

## Draft Regulations

### Draft Regulation

An Act respecting occupational health and safety  
(R.S.Q., c. S-2.1)

#### Safety Code for the construction industry — Amendments

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (R.S.Q., c. R-18.1), that the Regulation to amend the Safety Code for the construction industry, appearing below, may be made by the Commission de la santé et de la sécurité du travail and submitted to the Government for approval, in accordance with section 224 of the Act respecting occupational health and safety, on the expiry of 45 days following this publication.

The draft Regulation adds a new subdivision whose subject is steel structure erection and dismantling work. The new rules are intended to keep construction workers safe.

Study of the matter has shown little impact on enterprises, including small and medium-sized businesses.

Further information on the draft Regulation may be obtained by contacting Claude Rochon, Commission de la santé et de la sécurité du travail, 524, rue Bourdages, Québec (Québec) G1K 7E2; telephone: 418 266-4699, extension 2031; fax: 418 266-4698.

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Guylaine Rioux, Vice President, Partnership and Expert Consulting, Commission de la santé et de la sécurité du travail, 1199, rue De Bleury, 14<sup>e</sup> étage, Montréal (Québec) H3B 3J1.

LUC MEUNIER,  
*Chair of the Board of Directors  
and Chief Executive Officer  
Commission de la santé et  
de la sécurité du travail*

### Regulation to amend the Safety Code for the construction industry\*

An Act respecting occupational health and safety  
(R.S.Q., c. S-2.1, s. 223, 1st par., subpars. 7, 14,  
19, 42, and 3rd par.)

**1.** The Safety Code for the construction industry is amended by revoking sections 2.12.3 to 2.12.5.

**2.** The following subdivision is inserted after section 3.23.16.1:

“§3.24. *Steel structure erection or dismantling work*

**3.24.1. Scope:** This subdivision applies to steel structure erection or dismantling work, except work to erect or dismantle an electrical transformer station, a telecommunications tower or a power line tower used for electric power transportation or distribution.

**3.24.2. Signalmen and telecommunications system:** The provisions of section 3.10.5 apply to the erection or dismantling of a steel structure. In addition, if a signalman uses a telecommunications system, the system must be bidirectional, hands-free and transmit on a radio frequency dedicated exclusively to the work in progress.

The work in progress must be interrupted in case of telecommunications system failure.

**3.24.3. Rescue following a fall:** Before the beginning of the work, the employer must

(1) develop a rescue procedure that allows the rescue, within a maximum of 15 minutes, of a worker who, following a fall, is suspended in a safety harness;

(2) provide a rescue kit that must be used exclusively for that purpose and that must contain at least

(a) a double braided rope of 13 millimetres in diameter by 60 metres in length with an eye at each end, complying with the Standard on Fire Service Life Safety Rope and System Components, NFPA 1983, 2001 Edition;

\* The Safety Code for the construction industry (R.R.Q., 1981, c. S-2.1, r.6), was last amended by the regulation approved by Order in Council 119-2008 dated 13 February 2008 (2008, *G.O.* 2, 682). For previous amendments, refer to the *Tableau des modifications et Index sommaire*, Québec Official Publisher, 2009, updated to 1 March 2009.

(b) a shock absorber complying with CSA Standard CAN/CSA Z259.11, Shock Absorbers for Personal Fall-Arrest Systems, as it reads at the time the shock absorber was manufactured;

(c) a polyester endless sling of 25 millimetres in diameter by 1.25 metres in length;

(d) two 12-millimetre locking carabiners;

(e) scissors suitable for cutting the lanyard; and

(f) a 1.5-metre-long extension with a carabiner holding system; and

(3) ensure that a rescuer, who was trained to rescue a worker suspended in a safety harness, is present at all times on the work premises. The nature of the rescuer's work must not compromise a quick and efficient intervention. A rescuer may also act as first-aider if so provided in the rescue procedure.

**3.24.4. Presence of a first-aider:** Despite section 7 of the First-aid Minimum Standards Regulation, approved by Order in Council 1922-84 dated 22 August 1984, during the work, the principal contractor must ensure that one first-aider within the meaning of that Regulation is present at all times on the work premises.

**3.24.5. Protruding parts:** Where studs or other protruding parts constitute a danger for workers on the steel structure, a temporary sidewalk must be installed to ensure the safe movement of workers.

**3.24.6. Plans and procedures:** The plans and procedures provided for in this subdivision must be kept on the work premises and be accessible.

— Erection of a steel structure

**3.24.7. Preparation of the work area:** Before the beginning of the steel structure erection work, the principal contractor must verify

(1) that the concrete foundations are backfilled and the work area, including the unloading area, is levelled, drained and of a sufficient dimension to store materials; and

(2) that the resistance of the soil under the work area allows to support hoisting apparatus, trucks and loads during the work.

**3.24.8. Erection plans:** Work must be carried out according to the steel structure manufacturer's plan. The plan must include

(1) the location of the various components of the structure and their erection marks;

(2) the main dimensions and their respective levels;

(3) the type of bolts used and their diameter;

(4) the welds to be done on site;

(5) the temporary structural components; and

(6) the number of rows of bridging and their position, if applicable.

**3.24.9. Erection procedure:** In addition to being carried out in accordance with the erection plan provided for in section 3.24.8, the work must be carried out according to a procedure established by the employer. The procedure must contain

(1) the installation method and the erection stages of the structure;

(2) the measures to be taken to ensure that the structure components are stable; and

(3) the measures to protect workers from falling.

In addition to the requirements provided for in the first paragraph, the erection procedure must include the hoisting procedure provided for in section 3.24.14.

