



**PIONEER FIRE PROTECTION DISTRICT**  
**FIRE • RESCUE • EMS**



P.O. Box 128  
7061 Mt. Aukum Road  
Somerset, California 95684  
Phone (530) 620-4444 • Fax (530) 620-4317  
[www.pioneerfire.org](http://www.pioneerfire.org)

## **RESIDENTIAL & BUILDING SITE GUIDELINES (3/21)**

The Fire Chief is authorized to modify any of the provisions of this standard upon application in writing by the owner, a lessee, or a duly authorized representative where there are practical difficulties in the way of carrying out the provisions of this standard, provided that the spirit of the standard shall be complied with and public safety is secured. The particulars of such modification and the decision of the Fire Chief shall be entered upon the records of the Pioneer Fire Protection District and a signed copy shall be furnished to the applicant.

### **Address**

Address numbers. All new and existing buildings shall place and maintain approved numbers or address identification on the buildings so as to be plainly visible and legible from the street or road fronting the property. Approved numbers or address identification shall be placed prior to occupancy or all new buildings. Said numbers shall contrast with their background and shall be visible at all hours of the day and night by way of internal or external illumination. Numbers shall be a minimum of 4 inches high with a minimum stroke width of .5 inch. External source illumination shall have an intensity of not less than 5.0 foot-candles.

### **Residential signage One and Two Family Residential**

The address of a residence shall be posted and visible from the access roadway fronting the property. Whenever the numbers on the building will not be clearly visible from the access roadway, the numbers shall be placed at the access roadway and the driveway. Address numbers shall be clearly visible from both directions of travel on the roadway fronting the property. Said numbers shall be a minimum of 4 inches in height, with .5-inch stroke, reflectorized and contrast with their background (district preferred green/white), numbers shall be visible from at least 100 feet. All inhabited buildings shall have an address assigned by the El Dorado County Surveyor's office (Example: the **Main Home**= 4200 Sky Street, the **Granny Flat** on the same property= 4200 A Sky Street, **Hardship Home** on the same property= 4200 B Sky Street). The address numbers shall be reflectorized white no less than four inches in height on a reflectorized district approved green background and shall be clearly visible from the address roadway. The address numbers shall be of a size not less than four inches in height on a contrasting color background and shall be clearly visible from the address roadway.

The address numbers shall be permanently posted at each driveway entrance and shall be visible from both directions of travel along the road (contrasting color and a size that is visible from the roadway). The address numbers may be mounted on the home only if the distance from the road to the home does not exceed 100 feet and all the other requirements are met.



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Where multiple addresses are located on a single driveway, all addresses shall be posted following the requirements of #3. A separated address sign shall be posted at the intersection leading to either a granny flat or a hardship case home if the address on the home is not visible from the main driveway.

### **Apartment/Condominium Addressing System**

All requests for apartment and condominium complex addressing shall be submitted to the Pioneer Fire Protection District for plan review and approval. Single address shall be assigned to the entire complex. The complex address shall be posted on the main building or Clubhouse with the size and location to be the same as the commercial requirements. No names will be given to any of the roadways within the complex. Each building in the complex will be assigned a building number that is 16 inches high by 1 ½ inch stroke on a contrasting color background. The location of the building numbers shall match the commercial standard and shall be approved by the AHJ prior to installation. Each apartment/ condominium unit number is to start with the building number,

followed by the floor number, then the individual unit number. Odd-numbered units are to be located in the front and even-numbered units in the rear of the building. (Example 1: Std. #B-001 Addressing of Buildings Page 3 of 3 Rev. 03-30-09 Apartment 215 = Building 2, 1st floor, 5th apartment in building, front of building Example 2: Apartment 1028 = Building 10, 2nd floor, 8th apartment in building, rear of building). All individual apartment/ condominiums shall be numbered from left to right from the front access.

All units shall have 2 inch unit numbers on a contrasting color background installed on or right next to the door. The range of individual unit numbers shall be mounted on the building just below the building number (example: 211-238). The individual unit numbers shall measure no less than 6 inch by ¾ inch stroke in size on a contrasting color background. A monument address sign shall be installed at the main street address access. The monument sign shall be a minimum of 4 feet tall be 4 feet wide and visible from a vehicle when entering the complex. The monument shall show all the buildings, the associated roadways, you are here mark, and all building addresses. The sign shall be illuminated for night visibility. A drawing showing the monument address sign and location shall be approved by the AHJ prior to installation.

