shall be identified as the ERCSP by signage on the panel cover, in letters no less than 30 mm in height on a contrasting background and in addition, state in the same lettering that:

“This is NOT a Fire Alarm System”.
 - d. This system shall have the ERCSP detection designed and installed in accordance with the relevant portions of the referenced version of CAN/ULC-S524 in the current NBC(AE).
- 2) Existing building where the owner decides to upgrade to FEO and the building does have a FAS
- a. FEO smoke detectors shall be mounted in elevator lobbies (within 6.4 m of all hoistway entrances), hoistway and machine room,
 - b. All detection and control of the elevators in FEO shall be through the Fire Alarm Control Panel (FACP),
 - c. Upgrading may need to be accomplished by using an addressable FAS or require the use of smoke detectors (heat detectors in the machine room may be possible) with integral relays for the purpose of providing signals to the elevator controller and this shall all be connected to the FACP in an approved manner (CAN/ULC-S529, S530, and S524). Where smoke detectors with integral relays are used, a fault in the

elevator signalling wires shall cause the elevator to go to its recall position. The system shall be configured for normally closed contacts so that a break in the wiring shall be immediately detected by the elevator going to its recall position. A separate ERCSP providing a single signal to the FAS will not be acceptable.

- d. Unsupervised (120V systems with no annunciator or control panel) fire alarm configurations are not able to be upgraded to provide FEO as per ASME A17.1/CSA B44 which requires electrical supervision of the system devices and therefore shall be replaced by a compliant FAS at the time the elevator controller is upgraded.
- 3) Existing building where the FAS is upgraded and the owner has decided not to upgrade elevators to FEO
- a. The upgrade to the FAS does not generate any requirement to upgrade the elevator system,
 - b. No additional smoke detectors are required to be mounted in elevator lobbies, hoistway and machine room,
 - c. No FEO is required to be installed in building.

Designers, and the local Fire Department need to engage in full discussion of the requirements and expectations of the elevator and its interface to any FAS prior to the installation or upgrade of an elevator which utilises newer technology to provide FEO in accordance with ASME A17.1/CSA B44.

Note: New Buildings shall comply with all the applicable requirements for the Building, Fire, Electrical and the Elevating Devices Codes Regulations.

*The following ULC documents are referenced in this STANDATA:

CAN/ULC-S524, "Installation of Fire Alarm Systems"
ULC-S527, "Control Units for Fire Alarm Systems"
CAN/ULC-S529, "Smoke Detectors for Fire Alarm Systems"
CAN/ULC-S530, "Heat Actuated Fire Detectors"
CAN/ULC-S536, "Inspection and Testing of Fire Alarm Systems", and
CAN/ULC-S537, "Verification of Fire Alarm Systems"

[Original Signed]

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EXISTING FIRE ALARM SYSTEMS

PURPOSE

This identifies requirements where an existing fire alarm system, regardless of age, requires inspection, testing, maintenance and installation of devices or other equipment (e.g. maglocks) in order to provide or maintain an expected level of safety for occupants.

This also defines who is able to install, verify, inspect, test and maintain fire alarm systems.

DISCUSSION

There are five types of activities conducted on a fire alarm system – installation, verification, inspection, testing and maintenance.

Installation includes a new install or additions, modifications and renovations (changes) to an existing installation.

Verification involves inspection and testing to verify the fire alarm system conforms to the design, and the applicable codes and standards, and performs all of its intended functions.

Inspection is a visual examination to determine the device or system will apparently perform in accordance with its intended function.

Testing is the operation of a device or system to determine it will perform in accordance with its intended operation or function.

Maintenance is the removal, replacement or servicing of devices or equipment found inoperative during an inspection and test of the fire alarm system or due to an inoperative device at any other time.

There are factors that influence the degree of work that may be necessary to an existing fire alarm system in order for it to provide the expected level of protection. The factors take into consideration the need for maintaining or changing systems that have been installed to “good engineering practice” prior to established codes and standards.

The factors also reflect how fire alarm systems installed under established codes and standards should be regarded when maintenance or changes are contemplated and to what degree the

Issuance of this STANDATA is authorized by
the Provincial Fire/Building and Electrical Administrators
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requirements of the most current codes and standards apply in maintenance and changes to the systems.

The main codes containing specific requirements are the National Building Code–2019 Alberta Edition (NBC(AE)), National Fire Code–2019 Alberta Edition (NFC(AE)) and the Canadian Electrical Code (CE Code) 2018. These codes reference the following standards for the installation, verification, inspection and testing of fire alarm systems:

- CAN/ULC-S524-14 Installation of Fire Alarm Systems
- CAN/ULC-S536-13 Inspection and Testing of Fire Alarm
- CAN/ULC-S537-13 Verification of Fire Alarm Systems
- CAN/ULC-S1001-11 Integrated Systems Testing of Fire Protection and Life Safety Systems

Installations, verifications, inspections, testing and maintenance of fire alarm and voice communication systems can only be completed by those qualified under Division C of the NFC(AE).

CODE REFERENCES

Safety Codes Act states:

Interpretation

1(1) In this Act,

- (e) “Administrator” means an Administrator appointed under this Act;

Application of Act

2(1) This Act applies to fire protection, barrier-free design and the design, manufacture, construction, installation, use, operation, occupancy and maintenance of

- a) buildings,
- b) electrical systems,
- c) elevating devices,
- d) gas systems,
- e) plumbing systems,
- f) pressure equipment, and
- g) private sewage disposal systems.

NBC(AE) and NFC(AE) Preface states:

Relationship between the NBC(AE) and the NFC(AE)

The National Building Code – 2019 Alberta Edition (NBC(AE)) and National Fire Code – 2019 Alberta Edition (NFC(AE)) each contain provisions that deal with the safety of persons in buildings in the event of a fire and the protection of buildings from the effects of fire.(2) These two Codes are developed as complementary and coordinated documents to minimize the possibility of their containing conflicting provisions. It is expected that buildings comply with both the NBC(AE) and the NFC(AE). The NBC(AE) generally applies at the time of construction and reconstruction while the NFC(AE) applies to the operation and maintenance of the fire-related features of buildings in use.

The scope of each of these Codes with respect to fire safety and fire protection can be summarized as follows:

The NBC(AE) covers the fire safety and fire protection features that are required to be incorporated in a building or facility at the time of its original construction. Building codes typically no longer apply once a building is occupied, unless the building is undergoing alteration or change of use, or being demolished.

The NFC(AE) includes provisions for:

- the on-going maintenance and use of the fire safety and fire protection features incorporated in buildings
- the conduct of activities that might cause fire hazards in and around buildings
- limitations on hazardous contents in and around buildings
- the establishment of fire safety plans
- fire safety at construction and demolition sites

In addition, the NFC(AE) contains provisions regarding fire safety and fire protection features that must be added to existing buildings when certain hazardous activities or processes are introduced in these buildings.

Some of the NFC(AE)'s provisions are not duplicated directly in the NBC(AE) but are in fact adopted through cross-references to the NFC(AE). Thus, some NFC(AE) provisions may apply to original construction, alterations, or changes in use.

NBC(AE) and NFC(AE) Article 1.4.1.2 of Division A states:

1.4.1.2. Defined Terms

Approved means acceptable to the *Provincial Fire Administrator*.

Authority having jurisdiction means a safety codes officer in the building discipline exercising authority pursuant to designation of powers and terms of employment in accordance with the Safety Codes Act.

Authority having jurisdiction means a safety codes officer in the fire discipline exercising authority pursuant to designation of powers and terms of employment in accordance with the Safety Codes Act. (See Note A-1.4.1.2.(1).).

A-1.4.1.2.(1) Defined Terms. Authority Having Jurisdiction

The defined term “authority having jurisdiction” refers to a safety codes officer as the appointed individual responsible for decision-making in a number of areas. In most cases, this individual will be a member of an accredited municipal fire department. In municipalities that use accredited agencies for their inspection and enforcement, the fire department may not be involved. It is important that accredited municipalities employing accredited agencies properly designate the person(s) acting as the authority having jurisdiction.

In addition, municipalities using accredited agencies should ensure that the agency has a close working relationship with the fire department during the decision-making process.

Provincial Building Administrator means a person in the building discipline appointed as an Administrator under the Safety Codes Act.

Provincial Fire Administrator means a person in the fire discipline appointed as an Administrator under the Safety Codes Act.

Registered engineering professional means an individual who is authorized to engage in the practice of engineering under the Engineering and Geoscience Professions Act and its Regulations.

NBC(AE) Article 1.1.1.2. of Division A states:

1.1.1.2. Application to Existing Buildings

(See Note A-1.1.1.2.)

- 1) This Article applies to a *building* that has been legally built, occupied and used before 01 April 2019.

- 2) If a *building* is altered, rehabilitated, refurbished, renovated or repaired, the level of life safety and *building* performance shall not be decreased.
- 3) Except as specified in Part 10 of Division B, the *authority having jurisdiction* shall accept any construction or condition that lawfully existed in Alberta before 01 April 2019 if the construction or condition does not constitute an *unsafe condition*.
- 4) A change in *occupancy* or *alteration* of any *building* constructed before 01 April 2019 shall be permitted if the level of safety and *building* performance proposed are acceptable to the *authority having jurisdiction*.
- 5) For a *building* constructed before 01 April 2019, the *authority having jurisdiction* may accept an alternative or a proposal that achieves the appropriate level of safety for the specific activity for which the *building* is to be used.
- 6) The *authority having jurisdiction* may accept existing construction not in complete compliance with this Code, in which case it may be accepted, subject to conditions.

A-1.1.1.2. Application to Existing Buildings. This Code is most often applied to existing or relocated buildings when an owner wishes to rehabilitate a building, change its use, or build an addition, or when an enforcement authority decrees that a building or class of buildings be altered for reasons of public safety. It is not intended that the NBC(AE) be used to enforce the retrospective application of new requirements to existing buildings or existing portions of relocated buildings. For example, although the NFC(AE) could be interpreted to require the installation of fire alarm, standpipe and hose, and automatic sprinkler systems in an existing building for which there were no requirements at the time of construction, it is the intent of the Safety Codes Council that the NFC(AE) not be applied in this manner to these buildings unless the authority having jurisdiction has determined that there is an inherent threat to occupant safety and has issued an order to eliminate the unsafe condition, or where substantial changes or additions are being made to an existing building or the occupancy has been changed. (See also Note A-1.1.1.1.(1) of Division A of the NFC(AE).)

Relocated buildings that have been in use in another location for a number of years can be considered as existing buildings, in part, and the same analytical process can be applied as for existing buildings. It should be noted, however, that a change in occupancy may affect some requirements (e.g. loads and fire separations) and relocation to an area with different wind, snow or earthquake loads will require the application of current code requirements. Depending on the construction of the building and the changes in load, structural modifications may be required. Similarly, parts of a relocated or existing building that are reconstructed, such as foundations and basements, or parts being modified are required to be built to current codes. Whatever the reason, Code application to existing or relocated buildings requires careful consideration of the level of safety needed for that building. This consideration involves an analytical process similar to that required to assess alternative design proposals for new construction. See Clause 1.2.1.1.(1)(b) for information on achieving compliance with the Code using alternative solutions.

In developing Code requirements for new buildings, consideration has been given to the cost they impose on a design in relation to the perceived benefits in terms of safety. The former is definable; the latter difficult to establish on a quantitative basis. In applying the Code requirements to an existing building, the benefits derived are the same as in new buildings. On the other hand, the increased cost of implementing in an existing building a design solution that would normally be intended for a new building may be prohibitive.

The successful application of Code requirements to existing construction becomes a matter of balancing the cost of implementing a requirement with the relative importance of that requirement to the overall Code objectives. The degree to which any particular requirement can be relaxed without affecting the intended level of safety of the Code requires considerable judgment on the part of both the designer and the authority having jurisdiction.

Further information on the application of Code requirements to existing or relocated buildings may be found in the following publications:

- “User’s Guide - NBC 1995, Fire Protection, Occupant Safety and Accessibility (Part 3)”
- “Guidelines for Application of Part 3 of the National Building Code of Canada to Existing Buildings”
- Commentary entitled “Application of NBC Part 4 of Division B for the Structural Evaluation and Upgrading of Existing Buildings” of the “Structural Commentaries (User’s Guide – NBC 2015: Part 4 of Division B)”
- “User’s Guide - NBC 1995, Application of Part 9 to Existing Buildings”
- CBD 230, “Applying Building Codes to Existing Buildings”

These publications can be ordered through NRC’s website.

NBC(AE) Article 3.2.4.5. of Division B states:

3.2.4.5. Installation and Verification of Fire Alarm Systems

- 1) Except as permitted by Articles 3.2.4.10. and 3.2.4.19., fire alarm systems, including the voice communication capability where provided, shall be installed in conformance with CAN/ULC-S524, “Installation of Fire Alarm Systems.”
- 2) Fire alarm systems shall be verified in conformance with CAN/ULC-S537, “Verification of Fire Alarm Systems,” to ensure they are operating satisfactorily.

NBC(AE) Article 2.4.2.4. of Division C states:

2.4.2.4. Fire Alarm System Designs

- 1) If a fire alarm system is to be installed in a *building* described in Sentence 2.4.2.1.(4) or (5), the *owner* shall submit evidence to the *authority having jurisdiction*, before construction begins, that they have retained a *registered engineering professional* to
 - a) design the system,
 - b) perform *field reviews* of the system during installation, and
 - c) witness verification of the system after installation.

NFC(AE) Article 2.1.1.1. of Division A states:

2.1.1.1. Application

- 1) This Part applies to all *buildings* and facilities covered in this Code. (See Article 1.1.1.1.)

NFC(AE) Article 6.1.1.1 of Division B states:

6.1.1.1. Application

- 1) This Part includes requirements for the inspection, testing, maintenance, and operation of portable extinguishers, water-based fire protection systems, special extinguishing systems, fire alarm systems,

NFC(AE) Sentence 6.3.1.2.(1) of Division B states:

6.3.1.2. Inspection and Testing

- 1) Fire alarm systems shall be inspected and tested in conformance with CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems.”

NFC(AE) Article 2.2.4.3. of Division C states:

2.2.4.3. Fire Alarm and Voice Communication Systems

- 1) Only qualified persons shall install, test or perform maintenance on fire alarm and voice communication systems when they have acquired an *approved* certificate of

training from

- a) a public post-secondary educational institution, or
- b) the Canadian Fire Alarm Association (CFAA).

(See Note A-2.2.4.3.(1).)

A-2.2.4.3.(1) The types of training provided and other provincial legislation may limit the scope of activities a qualified person may perform on such systems.

Persons are considered qualified to make operational, inspect, test and maintain fire alarm and voice communication systems when they have acquired a certificate of training in this area of study from

- a) a public post-secondary educational institution, including:
 - i) an Alberta Journeyman's Electrician certificate on or after September 1, 1991,
 - ii) an Alberta Journeyman's Electrician certificate prior to September 1, 1991 and a fire alarm course* recognized by the Provincial Fire Administrator,
 - iii) a Canadian Red Seal Journeyman's Electrician certificate and a fire alarm course* recognized by the Provincial Fire Administrator, or
- b) Fire Alarm Technician certification issued by the Canadian Fire Alarm Association (CFAA).

Persons are considered qualified in the installation of fire alarm and voice communication systems when they have acquired

- a) an Alberta Journeyman's Electrician certificate on or after September 1, 1991,
- b) an Alberta Journeyman's Electrician certificate prior to September 1, 1991 and have completed a fire alarm course* recognized by the Provincial Fire Administrator, or
- c) a Canadian Red Seal Journeyman's Electrician certificate and have completed a fire alarm course* recognized by the Provincial Fire Administrator.

Fire alarm verifications are generally the responsibility of a licensed engineering professional. In Alberta, this must be the registered professional who will complete a Schedule "C" under the National Building Code – 2019 Alberta Edition.

APPLICATION

This interpretation applies to all buildings where a fire alarm system is currently in use and the fire alarm undergoes installation (changes), verification, inspection, testing and maintenance.

INTERPRETATION

This interpretation will simplify the requirements for installation (changes), verification, inspection, testing and maintenance to fire alarm systems in existing buildings. Only those qualified as per the NFC(AE) can complete these types of activities.

The five types of activities that can be done on an existing fire alarm system include: installation (changes), verification, inspection, testing and maintenance. Maintenance is typically the removal and replacement of devices found inoperative during a regular annual inspection and test of the fire alarm system or due to an inoperative device at any other time. Qualified electricians and fire alarm technicians can complete this activity as per NFC(AE) Division C. Only qualified electricians can replace or repair wiring.

For fire alarm systems installed under previous Alberta editions of the building code, equal exchange (like for like device replacement) of devices are acceptable. However, if the replacement is not an equal exchange, the following scenarios shall be followed:

- Change of use or modernization of the building - the current NBC(AE) shall be applied.

- No change of use – in this situation, upgrading to the current Building Code could be onerous and according to NFC(AE) Division A, Article 1.1.1.2. the owner may apply to the *authority having jurisdiction* (AHJ) (Building) for an alternative solution detailing the reasons why they need a fire alarm replaced and why they want to install a new fire alarm to an older edition of the Alberta Building Code and/or CAN/ULC standard.

Note: Where the NBC(AE) requires professional involvement for a building due to its size, occupancy, or complexity, a *registered engineering professional* is also required to upgrade or modify existing fire alarm systems.

If a fire alarm system requires additions or modifications, these changes are still categorized as installs and, along with complete new installs, can only be completed by a qualified electrician. The following chart shows the work which an electrician or fire alarm technician can complete:

Work Acceptable Under the Electrician Trade Regulation and the NFC(AE)

INSTALLATION & MAINTENANCE OF FIRE ALARM SYSTEMS		
	ELECTRICIAN	TECHNICIAN
Installation	✓	✗
Inspection	✓	✓
Testing	✓	✓
Maintenance	✓ (1)	✓ (1)
Additions / Renovations	✓	✗
Audit System (under AFC 6.3.1.6.)	✗ (2)	✗ (2)

- 1) Certified electricians and technicians must be qualified under the NFC(AE).
- 2) Certified electricians and technicians qualified as per the NFC(AE) may perform an audit where professional engineering involvement is not required as per the NBC(AE).

NOTES:

- Apprentice electricians may complete all of the work an electrician is able to, as long as the apprentice is competent to complete the work. The apprentice also has to be under the supervision of a journeyperson electrician as per the Apprentice Program Regulation and the Electrician Trade Regulation.
- A CFAA Fire Alarm Trainee (a trainee is one that is actively enrolled within the CFAA fire alarm technician program) may complete all of the work a certified technician is able to, as long as they are competent to complete the work. The CFAA Fire Alarm Trainee also has to be under the supervision of a certified technician.
- Where the table indicates inspections can only be completed by a qualified person, the daily and monthly inspections required by CAN/ULC–S536 are exceptions. These daily and monthly inspections and tests may be completed by the *owner* or the *owner's* representative who have received training from the manufacturer or service provider on their system.

All additions or modifications to a fire alarm system must be reviewed and accepted by the Building *Authority Having Jurisdiction*. Permits are often required for modifications and additions to the fire alarm system. The Safety Codes Act – Permit Regulation sets out the requirements for permits under both the building and electrical disciplines. The local *Authority Having Jurisdiction* must be contacted prior to any work being conducted on any fire alarm system.

Fire alarm's system verification must be in accordance with CAN/ULC S537 Verification of Fire Alarm Systems.

