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WHEN RECORDED RETURN TO:

Lucinda J. Aja, City Clerk
City of Buckeye
530 East Monroe Avenue
Buckeye, Arizona 85326

ORDINANCE NO. 17-23

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, DECLARING AS A PUBLIC RECORD THAT CERTAIN DOCUMENT ON FILE WITH THE CITY CLERK ENTITLED THE "CITY OF BUCKEYE 2023 AMENDMENTS TO THE INTERNATIONAL BUILDING, RESIDENTIAL, MECHANICAL, PLUMBING, ELECTRICAL, FUEL GAS, AND FIRE CODES," ADOPTING THE "CITY OF BUCKEYE 2023 AMENDMENTS TO THE INTERNATIONAL BUILDING, RESIDENTIAL, MECHANICAL, PLUMBING, ELECTRICAL, FUEL GAS, AND FIRE CODES" BY REFERENCE, AND AMENDING THE BUCKEYE CITY CODE BY AMENDING CHAPTER 15, BUILDING REGULATIONS, ARTICLE 15-2, BUILDING CODES, SECTIONS 15-2-1, BUILDING CODE, 15-2-2, RESIDENTIAL CODE, 15-2-3, MECHANICAL CODE, 15-2-4, PLUMBING CODE, 15-2-5, ELECTRICAL CODE, 15-2-6, FUEL GAS CODE, AND 15-2-10, FIRE CODE, AS SET FORTH IN THE "CITY OF BUCKEYE 2023 AMENDMENTS TO THE INTERNATIONAL BUILDING, RESIDENTIAL, MECHANICAL, PLUMBING, ELECTRICAL, FUEL GAS, AND FIRE CODES;" PROVIDING FOR REPEAL OF CONFLICTING ORDINANCES; PROVIDING FOR SEVERABILITY; AND SETTING FORTH PENALTIES FOR VIOLATIONS.

WHEREAS, that certain document entitled the "City of Buckeye 2023 Amendments to the International Building, Residential, Mechanical, Plumbing, Electrical, Fuel Gas, and Fire Codes," of which at least three paper copies or one paper copy and one electronic copy are on file in the Office of the City Clerk and open for public inspection during normal business hours, is hereby declared to be a public record and said copies are ordered to remain on file with the City Clerk;

WHEREAS, the Mayor and Council of the City of Buckeye, Arizona (the "Council") deems it necessary, in order to protect public health and safety, to update certain rules and regulations for building and fire safety within the City of Buckeye (the "City"); and

WHEREAS, the Council finds that the proposed rules and regulations will further protect public health and safety by incorporating certain options provided for in the 2018 versions of relevant building and fire codes published by the International Code Council, and by ensuring consistency between such codes and with applicable state law; and

WHEREAS, the City adopted sprinkler requirements for detached single-family residences and for residential buildings containing less than two dwelling units prior to December 31, 2009, and has preserved those requirements since that time.

NOW, THEREFORE, BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF BUCKEYE, ARIZONA, as follows:

Section 1. The recitals set forth above are hereby incorporated as if fully set forth herein.

Section 2. That certain document entitled the "City of Buckeye 2023 Amendments to the International Building, Residential, Mechanical, Plumbing, Electrical, Fuel Gas, and Fire Codes," of which at least three paper copies or one paper copy and one electronic copy are on file in the Office of the City Clerk and open for public inspection during normal business hours, is hereby referred to, adopted, and made a part hereof as if fully set out in this Ordinance.

Section 3. The Buckeye City Code is hereby amended by amending Chapter 15, Building Regulations, Article 15-2, Building Codes, Sections 15-2-1, Building Code, 15-2-2, Residential Code, 15-2-3, Mechanical Code, 15-2-4, Plumbing Code, 15-2-5, Electrical Code, 15-2-6, Fuel Gas Code, and 15-2-10, Fire Code, as set forth in the "City of Buckeye 2023 Amendments to the International Building, Residential, Mechanical, Plumbing, Electrical, Fuel Gas, and Fire Codes."

Section 4. Provisions requiring fire sprinklers in a single family detached residence, or in a residential building that contains not more than two dwelling units, which were adopted before December 31, 2009, are hereby preserved as adopted before such date.

Section 5. All ordinances and parts of ordinances in conflict with the provisions of this Ordinance or any part of the Code adopted herein by reference are hereby repealed.

Section 6. If any section, subsection, sentence, clause, phrase or portion of this Ordinance or any part of the "City of Buckeye Amendments to the 2018 International Fire Code" adopted herein by reference is for any reason held invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

Section 7. In accordance with Chapter 15, Building Regulations, Article 15-1, General Provisions, violations of this Ordinance are subject to the following penalties:

Section 15-1-1 – General provisions

...

C. Violations; Penalties. Whenever in this chapter of the city code, or in any of the regulatory publications adopted herein by reference, any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or whenever in such code or regulatory publication the doing of any act is required or the failure to do any act is declared to be unlawful or a misdemeanor, where no specific penalty is provided therefor, the violation of any such provision of this code or regulatory

publication shall be subject to civil and criminal penalties as set forth in subsection 15-1-2(E)(2) of this chapter and/or Article 1-7 of the city code.

D. Additional Fees, Surcharges, Costs, Expenses Permitted. Whenever any fees, assessments, surcharges, costs and/or expenses are imposed against any person as a condition, requirement or penalty of any provision of this chapter, or any of the regulatory publications adopted herein, such fees, assessments, surcharges, costs and/or expenses shall be in amounts as determined by the council and adopted by ordinance, resolution or annual budget.

Section 15-1-2 – Civil Code Enforcement for Violations of City Code

Violations of the building code and other adopted regulatory publications of the city may be filed under the civil enforcement procedures herein, and are hereby declared to be civil offenses. A person shall not be charged both as a civil and criminal offense for the same violation on the same date, but a subsequent violation against the same property or person may be charged as criminal offense rather than as a civil offense. The city may file a criminal charge against a violator that does not comply with a civil enforcement action pursuant hereto. A criminal charge of violation of any provision of this code shall be subject to penalties as set forth in Article 1-7 of the city code.

Section 1-7-1 – Penalty

A. Whenever in this code or in any ordinance of the city any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or whenever in such code or ordinance the doing of any act is required or the failure to do any act is declared to be unlawful or a misdemeanor, where no specific penalty is provided therefor, the violation of any such provision of this code or any ordinance shall be a class 1 misdemeanor and punishable by a base fine not to exceed two thousand five hundred dollars ($2,500.00) or by imprisonment for a period not to exceed six (6) months, or by both such fine and imprisonment, in accordance with state law. Each day that a violation continues shall be a separate offense punishable as hereinabove described. In all cases where the same offense is made punishable or is created by different clauses or sections of this code the prosecuting officer may elect under which to proceed; but not more than one (1) recovery shall be had against the same person for the same offense; provided, however, that the revocation of a license or permit shall not be considered a recovery or penalty so as to bar any other penalty being enforced.

B. Any person who is found or pleads guilty to a misdemeanor criminal offense in the municipal court and who, as a consequence, is incarcerated in any jail facility, may, as a part of any sentence imposed by the municipal court, be required to reimburse the city for any costs of such incarceration charged to the city by the jail facility in which the person was incarcerated.

C. In addition to any other remedy provided by law, the municipal court may, as a part of any sentence imposed by the municipal court, assess fees, surcharges, costs and expenses against any person who is found or pleads guilty to a civil or misdemeanor criminal offense in such amounts as may be determined by the council and adopted by ordinance, resolution or annual budget AND AS MAY BE REQUIRED BY STATE, FEDERAL OR LOCAL LAWS.

PASSED AND ADOPTED by the Mayor and Council of the City of Buckeye, Arizona, this 20th day of June, 2023.

Eric W. Orsborn, Mayor

ATTEST:

Lucinda J. Aja, City Clerk

APPROVED AS TO FORM:

K. Scott McCoy, City Attorney

JAG:jag 4801366.1 6/12/2023

CITY OF BUCKEYE 2023 AMENDMENTS TO THE INTERNATIONAL BUILDING, RESIDENTIAL, MECHANICAL, PLUMBING, ELECTRICAL, FUEL GAS, AND FIRE CODES

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-1 – Building Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

*** * ***

Article 15-2 – BUILDING CODES

*** * ***

SECTION 15-2-1 BUILDING CODE

A. Building Code Adopted. That certain document designated and marked as the International Building Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as the City's uniform building code as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the City's uniform building code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the City's uniform building code as hereby adopted by the city council.

B. City of Buckeye Amendments to the 2018 International Building Code.

CHAPTER 1 ADMINISTRATION, is hereby amended as follows:

101.1 Title. Insert the words "City of Buckeye" as the name of jurisdiction. Also add, "The administrative provisions of Chapter 1 of this Code shall apply to all the adopted technical codes. When there is a conflict between these provisions and those of another technical code, these provisions shall apply. Where there is an administrative provision contained in another technical code and not in this code, then the administrative provision of the technical code shall apply."

101.2 Scope. **Exception**: Delete the words **"this code or" of the last sentence of the exception.**

101.2.1 Appendices. Delete in its entirety and insert in lieu thereof the following:

101.2.1 Appendices. The following Appendices are hereby adopted:

Appendix B:	Board of Appeals;
Appendix C:	Agricultural Buildings;
Appendix F:	Rodent Proofing;
Appendix I:	Patio Covers, and;
Appendix J:	Grading

101.4 Referenced codes. Shall be deleted in its entirety and revised to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.7 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each reference. If another code is referenced elsewhere in this code and has not been adopted, then that section shall be considered invalid. The administrative requirements specified in this Code shall supersede those in other adopted codes when there is a conflict.

Exception: Administrative requirements in the City of Buckeye Fire Code.

Any references to the International Fuel Gas Code shall be deleted and the words "Fuel Gas Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Mechanical Code shall be deleted and the words "Mechanical Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Plumbing Code shall be deleted and the words "Plumbing Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Property Maintenance Code shall be deleted and the words "Property Maintenance Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Fire Code shall be deleted and the words "Fire Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Energy Conservation Code shall be deleted and the words "Energy Conservation Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

Any references to the International Existing Building Code shall be deleted and the words "Existing Building Code adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

101.4.1 Fuel Gas. The provisions of the Fuel Gas Code adopted by the City of Buckeye and amended from time to time 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 inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

101.4.2 Mechanical. The provisions of the Mechanical Code adopted by the City of Buckeye and amended from time to time 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.

101.4.3 Plumbing. The provisions of the Plumbing Code adopted by the City of Buckeye and amended from time to time shall apply to the installation alterations, repairs and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all applicable aspects of a medical gas system. Private Sewage Disposal Facilities shall be regulated by the Maricopa County Department of Environmental Services Department.

101.4.4 Property Maintenance. The provisions of the Property Maintenance Code adopted by the City of Buckeye and amended from time to time 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 and shall be managed by the City of Buckeye Code Enforcement Division.

101.4.5 Fire Prevention. The provisions of the Fire Code adopted by the City of Buckeye and amended from time to time shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire or 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 and alarm systems or fire hazards in the structure or on the premises from occupancy or operation and shall be managed by the City of Buckeye Fire Department.

101.4.6 Energy. The provisions of the Energy Conservation Code adopted by the City and amended from time to time shall apply to all matters governing the design and construction of buildings for energy efficiency.

101.4.7 Existing Buildings. The provisions of the Existing Building Code adopted by the City and amended from time to time shall apply to matters governing the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

103.3 Deputies. Delete the last sentence.

104.2 Add new subsection to read as follows:

104.2.2 Licenses required for non-residential projects.

All projects shall utilize Arizona state-licensed commercial contractors.

Exception: R-3 occupancies

105.2 Work exempt from permit, Building. Is amended as follows:

Delete items 2 and 9 and insert in lieu thereof the following:

2. Residential fences (pilaster style) not over 7 feet high

9. Prefabricated swimming pools accessory to a Group R-3 occupancy that meet both of the following requirements:
   A. Have a water depth of no more than 18 inches at any point; and
   B. Are no more than 8 feet wide at any point.

105.3.2 Time limitation of application. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

105.4 Validity of permit. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

105.5 Expiration. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

105.6 Suspension or revocation. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

109.1 Payment of fee. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

109.2 Schedule of permit fees. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

109.3 Building permit valuations. Amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time. Any valuation not specifically provided for shall be determined by the Building Official and shall be classified in the use and construction type it most nearly resembles.

The applicant for a permit for a new building or structure or additions or alterations to an existing building or structure shall provide a reasonable estimated permit value at time of application. The value to be used in computing the building permit and building plan review fees shall be, including labor, the total of all construction work for which the permit is being issued, as well as grading, roofing, siding, electrical, plumbing, gas, heating, air conditioning, elevators, fire extinguishing systems, permanent mechanical equipment and systems as well as any other items which will require plan review and/or inspection. When permitted work includes an alteration to an existing structure or includes work outside of the standard calculated fee areas determined by square footage cost tables, the applicant shall provide legitimate actual/contracted project costs to establish the additional non- calculated valuation of the total permitted project. Value for donated and/or discounted materials and labor shall be established at typical market rates. If, in the opinion of the Building Official, the valuation is underestimated on the application, the permit shall be denied, unless the applicant can provide detailed estimates acceptable to the Building Official. Final building permit valuation shall be set by the Building Official.

Exceptions: The Building Official shall be authorized to omit the cost of land, finish materials such as paint, wallpaper, tile, flooring, interior paneling, except those finish materials requiring fire resistive qualities, solar panels, electric vehicle charging devices, counters, counter tops, cabinets, and residential appliances such as dishwashers, stoves, ovens and microwaves. In addition, the Building Official is authorized to omit the cost of

electrical fixtures and plumbing fixtures such as garbage disposals, sinks, lavatories and water closets where their removal or replacement does not require inspection. These exceptions shall not include the replacement of any concealed or exposed electrical, plumbing, gas, ventilation or other mechanical systems required to operate these appliances or the exposed or concealed extension of any of these systems.

109.4 Work commencing before permit issuance. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

109.5 Related fees. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

109.6 Refunds. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

112.2.1 Add new section to 112.2 Temporary connection:

112.2.1 Lock out/tag out safety program.
Prior to the approval of temporary power in any form on a construction site, a letter containing the following information shall be on site at the time of the temporary power inspection. The letter shall be from the contractor or property owner and shall include:

1. Address and permit number
2. Description of equipment being energized
3. The name and phone number of a responsible party or parties.
4. Acknowledgment that the safety plan implemented will be maintained and monitored by the responsible parties.

An original signed and dated letter shall be retained by the City of Buckeye until the project is accepted and under a Certificate of Occupancy.

CHAPTER 2 DEFINITIONS, is hereby amended to read as follows:

202 Definitions. Add the following terms:

ASSISTED LIVING CENTER

ASSISTED LIVING FACILITY

ASSISTED LIVING HOME

CUSTODIAL CARE

DIRECTED CARE SERVICE and

SUPERVISORY CARE SERVICE as defined below:

ASSISTED LIVING CENTER. An assisted living facility that provides resident rooms or residential units to eleven or more residents.

ASSISTED LIVING FACILITY. A residential care institution, including adult foster care, that provides or contracts to provide supervisory care services, personal care services or directed care services on a continuing basis.

ASSISTED LIVING HOME. An assisted living facility that provides resident rooms to ten or fewer residents.

CUSTODIAL CARE. Non-medical care that helps individuals with activities of daily living, preparation of special diets and self-administration of medication not requiring constant attention of medical personnel. Providers of custodial care are not required to undergo medical training.

DIRECTED CARE SERVICE. Care of residents, including personal care services, who are incapable of recognizing danger, summoning assistance, expressing need, or making basic care decisions.

SUPERVISORY CARE SERVICE. General supervision, including daily awareness of resident functioning and continuing needs.

202 Definitions. Amend the following terms as follows:

PERSONAL CARE SERVICE. Delete in its entirety and insert in lieu thereof the following:

PERSONAL CARE SERVICE. Assistance with activities of daily living that can be performed by persons without professional skills or professional training and includes the coordination or provision of intermittent nursing services and administration of medications or treatments.

SWIMMING POOL. Delete in its entirety and insert in lieu thereof the following:

SWIMMING POOL. Private Pool. Any contained body of water used for swimming, recreational bathing or wading purposes that contains eighteen (18) or more inches in depth at any point, and/or eight (8) feet or wider at any point. This includes in-ground, above-ground and on-ground swimming pools, hot tubs, spas or other contained bodies except those exempted by Arizona Revised Statute as amended from time to time.

SWIMMING POOL. Semi-Public or Public. Any contained body of water other than a Private Pool that is regulated by the Arizona Department of Environmental Quality or the agency's designee.

CHAPTER 3 OCCUPANCY CLASSIFICATION AND USE, is hereby amended as follows:

308.2 Institutional Group I-1. Delete in its entirety and replace with the following:

308.2 Institutional Group I-1. This occupancy shall include buildings, structures or portions thereof for more

than 10 persons who reside on a 24-hour basis in a supervised environment, receive custodial care, and are capable of self-preservation, except as provided for assisted living centers. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living centers
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities
Any similar facilities developed for similar purposes

308.2.3 Six to 16 persons receiving custodial care. Delete in its entirety and replace with the following:

308.2.3 Six to 10 persons receiving custodial care. A facility such as above, housing not fewer than six and not more than 10 persons receiving such care, shall be classified as Group R-4.

308.3 Institutional Group I-2. Delete in its entirety and replace with the following:

308.3 Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are incapable of self-preservation. This group shall include, but not be limited to, the following:

Foster care facilities
Detoxification facilities
Hospitals
Assisted Living Facilities
Psychiatric hospitals

308.3.3 Arizona State Department of Health Facilities. All facilities as licensed by the State of Arizona Department of Health, further known, but not limited to, as direct care, personal care, supervisory care and behavioral residential agency, housing at least six and not more than 10 persons shall be considered a Group R-4.

310.4 Residential Group R-3. Amend Congregate living facilities to read as follows:

Congregate living facilities (nontransient) with 10 or fewer occupants

310.4.1 Care facilities within a dwelling. Delete in its entirety and replace with the following:

310.4.1 Care facilities within a dwelling. Licensed care facilities for 10 or fewer persons receiving care that are within a single-family dwelling are permitted.

310.5 Residential Group R-4. Delete in its entirety and replace with the following:

310.5 Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 10 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. The persons receiving care are capable of self-preservation, except as provided for assisted living homes. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living homes
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 or one- and two-family dwellings, except as otherwise provided for in this code.

310.5.1 Condition 1. This occupancy condition shall include facilities licensed to provide supervisory care services, in which occupants are capable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition facilities housing more than 10 persons shall be classified as Group I-2.

310.5.2 Condition 2. This occupancy condition shall include facilities licensed to provide personal or directed care services, in which occupants are incapable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition 2 facilities housing more than 10 persons shall be classified as Group I-2.

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS, is hereby amended as follows:

Section 502.1 Address identification. Delete in its entirety replace with the following:

502.1 Address identification. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Address numbers shall be maintained.

(1) **Address identification multi-family residential.** Within multi-family residential complexes, the building(s) nearest the street must identify the street number of the complex with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. All buildings within the complex shall identify the building number/letter with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. Buildings are required to provide two (2) or more building identification signs per each one hundred (100) feet of the length of the building elevation. All buildings within the complex shall include apartment spread numbers (e.g. Units 201-210) identified with minimum seven (7) inch high contrasting numbers/letters with a one (1) inch stroke width. Each individual unit shall be identified near the unit entryway using minimum four (4) inch high contrasting numbers/letters with a five-eighths (5/8) inch minimum stroke width.

