

This Is A Fire Fresh Document

FIRE SAFETY

APPLICATION CRITERIA FOR STORAGE, WARE-HOUSE AND DISTRIBUTION FACILITIES

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1. GENERAL

- 1.01 This section outlines application criteria for the 760-600 series fire safety practices for storage, ware-house, and distribution facilities.
- 1.02 This section is being updated to reflect refinements in firesafety covered in the Network Service Protection Task Force Report (NSPTFR). Whenever this section is reissued, the reason(s) for reissue will be given in this paragraph.
- 1.03 The recommendations in this section are based, in general, on the National Fire Protection Association (NFPA) standards, the Model Building and Fire Codes, insurance and property risk management considerations, technical advice of Bellcore and consensus opinion of Company subject matter experts.
- 1.04 Where local, state, federal or Occupational Safety and Health Act (OSHA) regulations require higher degrees of protection, the legislated criteria should be

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followed to the extent required. Where those provisions are in conflict with this section, a variance means should be found by seeking "equivalent protection" through alternative installation methods which will satisfy the intent of this section.

1.05 Where insurance carrier recommendations contain higher degrees of protection, those criteria should be followed. Criteria should be considered for the purposes of:

1. Providing adequate protection.
2. Qualifying or continuing to qualify facilities for particular insurance treatment, e.g. HPR (Highly Protected Risk)

1.06 A storage, warehouse or distribution facility is, in general, any building constructed for or occupied for the sole purpose of storing and distributing products and materials for the Company. This may include, but is not limited to, telephone equipment, installation equipment, cable, furniture, office supplies, and telephone books. Included should be Material Distribution Centers, tier level warehouses, and Company storerooms. This section is not applicable to buildings or storage rooms less than 1,000 sq. ft. in area and containing less than \$1,500,000 value in building and/or contents.

1.07 This section is based on Company Firesafety Policy and applies to both new and existing storage, ware-house or distribution facilities. However, there may be cases in existing buildings where it is impractical to retrofit the building to comply with certain sections. Therefore, sound engineering judgment should be exercised in these cases to ensure the intent of the sections are achieved.

1.08 Options for existing facilities not meeting the criteria of this section include, but are not limited to:

1. Retrofitting to meet criteria
2. Alternate storage arrangements
3. Relocation
4. Insurance arrangements
5. Combinations of the above

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- 1.09 As a general guide retrofitting should be considered practical if it can be completed at a cost of 10% or less of the building and/or contents' value.

2. FIRESAFETY PRACTICES

- 2.01 The firesafety requirements to be used in the design of storage, warehouse, or distribution buildings shall be in accordance with recognized codes (NFPA, Model Building Codes, etc.) and insurance carrier recommendations. In addition, the firesafety requirements discussed in the following paragraphs should also be followed where they are more stringent.
- 2.02 **Site Selection:**
- (a) Company Fire Protection Consultants (insurance carrier, inspection agency, etc.) should perform a site survey prior to purchasing land or buildings.
- (b) A pre-lease survey should be conducted before a lease is signed to determine if costly alterations might be necessary to insure adequate fire safety features (including exits). See Section 760-600-300, Application Guide for Leased Facilities and Section SW 770-310-902, Fire Protection Consultants Inspections.
- (c) For site selection, also see 760-610-100, Considerations Related to Site Selection.
- (d) The water supply, public or in combination with on-site storage, shall be adequate for automatic sprinkler and hose stream demand, in volume, pressure and duration. Arrangement and redundancy of water supplies, pumps, and piping should meet underwriting guidelines for reliability. These guidelines are based on exposed values in single fire areas.
- 2.03 **Compartmentation:** MFL (Maximum For-seeable Loss) fire walls may be necessary to subdivide large exposed values in single fire areas. Where necessary, as determined by insurance underwriters, design criteria for MFL fire walls should be obtained from a fire protection consultant. No MFL compartmentation is necessary under these guidelines if the total value in the building and/or contents is less than \$10,000,000.
- 2.04 **Portable Fire Extinguishers:** For fire extinguishers, also see 760-640-200, Distribution of Portable Fire Extinguishers. Ware-houses should be classified as extra (high) hazard areas.
- 2.05 **Suppression Systems:** Suppression systems are recommended for use in all

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storage, ware-house and distribution facilities.

- (a) Automatic sprinklers at ceiling level, adequate in density for commodity class and storage configuration, should be installed in all ware-houses or distribution facilities with a value of \$1,500,000 or more in the building and/or contents.
- (b) Certain commodity classes and storage heights (rack storage) require level(s) of sprinklers within racks.
- (c) The various NFPA standards which provide guidance on sprinkler system design and the degree of protection required for various storage configurations are:

NFPA 13-1983: Standard for the Installation of Sprinkler systems.

NFPA 231-1979: Indoor General Storage (palletized, solid pile, and bin box storage).

NFPA 231C-1980: Rack Storage of Materials.

- (d) Where insurance carrier recommendations contain higher degrees of protection, those criteria should be followed.
- (e) Permanent Class II (first aid) standpipes (1-1/2 in), not exceeding 100 ft. in length, capable of reaching all storage areas, should be provided throughout.

2.06 **Detection Systems:** Early warning fire detection systems (EWFDS) are recommended for use in storage, ware-house and distribution facilities.

- (a) EWFDS shall be installed so as to provide detection coverage throughout the storage, ware-house and distribution facility building.
- (b) EWFDS shall be continuously monitored for alarms 24 hours a day by a control center. Monitoring indication shall include detection and trouble conditions and, where provided, sprinkler system supervisory signal operation.
- (c) In addition to the above EWFDS requirements, sprinkler system water-flow alarms should be installed in accordance with the following table:

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Replacement Value of Building and/or Contents	Minimum Alarm Type
Up to \$3,000,000	Local
Up to \$15,000,000	Open circuit to a fire department or municipal dispatching service.
Up to \$25,000,000	Closed circuit to a fire department or municipal dispatching service.
\$25,000,000 and Above	Central Station, including super-vision of sprinkler control valves and pumps, or a Proprietary System with watchmen service.

- 2.07 **Consultation:** When designing a facility for storage, warehousing or distribution, you may reach the Company's current insurance carrier through the GHQ Real Estate Management group for detailed consultation. Since many variables apply to the design of a major materials storage facility, the insurance carrier can provide specific requirements for each individual facility.

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