Please refer to STANDATA [19-BCI-014R1](#) Fire Alarm and Fire Suppression System Verification and Testing Certificates.

This INTERPRETATION replaces the following:
FCI-08-06 and 14-FCI-006R1 Existing Fire Alarm Systems.

This INTERPRETATION is applicable throughout the province of Alberta.

MOBILE/TEMPORARY COOKING EQUIPMENT

PURPOSE

The purpose of this interpretation is to assist owners/operators of mobile cooking operations and safety codes officers with the minimum requirements under the *Safety Codes Act* for Mobile Cooking Operations (MCO).

DISCUSSION

Application of the National Building Code-2019 Alberta Edition

While a building means *any structure used or intended for supporting or sheltering any use or occupancy* and an MCO does support temporary occupancy or sheltering a use, an MCO is not purely a "building". An MCO is also a vehicle that may be parked or sited on a temporary basis and then moves to a different location. Describing an MCO as a building would be similar to describing a recreational vehicle as a building for use as a residential occupancy. If we accept that an MCO is a combination of uses as a vehicle and as a fixed shelter for temporary periods, then a selective application of the *Safety Codes Act* to MCOs is supported by the legislation.

This Interpretation has been jointly developed by Provincial Administrators for Fire, Building, Gas, Plumbing and Electrical disciplines at Alberta Municipal Affairs and the associated fire, building, gas, plumbing and electrical sub-councils of the Safety Codes Council.

APPLICATION OF INTERPRETATION UNDER THE SAFETY CODES ACT

There are specific provisions in the National Building Code – 2019 Alberta Edition (NBC(AE)) that apply to commercial cooking equipment used in an MCO that are also referenced in the National Fire Code - 2019 Alberta Edition (NFC(AE)) related to ventilation and fire suppression equipment.

NBC(AE) Clause 1.1.1.1.(1)(m) of Division A states:

Application of this Code

- 1) This Code applies to any one or more of the following:
 - m) the installation, replacement, or *alteration* of equipment regulated by this Code,

NBC(AE) Article 6.3.1.7 of Division B states:

Commercial Cooking Equipment

- 1) Except as provided in Article 3.6.3.5., systems for the ventilation of commercial cooking equipment shall be designed constructed and installed to conform to NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations."

Issue of this STANDATA is authorized by
the Provincial Fire, Plumbing, Gas, Building
and Electrical Administrators



[original signed]

- 2) A ventilation system for a *food establishment* shall not have components that allow drips to fall onto surfaces where food is prepared or into food.
- 3) A ventilation system for a *food establishment* shall have all openings to the exterior of the *building* located and protected to prevent the entry of vermin, dust, dirt and other contaminating material into the *food establishment*.
- 4) Canopies, hoods and ductwork for a ventilation system exposed within the kitchen or cooking area of a *food establishment* shall be constructed of stainless steel.
- 5) A *food establishment* in which food is prepared and process generates odours, smoke, steam or heat shall have a mechanical ventilation system that includes canopies, ductwork and fans to remove odours, smoke, steam or heat to the exterior of the *building*.

Definition of a *food establishment* from the NBC(AE)

Food establishment means premises where food that is intended for consumption by the public is served, offered for sale, displayed, processed, packaged, stored or handled.

Article 6.9.1.3. of Division B of the NBC(AE) states:

Commercial Cooking Equipment

- 1) Fire protection systems for commercial cooking equipment referred to in Sentence (1) using vegetable oil or animal fat shall conform to
 - a) ANSI/UL 300, "Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment," or
 - b) ULC/ORD-C1254.6, "Fire Testing of Restaurant Cooking Area Fire Extinguishing System Units."

Ventilation, exhaust and suppression requirements for an MCO are within the scope of National Fire Protection Association (NFPA) 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations" referenced in both the NBC(AE) and NFC(AE).

The 2017 edition of NFPA 96 states that "this document shall apply to":

4.1.9* Cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, tents, or any form of roofed enclosure, shall comply with this standard.

***A.4.1.9** The authority having jurisdiction can exempt temporary facilities, such as a tent, upon evaluation for compliance to the applicable portions of this standard.

Although it might not be practical to enforce all requirements of this standard in temporary facilities, the authority having jurisdiction should determine that all necessary provisions that affect the personal safety of the occupants are considered.

The *Authority Having Jurisdiction* (AHJ) may also require additional building and fire code requirements related to fire protection and exhaust/ventilation systems. Examples of the application of the NBC(AE) to an MCO include, but are not limited to:

- An MCO with an exhaust hood and fire suppression system is required where the production of smoke, heat and grease laden vapour occurs;
- An MCO with a ventilation system is not required to provide a make-up air system beyond provision of properly sized openable closures that are used for food service; and
- An MCO is required to have a fan interlock ensuring that the exhaust fan can only operate when such closures have been opened.

For MCO's operating in or under a "tent" the tent shall conform to CAN/ULC S109 as per Article 3.1.6.5. of Division B of the NBC(AE) which states:

Flame Resistance

- 1) Every tent and *air-supported structure* and all tarpaulins and decorative materials used in connection with these structures shall conform to CAN/ULC-S109, "Flame Tests of Flame-Resistant Fabrics and Films."

NOTE: NFPA 2017 Edition of NFPA 96 "Ventilation Control and Fire Protection of Commercial Cooking Operations", Annex B specifically speaks to Mobile Cooking Operations.

Application of the National Fire Code – 2019 Alberta Edition

Article 2.6.1.9. of the NFC(AE) requires that commercial cooking ventilation and exhaust systems comply with the requirements of the NBC(AE). The NBC(AE) directs compliance with NFPA 96 for exhaust and fire suppression installations. Article 2.6.1.9. of the NFC(AE) also requires that the ventilation, exhaust and suppression systems be inspected and maintained in accordance with NFPA 96.

NFC(AE) Article 2.6.1.9. of Division B states:

2.6.1.9. Commercial Cooking Equipment

- 1) Commercial cooking equipment exhaust and fire protection systems shall be designed and installed in conformance with the NBC(AE).
- 2) Except as required in Sentences (3) to (5), the use, inspection and maintenance of commercial cooking equipment exhaust and fire protection systems shall be in conformance with NFPA 96, "Ventilation Control and Fire Protection of Commercial Cooking Operations."
- 3) Hoods, grease removal devices, fans, ducts, and other appurtenances shall be cleaned at frequent intervals to prevent surfaces from becoming heavily contaminated with grease or other residues. (See Note A-2.6.1.9.(3).)
- 4) Flammable cleaning materials or solvents shall not be used for the cleaning of exhaust systems.
- 5) Instructions for manually operating the fire protection systems shall be posted conspicuously in the kitchen as part of the fire safety plan.
- 6) Commercial cooking equipment that is certified shall be installed and maintained in conformance with its certification.
- 7) Uncertified commercial cooking equipment shall be installed and maintained so as not to create a fire hazard.

NOTE: Uncertified/unapproved gas (natural or propane) or electrical appliances are not acceptable for installation in an MCO.

Article 2.1.3.5. of Division B of the NFC(AE) states that the installation and maintenance requirements for a kitchen fire suppression system are in NFPA 17A, "Standard for Wet Chemical Extinguishing Systems".

It is important to note that Article 3.2.5.17. of the NBC(AE) applies to all MCO's that have wet chemical extinguishing systems.

NBC(AE) Article 3.2.5.17. of Division B states:

3.2.5.17. Protection from Freezing

- 1) Equipment forming part of a fire protection system shall be protected from freezing if
 - a) it could be adversely affected by freezing temperatures, and
 - b) it is located in an unheated area.

NFC(AE) Article 2.1.3.5. of Division B states:

2.1.3.5. Special Fire Suppression Systems

- 1) Where a special fire suppression system is required by this Code or installed through application of good engineering practices, the system shall conform to one of the standards *listed* in Sentences (3) and (4).
- 3) The design and installation of a special fire suppression system that is not water-based shall conform to one of the following standards:
 - f) NFPA 17A, "Wet Chemical Extinguishing Systems,"

The NFC(AE) also requires Portable Fire Extinguishers for an MCO in accordance with NFPA 10, "Portable Fire Extinguishers".

Under the requirements of Sections 2.8. and 5.1. of the NFC(AE), the fire safety provisions for:

- the safe storage, use and location of gasoline for generators;
- generators to be cooled prior to refueling;
- the location of the MCO at least 3 metres from buildings and other MCOs; and
- the location of any generator 3 metres from a building

are all items required under a fire safety plan.

The NFPA's "**FIRE SAFETY TIPS FOR MOBILE COOKING OPERATIONS**" (attached to this Interpretation as Appendix "A") provides a list of items for consideration in the fire safety plan to be developed by the owner/operator and submitted to the local fire department.

The NFC(AE) also requires the electrical and cooking fuel gas systems to comply and be maintained in accordance with the electrical and gas code regulations adopted under the *Safety Codes Act*.

Application of the Electrical Code

The Electrical Code Regulation, section 2, prescribes the conditions for the use of equipment related to electrical systems and applies these requirements to the term "approved" as referenced in the 2018 Canadian Electrical Code, Part 1 (2018 CE Code).

The scope of the 2018 CE Code covers the wiring, equipment, components and accessories of the appliances located and connected within and to an MCO. Electrical equipment must be approved and identified with acceptable markings, as per the Electrical Safety Information Bulletin at:

<https://open.alberta.ca/publications/standata-electrical-safety-information-bulletin-legislation-electrical-code-regulation>

In addition, any electrical installation for an MCO shall comply with the requirements of the 2018 CE Code. The installation of wiring and the connection of electrical equipment are identified under the Permit Regulation as activities requiring electrical permits.

Application of the Gas Code

The Gas Code Regulation adopts CAN/CSA B149.1-15 “Natural Gas and Propane Installation Code”, CAN/CSA B149.2-15 “Propane Storage and Handling Code” and CAN/CSA B149.5-15 “Installation Code for Propane Fuel Systems and Tanks on Highway Vehicles”.

The scope of these regulations and codes covers all installation of appliances, equipment, components, and accessories where natural or propane gas is used for fuel purposes. Whenever the installation, extension, alteration or addition of a gas system occurs, compliance with the current code in force is required. Any natural gas and propane system installations in an MCO shall comply with the requirements of these regulations and codes and are identified under the Permit Regulation as activities requiring gas permits.

Application of the Plumbing Code

The Plumbing Code Regulation adopts the National Plumbing Code of Canada 2015. The scope of this code addresses any portion of a plumbing system installation that is not certified as part of a Recreational Vehicle or portable structure.

ADDITIONAL INFORMATION

In addition to the *Safety Codes Act*, MCOs are subject to other legislation (including regulations, codes, bylaws and other rules). The owner/operator is advised to contact:

- Each local municipality for any business licenses, permits, zoning and location approvals and restrictions.
- Environmental Public Health – Safe Food at Alberta Health Services for applicable licensing or inspection requirements. To contact a Public Health office for your local area, please access the following link:

<http://www.albertahealthservices.ca/eph/eph.aspx>

INTERPRETATION

Mobile Cooking Operations (MCO) and equipment, when stationary and used to produce, cook, sell and/or distribute food, support or intend to support an occupancy and subject to select application of the *Safety Codes Act* as set out in this Interpretation (includes regulations made under this *Act* and any codes, standards or body of rules declared in force pursuant to this *Act*).

This Interpretation applies to all portable/temporary food-service and cooking equipment including but not limited to food truck, vending truck, chip truck, burger wagon, doughnut shack, mobile/portable food vending unit, hot dog cart and other MCO uses in Alberta. The MCO may utilize electricity, wood, charcoal, propane or natural gas as energy for cooking and may use either supplied or on-site generated electricity to power lights, fans and cooling equipment.

This INTERPRETATION replaces the following:

14-FCI-003, “Mobile/Temporary Cooking Equipment”.

This INTERPRETATION is applicable throughout the province of Alberta.

Issuance of this STANDATA is authorized by the following Administrators:

[original signed]

Tina Parker
Provincial Fire Administrator

[original signed]

Sidney Manning
Provincial Plumbing and Gas Administrator

[original signed]

Paul Chang
Provincial Building Administrator

[original signed]

Clarence Cormier
Provincial Electrical Administrator

FIRE SAFETY TIPS FOR MOBILE COOKING OPERATIONS



General

- Does your jurisdiction require a license or permit to operate (e.g. local fire/health department)?
- Is cooking equipment attended at all times?
- Are all required ventilation openings open during cooking operations?
- Is the cooking hood/ventilation system free from grease?
- Is the vehicle parked at least 3 m from buildings, other vehicles, or combustibles?
- Is the vehicle parked so as not to block fire hydrants, fire lanes, fire department connections, exits, etc.?

Training

- Are employees trained in proper use of cooking equipment?
- Are employees trained in how to shut-off fuel sources (e.g. propane, generators)?
- Are employees trained in how to notify the local fire department in an emergency?
- Are employees trained in proper storage, handling and fueling procedures?
- Are employees trained in how to perform a leak test and when one is needed?
- Are workers trained in the proper use of portable fire extinguishers and hood extinguishing system?

Fire Protection

PORTABLE FIRE EXTINGUISHERS

- Are portable fire extinguishers charged, not obstructed, and in operating condition?
- Are portable fire extinguisher located near the cooking appliance, solid fuel storage, and any portable energy source (e.g. generator)?

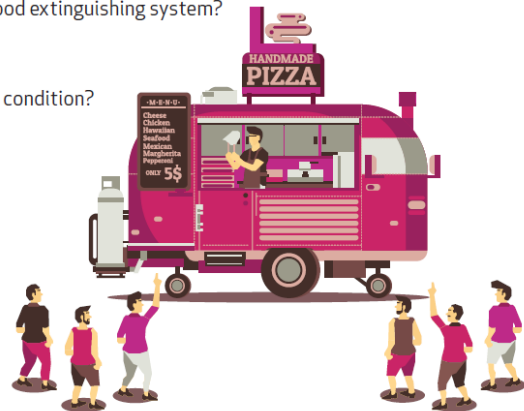
Hood Fire Suppression System

- Is the hood fire suppression system charged and in operating condition?

Fuel and Power Sources

PROPANE

- Is the propane system inspected prior to use?
- Are the propane tanks secured in an upright position?
- Are the propane tanks within their hydrostatic test date?
- Is the propane system in good condition, (i.e. no leaks, rust)?
- Has the propane system been leak tested?
- Has a leak test been performed when a new tank is installed, or a modification to the system has been made?
- Is documentation available for any leak test?
- Is the main shut-off marked, in plain view and easily assessable?
- Is the fuel supply shut off when not in use and while in transit?



ELECTRICAL

- Is the electrical system and other equipment in good working condition?
- Are extension cords in good condition?
- Is the electrical system, including extension cords in accordance with the electrical code?

GENERATORS

- Are generators placed at least 3 m from buildings, structures, vehicles and combustibles?
- Are generator exhausts directed away from mobile cooking vehicle, vehicles, buildings, structures, exits and openings?
- Are generators protected from contact by the public?
- Are fuel supplies properly stored?
- When refueling are the generators shut down, engine cooled and then refueled?

SOLID FUEL

- Is combustible solid fuel stored properly and away from combustibles or heat producing appliances?
- Are ashes, cinders, and other fire debris removed at the end of the day and stored in a proper container away from the vehicle, buildings and combustibles?

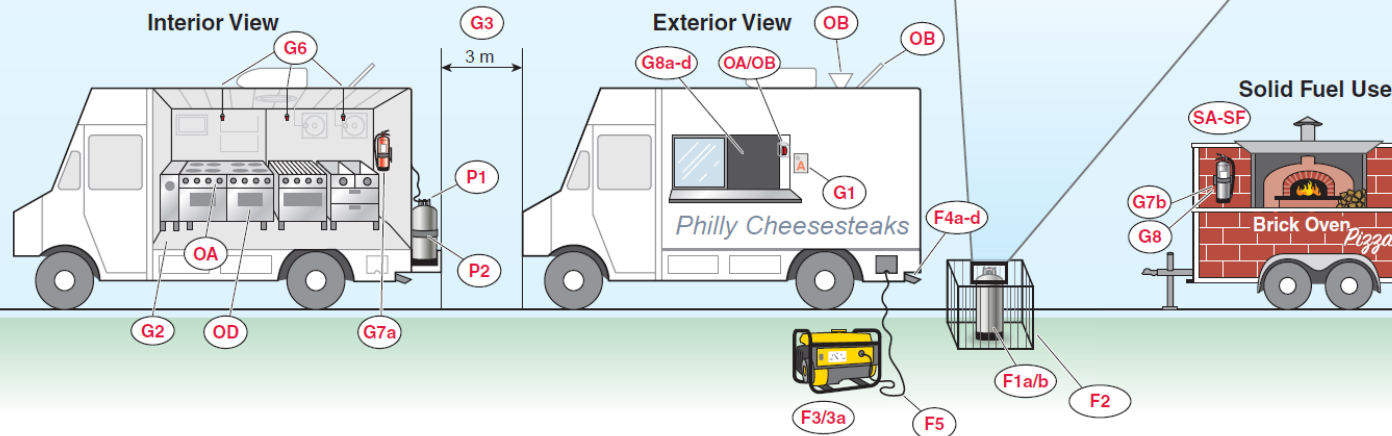
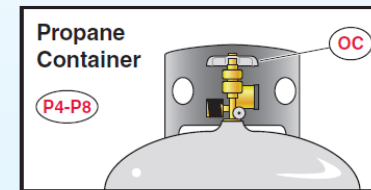
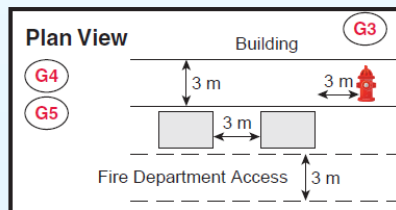
» NOTE: This Safety Sheet has been developed by the Ministry of Alberta Municipal Affairs, Technical and Corporate Services Division and is based on the "Fact Sheet for Food Truck Safety" created by the National Fire Protection Association ("NFPA"). The Ministry of Alberta Municipal Affairs is solely responsible for the content of this Sheet and therefore the NFPA takes no responsibility whatsoever for its contents and further the NFPA makes no warranty as to the accuracy or completeness of any information contained therein. This information is provided to help advance safety of mobile and temporary cooking operations. It is not intended to be a comprehensive list of requirements for mobile and temporary cooking operations. Check with the local jurisdiction for specific requirements. This safety sheet does not represent the official position of the NFPA or its Technical Committees. The NFPA disclaims liability for any personal injury, property, or other damages of any nature whatsoever resulting from the use of this information. For more information, go to nfpa.org/foodtrucksafety.



FOR MORE INFORMATION go to nfpa.org/foodtrucksafety



FACT SHEET » Food Truck Safety



NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

NOTE: This Safety Sheet has been developed by the Ministry of Alberta Municipal Affairs, Technical and Corporate Services Division and is based on the "Fact Sheet for Food Truck Safety" created by the National Fire Protection Association ("NFPA"). The Ministry of Alberta Municipal Affairs is solely responsible for the content of this Sheet and therefore the NFPA takes no responsibility whatsoever for its contents and further the NFPA makes no warranty as to the accuracy or completeness of any information contained therein. This information is provided to help advance safety of mobile and temporary cooking operations. It is not intended to be a comprehensive list of requirements for mobile and temporary cooking operations. Check with the local jurisdiction for specific requirements. This safety sheet does not represent the official position of the NFPA or its Technical Committees. The NFPA disclaims liability for any personal injury, property, or other damages of any nature whatsoever resulting from the use of this information. For more information, go to nfa.org/foodtrucksafety.

