ORDINANCE G-6463

AN ORDINANCE AMENDING CHAPTER 9-1 OF THE CITY CODE BY REPEALING EXISTING CONSTRUCTION CODE OF THE CITY OF PHOENIX, ADOPTING 13 MODEL CODES WITH PHOENIX AMENDMENTS AS THE PHOENIX BUILDING CONSTRUCTION CODE, AND ESTABLISHING EFFECTIVE DATE, AND PROVIDING FOR APPLICATION FOR EXCEPTIONS.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF PHOENIX as follows:

SECTION 1. That the Construction Code of City of Phoenix City Code adopted pursuant to Section 9-1 and on file with Office of the Phoenix City Clerk is hereby repealed and replaced with building codes and City of Phoenix amendments adopted pursuant to Section 2 of this ordinance.

SECTION 2. The following building codes are hereby adopted in their entirety as if set forth herein at length, subject to amendments to such codes as set forth below in this ordinance, with deletions struck through and additions underlined, with each code a separate document of the Phoenix Building Construction Code:

- 2018 International Building Code (IBC)
- 2018 International Existing Building Code (IEBC)
- 2018 International Residential Code (IRC)
- 2018 International Mechanical Code (IMC)

- 2018 International Plumbing Code (IPC)
- 2018 International Energy Conservation Code (IECC)
- 2018 International Fuel Gas Code (IFGC)
- 2012 International Green Construction Code (IGCC) (Optional)
- 2016 American Society of Mechanical Engineers (ASME) A17.1 Safety Code for Elevators and Escalators
- 2015 American Society of Mechanical Engineers (ASME) A17.3, Section 2.27.8 Switch Keys
- 2015 American Society of Mechanical Engineers (ASME) A17.3 Safety Code for Elevators and Escalators
- 2014 American Society of Mechanical Engineers (ASME) A18.1, Platform Lifts and Stairway Chairlifts
- 2010 American Society of Mechanical Engineers (ASME) A17.6, Elevator Suspension, Compensation and Governor Systems
- 2007 American Society of Mechanical Engineers (ASME) A17.7, Performance Code for Elevators and Escalators
- 2018 Uniform Plumbing Code (UPC)
- 2017 International Electrical Code (IEC)

SECTION 3. That the 2018 International Building Code (IBC), Chapter 1, Administrative Provisions as adopted and is hereby amended as set forth in the attachment hereto, with deletions struck through and additions underlined.

SECTION 4. That the remainder of the 2018 International Building Code (IBC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 5. That the 2017 National Electrical Code (NEC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 6. That the 2018 International Existing Building Code (IEBC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 7. That the 2018 International Energy Conservation Code (IECC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 8. That the 2018 International Fuel Gas Code (IFGC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 9. That the 2012 International Green Construction Code (IGCC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 10. That the 2018 International Mechanical Code (IMC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 11. That the 2018 International Residential Code (IRC) as adopted by reference above, is hereby amended as set forth in attachment hereto.

SECTION 12. That the 2010, 2014, 2015, 2016 American Society of Mechanical Engineers (ASME) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 13. That the 2018 International Plumbing Code (IPC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 14. That the 2018 Uniform Plumbing Code (IPC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 15. That the 2018 International Swimming Pool and Spa (ISPSC) as adopted by reference above, is hereby amended as set forth in the attachment hereto.

SECTION 16. Within 60 days after the effective date of this ordinance any person who has completed more than 50% of the design work on any project may apply to complete the design using the building codes repealed herein. If approved, such a person will have until December 30, 2018 to submit the plans for review using the repealed codes.

PASSED by the Council of the City of Phoenix this 6th day of June, 2018.

ACTING MAYOR

ATTEST:

City Clerk

APPROVED AS TO FORM:

Acting City Attorney

REVIEWED BY:

City Manager

PL:tml:LF18-0408:06/06/18:2042762v1

2018 Phoenix Building Construction Code

Amendments

G6463

Table of Contents

International Building Code Administrative Sections

International Building Code

ASME Code

International Existing Building Code

International Energy Conservation Code

International Green Construction Code

International Mechanical Code

International Plumbing Code

International Residential Code

2017 National Electrical Code

Uniform Plumbing Code

International Swimming Pool and Spa Code (ISPSC)

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 101.1
Submitted by: 2018 International Building Code Administrative Committee **[A] 101.1 Title.** These regulations shall be known as the Phoenix Building Construction Code ~~Building Code of [NAME OF JURISDICTION]~~, hereinafter referred to as "this code."
Reasons: This is the name of our code.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒YES ☐ NO This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6465

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 101.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 101.2 Scope.
The provisions of this code shall apply to the construction, *alteration*, relocation, enlargement, replacement, *repair*, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

~~**Exception:**~~ Detached one- and two-family *dwellings* and *townhouses* not more than three *stories above grade plane* in height with a separate *means of egress*, and their accessory structures not more than three *stories above grade plane* in height, shall comply with this code or the *International Residential Code*, as amended.

Exceptions. The provisions of this code shall not apply to:

1. Federally, state or county owned projects (building and land) are exempt from the required, permits, inspections and fees of Appendix A.2 of the Phoenix City Code.
2. Work primarily located within a public way such as streets, roads, sidewalks, bridges, drainage structures, street lights and traffic control signs or equipment. Pedestrian tunnels or bridges which cross a public way are regulated by this code when they directly connect one or more buildings located outside of the public way.
3. Canals, dams and hydraulic flood control structures constructed by or under contract with a governmental agency or jurisdiction.
4. Utility towers, poles, equipment or systems under the exclusive control of an electric utility and directly used to generate, transmit, transform, control or distribute electrical energy to utility customers. Electrical installations in buildings used by the electric utility, such as office buildings, that are not an integral part of a generating plant, substation or control center, and electrical installations located on the premises of a utility customer, such as exterior lighting, service entrance equipment or customer-owned substation equipment, are regulated by this code.
5. Installation of communications equipment under the exclusive control of communications utilities and located outdoors or in building spaces used exclusively for such installations. Communications wiring run inside a building is regulated by this code.
6. Piping and equipment owned and operated by a public service utility and directly used to produce, treat, distribute or meter water to utility customers, or directly used to collect, treat or dispose of sewage or waste water from utility customers. Domestic plumbing systems within water or sewer utility plants are regulated by this code.
7. Piping and equipment owned and operated by a public service utility and directly used to produce, distribute or meter natural gas to utility customers.
8. Construction methods and sequencing. This code does not regulate construction methods or the scheduling or coordination of construction work, except that the contractor(s) and property owner(s) are responsible for obtaining all permits, tests and city inspection approvals as specified in this code.

G6463

9. Construction site safety. This code does not regulate construction means, methods or safety. The property owner(s), the contractor(s) and all construction workers are each responsible for compliance with applicable federal and state occupational health and safety laws and regulations.

[A] 101.2.1 Appendices.
Provisions in the appendices shall not apply unless specifically adopted.

Reasons:
These provisions for scoping more accurately delineate the City's responsibilities and establish the limits of this code pertaining to utilities, jobs under construction and other jurisdictions, per applicable Federal, State, and County laws and regulations.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 101.3

Submitted by: 2018 International Building Code Administrative Committee

101.3 Intent.
The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health, safety and general welfare through structural strength, *means of egress* facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire, explosion and other hazards, and to provide a reasonable level of safety to fire fighters and emergency responders during emergency operations.

The purpose of this Code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefitted by the terms of this code. Although the Planning & Development Department Director (hereinafter referred to as the "Director") or designee is directed to obtain substantial compliance with the provisions of this code, a guarantee that all buildings, structures or utilities have been constructed in accordance with all provisions of the code is neither intended nor implied.

Reasons:
This establishes that the Director will endeavor to obtain substantial compliance with the Code, but cannot guarantee that the project complies in all respects. The responsibility for compliance with this code lies with the owner of the project.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 101.4

Submitted by: 2018 International Building Code Administrative Committee

[A] 101.4 Referenced codes.
The other codes listed in Sections 101.4.1 through 101.4.~~7~~ 10 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

[A] 101.4.1 Gas.
The provisions of the *International Fuel Gas Code*, as amended, shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlets connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

[A] 101.4.2 Mechanical.
The provisions of the *International Mechanical Code*, as amended, shall apply to the installation, *alterations, repairs* and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy related systems.

[A] 101.4.3 Plumbing.
The provisions of the *Uniform Plumbing Code* or *International Plumbing Code*, as amended, shall apply to the installation, *alteration, repair* and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the ~~*International Private Sewage Disposal Code*~~ *Uniform Plumbing Code* or *International Plumbing Code* shall also apply to private sewage disposal systems.

[A] 101.4.4 ~~Property maintenance.~~
Reserved. ~~The provisions of the International Property Maintenance Code shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.~~

[A] 101.4.5 Fire prevention.
The provisions of the *International Fire Code*, as amended, shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair alteration or removal of fire suppression, *automatic sprinkler systems* and alarm systems of fire hazards in the structure or on the premises from occupancy or operations.

G6463

[A] 101.4.6 Energy.
The provisions of the *International Energy Conservation Code*, as amended, shall apply to all matters governing the design and construction of buildings for energy efficiency.

[A] 101.4.7 Existing buildings.
The provisions of the International *Existing Building Code*, as amended, shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

[A] 101.4.8 Electrical.
The provisions of the *National Electrical Code*, as amended, shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

[A] 101.4.9 Residential.
Detached one and two-family *dwellings* and *townhouses* not more than three *stories above grade plane* in height with a separate means of egress, and their accessory structures not more than three stories above grade plane in height, shall comply with this code or the *International Residential Code*, as amended.

[A] 101.4.10 Swimming pools.
The provisions of the *International Swimming Pool and Spa Code*, as amended, shall apply to the construction of public and private swimming pools and spas.

Reasons:
This amendment recognizes administrative amendments are made to each of the reference codes. It also recognizes the National Electrical Code, International Residential Code, and the International Swimming Pool and Spa Code as adopted reference codes.

The International Property Maintenance Code is not adopted by the city. Rather, property maintenance is regulated by the Neighborhood Services Department Preservation Ordinance.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 102.6

Submitted by: 2018 International Building Code Administrative Committee

[A] 102.6 Existing structures.
The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the *International Existing Building Code*, the ~~*International Property Maintenance Code* or the *International Fire Code*~~ Phoenix Fire Code, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

Reasons:
The City uses the Neighborhood Preservation Ordinance for maintenance of existing and abandoned buildings, therefore the Property Maintenance Code is not adopted.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 102.7

Submitted by: 2018 International Building Code Administrative Committee

102.7 Applicability of this code.
All applications submitted on or after the effective date of this code shall be subject to the requirements of the codes adopted by Ordinance.

Exception: Application under the provisions of the *International Code Council Performance Code for Buildings & Facilities* requires approval of the *building official.*

Reasons:
This addition allows the use of the International Performance Code for Buildings & Facilities by approval of the building official.

Cost Impact:
Use of this code may produce considerable construction cost savings.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 103

Submitted by: 2018 International Building Code Administrative Committee

SECTION 103 ~~DEPARTMENT OF BUILDING SAFETY~~ PLANNING AND DEVELOPMENT DEPARTMENT

[A] 103.1 Creation of enforcement agency.
~~The Department of Building Safety is hereby created and the official in charge thereof shall be known as the building official.~~ The authority and responsibility for administration and enforcement of this code is hereby assigned to the Director of the Planning & Development Department. The Director may designate a person or persons to fulfill these duties.

[A] 103.2 Appointment.
The *building official* shall be appointed by the ~~chief appointing authority of the jurisdiction.~~ Director of the Planning & Development Department.

[A] 103.3 Deputies.
In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the ~~*building official*~~ Director of the Planning & Development Department shall have the authority to appoint a deputy building official, the related technical officers, inspectors, plan examiners and other employees. Such employees shall have powers as delegated by the *building official*. ~~For the maintenance of existing properties, see the *International Property Maintenance Code*.~~

[A] 103.4 City Manager's representative.
The Director shall appoint a representative to hear initial technical appeals of various development-related city codes, ordinances, policies and procedures as provided for in The *Phoenix City Code* and *City of Phoenix Zoning Ordinance*, and shall be known as the City Manager's Representative for Technical Appeals.

Reasons:
This is the organization of the department as dictated by the City Charter.

Cost Impact: No cost impact.

G64633

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 104.10

Submitted by: 2018 International Building Code Administrative Committee

[A] 104.10 ~~Modifications.~~ Administrative review, interpretations, modifications and appeals.
Any person dissatisfied with a code enforcement decision made by a Planning & Development Department employee may request an administrative review, formal interpretation, or a modification of a code requirement.

[A] 104.10.1 Administrative review.
Any person dissatisfied with a code enforcement decision made by a Planning & Development Department employee may request a review of that decision by the employee's supervisor.

Any person dissatisfied with a decision of the supervisor may appeal that decision to the *building official*. The appeal shall be made in writing on a form provided by the Planning & Development Department, and shall be accompanied by a non-refundable administrative processing fee as set forth in Appendix A.2 of the Phoenix City Code. The decision of the *building official* shall be final except as provided in Section 113 of these administrative provisions.

[A] 104.10.2 Interpretation.
Any person may request a written interpretation of a code requirement. The request shall be in writing on a form provided by the Planning & Development Department, shall include all information, calculations or other data necessary to describe the specific condition in detail, and shall be accompanied by a non-refundable administrative processing fee as set forth in Appendix A.2 of the Phoenix City Code. The decision of the *building official* shall be recorded in the files of the Department.

[A] 104.10.3 Modifications.
Where there are practical difficulties involved in carrying out the provisions of this code, the *building official* shall have the authority to grant modifications for individual cases, upon application of the *owner* or the owner's authorized agent, provided that the *building official* shall first find that special individual reason makes the strict letter of this code impractical, the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, *accessibility*, life and fire safety or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

Requests for modification of a code requirement shall be made in writing on a form provided by the Planning & Development Department, and shall be accompanied by a non-refundable fee as set forth in Appendix A.2 of the Phoenix City Code. The applicant is responsible for providing all information, calculations or other data necessary to document or substantiate each request. The *building official* may approve, approve with stipulations, or deny the application based upon the substantiating data submitted and the *building official's* determination that the modification results in substantial compliance with the intent of this code. In deciding each case, the *building official* may consider or require alternate methods or systems to be used in compensation for the particular code provision to be modified. The

G6463

details of action granting modifications shall be recorded and entered in the files of the department of building safety.

104.10.1.3.1 Flood hazard areas.
Reserved. ~~The building official shall not grant modifications to any provision required in flood hazard areas as established by Section 1612.3 unless a determination has been made that:~~

~~1. A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards of Section 1612 inappropriate.~~
~~2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.~~
~~3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing laws or ordinances. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.~~
~~4. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property.~~

[A] 104.10.4 Appeals.
Any person may appeal a decision made by the *building official* to the Development Advisory Board as set forth in Section 113 of these administrative provisions.

Reasons:
This code change sets up a policy of easy second opinions, reviews, interpretations and modifications providing customers alternative means of appealing a decision made by any single employee of Planning & Development. Flood hazard areas are determined by floodplain management per the City Charter.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 104.12

Submitted by: 2018 International Building Code Administrative Committee

[A] 104.12 Location on property.

[A] 104.12.1 General.
Buildings shall adjoin or have access to a public way or yard on not less than one side. Required yards shall be permanently maintained.

For the purpose of this section, the center line of an adjoining public way shall be considered an adjacent property line.

Required yards and all sewer and water services shall be on the same property as the building, and no building or sewer or water service shall be built across a recorded property line, except in accordance with the following provisions:

[A] 104.12.1.1 Utility easements.
A modification request is required to approve the provision of private sewer or water services to a lot or building site when such service is located within a permanent, non-revocable private utility easement duly-recorded in the deed records of Maricopa County for all the properties involved.

[A] 104.12.1.2 Lot combinations.
Where two or more adjacent lots or parcels are owned by the same person or persons, such lots or parcels shall be combined into a single building site by platting or replatting such lots or parcels into a single lot, or shall be combined by recording in the deed records of Maricopa County for all the lots or parcels involved, a permanent, nonrevocable lot combination agreement in a form approved by the building official. In addition, the property owner shall provide evidence that all the lots or parcels combined are taxed and assessed by the Maricopa County Assessor as a single tax parcel.

[A] 104.12.1.3 Integrated developments with multiple owners.
As a modification to the Building Code (see Section 104.10,3), the building official may approve a permanent agreement between multiple property owners for purposes of considering two or more separately owned properties as one building site for purposes of this code. Such agreement shall stipulate the reasons for the lot consolidation and the permanent requirements or prohibitions necessary to fully comply with this code as if all improvements were located on the same single lot.

[A] 104.12.1.4 Open space easements.
As a modification to the Building Code (see Section 104.9, Item 3), the building official may approve a permanent open space, nonbuilding easement on one property for purposes of providing yard areas or open space sufficient to satisfy building code setback or egress requirements on the adjacent property.

G6463

[A] 104.12.1.5 Agreement conditions.
Agreements proposed or required under this section shall be permanent and binding on all property owners, their heirs and assigns. The agreements shall be in writing, shall be approved by the building official and shall be recorded in the deed records of Maricopa County for all the properties involved. The agreements shall be enforceable by the building official and by each of the property owners, their heirs and assigns. The agreements shall require physical modification of any structures to fully comply with all applicable code requirements prior to alteration or expiration of the agreement. Alteration of the agreements or any condition or provision therein, or expiration or elimination of any such agreement, is prohibited except with the prior written approval of the building official. The building official shall have authority to revoke any agreement for noncompliance with any of its provisions, and thereafter to require the property owners to individually make each of their properties physically and fully compliant with all applicable code requirements, without benefit of the agreement conditions. The building official shall not initiate or negotiate any such agreement, but shall consider agreements offered jointly by adjacent property owners.

Reasons:
This change brings an International Building Code amendment into the relevant administrative portion for transparency.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.1 Required.
Any *owner* or owner's authorized agent who intends to construct, enlarge, alter, *repair*, move, demolish, or change the occupancy of a building or structure, or to erect, install, enlarge, alter, *repair*, remove, convert or replace any electrical, gas, mechanical or plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the *building official* and obtain the required *permit* for each building, structure, or building service equipment.

1. Separate permits shall be obtained for automatic fire extinguishing systems, fire alarm systems, and other uses or equipment regulated by the Phoenix Fire Code.
2. Separate permits shall be obtained from the Planning & Development Department for work within the public right of way including off-site sewer or water extensions; sewer or water taps and all connections to public sewer and water; paving, curb cuts, driveways and sidewalks, and landscaping. See Chapter 32 of the International Building Code for permits and restrictions on work within the public right of way.
3. Separate permits shall be obtained from the Planning & Development Department for site development work in accordance with the Phoenix City Code.
4. Factory-built buildings, manufactured homes and mobile homes require permits from both the State of Arizona Office of Manufactured Housing in accordance with Arizona Revised Statute (ARS) Title 41, Chapter 16, Article 2, and from the Planning & Development Department in accordance with Chapter 31 of the International Building Code or Appendix E of the International Residential Code.

~~**[A] 105.1.1 Annual permit.** in lieu of an individual permit for each alteration to an already approved electrical, gas, mechanical or plumbing installation, the building official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.~~

~~**[A] 105.1.2 Annual permit records.** The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The building official shall have access to such records at all times or such records shall be filed with the building official as designated.~~

Reasons:
Carried over from previous codes. Specifies requirements for permits from other municipalities and departments within the City. Requirements for annual permits are specified in International Building Code (IBC), Section 117.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.2 Work exempt from permit.
Exemptions from *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 codes, laws or ordinances of ~~this jurisdiction~~ the City of Phoenix. *Permits* shall not be required for the following:

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided that the floor area is not greater than ~~120 square feet (11 m^2)~~ 200 square feet (18.58 m^2), and the structure complies with city of Phoenix Zoning Ordinance requirements.
2. Fences not over ~~7~~ 3 feet (914.4 mm) ~~(2134 mm)~~ high. Fences not included in this exception, not over 7 feet (1829 mm) high, shall require a building permit demonstrating compliance with the zoning ordinance requirements and city code requirements for site drainage only.
3. Oil derricks.
4. Retaining walls that are not over ~~4 feet~~ 40 inches (~~1219~~ 1016 mm) in height measured from the ~~bottom~~ top of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIIA liquids.
5. Water tanks supported directly on grade if the capacity is not greater than 5,000 gallons (18,925 L) and the ratio of height to diameter or width is not greater than 2:1.
6. Platforms, ~~S~~sidewalks and driveways not more than 30 inches (762 mm) above adjacent grade, and not over any basement or *story* below and are not part of an *accessible route*.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Temporary motion picture, television, seasonal celebration and theater stage sets and scenery. Associated bleachers and grandstands are not included in this exemption.
9. Prefabricated *swimming pools* accessory to a Group R-3 occupancy that ~~are less than 24 inches (610 mm) deep,~~ are not greater than 5,000 gallons (18,925 L) and are installed entirely above ground. Barriers shall be installed in accordance with ~~Appendix G, Section AG105 of the International Residential~~ the International Pool & Spa Code. A permit is required for the barrier.
10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.
11. Swings and other playground equipment accessory to detached one- and two-family *dwellings*.
12. Window awnings in Group R-3 and U occupancies, supported by an exterior wall that do not project more than 54 inches (1372 mm) from the *exterior wall* and do not require additional support.
13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.

G6463

14. Ground or roof supported structures, such as radio and television antenna towers and flagpoles which do not exceed 200 pounds (90 kg) in weight or 45 feet (13,700 mm) in height above the ground surface.
15. Contractors' temporary construction offices which are associated with a permitted construction project in compliance with the city of Phoenix Zoning Ordinance and are intended to be removed from the site upon completion of the project. Structures which include sales offices which are open to the public do require a permit.
16. Roof replacement or roof recover with the same type of material as the original roofing.
17. Installation of a nonstructural weatherproof exterior covering over an existing weatherproof covering on an existing structure so long as the new covering will not affect the fire-resistive classification of the existing structure.

    Exception: Installation of an Exterior Insulation and Finish System (EIFS).

18. Minor repair or replacement in kind of non-structural components such as glass or glazing materials, sash, doors and hardware, patching walls or ceilings and replacing pieces of siding, soffits or facia. Installation of locking or security hardware on egress doors, or changing the types of locking devices requires a permit.

Electrical:

~~1. Repairs and maintenance: Minor repair work, including the replacement of lamps or the connection of *approved* portable electrical equipment to *approved* permanently installed receptacles.~~
~~2. Radio and television transmitting stations: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installations of towers and antennas.~~
~~3. Temporary testing systems: A *permit* shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.~~

1. Installation or replacement of equipment such as appliances, lamp holders, lamps and other utilization equipment manufactured, approved and identified for cord- and plug-connection to suitable permanently installed receptacles.
2. Repair or replacement of motors rated 50 HP or less, transformers rated 45 kVA or less, or fixed approved appliances of the same type and rating in the same location.
3. Temporary decorative lighting approved and identified for cord- and plug-connection.
4. Repair or replacement in kind of any switch, other than a service disconnect, receptacle, contactor, control device or other utilization equipment rated 60 amperes or less.
5. Replacement in kind of any circuit breaker other than a service disconnect, rated at 125 amperes or less, or any fuse.
6. Repair or replacement of electrodes or transformers of the same size and capacity for signs or gas tube systems.
7. Temporary wiring for experimental purposes in suitable experimental laboratories.
8. Temporary wiring for theaters, motion picture and television studios, performance areas, and similar locations where not accessible to the general public.
9. Class 2 and Class 3 control and signal circuits not essential for safety to human life.
10. Installation, repair or replacement of electrical systems and components within machinery or equipment which is not defined by this Code as building service equipment.

G6463

Gas:

1. Portable heating appliance.
2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.

Mechanical:

1. Portable heating appliance.
2. Portable ventilation equipment.
3. Portable cooling unit.
4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.
5. Replacement of any part that does not alter its approval or make it unsafe.
6. Portable evaporative cooler.
7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors of 1 horsepower (0.75 kW) or less.
8. Repair or replacement in kind of refrigeration units not over 5 tons (17.5 kW) of refrigeration capacity, when located outdoors. Replacement equipment shall be in the same location and equal to or less than the weight of that which is replaced. Repair or replacement of refrigeration systems located inside a building shall require a permit and compliance with all requirements of this Code for the classification of refrigerant utilized in the new equipment.

Plumbing:

1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a *permit* shall be obtained and inspection made as provided in this code.
2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.
3. Replacement of water closets, valves or fixtures with new valves or fixtures complying with the water conservation requirements of this Code, except that a permit shall be required for the relocation of any valves, pipes or fixtures.
4. Repair or replacement of portable or built-in appliances which are not regulated by this code as building service equipment and which connect to the building water, drain or gas piping systems by approved means.
5. Replacement, in kind, of an existing water heater in one-and two-family dwellings when the work is performed by a licensed contractor.
6. Repair or replacement of existing 2" and smaller secondary backflow prevention assemblies. A test report, completed by a certified backflow assembly tester, shall be submitted for approval to the authority having jurisdiction at the time of installation or repair.

G6463

Reasons:
Building Permit Exemption Amendments Proposed Through Current Code Adoption:

1. Clarification of applicability between Codes and Ordinances.
8. Coordination with newly adopted code for R-3 pools and spas.
16. Coordination with new sections and definitions of base code - see IBC 1511.3 &1511.3.1.

Building Permit Exemption Amendments Approved Through Previous Code Adoptions:

1. The word "Aggregate" was an added amendment to clarify multiple structures, without required separations, to be considered as one structure not exceeding 200 sf. The term has caused confusion by implying that all accessory structures on a property, even with proper separations, could not have a total combined area greater than 200 sf. The removal of the term aggregate brings the provision back to the original base code language. In addition, International Residential Code (IRC) exempts one story detached accessory structures up to 200 sf. Allows for placement of 8' x 20' shipping containers (standard size) without a permit.

4. Retaining wall heights are consistent with maximum allowable heights per the Phoenix Zoning Ordinance.

6. Addition of platforms not more than 30" provides more flexibility and is consistent with past amendments.

Other Specific exemptions for electric, mechanical and plumbing provide for more consistency and allows for additional permit exemptions for routine maintenance.

Cost Impact:
Specific exemptions save the customer time and money if a permit is not required.

Approved in previous 2015 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.3.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.3.1 Action on application.
The *building official* shall examine or cause to be examined applications for *permits* and amendments thereto within a reasonable time after filing. If the application or the *construction documents* do not conform to the requirements of pertinent laws, the *building official* shall reject such application in writing, stating the reasons therefor. If the *building official* is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the *building official* shall issue a *permit* therefor as soon as practicable.

[A] 105.3.1.1 Action for demolition permit. Application for exterior demolition permits for buildings identified as individually eligible for historic designation and commercial buildings 50 years of age or older as well as all properties located in the Downtown Code District (Chapter 12 of the Phoenix Zoning Ordinance) that are either 50 years of age or older OR deemed eligible shall require public notice and shall be held for 30 calendar days from the date of application and evidence of such notice.

Reasons:
Since implementation of the provision of the code amendment for the 30-day hold that went into effect December 2, 2016, the Historic Preservation Commission (HPC) has expressed concern with loss of single family and duplex properties within the Downtown Code District.

Although not individually eligible for the Phoenix Historic Property Register, the loss of these important buildings without notice to the public has caused concern given the scarcity of building stock within the Downtown. Prior to the implementation of the 30-day hold, there had been a policy for the three day hold for all properties within the Downtown Code District. The Commission would like to see the hold within notice apply to all properties located within the Downtown Code District.

Cost Impact:
Implementation of this new amendment would impact fewer than 100 properties within the Downtown Code District. The $300 fee would apply to these properties for demolition.

G6463

Approved in previous 2012 Code Adoption process: ☒YES ☐NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G64463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendments to the 2018 International Building Code
Section 105.3.2.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.3.2.1 Standard plan expiration.
Standard plans shall expire upon the adoption of a new code.

Reasons:
Clarifies the time limitation and expiration of standard plans. Standard plans are unique as multiple permits can be issued at various times.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.3.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.3.2 Time limitation of application.
An application for a permit or standard plan approval for any proposed work shall be deemed to have been abandoned 12 months ~~180 days~~ after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding ~~90~~ 180 days each. The extension shall be requested in writing and justifiable cause demonstrated. The application for extension shall include payment of a non-refundable fee as set forth in Appendix A.2 of the Phoenix City Code.

Reasons:
Carried over from previous codes. The proposed change provides more flexibility to complete projects and allows PDD to recover administrative costs associated with the application extension.

Cost Impact:
Extension application fees are set in Appendix A.2 of the Phoenix City Code. The additional time could save the developer money, lost time in plan resubmittal, and review.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.3

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.3 Application for permit or standard plan.
To obtain a permit or standard plan approval, the applicant shall first file an application therefore in writing on a form furnished by the ~~department of building safety~~ Planning & Development Department for that purpose. Such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by legal description, street address or similar description that will readily identify and locate the proposed building or work.
3. Indicate the use and occupancy for which the proposed work is intended.
4. Be accompanied by construction documents and other information as required in Section 107.
5. State the valuation of the proposed work.
6. Be signed by the ~~applicant~~ owner, or the ~~applicant's~~ owner's authorized agent.
7. Give such other data and information as required by the building official.

Reasons:
Carried over from previous codes. Clarifies department responsibilities and identifies who can apply for the permit.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

66463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.5

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.5 Expiration.
Every permit issued, except demolition permits and permits subject to section 114 of this code, shall expire 24 months after the date of permit issuance, unless an extension is granted in accordance with section 105.5.1. ~~or become invalid unless the work on the site authorized by such permit is commenced within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days. The extension shall be requested in writing and justifiable cause demonstrated. The work shall not be considered suspended or abandoned if the permit holder has done one or more of the following:~~

~~1. Requested one or more Planning & Development inspections that demonstrate substantial progress in construction;~~
~~2. Conducted legally authorized site preparation such as demolition, clearing or excavation; or~~
~~3. Pursued other activities deemed by the building official to indicate intent to start and complete the project.~~

[A] 105.5.1 Extension.
The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than one year each. The extension shall be requested in writing prior to permit expiration and justifiable cause demonstrated. The application for extension shall include payment of a non-refundable fee as set forth in Appendix A.2 of the Phoenix City Code.

Exception: The building official is authorized to extend a permit for 30 days if it can be demonstrated the permit holder requires no more than two inspections per each discipline to obtain a Certificate of Occupancy or Certificate of Completion.

The fee for a 30-day extension shall be based on the hourly rate for Building Safety Inspections (two-hour minimum for each discipline) and shall include an administrative fee based on the general hourly plan review rate (two-hour minimum) as set forth in Appendix A.2 of the Phoenix City Code.

[A] 105.5.2 Reinstatement.
When a permit has expired, as described in section 105.5, the building official is authorized to grant, in writing, reinstatement of the permit for a period of not more than one year provided the following conditions are met:

1. No changes have been made or will be made in the original plans and specifications for such work; and
2. The original permit expired less than one year from the request to reinstate. The reinstatement shall be requested in writing and justifiable cause demonstrated. The

G04633

application for reinstatement shall include payment of a non-refundable fee as set forth in Appendix A.2 or the Phoenix City Code.

Exception: The building official is authorized to reinstate a permit for 30 days if it can be demonstrated the permit holder requires no more than two inspections per each discipline to obtain a Certificate of Occupancy or Certificate of Completion. The fee for a 30-day extension shall be based on the hourly rate for Building Safety Inspections (two-hour minimum for each discipline) and shall include an administrative fee based on the general hourly plan review rate (two-hour minimum) as set forth in Appendix A.2 of the Phoenix City Code.

[A] 105.5.3 Demolition.
Demolition permits shall expire if the work authorized by such permit is not completed within 60 days from the date of permit issuance, which includes clearance of all debris from the site. Reasonable and continuous progress shall be made to complete all demolition work as expeditiously as possible. See Section 3303 of the International Building Code for demolition permit conditions.

The building official is authorized to grant, in writing, one extension of not more than 30 days. The extension shall be requested in writing and justifiable cause demonstrated. The application for extension shall include payment of a non-refundable fee as set forth in Appendix A.2 of the Phoenix City Code.

The building official is authorized to grant, in writing, reinstatement of an expired demolition permit, for a period of not more than 30 days. The reinstatement shall be requested in writing and justifiable cause demonstrated. The application for extension shall include payment of a non-refundable fee as set forth in Appendix A.2 of the Phoenix City Code.

Reasons:
The proposed changes provide flexibility of administrative oversight and additional consistence to extend and reinstate permits and allows PDD to recover administrative costs associated with the approvals.

Cost Impact:
Greater flexibility with extensions and reinstatements saves the developer unnecessary costs associated with resubmittal of plans and payment of new permit fees.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 International Building Code and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.6

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.6 Suspension or revocation.
The building official is authorized to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code~~,~~, or reasonable and continuous progress has not been made to complete the construction, or the continuance of any work becomes dangerous to life or property.

It shall be unlawful to proceed with any work for which a permit was issued after notice of permit suspension or revocation is served on the permit holder, the owner or the person having responsible charge of the work. Reinstatement of a suspended permit shall be by written notice from the building official authorizing work to resume, with or without conditions. Revoked permits shall be canceled and the permit fee shall not be refunded except as may be provided in Section 109.6 of these administrative provisions.

Reasons:
Carried over from previous codes and gives the building official greater flexibility to suspend or revoke a permit when necessary.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 International Building Code and carried forward as presented.

G64463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.7

Submitted by: 2018 International Building Code Administrative Committee

[A]105.7 Placement of permit.
The building permit or copy shall be kept on the site of the work until the completion of the project. The permit holder shall post a visible sign which identifies the permit number and the street address or suite number where construction work is authorized until completion of the project. Other forms of identification may be used when approved by the building official.

Reasons:
Carried over from previous codes, Informs the public of permitted construction activity, and identifies premises for construction inspections.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.8

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.8 Record changes.

[A] 105.8.1 Owner name change.
Any time after a permit has been issued a new owner may be substituted for the original owner, provided the new owner submits an affidavit of ownership and agrees to assume all code compliance obligations related to the permit, including responsibility for correcting any work previously installed in violation of any code requirement.

[A] 105.8.2 Business name change.
Any time after a permit has been issued, the name of the tenant or business may be changed provided the intended occupancy or use of the premises is not changed.

[A] 105.8.3 Contractor change.
Any time after a permit has been issued, the recorded owner of the property may by affidavit request substitution of a new contractor for the contractor named on the original permit, provided the new contractor agrees to assume all code compliance obligations related to the permit including assuming responsibility for correcting any work previously installed in violation of any code requirement. Nothing in this section shall be construed as preventing a new contractor from obtaining a new permit to authorize only that work intended to be performed by the new contractor.

[A] 105.8.4 Registered design professional change.
Any time after a permit has been issued, a new architect or engineer shall submit a new special inspection certificate to the Planning & Development Inspector at the site prior to performing any special inspections. Any changes to the permitted drawings shall be approved either by the Planning and Development Inspector at the site or in the plan review process as revision submittal. The new registered design professional must be registered in the state of Arizona.

[A] 105.8.5 Address changes.
A permit is not transferable from one property to another and no address change shall be processed which would have this effect. Any time after a permit has been issued or any time a property owner wishes to change the official address of any property, the recorded owner may request an address change in writing on a form provided by the department. The application shall be accompanied by a nonrefundable processing fee as set forth in section 109 of these administrative provisions. The department shall assign all addresses in accordance with established City regulations and may approve, modify or deny any request accordingly. Where an address change requires revising more than 10 records, the department may charge an administrative fee based upon the hourly rate for plan revisions.

[A] 105.8.6 Scope of work changes.
Permit records shall be changed to increase or decrease the scope of work or valuation of any project. Any increase in scope of work or valuation requires an application for a new

G6463

permit and payment of additional permit fees for the supplemental work. Any decrease in scope of work or valuation will be grounds for changing the permit record. In the case where a project scope is reduced after permit issuance, the original permit shall be revised to authorize the reduced scope of work, or, if no work has been started, the owner may in writing request to cancel the original permit and obtain a refund in accordance with Section 109.6 of these administrative provisions. In this case a new permit shall then be obtained for the actual work proposed.

[A] 105.8.7 Fees.
The fee for record changes shall be as set forth in Appendix A-2 of The Phoenix City Code.

Reasons:
Carried over from previous codes and gives specific requirements for various record changes. Sections 105.8.5, 105.8.6 code section correction.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 105.9

Submitted by: 2018 International Building Code Administrative Committee

[A] 105.9 Annexations.
A building under construction with a building *permit* issued by the Maricopa County Building Department (County) prior to the effective date of annexation, and where the footings and stem walls have been completed and approved by the County, shall obtain a *permit* from the City of Phoenix (City) to establish the scope of work and ensure the building is constructed in compliance with the County approved plans. Fees will be collected to recover the cost of City inspections as set forth in Appendix A.2 of the Phoenix City Code.

Building plans approved and permitted by the County for which no construction has commenced, or building(s) that are under construction and completed to a lesser degree than stated above on the effective date of annexation, shall be required to obtain a building *permit* from the City and pay fees based on the estimated cost of construction, as set forth in Appendix A.2 of the Phoenix City Code.

Construction shall conform to pertinent County zoning regulations in effect at the time the County *permit* is issued, prior to annexation.

Reasons:
Carried over from previous codes. Provides requirements for projects permitted by Maricopa County and then annexed into the city of Phoenix.

Cost Impact:
The customer will be responsible for the hourly Inspection fees related to the remainder of the work completed after annexation into the City of Phoenix, or for permit fees based on the valuation of construction if building plans were approved but never permitted in the County.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 107.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 107.1 General.
Submittal documents consisting of *construction documents*, statement of *special inspections*, structural calculations, geotechnical report and other data shall be submitted in two or more sets with each *permit* application. The *construction documents* shall be prepared by a *registered design professional* ~~where required by the statutes of the jurisdiction in which the project is to be constructed.~~ as required by the State of Arizona Board of Technical Registration. Where special conditions exist, the *building official* is authorized to require additional *construction documents* to be prepared by a *registered design professional* licensed by the state of Arizona.

Exception: The *building official* is authorized to waive the submission of *construction documents* and other data not required to be prepared by a *registered design professional* if it is found nature of the work applied for is such that review of *construction* that the *documents* is not necessary to obtain compliance with this code.

Reasons:
Provides clarification on the requirement for professional registration.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 107.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 107.2 Construction documents.
Construction documents shall be in accordance with Sections 107.2.1 through 107.2.8.

[A] 107.2.1 Information on construction documents.
Construction documents shall be dimensioned and drawn upon suitable material. Electronic media documents are permitted to be submitted where *approved* by the *building official*. *Construction documents* shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the *building official*.

107.2.1.1 Fire life safety report (FLSR).
Prior to submitting construction drawings for high-rise buildings, covered mall buildings, buildings containing atriums and other structures as determined by the building official or fire marshall, the design team shall prepare and submit a Fire Life Safety Report. This FLSR shall provide a description of the occupancies, design codes, egress, emergency systems, smoke control and other related systems, and a conceptual description of the suppression system. The first submittal of the building construction plans must incorporate the first review comments of the FLSR.

[A] 107.2.2 Fire protection system shop drawings.
Shop drawings for the *fire protection system(s)* shall be submitted to indicate conformance to this code and the *construction documents* and shall be *approved* prior to the start of system installation. Shop drawings shall contain all information as required by the referenced installation standards in Chapter 9.

[A] 107.2.3 Means of egress.
The *construction documents* shall show in sufficient detail the location, construction, size and character of all portions of the *means of egress* including the path of the *exit discharge* to the *public way* in compliance with the provisions of this code. In other than occupancies in Groups R-2, R-3, and I-1, the *construction documents* shall designate the number of occupants to be accommodated on every floor, and in all rooms and spaces.

[A] 107.2.4 Exterior wall envelope.
Construction documents for all buildings shall describe the *exterior wall envelope* in sufficient detail to determine compliance with this code. The *construction documents* shall provide details of the *exterior wall envelope* as required, including flashing, intersections with dissimilar materials, corners, end details, control joints, intersections at roof, eaves or parapets, means of drainage, water-resistive membrane and details around openings.

The *construction documents* shall include manufacturer's installation instructions that provide supporting documentation that the proposed penetration and opening details described in the *construction documents* maintain the weather resistance of the *exterior wall*

G6463

envelope. The supporting documentation shall fully describe the *exterior wall* system which was tested, where applicable, as well as the test procedure used.

[A] 107.2.5 Exterior balconies and elevated walking surfaces.
Where balconies or other elevated walking surfaces are exposed to water from direct or blowing rain, snow, or irrigation, and the structural framing is protected by an impervious moisture barrier, the *construction documents* shall include details for all elements of the impervious moisture barrier system. The *construction documents* shall include manufacturer's installation instructions.

[A] 107.2.6 Site plan.
A site plan shall be submitted prior to submittal of *construction documents*. The site plan shall include information as specified on the published City of Phoenix pre-application submittal requirements. Upon receipt of preliminary site plan approval, construction documents may be submitted.

The *construction documents* submitted with the application for *permit* shall be accompanied by a site plan showing to scale the size and location of new construction and existing structures on the site, distances from *lot lines*, the established street grades and the proposed finished grades and, as applicable, *flood hazard areas*, *floodways*, and *design flood elevations*; and it shall be drawn in accordance with an accurate boundary line survey. In the case of demolition, the site plan shall show construction to be demolished and the location and size of existing structures and construction that are to remain on the site or plot. The *building official* is authorized to waive or modify the requirement for a site plan when the application for *permit* is for *alteration* or *repair* or when otherwise warranted.

[A] 107.2.6.1 Design flood elevations.
Where *design flood elevations* are not specified, they shall be established in accordance with Section 1612.3.1.

[A] 107.2.7 Structural information.
The *construction documents* shall provide the information specified in Section 1603.

[A] 107.2.8 Relocatable buildings.
Construction documents for relocatable buildings shall comply with Section ~~3112~~ 3113.

Reasons:
Sections 107.2.6 ,107.2.1.1 defines submittal requirements.
Section 107.2.8 correct typo in base code.

Cost Impact: No cost impact.

G6465

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 107.3

Submitted by: 2018 International Building Code Administrative Committee

[A] 107.3 Examination of documents.
The *building official* shall examine or cause to be examined the accompanying submittal documents and shall ascertain by such examinations whether the construction indicated and described is in accordance with the requirements of this code and other pertinent laws or ordinances. The plans may also be reviewed by other departments of this jurisdiction to verify compliance with any applicable laws under their jurisdiction.

Reasons:
Clarifies who may examine documents.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 107.5

Submitted by: 2018 International Building Code Administrative Committee

[A] 107.5 Retention of construction documents.
One set of *approved construction documents* shall be retained by the *building official* ~~for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.~~ in accordance with the retention schedules set by the Phoenix City Clerk Department Records Management Program.

107.5.1 Standard plans.
Standard plans are valid under the code in effect at the time of submittal and valid for the duration of the code cycle as long as the plan remains active. Upon adoption of a new code, standard plans shall expire and be discarded by the building official in accordance with the retention schedules set by the Phoenix City Clerk Department Records Management Program.

Reasons:
Coordinates department policy with city clerk records management program requirements.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 108

Submitted by: 2018 International Building Code Administrative Committee

SECTION 108 TEMPORARY STRUCTURES AND USES

[A] 108.1 General.
The *building official* is authorized to issue a *permit* for temporary structures and temporary uses. Such *permits* shall be limited as to time of service, but shall not be permitted for more than 180 days. The *building official* is authorized to grant extensions for demonstrated cause.

Exception: Temporary fences not associated with a construction project, shall not be permitted for more than one year unless approved by a use permit granted by the Planning & Development Department.

[A] 108.2 Conformance.
Temporary structures and uses shall comply with the requirements in Section 3103.

[A] 108.3 Temporary power.
The *building official* is authorized to give permission to temporarily supply and use power in part of an electric installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in NFPA 70 - National Electrical Code.

[A] 108.4 Termination of approval.
The *building official* is authorized to terminate such *permit* for a temporary structure or use and to order the temporary structure or use to be discontinued.

Reasons:
108.1 The exception helps to control the use of temporary fences per the zoning ordinance.
108.3 For clarification.

Cost Impact: No cost impact.

G6465

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 109.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 109.1 Payment of fees.
A *permit* shall not be valid until the fees prescribed by law have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

[A] 109.1.1 Administrative fees.
The *building official* is authorized to charge and collect administrative service fees for providing goods and services such as code consultation; inspections or plan review services not specifically listed in this Code; extensive research of official records; providing copies of codes, records or department documents; recovering the cost of postage, handling or special data transmission services; and the cost of providing special functions such as education seminars given for trade or industry groups. Administrative services fees shall be in the amount set by the City Manager's Office for citywide services or shall be based on the department's hourly rate for professional services. The retail charge for sale of books or supplies shall be set to recover purchase costs plus reasonable inventory, handling and overhead expenses as determined by the department.

[A] 109.1.2 Record change fees.
An administrative service fee shall be assessed and collected by the *building official* for each request to change a *permit* record. No *permit* fee shall be reduced or refunded because of any record change.

Reasons:
Establishes ability to collect fees for administrative purposes.

Cost Impact:
Recovers costs for administrative services.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G64653

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 109.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 109.2 Schedule of plan review and permit fees.
On buildings, structures, electrical, gas, mechanical, and plumbing systems or *alterations* requiring a *permit*, a fee for each plan review and *permit* shall be paid as required, in accordance with the schedule ~~as established by the applicable governing authority.~~ set forth in Appendix A.2 of the Phoenix City Code. Fees paid for plan reviews, permits or other services are not transferable.

[A] 109.2.1 Supplemental permits.
The fee for a supplemental plan review and permit to cover any additional work or additional valuation not included in the original permit shall be computed based on the valuation of the supplemental work. A new permit for a building addition shall be required to increase the building area authorized by a permit. Supplemental work started prior to obtaining a supplemental permit is subject to an investigation fee set forth in Section 109.4 of these administrative provisions.

Reasons:
References our established fee schedule and clarifies fees are not transferable.
Clarify that an increase in scope requires a separate permit.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 109.3

Submitted by: 2018 International Building Code Administrative Committee

[A] 109.3 Building permit valuations.
The applicant for a *permit* shall provide an estimated ~~*permit* value~~ project valuation at time of application. ~~*Permit*~~ Project valuations shall include total value of work, including materials and labor, for which the *permit* is being issued, such as electrical, gas, mechanical, plumbing equipment, finish work and permanent systems. ~~If, in the opinion of the building official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can show detailed estimates to meet the approval of the building official.~~ Project valuation is the higher of the minimum project valuation as calculated by the Planning & Development Department, or the project valuation as provided by the applicant. The minimum project valuation is calculated using the International Code Council Building Valuation Data adjusted for the City of Phoenix. Final building *permit* valuation shall be set by the *building official*.

Reasons:
Clarifies "minimum" project valuation.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G64653

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 109.8

Submitted by: 2018 International Building Code Administrative Committee

109.8 Inspections and re-inspections.
Permit fees provide for customary inspections only. When inspections are requested for weekends, holidays, or anytime other than the regular working hours of the *building official*, an additional fee will be required as set forth in Appendix A-2 Phoenix City Code. A re-inspection fee may be assessed for each inspection or re-inspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

Re-inspection fees may also be assessed when the *approved* plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the *building official*. When inspections are requested for weekends, holidays, or anytime other than the regular Planning & Development Department inspection hours, an additional fee will be required.

