Accessible DADU

A1

City of Seattle

D.A.D.U. PLANS

Perspective

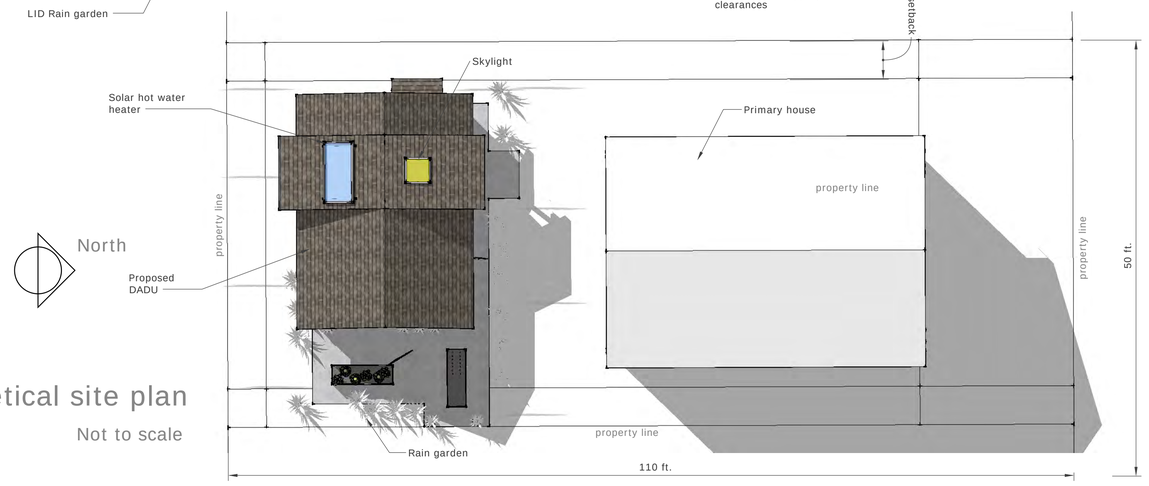
Not to scale

LID Rain garden

Wheelchair appropriate surface

Raised vegetable beds w/ wheelchair appropriate clearances

LID Rain garden



Theoretical site plan

Not to scale

Project description:

The project proposes a 555 square foot single story DADU that meets the requirements for the Americans with Disabilities Act (ADA) for wheelchair accessibility. Please see Sheet A3 for accessibility diagraming which shows how required clearances for turning, knee space, transfer, etc. are met.

Project narrative

This DADU is designed to be a fully accessible studio dwelling unit for a single person or a couple. Although the kitchen and dining area is combined with the sleeping space, an overhead curtain is proposed as a means to divide the space for privacy and night-time sleeping.

The house is designed to fit comfortably on a typical Seattle lot space. Additionally, the exterior appearance is meant to "play well" with the city's common architectural vernacular of traditional building stock.

The primary exterior focus of the proposed house is a patio space with raised planter beds that are designed to be wheelchair accessible. Views to this space are toward a side yard and windows on the side of the DADU facing the primary house have been minimized for privacy.

Cost reduction measures, constructability, as well as sustainable design strategies have been taken into consideration and are discussed in detail on Sheet A8.

