

FIRE ALARM PLAN REVIEW PERMIT REQUIREMENTS



Town of Brighton
Office of the Fire Marshal

MAY 2020

Fire Alarm Plan Review and Permit Submittal Requirements

Purpose

This information packet has been developed in an effort to provide the highest level of service to the customers of the Town of Brighton. The major goal of fire alarm plan reviews conducted by the Office of the Fire Marshal is to ensure the design of fire alarm systems meet the minimum requirements of the adopted codes and ordinances. To meet this goal, the submitted plans and supporting documentation must contain the information needed to conduct a thorough review.

Scope

This packet outlines the minimum requirements set forth in the Fire Code of New York State, local amendments, and departmental policies and procedures as they relate to the installation of Fire Alarm Systems. This packet is not intended to provide an all-inclusive listing of submittal and inspections requirements, as it would be virtually impossible to cover all situations. This packet only covers requirements set forth in the adopted 2016 edition of NFPA 72. Also included in this packet is information covering items required to be included on the working drawings and supporting documents.

Administration

A design engineer or licensed design professional will typically provide a preliminary design within the construction documents that will contain sufficient detail to identify the scope of the work and allow for competitive bidding. The design engineer's or licensed design professional's responsibilities include but are not limited to:

1. Evaluate the broad range of hazards and fire protection schemes required to develop a workable, integrated fire alarm solution.
2. Provide design documents as outlined in this guideline.
3. Review shop drawings and submittals to ensure conformance with design documents and applicable codes and standards.
4. Monitor the installation of fire protection systems and participate in their acceptance and commissioning.

Construction Documents

Fire Protection drawings and specifications prepared by the design engineer or licensed design professional and included in the bid documents constitute a 'preliminary design' and shall be sealed by the design engineer or licensed design professional of record registered in New York State as required by the New York State Department of Education Law.

This 'preliminary' design is a basis for bidding and may be referenced to herein as 'construction documents'. A basic understanding of hazard and occupancy classifications; and a working knowledge of fire protection codes and standards is expected from the design engineer or licensed design professional of record.

Construction Documents should comply as applicable with NFPA 72, NFPA 70, Fire Code of New York State and this guideline.

Details such as wiring sizes and head locations are not required to be part of the Construction Documents. Such layouts when provided shall be denoted as being provided for general coordination and information only.

Fire alarm system plans, and specifications shall be developed in accordance with this code by persons who are experienced in the proper design, application, installation, and testing of fire alarm systems. ([NFPA 72 – Section 10.5](#))

Review and Approval of Shop Drawings and Hydraulic Calculations

The following procedure for review and approval of working shop drawings is applicable and shall be included in the construction documents as necessary to ensure the fire alarm contractor understands their responsibility.

Working shop drawings can be produced by technicians, designers or contractors meeting the minimum standards of NICET Level III or better "Fire Alarm Systems". However, the working shop drawings, battery calculations, and product data shall be reviewed and approved by the design professional or licensed design professional in responsible charge prior to submittal to the Office of the Fire Marshal.

Working Shop drawings shall include and be in accordance with working plan requirements of Section 10.5 of NFPA 72.

Product data should include and identify all material, equipment, and accessory selections to be installed.

The fire alarm contractor must provide all necessary materials and labor for a system fully compliant with all applicable NFPA requirements and the construction documents.

Any discrepancies should be brought to the attention of the Specifying Engineer or licensed design professional of record.

The Specifying Engineer or licensed design professional has primary responsibility for review and approval of fire detection system working shop drawings and battery calculations. The Specifying Engineer or licensed design professional review shall determine compliance with applicable codes and standards and the project contract documentation.

Accompanying the shop drawings shall be a stamp on the drawings or sealed letter from the design professional in responsible charge stating the shop drawings have been reviewed and have been found in general compliance to the design document(s).

If comments by the design engineer or licensed design professional are limited, the specifying engineer may, at their discretion, forward the shop drawings to the Office of the Fire Marshal in parallel with comment resolution by the fire alarm contractor.

All comments made by the specifying designer or licensed design professional shall be forwarded to the Office of the Fire Marshal with the review package including comments from previous review iterations, if any.

As noted above the documents outlining the design strategy must be stamped by the registered Engineer/Architect and the shop drawings and other supporting documents must bear a **SHOP DRAWING REVIEW** stamp indicating review and approval from the originating design engineer or licensed design professional.

