~ 7/25/07 DRAFT ~

SEDONA FIRE DISTRICT
AMENDMENTS, ADDITIONS, AND DELETIONS
TO THE
2003 INTERNATIONAL FIRE CODE
AND THE
2003 URBAN-WILDLAND INTERFACE CODE

The 2003 International Fire Code is hereby amended in the following respects:

CHAPTER 1

Revised

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

[EB] 102.3 Change of Use or Occupancy. The provisions of this Code and applicable Building Codes shall apply to all buildings undergoing a change of occupancy.

102.4 Application of Building Code. The design and construction of new structures shall comply with the applicable Building Codes. Repairs, alterations, and additions to existing structures shall comply with all applicable Building Codes.

[EB] 102.5 Historic Buildings. The construction, alteration, repair, enlargement, restoration, relocation, or movement of existing buildings or structures that are designated as historic buildings when such buildings or structures do not constitute a distinct hazard to life or property shall be in accordance with the provisions of the Sedona Existing Building Code.

Add

102.6.1 International Codes 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 codes as listed herein:

1. International Building Code = As adopted by the applicable city/county having jurisdiction.
2. International Residential Code for One- and Two-Family Dwellings = As adopted by the applicable city/county having jurisdiction.
3. International Electrical Code = As adopted by the applicable city/county having jurisdiction.
4. International Plumbing Code = As adopted by the applicable city/county having jurisdiction.
5. International Mechanical Code = As adopted by the applicable city/county having jurisdiction.

6. International Fuel Gas Code = As adopted by the applicable city/county having jurisdiction.
7. International Existing Building Code = As adopted by the applicable city/county having jurisdiction.

Add

103.1 The Division of Community Risk Management is established under the direction of the Fire Chief. The function of this division shall be the implementation, administration and enforcement of the provisions of this code.

103.2 Fire Marshal: The District Fire Marshal, who shall also be known as the fire code official, shall be appointed by the Fire Chief of the Sedona Fire District. The Fire Marshal shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the Governing Fire Board. The duties of the Fire Marshal shall include the administration of the Division of Community Risk Management.

104.2.1 Fees. The Division of Community Risk Management is authorized to develop a fee schedule in accordance with the Arizona Revised Statutes (A.R.S.) Chapter 5 Article 1 Section: 48-805 (B) 14. Fees shall be charged as approved by the District's Governing Fire Board. The fee schedule shall be made available to the public and attached to this code.

104.2.2 Plans. Construction plans shall be submitted to the Division of Community Risk Management for review for all new construction, fire apparatus access roadways and fire protection systems required by this code per Section 901.2. Plans shall include all pertinent information as to the locations, types, styles and specifications of systems, roadways, devices and equipment to be installed. The Fire Marshal may require additional plans for any permit required per Section 105.2 or other activity regulated by this code.

Fees for plan reviews shall be received by the Community Risk Management Division prior to any field inspections being conducted.

104.6.2.1 Fire Inspection Card: A fire inspection card shall be posted on each construction site for which a plan review has been conducted. The fire inspection card shall be issued at the completion of each plan review. The card shall be maintained on the construction site and posted in a conspicuous location. The fire inspection card shall be returned to the Community Risk Management Division when completed.

104.6.3.1 Forms: The Division of Community Risk Management shall develop appropriate forms for the application of permits and record keeping as necessary.

104.10 Fire Investigations. The Sedona Fire District shall have the authority to investigate the origin, cause and circumstances of any fire, explosion or other hazardous condition occurring within the jurisdiction. Information that could be related to trade secrets or processes or juvenile offenders shall not be made part of the public record except as directed by a court of law. The Sedona Fire District shall use the applicable SFD Standard Operating Procedure for investigations.

105.6 Permits. The District Fire Marshal is authorized to issue operational permits for the operations set forth in Section 105.6.1 through 105.6.47 and as otherwise required throughout this code.

CHAPTER 2

Section 202
GENERAL DEFINITIONS

Add

R-4. *(Add the following language to existing at end of paragraph.)* All group R-4 occupancies shall require an operational permit to operate a licensed facility. Unlicensed residential care facilities are prohibited. A copy of the license from the issuing agency shall be submitted to the Community Risk Management Division.

READILY ACCESSIBLE. Access that is capable of being reached safely and quickly for operation, repair, or inspection without requiring those to whom ready access is requisite to climb over or remove obstacles, or to resort to the use of portable access equipment.

CHAPTER 3

Revised

309.1 General. Powered industrial trucks and similar equipment such as floor scrubbers and floor buffers, shall be operated and maintained in accordance with Section 309.

Add

311.2.2 Exceptions:

3. Where a fire alarm system was required for protection and/or evacuation of occupants, that system need not be maintained while the building is vacant.

315.3.3 Tire Storage. Outside storage of tires shall be in accordance with this section unless the use is classified as defined in Chapter 25.

CHAPTER 4

401.3.2.1 Resetting alarms. No person shall reset a fire or emergency alarm system, alarm initiating device or component until the fire department arrives.

> **Exception**: The person responsible for the property may investigate the building or area of alarm and if no evidence of fire or emergency is found, the system may be silenced providing the fire department is notified of the findings.

CHAPTER 5

501.5 Fire Protection in Recreational Vehicle, Mobile Home and Manufactured Housing Parks, Sales Lots and Storage Lots. Recreational vehicle, mobile home and manufactured housing parks, sales lots and storage lots shall provide and maintain fire hydrants and access roads in accordance with Sections 503 through 510.

> **Exception**: Recreational vehicle parks located in remote areas shall be provided with protection and access roadways as required by the Fire Chief.

Revised

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 (45720 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. The fire access roadway may extend up to 300 feet (91440 mm) of all portions of any building that is protected with an automatic fire sprinkler system in accordance with Section 903.3 of this Code.

> **Exceptions**: The fire code official is authorized to increase the dimension of 150 feet (45720mm) where:
>
> 1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
> 2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
> 3. There are not more than two Group R-3 or Group U occupancies.

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), except for approved security gates in accordance with section 503.6 and unobstructed vertical clearance of not less than 15 feet (4572 mm).

503.2.5 Dead Ends. Dead-end fire apparatus access roads in excess of 150 feet (45720 mm) in length shall be provided with an approved area for turning around fire apparatus. Dead-end access roads may be up to 300 feet to buildings protected by an automatic fire sprinkler system in accordance with Section 903.3 of this Code. Dead-end fire apparatus access road shall not have more than one turn for the fire apparatus to back around. The total aggregate of the turn shall be not more than 90°.

503.2.7 Grade. Whether temporary or permanent, no fire apparatus access roadway grade shall exceed 6% unless the roadway is paved hard and smooth with materials such as asphalt. Grades shall not exceed 12% unless the surface of the roadway is constructed of concrete. Grades shall not exceed 15% unless written request is made to and approved by the Fire Marshal.

503.4 Obstructions. *(Add this language to the end of the existing paragraph.)* Any low water crossings, speed bumps or speed humps located on or along fire apparatus access roadways shall be

considered obstructions. All buildings served by obstructed fire apparatus access roadways shall be equipped with automatic fire sprinkler systems that are installed in accordance with the National Fire Protection Association's (NFPA) standards for fire sprinklers as per Chapter 45.

503.6 Security Gates: (*Add this language to the end of the existing paragraph*) An operational permit is required to use and maintain gated access. Security gates shall be equipped with a Sedona Fire District key over-ride cylinder. This cylinder shall be keyed to the type presently employed by the Sedona Fire District. Operation of the key cylinder shall open the gates and the gates shall remain open until such time that the key is returned to its normal position. One clockwise turn shall open the gate. One counterclockwise turn shall return the gate to normal operation. The cylinder shall not captivate the key.

In addition to the key operation, a preemption traffic control device shall be installed. Security gates shall remain open for as long as the signal is being transmitted by the emergency apparatus.

A battery backup system shall be provided to open the gates upon a power failure. Gates shall remain open until such time power is restored.

Gates shall be equipped with reflective materials to identify the obstruction during nighttime, adverse weather or smoke conditions.

Add

503.7 Residential Developments. The access to residential developments shall comply with this section. A residential development may have public streets or private streets.

503.7.1 Access Directions. Residential developments where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads, and shall meet the requirements of Section 503.7.2 or Section 503.7.3.

503.7.2 Public Streets. Public streets in residential developments shall meet the requirements of the Sub-division Regulations.

503.7.3 Private Streets. Private streets in residential developments shall meet the requirements of Section 503 and the following:

503.7.3.1 Dead-ends. Shall meet the requirements of Section 503.2.5.

503.7.3.2. Gates. Shall meet the requirements of Section 503.6.

503.7.3.2.1. Secondary Gates. The queuing distance between the gate swing and arterial roadways shall accommodate the length of the fire apparatus. This distance is not required for automatic gates when no manual action is required to close and lock the gate.

503.7.3.3. Parking. Fire department access roadways shall have an unobstructed width of not less than 20 feet. Road widths shall be as follows:

20 feet wide when parking is not allowed on either side of the roadway.
28 feet wide or greater when parking is not allowed on one side of the roadway, and
34 feet wide or greater when parking is not restricted.

Revised

504.1 Required Access. All exterior doors and openings shall be maintained readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided when required by the fire code official.

Add

504.4 Access to Roof. For buildings two stories and less, maintain a flat area at grade from the building wall to any retention area at a minimum of two building corners. This flat area shall be a minimum of a 15° protection from the roof eave or parapet to a vertical line at grade plus 4 feet to the edge of any retention and shall be from both faces of the building corner.

507.4 Smoke Obscuration Systems. Smoke obscuration systems associated with security or burglar alarm systems are not allowed.

Revised

508.3 Fire Flow. Fire flow requirements for buildings or portions of buildings and facilities shall be determined by Appendix B.

Add

508.5 Fire Hydrants. Fire hydrant systems shall comply with Sections 508.5.1 through 508.5.6 and shall be located and distributed in accordance with Appendix C.

CHAPTER 6

610.3 Fire Protection. Commercial kitchen hoods shall be provided with approved fire protection systems installed in accordance with the National Fire Protection Association's standard for Wet Chemical Extinguishing Systems, Standard #17A. See section 904.5.

Section 611
Enhanced 9-1-1 For
Multi-Line Telephone Systems

611.1 Scope. Any voice delivering technology including but not limited to Multi-line Telephone Systems (MLTS), Voice Over Internet Protocol systems (VoIPs), private telephone networks, voice transmission systems and wireless voice systems shall meet the requirements of this section. All installations shall provide the public safety answering point (PSAP) a sufficient precise indication of the caller's location.

