VILLAGE OF DOWNERS GROVE
Report for the Village
9/12/2023

SUBJECT:	SUBMITTED BY:
Adoption of 2021 ICC Building and Fire Codes	Stan Popovich, AICP Director of Community Development

SYNOPSIS

Ordinances have been prepared adopting the International Code Council's (ICC) 2021 series of building and fire codes.

An Ordinance has also been prepared updating Chapter 7 of the Municipal Code concerning general building permit submission requirements.

STRATEGIC PLAN ALIGNMENT

The goals for 2023-2025 include *Exceptional Municipal Services* and *Steward of Financial, Environmental and Neighborhood Sustainability*.

FISCAL IMPACT

N/A

RECOMMENDATION

Discussion of the proposed building codes & approval on a future Council agenda.

BACKGROUND

The Village's current building codes were adopted in August, 2017. The building codes which were adopted at that time were the 2015 edition of the International Code Council (ICC) codes. Staff is proposing that the Village update to the 2021 edition of the ICC's building and fire codes. The specific codes targeted for adoption are:

- *2021 International Residential Code (IRC)* – governs construction of one- and two-family residential buildings and townhomes
- *2021 International Building Code (IBC)* – governs construction of all other use types
- *2021 International Property Maintenance Code (IPMC)* – governs maintenance of all existing buildings and properties
- *2021 International Fire Code (IFC)* – governs construction and maintenance of life safety systems in commercial and multi-family buildings
- *2021 International Fuel Gas Code (IFGC)* - governs installation of fuel-gas piping systems and fuel gas appliances

- *2021 International Mechanical Code (IMC)* - governs mechanical systems utilized to provide control of environmental conditions and related processes within buildings
- *2021 International Swimming Pool and Spa Code (ISPSC)* - governs aquatic recreation facilities, pools and spas
- *2020 National Electric Code (NEC)* - governs installation of electrical wiring and equipment
- *2015 NFPA 101 Life Safety Code* – governs existing and new buildings in regard to safety to life.

The Village also follows three State mandated codes:

- 2018 International Energy Conservation Code (IECC) *(currently adopted edition by the State)*
- State of Illinois Plumbing Code
- State of Illinois Accessibility Code

Staff has undertaken an extensive review process to examine the 2021 codes and determine differences between the current 2015 codes and local amendments with the 2021 codes. In exploring the code changes, staff emphasized the following concepts and strategies:

- Protect health, safety and welfare of Downers Grove occupants
- Align with Long Range Plan goals including sustainability
- Create clear and user friendly code requirements
- Reduce the number of local code amendments
- Maintain consistency with existing ordinance provisions
- Maintain and provide code provisions that address local construction practices
- Align Village regulations with comparable communities
- Maintain ISO / BCEGS score to the benefit of resident's insurance rates

In 2017, the Village amended the 2015 base code to eliminate the requirement to install fire sprinklers in newly constructed single family homes. The current proposal maintains this amendment (fire sprinklers in newly constructed single family homes are not required.) Additional information concerning residential sprinklers and a list of communities and fire districts in Illinois requiring sprinklers is attached.

Below is a brief summary of the highlighted changes in the 2021 model codes that are proposed for adoption.

2021 International Residential Code (IRC)

- Includes provisions for building-integrated photovoltaic systems including roof panels and shingles
- Requires radon testing compliance reports for new single family construction only. This is not required for additions or renovations.
- Requires sound transmission compliance testing and reports for new townhome developments as townhomes have similar sound challenges as apartments and condominiums.
- Provides shipping container and tiny house regulations
- Requires solar ready zones for new single family home construction

2021 International Building Code (IBC)

- Distilleries and breweries can be classified as less hazardous
- Added exiting requirements for escape/puzzle rooms
- Updated heavy timber regulations
- Updated required stairwell illumination standards
- Efficiency dwelling sizes have been reduced

2021 International Property Maintenance Code (IPMC)

- A structural analysis for an existing building is further defined.
- Emergency escape and rescue openings required to be maintained.

