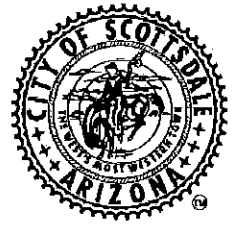


CITY COUNCIL REPORT



Meeting Date: September 20, 2022
General Plan Elements: *Safety, Housing and Water Resources*
General Plan Goals:

- **Work to prevent hazards and reduce physical risks throughout Scottsdale.**
- **Support diverse, safe, resource-efficient, and high-quality housing options.**
- **Expand water conservation program to increase efficiency and reduce water usage.**

ACTION

Building and Fire Code Updates. Every three to six years the Building and Fire Codes of the City of Scottsdale are updated to account for the latest building technologies, standards and construction practices. The Building Safety and Fire departments wish to update the Building and Fire Codes to the latest 2021 edition (or 2020 edition, as applicable) of the following codes with an effective date of January 1, 2023:

- (1) Adopt Ordinance No. 4562, amending Chapter 36, Article II, Division 1 of the Scottsdale Revised Code, and adopting portions of the 2021 edition of the International Fire Code and various amendments thereto.
- (2) Adoption Resolution No. 12583 declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Fire Code, 2021 Edition*," including appendices, and the "*2022 City of Scottsdale Amendments to the International Fire Code, 2021 Edition*."
- (3) Adopt Ordinance No. 4564, amending Section 36-18 of Chapter 36 of the Scottsdale Revised Code, relating to Automatic Sprinkler Systems.
- (4) Adopt Ordinance No. 4550, adopting part of the Building Code of the City of Scottsdale, including the 2021 editions of the International Building Code, International Mechanical Code, International Plumbing Code, International Fuel Gas Code, International Existing Building Code, International Swimming Pool and Spa Code, and 2020 edition of the National Electrical Code, and the 2022 City of Scottsdale amendments to, or adoption of, as applicable, the International and National Codes; repealing and replacing Article I, Articles III through VI, And Article VIII of Chapter 31 of the Scottsdale Revised Code (S.R.C.) and renaming Chapter 31 as "*Building And Construction Regulations*"; adding a new article XIII to Chapter 31, Building And Construction Regulations; amending the violation and penalty provisions contained in S.R.C. Section 31-7; setting forth the enforcement and penalty provision contained in S.R.C. Section 31-85; and establishing an effective date.

City Council Report | Building and Fire Code Updates

- (5) Adopt Resolution No. 12498, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Building Code, 2021 Edition*," including appendices, and the "2022 City of Scottsdale Amendments to the International Building Code, 2021 Edition."
- (6) Adopt Resolution No. 12500, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Mechanical Code, 2021 Edition*," and the "2022 City of Scottsdale Amendments to the International Mechanical Code, 2021 Edition."
- (7) Adopt Resolution No. 12501, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale, including appendices, and entitled the "*International Plumbing Code, 2021 Edition*," and the "2022 City of Scottsdale Amendments to the International Plumbing Code, 2021 Edition."
- (8) Adopt Resolution No. 12502, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Fuel Gas Code, 2021 Edition*," including appendices, and the "2022 City of Scottsdale Amendments to the International Fuel Gas Code, 2021 Edition."
- (9) Adopt Resolution No. 12504, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Existing Building Code, 2021 Edition*," and the "City of Scottsdale Adoption of the International Existing Building Code, 2021 Edition."
- (10) Adopt Resolution No. 12506, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*National Electrical Code, 2020 Edition*," and the "2022 City of Scottsdale Amendments to the National Electrical Code, 2020 Edition."
- (11) Adopt Resolution No. 12507, declaring as public records those certain documents filed with the City Clerk of the City of Scottsdale and entitled the "*International Swimming Pool and Spa Code, 2021 Edition*," and the "2022 City of Scottsdale Amendments to the International Swimming Pool and Spa Code, 2021 Edition."

