FortressFire
Wildfire Risk Solutions

Wildfire Disclosure Report

For Wildfire Risk, Remediations and Insurability Assessment

1234 Bradley Road
Santa Clarita, CA 91351

☑ Aerial Assessment ☐ Ground Assessment

Report Generated On: 09/26/2023 **Ordered by:** Marcus Simonson

Nothing herein shall be construed as providing certainty a property will survive a wildfire.

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Although some safety issues may be addressed in the Wildfire Risk Report, this assessment is not a safety or code inspection. The assessment may not reveal all deficiencies but is intended to inform you of potential wildfire risks with respect to the property. A full on-site inspection of the premises by FortressFire is recommended to provide a more comprehensive assessment.

Be advised that all assessments in the Inspection Reports are confined to areas visible and accessible to the inspector on the day and time of inspection. There is no guarantee that the inspection and inventory of the property will be current or accurately reflect all structures, vegetation and property elements that may exist or are not accessible to the inspectors on the day of the inspection. The Inspection Report does not include breaking apart, dismantling, removing or moving objects and the inspectors cannot see inside walls, between floors, inside roofing, behind stored goods in cupboards and other areas that are concealed or obstructed. FortressFire cannot be responsible for risks arising from structures, vegetation or property elements that are not visible and accessible to the inspector on the day and time of the inspection, including, without limitation, any changes that occur after the date on which the inspection occurred.

Although some safety issues may be addressed in this Inspection Report, this assessment is not a safety or code inspection. The assessment may not reveal all deficiencies but is intended to help reduce some of the risk involved in owning a property in a wildfire-prone location.

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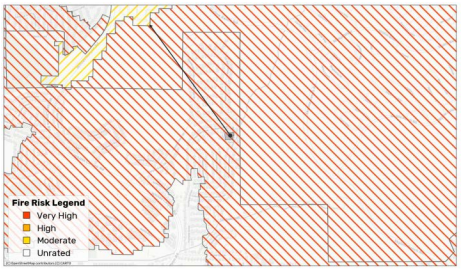
Wildfire Disclosure Summary

CalFire Hazard Rating

Hazard Maps depict the general wildfire threat to a property. The CalFire Hazard rating indicates whether a property is subject to AB 38. This report determines the AB 38 inspection requirement based on whether the centroid of the structure falls into a High or Very High CalFire Fire Hazard Severity Zone on the current CalFire maps. More detail on the wildfire hazard ratings for this property is available on page 8 of this report.



CalFire Rating

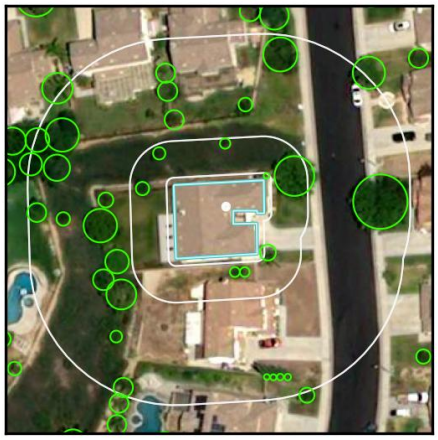
Very High

Subject to AB 38

Yes

AB 38 Compliance

More detail on the property compliance to AB 38 is available on pages 9.



AB 38 Compliance

Compliance Pending Inspection

While additional structure remediations may be required, the following vegetative fuels should be assessed onsite:

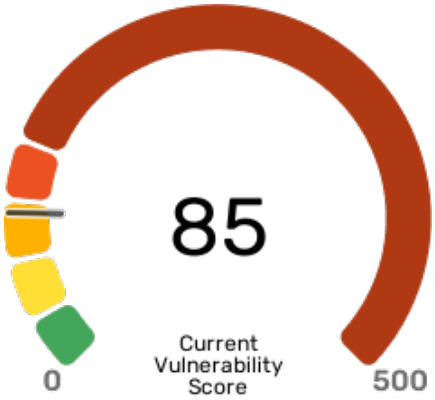
- **2** total Zone 0 trees which may require removal or trimming
- **4** total Zone 1 trees which may require trimming or thinning
- **5** total Zone 2 trees which may require trimming or thinning

These compliance mitigations are estimated to start from between **$1,600 – $5,600**.

This estimate represents an indication of the potential costs. An onsite inspection is required to determine the complete mitigations required for AB 38 Compliance.

Vulnerability Reduction

A detailed analysis of the property's wildfire Vulnerability is available on pages 10-19. Lower scores are better but do not guarantee insurability.



To reduce this home's vulnerability, this property would require:

- Treatment of **4** trees (removal vs trimming confirmed during onsite inspection)
- Retrofitting of all vents of **1/16th inch** mesh screening or Fire Rated Vents as necessary
- Active Asset Monitoring and Protection plans for the main structure and any secondary structures on the property are recommended
- Seasonal and emergency application of fire retardant to structures and surrounding landscape is recommended

These vulnerability reduction mitigations are estimated to range between **$3,200 – $11,600**.

This estimate represents an indication of the potential costs. An onsite inspection is required to determine the complete mitigations required to reduce this property's vulnerabilities.

Wildfire Disclosure Report Overview

This Wildfire Disclosure Report (WFDR) provides real estate professionals, their clients and related partners with a detailed view of a property's wildfire risk to help facilitate real estate transactions. The report leverages aerial imagery and third-party data and analysis to establish a baseline view of the wildfire risk indicators for the property.

A recent aerial image of the subject property is sourced along with standard property identifiers and additional related details. This report utilizes a proprietary Property Ignition Model ("PIM"). The PIM is designed to provide a comprehensive measurement of the possible wildfire threat to the property based on a composite score that includes a wide range of inputs that contribute to wildfire ignitions. Machine learning and high-capacity computing power enable precise and accurate evaluation of wildfire risk.

The report has four primary sections:

1. Wildfire Hazard Ratings

The report includes three Hazard ratings and maps:

- CalFire Fire Hazard Severity Zone (FHSZ) rating and map
- USDA Forest Service Wildfire Hazard Potential (WHP) rating and map
- CA Public Utility Commission fire threat map

Hazard maps depict the general wildfire threat level to a property. These maps show ratings and relative distance to increased and/or decreased risk areas. They are included in this report to provide an understanding of the wildfire hazard to the property and in the general area around the property.

Additionally, California's Assembly Bill 38 (AB 38) is based on CalFire's FHSZ maps. AB 38 defines how the seller of a residential property must submit documentation of compliance with locally adopted defensible space requirements prior to the close of escrow, and in the case where documentation is not obtained by the close of escrow, how the buyer is required to obtain documentation of compliance within one year of closing escrow. Properties in High or Very High CalFire Hazard Zones are subject to AB 38.

2. AB 38 and IBHS Compliance Indication

The report outlines the key components of AB 38 and IBHS (Institute of Business and Home Safety) standards and, as much as possible from the aerial imagery, provides insights for several of the key disclosure requirements. Aerial imagery is sufficient to frame a general understanding of a property's status against these standards, especially those requirements related to heavy fuels (structures and trees). However, an onsite inspection is required to either certify the property (by a local fire department for AB 38 Compliance or IBHS for its Wildfire Prepared Home Certification) or establish a comprehensive profile of the property.

Many local and county jurisdictions require owners to maintain their properties in compliance with vegetative and defensible space requirements. These local and county requirements may be equally or more stringent than those specified for determining hazard zones used by AB 38.

Sellers of properties within State Responsibility Areas (SRAs) with a CalFire Fire Hazard Severity Zone (FHSZ) rating of 'High' or 'Very High' or in Local Responsibility Areas (LRAs) with a CalFire FHSZ rating of 'Very High' must provide buyers with documentation that the property complies with defensible space requirements (AB 38).

This report indicates the SRA or LRA as reported by CalFire for purposes of AB 38 sale-of-property inspection requirements. Local and county vegetation and defensible space zones are not reported here.

