

## CITY of NOVI CITY COUNCIL

Agenda Item 2  
July 22, 2019

**SUBJECT:** Consideration to introduce Ordinance No. 19-99.18, an ordinance to amend the City of Novi Code of Ordinances Chapter 15, "Fire Prevention and Protection," Article II, "Fire Prevention Code, "Section 15-16, "International Fire Prevention Code-Adopted as Amended; Insertions" and Section 15-17, "Amendments," to adopt and incorporate the 2015 International Fire Code. **FIRST READING**

**SUBMITTING DEPARTMENT:**

**CITY MANAGER APPROVAL:**

FA

**BACKGROUND INFORMATION:**


The International Fire Prevention Code (IFC) is a nationally-promulgated model that is updated approximately every three years. The City currently operates under the 2012 version of the Code which was adopted by City Council in 2012. This proposed draft ordinance adopts the most recent version (2015). The various amendments that the City has adopted in previous years are carried forward into this ordinance (e.g., open burning). Most importantly, by adopting the 2015 edition would mirror the latest version of the various building codes the City uses and enforces.

**RECOMMENDED ACTION:** Approval of introduction of Ordinance No. 19-99.18, an ordinance to amend the City of Novi Code of Ordinances Chapter 15, "Fire Prevention and Protection," Article II, "Fire Prevention Code, "Section 15-16, "International Fire Prevention Code-Adopted as Amended; Insertions" and Section 15-17, "Amendments," to adopt and incorporate the 2015 International Fire Code. **FIRST READING**

# MEMORANDUM



**TO:** DAVID E. MOLLOY, DIRECTOR OF PUBLIC SAFETY  
JEFF JOHNSON, DIRECTOR OF EMS/FIRE OPERATIONS

**FROM:** KEVIN PIERCE, FIRE MARSHAL 

**SUBJECT:** 2015 INTERNATIONAL FIRE CODE ORDINANCE  
AMENDMENT & ADOPTION

**DATE:** APRIL 4, 2019

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The Novi Fire Department Fire Prevention will be seeking approval for the Novi City Council to legally adopt the 2015 edition of the International Fire Code (IFC). The Novi Fire Department is currently using the 2012 IFC. The IFC has made some changes to address concerns from the previous code cycle and to re-organize some parts of the book. A summary of the changes and the highlighted points are referenced in the background information provided in this communication. As a final note, requesting the adoption will mirror the Novi Community Development Department and the 2015 Michigan Building Code (MBC) & The International Building Code (IBC) to parallel the 2015 IFC currently adopted.

## Findings:

In this report is my findings and analysis of the entire 2015 IFC changes from the previous 2012 addition. Listed below are some of the significant changes of the 2015 IFC and their impacts to the Novi Fire Department and our Fire Prevention Ordinances:

- Fire Flow Requirements in Appendix B, B105: For One and Two-Family Dwellings, Group R-3 and R-4 and Townhomes: 0-3600 S.Q.F.T. 1,000 gallons per minute require no fire suppression system. 0-3600 S.Q.F.T. 500 gallons per minute requires fire suppression system. Residential sprinklers systems were not in IFC 2012.
- Section 5808 Hydrogen Fuel Gas Rooms are no longer allowed below grade for the structure (IFC 5808.1 Location).

- Section 1018.5 Aisle widths in other assembly spaces. Minimum clear aisle capacity shall be determined by section 1005.1 for the occupant load served. Width shall not be less than that required for corridors section 1020.2.
- Section 907.2.14 Smoke Detection in an atrium, rational analysis (thought process based on reasoning) will determine the placement of smoke detectors. For example: stack effect smoke detectors, wind effect, HVAC units, and smoke control systems are some of the issues for adding or relocating smoke detectors.
- Section 904.2 & 904.11 Automatic Water Mist Systems can be used in special rooms like a computer/server rooms. This is secondary to the National Fire Protection Association (NFPA)13 fire suppression system that is throughout the building. This can be used in place of a clean agent system (FM 200).
- Section 903.3.1.1.2 Bathrooms exempt from sprinklers: in Group R occupancies other than Group R-4, bathroom less than 55 square feet in area and all the walls, and ceilings are noncombustible material.
- Section 3203.2 Class I Commodities (high piled storage) using plastic pallets are required to install a NFPA 13 sprinklers system in the rack storage.
- Section 1004.1.1 Cumulative Occupant loads: Intervening spaces and adjacent levels for mezzanines shall be added to the occupant load.
- Section 609.4 Appliance Gas Connection, flexible connectors are required on all gas-fired appliances that are moveable.
- Section 1004.1.1 Cumulative Occupant Loads, intervening spaces and adjacent levels for mezzanines shall be added to the occupant load.
- Section 3206.9.3 Dead-End Aisles shall not exceed 20' in length in Group M occupancies. In all other occupancy groups, they cannot exceed 50' in length.
- Section 807 Decorative Materials hanging from walls shall be limited to 10% of the wall space without a fire suppression system. But will increase if the structure is fully suppressed. Refer to NFPA for more information.
- Section 904.13 Domestic Cooking systems, for nursing and Assisted Living Homes are required to have a Type I hood and a fire suppression system (wet chemical system).
- Section 907.1.2 Fire Alarm shop drawings are required to provide the minimum audibility level for occupant notification.