611.1.1 Definitions. The following definitions shall be used in conjunction with this section.

a. **Alternative Methods of Notification**. Having the ability to locate the emergency caller and initiate emergency response.

b. **Alternative Methods to support Enhanced 9-1-1**. Methods used by a systems' Operator to permit 9-1-1 emergency response team reasonable opportunity to quickly locate a caller as alternatives to the systems' signaling needed to produce the automatic display of caller location information on the video terminal of the call-taker.

c. **Automatic Location Identification (ALI)**. The automatic display at the PSAP of the caller's telephone number, the address/location of the telephone and supplementary emergency services information.

d. **Automatic Number Identification (ANI)**. The telephone number associated with the access line from which a call originates.

e. **Building Unit Identifier (BUI)**. A room number or equivalent designation of a portion of a structure/building.

f. **Call back Number**. A number used by the PSAP to re-contact the location from which the 9-1-1 call was placed. The number may or may not be the number of the station used to originate the 9-1-1 call.

g. **Direct inward Dialing (DID)**. The ability for a caller outside a company to call an internal extension without having to pass through a switchboard operator or attendant.

h. **Emergency Location Identification Number (ELIN)**. A valid North American Numbering Plan format telephone number assigned to the systems' Operator by the appropriate authority that is used to route the call to a PSAP and is used to retrieve the ALI for the PSAP. The ELIN may be the same number as the ANI. The North American Numbering Plan number may in some cases not be a dialable number.

i. **Emergency Response Location**. A location to which a 9-1-1 emergency response team may be dispatched. The location should be specific enough to provide a reasonable opportunity for the emergency response team to quickly locate a caller anywhere within it.

j. **Key Telephone System**. A type of Multiple-line Telephone System designed to provide shared access to several outside lines through buttons or keys, typically offering identified access lines with direct line appearance or termination on a given telephone set.

k. **Location Notification**. A system capability whereby a call to 9-1-1 from an extension is directed through the 9-1-1 Network to a PSAP and simultaneously to a switchboard operator, attendant or designated personnel where assistance can be provided to the PSAP to locate the caller and/or to assist in directing response. For Local Notification, the call back number shall be a phone number that can be dialed from the PSTN, which will be answered by the switchboard operator, attendant or designated personnel. Local notification must include the capability for the

switchboard operator, attendant or designated personnel to identify the location of telephones that have dialed 9-1-1.

l. **Multi-line Telephone System (MLTS)**. A multi-line Telephone System comprised of common control units(s), telephone sets and control hardware and software. This includes network and premises based systems such as Centrex and PBX, Hybrid and Key Telephone Systems as classified by the F.C.C. under Part 68 Requirements and includes systems owned or leased by governmental agencies and non-profit entities as well as for profit businesses.

m. **Operator**. The entity that either owns, leases, or rents from a third party and operates a voice system through which a caller may place a 9-1-1 call through the public switched network.

n. **Master Street Address Guide (MSAG)**. Master Street Address Guide is a database of street names and house number ranges within the associated communities defining emergency services zones and their associated emergency services numbers to enable proper routing of 9-1-1 calls.

o. **Private 9-1-1 Emergency Answering Point**. An answering point operated by non-public safety entities with functional alternative and adequate means of signaling and directing response to emergencies. This includes training to individuals intercepting calls for assistance that is in accordance with applicable local emergency telecommunications requirements. Private 9-1-1 Emergency Answering Points are an adjunct to public safety response and as such must provide incident reporting to the public safety emergency response centers.

p. **Public Switch Telephone Network (PSTN)**.

q. **Public Safety Answering Point (PSAP)**. A facility equipped and staffed to receive 9-1-1 calls.

r. **Shared Residential voice system Service**. The use of a voice system to provide service to residential facilities even if the service is not delineated for purposes of billing. For purposes of this definition residential facilities shall be liberally constructed to mean single family and multi-family occupancies including extended care facilities and dormitories.

s. **Shared Telecommunications Services**. Provisions of telecommunications and information management services and equipment within a user group located in discrete private premises in building complexes, campuses or high-rise buildings by a commercial shared services provider or by a user association through privately owned customer premises equipment and associated data processing and information management services and includes the provision of connections to the facilities of a local exchange and to inter-exchange telecommunications companies.

t. **Station Identification**. A telephone number dialable from the public switched network which provides sufficient information to permit a return call by the PSAP to the caller or a telephone nearby the caller.

u. **Voice over Internet Protocol System (VoIPs)** delivers voice information as data packets using the Internet. VoIP is a set of facilities for managing the delivery of voice information using the Internet Protocol (IP). This means sending voice information in digital form in discrete packets

rather than using the traditional circuit-committed protocols of the public switched telephone network (PSTN).

v. **Workspace**. The physical building area where work is normally performed. This is a net square footage measurement which includes hallways, conference rooms, restrooms, break rooms but does not include wall thickness, shafts, heating, ventilation and air-conditioning equipment spaces mechanical/electrical spaces or similar areas where employees do not normally have access.

w. **9-1-1 Service Provider**. An entity providing one or more of the following 9-1-1 elements: Network, CPE or database services.

611.2 Shared Residential Voice System Service. Operators of shared System service serving residential customers are required to assure that the telecommunications system is connected to the public switched network such that calls to 9-1-1 result in one distinctive automatic Number Identification (ANI) and Automatic Location Identification (ALI) for each living unit.

> **Exception**: At all times, if the facility maintains an Alternative Method to Support Enhanced 9-1-1.

611.3 Business Voice Systems. For Voice Systems connected to the public switched network and serving business locations of one employer, the Operator shall deliver the 9-1-1 call with an Emergency Location Identification Number (ELIN) which will result in one of the following:

a. An ERL which provides a minimum of the building and floor location of the caller, or
b. An ability to direct response through an alternative and adequate means of signaling by the establishment of a private answering point, or
c. A connection to a switchboard operator, attendant or a designated individual which provides for the establishment of Local Notification capability.

Exceptions:
a. Workspace less than 7000 square feet and located on a single contiguous property is not required to provide more than one ERL.
b. Key Telephone Systems are not required to provide more than one ERL.
c. MTLS Operators with less than 49 stations installed and occupying not more than 40,000 square feet and located on a single contiguous property are not required to provide more than one ERL.

611.4 Shared Telecommunications Services. Providers of shared Telecommunications Services shall assure that the system is connected to the public switched network such that calls to 9-1-1 from any telephone result in Automatic Location identification for each respective ERL, as defined in this section, of each entity sharing the telecommunications services.

611.6 Maintenance. Voice system operators shall arrange to update the ALI database with appropriate MSAG valid address and callback information for each voice system telephone such that the location information specifies the ERL of the caller. These updates shall be made as soon as practical for new installations or within one business day of record completion of the actual changes

for previously installed systems. The information in the ALI database is proprietary to operators and may not be disclosed or used for any purpose other than facilitating emergency response to a 9-1-1 call.

611.7 Dialing Instructions. Voice system services requiring a caller to dial a prefix, typically the number 9 before dialing any outgoing call shall have proper notices posted. Posting shall inform the callers of the proper procedure for calling for emergency assistance.

611.8 Voice System Signaling. Voice systems shall support Enhanced 9-1-1 calling by using any generally accepted industry standard signaling protocol designed to produce an automatic display of caller information on the video terminal of the PSAP call-taker.

> **Exception**: The system operator is exempt or a waiver has been granted in accordance with State rules and regulations.

CHAPTER 8

804.1 Natural Cut Trees. Natural cut trees shall be prohibited in all occupancies. Trees located in buildings shall be live and containing their root ball. The root ball shall be kept moistened. This tree shall not be on display for more than 60 days.

> **Exception:** Natural cut trees are allowed in Group R Division 3 Single family residences. The tree shall have the trunk bottoms cut off at least 0.5 inch (12.7mm) above the original cut and shall be placed in a support device in accordance with Section 804.1.2.

804.1.1 Restricted Occupancies. Natural cut trees shall be prohibited in all occupancies.
Exception: There shall be no restrictions in R-3 Occupancies.

CHAPTER 9

901.6 Inspection, Testing and Maintenance. Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Non-required fire protection systems and equipment shall be inspected, tested, and maintained or removed. The building owner shall be responsible for assuring that each fire protection system is maintained in an operable condition at all times per the applicable standard for that specific system. If a backflow prevention assembly is installed as part of a fire sprinkler system, it shall be tested in accordance with NFPA or other standards. Individuals or businesses conducting inspections, testing, repair or maintenance of fire protection systems shall possess an appropriate valid fire protection system license issued by the Arizona Registrar of Contractors. The annual backflow prevention assembly tests shall be performed at the same time as the annual automatic fire sprinkler system tests. All work and periodic testing/maintenance shall be performed in accordance with the applicable standard for the fire protection system. Non-required systems shall be maintained in accordance with nationally recognized standards per Section 901.4.2.

901.6.2 Records: Records of all system inspection, tests and maintenance required by the referenced standards shall be maintained on the premises for a minimum of 3 years and made available to the fire code official upon request. All individuals/businesses performing tests,

maintenance, and/or repair on any fire protection system, shall forward itemized reports of such work to the office of Community Risk Management within 30 days of the work performed.

Exception: R3 occupancies not including residential care facilities.

901.7 Systems out of Service. *(Add a paragraph to the end of existing language)* A durable and legible sign shall be posted at the main control of each fire protection system indicating, "Notify Fire District prior to placing this system out of service."

901.8.1: *Add to existing language:* Padlocks required by the Sedona Fire District (SFD) may be purchased through the SFD. Required padlocks shall only be SFD approved padlocks unless provisions are made for multiple locks to be installed in tandem with a SFD padlock. SFD approved padlocks shall be installed at the direction of the Fire Marshal.

Delete Section 903.2. Through 903.2.10.3

Add the following:

903.2. Where Required. An automatic fire sprinkler system shall be installed in accordance with the National Fire Protection Association's Standard #13 in all new occupancies hereafter constructed. Group R Division 3 Occupancies shall have fire sprinkler systems installed in accordance with Section 903.3.

Exception 1: Group R Division 3 Occupancies, not including residential care or assisted living care facilities located in Group R Division 3 occupancies, having a total floor area equal to or less than 3,600 square feet (344.5 m^2). Group R Division 3 Occupancies shall have fire sprinkler systems installed in accordance with Section 903.3.

Exception 2: Group R Divisions 1, 2 and 4 Occupancies shall have an automatic fire sprinkler system installed in accordance with the National Fire Protection Association's Standard #13R.

Exception 3: (Keep language from 903.2 Exception)

Exception 4: Permissible sprinkler omissions may include the following locations:

1. Manufactured homes built on a permanent chassis, designed and constructed as a dwelling unit and not having any of the listed conditions of Section 903.3.
2. Recreational vehicles that are not site built and are mobile or portable.
3. Detached gazebos and ramadas.
4. Detached restroom facilities associated with golf courses, parks and similar uses.
5. Detached guard houses less than 300 square feet in total floor area.
6. Detached carports less than 5,000 square feet in roof area.
7. Detached non-residential buildings less than 360 square feet in floor area.
8. Detached non-combustible canopies less than 5,000 square feet in roof area used exclusively for vehicle washing facilities or vehicle fuel dispensing stations.