To schedule an AB 38 inspection please visit:
https://survey123.arcgis.com/share/e659f03a6e8447af8663e42cf48f60fd

To learn more about AB 38 visit:
https://storymaps.arcgis.com/stories/b2fc79e82aec4ecab4250987db7312cb

To learn more about the IBHS Wildfire Prepared Home certification, please visit:
https://wildfireprepared.org/

3. Wildfire Vulnerability Analysis

The report analyzes and assesses a property's Vulnerability in the event of a wildfire. To conservatively inform the wildfire threat, the analysis begins with the assumption that a major wildfire is on the property and our Property Ignition Model (PIM) calculates points of potential ignition risk based on the specific characteristics of the property. In addition, the report outlines recommended actions for reducing the property's risk. The Vulnerability analysis incorporates satellite imagery, specific property data, machine learning, and integrates a physics-based ignition model developed on the latest fire science to estimate the heat energy projected on structures and any resulting ignition failures.

Vulnerability and Hazard ratings in combination provide data that insurers use to assess and price homeowner insurance. Reducing property Vulnerability to wildfire can help lower the cost of insurance and/or provide access to better coverage.

4. Mitigation Cost Estimate

Finally, based on the analysis, the report outlines the potential actions to be taken and related costs to mitigate the ignition risks and/or property characteristics observed from the aerial imagery.

Please note, this report is intended to provide an initial broad-based indication of the ignition risk and statutory compliance of the property. We recommend an onsite inspection to develop a comprehensive analysis of a property's wildfire risk and a more detailed quote inclusive of all services necessary to remediate a property.

Subject Property Details

Aerial Image provided by Airbus on 07/24/2023

Address	1234 Bradley Road Santa Clarita, CA, 91351
Structure Analyzed	Primary Structure
County	Los Angeles
APN	1642-281-592
Lat/Long	124.435098/-105.463981
Property Type	Residential

Year Built	1992
Stories/Levels	1
Roof Perimeter / Roof Area	263 linear ft / 2,814 sqft
Lot Size	0.36 acre
Roof Material	Tile | Client
Exterior Wall Material	Stucco | Client

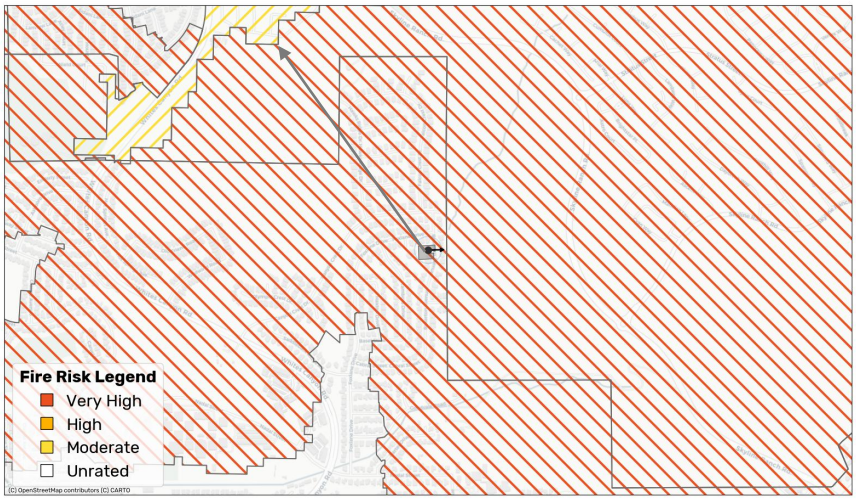
Property Schematic: Trees & Structures

The property schematic represents the inventory of fuel sources, structures, and property footprint that become the inputs to PIM. The schematic is combined with building materials data to perform our analysis. Parcel data is sourced from public records and plotted while the model identifies, numbers, and labels the fuel sources along with the sides of the structure. Generally speaking, the closer trees or other fuel sources are to a structure, the higher the risk of their contribution to ignition risk. Tree canopy analysis can isolate the trees that factor most significantly to wildfire risk. The table at the bottom of the page indicates the sum of specific fuel sources.

Trees in Zones 0-2	Trees on Parcel	Structures in Zones 0-2
35	11	5

Wildfire Hazard Rating

Wildfire hazard scores are probabilistic models that rely on historical fire information, topography, weather patterns, and vegetation to rate the likelihood that a wildfire will impact a given area. The most accurate assessment of wildfire risk combines hazard modeling with specific property vulnerability assessments. Insurers use a range of commercial hazard models when underwriting wildfire risk. Generally, insurance is more expensive and harder to source for properties rated moderate or higher. Several hazard rating examples are included below from CalFire, USDA and CPUC.



CalFire Rating

Very High (LRA)

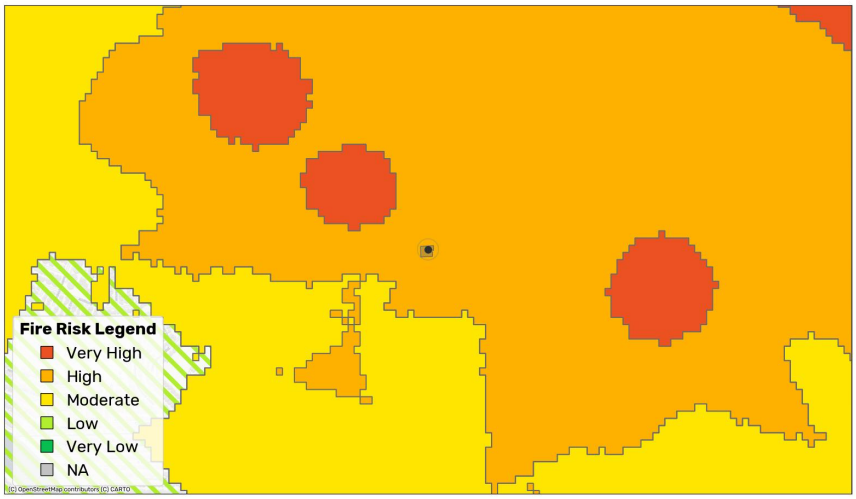
Distance to Closest Neighboring Zone

1.04 miles

The Fire Hazard Severity Zone (FHSZ) maps are developed by CalFire using a science-based and field-tested model. Many factors are considered such as fire history, existing and potential fuel (vegetation), predicted flame length, blowing embers, terrain, and fire weather for the area.

There are three levels of wildfire hazard in the CalFire ratings: Moderate, High, and Very High.

Properties may also be noted as Unrated, CalFire does not assess significant wildfire risk for Unrated properties.



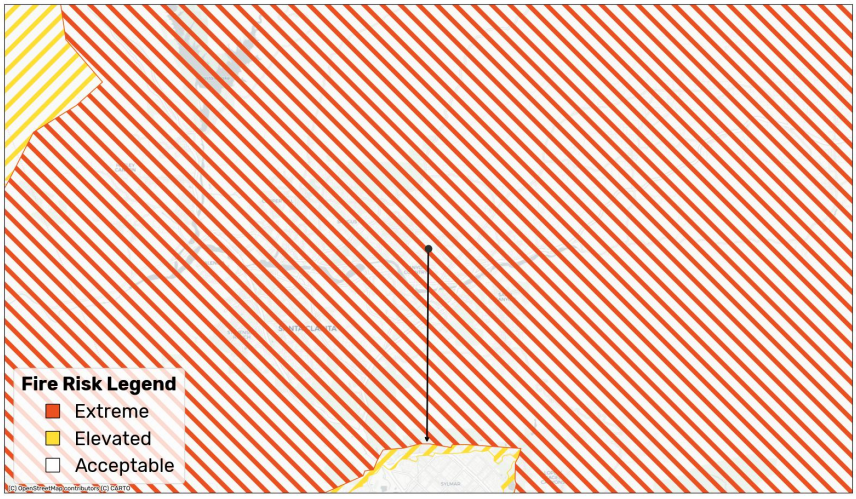
USDA Rating

High

The Wildfire Hazard Potential (WHP) map is produced by the USDA Forest Service's Fire Modeling Institute to help inform evaluation of wildfire hazard or prioritization of fuels management needs across very large landscapes. The specific objective with the WHP map is to depict the relative potential for wildfire that would be difficult for suppression resources to contain.