- Section 903.3.8 Limited Area Sprinkler Systems, the amount of heads for a limited suppression system has been changed from 20 or less to 6 or less.
- Section 903.3.1.1.1 Fire Suppression System is not required in the following rooms if they have smoke detection: Mechanical, Elevator and Machine rooms.
- Section 5307 Carbon Dioxide Systems, a system using more than 100 lbs. of CO2 MUST have CO2 detection tied into the fire alarm system.

The Novi Fire Department currently has a certified Fire Code instructor through the Michigan Fire Inspectors Society, as a NFPA Fire Inspector I & II and NFPA Plans Examiner Instructor who has been approved to teach this program at several local community colleges. With this certification, we can now teach "in-house" and also provide continuing education credits for ALL Fire Inspector requirements. This program will provide all Novi Fire Protection Officers with continuing education points to be applied to their current NFPA & State of Michigan Licenses.

#### Fire Inspector Training:

Lieutenant Jeff Lachman with oversight by Fire Marshal Pierce created an internal training program consisting of a Plan Review Packet and a new PowerPoint program that will guide our personnel on the significant changes to the new 2015 IFC. This program will be presented on the following dates: April 10 and 11, 2019 as a classroom lecture instructed by Fire Marshal Pierce and Fire Protection Officer Andy Copeland.

#### Other Reference Standards:

The National Fire Protection Association has changed and adopted several reference standards that we would use in the absence of design language in the new 2015 IFC code. NFPA has updated the following standards that we will use when referencing all plan reviews and construction standards along with the Michigan Building Code (MBC) 2015:

- IFC- Fire Code 2012 will change to IFC 2015.
- NFPA 101-Life Safety Code 2012 to 2015.
- NFPA 13-Fire Sprinkler Systems 2010 to 2013.
- NFPA 72-Fire Alarm Systems 2010 to 2013.

- NFPA 24-Private Water Service Mains 2010 to 2013.
- NFPA 25-Water Based Protection Systems 2011 to 2014.

Recommendation:

I'm requesting the city attorney's review and to provide the updated amendments to the Novi Fire Prevention Ordinance to the 2015 IFC. Our goal is present this to the Novi City Council on May 20, 2019 for adoption consideration.

Should you have any questions, please let me know.

c Victor Cardenas

Tom Schultz

STATE OF MICHIGAN  
COUNTY OF OAKLAND  
CITY OF NOVI  
ORDINANCE NO. 19-99.18

**AN ORDINANCE TO AMEND THE CITY OF NOVI CODE OF ORDINANCES CHAPTER 15, "FIRE PREVENTION AND PROTECTION," ARTICLE II, "FIRE PREVENTION CODE," SECTION 15-16, "INTERNATIONAL FIRE PREVENTION CODE- ADOPTED AS AMENDED; INSERTIONS" AND SECTION 15-17, "AMENDMENTS," TO ADOPT AND INCORPORATE THE 2015 INTERNATIONAL FIRE CODE.**

**THE CITY OF NOVI ORDAINS:**

**PART I.** That Chapter 15, "Fire Prevention and Protection," Article II, "Fire Prevention Code," Sec. 15-16, "International Fire Prevention Code- Adopted as amended; insertion," and Sec. 15-17, "Amendments," are hereby amended to read as follows in its entirety:

**Sec. 15-16. International Fire Prevention Code- Adopted as amended; insertions.**

The International Fire Code, 2015 Edition, including the Appendix Chapters, as published by the International Code Council, is hereby adopted as the Fire Code of the City of Novi, in the State of Michigan regulating and governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life and property in the occupancy of buildings and premises as herein provided; providing for the issuance of permits and collection of fees therefor; and each and all the regulations, provisions, penalties, conditions and terms of said Fire Code on file in the office of the City of Novi are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Section 15-17 of this article.

