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Title: Provide feedback on significant changes identified through the 2018 International Building Code Update.

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Attachments: 1. 2018 International Building Code Significant Changes, 2. Staff's Recommendation Regarding Battery Smoke Alarms, 3. Smart Home Technologies Staff Memo, 4. Residential Fire Suppression Staff Memo, 5. April 18, 2018 BRB Meeting Minutes, 6. May 16, 2018 BRB DRAFT Meeting Minutes

Date	Ver.	Action By	Action	Result
7/17/2018	1	City Council		

BUILDING REVIEW BOARD AGENDA ITEM

ACTION REQUESTED:

Provide feedback on significant changes identified through the 2018 International Building Code Update.

DEPARTMENT: Transportation, Engineering and Development

SUBMITTED BY: Trevor Dick, Operations Manager

BOARD/COMMISSION REVIEW:

N/A

BACKGROUND:

Building codes establish a minimum standard for construction to ensure the health, safety and welfare of the general public that occupy the resulting structures. The current adopted codes include the following:

- International Building Code (2012)
- International Residential Code (2012)
- International Energy Conservation Code (current)*
- International Fire Code (2012)
- Life Safety Code (2006)*
- National Fire Code (NFPA, current)
- International Plumbing Code (2012)
- Illinois State Plumbing Code (current)*
- International Code Council Electrical Administrative Provisions (2006)
- National Electric Code (2011)

- International Fuel Gas Code (2012)
- International Property Maintenance Code (2012)
- International Mechanical Code (2012)
- International Swimming Pool and Spa Code (2012)
- International Existing Building Code (2012)
- Illinois Accessibility Code (current)*
- Illinois Elevator Safety Rules, 41 Ill. Adm. Code 1000.60 (current)

**mandatory codes*

Since codes are ever evolving to keep pace with new technology, materials and trends in the building industry, it is recommended to review and adopt the latest codes on a regular basis to ensure continued quality and safe construction. It should be noted that some codes are mandatory and cannot be amended, unless amendments are stricter than the mandated code. The mandatory codes have been identified with an asterisk (*) above.

Acknowledging the sheer volume of the code provisions, a multi-step process was developed. The approach allows for early input from builders/architects/residents, the Building Review Board (BRB), and the City Council prior to discussing the significant changes with the public at large and before developing final recommendations for adoption. The current structure of the code update process also allows for feedback from representatives of the building community through the BRB and encourages continued dialogue throughout the public review process, currently scheduled for later this summer.

Since January 2018, code committees have been reviewing the new code provisions to identify and discuss the significant code changes. The code committees include a mix of city staff representatives as well as representatives from the business, building, and residential community, depending upon the code section being evaluated. Input from these outside groups is integral to the review and eventual adoption of the new code provisions. By establishing teams with members from various sectors, each member can bring their expertise to the table for discussion, with the end goal to reach consensus on codes that meet the needs for the community.

In addition to reviewing the different versions of the codes, issues and concerns identified by the Building Review Board at their August 17, 2017 meeting were provided to each appropriate committee for discussion. For example, the use of smart technologies in residential buildings, particularly wireless smoke detectors, was discussed during IBC, IRC and IFC Committee meetings.

An overview of the 2018 Building Code Update schedule and milestones is provided below, with Building Review Board (BRB) and Council actions bolded for reference.

Table 1: Schedule

MONTH	MILESTONE	STATUS
<i>November 2017</i>	<i>Create code committees</i>	<i>Complete</i>
<i>December 2017</i>	<i>Confirm code committees. Hold meeting with committee leads Provide copies of documents to leads Lead to send out invites including first meeting date and time</i>	<i>Complete</i>

January	Committee review & discuss new codes	Complete
February	Committee reconvene, identify significant changes	Complete
April and May	Present significant changes (chart/bullet format) to BRB	April 18, 2018 and May 16, 2018
July	Present significant changes (chart/bullet format) to Council	
August and September	Prepare documents for public review period <i>Public Review Period including: IL Homebuilders, Chamber of Commerce, NAHC, and Capital Development Board</i>	
September	Discuss recommendations with the BRB	
October to November	Teams complete pre-final draft recommendations	
November	Draft text amendments	
November	Pre-final draft with Title 5 Text Amendment for Council review	
December	Final adoption by City Council	
January 2019	2018 IBC Codes effective	

Significant Changes

Staff has compiled a matrix highlighting the significant changes identified by each code committee (**Attachment 1**). Significant changes are defined as 2018 International Building Codes and amendments that differ from the existing 2012 International Building Code requirements and its local amendments (which may cost the builder/developer/owner additional money or effort during a project), while minor changes reflect current policies or practices the building community is already comfortable implementing and therefore will require little or no additional effort during a project.