502.1.1 Address identification commercial/employment. All commercial and employment buildings shall identify the street number of the building with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. All commercial and employment buildings within multi-building complexes must identify the building number/letter with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. Each individual unit shall be identified near the primary unit entryway using minimum six (6) inch high contrasting numbers/letters with a one (1) inch stroke width. Individual unit or suite numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Rear doors of commercial buildings with individual suites (strip malls) shall be identified using minimum six (6) inch high contrasting numbers/letters with a one (1) inch stroke width.

502.1.2 Address identification one- and two-family residential dwellings. One- and two-family dwelling shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).

CHAPTER 9 FIRE PROTECTION AND LIFE SAFETY SYSTEMS, is hereby amended as follows:

901.1 Scope. Add the following sentences:

Wherever the words "Building Official" appear in Sections 901 through 911 they shall be deleted and the words "Fire Marshal" shall be inserted in lieu thereof. Code sections preceded by [F] shall be considered to be maintained and administered under the International Fire Code. Where there is a conflict regarding fire suppression systems and/or alarms between this code and the Fire Code, as adopted and amended from time to time, by the City of Buckeye, the Fire Code shall prevail.

901.5 Acceptance tests. Delete the last sentence and amend to read as follows:

901.5 Acceptance tests. It shall be unlawful to use, occupy or furnish any portion of a structure until the fire protection systems of the structure have been tested and approved.

Section 903.2.8.2 is amended to read follows:

903.2.8.2 Group R-4, Condition 1.
Modified NFPA 13d sprinkler system shall be required to be installed in accordance with section 903.3.1.3. If any portion of a patio has habitable space directly above the patio, all of the patio ceiling shall be equipped with sprinkler protection.

Exceptions:
1. Family foster homes and foster group homes licensed by the State of Arizona Department of Economic Security.
2. Behavioral health group homes (BHGH) that serve five or fewer residents and are licensed by the State of Arizona Department of Health Services.

Section 903.2.8.3 is amended to read follows:

903.2.8.3 Group R-4, Condition 2.

Modified NFPA 13d sprinkler system shall be required to be installed in accordance with section

903.3.1.3. If any portion of a patio has habitable space directly above the patio, all of the patio ceiling shall be equipped with sprinkler protection.

The sprinkler system shall consist of an electronically supervised valve located between the domestic water riser control valve and the sprinklers, and shall be equipped with an electronically supervised water-flow switch and monitored by an approved monitoring, and shall sound an alarm at a constantly attended location inside the facility. The minimum listed electronic components for the alarm system shall consist of:

1. Auto dialer.
2. Primary and secondary phone line or wireless digital alarm communications. Transmitter with primary and secondary communications ports.
3. Interior horn-strobe and exterior horn-strobe connected to the fire sprinkler riser water-flow switch.
4. Interconnected smoke alarms.
5. Carbon monoxide devices with distinctive signal, which is different from the smoke alarm, signal.

Exceptions:
1. Family foster homes and foster group homes licensed by the State of Arizona Department of Economic Security.
2. Behavioral health group homes (BHGH) that serve five or fewer residents and are licensed by the State of Arizona Department of Health Services.

Section 903.3.1.1.1 Exempt Locations is amended to read as follows:

903.3.1.1.1 Exempt locations. Automatic Sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic file detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion.

1. ....
....
3. Dedicated rooms within buildings, containing only electrical equipment, generators, transformers, or similar equipment, and used for no other purpose, which are separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. ....
....

Section 912.2 Location is amended to read as follows:

912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be not more than 100 feet from the closest in service fire hydrant, or as approved by the fire code official.

CHAPTER 10 MEANS OF EGRESS, is hereby amended as follows:

Section 1004.9, Posting of occupant load. Delete the last sentence and add the following:

The sign shall be printed in letters and numbers not less than ¾ inch brush stroke by 2 inches on a contrasting background and read: "As determined by City of Buckeye - Maximum Occupant Load __". Posted signs shall be maintained by the owner or authorized agent. The number of people occupying the room or space shall not exceed the maximum occupant load posted on the sign as determined by the Building Official.

1017.2.2.1 Group F-1 and S-1 with a storage area greater than 500,000 square feet (46,451 m2). When storage areas in Group F-1 and S-1 occupancies are greater than 500,000 square feet a technical report prepared by an Arizona professional shall be submitted for review and approval by the fire code official. Additional fire protection or life safety systems, or both, may be required by the Fire Marshal.

CHAPTER 11 ACCESSIBILITY: Is amended by amending Section 1102.1 to read as follows:

1102.1 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code, ICC A117.1 as adopted and amended by the governing authority, the 2010 ADA Standards for Accessible Design, as adopted and amended by the governing authority; the Arizonans with Disabilities Act" (Arizona Revised Statutes, Title 41, Chapter 9, Article 8) as amended, and the "Arizonans with Disabilities Act Implementing Rules" (Arizona Administrative Code, Title 10, Chapter 3, Article 4), which rules incorporate the federal "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities." The requirements herein shall apply to new construction and alterations and are not required in buildings or portions of existing buildings that do not meet the standards and specifications unless expressly required by federal or state law.

1103.2.5 Construction Sites. Amend by adding the following:

1103.2.5.1 Temporary sales offices/trailers 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.

Section 1206, "SOUND TRANSMISSION". Add new section to read as follows:

1206.4 Sound attenuation. All residential buildings or portions of buildings where the public is received, office areas and where normal noise level is low for first occupancy, including libraries, schools and churches, pursuant to building permits issued after December 31, 2001 in order to achieve a maximum interior noise level of forty-five (45) decibels in areas within the noise contours described in ARS section 28-8461, paragraph 9, subdivision (a), (b) or (c), as applicable.

These sound attenuation requirements do not apply to ancillary buildings used in agricultural land use.

If the gross floor area of a structure or project is expanded by less than fifty (50) percent, the requirements of this section apply only to the area of expansion. If the gross floor area of a structure

or project is expanded by fifty (50) percent or more, the requirements of this section apply to the entire structure, except for single family, mobile home, manufactured housing unit or duplex dwellings or any multifamily property used for residential purposes.

The Building Official may approve as an alternative, a certification by an architect or engineer registered pursuant to Title 32, Chapter 1 to achieve a maximum interior noise level of forty-five (45) decibels at time of final construction.

CHAPTER 31 SPECIAL CONSTRUCTION, is hereby amended by amending Section 3109.2, Swimming Pools, Spas and Hot Tubs to add Section 3109.2, Swimming Pool Enclosures and Safety Devices, to read as follows:

Section 3109 Swimming pools, spas and hot tubs.

Section 3109.2 Swimming pool enclosures and safety devices. Swimming pool enclosures and safety devices shall be installed as set forth below and in compliance with A.R.S. § 36-1681, without regard to A.R.S. § (C)(2) and (D)(7), which shall not apply.

POOL ENCLOSURE REQUIREMENTS

Swimming pools shall be protected by an enclosure (wall, fence, or barrier) that surrounds the pool area. Unless a local code provides otherwise, the enclosure of a belowground or aboveground pool must:

- Entirely enclose the pool area;
- Be at least 5 feet high;
- Have no openings, other than doors or gates, through which an object 4 inches in diameter can pass;
- Have no openings, handholds, or footholds accessible from the exterior side that can be used to climb the barrier; and
- Be at least 20 inches from the water's edge.

If, however, a residence or living area makes up part of the enclosure there must be:

- A wall, fence, or barrier located between the swimming pool or other contained body of water and the residence or living area that:
    - Has a height of at least four feet;
    - Has no openings through which a spherical object four inches in diameter can pass;
    - Has a gate that opens outward from the pool and is self-closing and self-latching;
    - Has no openings, handholds, or footholds accessible from the exterior side of the enclosure that can be used to climb the wall, fence, or barrier; and
    - Is at a distance of at least twenty inches from the water's edge;
- For each door or window in the residence or living area that has direct access to the pool:
    - A self-latching device that is located not less than fifty-four inches above the floor; and
    - Either a screwed in wire mesh screen covering a dwelling or guest room window or a keyed lock that prevents a dwelling or guest room window from opening more than four inches; or
- For an aboveground swimming pool, non-climbable exterior sides which are a minimum height of four feet and access ladders or steps that are removable and able to be secured when the pool is not in use.

Gate requirements

An access gate in either the five-foot-tall wall, fence, or barrier enclosing a pool or the four-foot-tall wall, fence, or barrier between the residence or other living area and a pool must:

- Open outward from the pool
- Be self-closing and self-latching; and
- Have a latch:
    - Located at least fifty-four inches above the underlying ground;
    - Located on the pool side of the gate with the latch's release mechanism located at least five inches below the top of the gate and no opening greater than one-half inch with twenty-four inches of the release mechanism; or
    - Located at any height if secured by a padlock or similar device which requires a key, electric opening, or integral combination.
- Rv or double gates that do not serve as the only means of access to the pool enclosure, shall be padlocked at all times when not in use.

- When acceptable and approved by the building official, a readily portable hot tub or spa which is completely above ground, not more than eight (8) feet in width (not more than (8) feet in any dimension for residences with residents younger than six years of age) and has all sides fully exposed, may be permitted to have a hard, latching or locking cover in lieu of the five (5) foot fence barrier.

Section 3113 RELOCATABLE AND FACTORY BUILDINGS. Delete section 3113.1 through 3113.4 in its entirety and replace with the following.

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 41-4001 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 Buckeye 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 Services 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 Buckeye 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 Buckeye 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 Services 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 City of Buckeye Zoning Ordinance and require City of Buckeye 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 City of Buckeye Zoning Ordinance and other applicable city codes and ordinances.

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 41-4001).

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 Services 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 Buckeye 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 Buckeye 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 City of Buckeye 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:

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 City of Buckeye 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 Buckeye 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, manufactured homes or mobile homes shall be protected pursuant to the City of Buckeye Fire Code.

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-2 – Residential Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

SECTION 15-2-2 RESIDENTIAL CODE

Residential Code Adopted. That certain document designated and marked as the International Residential Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the city's uniform code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the city's uniform code as hereby adopted by the city council.

A. City of Buckeye Amendments to the 2018 International Residential Code.

CHAPTER 1 SCOPE AND ADMINISTRATION, is hereby amended as follows: **R101.1 Title.** Insert the words "City of Buckeye" as the name of jurisdiction. **R101.2 Scope.** Add the following subsection:

R101.2.1 Residential photovoltaic systems. Residential Photovoltaic Systems shall be installed per the 2017 National Electric Code as adopted by the City of Buckeye and amended from time to time.

R102.5 Appendices. Provisions in the appendices shall not apply unless specifically referenced in the adopting ordinance. The following appendices are adopted:

APPENDIX A SIZING AND CAPACITIES OF GAS PIPING

APPENDIX B SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE AND TYPE B VENTS

APPENDIX C EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT- VENT VENTING SYSTEMS

APPENDIX D RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION

APPENDIX E MANUFACTURED HOUSING USED AS DWELLINGS APPENDIX H PATIO COVERS

APPENDIX J EXISTING BUILDINGS AND STRUCTURES APPENDIX K SOUND TRANSMISSION

APPENDIX P SIZING OF WATER PIPING SYSTEM APPENDIX Q TINY HOUSES

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

R102 Applicability, is hereby amended as follows:

R102.7 Existing structures. Any references to the International Property Maintenance Code shall be deleted and the words "Property Maintenance Code as adopted by the City of Buckeye and amended from time to time" shall be inserted in lieu thereof.

R105 Permits, is hereby amended as follows:

R105.2 Work exempt from permit. Amended as follows:

Delete items 2 and 9 and insert in lieu thereof the following:

2. Residential fences (pilaster style) not over 7 feet high

9. Prefabricated swimming pools accessory to a Group R-3 occupancy that meet both of the following requirements:
   a. Have a water depth of no more than 18 inches at any point; and
   B. Are no more than 8 feet wide at any point.

R105.3.2 Time limitation of application. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

R105.4 Validity of permit. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

R105.5 Expiration. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

R105.6 Suspension or revocation. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

R108 Fees. Fees is hereby amended as follows:

Section 108.3 Building permit valuations. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 108.5 Refunds. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section R108.6 Work commencing before permit issuance. Delete in its entirety and amend to read as follows:

Shall be in conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

R109 Inspections. Inspections is hereby amended as follows:

Section R109.1.5 Other inspections. Add the following subsection:

R109.1.5.2 Lath or gypsum board inspection. Inspection of the lath or gypsum board shall be made after all lathing and gypsum board, interior and exterior, is in place, but before any plastering is applied or before gypsum board joints and fasteners are taped and finished.

R110 Certificate of Occupancy, is hereby amended to read as follows:

R110.2 Change in use. Add the following words to the end of the sentence: "as adopted by the City of Buckeye and amended from time to time."

CHAPTER 3 BUILDING PLANNING, is hereby amended to read as follows:

Table R301.2(1), is hereby modified to read as follows:

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load[o]	Speed[d] (mph)	Seismic Design Category[f]	Subject To Damage From			Winter Design Temp[e]	Ice Shield Under-Layment Required[h]	Flood Hazards[g]	Air Freezing Index[i]	Mean Annual Temp[j]
			Weathering[a]	Frost Line Depth[b]	Termite[c]					
N/A	115 mph	B	Moderate	N/A	Moderate to Heavy	34˚F	NA	Jurisdicti	50°F	70°F

	Exposure C							on Specific		

(Footnotes in Table R301.2(1) remain unchanged)

R303 LIGHT, VENTILATION AND HEATING, is hereby amended as follows: Add the following Sub-section Section **R303.11 Air Conditioning** to read as follows:

R303.11 Air Conditioning. Every dwelling unit shall be provided air conditioning facilities capable of maintaining room temperatures at or below 90°F (32°C) at a point 3 feet (914 mm) above the floor and 2 feet (610 mm) from exterior walls in all habitable rooms. The installation of one or more portable air conditioning units shall be permitted to achieve compliance with this section when their installation is compliant with the electrical code, mechanical code and does not block the only emergency means of egress from a sleeping room.

R309.5 Fire sprinklers. Delete in its entirety and replace with the following:

R309.5 Fire sprinklers. Fire sprinklers shall be required per the International Fire Code as adopted by the City of Buckeye and amended from time to time.

R313 AUTOMATIC FIRE SPRINKLER SYSTEMS. Delete in its entirety and replace with the following:

R313 AUTOMATIC FIRE SPRINKLER SYSTEMS.

R313.1 Automatic fire sprinkler systems for townhouses and one- and two-family dwellings. Fire sprinklers shall be required per the International Fire Code as adopted by the City of Buckeye and amended from time to time.

CHAPTER 24 FUEL GAS, is hereby amended to read as follows:

G2415.12 (IFGC 404.12) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade for metal piping and 18 inches (457mm) for plastic piping.

Section G2417.4.1 Test pressure. Delete in its entirety and replace with the following:

G2417.4.1.4.1 Test pressure. The test pressure to be used shall be no less than 1 ½ times the proposed maximum working pressure, but no less than 3 psig (20 kPa gauge) for 15 minutes, the acceptable air gauge shall be calibrated in 1/10 lb increments. Where the test pressure exceeds 125 90 psig (862 kPa gauge), irrespective of design pressure, the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe

CHAPTER 29 WATER SUPPLY AND DISTRIBUTION, is hereby amended to read as follows:

P2903.7 Size of water-service mains, branch mains and risers. Delete in its entirety and replace with the following:

P2903.7 Size of water-service mains, branch mains and risers. The minimum size of the water service pipe shall be not less than 1 inch in diameter. The size of water service mains, branch mains and risers shall be

determined according to water supply demand [gpm (L/m)], available water pressure [psi (kPa)] and friction loss caused by the water meter and developed length of pipe [feet (m)], including equivalent length of fittings. The size of each water distribution system shall be determined according to design methods conforming to acceptable engineering practice, such as those methods in Appendix P and shall be approved by the building official.

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-3 – Mechanical Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

SECTION 15-2-3 MECHANICAL CODE

A. Mechanical Code Adopted. That certain document designated and marked as the International Mechanical Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the city's uniform code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the city's uniform code as hereby adopted by the city council.

B. City of Buckeye Amendments to the 2018 International Mechanical Code.

CHAPTER 1 ADMINISTRATION, is hereby amended as follows:

R101.1 Title. Insert the words "City of Buckeye" as the name of jurisdiction.

Section 101.2.1 Appendices. Delete in its entirety and replace with the following:

101.2.1 Appendices. The following appendix of the 2018 International Mechanical Code is adopted by the City of Buckeye:

Appendix A.

106.4.4 Extensions. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

106.5.1 Work commencing before permit issuance. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

106.5.2 Fee schedule. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

106.5.3 Fee refunds. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

108.5 Stop work order. Amend the last sentence as follows: "Any person who shall continue any work on the system after having been served by 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 as established by the City of Buckeye."

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-4 – Plumbing Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

SECTION 15-2-4 PLUMBING CODE

A. Plumbing Code Adopted. That certain document designated and marked as the International Plumbing Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the city's uniform code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the city's uniform code as hereby adopted by the city council.

B. City of Buckeye Amendments to the 2018 International Plumbing Code.

CHAPTER 1 SCOPE AND ADMINISTRATION, is hereby amended as follows:

Section 101.1 Title. Insert the words "City of Buckeye" as the name of jurisdiction.

Section 101.2 Scope. Delete the last sentence in its entirety and replace with the following:

"The following Appendices of the 2018 International Plumbing Code are adopted by the City of Buckeye:

Appendix E –Sizing of Water Piping System"

Section 106.5.4 Extensions. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.1 Work commencing before permit issuance. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.2 Fee schedule. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.3 Fee refunds. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 108.5 Stop work orders. Delete in its entirety and replace with the following:

108.5 Stop work orders. Upon notice from the code official, work on any plumbing system that is being done 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 owner's 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 by 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 civil or criminal penalties and fines as established by the City of Buckeye.

CHAPTER 3 GENERAL REGULATIONS, is hereby amended as follows:

Section 305.4 Freezing is amended to read as follows:

305.4.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be installed not less than 12 inches (305 mm) below finished grade at the point of septic tank connection. Building sewers shall be installed not less than 12 inches (305 mm) below grade.

CHAPTER 6 WATER SUPPLY AND DISTRIBUTION, is hereby amended as follows:

Section 603, Size of water service pipe, is amended to read as follows:

603.1 Size of water service pipe. The water service pipe shall be sized to supply water to the structure in the quantities and at the pressures required in this code. The water service pipe shall be not less than 1 inch. The replacement of existing water service pipe shall not be less in size than the size of the pipe being replaced.

Table 604.4 Maximum Flow Rates AND Consumption for Plumbing Fixtures & Fixture Fittings, is amended to read as follows:

Table 604.4 Maximum Flow Rates AND Consumption for Plumbing Fixtures & Fixture Fittings

PLUMBING FIXTURE OR FITTING FIXTURE	**MAXIMUM FLOW RATE OR QUANTITY**[b]
Lavatory, private	1.5 gpm at 60 psi
Lavatory, public (metering)	0.25 gallon per metering cycle
Lavatory, public (other than metering)	0.5 gpm at 60 psi
Shower head[a]	2.0 gpm at 80 psi
Sink faucet	2.2 gpm at 60 psi
Urinal	Waterless
Water closet	1.28 gallons per flushing cycle [c,]

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 L/m.

