

SUBJECT: ORDINANCE NO. 1891, SERIES 2025 – AN ORDINANCE
AMENDING THE CITY OF LOUISVILLE FIRE HARDENING
CODE FOR STRUCTURES – 2ND READING – PUBLIC HEARING
(advertised City of Louisville website 02/07/25)

DATE: MARCH 4, 2025

PRESENTED BY: ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT
DIRECTOR
CHAD ROOT, CHIEF BUILDING OFFICIAL

SUMMARY:

The proposed ordinance updates Chapter 15.70, Fire Hardening Code for Structures to allow Class B materials for decks and fences. The purpose of the amendment is to increase material availability and affordability of new and replacement decks and fences, and thus, obtain higher permitting and code compliance rates when decks are installed.

Since first reading, additional language was added to the fence material standards, which is shown in **Bold Double Underline**. This change clarifies that ignition resistant materials, such as metal, masonry, or stone may be allowed even though these materials do not have an ASTM E84 rating.

- D. *Fire and Ignition Resistant Fencing within 5 feet of a structure.* New construction and all replacement fences within 5 feet of the structure must be fire and ignition resistant with a ~~maximum~~ flame spread index of 25 26-75 (Class B) or better **or an ignition resistant material such as metal, masonry, or stone.**

BACKGROUND:

On November 4, 2024, City Council adopted Ordinance 1884, Series 2024, establishing a City-wide fire hardening building standards that address the following building elements:

- Roof coverings
- Siding and eave materials
- Deck surface materials
- Fencing materials (within 5-feet of the home)
- Vent coverings
- Solar panel screens
- Gutter materials and guards

ANALYSIS:

The current code requires that fence and certain deck materials meet a Class A flame spread rating of 25 or less. The standard typically used to determine flame spread ratings is the American Society for Testing and Material (ASTM) E84 testing method for Flame Spread Index (FSI). The following are the different standardized classifications:

Class A – 0-25 FSI

Class B – 26-75 FSI

Class C – 76-200 FSI

For decking materials, Class A, Class B, and Class C rated material standards are used in many Wildland Urban Interface codes. While Class A rated decking materials have the highest level of flame spread resistance, they are more expensive than Class B and Class C decking materials and there are less options available. In addition to consideration for cost, having a broader range of available materials will help to ensure that more contractors and homeowners obtain building permits and comply with the fire hardening code.

The following is a sample of pricing and local availability of Class A vs Class B decking materials.

Table 1: Comparison of Deck Board Cost and Availability

Supplier	Class A: FSI 0-25			Class B: FSI 26-75		
	Brand	\$ Per Linear Ft	Availability	Brand	\$ Per Linear Ft	Availability
Alpine Lumber	Vintage Collection Timber Tech	\$8.62	Special Order	Harvest Collection Timber Tech	\$5.70	Special Order
Lafayette Lumber	Promenade Fibron	\$8.45	Special Order	Porch Collection Timber Tech	\$7.69	Special Order
Budget Home Center	Vintage Collection Timber Tech	\$6.94	In Stock	Porch Collection Timber Tech	\$5.67	In Stock
Fox Galbraith	Promenade Fibron	\$6.90	Special Order	Paramount Fibron	\$6.28	Special Order
Lowes	Vintage Collection Timber Tech	\$8.06	Special Order	Porch Collection Timber Tech	\$5.62	Special Order
Home Depot	Promenade Fibron	\$6.85	Special Order	Paramount Fibron	\$5.75	Special Order
	Average Cost	\$7.64		Average Cost	\$6.12	

While allowing a Class C (76-200 FSI) decking material is not part of the proposal, staff would like to note that Class C decking materials are available in stock at the Louisville Home Depot and Arvada Lowes at a significantly more affordable price than the Class A and Class B decking options listed above (\$2.25 per linear ft average). Local retailers such as Home Depot and Lowes keep other composite decking brands in stock, but they do not have an ASTM E84 FSI rating.

As additional context on the ASTM E84 standard in WUI codes, the California Department of Forestry and Fire Protection (Cal Fire) publishes a building materials listing handbook of WUI compliant building materials. To qualify as a WUI compliant deck material in California, the material must meet the California material testing protocol SFM 12-7a-4a. The list of Cal Fire approved decking materials includes a mix of Class A, Class B, and Class C compliant decking material options, and decking without an ASTM E84 rating.