2021 International Fire Code (IFC)

- Consolidates all fire code requirements into the IFC, for clarity
- Removes restrictive fire sprinkler requirements for Group U structures
- Prohibit indoor fireworks/pyrotechnics
- Require increased fire sprinkler coverage for electric vehicle charging areas

2021 International Fuel Gas Code (IFGC)

- Residential cooking appliances must be approved for domestic use
- All replacement appliances must be vented in accordance with the requirements for new appliances

2021 International Mechanical Code (IMC)

- Requires continuous operation of exhaust system in nail salons
- Updated exiting requirements for machine rooms

2021 International Swimming Pool and Spa Code (ISPSC)

- Proposed Amendment to require a safety barrier fence around all pools

2020 National Electric Code (NEC)

- Surge protective device required for service of all dwelling units
- Emergency disconnects required on exterior of dwelling unit
- Expanded GFCI and AFCI requirements
- Proposed Amendment to delete aluminum and copper-clad aluminum as conductor materials
- Copper only from service point into structure

2015 NFPA 101 Life Safety Code

- Adopting the 2015 version to match the Illinois Office of the State Fire Marshal's code
- Amended fire sprinkler requirements to match the Village's Residential Code

With regard to the three state mandated codes, staff is not proposing any amendments to the State adopted 2018 International Energy Conservation Code or State Accessibility Code. The staff is aware that the State may adopt the 2021 version of the IECC in the near future. Once the State determines the effective date of the 2021 IECC update, the staff will begin administering that code edition.

The staff is proposing amendments to the State Plumbing Code. The amendments require approval from the Illinois Department of Public Health (IDPH) and are not effective until both the Village and IDPH approve them. The proposed amendments are as follows:

- Require plumbing and irrigation controllers to bear the WaterSense label (water efficiency)
- Require water service pipes to be at least 66-inches in depth to match current Village standards
- Require the water meter to be inside the building
- Disallow wet venting
- Disallow PEX tubing as well as CPVC as water distribution piping

Staff is also proposing minor amendments to Chapter 7 of the Municipal Code. These updates are principally related to permit submittal requirements and processes that changed due to the Village's implementation of an online permit system.

ATTACHMENTS

Council Questions
Fire Sprinkler Information Sheet
Ordinances

Council Questions

Question: We currently require heat detectors to be installed in a Garage. Should we consider requiring heat detectors throughout the house? Also, should we consider requiring homeowners to install a heat detector in the garage if pulling a permit, similar to our current approach for smoke detectors?

The best fire safety in residential buildings would be sprinklers, then smoke detectors in the house and a heat detector in the garage. When the Village chose not to require residential sprinklers in 2017, a compromise was made that called for the installation of a heat detector in the garage. Heat detectors are preferable over smoke detectors in the garage due to the possibility of vehicle exhaust causing false alarms in the garage. Smoke detection is preferable in the living portion of the house because it provides an earlier warning to the occupants. While requiring homeowners to install heat detection in an existing garage as part of a permit application would provide additional protection, it would also add additional cost, labor and time. At this time, Staff is continuing to recommend an amendment which requires smoke detection inside the home as part of all residential interior renovation permits.

Question: How will Village staff review new submissions to ensure additional energy efficiency requirements in the 2021 IECC have been met?

The architect or design professional is responsible for providing this documentation to the Village. This documentation can be provided either on the drawings or on an Energy Compliance documentation report.

Question: Why is PEX tubing inferior to copper piping for water distribution?

Pex tubing (cross-linked polyethylene) is inferior to copper as it is less durable and has a shorter lifespan due to the following reasons: 1) The chlorine in the water inside PEX pipes speed-up the brittle oxidative failure of cross-linked polyethylene. This failure can lead to leakage and pipes bursting. 2) PEX cannot be exposed to light or UV for a long period before deteriorating. 3) PEX is vulnerable to rodent attacks within the wall which can cause both leakage and contamination. In addition, the EPA has published studies documenting research noting concerns of PEX piping water distribution quality due to leaching of contaminants and odor. https://hero.epa.gov/hero/index.cfm/reference/details/reference_id/3859182

Question: Which section of current IRC defines solar panels?

