

Barrie BeHomes

Stock Plans, Affordable Detached Accessory Dwelling Units (DADU)
Modular dwellings, fully compliant with OBC & Barrie's ADU Zoning By-laws

a project of Thomson Architecture for the citizens of the City of Barrie



Be the Change you wish to see in the world

Barrie is facing a crisis of housing affordability. As the cost of conventional construction skyrockets, BeHomes aims at providing 'right-sized' dwelling units starting at 288sf that can be legally placed in the rear or side yard of all R-zoned (Residential) properties as per the Province of Ontario's Planning Act guidelines. By reducing dwelling size to the minimum allowed by the Ontario Building Code, or 1/10th the size of a conventional (2,800sf) dwelling, both total construction costs, long-term operating costs, and energy and carbon impacts can be reduced to a sustainable and affordable level. This is a design concept called 'Factor 10 Design' (per World Resources Institute and the Wuppertal Institute); the premise is that to reach sustainability goals on our one planet Earth, we can reduce our consumption to 1/10th of our current levels. In Canada, our per-Capita total consumption exceeds 390 GigaJoules (per Vaclav Smil), where in Vietnam or Thailand a much more sustainable 15GJ/pp can provide a comfortable, healthy and happy life. These DADUs also leverage the spaces in-between existing houses on the City's grid, aka. 'Infill Development' that can more readily connect to existing municipal electrical, water, and sewer infrastructure. By Barrie having pre-certified these designs for accelerated issuance of building permits, these buildings reduce red tape while providing the public with a set of simple, yet durable and high performance design that will bring decades of additional housing units online.

The design of the BeHome maximizes spatial efficiency, providing all of the modern conveniences one would expect in any condominium, and packing it all into a super-efficient layout that allows for a wider variety of uses in every room. With a 12' x 12' footprint for each room, these spacious, cube-shaped volumes provide a sense of relaxed comfort when compared with trailer or container-width modular solutions, and provide a wide range of configurations, from a single unit, to doubles, triples, L-shaped plans, courtyard plans and more. These can be readily deployed as an accessory dwelling with no special equipment and a minimum of complexity and construction duration, with material costs (MSRP) starting under \$100k. Every BeHome comes with a complete kitchen with upright refrigerator, induction range, microwave and washer-dryer options in the washroom, and features the latest in hyper-efficient heating, cooling and ventilation technologies. With a modular shower unit, floor-mounted toilet and complete sink with vanity, and computer nook or optional walk-in closet, even the smallest BeHome is designed to support one to two adults. A storage loft above provides space for seasonal swaps of clothing, equipment, gear, goods or other essential belongings, and ample built-in storage provides easy access to daily needs and wares.

