

## Fire & Life Safety Department

# BUILDING CONSTRUCTION REQUIREMENTS

Building plans are reviewed to determine compliance with fire and life safety codes and standards as they relate to building construction and layout. These requirements can be found in the 2021 International Fire Code (IFC), 2021 International Building Code (IBC), 2021 NFPA 1, and/or 2021 NFPA 101. In an effort to expedite the plan review process, please ensure the following list of items are incorporated into the building/fire code construction plans. Please note that not all of the below requirements pertain to all submittals, and the list is not all inclusive of all the fire code requirements. This listing provides the minimum amount of information required to be reflected on the building construction drawings for the Fire & Life Safety Department's review. It is recommended that a preconstruction meeting be scheduled to discuss your project in detail.

### GENERAL SUBMITTAL INFORMATION

1. Type of occupancy. (i.e. A – Assembly, B – Business, E – Educational, I – Institutional, M – Mercantile, S – Storage, etc.)
2. Indicate total square footage of the building and/or square footage of each separate occupancy in multiple tenant spaces.
3. Is the building to be provided with a fire sprinkler system, fire alarm system or other fire protection system?
4. An automatic system shall be installed throughout all buildings over 12,000 sq.ft, unless otherwise directed herein or documented in the amended code. For the purpose of this provision, firewalls shall not define separate buildings.
  - a. When determining the requirement for sprinkler protection, the total area under any roof overhangs, canopies, projections, or other permanent vertical structures, beyond that of the building footprint, is included in the total area determination. EXAMPLE: A proposed building area is 11,800 sq. ft. Multiple canopies are indicated to cover the entrances. The total square footage of the canopies is 300 sq. ft. The total building area is calculated as: 11,800 sq. ft. + 300 sq. ft. = 12,100 sq. ft. Therefore, this building would require an automatic sprinkler system. This is commonly referred to as the “drip line”.
  - b. An automatic system shall be installed throughout all A-2 occupancies with an occupant load of over 99 persons and/or over 5,000 sq. ft., unless otherwise directed.
  - c. An automatic system shall be installed throughout all I, R and H occupancies regardless of size. 5. An NFPA 13 or NFPA 13R, sprinkler system shall be installed throughout all R Occupancies
6. Type of construction (Type 1, Type II, Type III, etc).
7. Documentation regarding the operation(s) of the proposed business.
8. Buildings of four stories or more shall provide a stairway to the roof in accordance with IFC Section 504.3.
9. Egress plan to indicate the required exits, path of travel, travel distance and any floor fixtures. This is to include the corridor rating, travel distance, and common path of travel.
10. Wall and ceiling finishes shall be in accordance with the 2021 IFC, Table 803.3, for all corridors, rooms, and enclosed spaces. The IFC contains amendments which may not be reflected in the IBC.

11. The tenant separation wall/demising wall shall be a minimum of 1-hr fire rated construction. The 1-hr rated designation shall be clearly indicated. The UL listing number shall be provided. Higher rated walls may be required based upon occupancy and adjacent uses.
12. Indicate any types of special hazards. (i.e. medical gases, dust operations, spraying operations, etc.)
13. Will any type of special protection system be required? (i.e. ventilation, smoke dampers, smoke control, kitchen hood, storage tank)
14. Occupancy separation walls shall be in accordance with the 2021 IBC.
15. Flammable or combustible liquids tank storage.
16. A minimum of one 2A-10BC fire extinguisher per 3000 sq. ft., with a maximum travel distance of 75 ft.
17. The address must be legible from the street or fire lane. Numbers must be in contrasting color from building and shall be a minimum height of 6 inches.
18. Address must be provided at gas and electric meters and/or disconnecting means.
19. Alphabetic suite numbers are not permitted.
20. Emergency lighting and exit signs shall be in accordance with 2021 IFC.
21. Knox Box to be installed 5 to 7 feet above grade at the fire sprinkler riser room. When no riser room exists, the Knox Box shall be installed at the front door of the building.
22. Arrangement of interior walls and/or drop ceiling may interfere with the operation of the fire sprinkler system.
23. Complete listing of hazardous materials, if any, and storage and location information.
24. Indicate any doors intended to be provided with a security or access control system.
25. Additional criteria as required by the Fire & Life Safety Department.

