

CZU LIGHTNING COMPLEX FIRES



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Fire Access Standards

The purpose of this document is to provide guidance for rebuilding where homes and outbuildings were damaged or destroyed in the CZU Lightning Complex fires in August 2020. This guidance covers access roads, residential driveways, and requirements for new residential construction in the State Responsibility Area (SRA).

It has been identified that several critical life safety components were not in place or had not been maintained throughout the CZU Lightning Complex fire area. The lack of proper access road(s), clearance along access road(s) and defensive space around residential structures were all components that hindered firefighting efforts. In the rebuilding process fire agencies will be considering minimum standards for all these safety components.

To speed up the recovery process and identify potential hurdles to the recovery process, the Santa Cruz County Fire Marshal's Office in conjunction with the Fire Protection Districts of Boulder Creek, Ben Lomond, and Felton have collaborated to provide the public with this quick reference sheet on the basics of rebuilding a residential structure after a disaster.

For properties that had residential structures that were legally permitted prior to August 15th, 2020 and which were damaged or destroyed in the CZU Lightning Complex fires of 2020, the minimum access standards will apply to replacement buildings. If the minimum standard cannot be attained, then an alternate means may be allowed on a case by case basis as determined by the authority having jurisdiction (AHJ). The standard new building construction requirements apply to all new residential construction as highlighted below. Commercial buildings are not addressed in this fact sheet.

For properties that had residential structures that did not have permits and which were damaged or destroyed in the CZU Lightning Complex fires of 2020, the minimum access standards will also apply to all replacement buildings. The standard new building construction requirements apply to all new residential construction as highlighted below.

Access road, water storage, and hydrant installations are required to be in place prior to rough framing and will be verified by County Building and Fire inspectors.

MINIMUM ACCESS ROAD STANDARDS

Width: Twelve feet (12') wide drivable surface for roads and driveways For roads serving 3 or more residential structures eighteen feet (18') wide as determined by the AHJ.

Surface: Based on the slope of the road. Also see Fire Prevention Standard FPO-012.

0%-5% - Six inches (6") ninety-five percent (95%) compacted base rock (or equivalent).

5%-15% - Six inches (6") of ninety-five percent (95%) compacted base rock (or equivalent) plus oil and screen surface.



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15%-20% - Six inches (6") ninety-five percent (95%) compacted base rock (or equivalent) plus two inches (2") asphaltic concrete (AC) surface.

Maximum grade: Twenty percent (20%).

Minimum turn radii: Thirty-five-foot (35') centerline radius.

Turnouts: Required every five hundred feet (500') if the road or driveway is twelve feet (12') in width and greater than one thousand feet (1000') in length. See Fire Prevention Standard FPO-013 for dimensions.

Turnarounds: Required if the road or driveway serving the house is dead-end and greater in length than one hundred and fifty feet (150'). See Fire Prevention Standard FPO-015 for dimensions.

Vegetation clearance along roads and driveways: Ten feet (10') from the edge of the road and thirteen feet six inches (13'-6") vertical clearance is required. See Fire Prevention Standard FPO-012.

NEW RESIDENTIAL BUILDING CONSTRUCTION REQUIREMENTS

Fire Sprinklers: Are required for all new residences. This is a deferred submittal permit (separate from a building permit). See Fire Prevention Standard FPO-005.

Areas served by a water purveyor: A hydrant within six hundred feet (600') of the fire sprinklered residence, as determined by the AHJ.

Areas not served by a water purveyor: Ten thousand (10,000) gallons of stored water and a wharf head style hydrant are required. This is a deferred submittal permit (separate from a building permit). See Fire Prevention Standard FPO-007.

2019 California Building Code Chapter 7A and Residential Code R302: The home hardening features found in Chapter 7A and/or R302 are required for all newly constructed homes in the State Responsibility Areas (SRA).

Defensible Space: Defensible space as outlined in Public Resource Code Sections (PRC) 4290 and 4291 is required for all buildings in the SRA.

Addressing: Address numbers are required on the front of the residence visible from the street, four inches (4") tall and a contrasting color to the background (white reflective numbers on a green background). See Fire Prevention Standard FPO-016.