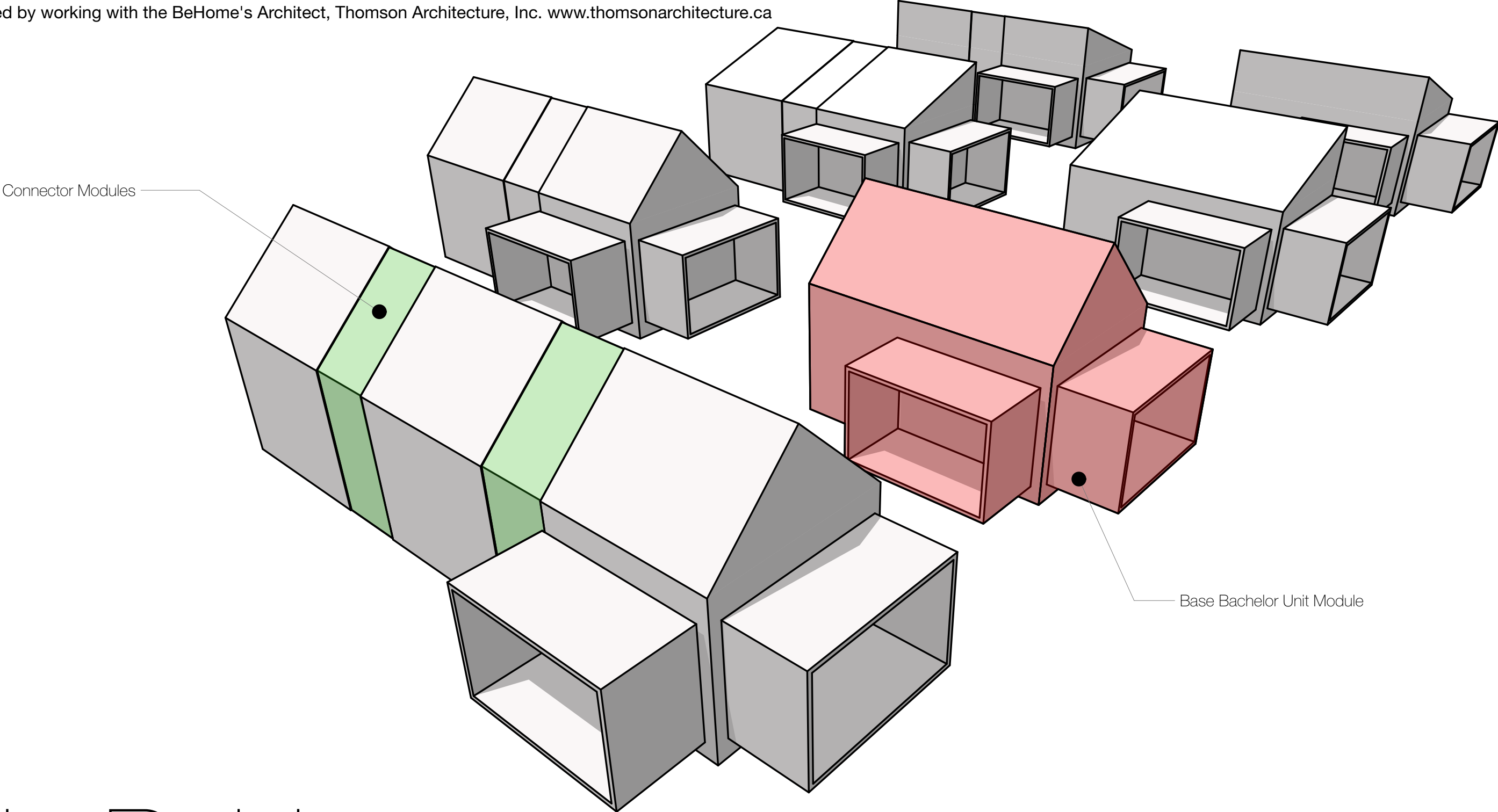
Barrie BeHomes



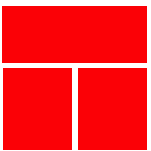
BeHome: How it works

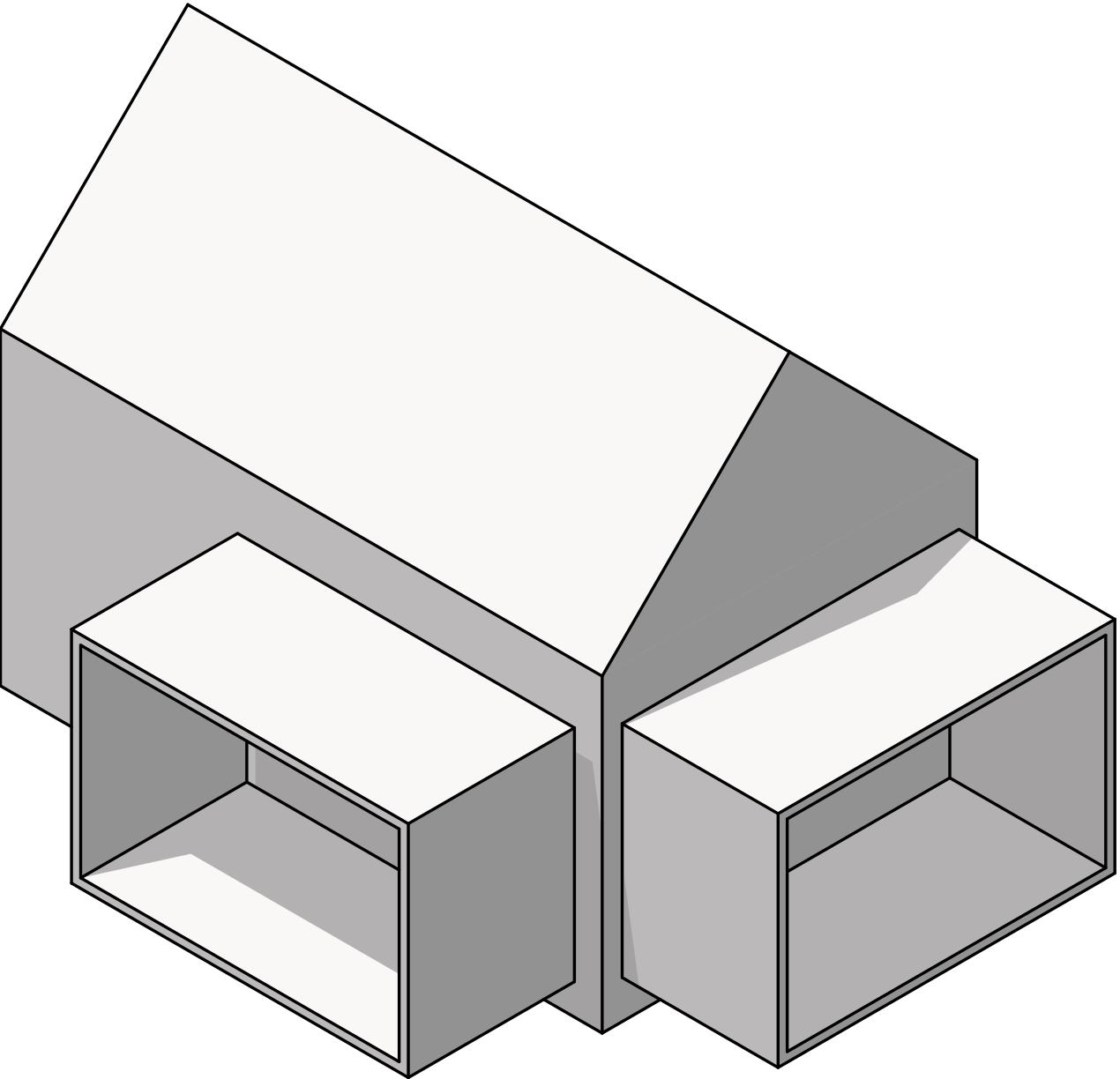
As a single-storey, modular system, BeHomes can be configured from a single unit (the Bachelor), or from multiple modules called 'cubes'. One cube is 12' x 12' or approx. 144sf in floor area. There are smaller 'connector' modules than link 12'x12' cubes. Roof options are either a 12:12 gable pitch or a 6:12 mono-pitch. Porches can be added to the end of the units or the sides. Most configurations are linear, but we can also design L-shaped plans or even U-shaped plans or courtyard plans - but only where yard space and setbacks permit. With the available plan, roof, duplexing, cladding colour, deck and foundation options, there are hundreds of combinations possible to find a BeHome that is a fit for your property, budget and goals.

