

January, 2013
BUILDING DIVISION

VERTICAL STORAGE SYSTEMS

1. Shelving and Racking Without an Elevated Walking Platform Less Than 2.5 Metres (8 ft.) In Height*:
 - (a) A building permit is not required for any racking or vertical storage systems under 2.5 metres (8 ft.) in height. These units are considered to be shelving.
 - (b) The units must be anchored to the manufacture's installation guidelines (involvement of a registered professional may be required).
 - (c) After the installation of the shelving units, the travel distance to the nearest required exit shall comply with the BC Building Code requirements.

2. Shelving and Racking Without an Elevated Walking Platform Greater Than 2.5 Metres (8 ft.) In Height*:
 - (a) A building permit is required.
 - (b) Non-combustible construction is required.
 - (c) These systems shall be seismically restrained according to the requirements of Part 4 of the BC Building Code.
 - (d) A *registered professional* (professional engineer) shall submit sealed drawings and Schedule B for seismic design and field review for seismic restraint, as well as to confirm that the existing concrete slab is capable to take the point loads from the racking posts.
 - (e) The shelving/racking system shall be sprinklered in compliance with NFPA 13 if the building is sprinklered**.

3. Shelving and Racking With an Elevated Walking Platform:
 - (a) A building permit is required.
 - (b) Non-combustible construction is required.
 - (c) The walking platform shall be an open system supported by the racking.
 - (d) The walking platform shall not be more than 1.25 metres (4 ft.) wide.
 - (e) The walking platform shall be used for access to the racking only (Storage on the walkway is not allowed).
 - (f) The walking platform shall be considered as a mezzanine for the purpose of determining the number of exits, travel distances, guards, and stairway design.
 - (g) A *registered professional* (professional engineer) shall submit sealed drawings, and Schedule B for the structural aspects of the project. The design loads shall be indicated on these drawings.

- (h) The floor area of the elevated walking platforms, not including the racks, shall be not more than ten percent (10%) of the floor area of the suite.
- (i) Interconnected smoke alarms (detectors for building with an existing fire alarm system) shall be installed above and below the elevated walking platforms. Smoke draft stops may be required.
- (j) The shelving/racking system shall be sprinklered in compliance with NFPA 13 if the building is sprinklered**.

4. The following condition shall be stated on the permit for any racking system:

"Any change in the commodities stored on the racking system may require a re-evaluation of the design load and the sprinkler system by a registered professional."

Notes:

* Height is measured from the floor to the top of the highest shelf level.

** Prior to the installation of racks, the building sprinkler system should be reviewed by a registered professional to determine if an upgrade to the sprinkler system is required. In many buildings, the sprinkler system has been designed to Ordinary Hazard Group 2 classification, which allows a maximum height of storage to be 3.6 m (12 ft.) for Class III materials (e.g. wood, paper, leather, textiles, with no significant amount of plastics); a maximum height of 3.0 m (10 ft.) for Class IV materials (plastic, paints, etc.) and a maximum height of 1.8 m (6 ft.) for empty wood pallets [NFPA 13, 7-2.3.2.2.].

In an unsprinklered building, a clearance of not less than 1 m (3'-4") between the top of storage and underside of floor or roof deck shall be maintained [BC Fire Code 3.2.2.3.].

In a sprinklered building, the clearance between the top of storage and the ceiling sprinkler deflectors shall comply with NFPA 13 [BC Fire Code 3.2.2.3.].



OWNER'S INFORMATION CERTIFICATE FOR STORAGE OCCUPANCY

Project Address: _____ Date: _____

Building Information:

New

Existing: Non-sprinklered Sprinklered: Wet Dry Other (specify): _____

Specify the design criteria for the existing sprinkler system in the proposed storage area: _____

Source of information above (record drawing, valve station plate, etc): _____

Storage area ceiling height (to underside of roof deck or ceiling): _____ ft

Storage area of roof/ceiling slopes greater than 2 in 12 (16.7%)? Yes No

Are there any High Volume Low Speed (HVLS) fans in the building? Yes No

Are there any unit heaters in the building? Yes No

Are there any combustibile concealed spaces (eg. TJI) in the building? Yes No

Commodity Information: (Refer to NFPA-13-2013 Section 5.6 for more information)

Idle Pallets:	Yes	No	If yes, the idle pallets are:	Wood	Plastic
Class I	Class II	Class III	Class IV	Encapsulated?	Yes No
Group A Plastic:	Expanded		Cartooned	Unstable free-flowing	
Rubber Tires	Other (Specify): _____				

Storage Arrangement: (In general, the storage height is from the floor to the top of the storage)

Palletized Solid Piled Bin Box Storage Maximum Storage Height: _____ ft

Solid Shelf Back-to-back Shelf Storage Maximum Storage Height: _____ ft

Rack Storage: Maximum Storage Height: _____ ft

Minimum width of aisle between racks: _____ ft

Are there any open-top containers on the rack structure? Yes No

Steel columns within racking structure? Yes No

Solid shelves or objects exceeding 20 sq. ft. on racks? Yes No

If yes, maximum vertical distance between shelves: _____ ft

Tire Storage:

Steel columns within tire storage? Yes No

Piling Method: On Floor On Portable Rack Fixed Rack On-side On-tread Other: _____

Automated Storage System (Specify on a separate page)

Other (Specify on a separate page)

I certify that I have knowledge of the intended use of the property and that the above information is correct.

Name of owner or owner's representative (printed): _____

Firm/Company of owner's representative: _____

Signature: _____ Date: _____