SHOP DRAWING / SUBMITTAL REVIEW	
<input type="checkbox"/> APPROVED	<input type="checkbox"/> APPROVE WITH CHANGES NOTED
<input type="checkbox"/> REVISE AND RESUBMIT	<input type="checkbox"/> REJECTED _____
SUBMITTAL WAS REVIEWED FOR DESIGN CONFORMITY AND GENERAL CONFORMANCE TO CONTRACT DOCUMENTS ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT JOBSITE FOR TOLERANCE, CLEARANCE, QUANTITIES, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF HIS WORK WITH OTHER TRADES AND FULL COMPLIANCE WITH CONTRACT DOCUMENTS	
By: _____	Date: _____
ABC Construction Ltd. Besttown, IA 12345	

Minimum Required Submittal Information

Construction Documents

Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provision of the Fire Code of New York State, and relevant laws, ordinances, rules and regulations as determined by the Town of Brighton – Office of the Fire Marshal.

When working on an existing system, you must provide details on that system such as original installation date, original requirements of the system or its intent, requirements based on occupancy and occupant load, etc.

Distinguish new from existing alarm equipment with “N” and “E” subscripts

Drawing Size.

Drawings shall be submitted on sheets no less than 24 x 36 inches and shall be drawn to $\frac{1}{8}$ " = 1' scale. Where $\frac{1}{8}$ " scale is not large enough to show pertinent details, then a $\frac{1}{4}$ " = 1' scale shall be used in a detail drawing. Other scales may be accepted on an as-needed basis, please contact the Chief Fire Marshal if you have questions regarding the use of different scales.

Number of Drawing Sets.

1. A minimum of three (3) sets of working shop drawings designed by NICET Level III or better "Fire Alarm Systems" shall be submitted and shall include the items found in the checklist provided within this packet.
2. One (1) copy of the construction documents plans stamped by a New York State licensed design professional shall be submitted for review.
3. Copies shall all be the same size, drawn in indelible ink. Plans that are not legible may be rejected as unacceptable for plan review purposes
4. Sheets that are cut and pasted, taped, or that have been altered by any means (pen, pencil, marking pen, etc.) will not be accepted for plan check.

Cut Sheets/Specifications.

1. A minimum of two (2) sets of the manufacturer's product information (cut sheets) shall be provided. This is to include the information on all devices that are part of, or being connected to, the fire alarm system. When cut sheets show multiple models/type of devices, the specific item being installed shall be highlighted.

As an example, the use of multi-candela horn/strobes shall have the specific model number highlighted and the current draws associated with that model and candela rating highlighted.

2. If component parts from different manufacturers are to be mixed in any system, then a manufacturer's statement of compatibility of said parts shall be included in the submission.
3. Cut sheets shall be stapled, bound, placed in a binder or otherwise neatly organized when submitted.

One copy of the cut sheets will be returned to the contractor and must remain with the approved plans, on the job site.

Secondary Power Calculations (Battery Calculations).

1. A minimum of two (2) sets of the secondary power (battery) calculations shall be provided for all power supplies being installed within the system. This is to include the voltage and amperage information on all batteries being installed within the main panel and any supplemental power panels being provided.

One copy of the battery calculations will be returned to the contractor and must remain with the approved plans, on the job site.

2. Calculations shall include battery calculations, which shall follow an approved format. A battery calculation shall include a listing of the current used by any and all energy consuming devices or equipment, each device powered by the batteries for both standby and alarm mode, and the current rating of the power supply.

A 30% shall be added under "standby" and "alarm" modes for battery depletion buffer.

3. A battery calculation formula format sheet (with all values used) showing that battery power is adequate for 24 hours of stand-by power and 5 minutes of alarm power. Standby Battery Calculations for each Control Panel, Sub Panel, Power Booster, Central Station Transmitter, Power supply.
4. Battery calculations shall include the following information:
 - a. Standby and Alarm current draws for each device/appliance connected to the fire alarm system.
 - b. The Model number of each device/appliance.
 - c. Description of each device/appliance.
 - d. Standby time (i.e. 24 hours, 60 hours, etc.)
 - e. Alarm time (i.e. 5 minutes, 15 minutes, 60 minutes etc.)
 - f. Total current draw of the system.
 - g. Batteries provided, size of batteries and whether wired in series or parallel.

An example is available from the Office of the Fire Marshal upon request.

Voltage Drop Calculations.

