VILLAGE OF LAKE BLUFF
ARCHITECTURAL BOARD OF REVIEW

TUESDAY, JANUARY 5, 2016 – 7:00 P.M.

VILLAGE HALL BOARD ROOM
40 E. CENTER AVENUE, LAKE BLUFF, ILLINOIS

AGENDA

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1. **Call to Order and Roll Call**

2. **Consideration of the December 1, 2015 Architectural Board of Review Meeting Minutes**

3. **Consideration of the December 16, 2015 Architectural Board of Review Workshop Meeting Minutes**

4. **Non-Agenda Items and Visitors (Public Comment Time)**
   The Architectural Board of Review Chair and Board Members allocate fifteen (15) minutes during this item for those individuals who would like the opportunity to address the Board on any matter not listed on the agenda. Each person addressing the Architectural Board of Review is asked to limit their comments to a maximum of three (3) minutes.

5. **A Discussion of Potential Building Code Updates**

6. **Staff Report**
   - **Confirm Next Regular Meeting – February 2, 2016 (1st Tuesday)**

7. **Adjournment**

The Village of Lake Bluff is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are requested to contact R. Drew Irvin at 234-0774 or TDD number 234-2153 promptly to allow the Village of Lake Bluff to make reasonable accommodations.

VILLAGE OF LAKE BLUFF
ARCHITECTURAL BOARD OF REVIEW
REGULAR MEETING
DECEMBER 1, 2015

DRAFT MINUTES

1. **Call to Order and Roll Call**
The meeting of the Architectural Board of Review (ABR) of the Village of Lake Bluff was called to order on December 1, 2015 at 7:00 p.m. in the Village Hall Board Room (40 E. Center Avenue) and the following were present.

Present: Neil Dahlmann
Ed Deegan
Matthew Kerouac
Carol Russ
John Sorenson
Bob Hunter, Chair

Absent: Steve Rappin, Member

Also Present: Mike Croak, Building Codes Supervisor (BCS)

2. **Consideration of the November 3, 2015 ABR Meeting**
Member Russ moved to approve the minutes of the November 3, 2015 ABR meeting. Member Sorenson seconded the motion. The motion passed on a unanimous voice vote.

3. **Non-Agenda Items and Visitors (Public Comment Time)**
Chair Hunter stated there were no requests to address the ABR.

4. **A Public Hearing to Consider a Site Plan to Review Changes to the Lake Bluff Middle School at 31 E. Sheridan Place**
Chair Hunter administered the oath to those in attendance and opened the public hearing.

Lake Bluff Elementary School District #65 Superintendent Dr. Jean Sophie noted that the proposed changes and improvements from the Workshop Meetings are reflected in the proposed plans presented. Dr. Sophie mentioned that there have been many community members helping with the process, two of which serve on the ABR. Principal of Lake Bluff Middle School Nate Blackmer, Lake Bluff School District #65 Board President Mark Barry, Craig Siepka of Wight Architects and Tom Carrano of IHC Construction Companies were in attendance to answer any questions.

Mr. Siepka noted that the School District engaged in an extensive community engagement process and the community had expressed priority for safety and security for the students, renovation of the library, modernizing the science labs, relocate classrooms from the basement and ADA access.

Mr. Siepka showed the main site plan and reviewed the highlighted areas showing the existing building and past additions, the proposed new classroom additions for the northeast and southwest areas of the building, a new storage building south of the western parking lot, and the reconfiguration of the parking lots located northeast of the building. He noted there are currently 24 parking stalls in the east lot and the proposed changes will decrease the number of stalls to 18. The west parking lot will be slightly reconfigured to expand the plaza area in front of the main entrance and the existing bus loop and access to the school from the north end will be maintained.

Mr. Siepka showed the main level floor plan and reviewed the highlighted areas for the proposed new additions, including: renovations to existing science labs, a new fine arts addition at the northeast side, and a new classroom addition on the southeast side of the building, reconfiguration of the main entranceway with direct viewing to the security vestibule and a series of reconfigured stairs and a new ADA accessible ramp. He stated the library will remain in the same location and the major renovation will be to the special education program located on the loft area will be relocated to the lower level into the space vacated by the main office. He reviewed the proposed improvements for the library and noted the walls will be removed to open up the entire facility to increase visibility to the space.

Mr. Siepka showed the location of the location for the presentation stair case which will descend to the lower level. He stated the lower level classrooms will be relocated to the instructional suite in the southwest corner. The District Office will relocate to the lower level with its own main entrance located at the north end of the building. Mr. Siepka stated we are looking at approximately 9,000 square feet or 80% renovations to the building.

Mr. Siepka showed how the renovated new instructional space will increase the natural lighting to the space and noted the option to install a skylight to allow additional lighting the adjoining existing classrooms space abutting the area.

Mr. Siepka showed the building elevations and stated the intent is to capture the colors of the brick from the 1954 addition, looking at the portions of the addition plus the size/type of widows, and repeating those as you move around the addition from the northeast to the southwest. In addition we are looking to break up the brick façade and include Hardie Board siding to give relief and modulation to the façade. The plan is give a soft, quiet addition to the existing context and make it more compatible with the existing surrounding areas of the building.

Mr. Siepka noted that some neighbors expressed concern regarding the noise levels from the proposed rooftop mechanical units. Mr. Siepka showed diagrams of the sight lines from grade to the rooftop mechanical units and noted an acoustical engineer will be engaged to ensure the decibel levels comply with State and Village regulations.

Mr. Siepka addressed the traffic comments noting there will be no changes to the current on-site circulation and no new traffic patterns. The existing traffic flow for pick-up/drop-off functions and bus drop-off will remain the same. He reviewed the parking lot configurations and noted there will be on street parking available for special events.

Mr. Carrano reviewed the construction and staging diagram and noted fabric will be placed around the construction fence for the two new additions to minimize any visual disturbance. Mr. Carrano stated construction will be done six days a week beginning March 1, 2016 and go through September 1, 2016. He explained the construction traffic flow and noted all delivery trucks will come in from Sheridan Road and the Village will allow construction traffic to turn left onto Sheridan Place to reach Sheridan Road preventing truck traffic from entering the surrounding neighborhoods. The northeast corner staging area will be larger and have a construction trailer.

Mr. Siepka reviewed the proposed landscape plan which include tree replacement and additional landscaping around the storage shed area. The additional screening around the storage shed is an alternate proposal should funding become available. Mr. Siepka reviewed the nine alternate proposals being considered by the Petitioner should funding become available. Lastly, Mr. Siepka showed and explained the 3D model of the proposed renovations

Will Granda, a former Middle School student, asked if the band room would be relocated. Mr. Siepka stated the band room will remain in its current location.

Don Fawcett, neighboring resident, commented on the previous Middle School chiller unit renovations, specifically the amount of time it took for the noise issue to be addressed. He expressed his concern for the proposed HVAC rooftop unit and asked that the units be installed as far from the houses as possible and install the appropriate barriers to minimize the noise.

In response to a question from Chair Hunter, Mr. Siepka stated there will be a 25 ton unit for the instructional area, a 5 ton unit for the administration area and the fine arts addition will be tied into the existing chiller units.

BCS Michael Croak stated he received an email from Bob Clifford expressing his concern regarding noise and asked for an individual review of sound impact from the existing chiller units with the proposed addition being added to the middle school. BCS Croak stated there is a provision to mitigate noise caused by all chiller and mechanical equipment operating at the Middle School included in the draft special use permit ordinance.

Mr. Siepka reviewed the additional proposed methods that will be used to mitigate the noise and noted their intent to comply with all applicable State and Village regulations regarding noise levels.

Matt Wnek, Lake Bluff resident, stated based on the information shared tonight regarding the timing when the school was initially built, where the extensions or additions planned as different phases from the initial construction.

Mr. Wnek commented on the construction route and asked if there was any consideration for a temporary entrance off of Sheridan Road to the construction area. Mr. Carrano stated Sheridan Road is a State roadway which would require IDOT approval. Also they did not want to disrupt the existing landscaping.

Mr. Wnek commented on his previous experience with high rise chiller units and asked about the need for new mechanical units. Mr. Siepka stated the length and capacity of the existing chiller will not support any additional square footage and that is why rooftop units are being proposed for that particular part of the building.

Member Dahlmann complimented the process the School system has had on the project and stated everyone involved worked well together to come up with a good solution. He commented on the mechanical drawings of the rooftop HVAC and asked about the possibility of moving the mechanical unit to the ground near the entrance. Member Dahlmann expressed his concern regarding the number of entrances by which students can access the building and noted most security consultants recommend one entrance.

Member Deegan stated the exterior elevations seem to tie together well. He asked if they looked at a number of options for additional locations where the units could be moved and if structurally those were the best locations. Mr. Siepka stated that is the best location and the new addition infrastructure will support the 25 ton unit.

Member Kerouac recommended that the School District prioritize addressing the noise issue and recognize that items like landscaping could be improved at a later date.

Mr. Siepka stated the School District has committed to addressing the noise issue.

Member Kerouac stated it has been a great team approach and he applauds the process. He noted that the entrance still needs to be resolved as it appears very tight and restricted. He is glad the sign won't be on the canopy, which will simplify that a bit. He stated this is a beautiful project and thanked everyone for their effort.

Member Russ expressed her agreement with the comments from the commissioner specifically regarding the entrance because the ramp appear to be an afterthought and needs further review. Member Russ stated the enclosed walls in the new addition could prevent visibility in the area where students populate and she would prefer to see the area opened up a little more. She noted the mechanical equipment is proposed for a higher roof and asked if the equipment could be place on the lower adjacent roof so that the existing masonry wall could help minimize the noise. The comment regarding directing the units to the north instead of the south was a good idea. She stated the character of the new classrooms do not really communicate with the exterior and this is something that will be noticed. Member Russ stated she is glad to see the alternate proposal written down with amplification of what they are and what potential they may have. She thanked the School District for recording the suggestions and presenting them as part of the packet.

Member Sorenson agreed with the comments and thanked the Petitioner for the presentation especially the 3D model. He asked what actions were taken in 2010 to address the noise issue.

Mr. Barry stated the School Board worked extremely hard to be a good neighbor and spent approximately $100,000 in unplanned money to meditate the noise from the chiller units to establish acceptable decibel levels. He stated we are commented to being good neighbors and will do the same for this project upfront instead of after the fact.

Mr. Siepka stated the School District must adhere to the decibel levels at the property line as required by the State of Illinois.

Board President Barry stated community members had expressed confidence with the results of Paul Schueler out of the University of Illinois who was used for previous projects and Staff will contact him to see if he is interested in this project.

Mr. Fawcett stated the aforementioned action makes him a little nerve because previous acoustical engineer stated the noise levels from the chillers had meet the Illinois Standards; however, the noise was extremely loud and not livable. He cautioned the ABR not to go with the mandated noise threshold level because the noise from the previous project was unreasonable although it did meet the requirements. Mr. Fawcett asked that the engineer consider all options to provide the neighbors with the lowest possible decibel levels.