The 2015 IRC defines requirements for Solar Energy Systems in Section R324.

Question: Where is a vapor retarder required? What is considered conditioned space?

Vapor retarder is required in all conditioned spaces and per local amendment, in garages, utility buildings and other accessory structures. Conditioned space is an area, room or space that is enclosed within the building thermal envelope and that is directly or indirectly heated or cooled. Vapor retardants are not required for carports, driveways, walks, patios and other unconditioned spaces.

Question: Village staff currently has discretion as to where a 6'-0" construction fence is located on a property. Should we define the requirements for a new home vs. an addition?

The discretion that the ordinance affords allows Village staff has worked well. Staff has been able to allow existing fencing to serve as construction fencing as well as better define fencing limits on a case by case basis. Staff's preference is to maintain this discretion to better serve the community.

Residential Fire Sprinkler Information Sheet

- The 2021 International Residential Code requires residential fire sprinklers in newly constructed single-family homes (~ .4% of the Downers Grove housing market)

- In Illinois, 121 communities require that fire sprinklers be installed in newly constructed single family homes. Adjacent communities include Clarendon Hills, Glen Ellyn, Lemont Fire District, Lisle Woodridge Fire District, Oak Brook, Western Springs, Westmont, etc. For a complete list of communities from the Northern Illinois Fire Sprinkler Advisory Board, please visit the following link: https://firesprinklerassoc.org/13d-communities/

- Fire sprinklers improve life safety by allowing more time to escape a home fire

- Cost Estimate: ~ 1.5% - 2% of construction costs
    - 4,000 sq ft home ~ $15,000-$20,000 assuming a 1.5" incoming water service

- Residential sprinkler coverage requirements are limited compared to commercial sprinkler coverage requirements. In addition, residential sprinklers do not require 24/7 monitoring or annual inspections.

Information from the **Northern Illinois Fire Advisory Sprinkler Board** is available on-line and summarized below:

- Northern Illinois Fire Advisory Sprinkler Board https://firesprinklerassoc.org/nifsab/

- National Fire Protection Association https://www.nfpa.org/

- Fire sprinklers, in addition to smoke alarms, reduce the chances of fire death by 80%

- Benefits:
    - Reduced injuries/deaths
    - Reduced water damage from a fire (~10X less)
    - Reduced property damage from a fire (~70% less)
    - Reduced firefighter injuries

- The fire sprinkler(s) closest to the fire activate; in 85-90% of home fires, only a single sprinkler activates

Information from the **National Association of Home Builders** is available on-line and summarized below:

https://www.nahb.org/advocacy/top-priorities/building-codes/fire-sprinklers/NAHB-Response-to--NFPA-Fire-Sprinkler-Initiative

- The National Association of Home Builders notes that fires are more likely to occur in older homes, residential fire sprinklers are not designed to save property, smoke alarms work and sprinklers are not cost effective.

ORDINANCE NO. _____

AN ORDINANCE ADOPTING THE 2021
INTERNATIONAL RESIDENTIAL CODE AND AMENDMENTS THERETO

BE IT ORDAINED by the Village Council of the Village of Downers Grove in DuPage County, Illinois, as follows: (Additions are indicated by redline/underline; deletions by ~~strikeout~~):

Section 1. That Section 7.1201 is hereby amended to read as follows:

Sec 7.1201 ~~2015~~2021 International Residential Code - Adoption
The ~~2015~~2021 International Residential Code, is hereby adopted for the purpose of establishing rules and regulations for the construction, alteration, removal, demolition, equipment, use, occupancy, location and maintenance of one- and two- family dwellings as defined therein. The same is adopted in its entirety, except such portions as are hereinafter deleted, modified or amended, and is, together with such amendments, incorporated as fully as if set out at length herein. At least one (1) copy of said Code, including amendments thereto, shall be filed in the office of the Village Clerk, and additional copies shall be available in the Community Development Department