9. Other buildings or structures accessory to and located on the same lot with one and two family dwellings or R-3 occupancies not including residential care or assisted living facilities in R-3 occupancies.
10. Shade canopies less than 5,000 square feet; not closer than 5 feet to any building, property line or other shade canopy and shading one of the following: vehicles for sale at a dealership, playground equipment or outdoor eating areas without cooking.
11. Shipping containers used for storage purposes and not closer than 5 feet to any building, property line or other container.
12. Exterior roofs, overhangs or canopies of Type I, II or III construction with no combustible storage beneath.
13. Exterior covered/enclosed walkways of Type I, II or III construction with enclosing walls that are at least 50% open.
14. Airport control towers.
15. Open parking garages.
16. Occupancies in Group F-2.

903.2.1 Through 903.2.3.1 Deleted.
903.2.8 Deleted
903.2.8.1 Deleted
903.2.9 Exception deleted
903.2.9.1 Deleted

903.2.4. 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 Sedona Building Code for the occupancy hazard classifications in accordance with Table 903.2.4.2.

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 903.2.4.2

GROUP H-5 SPRINKLER 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

903.2.5. Change of Occupancy. An automatic sprinkler system complying with Section 903.3 shall be provided for an existing building or portion thereof undergoing a change of occupancy as follows, based upon the relative hazard levels indicated in Table 903.2.5:

1. When a change of occupancy is made to a higher hazard level as shown in Table 903.2.5, the building shall be provided with an automatic fire sprinkler system.

2. When a change of occupancy is made to a lower hazard level or within a hazard level (except hazard level 1), as shown in Table 903.2.5, the building is not required to be provided with an automatic fire sprinkler system.
3. When a change of occupancy is made within hazard level 1 as shown in Table 903.2.5, the building shall be provided with an automatic fire sprinkler system.

TABLE 903.2.5

EXISTING BUILDING HAZARD LEVELS

HAZARD LEVEL	BUILDING OCCUPANCY TYPE
1 (Highest)	H, I, R-1, R-2, R-4
2	A-2, A-5
3	A-1, A-3, A-4
4	E, F-1, M, S-1
5 (Lowest)	B, F-2, R-3, S-2, U

Note: Occupancies as defined in this Code and the Sedona Building Code.

This Section is not intended to indicate all instances or circumstances where fire sprinkler systems are required; refer to this Code and the Sedona Building Code for other requirements.

Section 903.2.6. Building Additions. All additions to existing buildings or structures and all buildings or structures that are expanded by an addition(s) shall be provided with an automatic fire protection system complying with Section 903.3 as applicable.

Exceptions:

1. Existing non-sprinklered one and two family dwelling units and R-3 occupancies complying with the Sedona Residential Code, but not including residential care facilities, having a total floor area less than 3,600 square feet including the addition.
2. An existing non-sprinklered building or structure and additions to such existing building, provided the occupancy of the existing building is not changed, the addition is the same occupancy, and the resultant total area of all such additions and building do not exceed 3,600 square feet.

These exceptions do not relieve the building from other Sedona City Code requirements.

Section 903.2.7. Rubbish and Linen Chutes. An automatic sprinkler system shall be installed at the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Chute sprinklers shall be accessible for servicing.

Add

903.3 Group R Division 3 Occupancies. All Group R Division 3 occupancies shall be equipped with a residential style automatic fire sprinkler system installed in accordance with the National Fire Protection Association's Standard #13D when any of the following conditions are present.

a. The building has a total floor area greater than 3,600 square feet (344.5 m^2)

b. The building is more than 500 feet (152.4 m) from a fire hydrant capable of producing the required fire flow
c. The required fire flow is not available through approved means
d. Fire apparatus access roadways are obstructed by any of the following:
    1. Low water crossing(s)
    2. Security gate(s)
    3. Speed bump(s)
e. The building is located in a sub-division having a single fire apparatus access point
f. The fire apparatus access roadway has a grade greater than 12%
g. The building is located more than five miles (8.04km) from the nearest fire station on an approved route as measured by the Fire Marshal
h. The building is located on a cul-de-sac which exceeds 1000 feet (304.8m) from the nearest thoroughfare's intersection
i. The building is located more than 150 feet (45.72m) from the closest point of fire apparatus access
j. The building is located within the established urban-wildland interface area.

903.3.1.2.2 Required Fire Protection Systems. For the purpose of inspection, testing, or maintenance of NFPA 13R fire protection systems in R-1 and R-2 occupancies, there shall be provided, at the time of construction, an exterior access door on the side of the building next to the fire sprinkler riser of adequate size to allow for valves and gauges to be accessed, repaired and viewed from the exterior for testing and maintenance purposes. The dimensions of the access door will be dependent upon the design of the riser and system devices but shall, in no case, require that service personnel must enter a private dwelling or garage to reach the riser for service and/or repair.

903.4 (add exception)

8. When the control valve is equipped with a Sedona Fire District padlock.

903.4.4 Post Indicator Valves. When automatic fire sprinkler control valves are equipped with a post indicator valve (PIV) the PIV shall have the post painted red with the address of the building being served stenciled on the post in white numbers. Post indicator valves shall be locked open utilizing a Sedona Fire District padlock.

905.8 Dry Standpipes. Dry standpipes may only be installed if approved by the Fire Marshal. If approved, such dry standpipe systems shall be installed in accordance with NFPA 14.

905.9 Exception 2. Valves locked in the normal position by a Sedona Fire District padlock and inspected as provided in this code in buildings not equipped with a fire alarm system. Existing fire protection system control valves shall be provided with an SFD padlock when electronic supervision is not installed. Owners and/or operators of fire protection systems shall be responsible for the security and supervision of all control valves.

905.9.1 Post Indicator Valves. When the standpipe control valve is provided with a post indicator valve (PIV) the PIV shall be painted red with the address of the building being served stenciled on the post in white numbers. Post indicators valves shall be locked open utilizing a Sedona Fire District padlock.

912.1 Installation. (*Add to existing language*)

For all commercial occupancies requiring an automatic fire sprinkler system at least one fire department connection (FDC) shall be installed as approved by the Fire Marshal. The FDC shall provide a single 2½" (63.5mm) National Standard Thread female hose inlet for systems requiring a design flow of 500GPM or less. Systems of a design flow greater than 500GPM shall provide two 2½" (63.5mm) National Standard Thread female hose inlet connections.

All residential automatic fire sprinkler systems shall provide at least one fire department connection having a single 1½" (38.1mm) National Standard Thread female hose inlet.

Exception: R-3 occupancies when the total floor area is less than 3,600 square feet.

SECTION 914
FIRE PROTECTION BASED ON SPECIAL DETAILED REQUIREMENTS ON USE AND OCCUPANCY

914.1 Scope. This section shall specify where fire protection systems are required based on detailed requirements on use and occupancy.

914.2 Covered Mall Buildings.

914.2.1. Automatic Sprinkler System. The covered mall building and buildings connected shall be provided throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 which shall comply with the following:

1. The automatic sprinkler system shall be complete and operative throughout occupied space in the covered mall building prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with an approved alternate protection.
2. Sprinkler protection for the mall shall be independent from that provided for tenant spaces or anchors. Where tenant spaces are supplied by the same system, they shall be independently controlled.

914.2.2. Standpipe Systems. The covered mall building and other buildings connected shall be provided throughout with a standpipe system in accordance with Section 905.

914.2.3. Emergency Voice/Alarm Communication System. Covered mall buildings exceeding 50,000 square feet (4645m^2) in total floor area shall be provided with an emergency voice/alarm communication system. Emergency voice/alarm communication systems serving a mall, required or otherwise, shall be accessible to the fire department. The system shall be provided in accordance with Section 907.2.12.2.

914.2.4. Fire Department Access to Equipment. Rooms or areas containing controls for air-conditioning systems, automatic fire-extinguishing systems or other detection, suppression, or control elements shall be identified for use by the fire department.

914.3. High-Rise Buildings.

914.3.1. Automatic Sprinkler Systems. Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

914.3.2. Automatic Fire Detection. Smoke detection shall be provided in accordance with Section 907.2.12.

914.3.3. Emergency Voice/Alarm Communication Systems. An emergency voice/alarm communication system shall be provided in accordance with Section 907.2.12.2.

914.3.4. Fire Department Communication System. A two-way fire department communication system shall be provided for the fire department use in accordance with Section 907.2.12.3.

914.3.5. Fire Command. A fire command center complying with Section 509 shall be provided in a location approved by the fire department.

914.4. Atriums.

914.4.1. Automatic Sprinkler Protection. An approved automatic sprinkler system shall be installed throughout the entire building.

914.4.2. Smoke Control. A smoke control system shall be installed in accordance with Section 909.

Exceptions:

1. Smoke control is not required for a floor opening connecting only two floors, meeting the requirements of Section 707.2, exception 7 of the *International Building Code*.
2. Smoke control is not required for floor openings meeting the requirements of Section 707.2., exceptions 2, 8, or 9 of the *International Building Code*.

914.4.2.1. Automatic Fire Detection System. Smoke detection shall be provided in accordance with Section 907.2.13.

914.5. Underground Buildings.

914.5.1. Automatic Sprinkler System. The highest level of exit discharge serving the underground portions of the building and all levels below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1. Water-flow switches and control valves shall be supervised in accordance with Section 903.4.

914.5.2. Smoke Control System.

914.5.2.1. Control System. A smoke control system is required to control the migration of products of combustion in accordance with Section 909 and provisions of this section. Smoke control shall restrict movement of smoke to the general area of fire origin and maintain means of egress in a usable condition.

914.5.2.2. Smoke Exhaust System. Where compartmentation is required, each compartment shall have an independent smoke-control system. The system shall be automatically activated and capable of manual operation in accordance with Section 909.16.

914.5.3. Fire Alarm Systems. A fire alarm system shall be provided in accordance with Section 907.2.19.

914.5.4. Public Address. A public address system shall be provided in accordance with Section 907.2.19.1.

914.5.5. Standpipe System. The underground building shall be provided throughout with a standpipe system in accordance with Section 905.

914.6. Stages.

914.6.1. Automatic Sprinklers System. Stages shall be equipped with an automatic fire-extinguishing system in accordance with Chapter 903.3.11. The system shall be installed under the roof and gridiron, in the tie and fly galleries, and in places behind the proscenium wall of the stage and in dressing rooms, lounges, workshops, and storerooms accessory to such stages.

Exceptions:

1. Sprinklers are not required under stage areas less than 4 feet (1219mm) in clear height utilized exclusively for storage of tables and chairs, provided the concealed space is separated from the adjacent spaces by not less than 5/8 inch (15.9mm) Type X gypsum board.

914.6.2. Standpipes. Standpipe systems shall be provided in accordance with Section 905.

914.7. Special Amusement Buildings.

914.7.1. Automatic Fire Detection. Special amusement buildings shall be equipped with an automatic fire detection system in accordance with Section 907.2.11.

914.7.2. Automatic Sprinkler System. Special amusement buildings shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Where the special amusement building is temporary, the sprinkler water supply shall be of an approved temporary means.

Exception: Automatic fire sprinklers are not required where the total floor area of a temporary special amusement building is less than 1,000 square feet (93 m2) and the travel distance from any point to an exit is less than 50 feet (15240 mm).

