



City of Arvada

City Council Agenda

JANUARY 27, 2026

Councilmembers:

Lauren Simpson, Mayor
Randy Moorman, Mayor Pro-Tem
Shawna Ambrose, District 2
Sharon Davis, At large
Bob Fifer, District 4
Michael P. Griffith, At large
Rebecca Lovisone, District 3

Staff Members Usually Present:

Don Wick, City Manager
Linda Haley, Deputy City Manager
Allison Scheck, Deputy City Manager
Rachel Morris, City Attorney
Jacqueline Rhoades, Director of Infrastructure
Jessica Garner, Director of Community & Econ. Dev.
Bryan Archer, Chief Financial Officer
Gabriella Bommer, Director of Human Resources
Ryan Stevenson, Director of Vibrant Community & Neighborhoods
Rachael Kuroiwa, Director of Communications & Engagement
Ed Brady, Chief of Police
Kristen Rush, City Clerk

Info: 720-898-7550

THIRD FLOOR CONFERENCE ROOM
EXECUTIVE SESSION (If Needed)
5:00 P.M.

WORKSHOPS
CITY COUNCIL CHAMBERS
6:00 P.M.

1. Call to Order/Roll Call of Councilmembers
2. Workshops
 - A. Update Regarding the Comprehensive Plan Project
 - B. Building & Fire Code Adoption Workshop
 - C. Staff Updates
3. Adjournment



REPORT TO CITY COUNCIL WORKSHOP

AGENDA ITEM
2.A.

TO: THE HONORABLE CITY COUNCIL

DATE: January 27, 2026

SUBJECT: Update Regarding the Comprehensive Plan Project

Report in Brief

The City team will provide an update and a formal kickoff of the Comprehensive Plan project.

The City released a Request for Proposals for a new Comprehensive Plan in early November, with submissions due on November 25th. The team conducted consultant interviews on December 16th. The team will begin contract negotiations with the consultant picked to assist with the project in early January.

It is anticipated that the project will span the next couple of years, with a target adoption date in the 3rd quarter of 2027.

Background

The City Council authorized funding for the project as part of one-time funds earlier this year.

Strategic Alignment

It is anticipated that the Comprehensive Plan will address all of the topics contained within the City Council Strategic Plan.

Next Steps

It is anticipated that a consultant for the project will be under contract by early 2026. The team expects that the first public engagement efforts will take place in spring/summer 2026.

Prepared by:
Dixielee Rodriguez, Administrative Specialist

Reviewed by:

Approved by:

Rob Smetana, Planning Manager	11/18/2025
Paul Donegan, Long Range Senior Planner	11/18/2025
Rob Smetana, Planning Manager	11/18/2025
Jessica Garner, Director of Community and Economic Development	11/20/2025
Gail Walker, Legal Specialist-Contracts	01/07/2026
Kelsy Sargent, Assistant City Attorney	01/07/2026

Rachel Morris, City Attorney

01/12/2026

Allison Scheck, Deputy City Manager

01/13/2026

Don Wick, City Manager

01/13/2026

Enclosure, exhibits & attachments required to support the report

Arvada Comprehensive Plan

City Council and Planning Commission
Kickoff Workshop

01/27/2025





Agenda

- The Team
- The Comprehensive Plan
- The Process
- Engaging the Community
- Next Steps
- Questions and Discussion





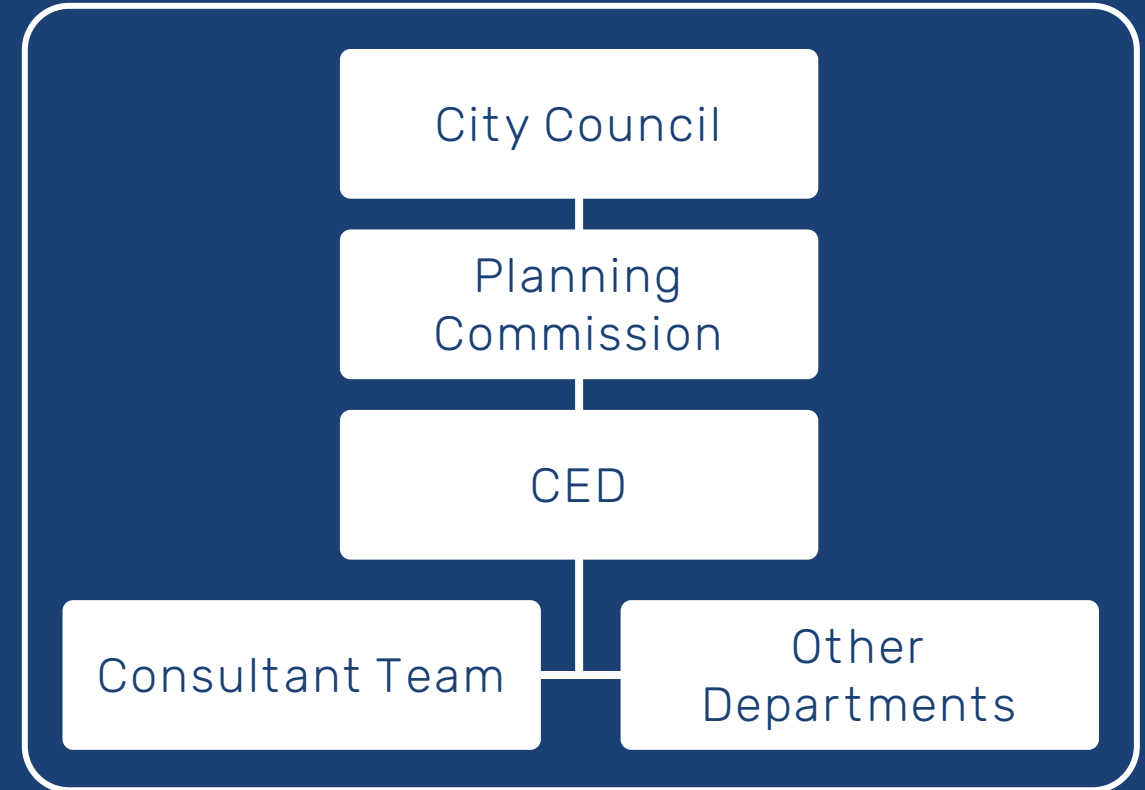
The Team

Planning Commission adoption
City Council ratification

CED Team:

- Jessica Garner, CED Director
- Rob Smetana, Planning Manager
- Paul Donegan, Senior Planner
- Chris Sandine, Senior Planner
- Jessie Bauters, Comms Manager

Arvada Community





The Comprehensive Plan

10- to 20-year plan to guide growth, prioritize City investments, and align across topics/departments



Land Use

Parks, Open Space
and Trails

Transportation

Health and Equity

Environment and
Resiliency

Infrastructure and
Services

Housing



The Comprehensive Plan

Why does Arvada need a Comprehensive Plan?

- Last updated in 2014 (largely implemented)
- Population growth (over 10,000 new residents)
- Engage the community
- Building consensus on important issues
- Changing trends, economy, technologies, etc.



The Process

18- to 22-month process (winter 2026 to fall 2027)



Regular updates to City Council and Planning Commission

Community engagement throughout the process





The Process

Four Phases:

1

How did we get here?
Understanding the community's evolution and context

2

Who are we now?
Assessing current conditions, challenges, and opportunities

3

Where do we want to go?
Establishing a shared vision and exploring future scenarios

4

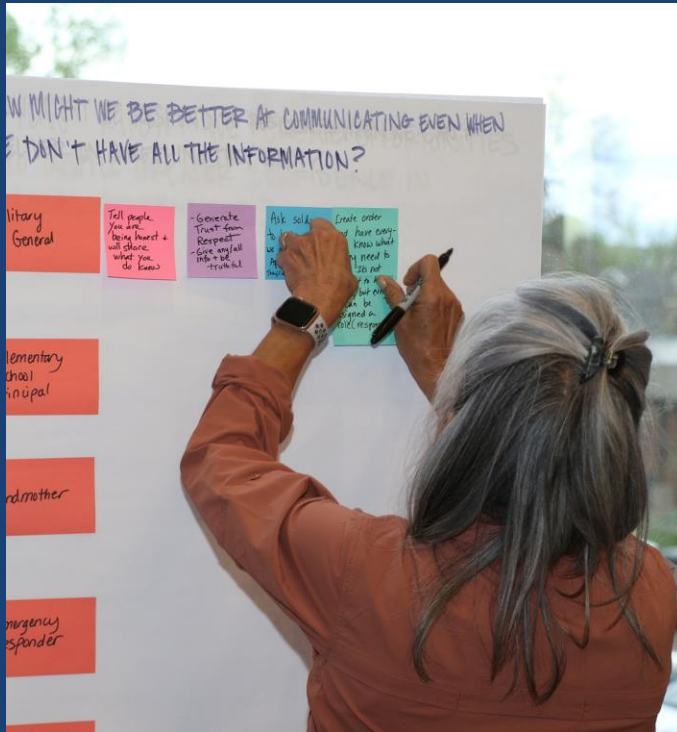
How do we get there?
Translating the preferred direction into policies, maps, and implementation strategies



Engaging the Community

Goals for Community Engagement:

- Robust: Many opportunities to participate
- Creative: Many ways to participate
- Inclusive: Reaching the entire community
- Representative: Events and participation in all neighborhoods, from all communities



Engaging the Community

We want to hear from everyone!

Committees:

Community
Advisory Group

Technical
Advisory Group

Youth Advisory
Group

Focus groups and
others

Communities:

Neighborhood
groups

Business owners
and employers

Employees of
local businesses

People who are
housing insecure

Homeowners and
renters

Families

Developers and
builders

Commuters

Older adults

ESL/Non-English
speakers

Youth and young
adults

And more!





Next Steps

- Notice to Proceed
- Kickoff
 - Public Engagement Plan
 - Youth Engagement
 - Data Collection & Background Research
- Engaging City Council and Planning Commission
 - Key Milestones & Policy Decisions
 - Joint sessions, presentations and regular hearings, small groups, one-on-ones, surveys



? Questions and Discussion

- What does a successful project look like to you?





REPORT TO CITY COUNCIL WORKSHOP

AGENDA ITEM
2.B.

TO: THE HONORABLE CITY COUNCIL

DATE: January 27, 2026

SUBJECT: Building & Fire Code Adoption Workshop

Report in Brief

This workshop will provide City Council with an overview of the proposed adoption of the 2024 International Code Council (ICC) Building and Fire codes along with the Arvada Wildfire Resiliency Code and what these updates mean for the City of Arvada. The discussion will focus on why regular code updates are important to maintain public safety, align with industry standards, state legislation, and ensure consistency with regional practices.

Staff will summarize the key changes to the codes, highlighting areas that impact life safety, building performance, energy efficiency, and construction practices. The workshop will also address how these updates affect homeowners, contractors, and development projects, including any anticipated changes to permitting, inspections, or construction costs.

Finally, the workshop will outline the proposed implementation timeline, staff training needs, stakeholder outreach efforts and community outreach efforts. City Council feedback will help guide a smooth transition that balances safety, predictability for the development community, and the City's commitment to clear, consistent customer service.

Background

The best practice for updates to Building Codes is every three years. This is a process that occurs all over the state, nation and internationally as well. The last update to the codes happened in September 2020 for Arvada, and the 2018 ICC was adopted. When the 2021 I-codes and energy code updates were created, there were delays at the federal and national level with updates. Additionally, because the changes to other codes were minimal, the Building Official at the time elected to skip the 2021 code cycle and to wait for some of these delays and conflicts to be resolved in the following cycle. The 2024 codes reflect the newest innovations in building technology and life safety which provide resiliency, among other benefits, for our community.

Strategic Alignment

Building Code adoption is in alignment with Strategic Result, Quality of Life: Foster an accessible and inclusive community that preserves and improves quality of life and ensures a safe and thriving place for all community members.

Next Steps

These codes will proceed to public hearing for full adoption through City ordinance.

