



Manitowoc Fire Rescue Department Addendum to Community Development Site Plan Review

The Fire Rescue Department will provide fire prevention inspections of the facility at least once a year. We expect all life safety and fire safety features to be designed and installed in accordance with all current federal, state, and local codes. This addendum is intended to cover the items we are regularly asked about and is **not** an all-inclusive list of code requirements.

Distribution of Comments

The person responsible for obtaining the building permit shall distribute this report (copies of these comments) to all contractors and sub-contractors affected by this document. This document outlines critical design and testing elements of the project. All recipients of this document need to become familiar with the contents.

Compliance

A letter shall be submitted to the Fire Rescue Department prior to the start of construction stating that the project will comply with all requirements addressed within this document and all other applicable federal, state, and local codes.

Conflicts

In the event there is a conflict between the codes, or a conflict with the insurance carrier criteria, the more stringent requirement shall apply. In the event this conflicts with any codes adopted by the State of Wisconsin, the owner must petition the State directly for a variance. The Owner must demonstrate that they will provide materials or design equivalent to the code or that they will exceed the code when petitioning the State for a variance.

Fire Suppression Systems

- a. Fire Sprinkler Systems. All systems must be designed and installed according to NFPA 13 and all other applicable state codes.
- b. The location of the fire department connection (FDC) **MUST** be approved by the fire rescue department pursuant to NFPA 13.8.17.2.4.6. The type of FDC shall be a 5” storz connection with a 30 degree elbow. A pumper pad (remote FDC) may be required. Landscaping cannot block the view of the FDC. It must be easily spotted by incoming fire personnel.
- c. If flexible sprinklers are being used, they must be inspected by the fire rescue department before they are covered by the ceiling tiles. Hard piped heads must be inspected before the ceiling is closed up.
- d. The fire rescue department **MUST** witness the 2 hour hydro test and the full back flow test.
- e. Installation of thrust block **MUST** be witnessed by the Fire Rescue Department.
- f. A horn and strobe shall be located on the outside of the building where it can alert those passing by. Location to be approved by the Fire Rescue Department.

Fire Alarms

- All systems must be designed and installed according to NFPA 72 and all other applicable State Codes. The system shall be fully addressable so that detailed information can be received about the device in alarm. Utilizing a pull station, fire sprinkler water flow, or any other fire protection device that may be installed within these buildings shall activate the internal fire alarm system.
- Depending on the location of main alarm panel, remote panel(s) may be required by the Fire Department.
- Testing of the horns and strobes **MUST** be witnessed by the Fire Rescue Department.
- Acceptance testing of the alarm system **MUST** be done by the Fire Rescue Department. The test will be done by activating a smoke detector or pull station and by activating the sprinkler system if the building has one. The test consists of

activating the alarm, sending a signal to central station, our Dispatch Center being called and the Dispatch Center notifying the Fire Rescue Department. This test cannot take more than three minutes. Tests will continue until the three minute time limit is achieved. Once the systems have passed, they **MUST** be fully operational. Until the sprinkler and alarm system are fully operational, no furnishings will be allowed in the facility without prior permission from the Fire Rescue Department

- Manual alarm pull stations shall be located at a minimum immediately adjacent to each exterior door. Any additional exterior doors will be required to meet this requirement. The pull station shall not be placed in the area of the door, but immediately adjacent to the door jamb.
- Pull stations and audiovisual alarms shall be installed per ADA requirements.
- Smoke and heat detection shall be installed where required.
- Tamper switches shall be placed on all sprinkler valves and be identified on the annunciator panel.
- The fire alarm control panel shall be addressable. The panel shall identify a fire sprinkler water flow by riser, the specific locations of the fire alarm pull stations, and any other fire detection devices that may be installed in this facility.
- The fire alarm control panel shall transmit all fire alarms, tamper, trouble and supervisory signals to a central station that is certified by Underwriters Laboratory (UL) and/or Factory Mutual (FM) and approved by the Fire Rescue Department.

Knox Box

At least one Knox Box is required for the facility. If more are needed you will be notified by the Fire Department. The location of the Knox Box **must** be approved by the Fire Rescue Department. The model and type will be approved by the Fire Rescue Department before ordering. Order forms are available at the Fire Rescue Department. A determination of the exact number required will need to be made. Two labeled sets of all keys (master, fire alarm pull station, annunciator, elevator etc.) shall be placed within the box.

