RESOLUTION NO. 12444

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MESA, ARIZONA, DECLARING AS A PUBLIC RECORD THOSE CERTAIN PUBLICATIONS FILED WITH THE CITY CLERK AND KNOWN AS THE 2024 INTERNATIONAL FIRE CODE AND ITS APPENDICES B, C, E, F, I, L, N, AND O AND THAT CERTAIN DOCUMENT TITLED "AMENDMENTS TO THE 2024 INTERNATIONAL FIRE CODE."

Be it resolved by the City Council of the City of Mesa, Arizona, as follows:

Section 1: The following publications, one paper copy and one electronic copy of which are on file with the City Clerk, are hereby declared a public record, and said copies are ordered to remain on file and available for public use and inspection at the Office of the City Clerk at 20 E. Main Street, Suite 150, Mesa, Arizona:

2024 International Fire Code and the following appendices to the 2024 International Fire Code:

Appendix B – Fire-Flow Requirements For Buildings
Appendix C – Fire Hydrant Locations And Distribution
Appendix E – Hazard Categories
Appendix F – Hazard Ranking
Appendix I – Fire Protection Systems - Noncompliant Conditions
Appendix L – Requirements For Fire Fighter Air Replacement Systems
Appendix N – Indoor Trade Shows And Exhibitions
Appendix O – Valet Trash And Recycling Collection in Group R-2 Occupancies

Section 2: That certain document titled "Amendments to the 2024 International Fire Code," three paper copies of which are on file with the City Clerk, is hereby declared a public record, and said copies are ordered to remain on file and available for public use and inspection at the Office of the City Clerk at 20 E. Main Street, Suite 150, Mesa, Arizona.

Passed and adopted by the City Council of the City of Mesa, Arizona, this 1st day of December, 2025.

CITY OF MESA CORPORATE SEAL MARICOPA COUNTY, AZ

APPROVED:

Mayor

ATTEST:

City Clerk

AMENDMENTS TO THE 2024 INTERNATIONAL FIRE CODE

7-2-2: AMENDMENTS TO THE 2024 INTERNATIONAL FIRE CODE

The following sections of the 2024 International Fire Code, adopted by reference as set forth in Section 7-2-1, are amended as follows:

CHAPTER 1 ADMINISTRATION

101.1 Title. These regulations shall be known as the *Mesa Fire Code*, hereinafter referred to as "this code."

102.3 Change of Use or Occupancy. A change of occupancy shall not be made unless the use or occupancy is made to comply with the requirements of this code and the Mesa Existing Building Code.

> **Exception:**
> Where approved by the fire code official, a change of occupancy shall be permitted without complying with the requirements of this code and the Mesa Existing Building Code, provided that the new or proposed use or occupancy is less hazardous, based on life and fire risk, than the existing use or occupancy.

102.4 Application of Building Code. The design and construction of new structures shall comply with the Mesa Building Code, and any alterations, additions, changes in use or changes in structures required by this code, which are within the scope of the Mesa Building Code, shall be made in accordance therewith.

A new **Section 102.7.3** is added as follows:
102.7.3 International Code References. Within the technical codes and the referenced codes and standards therein, specific references to the following International Codes shall be deemed and interpreted to mean the specific City of Mesa Codes as listed herein:

1. International Building Code (IBC) is redefined as Mesa Building Code (MBC)
2. International Fire Code (IFC) is redefined as Mesa Fire Code (MFC)
3. International Residential Code (IRC) is redefined as Mesa Residential Code (MRC)
4. International Mechanical Code (IMC) is redefined as Mesa Mechanical Code (MMC)
5. International Fuel Gas Code (IFGC) is redefined as Mesa Fuel Gas Code (MFGC)
6. International Existing Building Code (IEBC) is redefined as Mesa Existing Building Code (MEBC)
7. International Plumbing Code (IPC) is redefined as Mesa Plumbing Code (MPC)
8. International Swimming Pool and Spa Code (ISPSC) is redefined as Mesa Swimming Pool and Spa Code (MSPSC)

9. International Energy Conservation Code (IECC) is redefined as Mesa Energy Conservation Code (MECC).

103.1 Creation of Agency. The Mesa Fire and Medical Department is hereby created and the official in charge thereof shall be known as the fire code official. The function of the agency shall be the implementation, administration, and enforcement of the provisions of this code.

105.1.2 Types of Permits. There shall be two types of permits as follows:

1. Operational Permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.5 for either:

   1.1 A prescribed period.

   1.2 Until renewed or revoked.

2. Construction Permit. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by Section 105.6.

3. Fire Safety Operational Permit. A Fire Safety operational permit is required for any inspectable occupancy within the City of Mesa and requires the applicant to provide contact information annually as required by the fire code official. The permit is valid for one year from date of issuance.

Exception:
Home-based businesses are not required to obtain a Fire Safety Operational Permit.