1 pound per square inch = 6.895 kPa.

a. A hand-held shower spray is a shower head.

b. Consumption tolerances shall be determined from referenced standards.\

c. For a dual-flush water closet, the effective flush volume is the composite, average flush volume of two reduced flushes and one full flush.

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-5 – Electrical Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

SECTION 15-2-5 ELECTRICAL CODE

A. Electrical Code Adopted. That certain document designated and marked as the National Electrical Code, 2017 Edition, as published by the National Fire Protection Association, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the city's uniform code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the city's uniform code as hereby adopted by the city council.

B. City of Buckeye Amendments to the 2017 National Electrical Code.

Article 90 Introduction, is hereby amended as follows:

Section 90.1, Purpose.

(A) Practical safeguarding. Add the following after the first paragraph:

Any and all electrical work for light, heat, power or any other purposes shall be installed in conformity with the rules and regulations as set forth in the Buckeye Electrical Code, as adopted and amended from time to time, and in conformity with the rules and regulations as set forth by the Building Official.

(**D) Administrative code.** Add the following subsection:

(**D) Administrative code.** The International Building Code, 2018 Edition, Chapter One, as adopted by the City of Buckeye and amended from time to time, shall be considered the Administrative Code for this sub-section.

Article 90.6, Formal interpretations, is amended to read as follows:

90.6 Formal interpretations. To promote uniformity of interpretation and application of the provisions of this Code, Appendix B: Board of Appeals of the Buckeye Building Code, as adopted by the city and amended from time to time, shall provide established procedures for appeals of interpretation under this Section.

Article 110.7, Wiring integrity is hereby amended by adding the following sentence:

All electrical equipment 1000 amps or larger must pass a dielectric strength test by a qualified third party before requesting a meter clearance.

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-6 – Fuel Gas Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

SECTION 15-2-6 FUEL GAS CODE

A. Fuel Gas Code Adopted. That certain document designated and marked as the International Fuel Gas Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the city's uniform code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the city's uniform code as hereby adopted by the city council.

B. City of Buckeye Amendments to the 2018 International Fuel Gas Code.

CHAPTER 1 ADMINISTRATION, is hereby amended as follows:

Section 101.1 Title. Insert the words "City of Buckeye" as the name of jurisdiction.

Section 101.3 Appendices. Delete in its entirety and replace with the following:

101.3 Appendices. The following appendices are adopted by the City of Buckeye:

APPENDIX A SIZING AND CAPACITIES OF GAS PIPING,

APPENDIX B SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY 1 APPLIANCES AND APPLIANCES LISTED FOR USE WITH TYPE B VENTS,

APPENDIX C EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT- VENT VENTING SYSTEMS.

Section 106.5.4 Extensions. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.1 Work commencing before permit issuance. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.2 Fee schedule. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 106.6.3 Fee refunds. Delete in its entirety and replace with the following: In conformance with the City of Buckeye Development User Fee Schedule, as amended from time to time.

Section 108.4 Violation penalties. Delete in its entirety.

Section 108.5 Stop work order. Amended as follows:

108.5 Stop work order. The last sentence is amended to read as follows:

"Any person who shall continue any work on the system after having been served by 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 civil or criminal penalties and fines as established by the City of Buckeye."

CHAPTER 2 DEFINITIONS, is hereby amended to read as follows:

201.4 Terms not defined. Where terms are not defined through the methods authorized by this chapter, such terms shall have ordinarily accepted meanings such as the context implies.

CHAPTER 4 GAS PIPING INSTALLATIONS, is hereby amended to read as follows:

404.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade for metal piping and 18 inches (457mm) for plastic piping.

Section 406.4.1 Test pressure. Delete in its entirety and replace with the following:

406.4.1 Test pressure. The test pressure to be used shall be no less than 1 ½ times the proposed maximum working pressure, but no less than 3 psig (20 kPa gauge) for 15 minutes, the acceptable air gauge shall be calibrated in 1/10 lb increments. Where the test pressure exceeds 125 90 psig (862 kPa gauge), irrespective of design pressure, the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.

Amending the City of Buckeye Code of Ordinances, Chapter 15 – BUILDING REGULATIONS, Article 15-2 – BUILDING CODES by amending Section 15-2-10 – Fire Code, to read as follows:

CHAPTER 15 - BUILDING REGULATIONS

* * *

Article 15-2 – BUILDING CODES

* * *

Section 15-2-10 Fire Code

A. Fire Code Adopted. That certain document designated and marked as the International Fire Code, 2018 Edition, as published by the International Code Council, three (3) paper copies or one (1) paper copy and one (1) electronic copy of which are on file in the office of the city clerk, is hereby adopted by reference as the City's uniform fire code as if fully set forth herein and it is hereby declared to be unlawful to be in violation of any provision of the City's uniform fire code or cause or permit the same to be done, contrary to or in violation of any of the provisions of the City's uniform fire code as hereby adopted by the City Council.

B. Appeals. Whenever the fire chief disapproves an application or refuses to grant a permit applied for, or when it is claimed that the provisions of the code do not apply or that the true intent and meaning of the code have been misconstrued or wrongly interpreted, the applicant may appeal from the decision of the Fire Chief to City Council within 30 days from the date of the decision appealed.

C. New Materials, Processes or Occupancies Which May Require Permits. The fire chief or his designee and the fire marshal shall act as a committee to determine and specify, after giving affected persons an opportunity to be heard, any new materials, processes or occupancies for which permits are required in addition to those now enumerated in the International Fire Code. This information shall be posted in a conspicuous place at the fire station and copies thereof shall be distributed to interested persons.

D. Deletions, Modifications, and Amendments. The following Sections of the 2018 Edition of the International Fire Code are amended as follows:

Section 101.1 Title. "City of Buckeye" is inserted as the name of jurisdiction.

Section 101.2.1 Appendices is deleted in its entirety and replaced with the following:

101.2.1 Appendices. The following appendices are adopted by City of Buckeye:
Appendix A: Board of Appeals
Appendix B: Fire Flow Requirements for Buildings
Appendix C: Fire Hydrant Locations and Distribution
Appendix D: Fire apparatus Access Roads
Appendix E: Hazard Categories
Appendix F Hazard Ranking
Appendix H Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory

Statement (HMIS) Instructions
Appendix I: Fire Protection Systems – Noncompliant Conditions
Appendix J: Building Information Sign
Appendix K: Construction Requirements for Existing Ambulatory Care Facilities
Appendix L: Requirements for Fire Fighter Air Replenishment Systems
Appendix N: Indoor Trade Show and Exhibitions
Appendix O: Regional Wireless Cooperative, Policies and Procedures

Section 102.10 Administration; applicability; conflicting provisions is amended to read as follows:

102.10 Conflicting provisions. Where there is conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where there is a conflict between this Code and another Code, rule or regulation of the City of Buckeye, the more stringent shall apply.

Section 104.8 Modifications is amended by adding the following sentence to the beginning of the Section:

"The designated fire code official may develop guidance and details that are not consistent with the provisions of this code to assist those entities subject to this code comply with the provisions of this code."

Section 107 Inspections is amended by adding the following new subsection:

107.2.2 Special inspections. The fire code official is authorized to appoint qualified persons or agencies having special technical skills as special inspectors or plan reviewers and accept their inspection, plan review and evaluation of specialized fire protection equipment or systems.

Section 110 Violations is amended by adding the following new subsection:

110.4.2 Abatement of environmental, health, fire or life safety hazards by fire code official. If any person fails to comply with the orders of the Fire Code Official, or if the Fire Code Official is unable to locate the owner, operator, occupant or other person responsible within a reasonable time, the Fire Code Official or any authorized representative may take such steps as are necessary to abate the hazard for the protection and safety of the public. In no event is notice necessary before abatement, when the hazard is a clear and present danger to the public welfare. All costs and attorney fees related to such abatement shall become a lien on the subject property.

Section 202 General definitions is amended to read as follows:

AUTHORIZED EMERGENCY VEHICLE. Is any of the following, per A.R.S. § 28-101:

1. A fire department vehicle,
2. A police vehicle,
3. An ambulance or emergency vehicle of a municipal department or public service corporation that is designated or authorized by the department or a local authority, or
4. Any other ambulance, fire truck or rescue vehicle that is authorized by the department in its sole discretion and that meets liability insurance requirements prescribed by the department."

CUSTODIAL CARE. Non-medical care that helps an individual with his or her activities of daily living, preparation of special diets and self-administration of medication not requiring constant attention of medical personnel. Providers of custodial care are not required to undergo medical training.

FIRE HAZARD. Is any thing or act which increases or could cause an increase of the hazard or menace of fire to a greater degree than that customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing or extinguishing fire or any thing or act which could obstruct, delay, hinder or interfere with the operation of the fire department or the egress of occupants in the event of fire.

PERSONAL CARE SERVICE is deleted in its entirety and replaced with the following:

PERSONAL CARE SERVICE. Assistance with activities of daily living that can be performed by persons without professional skills or professional training and includes the coordination or provision of intermittent nursing services and administration of medications or treatments.

OCCUPANCY CLASSIFICATION.

Institutional Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 10 persons who reside on a 24-hour basis in a supervised environment, receive custodial care, and are capable of self-preservation, except as provided for assisted living centers. This group shall include, but not be limited to, the following:

Alcohol and drug centers
Assisted living centers
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

Six to 16 persons receiving custodial care is deleted in its entirety and replaced with the following:

Six to 10 persons receiving custodial care. A facility such as above, housing not fewer than six and not more than 10 persons receiving such care, shall be classified as Group R-4.

Institutional Group I-2 is deleted in its entirety and replaced with the following:

Institutional Group I-2. This occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are incapable of self-preservation. This group shall include, but not be limited to, the following:

Foster care facilities

Detoxification facilities
Hospitals
Assisted Living Centers
Psychiatric hospitals

Arizona State Department of Health Facilities. All facilities as licensed by the State of Arizona Department of Health, further known as, but not limited to, direct care, personal care, supervisory care and behavioral residential agency, housing at least six and not more than 10 persons shall be considered a Group R-4.

Residential Group R-3 "Congregate living facilities" is amended to read as follows:

Congregate living facilities (nontransient) with 10 or fewer occupants

Care facilities within a dwelling is deleted in its entirety and replaced with the following:

Care facilities within a dwelling. Licensed care facilities for 10 or fewer persons receiving care that are within a single-family dwelling are permitted.

Residential Group R-4 is deleted in its entirety and replaced with the following:

Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 10 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. The persons receiving care are capable of self-preservation, except as provided for assisted living homes. This group shall include, but not be limited to, the following:

Halfway houses
Residential board and custodial care facilities
Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 or one- and two-family dwellings, except as otherwise provided for in this code.

Condition 1. This occupancy condition shall include facilities licensed to provide supervisory care services, in which occupants are capable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition facilities housing more than 10 persons shall be classified as Group I-2.

Condition 2. This occupancy condition shall include facilities licensed to provide personal or directed care services, in which occupants are incapable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition 2 facilities housing more than 10 persons shall be classified as Group I-2.

SINGLE FAMILY DWELLING. A single family dwelling is less than 5000 square feet measured under the roof line, remote and detached from all other structures and property lines and meets all set back requirements as outlined in the current City of Buckeye Development Code or Standards.

NATIONAL INSTITUTE FOR THE CERTIFICATION OF ENGINEERING TECHNOLOGIES. Is hereafter referred to as NICET (1420 King Street, Alexandria, VA, 22314-2915).

SKY LANTERN. Is a device designed to carry an open flame as an airborne light. It is also known as a kongming lantern, wish lantern, sky candle, fire balloon, etc.

Section 308.1.1 Where prohibited is amended by adding the following new subsection:

308.1.1.1 Sky lantern. The lighting of, and the release of, sky lanterns shall be prohibited

Section 308.1.4 Open-flame cooking devices is amended to read as follows and to add the following new subsection:

308.1.4 Open-flame cooking devices. Charcoal burners, portable barbecues and other open flame devices shall not be operated on combustible balconies or within 10 feet (3048mm) of combustible construction.

Exception:
Single family dwellings.

308.1.4.1 Liquefied- petroleum-gas-fueled cooking devices. No person shall use individual fixed or portable LP-gas burners or barbecues on or under any attached covered patios, balconies, covered walkways, stair or roof overhangs and shall not be located within 10 feet (3,048 mm) of combustible construction. Liquid propane grills are not allowed above the ground floor and LP cylinders shall not be stored in or transported through the building.

Exception:
Single family dwellings.

Section 503 Fire apparatus access roads is amended by amending subsection 503.1.2.1 to read as follows and to add the following new subsections:

503.1.2.1 Additional access. Residential developments where the number of dwelling units exceeds 20 shall be provided with two separate and approved fire apparatus access roads.

503.1.4 Temporary fire apparatus access roads. Temporary fire apparatus access roads, such as those used for fire department access during construction, must comply with Section 503.1.7.

503.1.5 Required access. Fire apparatus access is required within 150 feet of all points on the exterior of the building.

503.1.6 Width. Temporary fire apparatus access roads shall be a minimum of 20 feet in width.

503.1.7 Surface. The access roadway surface is usable in all weather conditions. Temporary fire apparatus access roads shall be constructed as follows: Minimum 6 inches of native soil compacted to 95% of standard proctor density (ASTM D698), and Minimum 4 inches of aggregate base compacted to 100% of standard proctor density (ASTM D698). The surface of temporary fire apparatus access roads may differ from the above requirements if it is shown that the surface provided is sufficient to support an imposed live load of 75,000 pounds with a maximum axle load of 24,000 pounds.

503.1.8 Stabilization. Curbs are not required for temporary fire apparatus access roads.

Section 503.3 Marking is amended to read as follows:

Where required by the fire code official, approved signs or other approved notices shall be provided for fire apparatus access roads (fire lanes) to identify such roads or prohibit the obstruction thereof on public and private property. Signs or notices shall be maintained in a clean and legible condition at all times and shall be replaced or repaired when necessary to provide adequate visibility. All fire lanes shall be marked in the following manner:

1. Fire lane signs per City of Buckeye will adhere to standard detail specifications (City of Buckeye detail number 31452).
2. Curb, street or driveway will be painted red to indicate fire lane and labeled “FIRE LANE NO PARKING” in white block letters 3 inches (76.2mm) in height with a 3/4 in. (19.5 mm) stroke, on the vertical face of the curb to indicate a fire lane.
3. Lettering shall not be greater than 75'-0" (15.24m) apart and shall be posted at the beginning and end of the fire lane.
4. It shall be unlawful for any vehicle, equipment or device to park in or block the fire lane. Any vehicle, equipment or device found parked in or blocking a fire lane shall be cited by the police or the fire department.

Exception:
Authorized emergency vehicles.

Section 503.6 Security gates is amended by adding the following new sub-sections:

503.6.1 Fire department access limiting gates. All gates limiting access will be required to provide emergency Access controls for Fire Department entry.

503.6.2 Gate operations. Operation of the gate shall be by pre-emption device and key switch.

503.6.3 Permit required. Gate Access information and scale plans shall be submitted to the Fire Department for a permit.

503.6.4 Minimum installation standards. The installation of preemption devices shall comply with the following:

1. Traffic Preemption opening device shall be on all motorized gates. Opticom, 3M, or Tomar, Model Specified by the Fire Department at time of installation shall be used.
2. Detectors shall be mounted 8 to 10 feet above grade.
3. Detectors shall be located a minimum of 18 inches behind the gate on the property side.
4. Detectors shall be mounted on a separate 4 inch by 4 inch metal post and not on the guidepost. The metal post shall be secured in concrete a minimum of 18 inches below grade.
5. Detectors shall activate at a minimum of 150 feet from the gate.
6. Detectors shall point toward both the approach and the exit path of the emergency vehicle."
7. The sight path of the detector shall be free of visual obstructions such as signs, covered parking, canopies and vegetation.
8. Individual detectors shall be mounted together with the power module in a dual detector-mounting box. Detectors shall be approved by the fire department. A list of approved devices will be maintained by the fire department and available to the public.

503.6.5 Gate access roadways. The gates shall be designed so that the access roadway or turning radius (WB50) shall not be obstructed by the operation of the gate. Minimum set back from the public streets shall be a distance determined by the City Engineer and allow the emergency vehicle the ability to safely operate the lock box or panel. Turning radius from the public street shall be WB50.

503.6.6 Keyed access. The lock box, padlock or key switch, must be an approved model utilized by the Buckeye Fire Department. Lock Box Authorized Forms may be picked up at the City of Buckeye Fire Department, Monday through Thursday, 7:00 am to 6:00 pm.

503.6.7 Access controls. Access controls shall be exterior to the gate and located for activation by the vehicle operator without dismounting from the vehicle. The height of the lock box/control panel shall be sixty (60) inches to sixty six (66) inches, measured from the finished grade line of the street.

503.6.8 Access signage. The control pedestal must be identified with a minimum six (6) inch by ten (10) inch sign with white reflective letters on a red background. This sign must be securely fastened to the pedestal and legible from the approaching vehicle, and read: EMERGENCY FIRE DEPARTMENT ACCESS.

503.6.9 Gate operation. Gates must fully open within fifteen (15) seconds of activation and remain in the open position for thirty minutes or until closed by the Fire Department.

503.6.10 Fail safe operation. Battery back-up for all motorized gates is required, unless the gate fails safe (open) in the event of a power failure.

Section 503.7 Hillside building requirements. Residential developments where the access and operations of emergency services is determined by the Fire Code Official to be impacted by the terrain or other geographical issues may require additional fire protection and safety requirements for construction. These requirements include, but are not limited to:

1. All Structures are to be fully protected by an automatic fire sprinkler system including the attic.
2. On all driveways exceeding 150 feet or of a design that would impair access, a horizontal standpipe will be required.

3. All lots will require an operational platform of 400 square feet and of a design approved by the Fire Code Official.
4. Pullouts constructed of an all-weather surface will be required next to fire hydrants on all private drives or access roadways less than 20 feet in width.
5. Grades exceeding 15% will require flat areas for acceleration and staging.

Section 505.1 Address identification is amended to read as follows and to add the following new subsections:

505.1 Address identification. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other approved sign or means shall be used to identify the structure. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Address numbers shall be maintained.

505.1.2 Address identification multi-family residential. Within multi-family residential complexes, the building(s) nearest the street must identify the street number of the complex with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. All buildings within the complex shall identify the building number/letter with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. Buildings are required to provide two (2) or more building identification signs per each one hundred (100) feet of the length of the building elevation. All buildings within the complex shall include apartment spread numbers (e.g. Units 201-210) identified with minimum seven (7) inch high contrasting numbers/letters with a one (1) inch stroke width. Each individual unit shall be identified near the unit entryway using minimum four (4) inch high contrasting numbers/letters with a five-eighths (5/8) inch minimum stroke width.

505.1.3 Address identification commercial/employment. All commercial and employment buildings shall identify the street number of the building with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. All commercial and employment buildings within multi-building complexes must identify the building number/letter with minimum eighteen (18) inch high contrasting numbers/letters with a three (3) inch stroke width. Each individual unit shall be identified near the primary unit entryway using minimum six (6) inch high contrasting numbers/letters with a one (1) inch stroke width. Individual unit or suite numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Rear doors of commercial buildings with individual suites (strip malls) shall be identified using minimum six (6) inch high contrasting numbers/letters with a one (1) inch stroke width.

