

Board of Forestry and Fire Protection

**INITIAL STATEMENT OF REASONS
“State Minimum Fire Safe Regulations, 2021”**

**Title 14 of the California Code of Regulations (14 CCR),
Division 1.5, Chapter 7
Subchapter 2, Articles 1-5**

Adopt

§§ 1270.07; 1273.10; 1273.11; 1273.12; 1273.13; 1275.05; 1275.06; 1275.07; 1276.05;
1276.06

Amend

§§ 1270.00; 1270.01; 1270.03; 1270.03; 1270.04; 1270.05; 1270.06; 1273.00; 1273.01;
1273.02; 1273.03; 1273.04; 1273.05; 1273.06; 1273.08; 1273.09; 1274.00; 1274.01;
1274.02; 1275.00; 1275.01; 1275.02; 1275.03; 1275.04; 1276.00; 1276.01; 1276.02;
1276.03; 1276.04

Repeal

§§ 1271.00; 1274.03; 1274.04

**INTRODUCTION INCLUDING PUBLIC PROBLEM, ADMINISTRATIVE
REQUIREMENT, OR OTHER CONDITION OR CIRCUMSTANCE THE REGULATION
IS INTENDED TO ADDRESS (pursuant to GC § 11346.2(b)(1))...NECESSITY
(pursuant to GC § 11346.2(b)(1) and 11349(a))....BENEFITS (pursuant to GC §
11346.2(b)(1))**

Pursuant to Public Resources Code 4290, the Board is required to “...adopt regulations implementing minimum fire safety standards related to defensible space” applicable to “the perimeters and access to all residential, commercial, and industrial building construction. In 2018, the Legislature passed and the Governor signed SB 901 (Dodd), which expanded the applicability of the regulations promulgated under PRC 4290 to land in the Local Responsibility Area Very High Fire Hazard Severity Zone (VHFHSZ). SB 901 also revised PRC 4290 to require the Board to more frequently update regulations relating to fuel breaks and greenbelts near communities, and to preserve undeveloped ridgelines to reduce fire risk and improve fire protection.

The regulations set certain minimum standards for structures, subdivisions and developments in SRA and VHFHSZ and provide for basic emergency access and perimeter wildfire protection, as well as standards for fuel breaks, greenbelts, and measures to protect undeveloped ridgelines. These standards provide for emergency access and egress; signing and building numbering; private water supply reserves for emergency fire use; and vegetation modification, Fuel Breaks, Greenbelts, and measures to preserve undeveloped Ridgelines. This proposed action amends the existing regulations for the purposes of addressing the general applicability of these

standards; regulating fuel breaks and greenbelts near communities; including measures to protect undeveloped ridgelines; and improving regulatory clarity and ensuring the uniform implementation of wildfire protection standards association with residential, commercial, and industrial building construction.

Such regulations are necessary to inhibit the ignition and spread of wildland fires in the wildland-urban interface, the area where buildings and vegetation are sufficiently close that a wildland fire could spread to a structure or a structure fire could ignite wildland vegetation. Studies have shown that urbanization has a pronounced effect on fire activity: fire activity has increased in Mediterranean ecosystems, such as California's, across five continents,[1] the majority of fires are burning closer to developed areas,[2] and fire activity peaks in areas where urbanization has occurred but a large proportion of native vegetation remains.[3] This wildfire hazard is a significant threat to human and natural resources throughout the 31 million acres and over 800,000 homes in the SRA as well as the 865,738 acres in the VHFHSZ. The imminent nature of the fire hazard problem has been repeatedly recognized by many high profile efforts, including the Governor's Blue Ribbon Fire Commission of 2004; U.S. General Accounting Office report on western National Forest fire conditions; the Western Governors' Association promulgation of the National Fire Plan; the USDA Forest Service (USFS) Sierra Nevada Forest Plan Amendment, 2004; legislation proposed by both houses of the California Legislature; and Governor Brown's Executive Order B-52-18 (May 2018).

The threat to homes from wildfire is well documented, and major wildland fires in California threaten a wide range of public and private assets. In 2003, wildfires destroyed more than 730,000 acres, 3,600 residential structures, and resulted in the tragic loss of 25 lives in California. The southern California wildfires that year were followed by mudslides that tragically killed 14 people. The subsequent mudslides possibly resulted from vegetation lost to wildfire and flash flooding. In 2017, wildfires burned over 1.3 million acres, and at the time five of those fires were in the top twenty most destructive in the state. The 2017 wildfires killed 41 civilians and 2 firefighters and destroyed or damaged over 10,000 structures. The Thomas Fire, in December, burned over 280,000 acres and, at the time, was the largest wildfire in California history.

The record setting year of 2017 was soon eclipsed by even greater destruction and casualties in 2018 and 2020. The Camp Fire, in Butte County, destroyed nearly 19,000 structures, including most of the town of Paradise, and killed 85 civilians. Six fires from 2018 and 2020 have eclipsed the Thomas Fire in size, and nine fires from 2018 and 2020 have entered the top 20 most destructive wildfires. These back-to-back-to-back record-breaking fire seasons are unprecedented in California; previous records for the largest, deadliest, and most destructive wildfires had stood for decades, some for generations.

Having narrow and overgrown roads leading into and out of communities that lie in the wildland urban interface setting are jeopardizing the safety and lives of not only firefighters but the residents who live in these communities. These narrow roads do not and will not allow for the simultaneous use by evacuating citizens and responding fire department equipment. The 2006 Esperanza Fire claimed the lives of five firefighters,

and the final report lists roads as a contributing factor that lead to the deaths of the firefighters. In 2015, poor road networks led to deaths in the Valley Fire. Of the 85 people killed in the Camp Fire (2018), seven of them were found in their cars - four perished in a neighborhood with particularly steep terrain and overgrown brush along the finger of a ridge.

Temperatures in the American West have increased at a rate of twice the global average. Over the last 30 years, there have been four times the number of large and long-duration forest fires in the West, the length of fire season is two months longer, and the size of wildfires has increased.[4] Commensurately, the costs of wildfires has increased over time. From 1979 to 1990, emergency fund expenditures exceeded \$100 million (2001 dollars) only once. Between 1990 and 2001, losses exceeded \$100 million three times. Between 2001 and 2015, damages have exceeded \$100 million seven times.[5] Suppression expenditures have also increased, exceeding \$200 million eleven times since 2000.[6] It is within this increasingly dangerous and expensive context the Board seeks to establish minimum fire safety standards for development in the SRA and VHFHSZ to provide for civilian and firefighter safety and to protect natural resources and the environment.

2017 was, at the time, a record-setting year for wildfire activity in California, with 9,560 fires burning over 1.5 million acres of land. In response, during the next year the Legislature passed and the Governor signed SB 901 (Dodd), which amended PRC 4290 to expand the scope of the regulations to the LRA VHFHSZ; to require the Board to write regulations for fuel breaks and greenbelts near communities; and establish measures for preserving undeveloped ridgelines to reduce fire risk and improve fire protection.

The **problem** is that the regulations currently do not include measures to protect undeveloped ridgelines or standards for fuel breaks and greenbelts near communities. In addition, the regulations require updates for internal consistency and clarity. Processes for city and county compliance with the Fire Safe Regulations require amendments to address applicability, enforcement, and compliance in the LRA VHFHSZ. The regulations require greater specificity where and when local jurisdictions have flexibility when applying the Fire Safe Regulations in their communities and improvements to their general clarity.

The **purpose** of the proposed action is to

- Establish standards for fuel breaks and greenbelts near communities;
- Establish measures for the preservation of undeveloped ridgelines;
- Accurately reflect the applicable areas of the state where development may be subject to these regulations;
- Provide greater clarity regarding the types of development that may be subject to these regulations;
- Specify the conditions under which an existing road is subject to these minimum fire safety requirements;

- Reorganize the Fire Safe Regulations to reduce confusion and improve technical implementation and consistency;
- Reduce confusion regarding the inspection and enforcement agencies;
- Ensure definitions for these regulations are relevant, up to date, and consistent with their usage in the following articles;
- Promote local jurisdiction compliance with the Fire Safe Regulations and to clarify the process by which that occurs;
- Apply field-tested methods and industry-accepted computer-aided modeling to ingress and egress requirements; and
- Increase the flexibility offered to local jurisdictions in implementing the minimum standards provided in these regulations.

The **effect** of this proposed action is to establish standards for fuel breaks and greenbelts that protect communities; preserve undeveloped ridgelines; create clear, specific standards for where and when the regulations apply; amend the requirements for fire safe development for consistency and clarity; provide clearer lines of authority and implementation processes; and create standards that reflect modern firefighting apparatus dimensions and fire prevention policy.

The primary **benefit** of the proposed action is the continued protection of new and existing development in the SRA and LRA VHFHSZ from wildfire. These protection measures will increase the safety of people and property by providing minimum fire safety standards related to defensible space that may allow them to escape an oncoming wildfire; allow firefighters to find, defend, and protect their property from a wildfire; prevent the ignition of property due to flying embers or structure-to-structure ignition; and to protect natural resources and the environment. The proposed action will also increase government efficiency through the reduction of duplicative or inconsistent regulations. The action will improve regulatory compliance through considering stakeholder feedback to clarify the standards and requirements.

SPECIFIC PURPOSE OF EACH ADOPTION, AMENDMENT OR REPEAL (pursuant to GOV § 11346.2(b)(1)) AND THE RATIONALE FOR THE AGENCY’S DETERMINATION THAT EACH ADOPTION, AMENDMENT OR REPEAL IS REASONABLY NECESSARY TO CARRY OUT THE PURPOSE(S) OF THE STATUTE(S) OR OTHER PROVISIONS OF LAW THAT THE ACTION IS IMPLEMENTING, INTERPRETING OR MAKING SPECIFIC AND TO ADDRESS THE PROBLEM FOR WHICH IT IS PROPOSED (pursuant to GOV §§ 11346.2(b)(1) and 11349(a) and 1 CCR § 10(b)). *Note: For each adoption, amendment, or repeal provide the problem, purpose and necessity.*

The Board is proposing action to **adopt** §§ 1270.07; 1273.10; 1273.11; 1273.12; 1273.13; 1275.05; 1275.06; 1275.07; 1276.05; 1276.06, **amend** §§ 1270.00; 1270.01; 1270.03; 1270.03; 1270.04; 1270.05; 1270.06; 1273.00; 1273.01; 1273.02; 1273.03; 1273.04; 1273.05; 1273.06; 1273.08; 1273.09; 1274.00; 1274.01; 1274.02; 1275.00; 1275.01; 1275.02; 1275.03; 1275.04; 1276.00; 1276.01; 1276.02; 1276.03; 1276.04, and **repeal** §§ 1271.00; 1274.03; 1274.04.

The **problems** are:

- The SRA is typically found in rural environments with low to moderate housing densities, and the standards in the Fire Safe Regulations were written with this context in mind. VHFHSZ are frequently more suburban or urban environments with higher housing densities, and the existing standards in the Fire Safe Regulations may not be appropriate for both development contexts.
- The Fire Safe Regulations do not currently contain specific standards for fuel breaks and greenbelts to protect nearby communities.
- The Fire Safe Regulations do not currently contain any measures to preserve undeveloped ridgelines.
- The Fire Safe Regulations do not provide enough clarity regarding minimum fire safety standards for existing roads.
- In the last 30 years, firefighting apparatus and tactics have changed significantly, and the Fire Safe Regulations may not reflect California’s current fire prevention and protection programs.
- The the regulations may not provide enough alternative methods for implementation to address the diversity of landscapes throughout California.

The **purpose** of the proposed action is to make amendments to the SRA Fire Safe Regulations to address standards for fuel breaks and greenbelts; establish measures to preserve undeveloped ridgelines; establish standards for existing roads; fix areas of inconsistencies or conflicts; reflect modern definitions, firefighting equipment, and development patterns in California; and reorganize the regulations for improved compliance.

The below adoptions, amendments, and repeals are necessary to effectuate this purpose of this action.

The following universal changes were made within the regulations to accomplish this:

1. Defined terms were capitalized.
2. Cross-references to other sections of these regulations were updated to reflect any moved sections.
3. Arabic numerals were spelled out.

The following section-specific changes were made:

Article 1. Administration

1270.00. Title

The regulations were renamed to reflect their applicability to the Local Responsibility Area Very High Fire Hazard Severity Zones (LRA VHFHSZ) as well as the State Responsibility Area. This change is necessary to improve the clarity of the regulations as a whole; specifying that these are statewide minimum regulations will improve the implementation and application of these regulations, resulting in consistent statewide compliance.

1270.01. Definitions (previously “Purpose”)

The “Definitions” section was moved from § 1271.00 to § 1270.01 because many defined terms are used throughout Article 1, and it would provide clarity to the regulated public to define those terms before the reader comes across them in the rule text.

The sentence “The following definitions are applicable to this Subchapter.” was added to the beginning of this section to add greater clarity for the regulated public. As many of these terms have different meanings in common use, it is necessary to specify that these definitions only apply to this Subchapter, and not other regulatory programs administered by the Board or other agencies. The terms in this section were all provided with subsection lettering to improve ease of reading and general clarity.

The term “Access” was added to these regulations and defined in order to distinguish when these regulations apply to the means to enter or approach the perimeter of a building from when these regulations are applicable to infrastructure found within the perimeter of the building construction. “Access” is defined as a route from a Building to the nearest Collector Road. The Federal Highway Administration requires local governments to identify roads in their jurisdiction based on their “functional classification,” which includes interstates, highways, arterials, collectors, and local roads. Collector roads function to gather traffic from the local neighborhood roads to bring travelers to intra-county locations. From a fire safety perspective, the collector roads gather vehicular traffic escaping a wildfire from the local roads in a neighborhood and distributes this traffic to potentially safer locations, such as an evacuation shelter. Because of the volume of traffic a collector road might carry, they are typically constructed of multiple traffic lanes and tend to be at least 15-20 feet wide. As the Fire Safe Regulations require existing roads to be at least 14 feet wide, and new roads to be at least 20 feet wide, collector roads are likely to meet the minimum standards in these regulations (see § 1273.05 and § 1273.12). Local roads and other roads leading from a building to a collector road, on the other hand, might be as narrow as 8-10 feet wide. As the Fire Safe Regulations’ standards for new roads are two, 20-foot wide traffic lanes (plus shoulders and striping) and the proposed standard for existing roads is a 14-foot road (with some additional mitigation measures), it is appropriate for the definition of “access” to include local roads and other roads along a route to the nearest collector road. This clarifies that the existing roads that must comply with these requirements are limited to the types of roads most likely to present life safety concerns during civilian evacuation and fire apparatus access.

The definition of “agriculture” has not been changed from its existing definition.

A definition for “Board” was added to provide clarity to the regulated public regarding which state Board was referenced in these regulations.

The definition of “building” remains unchanged from its existing definition, except that the term “building” was removed after “Utility and Miscellaneous Group U.” Structures classified as Utility and Miscellaneous Group U are not necessarily “buildings,” as defined in these regulations, so that term was deleted here for the purpose of clarity.

The definition of “CAL FIRE” is unchanged from its existing definition.

A definition for “Clear Width” was added to these regulations to provide clarity regarding several requirements in these standards. The Road width requirements in §§ 1273.05 and 1273.12 both require horizontal clear widths in addition to the specific width of a traffic lane, and “clear width” is not a term in common usage. This definition is necessary to improve compliance with these regulations regarding this additional clear width.