Reasons:
Carried over from previous code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

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G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to the 2018 International Building Code
Section 110.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 110.1 General.
Construction or work for which a *permit* is required shall be subject to inspection by the *building official* and such construction or work shall remain visible and able to be accessed for inspection purposes until approved. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the *owner* or the owner's authorized agent to cause the work to remain visible and able to be accessed for inspection purposes. Neither the *building official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection. A survey of the lot may be required by the *building official* to verify that the structure is located in accordance with the approved plans where existing, legal corner boundary markers are not readily verifiable.

Reasons:
This clarifies the responsibilities of the public and the city.

Cost Impact:
The cost of the survey.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 110.3.9.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 110.3.9.1 Building service equipment inspections.
All building service equipment for which a *permit* is required by this Code shall be inspected by the *building official*. No portion of any building service equipment intended to be concealed by any permanent portion of the building shall be concealed until inspected and approved. When the installation of any building service equipment is complete, an additional and final inspection shall be made. Building service equipment regulated by the technical codes shall not be connected to the water, fuel, power supply or sewer system until authorized by the *building official.*

1. Electrical inspections.
A rough-in inspection is required for all conduit, semi-rigid piping or wiring after installation, but prior to being concealed. A final inspection is required when all conduit, wires, fixtures and equipment including covers has been installed and connected, but prior to energizing any such circuit or equipment.

2. Mechanical inspections.
All mechanical equipment and systems for which a *permit* is required by this Code, including all associated ductwork, flues, condensate and refrigeration lines, shall be subject to inspection and shall remain accessible and exposed for inspection purposes until approved.

3. Plumbing inspections.
A rough-in or underground inspection is required for all sewer, drainage and vent piping, and for all water and gas distribution systems prior to their being buried or concealed. A final inspection is required when all fixtures are set and operating or ready to operate pending final utility connection. Tests shall be performed as required by the applicable Plumbing Code.

4. Operation of building service equipment.
The requirements of this section shall not be considered to prohibit the operation of any building service equipment installed to replace existing equipment serving an occupied portion of the building in the event a request for inspection of such equipment has been filed with the building official not more than 72 hours after such replacement work is completed and before any portion of such equipment is concealed by any permanent portion of the building.

Reasons:
Clarifies required inspections.

Cost Impact: No cost impact.
No changes to current procedure.

G6463

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 110.3.9.2

Submitted by: 2018 International Building Code Administrative Committee

[A] 110.3.9.2 Swimming pool inspections.
In addition to the inspections required in Section 110.3 of these administrative provisions, a rough-in inspection is required after all fixed metal parts are in place and electrically bonded but prior to concealing or placement of any concrete or gunite. A final inspection is required before plaster is placed and before the pool is filled with water. At the time of final inspection, all of the following must be complete:

1. Installation of all motors, lights and electrical circuits, including connection to approved overcurrent protection devices.
2. Installation and electrical bonding of all fixed metal parts within 5 feet (1524 mm) of the inside edge of the pool.
3. Installation of approved backflow prevention devices on the nearest hose bib(s) providing water supply for the pool.
4. Installation of all pool enclosures and barriers required by this Code.

Reasons:
Clarifies required inspections.

Cost Impact: No cost impact.
No change to current procedure.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 111

Submitted by: 2018 International Building Code Administrative Committee

SECTION 111 CERTIFICATE OF OCCUPANCY

[A] 111.1 ~~Change of~~ Use and occupancy.
A building or structure shall not be used or occupied, and a change of occupancy of a building or structure or portion thereof shall not be made, until the *building official* has issued a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the ~~jurisdiction~~ City of Phoenix.

Exception: Certificates of occupancy are not required for work exempt from permits under Section 105.2.

[A] 111.1.1 Change of occupancy.
Application may be made for the *building official* to consider issuing a new certificate of occupancy for a change in use or for new use of an existing building when no construction *permit* has been issued. Application for such a certificate shall be on a form provided by the Planning and Development Department, and shall include payment of a nonrefundable application and inspection fee. This fee shall be in addition to any plan review fee or subsequent *permit* fee that may be required by Section 109 of these administrative provisions.

[A] 111.2 Certificate issued.
After the *building official* inspects the building or structure and does not find violations of the provisions of this code or other laws that are enforced by the ~~department of building safety~~, Planning and Development Department, the *building official* shall issue a certificate of occupancy that contains the following:

1. The building *permit* number.
2. The address of the structure.
3. The name and address of the *owner* or the owner's authorized agent.
4. A description of that portion of the structure for which the certificate is issued.
5. A statement that the described portion of the structure has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.
6. The ~~name of the building official~~ date of issuance.
7. The edition of the code under which the *permit* was issued.
8. The use and occupancy, in accordance with the provisions of Chapter 3.
9. The type of construction as defined in Chapter 6.
10. The area, story location, and the design *occupant* load for each occupancy group in the building.
11. If an *automatic sprinkler* system is provided, whether the sprinkler system is required.
12. Any special stipulations and conditions of the building *permit*.

G6463

[A] 111.3 Temporary occupancy.
The *building official* is authorized to issue a temporary certificate of occupancy before the completion of the entire work covered by the *permit*, provided that such portion or portions shall be occupied safely. The *building official* shall set a time period during which the temporary certificate of occupancy is valid.

[A] 111.3.1 Application.
Application for a temporary certificate of occupancy shall be on a form supplied by the Planning & Development Department and shall include payment of a nonrefundable inspection fee as set forth in Section 109 of these administrative provisions. Issuance of a temporary certificate of occupancy shall be subject to the property *owner* and the *permit* holder agreeing in writing to compliance with all stipulations set forth by the Planning and Development Department.

[A] 111.3.2 Duration.
The maximum duration for temporary occupancy of a building, or a portion thereof, shall be the expiration date of the permit under which the temporary Certificate of Occupancy was issued, at which time all requirements of the Phoenix Building Construction Code, Phoenix Fire Code, the Phoenix Zoning Ordinance and other applicable codes and ordinances shall have been completed.

[A] 111.4 Revocation.
The *building official* is authorized to, in writing, suspend or revoke a certificate of occupancy or completion issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

Reasons:
To be consistent with current administrative code language and procedures. Revised chronological order of previous amendment sections.

Section 111.1 Keep 2012 IBC language in heading.
Section 111.2 Item #3 base code language coordination.
Section 111.3.1 code section correction.

Cost Impact:

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 113.1

Submitted by: 2018 International Building Code Administrative Committee

[A] 113.1 General.
In order to hear and decide appeals of orders, decisions or determinations made by the *building official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals called the Development Advisory Board (hereinafter called "the board"). The board ~~of appeals~~ shall be appointed by the applicable governing authority and shall hold office at its pleasure. The scope and responsibility of the board shall ~~adopt rules of procedure for conducting its business~~ be governed by City Code Chapter 2, Article IX.

Reasons:
To provide the name of the City's Board of Appeals and the City Code section that governs the Board.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 113.3

Submitted by: 2018 International Building Code Administrative Committee

SECTION 113 BOARD OF APPEALS

[A] 113.3 ~~Qualifications.~~ Reserved.
~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.~~

Reasons:
Development Advisory Board members are appointed by City Council as designated in City Code Chapter 2, Article IX.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 114

Submitted by: 2018 International Building Code Administrative Committee

SECTION 114 VIOLATIONS

[A] 114.1 Unlawful acts.
~~It shall be unlawful for any person, firm or corporation to erect, construct, alter, extend, repair, move, remove, demolish or occupy any building, structure or equipment regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.~~
Whenever, by the provisions of this Code, the performance of any act is prohibited or wherever any regulation, dimension or limitation is imposed on the erection, alteration, repair, maintenance, demolition or occupancy of any building, structure or building service equipment, a failure to comply with the provisions of this Code shall constitute a violation. Every day on which a violation exists shall constitute a separate violation and a separate offense. The remedies herein are cumulative and the city of Phoenix may proceed under one or more such remedies.

114.1.1 Responsible parties.
For the purpose of this Code, unless a particular section, subsection or clause placed compliance responsibility upon a different person, the property owner, the tenant or occupant in responsible control of the premises and the person, firm or corporation performing the work all have the duty to ensure that all applicable requirements of this Code are complied with. Failure to comply with the provisions of this Code or with a lawful order of the Building official, subjects the owner, the tenant or occupant, and the person, firm or corporation performing the work to the criminal penalties and civil remedies prescribed in this section.

114.1.2 Submittal information.
It shall be unlawful and a violation of this Code for any person, firm or corporation to falsify or to materially misrepresent information submitted to the Building official as part of any application or request for approval required by this Code.

114.1.3 Alternate methods, materials and equipment.
It shall be unlawful and a violation of this Code for any person, firm or corporation to use any method, material or equipment as an alternate to the methods, materials or equipment permitted by this Code without first having obtained approval from the Building official in the manner provided in this Code.

114.1.4 Permits.
It shall be unlawful and a violation of this Code for any person, firm or corporation to:

1. Perform any work for which a permit is required by this Code until such permit has been obtained from the *building official* and been posted on the premises where the work is to be performed. Working beyond the authorized scope of a permit constitutes work without a permit.
2. Occupy, use or maintain any building, structure or other property improvement that was built, erected, altered or improved without a valid permit issued by the building official when such permit is required by this Code.

G6463

114.1.4.1 Nonpermitted construction enforcement.
In cases of nonpermitted construction, an investigation shall be made before a permit may be issued for the work. Nonpermitted construction is grounds for the building official to stop all work on the project until appropriate permits are obtained. Nonpermitted construction cases shall be subject to the enforcement procedures set forth herein.

114.1.4.1.1 Application for permit.
The applicant must apply for or obtain a permit by the date indicated on the notice of violation by which to obtain a permit.

Exception: Additional time may be granted when deemed necessary depending on the complexity of work or other justifiable circumstances prohibiting meeting the designated date to obtain a permit.

114.1.4.1.2 Permits.
Permits for work commenced without a permit must be obtained no later than 60 calendar days from the date of application.

Exception: Additional time may be granted when deemed necessary depending on the complexity of work or other justifiable circumstances prohibiting meeting the designated date to obtain a permit by.

114.1.4.1.3 Fees.
Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing system without first obtaining the necessary permit(s) shall be subject to the following penalties and fees in addition to the required permit fees.

1. **Investigation fee.** An investigation fee, in addition to the permit fee, shall be assessed whether or not a permit is then or subsequently issued. The investigation fee shall be as set forth in Appendix A-2 of *The Phoenix City Code.*
2. **Permit fees.** The permit fee for work commenced without permits shall be twice the published permit fees as set forth in Appendix A-2 of *The Phoenix City Code.*

Exceptions:

1. The Planning and Development Department may waive the investigation fee and/or additional permit fee where it can be demonstrated that the nonpermitted construction was completed by a previous owner.
2. When work without permits is to be demolished by the owner, the demolition permit fee shall be as set forth in Appendix A-2 of the Phoenix City Code.

114.1.4.1.4 Job-site meeting.
Upon issuance of the permit(s), a job meeting will be scheduled for the inspector to meet with the owner or authorized agent at the job site. The purpose of the job meeting is to determine corrective action required for compliance and to establish an inspection schedule. The fee for the job-site meeting shall be set forth in Appendix A-2 of the *Phoenix City Code.* The Planning and Development Department may waive the job-site meeting fee where it can be demonstrated that the nonpermitted construction was completed by a previous owner. The permit shall be suspended if the jobsite meeting is not held within 45 calendar days of permit issuance.

114.1.4.1.5 Completion of work.
All work must be completed within 180 calendar days from date of permit issuance, or expiration date specified on the permit. No action or inaction by the City shall relieve the permit holder from their duty to complete construction or request a required inspection within 180 calendar days from the date of permit issuance.

114.1.4.1.6 Extension.
A one-time extension, not-to-exceed 90 calendar days, may be granted with the approval of the building official and is subject to a fee as set forth in Appendix A-2 of the Phoenix City Code. Applications for permit extensions must be received prior to expiration of the permit.

114.1.4.1.7 Expiration.
Every permit subject to section 114 fees of this Code, shall comply with [A] 105.5 of this Code, except for the date of expiration shall be 90 calendar days from date of issuance.

114.1.4.1.8 Reinstatement.
When a permit issued subject to section 114 fees has expired, section 105.5.2 applies with the exception of the expiration date shall not exceed 30 calendar days from the date of reinstatement. (Note: The exception to 105.5.2 does not apply).

114.1.5 Inspections.
It shall be unlawful and a violation of this Code for any person, firm or corporation to:

1. Fail to request all inspections required by the provisions of this Code.
2. Cover or conceal any work requiring inspection until such inspection has been made and approved by the building official.

114.1.6 Occupancy violation.
It shall be unlawful and a violation of this Code for any person, firm or corporation to:

1. Occupy or use any building or structure without first having obtained a Certificate of Occupancy as required by the provisions of this Code,
2. Occupy or use any building or structure for any use or activity other than that authorized by a Certificate of Occupancy for such building or structure,
3. Change the occupancy, use or character or use of any building or structure without first obtaining a new Certificate of Occupancy for such new use,
4. Continue to occupy or use any building or structure in violation of the conditions of any temporary Certificate of Occupancy or after the expiration of a temporary Certificate of Occupancy.

114.1.7 Unsafe buildings and building service equipment.
It shall be unlawful and a violation of this Code for any person, firm or corporation to:

1. Cause or to create any unsafe condition as defined in this Code,
2. Use or occupy any building or structure, or to use or operate any building service equipment, when such building, structure or building service equipment has been declared unsafe in accordance with the provisions of this Code. These requirements shall apply to all buildings, structures and building service equipment, whether new, existing, under construction or being demolished,
3. Fail to make repairs or otherwise fail to correct or abate any unsafe condition as defined in this Code,

4. Fail to comply with an unsafe condition abatement order issued by the building official in accordance with Section 116.8 of these administrative provisions.

114.1.8 Rubbish and debris.
It shall be unlawful and a violation of this Code for any person, firm or corporation to allow any rubbish, refuse or loose material resulting from construction operations associated with a valid building permit to remain uncontained or to be swept, thrown, blown or deposited on any public property or any adjoining private property.

114.1.9 Lawful orders.
It shall be unlawful and a violation of this Code for any person, firm or corporation to fail to comply with any lawful notice or order of the building official issued in accordance with the provisions of this Code.

114.2 Notice of violation.
The *building official* is authorized to serve a notice of violation or order on the person responsible for the erection, construction, *alteration*, extension, *repair*, moving, removal, demolition or occupancy of a building or structure in violation of the provisions of this code, or in violation of a *permit* or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.

Notices of violation of this Code shall be in writing and shall be served by personal service or by certified mail with return receipt requested. Service shall be deemed complete upon delivery.

The notice of violation shall identify the address or legal description of the property in question and shall state the nature and extent of the violation in such detail as to allow the correction or abatement of the violation. The notice shall provide the name and phone number of a City representative to contact concerning the violation and acceptable methods of correction or abatement.

Nothing herein shall preclude the building official from giving additional verbal or written information notices. Nothing herein shall require the issuance of a notice of violation prior to commencement of emergency abatement or civil or criminal violation proceedings.

114.2.1 Recording a violation.
The City of Phoenix may record a notice of violation with the County recorder. A recorded notice of violation shall run with the land. Failure to record a notice of violation shall not affect the validity of the notice as to persons who receive the notice. When the property is brought into compliance, a satisfaction of notice of violation shall be filed at the request of the owner or responsible party.

114.3 Prosecution of violation.
If the notice of violation is not complied with promptly, the *building official* is authorized to request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

114.4 Violation penalties.
Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the *approved construction documents* or directive of the *building official*, or of a *permit* or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

G6463

114.4.1 Civil actions.
Any person, firm or corporation who causes, permits, facilitates, aids or abets any violation of this Code or who fails to perform any act or duty required by this Code is subject to a civil sanction of not less than 500 dollars ($500.00) nor more than 2,500 dollars ($2,500.00).

114.4.2 Commencement of civil action.
Any civil action to enforce the provisions of this Code shall be commenced, and summons shall be issued, in accordance with the procedures set forth in Arizona Revised Statutes, City ordinance or as provided in the Local Rules of Practice and Procedure – City Court – City of Phoenix.

Reasons:
These proposed amendments to these sections align the building code with other City Ordinances and eliminate conflicts between the codes and ordinances.

Cost Impact:
The cost of enforcement of these code sections is subsidized by the citizens who purchase permits; the civil fines generated are allocated to the general fund of the city.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

Amended from the 2012 Code version to clarify.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 116

Submitted by: 2018 International Building Code Administrative Committee

SECTION 116 UNSAFE STRUCTURES AND EQUIPMENT

[A] 116.1 Conditions.
Structures or existing equipment that are or hereafter become unsafe, insanitary or deficient because of inadequate *means of egress* facilities, inadequate light and ventilation, or which constitute a fire hazard, or shock hazard or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance, shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the *building official* deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

In addition to the provisions of this Code, all buildings, structures and property shall be maintained in compliance with the provisions of *Phoenix City Code* Chapter 39, the "Neighborhood Preservation Ordinance," and all unsafe buildings or structures shall be subject to the abatement and enforcement provisions of that ordinance.

[A] 116.2 Definitions. Unsafe structures and equipment shall be classified as being an unsafe or imminent unsafe condition.

UNSAFE CONDITION is a hazard that has the potential to cause harm or damage to life, health or property if not corrected. Sections 116.3, 116.4, and 116.5 include but are not limited to unsafe conditions.

IMMINENT UNSAFE CONDITION is an unsafe condition that is a high, real and immediate risk to life, health or property. Sections 116.3 and 116.4 include but are not limited to imminent unsafe conditions

[A] 116.3 Unsafe buildings or structures.
Conditions or defects that render a building or structure unsafe include, but are not limited to:

1. Where the stress in any materials, member or portion thereof, due to all dead and live loads, is more than one and one-half times the working stress or stresses allowed in this code for new buildings of similar structure, purpose or location.
2. Where any portion thereof has been damaged by fire, earthquake, wind, flood or any other cause to such an extent that the structural strength or stability thereof is materially less than it was before such catastrophe and is less than the minimum requirements of this Code for new buildings of similar structure, purpose or location.
3. Where any portion thereof has wracked, warped, buckled or settled to such an extent that walls or other structural portions have materially less resistance to winds or earthquake than is required in the case of similar new construction.
4. Where the exterior walls or other vertical structural members list, lean or buckle to such an extent that a plumb line passing through the center of gravity does not fall inside the middle of one-third of the base.
5. Where any building or structure which, whether or not erected in accordance with all applicable laws and ordinances or not, has any non-supporting part, member or portion

G6463

less than 50 percent, or in any supporting part, member or portion less than 66 percent, of the strength or fire-resisting qualities required by law in the case of a newly constructed building of like area, height and occupancy in the same location.

Imminent unsafe conditions:

1. Where any door, aisle, passageway, stairway or other means of egress is locked, blocked or constricted so as to prevent safe and adequate means of egress in case of fire or panic.
2. Where any portion of a building, or any member, appurtenance or ornamentation on the exterior thereof, is not of sufficient strength or stability or is not so anchored, attached or fastened in place so as to be capable of resisting a wind pressure of one-half of that specified in this code for new buildings of similar structure, purpose or location without exceeding the working stresses permitted for such buildings.
3. Where the building or structure, or any portion thereof, is likely to partially or completely collapse because of dilapidation, deterioration or decay; faulty construction; the removal, movement or instability of any portion of the ground necessary for the purpose of supporting such building; the deterioration, decay or inadequacy of its foundation; or any other cause.
4. Where, for any reason, the building or structure, or any portion thereof, is manifestly unsafe for the purpose for which it is being used.
5. Where the building or structure, exclusive of the foundation, shows 33 percent or more damage or deterioration of its supporting member or members, or 50 percent damage or deterioration of its non-supporting members, enclosing our outside walls or coverings.
6. Where the building or structure has been so damaged by fire, wind, earthquake or flood, or has become so dilapidated or deteriorated as to become an attractive nuisance to children or a harbor for vagrants, criminals or immoral persons.
7. Where any swimming pool is not enclosed with all barriers required by this Code.

116.4 Unsafe building service equipment.
Unsafe building service equipment is equipment which constitutes a fire hazard or hazard to life, health, property or the public welfare by reason of use, construction, quality of materials or inadequate maintenance or dilapidation. Conditions or defects that render equipment unsafe include, but are not limited to:

116.4.1 Gas-fired, oil-fired or solid-fuel-fired appliance, devices or apparatus which have any of the following defects:

1. Defective heat exchangers.
2. Defective or improperly installed and adjusted controls and appurtenances
3. Equipment locations which will constitute a fire or explosion hazard.
4. Defective or improperly installed equipment.

Imminent unsafe conditions:

1. Defective or deteriorated vents, venting or flues which permit leakage of flue gases through the flue walls.
2. Defective or leaking fuel supply lines.
3. Insufficient fresh air supply for combustion of fuel and vent operation.
4. Heating appliances which are not property vented.
5. Excessive exhaust in boiler, furnace rooms or areas where gas, liquid or solid fuel fired equipment is located.

116.4.2 Elevators, escalators, dumbwaiters or similar conveyances or apparatus which have any of the following defects:

G6463

1. Hoisting, counter-weight or governor ropes with frayed or broken strands.
2. Storage of any material other than elevator equipment within any hoist way, including the pit and the elevator equipment and control room.
3. The accumulation of dust or other highly combustible material on the elevator mechanism or in the hoist way, pit or elevator or equipment and control room.

Imminent unsafe conditions:

1. Defective or inoperable elevator or escalator brake mechanism.
2. Defective, disconnected or inoperable safety devices.
3. Hoist way entrance protection which does not meet the requirements of this Code.
4. Missing, damaged or defective escalator guardrails, handrails or treads.

116.4.3 Electrical systems, appliances, devices or apparatus which have any of the following defects:

1. Loose or poor electrical connections creating a fire or shock hazard.
2. Equipment or circuits not properly grounded and bonded.
3. Misuse of flexible cords and cables.
4. Wiring method or equipment not properly supported.
5. Improperly installed or not suitable for the intended use and location.

Imminent unsafe conditions:

1. Uninsulated or exposed live parts and a fire or shock hazard exists.
2. Overloaded branch circuits, feeders or service equipment.
3. Equipment or conductors not properly protected from overload, short circuit or ground fault.
4. Equipment short-circuit, interrupting or withstand ratings insufficient for the available fault current at the line terminals of the equipment.
5. Inadequate maintenance, dilapidation, damage, obsolescence or abandonment.

116.4.4 Boilers or pressure vessels which have any of the following conditions:

1. Excessive scaling or corrosion, or cracks in seams, tubes or shells.
2. Defective or improperly installed operational controls, burners or other appurtenances.
3. Hazardous operation or location of equipment.
4. Unacceptable means for blowdown where required.
5. Insufficient fresh air supply for complete combustion of fuel and vent operation.
6. A boiler or pressure vessel operated above its allowable pressure or temperature.

Imminent unsafe conditions:

1. Defective or improperly installed safety valves, or safety valves of improper setting, capacity or acceptable means of discharge.
2. Defective or improperly installed vent system for products of combustion.
3. Insufficient fresh air supply for complete combustion of fuel and vent operation.

116.4.5 Refrigeration equipment which has any of the following defects:

1. Inadequate ventilation of machinery rooms.
2. Inadequate sizing, setting capacity or venting of pressure-relief valves.
3. Hazardous location or operation of equipment.
4. Defective or improperly installed safety controls.
5. Refrigerants of a type or quantity which is prohibited for conditions under which it is used.

G6463

Imminent unsafe conditions:

1. Systems using ammonia as a refrigerant where inadequate provisions have been made for disposal as required elsewhere in this Code.

116.4.6 Plumbing systems which have any of the following defects:

1. Drainage systems which are clogged, fouled or depositing solids.
2. No trap seal is provided or the seal is inadequate.
3. Lack of sewer venting or venting into an enclosed building or structure.
4. Leaking water, sewage or sewer gas inside or outside a building.
5. Open or abandoned cesspools or septic tanks.

Imminent unsafe conditions:

1. Where the water does not meet the standards for potability as required by the Maricopa County Environmental Services Department.
2. The existence of cross connection, backflow or back siphonage, which creates health hazards or pollution.
3. Lack of running water to operate plumbing fixtures required for the use or occupancy of the premises.

116.5 Unsafe excavations.
An unsafe excavation is any abandoned swimming pool or any active or abandoned mining shaft, test hole, well, pit, trench or other excavation which is more than 4 inches (102 mm) in any lateral dimension and more than 3 feet (914 mm) in depth, whenever such excavation is not covered, fenced or otherwise enclosed such that the general public is exposed to an imminent hazard. This does not apply to active sand or gravel mines being operated in compliance with City and State laws.

116.6 Notice of violation.
Notices of violation shall describe the unsafe conditions and declare any unsafe conditions that are determined to be an imminent unsafe condition. A specified time must be stated on the notice by which a the unsafe / imminent unsafe conditions must be abated by. A building permit must also be obtained to request an inspection to verify the unsafe imminent conditions has been abated.

The person or persons occupying or having control of any unsafe building, structure or building service equipment who knows or should have known an unsafe condition exists shall take immediate steps to vacate the building or structure or to otherwise safeguard the health and safety of the public including all building occupants, and shall notify the appropriate agency or agencies of the situation as follows:

1. The fire department shall be notified immediately of all personal injuries, fires, explosions or hazardous materials incidents.
2. The Water Services Department shall be notified immediately of all backflow, back siphonage or cross-connection incidents according to City procedures.
3. The gas utility shall be notified immediately of any unsafe conditions relating to gas piping or gas-fired building service equipment.
4. The electric utility shall be notified immediately of any shock injuries, fire or explosion relating to any electrical building service equipment.
5. In addition to the above notifications, the building official shall be notified within four hours of the occurrence of any structural failure or of any unsafe condition.
6. In addition to the above notifications, the building official shall be notified within 72 hours of the occurrence of any fire that caused structural damage or damage to required

G6463

building service equipment, any plumbing cross-connection, or any other unsafe condition relating to building service equipment.

116.7 Authority for inspection and evaluation.
The building official shall follow the procedures for right of entry noted in Section 104.6.

When the building official has reason to suspect that an unsafe condition exists, the building official is authorized to immediately issue abatement orders in accordance with Section 116.8 of these administrative provisions, or the building official may require the property owner to obtain a detailed engineering evaluation of the suspected unsafe condition before the building official determines the extent of abatement required.

1. When so ordered by the building official, the owner of any building or property suspected of containing an unsafe condition shall engage the services of a design professional registered in Arizona to conduct a detailed investigation and analysis of the suspected unsafe condition. The cost of such an investigation and report shall be paid by the property owner.
2. The registered design professional retained by the owner shall conduct a detailed investigation and evaluation of the suspected unsafe condition and shall issue a written report to the property owner and to the building official on the condition of the building, structure, or building service equipment, including recommendations for steps necessary to abate any unsafe condition found. The report shall be delivered to the building official on or before the date specified in the building official order requiring such report.
3. The content, findings and recommendations contained in the owner's engineering report may be utilized by the building official to determine whether or not an unsafe condition exists, whether it creates an imminent unsafe condition and what, if any, abatement orders shall be issued.
4. Failure of a property owner to produce an engineering report on or before the date specified in the building official order shall be grounds for the building official to proceed with abatement proceedings up to and including orders to immediately vacate or demolish the subject building or structure.

116.8 Abatement of unsafe buildings, structures or building service equipment.
The building official shall, after inspection, determine whether a building, structure or building service equipment is an unsafe condition and, if so, whether it constitutes an imminent unsafe condition, as defined in Section 116.2 of these administrative provisions.

116.8.1 Unsafe conditions.
If a building, a structure or any building service equipment is determined to be in an unsafe condition, the building official shall issue a written notice to the property owner or occupant of the premises describing the unsafe condition and order its repair or abatement within a specified time. The time allowed for repair or abatement shall be not less than that posted on the Notice of Violation starting from the date of the notice. Failure to repair or abate the unsafe condition within the time specified shall constitute grounds for the building official to initiate formal abatement procedures.

116.8.2 Imminent unsafe conditions.
If a building, structure, or any building service equipment is determined to be in an imminent unsafe condition, the building official shall serve a written notice of violation on the person or persons occupying or having control of the building, structure or building service equipment and on the person or persons having recorded interest in the property. The notice of violation shall declare the imminent unsafe condition to be a nuisance and shall order its immediate abatement in accordance with the provisions of this section.

1. Notice of violation.

Notices of violation declaring imminent unsafe conditions shall be served by personal service or by certified mail return receipt requested. Service shall be deemed complete upon delivery.

The notice of violation shall identify the address and legal description of the property in question and shall state the nature and extent of the imminent unsafe condition in such detail as to allow the property owner to identify and abate the imminent unsafe condition. The notice shall provide the name and phone number of a city representative to contact concerning the imminent unsafe condition and acceptable methods of abatement. The notice shall state the City's authority to abate the violation if the owner fails to do so and the City's ability to assess the costs of such abatement against the property. The notice shall state the procedures to follow should the owner wish to appeal the decision of the building official.

Nothing shall preclude the building official from giving additional oral or written information notices. Nothing herein shall require the issuance of a notice of violation prior to commencement of emergency abatement or civil or criminal violation proceedings.

2. Unsafe buildings or structures.
In the case of an unsafe building or structure containing imminent unsafe conditions, the building official shall order the abatement by repair or by demolition of the building or structure. The unsafe building or structure and any buildings or structures placed in jeopardy by the unsafe buildings or structures shall be posted in accordance with this Code. The buildings or structures shall not be occupied or reoccupied until determined safe by the Building official.

3. Unsafe building service equipment.
In the case of an unsafe building service equipment installation containing imminent unsafe conditions, the building official shall attach or affix a warning red tag to the equipment declared to be unsafe. Where equipment is declared to be in an imminent unsafe condition, the building official shall order such equipment disconnected or its use discontinued until the condition is abated per Code. In addition, the building official may order any building or structure which is placed in jeopardy by the unsafe equipment to be vacated, or the building official may order the disconnection of the affected utility service to the building, structure or equipment, and these buildings or structures shall not be occupied, reoccupied or building service equipment reconnected until determined safe by the building official.

4. Posting of signs.
When necessary to protect life, health or public welfare, the building official shall post signs which shall prohibit entry into an unsafe building or structure provided, however, that with permission of the building official it shall be lawful to enter the building for the purposes of removing personal property.

It shall be unlawful to remove any such posted sign without permission from the building official.

5. Emergency barricades.
If any building or structure is a hazard to life or limb to persons using a public street, alley or sidewalk, the public way shall be barricaded to prevent public use. The necessary barricades shall be erected on order from the building official. The costs for barricading of a public way under this section shall be assessed to and paid by the owner of the unsafe building or structure causing the need for such barricades.

6. Emergency abatement.
In the event an emergency should occur wherein the continued existence of a building, structure or building service equipment would constitute an imminent unsafe condition to life, health or other property, the building official may cause such building or structure to be demolished, building service equipment removed or disconnected, swimming pool fenced or pumped dry or a cesspool or tank filled at once, all without notice. Such abatement shall be limited to the minimum work necessary to remove the imminent unsafe condition.

7. Abatement by city.
If the owner of any unsafe building, structure or building service equipment fails to abate an imminent unsafe condition within the time specified in the Notice of Violation, the City may abate any such imminent unsafe condition by repair, removal or demolition in accordance with the provisions of *Phoenix City Code*, Chapter 39, Sections 39-22 through 39-24. The costs of any City abatement, including emergency abatement or temporary repairs, shall be paid by the property owner as set forth in *Phoenix City Code* Chapter 39, Sections 39-22 through 39-24.

8. Court-ordered abatement.
In addition to any other abatement procedures provided in this Code, the building official may apply to the Municipal Court of the City of Phoenix for an order allowing the City to abate any unsafe condition in accordance with the provisions of *Phoenix City Code* Chapter 39, Section 39-20.

116.8.3 Appeals.
Decisions, orders and notices of violation relating to unsafe buildings, structures or building service equipment may be appealed to the building official and to the Development Advisory Board in accordance with Section 113 of this Code, except that any appeal of an order by the building official to vacate an unsafe building or to demolish part or all of an unsafe building or structure shall be made to the Rehabilitation Appeals Board in accordance with Article 5 of the *Phoenix City Code*, Chapter 39.

Reasons:
Modified from previous city amended base code to insert clarifying language.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 117

Submitted by: 2018 International Building Code Administrative Committee

[A] SECTION 117 ANNUAL FACILITIES PERMIT

[A] 117.1 Scope.
The Annual Facilities Program is an administrative system intended to simplify the permitting and inspection process for qualified facilities. This program allows inspector review of plans and maintains an inspection staff familiar with the construction history of qualified facilities. Additional permits shall be required in accordance with Section 105 of these administrative provisions for work that increases floor area or establishes or changes the occupancy of a space. The Annual Facilities Program shall administer all permits issued for qualified facilities registered under this program. This *permit* process shall not preempt compliance with the technical requirements of this Code or with other city, county, state or federal laws and regulations.

[A] 117.2 Definitions. For the purpose of this section, certain terms are defined as follows:

AGENT means a person employed by a qualified facility owner as full-time staff or by contract, who is an architect or engineer registered in the State of Arizona.

CAMPUS means two or more buildings located on the same property and under the control of the qualified facility owner.

QUALIFIED FACILITY means a building, campus, structure, or building service equipment registered with the Annual Facilities Permit Program.

QUALIFIED FACILITY OWNER means a firm, corporation, political entity or property management company that occupies or controls the buildings, campus, structure or building service equipment and maintains such buildings and equipment in compliance with all provisions of this Code.

[A] 117.3 Annual facilities permits.

[A] 117.3.1 Initial application.
Every applicant for an Annual Facilities Permit shall fill out a form provided by the Planning & Development Department and shall pay an application and registration fee as set forth in Appendix A.2 of the Phoenix City Code. The form shall include the following:

1. The name of the person authorized to act on behalf of the qualified facility owner(s).

2. The name of the agent who will be responsible for code compliance of the work performed under the Annual Facilities Permit. When the agent is employed by contract, the builder and the person who is authorized to act on behalf of the qualified facility owners cannot be the same individual.

G6463

3. The location and total square footage of the entire facility at the site(s) intended to be included in the program. The *building official* shall take action on the application and the applicant shall be notified accordingly.

[A] 117.3.2 Validity of the annual facilities permits.
An Annual Facilities Permit shall be valid only as long as the named agent remains in the employ of the qualified facility owner in an active capacity.

If the agent should leave the employ of the qualified facility owner, such facility shall notify the building official within seven calendar days. The qualified facility owner shall obtain a replacement agent within 45 days of notification to the *building official*. If the *building official* is not notified within the prescribed period that a new agent has been obtained, the Annual Facilities Permit shall be suspended until such agent is obtained.

[A] 117.3.3 Annual facilities permit transfers.
An Annual Facilities Permit is not transferable.

[A] 117.4 Annual facilities permit renewal.
Annual Facilities Permits shall be renewed every 12 months by payment of a renewal fee as set forth in Appendix A.2 of the Phoenix City Code. Renewal fees shall be due and payable before the date of expiration of the permit or when a new application is required.

Any work performed after expiration or without a *permit* as specified in Section 105 of these administrative provisions shall be a violation of this code.

[A] 117.5 Annual Facilities Permit operation.
The agent shall notify the Planning & Development Department before the start of any work on facilities registered with the Annual Facilities Permit Program. The *building official* shall determine the nature and extent of plan review or inspections required. The qualified facility shall pay to the Planning & Development Department an hourly fee for professional services rendered as set forth in the Appendix A.2 of the Phoenix City Code.

The agent shall be responsible for ensuring that qualified facilities comply with the substantive provisions of this code. The agent, as authorized by rules established by the Arizona Board of Technical Registration, shall assure work has been performed in accordance with this code.

[A] 117.5.1 Plan reviews.
Plans, drawings, diagrams, and /or other data describing such work shall be provided to the *building official* for review before work commences. Plans shall be complete and comply with all the codes and ordinances applicable to the proposed work.

[A] 117.5.2 Work report and inspections.
All structural, architectural, plumbing, mechanical and electrical installations or construction shall be inspected in accordance with this code. Facilities shall be subject to inspection at regular intervals not to exceed six months.

[A] 117.5.3 Construction compliance.
The agent and the qualified facility owner are jointly responsible for assuring that all work performed at the qualified facility complies with all technical requirements of all applicable construction codes whether or not such work is specifically inspected.

G6463

[A] 117.6 Revocation of annual facilities permit.

The *building official* may suspend or revoke an Annual Facilities Permit when the qualified facility fails to comply with any of the program policies or for willful violation of any provision of this Code. Violations that may result in annual permit suspension or revocation include, but are not limited to, one or more of the following:

1. Performing construction work without an agent as required in this section.
2. Performing construction work without the agent's knowledge or consent.
3. Concealing work without inspection approval or authorization.
4. Refusal to uncover concealed work.
5. Construction or installing work contrary to inspection orders.
6 Performing construction work prior to approval from the Annual Facilities Program.
7. Failure to report all construction work done under authority of the annual permit.
8. Refusal to eliminate unsafe hazards listed in Section 116 of these administrative provisions.
9. Failure to remain current on payment for plan review and inspection services.

An Annual Facilities Permit may be reinstated after all violations have been remedied to the satisfaction of the *building official*. If compliance involves actual work, a separate *permit* as required under Section 105 of these administrative provisions must be obtained and such *permit* is subject to regular *permit* fees as required under Section 109 of these administrative provisions. An investigation fee shall be paid in the amount equal to that prescribed in Section 114 of these administrative provisions.

Reinstatement of an annual permit, which has been suspended or revoked, requires payment of a new Annual Facilities Permit Fee, as prescribed in this Section.

Reasons:
These provisions create the Annual Facilities Permit Program.

Cost Impact:
This program frequently represents a time and cost savings for customers.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 118

Submitted by: 2018 International Building Code Administrative Committee

[A] SECTION 118 BUILDING MAINTENANCE REGISTRATION

[A] 118.1 General.
The holder of a building maintenance registration is exempt from Section 105.1 of these administrative provisions for Level 1 alterations as defined in Section 503 of the International Existing Building Code and repair or maintenance of the electrical, mechanical or plumbing equipment in or on buildings, structures or premises owned and controlled by the registrant when he or she complies with all the provisions of this section. All other provisions of this code shall be complied with, including but not limited to, requirements for city inspection of structural, plumbing, mechanical or electrical installations prior to covering any such work.

[A] 118.2 Definition. For the purpose of this section, this term is defined as follows:

Building Maintenance Registration Means authority granted to a person, firm, corporation or political entity to perform work as specifically authorized in this section when such parties have full-time supervisory employees in the proper classification as described in Section 118.3 of these administrative provisions.

[A] 118.3 Supervisor(s) required.
All electrical, mechanical or plumbing work done under a building maintenance registration shall be performed or supervised by a licensed supervisor of the proper classification.

1. A licensed electrical supervisor may perform or supervise the electrical work.
2. A licensed mechanical supervisor may perform or supervise the mechanical work.
3. A licensed plumbing supervisor may perform or supervise the plumbing work
4. A licensed contractor may perform the duties and responsibilities of a licensed supervisor.

[A] 118.3.1 Application and fee for supervisor licenses.
The application shall be accompanied by a nonrefundable application fee as set forth in Appendix A.2 of the Phoenix City Code. Unless revoked for cause, a supervisor's license shall run with the building maintenance registration as long as the supervisor is employed by the registrant.

[A] 118.3.2 Supervisor qualification.
A qualified supervisor must meet one of the following criteria:

1. A person licensed by the State of Arizona as a licensed contractor (qualified person) in a category of work covered by this section.
2. A licensed electrical supervisor must hold a current IAEI Electrical General or ICC Commercial Electrical Inspector certification.
3. A licensed mechanical supervisor must hold a current IAPMO Mechanical Inspector or ICC Commercial Mechanical Inspector certification.

G6463

4. A licensed plumbing supervisor must hold a current IAPMO Plumbing Inspector or ICC Commercial Plumbing Inspector certification.

[A] 118.3.3 Revocation of supervisor's license.
The *building official* may revoke or temporarily suspend any supervisor's license granted hereunder for cause. Before taking such action, the *building official* shall request, in writing, the person against who such action is contemplated to appear before him or her to show cause why such disciplinary action should not be taken. The supervisor whose license is revoked or suspended shall be notified of such action by certified mail. It shall be unlawful to perform any work in conflict with such notice.

[A] 118.4 Application and fee for building maintenance registration.
Every applicant for a building maintenance registration shall fill out a form provided by the Planning and Development Department and shall pay an application fee at time of filing in the amount as set forth in Appendix A.2 of the Phoenix City Code for each class of supervisor in his or her employ. The form shall include at least the following:

1. The name of the holder of the registration who is authorized and has the authority to act for the building owner(s).
2. The name of the licensed supervisor(s) or the contractor who will supervise or perform the work.
3. Copies of current code certifications for each supervisor.
4. Action shall be taken by the building official on such application and the applicant shall be notified accordingly.

[A] 118.5 Registration renewal.
Registrations shall be renewed not later than 12 months after initial registration by payment of a renewal fee equal to the application fee. Any work performed after expiration shall be a violation of this Code.

[A] 118.6 Validity of registration.
The registrations shall be valid only as long as the named licensed supervisor(s) shall remain in the employ of the registrant in an active full-time capacity. If these personnel should leave the employ of the registrant, the registrant shall notify the *building official* immediately. The registrant shall be required to obtain proper personnel according to the requirements of this code within 90 days of notification to the *building official*. If personnel are not obtained within the 90-day period, the registration shall be deemed suspended until such personnel are obtained.

[A] 118.7 Revocation of registration.
The *building official* may suspend or revoke a registration when the registrant fails to comply with any of the registration responsibilities or for violation of any provision of this code. Violations which may result in revocation of a building maintenance registration include, but are not limited to, one or more of the following:

1. Performing construction work outside the scope of the registration without obtaining a separate permit.
2. Performing construction work without a licensed supervisor as required in this section, or without the supervisor's knowledge, consent or oversight.
3. Concealing work without inspection approval or authorization.
4. Refusal to uncover concealed work.
5. Constructing or installing work contrary to inspection orders.
6. Failure to report all construction work done under authority of the building maintenance registration.
7. Refusal to eliminate unsafe conditions listed in Section 116 of this code.

When the *building official* determines that a violation has occurred and that suspension or revocation of the registration is warranted, the registrant shall be notified in writing by certified mail and shall be given an opportunity for an administrative hearing with the building official. The suspension or revocation shall take effect 10 days after the date of notification unless, within such time, the registrant requests an administrative hearing. When an administrative hearing is requested, the building official shall consider all evidence submitted at the hearing and shall notify the registrant in writing of the final decision within 10 days following such hearing. All final decisions of the *building official* to suspend or revoke a building maintenance registration may be appealed in accordance with Section 113 of these administrative provisions.

[A] 118.8 Work report and inspections.
A brief outline of all work done under the registration shall be prepared by the licensed supervisor(s) and shall be available to the *building official* during periodic inspections. Work shall not be concealed without first obtaining inspection approval from the *building official*. Work performed under the building maintenance registration shall be inspected at regular intervals not exceeding six months.

Reasons:
These provisions create the Building Maintenance Registration and are carried forward and expanded from previous editions of the Phoenix Building Construction Code. This allows minor work to be done under the supervision of a Licensed Supervisor without plan review or prior approval from Planning & Development Department.

Changes from 2012 Amendment: Structural work is not allowed to be part of the BMR program.

Changes from 2012 Amendment: COP no longer provides testing. ICC code certifications are now required to be in accordance with city inspector requirements.

Cost Impact:
This simplification and streamlining of the process for minor projects at registered facilities would save customers time and money.

Approved in previous 2012 Code Adoption process: ☒**YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendments to the 2018 International Building Code
Section 119

Submitted by: 2018 International Building Code Administrative Committee

[A] SECTION 119 JOURNEYMAN AND APPRENTICE LICENSES

119.1 License required.
All work performed on plumbing and mechanical systems where a permit is required according to Section 105 of these administrative provisions, is required to be performed by a Licensed Journeyman or by an Apprentice as defined in this section.

Exceptions:

1. A person licensed by the State of Arizona as a licensed contractor (qualified person) in a category of work covered by this section.
2. The owner/occupant of a single-family residence when performing work covered by this section on their residence or accessory buildings or structures.
3. Persons installing private water services, sewers or private sewage disposal systems as defined in the Phoenix Plumbing Code need not obtain a Journeyman or Apprentice license.

119.1 Definitions. For purposes of this section, terms are defined as follows:

Journeyman Licenses is the authority to perform or observe work requiring certain skills as identified in this section and is issued by the building official upon successful completion of an examination administered by the City of Phoenix.

Licensed Journeyman is a person skilled in an area of work covered by this section with sufficient work experience to pass the Journeyman Test administered by the City of Phoenix and is capable of performing work covered by their Journeyman License and supervising the work of Apprentices covered by this section.

Apprentice is a person learning a skill and working in an area of work covered by this section and working under the direct supervision of a Licensed Journeyman or State of Arizona Licensed Contractor.

119.1 Journeyman licenses.
Journeyman licenses shall be divided into classifications as follows:

1. **Journeyman plumber.** A Journeyman plumber may install plumbing systems within the scope of the Phoenix Building Construction Code.
2. **Journeyman gas fitter.** A Journeyman gas fitter may install gas appliances, including the piping and venting of these appliances within the scope of the Phoenix Building Construction Code.
3. **Journeyman mechanical systems installer.** A Journeyman mechanical systems installer may install all heating, ventilating, cooling, refrigeration or other mechanical systems and equipment within the scope of the Phoenix Building Construction Code.
4. **Apprentice.** An Apprentice license may be issued to an individual who cannot qualify for

G6463

the Journeyman status in one of the categories listed above. Apprentice licenses are valid for a period of one year.

119.2 Apprentice.
An apprentice must work under the supervision of a Licensed Journeyman or Arizona State Licensed Contractor at all times work is being performed. The Licensed Journeyman or state licensed contractor is responsible for the work of the apprentice.

119.2 Application for licenses.
Applicants shall submit either verification of experience (Journeyman) or notarized letter of request (Apprentice) with appropriate fees and application forms supplied by the Planning & Development Department. Applicants for Journeyman licenses shall schedule a test date subsequent to their application being accepted, or provide evidence that they have passed an approved third-party Journeyman license exam.

119.2 Fees.
Fees shall be paid upon submittal of the application for licensing. Test fees are refundable with cause prior to any test being taken. No fees are refundable after a test has been taken, regardless of the outcome. Fees are set forth in Appendix A.2 of the Phoenix City Code.

119.2 Examinations.

119.7.1 Frequency of examinations.
Approved third-party agencies shall hold examinations no less frequently than once every three months, in a suitable place, and for each classification for which there are applications on file. Examinations shall be held more frequently when necessary. The Planning & Development Department may also hold examinations when necessary.

119.7.2 Scope of examinations.
Each written examination shall relate specifically to that aspect of the trade(s) for which licensing is being requested. Examinations shall be in writing, and shall be sufficiently comprehensive to test the Code related knowledge of an applicant seeking Journeyman status. A prerequisite to testing is verification that the applicant has four or more years of practical experience in the discipline for which licensing is requested.

119.7.2 Notification of test results.
Licenses shall be issued to successful candidates within reasonable time after successful completion of an examination. Applicants who fail to pass their examination(s) shall be notified within 10 days after the examination. A retest date shall be established within 30 days.