1. A minimum of two (2) sets of voltage drop calculations shall be submitted with the plans.

One copy of the voltage drop calculations will be returned to the contractor and must remain with the approved plans, on the job site.

2. These calculations are to include the following information:
 - a. The total number of devices on each wiring circuit.
 - b. The current draw of each device.
 - c. The maximum length of wire utilized on each circuit.
 - d. The wire size being used.
 - e. The voltage remaining at the last device.
 - f. Intelligent Horn/Strobes must show the manufactures information of how the voltage drops shall be calculated.
 - g. Adjustable Multi-Candela Horn/Strobes - the battery calculations shall be calculated according to the candela rating on the fire alarm plans.

For example, if the fire alarm plans indicate the candela rating is 110, the battery calculation shall be calculated for 110 candela

3. Voltage drop calculations shall be attached to the battery calculation form.
4. Provide formula used for voltage drop calculation for all notification circuits in the FACP and for each sub-panel with a battery backup. Account for each notification appliance's voltage draw, and provide total draw and drop for each circuit.
5. Indicate notification appliance model and voltage drop corresponding with those listed in the applicable manufacturer's product data sheet (Cut Sheets).
6. Voltage drop calculations shall also identify (for the acceptance test) the acceptable minimum end of line voltage for the specific equipment used.
7. Voltage Drop, percent not to exceed listed manufacturer's operating range.
NOTE: Providing a 10% safety factor will allow the expansion of the circuit/addition of appliances in the future.

Sample calculations may be obtained from the Office of the Fire Marshal upon request.

Sequence of Operations.

The sequence of operation of the fire alarm system shall be provided in matrix format. An example of the typical input/output matrix format is located in NFPA 72 Figure A.14.6.2.4. The sequence of operations shall be specific to each submittal and shall not include functions that do not pertain to the specific submittal.

General Information and Requirements

A. Fire Alarm Control Equipment and Annunciators

1. The Fire alarm control panel shall be located at the main entrance to the building. If the FACP is not located at the entry, a Fire Alarm Annunciator shall be provided at the main entrance (**NFPA 72: 10.17.3.2**).

Annunciators should be mounted at approximately eye level.

2. Automatic smoke detection shall be provided at the location of each control unit, power extender, and supervising station transmitting equipment in accordance with (**NFPA 72:10.4.4**)

B. Zoned Systems

1. Each floor shall be zoned separately, and a zone shall not exceed 22,500 square feet (2090 m²). The length of any zone shall not exceed 300 feet (91 440 mm) in any direction
2. Manual and automatic initiation devices located within the same fire zone or floor may be wired on the same zone. Duct detectors shall be zoned separately from manual and automatic devices.

C. Monitoring

1. In accordance with FCNYS 907.6.6, all fire alarm system shall be monitored by an approved supervising station. Office of the Brighton Fire Marshal considers all UL listed or FM approved central, remote or proprietary supervising stations as approved supervising stations.
2. Communication Methods. Supervising station systems shall have communication methods that are approved.
3. Office of the Fire Marshal shall be notified within 30-days of any scheduled change in service that results in signals from a protected premise being handled by a different supervising station. Prior to termination of service, Office of the Fire Marshal shall be notified.

D. Signage

1. Approved signage must be provided on the door of the enclosure in which any fire alarm control panels are located stating "Fire Alarm Control Panel" shall be provided signage a minimum of 7" high by 10" width with 2-inch high block letters a 0.5" letter stroke - white letters on a contrasting red background. and shall be permanently attached, at normal eye level to the door leading to the fire alarm control panel(s) unless otherwise approved by the Office of the Fire Marshal.

- Signs shall be permanent, weatherproof and appropriately secured

Please refer to the Office of the Fire Marshal – Fire Protection Signage Requirements Bulletin

E. Audible Notification

- Office of the Fire Marshal requires all newly installed or system upgrades devices shall utilize the 3-pulse temporal pattern for notification.
- If the existing system does not currently provide the Temporal Three Pattern, additions/modifications to the system do not have to meet that requirement. The pattern used on any particular system must be uniform throughout the building. Synchronization of the patterns is required to eliminate “overlapping” of tones or patterns.
 - The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupied space within the building.
 - The minimum sound pressure levels shall be: 70 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.
- A note shall be on the face of the plans indicating the ambient noise range for all the various spaces identified in the plans and the justification (i.e., national standard or previous test) for this ambient level. Also indicate the minimum audibility level (dBA) to be used for the acceptance test.
- Provide mounting details of all components as applicable (ie: manual audible, visible and combination visible/audible notification appliances).

