

**East Contra Costa**



**Fire Protection District**

UG

F.D. Permit Number \_\_\_\_\_

Date \_\_\_\_\_

Description of Work: \_\_\_\_\_

Project Name: \_\_\_\_\_ Address: \_\_\_\_\_ Suite \_\_\_\_\_

City: \_\_\_\_\_ Additional Info. \_\_\_\_\_

Company/Applicant: \_\_\_\_\_ Address: \_\_\_\_\_

Contact Person: \_\_\_\_\_ Phone No. ( ) \_\_\_\_\_ Lic# / Type \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Email \_\_\_\_\_

**APPLICATION SECTION: DO NOT MARK BELOW THIS LINE**

The Fire District has reviewed the proposed **private fire service underground** plans for the project facility. Our review is to insure compliance with the minimum code requirements related to fire and life safety as set forth in the California Fire Code and NFPA 24. The following selected comments shall apply to this project:

- The underground piping shall have a minimum depth of bury of 30 inches from top of pipe to finished grade (36 inches below driveways). Non metallic pipe shall have a tracer wire and/or tape provided. NFPA 24 – 10.4.2.2
- Initial backfill and bedding surrounding the pipe shall consist of clean fill sand or pea gravel to a minimum of 6" below and 12" above the pipe and contain no ashes, cinders, refuse, organic matter or other corrosive materials. NFPA 24 – 10.9.1
- PVC pipe shall be a minimum of C900 Class 200. (DR-14) (ECCFPD Standard)
- All piping, valves, joints and fittings shall be listed for fire protection service and shall be installed, supported, anchored, cleaned, coated with an approved mastic, not tar, and/or wrapped with a corrosion-retarding material in accordance with the manufacturer's specifications as applicable. (Chapter 10) NFPA 24
- Installation of the FDC shall include ductile iron from the underground piping to a point above grade, and then may transition to galvanized pipe below the check valve/FDC. NFPA 24 – 10.1.2
- The fire department connection (FDC) shall be offset from the post indicator valve (PIV) by not less than 3 feet. The PIV & FDC shall be located 3 feet from nearby objects including high growth or dense vegetation, to maintain visibility and accessibility at all times. NFPA 24 - 5.9.5.2 and ECCFPD Standard.
- The FDC shall be set at a height of between 32 and 40 inches and the PIV shall be set so that the top of the post will be 36" above finished grade. Both shall be properly supported and protected from mechanical damage and FDC provided caps. NFPA 24 - 5.9, 6.3.1
- The FDC/PIV shall be affixed with an approved permanent sign as to the address being served. The sign shall have at least 1 inch numbers on contrasting background. Where there is no specific address, the area, building, or portion thereof shall be identified on the sign. NFPA 24 - 5.9.5.3

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Fee computed by: \_\_\_\_\_ Amount Due: \_\_\_\_\_

Received by: \_\_\_\_\_ Amount Received: \_\_\_\_\_

Cash  Credit  Check No. \_\_\_\_\_ Invoice No. \_\_\_\_\_

- Provide a concrete footing with restraining rods at the base of the PIV. (10.8.1.1) NFPA 24 Provide chain and/or break-away locks for the PIV and backflow prevention devices. ECCFPD Standard.
- Provide single check valve (swing or wafer) located in an approved location on the supply side of the PIV and FDC when private fire service mains serve fire hydrants. Provide an approved valve box.
- Pipe installed under the building or building foundation shall not contain mechanical joints. Provide continuous connection from outside the building to bottom of riser. Provide minimum of 2 inches annular clearance with sleeve around entire pipe penetration of foundation, floor, or pavement. NFPA 13 - 9.3.4, NFPA 24 – 10.4.3.1.1
- Prior to the sprinkler riser hookup to above ground piping, or acceptance of hydrant system, this Office shall witness a hydrostatic test of not less than 200 psi pressure for 2 hours and flush of the entire underground system. Required for the flush shall be burlap sacks or equivalent (with de-chlorination tablets) to strain the hose outlet(s). Adequate drainage shall be available to accept a minimum of five minutes flow per 100 feet of pipe at the required flush flow rate. It is the responsibility of the applicant to obtain all necessary approvals prior to release of water to the environment. NFPA 24 - 10.10.2.1
- Provide underground electrical conduit for the connection tamper switches to supervise all the valves controlling water supply to sprinkler systems and/or private hydrants. This includes both PIVs and back-flow prevention assemblies. NFPA 24 – 6.7, CFC 903.4
- Installing contractor shall complete and provide a copy of the Contractor's Material and Test Certificate for Private Fire Service Mains form to the Fire District at the conclusion of the hydrostatic test and flush inspection. NFPA 24 - 10.10.2

CONTACT THE FIRE DISTRICT (MINIMUM 2 WORKING DAYS IN ADVANCE) AT **925-240-2139** TO SCHEDULE THE FOLLOWING INSPECTIONS AND TESTS. CFC 507.4

- UNDERGROUND VISUAL (TO VERIFY PATH OF TRAVEL FROM POINT OF CONNECTION TO THE BUILDING, LOCATION OF PIV/FDC, TRENCH DEPTH, COVER, AND THRUST BLOCK DIMENSIONS. )
- UNDERGROUND HYDROSTATIC TEST (200 PSI FOR TWO HOURS) NFPA 24 – 10.10.2  
PRIOR TO THE WITNESSING OF THE HYDROSTATIC TEST, ALL THRUST BLOCKS SHALL BE POURED, CURED, AND VISIBLE. UNDERGROUND PIPING SHALL BE "CENTER LOADED" WITH JOINTS EXPOSED.
- UNDERGROUND FLUSH. REQUIRED MINIMUM FLOW RATE TO OBTAIN 10FT/SEC: NFPA 24 – 10.10.2  
4" DIAMETER PIPE 390 GPM = (2) 2-1/2" HOSE  
6" DIAMETER PIPE 880 GPM = (1) 4" HOSE  
8" DIAMETER PIPE 1,560 GPM = (1) 4" HOSE (HOSE LENGTH < 50 FEET)

***On the morning of the inspection, a confirmation telephone call made to the Fire District at 925-240-2139 is necessary between 8:00 and 8:30 AM. Otherwise, the inspection will be cancelled.***

**Approval does not relieve the designer / contractor from complying with all applicable fire code requirements, nor does it abrogate the requirements of other authorities having jurisdiction.**

- Approved as submitted.       Approved with Comments.       Denied, Resubmittal Required.

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_