914.8. Aircraft Related Occupancies.

914.8.1. Automatic Fire Detection Systems. Airport traffic control towers shall be provided with an automatic fire detection system installed in accordance with Section 907.2.22.

914.8.2. Fire Suppression. Aircraft hangers shall be provided with fire suppression as required in NFPA 409.

> **Exception:** Group II hangers as defined by NFPA 409 storing private aircraft without major maintenance or overhaul are exempt from foam suppression requirements.

914.8.2.3. Finishing. The process of "doping" involving the use of a volatile flammable solvent, or of painting, shall be conducted in a separate detached building equipped with automatic fire-extinguishing equipment in accordance with Section 903.

914.8.3. Residential Aircraft Hangers.

914.8.3.1. Smoke Detection. Smoke alarms shall be provided within the hanger in accordance with Section 907.2.21.

914.8.4. Aircraft Paint Hangers.

914.8.4.1. Fire Suppression. Aircraft paint hangers shall be provided with fire suppression as required by NFPA 409.

914.9. Application of Flammable Finishes.

914.9.1. Fire Protection. An automatic fire-extinguishing system shall be provided in all spray, dip and immersing spaces and storage rooms, and shall be installed in accordance with Chapter 9.

914.10. Drying Rooms.

914.10.1. Fire Protection. Drying rooms designed for high hazard materials and processes, including special occupancies as provided for in IBC Chapter 4, shall be protected by an approved automatic fire-extinguishing system conforming to the provisions of Chapter 9.

CHAPTER 10

1003.8 No Exit Signage. Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads NO EXIT. The NO EXIT sign shall consist of letters having a principal stroke of not less than 0.75 inch (19.1 mm) wide and at least 6 inches (152 mm) high on a contrasting background.

1008.1.1.2 Group R-3 Residential Care Facilities and R-4. Every required exit doorway shall be of a size as to permit the installation of a door not less than 3 feet (914 mm) in width and not less than 6 feet 8 inches (2032 mm) in height. When installed, exit doors shall be capable of opening so that the clear width of the exit is not less than 32 inches (813 mm). The door(s) shall be of the pivoted or side-hinged, swinging type.

1008.1.8.3 Locks and Latches.

5. Doors from individual dwelling or sleeping units of Group R-3 residential care/assisted living facilities and R-4 occupancies are permitted to be equipped with locks or latches, provided such devices are operable from the inside without the use of a key or tool and are mounted not more than 48 inches (1219 mm) above the finished floor. For required exterior exit doors, approved magnetic door locking devices are permitted where tied to the fire alarm system and released upon activation of any fire detection or suppression device or loss of power.

1011.6 Floor-Level Exit Signs. When exit signs are required by Section 1011.1, additional approved low-level exit signs which are internally or externally illuminated, photo luminescent, or self-luminous, shall be provided in all interior corridors serving guest rooms in Group R-1 occupancies.

The bottom of the sign shall not be less than 6 inches (152 mm) or more than 8 inches (203 mm) above the floor level. For exit doors, the sign shall be on the door or adjacent to the door with the closest edge of the sign within 4 inches (102 mm) of the door frame.

Exception: Where all sleeping units on a floor have a direct means of egress to the exterior.

CHAPTER 13

Revised

Table 1304.1

EXPLOSION PROTECTION STANDARDS

STANDARD	SUBJECT
NFPA 61	Agriculture and Food Products
NFPA 69	Explosion Prevention
NFPA 85	Boiler and Combustion Systems Hazards
NFPA 120	Coal Preparation Plants
NFPA 484	Magnesium Solids and Powders
NFPA 484	Titanium
NFPA 484	Zirconium
NFPA 654	Conveying Combustible Particulate Solids
NFPA 484	Aluminum Powder
NFPA 654	Chemical, Dye, Pharmaceutical and Plastics
NFPA 655	Sulfur
NFPA 664	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
ICC *Electrical Code*	Electrical Installations

CHAPTER 14

CHAPTER 15

Add

1504.8 Exterior Finishing Operations. Spray-finishing operations shall not be conducted outside of approved structures.

Exceptions:

1. Spray coating of buildings or dwellings, including appurtenances and any other ornamental objects that are not normally removed prior to coating.
2. Spray coating of facility equipment or structures which are fixed in a permanent location and cannot easily be moved into an enclosure or spray booth and which are not normally dismantled or moved prior to coating.
3. Spray coating of objects, which cannot fit inside of an enclosure with internal dimensions of 10’ W X 25’ L X 8’ H, excluding vehicles.
4. Coating operations utilizing only handheld aerosol cans.

Revised

1508.1. General. Automobile undercoating spray operations and spray on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt from the provisions of Section 1504 when approved and where utilizing Class IIIA or Class IIIB combustible liquids.

CHAPTER 23

2301.1 Scope. High-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 28.
2. Flammable and combustible liquids shall be in accordance with Chapter 34.
3. Hazardous materials shall be in accordance with Chapter 27.
4. Storage of combustible paper records shall be in accordance with NFPA 232.
5. Storage of combustible fibers shall be in accordance with Chapter 29.
6. Storage of miscellaneous combustible material shall be in accordance with Chapter 3.

2304.2. Designation Based on Engineering Analysis. The designation of a high-piled combustible storage area, or portion thereof, is allowed to be based on a lower hazard class than that of the highest class of commodity stored when a limited quantity of the higher hazard commodity has been demonstrated by engineering analysis to be adequately protected by the automatic sprinkler system provided. The engineering analysis shall consider the ability of the sprinkler system to deliver the higher density required by the higher hazard commodity. The higher density shall be based on the actual storage height of the pile or rack and the minimum allowable design area for sprinkler operation as set forth in the density/area figures provided in NFPA 13. The contiguous area occupied by the higher hazard commodity shall not exceed 120 square feet (11 m2), and additional areas of higher hazard commodity shall be separated from other such areas by 25 feet (7620 mm) or more. The sprinkler system shall be capable of delivering the higher density over a minimum area of 900 square feet (84 m2) for wet pipe systems and 1,200 square feet (112 m2) for dry pipe systems. The shape of the design area shall be in accordance with Section 903.

2306.7 Smoke and Heat Removal. Where smoke and heat removal are required by Table 2306.2, smoke and heat vents shall be provided in accordance with Section 910. Where draft curtains are required by Table 2306.2, they shall be provided in accordance with Section 910.3.4. When automatic sprinkler systems are provided in accordance with Sections 2307, 2308 and 2309.

1. The draft curtains requirements from Table 2306.2 are not required.
2. The temperature rating of the smoke and heat vents shall be two temperature ratings higher than the sprinkler head temperature rating.

2307.2 Fire Protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire-resistance-rated fire barrier walls constructed in accordance with the International Building Code. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with the International Building Code and NFPA 230.

2307.2.1 Shelf Storage. Shelf storage greater than 12 feet (3658 mm) but less than 15 feet (4572 mm) in height shall be in accordance with the fire protection requirements set forth in NFPA 230. Shelf storage 15 feet (4572 mm) or more in height shall be protected in an approved manner with special fire protection, such as in-rack sprinklers.

2308.2 Fire Protection. Where automatic sprinklers are required by Table 2306.2, an approved automatic sprinkler system shall be installed throughout the building or to 1-hour fire barrier walls constructed in accordance with the *International Building Code*. Openings in such walls shall be protected by opening protective assemblies having 1-hour fire protection ratings. The design and installation of the automatic sprinkler system and other applicable fire protection shall be in accordance with Section 903.3.1.1, the *International Building Code* and NFPA 13.

2308.2.1 Plastic Pallets and Shelves. Storage on plastic pallets or plastic shelves shall be protected by approved specially engineered fire protection systems.

2308.2.2 Racks with Solid Shelving. Racks with solid shelving having an area greater than 32 square feet (3 m2), measured between approved flue spaces at all four edges of the shelf, shall be in accordance with this section.

Exceptions:

1. Racks with mesh, grated, slatted, or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising at least 50 percent of overall shelf area, and with approved flue spaces, are allowed to be treated as racks without solid shelves.
2. Racks used for the storage of combustible paper records, with solid shelving, shall be in accordance with NFPA 232.

2308.2.2.1 Fire Protection. Fire protection for racks with solid shelving shall be in accordance with NFPA 13.

2308.4 Column Protection. Steel building columns shall be protected in accordance with NFPA 232.

2310.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be in accordance with Sections 2306 and 2308 and NFPA 232. Palletized storage of records shall be in accordance with Section 2307.

CHAPTER 24

2403.5 Use Period. Temporary tents, air-supported, air-inflated or tensioned membrane structures and canopies shall be erected for a period of not more than 180 days within a 12-month period on a single premise.

CHAPTER 33

3301.8.1 Quantity of Explosives. The quantity-distance tables in Sections 3304.5 and 3305.3 shall be used to provide the appropriate minimum distances from potential explosion sites as set forth in Tables 3301.8.1(1) through 3301.8.1(3). The classification of the explosives and the weight of the explosives are primary characteristics governing the use of these tables. The net explosive weight shall be determined in accordance with Sections 3301.8.1.1 through 3301.8.1.4.

Add

TABLE 3301.8.1(1)
APPLICATION OF SEPARATION DISTANCE (Q-D) TABLES
DIVISION 1.1, 1.2 AND 1.5 EXPLOSIVES [a, b]

Item	Magazine	Q-D	Operating Building	Q-D	Inhabited Building	Q-D	Public Traffic Route	Q-D
Magazine	Table 3304.5.2(2)	IMD	Table 3305.3	ILD or IPD	Table 3304.5.2(2)	IBD	Table 3304.5.2(2)	PTR
Operating Building	Table 3304.5.2(2)	ILD or IPD	Table 3305.3	ILD or IPD	Table 3304.5.2(2)	IBD	Table 3304.5.2(2)	PTR
Inhabited Building	Table 3304.5.2(2)	IBD	Table 3304.5.2(2)	IBD	NA	NA	NA	NA
Public traffic route	Table 3304.5.2(2)	PTR	Table 3304.5.2(2)	PTR	NA	NA	NA	NA

a. D_0 shall be a minimum of 60 feet. Where a building or magazine containing explosives is barricaded, the minimum distance shall be 30 feet.
b. Linear interpolation between tabular values in the referenced Q-D tables shall not be allowed. Non-linear interpolation of the values shall be allowed subject to an approved technical opinion and report prepared in accordance with Section 104.7.2.

TABLE 3301.8.1(2)
APPLICATION OF SEPARATION DISTANCE (Q-D) TABLES
DIVISION 1.3 EXPLOSIVES [a, b]

Item	Magazine	Q-D	Operating Building	Q-D	Inhabited Building	Q-D	Public Traffic Route	Q-D
Magazine	Table 3304.5.2(3)	IMD	Table 3304.5.2(3)	IMD	Table 3304.5.2(3)	IBD	Table 3304.5.2(3)	PTR

Operating Building	Table 3304.5.2(3)	ILD or IPD	Table 3304.5.2(3)	ILD or IPD	Table 3304.5.2(3)	IBD	Table 3304.5.2(3)	PTR
Inhabited Building	Table 3304.5.2(3)	IBD	Table 3304.5.2(3)	IBD	NA	NA	NA	NA
Public traffic route	Table 3304.5.2(3)	PTR	Table 3304.5.2(3)	PTR	NA	NA	NA	NA

a. D_0 shall be a minimum of 50 feet.
b. Linear interpolation between tabular values in the referenced Q-D tables shall be allowed.