Fire Extinguishers

The requirements of NFPA 10 regarding portable fire extinguishers shall be met. Final approval of the location and quantity will not be given until occupancy is taken. The number of portable fire extinguishers is dependent on how the tenant furnishes the space.

Emergency and Exit Lighting

Exit and emergency lighting shall be provided and shall have battery backup. Combination units are acceptable and recommended. An emergency generator eliminates the need for battery backup. Exit and emergency lighting shall not be placed on electrical circuits that cannot be disturbed or interrupted; this is for testing purposes. This type of lighting needs to be tested 90 seconds on a monthly basis and 90 minutes on an annual basis. These tests should be documented and available for review by fire rescue personnel. The circuits shall be clearly labeled. Any room that contains a fire pump, sprinkler riser, or alarm panel shall have an emergency light.

Fire Hydrants

Private hydrant(s) may be required depending on distance from existing hydrants or due to set back of building. They shall always be visible and accessible and not blocked by parking space or landscaping. If required, private hydrants shall be painted yellow.

Bollards

Bollards shall be placed near private fire hydrants, remote post indicator valves, (PIV) and Fire Rescue Department connections to prevent damage. Bollards shall not obstruct charged fire hoses. It is recommended that the Fire Rescue Department approve the location of the bollards before final placement is made.

Site Access

Fire Department Access Roads:

- Approved fire rescue department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.
- Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof.
- When fire rescue department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

Access to Building:

- A fire department access road shall extend to within 50 ft. (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building.

- Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft. (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.
- When buildings are protected throughout with an *approved automatic sprinkler system* that is installed in accordance with *NFPA 13, NFPA 13D, or NFPA 13R*, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).

Multiple Access Roads:

More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other

- Fire department access roads shall have an unobstructed width of not less than 20 ft. (6.1 m).
- Fire department access roads shall have an unobstructed vertical clearance of not less than 13 ft. 6 in. (4.1 m).
- Vertical clearance shall be permitted to be reduced, provided such reduction does not impair access by fire apparatus, and approved signs are installed and maintained indicating the established vertical clearance when approved.
- Vertical clearances or widths shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

Surface:

Fire department access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with an all-weather driving surface.

Turning Radius

- The turning radius of a fire department access road shall be as approved by the AHJ.
- Turns in fire department access roads shall maintain the minimum road width.

- Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

Grade

- The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.
- Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

Marking of Fire Apparatus Access Road

- Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof or both.
- A marked fire apparatus access road shall also be known as a fire lane.

Obstruction and Control of Fire Department Access Road

- The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.
- Entrances to fire department access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.

Water Supplies and Fire Hydrants

- An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction.
- Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.

- The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.
- Fire hydrants and connections to other approved water supplies shall be accessible to the fire department.
- Clear Space Around Hydrants. A 3 ft (914.4 mm) clear space shall be maintained around the circumference of fire hydrants except as otherwise required or approved.
- Private water supply systems shall be tested and maintained in accordance with NFPA 25.
- Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

Required Licenses

A Wisconsin licensed fire protection contractor and Wisconsin licensed sprinkler fitter must install underground fire mains and above ground fire protection. Periodic inspections of the job site will be made by the Fire Rescue Department to ensure compliance. Contractors of fire protection systems will be asked to show credentials from the State of Wisconsin.

Commercial Kitchens

Commercial kitchens shall be designed and constructed in accordance with NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations. A puff test will be required and **MUST** be witnessed by the Fire Rescue Department.

Plan Review

The Fire Rescue Department does require one (1) set of plans showing a basic site plan along with the location of the FDC and Knox Box. Sprinkler plans usually will come from the subcontractor at a later time.

Final Inspection

Contractor or fire protection subcontractor shall provide the following documentation to the Fire Rescue Department at the time of the Final Inspection and before the Fire Rescue Department signs off on their part of the occupancy certificate.

- Copy of the contract with the fire alarm central monitoring station.
- Copy of the UL or FM certificate(s) for the fire alarm monitoring station.

- Copy of all work performed by the fire sprinkler company.
- Copy of all fire alarm testing documents.
- A map of the sprinkler system shall be placed by the main riser and a map of the alarm system shall be placed by the main alarm panel.

All Fire & Life Safety requirements **must** be in place and operational prior to the facility being occupied or the moving in of any combustible materials.

Any questions can be directed to the Chief of Fire Rescue: Todd Blaser

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