LINK: [Cal Fire WUI Products Handbook](#)

The following provides a comparison of decking material costs using the following assumptions:

- Deck Size: 300 sq. ft. (15 ft. x 20 ft.)
- 10 Steps at 3 ft. wide
- 70 ft. of railings
- Metal deck railings for both Class A and Class B decking
- Dose not include deck framing or hardware

Table 2: Comparison of Deck Board and Railing Materials Cost

Class A	Class B	Class C	Pressure Treated Wood
\$7,599	\$6,556	\$3,901	\$1,665

While Class A has the highest fire rating, and thus, the most protection, Class B and Class C also provide a level of fire protection much higher than most pressure treated soft woods. The driving factors for staff's proposal to allow Class B decking materials is to improve compliance with the code by ensuring wider availability of material options and more affordable options. Staff also is taking into consideration that this is a City-wide code and not just targeted in the most vulnerable wildland-urban interface areas of the city, and thus, improving the fire rating overall from the baseline of pressure treated soft woods will improve fire resiliency with a higher compliance rate. If Council desires to further expand material options and affordability, Class C decking could also be an allowed material option.

While the primary issue is decking material availability and costs, staff identified that there are some composite fencing materials that also could meet a Class B rating, providing more material options while still improving fire protection over cedar fencing.

An example of a Class B rated composite fencing product is Seclusion Trex fencing panels. While there is a premium cost on this particular brand, it provides additional options for those who want a solid rated fence vs an open metal fencing type.

Table 3: Comparison of 6 ft. Tall x 8 ft. Wide Fence Panel Cost

Fencer Spaced Bar (Black Aluminum)	Seclusion Trex	Cedar
\$273	\$474	\$100

Staff also proposes adding language to allow ignition resistant fencing materials that may not be rated under the ASTM E84 standard, such as metal, masonry, and stone. The most common fire-resistant fencing materials will likely be coated aluminum fencing, metal panels, and chain link, which do not have ASTM E84 ratings.

FISCAL IMPACT:

There is no anticipated fiscal impact from the proposed amendments.

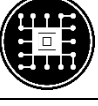
STAFF RECOMMENDATION:

Staff recommends approval on first reading and setting the public hearing for March 4, 2025.

ATTACHMENTS:

1. Ordinance No. 1891, Series 2025
2. Letter from Louisville Fire Protection District
3. Staff Presentation

STRATEGIC PLAN IMPACT:

☐	 Financial Stewardship & Asset Management	☐	 Reliable Core Services
☐	 Vibrant Economic Climate	☐	 Quality Programs & Amenities
☒	 Engaged Community	☐	 Healthy Workforce
☐	 Supportive Technology	☐	 Collaborative Regional Partner

(Second Reading changes shown in **Bold Double Underline**)

**ORDINANCE NO. 1891
SERIES 2025**

**AN ORDINANCE AMENDING THE CITY OF LOUISVILLE FIRE HARDENING CODE
FOR STRUCTURES**

WHEREAS, the City Council adopted the Louisville Fire Hardening Code for Structures by Ordinance No. 1884, Series 2024 in order to reduce threats from wildfires and to mitigate structure fires from spreading to adjacent residential and commercial structures; and

WHEREAS, it is deemed to be in the interest of the public health, safety and general welfare for the residence of Louisville to adopt such code; and

WHEREAS, the City Council desires to amend some of the provisions of the code to ensure there is building material availability for decks and fences that meet the minimum standards and intent of the code; and

WHEREAS, the City Council, after proper notice as required by law, has held a public hearing on this ordinance providing for the adoption of said codes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LOUISVILLE, COLORADO:

Section 1. Chapter 15.70 of the Louisville Municipal Code is hereby amended as follows (new text underlined and deleted text as ~~cross-through~~):

Chapter 15.70

Fire Hardening Code for Structures

Sec. 15.70.010. - Applicability

This Chapter provides minimum City-wide building and construction standards for residential and commercial structures in order to decrease threats from wildfires and the spread of fire between structures. The requirements set forth in this Chapter shall apply to all new construction, additions, and replacement of building materials, except as set forth in Section 15.70.030

Sec. 15.70.020. – Construction Standards.