TABLE 3301.8.1(3)
APPLICATION OF SEPARATION DISTANCE (Q-D) TABLES
DIVISION 1.4 EXPLOSIVES [a, b]

Item	Magazine	Q-D	Operating Building	Q-D	Inhabited Building	Q-D	Public Traffic Route	Q-D
Magazine	Table 3304.5.2(4)	IMD	Table 3304.5.2(4)	ILD or IPD	Table 3304.5.2(4)	IBD	Table 3304.5.2(4)	PTR
Operating Building	Table 3304.5.2(4)	ILD or IPD	Table 3304.5.2(4)	ILD or IPD	Table 3304.5.2(4)	IBD	Table 3304.5.2(4)	PTR
Inhabited Building	Table 3304.5.2(4)	IBD	Table 3304.5.2(4)	IBD	NA	NA	NA	NA
Public traffic route	Table 3304.5.2(4)	PTR	Table 3304.5.2(4)	PTR	NA	NA	NA	NA

a. D_0 shall be a minimum of 50 feet.
b. Linear interpolation between tabular values in the referenced Q-D tables is not applicable.

3301.9 Abandonment. Explosive materials shall not be abandoned.

3302.1. Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this Code, have the meanings shown herein.

Operating Line. A group of buildings, facilities, or workstations so arranged as to permit performance of the steps in the manufacture of an explosive or in the loading, assembly, modification, and maintenance of ammunition or devices containing explosive materials.
Quantity-Distance (Q-D). The quantity of explosive material and separation distance relationships providing protection. These relationships are based on levels of risk considered acceptable for the stipulated exposures and are tabulated in the appropriate Q-D Tables. The separation distances specified afford less than absolute safety.
Minimum Separation Distance (D_0). The minimum separation distance between adjacent buildings occupied in conjunction with the manufacture, transportation, storage, or use of explosive materials where one of the buildings contains explosive materials and the other building does not.
Intraline Distance (ILD) or Intraplant Distance (IPD). The distance to be maintained between any two operating buildings on an explosives manufacturing site at least one of which contains or is designed to contain explosives or the distance between a magazine and an operating building.
Inhabited Building Distance (IBD). The minimum separation distance between an operating building or magazine containing explosive materials and an inhabited building or site boundary.
Intermagazine Distance (IMD). The minimum separation distance between magazines.

Public Traffic Route (PTR). The minimum separation distance between any public street, road, highway, navigable stream, or passenger railroad that is used for through traffic by the general public and a magazine or operating building.

Revised

3304.2 Magazine Required. Explosives and explosive materials, and Division 1.3G fireworks shall be stored in magazines constructed, located, operated, and maintained in accordance with the provisions of Section 3304 and NFPA 495 or NFPA 1124.

Exceptions:

1. Storage of fireworks at display sites in accordance with Section 3308.5 and NFPA 1123 or NFPA 1126.
2. Portable or mobile magazines not exceeding 120 square feet (11 m^2) in area shall not be required to comply with the requirements of the International Building Code. The number of portable or mobile magazines counted as one structure shall not exceed an aggregate of two.

3304.5.2 Outdoor Magazines. All outdoor magazines other than Type 3 shall be located so as to comply with Table 3304.5.2(2), Table 3304.5.2(3), or Table 3304.5.2.4(4) as set forth in Tables 3301.8.1(1) through 3301.8.1(3). Where a magazine or group of magazines, as described in Section 3304.5.2.2 contains a different class of explosive materials, and Division 1.1 materials are present, the required separations for the magazine or magazine group as a whole shall comply with Table 3304.5.2(2).

Add

3304.5.2.1 Separation. Where two or more storage magazines are located on the same property, each magazine shall comply with the minimum distances specified from inhabited buildings, public transportation routes, and operating buildings. Magazines shall be separated from each other by not less than the intermagazine distances (IMD) shown for separation of magazines.

3304.5.2.2 Grouped Magazines. Where two or more magazines are separated from each other by less than the intermagazine distances (IMD), then such magazines as a group, shall be considered as one magazine, and the total quantity of explosive materials stored in the group shall be treated as if stored in a single magazine. The location of the group of magazines shall comply with the intermagazine distances (IMD) specified from other magazines or magazine groups, inhabited buildings (IBD), public transportation routes (PTR), and operating buildings (ILD) or (IPD) as required.

Delete Table 3304.5.2(1)

Revise

TABLE 3304.5.2(3)
TABLE OF DISTANCES (Q-D) FOR BUILDING CONTAINING EXPLOSIVES
DIVISION 1.3 MASS-FIRE HAZARD [a, b, c]

Quantity of Division 1.3 Explosives (Net Explosives Weight)		Distance in Feet			
Pounds Over	**Pounds Not Over**	**Inhabited Buildings Distance (IBD)**	**Distance to Public Traffic Route (PTR)**	**Inter-magazine Distance (IMD)**	**Intraline Distance (ILD) or Intraplant Distance (IPD)**
0	1,000	75	75	50	50
1,000	5,000	115	115	75	75
5,000	10,000	150	150	100	100
10,000	20,000	190	190	125	125
20,000	30,000	215	215	145	145
30,000	40,000	235	235	155	155
40,000	50,000	250	250	165	165
50,000	60,000	260	260	175	175
60,000	70,000	270	270	185	185
70,000	80,000	280	280	190	190
80,000	90,000	295	295	195	195
90,000	100,000	300	300	200	200
100,000	200,000	375	375	250	250
200,000	300,000	450	450	300	300

(Current notes and footnotes do not change)

TABLE 3304.5.2(4)
TABLE OF DISTANCES (Q-D) FOR BUILDING CONTAINING EXPLOSIVES
DIVISION 1.4 [c]

Quantity of Division 1.4 Explosives (Net Explosives Weight)		Distance in Feet			
Pounds Over	**Pounds Not Over**	**Inhabited Buildings Distance (IBD)**	**Distance to Public Traffic Route (PTR)**	**Intermagazine Distance [a, b] (IMD)**	**Intraline Distance (ILD) or Intraplant Distance [a] (IPD)**
50	Not limited	100	100	50	50

(Current notes and footnotes do not change)

TABLE 3305.3
MINIMUM INTRALINE (INTREPLANT) SEPARATION DISTANCES (ILD OR IPD)
BETWEEN BARRICADED OPERATING BUILDINGS CONTAINING EXPLOSIVES
DIVISION 1.1, 1.2 OR 1.5 – MASS EXPLOSION HAZARD [a]

Net Explosive Weight			Net Explosive Weight		
Pounds Over	**Pounds Not Over**	**Intraline Distance (ILD) or Intraplant Distance (IPD) (Feet)**	**Pounds Over**	**Pounds Not Over**	**Intraline Distance (ILD) or Intraplant Distance (IPD) (Feet)**

(Portions of table not shown do not change)

Add

3305.9.1 Standby Personnel. When required by the Chief, standby personnel shall be provided until such time as the site is determined to be safe.

Revised

3306.5.1.3 Small Arms Primers. No more than 10,000 small arms primers shall be displayed in Group M occupancies. Black powder shall not be stored with small arms primers or percussion caps.

CHAPTER 34

3404.3.3.9 Idle Combustible Pallets. Storage of empty or idle combustible pallets inside an unprotected liquid storage area shall be limited to a maximum pile size of 2,500 square feet (232 m2) and to a maximum storage height of 6 feet (1829 mm). Storage of empty or idle combustible pallets inside a protected liquid storage area shall comply with NFPA 232. Pallet storage shall be separated from liquid storage by aisles that are at least 8 feet (2438 mm).

Table 3404.3.6.3(7) Footnote b.
b. Except as modified herein, in-rack sprinklers shall be installed in accordance with NFPA 13.

3404.3.7.5.1 Fire-Extinguishing Systems. Liquid storage rooms shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1. In-rack sprinklers shall also comply with NFPA 13. Automatic foam-water systems and automatic aqueous film-forming foam (AFFF) water sprinkler systems shall not be used except when approved. Protection criteria developed from fire modeling or full-scale fire testing conducted at an approved testing laboratory are allowed in lieu of the protection as shown in Tables 3404.3.6.3(2) through 3404.3.6.3(7) and Table 3404.3.7.5.1 when approved.

3404.3.8.4 Fire-Extinguishing Systems. Liquid storage warehouses shall be protected by automatic sprinkler systems installed in accordance with Chapter 9 and Tables 3404.3.6.3(4) through 3404.3.6.3(7) and Table 3404.3.7.5.1, or Section 4.8.2 and Tables 4.8.2(a) through (f) of NFPA 30. In-rack sprinklers shall also comply with NFPA 13.

Add

3406.5.1.19 Disabled Vehicles. When a tank vehicle or tank is disabled through accident or mechanical failure and it becomes necessary to remove the cargo at that location, such cargo is allowed to be transferred to another tank vehicle or tank car using approved means.

SFD will delete this from its code. 3406.5.1.20 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.

3406.5.1.20 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 45

NFPA Standards
Revise

10 – 02	Portable Fire Extinguishers
11 – 02	Low Expansion Foam
11A – 02	Medium- and High-Expansion Foam Systems
13 – 02	Installation of Sprinkler Systems
13D – 02	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
13R – 02	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
14 – 03	Installation of Standpipe, Private Hydrants and Hose Systems
15 – 01	Water Spray Fixed Systems for Fire Protection
16 – 03	Installation of Foam-Water Sprinkler and Foam-Water Spray Systems
17 – 02	Dry Chemical Extinguishing Systems
17A – 02	Wet Chemical Extinguishing Systems
22 – 03	Water Tanks for Private Fire Protection
24 – 02	Installation of Private Fire Service Mains and their Appurtenances
25 – 02	Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
30B – 02	Manufacture and Storage of Aerosol Products
40 – 01	Storage and Handling of Cellulose Nitrate Motion Picture Film
51 – 02	Design and Installation of Oxygen-Fuel Gas
52 – 02	Compressed Natural Gas (CNG) Vehicular Fuel Systems
57 – 02	Liquefied Natural Gas (LNG) Vehicular Fuel Systems
61 – 02	Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities
69 – 02	Explosion Prevention Systems
72 – 02	National Fire Alarm Code
99 – 02	Health Care Facilities
101 – 03	Life Safety Code
110 – 02	Emergency and Standby Power Systems
211 – 03	Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances
407 – 01	Aircraft Fuel Servicing
430 – 04	Storage of Liquid and Solid Oxidizers
495 – 01	Explosive Materials Code