The following sections of the Fire Code are amended to insert the information indicated:

Section 101.1 Insert "City of Novi."

Section 109.4 Insert "misdemeanor" and "\$500.00 and/or 90 days in jail."

Section 111.4 Insert "\$250" and "\$500."

**Sec. 15-17. Amendments.**

The Fire Code adopted by reference in section 15-16 is hereby amended in the following respects:

*Subsection 105.1.1 Permits required*, shall be amended to read as follows:

Permits are required for the various uses and activities as provided in this code, except in instances where the use or activity is conducted pursuant to a permit issued by the building department under the state construction code, as enforced by the city. Permits required under this code shall be obtained from the code official. Permits shall at all times be kept on the premises designated therein and shall at all times be subject to inspection by the code official. Inspections of work and materials for which a permit was obtained shall be made as required by the authority having jurisdiction or the duly authorized representative.

*Subsection 108.1 Board of appeals established*, shall be amended to read as follows:

The City of Novi Construction Code Board of Appeals shall sit as the board of appeals for purposes of this code.

*Subsection 307. Open burning, recreational fires and portable outdoor fireplaces.*

*307.1 General.* A person shall not kindle or maintain or authorize to be kindled or maintained any open burning unless conducted and approved in accordance with Sections 307.1.1 through 307.5.

*307.1.1 Prohibited open burning.* Open burning shall be prohibited when atmospheric conditions or local circumstances make such fires hazardous.

*Exception:* Prescribed burning solely for the purpose of reducing the impact of wildland fire when authorized by the fire code official.

*307.2 Permit required.* A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, a bonfire, or a fire set as a prescribed burn as provided in this subsection. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

*Exception:* Bonfires located within thirty feet (30') of a lake, not exceeding 3'x3'x3' in size and meeting all other provisions of this code shall be allowed without a permit.

*307.2.1 Authorization.* Where required by state or local law or regulations, open burning shall only be permitted with prior approval from the state or local air and water quality management authority, provided that all conditions specified in the authorization are followed.

*307.3 Extinguishment authority.* When open burning creates or adds to a hazardous situation, or a required permit for open burning has not been obtained, the fire code official is authorized to order the extinguishment of the open burning operation.

*307.4 Location.* The location for open burning shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.

*Exceptions:*

1. Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.
2. The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.
3. Prescribed burns approved in accordance with this subsection.

*307.4.1 Bonfires.* A bonfire shall not be conducted within 50 feet (15 240 mm) of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions which could cause a fire to spread within 50 feet (15 240 mm) of a structure shall be eliminated prior to ignition.

*307.4.2 Recreational fires.* Recreational fires shall not be conducted within 25 feet (7620 mm) of a structure or combustible material. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.

*307.4.3 Portable outdoor fireplaces.* Portable outdoor fireplaces shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet (3048 mm) of a structure or combustible material.

*Exception:* Portable outdoor fireplaces used at one- and two-family dwellings.

*307.5 Attendance.* Open burning, bonfires, recreational fires and use of portable outdoor fireplaces shall be constantly attended until the fire is



extinguished. A minimum of one portable fire extinguisher complying with Section 906 with a minimum 4-A rating or other approved on-site fire-extinguishing equipment, such as dirt, sand, water barrel, garden hose or water truck, shall be available for immediate utilization.

*307.5.1 Materials.* Fuel for open burning shall consist only of seasoned dry firewood and be ignited with a small quantity of paper. The use of refuse, waste, trash, garbage, tires, stumps, cardboard, lumber, furniture, grass, leaves, brush, evergreens, roof covering, flammable liquids, fabric, cloth, or other material not approved by the code official as fuel is prohibited. Open burning shall not be used for waste disposal purposes.

*307.6 Occupational needs.* Open burning for the warmth of workers or heating for occupational needs shall be confined to an approved noncombustible container or apparatus to prevent the fire from spreading.