119.7 Expiration and renewal.
Unless revoked for cause, all Journeyman licenses shall expire 36 months after the month in which they were issued. To renew a Journeyman license, it is necessary to pass a renewal examination and to pay a renewal fee as set forth in Appendix A.2 of the Phoenix City Code. An examination will be mailed to each holder of a Journeyman license prior to expiration of the current license. This examination is to be completed and returned within 60 days of license expiration. Failure to renew within 60 days after expiration of a license will result in its revocation, and will require that the initial Journeyman examination be taken before issuance of a new Journeyman license.

119.7 Journeyman or apprentice identification card.
At the time of licensing each Journeyman or Apprentice, and at the time of renewing each license, the Planning & Development Department shall provide each successful applicant with an identification card showing the classification for which that person is licensed. At all times when performing work that requires a license, such person shall have a Journeyman or Apprentice card in their immediate possession, and shall produce it upon request of a Planning & Development Department representative. It shall be the responsibility of the contractor to determine that their workers are properly licensed.

Journeyman or apprentice licenses shall be issued only to individual persons and shall not be transferable.

119.7 Revocation of licenses.
The Planning & Development Department may revoke any license granted hereunder for cause. Upon notification, the licensee shall be given 30 days to justify in writing why revocation of the license is unwarranted. Failure to respond to such notification will be taken as voluntary forfeiture of the license and acceptance of any action revoking said license. Appeal of a final administrative decision may be filed within 10 days of formal notification as provided in Section 113 of these administrative provisions.

Reasons:
This retains the Journeyman Licensing program that has historically been in place in Phoenix. The program helps to ensure quality construction and is supported by the construction industry.

Cost Impact: Minimal cost impact.
There may be a minimal additional cost to a project due to the requirement to use qualified staff, however this is frequently offset by reduction in rework. The provision has been included in the Phoenix Building Construction Code for many years.

Approved in previous 2015 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 IBC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 901.1

Submitted by: 2018 International Building Code Committee

901.1 Scope.
The provisions of this chapter shall specify where fire protection and life safety systems are required and shall apply to the design, installation and operation of *fire protection systems*.

901.1.1 City of Phoenix amendments to fire protection and life safety systems.
The City of Phoenix amendments to the fire protection and life safety systems are found in Chapter 9 of the most recent adopted version of the Phoenix Fire Code. Where conflicts occur between provisions of this chapter and Chapter 9 of the Phoenix Fire Code, the provisions of the Phoenix Fire Code shall apply.

Reasons:
To better coordinate the fire protection and life safety systems requirements found in both the Building Code and Fire Code and to avoid conflicts that may occur when providing the same information in two separate locations, this amendment has been provided in the Building Code to reference Chapter 9 of the Phoenix Fire Code for all City of Phoenix amendments to Chapter 9 Fire Protection and Life Safety Systems.

Cost Impact: No cost impact.
This amendment will not in and of itself revise any code requirements.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1017.2.2

Submitted by: 2018 International Building Code Committee

1017.2.2 Groups F-1 and S-1 increase.
The maximum *exit access* travel distance shall be 400 feet (122 m) in Group F-1 or S-1 occupancies where all of the following conditions are met:

1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height.
2. The minimum height from the finished floor to the bottom of the ceiling or roof slab or deck is 24 feet (7315 mm).
3. The building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
4. Additional building access shall be provided in accordance with the Phoenix Fire Code, Sections 3206.6 through 3206.6.1.3.

Reasons:
This entire section is a current amendment to the 2012 IBC. The 2018 IBC now includes this, with the exception of item 4 which includes additional access into the building, per the Phoenix Fire Code. Most architects design to the IBC; this will provide reference to the Phoenix Fire Code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 1101.1
Submitted by: 2018 International Building Code Committee **1101.1 Scope.** The provisions of this chapter and Arizona Revised statutes, ARS sections 41-1492 through 41-1492.12 shall control the design and construction of facilities for accessibility for individuals with disabilities.
Reasons: This is a current amendment to the 2012 IBC. This is a state law that must be enforced. It references the current ADA Standards which are more restrictive than the IBC and ICC/ANSI 2009.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1102.1

Submitted by: 2018 International Building Code Committee

1102.1 Design.
Buildings and facilities shall be designed and constructed to be *accessible* in accordance with this code and ICC A117.1 and in accordance with provisions State of Arizona Attorney General Administrative Rules R10-3-401 through R-10-3-404 (2010 ADA Standards for Accessible Design, referred to as "2010 Standards", adopted by the U.S. Department of Justice), whichever standard provides the greatest degree of accessibility.

Reasons:
This is a current amendment to the 2012 IBC. This is a state law that must be enforced. It references the current ADA Standards which are more restrictive than the IBC and ICC/ANSI 2009.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1103.2.3

Submitted by: 2018 International Building Code Committee

1103.2.3 Detached dwellings.
Detached one- and two- family dwellings, their accessory structures and their associated *dwellings* and accessory structures, and their associated sites and facilities are not required to ~~comply with this chapter~~ be accessible. Home Occupancies as defined in the Phoenix Zoning Ordinance are not required to be accessible.

Reasons:
This is a current amendment to the 2012 IBC. This is an issue, which had caused confusion in the past, so addition of the clarification helps avoid that.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1103.2.5

Submitted by: 2018 International Building Code Committee

1103.2.5 Construction sites.
Structures, *sites* and equipment directly associated with the actual processes of construction including, but not limited to, scaffolding, bridging, materials hoists, materials storage or construction trailers are not required to comply with this chapter. The public portions of temporary sales offices/trailers are required to be accessible. There shall be accessible parking and an accessible route from the accessible parking aisle to the sales office/trailer and throughout the public portion of the sales office/trailer, including the design center. Accessible toilet rooms shall be provided according to this code.

Reasons:
This is a current amendment to the 2012 IBC. This is an issue which had caused confusion in the past, so addition of the clarification helps avoid that.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1106.1

Submitted by: 2018 International Building Code Committee

1106.1 Required.
~~Where parking is provided, *accessible* parking spaces shall be provided in compliance with Table 1106.1, except as required by Sections 1106.2 through 1106.4. Where more than one parking facility is provided on a *site*, the number of parking spaces required to be *accessible* shall be calculated separately for each parking facility.~~

~~**Exception:** This section does not apply to parking spaces used exclusively for buses, trucks, other delivery vehicles, law enforcement vehicles or vehicular impound and motor pools where lots accessed by the public are provided with an *accessible* passenger loading zone.~~

11.6.1 General.
Where parking lots, garages or passenger loading zones are provided, they shall be provided in accordance with the Phoenix Zoning Ordinance and the 2010 ADA Standards for Accessible Design.

~~1106.2~~

~~1106.3~~

~~1106.4~~

~~1106.5~~

~~1106.6~~

~~1106.7~~

~~1106.7.1~~

~~1106.7.2~~

~~1106.7.3~~

~~1106.7.4~~

Reasons:
This matches a current amendment to the 2012 IBC for sections 1106.1 through 1106.7. These sections are deleted and replaced by the reference to the Zoning Ordinance and 2010 ADA Standards.

G6463

Cost Impact: No cost impact.	
Approved in previous 2012 Code Adoption process:	☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1107.6.2.2.1

Submitted by: 2018 International Building Code Committee

1107.6.2.2.1 Type A units.
In Group R-2 occupancies containing more than 20 *dwelling units* or *sleeping units*, at least 2 percent but not less than one of the units shall be a *Type A unit*. All Group R-2 units on a site shall be considered to determine the total number of units and the required number of *Type A units*. *Type A units* shall be dispersed among the various classes of units. In R-2 occupancies containing more than 20 dwelling units or sleeping units which are located within thirteen hundred twenty feet of the light rail station platform, at least 6 percent, but not less than one of the units shall be a type A unit.

Reasons:
This is a current amendment to the 2012 IBC and a current COP Ordinance G-4509.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1107.7.2

Submitted by: 2018 International Building Code Committee

1107.7.2 Multistory units.
A *multistory dwelling unit* or *sleeping unit* that is not provided with elevator service is not required to be a Type A or *Type B unit*. Where a *multistory unit* is provided with external elevator service to only one floor, the floor provided with elevator service shall be the primary entry to the unit, shall comply with the requirements for a *Type B unit* and, where provided within the unit, a living area, a kitchen and a toilet facility shall be provided on that floor.

Reasons:
This is a current amendment to the 2012 IBC. This amendment complies with Fair Housing Act and is supported by Kim Paarlberg of ICC. Accessibility requirements for townhouses conforming to the requirements of the IRC are referred back to IBC section 1107.6.3 which has requirements for only the type B units and not type A unit. The same requirements should apply to two-story units complying with either the IRC or IBC.

Cost Impact:
Reduced cost for compliance.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1203.1

Submitted by: 2018 International Building Code Committee

SECTION 1203 TEMPERATURE CONTROL

1203.1 Equipment and systems.
Habitable spaces ~~Interior spaces intended for human occupancy~~ shall be provided with active or passive space-heating and space-cooling systems capable of maintaining ~~a minimum indoor~~ temperatures between 70 ~~of 68°F~~ (20~~1~~°C) and 90°F (32°C) at a point 3 feet (914 mm) above the floor ~~on the design heating day~~. The installation of portable space heaters or coolers shall not be used to achieve compliance with this section.

Exception: Space heating and cooling systems are not required for:

1. Interior spaces where the primary purpose of the space is not associated with human comfort.
2. Group F, H, S or U occupancies.

Reasons:
The 2018 IMC and IBC text covers heating concerns only and does not distinguish between residential or commercial buildings. The intent of this proposed amendment is to recognize that the cooling season in Phoenix is the dominant design condition. The City Council of Phoenix included provisions for space cooling in all residential dwellings during the update of the Neighborhood Preservation Ordinance, approved on June 16, 1998. The cooling requirement for dwellings was incorporated into the adoption of the 1997 Uniform Building Code and was approved with an effective date of March 12, 1999. The adoption of the 2003 I-codes included mandatory heating and cooling for occupied interior spaces. An exception allowed for no heating and cooling when the primary purpose was not associated with human comfort, such as warehouses. The 2012 and 2006 I-codes were amended by Phoenix to require heating and cooling in habitable spaces. This proposed amendment re-establishes the City Council mandate to provide heating and cooling in residential dwellings and allows for designers and building owners to determine if it is required in commercial buildings based on the definition of habitable spaces.

Cost Impact: No cost impact.
This amendment has been in effect since 1998.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1609.1.1

Submitted by: 2018 International Building Code Committee

1609.1.1 Determination of wind loads.
Wind loads on every building or structure shall be determined in accordance with Chapters 26 to 30 of ASCE 7. The type of opening protection required, the basic design wind speed, V, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 buildings.
2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AWC WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.
4. Designs using NAAMM FP 1001.
5. Designs using TIA-222 for antenna-supporting structures and antennas, provided that the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.
6. Wind tunnel tests in accordance with ASCE 49 and Sections 31.4 and 31.5 of ASCE 7.
7. A net force coefficient, $C_f = 1.2$, and Load Case A only, may be used to develop design wind loads on solid freestanding walls with a top-of-wall elevation not greater than 7 feet above the lowest adjacent grade within a horizontal distance equal to the wall height on either side of the wall.

Reasons:
Amendment carried forward from previous code for fences not over 7 feet with new wording to eliminate the use of these lesser wind loads for fences on top of, or near, retaining walls.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1612.3

Submitted by: 2018 International Building Code Committee

1612.3 Establishment of flood hazard areas.
~~To establish *flood hazard areas*, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for **[INSERT NAME OF JURISDICTION]**," dated **[INSERT DATE OF ISSUANCE]**, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.~~ The areas of special flood hazard identified by FEMA in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Maricopa County, Arizona and incorporated areas" dated September 30, 2005, with accompanying FIRMs and FBFMs dated September 30, 2005, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the Floodplain Administrator. The Floodplain Administrator, within its area of jurisdiction, shall delineate (or may, by rule, require developers of land to delineate) for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by FEMA and the Director of the Arizona Department of Water Resources. The FIS and FIRM panels are on file at City of Phoenix City Hall, 200 W. Washington Street, Phoenix, AZ 85003, Street Transportation Department, 5th Floor.

Reasons:
The amendment uses the exact wording from Phoenix City Code 32B-7.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 1613.2.5.3
Submitted by: 2018 International Building Code Committee **1613.2.5.3 ASCE 7-16, Section 11.7.** Modify ASCE 7-16, Section 11.7 to read: **11.7 Design requirements for seismic design category A.** Buildings and other structures assigned to Seismic Design Category A, excluding those assigned to Risk Categories III and IV, need only comply with the requirements of Section 1.4. Nonstructural components in SDC A are exempt from seismic design requirements. In addition, tanks assigned to Risk Category IV shall satisfy the freeboard requirement in Section 15.6.5.1.
Reasons: Buildings that are determined to be essential facilities, and that are expected to be operational during an emergency, should not be designed using non-conservative design methods.
Cost Impact: Possible cost of earthquake analysis for high risk category structures.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1704.1

Submitted by: 2018 International Building Code Committee

SECTION 1704 SPECIAL INSPECTIONS AND TESTS, CONTRACTOR RESPONSIBILITY, AND ~~STRUCTURAL~~ OBSERVATION

1704.1 General.
Special inspections and tests, statements of special inspections, responsibilities of contractors, submittals to the *building official* and ~~structural~~ observations shall meet the applicable requirements of this section.

Reasons:
Special Inspections and Observations for all disciplines: structural, mechanical plumbing, and electrical are included in this section.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1704.6.1

Submitted by: 2018 International Building Code Committee

1704.6.1 Structural observations for structures.
Structural observations shall be provided for those structures where one or more of the following conditions exist:

1. The *structure* is classified as *Risk Category IV.*
2. The *structure* is a *high-rise building.*
3. Such observation is required by the *registered design professional* responsible for the structural design.
4. Such observation is specifically required by the *building official.*
5. The height of the *structure* is greater than 75 feet (22,860mm) above the *grade plane.*
6. The *structure* has more than three stories above the *grade plane.*
7. Elevated post-tensioned concrete structures.
8. Prefabricated deferred units and their connections when such units are utilized structurally in the lateral force-resisting systems of a *structure.*

Reasons:
These requirements were previously included in an amendment to the 2012 IBC except that the 2018 IBC now has a subsection that this information can be incorporated into rather than having to add a new subsection.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 1704.7

Submitted by: 2018 International Building Code Committee

1704.7 Electrical observations.
The owner shall employ the *registered design professional* responsible for the electrical design, or another *registered design professional* designated by the *registered design professional* responsible for the electrical design, to perform visual observation of complex electrical equipment and systems for general conformance to the approved plans and specifications, including but not limited to, placement and interconnection of equipment. Electrical observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. Electrical Observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.19, and shall be provided when one of the following conditions exist:

1. Installation or alteration of that portion of health care facility electrical systems which falls within the scope of Article 517 of the *National Electrical Code*, including such systems installed in facilities where outpatient surgical procedures are performed.
2. Installations or alteration of electrical systems over 600V.
3. Installation or alteration of electrical systems within locations classified as hazardous by provisions of the *National Electrical Code*, except for gasoline dispensing installations and systems located within storage garages, repair garages or lubritoriums.
4. When such observation is specifically required by the *building official*.

1704.7.1 Procedures.
The *registered design professional* responsible for electrical observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring electrical observation as set forth in the inspection and observation program for each project.

The *registered design professional* responsible for performing electrical observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the *registered design professional in responsible charge* and to the *building official*.

In addition to individual reports, the *registered design professional in responsible charge* shall file with the *building official* a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

1704.7.2 Certificate of compliance.
Upon completion of the portions of the work requiring electrical observation, a Certificate of Compliance shall be issued to the *building official* under the seal and signature of the *registered design professional* responsible for such observation. A Certificate of Occupancy

G6463

will not be issued until the *building official* receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for electrical observation shall read as follows:

"I certify to the best of my knowledge the electrical requirements of the *Phoenix Building Construction Code* and approved plans and specifications have been complied with insofar as the portion of the work requiring electrical observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."

Reasons:
These requirements were previously included in an amendment to the 2012 IBC.

Cost Impact:
Increased costs associated with hiring a *registered design professional* to perform electrical observations.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 1704.8

Submitted by: 2018 International Building Code Committee

1704.8 Mechanical observations.
The owner shall employ the *registered design professional* responsible for the mechanical design, or another *registered design professional* designated by the *registered design professional* responsible for the mechanical design, to perform visual observation of complex mechanical equipment and systems for general conformance to the approved plans and specifications, including, but not limited to, placement and interconnection of equipment. Mechanical observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. Mechanical observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.20, and shall be provided when one of the following conditions exist:

1. When such observation is specifically required by the *building official.*

1704.8.1 Procedures.
The *registered design professional* responsible for mechanical observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring mechanical observation as set forth in the inspection and observation program for each project.

The *registered design professional* responsible for performing mechanical observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the *registered design professional in responsible charge* and to the *building official.*

In addition to individual reports, the *registered design professional in responsible charge* shall file with the *building official* a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

1704.8.2 Certificate of compliance.
Upon completion of the portions of the work requiring mechanical observation, a Certificate of Compliance shall be issued to the *building official* under the seal and signature of the *registered design professional* responsible for such observation. A Certificate of Occupancy will not be issued until the *building official* receives all required special inspection reports and the Certificates of Compliance.

G6463

The Certificate of Compliance for mechanical observation shall read as follows:

"I certify to the best of my knowledge the mechanical requirements of the *Phoenix Building Construction Code* and approved plans and specifications have been complied with insofar as the portion of the work requiring mechanical observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."

Reasons:
These requirements were previously included in an amendment to the 2012 IBC.

Cost Impact:
Increased costs associated with hiring a *registered design professional* to perform mechanical observations.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 1704.9

Submitted by: 2018 International Building Code Committee

1704.9 Plumbing observations.
The owner shall employ the *registered design professional* responsible for the plumbing design, or another *registered design professional* designated by the *registered design professional* responsible for the plumbing design, to perform visual observation of complex plumbing equipment and systems for general conformance to the approved plans and specifications, including, but not limited to, placement and interconnection of equipment. Plumbing observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. Plumbing observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.21 and shall be provided when one of the following conditions exist:

1. When such observation is specifically required by the *building official*

1704.9.1 Procedures.
The *registered design professional* responsible for plumbing observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring plumbing observation as set forth in the inspection and observation program for each project.

The *registered design professional* responsible for performing plumbing observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the *registered design professional in responsible charge* and to the *building official.*

In addition to individual reports, the *registered design professional in responsible charge* shall file with the *building official* a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

1704.9.2 Certificate of compliance.
Upon completion of the portions of the work requiring plumbing observation, a Certificate of Compliance shall be issued to the *building official* under the seal and signature of the *registered design professional* responsible for such observation. A Certificate of Occupancy will not be issued until the *building official* receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for plumbing observation shall read as follows:

"I certify to the best of my knowledge the plumbing requirements of the *Phoenix Building Construction Code* and approved plans and specifications have been

G6463

complied with insofar as the portion of the work requiring plumbing observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."
Reasons: These requirements were previously included in an amendment to the 2012 IBC.
Cost Impact: Increased costs associated with hiring a *registered design professional* to perform plumbing observations.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1705.6

Submitted by: 2018 International Building Code Committee

1705.6 Soils.
Special inspections and tests of existing site soil conditions, fill placement and load-bearing requirements shall be performed in accordance with this section and Table 1705.6. The *approved* geotechnical report and the *construction documents* prepared by the *registered design professionals* shall be used to determine compliance. During fill placement, the special inspector shall verify that proper materials and procedures are used in accordance with the provisions of the *approved* geotechnical report.

Exceptions:

1. Where Section 1803 does not require reporting of materials and procedures for fill placement, the special inspector shall verify that the in-place dry density of the compacted fill is not less than 90 percent of the maximum dry density at optimum moisture content determined in accordance with ASTM D1557.
2. *Special inspections* of existing site soil conditions will not be required for foundations complying to Exception 2 of Section 1803.2.

Reasons:
The code requires special inspections for existing site soil conditions as a default. This amendment adds an additional exception when special inspections of existing site soil conditions may not be required. The amendment uses information in existing TRT/DOC 00878 which is based on decades of industry practice allowing the registered design professional to specify the soil class of material and utilize the tabulated presumed soil bearing values for that class of material. Special inspection for existing soil conditions is not deemed necessary for structures within the limitations stated. This amendment is intended to further assist the design community in clarifying when a geotechnical special inspection is required.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1705.19

Submitted by: 2018 International Building Code Committee

1705.19 Electrical special inspections.
The types of equipment or installations noted below shall be tested or inspected by a special inspector.

1. Ground-fault protection performance tests for equipment provided with ground-fault protection.
2. Switchboards, panelboards, motor control centers and other equipment rated at 1,000 amperes or more, or over 600 volts.
3. Transformers rated 100 KVA or more, single phase; or 300 kVA or more, three phase.
4. Conductors that supply equipment rated at 1,000 amperes or more, or over 600 volts.
5. Emergency and standby power systems, including switchboards, panelboards, distribution boards, transfer equipment, power source, conductors, fire pumps and exhaust and ventilation fans.
6. Selective Coordination - This includes verification of the installation in accordance with the required selective coordination study.
7. Special cases – Work which, in the opinion of the building official, involves unusual hazards or conditions.

Exception: The building official may waive the requirement for special inspection if the construction is of a minor nature.

Reasons:
These requirements were previously included in an amendment in 2012 IBC and specify the items in electrical design that require Special Inspection.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1705.20

Submitted by: 2018 International Building Code Committee

1705.20 Mechanical special inspections.
The types of equipment or installations noted below shall be tested or inspected by a special inspector in accordance with regulations established by the building official:

1. Duct smoke detectors for air distribution systems as required by *International Mechanical Code* section 606.5.
2. Fire, fire / smoke, radiation and smoke damper operation for dampers required by *International Mechanical Code* section 607.2.
3. Installation of grease duct enclosure alternative systems allowed under the exceptions to the *International Mechanical Code* section 506.3.11.
4. Special cases—Work which, in the opinion of the building official, involves unusual hazards or conditions.
5. Test and Balance report for air balance of ventilation systems installed in ambulatory care and I-2 occupancies designed and installed in accordance with ASHRAE 170 as required by *International Mechanical Code* section 407.1.

   Exception: The building official may waive the requirement for special inspection if the construction is of a minor nature.

Reasons:
These requirements were previously included in an amendment in 2012 IBC, Chapter 17 and specify the items in mechanical design that require Special Inspection in the City's Special Inspections Program.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1705.21

Submitted by: 2018 International Building Code Committee

1705.21 Plumbing special inspections.
The types of equipment or installations noted below shall be tested or inspected by a special inspector.

1. Medical Gas and Vacuum Systems as required by *International Plumbing Code* section 1202 and *Uniform Plumbing Code* Chapter 13.
2. Special cases - Work which, in the opinion of the building official, involves unusual hazards or conditions.

Exception: The building official may waive the requirement for special inspection if the construction is of a minor nature.

Reasons:
These requirements were previously included in an amendment in 2012 IBC and specify the items in plumbing design that require Special Inspection.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1803.2

Submitted by: 2018 International Building Code Committee

1803.2 Investigations required.
Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exceptions:

1. The *building official* shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.10 and 1803.5.11.
2. Foundations may be designed in accordance with Section 1806 without a geotechnical investigation on sites with Class of Material 4 or 5 soils per Table 1806.2 and where all the following are met. The *building official* shall be permitted to require a geotechnical investigation where the classification, strength, or compressibility of the soil is in doubt.

   2.1. The *structure* is limited to a maximum of two stories with maximum column axial loads of 25,000-pounds, and maximum wall axial loads of 2000 pounds per foot at the foundation as derived from the load combinations in Section 1605.3.
   2.2. Fill material is not used to resist *loads* associated with a *structure*.
   2.3. The *structure* is not located in a new subdivision;
   2.4. The *structure* is not located on a hillside lot.
   2.5. The *registered design professional* responsible for foundation design has determined the Class of Material and the *construction documents* include the following information:

      2.5.1. A statement indicating that the foundations are designed using the presumptive load-bearing values of Table 1806.2;
      2.5.2. A statement indicating the Class of Material;
      2.5.3. A statement indicating the allowable vertical foundation pressure, allowable lateral bearing pressure, and allowable lateral sliding resistance from Table 1806.2 associated with the Class of Material on the site;
      2.5.4. A statement of the minimum required foundation bearing depth below finished grade.

Reasons:
The code requires a geotechnical investigation as a default unless data satisfactory to the building official is available from adjacent areas. This amendment adds an additional exception to when a geotechnical investigation may not be required. The amendment is based on decades of industry practice allowing the registered design professional to specify the soil class of material and utilize the tabulated presumed soil bearing value. This amendment is intended to further assist the design community in clarifying when a geotechnical investigation is required.

G6463

Cost Impact: Saving the cost of a geotechnical investigation.
Approved in previous 2012 Code Adoption process: ☐ YES ☒ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1803.5.13

Submitted by: 2018 International Building Code Committee

1803.5.13 Post-tensioned slabs on ground.
A geotechnical investigation is required for the design of all post-tensioned slabs on ground. The investigation report shall include all soil parameters as outlined in PTI DC-10.5. Information required on the drawings includes, but is not limited to, slab type, soil parameters, bearing value and depth, coefficient of subgrade friction, soil subgrade modulus, e_m and y_m for expansive soils and all special inspection requirements.

Reasons:
Post-tensioned slabs are structured slabs, the design of which requires specific information about the soil on which it is supported. The IBC does not provide presumptive values as they are site specific and require testing and analysis by a registered design professional qualified to perform such tests.

Cost Impact:
A geotechnical investigation and report is required for all locations that include a post-tensioned slab on ground.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 1905.1.7

Submitted by: 2018 International Building Code Committee

1905.1.7 ACI 318, Section 14.1.4.
Delete ACI 318, Section 14.1.4 and replace with the following:

14.1.4 – Plain concrete in *structures* ~~assigned to Seismic Design Category C, D, E or F.~~
14.1.4.1 – *Structures* assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, and *structures* of any Seismic Design Category shall not have any new elements of structural plain concrete, except as follows:

Reasons:
Phoenix has historically required minimal reinforcing in concrete structures as prescribed in the seismic design forces, to provide structural integrity and minimize cracking during microbursts.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 1907.2
Submitted by: 2018 International Building Code Committee **1907.2 Post-tensioned slabs on ground.** All post-tensioned slabs on ground shall be permanently stamped, marked or otherwise identified in a conspicuous location indicating the slab is a post-tensioned slab. Conspicuous locations include, but are not limited to, entrance porches, slabs at garage doors or patio slabs.
Reasons: Many residential structures have been, and continue to be, constructed with post-tensioned slabs on ground. If a tendon is cut from during repair or remodel work, it can cause serious injury to people in the area. The stamp provides a rapid identification that the slab is constructed with tendons and the contractor will know to identify tendon locations prior to cutting or drilling into the slab.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 2106.1

Submitted by: 2018 International Building Code Committee

2106.1 Seismic design requirements for masonry.
Masonry structures and components shall comply with the requirements in Chapter 7 of TMS 402 depending on the structure's *seismic design category*. All new masonry structures and components, regardless of *seismic design category*, shall meet the following minimum reinforcement requirements:

1. Vertical wall reinforcement of at least 0.20 square inch (129 mm^2) in cross-sectional area shall be provided continuously from support to support at each corner, at each side of each opening, at the ends of walls, at each side of movement joints, and at a maximum spacing of 4 feet (1219 mm) apart horizontally throughout the wall.

2. Horizontal wall reinforcement not less than 0.20 square inch (129 mm^2) in cross-sectional area shall be provided (1) at the bottom and top of wall openings and extend at least 24 inches (610 mm) but not less than 40 bar diameters past the opening, (2) continuously at structurally connected roof and floor levels and at the top of walls, (3) at the bottom of walls or in the top of foundations when doweled in walls, and (4) at a maximum spacing of 10 feet (3048 mm) unless uniformly distributed joint reinforcement is provided.

3. Where anchor bolts are used to connect horizontal elements to the tops of columns, anchor bolts shall be placed within lateral ties. Lateral ties shall enclose both the vertical bars in the column and the anchor bolts. There shall be a minimum of two No. 4 (M #13) or three No. 3 (M #10) in the top 5 inches (127 mm) of the column.

Reasons:
Phoenix has historically required minimal reinforcing in masonry structures as prescribed in the seismic design forces to provide structural integrity and minimize cracking during microbursts.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 2304.11.1.3

Submitted by: 2018 International Building Code Committee

2304.11.1.3 Roof framing.
Minimum dimensions of roof framing shall be in accordance with Table 2304.11. ~~Every roof girder and not less than every alternate roof beam shall be anchored to its supporting member to resist forces as required in Chapter 16.~~

Reasons:
This change places heavy timber construction under the same connection requirements as other building materials in the building code.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 2701.1

Submitted by: 2018 International Building Code Committee

2701.1 Scope.
The provisions of this chapter and NFPA 70 shall govern the design, construction, erection and installation of the electrical components, appliances, equipment and systems used in buildings and structures covered by this code. The International Fire Code, the International Property Maintenance Code and NFPA 70 shall govern the use and maintenance of electrical components, appliances, equipment and systems. The International Existing Building Code and NFPA 70 shall govern the alteration, repair, relocation, replacement and addition of electrical components, appliances, or equipment and systems. Codes referenced shall refer to the adopted editions with City of Phoenix amendments. Emergency power systems shall be as defined in the National Electrical Code (NFPA 70) Section 700.2. Standby power systems shall be as defined in the National Electrical Code (NFPA 70) Section 701.2.

Reasons:
(1) Clarifies referenced codes to the adopted versions.
(2) Clarifies the definition of emergency and standby power systems consistent with the installation code covering these systems, the National Electrical Code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 2702.2.12
Submitted by: 2018 International Building Code Committee **[F] 2702.2.12 Laboratory suites.** Standby or emergency power shall be provided in accordance with Section 5004.7 of the International Fire Code where laboratory suites are located above the sixth story above grade plane or located in a story below grade plante.
Reasons: Clarifies referenced code Section 5004.7 as referring to the Fire Code. Corrects typo "grand plant" to "grade plane".
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 2902.2

Submitted by: 2018 International Building Code Committee

[P] 2902.2 Separate facilities.
Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for *dwelling units* and *sleeping units*.
2. Separate facilities shall not be required in structures or tenant spaces with a total *occupant load*, including both employees and customers, of 15 or fewer.
3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is ~~100~~ 50 or fewer.
4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is ~~25~~ 50 or fewer.

Reasons:
These revisions are made to provide consistency between the 2018 IBC, 2018 UPC section 422.2 and 2018 IPC section 403.2 to allow for small business and mercantile occupancies to provide a single toilet facility for up to 50 occupants.

Cost Impact:
Cost savings for small businesses less than 50 and an increase for mercantile more than 50 and less than 100.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 2902.6
Submitted by: 2018 International Building Code Committee **[P] 2902.6 Small occupancies.** Drinking fountains shall not be required for an occupant load of ~~15~~ 50 or fewer.
Reasons: This revision is made to provide consistency between the UPC and IPC codes.
Cost Impact: Savings from providing a drinking fountain with an occupant load less than 50.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3002.4

Submitted by: 2018 International Building Code Committee

3002.4 Elevator car to accommodate ambulance stretcher.
Where elevators are provided in buildings four or more stories above or four or more stories below, grade plane, at least one elevator shall be provided for fire department ~~emergency access~~ and emergency medical access to all floors. All elevators that require emergency medical access shall be in accordance with 3002.4.1 through 3002.4.5.

3002.4.1 Size of the emergency access elevator (EMS) cab.
The elevator car shall be of such a size and arrangement to accommodate ambulance stretcher 24-inch by 84-inch (610mm by 2134mm) with not less than 5-inch (127mm) radius corners, in the horizontal, open position. ~~and~~

3002.4.2 Identification of the emergency access elevator.
All EMS elevators shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than 3 inches (76mm) in height and shall be placed on both sides of the elevator hoistway door frames at all floors.

3002.4.3 Emergency medical access (EMS) key switches and markings.

1. The medical service operation shall be activated and or controlled by a two position on/off keyed switch, mounted near the elevator at every elevator floor landing and in the elevator cab enclosure. Key shall be removable only in the "off" position at the lobbies and in the elevator cab enclosure.
2. Keys for EMS shall be of tubular 7 pin style 137 construction and shall have a bitting code of 6143521. The key shall be coded "EMS"
3. All fixtures for EMS shall be provided with a jewel light which will illuminate when activated and shall be identified with the words "MEDICAL EMERGENCY".
4. The "MEDICAL EMERGENCY" lettering shall be a minimum of 6 mm (0.25 in.) in height with a color blue background.

3002.4.4 Lobby medical emergency operation.

1. When any of the elevator lobby EMS key switch are turned to the "on" position it shall activate a continuous audible signal in the car. It shall also activate a visual "MEDICAL EMERGENCY" signal in the car and at the floor landing where initiated.
2. After turning the switch to the "on" position the elevator shall return non-stop to the floor where activated. All car calls shall be cancelled and unable to be registered. An elevator on EMS shall not respond to hall calls.
3. Upon arrival to a floor in response to the EMS call, the elevator audible signal shall cease and the doors shall remain open until the lobby key switch is turned to the "off" position. If the key switch is turned to the "off" position the visual indication shall remain illuminated for 60 seconds. During this time emergency personnel must activate the car EMS key switch to retain control of the car. Upon expiration of the delay without activation of the car EMS switch the car shall return to normal service.

G6463

3002.4.5 Car operation.

1. Upon entering the car, it shall not accept a car call until the in car EMS key switch is turned to the "on" position. After turning the key on and registering a call, the car shall automatically close and proceed to the call. All door zone detection devices shall be operative. If more than one call is registered it shall stop at the nearest call and cancel all others at which time a second choice can be made.
2. Upon arriving at the desired floor, the doors shall open automatically and the elevator shall remain on EMS until the key is turned to the "off" position.
3. If the car is on any other form of special service such as inspection, fire fighters, etc. when EMS service is initiated, the audible and visual signal shall be activated but the elevator shall not respond to the EMS call.
4. If the car has responded to a medical emergency call prior to a fire fighters service call the EMS service shall not be overridden by fire fighters service call until the car returns to the main floor but the fireman service audible and visual signal shall be activated.

Reasons:
Original request in 2006 from Phoenix Fire Department. 2012 request for clarification from elevator companies.

Cost Impact:
Cost for software and hardware.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3003.1.4

Submitted by: 2018 International Building Code Committee

[F] 3003.1.4 Venting.
Where standby power is connected to elevators, the machine room, machine space, control room or control space air conditioning ~~*ventilation or air conditioning*~~ shall be connected to the standby power source.

Reasons:
(1) To prevent elevator equipment from overheating while on building stand-by power.
(2) To clarify existing policy.

Cost Impact:
Cost of independent air conditioning system.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3005.2

Submitted by: 2018 International Building Code Committee

3005.2 Venting.
Elevator machine rooms, machinery spaces, control rooms and control spaces that contain ~~the driving machine, and control rooms or spaces that contain the operation or motion controller~~ solid state equipment for elevator operation shall be provided with an independent ~~*ventilation or*~~ air-conditioning system to protect against the overheating of the electrical equipment. The system shall be capable of maintaining temperatures ~~within the range established for the elevator equipment.~~ not greater than 90 degrees to ensure safe and normal operation of the elevator.

Reasons:
(1) Experience with existing elevator equipment that have been installed with air conditioning set to the upper limit of the manufacture's operating range has shown a higher percentage of equipment failures and shortened life cycle occur due to the extreme temperatures in Phoenix.
(2) This results in unsafe conditions as controller doors are left open and extra fans are brought into equipment rooms to try and solve the problem.
(3) To avoid shut downs.

Cost Impact:
Cost of independent air conditioning system.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3005.3

Submitted by: 2018 International Building Code Committee

3005.3 Pressurization.
The atmospherically connected elevator machine room, machine space, control rooms, or control space with openings into a pressurized elevator hoistway shall be pressurized upon activation of a heat or smoke detector located in the elevator machine room, machine space, control room or control space.

Reasons:
For further clarification.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3005.5

Submitted by: 2018 International Building Code Committee

3005.5 Shunt trip.
Where elevator hoistways, elevator machine rooms, machine spaces, control rooms and control spaces containing elevator control equipment are protected with automatic sprinklers, a means installed in accordance with Section 21.4 of NFPA 72, elevator shutdown shall be provided to automatically disconnect the main line power supply to the affected elevator prior to the application of water. This means shall not be self-resetting. The activation of automatic sprinklers outside the hoistway, machine room, machinery space, control room or control space shall not disconnect the main line power supply.

Reasons:
Added: machine spaces to harmonize with A17.1.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Section 3105

Submitted by: 2018 International Building Code Committee

3105.1 General.
Awnings, shade structures, and *canopies* shall comply with the requirements of ~~Sections 3105.2 and 3105.3~~ this section and other applicable sections of this code. All provisions of this Code shall apply to nonresidential shade structures except as specifically modified by this section. The intent of this section is to provide less restrictive construction standards than this Code would otherwise require, provided all of the special design and construction requirements of these sections are met.

3105.1.5 Definitions. The following terms for the purposes of this section and as used elsewhere in this Code, shall have the meanings shown herein.

INDUSTRIAL SHADE CANOPY. An industrial shade canopy is an awning, canopy or roof structure which provides solar protection for outdoor Group F or Group S factor, industrial or storage uses or equipment. Industrial shade canopies shall be classified as to Occupancy Group in accordance with Chapter 3 of this Code.

MERCANTILE SHADE CANOPY. A mercantile shade canopy is an awning, canopy or roof structure which provides solar protection for the outdoor storage, display or sale of merchandise as part of a Group M occupancy, and includes the following:

1. A roof structure with not less than 50 percent of its perimeter wall area unenclosed; or
2. A slatted, lattice or louvered roof structure with not less than 25 percent of the roof area open to the sky; or
3. An open structural framework covered with shade cloth fabric as specified in Section 3105.4. Mercantile shade canopies shall not apply to motor fuel dispensing facilities.

NON-RESIDENTIAL PATIO COVER. A non-residential patio cover is an awning, canopy or roof structure which provides solar protection for outdoor seating, dining, walkway or pedestrian entry areas accessory to a building of any occupancy, and includes the following:

1. A roof structure with not less than 50 percent of its perimeter wall area unenclosed; or
2. A slatted, lattice or louvered roof structure with not less than 25 percent of the roof area open to the sky; or
3. An open structural framework covered with shade cloth fabric as specified in Section 3105.4. Non-residential patio covers shall not apply to canopies or roof structures over vehicle drive-through lanes or porte-cocheres used by motor vehicles.

PARKING LOT SHADE STRUCTURE. A parking lot shade structure is a modified Group S-2 open parking garage. A parking lot shade structure is a freestanding roof supported on columns and entirely open on all sides with no enclosures beneath the roof.

RETRACTABLE AWNING. A retractable awning is a cover with a frame that retracts against a building or other structure to which it is entirely supported.

G6463

3105.2 Design and construction.
Awnings, shade structures, and *canopies* shall be designed and constructed to withstand wind or other lateral loads and live loads as required by Chapter 16 with due allowance for shape, open construction and similar features that relieve the pressures or loads. Structural members shall be protected to prevent deterioration. *Awnings* shall have frames of noncombustible material, *fire-retardant-treated wood*, heavy timber complying with Section 2304.11, or 1-hour construction with combustible or noncombustible covers and shall be either fixed, retractable, folding or collapsible.

3105.3 Awnings, shade structure, and canopy materials.
Awnings, shade structures, and *canopies* shall be provided with an *approved* covering that complies with one of the following:

1. The fire propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701.
2. Has a flame spread index not greater than 25 when tested in accordance with ASTM E84 or UL 723.
3. Meets all of the following criteria when tested in accordance with NFPA 286:

    3.1 During the 40 kW exposure, flames shall not spread to the ceiling.
    3.2 Flashover, as defined in NFPA 286, shall not occur.
    3.3 The flame shall not spread to the outer extremity of the sample on any wall or ceiling.
    3.4 The peak heat release rate throughout the test shall not exceed 800 kW.

Exception: The fire propagation performance and flame spread index requirements shall not apply to awnings installed on detached one- and two-family dwellings.

3105.4 Industrial shade canopies.
Industrial shade canopies shall comply with the provisions of Chapter 3 for their designated occupancy except as specifically modified below.

3105.4.1 Construction and height.
Industrial shade canopies shall be limited to one story in height and shall be entirely of Type I or Type II non-combustible construction. Industrial shade canopies shall meet the design requirements of Chapter 16.

3105.4.2 Location on property.
Industrial shade canopies shall comply with Table 601 and 602 for the fire-resistive protection. Shade canopies attached to unlimited area buildings shall not encroach within the required 60 foot (18288 mm) open yard area. Not less than 50 percent of the shade canopy perimeter area shall be unenclosed.

3105.4.3 Allowable area.
Industrial shade canopies may be attached to a Group F or a Group S occupancy building of any construction type when the total combined area of the building and the shade canopy does not exceed the area limits specified in Sections 503 and 506 for the type of construction for the building.

3105.4.4 Sprinkler systems.
Industrial shade canopies shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

G6463

3105.4.5 Special hazards.
Outdoor hazardous material storage areas including compressed gas storage tanks, portable tanks or cylinders and related equipment, required by the Phoenix Fire Code to be weather protected, may be covered by a non-combustible industrial shade canopy when all of the following additional conditions are met. In all cases, the most restrictive requirement of the building code or the fire code shall apply:

3105.4.5.1 Fire code requirements.
The location of outdoor hazardous material storage areas and weather-protection shade canopies shall comply with the Phoenix Fire Code for distance to buildings, property lines, streets, alleys, public ways and exits to a public way based upon the type and quantity of material stored. No hazardous material shall be stored or used under an industrial shade canopy except in compliance with the fire code.

3105.4.5.2 Building code requirements.
In addition to fire code requirements, weather-protection shade canopies attached to buildings shall also comply with Table 601 and 602 for the fire-resistive protection. Weather-protection shade canopies shall not encroach into or obstruct any yard area, fire access or exit path required by this code.

3105.4.5.3 Extent of enclosure.
Weather-protection shade canopy supports and walls shall not obstruct more than 25 percent of the perimeter wall area of the canopy or storage area. Openings shall be arranged to permit natural ventilation and air flow through the space.

1. Where a weather-protection shade canopy is located less than 5 feet (1524 mm) from a building or a property line, a four-hour fire-resistive concrete or masonry separation wall without openings shall be provided.
2. Where a weather-protection shade canopy is located 5 feet (1524 mm) or more but less than 20 feet (6096 mm) from a building or a property line, a two-hour fire-resistive concrete or masonry separation wall without openings shall be provided. Where allowed by the Phoenix Fire Code, this two-hour separation wall may be a line of sight shield or protective structure less than the full height of the canopy.
3. Where a weather-protection shade canopy is located 20 feet (6096 mm) or more from a building or a property line, the requirement for installation of a fire-resistive separation wall, shield or protective structure shall be as determined by the Phoenix Fire Code.

3105.4.5.4 Sprinkler systems.
Weather-protection shade canopies shall be protected by an automatic sprinkler system when required in this code and the Phoenix Fire Code.

3105.5 Mercantile shade canopies and non-residential patio covers.
Mercantile shade canopies and non-residential patio covers shall comply with the provisions of Chapter 3 for their designated occupancy, except as specifically modified below.

3105.5.1 Construction and height.
Mercantile shade canopies and non-residential patio covers shall be limited to one story in height and shall be entirely of type I or type II non-combustible construction. Tables 601 and 602 shall not apply for these structures.

G6463

Exceptions:

1. Shade membrane fabric compliant with Section 3105.3. Mercantile shade canopies and non-residential patio covers including the supporting framework for membrane fabric shall meet the design requirements of Chapter 16.

3105.5.2 Location on property.
Mercantile shade canopies and non-residential patio covers shall be located not less than 5 feet (915 mm) from the property line. Mercantile shade canopies and non-residential patio covers attached to unlimited area buildings shall not encroach within the required 60 foot (18 288 mm) open yard area.

3105.5.3 Allowable area.
Mercantile shade canopies may be attached to a Group M occupancy building and non-residential patio covers may be attached to any non-residential building when the total combined area of the building and the shade canopy does not exceed the area limits specified in Sections 503 and 506 for the occupancy and type of construction of the building. Mercantile shade canopies and nonresidential patio covers with a roof covering of shade membrane fabric shall not exceed 5,000 square feet in area.

3105.5.4 Sprinkler systems.
Mercantile shade canopies and non-residential patio covers shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

3105.6 Parking lot shade structures.
Parking lot shade structures shall be used exclusively for the solar protection of parked motor vehicles and shall not be used to shelter any other use.

3105.6.1 Construction and height.
Parking lot shade structures shall be entirely of type I or type II noncombustible construction.

Exceptions:

1. Shade membrane fabric compliant with Section 3105.4, can only be used with a maximum allowable area of 12,000 square feet in compliance with Section 3105.7.3.

   Parking lot shade structures shall meet the design requirements of Chapter 16.

   Parking lot shade structures shall have a clear height of not less than 7 feet (2134 mm). Where van accessible shaded parking is required by this code or by the Phoenix Zoning Ordinance, the clear height shall be not less than 98 inches (2490 mm).

3105.6.2 Location on property.
Parking lot shade structures shall be located not less than 3 feet (915 mm) from any building or property line. Parking lot shade structures which meet all the requirements of this section shall be permitted in any required yard, without affecting any of the general building limitations specified in Chapter 5 of this code.

3105.6.3 Allowable area.
Parking lot shade structures shall not exceed 300 feet (91440 mm) in length or 40 feet (12192 mm) in width. A clear separation of not less than 20 feet (6096 mm) shall be

G6463

maintained between shade structures on the same property. No shade structure shall cover or encroach into any required fire lane.

3105.6.3.1 Allowable area for minimum 21 feet clear high parking lot shade structures.
The allowable area may be determined by Section 406.5.5 of this code provided the site fire apparatus access is approved by the Fire Marshal.

3105.6.4 Roof-top shade structures.
Parking lot shade structures complying with the provisions of this section may be installed to shade open parking on the roof of Group S-2 parking garages. This installation shall not be construed as affecting the construction type, allowable area, height, or number of tiers of the parking garage. Where the parking garage is required to be protected by an automatic sprinkler system, all parking lot shade structures on the roof shall also be so protected.

3105.6.5 Sprinkler systems.
Parking lot shade structures shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

Reasons:
Mercantile shade canopies and non-residential shade structures may be located 5 feet from a property line for following reason:

The framework is of non-combustible construction, open on all sides and limiting the fire loading area to 5,000 square feet, it seemed rational that the radiant heat from either a fire in the structure or from an adjacent structure would affect the frame in the same way. Therefore, the allowance of an unrated frame at 5 feet versus the 10 feet required by strict adherence to the code, seems reasonable since the code would allow a combustible roof overhang to project within 5 feet of a property line. The fire loading underneath the overhang would be allowed by code. The columns in these structures are not considered exterior walls, per the definition of wall in the code, opening protection would not be required.

Limiting the area to 5,000 square feet was based on Group M occupancies used for display and sale of upholstered furniture or mattresses where an automatic sprinkler system would not be required under base code.

