



# CLOVIS FIRE DEPARTMENT

## Standard #2.1

### Fire Service Underground

Prior to installation, the applicant shall submit fire service underground water supply plans for review, approval and issuance of a building permit by the Clovis Fire Department. Installation shall be done by a licensed California contractor with one of the following licenses: C16, C34, C36 or "A".

All underground systems shall be in compliance with NFPA 24, NFPA 13 and CFD Standard #2.1, City of Clovis Standard W-4.

Prior to final acceptance, the underground fire service line shall be inspected, pressure tested and flushed in the presence of a Clovis Fire Department inspector. Permit from fire department is required to be on-site for all inspections.

**Important Note** – Approval of the public utility plans does not include approval of the fire service underground plans. They require separate submittals, separate approvals and issuance of permit from fire department. Exhibit 'A' illustrates the order of required appliances and valves. This illustration does not show the geographical locations.

### Testing

Hydraulic pressure testing of all fire service underground components shall occur for 2 hours at 200 psi. The test shall be witnessed by the Clovis Fire Department inspector at the beginning and the end of the 2 hours. During the test a pancake must be used to ensure that the detector check valve and the PIV are not damaged during the test.

### Joint Restraint

Joint restraint shall follow the requirements of NFPA 24. All tees, reducers and valves shall be restrained against movement. Thrust blocks must be dug out to undisturbed soil. The fire department shall inspect all joint restraint prior to backfilling. All exposed metal components shall be corrosion-resistant.

### Fire Department Connection (FDC)

The location of the FDC must be reviewed and approved by the Clovis Fire Department prior to installation. The attached drawing is for reference only and is not indicative of where the FDC will be located.

FDC – Only listed underground piping shall be installed on the primary water supply side of the check valve.

The FDC shall be located within 100' of a fire hydrant.

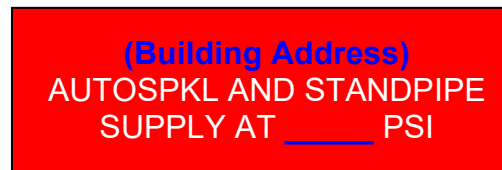
The top of the FDC is to be 18" to 48" above finished grade and there shall be a minimum of 36" of perimeter clearance.

The check valve for the FDC shall be flanged to ensure that it can easily be removed and flipped as part of the flush for the state mandated 5 year fire sprinkler test. Screw in check valves may not be used on the FDC.

The FDC shall not have any obstructions that may impede fire department usage. When a fire pump is required by the overhead system demand, the FDC shall be connected on the discharge side of the fire pump plumbing.

### **FDC Signage**

In systems where the fire sprinkler and/or fire standpipe system demands are greater than 150 psi – a sign shall be provided at the FDC indicating the following information:



The sign shall be of durable (red colored) metal and may be attached to the FDC by U-bolts. The lettering shall be of white one-inch (1") height durable lettering.

### **Riser**

The underground riser shall be a minimum of 4" piping. A space 4" larger than the riser shall be maintained where the riser passes through foundations. The riser stub shall terminate approximately 6" above the finished floor.

### **Post Indicator Valve (PIV)**

The top of the PIV is to be 32" to 40" above finished grade. Conduit shall be brought to the PIV for supervision purposes. The open/shut indicator must be properly adjusted.

### **Pipe**

The piping shall be at least 4" in diameter. Piping shall be a minimum of 30" below grade in all areas except under driveways, which shall be at least 36" below grade. All pipe markings shall be visible from the top of the trench.

### **Flush**

All piping, including the FDC line, shall be flushed with the Clovis Fire Department inspector present. Flow velocity during the flush shall meet the requirements of NFPA 24. Once completed, all open ends shall be capped with listed metal caps.