505.1.4 Address identification one- and two-family residential dwellings. One- and two-family dwelling shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).

Section 506.1 Where required is amended to read as follows:

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for lifesaving or fire- fighting purposes, or where there is an automatic fire sprinkler or fire alarm system, the Fire Official is authorized to require a key box to be installed in an accessible location(s). The key box shall be an approved type and shall contain keys to gain access as required by the Fire Official.

Section 507 Fire Protection Water Supplies is amended by amending Section 507.1 to read as follows, and by adding new subsections 507.1.2, 507.5.2.1, 507.5.7, and 507.8 to read as follows:

507.1 Required water supply. Water supplies for automatic and manual fire suppression and fire hydrants shall be in accordance with Appendix B. When water is not available, or if the flow rate, pressure, or duration of the water available from the City of Buckeye or Private water Company does not meet the minimum requirements of this code, the owner shall be responsible for installing the entire infrastructure required to meet the fire flow, pressure, and duration requirements of this code.

507.1.2 Failure to provide water supply. Failure to provide the required water supply necessary for fire protection shall be considered a hazard to life or property and is subject to enforcement under Section 110 of this code.

507.5.2.1 Inspection of private water supply systems. Private water supply system installations and modifications shall be subject to field inspection and tests by the Fire Department.

507.5.7 Height. Fire hydrants shall be installed so that the centerline of the lowest outlet is not less than 18 inches above grade and the highest outlet does not exceed 30 inches above grade.

507.5.8 Color of hydrants. The color of hydrants shall be fire hydrant yellow. Private fire hydrants shall have the bonnet painted reflective white. Hydrants not intended for fire department use shall have the bonnet painted black.

Section 510 Emergency Responder Radio Coverage is amended by adding the following new subsections to read as follows:

510.01 Purpose. The purpose of this article is to provide minimum standards to insure a reasonable degree of reliability for emergency services communications from within certain buildings and structures within the City of Buckeye to and from emergency communications centers. It is the responsibility of the emergency service provider to get the signal to and from the building site.

510.02 Scope. The provisions of this article shall apply to new buildings and structures of construction greater than fifty thousand (50,000) square feet or modifications made within any twelve (12) month period and exceed fifty percent (50%) of the value of the existing building(s) or structure(s), or the use of the property is expanded or enlarged by fifty percent (50%), which have not received a final inspection prior to the adoption of these provisions; and All basements or sub-level parking structures over ten thousand (10,000) square feet where the design occupant load is greater than fifty (50), regardless of the occupancy. For the purpose of this section, area separation walls cannot be used to define separate buildings.

Section 510.03 Radio coverage. Except as otherwise provided in this article, no person shall erect construct or modify any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for firefighters and police officers and other public safety personnel. A final inspection shall not be approved for any building or structure that fails to comply with this requirement.

Section 510.04 Regional Wireless Cooperative. In addition to the requirements of section 510, compliance with appendix "O' is required

Section 510.3.1 Permit and approval. The City's Telecommunications unit with consideration of the appropriate police, fire and emergency medical department services, at the time the building permit is issued, shall determine the frequency range or ranges that must be supported. For the purpose of this section, adequate radio coverage shall constitute a successful communications test between the building and the communications centers for all appropriate emergency service providers for the building.

Section 901 General is amended by adding the following new sub-sections to read as follows:

901.2.2 Plan certification for fire alarm systems and occupant notification. All fire alarm and occupant notification system plans submitted to the fire department for review and approval shall bear a qualified registrants seal or review certification of a minimum level III NICET in Fire Alarms.

901.2.3 Plan certification for fire sprinkler systems. All fire sprinkler plans submitted to the fire department for review and approval shall bear a qualified registrant's seal or review certification of a minimum level III NICET in fire sprinklers in accordance with fire department Interpretation and Applications Manual.

901.2.4 Plan certification for all other fire protection systems. Plan certification for all other fire protection systems will be accompanied by a certification of competence when required.

901.2.5 On-site plans. Plans and specifications shall be submitted to the fire department for review and approval prior to construction. One set of fire department approved plans shall be on the job site for each inspection.

Section 901.5.1 Occupancy is amended to read as follows**:**

901.5.1 It shall be unlawful to use, occupy or furnish any portion of a structure until the fire protection systems of the structure have been tested and approved.

Section 901.7 Systems out of service is amended by adding the following sentence at the end of the section: "No required fire sprinkler system or fire alarm system shall be placed out of service for more than 8 hours in any one day without written authorization by the fire code official."

Section 903.2 Where required is amended to read as follows:

903.2 Where required. An automatic sprinkler system shall be installed throughout all levels of new Groups A, B, E, F, H, I, M, R, S and U occupancies of more than zero (0) square feet.

Exceptions:
The following accessory structures shall be exempt from fire sprinkler requirements:

1. Gazebos and Ramada's for residential and public use.
2. Independent rest room buildings that are associated with golf courses, parks and similar uses.
3. Guardhouses for residential and commercial developments.
4. Detached non-combustible carports or parking structures for residential and commercial developments with covered parking. Each non-combustible carport shall not exceed 2,000 square feet, and shall be separated from other parking structures by a minimum of ten (10) feet from the main building. Where there are a group of carports and each one does not exceed 2,000 square feet, the minimum separation required between carports shall be ten (10) feet.
5. Barns and agricultural buildings for private, residential, non-commercial use, not exceeding 1,500 square feet (139.35m^2) with no habitable areas.
6. Detached storage sheds for private, residential, non-commercial use, not exceeding 1,500 square feet (139.35 m^2).
7. Detached 1, 2 and 3 car garages (without habitable spaces) in existing R-3 developed parcels.
8. Non-combustible detached wash racks and canopies with flame retardant sunscreen.
9. Open shade horse stalls of non-combustible construction for private, residential, non- commercial use, not exceeding 5,000 square feet (464.52 m^2) and no storage of combustible products, vehicles, or agricultural equipment.
10. Telecommunications building:
    a. A minimum of 20 feet shall be provided from the structure(s) to the closest building on the site.
    b. A minimum of 20 feet shall be provided from the structure(s) to the property line.
    c. A fire hydrant shall be located a maximum of 350 feet from the structure or an approved distance approved by the Fire Marshal.
    d. Clear and unobstructed 20 foot fire apparatus access shall be provided to the structure(s).
    e. Recommended a basic fire alarm with smoke detection tied into the SCADA system, for early detection and notification.
    f. An approved Fire Suppression System may be required based on location and or single source infrastructure coverage area.
    g. The storage or use of flammable liquids or any other hazardous materials in the structure is prohibited.
    h. Independent structure of noncombustible construction will be limited to 200 square foot or less.
10. Special use non-combustible structures as approved by the chief.

Section 903.2.1 Group A is amended to read as follows:

903.2.1 Group A. An automatic sprinkler system shall be installed throughout all Group A occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Exceptions:
1. An automatic sprinkler system need not be provided when the floor area of a temporary amusement building is less than 1,000 square feet and the exit travel distance from any point is less than 50 feet.

2. Press boxes and storage facilities less than 1,000 square feet in area and in conjunction with outdoor seating facilities where all means of egress in the seating area are essentially open to the outside.

Section 903 Automatic sprinkler systems is amended by adding new sub-sections to read as follows:

903.2.2.1 Group B occupancies. An automatic sprinkler system shall be installed throughout all Group B occupancies in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

903.3.2.3 Group E. An automatic sprinkler system shall be installed throughout all Group E occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

903.2.4 Group F. An automatic sprinkler system shall be installed throughout all Group F occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

903.2.5 Group H. An automatic sprinkler system shall be installed throughout all Group H occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Section 903.2.5 Group H is amended by deleting sub-section 903.2.5.1 entitled "General."

Section 903.2.5 Group H is amended by deleting sub-section 903.2.5.2 entitled "Group H-5 occupancies."

Section 903.2.5 Group H is amended by deleting sub-section 903.2.5.3 entitled "Pyroxylin Plastics."

Section 903.2.6 Group I is amended to read as follows:

903.2.6 Group I. An automatic sprinkler system shall be installed throughout all Group I occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Exception:
In jails, prisons and reformatories, the piping system may be dry, provided a manually operated valve is installed at a continuously monitored location. Opening of the valve will cause the piping system to be charged. Sprinkler heads in such systems shall be equipped with fusible elements or the system shall be designed as required for deluge systems in the Building Code.

Section 903.2.7 Group M is amended to read as follows:

903.2.7 Group M. An automatic sprinkler system shall be installed throughout all Group M occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Section 903.2.8 Group R is amended to read as follows:

903.2.8 Group R. An automatic sprinkler system shall be installed throughout all Group R occupancies in accordance with NFPA 13, 13-R, or 13D Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Exception:
Single Family Dwellings less than 5000 square feet measured under the roof line, remote and detached from all other structures and property lines and meets all set back requirements as outlined in the current City of Buckeye development rules or standards.

Zero lot lines, Z-lots, court homes, cluster homes, condominiums, patio homes, townhomes and non-traditional housing units are not considered a single family structure and all other housing units by their design, construction or location, present access issues for Fire Department response and are required to be protected throughout with an approved automatic sprinkler system.

Section 903.2.8.2 is amended to read as follows:

903.2.8.2 Group R-4, Condition 1.

Modified NFPA 13d sprinkler system shall be required to be installed in accordance with Section 903.3.1.3. If any portion of a patio has habitable space directly above the patio, all of the patio ceiling shall be equipped with sprinkler protection.

Exceptions:
1. Family foster homes and foster group homes licensed by the State of Arizona Department of Economic Security.
2. Behavioral health group homes (BHGH) that serve five or fewer residents and are licensed by the State of Arizona Department of Health Services.

Section 903.2.8.3 is amended to read as follows:

903.2.8.3 Group R-4, Condition 2.

Modified NFPA 13d sprinkler system shall be required to be installed in accordance with Section 903.3.1.3. If any portion of a patio has habitable space directly above the patio, all of the patio ceiling shall be equipped with sprinkler protection.

The sprinkler system shall consist of an electronically supervised valve located between the domestic water riser control valve and the sprinklers, and shall be equipped with an electronically supervised water-flow switch and monitored by an approved monitoring, and shall sound an alarm at a constantly attended location inside the facility. The minimum listed electronic components for the alarm system shall consist of:

1. Auto dialer
2. Primary and secondary phone line or wireless digital alarm communications. Transmitter with

primary and secondary communications ports.

3. Interior horn-strobe and exterior horn-strobe connected to the fire sprinkler riser water-flow switch.
4. Interconnected smoke alarms.
5. Carbon monoxide devices with distinctive signal, which is different from the smoke alarm, signal.

Exceptions:

1. Family foster homes and foster group homes licensed by the State of Arizona Department of Economic Security.
2. Behavioral health group homes (BHGH) that serve five or fewer residents and are licensed by the State of Arizona Department of Health Services.

Section 903.2.9 Group S is amended to read as follows:

903.2.9 Group S. An automatic sprinkler system shall be installed throughout all Group S occupancies in accordance with NFPA 13 Installation of Sprinkler Systems and Fire Department Interpretation and Applications Manual.

Section 903.2.9.1 Repair garages is amended to read as follows:

903.2.9.1 Repair garages. An automatic sprinkler system shall be installed throughout all repair garages in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.2.9.2 Bulk storage of tires is amended to read as follows:

903.2.9.2 Bulk storage of tires. An automatic sprinkler system shall be installed throughout all bulk tire storage facilities in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.2.10 Group S-2 is amended to read as follows:

903.2.10 Group S-2 occupancies. An automatic sprinkler system shall be installed throughout all Group S-2 occupancies in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.2.10.1 Commercial parking garages is amended to read as follows:

903.2.10.1 Commercial parking garages. An automatic sprinkler system shall be installed throughout all commercial parking garages in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.2.11.1 Stories without openings is amended by adding a new sub-section as follows:

903.2.11.1.4 Windowless stories in all occupancies. An automatic sprinkler system shall be installed throughout all Windowless stories in all occupancies in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.2.11.3 Buildings 55 feet or more in height is amended to read as follows:

903.2.11.3. Buildings 55 feet or more in height. An automatic sprinkler system shall be installed throughout all buildings 55 feet or more in height in accordance with NFPA 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.3 Installation requirements is amended to read as follows:

903.3 Installation requirements. Automatic sprinkler systems shall be designed and installed in accordance with NFPA 13, 13-R, 13-D 13 Installation of Sprinkler Systems as modified by Fire Department Interpretation and Applications Manual.

Section 903.3.1.1.1 Exempt Locations is amended to read as follows:

903.3.1.1.1 Exempt locations. Automatic Sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion.

1. ....

....

3. Dedicated rooms within buildings, containing only electrical equipment, generators, transformers, or similar equipment, and used for no other purpose, which are separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. ....

....

Section 903.4.1 Monitoring is amended by adding the following new subsection:

903.4.1.2. **Fire sprinkler monitoring systems**. A minimum of 1 listed all-weather horn strobe will be required at the front of a building in the common area, the notification device shall be audible in all occupied suites

Section 907.2.7 Group M is amended by adding the following new subsection**:**

907.2.7.1.2. **Fire sprinkler monitoring systems**. A minimum of 1 listed all-weather horn strobe will be required at the front of a building in the common area, the notification device shall be audible in all occupied suites.

Section 912.2 Location is amended to read as follows:

912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hoses connected to supply the system will not

obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be not more than 100 feet from the closest in service fire hydrant, or as approved by the fire code official.

Section 1017.2.2 Groups F-1 and S-1 increase is amended by adding the following new sub-section**:**

1017.2.2.1 Group F-1 and S-1 with a storage area greater than 500,000 square feet (46,451 m^2). When storage areas in Group F-1 and S-1 occupancies are greater than 500,000 square feet a technical report prepared by an Arizona professional shall be submitted for review and approval by the *fire code official*. Additional fire protection or life safety systems, or both, may be required by the Fire Marshal.

Chapter 12 Energy Systems is deleted in its entirety and replaced with the following**.**

CHAPTER 12
ENERGY SYSTEMS

User note:
About this chapter: *Chapter 12 was added to address the current energy systems found in this code, and is provided for the introduction of a wide range of systems to generate and store energy in, on and adjacent to buildings and facilities. The expansion of such energy systems is related to meeting today's energy, environmental and economic challenges. Ensuring appropriate criteria to address the safety of such systems in building and fire codes is an important part of protecting the public at large, building occupants and emergency responders. More specifically, this chapter addresses standby and emergency power, photovoltaic systems, fuel cell energy systems, battery storage systems and capacitor energy storage.*

SECTION 1201
GENERAL

1201.1 Scope. The provisions of this chapter shall apply to the installation, operation and maintenance of energy systems used for generating or storing energy. It shall not apply to equipment associated with the generation, control, transformation, transmission, or distribution of energy installations that is under the exclusive control of an electric utility or lawfully designated agency.

1201.2 Electrical wiring and equipment. Electrical wiring and equipment used in connection with energy systems shall be installed and maintained in accordance with Chapter 12 and NFPA 70.

1201.3 Mixed system installation. Where approved, the aggregate kWh energy in a fire area shall not exceed the maximum quantity specified for any of the energy systems in this chapter. Where required by the *fire code official*, a hazard mitigation analysis shall be provided and approved in accordance with Section 104.7.2 to evaluate any potential adverse interaction between the various energy systems and technologies.

1201.4 Recognized standard. The City of Buckeye will enforce the latest edition of NFPA 855, Standard for the Installation of Stationary Energy Storage Systems.

SECTION 1202
DEFINITIONS

1202.1 Definitions. The following terms are defined in Chapter 2:

BATTERY SYSTEM, STATIONARY STORAGE.
BATTERY TYPES.
LEAD-ACID BATTERY.
CAPACITOR ARRAY.
CAPACITOR ENERGY STORAGE SYSTEM.
CRITICAL CIRCUIT.
EMERGENCY POWER SYSTEM.
ENERGY MANAGEMENT SYSTEM.
FUEL CELL POWER SYSTEM, STATIONARY.
STANDBY POWER SYSTEM.
STATIONARY BATTERY ARRAY.
STATIONARY FUEL CELL POWER SYSTEM.

SECTION 1203
EMERGENCY AND STANDBY POWER SYSTEMS

1203.1 General. Emergency power systems and standby power systems required by this code or the *International Building Code* shall comply with Sections 1203.1.1 through1203.1.9.

1203.1.1 Stationary generators. Stationary emergency and standby power generators required by this code shall be listed in accordance with UL 2200. *Associated flammable or combustible liquid tanks shall also comply with Chapters 50 and 57 of this code.

1203.1.2 Fuel line piping protection. Fuel lines supplying a generator set inside a high-rise building shall be separated from areas of the building other than the room the generator is located in by an approved method, or an assembly that has a fire-resistance rating of not less than 2 hours. Where the building is protected throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, the required fire-resistance rating shall be reduced to 1 hour.

1203.1.3 Installation. Emergency power systems and standby power systems shall be installed in accordance with the *International Building Code*, NFPA 70, NFPA 110 and NFPA 111.

1203.1.4 Load transfer. Emergency power systems shall automatically provide secondary power within 10 seconds after primary power is lost, unless specified otherwise in this code. Standby power systems shall automatically provide secondary power within 60 seconds after primary power is lost, unless specified otherwise in this code.

1203.1.5 Load duration. Emergency power systems and standby power systems shall be designed to provide the required power for a minimum duration of 2 hours without being refueled or recharged, unless specified otherwise in this code.

1203.1.6 Uninterruptable power source. An uninterrupted source of power shall be provided for equipment where required by the manufacturer's instructions, the listing, this code or applicable referenced standards.

1203.1.7 Interchangeability. Emergency power systems shall be an acceptable alternative for installations that require standby power systems.

1203.1.8 Group I-2 occupancies. In Group I-2 occupancies located in flood hazard areas established in Section 1612.3 of the International Building Code and where new or replacement essential electrical systems are installed and where new essential electrical system generators are installed, the systems and generators shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

1203.1.9 Maintenance. Existing installations shall be maintained in accordance with the original approval and Section 1203.4.

1203.2 Where required. Emergency and standby power systems shall be provided where required by Sections 1203.2.1 through 1203.2.18.

1203.2.1 Ambulatory care facilities. Essential electrical systems for ambulatory care facilities shall be in accordance with Section 422.6 of the *International Building Code*.

1203.2.2 Elevators and platform lifts. Standby power shall be provided for elevators and platform lifts as required in Sections 606.2, 1009.4.1, and 1009.5.

1203.2.3 Emergency responder radio coverage systems. Standby power shall be provided for emergency responder radio coverage systems as required in Section 510.4.2.3. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

1203.2.4 Emergency voice/alarm communication systems. Emergency power shall be provided for emergency voice/alarm communication systems as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

1203.2.5 Exit signs. Emergency power shall be provided for exit signs as required in Section 1013.6.3. The system shall be capable of powering the required load for a duration of not less than 90 minutes.

1203.2.6 Gas detection systems. Emergency power shall be provided for gas detection systems where required by Sections 1203.2.9 and 1203.2.16. Standby power shall be provided for gas detection systems where required by Section 916.5.

