

AFFORDABLE HOUSING CASE STUDY

Timber Ridge

Timber Ridge is an 82-unit intergenerational community located in the picturesque Grande Ronde Valley in Northeast Oregon. Providing muchneeded affordable housing in the rural community of La Grande, the project features eight residential buildings and a 4,500 square foot community center containing gathering spaces, resident services, classrooms, and a Head Start program. Serving low-income residents earning 30–60% of the area median income (AMI), the development includes 35 units with Section 8 project-based vouchers and 10 units designated for households receiving assistance through the Housing Opportunities for Persons With Aids (HOPWA)¹ Program, an initiative that supports the housing needs of persons living with HIV/AIDS.

By pursuing Zero Energy Certification, the project aims to eliminate the energy cost burden for both its Owner and occupants. Timber Ridge embodies a deep commitment to centering the needs of its residents in every development decision, reflected in its integration of trauma-informed, biophilic design principles with universal design and intergenerational living. **LOCATION** La Grande, OR

DEVELOPER

Northeast Oregon Housing Authority + Community Development Partners

PROJECT SIZE 96,000 SF

TOTAL UNITS 82

COST/SF \$281

CONSTRUCTION COMPLETION DATE

January 2024 CERTIFICATION PATH

Zero Energy

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¹ Through the State of Oregon's Oregon Housing Opportunities in Partnership Program (OHOP)



CENTERING RESILIENCE: ZERO ENERGY

The decision to create a Zero Energy project stemmed from the Owner's commitment to alleviating the financial burden of its residents. Recognizing that energy costs add further strain to La Grande's already rent-burdened² households, the Northeast Oregon Housing Authority made the decision to cover all utility costs for Timber Ridge, and the project team identified early on that eliminating operational energy costs altogether would be a key goal.

While sustainability was a top concern for the team, their dedication to their residents was the core driver for pursuing Zero Energy Certification. Participating in the International Living Future Institute's Affordable Housing Program aligned well with these goals, and provided an opportunity to connect with other affordable housing project teams and explore resources and strategies for achieving Zero Energy.

While the project's high roof-to-building area ratio provided an excellent opportunity for rooftop solar panels, its rural location presented challenges, as the local utility cooperative offered fewer renewable energy incentives than larger urban utilities. To help navigate this, the team partnered with <u>Fleet Development</u>³ to assess the feasibility of solar energy for the project. In addition to exploring different incentives and grants to finance the system, they helped the team understand the long-term financial benefits of Zero Energy–projecting a seven-year payback period and a net gain of \$73,000 by year ten.

To achieve an energy use intensity (EUI) of 17⁴, the team leveraged the architect's expertise and analyzed the most cost-effective energy efficiency strategies. Those implemented in Timber Ridge include:

- All-electric buildings with strategically oriented roof forms to maximize solar energy generation
- Enhanced insulation: R-65 attics and roofs
- Superior air sealing: airtightness of <1.5 ACH 50
- Improved glazing with 0.24 U-value
- Ducted mini-split heat pumps for heating and cooling
- Energy recovery ventilation with MERV13 filtration
- Hybrid heat pump water heating: a combination of individual Rheem heat pump water heaters and a SANCO₂ centralized system
- Ventless heat pump clothes dryers

² In La Grande, over half of households are low-income, and in Union County, five in seven extremely low-income renters spend more than 50% of their income on rent. Source: The Center for Public Interest Design

³ An Eastern Oregon-based consultant specializing in renewable energy solutions for affordable housing projects

⁴ Excluding solar power generation



The team also explored a number of strategies to reduce the project's embodied carbon emissions, including advanced framing techniques, providing a crawl space with framed flooring to reduce concrete, using natural materials for site finishes and paving wherever possible, and selecting highly durable materials to minimize the need for replacement.

CENTERING PEOPLE AND PLACE: TRAUMA-INFORMED DESIGN, BIOPHILIC DESIGN, AND UNIVERSAL DESIGN

The unique landscape of Eastern Oregon presented an opportunity to create a design deeply informed by its place. This was supported by the Owner's vision of challenging traditional narratives around affordable housing and instilling in its residents a sense of pride for their community. The resulting design, highlighting the panoramic views of the surrounding Blue Mountains, draws inspiration from the beauty of the Grande Ronde Valley to foster a strong connection between building occupants and the natural environment.

The varying roof lines and overhangs of Timber Ridge echo the surrounding mountain forms while breaking up the scale of the buildings to optimize solar orientation. These roofs are supported by large timber beams and columns reminiscent of the towering Ponderosa and Lodgepole pines that are abundant in the area, inspiring the project's name. According to the architect, expressing wood in the design was essential to telling the story of its place and reinforcing the project's trauma-informed design goals by cultivating a sense of calm and biophilic connection through natural materials. For this reason, wood remained a core element of the design, even as the team had to navigate several cost-saving measures.