Prepared by:

Josie Suk, Development Systems and Administrative Manager

Reviewed by:

Approved by:

Kyley Flynn, Chief Building Official	01/08/2026
Jessica Garner, Director of Community and Economic Development	01/08/2026
Gail Walker, Legal Specialist-Contracts	01/09/2026
Kelsy Sargent, Assistant City Attorney	01/09/2026
Rachel Morris, City Attorney	01/12/2026
Allison Scheck, Deputy City Manager	01/13/2026
Don Wick, City Manager	01/13/2026

Enclosure, exhibits & attachments required to support the report



2024 Building Code Adoption Significant Changes

Overall goals of Code Adoption:

- Increase Building Safety
- Building further community Resiliency
- Introduce new technologies with latest codes
- Remove excess amendments to help with consistency, complexity and support contractor reciprocity
- Customize codes where needed for Arvada's needs and risks faced
- Lower construction costs where possible
- Consider long term savings and resiliency
- Support sustainability and decarbonization efforts
- Replace outdated provisions
- Respond to building performance following catastrophic events that have occurred
- Correct Errors & omissions
- Consider regional and neighboring communities and consistency wherever possible
- Flexibility in providing further options for compliance with various codes
- Build in Education wherever possible

Administrative Changes Significant Changes:

- Adding radon mitigation contractor provisions
- Adding special inspector registration provisions
- Changing "Building Inspection Division" to "Building Safety Division"
- Changing contractor licensing letter designations
- Allowing ADU's to be built by a homeowner/occupant
- Further clarifying when permits expire or become abandoned what can be done to assist permittees

- Define what a permittee is and their responsibilities instead of just licensee responsibilities
- Allowing referenced standards to consistently use the newest versions/ updated versions if needed by staff (IE: ASHRAE)

The 2024 International Residential Code (IRC) Significant Changes:

- New Appendixes adopted: Tiny houses, ADU's, 3D Printed homes and recommended procedures for inspection of existing appliances
- New ADU provisions will allow for more affordable and practical options for compliance with fire separation including new option for interconnection of smoke and carbon monoxide detectors in lieu of fire separation
- Plumbing fixture replacement permitting changes
- Removing previous amendment requiring exhaust fans regardless of operable windows
- Fire separation requirements clarified for townhouses, ADUs and buildings on the same lot
- Duplex allowance for stacked units
- Sleeping Lofts permitted
- Energy Changes
- A2L refrigerants are added with new provisions to address needs for compliance
- Adding back into the code the requirements for sprinkler systems to be installed in new single family homes, townhomes and duplexes built per the IRC. This will not affect existing structures.
- Updating language for current amendment for requirements for soils reports and design professional stamped foundation plans

The 2024 International Building Code (IBC) Significant Changes:

- Updated wind, earthquake, and snow load provisions (no changes proposed to current design criteria, just updated provisions added for lessons learned)
- Openings in Shaft Enclosures: Additional exceptions are provided for shaft enclosures, including new allowances for openings and penetrations.
- Vapor retarders: changes provide additional options and better guidance for allowable types and locations of permitted vapor retarders.
- Power operated doors for accessibility are now added as requirement
- Clarification of accessibility requirements for R-3 occupancies
- Using the 2017 ICC A117.1 Code (newest ANSI accessibility code)

- 67" radius now required for wheelchair turning space due to changes in wheelchair sizes
- Adult changing tables now have regulations
- Dispersion of accessible units amongst types of units for accessibility now clarified
- Plumbing fixture replacement permitting changes
- Various code changes to align with fire code
- Updating language for current amendment for requirements for soils reports and design professional stamped foundation plans

The 2024 International Plumbing Code (IPC) Significant Changes:

- Deleting chapter 14 for gray water
- Restrooms need not be provided for each sex when restrooms are provided for all persons regardless of sex
- Updated requirements for plumbing fixtures in Group I occupancies and Ambulatory care facilities
- New minimum standards for various plumbing piping materials and other materials
- New materials and plumbing products that promote water conservation

The 2024 International Mechanical Code (IMC)

- Addition of a new minimum landing at the roof hatch for personnel to safely use the hatch when accessing the roof for repair and maintenance.
- Addition of a new testing option for grease ductwork
- Refrigerant updates: Addition of Group A2L and B2L refrigerant provisions and updates added from Arvada to better address these refrigerants and their needs for proper installation

The 2024 International Fuel Gas Code (IFGC) Significant Changes:

- Requiring calculations and details to be provided to show compliance with combustion air, dilution air and ventilation as part of construction documents

The 2024 International Existing Building Code (IEBC) Significant Changes:

- Adult changing station provisions now added
- Clearer language for changes to areas containing primary function
- Occupiable roofs have been built into various sections of the code
- Assists with clarifying how risk categories should be assigned for structural

design

- Exterior wall covering and wall envelope changes
- Owner's responsibility at construction sites has been added to show the importance of developing, implementing and maintaining a site safety plan during construction

The 2024 International Property Maintenance Code (IPMC) Significant Changes:

- Deleting 45 municipal amendments that were made to our previous adopted 2009 version of this code.
- Clothes dryer exhaust duct maintenance required to prevent a leading cause of fires for homes and properties

The 2024 International Swimming Pool and Spa Code (ISPSC) Significant Changes:

- Clarification of means of egress to include all public swimming pools vs just outdoor public swimming pools
- Clarification and strengthening requirements for plumbing fixture counts for all public swimming pools to better assist with public health
- Adds screen enclosures as barrier method

The 2024 International Energy Conservation Code (IECC) Significant Changes:

- More energy conservation measures, including updated insulation standards and requirements for high-efficiency appliances
- Updates to different paths of compliance, providing additional clarity and flexibility with methods. Such as allowing an "F" factor for slabs so that they can be traded off when using a performance type method
- Additional options now for air leakage testing based on the method of compliance
- R403- Duct systems/ ductwork systems have added provisions and clarifications- such as for heat recover or energy recovery ventilation systems. Aids in creating a balanced system and energy loss
- Additional auto-off features for lighting
- More efficient windows, skylights, and air sealing requirements
- EV Ready Provisions: Requires residential and commercial buildings to have infrastructure for EV charging

- Some provisions to install EV based on number of parking spaces
- Electric Ready Provisions: Dedicated electrical infrastructure
- Solar Ready Provisions: Requires single-family homes to have roofs designed for solar panels
- More flexible duct leakage requirements
- Allows limited trade-offs for heating, cooling, and water heating equipment that are more efficient than the federal minimum

The 2024 International Fire Code (IFC) Significant Changes:

- Operational Permits
 - Lithium-Ion batteries
 - Sky lanterns
 - Temporary sheltering
 - Valet trash
- Rural Fire Apparatus Access Roads
 - Mostly taken from Jefferson County Road and Transportation Manual
 - Allows for roads narrower than the prescriptive fire code and city roadway standards
- Driveways
 - Typical driveways not allowed for fire apparatus access.
- Open Burning
 - Prohibited in WUI areas unless portable fireplaces, recreational fires, and vegetation management.
 - Provided a list of prohibited materials to be burned
- Sky Lanterns
 - Additional provisions
- Retroactive Manual Fire Alarm Systems
 - Allow interior corridor R-2's to meet exemption
 - Increased number of units from 16 to 24 to be exempted
- Stairwells In Buildings Under Construction
 - Changed it to be required at 20' rather than 40'
- Fire Flow Requirements
 - Went back to prescriptive reduction of 75% for sprinklered buildings
- Fire Apparatus Access Roads – Loading
 - Increased from 85k pounds to 90k pounds
- Valet Trash
 - Added the requirement that this can only be done in a sprinklered building

New Wildfire Resiliency Code/ Wildland Urban Interface Code (WUIC)

Significant Changes by adopting:

- Additions over 500 sf will require compliance with this code
- Accessory structures over 120 sf will require compliance with this code
- Re-roofing that includes replacing over 25% of the roof covering will require compliance with this code.
- Siding replacements that involves replacing over 25% of the exterior siding material will be required to meet this code.
- A wildland urban interface map is being developed for Arvada that will be used to identify fire intensity classification areas.
- Class 1 structural hardening per the state of Colorado wildfire resiliency code may require:
 - Class A roofing material
 - Additional fire measures may be required between the roof deck and roof covering
 - Specific flashing may be required
 - Fire resistant gutters may be required
 - Ventilation may require covering of vents.
- Class 2 Structural Hardening per the state of Colorado wildfire resiliency code may require:
 - Class A roofing material
 - Additional fire measures may be required between the roof deck and roof covering
 - Specific flashing may be required
 - Fire resistant gutters may be required
 - Ventilation may require covering of vents.
 - Fire resistance construction of roof eaves and soffits
 - Rated exterior wall assemblies with one hour rating
 - Ignition resistant exterior wall coverings
 - Flashing requirements
 - Underfloor protection
 - Decking protection- unenclosed decks
 - Garage door perimeter gap requirements
 - Nearby accessory structure requirements

City of Arvada – Building Code Adoption and Implementation Plan 2024 International Building Code Adoption

To Whom it may concern,

As Chief Building Official for the City of Arvada, I am providing this formal implementation plan for the City's adoption of the 2024 International Building Codes, transitioning from the currently adopted 2018 editions. These updates reflect national best practices and are intended to improve life safety, resiliency, accessibility, and clarity in construction requirements.

While adoption is proposed for April 1st, 2026, enforcement of the new codes is intentionally delayed until July 1, 2026, to allow adequate time for preparation, education, and coordination with the community and development industry.

Purpose of Delayed Enforcement

This delayed enforcement date is a deliberate and proactive measure designed to support a smooth and successful transition to the updated codes. We hope this approach will allow contractors, design professionals, homeowners, and City staff sufficient time to understand the changes, update practices, update resources, provide further public outreach and training, provide further city staff training and align projects already in the development process with the appropriate code cycle.

What This Means for the Community

- The 2018 Building Codes will remain in effect until June 30th, 2026 for building permit applications that are submitted and accepted prior to July 1, 2026.
- All building permit applications submitted and accepted on or after July 1, 2026, will be reviewed and inspected under the adopted 2024 International Codes, as amended by the City of Arvada. Building Permit applications submitted prior to that date will remain subject to the currently adopted 2018 codes, in accordance with established vesting policies.
- This delayed enforcement period provides time for education, training, and project planning as well as deliberate alignment with our implementation of our new wildfire codes.
- Building permits already issued will be permitted to finish out their project under the codes that the permit and plans were approved under. Please be aware that we are subject to the state of Colorado's requirements as well. When the state of Colorado adopts the newest 2026 National Electrical Code, we will be required to enforce this new electrical code as well regardless of the electrical code that plans and permits were approved under. This occurred during our last adoption of the newest state adopted national electrical code as well. We are dedicated to working with the community during that transition and further details of electrical code changes will be provided in the upcoming future.



- Master permits that are approved under the current 2018 code cycle are permitted to be utilized by such permit holders to apply for site specific building permits under those approved plans, for the duration of completing such proposed structures per subdivisions, per such mastered plans.
- Permits that expire or become abandoned after the effective date of these adopted codes as referenced herein are not eligible for any extensions as set forth in our Arvada's adopted codes, at the Building Official's discretion. Please plan accordingly and ensure permits remain in an active status.
- Upcoming development projects that have concerns about these time lines should reach out to city staff to discuss plans for their specific project to plan for these changes. We are committed to working with you to plan for your project.

Implementation Strategy

Between adoption and the July 1 enforcement date, the City will undertake the following implementation efforts:

- Education and Outreach: The Building Division will provide informational materials, guidance documents, educational videos and educational opportunities to communicate key changes in the 2024 codes to the development community and the public.
- Staff Training and Readiness: Building Division staff will continue focused training to ensure consistent and accurate application of the new code provisions upon enforcement.
- Industry Coordination: Ongoing coordination with regional jurisdictions, professional organizations, and industry stakeholders will help promote consistency and predictability across the metro area.
- Transition Management: Clear guidance will be provided regarding permit application cutoffs, project vesting, and applicability of the 2018 versus 2024 codes to ensure transparency and fairness at the pre-application stage, development stage and building permit application stage.
- Continued updates: Building Division staff will provide continuous updates through email communication to our licensee's, permit holders and stakeholders. Continued updates of the Arvada website will also be provided with further resources and community outreach on a continued basis.
- Commitment to the community: These changes are impactful and yet so important. As code officials it is our duty and responsibility to enforce these adopted building codes and to balance changes to our building codes with consideration for local economy, responsibility to the public, responsibility to the future, accessibility, life safety, public welfare, sustainability, resiliency, affordability and consistent enforcement. We have worked hard to create a code adoption that fits Arvada's needs while maintaining our ultimate responsibility and commitment to life safety. Some of these changes may be impactful or may be significant changes. We are dedicated to serving Arvada so please feel free to reach out to us with any questions or concerns and we will gladly assist you to get to a solution.