### **Commercial Buildings Addressing System**

Posting and continued maintenance of address identification shall be the responsibility of the owner, occupant or person in charge of any building to which a number has been assigned. All buildings shall display the address number on the side of the building that faces the address street. The posted address may be required on more than one side. The address numbers shall be a minimum of 16 inches tall with a 1 1/2 inch stroke that is visible on a contrasting background. The



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address shall be installed high enough on the building to be visible from the street. The address shall not be obstructed by maturing vegetation. Exact location shall be approved by the Pioneer Fire Protection District prior to installation. If the building is part of a complex of buildings, an illuminated monument address sign may be required to be installed at the street address access. This is in addition to the individual building installed addresses. This monument shall show the addresses that are located within the complex as well as the complex name. The monument sign shall be a minimum of 4 feet by 4 feet in size with address numbers that shall be a minimum of 6 inches tall with 1/2 inch stroke on a contrasting background. The addresses shall be visible from each direction of travel on the address street. Location and design shall be approved by the AHJ prior to installation.

All exterior suite doors shall be numbered from left to right, addressing all individual suites. The back doors shall match the corresponding front suite door. If the building does not have suites, the doors shall be numbered starting from the front door and continue clockwise around the building. The minimum size door numbers shall be 3 inches tall by 1/2 inch stroke on a contrasting color background. The numbering on the first floor shall start with 101 and number up from there (101,

102, 103...). The number 1 signifies the first floor and the last two numbers identify the door. The numbering on the second floor will start with 201 and number up from there (201, 202, 203...). This will be typical for each floor going up. Suite numbers shall be the same except for starting from the left and going right.

All doors not associated with a suite or entry door shall be labeled as to the use (example: Fire Riser Room, Fire Control Room, Electrical Room, Supply Room, Roof Access...) Minimum letter size shall be 3 inches tall by 3/8 inch stroke on a contrasting color background.

Exterior doors and their function shall not be eliminated without prior approval of the AHJ. Exterior doors that have been rendered nonfunctional and that retain a functional door exterior appearance shall have a sign affixed to the exterior side of the door with the words THIS DOOR BLOCKED. The sign shall consist of letters having a principal stroke of not less than 3/4 inch stroke and at least 6 inches high on a contrasting background.

### **Building under construction Addressing System**

Approved numbers or addresses shall be placed at each fire access road entry into and on each building within construction sites. Numbers shall be visible from at least 100 feet.

### **Driveways**

Driveways for access to one- and two-family dwellings shall conform to the following criteria as applicable:



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1. Driveways serving one parcel with no more than five structures shall be a minimum of twelve (12) feet in width. The Fire Chief may require up to twenty (20) foot wide driveway when more than five structures exist.
2. Roadways serving more than one parcel, but less than fire parcels, shall be a minimum twenty (20) feet in width. Roadways serving five parcels or more shall be no less than 24 feet in width.
3. Vertical clearance shall be a minimum of fifteen (15) feet.
4. When the driveway exceeds 150 feet in length, provide a turnout at the midpoint. For driveways not exceeding 400 feet in length, the turnout may be omitted if full sight distance is maintained. If the driveway exceeds 800 feet in length, a turnaround shall be provided not greater than 50 feet from the structure.
5. When a driveway exceeds 300 feet in length, a turnaround shall be provided no greater than 50 feet from structure.
6. The driveway must be provided with an all-weather surface capable of supporting a 75,000 lb. vehicle loading. When the road grade exceeds ten (10) percent, the road shall be surfaced with asphalt or concrete.