(Ord. 5627, Amended, 08/12/2017; Ord. 5075, Renumbered, 10/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4453, Amended, 10/15/2002; 4213, Amended, 08/15/2000; 3942, Amended, 06/09/1997; 3777, Amended, 09/05/1995; 3763, Amended, 07/24/1995; 3662, Amended, 08/01/1994)

Section 2. That Section 7.1202 is hereby amended to read as follows:

Sec 7.1202 International Residential Code - Amendments
The deletions from and modifications and amendments to the ~~2015~~2021 International Residential Code are the following:

Section R101.1 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R101.1 Title. These regulations shall be known as the Residential Code for One- and Two-family Dwellings of the Village of Downers Grove, and shall be cited as such and will be referred to herein as "this Code".

Section R101.2 Scope is amended by deleting the phrase "Section P2904" in The Exception~~s #1 & #2 and~~ substituting in lieu thereof "~~National~~International Fire Code as adopted by the Village of Downers Grove".

Section 102.4.3. Illinois Plumbing Code is hereby added as follows:
Section 102.4.3. Illinois Plumbing Code. Whenever a reference is made to the International Plumbing Code, such reference shall be deemed to refer to the applicable section of the current Illinois State Plumbing Code, as adopted by the Village of Downers Grove.

Section R103 through Section R104 are amended by deleting the same in their entirety and addressed in DGMC Chapter 7, Article II of the Downers Grove Municipal Code.

Section R105.1 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article III of the Downers Grove Municipal Code.

Subsection R105.2 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of the Village.

(1) Except for ICC Storm Shelters, one~~One~~-story detached accessory structures, provided the floor area does not exceed one hundred (100) square feet and is not more than ten (10) feet from the highest point on the roof to grade.

(2) Retaining walls that are not more than three feet in height measured from grade to the top of the wall.

(3) Painting, papering, tiling, carpeting, cabinets, counter tops, fixture and appliance replacements.

(4) Swings~~Wings~~ and other playground equipment.

(5) Window awnings supported by an exterior wall and do not require additional support.

(6) Windows that are the same size as the ones being replaced. Exception: Homes that have received historic designation by the Village Council.

(7) ~~Aluminum or vinyl s~~Siding replacement. Exception: Homes that have received historic designation by the Village Council.

(8) Replacement water heaters, furnaces and air-conditioning units.

(9) Re-roofing work involving the replacement of shingles only.

Section R105.3 through Section R105.3.1 are amended by deleting the same in their entirety and addressed in DGMC Chapter 7, Article III of the Downers Grove Municipal Code.

Section R105.3.1.1 is deleted in its entirety.

Section R105.3.2 through Section R105.9 are amended by deleting the same in their entirety and addressed in DGMC Chapter 7, Article III of the Downers Grove Municipal Code.

Section R106 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article IV of the Downers Grove Municipal Code.

Section R108 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article VIII of the Downers Grove Municipal Code.

Section R109.1.1 is amended by deleting the phrase "or equipment and special requirements for wood foundations"

Section R109.1.1.1 is hereby added as follows:
R109.1.1.1 Approval of a spot survey. A spot survey indicating the top of foundation elevation and the foundation distances to lot lines must be submitted and approved by the building official prior to the commencement of framing on the foundation.

Section R109.1.3 is amended by deleting the reference to Table R301.2(1) and substitute in lieu thereof the following:
"local flooding data"

Section R109.1.5 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R109.1.5 Types of inspections. In addition to the called inspections above, the Building Official may

make or require any other inspections to ascertain compliance with this Code and other laws enforced by the building official. Additional inspections required include but are not limited to:

(1) Pre-construction, site management inspection

(2) Foundation and drain tile prior to backfill

(3) Any and all underground utilities

(4) Rough framing, electrical, mechanical, plumbing systems

(5) Plumbing stack test with water from the highest fixture

(6) Insulation with required fire blocking and draft stopping in place

(7) New or upgraded electrical service installations prior to activation of service

(8) Concrete pours prior to placement of concrete for all exterior and interior slabs on grade, basement and garage floors, stoops, steps, porches, deck piers.