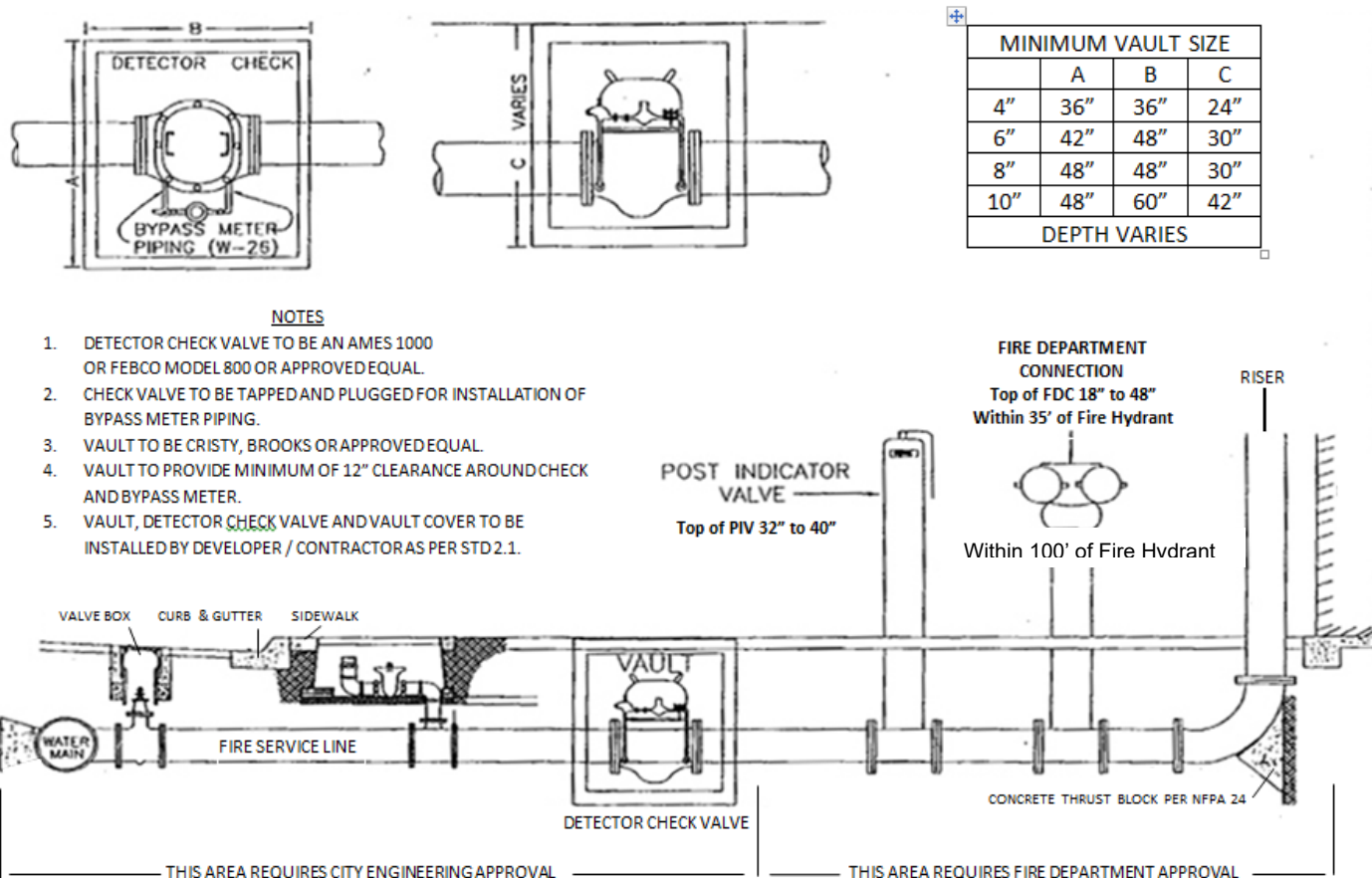
### **Tracer Wire**

All non-metallic underground piping shall have tracer wire or tracer tape installed continuously along the length of the pipe, passing through the inside of each valve box and terminating at the bottom of the riser and the FDC. Tracer wire shall be #10 stranded copper, white insulation.

## Identification

Refer to Clovis Fire Department Standard #2.2 for the required address identification of the FDC and PIV.

### Clovis Fire Department Standard 2.1 Fire Sprinkler Underground



## Shared Underground Fire Service

A shared fire service with a single point of connection may be used to serve two buildings only. A looped system with two points of connection will be required for three or more buildings with a shared fire service. A covenant for a reciprocal cross access agreement and maintenance of the shared fire service shall be obtained prior to the installation of the shared underground fire service. A copy of the covenant for the shared fire service shall be included with the fire service underground plan submittal to the Clovis Fire Prevention Bureau. The shared fire service shall be designed with a detector check, a separate check valve, PIV, and FDC for each building. The check valve, PIV, and FDC for each building shall be installed as part of the initial installation and be included with the plan submittal. A separate permit will be required for each building.