### **Roadway and Driveway Width**

Roadway width shall mean driving surface to face of curb or flow line or rolled gutter. All roadways and access roads shall be complete before any building construction. Roadways serving four or less parcels shall be no less than 20 feet in width. Roadways serving five parcels or more shall meet El Dorado County Standards but shall be no less than 24 feet in width. Driveways serving one parcel but no more than 5 structures shall be a minimum of 12 feet in width. Vertical clearance shall be 15 feet for the width of the road. For the purpose of this section, roadway width shall mean driving surface to face of curb or flow line of rolled gutter. Driveways exceeding 150 feet in length, but less than 800 feet in length, shall provide a turnout near the midpoint of the driveway. If driveway exceeds 800 feet, turnouts shall be no more than 400 feet apart. A turnaround shall be provided at all building sites on driveways over 300 feet in length and shall be within 50 feet of the building. All roadways and access roads shall be completed before any building construction.

### **Driveway Bridges**

Bridges designed for major ingress/egress roads serving subdivisions or used as part of a fire apparatus access road shall be constructed and designed to meet standard, AASHTO HB-17. Bridges shall be no narrower than the driving portion of the road serving each end. The bridge or culvert crossing shall be designed for a live load of a minimum of 75,000 pounds gross vehicle weight. Vehicle load limits shall be posted at both entrances to bridges and culvert crossings.



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### **Driveway Grades**

In order to accommodate driveway grades in excess of sixteen (16) percent, the driveway shall be designed to have a finished surface of grooved concrete or rough asphalt to hold a 45,000 lb. traction load. The concrete grooves shall be ¼ inch wide by ¼ inch deep and ¾ inch on center. The road design shall be certified by a registered engineer and approved by the Fire Chief/Fire Marshal. Emergency Fire access roads and response routes 12% or more shall be approved by the Fire Chief or Fire Marshal.

### **Driveway Radius**

The inside turning radius for an access road shall be 30 feet or greater. The outside turning radius for an access road shall be 50 feet or greater.

### **Driveway Surface**

Driveway surfaces shall be paved or similar all weather hard packed approved surface, capable of supporting a 75,000 lb load.

### **Driveway Turnarounds**

Turnarounds are required on driveways and dead-end roads as specified. Cul-de-sacs radius shall be 42 feet of driving surface, measured from face of curb or flow line of rolled curb. If a hammerhead/T is used, the top of the (T) shall be a minimum of 80 feet in length.

### **Dry and Dead Vegetation Abatement**

Open areas around residential homes shall be maintained in a fire safe condition. The homeowner shall be responsible to remove dead and dry vegetation at least 100 feet or to the lot line from all non-fire resistive structures as per CFC, Sections 304.1.1; 304.1.2 and California Public Resource Code 4291. This includes all homes and outbuildings

### **Gates/Access Control Devices**

#### **A. Installation Requirement**

Entrance roads (at the gate) shall have a minimum unobstructed width of fifteen (15) feet each lane if divided, or twenty (20) feet total width if not divided. An unobstructed vertical clearance shall not be less than fifteen (15) feet. Gates over a driveway shall have a minimum unobstructed width of fourteen (14) feet. The gate shall be a minimum of two (2) feet wider than the road/driveway surface. An unobstructed vertical clearance shall not be less than fifteen (15) feet.



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Gates shall be inset off the roadway as to avoid stacking and to provide an area of refuge while the gate is operated and opened. This inset shall be a minimum of thirty (30) feet from the adjacent roadway or driveway edge. The key pad shall be placed within ten (10) feet of the gate. If the key pad is placed more than ten (10) feet from the gate, then the gate inset shall be increased respectively to accommodate the additional footage.

All automatic gates shall be equipped with a “Knox” emergency access override system that consists of a low security key activated switch located in accordance with Fire District requirements. All automatic gates shall also be equipped with both 3M Opticom Control device. The device shall be placed in a location allowing operation from 75 feet away. Exception: Single family R-3 Linear receiver device (approved by the Fire District) to allow remote activation by emergency vehicles: Shall be programmed to operate with the Fire Districts current transmitters. Contact local AHJ for transmitter frequencies. Exception: Single family R-3 Automatic gates shall be equipped with a mechanical release. Automatic gate loop systems located on the inside portion of the access roadway shall permit vehicular traffic to open the gate from the inside by driving over the loop. This process shall not take any special knowledge, actions or codes to open the gate to exit the area. The loop system shall also keep the gate open as long as vehicular traffic is passing through it. All automatic gates shall be designed to automatically open and remain in a fully opened position during power failures.

