

Ayllu Commons

Design Approach

Named after the traditional Quechua concept of an extended household network bound by shared land and mutual support, the **Ayllu Commons** is a middle-housing community built for the reality of contemporary living.

In practice, the project pairs a primary home with a rear duplex to place three distinct residences on a single lot. This configuration expands neighborhood housing choice and encourages everyday connection while making smart use of land and infrastructure.

Affordability & Constructability

Achieving affordability starts with simplicity in construction. The design utilizes a compact, orthogonal footprint to minimize structural complexity, exterior wall area, and unnecessary corners.

A standardized dimensional system runs through the entire layout. By repeating core wall assemblies, window sizes, bathroom plans, and kitchen modules, the design limits custom fabrication, speeds up coordination on site, and reduces material waste. Framing relies on standard 2×6 construction with prefabricated floor and roof trusses to keep the framing sequence straightforward. Furthermore, wet areas are stacked and consolidated to keep plumbing runs short, which cuts initial construction costs and simplifies long-term maintenance.

The primary single-family home incorporates universal design principles on the main floor. An adaptable ground-level room works as a home office or guest room today, and an accessible bedroom tomorrow. This allows residents to age in place and accommodates multigenerational living without costly future renovations.

Sustainability & Structural Performance

Our environmental approach follows a clear sequence: reduce energy demand first, optimize equipment efficiency second, and prepare for clean energy generation third.

1. **Envelope & Passive Performance:** The building envelope minimizes heating and cooling loads through tight air sealing, continuous high-performance insulation, minimized thermal bridging, and intentional window placement. The wall assembly incorporates a smart vapor retarder that adjusts to seasonal moisture shifts, preserving the structural enclosure while acting as a primary

air barrier. The building massing can also be mirrored to adapt to different lot orientations, maximizing solar gain and natural daylight regardless of which side of the street the parcel sits on.

2. **Efficient Mechanical Systems:** Heating and cooling are handled by individual ductless mini-split heat pumps in each dwelling, eliminating the energy loss and bulk of centralized ductwork. Operable windows, natural cross-ventilation, LED lighting, and ENERGY STAR appliances further drive down daily electrical demand.
3. **Renewables & Site Hydrology:** Rooflines are explicitly angled and framed to support future solar PV installations. On the ground, permeable site paving and native, drought-tolerant landscaping mitigate stormwater runoff, reduce irrigation needs, and manage drainage naturally on-site.

Community & Housing Diversity

Rather than building three identical units, Ayllu Commons provides varied housing types within one small footprint:

- **Unit A (Multigenerational Home):** A larger family residence designed for growing households, extended families, or those needing flexible remote-work space.
- **Units B & C (Compact Duplex):** A ground-floor single-level dwelling tailored for seniors, first-time buyers, or couples, paired with an upper-level unit ideal for smaller households, roommates, or young professionals.

This mix functions as a flexible micro-neighborhood. An owner-occupant can live in the main home while housing aging parents or adult children in the duplex units—maintaining closeness alongside daily privacy. Alternatively, the secondary units can serve as long-term rentals, providing steady income that offsets mortgage costs. For small-scale infill builders, it offers a proven model for adding density that naturally fits the scale of an established residential block.

Feedback for the City of Bellingham: Bringing Back the Corner Store

As Bellingham continues updating its land-use policies to encourage housing variety, the city should look beyond housing units alone and consider the daily amenities that make neighborhoods livable.

Historically, residential streets contained small commercial outposts within an easy walk of home. Modern zoning often restricts these gentle commercial uses, forcing

residents to drive for basic daily needs. We encourage the City to explore allowing small-scale, accessory neighborhood commercial spaces: a corner bodega, coffee shop, bakery, flower stand, or bike repair shop, where appropriate.

Kept small and compatible with surrounding home scales, these accessory uses transform middle-housing parcels into active, walkable community anchors rather than just places to sleep.