

**MCKINNEY FIRE DEPARTMENT
FIRE MARSHAL'S OFFICE**

**FIRE HYDRANTS
LOCATION AND FIRE FLOW**

This guide is intended as a resource for installation of fire hydrants to serve as fire protection water supply for commercial development and residential subdivisions.

All fire hydrants for the purposes of this guide and any other guidelines or requirements of the Fire Department shall conform to the 2015 International Fire Code, as adopted and amended by City of McKinney Ordinance No. 2018-01-002. NOTE. The Engineering Department has additional requirements for fire hydrant installation. These pertain only to the Fire Department.

CONSTRUCTION DETAILS

1. Fire hydrants shall have two (2) 2-½" connections and one (1) 4" steamer/pumper connection.

GENERAL LOCATION NOTES

2. Fire hydrants shall be located adjacent to public streets and fire lanes/fire apparatus access roads.
3. A minimum of two (2) fire hydrants are required to serving each property/lot. A minimum of one (1) fire hydrant is required to be located on the lot. Credit for fire hydrants on adjacent lots and R.O.W. may be provided based upon specific site conditions. Additional fire hydrants may be required as determined by the Fire Department.
4. A minimum required fire flow of 1,500 GPM is required. (IFC Appendix B, Section B105)
5. Fire hydrants shall be so spaced such that all portions of the exterior of the building are within the following distances as the hose lays:
 - a. 400 feet for non-sprinklered properties.
 - b. 600 feet for sprinkler properties.

NOTE: Spacing may be increased or decreased due to occupancy type, construction type and required fire flow.

6. Spacing between fire hydrants shall not exceed a maximum of 500 feet. Spacing may be required to be reduced to 200 ft. based upon the required fire flow, building size and construction, and site conditions.
7. Where streets are provided with median dividers which can be crossed by fire fighters pulling hose lines, fire hydrants shall be spaced every 500 feet on each side of the street and be arranged on an alternating basis.
8. Where water mains are provided along streets where fire hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at a spacing not to exceed 1,000 feet. Roadways in which the traffic volume is heavy shall meet the spacing of 500 feet on each side, alternating.

RESIDENTIAL SUBDIVISIONS

9. All homes shall be within 250 feet of a fire hydrant.
10. All homes located on a dead-end street or cul-de-sac shall be within 200 feet of a fire hydrant.
11. Fire hydrants shall not be located in the bulb of a cul-de-sac.

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FIRE DEPARTMENT CONNECTION (FDC) & FIRE HYDRANT ACCESS

12. The Fire Department Connection (FDC) shall be located adjacent to and face an approved fire lane.
13. FDC shall be a yard mounted Remote FDC.
14. The FDC shall be located adjacent to a fire hydrant.
15. A minimum of a 5 foot wide unobstructed pathway shall be provided from the fire hydrant to the FDC. Parking/loading spaces and landscaping are considered an obstruction.
16. Shall be located a minimum of 3 ft. from the face to any landscaping and provided a clear pathway to the fire lane and adjacent fire hydrant. Parking, screening and landscaping are considered obstructions.
17. Shall be located, as practical, near the corner of the building on the outside edge of the fire lane.
18. Shall be protected by bollards.

FIRE HYDRANT ACCESS & PROTECTION

19. A clear space of 3 ft. shall be maintained around the fire hydrant. Building elements, signs, shrubberies, trees, bushes or other landscaping elements shall not be located within the 3 ft. clear space around the fire hydrants.
20. A 5 foot wide unobstructed pathway shall be provided from the fire hydrant to the public street or fire lane. Parking/loading spaces and landscaping are considered an obstruction
21. Where fire hydrants are subject to impact from a motor vehicle or industrial equipment, they shall be protected in accordance with IFC Section 312.

