

AFFORDABLE A R U

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Architecture Engineering Construction Technology | Expected May 2024

The ARU is to be hypothetically built in the Wailua Homesteads on Kauai. The ARU is positioned and designed to ensure that existing trees and vegetation are preserved. The design is motivated towards complimenting the site's natural landscape, as well as responding to weather conditions.

The 650 square feet two-bedroom ARU is suitable for a small family, young adults, and for those who want to downsize.

The parking, which doubles as a front lawn, is a combination of bermuda grass and pavers to minimize heat absorption.

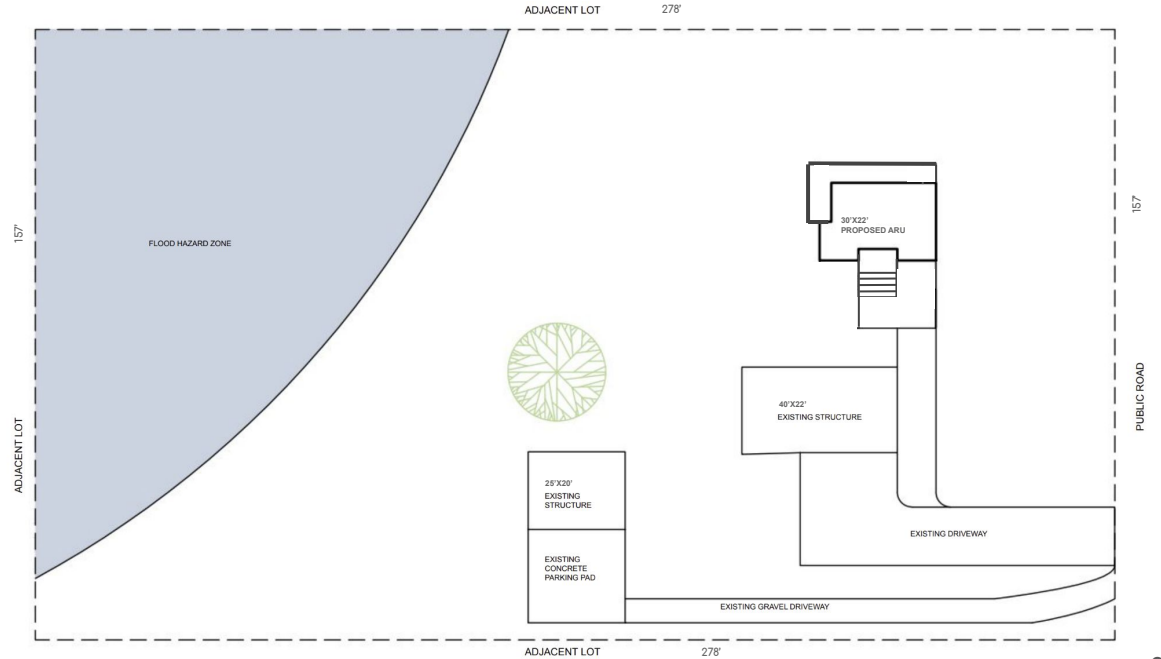


Floor Plan

- 1. Entry
- 2. Living room
- 3. Kitchen
- 4. Dining room
- 5. Laundry
- 6. Storage
- 7. Bedroom 1
- 8. Bedroom 2
- 9. Toilet and Bath
- 10. Deck
- 11. Parking



Site Plan





The ARU is entirely elevated using post and pier foundation to allow rainwater to flow through.

A wood polymer deck serves as an extension of the interior spaces, as well as to provide for additional gathering space.

A green wall is incorporated to the design to promote relaxation for future inhabitants, as well as to provide privacy from the adjacent road.

Front Facade



Longitudinal Section

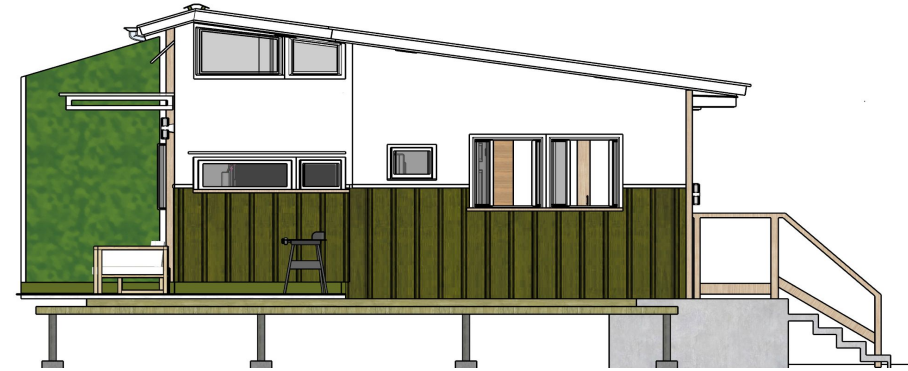


The wood panels not only give the unit a minimalist more gentle look, but also serve as additional barriers from the afternoon sun.

To reduce privacy concerns from the principal dwelling, openings and window placement on the entry facade are avoided.



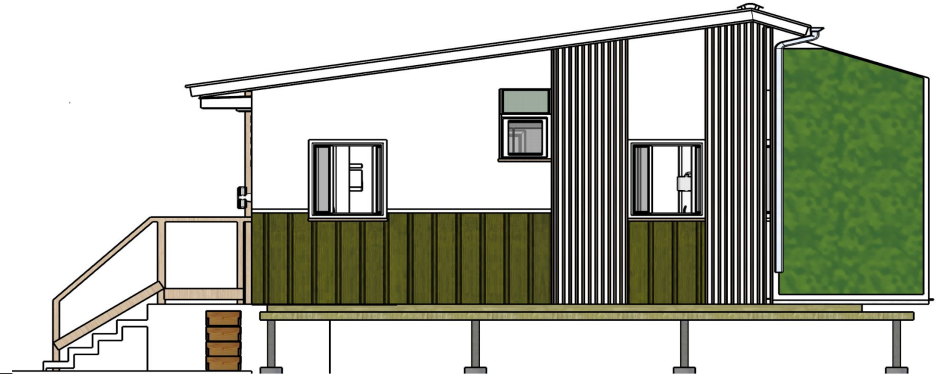
Front Elevation



East Elevation



Rear Elevation



West Elevation

To increase the ARU's curb appeal, vertical board and batten siding is placed on the exterior walls which then give the ARU a subtle contemporary look. It is also more practical because it is much easier to upkeep than the more traditional horizontal siding.

Foyer and Dining area

Wood laminate flooring and PVC panels are an affordable alternative to wood panels. It not only adds warmth to the interior space but is also low maintenance and highly resistant to water damage and fire.

A large mirror is placed on the center of the dining room to reflect natural light coming in from the casement windows, making the space feel both more open and brighter.



Living room and Foyer

To define transitions between spaces, ceilings on particular spaces are raised or lowered. The ARU is an open plan layout, minimizing barriers for views and conversation.

A round table and an arched mirror is incorporated to soften the living room space and break the sharp edges and straight lines created by the walls, flooring, etc.



Kitchen

A semi single wall L-kitchen layout is incorporated and features an awning window directly over the kitchen sink for fresh air circulation.

The clerestory windows allow plenty of natural lighting and create good cross ventilation, minimizing reliance on artificial cooling and lighting.



Toilet and Bathroom

A combination of awning and picture window are placed high on the walls to maintain privacy while at the same time allowing air circulation and natural light to keep out moisture.

Simple rectangular tiles with contrasting colors add texture and style to the bathroom in a subtle way. The glossy wall tiles reflect the natural and artificial light, thus creating an illusion of a bigger bathroom.

