



STATE OF NEW HAMPSHIRE DEPARTMENT OF SAFETY

John J. Barthelmes, Commissioner

Division of Fire Safety

Office of the State Fire Marshal

J. William Degnan, State Fire Marshal

Office: 110 Smokey Bear Blvd., Concord, NH

Mailing Address: 33 Hazen Drive, Concord, NH 03305

PHONE 603-223-4289, FAX 603-223-4294 or 603-223-4295

TDD Access: Relay NH 1-800-735-2964 ARSON HOTLINE 1-800-400-3526



July 24, 2013

Mr. David L. Stack, Town Manager
Town of Bow
Town Manager's Office
Municipal Office Building
10 Grandview Road
Bow, New Hampshire 03304

Dear David:

Thank you for meeting with me on July 19, 2013 to discuss code compliance and waiver issues related to the Bow Fire Department/Bow Community Building. A brief, plain-language synopsis of the violations and concerns is articulated in the attached reports of two limited visual inspections conducted during the first two weeks of May 2013.

As you know and have acknowledged, the outstanding waiver issue, related to the change of use created when permanent fire fighters occupied the building and created a residential occupancy within, represents a primary life safety concern which was not addressed, as required, by the Town of Bow. The 2007 waiver, requested by Town Manager James Pitts, was limited to a relatively short window of occupancy, and was dependent upon the approval of the project to construct a new fire department facility. Upon failure of the Town of Bow to approve the construction of a new fire department facility, the waiver expired, and the current fire department facility was required to be rendered compliant with the New Hampshire State Fire Code and all other relevant codes related to building and life safety.

The New Hampshire State Fire Marshal's Office does not have a tracking mechanism for outstanding waivers, and I became aware of the waiver earlier this year, previous to conducting the May 2013 inspections. As I'm sure that you recall, you surrendered a copy of the 2007 waiver document to me when we first met to discuss the inspections. When I reviewed our office inspection file for the Town of Bow, no response or other communication, relative to the waiver, was revealed.

NFPA 1, *Fire Code* (2009 Edition) Chapter 1.15.1 authorizes the Authority Having Jurisdiction to compel the owner to engage the services of a third-party fire protection engineer to assist the owner in developing a compliance plan of action for the subject property. In addition, Chapter 1.14.1 compels the production of engineered drawings and construction documents for the construction related to a compliance plan of action. The services provided by these professionals often facilitate the efficient and timely achievement of the typical three- year mandate from non-compliance to total compliance. Compliance deadlines shall be as follows:

On or before August 1, 2013, the Town of Bow shall engage the services of a New Hampshire-Licensed Fire Protection Engineer with the scope of work to develop a proposed building and life safety compliance plan of action, including engineered drawings, for the Bow Fire Department/Bow Community Building on or before September 15, 2013. The proposed compliance plan of action shall identify the prioritized compliance landmarks and propose deadlines for compliance with each landmark of compliance.

The first landmark of compliance shall be the attainment of a compliant, on-site residential occupancy for the permanent fire fighters, or the submission of a waiver request articulating an equivalency in support of the waiver request. If the proposed residential occupancy is within the existing building, the minimum requirements shall include fire-rated, smoke-tight separations from the other occupancies, as well as detection and notification appliances, and a dedicated exit, at the level of exit discharge, to the outside perimeter of the existing building (outside wall). If the proposed residential occupancy is without the existing building, the portable or satellite residential accommodation shall comply with all required building and life safety requirements.

On or before November 1, 2013, the on-site residential occupancy shall be complete, operational, and in compliant status with all building and life safety requirements. The proposed compliance plan of action shall achieve total compliance on or before September 15, 2016.

Please respond to this communication, including any questions or concerns which you may have, in advance of the August 1, 2013 deadline for engagement of a fire protection engineer.

Sincerely,

A handwritten signature in black ink, appearing to read "William O. Clark". The signature is fluid and cursive, with the first name "William" written in a larger, more prominent script than the last name "Clark".

William O. Clark
Investigator # 907

cc: J.William Degnan, file

**NEW HAMPSHIRE STATE FIRE MARSHAL'S OFFICE
CONTINUATION OF INSPECTION**

CASE #: 2130206	INVESTIGATOR: W. O. CLARK	ID#: 907	TOWN: BOW
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On 05/01/2013, at the request of Bow FD Chief Dana Abbott, Investigator Ronald Anstey and I conducted a fire and life safety inspection at Bow FD. The inspection commenced at 09:00 a.m. and included a limited visual inspection of the community room, kitchen, performance stage, fire department apparatus bays, fire department sleeping quarters, fire department day (meeting) room, basement utility area, and Bow Recreation storage area.

