

a decent small home.

NORTH OKANAGAN HOUSING DESIGN COMPETITION

PROJECT INFO

BUILDING AREA 967 SQ FT

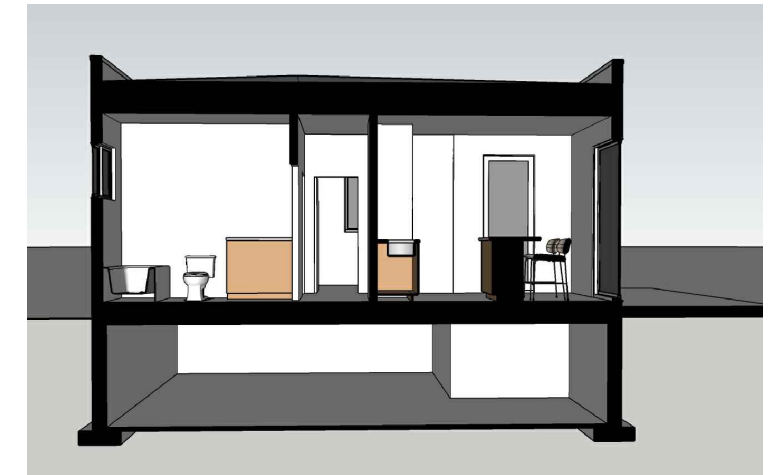
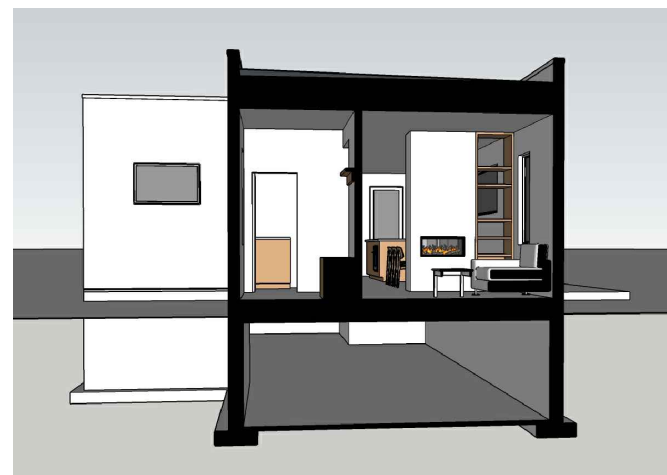
BUILDING HEIGHT 13'-0"

EXTERIOR FINISHES

- ACRYLIC LIMESTONE FINISH ON 3/4" CEMENTITIOUS STUCCO
OPTIONAL 2" EPS RIGID INSULATION & DRAINAGE PLANE FOR THERMAL EFFICIENCY
- VERTICAL WOOD T&G SIDING
(COVERED AREAS ONLY, TO MINIMIZE MAINTENANCE)
DOUGLAS FIR OR HEMLOCK SUGGESTED
- 24ga PREFINISHED METAL PARAPET CAP FLASHING
- EXPOSED CONCRETE FOUNDATION

ALTERNATE SUGGESTIONS INSTEAD OF STUCCO

- METAL 'BOARD & BATTEN' SIDING
- VERTICAL 7/8 CORRUGATED METAL
- 'HARDIE PANEL' BOARD AND BATTEN STYLE
(COST SAVINGS OPTION)



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Homeowner Pitch:

Good, durable materials with a functional and practical design. 'A decent small home' provides flexibility for small families and couples alike. For persons with limited mobility, the floor level is dropped to have only a step to the landing, and then a small step into the home- a ramp can be added easily. The bedrooms and main bathrooms are accessed through a back hallway, which provides a clear break between the private and public areas. Exterior finishes are simple and honest. Easy to maintain. Featured wood accents are covered to minimize the amount of maintenance required. A crawl space is provided to allow for any type of heating, ventilation and air conditioning system desired. A concrete pad for a heat pump can be easily added, and ducting can be achieved through crawl space or attic space (due to flat pack exterior insulation).

Alternate roof styles and different bedroom 'wing' layouts allow for easy customization, and adaptability to suit many different sites and neighbourhoods.

The wood burning fireplace is optional but a good backup system in case of power outage. It's also a good choice for primary heat as a 968 sq ft space would be easily heated by just using a high efficiency fireplace. A gas fireplace is also an option.