- A. *Class A Roof Coverings* tested with ASTM E108 or UL 790 are required on all new structures, additions and replacement roofs where the replaced roof is 50% or greater. Examples of a Class A roof coverings include metal, membrane, asphalt, tile, clay, concrete, stone and slate shingles.

- B. *Fire Resistant Siding and Eaves* are required on all new structures, additions and where 50% or more of the siding or eave is replaced. Siding and eaves shall be fire and ignition resistant with a ~~maximum~~ flame spread rating of 25 or less (Class A). Heavy timber and log construction is also acceptable.
- C. *Fire and Ignition Resistant Deck Surface, Steps and Guardrails* are required on all new decks and all replacement decks, steps and guardrails. The deck surface, step surface and guardrails shall be fire and Ignition resistant with a ~~maximum~~ flame spread rating of ~~25~~ 26-75 (Class B) or better. For decks six feet or lower to the ground, the surface below the deck shall be gravel placed over a sheet of 6 mil plastic or concrete slab to prevent vegetation growth under the deck.
- D. *Fire and Ignition Resistant Fencing within 5 feet of a structure*. New construction and all replacement fences within 5 feet of the structure must be fire and ignition resistant with a ~~maximum~~ flame spread index of ~~25~~ 26-75 (Class B) or better **or an ignition resistant material such as metal, masonry, or stone.**
- E. *Roof/Attic Vents, Crawlspace Vents and Solar Panels Screens* - New structures and all replacement vents shall have the following:
 - 1. 1/8-inch metal mesh for attic vents, roof vents, eave vents and foundation vents. Mechanical and plumbing vents do not need to be screened.
 - 2. If solar panels on the roof are screened with metal mesh then the screen must be removable to clean out debris from under panels.
- F. *Metal Gutters with Gutter Guards* - New structures and replacement Gutters shall be made of metal and shall have an approved ignition resistant means to prevent accumulation of debris in gutter.

Sec. 15.70.030 Exemptions.

Exemptions from the requirements of this Chapter 15.70 are as follows:

- A. *Historic Home Exemption*. Historic homes and buildings may be exempted by the Building Official from roofing or siding requirements, or both, of this Chapter if the Building Official finds there is no practical means to meet the intent of the Chapter while maintaining historic features.
- B. *Commercial Structures* that are fully sprinklered and are in compliance with NFPA-13 and are located greater than 35 feet from the property line are exempt from the requirements of this Chapter..
- C. *Temporary Structures*. Permitted Temporary structures, such as tents and membrane structures, are exempt for a period of time not to exceed a 180 days.
- D. The building official may approve alternative methods demonstrating class A or a flame spread of 25 or less in lieu of the requirements of this Chapter.

Section 2. If any article, section, paragraph, sentence, clause, or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts hereof irrespective of the fact that any one part or parts be declared unconstitutional or invalid.

Section 3. The repeal or modification of any provision of any prior ordinance by this ordinance shall not release, extinguish, alter, modify, or change in whole or in part any penalty, forfeiture or liability, either civil or criminal, which shall have been incurred under such provision, and each provision shall be treated and held as still remaining in force for the purpose of sustaining any judgment, decree, or order which can or may be rendered, entered, or made in such actions, suits, proceedings, or prosecutions.

Section 4. All other ordinances or portions thereof inconsistent or conflicting with this ordinance or any portion hereof are hereby repealed to the extent of such inconsistency or conflict.

INTRODUCED, READ, PASSED ON FIRST READING, AND ORDERED PUBLISHED this 4th day of February, 2025.

Christopher M. Leh, Mayor

ATTEST:

Genny Kline, Interim City Clerk

APPROVED AS TO FORM:

Kelly, P.C., City Attorney

PASSED AND ADOPTED ON SECOND AND FINAL READING, this 4th day of March, 2025.