DISCUSSION:

Building Review Board Meetings

Following committee review of the codes, significant changes were presented to the BRB on two occasions (April 18, 2018 and May 16, 2018). Overviews of these meetings are provided below and the meeting minutes are included as **Attachments 5 and 6**.

BRB Meeting #1:

At the April 18, 2018, BRB meeting staff provided an overview of the process and highlighted the significant changes by code book section for discussion. Due to their size and complexity, the Committee reviews of the International Residential Code (IRC) and International Building Code (IBC) were still underway and therefore were not discussed at this first meeting. Paul Felstrup (TED) presented an overview the significant changes found in the National Electric Code. One of staff's recommendations is that if the IRC and NEC conflict, that the NEC prevail. No members of the audience spoke during the public comment period. There were no questions about significant changes from the BRB.

BRB Meeting #2:

At the May 16, 2018 BRB meeting staff continued to provide an overview of significant changes, including the addition of International Residential Code (IRC) & International Building Code (IBC)

significant changes. No members of the audience spoke during the public comment period. There were no questions from the BRB about significant changes.

Staff then continued its presentation by focusing on two topics: Smart home technologies (particularly wireless smoke detectors) in residential buildings and residential sprinkler system requirements. There were several questions from the BRB regarding residential sprinkler systems. Below are overviews of the BRB discussion related to these topics and separate more detailed staff memos about these topics are included as **Attachments 3 and 4**.

Smart Home Technologies:

Staff provided a presentation related to the potential of the City to utilize smart home technologies. Discussion points included:

- It's important to note that there is nothing in our current codes, or the 2018 codes that prevents our residents from using smart smoke alarms.
- It's also important to keep in mind that smart smoke detectors need to be hardwired for power per code.
- We should also keep in mind that Smart Technology is not always fool proof. Our phone batteries go dead regularly and our home wi-fis can also go down.
- In our discussion with home builders - they do not support making smart home technology mandatory. Although many residents want it, there are also residents who do not like the cost, and not all residents have smart phones.

While keeping those items in mind, staff also felt that clarity was needed to help address the issue of battery smoke alarms. To do that staff has worked on a proposed code change. A copy of that code change proposal is included as **Attachment 2**. 2012 and 2018 Codes require smoke detectors to be hardwired for power. Staff's proposed amendment is that smoke detectors installed as part of alterations, repairs or additions cannot be battery powered, instead they must be powered by the house domestic 110V power with battery backup, but the other areas may remain battery powered. All detectors and alarms will still need to be interconnected, and code permits for that interconnection to be wireless between the units. Staff believes that the proposed code change will be a benefit to staff, our residents, and our builders. There were no questions from the BRB on this item.

Residential Sprinkler Systems:

According to the 2018 Codes, residential sprinkler systems are required in new single-family detached homes and duplexes. An overview of the Fire Department's position to include the requirement for single-family residential new construction to be sprinklered was presented to the BRB. See **Attachment 4** for more information. BRB Discussion was centered upon:

- The Fire Marshall is recommending that this would apply only to new construction or homes that are renovated beyond 50% of their value.
- Whether a square footage trigger is proposed by staff. It is not.
- Whether a square footage trigger would include basements. In keeping with the building's departments definition of occupiable space, basements would be included.
- It was noted that this could be a significant cost and that the builder community may push back.
- The Fire Marshall was asked what other nearby locations have this requirement. He is aware of some counties as well as the communities of Clarendon Hills, Glen Ellyn, Barrington and Long Grove. There are over 100 jurisdictions in Northern Illinois that have some form of residential sprinkler requirements.

In general, there was not a consensus among the BRB regarding the provisions for residential sprinkler systems; but, the BRB concurred to seek additional information and input from the building community.

City Council Input

At this step in the process, staff is seeking City Council input on the final list of significant changes that should be included in the public review period this summer. Based on the feedback from the BRB, staff is not proposing to remove any of the significant changes from discussion.

RECOMMENDATION:

Provide feedback on significant changes identified through the 2018 International Building Code Update.

ATTACHMENTS:

Attachment 1: 2018 International Building Code Significant Changes

Attachment 2: Staff's Recommendation Regarding Battery Smoke Alarms

Attachment 3: Smart Home Technologies Staff Memo

Attachment 4: Residential Fire Suppression Staff Memo

Attachment 5: April 18, 2018 BRB Meeting Minutes

Attachment 6: May 16, 2018 BRB DRAFT Meeting Minutes