498 – 01	Safe Havens and Interchange Lots for Vehicles Transporting Explosives
505 – 02	Powered Industrial Trucks, Including Type Designations, Areas of Use, Maintenance and Operation
654 – 00	Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids
655 – 01	Prevention of Sulfur Fires and Explosions
664 – 02	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities
704 – 01	Identification of the Hazards of Materials for Emergency Response
750 – 03	Standard on Water Mist Fire Protection Systems
1122 – 02	Model Rocketry
1124 – 03	Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles
1125 – 01	Manufacture of Model Rocket and High Power Rocket Motors
1127 – 02	High Power Rocketry

Delete

231 – 98	General Storage
231C – 98	Rack Storage of Materials
231D – 98	Storage of Rubber Tires
480 – 98	Storage, Handling, and Processing of Magnesium Solids and Powders
481 – 00	Production, Processing, Handling, and Storage of Titanium
482 – 96	Production, Processing, Handling, and Storage of Zirconium
651 – 98	Machining and Finishing of Aluminum and the Production and Handling of Aluminum Powders

Add

230 – 03	Standard for the Fire Protection of Storage
232 – 07	Standard for the Protection of Records
409 – 01	Standard on Aircraft Hangars
484 – 06	Standard for Combustible Metals, Metal Powders, and Metal Dusts

Revise

ANSI Publications

B31.3 – 01	Process Piping

ASME Publications

A17.3 – 2001	Safety Code for Existing Elevators and Escalators

CGA Publications

S-1.1 – (2001)	Pressure Relief Device Standards – Part 1 – Cylinders for Compressed Gases

Add

CHAPTER 46 – AUTOMOBILE WRECKING YARDS

SECTION 4601 GENERAL

4601.1 General. Automobile wrecking yards shall be in accordance with this chapter.

4601.2 Fire Department Access Roads. Fire Department access roads for facilities and piles shall be in accordance with Section 503.

4601.3 Fire Extinguishers. Fire extinguishers shall be placed and sized in accordance with Section 906.

4601.4 Welding and Cutting. Welding and cutting operations shall be in accordance with Chapter 26.

4601.5 Tire Storage. Tire storage shall be in accordance with Chapter 25.

4601.6 Burning Operations. The burning of salvage vehicles and salvage or waste materials shall be prohibited.

SECTION 4602 DEFINITIONS

4602.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this Code, having the meanings shown herein.

AUTOMOBILE WRECKING YARD. An area that stores salvage vehicles.

MOTOR VEHICLE FLUIDS. Liquids which are flammable, combustible or hazardous materials, such as crankcase fluids, fuel, brake fluids, transmission fluids, radiator fluids and gear oil. This definition does not include liquids which are permanently sealed, such as hydraulic fluid within shock absorbers.

SALVAGE VEHICLE. A vehicle which is dismantled for parts or awaiting destruction.

SECTION 4603 MOTOR VEHICLE FLUIDS AND HAZARDOUS MATERIALS

4603.1 General. The storage, use, and handling of motor vehicle fluids and hazardous materials, such as those used to operate air bags and electrical systems, shall be in accordance with Section 4603 and Chapters 27 and 34.

4603.2 Motor Vehicle Fluids. Motor vehicle fluids shall be drained from salvage vehicles when such fluids are leaking. Storage and handling of motor vehicle fluids shall be done in an approved manner. Flammable and combustible liquids shall be stored and handled in accordance with Chapter 34.

4603.3 Mitigation for Vehicle Fluid Leaks. Supplies or equipment capable of mitigating leaks from fuel tanks, crankcases, brake systems, and transmissions shall be kept available on site. Single-

use plugging, diking, and absorbent materials shall be disposed of as hazardous waste and removed from the site in a manner approved by federal, state, and local requirements.

4603.4 Air Bag Systems. Removed air bag systems shall be handled and stored in accordance with Chapter 27.

4603.5 Lead-Acid Batteries. Lead-acid batteries shall be removed from salvage vehicles when such batteries are leaking. Lead-acid batteries that have been removed from vehicles shall be stored in an approved manner.

APPENDIX D
FIRE APPARATUS ACCESS ROADS

Section D103
MINIMUM SPECIFICATIONS

Replace

Table D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (Feet)	WIDTH (Feet)	TURNAROUNDS REQUIRED
0-150	20	None required.
151-500	20	120-foot Hammerhead, 60-foot "Y" or 80-foot-diameter cul-de-sac in accordance with Figure D103.1.
501-750	26	120-foot Hammerhead, 60-foot "Y" or 80-foot-diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required.	

FIGURE D103.1
DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND

Revise

The "70' Diameter Cul-De-Sac" drawing shall be changed to "80' Diameter Cul-De-Sac".

URBAN-WILDLAND INTERFACE CODE
FOR SEDONA FIRE DISTRICT

The implementation of the 2003 International Urban-Wildland Interface Code provides a degree of safety to the general public, and includes improvements over the 2000 Urban-Wildland Interface Code.

The 2003 International Urban-Wildland Interface Code shall be amended as follows:

(A) Section 101.1 entitled "Administration; General; Title" is hereby amended to read as follows:

101.1 Title. These regulations shall be known as the Urban-Wildland Interface Code of the Sedona Fire District, hereinafter referred to as "this Code".

(B) Section 101.2 entitled "Administration; General; Scope" is hereby amended to read as follows:

101.2 Scope. The provisions of this Code shall apply to any new construction or the moving of any building, structure, or premises into or within the urban-wildland interface areas of the Sedona Fire District. This area is designated on the Sedona Fire District Urban Wildland Interface Vegetation Management Map as referenced in Appendix B-1 of this Code.

Exceptions:

1. Remodeling or additions, including but not limited to, decks of existing buildings or structures are exempt.
2. Modular / manufactured buildings affixed on an individual lot are exempted from the construction requirements of this Code but are required to comply with the vegetation requirements.
3. Any commercial, multi-family, townhouse, or triplex and larger resource, including but not limited to, buildings, structures, landscapes, streetscape features or sites may be exempted from this Code if, it is determined by the Building Official or Community Development Director, and approved by the Fire Chief, that the exemption of said resource will not create an additional fire hazard in the immediate vicinity of the resource.
4. Any cultural resources, including but not limited to, buildings, structures, landscapes, streetscape features or sites may be exempted from this Code if, (a) it is listed in or officially determined eligible for, the National, State of Arizona, or City of Sedona Register of Historic Places or is located within a Historic Preservation District and (b) it is determined by the City of Sedona Historic Preservation Specialist or the Community Development Director, and approved by the Fire Chief, that the exemption of said resource will not create an additional fire hazard in the immediate vicinity of the resource.

(C) Section 101.3 entitled "Administration; General; Objective" – the first paragraph is hereby amended to read as follows:

101.3 Objective. The objective of this Code is to establish minimum regulations consistent with nationally recognized good practice for the safeguarding of life and property. Regulations in this Code are intended to mitigate the risk to life and structures from intrusion of fire from wildland fire exposures and fire exposures from adjacent structures and to mitigate structure fires from spreading

to wildland fuels. A tiered level approach may be applied, commensurate with the relative level of hazard present, under special circumstances when approved by the Fire Code Official.

(D) Section 105.2 entitled "Administration; Permits; Permits Required" is hereby amended by deleting the third paragraph therein and the fourteen subsections thereunder, and to replace said paragraph with the following new paragraph, to read as follows:

105.2 Permits Required. Permits are required in accordance with the International Fire Code.

(E) Section 105.3(1) entitled "Administration; Permits; Work Exempt from Permit" is hereby amended to read as follows:

105.3 Work Exempt from Permit.

1. One-story detached accessory buildings used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 120 square feet and the structure is located more than thirty (30) feet from the nearest adjacent structure.

(F) Section 105.8 entitled "Expiration" is hereby amended to read as follows:

105.8 Expiration. Every permit issued or extended by the code official under the provisions of this Code shall expire as set forth in said permit.

(G) Section 106.3 entitled "Site Plan" is hereby amended by adding the following sentence at the end of said section:

106.3 Site Plan. Do not change code.

(H) Section 106.4 entitled "Vegetation Management Plans" is hereby amended to read as follows:

106.4 Vegetation Management Plans. Vegetation management plans shall be prepared and shall be submitted to the code official for review and approval as part of the plans required for a permit. See Appendix B.

Add

106.5 Fire Protection Plan. When required by the code official pursuant to Section 405, a fire protection plan shall be prepared and shall be submitted to the code official for review and approved as a part of the plans required for a permit.

(I) Section 202 entitled "Definitions" is hereby amended as follows:

202 DEFINITIONS

Add

FIRE PROTECTION PLAN: A document prepared for a specific project or development proposed for the urban-wildland interface area. It describes ways to minimize and mitigate the fire problems created by the project or development, with the purpose of reducing impact on the community's fire protection delivery system.

Revise to read as follows

HEAVY TIMBER CONSTRUCTION (HT) as defined by the International Building Code is classified as Type IV construction. HT beams/girders shall be not less than 6-inch nominal in width and not less than 10-inch nominal in depth. Post/columns shall be not less than 8-inches nominal, in any dimension when supporting floor loads.

Add

LADDER FUEL shall mean flammable materials occurring between surface fuels and crown fuels which act as a ladder to facilitate the spread of a surface fire to tree crowns, or a crown fire down to the surface.

(K) Section 302.1 entitled "Urban-Wildland Interface Areas; Urban-Wildland Interface Area Designations; Declaration" is hereby amended to read as follows:

302.1 Declaration. The Sedona Fire District (the "District") hereby declares the urban-wildland interface area within the District limits as shown in Appendix B-1. The urban-wildland interface area is based on the findings of fact as follows: The District is situated along the slopes of the Mogollon Rim with Oak Creek Canyon running down from the north. The elevation of the District's 240 square miles ranges from above 7,000 feet on the north end to below 3,800 feet where Oak Creek leaves the District. This dramatic change in elevation coupled with the numerous ridges and drainages has created an extended period of high fire risk in the District. Additionally, the presence of not only timber, but also brush and grass can lead to a rapidly changing fire environment. The limited road access to much of the District, steep slopes, and high traffic flows through narrow corridors further limits the ability to safely and effectively extinguish every vegetation fire that may threaten a home.

These geographic considerations relate directly to the fuel accumulation within the District. Drought, disease, and the exclusion of fire have led to hazardous conditions in nearly every area of the District. Additionally, the continuity of fuels and the presence of highly flammable vegetation such as Manzanita and other chaparral species add to the increased risk of fires spreading to the interface.

Weather during the summer months in Sedona is also a major contributing factor to the risk of significant wildfires. From 1997 through 2006, during the April-August time frame, the RAWS site in Oak Creek Canyon has recorded periods of single digit relative humidity (RH) 29 months of the 50 months observed (nine months had no data). Additionally, during the same period of time the Verde Valley RAWS recorded 42 months with single digit RH. Afternoon temperatures above 100 degrees are also common during this time. Wind is another significant contributor to fire spread.