A definition for “Collector Road” was added to provide clarity to the regulated public. In Title 23 of the Code of Federal Regulations § 470.105, the Federal Highway Administration requires local government to classify roads in their jurisdictions based on their functionalities, and provides criteria and guidance for doing so in “Highway Functional Classification Concepts, Criteria, and Procedures,” 2013 Edition, which is incorporated by reference into these regulations. This term is necessary because these regulations include standards for existing roads, and so it was necessary to determine how many, or what distance, or what types of roads would need to comply with the standards in this Subchapter. Since collector roads are more likely to meet the road width standards in this Subchapter, it would be most effective for fire safety minimum standards to apply to local roads and other roads, which tend to be narrower and less safe, that lead from a building to the collector road. Other alternatives, such as requiring existing roads within a certain distance of a building to meet fire safety standards, were determined to be arbitrary and lacking in a connection to fire safety. Defining “collector roads” identifies the minimum fire safety standards only to those roads most likely to cause life safety issues during a wildfire.

The definition of “Dead-end Road” is not changed from its existing definition.

The definition of “defensible space” was revised to cross-reference the definition of “defensible space” in Title 14, Division 1.5, Chapter 7, Subchapter 3, Article 3, section 1299.02(a). Those are regulations promulgated by the Board to implement PRC 4291, and using that definition in these regulations provides consistency between the Board’s regulatory programs and reduces confusion. These regulations in Subchapter 2 are similar in scope and purpose to those in Subchapter 3, as Subchapter 2 regulates “minimum fire safety standards related to defensible space” (PRC 4290(a)). Where this term is used, in § 1275.07 and 1276.03, it is referring to the same concept as the term “defensible space” is used in § 1299.02(a), so applying that definition in Subchapter 2 reduces confusion and improves compliance.

The definitions of “development” and “director” are unchanged from their existing definitions.

The definition of “driveway” was revised to address an editorial error. The intention was that a driveway could serve up to 2 parcels with no more than 2 residential units on each parcel and any number of Utility or Miscellaneous Group U structures on each parcel, but due to errors this was not clear and resulted in confusion amongst the

regulated public. The definition was revised to specify that those non-commercial and non-industrial Group U structures are allowed on parcel served by a Driveway, but any commercial or industrial use cannot be served by a Driveway. It is necessary to specify this because the standards for Driveways are not as strict as the standards for Roads, and in order to accommodate the larger commercial vehicles and the number of employee and visitor vehicles that travel to and from commercial or industrial uses, the stricter Road standards must be applied.

The definition for “distance measurement,” while offering important information regarding the application of these regulations, is a standard and not a definition. The term “distance measurement” is not used in these regulations except in this section, so it is not necessary to include it as a defined term. The language in this defined term was moved to a new section, § 1270.07.

The definition for the term “exception” was revised to specify that an alternative method to a specified standard is still required to achieve the fire safety intent of the standard, rather than provide for a complete exception from the standard entirely. This is necessary to specify that an exception must still provide for fire safety even if it must be achieved by an alternative method rather than the specified standard. This definition is further necessary to prevent instances where someone might use the exceptions process to avoid having to comply with a standard entirely, and thus reducing fire safety.

A definition for the term “Existing Road” was added because these regulations specify different standards for new roads and existing roads. It is necessary to define “existing roads” as those that are physically constructed and used by vehicles prior to any development proposal because roads that are physically constructed, rather than theoretical roads that are included as part of a development proposal, have existing limitations related to fire safety. A road that is part of a development proposal, but not yet physically constructed, has greater flexibility to comply with the standards in this Subchapter. This definition is necessary for clarity regarding when a road is considered “existing,” rather than a “new” road.

A definition for “Fire Apparatus” was added to identify the vehicles used by the local fire authorities to respond to fire emergencies. A definition for fire apparatus was necessary to distinguish this type of vehicle from other vehicles. Fire Apparatus vary by local fire authority, based on local conditions and needs. Due to the variation, this general term is necessary to describe these vehicles.

A definition for “Fire Authority” was added to identify situations where a fire department, agency, division, district, or other governmental body has responsibility for regulating and/or enforcing minimum fire safety standards. This definition was necessary to distinguish a fire authority from a Local Jurisdiction to avoid confusion. While the Local Jurisdiction has the authority to approve or otherwise regulate Development, in some instances it is necessary for a Development standard to be specified by someone with

specific expertise in firefighting, such as the municipal water supply requirements in § 1275.04.

The existing definition for “hydrant” was revised by adding the word “fire” in front of “hydrant” for clarification. The requirement for the outlet sizes on the hydrant head was also removed. Fire hydrants have different requirements for outlet sizes, and fire apparatus carry couplings and adapters to attach hoses of different sizes to the different sized outlets they may encounter on a fire hydrant. The requirement for male American National Fire Hose Screw Threads (NH) was deleted because this requirement is addressed under §1275.04(b). This change to the definition allows for the variability in fire hydrant specifications used by individual jurisdictions. The definition of “fire hydrant” was also revised to specify this term was inclusive of “hydrant head” and “fire valve” in order to reduce confusion. “Fire valve” was already an existing term that cross-referenced the definition of “fire hydrant,” so the specific definition for “fire valve” was deleted.

A definition for “Fuel Break” was added and modifies the previous term “fuel modification area,” which has been deleted. The use of the term “Fuel Break” in the new definition aligns with a term that is commonly used by fire management professionals. The term not only identifies a spatial area on the landscape, but also infers the condition of the spatial area as providing some level of a “break” in fuel conditions. As PRC 4290(a)(4) and (b) require the Board to regulate fuel breaks, a definition is necessary to establish what a fuel break is and what its purposes are. This provides clarity to the regulated public regarding the fuel break standards in Article 5 in this Subchapter.

The term “fuel modification area” was deleted, as the term is no longer used in these regulations.

The definition of “Greenbelts” revised the previous definition. The updated definition more closely aligns with how the term is used in local land use planning contexts and removes uses that are traditionally not included in greenbelts, such as parking lots. The definition is also modified to remove the assumption that greenbelts will slow or resist the spread of fire, as specific vegetative conditions must be met in order for fire behavior to change. This definition reflects a general understanding within the regulated public on greenbelts. These amendments have been made to clarify the definition of this term throughout the regulations.

A definition of “Greenways” was added to recognize the distinction between “greenbelts” and “greenways” in the context of land uses and fuel management. A greenway is an area within a community, whereas a greenbelt is an area that surrounds a community, making two distinct definitions for these terms necessary. Adding greenways reflects amendments to the regulations which now includes this term.

The definition of “Hammerhead/T” was revised to replace the term “emergency equipment” with the defined term “Fire Apparatus,” which is necessary to add clarity to this definition and to the standards for Hammerhead/T turnarounds in § 1273.10.

A definition for “Hazardous Land Use” was added to describe the type of land use that could present a significantly elevated potential for the ignition, prolonged duration, or increased intensity of a wildfire due to the presence of certain materials or conditions. This definition helps distinguish between this type of use, which may require additional consideration during the planning and review process, from other types of land uses that do not pose the same concerns for wildfire.

The definition for “Local Jurisdiction” was revised because the current definition was too specific, and did not necessarily capture the full breadth of local agencies that may be the appropriate governmental body to implement and enforce these regulations. By specifying the defined term “development” instead of the existing language (“...issues or approves building permits, use permits, tentative maps or tentative parcel maps, or has authority to regulate development and construction activity...”), this broad definition ensures that all locally relevant governmental bodies or agencies are granted the appropriate authority to ensure compliance with these standards. This is necessary to improve compliance with these regulations and reduce confusion.

A definition for “Local Responsibility Area” was added because these regulations are applicable to VHFHSZs in the LRA. The definition for Local Responsibility Area references the section of Public Resources Code that requires the Board determine where in the state CAL FIRE has the financial responsibility to prevent and suppress wildfires, and fire prevention and suppression in the other areas in the state are the responsibility of either local or federal agencies, as the case may be (PRC 4125(a)). This definition specifies that the Local Responsibility Area is those areas of the state where the financial responsibility of preventing and suppressing wildfires is that of a local government, rather than the federal or state government. This definition is necessary to provide clarity relating to where in the state these standards are applicable.

A definition for “Local Road” was added to provide clarity to the regulated public. In Title 23 of the Code of Federal Regulations § 470.105, the Federal Highway Administration requires local government to classify roads in their jurisdictions based on their functionalities, and provides criteria and guidance for doing so in “Highway Functional Classification Concepts, Criteria, and Procedures,” 2013 Edition, which is incorporated by reference into these regulations. This term is necessary because these regulations include standards for existing roads, and so it was necessary to determine how many, or what distance, or what types of roads would need to comply with the standards in this Subchapter. Since local roads are typically narrower and thus less likely than collector roads, arterials, or highways and freeways to meet the road width standards for fire safety in this Subchapter, it would be most effective for minimum fire safety standards to address this type of road. Other alternatives, such as requiring existing roads within a certain distance of a building to meet fire safety standards, were determined to be arbitrary and lacking in a connection to fire safety. Defining “local roads” applies fire minimum fire safety standards to those roads most likely to cause life safety issues during a wildfire.

A definition for “Municipal-Type Water System” was added to provide greater clarity regarding the regulated water systems in §§ 1275.01 and 1275.04. This is the same definition used in the NFPA 1142 Standard on Water Supplies for Suburban and Rural Fire Fighting, 2017 Edition - Chapter 3 Definitions, section 3.3.16, a document incorporated by reference into these regulations. This is a well-known “model code” standard frequently used by fire authorities to determine the requirements for water supply systems. This definition is intended to describe all water systems that are designed similarly to what would be designed by a local municipality. In the context of this document, it is necessary to delineate a “municipal-type water system” from alternative water supply systems that may be used. This is a necessary delineation because “municipal-type water systems” represent the desired standard for water supply reliability and consistency, while all other “alternative water supply systems” are installed with the intent of meeting the capabilities of the municipal-type systems, but they have known potential reliability limitations that, under certain circumstances, may not meet the same capabilities as a municipal-type water system.

The definitions for “occupancy” and “one-way road” are unchanged from their existing definitions.

The proposed action defines “perimeter” as the boundary of an individual parcel, and/or the boundary of a tentative and final map, or parcel map. The definition distinguishes these two boundaries (of a parcel and of a map) because those are the typical land use planning tools by which local governments regulate the design and construction of buildings, structures, and subdivisions that may be subject to this Subchapter. This amendment is necessary in order to clarify the applicability of these regulations with regard to the term as used within PRC 4290(a) and is necessary in order to provide a scope by which to implement and enforce the regulations.

The definition for “residential unit” was revised to reflect corrected cross-references.

A definition for “Ridgeline” was added to define this term based on PRC 4290(b), which requires the Fire Safe Regulations include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection, and, by regulation, define the term ridgeline for the purposes of this requirement. This definition is necessary to clarify what constitutes a ridgeline pursuant to PRC 4290(s) and is necessary in order to implement and enforce the regulations.

The phrase “Includes public and private streets and lanes” was deleted from the definition of Roads because none of those terms are used in these regulations, and so including them in the definition of “Road” was unnecessary. However, the phrase “public or private” was moved to the beginning of the definition, and the term “access” was replaced with “pathway.” This provides clarity regarding the application of these standards to both public and private roads, and also reduces any confusion with the defined term Access.

The definition for “Road or Driveway Structures” was not changed from its existing definition.

The term “Same Practical Effect” was deleted. This is necessary because this term was confusing and is no longer used in these regulations.

The definition of “shoulder” was revised to replace the term “access” with “pathway.” Since “access” is now a defined term in these regulations, and is not being used here in congruence with its definition, it is necessary to replace it with “pathway” to avoid confusion.

The definitions of “State Responsibility Area” is unchanged from its existing definition.

The definition of “structure” was revised to delete “an edifice.” Since an edifice is a particularly large building, and the definition of “structure” already references “a building of any kind,” including the word edifice in this definition was redundant.

The definition of “Subdivision” was deleted because the term is no longer used in these regulations.

A definition for “substantial compliance” clarifies the meaning of the term “Substantial Compliance” as it is used in these regulations, specifically § 1270.06 Exceptions to Standards. This term would likely be ascribed different meanings if not defined, thus leading to differing and inconsistent application of the regulations and the grant or denial of exceptions to the standards in the regulations. The purpose of including this definition is to ensure that the term’s meaning is understood and applied consistently in these regulations. This is necessary to provide clarity as to its meaning and to ensure consistent interpretation and implementation of the regulations.

A definition for “substantial evidence” clarifies the meaning of the term “Substantial Evidence” as it is used in these regulations, specifically § 1270.06 Exceptions to Standards. This term would likely be ascribed different meanings if not defined, thus leading to differing and inconsistent application of the regulations and the grant or denial of exceptions to the standards in the regulations. The purpose of including this definition is to ensure that the term’s meaning is understood and applied consistently in these regulations. This is necessary to provide clarity as to its meaning and to ensure consistent interpretation and implementation of the regulations.

The definition for “traffic lane” is unchanged from its existing definition.

The definition for “turnaround” was revised to specify that a turnaround is a part (“a portion”) of a road or driveway, rather than the entire road or driveway, as the existing definition implies. This provides clarity to the regulated public. The term “emergency equipment” was replaced with the defined term “Fire Apparatus,” which also provides clarity.

The definition of “turnouts” is unchanged from its existing definition.

A definition of “undeveloped ridgelines” was added in order to provide specificity regarding the Board’s mandate to preserve such ridgelines. Without a definition for “undeveloped ridgelines,” it would be impossible to determine what ridgelines are or are not “undeveloped,” which makes any measures to protect such ridgelines unenforceable. The definition of “undeveloped ridgeline” cross-references the defined term “Buildings” in this Subchapter. This definition is necessary to clarify that ridgelines that have already experienced Building construction does not qualify as an “undeveloped ridgeline” subject to the preservation measures described in these regulations.

The definitions of “Utility and Miscellaneous Group U” is unchanged from its existing definition.

The term “vertical clearance” was revised to include vegetation clearance as part of its specified standards. The existing definition states “The minimum specified height of a bridge or overhead projection above the road or driveway,” but in the context of these regulations, the term is used to regulate the height of vegetation clearance above a road or driveway. This definition is necessary to clarify that the minimum standards for vertical clearance in these regulations are applicable to vegetation.

A definition for “Very High Fire Hazard Severity Zone” was added. CAL FIRE maps VHFHSZ in both the LRA and the SRA, so the cross-reference to the requirement in Government Code § 51177(i) to map LRA VHFHSZ, and the definition of VHFHSZ therein, is used to define the term for the purposes of these regulations, and is necessary to implement the full scope of PRC 4290. This provides clarity to the regulated public regarding where these regulations are applicable.

The definition of “wildfire” is unchanged from its existing definition.

1270.02. Purpose (formerly “Scope”)

Because the “Definitions” section was moved to § 1270.01, the language in § 1270.01 was moved to § 1270.02. The substantive changes to this section from the existing language will be discussed here.

In subsection (a), the comma between “building” and “construction” was removed, which is necessary to align the term with the terminology used in PRC 4290. Using the terms “Building construction” and the defined term “Development” here more clearly specifies the types of projects these regulations are applicable to and avoids introducing new, undefined terms into the regulations.