The map identifies five tiers: Very Low, Low, Moderate, High and Very High.

Properties may also be noted as NA, the USDA does not assess significant wildfire risk for NA properties. **NA includes both areas unrated by USDA and areas at which the USDA model predicts no appreciable wildfire risk (such as areas marked as 'non-burnable' or 'water' on some USDA maps).**



CPUC Rating

Extreme

Distance to Closest Neighboring Zone

7.29 miles

The California Public Utility Commission (CPUC) adopted a fire threat map to identify areas of heightened fire risk for use by utilities for risk reduction activities. The map was developed in collaboration with CalFire, the Office of Emergency Services, and utilities.

The map defines three tiers: Tier 1 have an Acceptable level of wildfire risk, Tier 2 areas have Elevated risk and Tier 3 areas have an Extreme risk.

Regulatory Compliance Indication

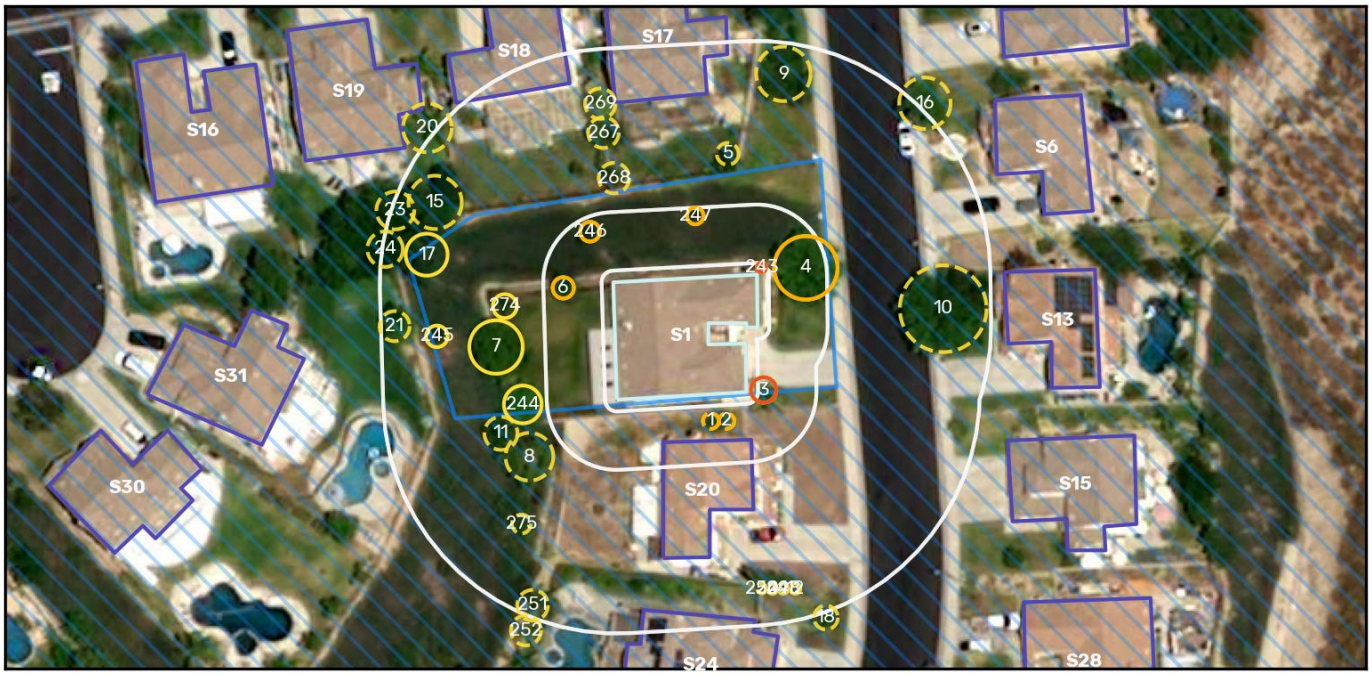
Many local and county jurisdictions require owners to maintain their properties in compliance with vegetative and defensible space requirements. These local and county requirements may be equally or more stringent than those specified for determining hazard zones used by AB 38.

Sellers of properties within State Responsibility Areas (SRAs) with a CalFire Fire Hazard Severity Zone (FHSZ) rating of 'High' or 'Very High' or in Local Responsibility Areas (LRAs) with a CalFire FHSZ rating of 'Very High' must provide buyers with documentation that the property complies with defensible space requirements (AB 38).

This report indicates the SRA or LRA as reported by CalFire for purposes of AB 38 sale-of-property inspection requirements. Local and county vegetation and defensible space zones are not reported here.

AB 38 & IBHS Wildfire Protected Home Compliance Summary

The following represents the disclosure standards for AB 38 and certification standards for IBHS Wildfire Prepared Home. The full list of standards can be found on the next page. This partial analysis is based on aerial imagery that is meant to provide an initial view of the property. **An onsite inspection by a qualified provider is required to provide a complete view of the property's compliance status.**



Structure Standards	
Roof must be Class A — non-combustible material Roofing composition must be confirmed during an onsite inspection Bird stops and/or roof flashing must be sealed	Tile | Client - Compliant

ZONE 0	
Remove all branches overhanging structures	Compliant Pending Inspection
Remove all trees, trim back branches and remove any vegetative debris	**2** Total Zone 0 Tree(s)

ZONE 1	
Trim trees to separate canopies by 10 feet and limb up 6 feet from the ground	**4** Total Zone 1 Tree(s)

ZONE 2	
Remove fuels in accordance with the Zone 2 Fuel Separation or Continuous Tree Canopy guidelines	**5** Total Zone 2 Tree(s)
Outbuildings and propane tanks have no flammable vegetation for 10 feet around exterior	**0** Secondary Structure(s) on Property

Please find a more complete list of standards and requirements for AB 38 and IBHS Wildfire Prepared Home on the next page.

AB 38 & IBHS Wildfire Protected Home Standards

The following represents the disclosure standards for AB 38 and certification standards for IBHS Wildfire Prepared Home. Some of the requirements have been summarized or consolidated to facilitate review.

○ Recommended ● Required *Not required for AB 38 until 2025

Standard	IBHS	AB 38
Structure		
Class A — non-combustible roof material (AB 38 accepts a treated wood shingle roof)	●	○*
Bird stops and/or roof flashing are sealed	●	○*
Vents are flame and ember resistant or 1/8 inch or finer mesh screens	●	○*
Windows are multi-pane, tempered glass (IBHS Prepared Plus standard)	●	○*
Gutters and downspouts are made of a non-combustible material	●	
Non-combustible gutter covers installed	●	○*
Roof and gutters must be clear of leaves, branches or other combustible debris	●	○*
All exterior walls must have a minimum of 6 vertical inches of non-combustible material	●	
Equip chimney or stovepipe openings with a metal screen having openings between 3/8 - 1/2 inch	●	
Zone 0 (0-5 ft from the structure)		
Remove all trees, branches and vegetative debris	●	●
Remove all tree branches within 10 feet of any chimney or stovepipe outlet	●	
Remove and/or replace combustible bark or mulch	●	○
Replace combustible fencing, gates, and arbors attached to the home with non-combustible alternatives	●	○
Clear vegetative debris from decks, porches, stairways, etc.	●	○
Limit combustible items (outdoor furniture, planters, etc.) on top of decks	●	○
Relocate firewood and lumber to Zone 2	●	○
Relocate garbage and recycling containers, boats, RVs and vehicles outside of Zone 0	●	○
Zone 1 (5-30 ft from the structure)		
Remove all dead or dying branches and shrubs or other plants adjacent to or overhanging buildings	●	●
Trim trees regularly to separate canopies by 10 feet and remove all dead or dying, plants, trees, branches, leaves, etc	●	●
Remove or separate live flammable ground cover and shrubs in both Zone 1 and 2	●	●
Remove combustible vegetation and items adjacent to or below combustible decks, balconies and stairs	●	●
Remove leaves, needles or other vegetative debris on decks, porches, stairways, etc	●	●
Relocate exposed wood piles outside of Zone 1 unless completely covered in a fire resistive material	●	●
Zone 2 (30-100 ft from the structure or to the property line)		
Remove fuels in accordance with the Zone 2 Fuel Separation or Continuous Tree Canopy guidelines	●	●
All exposed woodpiles must have a minimum of 10 feet clearance, down to bare mineral soil, in all directions	●	●
Remove all dead or dying woody surface fuels/vegetative debris and cut annual grasses/forbs to a maximum of 4 inches in height	●	●
Other		
Annual inspection to review landscape and confirm maintenance necessary to keep property in compliance	●	
“Outbuildings” and Liquid Propane Gas (LPG) storage tanks shall have 10 feet of clearance to bare mineral soil and no flammable vegetation for an additional 10 feet around their exterior		○
Logs or stumps embedded in the soil within 100 ft of any structure must be removed or isolated from other vegetation	○	○

