



DEVELOPMENT SERVICES

To: Mayor and Town Council

From: Brady Cudd, Building Official

Through: Bob Scott, Interim Town Manager
Charles Ewings, Executive Director of Development and Infrastructure Services

Re: International Codes Ordinance Updates
Town Council Meeting – January 24, 2023

Agenda Item:

Conduct a public hearing and consider and act upon ordinances adopting the following International Codes with local amendments:

- A. 2021 Existing Building Code;
- B. 2021 Building Code;
- C. 2021 Residential Code;
- D. 2021 Plumbing Code;
- E. 2021 Mechanical Code;
- F. 2021 Fuel Gas Code;
- G. 2021 Energy Conservation Code;
- H. 2021 Property Maintenance Code;
- I. 2021 Fire Code; and
- J. 2020 National Electric Code,

and repealing all prior versions of said International Codes, to the extent referenced in each applicable ordinance. The foregoing codes are contained in Chapter 3, "Building Regulations," of the Town's Code of Ordinances, as amended.

Description of Agenda Item:

The International Building Code (IBC) family of codes and National Electric Code are updated every three years. Typically, communities adopt the latest codes approximately every six years and the Town of Prosper currently is under the 2015 IBC. There are two primary reasons staff recommends updating the building codes. First, utilizing dated codes may have a negative impact on the Town's Insurance Services Office (ISO) rating effecting property owner insurance rates. Second, most of Prosper's peer cities in the area have adopted the 2021 IBC family of codes and this action will provide consistency for builders and contractors working in the area. If approved, the updated codes would not be implemented for new permits until April 1, 2023, to provide a transition period for current projects.

Existing Building Code

This ordinance updates the Town's Existing Building Code from the 2015 International Existing Building Code (IEBC) to the 2021 IEBC. The IEBC code was first adopted on December 11, 2018,

and plays a lesser role at this time as Prosper is still in a build-out phase. This code will become more important over time as its purpose is to “provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to provide a reasonable level of safety, health, property protection and general welfare insofar as they are affected by the repair, alteration, change of occupancy, addition and relocation of existing buildings.”

Building Code

This ordinance updates the Town’s Building Code from the 2015 IBC to the 2021 IBC. Important changes include provisions for:

- An updated occupant load factor for business areas from 100 to 150. This will reduce the calculated occupant load for many businesses, thus reducing requirements for plumbing facilities amongst other (Table 1004.5)
- Extensive updates to the fastener table for conventional light-frame wood construction adding staples and generally tightening fastener installation patterns (Table 2304.10.2)
- Additional requirements for an air space behind stucco installations given our climate designation (2510.6)
- Accessory storage spaces of any size are now permitted to be classified as part of the occupancy to which they are accessory
- Significant modifications to the requirements for I-1 (assisted living facilities, generally) and I-2 (nursing homes, generally) over 2-code cycles to address a market trend of adding domestic cooking facilities to common areas in these settings.

Residential Code

This ordinance updates the Town’s Residential Code from the 2015 IRC (International Residential Code) to the 2021 IRC. Important changes and updates include:

- Figure R301.2(2) changes Prosper from 115 MPH V_{ult} windspeed to 105 MPH
- R301.3 increases story height to 13’7” for prescriptive designs and Table R602.3(6) was added showing required lumber dimensions for 11’ and 12’ bearing walls
- R314.3 requires an additional smoke detector exterior to bedrooms in certain instances
- Table R602.3(1) has been edited to show fastener requirements for staples and to require additional fasteners in some instances
- R324 adds requirements for solar panels including a requirement that panels must not be directly below a required Emergency Escape and Rescue Opening (i.e.- no panels on a first-floor roof below a second-floor bedroom window if that window is a required emergency escape window)
- R703.7.3.2 adds requirements for an air barrier behind stucco installations per our climate designation
- Removal of Residential Green Building Program. The requirements of this ordinance, originally adopted as ordinance 09-98, are in many instances outdated given the requirements of newer building codes. Additionally, this program requires the builder to belong to the Dallas Homebuilders Association and to hire a program verifier from a list promulgated by the Dallas Homebuilders Association. The requirement for new homes to have rain gutters has been retained as an amendment to the IRC.