All gates creating a dead-end road in excess of one hundred fifty (150) feet in length shall be provided with approved provisions for the turning around of fire apparatus. The gradient for the fire apparatus access road shall not exceed the maximum approved by the Fire Department. The intent is to provide a level landing area on either side of the gate to allow emergency apparatus to be parked in a safe manner when it is necessary to exit the vehicle for manual gate activation. All automatic gates must reach the fully open position within a total time not to exceed one second for each foot total width. The receiving devices shall be installed so the signal from the transmitter will open the gate approximately 75 feet from the gate location. Exception: Single family R-3 Prohibited Devices: All required vehicle access openings shall provide both ingress and egress. Direction limiting devices, such as fixed tire spikes, are prohibited. No device may be used which will delay the ingress or egress of emergency responders. The total number of vehicle access control gates or systems, through which emergency equipment must pass to reach any address, shall not exceed one.

### **Manual Gates**

Manual gates shall have a KNOX padlock installed for emergency access.

### **Gated Entrances – Residential Lot**

Gate entrance on driveway to individual lots shall provide a clear open width at least two feet wider than the width of the driveway (normally a minimum width of 14 feet). Property owner





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should contact the Fire Prevention Division to determine the best option of providing Fire District access. The owner shall provide a code or key to access through the gate (key box) Electronically opened access gates shall be provided with a Model #3502 electronic override switch manufactured by the KNOX Company. Said switch shall interface with the key pad at the entry gate to provide fire apparatus access to the site. An acceptance test of the Knox access system shall be witnessed by the fire district prior to final approval of the project.

### Gate Plans

Plans for the installation of automatic gates on fire apparatus access roadways shall be submitted to the Pioneer Fire Protection District for approval **prior** to installation. The number and type of plans (*paper or digital*) shall be submitted per the direction of the Pioneer Fire Protection District (one full set).

### Gates Testing and Acceptance

Gates and access control equipment shall be inspected and tested by the Pioneer Fire Protection District **prior** to being placed into service

### Residential Sprinkler Systems

**All proposed one- and two-family homes (includes manufactured homes) will require a residential sprinkler fire system and Fire Chief/Fire Marshal site plan review.** This standard is pursuant to the 2019 California Residential Fire Code, Section R313 and 2019 California Fire Code. The design and installation shall meet both the latest edition of NFPA Standard 13-D with Pioneer Fire Protection District Amendments. Rooms with ceiling heights over 24 feet or more than 600 square feet may require a 3 or 4 head calculation based on the number of heads that may activate during a fire (NFPA 13D, 2019 Edition, Section 10.2.4 and A10.2.4) One pilot head will be required in all attic areas, usually installed near the HVAC if installed in the attic space.

### Fire Protection System Alarms

Residential sprinkler systems water flow alarm shall be integrated with smoke alarms. An approved audible and visual (horn/strobe) sprinkler flow alarm device shall be provided on the exterior of the building in an approved location. Pilot head/heads are required in attic spaces, preferably near HVAC units located in the attic. Rooms with ceiling heights over 24 feet or more than 600 square feet may require a 3 or 4 head calculation based on the number of heads that may activate during a fire (NFPA 13D, 2013 Edition, Section 10.2.4 and A10.2.4)

### Garage sprinklers.

Sprinkler heads in garages shall be spaced at no more than 150 sq.ft. per sprinkler and shall be intermediate temperature rated.



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### **Detached Garages.**

Automatic sprinkler protection shall be provided in detached garages under the following circumstances:

1. An exterior wall of the garage is closer than six (6) feet from an exterior wall of an adjacent sprinkler Group R occupancy
2. A roof projection of the garage is closer than four (4) feet from a roof project of an adjacent sprinklered Group R occupancy.

### **Grizzly Flats, Outingdale, Candlelight Village and Crystal Caves Mobile Home Park Water District:**

Automatic sprinkler systems installed within Grizzly Flats, Outingdale, Candlelight Village and Crystal Caves Mobile Home Park jurisdiction, after January 1, 2019, in one- and two-family dwellings (manufacture homes included); Group R-3 ad townhomes shall be designed using an approved Modified Passive Purge System design.