Site planning & exterior views

DATE: 12/17/2020

Plot at 24 x 36 inches

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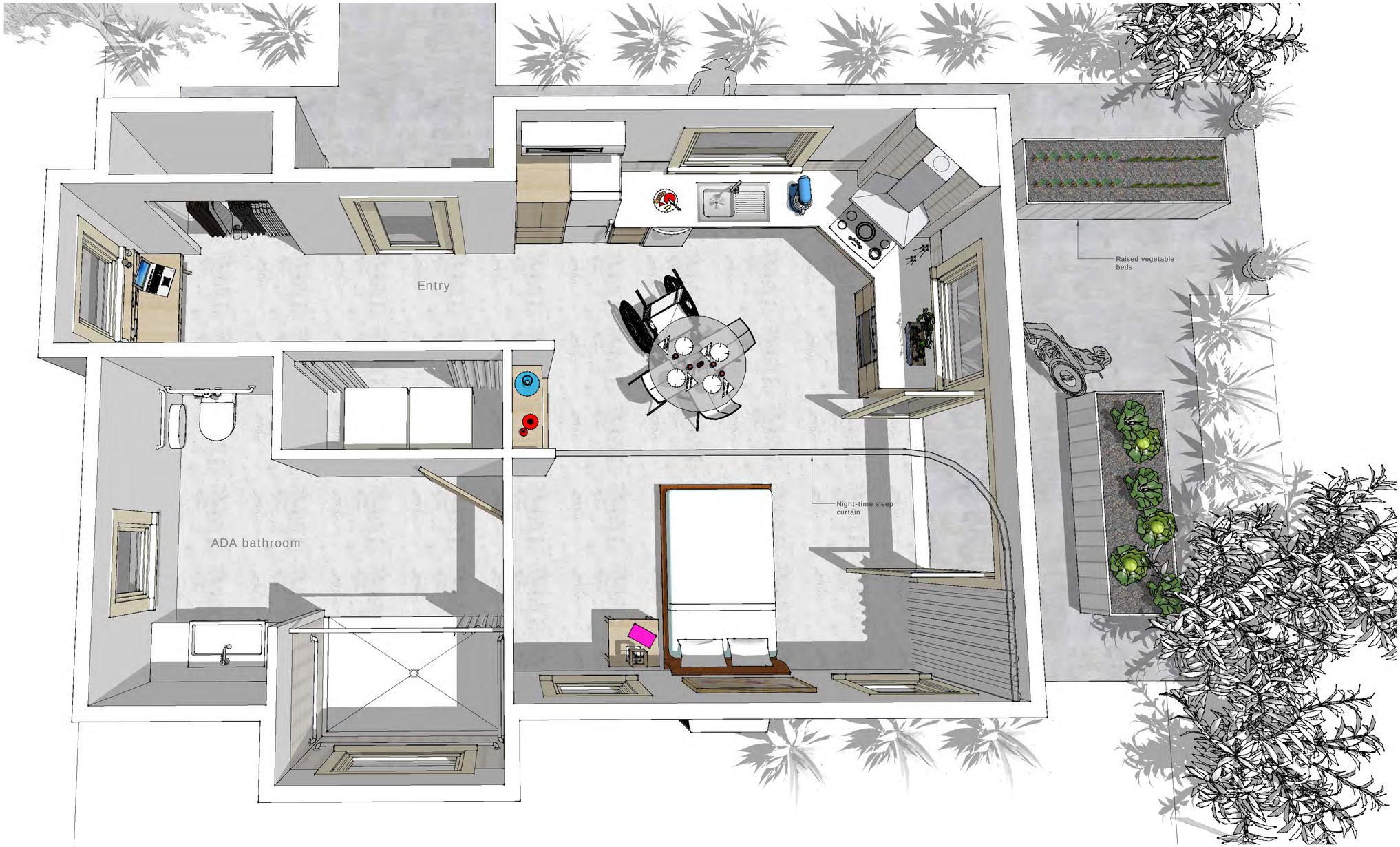
FORM FOLLOWS IMAGINATION