FACT SHEET » Food Truck Safety (continued)

Code references are provided at the end of each item. The red keys correspond to the NFPA food truck safety diagram. For more detailed information, see Annex B in NFPA 96.

GENERAL SAFETY CHECKLIST

- ☐ Obtain license or permits from the Local Authority Having Jurisdiction. [SCA] **G1**
- ☐ Ensure there is no public seating within the mobile food truck. **G2**
- ☐ Check that there is a clearance of at least 3 m away from buildings, structures, vehicles, and any combustible materials. [NFPA 96:7.8.2; 96:7.8.3 NOTE: Check with Local Authority Having Jurisdiction] **G3**
- ☐ Verify fire department vehicular access is provided for fire lanes and access roads. [AFC 2.5.1.5.] **G4**
- ☐ Ensure clearance is provided for the fire department to access fire hydrants and access fire department connections. [AFC 2.5.1.4.] **G5**
- ☐ Check that appliances using combustible media are protected by an approved fire extinguishing system. [NFPA 96:10.1.2, B149.2:4.15] **G6**
- ☐ Verify portable fire extinguishers have been selected and installed in kitchen cooking areas in accordance with NFPA 10. [AFC 2.1.5.1., & 6.2, NFPA 96:10.9.3] **G7a**
- ☐ Where solid fuel cooking appliance produce grease-laden vapors, make sure the appliances are protected by listed fire-extinguishing equipment. [ABC 6.2.2.7., NFPA 96:14.7.1] **G7b**
- ☐ Ensure that workers are trained in the following: [NFPA 96:B.15.1] **G8**
 - ☐ Proper use of portable fire extinguishers and extinguishing systems [NFPA 10:1.2] **G8a**
 - ☐ Proper method of shutting off fuel sources [NFPA 96:10.4.1] **G8b**
 - ☐ Proper procedure for notifying the local fire department [NFPA 1:10.14.9] **G8c**
 - ☐ Proper procedure for how to perform simple leak test on gas connections. [B149.1:4.4.2] **G8d**

FUEL & POWER SOURCES CHECKLIST

- ☐ Verify that fuel tanks are filled to the capacity needed for uninterrupted operation during normal operating hours. **F1a**
- ☐ Ensure that refueling is conducted only during non-operating hours. [NFPA 96:B.18.3] **F1b**
- ☐ Check that any engine-driven source of power is separated from the public by barriers, such as physical guards, fencing, or enclosures. [NFPA 96:B.16.2.2] **F2**
- ☐ Ensure that any engine-driven source of power is shut down prior to refueling from a portable container. **F3**
- ☐ Check that surfaces of engine-driven source of power are cool to the touch prior to refueling from a portable container. **F3a**
- ☐ Make sure that exhaust from engine-driven source of power complies with the following: **F4**
 - ☐ At least 3 m in all directions from openings and air intakes [NFPA 96:B.13] **F4a**
 - ☐ At least 3 m from every means of egress [NFPA 96:B.13] **F4b**
 - ☐ Directed away from all buildings **F4c**
 - ☐ Directed away from all other cooking vehicles and operations **F4d**
- ☐ Ensure that all electrical appliances, fixtures, equipment, and wiring complies with the Canadian Electrical Code. **F5**

For more of these resources,
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PROPANE SYSTEM INTEGRITY CHECKLIST

- ☐ Check that the main shutoff valve on all gas containers is readily accessible. [B149.5:5.3.5.6] **P1**
- ☐ Ensure that portable gas containers are in the upright position and secured to prevent tipping over. [B149.2:6.1.8 & 5.5] **P2**
- ☐ Inspect gas systems prior to each use. [NFPA 96:B.19.2.3] **P3**
- ☐ Perform leak testing on all new gas connections of the gas system. [B149.1:4.12.1 & 6.22.3] **P4**
- ☐ Perform leak testing on all gas connections affected by replacement of an exchangeable container. [B149.1:4.12.1 & 6.22.3] **P5**
- ☐ Document leak testing and make documentation available for review by the authorized official. [B149.1:6.22] **P6**
- ☐ Where a gas detection system is installed, ensure that it has been tested in accordance with the manufacturer's instructions. [NFPA 96:B.19.2.1] **P7**

OPERATIONAL SAFETY CHECKLIST

- ☐ Do not leave cooking equipment unattended while it is still hot. (This is the leading cause of home structure fires and home fire injuries.) **OA**
- ☐ Operate cooking equipment only when all windows, service hatches, and ventilation sources are fully opened. [B149.1:4.25.6, NFPA 96:14.2.2 & 14.2.3] **OB**
- ☐ Close gas supply piping valves and gas container valves when equipment is not in use. [B149.2:5.12.5] **OC**
- ☐ Keep cooking equipment, including the cooking ventilation system, clean by regularly removing grease. [NFPA 96:11.4] **OD**

SOLID FUEL SAFETY CHECKLIST (WHERE WOOD, CHARCOAL, OR OTHER SOLID FUEL IS USED)

- ☐ Fuel is not stored above any heat-producing appliance or vent. [NFPA 96:14.9.2.2] **SA**
- ☐ Fuel is not stored closer than 0.92 m to any cooking appliance. [NFPA 96:14.9.2.2] **SB**
- ☐ Fuel is not stored near any combustible flammable liquids, ignition sources, chemicals, and food supplies and packaged goods. [NFPA 96:14.9.2.7] **SC**
- ☐ Fuel is not stored in the path of the ash removal or near removed ashes. [NFPA 96:14.9.2.4] **SD**
- ☐ Ash, cinders, and other fire debris should be removed from the firebox at regular intervals and at least once a day. [NFPA 96:14.9.3.6.1] **SE**
- ☐ Removed ashes, cinders, and other removed fire debris should be placed in a closed, metal container located at least 0.92 m from any cooking appliance. [NFPA 96:14.9.3.8] **SF**

REFERENCED DOCUMENTS

- | | |
|--|--|
| <input type="checkbox"/> Safety Codes Act and its Regulations | <input type="checkbox"/> CSA B149.2-15 Propane Storage and Handling Code |
| <input type="checkbox"/> National Building Code - 2019 Alberta Edition | <input type="checkbox"/> CSA B149.5-15 Installation Code for Propane |
| <input type="checkbox"/> National Fire Code - 2019 Alberta Edition | <input type="checkbox"/> Fuel Systems and Containers on Motor Vehicles |
| <input type="checkbox"/> CSA C22.1-15 Canadian Electrical Code | <input type="checkbox"/> NFPA 10 Standard for Portable Fire |
| <input type="checkbox"/> CSA B149.1-15 Natural Gas and Propane | <input type="checkbox"/> Extinguishers, 2013 Edition |
| Installation Code | <input type="checkbox"/> NFPA 96, Standard for Ventilation Control and |
| | Fire Protection of Commercial Cooking |
| | Operations, 2017 Edition |

Variances

NOTICE

Variances

Variances under the Safety Codes Act

A variance is a power exercised by a safety codes officer or an Administrator under the *Safety Codes Act* (“*Act*”), which provides approximately equivalent or greater safety performance to persons and property as provided by the *Act*. The *Act* includes all regulations, codes, standards and rules in force under the *Act*. It is an expectation that safety codes officers (SCO) who have the power to issue a variance will consider and evaluate a request for a variance. Section 38 of the *Act* states:

“38(1) An Administrator or a safety codes officer may issue a written variance with respect to any thing, process or activity to which this Act applies if the Administrator or officer is of the opinion that the variance provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by this Act.

(2) An Administrator or a safety codes officer may include terms and conditions in the variance.

(3) A safety codes officer on issuing a variance shall notify an Administrator.

(4) The *Regulations Act* does not apply to variances issued under this section.”

A variance does not “change code” and it is not a relaxation of the *Act*. A variance provides an alternative to any thing, process or activity regulated under the *Act*. The prescriptive rules remain in place as a benchmark from which a variance may be developed. Anything that is not regulated by the *Act* cannot be the subject of a variance. Regarding the process for a variance, the person proposing the variance is responsible to provide evidence to the SCO that the variance would provide “approximately equivalent or greater safety performance with respect to persons and property as that provided for by this *Act*”. It is not the SCO’s responsibility to develop the variance or the evidence to support a variance.

With this understanding of a variance, safety codes officers should exercise all due diligence when issuing variances for which there is no recognized standard or for innovative materials, products and systems that are not listed by a recognized evaluation service such as the Canadian Construction Materials Centre (CCMC), or in accordance with the Association of Professional Engineers and Geosciences of Alberta (APEGA) professional practice standard for authentication of professional work products.

Why issue a variance?

The Government of Alberta created the authority to issue a variance under the *Act* in recognition that a thing, process or activity may meet or exceed safety outcomes but not be in strict accordance with the regulations, codes, standards or other rules under the *Act*. Over the past few decades, jurisdictions around the world including Canada have seen the introduction of objective based and performance based codes that allow for a variance or alternative solution to meet the safety objectives of the construction and installation codes. A variance to a prescribed rule recognizes that there are often multiple ways to achieve compliance or meet the safety objective of the regulations, codes or standards.

May a variance be issued for more than one thing, process or activity at a time?

Yes. Historically, a safety codes officer within their jurisdiction issued a variance that was site specific only. Section 38 of the *Act* is quite broad in application and does not place restrictions on whether a

August 1, 2019

For further information contact Municipal Affairs, Public Safety Division
toll-free at 1-866-421-6929.



variance can be issued for a specific site or for multiple sites for the same thing, process or activity or with the same conditions. Therefore, a safety codes officer designated with a variance power and employed by an accredited municipality, an accredited region services commission or an accredited corporation may issue a variance for the same thing, process or activity for multiple sites within their jurisdiction. Safety codes officers for accredited agencies may also issue a variance for multiple sites within the jurisdiction of the accredited organization for which they provide services.

What is the role of accredited municipalities, corporations and agencies with respect to variances?

An accredited body may manage variance issuance, including having policies and procedures for the administration of variances, provided the accredited organization does not interfere with or hinder a safety codes officer in the exercise of the officer's power when issuing a variance.

Which Administrator should receive a copy of a variance?

The *Act* requires that an Administrator be notified when a safety codes officer issues a variance. A copy of the variance is to be sent to the Administrator of Accreditation with the Safety Codes Council. The Administrator will then add the variance to the Council's variance registry system. Do not provide a copy to the Provincial Technical Administrators at Municipal Affairs.

What should be documented in a variance?

The Safety Codes Council currently provides a template for variances on their website. A revised template and updated training delivered through the Council will be developed at a later date to provide guidance for safety codes officers that aligns with this document.

Does an SCO have authority to review a variance proposed by a registered professional architect, engineer or other member?

Yes. An SCO's responsibility is to ensure the proponent confirms that a proposed variance will provide approximately equivalent or greater safety performance to that of the *Act* including applicable regulations, codes, standards or other rules under the *Act*. It is the professional member's responsibility to demonstrate to the SCO that their proposed variance or alternative solution meets the objectives of the codes and provides approximately equivalent or greater safety performance. While the professional and the SCO may engage in constructive discussions respecting the proposed variance based on their experience and knowledge of the codes, the SCO may not engage in the practice of engineering or architecture by substituting their own design proposals for that of the professional member's proposed solution, even if that SCO is a registered professional member.

STANDATA variance 21-ECV-064-900-ESS/19-BCB-010

Electrical/Building

2021 Canadian Electrical Code, Part I, Section 64

Date Issued: April 2023

Page 1 of 13

Purpose

Industry has identified concerns regarding Energy Storage System (ESS) requirements. This variance permits the installation of an ESS at a dwelling unit or residential occupancy not exceeding 20 kWh for any single ESS, as an alternative method to the C22.1:21 – Canadian Electrical Code, Part I.

Discussion

The current electrical code, C22.1:21 – Canadian Electrical Code, Part I, Rule 64-918 2) prohibits the installation of ESS's utilizing batteries below grade, including basements of dwelling units. Additionally, 64-918 4) prohibits ESS's with a storage capacity above 1 kWh from being installed in a dwelling unit or living space of a residential occupancy including clothes closets, storage rooms, bathrooms, stairways, or in any similar undesirable locations.

The next electrical code is C22.1:24 – Canadian Electrical Code, Part I, and will contain requirements for ESS installations up to 20 kWh for any single ESS installed at a dwelling unit or residential occupancy.

The upcoming code provisions in the 2024 edition are developed by the CSA Group. Additional standards related to ESS's include:

- Batteries for Use in Stationary and Motive Auxiliary Power Applications UL1973, which covers battery safety,
- Energy Storage Systems and Equipment UL9540, which covers overall ESS system safety,
- ANSI/CAN/UL Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems UL9540A, which covers fire propagation testing, and
- The Standard for the Installation of Stationary Energy Storage Systems NFPA 855, which covers construction, separation, operation, maintenance, and commissioning of ESS's.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part I 2021

Issued by the Provincial Electrical and Building Administrators

[Original signed]
Kevin Glubrecht
Provincial Electrical Administrator

[Original signed]
Paul Chang
Provincial Building Administrator

Alberta Municipal Affairs – Technical and Corporate Services
Phone: 1-866-421-6929 Email: safety.services@gov.ab.ca

To sign up for our List Subscription Service: municipalaffairs.gov.ab.ca/am_list_subscription_services

alberta.ca/electrical-standata.aspx
alberta.ca/building-standata.aspx

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These standards allow the potential for ESS's to be installed at a dwelling unit or residential occupancy. The UL1973, UL9540 and Standard for the Installation of Stationary Energy Storage Systems NFPA 855 have improved significantly allowing for testing of ESS's for residential use and provide better fire protection. Provisions also include requirements for fire protection to mitigate thermal runaway.

The C22.1:24 – Canadian Electrical Code, Part I, is anticipated to be published in 2024 and coming into force approximately 12 months from its publication date, with minimal provincial variations. In order to advance the installation of ESS's in Alberta, this variance will permit ESS's up to 20 kWh for any single ESS at a dwelling unit or residential occupancy anywhere in Alberta - provided it complies with the conditions in this variance. A variance provides an alternative solution of approximately equivalent or greater safety performance to the prescriptive requirements of the codes. Any ESS installation that complies with this variance is permitted just as if the installation was installed under code requirements.

Variance under the Safety Codes Act

The conditions in this variance are based on the unpublished code provisions in the upcoming C22.1:24 – Canadian Electrical Code, Part I. When this edition is adopted and brought into force in Alberta, the requirements for ESS's will essentially be unchanged when compared to this variance. Any ESS installation under this variance will be allowed to continue under the conditions in this variance until the next C22.1:24 – Canadian Electrical Code, Part I is adopted and comes into force in Alberta.

Current installation

C22.1:21 – Canadian Electrical Code, Part I, rule 64-918 currently does not permit an ESS with a storage capacity greater than 1kWh or utilizing lithium-ion batteries in dwelling units and any living space of a residential occupancy. The provisions in C22.1:21 – Canadian Electrical Code, Part I, severely restrict the installation of ESS's at dwelling unit or residential occupancy.

The current C22.1:21 – Canadian Electrical Code, Part I also states ESS's utilizing batteries shall be permitted to be installed in an electrical equipment vault and an Appendix B note suggests alternative locations may be considered subject to discussions with the local building, fire or appropriate authority having jurisdiction (AHJ). Even with equipment in conformance to UL 9540, UL 90540A standard, the location, size and spacing should still have a standard set of restrictions. The main purpose of these restrictions would be to ensure the occupants have adequate time and points of egress to exit the premises if there was a fire. Systems that are manufactured and certified for Canadian residential use and tested to UL9540, UL9540A exist, which until recently was not the case.

Code References

Third Memorandum of Revisions to CSA C22.1:21

Section 64 Renewable energy systems, energy production systems, energy storage systems, and batteries

64-000 Scope (see Appendix B)

- 1) This Section applies to the installation of renewable energy systems, energy production systems, energy storage systems, and batteries except where the voltage and current are limited in accordance with Rule 16-200 1) a) and b)
- 2) This Section supplements or amends the general requirements of this code. Batteries shall be installed in accordance with the provisions of Rules 64-802 to 64-814, except as otherwise required by the manufacturer.

Definitions

Energy storage system —a system capable of storing energy, and supplying electrical energy to local power loads, or operating in parallel with a supply authority system or any other power sources.

Field-assembled energy storage system —Equipment assembled in the field to form an energy storage system.

Residential use energy storage system—an energy storage system that

- a) conforms to the requirements of UL 9540; and
- b) has a capacity not exceeding 20 kWh for any single energy storage unit.

Self-contained energy storage system —equipment manufactured as a single unit to form an energy storage system.

Installation of batteries

64-800 Scope

- 1) Batteries shall be installed in accordance with the provisions of Rules 64-802 to 64-814, except as otherwise required by the manufacturer.
- 2) Electrical equipment associated with batteries shall be installed in accordance with the provisions of Rules 64-816 to 64-820.

64-802 Ventilation of battery rooms or areas (see Appendix B)

- 1) Rooms or areas that contain batteries that vent hydrogen to the atmosphere shall be adequately ventilated.
- 2) Lead-acid batteries shall not be subjected to ambient temperatures greater than 45 °C or less than the freezing point of the electrolyte.

64-804 Installation (see Appendix B)

- 1) Batteries shall be suitable for the purpose.
- 2) Batteries with exposed energized parts shall be kept in a room or enclosure accessible only to authorized personnel.
- 3) Batteries installed in a dwelling unit shall be connected with an output voltage not exceeding 50 V dc.
- 4) Energized parts of batteries installed in dwelling units shall be guarded to prevent accidental contact by persons or objects, regardless of voltage or battery type.
- 5) Battery trays, racks, and other surfaces on which batteries are mounted shall be
 - a) level;
 - b) protected against corrosion from the battery electrolyte, if corrosive;
 - c) covered with an insulating material having a dielectric strength of at least 1500 V;
 - d) of sufficient strength to carry the weight of the batteries; and
 - e) designed to withstand vibration and sway where appropriate.
- 6) Batteries shall be spaced in accordance with the manufacturer's installation instructions.
- 7) For lead-acid type batteries, no conductive materials shall be located within 150 mm of the tops of the non-conductive cases.

64-806 Current-limiting overcurrent devices (see Appendix B)

A current-limiting overcurrent device shall be installed in each battery circuit where the available short-circuit current from a battery or battery bank exceeds the short-circuit current ratings of other equipment in that circuit.

64-808 Disconnection of series battery circuits

Battery circuits subject to field servicing, operating at more than 50 V dc shall have provisions for disconnecting the

- a) series-connected strings; and
- b) grounded circuit conductor(s) in the battery electrical system for maintenance without disconnecting the grounded circuit conductor(s) of other circuits in the system.

64-810 Bonding of battery installations

Bonding of battery installations shall be in accordance with Section 10 in the C22.1:21 – Canadian Electrical Code, Part I.

64-812 Battery interconnections (see Appendix B)

- 1) Insulated conductors and cables used to terminate to battery terminals shall be of the flexible fine strand type.
- 2) The connection method between batteries shall be permitted to be insulated or bare busbars.
- 3) Flexible metal raceways shall not be permitted for battery interconnections
- 4) Conductors shall have sufficient ampacity for the maximum load.
- 5) Insulated flexible conductor and cable terminations to a battery terminal or associated equipment, as well as interconnections between battery strings, shall be secured to minimize the movement of cables due to short-circuit forces and at intervals not more than 1.5 m throughout the run.