In subsection (b), the term “Building construction” was again used to improve the clarity of these regulations, rather than relying on undefined terms. This also improves consistency between subsections (a) and (b). The phrase “basic emergency access and perimeter wildfire measures” was replaced with the phrase “minimum Wildfire protection

standards.” This was necessary to avoid conflicts with the defined terms “Access” and “Perimeter,” as well as to avoid confusion between “measures to protect undeveloped ridgelines” with the general standards in this Subchapter related to other regulations. Since the revisions to PRC 4290 require the Board to write regulations that “...shall include measures to preserve undeveloped ridgelines...,” it is necessary to replace the term “measures” throughout this rulemaking with “standards.”

In subsection (c), the term “measures” was replaced with “standards” for the same reason as described in § 1270.02(b) above, and the phrase “fire protection standards” was replaced with “regulations” to avoid duplication and confusion. This subsection was also revised to more accurately state the topics that are regulated in this Subchapter, as SB 901 (2018) added new topics for the Board to address in these regulations. This ensures consistency with statute.

1270.02(d). Adds a statement declaring that limiting Building construction in instances where the minimum Wildfire protection standards are not satisfied reduces the risk of wildfires, which protects the health, safety and welfare of residents, and protects natural resources and the environment. As minimum standards, the Fire Safe Regulations establish a floor for fire safe development in the SRA and LRA VHFHSZ. Implicit in these standards is that Building construction that does not meet the minimum standards will not provide sufficient minimum Wildfire protection for residents, property, or natural resources and the environment and, therefore, would be unsafe. Yet, experience indicates a significant problem of several local jurisdictions approving new development that fails to meet all of the Fire Safe Regulation standards. Similarly, objections raised by local jurisdictions during the informal scoping process preceding this rulemaking focus heavily on concerns that the standards impose unreasonable costs and impair development. The purpose of the added statement is the clarification to regulated parties that the benefits and purpose of the minimum wildfire protection standards cannot be realized through partial compliance with the regulations. Thus, the amendment is necessary to ensure a proper understanding of the scope and purpose of the Fire Safe Regulations that is consistent with PRC § 4290 and to identify and promote the benefits of proper implementation of the minimum Wildfire protection standards.

1270.03. Scope (previously called Provisions for Application of These Regulations)

Because the “Definitions” section was moved to § 1270.01, the language in § 1270.02 was moved to § 1270.03. The substantive changes to this section from the existing language in § 1270.02 will be discussed here.

Subsection (a) was not revised except to capitalize defined terms and revise cross references to other sections in the regulations.

The existing language in subsection (b) is unchanged from the existing regulation except to capitalize defined terms and revise cross references to other sections in the regulations, however two new subsections (b)(1) and (b)(2) were added for additional clarity. These sections are necessary, given the newly defined terms Access and

Perimeter, to provide greater specificity to the regulated public regarding how to most effectively implement subsection (b), consistent with Opinion of Attorney General No. 92-807, Daniel E. Lungren, Attorney General, March 17, 1993, as referenced herein.

Subsection (c) is an existing exemption from the Fire Safe Regulations which exempts repairs and reconstruction due to wildfires from compliance with these regulations. The phrase “legally constructed residential, commercial, or industrial buildings” in the existing language (§ 1270.02(c)(1) and (2)) is replaced with “Buildings” in this proposed action. This was necessary to provide for situations where a Building was not permitted prior to a wildfire, but is being rebuilt through a Local Jurisdiction’s permitting process. As the previously un-permitted Building is rebuilt to current codes and standards, the overall fire safety of the neighborhood is improved. This phrase was also removed in § 1270.02(2) for consistency within this section.

This existing exemption in subsection (c) places several caveats on the use of this exemption. Those caveats in existing § 1270.02(c)(1)(A) and (B) have been revised in this proposed action to provide greater flexibility to local jurisdictions in determining any restrictions on rebuilding or repair of buildings after a wildfire. The existing regulations do not allow a repaired or reconstruction building to increase in square footage. This proposed action would allow repairs or reconstruction to increase in square footage or add additional buildings on the site so long as the building and parcel siting and setback standards in § 1276.01 are still maintained. These conditions maintain fire safety by ensuring that buildings are still spaced apart so that building-to-building ignition is reduced in any subsequent wildfire even if the number of buildings on site are increased or the size of those buildings are increased from what was there previously. Allowing local jurisdictions to set their own requirements for repairs and rebuildings when those requirements are unlikely to materially negatively impact fire safety, are necessary to provide additional flexibility for the implementation of these regulations.

Subsections (c)(3) and (4) were added to clarify the applicability of the Wildfire exemption. Subsection (c)(3) is necessary to clarify that the exemption in subsection (c) applies only to the reconstruction or repair of a Building due to Wildfire, and it does not affect the extent to which the regulations apply to the reconstruction or repair of a building for other reasons. Similarly, subsection (c)(4) is necessary to clarify that the applicability of this exemption does not affect the legal character, such as whether it is legally constructed, of the Building reconstructed or repaired.

Subsection (d) is also an existing exemption in the Fire Safe Regulations which exempts accessory and junior accessory dwelling units. There are no language changes to this subsection in this proposed action.

The existing language in § 1270.02(e) is deleted in this proposed action. This subsection was confusing and resulted in inconsistent application of these regulations. Although this was a non-exhaustive list of land use activities to which these regulations may be applicable, it did not provide enough clarity to the regulated public regarding other activities to which these regulations are applied. It also implied that these regulations are always applicable to the enumerated activities, which may result in

these regulations applying to activities that do not materially impact fire safety, which would not be consistent with the purpose of these regulations. Deleting this subsection is necessary to provide clarity regarding the scope and application of these regulations.

The existing language in § 1270.02(f) is carried over into this proposed action with some revisions for consistency, clarity, and grammar. The existing language removed the term “EXEMPTION” in front of the subsection and turned this subsection into a full sentence. The term “agricultural” was replaced with the defined term “Agriculture,” for consistency and clarity. The phrase “the management and harvesting of wood products” was rephrased to “the management of timberland and harvesting of forest products” for consistency with terms used in the Board’s regulatory programs under the Forest Practices Act and Rules and to improve their application through clarity.

1270.04. Local Ordinances

Revisions to § 1270.04 are necessary to interpret and make specific PRC 4290(c) - “These regulations do not supersede local regulations which equal or exceed minimum regulations adopted by the state.” Greater specificity is required in regulation in order to provide local jurisdictions with the information they need to consistently apply this section of statute within their jurisdiction, and so that the application of this section is consistent between jurisdictions across the state.

Subsection (a) is deleted and replaced with new language that uses more common terms and more accurately reflects the provision of statute it is implementing. This is necessary to provide greater clarity to local jurisdictions and reduce confusion in understanding and interpreting the requirements.

The existing process in subsections (b), (c), and (d) where a local jurisdiction could send their local ordinances to the Board for certification as meeting or exceeding the requirements in the Fire Safe Regulations is deleted in this proposed action. While these subsections were intended to provide a process for which local jurisdictions could receive a certification from the Board that their local requirements met or exceeded the State Minimum Fire Safe Regulations, few local jurisdictions took advantage of this process as it proved to be an overly burdensome process.

The proposed action replaces subsections (b) and (c) with additional specifics to assist local jurisdictions in determining if their local regulation equals or exceeds a minimum standard in this Subchapter. This is necessary to establish consistent criteria across the State for local jurisdictions to rely upon when making a determination regarding whether or not a local regulation equals or exceeds the standards in this Subchapter.

New language in subsection (d), and new subsections (e) and (f) is necessary to provide local jurisdictions an opportunity for the Board to review and comment on their proposed local regulations relating to fire safe development. These subsections are not intended to prescribe a procedure or process by which a local jurisdiction shall communicate with the Board regarding their proposed requirement.

A new subsection (g) is necessary to establish that regardless of a local regulation that equals or exceeds the State Minimum Fire Safe Regulations, Building construction must still comply with the requirements in this Subchapter. This is necessary to specify that any local regulation applied to Building construction in addition to the State Minimum Fire Safe Regulations shall ensure that the minimum requirements in these standards are satisfied.

1270.05 Inspections

This section clarifies the inspection authority obligations in the SRA and VHFHSZ. Prior to the amendments to PRC 4290 that expanded the applicability of the Fire Safe Regulations from the SRA to also include the VHFHSZ, the government entity with inspection authority was CAL FIRE, since CAL FIRE has this authority in the SRA. However, because the VHFHSZ is not within the SRA, CAL FIRE lacks inspection authority there. Consistent with PRC 4102 and 4125(a), CAL FIRE has the inspection authority in the SRA, and the Local Jurisdiction has the inspection authority in the VHFHSZ, as the VHFHSZ is in the Local Responsibility Area. The purpose of the amendments in subsections (a) to (d), inclusive, is to clarify which government entity - local or state - has inspection authority in the SRA and VHFHSZ, respectively, and the process by which inspection authority may be delegated by the Director, consistent with the authority provided by statute, thereby eliminating potential confusion as to the proper inspection authority. The amendments to subsections (b)(5) also impose documentation requirements for a delegation of inspection authority from CAL FIRE to the Local Jurisdiction, the purpose of which is promote transparency and clarity as to whether CAL FIRE or the Local Jurisdiction have inspection authority for an area. These amendments are necessary to clarify the applicability of the regulations and to aid in their implementation.

In addition, the amendments to PRC 4290 that expanded the applicability of the Fire Safe Regulations from the SRA to also include the VHFHSZ create other problems with respect to what standards the inspection entity is applying. The Fire Safe Regulations impose the minimum standards for fire safety in the SRA and VHFHSZ. However, pursuant to PRC 4290(c), Local Jurisdictions have discretion to adopt additional standards that equal or exceed the Board's minimum standards, so long as complying with the local standards also results in compliance with the Board's minimum standards, as described in Section 1270.04. This creates a significant problem where a Local Jurisdiction adopts such additional local standards because there is no process by which CAL FIRE is made aware of the adoption or content of those standards that equal or exceed the Board's minimum standards. More to the point, however, CAL FIRE lacks statutory authority to inspect or enforce local ordinances – in either the SRA or VHFHSZ. This means responsibility necessarily must fall to the Local Jurisdiction to inspect and enforce any portion of a local ordinance that exceeds the Board's minimum standards. The purpose of the amendments in subsections (f) and (g) are to clarify that the state's interests in inspection compliance are limited to the state's minimum standards and that the scope of CAL FIRE's jurisdiction does not extend to local ordinances. To the extent a Local Jurisdiction exercises discretion to adopt stricter local standards, then responsibility for inspection and enforcement of standards that exceed

the Board's standards must lie exclusively with the Local Jurisdiction. These amendments are necessary to promote clarity as to the scope of CAL FIRE's and the Local Jurisdiction's inspection obligations in situations where the Local Jurisdiction voluntarily imposes heightened local standards that equal or exceed the state's standards.

1270.06. Exceptions to Standards

A new subsection (a) is necessary in this section to specify that the exception process requirements are only applicable to requests for exceptions to the Fire Safe Regulations. The existing language in subsection (a) and the following subsections were re-lettered to reflect the addition of this new language.

Subsection (b) (formerly (a)) was revised for grammar and to reflect defined terms that were added or deleted. This is necessary to maintain congruence with the defined terms to reduce confusion and improve compliance. For ease of reading, the existing language was further divided into sub-subsections. Language was added to specify that exceptions shall only be granted where the exception still provides for "Substantial Compliance with the minimum standards provided in this Subchapter." This is necessary to prevent situations where exceptions are granted which do not provide for an alternative method of providing for fire safety in development.

Greater specificity was added to the existing language moved into subsection (b)(2). This additional specificity reflects defined terms and is necessary so that these regulations may provide for a consistent standard for which a local jurisdiction may judge whether or not to grant an exception. Whereas local jurisdictions previously were only required to send any exception approvals to the CAL FIRE unit headquarters that administers SRA fire protection in that local jurisdiction, this proposed action also requires those exception requests to be sent to the Board. This is necessary so the Board can evaluate the frequency of exceptions granted for any given standard and determine if further rulemaking is necessary to further clarify or otherwise amend the standards. Additional changes for clarity ("CAL FIRE unit office" is not as specific as "CAL FIRE unit headquarters") and specificity (CAL FIRE does not administer fire protection in the LRA, and so additional language was necessary to clarify where exceptions granted in the LRA should be forwarded) were made to this section. The existing regulations require that these exceptions shall be kept "on file" at the Unit office; greater specificity was added to require that exception shall be kept on file at the Board and Unit offices for a period of no less than five years. Five years provides enough of a historical record to inform future rulemaking activities, but does not burden the Board or CAL FIRE offices with an excessively long retention period.

The existing language in subsection (b), now (c), is revised for general clarity and to use defined terms. These changes are necessary to establish a consistent statewide process for the regulated public to request and the local jurisdiction to decide on exceptions. Existing subsections (c) and (d), now combined into one subsection (d), was similarly revised to add greater specificity and clarity. A new requirement that the appeals body consult with the inspection authority was added. This is necessary to ensure that any appeals are decided, on the balance, towards providing for fire safety.

Existing subsection (e) was revised to align with the requirements in earlier subsections in this section and to reflect defined terms. This is necessary to provide clarity to the regulated public and consistency within the rules. The additional information required in the written findings provides the Board and CAL FIRE with additional information regarding exceptions that can be used to determine the necessity, if any, of revising or otherwise clarifying the standards in the Fire Safe Regulations.

§ 1273.07 Distance Measurements

The language in this section was previously in § 1270.10 Definitions (now § 1270.01 Definitions). This language offers important information regarding the application of these regulations, but it is a standard and not a definition. As such, it was necessary to move that language to its own section. This standard is necessary so that any distance measurements contained in these regulations are measured with a consistent method across the state.

Article 2. Ingress and Egress (previously called Emergency Access and Egress)

This title of this Article was changed to remove the term “Emergency” which was redundant with section 14 CCR §1270.02 “Purpose,” which specifies that the purpose of these Fire Safe Regulations shall provide minimum standards for emergency ingress and access. In addition, the term Access was changed to Ingress to avoid confusion with the definition of Access (14 CCR §1270.01) which applies to Roads, whereas Ingress and Egress refer more broadly to entrances and exits, respectively.

Article 2 was reorganized to align with engineering documents used for Road design such as the “American Association of State and Highway Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets” and the “California Department of Transportation (Caltrans) Highway Design Manual.” The professional engineers working on the update identified that the organization of the regulations was confusing and was not consistent with typical design guidelines published at the federal and state levels. This was confirmed during discussions with the agency staff that the regulations are somewhat difficult to implement due to the organizational nature of them. As such, the intent of the reorganization is to assist the regulated public with implementing the regulations by presenting the topics and information consistent with those typical Road design guidelines and which will result in a regulatory scheme which ensures fire safety with regards to building access.

1273.00. Purpose and Application (previously called Intent)

This section name was changed to Purpose and Application to describe the purpose of this article and which provisions apply to reflect the substantive changes made to this section. The intent of Article 2 is set forth in section 14 CCR §1270.02 Purpose, which states these regulations have the purpose of establishing minimum wildfire protection standards.

§1273.00(a) was revised to specify that New Roads, Driveways, and Road or Driveway Structures are subject to regulation under these Fire Safe Regulations, unless

exempted in § 1270.03(b)-(e). Further revisions were made for consistency with defined terms and cross references to other standards in these regulations. These revisions were necessary to provide clarity to the regulated public regarding the application of these standards to new versus existing roads.

