CONSTRUCTION CODE APPEALS COMMITTEE

The Construction Code Appeals Committee meeting was held on March 24, 2016 at 4:15 p.m. with Chairman Sudler presiding. Members present were Mr. Lewis and Mr. Koenig.

AGENDA ADDITIONS/DELETIONS
By unanimous consent, the agenda was adopted as presented.

Reconsideration of Appeal of Requirement for Places of Assembly to be Sprinklered (Chapter 46 - Fire Prevention and Protection, Article IV - Public Occupancies, Section 46-162 - Sprinkler Requirements) - 518 and 524 South Bay Road *(Proverbs 356 Properties, LLC)*
The Construction Code Appeals Committee previously considered this matter during their meeting of February 23, 2016, and no action was taken by the Committee.

Mr. Timothy Mullaney, Fire Marshal, advised members that on March 14, 2005, the City adopted the sprinkler requirements in Chapter 46-162 of the Dover Code in an effort to make public assemblies safer. He explained that the new requirements were more stringent than those mandated by the National Fire Protection Association (NFPA) at that time. Mr. Mullaney noted that he had not been working in the Fire Marshal's Office when the new requirements were introduced, and this decision was made by Mr. David Truax, former City of Dover Fire Marshal. Mr. Mullaney indicated that the intent was to get water on fires more quickly to save lives and ensure that people in public assemblies with large occupant loads would be able to exit safely. He noted that the City of Dover Fire Department is a volunteer organization. Mr. Mullaney indicated that, as Fire Marshal, he supported the requirements, stating that he deals with fire protection and places with large occupancies on a daily basis, and sprinkler systems are needed to allow occupants to exit facilities under their protection.

In response to Mr. Lewis, Mr. Mullaney stated that the building does not currently have a sprinkler system.

Noting that this business had changed hands multiple times since the Code amendment took effect in 2005, Mr. Lewis questioned why the Code had not been enforced. Responding, Mrs. Ann Marie Townshend, Director of Planning and Community Development, indicated that when ownership had changed previously, the building remained a restaurant. She explained that there had been no change in the occupancy classification and no major renovations; therefore, nothing in the Code would have triggered the requirement for Code compliance. In the current case, the use would change from a restaurant to a different occupancy classification and there would be renovations, both of which would trigger enforcement of the Code.

Mr. Sudler asked if this was a non-conforming use or if the property had been grandfathered. Responding, Mrs. Townshend advised that when the building became a restaurant, a sprinkler system was not required. It was continuously used as a restaurant, so the type of use did not change. Mrs. Townshend noted that when an occupancy classification is changed or modifications are made to a building, the new requirements come into effect. She noted that although the term "grandfathered" is not typically used, this was essentially the case. Mrs. Townshend advised that the building had been under the old regulations until there were significant changes to the building and the type of use.

Mr. Evan Smith, owner of the properties at 518 and 524 South Bay Road, asked if the sprinkler requirement was due to a change of use or building construction. Responding, Mrs. Townshend stated that both were factors.

Mr. Sudler stated his understanding that an upgrade of 50% would require that a property be brought up to Code.

Mr. Smith asked what would happen if the property remained in the state in which he bought it. Responding, Mr. Sudler explained that the change in use would also make him accountable to the current Code.

Mr. Lewis expressed concern that the restaurant did not have a sprinkler system when it was open.

Mr. Sudler noted that during the Construction Code Appeals Committee meeting of February 23, 2016, there had been discussion about construction measures that could be implemented or substituted for the sprinkler system. He stated that a legal opinion had been sought and Deputy City Solicitor William Pepper indicated that the City would not be liable if a waiver were granted and a fatality occurred, and this liability would be on Mr. Smith's insurance provider. Mr. Sudler expressed his opinion that, from the City's perspective, this was the major concern, apart from the Code.

In response to Mr. Sudler's request for his input, Mr. Gregory Akers, Chief Building Inspector, advised that there was a change in the occupancy classification from A2, which includes banquet and night clubs, restaurants, taverns, and bars, to A3, which has five (5) sub-categories of assembly. As result, the existing building is required to meet the minimum requirements for the new occupancy class. Mr. Akers advised that the proposed construction exceeded 50% of the aggregate floor area and it was proposed to locate an apartment above the funeral parlor. He informed members that the engineer had demonstrated the flame spread ratings and different materials for separation between the floors on the contract documents. Mr. Akers stated that staff makes people aware of construction alternatives as opposed to sprinkler systems. He felt that such an alternative would be achievable; however, he stated that nine (9) times out of ten (10), a sprinkler system will prevail due to cost. Mr. Akers explained whatever is not done with sprinklers must be made up for with non-combustible materials, and this presents challenges, for example, fire-rated plywood is much more expensive than regular plywood. He indicated that if the engineer was able to present a plan that is equal to a sprinkler system, this could be considered; however, this would not change the Code.

