



# AUSTIN FIRE DEPARTMENT

2024 International Wildland Urban Interface  
Code Adoption

Updated 06/06/2024 to reflect City of Austin  
Land Development Code amendments.  
Pages 6, 8, 11-12, 28.

Updated 07/03/2024 to reflect stakeholder  
feedback. Page 29.

Updated 07/09/2024 (for Building and Fire  
Code Board Update) and 07/25/2024 to  
reflect stakeholder feedback. Pages 3, 9,  
10, 11, 13-16, 19, 25, 29, 30, 32.

# 2024 International Wildland Urban Interface Code

Local Amendment  
Adoption

***Our Mission Goes Beyond Our Name is our cornerstone***

As a leader in the fire service:

We are on the cutting-edge of technology and training.

We protect lives and property through extensive fire prevention and safety education efforts, in addition to a quick and effective response to emergencies.



# Proposed Adoption

In accordance with ICC latest publication, Austin Fire Department is on track to implement the 2024 International Wildland Urban Interface Code (IWUIC) and local amendments 30 days following City Council adoption, **tentative date November 16, 2024.**

07/25/2024:  
Updated to reflect  
City of Austin Land  
Development Code  
amendments



# Coordinate and Clarify

**Goals:** Clarify previously adopted local amendments with changing technology and published code.

Adjust requirements based on challenges and successes of initial implementation of the IWUIC.

## **Reasons for amendments:**

1. To support operating procedures for Wildfire Operations.
2. Formalize WUI Proximity Zones to clarify structure hardening requirements.
3. Align requirements with current wildfire research.
4. Clarification purposes and formalizing 2015 WUIC interpretations.



# 2024 IWUIC Significant Changes

## Significant Changes to IWUIC model code:

- 104 Determination of Compliance (*COA amendments refer to Fire Code*)
  - Outlines requirements for technical opinions, reports, and alternative materials, design and methods
- 503.2 Ignition-resistant building material. Reorganized and clarified.
- 504.5.1 Flashing. Additional requirements above International Residential Code.
- 504.10, 505.10, 506.5 Vents
  - Performance and Prescriptive requirements
  - 1/8" max. mesh openings, in alignment with current COA regulation



# 2024 WUIC Highlights

## Changes

- Unofficial “Proximity Classes” defined and renamed Proximity Zones A, B, and C
  - Zone A & B modified protection of accessory structures
  - Zone B enhanced protection of walls
  - Zone C enhanced eave and ceiling protection
  - Zone C reduced roofing, underfloor enclosure, and slope requirements
- NEW Ember Ignition Zone
- Expiration of initial code launch leniency
- Driveways serve up to max of 3 dwelling units, or provide full width fire lane
- Reduced full roof replacement requirement
- Reduced boat dock requirements

06/06/2024:  
Updated to reflect  
City of Austin Land  
Development Code  
amendments

Continued...



# 2024 WUIC Highlights

## Reformatting

- Separate code sections for WUI Proximity Zones
  - 504 Zone A
  - 505 Zone B
  - 506 Zone C
- Subsections for eave components
- Table of modified changes indicates three (3) types of amendments to the base code
  - Single asterisk \* for Amended (edited/modified) items
  - Double asterisks \*\* for Deleted (removed, unadopted) items
  - T-Cross † for Added (new/clarifying) items

Continued...



# 2024 WUIC Highlights

## Clarifications

- Formalize allowances and interpretations
  - Increased use of the Fire Protection Criteria Manual
- Added reference alignment to the Fire Code
- Extreme Hazard Condition clarified
  - Fire Hazard Severity Form (amended) required for
    - Development under City of Austin Homes Options for Mobility and Equity initiatives
    - Where a single fire apparatus access road serves more than 30 dwelling units
- Wildland definition clarified
- Compliance with roof fire-rating
  - No wood or green roof coverings
  - Raised-deck systems to comply with IBC
- Exterior ceilings, same treatment as soffits
- Artificial turf requirements provided

06/06/2024:  
Updated to reflect  
City of Austin Land  
Development Code  
amendments





# Wildland

*An area in which development is essentially nonexistent including but not limited to grassland, pastures and farmland, shrub-covered and treed areas, easements, unmitigated parkland, and other natural surfaces that are not regularly maintained.*

07/25/2024:  
See Slide 30  
for Update

- Wildland is no longer defined as 40 acres or 750 acres.
- Wildland mapping will reflect approximately 10 acres, to be specified within Fire Protection Criteria Manual.
- Expands examples of wildland types and includes easements.
  - Compared to the model code, the amendment does not exempt roads, railroads, power lines or similar facilities from being wildland.
  - Additional guidance will be included in the Fire Protection Criteria Manual.



# Proximity Zone

## Section 302.4

*The designation given to a structure to determine the enhanced ignition resistant construction required to reduce the effects of a wildfire on the structure. The proximity zone is based on the distance of the structure from the wildland per Section 302.4.*

07/25/2024: See Slide 30 for Update

### **302.4 Proximity Zone designation:**

- Proximity Zone A structures are those that are 50 feet or closer to the wildland.
- Proximity Zone B structures are those that are greater than 50 feet and up to 150 feet from the wildland.
- Proximity Zone C structures are those that are greater than 150 feet and up to 1.5 miles from the wildland.

### **302.4.1 Proximity Zone Conflicts:**

The more restrictive zone applies for a structure where it crosses multiple zones.