Parking lot shade structures meeting the following criteria have been allowed in the City of Phoenix for over a decade: maximum 40 feet by 300 feet in area, non-combustible framework, a minimum of 3 feet from a property line with a non-combustible or shade membrane fabric roof. The need to expand the area is a result of solar industry utilizing established parking lots for their product. By placing the minimum height and fire apparatus access requirements to increase the area of non-combustible construction, it seemed rational the effect on building safety would be no more severe than the original uncovered parking lot. The setback of 3 feet is allowed for a non-combustible roof overhang with the same reasoning as above for not rating the frame.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☒ YES	☐ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 3107.1
Submitted by: 2018 International Building Code Committee **3107.1 General.** Signs shall be designed, constructed and maintained in accordance with this code and the Phoenix Zoning Ordinance.
Reasons: This refers the customer to the Phoenix Zoning Ordinance for additional design requirements for signs.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC) Section 3110.1
Submitted by: 2018 International Building Code Committee **3110.1 General.** *Automatic vehicular gates* shall comply with the requirements of Sections 3110.2 and 3110.3, ~~and~~ other applicable sections of this code, and the Phoenix Fire Code.
Reasons: This amendment refers the applicants to the Phoenix Fire Code for additional design and permitting requirements.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Section 3113

Submitted by: 2018 International Building Code Committee

SECTION 3113 RELOCATABLE AND FACTORY-BUILT BUILDINGS

~~**3113.1 General.**~~
~~The provisions of this section shall apply to relocatable buildings. Relocatable buildings manufactured after the effective date of this code shall comply with the applicable provisions of this code.~~

~~**Exception:** This section shall not apply to manufactured housing used as dwellings.~~

~~**3113.1.1 Compliance.**~~
~~A newly constructed relocatable building shall comply with the requirements of this code for new construction. An existing relocatable building that is undergoing alteration, addition, change of occupancy or relocation shall comply with Chapter 14 of the International Existing Building Code.~~

~~**3113.2 Supplemental information.**~~
~~Supplemental information specific to a relocatable building shall be submitted to the authority having jurisdiction. It shall, as a minimum, include the following in addition to the information required by Section 105:~~

~~1. Manufacturer's name and address.~~
~~2. Date of manufacture.~~
~~3. Serial number of module.~~
~~4. Manufacturer's design drawings.~~
~~5. Type of construction in accordance with Section 602.~~
~~6. Design loads including: roof live load, roof snow load, floor live load, wind load and seismic site.~~
~~class, use group and design category.~~
~~7. Additional building planning and structural design data.~~
~~8. Site-built structure or appurtenance attached to the relocatable building.~~

~~**3113.3 Manufacturer's data plate.**~~
~~Each relocatable module shall have a data plate that is permanently attached on or adjacent to the electrical panel, and shall include the following information:~~

~~1. Occupancy group.~~
~~2. Manufacturer's name and address.~~
~~3. Date of manufacture.~~
~~4. Serial number of module.~~
~~5. Design roof live load, design floor live load, snow load, wind and seismic design.~~
~~6. *Approved* quality assurance agency or *approved* inspection agency.~~
~~7. Codes and standards of construction.~~
~~8. Envelope thermal resistance values.~~

G6463

~~9. Electrical service size.~~
~~10. Fuel-burning equipment and size.~~
~~11. Special limitations if any.~~

~~**3113.4 Inspection agencies.**~~
~~The building official is authorized to accept reports of inspections conducted by *approved* inspection agencies during off-site construction of the relocatable building, and to satisfy the applicable requirements of Sections 110.3 through 110.3.11.1.~~

3113.1 General.
Factory-built buildings, manufactured homes and mobile homes shall comply with applicable laws of the State of Arizona and this code. The provisions of this section for factory-built buildings, manufactured homes and mobile homes take precedence over other code provisions which are inconsistent therewith. The general provisions of this code shall apply in all areas where there are not specific provisions in this section.

3113.1.1 Arizona law.
The construction of factory-built buildings and manufactured homes is regulated by the State of Arizona, Arizona Revised Statutes ARS 41-2142 et seq, and is not included in this Code.

3113.1.2 Manufactured home installation.
The installation of manufactured homes and mobile homes, including connection to utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for Zoning Code administration purposes. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

3113.1.3 Factory-built building installation.
The installation of factory-built buildings including their foundations and direct connection to sewer, water, gas or electric utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for compliance with Zoning Code requirements and with Building Code requirements pertaining to location on property and setback from other buildings or structures on the property. A City of Phoenix building permit is required for all on-site construction (except foundations) including connection to or alteration of existing on-site sewer, water, gas or electrical systems, and for construction of all site improvements required by the Zoning Code such as design review elements, signs, parking, landscaping, site amenities and disabled accessibility. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

3113.1.4 Alterations and additions.
Repairs, alterations and site-built additions to factory-built buildings, mobile homes and manufactured homes are regulated by this code and by the Phoenix Zoning Ordinance and require City of Phoenix permits.

3113.1.5 Occupancy and use.
Occupancy and use of a factory built-building, manufactured home or mobile home is prohibited without first obtaining inspection approval and a certificate of occupancy from the building official, to verify compliance with the Phoenix Zoning Ordinance and other applicable city codes and ordinances.

G6463

3113.2 Definitions. For the purpose of this Section, the following definitions shall apply:

FACTORY BUILT BUILDING is a residential or non-residential building including a dwelling unit or habitable room thereof which is either wholly or in substantial part manufactured at an off-site location to be assembled on-site, except it does not include a manufactured home, recreational vehicle or mobile home (ARS 41-2142).

MANUFACTURED HOME is a structure built in accordance with the National Manufactured Home Construction and Safety Standards Act.

MOBILE HOME is a structure built prior to June 15, 1976, on a permanent chassis, capable of being transported in one or more sections and designed to be used with or without a permanent foundation as a dwelling when connected to on-site utilities except that it does not include recreational vehicles or factory-built buildings.

ON-SITE PERMIT is the permit issued by the building official which authorizes the placement of a factory-built building, manufactured home or mobile home on a site. The on-site permit shall authorize only the placement, foundation or unit tie-down, and specific connections to utility services which are authorized by a permit issued by the State of Arizona Office of Manufactured Housing. All other work on the site shall require a building permit issued by the building official in accordance with Section 105 of this code. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

3113.3 Installation requirements.
No factory-built building, manufactured home or mobile home shall be moved onto or installed on any lot or site in the City of Phoenix except in compliance with these provisions.

3113.3.1 State insignia required.
No person, firm or corporation shall move onto any site any factory-built building or manufactured home building unless such building bears a current, valid insignia of approval of the State of Arizona.

3113.3.2 State permit required.
No person, firm or corporation shall move onto any site any factory-built building, manufactured home or mobile home unless and until a permit for such installation has been obtained from the State of Arizona.

3113.3.3 On-site permit required.
No person firm or corporation shall move onto any site, or relocate on any site, any factory-built building, manufactured home or mobile home until an On-Site Permit has been issued by the City of Phoenix building official.

A site plan shall be submitted to the building official which shows all utility connections and all other information necessary to ascertain compliance with the separation and area restrictions of other sections of this code and with all provisions of the Phoenix Zoning Ordinance. If the building official is satisfied that the work described by the documents submitted conform to this section and other applicable law, the On-Site Permit shall be issued to the owner of the site or his authorized agent.

3113.3.4 Building permit required.
The person, firm or corporation obtaining the On-Site Permit shall also apply for and obtain a building permit from the building official when one or more of the following conditions apply:

G6463

1. For all on-site construction which connects to or alters existing buildings or existing on-site sewer, water, gas or electrical systems.

2. For all on-site construction which is required by or regulated by the Phoenix Zoning Ordinance, such as for design review elements, signs, parking, landscaping, site amenities and accessibility.

3. For all construction or alteration which is not part of the State-approved factory-built building, manufactured home, or mobile home including all interior fit-up, tenant improvement or remodeling work which is not specifically included in such State permit.

4. When a City of Phoenix inspection is requested by the installer for work otherwise included in the State of Arizona installation permit, including but not limited to requests for utility clearance inspections.

3113.4 Repairs, alterations, and additions.
No person shall repair, alter or add on to a factory-built building, manufactured home or a mobile home after the unit has been installed without first having obtained a permit from the building official for the specific work to be performed. All such work shall comply with the requirements of this Code.

3113.5 Fire protection.
Factory-built buildings shall be protected pursuant to the Phoenix Fire Code.

Reasons:
This is a current amendment to the 2012 IBC to add Factory Built Buildings. The 2018 IBC has added a section for Relocatable Buildings, however the State of Arizona has jurisdiction to regulate the construction of these buildings including manufactured housing used as dwellings. The City of Phoenix has worked extensively, and will continue to work, with the State of Arizona on the construction of these buildings.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Appendices A-N

Submitted by: 2018 International Building Code Committee

Recommendation for the following appendices:

Not Adopt
Appendix A: Employee Qualifications.
Appendix B: Board of Appeals.
Appendix C: Group U-Agricultural Buildings.
Appendix D: Fire Districts.
Appendix F: Rodent proofing.
Appendix G: Flood-resistant Construction.
Appendix H: Signs.
Appendix I: Patio Covers.
Appendix J: Grading.
Appendix K: Administrative Provisions.
Appendix L: Earthquake Recording Instrumentation.
Appendix M: Tsunami-Generated Flood Hazard.
Appendix N: Replicable Buildings.

Adopt
Appendix E: Supplemental Accessibility Requirements.

Reasons:
Appendices A, B, C, D, F, G, H, I, J, K, L, M where needed are already covered by existing ordinances. Adopting only Appendix E is a current amendment in the 2012 IBC. The requirements of this appendix do not match the 2010 ADA Standards and includes sections not subject to enforcement by the Phoenix Building Construction Code such as laundry equipment, mailboxes, telephones and clocks. The 2010 ADA Standards were adopted as part of the Phoenix Building Construction Code and those requirements are adequate.

Cost Impact: N/A

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Building Code (IBC)
Table 1607.1

Submitted by: 2018 International Building Code Committee

Table 1607.1 MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_o, AND MINIMUM CONCENTRATED LIVE LOADS [g]

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (pounds)
25. Residential Habitable attics and sleeping areas [k]	~~30~~ 40	—

Reasons:
Habitable attics can be used as floor space and 40 psf more closely reflects floor live loading.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ YES ☐ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Building Code (IBC)
Table 1806.2

Submitted by: 2018 International Building Code Committee

TABLE 1806.2
PRESUMPTIVE LOAD-BEARING VALUES

CLASS OF MATERIALS	VERTICAL FOUNDATION PRESSURE (psf)	LATERAL BEARING PRESSURE (psf/ft below natural grade)	LATERAL SLIDING RESISTANCE	
			Coefficient of friction [a]	Cohesion (psf) [b]
1. Crystalline bedrock	12,000	1,200	0.70	--
2. Sedimentary and foliated rock	4,000	400	0.35	--
3. Sandy gravel and gravel (GW and GP)	3,000	200	0.35	--
4. Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM [c], SC [c], GM, and GC)	~~2,000~~ 1500	150	0.25	--
5. Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL [c], ML, MH, and CH [c])	~~1500~~ 1000	100	---	130

For SI: 1 pound per square foot = 0.0479kPa, 1 pound per square foot per foot = 0.157 kPa/m

a. Coefficient to be multiplied by the dead load.
b. Cohesion value to be multiplied by the contact area, as limited by Section 1806.3.2.
c. This soil classification may be prone to expansive, collapsible or cyclic properties with changes to soil moisture content. The *registered design professional* shall determine if the use of this table is appropriate for this soil classification.

Reasons:
The geography of Phoenix incorporates native desert as well as previously farmed land that exhibit inconsistent bearing values. Geotechnical engineers practicing in the Phoenix area have provided their professional opinions and recommend the adjustment in the bearing values for Class 4 and Class 5. The information in this amendment presents the previous 2012 amendment in a graphical manner. Footnote c has been added to several soil classifications at the request of the geotechnical engineering and structural engineering communities to highlight the use of presumptive bearing values may not be appropriate due to their detrimental soil properties.

G6463

Cost Impact: No cost impact.	
Approved in previous 2012 Code Adoption process:	☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2010 American Society of Mechanical Engineers (ASME) Section A17.6

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:
Adopt 2010 version of A17.6 Safety Code for Elevators and Escalators.

Reasons:
This code covers the installation, inspection and replacement criteria for elevator suspension systems. It includes standards for new technology and updated standards for existing systems that have been removed from A17.1 section 2.20.

Cost Impact:
Reduces cost caused by delays obtaining code modifications or AECO certifications for newer suspension technology.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2007 American Society of Mechanical Engineers (ASME) Section A17.7

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:
Adopt ASME A17.7 2007 Performance-based safety code for elevators and escalators.

Reasons:
ASME A17.7/CSA B44.7 is the Performance-based code for elevators and escalators or the PBC. ASME A17.7/CSA B44.7 is a companion to the 2007 and later versions of the Safety Code for Elevators and Escalators, ASME A17.1/CSA B44 that provides Authorities Having Jurisdiction with an objective and structured method for approving new technology while ensuring continued elevator safety. Under ASME A17.7/CSA B44.7, safeguards must be provided and documentation must be presented that indicates designs and products are equivalent or superior to the current standards. It is important to remember that ASME A17.7/CSA B44.7 is not replacing ASME A17.1/CSA B44, but is a vital addition.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2014 American Society of Mechanical Engineers (ASME) Section A18.1

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:
Adopt ASME A18.1 2014 Safety Standard for Platform Lifts and Stairway Chairlifts.

Reasons:
The ASME A18.1 Safety Standard for Platform Lifts and Stairway Chairlifts presents certain guides for the design, construction, installation, operation, inspection, testing, maintenance, and repair of inclined stairway chairlifts, and inclined and vertical platform lifts. It covers devices intended for transportation of a mobility-impaired person, only typically for applications within buildings and residences.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2015 American Society of Mechanical Engineers (ASME) A17.1 Section 2.27.8

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:

2.27.8 Switch Keys.
The key switches required by 2.27.2 through 2.27.5 for all elevators in a building shall be operable by the ~~FEO-K1~~ same key. The keys shall be Group 3 Security (see 8.1).

A separate key shall be provided for each switch. These keys shall be kept on the premises in a location readily accessible to firefighters and emergency personnel, but not where they are available to the public. ~~This key shall be of a tubular, 7 pin, style 137 construction and shall have a biting code of 6143521 starting at the tab sequenced clockwise as viewed from the barrel end of the key.~~ The key shall be coded the "AZFS" key as designated by the authority having jurisdiction. The possession of the ~~"FEO-K1"~~ "AZFS" key shall be limited to elevator personnel, emergency personnel, elevator equipment manufacturers, and authorized personnel during checking of Firefighters' Emergency Operation (see 8.1 and 8.6.11.1).

Where provided, a lock box, including its lock and other components, shall conform to the requirements of UL 1037 (see Part 9).

Note (2.27.8): Local authorities may specify additional requirements for a uniform keyed lock box and its location, to contain the necessary keys.

Reasons:
Existing fire service key used by fire department and emergency personnel.

Cost Impact: No cost impact.
Existing keys are already changed over to "AZFS".

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2015 American Society of Mechanical Engineers (ASME) Section A17.3

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:
Adopt 2015 version of A17.3 Safety Code for Elevators and Escalators.

Reasons:
The purpose of this Code is to establish minimum requirements that will provide a reasonable degree of safety for the general public. While many of these requirements will also increase the degree of safety for the elevator mechanic and inspector.

Cost Impact: No cost impact..

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2016 American Society of Mechanical Engineers (ASME) Section A17.1

Submitted by: 2018 ASME/Elevator Code Committee

Recommendation:
Adopt 2016 version of A17.1 Safety Code for Elevators and Escalators.

Reasons:
As elevator and escalator equipment ages and new technology advances are made, the codes that govern safety are also modified. The 2016 edition of ASME A17.1/CSA B44 offers multiple changes designed to increase safety, address new technology and clarify or enhance existing requirements.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2018 ASME and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC) Section 101.1
Submitted by: 2018 International Existing Building Code Committee **[A] 101.1 Title.** These regulations shall be known as the Phoenix Building Construction Code ~~Building Code of [NAME OF JURISDICTION]~~, hereinafter referred to as "this code."
Reasons: This is the name of our code.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 101.2

Submitted by: 2018 International Existing Building Code Committee

101.2 Scope.
The provisions of this code shall apply to the *repair, alteration, change of occupancy, addition* to and relocation of *existing buildings*.

Exception: Detached one- and two-family *dwellings* and multiple single-family *dwellings* (*townhouses*) not more than three *stories* above *grade plane* in height with a separate *means of egress*, and their accessory structures not more than three *stories* above *grade plane* in height shall comply with this code or the *International Residential Code*.

101.2.1 Fire Code construction requirements for existing buildings.
Existing buildings shall also comply with Chapter 11 Construction Requirements for Existing Buildings in the Phoenix Fire Code. Where conflicts occur between provisions of this code and Chapter 11 Construction Requirements for Existing Buildings in the Phoenix Fire Code, the most restrictive provisions shall apply.

Reasons:
To better coordinate the Fire Protection requirements found in the Existing Building Code and the Chapter 11 Construction Requirements for Existing Buildings in the Fire Code, this amendment has been provided in the Existing Building Code to direct the designer to Chapter 11 of the Phoenix Fire Code for additional Fire Protection requirements.

Cost Impact: No cost impact.
This amendment will not in and of itself revise any code requirements.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Sections A101.4 - A117.4

Submitted by: 2018 International Existing Building Code Committee

[A] 101.4 - [A] 117.4 – Reserved.

See Chapter 1 of Phoenix Building Construction Code

Reasons:
Administration and enforcement of the Phoenix Building Construction Code is specified in Chapter 1 of the 2018 International Building Code (IBC) as amended by the City of Phoenix.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 202

Submitted by: 2018 International Existing Building Code Committee

SECTION 202 GENERAL DEFINITIONS

[A] HISTORIC BUILDING. Any building or structure that is one or more of the following:

1. Listed, or certified as eligible for listing, by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, in the National Register of Historic Places.
2. Designated as historic under an applicable state or local law.
3. Certified as a contributing resource within a National Register, state designated or locally designated historic district.
4. Recommended by the City of Phoenix Historic Preservation Officer for listing on the Phoenix Historic Property Register, either as an individually eligible property or as a contributing resource to an eligible historic district.

Reasons:
This requirement is consistent with state and federal practices where eligible historic properties are treated the same as listed properties for design review purposes.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for projects.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 301.5

Submitted by: 2018 International Existing Building Code Committee

301.5 Compliance with accessibility.
Accessibility requirements for *existing buildings* shall comply with the 2009 edition of ICC A117.1 and the provisions of Sections 305.1 through 305.9.4, as applicable to facilities designated as historic structures that undergo *alterations*, unless *technically infeasible*. Where compliance with the requirements for accessible routes, entrances and toilet rooms would threaten or destroy the historic significance of the building or *facility*, as determined by the *code official* and historic preservation officer, conformance with the requirements to the maximum extent technically feasible shall be permitted.

Reasons:
This requirement was previously amended in 2012 IEBC code section 1204.1, and is consistent with departmental policies and permit requirements. The current 2012 amendment is located in section 1204 "Alterations." This section, 1204, was deleted in the 2018 edition. Accessibility in 2018 IEBC is generalized in chapter 3, section 301 "Administration" under sub-section 301.5 and section 305 "Accessibility for existing Buildings", sub-sections 305.1 through 305.9.4. These sections now apply to all existing buildings including historic. This amendment may not be needed or may need to be re-worded. Committee decision pending – 233, 1221-17.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 305.8.10

Submitted by: 2018 International Existing Building Code Committee

305.8.10 Toilet rooms.
Where it is technically infeasible to alter existing toilet and bathing rooms to be accessible, an accessible family or assisted-use toilet or bathing room constructed in accordance with Section 1109.2.1 of the International Building Code is permitted. The family or assisted-use toilet or bathing room shall be located on the same floor and in the same area as the existing toilet or bathing rooms. At the inaccessible toilet and bathing rooms, directional signs indicating the location of the nearest family or assisted-use toilet room or bathing room shall be provided. These directional signs shall include the International Symbol of Accessibility and sign characters shall meet the visual character requirements in accordance with ICC A117.1. In existing construction, one of two or more fixtures (water closets and/or urinals) may be removed to create space for one accessible stall in each existing toilet room. This may result in the reduction of one required water closet which shall be permitted when this reduction is needed to create a conforming accessible toilet stall. Any alteration under this section shall not reduce other accessibility requirements including, but not limited to required clear floor spaces and maneuvering spaces.

Reasons:
This is a current amendment to the 2012 IBC Chapter 34, section 3411.8.11 & 2012 IEBC Chapter 4, section 410.8.11. This supports barrier removal, an important part of the ADA law.

Cost Impact:
Reduced cost for compliance.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1201.1.1

Submitted by: 2018 International Existing Building Code Committee

1201.1 Scope.
This chapter is intended to provide means for the preservation of *historic buildings*. *Historic buildings* shall comply with the provisions of this chapter relating to their *repair*, *alteration*, relocation and *change of occupancy*.

1201.1.1 Preliminary meeting.
If an applicant requests that a building meet the requirements of this chapter and the project is a project involving *alterations* and/or a *change of occupancy*, then the Planning and Development Department shall offer a preliminary meeting with the applicant upon payment of a fee as set forth in Appendix A.2 of Phoenix City Code, prior to the submission of a permit application. The preliminary meeting shall, to the extent possible, include the officials responsible for permit approval and enforcement with respect to the Phoenix Building Construction Code, Phoenix Fire Code and historic preservation ordinances.

Reasons:
This requirement was previously amended in the 2012 IEBC, chapter 12, section 1201.1 and is consistent with departmental policies.

Cost Impact:
This is a cost-saving measure. The objective of this meeting is to identify proactively all the code, technical and policy requirements as early as feasible.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1201.4

Submitted by: 2018 International Existing Building Code Committee

[BS] 1201.4 Flood hazard areas.
In *flood hazard areas*, if all proposed work, including *repairs*, work required because of a *change of occupancy*, and *alterations*, constitutes *substantial improvement*, then the *existing building* shall comply with Section 1612 of the *International Building Code*, or Section R322 of the *International Residential Code* as applicable.

Exception: Buildings or structures listed on the National Register of Historic Places or City of Phoenix or State Inventory of Historical Places shall be exempt if alteration of a 'historic structure,' will not preclude the structure's continued designation as a 'historic structure'. Historic Preservation may show the property listed within a Historic District, but it must be a contributor to the Historic District or individually listed.

~~If a *historic building* will continue to be a *historic building* after the proposed work is completed, then the proposed work is not considered a *substantial improvement*. For the purposes of this exception, a *historic building* is any of the following:~~

~~1. Listed or preliminarily determined to be eligible for listing in the National Register of Historic Places.~~
~~2. Determined by the Secretary of the U.S. Department of Interior to contribute to the historical significance of a registered historic district or a district preliminarily determined to qualify as a historic district.~~
~~3. Designated as historic under a state or local historic preservation program that is approved by the Department of the Interior.~~

Reasons:
This requirement is consistent with state and federal practices where eligible historic properties are treated the same as listed properties for design review purposes. Modified to match flood plain requirements

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for projects.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1201.6

Submitted by: 2018 International Existing Building Code Committee

1201.6 Energy efficiency.
Alterations and additions to an *historic building* shall be exempt from the provisions of the International Energy Conservation Code. New construction within designated historic districts shall be subject to the provisions of the International Energy Conservation Code.

Reasons:
This additional section was previously amended in the 2012 IEBC section 1201.5, and is consistent with departmental policies.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility of energy upgrades to the entire building.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1202.2

Submitted by: 2018 International Existing Building Code Committee

1202.2 Repair and replacement.
Repair and replacement of existing or missing features using original materials shall be permitted. Partial replacement for *repairs* that match the original in configuration, height, and size shall be permitted. Glazing is subject to the requirements of Section 1203.8. Replacement glazing in hazardous locations shall comply with the safety glazing requirements of Chapter 24 of the *International Building Code*.

Exception: Glass block walls, louvered windows, and jalousies repaired with like materials.

Reasons:
This requirement was previously amended in the 2012 IEBC section 1202.4, and is consistent with departmental policies.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for uncomplicated projects.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1203.3

Submitted by: 2018 International Existing Building Code Committee

1203.3 Means of egress and emergency escape and rescue.
Existing window and door openings and corridor and stairway widths less than those specified elsewhere in this code may be *approved*, provided that, in the opinion of the *code official*, there is sufficient width and height for a person to pass through the opening or traverse the means of egress. Where approved by the *code official*, the front or main exit doors need not swing in the direction of the path of exit travel, provided that other *approved* means of egress having sufficient capacity to serve the total occupant load are provided.

Reasons:
This requirement was previously amended in the 2012 IEBC section 1203.3, and is consistent with departmental policies.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for projects.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1204.14

Submitted by: 2018 International Existing Building Code Committee

1204.14 Natural light.
Where it is determined by the *code official* and the historic preservation officer that compliance with the natural light requirements of Section 1010.1 will lead to loss of historic character or historic materials in the building, the existing level of natural lighting shall be considered to be acceptable.

Reasons:
This requirement was previously amended in 2012 IEBC code section 1205.14, and is consistent with departmental policies.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for projects.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Existing Building Code (IEBC)
Section 1204.6

Submitted by: 2018 International Existing Building Code Committee

1204.6 Means of egress and emergency escape and rescue.
Existing window and door openings and corridor and stairway widths less than those that would be acceptable for non-historic buildings under these provisions shall be *approved*, if, in the opinion of the *code official*, there is sufficient width and height for a person to pass through the opening or traverse the exit and that the capacity of the exit system is adequate for the occupant load, or where other operational controls to limit occupancy are *approved* by the *code official*.

Reasons:
This requirement was previously amended in 2012 IEBC code section 1205.6, and is consistent with departmental policies.

Cost Impact:
This cost-saving measure is intended to reduce the financial and technical infeasibility for projects.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Commercial Chapter 1

Submitted by: 2018 International Energy Conservation Code Committee

C101 SCOPE AND GENERAL REQUIREMENTS

C101.1 Title.
This code shall be known as the Energy Conservation Code for the City of Phoenix, as amended by the Phoenix Building Construction Code ~~of [NAME OF JURISDICTION],~~ and shall be cited as such. It is referred to herein as "this code."

C101.2 Scope.
This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment.

C101.3 Intent.
This code shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

C101.4 Applicability.
Where in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

C101.4.1 Mixed residential and commercial buildings.
Where a building includes both *residential building* and *commercial building* portions, each portion shall be separately considered and meet the applicable provisions of IECC—Commercial Provisions or IECC—Residential Provisions.

C101.5 Compliance.
Residential buildings shall meet the provisions of IECC—Residential Provisions. *Commercial buildings* shall meet the provisions of IECC—Commercial Provisions.

C101.5.1 Compliance materials.
The *code official* shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code.

C102 ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT – Reserved.

G6463

PART 2 – ADMINISTRATION AND ENFORCEMENT

C103 CONSTRUCTION DOCUMENTS

C103.1 General.
Construction documents and other supporting data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

Exception: The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

C103.2 Information on construction documents.
Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Insulation materials and their *R*-values.
2. Fenestration *U*-factors and solar heat gain coefficients (SHGCs).
3. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
4. Mechanical system design criteria.
5. Mechanical and service water heating systems and equipment types, sizes and efficiencies.
6. Economizer description.
7. Equipment and system controls.
8. Fan motor horsepower (hp) and controls.
9. Duct sealing, duct and pipe insulation and location.
10. Lighting fixture schedule with wattage and control narrative.
11. Location of *daylight* zones on floor plans.
12. Air sealing details.

C103.2.1 Building thermal envelope depiction.
The *building thermal envelope* shall be represented on the construction drawings.

C103.3 Examination of documents. – Reserved.

C103.3.1 Approval of construction documents. – Reserved.

C103.3.2 Previous approvals. – Reserved.

C103.3.3 Phased approval. – Reserved.

C103.4 Amended construction documents. – Reserved.

C103.5 Retention of construction documents. – Reserved.

G6463

C103.6 Building documentation and closeout submittal.
The construction documents shall specify that the documents described in this section be provided to the building owner or owner's authorized agent within 90 days of the date of receipt of the certificate of occupancy.

C103.6.1 Record documents.
Construction documents shall be updated to convey a record of the completed work. Such updates shall include mechanical, electrical and control drawings that indicate all changes to size, type and location of components, equipment and assemblies.

C103.6.2 Compliance documentation.
Energy code compliance documentation and supporting calculations shall be delivered in one document to the building owner as part of the project record documents or manuals, or as a standalone document. This document shall include the specific energy code edition utilized for compliance determination for each system, documentation demonstrating compliance with Section C303.1.3 for each fenestration product installed, and the interior lighting power compliance path, building area, or space-by-space used to calculate the lighting power allowance.

For projects complying with Item 2 of Section C401.2, the documentation shall include:

1. The envelope insulation compliance path.
2. All compliance calculations including those required by Sections C402.1.5, C403.8.1, C405.3 and C405.4.

For projects complying with Section C407, the documentation shall include that required by Sections C407.4.1 and C407.4.2.

C103.6.3 Systems operation control.
Training shall be provided to those responsible for maintaining and operating equipment included in the manuals required by Section C103.6.2. The training shall include:

1. Review of manuals and permanent certificate.
2. Hands-on demonstration of all normal maintenance procedures, normal operating modes, and all emergency shutdown and startup procedures.
3. Training completion report.

C104 FEES – Reserved.

C105 INSPECTIONS – Reserved.

C106 VALIDITY – Reserved.

C107 REFERENCE STANDARDS

C107.1 Referenced codes and standards.
The codes and standards referenced in this code shall be those listed in Chapter 6, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference, and as further regulated in Sections C107.1.1 and C107.1.2.

C107.1.1 Conflicts.
Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

G6463

C107.1.2 Provisions in referenced codes and standards.
Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

C107.2 Application of references.
References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

C107.3 Other laws.
The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

C108 STOP WORK ORDER – Reserved.

C109 BOARD OF APPEALS – Reserved.

Reasons:
The deleted provisions are contained in the Phoenix Building Construction Code IBC, which is being used as a centralized location for the administrative provisions. These provisions may conflict with the adopted administrative code sections and retaining them is redundant.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Residential Chapter 1, Part 2

Submitted by: 2018 International Energy Conservation Code Committee

R101 SCOPE AND GENERAL REQUIREMENTS

R101.1 Title.
This code shall be known as the Energy Conservation Code for the City of Phoenix as amended by the Phoenix Building Construction Code ~~of [NAME OF JURISDICTION],~~ and shall be cited as such. It is referred to herein as "this code."

R101.2 Scope.
This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment.

R101.3 Intent.
This code shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. This code is intended to provide flexibility to permit the use of innovative approaches and techniques to achieve this objective. This code is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

R101.4 Applicability.
Where, in any specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

R101.4.1 Mixed residential and commercial buildings.
Where a building includes both *residential building* and *commercial building* portions, each portion shall be separately considered and meet the applicable provisions of IECC—Commercial Provisions or IECC—Residential Provisions.

R101.5 Compliance.
Residential buildings shall meet the provisions of IECC—Residential Provisions. *Commercial buildings* shall meet the provisions of IECC—Commercial Provisions.

R101.5.1 Compliance materials.
The *code official* shall be permitted to approve specific computer software, worksheets, compliance manuals and other similar materials that meet the intent of this code.

R102 ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT – Reserved.

G6463

PART 2 – ADMINISTRATION AND ENFORCEMENT

R103 CONSTRUCTION DOCUMENTS

R103.1 General.
Construction documents and other supporting data shall be submitted in one or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the *code official* is authorized to require necessary construction documents to be prepared by a registered design professional.

> **Exception:** The *code official* is authorized to waive the requirements for construction documents or other supporting data if the *code official* determines they are not necessary to confirm compliance with this code.

R103.2 Information on construction documents.
Construction documents shall be drawn to scale on suitable material. Electronic media documents are permitted to be submitted where *approved* by the *code official*. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to, the following as applicable:

1. Insulation materials and their *R*-values.
2. Fenestration *U*-factors and solar heat gain coefficients (SHGCs).
3. Area-weighted *U*-factor and solar heat gain coefficient (SHGC) calculations.
4. Mechanical system design criteria.
5. Mechanical and service water heating systems and equipment types, sizes and efficiencies.
6. Equipment and system controls.
7. Duct sealing, duct and pipe insulation and location
8. Air sealing details.

R103.2.1 Building thermal envelope depiction.
The *building thermal envelope* shall be represented on the construction drawings.

R103.3 Examination of documents. – Reserved.

R103.3.1 Approval of construction documents. – Reserved.

R103.3.2 Previous approvals. – Reserved.

R103.3.3 Phased approval. – Reserved.

R103.4 Amended construction documents. – Reserved.

R103.5 Retention of construction documents. – Reserved.

R104 FEES – Reserved.

R105 INSPECTION. – Reserved.

R106 VALIDITY – Reserved.

G6463

R107 REFERENCE STANDARDS

R107.1 Referenced codes and standards.
The codes and standards referenced in this code shall be those listed in Chapter 5, and such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R107.1.1 and R107.1.2.

R107.1.1 Conflicts.
Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

R107.1.2 Provisions in referenced codes and standards.
Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code, the provisions of this code, as applicable, shall take precedence over the provisions in the referenced code or standard.

R107.2 Application of references.
References to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

R107.3 Other laws.
The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

R108 STOP WORK ORDER – Reserved.

R109 BOARD OF APPEALS – Reserved.

Reasons:
The Reserved provisions are contained in the Phoenix Building Construction Code IBC, which is being used as a centralized location for the administrative provisions. These provisions may conflict with the adopted administrative code sections and retaining them is redundant.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section C101.2

Submitted by: 2018 International Energy Conservation Code Committee

Code Section Proposed Information:

C101.2 Scope.
This code applies to *commercial buildings* and the buildings' sites and associated systems and equipment. Group R-2 when defined as a Commercial Building by section C202, shall have the option of complying under the Residential Provisions of the code, regardless of height. Once defined as such on the submittal documents, all components of the Residential Provisions shall be followed.

Reasons:
This provision was adopted in the previous code cycle. It would allow a multi-family developer the choice between residential and commercial provisions regardless of height and would align the commercial and residential provisions for multi-family construction.

Cost Impact:
Possible cost savings.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC) Section R101.2
Submitted by: 2018 International Energy Conservation Code Committee **R101.2 Scope.** This code applies to residential buildings and the building sites and associated systems and equipment. Group R-2, when defined as a Residential Building by section R202, shall have the option of complying under the Commercial Provisions of the code, regardless of height. Once defined as such on the submittal documents, all components of the Commercial Provisions shall be followed.
Reasons: This provision was adopted in the previous code cycle. It would allow a multi-family developer the choice between residential and commercial provisions regardless of height, and would align the commercial and residential provisions for multi-family construction.
Cost Impact: Possible cost savings to the developer.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section R102.1.2

Submitted by: 2018 International Energy Conservation Code Committee

R102.1.2 RESNET testing & inspection protocol.
The Residential Energy Services Network (RESNET) Mortgage Industry National Home Energy Rating System, Standards Protocol for third party testing and inspections, shall be deemed to meet the requirements of sections R402.4.1.1, R402.4.1.2 and R403.2.2. and shall meet the following conditions:

1. Third Party Testing and Inspections shall be completed by RESNET certified Raters or Rating Field Inspectors and shall be subject to RESNET Quality Assurance Field Review procedures.
2. Sampling in accordance with Chapter 6 of the RESNET Standards shall be performed by Raters or Rating Field Inspectors working under a RESNET Accredited Sampling Provider.
3. Third Party Testing is required for the following items:

   a. R402.4.1.1 – Building Envelope – Thermal and Air Barrier Checklist
   b. R402.4.1.2 – Testing – Air Leakage Rate
   c. R403.2.2 – Sealing – Duct Tightness

4. The other requirements identified as "mandatory" in Chapter 4 shall be met.
5. Alternate testing and inspection programs and protocols shall be allowed when approved by the Code Official.

Reasons:
This section was previously adopted in the 2012 IECC and included in the Phoenix Building Construction Code.

Previous Substantiation:
1. Maricopa Association of Governments Building Code Committee has reviewed the Third-Party Testing and Inspection procedures of the Residential Energy Services Network (RESNET) with the intent to promote and present uniform guidelines for the acceptance of the RESNET Mortgage Industry National Home Energy Rating System Standards (Standards) as an "Above Code Program" for the jurisdictions within Maricopa County; and
2. The inspection and testing required under the 2018 International Residential Code (IRC) and the 2018 International Energy Conservation Code (IECC) is currently being performed under the RESNET Standards for home builders participating in the Environmental Protection Agency's ENERGY STAR for Homes Program; and
3. The RESNET Standards (Chapters 3,6, and 8) are in the process of being certified as ANSI Standards; and
4. The utilization of the RESNET Standards would assure home builders the ability to continue a testing and inspection process that has been proven to be successful in saving energy while protecting the health, safety and welfare of the public in the building code sections covered by the program; and

G6463

5. The committee has researched and discussed this issue and determined that the intent of the code is being met by the acceptance of the testing and inspection protocols of the RESNET Standards.
Cost Impact: There will be significant cost savings for the large production home builders.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section C302.1

Submitted by: Roy Otterbein, PE - Otterbein Engineering

Code Section Proposed Information:

C302.1 Interior design conditions.
The interior design temperatures used for heating and cooling load calculations shall be ~~a maximum of 72°F (22°C) for heating and minimum of 75°F (24°C)~~ for cooling clearly stated on the plans and consistently used in the calculations for equipment design.

Reasons:
One set of interior temperatures will not necessarily meet the needs of all residents or businesses. There are many variables to a comfortable and healthy interior environment. It is therefore best to rely upon proven design standards such as ASHRAE and ACCA to determine the design temperatures based on the individual needs of the space; so long as the equipment and temperature control is compliant with the energy efficiency requirements of the 2018 IECC.

This amendment removes a conflict between set temperature values in Section C302.1 and the recognized design standards in the industry; such as ANSI/ASHRAE/ACCA Standard 183, as referenced in Section C403.1.1.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section R302.1

Submitted by: Roy Otterbein, PE - Otterbein Engineering

Code Section Proposed Information:

R302.1 Interior design conditions.
The interior design temperatures used for heating and cooling load calculations shall be ~~a maximum of 72°F (22°C) for heating and minimum of 75°F (24°C)~~ for cooling clearly stated on the plans and consistently used in the calculations for equipment design.

Reasons:
One set of interior temperatures will not necessarily meet the needs of all residents or businesses. There are many variables to a comfortable and healthy interior environment. It is therefore best to rely upon proven design standards such as ASHRAE and ACCA to determine the design temperatures based on the individual needs of the space; so long as the equipment and temperature control is compliant with the energy efficiency requirements of the 2018 IECC.

This amendment removes a conflict between set temperature values in Section R302.1 and the recognized design standards in the industry; such as ACCA Manual S or J, as referenced in 2018 IRC Section M1401.3.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section C401.2

Submitted by: 2018 International Energy Conservation Code Committee

C401.2 Application.
Commercial buildings shall comply with one of the following:

1. The requirements of ANSI/ASHRAE/IESNA 90.1.
2. The requirements of Sections C402 through C405 ~~and C408~~. In addition, commercial buildings shall comply with Section C406 and tenant spaces shall comply with Section C406.1.1.
3. The requirements of Sections C402.5, C403.2, C403.3 through C403.3.2, C403.4 through C403.4.2.3, C403.5.5, C403.7, C403.8.1 through C403.8.4, C403.10.1 through C403.10.3, C403.11, C403.12, C404, C405, and C407 ~~and C408~~. The building energy cost shall be equal to or less than 85 percent of the standard reference design building.
4. Compliance with the provisions of Section C408 are optional.

Reasons:
The 2018 IECC added references for mandatory compliance with Section C408 in Section C401.2. This amendment revises the requirements of Section C408 from mandatory to optional.

While the City of Phoenix encourages compliance with Section C408 Maintenance Information and System Commissioning; it recommends deferring the mandatory requirement to a future code cycle to reduce the cost of this relatively new non-life safety requirement.

Cost Impact:
Cost reduced.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section 403.3.1

Submitted by: 2018 International Energy Conservation Code Committee

R403.3 Ducts.
Ducts and air handlers shall be installed in accordance with Sections R403.3.1 through R403.3.7.

R403.3.1 Insulation (prescriptive).
Supply and return ducts in attics shall be insulated to an *R*-value of not less than R-8 for ducts 3 inches (76 mm) in diameter and larger, and not less than R-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the *building* shall be insulated to not less than R-6 for ducts 3 inches (76 mm) in diameter, and not less than R-4.2 for ducts smaller than 3 inches (76 mm) in diameter.

Exception: ~~Ducts or portions thereof located completely inside the *building thermal envelope.*~~

1. Ducts or portions thereof located completely inside the building thermal envelope.
2. Supply ducts may be insulated to a minimum of R-6 when one or more of the following conditions are met:

   2.1 Minimum SEER rating of space heating/cooling system is increased to 15.
   2.2 Maximum U-factor is decreased to 0.35 and maximum SHGC is decreased to 0.22 for all fenestration products.
   2.3 Wall cavity insulation minimum R-value is increased to R-19.
   2.4 Residential buildings that meet the requirements of sections R102.1.1 or R405.
   2.5 Residential buildings with attic radiant barriers in accordance with ASTM C1313, installed in accordance with ASTM C1743.

Reasons:
These provisions were adopted in 2012.

Previous substantiation: The Arizona Homebuilders Association proposed efficiency improvements in heating/cooling equipment, glazing product performance, and increased thermal envelope insulation as an alternative to providing R-8 duct insulation required by the IECC. A Code Modification was approved in July 2006 to allow a trade-off to the use of R-6 insulation on HVAC ducts in residential attics. Energy simulation software was used to compare cost savings for each of the proposed areas of concentration. The benefits from improving the efficiency of the air conditioning system, window thermal resistance to heat gain, and wall cavity insulation were shown to surpass cost savings from increasing HVAC duct insulation. Based on these findings, staff recommendation is that this amendment be adopted for use in the 2012 IECC and the 2012 IRC Chapter 11.

G6463

** A public proposal was submitted to include attic radiant barriers in the list of trade-offs for the R-8 duct insulation. Simulation software was used to demonstrate cost savings when radiant barriers and R-6 insulation were incorporated, as compared to no radiant barriers and R-8 duct insulation. Based on these positive savings results and the requirement for listed products, staff recommends that this previously approved proposal be modified to include radiant barriers in the list of exceptions.
Cost Impact: Builders could realize construction cost savings or net – neutral cost savings.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Table R406.4

Submitted by: 2018 International Energy Conservation Code Committee

TABLE R406.4

MAXIMUM ENERGY RATING INDEX	
CLIMATE ZONE	ENERGY RATING INDEX
1	57
2	~~57~~ 64
3	57
4	62
5	61
6	58
7	58
8	58

Reasons:
In 2012, the Phoenix Building Construction Code had set the HERS score at 73, In 2016 it was lowered to 64 based on 2015 IECC numbers. COP 2017 permit records of home testing results show an average score of 62.5. The committee recommends the score remain at 64.

Cost Impact:
Cost savings for construction.

Approved in previous 2012 Code Adoption process: ☒ **YES AND** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section C408.3.1

Submitted by: 2018 International Energy Conservation Code Committee

C408.3 Functional testing of lighting controls.
Automatic lighting controls required by this code shall comply with this section.

C408.3.1 Functional testing.
Prior to ~~passing~~ final inspection, ~~the registered design professional~~ a preliminary report of commissioning test procedures and results shall be completed and certified by the registered design professional or approved agency and provided to the building owner or owner's authorized agent. The report shall be identified as "Preliminary Commissioning Report - Lighting," and shall be provided to the *code official* from the building owner or owner's authorized agent. The preliminary report shall include the completed Commissioning Compliance Checklist, Figure C408.2.4, and shall identify:

1. Itemization of deficiencies found during testing required by this section that have not been corrected at the time of report preparation.
2. Deferred tests that cannot be performed at the time of report.
3. Schedule of when deferred tests will be performed.
4. Results of functional performance tests.
5. Functional performance test procedures used during the commissioning process, including measurable criteria for test acceptance.

The preliminary and final commissioning reports shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's instructions. Functional testing shall be in accordance with Sections C408.3.1.1 through C408.3.1.3 for the applicable control type.

Reasons:
Provides clarity that a preliminary report is required for lighting controls as well as mechanical systems prior to final inspection. Any tests that cannot be performed at the time of the preliminary report will be documented and scheduled to be included in the final report due to the owner within 90 days of C of O.

This will ensure that any lighting control systems that can be commissioned prior to final inspection will be performed and a plan to complete any deferred testing will be in place at time of C of O. This is consistent with the requirements in the mechanical commissioning section C408.2.4.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☐ YES	☒ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Energy Conservation Code (IECC)
Section 408.3.1

Submitted by: 2018 International Energy Conservation Code Committee

C408.3 Functional testing of lighting controls.
Automatic lighting controls required by this code shall comply with this section.

C408.3.1 Functional testing.
Prior to ~~passing~~ final inspection, ~~the registered design professional~~ a preliminary report of commissioning test procedures and results shall be completed and certified by the registered design professional or approved agency and provided to the building owner or owner's authorized agent. The report shall be identified as "Preliminary Commissioning Report - Lighting," and shall be provided to the *code official* from the building owner or owner's authorized agent. The preliminary report shall include the completed Commissioning Compliance Checklist, Figure C408.2.4, and shall identify:

1. Itemization of deficiencies found during testing required by this section that have not been corrected at the time of report preparation.
2. Deferred tests that cannot be performed at the time of report.
3. Schedule of when deferred tests will be performed.
4. Results of functional performance tests.
5. Functional performance test procedures used during the commissioning process, including measurable criteria for test acceptance.

The preliminary and final commissioning reports shall provide evidence that the lighting control systems have been tested to ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition, in accordance with the construction documents and manufacturer's instructions. Functional testing shall be in accordance with Sections C408.3.1.1 through C408.3.1.3 for the applicable control type.

Reasons:
Provides clarity that a preliminary report is required for lighting controls as well as mechanical systems prior to final inspection. Any tests that cannot be performed at the time of the preliminary report will be documented and scheduled to be included in the final report due to the owner, within 90 days of Certificate of Occupancy (C of O).

This will ensure that any lighting control systems that can be commissioned prior to final inspection will be performed and a plan to complete any deferred testing will be in place at time of C of O. This is consistent with the requirements in the mechanical commissioning section C408.2.4.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☐ YES	☒ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 103, 104, 105, 106, 107, 108, 109, & 110

Submitted by: 2018 International Mechanical Code Committee

PART 2 — ADMINISTRATION AND ENFORCEMENT

SECTION 103 DEPARTMENT OF MECHANICAL INSPECTION — Reserved.

~~**[A] 103.1 General.**~~
~~The department of mechanical inspection is hereby created and the executive official in charge thereof shall be known as the code official.~~

~~**[A] 103.2 Appointment.**~~
~~The code official shall be appointed by the chief appointing authority of the jurisdiction.~~

~~**[A] 103.3 Deputies.**~~
~~In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the code official.~~

~~**[A] 103.4 Liability.**~~
~~The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.~~

~~**[A] 103.4.1 Legal defense.**~~
~~Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representatives of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code.~~

SECTION 104 DUTIES AND POWERS OF THE CODE OFFICIAL — Reserved.

