CITY OF APPLETON

FIRE DEPARTMENT

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MEMORANDUM

September 7, 2023

To: Safety and Licensing Committee & Common Council

From: Jeremy Hansen, Fire Chief

Cc: Ryan Weyers, Deputy Fire Chief
Derek Henson, Battalion Chief of Fire Prevention and Public Education

Re: Appleton Municipal Code, Chapter 6 Revision

Chapter 6 of the Appleton Municipal Code is due for revision. This revision is necessary to keep current with emerging technologies, practices. These changes include adopting the 2021 edition of the International Fire Code, the revision or deletion of several sections, and a fee structure increase. There are also several sections that underwent minor revisions to better align them with industry best practices or other areas of the ordinances. The recommended effective date of these changes is January 1, 2024.

2021 International Fire Code

The fire service has the daunting task of maintaining fire and life safety across every industry. This is eased by adopting recent code editions that address these changes in operations and technology. The Appleton Fire Department is recommending adoption of the 2021 edition of the International Fire Code (IFC)

One of the fastest evolving segments of society is energy storage systems. These systems take power created from wind or photovoltaic systems and store it in battery style systems. This allows green energy systems that may produce peak power for only a few hours per day to distribute that power over the course of an entire day. These systems also include battery backup systems for buildings and battery-operated machines such as industrial lift trucks.

Energy storage systems are a topic that was introduced in the 2018 edition of the IFC in a limited fashion. The 2021 edition of the IFC provides a far wider scope for the safe operations of energy storage systems. These systems range from small portable systems to large building sized permanent systems. The concern from a fire perspective is that many of these systems feature an electrolyte that is highly flammable when vented from the system.

While the City of Appleton does not currently have a significant amount of these systems, the trend is that these systems are increasing in popularity. As energy costs continue to increase, these systems will continue to increase in demand. Staying ahead of these systems ensures that industry best practices are followed, ensuring fire and life safety.

Other changes from the new edition of the code include regulations for new indoor play structures in existing buildings and requirements for the distilling of spirits. Both sections provide similar requirements to what is currently being required. The major difference is in the old code, inferences must be made, and several code sections needed to be

used to establish the requirements. In the new edition of the code these requirements are codified in a singular location and specific to the respective situation.

There are also some requirements for existing buildings, but these are already addressed through the state fire prevention and building codes. An example of this is the new requirement for high-rise buildings to retroactively install fire sprinkler systems in the 2021 IFC. The State of Wisconsin already has a requirement for certain high-rise buildings to retrofit fire sprinklers. This requirement would not impact any buildings in Appleton. All new construction would continue to be under the purview of the Wisconsin Commercial Building Code.

A full listing of the changes between the 2018 and 2021 IFC editions can be found in the book *Significant Changes to the International Fire Code, 2021 Edition.* A copy of this book can be provided for review upon request.

Changes to Chapter 6

Several changes are proposed for Chapter 6, outside of the new edition of the International Fire Code (IFC). First, sections 6-14, 6-58, 6-62, 6-65, 6-66, and 6-71 are all being recommended for deletion based on being redundant with the adopted IFC, state fire prevention code, or Wisconsin Commercial Building Code. A potential conflict is eliminated by removing these sections and relying on the other adopted documents.

The second change proposed is in 6-12 (b) (1) (a). This section currently references single family dwelling as an exception for grills. The proposed change replaces the word single with 'one and two'. This change would provide agreement with both the adopted IFC and state fire prevention code.

The third proposed change is to section 6-56 (c). The recommendation is to delete this section as it is outdated and redundant. The adopted IFC and Wisconsin Commercial Building Code both provide codes and standards that are adopted by reference. Having them doubly listed in the ordinance provides conflict when there is not agreement between the listed editions. For example, in the ordinance, NFPA 13 is listed as the 2007 edition; however, the Wisconsin Commercial Building Code requires the use of the 2013 edition for NFPA 13.