Chair Hunter described the existing chiller units and noted most of the noise was generated by the motors and fans from the units; however, the proposed HVAC units are a different type of system. Chair Hunter stated they have done a nice job with the architectural features of the building and he agreed the front entrance needs to be reviewed.

Chair Hunter stated the Hardie panel on the front of the fine arts room looks like it is in the same plane as the brick and it needs to have some relief. Mr. Siepka stated they will look at it and make sure it is distinct.

Chair Hunter closed the public hearing.

Member Dahlmann moved to recommend the Village Board approve the site plan with the condition the following elements to return for final approval by the ABR: (i) front entry, (ii) mechanical units, (iii) noise, (iv) landscaping, and (v) wall sign. Member Sorenson seconded the motion. The motion passed on the following roll call vote:

Ayes:	Dahlmann, Deegan, Kerouac, Sorenson, Russ and Chair Hunter
Nays:	None
Absent:	Rappin

5. <u>A Public Hearing to Consider a Site Plan to Review the Manor House and Carriage House at Stonebridge at 136 Green Bay Road</u>

Chair Hunter administered the oath to those in attendance and opened the public hearing.

Peter Kyte, principal with The Roanoke Group expressed his appreciation to the ABR. He introduced the members of his team, and noted that Mariani Landscaping will be the landscape architects for the project.

Austin DePree of Northworks Architects, showed historic, existing conditions and interior space photographs and reviewed the conceptual plan for the Manor and Carriage Houses at the Stonebridge Planned Residential Development. He noted that transom windows in the Carriage House that had been filled in previously will be restored.

Mr. Rick Lesser a Lake Bluff resident commented on the short notice near the Thanksgiving holiday. He stated this is a substantial change in the plan because the previous plan was to demolish the Carriage House and replace it with three new homes and he is glad to the see that the Carriage House will be restored as it is a landmark for the neighborhood.

BCS Croak provided an overview of the expected public process for approval and anticipated future meetings.

Mr. Lesser expressed his appreciation to the ABR and noted without volunteers serving on the Advisory Board's the Village could not work.

Barbara Fox, resident of 435 Park Ln, asked what the proposed uses would be for the Manor House and Carriage House. Mr. Kyte stated the Manor House would be used for banquets and conferences and the Carriage House would be a clubhouse amenity for the use of the PRD residents.

Member Sorenson stated that it is great that you plan to restore the existing Manor and Carriage Houses. He asked about the parking plan for the area. Mr. Kyte stated they are currently working with Mariani Landscaping regarding a parking plan. A discussion ensued regarding parking.

Member Russ stated the windows appear more contemporary and elegant in the current plan as opposed to what was originally there and inquired of the thought process. Mr. Kyte stated the proposed plans are to install windows versus the screen porches to make it a useable space. The most modern portion of the project is the porte-cochere which was historically an open area, but will have windows installed.

Member Russ inquired of the door height on the south elevation of the Carriage House, Mr. DePree stated the arch is approximately 16 ft. with three 8 ft. doors in the opening.

Member Kerouac stated he loves the simplicity of the Carriage House and cautioned against hiding it behind a hedgerow.

Mr. DePree stated many features have been lost over time with the façade and it would fun to bring back the sun dial, similar to market square, this is an architectural detail that will add to the iconic nature of the tower and bought back at minimal cost.

Member Kerouac stated when additions are added to a building there should be minimal impact on the original building, there needs to be balance so as not to replicate something that is already there. Mr. DePree stated we want to underplay the addition and not compete with the architectural features and noted the preference is to make it appear as a beautifully landscaped wall.

Member Kerouac asked about the location of the east entrance. A discussion ensued regarding the wall and the landscape features.

Member Deegan stated the Carriage House is his favorite structure and everything being proposed is fantastic. He stated the questions is how these buildings engage in the proposed landscape plan.

Member Dahlmann expressed his agreement that everything appears to be moving in the right direction and look forward to the future plans.

Chair Hunter expressed his agreement with the comments from the commissioners.

6. **A Continuation of the Discussion of Community Character and Architectural Review of Single Family Homes**
Chair Hunter reported on the November 23rd Joint Special Meeting with the Committee-of-the-Whole, PCZBA, Historic Preservation Commission and ABR meeting. The Chair of each respective Advisory Board reviewed the community character discussion points submitted to the Village Board. Chair Hunter stated the Village Board appeared to be okay with the ABR points and the PCZBA points are the major issues that need to be addressed. Chair Hunter stated it was the consensus of the COW for the Advisory Boards to: (i) consider procedures to slow residential development; (ii) generate more specifics related to each recommendation; and (iii) return to the COW as a group for further discussion.

A discussion of the community character discussion points followed.

7. **Consideration of the 2016 ABR Meeting Schedule**
Member Kerouac moved to approve the 2016 meeting schedule. Member Sorenson seconded the motion. The motion passed on a unanimous voice vote.

8. **Staff Report**
BCS Croak reported the next regular meeting will be on January 5, 2016.

9. **Adjournment**
There being no further business to consider, Member Kerouac moved to adjourn the meeting. Member Russ seconded the motion. The motion passed on a unanimous voice vote.

The meeting adjourned at 10:20 p.m.

Respectfully submitted,

Mike Croak, CBO, CBCO
Building Codes Supervisor

VILLAGE OF LAKE BLUFF
ARCHITECTURAL BOARD OF REVIEW
SPECIAL WORKSHOP MEETING
DECEMBER 16, 2015

DRAFT MINUTES OF MEETING

1. Call to Order and Roll Call

The Village of Lake Bluff Architectural Board of Review (ABR) met at a Special Workshop Meeting in the Village Hall Board Room (40 E. Center Avenue) on Wednesday, December 16, 2015. The Meeting was called to order at 7:00 p.m. and it was determined that the following ABR and Joint Plan Commission and Zoning Board of Appeals Members (PCZBA) were present:

ABR Members: Neil Dahlmann
Matt Kerouac
Carol Russ
John Sorenson
Robert Hunter, Chair

PCZBA Members: Sam Badger
Leslie Bishop
Mary Collins
Michael Goldsberry
Elliot Miller
Gary Peters

Absent: Edward Deegan, ABR Member
Stephen Rappin, ABR Member
Steven Kraus, PCZBA Chair

Also Present: Michael Croak, Building Codes Supervisor
Brandon Stanick, Assistant to the Village Administrator
Drew Irvin, Village Administrator

2. Non-Agenda Items and Visitors (Public Comment Time)

Chair Hunter stated there were no requests to address the ABR.

3. Consideration of a Change to a Sign for Bernie's Books at 917 North Shore Drive

Chair Hunter stated the ABR previously approved two sign changes for Bernie's Book Bank. The Petitioner is now requesting approval of a smaller wall sign that was previously approved. The previous sign was 42" wide by 72" tall and the new proposal is for the sign to be 22" wide by 37" tall.

In response to a question from Member Kerouac, BCS Croak stated the proposal is for a two sided sign with no internal illumination directly mounted into the brick column at the main entrance.

Member Dahlmann moved to approve the sign permit as presented. Member Russ seconded the motion. The motion passed on the following roll call vote:

Ayes: Sorenson, Russ, Dahlmann, Kerouac and Chair Hunter
Nays: None
Absent: Deegan and Rappin

4. A Joint Workshop with the Plan Commission and Zoning Board of Appeals and the Architectural Board of Review to Receive a Presentation and Finalize the Draft Architectural and Streetscape Design Guidelines for Central Business District Block Two and Block Three as Part of the Downtown Subarea Visioning Project

Following a brief intermission, the ABR reconvened to conduct a workshop discussion with the Joint Plan Commission and Zoning Board of Appeals (PCZBA). The following PCZBA Members were in attendance: Members Sam Badger, Leslie Bishop, Mary Collins, Michael Goldsberry, Elliot Miller and Gary Peters. Village Administrator Drew Irvin was in attendance as well.

Village Administrator Irvin thanked the respective Advisory Boards for conducting the workshop. He provided background and current information regarding the project and then introduced Jodi Mariano, Principal at Teska Associates.

Ms. Mariano provided background information regarding the Downtown Visioning Project and gave a presentation of the Downtown Subarea Visioning Project (CBD Blocks Two and Three).

A discussion regarding the draft design guidelines followed.

As a result of the feedback expressed during the workshop it was recommended the Downtown Subarea Visioning Project (CBD Blocks Two and Three) be further discussed at a future workshop meeting.

5. Adjournment of the Meeting

As no further business came before the ABR, the meeting adjourned at 8:45 p.m.

Respectfully submitted,

Mike Croak, CBO, CBCO
Building Codes Supervisor

VILLAGE OF LAKE BLUFF

Memorandum

TO: Chairman Hunter and Members of the Architectural Board of Review

FROM: Mike Croak, Building Codes Supervisor

DATE: December 30, 2015

SUBJECT: **Agenda Item # 5 -- A Discussion of Potential Building Code Updates**

Lake Bluff Village Ordinances requires us to consider the adoption of the latest building codes every three years in order to stay current with the latest technology and best practices in the industry. Accordingly, the purpose of this memo is to summarize some of the issues the ABR may want to consider in the adoption of the latest codes. As was true in previous years, the model codes under consideration are published by the International Code Council (ICC) and the National Fire Protection Association (NFPA), or, in the case of the Plumbing Code and the Accessibility Code, by the State of Illinois. Many of these codes are adopted with Lake Bluff's own local amendments.

Below is a list of the model codes currently adopted and proposed.

Currently Adopted Code	Proposed Code
2012 International Building Code	2015 International Building Code
2012 International Residential Code	2015 International Residential Code
2012 International Property Maintenance Code	2015 International Property Maintenance Code
2012 International Fire Code	2015 International Fire Code
2004 Illinois Plumbing Code	2014 Illinois Plumbing Code
2011 National Electrical Code	2014 National Electrical Code
2012 International Fuel Gas Code	2015 International Fuel Gas Code
1997 Illinois Accessibility Code	1997 Illinois Accessibility Code
2012 International Energy Conservation Code	2015 International Energy Conservation Code
2012 International Mechanical Code	2015 International Mechanical Code
2012 International Swimming Pool & Spa Code	2015 International Swimming Pool & Spa Code
2012 International Existing Building Code	2015 International Existing Building Code

The following is a summary of significant points for the ABR's consideration.