*307.7 Prescribed burns.*

*307.1* "Prescribed burn" means the burning, in compliance with a plan (or "prescription") and to meet specific planned land management objectives related to ground cover or invasive or undesirable plant species or materials, of a continuous cover of fuels. The following shall apply to all prescribed burns:

*307.1.1 Application and plan/prescription required.* No permit shall be issued unless an application on a form provided by the City has been submitted by the owner of the land upon which the burn will take place, or by the individual conducting the burn on behalf of the owner; if submitted by someone other than the owner, the owner shall also sign the application. The application shall require a plan or prescription that includes:

- a. A site map detailing:
  - (i) the targeted burn area;
  - (ii) property lines;
  - (iii) neighboring structures and utilities
  - (iv) other relevant physical features of the site.
- b. A description of the purposes of the burn, including:
  - (i) the benefit(s) to the property of the proposed activity; and
  - (ii) the particular ground cover and/or plant species or materials the activity will address.
- c. A statement of the weather conditions under which the proposed burn will take place.

- d. Proof of adequate water supply for extinguishing the fire set.
- e. A description of proposed method of conducting the burn.
- f. A description of proposed method of extinguishment detailing both primary and secondary measures.
- g. Proof, satisfactory to the code official in his or her sole discretion, of the qualifications of the individual conducting the burn to safely engage in the permitted activity.

*307.1.2 Review fee.* A fee of \$50.00 for residential and \$150.00 for commercial shall be paid at the time of the application.

*307.1.3 Insurance and cost recovery agreement.* The code official shall require proof of adequate insurance covering the proposed activity. Insurance coverage may be provided by the individual conducting the burn (e.g., through a comprehensive general liability policy), or by the property owner (e.g., through a homeowner's insurance policy). In addition, the applicant shall agree to pay the costs of any required response by the City. Any prescribed burn determined by the fire code official to require fire department equipment/vehicle and personnel shall be charged according to the Fire Department Fee Schedule.

*307.1.4 Term of permit.* The permit shall be for a specific period of time no longer than 30 days.

*307.1.5 Notification to the fire department.* The applicant shall be responsible to notify the fire department of the time of the burn at least 48 hours before the time of its expected commencement. The applicant shall also notify the Department approximately 30 minutes before ignition. If weather conditions prevent ignition at the expected time, the applicant may commence the burn within the next 48-hour period, with notice to the Department approximately 30 minutes before ignition. The applicant shall also notify the department of the completion of the burn and the complete extinguishment of the fire within one hour of extinguishment.

*307.1.6 Notification of adjacent property owners.* The applicant shall give reasonable notice to the occupants of the immediately adjacent properties of the intended activity at least 24 hours before commencement. Notice may be verbal or in writing. If weather conditions prevent ignition at the expected time, the applicant shall be permitted to commence the burn without additional notice within the next 24-hour period.

*307.1.7 Extinguishment authority.* When a prescribed burn creates or adds to a hazardous situation, or a required permit for a prescribed burn has not been obtained, the fire code official is authorized to order the extinguishment of the prescribed burn operation.

307.1.8 *Attendance.* The person in charge of conducting the burn shall be present at all times during the burn, from ignition to extinguishment.

*Section 503. Fire apparatus access roads,* shall be amended to read as follows:

503.2 *Specifications.* Fire apparatus roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.7 and the City of Novi Design and Construction Standards.

503.2.1 *Dimensions.* Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm) and an unobstructed vertical clearance of not less than 14 feet (4115 mm).

503.2.2 *Authority.* The code official shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations.

503.2.3 *Surface.* Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities supporting thirty-five (35) tons.

503.2.4 *Turning radius.* The minimum required outside turning radius of a fire apparatus access road shall be fifty feet (50').

503.2.5 *Dead ends.* Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus.

503.2.6 *Bridges and elevated surfaces.* Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO Standard Specification for Highway Bridges. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the code official.

503.2.7 *Grade.* The grade of a fire apparatus access road shall be a maximum of eight percent (8%).

503.2.8 *Angles of approach and departure.* The angles of approach and departure for fire apparatus access roads shall be within the limits

established by the fire code official based on the fire department's apparatus.

*503.2.9 Temporary roadways.* Where approved by the code official, temporary fire department access roadways of such a surface, width, turning radii and vertical clearance which will permit access by fire apparatus shall be allowed until permanent roads are constructed.

*Section 912.* Fire department connections shall be amended to include the following subsections:

*912.2.3 Proximity to hydrant.* In any building or structure required to be equipped with a fire department connection, the connection shall be located within one hundred feet (100') of a fire hydrant.

*912.7 Inspection, testing and maintenance.* Fire department connections shall be periodically inspected, tested and maintained in accordance with NFPA 25. Records of inspection, testing and maintenance shall be maintained.

