



Fire Alarm Permitting Process



Permitting and Inspection Information

Permits are required for new installations and upgrades which are classified as an existing fire alarm or detection system that is modified. A device for device switch is classified as switching a manual pull station, smoke detector, heat detector or A/V device with the same device. This type of work does not require a Fire Protection Systems permit. To obtain a permit, applicants should bring a completed Fire Protection Systems Permit Application and Intake Checklist to Construction Services and Inspections at City Hall, 411 W 1st St Room 100.

Work shall not commence until plans have been approved (when required) and the permit has been issued. In order to approve the installation, inspections will be required at certain stages of the process. Most scenarios will require a rough in and final inspection. To schedule an inspection, please contact the Fire Marshal Office at lconsie@duluthmn.gov or 218-730-4398.

Additional Intake Checklist Information

DRAWING SUBMITTAL REQUIREMENTS
1) Provide one digital set of drawings, one set of the equipment technical data sheets, voltage drop calculations, battery calculations, and a copy of the scope of work letter
2) Drawings must be to scale with a graphic scale (1/8" = 1 ft scale is preferred)
3) Label all rooms
4) All fire alarm plans must be designed by an individual holding a level II NICET certification.
5) Provide legend/key for all fire alarm components and include the quantities; the fire alarm symbols must comply with the 2012 edition of NFPA 72: 7.2.3)
6) Provide a copy of the low voltage installer with name, license #, and original signature of license holder on the drawings
7) Provide a riser diagram (NFPA 72: 7.2.1(2))
8) Provide a sequence of operation in an input/output matrix (NFPA 72: 7.2.1(4))
9) Provide a wire legend (specify wire type and size), show point-to-point system wiring, EOLR locations Note: SLC, NAC or other circuits shown in different colors is preferred
10) Show the location of FACP and remote power supplies with smoke detectors ³
11) Show the location of the documentation cabinet for new fire alarm systems (NFPA 72: 7.7.2)
12) Show the location of alarm annunciator; annunciator must be within 10 ft of the main fire department entrance
13) Show the location of manual fire alarm boxes; within 5 ft of exit doors (NFPA 72: 17.14.8.4); provide additional manual fire alarm boxes every 200 ft of travel (NFPA 72: 17.14.8.5)
14) Show the location of smoke detectors where required by NFPA 72
15) Show the location of detectors in air duct systems Note: Detectors located in air ducts shall report as supervisory only (NFPA 72: 17.7.5.)
16) Show the location of other smoke sensing detectors (i.e. beam detectors or air sampling smoke detectors)
17) Show the location of smoke detectors for the operation of smoke dampers
18) Show the location of heat detectors in elevator shafts
19) Show the interface with the kitchen hood/suppression system (NFPA 72: 17.13)
20) Show the location of sprinkler flow switches and tamper for electronic monitoring (MSFC 903.4 and NFPA 72: 17.12)
21) Show the location of other automatic extinguishing systems (i.e. clean agent system or foam system) (NFPA 72: 17.13)

22) Provide pressure supervisory signal-initiating device and off-normal signal for pressure increases and decreases for dry-pipe sprinkler system (NFPA 72: 17.16.2.2.2)
23) Provide monitoring of fire pump per NFPA 20 to include pump running, loss of phase and phase reversal (NFPA 72: 23.8.5.9)
24) Provide audible notification to attain 15 dB above the average ambient sound level throughout the building or space (NFPA 72: 18.4.3.1) Note: The required sound level must be noted on the drawing and documentation per NFPA 72: 7.3.4.3 must be provided ⁴
25) Provide audible notification at a minimum of 75 dB measure at the pillow level in sleeping areas (NFPA 72: 18.4.5.1) Note: Low frequency alarm provided in sleeping rooms
26) Provide audible notification that produce low frequency alarm signals in sleeping and living areas (NFPA 72: 18.4.5.3 & A18.4.5.3)
27) Show the location of speakers with wattage tap where the building is required to have a Fire Emergency Voice/Alarm Communication System (i.e. assembly occupancies with 300 or more occupants or high-rise buildings)
28) Show the location of visible appliances (strobes) and indicate the candela rating
29) Show the height of strobes mounted on the wall (NFPA 72: 18.5.5.1)
30) Provide strobe spacing in rooms per Table 18.5.5.4.1(a) and Figure 18.5.5.4.1 or Table 18.5.5.4.1 (b) (NFPA 72: 18.5.5.4.1)
31) Locate strobes in corridors not more than 15 ft from the end of the corridors and not more than 100 ft between strobes (NFPA 72: 18.5.5.5.5) Note: Corridors exceeding 20 ft in width must use the spacing requirements of NFPA 72: 18.5.5.4
32) Provide strobes in sleeping areas where required per Table 18.5.5.7.2 (NFPA 72: 18.5.5.7.1)
33) Provide initiating devices in areas for elevator recall as required by ANSI/ASME A17.1/CSA B44 (NFPA 72: 21.3)
34) Provide lobby smoke detector within 21 ft of the centerline of the elevator bank for elevator recall (NFPA 72: 21.3.5)
35) Show the location of all doors on hold opens with compliant smoke detector location per NFPA 72: 17.7.5.6 (NFPA 72: 21.8) Note: Smoke detectors for door release to only report as a supervisory signal
36) Show the location of electrically locked doors (i.e. magnetic locks or access controlled doors) (NFPA 72: 21.9)
37) Battery back-up calculations for all new panels
38) Provide a note on the drawing stating how the fire alarm system will be monitored by a supervising station for electronically monitored sprinkler systems and in buildings or occupancies required to have emergency forces notification; refer to the Life Safety Code for emergency forces notification requirements; provide technical data on equipment (NFPA 72: Chapter 26)

¹ This list is not an all-inclusive list, all applicable codes for fire alarm systems must be met

² Special locking arrangements include access control doors, delayed egress locks, and elevator lobby exit access door assemblies

³ A key plan must be maintained at each FACP and the sprinkler riser room where multiple FACP's on the premises are connected to a single flow switch

⁴ An audible sound level test report is required to be provided to the Life Safety Inspector