1203.2.7 Group I-2 occupancies. Essential electrical systems for Group I-2 occupancies shall be in accordance with Section 407.11 of the *International Building Code*.

1203.2.8 Group I-3 occupancies. Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door. Emergency power shall be provided for the doors and locks.

Exceptions:

1. Emergency power is not required in facilities where provisions for remote locking and unlocking of occupied rooms in Occupancy Condition 4 are not required as set forth in the *International Building Code*.
2. Emergency power is not required where remote mechanical operating releases are provided.

1203.2.9 Hazardous materials. Emergency and standby power shall be provided in occupancies with

hazardous materials as required in the following sections: 1. Sections 5004.7 and 5005.1.5 for hazardous materials. 2. Sections 6004.2.2.8 and 6004.3.4.2 for highly toxic and toxic gases. 3. Section 6204.1.11 for organic peroxides.

1203.2.10 High-rise buildings. Standby power and emergency power shall be provided for high-rise buildings as required in Section 403 of the *International Building Code*, and shall be in accordance with Section 1203.

1203.2.11 Horizontal sliding doors. Standby power shall be provided for horizontal sliding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

1203.2.12 Hydrogen fuel gas rooms. Standby power shall be provided for hydrogen fuel gas rooms as required by Section 5808.7.

1203.2.13 Laboratory suites. Standby or emergency power shall be provided in accordance with Section 5004.7 where *laboratory suites* are located above the sixth story above grade plane or located in a story below grade plane.

1203.2.14 Means of egress illumination. Emergency power shall be provided for *means of egress* illumination in accordance with Sections 1008.3 and 1104.5.1.

1203.2.15 Membrane structures. Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with Section 2702 of the *International Building Code*. Auxiliary inflation systems shall be provided in temporary air-supported and air inflated membrane structures in accordance with Section 3103.10.4.

1203.2.16 Semiconductor fabrication facilities. Emergency power shall be provided for semiconductor fabrication facilities as required in Section 2703.15.

1203.2.17 Smoke control systems. Standby power shall be provided for smoke control systems as required in Section 909.11.

1203.2.18 Underground buildings. Emergency and standby power shall be provided in underground buildings as required in Section 405 of the *International Building Code* and shall be in accordance with Section 1203.

1203.2.19 Connected facilities. Power and lighting facilities or the *fire command center* and elevators specified in Sections 403.4.8.2 and 403.6 of the *International Building Code*, as applicable, and electrically powered fire pumps required to maintain pressure, shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.

1203.3 Critical circuits. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196. Electrical circuit protective systems shall be installed in accordance with their listing requirements.

1203.4 Maintenance. Emergency and standby power systems shall be maintained in accordance with NFPA 110 and NFPA 111 such that the system is capable of supplying service within the time specified for the type

and duration required.

1203.4.1 Group I-2. In Group I-2 occupancies, emergency and standby power systems shall be maintained in accordance with NFPA 99.

1203.4.2 Schedule. Inspection, testing and maintenance of emergency and standby power systems shall be in accordance with an approved schedule established upon completion and approval of the system installation.

1203.4.3 Records. Records of the inspection, testing and maintenance of emergency and standby power systems shall include the date of service, name of the servicing technician, a summary of conditions noted and a detailed description of any conditions requiring correction and what corrective action was taken. Such records shall be maintained.

1203.4.4 Switch maintenance. Emergency and standby power system transfer switches shall be included in the inspection, testing and maintenance schedule required by Section 1203.4.2. Transfer switches shall be maintained free from accumulated dust and dirt. Inspection shall include examination of the transfer switch contacts for evidence of deterioration. When evidence of contact deterioration is detected, the contacts shall be replaced in accordance with the transfer switch manufacturer's instructions.

1203.5 Operational inspection and testing. Emergency power systems, including all appurtenant components, shall be inspected and tested under load in accordance with NFPA 110 and NFPA 111.

Exception: Where the emergency power system is used for standby power or peak load shaving, such use shall be recorded and shall be allowed to be substituted for scheduled testing of the generator set, provided that appropriate records are maintained.

1203.5.1 Group I-2. In Group I-2 occupancies, emergency and standby power systems shall be inspected and tested under load in accordance with NFPA 99.

1203.5.2 Transfer switch test. The test of the transfer switch shall consist of electrically operating the transfer switch from the normal position to the alternate position and then return to the normal position.

1203.6 Supervision of maintenance and testing. Routine maintenance, inspection and operational testing shall be overseen by a properly instructed individual.

SECTION 1204
SOLAR PHOTOVOLTAIC POWER SYSTEMS

1204.1 General. Solar photovoltaic systems shall be installed in accordance with Sections 1204.2 through 1204.5, and the *International Building Code* or *International Residential Code*. The electrical portion of solar PV systems shall be installed in accordance with NFPA 70.

***1204.1.1 Permits.** Permits shall be obtained for solar voltaic systems in accordance with Section 105.7.21
Exception: Solar photovoltaic systems with less than 3 kW alternating current nameplate rating.

***1204.1.2 Marking.** Marking is required on interior and exterior direct-current (DC) conduit, enclosures, race- ways, cable assemblies, junction boxes, combiner boxes and disconnects.

1204.1.2.1 Materials. The materials used for marking shall be reflective, weather resistant and suitable for the environment. Marking as required in Sections 1204.1.2 through 1204.1.3 shall have all letters capitalized with a minimum height of 3/8 inch (9.5 mm) white on red background.

***1204.1.2.2 Marking content.** The marking shall contain the words "WARNING: PHOTOVOLTAIC POWER SOURCE."

***1204.1.2.3 Main service disconnect.** The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated.

***1204.1.3 Location of marking**. Marking shall be placed on interior and exterior DC conduit, raceways, enclosures and cable assemblies every 10 feet (3048 mm), within 1 foot (305 mm) of turns or bends and within 1 foot (305 mm) above and below penetrations of roof/ceiling assemblies, walls or barriers.

1204.2 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in accordance with Sections 1204.2.1 through 1204.3.3. Pathways shall be over areas capable of supporting fire fighters accessing the roof. Pathways shall be located in areas with minimal obstructions, such as vent pipes, conduit or mechanical equipment.
*Residential structures shall be designed so that each photovoltaic array is not greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in either axis.

Exception:
1. Detached, uninhabitable Group U structures including, but not limited to, *detached garages serving Group R-3 buildings, parking shade structures, carports, solar trellises and similar structures.

***1204.2.1 Solar photovoltaic systems for Group R-3 buildings.** Solar photovoltaic systems for Group R-3 buildings shall comply with Sections 1204.2.1.1 through *1204.2.1.5.
*****Removed both exceptions

***1204.2.1.1 Roof access points.** Roof access points shall be located in areas that do not require the placement of ground ladders over openings such as windows or doors and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

***1204.2.1.2 Residential buildings with hip roof layouts.** Panels or modules installed on residential buildings with hip roof layouts shall be located in a manner that provides two 3-foot-wide (914 mm) clear access pathway from the eave to the ridge on each roof slope where panels or modules are located.

***1204.2.1.3 Residential buildings with a single ridge.** Panels/modules installed on residential buildings with a single ridge shall be located in a manner that provides two 3-foot-wide (914 mm) access pathways from the eave to the ridge on each roof slope where panels/modules are located.

***1204.2.1.4 Residential buildings with roof hips and valleys.** Panels or modules installed on residential buildings with roof hips and valleys shall be located not closer than 18 inches (457 mm) to a hip or a valley where panels or modules are to be placed on both sides of a hip or valley. Where panels are to be located on only one side of a hip or valley that is of equal length, the panels shall be permitted to be placed directly adjacent to the hip or valley.

*1204.2.1.5 **Residential building smoke ventilation.** Panels/modules installed on residential buildings shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.

1204.2.2 Emergency escape and rescue openings. Panels and modules installed on Group R-3 buildings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway of not less than 36 inches (914 mm) wide shall be provided to the emergency escape and rescue opening.

1204.3 Other than Group R-3 buildings. Access to systems for buildings, other than those containing Group R-3 occupancies, shall be provided in accordance with Sections 1204.3.1 through 1204.3.3.

Exception: Where it is determined by the *fire code official* that the roof configuration is similar to that of a Group R-3 occupancy, the residential access and ventilation requirements in Sections 1204.2.1.1 through *1204.2.1.5 are a suitable alternative.

1204.3.1 Perimeter pathways. There shall be a minimum 6-foot-wide (1829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76 200 mm) or less, the clear perimeter around the edges of the roof shall be permitted to be reduced to a minimum width of 4 feet (1219 mm).

1204.3.2 Interior pathways. Interior pathways shall be provided between array sections to meet the following requirements:

1. Pathways shall be provided at intervals not greater than 150 feet (45 720 mm) throughout the length and width of the roof.
2. A pathway not less than 4 feet (1219 mm) wide in a straight line to roof standpipes or ventilation hatches.
3. A pathway not less than 4 feet (1219 mm) wide around roof access hatches, with no fewer than one such pathway to a parapet or roof edge.

*4. The pathway shall be over areas capable of supporting the live load of firefighters accessing the roof**.**

*5. The centerline axis pathways shall be provided in both axes of the roof. Centerline axis pathways shall run where the roof structure is capable of supporting the live load of fire fighters accessing the roof.

1204.3.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

1. Where nongravity-operated smoke and heat vents occur, a pathway not less than 4 feet (1219 mm) wide shall be provided bordering all sides.
2. Smoke ventilation options between array sections shall be one of the following:
   2.1. A pathway not less than 8 feet (2438 mm) wide.
   2.2. Where gravity-operated dropout smoke and heat vents occur, a pathway not less than 4 feet (1219 mm) wide on no fewer than one side.
   2.3. A pathway not less than 4 feet (1219 mm) wide bordering 4-foot by 8-foot (1219 mm by 2438 mm) venting cutouts every 20 feet (6096 mm) on alternating sides of the pathway.

*3. Arrays shall be not greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for fire department smoke ventilation operations.

1204.4 Ground-mounted photovoltaic panel systems. Ground-mounted photovoltaic panel systems shall comply with Section 1204.1 and this section. Setback requirements shall not apply to ground-mounted, free-

standing photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

1204.5 Buildings with rapid shutdown. Buildings with rapid shutdown solar photovoltaic systems shall have permanent labels in accordance with Sections 1204.5.1 through 1204.5.3.

1204.5.1 Rapid shutdown type. The type of solar photovoltaic system rapid shutdown shall be labeled with one of the following:

1. For solar photovoltaic systems that shut down the array and the conductors leaving the array, a label shall be provided. The first two lines of the label shall be uppercase characters with a minimum height of 3⁄8 inch (10 mm) in black on a yellow background. The remaining characters shall be uppercase with a minimum height of 3/16 inch (5 mm) in black on a white background. The label shall be in accordance with Figure 1204.5.1(1) and state the following:

   SOLAR PV SYSTEM EQUIPPED WITH
   RAPID SHUTDOWN. TURN RAPID
   SHUTDOWN SWITCH TO THE "OFF"
   POSITION TO SHUT DOWN PV SYSTEM
   AND REDUCE SHOCK HAZARD IN
   ARRAY.

2. For photovoltaic systems that only shut down conductors leaving the array, a label shall be provided. The first two lines of the label shall be uppercase characters with a minimum height of 3/8 inch (10 mm) in white on a red background and the remaining characters shall be capitalized with a minimum height of 3/16 inch (5 mm) in black on a white back-ground.

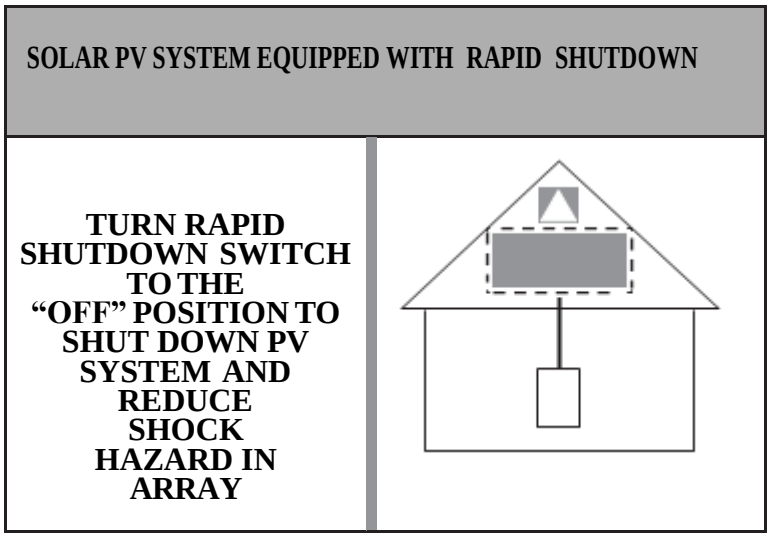

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FIGURE 1204.5.1(1)
LABEL FOR SOLAR PV SYSTEMS THAT REDUCE SHOCK HAZARD WITHIN ARRAY AND SHUT DOWN CONDUCTORS LEAVING ARRAY

The label shall be in accordance with Figure 1204.5.1(2) and state the following:

THIS SOLAR PV SYSTEM EQUIPPED

WITH RAPID SHUTDOWN. TURN RAPID
SHUTDOWN SWITCH TO THE "OFF"
POSITION TO SHUT DOWN CONDUCTORS
OUTSIDE THE ARRAY. CONDUCTORS
WITHIN ARRAY REMAIN
ENERGIZED IN SUNLIGHT.

1204.5.1.1 Diagram. The labels in Section 1204.5.1 shall include a simple diagram of a building with a roof. Diagram sections in red signify sections of the solar photovoltaic system that are not shut down when the rapid shutdown switch is turned off.

1204.5.1.2 Location. The rapid shutdown label in Section 1204.5.1 shall be located not greater than 3 feet (914 mm) from the service disconnecting means to which the photovoltaic systems are connected, and shall indicate the location of all identified rapid shutdown switches if not at the same location.

1204.5.2 Buildings with more than one rapid shutdown type. Solar photovoltaic systems that contain rapid shutdown in accordance with both Items 1 and 2 of Section 1204.5.1 or solar photovoltaic systems where only portions of the systems on the building contain rapid shutdown, shall provide a detailed plan view diagram of the roof showing each different photovoltaic system and a dotted line around areas that remain energized after the rapid shutdown switch is operated.

1204.5.3 Rapid shutdown switch. A rapid shutdown switch shall have a label located not greater than 3 feet (914 mm) from the switch that states the following:

RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM

SECTION 1205
STATIONARY FUEL CELL POWER SYSTEMS

1205.1 General. Stationary fuel cell power systems in new and existing occupancies shall comply with this section.

1205.2 Permits. Permits shall be obtained for *stationary fuel cell power systems* as set forth in Section 105.7.10.

1205.3 Equipment. Stationary fuel cell power systems shall comply with the following:

1. *Prepackaged fuel cell power systems* shall be listed and labeled in accordance with CSA FC 1.
2. The modules and components in a *pre-engineered fuel cell power system* shall be listed and labeled in accordance with CSA FC 1 and interconnected to complete the assembly of the system at the job site in accordance with the manufacturer's instructions and the module and component listings.
3. *Field-fabricated fuel cell power systems* shall be approved based on a review of the technical report provided in accordance with Section 104.7.2. The report shall be prepared by and bear the stamp of a registered design professional and shall include:
   3.1. A fire risk evaluation.
   3.2. An evaluation demonstrating that modules and components in the fuel cell power system comply with applicable requirements in CSA FC 1.

3.3. Documentation of the fuel cell power system's compliance with applicable NFPA 2 and NFPA 853 construction requirements.

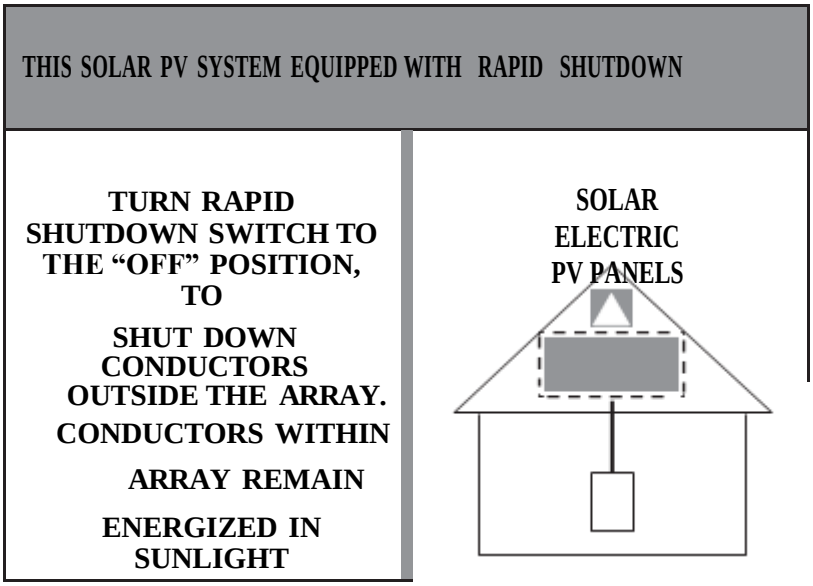


FIGURE 1204.5.1(2)
LABEL FOR SOLAR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY

1205.4 Installation. Stationary fuel cell power systems shall be installed and maintained in accordance with NFPA 70 and NFPA 853, the manufacturer's installation instructions, and the listing. *Stationary fuel cell power systems* fueled by hydrogen shall be installed and maintained in accordance with NFPA 2 and NFPA 70, the manufacturer's installation instructions and the listing.

1205.5 Residential use. *Stationary fuel cell power systems* shall not be installed in Group R-3 and R-4 buildings, or dwelling units associated with Group R-2 buildings unless they are specifically listed for residential use.

1205.6 Indoor installations. *Stationary fuel cell power systems* installed in indoor locations shall comply with Sections 1205.6 through 1205.6.2. For purposes of this section, an indoor location includes a roof and 50 percent or greater enclosing walls.

1205.6.1 Listed. Stationary fuel cell power systems installed indoors shall be specifically listed and labeled for indoor use.

1205.6.2 Separation. Rooms containing *stationary fuel cell power systems* shall be separated from the following occupancies by fire barriers or horizontal assemblies, or both, constructed in accordance with the *International Building Code*.

1. Group B, F, M, S and U occupancies by 1-hour fire resistance rated construction.
2. Group A, E, I and R occupancies by 2-hour fire resistance rated construction.

Exception: Stationary fuel cell power systems with an aggregate rating less than 50 kW shall not be required to be separated from other occupancies provided that the systems comply with Section 9.3 of NFPA 853.

1205.7 Vehicle impact protection. Where *stationary fuel cell power systems* are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312.

1205.8 Outdoor installation. Stationary fuel cell power systems located outdoors shall be separated by not less than 5 feet (1524 mm) from the following:

1. Lot lines.
2. Public ways.
3. Buildings.
4. Stored combustible materials.
5. Hazardous materials.
6. High-piled stock.
7. Any portion of a designated means of egress system.
8. Other exposure hazards.

1205.9 Fuel supply. The design, location and installation of the fuel supply for *stationary fuel cell power systems* shall comply with Chapter 53, Chapter 58 and the *International Fuel Gas Code,* based on the particular fuel being supplied to the system.

