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TO: OSFM PERSONNEL AND MARYLAND CODE AUTHORITIES
FROM: A. LARRY ISEMINGER, JR., P.E., CHIEF FIRE PROTECTION ENGINEER
RE: SUMMARY OF THE NEW MARYLAND SMOKE ALARM LAW

We are receiving questions concerning the new Maryland Smoke Alarm Law which took effect on July 1, 2013 and how the changes will impact smoke alarm requirements in residential occupancies in the State. We had previously issued a document on the impact of the new law on day care homes. This document will be more general in nature and applicable to all residential occupancies. It is intended to highlight some of the more important provisions of the rewritten law with the goal of uniform enforcement throughout the State of Maryland. Please keep in mind that the original smoke alarm law was written thirty-eight years ago and modified numerous times to the point where it was pieced together and very difficult to understand and enforce.

The Maryland Smoke Alarm Technology Task Force spent nearly two years reviewing evolving smoke alarm technologies and speaking with experts and manufacturers from around the country. Everyone is encouraged to read the Smoke Alarm Technology Task Force Report dated August 2012. The report is available on the MD State Fire Marshal's Office website by clicking on document downloads and then opening the task force report.

While strict compliance with the provisions of the new Maryland Smoke Alarm Law will significantly reduce the unnecessary loss of life in residential fires, most code officials have no jurisdiction in existing one- and two-family dwellings. It will therefore be critical to create widespread publicity to convince the public of the critical need to upgrade the smoke alarm coverage in their homes. Please take every opportunity to encourage compliance with the new Maryland Smoke Alarm Law.

A summary of the more important provisions of the new smoke alarm legislation is as follows:

1. The new Maryland Smoke Alarm Law is part of the Public Safety Article, Sections 9-101 through 9-109. At present, the best way to review the wording is to go to the Maryland General Assembly website and bring up the final version of Senate Bill 969 or House Bill 1413. When doing this, please keep in mind that the first six pages of the document are bracketed out old language which has been deleted and that the new law is in bold capital letters beginning in the middle of page six. Everyone is encouraged to read through the new law.
2. The new Maryland Smoke Alarm Law will require the replacement of smoke alarms when they are ten years old; (ten years from the date of manufacture). This replacement requirement is already in the adopted State Fire Code, reference to the 2010 edition of NFPA 72, Paragraph 14.4.8. It is envisioned that adding the wording in State Law and publicizing the requirement will hopefully result in the widespread replacement of older nonfunctioning or unreliable smoke alarms. The date of manufacture, while sometimes hard to locate, should be printed on the back of the smoke alarm. If no manufacture date can be located, it is clearly time to replace the smoke alarm.

3. For new construction, the Maryland Smoke Alarm Law has simply been updated to correspond with the International Residential Code and NFPA 72, National Fire Alarm and Signaling Code. An AC power, battery back-up smoke alarm is required in every bedroom, in the common area outside of the bedrooms and on every other level of the dwelling unit, with all of the required smoke alarms being interconnected. Every local building official who is presently enforcing the 2009 or 2012 IRC should already be enforcing this requirement and there is essentially no change in requirements or increase in cost.

4. The smoke alarm requirements for existing older homes are based upon when the house was built. As a result, the requirements are sometimes confusing and it will be critical to determine when the home was actually built to determine the level and type of smoke alarms required. Key dates are July 1, 1975, January 1, 1989, and January 1, 1990.

5. The new law heavily emphasizes the use of sealed smoke alarms with long life batteries and silence/hush buttons. However, it is critical to understand that these devices are appropriate only where battery operated smoke alarms presently exist or in locations where no smoke alarms are present. **It is never acceptable to remove required wired in smoke alarms and replace them with any type of battery only operated device.**

6. The intent of the new Maryland Smoke Alarm Law was to achieve as much reliable smoke alarm coverage as possible in older dwellings without ever requiring a homeowner to run new wiring. It was believed that any provision in the law which would have required hiring an electrician, obtaining an electrical permit, tearing up, patching and repainting gypsum board, etc. would have never passed the legislative process and would have never been enacted into law.

7. The primary intent of the new Maryland Smoke Alarm Law was to transition away from smoke alarms with nine-volt batteries. Historically, the normal course of action when frying bacon or burning toast activated the smoke alarm was to stand on a chair and remove the battery to shut the unit up. The annoying low battery alarm chirp which always occurs at 3:00 in the morning has once more resulted in removal of the smoke alarm battery. Despite the best of intentions, many of these batteries never got replaced resulting in many loss of life fires in homes having smoke alarms with dead or missing batteries. Both of these problems will be essentially solved as we transition to sealed smoke alarms. The silence button will temporarily turn off the alarm due to cooking activations and the alarm will reset after a few minutes. A low battery chirp will occur only once every ten years with the new generation sealed units, rather than once per year.

8. While the new sealed smoke alarms with long life batteries and hush features will cost a few more dollars at the time of purchase, money is actually saved over the ten year life of the device since there is no longer a need to purchase new nine-volt batteries every year.

9. Under the old law, for homes constructed prior to July 1, 1975, a smoke alarm was required in each sleeping area and the smoke alarm may be battery operated. Essentially, an older two story house with a basement could get by with a single nine-volt battery operated smoke alarm in the second floor hallway, outside of the bedrooms. This device, even if working properly, most likely will not alert a family member who falls asleep playing video games in the basement recreation room or while watching TV in the living room on the first floor.

10. For homes constructed between July 1, 1975 and June 30, 1990, an AC power operated smoke alarm was required in each sleeping area. Once more, if all of the bedrooms were located on the second floor, only one smoke alarm outside of the sleeping rooms was required. The requirement that the AC-power operated smoke alarms have battery back up became effective July 1, 1990.

11. Any new home in Maryland constructed after January 1, 1989 required at least one wired in electric smoke alarm on every level of the home, including the basement and required the units to be interconnected in

order that activation of any one of the required smoke alarms resulted in the sounding all of the required smoke alarms.

12. Smoke alarm coverage in older homes constructed prior to January 1, 1989, must be upgraded to at least one approved smoke alarm on every level of the older home when any one of the following first occur:

- A. The existing smoke alarm is more than ten years old.**
- B. The existing smoke alarm fails to respond or otherwise malfunctions.**
- C. There is a change of tenant.**
- D. A building permit is issued for an addition or renovation.**
- E. January 1, 2018 at the absolute latest.**

13. To achieve the upgraded smoke alarm coverage noted in item 12, smoke alarms shall be AC-power operated units except that sealed battery operated smoke alarms with long life batteries and silence / hush button features may be installed in locations of the home where wired in smoke alarms did not previously exist.

Please feel free to contact me as questions arise. The goal of the new law was clearly to get at least one smoke alarm on every level of older homes and transition away from the removable nine-volt battery operated smoke alarms. Please also understand that there is a small, but extremely vocal group of individuals out there that are attempting to convince everyone who will listen that ionization smoke alarms are no good and that only photoelectric smoke alarms should be allowed. The conclusion of the Maryland Smoke Alarm Technology Task Force was that both ionization and photoelectric smoke alarms are listed to Underwriters Laboratories Standard 217 and are perfectly acceptable early warning devices which have been responsible for the saving of many lives.

The members of the Task Force and the Maryland State Fire Marshal's Office encourage the use of both technologies by installing at least one ionization and at least one photoelectric smoke alarm in every home. Furthermore, nothing in the new law is intended to imply in any way that smoke alarms are an adequate substitute for residential sprinkler protection. The combination of properly located and functioning smoke alarms and properly designed residential sprinkler protection provide the greatest potential for surviving any residential fire.