64-814 Wiring from batteries to other equipment

- 1) Conductors for connection from battery terminals to other equipment shall
 - a) be installed in accordance with Rule 64-812;
 - b) be sized in accordance with the load but not less than 2/0 AWG; and
 - c) extend not less than 300 mm from battery terminals.
- 2) Conductors that extend more than 3 m from battery terminals shall be
 - d) a) in a wiring method in accordance with Section 12; and
 - e) b) in accordance with Rule 14-100 b).
- 3) For batteries containing corrosive electrolyte, insulated conductors between batteries and other equipment shall be permitted to be installed in a raceway, provided the raceway
 - a) is of corrosion-resistant material or other materials suitably protected from corrosion;
 - b) is tightly sealed with sealing compound, rubber tape, or other material to resist the entrance of electrolyte by spray or creeping;
 - c) has an insulating bushing where the conductor emerges for connection to the battery, or be a non-metallic raceway with a suitable fitting; and
 - d) is located at least 300 mm above the highest battery terminal to reduce electrolyte creepage or spillage entering the raceway.
- 4) Flexible metal raceways shall not be permitted to connect batteries to other equipment.
- 5) For batteries containing corrosive electrolyte, cable shall be permitted to be installed for connection to other equipment provided
 - a) the cable is of corrosion-resistant material or other materials suitably protected from corrosion;
 - b) the end of the cable is tightly sealed with sealing compound, rubber tape, or other material to resist the entrance of electrolyte by spray or creeping;
 - c) the conductor issues from a cable through an insulating bushing or inner jacket where a metal armoured cable is used;
 - d) at least 300 mm of free conductor extends from the cable where connected to a battery terminal; and
 - e) the cable exit is located at least 300 mm above the highest battery terminal to reduce electrolyte creepage or spillage entering the raceway.

64-816 Wiring methods and installation of equipment in battery rooms

The installation of wiring and equipment in a battery room, which is not part of the wiring of the batteries, shall be in accordance with the requirements for an ordinary location.

64-818 Charge control (see Appendix B)

- 1) Equipment shall be provided to control the charging process of the batteries.
- 2) Notwithstanding Subrule 1), charge controller equipment shall not be required where the design of the renewable energy source circuit is the only supply and is matched to the voltage rating and charge current requirements of the interconnected battery cells, and the maximum charging current multiplied by 1 h is less than 3% of the rated battery capacity.
- 3) All adjusting means for control of the charging process shall be accessible only to qualified persons.

64-820 Diversion charge controller (see Appendix B)

- 1) Systems employing a diversion charge controller as the sole means of regulating the charging of a battery shall be equipped with an additional, independent means to prevent overcharging of the battery.
- 2) Circuits containing a dc diversion charge controller and a dc diversion load shall comply with the following:
 - a) the current rating of the diversion load shall be less than or equal to the current rating of the diversion load charge controller;
 - b) the voltage rating of the diversion load shall be equal to or greater than the maximum battery voltage;
 - c) the power rating of a diversion load shall be at least 150% of the power rating of the charging source; and
 - d) the conductor ampacity and the rating of the overcurrent device for the circuit shall be at least 150% of the maximum current rating of the diversion charge controller.
- 3) Renewable energy systems using interactive inverters to control battery state-of-charge by diverting excess power into the utility system shall have an additional, independent means of controlling the battery charging process for use when the utility is not present or when the primary charge controller fails or is disabled.

Energy storage systems
General

64-900 Scope (see Appendix B)

Rules 64-902 to 64-926 apply to the installation of self-contained and field-assembled energy storage systems.

64-902 Marking (see Appendix B)

- 1) In addition to the requirements in Rule 64-074, a plaque or directory shall be provided to indicate the building or structure contains an energy storage system and the location of all energy storage system disconnecting means.
- 2) Energy storage systems with a storage capacity of 1 kWh or less, shall include permanent markings, as applicable to the system, in accordance with Rule 2-100 at a readily accessible location at the disconnecting means for the energy storage system.
- 3) Energy storage systems meeting the requirements of Rule 2-024 shall be deemed to meet the requirements of Subrule 2).

64-904 Voltage of energy storage systems

- 1) Energy storage systems installed in accordance with Rule 64-1100 shall
 - a) not exceed 600 V; and
 - b) have all energized parts over 150 volts-to-ground accessible only to qualified persons.
- 2) The dc portion of energy storage systems with maximum voltages higher than 750 V dc but not exceeding 1500 V dc shall not be required to comply with Rules 36-204, 36-208, and 36-214 provided that
 - a) the installation is serviced only by qualified persons;
 - b) the part of the installation exceeding 750 V dc is inaccessible to the public; and
 - c) enclosures in which circuits exceeding 750 V dc are present are marked with the word "DANGER" followed by the maximum rated circuit voltage of the equipment.

64-906 Insulated conductors and cables

Insulated conductors and cables for interconnection and connection of energy storage systems shall have a temperature rating of not less than 90 °C.

64-908 Insulated conductors marking or colour coding

Insulated conductors for dc circuits shall be colour coded or marked as follows:

- a) for a 2-wire circuit,

- i) red for positive and black for negative;
- ii) insulated conductors, other than green or white, with permanent marking at terminations and splices in accordance with Item i); or
- iii) insulated conductors manufactured with permanent surface printing indicating the polarity on the insulated conductor; and
- b) for a 3-wire circuit (bipolar circuit),
 - i) white or white with a coloured stripe for the mid-wire (identified as the centre tap), red for positive, and black for negative;
 - ii) insulated conductors, other than green or white, with permanent marking at terminations and splices in accordance with Item i); or
 - iii) insulated conductors manufactured with permanent surface printing indicating the polarity on the conductor insulation.

64-910 Installation and maintenance

- 1) Energy storage system equipment shall be installed and maintained in accordance with the manufacturer's instructions.
- 2) Mechanical protection shall be provided where an energy storage system is subject to the risk of vehicular impact or other physical damage.

64-912 Overcurrent protection

- 1) Where the available short-circuit current exceeds the ampacity of the conductor, each ungrounded conductor of an energy storage system shall be protected in accordance with Rules 14-100 and 14-104.
Equipment and conductors that are energized from both directions shall be provided with overcurrent protection from each source of supply in accordance with Subrule 1). Overcurrent devices used in any dc portion of an energy storage system shall be marked for the purpose.

64-914 Disconnecting means for energy storage systems (see Appendix B)

- 1) Disconnecting means for energy storage systems shall be in accordance with Subrules 2) to 8).
- 2) Where an energy storage system does not include an integral output disconnecting means, a disconnecting means shall be installed in accordance with Subrule 3).
- 3) The disconnecting means referenced in Subrule 2) shall
 - a) be capable of being energized from both sides;
 - b) indicate whether it is in the open or closed position;
 - c) have provision for being locked in the open position;
 - d) be in accordance with Section 14;
 - e) be capable of being opened at rated load;
 - f) be capable of being closed with a fault on the system; and
 - g) be located within sight of and within 9 m of the energy storage system equipment
- 4) The disconnecting means required by this Rule shall not be connected in any grounded conductor if operation of that disconnecting means would cause the grounded conductor to be in an ungrounded and energized state.
- 5) The disconnecting means shall comply with Rules 14-414 and 14-700.
- 6) As required by Rule 14-402, disconnecting means shall be provided to disconnect a fuse from all sources of supply if the fuse is energized from both directions, unless the fuse can be readily and safely de-energized.
- 7) Disconnecting means provided on dc circuits shall be rated for dc applications.
- 8) The disconnecting means shall bear a warning to the effect that the terminals on both the line and load sides could be energized when the disconnecting means is open.

64-916 Bonding (see Appendix B)

- 1) Non-current-carrying conductive parts of electrical equipment shall be bonded in accordance with Section 10.
- 2) In addition to the bonding requirements of Section 10, metal objects such as battery racking, cable management systems, structures and enclosures housing field-assembled energy storage

equipment, etc., shall be made electrically continuous and bonded to non-current-carrying conductive parts of electrical equipment.

- 3) Bonding conductors shall be sized in accordance with Section 10 based on the largest overcurrent device protecting the circuit conductors.

64-918 Diversion load controllers

A diversion load controller used as the primary means of regulating the stored kinetic energy of an energy storage system shall not use the supply authority system as a diversion load.

64-920 Ampere rating of energy storage system circuits

- 1) The current rating for energy storage system circuits shall be as follows:
 - a) the rated current indicated on the energy storage system nameplate(s),
 - b) for an inverter output circuit, the inverter continuous output current rating;
 - c) for an inverter input circuit, the continuous inverter input current rating when the inverter is producing rated power at the lowest input voltage;
 - d) for the output of a dc-to-dc converter, the dc-to-dc converter continuous output current rating; and
 - e) for a charge controller, the input current rating while charging
- 2) Where interconnected with the supply authority system, the current rating referred to in Subrule 1) shall be considered a continuous load for the application of Rule 8-104.
- 3) Where the output supplies dedicated loads or other power systems, the continuous load shall be determined in accordance with Rule 8-104 3).

64-922 System charge control (see Appendix B)

- 1) Equipment shall be provided to control the charging process of an energy storage system.
- 2) Adjustable settings for control of the charging process shall be accessible only to qualified personnel.
- 3) A diversion charge controller installed as part of an energy storage system shall be in accordance with the requirements of Rule 64-820.
- 4) A self-contained energy storage system shall be deemed to meet the requirements of this Rule.

64-924 Working space and accessibility to energized parts (See Appendix B)

- 1) Notwithstanding Rule 2-308, 2-310 and 2-312, working space requirements within energy storage systems complying with Rule 2-024 1) shall be permitted to be in accordance with the manufacturers instructions.
- 2) Energy storage systems installed in dwelling units shall have no exposed energized parts.

64-926 Egress from buildings

Except as provided for by other rules of this Code, batteries forming part of an energy storage system located outdoors shall not impede egress from a building and shall not be located closer than 3 m from

- a) a means of egress; and
- b) entrance or exit doors.

Energy storage systems utilizing batteries

General

64-1000 Scope

Rule 64-1002 to 64-1004 apply to the installation of energy storage systems utilizing batteries with a storage capacity exceeding 1 kWh.

64-1002 Installation requirements of energy storage systems

- 1) Energy storage systems utilizing batteries shall comply with Rule 2-024 1), and be installed and assembled in accordance with the manufacturer's instructions.
- 2) Except where installed in an electrical equipment vault, energy storage systems utilizing batteries shall not be installed where the floor is

- a) higher than 23 m above grade; or
 - b) below the lowest level of egress from the occupancy.
- 3) Energy storage systems shall be installed in accordance with Rule 2-328

64-1004 Installation requirements of batteries forming part of an energy storage system

- 1) Batteries forming part of an energy storage system shall
 - a) be installed in accordance with the manufacturer's installation instructions where provided; or
 - b) be installed in accordance with Rules 64-800 to 64-820.
- 2) Notwithstanding Rule 64-804 3), where indicated in the manufacturers installation instructions, batteries forming part of energy storage system installed in a dwelling unit, shall be permitted to be connected to exceed 50 V dc.

Installation of energy storage systems at residential occupancies

64-1100 Location and separation requirements (See Appendix B)

- 1) Energy storage systems installed at a dwelling unit or residential occupancy shall be suitable for residential use, and be located.
 - a) in an attached garage,
 - b) in or on an associated detached garage, or other free standing structure,
 - c) on the exterior surface of a dwelling unit or residential occupancy,
 - d) in a dedicated room with a fire resistance rating of not less than 1 h when installed in a dwelling unit or residential occupancy, or
 - e) in other locations where permitted
- 2) Notwithstanding Rule 64-1002 2) b), energy storage systems in a dwelling unit or residential occupancy shall be permitted to be installed below the lowest level of egress when located in accordance with Subrule 1) d) or e).
- 3) Energy storage systems shall not be installed in sleeping areas, or rooms opening directly into sleeping areas.
- 4) Except as required by Subrule 5), energy storage systems installed in accordance with Subrule 1), shall
 - a) have a storage capacity not exceeding 20 kWh for any single energy storage system; or
 - b) where multiple energy storage systems are installed, have an aggregate capacity not exceeding 80 kWh.
- 5) Energy storage systems installed in accordance with Subrule 1) d) shall
 - a) have a storage capacity not exceeding 20 kWh for any single energy storage system; or
 - b) where multiple energy storage systems are installed, have an aggregate capacity not exceeding 40 kWh.
- 6) Batteries forming part of an energy storage system installed outdoors shall not be located within 1 m of any window or door of a dwelling unit or residential occupancy.
- 7) Where multiple energy storage systems are installed, batteries forming part of each system shall be spaced not less than 1 m apart from each other.
- 8) Notwithstanding Subrules 1) through 7), energy storage systems evaluated to UL9540A shall be permitted to be installed in accordance with the manufacturer's installation instructions.
- 9) Where an energy storage system is installed in a dwelling unit or residential occupancy, a smoke alarm or smoke detector shall be installed,
 - a) in the area or room where the energy storage system is located, and,
 - b) be connected in accordance with Section 32.

Appendix B informative Notes

Rule 64-002

Energy storage system

Additional information regarding energy storage systems is located in UL 9540.

This definition is not intended to include an uninterruptible power system (UPS) which is covered by CSA C22.2 No. 107.3.

CSA C22.2 No. 107.3 defines an uninterruptible power system as follows:

Uninterruptible power system (UPS)

combination of converters, switches, and energy storage devices (such as batteries), constituting a power system for maintaining continuity of power to a load in case of input power failure.

Field-assembled energy storage systems

Field-assembled energy storage systems involve interconnection of separate pieces of equipment forming an overall energy storage system. This equipment may include batteries, protection, control, power conversion, charge control, and fire detection.

64-800

The intent of this Rule is to provide direction to Code users when components, such as batteries, inverters, converters, and controls, are interconnected in the field to create an energy storage system and have not been evaluated together as an assembly in accordance with UL 9540

64-802

Sufficient ventilation should be provided to prevent the hydrogen gas from building up to a level of 2% by volume in the room air at any time. When batteries are operated in constant-voltage-float service and the float voltage is maintained at appropriate levels, generation of gas is very slight. The rate of ventilation required to maintain the volume of hydrogen gas below the 2% level in a battery room may be calculated in accordance with IEEE 484. As an example, the volume of hydrogen gas generated daily by a 60 cell, 840 ampere-hour lead calcium grid battery charging at 2.2 V per cell is determined as follows:

Total m³/min of hydrogen gas = number of cells × gas generation rate of battery type in m³/min × float current in amperes × minutes/day.

$$\begin{aligned} \text{Volume of gas production} &= 60 \text{ cells} \times 7.6 \times 10^{-6} \frac{\text{m}^3}{\text{min}} \times \frac{0.006 \text{ A}}{100 \text{ A.H.}} \times 840 \text{ A.H.} \times \frac{60 \text{ min}}{\text{h}} \times \frac{24 \text{ h}}{\text{day}} \\ &= \frac{0.03309 \text{ m}^3 \text{ gas}}{\text{day}} \end{aligned}$$

For a room volume of 30 m³, the total volume of gas that should be allowed to accumulate in this room is 30 m³ × 2% = 0.6 m³.

Therefore, to meet this 2% maximum level, one air change is required for each

$$\frac{0.6 \text{ m}^3}{0.03309 \text{ m}^3 \frac{\text{gas}}{\text{day}}} = 18 \text{ days}$$

However, a minimum of one to four air changes per hour in the battery room is recommended to prevent pockets of hydrogen gas from accumulating and to ensure the comfort of the maintenance personnel.

Rule 64-802 2)

The freezing point of the electrolyte used in a lead-acid battery is –15 °C for a specific gravity of 1.150, –20 °C for a specific gravity of 1.175, and –27 °C for a specific gravity of 1.200. The freezing point will be higher if the battery is completely discharged. Therefore, batteries should not be located in areas where the temperature is likely to fall below –7 °C.

Rule 64-804

Metal trays and cases or containers in flooded, lead-acid battery systems operating over 50 V dc have been shown to be a contributing factor in ground faults. Non-conductive racks, trays, and cases minimize this problem.

Rule 64-804 1)

The Standards for batteries are UL 1973 and UL 9540.

Rule 64-804 4)

Batteries can be subject to extensive charge/discharge cycles and typically require frequent maintenance (e.g., checking electrolyte, cleaning connections). At any voltage, a primary safety concern in battery systems is that a fault (e.g., caused by a metal tool dropped onto a terminal) might result in a fire or explosion. The best method for reducing this hazard is to ensure that battery systems are guarded, as defined in Section 2.

Rule 64-806

Large banks of storage batteries can deliver significant amounts of short-circuit current. As a result, installers are reminded to ensure that the circuit overcurrent protective devices are selected and coordinated so that the devices will clear a fault without extensively damaging the electrical components of the circuit.

Rule 64-812

Battery plates and terminals are frequently constructed of relatively soft lead and lead alloys encased in plastics that are sealed with asphalt. Large-size, low-stranding stiff copper conductors attached to these components can cause them to become distorted. The use of flexible cables reduces such distortions. Examples of insulated conductors and cables with the appropriate physical and chemical-resistant properties for use with lead-acid batteries are: R90, RW90, RWU90, RPV90, RPVU90, DLO, etc. These insulated conductors and cables address the effects of dc currents and chemicals from lead-acid batteries. This Code does not permit welding and battery cables to be used for this purpose since they have no voltage rating.

Examples of fine strand conductors are Class G, H, M, I, and K

See the Note to Rules 12-406 4) and 64-812.

Rule 64-818

Certain battery types, such as lithium-ion, valve-regulated lead-acid, or nickel-cadmium, can experience thermal failure when overcharged.

Rule 64-820

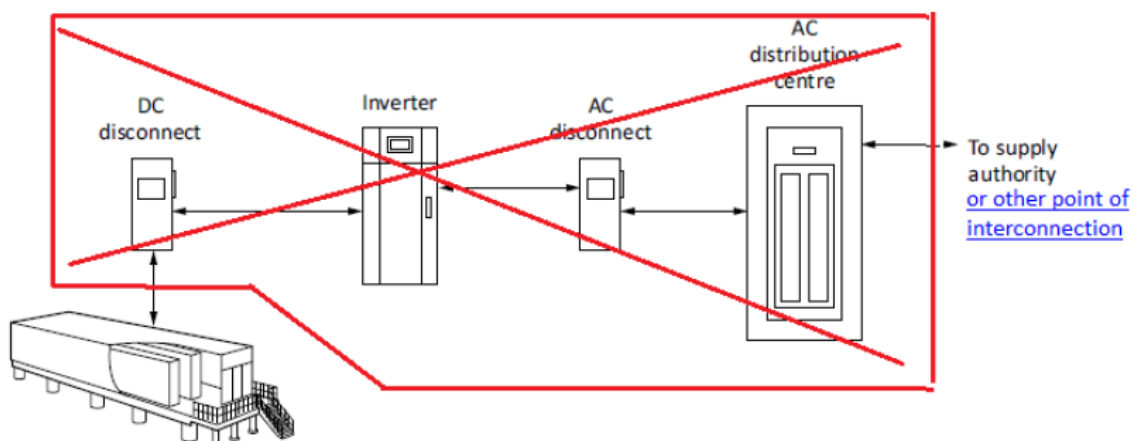
If any portion of a diversion charge control system fails, the batteries may be overcharged, creating a potentially hazardous condition. A second, independent charge control method (usually a series regulator) and robust diversion controller circuits minimize potential problems.