Staff recommends one change to Title 9 (Building Regulations), Chapter 1(Administration and Enforcement) of the Lake Bluff Code:

Permit Renewals: Currently, Section 9-1-9 of the Lake Bluff Municipal Code provides that permits expire one year after issuance (unless a longer time is specified on the face of the permit) and that, if an extension is needed, the applicant must pay an additional 50% of the original permit fee for a six month extension. Because the amount of the renewal fee has been unduly burdensome for larger projects, this provision has not been consistently enforced in the past. The Village's goal is to incentivize prompt completion without unduly burdening larger projects that may need more time. Accordingly, staff's recommendation is the following:

1. Keep existing 12 month expiration date for permit for project of a construction cost of $300,000 or less.
2. Establish new 15 month expiration date for projects of more than $300,000 construction cost
3. For renewals, charge $200 per month if exterior work is incomplete, but only $100 per month if exterior work is complete and only interior is incomplete.

4. Require a deposit to cover 6 months of permit renewals, before a Temporary Certificate of Occupancy is issued, unless the TCO is being issued more than 2 months before the expiration date and, in the opinion of the Code Official, it is reasonably likely that the work will be completed before the permit expiration date.
5. If permit expires and is not renewed while work is incomplete, then any bond (deposit) is forfeited.
6. Expiration date is based on the date the permit is issued or the date that work starts whichever is earlier.

International Building Code

Staff recommends adoption of the 2015 edition of International Building Code (IBC) with the same amendments that we had for 2012 edition, except for one change. An amendment that Lake Bluff adopted in 2010 requiring that fire rated partitions within a building be constructed of masonry has not proven to be practical. Staff recommends that we eliminate this amendment and allow fire rated partitions to be constructed of any materials allowed by the 2015 IBC. One reason why requiring masonry fire partitions has proven to be impractical is that the code requires a fire rated partition between restaurants and retail spaces; however, in multi-tenant buildings, tenant spaces change so frequently that it not practical to erect a masonry wall between every restaurant and every retail space. A variance to this amendment was granted to one of the Target outlots so that the wall between Meatheads and GNC did not have to be masonry. This amendment is only regarding fire partitions (which are within one building) and not fire walls (which separate different buildings).

Attached is a summary prepared by four trade associations that summarizes significant changes to the 2015 IBC and the other I-codes (codes published by the International Code Council). The overview on page 2 notes that there are several beneficial changes that make the 2015 IBC more user friendly.

International Energy Conservation Code

Illinois State law mandates that constructions projects for which permits are submitted on or after January 1, 2016 comply with the 2015 edition of the International Energy Conservation Code. Attached is a summary of 12 changes to the residential provisions of the new energy code and 11 changes to the commercial provisions.

Illinois Plumbing Code

1. Attached is letter from the Illinois Department of Natural Resources informing us that all communities that use Lake Michigan water are required by State law to establish plumbing code amendments requiring new plumbing fixtures to be WaterSense labeled for water conservation.
2. The IDNR letter also informs us that we are required to prohibit the irrigation of lawns during a six hour time period in the middle of the day. Currently, Section 8-1D-4 of the Lake Bluff Code prohibits watering for a five hour time period from 12:01 PM to 5:00 PM. Staff recommends amending the time to 11:00 AM to 5:00 PM.
3. Lake Bluff's municipal code refers to the 2004 edition of the Illinois Plumbing Code. Since the State has published a 2014 edition to the Illinois Plumbing Code, we will amend the municipal code to refer to the latest edition.
4. One of the more controversial changes to the Illinois Plumbing Code is that it now allows polyethylene tubing (PEX) for water supply piping. Staff recommends that we maintain our existing plumbing material restrictions, which are similar to those of neighboring communities, and which require copper pipe for water supply.

Illinois Radon Resistant Construction Act

State law has required new residential construction to provide a radon mitigation system (passive or active venting) since June 1, 2013. By adopting these requirements into the Lake Bluff Code, the Village will have the authority to enforce these requirements.

National Electrical Code

Attached is a summary of 12 significant changes within the latest edition of the National Electrical Code.

Building Code Update Process: Following the discussion at the January 5 meeting, staff will write a complete set of redlined proposed amendments to Chapter 9 of the Lake Bluff Municipal Code. The Code requires the ABR to hold public hearing on the matter and then make a recommendation to the Village Board.

If you should have any questions regarding this matter, please feel free to contact me at 847-283-6885.

Attachment 1

NMHC NATIONAL MULTIFAMILY HOUSING COUNCIL | NAA NATIONAL APARTMENT ASSOCIATION | NAHB | BOMA International

BACKGROUNDER | OCTOBER 2014

2015 ICC Model Codes Summary of Important Changes

The 2015 International Code Council (ICC) model building codes were completed in June 2014 and are now available for adoption at the state and local level. This document summarizes the significant changes made between the 2012 and 2015 codes that affect apartments (Residential R-2) and commercial occupancies. For the first time, the National Multifamily Housing Council (NMHC), National Apartment Association (NAA), Building Owners and Managers Association (BOMA) and National Association of Home Builders (NAHB) encourage state and local jurisdictions to consider adopting the 2015 I-Codes when updating their state or local codes. Two exceptions to this are noted in this document.

Importantly, this summary does not include all the changes, and therefore developers and designers need to consult the codes for other changes that may impact a specific design. For each change, the tables included indicate whether the change is likely to result in higher or lower costs (or whether the impact is unknown).

National Multifamily Housing Council
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02 Overview

This Backgrounder reviews the key changes between the 2012 and 2015 ICC Codes that affect apartments (Residential R-2) and commercial properties. The good news for designers and developers is that for the first time ever, NMHC/NAA, BOMA and NAHB encourage state and local jurisdictions to consider adopting the 2015 I-Codes when updating their state or local codes. There are two exceptions to this, however. The first is the International Green Construction Code (IgCC) which has not been published. The second is the International Energy Conservation Code (IECC), which we suggest be amended in some key areas. Those recommendations are included in a separate document titled *Recommended Amendments to the 2015 International Energy Conservation Code (IECC)*.

Although the codes can largely be adopted as is, they do contain meaningful changes. Therefore, designers and developers need to be aware of several changes in the 2015 codes that will impact apartments and commercial properties. Many of the changes benefit apartment and commercial construction, and taken as a whole these positive changes more than offset the changes that might increase construction costs.

The most beneficial changes, by far, are the ones dealing with podium/pedestal buildings. Most notably, the 2015 codes remove the restriction limiting the podium/pedestal portion of the building to one story. As a result, the podium/pedestal portion can go to any height without imposing a limit on the number of stories allowed in the property. The restrictions on occupancies allowed in the podium/pedestal portion of the building have also been revised. In the 2015 codes, the only restriction remaining is that this portion of the building cannot contain a Group H (hazard) type occupancy.

Other beneficial changes include: a rewrite of "Chapter 5, Heights and Area" that makes it more user friendly; new requirements for donut-type construction that establish provisions for separating the garage from the apartment building; permitted uses of NFPA 13R sprinkler systems; and use of cross-laminated and fire-retardant-treated lumber.

The ICC codes included in this summary:

- 2015 International Building Code (IBC)
- 2015 International Fire Code (IFC)
- 2015 International Existing Building Code (IEBC)
- 2015 International Plumbing Code (IPC)
- 2015 International Energy Conservation Code (IECC)
  Note: A separate document is available that identifies recommended changes to the IECC during the local adoption process.
- 2015 International Mechanical Code (IMC)
- 2015 International Fuel Gas Code (IFGC)

The changes are organized by the cost impact they will have. Changes noted as "Decrease" could have a major impact on how a structure is built and, in several cases, they clarify unclear or misinterpreted code requirements. Major cost-saving changes include:

1. Removal of the height restriction on the pedestal/podium portion of buildings.
2. Removal of the limitation on occupancies permitted in the pedestal/podium portion of the building with the exception of not permitting Type H occupancies.
3. Redefine how private garages can be used in multifamily buildings.
4. Determination of building heights, area and setbacks.
5. Separation of the apartment building from garages in donut type construction.

6. Application of the NFPA 13R sprinkler system.
7. Design and use of assembly occupancies on building roofs.

Changes noted as "Increase" are important and will impact specific requirements within the building. Major changes in this category include:

1. Requirements for a secondary sprinkler water supply in Seismic Design Category C, D, E, or F.
2. New requirements for opening protective glazing.
3. Use of limited area sprinkler systems.
4. Requirements for alarm systems in college and university buildings.

The changes noted as having cost implication of "None" or "Unknown" need special attention because they will impact the building design and could have an impact on specific provisions in the code. Major changes here include:

1. Revision to requirements on dampers protecting ceiling membrane.
2. Use of cross-laminated and fire-resistant lumber.
3. Location of smoke alarms near kitchens and bathrooms.
4. Use of smoke detection systems as alternative to providing smoke alarms.
5. Measurement of exit and exit access configuration.

One additional note: Special awareness should be given to any attempts to adopt Appendix L – Fire Fighter Air Replenishment Systems and Appendix M – High-Rise Retro Active Installation of Automatic Sprinkler Systems. Appendix items are not part of the code unless they are specifically included during the code adoption process.

Designers and builders need to consult the 2015 ICC codes that are not listed for changes that may be of concern to specific projects.