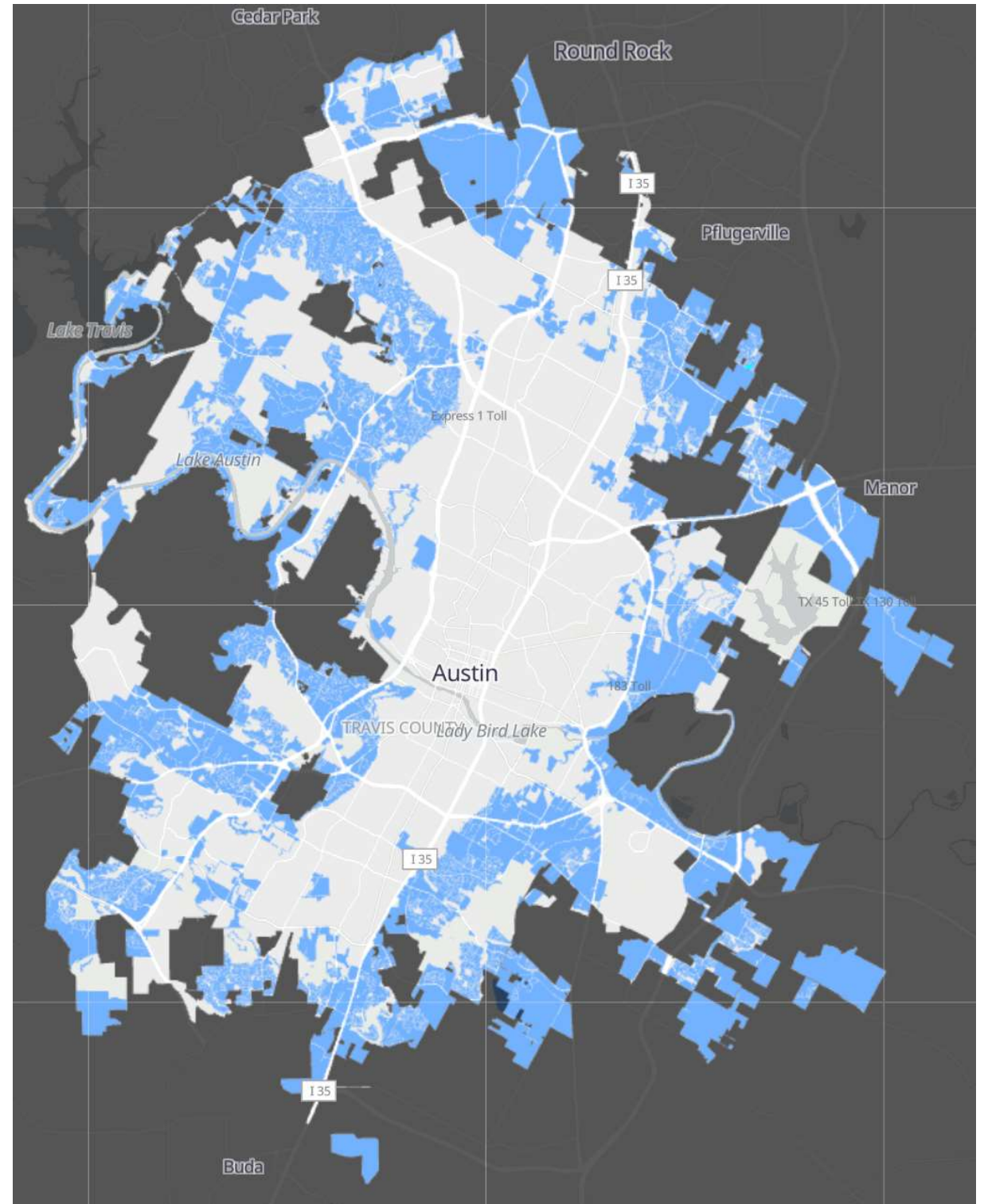
# Current WUI Map

## Concerns:

- Discrepancy created by using 40 acres of wildland for Zones A and B, versus 750 acres of wildland for Zone C
- High risk areas of Austin are unprotected
- Ease of application and determining site conditions

### Current Proximity Classes:

- Class A: Within 50' of 40 acre+ wildland
- Class B: Within 150' of 40 acre+ wildland
- Class C: Within 1.5 miles of 750 acre+ wildland



07/25/2024: Added clarification of existing Proximity Classes



Added June 24, 2024

# Austin-Travis Co. Wildfire Risk

This map can be found on the Wildfire Hub to help assess your property's wildfire risk level.

<https://wildfire-austin.hub.arcgis.com/>

Legend:

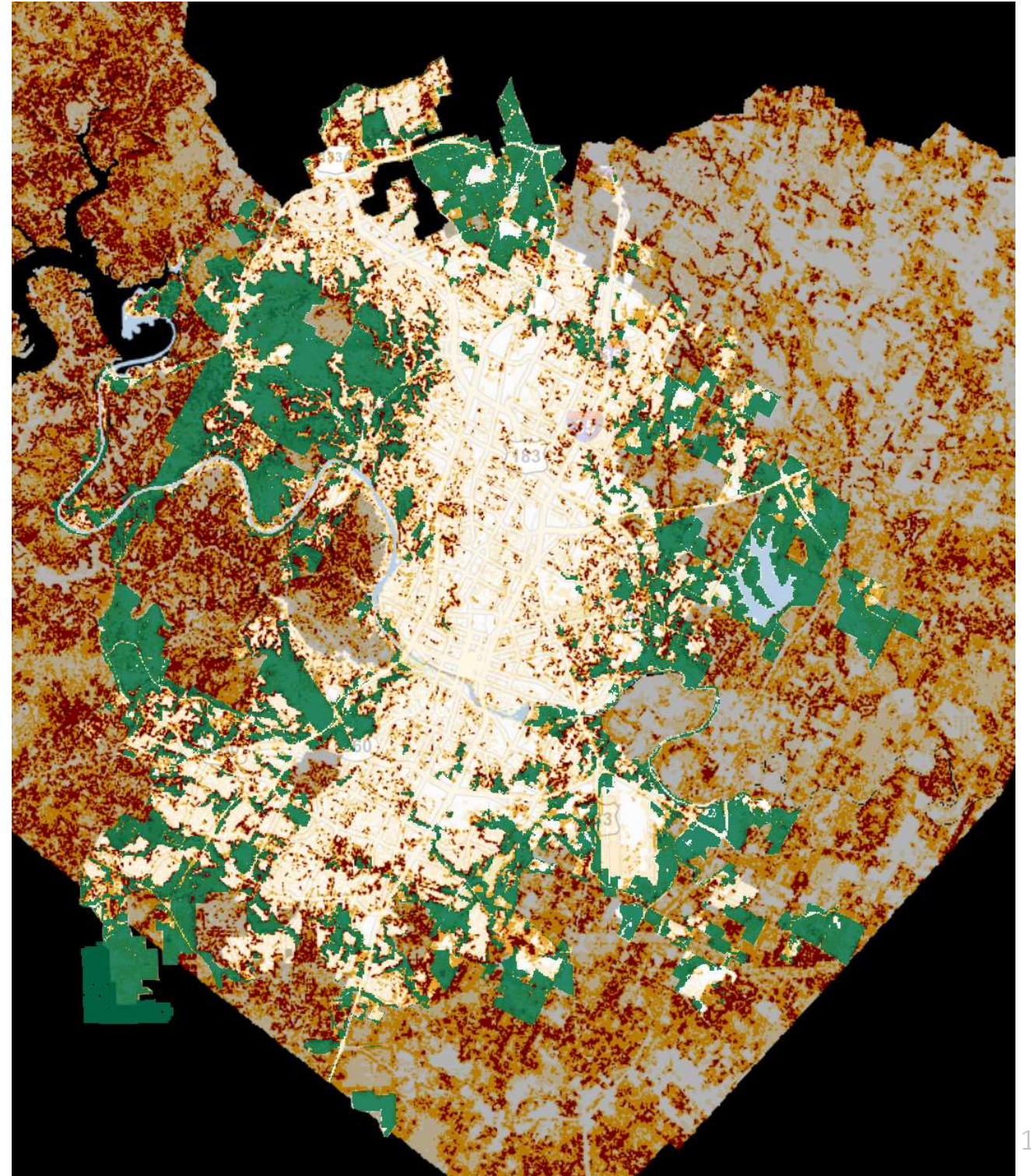
*White = Lowest*

*Light Yellow = Moderate*

*Orange = Elevated*

*Dark Red = High*

*Green = Wildland within the City of Austin*





Mapping Updated July 25, 2024 per stakeholder feedback, see page 32 for summary of other mapping iterations that were considered.