Mr. Scott Koenig, City Manager, questioned if the sprinkler system would be required if the occupancy load was 149. Responding, Mr. Akers stated that the Code indicates that all new indoor places of assembly with an occupant load of 150 persons or greater require a sprinkler system.

Mr. Davidson stated, to his recollection, that their model was based on an occupancy of 220 on the first floor.

Mr. Koenig noted that Mr. Davidson had indicated that the funeral home would possibly be occupied by 229 people once per day during the previous meeting.

Mr. Koenig questioned if the occupancy load was the only factor driving the sprinklering of the building or if the 50% renovation issue was also an issue. In response, Mr. Akers indicated that both factors were in play. He advised that the Code states that places of assembly shall be sprinklered throughout in accordance with the most recently adopted edition of NFPA #13 when the following apply:

1) All new indoor places of assembly with an occupant load of 150 persons or greater.
2) Any interior renovations of 50 percent or more to an existing place of assembly with an occupant load greater than 150 persons.
3) Any additions or increase in interior size to an existing place of assembly that would create an occupant load of 150 persons or greater.

Mr. Akers noted that this building would change from occupancy class A2 to A3 and the renovations would exceed 50%.

Mr. Mullaney advised that staff typically goes by the information presented to the City from an architect that indicates the amount of space and the calculations, and staff must adhere to the requirements presented in the Code.

Mr. Akers indicated that occupancy is based on calculations, not what it is stated to be.

In response to Mr. Sudler, Mr. Smith stated his belief that there are four (4) or five (5) funeral homes in Dover.

Mr. Sudler questioned if any of these funeral homes had caught fire in the last two (2) to three (3) years. Responding, Mr. Mullaney stated that he did not know if the Dover Fire Department had responded to fires at these locations but could check records. He stated that he was aware of two (2) funeral homes that were sprinklered.

Mr. Sudler questioned the likelihood of a fire in a funeral home. Responding, Mr. Mullaney indicated that this is a "what if" question that he could not answer. He believed that the last fire at a funeral home in Delaware had occurred in Lewes.

Mr. Jim Davidson, Fire Protection Engineer, stated that most of the time he believes that sprinklers are needed for public and life safety; however, after the Construction Code Appeals Committee meeting of February 23, 2016, he performed calculations on probability and occurrence. Mr. Davidson stated that the NFPA indicated there were 495,000 fires in the United States each year between 2007 and 2013, only 70 of which were in funeral homes. This equated to a probability of one (1) in 7115. Mr. Davidson indicated that in a real-life situation, this would occur just between the probability of an individual being struck by lightning in their lifetime and the probability of

knowing someone who is struck by lightning. The probability would be slightly more likely than an individual being accidentally shot by a firearm or dying in an air or space transportation vehicle accident. Mr. Davidson noted that the possibility of looking into smoke detection systems had been discussed, and he proposed a Very Early Smoke Detection Apparatus (VESDA) system, which is used in very high-end, smoke sensitive environments. He indicated that with this system, a laser is put in a cloud chamber, counts the number of smoke particles, and sounds an alarm. Mr. Davidson indicated that the VESDA is very accurate and is nearly false alarm proof. He explained that in smoke obscurity, most smoke detectors work at 2% obscuration per foot; however, the VESDA detector operates at 0.002% obscuration per foot. Mr. Davidson advised that the device would sound a fire alarm before smoke can be seen and is designed to start picking up the particulate of the products of combustion just as an area is beginning to heat up, such as in wiring, insulation, or fabric, by the scientific principles of a Wilson cloud chamber. He informed members that when systems are used side by side, a VESDA detector can sound an alarm three (3) minutes before a smoke detector and five (5) minutes before a sprinkler head goes off, because a sprinkler head needs to have heat up at the ceiling and a smoke detector needs to see the smoke. Mr. Davidson stated that the VESDA system has a small pipe hidden behind construction with a small blower motor that sucks air samples from all points in the building into its monitoring system. It actively sees the products of combustion and ensures that it is sampling all of the air and is not waiting for the air to get up into the detector.