§1273.00(b) was added to further specify the applicability of this Article. As PRC 4290 requires that “[t]hese regulations apply to the perimeters and access to all residential, commercial, and industrial building construction,” it is necessary to specify when these regulations apply to the Perimeter or Access. This will result in more consistent application of the regulations across the State.

While subsection (b) specifies the application of these regulations to all New Roads, Driveways, and Road and Driveway Structures (shortened here to “New Roads”) as well as to New and Existing Roads, Driveways, and Road and Driveway Structures within the Perimeter of a development, §1273.00(c) was added to further specify the applicability of this Article to Existing Roads, Driveways, and Road and Driveway Structures (shortened here to “Existing Roads”) that provide Access to Building construction. This is necessary to ensure Existing Roads provide for suitable fire safety when development that is increasing the intensity or density of uses along those Existing Roads is approved.

The thresholds established in subsections (c)(1), (2), and (3) are revised from existing language in § 1270.02(e), but given greater specificity to improve clarity. The first subsection, (c)(1), specifies that where Building construction includes the division of land into 3 or more parcels, Existing Roads must meet the standards in this Subchapter. This division into 3 more parcels was selected to reflect the distinction in these regulations between a Driveway and a Road; once a vehicular pathway serves more than 2 parcels, it must meet the stricter Road standards in this Subchapter rather than the Driveway standard. As such, when a parcel is split into 3 or more new parcels, it would be appropriate to evaluate the condition of any Existing Roads providing Access to the parcels, and ensure those Existing Roads provide for adequate fire safety pursuant to this Subchapter.

The second and third subsections, § 1270.00(c)(2) and (3), provide greater specificity regarding what kinds of zoning changes or use permits require the application of these regulations to Existing Roads. This specificity is necessary so that only those applications for zoning changes and change of use permits that would materially negatively impact fire safety are subject to these regulations. This provides clarity to regulated public, will result in the consistent application of these regulations statewide, and reduces regulatory burdens on proposed Building construction or development that is not anticipated to materially negatively impact fire safety.

§1273.00(d) is added to these regulations for clarity regarding the application of the standards in § 1273.12, Standards for Existing Roads. This requirement specifies that Building construction is prohibited where any Existing Road does not meet the

standards in that section. This is necessary to provide for consistent statewide minimum standards for all development regardless of size, intensity, or type.

1273.01. Horizontal and Vertical Curves / Curb Radii (previously called Width)

The title of this section was changed to reflect its new contents consistent with the reorganization of this Article described above. Specifically, Width typically relates to only the travel lane Width; whereas, the updated title includes the additional attributes of the travelway that are included in the regulations. This was related to the reorganization of the section and the contents it covers within.

§1273.01(a) moves the existing requirement in 1273.04(a) to this section and adds an exception for subsections §1273.01(b), (c), and (d). The need for adding these exceptions allows for circumstances where an alternative standard may be acceptable, as further described below. This section also added a specification on the measurement of the horizontal inside radius of curvature to be to be measured from the centerline of the inside lane. This measurement was necessary to establish a consistent means of measuring the horizontal curvature; without this specification different local jurisdictions were interpreting where to measure the horizontal curvature in different ways (some measuring it from the centerline of the inside travel lane, others from the shoulder stripe).

§1273.01(a)(1) moves the existing requirement in §1273.04(a), which requires an additional surface width of four feet to curves of 50-100 feet radius, and adds a cross-reference to § 1273.05 (Road and Driveway Width and Horizontal Clearances) to clarify the applicability of this minimum width requirement. This cross-reference is necessary to add clarity regarding to what additional surface width this four feet is applied to. In general, these amendments are necessary in order to ensure clear implementation of this provision and fire safe standards for roads.

§1273.01(a)(2) moves and revises the existing requirement in §1273.04(a), which identifies surface width requirements for curves of 100-200 feet radius. The minimum standards related to additional surface width for horizontal curvatures of 100-200 feet was reduced from two feet to one foot based on the turning templates of Fire Apparatus utilized to test the appropriateness of the curvature. Use of turning templates from the AutoTURN software program is considered state-of-the-practice for testing geometric features to ensure design vehicles can navigate turns appropriately. AutoTURN incorporates a factor of safety related to vehicle turning performance when it comes to verifying navigation, which is also appropriate for testing. The Fire Chiefs Working Group provided specifications related to Fire Apparatus vehicles that were used in their districts and those specifications were used to develop a custom turning template that was used in the assessment (representing a typical Fire Apparatus). Figures 1 and 2 are included in this proposed rulemaking to show the turning template results and demonstrating the intent of this regulation. This is necessary to provide clarity to the regulated public regarding the implementation of these requirements to improve compliance. These modifications reflect needs for actual Fire Apparatus used by CAL FIRE and resulted in slightly reducing the horizontal curvature requirements which were

incorporated into the standards while verifying that emergency accessibility is maintained.

§1273.01(a)(3) This paragraph was added to specify that flexible posts may be placed within the horizontal curvature requirement. Many local jurisdictions desire to implement road networks that allow for alternative transportation modes that reduce greenhouse gas emissions. Flexible posts create protected spaces for these alternate transportation options, such as bike lanes or transit stops, without materially impacting the overall fire safety of the Road. This specificity is necessary in order to provide flexibility to local jurisdictions as they endeavor to simultaneously provide for concurrent ingress and egress, pursuant to the standards in this Subchapter, as well as reduce the climate impacts associated with greenhouse gas emissions. This specificity provides greater clarity to local jurisdictions regarding their ability to permit such flexible posts, clarity which does not exist in the existing regulations.

§1273.01(b) This subsection was added to provide an alternative standard to that specified in §1273.01(a) which may be applied on roads that require vehicles to operate at slow speeds. This modification does not reduce existing regulations but it does provide an alternative for a single, specific condition where a Road may not otherwise meet the requirements in § 1273.01(a). Compliance with this alternative requires verification and design by a Professional Engineer, including demonstration that the alternative radius is navigable by Fire Apparatus. This is necessary to ensure appropriate application of an alternative method and achieve increased flexibility for the implementation of these regulations.

§1273.01(c) This subsection was added to provide a minimum standard for effective turning radius for situations where on-street parking, bike lanes, smaller curb radii, or curb extensions to minimize pedestrian exposure and collision severity are provided. Subsection (d) was added to provide an alternative standard to that of §1273.01(a) on intersections without on-street parking and/or bike lanes with certain vehicle and traffic volume requirements. These modifications provide clarity that these multi-modal transit facilities can be provided for on a Road while maintaining fire safety-related accessibility as long as the effective turning radius is provided. This section is necessary because the existing regulations do not account for streets with parking and/or bicycle facilities or other street features, which are growing in popularity as local jurisdictions design road networks that accommodate a greater variety of transportation options. Figures 3 and 4 were added to improve clarity of this regulation through a visual representation and aid in the implementation of this provision.

§1273.01(e) This language has been moved and renumbered from §1273.04(b) to support the general reorganization of these regulations. Please see the discussion under the Article 2 header for the necessity and purpose for reorganizing this Article.

1273.02. Road and Driveway Surfaces

§1273.02 was renamed to “Road and Driveway Surfaces” from “Road Surfaces” to reflect that the standards and regulations contained within are applicable to both Roads

and Driveways, which is necessary to improve the accuracy and clarity of the regulations.

§1273.02 (a) This subsection was modified to remove the words “be designed and maintained” which were redundant with the requirements as stated in §1273.02 (a). This section also removed the words “at least” when describing the minimum imposed load of Fire Apparatus for language consistency within the document. Additionally, the words “and provide an aggregate base” were removed from the standard since there are a variety of ways to ensure that the Road meets the weight and slippage requirements without an aggregate base. The standard was modified to provide additional treatments that can be provided on the Road, including binding agents, gravel, lime slurry, or pavement, as long as it can support the required weights at all times including during saturation and is non-erodible, which are necessary elements to ensure long-term fire-safe accessibility for Roads. The potential surface treatments provide a non-exhaustive list which identifies some of the professionally utilized materials, as well as research provided identifying the applicability of treatments like lime slurry as a potentially appropriate surface treatment.

§1273.02 (b) This subsection was added to provide a minimum weight standard for Driveways and Road and Driveway Structures, which is a lower weight requirement than that identified in §1273.02(a). The minimum weight requirement was reduced from 40,000 pounds to 36,000 pounds based on information received from the Fire Chiefs Working Group that a Cal Fire Model 34 engine, the type of engine most likely to respond to emergency incidents in areas subject to these regulations, weighs no more than 36,000 pounds and, if those are the appropriate response vehicles, roads should be designed accordingly. These changes make the regulations easier to implement in those specific cases while maintaining a regulatory scheme which promotes fire safe access to buildings.

§1273.02 (c) This subsection updates §1273.02(c) by adding the word “The” before “project proponent” for consistency with how the term is used throughout. The words “certified engineered” replaces the term “engineering” to more explicitly describe specifications that must meet a recognized standard. The words “the Road” were added to specify that the Road design must meet the certified engineered specifications, if requested. The words “authority having” were removed to change the reference from local authority having jurisdiction to Local Jurisdiction consistent with defined terms.

1273.03. Bridge or Elevated Structures on Roads and Driveways (previously called Grades)

The title of this section was changed to reflect its new contents.

§1273.03(a) This subsection is a renumbering and update of existing requirements in §1273.07(a) to add a more specific reference to Article 3, which is necessary to ensure that signing is consistently applied to each bridge or elevated structure to reflect their weight, vertical clearance limitations, and other traffic conditions that are important for emergency responders to be made aware of during wildfires. This information is useful

due to the number of different Fire Apparatus that may vary in type, size, and weight that are responding from out of the local area to a wildfire. Any limitations on a bridge or elevated structure must be made visible so emergency responders can determine if they can safely access an area.

§1273.03 (b) This subsection renumbers and amends existing requirements in §1273.07(b). This proposed action requires that any bridge or elevated structure be designed and constructed to support a gross vehicle weight rating of 75,000 pounds and that vehicle load limits must be posted at both entrances to a bridge. This update was necessary to add consistency with the Road requirement which also specifies that Roads shall support Fire Apparatus weighing 75,000 pounds. These revisions eliminated a requirement that bridges be maintained to this standard as well; as these regulations are applicable to Building construction and related Development, it is outside the scope of these regulations to place specific requirements on the maintenance of bridges or other structures when maintenance may not necessarily be related to such construction. Replacing the reference to the AASHTO HB-17 standard was replaced with this specific numerical threshold in response to comments received from the Fire Chiefs Working Group noting that this standard makes it easier to determine whether a proposed design meets the requirements of this section. Relying on a standard for gross vehicle weight in this section is also more consistent with other weight requirements referenced in Article 2 (such as Road and Driveway requirements). This provides additional consistency for determining compliance during the plan review process and clarity for emergency response vehicles, or any vehicles, that may have to access these features.

§1273.03 (b)(1) This paragraph was added to provide an alternative minimum standard in situations where the maximum weight of a fire apparatus responding to an emergency event would be lower than 75,000 pounds. In that specific instance, the Bridge or Elevated Structure could be designed to a lower weight requirement without affecting the ability for Fire Apparatus to traverse it. This amendment clarifies the standards for a reduction in support capacity, and is necessary in order to increase the flexibility of implementation of these regulations while still maintaining fire safety.

§1273.03 (b)(2) This paragraph updates §1273.02(b) by reducing the allowable minimum weight requirement from 40,000 pounds to 36,000 pounds. This reduction was based on the fact that the Cal Fire Model 34 engine weighs no more than 36,000 pounds, as well as information received from the Fire Chiefs Working Group that those would be the most likely apparatus to respond to emergency incidents within the geographic scope of these regulations and, if those are the appropriate response vehicles, roads should be designed accordingly. This section also adds a requirement in cases where a lower weight is accommodated for signing as required in Article 3. This was added for consistency in providing information to responding personnel so they are aware of the bridge weight design capabilities. These signing requirements are revised to be made compulsory, rather than discretionary on the part of the jurisdiction having authority, in order to promote safety and clarity of bridge and access capacity.

§1273.03 (b)(3) This paragraph further revises the existing language in §1273.07 regarding the application of AASHTO structure design standards. The proposed amendment clarifies that these standards may be applied in lieu of the vehicle weight requirements in §1273.03 so long as those features are designed and certified by a professional engineer, as described. The amendment eliminates existing language regarding design requirements related to live loads of fire apparatus in favor of the revised regulations which promote flexibility in implementation while still maintaining professional accountability of the safety of access.

§1273.03 (c) This section revises §1273.07(c) but replaces the words “emergency vehicle” with “Fire Apparatus” for consistency throughout these regulations. This section also removes the words “or both” and replaces it with “and/or other distinguishing features” to allow for other acceptable features that may not otherwise be stated in the provisions but would be acceptable to the Local Jurisdiction.

§1273.03 (d) This subsection renumbers and revises existing language in §1273.07(d) by adding the words “or elevated structure” for consistency with this section and revises the first sentence for clarity. Additionally, a provision was added to reference that bridges or elevated structures must meet the Road width and height requirements outlined in §1273.05 for consistency of standards and to ensure the safety of the access. This avoids situations where Fire Apparatus may unexpectedly encounter a situation where the bridge width is narrower than a road and limits safe ingress or egress under emergency situations. Furthermore, the proposed amendment replaces discretionary authority of authorization of such a one-lane bridge with the above described prescriptive requirement. The purpose of this amendment is to provide additional clarity and consistency of application of the regulations.

§1273.03 (e) The subsection requires that bridges and elevated structures be made of non-combustible material to reduce the likelihood that the bridge would burn in a fire event. The purpose of this amendment is to ensure the integrity of bridges during a fire event. This modification does change the potential material required when building a bridge or elevated structure but will improve safety for emergency responders and evacuating civilians by ensuring that the bridge does not burn during a wildfire event.

The existing language in § 1273.03, regarding Grades, has been moved to § 1273.04. Please see purpose and necessity for this reorganization under the header for Article 2.

1273.04. Road and Driveway Grades (previously called Radius)

The title of this section was changed to reflect its new contents. The existing contents of this section was moved to § 1273.01. Please see purpose and necessity statements for this reorganization under the Article 2 header.

§1273.04(a) This subsection reworded the existing provision in §1273.03(a) to improve clarity. This does not change the requirement that all Roads and Driveways shall not exceed 16 percent.

§1273.04(b) This subsection revised §1273.03(b) by replacing language that allowed mitigations of the same practical effect with approval from the local authority on grades between 16% and 20% with a more specific standard to prevent slippage and scraping through treatments such as aggregate treatments, binding agents, and/or paving. This standard provides clarity of when these slopes may be allowed and is necessary so that Fire Apparatus can safely traverse a Road without slippage, which would result in a dangerous situation for firefighters in the Fire Apparatus and any other vehicles on the Road.

§1273.04(c) This subsection was added to require that grade transitions be constructed and designed to accommodate maximum approach and departure angles of 12 degrees. This was based on vehicle specifications provided by the Fire Chiefs Working Group representing a typical Fire Apparatus which was used to verify the approach and departure angle requirements. The Fire Apparatus represents a Type 1 engine used by each fire district, which would be the likeliest to respond/apparatus with the shallowest maximum approach angle capacity. This amendment is necessary to ensure adequate safe access for such apparatus.

1273.05. Road and Driveway Width and Horizontal Clearances (previously called Turnarounds)

The title of this section was changed to reflect its new contents. The existing language in this section was moved to § 1273.10. The purposes and necessity for this reorganization is discussed under the Article 2 header.