## Post-Engagement Update

# Proposed Map

### Proximity Zones:

- Zone A: Within 50' of 40 acre+ wildland
- Zone B: Within 150' of 40 acre+ wildland
- Zone C:
  - Within 1.5 miles of 750 acre+ wildland
  - Within 0.5 miles of 40 acre+ wildland (new)

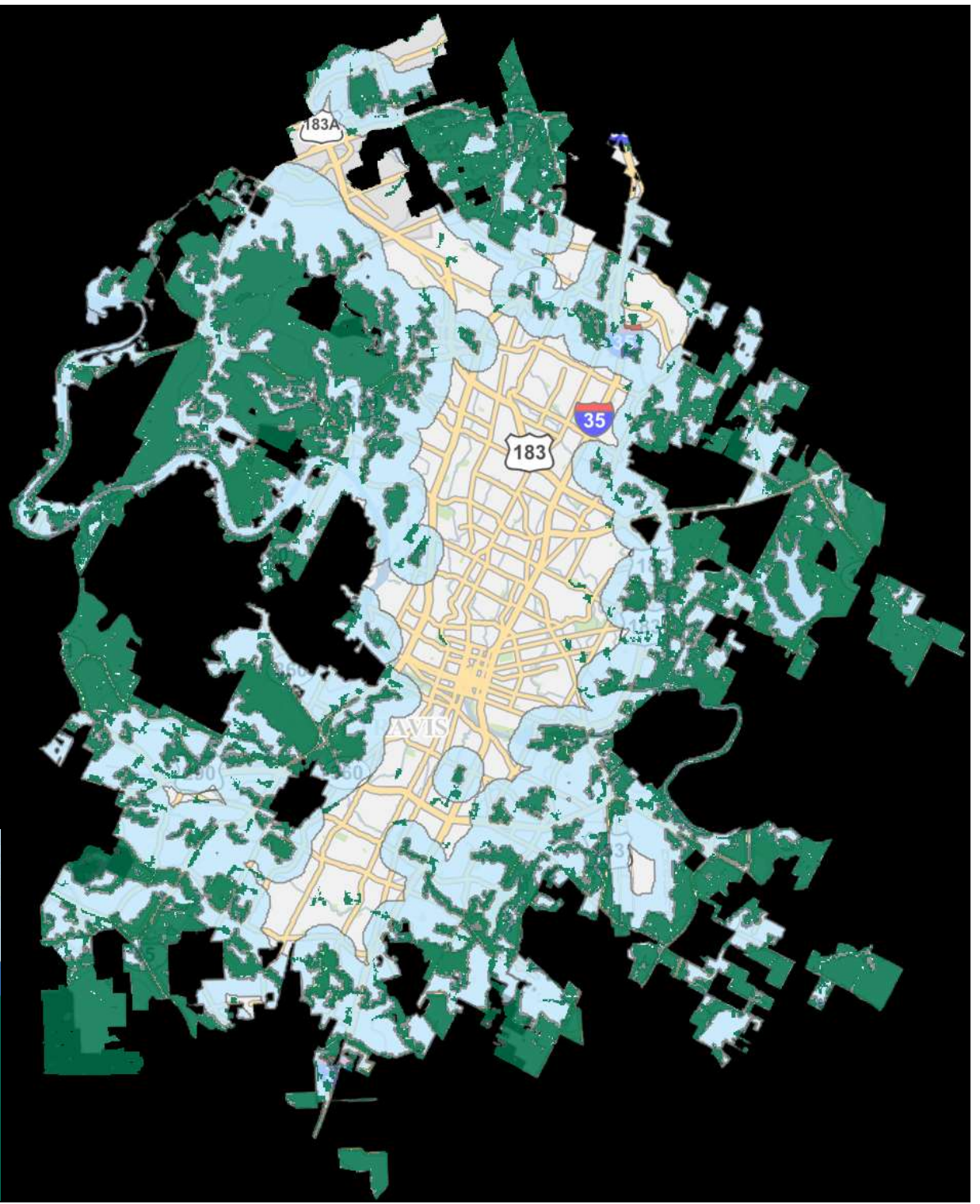
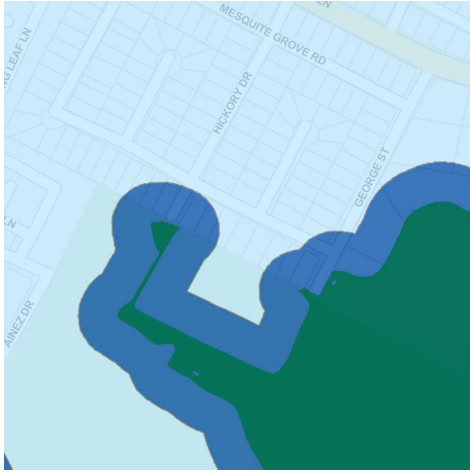
### Legend:

*Green/Dark Blue = Wildland & Proximity Zones A & B*  
*Light Blue = Proximity Zone C*

*New map shows "offsets" or "buffer zones" from wildland to show more clearly where Proximity zones end.*

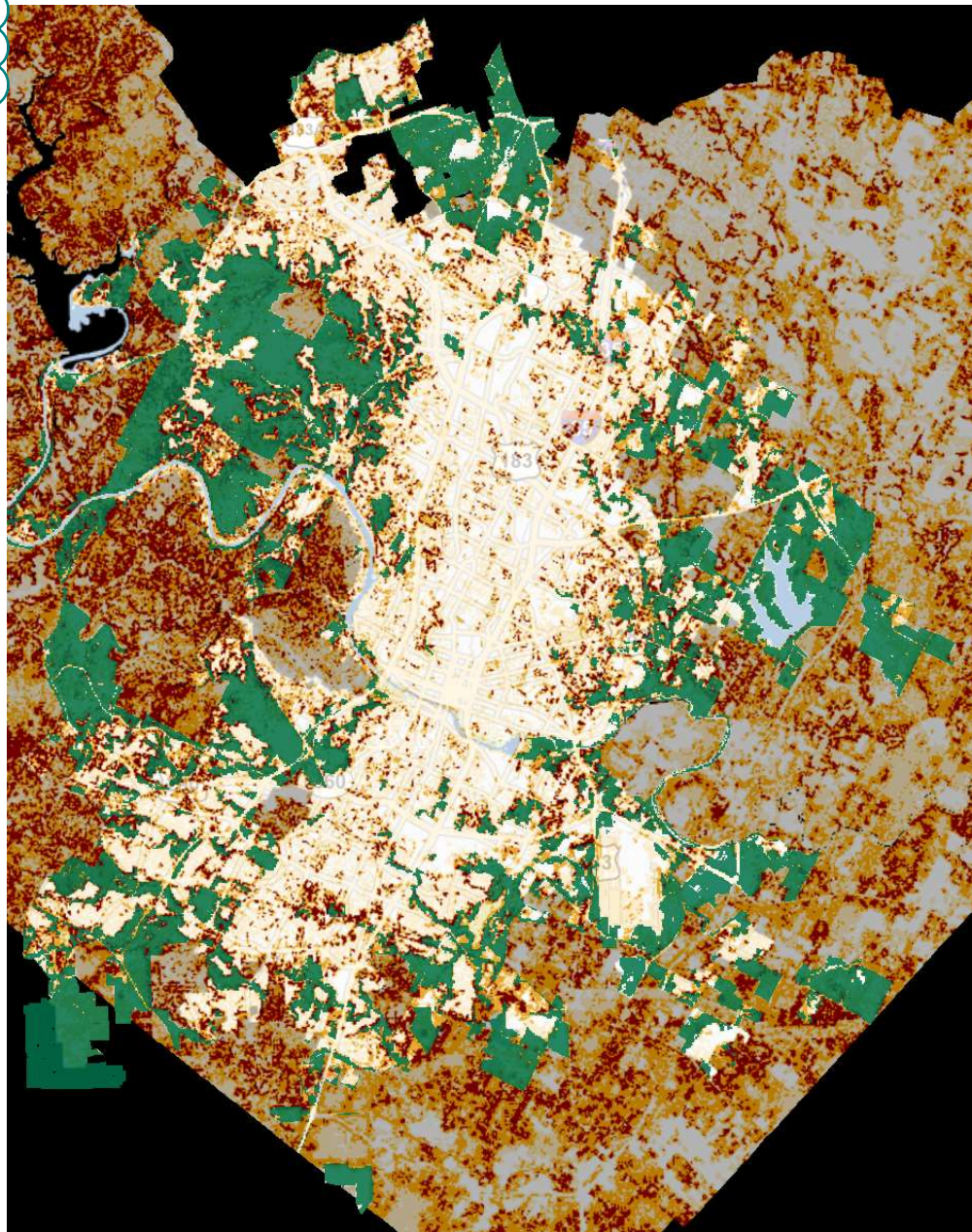


*\*Note: Map is a visual draft, additional cleanup will be conducted prior to map for City Council.*