IFC SECTION 312

22. Bollards or guard posts, *for fire hydrant protection only*, shall comply with the following:
 - a. Constructed of steel not less than 4 inches in diameter.
 - b. Spaced 3 feet from the face of the fire hydrant.
 - c. Set not less than 3 feet deep in a concrete footing of not less than 15 inches in diameter.
 - d. Set with the top of the post not less than 3 feet above grade.

FIRE FLOW AND FIRE HYDRANTS

23. The total number of fire hydrants required will be based upon an evaluation of the projected fire flow required for the building(s).
24. Additional fire hydrants may also be required based upon the hazards present, size of the building(s) and/or access to the facility. This shall be determined by the fire code official.
25. The minimum fire flow required shall be 1,500 GPM.

BACKFLOW PREVENTION

26. Backflow prevention devices may be required on dead-end fire hydrants depending upon the total length of the pipe to the hydrant. A good rule of thumb is 100 ft. Contact the Engineering Department to determine if a backflow prevention device will be required.

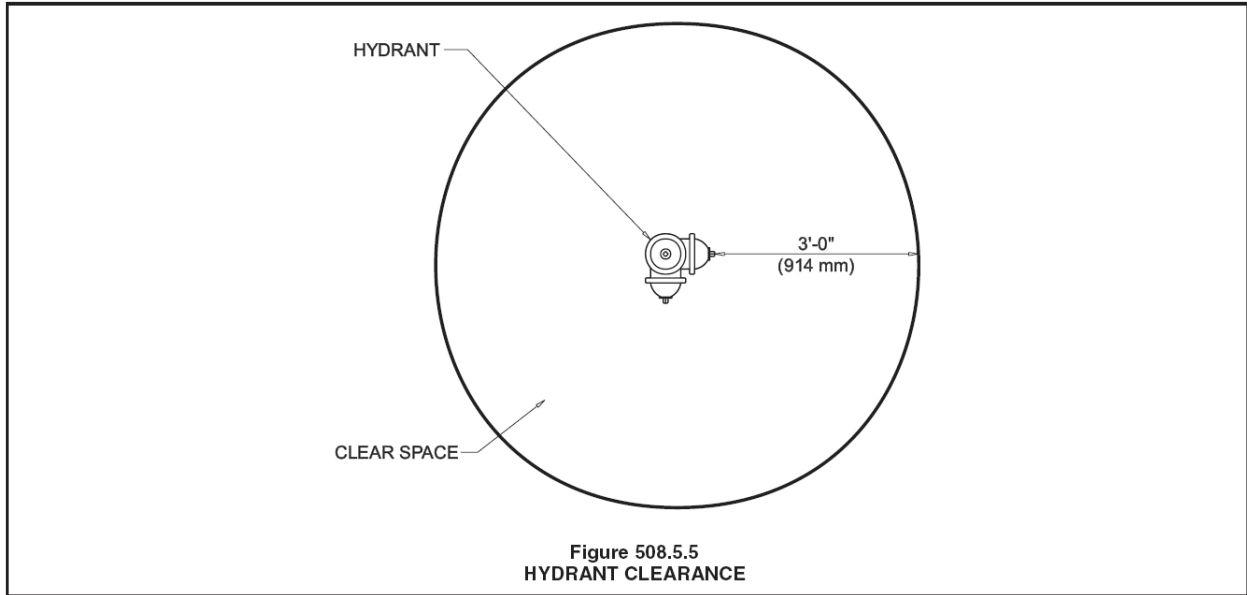
All access control criteria for the purposes of this guideline and any other guidelines or requirements of the Fire Department shall conform to the 2015 International Fire Code, as adopted and amended by City of McKinney.

This guide does not replace, nor supersede any codes and/or ordinances adopted by the City of McKinney, or determinations and positions of the Fire Chief or Fire Marshal.

FIRE HYDRANTS LOCATION AND FIRE FLOW

STANDARD DETAILS

Fire Hydrant Clearance Detail
Figure 508.5.5



Fire Hydrant Impact Protection
Figure 508.5.6