Floor plan perspective

Not to scale

For scaled plans see Sheets A3 & A4

Interior perspectives

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Accessible DADU

A3

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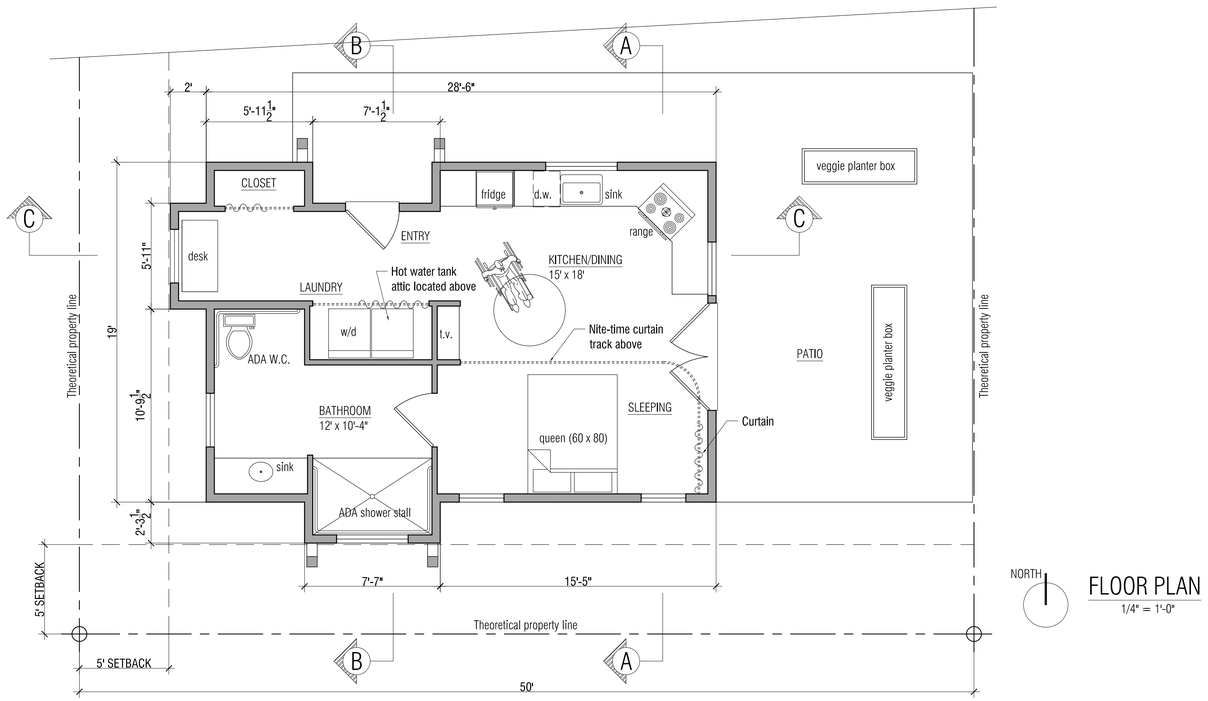
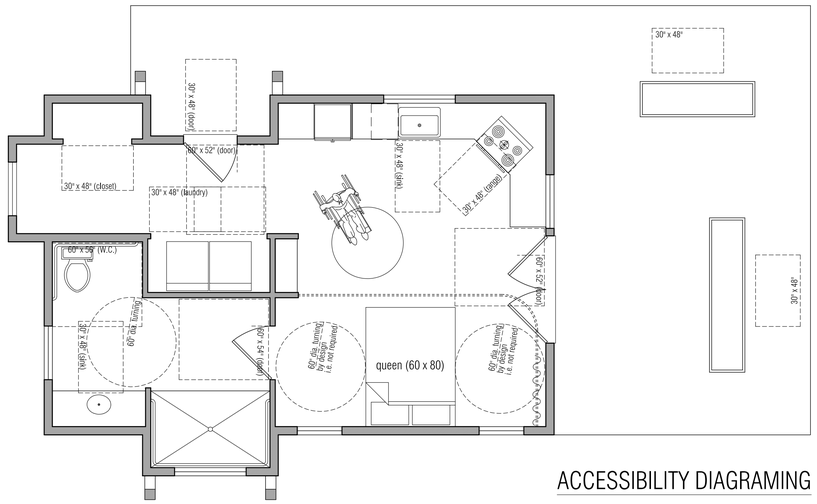
D.A.D.U. PLANS



NORTH

FLOOR PLAN
1/4" = 1'-0"



ACCESSIBILITY DIAGRAMING

BUILDING AREA:

PROPOSED FLOOR PLAN (MEASURED TO EXTERIOR OF WALLS) = 555 S.F.