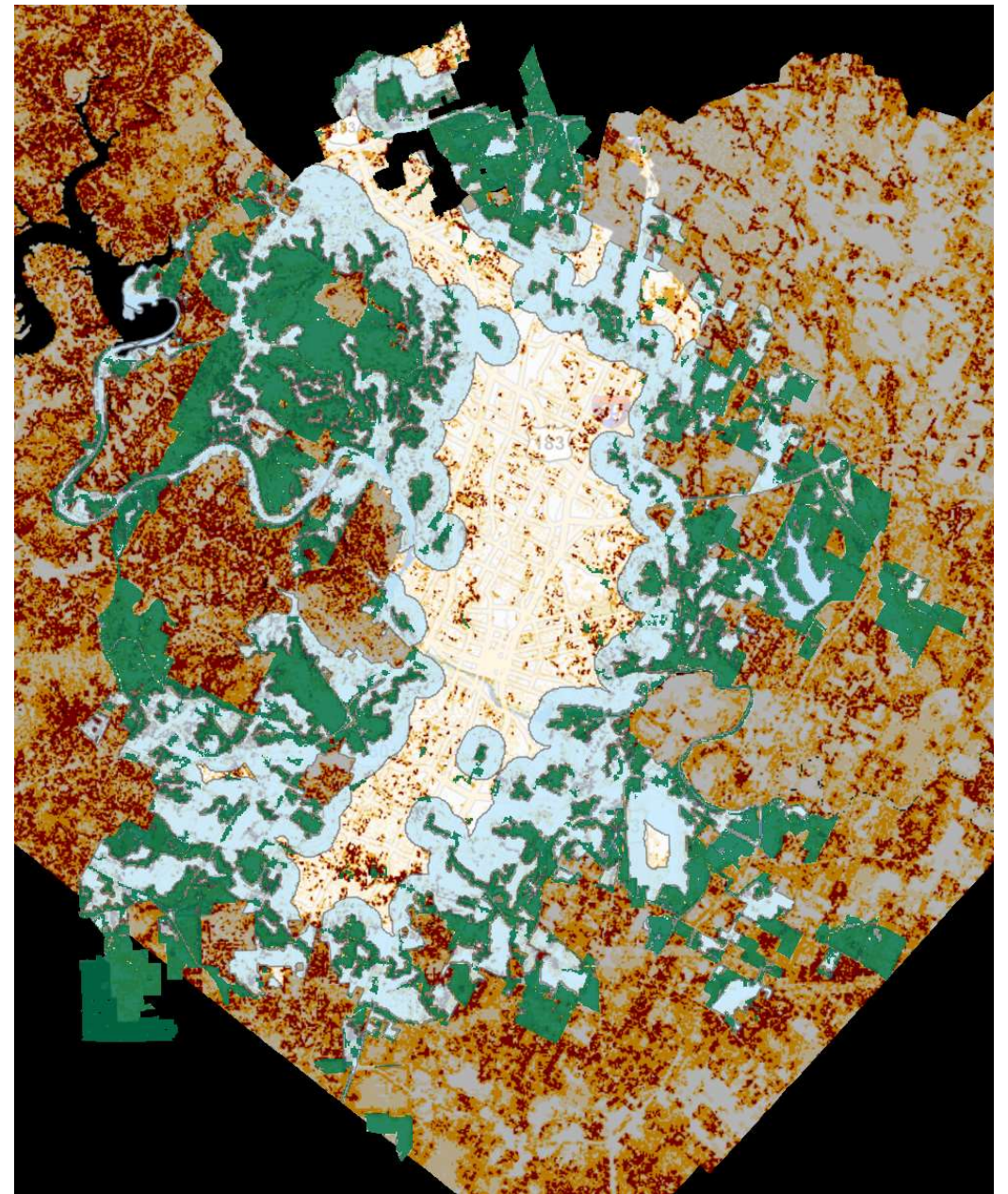




Updated  
July 25, 2024



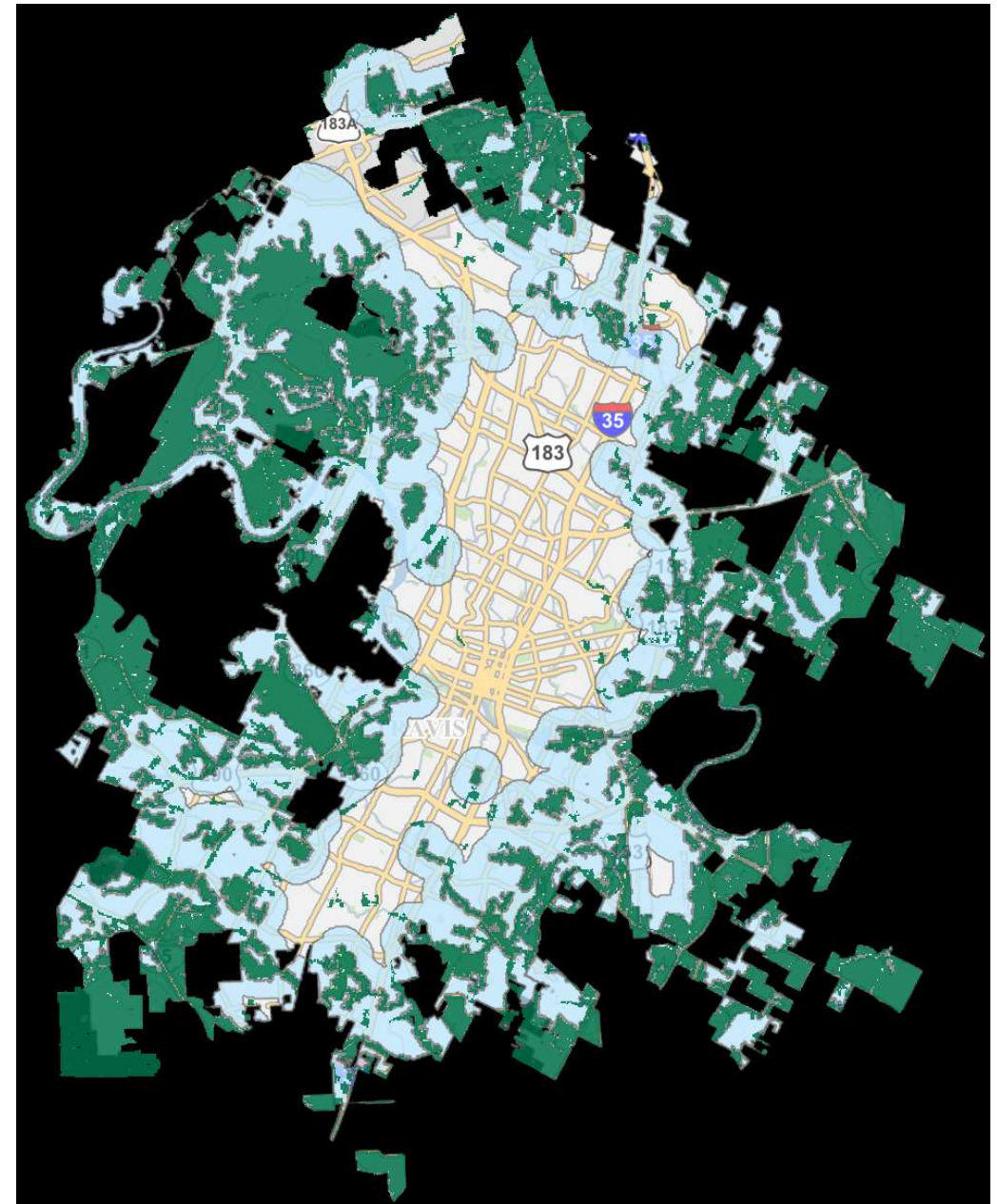
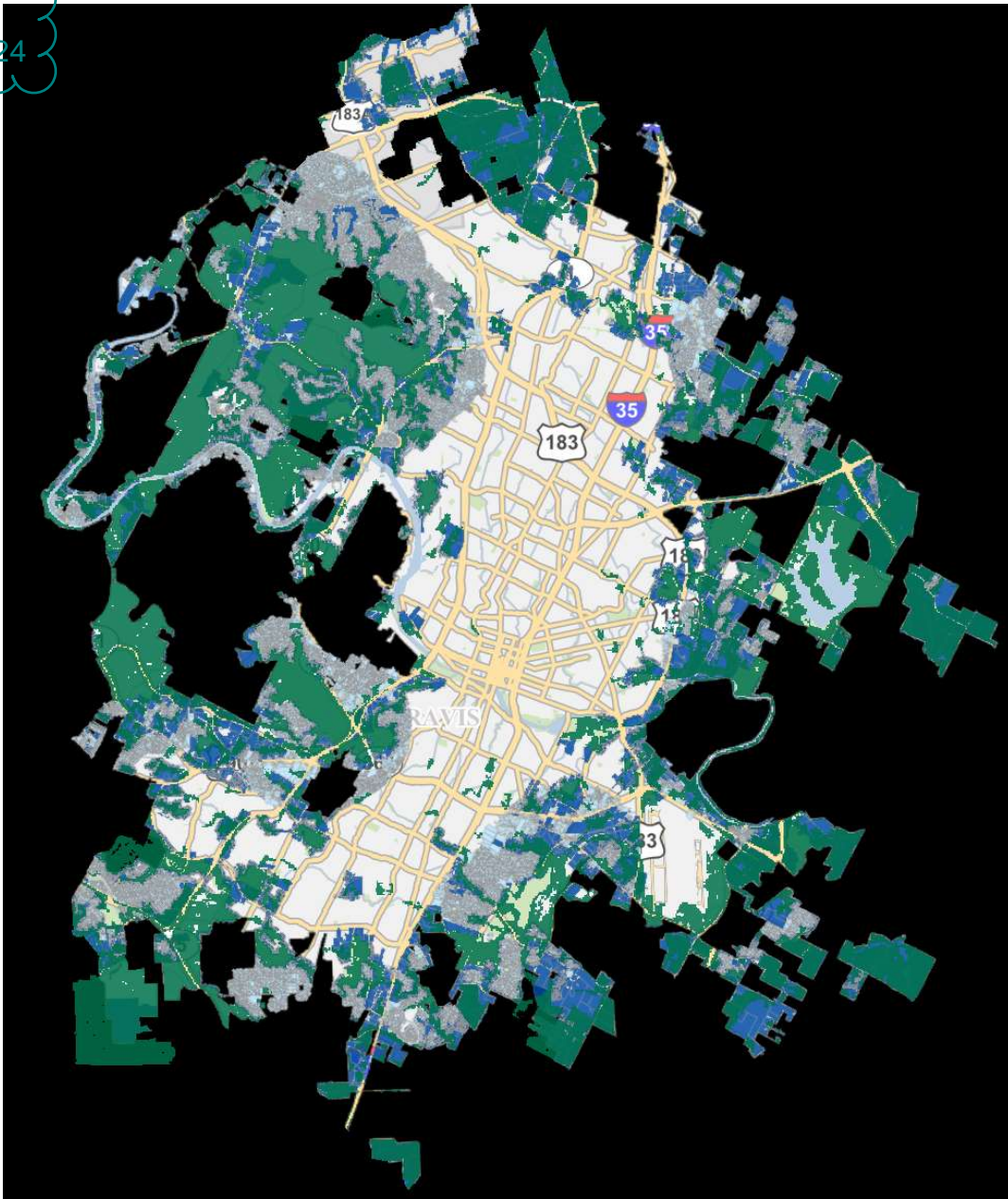
Austin-Travis County Wildfire Risk



Proposed WUI Map - Overlay on Wildfire Risk Map







Current 2015 WUI Map  
*Shown visually similar to new map,  
with wildland shown in green*

Proposed 2024 WUI Map  
*Including new "offset" or "buffer zone"  
visualization*

Added  
July 25, 2024

# Map Data

	Parcels		Area (acres)							
<b>Austin Full &amp; Limited Purpose</b>	232,340 parcels		212,940 acres							
	<b>Current 2015 WUI Map</b>				<b>Proposed 2024 WUI Map</b>					
	<b>Parcels</b>	<b>% Austin</b>	<b>Area (acres)</b>	<b>% Austin</b>	<b>Parcels</b>	<b>% Increase</b>	<b>% Austin</b>	<b>Area (acres)</b>	<b>% Increase</b>	<b>% Austin</b>
<b>WUI Area</b>	79,263 parcels	34%	80,365 acres	38%	139,271 parcels	76%	60%	98,267 acres	22%	46%
<b>Proximity Zone A &amp; B</b> <i>(currently Proximity Zone, Class A &amp; B)</i>	23,790 parcels	10%	60,960 acres	29%	23,790 parcels	0%	10%	80,930 acres	33%**	38%
<b>Proximity Zone C</b> <i>(currently Ember Zone, Class C)</i>	55,473 parcels	24%	19,405 acres	9%	118,295 parcels	113%	51%	82,886 acres	327%	39%
<b>Total Contributing Wildland*</b>			<b>64,349 acres</b>	<b>30%</b>				<b>64,349 acres</b>	<b>0%</b>	<b>30%</b>

\*Wildland is all wildland 40 acres or greater, which is inclusive of wildland 750 acres or greater.

\*\*New mapping for Zone A & B has an increase in area because of the nature of using the buffer zones, as opposed to WUI zone designation per parcel.