Wildfire Vulnerability Analysis

This report breaks down the property by zones to better assess the risk of wildfire and follow industry accepted best practices for wildfire risk management. There are four distinct zones recognized for ignition threats:

- Zone 0 (zero) — often referred to as the Home Ignition Zone, the immediate 5 feet from the structure
- Zone 1 — 5 to 30 feet from the structure
- Zone 2 — 30 to 100 feet from the structure
- Zone 3 — 100 to 300 feet from the structure

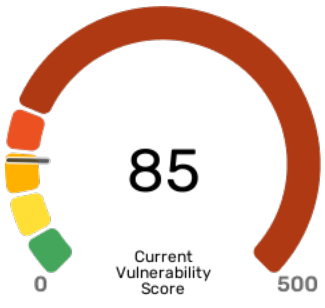
Since proximity to a structure is of paramount importance in evaluating fire threats, zone analysis allows FortressFire's Property Ignition Model (PIM) to determine different fuel risks within each zone to prioritize them. This report generates a Vulnerability Score for a property for overall risk ranging from 1 to 500 with 1 being the lowest and 500 being the highest.

The Vulnerability Score is made up of five components that represent distinct threat vectors or ignition risks to a property. They include Convective (flame touch), Radiant, Ember Accumulation, Ember Entry, and Structure Risks.

Any positive score means that, in a peak fire scenario where all fuels surrounding a structure are ignited at once, **the energy present is capable of causing an ignition.** The higher the score, the more excess heat energy above the ignition point of the structure is present. The maximum score for each individual threat vector is 100, which generally represents more than 3-4X the energy necessary to cause ignition.

Not all fires are peak fires, but PIM is designed to inform a worst-case scenario, promote a comprehensive understanding for the vulnerability of a structure, and highlight the required mitigations.

Wildfire Vulnerability & Ignition Risk Summary



Threat Vector Breakdown

Convective Heat	**23.5**/100
Radiant Heat	**0**/100
Ember Entry	**13.0**/100
Ember Accumulation	**0**/100
Structures	**48.0**/100

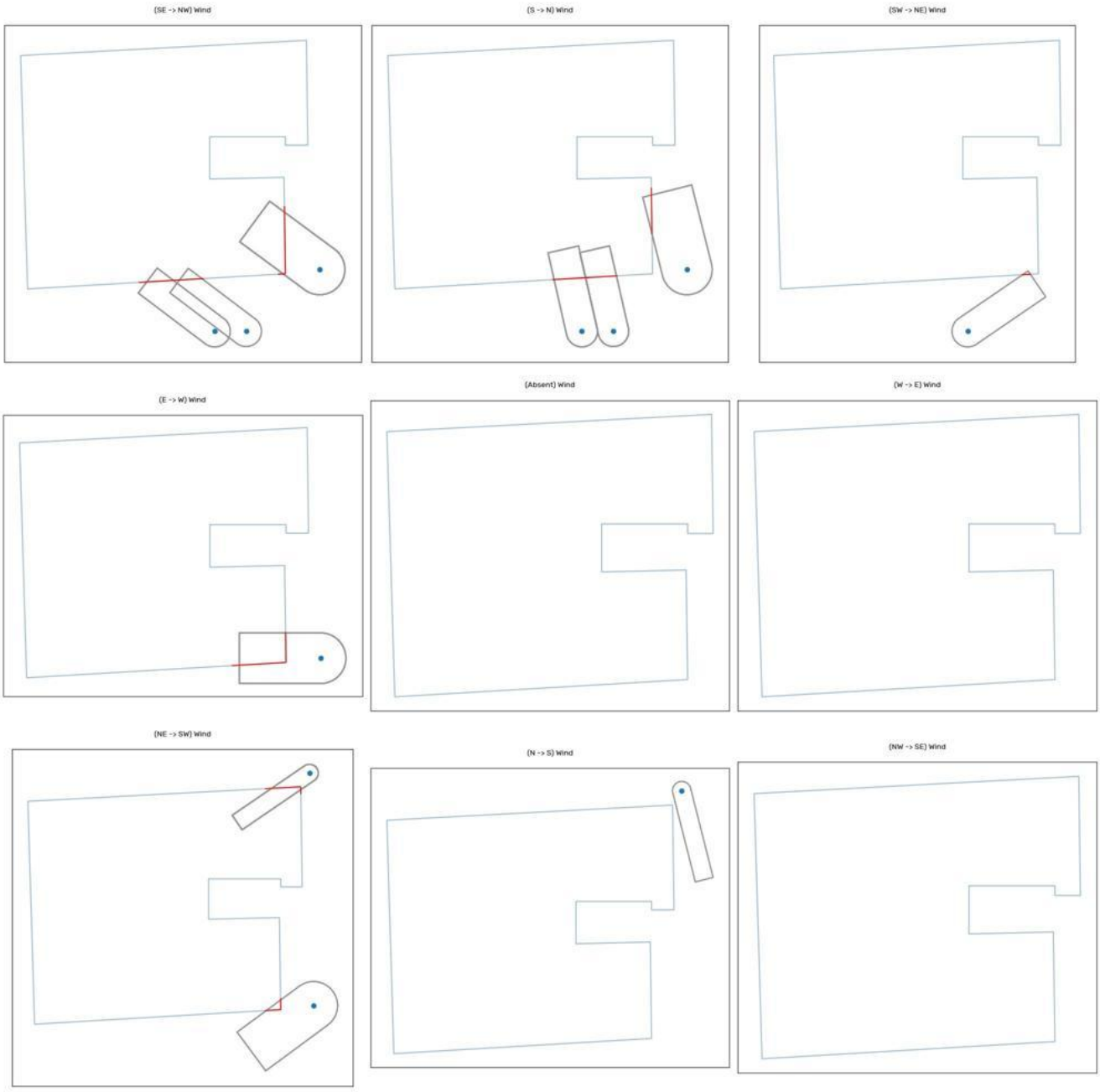
Assessment Summary

- Currently 66.0 linear feet of perimeter ignitions represent a combination of convective and radiant threats.
- The treatment of 4 tree(s) will lower structural ignition risk.
- Trimming of limbs and other detailed mitigation services are recommended to reduce risk.
- Recommend active asset monitoring and protection plans including long-term fire retardant application to maintain and protect properties once mitigations are implemented.

Convective Heat Failure Analysis

Convective risk represents the risk of direct flame touch to the exterior of a structure. Convective Risk Analysis models a 20 mph wind from 8 directions, as well as a zero-wind scenario, taking into account slope and elevation to determine where flame from a tree that is ignited would touch the structure and produce a structure ignition. It should be noted that flame length is modeled at 20 mph to represent a peak flame length for risk analysis because studies demonstrate that while higher winds increase fire spread, they do not produce longer flames.