The flat roof would be a good candidate for a green roof as it extends the life of the roofing membrane, while providing added thermal benefit and evaporative cooling. Not to mention Solar panels can be easily added, and rough in for future solar is standard. Adding 1-2" of vapour permeable exterior wall insulation would minimize thermal bridging. A staggered stud assembly is standard in all options to also help with thermal bridging. Sun shading can be added at west or south facing windows to minimize solar heat gain. These sun shades can be cantilevered bottom truss chords finished with roofing membrane, flashings and wood soffit.

Flexibility, functionality, and a simple, honest form make the plans for 'a decent small home' a good choice for homeowners looking to add a detached suite.

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Evaluation Criteria Responses

1. Design

First and foremost, the plan has to be functional and practical. It was decided that a 3 bedroom approach would be the most flexible layout for the desires of different occupants. Small families of three, four or even five (if using bunkbeds) will find the space entirely liveable. It may be beneficial for small families to omit the fireplace to allow the flow of day-to-day life to change the dining-living layout as needed. A young couple or retired couple will be able to entertain guests, and have a guest bedroom plus an extra hobby room.

Simple, honest materials, and three options for roof lines will allow 'a decent small home' to fit into any neighbourhood.

2. Good Home, Good Neighbour

The cantilevered entryway is a simple, attractive way to provide cover to access the home and the wood really shows off this architectural feature. Depending on site orientation and neighbouring buildings, the side patio door could be omitted and replaced with a high window and the rear covered patio could be screened on one side. The uncovered patio could be screened as well. Public and private areas are very separated in this plan, and sound batting is included in the bedroom and bathroom walls.

3. Affordability

The initial construction costs of the flat roof option are approximately \$240,000, or \$247 /sq ft. This accounts for a few items that are not fully required, but recommended:

- High efficiency furnace and air conditioning as well as HRV
- Mid-higher end finishes
- Quiet zone sound insulation above bedrooms and bathrooms. Double layer quiet zone in walls between bedrooms and bathrooms.

There would be approximately \$26,000 to \$30,000 in cost savings if using the low slope asphalt shingle option, with blown in insulation, and omitting the

fireplace. That brings the cost to \$216 /sq ft. With other cost saving measures such as removing A/C and using lower end finishes, that number could come down to almost \$200 /sq ft.

4. Flexibility and Longevity

Interchangeable roof styles and different bedroom 'wing' layouts allow for easy customization, and adaptability to suit many different sites.

5. Eco-Design

The flat roof makes it easier for a green roof option. It makes both sustainable sense and economic sense in the long run. The green roof would extend the life of the roofing membrane and provide the home with added thermal resistance and evaporative cooling.

Solar panels can be added above the membrane, or above a green roof, and rough in for future solar is standard.

Sun shading above larger windows would minimize solar heat gain when placed above west and south facing windows. A cantilevered bottom chord overhang could be provided at these strategic locations.

A staggered stud wall assembly is standard in all options to also help with thermal bridging and exterior rigid insulation could be provided to help reduce it even more.

Honest materials that are not highly processed require the use of skilled trade labour, which is better for the local economy, and the carbon footprint will be lower. Especially when compared to some products that are shipped out to different countries to be processed and shipped back again.



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BUILDING HEIGHT 13'-0" (SEE A0.3 FOR HEIGHT OF ROOF STYLE OPTIONS)

EXTERIOR FINISHES (SEE A4.1 FOR CONSTRUCTION ASSEMBLIES):

- ACRYLIC LIMESTONE FINISH ON 3/4" CEMENTITIOUS STUCCO
OPTIONAL 2" EPS RIGID INSULATION & DRAINAGE PLANE FOR
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DRAWING LIST

A0.0 TITLE PAGE / PROJECT INFO
A0.1 FLOOR PLAN OPTIONS
A0.2 SITE PLAN STUDY
A0.3 ROOF OPTIONS
A1.0 SITE PLAN & 3D SITE VIEWS
A2.0 3D PLAN VIEWS
A2.1 FOUNDATION PLAN
A2.2 FLOOR PLAN
A2.3 ROOF PLAN
A3.0 3D EXTERIOR VIEWS
A3.1 FRONT ELEVATION
A3.2 PATIO SIDE ELEVATION
A3.3 REAR ELEVATION
A3.4 BEDROOM SIDE ELEVATION
A4.0 3D SECTION VIEWS
A4.1 BUILDING SECTION