# Ember Ignition Zone (EIZ)

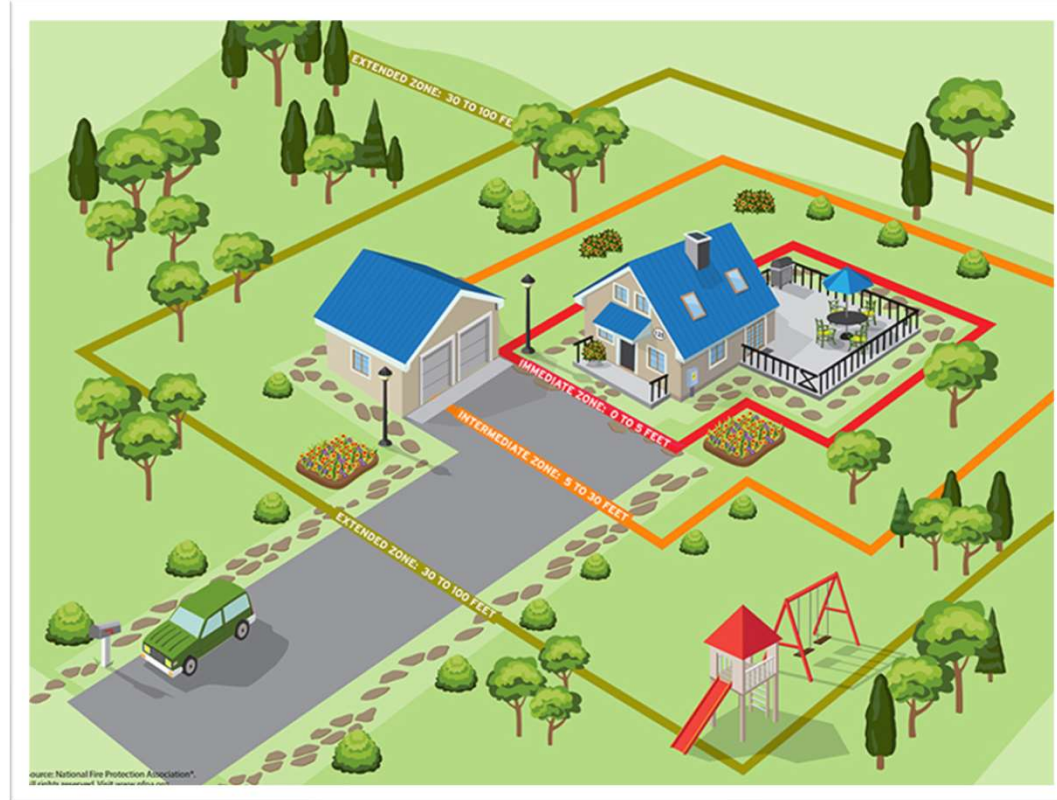
## Section 603.2.1

Research from the National Fire Protection Association (NFPA) and Insurance Institute for Business & Home Safety (IBHS) show

- 5 feet around a structure has greatest impact
- Noncombustible zone can protect a building from ignition due to
  - direct flame
  - radiant heat
  - wind-blown embers collecting at the base of an exterior wall or structure

<https://www.nfpa.org/education-and-research/wildfire/preparing-homes-for-wildfire>

<https://ibhs.org/wildfire/near-building-noncombustible-zone/>



# Ember Ignition Zone (EIZ)

## Section 603.2.1

Wildfire Defense Mesh, IBHS  
Combustible Vs Non-Combustible  
Burn Demonstration

- Right Side: Traditional wood deck, vegetation, wood mulch
- Left Side: Noncombustible zone with ignition-resistant deck, Wildfire Defense Mesh skirting, rock mulch



# Ember Ignition Zone (EIZ)

## Section 603.2.1

The **Ember Ignition Zone (EIZ)** requires a 5-foot wide, noncombustible area to surround all structures and appendages. 603.2.1.

The EIZ surface is gravel, pavers, or other non-combustible materials and maintained free of all combustible materials at all times. Artificial turf may not be used in the EIZ, and if used within any defensible space area must have Class A rating per ASTM E108.

### Exceptions:

07/25/2024: See Page 30 for additional Zone C exception added per stakeholder feedback

- Protected and Heritage trees are allowed to remain in all existing conditions.
  - New construction should aim to maintain appropriate distance from such trees.
  - Protective mulch for critical root zone (CRZ) is allowable during construction and shall be removed at the completion of construction.
- For structures of Type I & II construction, the EIZ shall only be required 10 feet to each side of required egress points of the structure.



Proximity Zone A Section 504	Proximity Zone B Section 505	Proximity Zone C Section 506
Roof & Accessories	Roof & Accessories	Roof & Accessories REDUCED sloped roof underlayment
Skylights	Skylights	Skylights
Protection of Eaves	Protection of Eaves REDUCED	Protection of Eaves REDUCED eaves & rafter tails
Gutters & Downspouts	Gutters & Downspouts	Gutters & Downspouts
Appendages & structures	Appendages & structures REDUCED distance	Appendages & structures REDUCED distance & protection at slopes >10%
Ventilation	Ventilation	Ventilation REDUCED - soffit vents allowed
Boat Docks REDUCED	Boat Docks	Boat Docks
Underfloor Enclosure	Underfloor Enclosure	Underfloor Enclosure REDUCED
Exterior Walls	Exterior Walls REDUCED flashing	
Exterior Glazing		
Exterior Doors		



\*REDUCED items are a reduction compared to standard Proximity Zone A Ignition-Resistant (IR) Construction Requirements



# Roof & Accessories

Sections 504.2 (Zone A), 505.2 (Zone B), 506.2 (Zone C), and 507.1 (Roof Replacement)

## Modified, reduction:

- The entire roof shall comply when 50% or more of the roof is replaced.
- Roof Assemblies in Zone C:
  - Sloped roofs may reduce underlayment to 30 lb felt.

## Added:

- Raised-deck systems shall meet **new** 2024 IBC section 1511.9 – including residential structures.

## Clarifications, 2015 WUIC interpretations:

- Woven roof valleys allowed as an option versus model code 36" wide 72-lb cap sheet.
- Skylights:
  - Housing shall be noncombustible.
  - Glazing shall be protected at all Zones.
- No wood roof coverings and no green roofs.
- Walkway pads shall not compromise the roof fire resistance rating.



# Protection of Eaves

Sections 504.3 (Zone A), 505.3 (Zone B), and 506.4 (Zone C)

Created separate subsections for eave components

## Eaves

- Zone A: added 5/8" Type X sheetrock as an option
- Zone B: added clarification that Zone A materials may be used
- Zone C: shall match Zone B requirements

## Fasciae

- Zone A: 3/4" thick material protected by Ignition-resistant (IR) exterior finish. Per model code, backside of fascia protected by IR material or 2x lumber.
- Zone B & C: shall match Zone A requirements

## Exposed Rafter Tails

- Zone A & B: Heavy timber, exterior wall shall be 1-hour rated from foundation to bottom of roof deck, roof deck shall be ASTM E 84 Class A rated material or noncombustible (48" min. either side of wall).
- Zone C: Heavy Timber

## Added:

- **Gaps Between Materials** shall have ember protection similar to ventilation openings.
- **Exterior Ceilings** shall be built using ignition-resistant building materials that comply with Section 503.2.



# Exterior Walls & Underfloor Enclosure

Sections 504.5 (Zone A), 505.5 (Zone B), and 506.3 (Zone C)

## Modified:

- Zone A: Reverted to model code language
  - Result does not change requirements.
- Zone B: Reverted to model code language
  - Requirements now match Zone A.