§1273.05(a) This subsection restructured and revised §1273.01(a) by adding the word “Bidirectional” before Roads to specify applicability of the stated width requirement to a road that has traffic flow in two directions without a median. This is necessary to specify because there are different width requirements for different types of roads. The specific standard of two 10 foot traffic lanes, excluding shoulders and striping, is unchanged from existing regulations.

§1273.05(a) is amended to include a minimum fire safety standard for bidirectional roads with non-adjacent Traffic Lanes, such that each Traffic Lane provide a minimum width of twelve feet. This amendment is necessary to add clarity regarding the width minimum standards for non-adjacent bidirectional roads. To ensure these particular roads provide for adequate fire safety, the standard proposed here requires these roads have the same widths as functionally similar unidirectional roads. These clarifications were added to account for topographic areas (such as the side of a hill or around an environmental resource) that do not allow for bidirectional travel lanes to be adjacent to one another. The existing language in this section regarding Vertical Clearance was moved to its own section, § 1273.06.

§1273.05(b) This subsection revises this existing language in §1273.01(b), (b)(1), and (b)(2) to provide greater clarity regarding the standards for one-way roads. Subsection (b) is retained in § 1273.05(b), but the provision specifically allowing local jurisdictions to approve one-way roads has been deleted. That provision was unnecessarily redundant,

as the local jurisdiction is already provided the authority to approve such roads in these regulations. The minimum standard for a 12-foot traffic lane on one-way roads was further revised to delete the specification that the 12-foot Traffic Lane exclude any Shoulders. That requirement is unnecessary because a new, stricter requirement in subsection (c), discussed below, addresses additional width requirements for one-way roads. The requirements in subsection (b)(2) were moved to § 1273.07 and § 1273.09.

§1273.05(c) This adds a minimum Clear Width requirement for Bidirectional Roads with a center median and One-way Roads of 20 feet consistent with the existing regulatory requirement for bidirectional roads without a center median. This is necessary to ensure that in instances where a Road may only provide one Traffic Lane, sufficient Clear Width is provided for to ensure concurrent ingress and egress during a wildfire as is provided for on bidirectional roads with two lanes.

§1273.05(d) This subsection moved existing language regarding the width and Clear Width requirements for driveways from §1273.01(c) to this section. The standards in this section remain the same, but the phrase “unobstructed horizontal clearance” was replaced with the defined term “Clear Width” and Vertical Clearance was capitalized for consistency with the defined term.

§1273.06 Road and Driveway Vertical Clearances

The existing language in this section was moved to § 1273.09. Please see the purpose and necessity for this reorganization under the Article 2 header.

This section moved current requirements for vertical clearance for driveways in existing §1273.01(c) to this section and expanded the requirements to apply to Roads as well. This establishes a consistent set of minimum requirements for vertical clearance such that Fire Apparatus can safely access an area through improved visibility and removal of any physical obstructions such as vegetation.

§1273.07 Maximum Lengths of New One-Way Roads

The existing language in this section was moved to § 1273.03. Please see the purpose and necessity for this reorganization under the Article 2 header.

§1273.07(a) moved the requirements of the current §1273.01(b)(2) to this section and added the word “New” before “One-Way Road” to specify the applicability of this provision which is necessary to ensure that future road construction conform to safe access standards, and to specify that this requirement does not apply to Existing One-way Roads.

§1273.08 Maximum Lengths of New Dead-end Roads

This section was revised to include use of the term “New” throughout to ensure that the standards identified here only apply to New Dead-end Roads and not Existing Dead-end Roads.

§1273.08(a) The proposed action eliminates redundant language regarding how the maximum length of a dead-end road is to be determined in favor of use of existing language which simply identifies maximum cumulative length. The purpose of this amendment is to simplify the determination of length and is necessary in order to improve implementation and enforcement of the regulations.

§1273.08(a)(1), (2), and (3) These paragraphs modified the existing standard for dead-end roads from 5 acres to 19.99 acres to 5 acres or larger. This modifies the regulation to reduce the maximum length of New Dead-end Roads from 5,280 feet (or one mile) to 2,640 feet (or half a mile). Survey information received from the Fire Chiefs Working Group noted concerns for the maximum lengths of the Dead-end Roads and suggesting shortening the maximum allowable lengths for Dead-end Roads would provide for greater fire safety than the current standards. Additionally, when completing an on-line search for the maximum length of a Dead-end Road allowed throughout the country, it was difficult to identify any standard that allowed roads longer than ½ mile in length, and most agencies' maximum allowable lengths were less. The practical effect of this change is that the maximum allowable length of New Dead-end Roads serving parcels larger than 20 acres is reduced from 5,280 feet to 2,640 feet. This requirement does not affect Existing Dead-end Roads which are longer than 2,640. Additional revisions were made to § 1273.08(a)(1)-(3) for grammar and clarity.

Furthermore, the un-numbered language following paragraphs (1)-(3) has been restructured and revised into §1273.08(e) and (f). Please see discussions of those subsections below for additional information.

§1273.08(b) is revised to update citation for Turnaround requirements in §1273.10, and revised for grammar and clarity.

§1273.08(c) clarifies that existing width standards in §1273.05 are applicable to new Dead-end Roads, which is necessary to ensure consistent implementation of the Road Width minimum requirements.

§1273.08(d) This is a new subsection stating that new Dead-end roads must be connected to through roads on both ends. This was necessary to prevent piecing together Dead-end Roads together which would otherwise result in a cumulative length exceeding the maximum length standards (or, in essence, piecing together a collection of ½ mile Dead-end Roads that would dramatically exceed the maximum length requirement and make it more difficult to access/egress from those areas during a wildfire event). Although existing language in this section was intended to prevent that from occurring ("The maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths..."), in practice this language was confusing and did not result in the intended outcome. Replacing that existing requirement with the proposal here is necessary to prevent Dead-End Roads from exceeding the fire safety standards in this Subchapter.

§1273.08(e) This is a new subsection that specifies how to measure a Dead-end Road (centerline of the through roadway to the farthest point of the Dead-end Road). This clarification was necessary to provide uniformity and consistency in how Dead-end Roads are measured.

§1273.08(f) This provision remains from the original regulation in the unnumbered provision following paragraphs (a)(1) through (a)(3) with the clarification that that the provision was applicable where a dead end road provides access to differing zoned parcel sizes, rather than crossing over those differing zoned parcel sizes, and is necessary given that some roads may not cross differing parcel zones, but that fire safe access is dependent on the service provided by the road, rather than the location of the road itself. Additionally, it was given a separate subsection for consistency in formatting within the regulation.

§1273.09 Road and Driveway Turnouts

The existing language in this section was moved to § 1273.11. Please see the purpose and necessity for this reorganization under the header for Article 2.

§1273.09(a) revises the existing Turnout standards in §1273.06 by shortening the length of a Turnout from 30 feet in length to 22 feet and requiring that turnouts be facilitated outside of the Traffic Lane to accommodate one passenger vehicle. This revision was based on an analysis of turning templates using the AutoTURN software which is considered state of the practice for testing geometric appropriateness of road feature design. The requirements were developed assuming a passenger car as the design vehicle which is consistent with direction received from the Fire Chiefs Working Group to improve flexibility in implementation of the regulations while maintaining safe access requirements. Figure 5 was added to show the dimension and the turning template to provide additional details and visual clarification and representation of the requirement. This modification makes implementation of the regulation easier as the design has been reduced by eight feet reflecting the results of the technical analysis.

§1273.09(b) modifies the existing standards in §1273.01(b)(2) by specifying that One-way Roads and Dead-end Roads over 400 feet in length shall have a Turnout located at approximately the midpoint of the Road, in addition to any other Turnouts required. Existing requirements in § 1273.01(b)(2) specify that a turnout shall be constructed at the midpoint of each One-Way Road, but that requirement was revised here to only require turnouts at the midpoint of One-way Roads that exceed 400 feet. Requiring turnouts on One-way Roads less than 400 feet in length was overly burdensome and did not provide a specific fire safety advantage over requiring a turnout on one-way roads over 400 feet. A requirement for turnouts at the midpoint of Dead-end Roads over 400 feet in length was added to this section to provide additional safe areas for Fire Apparatus and civilian vehicles to pass each other during a Wildfire evacuation. This 400 foot distance requirement was an extant requirement for driveway turnouts in §1273.05(c) (revised to in §1273.09(f)) and is appropriate and suitable here as a prescriptive requirement for One-way and Dead-end roads given the potentially design characteristics of both types of accessible surface.

§1273.09(c) Since One-way Roads have a narrower width standards than bi-directional roads, it was necessary to specify additional turnout requirements for one-way roads, or for other Roads which do not meet the width requirements in this Subchapter, such as through an exception provided by §1270.06. This is necessary to provide for adequate opportunities for vehicles to pass each other on one-way roads despite the narrower width allowances or other Roads that may be narrower than the standards in § 1273.05 in order to maintain safe fire access in those situations.

§1273.09(d) This section modified the existing requirement in 1273.05(c) to specify that driveways that are less than 20 feet wide and greater than 150 feet in length are required to have a Turnout. Previously, all driveways independent of width required a turnout; but Driveways that are at least 20 feet in width provide sufficient space for a Fire Apparatus to pass a vehicle in the Driveway. This revision is necessary for the consistent application of these requirements.

§1273.09(e) This section renumbers a portion of existing 1273.05(c) in the current regulations; the location requirement was broken into its own sub-heading for consistency in regulation formatting.

§1273.09(f) This section renumbers a portion of existing 1273.05(c) in the current regulations; the spacing requirement was broken into its own sub-heading for consistency in regulation formatting.

§1273.10 Road and Driveway Turnarounds

§1273.10(a) revised a portion of the existing regulation §1273.05(d), regarding Turnarounds on Dead-end Roads. The second sentence was modified from “Turnarounds shall be provided at a maximum of 1,320 foot intervals” to “a Turnaround should be provided halfway along the Dead-end Road” for parcels 5 acres or larger.” This revision reflects the updated standard for the maximum length of a dead-end road, which was shortened to 2,640 feet. This revision does not substantively alter the minimum standards at which a turnaround must be provided on a Dead-end road.

§1273.10(b) moves the existing requirement in § 1273.05(d), regarding Turnarounds on Driveways, to this section. No changes were made to the requirements in this section.

§1273.10(c) specifies a Turnaround must meet the requirements of one of three new figures (Figures 6.1, 6.2, and 6.3). These figures were added to depict three different turning radii (40-foot, 35-foot, and 30-foot radius) of a Turnaround. This is necessary to provide greater specificity and clarity regarding the Turnaround requirements and how they shall be applied. These standards replace those of existing 1273.05(b), the repeal of which was necessary to implement the improved clarity of the described provisions.

§1273.10(d) was added to provide for an alternative where physical constraints prohibit the use of a 40-foot Turnaround. Figures 6.2 and 6.3 depict how a Type 1 Fire

Apparatus could negotiate the turnaround in those instances. This would be allowed in specific instances when there was a geometric constraint due to terrain, Road size/width, or other environmental features that would not make the provision of a 40-foot Turnaround possible. This amendment is necessary in order to improve the flexibility of implementation of these regulations.

§1273.10(e) was added to require that a Turnaround remain clear of vegetation or decorative elements. This requirement is necessary to ensure that a Turnaround which allows vehicles or a Fire Apparatus to safely turn around in an area is not compromised by an obstruction or visual limitation. This addition is also necessary in order to provide that adequate accessibility is maintained.

§1273.10(f) moves the second sentence in the existing requirement in 1273.05(b) to this section. There are no changes to this language otherwise.

The existing Figures A and B (within 1273.05(e) and (f)) have been repealed in favor of the clarity provided by figures 6.1, 6.2, and 6.3. Please see discussion of 1273.10(c) for additional details.

§1273.11. Gates

§1273.11(a) revises existing language in §1273.09(d) and moves it to this section (please see the purpose and necessity statements for this reorganization under the Article 2 header). The proposed action uses the term “gates” consistently in place of the existing mixed use of “gates” and “security gates”. There was no previous distinction in the terms and the use of consistent terminology clarifies the applicability of these regulations to all gates, regardless of the level of security they provide. This language was revised to delete specific authorities granted to the local jurisdictions to approve gates, as this authority is already inherent in the structure of these regulations. This is necessary to reduce redundancy and improve clarity in these regulations.

The proposed action additionally specifies that all electronic gates must have a manual method of opening in case of electronic failure and specifies that this manual method must be maintained operational at all times, where existing regulation compelled operational status at all times. The purpose of this revision is acknowledgment of the potential for electronic failure, which is likely to be an issue during a wildfire event, and clarification that only a mechanical method of opening gates is compulsory. This is necessary in order to maintain a realistic and achievable level of fire safe access for emergency response.

§1273.11(b) revises existing language in §1273.09(a) to more clearly specify the minimum standard of width of a gate serving a Road or Driveway. The requirement in the existing regulations is that a gate entrance shall be two feet wider than the traffic lane, but given that some Roads require additional width due to shoulders and striping, it was necessary to clarify that the gate entrance width is intended to be 2 feet wider than the entire road surface, not just the Traffic Lane. An additional requirement was added to this section requiring that where a gate is installed across an existing road or

driveway, the gate shall be no less than ten (10) feet wide. This requirement is necessary to specify the standards for gates crossing existing Roads or Driveways that are narrower than the standards in § 1273.05. Additional changes were made to use defined terms, which is necessary for consistency within the regulations.

Additionally, the proposed action requires that the above stated clearance be maintained at all time, which provides for improved visibility and is necessary to ensure fire safe access through gates and gate entrances.

§ 1273.11(c) places the existing requirement in §1273.09(c) to this section. Figure 7 was added to depict turning templates for vehicles turning into these Roads or Driveways and demonstrate the intent of the regulation. These revisions are necessary to provide greater clarity regarding these standards and ensure consistent implementation in the field.

§1273.11(d) moved §1273.09(b) to this section and added a reference to the new Figure 7 showing the turning template and requires that gates open in the direction of road travel, where the previous regulations allowed for a gate to open to allow a vehicle to stop without obstructing traffic on the road. This prescriptive requirement ensures consistency of application and reduces potential issues with gate variation for emergency responders. These revisions are necessary to provide greater clarity regarding these standards and ensure consistent implementation in the field.

§1273.12 Standards for Existing Roads

This section sets minimum standards for Existing Roads subject to this Subchapter pursuant to § 1273.00(c) and (d). It is necessary to set different standards for existing versus new roads, as existing roads face different limitations related to fire safety. Existing easements or ownership patterns, topography and terrain, or environmental constraints may limit the ability of an Existing Road to meet the standards for New Roads in this Subchapter. However, there are standards for Existing Roads that would provide for fire safety that could be applied to Existing Roads under such constraints.

§ 1273.12(a)(1), (2), and (3) require Existing Roads to provide for at least one 14 foot Traffic Lane, non-native surfacing for at least 50% of the Roads length, and either Turnouts in compliance with § 1273.09, or a 20 foot Clear Width. These minimum standards are necessary to allow for adequate Fire Apparatus access along the Road, a suitable surface that provides traction, and additional width to allow Fire Apparatus and civilian vehicles to safely pass each other.