105.6 Required Construction Permits. The Mesa Administrative Code shall apply to construction permits for work as set forth in Sections 105.6.1 through 105.6.13. Any conflicts with the provisions of Sections 105.6.1 through 105.6.13 and the Mesa Administrative Code, the Mesa Administrative Code shall take precedence.

106.1 Submittals. Construction documents and supporting data shall be submitted electronically for a permit and in such form and detail as required by fire code official. The construction documents shall be prepared by a registered design professional registered by the State of Arizona.

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

112.1 Board of Appeals. Orders, decisions, or determinations made by the fire code official may, within thirty (30) days of the receipt of the notice of the decision, be appealed to the Building Board of Appeals, Section 2-11 of the Mesa City Code. The request for an appeal shall be in

writing and shall set forth the specific objections to the decision of the fire code official. This shall form the basis of the appeal. A hearing shall be set as soon as practicable. The decision of the Building Board of Appeals shall be based on the evidence presented.

Sections 112.2 and 112.3 are deleted in their entirety. Any reference to Sections 112.2 through 112.3 shall comply with the Mesa Administrative Code (Mesa City Code, Title 4, Chapter 1).

Sections 113.4 and 114.4 are deleted in their entirety.

Additions to **Section 202 Definitions** are as follows:
GAZEBO. Detached, open-sided, roofed structure.

BATTERY MODULE. Groups of battery cells connected in series or parallel and encapsulated in a protective casing to form an intermediate energy storage unit.

BATTERY MODULE ARRAY. System of battery modules arranged and interconnected in a series and/or parallel configuration to form a larger battery system.

R-5 OCCUPANCIES. As defined by Mesa Building Code 310.6, R-5 occupancies shall comply with the Mesa Residential Code.

RAMADA. See definition for Gazebo.

CHAPTER 3 GENERAL REQUIREMENTS

A new **Section 315.3.5 Storage Under Stairways** is added as follows:
315.3.5 Storage Under Stairways. Storage is prohibited under stairways.

Exception:
Storage is allowed under interior or exterior stairways when spaces are protected below by one-hour fire-resistance-rated construction as specified in the MBC or are protected by fire sprinklers.

CHAPTER 5 FIRE SERVICE FEATURES

503.1.1 Buildings and Facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:
1. The fire code official is authorized to increase the dimension to 300 feet (91,400 mm) where any of the following conditions occur:

1.1 The building is equipped throughout with approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3. (This is an exception the applicant may select and is not intended to be a direct or indirect requirement to install automatic fire sprinklers.)

1.2 Fire Apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

1.3. Group R-3/R-5 or Group U occupancies.

2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

A new **503.1.4 Storage Yards** is added as follows:
503.1.4 Storage Yards. Approved fire access shall be provided where required by the fire official for all new and existing, outdoor storage areas. This includes, but is not limited to, storage piles throughout automotive wrecking yards, junkyards, and recycling facilities.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6,096 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 15 feet (4,572 mm).

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities as determined by the fire code official.

503.2.7 Grade. Whether temporary or permanent, fire apparatus access roads with grades equal to or less than 6% may be designed with materials such as compacted ABC or compacted decomposed granite. All fire apparatus access roads that exceed 6% shall be paved with materials such as concrete or asphalt. All fire apparatus access roads with grades that exceed 12% shall be subject to the approval of the fire code official.

A new **Section 503.7 Commercial and Industrial Developments** is added as follows:
503.7. Commercial and Industrial Developments.

503.7.1. Building Exceeding Three Stories or 30 Feet in Height. Buildings or facilities exceeding 30 feet (9,144 mm) or three stories in height shall have not fewer than two means of fire apparatus access for each structure.

503.7.2 Buildings Exceeding 124,000 Square Feet in Area. Buildings or facilities having a gross building area of more than 124,000 square feet (11,520 m^2) shall be provided with two separate and approved fire apparatus access roads.

503.7.3. Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

A new **Section 503.8 Aerial Fire Apparatus Access Roads** is added as follows:
503.8 Aerial Fire Apparatus Access Roads.

503.8.1 Where Required. Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet (9,144 mm), approved aerial fire apparatus access roads shall be provided. For purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of parapet walls, whichever is greater.

Exception:
Where approved by the fire code official, buildings of Type IA, Type IB or Type IIA construction equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and having firefighter access through an enclosed stairway with a Class I standpipe from the lowest level of fire department vehicle access to all roof surfaces.

503.8.2 Width. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7,925 mm), exclusive of shoulders, in the immediate vicinity of the building or portion thereof.

503.8.3 Proximity to Building. One or more of the required access routes meeting this condition shall be located not less than 15 feet (4,572 mm) and not greater than 30 feet (9,144 mm) from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

503.8.4 Obstructions. Overhead utility and power lines shall not be located over the aerial fire apparatus access road or between the aerial fire apparatus road and the building. Other obstructions shall be permitted to be placed with the approval of the fire code official.

A new **Section 503.9 Residential Access Roads** is added as follows:
503.9 Residential Access Roads. Access to residential developments shall comply with this section. A residential development may have public or private streets.