The project's top priority—resident well-being—is reflected in its thoughtful application of trauma-informed design principles. This emerged from the design team's understanding of the diverse groups the project aimed to serve, including the formerly unhoused, veterans, youth transitioning from foster care, and survivors of abuse, with a strong commitment to honoring their life experiences, struggles, and aspirations. It was also informed by a robust <u>outreach process</u> conducted by project partners from Portland State University's Center for Public Interest Design.

Applying a trauma-informed design framework meant embracing the principles of connection, comfort, and choice, all anchored in a foundation of safety. This translates into abundant indoor and outdoor spaces designed to support a spectrum of engagement, fostering belonging while minimizing potential stressors. One way this approach takes shape is in the circulation layout: instead of conventional apartment designs with narrow hallways and opposing unit entry doors–often sources of discomfort–the team incorporated outward-facing,



single-loaded corridors to enhance psychological safety. In addition to creating a sense of spaciousness, visibility, and connection to the outdoors, this also maximizes access to daylight and views by allowing for windows in both the front and the back of each unit.

With biophilic design playing a key role in stress reduction, the project incorporates thoughtful design gestures that allow residents to connect deeply with the natural world on two levels: outwardly (through panoramic views of the surrounding mountains) and inwardly (through materiality and site design strategies). The color and materials palette was carefully selected to evoke a sense of calm, and the project features a series of artworks throughout, including murals inspired by the local ecosystem.

Finally, universal design was also an important priority for the project to better serve its intergenerational population, which includes seniors and people with various disabilities. To reflect a cross-disability approach, the architect utilized The Kelsey's <u>Inclusive Design</u> <u>Standards</u>, exploring opportunities to incorporate as many of its elements as possible. Intended to complement code requirements, these standards provide a valuable framework for enhancing accessibility and inclusion in multifamily housing.





The principles from the Inclusive Design Standards directly informed a number of strategies designed to improve the quality of life for all residents, including:

- A diverse furniture selection with seating options for children (small chairs and tables), seniors (chairs with arms, without wheels), and people of larger sizes (armless and extra wide chairs)
- An audio-visual system with assisted listening devices
- Provisions for smart doorbells
- Excellent acoustics at community meeting spaces
- Accessible units and common bathrooms beyond code-required quantities
- Large kitchens that provide ample cabinet storage even after removable base cabinets are removed for wheelchair access
- The use of visual contrast at all pedestrian crossings, and for all entry doors and hardware
- Custom trash and recycling containers for accessibility



COLLABORATION, PARTNERSHIP, AND INNOVATION

Timber Ridge stands as a testament to innovative collaboration within its development team. Its success is largely driven by the collective efforts of community service partners coming together around a shared vision rooted in inclusion and equity. Despite several challenges posed by the pandemic during the development process, the project team was able to leverage multiple funding sources to bring the project to fruition, including:

MAJOR CAPITAL STACK SOURCES

- 4% Low Income Housing Tax Credits
- Oregon Housing and Community Services LIFT (Local Innovation and Fast Track) Funds
- OHCS GHAP (General Housing Account Program) Funds
- HUD Project-Based Section 8 Vouchers

SUPPORTING SOURCES & GRANTS

- Oregon Health Authority OHOP HOPWA Vouchers
- Solar Investment Tax Credits
- 45L Tax Credits
- OTEC (Oregon Trail Electric Cooperative) Energy Incentives
- BPA Grant for heat pump water heating
- Eastern Oregon Coordinated Care Organization Grant
- Eastern Oregon University Head Start Grant
- Roundhouse Foundation Grant
- Grande Ronde Hospital Grant

LENDING & OFFSET CONTRIBUTIONS

- WaFed Construction Loan
- Citi Permanent Loan
- Northeast Oregon Housing Authority Deferred Fee Contributions
- Community Development Partners Deferred Fee Contributions



LESSONS LEARNED

For affordable housing projects facing budget constraints and tight timelines, sustainability measures are often at risk of falling behind other critical priorities. With this in mind, Timber Ridge's architect emphasizes the importance of understanding that innovative design solutions are most likely to be successful—and to withstand cost-saving measures—if they meet two criteria. First, they should clearly reinforce the overarching intent of the project and tell a compelling story that aligns with the Owner's vision. Second, these solutions should emerge primarily from the bottom up, placing the needs and wellbeing of the residents the project is designed to serve at their core.

"The [design measures] that you build a clear, strong story around survive, and the ones that are just an add-on feature... are the first things to get value engineered. But if they're inherent to the design and the story of the design in some way, and not just secondary, then they'll last and be successful."

NATE EMBER, INK BUILT ARCHITECTURE

In the case of Timber Ridge, a place-based, Zero Energy, trauma-informed approach was fundamental to telling its story. Recognized for its innovative, people-centered design, the project received the <u>AIA Bend People's Choice</u> <u>Award</u> in 2021 and the <u>AIA Oregon 2030 Award</u> in 2024. Now fully occupied following its completion in 2024, the project is currently gathering preliminary energy data with the hope of reaching Zero Energy performance in the near future.