Important Changes to the 2015 IBC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 202 Definition of "Private Garage," 406.3.1 "Classification," 406.3.2 "Clear Height"	Major Change	Decrease	Private garages are no longer limited to a maximum of 3,000 sq. ft. in a building. Multiple private garages, each a maximum of 1,000 sq. ft., each separated by one-hour fire barriers or horizontal assemblies are now permitted based on their U occupancy classification. Also, a minimum of 7' clear height will be required in private garages.
IBC 202 Definition of "Fire Retardant Treated Wood"	Major Change	Decrease	Revised definition to permit other treatment methods by other than the pressure process. See also IBC Sections 2303.2.2 and 2303.2.3 for further explanation.
IBC 503 through 506 Building Heights and Area Requirements	Makes Code More User Friendly	Decrease	2012 IBC Table 503 was replaced with the 2015 IBC Tables 504.3, 504.4 and 506.2 with NO changes in the technical application, making the code more user-friendly. The maximum allowable height and number of stories can now be determined directly from Tables 504.3 and 504.4. The maximum allowable sprinkler area increase can also now be determined directly from Table 506.2.
IBC 510.2 "Horizontal Building Separation" (i.e., Podium/Pedestal Structures)	Major Change	Decrease	2012 IBC Section 510.2(2) that limited the Type IA portion of the podium/pedestal building below the horizontal separation to a maximum of one story above grade plane has been deleted in the 2015 IBC allowing the podium portion of the building to be of any height without any restriction on the number of floors. Also, 2015 IBC Section 510.2(5) permits any occupancy, except Group H, below the horizontal separation. (See also the table entry under IBC Section 903.3.1.2 for further information on podium design)
IBC 705.3 Exception #2 "Buildings on the Same Lot"	New Provision	Decrease	Permits a parking garage of Construction Type I or IIA to abut a Group R-2 building with 1½- hour-protected openings (fire doors) in the abutting exterior wall of the garage and no required opening protective(s) in the abutting wall of a sprinklered R-2 building. Previous editions of the Code did not permit any openings in these abutting exterior walls that are at a "0" fire separation distance apart and required a fire wall design between such buildings to be permitted to have openings between the abutting buildings.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 705.6 "Exterior Wall-Structural Stability"	Major Change	Decrease	Exterior fire-rated walls that are braced by floor or roof assemblies that have a lesser fire resistance rating are now permitted. Previous editions of the IBC Code required Construction Type III buildings with two -hour fire-rated exterior walls to have floors that support the two-hour fire-rated exterior walls to be upgraded to the two-hour fire rating. This is a major cost since apartment buildings built of Construction Type III under the legacy codes only required one-hour floor and roof assemblies to support the two-hour fire-rated exterior walls.
IBC 707.5 Exception 2 "Fire Barriers–Continuity"	New: Clarification	Decrease	Clarifies that the walls of an interior exit stairway do not need to extend through the attic space to the underside of the roof deck if the ceiling of the stairway terminates with a fire-rated top enclosure complying with Section 713.12.
IBC 714.4.2 Exception 7 "Membrane Penetration"	Revision	Decrease	This exception was new in the 2012 IBC (Section 714.4.1.2 Exception #7) and allowed for a practical application of the code in circumstances where wood-framed walls extend up to and attach directly to the underside of joist/trusses floor and roof fire-rated assemblies. It was further modified to permit the wood framed walls to be sheathed solely with Type X gypsum wallboard in lieu of being a fire resistance rated wall assembly.
IBC 717.1.1 "Ducts and Air Transfer Openings"	New Provision	Decrease	Duct will be allowed to leave a fire-rated shaft enclosure, transition horizontally, and then enter another fire-rated shaft if the duct penetrations on each side of the shafts are protected with fire dampers. Note that this is not permitted for clothes dryer exhaust ducts or any other ducts that the I Codes require to be continuous and uninterrupted.
IBC 903.2.1.6 "Assembly Occupancies on Roof"	New Provision	Decrease	Code now addresses how to deal with assembly occupancies on the roof of a building. When the occupant load > 100 for Group A-2 (i.e., restaurant), or > 300 for other Group A (i.e., meeting rooms, swimming pools) all floors to, and including, level of exit discharge are required to be sprinklered per NFPA 13 or NFPA 13R, as applicable. Since all new Group R occupancies are already required to be sprinklered, this new requirement is a good clarification of the Code for such common assembly occupancies that are to be located on the roofs of new apartment projects. Note that there is an exception to this sprinkler requirement for open parking garages of Construction Type I or Type II.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 903.2.11.3 "Automatic Sprinkler Systems – Where Required- Buildings 55' or More in Height"	Revision	Decrease	This revision clarified that the 55' is measured from the lowest level of fire department vehicle access to the finished floor level of the highest floor with an occupant load of ≥ 30. Exceptions are provided for open parking garages and F-2 occupancies.
903.3.1.1.2 Exception "NFPA 13 Exempt Bathroom Sprinklers"	New Provision	Decrease	The 2015 IBC references the 2013 NFPA 13. In the 2013 NFPA 13 Section 8.15.8.1 the small bathroom (≤ 55 sq. ft.) sprinkler exception was deleted for apartment dwelling units. Since the NFPA 13 Committee deleted this reasonable, long-standing, sprinkler exception out of its Code, the NFPA 101 Committee, as well as the ICC Membership, decided to place it back into the 2015 NFPA 101 and 2015 IBC. The NFPA 13 Committee is in the process of attempting to place the bathroom exception for dwelling units back into its 2015 edition of NFPA 13.
903.3.1.2 "Installation Requirements NFPA 13R Sprinkler Systems"	Clarification	Decrease	Section was revised to correlate with the scope of the 2013 NFPA 13R Standard. This should help prevent any misapplication of the sprinkler standards that apply to "…Group R occupancies up to and including four stories in height in buildings not exceeding 60 feet in height above grade plane…". The new second paragraph in this section clarifies that the number of stories of Group R occupancies above a podium or pedestal designed structure (see Section 510.4) is measured from the fire-rated horizontal separation that creates separate buildings. By default, this new second paragraph under the NFPA 13R requirements is also applicable to the number of stories of Group R occupancies above a podium structure when the entire structure is sprinklered per NFPA 13. For example, an R-2 occupancy of Construction Type IIIA, sprinklered per NFPA 13, can be five stories above the Type IA pedestal below as long as the overall building height from grade plane does not exceed 85 feet (IBC Table 504.3)
IBC 1011.12 Exception "Stairway to Roof"	New Exception	Decrease	For stairways in buildings ≥ four stories above grade plane that do not have an occupied roof or elevator equipment on the roof, access to the roof does not need to be by one of the stairways in the building. It can be provided by an alternating tread device, a ship's ladder or a permanent ladder.
IBC 1011.16 "Ladders"	New Provision	Decrease	New section with specific requirements for permanent ladders. Such ladders cannot serve as a part of the means of egress from occupied spaces within a building.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 1016.2(1) "Egress through Intervening Spaces," 3006.4 Means of Egress"	New Provision	Decrease	Exit access is permitted through an enclosed elevator lobby that leads to at least one of the required exits. Exit access to not less than one of the other required exits shall be provided without travel through the enclosed elevator lobby.
IBC 1023.3.1 Exception 2 "Interior Exit Stairway Extension"	New Provision	Decrease	An exit stairway does not require a door at the stairway opening into an exit passageway if the exit passageway has no other openings into it from the building.
IBC 1107.4 Exceptions 3 and 4 "Accessible Route"	New Provision	Decrease	Exceptions added to exempt, in certain cases, accessible stories and mezzanines in buildings with Group R-2 units or dormitories if accessibility is provided to other facilities.
Previous 2012 IBC Section 3004 "Hoistway Venting"	Deleted	Decrease	The hoistway venting requirements have been deleted from the 2015 IBC since they were antiquated and wasted building energy. Only Section 3004.3.1, "Plumbing and Mechanical Systems," was retained, and it was relocated to Section 3002.9
IBC 101.4.7 "Existing Buildings," Previous 2012 IBC Chapter 34 "Existing Buildings"	Deleted 2012 IBC Chapter 34	None	The requirements (Chapter 34) for existing structures have been removed from the 2015 IBC. All existing construction requirements are now in the 2015 International Existing Building Code (IEBC).
IBC 104.11 "Alternative Materials, Design, and Methods of Construction and Equipment"	Revision	None	Last sentence was added that requires the code official to provide in writing the reasons why the alternative was not approved if he/she rejects the application for an alternative design under this section of the Code.
903.3.1.2.2 "Open-Ended Corridors"	New Provision – Correlation	None	This new section was added to the sprinkler requirements just to clarify that when applying the open-ended corridor (i.e., open breezeway) sprinkler requirements of Section 1027.6 Exception 3.1 to a building sprinklered in accordance with NFPA 13R, it is the intent of the IBC Code to also require the open-ended corridors and its associated exterior stairs to be sprinklered when using Exception 3 of Section 1027.6.
903.3.5 "Water Supplies"	Revision	None	New last sentence in section was added to clarify that the fire flow test for the design of the sprinkler system needs to be adjusted for seasonal and daily pressure fluctuations.
IBC 907.2.11.4 "Smoke Alarms Near Bathrooms"	New Provision	None	Smoke alarms are to be located a minimum of three feet from the bathroom door when the bathroom contains a bathtub or shower.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Conument*
IBC 907.2.11.3 and 907.2.11.4 "Single and Multiple-Station Smoke Alarms Near Cooking Appliances"	New Provision - Correlation	None	These new sections were added to the alarm requirements to correlate with the requirements in NFPA 72 on the placement of smoke alarms. When ionization smoke alarms are to be installed they shall be placed a minimum of 20 feet from cooking devices, or a minimum of 10 feet if they have an alarm-silencing switch. If photoelectric smoke alarms are to be installed they shall be placed a minimum of six feet from cooking devices.
IBC Table 1006.2.1 "Spaces with One Exit or Exit Access Doorway"	New Provision	None	Combined 2012 IBC Tables 1014.3 and 1015.1 into a single table for user-friendliness. Note that Table 1006.2.1 covers the maximum common path of egress travel distance to that point where the occupants have separate access to two exits (or are already outside the building), whereas Table 1017.2 covers the total exit access travel distance to an exit.
IBC 1006.2.1, Exception 1, Table 1006.3.2(1) and 1006.3.2 Single Exits in Buildings	Revised	None	It is permitted for multiple dwelling units, in groups of four units or less per floor, to have access to a single means of egress. The change also reflects the revised travel distance for single exit design allowing a maximum common path of egress travel distance of 125 feet.
IBC Section 915 "Carbon Monoxide (CO) Detection"	Relocated to its Own Section in Chapter 9, Reformatted and Revised	None	The CO alarm requirements that were new in the 2012 IBC and located in Section 908.7 have been relocated and extensively revised and clarified in the 2015 IBC. A CO alarm is to be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in R-2 occupancies that have fuel-burning appliances/fireplaces and/or attached private garages. Buildings with open parking garages complying with Section 406.5 or enclosed parking garages complying with Section 406.6 are not considered private garages.
IBC 1010.1.7, Exception #2 "Thresholds at Doorways"	New Provision	None	In Type B dwelling units that permit a four -inch elevation change at the door, the threshold height on the exterior side of the door shall not exceed 4¾" in height above the exterior deck, patio or balcony for sliding doors and not more than 4½" for other doors.
IBC 1210.2.3 "Shower Compartments"	Revised	None	The height of the required nonabsorbent surface has been raised from 70 inches to 72 inches.