503.9.1 Multiple Access Roads. Residential developments where the number of dwelling units exceed 30 shall be provided with a minimum of two separate and approved fire apparatus access roads.

503.9.2 Parking. Fire department access shall have an unobstructed width of not less than 20 feet (6,096 mm). Road widths shall be as follows:

1. No parking on either side of the roadway when the road is at least 20 feet (6,096 mm) to less than 28 feet (8,534 mm) wide.

2. No parking on one side of the roadway when the road is between at least 28 feet (8,534 mm) and less than 34 feet (10,363 mm) wide.

3. Parking is not restricted when a road is 34 feet (10,363 mm) wide or greater.

503.9.2.1 Maintenance of Parking Restrictions. Maintenance of Mesa Fire and Medical Department access parking restrictions as initiated by Mesa Fire and Medical Department will be the responsibility of the homeowners' association or individual property owner of the property affected by the restriction. Maintenance includes posting and maintaining approved signage and/or red painted curb marking in accordance with Mesa Fire Detail. If there is not a homeowners' association or individual property owner, the City of Mesa shall be responsible for the maintenance of the fire department access parking restrictions.

503.9.3 Queuing Distance. The queuing distance between the open gate swing and arterial roadway shall be no less than 50 feet (15,240 mm) in length to accommodate a fire apparatus. This distance is not required for automatic gates when no manual action is required to close and lock the gate. R-2 occupancies shall provide a minimum of one approved automatic gate.

A new **Section 503.9.4 Fire Lane Turning Radius** is added as follows:
503.9.4 Fire Lane Turning Radius. Residential developments shall comply with Mesa Fire and Medical Details.

A new **Section 503.10 Multiple-Family Residential Developments** is added as follows:
503.10 Multiple-Family Residential Developments. Where required by the fire code official, multiple-family residential projects having more than 30 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

505.1 Address Identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background and be illuminated or reflective. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 12 inches (304.8 mm) high with a minimum stroke width of 2 inches (50.8 mm). Numbers shall not be spelled out. Each character shall not be less than 12 inches (304.8 mm) high with a minimum stroke width of 2 inches (50.8 mm). Address identification shall be approved, and where required by the fire code official, shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

A new **Section 505.1.1 Residential Addressing** is added as follows:
505.1.1 Residential Addressing. R-3, R-4 and R-5 address numbers shall be a minimum of 4 inches (101.6 mm) high with a minimum stroke width of ½-inch (12.7 mm).

A new **Section 505.1.2 Suite identification** is added as follows:

505.1.2 Suite Identification. New and existing buildings shall be provided with approved suite identification. Suite identification shall be legible and stenciled on or near the outside portion of all entrance and exit doors. Suite identification characters shall contrast with their background and shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 3 inches (76.2 mm) high with a minimum stroke width of ½-inch (12.7 mm). Numbers shall not be spelled out. Suite identification shall be approved, and where required by the fire code official, shall be provided in additional approved locations to facilitate emergency response.

A new **Section 505.1.3 Multiple Tenant Buildings** is added as follows:
505.1.3 Multiple Tenant Buildings. Strip malls and other multiple tenant buildings shall have their address and suite number posted on all doors of each tenant space.

A new **Section 507.2.1.1. Detectible Underground Locator Device** is added as follows:
507.2.1.1 Detectible Underground Locator Device. Underground nonmetallic water piping larger than 2 inches (50.8 mm) in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall be not less than 12 AWG, and the insulation type shall be suitable for direct burial.

507.3 Fire flow. Fire-flow requirements for buildings or portions of buildings and facilities shall be determined in accordance with Appendix B.

510.1 Emergency Responder Radio Coverage in New Buildings. New buildings shall have approved radio coverage for emergency responders within the building based on the existing coverage levels of the public safety communication systems utilized by the City of Mesa, measured at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. New and existing buildings and structures with the following characteristics shall comply with Section 510:

1. Buildings or structures more than three (3) stories above ground level;

2. Buildings or structures totaling 45,000 square feet (4,181 m^2) or more on any single floor;

3. Buildings or structures that include a basement or other subterranean space totaling 250 square feet (23.2 m^2) or more; or

4. Buildings or structures where the fire code official has determined to have been constructed in a manner or with materials likely to limit the ability of emergency response personnel to effectively use radio communication while within that building or structure.

Exceptions:
1. Where approved by the building official and the fire code official, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an approved radio coverage system.

2. Where it is determined by the fire code official that the radio coverage system is not needed.

3. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency responder radio coverage system.

4. Group R-3, R-4, R-5, and U occupancies.

5. Buildings and structures utilizing only wood framing.

6. Buildings and structures less than 35 feet (10,668 mm) above ground level and do not utilize any metal framing or metal roofing.

510.4.1.1 Minimum Signal Strength into the Building. The minimum inbound signal strength shall be sufficient to provide usable voice communications throughout the coverage area as specified by the fire code official. The inbound signal level shall be sufficient to provide not less than a minimum signal strength of -95 dBm in 95% of the area on each floor when transmitting to and from a Public Safety Radio System applicable to the technology for either analog or digital signals.