NFPA 72 - 2016 Table A .18.4.3		Average Ambient Sound Level According to Location	
Location	Average Ambient Sound Level (dBA)	Location	Average Ambient Sound Level (dBA)
Business Occupancy	55	Pier and Water Surrounded Structures	40
Educational Occupancy	45	Place of Assembly	55
Industrial Occupancy	80	Residential Occupancy	35
Institutional Occupancy	50	Storage Occupancy	30
Mercantile Occupancy	40	Tower Occupancy	35
Mechanical Room	85	Underground Structures and Windowless Buildings	40
		Vehicles and vessels	50

F. Visual Notification.

- Show the candela rating of each visible notification appliance adjacent to the device on the floor plans in compliance with UL Standard 1971 and NFPA 72.
- The new strobe devices are required to be synchronized amongst each other. The new strobe devices do not have to be synchronized with existing strobe devices, unless there are more than two visible notification appliances in the same room or adjacent space within the same field of view (**NFPA 72: 18.5**).
 Visual notification appliances shall be in accordance with the applicable sections within NFPA 72.
- If utilizing ceiling mounted visible notification appliances indicate the height of the applicable ceilings.

G. FACP Replacements / Upgrades

If the panel is being replaced due to age, damage, parts are no longer available or the system is no longer serviceable a plan submittal is required unless panel replacement does not negatively impact the existing battery and voltage drop calculations. The Office of the Fire Marshal shall witness a test of the system, please contact the Office of the Fire Marshal when ready for testing.

Please refer to the Office of the Fire Marshal – Fire Protection Signage Requirements Bulletin

H. Magnetic Locks, Door Releasing Service and Delayed Egress

1. Magnetic-held door locks shall drop/release upon activation of the fire alarm system.
2. Door releasing for high ceiling areas (>15-ft) where the depth of the lintel exceeds 60 inches on both sides of the door will require an engineering evaluation to be conducted in accordance with NFPA 72.

I. ELEVATORS / ELEVATOR RECALL (NFPA 72:21.3)

1. Smoke detectors shall not be installed in unsprinklered elevator hoistways unless they are installed to activate the elevator hoistway smoke relief equipment. **(NFPA 72: 21.3.6)**
2. In facilities without a building fire alarm system, initiating devices used to initiate fire fighters' service recall shall be connected to a dedicated function fire alarm control unit that shall be designated as "elevator recall control and supervisory control unit," permanently identified on the dedicated function fire alarm control unit and on the record drawings. **(NFPA 72: 21.3.2)**
3. Elevator Recall functions shall include a 3rd circuit to indicate to emergency responders the elevator is no longer safe to use. When the elevator machine room smoke detector activates, it shall cause the firefighters hat in the elevator cars controlled by that machine room to flash **(NFPA 72:21.3.11)**
4. Elevator recall functions shall be in accordance with ANSI/ASME A17.1a/CSA B44a and NFPA 72.

K. Water Flow Alarm Systems

1. In accordance with the FCNYS section 903.4, all valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically supervised.
2. There must be an exterior horn/strobe placed above the FDC. The exterior horn/strobe shall activate upon a water flow only, and de-activate when the water flow stops. No other devices are required to be monitored by a water flow alarm system. The intent of the water flow alarm system is merely to monitor the status of the suppression systems.

L. Duct Detectors and Smoke Damper Detectors

1. If any duct smoke detectors are installed, they shall be supervised by this system and shall be wired to a supervisory zone only, not an alarm-initiating zone, as provided in NFPA 72 and 90A. (Required in HVAC systems > 2000 CFM.)
2. Duct smoke detectors and visible and audible supervisory signal at a constantly attended location. **(FCNYS 907.3.1)**
3. If the fire alarm panel is monitoring smoke damper detectors, the smoke damper detectors shall initiate a supervisory signal not a general alarm signal. Remote test switches shall be labeled to the designate which air handling unit they monitor.

M. Special Hazard Extinguishing Systems

1. Dry/wet chemical, carbon dioxide, halon, and clean agent systems shall be connected to the building fire alarm system, if provided, in accordance with the requirements of NFPA 72 **(FCNYS 904.3.4.3)**. The actuation of the extinguishing system shall annunciate an alarm signal to fire alarm control panel as well as provide the function of the extinguishing system. (Reference the NFPA standard applicable to the type of system).