The fourth change proposed is to sections 6-57 (e) and 6-67 (a). This proposed change modifies the requirement for plan submittal from paper plans to electronic plans for fire protection systems. Requiring electronic plans reduces the time it takes to process and review a plan. This change also provides for an approved format. Currently the Fire Department can accept a wide variety of formats, and not listing the specific format provides options to the contractor for how they submit their plans. Not requiring a specific format by ordinance also ensures that any future formats can easily be approved as they become available. The Fire Department has been using this method for the past 18 months as a trial and there have been zero complaints from contractors. This is the same process used by the Wisconsin Department of Safety and Professional Services plan review division.

The fifth proposed change is to section 6-68 (1). The miscellaneous fee was designed for alternative fire protection systems originally. The proposed change clarifies the intent of this section and adds two unique situations where it would be added to a plan review. The first situation is the use of a fire pump on a system. The inclusion of a fire pump on a system adds to the complexity of both the plan review and the inspection of the system. The plans must be reviewed to ensure the efficacy of the water supply and that the pump will produce the necessary pressure. The inclusion of a pump also requires a final acceptance test to be witnessed by a Fire Department representative. These tests can take over four hours alone and are in addition to the regularly required acceptance tests for the sprinkler and fire alarm. The second unique situation is when the building exceeds five stories in height, and for every five stories thereafter. This covers high-rise buildings that may be constructed or remodeled in the city. These buildings are complex and require a large time commitment to ensure compliance. The recent renovation of the 12 story Zuelke Building, a high-rise building with an included fire pump, required over 100 hours of review and inspection from a Fire Department representative. A change is also proposed to remove the clause that says this fee is not included if the

system is submitted as part of a sprinkler or alarm system submittal. The systems covered by the miscellaneous fee are both unique and complex. These characteristics require that these systems be a separate submittal with a separate fee.

The sixth change proposed is to section 6-69 (b). This proposed change clarifies that 'all fire protection systems shall be tested and approved in accordance with their respective National Fire Protection Association standards'. This eliminates the specific reference to types of systems and simplifies the language.

The seventh and final proposed change is to section 6-69 (c)(1) and (2). This section requires a registration of all installers of fire protection system installers. This is not something that is occurring as written but is occurring through the plan review process. The recommendation is to remove this section and continue maintaining this information through the plan review process.

Fee Structure Increase

Research was conducted from similar sized departments within the State of Wisconsin. Responses were received from Green Bay, Janesville, Oshkosh, and Grand Chute. Two methodologies for determining permit price are used amongst the responses received. These methodologies are inspection based and per device based. The City of Appleton currently uses a fee structure based on the gross area of the building. Of the responses received, the City of Appleton is the only municipality that offers in house plan review. Janesville has delegation of authority to perform these reviews but has contracted E-Plan Exam to perform their plan reviews.

Due to the differing methodologies amongst the City of Appleton and the respondents to the research, example projects were compiled based on recent fire protection plan reviews conducted. A wide variety of small, medium, and large projects were used to compile the data presented below.

Project	Appleton **Current**	Appleton **New**	Green Bay	Janesville	Oshkosh	Grand Chute
12 Story High Rise	$350	$1,100	$2,485	$850	$260	$250
500k sq. ft. Warehouse	$560	$1,400	$11,580	$850	$260	$250
Small Office Remodel	$35	$150	$30	$50	$38	$150
Medium Residential	$210	$920	$1,270	$500	$260	$175
Medium Office	$140	$335	$252.50	$50	$86	$175

The proposed increase in fees provides a sizeable increase while maintaining competitiveness with other communities in the state. One benefit to the City of Appleton fees for fire protection systems is that these include plan review fees. The results of the research for Green Bay, Janesville and Oshkosh do not include any fees that are associated with reviewing plans. An applicant would need to file for plan review separately at additional cost.