The typical southwest winds during summer months commonly average 5 to 6 MPH. In addition to the local winds, the diurnal winds created by the Mogollon Rim are responsible for strong up and down canyon winds which often exceed 15 MPH at eye level near the mouth of Oak Creek Canyon. A third component that often contributes to ignitions and strong erratic winds are thunderstorms. The orographic lifting associated with the Rim often produces significant cumulus build up during the monsoons. These cells can produce outflow winds in excess of 40 MPH.

The conditions typical throughout the summer in the chaparral (FM4) in Oak Creek Canyon and elsewhere are capable of producing flame lengths in excess of 18 feet. (Dry Bulb 100 degrees, RH 4%, 1 Hour FM 1%, 10 Hour FM 2%, 100 Hour FM 5% and Mean Live Fuel Moisture 80% on a partially sheltered 40% slope with a 1 MPH mid-flame wind). With a 5 MPH mid-flame wind speed you would see Flame Lengths approaching 30 feet with rates of spread exceeding 150 chains per hour (roughly 150 feet/minute). These rates of spread do not take into consideration the spotting which is likely to occur. The models indicate that if a fire were to occur in the same weather conditions in the Juniper fuels surrounding the southern part of the District, flame lengths of over 10 feet and rates of spread exceeding 70 chains per hour. Based on fire behavior observed in the District during the LaBarranca and Brins Fires, these models may be severely underestimating the fire activity. Again, the spotting, which contributed significantly to the fire spread on the Brins and LaBarranca Fires, would also greatly increase the rates of spread above.

Summary: The aforementioned problems support the declaration of an urban-wildland interface as depicted on Appendix B-1.

(L) Section 302.2 entitled "Urban-Wildland Interface Areas; Urban-Wildland Interface Area Designations; Mapping" is hereby amended to read as follows:

302.2 Mapping. The urban-wildland interface areas shall be recorded on maps and filed with the clerk of the jurisdiction. These areas shall become effective immediately thereafter. The urban-wildland interface areas as defined as high-risk areas designed on the Sedona Urban Wildland Interface Vegetation Management Map as referenced in Appendix B-1.

(M) Section 302.3 entitled "Urban-Wildland Interface Areas; Urban-Wildland Interface Area Designations; Review of Urban-Wildland Interface Areas" is hereby amended to read as follows:

302.3 Review of Urban-Wildland Interface Areas. The Code official shall re-evaluate and recommend modifications to the urban-wildland areas in accordance with Section 302.1 as frequently as deemed necessary by the Wildland Coordinator, Fire Marshal, Fire Chief, or the Sedona Fire District Governing Board.

(N) Section 402.1.2 entitled "Urban-Wildland Interface Area Requirements; Applicability; Subdivisions; Water Supply" is hereby amended to read as follows:

402.1.2 Water Supply. New subdivisions and other residential developments as determined by this jurisdiction shall be provided with water supply in accordance with Section 404 and in accordance with the International Fire Code. Structures shall have a water hose bib installed to accommodate the use of a garden hose on the exterior of each side of all dwelling units.

(O) Section 402.2.2 entitled "Urban-Wildland Interface Area Requirements; Applicability; Individual Structures; Water Supply" is hereby amended to read as follows:

402.2.2 Water Supply. Individual structures hereafter constructed or relocated into or within urban-wildland interface areas shall be provided with a conforming water supply in accordance with Section 404, and in accordance with the International Fire Code. Structures shall have a water hose bib installed to accommodate the use of a garden hose on the exterior of each side of all dwelling units.

Exception: Buildings containing only private garages, carports, sheds, and agricultural buildings with a floor area of not more than 600 square feet.

(P) Section 403.2 entitled "Urban-Wildland Interface Area Requirements; Access; Driveways" – the second paragraph is hereby amended to read as follows:

403.2 Driveways. A driveway shall not serve in excess of two dwelling units. (The exception remains.)

(Q) Section 403.7 entitled "Urban-Wildland Interface Area Requirements; Access; Grade" is hereby amended to read as follows:

403.7 Grade. The gradient for fire apparatus access roads and driveways shall not exceed 12% or the maximum approved by the code official.

(R) Section 501.1 entitled "Special Building Construction Regulations; General; Scope" – Exceptions 1 and 2 to are hereby amended to read as follows:

Add a new section to read as shown:

SECTION 405 – FIRE PROTECTION PLAN

405.1 General. When required by the code official, a fire protection plan shall be prepared.

405.2 Content. The plan shall be based upon a site-specific wildfire risk assessment that includes considerations of location, topography, aspect, flammable vegetation, climatic conditions, and fire history. The plan shall address water supply, access, building ignition and fire resistance factors, fire protection systems and equipment, defensible space and vegetation management.

405.3 Cost. The cost of Fire Protection Plan preparation and review shall be the responsibility of the applicant.

405.4 Plan Retention. The Fire Protection Plan shall be retained by the code official.

(S) Section 501 entitled "Special Building Construction Regulations; General" is hereby amended to read as follows:

Section 501.1 Scope

Exceptions:

1. Accessory structures not exceeding 120 square feet (11 m^2) in floor area when located at least 30 feet from buildings containing habitable spaces.
2. Agricultural buildings at least 30 feet from buildings containing habitable spaces. In no case shall the gradient exceed 15%.

(T) Section 502 entitled "Special Building Construction Regulations; Fire Hazard Severity" is hereby amended to read as follows:

502 Fire Hazard Severity. The application of this section may be used only when approved by the Fire Marshal. When the Fire Marshal has determined that special circumstances exist and all other alternatives have been unsuccessfully exhausted, the Fire Marshal may consider the application of this section as an alternative to comply with the intent of the code. The fire hazard severity of building sites for all buildings hereafter constructed, modified, or relocated into urban-wildland interface areas shall be established in accordance with Table 502. See also Appendix 1-C.

(U) Section 503.1 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; General" is hereby amended to read as follows:

Section 503.1 General. Building and structures hereafter constructed, modified or relocated into or within urban-wildland interface areas shall meet the construction requirements in accordance with Section 504.

Table 503.1 entitled "Ignition-Resistant Construction", may be applied when approved to do so by the Fire Marshal, and shall be in accordance with Sections 505 and 506.

(V) Section 504.2 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Roof Covering" is hereby amended by adding an exception to read as follows:

504.2 Roof Covering.

Exception:
Santa Fe style flat roofs

(W) Section 504.3 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Protection of Eaves" is hereby amended by adding a new paragraph at the end thereof, to read as follows:

504.3 Protection of Eaves. Soffits may be protected by use of 5/8-inch re-sawn plywood or an equivalent. Open eaves are allowed when constructed of heavy timber.

(X) Section 504.5 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Exterior Walls" is hereby amended by adding two new paragraphs at the end thereof, to read as follows:

504.5 Exterior Walls. Exterior walls constructed of ignition resistant materials such as cement plaster (veneer one-coat stucco), fiber cement board or other masonry products, as approved by the code official, are allowed and acceptable.

Where wood siding of any type is used, there shall be required a ten (10) foot clearing of all vegetation and a ten (10) foot minimum setback to all property lines.

(Y) Section 504.7 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Appendages and Projections" is hereby amended to read as follows:

504.7 Appendages and Projections. Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, the structural support members (post, beams), of said structures and other appendages, shall be a minimum of one-hour-rated fire-resistive construction, heavy timber construction, in accordance with the International Building Code (IBC) or constructed of approved non-combustible materials. Any under floor space 24" or less from the bottom of a floor joist to the ground shall be required to be a patio with a stem wall and a solid floor constructed of non-combustible material.

(Z) Section 504.8 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Exterior Glazing" is hereby amended to read as follows:

504.8 Exterior Glazing. Exterior windows, window walls, glazed panels and glazed doors must have a 20-minute fire rating or adhere to the following criteria: Glass must be of double pane or laminate construction. Single pane materials are prohibited. Acrylic block windows are prohibited. Skylights must be constructed of insulated tempered or heat strengthened laminate glass. Solar tube sky lights must have a maximum exposed plastic lens no larger than sixteen (16) inches in diameter and be used in conjunction with a class "A" roof. Vinyl frame window assemblies are acceptable and must comply with the following:

1. Frame and sash are comprised of vinyl material with welded corners; and
2. Metal reinforcement in the interlock area; and
3. Frame and sash profiles are certified in American Architectural Manufacturers Association (AAMA) Lineal Certification Program (verified with either an AAMA product label or Certified Products Directory); and
4. Certified and labeled to ANSI / AAMA / NWWDA 101 / I.S.2-97 for structural requirements; and
5. Glazed with insulating glass, annealed or tempered glass.

(AA) Section 504.9 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Exterior Doors" is hereby amended to read as follows:

504.9 Exterior Doors. Exterior doors shall be solid-core wood not less than 1 ¾-inches (45mm) thick, or doors shall have a minimum 20-minute fire rating or comply with the following criteria: Doors to have a minimum 1 ¾-inch (45 mm) thick stile and rail. Wood doors to have a minimum panel thickness of ¾-inch measured at center of panel. Alternate door materials include 1/16-inch or larger fiberglass composite or Masonite skin when used with a laminate, hardwood, or composite interior perimeter core and a 1 ¾-inch stile and rail. Metal doors must have a minimum 26-gauge

skin. Doors with glass within the door must have minimum double-glazed tempered or tempered laminate glass bound in fiberglass, composite or wood frame and have a minimum stile and rail thickness of 1 ¾-inches. Windows within doors and glazed doors shall be in accordance with requirements of Section 504.8.

Exception: Vehicle Access Doors.

(BB) Section 504.10 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Vents" is hereby amended to read as follows:

504.10 Vents. Attic ventilation openings, foundation or under-floor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall be covered (inside or outside) with non-combustible, corrosion-resistant mesh with openings not to exceed 1/8 inch (3.2 mm). Attic ventilation openings in soffits eave overhangs, between rafters at eaves or in other overhang areas shall be allowed. These vent openings are required to be located as close to the fascia as is possible. Such ventilation openings shall be covered (inside or outside) with non-combustible, corrosion-resistant mesh with openings not to exceed 1/8 inch (3.2 mm).

(CC) Section 504.11 entitled "Special Building Construction Regulations; Ignition-Resistant Construction; Detached Accessory Structures" is hereby amended to read as follows:

504.11 Detached Accessory Structures. Detached accessory structures located less than thirty (30) feet from a building containing habitable space shall have exterior walls constructed with materials approved for a minimum of one-hour-rated fire-resistive construction, heavy timber, log wall construction, or constructed with approved non-combustible materials on the exterior side. The area below the structure shall have all underfloor areas enclosed with exterior wall construction in accordance with Section 504.5 or underfloor protection in accordance with Section 504.6.

See Section 504.2 for roof requirements.

(DD) Section 602 entitled "Fire Protection Requirements; Automatic Fire Sprinkler Systems" is hereby amended to read as follows:

602 Automatic Fire Sprinkler Systems. An approved automatic fire sprinkler system shall be installed in all occupancies in new buildings as required by the fire and building codes. The installation of the automatic fire sprinkler systems shall be in accordance with nationally recognized standards.