Rule 64-820 3)

An interconnected utility system is not to be considered a reliable diversion load.

64-900 – see figure B64-9 and B64-10

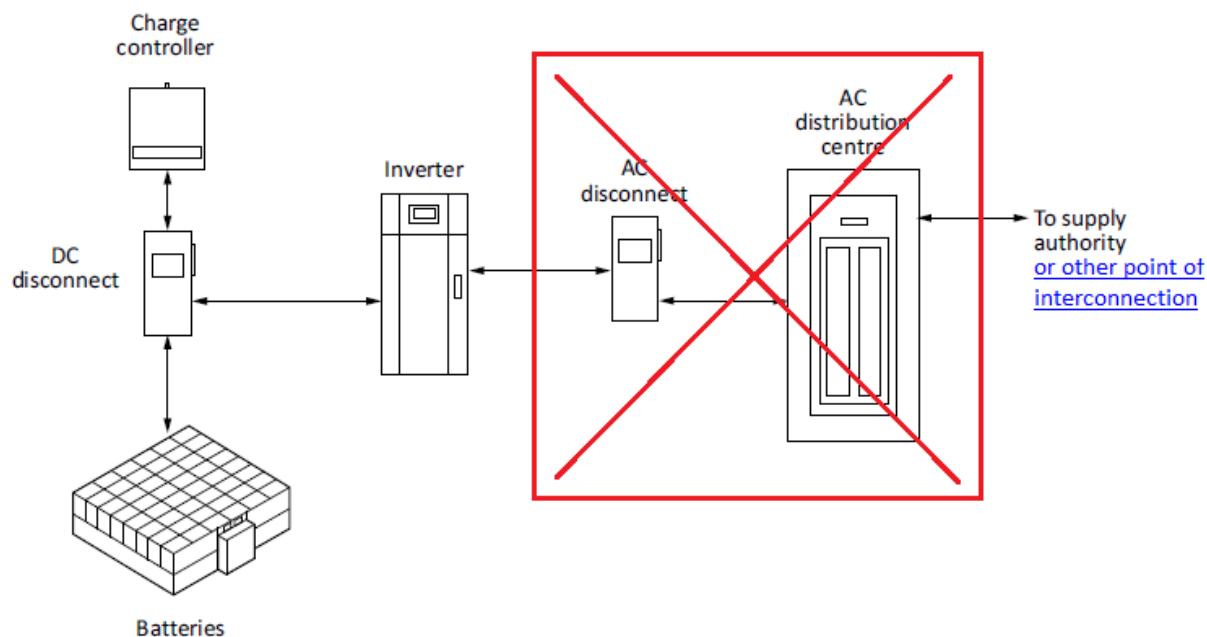
Figure B64-9
Self-contained energy storage



Energy storage system
manufactured as a single unit

Note: Self-contained energy storage systems may include such equipment as inverters and disconnects.

Figure B64-10
Field-assembled energy storage



Note: Field assembled energy storage systems may be multi-part assemblies that have been evaluated to UL9540, or an assembly of equipment on site that has not been evaluated to UL9540.

64-902 3), 64-910 1)

Requirements for marking, installation and maintenance of energy storage systems are found in CAN/UL 9540.

Rule 64-914

Disconnecting means for self-contained energy storage systems may be provided as part of the energy storage systems, or may be required to be installed in accordance with the manufacturer's installation instructions.

Rule 64-916 2)

An example of structures and enclosures housing energy storage equipment includes, but is not limited to, shipping containers, prefabricated buildings, and control panel enclosures.

Rule 64-916 3)

Energy storage systems are bi-directional, and fault current can be available from more than one source. Energy storage system circuits connected in parallel can all contribute to a fault; therefore, bonding conductors should be sized according to the largest overcurrent device in the circuit.

The intent of this rule is to acknowledge that the manufacturer's installation instructions may provide minimum working space requirements in or about equipment forming part of an energy storage system that are different than those required by other rules of this Code.

Rule 64-922 4)

UL 9540 requires charge controllers to be part of the energy storage systems.

Rule 64-924 2)

The intent of this rule is to acknowledge that the manufacturer's installation instructions may provide minimum working space requirements in or about equipment forming part of an energy storage system that are different than those required by other rules of this Code.

Rule 64-1002 3)

See the Note to Rule 2-328.

Rules 2-328, 64-1002 3)

The clearance distances specified in CSA B149.1 between a source of ignition and a combustible gas relief discharge device or vent are as follows:

- a) 1 m for natural gas; and
- b) 3 m for propane gas.

Rule 64-1100 1)

The acceptability of the fire resistance rating of a dedicated room constructed for the purposes of this rule should be verified by a qualified individual in accordance with the requirements of the authority having jurisdiction prior to installation.

Additional information regarding the Standard Methods of Fire Endurance Tests of Building Construction And Materials is found in CAN/ULC-S101. This standard covers fire endurance tests applicable to walls, partitions, floors, roofs, ceilings, columns, beams, and girders, as well as to some components of these building sub-assemblies.

Alternative locations may be considered, subject to acceptance from the local building, fire, or other appropriate authority having jurisdiction.

Rule 64-1100 8)

The test methodology in the UL9540A standard determines the capability of a battery technology to undergo thermal runaway.

Thermal runaway is defined as “The incident when an electrochemical cell increases its temperature through self-heating in an uncontrollable fashion. The thermal runaway progresses when the cell’s generation of heat is at a higher rate than the heat it can dissipate. This may lead to fire, explosion and gas evolution”.

As part of the energy storage system certification process to UL9540, the testing data generated by UL9540A may be used to determine acceptable installation practices such as but not limited to location of the energy storage system, aggregate capacity limitations, ventilation, and spacing requirements from other energy storage systems.

The intent of this rule is to recognize where such systems have undergone this testing that the requirements of Subrules 1) through 7) may not be required.

UL 9540 requires energy storage systems intended for installation in the habitable or living space of dwelling units to meet the cell level performance criteria of UL9540A

Application

This variance applies to ESS installed at dwelling units or residential occupancies.

Variance

This variance provides approximately equivalent or greater safety performance required with respect to persons and property as that provided for by the *Safety Codes Act* for ESS’s being installed at dwelling units or residential occupancies provided the following conditions are met.

This variance replaces rules in C22.1:21 – Canadian Electrical Code, Part I 64-000 and 64-800 – 64-820 series of rules and 64-900 – 64-928 series of rules, unless specified otherwise, as well as some definitions in 64-002 of the C22.1:21 – Canadian Electrical Code, Part I.

The installation of an ESS, room construction, and smoke alarm location and interconnection must be conducted under both a building and electrical permit.

General requirements

Except as specifically varied in this variance, all sections in the C22.1:21 – Canadian Electrical Code, Part I apply to electrical installations regulated by this variance.

Conditions

The directions specified in this STANDATA intend to harmonize with the proposed C22.1:24 – Canadian Electrical Code, Part I, and ANSI/CAN/UL 9540 standard. Once the CE 2024 Code 26th edition is adopted, this variance is no longer applicable as the requirements for ESS’s will be in the C22.1:24 – Canadian Electrical Code, Part I.

This VARIANCE is applicable throughout the Province of Alberta.

STANDATA variance 21-ECV-064-900-ESS/19-BCB-010(REV1)

Electrical/Building

Energy Storage Systems in residential buildings

Date Issued: October 2023

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Purpose

Industry has identified concerns regarding Energy Storage System (ESS) requirements. This variance permits the installation of an ESS at a dwelling unit or residential occupancy not exceeding 20 kWh for any single ESS, as an alternative method to the C22.1:21 – Canadian Electrical Code, Part I.

Discussion

The current electrical code, C22.1:21 – Canadian Electrical Code, Part I, Rule 64-918 2) prohibits the installation of ESS's utilizing batteries below grade, including basements of dwelling units. Additionally, 64-918 4) prohibits ESS's with a storage capacity above 1 kWh from being installed in a dwelling unit or living space of a residential occupancy including clothes closets, storage rooms, bathrooms, stairways, or in any similar undesirable locations.

The next electrical code is C22.1:24 – Canadian Electrical Code, Part I is expected to contain requirements for ESS installations up to 20 kWh for any single ESS installed at a dwelling unit or residential occupancy.

The upcoming code provisions in the 2024 edition were developed by the CSA Group. Additional standards related to ESS's include:

- Batteries for Use in Stationary and Motive Auxiliary Power Applications ANSI/CAN/UL1973, which covers battery safety,
- Energy Storage Systems and Equipment ANSI/CAN/UL 9540, which covers overall ESS system safety,
- ANSI/CAN/UL 9540A Standard for Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems, which covers fire propagation testing.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part I 2021

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These standards allow the potential for ESS's to be installed at a dwelling unit or residential occupancy. The ANSI/CAN/UL1973, ANSI/CAN/UL 9540 have improved significantly allowing for testing of ESS's for residential use and provide better fire protection. Provisions also include requirements for fire protection to mitigate thermal runaway.

The C22.1:24 – Canadian Electrical Code, Part I is anticipated to be published in 2024 and come into force approximately 12 months from its publication date with minimal provincial variations. In order to advance the installation of ESS's in Alberta, this variance will permit ESS's up to 20 kWh for any single ESS at a dwelling unit or residential occupancy anywhere in Alberta - provided it complies with the conditions in this variance. A variance provides an alternative solution of approximately equivalent or greater safety performance to the prescriptive requirements of the codes. Any ESS installation that complies with this variance is permitted just as if the installation was installed under code requirements.

Variance under the Safety Codes Act

The conditions in this variance are based on the unpublished code provisions in the upcoming C22.1:24 – Canadian Electrical Code, Part I.. Any ESS installation under this variance will be allowed to continue under the conditions in this variance until the next C22.1:24 – Canadian Electrical Code, Part I is adopted and comes into force in Alberta.

Current installation

C22.1:21 – Canadian Electrical Code, Part I, rule 64-918 currently does not permit an ESS with a storage capacity greater than 1kWh or utilizing lithium-ion batteries in dwelling units and any living space of a residential occupancy. The provisions in C22.1:21 – Canadian Electrical Code, Part I severely restrict the installation of ESS's at dwelling unit or residential occupancy.

The current C22.1:21 – Canadian Electrical Code, Part I also states ESS's utilizing batteries shall be permitted to be installed in an electrical equipment vault and an Appendix B note suggests alternative locations may be considered subject to discussions with the local building or fire safety codes officer or appropriate authority having jurisdiction (AHJ). Even with equipment in conformance to ANSI/CAN/UL 9540, ANSI/CAN/UL 90540A standard, the location, size and spacing should still have a standard set of restrictions. The main purpose of these restrictions would be to ensure the occupants have adequate time and points of egress to exit the premises if there was a fire. Systems that are manufactured and certified for Canadian residential use and tested to ANSI/CAN/UL9540, ANSI/CAN/UL 9540A now exist.

Code References

Fourth Memorandum of Revisions to CSA C22.1:21

Section 64 Renewable energy systems, energy production systems, energy storage systems, and batteries

64-000 Scope (see Appendix B)

- 1) This Section applies to the installation of renewable energy systems, energy production systems, energy storage systems, and batteries.
- 2) This Section supplements or amends the general requirements of this code. Batteries shall be installed in accordance with the provisions of Rules 64-802 to 64-814, except as otherwise required by the manufacturer.

Definitions

Energy storage system —a system capable of storing energy, and supplying electrical energy to local power loads, or operating in parallel with a supply authority system or any other power sources.

Field-assembled energy storage system —Equipment assembled in the field to form an energy storage system.

Residential use energy storage system—an energy storage system that for use in a dwelling unit of residential occupancy that has a capacity not exceeding 20kWh for any single energy storage unit.

Self-contained energy storage system —equipment manufactured as a single unit to form an energy storage system.

Installation of batteries

64-800 Scope

- 1) Batteries shall be installed in accordance with the provisions of Rules 64-802 to 64-814, except as otherwise required by the manufacturer.
- 2) Electrical equipment associated with batteries shall be installed in accordance with the provisions of Rules 64-816 to 64-820.

64-802 Ventilation of battery rooms or areas (see Appendix B)

- 1) Rooms or areas that contain batteries that vent gasses to the atmosphere under normal operation shall be adequately ventilated.
- 2) Lead-acid batteries shall not be subjected to ambient temperatures greater than 45 °C or less than the freezing point of the electrolyte.

64-804 Installation (see Appendix B)

- 1) Batteries shall be suitable for the purpose.
- 2) Batteries with exposed energized parts shall be kept in a room or enclosure accessible only to authorized personnel.
- 3) Batteries installed in a dwelling unit shall be connected with an output voltage not exceeding 50 V dc.
- 4) Energized parts of batteries installed in dwelling units shall be guarded to prevent accidental contact by persons or objects, regardless of voltage or battery type.
- 5) Battery trays, racks, and other surfaces on which batteries are mounted shall be
 - a) level;
 - b) protected against corrosion from the battery electrolyte, if corrosive;
 - c) covered with an insulating material having a dielectric strength of at least 1500 V;
 - d) of sufficient strength to carry the weight of the batteries; and
 - e) designed to withstand vibration and sway where appropriate.
- 6) Batteries shall be spaced in accordance with the manufacturer's installation instructions.
- 7) For lead-acid type batteries, no conductive materials shall be located within 150 mm of the tops of the non-conductive cases.

64-806 Current-limiting overcurrent devices (see Appendix B)

A current-limiting overcurrent device shall be installed in each battery circuit where the available short-circuit current from a battery or battery bank exceeds the short-circuit current ratings of other equipment in that circuit.

64-808 Disconnection of series battery circuits

Battery circuits subject to field servicing, operating at more than 50 V dc shall have provisions for disconnecting the

- a) series-connected strings; and
- b) grounded circuit conductor(s) in the battery electrical system for maintenance without disconnecting the grounded circuit conductor(s) of other circuits in the system.

64-810 Bonding of battery installations

Bonding of the non-current-carrying conductive parts of battery installations shall be in accordance with Section 10 in the C22.1:21 – Canadian Electrical Code, Part I.

64-812 Battery interconnections (see Appendix B)

- 1) Insulated conductors and cables used to terminate to battery terminals shall be of the flexible fine strand type.
- 2) The connection method between batteries shall be permitted to be insulated or bare busbars.
- 3) Flexible metal raceways shall not be permitted for battery interconnections
- 4) Conductors shall have sufficient ampacity for the maximum load.
- 5) Insulated flexible conductor and cable terminations to a battery terminal or associated equipment, as well as interconnections between battery strings, shall be secured to minimize the movement of cables due to short-circuit forces and at intervals not more than 1.5 m throughout the run.

64-814 Wiring from batteries to other equipment

- 1) Conductors for connection from battery terminals to other equipment shall
 - a) be installed in accordance with Rule 64-812;
 - b) be sized in accordance with the load but not less than 2/0 AWG; and
 - c) extend not less than 300 mm from battery terminals.
- 2) Conductors that extend more than 3 m from battery terminals shall be
 - a) installed in accordance with Section 12; and
 - b) protected in accordance with Rule 14-100
- 3) For batteries containing corrosive electrolyte, insulated conductors between batteries and other equipment shall be permitted to be installed in a raceway, provided the raceway
 - a) is of corrosion-resistant material or other materials suitably protected from corrosion;
 - b) is tightly sealed with sealing compound, rubber tape, or other material to resist the entrance of electrolyte by spray or creeping;
 - c) has an insulating bushing where the conductor emerges for connection to the battery, or be a non-metallic raceway with a suitable fitting; and
 - d) is located a minimum 300 mm above the highest battery terminal.
- 4) Flexible metal raceways shall not be permitted to connect batteries to other equipment.
- 5) For batteries containing corrosive electrolyte, cable shall be permitted to be installed for connection to other equipment provided
 - a) the cable is of corrosion-resistant material or other materials suitably protected from corrosion;
 - b) the end of the cable is tightly sealed with sealing compound, rubber tape, or other material to resist the entrance of electrolyte by spray or creeping;
 - c) the conductor issues from a cable through an insulating bushing or inner jacket where a metal armoured cable is used;
 - d) at least 300 mm of free conductor extends from the cable where connected to a battery terminal; and
 - e) the conductor issues from a cable a minimum 300 mm above the highest battery terminal.

64-816 Wiring methods and installation of equipment in battery rooms

The installation of wiring and equipment in a battery room, which is not part of the wiring of the batteries, shall be in accordance with the requirements for a dry location.

64-818 Charge control (see Appendix B)

- 1) Equipment shall be provided to control the charging process of the batteries.
- 2) Notwithstanding Subrule 1), charge controller equipment shall not be required where the
 - a) Only battery charging circuit is a renewable energy source;
 - b) Renewable energy system source and output circuits are not capable of exceeding the voltage rating and charge current requirements of the interconnected battery cells; and
 - c) Maximum charging current multiplied by 1 h is less than 3% of the rated battery capacity.
- 3) All adjusting means for control of the charging process shall be accessible only to qualified persons.

64-820 Diversion charge controller (see Appendix B)

- 1) Systems employing a diversion charge controller as the sole means of regulating the charging of a battery shall be equipped with an additional, independent means to prevent overcharging of the battery.

- 2) Circuits containing a dc diversion charge controller and a dc diversion load shall comply with the following:
 - a) the current rating of the diversion load shall be less than or equal to the current rating of the diversion load charge controller;
 - b) the voltage rating of the diversion load shall be equal to or greater than the maximum battery voltage;
 - c) the power rating of a diversion load shall be at least 150% of the power rating of the charging source; and
 - d) the conductor ampacity and the rating of the overcurrent device for the circuit shall be at least 150% of the maximum current rating of the diversion charge controller.
- 3) Renewable energy systems using interactive inverters to control battery state-of-charge by diverting excess power into the utility system shall have an additional, independent means of controlling the battery charging process for use when the utility is not present or when the primary charge controller fails or is disabled.

Energy storage systems

General

64-900 Scope (see Appendix B)

Rules 64-902 to 64-926 apply to the installation of self-contained and field-assembled energy storage systems.

64-902 Marking (see Appendix B)

- 1) In addition to the requirements in Rule 64-074, a plaque or directory shall be provided, in a location acceptable to the inspection department, to indicate the building or structure contains an energy storage system, including the location of all energy storage system disconnecting means.
- 2) Energy storage systems with a storage capacity of 1 kWh or less, shall include permanent markings, as applicable to the system, in accordance with Rule 2-100 at a readily accessible location at the disconnecting means for the energy storage system.
- 3) Energy storage systems meeting the requirements of Rule 2-024 shall be deemed to meet the requirements of Subrule 2).

64-904 Voltage of energy storage systems

- 1) Energy storage systems installed in accordance with Rule 64-1100 shall
 - a) not exceed 600 V; and
 - b) have all energized parts over 150 volts-to-ground accessible only to qualified persons.
- 2) The dc portion of energy storage systems with maximum voltages higher than 750 V dc but not exceeding 1500 V dc shall not be required to comply with Rules 36-204, 36-208, and 36-214 provided that
 - a) the installation is serviced only by qualified persons;
 - b) the part of the installation exceeding 750 V dc is inaccessible to the public; and
 - c) enclosures in which circuits exceeding 750 V dc are present are marked with the word "DANGER" followed by the maximum rated circuit voltage of the equipment.