A new **Section 510.4.1.1.1 Minimum Delivered Audio Quality (DAQ)** is added as follows:
510.4.1.1.1 Minimum Delivered Audio Quality (DAQ). A minimum DAQ of 3.4 for signal strength and intelligibility when utilizing the Public Safety Radio System. For public safety, the accepted objective is to provide DAQ 3.4 over the service area. DAQ 3.4 is defined as "speech understandable with repetition only rarely required, and with some noise and/or distortion" and represents a Bit Error Rate (BER) of 2%.

510.4.1.1.1.1 Existing Buildings. Where required by the fire code official in existing buildings, emergency responder radio coverage testing must be conducted. If results do not meet minimum signal requirement of Section 510.4.1.1.1, emergency responder radio system shall be installed.

510.4.2.2 Technical Criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder communications coverage system. This document shall contain, but not be limited to, the various frequencies required, the location of radio sites, the effective radiated power of radio sites, the maximum propagation delay in microseconds, the applications being used and other supporting technical information necessary for system design.

1. The Topaz Regional Wireless Cooperative (TRWC) will provide which donor site will be utilized for any installation of a 700/800 MHz BDA/DAS system that will be using the TRWC public safety network.

2. The TRWC Administration Manager will approve any enhancements for Simplex VHF Hazard Zone Fire network.

CHAPTER 9 FIRE PROTECTION AND LIFE SYSTEMS

901.4.7.1 Access. Automatic sprinkler system risers, fire pumps and controllers shall be provided with ready access. Where located in a fire pump room or automatic sprinkler system riser room, an exterior door shall be provided, and permitted to be locked provided that the key is available at all times.

A new **Section 901.6.1.1 Contractor Qualification** is added as follows:
901.6.1.1 Contractor Qualification. The fire code official shall validate contractor qualification and training at least once every 3 years.

Sections 903.2 through 903.2.11.1.3 are deleted in their entirety.

A new **Section 903.2 Where Required** is added as follows:
903.2 Where Required. Approved automatic sprinkler systems shall be provided in the locations described in this Section.

903.2.1 New Buildings or Structures. All areas of new buildings or structures, and other locations required by this Chapter or the Mesa Fire Code, shall be provided with an automatic fire sprinkler system complying with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 as applicable.

Exceptions:
Unless the use of the facility otherwise requires automatic fire sprinkler protection, fire sprinkler systems shall not be required for the following:

1. R-3 and R-5 other than care facilities with persons incapable of self-preservation in accordance Section 203.9.3.1.

2. R-4 condition 1.

3. Other buildings or structures accessory to and located on the same lot with R-3, R-4, or R-5 occupancies.

4. Detached non-residential buildings not exceeding 500 square feet (46.5 m^2) in floor area and not closer than 5 feet (1,524 mm) to any building or property line.

5. Detached gazebos, ramadas, and canopies not greater than 5,000 square feet (465 m^2) in roof area, with no combustible storage, portable heating devices, or cooking beneath, and not closer than 5 feet to any building, property line, or other shade canopy.

6. Detached non-combustible or NFPA 701 compliant gazebos, ramadas, and canopies not greater than 5,000 square feet (465 m^2) in roof area, with no combustible storage and not closer than 5 feet to any building, property line, or other shade canopies.

7. Detached restroom facilities associated with golf courses, parks and similar uses.

8. Noncombustible portable storage containers used for storage purposes.

9. Exterior covered/enclosed walkways of Type I, II or III construction, with no combustible storage beneath, and with enclosing walls that are at least 50 percent open with fire code official approval.

903.2.2 Group H-5 Occupancies. An automatic sprinkler system shall be installed throughout buildings containing Group H-5 occupancies. The design of the sprinkler system shall not be less than that required under the Mesa Building Code for the occupancy hazard classifications in accordance with Table 903.2.2. Where the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers required to be calculated is 13.

TABLE 903.2.2 GROUP H-5 AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA	
Location	**Occupancy Hazard Classification**
Fabrication areas	Ordinary Hazard Group 2
Service corridors	Ordinary Hazard Group 2
Storage rooms without dispensing	Ordinary Hazard Group 2
Storage rooms with dispensing	Extra Hazard Group 2
Corridors	Ordinary Hazard Group 2

903.2.3 Change of Occupancy. Where conditions exceed Section 102.3, an existing building or portion thereof undergoing a change of occupancy shall provide an automatic sprinkler system complying with the requirements of this chapter and Mesa Existing Building Code.

Exception:
Where approved by the fire code official, a change of occupancy shall be permitted without complying with the requirements of this code and the International Mesa Existing Building Code, provided that the new or proposed use or occupancy is less hazardous, based on life and fire risk, than the existing use or occupancy.

903.2.4 Additions. All additions to existing buildings shall be provided with an automatic fire protection system throughout the existing building and addition compliant with Section 903.3 as applicable.

