



## **Standard Fire Department Guidelines**

### **General Fire Plan Submittals:**

These notes are required to be on the commercial, industrial and multi-family plans for all submittals

1. Construction within the Town of Gilbert shall comply with the 2006 International Fire Code (IFC) as amended and adopted by fire code sub-sections 10-37-1, 10-37-2, 10-37-3 and Fire Department Regulations.
2. The applicant is responsible to identify and coordinate deferred submittals.
3. Plans and specifications for fire alarm systems, automatic fire extinguishing systems, standpipes and their appurtenances shall be submitted to the Permitting & Plan Review Department for review and approval prior to installation.
4. A Knox Box is required at every fire sprinkler riser room. On large buildings when rapid access would be compromised by long travel distances, Knox Boxes shall be required at other locations at the discretion of the Fire Official. Refer to Fire Department Regulation 2006-019.

### **General Fire Sprinkler Requirements:**

1. Plans and specifications for fire sprinkler systems exceeding 19 heads submitted for review shall be sealed by a qualified Arizona Registrant in fire sprinkler design. The installing contractor's name, address and phone number are to be included on the drawings and calculations submitted for review and approval. As-built drawings will be required where field changes are made to the designed drawings. When piping and/or sprinkler heads are added to initial sprinkler system installations, updated calculations will be required. When additional wiring and devices are added to fire alarm systems, updated voltage drop and battery calculations will be required.
2. Fire sprinklers shall be installed in accordance with NFPA Standards and Town of Gilbert sprinkler ordinance.
3. The fire sprinkler riser shall be located inside a dedicated fire riser room and shall comply with Town of Gilbert fire code amended Section 903.3.
4. Fire department inlet connections (FDC) shall be located on the wall of the address side or natural approach of the building it serves and shall identify the building(s) served with



permanent signage. A 2 ½ inch, National Standard Thread, Siamese connection (double snoot) is required on all NFPA 13 and 13R fire sprinkler systems.

5. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where the number of sprinkler heads exceeds 19, IBC Section 903.4
6. In addition to an exterior fire sprinkler system alarm bell above the fire riser room door and a weather-proof 75cd horn strobe located over the fire department connection, interior alarm notification shall be provided in accordance with IFC Section 901.10 and Section 4.28 of ADAA.

#### **General Fire Alarm Requirements:**

1. Plans and specifications for fire alarm systems submitted for review shall be sealed by a qualified Arizona Registrant in fire alarm system design.
2. Alarm initiating devices, alarm signaling devices and other fire alarm system components shall be designed and installed in accordance with 2006 IFC.
3. When duct detectors, required by IMC 606 or IFC and IBC Section 909, are concealed from view or installed more than 10 feet above finished floor or in arrangements where the detectors alarm indicator is not readily visible to responding personnel, an LED with audible device shall be provided through the ceiling level or sight obstruction at each detector. All detection devices provided shall be monitored for integrity by the fire alarm system where a fire alarm is installed.

#### **General Fire Department Access:**

1. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within Gilbert's jurisdiction.
2. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility. The route is to be measured around the building as the fire hose would be laid out and is NOT measured through interior or covered walkways or water retention basins. The route of the fire apparatus access road shall be approved by the fire department.



3. Apparatus access roads shall have a minimum unobstructed width of 20 feet (foc).
4. A minimum vertical clearance of 15 feet shall be provided for the apparatus access roads.
5. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved means for turning the apparatus around. Fire apparatus turning radii 35 feet inside and 55 feet outside (foc).
6. Fire lanes shall be marked by signs per TOG Detail #63 and/or curb painted red and labeled "FIRE LANE NO PARKING". Refer to Fire Department Regulation 2006-003.
7. Fire apparatus access roads shall have a maximum grade of
  - 0-6% grade ABC 6" 95% compaction
  - 6-10% grade concrete asphalt, 4" or more
  - Grades steeper than 10% shall be approved by the Fire Official.

#### **Fire Hydrant Requirements:**

1. The minimum number of fire hydrants shall not be less than required per. The minimum required fire flow is **1500** (gpm) at **20** (psi) residual pressure.
2. A fire hydrant shall be located within 150' of the fire department connection (FDC). The route is to be measured as the fire hose would be laid out and does not go through water retention basins, over walls or similar obstructions.
3. A 3-foot clear space shall be maintained around the circumference of all fire hydrants.

#### **Fire Safety During Construction, Alteration or Demolition of a Building:**

1. During construction, you must provide and maintain an all weather road designed to support the imposed load of fire apparatus weighing up to 85,000 pounds. Sites shall have two points of access or as indicated at plan review or by the Fire Inspector. Unpaved surfaces shall have a minimum ABC 6" depth compaction to 95% and 20' wide. No vehicle parking or building material off-loading allowed on the emergency access road. Fire lane signs are required to be posted along the road.
2. A sign shall be posted at the main street entrance indicating emergency vehicle entrance, the project name, the project address and an emergency contact number of a company representative. The sign shall be a minimum of 24" high x 36" wide with white reflective background and 3" red reflective letters. In addition, all off-site work shall have a sign posted at the main street entrance that is reflective of the geographical location to the



project. The sign shall include the project name followed by the caption “off-site” and the geographical location.

3. All site hydrants shall be installed and accepted by the Town Engineering Department prior to combustible materials being delivered to the construction site.
4. Temporary dead end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved means for turning the apparatus around.
5. Fire hydrants provided during construction shall be located along the fire apparatus access roadway.
6. Fire hydrants provided during construction shall be protected from vehicular damage.