64-906 Insulated conductors and cables

Insulated conductors and cables for interconnection and connection of energy storage systems shall have a temperature rating of not less than 90 °C.

64-908 Insulated conductors marking or colour coding

Insulated conductors for dc circuits shall be colour coded or marked as follows:

- a) for a 2-wire circuit,
 - i) red for positive and black for negative;
 - ii) insulated conductors, other than green or white, with permanent marking at terminations and splices in accordance with Item i); or

- iii) insulated conductors manufactured with permanent surface printing indicating the polarity on the insulated conductor; and
- b) for a 3-wire circuit (bipolar circuit),
 - i) white or white with a coloured stripe for the mid-wire (identified as the centre tap), red for positive, and black for negative;
 - ii) insulated conductors, other than green or white, with permanent marking at terminations and splices in accordance with Item i); or
 - iii) insulated conductors manufactured with permanent surface printing indicating the polarity on the conductor insulation.

64-910 Installation and maintenance

- 1) Energy storage system equipment shall be installed and maintained in accordance with the manufacturer's instructions.
- 2) Mechanical protection shall be provided where an energy storage system is subject to the risk of vehicular impact or other physical damage.

64-912 Overcurrent protection

- 1) Where the available short-circuit current exceeds the ampacity of the conductor, each ungrounded conductor of an energy storage system shall be protected in accordance with Rules 14-100 and 14-104.
- 2) Equipment and conductors that are energized from both directions shall be provided with overcurrent protection from each source of supply in accordance with Subrule 1).
- 3) Overcurrent devices used in any dc portion of an energy storage system shall be marked for the purpose.

64-914 Disconnecting means for energy storage systems

- 1) Disconnecting means for energy storage systems shall be in accordance with Subrules 2) to 8).
- 2) Where an energy storage system does not include an integral output disconnecting means, a disconnecting means shall be installed in accordance with Subrule 3).
- 3) The disconnecting means referenced in Subrule 2) shall
 - a) be capable of being energized from both sides;
 - b) indicate whether it is in the open or closed position;
 - c) have provision for being locked in the open position;
 - d) be in accordance with Section 14;
 - e) be capable of being opened at rated load;
 - f) be capable of being closed with a fault on the system; and
 - g) be located within sight of and within 9 m of the energy storage system equipment
- 4) The disconnecting means required by this Rule shall not be connected in any grounded conductor if operation of that disconnecting means would cause the grounded conductor to be in an ungrounded and energized state.
- 5) The disconnecting means shall comply with Rules 14-414 and 14-700.
- 6) As required by Rule 14-402, disconnecting means shall be provided to disconnect a fuse from all sources of supply if the fuse is energized from both directions, unless the fuse can be readily and safely de-energized.
- 7) Disconnecting means provided on dc circuits shall be rated for dc applications.
- 8) A permanent warning label shall be installed on the disconnecting means to indicate that the terminals on both the line and load sides could be energized when the disconnecting means is in the open position.

64-916 Bonding (see Appendix B)

- 1) Non-current-carrying conductive parts of electrical equipment shall be bonded in accordance with Section 10.
- 2) Bonding conductors installed in circuits described in Subrule 64-912 2) shall be sized in accordance with Section 10 based on the largest overcurrent device protecting circuit conductors from each source of supply.

64-918 Diversion load controllers

A diversion load controller used as the primary means of regulating the stored kinetic energy of an energy storage system shall not use the supply authority system as a diversion load.

64-920 Ampere rating of energy storage system circuits

- 1) The current rating for energy storage system circuits shall be as follows:
 - a) the rated current indicated on the energy storage system nameplate(s),
 - b) for an inverter output circuit, the inverter continuous output current rating;
 - c) for an inverter input circuit, the continuous inverter input current rating when the inverter is producing rated power at the lowest input voltage;
 - d) for the output of a dc-to-dc converter, the dc-to-dc converter continuous output current rating; and
 - e) for a charge controller, the input current rating while charging
- 2) Where interconnected with the supply authority system, the current rating referred to in Subrule 1) shall be considered a continuous load for the application of Rule 8-104.
- 3) Where the output supplies dedicated loads or other power systems, the continuous load shall be determined in accordance with Rule 8-104 3).

64-922 System charge control (see Appendix B)

- 1) Equipment shall be provided to control the charging process of an energy storage system.
- 2) Adjustable settings for control of the charging process shall be accessible only to qualified personnel.
- 3) A diversion charge controller installed as part of an energy storage system shall be in accordance with the requirements of Rule 64-820.
- 4) A self-contained energy storage system shall be deemed to meet the requirements of this Rule.

64-924 Working space and accessibility to energized parts (See Appendix B)

- 1) Notwithstanding Rule 2-308, 2-310 and 2-312, working space requirements within energy storage systems complying with Rule 2-024 1) shall be permitted to be in accordance with the manufacturers instructions.
- 2) Energy storage systems installed in dwelling units shall have no exposed energized parts.

64-926 Separation from building exposures and Egress from buildings (See Appendix B and G)

- 1) Batteries forming part of an energy storage system located outdoors shall not be located within
 - a) 3 m of a means of egress; and
 - b) 1.5 m of windows, ventilation openings, any other operable openings, or doors other than vehicular access doors.
- 2) Notwithstanding Subrule 1) energy storage systems evaluated to ANSI/CAN/UL 9540A shall be permitted to be installed in accordance with the manufacturer's installation instructions, including separation distances from means of egress and building openings.

Energy storage systems utilizing batteries**General****64-1000 Scope**

Rule 64-1002 to 64-1004 apply to the installation of energy storage systems utilizing batteries with a storage capacity exceeding 1 kWh.

64-1002 Installation requirements of energy storage systems

- 1) Energy storage systems utilizing batteries shall comply with Rule 2-024 1), and be installed and assembled in accordance with the manufacturer's instructions.
- 2) Except where installed in an electrical equipment vault, energy storage systems utilizing batteries shall not be installed where the floor is

- a) higher than 23 m above grade; or
 - b) below the lowest level of egress from the occupancy.
- 3) Energy storage systems shall be installed in accordance with Rule 2-328

64-1004 Installation requirements of batteries forming part of an energy storage system

- 1) Batteries forming part of an energy storage system shall
 - a) be installed in accordance with the manufacturer's installation instructions where provided; or
 - b) be installed in accordance with Rules 64-800 to 64-820.
- 2) Notwithstanding Rule 64-804 3), where indicated in the manufacturers installation instructions, batteries forming part of energy storage system installed in a dwelling unit, shall be permitted to be connected to exceed 50 V dc.

Installation of energy storage systems at residential occupancies

64-1100 Location and separation requirements (See Appendix B)

- 1) Energy storage systems installed at a dwelling unit or residential occupancy shall be suitable for residential use, and be located.
 - a) in an attached garage,
 - b) in or on an associated detached garage, or other free standing structure,
 - c) on the exterior surface of the building,
 - d) in a dedicated room or utility room having a door equipped with a self-closing device and enclosed with a minimum construction of
 - i) ceilings and walls finished with gypsum board; and
 - ii) floors finished with lumber sheathing; or
 - e) in other locations where permitted
- 2) Where an energy storage system is installed in a building of residential occupancy containing multiple dwelling units, the construction required in Subrule 64-1100 1) d) shall have a fire resistance rating of not less than 1 h.
- 3) Notwithstanding Rule 64-1002 2) b), energy storage systems in a dwelling unit or residential occupancy shall be permitted to be installed below the lowest level of egress when located in accordance with Subrule 1) d) or e).
- 4) Batteries forming part of an energy storage system installed in accordance with Subrule 2) shall not be located directly beneath an exit required by National Building Code.
- 5) Except as required by Subrule 6), energy storage systems installed in accordance with Subrule 1), shall
 - a) have a storage capacity not exceeding 20 kWh for any single energy storage system; or
 - b) where multiple energy storage systems are installed, have an aggregate capacity not exceeding 80 kWh.
- 6) Energy storage systems installed in accordance with Subrule 1) d) shall
 - a) have a storage capacity not exceeding 20 kWh for any single energy storage system; or
 - b) where multiple energy storage systems are installed, have an aggregate capacity not exceeding 40 kWh.
- 7) Notwithstanding Rule 64-926 1), batteries forming part of an energy storage system installed indoors or outdoors shall not be located within 1 m of any window or door, other than a vehicular access door, of a dwelling unit or residential occupancy.
- 8) Where multiple energy storage systems are installed, batteries forming part of each system shall be spaced not less than 1 m apart from each other.
- 9) Notwithstanding Subrules 1) through 8), energy storage systems evaluated to ANSI/CAN/UL 9540A shall be permitted to be installed in accordance with the manufacturer's installation instructions.
- 10) Energy storage systems shall not be installed in sleeping areas, or rooms opening directly into sleeping areas.
- 11) Where an energy storage system is installed in a accordance with Subrule 1) d), a smoke alarm or smoke detector shall be installed,
 - a) in the room where the energy storage system is located, and,
 - b) be installed in accordance with Section 32.

Appendix B informative Notes**Rule 64-002****Energy storage system**

Additional information regarding energy storage systems is located in ANSI/CAN/UL 9540.

This definition is not intended to include an uninterruptible power system (UPS) which is covered by CSA C22.2 No. 107.3.

CSA C22.2 No. 107.3 defines an uninterruptible power system as follows:

Uninterruptible power system (UPS)

combination of converters, switches, and energy storage devices (such as batteries), constituting a power system for maintaining continuity of power to a load in case of input power failure.

Field-assembled energy storage systems

Field-assembled energy storage systems involve interconnection of separate pieces of equipment forming an overall energy storage system. This equipment may include batteries, protection, control, power conversion, charge control, and fire detection.

This definition applies to systems approved at a manufacturer's facility prior to field assembly.

This definition also applies to field-assembled systems that require approval following assembly.

Large energy storage systems may be approved off site, disassembled for shipment, and then reassembled on site based on the manufacturer's installation instructions in which the overall approval of the system is maintained.

64-800

This Rule provides direction to Code users when separate pieces of equipment, such as inverters, converters, and controls, are interconnected with batteries in the field.

64-802

When lead-acid batteries or other off-gassing batteries are operated in constant-voltage-float service and the float voltage is maintained at appropriate levels, generation of gas is very slight.

However sufficient ventilation should be provided to prevent the hydrogen gas from lead-acid batteries from building up to a level of 2% by volume in the room air at any time.

The rate of ventilation required to maintain the volume of hydrogen gas from lead-acid batteries below the 2% level in a battery room may be calculated in accordance with IEEE 484.

As an example, the volume of hydrogen gas generated daily by a 60 cell, 840 ampere-hour lead calcium grid battery charging at 2.2 V per cell is determined as follows:

Total m³/min of hydrogen gas = number of cells × gas generation rate of battery type in m³/min × float current in amperes × minutes/day.

$$\begin{aligned} \text{Volume of gas production} &= 60 \text{ cells} \times 7.6 \times 10^{-6} \frac{\text{m}^3}{\text{min}} \times \frac{0.006 \text{ A}}{100 \text{ A.H.}} \times 840 \text{ A.H.} \times \frac{60 \text{ min}}{\text{h}} \times \frac{24 \text{ h}}{\text{day}} \\ &= \frac{0.03309 \text{ m}^3 \text{ gas}}{\text{day}} \end{aligned}$$

For a room volume of 30 m³, the total volume of gas that should be allowed to accumulate in this room is 30 m³ × 2% = 0.6 m³.

Therefore, to meet this 2% maximum level, one air change is required every 18 days.

$$\frac{0.6 \text{ m}^3}{0.03309 \text{ m}^3 \frac{\text{gas}}{\text{day}}} = 18 \text{ days}$$

Table 9.32.2.3 of the National Building Code of Canada requires 5L/s minimum ventilation capacity for utility rooms, which meets the minimum requirements of ventilation for rooms in dwellings units where residential battery energy storage systems using lead-acid batteries are stored (e.g. 5L/s required ventilation capacity result in 0.6 Air Changes per Hour for a 30m³ room (3.6mx3.6m x 2.4m)).

Rule 64-802 2)

Precautions should be taken to ensure the electrolyte will not be subject to temperatures below its freezing point when installed in areas that the temperature is likely to fall below this value. The freezing point of the electrolyte used in a lead-acid battery is -15°C for a specific gravity of 1.150, -20°C for a specific gravity of 1.175, and -27°C for a specific gravity of 1.200. The freezing point will be higher if the battery is completely discharged.

Rule 64-804

Metal trays and cases or containers in flooded, lead-acid battery systems operating over 50 V dc have been shown to be a contributing factor in ground faults. Non-conductive racks, trays, and cases minimize this problem.

Rule 64-804 1)

The Standard for batteries is ANSI/CAN/UL 1973.

Rule 64-804 4)

Batteries can be subject to extensive charge/discharge cycles and typically require frequent maintenance (e.g., checking electrolyte, cleaning connections). At any voltage, a primary safety concern in battery systems is that a fault (e.g., caused by a metal tool dropped onto a terminal) might result in a fire or explosion. The best method for reducing this hazard is to ensure that battery systems are guarded, as defined in Section 2.

Rule 64-806

Large banks of storage batteries can deliver significant amounts of short-circuit current. As a result, installers are reminded to ensure that the circuit overcurrent protective devices are selected and coordinated so that the devices will clear a fault without extensively damaging the electrical components of the circuit.

Rule 64-812

Battery plates and terminals are frequently constructed of relatively soft lead and lead alloys encased in plastics that are sealed with asphalt. Large-size, low-stranding stiff copper conductors attached to these components can cause them to become distorted. The use of flexible cables reduces such distortions. Examples of insulated conductors and cables with the appropriate physical and chemical-resistant properties for use with lead-acid batteries are: R90, RW90, RWU90, RPV90, RPVU90, DLO, etc. These insulated conductors and cables address the effects of dc currents and chemicals from lead-acid batteries. This Code does not permit welding and battery cables to be used for this purpose since they have no voltage rating.

Examples of fine strand conductors are Class G, H, M, I, and K

See the Note to Rules 12-406 4) and 64-812.

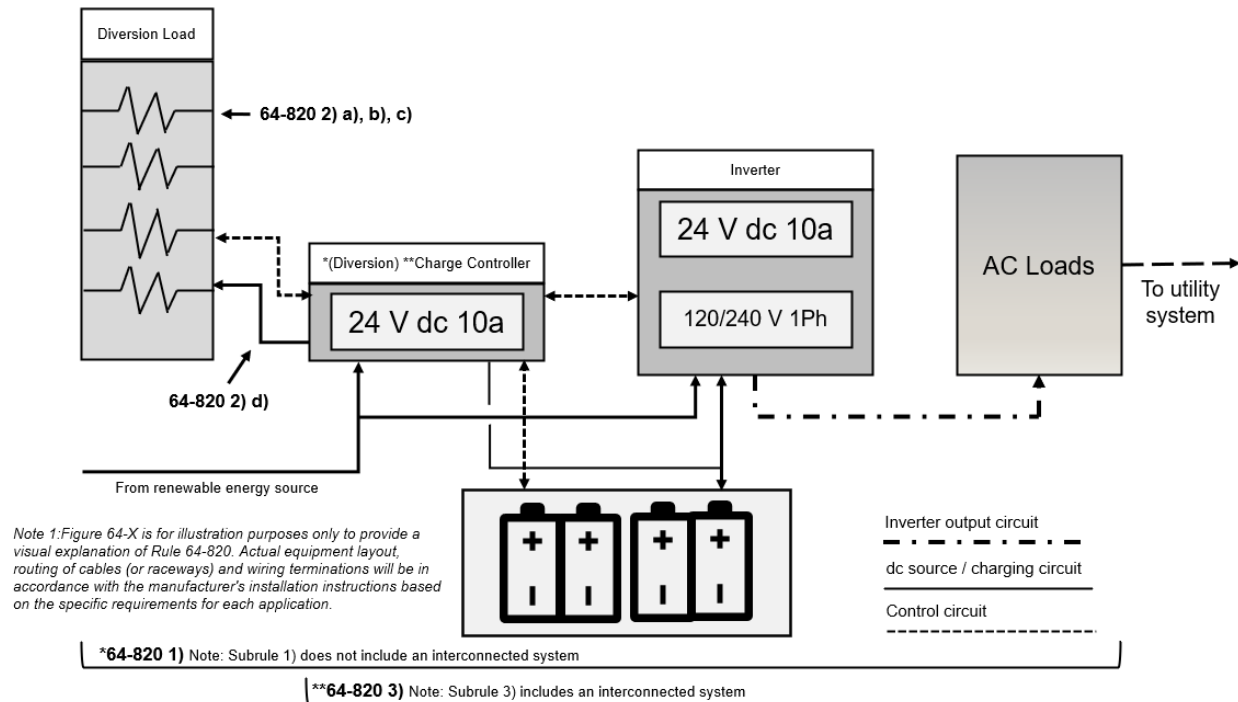
Rule 64-818

Certain battery types, such as lithium-ion, valve-regulated lead-acid, or nickel-cadmium, can experience thermal failure when overcharged.

Rule 64-820

If any portion of a diversion charge control system fails, the batteries may be overcharged, creating a potentially hazardous condition. A second, independent charge control method minimizes these potential hazards (see Figure B64-XX)

Figure B64-XX Diversion Charge Control System

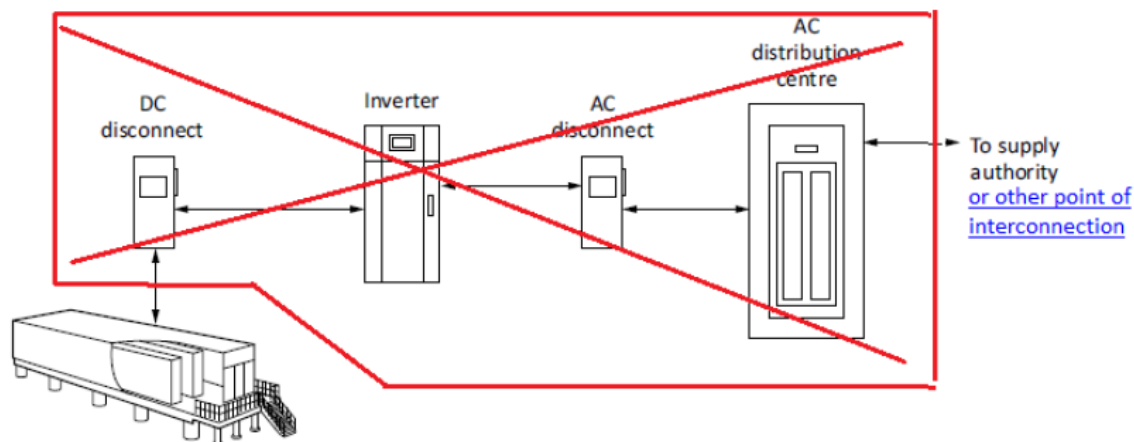


Rule 64-820 3)

An interconnected utility system is not to be considered a reliable diversion load.