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Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 1405.3 "Vapor Retarders"	Revised	None	Requirements for vapor retarders have been modified. In Climate Zones 1 and 2, Class I and II vapor retarders are not permitted on the interior side of frame walls. In Climate Zones 3 and 4, Class I vapor retarders are not permitted on the interior of frame walls. Class III vapor retarders are required in specific locations.
IBC 3104.5 Connections of Pedestrian Walkway to Buildings"	Makes Code More User Friendly	None	Revised, reformatted section with no intended changes to the existing requirements.
IBC Section 3006 "Elevator Lobbies and Hoistway Opening Protection	New Section with Relocated Requirements	None	The elevator lobby requirements that were located in 2012 IBC Section 713.14.1 were reformatted and relocated into newly created Sections 3006.2 and 3006.3 in the 2015 IBC.
IBC 403.3.3 "Sprinkler Secondary Water Supply"	Relocated	None	Sprinkler systems in high-rise buildings in Seismic Design Category C, D, E or F are required to have a secondary water supply.
IBC 202 Definition of "Corridor Damper," 717.3.2.4 "Corridor Damper Rating," 717.3.3.5 "Corridor Damper Actuation," 717.5.4.1 Exception #1 "Where Required-Corridors"	New Provision	Unknown	New design option protecting the ceiling membrane's HVAC penetrations for a fire-rated exit access corridor where the ceiling of the corridor is constructed using a fire-rated corridor wall assembly placed horizontally.
IBC 602.4 Cross-Laminated Timber Use in Construction Type IV	New Provision	Unknown	Revisions allow the use of fire-retardant-treated lumber, cross-laminated timber and glued-laminated plank in specific applications.
IBC 703.2.4 Fire-Resistance Ratings and Fire Tests: Supplemental Features"	New Provision	Unknown	When a listed fire resistance assembly is modified, sufficient data shall be made available to the code official to show that the required fire resistance rating is not reduced.
IBC 705.2 "Projections," 705.2.3 "Combustible Projections"	Major Change	Unknown	Table 705.2, "Minimum Distance of Projections," was modified and simplified and now requires an increase in the separation required between the leading edge of a building's projection and the property line (or fire separation distance line). Section 705.2.3 was simplified and requires added protection where a combustible projection is within 5' of a property line (or FSD).
907.2.11.7 "Smoke Detection System"	New Provision	Unknown	Clarifies that an acceptable alternative to providing single and multiple-station smoke alarms is to use smoke detectors, listed per UL 268, that are part of the building's fire alarm system.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
913.2.2 "Circuits Supplying Fire Pumps"	New Provision	Unknown	New section requires that the power supply cables shall be listed and installed in accordance with UL 2196.
IBC 1019 Exception 3, "Exit Access Stairways and Ramps"	New Provision	Unknown	New provisions for exit stairways and ramps require enclosed stairways and ramps with exception for interior of dwelling units.
IBC 308.3 "Group I-1," 308.3.1 "Condition 1, 308.3.2 "Condition 2," 404.5 Exception "Smoke Control," 420.4. "Smoke Barriers in Group I-1, Condition 2," 420.5 "Automatic Sprinkler System," 420.6 "Fire Alarm Systems and Smoke Alarms," 709.5 Exceptions "Openings," 903.2.6 Exception 1 "Group I," 903.3.2(3) "Quick-response and Residential Sprinklers," 904.13 "Domestic Cooking Systems in Group I-2 Condition 1," 907.2.6 Group I Manual Fire Alarm," 907.2.11.2 ""Smoke Alarms," 907.2.11.5 "Interconnection of Smoke Alarms," 907.2.13 Exception 6 "High-Rise Buildings," 907.5.2.2 Exception "Emergency Voice/Alarm Communications," 907.5.2.3.2 "Group I-1 Visible Alarms," 909.5.3 Exception 3 and 909.5.3.1 "Smoke Barrier Opening Protection," 915.1.1 "CO Detection," 1010.1.9.6 "Controlled Egress Doors in Group I-1 and I-2," 1010.1.9.8 "Sensor Release of Electrically Locked Egress Doors," 1010.1.9.9 "Electromagnetically Locked Egress Doors," 1020.1 Exception 2 "Corridor Construction," Table 1020.1 "Corridor Fire-Resistance Rating," 3006.2(2) "Hoistway Opening Protection Required"	Major Changes for I-1 Occupancies	Unknown	There have been a number of requests for conversions of existing R-2 projects into assisted living facilities as the baby boomers are now in their 60s. To provide some general guidance to firms that may be considering either the construction of new projects or conversion of existing buildings to such occupancies, the two rows on I-1 and R-4 occupancies are provided showing the revised requirements in the 2015 IBC for these occupancies. Also be aware that there may be modifications to the requirements in the 2015 IBC that relate to an existing building's conversion to another occupancy. See the requirements in the 2015 International Existing Building Code (IEBC), Chapter 10, "Change of Occupancy". Assisted living facilities (≥ 17 persons) are now divided into two conditions with different requirements throughout the Code. I-1 Condition 1 only applies to occupants who are capable of responding to an emergency without any assistance to leave the building. I-1 Condition 2 applies to occupants who will require limited verbal or physical assistance to respond to an emergency and safely egress from the building.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
Chapter 10 "Means of Egress"	Major Revisions, Re-locations and Clarifications	Unknown	2012 IBC Sections 1015 and 1021 requirements were relocated and revised into the general provisions of Sections 1006 and 1007. All the section numbers that were in the 2012 IBC have been changed in the 2015 IBC because of the extensive reorganization and revisions during this code cycle. Users of the Code are cautioned to do an extensive review of Chapter 10 before designing a project under this new edition of the Code.
IBC 1007 "Exit and Exit Access Doorway Configuration"	New Provision	Unknown	New section with specific requirements on how to measure the separation distance between exits, exit access doorways/stairways and ramps.
IBC 1015.7 Exception "Roof Access"	New Exception	Unknown	Exception eliminates the guards required for roof access where the roof hatch opening is located within 10' of the roof edge or the open side is located > 30" above the floor, roof or grade above, where permanent fall arrest/restraint anchorage connector devices complying with ANSI/ASSE Z 359.1 are provided.
IBC 2406.4.7 "Safety Glazing Adjacent to the Bottom Stairway Landing"	Revision	Unknown	Requires safety glazing if glazing is located < 60" above the bottom of a stair, or within a 60" horizontal arc if < 180 degrees from the bottom tread nosing.
IBC 111.1 "Use and Occupancy"	Revision	Increase	A change in a building use, or portion thereof, with no change in its occupancy classification will now require a new Certificate of Occupancy.
IBC 716.5.8.4 "Opening Protectives–Safety Glazing"	Revision	Increase	Previous editions of the Code only required safety glazing for "fire protection-rated" glazing in fire door assemblies, now it will be required also for "fire resistance-rated" glazing in fire door assemblies. Note that Section 716.5.8.1.1 provides the locations where "fire resistance-rated" glazing in fire door assemblies can be used, and Section 716.5.8.1.2 provides the requirements where "fire protection-rated" glazing in fire door assemblies can be used.
903.3.8 "Limited Area Sprinkler Systems"	Major Revisions	Increase	In existing, non-sprinklered apartment buildings, limited area sprinkler systems were mostly provided in basements where storage rooms, boiler rooms and similar spaces were located. Revisions reduced the number of sprinklers from 20 to six that can be used on a "limited area sprinkler system" in any single fire area. In addition, it now requires hydraulic calculations to be done to show that these sprinklers that are piped off the domestic water supply can control a fire.

Important Changes to the 2015 IBC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IBC 907.2.9.3 "Alarm Systems - Group R-2 College and University Buildings"	Clarification	Increase	In the previous edition of the IBC, the alarm requirements of this section appeared to apply to buildings that are owned by a college or university. For the 2015 IBC it was clarified that this requirement was for Group R-2 occupancies that are "...operated by a college or university for student or staff housing..." Requires an automatic smoke detection system in the common corridors/spaces, laundry, mechanical equipment and storage rooms. It also requires the smoke alarms in the dwelling/sleeping units to be interconnected with the fire alarm system
IBC 1015.8 "Window Opening Guard Protection"	New Provision	Increase	Window openings more than 72" above grade that are less than 36" above the floor must be protected with guards or fixed openings that will not allow the passage of a four-inch-diameter sphere.
IBC 1107.6.2.1 "Live/Work Units"	New Provision	Increase	The nonresidential portion of a live/work unit is required to be accessible. The entire live/work unit is required to be accessible if the residential portion of the live/work unit is required to be a Type B dwelling unit.
IBC 1107.7.2 Multistory Type B Dwelling Units	New Provision	Increase	The primary entry level in a multistory Type B dwelling unit that is served by an elevator must have a living area, kitchen and toilet facility.
IBC 1110.2.2, 1110.2.3 and 1110.4.13, Exception 3. "Accessible Recreational Facilities"	New Provision	Increase	New requirement that apartment properties comply with ANSI A117.1 recreational facility requirements. Accessible means of entry into a swimming pool, spa or similar water feature is not required in R-2, R-3 and R-4 occupancies.
IBC 1203.2 "Attic Ventilation"	New Provision	Increase	The ventilation requirements for attics have been upgraded to reflect the new code requirements for energy conservation. Specific requirements have been added for enclosed attics and a new section (IBC 1203.3) has been added for unvented attic and unvented enclosed rated assemblies.
IBC Chapter 17 "Special Inspections and Tests"	New Provision and Revised	Increase	New requirements for special testing have been added detailing specific requirements that must be complied with when special inspection is required. Requirements for inspection of specific materials have been modified or added.

Important Changes to the 2015 IFC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IFC 1103.3.2 Elevator Emergency Operation	New Provision	Decrease	New exception to requirements for updating elevators to latest standard which include installation of protective doors, sprinkler protection, and for freight elevators sprinkler protection provided at least one elevator complies with A 17.3.
IFC 1104.22(4) "Means of Egress for Existing Buildings–Exterior Stairway Protection"	Deletion of **2012** IFC Section 1104.21**(4.1)**	Decrease	Remainder of Section 1104.21 was moved to 1104.22. The requirement to retroactively sprinkler existing, open-ended corridor (i.e., open breezeway) buildings was deleted.
IFC 1103.7.6 Exception 4 "Manual Fire Alarm System in Existing Group R-2 Occupancies"	New Exception	Decrease	Exception 4 eliminates the requirement for a manual fire alarm system in an existing R-2 occupancy where all four requirements are met: 1. Building is ≤ three stories in height above grade plane. 2. Dwelling units are not served by interior corridors. 3. Dwelling units are separated from each other by 3/4 hour fire barriers. 4. Dwelling units are provided with smoke alarms per Section 907.2.11.
IFC Appendix B B105 "Fire Flow Requirements for Buildings"	Revisions	Unknown	If a jurisdiction adopts the IFC and makes Appendix B mandatory in the adopting ordinance, then fire flows for townhouses and other buildings can be reduced based on the construction type and sprinkler system installed (NFPA 13, NFPA 13R or NFPA 13D).
IFC Appendix C "Fire Hydrant Locations and Distribution"	Revisions	Unknown	If a jurisdiction adopts the IFC and makes Appendix C mandatory in the adopting ordinance, then the revisions to Sections C103.2 Exception and C104.1 provide increased spacing for existing fire hydrants and credit for existing fire hydrants on adjacent properties that can be used. Also new footnotes "f" and "g" permit fire hydrant spacing increases based on the type of sprinkler system installed in the building.
IFC Appendix L "Fire Fighter Air Replenishment Systems (FARS)"	New Provision	Increase	If a jurisdiction adopts the IFC and makes Appendix L mandatory in the adopting ordinance, then buildings required by the local adopting ordinance to have FARS would be required to comply with Appendix L's design, installation, testing and maintenance requirements.
IFC Appendix M "High-Rise – Retroactive Automatic Sprinkler Requirement"	New Provision	Increase	If a jurisdiction adopts the IFC and makes Appendix M mandatory in the adopting ordinance, then all existing high-rise buildings in that jurisdiction will be required to be sprinklered.