Conclusion

This phased implementation plan reflects the City's commitment to thoughtful code adoption, regulatory clarity, and customer service. By establishing a delayed enforcement date, the City of Arvada Building Safety Division hopes to ensure that the transition to the 2024 International Codes prioritizes life safety, resilience, and compliance while providing the community with the time and resources needed to adapt successfully.

On behalf of the Building Safety Division we are grateful for your collaboration and support as we work together to continue to build a great community, through all of the changes that we face together.

Sincerely,

A handwritten signature in black ink that reads "Kyley Flynn".

Kyley Flynn
Chief Building Official
City of Arvada
kflynn@arvada.org
720-898-7615
1/5/2026



Helpful Links:

Online free Building Codes through ICC:

<https://codes.iccsafe.org/codes/i-codes/2024-icodes>

Arvada current municipal adopted code (see chapter 18 for building codes and chapter 42 for fire codes):

https://library.municode.com/co/arvada/codes/code_of_ordinances?nodeId=PTIICOOR_C H18BUBURE

Link to Arvada website with updates provided to the public about code adoption as well as list of all codes:

<https://www.arvadaco.gov/1388/Building-Code-updates-coming-in-2026>

A History of U.S. Building Codes (written by Glenn Mathewson, a Building Code Expert who is an Arvada citizen):

<https://www.finehomebuilding.com/2023/07/19/a-history-of-u-s-building-codes>

Articles for Consideration:

Quick article about energy code updates and cost analysis:

<https://www.nahb.org/blog/2025/02/2024-iecc-cost-analysis>

Article from ICC about the growing importance for adopting and enforcing the newest building codes with a link to the chamber of commerce article in their white paper for further details:

<https://www.iccsafe.org/building-safety-journal/bsj-hits/u-s-chamber-of-commerce-report-highlights-building-codes-as-solution-to-stabilizing-insurance-markets/>

Article about Energy and how it affects affordability:

<https://imt.org/news/are-energy-codes-exacerbating-the-housing-affordability-crisis/>

Article from the Denver Business Journal about EV chargers, insurance coverage and sprinklers:

<https://mail.google.com/mail/u/0/#sent/QgrcJHsbhNpBDXrwRWRnZhrqbnCmnSZVDCI?projector=1&messagePartId=0.1>

Article about Arvada's code adoption:

<https://drive.google.com/file/d/13Rhqt0Zel0epumOc73ebkW9mj6i0v2ZW/view?usp=sharing>



Dear Mayor and Members of City Council,

As Chief Building Official for the City of Arvada and in conjunction with the Fire Marshal for Arvada Fire, we are writing to provide a summary of the extensive efforts undertaken by City staff, Arvada Fire and industry professionals in preparation for the proposed adoption of the 2024 International Building Codes, transitioning from the currently adopted 2018 code editions, for the city of Arvada.

Over the past several years (from the time of our last code adoption in October of 2020), Building Division staff and Arvada Fire have been preparing for this adoption and we have intentionally skipped over the 2021 version of the International code version to prepare for adoption of the 2024 International Codes. We have completed a full comprehensive and technical review of the 2024 suite of codes to ensure the proposed updates are appropriate for Arvada's local conditions, operational capacity, and long-term community goals. This work included detailed technical analysis, comparison of substantive changes between code cycles, technical review of state legislation affecting our codes and evaluation of potential impacts to construction practices, enforcement processes, affordability, and public safety.

Staff engaged in ongoing coordination and collaboration with other jurisdictions, other divisions/ departments, various stakeholders- including ASAC, HAC, HBA, BCAB and DRCOG-, subject matter experts—including building and fire officials, code experts, design professionals, contractors, etc.—to promote consistency with regional best practices while adding thoughtful local amendments where needed. We hope this collaborative approach will support predictability for the development community and effective code administration across Arvada.

In addition, Building Division staff and Arvada Fire staff have invested significant time in training, professional development, and participation in code hearings, technical forums, and educational opportunities to fully understand the intent and application of these updated codes, with plans in place for ongoing training and development. Implementation considerations, including contractor outreach, educational resources for the public and an implementation plan for phasing of these code changes, have also been incorporated and will continue to be incorporated to support a clear and successful adoption process that we hope will minimize the effects that this transition will have on the community, businesses, developers, contractors, homeowners, staff and the general public.

The proposed adoption of the 2024 International Codes reflects a deliberate, transparent, and well-vetted process that prioritizes life safety, resiliency, sustainability, accessibility, housing, general welfare and consistent enforcement. It represents the collective efforts of dedicated City staff, Arvada Fire and all of the various professionals and experts that have worked with us to ensure Arvada's building regulations remain current, defensible, and responsive to the needs of our community and the ever present building safety needs that we are charged with protecting for our community.



We have put together various resources for you to “arm you with knowledge” as we prepare to meet with you at our first workshop meeting on January 27th, 2026. This code adoption will include the adoption of 11 different model codes, adoption by reference of 2 other model codes and incorporation of 2 state of colorado model codes with amendments to these codes created for Arvada. We know this is a lot to review so we hope that these extra resources and the thoughtfulness in summarizing key elements of this proposed Building Code update will be helpful for you. As building code professionals our most important duties involve education and collaboration and we cannot wait to share more with you and the city of Arvada as a whole about these proposed building changes and to further share with you what we do on a daily basis to serve the city of Arvada.

On behalf of the Building Safety Division and Arvada Fire, we thank you for your continued support and look forward to further introductions and collaboration with you all in the future. Please feel free to reach out if you have any questions surrounding this proposed building code update.

Sincerely,

Handwritten signature of Kyley Flynn.

Kyley Flynn
Chief Building Official
City of Arvada
kflynn@arvada.org
720-898-7615
1/5/2026

Handwritten signature of Steven Parker.

Steven Parker
Fire Marshall
Arvada Fire
steven.parker@arvadafireco.gov
303-403-0477
1/5/2026

LIST OF RESOURCES PROVIDED:

- Letter from CBO
- Implementation Plan
- Significant changes list
- Helpful links page
- Building Code Impactful History Summary
- Various Articles for consideration
- Residential Sprinklers White Paper
- Residential Sprinklers Bullet Points



Residential Fire Sprinkler Information

FORWARD

The Arvada Fire Protection District (AFPD) strongly believes that a reactive fire protection philosophy is not what is needed to manage the impacts of fire on a community. For many years, the traditional fire service has had a strategy designed around the hope that fire departments could amass enough resources and beat the clock by arriving soon enough to have a positive impact on a fire incident. While it is still important to have adequate staffing to safely fight a structure fire, we also understand the inherent limitations to responding to structures without built-in fire sprinkler systems. We believe that it is time to rethink the way we protect our citizens and protect our firefighters.

Fortunately, today many communities are adopting a more proactive fire protection philosophy by embracing proven technology and built-in protection, consistent and educational code enforcement, and stronger public education programs. It is hard to say how many more lives could be saved, injuries prevented, loss of property and reduced impact on the environment by not amending out the prescriptive requirement for residential sprinklers in the model codes. However, the AFPD does know that of the several large-loss-of-life residential fire disasters (10 deaths) and hundreds of fires that have occurred within the AFPD since 2016, not one has occurred in a sprinklered building.

We believe that this proposal will not only reduce the risk and impact of fires in our community into the future but will improve firefighter safety and help reduce the demand for extensive resources at residential structure fires.

PROBLEM STATEMENT

Nearly all one- and two-family structures in the AFPD, including Wheat Ridge and unincorporated Jefferson County, were built without automatic fire sprinkler protection to control the growth of fire and allow for the safe evacuation of the occupants. Historically this requirement was amended out of the International Residential Code despite it being prescriptively required since 2009. Moreover, the efforts by fire departments nationwide have been thwarted by homebuilders and real estate groups, citing unsubstantiated claims that the systems are excessively expensive and hinder development.

Provided within this proposal, there is both national and local information regarding the cost and effectiveness of residential sprinkler systems as well as figures based on fires within the city of Arvada that presents fire loss data and fire loss versus the cost of a fire sprinkler system.



PROBLEM ANALYSIS

Fire Statistics provided by the National Fire Protection Association (NFPA) show there are more than 328,000 fires in residential structures and 70% of fire related deaths occur within the residential setting. Additionally, the fire problem has increased because of the following home characteristics:

- larger home sizes,
- reduced separation between homes,
- larger open spaces within homes,
- increased and more hazardous fuel loads,
- lightweight building construction materials, and
- more void spaces

These characteristics allow for faster fire propagation, shorter time to flashover, rapid changes in fire dynamics, shorter escape times for occupants, and shorter time for structural collapse. The NFPA Home Structure Fires report indicates that flashover times have decreased from 30 minutes to less than 5 minutes, primarily based upon modern finishes in today's homes. Moreover, fires in non-sprinklered homes have a significantly higher chance of spreading beyond the room of origin, where fires in sprinklered homes rarely spread beyond the area of origin.

37% of fire deaths occurred while occupants were trying to evacuate the home during a fire incident followed closely by 30% occurring while occupants were sleeping.

Figure 2 and 3 below depict fire growth in single family homes as compared to the response time of residential sprinklers and that of a typical fire department response to the same fire. Best case scenario is it takes two to three minutes to recognize a fire and evacuate the home. Residential sprinklers respond to that same fire in less than two minutes and act immediately. It would take the fire department six minutes to respond once dispatched and up to an additional four minutes for action to be taken. Time is of the essence to safely evacuate a fire.



ARVADA FIRE

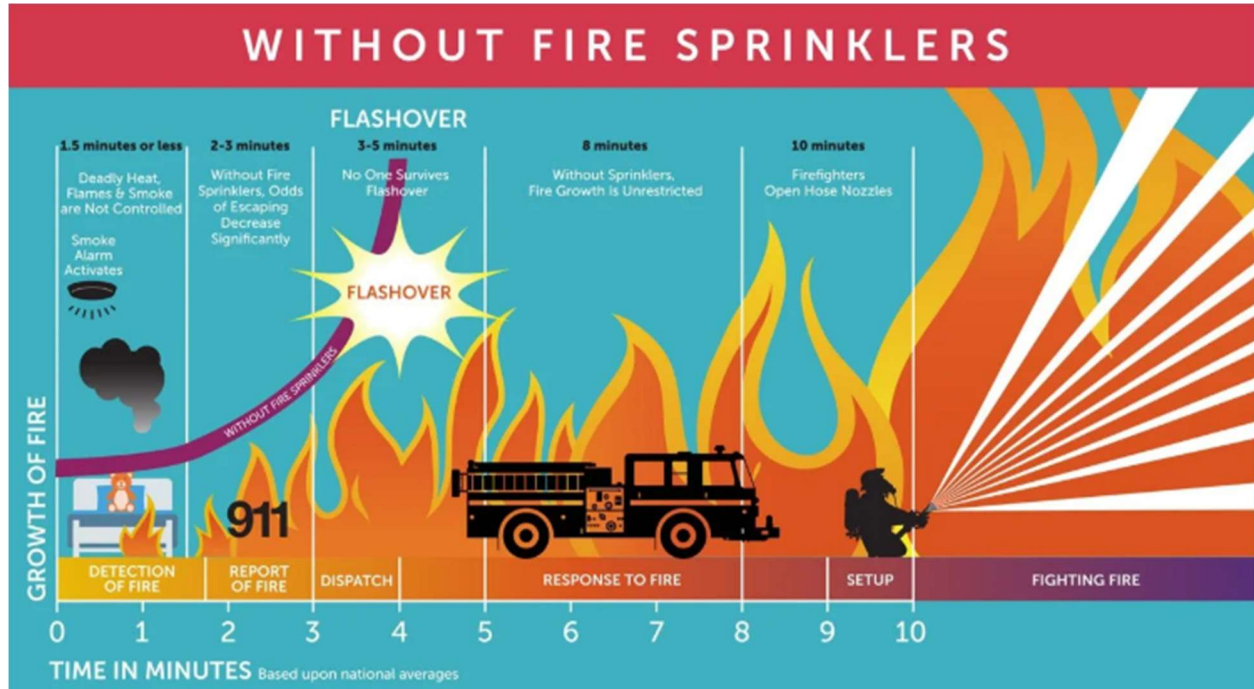


Figure 1: Home Fire Sprinkler Coalition's chart represents the growth of fire and time to manually suppress a fire



Figure 2: Home Fire Sprinkler Coalition's chart represents the growth of fire and time for sprinklers to suppress a fire



ARVADA FIRE

In 2009, the International Code Council's (ICC) International Residential Code (IRC) first introduced the requirement to sprinkler one- and two-family dwellings. Since then, many jurisdictions have amended this requirement out of their adopted IRC citing the high-cost impact of installing fire sprinkler systems in one- and two-family dwellings. Over the last 15 years many jurisdictions have begun to keep the prescriptive fire sprinkler requirement in their IRC adoptions. This was based on the lower cost of fire sprinkler systems, the introduction of multi-purpose P2904 fire sprinkler systems and not seeing a significant reduction in the civilian casualty rate (approximately 3,000 nationally)¹ and within Colorado approximately 30 fire deaths annually.