64-900 – see figure B64-9 and B64-10

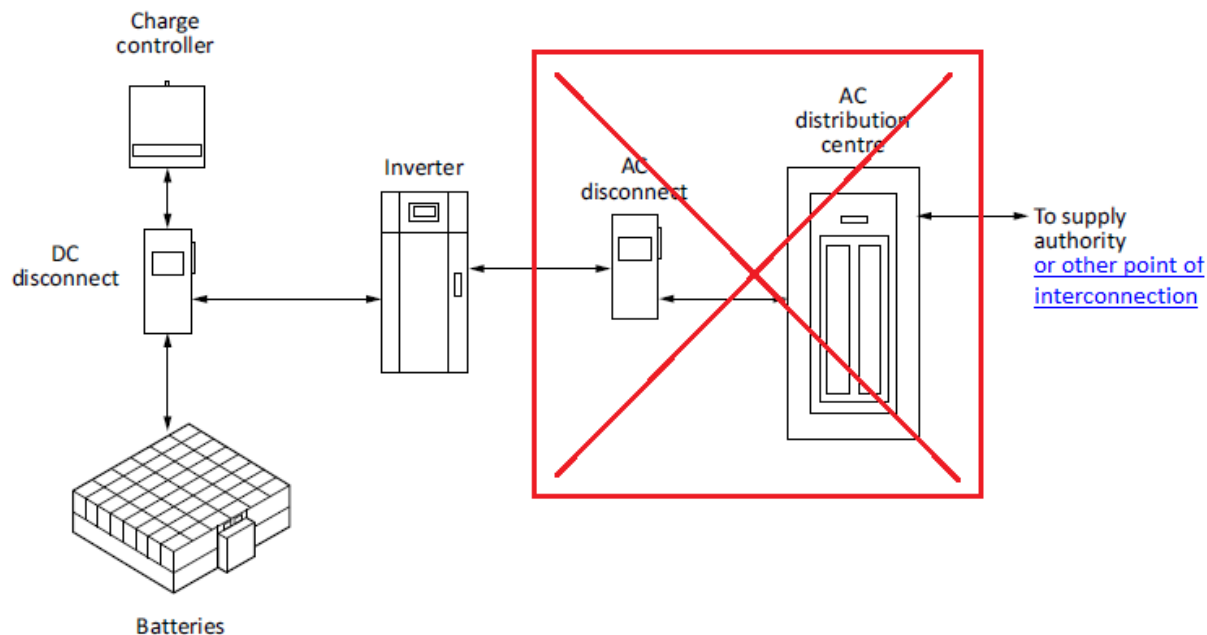
Figure B64-9
Self-contained energy storage



Energy storage system
manufactured as a single unit

Note: Self-contained energy storage systems may include such equipment as inverters and disconnects.

Figure B64-10
Field-assembled energy storage



Note: Field assembled energy storage systems may be multi-part assemblies that have been evaluated to ANSI/CAN/UL 9540, or an assembly of equipment on site that has not been evaluated to ANSI/CAN/UL 9540.

Rule 64-902 1)

Placement of signage should be coordinated with the local building, fire, or other appropriate authorities having jurisdiction.

64-902 3), 64-910 1)

Requirements for marking, installation and maintenance of energy storage systems are found in ANSI/CAN/UL 9540.

Rule 64-914

Disconnecting means for energy storage systems may be provided as part of the energy storage systems. When an energy storage system is not supplied with an output circuit disconnecting means, Subrule 3) provides direction on installation requirements for a field installed disconnect.

Rule 64-916 2)

An example of structures and enclosures housing energy storage equipment includes, but is not limited to, shipping containers, prefabricated buildings, and control panel enclosures.

Rule 64-916 3)

Energy storage systems are bi-directional, and fault current can be available from more than one source. Energy storage system circuits connected in parallel can all contribute to a fault; therefore, bonding conductors should be sized according to the largest overcurrent device in the circuit.

The intent of this rule is to acknowledge that the manufacturer's installation instructions may provide minimum working space requirements in or about equipment forming part of an energy storage system that are different than those required by other rules of this Code.

Rule 64-922 4)

ANSI/CAN/UL 9540 requires charge controllers to be part of the energy storage systems.

Rule 64-924 2)

The intent of this rule is to acknowledge that the manufacturer's installation instructions may provide minimum working space requirements in or about equipment forming part of an energy storage system that are different than those required by other rules of this Code.

Rule 64-926

See the Note to Rules 2-310 1) and 64-926.

The National Building Code has requirements regarding any object obstructing the minimum required width of an exit in order to not impede egress of occupants from a building in an emergency to a safe location.

The National Building Code does not cover the minimum permitted distance between a means of egress and an Energy Storage System and is therefore a requirement in this rule.

National Building Code of Canada defines means of egress as follows: "*Means of egress means a continuous path of travel provided for the escape of persons from any point in a building or contained open space to a separate building, an open public thoroughfare, or an exterior open space protected from fire exposure from the building and having access to an open public thoroughfare. Means of egress includes exits and access to exits*".

Rule 64-1002 3)

See the Note to Rule 2-328.

Rule 64-1100 1)

The fire resistance rating of ceilings, floors, and walls constructed for the purposes of this rule should be verified by a qualified individual in accordance with the requirements of the authority having jurisdiction prior to installation.

Additional information regarding the Standard Methods of Fire Endurance Tests of Building Construction And Materials is found in CAN/ULC-S101. This standard covers fire endurance tests applicable to walls, partitions, floors, roofs, ceilings, columns, beams, and girders, as well as to some components of these building sub-assemblies.

Additional information regarding fire resistance values of generic wall and floor assemblies can be found in Table 9.10.3.1.A and 9.10.3.1.B of the National Building Code of Canada or in Appendix D of the National Building Code of Canada. An example of a wall providing a 1h fire resistance rating is a construction of 38 mm x 89 mm wood studs spaced 400 mm or 600 mm o.c. without absorptive material in the cavity and with one layer of 15.9 mm Type X gypsum board on each side. An example of a floor/ceiling assembly providing a 1h fire resistance rating is a construction of a typical wooden subfloor (15.5 mm plywood, Oriented Strand Board (OSB) or waferboard, or 17 mm tongue and groove lumber) on wood joists or wood I-joists spaced not more than 400 mm o.c. and 2 layers of 12.7 mm Type X gypsum board on the ceiling side without absorptive material in cavity. Where the spacing of the joists is 600mm, two layers of 15.9 mm Type X gypsum board would be required to achieve the same rating.

Alternative locations or wall, ceilings and floor assemblies may be considered, subject to acceptance from the local building, fire, or other appropriate authority having jurisdiction.

Rule 64-1100 3)

In accordance with the National Building Code of Canada, rooms containing fuel-fired appliances are not permitted to be installed directly under a required exit. Although an energy storage system is not a fuel-burning appliance, similar concerns exist for energy storage systems and are therefore also not permitted to be located directly under a required exit.

Rule 64-1100 8)

The test methodology in the ANSI/CAN/UL 9540A standard determines the capability of a battery technology to undergo thermal runaway.

Thermal runaway is defined as “The incident when an electrochemical cell increases its temperature through self-heating in an uncontrollable fashion. The thermal runaway progresses when the cell’s generation of heat is at a higher rate than the heat it can dissipate. This may lead to fire, explosion and gas evolution”.

As part of the energy storage system certification process to ANSI/CAN/UL 9540, the testing data generated by ANSI/CAN/UL 9540A may be used to determine acceptable installation practices such as but not limited to location of the energy storage system, aggregate capacity limitations, ventilation, and spacing requirements from other energy storage systems.

The intent of this rule is to recognize where such systems have undergone this testing that the requirements of Subrules 1) through 7) may not be required.

ANSI/CAN/UL 9540 requires energy storage systems intended for installation in the habitable or living space of dwelling units to meet the cell level performance criteria of ANSI/CAN/UL 9540A.

Application

This variance applies to an ESS's installed at dwelling units or residential occupancies.

Variance

This variance provides approximately equivalent or greater safety performance required with respect to persons and property as that provided for by the *Safety Codes Act* for ESS's being installed at dwelling units or residential occupancies provided the following conditions are met.

This variance replaces rules in C22.1:21 – Canadian Electrical Code, Part I 64-000 and 64-800 to 64-820 series of rules and 64-900 to 64-928 series of rules unless specified otherwise, as well as some definitions in 64-002 of the C22.1:21 – Canadian Electrical Code, Part I.

The installation of an ESS, room construction, and smoke alarm location and interconnection must be conducted under both a building and electrical permit.

Conditions

The directions specified in this STANDATA intend to harmonize with the proposed C22.1:24 – Canadian Electrical Code, Part I, and ANSI/CAN/UL 9540 standard. Once the CE 2024 Code 26th edition is adopted, this variance is no longer applicable as the requirements for ESS's will be in the C22.1:24 – Canadian Electrical Code, Part I.

This Variance is applicable throughout the Province of Alberta.

STANDATA variance 21-ECV-002-024-ESP

Electrical

2021 Canadian Electrical Code, Part I, Rule 2-024 Use of approved equipment – Oil and Gas Industry Electrical Submersible Pumps

Date Issued: April 2022

Page 1 of 3

Purpose

This variance addresses issues with approval requirements for Electrical Submersible Pumps.

Discussion

Certification organizations have yet to identify a demand for developing a product certification program for Electrical Submersible Pumps (ESP's) and the associated down-hole cable assemblies. In addition, standards development organizations have not developed a certification standard for these products, consequently, certified ESP's and cables are not available.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

Issued by the Provincial Electrical Administrator

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Code References**C22.1:21 – Canadian Electrical Code, Part I****Rule 2-024 Use of approved equipment**

- 1) Electrical equipment used in electrical installations within the jurisdiction of the inspection department 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) Notwithstanding Subrule 1), equipment described in Rule 16-222 1) a) shall not be required to be approved.

Electrical Code Regulation - Electrical systems equipment

2(1) If a code, standard or body of rules declared in force under the Act with respect to electrical systems requires approved equipment, that equipment must meet the requirements of this section.

(2) No person shall manufacture, install, sell or offer for sale any equipment related to electrical systems for use in Alberta unless the equipment has been

- (a) certified by a certification body in accordance with the certification body's terms of accreditation with the Standards Council of Canada, or
- (b) inspected by an inspection body in accordance with the inspection body's terms of accreditation with the Standards Council of Canada.

(3) Subsection (2) does not apply to electrical equipment of an electric distribution system or a transmission line as defined in the *Hydro and Electric Energy Act*.

(Note: "certification body" is defined as 'an organization accredited by the Standards Council of Canada as a certification body;' and "inspection body" is defined as 'an organization accredited by the Standards Council of Canada as an inspection body.')

Application

This variance applies to Electrical Submersible Pumps (ESP's).

Variance

This Variance applies to ESP's and associated down-hole cables used in wells within the oil and gas industry. ESP's are multistage centrifugal pumps driven by 3-phase motors constructed to fit within the inside diameter of the well tubing. Motors range in size from 5kW to 1200 kW and in lengths from 1.2 m to 12 m. Power cables are normally 3-phase with tape-in or plug in pot head connection at the motor. Instrument cables may also be associated with the ESP installation.

ESP's and associated down-hole cables mentioned in this variance have a history of successful and safe operation. This installation poses no fire or shock risks. The motor is underground in an oxygen deficient atmosphere and could not create an explosion. Personnel are physically isolated from the motor and cable, and consequently, there is no shock hazard. Creating a certification program for this type of equipment, with a proven safety record, adds no value. Therefore, a Variance is required to address the approval requirements of Rule 2-024.

Conditions

1. a) Manufactured to North American Standards
ESP's and/or associated down hole cables are acceptable when the manufacturer declares they have manufactured, inspected and tested the ESP's and/or associated down-hole cables to the requirements of the appropriate and current standards. These standards include but are not limited to:
 - IEEE 252 Standard Test Procedure for Polyphase Induction Motors having Liquid in the Magnetic Gap.
 - IEEE 1017 Recommended Practice for Field Testing Electric Submersible Pump Cable.

- IEEE 1018 Recommended Practice for specifying Electric Submersible Pump Cable Ethylene-Propylene Rubber Insulation.
- IEEE 1019 Recommended Practice for specifying Electric Submersible Pump Cable Polypropylene Rubber Insulation.

b) Manufactured to Other than North American Standards

Where ESPs and/or associated down-hole cables are manufactured to other than North American standards, the manufacturer must declare the product has equivalent safety performance as one manufactured to North American standards. Alternatively, a licensed engineering professional may evaluate and accept the product standard to which the ESP's and/or associated down-hole cables were manufactured to, if it compares favourably with the appropriate North American standards concerning safety performance.

2. Product Identification

The following documentation for ESPs and associated down-hole cables must be readily accessible:

- a manufacturer's declaration stating the product meets industry recognized standards; and
- specification sheets stating the product's electrical ratings and characteristics.

3. Additional Requirements

- The installation shall be bonded to ground. Proper overcurrent and overload protection must be provided in accordance with the CE Code, Part 1
- All above ground components associated with the installations meets the requirements of the Electrical Code Regulation, including the CE Code, Part 1.
- The installation shall be subject to a safety codes inspection to verify compliance.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta.

STANDATA variance 21-ECV-002-024-LFT

Electrical

2021 Canadian Electrical Code, Part I, Rule 2-024 Use of approved equipment – Liquid-filled Transformers

Date Issued: 25 April 2022

Page 1 of 3

Purpose

Addresses issues with the approval requirements for liquid-filled transformers.

Discussion

Certification organizations have yet to identify a demand for developing a product certification program for liquid-filled transformers. As a result, certified liquid-filled transformers are not available.

Code References

C22.1:21 – Canadian Electrical Code, Part I

Rule 2-024 Use of approved equipment

- 1) Electrical equipment used in electrical installations within the jurisdiction of the inspection department 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) Notwithstanding Subrule 1), equipment described in Rule 16-222 1) a) shall not be required to be approved.

Electrical Code Regulation - Electrical systems equipment

2(1) If a code, standard or body of rules declared in force under the Act with respect to electrical systems requires approved equipment, that equipment must meet the requirements of this section.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

Issued by the Provincial Electrical Administrator

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- (2)** No person shall manufacture, install, sell or offer for sale any equipment related to electrical systems for use in Alberta unless the equipment has been
- (a) certified by a certification body in accordance with the certification body's terms of accreditation with the Standards Council of Canada, or
 - (b) inspected by an inspection body in accordance with the inspection body's terms of accreditation with the Standards Council of Canada.

(3) Subsection (2) does not apply to electrical equipment of an electric distribution system or a transmission line as defined in the *Hydro and Electric Energy Act*.

(Note: "certification body" is defined as 'an organization accredited by the Standards Council of Canada as a certification body;' and "inspection body" is defined as 'an organization accredited by the Standards Council of Canada as an inspection body.')

Application

This variance applies to liquid-filled transformers.

Variance

Owners/users required to use liquid-filled transformers are permitted to deviate from Rule 2-024 of the Canadian Electrical Code.

Conditions

1. a) Manufactured to Canadian standards
Liquid-filled transformers are acceptable when the manufacturer declares they have manufactured, inspected and tested the transformer to the requirements of the appropriate and current Canadian standards. These standards include, but are not limited to:
 - CAN/CSA-C2 Single Phase and Three Phase Distribution Transformers;
 - CAN/CSA-C88 Power Transformers and Reactors;
 - CAN/CSA-C227.3 Low Profile, Single Phase, Dead Front Pad-mounted, Distribution Transformers; or
 - CAN/CSA-C227.4 Three Phase, Dead Front Pad-mounted, Distribution Transformers.
- b) Manufactured to other than Canadian standards
Where liquid-filled transformers are manufactured to other standards, the manufacturer must declare the product has the same safety performance as one manufactured to current Canadian standards. Alternatively, a licensed engineering professional may evaluate and accept the manufacturing standard of the liquid-filled transformer if it aligns with the current Canadian standards and safety performance.
2. Product identification
In addition to meeting the requirements of Rule 2-100 of the Canadian Electrical Code, the liquid-filled transformer must identify the standard to which it was manufactured.

The following documentation or appropriate marking must also accompany the product:
 - a manufacturer's declaration stating they have manufactured the product to one or more appropriate Canadian standards, or
 - when manufactured to other than Canadian standards:
 - i. a manufacturer's declaration that the product has equivalent safety performance as one manufactured to the appropriate current Canadian standards; or
 - ii. a licensed engineering professional's evaluation report indicating the product has equivalent safety performance as one manufactured to Canadian standards.

3. Maintenance

The owner of the equipment will ensure the product is maintained to industry standards and manufacturer's specifications.

This Variance is applicable throughout the province of Alberta and provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

STANDATA variance 21-ECV-002-024-MMTE

Electrical

2021 Canadian Electrical Code, Part I, Rule 2-024 Use of approved equipment – Meter mounted transfer equipment

Date Issued: 7 April 2022

Page 1 of 3

Purpose

This variance addresses issues with the approval requirements for Meter Mounted Transfer Equipment and the limitations in quantity of units permitted for Field Evaluation by SPE-1000.

Discussion

Rule 2-024 requires electrical equipment to be approved. Section 2 of the Electrical Code Regulation mandates the approval requirements.

Rare situations exist where the requirement may be onerous or impracticable.

In the specific situation of Meter Mounted Transfer Equipment, no Canadian standard to evaluate this equipment currently exists. A US standard, UL 1008M, does exist, and inspection bodies are able to use this standard in conjunction with SPE-1000 to approve this equipment for Canada.

Efforts are currently underway to develop a Tri-National standard for Canada, the US, and Mexico based on the published version of UL 1008M.

In the meantime, demand for these units in Canada is steadily increasing which exceeds the 500 unit limitation of SPE-1000-1.2 c).

An interim solution would be to accept certification of these devices to UL-1008M and SPE-1000, while striking the 500 unit limitation.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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Code References

C22.1:21 - 2021 Canadian Electrical Code, Part I

Rule 2-024 Use of approved equipment

- 1) Electrical equipment used in electrical installations within the jurisdiction of the inspection department 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) Notwithstanding Subrule 1), equipment described in Rule 16-222 1) a) shall not be required to be approved.

Electrical Code Regulation - Electrical systems equipment

2(1) If a code, standard or body of rules declared in force under the Act with respect to electrical systems requires approved equipment, that equipment must meet the requirements of this section.

(2) No person shall manufacture, install, sell or offer for sale any equipment related to electrical systems for use in Alberta unless the equipment has been

- (a) certified by a certification body in accordance with the certification body's terms of accreditation with the Standards Council of Canada, or
- (b) inspected by an inspection body in accordance with the inspection body's terms of accreditation with the Standards Council of Canada.

(3) Subsection (2) does not apply to electrical equipment of an electric distribution system or a transmission line as defined in the *Hydro and Electric Energy Act*.

(Note: "certification body" is defined as 'an organization accredited by the Standards Council of Canada as a certification body;' and "inspection body" is defined as 'an organization accredited by the Standards Council of Canada as an inspection body.')

CSA SPE-1000:21 Model Code for the field evaluation of electrical equipment

1 Scope

1.2

The following are examples of where this Model Code applies:

- c) equipment sold in quantities of not more than 500 on a national basis, per model, per year, per inspection body;

Application

This document specifically addresses meter mounted transfer equipment, which is designed to be installed between the electrical meter and the meter mounting device.

Variance

Rule 2-024 & SPE-1000

Item 1.2 c) of SPE-1000, which establishes a 500 unit limitation, shall not apply to Meter Mounted Transfer Equipment in Alberta until an applicable Canadian Standard has been published. The equipment shall otherwise meet the requirements of SPE-1000 as well as UL 1008M.

Persons contemplating the use of meter mounted transfer equipment are advised to check with their local supply authority to ensure the proposed installation is acceptable.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta and remains in force until a Canadian standard for meter mounted transfer equipment is published.

