



FIRE DEPARTMENT / PREVENTION

Fire Station 2 -170 N. Wilbur Ave.
Walla Walla, WA 99362-2548
Telephone (509) 524-4603
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April 2, 2021

RE: Fire Sprinkler Plans and Specifications

Dear Owner and/or Contractor:

The Walla Walla Fire Department would like to make you aware of the requirements for all new installations, and existing system upgrades and modifications of required and non-required life safety systems.

DESIGN

RCW 18.160 and WAC 212-80 require companies offering to contract for the design, installation, testing, and/or maintenance of fire sprinkler systems in Washington State must be licensed by Washington State. www.wsp.wa.gov/fire/licensing.htm . NICET level III or greater.

IFC Requires automatic sprinkler systems shall be designed and installed according to 2018 **IFC Chapter 9 Section 903.2.1 through 903.2.12 including Washington State Amendments, Referenced 2016 NFPA 13, 13R, 13D standards, and the Walla Walla Municipal Code.**

IFC 903.3.1.1 NFPA 13 sprinkler systems

Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1. As per WWMC, all bathrooms shall have sprinklers regardless of square footage.

IFC 903.3.1.2 NFPA 13R sprinkler systems

Automatic sprinkler systems in Group R occupancies up to and including four stories in height in buildings not exceeding 60 feet above grade plane shall be permitted to be installed throughout in accordance with NFPA 13R. As per WWMC, all bathrooms shall have sprinklers regardless of square footage.

IFC 903.3.1.2.1 Balconies and decks

Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units where the building is of Type V construction, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

IFC 903.3.1.2.2 Open-ended corridors

Sprinkler protection shall be provided in open-ended corridors and associated exterior stairways and ramps as specified in Section 1027.6, Exception 3.

IFC 903.3.1.3 NFPA 13D sprinkler systems

Automatic sprinkler systems installed in one and two-family dwellings, Group R-3 and R-4 congregate living facilities and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.

IFC 903.3.2 Quick-response and residential sprinklers

Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

1. Throughout all spaces within a smoke compartment containing care recipient sleeping units in Group I-2 in accordance with the International Building Code.
2. Throughout all spaces within a smoke compartment containing treatment rooms in ambulatory care facilities.
3. Dwelling units and sleeping units in Group I-1 and R occupancies.
4. Light-hazard occupancies as defined in NFPA 13.

IFC 903.3.5 Water supplies

Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the International Plumbing Code.

IFC 903.3.5.1.2 Residential combination services

A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

IFC 903.4 Sprinkler system supervision and alarms

All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and water-flow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit. WWFD required all such valves to be located no more than 6' above the floor.

IFC 903.4.1 Monitoring

Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.

IFC Section 903.4.2 Alarms

Requires approved audible sprinkler flow alarms be provided in approved locations. WWFD requirements:

1. An approved Horn/Strobe located on the exterior of the building in an approved location, shall be connected to each automatic sprinkler system. The horn strobe is in lieu of the outside water gong.
2. A supervised switch is required to be installed to deactivate water flow alarms for dry-sprinkler systems. This switch will be used by WWFD personnel once water flow has been controlled to silence the device until the dry system is restored.

IFC 912.1 FDC Installations

Remote Fire department connections shall be installed in accordance with the NFPA standard applicable to the system design and shall comply with Sections 912.2 through 912.7.

IFC 912.2 Locations

With respect to hydrants, driveways, buildings, and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire chief. WWFD requires FDC and PIV to be located at the front of the building.

IFC 912.2.1 Visible Location

Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the fire chief.

IFC 912.4 Access

Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other fixed or moveable object. Access to fire department connections shall be approved by the fire chief.

IFC 912.4.1 Locking fire department connection plugs.

The fire code official is authorized to require locking plugs on fire department connections for water-based fire protection systems where the responding fire department carries appropriate key wrenches for removal. WWFD requires **Knox-FDC Plugs** to be installed on all FDCs. Plugs can be purchased online at www.knoxbox.com or Call **1-800-552-5669**.

IFC 912.4.2 Clear space around connections.

A working space of not less than 36 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided and maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections, except as otherwise required or approved by the fire chief.

