

The Smart Art ADU

The **Smart Art ADU** concept combines spaces to accommodate aesthetic sensibilities combined with innovative products and practical design. In other words, form and function really matter and one should not negate the other. I like the idea of accommodating one's art and other personal treasures while taking cost, energy efficiency, sustainability and useful space planning in mind. These are big challenges for one small space. **The 618 sq. ft. ADU** preserves a 24' yard space between the primary home and the new ADU structure with the addition of one parking space in the rear of the new building off the alley. ADU and vehicle are fully within the 5' setback limitation and the roof height average does not exceed limits coming in under 12'.

Universal design and aging-in-place elements have been used. The gently sloping sidewalk takes the resident from ground level at the car to smooth passageway transitions at both side and front doors. The kitchen and bathroom spaces have accessible knee space accommodation at the sink and cooktop. All doors are wide enough to accommodate a wheelchair. Most of the cabinets and storage spaces are within 48" of the floor or contain pull-downs and add-in convenience hardware. The bathroom grab rails are color-coded; the darker rails are intended for safety aids. The extra thick walls and triple pane windows keep the home quiet and peaceful.

Affordability and cost effectiveness have been addressed by using many materials that allow homeowner labor as a cost-saving measure. The biggest example is the Faswall block walls as an optional DIY element. Additionally, floating cork and tile flooring are affordable on the front end and can be installed by the homeowner; durable surfaces for many years which makes them a big cost saver over the long haul. This home has been designed using a ***previously tested envelope assembly*** that will result in a net zero energy impact when solar panels are added. Beyond code thermal layers, air sealing and correct vapor control are critical to net zero energy and effective envelope results. Keeping energy costs down over the long term adds to the cost effectiveness of this building.

Sustainability and resilience are incorporated by using a passive house approach for all systems and natural materials have been chosen for nearly all surfaces. Components included in this ADU;

1. Lime plaster wall coatings, inside and outside.
2. Cork, wood, tile finishes and Paperstone countertop.
3. Heat pump source air handlers in each room for ambient air heating and cooling
4. Heat pump source for hot water, efficiently placed tank.
5. Heat pump sourced for clothes drying, unvented.
6. Heat recovery ventilation with Merv 13 air filtration for fresh clean air year-round.
7. Hydro panels to supplement drinking water.
8. ERV charging station, LED lighting fixtures and Induction cooktop.
9. Solar-ready roof with zero penetration and adequate slope.
10. Triple pane insulated windows.
11. Faswall cemented blocks made of inert woodchips from recycled pallets.

Innovation & creativity have been addressed by incorporating many passive house approaches listed above as well as natural light from the clerestory windows housed in a mini-vaulted ceiling from the split roof. The SIP roof is graphite infused for extra R-value. The front porch includes some unexpected, angled post bracing. The kitchen includes standard sized soft close stylish cabinets with convenience add ins. The overall interior aesthetic is crafted to be eye-appealing with a nod to midcentury, while very practical. The surfaces are made from ordinary affordable materials that are natural. And of course, there is space planned for art on the walls and shelves for displaying treasures.