Exceptions:
1. Additions of 1,000 sq. ft. (93 m^2) or less to existing buildings without fire sprinklers. The aggregate of multiple additions shall not exceed 1,000 sq. ft. (93 m^2).

2. Additions to R-3, R-4 Condition 1 and R-5 occupancies, not including care facilities with persons incapable of self-preservation in accordance Section 203.9.3.1.

Section 903.2.11.3 is deleted in its entirety.

903.3.1.1.1 Exempt Locations. With fire code official approval, 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. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. A room or space where sprinklers constitute a serious life or fire hazard because of the nature of the contents.

2. Generator and transformer rooms 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.

3. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.

4. Fire service access elevator machine rooms and machinery spaces.

5. Machine rooms, machinery spaces, control rooms and control spaces associated with occupant evacuation elevators designed in accordance with Section 3008 of the International Building Code.

A new **Section 903.3.1.1.4 Minimum Design Requirement** is added as follows:
903.3.1.1.4 Minimum Design Requirement. The minimum design requirement for fire sprinkler systems shall be as determined by the Mesa Fire Code or as defined in Section 903.3.1.1.4 whichever is greater.

903.3.3.1.1.4.1 Shell Buildings. The minimum fire sprinkler system design for shell buildings shall be Ordinary Group II as defined in 903.3.1.1.

903.3.3.1.1.4.2 Buildings with Roof Structure over 20 feet (6,096 mm). The minimum design requirements for Group H, F and S-1 buildings with the roof structure over 20 feet (6,096 mm) above the finished floor shall be Extra Hazard Group I as defined in Chapter 32 and Section 903.3.1.1.

903.3.1.2.3 Attics. Attic protection shall be provided as follows:

1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.

2. Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.

3. Attics not required by Item 1 to have sprinklers shall comply with one of the following:

3.1. Provide automatic sprinkler system protection.

3.2. Construct the attic using noncombustible materials.

3.3. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.

3.4. Fill the attic with noncombustible insulation.

The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance. For the purpose of this measurement, required fire vehicle access roads shall include only those roads that are necessary for compliance with Section 503.

4. Group R4, Condition 2 occupancy attics not required by Item 1 to have sprinklers shall comply with one of the following:

4.1. Provide automatic sprinkler system protection.

4.2. Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.

4.3. Construct the attic using noncombustible materials.

4.4. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.

4.5. Fill the attic with noncombustible insulation.

A new **Section 903.3.1.2.4 Required Fire Protection Systems** is added as follows:
903.3.1.2.4 Required Fire Protection Systems. For the purpose of inspection, testing, or maintenance of fire protection systems in R-1 and R-2 occupancies, there shall be an exterior door for access to the fire sprinkler riser. The dimensions of the door be a minimum of 30 inches (762 mm) wide and in no case require service personnel to enter a private dwelling or garage to access the riser.

903.3.1.3 NFPA 13D Sprinkler Systems. Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3, R-4, and R-5, and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.

903.3.5 Water Supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow as required by Mesa Standard Details. For connections to public waterworks systems, the water supply test used for design of fire protection systems shall be

adjusted to account for seasonal and daily pressure fluctuations based on information from the water supply authority and as approved by the fire code official.

A new **Section 903.3.5.3 Detectible Underground Locator Device** is added as follows:
903.3.5.3 Detectible Underground Locator Device. Underground nonmetallic water and irrigation system piping larger than 2 inches (50.8 mm) in diameter shall be installed with insulated copper tracer wire or other approved conductor located adjacent to the piping. Access shall be provided to the tracer wire or the tracer wire shall terminate above ground at each end of the nonmetallic piping. The tracer wire size shall not be not less than 12 AWG and the insulation type shall be suitable for direct burial.

903.3.6 Hose Threads. Fire hose threads and fittings used in connection with automatic sprinkler systems shall be National Standard Thread.

A new **Section 903.3.7.1. Fire Department Connection Sizing** is added as follows:
903.3.7.1. Fire Department Connection Sizing. The size of the fire department connection and piping is dependent on the automatic sprinkler design flow. The maximum design flow for a 2-½ inch Siamese connection is 500 GPM (1892.71 LPM). For design flows greater than 500 GPM (1892.71 LPM) not including hose stream demands, install a single 2-½ inch (63.5 mm) Siamese connection and 5-inch (127 mm) Storz connection.

A new **Section 903.3.10 Safety Factor** is added as follows:
903.3.10 Safety Factor. All fire sprinkler designs shall have a 10 percent (pressure) safety margin.

A new **Section 903.3.11 Remodel** is added as follows:
903.3.11 Remodel. Fire sprinkler design drawings shall not be required for tenant improvements, other than Group H, high-pile, or rack storage, when 15 or less sprinklers are relocated or added where approved by the fire code official.

A new **Section 903.3.12 Freeze Protection** is added as follows:
903.3.12 Freeze Protection. Exterior sprinkler piping with a minimum of 2 inches (50.8 mm) may be used in lieu of freeze protection required by Section 903.3.1.1.