In response to Mr. Smith regarding how quickly the building could be evacuated, Mr. Davidson advised members that modeling indicated that it would take 1.6 minutes to evacuate 150 people and 2.0 minutes to evacuate 220 people.

Responding to Mr. Mullaney regarding whether he had assumed in the modeling that all occupants were capable of self-preservation, Mr. Davidson indicated that he did make this assumption; however, he reduced the number of feet per second that NFPA calls for by 80% due to the possibility of elderly people. He had assumed that people would go out more slowly than in a standard NFPA analysis.

Mr. Mullaney questioned if Mr. Davidson could run an analysis that included a percentage of people not capable of self-preservation. Responding, Mr. Davidson indicated that the term "not capable of self-preservation" refers to people who cannot get out. Mr. Mullaney indicated that he was interested in people in wheelchairs who would need to be pushed out by someone else, and Mr. Davidson stated that this could be done. He advised that wheelchairs would slow down egress; however, he thought, as an engineer, that the VESDA system would give people very early warning to look for the problem.

Mr. Mullaney indicated that staff had not seen a VESDA system in the City; therefore, he was not familiar with it. Mr. Davidson advised that the system was developed by the National Aeronautics and Space Administration (NASA) and was used to monitor space capsules on the ground to provide the earliest possible warning. He indicated that it was now being used in juvenile detention centers

because sprinklers are not allowed in the sleeping quarters of these facilities since the Federal Correctional Institute had stated that water on juveniles is an unusual punishment. Mr. Davidson stated that the Delaware County Juvenile Detention Center in Media, Pennsylvania removed sprinklers and installed VESDA systems. He explained that they are fairly new, have been used since the mid-1970s or early 1980s, and are getting better. Mr. Davidson indicated that these systems are becoming more cost effective and more widely used.

Mr. Smith believed that the Code was very broad and used with a wide ink brush, noting that the Fire Marshal does not have the ability to look at individual situations and make a determination. He felt that the cost of the sprinkler system outweighed its life safety. Mr. Smith indicated that the sprinkler system would not alert anyone to the presence of a fire since, once the smoke detector goes off and everyone is alerted, people will have evacuated the building before the sprinkler system activates. Mr. Smith advised that he was investing his money and trying to be a good neighbor. He felt that he was being stopped by Code regulations that require him to install something on his property, and no one from the City was trying to assist him to figure out a variance to make sure people are safe and also open his business and be a blessing to the residents of Dover.

Mr. Mullaney stated that staff had met with Mr. Smith plenty of times and had advised him early on that this needed to be looked into. When City staff were invited to come to Mr. Smith's property to walk through it with Mr. Smith and the individuals who were representing him, Mr. Smith's architect stated that he had missed this requirement. Mr. Mullaney understood what Mr. Smith had stated about being tied to meeting the requirement; however, he believed that the opportunity to figure this out early on was presented to the people involved.

Mr. Smith stated that they had met early on, when a walkthrough was done and the use of the property was explained. He noted that the need for a smoke detector or sprinkler system was never mentioned, and that a witness now present had been with Mr. Smith and could attest to this. What was mentioned was that there would probably not be a need, not that there would be a need or that it had to be assessed. Mr. Smith advised that the meeting that City staff had with the contractor and Mr. Davidson was months after the original meeting, and that was when the sprinkler system and whether they had missed its requirement came up in the conversation.

As the plans reviewer, Mr. Akers advised that the sprinkler requirement was mentioned twice on the corrections list with the first and second set of documents that were submitted, and it was also stated during two (2) different meetings onsite; however, it never appeared on the drawings. Mr. Akers stated, with respect, that if what Mr. Smith was saying were true, the sprinkler system would be on the drawings and the current meeting would not be held. Mr. Akers agreed with Mr. Smith's point regarding the broad brush in terms of how the Code reads today; however, he stated that neither Mr. Akers nor Mr. Mullaney can change the Code.

Responding to Mr. Sudler regarding the categories of assembly in the Code, Mr. Akers stated that the original Code addressed four (4) specific occupancy classes: 1) dance halls, 2) discotheques,

3) night clubs, and 4) assembly occupancies with festival seating. He noted that the Assembly 2 category now covers those four (4) classes. Mr. Akers explained that a funeral home would not fall into any of these original Code categories. He stated that the modified Code covers all assembly occupancies, whether a church, funeral home, or restaurant, and simply specifies assembly. Mr. Akers advised that current Code has five (5) categories and approximately 56 sub-categories for assembly.