*912.8 Alarm devices.* Both an audible and visual means of indicating an automatic sprinkler system activation shall be mounted above or in close proximity to the fire department connection.

*Section 5003.* General requirements shall be amended to include the following subsection:

*5003.3.1.4 Responsibility for cleanup.* The person, firm or corporation responsible for an unauthorized discharge shall institute and complete all actions necessary to remedy the effects of such unauthorized discharge, whether sudden or gradual, at no cost to the City. When deemed necessary by the fire code official, cleanup may be initiated by the fire department or by an authorized individual or firm. The liability for and recovery of costs of the cleanup shall be governed by the Michigan Natural Resources and Environmental Protection Act (MCL 324.20101, et seq.) or any other law that preempts the cost recovery provisions of this Chapter, and the City may pursue collection of such costs of the cleanup in a civil action, pursuant to said laws.

*Section 5504.* Storage shall be amended to include the following subsection:

*5504.3.1.1.3 Location.* The storage of flammable cryogenic fluids in stationary containers is prohibited except: (1) as disclosed and permitted by an approved site plan on property zoned I-2, Heavy Industrial, under the City of Novi Zoning Ordinance or (2) if determined by the City Fire Marshal to be allowed by the State of Michigan Fire Prevention Code, Public Act No 207 of

1941, as amended, or rules promulgated under that Act, and in compliance with all other applicable governmental regulations.

*Section 5704.* Storage shall be amended to include the following subsection:

*5704.2.9.6.1 Locations where above-ground tanks are prohibited.* The storage of Class I and Class II liquids in above-ground tanks outside of buildings is prohibited except: (1) as disclosed and permitted by an approved site plan on property zoned I-2, Heavy Industrial, under the City of Novi Zoning Ordinance, or (2) if determined by the City Fire Marshal to be allowed by the State of Michigan Fire Prevention Code, Public Act No 207 of 1941, as amended, or rules promulgated under that Act, and in compliance with all other applicable governmental regulations.

*Section 5706.* Special operations shall be amended to include the following subsection:

*5706.2.4.3 Location.* The storage of Class I and Class II liquids in above-ground tanks is prohibited except: (1) as disclosed and permitted by an approved site plan on property zoned I-2, Heavy Industrial, under the City of Novi Zoning Ordinance, (2) if determined by the City Fire Marshal to be allowed by the State of Michigan Fire Prevention Code, Public Act No 207 of 1941, as amended, or rules promulgated under that Act, and in compliance with all other applicable governmental regulations, or (3) in connection with a temporary activity necessary to the use or development of property in conformity with all City and other governmental ordinances, laws, permits and approvals.

*Section 6104.* Location of LP-gas containers shall be amended to include the following subsection:

*6104.2 Maximum capacity within established limits.* For the protection of heavily populated or congested areas, the capacity limitations in this Section shall apply to all properties except as disclosed and permitted by an approved site plan on property zoned I-2, Heavy Industrial, under the City of Novi Zoning Ordinance.

## **PART II.**

**Severability.** Should any section, subdivision, clause, or phrase of this Ordinance be declared by the courts to be invalid, the validity of the Ordinance as a whole, or in part, shall not be affected other than the part invalidated.

**PART III.**

**Savings Clause.** The amendment of the Novi Code of Ordinances set forth in this Ordinance does not affect or impair any act done, offense committed, or right accruing, accrued, or acquired or liability, penalty, forfeiture or punishment, pending or incurred prior to the amendment of the Novi Code of Ordinances set forth in this Ordinance.

**PART IV.**

**Repealer.** All other Ordinances or parts of Ordinances in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

**PART V.**

**Effective Date: Publication.** The provisions of this Ordinance shall become effective fifteen (15) days after its adoption and shall be published within 15 days of its adoption by publication of a brief notice in a newspaper circulated in the City, stating the date of enactment and the effective date of the ordinance, a brief statement as to the subject matter of this Ordinance and such other facts as the Clerk shall deem pertinent, and that a copy of the Ordinance is available for public use and inspection at the office of the City Clerk.

\_\_\_\_\_  
Robert J. Gatt, Mayor

\_\_\_\_\_  
Cortney Hanson, City Clerk

**Certificate of Adoption**

I hereby certify that the foregoing is a true and complete copy of the ordinance adopted at the regular meeting of the Novi City Council held on the \_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
Cortney Hanson, City Clerk