§ 1273.12(b) specifies that when an Existing Road provides Access to Buildings that are being reconstructed after a Wildfire, it shall be provided with a 14 foot Traffic Lane for a distance of 22 feet, at an interval of at least every 400 feet. It is necessary to establish a different standard for existing roads being reconstructed or repaired after a Wildfire because of the unique nature of Wildfire impacts and rebuilding processes. When a neighborhood goes through a Wildfire event, frequently the Structures in the neighborhood burn in a patchwork pattern, where some Structures are standing and

others are burned. This subsection requires Existing Roads providing Access to Buildings being reconstructed or repaired to meet minimal fire safety standards that ensure a neighborhood is provided with a higher level of safety than it was previously. The prescriptive standard for an Existing Road subject to § 1273.12(b) requires that an Existing Road have the equivalent width of a Driveway (see § 1273.05(d)) for at least 22 feet at an interval of at least every 400 feet (the equivalent requirements for Turnout length and spacing under § 1273.09). These dimensions are necessary to provide enough horizontal space for a vehicle to pull to the side to allow another vehicle to pass, and necessary to provide those spaces frequently enough that any vehicles that need to back up on a road to reach those spaces can do so safely. Because of the unique nature of Wildfire impacts on the built environment described earlier, it is necessary to provide greater flexibility is given to local jurisdictions.

§ 1273.12(c) specifies that an Existing Road providing Access to Buildings shall not exceed a grade over 25% for a distance over 500 linear feet. This is necessary to ensure that Existing Roads are not so excessively steep that Fire Apparatus and other vehicles cannot safely traverse the Road. A limit of 25% allows for roads that might exceed the standards in § 1273.04 Road and Driveway Grades but may still provide safe passage. Several county planners indicated that many existing roads in their counties exceed the grade requirements in § 1273.04 but generally do not exceed 25%, and that those roads have in the past been used by Fire Apparatus. This requirement allows flexibility for Existing Roads that exceed the grade requirements in § 1273.04 but still demonstrate a level of fire safety.

§ 1273.12(d) provides that where an Existing Road does not meet the requirements of § 1273.12(a), but does provide for a secondary route in conformance with § 1273.13 Secondary Routes for Existing Roads, that Existing Road does not need to satisfy the requirements of § 1273.12(a). This is necessary to provide greater flexibility when Access is being provided by Existing Roads that do not meet the requirements in § 1273.12(a); rather than improving the Existing Road to meet the specified standard, a secondary route may be installed instead to provide for fire safety.

The purpose of these amendments are to provide minimum standards for safe access related to Existing Roads and are necessary in order to full effectuate the requirements for providing fire safe access as described in PRC 4290.

§1273.13 Secondary Routes for Existing Roads

The proposed action identifies minimum standards for secondary routes for existing roads. These standards are intended to clarify fire safe access standards for these roads and are necessary for the implementation of the regulations. The requirements for secondary access is that they are constructed to meet the geometric requirements of New Roads and shall provide for legal and deeded Access to ensure that the access is provided in perpetuity. Secured routes (those with gates) are allowed as long as they meet the requirements in §1273.11. §1273.13(b) notes that the Secondary routes shall connect the user to an alternative route to ensure two means of accessibility in the event that the primary route is compromised. The purpose of these amendments are to

provide minimum standards for safe access related to secondary routes and are necessary in order to fully effectuate the requirements for providing fire safe access as described in PRC 4290.

Article 3. Signing and Building Numbering

§1274.00. Road Name Signs (previously called Intent)

§1274.00(a) was added to note that all Road signs shall conform to the requirements of the California Manual of Uniform Traffic Control Devices (CA MUTCD). This document is the standard for all signage in the state. Adding this reference is necessary for creating a consistent approach with statewide requirements for traffic information and traffic control throughout the state.

§1274.00 (b) is a relocation and renumbering of 1274.01 with revisions to improve clarity. The word “New” was added before “Roads” to clarify when this provision applies and for consistency with provisions and terms in Articles 1 and 2. The word “must” was changed to “shall” for consistency with other wording throughout the section. The word “/or” was deleted related to patterned numbering and non-duplicative naming to improve grammar correctness. The second sentence deleted the phrase “nor shall a road providing access only to a single commercial or industrial occupancy require naming or numbering” in order to ensure that all building construction regardless of type provided fire safe access standards related to road signs and is necessary for the total implementation of these regulations.

§1274.00(c) is the relocation of existing language in § 1274.01(b) to support the restructuring of these regulations described above and provide additional clarity. There are no substantive revisions to this provision.

§1274.01. Road Sign Installation, Location, and Visibility

This section title was changed to more accurately reflect the section contents.

The existing provision §1274.02(a) was deleted from the regulations as it pertained to visibility of the signage. This deletion was necessary because this provision is already regulated by Title 24, California Code of Regulations (California Building Standards Code) and therefore was duplicative in these regulations. The remaining subsections in §1274.02, now in § 1274.01, were renumbered accordingly due to the deletion.

The revised §1274.01(b) capitalized words that are defined in Article 1, including Dead-end Roads and One-way Roads. This subsection also replaced the term “conditions” with “Roads and bridges” to align with the terms used throughout these regulations and reduce any ambiguity on the interpretation of “conditions.”

Subsections 1274.01(b)(1) and (2) remove the term “access,” as “Access” is now a defined term in these regulations.

§1274.01(d) added a new requirement for minimum sign retroreflectivity and illumination references. These requirements are consistent with requirements in the CA MUTCD. The purpose of adding these requirements is to increase visibility of signs during nighttime or reduced visibility situations, such as smoke, to improve public and firefighter safety during a wildfire event.

1274.03. Addresses for Buildings

§1274.03 (a) deleted the reference to the overall address system and how units are identified. These provisions are regulated by Title 24, California Code of Regulations (California Building Standards Code) and are duplicative in these regulations.

Subsection (a) was revised to combine it with §1274.03 (b), eliminate the reference to the size of letters, numbers and symbols, and state that the address shall be consistent with the California Fire Code. This revision was necessary because this provision is already regulated by California Fire Code and therefore was duplicative in these regulations.

1274.04. Address Installation, Location, and Visibility

This section was deleted as it is regulated by Title 24, California Code of Regulations (California Building Standards Code) and is duplicative in these regulations.

Article 4. Water Supply (previously called Emergency Water Standards)

This article title was changed to Water Supply to align with updated content.

1275.00 Application (previously called Intent)

The existing language in this section was deleted, as it was unnecessary given the general authority of these regulations to require conformance with any standards therein.

§1275.00 copies existing language from §1275.01 and then further expands it to provide greater specificity regarding the application of this Article. This is necessary in order to ensure consistent compliance with these requirements and effectuate the purpose of PRC 4290.

§1275.00(a) adds to the existing applicability of water supply by including the requirement for water supply when new Building construction occurs and this building construction is not already served by an existing water supply. This additional requirement addresses circumstances where a new Building, as defined in § 1270.01, cannot be approved unless adequate water supply is available as established in this Article. Adequate water supply for every Building is necessary for a safe and effective response during a wildfire emergency to help protect these structures. Without having an adequate water supply in place, it becomes more difficult for firefighters to conduct suppression activities on fires that threaten structures.

§1275.00(b) is a new subsection that identifies which types of existing water supply facilities are not subject to the requirements of Article 4. This additional language was added to remove any potential ambiguity as to whether existing water or wastewater

facilities, including those undergoing repairs, reconstruction, or upgrades, would be subject to the same provisions as those activities in subsection (a). This is necessary to prevent minor repairs from triggering the Fire Safe Regulations, resulting in unnecessarily burdensome requirements to upgrade the entire water system. This clarification was based on consultation with experts from the Association of California Water Supply Agencies (ACWA) during a focused meeting on January 6, 2021, and followed written comments submitted by the ACWA. The “water and wastewater systems” text aligns with language commonly used in the water supply industry. The “newly constructed” text was added to specifically focus these standards on new water and wastewater systems that are constructed to meet the water supply requirements of new development only. The text “includes, but is not limited to, water storage tanks and reservoirs, pump stations, treatment facilities, regulator stations, fire hydrants, and similar water and wastewater system devices” specifically identifies the exclusion of changes made to existing water or wastewater facility components for the purposes of maintenance or upgrades.

Subsection (c) is a new subsection that specifies when either the California Fire Code or standards from the National Fire Protection Association (NFPA) are referenced in this Article that all the sections within the relevant code or standard referring to alternative methods for compliance, equivalencies, or modifications to those specified standards are also applicable. This language was added to clarify the authorization of a Local Jurisdiction to undertake alternatives, equivalencies, or modifications of the sections within these relevant codes.

1275.01 Approved Water Supply (previously called Application)

The existing language in § 1275.02 was moved to § 1275.01 to reflect the deletion of the existing text in § 1275.00. This section title was updated to add the word “Approved” before “Water Supply” to specify the standards on water supplies that are approved by the Local Jurisdiction, as opposed to existing natural, or other water sources that may be used for wildfire response but are not required to be approved by the Local Jurisdiction as part of Building construction approval. This text update was added after discussions with water engineering experts from ACWA during a focused meeting on January 6, 2021, and written comments submitted by the ACWA.

The existing text from § 1275.02 was moved to this section with some reorganization and revisions.

§ 1275.01(a) requires that all water supply systems meet or exceed the California Fire Code. To replicate the standards in the California Fire Code here would be redundant and create the potential for conflicts if the California Fire Code is updated without a commensurate update to the State Minimum Fire Safe Regulation, so it is necessary to provide a reference to the California Fire Code here instead. § 1275.01(b) provides for an alternate standard to the California Fire Code, which is necessary to provide flexibility in situations where the requirements of the Fire Code might not be achievable. The purpose of the amendments is to utilize one standard of water supply in these

instances where a municipal-type supply is not available, and the standards provided in the cited NFPA document are suitable and appropriate for providing such a supply.

§ 1275.01(c) reflects existing language from § 1275.02(a), but clarifies that all Building construction shall install a water supply system. This is necessary to align this section in conformance with the requirements for water supply systems specified in § 1275.00. This reduces confusion regarding when water supply systems shall be installed. The second sentence of this subsection, regarding the timing of water supply installation, is unchanged from the existing language in § 1275.02(a).

The existing language in § 1275.02(c) has been moved to § 1275.06 to improve organizational flow, logic and readability of this Article.

§ 1275.01(d) copies existing text from § 1275.02(d), and adds a provision which identifies that other water supplies that may be required by law can also be used to satisfy the legal requirements identified in this article, under certain conditions. This information is necessary to clarify that separate or distinct systems need not be constructed so long as a system complies with these regulations and provides the required quantity of water required in these regulations.

§ 1275.01(e) copies existing language from § 1275.02(e) with no changes. This is necessary for clarity and to fully effectuate the reorganization of this section.

1275.02 Identification of Water Sources (previously called Water Supply)

The text from § 1275.04 titled “Signing of Water Sources” was moved to this section, re-titled to “Identification of Water Sources,” reorganized and updated for clarity. These are existing requirements, except for removing the reference to the “State Fire Marshal's Guidelines for Fire Hydrant Markings Along State Highways and Freeways, May 1988” and replacing it with “or as specified by the local fire authority.” This was changed because the State Fire Marshal document is not readily available for reference. The purpose of these amendments are to provide improved clarity and implementation with regard to sign location requirements and are necessary to provide improved flexibility for the implementation of these regulations. The term “Fire Valve” was deleted, since it is no longer a defined term in these regulations.

The existing language in this section was moved to § 1275.01. Please see above for purpose and necessity statements.

1275.03 Secured Water Sources (previously called Hydrants and Fire Valves)

This new section and text was created to establish minimum requirements for breakaway locks when water supplies or associated fixtures are normally secured by gates, doors, or other locking systems. Specifying requirements for these security features is necessary to facilitate firefighter access to these water systems under emergency conditions. Providing these requirements helps firefighters to quickly access water supplies. This text was created based on consultation with a fire service working

group during a virtual meeting on October 14, 2020 and responses received through a questionnaire to the Fire Chiefs Working Group in September 2020.

1275.04 Municipal Water System Hydrants and Fire Valves (previously called Signing of Water Sources)

This section was moved from § 1275.03. and was re-named to reflect defined terms and the contents of this section.

Subsection (a) added the word “Municipal-Type” before “Fire Hydrant” for consistency with defined terms.

Subsection (b) was revised to allow for the Local Jurisdiction to determine the appropriate hose connection sizes on Fire Hydrants, while still requiring a standardized thread pattern to ensure compatibility across the state. This is necessary to provide Local Jurisdictions the flexibility to install Fire Hydrants that meet any specified local requirements while ensuring consistency across the state so out-of-area resources responding to a Wildfire can access water supplies via hydrants.

Subsection (c) removed the reference to freeze protection because it is already addressed in § 1275.01(e) and so further reference to this requirement was redundant. This text was replaced by text that describes the alternative of a performance-based system “where a municipal water supply hydrant system is not practical” that can be approved by the Local Jurisdiction, “in consultation with the local fire authority”. This section also requires that the alternative system meets the minimum water supply requirements of 250 gallons per minute (gpm) for two (2) hours”. This is necessary to establish a standard for local jurisdictions that meets the NFPA 1142 and International Organization for Standardization (ISO) minimum fire flow requirements where the more prescriptive standard in §1275.04 is not achievable.

1275.05 Dry Hydrants

This is a new section that was developed to specifically address the minimum requirements for dry hydrant systems, where the local jurisdiction has approved the use of them. Although alternative water supplies are provided for in § 1275.01.(c) and (d), this section provides clear minimum requirements for dry hydrant systems, which have different system requirements than standard Fire Hydrants, to provide firefighters with a reliable water source for fire suppression close to an incident. This is necessary to ensure all requirements of PRC 4290 are met by establishing minimum fire safety standards specific to the different kinds of hydrant systems available for installation. NFPA 1142 (2017) Chapter 8 (8.3, 8.4, 8.5, 8.6, 8.7 and 8.8) provides detailed technical requirements for dry hydrant systems, which are agreed upon by technical experts and is suitable and appropriate for application here, and therefore is specifically referenced as the minimum requirements for this section.

1275.06 Mobile Water Supply (Water Tenders)

This is a new section that was developed to specifically address the minimum requirements for mobile water tender systems, where the local jurisdiction has approved the use of them. This section is necessary to provide specific minimum requirements for mobile water tender systems that provide water supply to an area when no other option exists. Subsection (a) specifies the conditions under which a mobile water supply may be approved, which is necessary to limit the circumstances under which a mobile water supply is allowed. By limiting the use of mobile water supplies these regulations ensure the highest level of water supply for fire safety as possible.

Subsection (b) establishes that the mobile water supply shall arrive on site within 5 minutes of the first arriving apparatus, and supply a minimum of 250 gpm for two (2) hours of water supply. This requirement is necessary to establish a minimum fire flow that reflects industry best practices found in the NFPA 1142 and International Organization for Standardization (ISO) minimum fire flow requirements.

Subsection (c) adds a reference to NFPA 1142 Annex C to provide an alternative for achieving minimum fire flow requirements for mobile water supply. This alternative standard is necessary to provide flexibility to local jurisdictions when the prescriptive standard in § 1275.06(b) is not achievable.

1275.07 Protection of Water Supply Infrastructure from Wildfire

This is a new section that was developed to specifically address the potential impacts of wildfire on water supply systems. This text addition was based on discussions with fire experts who shared direct experience with water system infrastructure that was threatened or destroyed by fire because it was made of combustible material. The specific text change is intended to reduce the effects of ember impacts, radiant heat and convective heat that can damage or destroy critical water supply infrastructure, rendering it inoperable or unavailable for use by fire suppression resources. The loss of this water supply makes it more difficult for firefighters to conduct suppression activities on fires that threaten structures. This text change was also further refined and supported by consultation with the Fire Chiefs Working Group, including virtual meetings on December 14, 2021 and written comments from Los Angeles County submitted on December 31, 2020.