Notification Requirements for Public Accessible/Common Use Rooms

The Fire Alarm Committee Members established a list of rooms that will be used as guidelines when designing a fire alarm system.

- The rooms requiring notification devices include, but not limited to:
 - Reception Lobbies
 - Waiting Lobby/area
 - Conference/meeting rooms
 - Corridors for public areas
 - Restrooms
 - Elevator Lobbies
 - School Office Areas
 - School health/nurse rooms
 - Places of assembly:
 - Theater, Auditorium, Gymnasium etc.
 - Classrooms
 - Accessible Rooms
 - Hotels
 - Handicap & Hearing-Impaired rooms etc.
 - Counselor offices
 - Locker/shower rooms
 - Indoor Pool Areas
 - Public Hotel Laundry Rooms
 - Break/lunch rooms
 - Dinning/cafeteria rooms
 - Sales floors/customer areas
 - Music Practice Rooms
 - Work room/office space greater than 100 sq ft.
 - Libraries
 - Mechanical/electrical/data/phone/utility rooms greater than 300 sq ft.
 - Medical exam/treatment/patient care rooms
 - Parking Garages will be a pre-designed basis.
 - Copy/mail rooms greater than 100 sq ft.
 - Dressing rooms
 - Open work areas greater than 100 sq ft.
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Installation

A. Smoke Detection

1. Where possible, smoke detectors should not be installed until the construction clean up of all trades is complete. The shipping covers that come with the smoke detectors are not considered listed dust covers and are not to be considered as protection against dust or other contaminants. Smoke detector heads found installed prior to cleanup will need to be replaced or re-certified by the manufacturer. **(NFPA 72:17.7.1.11.2).**
2. Where detectors are installed but not operational during construction, they shall be protected from construction debris, dust, dirt, and damage in accordance with the manufacturer's recommendations and verified to be operating in accordance with the listed sensitivity, or they shall be replaced prior to the final commissioning of the system.
3. The installer to coordinate with the mechanical contractor when determining installation of smoke detectors or sensors (i.e., not closer than 3 feet from any supply/return diffuser and that additional detection may be required due to the relocation or spacing adjustment of detectors, as a result).
4. Provide cross sectional elevation of the building showing ceiling heights and spaces above suspended ceilings etc. Indicate all conditions which would impact detector spacing and location. State the type of ceiling being installed (suspended, sheetrock, open joist etc...)
5. Show mounting heights and "Beam Detector" installation directives maximum height above finished floor, horizontal spacing, etc.).
6. Provide drawings of reflected ceiling plans or identify and beams (beam pockets), soffits, etc which will affect device spacing and locations.

B. Manual Pull Stations

1. All pull stations located in public areas or areas where they are subject to impact damage are to be fitted with protective sounding covers.
2. Any/all keys and or tools required to reset all components of the fire alarm system will be left on site. (This includes panel keys, proper size Allen keys or proper type of screwdriver(s) necessary to reset pull stations).

C. Stereo Shunt / Shut Down

1. Stereo shunt is to be installed that will shut down all music systems in the establishment. Music system will not reset until fire alarm system is reset.
2. Is the fire alarm system arranged to stop or reduce ambient background noise (via relays, circuits or other such interfaces) in areas such as theaters, dance halls, nightclubs, machine shops and other such high noise areas, and will the notification appliances produce a sound level at least 15dB above the reduced average ambient sound level or 5dB above the maximum sound level lasting at least 60 seconds after reduction of the ambient noise level, whichever is greater, measured 5' above the floor in the occupiable area, using the A-weighted scale (dBA). **(NFPA 72: 18.4.3.5.1)**

Submittal Requirements per Office of the Fire Marshal, NFPA 72 and FCNYS.