Important Changes to the 2015 IEBC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IEBC 406.3 and 702.5 – "Replacement Window Emergency Escape and Rescue Openings"	New Provision	Decrease	Under the Prescriptive Compliance Method or Level 1 Alterations, the replacement window must be the largest standard size that will fit within the existing frame.
IEBC 803.6 "Fire-Resistance Rating"	New Provision	Decrease	Under Level 2 Alterations, in buildings where an automatic sprinkler system is installed throughout, the required fire resistance rating of building elements and materials can be reduced to meet the requirements of the current building code.
IEBC 706 "Reroofing"	New Provision	Unknown	Under Level 1 Alterations, requirements from 2015 IBC Section 1511 were also placed in the IEBC.
2012 IBC Chapter 34 has been deleted and all of the requirements for existing buildings are now found in the 2015 IEBC	Editorial	None	The 2015 IEBC applies to repair, alteration, and change of occupancy, additions, and relocations of existing buildings.
IEBC 906.2 Alterations Level III	New Provision - Clarification	None	Revised to clarify that where four or more Group I-1, I-2, R-1, R-2, R-3 or R4 dwelling or sleeping units are be altered, the requirements of Section 1107 of the IBC for Type B units and Chapter 9 of the IBC for visible alarms apply only to the spaces being altered. Exception: Group I-1, I-2, R-1, R-2, R-3 and R-4 dwelling or sleeping units where the first certificate of occupancy was issued before March 15, 1991 are not required to provide Type B dwelling or sleeping units.
IEBC 406.2 and 702.4 - Replacement Window Fall Protection	New Provision	Increase	Under the Prescriptive Compliance Method or Level 1 Alterations, requirements for limits on window openings, similar to those for new construction, are required for replacement windows. Window openings more than 72 inches above the exterior grade and less than 36 inches above the finished floor are required to have control devices that limit the opening so that a four-inch sphere will not pass.
IEBC 904.2 Fire Alarm System - Alteration Level 3	New Provision	Increase	Install fire alarm and detection system with any Level 3 alteration.

Important Changes to the 2015 IPC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IPC 106.1.1 "Annual Permit"	New Provision	Decrease	An annual permit for plumbing repairs can be issued to a person, firm or corporation to perform plumbing work on individual plumbing items that have already been approved when they employ a qualified tradesperson.

Important Changes to the 2015 IECC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IECC C402 and Chapter 5 Performance Compliance Options	Revision	Decrease	Allow component performance design options for wall, floor, roof and other systems using overall building insulation values to reduce insulation values in individual components.
IECC C504.2.3 Roof Covering Air Barrier	Revision	Decrease	Exemption for repair/replacement of roof recovering from the requirement for an air barrier.
IECC C406 and Chapter 5 Energy Efficiency Packages	Revision	Unknown	Additional choices for required additional energy efficiency packages that can be more cost-effective for new and existing buildings.
IECC Tables C402.1, C402.4, R402.1.2 and R402.1.4–R-values and U-values	No Change from the 2012 IECC	Increase from the 2009 IECC	The R-value and corresponding U-value tables for the commercial and residential requirements have not been changed (except roof insulation), and are the same as in the 2012 versions of the IECC which are not cost effective. See separate document, *Recommended Amendments to the 2015 International Energy Conservation Code (IECC)*, for more information.
IECC R402.4.1.2–Thermal Envelope Air Barrier Testing	No Change from the 2012 IECC	Increase from the 2009 IECC	The residential Section R402.1.2 requires that the air barrier be pressure tested in accordance with a test method for one- and two-family dwellings that is not appropriate for R-2 occupancies. See separate document, *Recommended Amendments to the 2015 International Energy Conservation Code (IECC)*, for more information.
IECC Commercial and Residential Provisions	Revisions and Editorial	Increase	The Commercial portions, which apply to R-2 occupancies four-or-more stories in height; and the Residential portions, which apply to R-2 occupancies three-or-less stories in height, have major revisions to text which need to be considered during the design process.
IECC C403.3.2.1 and Chapter 5	Revision	Increase	Increased hot water piping insulation levels with limits on lengths of hot water piping.

Important Changes to the 2015 IECC (cont'd)			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IECC Table C403.2.3(9) Minimum Efficiency Air Conditioners and Condensing Units Serving Computer Rooms	Revision	Increase	Increased stringency of computer room HVAC minimum efficiency levels.
IECC C403.2.4.7 Fault Detection	New Provision	Increase	Required inclusion of a fault detection and diagnostics reporting system on all 4.5 ton or larger air-cooled, HVAC systems.
IECC C403.2.6.2 Garage Ventilation Controls	New Provision	Increase	Mandatory installation of automatic garage controls.
IECC C405 and Chapter 5 Lighting Controls	New Provision	Increase	Additional more stringent requirements for daylighting, lighting controls and allowed lighting power densities in new and existing buildings.
IECC C408.2.5.2.6 Lighting Operation and Maintenance Manuals	New Provision	Increase	Lighting contractor required to provide operations and maintenance manuals for lighting and lighting controls.
IECC C408.3.1 Occupant Sensor Controls	Revision	Increase	Requirement for functional testing of occupant sensor controls and time-switch controls.
IECC Chapter 5 Existing Buildings	New Provision	Increase	New Chapter 5, Existing Structures with provisions for existing buildings in addition to those contained in the IEBC.

Important Changes to the 2015 IMC			
Section(s) and Issue(s)	*Type of Change*	*Cost Implication*	*Comment*
IMC 106.1.1 "Annual Permit"	New Provision	Decrease	An annual permit for mechanical repairs can be issued to a person, firm or corporation to perform mechanical work on individual mechanical system or equipment that has already been approved when they employ a qualified tradesperson.
IMC 403.3.2 Mechanical Ventilation	New Provision	Increase	Ventilation requirements for R-2 occupancies three stories or less in height have been completely revised to include requirements for inclusion of mechanical exhaust and supply for each dwelling unit.

Important Changes to the 2015 IFGC			
Section(s) and Issue(s)	**Type of Change**	**Cost Implication**	**Comment**
IFGC 307.6 A/C Condensation Pumps	New Provision	Increase	Condensation pumps located in attics, crawl spaces and other uninhabited spaces must have controls that shut down the appliance upon failure of the pumping system.
IFGC 404.7 "Protection Against Physical Damage"	New Provision	Increase	Provisions added to protect concealed piping from penetration by nails, screws and other fasteners.

Attachment 2

Summary of Significant Changes from 2012 to 2015 International Energy Conservation Code
Adapted from an email written by Darren Meyers (energy code consultant to the State of Illinois)

1) Executive-level summary of **2015 IECC Residential Provisions** with amendments for Illinois

a. New homes built to the 2015 IECC are projected to **save new home buyers in Illinois 1.0 percent in annual site energy usage**, and 0.7 percent in annual energy costs compared with homes built to the 2012 IECC.

b. Illinois amendment **eliminates the requirement for 0.40 SHGC for Illinois Climate Zone 5A** (i.e., Springfield and North) for consistency with a similar non-requirement for Illinois Climate Zone 4A (South of Springfield).

c. Illinois amendment allows **basement wall insulation** to be either: 1) R-13/R-10ci full-height, or 2) R-19/R-15ci (half-height).

d. Illinois amendment requires **Whole House Ventilation (WHV) "flow verification" through testing** prior to approval of a WHV system.

e. A **new alternative compliance path** is added based on an Energy Rating Index (ERI). While this change does not directly alter stringency of the code, it does provide an additional compliance path as an alternative to the IECC prescriptive and performance paths.

f. **New Appendix 'RA'** provides informative provisions for conducting a Combustion Air Zone (CAZ) test to confirm whether homes are designed to provide acceptable levels of combustion air to atmospherically-vented appliances. Because the appendix is non-mandatory, there is no direct impact on residential energy efficiency.

g. **New Appendix 'RB'** provides informative provisions to ensure homes are "solar-ready." Because the appendix is non-mandatory, there is no direct impact on residential energy efficiency.

h. **Duct insulation requirements** for return ducts in attics increased from R-6 to R-8.

i. **Heated water circulation systems and heat trace systems** shall be controlled by demand-activated circulation systems.

j. All ¾-inch hot-water pipes shall be insulated to R-3.

k. **Historic buildings**, which are generally exempted from the code, to comply with any of the code's provisions for which there is no "compromise to the historic nature and function of the building."

l. **Outdoor reset control for hot water boilers** requires boiler water temperature be lower when outdoor temperature is higher.

2) Executive-level summary of **2015 IECC Commercial Provisions** with amendments for Illinois

a. New commercial buildings constructed to the 2015 IECC are projected to save commercial building owners and operators 11.1 percent in annual site energy usage and 11.5 percent in annual energy costs on a national aggregated basis compared to commercial buildings constructed to the 2012 IECC.

b. **Three new "efficiency package" options added** to the original three, making six (6) options, of which one must be selected for ***ALL*** new commercial buildings:

i. Improved HVAC equipment performance (Section C406.2),

ii. Reduced lighting power density (LPD) system (Section C406.3),

iii. Enhanced lighting controls (Section 406.4),

iv. On-site supply of renewable energy (Section C406.5),

v. A dedicated outdoor air system for certain HVAC equipment (Section C406.6), and

vi. High-efficiency service water heating (Section C406.7).

c. **Flat-roof insulation levels** "above deck" increased from R-25ci to R-30ci.

d. **Hot Water Boilers** shall be provided with temperature reset controls that automatically lowers the boiler water supply temperature setpoint based on outdoor air temperature.

e. **Energy recovery ventilation (ERV)** requirements in Table C403.2.7(1) reduce the OA fraction threshold to 10% in Illinois climate zones 4A and 5A.

f. New requirements for **all kitchen exhaust and kitchen make up air systems** based on recognized hood and canopy exposure types.

g. DX units that control 75,000 Btu/h or more of rated capacity require at least **two stages of mechanical cooling capacity**.

h. Medium and Large Offices, Private Primary and Secondary Schools, Outpatient Healthcare, and Hospitals will be able to reheat/recool more recirculation air for human comfort if it can be demonstrated to reduce overall system annual energy use by offsetting reheat/recool energy losses through reductions in outdoor air intake. <<**Chicago Building Code on Ventilation trumps this**>>

i. **Multiple-zone VAV system ventilation optimization control requirements** in Section C403.4.4.6. Under this requirement, multiple-zone VAV systems shall have automatic controls to reduce outdoor air intake flow from the design rates in response to dynamic system ventilation efficiency as defined by the 2015 *International Mechanical Code* (IMC).

j. Changes that will likely **decrease the number of skylights in warehouses** and strip-mall-retail from 2012 to 2015 IECC levels. The major impacts of these changes on energy performance of warehouses and strip-mall-retail buildings are in envelope thermal performance, daylight responsive control, and HVAC system sizing.

k. **Interior lighting power reductions.** The IECC requirements related to the interior lighting power were reduced across all building area types on average -19% (e.g., 2012 IECC "Office" LPD reduced from 0.9 to 0.82 W/ft2 in 2015 IECC).