(EE) Section 603.2 entitled "Fire Protection Requirements; Fuel Modification" – the first paragraph is hereby amended to read as follows:

Revise the first paragraph to read as shown:

603.2 Fuel Modification. In order to qualify as a conforming defensible space for the purpose of Table 503.1, fuel modification shall be provided within a distance from building or structures as specified in Table 603.2. For all other purposes, the fuel modification distance shall not be less than 10 feet (30489 mm) or to the property line, whichever is less. Distances specified in Table 603.2

shall be measured along the grade from the perimeter or projection of the building or structure as shown in Figure 603.2. Distances specified in Table 603.2 may be increased by the code official due to a site-specific analysis based on local conditions and the Fire Protection Plan.

Revise the fourth paragraph to read as shown
603.2 Fuel Modification.

Where ornamental vegetative fuels or cultivated ground cover, such as green grass, ivy, succulents, or similar plants are used as ground cover, they are allowed to be within the designated defensible space provided they do not form a means of transmitting fire from the native growth to any structure.

(FF) Section A106.1 of Appendix "A" entitled "General Requirements; Dumping; Waste Material" is hereby amended by adding the following additional exception thereto:

APPENDIX A
GENERAL REQUIREMENTS

A 106.1 Waste Material

Exceptions:

2. Items removed from the forest floor in compliance with this Code may be composted to a safer fire resistive level with the intent to redistribute to the forest floor to maintain forest health. Compost piles must be a minimum of 10 feet from all native fuels and structures.

(GG) Appendix "B" entitled "Vegetation Management Plan" is hereby amended by adding new paragraphs at the beginning thereof, to read as follows:

APPENDIX B
VEGETATION MANAGEMENT PLAN

The purpose for creating a defensible space around buildings or structures is to reduce the threat of fire spread by changing the characteristics of vegetation in a safe, yet aesthetic and pleasing manner. To reduce an urban-wildland interface area hazard, a vegetation management plan shall be established. The plan shall be used for controlling, changing, or modifying wildland areas for safety from wildfires to the benefit of the users, surrounding community and wildlands. A vegetation management plan reduces the amount of fuel available for wildfire and reduces the probability of a rapidly spreading wildfire. Elements of the plan include removal of slash, snags, other ground fuels, ladder fuels, dead trees, and the thinning of live trees. The vegetation fuel modifications shall be completed (within thirty {30} feet of the house or to the property line, whichever is less) prior to the vertical construction. The vegetation fuel modification beyond thirty (30) feet of the house and up to one hundred fifty (150) feet of the house or the property line, whichever is less, shall be completed prior to the issuance of the Certificate of Occupancy.

Where an irrigation system is required for vegetation, it must be completed, inspected, and accepted by the Fire Marshal prior to the issuance of a Certificate of Occupancy. Any re-vegetation shall be subject to the inspection and approval of the Fire Marshal upon its completion. Required irrigation systems shall be approved and installed in accordance with Appendix B-2 "Irrigation Design and Performance Requirements".

Tree density shall be determined as outlined in Appendix B-3 "Procedure for Determining Tree Density" of this Code.

(HH) Appendix B entitled "Vegetation Management Plan" is hereby further amended by adding a section at the end thereof to read as follows:

Defensible Space Requirements

Defensible space practices include:
Decreasing the amount of flammable vegetation
Increasing the amount of open space
Increasing the moisture content of vegetation
Planting less flammable plants
Rearranging existing plants
Reducing trees to a maximum of 200 hydrated or 85 non-hydrated, healthy trees per acre, with under-story pruned and maintained
Removing all combustible materials and vegetation from under decks
Continuing maintenance of the area
Where required, open space or common areas shall be maintained to meet the defensible space requirements by the homeowners' association and/or owner of the property.
When, in the professional opinion of the Fire Marshal, particular vegetation does not constitute a fire danger (including but not limited to cases of natural groupings), the code official may grant exceptions to the requirements as set forth in the Defensible Space Requirements.
A three-zone approach should be applied to accomplish the defensible space requirements of this Code as outlined below.

Zone 1. 0 feet to 10 feet from buildings, structures, decks, etc.

1. Thin native brush, leaving only the best specimens. Those remaining specimens should be opened up by pruning and by removal of dead and weak material.
2. Trim all non-hydrated trees to where the lowest branches or canopy are above the roofline. Any tree that cannot be limbed above the roofline due to tree structure must be hydrated by an approved automatic irrigation system in accordance with Appendix B-2. Such trees shall not have a ladder fuel condition below their canopy.
3. Trim or prune native shrubs/vegetation to a maximum height of two (2) feet and provide a clear space around each plant of at least four (4) feet. Native shrubs/vegetation that normally grow taller than two (2) feet shall be removed rather than improperly pruned (i.e. topped). No ladder fuel conditions shall be allowed to exist or be created.

   Exceptions:

   1. Cultivated ground cover does not require clear space.
   2. Ornamental, non-native vegetation is not required to meet the clear spacing and height of lowest limb limitations, providing a ten (10) foot distance is maintained from all native

fuels and they are on an approved automatic irrigation system. The non-fire resistive ornamental vegetation shall not create a ladder fuel condition under a structure overhang.

4. Remove all dead materials from the ground.
5. Remove all combustible materials and vegetation from under decks. No native brush or grasses shall be within three (3) feet of buildings, structures, and decks.
6. The maximum tree density shall not exceed the limits as established in Appendix B-3.
7. Defensible space shall be maintained at least annually.

Zone 2. 10 feet to 30 feet from buildings, structures, decks, etc.

1. Remove all ladder fuels by trimming back, pruning up, or removing vegetation from under trees. Distance to the lowest tree branches should be a minimum of three (3) times the brush height.
2. Trim all tree limbs a minimum of six (6) feet from the ground or to where the lowest branches or canopy are above the roofline when the branches or canopy are closer than ten (10) feet from any structure. Any tree that cannot be limbed above the roofline due to tree structure must be hydrated by an approved automatic irrigation system in accordance with Appendix B-2. Such trees shall not have a ladder fuel condition below their canopy.
3. The maximum tree density shall not exceed the limits as established in Appendix B-3.
4. Reduce continuity of fuels by removing dead materials and removing/thinning so a person can walk between them.
5. Cut sod grasses to a maximum height of four (4) inches above the ground.
6. Where plants/vegetation is greater than four (4) feet in height, create a clear space around each plant (or group of plants), twice the height of the plant in width (clear space not to exceed a maximum of ten {10} feet or compromise erosion). The plants/vegetation will create an island for wildlife habitat.

Exceptions:

1. Cultivated ground cover does not require clear space.
2. Ornamental, non-native vegetation is not required to meet the clear spacing and height of lowest limb limitations, providing a ten (10) foot distance is maintained from all native fuels and they are on an approved automatic irrigation system. The non fire-resistive ornamental vegetation shall not create a ladder fuel condition under a structure overhang.
7. Emphasis is placed on slopes greater than 20% gradient, in which case, additional vegetation treatment may be required. (Example: Zone 2 treatment may be required to extend out an additional 100 feet to a total of 130 feet from the structure.) Control erosion and sedimentation from exposed soils through terracing, gravel beds, rocked and appropriate irrigated ground covers.
8. Remove all but one (1) inch of the last-season pine needle or leaf droppings. It is important to leave one (1) inch of the new and all of the decomposing layers of needles and leaf droppings to build healthy soil.
9. Defensible space shall be maintained at least annually.

Zone 3. 30 feet to 150 feet from buildings, structures, decks, etc where no slopes exist.

1. Remove all ladder fuels and dead materials by trimming back, pruning up, or removing vegetation from under trees. Distance to the lowest tree branches should be a minimum of three times the brush/shrub height.
2. Defensible space shall be maintained at least annually.

(II) The International Urban-Wildland Interface Code is hereby amended by adding an Appendix "B-1" thereto, entitled "Sedona Fire District Urban-Wildland Interface Vegetation Management Map", to read as follows:

APPENDIX B-1
Sedona Fire District Urban-Wildland Interface Vegetation Management Map

(JJ) The International Urban-Wildland Interface Code is hereby amended by adding an Appendix B-2 entitled "Irrigation Design and Performance Requirements" to read as follows:

APPENDIX B-2
Irrigation Design and Performance Requirements

The irrigation system design will provide for the automatic delivery of a minimum of ½" of equivalent precipitation spread across the critical root zone of the tree or of ½" of equivalent precipitation spread across the critical root zone of the tree or shrub being hydrated at a minimum frequency of twice per month year round. The following systems are allowed:

A. Gear drive rotor or impact head sprinkler
B. Spray head sprinkler
C. Soaker line
D. Drip system

All systems must be equipped with an approved back-flow prevention device, appropriate to the specific application, and must conform to all codes pertaining to automatic irrigation.

Method to determine system delivery requirements.

To determine the total gallons of water required to cover the critical root zone with ½" of equivalent precipitation, figure the square footage of the ground surface area from the trunk to the outer drip edge of the limbs and multiply by one-third or 0.3.

The delivery of this water should be distributed evenly throughout the critical root zone areas.

(KK) The International Urban-Wildland Interface Code is hereby amended by adding an Appendix "B-3" entitled "Procedure for Determining Tree Density" to read as follows:

APPENDIX B-3
Procedure for Determining Tree Density

As there are 43,560 square feet in an acre, there would be one tree allowance for every 218 square feet as hydrated in accordance with Appendix B-2 (580 square feet for non-hydrated). This does not mean that the trees must be arranged with equal separation. They may be clustered in any arrangement but cannot exceed the total Zone allowance.

Any trees that do not have ten- (10) feet separation between their canopies must be hydrated by an approved automatic irrigation system in accordance with Appendix B-2. The trees shall not have a ladder fuel condition below their canopy.

Where non fire-resistive construction materials are used for exterior walls, the tree density provision stated above does not apply and there shall be required a ten- (10) foot clearing of all vegetation.

> **Exception:** Designated historic or specimen trees are allowed to remain. This allowance is made regardless of the tress' proximity to structures or the roofline, provided the trees conform to the following:
>
> A. Trees are estimated to be a minimum of twenty (20) years old or have at least a six (6) inch caliper; and,
> B. Trees do not have any ladder fuel within ten (10) lateral feet of their canopy; and,
> C. Trees must be irrigated on an approved automatic irrigation system; and,
> D. Only one (1) tree is allowed in every thirty (30) feet of lateral distance between canopies.

Where trees are hydrated by an approved automatic irrigation system in accordance with Appendix B-2, a maximum density of 200 trees per acre will be allowed. Deciduous trees under 2-inch caliper in size will not be counted in the density limitation. Also, evergreen trees 4-inch caliper in size or less will not be counted in the density limitation.

Where trees are not automatically hydrated by an approved automatic irrigation system in accordance with Appendix B-2, the following density will be allowed:

All trees shall not exceed 85 trees per acre.

> **Exception:** Any tree 2-inches and less in caliper size will not be counted in the density limitation provided: a ladder fuel condition is not created; vegetation fuel continuity breaks are created and maintained; there is compliance with all other provisions of this Code.