Drawings:

Cover Sheet/Title Block shall contain the following:

- Name of owner and occupant.
- Compass direction and clearly marked scale.
- Location including full property street address, including suite number as assigned by Town of Brighton.
- Name, address, phone, FAX number and email address of installing contractor and designer.
- Signature/seal or approval letter from designer of record.
- A 3"x 4" space labeled for "Fire Marshal Use Only".
This will be used for the Brighton Fire Marshal review comments, approval stamp, date, and signature
- Authority having Jurisdiction – Town of Brighton / Office of the Fire Marshal
- Brief written narrative detailing project as it pertains to your intent / system description within project.
- A list of the codes / standards, including the edition dates, that were used to design the fire alarm system.
- Type of fire alarm system – zoned, addressable, intelligent.
- Name, address and type (central, remote, proprietary) of monitoring agency.
- Occupant Load
- Indicate if the building is fully, partially or not sprinklered
- Building construction type and BCNYS occupancy classification and proposed use of structure(s).
If Multi-use, note separate occupancy classifications on the layout or key plan.
- Any specific notes that would be applicable to the specific project.
- Date of issue and any revision dates

System Information:

Wiring Riser Diagram

- Include a "Point-to-Point" (identify devices in the sequence intended to be wired per the riser) wiring riser diagram detailed for each type of device or appliance being installed.
 - o Identify each appliance for both initiating devices and notification.
For example:(sequentially number each circuit and component)
A1-1 = Audible circuit #1, device #1 / P3-4 = Initiation circuit #3, device #4, etc.
 - o The location of system duct smoke detectors shall be indicated. This information is to include the location of the remote test switch, when a remote test switch is required.
 - o The location of smoke control/exhaust fans, vents, dampers and other similar equipment. This information is to include the design information on the smoke control/management system.
 - o The location of all electromagnetic door holders and the smoke detectors that release those electromagnetic doors shall be shown. The ceiling elevation on either side of these doors must be indicated on the plans.
 - o Type and number of circuits in each riser – identify if wiring is enclosed in conduit, exposed, PL or NP
- Device / System Legend to include: Make, model, temperature rating if applicable, candela rating if applicable.
- Symbols shown on the Symbol Legend must match those in Architectural, General Electrical, and Floor plans for the Fire Alarm System. **NOTE:** *To expedite plan review, exclude symbols for components that are not part of the project.*

- Show all devices, appliances, components and equipment by symbols matching the symbol legend for each circuit
- Zone identification when (or where) applicable.
- Maximum number of detection devices allowed on two-wire circuits.
- Maximum number of detection devices allowed on four-wire circuits.
- Location of sprinkler system waterflow and tamper supervision, if applicable.
- Sprinkler system water flow and tamper switches shall be zoned separately.
- Location of range hood fire suppression systems discharge contacts, if applicable.
- The source of primary power and its wiring riser diagram.
- Source of secondary power.
- Location of primary power disconnecting means.
- Calculations:
 - o Battery calculations.
 - o Voltage Drop calculations.
 - o Deviations from listed spacing, such as reduced ceiling height or airflow, corridor spacing, or similar; or when otherwise called for in NFPA 72.
- Intended areas of coverage.
- Sequence of operations – matrix format.
- Notification and evacuation signaling zones indicated
- Floor plan indicating use of all rooms and level identification.
- Location of Alarm control and trouble signaling equipment.
- Location of Annunciator, if provided
- Location of FDC (Exterior Weather Proof Horn Strobe Provided)
- Location of monitor/control interfaces to other systems.
- The location of all elevators and elevator equipment rooms shall be indicated.
- When a new system is an addition to an existing system, enough of the old system shall be indicated to make all conditions clear.
- Acoustic properties of spaces, where known

Final Acceptance Testing

Certificate of Compliance

1. Before requesting final approval of the installation, the installing contractor shall furnish a written statement stating that the system has been installed in accordance with approved plans and tested in accordance with the manufacturer's published instructions and the appropriate NFPA requirements. **(NFPA 72 – 7.5.2)**

A. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement. **(FCNYS §F901.2.1)**