Exception: When an automatic fire sprinkler system is installed with an approved backflow assembly valve to protect the public water supply source.

### **Alarms in Group R3 Occupancies.**

Automatic sprinkler systems in R-3 occupancies shall be equipped with a water flow switch, an exterior horn-strobe located on the address side of the structure, and interconnection to the smoke detector alarm circuit.

### **Standpipe**

Proposed homes that do not meet California Fire Code, Section 503.1.1 standard may be required to install an underground Standpipe. Underground installation shall meet the latest edition of NFPA 24 standards.

### **Water Supply**

On site water supply for firefighting shall be as follows for one- and two-family dwellings: For new subdivisions when more than four parcels are created the minimum fire flow, through approved fire hydrants, shall be 1,000 gallons per minute at 20 pounds residual pressure for 60 minutes for dwellings 3,600 square feet or smaller. Fire-flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5 sq. m.) shall not be less than that specified in UFC Table B105.1 (2).





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All proposed water supplies shall come from reliable sources such as fixed underground water distribution systems or static water system equaling or exceeding the National Fire Protection Association (NFPA) Standard 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting. On site water is required per El Dorado County and Pioneer Fire Protection District adopted ordinance.

EXCEPTION: A reduction in fire flow of 50 percent, as approved by the Fire Chief/Fire Marshal, is allowed when the building is provided with an approved automatic sprinkler system.

Final Plans Accepted

The final plans shall be approved only when stamped and/or signed by Pioneer Fire Protection District Fire Chief/Marshal.

**Rural Residential construction (home, buildings or remodel) where no hydrant system; Requiring Fire Water storage Tanks or Draft Site.**

Tank Installation Requirement Plans

Plans shall be submitted and approved by the Pioneer Fire Protection District prior to installation (providing either paper plan set(s) or digital plans). Scaled plans shall include the plan view and elevation view of access roads and driveways, structures, tank size, tank location, hydrant location, and all associated piping. Submitted plans shall include the manufacturer's specification sheets for the tank and all system components.

Tank Installation time line

The required water supply system shall be operational prior to occupancy of the new construction. New construction in PFPD must have an approved rural water supply tank in place meeting the proper water flow and storage (reference is the PFPD adopted G-001). PFPD will not approve construction permits until an approved water supply tank or hydrant is on site (CFC/IFC 507.1/102.9)

Tank Construction

Tanks shall be manufactured with materials designed specifically for residential potable water storage requirements. Tanks shall be installed following the tank manufacturer's requirements for foundation, venting, flexible piping attachments, corrosion protection and other manufacturer required features.

Above ground plastic tanks shall be constructed with UV light protection. Tanks are required to be connected to a water supply that will keep the required water levels maintained. (Auto fill)



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Tank Location

Water storage tanks shall be located a minimum of 30 feet from the closest structure to be protected and a minimum of 10 feet from the property line, roads or driveways. Where this requirement is impractical a fire barrier may be required by the fire official. Combustible vegetation shall be maintained clear for 30 feet around the tank or to the property line. Footings, foundation(s) or other supports shall be constructed per the tank manufacturer’s specifications. Soil grading adjacent to the tank shall be performed to prevent water run-off from eroding the foundation, footings or support. Elevation of the tank floor shall be the same level or higher than the outlet of the hydrant. Exception: Elevation of the tank floor may be no more than 5 feet below the fire hydrant outlet where the plan view distance from the hydrant to the tank outlet is no more than 20 feet. Where topography allows, the water tank should be located at an elevation that is as high above the hydrant outlet as reasonably possible... Where topography does not allow

compliance with above, the Pioneer Fire Protection Chief/Fire Marshal may consider a system design with a brass or bronze check valve installed at the tank end of the piping in an above ground horizontal pipe section downstream from the tank shut-off valve. Water storage tanks may be located within a structure. Combustible vegetation clearance and distance to property line requirements for structures detailed in CRC, Title 19, Section 4291, must still be met