OWNER

Planning and Development; Building Safety; Fire Department; Office of Environmental Initiatives

APPLICANT CONTACT

Michael L. Clack, Chief Development Director
480-312-7629 email: mclack@scottsdaleaz.gov

Kristi Gagnon, Fire Marshal
480-312-1810 email: kgagnon@scottsdaleaz.gov

Anthony Floyd, Green Building Program Manager/Energy Code Specialist
480-312-4202 email afloyd@scottsdaleaz.gov

LOCATION

7447 E. Indian School Rd, Suite 125
Scottsdale, AZ 85251-3915

BACKGROUND

The family of building codes are developed through the US-based International Code Council (ICC) and supported by the American Institute of Architects (AIA), the National Association of Home Builders (NAHB), Building Owners and Managers Association (BOMA), professional trade associations and building product and material manufacturers including structural, fire safety, electrical, energy, mechanical and plumbing systems. The energy codes are supported by Southwest Energy Efficiency Project (SWEEP), Northeast Energy Efficiency Partnership (NEEP), Residential Energy Services Network (RESNET), American Council for an Energy Efficient Economy (ACEEE), Energy-Efficient Codes Coalition (EECC), Energy and Environmental Building Association (EEBA), local electric utility companies and the US Department of Energy.

Since incorporation, the City of Scottsdale has adopted the latest model building codes published by the International Conference of Building Officials (ICBO), now known as the International Code Council (ICC), as well as the National Electrical Code (NEC). The 2021 edition of the ICC codes and the 2020 NEC are the most current edition of ICC construction codes. Each edition is usually adopted with local amendments that reflect the climate, environmental characteristics, and community priorities.

On November 28, 2016, Scottsdale adopted the 2015 edition of the ICC codes and the 2014 NEC, which are currently used in Scottsdale. The 2021 ICC codes and the 2020 NEC have been adopted by other valley communities including Cave Creek and Chandler. Other cities and towns are going through a similar process to adopt the 2021 edition of the ICC codes and the 2020 NEC.

Building and Fire Code Updates

This proposed code adoption will update the fire, building, mechanical, plumbing, fuel gas, electrical and swimming pool and spa codes. The energy, residential and green construction codes will be presented at the November 14th council meeting. The following summarizes the content of each code:

- The building code contains life-safety requirements for commercial and multifamily buildings. It has fire resistive construction building elements and protected exiting paths to protect occupants, first responders and the structure in the event of an

emergency. It contains design provisions for buildings using concrete, steel, masonry, wood, and other building materials.

- The fire code is coordinated closely with the building code and establishes regulations for fire prevention activities and fire protection systems. It addresses the hazards to life and property from fire, explosion, handling and use of hazardous materials. It regulates the continued safe use of buildings well after the Certificate of Occupancy is issued.
- The fuel gas code addresses the design and installation of fuel gas systems and gas-fired appliances with requirements that emphasize safe operation and performance.
- The mechanical code provides requirements for heating, cooling and ventilation in commercial and multifamily buildings.
- The plumbing code provides requirements for safe water distribution, water conservation and drainage of wastewater.
- The existing building code contains requirements intended to encourage the use and reuse of existing buildings. The scope covers repair, alteration, addition and change of occupancy for existing buildings and historic buildings, while achieving appropriate levels of safety without requiring full compliance with the new construction requirements.
- The electrical code contains all the necessary requirements for safe electrical wiring on any building, structure, swimming pool for lighting, mechanical systems, solar power generation and energy storage.
- The swimming pool and spa code addresses the design, location and construction of swimming pools and spas. It requires safety barriers to protect children from using without supervision.

Significant new changes.