Attachment 3

General Summary of the Changes to the Illinois Plumbing Code

The following is a general summary of the changes to the Illinois Plumbing Code which became effective April 24, 2014. To access the Code electronically, visit www.ilphcc.com and click on the Illinois Plumbing Code under the Quick Links tab. The Illinois PHCC will be printing code books in the near future and will provide more detailed information as it is available.

	All sections	Date removed from Standard except in the Tables
	Various sections	"Proper" replaced with" Approved";"Appropriate" replaced with "the required", etc. General grammar and style corrections.
SUBPART A	Changes "General Regulations" to "General Provisions".	
890.110	Changed the name of the section from "General Regulations" to "Applicability".	
890.120 Definitions	**Circuit Vent;** deleted "which depend on siphonage for proper operation" from the definition. **Code;** changed to use the official reference to the Code. In reference to the local level, changed "code" to "rule or ordinance". **Continuous Vent;** deletes the sentence "A continuous vent is also known as a back vent or an individual vent". **CCCDI;** replaces the "Illinois EPA" with reference to the Title 35 rules. **Department;** new definition referring to the Illinois Department of Public Health. **Drainage Fixture Unit;** replaces "Fixture Unit, Drainage".Definition is the same. **Existing Work;** changes the date – "A plumbing system or any part of a plumbing system that has been installed prior to January 1, 2014". **Graywater;** Definition changed to read "Untreated waste water that has not come into contract with toilet waste, kitchen sink waste, dishwasher waste or similarly contaminated sources. Graywater includes waste water from bathtubs, showers, lavatories, clothes washers and laundry tubs. Also know as gray water, grey water, and grey water". **Individual Vent** changed to Individual Dry Vent. Changed to read; "a pipe installed to vent a single fixture trap that connects with the vent system above the fixture served, or that terminates in the outside atmosphere". Added; See Appendix B. Illustration CC. **Island Fixture Vent;** changed to read "a vent in which the vent pipe rises as near as possible to or above the highest water level in the fixture vented and then turns down before rising to connect to the vent system 6 inches above the flood level rim or terminating to the atmosphere".	**Kitchen or Bar Sink Faucet;** new definition - "a faucet that discharges into a kitchen or bar sink in domestic or commercial applications. Supply fittings that discharge into other types of sinks, including, clinic sinks, floor sinks, service sinks and laundry trays are not included". **Labeled;** new definition – "an indication that an agency approved by the Department or that is an ANSI-accredited certification program has certified the plumbing material to be in compliance with applicable standards in accordance with this Part". **Lavatory Faucet;** new definition – "a faucet that discharges into a lavatory basin in a domestic or commercial installation". **Lead Free;** wording changed to meet the 2014 federal Safe Drinking Water Act. **Loop Vent;** deletes the phase "which depend on self siphonage for proper operation". **Main Vent;** adds "a main vent may be a vent stack or a stack vent". **Metering Faucet;** new definition – "a self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable". **Multi-person Showers;** "shower compartments designed and intended for use by two or more persons simultaneously. **Non-Potable Water;** corrects the standard referenced. **Pipe Increments;** adds 1-1/4" to the list of pipe sizes. **Potable Water;** changed to read "water that meets drinking water standards specified in the Pollution Control Board's rules titled Primary Drinking Water Standards (35 Ill. Adm. Code 611), and is suitable for human consumption or culinary use". **Pre-Rinse Spray Valve;** new definition – "a hand-held device for use with commercial dishwashing and ware-washing equipment that sprays water on dishes, flatware, and other food service items for the purpose of removing food residue before cleaning and sanitizing items". **Private Water Supply;** deletes the reference to the Illinois Groundwater Protection Act. **Self Closing Faucet;** new definition – "a faucet that closes itself after the actuation or control mechanism is deactivated. The actuation or control mechanism can be mechanical or electronic". **Water Closet;** new definition – "a fixture with a water-containing receptor that receives

General Summary of the Changes to the Illinois Plumbing Code Continued

	liquid and solid body waste and on actuation conveys the waste through an exposed integral trap into a drainage system. Also referred to as a toilet." **Water Supply Fixture Unit**; replaces Fixture Unit, Water Supply. Definition is the same.
890.130	Incorporated and Referenced Materials (List)
890.140	Replaces "Repairs and Alterations" with "Compliance with This Part".
890.140 b) 1	Deletes part of the variance language.
890.140 b) 2	Adds; "The Department will consider variances to this Part when the applicant has provided documentation citing the particular portion of this Part for which a variance is sought and has provided justification sufficient, in the opinion of the Department, to demonstrate that the variance will not create a condition less protective than that portion of this Part addressed in the variance request. Issuance of variances to this Part is at the sole discretion of the Department and may not be delegated or assumed by any other authority identified in this Part. Variance authorizations may be conditioned as determined by the Department and are not precedential".
890.180 e) & f)	Adds a note to see Appendix B. Illustration BB.
890.320 l)3)	Joints in Plastic Drainage; adds "listed in Section 890. Appendix A. Table A.
890.330 b)	Corrects the standard to ASME B31.1.
890.330 c)	Straight stops are added for push-on stops.
890.340 c)	Corrects the standard for cast iron joints in water supply pipe to AWWA C151.
890.340 g) 1)	Plastic-Commingling; adds "or approved solvent as listed in 890. Appendix A. Table A. for connections transitioning from one material to another, only.
890.410	Changed "Traps" to "Fixture Traps/ Continuous Waste"
890.510 a) 3)	Deletes the prohibition of discharging a commercial dishwashing machine into the grease interceptor.
890.520 d) 3)	Gas & Oil Interceptors; "Two or more vents may be connected to a header, which shall be 6 inches higher than the lowest floor or trench drain served".
890.520 d) 6)	Corrects Office of State Fire Marshal Code to add 174, 175, 176, 177 and deletes 170.
890.630 e)	Adds; "Potable" in front of "Water Supply Connection".

890.640 c) 3)	Corrects the standard for bathtub liners/ inserts.
890.650 f)	Adds; "Seats for accessible water closets may be open or closed front, and may have a lid or not have a lid".
890.650 g)	Corrects the standard for flushometer tank valves.
890.680 e)	Changes the standard reference from ASSE 1016 to 1070 on water temperature for lavatories.
890.690 b)	Water temperature for showers; corrects the standard.ASSE 1016/ASME A112.1016/ CSA B125.16 and adds ASSE 1070. Changes "gang" shower to "multi-person" shower.
890.700 d)	Adds; "Service sinks, mop sinks, laundry trays or similar utility sinks shall be provided with hot water".
890.700 e)	Adds; "Sinks in laboratories that are not designated for hand washing or personal hygiene may be supplied with cold water only".
890.720 f)	Adds the Illinois Safe Bottled Water Act to the requirements. Deletes reference to "IDPH's Public Area Sanitary Practice Code".
890.730 b)	Adds high-density polyethene (HDPE) to the materials allowed for trench drains.
890.750	Added "Hydromassage" in front of Whirlpool.
890.750 b)	Corrects the standards and addresses suction fittings.
890.810 a) 1)	Adds "Individual businesses within the same building or within an enclosed mall may share public or employee restroom facilities, provided that the access to the restrooms does not require trespass on adjoining businesses or leased space. Restrooms shall be open at all times when any individual business within the same building or within an enclosed mall is open". Deletes the example given.
890.810 a) 2) A) ii)	Changes the floor area per person for "Assembly Places –Facilities for Spectator Events; Worship Places and Funeral Homes; Museums, Libraries,Exhibition Areas and Similar Uses" from 15 sq. ft. to 50 sq. ft.
890.1010 e)	Clear water wastes; adds "refrigerated cases" and "vacuum waste systems". Deletes "building sewer".

General Summary of the Changes to the Illinois Plumbing Code

Continued

890.1120	Changes color for non-potable water marking from yellow to continuous purple; changes the reference to the correct standard.
890.1130 g) 7	Adds "with hot water storage" to the section on closed water systems with regards to backflow devices.
890.1140 h) 1) A)	Adds "and the water supply shall be protected against backflow and back siphonage by an air gap; or an RPZ.
890.1140 h) 1) B)	Language changed to read "Chemical dispensing units shall have a dedicated water supply and shut-off valves to each unit. Each unit shall have a backflow device installed to protect against backflow and back siphonage".
890.1140 k)	Adds requirements for the usage of water powered sump pumps.
890.1180 b) 3)	Changes the reference to labs certified for water testing.
890. 1190 a)	Requires a full port valve on inlet and outlet side of the meter.
890.1190 b)	Adds that a drain valve shall be installed on the discharge side of the meter valve when located inside of a building.
890.1190 d)	Requires that the valve in the cold water branch to a water storage tank or each water heater shall be within 5 developed feet of the tank or heater and be located in the same room.
890.1190 e) & f)	"Shut off" replaced with "line" in reference to valves.
890.1190 g)	Deletes "or back to back" in reference to valve requirements in health care facilities.
890.1210 a)	Adds "attic" to places where water pipes cannot be run unless provisions are made to prevent freezing.
890.1210 b)	Replaces "CIPE" with "CPD".
890.1210 f)	Replaces "high pressure" with "pressure surges" . (Water Hammer)
890.1220 a) 1)	Adds 'the CSA" as an approved testing agency for equipment used for heating and storing hot water.
890.1220 a) 2) A	Allows the use of a single wall construction hot water heat exchanger in a solar system if a non-toxic transfer fluid is used. (2-5) rearranges the current language on heat exchangers.
890.1220 a) 8)	Language changed and moved New 9) for P-O-U water heaters. Removed "instantaneous".

890.1220 a) 8-9	Was 9), now 8).Added Z21.10.1 & Z21.10.1b for space heating.
890.1220 a) 9) A)	POU water heaters; non-storage and non-pressurized units are exempt from relief valve requirements.
890.1220 a) 9) B)	POU water heaters; units intended to deliver water 110 degrees or less shall have an internal burnout element. Deletes the option of a factory set thermostat. Units are exempt from relief valve requirements.
890.1220 a) 10) (New)	Steam Heat.B) "All steam heat exchangers operating in excess of 15 psi, but less than 50 psi shall be separated by double wall construction, with an air gap open to the atmosphere between the two walls."
890.1220 a) 10) C	Adds requirements for steam heat exchangers
890.1230 b) 2)	Replaces AGA with CSA
890.1310 a)	Adds "and clear water vacuum waste systems" in reference to drainage materials.
890.1320 a)	Requires all underground drainage systems to be installed on undisturbed earth or granular fill. Removes exemption for cast iron.
890.1340 a)	Adds design language for Drainage similar to the requirements for Water Distribution. Also changes CIPE to CPD.
890.1340 b) 4)	Adds that the venting system is excluded from the requirement that any piping underground must be at least 2".
890.1360 a) 1)	Adds the words "sewage ejection" between automatic and "pumping".
890.1370 a)	Removes "When plumbing fixtures are installed on the level immediately above a crawl space, at least one trapped and vented floor drain shall be installed."
890.1370 e) 1)	Deletes the requirement that floor drains in food establishments must be metallic.
890.1370 e) 3)	Adds language to isolate these floor drains (in food establishments) from other sanitary discharge.
890.1420 a)	Added to (Vents) Design – "All fixture traps shall be protected by the use of a vent or venting system constructed in accordance with this Part".
890.1420 b)	Added to Installation – "Fixture Traps shall be protected by the appropriate method as follows: an individual dry vent, a wet vent, a common vent, a circuit or loop vent, an island vent, or a combination waste & vent system."