↘ A 6% decrease in fires.

↗ A 5% increase in deaths.

↘ An 8% decrease in injuries.

↗ A 25% increase in dollar loss.¹

Figure 3. United States Fire Administration Overall Trends in Residential Structure Fires

Fire growth is exponential and fire sprinkler systems can reduce the rate of fire growth in a quick and efficient manner. In 90% of residential structure fires in sprinklered buildings, a single fire sprinkler can detect, activate, and suppress a fire within two minutes of ignition. Given that information, a *typical residential sprinkler discharges 14 gallons per minute* and can suppress a fire with approximately 28 gallons. Taking into consideration a fire department response time of eight minutes from the time the fire is reported, the sprinkler system will discharge a total of 140 gallons over a ten-minute time frame. When compared to fire department suppression operations it is significantly less. Fire department suppression operations may discharge close to 1,500 gallons (150 gallons per minute) to suppress the fire that has grown uncontrolled over that same ten-minute time and have significantly more fire damage.

Currently, NFPA 1710 (standards for organization and fire suppression deployment) requires a minimum of 14 firefighting personnel and AFPD on average responds with 19 personnel to all

¹ Residential fire estimate summaries (2014-2023), https://www.usfa.fema.gov/statistics/residential-fires/?utm_source=chatgpt.com



residential structure fires. If a given situation presents additional hazards, more firefighting personnel will be required to respond. When fire sprinkler systems have suppressed a fire, there is a decreased need to have as many personnel on-scene, and they can then be made available to respond to other emergency incidents.

The use of automatic fire sprinkler systems to control fire relates to more than just personnel and equipment. The ability to control fire often extends beyond the ability of fire suppression personnel, because the time of discovery and the rapidity of flame spread is often uncontrolled. Considering these possibilities, analysis indicates that any size structure could be subject to heavy or total fire loss regardless of fire department size. This should be given equal or greater consideration than personnel demand. Sprinklers can also reduce the impact on the environment by not releasing as many fire gases into the atmosphere and reducing the amount of fire debris and contaminated water going down storm sewers.

IV) SUPPORTIVE DATA

Automatic fire sprinklers have an enviable record in controlling fires and limiting loss. NFPA statistics have shown that they are effective 97% of the time and property loss is reduced up to 68%. A 15-year study was completed in Scottsdale, Arizona that showed property loss of structure fires categorized into two types of homes, sprinklered and non-sprinklered. This study proved that the average cost of fire damage in a sprinklered home was \$2,166.00 as compared to \$45,019.00 in a non-sprinklered home². Residential fire sprinklers provide four basic functions when installed within a residential structure.

1. They automatically detect fire,
2. Operate upon activation to fight the fire (not all sprinklers),
3. Provide essential time to evacuate, and
4. Remain in operation until the fire is suppressed and shut off

From the AFD perspective, due to decades of engineering design, construction, assembly, and the rigid testing and approval requirements, automatic sprinklers are among the most reliable mechanical devices made. Furthermore, nine out of ten fire sprinkler activations in residential structures are contained with only one fire sprinkler opening and flowing water. Furthermore, there is no maintenance requirement for residential sprinkler systems. If they are kept on and not obstructed, they will operate as designed.

² www.homfiresprinkler.org/fireservice/scottsdale15.html



ARVADA FIRE

Moreover, the National Institute of Standards and Technology (NIST) conducted an in-depth cost analysis of residential sprinkler systems in 2005. That study showed that the cost of the most expensive residential sprinkler system in a 2,257 ft² home with a 100% markup cost \$2,800.46³. Considering inflation over the last 20 years of approximately 66%, that same system would cost \$4,648.76 in 2025. Resulting in an average cost per square foot of \$2.06 per square foot.

There are additional cost savings in typical designs and installations for tract homes based on standard designs and repetitive installations for standard home designs. Although the NIST study mentioned above shows a relatively low cost of construction, in Colorado we see these systems cost between 1% and 3% the overall cost of the home.

Over the last five years, the AFD has seen 62 residential sprinkler systems installed in both detached single-family dwellings (18) and townhouses (44). The single-family homes have been custom homes and are arguably the most expensive systems due to them being installed in large homes ranging in size from 6,000 square feet to nearly 20,000 square feet. Despite that fact, *the average cost of these systems is \$3.23 per square foot.*

The following tables represent the fire losses within the AFD's jurisdictional boundaries in the City of Arvada occurring from January 1st, 2017, through July 12, 2025. There was a total of 298 one- and two-family dwelling fires. Utilizing the AFD average cost per square foot of \$3.23, the cost of installing a fire sprinkler system is less than 3% of the total cost of a newly constructed one- and two-family dwelling.

³ <https://www.nist.gov/publications/economic-analysis-residential-fire-sprinkler-systems-0>



ARVADA FIRE

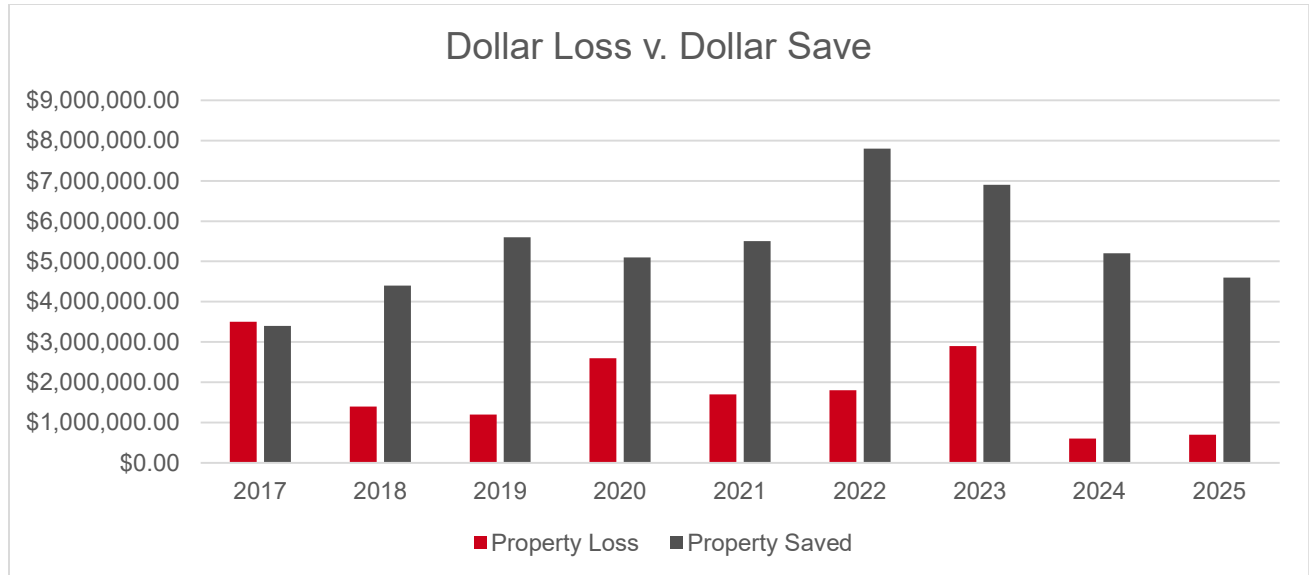


Figure 4: Total Dollar Fire Loss by Year 2017 to July 2025

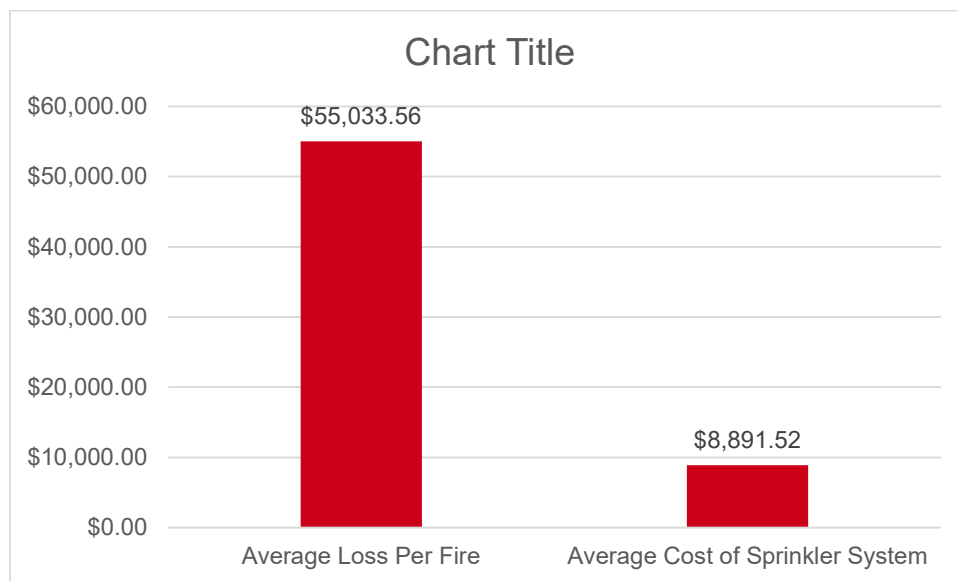


Figure 5: City of Arvada Average Fire Loss versus Average Cost of Sprinkler System

These tables show that on average there is around \$1,925,185 of fire damage annually, and an average of \$55,034 per fire versus an average cost of \$8,892 per residential sprinkler system. National statistics from the NFPA state that fire loss can be reduced by up to 97% when a home



ARVADA FIRE

is sprinklered. Utilizing Scottsdale's 15 years of data on fire loss in sprinklered homes, \$2,166 dollars in fire loss is significantly less than what we are currently seeing in Arvada.

COST BENEFIT

In addition to protection against destruction of property, injuries, loss of life and possibly business interruptions, there are insurance savings potential. The Home Fire Sprinkler Coalition's recent survey of insurance companies shows that there can be as high as a 35% discount for having a residential fire sprinkler system installed⁴. Despite the fact that there are potential insurance savings, this does not protect the sentimental content's that will be lost in a fire. Furthermore, it takes months, if not years, to have the home damaged by fire be restored back to a habitable condition.

When structures, including one- and two-family dwellings and residential developments are equipped with fire sprinkler systems, the following concessions may be made:

- Narrower fire apparatus access roads (narrower roads)
- Fewer access roads into the development
- Longer dead-end roads
- More units within a development
- Access to within 150 feet of all portions of the exterior of a structure can be increased
- Reduced required fire flow
- Increased distance between fire hydrants
- Numerous trade-ups out of the IRC

These allowances may arguably offset the increased cost of installing fire sprinkler systems. It is often stated that requiring residential sprinkler systems will deter development and decrease the volume of affordable housing. There is no statistical data that supports these assertions specific to the cost of the systems and surrounding jurisdictions that require residential sprinklers have indicated that development has not been deterred because of this requirement.

The AFPD understands that on the surface, the requirement of residential sprinklers will increase the cost of a home. Furthermore, it will require city and/or AFPD staff to review and inspect these systems. Fortunately, there are multiple system types that can be installed, and both can be designed to reduce the demand of city and/or AFPD staff time. Understanding that water quality is of high importance, these systems can be designed in a manner that does not

⁴ Home Fire Sprinkler Coalition Answers for Real Estate Professionals, <https://homefiresprinkler.org/fire-sprinklers-insurance-discounts/>



ARVADA FIRE

change how domestic water systems are currently designed, reviewed, installed, and inspected. Furthermore, the AFPD can commit to a low cost for review, permitting and inspections of those systems that will not significantly impact the cost of these installations. Additionally, we can commit to same day reviews and next day inspections for these systems.