Section R109.1.6.2~~R109.1.6.1~~ is hereby added as follows:
Section R109.1.6.2~~R109.6.1.~~ Agency approvals. Approval from the Downers Grove Sanitary District will be required as applicable to the type of project.

Section R110 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article VII of the Downers Grove Municipal Code.

Section R112 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article IX of the Downers Grove Municipal Code.

Section R113 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article X of the Downers Grove Municipal Code.

Section R114 is amended by deleting the same in its entirety and addressed in DGMC Chapter 7, Article V of the Downers Grove Municipal Code.

Chapter 2

Section R202 is amended by adding the following definitions:
Section R202 Definitions.
FLOOD HAZARD AREA. An area as defined by local flooding data.

CHAPTER 3

Table R301.2~~R301.2(1)~~ is hereby amended as follows:

Table R301.2~~R301.2(1)~~
Climatic and Geographic Design Criteria

Ground Snow Load	Wind Design			**Seismic Design Category**	Subject to Damage From			**Winter Design Temp**	**Ice Barrier**	**Flood Hazards**
	Speed (mph)	Topographic Effects	Wind Borne Debris Zone		Weathering	Frost Line Depth	Termite			

25 psf	115 mph ultimate design wind speed	No	No	A	Severe	42"	Moderate to Heavy	-4°F	Yes	DGMC Chapter 26 of the Downers Grove Municipal Code

Section R302.2 Townhouses is amended by deleting the phrase "Section P2904" in #1 & #2 and substituting in lieu thereof "~~National~~International Fire Code as adopted by the Village of Downers Grove".

~~**Section R302.5.1** is amended by adding the following to the end of the paragraph:"…and self-latching device."~~

Section R302.5.2 is amended by adding the following to the end of the paragraph:"…and shall be covered with a minimum of ½" gypsum board."

Table R302.6 is amended as follows:
Deletion of all references of "1/2-inch" and substituting in lieu thereof "5/8-inch Type X and deletion of all references of "3 feet" and substituting in lieu thereof "ten feet (10')".

Section R302.14 is amended by deleting the phrase "Section N1102.4.5 of this code" and substituting in lieu thereof the following: "International Energy Conservation Code as Adopted by the Village of Downers Grove."

Section R303.1 Habitable Rooms Exception 1 is amended by adding the following to the end of the paragraph:
"…and the Illinois Amendments of the International Energy Conservation Code as adopted by the Village of Downers Grove."

Section R303.4 Mechanical Ventilation is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
Section R303.4 Mechanical Ventilation. Mechanical ventilation shall be provided as identified in the Illinois Amendments of the International Energy Conservation Code as adopted by the Village of Downers Grove.

~~**Section R305.1** Exception #5 is hereby added as follows:~~
~~**R305.1 Exceptions**:~~
~~4. Crawl spaces containing utilities requiring maintenance and servicing shall have a minimum clear height of thirty (30) inches from the slush coat to the bottom of the floor joists.~~

~~**Section R302.5.1** is amended by adding the following to the end of the paragraph:~~
~~"The door shall be self closing and self latching."~~

~~**Table R302.6** is amended as follows:~~
~~Deletion of all references of "1/2-inch" and substituting "5/8-inch Type X and deletion all references of "3 feet" and substituting "ten feet (10')".~~

Section R309.1.1 is hereby added as follows:
R309.1.1 Gas curb. The garage floor surface shall be a minimum of 6 inches below the adjacent top of foundation for the common walls with the living space. A six (6)-inch high by four (4)-inch wide concrete gas curb may be poured against the common walls in lieu of the six (6) inch difference in elevation. Exception: Existing garage slabs without a gas curb can be replaced without installing a new gas curb.

Section R313.1.1 Design and Installation is amended by deleting the phrase "Section P2904 or".

~~**Section R313.2** and it subsections are amended by deleting the same in their entirety.~~

~~**Section R314.4** is amended by deleting the exception.~~

Section R314.8. is hereby added as follows:
R314.8 Heat alarms. Heat alarms shall be installed in all new attached garages.