### **Fire Department Requirements for Residential Development**

1. Residential Development within the Town of Gilbert shall comply with the 2006 International Fire Code as amended by the Town, Fire Department Regulations and the Unified Land Development Code.
2. Fire sprinklers shall be installed in all buildings except **detached** R-3 and U-Occupancies in accordance with NFPA Standards and the Town of Gilbert sprinkler ordinance.
3. The Minimum number of fire hydrants shall not be less than required per 2006 IFC Appendix B & C. Fire hydrants shall be located along the route of the fire apparatus access roadway. Additional fire hydrants are required for attached homes, cluster homes, and private street.
4. A 3-foot clear space shall be maintained around the circumference of all fire hydrants.
5. A fire access road shall be provided when any portion of an exterior wall of the 1<sup>st</sup> story is located more than 150’ from fire apparatus access measured by an approved route around the exterior of the building. The route is to be measured around the building as the fire hose would be laid out and is **NOT** measured through interior or covered walkways or water retention basins.
6. The route of the fire apparatus access road shall be approved by the Town of Gilbert Fire Department.
7. Apparatus access roads shall have a minimum unobstructed width of 20 feet (foc). All access gates, traffic calming devices, and alleyways are required to meet Fire Department Regulations 2006-004 and 2006-005.



8. A minimum vertical clearance of 15 feet shall be provided for the apparatus access roads.
9. Confirm fire apparatus minimum turning radius of 35 feet inside, and 55 feet outside (foc). All traffic calming devices, round-turns, traffic medians, etc. are required to meet this standard.
10. Cul-de-sac streets are required to meet the minimum design standard of Detail 41
11. Fire lanes shall be marked by signs per Fire Department Regulation 2006-003, **and/or** curb painted red and labeled "FIRE LANE NO PARKING". Refer to Fire Department Regulation 2006-003.
12. Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved means for turning the apparatus around. The turnaround must meet the fire apparatus minimum turning radius of 35 feet inside and 55 feet outside (foc). Any deviation from this standard must be approved by the Town of Gilbert Fire Marshal.
13. All residential developments are required to meet the 2006 IFC requirements of providing at least two separate and distinct access points. A single road with a divided median does not meet this requirement.
14. Street width for fire lane compliance shall meet the requirements of Gilbert Fire Regulation 2006-003. Less than 26' (foc) will require "No Parking Both Sides"; 26' to less than 32' will require "No Parking One Side", 32' or greater, Parking Both Sides allowed. No street will be less than 20' wide (foc). All traffic calming devices, round-turns, traffic medians, etc. are required to meet this standard. 2006 IFC Appendix D.
15. The **minimum** setback between property lines is 5' on each side. Patios or other framed parts of the residence may not encroach on this 5' setback.
16. **Section 10-35 of the Town of Gilbert 2006 Fire Code –**  
**903.2.1** All occupancies except detached Group R, Division 3 and Group U Occupancies. Except for detached Group R, Division 3 and Group U Occupancies, an automatic sprinkler system shall be installed: **Throughout all levels of all new occupancies of more than zero (0) square feet.** In Group R, Division 3 occupancies, licensed as residential group care facilities accommodating, 1 to 5 clients or residents, excluding staff. Automatic sprinkler systems in detached Group R, Division 3 group care facilities may be in accordance with NFPA 13-D and TOG Standards.  
**903.2.4** Group R, Division 1 & 2 Occupancies. An automatic sprinkler shall be installed throughout all of Group R, Division 1 & 2 Occupancies. There shall be no sprinkler



deletions in bathrooms, closets, garages, attached carports, stair landings, balconies, or attached covered patios, entryways or attics. Attics shall be calculated at a minimum of four standard spray heads or at a minimum of two extended heads, provided that in any case the calculated area is not less than five hundred square feet. Residential or quick response standard sprinklers shall be used in the dwelling units and guest room portions of the buildings.

**903.2.5** Attached Group R, Division 3 Occupancies and Group R, Division 4 Occupancies. An automatic sprinkler system shall be installed throughout. There shall be no sprinkler deletions in bathrooms, attached garages, attached carports or attached covered patios and entry porches.

17. Residential Projects that do not front directly onto an approved, accessible public roadway present an inherent delay and problems to fire suppression efforts.

18. All detached Group R, Division 3 Occupancies that do not front directly onto an approved, accessible public roadway<sup>1</sup> shall incorporate the following components into the property:

- An access gate shall be provided into the side yards, both front and rear, between structures.
- All structures shall have at least one side yard accessible entry door into the structure. The door may lead into the main structure, and/or garage.
- A minimum setback distance of 5 feet from the property line, or a Use and Benefit Easement (UBE), for a total minimum separation distance of 10 feet between structures.

19. All detached Group R, Division 3 Occupancies that do not front directly onto an approved, accessible public roadway<sup>1</sup> and any portion of the structure exceeds 150 feet from the curb line of the approved roadway, shall incorporate the following additional component into the property:

- An automatic fire sprinkler system shall be installed in accordance with NFPA Standard 13D with Town of Gilbert Amendments and 2006 IFC Sections 903.2.1 through 903.2.7. There shall be no sprinkler deletions in bathrooms, closets, garages, attached carports, attached covered patios and entry porches or attics.

**NOTE:** All other standard requirements for fire department access and water supply shall remain in effect. An approved, accessible public roadway is defined as:

- Roads with an unobstructed width of not less than 20 feet, an unobstructed height of not less than 15 feet, turning radius of 35 feet inside and 55 feet outside with



an all weather surface designed and maintained to support the imposed loads of fire apparatus.