Responding to Mr. Lewis, Mrs. Townshend stated that an occupancy of 149 or below would be exempt from the sprinkler requirement.

In response to Mr. Davidson, Mr. Mullaney stated that the threshold under the NFPA code and State fire regulations is 300.

Mr. Akers stated that the Dover Code had cut this figure in half to save more lives.

Mr. Davidson noted that the International Fire Code and International Building Code both specify the use of sprinklers for an occupancy of 300; however, the City of Dover had changed this to 150. He stated that in today's Code, the four (4) specific original classifications had been lowered to an occupancy of 100 in the International Building Code and the NFPA 101. Mr. Davidson advised that if the City went back to the national standards, church social halls and meetinghouses would not be included in the same assembly uses that specify an occupancy of 150.

Mr. Davidson stated that, by national consensus, standards in the new codes had been changed due to concerns regarding the original four (4) categories. He noted that up-to-date codes require sprinklers for places of assembly with an occupancy load of 100 or more and include such uses as dance halls, bars, and certain restaurants and places where there is consumption of alcohol. He noted that the new code was more stringent for these specific categories, which are the highest life hazard categories due to people present who are cognitively unaware of what is going on around them. Mr. Davidson noted that attendees at a fraternity house party who are fine at 9:00 p.m. may be falling off a roof at 2:00 a.m. because they think they can fly. He recalled that Mr. Truax had questions regarding certain party assembly occupancies in Dover and was worried about venues that were not technically set up for that type of thing. The limit of 150 was deemed an easy solution to address them. Mr. Davidson noted that this was a long time ago, and Mr. Mullaney concurred.

Responding to Mr. Lewis regarding how much work had been completed on the project, Mr. Smith stated that it had been completely demoed, a brand new roof had been installed, plumbing had been started, and some framing had been done on the interior.

In response to Mr. Mullaney regarding internal work, Mr. Smith indicated that the demo, framing, plumbing, and electrical work had been done. He noted the property had sat for a long time but was now secure and had an alarm system, so that no one would be squatting on the property.

In response to Mr. Sudler regarding the percentage of construction that had been completed, Mr. Smith indicated that, from a dollar perspective, he had made a significant investment in a building that sat in Dover for a while and was a public nuisance. He estimated that roughly 50% had been completed.

Mr. Lewis stated his understanding that there would be an upstairs apartment. Responding, Mr. Smith indicated that there would not be such an apartment.

Stating his understanding of cost issues, Mr. Lewis questioned if there could be a reasonable compromise between Mr. Smith and the City. Responding, Mr. Smith advised that after the first meeting regarding his appeal, they contacted two (2) sprinkler system companies, Bear Industries, Inc. and Sobieski Life Safety, to get an idea of the cost. The cost to install equipment inside the building would be $20,000 - $25,000, which Mr. Smith indicated was relatively inexpensive; however, the cost to dig from the property to the water line, obtain the permits, and install the line would be approximately $100,000 - $140,000.

In response to Mr. Lewis, Mr. Smith stated that the water would come directly from the City.

Responding to Mr. Lewis, Mr. Sudler reiterated that Mr. William Pepper, Deputy City Solicitor, had indicated that if the project proceeded without the sprinkler system, the City would not be liable if anything were to occur. Mr. Smith's insurance provider would be liable. He was unsure if this opinion was in writing, but stated that this could be verified with Mrs. Traci McDowell, City Clerk.

Mr. Koenig stated that the City Solicitor had indicated that the City would not incur any additional liability. This did not mean that the City could not be sued. If the Code were waived, the City would not be incurring additional liability.

Mr. Koenig questioned what permits had been issued for this property to date and what work those permits covered. In response, Mr. Akers indicated that, to his knowledge, a demolition permit had been issued to allow the property owner to get started on the project and to allow roof repairs.

Mr. Koenig questioned if this would include the replacement of a roof. Responding, Mr. Akers indicated that it would if this was part of the repairs.