Often the upfront costs are at the forefront of everyone's mind. But these systems help protect the investment of purchasing a home. As construction costs increase, it is imperative that these homes are protected to decrease the burden on the homeowner should a fire occur.

The most important area to address here lacks dollar value; it is life safety and a feeling of security that sprinkler protection provides for the occupants of the home.

ADDITIONAL BENEFITS

In addition to the obvious and overriding benefit of providing a highly desirable level of public safety, the spin-off benefits are numerous. Financial savings most certainly are realized from the reduction of resources needed for a first alarm assignment, wear and tear on equipment, fuel consumption, firefighter injuries, and personnel hours, to name a few. All these benefits provide opportunities for substantial savings or cost avoidance to the taxpayers.

We also believe that attitude changes can be expected, including a greater sensitivity to fire prevention and a proactive approach to community fire protection. One could logically expect that our sprinkler efforts would be undertaken in areas not specifically mandated. Other associated prevention actions (e.g., smoke alarms, self-home inspection, and resident evacuation training) could conceivably be implemented concurrently with installation of sprinklers.

Other tangible benefits include a return on investment, increased property values, and the desirability of occupancy. It is also important to note that not amending this out of the IRC does not affect current residents. *This would only apply to newly constructed homes and does not require sprinkler systems in additions or remodels.* The community will benefit by making our community fire safe.

Finally, maintaining the residential fire sprinkler requirement in the IRC is one of the most fiscally reasonable, public welfare-oriented, and visionary efforts government and fire service leaders can undertake.



ARVADA FIRE

RECOMMENDATION

It is important to note that the AFPD is not asking for an additional fire safety requirement, we are simply asking for the minimum requirements that have been vetted through an international consensus code development process to be trusted. We can then continue to ensure the health, safety and welfare of the people who live in, work in, and visit this great community.

The AFPD can commit to low permit fees, group reviews in large batches for typical floorplans, quick turn-around times and next day inspections to ensure there is as little impact to the construction process as possible.

It is AFPD's recommendation that during the adoption of the 2024 ICC code set, that the prescriptive residential sprinkler requirements are maintained and join progressive jurisdictions such as Broomfield, Boulder, Boulder County, Castle Pines, Centennial, Cherry Hills Village, Erie, Federal Heights, Fort Collins, Golden, Granby, Grand County, Lakewood, Louisville, Lafayette, Snowmass Village, Superior, Westminster, and Wheat Ridge.

In closing, we appreciate the opportunity to discuss this proposed ordinance change and welcome your feedback. Again, thank you for your community leadership and interest in making Arvada a fire-safe community.



ARVADA FIRE

RESIDENTIAL FIRE SPRINKLERS

Requiring residential fire sprinkler systems in new construction offers significant benefits for home builders and developers, both in terms of marketability and long-term value. Homes equipped with fire sprinklers are increasingly attractive to safety-conscious buyers and can be promoted as premium, forward-thinking builds that prioritize family safety. These systems also help limit fire damage, reducing liability risks and potentially lowering insurance costs. Additionally, trade-offs can lower infrastructure costs for developers and builders. By embracing this life safety system, builders not only enhance the desirability of their properties by creating modern, resilient communities.

- **1-3% the cost of a new home.** This is both a local and national statistic.
- Various IRC trade-offs, 2-hr fire walls and protection of structural members in unfinished basements are no longer required and many others.
- Reduces greenhouse gas emissions by up to 98%.
- Reduces the required fire flow for the underground water supply (water conservation).
- Reduces water usage at a fire by as much as 91%.
- Reduces environmental impacts from contaminated runoff.
- Fewer fire hydrants are required because we will not need to use them at sprinklered homes.
- Narrower roads are allowed because we will not need as many apparatus at these fires.
- Fewer fire apparatus access roads are required
- Required in the International Residential Code (IRC) since 2009, but locally amended out
- Reduces fire damage by 97%. The national average fire loss is \$45,019 where the AFPD average is \$55,034. National statistics show that with sprinkler systems, the average loss is \$2,166.
- Smaller fires will displace the citizens for shorter durations, if at all, and cost less to repair.
- Very reliable – not any more susceptible to breaks any more than domestic plumbing.
- Water damage can be remedied easier than fire damage.
- Little to no maintenance, just need to make sure sprinklers are not obstructed or painted.
- Fires typically contained by one (1) sprinkler
- Possible insurance breaks (0.0%-10% depending on carrier and system coverage).
- Houses become uninhabitable in approximately two (2) minutes. These systems provide the much-needed time to evacuate a home.
- Life safety of the citizens and firefighters – fires will be smaller and will not put anyone into an immediately dangerous to life and health situation.
- Cancer prevention for AFPD personnel – although these will not eliminate carcinogenic exposures, it will significantly reduce them.
- Put water on the fire well before we arrive. Although we have good response times, the sprinkler system will be many minutes faster at putting water on the fire than we will.
- Activate upon heat detection (at least 150 degrees) and not smoke. Burnt food or steam from a shower will not activate these systems.
- Compliments smoke alarms
- Multiple system types allowed

Many progressive surrounding communities have maintained this in their codes, Westminster, Superior, Broomfield, Lakewood, Louisville, Golden, Boulder, Boulder County, Wheat Ridge, Castle Pines, Federal Heights, Cherry Hills Village, and Erie.

*The cost will vary depending on whether it is a custom home or a tract home. Tract homes costs are lower than custom homes.

2024 Building Code Adoption



Building Safety Division

Our Responsibility: Protect public health and welfare of the City of Arvada by enforcing the minimum building codes through permit issuance, plan review, inspections and issuance of certificates of occupancy, for the places that we live, sleep, eat, play and work!

- 15 members of staff
- Plans Examiners, Building Inspectors, Permit Technicians, Deputy and Chief Building Official
- 26,426 Building Inspections in 2025
- 6,454 Building Plan Reviews in 2025
- 6,025 Building Permits issued in 2025
- #1 Type of Building Permit issued was for Residential existing homes- remodel, addition, replacement, repair-4,871
- Our team holds over 100 certifications!

History of Codes and Proposed Codes

- History/ Background
 - Building Codes- One of the oldest government functions ranging from ancient times
 - First Adopted Building Codes in Arvada- October 10th, 1955
 - Arvada created a Building Department in 1965
 - 18th Building code adoption in Arvada History
- City of Arvada current adopted codes
 - 2018 IRC, IBC, IMC, IFGC, IFC, IPC, IEBC, IECC, ISPSC
 - 2009 IPMC
 - 2023 NEC
 - Adoption by reference- 2009 ICC A117.1
- City of Arvada proposed new building codes
 - 2024 IRC, IBC, IMC, IFGC, IFC, IPC, IEBC, IECC, ISPSC, IPMC
 - 2026 NEC - adopted by reference
 - 2017 ICC A117.1- adopted by reference
 - New! wildfire code- Arvada wildfire resiliency code
 - New! Adoption of the Low Energy Carbon Code



ICC- International Code Council

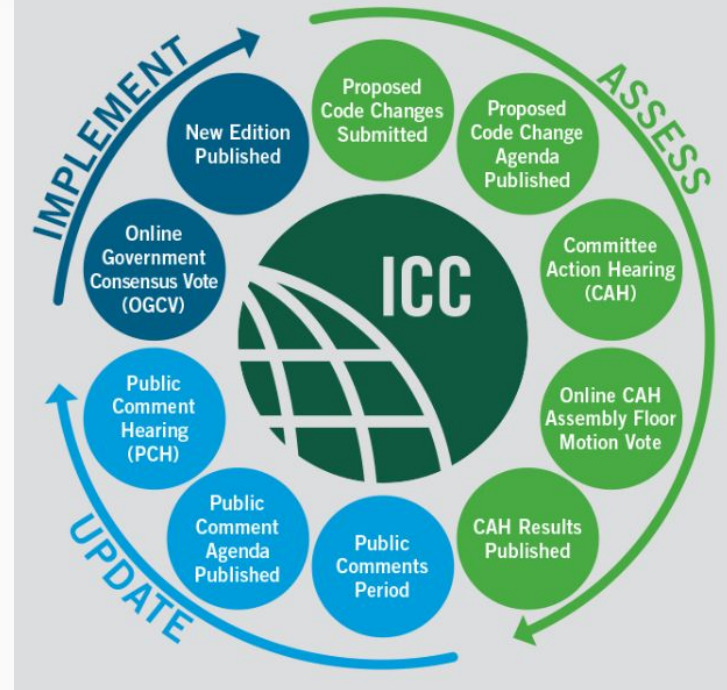
Who is ICC?

- International code council
- Non-profit association focused on building safety worldwide
- Vision is to create safe, affordable and sustainable buildings and communities
- They provide many services including publishing of model codes, evaluation, certification, accreditation, consulting, professional development, etc.
- Develop codes and standards used worldwide
- Established in 1994
- Before this, there were multiple groups of professionals that had their own codes which formed to create ICC (BOCA, ICBO, SBCCI)
- 15 Building codes that ICC has developed known as a “family” of codes or I-codes
- Most trusted source of model codes and standards. Comes from hundreds of years of knowledge, experience and lessons learned



Code Development Process

- Codes from ICC known as Model Codes
- ICC updates the Model Building Codes every three (3) years
- Anyone can submit a code development proposal
- Voted on by industry experts, contractors, designers, design professionals through public comment and a committee of experts
- Communities all over the world adopt the same ICC model codes in the same fashion and all 50 states utilize these codes
- Continuous growing and improving



Why do we adopt modern building codes?

Industry and our community progresses and so do Building Codes!

- AI
- Robots in construction
- New materials and innovations
- AR and VR training
- QR codes in code books/ online codes
- Drone usage
- Modular structures and pre-manufactured structures becoming more common
- Shipping container homes
- Housing becoming more and more important
- New legislation impacting codes
- Energy efficiency, green codes and sustainability efforts amping up
- New mechanical refrigerants being used in mechanical equipment
- New products and needs of communities with new troubles faced such as environmental and weather changes, scarcity of resources and “super aging” with increased life span
- Disasters and lessons learned- Disasters are Increasing in events!



Notable Disasters from 2020-2026

2020-2021:

- US Wildfires in California, Colorado, Oregon and other western states. Consuming millions of acres.
- Hurricanes: Hurricane Laura and Hurricane Delta
- Severe storms and tornado outbreaks across central and eastern states
- **Marshall Fire**- most destructive in state history, destroying nearly 1,000 structures, killing multiple people and leading to evacuation of 37,500 people

2022-2023:

- Hurricane Ian in Florida- category 4 hurricane causing deaths and extensive damage
- US drought and heat waves- contributing to wildfires and impacting agriculture
- Historic tornado outbreak in March of 2023- over 145 tornadoes
- **Maui fire**: top 10 ranked fires in history, deadliest wildfire in Hawaii's history. 102 confirmed deaths 5.5 billion dollars in loss and 2,200 structures lost

2024-2026:

- 27 billion dollar weather and climate disaster events in the US alone.
- Hurricane Helene (FL, NC, VA, TN) Strongest hurricane on record to strike Florida's big bend region, causing historic rainfall and flooding across north carolina, killing 219 people.
- Hurricane Beryl (Texas and Louisiana): Became the earliest category 5 hurricane on record in the Atlantic during July, causing power outages for millions.
- **Los Angeles wildfires**: 449 deaths, consumed more than 50,000 acres and destroyed nearly 16,000 homes
- **Ruidoso NM**: Faced 8 major floods since June of 2021 after two wildfires scorched the area. Over \$500 million in estimated damages.

Building, Fire and Wildfire Codes in Action!



LEYDEN ROCK ARVADA, CO SEPT. 2025



LEYDEN ROCK ARVADA, CO SEPT. 2025

Benefits of Modern Building Code Adoption

Benefits of Building Codes

- Life safety
- Disaster Resilience/ community resiliency
- Economic Savings
- Energy efficiency
- Property value and Quality
- Updated codes replace outdated provisions
- Allows for vetted modern practices and new materials and innovations
- More options for compliance offering savings because of flexibility provided
- Potential of reduction of insurance rates and coverage where coverage without building codes and permitted work may not be possible
- Consistency among surrounding communities leads to predictable costs and reciprocity for contractors
- Improve public health and general welfare- reduce exposure to hazardous materials, better ventilation, safer environments, etc. reducing loss of life and fewer illnesses.