1205.10 Manual shutoff. Access to a manual shutoff valve shall be provided for the fuel piping within 6 feet (1829 mm) of any fuel storage tank serving the fuel cell and within 6 feet (1829 mm) of the power system. If the fuel tank and the *stationary fuel cell power system* are less than 12 feet (3658 mm) apart, a single shutoff valve shall be permitted. If the *stationary fuel cell power system* is located indoors, the shutoff valve shall be located outside of the room in which the system is installed, unless otherwise approved by the *fire code official*.

1205.11 Ventilation and exhaust. Ventilation and exhaust for stationary fuel cell power systems shall be provided in accordance with NFPA 853.

1205.12 Fire suppression. Fire suppression for stationary fuel cell power system installations shall be provided in accordance with NFPA 853.

1205.13 Gas detection systems. Stationary fuel cell power systems shall be provided with a gas detection system. Detection shall be provided in approved locations in the fuel cell power system enclosure, the exhaust system or the room that encloses the fuel cell power system. The system shall be designed to activate at a flammable gas concentration of not more than 25 percent of the lower flammable limit (LFL).

1205.13.1 System activation. The activation of the gas detection system shall automatically:

1. Close valves between the gas supply and the fuel cell power system.
2. Shut down the fuel cell power system.
3. Initiate local audible and visible alarms in approved locations.

SECTION 1206
ELECTRICAL ENERGY STORAGE SYSTEMS

1206.1 Scope. The provisions in this section are applicable to energy storage systems designed to provide electrical power to a building or facility. These systems are used to provide standby or emergency power, an uninterruptable power supply, load shedding, load sharing or similar capabilities. *Energy storage systems in Group R-3 and R-4 occupancies shall be in accordance with Sections 1206.2.1 and 1206.4. Approved signage

is required for all installations in accordance with Section 1206.2.8.6.

1**206.2 Stationary storage battery systems**. Stationary storage battery systems having capacities exceeding the values shown in Table 1206.2 shall comply with Section 1206.2.1 through 1206.2.13.6, as applicable. *Approved signage is required for all installations in accordance with Section 1206.2.8.6.

1206.2.1 Permits. Permits shall be obtained for the construction of stationary storage battery systems *with a capacity of 3 kWh or more, in accordance with Section 105.7.2.

1206.2.2 Construction documents. The following information shall be provided with the permit application:

1. Location and layout diagram of the room in which the stationary storage battery system is to be installed.
2. Details on hourly fire-resistance-rated assemblies provided.
3. Quantities and types of storage batteries and battery systems.
4. Manufacturer's specifications, ratings and listings of storage batteries and battery systems.
5. Details on energy management systems.
6. Location and content of signage.
7. Details on fire-extinguishing, smoke detection and ventilation systems.
8. Rack storage arrangement, including seismic support criteria.

TABLE 1206.2
BATTERY STORAGE SYSTEM THRESHOLD QUANTITIES.

BATTERY TECHNOLOGY	CAPACITY[a]
Flow batteries[b]	20 kWh
Lead acid, all types	70 kWh
Lithium, all types	20 kWh
Nickel cadmium (Ni-Cd)	70 kWh
Sodium, all types	20 kWh[C]
Other battery technologies	10 kWh

For SI:1 kilowatt hour = 3.6 megajoules.

a. For batteries rated in amp-hours, kWh shall equal rated voltage times amp-hour rating divided by 1000.
b. Shall include vanadium, zinc-bromine, polysulfide-bromide, and other flowing electrolyte-type technologies.
c. 70 kWh for sodium-ion technologies.

1206.2.3 Hazard mitigation analysis. A failure modes and effects analysis (FMEA) or other approved hazard mitigation analysis shall be provided in accordance with Section 104.7.2 under any of the following conditions:

1. Battery technologies not specifically identified in Table 1206.2 are provided.
2. More than one stationary storage battery technology is provided in a room or indoor area where there is a potential for adverse interaction between technologies.
3. Where allowed as a basis for increasing maximum allowable quantities in accordance with Section 1206.2.9.

*4. Where required by the *fire code official.*

1206.2.3.1 Fault condition. The hazard mitigation analysis shall evaluate the consequences of the following failure modes, and others deemed necessary by the *fire code official*. Only single-failure modes shall be considered.

1. Thermal runaway condition in a single-battery storage rack, module or array.
2. Failure of any energy management system.
3. Failure of any required ventilation system.
4. Voltage surges on the primary electric supply.
5. Short circuits on the load side of the stationary battery storage system.
6. Failure of the smoke detection, fire-extinguishing or gas detection system.
7. Spill neutralization not being provided or failure of the secondary containment system.

*8. Failure of temperature control.

1206.2.3.2 Analysis approval. The *fire code official* is authorized to approve the hazardous mitigation analysis provided that the hazard mitigation analysis demonstrates all of the following:

1. Fires or explosions will be contained within unoccupied battery storage rooms for the minimum duration of the fire-resistance-rated walls identified in Table 509.1 of the *International Building Code*.
2. Fires and explosions in battery cabinets in occupied work centers will be detected in time to allow occupants within the room to evacuate safely.
3. Toxic and highly toxic gases released during fires and other fault conditions shall not reach concentrations in excess of Immediately Dangerous to Life or Health (IDLH) levels in the building or adjacent means of egress routes during the time deemed necessary to evacuate from that area.
4. Flammable gases released from batteries during charging, discharging and normal operation shall not exceed 10 percent of their lower flammability limit (LFL).
5. Flammable gases released from batteries during fire, overcharging and other abnormal conditions shall not create an explosion hazard that will injure occupants or emergency responders.

1206.2.3.3 Additional protection measures. Construction, equipment and systems that are required for the stationary storage battery system to comply with the hazardous mitigation analysis, including but not limited to those specifically described in Section 1206.2, shall be installed, maintained and tested in accordance with nationally recognized standards and specified design parameters.

1206.2.3.4 Large-scale fire testing. Where required in Section 1206, large-scale fire testing shall be conducted on a representative stationary storage battery system, in accordance with UL 9540A. The testing shall be conducted or witnessed and reported by an approved testing laboratory. The test report shall be provided to the *fire code official* for review and approval in accordance with Section 104.7.2.

1206.2.3.5 Fire remediation. Where a fire or other event has damaged a stationary storage battery system and ignition, or re-ignition of the stationary storage battery system is possible, the *fire code official* may require the system owner, agent, or lessee to take actions, at their expense, to mitigate the hazard or remove the damaged equipment from the premise, to a safe location.

***1206.2.3.6 Forensic analysis.** The *fire code official* may also require a forensic analysis of the cause of failure by an independent laboratory approved by the *fire code official* in accordance with Section 104.10.2.

1206.2.4 Seismic and structural design. Stationary storage battery systems shall comply with the seismic design requirements in Chapter 16 of the *International Building Code* and shall not exceed the floor-loading limitation of the building.

1206.2.5 Vehicle impact protection. Where stationary storage battery systems are subject to impact by a motor vehicle, including fork lifts, vehicle impact protection shall be provided in accordance with Section 312.

1206.2.6 Combustible storage. Combustible materials not related to the stationary storage battery system shall not be stored in battery rooms, cabinets or enclosures. Combustible materials in occupied work centers covered by Section 1206.2.8.5 shall not be stored less than 3 feet (915 mm) from battery cabinets.

1206.2.7 Testing, maintenance and repair. Storage batteries and associated equipment and systems shall be tested and maintained in accordance with the manufacturer's instructions. Any storage batteries or system components used to replace existing units shall be compatible with the battery charger, energy management systems, other storage batteries and other safety systems. Introducing other types of storage batteries into the stationary storage battery system or other types of electrolytes into flow battery systems shall be treated as a new installation and require approval by the *fire code official* before the replacements are introduced into service.

1206.2.8 Location and construction. Rooms and areas containing stationary storage battery systems shall be designed, located and constructed in accordance with Sections 1206.2.8.1 through 1206.2.8.7.4.

1206.2.8.1 Location. Stationary storage battery systems shall not be located in the following areas:

1. Where the floor is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access,
2. Where the floor level is located below the lowest level of exit discharge.

Exceptions:

1. Lead acid and nickel cadmium stationary storage battery systems less than 50 VAC and 60 VDC installed in facilities under the exclusive control of communications utilities in accordance with NFPA 76.
2. Where approved, installations shall be permitted in underground vaults complying with NFPA 70, Article 450, Part III.
3. Where approved by the *fire code official*, installations shall be permitted on higher and lower floors.
4. Installations on noncombustible rooftops of buildings exceeding 75 feet (22 860 mm) in height that do not obstruct fire department rooftop operations, where *approved* by the *fire code official*.

1206.2.8.2 Separation. Rooms containing stationary storage battery systems shall be separated from other areas of the building in accordance with Section 509.1 of the *International Building Code*. Battery systems shall be allowed to be in the same room with the equipment they support.

1206.2.8.3 Stationary battery arrays. Storage batteries, prepackaged stationary storage battery systems and pre-engineered stationary storage battery systems shall be segregated into stationary battery arrays not exceeding 50 kWh (180 megajoules) each. Each stationary battery array shall be spaced not less than 3 feet (914 mm) from other stationary battery arrays and from walls in the storage room or area. The storage

arrangements shall comply with Chapter 10.

Exceptions:

1. Lead acid and nickel cadmium storage battery arrays.
2. Listed pre-engineered stationary storage battery systems and prepackaged stationary storage battery systems shall not exceed 250 kWh (900 megajoules) each, *where *approved* by the *fire code official.*
3. The *fire code official* is authorized to approve listed, pre-engineered and prepackaged battery arrays with larger capacities or smaller battery array spacing if large-scale fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory is provided showing that a fire involving one array will not propagate to an adjacent array, and be contained within the room for a duration equal to the fire-resistance rating of the room separation specified in Table 509 of the *International Building Code*.

1206.2.8.4 Separate rooms. Where stationary batteries are installed in a separate equipment room that can be accessed only by authorized personnel, they shall be permitted to be installed on an open rack for ease of maintenance.

1206.2.8.5 Occupied work centers. Where stationary storage batteries are located in an occupied work center, they shall be housed in a noncombustible cabinet or other enclosure to prevent access by unauthorized personnel.

1206.2.8.5.1 Cabinets. Where stationary batteries are contained in cabinets in occupied work centers, the cabinet enclosures shall be located within 10 feet (3048 mm) of the equipment that they support.

1206.2.8.6 Signage. Approved signs shall be provided on or adjacent to all entry for battery storage rooms or areas and on enclosures of battery storage cabinets and walk-in units located outdoors, on rooftops or in open parking garages. Signs designed to meet both the requirements of this section and NFPA 70 shall be permitted. The signage shall include the following or equivalent:

1. "Energy Storage System", "Battery Storage System", "Capacitor Energy Storage System", or the equivalent.
2. The identification of the electrochemical battery energy storage system technology present. "Energized Electrical Circuits"
3. If water reactive electrochemical battery energy storage system are present, the signage shall include "APPLY NO WATER"
4. Current contact information, including phone number, for personnel authorized to service the equipment and fire mitigation personnel.

Exception: Existing stationary storage battery systems shall be permitted to include the signage required at the time it was installed.

1206.2.8.6.1 Electrical disconnects. Where the stationary storage battery system disconnecting means is not within sight of the main service disconnecting means, placards or directories shall be installed at the location of the main service disconnecting means indicating the location of stationary storage battery system disconnecting means in accordance with NFPA 70.

1206.2.8.6.2 Cabinet signage. Battery storage cabinets provided in occupied work centers in accordance

with Section 1206.2.8.5 shall have exterior labels that identify the manufacturer and model number of the system and electrical rating (voltage and current) of the contained battery system. There shall be signs within the cabinet that indicate the relevant electrical and chemical hazards, as required by Section 1206.2.12.

1206.2.8.7 Outdoor installations. Stationary storage battery systems located outdoors shall comply with Sections 1206.2.8.7 through 1206.2.8.7.4, in addition to all applicable requirements of Section 1206.2.
Installations in outdoor enclosures or containers that can be occupied for servicing, testing, maintenance and other functions shall be treated as battery storage rooms.
Remote outdoor installations include stationary battery systems located more than 100 feet from buildings, property lines, public ways, stored combustible storage, hazardous materials, high piled stock and other exposure hazards.
Installations near exposures include all outdoor stationary battery systems that are not more than 100 feet from buildings, property lines, public ways, stored combustible storage, hazardous materials, high piled stock and other exposure hazards.

Exception: Stationary battery arrays in noncombustible containers shall not be required to be spaced 3 feet (914 mm) from the container walls.

TABLE 1206.2.8.7
OUTDOOR INSTALLATIONS

Compliance Required	Remote Installations	Installations Near Exposures
General installation requirements	Yes	Yes
Size and separation	No	Yes [a]
Smoke and automatic fire detection	Yes	Yes
Fire suppression systems	Yes [b]	Yes
Maximum enclosure size	Yes	Yes
Vegetation control	Yes	Yes
Means of egress separation	Yes	Yes
Clearance to exposures	Yes	Yes
Technology-specific protection	Yes	Yes

a. In outdoor walk-in units, spacing is not required between energy storage systems units and the walls of the enclosure.
b. Where approved by the *fire code official*, fire suppression systems are permitted to be omitted.

1206.2.8.7.1 Separation. Stationary storage battery systems located outdoors shall be separated by not less than *10 feet (3048 mm) from the following:

1. Lot lines.
2. Public ways.
3. Buildings.
4. Stored combustible materials.
5. Hazardous materials.
6. High-piled stock.
7. Other exposure hazards.

Exception: The *fire code official* is authorized to approve smaller separation distances if largescale fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory is provided showing that a fire involving the system will not adversely impact occupant egress from adjacent buildings, or adversely impact adjacent stored materials or structures.

1206.2.8.7.2 Means of egress. Stationary storage battery systems located outdoors shall be separated from any *means of egress* as required by the *fire code official* to ensure safe egress under fire conditions, but not less than 10 feet (3048 mm).

Exception: The *fire code official* is authorized to approve lesser separation distances if large-scale fire and fault condition testing conducted or witnessed and reported by an *approved* testing laboratory is provided showing that a fire involving the system will not adversely impact occupant egress.

1206.2.8.7.3 Security of outdoor areas. Outdoor areas in which stationary storage battery systems are located shall be secured against unauthorized entry and safeguarded in an approved manner.

1206.2.8.7.4 Walk-in units. Where a stationary storage battery system includes an outer enclosure, the unit shall only be entered for inspection, maintenance and repair of batteries and electronics, and shall not be occupied for other purposes.

1206.2.9 Maximum allowable quantities. *Fire areas* within buildings containing stationary storage battery systems exceeding the maximum allowable quantities in Table 1206.2.9 shall comply with all applicable Group H occupancy requirements in this code and the *International Building Code*.

Exception: Where approved by the *fire code official*, areas containing stationary storage batteries that exceed the amounts in Table 1206.2.9 shall be treated as incidental use areas and not Group H occupancies based on a hazardous mitigation analysis in accordance with Section 1206.2.3 and large-scale fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory.

1206.2.9.1 Mixed battery systems. Where areas within buildings contain different types of storage battery technologies, the total aggregate quantities of batteries shall be determined based on the sum of percentages of each battery type quantity divided by the maximum allowable quantity of each battery type. If the sum of the percentages exceeds 100 percent, the area shall be treated as a Group H occupancy in accordance with Table 1206.2.9.

1206.2.10 Storage batteries and equipment. The design and installation of storage batteries and related

equipment shall comply with Sections 1206.2.10.1 through 1206.2.10.8.

Battery storage system installations shall comply with the requirements of this section and the applicable requirements of Table 1206.2.10

1206.2.10.1 Listings. Storage batteries and battery storage systems shall comply with the following:

1. Storage batteries shall be listed in accordance with UL 1973.
2. Prepackaged and pre-engineered stationary storage battery systems shall be listed in accordance with UL 9540.

   Exception: Lead-acid batteries are not required to be listed.

1206.2.10.2 Prepackaged and pre-engineered systems. Prepackaged and pre-engineered stationary storage battery systems shall be installed in accordance with their listing and the manufacturer's instructions.

TABLE 1206.2.9
MAXIMUM ALLOWABLE BATTERY QUANTITIES

BATTERY TECHNOLOGY	MAXIMUM ALLOWABLE	GROUP H
Flow batteries[b]	600 kWh	Group H-2
Lead acid, all types	Unlimited	Not Applicable
Lithium, all types	600 kWh	Group H-2
Nickel cadmium (Ni-Cd)	Unlimited	Not Applicable
Sodium, all types	600 kWh	Group H-2
Other battery technologies	200 kWh	Group H-2[c]

For SI:1 kilowatt hour = 3.6 megajoules.

a. For batteries rated in amp-hours, Kilowatt-hours (kWh) shall equal rated battery voltage times the amp-hour rating divided by 1,000.

b. Shall include vanadium, zinc-bromine, polysulfide-bromide, and other flowing electrolyte-type technologies.

c. Shall be a Group H-4 occupancy if the *fire code official* determines that a fire or thermal runaway involving the battery technology does not represent a significant fire hazard.

TABLE 1206.2.10
BATTERY TECHNOLOGY SPECIFIC

Compliance Required [b]	Battery Technology				Other Battery Storage Systems and Battery Technologies [b]
	Lead-acid	Ni-Cad & Ni-MH	Lithium-ion	Flow	
Exhaust ventilation	Yes	Yes	Yes	Yes	Yes
Spill control and neutralization	Yes [c]	Yes [c]	No	Yes	Yes
Explosion control	Yes [a]	Yes [a]	Yes	Yes	Yes
Safety Caps	Yes	Yes	No	Yes	Yes
Thermal runaway	Yes [d]	Yes	Yes [e]	Yes	Yes [e]

a. Not required for lead-acid and nickel cadmium batteries at facilities under the exclusive control of communications utilities that comply with NFPA 76 and operate at less than 50 VAC and 60 VDC.
b. Protection shall be provided unless documentation acceptable to the *fire code official*, in accordance with 2021 *International Fire Code* Section 104.7.2, provides justification why the protection is not necessary based on the technology used.
c. Applicable to vented (i.e. flooded) type nickel cadmium and lead acid batteries.
d. Not required for vented (i.e. flooded) type lead acid batteries.
e. The thermal runaway protection is permitted to be part of a battery management system that has been evaluated with the battery in accordance with UL 1973.

1206.2.10.3 Energy management system. An approved energy management system shall be provided for battery technologies other than lead-acid and nickel cadmium for monitoring and balancing cell voltages, currents and temperatures within the manufacturer's specifications. The system shall transmit an alarm signal to an approved location and to an approved annunciator panel if potentially hazardous temperatures or other conditions such as short circuits, over voltage or under voltage are detected.

1206.2.10.3.1 Annunciator panel. The approved annunciator panel shall visibly indicate any hazardous temperature or other conditions. The location of the annunciator panel shall be approved by the *fire code official.*

1206.2.10.4 Battery chargers. Battery chargers shall be compatible with the battery chemistry and the manufacturer's electrical ratings and charging specifications. Battery chargers shall be listed and labeled in accordance with UL 1564 or provided as part of a listed pre-engineered or prepackaged stationary storage battery system.

1206.2.10.5 Inverters. Inverters shall be listed and labeled in accordance with UL 1741. Only inverters listed and labeled for utility interactive system use and identified as interactive shall be allowed to operate in parallel with the electric utility power system to supply power to common loads.

1206.2.10.6 Safety caps. Where required by Table 1206.2.10, batteries shall be provided with flame-arresting safety caps.