Mr. Koenig expressed concern about the statement that 50% of the work had been done, which led him to believe that more work had been done than had been authorized by the City. Referring to the City of Dover Building Permit Application for the property, Mr. Koenig noted that the permit was dated September 24, 2015, so this had been an issue for some time. He noted that during the previous meeting, Mr. Smith had indicated that his attorney contacted the City, and the engineer did not get involved until the permits were submitted. Mr. Koenig did not believe that the City was in a position to comment about something that was or was not needed on the property because he did not see how those conversations actually took place. He stated that Mr. Smith indicated that his

lawyer called the City before the building was purchased; however, was unsure who the lawyer talked to. Mr. Koenig reiterated that this project had been pending for a long time.

Mr. Koenig advised that the project could be done with an occupancy load of under 149 people without a requirement to sprinkler the building. The architect would have to lay out the interior of the building so that the load would equate to 149 people or less. Mr. Koenig realized that this was expensive and that people do not like the Code in place; however, he stated that the Code had been adopted and staff had been working with it for the past 11 years. He thought that there were options for the applicant to reduce the occupant load of the building and conduct business.

Mr. Mullaney stated that he had received a phone call from a contractor for the project, which typically occurs when contractors are trying to determine from the City what is needed when they are bidding jobs. Mr. Mullaney indicated that an option would be to research some type of tank system, stating that these types of systems are called 13R and 13D and could be better explained by the project engineer.

Mr. Davidson noted that they would have to ask the City for an equivalency if this approach was used.

Mr. Mullaney indicated that they would have to ask him, as Fire Marshal, if he would support a tank system. He explained that this is basically an onsite tank that provides a certain amount of water pressure and water to the sprinkler system to allow sufficient time for people to exit. Mr. Mullaney noted that this would not have lines running directly from the outside, which would reduce the cost. He stated that he had told the contractor that he was willing to explore this as an option if Mr. Smith was willing to do so. Mr. Mullaney advised that this type of sprinkler system is used more in residential buildings and, although it is not 100% what the Code says, it is a type of sprinkler system that he believed he had the leeway to allow in order to work with the owner to make sure that he would still be abiding by requirements. He indicated that this approach would be a version of NFPA 13 and would provide fire suppression in the building.

Mr. Davidson asked if Mr. Akers, as the engineer and building code specialist, agreed with the concept of allowing the use of a UL-listed 13R system, with the tank size equivalent to a NFPA 13 light hazard quick response head. He stated the desire to confirm the concept before putting everything on paper and giving it to Mr. Mullaney and Mr. Akers. Responding, Mr. Akers stated that if the Fire Marshal was willing to accept this, he would support him 100%.

Mr. Smith stated that he did not understand why he had to come to an appeals meeting to find out that there was something equivalent that he could do. Responding, Mr. Davidson indicated that technically Mr. Mullaney's hands are tied until the Committee gives him the approval to do what is called an equivalent.

Mr. Mullaney stated he was contacted by the contractor after the first appeal and Mr. Mullaney had no knowledge that the appeal would be reconsidered.

Mr. Sudler explained that the reason that this matter was reconsidered was because the Code states that the Construction Code Appeals Committee has three (3) members and only two (2) members were present at the previous meeting. As Chairman, Mr. Sudler felt this was unfair to Mr. Smith.

Mr. Koenig questioned if the applicant could submit this equivalent outside of the Code appeals process. Responding, Mr. Mullaney indicated that architects know the parameters of the Code and can ask for this. He stated that he had received many similar requests.

Mr. Koenig questioned if the Committee had to vote to uphold Mr. Mullaney's decision or override his decision for an equivalent. Mr. Mullaney indicated that he did not believe so.

Mr. Lewis questioned if authorization was needed from a higher power. Responding, Mr. Mullaney stated that a fire suppression system is required and the equivalent discussed would be a type of fire suppression system.

In response to Mr. Lewis as to whether he would be in agreement with the alternative, Mr. Smith stated that he would; however, he indicated that he did not know how much it would cost, which was important to him.

Mr. Sudler asked whether Mr. Smith would like the Committee to make a decision today regarding this matter or if he would work with the Fire Marshal on suppression without knowing the cost. Responding, Mr. Smith stated that he wanted the Committee to make a decision today.

Mr. Sudler moved to waive the Code requirement for a sprinkler system. The motion failed for lack of a second.

Mr. Lewis moved for adjournment, seconded by Mr. Sudler and unanimously carried.

Meeting adjourned at 5:03 p.m.

Roy Sudler, Jr.
Chairman

RS/JS/dd
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