ACCESSIBLE D.A.D.U. FLOOR PLAN

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Accessible DADU

A4

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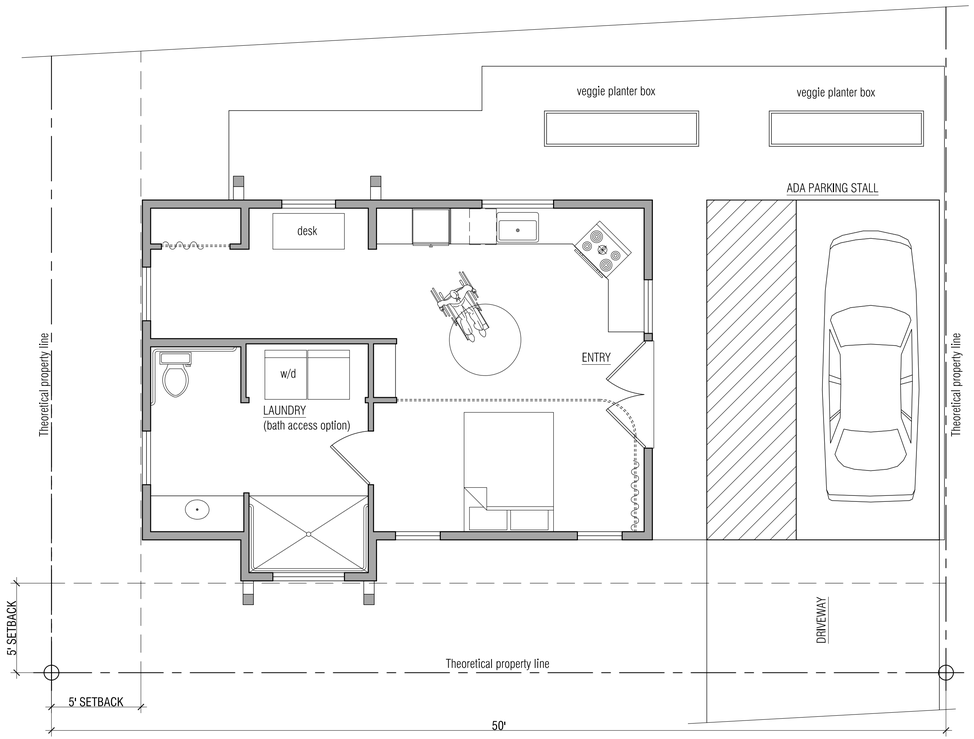
D.A.D.U. PLANS



NORTH

FLOOR PLAN w/ ADA PARKING STALL OPTION

1/4" = 1'-0"

BUILDING AREA:

PROPOSED FLOOR PLAN (MEASURED TO EXTERIOR OF WALLS) = 555 S.F.

ACCESSIBLE D.A.D.U. ALTERNATE SITE PLAN

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Main living space (daytime)

Not to scale

Night-time curtain provides privacy and room darkening.

Main living space -- curtain drawn (sleep time)