IFC 912.4.3 Physical protection.

Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided as approved by the WWFD. 8 inch curb or bollards.

IFC 912.5 Signs.

A metal sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

NFPA 8.15.22 The WWFD requires floors in buildings over two stories and/or floors over 5000 ft² to be equipped with floor/zone supervised control valves and flow switches.

All reviewed plans are subject to field inspection for final acceptance.

Per City of Walla Walla:

1. WWMC 13.04.190 The City requires approved backflow prevention devices and detector check, or full-sized service meter be installed on standby fire protection service connections.
2. All Premises Isolation shall comply with WWMC 13.05 Water System Cross Connection Control. Refer to City of Walla Walla Standard Plans 5-2, 5-3, 5-6, 5-8, 5-9 and 5-10.
3. Fire services greater than 3" shall be installed as ductile iron pipe per city standards from the main to the backflow device.
4. **Please note that the typical underground installation from the main to the first working valve at or near the property line will be installed by the City of Walla Walla Water Division at cost. Contact Scott Holbrook or Adrian Sutor @ 509 527-4380 for additional arrangements.**

SUBMITTAL REQUIREMENTS

IFC 105.4.4 Approved documents. Construction documents approved by the fire code official are approved with the intent that such construction documents comply in all respects with the code. Review and approval by the fire code official shall not relieve the applicant of the responsibility of compliance with the code.

Fire Protection Permit. Per City Ordinance No. 2003-43 Subsection 15.04.010(H) a permit is required for the installation, alteration or repair of fire protection and/or fire detection equipment. All applications and fees will be processed through the Walla Walla Development Services office. The Walla Walla Fire Department will issue a permit once submittal requirements are met and the review process is completed. Deviation from the approved plans will require notification.

Preliminary and working plans for fire sprinkler systems shall include all items listed in **NFPA 13**.

Separate permit for fire service mains (underground); if a WA state licensed level U contractor wishes to install underground separate from the design work of a WA state licensed level III contractor, full submittals including site plan, equipment cut sheets, and hydro calcs from a WA state licensed engineer must be submitted.

The entire fire underground (City water main to base of riser) & remote FDC must be done under **ONE** state licensed contractor.

Right of Way Permit. Any operation in the City of Walla Walla right of way will require a right of way permit. Applying for a permit requires a pedestrian safety plan and traffic control plan to be submitted to Walla Walla Development Services for review.

No Fire protection Permit will be issued for underground until right of way permit is acquired.

One copy of shop drawings & component spec must be submitted electronically in PDF format. *Electronic formatted submittals may be delivered on CD or E-mailed to permits@wallawallawa.gov .*

Payment can be in person cash, check, or VISA, or Check by mail or VISA or over the phone.

Application, Plans and Fees must be received at:

Walla Walla Development Services
55 E Moore Street
Walla Walla, WA 99362
(509) 524-4710
permits@wallawallawa.gov

- Subject line on the Email should indicate property address and that it is a “Fire Sprinkler Application” i.e.: 170 N Wilbur / Fire Sprinkler Application
- Application will not be processed until Review Payment is received.
- Once review is complete Permit Fee will be due.

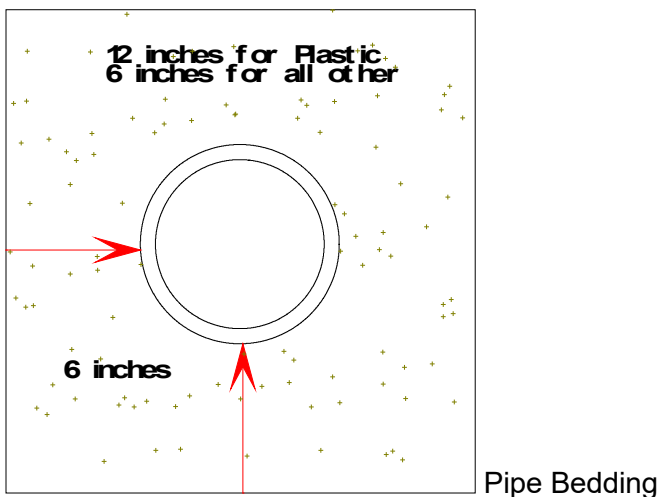
INSTALLATION

IFC 105.4.6 Retention of construction documents. One signed set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