Street signs: Road naming signs are required for all named roads. They should be reflective with white letters on green background.

Smoke and carbon monoxide alarms: Smoke and carbon monoxide alarms are required in every bedroom, in the hallway outside the bedrooms and one per floor. They are required to be hardwired, with battery backup and interconnected.





COUNTY OF SANTA CRUZ
RECOVERY PERMIT CENTER

Phone 831-454-5323
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- Santa Cruz County Fire Department (831) 335-6748 | 6059 Highway 9, Felton CA 95018
- Boulder Creek Fire Protection District (831) 338-7222 | 13230 Central Ave., Boulder Creek CA 95006
- Ben Lomond Fire Protection District (831) 336-5495 | P.O. Box 27, Ben Lomond CA 95005
- Felton Fire Protection District (831) 335-4422 | 131 Kirby St., Felton CA 95018

MINIMUM ACCESS ROAD STANDARDS CHECKSHEET

Address:

APN: _____ Date: _____

Width: Meets minimum Does not meet minimum AHJ Variance

Comments:

Surfacing: Meets minimum Does not meet minimum AHJ Variance

Comments:

Grades: Meets minimum Does not meet minimum AHJ

Variance

Comments:

Turn Radii: Meets minimum Does not meet minimum AHJ Variance

Comments:

Turnouts: Meets minimum Does not meet minimum AHJ Variance

Comments:



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Turnarounds:

Meets minimum

Does not meet minimum

AHJ Variance

Comments:

Bridges/Culverts:

Meets minimum

Does not meet minimum

AHJ Variance

Comments:

Vegetation Clearance: Meets minimum

Does not meet minimum

AHJ Variance

Comments:

Site Review Comments:

Inspector:

Phone:



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MINIMUM ACCESS ROAD STANDARDS

Width: Twelve feet (12') wide drivable surface for roads and driveways. For roads serving 3 or more residential structures eighteen feet (18') wide as determined by the AHJ.

- The typical fire engine is ten feet (10') wide, mirror to mirror, leaving one foot on either side of the fire engine for maneuvering.

Surface: Based on the slope of the road. See Fire Prevention Standard FPO-012.

- **0%-5%** - Six inches (6") ninety-five percent (95%) compacted base rock (or equivalent).
- **5%-15%** - Six inches (6") ninety-five percent (95%) compacted base rock (or equivalent) plus oil and screen surface.
- **15%-20%** - Six inches (6") ninety-five percent (95%) compacted base rock (or equivalent) plus two inches (2") asphaltic concrete (AC) surface.
- These surfacing conditions provide an "all-weather" driving surface that all fire equipment can negotiate without needing to be four-wheel drive capable.

Maximum grade: Twenty percent (20%).

- This is the maximum slope fire engines should negotiate safely.

Minimum turn radii: Thirty-five foot (35') centerline radius.

- This is the most acute turn a fire engine can negotiate without having to make a "three-point turn."

Turnouts: Required every five hundred feet (500') if the road or driveway is twelve feet (12') in width and greater than one thousand feet (1000') in length. See Fire Prevention Standard FPO-013 for dimensions.

- Turnouts spaced roughly every five hundred feet (500') provides an opportunity for public and fire vehicles to pass by each other safely.

Turnarounds: Required if the road or driveway serving the house is dead-end and greater in length than one hundred and fifty feet (150'). See Fire Prevention Standard FPO-015 for dimensions.

- An area is needed for a fire engine to safely turnaround without damaging the fire engine or private property.

Bridges and/or culverts: Bridges and culverts must be designed to carry the load of vehicles including fire apparatuses. The Cal Trans standard is AASHTO HB-17.

- This is critically important as fire equipment can reach weights of 80,000 lbs.

Vegetation clearance along roads and driveways: Ten feet (10') from the edge of the road and thirteen feet six inches. (13'-6") vertical clearance is required. See Fire Prevention Standard FPO-012.

- A road as narrow as twelve feet (12') wide must have proper vegetation clearance along the sides and overhead for fire equipment to safely negotiate without damaging the fire engine.