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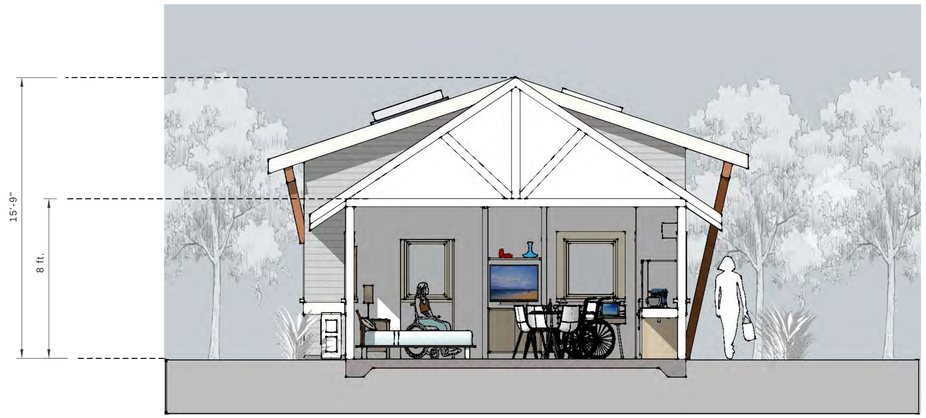
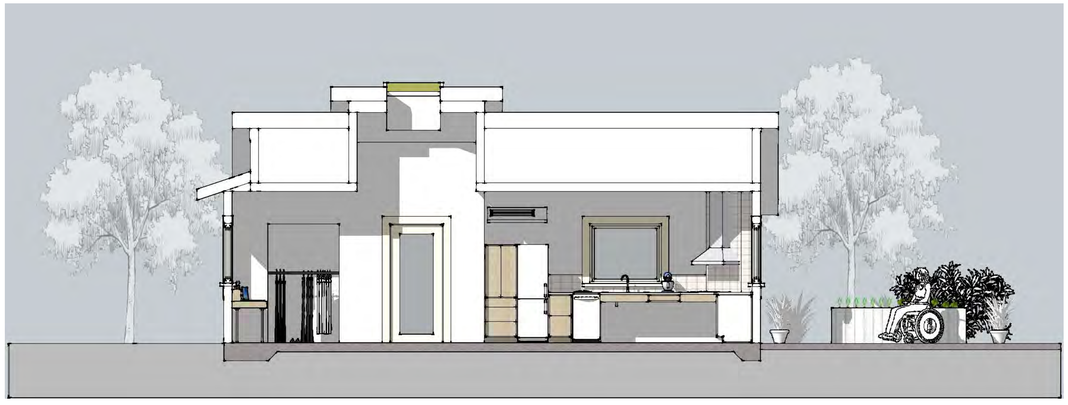


Building section A-A

Scale: 1/4" = 1 Ft.

Building section B-B



Building section C-C

Building sections

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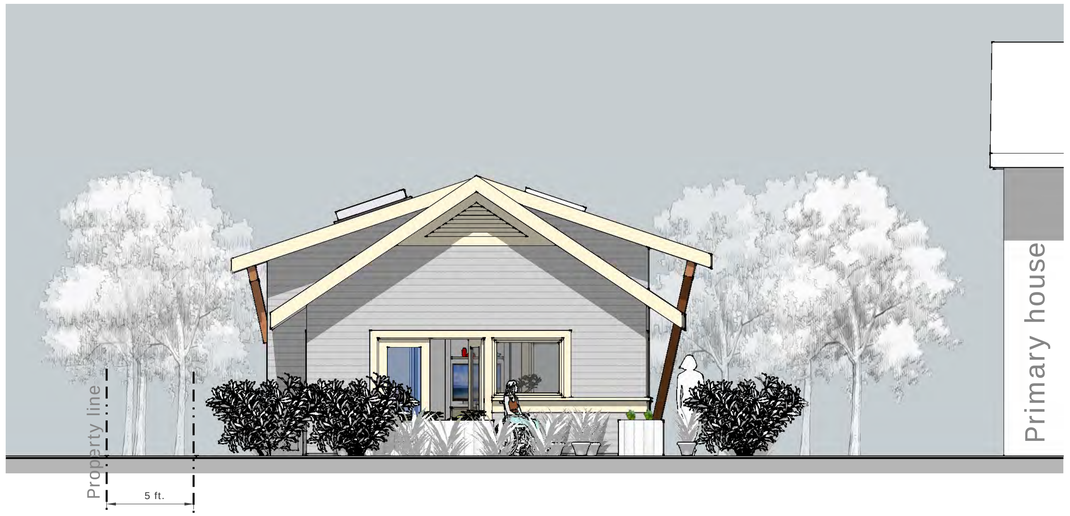
Accessible DADU

A7

City of Seattle

D.A.D.U. PLANS



Elevation east

Scale: 1/4" = 1 Ft.

Elevation south

Elevation north

Elevation west

Exterior elevations

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FORM FOLLOWS IMAGINATION

Accessible DADU

A8

City of Seattle
D.A.D.U. PLANS

Built green design:

The project proposes to meet the Built Green standards for a 4-Star rated project: Sustainable strategies employed include the following:

1. Energy Efficency + Renewable Energy: A 20% energy use improvement above current WA Sate Code is proposed for the project. Additional insulation is proposed as well as triple pane windows (if affordable). A high efficiency heat pump and mini-split system will heat the space. A solar hot water heater is proposed for the roof.