IFC Section 901.7 Systems out of service. Requires when a building is protected by fire-protection systems such systems shall be maintained operational at all times during alteration. When alteration requires modification of a portion of a fire protection system, the remainder of the system shall be kept in service. When it is necessary to shut down the entire system, a fire watch shall be kept on site until the system is returned to service. WWFD's shift captain (527-4429) must be notified prior to system shut down and after the system is restored.

NFPA 13 requires water pipes to be buried not less than 1 ft below the frost line. The frost line is 24 inches, which will require all wet pipes to be buried a minimum of 3' underground.

NFPA 13 requires backfill to be tamped or puddle under and around the pipe to prevent settlement or lateral movement. Pipe bedding shall not contain any solid material greater than 1 inch in diameter.



Per Washington State WAC 18-160: a state licensed sprinkler installer shall install all components of a sprinkler system, **beginning at the first valve off of the city water supply main.**

Per City of Walla Walla Water Division:

1. Thrust blocks shall not be used on city mains or within city right-of-way. Restrained joints shall be used a minimum of three full pipe lengths (63') from fittings.
2. The contractor shall provide written notification to the Water Division five working days in advance of a requested shutdown or seven working days in advance where non-residential services may be affected. A working day shall begin at 8am. A minimum of 24 hours in advance of the shutdown (72 hours for restaurant, hotels, etc) the contractor shall distribute preprinted notices (supplied by the Water Division) to the affected water users. The Water Division will determine the required shutdown area and shall turn all main distribution valves. Service valves shall be turned by the contractor.

ACCEPTANCE TESTING

Acceptance tests **SHALL** be scheduled at least 24 hours in advance.
Inspection request line: 509-524-4422 or inspect@wallawallawa.gov

IFC Section 901.5 Installation acceptance testing. Requires fire hydrant systems, fire-extinguishing systems, standpipes, and other fire-protection systems and appurtenances thereto shall meet the approval of the Fire Department as to installation and location and shall be subject to such acceptance tests as required by the fire code official. The fire code official shall be notified before any required acceptance testing.

All welded pipe shall be inspected by WWFD prior to installation. The best time is during off loading operations at the construction site.

New construction:

WWFD acceptance testing will be conducted after the installer has successfully completed the same test. (Underground flush, **Two hour 200psi** pressure tests for underground and above ground piping.)

Modified Systems:

WWFD acceptance testing will be conducted after the installer has successfully completed the same test. (Underground flush, **One hour 150psi** pressure tests for underground and above ground piping.)

1. During acceptance pressure testing, ALL pipe connections shall be clearly visible from the floor and all sprinkler heads must be installed and located in their permanent positions.
2. During underground hydro testing, all joints must be completely uncovered.
3. All pressure tests shall start on a line represented on the gauge used. (Examples 200, 205, 210).
4. A successful pressure test requires no pressure loss and **NO WATER SHOWING**.

Per City of Walla Walla Engineering Division:

All system components installed on city right of way must be inspected by a City of Walla Walla Engineer prior to back filling. Inspections are to be scheduled by 3:30 pm the day prior through the Development Services Inspection line, (509) 524-4729 or at inspections@wallawallawa.gov Please include the address and right of way permit number with the request.

Per City of Walla Walla Water Division:

Upon installation, the installer must request a final inspection of the backflow assembly by the Water Division. Immediately following a successful inspection, the customer shall have backflow assembly tested by a Washington State Department of Health certified backflow assembly tester registered with the City of Walla Walla to test backflow assemblies (a list of registered testers is available from the Water Division). Only upon completion of a successful inspection and test report of the assembly, will the Water Division approve the assembly for use.

The above is an attempt to identify requirements which you may or may not be aware of. Any code references left out of this letter do not negate the requirements of the code.

Please call the Prevention Office at the numbers listed below if you have any questions.

Respectfully,

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509-524-4603

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