MINOOKA FIRE PROTECTION DISTRICT

Fire Prevention Bureau

Fire Inspector Matt Feinberg

Fire Alarm Systems Plan Review Checklist

Date: _____ **Permit Number: _____**

Business Name: _____Address: _____

Fire Alarm System Submittal Minimal Requirements:

A1 A Fire Alarm System application permit is required to be completed and submitted with your plans. (See Village or County for this).

A2 A minimum of three paper plans dropped off to the Village or County and a digital copy via email to the Building Code official and the Minooka Fire Inspector is required to be submitted. Please also send FSCI your digital plan and cut sheets for review.

A3 A complete set of manufacturers cut sheets on all devices and appliances are required to be submitted (paper and digital).

A4 A plan review Fee shall be submitted for your plan review with FSCI.

A5 Please review all IFC 2021, NFPA (Current year), and Local Code ordinance requirements for the buildout of this system.

Fire Alarm Monitoring Requirements: WESCOM Only Wireless

B1 The Fire Alarm shall be monitored in accordance with NFPA 72.

B2 The method of fire alarm monitoring, signal transmission, and alarm monitoring company, shall be provided on the plan review submittal form.

B3 Digital Alarm Communicators requires a wireless only system. A U.L central station is required, WESCOM.

B4 Institutional use group occupancies, as defined in the international building code shall utilize wireless only monitoring.

Fire Alarm Control Panel Minimal Requirements:

C1 A smoke detector is required in the room that has the fire alarm control panel, when ambient conditions prohibit the use of a smoke detector; a heat detector shall be permitted with a request to the fire inspector.

C2 Access to the fire alarm control panel is required 24 hours a day, 365 days a year. A Knox Box is required to be located by the Fire Inspector.

C3 The Fire Alarm System shall be separate from any other non-fire protection type system, i.e. burglar, etc.

C4 A 4-inch Red Lens, strobe light to indicate water flow and white lens, strobe light to indicate general alarm is required on the exterior of the building (above FDC.)

C5 The Fire Alarm Control Panel room shall be properly labeled, minimum 4" letters, "FACP," on the door to the room.

C6 The primary power for the Fire Alarm Control Panel shall be on a separate circuit on the electrical breaker panel. It needs to be labeled and locked out.

C7 Battery calculations shall be submitted, 60 24 hours are required.

C8 The Fire Alarm Control Panel shall be properly grounded.

C9 The Fire Alarm Control Panel shall be installed in an approved weatherproof enclosure. Cut sheets on the enclosure is required prior to installation.

C10 The room, closet or enclosure, where the fire alarm control panel is located shall be climate controlled to properly maintain heat. The heater shall be thermostatically controlled.

C11 The fire alarm system shall identify the specific initiating device address, location, device type, floor level where applicable and status including indication of normal, alarm, trouble and supervisory status, as appropriate.

C12 A map shall be provided, showing a floor plan and device locations. The map shall be posted by the Fire Alarm Control Panel and the Annunciator Panel.

Fire Alarm Annunciator Panel Minimal Requirements:

D1 A Fire Alarm Annunciator Panel is required and shall be located in accordance with MFPD. The Annunciator Panel shall be located to be visible from the exterior of the building.

D2 The zones on the panel shall be permanently marked.

D3 Fire Alarm Annunciator Panel shall have all of the functions of the Fire Alarm Control Panel.

Audible and Visual Device Minimal Requirements:

E1 Audio/Visuals are required in all common areas of the building. Visual devices shall be installed in washrooms, kitchens/break rooms and conference rooms.

E2 Audio/Visual alarms shall be heard throughout the buildings. This will be evaluated on the final inspection.

E3 Visual devices shall be installed in all examination rooms and treatment rooms.

E4 All required notification devices shall be of the audible and visual type. Mechanical horns or bells and emergency voice/alarm communications systems are prohibited. However, manual live voice override systems will be allowed provided the audio-visual devices reactivate automatically upon completion of any live voice message. Audio sound levels shall meet NFPA 72.

E5 Fire Alarm system is fully addressable, a white lens, 4-inch strobe light, used to annunciate an alarm condition, shall be installed on the exterior of each tenant space and multi-family unit located in the building.

Use Group R-4 Assisted Living facilities

E6 Visuals are required in all dwelling units.

Use Group – Multi-Family Attached

E7 One Audio/Visual device in each dwelling unit located in the area of the bedrooms.

Manual Devices:

F1 Pull Stations shall be required at all exits and at the entrance to any stairwell on every story of the building.
F2 Pull Stations are required within 5' of the door.
F3 Manual fire alarm box covers, as required by the municipality.