Goals and Considerations

- Adopt latest version of the International Building Codes- 2024 I-codes/ replace outdated provisions
- Correct errors/ omissions
- Remove excess amendments
- Customize codes where needed for Arvada
- Support sustainability and decarbonization efforts
- Flexibility in providing further options for compliance where possible
- Consider long term savings and resiliency
- Implement codes to address learned hazards and risks from disasters occurred
- Consider consistency with surrounding jurisdictions
- Adopt every three years instead of every six- the longer a jurisdiction waits between code cycles, the larger the impact on the construction industry, on staff and on the community.
- State of Colorado legislation
- Lower construction costs where possible

Cost Impacts

- FEMA estimates for every \$1 invested, modern building codes save \$11 by reducing disaster losses AND if everyone adopted the modern codes, there would be a potential of avoiding hundreds of billions in damages by 2040-2060 from hurricanes, floods, wildfires, fires and earthquakes
- More resiliency for our structures = long term savings and avoidance of costly rebuilding after disaster strikes
- Higher return on investment- reduce long term costs and increase long term savings
- Energy- Varies in cost increases and savings. Depends on many factors such as square footage, use of fuel burning appliances, method of compliance, etc. This new code will help homeowners save money on energy bills by improving efficiency and reducing energy consumption in new homes and commercial buildings over all.
- New paths of compliance = savings
- Potential to reduce insurance rates through higher score for ISO BCEGS score for Arvada Building Safety Division

Legislation Affecting Adoption

- ★• (HB22-1362) Colorado Statewide Energy Code
 - (HB23-1233) Electric Vehicle Charging and Parking
 - (HB24-1173) Electric Vehicle Charging System Permits
- ★• (SB23-166) Colorado Wildfire Resiliency Code
 - (HB25-1030) Accessibility Standards in Building Codes
 - (SB25-002) Regional Building Code for Factory Built Structures
 - (HB24-1152) Accessory Dwelling Units
 - (HB24-01239) Single Exit Stairway
 - (HB24-01362) Graywater Use
 - (HB23-00206) Radon Professional Licensing

Arvada's Approach and Outreach

- Review process of all changes and codes
- Review multiple state codes
- Review legislation affecting adoption
- Customizing codes for Arvada's needs
- Reviewed HBA's recommendations for amendments and other communities
- Drafting "redlines"
- Focus on training for staff
- Updating all guides, handouts, website and other resources.
Creating new resources where needed
- Community outreach - video series, website updates, etc.
- Stakeholder outreach: BCAB, ASAC, HAC, HBA
- DRCOG
- Comparison of what other communities are doing
- Joining workshops, training events, classes, etc. to prepare staff and understand changes
- Create implementation plan and put steps in place to help people plan their projects
- Budgeting ahead of time to prepare for costs such as new books and training
- Reviewing permitting fees to look for potential decrease in fees in some areas where we can provide leeway and incentives
- Looking for grants where possible to help- did achieve the BPC grant from DRCOG!
- Plan for ongoing training and outreach!

Top 3 Significant Changes

- ★ **1. IECC: Energy changes and incorporation of Low Energy Carbon Code (LECC)**
- ★ **3. IRC: Residential Sprinkler Systems**
- ★ **2. New Arvada Wildfire Resiliency Code (AWRC)**

#1 Energy changes/ incorporation of LECC

★ **(HB22-1362) Colorado Statewide Energy Code**, requires cities and counties to update their building energy codes to increase energy efficiency and cut the climate pollution from new homes and commercial buildings. The bill directs local governments that have building codes to:

- Adopt and begin enforcing the 2021 version of the International Energy Conservation Code (IECC), or an energy code that achieves equivalent or better energy performance, when one or more building codes are updated, beginning July 1, 2023;
- Adopt electric and solar ready requirements as part of energy codes when one or more building codes are updated, beginning July 1, 2023; and
- Adopt and begin enforcing a low energy and carbon code when one or more building codes are updated, beginning July 1, 2026.

the intent of the LECC, is to minimize the overall carbon emissions associated with new homes and commercial buildings while also taking into account home affordability.

#1 Energy changes continued

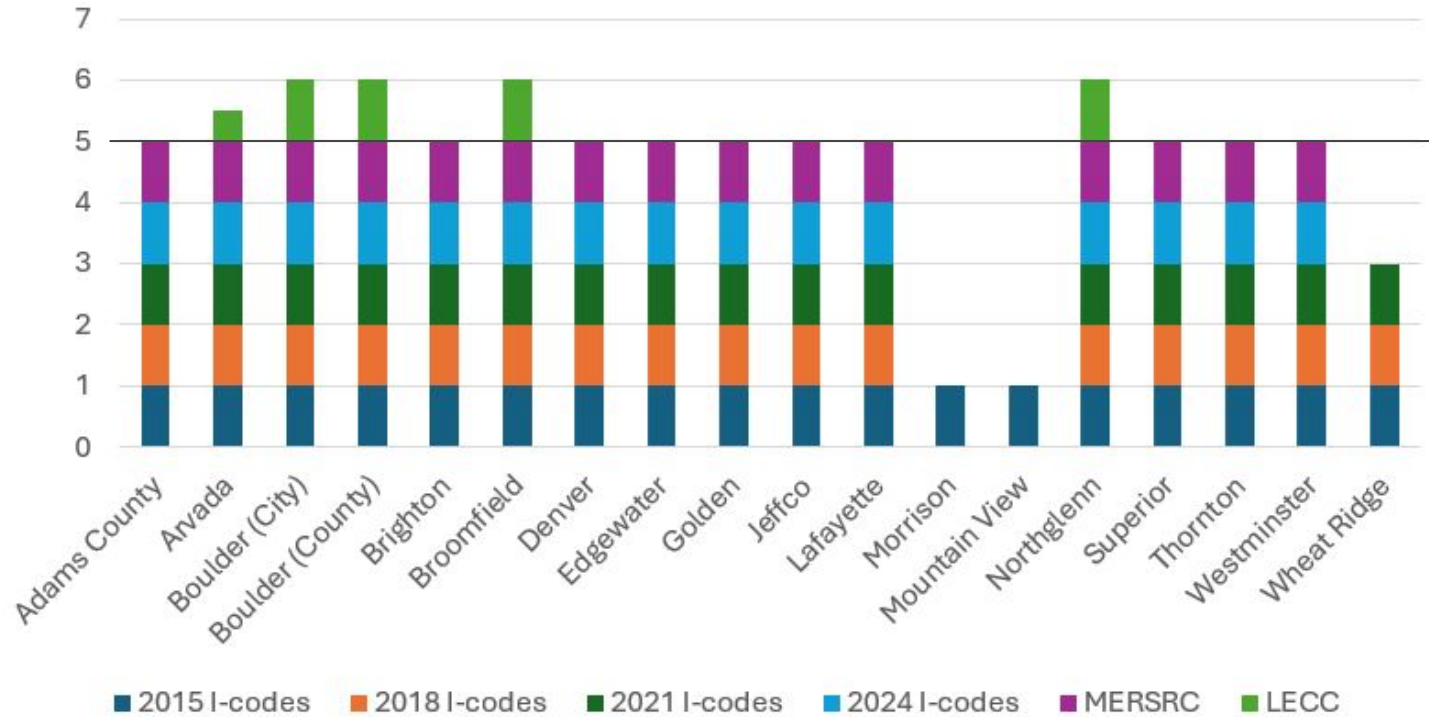
★ Significant changes to 2024 IECC

- New point system for compliance
- Easier to achieve compliance because there are many options that allow for flexibility, based on the needs and wants for a project

Significant changes with LECC

- Electric ready, solar ready and EV ready provisions
- Requires some EV installation requirements
- Cannot use COMcheck
- Penalties for fuel burning appliances- impact mostly larger homes over 5,000 sf
- Over all updates that make sense and work with 2024 IECC
- Colorado has created one code book that includes the LECC and the 2024 IECC

ENERGY CODE ADOPTION STATUSES



#2 Residential Fire Sprinklers

★ Significant Changes:

- Will require residential sprinkler systems to be installed in single family homes, duplexes and townhomes less than 3 stories in height that are built per the IRC
- Will only be applicable to new homes
- Sprinklers save lives

City convened an internal task force in 2023

- Multiple divisions/departments and AFD
- Potential impacts to utilities
- Potential impacts to Eng. Standards and Specs

Summary

- Current Eng. Standards and Specs are neutral on sprinklers
- Sprinklers can be installed now in all types of properties with minimal impact to utilities
- No change to current operations or standards/specs with change to building code
- Has been a minor learning curve but generally working for those that do want them

#3 New Arvada Wildfire Resiliency Code

★ ****(SB23-166) Colorado Wildfire Resiliency Code**, requires cities and counties to adopt and enforce wildfire-resistant building codes for high-risk areas.

- About 70-80% of Arvada is in some portion of this risk area
- The state has created the 2025 Colorado Wildfire Resiliency Code (CWRC), which will be effective July 1, 2025, and sets stricter construction standards for new homes and renovations in the Wildland-Urban Interface area.
- This code is essentially a version of the International Code Council's Wildland Urban Interface Code (IWUIC)
- Communities are encouraged to make this code work for their communities
- Arvada's stance- have worked with Jeffco to create an "Arvada Wildfire Resiliency Code" that will match essentially what Jeffco is using for consistency and a code that works for Arvada

Who Else is Adopting the 2024 I-codes?

- Adams County
- Boulder (City)
- Boulder (County)
- Brighton
- Broomfield
- Denver (Denver code based on 24' codes)
- Edgewater
- Fort Collins
- Golden
- Greenwood Village
- Jeffco
- Lafayette
- Larimer County
- Littleton
- Louisville
- Northglenn
- Superior
- Thornton
- Westminster
- Wheatridge



2024 International Fire Code Update



Our Family Helping Your Family

Code Changes and Amendments to Note

- Operational Permits
 - Lithium-Ion batteries
 - Temporary sheltering
- Rural Fire Apparatus Access Roads
 - Mostly taken from Jefferson County Road and Transportation Manual
 - Allows for roads narrower than the prescriptive fire code and city roadway standards

Code Changes and Amendments to Note

- Driveways
 - Typical driveways not allowed for fire apparatus access.
- Open Burning
 - Prohibited in WUI areas unless portable fireplaces, recreational fires, and vegetation management.
 - Provided a list of prohibited materials allowed to be burned
- Sky Lanterns
 - Additional provisions

Code Changes and Amendments to Note

- Retroactive Manual Fire Alarm Systems
 - Allow interior corridor R-2's to meet exemption
 - Increased number of units from 16 to 24 to be exempted
- Stairwells In Buildings Under Construction
 - Changed it to be required at 20' rather than 40'
- Fire Flow Requirements
 - Went back to prescriptive reduction of 75% for sprinklered buildings

Code Changes and Amendments to Note

- Fire Apparatus Access Roads – Loading
 - Increased from 85k pounds to 90k pounds
- Valet Trash
 - Added the requirement that this can only be done in a sprinklered building

Residential Sprinklers - Collaboration

- October 2020 Council Recommendation
 - Arvada Fire, Utilities, Building, Engineering, Planning,
- Updated Section 413.02 of the Engineering Code of Standards
 - Combination domestic/fire service line with passive purge (No BFP)
 - Pump and tank allowed as alternative
 - Max meter size and flow rate established
 - Tag on meter required
 - NSF 61 certified materials
- P2904 not allowed
- AFRPD will notify city when a system is activated
- AFRPD will do all the reviews and inspections

Residential Sprinklers - Collaboration

*“Because the city is over 80% built-out without fire sprinklers and because fire storage is still needed for larger buildings (commercial, schools, large multi-family), **there will be no change in Level of Service and design standards for fire storage**”*

Residential Sprinklers – Policy Q&A

- Will this affect city standards – NO
- Water shut off – not habitable therefore, system can be shut off (City Code 102-33)
- Road widths – will not change but allows for it in the future
- Density – NO change
- Remodels – NOT required
- Fees
 - Cost based on square footage – most will be between \$150 and \$375
 - Master plans accepted for tract home projects
 - NO change in tap fee
 - NO change in System Development Charges

Surrounding Communities and Residential Sprinklers

- City of Wheat Ridge
 - Townhouses
- Other area municipalities
 - Commerce City
 - Superior
 - Erie
 - Lakewood
 - Boulder
 - Lafayette
 - Golden (over 10 years ago)
 - Westminster (over 10 years ago)

Wildland Urban Interface (WUI) Code and the Colorado Wildfire Resiliency Code (WRC)

Any area where the built environment meets wildland.