## Modified, reduction:

- Zone C: Underfloor enclosures may be constructed with the same material as exterior walls of Zone C.
  - No longer has to meet the more stringent Zone A or B exterior wall requirements.



# Appendages

Sections 504.7 (Zone A), 505.7 (Zone B), and 506.6 (Zone C)

**Clarifications, 2015 WUIC interpretations:**

- Examples provided: decks, balconies, carports, pergolas, patio covers, awnings, canopies, and similar structures.
- Deck boards with gaps larger than 1/8" shall have ember protection, similar to ventilation openings.
- Underside of decks, not over a >10% slope, may be enclosed by an exterior wall/skirting to allow framing to be of any building/residential code approved material.
- Decks over a >10% slope shall have the underside enclosed to the ground.
  - Protected ventilation openings can be provided.
  - Storage and access points are not allowed.
  - Ignition-resistant framing required at sloped areas, not exempted by underdeck enclosure

Continued...





# Appendages

Sections 504.7 (Zone A), 505.7 (Zone B), and 506.6 (Zone C)

## Modifications:

- **REDUCED:** Decks in Zone C will no longer have special requirements for steep slopes. A compliant underdeck enclosure allows framing to be constructed of any building or residential code allowed material.
- Zone A: All unenclosed accessory structures and appendages shall be ignition-resistant. *See changes to 504.11 Detached Accessory Structures.*
- Zone B: All unenclosed accessory structures and appendages within 30' of a habitable building shall be ignition-resistant. *See changes to 505.11 Detached Accessory Structures.*
- Expiration of initial code launch leniency:
  - Residential fence requirements. All fences shall be ignition resistant within 10' of structures.
  - Residential appendages in Zones B and C. All appendages, such as exterior columns, shall comply with ignition-resistant requirements. Each Zone is outlined separately to clarify any differences.

07/25/2024 See Page 30 for additional Zone C exception added per stakeholder feedback



# Doors & Windows

Sections 504.8 (Zone A), 505.8 (Zone B), and 506.7 (Zone C)

## Modified:

- Zone A: Reverted to model code language.
  - Result does not change requirements.
- Zone B and C: Clarification, *2015 WUIC interpretation*
  - Skylights shall be tempered glass, multilayered glazed panels, glass block, or have a 20-minute fire rating.
  - Other glazing and door requirements unchanged and shall not require protection.



# Ventilation

## Sections 504.10 (Zone A), 505.10 (Zone B), and 506.5 (Zone C)

2024 IWUIC model code has been clarified with separate sections for Performance Requirements and Prescriptive Requirements.

### **Modified, 2015 WUIC interpretation:**

- Correction to model code requirements to clarify soffit vents are not allowed in Zones A or B.

### **Clarification, 2015 WUIC interpretations:**

- Ventilation opening types that require protection: exhaust, outside air intake, enclosed attics, gable ends, ridge ends, underfloor ventilation, foundations, and crawl spaces.



# Miscellaneous

## Added, reduction:

- **Boat docks** shall only be required to have noncombustible or ignition-resistant walking surfaces and Class A roof assemblies as required by the Proximity Zone. **Sections 504.11.2 (Zone A), 505.11.2 (Zone B), and 506.8.2 (Zone C)**

## Modified:

- **Detached accessory structures** shall comply with the requirements specific to the Proximity Zone. **Sections 504.11 (Zone A), 505.11 (Zone B), and 506.8 (Zone C)**

- **Driveways, 202 Definitions, 403.2, 403.2.3**

- Required for Group R-3 buildings >150' from fire apparatus access road where a new fire lane is not otherwise provided
- Group R-3 buildings >200' from fire apparatus access road require a new fire lane or may provide a driveway and automatic fire sprinklers
- Serve up to three buildings and three dwelling units max, otherwise a Fire Lane is required

- **Extreme Hazard Condition clarified, 502 and Appendix C**

- Fire Hazard Severity Form (amended) required for
  - Development under City of Austin Homes Options for Mobility and Equity initiatives
  - Where a single fire apparatus access road serves more than 30 dwelling units

06/06/2024  
Updated to reflect  
City of Austin Land  
Development Code  
amendments



# Stakeholder Engagement Updates

## 07/03/2024 Changes in response to stakeholder feedback:

- **WUI Map** – Option B, included in June 24 engagement, reduces Proximity Zone C
- **Driveways 403.2**, clarified this section applies to buildings under the Residential Code
- **Wood roof coverings 503.2.3**, clarification to include fire-retardant-treated wood in body of code
- **Fasciae 504.3.2, 505.3.2, 506.4.2**, reduced minimum number of layers and clarified options
- **Gaps between materials 504.3.3, 505.3.3, 506.4.3**, clarified this applies to all gaps in eave
- **Exposed rafter tails 504.3.4, 505.3.4**, clarified exposed roof deck testing requirements are 30 minutes for Zone A and 10 minutes for Zones B and C
- **Roof Assembly 506.2**, added missing number for Exception 4
- **Exposed rafter tails 506.4.4**, added option to use ignition-resistant material for rafter tails in Zone C
- **Exterior Ceilings 504.3.5, 505.3.5, 506.4.5**, clarified this includes ceilings below a covered porch roof or below a deck/balcony/floor above
- **Fences 506.6.1**, reduced requirement for residential Zone C fences to have ignition-resistant construction when located within 5' of a building or structure, in lieu of 10'

07/25/2024  
Updated, see slides  
12-14 and 30



# Post-Engagement Updates

## 07/09/2024 Additional update in response to stakeholder feedback:

- **WUI Map** – Option C, reducing minimum wildland size to 20 acres in lieu of 10 acres.
- **EIZ 603.2.1 Ember Ignition Zone (EIZ)**, exception 5 added for Proximity Zone C to allow green, moist, closely mowed lawn grass, dormant grass shall be overseeded with perennial Rye.

07/25/2024 Updated, see slides 12-14 and 30 (below)

## 07/25/2024:

- **Driveways 202 Definitions, 403.2, 403.2.3** applies to individual lots, not joint use driveways
- **WUI Map** – Final
  - Retaining existing wildland size of 40 acres and 750 acres.
  - Zones A & B continue to be up to 50' and up to 150' from 40 acres of wildland, respectively
  - Zone C continues to be up to 1.5 miles from 750 acres of wildland, adding in a 0.5 miles from 40 acres of wildland
  - Zones shown as “offsets” or “buffer zones” from wildland in lieu of an entire parcel being shown as one zone.