This is an update of existing building, fire, mechanical, plumbing, fuel gas, electrical and pool/spa codes. The energy, residential and green construction codes are scheduled to be presented to council on November 14. With the proposed code adoptions, the basic requirements of Scottsdale's existing codes are preserved, with improvements in the following major areas:

1. The building code (IBC) has new provisions for mass wood construction type; domestic cooking in nursing homes and assisted living facilities; fire and smoke damper access and identification requirements; new fire classification for roof mounted solar PV panels; new structural load details; and new steel storage rack requirements.
2. The fire code (IFC) contains revised provisions for emergency responder communication; energy storage system (ESS) provisions that reflect new technologies, applications and commissioning/decommissioning; new chapter on the storage of distilled spirits and wines; and expanded construction fire safety requirements with site safety plan and designation of a site safety director.
3. The existing building code (IEBC) contains new provisions for unsafe structures and equipment, and smoke alarm and carbon monoxide requirements,

4. The mechanical code (IMC) includes section to allow for new combo exhaust/air intake fittings; changes for outside air ventilation; increased stringency for exhaust in nail salon facilities; updated energy recovery ventilation for commercial kitchen exhaust hood systems; HVAC system testing/balancing; and new refrigerant piping requirements.
5. The plumbing code (IPC) provides accommodations for multiple-user toilet facilities serving all genders in shared restrooms; urinals must be in an area visually separated from the remainder of the restroom or located in a stall; new provisions for mounting roof top solar panels over vent terminals; rainwater harvesting systems is now accepted as an alternative design method for storm drainage; Scottsdale amendments improves the efficiency and performance of plumbing fixtures for saving water including requirement of water bottle filling stations at all drinking fountain locations.
6. The fuel gas code (IFGC) has new provisions for clothes dryers located in a closet that exhaust more than 200 cubic feet per minute to be provided with make-up air opening in the closet; return air cannot be pulled from a mechanical room where a gas furnace is located.
7. The electrical code (NEC) has modifications for lighting loads of non-dwelling buildings in alignment with power allowances permitted in the energy code; readily accessible emergency power disconnects for single-family homes; ground-fault circuit interrupter (GFCI) protection for dwelling unit receptacles serving clothes dryers and cooking ranges within 6 feet of a sink; surge-protective device requirement required for all dwelling unit services; special provisions for horticultural lighting (grow facilities); and electric vehicle power transfer for bidirectional current flow of electricity.

The adoption of these codes will improve the city's rating with the Insurance Services Office, ensuring the lowest premium rates for all property owners, residential and commercial, throughout the city.

APPLICANTS PROPOSAL

Goal/Purpose of Request

This proposal will update the 2015 code editions to the 2021 code editions of the ICC code documents, and the 2014 electric code edition to the 2020 electric code edition.

This proposed adoption will:

- update the building and fire codes to meet or exceed industry standards while ensuring safety in construction, maintenance, and protection of property.
- maintain the current favorable rating with the Insurance Services Office (ISO), which establishes criteria for setting insurance premiums based on up-to-date building codes and standards to ensure a healthy, safe, and resilient built environment.
- simplify code compliance by improving effectiveness and ease of use.
- improves water conservation measures, supports healthy indoor air quality and reduces impacts on the built environment.

Community Input

This ordinance was developed through public meetings and input received from the Building Advisory Board of Appeals, Scottsdale Environmental Advisory Commission, the Home Builders Association of Central Arizona, AZ American Institute of Architects AZ, Southwest Energy Efficiency Project (SWEEP), AZ Multihousing Association, American Lung Association, Nelsen Partners Architects and Planners and Scottsdale Area Association of Realtors.

Community Impact

The community will benefit from up-to-date safety and resource conserving codes that account for new technologies, materials and building systems. The update will improve community value and quality of life while protecting natural resources. The new codes help clarify code provisions while enhancing life-safety, conserving water, and improving indoor environmental quality.

BOARDS & COMMISSIONS

Board/Commission

The Scottsdale Building Advisory Board of Appeals (BABA) held ten public meetings to discuss the adoption of the 2021 ICC codes and to receive comments from the public. Over the course of three meetings (May 19, June 16 and July 21), the board recommended City Council adoption of the following suite of building codes:

- a) International Building Code (IBC) with associated amendments including new provision for multifamily recycling accommodations consisting of pull-out trash/recycling bins in kitchen dwelling units and recycling/trash chutes for buildings 4 or more stories.
- b) International Fire Code (IFC) with associated amendments.
- c) International Existing Building Code (IEBC) without amendments.
- d) International Fuel Gas Code (IFGC) with associated amendments.
- e) International Mechanical Code (IMC) with exhaust ventilation amendments.
- f) International Plumbing Code (IPC) with indoor water efficiency amendments.
- g) National Electrical Code (NEC) with associated amendments.
- h) International Swimming Pool and Spa Code (ISPSA) with associated amendments.

