



ADVISORY BULLETIN

November 2015

Subject:

Racking – Building Permit Requirements

Background:

The addition of racking is considered an *alteration* to a building and therefore a building permit may be required. A change to the sprinkler system design and installation may be required when storage racking is added to a building or tenant space. Travel distance to an exit, location of emergency lighting, directional exit signage and the floor slab structural design may also be affected by the addition of storage racking to a building or tenant space.

Advisory:

In general, a building permit for the installation of racking is required when the top of storage on a rack will exceed 3.6 meters (12 feet) above the floor **and** the building is required to be sprinklered. Drawings and letters submitted with a Building Permit application must be stamped by a professional (architect, appropriate engineers) if the area of construction exceeds 500 square metres for industrial/retail type occupancies. Structural drawings and letters must always be stamped. Sprinkler system letters and sprinkler drawings must always be stamped.

Note that an existing building may not be sprinklered **but** may be required to be sprinklered depending on what will be stored on the racks, height of racks, clearances, aisle widths etc - Refer to the 2014 Alberta Fire Code Part 3 for further requirements.

Building Permit Drawing Submission Requirements

Plans shall indicate the nature and extent of work in sufficient detail to establish that the work will conform to the Code. (Div. C 2.2.2.1)

Architectural

Plans must be drawn to scale and show the following information:

- Stamped by a registered architect or engineer if required by Division C article 2.4.2.1 of the Alberta Building Code 2014
- Type of materials stored on the racks
- Are the materials stored on pallets or within cartons?
- Are the pallets or cartons encapsulated within plastic sheets?

- Height of storage above the top of the upper level of the rack and clearance to ceiling
- Layout of the racking system including:
 - Width of all main and secondary aisles
 - Location of all exits from the floor area
 - Travel distance analysis to the exits ensure travel distances to exits are not exceeded (45 metres in a sprinklered bldg)

Structural

Plans must be drawn to scale and show the following information:

- Professional engineer's stamp – Refer to Division C 2.4.2.2 of the Alberta Building Code 2014
- Design loading for the racking system
- Rack dimensions
- Location and size of all structural members
- All required bracing and base plate fastening requirements to the floor slab.
- Provide written verification, from a professional engineer registered in the province of Alberta, confirming that the main floor slab is capable of resisting the loads from the racking system

* Structural plans showing the racking construction. If plans are not available because the racking is existing provide a review letter from an engineer that addresses the rack structure.

Electrical

Plans must be drawn to scale and show the following information:

Professional engineer's stamp – if required by Division. C 2.4.2.1 of the Alberta Building Code 2014

- Emergency lighting
- Exit signage (new racks may block existing lighting and signage)

Sprinkler

Sprinkler drawings are required if a sprinkler system has to be added or altered because the existing sprinkler system no longer meets the requirements of NFPA due to the addition of the racking system. A letter addressing the items below is acceptable if no changes are required to the system. The letter must be stamped and signed by a professional engineer registered in the province of Alberta.

Plans must be drawn to scale and show the following information:

- Professional engineer's stamp – Refer to Div. C 2.4.2.1.(8) of the Alberta Building Code 2014
- Type of commodities stored on the rack system
- Statement that the sprinkler system will meet the requirements of NFPA 13 (2013)
Height of racking
- Type of racking
- Aisle widths
- Sprinkler system type (eg ESFR) etc)

Verification

After the Racking is installed/constructed – verification information must be submitted to the field Safety Codes Officer at time of inspection.

- Sprinkler System
Provide verification that the suppression system has been installed as required by NFPA 13 (2013) Division B 3.2.5.12. (1) / Division C 2.4.2.3. (1) Automatic Sprinkler Systems. Provide a copy of the sprinkler verification to the Building Inspector prior to occupancy. The verification must be stamped and signed by a professional engineer registered to practice in the Province of Alberta.
- Structural
Division C 2.4.2.1 of the Alberta Building Code 2014 - Professional involvement. A professional engineer registered to practice in the province of Alberta shall be retained for field review. This professional shall provide written verification (i.e. to the field inspector at the time of the inspection) that the design and construction is in substantial compliance with the design drawings and confirming that the new Racking has been structurally supported in accordance with Part 4 of the Alberta Building Code 2014

For multi-level racking see:

<http://www.municipalaffairs.gov.ab.ca/documents/ss/STANDATA/building/bcr/06BCV011.pdf>