TANK SIZE

Tank systems covered by this standard shall provide, at a minimum, the capacity of Hose Stream Allowance indicated on the Table below based on the size of the structure to be protected. Additional water capacity may be added to the tank system to provide either residential fire sprinkler system water supply and/or domestic water supply. These water supply needs may be provided by systems separate from the hose allowance system. Systems that provide water for a combination of hose allowance and either automatic fire sprinklers or domestic use shall be designed with either piping or controls that assure that hose stream allowance water is always reserved for fire department use. See (Figure 1) for graphics showing some possible approved design methods. If additional water storage capacity is needed in the tank for automatic fire sprinkler system design, the tank size shall be increased 500 gallons minimum, or the amount specified by the Licensed California C-16 Contractor who designs and builds the sprinkler system per the NFPA 13D standard. If additional water storage capacity is required by the building owner for domestic use, the tank size shall be increased 500 gallons minimum.

Table 8.5.1 Hose Stream Allowance - Minimum Tank Size Determination

Building Size in Square Feet	Minimum Tank Size
3,500 or Less	3,000
3501 - 5,000	4,000



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5001 - 6,500  
6,501 or Greater

6,000  
Provide Engineering Calculations  
when required by Fire Chief/Marshal

NOTE: This Table is Hose Stream tank sizing only. If AFS or Domestic water are stored in the same tank the tank size must be increased accordingly.

### Tank Venting

Rapid use of water during firefighting operations requires sufficient tank venting to prevent tank collapse or fire water delivery impairment. Tanks shall be provided with a vent above the maximum water level. Tank vents shall have a cross sectional area greater than or equal to one half the area of the hydrant supply pipe or the tank fill pipe, whichever is larger. Tank vents shall be provided with a screened inlet configured to prevent the impairment of the vent or tank intrusion by birds, mammals, insects or debris. Tank vents shall be installed above the potential snow level for the site elevation. Approval required by the Fire Chief/Marshal.

### Tank Piping

Tank piping attachments for fill, venting, supply, overflow, or drain shall meet the requirements of the tank manufacturer. All supply piping shall be designed and installed to provide 250 gallons per minute of flow rate minimum to a fire department apparatus pumping at draft at the hydrant location. Above ground piping shall be Schedule 40 galvanized steel pipe minimum. Tank fill piping shall be ¾ inch minimum. Hydrant supply piping attachment point on the tank shall be 2½ inch minimum. Hydrant supply piping shall be 2½ inch minimum for all above ground piping and shall continue as galvanized pipe to the underground piping with a minimum of a 2-foot horizontal galvanized section at the tank end and the hydrant end of the underground piping. See (Figure 2) Underground piping installations using no more than 20 feet of underground piping on the horizontal run may be constructed of 2½ inch pipe. Where underground piping is longer than 20 feet and no greater than 100 feet, the underground piping shall be 4 inch. Underground piping up to 4 inch may be constructed with schedule 40 minimum PVC pipe. See (Figure 2) Underground piping greater than 100 feet in length shall be designed by an engineer. Underground galvanized steel piping shall be coated and wrapped. All underground piping shall be placed on 6 inches of sand or other fill material approved for underground utilities and covered 6 inches minimum with the same material prior to backfill. See (Figure 2) Underground piping shall be buried 24 inches below finished grade unless it is routed under roads or driveways in which case it shall be buried 36 inches minimum below finished grade. . Underground non-metallic piping shall have a tracer wire buried with the pipe. Hydrant supply piping may be approved to remain above ground between the tank and the hydrant when approved by the fire code official.



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### Hydrants

Hydrant location shall be located no closer than 50 feet from protected structures. Hydrant location shall be no more than 250 feet from protected structures as measured along the route of a road or driveway. The center height of the hydrant outlet shall be 18 to 24 inches above the finished grade. See (Figure 2) The center height of the hydrant outlet shall be no greater than 5 feet above the bottom elevation of the water supply tank. See (Figure 2). The hydrant outlet shall be 2½ inch minimum. The hydrant outlet shall be 2½ inch NST male hose thread (also known as NH and NS). The male hose threaded outlet shall be provided with a lugged protective cap. The hydrant may be a single assembly or may be a 2½ inch gate or ball valve with an appropriate 2½ inch hose thread adapter on the outlet. The hydrant shall be visible and accessible. The hydrant shall be located adjacent to a fire apparatus turnout from the driveway or the road that intersect with that driveway as approved by the fire department per the current El Dorado County driveway standard and Title 14 requirements for driveways, roads, and clearances.