Automatic Detection Devices/Sprinkled buildings:

Use group M – Mercantile/S-1, S-2 Storage Buildings/U – Utility Buildings /F-1, F-2 Factory and Industrial Buildings

Use Group A-1, A-2, A-3, A-4 & A-5 Assembly/B - Business

G1 A smoke detector is required at the top of all stairwells.

Use Group E – Education

G2 A smoke detector is required at the top of all stairwells.
G3 A smoke detector is required in all day care sleeping rooms.
G4 Smoke detectors are required on both sides of the fire doors in corridors, if they have hold open devices installed.

Use Group H – Hazardous

G5 Smoke detection shall be installed in rooms or areas where highly toxic compressed gases are stored or used.
G6 Smoke detection shall be installed in rooms or areas where class I, II and III Organic Peroxides are stored.
G7 Smoke detection shall be installed in areas storing liquid and solid oxidizers.

Use Group I-2, I-2 Institutional

G8 Smoke detection is required in all corridors.
G9 Smoke detection is required in all waiting areas open to the corridor.
G10 Smoke detection is required in all laundry, trash and storage rooms
G11 Smoke detection is required in all sleeping patient rooms.
G12 Smoke detection is required outside of each sleeping areas.
G13 Smoke detection is required at the top of all stairwells.

Use Group I-3 Institutional

G14 Smoke detection is required throughout resident housing areas including but not limited to, sleeping areas, day rooms, group activity spaces and other common spaces.

Use Group I-4 Institutional

G15 Smoke detection is required in all corridors.
G16 Smoke detection is required in all waiting areas open to the corridor.
G17 Smoke detection is required in all laundry, trash and storage rooms.
G18 Smoke detection is required in all sleeping rooms.
G19 Smoke detection is required outside of each sleeping areas.
G20 Smoke detection is required at the top of all stairwells.

Use Group R-1 Residential hotels/motels

G21 Smoke detection is required in all corridors.
G22 Smoke detection is required in all common areas.
G23 Smoke detection is required in all waiting areas open to the corridor.
G24 Smoke detection is required in all guest rooms in the sleeping areas and in every room in the path of egress from the sleeping area and the door of the guest room or suite.
G25 Smoke detection is required at the top of all stairwells.

Use group R-2 Apartments, Boarding Houses, dormitories – attached multi-family, & two-family Dwelling units exceeding 2500 square feet.

G26 Smoke detection is required in all corridors.
G27 Smoke detection is required in all common areas.
G28 Smoke detection is required in all waiting areas open to the corridor.
G29 Smoke detection is required in all dwelling units.
Exception: Apartments and attached multi-family
G30 Smoke detection is required at the top of all stairwells.

Use group R-4 Assisted Living facilities

G31 Smoke detection is required in all corridors.
G32 Smoke detection is required in all waiting areas open to the corridor.
G33 Smoke detection is required in all laundry, trash and storage rooms.
G34 Smoke detection is required in all Electrical closets.
G35 Smoke detection is required at the top of all stairwells.

Automatic Detection Devices/Un sprinkled buildings:

G36 Detection is required throughout the building in all accessible areas.
Exception: spaces above suspended ceilings and closets under 24 square feet, with the least dimension on one side of 3 feet.

Use Group Multi-Family Attached

G37 Heat detectors are required in attics, one on each level, Laundry, Furnace rooms and Garages.

G38 An Audio/Visual device is required one in each dwelling unit, located in the area of the bedrooms.

Duct Smoke Detectors

H1 Duct Smoke Detectors shall:

- Shut down the HVAC unit, when activated
- Have a remote LED and Test Switch Station located on the wall no higher than 6 feet by the unit switch red in color.
- Have a separate zone on the fire alarm control panel
- Be installed on all units over 2000 CFM and be located on the return side of the HVAC unit.
- The location shall be shown on the zone map and posted by the FACP.

H2 Duct Smoke Detectors, when activated in a fully sprinklered building, shall send a supervisor signal to the fire alarm control panel.

Fire Alarm Inspections & Certification Required

I1 Final acceptance and performance test

I2 Rough wire inspection (Not required in all instances)

I3 A certificate of Completion is required to be provided at the time of inspection

I4 All reports are to be upload to Brycer (Compliance Engine), for final occupancy approval.