The boxes below indicate flame touch for each of the 8 standard wind directions and in the middle a no-wind scenario is indicated. The curved side of the trees indicates the side of the tree from where the wind is coming from and the flat end indicates the flame length extension. Red indicates flame touch on the structure.



Sum of Perimeter Ignition

66.0 ft

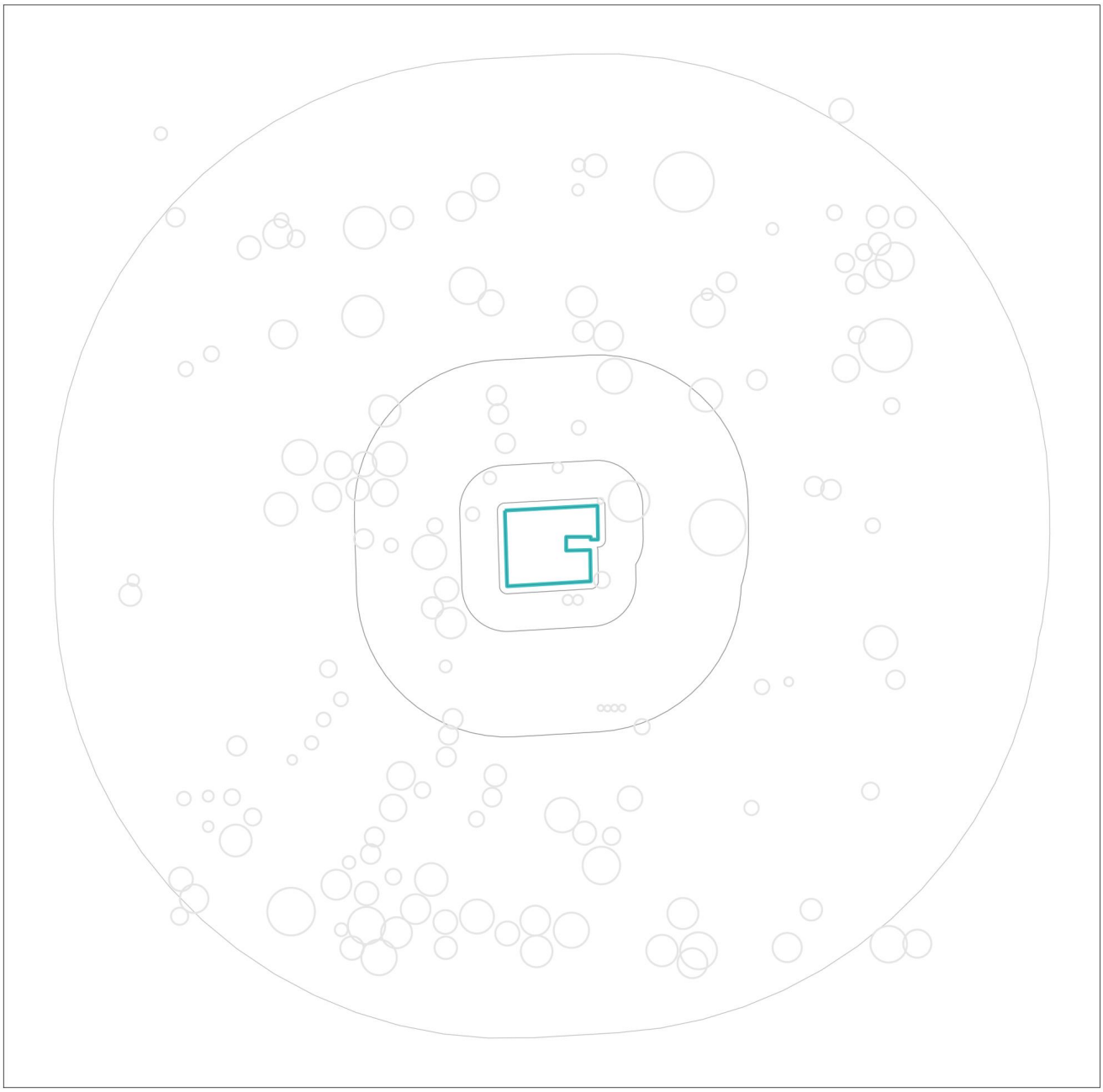
(Total linear feet of structure walls that are vulnerable to Convective ignition in the above model)

Unique Contributing Trees

4

Radiant Heat Failure Analysis

Radiant heat is heat projected from outside a flame (such as heat generated by patio heater). While all potential fuel sources are analyzed, PIM identifies the key contributors to radiant heat. This diagram identifies the top contributing vegetative fuel sources to highlight the highest risk fuel sources.

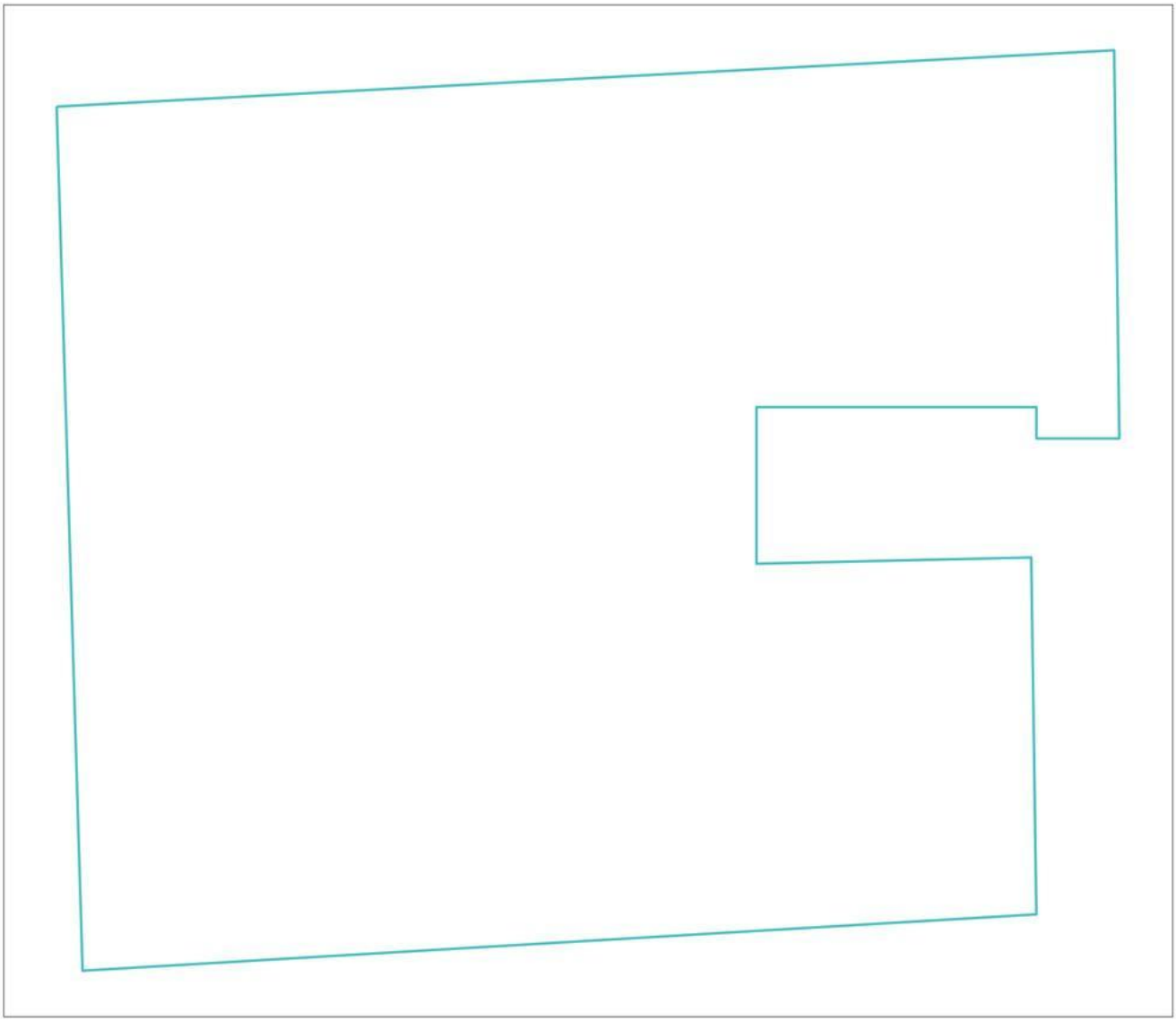


Primary Material Considered	Window Type	Zone 0 Tree Threat	Zone 1 Tree Threat	Zone 2 Tree Threat
Stucco Client	**Double Pane Tempered** Default	**0**	**0**	**0**