STANDATA variance 21-ECV-006-112

Electrical

2021 Canadian Electrical Code, Part I – Rule 6-112 Support for the attachment of overhead supply or consumer's service conductors or cables

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This variance allows the continued practice of accepting rigid steel conduit in trade sizes 35 and larger for service masts in Alberta.

Discussion

Alberta has historically accepted rigid steel conduit in trade sizes 35 and larger to be used as a service mast, providing certain conditions are met. Rule 6-112 5) states that service masts must be assembled from components suitable for such use. (See the Appendix B note for this rule). To be acceptable, a service mast must be able to withstand the stresses it may be subjected to.

Application

This variance applies to service masts for the support of overhead supply or consumer's service conductors or cables.

Variance

Rule 6-112 Support for the attachment of overhead supply or consumer's service conductors or cables

In complying with Rule 6-112 5), rigid steel conduit in trade sizes 35 and larger may be used as a service mast provided:

1. The point of attachment for the supply service drop does not extend above the roof more than the following distances:

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Conduit Trade Size	Distance Above Roof
35	450 millimetres
41	600 millimetres
53	900 millimetres

Notes: 1) If the distances above must be exceeded, an acceptable alternate type of service mast must be installed. To ensure an acceptable installation, consult with the inspection authority having jurisdiction.

2) Electrical metallic tubing and aluminum conduit are not suitable for use as a service mast.

2. Where 35 and 41 trade size conduits are used, the stress imposed by aluminum neutral supported (NS) cable is minimized by ensuring that the NS cable is No. 4 AWG or smaller and the span does not exceed 30 metres in length with a sag of 450 millimetres at 15° Celsius.
3. The conduit is secured to the building with at least two “anchor” or “U” bolts spaced at least 450 millimetres apart with one placed near the roof line and the other near the meter socket. Standard conduit straps are not acceptable for this purpose.
4. A suitable roof jack is installed where the mast extends through the upper section of the roof.
5. The service drop is attached to the mast with an insulator located at least 300 millimetres above the roof surface and not more than 300 millimetres below the service head.

Where a supporting mast is installed at a distance greater than 600 millimetres from the outer edge of the roof, or the service drop extends away from the building at an angle less than 45° from the roof edge, the vertical clearances in Rule12-310 shall apply.

This VARIANCE is applicable throughout the Province of Alberta and remains in effect until revoked by the Administrator.

STANDATA variance 21-ECV-010-102-GE

Electrical

2021 Canadian Electrical Code, Part I, Rule 10-102 Grounding Electrodes (number of rods)

Date Issued: June 2022

Page 1 of 1

Purpose

To simplify compliance with the grounding electrode requirements of Section 10.

Discussion

Alberta has historically accepted grounding electrodes consisting of one ground rod for certain types of installations. There have been no negative reports regarding the use of this Variance in Alberta.

Application

This variance applies to the installation of grounding electrodes for small or temporary installations.

Variance

Number of Rods Required for an Electrode

Rod electrodes comprising of only one rod are considered acceptable for the following types of installations.

1. Temporary services of 200 amps or less;
2. Services of 30 amps or less supplying installations such as telephone booths and cable TV boosters.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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STANDATA variance 21-ECV-018-150

Electrical

2021 Canadian Electrical Code, Part I – Rules 18-150 and J18-150 Equipment in classified areas

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This variance allows certain electrical equipment not certified for use in Zone 2 and Class I, Division 2 classified areas to be permitted, provided that maximum surface temperature rating requirements are met as per the Canadian Electrical Code, Part I.

Discussion

A re-write of Rules 18-150 2) and J18-150 2) occurred in the 2021 Canadian Electrical Code, Part I (CE Code). These are the acceptance rules for equipment not certified for use in Zone 2 and Class I, Division 2 classified areas respectively. This created an unintended consequence of excluding some electrical equipment that should have been included, notably certain capacitors and electrical devices used for instrumentation and measurement purposes.

The subject equipment as noted above is used in Zone 2 and Division 2 classified areas for petrochemical and oil and gas facilities (some extensively) and likely for other facilities as well. This error was realized too late to have it corrected for the 2021 CE Code, but a subject has now been approved for the 2024 CE Code. Not allowing this equipment to be used in the interim would prove problematic for industry.

The approved 2024 CE Code, Part I, wording for Section 18 and Annex J18 would form the basis of a Variance to accept this equipment in the interim.

Code References

CSA C22.2:21 – 2021 Canadian Electrical Code, Part I

18-150 Equipment, Zone 2 locations (see Appendices B and F)

1) Electrical equipment installed in a Zone 2 location shall be in accordance with Table 18.

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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- 2) Notwithstanding Subrule 1) and Rule 18-052, the following shall be permitted:
- a) transformers, solenoids, coils, and similar electromagnetic devices that comply with the requirements of Rule 18-054;

CSA C22.2:21 – 2021 Canadian Electrical Code, Part I

J18-150 Equipment in Class I, Division 2 locations (see Annex JB)

- 1) Equipment installed in a Class I, Division 2 location shall be in accordance with Table 18.
- 2) Notwithstanding Subrule 1) and Rule J18-052, the following shall be permitted:
 - a) transformers, solenoids, coils, and similar electromagnetic devices that comply with the requirements of Rule J18-054;

Application

This variance applies to electrical equipment for use in Zone 2 and Class I, Division 2 classified areas.

Variance

1. Rule 18-150 2) Equipment, Zone 2 locations

In addition to the equipment contained in item a), the following equipment is allowable in Zone 2 locations, provided it also complies with the requirements of Rule 18-054:

- Capacitors that do not have integral fuses, such as those used for partial discharge monitoring, power factor correction, and harmonic reduction.
- Devices used for instrumentation and measurement purposes, including thermocouples, resistance temperature detectors (RTDs), piezoelectric pressure transducers and accelerometers, resistive strain gauges, passive RFID (radio frequency identification) tags, and similar equipment.

2. Rule J18-150 2) Equipment in Class I, Division 2 locations

In addition to the equipment contained in item a), the following equipment is allowable in Class I, Division 2 locations, provided it also complies with the requirements of Rule J18-054:

- Capacitors that do not have integral fuses, such as those used for partial discharge monitoring, power factor correction, and harmonic reduction.
- Devices used for instrumentation and measurement purposes, including thermocouples, resistance temperature detectors (RTDs), piezoelectric pressure transducers and accelerometers, resistive strain gauges, passive radio frequency identification (RFID) tags, and similar equipment.

RFID tag readers are not included in this allowance and they would need to be certified for the areas in which they are used.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta and remains in force until the adoption of the 2024 Canadian Electrical Code, Part I.

STANDATA variance 21-ECV-064-216

Electrical

2021 Canadian Electrical Code, Part I, Rule 64-216 - Arc-Fault Protection Requirements for Ground-Mounted Solar Photovoltaic Systems

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This variance allows ground-mounted solar photovoltaic renewable energy systems to omit the requirement for dc arc-fault circuit protection where certain criteria are met.

Discussion

Industry and solar photovoltaic system installers have questioned the validity of requiring dc arc-fault circuit protection on ground-mounted systems not installed on or above a building. The original intent of the arc-fault circuit protection requirement is to protect against structural fires when photovoltaic systems are installed on or above a building.

Code References

C22.1:21 – Canadian Electrical Code, Part I

64-216 Photovoltaic dc arc-fault circuit protection

- 1) Solar photovoltaic systems with a dc source or dc output circuit voltage of 80 V or greater when calculated in accordance with Rules 64-202 1) or 2) shall be protected by
 - a) a dc arc-fault circuit interrupter; or
 - b) other system equipment that provides equivalent protection.
- 2) The protection required in Subrule 1) shall
 - a) detect and interrupt arcing faults resulting from a failure in the intended continuity of a conductor, connection, photovoltaic module, or other system component in the dc photovoltaic source and output circuits;
 - b) not have the capability of being automatically restarted;

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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- c) have annunciation, without an automatic reset, that provides a visual indication that the circuit interrupter has operated; and) disable or disconnect
 - i) inverters or charge controllers connected to the faulted circuit when the fault is detected; or
 - ii) the photovoltaic dc source circuits or dc output circuits either within the combiner, at the module junction box, or at the module cable connectors.

Application

This variance applies to ground-mounted solar photovoltaic renewable energy systems where risk of fire is limited to the solar photovoltaic system only.

Variance

Ground-mounted solar photovoltaic systems, or those mounted on trackers, not installed on or above buildings, may omit the arc-fault requirements of Rule 64-216 providing the following requirements are satisfied and maintained:

1. Vegetation around the area the photovoltaic installation is controlled as to mitigate the possibility of fire spread.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta and remains in force until revoked by the Administrator.

STANDATA variance 21-ECV-064-218

Electrical

2021 Canadian Electrical Code, Part I, Rule 64-218 Photovoltaic rapid shutdown

Date Issued: 1 February 2022

Page 1 of 2

Purpose

This variance allows a fire alarm system to initiate a photovoltaic rapid shutdown and alters the requirement for a rapid shutdown initiating device to be within sight and within 9 metres of the photovoltaic array.

Discussion

1. Photovoltaic (PV) rapid shutdown provides firefighter protection. Many Solar PV systems with rapid shutdown have the option of interconnecting with a fire alarm system. As a result, the fire alarm system may also initiate PV rapid shutdown.
2. Many roofs do not have permanent access and are considered inaccessible and most likely unreachable in an emergency. Many suitable and readily accessible locations within 9 metres of the array are not within sight of the array.

Code References

C22.1:21 – Canadian Electrical Code, Part I

64-218 Photovoltaic rapid shutdown

- 4) A device used to initiate photovoltaic rapid shutdown shall be readily accessible and located
- a) for single dwelling units, at the supply authority meter location;
 - b) for other than single dwelling units, at the consumer's service equipment or supply authority meter location, and
 - i) at a permanent access to a building roof where an array(s) is installed; or
 - ii) within sight and within 9 m of the array(s); and
 - c) for a stand-alone system, in accordance with Items b) i) and ii).

Unless stated otherwise, all Code references in this STANDATA are to the Canadian Electrical Code, Part 1, 2021.

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Application

This variance applies to photovoltaic systems equipped with rapid shutdown systems.

Variance**1. Rule 64-218 4)**

In lieu of Rule 64-218(4), where a fire alarm system is interconnected with a Solar PV System, the fire alarm system, upon entering an alarm condition, shall initiate photovoltaic rapid shutdown.

2. Rule 64-218 4) b) ii)

In lieu of “within sight” of the array, the PV rapid shutdown initiating device shall be marked to indicate the location of the array it operates. The “within 9 metres” requirement shall be maintained.

This VARIANCE provides approximately equivalent or greater safety performance with respect to persons and property as that provided for by the *Safety Codes Act*.

This VARIANCE is applicable throughout the province of Alberta and remains in force until revoked by the Administrator.

Alberta Electrical Utility Code

2016 ALBERTA ELECTRICAL UTILITY CODE ERRATA

SUBJECT: Re-Introduction of Missing Former Section 10 Code Clause in Section 2

DISCUSSION:

The Alberta Electric Utility Code (AEUC) 2016 was brought into force on May 1, 2017. A clause has been found to be missing from the 2016 AEUC that was previously located in Section 10 of the 2013 Edition. After investigation, it was determined that the clause in question was supposed to have been moved from Section 10 to Section 2 of the code during the AEUC 2016 code review process, however, the latter step of adding the clause to Section 2 of the code was accidentally missed.

CODE REFERENCES:

2013 AEUC (clause removed in 2016 code revision)

10-002 Standard to be Used

CSA Standard C22.3 No.1-15, Overhead Systems, shall be the standard for the construction and maintenance of overhead electrical utility and communication systems, with amendments to that standard as follows:

(5) Amend 4.3 by adding the following:

4.3.7 Operation and Maintenance

- (1) The operator of a utility system shall ensure that the equipment and lines are:
 - (a) not energized unless the equipment and lines meet the requirements of this Standard; and
 - (b) visually inspected at regular intervals, as required; and
 - (c) maintained in accordance with this Standard.
- (2) The operator of an electrical utility system shall ensure that equipment or lines not in use are maintained in accordance with this Standard.
- (3) The operator of communication systems shall ensure that equipment or lines not in use are maintained in accordance with this Standard.

Unless stated otherwise, all Code references in this STANDATA are to the 2016 Alberta Electrical Utility Code.

Issue of this STANDATA is authorized by
the Provincial Electrical Administrator

[Original Signed]

Clarence C. Cormier, P.Eng.


Government

ERRATA

Add:

Rule 2-032 Operation and Maintenance

- (1) The operator of a utility system shall ensure that the equipment and lines are:
 - (a) not energized unless the equipment and lines meet the requirements of this Code; and
 - (b) visually inspected at regular intervals, as required; and
 - (c) maintained in accordance with this Code.
- (2) The operator of an electrical utility system shall ensure that equipment or lines not in use are maintained in accordance with this Code.
- (3) The operator of communication systems shall ensure that equipment or lines not in use are maintained in accordance with this Code.

These ERRATA are applicable throughout the province of Alberta.

STANDATA interpretation 22-AEUCI-001

Electrical

2022 Alberta Electrical Utility Code, Section 2 – General Rules

Date Issued: September 2023

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Purpose

Industry has requested clarification regarding the demarcation point between consumer installations and utility/supply authority installations.

Code References

Alberta Electrical Utility Code 2022

2-024 Consumer's Service Connection

The operator of a utility system shall not connect, or allow to be connected, an electrical consumer's service to the electric utility system unless:

- a) the attachment point for conductors used on overhead systems to supply the consumer's service is located so that the conductors maintain required clearances;
- b) the metering equipment and location are acceptable;
- c) the operator of the utility system has assurance from the owner or the owner's agent that the installation is ready for connection and no obvious hazards should result;
- d) the operator of the utility system has received a copy of a valid permit or authorization issued by the authority having jurisdiction; and
- e) for existing service re-connections, and at the discretion of the operator of the utility system, a re-inspection of the consumer's service is performed.

Unless stated otherwise, all Code references in this STANDATA are to the 2022 Alberta Electrical Utility Code. C22:21 2021 Canadian Electrical Code, Part I

Issued by the Provincial Electrical Administrator

[original signed]

Kevin Glubrecht

Provincial Electrical Administrator

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alberta.ca/electrical-codes-and-standards.aspx

C22.1:21 – 2021 Canadian Electrical Code, Part I**Section 0 — Object, scope, and definitions**

Service, consumer's — all that portion of the consumer's installation from the service box or its equivalent up to and including the point at which connection is made to the supply service.

Supply authority — any person, firm, corporation, company, commission, or other organization responsible for an electrical power distribution network that connects to a consumer's service (see Appendix B).

Discussion

There are differences in how the demarcation is determined in various jurisdictions, as well as differences between commercial and residential, underground and overhead, etc. It is important to prevent any gaps in oversight between the Group B Utility safety codes officer (SCO) and the Group A Electrical SCO.

Examples in the Canadian Electrical Code Handbook do not cover all situations and have led to confusion.

The demarcation point has to meet the requirements of both the Canadian Electrical Code, Part I and the Alberta Electrical Utility Code, e.g., a connection must exist at the property line if the line is deemed to be the demarcation point.

Interpretation

The purpose of the STANDATA is to provide guidance in situations where the demarcation point is not already identified.

The location of the demarcation point can be unique for each customer as **determined by the supply authority**; however, for the purposes of determining demarcation between the Canadian Electrical Code, Part I and the Alberta Electrical Utility Code, the **typical** point of demarcation:

- for an overhead service is the connection point at the service head;
- for a residential underground service is the line side terminal of the customer's meter base; and
- for a commercial underground service is the secondary terminals of the transformer; and in the event that the commercial service cabling system is extended from the transformer to pedestals or underground enclosures, then the demarcation point is the terminals in the pedestals or the underground enclosures.

The demarcation point should be identified in all cases.

This INTERPRETATION is applicable throughout the Province of Alberta.

Notice

New Alberta Electrical Utility Code Sixth Edition 2022

Date Effective

The 2022 Alberta Electrical Utility Code Sixth Edition automatically comes into force on September 1, 2023 throughout the Province of Alberta.

Summary

Information on upcoming automatic code updates and compliance requirements.

Code in Force under the Regulation

On September 1, 2023, The *Electrical Code Regulation* adopts the following code:

- **Alberta Electrical Utility Code – Sixth Edition, 2022** –This code used in combination with the CSA 22,3 No.1 Overhead standards and the CSA 22.3 No.7 Underground standards provides the minimum safety standards for the installation and maintenance of electrical utility systems in Alberta.

Persons who have received a permit by the authority having jurisdiction (AHJ) to undertake electrical installations regulated under the previous 2016 Alberta Electrical Utility Code Fifth Edition prior to September 1, 2023 will be considered in compliance with the *Safety Codes Act*. Installations permitted on or after September 1, 2023 are required to conform to the new 2022 Alberta Electrical Utility Code Sixth Edition. Unless an unsafe condition exists or would exist in the opinion of the AHJ, electrical installations in progress should not be required to be updated to the new codes and result in undue hardship or cost. Questions regarding unusual situations should be directed in writing to the local AHJ: to find your local AHJ click on the Get a Permit link found at www.safetycodes.ab.ca/.

Additional Notes

The 2022 Alberta Electrical Utility Code Sixth Edition was published by the Safety Codes Council in August 2022.

Information on accessing the Codes

The Alberta Electrical Utility Code may be obtained directly from the Safety Codes Council at safetycodes.ab.ca/ or from the Alberta Kings Printer alberta.ca/alberta-kings-printer.aspx.

For code update training information and timelines, please check the Safety Codes Council site at safetycodes.ab.ca.

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Notice

New Canadian Electrical Code, Part I

Date Effective

The 2021 Canadian Electrical Code, Part I (twenty-fifth edition) automatically came into force on February 1, 2022 throughout the Province of Alberta.

Summary

Information on the automatic code updates and compliance requirements.

Code in Force under the Regulation

On February 1, 2022, The Electrical Code Regulation adopted the following code:

- **CSA-C22.1-21 – Canadian Electrical Code, Part I (twenty-fifth edition)** – This code provides the minimum safety standards for the installation and maintenance of electrical equipment.

Persons who have received a permit by the authority having jurisdiction (AHJ) to undertake electrical installations regulated under the previous 2018 Canadian Electrical Code, Part I (twenty-fourth edition) prior to February 1, 2022 will be considered in compliance with the *Safety Codes Act*. Installations permitted on or after February 1, 2022 are required to conform to the new 2021 edition of the Canadian Electrical Code, Part I. Unless an unsafe condition exists or would exist in the opinion of the AHJ, electrical installations in progress should not be required to be updated to the new codes and result in undue hardship or cost. Questions regarding unusual situations should be directed in writing to your local AHJ click on the Get a Permit link found at <https://www.safetycodes.ab.ca/>.

For area classification requirements at oil and gas facilities permitted or constructed prior to February 1, 2019, the use of the “Code for Electrical Installations at Oil and Gas Facilities” published by the Safety Codes Council is permitted.

Additional Notes

The 2021 Canadian Electrical Code, Part I (twenty-fifth edition) was published by the CSA Group in January 2021.

Information on accessing the Codes

The Canadian Electrical Code may be obtained directly from the CSA Group at store.csagroup.org or from applicable electrical wholesalers and post-secondary institutions.

For code update training information and timelines, please check the Safety Codes Council site at safetycodes.ab.ca.

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