Christopher M. Leh, Mayor

ATTEST:

Genny Kline, Interim City Clerk



LOUISVILLE FIRE
PROTECTION DISTRICT

"OUR FAMILY SERVING YOUR FAMILY"

895 VIA APPIA WAY LOUISVILLE, CO 80027
HEADQUARTERS: 303.666.6595 | FAX: 303.666.7659
LOUISVILLEFIRE.COM

February 28, 2025

City of Louisville
City Council

Dear Mayor Leh and City Council Members,

First of all, thank you for passing the Home Hardening Ordinance last November. We appreciate all of you for your support and backing of the city-wide ordinance. The ordinance will help the Fire District protect homes from fires that can lead to the next Marshal Fire. I know you will be discussing the following on March 4;

Amendment

- Fire resistance decking
- Fire resistance fencing within 5 ft of the home

We agree that the building material that we require needs to be available and affordable for all citizens of Louisville. The Fire District understands and supports the amendments that the City Staff is recommending but suggests the following;

- Class A material is required for all new construction still
- The portion of the replacement fence that attaches to the house has to be Class A.

In Fire Safety



John Willson
Fire Chief

City Council Public Hearing

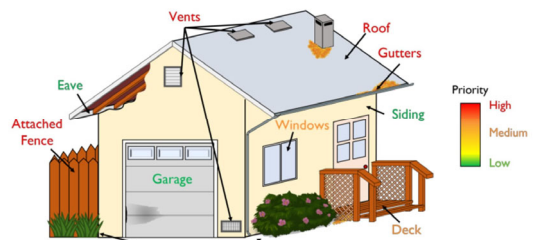
March 4, 2025

Structure Hardening Code Amendment Ordinance 1891, Series 2025



Structure Fire Hardening Code

- Ordinance 1884, Series 2024, Adopted November 4, 2004
- Applies City-Wide to All Structures, New Structures and Alterations/Repairs
- Fire resistant materials for:
 - Roof coverings
 - Siding and eave materials
 - Deck surface materials
 - Fencing materials (within 5-feet of the home)
 - Vent coverings
 - Solar panel screens
 - Gutter materials and guards



Structure Fire Hardening Code

- ASTM E84 – Flame Spread Index
 - Measures Rate of Spread of Fire on Material
 - Three Classifications Most Often Used for Fire Resistant Decking
 - ✓ Class A – 0-25 FSI
 - ✓ Class B – 26-75 FSI
 - ✓ Class C – 76-200 FSI
- Purpose of Proposed Amendments
 - Increase Material Availability and Affordability
 - Obtain higher permitting and code compliance rates



Deck Material Cost And Availability

Table 1: Comparison of Deck Board Cost and Availability

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	Average Cost	\$7.64		Average Cost	\$6.12	

* Class C Available and Local Home Depot and Lowes \$2.25 per linear ft.

Cal Fire Standards

- Cal Fire Has California Specific Standard – SFM 12-7a-4a
- Listing of Approved Decking Materials Include Class A, Class B, Class C and non-ASTM E84 Rated Decking
- Council Could Also Consider Allowing Class C to Further Expand Material Availability and Affordability

CALIFORNIA DEPARTMENT of FORESTRY
and FIRE PROTECTION
OFFICE OF THE STATE FIRE MARSHAL



STATE FIRE MARSHAL LISTED
WILDLAND URBAN INTERFACE (WUI)
PRODUCTS

HANDBOOK

Published by CAL-FIRE
FIRE ENGINEERING AND INVESTIGATIONS DIVISION
BUILDING MATERIALS LISTING PROGRAM
September 20, 2024

Fence Material Cost And Availability

Table 3: Comparison of 6 ft. Tall x 8 ft. Wide Fence Panel Cost

Fencer Spaced Bar (Black Aluminum)	Seclusion Trex	Cedar
\$273	\$474	\$100

- Limited Class B Options
- Most Alternatives to Cedar are Not ASTM E84 Rated, but Fire Resistant Such As Metal, Masonry and Stone
- Most Affordable Option is Chain Link and Coated Aluminum Open Rail. Solid 6' Fence Panels More Expensive Alternative

Staff Recommendation:

- Staff Recommends Approval
- Alternative Amendments for Consideration
 - Remove Class B Allowance for Fence Materials
 - Allow Class C Decking Material