General Summary of the Changes to the Illinois Plumbing Code

Continued

890.1420 c)	Vent Terminals; moved to 890.1430
890.1430 d) (new d was c)	d) Adds that no vent terminal can be within 4 feet of a vertical obstruction. e) states that wet vents in an exterior wall or adjacent to an unheated space must be protected from freezing.
890.1450 b)	Vertical Rise; adds the following "Exception: Wet venting and floor drain vents may connect horizontally."
890.1450 d)	Deletes: "Horizontal kitchen sink vents shall be above the flood level rim of the fixture".
Venting Part	General Cleanup and Reorganization.
890.1720 a)	Corrects the Standard for Correction Facility Water Closets.
890.1730 a)	Corrects the Standard for Correctional Facility Urinals.
890.1750 a)	Correct the Standard for Correctional Facility Service Sinks.
890. Appendix A	Cleanup of addresses/listings on agencies/ organizations.
Appendix A. Table A	Updates standards for **DWV.** Adds: CPVC for chemical waste; Identification of Piping Systems; deletes steel. Updates standards for **Building Sewer.** Adds: HDPE pipe; Polypropylene Pipe; Identification of Piping Systems. Updates standards for **Water Service.** Adds: Stainless Steel. Updates standards for **Water Distribution.** Adds: Pex Distribution Systems & Joints; Stainless Steel. Updates standards for **Fixtures & Fixture Fittings.** Adds: enameled steel fixtures; trench drains; plastic urinals. Updates standards for **Appliances/Appurtenances/ Devices.** Under mixing valves, adds: automatic compensating valves for individual showers and tub/shower combinations; mixing valves for hot water distribution; automatic temperature control mixing valves; water temperature limiting devices; mixing valves for emergency equipment; also addds; water closet personal hygiene devices; water softner and treatment devices.
Appendix A. Table B	**Minimum Number of Fixtures.** **Drinking fountains** for facilities for employee use changed from 1 per 75 to 1 per 100. Other fixtures for single or multiple dwelling, condo, or apt., hotel/motel; changed from 1 **laundry tray or clothes washer connection** for each 4 units to 1 for each 10 units. **Water closets** for assembly places (sports arenas, etc.) for over 800 people changed from 1 for each 200 females to 1 for each 150. **Bathtubs/Showers for Dormitories;** change in Footnote 13 now reads "The total number of bathing facilities shall include one bathtub for males and one bathtub for females or one individual user restroom with a bathtub. **Drinking fountains for assembly places** (sports arenas, etc.).Adds High-Low to 1 per each set of male and female restrooms. **Drinking fountains for assembly places** (theaters, etc.).Adds; "1 High-Low for each set of male and female restrooms. For **Mercantile, malls,** etc. it adds the same language. **Water Closets for Mercantile, malls, etc.** Changes the over 800 requirement for females from 1 for 175, to 1 for each 150. **Businesses Selling Motor Fuel.** Adds "1 service sink where public restrooms are required. **Office/Public Buildings.** Changes the water closet requirement for additional over 110 from 1 for each 40, to 1 for each 50. Changes additional **lavatories** for over 125 people from 1 for 45, to 1 for 50. **Schools – Elementary and above, Day Care,Nursery, etc.** Adds to the requirement for 1 service sink per floor "and kitchen area.'
Appendix A. Table D	**Minimum Water Dist. Pipe Size.** Adds "Dishwasher (commercial) 3/4 inch"; Kitchen sink (commercial) 1 faucet ½ inch"; Kitchen sink (commercial) 2 faucets ¾ inch".
Appendix A. Table M	**Load Values Assigned to Fixtures.** Water Closets Public/Private, Flush Tank changed from 5 to 3 WSFU. Lav. Public, Faucet changed from 1.5 to 1 WSFU. Shower Head Public, Mixing Valve changed from 3 to 2 WSFU. Service sink faucets, Office, etc. changed from 2.25 to 2. Shower stall mixing valve, private changed from 1.5 to 1. Laundry tray faucets, private changed from 2.25 to 2.
Drawings **Illustrations.**	**Cleanup and Clarification of all**

Attachment 4

Illinois Department of
Natural Resources
One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

May 5, 2015

Dear Lake Michigan Water Allocation Permittees,

On March 31, 2015, the Department sent out an email requesting that all Lake Michigan Water Allocation Permittees adopt and submit revised ordinances/building codes consistent with the Department's recently updated Lake Michigan Water Allocation Regulations; in particular, Section 3730.307 (c) subparts 4 and 8. The revised language includes a requirement that new and replacement plumbing fixtures and irrigation controllers on sprinkler systems be a labeled WaterSense product, as specified by the USEPA.

IDNR has coordinated with the Illinois Department of Public Health (IDPH) to ensure our rules are consistent with IDPH's rules implementing the Illinois Plumbing Code. IDNR and IDPH have crafted sample ordinance language that will meet both requirements. The sample ordinance language reads as follows:

Pursuant to 17 Ill. Admin. Code 3730.307(c)(4) and subject to the Illinois Plumbing Code (77 Ill. Admin. Code 890) and the Lawn Irrigation Contractor and Lawn Sprinkler System Registration Code (77 Ill. Admin. Code 892), be it hereby ordained that in the City/Village/County of XXXXX, all new plumbing fixtures and irrigation controllers installed after the effective date of this ordinance shall bear the WaterSense label (as designated by the U.S. Environmental Protection Agency WaterSense Program), when such labeled fixtures are available.

Prior to adopting this ordinance, you must first submit it to the IDPH for their approval. An IDPH submittal form and a description of the approval process are attached for your use. If your proposed ordinance is consistent with the substance in the sample ordinance above, it should receive IDPH approval.

In addition, all permittees are still required to adopt and submit a second ordinance consistent with the Department's revised language concerning non-essential outside water use (Section 3730.307 (c)(8)):

8) The adoption of ordinances that restrict non-essential outside water uses to prevent excessive, wasteful use. These shall provide that unrestricted lawn sprinkling will not be allowed from May 15 through September 15 or each year by requiring, as a minimum, that lawn sprinkling shall not occur on

consecutive days nor shall any lawn sprinkling occur during at least a 6 hour period in the middle of the day (i.e., 10 a.m. through 4 p.m., noon to 6 p.m.) when evapotranspiration is at its highest. New lawns (less than 3 months old) may be exempted from this provision.

Adoption of an ordinance consistent with this language will not require prior approval of IDPH.

I apologize for any confusion and additional work this extra step will cause. All Lake Michigan water allocation permittees that are units of local government should submit their revised ordinances to the Department by September 30, 2015. If you have any questions, please contact Cara Adkins at 312.814.8579 or cara.n.adkins@illinois.gov.

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Attachment 5

Codes & Standards

Changes to the 2014 NEC

According to the National Fire Protection Association (NFPA), there were 3,745 proposals submitted recommending changes for the 2014 National Electric Code (NEC). In addition, there were 1,625 comments concerning the NEC Code-Making Panels' responses to these proposals. Below are some of the more noteworthy changes that occurred in the 2014 edition of the *NEC*.

1. There was a revision to increase the nominal threshold voltage from 600 Volts to 1,000 Volts. The higher voltage is needed for the installation for solar PV equipment.

2. New Articles were added to the NEC topics concerning:

- Article 393 Low Voltage Suspended Ceiling Power Distribution
- Article 646 Modular Data Centers
- Article 728 Fire Resistive Cable Systems
- Article 750 Energy Management Systems

3. Even though "readily accessible" has been used in the NEC, the definition of readily accessible has been added to article 100. This may require changes to the installation of receptacles for dishwashers and vending machines.

Readily Accessible
Capable of being reached quickly for operation, renewal, or inspection without requiring those concerned to use a tool, to climb over, remove obstacle, or other.

4. Article 210.8 GFCI Protection for Dwelling Unit Laundry Areas and Commercial Garages
Dwelling unit laundry areas will now require GFCI protection for all 125-volt, single-phase, 15- and 20 amp receptacles in laundry rooms.

GFCI protection required for all 125 volt single phase 15 and 20 ampere receptacles installed in all commercial, non dwelling unit garages, service bays and similar areas. Not only garages where electrical diagnostic equipment electrical hand tools, or portable lighting equipment are to be used.

5. Article 210.8(D) GFCI for Kitchen Dishwasher Branch Circuit.

GFCI protection shall be provided for outlets that supply dishwashers installed in dwelling units. This includes receptacles and hardwired (All GFCI's must be readily accessible).

6. Article 210.12 AFCI Protection for Dwelling Units now required in kitchen, laundry, and dormitories.

Receptacle AFCI's can be used under certain conditions.

7. Article 300.38 Raceways in Wet Locations Above Grade.

A new section was added to Part II (over 1000 volts, nominal) of Article 300 to indicate that the interior of raceways installed in wet locations above grade are now considered to be a wet location. This will bring aboveground installation requirements for over 1000 volts consistent with the requirements in 300.9 for 1000 volts and under.

8. Article 310.15(B)(3)(c), Exception and Table 310.15(B)(3)(c) Raceways and Cables Exposed to Sunlight on Rooftops.

A new exception was also added that will allow the employment of Type XHHW-2 conductors, which is a thermoset insulated conductor, to be installed in raceways or cables on rooftops without having to apply an ambient temperature adjustment correction factor for these conductors.

9. There was a revision to article 406.9(B)(1) Extra-Duty Covers at 15- and 20-Ampere for receptacles at wet locations.

10. There is a revision in Article 445.11 to require marking at generators to indicate if the neutral is bonded to the frame.

11. Articles 517.18(B); 517.19(B); and 517.19(C) for healthcare facilities will conform to NFPA 99 and change the number of receptacles in patient care facilities for the patient and in operating rooms.

12. Article 690.12 will require Rapid Shutdown of PV Systems on Buildings.

These are just a few of the changes that have been incorporated into the new 2014 NEC.

For more information, contact John Masarick at (703) 650-0053 or e-mail jmasarick@ieci.org. (mailto:jmasarick@ieci.org)