~~**[A] 104.1 General.**~~
~~The code official is hereby authorized and directed to enforce the provisions of this code. The code official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.~~

G6463

~~**[A] 104.2 Applications and permits.**~~
~~The code official shall receive applications, review *construction documents* and issue permits for the installation and *alteration* of mechanical systems, inspect the premises for which such permits have been issued and enforce compliance with the provisions of this code.~~

~~**[A] 104.3 Inspections.**~~
~~The code official shall make all of the required inspections, or shall accept reports of inspection by *approved* agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The code official is authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise, subject to the approval of the appointing authority.~~

~~**[A] 104.4 Right of entry.**~~
~~Where it is necessary to make an inspection to enforce the provisions of this code, or where the code official has reasonable cause to believe that there exists in a building or on any premises any conditions or violations of this code that make the building or premises unsafe, insanitary,', dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed on the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owners authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official has recourse to every remedy provided by law to secure entry.~~

~~Where the code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, the owner, owner's authorized agent or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.~~

~~**[A] 104.5 Identification.**~~
~~The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.~~

~~**[A] 104.6 Notices and orders.**~~
~~The code official shall issue all necessary notices or orders to ensure compliance with this code.~~

~~**[A] 104.7 Department records.**~~
~~The code official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.~~

SECTION 105 APPROVAL — Reserved.

~~**[A] 105.1 Modifications.**~~
~~Where there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases upon application of the owner or owner's authorized agent, provided that the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the mechanical inspection department.~~

G6463

~~**[A] 105.2 Alternative materials, design and methods of construction and equipment.**~~
~~The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not *approved*, the code official shall respond in writing, stating the reasons why the alternative was not *approved*.~~

~~**[A] 105.2.1 Research reports.**~~
~~Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.~~

~~**[A] 105.3 Required testing.**~~
~~Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.~~

~~**[A] 105.3.1 Test methods.**~~
~~Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures.~~

~~**[A] 105.3.2 Testing agency.**~~
~~Tests shall be performed by an *approved* agency.~~

~~**[A] 105.3.3 Test reports.**~~
~~Reports of tests shall be retained by the code official for the period required for retention of public records.~~

~~**[A] 105.4 *Approved* materials and equipment.**~~
~~Materials, *equipment* and devices *approved* by the code official shall be constructed and installed in accordance with such approval.~~

~~**[A] 105.5 Material, equipment and appliance reuse.**~~
~~Materials, *equipment*, appliances and devices shall not be reused unless such elements have been reconditioned, tested and placed in good and proper working condition and *approved*.~~

SECTION 106 PERMITS — Reserved.

~~**[A] 106.1 Where required.**~~
~~An owner, owner's authorized agent or contractor who desires to erect, install, enlarge, alter, repair, remove, convert or replace a mechanical system, the installation of which is regulated by this code, or to cause such work to be performed, shall first make application to the code official and obtain the required permit for the work.~~

~~**Exception:** Where *equipment and appliance* replacements or repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the department of mechanical inspection.~~

G6463

[A] 106.1.1 Annual permit.

Instead of an individual construction permit for each *alteration* to an already *approved* system or *equipment* or application installation, the code official is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit

[A] 106.1.2 Annual permit records.

The person to whom an annual permit is issued shall keep a detailed record of *alterations* made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

[A] 106.2 Permits not required.

Permits shall not be required for the following:

1. Portable heating appliances.
2. Portable ventilation appliances and *equipment.*
3. Portable cooling units.
4. Steam, hot water or chilled water piping within any heating or cooling *equipment* or appliances regulated by this code.
5. The replacement of any minor part that does not alter the approval of *equipment* or an *appliance* or make such *equipment* or appliance unsafe.
6. Portable evaporative coolers.
7. Self-contained refrigeration systems that contain 10 pounds (4.5 kg) or less of refrigerant, or that are actuated by motors of 1 horsepower (0.75 kW) or less.
8. Portable fuel cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.

[A] 106.3 Application for permit.

Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or the owners authorized agent. The permit application shall indicate the proposed *occupancy* of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.

[A] 106.3.1 Construction documents.

Construction documents, engineering calculations, diagrams and other data shall be submitted in two or more sets with each application for a permit. The code official shall require *construction documents*, computations and specifications to be prepared and designed by a *registered design professional* where required by state law. Where special conditions exist, the code official is authorized to require additional *construction documents* to be prepared by a *registered design professional. Construction documents* shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. *Construction documents* for buildings more than two stories in height shall indicate where penetrations will be made for mechanical systems, and the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking.

G6463

Exception: The code official shall have the authority to waive the submission of *construction documents*, calculations or other data if the nature of the work applied for is such that reviewing of *construction documents* is not necessary to determine compliance with this code.

[A] 106.3.2 Preliminary inspection.
Before a permit is issued, the code official is authorized to inspect and evaluate the systems, *equipment*, buildings, devices, premises and spaces or areas to be used.

[A] 106.3.3 Time limitation of application.
An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the code official shall have the authority to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

[A] 106.4 Permit issuance.
The application, *construction documents* and other data filed by an applicant for a permit shall be reviewed by the code official. If the code official finds that the proposed work conforms to the requirements of this code and all laws and ordinances applicable thereto, and that the fees specified in Section 106.5 have been paid, a permit shall be issued to the applicant.

[A] 106.4.1 Approved construction documents.
When the code official issues the permit where *construction documents* are required, the *construction documents* shall be endorsed in writing and stamped *"APPROVED."* Such *approved construction documents* shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the *approved construction documents*.

The code official shall have the authority to issue a permit for the construction of part of a mechanical system before *the construction documents* for the entire system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of such permit shall proceed at his or her own risk without assurance that the permit for the entire mechanical system will be granted.

[A] 106.4.2 Validity.
The issuance of a permit or approval of *construction documents* shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinances of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall be invalid.

The issuance of a permit based on *construction documents* and other data shall not prevent the code official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations from being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction

[A] 106.4.3 Expiration.
Every permit issued by the code official under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days Before such work recommences, a new permit shall be first obtained and the fee therefor shall be one-half the amount required for a new permit for such work, provided that changes

G6463

have not been made and will not be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year.

[A] 106.4.4 Extensions.
A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit where work is unable to be commenced within the time required by this section for good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. A permit shall not be extended more than once. The fee for an extension shall be one-half the amount required for a new permit for such work.

[A] 106.4.5 Suspension or revocation of permit.
The code official shall have the authority to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

[A] 106.4.6 Retention of construction documents.
One set of *approved construction documents* shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of *approved construction* documents shall be returned to the applicant, and said set shall be kept on the site of the building or job at all times during which the work authorized thereby is in progress.

[A] 106.4.7 Previous approvals.
This code shall not require changes in the *construction* documents, construction or designated *occupancy* of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

[A] 106.4.8 Posting of permit.
The permit or a copy shall be kept on the site of the work until the completion of the project.

[A] 106.5 Fees.
A permit shall not be issued until the fees prescribed in Section 106.52 have been paid, nor shall an amendment to a permit be released until the additional fee, if any, due to an increase of the mechanical system, has been paid.

[A] 106.5.1 Work commencing before permit issuance.
Any person who commences work on a mechanical system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the required permit fees.

[A] 106.5.2 Fee schedule.
The fees for mechanical work shall be as indicated in the following schedule.

[JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

[A] 106.5.3 Fee refunds.
The code official shall authorize the refunding of fees as follows:

1. The full amount of any fee paid hereunder that was erroneously paid or collected.
2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid where work

has not been done under a permit issued in accordance with this code.

3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid where an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.

The code official shall not authorize the refunding of any fee paid, except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

SECTION 107 INSPECTIONS AND TESTING — Reserved.

[A] 107.1 General.

The code official is authorized to conduct such inspections as are deemed necessary to determine compliance with the provisions of this code. Construction or work for which a permit is required shall be subject to inspection by the code official, and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved* Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid.

[A] 107.2 Required inspections and testing.

The code official, upon notification from the permit holder or the permit holder's agent, shall make the following inspections and other such inspections as necessary, and shall either release that portion of the construction or shall notify the permit holder or the permit holder's agent of violations that must be corrected. The holder of the permit shall be responsible for the scheduling of such inspections.

1. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before backfill is put in place. Where excavated soil contains rocks, broken concrete, frozen chunks and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.
2. Rough-in inspection shall be made after the roof, framing, fireblocking and bracing are in place and all ducting and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes.
3. Final inspection shall be made upon completion of the mechanical system.

Exception: Ground-source heat pump loop systems tested in accordance with Section 1210.10 shall be permitted to be backfilled prior to inspection.

The requirements of this section shall not be considered to prohibit the operation of any heating *equipment* or appliances installed to replace existing heating *equipment* or appliances serving an occupied portion of a structure provided that a request for inspection of such heating *equipment* or appliances has been filed with the department not more than 48 hours after such replacement work is completed, and before any portion of such *equipment* or appliances is concealed by any permanent portion of the structure.

[A] 107.2.1 Other inspections.

In addition to the inspections specified in Section 107.2, the code official is authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced.

[A] 107.2.2 Inspection requests.

It shall be the duty of the holder of the permit or their duly authorized agent to notify the code

G6463

official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

[A] 107.2.3 Approval required.
Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code official. The code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code official.

[A] 107.2.4 *Approved* inspection agencies.
The code official is authorized to accept reports of *approved* agencies, provided that such agencies satisfy the requirements as to qualifications and reliability.

[A] 107.2.5 Evaluation and follow-Lap inspection services.
Prior to the approval of a prefabricated construction assembly having concealed mechanical work and the issuance of a mechanical permit, the code official shall require the submittal of an evaluation report on each prefabricated construction assembly, indicating the complete details of the mechanical system, including a description of the system and its components, the basis on which the system is being evaluated, test results and similar information, and other data as necessary for the code official to determine conformance to this code.

[A] 107.2.5.1 Evaluation service.
The code official shall designate the evaluation service of an *approved* agency as the evaluation agency, and review such agency's evaluation report for adequacy and conformance to this code.

[A] 107.2.5.2 Follow-up inspection.
Except where ready access is provided to mechanical systems, service *equipment* and accessories for complete inspection at the site without disassembly or dismantling, the code official shall conduct the in-plant inspections as frequently as necessary to ensure conformance to the *approved* evaluation report or shall designate an independent, *approved* inspection agency to conduct such inspections. The inspection agency shall furnish the code official with the follow-up inspection manual and a report of inspections on request, and the mechanical system shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

[A] 107.2.5.3 Test and inspection records.
Required test and inspection records shall be available to the code official at all times during the fabrication of the mechanical system and the erection of the building; or such records as the code official designates shall be filed.

[A] 107.4 Approval.
After the prescribed tests and inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the code official.

[A] 107.4.1 Revocation.
The code official is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this code wherever the notice is issued in error, on the basis of incorrect information supplied, or where it is determined that the building or structure, premise or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

G6463

~~[A] 107.5 Temporary connection.~~
~~The code official shall have the authority to authorize the temporary connection of a mechanical system to the sources of energy for the purpose of testing mechanical systems or for use under a temporary certificate of occupancy.~~

~~[A] 107.6 Connection of service utilities.~~
~~A person shall not make connections from a utility, source of energy, fuel or power to any building or system that is regulated by this code for which a permit is required, until authorized by the code official.~~

SECTION 108 VIOLATIONS — Reserved.

~~[A] 108.1 Unlawful acts.~~
~~It shall be unlawful for a person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize a mechanical system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.~~

~~[A] 108.2 Notice of violation.~~
~~The code official shall serve a notice of violation or order to the person responsible for the erection, installation, *alteration*, extension, repair, removal or demolition of mechanical work in violation of the provisions of this code, or in violation of a detail statement or the *approved* construction documents thereunder, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.~~

~~[A] 108.3 Prosecution of violation.~~
~~If the notice of violation is not complied with promptly, the code official shall request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the structure in violation of the provisions of this code or of the order or direction made pursuant thereto.~~

~~[A] 108.4 Violation penalties.~~
~~Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair mechanical work in violation of the *approved* construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~

~~[A] 108.5 Stop work orders.~~
~~Upon notice from the code official that mechanical work is being performed contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's authorized agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work on the system after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.~~

~~[A] 108.6 Abatement of violation.~~
~~The imposition of the penalties herein prescribed shall not preclude the legal officer of the~~

G6463

~~jurisdiction from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or utilization of the mechanical system on or about any premises.~~

~~**[A] 108.7 Unsafe mechanical systems.**~~
~~A mechanical system that is unsafe, constitutes a fire or health hazard, or is otherwise dangerous to human life, as regulated by this code, is hereby declared as an unsafe mechanical system. Use of a mechanical system regulated by this code constituting a hazard to health, safety or welfare by reason of inadequate maintenance, dilapidation, fire hazard, disaster, damage or abandonment is hereby declared an unsafe use. Such unsafe *equipment* and appliances are hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.~~

~~**[A] 108.7.1 Authority to condemn mechanical systems.**~~
~~Where the code official determines that any mechanical system, or portion thereof, regulated by this code has become hazardous to life, health, property, or has become insanitary, the code official shall order in writing that such system either be removed or restored to a safe condition. A time limit for compliance with such order shall be specified in the written notice. A person shall not use or maintain a defective mechanical system after receiving such notice.~~

~~Where such mechanical system is to be disconnected, written notice as prescribed in Section 108.2 shall be given. In cases of immediate danger to life or property, such disconnection shall be made immediately without such notice.~~

~~**[A] 108.7.2 Authority to order disconnection of energy sources.**~~
~~The code official shall have the authority to order disconnection of energy sources supplied to a building, structure or mechanical system regulated by this code, where it is determined that the mechanical system or any portion thereof has become hazardous or unsafe. Written notice of such order to disconnect service and the causes therefor shall be given within 24 hours to the owner, the owner's authorized agent and occupant of such building, structure or premises, provided, however, that in cases of immediate danger to life or property, such disconnection shall be made immediately without such notice. Where energy sources are provided by a public utility, the code official shall immediately notify the serving utility in writing of the issuance of such order to disconnect.~~

~~**[A] 108.7.3 Connection after order to disconnect.**~~
~~A person shall not make energy source connections to mechanical systems regulated by this code that have been disconnected or ordered to be disconnected by the code official, or the use of which has been ordered to be discontinued by the code official until the code official authorizes the reconnection and use of such mechanical systems.~~

~~Where a mechanical system is maintained in violation of this code, and in violation of a notice issued pursuant to the provisions of this section, the code official shall institute appropriate action to prevent, restrain, correct or abate the violation.~~

SECTION 109 MEANS OF APPEAL — Reserved.

~~**[A] 109.1 Application for appeal.**~~
~~A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply; or an equally good or better form of construction is proposed. The application shall be~~

G6463

~~filed on a form obtained from the code official within 20 days after the notice was served.~~

~~[A] 109.1.1 Limitation of authority.~~
~~The board of appeals shall not have authority relative to interpretation of the administration of this code nor shall such board be empowered to waive requirements of this code.~~

~~[A] 109.2 Membership of board.~~
~~The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years; one for 4 years; one for 3 years; one for 2 years; and one for 1 year. Thereafter~~, each new member shall serve for 5 years or until a successor has been appointed.

~~[A] 109.2.1 Qualifications.~~
~~The board of appeals shall consist of five individuals, one from each of the following professions or disciplines:~~

1. ~~*Registered design professional* who is a registered architect; or a builder or superintendent of building construction with not less than 10 years' experience, 5 of which shall have been in responsible charge of work~~
2. ~~*Registered design professional* with structural engineering or architectural experience.~~
3. ~~*Registered design professional* with mechanical and plumbing engineering experience; or a mechanical contractor with not less than 10 years' experience, 5 of which shall have been in responsible charge of work~~
4. ~~*Registered design professional* with electrical engineering experience; or an electrical contractor with not less than 10 years' experience, 5 of which shall have been in responsible charge of work.~~
5. ~~*Registered design professional* with fire protection engineering experience; or a fire protection contractor with not less than 10 years' experience, 5 of which shall have been in responsible charge of work.~~

~~[A] 109.2.2 Alternate members.~~
~~The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership and shall be appointed for 5 years, or until a successor has been appointed.~~

~~[A] 109.2.3 Chairman.~~
~~The board shall annually select one of its members to serve as chairman.~~

~~[A] 109.2.4 Disqualification of member.~~
~~A member shall not hear an appeal in which that member has a personal, professional or financial interest.~~

~~[A] 109.2.5 Secretary.~~
~~The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the chief administrative officer.~~

~~[A] 109.2.6 Compensation of members.~~
~~Compensation of members shall be determined by law.~~

~~[A] 109.3 Notice of meeting.~~
~~The board shall meet upon notice from the chairman, within 10 days of the filing of an appeal, or at stated periodic meetings.~~

G6463

~~[A] 109.4 Open hearing.~~
~~Hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.~~

~~[A] 109.4.1 Procedure.~~
~~The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.~~

~~[A] 109.5 Postponed hearing.~~
~~When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.~~

~~[A] 109.6 Board decision.~~
~~The board shall modify or reverse the decision of the code official by a concurring vote of three members.~~

~~[A] 109.6.1 Resolution.~~
~~The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.~~

~~[A] 109.6.2 Administration.~~
~~The code official shall take immediate action in accordance with the decision of the board.~~

~~[A] 109.7 Court review.~~
~~Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.~~

SECTION 110 TEMPORARY EQUIPMENT, SYSTEMS AND USES — Reserved.

~~[A] 110.1 General.~~
~~The code official is authorized to issue a permit for temporary *equipment*, systems and uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The code official is authorized to grant extensions for demonstrated cause.~~

~~[A] 110.2 Conformance.~~
~~Temporary *equipment*, systems and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.~~

~~[A] 110.3 Temporary utilities.~~
~~The code official is authorized to give permission to temporarily supply utilities before an installation has been fully completed and the final certificate of completion has been issued. The pan covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the code.~~

~~[A] 110.4 Termination of approval.~~
~~The code official is authorized to terminate such permit for temporary *equipment*, systems or uses and to order the temporary *equipment*, systems or uses to be discontinued.~~

G6463

Reasons: The deleted provisions are contained in the Phoenix Building Construction Code, 2018 IBC - Administrative Provisions. These provisions may conflict with the adopted administrative code and retaining them is redundant.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 307.2.2

Submitted by: 2018 International Mechanical Code Committee

307.2.2 Drain pipe materials and sizes.
Nonmetalic piping shall not be installed in exposed locations. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, copper alloy, cross-linked polyethylene, polyethylene, ABS, CPVC, PVC, or polypropylene pipe or rigid tubing. Components shall be selected for the pressure and temperature rating of the installation. Joints and connections shall be made in accordance with the applicable provisions of Chapter 7 of the ~~International~~ Phoenix Building Construction Code relative to the material type. Condensate waste and drain line size shall be not less than 3/4-inch internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2.

Reasons:
Due to our extreme weather conditions, it is recommended that all nonmetallic condensate piping be prohibited from areas of direct sunlight, such as roofs. Nonmetallic piping subject to extreme heat will soften and sag between supports. This causes low spots in the drainage system and prevents gravity flow to the point of disposal. In addition, exposure to UV rays from the sun causes the pipe to become brittle and subject to fracture when placed under stress or strain. Both of these conditions lead to condensate disposal failure with the likely result of water ponding on the roof.

Cost Impact:
Increase in cost of materials. This item is in the current 2012 code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 309.1

Submitted by: 2018 International Mechanical Code Committee

[BG] 309.1 ~~Space-heating systems~~. Heating and cooling systems.
Habitable spaces ~~Interior spaces intended for human occupancy~~ shall be provided with active or passive space-heating and space-cooling systems capable of maintaining ~~an indoor~~ temperatures between 70 ~~of not less than 68~~° F (20~~1~~°C) and 90° F (32°C) at a point 3 feet above the floor. ~~on the design heating day~~. The installation of portable space heaters or coolers shall not be used to achieve compliance with this section.

Exceptions:

1. Space heating and cooling systems are not required for interior spaces where the primary purpose is not associated with human comfort.
2. Group F, H, S, and U occupancies.

Reasons:
The 2018 IMC and IBC text covers heating concerns only and does not distinguish completely between residential or commercial buildings. The intent of this amendment is to recognize that the cooling season in Phoenix is the dominant design condition. The Phoenix City Council included provisions for space cooling in all residential dwellings during the update of the Neighborhood Preservation Ordinance approved on June 16, 1998. This proposed amendment re-establishes the City Council mandate to provide heating and cooling in residential dwellings and allows for designers and building owners to determine if it is required in commercial building based on the definition of habitable spaces.

Cost Impact: No cost impact.
This has been in effect since 1998.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 402.1

Submitted by: 2018 International Mechanical Code Committee

402.1 Natural ventilation.
Natural ventilation of an occupied space in residential buildings shall be through windows, doors, louvers or other openings to the outdoors. The operating mechanism for such openings shall be provided with ready access so that the openings are readily controllable by the building occupants. Natural ventilation of commercial buildings shall be through permanently fixed openings to the outdoors.

Reasons:
Openings such as doors and windows in a commercial building cannot be reliably depended upon to remain open whenever occupants are present. Natural ventilation depends on operable openings such as doors, windows, louvers, or other openings to the outdoors. Whenever a room or space has occupants and the qualifying window or door is open to the outdoors, then the ventilation requirement of IMC 401.3 is met. If the window or door is closed, then the ventilation requirement is not met. A typical commercial building with space cooling and heating would rarely leave windows or doors in the open position.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 403.3.1.5

Submitted by: 2018 International Mechanical Code Committee

403.3.1.5 Balancing.
The *ventilation* air distribution system shall be provided with means to adjust the system to achieve not less than the minimum ventilation airflow rate as required by sections 403.3 and 403.3.1.2. Ventilation systems shall be balanced using a nationally accepted air balancing test ~~by an approved~~ method. Such balancing shall verify that the ventilation system is capable of supplying and exhausting the airflow rates required by Sections 403.3 and 403.3.1.2. A final report shall be provided to the engineer of record and the mechanical inspector.

Reasons:
This is a current amendment to the 2012 IMC. The proposed amendment will require an approved test and balance agency / individual to perform balancing of ventilation air systems in commercial buildings. The original code language does not define what type of "approved method" is acceptable. The proposal will further require that such agency / individual follow national standards for air balancing methods.

Cost Impact: Minimal cost impact.
Minimal impact of nationally accepted air balancing test.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 407.1.1

Submitted by: 2018 International Mechanical Code Committee

407.1 General.
Mechanical ventilation for ambulatory care facilities and Group 1-2 occupancies shall be designed and installed in accordance with this code and ASHRAE 170.

407.1.1
Mechanical systems designed and installed in accordance with IMC 407.1 and ASHRAE 170-2017 shall be verified by a qualified third party Special Inspector. The Special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. A report shall be generated by the third party individual or firm showing compliance. Special inspections shall be as specified in Chapter 17 of the *International Building Code* as amended.

Reasons:
The ventilation systems for Group I-2 and ambulatory facilities face the possibility of communicating and perpetuating airborne diseases. Special inspections are required to ensure that life safety systems and public health standards are met. It is imperative that the ventilation systems required by IMC 407.1 are designed to control the spread of disease and operate as designed. This can only be accomplished by verification through proper testing. The Registered Design Professional in Responsible Charge shall follow the guidelines set forth in the 2018 IBC as specified in Chapter 17.

Cost Impact: No cost impact.
Currently Arizona Department of Health Services (ADHS) requires that the ventilation systems are balanced and tested.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 408

Submitted by: 2018 International Mechanical Code Committee

408 MARIJUANA RELATED OCCUPANCIES

408.1 General.
Any building used to cultivate, produce, infuse or dispense marijuana shall be designed such that there shall be no emission of dust, fumes, vapors, or odors into the environment from the premise. A ventilation system shall be designed to prevent the distribution of odors to other occupied parts of the building or adjacent properties. Design of the odor control system shall be based on accepted engineering practices. All equipment and filter media shall be listed and labeled for the application. Exhaust systems used in odor control systems shall meet the requirements of Section 501.

408.1.1 Exhaust outlets.
The termination point for exhaust outlets shall be in accordance with Section 501.3. Exhaust from cultivation and production facilities shall be in accordance with Section 501.3.1(2) and for dispensaries in accordance with Section 501.3.1(3).

Reasons:
This is a current amendment to the 2012 IMC. This new section provides design guidance for required odor control systems, per City of Phoenix Zoning Ordinance section 623 D.122.

Cost Impact:
Moderate cost impact due to additional equipment necessary to comply with air quality requirements mandated by the Authority Having Jurisdiction (AHJ).

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 502.14

Submitted by: 2018 International Mechanical Code Committee

502.14 Motor vehicle operation.
In areas where motor vehicles operate, mechanical ventilation shall be provided in accordance with Section 403 Additionally, areas in which stationary motor vehicles are operated shall be provided with a source capture system that connects directly to the motor vehicle exhaust systems. Makeup air for the required exhaust systems in areas where motor vehicles operate shall be provided through permanent unobstructed openings to the outdoors, such as louvers and grills. Mechanical equipment and louvers used for makeup air purposes shall be electrically interlocked with the exhaust system. Such system shall be engineered by a registered design professional or shall be factory-built equipment designed and sized for the purpose.

Exceptions:

1. This section shall not apply where the motor vehicles being operated or repaired are electrically powered.
2. This section shall not apply to one- and two-family dwellings.
3. This section shall not apply to motor vehicle service areas where engines are operated inside the building only for the duration necessary to move the motor vehicles in and out ot the building.

Reasons:
Motor vehicle operation in a building depletes oxygen and causes a build-up of carbon monoxide and other products of combustion which could be fatal to occupants. It is critical to the health of occupants to remove these emissions from the occupied space. From IMC section 403, an exhaust rate of 0.75 cfm/ft^2 is specified for both repair garages and enclosed parking garages. Repair garages that have stationary vehicle operation, such as engine tune-up services, radiator or transmission flushing, etc. require dedicated exhaust systems. This proposal adds specific requirements to provide permanent building openings for makeup air or use mechanical makeup air units. This eliminates the use of open doors, which cannot be reliable. It also requires any mechanical equipment or mechanical louvers used for makeup air to be electrically interlocked with the dedicated exhaust system.

Cost Impact: Minimal cost impact.
Minimal cost increase to install openings. This requirement is also an amendment carried forward from the 2012 IMC.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G64463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 502.21

Submitted by: 2018 International Mechanical Code Committee

502.21 Storage and use of liquid carbon dioxide (CO_2) systems.
Indoor or outdoor areas that contain liquid carbon dioxide (CO_2) stored in ASME pressure vessels in new and existing facilities shall be provided with mechanical exhaust ventilation in accordance with this section.

Exception: Outdoor storage areas in non-enclosed spaces designed to prevent the collection of vapors when approved by the *Fire Marshal.*

502.21.1 System requirements.
Exhaust ventilation systems for liquid carbon dioxide CO_2 tanks shall comply with all of the following:

1. The installation shall be in accordance with this code and the *Phoenix Fire Code.*
2. Mechanical ventilation shall be provided at a rate of not less than 1 cfm per square foot [0.00508 $m^3/(s \cdot m^2)$] of floor area over the storage area.
3. The system shall operate continuously unless alternate designs are approved by the *Fire Marshal.*
4. A manual start control shall be provided outside of the room in a position adjacent to the access door to the room or in another approved location. The switch shall be a break-glass or other approved type and shall be labeled: VENTILATION SYSTEM EMERGENCY ON-ONLY.
5. Exhaust ventilation shall be designed to consider the density of the potential vapors released. For liquid **Co_2** systems, exhaust shall be taken from a point within 12 inches (305 mm) of the floor.
6. Makeup air shall be provided. The location of both the exhaust and makeup air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.
7. Exhaust air shall not be recirculated to occupied areas. Exhaust termination shall be located where it will not allow for a dangerous accumulation of vapors and in accordance with Section 501.3.1 (2).
8. Sensors, controls, alarms, piping and all accessory components ~~shall be~~ as prescribed by the *Phoenix Fire Department.*

Reasons:
This amendment determines the requirement for a mechanical ventilation system for liquid carbon dioxide (CO_2) bulk storage systems regardless of quantity. Businesses that provide carbonated drinks have been increasingly switching from dry to liquid CO_2 storage systems. Liquid CO_2 storage systems have been deemed potentially hazardous to human health by the Phoenix Fire Department. Separate Fire Department permits are also required for CO_2 systems. This requirement is also an amendment carried forward from the 2012 IMC.

G6463

Cost Impact: Additional costs are due to the requirement for installation of dedicated mechanical exhaust system in the area of liquid CO_2 tanks.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 606.2.1

Submitted by: 2018 International Mechanical Code Committee

606.2 Where required.
Smoke detectors shall be installed where indicated in Sections 606.2.1 through 606.2.3.

Exception: Smoke detectors shall not be required where air distribution systems are incapable of spreading smoke beyond the enclosing walls, floors and ceilings of the room or space in which the smoke is generated.

606.2.1 ~~Return air systems.~~ Air distribution systems.
Smoke detectors shall be installed in ~~return air systems with~~ air distribution systems downstream of the filters and ahead of any branch connections in systems having a design capacity greater than 2,000 cfm (0.9 m^3/s). ~~in the return air duct or *plenum* upstream of any filters, *exhaust air* connections, outdoor air connections, or decontamination *equipment* and appliances.~~

Exception: Smoke detectors are not required ~~in the return air system~~ where all portions of the building served by the air distribution system are protected by area smoke detectors connected to a fire alarm system in accordance with the International Fire Code. The area smoke detection system shall comply with Section 606.4.

Reasons:
Committee recommends that this section be revised to correlate with NFPA 90A Installation of Air-Conditioning and Ventilating Systems. The 2018 IMC references NFPA 72 National Fire Alarm Code, which in turn references NFPA 90A for installation of smoke detectors. These NFPA Standards are generally recognized as the national standards for smoke detector installation. A large amount of air distribution systems installed in Phoenix utilize a filtered grill for return air, typically installed in a ceiling or wall. In order to place a duct detector in front of this filter without having it attached to the grill, an additional length of plenum or duct is required. This leads to added construction costs and space restraints. The duct smoke detector may also be subjected to a higher frequency of false alarms from contaminants in the room. The committee reasons that any appreciable amount of smoke entering the return air system will pass through the filtered grill and reach the probe for the smoke detector. This proposed amendment will help to keep down the design costs while still providing an equivalent level of life safety based on the national standard. This amendment is carried forward from the 2012 IMC.

Cost Impact:
Saves cost of additional duct work.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 606.5

Submitted by: 2018 International Mechanical Code Committee

606.5 Testing.
Smoke detectors shall be tested by an approved testing agency or a qualified third party Special Inspector. The Special Inspector/ testing agency shall be an independent third party individual or firm and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the *International Building Code* as amended.

Reasons:
Smoke detectors can save lives when they operate correctly. The Mechanical code requires that these devices be installed at specific locations in the building air distribution systems. Testing of the operation of each smoke detector is required to be completed by a special inspector that is independent of the installer. Such special inspector must also be qualified to complete the work. Special Inspections is covered in the International Building Code and has been extended in the City of Phoenix to include several life safety items related to Mechanical design. Due to the importance of these life safety devices, it is recommended by the committee that a Special Inspector submit a final report certifying that all devices operate as designed and the Registered Design Professional in Responsible Charge signs the certificate. To maintain consistency with the Special Inspections program, the testing agency and the registrant shall follow the guidelines set forth in the 2012 IBC, as specified in Chapter 17.

Cost Impact:
Increase costs associated with hiring a Special Inspector. However, this amendment is carried forward from the 2006 IMC and has been in place for the past six years.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 607.2

Submitted by: 2018 International Mechanical Code Committee

[BF] 607.2 Installation.
Fire dampers, smoke dampers, combination fire/smoke dampers and ceiling radiation dampers located within air distribution and smoke control systems shall be installed in accordance with the requirements of this section, and the manufacturer's instructions and listing. Dampers shall be tested by an approved testing agency or a qualified third party special inspector. The special Inspector/testing agency shall be an independent third party individual or firm and shall not be the installing contractor. Special inspections shall be as specified in Chapter 17 of the *International Building Code* as amended.

Reasons:
Fire and smoke dampers can save lives when they operate correctly. The Mechanical code requires that these devices be installed at specific locations to prevent fire and smoke from spreading throughout a building. The IMC requires all dampers to be listed and tested at the factory. This proposal will verify that the dampers operate correctly after they are installed in the building. This amendment requires that testing of dampers shall be performed by a qualified third party testing agency and all results shall be verified by the professional design engineer. Special inspection requirements are listed in the 2012 IBC and a reference is provided in this proposal.

Cost Impact:
Increase costs associated with hiring a Special Inspector. However, this amendment is carried forward from the 2012 IMC and has been in place for the past six years.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 928.1

Submitted by: 2018 International Mechanical Code Committee

SECTION 928 EVAPORATIVE COOLING EQUIPMENT

928.1 General.
Evaporative cooling equipment shall:

1. Be installed in accordance with the manufacturer's instructions.
2. Be installed on level platforms in accordance with Section 304.10. An evaporative cooler supported by the building structure shall be installed on a substantial level base and shall be secured directly or indirectly to the building structure by suitable means to prevent displacement of the cooler. Modifications made to the supporting framework of buildings as a result of the installation shall be made in accordance with the requirements of the *International Building Code* as amended.
3. Have openings in exterior walls or roofs flashed in accordance with the *International Building Code* as amended.
4. Be provided with potable water backflow protection in accordance with ~~Section 608 of~~ the ~~*International*~~ *Phoenix Building Construction Code*.
5. Have air intake opening locations in accordance with Section 401.4.
6. A permanent relief opening or other engineered design sufficient to assure positive airflow shall balance intake air.
7. Outside air shall be provided as specified in Section 403.2.
8. Air ducts and dampers, which are a portion of an evaporative cooling system, shall comply with Chapter 6.
9. Overflow drains shall be provided that discharge to an approved disposal location and comply with the Phoenix Building Construction Code.

Reasons:
This amendment clarifies installation requirements for evaporative coolers.

Cost Impact: No cost impact.
These requirements are carried forward from the 2012 IMC.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 930.1

Submitted by: 2018 International Mechanical Code Committee

SECTION 930 WOOD STOVE/FIREPLACE INSTALLATION

DEFINITIONS. For purposes of this section, the following words and terms shall have the meaning ascribed thereto:

FIREPLACE: A built-in-place masonry hearth and fire chamber or a factory-built appliance, designed to burn solid fuel or to accommodate gas or electric log insert or similar device, and which is intended for occasional recreational or aesthetic use, not for cooking, heating, or industrial processes.

SOLID FUEL: Includes, but is not limited to, wood, coal, or other non-gaseous or non-liquid fuels, including those fuels defined by the Maricopa County Air Pollution Control Officer as "inappropriate fuel" to burn in residential wood burning devices.

WOODSTOVE: A solid-fuel burning heating appliance including a pellet stove, which is either freestanding or designed to be inserted into a fireplace.

930.1 General.
In accordance with the Phoenix City Council adopted Ordinance G-4062, on or after December 31, 1998, no person, firm or corporation shall construct or install a fireplace or a wood stove, and the Building Official shall not approve or issue a permit to construct or install a fireplace or a wood stove, unless the fireplace or wood stove complies with one of the following:

1. A fireplace which has a permanently installed gas or electric log insert;
2. A fireplace, wood stove or other solid fuel burning appliance which has been certified by the United States Environmental Protection Agency as conforming to 40 Code of Federal Regulations part 60, subpart AAA;
3. A fireplace, woodstove or other solid fuel burning appliance that has been tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA;
4. A fireplace, wood stove or other solid fuel burning appliance which has been determined by the Maricopa County Air Pollution Control Officer to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA, as in effect on July 1, 1990.
5. A fireplace which has a permanently installed wood stove insert which complies with subparagraph 2, 3, or 4 above.

Exceptions: The following installations are not regulated and are not prohibited by this section: Furnaces, boilers, incinerators, kilns, and other similar space heating or industrial process equipment. Cook stoves, barbecue grills, and similar appliances designed primarily for cooking. Fire pits, barbecue grills, and other outdoor fireplaces.

G6463

Fireplace or wood stove alterations prohibited. Fireplaces constructed or installed on or after December 31,1998, that contain a gas or electric log insert or a woodstove insert, shall not be altered to directly burn wood or any other solid fuel. On or after December 31, 1998, no person, firm, or corporation shall alter a fireplace, woodstove, or other solid-fuel burning appliance in any manner that would void its certification or operational compliance with the provisions of this section. Fireplaces constructed or installed on or after December 31, 1998, shall not be altered without first obtaining a permit from the City to ensure compliance with this section.
Reasons: Recommendation to include code language based on City Ordinance G4062 and Maricopa County wood burning restriction ordinance. This amendment is carried over from the 2012 IMC and is also found in the 2012 IRC as Section R325.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Mechanical Code (IMC)
Section 1105.10

Submitted by: 2018 International Mechanical Code Committee

1105.10 Dimensions.
Refrigeration machinery rooms shall be of such dimensions that all system parts are readily accessible with adequate space for service, maintenance, and operations. A minimum unobstructed walking space at least three (3) feet (914 mm) in width and six (6) feet eight (8) inches (2032 mm) in height or approved manufacturer's installation or required clearances shall be maintained throughout, allowing free access to at least two sides of all moving machinery and approaching each stop valve. Access to refrigeration machinery rooms shall be restricted to authorized personnel and posted with permanent signage.

Reasons:
This addition to this section is needed to ensure adequate safe working space around the equipment in a refrigeration machinery room. Previously incorporated into the 2012 IMC.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Plumbing Code (IPC)
Sections 103, 104, 105, 106, 107, 108, 109, & 110

Submitted by: 2018 International Plumbing Code Committee

PART 2—ADMINISTRATION AND ENFORCEMENT

SECTION 103 DEPARTMENT OF PLUMBING INSPECTION - Reserved.

~~**[A] 103.1 General.**~~
~~The department of plumbing inspection is hereby created and the executive official in charge thereof shall be known as the code official.~~

~~**[A] 103.2 Appointment.**~~
~~The code official shall be appointed by the chief appointing authority of the jurisdiction.~~

~~**[A] 103.3 Deputies.**~~
~~In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the code official shall have the authority to appoint a deputy code official, other related technical officers, inspectors and other employees. Such employees shall have powers as delegated by the code official.~~

~~**[A] 103.4 Liability.**~~
~~The code official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties.~~

> ~~**[A] 103.4.1 Legal defense.**~~
> ~~Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by the legal representative of the jurisdiction until the final termination of the proceedings. The code official or any subordinate shall not be liable for costs in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.~~

SECTION 104 DUTIES AND POWERS OF THE CODE OFFICIAL – Reserved.

~~**[A] 104.1 General.**~~
~~The code official is hereby authorized and directed to enforce the provisions of this code. The code official shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.~~

G6463

~~[A] 104.2 Applications and permits.~~
~~The code official shall receive applications, review construction documents and issue permits for the installation and alteration of plumbing systems, inspect the premises for which such permits have been issued, and enforce compliance with the provisions of this code.~~

~~[A] 104.3 Inspections.~~
~~The code official shall make all the required inspections, or shall accept reports of inspection by *approved* agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such *approved* agency or by the responsible individual. The code official is authorized to engage such expert opinion as deemed necessary to report on unusual technical issues that arise, subject to the approval of the appointing authority.~~

~~[A] 104.4 Right of entry.~~
~~Where it is necessary to make an inspection to enforce the provisions of this code, or where the code official has reasonable cause to believe that there exists in any building or on any premises any conditions or violations of this code that make the building or premises unsafe, insanitary, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the code official shall have recourse to every remedy provided by law to secure entry.~~

~~Where the code official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, the owner, owners authorized agent, occupant or person having charge, care or control of any building or premises shall not fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.~~

~~[A] 104.5 Identification.~~
~~The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.~~

~~[A] 104.6 Notices and orders.~~
~~The code official shall issue all necessary notices or orders to ensure compliance with this code.~~

~~[A] 104.7 Department records.~~
~~The code official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for the retention of public records.~~

SECTION 105 APPROVAL – Reserved.

~~[A] 105.1 Modifications.~~
~~Where there are practical difficulties involved in carrying out the provisions of this code, the code official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's authorized agent, provided that the code official shall first find that special individual reason makes the strict letter of this code impractical and the modification conforms to the intent and purpose of this code and that such modification does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the plumbing inspection department.~~

G6463

~~**[A] 105.2 Alternative materials, design and methods of construction and equipment.**~~
~~The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material or method of construction shall be *approved* where the code official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. Where the alternative material, design or method of construction is not *approved*, the code official shall respond in writing, stating the reasons why the alternative was not *approved*.~~

~~**[A] 105.2.1 Research reports.**~~
~~Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.~~

~~**[A] 105.3 Required testing.**~~
~~Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternate materials or methods, the code official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction.~~

~~**[A] 105.3.1 Test methods.**~~
~~Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the code official shall approve the testing procedures.~~

~~**[A] 105.3.2 Testing agency.**~~
~~Tests shall be performed by an *approved* agency.~~

~~**[A] 105.3.3 Test reports.**~~
~~Reports of tests shall be retained by the code official for the period required for retention of public records.~~

~~**[A] 105.4 Approved materials and equipment.**~~
~~Materials, equipment and devices *approved* by the code official shall be constructed and installed in accordance with such approval.~~

~~**[A] 105.4.1 Material and equipment reuse.**~~
~~Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition and *approved*.~~

SECTION 106 PERMITS – Reserved.

~~**[A] 106.1 Where required.**~~
~~Any owner, owner's authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any plumbing system, the installation of which is regulated by this code, or to cause any such work to be performed, shall first make application to the code official and obtain the required permit for the work.~~

~~**[A] 106.1.1 Annual permit.**~~
~~Instead of an individual construction permit for each alteration to an already *approved* system or equipment or appliance installation, the code official is authorized to issue an annual~~

G6463

permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.

[A] 106.1.2 Annual permit records.
The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The code official shall have access to such records at all times or such records shall be filed with the code official as designated.

[A] 106.2 Exempt work.

The following work shall be exempt from the requirement for a permit:

1. The stopping of leaks in drains, water, soil, waste or vent pipe provided, however, that if any concealed trap, drainpipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.

2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures, and the removal and reinstallation of water closets, provided that such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

[A] 106.3 Application for permit.
Each application for a permit, with the required fee, shall be filed with the code official on a form furnished for that purpose and shall contain a general description of the proposed work and its location. The application shall be signed by the owner or owner's authorized agent. The permit application shall indicate the proposed occupancy of all parts of the building and of that portion of the site or lot, if any, not covered by the building or structure and shall contain such other information required by the code official.

[A] 106.3.1 Construction documents.
Construction documents, engineering calculations, diagrams and other such data shall be submitted in two or more sets with each application for a permit. The code official shall require construction documents, computations and specifications to be prepared and designed by a registered design professional where required by state law. Construction documents shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work conforms to the provisions of this code. Construction documents for buildings more than two stories in height shall indicate where penetrations will be made for pipes, fittings and components and shall indicate the materials and methods for maintaining required structural safety, fire resistance rating and fireblocking.

Exception: The code official shall have the authority to waive the submission of construction documents, calculations or other data if the nature of the work applied for is such that reviewing of construction documents is not necessary to determine compliance with this code.

G6463

[A] 106.3.2 Preliminary inspection.
Before a permit is issued, the code official shall be authorized to inspect and evaluate the systems, equipment, buildings, devices, premises and spaces or areas to be used.

[A] 106.3.3 Time limitation of application.
An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the code official shall have the authority to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated.

[A] 106.4 By whom application is made.
Application for a permit shall be made by the person or agent to install all or part of any plumbing system. The applicant shall meet all qualifications established by statute, or by rules promulgated by this code, or by ordinance or by resolution. The full name and address of the applicant shall be stated in the application.

[A] 106.5 Permit issuance.
The application, construction documents and other data filed by an applicant for permit shall be reviewed by the code official. If the code official finds that the proposed work conforms to the requirements of this code and all laws and ordinances applicable thereto, and that the fees specified in Section 106.6 have been paid, a permit shall be issued to the applicant.

[A] 106.5.1 Approved construction documents.
When the code official issues the permit where construction documents are required, the construction documents shall be endorsed in writing and stamped "APPROVED." Such *approved* construction documents shall not be changed, modified or altered without authorization from the code official. Work shall be done in accordance with the *approved* construction documents. The code official shall have the authority to issue a permit for the construction of a part of a plumbing system before the entire construction documents for the whole system have been submitted or *approved*, provided that adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holders of such permit shall proceed at their own risk without assurance that the permit for the entire plumbing system will be granted.

[A] 106.5.2 Validity.
The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or any other ordinance of the jurisdiction. A permit presuming to give authority to violate or cancel the provisions of this code shall not be valid.

The issuance of a permit based on construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction.

[A] 106.5.3 Expiration.
Every permit issued by the code official under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained and the fee therefore shall be one-half the amount required for a new permit for such work, provided that changes have not been made and will not be made in the original construction documents for

G6463

such work, and provided further that such suspension or abandonment has not exceeded 1 year.

[A] 106.5.4 Extensions.
Any permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. A permit shall not be extended more than once. The fee for an extension shall be one-half the amount required for a new permit for such work.

[A] 106.5.5 Suspension or revocation of permit.
The code official shall have the authority to suspend or revoke a permit issued under the provisions of this code wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or regulation or any of the provisions of this code.

[A] 106.5.6 Retention of construction documents.
One set of *approved* construction documents shall be retained by the code official for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws.

One set of *approved* construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

[A] 106.5.7 Previous approvals.
This code shall not require changes in the construction documents, construction or designated occupancy of a structure for which a lawful permit has been heretofore issued or otherwise lawfully authorized, and the construction of which has been pursued in good faith within 180 days after the effective date of this code and has not been abandoned.

[A] 106.5.8 Posting of permit.
The permit or a copy shall be kept on the site of the work until the completion of the project.

[A] 106.6 Fees.
A permit shall not be issued until the fees prescribed in Section 106.62 have been paid, and an amendment to a permit shall not be released until the additional fee, if any, due to an increase of the plumbing systems, has been paid.

[A] 106.6.1 Work commencing before permit issuance.
Any person who commences any work on a plumbing system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the required permit.

[A] 106.6.2 Fee schedule.
The fees for all plumbing work shall be as indicated in the following schedule:

[JURISDICTION TO INSERT APPROPRIATE SCHEDULE]

G6463

~~[A] 106.6.3 Fee refunds.~~
~~The code official shall authorize the refunding of fees as follows:~~

~~1. The full amount of any fee paid hereunder that was erroneously paid or collected.~~

~~2. Not more than [SPECIFY PERCENTAGE] percent of the permit fee paid where work has been done under a permit issued in accordance with this code.~~

~~3. Not more than [SPECIFY PERCENTAGE] percent of the plan review fee paid where an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan review effort has been expended.~~

~~The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.~~

SECTION 107 INSPECTIONS AND TESTING – Reserved.

~~[A] 107.1 General.~~
~~The code official is authorized to conduct such inspections as are deemed necessary to determine compliance with the provisions of this code. Construction or work for which a permit is required shall be subject to inspection by the code official, and such construction or work shall remain visible and able to be accessed for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the permit applicant to cause the work to remain visible and able to be accessed for inspection purposes Neither the code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.~~

~~[A] 107.2 Required inspections and testing.~~
~~The code official, upon notification from the permit holder or the permit holder's agent, shall make the following inspections and such other inspections as necessary, and shall either release that portion of the construction or shall notify the permit holder or an agent of any violations that must be corrected. The holder of the permit shall be responsible for the scheduling of such inspections.~~

~~1. Underground inspection shall be made after trenches or ditches are excavated and bedded piping installed, and before any backfill is put in place.~~

~~2. Rough-in inspection shall be made after the roof, framing, fire blocking, firestopping, draft stopping and bracing is in place and all sanitary, storm and water distribution piping is roughed in, and prior to the installation of wall or ceiling membranes.~~

~~3. Final inspection shall be made after the building is complete, all plumbing fixtures are in place and property connected, and the structure is ready for occupancy.~~

~~[A] 107.2.1 Other inspections.~~
~~In addition to the inspections specified in Section 107.2, the code official shall be authorized to make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws that are enforced.~~

~~[A] 107.2.2 Inspection requests.~~
~~It shall be the duty of the holder of the permit or their duly authorized agent to notify the code~~

G6463

official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this code.