07/25/2024 Updated to reflect stakeholder feedback



# 2024 International Wildland Urban Interface Code

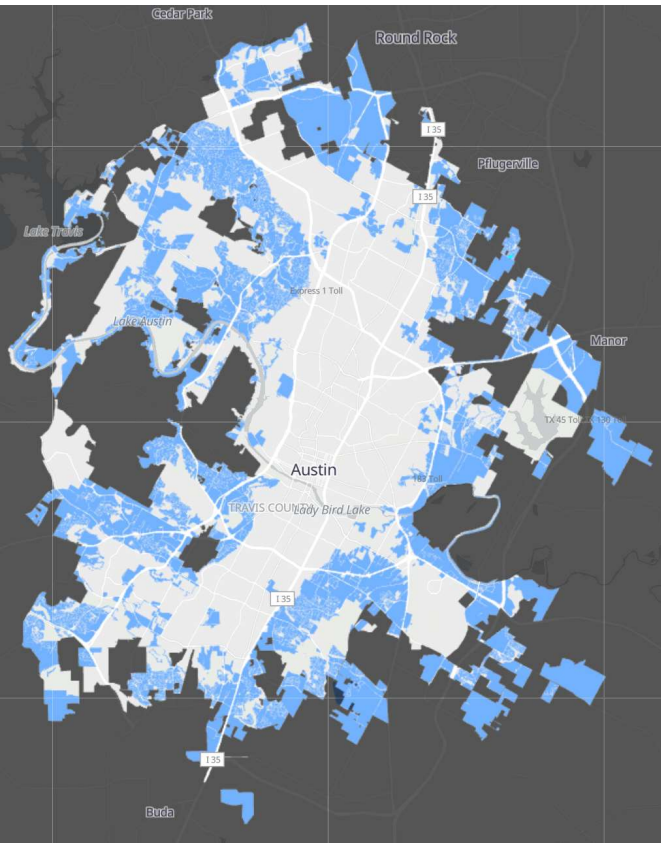
Proposed Local Amendments

## Questions?

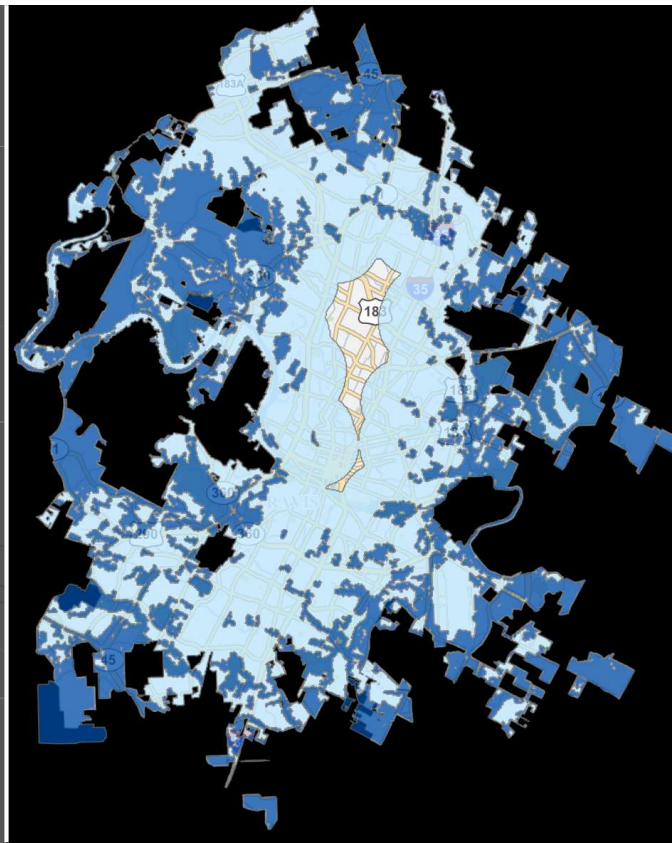
## Thank you for your time!



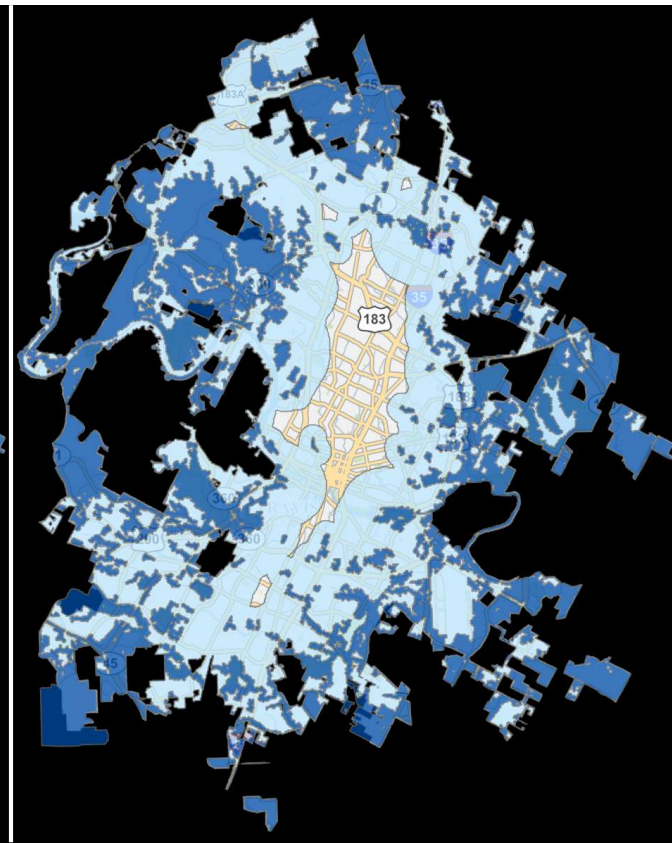




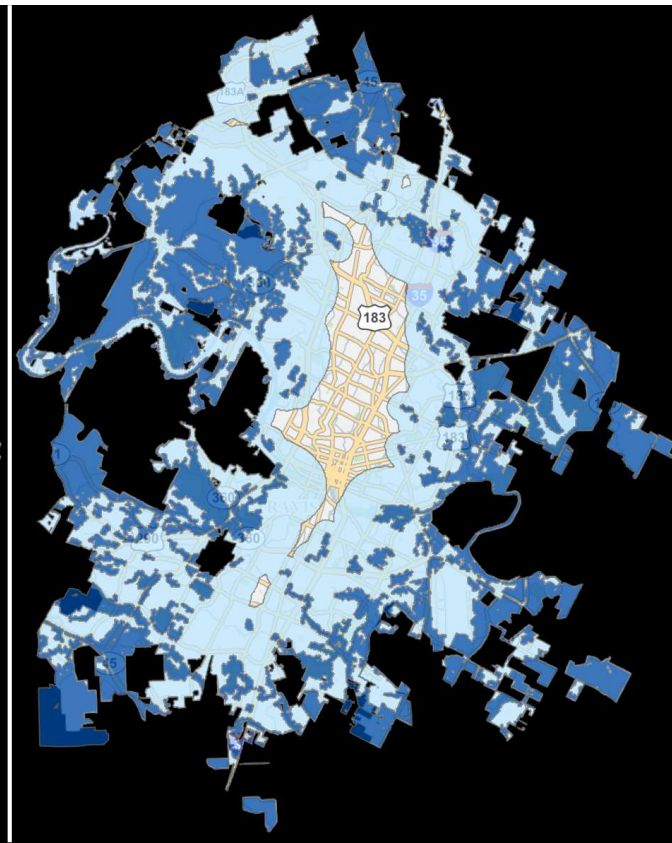
Current 2015 WUI Map  
 Zones A&B: 40 acres  
 Zone C: 750 acres



Proposed 2024 WUI Map  
 Zones A, B, & C: 10 acres



Proposed 2024 WUI Option B  
 Zones A&B: 10 acres  
 Zone C: 10 acres and 100 acres



Proposed 2024 WUI Option C  
 Zones A&B: 20 acres  
 Zone C: 20 acres and 100 acres



## APPENDIX A: Post-Engagement Update – Previously Considered Mapping Iterations

Added 07/25/2024 to replace previous multiple slides showing mapping iterations.