

## Notes From the Commish

### Basements, Bedrooms & Other Problems

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As the cost of housing goes up and budgets are squeezed we are seeing a number of rooms converted into purposes that they were not intended for, or modifications being made to homes to expand the living space. In the process of the conversions, various code requirements and safety items are often overlooked.

Many times the problem is discovered during an inspection for some other work being done, or when emergency services are called to respond for a problem; such as a carbon monoxide alarm, fire, police or medical emergency.

If another Town Agency discovers a potential problem while rendering service, the Building Commissioner or appropriate inspector may be summoned to the location to evaluate the situation. Based on the inspectors knowledge of regulation and evaluation of the situation, the problem maybe minor and the situation maybe allowed to continue, or the hazard could be so great it requires the repair, removal of an item or the discontinued use of the property or portion of it, immediately.

Recently I have been to three homes in conjunction with the Fire Department. In two cases there were bedrooms in the basement level of the structure, and the third, there was a reconfiguration of the smoke pipe and chimney system for the oil burner. In all three cases the fire department had been summoned to the home for emergencies, two were elevated levels of carbon monoxide, with the third being an oil burner malfunction resulting in a contained fire.

The basement level bedrooms had been constructed to allow additional family members to reside in the home without proper permits for the remodeling or wiring. With proper permitting and plan review it is possible to construct lower level bedroom, in these cases, no permit had been obtained, the bedrooms lacked the proper emergency egress window or door and the required smoke and carbon monoxide detectors.

Recent editions of the building code require that every bedroom have a second means of emergency egress or rescue, through an operable opening from the bedroom that is not more than 44 inches above the floor, has a minimum opening of 3.3 square feet and a minimum clear opening of 22x20 inches, measured in either direction, that exits directly to the outside of the structure. Few existing basements have windows that meet these requirements.

While it is possible to cut the foundation wall and install a window meeting the previously mentioned code requirements, a set of stairs with a landing needs to be constructed for access to grade level. The new seventh edition of the code allows for the installation of a window well, that has a minimum of 9 square feet of area, a minimum projection of 36 inches, the window must be able to fully open and if the depth of well is 44 inches or more there must be stairs or ladder type arrangement not more than 18 inches tall and 12 inches wide, in addition ladders may not project more than 6 inches into the well. (§ 5310.2)

If the lower level space is to be used as a family room, a door leading to grade or bulkhead door opening is sufficient to provide the secondary means of egress from the lower level of a home.

The third issue that I responded to was the homeowner hiring a contractor to reconfigure the flue piping for their oil burner to metal chimney previously used for a wood stove. This project resulted in elevated carbon monoxide level in the home and the opening of a wall between the garage and living space.

While it seemed to make sense to attach the exhaust gas from the oil burner to the flue that had been previously used by a wood stove, the consequences were potentially deadly, the level of carbon monoxide found by the Fire Department was 200 parts per million. The Fire Department policy requires the use of breathing equipment at level of 10 parts per million or more. In addition to facilitate the work, the sheetrock that separates the garage from the living space had been removed, some structural elements had been compromised and a large opening was created that could be a path for a fire to extend from the garage into the voids of the structure.

The reuse of the metal chimney that had not been inspected and cleaned before the oil burner was connected to it resulted in heating of the soot and creosote that had been deposited on the chimney walls becoming loose and falling to the bottom of the chimney clogging the pipe, preventing the exhaust gas from going up the flue and backing up into the home, along with deadly carbon monoxide gas.

Two of the homes were equipped with the required carbon monoxide detectors that alerted the occupants to dangerous levels of carbon monoxide. The third home that had the contained fire had no working detectors of any kind. The smoke detectors had the batteries removed and the carbon monoxide detector was still in the packaging from the store.

Most people have good intentions and believe the contractor they have hired is competent and conversant with the codes, that permits are not needed, applying for a permit seems to be a difficult task, along with the perception that the work will lead to a property tax increase. It is true that most contractors are competent, but many do not obtain the proper permits, taxes sometimes increase because of improvement to the home, and there are a number of steps to obtain permit, but all are necessary and protect you from future problems.

All of this leads us to the reasons for codes, permitting requirements, plan review and inspection by various officials; it is to provide minimum levels for life safety. A building permit is required for anything that may affect the life safety components of a structure, adding rooms, reconfiguring finished spaces, creating rooms or changing the use of an area within the home, all are activities that require building permits. Painting, papering and finish flooring do not require permits.

For additional guidance in determining work that may need a building permit, refer to the [FAQ](#) portion of the Department of Building Inspectional Services web page, or call the office at 508-248-2241, we would rather answer the question prior to the work being done than respond to a problem after the fact.