Categorized into two risk classifications:

Class 2 – High & Moderate Fire Intensity

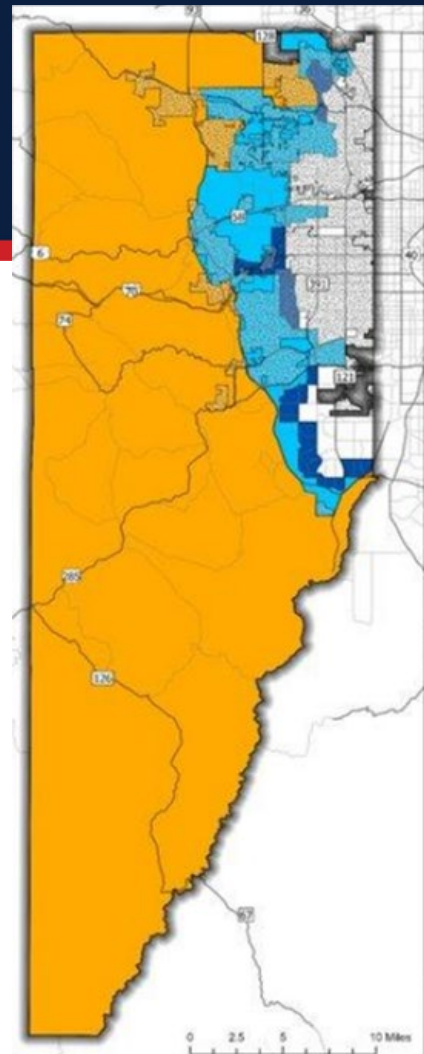
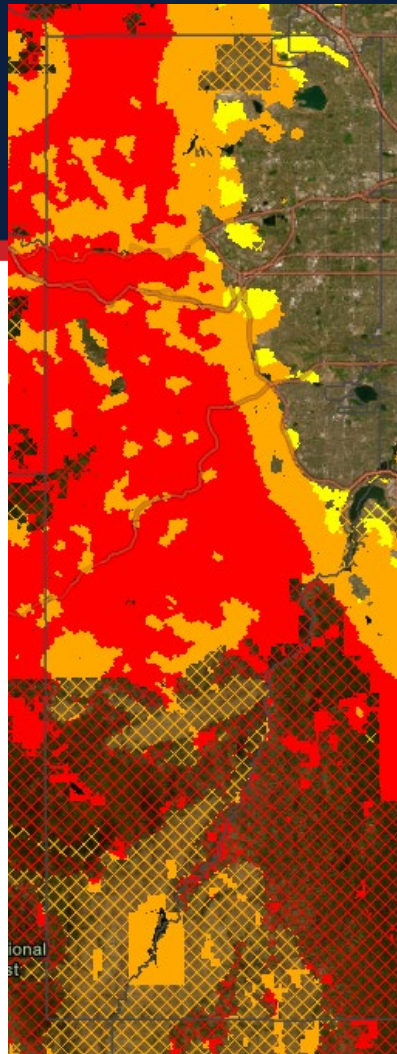
- Intended to keep fire away from homes through home hardening.
- Intended to harden the structure to keep a structure from igniting if a fire comes into contact with it.

Class 1 – Low Fire Intensity

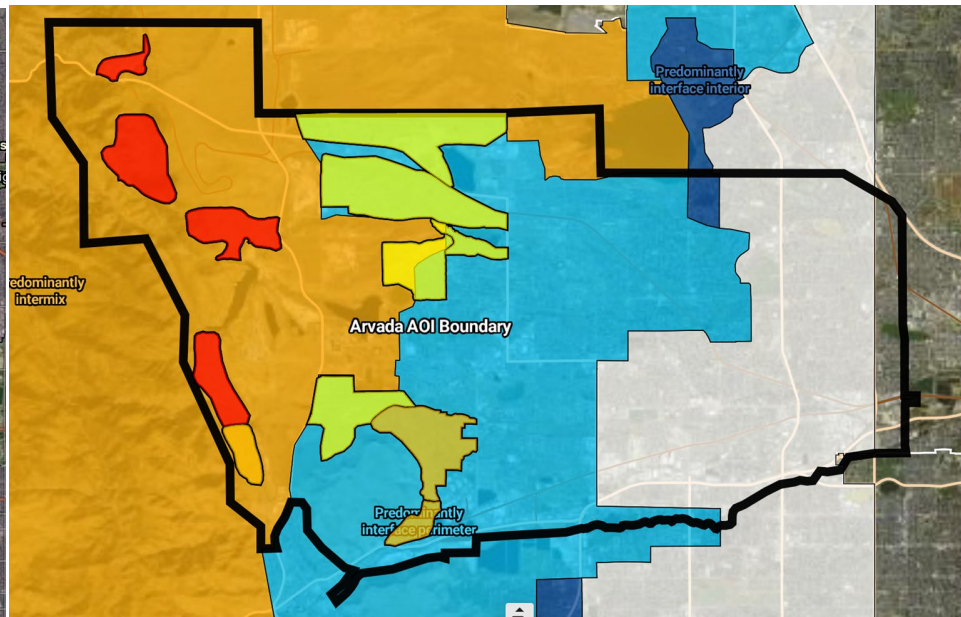
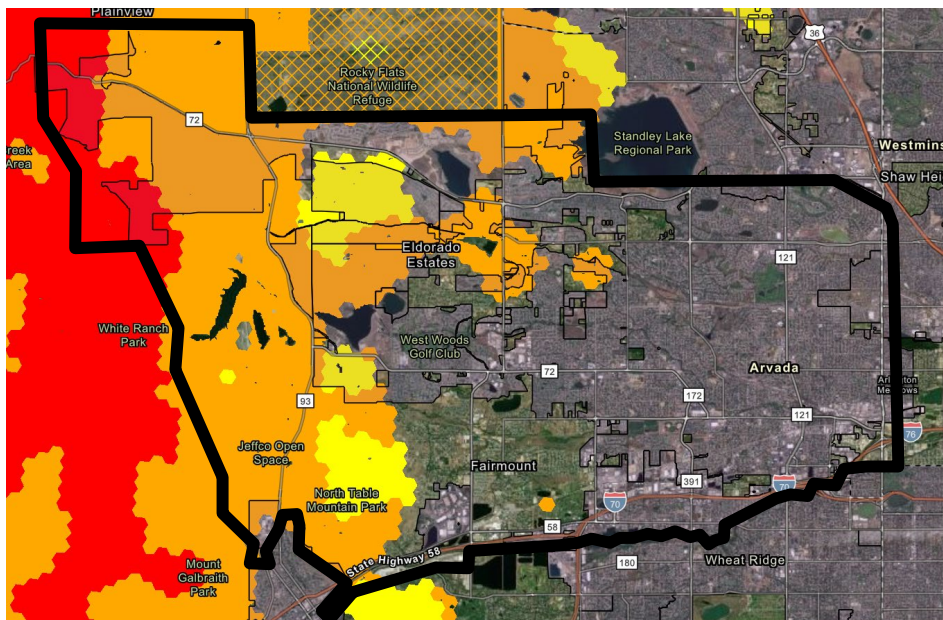
- Intended to harden the structure from ember cast created by a wildfire.
- Defensible space and structure hardening is less stringent in this classification.

WUI Risk Maps - County

- Jefferson County is one of the highest risk counties in Colorado for wildfire risk and impact.
 - Higher density along wildland areas
 - High wind potential
 - Light flashy fuels that spread fast
- The WUI boundary map is based on the best-available science and observations of fire behavior along the Colorado Front Range.



WUI Risk Maps - Arvada



Applicability

- New structures & exterior alterations to existing structures
- Exemptions
 - Detached non-habitable structures not exceeding 120 square feet and >10 feet from nearest occupiable structure
 - Barns exclusively used for livestock, livestock feed, store farm products, farm equipment and located > 50 feet from occupiable structure
 - Alterations to existing structures where <25% of **exterior walls** are impacted
 - Alterations to existing structures where <25% of **roofs** are impacted
 - Where new attachments to an existing structure is <25% of the **exterior of the structure** is impacted
 - Painting, staining or similar maintenance work
 - Interior remodels

Structure Hardening

Class 1 structural hardening per the state of Colorado wildfire resiliency code may require:

- Class A roofing material
- Additional fire measures may be required between the roof deck and roof covering
- Specific flashing may be required
- Fire resistant gutters may be required
- Ventilation may require covering of vents.

Class 2 Structural Hardening per the state of Colorado wildfire resiliency code may require:

- Class A roofing material
- Additional fire measures may be required between the roof deck and roof covering
- Specific flashing may be required
- Fire resistant gutters may be required
- Ventilation may require covering of vents.
- Fire resistance construction of roof eaves and soffits
- Rated exterior wall assemblies with one hour rating
- Ignition resistant exterior wall coverings
- Flashing requirements
- Underfloor protection
- Decking protection - unenclosed decks
- Garage door perimeter gap requirements
- Nearby accessory structure requirements

Defensible Space – Zone 1: 0-5 feet

- Non-combustible, hard surface materials
- No plantings
- No combustible storage
- No new trees – mature trees >10" diameter and limbs >4.5' above ground can be maintained
- Tree crowns shall provide 10' clearance from structure



Defensible Space – Zone 2: 5-30 feet

- Dead plant material must be removed
- No large accumulations of surface fuels – mulch no deeper than 4 inches
- Firewood piles must be at least 30 feet from habitable structure
- Tree crowns 10 feet from outermost portion of any structure



Defensible Space – Class 1 and 2

- Class 1
 - Shrubs within this zone shall be spaced to prevent structure ignition
 - Shrubs shall not be planted **under trees** within the drip line
- Class 2
 - Shrubs within this zone shall be spaced to prevent structure ignition
 - Shrubs shall be **At least 10 feet away from the eds of tree branches**
- Prohibited plants
 - Juniperus spp. (Juniper species), Thuja occidentalis (American arborvitae), Thuja orientalis (Oriental Arborvitae)

Defensible Space – Zone 1 and 2: Fencing

- Fencing within **8 feet** of a structure regulated by this code or up to the property line when the property line is less than 8 feet away from the structure shall be constructed with noncombustible or ignition-resistant building materials.

Defensible Space – Zone 3: Class 2 Only

- Prune trees to a height of 6 to 10 feet from the ground or a third of the total height of the tree, whichever is less
- Tree crowns shall be spaced at a minimum of 6 to 10 feet
- Hazardous dead plant material must be removed

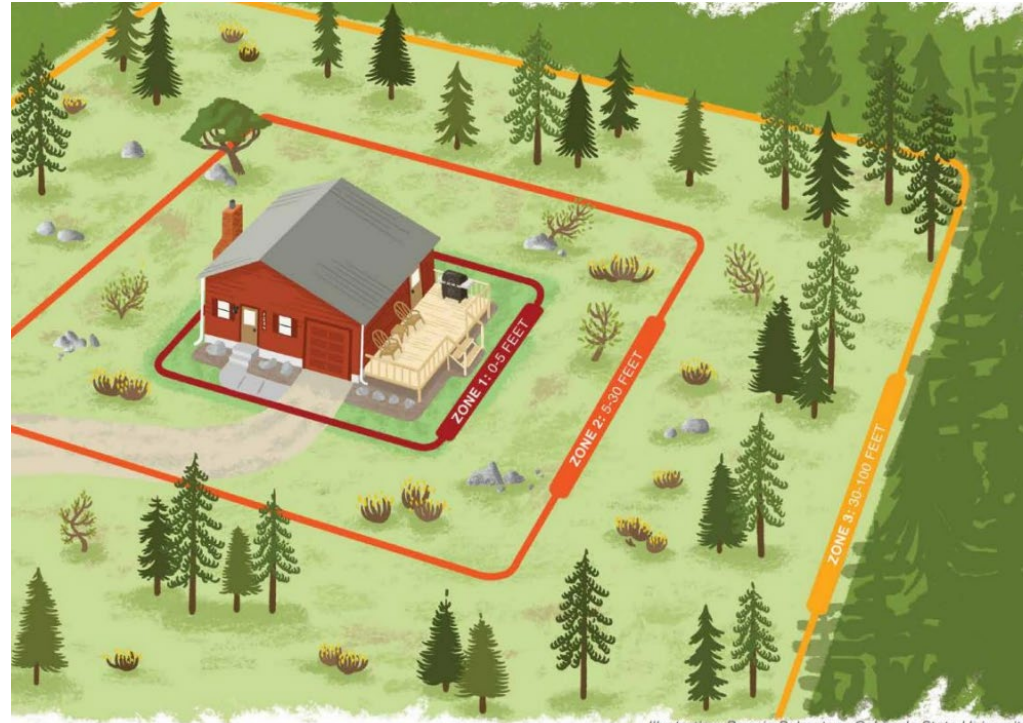


Illustration: Bonnie Palmatory, Colorado State University

Questions?