Section R314.8.1 is hereby added as follows:
R314.8.1 General. Heat alarms shall be UL Listed and comply with NFPA 72.

Section R314.8.2 is hereby added as follows:
R314.8.2 Interconnection of heat alarm. The alarm device shall be interconnected in such a manner that the actuation of any alarm device will activate all of the alarm devices in the individual dwelling unit and attached garage.

Section R314.8.3 is hereby added as follows:
R314.8.3 Power source. Heat alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Section R317.1 Condition #1 shall be amended to add the following to the beginning of Condition #1: "Structural members for all exterior decks and porches,"
Section R317.1 shall further be amended to delete Condition #2 and by substituting in lieu thereof the following:
2. All wood framing members that rest on concrete or masonry exterior foundation walls.

CHAPTER 4

Section R401.1 is amended to delete the last sentence of the first paragraph.
Section R401.1 is further amended to delete the exceptions.
Section R401.1 is further amended to delete the last paragraph of the section.

Section R401.2 is amended by deleting the words "wood and" from the last sentence.

Section R401.2.1 shall be added as follows:
Section **R401.2.1 Weather-related construction methods**. All concrete preparation, placement, and protection for footings, foundations, and flatwork with temperature conditions below freezing shall be in accordance with accepted industry standards and the protection provisions of ACI 318 when applicable.

Section R402.1 through Section R402.1.2 are deleted in their entirety.

Section R403.1 is amended by deleting the words "fully grouted masonry", crushed stone footings" and "wood foundations".

~~**Section R403.1.1** is amended by deleting the phrase "masonry footings"~~
Section R403.1.1 is ~~further~~ amended by deleting the second to the last sentence of the section.

Figure R403.1(2) and Figure R 403.1(3) are deleted in their entirety.

Section R403.1.1.1~~R403.1.1.2~~ is added as follows:
Section R403.1.1.1~~R403.1.1.2~~ Open deck and gazebo piers. One-story wood deck structures without roofs, and free-standing gazebo type structures with roofs, shall be permitted to be constructed on concrete piers. The piers shall be spaced in accordance with proper structural design for the anticipated loading conditions. All wood supporting columns shall be anchored to the piers with galvanized post base anchors.

Section R403.1.1.2~~R403.1.1.3~~ is added as follows:
Section R403.1.1.2~~R403.1.1.3~~ Screen rooms and Three-season room foundations. Screen rooms and three-season rooms shall be supported on a minimum of an eight (8) inch wide continuous frost depth trench-type foundation. Alternate foundation designs shall be submitted by a State of Illinois licensed design professional. The submittal shall be sealed by the design professional of record.

Section R403.1.1.3~~R403.1.1.4~~ is added as follows:
Section R403.1.1.3~~R403.1.1.4~~ Exterior-stair foundations. When constructed of concrete, stone or masonry materials, the main entry stairs exceeding three (3) risers in height shall be supported on a minimum of a continuous perimeter trench type foundation 42" deep. All other exterior stairs shall be supported on a minimum of wing walls tied with reinforcing bars to the main foundation or 8" diameter concrete piers, 42" deep. Alternate foundation designs shall be submitted by a State of Illinois licensed design professional. The submittal shall be sealed by the design professional of record.

Section R403.2, is amended by deleting the same in its entirety.

Section R403.3 is amended by deleting the same in its entirety.

Figure R403.3(1), (2) (3) and (4) are amended by deleting the same in their entirety.

Table R403.3(1) is amended by deleting the same in its entirety.

Section R403.3.1 through Section R403.3.3 are amended by deleting the same in their entirety.

Section R404.2 through Section R404.2.6, are amended by deleting the same in their entirety.

Section R404.3 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R404.3. Wood sill plates. Wood sill plates shall be a minimum of two (2)-inch by four (4)-inch nominal lumber. Sill plate anchorage shall be in accordance with Sections R403.1.6 and R602.11. Sill plates shall be of naturally durable or pressure-treated wood.