Testing

1. It shall be the duty of the person doing the work authorized by a permit to notify the Office of the Fire Marshal that the work is ready for inspection.
2. Functional Pre-Test Requirement. A full operational pre-test of the fire alarm system shall be performed **PRIOR** to the scheduled fire inspection and shall be documented on the Installers Certification form. Failure to pre-test will result in immediate failure of the inspection and the assessment of a re-inspection fee.
3. Notification appliances and circuits, alarm- supervisory- and trouble-initiating devices and circuits, primary and secondary power supplies, shall be tested in accordance with NFPA 72. **(FCNYS §907.17)**
4. Battery/Voltage Drop Test Procedure: Systems are to be taken off of AC power 24 hours prior to scheduled final testing. Once the inspector arrives on site, the 5 or 15 minute alarm test shall commence. One initiating device will be activated and visual/audible devices will continue to operate for 5 minutes (15 minutes for voice alarms).
5. Phone lines/monitoring devices are still required to be provided for final testing even if there is no occupant for the building. Without verification of monitoring, the system cannot undergo final testing.
6. When any initiating device, notification appliance or control relay is added, it shall be functionally tested.
7. If any of the above is deleted, another item of the same description on the circuit shall be tested
8. When any modification to the control equipment is made, the control equipment shall be tested in accordance with **(NFPA 72:14.4.)**
9. Verify manual pull stations not more than 5 feet from entrance to each exit and located so that travel distance to nearest box does not exceed 200 feet. **(FCNYS §907.4.1)**
10. Fire alarm detection and notification devices shall be visually inspected for proper location, candela rating and installation **(NFPA 72:10.3).**
11. Verify visual alarm notification mounting heights such that entire lens is not less than 80" and not greater than 96 above the finished floor or at a performance based alternative. **FCNYS §907.2 and 907.3)**
12. All areas shall be tested using a sound level meter, and witnessed by the Office of the Fire Marshal. Provide additional Audible Notification Appliances as necessary to attain 15dBA above ambient.
13. All corridor spaced strobes are placed a maximum of 100' feet apart and within 15' feet from ends of the corridor.
14. Circuit disconnecting means shall have a red marking, shall be accessible only to authorized personnel, and shall be identified as "FIRE ALARM CIRCUIT." **(NFPA 72 - 10.6.5.2.2)**
15. The location of the circuit disconnecting means shall be permanently identified at the fire alarm control unit. **(NFPA 72 - 10.6.5.2.2)**
16. Circuit breaker and panel number as well as the central station account number are to be noted on the inside of the FACP door.
17. Batteries shall be permanently marked with the month and year of manufacture, using the month/year format. **(NFPA 72 - 10.6.10.1.1)**

Completion Documents

1. The completed Fire Alarm System Record of Completion form is to be provided to the fire inspector at the time of inspection. This form is located in Chapter 7 of NFPA 72. Be sure to use the updated form in the 2016 edition of NFPA 72. Previous editions will NOT be accepted.
2. A copy of a completed Pre-Final Acceptance Test Checklist.
3. A copy of the completed Fire Alarm System Installer's Certification.

4. Permanent records in accordance with NFPA 72:14.6 shall be provided.
5. A clearly marked pictograph of the building layout indicating the fire alarm zone configurations shall be provided adjacent to the fire alarm control panel, at the main entrance, or in a location as specified by the Fire Marshal.
Please refer to the Office of the Fire Marshal – Fire Protection Signage Requirements Bulletin
6. System documents shall be housed in a documentation cabinet, installed next to the Fire Alarm Control Panel. See also, section 7.7 of NFPA 72.
7. Obtain a Bi-Annual Fire Alarm Permit in accordance with the Town of Brighton Code § 28-9 Fire alarm System permit is required and where no person shall possess or use a fire alarm system without first applying for and receiving a fire alarm permit therefore in accordance with the provisions of this article.

Please read the information below and sign before submitting your application

Your application shall be deemed complete only if this information package is reviewed and application completed and submitted. Accuracy of the submittal package, including knowledge and understanding of this information package, is the responsibility of the applicant.

Failure to submit an accurate submittal package will be considered an incomplete application by the Plan Reviewer. An incomplete submittal will result in a **HOLD**.

If work is found to have commenced without approved plans and/or a proper permit, this office reserves the right to shut down any/all portions of the entire project deemed necessary to inspect, investigate and confirm that work has been done.

All installations and/or operations must concur with the approved plans. Any deviation from the approved plans requires a re-submittal to the Office of the Fire Marshal. If changes, alteration or deviation from the approved plans are not submitted for review and approval prior to final inspection by the Office of the Fire Marshal, then the installation **permit fees immediately double**.

When work for which a permit is required has been conducted without a permit or approval, a stop work is immediately posted and all **permit fees immediately double** upon proper application for plan review and due upon issuance of a new installation permit

If any portion of the work performed is not clearly visible or readily accessible, you will be ordered to demolish, disassemble or remove any and all obstructions regardless of the cost incurred. Failure to comply will result in the suspension/revocation of any building or other permits related to the site.

In addition, it is understood that the installation of fire protection systems shall be made only by persons properly trained and qualified to install the specific fire protection system being provided. The installer shall certify to this authority that the installation is in complete agreement with the terms of the listing and manufacturer's instructions and/or approved design plan.