#### **HAZARDOUS MATERIALS**

26. Please contact us for Hazardous Materials Submittal Guidelines for additional information regarding required plans submittal requirements.
27. Building construction and fire protection features shall comply with the applicable requirements of IFC, IBC, and NFPA.

#### **HIGH-PILED STORAGE**

28. High-piled storage is defined as the storage of combustible materials in closely packed piles of combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet in height.
29. Please contact us for High-Piled Storage Submittal Guidelines and additional information regarding required building features, fire protection and plan submittal requirements. All occupancies containing high-piled storage regulated by IFC, NFPA, or other sections of the fire code, shall be required to have a permit. The permit shall be valid for one year and will be required to be renewed annually.
30. Building construction and fire protection features shall comply with the applicable requirements of IFC, IBC, and NFPA 1 and/or 101.
31. A rack storage plan is required prior to fire sprinkler plan approval.

The following items are listed to aid the applicant in what will be required to complete the project that is not included in the building plan review. This is intended as a partial list only and is not all-inclusive. If the modification/ installation of a fire protection system shall be required, the Fire & Life Safety Department Building Plan Review shall indicate the type(s) of fire protection system required.

Additional fire protection systems and or building construction components may be required as a result of the Fire & Life Safety Department's review of your building construction drawings.

#### **FIRE PROTECTION & ACCESS SYSTEMS**

32. Fire apparatus access roads and water supply for fire suppression should be installed, tested, and approved prior to the time of which construction has progressed beyond completion of the foundation of any structure.
33. Key boxes for elevators shall comply with Section 506.1 2021 IFC.

34. Class III Standpipe systems shall be installed throughout buildings where the floor level of the highest story is more than 30 feet above the lowest level of fire department vehicle access, or where the floor level of the lowest story is more than 30 feet below the highest level of fire department vehicle access.
35. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 200 feet of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual standpipes shall be provided. For the purpose of this provision, fire areas shall not define separate buildings.
  - a. Exceptions:
    - i Automatic dry, semi-automatic dry, and manual dry standpipes are allowed as provided in NFPA 14 where approved by the AHJ.
    - ii R-2 occupancies four stories or less in height having no interior corridors.

#### **LICENSED CONTRACTORS**

36. A Texas Department of Insurance licensed fire alarm contractor must install the Fire Alarm System. Plans must be submitted to the Fire & Life Safety Department for review and approval.
37. A Texas Department of Insurance licensed fire sprinkler contractor must install the overhead Fire Sprinkler System. Plans must be submitted to the Fire & Life Safety Department for review and approval.
38. A Texas Department of Insurance licensed fire sprinkler contractor must install the underground Fire Sprinkler System. Plans must be submitted to the Fire & Life Safety Department for review and approval.
39. A Texas Department of Insurance licensed fire extinguisher contractor must install the Kitchen Hood/Paint Spray Booth extinguishing system. Plans must be submitted to the Fire & Life Safety Department for review and approval.
36. Texas Commission of Environment Quality licensed underground storage tank contractor must install the underground storage tank system. Plans must be submitted to the Fire & Life Safety Department for review and approval.
37. All access-controlled egress doors shall meet the requirements of IFC Sections 1010. "Access - Controlled Egress Doors". Access control doors are required to be reviewed, approved and permitted.
38. All smoke control and pressurization systems shall meet the requirements of IFC/IBC Chapters 909 and 910. Plans must be submitted to the Fire & Life Safety Department for review and approval under separate instrument.

All access control criteria for the purposes of this guideline and any other guidelines or requirements of the Fire & Life Safety Department shall conform to the 2021 International Fire Code, 2021 NFPA 1, and/or 2021 NFPA 101.