**3.24.10. Anchor rods:** Column anchor rods must be installed according to an anchoring plan provided by the steel structure manufacturer. The plan must

(1) contain the following information:

(a) the dimensions of the anchor rods and their position;

(b) the details necessary for securing the anchor rods;

(2) provide an erection procedure where the columns are anchored with fewer than 4 anchor rods or where the position of the anchor rods does not ensure stability of the columns in all their axes.

In addition, column anchor rods must resist the application of a vertical construction load of at least 1.33 kilonewtons located 45 centimetres from the column face in each of its axes and at its maximum height.

**3.24.11. Prior certification:** Before the beginning of the work, the principal contractor must obtain from an engineer a certification according to which the anchor rods were installed in accordance with the anchoring

plan provided for in section 3.24.10 and the concrete foundations reached the strength required to support the erection of the steel structure.

**3.24.12. Anchor rod modification or repair:** During the work, the principal contractor must obtain from an engineer a new certification following any modification to or repair of column anchor rods that is subsequent to their installation.

**3.24.13. Stacks of shims:** Each column that stands on concrete foundations must rest on 2 stacks of shims of at least 9 square inches and located near the anchor rods, unless another levelling device offering equivalent safety is provided for in the erection plan.

**3.24.14. Hoisting procedure:** A hoisting procedure must be developed when a load is handled

- (1) by more than one hoisting apparatus;
- (2) by a hoisting apparatus other than a crane;
- (3) on a pallet by a hoisting apparatus other than a fork lift truck.

Where a hoisting apparatus is anchored to an existing structure, the anchor point and its working load limit must be specified in the hoisting procedure.

**3.24.15. Component weight:** Information about the weight of each component of a steel structure to be erected must be accessible on the work premises.

In addition, the weight must be indicated on each component exceeding 500 kilograms.

**3.24.16. Hoist hooks:** Every hook used to hoist a load must present one of the following characteristics:

- (1) be equipped with a safety latch;
- (2) close under the application of the load and be equipped with a self-locking latch requiring a positive action to unlock the hoist hook.

Where a load is hoisted using a hook referred to in subparagraph 1 of the first paragraph, the load must be hung using a shackle or a wrought alloy steel ring.

Where a load remote unhooking device is used, it must have the following features:

- (1) the minimum and maximum loading capacities are conspicuously indicated on the device;

- (2) where the device is engaged, it locks under the application of the load; and

- (3) it opens only when it no longer withstands the weight of the load and a command to open it is issued.

**3.24.17. Beam-column connection of a multi-span steel structure:** During beam-column connection work, a beam must not be supported by a spanner. The type of connection must be designed so as to take that prohibition into account.

The type of beam-column connection may be designed in one of the following manners:

- (1) the beam is attached to the column while being supported by a bracket previously attached to the column;

- (2) the upper right corner of the plate or angle seat is notched to clear the first supporting bolt of the beam placed previously in the manner specified in Schedule 6.

**3.24.18. Erection of an open web steel joist:** Erection work of an open web steel joist must be carried out in accordance with the following standards:

- (1) before a hoisting apparatus lands the joist and in order to ensure the lateral stability of the joist during its placement, erection bridging must be installed, if applicable, in accordance with the joist manufacturer's plan. Bridging must be of the bolted diagonal type and the number of rows indicated in the plan must at least comply with the following specifications:

Joist length	Minimum number of rows
(a) less than 12 metres	None
(b) 12 metres to 18 metres	1 row
(c) 18 metres to 30 metres	2 rows
(d) 30 metres or more	4 rows

- (2) as soon as a joist is placed, each joist end must be bolted using at least one bolt; and

- (3) no load may be placed on the joist as long as all the rows of bridging have not been secured and each end of row has not been anchored, except if the joist manufacturer specifies on the joist connection plan the measures to be taken to do so and those measures have been complied with.

Joists may be hoisted and landed in bundles on the steel structure if they do not require erection bridging and are put in place one after the other to prevent them from falling off their supports.

**3.24.19. Space between girts:** If the provisions set out in section 3.10.7 may not be applied to the installation of girts because of the work environment or the height of the steel structure, the vertical space between girts must not exceed 1.6 metres and a means of access to allow a worker to go from one girt to another must be provided in the plan or in the hoisting procedure.

— Dismantling of a steel structure

**3.24.20. Obligations of the principal contractor:** Before the beginning of the dismantling work of a steel structure, the principal contractor must

(1) locate, if applicable, the electric network of the work area, turn off the power and apply a locking procedure;

(2) locate any gas, steam or liquid line and apply, if applicable, a method for purging the line and a locking procedure.

**3.24.21. Dismantling plan:** Work must be carried out according to a plan drawn up by an engineer. The plan must contain

(1) the dismantling method and sequence, including the bolt, rivet and weld removal sequence;

(2) measures to ensure the stability of the hoisting apparatus and structure components. The measures must particularly take into account the following elements:

(a) the load must not exceed 70% of the hoisting apparatus capacity, including hoisting accessories, specified in the applicable load rating chart;

(b) anchor rods must be considered as having no resistance, unless pull-out tests are performed to establish their resistance;

(3) the weight and the centre of gravity of the structure components;

(4) measures to protect workers against falls; and

(5) any other relevant measure to ensure the safe dismantling of the structure.

**3.24.22. Means of access:** The means of access provided for in subdivisions 3.5. and 3.6 must be installed so that horizontal movements of workers on trusses, beams and joists do not exceed 30 metres.”.

**3.** Schedule 6 is amended

(1) by replacing “(s. 2.12.5)” by “(s. 3.24.17)”;

(2) by replacing “left” in the NOTE by “right”;

(3) by replacing “poutre-colonne” in the French text of the NOTE by “poutre-poteau” .

**4.** This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

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