Radiant Heat Failure Analysis (continued)

Radiant heat analysis illustrates the areas of a structural wall that will ignite from radiant heat. PIM analyzes structure walls in two-foot-wide segments. The wall segments that will ignite in a peak fire scenario are highlighted in red in the illustration below. The circles represent the trees contributing the most heat to ignited wall segments and the yellow lines connect the trees to the ignited wall segments that they contribute to.

Each fuel source is assessed, which allows a property owner to consider many combinations of risk mitigation measures and their likely effectiveness in reducing ignition risk.

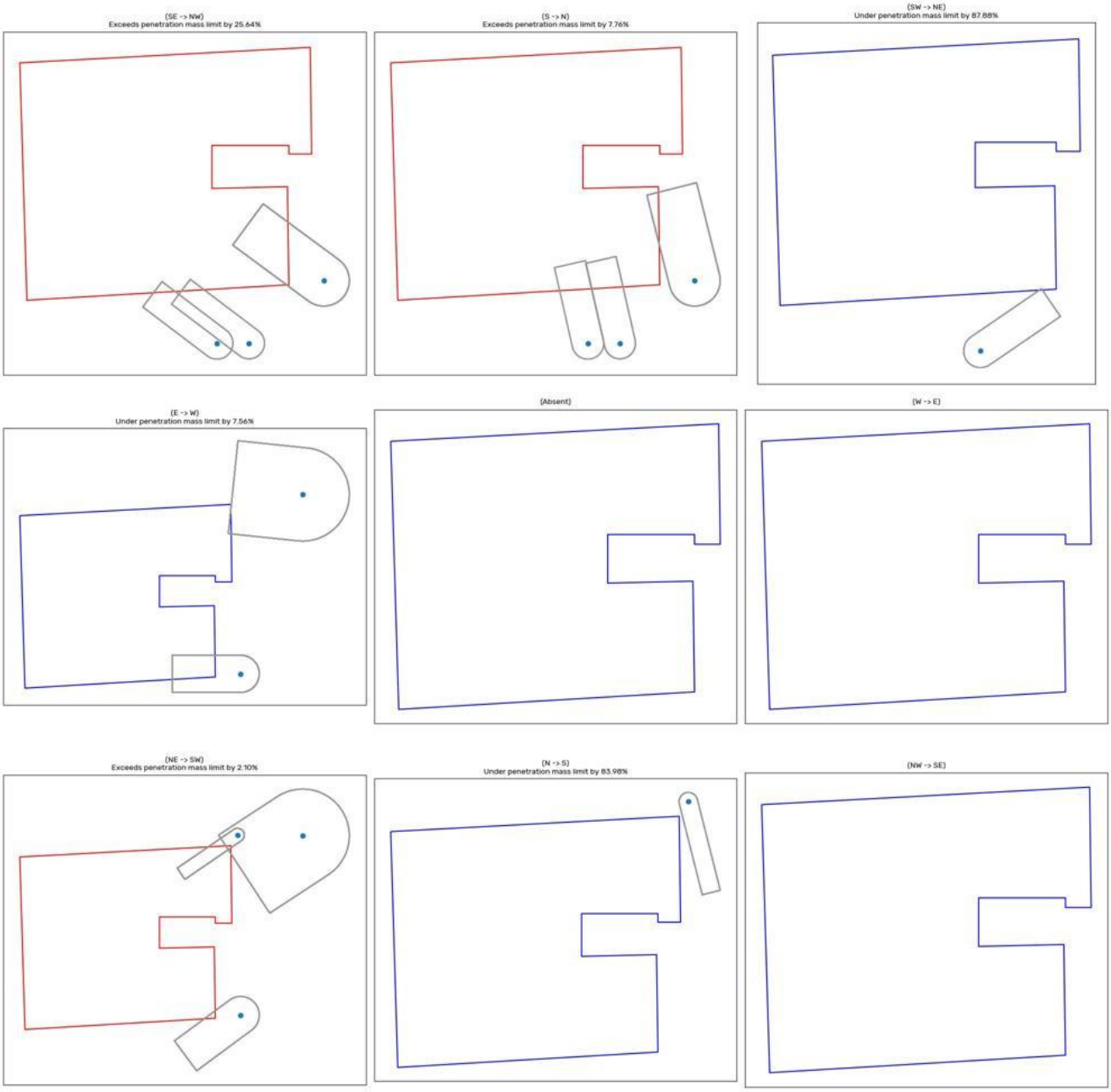


Primary Material Considered	Window Type	Sum of Perimeter Ignition	Top Contributing Trees
Stucco Client	**Double Pane Tempered** Default	**0.0 linear ft**	**0**

Ember Entry Surplus Analysis

Ember entry is a probability model that estimates whether embers will enter a home through a soffit, vent, or other opening with sufficient mass to cause structure ignition. Ember entry is universally cited as the leading cause of structure ignition during wildfires. Based on fuel mass, PIM calculates ember penetration using the same wind scenarios outlined above and estimates ember penetration to exposed property features such as eaves, vents, and soffits. While distance degrades the ignition potential of embers, should they gain entry into a structure, they can find and ignite combustible materials causing a structure to burn from the inside out.

Ember cast (quantity and size) and accumulation patterns are critical in assessing wildfire risk. PIM identifies the areas of a structure most likely to encounter significant ember showers and thus the areas of the structure that must be hardened. An inspection is necessary to identify the specific vents and wall segment gaps that may need to be remediated to prevent ignition.