The hydrant shall be located no closer than (4) four feet nor farther than (12) twelve feet from a roadway and in a location where fire apparatus using it, will not block the roadway. The hydrant shall be painted per the local fire department requirements. A permanent sign shall be attached to the hydrant stating "NO PARKING - Drafting Fire Hydrant - \_\_\_\_\_ Gallons". Permanent lettering characters shall be 3-inch minimum and shall be red in color on a white background. In addition, 4-inch or larger if the sign is located on the Water Tank (Hydrant must be within 3-feet of tank). The hydrant shall have (8) eight feet of clearance from weeds and flammable vegetation. An approved PFPD reflectorized blue marker, with a minimum dimension of 3" inches, shall be located on the driveway address sign and within 3' feet of the draft hydrant on a post or sign. In addition, an approved PFPD Fire Water Supply sign will be posted at the entrance leading to the fire water supply (main roadway to drive). Dry hydrants shall be installed on projects where there is a potential snow level for the site elevation. Approval required by the Fire Chief/Marshall.

### Water Supply Tank Sign

PFPD Fire Water Supply Tank Sign requirements: Sign must be aluminum 12" wide by 9" high minimum, with navy blue backing and centered; 2" inch Arial Black Letter "PFPD" on top of sign, 4" inch Arial White Letters "FWST" and 2" inch Arial Black Letters of the tank size in gallons (exp. 3000 GAL) Refer to Attachment A. The sign must be mounted on a permanent wood or metal post no lower than 42" inches or higher than 60" inches displayed forward to be seen from main entrance

### Freeze Protection

All aboveground water piping shall be designed and installed to protect against freezing. The water tank shall be protected against freezing when required by the Fire Chief/Marshall.



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Water Level Assurance

An approved method shall be used to provide automatic water storage fill to the minimum level of fire department hose allowance. The system shall be designed such that when the source water supply to the water storage system is impaired, the hose stream allowance will be reserved for firefighting only. The methods used to provide this assurance may include tank plumbing design/configuration and/or approved electric control systems. See (Figure 1) A sight gauge may be required as part of the water level assurance design.

Inspection/Testing

All underground piping shall be inspected by the fire district prior to covering with fill. Piping shall be pressurized for the inspection with water or air at 20 psig or the maximum expected system pressure, whichever is greater. There shall be no evidence of leaks. Systems designed with a check valve per may require a draft primer pump performance test to verify that the check valve will hold water up to the hydrant for 30 minutes' minimum. A final inspection including functional test of liquid level controls shall be performed by the fire district prior to building occupancy of new construction

Water Storage Tank Inspection, Testing & Maintenance

Owners of residential water systems, installed per the requirements of this standard, shall perform necessary ongoing maintenance and repairs to the system to assure the proper performance of the system as it was designed and installed. All inspections, testing, maintenance, and record keeping

shall comply with all requirements per Title 19, Division 1, Chapter 5. See Table 9.1 for ITM Schedule. Impairments to the fire protection water supply system shall be reported immediately to the fire department. Vegetation and combustible debris (i.e. leaves, pine needles, branches, etc.) shall be kept at a minimum 30' foot clearance from the fire water tank to prevent flames impinging on the tank structure.

**Residential Home Final Acceptance**

Final acceptance of the project is subject to inspection and testing from the Pioneer Fire Protection District. 72-hour notice required previous to inspection and testing.