Section R405.2 through Section R405.2.3 are amended by deleting the same in their entirety.

Section R406.3 through Section R406.3.4 are amended by deleting the same in their entirety.

Section R408.3 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1. A two (2) inch minimum concrete slush coat floor slab is provided and one of the following is provided for the under-floor space.

    1. Continuously operated mechanical exhaust ventilation at a rate equal to one (1) cfm for each fifty (50) square feet of crawlspace floor area, including an air pathway to an adjacent conditioned space, and perimeter walls insulated in accordance with the International Energy Conservation Code.
    2. Conditioned air supply sized to deliver at a rate equal to one (1) cfm for each fifty (50) square feet of under-floor area, including a return air pathway to an adjacent conditioned space, and perimeter walls insulated in accordance with the International Energy Conservation Code.

Section R408.4 is amended to add the following at the end of the first paragraph:
"A minimum of thirty inch (30") vertical clearance is required for access requirements where mechanical equipment is located under floors."

CHAPTER 5

Section 506.1, is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R506.1 General. Concrete slab-on-grade floors and exterior slabs shall be designed and constructed in accordance with the provisions of this section or ACI 332. Floors shall be a minimum of 4.0 inches thick (for expansive soils, see Section R403.1.8). The specified compressive strength of concrete shall be set forth in Section R402.2.
Exception: Crawl space floors shall consist of a minimum of 2 inches of concrete on a vapor retarder as specified in 506.2.3 on a base as specified in Section 506.2.2.

Section R506.2.3 is amended by deleting the Exception #1.

CHAPTER 6

Section R606.4.2 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
R606.4.2 Support at foundation. Cavity wall or masonry veneer construction must be supported on a foundation wall of equal width of the wall system above. Alternate foundation designs shall be submitted by a State of Illinois licensed design professional. The submittal shall be sealed by the design professional of record.

CHAPTER 7

Section R702.3.2.1 is hereby added as follows:
Section **R702.3.2.1 Concealment of framing**. All framing of finished rooms, closets, storage areas, and under stairways shall have a minimum of one half (1/2) inch thick gypsum board applied.

Section R703.2 is amended by deleting the last sentence.

Section R703.5.2 is amended by adding at the end of the paragraph the following sentence:
"All panels shall contain an approved rated siding grade mark. All panels shall be decorative in appearance such as T1-11 siding."

Section R705~~R704~~ is hereby added as follows:
Section R705~~R704~~ **Weather caulking**. All exterior openings in the exterior weather protective membrane shall be caulked with an elastic, non-hardening and firmly adhering material, the intersections of all wood to masonry, or dissimilar materials shall be caulked.

CHAPTER 8

Section R801.3 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
Section**R801.3 Roof drainage**. All dwellings and accessory buildings of four hundred (400) square feet or larger shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface at least five (5) feet from foundation walls, or to an approved drainage system, or in a manner as reviewed and approved by the building official.

CHAPTER 9

Section R903.4.1 Secondary (emergency overflow) drains or scuppers shall be modified to replace "Section 1106 and 1108 of the International Pluming Code, as applicable" with "State of Illinois Plumbing Code as adopted and amended by the Village".

Section R903.4.2 is hereby added as follows:
Section **R903.4.2 Gutters and downspouts**.

(1) Gutters and downspouts shall be installed on all dwelling units and accessory buildings that are four hundred (400) square feet or larger unless omission is specifically permitted by the Building Official.

Section R908.7 is hereby added as follows:
Section **R908.7 Ventilation**. When re-covering or replacing an existing roof, the roof shall be ventilated in accordance with the requirements of Section R806.

CHAPTER 10

Section R1004.1.1 is hereby added as follows:
Section **R1004.1.1 Insulated fire boxes**. When a factory-built fireplace is installed on an outside wall, the frame cavity surrounding the firebox shall be insulated in the same manner as the adjacent wall areas. The product's rating for clearance to combustibles shall be maintained. A minimum of ½" gypsum board shall be installed over combustible materials extending from the bottom of the firebox to the firestop located above the appliance.

