



## **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

Construction within the Town of Gilbert shall comply with the 2012 International Fire Code (IFC) as amended and adopted by fire code sub-sections 10-37-1, 10-37-2, and 2012 Fire Code Interpretations & Regulations

The applicant is responsible to identify and coordinate deferred submittals.

Plans and specifications for fire alarm systems, automatic fire extinguishing systems, and standpipes shall be submitted to the Permitting & Plan Review Department for review and approval prior to installation.

A Knox Box is required at every fire sprinkler riser room. 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 2012 Fire Code Interpretations & Regulations 12-506.1 Key Boxes.

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

Approved fire apparatus access roads shall be provided for every facility, building or portion of a building constructed or moved within Gilbert's jurisdiction.

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 and shall be approved by the Fire Plans Examiner.

Apparatus access roads shall have a minimum unobstructed width of 20 feet (foc).

A minimum vertical clearance of 13'6" shall be provided for the apparatus access roads.

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 radius is 35 feet inside and 55 feet outside (foc).



Fire lanes shall be marked by signs per TOG Detail #63 and/or curb painted red and labeled "FIRE LANE NO PARKING". Refer to 2012 Fire Code Interpretations & Regulations 12-D103.6 Fire Lanes.

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:**

The minimum number of fire hydrants shall not be less than required per Appendix C in the IFC.

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 shall be approved by the Fire Plans Examiner.

A 3-foot clear space shall be maintained around the circumference of all fire hydrants

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

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.

Fire sprinklers shall be installed in accordance with the current NFPA referenced standards and the Town of Gilbert sprinkler ordinance.

The fire sprinkler riser room shall comply with Town of Gilbert fire code amended Section 904.1.6.

Fire department inlet connections (FDC) shall be located on the address side or natural approach of the building it serves and shall identify the building(s) served with a permanent sign.

Fire hose threads and fittings used in connection with automatic sprinkler systems shall National Standard Thread.



Control valves and water flow switches for automatic sprinkler systems shall be electrically monitored where the number of sprinkler heads exceeds 19, IFC Section 903.4.

An exterior fire sprinkler system alarm bell shall be mounted above the fire riser room door.

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

Plans and specifications for fire alarm systems submitted for review shall be sealed by a qualified Arizona Registrant in fire alarm system 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 additional wiring and devices are added to fire alarm systems, updated voltage drop and battery calculations will be required.

Fire Alarm Requirements for Non-separated Mixed Occupancies: Occupancies that depend on occupant load criteria to determine when a fire alarm system is required shall use the total building occupant load using the most restrictive occupancy classification and extend the fire alarm system to all occupied areas of that building in accordance with applicable code and standard. The fire alarm requirements shall be based on the most restrictive fire protection system requirement of IFC Chapter 9.

Alarm initiating devices, alarm signaling devices and other fire alarm system components shall be designed and installed in accordance with 2012 IFC and current NFPA referenced standards.

Duct smoke detectors that are concealed from view, installed more than 10 feet above finished floor or in arrangements where the detectors alarm indicator is not readily visible to responding personnel it shall have a visible and audible supervisory signaling device at the ceiling level or sight obstruction at each detector. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required.

### **Fire Safety During Construction:**

An all-weather access road designed to support the imposed load of fire apparatus weighing up to 85,000 pounds shall be installed and maintained at all times. 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 land signs are required to be posted along the road.

Signs shall be posted at each required 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.

All site hydrants shall be installed and accepted by the Town Engineering Department prior to combustible materials being delivered to the construction site.

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.

Fire hydrants provided during construction shall be located along the fire apparatus access roadway.

Fire hydrants provided during construction shall be protected from vehicular damage.

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

Residential Development within the Town of Gilbert shall comply with the 2012 International Residential Code and International Fire Code as amended by the Town.

All residential developments are required to meet the amended 2012 IFC requirements of providing at least two separate and distinct access points. A single road with a divided median does not meet this requirement.

The Minimum number of fire hydrants shall not be less than required per 2012 IFC Appendix B & C. Fire hydrants shall be located along the route of the fire apparatus access roadway. Additional fire hydrants may be required for attached homes, cluster homes, and private streets.

A 3-foot clear space shall be maintained around the circumference of all fire hydrants.

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 of the fire apparatus access road shall be approved by the Fire Plans Examiner.

Apparatus access roads shall have a minimum unobstructed width of 20 feet (foc).

A minimum vertical clearance of 13 feet 6 inches shall be provided for the apparatus access roads.



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.

Cul-de-sac streets are required to meet the minimum design standard of Detail 41.

Fire lanes shall be marked by signs per Fire Department Regulation 12-D103.6.

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 fire code official.

Street width for fire lane compliance shall meet the requirements of 2012 Fire Code Interpretations & Regulations 12-D103.6 Fire Lanes. 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 the requirements of 2012 IFC Appendix D.