[A] 107.2.3 Approval required.
Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the code official. The code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the permit holder or his or her agent wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the code official.

[A] 107.2.4 Approved agencies.
The code official is authorized to accept reports of *approved* inspection agencies, provided that such agencies satisfy the requirements as to qualifications and reliability.

[A] 107.2.5 Evaluation and follow-up inspection services.
Prior to the approval of a closed, prefabricated plumbing system and the issuance of a plumbing permit, the code official shall require the submittal of an evaluation report on each prefabricated plumbing system indicating the complete details of the plumbing system, including a description of the system and its components, the basis on which the plumbing system is being evaluated, test results and similar information, and other data as necessary for the code official to determine conformance to this code.

[A] 107.2.5.1 Evaluation service.
The code official shall designate the evaluation service of an *approved* agency as the evaluation agency, and review such agency's evaluation report for adequacy and conformance to this code.

[A] 107.2.5.2 Follow-up inspection.
Except where ready access is provided to all plumbing systems, service equipment and accessories for complete inspection at the site without disassembly or dismantling, the code official shall conduct the frequency of in-plant inspections necessary to ensure conformance to the *approved* evaluation report or shall designate an independent, *approved* inspection agency to conduct such inspections. The inspection agency shall furnish the code official with the follow-up inspection manual and a report of inspections on request, and the plumbing system shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

[A] 107.2.5.3 Test and inspection records.
Required test and inspection records shall be available to the code official at all times during the fabrication of the plumbing system and the erection of the building, or such records as the code official designates shall be filed.

[A] 107.3 Special inspections.
Special inspections of alternative engineered design plumbing systems shall be conducted in accordance with Sections 107.31 and 107.32.

[A] 107.3.1 Periodic inspection.
The registered design professional or designated inspector shall periodically inspect and observe the *alternative engineered design* to determine that the installation is in accordance with the *approved* construction documents. Discrepancies shall be brought to the immediate attention of the plumbing contractor for correction. Records shall be kept of all inspections.

G6463

~~**[A] 107.3.2 Written report.**~~

~~The registered design professional shall submit a final report in writing to the code official upon completion of the installation, certifying that the *alternative engineered design* conforms to the *approved* construction documents. A notice of approval for the plumbing system shall not be issued until a written certification has been submitted.~~

~~**[A] 107.4 Testing.**~~

~~Plumbing work and systems shall be tested as required in Section 312 and in accordance with Sections 107.4.1 through Tests shall be made by the permit holder and observed by the code official.~~

~~**[A] 107.4.1 New, altered, extended or repaired systems.**~~

~~New plumbing systems and parts of existing systems that have been altered, extended or repaired shall be tested as prescribed herein to disclose leaks and defects, except that testing is not required in the following cases:~~

~~1. In any case that does not include addition to, replacement, alteration or relocation of any water supply, drainage or vent piping.~~

~~2. In any case where plumbing equipment is set up temporarily for exhibition purposes.~~

~~**[A] 107.4.2 Equipment, material and labor for tests.**~~

~~Equipment, material and labor required for testing a plumbing system or part thereof shall be furnished by the permit holder.~~

~~**[A] 107.4.3 Reinspection and testing.**~~

~~Where any work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this code. The work or installation shall then be resubmitted to the code official for inspection and testing.~~

~~**[A] 107.5 Approval.**~~

~~After the prescribed tests and inspections indicate that the work complies in all respects with this code, a notice of approval shall be issued by the code official.~~

~~**[A] 107.5.1 Revocation.**~~

~~The code official is authorized to, in writing, suspend or revoke a notice of approval issued under the provisions of this code wherever the notice is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure, premise or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.~~

~~**[A] 107.6 Temporary connection.**~~

~~The code official shall have the authority to authorize the temporary connection of the building or system to the utility source for the purpose of testing plumbing systems or for use under a temporary certificate of occupancy.~~

~~**[A] 107.7 Connection of service utilities.**~~

~~A person shall not make connections from a utility, source of energy, fuel, power, water system or sewer system to any building or system that is regulated by this code for which a permit is required until authorized by the code official.~~

SECTION 108 VIOLATIONS – Reserved.

~~**[A] 108.1 Unlawful acts.**~~
~~It shall be unlawful for any person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize any plumbing system, or cause same to be done, in conflict with or in violation of any of the provisions of this code.~~

~~**[A] 108.2 Notice of violation.**~~
~~The code official shall serve a notice of violation or order to the person responsible for the erection, installation, alteration, extension, repair, removal or demolition of plumbing work in violation of the provisions of this code, or in violation of a detail statement or the *approved* construction documents thereunder, or in violation of a permit or certificate issued under the provisions of this code. Such order shall direct the discontinuance of the illegal action or condition and the abatement of the violation.~~

~~**[A] 108.3 Prosecution of violation.**~~
~~If the notice of violation is not complied with promptly, the code official shall request the legal counsel of the jurisdiction to institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the structure in violation of the provisions of this code or of the order or direction made pursuant thereto.~~

~~**[A] 108.4 Violation penalties.**~~
~~Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair plumbing work in violation of the *approved* construction documents or directive of the code official, or of a permit or certificate issued under the provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~

~~**[A] 108.5 Stop work orders.**~~
~~Upon notice from the code official, work on any plumbing system that is being performed contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owners authorized agent, or to the person performing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.~~

~~**[A] 108.6 Abatement of violation.**~~
~~The imposition of the penalties herein prescribed shall not preclude the legal officer of the jurisdiction from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or utilization of the plumbing on or about any premises.~~

~~**[A] 108.7 Unsafe plumbing.**~~
~~Any plumbing regulated by this code that is unsafe or that constitutes a fire or health hazard, insanitary' condition, or is otherwise dangerous to human life is hereby declared unsafe. Any use of plumbing regulated by this code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or~~

G6463

~~abandonment is hereby declared an unsafe use. Any such unsafe equipment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.~~

~~**[A] 108.7.1 Authority to condemn equipment.**~~
~~Where the code official determines that any plumbing, or portion thereof, regulated by this code has become hazardous to life, health or property or has become insanitary, the code official shall order in writing that such plumbing either be removed or restored to a safe or sanitary condition A time limit for compliance with such order shall be specified in the written notice. A person shall not use or maintain defective plumbing after receiving such notice. Where such plumbing is to be disconnected, written notice as prescribed in Section 108.2 shall be given. In cases of immediate danger to life or property, such disconnection shall be made immediately without such notice.~~

~~**[A] 108.7.2 Authority to disconnect service utilities.**~~
~~The code official shall have the authority to authorize disconnection of utility service to the building, structure or system regulated by the technical codes in case of an emergency, where necessary, to eliminate an immediate danger to life or property. Where possible, the owner or the owner's authorized agent and occupant of the building, structure or service system shall be notified of the decision to disconnect utility service prior to taking such action. If not notified prior to disconnecting, the owner, the owner's authorized agent or occupant of the building, structure or service systems shall be notified in writing, as soon as practical thereafter.~~

~~**[A] 108.7.3 Connection after order to disconnect.**~~
~~A person shall not make connections from any energy, fuel, power supply or water distribution system or supply energy fuel or water to any equipment regulated by this code that has been disconnected or ordered to be disconnected by the code official or the use of which has been ordered to be discontinued by the code official until the code official authorizes the reconnection and use of such equipment.~~

~~Where any plumbing is maintained in violation of this code, and in violation of any notice issued pursuant to the provisions of this section, the code official shall institute any appropriate action to prevent, restrain, correct or abate the violation.~~

SECTION 109 MEANS OF APPEAL- Reserved.

~~**[A] 109.1 Application for appeal.**~~
~~Any person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.~~

~~**[A] 109.2 Membership of board.**~~
~~The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years, one for 4 years, one for 3 years, one for 2 years and one for 1 year. Thereafter, each new member shall serve for 5 years or until a successor has been appointed.~~

G6463

~~**[A] 109.2.1 Qualifications.**~~
~~The board of appeals shall consist of five individuals, one from each of the following professions or disciplines:~~

~~1. Registered design professional who is a registered architect; or a builder or superintendent of building construction with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.~~

~~2. Registered design professional with structural engineering or architectural experience.~~

~~3. Registered design professional with mechanical and plumbing engineering experience; or a mechanical and plumbing contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.~~

~~4. Registered design professional with electrical engineering experience; or an electrical contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.~~

~~5. Registered design professional with fire protection engineering experience; or a fire protection contractor with not less than 10 years' experience, 5 years of which shall have been in responsible charge of work.~~

~~**[A] 109.2.2 Alternative members.**~~
~~The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership, and shall be appointed for 5 years or until a successor has been appointed.~~

~~**[A] 109.2.3 Chairman.**~~
~~The board shall annually select one of its members to serve as chairman.~~

~~**[A] 109.2.4 Disqualification of member.**~~
~~A member shall not hear an appeal in which that member has any personal, professional or financial interest.~~

~~**[A] 109.2.5 Secretary.**~~
~~The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the chief administrative officer.~~

~~**[A] 109.2.6 Compensation of members.**~~
~~Compensation of members shall be determined by law.~~

~~**[A] 109.3 Notice of meeting.**~~
~~The board shall meet upon notice from the chairman, within 10 days of the filing of an appeal or at stated periodic meetings.~~

~~**[A] 109.4 Open hearing.**~~
~~Hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.~~

G6463

~~[A] 109.4.1 Procedure.~~
~~The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.~~

~~[A] 109.5 Postponed hearing.~~
~~When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.~~

~~[A] 109.6 Board decision.~~
~~The board shall modify or reverse the decision of the code official by a concurring vote of three members.~~

~~[A] 109.6.1 Resolution.~~
~~The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.~~

~~[A] 109.6.2 Administration.~~
~~The code official shall take immediate action in accordance with the decision of the board.~~

~~[A] 109.7 Court review.~~
~~Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law." Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.~~

SECTION 110 TEMPORARY EQUIPMENT, SYSTEMS AND USES – Reserved.

~~[A] 110.1 General.~~
~~The code official is authorized to issue a permit for temporary equipment, systems and uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The code official is authorized to grant extensions for demonstrated cause.~~

~~[A] 110.2 Conformance.~~
~~Temporary equipment, systems and uses shall conform to the structural strength, fire safety, means of egress, accessibility, light, ventilation and sanitary requirements of this code as necessary to ensure the public health, safety and general welfare.~~

~~[A] 110.3 Temporary utilities.~~
~~The code official is authorized to give permission to temporarily supply utilities before an installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate shall comply with the requirements specified for temporary lighting, heat or power in the code.~~

~~[A] 110.4 Termination of approval.~~
~~The code official is authorized to terminate such permit for temporary equipment, systems or uses and to order the temporary equipment, systems or uses to be discontinued.~~

Reasons:
The deleted provisions are contained in the Phoenix Building Construction Code, 2018 IBC-Administrative Provisions. These provisions may conflict with the adopted administrative code and retaining them is redundant.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES** ☐ **NO**
Cost Impact: No cost impact.	

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 202

Submitted by: 2018 International Plumbing Code Committee

202 GENERAL DEFINITIONS

GREASE INTERCEPTOR

Gravity. Plumbing appurtenances of not less than 500 gallons (1893 L) capacity that are installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Separation is accomplished by gravity during a retention time ~~of not less than 30 minutes~~ approved by the Authority Having Jurisdiction.

Reasons:
City of Phoenix and surrounding cities use a minimum 12-minute retention time. The additional requirements establish construction parameters for interceptors.

Cost Impact: No cost impact.
Adopting a 30-minute retention time would increase the size of required grease interceptors, adding extra expense to the purchase and installation of gravity grease interceptors. The additional requirements are carried over from 2012 UPC.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 202 (GRD)

Submitted by: 2018 International Plumbing Code Committee

202 GENERAL DEFINITIONS

GREASE REMOVAL DEVICE, AUTOMATIC (GRD). A plumbing appurtenance that is installed in the sanitary drainage system to intercept free-floating fats, oils and grease from waste water discharge. Such a device operates on a time-or event-controlled basis and has the ability to remove free-floating fats, oils and grease automatically without intervention from the use, except for maintenance. These devices must be able to perform as a gravity interceptor if mechanical or electrical power is lost, and provide continuous separation.

Reasons:
Grease removal devices rely on moving parts and electricity to separate grease from the waste stream; therefore, if moving parts break down or electrical power is lost the device will still be able to operate as a passive device and prevent grease from entering the sewer system.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

Cost Impact: No cost impact.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 312.10.2

Submitted by: 2018 International Plumbing Code Committee

SECTION 312 TESTS AND INSPECTIONS

312.10.2 Testing.
Reduced pressure principle, double check, pressure vacuum breaker, reduced pressure detector fire protection, double check detector fire protection, and spill-resistant vacuum breaker backflow preventer assemblies and hose connection backflow preventers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. ~~The testing procedure shall be performed in accordance with one of the following standards: ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10 or CSA B64.10.1.~~ Testing or maintenance shall be performed by a certified backflow assembly tester or repairer in accordance with ASSE Series 5000, or otherwise approved by the Authority Having Jurisdiction.

Reasons:
1. Allows the AHJ the ability to use the test procedures outlined in the most current edition of the USC Foundation for Cross-Connection Control and Hydraulic Research Manual of Cross-Connection Control, mandated by State Rule R18-4-215 and Phoenix City Code Chapter 37, Article XII. Backflow Prevention.
2. Mirrors identical requirements found in 2018 UPC Section 603.2 "Approval of Devices" or Assemblies.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section: Table 403.1

Submitted by: 2018 International Plumbing Code Committee

SECTION 403 MINIMUM PLUMBING FACILITIES

Delete all service sink requirements from Table 403.1 and footnote "e".

Table 403.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES[a]
(See Sections 403.1.1 and 403.2)

a. The fixtures shown are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.
b. Toilet facilities for employees shall be separate from facilities for inmates or care recipients.
c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted, provided that each patient sleeping unit has direct access to the toilet room and provisions for privacy for the toilet room user are provided.
d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
~~e. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.~~
f. The required number and type of plumbing fixtures for outdoor swimming pools shall be in accordance with Section 609 of the International Swimming Pool and Spa Code.

Reasons:
These revisions are made to provide consistency between amended sections in the 2018 UPC, IPC and Table 2902.1 in the International Building Code.

Cost Impact:
Cost savings to building owner.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 403.2

Submitted by: 2018 International Plumbing Code Committee

403.2 Separate facilities.
Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.
2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
3. Separate facilities shall not be required in mercantile *occupancies* in which the maximum occupant load is 50 ~~100~~ or fewer.
4. Separate facilities shall not be required in business *occupancies* in which the maximum occupant load is ~~25~~ 50 or fewer.

Reasons:
These revisions are made to provide consistency between the 2018 UPC section 422.2, 2012 IBC section 2902.2 and the 2018 IPC to allow for small business and mercantile occupancies to provide a single toilet facility for up to 50 occupants.

Cost Impact:
Cost savings for small mercantile and business occupancies.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC) Section 410.2
Submitted by: 2018 International Plumbing Code Committee **410.2 Small occupancies.** Drinking fountains shall not be required for an occupant load of ~~15~~ 50 or fewer.
Reasons: This revision is made to provide consistency between UPC, IPC and IBC.
Cost Impact: Cost savings.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 424.2

Submitted by: 2018 International Plumbing Code Committee

424.2 Substitution for water closets.
~~In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies.~~ Urinals shall not be substituted for more than 50 percent of the required water closets in all ~~other~~ occupancies.

Reasons:
These revisions are made to provide consistency between the UPC and IPC and the minimum plumbing fixture table that is found in the 2018 International Building Code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 608.7.2

Submitted by: 2018 International Plumbing Code Committee

SECTION 608
PROTECTION OF POTABLE WATER SUPPLY

608.7 Cross connection control.
Cross connections shall be prohibited, except where *approved* backflow prevention assemblies, backflow prevention devices or other means or methods are installed to protect the potable water supply.

608.7.1 Private water supplies.
Cross connections between a private water supply and a potable public supply shall be prohibited.

608.7.2 Secondary backflow protection.
The following activities or facilities shall have a Secondary Reduced Pressure Principle Backflow Prevention assembly installed as close as practicable to each point of service delivery: Hospitals, surgical clinics, medical buildings, laboratories, morgues, mortuaries, veterinary hospitals, animal grooming shops, industrial occupancies, packing plants, slaughter houses, chemical plants, municipal waste treatment facilities, auxiliary water systems, construction water services or as otherwise listed in the most current edition of Phoenix City Code Chapter 37 ARTICLE XII. Backflow Prevention.

Note: Multiple water services which are interconnected onsite shall be provided with not less than a Double Check Valve Assembly at each service connection.

Reasons:
ADEQ, Maricopa County and City of Phoenix Water Department all require secondary protection for the services cited.

Cost Impact: No cost impact.
This amendment carries over from previous code cycles.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 608.8.1

Submitted by: 2018 International Plumbing Code Committee

608.8 Valves and outlets prohibited below grade.
Potable water outlets and combination stop-and-waste valves shall not be installed underground or below grade. A freeze-proof yard hydrant that drains the riser into the ground shall be considered as having a stop-and-waste valve below grade.

Exception: Freeze-proof yard hydrants that drain the riser into the ground shall be permitted to be installed, provided that the potable water supply to such hydrants is protected in accordance with Section 613.13.2 or 613.13.5, and the hydrants and the piping from the backflow preventer to the hydrant are identified in accordance with Section 608.9.

608.8.1 Prohibited Locations.
Backflow prevention devices shall not be installed in pits, underground vaults, or submerged locations.

Reasons:

1. Phoenix City Code Chapter 37-144 (d) regarding backflow assembly accessibility and testing presents design constraints for adequate clearance and drainage in a proposed vault installation. Proposed vault dimensions typically restrict full accessibility to all parts of an assembly.
2. Eliminates the possibility of installing a backflow prevention assembly in a pit or vault.
3. Reflects installation drawings shown in City of Phoenix Standard Details P1351 through P1355.
4. Corresponds to manufacturer's installation instructions which restrict underground installations to AHJ approval.
5. Above ground installation assures that Fire Department personnel have visual access to fire line backflow prevention assembly shut off valves and verifies that the assembly OS&Y (outside stem & yoke) shut-off valves are open by presence of a rising stem.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 608.15.3

Submitted by: 2018 International Plumbing Code Committee

608.15 Location of backflow preventers.
Access shall be provided to backflow preventers as specified by the manufacturer's instructions.

608.15.1 Outdoor enclosures for backflow prevention devices.
Outdoor enclosures for backflow prevention devices shall comply with ASSE 1060.

608.15.2 Protection of backflow preventers.
Backflow preventers shall not be located in areas subject to freezing except where they can be removed by means of unions or are protected from freezing by heat, insulation or both.

608.15.2.1 Relief port piping.
The termination of the piping from the relief port or air gap fitting of a backflow preventer shall discharge to an approved indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance.

608.15.3 Access and clearance.
Access and clearance shall be provided for the required testing, maintenance, and repair. *Access* and clearance shall be in accordance with manufacturer's instructions, and not less than 12 inches between the lowest portion of the assembly and grade, floor, or platform. Elevated installations that exceed 5 feet above the floor or grade shall be provided with a platform capable of supporting a tester or maintenance person. Secondary backflow assemblies shall be installed above ground, as close as practicable to the point of service delivery. A minimum 3-foot (914 mm) clear space shall be maintained for testing, maintenance, and repair.

Reasons:
1. Inserts code language regarding elevated installations.
2. Clarifies that secondary backflow prevention assemblies shall be installed above ground.
3. Clarifies the minimum required clearance dimensions for secondary backflow prevention assemblies.
4. Coordinates with Phoenix Fire Code requirements for access to fire protection equipment.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 704.1

Submitted by: 2018 International Plumbing Code Committee

704.1 Slope of horizontal drainage piping.
Horizontal drainage piping shall be installed in uniform alignment at uniform slopes. The slope of a horizontal drainage pipe shall be not less than that indicated in Table 704.1 except that where the drainage piping is upstream of a grease interceptor, the slope of the piping shall be not less than 1/4 inch per foot (2-percent slope).

TABLE 704.1
SLOPE OF HORIZONTAL DRAINAGE PIPE

SIZE (inches)	MINIMUM SLOPE (inch per foot)
2½ or less	1/4[a]
3 to 6	1/8[a]
8 or larger	1/16[a]

For SI: 1 inch = 25.4 mm, 1 inch per foot = 83.33 mm/m

a. Slopes for piping draining to a grease interceptor shall comply with Section 704.1.

Exception: The Authority Having Jurisdiction may approve a lesser slope for building sewers in lieu of a sewage ejector or pumping station when a registered engineer or architect certifies the building sewer design and its installation, and when the building owner agrees in writing under notary to accept the lesser slope. Certification of the building sewer shall meet the special inspection requirements of the Phoenix Building Construction Code.

Reasons:
This amendment adds the option of using a lesser slope for building sewers based on engineering calculations. The owner will be required to sign under notary that they have accepted the lesser slope. The registrant shall certify the design and final installation through special inspection.

Cost Impact:
This amendment will reduce the costs associated with the previous approval process for low slope sewer installations.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 716

Submitted by: 2018 International Plumbing Code Committee

Delete Section 716 in its entirety.

~~**SECTION 716 REPLACEMENT OF UNDERGROUND BUILDING SEWERS AND BUILDING DRAINS BY PIPE-BURSTING METHODS**~~

~~**716.1 General.**~~
~~This section shall govern the replacement of existing *building sewer* and *building drain* piping by pipe-bursting methods.~~

~~**716.2 Applicability.**~~
~~The replacement of *building sewer* and *building drain* piping by pipe-bursting methods shall be limited to gravity drainage piping of sizes 6 inches (152 mm) and smaller. The replacement piping shall be of the same nominal size as the existing piping.~~

~~**716.3 Pre-installation inspection.**~~
~~The existing piping sections to be replaced shall be inspected internally by a recorded video camera survey. The survey shall include notations of the position of cleanouts and the depth of connections to the existing piping.~~

~~**716.4 Pipe.**~~
~~The replacement pipe shall be made of high-density polyethylene (HDPE) and shall have a standard dimension ratio (SDR) of 17. The pipe shall be in compliance with ASTM F714.~~

~~**716.5 Pipe fittings.**~~
~~Pipe fittings to be connected to the replacement pipe shall be made of high-density polyethylene (HDPE) and shall be in compliance with ASTM D2683.~~

~~**716.6 Cleanouts.**~~
~~Where the existing *building sewer* or *building drain* did not have cleanouts meeting the requirements of this code, cleanout fittings shall be installed as required by this code.~~

~~**716.7 Post-installation inspection.**~~
~~The completed replacement piping section shall be inspected internally by a recorded video camera survey. The video survey shall be reviewed and approved by the code official prior to pressure testing of the replacement piping system.~~

~~**716.8 Pressure testing.**~~
~~The replacement piping system as well as the connections to the replacement piping shall be tested in accordance with Section 312.~~

G6463

Reasons:
This section allows less than the minimum code required installation and inspection standards for drainage and sewer piping. It is not possible to verify slope, alignment, visual water test, connections to fittings, connections to existing pipe, clean bedding and backfill and compliance with manufacturer's installation instructions.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ YES ☒ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 803.1

Submitted by: 2018 International Plumbing Code Committee

803.1 Neutralizing device required for corrosive wastes.
Corrosive liquids, spent acids or other harmful chemicals that destroy or injure a drain, *sewer*, soil or waste pipe, or create noxious or toxic fumes or interfere with the sewage treatment processes shall not be discharged into the plumbing system without being thoroughly ~~diluted,~~ neutralized, or treated by passing through an *approved* ~~dilution or~~ neutralizing device. Such devices shall be ~~automatically~~ provided with a sufficient supply of ~~diluting water or~~ neutralizing medium so as to make the contents noninjurious before discharge into the drainage system. The nature of the corrosive or harmful waste and the method of its treatment ~~or dilution~~ shall be *approved* prior to installation.

Reasons:
Diluting chemical wastes is prohibited by the Clean Water Act, 40 CFR, 403.6 (d).

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1003.2

Submitted by: 2018 International Plumbing Code Committee

1003.2 Approval.
The size, type and location of each interceptor and of each separator shall be designed and installed in accordance with the manufacturer's instructions and the requirements of ~~this section based on the anticipated conditions of use~~ the Authority Having Jurisdiction. Wastes that do not require treatment or separation shall not be discharged into any interceptor or separator.

Reasons:
Phoenix City Code Section 28–13 gives approval authority for all interceptors to the Director of Water Services. This code change is an administrative change to clarify approval authority for these devices in the International Plumbing Code.

Cost Impact: No cost impact.
This amendment is carried over from 2012 International Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1003.3.1

Submitted by: 2018 International Plumbing Code Committee

1003.3.1 Grease interceptors ~~and automatic grease removal devices~~ required.
A grease interceptor ~~or automatic grease removal device~~ shall be required to receive the drainage from fixtures and equipment with grease laden waste ~~located in food preparation areas~~, such as in restaurants, hotel kitchens, hospitals school kitchens, bars, factory cafeterias and clubs. Fixtures and equipment shall include, but are not limited to pot sinks, prerinse sinks; soup kettles or similar devices; wok stations; floor drains or sinks into which kettles are drained; automatic hood wash units. ~~, and dishwashers without prerinse sinks~~. Commercial dishwashers and food waste disposal units shall discharge to a gravity grease interceptor. Grease interceptors ~~and automatic grease removal devices~~ shall receive waste only from fixtures and equipment that allow fats, oils or grease to be discharged. ~~Where lack of space or other constraints prevent the installation or replacement of a grease interceptor, one or more grease interceptors shall be permitted to be installed on or above the floor and upstream of an existing grease interceptor.~~

Reasons:
Automatic grease removal devices are not required or allowed as a standalone device by the City of Phoenix. Installing one or more grease interceptors upstream of an existing interceptor does not increase the flow capacity of the existing grease interceptor.

Cost Impact: No cost impact.
Portions carried over from 2012 IPC.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section, 1003.3.2

Submitted by: 2018 International Plumbing Code Committee

Delete Section 1003.3.2

~~**1003.3.2 Food waste disposers restriction.**~~
~~A food waste disposer shall not discharge to a grease interceptor.~~

Reasons:
Commercial food waste disposers are required to discharge to a gravity grease interceptor, per the City of Phoenix Amended Code 1003.3.1.

Cost Impact: No cost impact.
Preserves changes adopted in 2012 IPC.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1003.3.5

Submitted by: 2018 International Plumbing Code Committee

1003.3.5 Hydromechanical grease interceptors, fats, oils and greases disposal systems and automatic grease removal devices.
Hydromechanical grease interceptors shall be sized in accordance with Section 1003.3.5.1. Fats, oils, and greases disposal systems and automatic grease removal devices shall be sized in accordance with ASME A112.14.3, ASME A112.14.4, ASME A112.14.6, CSA B481.3 or PDI G101. Hydromechanical grease interceptors; fats, oils, and greases disposal systems and automatic grease removal devices shall be designed and tested in accordance with ASME A112.14.3, ASME A112.14.4, CSA B481.1, PDI G101 or PDI G102. Hydromechanical grease interceptors; fats, oils, and greases disposal systems and automatic grease removal devices shall be installed in accordance with the manufacturer's instructions. Where manufacturer's instructions are not provided, hydromechanical grease interceptors; fats, oils, and greases disposal systems and automatic grease removal devices shall be installed, in compliance with the Authority Having Jurisdiction. ~~ASME A112.14.3, ASME A112.14.4, ASME A112.14.6, CSA B481.3 or PDI G101~~.

Reasons:
To clarify hydromechanical grease interceptor sizing for the public and create consistency in sizing with Uniform Plumbing Code.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section: Table 1003.3.5.1

Submitted by: 2018 International Plumbing Code Committee

Amend existing table title, values and add an additional column for fixtures connected.

~~**TABLE 1003.3.5.1**~~
~~**CAPACITY OF GREASE INTERCEPTORS**~~

~~TOTAL FLOW-THROUGH RATING (gpm)~~	~~GREASE RETENTION CAPACITY (pounds)~~
~~4~~	~~8~~
~~6~~	~~12~~
~~7~~	~~14~~
~~9~~	~~18~~
~~10~~	~~20~~
~~12~~	~~24~~
~~14~~	~~28~~
~~15~~	~~30~~
~~18~~	~~36~~
~~20~~	~~40~~
~~25~~	~~50~~
~~35~~	~~70~~
~~50~~	~~100~~
~~75~~	~~150~~
~~100~~	~~200~~

TABLE 1003.3.5.1
HYDROMECHANICAL GREASE INTERCEPTOR SIZING BASED ON FIXTURE COUNT [ab]

Maximum Number of Fixtures Connected	Total Flow-Through Rating (gpm)	Grease Retention Capacity Equal to or Greater Than (pounds)
1	20	40
2	25	50
3	35	70
4	50	100

For SI Units: 1 gallon per minute = 3.785 L/m, 1 pound = 0.454 kg.

a. For total flow-through ratings greater than ~~100 (gpm), double the flow through rating to determine the grease retention capacity (pounds)~~ 50 (gpm) shall be specially approved by the Authority Having Jurisdiction.

b. For installations with more than (4) fixtures, The Authority Having Jurisdiction may permit the use of larger devices.

G6463

Reasons: The purpose of amending this table is to provide the public with prescriptive sizing guidelines for hydromechanical grease interceptors.
Cost Impact: No cost impact. This requirement is an amendment carried forward from the 2012 International Plumbing Code and will align with the 2018 Uniform Plumbing Code.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section, 1003.3.5.3

Submitted by: 2018 International Plumbing Code Committee

1003.3.5 Hydromechanical grease interceptors, fats, oils and greases disposal systems and automatic grease removal devices.

1003.3.5.1 Grease interceptor capacity.
Grease interceptors shall have the grease retention capacity indicated in Table 1003.3.5.1 for the flow-through rates indicated.

1003.3.5.2 Rate of flow controls.
Grease interceptors shall be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow-control device shall be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions.

1003.3.5.3 Interceptor maintenance.
A two-way cleanout shall be installed on the discharge side of all hydromechanical grease interceptors.

Reasons:
The purpose of this code section is to provide an entry point to clean the line downstream of the device and back to the device.

Cost Impact: Minimal cost impact.
To install additional piping for cleanouts. This requirement is an amendment carried forward from the 2012 Uniform and International Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1003.3.7

Submitted by: 2018 International Plumbing Code Committee

1003.3.7 Gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems.
The required capacity of gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems shall be determined by multiplying the ~~peak drain flow into the interceptor in gallons per minute by a retention time of 30 minutes~~ total DFU's x 3-gpm x 12-minute retention time with no food waste disposers or, total DFU's x 3-gpm x 17-minute retention time with food waste disposers. Gravity grease interceptors shall be designed and tested in accordance with IAPMO/ANSI Z1001. Gravity grease interceptors with fats, oils, and greases disposal systems shall be designed and tested in accordance with ASME A112.14.6 and IAPMO/ANSI Z1001. Gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems shall be installed in accordance with manufacturer's instructions and the Authority Having Jurisdiction. Gravity grease interceptors shall comply with the requirements of Chapter 10 or shall be designed by a registered professional engineer and approved by the Authority Having Jurisdiction. 500 gallon interceptors shall have a minimum of two compartments and two man-ways. Interceptors 750 gallons and above shall have a minimum of two compartments and three man-ways. All man-ways shall have a minimum 20" inside diameter. The grade rings (risers) of gravity grease interceptors shall be grouted with shrink proof grout. Gravity grease interceptors shall be installed outside unless otherwise approved by the Authority Having Jurisdiction. Where manufacturer's instructions are not provided, gravity grease interceptors and gravity grease interceptors with fats, oils, and greases disposal systems shall be installed in compliance with the Authority Having Jurisdiction ~~ASME A 112.14.6 AND IAMPMO/ANSI Z1001~~.

Example: Take the total DFU's going to grease waste, multiply by three (3) gallons per minute (GPM), multiply by a 12-minute detention time and this will give the interceptor size in gallons. If there is a disposal, use a 17-minute detention time.

Reasons:
To clarify retention time, construction, and gravity grease interceptor sizing for the public and to align with UPC. Gravity interceptors are generally installed outside to prevent sewer gases and odors from entering the building.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1106.1

Submitted by: 2018 International Plumbing Code Committee

SECTION 1106 SIZE OF CONDUCTORS, LEADERS AND STORM DRAINS

1106.1 General.
The size of the vertical conductors and leaders, building *storm drains*, building storm *sewers*, and any horizontal branches of such drains or *sewers* shall be based on an hourly rainfall rate of three (3) inches per hour. ~~the 100-year hourly rainfall rate indicated in Figure 1106.1 or on other rainfall rates determined from approved local weather data.~~

Reasons:
The 2018 UPC and the 2018 IPC list rainfall rates for Phoenix as 2.2 and 2.5 inches per hour, respectively. It is recommended that a rainfall rate of three (3) inches per hour be used to remain consistent with previous amendments and for ease of using the sizing tables.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC)
Section 1109

Submitted by: 2018 International Plumbing Code Committee

Delete Section 1109 in its entirety.

~~**SECTION 1109 - COMBINED SANITARY AND STORM PUBLIC SEWER**~~

~~**1109.1 General.**~~
~~Where the *public sewer* is a combined system for both sanitary and storm water, the *storm sewer* shall be connected independently to the *public sewer.*~~

Reasons:
The city of Phoenix does not allow for combined sanitary and storm drainage systems. This type of combined system is under the jurisdiction of the city of Phoenix Water Services Department.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Plumbing Code (IPC) Appendices
Submitted by: 2018 International Plumbing Code Committee Adopt **Appendices C & E.**
Reasons: Appendix "C" contains structural safety provisions that match those found in the IBC and the UPC. Appendix "E" provides two methods of water pipe sizing not provided in the body of the code.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Residential Code (IRC)
Chapter 1

Submitted by: 2018 International Residential Code Committee

CHAPTER 1 ADMINISTRATION

Notes:

1. For reserved sections herein, refer to the city of Phoenix Building Construction Code - Administrative Provisions for these code requirements.
2. For sections that remain unchanged from base code, the term "see this section of the 2018 IRC" shall refer to the unchanged base code.

SECTION R101 TITLE, SCOPE AND PURPOSE

R101.1 Title.
These provisions shall be known as the Residential Code for One- and Two-Family Dwellings as amended by the city of Phoenix, and shall be cited as such and will be referred to herein as "this code."

R101.2 Scope.
The provisions of the International Residential Code for One- and Two-Family Dwellings shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, *equipment*, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and *townhouses* not more than three stories above *grade plane* in height, with a separate means of egress, and their *accessory structures* not more than three stories above *grade plane* in height.

Exception: The following shall be permitted to be constructed in accordance with this code. ~~where provided with a residential fire sprinkler system complying with Section P2904:~~

1. Live/work units located in one- and two-family dwellings, or townhouses and complying with the requirements of Section 419 of the International Building Code. Fire suppression required by Section 419.5 of the International Building Code when designed under the International Residential Code for One- and Two-family dwellings shall conform to Section P2904.
2. Owner-occupied lodging houses with five or fewer guestrooms.
3. A care facility with five or fewer persons receiving *custodial care* within a dwelling unit.
4. A care facility with five or fewer persons receiving *medical* care within a dwelling unit.
5. A care facility with five or fewer persons receiving care that ~~are~~ reside within a single-family dwelling.

R101.3 Intent. Reserved.

SECTION R102 APPLICABILITY – Reserved, except as noted below.

R102.5 Appendices. See this section of the 2018 IRC.

G6463

R102.6 Partial invalidity. See this section of the 2018 IRC.

R102.7 Existing structures.
The legal occupancy of any structure existing on the date of adoption if this code shall be permitted to continue without change, except as is specifically covered in this code or the ~~International Property Maintenance Code or the International Fire Code~~ Phoenix Fire Code, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

R102.7.1 Additions, alterations or repairs. See this section of the 2018 IRC.

R102.7.2 Effective code.
All permit applications submitted on or after the effective date of this code shall be subject to the requirements of the codes and appendices adopted by Ordinance.

PART 2 - ADMINISTRATION AND ENFORCEMENT

SECTION R103 DEPARTMENT OF BUILDING SAFETY – Reserved.

SECTION R104 DUTIES AND POWERS OF THE BUILDING OFFICIAL – Reserved.

SECTION R105 PERMITS – Reserved.

SECTION R106 CONSTRUCTION DOCUMENTS – Reserved.

SECTION R107 TEMPORARY STRUCTURES AND USES – Reserved.

SECTION R108 FEES – Reserved.

SECTION R109 INSPECTIONS – Reserved.

SECTION R110 CERTIFICATE OF OCCUPANCY – Reserved.

SECTION R111 SERVICE UTILITIES – Reserved.

SECTION R112 BOARD OF APPEALS – Reserved.

SECTION R113 VIOLATIONS – Reserved.

SECTION R114 STOP WORK ORDER – Reserved.

Reasons:
The deleted provisions are contained in the Phoenix Building Construction Code – Administrative Provisions (Chapter 1 of the International Building Code). These provisions may conflict with the adopted administrative code and retaining them is redundant. The retained sections are specific to one- and two-family residences or townhouses designed under the IRC and differ from the same numbered sections in the IBC.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section AQ102

Submitted by: 2018 International Residential Code Committee

APPENDIX Q, SECTION AQ102

SECTION AQ102 DEFINITIONS

TINY HOUSE. A *dwelling* that is no more than 400 square feet (37 m^2) and no less than 200 square feet (18.58 m^2) ~~or less~~ in floor area excluding *lofts*.

Reasons:
Referencing the Coconino County policies and to keep requirements uniform throughout the state.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R202

Submitted by: 2018 International Residential Code Committee

SECTION R202 DEFINITIONS

[RB] FIRE SEPARATION DISTANCE. The distance measured from the building face to one of the following:

1. To the closest interior *lot line*.
2. To the centerline of a street, an alley or a public way.
3. To an imaginary line between two buildings on the *lot*. The distance shall be measured at the right angle from the face of the wall framing.

Reasons:
This establishes a more exact point for measurement. Construction documents use this point for measuring distances.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC) Section R202
Submitted by: 2018 International Residential Code Committee **SECTION R202 DEFINITIONS** **[RB] STANDARD PLANS.** Plans authorized by the Planning & Development Department to be used in construction on a repetitive basis. Standard plans may include options allowing variations to the building design that may alter the interior and exterior appearance.
Reasons: The definition allows standard plans to be used in lieu of separate submittals for each production home.
Cost Impact: The use of standard plans reduces the cost for the department and the home builders.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R301.1.4

Submitted by: 2018 International Residential Code Committee

R301.1.4 Access to a public way.
All buildings shall be located on lots fronting a public way or other approved access to a public way. Such approved access shall be recorded with the county of Maricopa, with the approval of the building official or recorded on the approved plat in accordance with the Phoenix city code. The access shall be in compliance with the Phoenix Fire Code.

Reasons:
Clarifies access requirements for all lots. Carried forward from the previous amendments.

Cost Impact: No cost impact.
No additional cost impact above what was approved in the 2006 and 2012 amendments. The same text is used in this proposal as approved on Dec. 1, 2006.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R301.1.5

Submitted by: 2018 International Residential Code Committee

R301.1.5 Lot corner identification.
In construction applications where legally surveyed lot corner identification markers are not readily verifiable or are missing, the building official, when deemed necessary, shall require lot boundary markers to be surveyed and permanently identified in accordance with State law at the owner's or applicant's expense. The survey shall be executed by a registrant licensed to do such work by the Arizona State Board of Technical Registration.

Reasons:
Often construction is started without locating the legal corners of a lot, leading to disputes after substantial completion of the work. This requirement would limit such cases and ensure compliance to both the Residential Code and the Zoning Ordinance.

Cost Impact: Minimal cost impact.
While there could be a possible cost for a survey, this code amendment could save costs by preventing construction in a prohibited location. The same text is used in this proposal as approved on 12-01-06 and 05-15-13.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R301.2 and Table R301.2(1)

Submitted by: 2018 International Residential Code Committee

R301.2 Climatic and geographic design criteria.
Buildings shall be constructed in accordance with the provisions of this code as limited by the provisions of this section. ~~Additional criteria shall be established by the local jurisdiction and set forth in Table R301.2(1)~~

TABLE R301.2(1)

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA (Due to space limitations, the table could not be reproduced; only the values are listed)	
Ground snow load[o]:	N/A
Wind Speed[d] (mph):	115
Topographic effects[k]:	NO
Special wind region[l]:	NO
Windborne debris zone[m]:	NO
Seismic Design Category[f]:	B
Weathering[a]:	Negligible
Frost line depth[b]:	0
Termite[c]:	Moderate to heavy
Winter design temperature[e]:	None to slight
Ice barrier underlayment required[h]:	NO
Flood Hazards[g]:	See Phoenix city code
Air freezing index[i]:	N/A
Mean annual temperature[j]	71.2° F

MANUAL J DESIGN CRITERIA[N]
Refer to Section M1401.3 and N1103.7 of the 2018 IRC.
~~Elevation:~~
~~Latitude:~~
~~Winter heating:~~
~~Summer cooling:~~
~~Altitude correction factor:~~
~~Indoor temperature design:~~
~~Design temperature cooling:~~
~~Heating temperature difference:~~
~~Cooling temperature difference:~~
~~Wind velocity heating:~~
~~Wind velocity cooling:~~
~~Coincident wet bulb:~~
~~Daily range:~~
~~Winter humidity:~~
~~Summer humidity:~~

G6463

For SI: 1 pound per square foot = 0.0479 kPa, 1 mike per hour = 0.447 m/s.

a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(4). The grade of masonry units shall be determined from ASTM C34, C55, C62, C73, C90, C129, C145, C216 or C652.
b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1), the frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(5) A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
e. The outdoor design dry-bulb temperature shall be selected from the columns of $97^1/_2$-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official. [Also see Figure R301.2(1).]
f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdictions' entry into the National Flood Insurance Program (dated of adoption of the fires code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and the (c) the panel numbers and dates of the currently effective FIRM' and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
h. In accordance with Sections R905.1.2, R905.4.3.1, R905.5.3.1m R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise the jurisdiction shall fill in this part of the table with "NO."
i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (FG-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° F)."
j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° F)."
k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
l. In accordance with Figure R301.2(5) A, where there are local historical data documenting unusual wind conditions, the jurisdiction shall fill in the part of the table with "YES" and identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
m. In accordance with Section R301.2.1.2 the jurisdiction shall indicate the wind-borne debris wind zones(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
~~n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b form ACCA Manual J or established criteria determined by the jurisdiction.~~
o. The jurisdiction shall fill in this section of the table using the Ground Snow Loads.

G6463

Reasons: In order for this document to be adopted, the completed referenced table has to be a part of it. The deleted sentence is not required as the amendment refers to another code section rather than providing data.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☐ YES ☒ NO

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R301.2.4

Submitted by: 2018 International Residential Code Committee

R301.2.4 Floodplain construction.
Buildings and structures constructed in whole or in part in flood hazard areas ~~(including A or V Zones) as established in Table R301.2(1), and substantial improvement and repair of substantial damage of buildings and structures in flood hazard areas~~, shall be designed and constructed in accordance with ~~Section R322.~~ Chapter 32B of the *Phoenix City Code*. ~~Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Building and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.~~

~~**R301.2.4.1 Alternative provisions.**~~
~~As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and limitations therein.~~

Reasons:
The city's floodplain ordinance is contained in Chapter 32B of the Phoenix city code.

Cost Impact: No cost impact.
Current city code requirements are in place.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Table R301.5

Submitted by: 2018 International Residential Code Committee

Table R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS
(in pounds per square foot)

USE	LIVE LOAD
Habitable attics and attics served with fixed stairs	~~30~~ 40
Sleeping rooms	~~30~~ 40

Reasons:
Habitable attics and sleeping rooms can be used as floor space and 40 psf more closely reflects floor live loading. The code change reflects the changes made to the 2018 IBC and is recommended by the Structural Sub-Committee.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R302.2.2

Submitted by: 2018 International Residential Code Committee

R302.2.2 Common walls.
Common walls separating *townhouses* shall be assigned a fire resistance rating in accordance with Item 1 or 2. The common wall shared by two townhouses shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with section R302.4.

1. Where a fire sprinkler system in accordance with P2904 is provided, the common wall shall not be less than a 1-hour fire resistance rated wall assembly tested in accordance with ASTM E119, UL 263 or section 703.3 of the *International Building Code* (as amended by the City of Phoenix).
2. Where a fire sprinkler system in accordance with P2904 is not provided, the common wall shall not be less than a 2-hour fire resistance rated wall assembly tested in accordance with ASTM E119, UL 263 or section 703.3 of the *International Building Code* (as amended by the City of Phoenix).

Reasons:
Clarifies the IBC is the amended version.

Cost Impact: No cost impact.
This amendment follows our current policy and procedures.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R302.5.1

Submitted by: 2018 International Residential Code Committee

R302.5.1 Opening protection.
Openings from a private garage or carport directly into a room used for sleeping purposes or a hallway that only accesses sleeping room(s) shall not be permitted. Other openings between the garage or carport and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors or windows, equipped with a self-closing or automatic-closing device.

Reasons:
Whether a garage or carport, the rooms used for sleeping purposes should be protected from the hazard inherent in this use. Industry is supportive of the self-closing provisions to provide an additional level of safety.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☒ **NO** (parts)

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R303.10

Submitted by: 2018 International Residential Code Committee

R303.10 Required heating and cooling.
~~Where the winter design temperature in Table R301.2(1) is below 60° F (16° C)~~, Every *dwelling unit* shall be provided with heating and cooling facilities capable of maintaining ~~a~~ room temperatures ~~of not less than~~ between ~~68° F (20° C)~~ 70° F (21° C) and 90° F (50° C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in habitable rooms ~~at the design temperature~~. The installation of one or more portable space heaters or portable space coolers shall not be used to achieve compliance with this section.

Reasons:
The intent of this proposed amendment is to recognize that the cooling season in Phoenix is the dominant design condition. The City Council of Phoenix included provisions for space cooling in all residential dwellings during the update of the Neighborhood Preservation Ordinance approved on June 16, 1998. The cooling requirement for dwellings was incorporated into the adoption of the 1997 Uniform Building Code and was approved with an effective date of March 12, 1999. The adoption of the 2003 I-codes included mandatory heating and cooling for occupied interior spaces. An exception allowed for no heating and cooling when the primary purpose was not associated with human comfort, such as warehouses. The 2006 and 2012 I-codes were amended by Phoenix to require heating and cooling in habitable spaces. This proposed amendment re-establishes the City Council mandate to provide heating and cooling in residential dwellings.

Cost Impact:
There is a cost associated with providing cooling, but this has been a requirement for over 19 years and is accepted practice. The verbiage is consistent with the Neighborhood Preservation Ordinance.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R310.4

Submitted by: 2018 International Residential Code Committee

Section R310.4 Bars, grilles, covers and screens.
Where bars, grilles, covers, screens or similar devices are placed over emergency escape and rescue openings, area wells, or window wells, the minimum net clear opening size shall comply with sections R310.2.1 through R310.2.3 and such devices shall be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that required for the normal operation of the escape and rescue opening. The dwelling shall be equipped with smoke alarms installed in accordance with Section R314.