The specific requirements in this section are necessary to protect this infrastructure from the impacts of radiant heat, convective heat and embers. This is important for the protection of water supply infrastructure to increase the likelihood that it will be available for suppression efforts during a wildfire. These changes are based on the defensible space requirements for buildings in Public Resource Code Section 4290, and the construction requirement in California Building Code (California Code of Regulations Title 24, Part 2) Chapter 7A, along with recommendations from the Fire Chiefs Working Group during virtual meetings on December 14, 2021.

Article 5. Building Siting, Setbacks and Fuel Modification (previously called Fuel Modification Standards)

This article title was changed to better reflect the scope of the content in the section that extends beyond strictly “Fuel Modification” and to provide organizational clarity within the document.

1276.00 Applicability (previously called Intent)

The existing language in this section was deleted, which was necessary as it had become redundant as intent language for each particular standard was moved into the specific section for that standard.

New text in this section was added to specify when the requirements of this Article apply in different Building and Development processes. This is necessary to provide clarity to the regulated public regarding when these requirements apply, as not all of the requirements are appropriate for all types of Building construction or Development.

1276.01 Building and Parcel Siting and Setbacks (previously called Setback for Structure Defensible Space)

This section was renamed to better reflect its contents.

§ 1276.01(a) was revised added language that provides for exceptions to this requirement as set forth in subsection (b), for clarity.

§ 1276.01 (b) was revised to remove the term “same practical effect” as it is no longer a defined term. This subsection was revised for written clarity, and greater specificity was added to the non-exhaustive list of practical reasons for which a reduced setback may be necessary. The term “easements” was deleted, as easements are now captured in the broader phrase “other site constraints.” These revisions were necessary to provide clearer specificity to the regulated public. The phrase “shall reduce Structure-to-Structure ignition” was added to specify that when reductions in the required setbacks are provided for, there shall be features on the site that provide for fire safety. The non-exhaustive list of such appropriate features was numbered for clarity.

The existing requirement under § 1276.01(c) was deleted in its entirety, as it was redundant with the existing code it cited, and was unnecessary to specify in these regulations.

1276.02 Ridgelines (previously called Maintenance of Defensible Space Measures)

§ 1276.02 revises existing language in Maintenance of Defensible Space Measures by moving portions of that text to §1276.05 and creating a new section called Ridgelines. This is a new section that was added to meet the new legislative requirements of PRC 4290 (b) which states that these regulations shall include measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection. To address this legislative requirement, “Ridgelines” and “Undeveloped Ridgelines” are now defined in § 1270.01 and the specific requirements for assessing and preserving Undeveloped Ridgelines are described in § 1276.02 subsections (a), (b), (c) and (d).

§1276.02 (a) requires the Local Jurisdiction, in consultation with the Fire Authority, to identify the presence of ridgelines that have strategic value. The text provides the general parameter for an assessment or factors to help determine the strategic nature or ridgelines related to the purpose of these regulations for improving fire safety and response. These factors are topography, vegetation, proximity to existing or proposed development, and the appropriateness of the ridge to support suppression operations. It is necessary to specify these factors so that there is consistent criteria applied across the state when local jurisdictions are identifying ridgelines pursuant to this section.

The topography factor is important with regards to elevation, slope, terrain and general orientation of the ridge. These factors not only influence fire behavior but will also determine accessibility for fire suppression and suppression resource safety concerns. Topography also influences the complexity and effort of undertaking successful fuel management.

The vegetation factor influences fire behavior, suppression success and fire suppression resource safety. Vegetation type will also influence the effort required to successfully undertake fuel management.

The proximity of residential, commercial or hazardous land uses to ridges will influence the both the suppression response and fuel management options and complexity.

Finally through consideration of the above factors, in addition to any other factors, such as but not limited to, the type and number and distance to suppression resources, access to the ridge local weather influences can help determine the appropriateness for a ridge to support effective fire suppression.

§1276.02 (b) requires that Undeveloped Ridgelines which are identified as strategically important to the local jurisdiction must be preserved. This is necessary to effectuate the requirements of PRC 4290(b).

§1276.02 (c) prohibits the construction of new Buildings on Undeveloped Ridgelines that are identified as strategically important. This provision further specifies that this prohibition does not include non-occupied Buildings, such as, but not limited to Group U Structures, as defined. This section is necessary to fully effectuate the requirements of PRC 4290(b).

§1276.02 (d) specifies that these are a minimum set of requirements which do not restrict the Local Jurisdiction from implementing additional requirements to preserve Undeveloped Ridgelines. This is necessary to specify that a Local Jurisdiction retains the authority to add additional requirements as may be necessary to achieve locally specific goals or objectives related to such preservation. This is necessary to further implement PRC 4290(c), specifying that local regulations which equal or exceed the state minimums may be implemented.

1276.03 Fuel Breaks (previously called Disposal of Flammable Vegetation and Fuels)

Existing language in §1276.03 (Disposal of Flammable Vegetation and Fuels) was moved to a new section §1276.06. §1276.03 is renamed to reflect its contents.

The rationale for developing text that specifically addresses Fuel Breaks as a separate requirement from Greenbelts is based on the functional differences between Fuel Breaks and Greenbelts. The purpose of Fuel Breaks is to lower fire behavior by influencing intensity, spread rate, or ember impacts. A Greenbelt may alter an area through the type of land management features allowed or development activities that are restricted, but this does not automatically include inherent features that reduce fire behavior.

For organizational purposes, this section is delineated into subsections (a), (b), (c), (d), (e), (f) and (g).

§1276.03(a) identifies the thresholds for when Building construction or Development is required to meet the standards in this section. These are the same thresholds specified in § 1273.00, which is necessary for consistency within the regulations.

The first subsection, (a)(1), specifies that this section applies where Building construction includes the division of land into 3 or more parcels. This division into 3 more parcels was selected to reflect the distinction in these regulations between a Driveway and a Road; once a vehicular pathway serves more than 2 parcels, it must meet the stricter Road standards in this Subchapter rather than the Driveway standard. A common point of ignition for Wildfires is along roadsides, and so it is necessary to ensure that New Roads, or Driveways meet the New Road standards, be served with a Fuel Break that can slow or stop a Wildfire advancing from the Road into a community or into the wildlands.

The second and third subsections, § 1270.00(b)(2) and (3), provide greater specificity regarding what kinds of zoning changes or use permits require the application of these regulations to Existing Roads. This specificity is necessary so that only those applications for zoning changes and change of use permits that would materially negatively impact fire safety are subject to these regulations. This provides clarity to regulated public, will result in the consistent application of these regulations statewide, and reduces regulatory burdens on proposed Building construction or development that is not anticipated to materially negatively impact fire safety. An increase in zoning and use intensity or density is likely to increase the number of site visitors, leading to a higher likelihood of roadside ignitions as well as a higher number of people at risk if a wildland is advancing towards the area. It is necessary to ensure that these kinds of projects are served by a Fuel Break that can slow or stop a Wildfire advancing from the Road into a community or into the wildlands, or a Wildfire advancing on the community from the wildlands.

§1276.03(b) provides requirements for the design of a Fuel Break to change fire behavior outcomes with regards to reducing wildfire exposure to Access routes, Buildings, or infrastructure with the Development. This section was necessary to set consistent criteria for establishing Fuel Breaks across the state while simultaneously

accounting for the diversity of vegetation, weather, and topography that influence fire behavior conditions across the state of California, as well as the diversity of methodologies and strategies available to Fire Authorities and Local Jurisdictions for achieving the Fuel Break design objectives.

§1276.03(c) provides a non-exhaustive list of the typical locations of Fuel Breaks that would be reasonably associated with Building construction. This is necessary to establish the expectations of these fuel breaks so they may be evaluated for implementation success.

- (1) This paragraph focuses Fuel Breaks on locations that will support Defensible Space around buildings, or infrastructure. In situations where setbacks on individual parcels cannot accommodate the full 100 feet of Defensible Space pursuant to PRC 4291, the importance of the location and treatment of these fuel breaks is increased.
- (2) This paragraph focuses Fuel Breaks on locations that will support potential fire apparatus access roads, or evacuation routes. Locating and treatment of Fuel Breaks along these routes to lower the fire behavior is necessary to include as it will increase the safety of firefighters and public by reducing the radiant and convective heat they may be unintentionally exposed to.
- (3) This paragraph focuses Fuel Breaks on locations that will support and allow for the effective reduction in fire behavior of a wildfire spreading from, or exposing a hazardous land use that can create a cumulative increase in fire threat. Examples of hazardous land uses are, but not limited to, sawmills, log sorts, lumber yards, flammable gas, or flammable liquid facilities, powerlines. These sites are hazardous because they increase the potential for fire ignition, fire behavior, or explosion when exposed to radiant heat, convective heat, or ember impacts. Locating and treatment of fuel breaks adjacent to these land uses to lower the fire behavior is important, as it will increase the safety of firefighters and public by reducing the radiant and convective heat they may be exposed to during a wildfire event, or their potential for starting and spreading a wildfire.
- (4) This text focuses Fuel Breaks on locations that will support the effectiveness of strategic Ridgelines, Greenbelts or other locations that are strategically important for reducing fire exposure to a community.

§1276.03 (d) specifies the requirement that Fuel Breaks must be completed prior to commencing permitted construction. This requirement is necessary to address the increased risk of fire ignition during the construction phase, given the large amounts of stored combustibles present, and Structures that have not yet been completed and the fire resistant features, such siding, windows, doors, vents and roof covering have not yet been installed. This situation leaves the structures and defensible space highly susceptible to fire, therefore it is necessary to minimize both the potential exposure of buildings under construction to fire, and minimize the potential of the construction site becoming an ignition source for a wildfire.

§1276.03 (e) adds a requirement that Fuel Break design and implementation consider the most ecologically and site appropriate treatment option, which is necessary to

ensure that impacts of fuel treatment are minimized. In many California ecosystems, the treatment of a Fuel Break, or a wildfire that burns into a strategically located fuel break that is designed to reduce fire intensity, rate of spread and/or crown fire potential, can also result in beneficial fire effects to the local and surrounding ecosystem and environmental conditions.

§1276.03 (f) requires a minimum of one point of access for fire suppression resources to Fuel Breaks. Depending on the site conditions and need, the Local Jurisdiction may require additional access routes and access points. Fuel Breaks are designed to lower potential fire behavior to provide a strategic fire suppression advantage; ground based fire suppression resources are still required to stop a wildfire from spreading. Therefore, it is necessary to specify that access to the Fuel Break be installed, to ensure firefighter access to these strategic tactical positions.

1276.04 Greenbelts, Greenways, Open Spaces and Parks

This section title was changed to more accurately reflect the full scope of requirements. Furthermore, there were substantial revisions to the existing language of this section. The existing language was deleted, because the revised language offers greater clarity and specificity and to retain the existing language would have been confusing and redundant.

New language in §1276.04 (a) requires that any "...Greenbelt, Greenway, open space, park, landscaped or natural area, or portions thereof..." that will serve as a Fuel Break will be subject to the requirements of §1276.03 Fuel Breaks. Adding this language was necessary to clarify that these areas cannot serve as Fuel Breaks unless the vegetation within it is treated so it is in a condition that reduces wildfire behavior. This section was expanded to include other natural areas in addition to Greenbelts. This was necessary to recognize that there are other natural areas that could be considered as a potential Fuel Break and therefore should also be subject to the same requirements as a Greenbelt when they are intended to serve as a Fuel Break. Clarifying and expanding this section is also necessary to improve fire safety by setting up a consistent approach for natural areas that are intended to serve as a Fuel Break.

§1276.04 (b) provides the authority for a Local Jurisdiction to require Greenbelts or Greenways or other open areas for the purpose of potential public areas of refuge, or firefighter safety zones, as a last resort if evacuation is not possible. This is necessary to specify that the Local Jurisdiction retains the authority to propose Greenbelts for other uses, such as areas of last resort.

1276.05 Maintenance of Fuel Breaks

This is a new section, but contains revised text from the existing § 1276.02. The title of this section more clearly reflects its content. The existing text in § 1276.02 is largely deleted here; as the revised language provides for greater clarity and specificity, retaining that language in this section would be redundant and confusing.

§1276.05(a) provides the requirement for Fuel Breaks to be maintained in a manner consistent with the requirements of the Fuel Break section. Vegetated areas are dynamic and can change over time at varying rates, dependent on the specific site characteristics. This provision was necessary to ensure that Fuel Breaks as required in these regulations remain effective through ongoing maintenance and continue to serve the purpose of fire risk reduction to adjacent Buildings or Development.

§1276.05(b) revised the language in §1276.02 to require a binding mechanism that compels the property owner or land manager to undertake Fuel Break maintenance and ensure that funding is in place for the work. This revision was necessary to apply the maintenance provision to Fuel Breaks through a legal structure that is specific and enforceable.

1276.06 Disposal of Flammable Vegetation and Fuels

This is a new section containing revised text from existing § 1276.03. This section makes revisions to the existing text to improve clarity. It removes references to the activities of “chipping” and “burying,” which is necessary to reduce redundancy as chipping and burying would both require the vegetation and fuels to be removed to a different site, which is already specified in this section. This revised language also specifies that such disposal shall comply with all applicable laws, which is necessary to acknowledge that these regulations are not the only regulatory scheme that provides standards for such activities. Existing language which required that the disposal of vegetation and fuel be complete prior to completion of road construction or final inspection of a building permit was removed for the purpose of clarity; this deletion was necessary because not all relevant Building construction or development requires either Road construction or a final inspection of a building permit. This requirement was too specific without offering a clear fire safety benefit.

ECONOMIC IMPACT ANALYSIS (pursuant to GOV § 11346.3(b)(1)(A)-(D) and provided pursuant to 11346.3(a)(3))

The **effect** of the proposed action is the following:

- reorganized regulations that provide clear standards to the regulated public;
- consistency in terms within and between these regulations and relevant codes;
- Standards for fuel breaks and greenbelts near communities;
- Measures to protect undeveloped ridgelines; and
- more options to achieve prescriptive requirements.

Creation or Elimination of Jobs within the State of California

The regulatory amendments as proposed represent a continuation of existing fire safe development regulations. No creation or elimination of jobs will occur as a result of this action.

Creation of New or Elimination of Businesses within the State of California

The regulatory amendments as proposed represent a continuation of existing fire safe development regulations. Implementation costs are likely to fall on local jurisdictions and

not onto private individuals or businesses. The proposed regulation will neither create new businesses nor eliminate existing businesses in the State of California.

Expansion of Businesses Currently Doing Business within the State of California

The regulatory amendments as proposed represent a clarification and refinement of existing fire safe development regulations. These regulations do not expand the scope of existing fire safe regulations, which already apply in both the SRA and LRA VHFHSZ. The proposed regulation will not result in the expansion of businesses currently doing business within the State.

Benefits of the Regulations to the Health and Welfare of California Residents, Worker Safety, and the State's Environment

The proposed action will have beneficial effects on health, welfare, and worker safety, and may benefit the State's environment. This proposed action relates to the creation of defensible space in the SRA and LRA VHFHSZ, which provides for the safety of residents by preventing home ignition and stopping or slowing the spread of wildfires and provides for the safety of firefighters when responding to wildfires. Defensible space may also benefit the environment by slowing or stopping the spread of a wildfire. Reducing a wildfire's impacts benefits human health, via less emissions and particulate matter reducing air quality, and by reducing the potential destruction of ecological communities.