903.4.1 Electronic Supervision. Valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures and waterflow switches on all sprinkler systems shall be electrically supervised by a listed fire alarm control unit.

Exceptions:
1. Automatic sprinkler systems protecting one- and two-family dwellings, other than R-3 with incapable of self-preservation and R-4 Condition 1.

2. Backflow prevention devices, serving limited area sprinkler system supply piping shall be locked in the open position.

3. Remotely located backflow prevention devices, including test valves, shall be locked in the open position where approved by the fire code official.

4. Groups R-1 and R-2 occupancies containing 15 or less dwelling or sleeping units and not exceeding an aggregate area of 12,000 square feet.

5. Jockey pump control valves that are sealed or locked in the open position.

6. Trim valves to pressure switches in dry, preaction and deluge sprinkler systems that are sealed or locked in the open position.

7. Underground key or hub gate values in roadway boxes.

A new **Section 903.4.1.1 Backflow Preventors** is added as follows:
903.4.1.1 Backflow Preventors. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

905.5 Location of Class II standpipe hose connections. Where required by the *fire code official,* Class II standpipe hose connections shall be located so that all portions of the building are within 30 feet (9,144 mm) of a nozzle attached to 100 feet (30,480 mm) of hose. Class II standpipe hose connections shall be located where they will have ready access.

905.6 Location of Class III standpipe hose connections. Class III standpipe systems shall have hose connections located as required for Class I standpipes in Section 905.4. Where required by the fire code official, shall have Class II hose connections as required in Section 905.5.

912.3 Fire Hose Threads. Fire hose threads used in connection with standpipe systems shall be National Standard Thread (NST).

912.6 Backflow Protection. The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow as required by the Mesa Standard Details.

CHAPTER 12 ENERGY SYSTEMS

1207.8.1 Remote Outdoor Installations. For the purpose of Table 1207.8, to be deemed, and to be regulated as, a remote outdoor installation, an ESS shall be located more than 100 feet (30 480 mm) from buildings, lot lines, public ways, stored combustible materials, hazardous materials, high-piled stock and other exposure hazards. Additionally, remote outdoor installations shall comply with UL 9540 and UL 9540A.

A new **Section 1207.8.5 Fire Access to Outdoor Installations** is added as follows:
1207.8.5 Outdoor Installation Fire Apparatus Access. ESS located outdoors shall comply with all the following:

1. Modular battery arrays shall not exceed 300 feet (91,440 mm) in length or depth.

2. A fire apparatus access road that has a minimum unobstructed width of 20 feet (6096 mm) and complies with Section 503.2 shall be provided adjacent to all perimeter sides of a modular battery array.

3. In addition to the requirement in subpart (2), for modular battery arrays that exceed 150 feet (45,720 mm) in either length or depth, at least one of the fire apparatus access roads adjacent to a perimeter side of the modular battery array shall be an aerial fire apparatus access road that has a minimum unobstructed width of 26 feet (7925 mm) and complies with Section 503.8.

4. The configuration of the ESS, the modular battery arrays, the fire apparatus access roads, and if required, the aerial fire apparatus access road, shall be subject to review and approval by the fire code official.

CHAPTER 24 FLAMMABLE FINISHES

A new **Section 2404.12 Exterior Finishing Operations** is added as follows:
2404.12 Exterior Finishing Operations. Flammable spray-finishing operations shall not be conducted outside of approved structures.

CHAPTER 28 LUMBER YARDS AND AGRO-INDUSTRIAL, SOLID BIOMASS AND WOODWORKING FACILITIES

2809.5 Fire Protection. An approved hydrant or portable fire-extinguishing equipment suitable for the fire hazard involved shall be provided for open storage yards. Hydrant systems shall be installed in accordance with NFPA 24. Portable fire extinguishers complying with Section 906 shall be located so that the travel distance to the nearest unit does not exceed 75 feet (22,860 mm).

CHAPTER 31 TENTS, TEMPORARY SPECIAL EVENT STRUCTURES AND OTHER MEMBRANE STRUCTURES

3103.2 Approval Required. Tents and membrane structures having an area in excess of 400 square feet (37 m^2) and tents without walls (canopies) in excess of 1,200 square feet (111.5 m^2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exceptions:
1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides that comply with all of the following:

   2.1. Individual tents having a maximum size of 700 square feet (65 m^2) total.

   2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3,658 mm), not exceeding 700 square feet (65 m^2) total.

2.3. A minimum clearance of 12 feet (3,658 mm) to all structures and other tents.

Section 3103.8.1 Water-Filled Vessels is deleted in its entirety.