Additional Requirements

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Fire Alarm System Plan Review Results

☐ **Approved** ☐ **Not Approved**

Completed By: _____

MINOOKA FIRE PROTECTION DISTRICT

Fire Prevention Bureau

Fire Inspector Matt Feinberg

Fire Sprinklers
Plan Review Checklist

Date: _____ Permit Number: _____

Business Name: _____Address: _____

Fire Sprinkler System Submittal Minimal requirements:

- ☐ A Fire Protection System application permit is required to be completed and submitted with your plans. (See Village or County for this).
- ☐ A minimum of three paper plans dropped off to the Village or County and a digital copy via email to the Building Code official and the Minooka Fire Inspector is required to be submitted. Please also send FSCI your digital plan and cut sheets for review.
- ☐ A complete set of manufacturers cut sheets on all piping, appliances and heads are required to be submitted with your plans (paper and digital).
- ☐ A plan review Fee shall be submitted for your plan review with FSCI.
- ☐ Hydraulic calculations and current Water Flow Data, within 2 years need to be done at owner/builder's expense by third party contractor.
- ☐ Please review all IFC 2021, NFPA (Current year), and Local Code ordinance requirements for the buildout of this system.

Fire Sprinkler Riser Locations:

- ☐ A 10" bell is required on the exterior above the fire department connection and a 6" bell is required inside the main riser.
- ☐ 36" clearance is required in front of the risers.
- ☐ A spare sprinkler head cabinet, with a min of 6 heads and a wrench is required to be mounted by the risers.
- ☐ A riser zone map is required to show areas of sprinkler coverage throughout the building.
- ☐ The main drain shall be piped to the exterior of the building or to a floor drain that will accept the full flow of the drain.
- ☐ Placards shall be posted for all calculated areas, by the risers.
- ☐ All valves shall have proper signs attached.
- ☐ The sprinkler riser room shall be properly labeled, "SPRINKLER ROOM."

Fire Sprinkler Spacing and Head Locations:

- ☐ Sprinkler heads shall be properly spaced throughout the protected area.
- ☐ Sprinkler heads shall be a minimum of 4" away from any wall.
- ☐ Sprinkler heads shall not be obstructed by any ceiling mounted electrical fixtures, including exit lights, etc.
- ☐ Sprinkler heads shall be installed under any permanent fixture, ductwork, etc. that exceeds 4'.
- ☐ Sprinklers shall be installed under all building overhangs where combustible items are stored.
- ☐ Sprinklers shall be installed under all parts of the building, where vehicles have access, drive thru, canopies, etc.
- ☐ Sprinkler heads shall be installed in all accessible areas.

Fire Department Standpipes:

- ☐ Fire Department standpipes shall be installed in all stairways, and on every level of this building and all service doors.
- ☐ Standpipes shall have a 2 1/2" reducer installed on all valves.
- ☐ A pressure gauge shall be installed at the top of all standpipes.
- ☐ The valve shall have sufficient clearance to properly operate the valve and remove the caps.
- ☐ The standpipe pressures as outlined in NFPA 14, are not required in fully sprinklered buildings.
- ☐ Pressure reducing valves are required to maintain a safe working pressure at the valves.

Fire Department Connections:

- ☐ A fire department 5" Storz 30˚ angle connection is required for this building.
- ☐ The fire department connection shall be located within 75' of a fire hydrant. The approved location is noted on the engineering plans.
- ☐ The fire department connection supplies sections of the building, a sign, with minimum 4" letters shall be installed above the connection to indicate the coverage area of the connection.
- ☐ The fire department connection shall not be obstructed by landscape, etc.

Fire Inspectors Test Valve:

- ☐ The inspectors test valve shall be accessible and properly labeled.
- ☐ The inspectors test valve shall be piped to the exterior or to a floor drain that will accept the full flow of the inspector's test.
- ☐ An inspector's test valve is required to be installed.

Fire Alarm Minimal Requirements:

- ☐ Water flow switch shall be shown on a separate zone on the fire alarm system.
- ☐ Water flow and tamper switches for separate floors, shall be shown on a separate zone on the fire alarm system.
- ☐ Tamper switches shall be shown on a separate zone on the fire alarm system.
- ☐ High/low air switch shall be shown on a separate zone on the fire alarm system.
- ☐ Pressure switch shall be shown on a separate zone on the fire alarm system.
- ☐ The quarter turn valve under the pressure switch shall be supervised on the fire alarm system.
- ☐ A 10” bell is required on the exterior above the fire department connection and a 6” bell is required inside the main riser.

System Approvals and Inspections Required:

- ☐ Final inspection of the sprinkler system
- ☐ 2 hour, 200 P.S.I. hydro test
- ☐ 2 hour, 200 P.S.I. hydro test including the fire department connection
- ☐ 2 hour, 50 P.S.I. over static pressure, hydro test
- ☐ 24-hour air test
- ☐ Final trip and alarm test
- ☐ Final flow and alarm test
- ☐ A water flow, from the top of all standpipes is required.
- ☐ A fire pump flow and acceptance test are required for this building
- ☐ A fire department, water flow flush is required prior to connecting the piping to the riser.
- ☐ All reports are to be upload to Brycer (Compliance Engine), for final occupancy approval.