Reasons:
Retains current requirements for smoke detectors when quick release security bars over bedroom windows are installed. Carryover.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R313

Submitted by: 2018 International Residential Code Committee

SECTION R313 AUTOMATIC FIRE SPRINKLER SYSTEMS

R313.1 Townhouse automatic fire sprinkler systems.
An automatic residential fire sprinkler system shall be installed in townhouses.

Exception: An automatic residential fire sprinkler system shall not be required where additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed when not required, in accordance with section 903.1 of the Phoenix Fire Code.

R313.2 One- and two-family dwellings automatic fire sprinkler systems.
An automatic residential fire sprinkler system shall be installed in one- and two-family *dwellings* when required, in accordance with section 903.1 of the Phoenix Fire Code.

Exception: An automatic residential fire sprinkler system shall not be required for *additions* or *alterations* to existing buildings that are not already provided with an automatic residential sprinkler system when not required, in accordance with section 903.1 of the Phoenix Fire Code.

Reasons:
PFC Section 903.1 (Bret Tarver Fire Sprinkler Ordinance) is the current governing standard for when fire sprinklers are required in buildings. A.R.S. Title 9, Chapter 7, Section 9-807, prohibits municipalities from adopting any ordinance that requires installation of fire sprinklers in any residential building containing not more than two (2) residences. This provision does not apply to any ordinance adopted prior to December 31, 2009, or townhouses, which are defined as having three (3) or more residences in a single building.

Cost Impact: No cost impact.

Approved in previous 2015 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Residential Code (IRC)
Section 320.2

Submitted by: 2018 International Residential Code Committee

SECTION R320 ACCESSIBILITY

R320.2 Scope.
Where there are four or more *dwelling* units or sleeping units in a single structure, the provisions of Chapter 11 of the *International Building Code* for Group R-3 shall apply.

R320.2.1 Guestrooms.
A *dwelling* with guestrooms shall comply with the provisions of Chapter 11 of the *International Building Code* for Group R-3. For the purpose of applying the requirements of Chapter 11 of the *International Building Code*, guestrooms shall be considered to be sleeping units.

Exceptions: Owner-occupied lodging houses with five or fewer guestrooms constructed in accordance with the *International Residential Code* are not required to be accessible.

R320.2 Model home complex.

R320.2.1 No-step entrance.
At least one single family dwelling as part of a Model Home Complex, as described in the Phoenix Zoning Ordinance, shall have a no-step entrance as described in Section R320.2.2.

R320.2.2 Dwellings.
Residential single family dwellings, as part of a Model Home Complex, as described in the Zoning Ordinance, shall have a route of travel as described herein. The route of travel shall be a continuous no–step path connecting each subdivision sales office or public way to the primary entry.

The route of travel shall conform to the following requirements:

1. The running slope shall not exceed 1:12.
2. Routes of travel complying with this section are not required to have handrails.
3. The route of travel shall be a firm, stable, and slip resistant surface for a minimum width of 36 inches (914 mm) continuous and clear for a height of 7 feet (2.134 m) above the route.
4. The entry to the model home shall have a maneuvering space of a minimum 48 inches (1219 mm) by 48 inches (1219 mm) on the exterior side of the entry door.
5. The threshold at the entry shall not exceed ½ inch (13 mm).
6. The no step entry shall be identified by a readily viewable sign.

G6463

Reasons:
To provide a somewhat accessible route to the model home to allow access without traversing steps or steep slopes. This requirement was approved by the Development Advisory Board on May 17th, 2001 and has been in the Phoenix Building Construction Code since that time.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC) Section R322
Submitted by: 2018 International Residential Code Committee **R322 Flood resistant construction.** Delete the text of this section of the IRC and replace with: All proposed development in a FEMA designated Flood Hazard Area shall conform to the requirements of Chapter 32B of the Phoenix City Code.
Reasons: The city's floodplain ordinance is contained in Chapter 32B of the Phoenix City Code.
Cost Impact: No cost impact. Current city code requirements are in place.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R328

Submitted by: 2018 International Residential Code Committee

R328 FIREPLACE RESTRICTIONS

R328.1 Definitions.

For purposes of this article, the following words and terms shall be defined as follows:

FIREPLACE: A built-in-place masonry hearth and fire chamber or a factory-built appliance, designed to burn solid fuel or to accommodate gas or electric log insert or similar device, and which is intended for occasional recreational or aesthetic use, not for cooking, heating, or industrial processes.

SOLID FUEL: Includes, but is not limited to, wood, coal, or other non-gaseous or non-liquid fuels, including those fuels defined by the Maricopa County Air Pollution Control Officer as inappropriate fuel" to burn in residential wood burning devices.

WOODSTOVE: A solid-fuel burning heating appliance including a pellet stove, which is either freestanding or designed to be inserted into a fireplace.

R328.2 General.

In accordance with the Phoenix City Council adopted Ordinance G-4062, on or after December 31, 1998, no person, firm or corporation shall construct or install a fireplace or a wood stove, and the Building Official shall not approve or issue a permit to construct or install a fireplace or a wood stove, unless the fireplace or wood stove complies with one of the following:

1. A fireplace which has a permanently installed gas or electric log insert;
2. A fireplace, wood stove or other solid fuel burning appliance which has been certified by the United States Environmental Protection Agency as conforming to 40 Code of Federal Regulations part 60, subpart AAA;
3. A fireplace, woodstove or other solid fuel burning appliance that has been tested and listed by a nationally recognized testing agency to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA;
4. A fireplace, wood stove or other solid fuel burning appliance which has been determined by the Maricopa County Air Pollution Control Officer to meet performance standards equivalent to those adopted by 40 Code of Federal Regulations part 60, subpart AAA, as in effect on July 1, 1990.
5. A fireplace which has a permanently installed wood stove insert which complies with subparagraph 2, 3, or 4 above.

G6463

Exceptions: The following installations are not regulated and are not prohibited by this section:

1. Furnaces, boilers, incinerators, kilns, and other similar space heating or industrial process equipment.
2. Cook stoves, barbecue grills, and similar appliances designed primarily for cooking.
3. Fire pits, barbecue grills, and other outdoor fireplaces.

R328.3 Fireplace or wood stove alterations prohibited.

Fireplaces constructed or installed on or after December 31,1998, that contain a gas or electric log insert or a woodstove insert, shall not be altered to directly burn wood or any other solid fuel. On or after December 31, 1998, no person, firm, or corporation shall alter a fireplace, woodstove, or other solid-fuel burning appliance in any manner that would void its certification or operational compliance with the provisions of this section.

Fireplaces constructed or installed on or after December 31, 1998, shall not be altered without first obtaining a permit from the City to ensure compliance with this section.

Reasons:
This amendment is included to comply with Chapter 40 of the Phoenix City Code and with Maricopa County Air Pollution Control regulations.

Cost Impact: No cost impact.
Matches existing regulations.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R401.3

Submitted by: 2018 International Residential Code Committee

R401.3 Drainage.
Delete the text of this section of the IRC and replace with: All drainage shall conform to the requirements of Chapter 32A of the Phoenix City Code.

Reasons:
The city's Grading and Drainage ordinance is contained in Chapter 32A of the Phoenix City Code.

Cost Impact: No cost impact.
Current city code requirements are in place.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Residential Code (IRC)
Table R401.4.1

Submitted by: 2018 International Residential Code Committee

R401.4.1 Geotechnical evaluation.
In lieu of a complete geotechnical evaluation the load-bearing values in Table R401.4.1 shall be assumed. A complete geotechnical evaluation is required for presumptive load-bearing values greater than 1500 pounds per square foot (72kPA).

TABLE R401.4.1
PRESUMPTIVE LOAD-BEARING
VALUES OF FOUNDATION MATERIALS[a]

CLASS OF MATERIAL	LOAD-BEARING PRESSURE (pounds per square foot)
Crystalline bedrock	12,000
Sedimentary and foliated rock	4,000
Sandy gravel and gravel (GW and GP)	3,000
Sand, silty sand, clayey sand, silty gravel and clayey gravel (SW, SP, SM[c], SC[c], GM, and GC)	~~2,000~~ 1500
Clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL[c], ML, MH, and CH[c])	~~1,500~~ 1000

For SI: 1 pound per square foot = 0.0479kPa

a. Where soil tests are required by Section R401.4, the allowable bearing capacities of the soil shall be part of the recommendations.
b. Where the building official determines that in-place soils with an allowable bearing capacity of less than ~~1500~~ 1000 psf are likely to be present at the site, the allowable bearing capacity shall be determined by a soils investigation.
c. This soil classification may be prone to expansive, collapsible or cyclic properties with changes to soil moisture content.

Reasons:
The geography of Phoenix incorporates native desert as well as previously farmed land that exhibit inconsistent bearing values. Geotechnical engineers practicing in the Phoenix area have provided their professional opinions and recommend the adjustment in the bearing values. This amendment is intended to further assist the design community in clarifying the soil load-bearing values that may be presumed without conducting a geotechnical investigation. Footnote c has

G6463

been added to several soil classifications at the request of the geotechnical engineering and structural engineering communities, to highlight the use of presumptive bearing values that may not be appropriate due to their detrimental soil properties.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R403.1.1

Submitted by: 2018 International Residential Code Committee

SECTION R403 FOOTINGS

R403.1.1 Minimum size.
Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(1). The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be at least 6 inches (152 mm) in thickness, T. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2, and Figures R403.1(2) and R403.1(3).

Exception: For enclosure of existing carport and patio covers, non-bearing wood framed exterior walls within the projection of the existing roof may be supported on an existing, uncracked concrete slab. The minimum slab thickness shall be 3.5 inches and the construction shall comply with the requirements of R317 for protection against decay.

Reasons:
This will allow enclosure of existing covered areas without requiring construction of a new footing. The only loads on the base of the wall are lateral loads from wind, which can be resisted by existing slab.

Cost Impact:
Reduce cost for carport and patio enclosures.

Approved in previous 2012 Code Adoption process: ☒ YES ☐ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R502.3.1

Submitted by: 2018 International Residential Code Committee

SECTION R502 ALLOWABLE JOIST SPANS

R502.3.1 Sleeping areas and attic joists.
Table R502.3.1(~~1~~ 2) shall be used to determine the maximum allowable span of floor joists that support sleeping areas and *attics* that are accessed by means of a fixed stairway in accordance with Section R311.7 provided that the design live load does not exceed ~~30~~ 40 pounds per square foot (~~1.44~~ 1.92 kPa) and the design dead load does not exceed 20 pounds per square foot (0.96 kPa). The allowable span of ceiling joists that support *attics* used for limited storage or no storage shall be determined in accordance with Section R802.4.

Reasons:
This will coordinate the required design table with the proposed amendment to Table R301.5 for live loads in sleeping areas.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section R606.12

Submitted by: 2018 International Residential Code Committee

R606.12 Seismic requirements.
All new masonry elements shall meet the minimum reinforcing requirements of R606.12.2.2.3, R606.12.2.3.2 and R606.12.2.3.3. In addition, the seismic requirements of this section shall apply to the design of masonry and the construction of masonry building elements located Seismic Design Category D_0, D_1, or D_2. Townhouses in Seismic Design Category C shall comply with the requirements of Section R606.12.2. These requirements shall not apply to glass unit masonry conforming to Section R610, anchored masonry veneer conforming to Section R703.8 or adhered masonry veneer conforming to Section R703.12.

Reasons:
This will require minimum reinforcing in all new masonry construction. This reinforcing has been required in previous editions of the Phoenix Construction Code at the recommendation of the Structural Engineers Association of Arizona as an inexpensive way to significantly increase the safety of masonry construction. The code change reflects the changes made to the 2018 IBC and is recommended by the Structural Sub-Committee.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section N1101.4.1

Submitted by: 2018 International Residential Code Committee

N1101.4.1 RESNET testing & inspection protocol.
The Residential Energy Services Network (RESNET) Mortgage Industry National Home Energy Rating System, Standards Protocol for third party testing and inspections, shall be deemed to meet the requirements of sections R402.4.1.1, R402.4.1.2 and R403.2.2. and shall meet the following conditions:

1. Third Party Testing and Inspections shall be completed by RESNET certified Raters or Rating Field Inspectors and shall be subject to RESNET Quality Assurance Field Review procedures.
2. Sampling, in accordance with Chapter 6 of the RESNET Standards shall be performed by Raters or Rating Field Inspectors working under a RESNET Accredited Sampling Provider.
3. Third Party Testing is required for the following items:

    a. N1102.4.1.1 – Building Envelope – Thermal and Air Barrier Checklist
    b. N1102.4.1.2 – Testing – Air Leakage Rate
    c. N1103.3.2 – Sealing – Duct Tightness

4. The other requirements identified as "mandatory" in Chapter 11 shall be met.
5. Alternate testing and inspection programs and protocols shall be allowed when approved by the Code Official.

Reasons:
These provisions were contained in the previously adopted 2012 IRC and mirror requirements in the 2018 IECC Residential Energy Section.

Previous Substantiation:
1. Maricopa Association of Governments Building Code Committee has reviewed the Third-Party Testing and Inspection procedures of the Residential Energy Services Network (RESNET) with the intent to promote and present uniform guidelines for the acceptance of the RESNET Mortgage Industry National Home Energy Rating System Standards (Standards) as an "Above Code Program" for the jurisdictions within Maricopa County; and
2. The inspection and testing required under the 2018 International Residential Code (IRC) and the 2018 International Energy Conservation Code (IECC) is currently being performed under the RESNET Standards for home builders participating in the Environmental Protection Agency's ENERGY STAR for Homes Program; and
3. The RESNET Standards (Chapters 3,6, and 8) are in the process of being certified as ANSI Standards; and
4. The utilization of the RESNET Standards would assure home builders of the ability to continue a testing and inspection process that has been proven to be successful in saving energy while protecting the health, safety and welfare of the public in the building code sections covered by the program; and

G6463

5. The committee has researched and discussed this issue and determined that the intent of the code is being met by the acceptance of the testing and inspection protocols of the RESNET Standards.
Cost Impact: There will be significant cost savings for the large production home builders.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section N1103.3.1

Submitted by: 2018 International Residential Code Committee

N1103.3 Ducts.
Ducts and air handlers shall be installed in accordance with Sections R403.3.1 through R403.3.7.

N1103.3.1 Insulation (prescriptive).
Supply and return ducts in attics shall be insulated to an *R*-value of not less than R-8 for ducts 3 inches (76 mm) in diameter and larger and not less than R-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the *building* shall be insulated to not less than R-6 for ducts 3 inches (76 mm) in diameter and not less than R-4.2 for ducts smaller than 3 inches (76 mm) in diameter.

Exception: ~~Ducts or portions thereof located completely inside the *building thermal envelope.*~~

1. Ducts or portions thereof located completely inside the building thermal envelope.
2. Supply ducts may be insulated to a minimum of R-6 when one or more of the following conditions are met;

2.1 Minimum SEER rating of space heating/cooling system is increased to 15.
2.2 Maximum U-factor is decreased to 0.35 and maximum SHGC is decreased to 0.22 for all fenestration products.
2.3 Wall cavity insulation minimum R-value is increased to R-19.
2.4 Residential buildings that meet the requirements of sections R102.1.1 or R405.
2.5 Residential buildings with attic radiant barriers in accordance with ASTM C1313, installed in accordance with ASTM C1743.

Reasons:
These provisions were adopted in 2012.

Previous substantiation: The Arizona Homebuilders Association proposed efficiency improvements in heating/cooling equipment, glazing product performance, and increased thermal envelope insulation as an alternative to providing R-8 duct insulation required by the IECC. A Code Modification was approved in July 2006 to allow a trade-off to the use of R-6 insulation on HVAC ducts in residential attics. Energy simulation software was used to compare cost savings for each of the proposed areas of concentration. The benefits from improving the efficiency of the air conditioning system, window thermal resistance to heat gain, and wall cavity insulation were shown to surpass cost savings from increasing HVAC duct insulation. Based on these findings, staff recommendation is that this amendment be adopted for use in the 2012 IECC and the 2012 IRC Chapter 11.

G6463

** A public proposal was submitted to include attic radiant barriers in the list of trade-offs for the R-8 duct insulation. Simulation software was used to demonstrate cost savings when radiant barriers and R-6 insulation were incorporated, as compared to no radiant barriers and R-8 duct insulation. Based on these positive savings results and the requirement for listed products, staff recommends that this previously approved proposal be modified to include radiant barriers in the list of exceptions.
Cost Impact: Builders could realize construction cost savings or net – neutral cost savings.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Table N1106.4

Submitted by: 2018 International Residential Code Committee

TABLE N1106.4 (R406.4)

MAXIMUM ENERGY RATING INDEX	
CLIMATE ZONE	**ENERGY RATING INDEX**
1	57
2	~~57~~ 64
3	57
4	62
5	61
6	61
7	58
8	58

a. Where on-site renewable energy is included for compliance using the ERI analysis of Section N1106.4, the building shall meet the mandatory requirements of Section N1106.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table N1102.1.2 or Table N1102.1.4.

Reasons:
In 2012, the Phoenix Building Construction Code had set the HERS score at 73, In 2016, it was lowered to 64. 2017 permit records of home testing results show an average score of 62.5. The committee recommends the score remain at 64. This change aligns this IRC section with IECC Table R406.4.

Cost Impact:

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section E3901.9

Submitted by: 2018 International Residential Code Committee

E3901.9 Basements, garages and accessory buildings.
Not less than one receptacle outlet, in addition to any provided for specific equipment, shall be installed in each separate unfinished portion of a basement; in each vehicle bay at not less than (18) inches (457 mm) and not more than 5.5 feet (1676 mm) above the floor in attached garages; in each vehicle bay at not less than (18) inches (457 mm) and not more than 5.5 feet (1676 mm) above the floor in detached garages that are provided with electric power and in accessory buildings that are provided with electric power. [210.52(G)(1), (2), and (3)]

Reasons:
2018 IRC Section G2408.2 (305.3) Elevation of ignition source. This section states that Equipment and appliances having an ignition source shall be elevated such that the source of the ignition is not less than 18 inches (457 mm) above the floor in hazardous locations and public garages, private garages, repair garages, motor fuel dispensing facilities and parking garages.

Many private/dwelling garages are utilized to work on vehicles or other equipment that contain volatile fuels or other liquids and gases. Other jurisdictions around the United States have amended this section of NEC article 210.52 to address this situation. The receptacles outlets, if installed below the 18 inches, could possibly become an ignition source which could cause fire, property damage, injury, or death if these volatile liquids or gases are present.

This proposed amendment to the 2018 IRC is to mirror the proposed amendment to the 2017 NEC article 210.52(G)(1), which has been voted on by the 2017 NEC code adoption committee. The 2017 NEC code adoption committee voted to accept the amendment as written to add the minimum receptacle height.

Cost Impact: No cost impact.
Receptacle outlets are required in the dwelling garages as per the NEC and IRC. All wiring and associated electrical equipment do not change from the NEC and IRC standard requirement.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section E3902.14

Submitted by: 2018 International Residential Code Committee

E3902.14.1 Indoor damp locations.
125-volt, single-phase, 15 and 20 ampere receptacles installed in indoor damp locations shall have ground-fault circuit-interrupter protection for personnel.

Reasons:
Added safety in damp locations indoors.

National Electrical Code, (NEC) Article 100 defines Damp Location as follows: "Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture.

Informational Note: Examples of such locations include partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns, and some cold-storage warehouses".

Since receptacles located in an outdoor damp location require GFCI protection, logically, receptacles located in an indoor damp location should also be provided with the same GFCI protection.

This proposal is in line with a proposal to add this item to the 2017 NEC.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Residential Code (IRC)
Section E3908.8

Submitted by: 2018 International Residential Code Committee

E3908.8 Types of equipment grounding conductors.
The equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of the following:

4. Electrical metallic tubing with an additional equipment grounding conductor sized in accordance with table E3908.12.

Reasons:
This amendment requires that specific wiring methods include an individual equipment-grounding conductor. This amendment is more restrictive than the NEC, but provides for a higher degree of equipment grounding safety. The intent of the amendment is to supplement the low impedance path to ground and to attain reasonable compliance with requirements for the performance of the fault current path.

Note: This amendment is, essentially, a continuation of the amendment to the currently adopted code, 2011 NEC, with updated code language from the 2018 IRC.

Cost Impact: Minimal cost impact.
Due to additional grounding conductor.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to the 2018 International Residential Code (IRC)
Appendix Adoption

Submitted by: 2018 International Residential Code Committee

APPENDIX A – SIZING AND CAPACITIES OF GAS PIPING
Reason: Provides guidance on pipe sizing with all the methods of sizing.

APPENDIX B – SIZING OF VENTING SYSTEMS
Reason: Provides a guide for inspectors and customers.

APPENDIX C – EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT SYSTEMS
Reason: Good graphical representation of vent terminals.

APPENDIX E – MANUFACTURED HOUSING USED AS DWELLINGS AND FACTORY BUILT BUILDINGS
Reason: Continues factory-built building requirements.

APPENDIX G – PIPING STANDARDS FOR VARIOUS APPLICATIONS

APPENDIX H – PATIO COVERS
Reason: Continuation of less restrictive structural requirements for patio covers.

APPENDIX J – EXISTING BUILDINGS AND STRUCTURES
Reason: Allows additional design flexibility when modifying an existing building.

APPENDIX K – SOUND TRANSMISSION
Reason: Incorporates Phoenix Amendment for sound mitigation around City airport.

APPENDIX N – VENTING METHODS
Reason: Provides useful guidance for residential plumbing situations.

APPENDIX P – SIZING OF WATER PIPING SYSTEMS
Reason: Provides useful guidance for pipe sizing.

APPENDIX Q – TINY HOUSES
Reason: Useful information for inspectors and customers.

APPENDIX R – LIGHT STRAW-CLAY CONSTRUCTION
Reason: New appendix with development options.

APPENDIX S – STRAWBALE CONSTRUCTION
Reason: New appendix with development options.

APPENDIX T – SOLAR-READY PROVISIONS – DETACHED ONE- AND TWO-FAMILY DWELLINGS
Reason: New appendix with development options and guidance for builders.

G6463

Reasons: See above.
Cost Impact: Minimal cost impact. There is less restriction and more flexibility in the model code requirements, therefore the cost impact should be slightly less.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO** Exception is new Appendices Q and R.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 International Residential Code (IRC)
Appendix E

Submitted by: 2018 International Residential Code Committee

Replace entire Appendix E with the following text:

APPENDIX E MANUFACTURED HOUSING USED AS DWELLINGS AND FACTORY BUILT BUILDINGS

SECTION AE101 SCOPE

AE101.1 General.
Factory-built buildings, manufactured homes and mobile homes shall comply with applicable laws of the State of Arizona and this code. The provisions of this section for factory-built buildings, manufactured homes and mobile homes take precedence over other code provisions which are inconsistent therewith. The general provisions of this code shall apply in all areas where there are not specific provisions in this section.

AE101.1.1 Arizona law.
The construction of factory-built buildings and manufactured homes is regulated by the State of Arizona, Arizona Revised Statutes A.R.S., Section 41-2141 et seq, and is not included in this Code.

AE101.1.2 Manufactured home installation.
The installation of manufactured homes and mobile homes, including connection to utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for Phoenix Zoning Ordinance administration purposes. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

AE101.1.3 Factory-built building installation.
The installation of factory-built buildings including their foundations and direct connection to sewer, water, gas or electric utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for compliance with Phoenix Zoning Ordinance requirements and with building code requirements pertaining to location on property and setback from other buildings or structures on the property. A City of Phoenix building permit is required for all on-site construction (except foundations) including connection to or alteration of existing on-site sewer, water, gas or electrical systems, and for construction of all site improvements required by the Zoning Ordinance, such as design review elements, signs, parking, landscaping, site amenities and disabled accessibility. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

AE101.1.4 Alterations and additions.
Repairs, alterations and site-built additions to factory-built buildings, mobile homes and manufactured homes are regulated by this code and by the Zoning Ordinance and require City of Phoenix permits.

G6463

AE101.1.5. Occupancy and use.
Occupancy and use of a factory built-building, manufactured home or mobile home is prohibited without first obtaining inspection approval and a certificate of occupancy from the building official, to verify compliance with the Zoning Ordinance and other applicable city codes and ordinances.

AE101.2 Flood hazard areas.
New and replacement manufactured homes to be installed in *flood hazard areas* as established in Table R301.2(1) shall meet the applicable requirements of Section R322.

SECTION AE102 REPAIRS, ALTERATIONS, AND ADDITIONS

AE102.1 Repairs, alterations, and additions.
No person shall repair, alter or add on to a factory-built building, manufactured home or a mobile home after the unit has been installed, without first having obtained a permit from the building official for the specific work to be performed. All such work shall comply with the requirements of this Code. Additions and alterations shall be structurally separated from the manufactured home.

Exception: A structural separation need not be provided when structural plans, details and calculations are provided to justify the omission of such separation.

SECTION AE201 DEFINITIONS

AE201.1 General.
For the purpose of this Section, the following definitions shall apply:

FACTORY BUILT BUILDING is a residential or non-residential building, including a dwelling unit or habitable room thereof, which is either wholly or in substantial part manufactured at an off-site location to be assembled on-site, except it does not include a manufactured home, recreational vehicle or mobile home (ARS 41-2142).

MANUFACTURED HOME is a structure built in accordance with the National Manufactured Home Construction and Safety Standards Act.

MOBILE HOME is a structure built prior to June 15, 1976, on a permanent chassis, capable of being transported in one or more sections and designed to be used with or without a permanent foundation as a dwelling, when connected to on-site utilities, except that it does not include recreational vehicles or factory-built buildings.

ON-SITE PERMIT is the permit issued by the building official which authorizes the placement of a factory-built building, manufactured home or mobile home on a site. The on-site permit shall authorize only the placement, foundation or unit tie-down, and specific connections to utility services which are authorized by a permit issued by the State of Arizona Office of Manufactured Housing. All other work on the site shall require a building permit issued by the building official in accordance with Section 105 of this code. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

SECTION AE301 INSTALLATION REQUIREMENTS

AE301.1 Installation requirements.
No factory-built building, manufactured home or mobile home shall be moved onto or installed on any lot or site in the City of Phoenix except in compliance with these provisions.

G6463

AE301.1.1 State insignia required.
No person, firm or corporation shall move onto any site any factory-built building or manufactured home building unless such building bears a current, valid insignia of approval of the State of Arizona.

AE301.1.2 State permit required.
No person, firm or corporation shall move onto any site any factory-built building, manufactured home or mobile home unless and until a permit for such installation has been obtained from the State of Arizona.

AE301.1.3 On-site permit required.
No person firm or corporation shall move onto any site, or relocate on any site, any factory-built building, manufactured home or mobile home until an On-Site Permit has been issued by the City of Phoenix building official.

A site plan shall be submitted to the building official which shows all utility connections and all other information necessary to ascertain compliance with the separation and area restrictions of other sections of this code, and with all provisions of the Zoning Ordinance. If the building official is satisfied that the work described by the documents submitted conform to this section and other applicable law, the On-Site Permit shall be issued to the owner of the site or his authorized agent.

AE301.1.4 Fire protection.
All factory-built buildings must be protected pursuant to the Phoenix Fire Code.

SECTION AE304 PERMITS

AE304.1 Building permit required.
The person, firm or corporation obtaining the On-Site Permit shall also apply for and obtain a building permit from the building official when one or more of the following conditions apply:

1. For all on-site construction which connects to or alters existing buildings or existing on-site sewer, water, gas or electrical systems.

2. For all on-site construction which is required by or regulated by the Zoning Ordinance, such as for design review elements, signs, parking, landscaping, site amenities and accessibility.

3. For all construction or alteration which is not part of the State-approved factory-built building, manufactured home, or mobile home including all interior fit-up, tenant improvement or remodeling work which is not specifically included in such State permit.

4. When a City of Phoenix inspection is requested by the installer for work otherwise included in the State of Arizona installation permit, including but not limited to requests for utility clearance inspections.

All work subject to a building permit under this section is subject to all inspections and all technical requirements of this code and all other applicable city codes and ordinances. For administrative purposes, the building official may combine the On-Site Permit and the city building permit into a single document.

G6465

Reasons:
Appendix E Manufactured Housing Used as Dwellings does not address the State of Arizona and the City of Phoenix requirements for Manufactured Housing (Factory Built Buildings). This amendment matches local laws and is carried over from previous codes.

Cost Impact: No cost impact.
There is no additional cost because this has been in effect for several code cycles.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2017 National Electrical Code (NEC)
Section 210.52(G)(1)

Submitted by: 2018 National Electrical Code Committee

ARTICLE 210 Branch Circuits

210.52(G)(1) Garages. In each attached garage and in each detached garage with electric power, at least one receptacle outlet shall be installed in each vehicle bay ~~and~~ at not less than (18) inches and not more than 1.7 m (5 ½ ft.) above the floor.

Reasons:
2018 IRC section G2408.2 (305.3) Elevation of ignition source. This section states that equipment and appliances having an ignition source shall be elevated such that the source of the ignition is not less than 18 inches (457 mm) above the floor in hazardous locations and public garages, private garages, repair garages, motor fuel dispensing facilities and parking garages.

Many private/dwelling garages are utilized to work on vehicles or other equipment that contain volatile fuels or other liquids and gases. Other jurisdictions around the United States have amended this section of NEC article 210.52 to address this situation. The receptacles outlets, if installed below the 18 inches, could possibly become an ignition source which could cause fire, property damage, injury, or death if these volatile liquids or gases are present.

Cost Impact: No cost impact.
Receptacle outlets are required in the dwelling garages as per the NEC. All wiring and associated electrical equipment do not change from the NEC standard requirement.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2017 National Electrical Code (NEC)
Section 210.8(A)(11)

Submitted by: 2018 National Electrical Code Committee

ARTICLE 210 Branch Circuits

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (~~10~~11) shall have ground-fault circuit interrupter protection for personnel.

(11) Other indoor damp and wet locations

Reasons:
Added safety in damp locations indoors.

NEC Article 100 defines Damp Location as follows: Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture. Examples of such locations include partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns, and some cold-storage warehouses.

Additionally, NEC Section 406.9(A) requires that a receptacle located in any damp location is installed in a weatherproof enclosure.

Since receptacles located in an outdoor damp location require GFCI protection, logically, receptacles located in an indoor damp location should also be provided with the same GFCI protection.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2017 NEC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2017 National Electrical Code (NEC)
Section 210.8(B)(6)

Submitted by: 2018 National Electrical Code Committee

ARTICLE 210 Branch Circuits

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(B) Other Than Dwelling Units. All single-phase receptacles rated 150 volts to ground or less, 50 amperes or less and three-phase receptacles rated 150 volts to ground or less, 100 amperes or less installed in the following locations shall have ground-fault circuit-interrupter protection for personnel.

(6) Indoor damp and wet locations

Reasons:
Added safety in damp locations indoors.

NEC Article 100 defines Damp Location as follows: Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture. Examples of such locations include partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns, and some cold-storage warehouses.

Additionally, NEC Section 406.9(A) requires that a receptacle located in any damp location is installed in a weatherproof enclosure.

Since receptacles located in an outdoor damp location require GFCI protection, logically, receptacles located in an indoor damp location should also be provided with the same GFCI protection.

Cost Impact: Minimal cost impact.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2017 NEC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2017 National Electrical Code (NEC)
Section 250.118(4)

Submitted by: 2018 National Electrical Code Committee

ARTICLE 250 Grounding and Bonding

250.118 Types of Equipment Grounding Conductors. The equipment grounding conductor run with or enclosing the circuit conductors shall be one or more or a combination of the following:

(4) Electrical metallic tubing with an additional equipment grounding conductor.

Reasons:
This amendment requires that specific wiring methods include an individual equipment-grounding conductor. This amendment is more restrictive than the NEC, but provides for a higher degree of equipment grounding safety. The intent of the amendment is to supplement the low impedance path to ground and to attain reasonable compliance with requirements for the performance of the fault current path.

Cost Impact: Minimal cost impact.
Cost due to additional grounding conductor.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2017 NEC and carried forward as presented.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2017 National Electrical Code (NEC)
Section 310.15(B)(7)

Submitted by: 2018 National Electrical Code Committee

ARTICLE 310 Conductors for General Wiring

310.15(B)(7) 120/240-Volt, Single-Phase Dwelling Services and Feeders. For one-family dwellings and the individual dwelling units of two-family and multifamily dwellings, service and feeder conductors supplied by a single-phase, 120/240-volt system shall be permitted to be sized in accordance with 310.15(B)(7)(1) through (4).

~~For one-family dwellings and the individual dwelling units of two-family and multifamily dwellings, single-phase feeder conductors consisting of 2 ungrounded conductors and the neutral conductor from a 208Y/120-volt system shall be permitted to be sized in accordance with 310.15(B)(7)(1) through (3).~~

(1) For a service rated 100 through 400 amperes, the service conductors supplying the entire load associated with a one-family dwelling, or the service conductors supplying the entire load associated with an individual dwelling unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the service rating.
(2) For a feeder rated 100 through 400 amperes, the feeder conductors supplying the entire load associated with a one-family dwelling, or the feeder conductors supplying the entire load associated with an individual dwelling unit in a two-family or multifamily dwelling, shall be permitted to have an ampacity not less than 83 percent of the feeder rating.
(3) In no case shall a feeder for an individual dwelling unit be required to have an ampacity greater than that specified in 310.15(B)(7)(1) or (2).
(4) Grounded conductors shall be permitted to be sized smaller than the ungrounded conductors, if the requirements of 220.61 and 230.42 for service conductors or the requirements of 215.2 and 220.61 for feeder conductors are met.

Where correction or adjustment factors are required by 310.15(B)(2) or (3), they shall be permitted to be applied to the ampacity associated with the temperature rating of the conductor.

Informational Note No. 1: The service or feeder ratings addressed by this section are based on the standard ampacity ratings from 240.6(A).

Informational Note No. 2: See Example D7 in Annex D.

Reasons:
Conductor ampacity is required by the code to be selected per the ampacity tables and adjusted for conditions that cause heating of the conductor. The ampacity of a conductor is affected by heat, including both the heat generated by current flowing in the conductor, and other adjacent conductors, and from the ambient temperature surrounding the conductors.

The ampacities in Table 310.15(B)(16) are based on three current-carrying conductors in a raceway or cable and an ambient temperature of 86°F.

The code requires that if there are more than three current-carrying conductors, that the allowable ampacity be adjusted by the factors listed in Table 310.15(B)(3)(a). This is due to the

G6465

additional heating effects of having more current-carrying conductors in the same raceway or cable. Similarly, the code requires the ampacity to be adjusted if the ambient temperature is greater than the 86° F that Table 310.15(B)(16) is based upon. The ampacity must be adjusted by the factors listed in Table 310.15(B)(2)(a). This is because the higher ambient temperature reduces the ampacity of the conductor as well as hinders the dissipation of heat from the conductor.

The 2017 NEC added 208Y/120-volt single-phase 3-wire systems to Section 310.15(B)(7). This presents an unsafe installation.

Consider the electrical characteristics of a single-phase 120/240V system, which has two ungrounded conductors and a neutral conductor. The ungrounded conductors are 180 degrees out of phase with each other. Therefore, for a balanced load, the neutral current would be zero and for an unbalanced load the neutral current will be a small value based on the unbalance. This system essentially represents two current-carrying conductors since the neutral current is negligible.

However, in a 208Y/120-volt single-phase system, with two ungrounded conductors and a neutral conductor, the ungrounded conductors are 120 degrees out of phase with each other. This results in neutral current that is the same as the phase current for a balanced load and almost as large as the phase current for an unbalanced load. Therefore, this system represents three current-carrying conductors.

Prior to the 2017 edition, NEC 310.15(B)(7) has historically only been applicable to 120/240-volt single phase dwelling services and feeders. This is due to considering only two current-carrying conductors and allowing an increase in ampacity in those conductors due to less heat being generated by the conductors. However, since 208V single-phase systems must be considered three current-carrying conductors, the ampacities in Table 310.15(B)(16) must be used and 310.15(B)(7) should not apply. Allowing the use of this ampacity adjustment on 208Y/120-volt systems will result in conductors being undersized based on the load and the overcurrent device intended to protect them. This will be an unsafe installation that could result in fire.

This amendment removes 208Y/120-volt systems from the code section. NEC 310.15(B)(7) is only applicable to 120/240V single-phase dwellings.

Cost Impact: No cost impact.
Neutral. Previous code cycles did not permit 310.15(B)(7) to apply to 208Y/120-volt systems.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2017 National Electrical Code (NEC)
Section 334.10

Submitted by: 2018 National Electrical Code Committee

ARTICLE 334 Nonmetallic-Sheathed Cable; Types NM, NMC and NMS

Part II. Installation

334.10 Uses Permitted.
Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following, except as prohibited in 334.12:

(1) One- and two-family dwellings and their attached or detached garages, and their storage buildings.

(2) Multi-family dwellings permitted to be of Types III, IV, and V construction.

(3) Other dwelling unit accessory buildings and structures ~~permitted to be of Types III, IV, and V construction. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.~~ in accordance with 334.10(1) and (2).

(4) Cable trays in dwelling structures, in accordance with 334.10(1) and (2), ~~permitted to be Types III, IV, or V~~ where the cables are identified for the use.

(5) Types I and II construction, in accordance with 334.10(1) and (2), where installed within raceways permitted to be installed in Types I and II construction.

Reasons:
The use of Nonmetallic-Sheathed cable in commercial buildings has not typically been permitted in the Phoenix metropolitan area as well as many surrounding cities. Nonmetallic-Sheathed cable (NM) is traditionally used in dwelling units, whereas a stouter wiring method enclosed within raceways is traditionally used in commercial buildings.

The code restrictions of the NEC, with respect to allowing type NM cable in a commercial building, would tend to make the installation impractical in most cases, (i.e. NM cable would not be allowed underground or in drop ceilings), and at best the resulting installation would likely be a mixture of several different wiring methods, (each with their own requirements). This type of mixture would actually tend to make the installation more complex, creating a larger hurdle to providing a code compliant installation.

Concerns also exist that Nonmetallic-Sheathed Cable would be more subject to damage, such as nicks in the insulation, etc. The integrity of the insulation is critical to the safety of the electrical installation. In dwelling units, the NEC requires AFCI (Arc-Fault Circuit Interrupter) protection for most circuits since a nick in the insulation, such as from a nail for hanging a

G6463

picture, can cause an arcing fault which may not be cleared by a normal circuit breaker before a fire starts.

The AFCI breaker was developed specifically to detect and clear arcing faults; however, the NEC does not require AFCI protection in most non-dwelling occupancies.

It is therefore the general consensus of the electrical section, and supported in general by the Electrical Focus Group, (made up of members of the local electrical engineering community and others members of the industry), that the use of Nonmetallic-Sheathed Cable should be restricted to dwellings, as described within this document, to provide a higher degree of electrical safety in other occupancies.

Cost Impact:
Additional cost due to the cost difference between an installation consisting of Nonmetallic-Sheathed Cable and an installation consisting of another wiring method, depending on the wiring method chosen.

Approved in previous 2012 Code Adoption process: ☒YES ☐ NO

This amendment was approved in previous code adoptions. It has subsequently been evaluated by the committee for applicability to the 2017 NEC and carried forward as presented.

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Sections 102, 103, 104, 105, 106, & 107

Submitted by: 2018 Uniform Plumbing Code Committee

CHAPTER 1 – ADMINISTRATION

102.0 Applicability. – Reserved.

~~**102.1 Conflicts Between Codes.** Where the requirements within the jurisdiction of this plumbing code conflict with the requirements of the mechanical code, this code shall prevail. In instances where this code, applicable standards, or the manufacturer's installation instructions conflict, the more stringent provisions shall prevail. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall prevail.~~

~~**102.2 Existing Installations.** Plumbing systems lawfully in existence at the time of the adoption of this code shall be permitted to have their use, maintenance, or repair continued where the use, maintenance, or repair is in accordance with the original design and location and no hazard to life, health, or property has been created by such plumbing system.~~

~~**102.3 Maintenance.** The plumbing and drainage system, both existing and new, of a premise under the Authority Having Jurisdiction shall be maintained in a sanitary and safe operating condition. Devices or safeguards required by this code shall be maintained in accordance with the code edition under which installed.~~

~~The owner or the owner's designated agent shall be responsible for maintenance of plumbing systems. To determine compliance with this subsection, the Authority Having Jurisdiction shall be permitted to cause a plumbing system to be reinspected.~~

~~**102.4 Additions, Alterations, Renovations, or Repairs.** Additions, alterations, renovations or repairs shall conform to that required for a new system without requiring the existing plumbing system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe, insanitary, or overloaded.~~

~~Additions, alterations, renovations, or repairs to existing plumbing installations shall comply with the provisions for new construction unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.~~

~~**102.4.1 Building Sewers and Drains.** Existing building sewers and building drains shall be permitted to be used in connection with new buildings or new plumbing and drainage work where they are found on examination and test to be in accordance with the requirements governing new work, and the proper Authority Having Jurisdiction shall notify the owner to make changes necessary to be in accordance with this code. No building, or part thereof, shall be erected or placed over a part of a drainage system that is constructed of materials other than those approved elsewhere in this code for use under or within a building.~~

G6463

~~**102.4.2 Openings.** Openings into a drainage or vent system, excepting those openings to which plumbing fixtures are properly connected or which constitute vent terminals, shall be permanently plugged or capped in an approved manner, using the appropriate materials in accordance with this code.~~

~~**102.5 Health and Safety.** Where compliance with the provisions of this code fails to eliminate or alleviate a nuisance, or other dangerous or insanitary condition that involves health or safety hazards, the owner or the owner's agent shall install such additional plumbing and drainage facilities or shall make such repairs or alterations as ordered by the Authority Having Jurisdiction.~~

~~**102.6 Changes in Building Occupancy.** Plumbing systems that are a part of a building or structure undergoing a change in use or occupancy, as defined in the building code, shall be in accordance with the requirements of this code that are applicable to the new use or occupancy.~~

~~**102.7 Moved Structures.** Parts of the plumbing system of a building or part thereof that is moved from one foundation to another, or from one location to another, shall be in accordance with the provisions of this code for new installations and completely tested as prescribed elsewhere in this section for new work, except that walls or floors need not be removed during such test where other equivalent means of inspection acceptable to the Authority Having Jurisdiction are provided.~~

~~**102.8 Appendices.** The provisions in the appendices are intended to supplement the requirements of this code and shall not be considered part of this code unless formally adopted as such.~~

103.0 DUTIES AND POWERS OF THE AUTHORITY HAVING JURISDICTION. – Reserved.

~~**103.1 General.** The Authority Having Jurisdiction shall be the Authority duly appointed to enforce this code. For such purposes, the Authority Having Jurisdiction shall have the powers of a law enforcement officer. The Authority Having Jurisdiction shall have the power to render interpretations of this code and to adopt and enforce rules and regulations supplemental to this code as deemed necessary in order to clarify the application of the provisions of this code. Such interpretations, rules, and regulations shall comply with the intent and purpose of this code.~~

~~In accordance with the prescribed procedures and with the approval of the appointing authority, the Authority Having Jurisdiction shall be permitted to appoint such number of technical officers, inspectors, and other employees as shall be authorized from time to time. The Authority Having Jurisdiction shall be permitted to deputize such inspectors or employees as necessary to carry out the functions of the code enforcement agency.~~

~~The Authority Having Jurisdiction shall be permitted to request the assistance and cooperation of other officials of this jurisdiction so far as required in the discharge of the duties in accordance with this code or other pertinent law or ordinance.~~

~~**103.2 Liability.** The Authority Having Jurisdiction charged with the enforcement of this code, acting in good faith and without malice in the discharge of the Authority Having Jurisdiction's duties, shall not thereby be rendered personally liable for damage that accrues to persons or property as a result of an act or by reason of an act or omission in the discharge of duties. A suit brought against the Authority Having Jurisdiction or employee because of such act or omission performed in the enforcement of provisions of this code shall be defended by legal counsel provided by this jurisdiction until final termination of such proceedings.~~

G6463

~~**103.3 Applications and Permits.** The Authority Having Jurisdiction shall be permitted to require the submission of plans, specifications, drawings, and such other information in accordance with the Authority Having Jurisdiction, prior to the commencement of, and at a time during the progress of, work regulated by this code.~~

~~The issuance of a permit upon construction documents shall not prevent the Authority Having Jurisdiction from thereafter requiring the correction of errors in said construction documents or from preventing construction operations being carried on thereunder where in violation of this code or of other pertinent ordinance or from revoking a certificate of approval where issued in error.~~

~~**103.3.1 Licensing**. Provision for licensing shall be determined by the Authority Having Jurisdiction.~~

~~**103.4 Right of Entry.** Where it is necessary to make an inspection to enforce the provisions of this code, or where the Authority Having Jurisdiction has reasonable cause to believe that there exists in a building or upon a premises a condition or violation of this code that makes the building or premises unsafe, insanitary, dangerous, or hazardous, the Authority Having Jurisdiction shall be permitted to enter the building or premises at reasonable times to inspect or to perform the duties imposed upon the Authority Having Jurisdiction by this code, provided that where such building or premises is occupied, the Authority Having Jurisdiction shall present credentials to the occupant and request entry. Where such building or premises is unoccupied, the Authority Having Jurisdiction shall first make a reasonable effort to locate the owner or other person having charge or control of the building or premises and request entry. Where entry is refused, the Authority Having Jurisdiction has recourse to every remedy provided by law to secure entry.~~

~~Where the Authority Having Jurisdiction shall have first obtained an inspection warrant or other remedy provided by law to secure entry, no owner, occupant, or person having charge, care or control of a building or premises shall fail or neglect, after a request is made as herein provided, to promptly permit entry herein by the Authority Having Jurisdiction for the purpose of inspection and examination pursuant to this code.~~

104.0 PERMITS. – Reserved.

~~**104.1 Permits Required.** It shall be unlawful for a person, firm, or corporation to make an installation, alteration, repair, replacement, or remodel a plumbing system regulated by this code except as permitted in Section 104.2, or to cause the same to be done without first obtaining a separate plumbing permit for each separate building or structure.~~

~~**104.2 Exempt Work.** A permit shall not be required for the following:~~

~~(1) The stopping of leaks in drains, soil, waste, or vent pipe, provided, however, that a trap, drainpipe, soil, waste, or vent pipe become defective, and it becomes necessary to remove and replace the same with new material, the same shall be considered as new work and a permit shall be procured and inspection made as provided in this code.~~

~~(2) The clearing of stoppages, including the removal and reinstallation of water closets, or the repairing of leaks in pipes, valves, or fixtures, provided such repairs do not involve or require the replacement or rearrangement of valves, pipes, or fixtures.~~

~~Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of the code or other laws or ordinances of this jurisdiction.~~

G6463

104.3 Application for Permit. To obtain a permit, the applicant shall first file an application therefore in writing on a form furnished by the Authority Having Jurisdiction for that purpose. Such application shall:

(1) Identify and describe the work to be covered by the permit for which application is made.

(2) Describe the land upon which the proposed work is to be done by legal description, street address, or similar description that will readily identify and definitely locate the proposed building or work.

(3) Indicate the use or occupancy for which the proposed work is intended.

(4) Be accompanied by construction documents in accordance with Section 104.3.1.

(5) Be signed by the permittee or the permittee's authorized agent. The Authority Having Jurisdiction shall be permitted to require evidence to indicate such authority.

(6) Give such other data and information in accordance with the Authority Having Jurisdiction.