The Scottsdale Environmental Advisory Commission (SEAC) held eight public meetings to discuss the International Building Code and the International Plumbing Code. Over the course of four meetings (February 16, May 18, June 15 and July 20), the board unanimously recommended City Council adoption of the following codes with amendments:

- a) International Building Code (IBC) with an amendment for multifamily recycling accommodations in agreement with BABA's recommendation for pull-out trash/recycling bins in kitchen dwelling units and recycling/trash chutes for buildings 4 or more stories.
- b) International Plumbing Code (IPC) with indoor water efficiency amendments.

Staff Recommendation

Approve the BABA and SEAC's recommendations for adoption:

- a) International Building Code (IBC) with amendments including new provision for multifamily recycling accommodations for pull-out trash/recycling bins in kitchen dwelling units and recycling/trash chutes for buildings 4 or more stories
- b) International Fire Code (IFC) with fire department recommended amendments
- c) International Existing Building Code (IEBC) without amendments
- d) International Fuel Gas Code (IFGC) with associated amendments
- e) International Mechanical Code (IMC) with exhaust ventilation amendments
- f) International Plumbing Code (IPC) with indoor water efficiency amendments
- g) National Electrical Code (NEC) with associated amendments
- h) International Swimming Pool and Spa Code (ISPSC) with associated amendments

OPTIONS & STAFF RECOMMENDATION

Recommended Approach

Description of Option A – Approve BABA's and SEAC's recommendations for adoption.

Description of Option B – Further study

Description of Option C - Remain on the current codes and amendments, which would put us behind the building industry standards and may negatively affect our ISC Insurance rating.

Proposed Next Steps

November 14 city council meeting for adoption of the International Energy Conservation Code (IECC), International Residential Code (IRC) and International Green Construction Code (IgCC).

RESPONSIBLE DEPARTMENT(S)

Planning, Economic Development and Tourism

STAFF CONTACTS (S)

Michael L. Clack, Chief Development Director
480-312-7629 email: mclack@scottsdaleaz.gov

APPROVED BY


Michael Clack, Chief Development Director

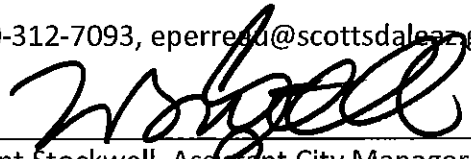
480-312-7629, mclack@scottsdaleaz.gov

9/6/2022
Date


Erin Perreault, Executive Director

480-312-7093, eperreault@scottsdaleaz.gov

09/06/2022
Date


Brent Stockwell, Assistant City Manager

480-312-7288, bstockwell@scottsdaleaz.gov

9/6/2022
Date

ATTACHMENTS

1. Ordinance 4562, Adopting Fire Code and Amendments
2. Resolution 12583 and Exhibit A – International Fire Code and City of Scottsdale Amendments
3. Ordinance 4564, Automatic Sprinkler Systems
4. Ordinance 4550, Adopting Building Codes and Amendments
5. Resolution 12498 and Exhibit “A” – International Building Code and City of Scottsdale Amendments
6. Resolution 12500 and Exhibit “A,” International Mechanical Code and Amendments
7. Resolution 12501 and Exhibit “A,” International Plumbing Code and Amendments
8. Resolution 12502 and Exhibit “A,” International Fuel Gas Code and Amendments
9. Resolution 12504 and Exhibit “A,” International Existing Building Code
10. Resolution 12506 and Exhibit “A,” National Electrical Code and Amendments
11. Resolution 12507 and Exhibit “A,” International Swimming Pool and Spa Code and Amendments