Additional Requirements:

- ☐ _____
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- ☐ _____
  _____
- ☐ _____
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System Plan Review Results:

☐ **Approved** ☐ **Not Approved**

Completed By: _____

MINOOKA FIRE PROTECTION DISTRICT

Fire Prevention Bureau

Fire Inspector Matt Feinberg

FIRE COMMAND CENTER
Plan Review Checklist

Date: _____ Permit Number: _____

Business Name: _____Address: _____

The Fire Alarm Command Center shall comply with NFPA 72 and shall contain the following features Minimal:

- ☐ The Emergency Voice Communications System.
- ☐ The Fire Department Communication System
- ☐ Fire detection and alarm system annuciator system.
- ☐ Annunciator visually indicating the location of the elevator and whether they are operational.
- ☐ Status indicators and controls for air-handling systems.
- ☐ The Firefighter's control panel required by this section 909.16 for smoke control systems installed in the building.
- ☐ Controls for unlocking stairway doors simultaneously.
- ☐ Sprinkler valve and water flow detector display panels.
- ☐ Emergency and stand-by power status indicators.
- ☐ A telephone for fire department uses with controlled access to the public telephone system.
- ☐ Fire Pump status indicators.
- ☐ Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
- ☐ Work Table.
- ☐ Generator supervision devices, manual start and transfer features.
- ☐ Public address system, where specifically required by other sections of this code.
- ☐ All reports are to be upload to Brycer (Compliance Engine), for final occupancy approval.

Fire Command Center Plan Review Results:

☐ **Approved** ☐ **Not Approved**

Completed By: _____

MINOOKA FIRE PROTECTION DISTRICT

Fire Prevention Bureau

Fire Inspector Matt Feinberg

Kitchen Hood Suppression Systems Plan Review Checklist

Date: _____ Permit Number: _____

Business Name: _____Address: _____

Cooking Suppression System Submittal Minimal Requirements:

- ☐ A Fire Protection System application permit is required to be completed and submitted with your plans. (See Village or County for this).
- ☐ A minimum of three paper plans dropped off to the Village or County and a digital copy via email to the Building Code official and the Minooka Fire Inspector is required to be submitted. Please also send FSCI your digital plan and cut sheets for review.
- ☐ A complete set of manufacturers cut sheets on all piping, appliances and heads are required to be submitted with your plans (paper and digital).
- ☐ A plan review Fee shall be submitted for your plan review with FSCI.
- ☐ Please review all IFC 2021, NFPA (Current year), and Local Code ordinance requirements for the buildout of this system.

Appliance Layout Minimal Requirements:

- ☐ If any appliances change in the process of review and approval of plans, as built drawings are required to be submitted. (NFPA 17A)
- ☐ All deep fat fryers shall be installed in accordance to (NFPA 96)

System installation Minimal Requirements:

- ☐ A Fusible Link shall be provided above each cooking appliance, or in accordance with the manufacturer's specifications. (NFPA 17A)
- ☐ A Fusible link shall be provided within each exhaust duct opening in accordance with the manufacturing specifications. (NFPA 17A)
- ☐ A manual pull station to activate the system shall be located within 10' of the hazard, and located within the path of egress. (NFPA 17A)
- ☐ Discharge nozzles shall be listed for their intended use, (NFPA 17A)

☐ Discharge nozzles shall be properly selected and installed for the appliance they are intended to protect. _____
_____

☐ Additional Comments: _____
_____
_____
_____
_____
_____
_____

Exhaust System Requirements:

☐ A hood exhaust fan shall continue to operate after the extinguishing system has activated unless otherwise required by the design of the extinguishing system. (NFPA 17A)

☐ When the extinguishing system discharges, makeup air supplied to the hood shall be shut off. (NFPA 17A)

Fire Alarm Requirements:

☐ The activation of the system shall activate the fire alarm system and shall be shown on a separate zone on the fire alarm control panel. (NFPA 96)

Fire Extinguisher Requirements:

☐ A class "K" fire extinguisher requires to be installed within 30 feet from the hazard area. (NFPA 10)

System Approvals and Inspections Required:

☐ Inspection of the nozzle types, and placement from the protected hazard shall be in accordance with the manufacturers specifications.

☐ A function test that requires the activation of the system, the release air through the nozzles. The activation of the fire alarm system is required.

☐ Provide certification by the installing contractor that the system has been installed in accordance with the approved plans and manufacturers specifications. (NFPA 17A)

☐ All reports are to be upload to Brycer (Compliance Engine), for final occupancy approval.

System Plan Review Results:

☐ **Approved** ☐ **Not Approved**

Completed By: _____