Section R1005.4.1 is hereby added as follows:
Section **R1005.4.1 Chimney enclosures**. Portions of the chimney which pass through habitable spaces or closets shall be enclosed in a drywall chase to avoid personal contact, contact with combustible material, and damage to the chimney.

Section R1005.4.2 is hereby added as follows:
Section **R1005.4.2 Installation of firestops**. Firestops shall be installed inside of the chase enclosing the factory-built chimney. The firestop device shall be as provided by the manufacturer for use with that specific chimney being installed. The firestops shall be placed at a minimum at the level of each ceiling that the chimney passes through or when located on an outside wall, at the points equivalent to each ceiling line. All installations shall meet the requirements of the manufacturer's installation guidelines.

Section R1005.4.3 is hereby added as follows:
Section **R1005.4.3. Insulating of chase**. When the enclosing fireplace chase is located on an outside wall or adjacent to an unheated area, it shall be insulated in the same manner as the adjacent walls up to the firestop. The insulation shall then be covered with 1/2 inch drywall.

~~Chapter 11~~CHAPTER 11 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
See the current International Energy Conservation Code as adopted and amended by the Village.

CHAPTERS 12 through 23 - Residential Mechanical

Section M1405.1, Section M1406.1, Section M1406.2, and Section M1407.1 are hereby amended to delete the phrase "Chapters 34 through 43 of this code" and by substituting in lieu thereof the following: "the applicable provisions of the National Electrical Code as adopted and amended by the Village."

Section M1601.1.1 is amended by deleting Condition #7 and its subsections in their entirety and by substituting in lieu thereof the following:
7. Stud wall cavities and the spaces between solid floor joists shall not be used for air plenums serving habitable spaces. Supply and return air shall be conveyed in a ducted system.

Section M2004.1 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
M2004.1 General. Water heaters used to supply both potable hot water and hot water for space heating shall be installed in accordance with this chapter, the manufacturer's installation instructions, the Energy Conservation Code, the National Electrical Code, and the State of Illinois Plumbing Code as adopted and amended by the Village.

CHAPTERS 25 through 33 are amended by deleting the same in its entirety and by substituting in lieu thereof the following: See the current Illinois Plumbing Code as adopted and amended by the Village.

CHAPTERS 34 through 43 – Electrical
Chapters 34 through 43 are amended by deleting the same in their entirety and by substituting in lieu thereof the following:
See the current National Electric Code as adopted and amended by the Village.

Chapter 44 Referenced Standards is amended by deleting "International Plumbing Code" and substituting in lieu thereof the following:
"Current Illinois Plumbing Code as adopted by the Village".

The following appendices are adopted by reference as amended:

APPENDIX ~~F~~A RADON CONTROL METHODS

AF101.1 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:
AF101.1 General. This appendix contains requirements for new construction in accordance with the Radon Resistant Construction Act (420 ILCS ~~52/1, et. seq.~~)

AF102 is amended by deleting the same in its entirety.

AF103 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

AF103 REQUIREMENTS

AF103.1 General. The construction techniques intended to resist radon entry and prepare the building for post-construction radon mitigation shall be in accordance with 32 Ill. Admin. Code 422.150 "Mitigation Standard for New Residential Construction".

APPENDIX AK SOUND TRANSMISSION

APPENDIX AQ TINY HOUSES

APPENDIX AT SOLAR-READY PROVISIONS – DETACHED ONE-AND TWO-FAMILY DWELLINGS AND TOWNHOUSES

(Ord. 5627, Amended, 08/12/2017; Ord. 5555, Amended, 08/19/2016; Ord. 5373, Amended, 04/01/2014; Ord. 5289, Amended, 12/04/2012; Ord. 5262-scriv, Amended, 05/08/2012, Flood Plan-scrivners, change Ch26 references; Ord. 5075, Added, 10/06/2009)

Section 3. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4. That this ordinance shall be in full force and effect on January 1, 2024.

_____
Mayor

Passed:
Published:

Attest:_____
Village Clerk

1\mw\ord.23\IRC-2021