104.3.1 Construction Documents. Construction documents, engineering calculations, diagrams, and other data shall be submitted in two or more sets with each application for a permit. The construction documents, computations, and specifications shall be prepared by, and the plumbing designed by, a registered design professional. Construction documents shall be drawn to scale with clarity to identify that the intended work to be performed is in accordance with the code.

Exception: The Authority Having Jurisdiction shall be permitted to waive the submission of construction documents, calculations, or other data where the Authority Having Jurisdiction finds that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with the code.

104.3.2 Plan Review Fees. Where a plan or other data is required to be submitted in accordance with Section 104.3.1, a plan review fee shall be paid at the time of submitting construction documents for review.

The plan review fees for plumbing work shall be determined and adopted by this jurisdiction.

The plan review fees specified in this subsection are separate fees from the permit fees specified in Section 104.5.

Where plans are incomplete or changed so as to require additional review, a fee shall be charged at the rate shown in Table 104.5.

104.3.3 Time Limitation of Application. Applications for which no permit is issued within 180 days following the date of application shall expire by limitation, plans and other data submitted for review thereafter, shall be returned to the applicant or destroyed by the Authority Having Jurisdiction. The Authority Having Jurisdiction shall be permitted to exceed the time for action by the applicant for a period not to exceed 180 days upon request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. No application shall be extended more than once. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee.

G6463

104.4 Permit Issuance. The application, construction documents, and other data filed by an applicant for a permit shall be reviewed by the Authority Having Jurisdiction. Such plans shall be permitted to be reviewed by other departments of this jurisdiction to verify compliance with applicable laws under their jurisdiction. Where the Authority Having Jurisdiction finds that the work described in an application for permit and the plans, specifications, and other data filed therewith are in accordance with the requirements of the code and other pertinent laws and ordinances and that the fees specified in Section 104.5 have been paid, the Authority Having Jurisdiction shall issue a permit therefore to the applicant.

104.4.1 Approved Plans or Construction Documents. Where the Authority Having Jurisdiction issues the permit where plans are required, the Authority Having Jurisdiction shall endorse in writing or stamp the construction documents "APPROVED." Such approved construction documents shall not be changed, modified, or altered without authorization from the Authority Having Jurisdiction, and the work shall be done in accordance with approved plans.

The Authority Having Jurisdiction shall be permitted to issue a permit for the construction of a part of a plumbing system before the entire construction documents for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed in accordance with the pertinent requirements of this code. The holder of such permit shall be permitted to proceed at the holder's risk without assurance that the permit for the entire building, structure, or plumbing system will be granted.

104.4.2 Validity of Permit. The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, a violation of the provisions of this code or other ordinance of the jurisdiction. No permit presuming to give authority to violate or cancel the provisions of this code shall be valid.

The issuance of a permit based upon plans, specifications, or other data shall not prevent the Authority Having Jurisdiction from thereafter requiring the correction of errors in said plans, specifications, and other data or from preventing building operations being carried on thereunder where in violation of this code or of other ordinances of this jurisdiction.

104.4.3 Expiration. A permit issued by the Authority Having Jurisdiction under the provisions of this code shall expire by limitation and become null and void where the work authorized by such permit is not commenced within 180 days from the date of such permit, or where the work authorized by such permit is suspended or abandoned at a time after the work is commenced for a period of 180 days. Before such work is recommenced, a new permit shall first be obtained to do so, and the fee, therefore, shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspensions or abandonment has not exceeded 1 year.

104.4.4 Extensions. A permittee holding an unexpired permit shall be permitted to apply for an extension of the time within which work shall be permitted to commence under that permit where the permittee is unable to commence work within the time required by this section. The Authority Having Jurisdiction shall be permitted to extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.

G6463

~~**104.4.5 Suspension or Revocation.** The Authority Having Jurisdiction shall be permitted to, in writing, suspend or revoke a permit issued under the provisions of this code where the permit is issued in error or on the basis of incorrect information supplied or in violation of other ordinance or regulation of the jurisdiction.~~

~~**104.4.6 Retention of Plans.** One set of approved construction documents and computations shall be retained by the Authority Having Jurisdiction until final approval of the work covered therein.~~

~~One set of approved construction documents, computations, and manufacturer's installation instructions shall be returned to the applicant, and said set shall be kept on the site of the building or work at times during which the work authorized thereby is in progress.~~

~~**104.5 Fees.** Fees shall be assessed in accordance with the provisions of this section and as set forth in the fee schedule, Table 104.5. The fees are to be determined and adopted by this jurisdiction.~~

~~**104.5.1 Work Commencing Before Permit Issuance.** Where work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation shall be made before a permit is issued for such work.~~

~~**104.5.2 Investigation Fees.** An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee that is required by this code if a permit were to be issued. The payment of such investigation fee shall not exempt a person from compliance with other provisions of this code, nor from a penalty prescribed by law.~~

~~**104.5.3 Fee Refunds.** The Authority Having Jurisdiction shall be permitted to authorize the refunding of a fee as follows:~~

~~(1) The amount paid hereunder that was erroneously paid or collected.~~

~~(2) Refunding of not more than a percentage, as determined by this jurisdiction where no work has been done under a permit issued in accordance with this code.~~

~~The Authority Having Jurisdiction shall not authorize the refunding of a fee paid except upon written application filed by the original permittee not to exceed 180 days after the date of fee payment.~~

105.0 INSPECTIONS AND TESTING. – Reserved.

~~**105.1 General.** Plumbing systems for which a permit is required by this code shall be inspected by the Authority Having Jurisdiction.~~

~~No plumbing system or portion thereof shall be covered, concealed, or put into use until inspected and approved as prescribed in this code. Neither the Authority Having Jurisdiction nor the jurisdiction shall be liable for expense entailed in the removal or replacement of material required to permit inspection. Plumbing systems regulated by this code shall not be connected to the water, the energy fuel supply, or the sewer system until authorized by the Authority Having Jurisdiction.~~

~~**105.2 Required Inspections.** New plumbing work and such portions of existing systems as affected by new work, or changes, shall be inspected by the Authority Having Jurisdiction to ensure compliance with the requirements of this code and to ensure that the installation and~~

G6463

~~construction of the plumbing system are in accordance with approved plans. The Authority Having Jurisdiction shall make the following inspections and other such inspections as necessary. The permittee or the permittee's authorized agent shall be responsible for the scheduling of such inspections as follows:~~

~~(1) The underground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before backfill is put in place.~~

~~(2) Rough-in inspection shall be made prior to the installation of wall or ceiling membranes.~~

~~(3) Final inspection shall be made upon completion of the installation.~~

~~**105.2.1 Uncovering.** Where a drainage or plumbing system, building sewer, private sewage disposal system, or part thereof, which is installed, altered, or repaired, is covered or concealed before being inspected, tested, and approved as prescribed in this code, it shall be uncovered for inspection after notice to uncover the work has been issued to the responsible person by the Authority Having Jurisdiction.~~

~~The requirements of this section shall not be considered to prohibit the operation of plumbing installed to replace existing equipment or fixtures serving an occupied portion of the building in the event a request for inspection of such equipment or fixture has been filed with the Authority Having Jurisdiction not more than 72 hours after such replacement work is completed, and before a portion of such plumbing system is concealed by a permanent portion of the building.~~

~~**105.2.1.1 Water Supply System.** No water supply system or portion thereof shall be covered or concealed until it first has been tested, inspected, and approved.~~

~~**105.2.1.2 Covering or Using.** No plumbing or drainage system, building sewer, private sewer disposal system, or part thereof, shall be covered, concealed, or put into use until it has been tested, inspected, and accepted as prescribed in this code.~~

~~**105.2.2 Other Inspections.** In addition to the inspections required by this code, the Authority Having Jurisdiction shall be permitted to require other inspections to ascertain compliance with the provisions of this code and other laws that are enforced by the Authority Having Jurisdiction.~~

~~**105.2.3 Inspection Requests.** It shall be the duty of the person doing the work authorized by a permit to notify the Authority Having Jurisdiction that such work is ready for inspection. The Authority Having Jurisdiction shall be permitted to require that a request for inspection be filed not less than 1 working day before such inspection is desired. Such request shall be permitted to be made in writing or by telephone, at the option of the Authority Having Jurisdiction. It shall be the duty of the person requesting inspections in accordance with this code to provide access to and means for inspection of such work.~~

~~**105.2.4 Advance Notice.** It shall be the duty of the person doing the work authorized by the permit to notify the Authority Having Jurisdiction, orally or in writing that said work is ready for inspection. Such notification shall be given not less than 24 hours before the work is to be inspected.~~

~~**105.2.5 Responsibility.** It shall be the duty of the holder of a permit to make sure that the work will stand the test prescribed before giving the notification.~~

G6463

The equipment, material, and labor necessary for inspection or tests shall be furnished by the person to whom the permit is issued or by whom inspection is requested.

105.2.6 Reinspections. A reinspection fee shall be permitted to be assessed for each inspection or reinspection where such portion of work for which inspection is called is not complete or where required corrections have not been made.

This provision shall not be interpreted as requiring reinspection fees the first time a job is rejected for failure to be in accordance with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for inspection or reinspection.

Reinspection fees shall be permitted to be assessed where the approved plans are not readily available to the inspector, for failure to provide access on the date for which the inspection is requested, or for deviating from plans requiring the approval of the Authority Having Jurisdiction.

To obtain reinspection, the applicant shall file an application therefore in writing upon a form furnished for that purpose and pay the reinspection fee in accordance with Table 104.5.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

105.3 Testing of Systems. Plumbing systems shall be tested and approved in accordance with this code or the Authority Having Jurisdiction. Tests shall be conducted in the presence of the Authority Having Jurisdiction or the Authority Having Jurisdiction's duly appointed representative.

No test or inspection shall be required where a plumbing system, or part thereof, is set up for exhibition purposes and has no connection with a water or drainage system. In cases where it would be impractical to provide the required water or air tests, or for minor installations and repairs, the Authority Having Jurisdiction shall be permitted to make such inspection as deemed advisable in order to be assured that the work has been performed in accordance with the intent of this code. Joints and connections in the plumbing system shall be gastight and watertight for the pressures required by the test.

105.3.1 Defective Systems. An air test shall be used in testing the sanitary condition of the drainage or plumbing system of building premises where there is reason to believe that it has become defective. In buildings or premises condemned by the Authority Having Jurisdiction because of an insanitary condition of the plumbing system, or part thereof, the alterations in such system shall be in accordance with the requirements of this code.

105.3.2 Retesting. Where the Authority Having Jurisdiction finds that the work will not pass the test, necessary corrections shall be made, and the work shall be resubmitted for test or inspection.

105.3.3 Approval. Where prescribed tests and inspections indicate that the work is in accordance with this code, a certificate of approval shall be issued by the Authority Having Jurisdiction to the permittee on demand.

105.4 Connection to Service Utilities. No person shall make connections from a source of energy or fuel to a plumbing system or equipment regulated by this code and for which a permit is required until approved by the Authority Having Jurisdiction. No person shall make connection from a water supply line nor shall connect to a sewer system regulated by this code and for which a permit is required until approved by the Authority Having Jurisdiction. The Authority

G6463

~~Having Jurisdiction shall be permitted to authorize temporary connection of the plumbing equipment to the source of energy or fuel for the purpose of testing the equipment.~~

106.0 VIOLATIONS AND PENALTIES. – Reserved.

~~**106.1 General.** It shall be unlawful for a person, firm, or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert, demolish, equip, use, or maintain plumbing or permit the same to be done in violation of this code.~~

~~**106.2 Notices of Correction or Violation.** Notices of correction or violation shall be written by the Authority Having Jurisdiction and shall be permitted to be posted at the site of the work or mailed or delivered to the permittee or their authorized representative.~~

~~Refusal, failure, or neglect to comply with such notice or order within 10 days of receipt thereof, shall be considered a violation of this code and shall be subject to the penalties set forth by the governing laws of the jurisdiction.~~

~~**106.3 Penalties.** A person, firm, or corporation violating a provision of this code shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punishable by a fine, imprisonment, or both set forth by the governing laws of the jurisdiction. Each separate day or portion thereof, during which a violation of this code occurs or continues, shall be deemed to constitute a separate offense.~~

~~**106.4 Stop Orders.** Where work is being done contrary to the provisions of this code, the Authority Having Jurisdiction shall be permitted to order the work stopped by notice in writing served on persons engaged in the doing or causing such work to be done, and such persons shall forthwith stop work until authorized by the Authority Having Jurisdiction to proceed with the work.~~

~~**106.5 Authority to Disconnect Utilities in Emergencies.** The Authority Having Jurisdiction shall have the authority to disconnect a plumbing system to a building, structure, or equipment regulated by this code in case of emergency where necessary to eliminate an immediate hazard to life or property.~~

~~**106.6 Authority to Condemn.** Where the Authority Having Jurisdiction ascertains that a plumbing system or portion thereof, regulated by this code, has become hazardous to life, health, or property, or has become insanitary, the Authority Having Jurisdiction shall order in writing that such plumbing either be removed or placed in a safe or sanitary condition. The order shall fix a reasonable time limit for compliance. No person shall use or maintain defective plumbing after receiving such notice. Where such plumbing system is to be disconnected, written notice shall be given. In cases of immediate danger to life or property, such disconnection shall be permitted to be made immediately without such notice.~~

107.0 BOARD OF APPEALS. – Reserved.

~~**107.1 General.** In order to hear and decide appeals of orders, decisions, or determinations made by the Authority Having Jurisdiction relative to the application and interpretations of this code, there shall be and is hereby created a Board of Appeals consisting of members who are qualified by experience and training to pass upon matters pertaining to plumbing design, construction, and maintenance and the public health aspects of plumbing systems and who are not employees of the jurisdiction. The Authority Having Jurisdiction shall be an ex-officio member and shall act as secretary to said board but shall have no vote upon a matter before the board. The Board of Appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render~~

G6463

decisions and findings in writing to the appellant with a duplicate copy to the Authority Having Jurisdiction.

107.2 Limitations of Authority. The Board of Appeals shall have no authority relative to interpretation of the administrative provisions of this code, nor shall the board be empowered to waive requirements of this code.

TABLE 104.5
PLUMBING PERMIT FEES

Permit Issuance

1. For issuing each permit ..... *
2. For issuing each supplemental permit ..... *

Unit Fee Schedule (in addition to Item 1 and Item 2 above)

1. For each plumbing fixture on one trap or a set of fixtures on one trap (including water, drainage piping, and backflow protection therefore) ..... *
2. For each building sewer and each trailer park sewer ..... *
3. Rainwater systems – per drain (inside building) ..... *
4. For each cesspool (where permitted) ..... *
5. For each private sewage disposal system ..... *
6. For each water heater, vent, or both ..... *
7. For each gas piping system of one to five outlets ..... *
8. For each additional gas piping system outlet, per ..... *
9. For each industrial waste pretreatment interceptor, including its trap and vent, except kitchen-type grease interceptors functioning as fixture traps ..... *
10. For each installation, alteration, or repair of water piping, water-treating equipment, or both ..... *
11. For each repair or alteration of drainage or vent piping, each fixture ..... *
12. For each lawn sprinkler system on one meter including backflow protection devices therefore ..... *
13. For atmospheric-type vacuum breakers not referenced in Item 12:
    - One to 5 ..... *
    - Over 5, each ..... *
14. For each backflow protective device other than atmospheric-type vacuum breakers:
    - Two inches (50 mm) in diameter and smaller ..... *
    - Over 2 inches (50 mm) in diameter ..... *
15. For each gray water system ..... *
16. For initial installation and testing of a reclaimed water system ..... *
17. For each annual cross-connection testing of a reclaimed water system (excluding initial test). ..... *
18. For each medical gas piping system serving one to five inlet(s)/outlet(s) for a specific gas ..... *
19. For each additional medical gas inlet(s)/outlet(s) ..... *

Other Inspections and Fees

1. Inspections outside of normal business hours ..... *
2. Reinspection fee ..... *
3. Inspections for which no fee is specifically indicated ..... *
4. Additional plan review required by changes, additions, or revisions to approved plans (minimum charge – 1/2 hour) ..... *

For SI units: 1 inch = 25 mm

* Jurisdiction will indicate their fees here

G6463

Reasons: The deleted provisions are contained in the Phoenix Building Construction Code, 2018 IBC-Administrative Provisions. These provisions may conflict with the adopted administrative code and retaining them is redundant.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 209.0

Submitted by: 2018 Uniform Plumbing Code Committee

CHAPTER 2 DEFINITIONS

209.0 Gravity Grease Interceptor. A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils and greases (FOG) from a wastewater discharge and is identified by volume, ~~30~~ 12 or 17-minute retention time, baffle(s), not less than two compartments, a total volume of not less than ~~300~~ 500 gallons (~~1135~~ 1895 L), and gravity separation. [These interceptors comply with the requirements of Chapter 10 or are designed by a registered design professional and approved by the Authority Having Jurisdiction.] Gravity grease interceptors ~~are generally~~ shall be installed outside unless otherwise approved by the Authority Having Jurisdiction.

Reasons:
The larger interceptor has two man-ways and two compartments which makes it easier for the user to clean and maintain the device. The 12 and 17-minute retention time is currently used to size interceptors in the City of Phoenix and was developed based on feedback from three public forums held in 1997 to address sizing of commercial grease interceptors. Gravity interceptors are generally installed outside to prevent sewer gases and odors from entering the building.

Cost Impact: Minimal cost impact.
The cost impact to install a 500-gallon interceptor versus a 300-gallon interceptor is minimal for a facility. This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 209.0 (GRD)

Submitted by: 2018 Uniform Plumbing Code Committee

CHAPTER 2 DEFINITIONS

209.0 Grease Removal Device (GRD). A hydromechanical grease interceptor that automatically, mechanically removes non-petroleum fats, oils and grease (FOG) from the interceptor, the control of which are either automatic or manually initiated. These devices must be able to perform as a gravity interceptor if mechanical or electrical power is lost and be able to provide continued separation.

Reasons:
Grease removal devices rely on moving parts and electricity to separate grease from the waste stream; therefore, if moving parts break down or electrical power is lost the device will still be able to operate as a passive device and prevent grease from entering the sewer system.

**2012 DAB Technical asked for the last sentence to be reworked and accepted as modified.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL
Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 225.0

Submitted by: 2018 Uniform Plumbing Code Committee

CHAPTER 2 DEFINITIONS

225.0 Add new definitions as follows:

Water Dispenser. A plumbing fixture that is manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. This definition also includes a freestanding apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.

Water Cooler. A *drinking fountain* that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

Reasons:
There is often confusion regarding what is or is not a water cooler. Some people think that a water cooler is a drinking fountain since typically they also cool the water that is being dispensed. Others think that a water cooler is a bottled water dispenser that is capable of cooling the water dispensed. Currently the code does not define any of the terms. In reality, drinking fountains are drinking fountains and everything else is some form of a water dispenser. Whether or not the water is cooled is irrelevant. The code does not require cooled water. The code can be simplified in Section 415.2 by referring only to drinking fountains or their alternative, water dispensers. The new definitions establish that a drinking fountain and a water dispenser that is connected to the potable water supply system are both plumbing fixtures by definition and a bottled water dispenser is not a plumbing fixture by definition. It is necessary to be clear as to what the code requires to be provided and also what the code intends to allow as an alternative. This proposal also paves the way for new technology that is being marketed and installed today, namely water dispensers that are built into a wall, connected to the potable water supply system and dispense water into cups, glasses and bottles. These units typically treat the potable water with additional filtering and/or reverse osmosis treatment

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

G6463

Approved in previous 2012 Code Adoption process:	☒ **YES**	☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 415.2, 415.4

Submitted by: 2018 Uniform Plumbing Code Committee

415.0 Drinking Fountains.

415.2 Drinking Fountain Alternatives. Where restaurants provide drinking water in a container free of charge, *drinking fountains* shall not be required in those restaurants. In other occupancies where *drinking fountains* are required, *water dispensers* shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains. *Bottle filling stations* shall be permitted to be substituted for *drinking fountains* up to 50 percent of the requirements for *drinking fountains*. *Drinking fountains* shall not be required for an occupant load of 50 or less.

415.4 Location. *Drinking fountains, water coolers* and *water dispensers* shall not be installed in toilet rooms.

Reasons:
These terms were added to the above sections to align with 2018 IBC chapter 29. These terms are defined in 2018 UPC amended Section 225.0

Cost Impact:
Cost savings by replacing drinking fountain installations with water dispensers.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section: Table 422.1

Submitted by: 2018 Uniform Plumbing Code Committee

422.0 Minimum Number of Required Fixtures.

Table 422.1
Minimum Plumbing Facilities

Replace UPC Table 422.1 and footnotes with 2018 IBC Table 2902.1 & footnotes.
Amend footnote "e" and add new footnotes, "h" & "g" in this replacement table.
Delete all service sink requirements and all references to the IPC from this replacement table.

~~e. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.~~

h. Where urinals are provided they may be substituted for water closets, provided the number of water closets is not reduced to less than 50% of the minimum required by Table 422.1.

g. Drinking fountains are not required for an occupant load of ~~15~~ 50 or fewer.

Reasons:
These revisions are made to provide consistency between the UPC and the IBC and the minimum plumbing fixture table that is found in the 2018 International Building Code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 603.4.3

Submitted by: 2018 Uniform Plumbing Code Committee

603.4.3 Access and Clearance. Access and clearance shall be provided for the required testing, maintenance, and repair. Access and clearance shall be in accordance with manufacturer's instructions, and not less than 12 inches between the lowest portion of the assembly and grade, floor, or platform. ~~Installations elevated~~ Elevated installations that exceed 5 feet above the floor or grade shall be provided with a platform capable of supporting a tester or maintenance person.

Secondary backflow assemblies shall be installed above ground, as close as practicable to the point of service delivery. A minimum 3-foot (914 mm) clear space shall be maintained for testing, maintenance and repair.

Reasons:

- Clears up original grammatically incorrect code language regarding elevated installations.
- Clarifies that secondary backflow prevention assemblies shall be installed above ground.
- Clarifies the minimum required clearance dimensions for secondary backflow prevention assemblies.
- Coordinates with Phoenix Fire Code requirements for access to fire protection equipment.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 603.4.9

Submitted by: 2018 Uniform Plumbing Code Committee

603.4.9 Prohibited Locations. Backflow prevention devices ~~with atmospheric vents or ports~~ shall not be installed in pits, underground vaults, or submerged locations. Backflow preventers shall not be located in an area containing fumes that are toxic, poisonous, or corrosive.

Reasons:
Phoenix City Code Chapter 37-144 (d) regarding backflow assembly accessibility and testing presents design constraints for adequate clearance and drainage in a proposed vault installation. Proposed vault dimensions typically restrict full accessibility to all parts of an assembly.

Eliminates the possibility of installing a backflow prevention assembly in a pit or vault.

Adds the word vault to better define underground locations.

Reflects installation drawings shown in City of Phoenix Standard Details P1351 through P1355.

Corresponds to manufacturer's installation instructions which restrict underground installations to AHJ approval.

Above ground installation assures that Fire Department personnel have visual access to fire line backflow prevention assembly shut off valves and verifies that the assembly OS&Y (outside stem & yoke) shut-off valves are open by presence of a rising stem.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 603.4.10

Submitted by: 2018 Uniform Plumbing Code Committee

New section:

603.4.10 Secondary Backflow Protection. The following activities or facilities shall have a Secondary Reduced Pressure Principle Backflow Prevention assembly installed as close as practicable to each point of service delivery: Hospitals, surgical clinics, medical buildings, laboratories, morgues, mortuaries, veterinary hospitals, animal grooming shops, industrial occupancies, packing plants, slaughter houses, chemical plants, municipal waste treatment facilities, auxiliary water systems, construction water services or as otherwise listed in the most current edition of Phoenix City Code Chapter 37 ARTICLE XII. Backflow Prevention. Note: Multiple water services which are interconnected onsite shall be provided with not less than a Double Check Valve Assembly at each service connection.

Reasons:
ADEQ, Maricopa County and City of Phoenix Water Services Department all require secondary protection for the services cited.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

Cost Impact: No cost impact.

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 612.0

Submitted by: 2018 Uniform Plumbing Code Committee

Sections: 612.0 Residential Fire Sprinkler System.

Delete Section 612.0 in its entirety.

Reasons:
Design, installation and inspection of Fire Sprinkler Systems in one and two-family dwellings or townhouses is regulated by the Phoenix Fire Code.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 718.1

Submitted by: 2018 Uniform Plumbing Code Committee

718.1 Slope. Building sewers shall be run in practical alignment and at a uniform slope of not less than 1/4 inch per foot (20.8 mm/m) toward the point of disposal.

Exception:
(1) Where approved by the Authority Having Jurisdiction and where it is impractical, due to the depth of the street sewer or to the structural features or to the arrangement of a building or structure, to obtain a slope of 1/4 inch per foot (20.8 mm/m), such pipe or piping 4 inches (100 mm) through 6 inches (150 mm) shall be permitted to have a slope of not less than 1/8 inch per foot (10.4 mm/m) and such piping 8 inches (200 mm) and larger shall be permitted to have a slope of not less than 1/16 inch per foot (5.2 mm/m).

(2) The Authority Having Jurisdiction may approve a lessor slope in lieu of a sewage ejector or pumping station when a registered engineer or architect certifies the sewer design and its installation, and when the building owner agrees in writing under notary to accept the lessor slope. Certification of the building sewer shall meet the special inspection requirements of the Phoenix Building Construction Code.

Reasons:
This amendment adds the option of using a lessor slope for building sewers based on engineering calculations. The owner will be required to sign under notary that they have accepted the lessor slope. The registrant shall certify the design and final installation through special inspection.

Cost Impact:
This amendment will reduce the costs associated with the current approval process for low slope sewer installations.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.1

Submitted by: 2018 Uniform Plumbing Code Committee

1014.0 Grease Interceptors.

1014.1 General. Where it is determined by the Authority Having Jurisdiction that waste pretreatment is required, an approved type of grease interceptor(s) complies with ASME A112.14.3, ASME A112.14.4, CSA B481, PDI G-101, or PDI G-102, and sized in accordance with Section 1014.2.1 or Section 1014.3.6, shall be installed in accordance with the manufacturer's installation instructions to receive the drainage from fixtures or equipment that produce grease-laden waste located in areas of establishments where food is prepared, or other establishments where grease is introduced into the drainage or sewage system in quantities that can effect line stoppage or hinder sewage treatment or private sewage disposal systems. ~~A~~ Where approved by the Authority Having Jurisdiction, a combination of hydromechanical, gravity grease interceptors and engineered systems shall be allowed to meet this code and other applicable requirements of the Authority Having Jurisdiction where space or existing physical constraints of existing buildings necessitate such installations. A grease interceptor shall not be required for individual dwelling units or private living quarters. Water closets, urinals, and other plumbing fixtures conveying human waste shall not drain into or through the grease interceptor.

Reasons:
Combination pretreatment systems are generally not allowed by the Environmental Services Division but will be considered on a case by case basis.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.1.3

Submitted by: 2018 Uniform Plumbing Code Committee

1014.0 Grease Interceptors.

1014.1.3 Food Waste Disposers and Dishwashers. All food waste disposers and dishwashers installed in commercial applications shall be connected to and / or discharge into a gravity grease interceptor unless approved by the Authority Having Jurisdiction. ~~No food waste disposer or dishwasher shall be connected to or discharge into a grease interceptor. Commercial food waste disposers shall be permitted to discharge directly into the building's drainage system.~~

~~**Exception:** Food waste disposers shall be permitted to discharge to grease interceptors that are designed to receive the discharge of food waste.~~

Reasons:
This code change is necessary to positively identify where disposers and dishwashers shall be discharged. Connecting a commercial disposer unit and/or dishwasher to a hydromechanical interceptor will have a negative effect on the operation, separation and grease retention efficiency of the device.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.2.1

Submitted by: 2018 Uniform Plumbing Code Committee

1014.2 Hydromechanical Grease Interceptors.

1014.2.1 Capacity. The total capacity in gallons (gal) (L) of fixtures discharging into a hydromechanical grease interceptor shall not exceed two and one-half times the certified gallon per minute (gpm) (L/s) flow rate of the interceptor in accordance with Table 1014.2.1 and 1014.2.1A. No hydromechanical interceptor shall be installed which has an approved rate of flow greater than fifty-five (55) gallons per minute or (3.5 L/s), nor less than twenty (20) gallons per minute (1.3 L/s) except where approved by the Authority Having Jurisdiction.

For the purpose of this section, the term "fixture" shall mean and include each plumbing fixture, appliance, apparatus, or other equipment required to be connected to or discharged into a grease interceptor by a provision of this section.

Reasons:
The purpose of this code change is to provide the public with prescriptive sizing guidelines for hydromechanical grease interceptors.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section: Table 1014.2.1A

Submitted by: 2018 Uniform Plumbing Code Committee

1014.2 Hydromechanical Grease Interceptors.

Add new table:

TABLE 1014.2.1A
HYDROMECHANICAL GREASE INTERCEPTOR SIZING BASED ON FIXTURE COUNT

Total Number of Grease Retention Fixtures Connected	Total Flow-Through Rating (gpm)	Grease Retention Capacity Equal to or Greater Than (pounds)
1	20	40
2	25	50
3	35	70
4	50	100

For SI Units: 1 gallon per minute = 0.06 L/s, 1 pound = 0.454 kg.

Reasons:
The purpose of adding this table to the code is to provide the public with prescriptive sizing guidelines for hydromechanical grease interceptors.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.2.3

Submitted by: 2018 Uniform Plumbing Code Committee

1014.2 Hydromechanical Grease Interceptors.

Add new section:

1014.2.3 Maintenance. An *approved* two-way cleanout shall be installed on the discharge side of all separators, interceptors, (clarifiers) and *hydromechanical grease interceptors.*

Reasons:
The purpose of this code section is to provide an entry point to clean the line downstream of the device and back to the device.

Cost Impact: Minimal cost impact.
The cost impact is minimal to install additional piping for cleanouts. This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.3.5

Submitted by: 2018 Uniform Plumbing Code Committee

1014.3 Gravity Grease Interceptors.

1014.3.5 Construction Requirements. Gravity grease interceptors shall be designed to remove grease from effluent and shall be sized in accordance with this section. Gravity grease interceptors shall also be designed to retain grease until accumulations can be removed by pumping the interceptor. ~~It is recommended that a sample box be located at the outlet end of gravity grease interceptors so that the Authority Having Jurisdiction can periodically sample effluent quality.~~ The minimum gravity grease interceptor capacity shall be 500 gallons and the maximum capacity shall be 5000 gallons unless otherwise approved by the Authority Having Jurisdiction. A 500-gallon interceptor shall have a minimum of two compartments and two man-ways. Interceptors 750 gallons and above shall have a minimum of two compartments and three man-ways. All man-ways shall have a minimum 20" inside diameter. All interceptors shall have a vented two-way cleanout on the discharge side of the interceptor. All interceptors shall have a separate set of approved plans on file with the Environmental Services Division. The plans shall be sealed by a registered professional engineer and be approved by the Authority Having Jurisdiction. These plans shall be on file with the city before installation can be completed.

The grade rings (risers) of gravity grease interceptors shall be grouted with shrink and water proof grout. The interceptor lids shall be just above grade so as to prevent rain water infiltration. All interceptors shall have gas tight and/or traffic rated lids where required.

Reasons:
The Environmental Services Division does not sample effluent discharges from grease interceptors therefore providing a sample box is an unnecessary expense for a facility. The additional requirements establish construction parameters for interceptors.

Cost Impact:
The Environmental Services Division does not sample effluent discharges from grease interceptors therefore providing a sample box is an unnecessary expense for a facility. The additional requirements establish construction parameters for interceptors.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1014.3.6

Submitted by: 2018 Uniform Plumbing Code Committee

1014.3 Gravity Grease Interceptors.

1014.3.6 Sizing criteria. The volume of the interceptor shall be determined by calculating drainage fixture units (DFUs) using Table ~~1014.3.6~~ 702.1. Where drainage fixture units (DFUs) are not known, the interceptor shall be sized based on the maximum DFUs allowed for the pipe size connected to the inlet of the interceptor. Refer to Table 703.2, Drainage Piping, Horizontal.

Example: Take the total DFUs going to grease waste, multiply by three (3) gallons per minute (GPM), multiply by a 12-minute detention time and this will give the interceptor size in gallons. If there is a disposal, use a 17-minute detention time.

Reasons:
The purpose of this code change is to define how an interceptor will be sized. The sizing criteria was developed from three public forums held in 1997 to standardize gravity grease interceptor sizing.

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2006 & 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section: Table 1014.3.6

Submitted by: 2018 Uniform Plumbing Code Committee

1014.3 Gravity Grease Interceptors.

Delete TABLE 1014.3.6 GRAVITY GREASE INTERCEPTOR SIZING

Reasons:
Gravity grease interceptor sizing is defined in 2018 UPC amended section 1014.3.6 and amended section Example 1014.3.6

Cost Impact: No cost impact.
This requirement is an amendment carried forward from the 2012 Uniform Plumbing Code.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section: Example 1014.3.6

Submitted by: 2018 Uniform Plumbing Code Committee

1014.3 Gravity Grease Interceptors.

EXAMPLE 1014.3.6
GRAVITY GREASE INTERCEPTOR SIZING EXAMPLE

Given: A restaurant with the following fixtures and equipment.

One food preparation sink; three floor drains – one in the food prep area, one in the grill area, and one receiving the indirect waste from the ice machine and mop sink.

Kitchen Drain Line DFU Count (from Table 702.1):

3 floor drains at 2 DFUs each	=	6 DFUs
Mop sink at 3 DFUs each	=	3 DFUs
Food prep sink at 3 DFUs each	=	3 DFUs
Total	=	12 DFUs

~~Using Table 1014.3.6, the grease interceptor will be sized at 750 gallons (2389 L).~~ Using UPC 1014.3.6:

12 DFUs x 3 GPM x 12-minute detention time = 432 gallons. The interceptor will be sized at 500 gallons (1893 L).

Reasons:
The purpose of this code change is to provide a design example that clearly illustrates how to size an interceptor.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1101.12.1

Submitted by: 2018 Uniform Plumbing Code Committee

1101.12 Roof Drainage.

1101.12.1 Primary Roof Drainage. Roof areas of a building shall be drained by roof drains, scuppers or gutters. The location and sizing of drains and gutters shall be coordinated with the structural design and pitch of the roof. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by this section. Scupper openings shall be not less than 4 inches (102 mm) in height and have an opening width equal to the circumference of the roof drain required for the area served, sized in accordance with Table 1101.12. Unless otherwise required by the Authority Having Jurisdiction, roof drains, scuppers, gutters, vertical conductors or leaders, and horizontal storm drains for primary drainage shall be sized based on a rainfall rate of three (3) inches per hour ~~storm of 60- minute duration and 100-year return period. Refer to Table D 101.1 (in Appendix) for 100 years, 60-minute storms at various locations.~~

Reasons:
Current language in the 2018 UPC implies that scuppers are only approved for secondary roof drainage. It has been a long-standing practice in Phoenix to allow the use of scuppers as primary roof drains. This proposal adds the acceptance of scuppers as primary roof drains and matches the sizing criteria found for the secondary scuppers in Section 1101.12.2.1. The annual rainfall rate is given in the Appendix D of this code as 2.2 inches per hour. It is proposed to round this number up to 3 inches for ease of use of the sizing Tables.

Cost Impact: No cost impact.
Carried over from 2012 Amendment.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1101.12.2.2 & 1101.12.2.2.2

Submitted by: 2018 Uniform Plumbing Code Committee

1101.12 Roof Drainage.

1101.12.2.2 Secondary Roof Drain. Secondary roof drains shall be provided. The secondary roof drains shall be located not less than 2 inches (51 mm) above the roof surface. The maximum height of the roof drains shall be a height to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.12.1. The secondary roof drains shall connect to a piping system in accordance with Section 1101.12.2.2.1. ~~or Section 1101.12.2.2.2.~~

1101.12.2.2.1 Separate Piping System. The secondary drainage system shall be separate system of piping independent of the primary roof drainage system. The discharge shall be above grade, in a location observable by the building occupants or maintenance personnel. Secondary roof drain systems shall be sized in accordance with Section 1101.12.1 based on rainfall rate for which the primary system is sized.

~~**1101.12.2.2.2 Combined System.** The secondary roof drains shall connect to the vertical piping of the primary storm drainage conductor downstream of the last horizontal offset located below the roof. The primary storm drainage system shall connect to the building storm water that connects to an underground public storm sewer. The combined secondary and primary roof drain systems shall be sized in accordance with Section 1103.0 based on double rainfall rate for the local area.~~

Reasons:
The city of Phoenix does not allow for combined primary and secondary rainwater removal systems. A combined system does not have any way to indicate there is a blockage in the primary drain.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1101.16.2

Submitted by: 2018 Uniform Plumbing Code Committee

1101.16 Leaders, Conductors, and Connections. Leaders or conductors shall not be used as soil, waste, or vent pipes nor shall soil, waste, or vent pipes be used as leaders or conductors.

1101.16.1 Protection of Leaders. Leaders installed along alleyways, driveways, or other locations where exposed to damage shall be protected by metal guards, recessed into the wall, or constructed from the ferrous pipe.

~~**1101.16.2 Combining Storm with Sanitary Drainage.** The sanitary and storm drainage system of a building shall be entirely separate, except where a combined sewer is used, in which case the building storm drain shall be connected in the same horizontal plane through a single wye fitting to the combined building sewer not less than 10 feet (3048 mm) downstream from a soil stack.~~

Reasons:
The city of Phoenix does not allow for combined sanitary and storm drainage systems. This type of combined system is under the jurisdiction of the city of Phoenix Water Services Department.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC)
Section 1208.5.10.5.

Submitted by: 2018 Uniform Plumbing Code Committee

1208.5.10 Flange Specification.
Cast iron flanges shall be in accordance with ASME B16.1. [NFPA 54:5.6.10.1.1]

1208.5.10.1 Steel Flanges.
Steel flanges shall be in accordance with one of the following:
(1) ASME B16.5 or
(2) ASME B16.47. [NFPA 54:5.6.10.1.2]

1208.5.10.2 Non-Ferrous Flanges.
Non-ferrous flanges shall be in accordance with ASME B16.24. [NFPA 54:5.6.10.1.3]

1208.5.10.3 Ductile Iron Flanges.
Ductile iron flanges shall be in accordance with ASME B16.42. [NFPA 54:5.6.10.1.4]

1208.5.10.4 Dissimilar Flange Connections.
Raised-face flanges shall not be joined to flat-faced cast iron, ductile iron or nonferrous material flanges. [NFPA54:5.6.10.2]

1208.5.10.5 Flange Facings.
Standard facings shall be permitted for use under this code. ~~Where 150 psi (1034 kPa) steel flanges are bolted to Class 125 cast iron flanges, the raised face on the steel flange shall be removed. [NFPA 54:5.6.10.3]~~

1208.5.10.6 Lapped Flanges.
Lapped flanges shall be used only aboveground or in exposed locations accessible for inspection. [NFPA 54:5.6.10.4]

Reasons:
Defacing a listed product voids its certification to a design standard. This amendment is consistent with the amended similar section in the 2018 International Fuel Gas Code.

Cost Impact: No cost impact.

G6463

Approved in previous 2012 Code Adoption process:	☐ **YES**	☒ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 Uniform Plumbing Code (UPC) **Section: Appendices**
Submitted by: 2018 Uniform Plumbing Code Committee Adopt Appendices A, B & I.
Reasons: Appendix A provides an alternative engineered method of water pipe sizing. Appendix B provides supplemental and explanatory information on combination waste and vent systems. Appendix I contains installation standards for PEX tubing systems.
Cost Impact: No cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Chapter 2

Submitted by: 2018 International Swimming Pool and Spa Code Committee

RESIDENTIAL SWIMMING POOL (RESIDENTIAL POOL). A pool intended for use that is accessory to a *residential* setting and available only to the household and its guests including any structure intended for swimming or recreational bathing that contains water over ~~24~~ 18 inches ~~(610mm)~~ (457.2mm) deep. This includes in-ground, above ground and on-ground swimming pools, hot tubs, spas, and fixed in place wading pools. All other pools shall be considered public pools for purposes of this code.

Types I-V. *Residential* pools suitable for the installation of diving equipment type.

Types O. A nondiving *residential* pool.

Reasons:
The added text enhances this important definition and keeps us in line with previous code language. 18" depth is in accordance with A,R.S. section 36-1681.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 305.1

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.1 General.
The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

It is the responsibility of the property owner and any other person in responsible charge of a swimming pool to ensure that the required swimming pool barrier, including all gates, doors, locks, latches, and other portions of the barrier are maintained safe and in good working order at all times. No person shall alter or remove any portion of a swimming pool barrier except to repair, reconstruct, or replace the barrier in compliance with the provisions of this section. All barriers shall be installed, inspected, and approved prior to plastering or filling with water.

Reasons:
This paragraph was located in section AG105.2 of the 2012 IRC Appendix G. It provides important information for the pool owner and should be included in the new ISPSC.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 305.2.1(1)

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.2.1. (1) Barrier height and clearances.
Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than ~~48 inches (1219 mm)~~ **60" (1524 mm)** (above grade) where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.

Reasons:
The provision for the required pool barrier fence height was set at five feet in the previous 2012 IRC, Appendix G. This is in accordance with A.R.S. § 36-1681 and City of Phoenix Ordinance G-3316, adopted on May 4, 1990.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 305.2.7

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.2.7 Chain link dimensions.
The maximum opening formed by a chain link fence shall be not more than 1¾ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than 1¾ inches (44 mm). The mesh shall not be less than 11 wire gauge.

Reasons:
The provision for the chain link wire gauge was in the previous Appendix G.

Cost Impact: No cost impact.

Approved in previous 2012 Code Adoption process: ☒ **YES** **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 305.3.2

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.3.2 Double or multiple gates.
~~Double gates or multiple gates~~ If a set of double gates or multiple gates is the only access to the yard area where the pool is located, they shall have not fewer than one leaf secured in place and the adjacent leaf shall be self-closing and be secured with a self-latching device. The gate and barrier shall not have openings larger than $^1/_2$ inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

If a pedestrian gate is present in conjunction with the double or multiple gates, the double or multiple gates need not be self-closing or self-latching and shall be equipped with a padlock or similar locking device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

A. The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and
B. The gate and barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

Reasons:
The 2012 IRC, Appendix G, section AG 105.2.8 did not address RV type double gates as being required to meet section AG 105.2 (1) through (7). (Self-closing, self-latching, etc.) This clarifies that it is necessary if it is the only gate to the yard area with the pool.

The second paragraph is taken from the 2012 IRC, Appendix G with added clarification to exclude RV type gates if there is also a pedestrian gate present that meets the 2018 ISPSC section 305.5.

Cost Impact: Minimal cost impact.
Some cost may be realized to properly equip an RV type gate if required.

Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 305.4

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.4 Structure wall as a barrier.
Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

~~1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor and doors shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be *listed* and *labeled* as a water hazard entrance alarm in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located 54 inches (1372 mm) or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.~~

~~2. A *safety cover* that is *listed* and *labeled* in accordance with ASTM F1346 is installed for the pools and spas.~~

~~3. An *approved* means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.~~

1. The pool shall be equipped with a key operated powered safety cover in compliance with ASTM F1346. The keyed pool cover switch shall be located not less than 54 inches (1372 mm) above the floor or adjacent ground level and where the entire pool cover can be visually inspected; or

2. All doors leading from the dwelling unit or guest room, directly into a yard with a swimming pool, shall swing away from the pool, shall be self-closing and self-latching, and shall be equipped with a locking device. The release mechanism for the latch or a secondary locking device, shall be located not less than 54 inches (1372 mm) above the floor. A locking latch which uses a key, electronic opener, or integral combination lock may be located at any height on the door. Sliding doors shall not form any part of a required barrier unless the self-closing and self-latching mechanism is specifically approved.

3. Multi panel sliding doors or walls shall meet the requirements of ISPSC 305.4.2., or shall be secured in place by a permanent fastening method that requires a tool to remove. If a sliding glass door or panel is the only door to the pool area it shall meet the requirements of ISPSC 305.4.2.

G6463

4. Windows used for emergency escape or rescue which face into a yard with a swimming pool shall be equipped with a latching device located not less than 54 inches (1372 mm) above the floor. All other operable dwelling unit windows facing into a yard with a swimming pool shall be equipped with a screwed in place wire mesh screen, a keyed lock that prevents opening the window more than 4 inches (102 mm), or a latching device not less than 54 inches (1372 mm) above the floor.
Reasons: The ISPSC allows audible alarms as part of the barrier system which was not acceptable in the previously adopted 2012 IRC Appendix G. This provision for house barriers was in the previous Appendix G.
Cost Impact: Minimal cost impact.
Approved in previous 2012 Code Adoption process: ☒ **YES** ☐ **NO**

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC) Section 305.8

Submitted by: 2018 International Swimming Pool and Spa Code Committee

305.8 Barrier exceptions.

1. For portable spas and or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section 305.4.2 shall be exempt from the provisions of this section.
2. For spas and hot tubs, a hard safety cover which is latched or locked may be used provided the spa or hot tub is not more than 8 feet (2.44 m) in width at any point.
3. Existing swimming pools located on a one-family dwelling property on or before May 4, 1990, need not be retroactively fitted with a barrier between the dwelling and the pool provided all occupants of the dwelling are at least six years of age or older. All other portions of the swimming pool barrier separating properties shall be installed and maintained as required by Section 105.2.

Exception:

1. This exception does not eliminate an owner's responsibility for providing a temporary barrier or otherwise physically restricting visiting children's direct access from the dwelling to the swimming pool.
2. This exception shall expire and the required permanent barrier shall be retroactively installed between the dwelling and the swimming pool whenever:

    1. One or more children under six years of age become occupants of the property.
    2. There is a change of use or character to the primary building occupancy on the property.
    3. A new pool or spa is being installed on the same property including spa additions to the existing swimming pool or alterations to the existing pool that change size or shape.
    4. Alterations to existing buildings: New work that changes an existing element of the pool barrier (whether the barrier is compliant or not) shall meet the current barrier requirements of Section 305.

Reasons:
This section is not included in the 2018 ISPSC, however it was part of Appendix G in the 2012 IRC. A new section 305.8 is added to the 2018 ISPSC to allow for this text. This language is added to provide an exception to barriers for pools constructed prior to May 4, 1990, in accordance with City of Phoenix Ordinance G-3316.

G6463

Cost Impact: Minimal cost impact. There could be a minor increase in cost for homes that do not have barriers present, depending on barrier type affected.
Approved in previous 2012 Code Adoption process: ☒ YES ☐ NO

G6463

City of Phoenix
PLANNING & DEVELOPMENT DEPARTMENT

BUILDING CONSTRUCTION CODE CHANGE PROPOSAL

Proposed Amendment to 2018 International Swimming Pool and Spa Code (ISPSC)
Section 411.1.4

Submitted by: 2018 International Swimming Pool and Spa Code Committee

411.1.4 Pools greater than ~~30~~ 20 feet wide.
Swimming pools greater than ~~30~~ 20 feet (9144 mm) in width shall be provided with entries and exits on each side of the deep area of the pool. The entries and exits on the sides of the deep area of a pool shall be located not more than 82 feet (25 m) apart.

Reasons:
This change maintains consistency with the Maricopa County Environmental Health Code, Chapter VI, Section 6: Public Swimming Pools.

Cost Impact: Minimal cost impact.
For some pools, this may increase cost by the addition of a ladder for egress.

Approved in previous 2012 Code Adoption process: ☐ **YES** ☒ **NO**

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