The manzanita tree, with smooth red bark and sculptural silhouette, evolved over millennia to thrive in the face of fire. A bridge between what is and what will be, manzanita symbolizes rooted belonging and hard-won ecological wisdom.

The Manzanita House draws from this spirit—a place-based response shaped by the elements, designed for longevity, and built to thrive amid a changing climate. With a nod to Spanish Colonial tradition and a wink to contemporary aesthetics, this Passive House balances warmth, efficiency, and deep respect for place.

Inspired by the character of Altadena and Pacific Palisades neighborhoods, the 3 bedroom design embraces a smaller, smarter footprint. It takes advantage of Like-for-Like rebuilding rules to streamline permitting, while every detail—from the airtight envelope to solar panel placement—meets rigorous Passive House standards. Prefabrication is utilized for faster build and cost efficiency. Designed with aging in place in mind, it uses solar orientation, low-impact materials, and proven building science to deliver comfort, durability, and beauty.

The Manzanita House is a celebration of intentional, joyful, and enduring design.

## **Passive House Certification Ready**

In a field-tested build, this design achieved industry-leading performance in energy efficiency, indoor air quality, and thermal comfort. Optimized orientation, high-performance insulation, minimized thermal bridging, and balanced ventilation allow the home to dramatically reduce energy loads while maintaining year-round comfort.

# Adapting the Manzanita House for Local Climate

Passive House certification is climate-specific. This design was adapted for Altadena + Pacific Palisades' warm, dry, fire-prone conditions. Refined window placement, glazing, and shading reduce overheating while maintaining natural light. Balanced insulation prioritizes summer heat protection without sacrificing winter comfort. Enhanced cross-ventilation and a small, efficient cooling system

prepare the home for summer peaks. Severe Fire Zone measures include ignition-resistant materials, simplified rooflines, and defensible space planning.

### **Speedier Permitting for a Faster Build**

The Manzanita House's modest footprint is tailored for Like-for-Like Rebuilding rules, which can significantly reduce permitting time lines. In many municipalities, if your new home is the same size or up to 10% larger than the original, you may avoid lengthy rezoning.

### **Buildability + Affordability**

Our prefabricated design streamlines building while reducing both time and cost. With precision manufacturing, we minimize construction waste and optimize material efficiency for a more sustainable outcome. The controlled fabrication allows for higher quality assurance, mitigating delays from weather or site. This efficiency directly translates into affordability, making high-performance homes more accessible without compromise.

### Age in Place

This floorplan supports living well at every stage of life. A primary bedroom on the main floor, wide doorways and flush thresholds ease mobility while adaptable bathrooms ensure long-term usability. Ample natural light, balanced ventilation, and excellent indoor air quality promote health and comfort for decades to come.

## **Energy Modeling Outputs**

Modeled using the Passive House Planning Package (PHPP), the Manzanita House delivers:

- Extremely low heating and cooling demands
- Optimized solar gain for energy balance
- Minimized primary energy use

These results confirm the home can achieve net-zero energy when paired with solar panels, while exceeding local energy code requirements by a wide margin.

## **Airtightness**

Airtightness is central to Passive House performance—and the Manzanita House is designed to exceed the 0.6 ACH50 standard. This level of precision minimizes heat loss, eliminates drafts, prevents moisture issues, and ensures a consistently comfortable, healthy indoor environment year-round.

#### **Qualifications**

The Manzanita House was designed by architects with deep expertise in Passive House and high-performance design.

Passive House Certified Designers

Decades of award-winning experience in modern, energy-efficient, climateresponsive design

This design reflects technical skill and field-tested success. It's not just an idea—it's a buildable solution ready to help you thrive more beautifully and sustainably.

Welcome home.