

## reFRESH

Bellingham is a vibrant community that attracts a variety of people. Despite its quaint small town vibe, it can at times be a bustling place to live and it's important to have a home where you can recharge and feel refreshed.

### **Universal Design & Aging in Place**

In the design of the reFRESH ADU, we aimed to create a home that has the capability of being functional and comfortable for a variety of inhabitants.

The home is all on one level to allow for aging in place without the increased costs for accessible vertical circulation. This design allows for all types of occupants to inhabit the space, from a young family to an elderly person(s) aging in place and everything in between by providing two bedrooms that could be used by children, a caretaker, a guest room or an office space. The main living area is open to allow for flexibility of use, and the entrance has ample space to allow for maneuvering wheelchairs, walkers, strollers, etc., or the entry space can be used as a reading nook or work space.

The primary entrance is on the East side of the residence with access both from the alley and the street. Even though parking isn't a requirement, a parking spot is provided from the alley. This allows both for the occupants to be able to park close to unload groceries, kids, etc.; to have space to be used as a pickup/dropoff if the inhabitants have limited mobility; or the space can be used as a patio to soak up the morning rays.

### **Affordability & Cost Effectiveness**

While the overall form of the residence is visually interesting, it utilizes simple forms with right angles and standard plate heights that are still easy to construct. The overall dimensions of the structure fit with standard material dimensions to help minimize waste during construction. The exterior wall composition is thicker than standard to allow for more insulation and thus higher R-value but is done in a way that doesn't greatly increase costs by using a standard 2x6 stud with 2x furring at the exterior of the wall assembly.

## **Sustainability & Resilience**

The building is oriented to maximize solar exposure to the South and West to maximize passive solar gains for heating in the cool months. Solar panels are located on the two of the main roof forms to generate an ample amount of kWh. Part of the roof is planted which helps reduce stormwater runoff by soaking up and filtering the water on site. Care was taken to provide enough outdoor space so that even with two homes on a 5,000 square foot lot, there's still room to grow food for both households.

An Agepan system is proposed to create a building envelope that breathes without needing to introduce expensive mechanical ventilation systems.

## **Innovation & Creativity**

With the existing house footprint being less than the new ADU structure, special care was taken in not dominating the existing house, while also providing private outdoor spaces for each home. The ADU as designed has a connection to the outdoors and landscape that allows it to feel larger than it is. The overall form of the ADU is broken up into three forms to blend into the landscape and not overpower the main home on the site. This breaking up of forms also helps separate private versus public space within the home. The main living space in the South wing is open to allow for a variety of configurations and occupant needs. While the bedrooms and bathroom are tucked away in the North wing to allow for privacy. The bathroom has ample maneuvering room for inhabitants and is wheelchair accessible. The open entry that connects to the two wings allows for a flexible, natural light-filled living space for the inhabitants, helps create the separation between public and private spaces, and helps to separate sound between the two. The entry and the dining nook also provide attractive built-in storage fixtures.

# ADU Design Narrative

Requirements: 750 words max, pdf format; describe in detail how the project addresses the scoring criteria . . . reflects our community goals and values

## Universal Design & Aging in Place (30%)

Submissions must encompass ADU designs that prioritize accessibility and inclusivity, incorporating universal design principles to ensure usability and adaptability for all individuals, including those with disabilities or special needs. We strongly encourage designs that support flexible living arrangements, meet the changing needs of people as they age, and allow people to continue living in their homes as long as they wish.

- Single story living
- Flexible layout in common areas
- Two bedrooms to allow for a family or aging in place
- Provided an onsite parking spot if limited mobility is an issue. This not only allows for the occupant to park close but if they're using a ride share program to have a designated space that is easier for them to be picked up at.
- Durable materials with low maintenance.

## Affordability & Cost Effectiveness (30%)

Submissions should be economically viable and efficient, considering factors such as construction costs, ongoing maintenance, and operational expenses. We are seeking inventive and cost-effective approaches that minimize costs and promote affordability.

- 2' increments
- Truss package
- Foundation - slab on grade with mono pour condition - how does this get insulated well and not add additional costs?
- Wall assembly - 2x2 furring at exterior

## Sustainability & Resilience (25%)

Submissions should feature designs that place a strong emphasis on sustainability and energy efficiency. These designs should incorporate key elements of energy performance, water efficiency measures, and resilience against potential hazards. Designs should also consider sustainable materials, waste reduction strategies, and overall ecological footprint reduction.

- Passive solar - Maximize South and West light
- Solar panels
- Green roof
- Some passive house approaches
- Agepan, breathability
- More passive systems, less mechanical/active
- Convection microwave/oven; induction cooktop
- Gray water system?
- Drain water recovery?
- Low CO2 concrete
- Breathable drywall
- Increased insulation - low cost - high benefit
- Passive cooling
- Breathable wall envelope

## **Innovation & Creativity (Aesthetics) (15%)**

Submissions should showcase ADU designs that are visually captivating, consider scale, exemplify innovation, creativity, and distinctive design solutions. We are interested in designs that thoughtfully and creatively support modern living needs for everyone, creative storage solutions, and original concepts that push the limits of creativity.

- Don't want to dominate small house at front.
- Visual or physical separation from main house with landscaping, raised gardens, fence, etc.
- Embrace landscape