Our Family Helping Your Family

Residential Fire Sprinkler Systems

2024 ICC Code Adoption



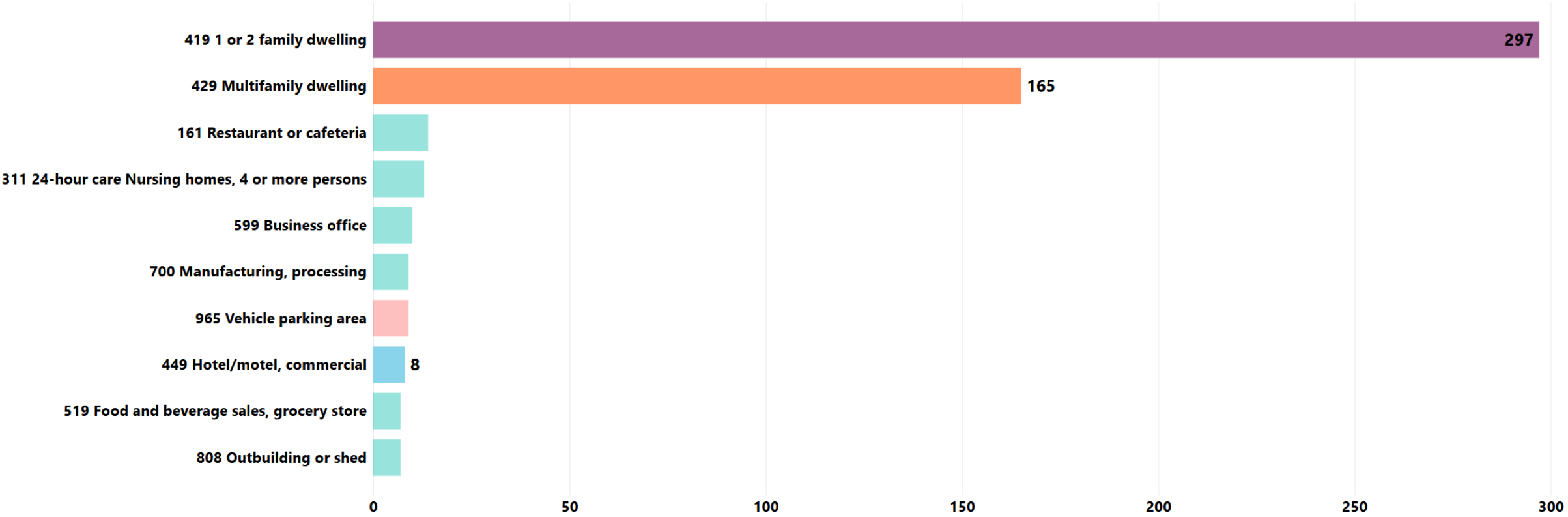
Our Family Helping Your Family

The Fire Problem



- Data from 01/01/2017 through 07/15/2025
 - 49% of all fires are in one- and two-family dwellings
 - 92% of fire fatalities are in one- and two-family dwellings
 - Arvada is approximately 2% of the CO populations but accounts for 4% of the fire fatalities since 2017.
 - Average fire loss is over \$53,000 (more than 2X the typical cost of a sprinkler system)

The Fire Problem



The Fire Problem



Year	Incidents	Total Value	Avg Value	Total Loss	Avg Loss	Total Loss %	Total Saved	Avg Saved	Total Saved %
2017	39	\$6,834,346	\$151,874	\$3,452,141	\$76,714	50.51%	\$3,382,205	\$75,160	49.49%
2018	43	\$5,784,629	\$131,469	\$1,350,484	\$30,693	23.35%	\$4,434,145	\$100,776	76.65%
2019	40	\$6,806,098	\$170,152	\$1,237,784	\$30,945	18.19%	\$5,568,314	\$139,208	81.81%
2020	37	\$7,622,826	\$200,601	\$2,572,636	\$67,701	33.75%	\$5,050,190	\$132,900	66.25%
2021	36	\$7,218,190	\$206,234	\$1,678,880	\$47,968	23.26%	\$5,539,310	\$158,266	76.74%
2022	39	\$9,659,017	\$241,475	\$1,819,759	\$45,494	18.84%	\$7,839,258	\$195,981	81.16%
2023	29	\$9,871,322	\$329,044	\$2,926,471	\$97,549	29.65%	\$6,944,851	\$231,495	70.35%
2024	19	\$5,828,998	\$291,450	\$625,458	\$31,273	10.73%	\$5,203,540	\$260,177	89.27%
2025	16	\$5,288,812	\$330,551	\$700,458	\$43,779	13.24%	\$4,588,354	\$286,772	86.76%
Total	298	\$64,914,238	\$210,761	\$16,364,071	\$53,130	25.21%	\$48,550,167	\$157,630	74.79%



Code Requirement & History

- 2009 IRC began requiring in one- and two-family dwellings with a full implementation required in 2011
- Historically amended out in Arvada & other communities
- This is the minimum prescriptive requirement derived from the ICC code development process

Facts

- Houses become uninhabitable in approximately two minutes
- Not every sprinkler activates – only the ones exposed to the heat
- No more prone to leaking than domestic plumbing systems
- Inspections can be done by homeowner – simple visual checks

Residential Sprinkler System Types



THIS IS WHAT IT IS NOT



Residential Fire Sprinkler Systems

Residential Sprinkler System Types



NFPA 13D – TAPPED
OFF DOMESTIC
SERVICE



Residential Sprinkler System Types



NFPA 13D – TANK AND
PUMP



Residential Sprinkler System Types



P2904 – MULTI-
PURPOSE UTILIZING
DOMESTIC PLUMBING



Residential Sprinkler System Types



CONCEALED SPRINKLERS



Impacts



- Meter sizes
 - Current – 5/8" x 3/4"
 - Anticipated – 3/4" x 3/4"
 - NO change in tap fee
 - \$62 increase of meter cost
 - NO change in System Development Charges*
- Allowed in Section 400 – Water Supply Facilities
- Backflow preventor not required

*Information sourced from City of Arvada website: [System Development Charges and Meter Fees | Arvada, CO](#)

Costs



- Yes, this will increase the cost of a home
 - Cost may be offset by various IRC trade-offs
- Average cost seen is \$3.23 per square foot
- National statistics show 1%-3% the cost of the home
- Often costs provided by homebuilders are their marked-up cost

Code Allowances with Sprinklers



- Narrower roads and more opportunity for traffic calming
- More units in a development with 1 point of access
- Longer spacing between hydrants
- Various IRC allowances



Benefits



- Allows the much-needed time for occupants to evacuate
- Compliment smoke alarms
- Water conservation
 - Reduce water usage by as much as 91%
- Less contamination of the environment from fire
 - 98% reduction of greenhouse gas emissions
 - Reduce fire damage up to 97%
- Reliable
- Does not affect current residences
- Provides quick suppression capabilities – quicker than we can get there

AFPD's Commitment



- Low permit fees
- Group reviews in large batches for typical floorplans
- Quick turn-around times <1week
- Next day inspections



Questions?
Steven Parker
Fire Marshal



Our Family Helping Your Family

Adopted Building Codes & Proposed Building Codes

Current Adopted Building Codes

- 2018 International Building Code
- 2018 International Residential Code
- 2018 International Fuel Gas Code
- 2018 International Mechanical Code
- 2018 International Plumbing Code
- 2009 International Property Maintenance Code
- 2018 International Energy Code
- 2018 International Fire Code
- 2018 International Existing Building Code
- 2023 National Electrical Code (adopted by reference)
- 2018 International Swimming Pool and Spa Code
- 2009 ICC A117.1 Code for Accessible and Usable Buildings and Facilities (adopted by reference)

Proposed Building Codes

- 2024 International Building Code
- 2024 International Residential Code
- 2024 International Fuel Gas Code
- 2024 International Mechanical Code
- 2024 International Plumbing Code
- 2024 International Property Maintenance Code
- 2024 International Energy Conservation Code with the NEW! Colorado Low Energy and Carbon Code
- 2024 International Fire Code
- 2024 International Existing Building Code
- 2026 National Electrical Code (adopted by reference)
- 2024 International Swimming Pool and Spa Code
- 2024 ICC A117.1 Code for Accessible and Usable Buildings and Facilities (adopted by reference)
- NEW! City of Arvada Wildfire Resiliency Code

Common Acronyms

ICC- International Code Council

IBC- International Building Code

IRC- International Residential Code

IMC- International Mechanical Code

IPC- International Plumbing Code

IFGC- International Fuel Gas Code

IFC- International Fire Code

IEBC- International Existing Building Code

IPMC- International Property Maintenance Code

IECC- International Energy Conservation Code*

MERSRC- Colorado Model Electric Ready and Solar Ready Code*

LECC- Colorado Low Energy Carbon Code*

NEC- National Electrical Code

AWRC- Arvada Wildfire Resiliency Code**

CWRC- Colorado Wildfire Resiliency Code**

IWUIC- International Wildfire Resiliency Code**

ANSI- American National Standards Institute ***

Additional Clarification:

* **(HB22-1362) Colorado Statewide Energy Code**, is a house bill that requires cities and counties to update their building energy codes to increase energy efficiency and cut the climate pollution from new homes and commercial buildings. The bill directs local governments that have building codes to:

- Adopt and begin enforcing the 2021 version of the International Energy Conservation Code (IECC), or an energy code that achieves equivalent or better energy performance, when one or more building codes are updated, beginning July 1, 2023;
- Adopt electric and solar ready requirements as part of energy codes when one or more.
- building codes are updated, beginning July 1, 2023; and
- Adopt and begin enforcing a low energy and carbon code when one or more building codes are updated, beginning July 1, 2026.

It is important to understand that the MERSRC and the LECC is essentially a set of amendments that get added into the IECC code adoption as amendments. They do not replace the IECC and so the IECC needs to still be adopted with the addition of either the MERSRC or the LECC. The LECC is the same as the MERSRC but has added text, updated text and added requirements to further help with decarbonization. As stated in the bill, the intent of the LECC, is to minimize the overall carbon emissions associated with new homes and commercial buildings while also taking into account home affordability.

**** (SB23-166) Colorado Wildfire Resiliency Code**, is a house bill that requires cities and counties to adopt and enforce wildfire-resistant building codes for high-risk areas. About 70-80% of Arvada is in some portion of this risk area and so Arvada is required to adopt at a minimum the Colorado Wildfire Resiliency Code which will be applicable to those areas within a risk area. The state has created the 2025 Colorado Wildfire Resiliency Code (CWRC), which will be effective July 1, 2025, and sets stricter construction standards for new homes and renovations in the Wildland-Urban Interface area. This code is essentially a version of the International Code Council's Wildland Urban Interface Code (IWUIC) but it has a few chapters that are not included in it and it has some additional and stricter requirements than the IWUIC. Communities also have the option to create their own version of the CWRC and are encouraged to do so, as long as the code developed is not any less restrictive than the CWRC.

***** ANSI is a common term for the ICC A117.1** Code for accessible and usable buildings and facilities code book. Saying ANSI highlights this code's national standard status, while "ICC A117.1" points to its creator, but they refer to the same foundational accessibility. This code book is consistent with ADA (Americans with Disabilities Act) regulations and is adopted by building codes (like the IBC) for compliance, effectively making it the "how-to" for ADA accessibility requirements.



REPORT TO CITY COUNCIL

AGENDA ITEM
2.C.

TO: THE HONORABLE CITY COUNCIL

DATE: January 27, 2026

SUBJECT: Staff Updates

Report in Brief

The purpose of this workshop is for staff to provide City Council with brief updates on projects and issues that do not require a full workshop.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report