CHAPTER 32 HIGH-PILED COMBUSTIBLE STORAGE

A new **Section 3206.4.2 Identification of Sprinkler System Capabilities and Limitations** is added as follows:

3206.4.2 Identification of Sprinkler System Capabilities and Limitations. An adhesive label shall be permanently installed at or adjacent to each sprinkler riser. When a building contains more than four risers, the sign shall be located at an approved location inside the building. When sprinkler risers are located outside of the building, the sign shall be stamped metal. The minimum sign dimension is 6-inches (152.4 mm) high by 4-inches (101.6 mm) wide. The sign shall specify the capabilities and limitations of the automatic sprinkler system. The sign shall include the following information:

1. The design base or basis, including the edition used.
2. A statement indicating if the sprinkler design is control mode density area method, control mode specific application, suppression mode, or any combination thereof.
3. When used, all of the storage conditions stipulated NFPA 13, Section 12.7 for special designs.
4. The maximum storage height.
5. The minimum required aisle width.
6. If storage is in racks, the maximum rack width and minimum transverse and longitudinal flue widths.
7. Commodities that can be protected by the automatic sprinkler system.
8. Commodities that cannot be protected by the automatic sprinkler system.
9. Limits on storage heights of idle wood and plastic storage.
10. Limits on storage heights of miscellaneous Group A plastic, tire and rolled paper storage.
11. Locations where in-rack sprinklers are required.
12. Locations where horizontal and/or vertical barriers are required.
13. Information explaining the manufacturer, sprinkler identification number, K-factor, and operating temperature of the overhead sprinklers protecting the high pile storage.

The following example illustrates a suggested format label or sign:

Automatic Sprinkler System Capabilities & Limitations

Stored Commodity	Class I water miscible flammable liquid in 1 & 5 gallon polyethylene containers in fiberboard cartons
Design Documents	NFPA 13, 2025 edition & NFPA 30, 2024 edition, Sections 29.4.3, A.29.4 and A.29.6
Design Type	25 feet
Min. Aisle Width	8 feet
Max. Rack Width	9 feet
Flue Dimensions	Longitudinal: min. 6 inches Transverse: Min. 3 inches
System Capabilities	Class I-IV commodities, stored commodity, solid pile or palletized Group A plastics to 12 feet; rack storage of Group A plastics to 25 feet.
System Limitations	No level 2 or 3 aerosols, Class 2, 3, or 4 oxidizers
Idle Pallets	6 feet maximum storage height
Tire Storage	5 feet maximum storage height
Roll Paper Storage	5 feet maximum storage
In-Rack Sprinklers	In-rack sprinklers are required at each of 3 rack tiers containing the storage commodity. In-rack sprinklers are Tyco/Central FS-B, 17/32-inch orifice, QR 155°F elements, SIN TY0041
Horizontal Barriers	Required at each rack tier containing the stored commodity.
Ceiling Sprinklers	Tyco ELO-231B, ¾-inch orifice, SR 286°F element, upright, SIN TY0030

CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

3307.1 Required Access. Approved vehicle access for firefighting shall be provided to all construction or demolition sites and shall comply with Mesa Fire and Medical Department Standard Details.

3307.1.2 Stairways Required. Where building construction exceeds 40 feet (12,192 mm) in height above the lowest level of fire department vehicle access, no fewer than two temporary or permanent stairways shall be provided. As construction progresses, such stairway shall be extended to within one floor of the highest point of construction having secured decking or flooring. Stairways shall be located diametrically from one another.

3307.2.1 Combustible Building Materials. When combustible building materials of the building under construction are delivered to a site, a minimum fire flow of 1,500 gallons per minute at 20

PSI shall be provided. The fire hydrant used to provide this fire-flow supply shall be within 500 feet (152,400 mm) of the combustible building materials, as measured along an approved fire apparatus access lane. Where the site configuration is such that one fire hydrant cannot be located within 500 feet (152,400 mm) of all combustible building materials, additional fire hydrants shall be required to provide coverage in accordance with this section.

CHAPTER 50 HAZARDOUS MATERIALS - GENERAL PROVISIONS

A new **Section 5001.5.2.1 Changes to Hazardous Materials Inventory Statements** is added as follows:
5001.5.2.1 Changes to Hazardous Materials Inventory Statements. An amended hazardous materials inventory statement shall be provided to the fire official by facilities that store or handle hazardous materials within 30 days of a change or addition of hazard class, or in amounts sufficient to cause an increase or decrease in the aggregate quantity that exceeds 5 percent for any physical or health class, or when required by the fire code official.

CHAPTER 56 EXPLOSIVES AND FIREWORKS

5601.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Storage and handling of fireworks as allowed in Section 5604.

2. Manufacture, assembly and testing of fireworks as allowed in Section 5605.

3. The use of fireworks for fireworks displays as allowed in Section 5608.

4. The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided that such fireworks and facilities comply with the 2013 edition of NFPA 1124, CPSC 16 CFR Parts 1500 and 1507, and DOTn 49 CFR Parts 100-185, as applicable for consumer fireworks.

5. The use, discharge or ignition of fireworks are prohibited except as allowed under Mesa City Code 6-21.

A new **Section 5601.9 Abandonment** is added as follows:
5601.9 Abandonment. Explosive materials shall not be abandoned per Sections 311.4 and 5001.6.

