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## Plan Review Submittal Guide

This guide outlines the minimum requirements that must be met for construction documents to be submitted for plan review by Gresham Fire & Emergency Services (GFES). Typical documents applicable to this guide are for projects including but not limited to: building construction, tenant improvement, fire protection system, flammable/combustible storage tank installation, high piled storage racking systems, etc.

To ensure a submittal meets the requirements in this guide it is recommended that project engineers and/or architects contact GFES Life Safety Division when preparing submittal documents to verify local requirements. Utilizing information in this guide will avoid incomplete plan review submittals that cause delays and effect permit approvals that may interfere with construction timelines.

The 2014 Oregon Fire Code (OFC) and the National Fire Protection Association (NFPA) Standards have been adopted for use by GFES as the authority having jurisdiction.

### Plan Review Submittal Requirements:

Plans submitted for review must comply with the applicable requirements in this guide and the specific City requirements.

### General Plan Requirements:

- All plans shall be drawn to a common scale (OFC 105.4.2) with a point of compass and stamped by a (State of Oregon) Registered Professional Engineer as required by the Oregon Revised Statutes 671.020 (5).
- Plans must contain code summary
- Plans must include exterior building elevations (all sides)
- Plans must include floor plan including identification for each room, floor level and include ceiling elevations, obstructions or architectural features that may interfere with other fire and or building code requirements.
- Site plan showing fire department access including: access road widths within project, to and from project address, turning radius of corners, etc. (OFC 503.1) Must include stamped/signed document from Registered Civil Engineer indicating design and construction specifics to demonstrate access roads/lanes are capable of supporting not less than 75,000 pounds with a point load of 12,500 pounds (OFC Appendix D 102).
- Report from water purveyor indicating available fire flow to the project site. Report must be dated no more than 12 months before the plan submittal.

### **Specific Plan Requirements:**

- Plan requirements for the installation or modification of underground fire supply must meet the requirements in **GFES Private Underground Fire Supply Guide** and NFPA 24-4, including the following:
  1. Site utilities plan with locations of both new and existing fire hydrants and fire supply vault (NFPA 24-4.1.3).
  2. Fire hydrants shall generally not be installed on the fire suppression supply line. Hydrants shall be installed on a separate supply line that is connected downstream of the double check valves (NFPA 13 E-4.3). See City of Gresham approved vault detail in **Private Underground Fire Supply Guide**.
  3. Sprinkler system post indicator valve (PIV) in approved location at least 40 feet from the building (24-6.2.11).
  4. Fire department connection (FDC) shall be installed within 50 feet of a public fire hydrant (13E-4.3.4). FDC also to be located at least 40 feet from the building and installed downstream of the double check valves and PIV (24-7.2.3).
  5. PIV and both control valves in fire vault shall have tamper switches. Tamper switches must be tied to building fire alarm control panel (FACP) (OFC 903.4).
  
- Plan requirements for the installation or modification of Fire Sprinkler Systems must meet the requirements in **GFES Fire Sprinkler Plan Submittal Guide**
  1. Fire Sprinkler Plans must be stamped by a State of Oregon Registered Professional Engineer as required by the Oregon Revised Statutes 671.020.
  2. Working plans shall be submitted for approval to the local building department's permit services before any equipment is installed or remodeled.
  3. Fire sprinkler plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan for each floor, and shall include items identified in NFPA 13-23.1.3.
  4. Fire sprinkler plans must include hydraulic calculations and manufacturer's specification sheets for all proposed devices (OFC 903 and NFPA 13 Chapter 23).
  
- Plan requirements for the installation or modification of Fire Alarm Systems must meet the requirements in **GFES Fire Alarm Plan Submittal Guide**
  1. Three copies of Fire Alarm Plans must be submitted for approval to the local building department's permit services before any equipment is installed or remodeled.
  2. Fire alarm plans shall be drawn to 1/8" or 1/4" scale on sheets of uniform size, with a plan for each floor and include items identified in NFPA-72-7.2.1

3. Fire alarm plans must include manufacturer's specification sheets for each type of device used and calculations (secondary supply and voltage drop calculations)(NFPA 72-7.4.10).
  4. Fire Alarm plans must include typical wiring diagrams for all control equipment, power supplies, battery chargers and annunciators.
  5. Fire Alarm plans must include typical wiring diagrams for all initiating devices, notification appliances, remote alarm light emitting diodes (LED's), remote test stations, and end of line power supervisory devices.
  6. Fire alarm plans must indicate the location of one UL listed exterior strobe mounted on the address side of the building.
  7. If the building is protected by an automatic sprinkler system, fire alarm plans must include tamper switches that are required to be installed on control valves (including those located in the underground fire supply vault) and on the PIV.
- Plan Review submittal requirements for the installation of duct smoke detectors in the HVAC system. If duct detection is required and there is no fire alarm system on site, they shall activate a visible/audible signaling device in an approved location. The audible/visible signal shall have a permanent sign below it stating "AIR DUCT SMOKE DETECTOR TROUBLE ALARM". The strobe appliance shall not be a fire alarm strobe with a red body. Specific appliances are made for this application. Appliance shall be approved by GFES prior to installation. (OFC 907.3.1 & OMSC 606.4.1).
  - Plan Review submittal requirements for the installation of:
    1. Fuel Storage Tanks (above or underground, flammable or combustible liquid and/or Liquid Petroleum Gas)
    2. Emergency Power Supply Systems
    3. Special Extinguishing Systems
    4. Kitchen Hood Suppression Systems
    5. Spray Booth Extinguishing Systems
    6. Racking Systems for High Piled Storage
 must be met for the applicable **GFES Plan Review Guide**. For specifics please contact the GFES Life Safety Division at 503-618-2355.