1206.2.10.7 Thermal runaway. Where required by Table 1206.2.10 storage batteries shall be provided with a listed device or other approved method to prevent, detect and control thermal runaway.

1206.2.10.8 Toxic and highly toxic gas. Stationary storage battery systems that have the potential to release toxic and highly toxic gas during charging, discharging and normal use conditions shall comply with Section 1206.2.11.3 and Chapter 60.

1206.2.11 Fire protection and life safety systems. Fire protection and life safety systems shall be provided in accordance with Sections 1206.2.11.1 through 1206.2.11.7. All alarm, and supervisory signals from the fire protection and life safety systems shall be transmitted to a central station, proprietary or remote station service in accordance with NFPA 72, and to an approved annunciator panel.

1206.2.11.1 Fire-extinguishing systems. Rooms and areas within buildings and walk-in units containing electrochemical battery energy storage systems shall be equipped with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1. Commodity classifications for specific technologies of storage batteries shall be in accordance with Chapter 5 of NFPA 13. If the storage battery types are not addressed in Chapter 5 of NFPA 13, the *fire code official* is authorized to approve

the fire-extinguishing system based on full scale fire and fault condition testing conducted or witnessed and reported by an approved laboratory.

Exception: Spaces or areas containing stationary storage battery systems used exclusively for telecommunications equipment in accordance with Section 903.2.

1206.2.11.1.1 Fire-extinguishing systems. Rooms and areas within buildings and walk-in units containing electrochemical battery energy storage systems shall be protected by an automatic fire suppression system designed and installed in accordance with the most stringent of the following:

1. An *automatic sprinkler system* designed and installed in accordance with Section 903.3.1.1 with a minimum density of 0.6 gpm/ft.^{2} based on the fire area or 2,500 square feet (232 m^2) design area, whichever is smaller.
2. Where *approved*, an automatic sprinkler system designed and installed in accordance with Section 903.3.1.1 with a sprinkler hazard classification based on large-scale fire testing.
3. An alternate automatic fire extinguishing system designed and installed in accordance with Section 904, provided the installation is approved by the *fire code official* based on large scale fire testing

Exception: Fire suppression systems for lead acid and nickel cadmium battery systems at facilities under the exclusive control of communications utilities that operate at less than 50 VAC and 60 VDC shall be provided where required by NFPA 76.

1206.2.11.1.2 Fire department connections. Fire Department connections shall be installed in an *approved* location.

1206.2.11.1.3 Hydrants. Fire hydrants shall be installed and maintained in accordance with Chapters 5 and 9.

1206.2.11.1.4 Alternative fire-extinguishing systems. Battery systems that utilize water-reactive materials shall be protected by an *approved* alternative automatic fire extinguishing system in accordance with Section 904. The system shall be listed for protecting the type, arrangement and quantities of storage batteries in the room. The *fire code official* shall be permitted to approve the alternative fire extinguishing system based on full-scale fire and fault condition testing conducted or witnessed and reported by an *approved* laboratory.

1206.2.11.2 Smoke detection system. An *approved automatic smoke detection system* shall be installed in rooms containing *stationary storage battery systems* in accordance with Section 907.2.

1206.2.11.3 *Exhaust ventilation. Where required by Table 1206.2.10, ventilation of rooms containing stationary storage battery systems shall be provided in accordance with the *International Mechanical Code* and one of the following:

1. The ventilation system shall be designed to limit the maximum concentration of flammable gas to 10 percent of the lower flammability limit, or for hydrogen, 1.0 percent of the total volume of the room.
2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute (cfm) per square foot [0.00508 m3/(s • m2)] of floor area, but not less than 150 cfm (4 m^3/min). The exhaust system shall be designed to provide air movement across all parts of the floor for gases having a vapor density greater than air and across all parts of the vault ceiling for gases having a vapor

density less than air.

1206.2.11.3.1 Cabinet ventilation. Where cabinets located in occupied spaces contain storage batteries that are required by Table 1206.2.10 to be provided with ventilation, the cabinet shall be provided with ventilation in accordance with Section 1206.2.11.3.

1206.2.11.3.2 Supervision. Required mechanical ventilation systems for rooms and cabinets containing storage batteries shall be supervised by an *approved* central station, proprietary or remote station service or shall initiate an audible and visual signal at an *approved* constantly attended on-site location.

1206.2.11.3.3 Standby power. Mechanical exhaust ventilation shall be provided with not less than 6 hours of standby power in accordance with *International Building Code.*
Separation shall be in accordance with NFPA 70.
Where the building, or a portion of the building, served by the mechanical exhaust ventilation is intended to remain operational / occupied during a utility power outage, through the use of an electrical standby power system, whether required or optional; the mechanical exhaust ventilation shall be connected to both the normal electrical service and emergency or standby power system for equivalent time periods.

1206.2.11.3.4 Mechanical exhaust ventilation controls. Clearly identified separate switches shall be provided both to activate the mechanical exhaust ventilation system and to shutoff the ventilation system.

1206.2.11.4 Gas detection system. Where required by Section 1206.2.3 or 1206.2.10.8 rooms containing stationary storage battery systems shall be protected by a gas detection system complying with Section 916. The gas detection system shall be designed to activate where the level of flammable gas exceeds 10 percent of the lower flammable limit (LFL), or where the level of toxic or highly toxic gas exceeds one half of the IDLH.

1206.2.11.4.1 System activation. Activation of the gas detection system shall result in all the following:

1. Initiation of distinct audible and visible alarms in the battery storage room.
2. Transmission of an alarm to an approved location.
3. De-energizing of the battery charger.
4. Activation of the mechanical ventilation system, where the system is interlocked with the gas detection system.

Exception: Lead-acid and nickel-cadmium stationary storage battery systems shall not be required to comply with Items 1, 2 and 3.

1206.2.11.5 Spill control and neutralization. Where required by Table 1206.2.10, approved methods and materials shall be provided for the control and neutralization of spills of electrolyte or other hazardous materials in areas containing stationary storage batteries as follows:

1. For batteries with free-flowing electrolyte, the method and materials shall be capable of neutralizing a spill of the total capacity from the largest cell or block to a pH between 5.0 and 9.0.
2. For batteries with immobilized electrolyte, the method and material shall be capable of neutralizing a spill of 3.0 percent of the capacity of the largest cell or block in the room to a pH between 5.0 and 9.0.

1206.2.11.5.1 Spill control barrier. Each rack of batteries, or group of racks shall be provided with a liquid-tight 4-inch (102 mm) spill control barrier that extends at least 1-inch (25 mm) beyond the battery rack in all directions.

1206.2.11.6 Explosion Control. Where required by Table 1206.2.10, explosion control, complying with Section 911, NFPA 68 and NFPA 69, shall be provided for rooms, areas or walk-in units containing electrochemical battery energy storage system technologies.

Exceptions:

1. Where approved, explosion control is permitted to be waived by the *fire code official* based on large- scale fire testing demonstrating that flammable gases are not liberated from electrochemical battery energy storage system cells or modules.
2. Where approved, explosion control is permitted to be waived by the *fire code official* based on documentation provided in accordance with *Section* 104.7 that demonstrating that the electrochemical battery energy storage system technology to be used does not have the potential to release flammable gas concentrations in excess of 25 percent of the lower flammable limit (LFL) anywhere in the room, area, walk-in unit or structure under thermal runaway or other fault conditions.

1206.2.11.7 Emergency energy release. An approved means must be provided to safely release stored energy from the batteries in an emergency situation.

1206.2.12 Specific battery-type requirements. This section includes requirements applicable to specific types of storage batteries. Stationary storage battery systems with more than one type of storage battery shall comply with requirements applicable to each battery type.
Ventilation, spill control and neutralization, explosion control, safety caps and thermal runaway shall be required in accordance with Table 1206.2.10

1206.2.12.1 Lead-acid storage batteries. Stationary storage battery systems utilizing lead-acid storage batteries shall comply with the following:

1. The signage required by Section1206.2.8.6 shall indicate the room contains lead-acid batteries.

1206.2.12.2 Nickel-cadmium (Ni-Cd) storage batteries. *Stationary storage battery systems* utilizing nickel cadmium (Ni-Cd) storage batteries shall comply with the following:

1. The signage required by Section1206.2.8.6 shall indicate the room contains lead-acid batteries.

1206.2.12.3 Lithium-ion storage batteries. The signage in Section 1206.2.8.6 shall indicate the type of lithium batteries contained in the room.

1206.2.12.4 Sodium-beta storage batteries. *Stationary storage battery systems* utilizing sodium-beta storage batteries shall comply with the following:

1. The signage in Section 1206.2.8.6 shall indicate the type of sodium batteries in the room and include the instructions, “APPLY NO WATER.”

1206.2.12.5 Flow storage batteries. Stationary storage battery systems utilizing flow storage batteries shall comply with the following:

1. The signage required in Section 1206.2.8.6 shall indicate the type of flow batteries in the room.

1206.2.12.6 Other battery technologies. *Stationary storage battery systems* utilizing battery technologies other than those described in Sections 1206.2.12.1 through 1206.2.12.5 shall comply with the following:

1. Gas detection systems complying with Section 916 shall be provided in accordance with Section 1206.2.11.4 where the batteries have the potential to produce toxic or highly toxic gas in the storage room or cabinet in excess of the permissible exposure limits (PEL) during charging, discharging and normal system operation.
2. In addition to the signage required in Section 1206.2.8.6, the marking shall identify the type of batteries present, describe the potential hazards associated with the battery type, and indicate that the room contains energized electrical circuits.

1206.2.13 Special Installations. Rooftop and open parking garage battery energy storage system installations shall comply with Sections 1206.2.13.1 through 1206.2.13.6. Signage shall comply with Section 1206.2.8.6.

1206.2.13.1 Rooftop installations. For the purpose of Table 1206.2.13, rooftop installations are those located on the roofs of buildings.

1206.2.13.2 Open parking garage installations. For the purposes of Table 1206.2.13, open parking garage installations are those located in a structure or portion of a structure that complies with Section 406.5 of the *International Building Code*.

TABLE 1206.2.13
SPECIAL INSTALLATIONS

Compliance Required	Rooftops	Open Parking Garages
General Installation Requirements	Yes	Yes
Size and separation	Yes	Yes
Smoke and automatic fire detection	Yes	Yes
Maximum enclosure size	Yes	Yes
Means of egress separation	Yes	Yes
Clearance to exposures	Yes	Yes
Fire suppression systems	Yes	Yes
Technology specific protection	Yes	Yes

1206.2.13.3 Clearance to exposures. Battery storage systems located on rooftops and in open parking garages shall be separated by not less than 10 feet (3048 mm) from the following exposures:

1. Buildings, except the building on which rooftop battery energy storage system is mounted
2. Any portion of the building on which a rooftop system is mounted that is elevated above the rooftop on which the system is installed
3. Lot lines

4. Public ways
5. Stored combustible materials
6. Locations where motor vehicles can be parked
7. Hazardous materials
8. Other exposure hazards

Exceptions:

1. Clearances are permitted to be reduced to 3 feet (914 mm) where a 1-hour freestanding fire barrier, suitable for exterior use, and extending 5 feet (1524 mm) above and 5 feet (1524 mm) beyond the physical boundary of the battery energy storage system, installation is provided to protect the exposure.
2. Clearances are permitted to be reduced to 3 feet (914 mm) where a weatherproof enclosure constructed of noncombustible materials is provided over the battery energy storage system and it has been demonstrated that a fire within the enclosure will not ignite combustible materials outside the enclosure.

1206.2.13.4 Fire suppression systems. Battery storage systems located in walk-in units on rooftops or in walk-in units in open parking garages shall be provided with automatic fire suppression systems within the battery energy storage system enclosure in accordance with Section 1206.2.11.1. Areas containing battery energy storage systems other than walk-in units in open parking structures on levels not open above to the sky shall be provided with an automatic fire suppression system complying with Section 1206.2.11.1.

1206.2.13.5 Rooftop installations. Battery storage systems and associated equipment that are located on rooftops and not enclosed by building construction shall comply with the following:

1. Stairway access to the roof for emergency response and fire department personnel shall be provided either through a bulkhead from the interior of the building or a stairway on the exterior of the building.
2. Service walkways not less than 5 feet (1524 mm) in width shall be provided for service and emergency personnel from the point of access to the roof to the system.
3. Battery storage systems and associated equipment shall be located from the edge of the roof a distance equal to at least the height of the system, equipment, or component but not less than 5 feet (1524 mm).
4. The roofing materials under and within 5 feet (1524 mm) horizontally from a battery storage systems or associated equipment shall be noncombustible or shall have a Class A rating when tested in accordance with ASTM E108 or UL 790.
5. A Class I standpipe outlet shall be installed at an approved location on the roof level of the building or in the stairway bulkhead at the top level.
6. The battery storage systems shall be not less than 10 feet (3048 mm) from the fire service access point on the rooftop.

1206.2.13.6 Open parking garages. Battery storage systems and associated equipment that are located in open parking garages shall comply with all of the following:

1. Battery storage systems shall not be located within 50 feet (15 240 mm) of air inlets for building HVAC systems.

Exception: This distance shall be permitted to be reduced to 25 feet (7620 mm) if the automatic fire alarm system monitoring the radiant-energy-sensing detectors de-energizes the ventilation system connected to the air intakes upon detection of fire.

2. Battery storage systems shall not be located within 25 feet (7620 mm) of exits leading from the attached building where located on a covered level of the parking structure not directly open to the sky above.
3. An approved fence with a locked gate or other approved barrier shall be provided to keep the general public not less than 5 feet (1024 mm) from the outer enclosure of the battery energy storage system.

1206.3 Capacitor energy storage systems. Capacitor energy storage systems having capacities exceeding 3 kWh (10.8 megajoules) shall comply with Sections 1206.3 through 1206.3.2.6.1.

Exception: Capacitors regulated by NFPA 70, Chapter 460, and capacitors included as a component part of other listed electrical equipment are not required to comply with this section.

1206.3.1 Permits. Permits shall be obtained for the installation of capacitor energy storage systems in accordance with Section 105.7.3.

1206.3.2 Location and construction. Rooms and areas containing capacitor energy storage systems shall be designed, located and constructed in accordance with Sections 1206.3.2 through 1206.3.2.5.

1206.3.2.1 Location. Capacitor energy storage systems shall not be located in areas where the floor is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access, or where the floor level is more than 30 feet (9144 mm) below the finished floor of the lowest level of exit discharge.

1206.3.2.2 Separation. Rooms containing capacitor energy storage systems shall be separated from the following occupancies by fire barriers or horizontal assemblies, or both, constructed in accordance with the *International Building Code*.

1. Group B, F, M, S and U occupancies by 1-hour fire-resistance-rated construction.
2. Group A, E, I and R occupancies by 2-hour fire resistance rated construction.

1206.3.2.3 Capacitor arrays. Capacitor energy storage systems shall be segregated into capacitor arrays not exceeding 50 kWh each. Each array shall be spaced not less than 3 feet (914 mm) from other arrays and from walls in the storage room or area. The storage arrangements shall comply with Chapter 10.

Exception: Capacitor energy storage systems in noncombustible containers located outdoors shall not be required to be spaced 3 feet (914 mm) from the container walls.

1206.3.2.4 Signage. Approved signs shall be provided on doors or in locations adjacent to the entrances to capacitor energy storage system rooms and shall include the following or equivalent verbiage and information:

1. “CAPACITOR ENERGY STORAGE ROOM.”
2. “THIS ROOM CONTAINS ENERGIZED ELECTRICAL CIRCUITS.”
3. An identification of the type of capacitors present and the potential hazards associated with the capacitor type.

1206.3.2.5 Electrical disconnects. Where the capacitor energy storage system disconnecting means is not within sight of the main service disconnecting means, placards or directories shall be installed at the location of the main service disconnecting means identifying the location of the capacitor energy storage system disconnecting means in accordance with NFPA 70.

1206.3.2.6 Outdoor installation. Capacitor energy systems located outdoors shall comply with Sections 1206.3.2.6 through 1206.3.2.6.4 in addition to all applicable requirements of Section 1206.3. Installations in outdoor enclosures or containers that can be occupied for servicing, testing, maintenance and other functions shall be treated as capacitor storage rooms.

Exception: Capacitor arrays in noncombustible containers shall not be required to be spaced 3 feet (914 mm) from the container walls.

1206.3.2.6.1 Separation. Capacitor energy systems located outdoors shall be not less than 5 feet (1524 mm) from the following:

1. Lot lines.
2. Public ways.
3. Buildings.
4. Stored combustible materials.
5. Hazardous materials.
6. High-piled stock.
7. Other exposure hazards.

Exception: The *fire code official* is authorized to approve lesser separation distances if large-scale fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory is provided showing that a fire involving the system will not adversely impact occupant egress from adjacent buildings, or adversely impact adjacent stored materials or structures.

1206.3.2.6.2 Means of egress. *Capacitor energy storage systems* located outdoors shall be separated from any means of egress as required by the *fire code official* to ensure safe egress under fire conditions, but not less than 10 feet (3048 mm).

Exception: The *fire code official* is authorized to approve lesser separation distances if large-scale fire and fault condition testing conducted or witnessed and reported by an approved testing laboratory is provided showing that a fire involving the system will not adversely impact occupant egress.

1206.3.2.6.3 Security of outdoor areas. Outdoor areas in which *capacitor energy storage systems* are located shall be secured against unauthorized entry and safeguarded in an approved manner.

1206.3.2.6.4 Walk-in units. Where a capacitor energy storage system includes an outer enclosure, the unit shall only be entered for inspection, maintenance and repair of capacitors and electronics, and shall not be occupied for other purposes.

1206.3.3 Maximum allowable quantities. Fire areas within buildings containing *capacitor energy storage systems* that exceed 600 kWh of energy capacity shall comply with all applicable Group H occupancy requirements in this code and the *International Building Code*.

1206.3.4 Capacitors and equipment. The design and installation of *capacitor energy storage systems* and related equipment shall comply with Sections 1206.3.4.1 through 1206.3.4.5.

1206.3.4.1 Listing. Capacitors and *capacitor energy storage systems* shall comply with the following:

1. Capacitors shall be listed in accordance with UL 1973.
2. Prepackaged and pre-engineered stationary capacitor energy storage systems shall be listed in accordance with UL 9540.

1206.3.4.2 Prepackaged and pre-engineered systems. In addition to other applicable requirements of this code, prepackaged and pre-engineered *capacitor energy storage systems* shall be installed in accordance with their listing and the manufacturer's instructions.

1206.3.4.3 Energy management system. An approved energy management system shall be provided for monitoring and balancing capacitor voltages, currents and temperatures within the manufacturer's specifications. The system shall transmit an alarm signal to an approved location if potentially hazardous temperatures or other conditions such as short circuits, over voltage or under voltage are detected.

1206.3.4.4 Capacitor chargers. Capacitor chargers shall be compatible with the capacitor manufacturer's electrical ratings and charging specifications. Capacitor chargers shall be listed and labeled in accordance with UL 1564 or provided as part of a listed pre-engineered or prepackaged *capacitor energy storage system.*

1206.3.4.5 Toxic and highly toxic gas. *Capacitor energy storage systems* that have the potential to release toxic and highly toxic materials during charging, discharging and normal use conditions shall comply with Chapter 60.