The facility consisted of a variety of construction types, and was originally occupied in 1955. The occupancy classification is separated mixed use, including residential, storage, business, and assembly. There was no fire alarm system, but several areas of the facility contained smoke and CO detectors, and exit signage with integral emergency lighting.

The Day (meeting) Room inspection revealed both stairs to be non-compliant (railings), as well as non-compliant interior finish, wiring methods, exit remoteness, exposed structural steel, and furnishings.

The Apparatus Bay #1 inspection revealed non-compliant wiring methods, but included one EBU emergency light unit.

The inspection of the Basement Utility area revealed non-compliant wiring methods and missing components, inadequate combustion air, stair unit, common venting of boiler and water heater, barometric damper, leaking waste line, and disturbed Transite ceiling materials.

The Kitchen inspection revealed non-compliant periodic maintenance of and lack of full coverage of hood fire suppression system (last inspected and labeled non-compliant in 2007), and inadequate clearance to combustibles.

The Community Room displayed an assembly permit stating a maximum capacity of 299. The Community Room measured approximately 4000 sq. ft. and the stage measured approximately 600 sq. ft. Doors were 72" and 36", and the 50% occupant load represented the limiting factor. It was noted that the requirement for a full fire alarm with voice evacuation is for occupant loads of greater than 300.

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The Stage area violations included non-compliant (nm) wiring methods, interior finish, furnishings, over stage storage compartment, stage curtains, combustible storage, housekeeping (impaired exit on Side D), exit signage, and obstructions.

Apparatus Bay #2, aka Back Bay, included non-compliant combustible and flammable storage, wiring methods, structural deficiencies and lack of separation from community room (assembly), storage of (5) 20# LP containers.

Residence spaces contained single-station, combination smoke and CO detectors and a compliant electrical service panel. The Residence spaces represented a change of use, and were the subject of a 11/20/2006 variance request from Bow Town Manager James Pitts. The variance was granted, but expired upon failure of the town to pass the new fire facility project at the deliberative session of May 2007. Consequently, this space remains non-compliant.

The Rear Bays included non-compliant separation (open to the Community Room), wiring methods, and housekeeping deficiencies.

The evaluation of the facility electrical system was completed on 05/08/2013 and is the subject of a separate report by NH State Electrical Inspector Alfio Torrisi. The main panel capacity was 225 amps. The generator was not protected, as required, from anticipated traffic.

End of Report

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Bureau of Electrical Safety and Licensing
Office: 110 Smokey Bear Boulevard, Concord, NH
Mailing Address: 33 Hazen Drive, Concord, N.H. 03305
603-223-4289, FAX 603-223-4295
www.nh.gov/safety/divisions/firesafety/building/electrician/

To: File

From: Alfio Torrisi, State Electrical Inspector

Date: May 16, 2013

Subject: Town of Bow, Multi-use building

At the request of Fire Investigator William Clark and Chief Electrical Inspector Dean Sotirakopoulos of the NH State Fire Marshal's Office, I Alfio Torrisi, NH State Electrical Inspector from The Bureau of Electrical Safety and Licensing assisted in a limited visual inspection on May 3, 2013 at the Town of Bow's Fire Station, located on Two (2) Knox Road.

This inspection involved reviewing a multi-use building built in the mid 1950's and is currently occupied by a fire station and senior center. The age of the building predates the State of New Hampshire's licensing laws. Most of the electrical equipment is original; some electrical equipment like the Generator, have been added through the years, including various small electrical installations.

Because of the various years and National Electrical Code (NEC) cycles involved, my review was based on the overall integrity of the various installations.

I found numerous supporting issues relating to securing of raceways and cables throughout the building. To ensure the integrity of the bonding and grounding aspect of a raceway and cable, the proper support is paramount. This also ensures the reliability of the entire electrical system and minimizes potential electrical fault hazards.

Working space clearance, as they apply to electrical equipment need to be maintained. Every panelboard in the building is required to have no less than a 30 inch width, 36 inch depth and 78 inches of head room height in front of each panelboard, this area shall not be used for storage of items, whether portable or not. Understanding space is at a premium in this facility, it should not be at the expense of personnel accessing the electrical equipment.

A common occurrence, which happens over years on numerous electrical installations, is the improper labeling of disconnect switches and circuit breakers. This facility requires an evaluation of all circuits in order to properly identify all disconnects and circuit breakers.

The 1953 NEC, Chapter 10, Table 2, Note 10 States....

10. Deterioration of insulation. It should be noted that even the best grades of rubber insulation will deteriorate in time, so eventually will need to be replaced.

Given the age of the original equipment, I would recommend an evaluation to be conducted by an electrical engineer on the entire electrical system in order to ensure reliability of the electrical system.

Sincerely:


Alfio Torrisi
NH State Electrical Inspector