CHAPTER 57 FLAMMABLE AND COMBUSTIBLE LIQUIDS

A new **Section 5706.5.1.19 Time Limit for Unloading** is added as follows:
5706.5.1.19 Time Limit for Unloading. Tank vehicles and tank cars shall be unloaded as soon as possible after arrival at point of delivery and shall not be used as storage tanks. Tank cars shall be

unloaded only on private sidings or railroad siding facilities equipped for transferring the liquid between tank cars and permanent storage tanks. Unless otherwise approved, a tank car shall not be allowed to remain on a siding at the point of delivery for more than 24 hours while connected for transfer operations.

CHAPTER 80 REFERENCED STANDARDS

NFPA (National Fire Protection Association):

10 – 26	Portable Fire Extinguishers
11 – 24	Low Medium- and High-Expansion Foam
12 – 25	Carbon Dioxide Fire-Extinguisher System
12A – 25	A Halon 1301 Fire-Extinguisher System
13 – 25	Installation of Sprinkler Systems
13D – 25	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
13R – 25	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
14 – 24	Installation of Standpipe, Private Hydrants and Hose Systems
17 – 24	Dry-Chemical Extinguishing Systems
17A – 24	Wet-Chemical Extinguishing Systems
20 – 25	Installation of Stationary Pumps for Fire Protection
24 – 25	Installation of Private Fire Service Mains and their Appurtenances
25 – 26	Water-Based Fire Protection Systems
52 – 26	Compressed Natural Gas (CNG) Vehicular Fuel Systems
58 – 24	Liquified Petroleum Gas Code
72 – 25	National Fire Alarm Code
105 – 25	Smoke Dampers
110 – 25	Emergency and Standby Power Systems
111 – 25	Standard on Storage Electrical Energy Emergency and Standby Power Systems
204 – 24	Smoke and Heat Vents
660 – 25	Standard for combustible dusts and particulate solids
855 – 26	Standard for Installation of Stationary Energy Storage Systems
1225 – 25	Standard for Emergency Services Communications
2001 – 25	Clean-Agent Extinguishing Systems
2010 – 25	Aerosol Fire-Extinguishing Systems

UL (Underwriter Laboratory):

9540 – 23 Standard for Energy Storage Systems and Equipment

9540A – 25 Test Method for Evaluating Thermal Runway Fire Propagation in Battery Energy Storage Systems

APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS:

Table B105.2: Required Fire Flow for Buildings Other Than One- and Two-Family Dwellings, Group R-3, R-4, and R-5 Buildings and Townhouses		
AUTOMATIC SPRINKLER SYSTEM (Design Standard)	**MINIMUM FIRE FLOW (gallons per minute)**	**FLOW DURATION (hours)**
No automatic sprinkler system	Value in Table B105.1(2)	Duration in Table B105.1(2)
Section 903.3.1.1 of the Mesa Fire Code	50% of the value in Table B105.1(2)[a]	Duration in Table 105.1(2) at the reduced flow rate
Section 903.3.1.2 of the Mesa Fire Code	50% of the value in Table B105.1(2)[b]	Duration in Table 105.1(2) at the reduced flow rate

Footnote a. The reduced fire flow shall be not less than 1,000 gallons (3,785.41 L) per minute.

Footnote b. The reduced fire flow shall be not less than 1,500 gallons (5,678.12 L) per minute.

APPENDIX C FIRE HYDRANT LOCATIONS AND DISTRIBUTION

Table C102.1 Required Number and Spacing of Fire Hydrants:

Footnote c. Where new water mains are extended along streets where hydrants are not needed for protection of structures or similar fire problems, fire hydrants shall be provided at spacing not to exceed 500 feet (152,400 mm) to provide for transportation hazards.

Footnote g. A 25-percent spacing increase shall be permitted where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.2 or 903.3.1.3 of the Mesa Fire Code.

APPENDIX L REQUIREMENTS FOR FIREFIGHTER AIR REPLENISHMENT SYSTEMS

Section L104.1.1 When Required added as follows:
L104.1.1 When Required. In high-rise buildings and structures as defined by the Mesa Building Code; or underground buildings and structures, or components thereof, totaling 10,000 square feet (929 m^2) or more that are either more than 2 floors below grade or more than 30 feet (9,144 mm) below grade.

L104.13.1 Location. Fill stations for refilling breathing air cylinders shall be located as follows:

1. Fill stations shall be provided at the fifth floor above and below the ground level floor and every third level floor thereafter.

2. On floor levels requiring fill stations, one fill station shall be provided adjacent to a required exit stair at a location designated by the fire code official. In buildings required to have multiple exits, additional fill stations shall be provided at every stairways.

A new **Section L108 Records** is added as follows:

L108 Records

L108.1 Markings. The fire department air connection panel and the remote air fill panels shall be clearly identified by means of permanently installed signage which says: "FIREFIGHTER AIR SYSTEM" in minimum letters 1½-inch high with a ¼-inch stoke and be located where plainly visible.