2. Site + Water: Low-impact development (LID) is proposed as a strategy for managing on-site stormwater run-off. Water collected from impervious surfaces to be directed to a rain garden (subject to permeability testing) and/or a drywell system. The goal is to keep run-off on-site.

3. Health + Air Quality: A heat recovery ventilation system (HRV) is proposed to help maintain healthy indoor air quality while at the same time helping to save energy

4. Materials Efficiency + Green Materials Selection: The materials needed for this project can be quantified in detail partly because it may be a repeat project and it's all new construction (versus a remodel). This will improve construction efficiency and thereby help reduce construction waste. Where possible (and affordable) sustainable materials such as forest certified lumber and green interior finishes will be utilized.

List of major materials:

Pre-fabricated wood walls and roof.

Hardie cement siding

Milgard vinyl or fiberglass windows

Asphalt shingle roofing

MDF interior trim

Pre-manufactured cabinets

Finished concrete floor

List of mechanical systems:

Heat pump and mini-split system for heating and cooling

Heat recovery ventilation connected to household fans (kitchen, bath, laundry spaces)

On demand hot water (if gas is available). Hot water tank proposed if electric powered. Tank to be located in attic space or closet

Roof-top solar hot water system to augment electric/gas hot water generation

Cost savings:

The project proposes to reduce construction cost through the following strategies:

1. Pre-manufactured roof trusses and wall panels: Pre-manufactured framing parts offer the advantage of speed and efficiency of construction over traditional stick framing. The project proposes that the DADU exterior shell be constructed with pre-manufactured wood stud walls and roof. This would allow the contractor or potentially the home owner to erect the exterior of the building quickly, efficiently, and with the confidence that the framed product matched the design that they purchased.

   Per-manufactured stud panels are a better approach than structurally insulated panels (SIPS) because they don't require trades-people (or homeowners) with specialized knowledge since they're installed and plumbed for mechanical, electrical and plumbing more like conventional wood framing.

   Advantages of pre-manufactured wood components:
   a. Engineered solutions ensure quality and efficiency
   b. Components are designed and constructed per approved building codes
   c. Allow for faster installation and require less skilled labor
   d. Reduced jobsite waste
   e. Reduced cost, improved efficiency and speed
   f. Panels are assembled in a controlled environment, which provides consistent quality.

2. Efficient project construction: Contractors can save project money (and thereby offer savings to their clients) by working more efficiently. Because this type of project is new construction and because it is potentially a repeat kind of project, all of the material and labor can be easily quantified. This offers contractors the opportunity to avoid cost overruns and stay on budget and this in turn offers homeowners more confidence and assurance that their DADU project is more likely to be on-time and on budget.

   The primary reasons for cost overruns are: inaccurate project estimates, design errors, change orders, admin. errors and poor site management. These can be addressed with a project such as this because it is a small project and because material quantities will be defined in detail as a part of the design. As a part of the permit/construction document phase (if accepted) all materials for this project will be listed in detail for efficient costing.

   This project differs somewhat from conventional architect design and the contractor build projects in that consumers are purchasing a pre-designed product up front. This means that there are fewer unknowns which should give both builder and homeowner increased assurance that project costing can be more accurately anticipated from the get-go. The added security that this provides should mean that contractors should be more comfortable offering meaningful price reductions.

Cost estimate:

PROJECT COST ESTIMATE TABLE

CONSTRUCTION ITEM:		PROJECTED COST:
General conditions		unknown
Site work		unknown
Concrete		$25,000
Carpentry (pre-manufactured wood panels)		$45,000
Finish carpentry		$6,000
Cabinetry		$15,000
Insulation		$5,000
Exterior cladding + roofing		$45,000
Windows + doors		$25,000
Drywall		$25,000
Floor + wall finishes		$20,000
Painting		$20,000
Bath + kitchen specialties		$15,000
Mechanical + plumbing		$25,000
Electrical		$20,000

TOTAL (building only) COST ESTIMATE: $266,000

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