1206.3.5 Fire-extinguishing and detection systems. Fire-extinguishing and smoke detection systems shall be provided in *capacitor energy storage system* rooms in accordance with Sections 1206.3.5.1 through 1206.3.5.2.

1206.3.5.1 Fire-extinguishing systems. Rooms containing *capacitor energy storage systems* shall be equipped with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1. Commodity classifications for specific capacitor technologies shall be in accordance with Chapter 5 of NFPA 13. If the capacitor types are not addressed in Chapter 5 of NFPA 13, the *fire code official* is authorized to approve the *automatic sprinkler system* based on full-scale fire and fault condition testing conducted by an *approved* laboratory.

1206.3.5.1.1 Alternative fire-extinguishing systems. *Capacitor energy storage systems* that utilize water-reactive materials shall be protected by an approved alternative *automatic fire-extinguishing system* in accordance with Section 904. The system shall be listed for protecting the type, arrangement and quantities of capacitors in the room. The *fire code official* shall be permitted to approve the system based on full-scale fire and fault condition testing conducted by an *approved* laboratory.

1206.3.5.2 Smoke detection system. An approved *automatic smoke detection system* shall be installed in rooms containing *capacitor energy storage systems* in accordance with Section 907.2.

1206.3.5.3 Ventilation. Where capacitors release flammable gases during normal operating conditions, ventilation of rooms containing capacitor energy storage systems shall be provided in accordance with the *International Mechanical Code* and one of the following:

1. The ventilation system shall be designed to limit the maximum concentration of flammable gas to 25

percent of the lower flammability limit.

2. Continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute (cfm) per square foot [0.00508 m3/(s • m2)] of floor area, but not less than 150 cfm (4 m3/min).

   The exhaust system shall be designed to provide air movement across all parts of the floor for gases having a vapor density greater than air and across all parts of the ceiling for gases having a vapor density less than air.

1206.3.5.3.1 Supervision. Required mechanical ventilation systems for rooms containing *capacitor energy storage systems* shall be supervised by an *approved* central station, proprietary or remote station service, or shall initiate an audible and visible signal at an *approved,* constantly attended on-site location.

1206.3.5.4 Spill control and neutralization. Where capacitors contain liquid electrolyte, *approved* methods and materials shall be provided for the control and neutralization of spills of electrolyte or other hazardous materials in areas containing capacitors as follows:

1. For capacitors with free-flowing electrolyte, the method and materials shall be capable of neutralizing a spill of the total capacity from the largest cell or block to a pH between 5.0 and 9.0.
2. For capacitors with immobilized electrolyte, the method and material shall be capable of neutralizing a spill of 3.0 percent of the capacity of the largest cell or block in the room to a pH between 5.0 and 9.0.

1206.3.6 Testing, maintenance and repair. Capacitors and associated equipment and systems shall be tested and maintained in accordance with the manufacturer's instructions. Any capacitors or system components used to replace existing units shall be compatible with the capacitor charger, energy management systems, other capacitors, and other safety systems. Introducing different capacitor technologies into the capacitor energy storage system shall be treated as a new installation and require approval by the *fire code official* before the replacements are introduced into service.

1206.4 Energy storage system in Group R-3 and R-4 occupancies. Energy storage systems in Group R-3 and R-4 occupancies shall be installed and maintained in accordance with this section. The temporary use of an owner or occupant's electric-powered vehicle as an energy storage system shall be in accordance with this section.

***Exception:** Energy storage systems in Group R-3 and R-4 occupancies with a capacity of 3 kWh or less.

1206.4.1 Equipment listings. Energy storage system shall be listed and labeled for residential use in accordance with UL 9540.

Exceptions:

1. Where *approved*, repurposed unlisted battery systems from electric vehicles may be installed outdoors or in detached dedicated cabinets located not less than 5 feet (1524 mm) from exterior walls, property lines and public ways.
2. Energy storage systems less than 1 kWh.

1206.4.2 Installation. Energy storage system shall be installed in accordance with the manufacturer's instructions and their listing.

1206.4.2.1 Spacing. Individual units shall be separated from each other by at least 3 feet (914 mm) of spacing unless smaller separation distances are documented and approved by the *fire code official* to be adequate based on large-scale fire testing.

1206.4.3 Location. Energy storage systems shall only be installed in the following locations:

1. Detached garages and detached accessory structures.
2. Attached garages separated from the dwelling unit living space and sleeping units in accordance with Section 406.3.2 of the *International Building Code*.
3. Outdoors on exterior walls in accordance with 1206.4.3.1

*4. Other locations with Fire Marshal approval.

1206.4.3.1 Exterior wall and outdoor installations. Energy storage systems shall be permitted to be installed outdoors on exterior walls of buildings or on the ground where all of the following conditions are met:

1. The maximum energy capacity of individual energy storage system units shall not exceed 20 kWh.

*2. The installation is in accordance with zoning setback requirements.

3. The energy storage system shall be installed in accordance with the manufacturer's instructions and their listing.
4. Individual energy storage system units shall be separated from each other by not less than 3 feet (914 mm).
5. The energy storage system shall be separated from doors, windows, operable openings into buildings, or HVAC inlets by at least 5 feet (1524 mm).

Exception: Where approved by the *fire code official,* smaller separation distances in Items 4 and 5 may be permitted based on large scale fire testing

1206.4.4 Energy ratings. Individual energy storage systems units shall have a maximum rating of 20 kWh. The aggregate rating structure shall not exceed:

*Removed # 1

1. 80 kWh in attached or detached garages and detached accessory structures.
2. 80 kWh on exterior walls.
3. 80 kWh outdoors on the ground.

1206.4.5 Electrical installation. Energy storage system shall be installed in accordance with NFPA 70. Inverters shall be listed and labeled in accordance with UL 1741 or provided as part of the UL 9540 listing. Systems connected to the utility grid shall use inverters listed for utility interaction.

1206.4.6 Fire detection. Rooms and areas within dwellings units, sleeping units and attached garages in which energy storage systems are installed shall be protected by smoke alarms in accordance with Section 907.2.10. A heat detector listed and interconnected to the smoke alarms shall be installed in locations within dwelling units, sleeping units and attached garages where smoke alarms cannot be installed based on their listing.

1206.4.7 Protection from impact. Stationary storage battery systems installed in a location subject to vehicle damage shall be protected by approved barriers. Appliances in garages shall also be installed in accordance with Section 304.3 of the *International Mechanical Code.*

1206.4.8 Ventilation. Indoor installations of energy storage systems that include batteries that produce hydrogen or other flammable gases during charging shall be provided with ventilation in accordance with Section 1206.2.11.3.

1206.4.9 Toxic and highly toxic gas. Energy storage systems that have the potential to release toxic or highly toxic gas during charging, discharging and normal use conditions shall not be installed within Group R-3 or R-4 occupancies.

* * *

Section 2301.4 Indoor motor fuel-dispensing facilities is amended to read as follows:

> **2301.4 Indoor service stations.** Motor vehicle fuel-dispensing stations located inside buildings are prohibited within the entire City of Buckeye.
>
> **Exception:**
> Single family residences for alternative fuels when installed with applicable standards.

Sub-section "**2301.4.1 Protection of floor openings in indoor motor fuel dispensing facilities** is deleted.

Section 3310 Access for Fire Fighting is amended to add a new subsection:

> **3310.3 Access road and signage.** During construction, approved signs shall be located to direct emergency responders into and through the construction site as required by the Fire Code Official

Section 5001.5.1 Hazardous materials management plan is amended to read as follows:

> **5001.5.1 Hazardous materials management plan.** When required by the fire code official, each application for a permit shall include a Hazardous Materials Management Plan (HMMP). The HMMP shall include a facility site plan and include the information set forth below. HMMP shall be submitted annually or more often if the hazardous material amounts change by greater than 10% in any single category or overall. HMMP shall be submitted electronically in a format acceptable to the Buckeye Fire Department. The submittal shall be required to determine Fire Code Permitting criteria for storage, use, and/or handling of hazardous materials within the City of Buckeye. Any electronic submittal is acceptable as long as the data will import or interface with the software program currently being used by the Fire Department. Electronic reporting shall be required for all new and existing facilities upon permit renewal.
>
> 1. Storage and use areas.
> 2. Maximum amount of each material stored or used in each area.
> 3. Range of container sizes.
> 4. Locations of emergency isolation and mitigation valves and devices.
> 5. Product conveying piping containing liquids or gases, other than utility-owned fuel gas lines and low pressure fuel gas lines.
> 6. On and off positions of valves for valves that are of the self-indicating type.
> 7. Storage plan showing the intended storage arrangement, including the location and dimensions of aisles.

8. The location and type of emergency equipment. The plans shall be legible and drawn approximately to scale. Separate distribution systems are allowed to be shown on separate pages.

Section 5001.5.2 Hazardous materials inventory statement is amended to read as follows:

5001.5.2 Hazardous materials inventory statement (HMIS). Where required by the fire code official, an application for a permit shall include an HMIS, such as SARA (Superfund Amendments and Reauthorization Act of 1986) Title III, Tier II Report, or other approved statement. The HMIS shall include the information set forth below. A HMIS shall be submitted annually or more often if the hazardous material amounts change by greater than 10% in any single category or overall. HMIS shall be submitted electronically in a format acceptable to the City of Buckeye Fire Department. The submittal shall be required to determine Fire Code Permitting criteria for storage, use, and/or handling of hazardous materials within the City of Buckeye. Any electronic submittal is acceptable as long as the data will import or interface with the software program currently being used by the Fire Department. Electronic reporting shall be required for all new and existing facilities upon permit renewal.

1. Manufacturer's name.
2. Chemical name, trade names, hazardous ingredients.
3. Hazard classification.
4. MSDS or equivalent.
5. United Nations (UN), North America (NA) or the Chemical Abstract Service identification number.
6. Maximum quantity stored or used on site at one time.
7. Storage conditions related to the storage type, temperature and pressure.

Section 5505 Use, Dispensing and Handling is amended by adding the following new subsection:

5505.4.5 Trans-filling of liquid oxygen. In addition to the requirements of this section, when trans-filling of liquefied oxygen is performed inside buildings for respiration purposes, the maximum aggregate quantity of all containers shall be limited to 72 pounds (32.7 kg). Trans-filling shall be on bare concrete floors with no combustible seams. The room shall be separated from the means of egress by one-hour fire barriers. The room shall have ventilation to handle off gassing of the containers. Refer to pamphlet CGA P-2.6, 1995 edition, and NFPA 99 2005 Edition. Trans-filling of Liquid Oxygen to be used for Respiration, for the requirements within health care, residential care, and assisted living facilities.

Section 5704.2.13.1.4 Tanks abandoned in place is amended to read as follows:

5704.2.13.1.4 Tanks abandoned in place. The abandonment of tanks in place shall be prohibited within the entire City of Buckeye.

APPENDIX L
REQUIREMENTS FOR FIREFIGHTER AIR REPLENISHMENT SYSTEMS

Section LlOl.1 "Scope," is deleted in its entirety and replaced with the following:

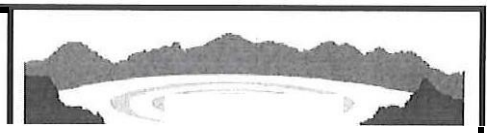
LlOl.1 Scope. Firefighter air replenishment systems (FARS) shall be provided in accordance with this appendix.

Section LlOl.2 "When required," is added to read as follows:

LlOl.2 When required. A Fire Fighter Air Replenishment System (FARS) shall be required in all new buildings or structures that meet any of the following:

1. The building or structure has five (5) or more floors above grade; or
2. The building or structure is a high rise building as defined by the International Building Code as adopted and amended by the governing authority; or
3. The building, structure or components thereof are underground and the square footage of the underground building, structure, or component thereof is ten thousand (10,000) feet or more and is located either more than two (2) floors below grade or more than thirty (30) feet below grade.

APPENDIX O
Regional Wireless Cooperative Policies and Procedures
Is added

REGIONAL WIRELESS COOPERATIVE POLICIES AND PROCEDURES	 **Regional Wireless Cooperative**
	No. **0-12.12**
Subject: **Emergency Responder Radio Coverage Systems Policy**	**Effective Date** **05/24/2012** **Rev: 09/29/2020** **04/10/2019**

1.0 Purpose

1.1. The purpose of this policy is to provide standards for the deployment of Emergency Responder Radio Coverage Systems (ERRCS) to improve radio signal coverage inside of buildings and underground spaces on the Regional Wireless Cooperative (RWC) network.

2.0 Owner

2.1. RWC Operations Working Group (OWG).

3.0 Applies To

3.1. Any entity installing an ERRCS within the RWC service area and on the radio frequencies licensed from the Federal Communications Commission (FCC) by RWC Member(s.)

4.0 Background

4.1. An ERRCS is used to enhance radio signals within buildings, structures or other locations where signals would otherwise be inadequate.

4.2. An improperly installed or maintained ERRCS can cause interference or degrade radio performance putting first responder safety at risk.

4.3. FCC 47 CFR Part 90.219 Use of Signal Boosters and 47 CFR Part 2 FCC Certification Requirements govern use and certification of radio amplification systems.

4.4. An ERRCS may include Bi-Directional Amplifiers (BOA), Distributed Antenna Systems (DAS) or other active devices designed to amplify radio signals.

5.0 Policy Statement

5.1. Entities desiring to operate an ERRCS on RWC Member-licensed frequencies and within the service area of the RWC network must obtain written consent and approval from the licensee per FCC 47 CFR 90.219 (b)(1)(ii).

5.1.1. A Rebroadcast Authorization Form must be submitted prior to any ERRCS installation. This form can be found at rwcaz.org.

5.2. RWC network licensed frequencies are managed by the RWC Administrative Manager.

5.3. Enhancement of the RWC VHF Fire Hazard Zone network will not be allowed.

6.0 Supporting Rules

6.1. Documents required by the RWC for review when applying for Re-Broadcast Authorization:

6.1.1. Complete ERRCS design including site floorplan with antenna and equipment locations and a riser block diagram showing all floors.

6.1.2. Itemized list of system components including manufacturer make and model numbers.

6.1.3. Baseline pre-treatment signal level testing documentation based on RWC donor site and channel data.

6.2. As of the date of this policy, Class A amplifiers (see FCC 47 CFR 90.219 (a)) must be used for any ERRCS installed to operate on the RWC 700 MHz P25 network.

6.2.1. Existing Class B amplifiers must continue to be maintained on an annual basis. If an existing Class B amplifier fails it must be replaced with a Class A amplifier.

6.3. ERRCS installation contractors must follow the Authority Having Jurisdiction (AHJ) fire code pertaining to ERRCS installations.

6.4. Installation of an ERRCS must follow National Fire Protection Association and/or National Electrical Code jurisdictional standards.

6.5. ERRCS owner or installation contractor must submit required documents including the RWC Rebroadcast Authorization form. Required forms and documents can be found at rwcaz.org.

6.5.1. Installation of any ERRCS will not be allowed until the required documents are submitted and approved by the RWC. Once approved, the RWC will provide frequencies and subsite location to use.

6.5.2. Multiple building campuses with more than one (1) building sharing the same address require a single campus-wide solution if an ERRCS is needed.

6.5.2.1. An ERRCS fiber DAS system is required for all buildings located on the same parcel as identified by the County Assessor's Office.

6.5.2.2. If a building requires more than a single BDA, per the manufacturer's installation recommendations, then an ERRCS fiber DAS is required.

6.6. The RWC does not require entities to maintain any minimum coverage requirements within buildings or structures.

7.0 Responsibilities

7.1. Prior to being energized the system design must be provided to the RWC.

7.2. ERRCS RF energy for the uplink is extremely important. Contractor must contact the RWC to arrange the testing process required for energizing an ERRCS.

7.3. Once the ERRCS is energized, detailed measurements of signal strength of all areas enhanced must be provided.

7.4. New and existing radio amplification systems (signal booster), must be registered with the FCC (https://signalboosters.fcc.gov/signal-boosters/.)

7.5. In the event of interference or malfunction of an ERRCS, the entity responsible for its installation and/or operation shall discontinue operation of the system until it is repaired or interference has been eliminated.

7.5.1. The RWC will work with an offending entity to resolve problems due to interference, pursuant to CFR 90.173(b).

7.5.2. The RWC will de-energize any ERRCS that is causing interference and cannot be resolved immediately.

8.0 Conditions for Exemption or Waiver

8.1. As provided in the Waiver or Exception Policy.

9.0 Applicable Policies and/or Procedures

9.1. As listed at www.rwcaz.org.

REGIONAL WIRELESS COOPERATIVE
Radio Amplification System Rebroadcast

Pursuant to the Regional Wireless Cooperative (RWC) Radio Amplification Systems Policy (see attached policy), Section 5.1; entities desiring to operate radio amplification systems on a RWC Member's licensed frequencies and within the service area of the RWC network must obtain written consent and approval from the licensee. This document serves as both application for authorization and written consent and approval when completed by both applicant and licensee.

PAGE 1 - APPLICANT INFORMATION (To be completed by applicant)

Proposed Amplification System Site Information:

Location Name: _____

Street Address: _____

City:_____State:___Zip Code:_____

Facility Owner Contact Information:

Name:_____

Address:_____

City:_____State:___Zip:_____

Phone: _____

Email: _____

Facility Occupant Contact Information Name:_____

_____ Address:_____

_____ City:_

_____State:___Zip:_____

Phone: _____

Email: _____

Engineering Agent/Vendor Contact Information:

Name:_____

Address:_____

City:_____State:___Zip:_____

Phone: _____

Email: _____

System Activation and Donor Antenna:

Expected system activation date: _____

System design is FCC Part 90:
❑ Class A or □ Class

B Donor Antenna Latitude: °_'__"___

Donor Antenna Longitude °____'___

_____" _____

Donor Antenna Height Above Ground_Ft.

Additional Attachments to be Provided with Application:

❑ Facility floor plan for all building levels including square footage of each floor.
❑ System design including block diagram and itemized list of system components including manufacturer and make/model numbers.

REGIONAL WIRELESS COOPERATIVE
Radio Amplification System Rebroadcast

Submit Application and Attachments to (Completed by RWC):

stuart.snow@phoenix.gov

cc email to: _____

cc email to: _____

cc email to: _____

PAGE 2 - LICENSEE AUTHORIZATION (To be completed by licensee)

Donor Site Information:

Donor Site: _____

Street Address: _____

City:_____FCC Call Sign:_____

Donor Site Latitude: °__ ‘___“ ___

Donor Site Longitude °__ ‘___“ ___

Donor Antenna Site Distance__Miles. Donor Antenna Site Azimuth__Degrees

FCC REGISTRATION REQUIREMENTS

FCC regulations Section 90.219(d)(5)1 of the Commission’s rules require that all Part 90 **Class B** signal booster installations must be registered with the FCC. If this installation is a Class B system it must be registered via the FCC online registration tool within 15 days of system activation. ***Failure to comply with this requirement will result in revocation of this authorization.***

The FCC’s Part 90 Class B signal booster registration tool is available at:

www.fcc.gov/signal-boosters/registration

LICENSEE AUTHORIZATION

In consideration of review of the information and requirements provided on this application, the authorized agent of the licensee operating on a RWC Member’s licensed frequencies and within the service area of the RWC network hereby consents and approves activation of the radio amplification system as documented herein.

Authorized signature:_____Title: _____

Print Name:_____Entity: _____

Date: _____