Surplus Energy / Structure Ignition

No Surplus Energy / No Structure Ignition

Vent Screening

1/8 in.
Default

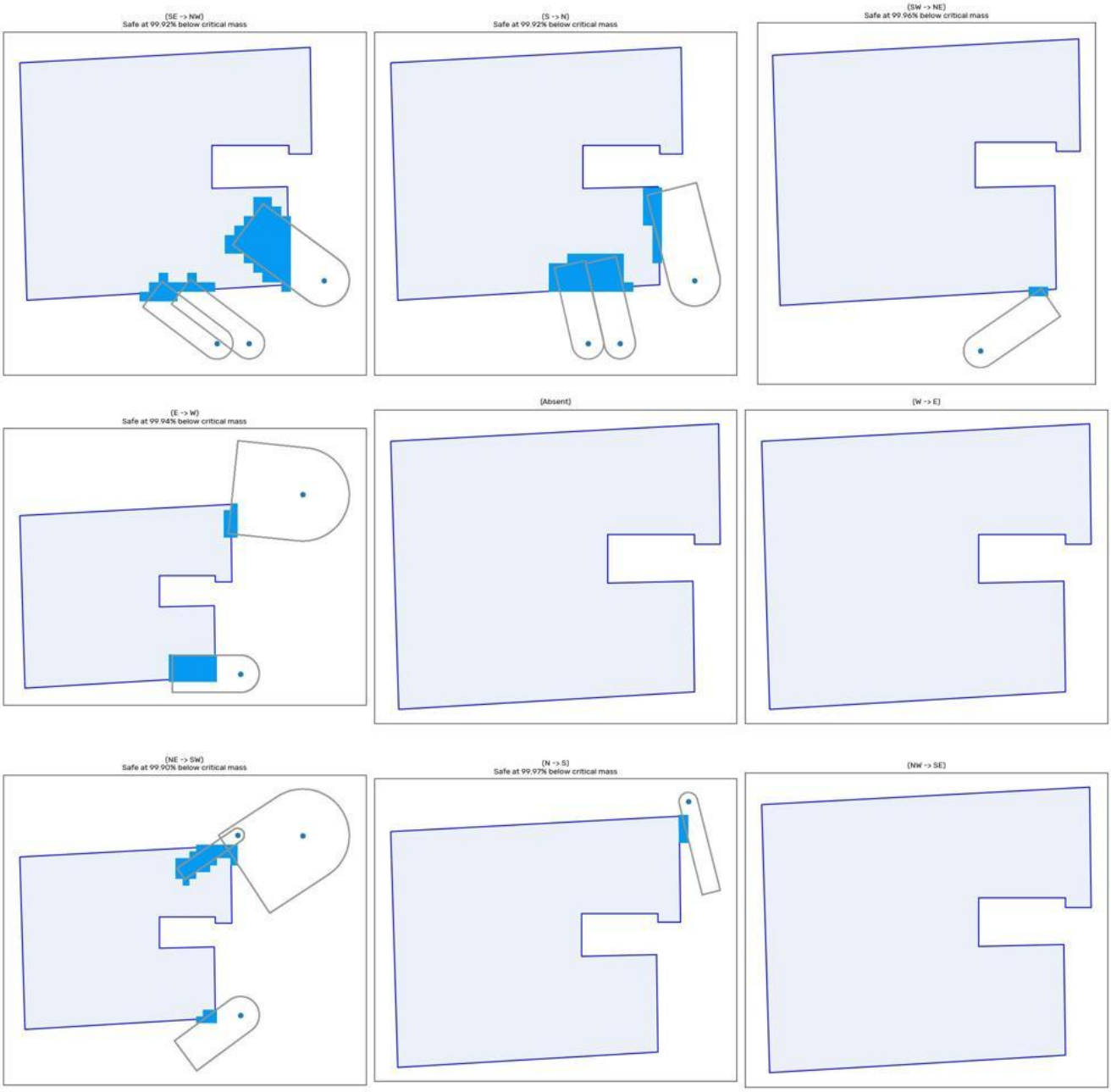
Top Unique Contributing Trees

5

Ember Accumulation Analysis

Ember accumulation is the estimate of embers ejected from surrounding fuel sources that accumulate on flat surfaces of the structure, primarily the roof. PIM calculates ember projection from burning fuels based on the size and proximity of fuel sources. Then the model measures ember movement from all wind scenarios and estimates the ember accumulations on the property's roof. Debris accumulated on roofs or gutters can be ignited by embers and an inspection is necessary to confirm whether the roof is clean. In most cases, clean asphalt shingle roofs, or other non-combustible roof materials, will not burn through as a result of ember accumulation.

Embers produced by wildfires are one of the greatest threats to wildfire spread. Embers can travel for miles, though they lose mass and ability to ignite structures over distance. Understanding a property's roof status is critical to determining overall wildfire risk.



Surplus Energy / Structure Ignition No Surplus Energy / No Structure Ignition

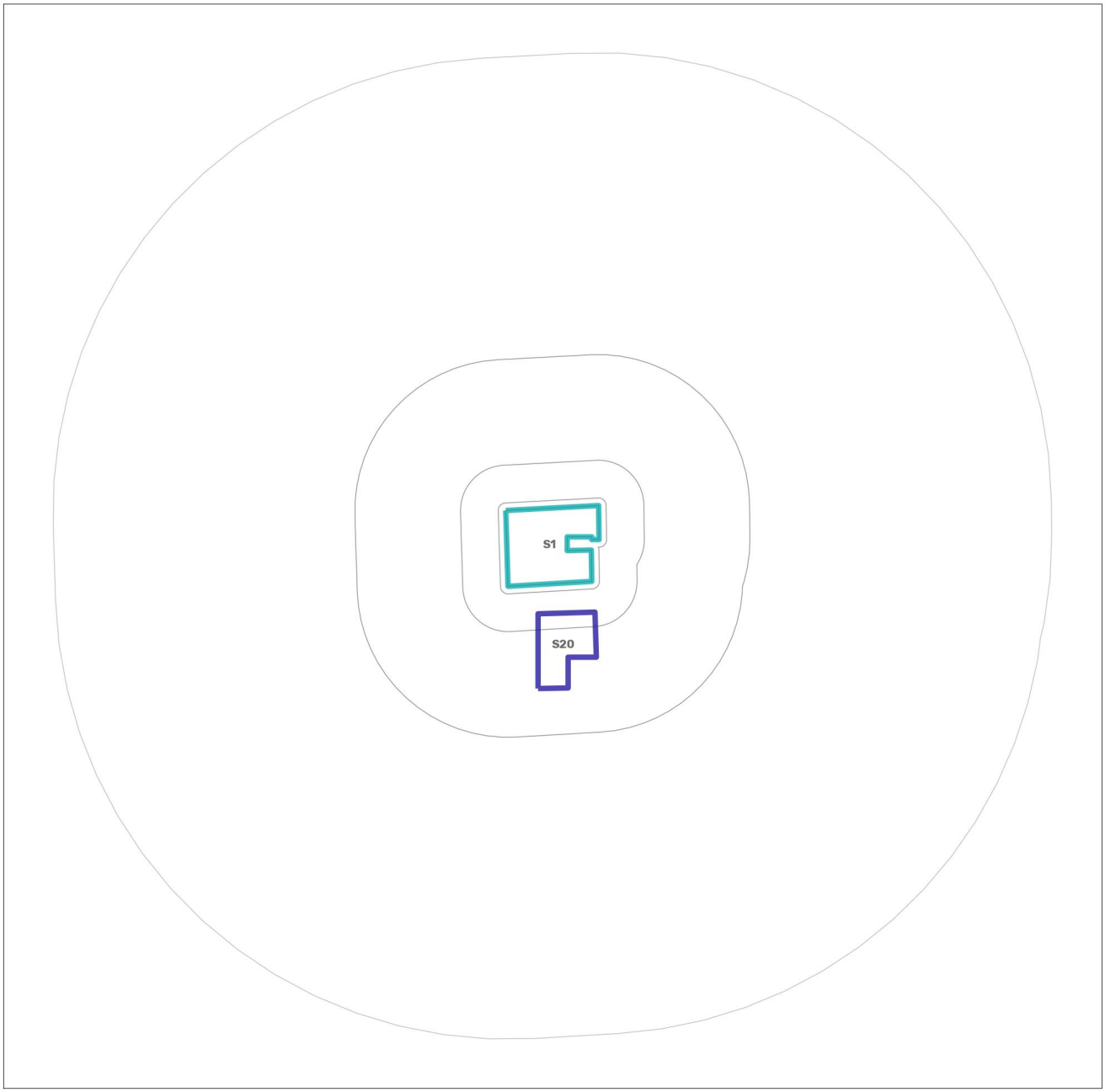
Primary Material Considered	Roof Condition Assumed	Top Unique Contributing Trees
Tile Client	**Clean** Default	**0**

Critical Structure-to-Structure Failure Analysis

Structures are treated separately because they represent a larger potential fuel source. Structures project materially more energy onto other structures. And because they are larger, they burn for a longer period of time when compared to vegetation fuels.

All structures within 30 feet of the primary structure (S1) represent fuel source risks that are close enough to cause ignition and are shown below.

To protect the primary structure, the vulnerabilities of any secondary structures must also be mitigated. The Mitigation Plan will list these structures as necessary to protect the primary structure. An inspection can identify the specific measures to address the risk presented by secondary structures. Insurance underwriters may require a full PIM assessment for secondary structures.

