DEDICATED UNDERGROUND FIRE SPRINKLER PIPING GUIDELINE


PURPOSE

This guideline is intended to ensure compliance with City of Conroe requirements for dedicated underground fire sprinkler piping. The regulations regarding dedicated underground fire sprinkler piping are found in the 2009 International Fire Code (2009 IFC), 2007 edition NFPA 13, Texas Insurance Code (TIC), Texas Administrative Code (TAC) and the City of Conroe Design Manual. The Conroe Fire Department will return plans not conforming to the requirements listed herein as incomplete. Installations not meeting these requirements will fail inspection.

SCOPE

This guideline is intended to provide the minimum requirements necessary for review and approval of dedicated underground fire sprinkler piping located within the jurisdiction of the Conroe Fire Department. It is intended to be a simplified guide applicable to most projects within the City of Conroe. It is not intended to replace the adopted fire code and amendments in whole, or in part. Your project may have special requirements, not outlined in this document. It is the ultimate responsibility of the design professional to assure all code requirements, whether or not listed in this guideline, are met.

DEFINITIONS

- Sprinkler System – A sprinkler system, for fire protection purposes which:
  A. Is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards;
  B. Is an installation including a water supply such as a gravity tank, fire pump, reservoir or pressure tank, and/or connection by underground piping to a city main from the point of connection or valve where the primary purpose of the water is for a fire protection sprinkler system. *TAC Section 34.706, (20).*

SUBMITTAL REQUIREMENTS

Prior to beginning any installation, plans for dedicated underground fire line shall be submitted to the Conroe Fire Department. Submittals shall be submitted in digital format on a flash drive according to the instructions contained within form “CFD FMO 043 – FIRE SPRINKLER PERMIT APPLICATION.” Plans are typically reviewed and returned within 10 business days. Plans shall be prepared by a registered design professional. Acceptable license types shall be RME-G and RME-D.

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GENERAL REQUIREMENTS

A. The 2009 IFC references the 2007 edition of NFPA 13. Use of newer editions of NFPA 13 is acceptable as long as the design meets or exceeds the requirements of the referenced 2007 edition. Determination of whether or not this requirement is met shall be at the sole discretion of the Fire Marshal.

B. Dedicated underground fire line installations shall be performed by individuals licensed by the State of Texas to install fire protection systems. It shall be considered unacceptable for a licensed company to sub-contract installation work to non-licensed companies. Acceptable license types shall be SCR-G, SCR-D or SCR-U.

C. Underground piping shall be considered dedicated fire line when:
   - The piping is completely separate from domestic water supply piping.
   - The piping branches off from the combination domestic/fire line in the ground before reaching the building. The piping shall be considered dedicated fire line from the point at which it branches off until it reaches the building.
   - Piping to the remote FDC shall be considered dedicated fire line.

D. The following inspections will be required on all dedicated underground fire line installations:
   - Visual inspection. This shall be performed after installation of the pipe and before the trench is filled. The inspector will be verifying that the pipe is of an acceptable type, all connections are properly made and kickers are in place.
   - Hydrostatic test. Piping shall hold at least 200 PSI for 2 hours. A State of Texas licensed fire protection professional shall be present for the hydrostatic test. Acceptable license types are: RME-G, RME-U and RME-I.
   - All inspections of underground piping shall be performed by the City of Conroe Engineering Division at 936-522-3100.

E. Prior to backfilling of all underground water lines, install a continuous multi-strand #14 copper tracer wire, located directly over buried lines and accessible at each valve stack. (City of Conroe Design Manual, Division VI – Water Main Design Requirements).

LEGAL CONSIDERATIONS

TIC Sec. 6003.151 (a). Unless the individual or organization holds a registration certificate issued by the department, an individual or organization may not plan, sell, install, maintain, or service a fire protection sprinkler system.

TIC Sec. 6003.301 (a)(b). A person commits an offense if the person knowingly violates Section 6003.151(a), 6003.153, or 6003.251. An offense under this section is a Class B misdemeanor.
Illustration #1
*Not To Scale*

Separate Domestic and Fire Protection Piping

- Separate domestic piping. Can be installed by any licensed plumber registered with the City of Conroe.
- Dedicated fire sprinkler piping. Must be designed and installed by licensed fire protection company.

Illustration #2
*Not To Scale*

Single Tap, Branched Piping

- City Main
- Domestic
- Combination Piping
- Dedicated Fire Line
- Building
Combination Domestic and Fire Protection Piping

City Main

Combination Piping. Can be installed by any licensed plumber registered with the City of Conroe.

Building

Illustration #3
Not To Scale