Plumbing Code

This ordinance updates the Town’s Plumbing Code from the 2015 IPC (International Plumbing Code) to the 2021 IPC. Important changes include provisions for:

- Vacuum testing of DWV plumbing as an alternative test procedure.
- Limiting the developed length of hot water piping to 100’ from heat source
- Removal of requirement for tubs to have an overflow

Mechanical Code

This ordinance updates the Town’s Mechanical Code from the 2015 IMC (International Mechanical Code) to the 2021 IMC. Important changes include provisions for:

- A minimum of 3' clearance from dryer duct terminations to building openings (504.4.1)
- Continuous operation of the required exhaust system at manicure and pedicure stations when the space is occupied (502.20.1)

International Fuel Gas Code

This ordinance updates the Town's Fuel Gas Code from the 2015 IFGC (International Fuel Gas Code) to the 2021 IFGC. Important changes include provisions for:

- Using Schedule 10 steel pipe
- Using arc-resistant CSST
- Provides clarification that gas shut offs are allowed behind moveable appliances such as dryers and refrigerators
- Removal of a provision that was previously added to the 2018 IFGC that allowed commercial cooking appliances for domestic cooking if approved by a registered design professional

Energy Conservation Code

This ordinance updates the Town's Energy Conservation Code from the 2015 IECC (International Energy Conservation Code) to the 2021 IECC. Important changes to the residential section include provisions for:

- Further lowering of required U-factors for windows and doors required for prescriptive compliance
- Further increasing the required R-value for ceiling insulation and duct insulation to meet prescriptive requirements
- Amendments mirror NCTCOG amendments and allow for alternative compliance pathway via Energy Star Certification while also addressing issues that are specific to our location

Property Maintenance Code

This ordinance updates the International Property Maintenance Code from the current 2015 IPMC (International Property Maintenance Code) to the 2021 IPMC. The IPMC is a model code that regulates the maintenance requirements for existing buildings and houses. The intent is to maintain a minimum level of public health, safety, and welfare. Staff wants to ensure the Town strives to keep current with adopted codes. Key points of the ordinance update include:

- Elevate and promote uniformity and consistent application of codes.
- Minimum requirements for maintaining sanitary and safe structures
- A clearer approach to code compliance
- Prevent the decline or blighting effects on neighborhoods
- Further ensure the quality of life is preserved in the Town

Specifically, the 2021 IPMC changes include specific requirements for maintaining fences and retaining walls, disallowing portable containers to be on a property over 45 days, and strikes the requirement for cross-lot drainage to be reviewed and approved by the Town.

Fire Code

The International Fire Code (IFC) is updated every three years. Typically, communities adopt the updated codes approximately every six years and the Town of Prosper currently is under the 2015 IFC. There are two primary reasons staff recommends updating the fire codes. First, utilizing dated codes may likely have a negative impact on the Town's Insurance Services Office (ISO) rating impacting homeowner insurance rates. Second, most of Prosper's peer cities in the area have adopted the 2021 IFC and this action will provide consistency for contractors working in the area. If approved, the updated codes would not be implemented for new permits until April 1, 2023, to provide a transition period for current projects.

National Electric Code

This ordinance updates the Town's Electrical Code from the 2017 NEC (National Electrical Code) to the 2020 NEC. The 2020 NEC is currently the adopted Electrical Code for the State of Texas. Important changes include provisions for:

- Emergency disconnects in a readily accessible location on the exterior for all new one- and two-family dwellings
- Whole-house surge protection for all new one- and two-family dwellings
- GFCI protection for receptacles over 20 amps in all locations that require GFCI protection. In practice in a residential setting, this will mean the circuit for the clothes dryer will now be GFCI protection
- Additional receptacles will be required on kitchen islands larger than 9 square feet for all new one- and two-family dwellings

Budget Impact:

There is no budgetary impact affiliated with these items.

Legal Obligations and Review:

Terrence Welch of Brown & Hofmeister, L.L.P., has approved the attached documents as to form and legality.

Attachments:

1. International Existing Building Code Ordinance
2. International Building Code Ordinance
3. International Residential Code Ordinance
4. International Plumbing Code Ordinance
5. International Mechanical Code Ordinance
6. International Fuel Gas Code Ordinance
7. International Energy Conservation Code Ordinance
8. International Property Maintenance Code Ordinance
9. International Fire Code Ordinance
10. National Electric Code Ordinance

Town Staff Recommendation:

Town Staff recommends adopting ordinances respectively approving the 2021 versions of the following International Codes: Existing Building Code; Building Code; Residential Code; Plumbing Code; Mechanical Code; Fuel Gas Code; Energy Conservation Code; Property Maintenance Code; Fire Code; and the 2020 National Electric Code, and all local amendments to the foregoing codes.

Proposed Motion:

I move to adopt ordinances respectively approving the 2021 versions of the following International Codes: Existing Building Code; Building Code; Residential Code; Plumbing Code; Mechanical Code; Fuel Gas Code; Energy Conservation Code; Property Maintenance Code; Fire Code; and the 2020 National Electric Code, and all local amendments to the foregoing codes.