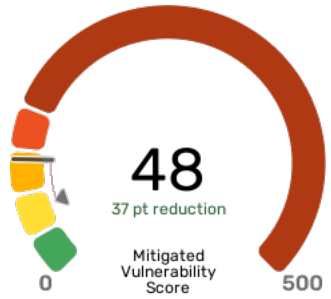


Structures within 30 ft of Main Structure

1

Vulnerability Mitigation Summary

A Mitigated Vulnerability Score is generated after analysis of the five threat vectors, and the Mitigation Vulnerability Score is compared to the Vulnerability Score provided earlier in this report.



Mitigated Threat Vector Breakdown

Convective Heat	**0**/100
Radiant Heat	**0**/100
Ember Entry	**0**/100
Ember Accumulation	**0**/100
Structures	**48.0**/100

Vulnerability Mitigation Actions

Solution: ☐ On-parcel ☑ Off-parcel ☐ No parcel available

Schematic ID	Primary Threat	Treatment
Tree ID - 1	Convective	Remove
Tree ID - 2	Convective	Remove
Tree ID - 3	Convective	Remove
Tree ID - 243	Convective	Remove
Structure ID - 1	Ember Entry	Installation or retrofit of 1/16th in. screening for all vents

Mitigation & Protection Plan Estimate

Based on the property's aerial imagery and wildfire vulnerability analysis, the following mitigation services and related costs indications are estimates to meet AB 38 requirements and remediate the property vulnerabilities. Additional services will be identified and may be required based upon onsite inspection.

An inspection is required to review the structure and Zone 0 components for IBHS certification and determine whether trees may be trimmed or require removal.

Service estimates are presented to indicate the potential costs for AB 38 compliance and remediation of the identified Vulnerabilities separately. In some cases, certain services may be presented in both estimates.

AB 38 Compliance

Zone 0 Tree Treatments	2 Total Trees	**$800 - $2,800**
Zone 1 Tree Trimming	1 Total Tree Typically 10% of trees need to be trimmed.	**$400 - $1,400**
Zone 2 Tree Trimming	1 Total Tree Typically 5% of trees need to be trimmed.	**$400 - $1,400**
Outbuilding / Propane Tank Mitigations	0 Total	**TBD pending inspection**
	Total	**$1,600 - $5,600**

Vulnerability Mitigation Services

The Property Ignition Model identifies the optimal fuel reduction by tree removal and tree trimming to reduce radiant energy below the structure material ignition threshold and removes tree fuel so as to minimize the risk of ignition. Trees significantly taller than the structure roofline may be eligible to be trimmed to meet energy and flame reduction requirements. Tree removals and tree trimming solution work is performed by licensed and certified tree contractors with arborists on staff.

Convective Solution Trees	4 Total Trees - Tree ids 1,2,3,243	**$3,200 - $11,600**
Radiant Solution Trees	0 Total	**$0 - $0**
Structure to Structure	0 Total	**TBD pending inspection**
Vents	Structures built before 2010 may most likely require vent replacements	**TBD pending inspection**
Vegetation Management	Additional vegetative mitigations may be required after inspection	**TBD pending inspection**
	Total	**$3,200 - $11,600**

Wildfire Protection Plans

FortressFire Wildfire Protection Plans feature monitoring capabilities that track wildfire conditions at the property, provide communications and alerts to the property owner, and include annual inspection and maintenance services to keep the property compliant to IBHS, AB 38, and insurance carriers underwriting standards.

Residential Protection Plan **$1,200**

- Wildfire threat monitoring, alerts and communications
- Annual inspection and property maintenance*
- Asset protection services and onsite proprietary retardant
- 1 Structure identified — additional structures may be subject to additional costs

*Price estimate is for primary structure only.

Glossary & Explanations

Subject Property Details (ref. page 4)

A recent aerial image of the subject property is sourced along with standard property identifiers and additional related details. This report utilizes a proprietary Property Ignition Model ("PIM"). The PIM is designed to provide a comprehensive measurement of the possible wildfire threat to the property based on a composite score that includes a wide range of inputs that contribute to wildfire ignitions. Machine learning and high-capacity computing power enable precise and accurate evaluation of wildfire risk.

Zone Analysis

The Wildfire Disclosure Report breaks down the subject property by zones. There are four distinct zones recognized for ignition threat with Zone 0 (zero) being the closest and Zone 3 being the widest measured

Why is this important?

Zone analysis allows PIM to determine different risks based on each zone. For instance, trees in Zone 0 will result in different scores than trees in Zone 3 due to their proximity to the primary structure. Recommended mitigation efforts are also zone based.

Zones 0-3

Our model uses exact distances and energy loads. The data is presented in a zone model to help align with industry standard approaches to home ignition risk modeling with the goal of presenting actionable mitigation recommendations and their associated cost estimates. For our model, the zones are defined as:

Zone (0) Zero – *(0-5ft) from home* – The Non-Ignition Zone is a critical area where the goal is to eliminate all ignition threats.
Zone (1) One – *(5-30ft)* – Goal is to increase tree spacing and minimize aggregate radiant heat output.
Zone (2) Two – *(30-100ft)* – Goal is to maintain tree spacing necessary to disconnect fuels sources and enable safe home defense.
Zone (3) Three – *(100-300ft)* – Goal is to maintain tree spacing to disconnect fuels and enable safe home defense.

Wildfire Vulnerability & Ignition Risk Summary (ref. page 11)

This report is intended to provide an understanding of a structure's ignition risk in the event of a wildfire. Additionally, an estimation of the effort required to remediate a property to reduce or prevent ignition is also provided. The Property Ignition Model (PIM) utilizes high resolution imagery, property data, machine learning, and a proprietary physics-based ignition model to arrive at a risk score and to identify mitigations that can reduce the risk of property ignition under peak wildfire conditions. PIM can be supplemented using a proprietary mobile phone app with a structured onsite inspection which will trigger an automatically updated report.

Vulnerability Score

The vulnerability of a property is measured in an overall risk score, ranging from 1-500. This score consists of five components that represent distinct ignition risks to a property. Each ignition risk is scored on a weighted 0-100 scale. Any positive result means that in a peak fire scenario, the energy present is predicted to cause an ignition. The larger the score, the more energy in excess of the amount that will cause ignition is present. Of course, not all fires are peak, and this model is intended to present scores and a protection plan against a peak fire scenario.

Threat Vector Breakdown

There are five separate ignition models that are analyzed in this assessment. They include Convective, Radiant, Ember Accumulation, Ember Entry, and Structure Risks. Below is a brief explanation of those risks:

Convective - Convective risk represents the risk of direct flame touch to the exterior of a home. Convective touch is measured across nine different wind scenarios and touch locations on the home are identified.

Radiant - Radiant heat is heat projected from a fire as opposed to the flame. Radiant energy transmission is not impacted by wind. We analyze all potential fuel sources that the aerial image identifies and look at the aggregate energy load on the home to see if enough energy is present to create ignition. An onsite inspection is required to identify and analyze all potential ground fuel sources.

Ember Entry - Ember Entry is a model of the probability of an ember entering through a soffit or vent. Based on total ember load and entry points, an ignition model is calculated.

Ember Accumulation - Ember accumulation is the estimate of embers ejected from surrounding fuel sources that accumulate on flat surfaces of the structure, primarily the roof. PIM calculates ember projection from burning fuels based on the size and proximity of fuel sources. Then, the model measures ember movement from all wind scenarios and estimates the resulting ember accumulations on the property's roof. Debris accumulated on roofs or gutters can be ignited by embers, so high-resolution images are used to confirm whether the roof is clean.

Structure-to-Structure - Structures are treated separately because they are a larger potential fuel source, which project more energy onto a building for a longer time period as compared to vegetation fuels.

Why is this important?

Vulnerability scoring breaks down the key threat vectors which ultimately feed into the property's overall risk score. The higher the comprehensive Vulnerability Score , the higher risk the property has of being consumed by a wildfire.