Attached Details Not Drawn to Scale:



**PIONEER FIRE PROTECTION DISTRICT**  
**FIRE • RESCUE • EMS**



P.O. Box 128  
7061 Mt. Aukum Road  
Somerset, California 95684  
Phone (530) 620-4444 • Fax (530) 620-4317  
[www.pioneerfire.org](http://www.pioneerfire.org)

**Attachment A**

**PIONEER FIRE PROTECTION DISTRICT**  
**"FIRE WATER SUPPLY TANK" FWST**

12"



9"





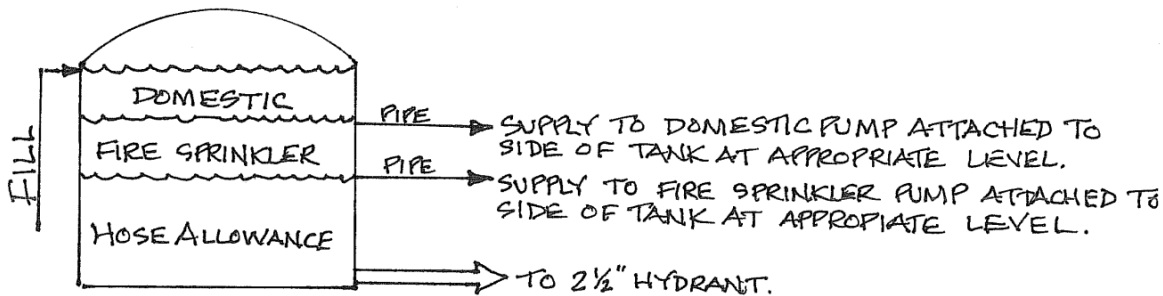
**PIONEER FIRE PROTECTION DISTRICT**  
**FIRE • RESCUE • EMS**

P.O. Box 128  
 7061 Mt. Aukum Road  
 Somerset, California 95684  
 Phone (530) 620-4444 • Fax (530) 620-4317  
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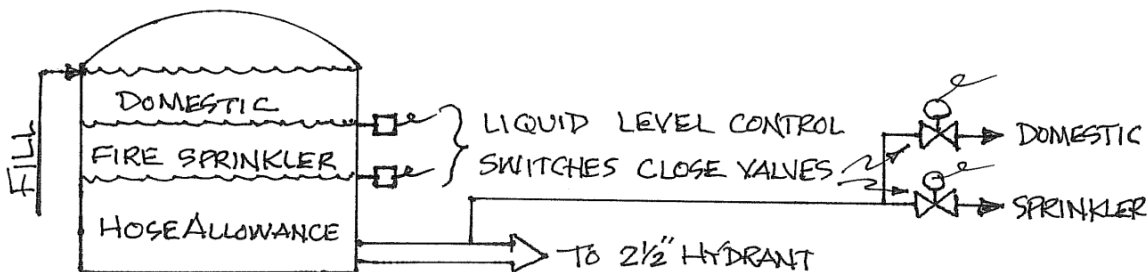


**FIGURE 1**

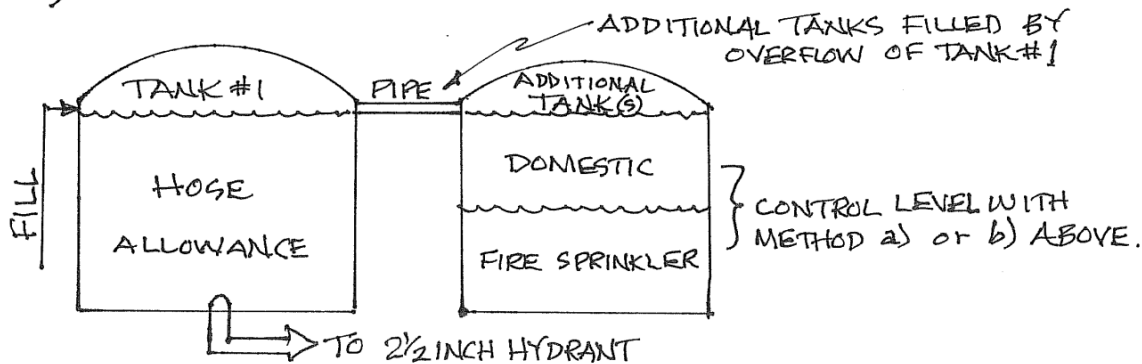
a) SINGLE TANK - MECHANICAL LEVEL ASSURANCE



b) SINGLE TANK - ELECTRICAL LEVEL ASSURANCE



c) MULTIPLE TANKS





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**FIGURE 2**