Another proposed fee increase is for the miscellaneous fee. As discussed earlier, this fee covers alternative fire protection systems, fire pumps, and high-rise systems. The fee covers both the plan review and inspections for these complex systems. Staff time for review and inspections of these systems can easily exceed five hours in some cases, with a typical project taking three to four hours to review and inspect.

As part of the proposed fee structure change, two discounts for multiple identical buildings and shell buildings were removed. When multiple identical buildings are submitted, each building must still get a full review. Slight changes to elevation or water supply can make a large difference in the efficacy of the fire suppression system and must be fully vetted prior to acceptance. For shell buildings, a full review is completed when the shell is built, and then again when a tenant moves into the space. A full review is required to ensure the tenant fits within the occupancy hazard classification for which the building was designed. This also includes a full review of the modifications of the system that are necessary for the tenant.

Both the re-submission and re-inspection fees are proposed to be increased to $250 for each occurrence. This increase provides additional incentive for contractors and designers to submit completed and compliant work on the first attempt. This would also include the fee for missing a scheduled appointment. Ensuring work is completed and compliant on the first submission or inspection, and that responsible parties make scheduled appointments, is paramount to ensuring efficient inspections and maximizing staff time. The fee for work without a permit was clarified that the intent is to triple the permit fee.

The fee for bonfires, brush and prescribed wildland burns is proposed to be increased to $200 per event. This increase is due to the need for a burn plan for each event. This burn plan outlines atmospheric conditions where the burn is acceptable and contingency plans should an unplanned event occur. Further, these plans ensure the operators of the burn are competent and capable of performing the burn in a safe manner. These plans are reviewed by Fire Department staff prior to approving the permit for burning.

A significant increase is proposed for fireworks/pyrotechnic displays, with the proposed amount being $1,000 per display. This change covers some of the cost of staff time for review and approval of the show, plus the subsequent inspection of the show during setup and firing. Currently, Fire Department staff reviews the application for approval. This includes ensuring all applicable National Fire Protection Association standards are followed. Then, during the setup and firing of the show, two Fire Department inspectors are present to ensure these same standards are followed. Staff time dedicated to a typical fireworks or pyrotechnic display is 15 hours (2 hours for review, 6.5 hours inspection with two inspectors).

The storage tank permit fees are proposed to be removed as these are now handled at the state level.

Finally, an increase is proposed in false alarm fees. These fees are charged when a business has a false fire alarm that is not due to an actual alarm activation. For example, if a child activates a manual pull station, a fee would not be charged as the activation was accidental and the pull station was operating as normal. Conversely, if the same manual pull station was defective and causing a fire alarm outside of normal operation, a fee would be charged. The fees are charged based on a table and the number of false alarms in a rolling twelve-month period. These fees provide incentive for businesses to remedy deficiencies with their fire alarm systems in a timely manner. This in turn reduces false alarms and ensures efficient use of Fire Department resources.

A comparative analysis was completed with other local departments for false alarm fees. The City of Green Bay and the Town of Grand Chute use a table for false alarm fees, while there are several others that bill actual cost for false alarms. For the departments that bill costs, the per unit cost is defined in their ordinances and typically based on the FEMA unit cost. Based on the wide variety of per unit charges and without knowing the response complement for each department, the results with per unit billing were excluded. Per unit billing, while an option for the City of Appleton, would raise fees for the first few false alarms but would decrease fees for higher numbers of alarms. The remaining results are outlined in the table below.

Number of False Alarms	City of Appleton Current	City of Appleton Proposed	Town of Grand Chute (First two are free)	City of Green Bay
1-4	$50/alarm	$200/alarm	$75/alarm (3-5)	$50 first alarm
5-7	$100/alarm	$300/alarm	$150/alarm (6-8)	$70 second alarm
8-11	$200/alarm	$500/alarm	$300/alarm (9-11)	$125 third alarm
12+	$300/alarm	$800/alarm	$600/alarm (12+)	$225 fourth alarm+

If you have any questions or concerns, please do not hesitate to contact me at (920) 832-5810. Thank you for your consideration.