Business Reporting Requirement (pursuant to GOV § 11346.5(a)(11) and GOV § 11346.3(d))

The proposed regulation does not impose a business reporting requirement.

Summary

In summary, the proposed action:

- Will not create jobs within California (GOV § 11346.3(b)(1)(A)).
- Will not eliminate jobs within California (GOV § 11346.3(b)(1)(A)).
- Will not create new businesses (GOV § 11346.3(b)(1)(B)).
- Will not eliminate existing businesses within California (GOV § 11346.3(b)(1)(B)).
- Will not affect the expansion or contraction of businesses currently doing business within California (GOV § 11346.3(b)(1)(C)).
- Will yield nonmonetary benefits (GOV § 11346.3(b)(1)(D)). For additional information on the benefits of the proposed regulation, please see anticipated benefits found under the "Introduction Including Public Problem, Administrative Requirement, or Other Condition or Circumstance the Regulation is Intended to Address."

SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESS, INCLUDING ABILITY TO COMPETE (pursuant to GOV §§ 11346.3(a), 11346.5(a)(7) and 11346.5(a)(8))

The proposed action will not have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states, by making it costlier to produce goods or services in California.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE RELIED UPON TO SUPPORT INITIAL DETERMINATION IN THE NOTICE THAT THE PROPOSED ACTION WILL NOT HAVE A SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS (pursuant to GOV § 11346.2(b)(5) and GOV § 11346.5(a)(8))

The Board relied upon its extensive knowledge and experience related to the development of minimum fire safety regulations, as well as representative government costs identified within current state materials. There will be no significant adverse economic impact on businesses, because the proposed regulatory action reorganizes the regulations to provide clear standards to the regulated public; implements consistency in terms within and between these regulations and relevant codes, maintain standards for fuel breaks and greenbelts near communities, and promote measures to protect undeveloped ridgeline as well as other options to achieve prescriptive requirements.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENT RELIED UPON (pursuant to GOV SECTION 11346.2(b)(3))

The Board relied on the following list of technical, theoretical, and/or empirical studies, reports or similar documents to develop the proposed action:

1. Syphard, A. D., Radeloff, V.C., Hawbaker, T. J., and Stewart, S. I. 2009. Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems. *Conservation Biology* 23(3):758-769.
2. Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., et al. 2007. Human influence on California fire regimes. *Ecological Applications* 17(5):1388-1402
3. Price, O., and R. A. Bradstock. 2014. Countervailing effects of urbanization and vegetation extent on fire frequency on the Wildland urban interface: disentangling fuel and ignition effects. *Landscape and Urban Planning* 130:81-88.
4. National Research Council of the National Academies. *Advancing the Science of Climate Change*. 2010. The National Academies Press: Washington, DC.
5. California Department of Forestry and Fire Protection Emergency Fund Fire Suppression Expenditures. 2020. <https://www.fire.ca.gov/media/px5lnaaw/suppressioncostsonepage1.pdf>. Accessed March 19, 2020.

6. California Department of Forestry and Fire Protection CAL FIRE ENGINE MODELS 34-35 FACT SHEET. January 2008.
7. California Department of Forestry and Fire Protection Top 20 Largest California Wildfires <https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf>. Accessed March 19, 2021.
8. California Department of Forestry and Fire Protection Top 20 Most Desctructive California Wildfires. <https://www.fire.ca.gov/media/t1rdhizr/top20_destruction.pdf>. Accessed March 19, 2021.
9. California Manual of Uniform Traffic Control Devices 2017 Revision 2
10. National Fire Protection Association (NFPA), Standard 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting", 2017 ed.
11. American Association of State Highway and Transportation Officials (AASHTO). 2018. A Policy on Geometric Design of Highways and Streets, 7th Edition.
12. Association of California Water Supply Agencies (ACWA) written communications dated January 19, 2021; verbal communications during Board workshops (December 22, 2020, January 27, 2021)
13. Los Angeles County Fire Department written communications dated December 31, 2020.
14. Benefield, M. n.d. Southern California Fuels Treatment Effectiveness Review. USDA Forest Service, Central Oregon Fire Management Service. <https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5295359.pdf> Accessed March 18, 2021.
15. California Department of Forestry and Fire Protection. 2019. CAL FIRE Fuel Breaks and Use During Fire Suppression. March 21. <https://www.fire.ca.gov/media/5585/fuel_break_case_studies_03212019.pdf> Accessed March 18, 2021.
16. California Department of Transportation (Caltrans). n.d. Highway Design Manual, 7th Edition. <<https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>> Accessed March 18, 2021.
17. Chen Y., Shafi S., Chen Y. 2020. Simulation pipeline for traffic evacuations in urban areas and emergency management policy improvements through case studies. Transportation Research Interdisciplinary Perspectives, Volume 7, 100210. <<https://doi.org/10.1016/j.trip.2020.100210>> Accessed March 18, 2021.
18. Excerpts from Fire Chiefs Working Group survey prepared and received September 2020; communications during scheduled calls on August 12, August 17, September 17, October 14, October 19, December 14 2020
19. International Organization for Standardization (ISO). n.d. Water Supply Evaluations <<https://www.isomitigation.com/ppc/technical/water-supply-evaluations/>> Accessed March 18, 2021. Maranghides, A. , Link, E. , Brown, C. , Mell, W. , Hawks, S. , Wilson, M. , Brewer, W. , Vihnanek, R. and Walton, W. 2021. A Case Study of the Camp Fire - Fire Progression Timeline, Technical Note (NIST TN), National Institute of Standards and Technology, Gaithersburg, MD. <<https://doi.org/10.6028/NIST.TN.2135>> (Accessed March 18, 2021)
20. Mowery, M., Read, A., Johnston, K., Wafaie, T. 2019. Planning the Wildland-Urban Interface. American Planning Association Planning Advisory Services

- Report 594. <<https://www.planning.org/publications/report/9174069/>> Accessed March 18, 2021.
21. National Lime Association. 2004. Lime-Treated Soil Construction Manual - Lime Stabilization & Lime Modification. <https://www.lime.org/documents/publications/free_downloads/construct-manual2004.pdf> Accessed March 18, 2021
 22. Syphard, A. D., Keeley J. E., Brennan T. J. 2011. "Comparing the role of fuel breaks across southern California national forests." *Forest Ecology and Management* 261 2038-2048. <doi:10.1016/j.foreco.2011.02.030> Accessed March 18, 2021.
 23. Transoft Solutions, AutoTURN software. <https://www.transoftsolutions.com/vehicle-swept-path/?setRegion=en>. Accessed March 19, 2020.
 24. United States Department of Agriculture (USDA), United States Forest Service. 2014. 2013 Mountain Fire Fuel Treatment Effectiveness Summary. Pacific Southwest Region, October 2014. <https://www.fs.fed.us/adaptivemanagement/reports/fbat/MountainFireFTE_110714_newFinal.pdf> Accessed March 18, 2021.
 25. Nicas, Jack, et al. "Forced Out by Deadly Fires, Then Trapped in Traffic." *The New York Times*, 11 Nov. 2018. <https://www.nytimes.com/2018/11/11/us/california-fire-paradise.html>.
 26. US Federal Highway Administration "Highway Functional Classification Concepts, Criteria, and Procedures," 2013 Edition
 27. American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 17th Edition, published 2002
 28. Email from Bakyt Djaparov, CAL FIRE Budget Analyst, to Edith Hannigan, Board Land Use Planning Program Manager, "Costs for Associate Environmental Planner," November 25, 2020.

DOCUMENTS INCORPORATED BY REFERENCE (pursuant to 1 CCR § 20)

Pursuant to 1 CCR § 20(c), the follow documents are incorporated by reference in these regulations:

1. California Manual of Uniform Traffic Control Devices 2017 Revision 2
2. American Association of State Highway and Transportation Officials (AASHTO). 2018. A Policy on Geometric Design of Highways and Streets, 7th Edition.
3. National Fire Protection Association (NFPA), Standard 1142, "Standard on Water Supplies for Suburban and Rural Fire Fighting", 2017 ed.
4. US Federal Highway Administration "Highway Functional Classification Concepts, Criteria, and Procedures," 2013 Edition
5. American Association of State Highway and Transportation Officials (AASHTO) Standard Specifications for Highway Bridges, 17th Edition, published 2002

The Board has available the entire rulemaking file, including all information considered as a basis for this proposed regulation, available for public inspection and copying at its office in Sacramento, California.

REASONABLE ALTERNATIVES TO THE PROPOSED ACTION CONSIDERED BY THE BOARD, IF ANY, INCLUDING THE FOLLOWING AND THE BOARD'S REASONS FOR REJECTING THOSE ALTERNATIVES (pursuant to GOV § 11346.2(b)(4)(A) and (B)):

- **ALTERNATIVES THAT WOULD LESSEN ANY ADVERSE IMPACTS ON SMALL BUSINESS AND/OR**
- **ALTERNATIVES THAT ARE LESS BURDENSOME AND EQUALLY EFFECTIVE IN ACHIEVING THE PURPOSES OF THE REGULATION IN A MANNER THAT ENSURES FULL COMPLIANCE WITH THE AUTHORIZING STATUTE OR OTHER LAW BEING IMPLEMENTED OR MADE SPECIFIC BY THE PROPOSED REGULATION**

The alternatives provided herein are provided pursuant to the APA (**GOV § 11346.2(b)(4)**) exclusively.

The Board has considered the following alternatives and rejected all but the “Proposed Action” alternative.

Alternative 1: No Action

The Board considered taking no action, but the “No Action” alternative was rejected because it would not address the legislative mandates in PRC 4290 to address fuel breaks, greenbelts, and ridgelines.

Alternative 2: Performance Based Standards

This alternative would have utilized performance-based standards instead of prescriptive based standards to achieve fire safety.

The Board rejected this alternative as specific, prescriptive requirements are necessary to achieve fire safety. Prescriptive requirements establish clear and enforceable statewide minimum standards that are more effective than performance based measures. Where possible, the Board included performance based measures instead of or in addition to prescriptive standards.

Alternative 3: Proposed Action

The Board accepted the “Proposed Action” alternative to address the problem as it is the most cost-efficient, equally or more effective, and least burdensome alternative. Alternatives 1 and 2 would not be more effective or equally effective while being less burdensome or impact fewer small businesses than the proposed action. Specifically, alternatives 1 and 2 would not be less burdensome and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the authorizing statute being implemented or made specific by the proposed regulation than the proposed action.

Additionally, alternatives 1 and 2 would not be more effective in carrying out the purpose for which the action is proposed and would not be as effective and less burdensome to affected private persons than the proposed action, or would not be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law than the proposed action. Further, none of the alternatives would have any adverse impact on small business. "Small business" means independently owned and operated, not dominant in their field of operations, and having fewer than 100 employees.

Prescriptive Standards versus Performance Based Standards (pursuant to GOV §§11340.1(a), 11346.2(b)(1) and 11346.2(b)(4)(A)):

Pursuant to **GOV §11340.1(a)**, agencies shall actively seek to reduce the unnecessary regulatory burden on private individuals and entities by substituting performance standards for prescriptive standards wherever performance standards can be reasonably expected to be as effective and less burdensome, and that this substitution shall be considered during the course of the agency rulemaking process.

The proposed action introduces additional prescriptive or performance based standards, but also provides for alternatives to those prescriptive standards. These alternatives allow government agencies and the regulated public to meet the intent of any given requirement in the State Minimum Fire Safe Regulations with a different tool or standard than that strictly allowed in these regulations. Alternative 3 is preferred as it provides the most flexible standards to the regulated public. The rationales for individual provisions serve as the explanation for why a standard is prescriptive.

Pursuant to **GOV § 11346.2(b)(1)**, the proposed action does not mandate the use of specific technologies or equipment.

Pursuant to **GOV § 11346.2(b)(4)(A)**, Alternatives 1 and 2 were considered and ultimately rejected by the Board in favor of the proposed action. The proposed action does not mandate the use of specific technologies or equipment, but does prescribe specific actions or procedures. Where possible, the Board included performance based measures instead of or in addition to prescriptive standards.

DESCRIPTION OF EFFORTS TO AVOID UNNECESSARY DUPLICATION OR CONFLICT WITH THE CODE OF FEDERAL REGULATION (pursuant to GOV § 11346.2(b)(6))

The Code of Federal Regulations has been reviewed and based on this review, the Board found that the proposed action neither conflicts with, nor duplicates, Federal regulations. There are no comparable Federal regulations for development and defensible space on private lands.

OTHER STATUTORY REQUIREMENTS (Gov. Code § 11346.5(a)(4))

The California Environmental Quality Act (CEQA) requires that state agencies consider the potentially significant environmental impacts of their discretionary actions, which may include the development of regulations. Pursuant to CEQA, the adoption of regulations may, but will not inevitably, constitute a “project,” that is, “an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment” undertaken, supported, or approved by a public agency. If the development of regulations is determined to be a project, then to comply with CEQA the public agency must determine whether the project is exempt under either a statutory or categorical exemption. If the project is exempt, then no further environmental review is required under CEQA. (See Public Resources Code § 21084; 14 CCR § 15300.) If the project is not exempt, in accordance with CEQA the public agency must perform an environmental analysis, typically leading to either a Negative Declaration or an Environmental Impact Report (EIR). The approval by the public agency of one of these environmental documents or determinations typically occurs prior to the approval of the project, which in this case would be the adoption of the regulations.

The Board has not made a determination as to whether the present rulemaking action is a project under CEQA, nor whether, if it is a project, the development of the regulations is exempt from CEQA or another CEQA document, such as an EIR or a Negative Declaration, is required. If the Board determines that the development of the regulations is a project, and the project is not exempt, then CEQA will constitute one of the “other matters as are prescribed by statute applicable to the specific state agency or to any specific regulation or class of regulations” under § 11346.5(a)(4). If CEQA applies, the Board shall comply with all applicable CEQA requirements.

^[1] Syphard, A. D., Radeloff, V.C., Hawbaker, T. J., and Stewart, S. I. 2009. Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems. *Conservation Biology* 23(3):758-769.

^[2] Syphard, A. D., Radeloff, V. C., Keeley, J. E., Hawbaker, T. J., Clayton, M. K., Stewart, S. I., et al. 2007. Human influence on California fire regimes. *Ecological Applications* 17(5):1388-1402

^[3] Price, O., and R. A. Bradstock. 2014. Countervailing effects of urbanization and vegetation extent on fire frequency on the Wildland urban interface: disentangling fuel and ignition effects. *Landscape and Urban Planning* 130:81-88.

^[4] National Research Council of the National Academies. *Advancing the Science of Climate Change*. 2010. The National Academies Press: Washington, DC.

^[5] CAL FIRE Jurisdiction Fires, Acres, Dollar Damage, and Structures Destroyed (1933-2015). 2017. <http://cdfdata.fire.ca.gov/pub/cdf/images/incidentstatevents_270.pdf>. Accessed July 2, 2018.

^[6] California Department of Forestry and Fire Protection Emergency Fund Fire Suppression Expenditures. 2017. <http://www.fire.ca.gov/fire_protection/downloads/SuppressionCostsOnepage.pdf>. Accessed July 2, 2018.