These can be customized by working with the BeHome's Architect, Thomson Architecture, Inc. www.thomsonarchitecture.ca



Barrie BeHomes

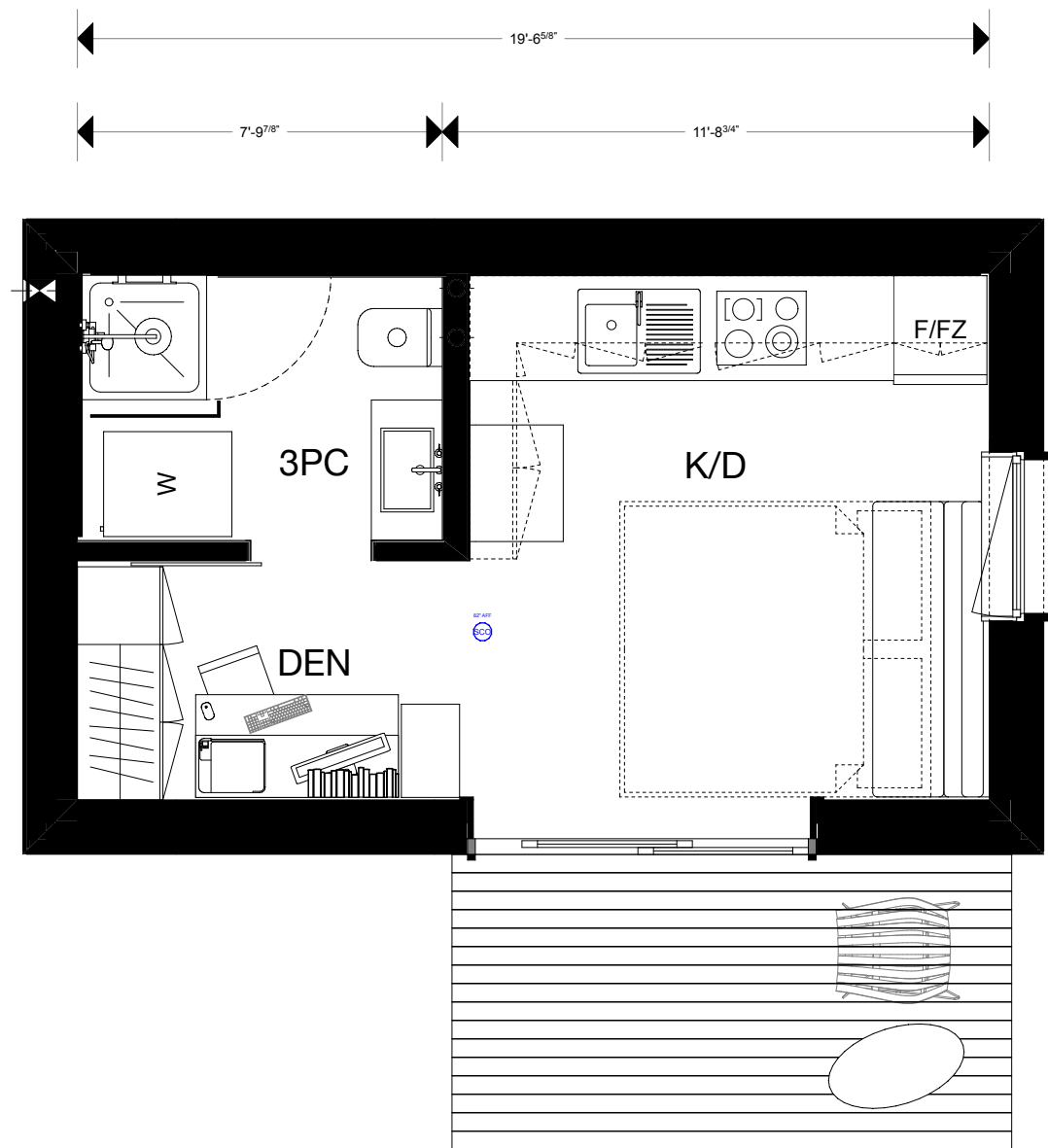
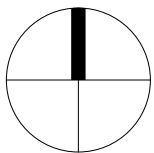




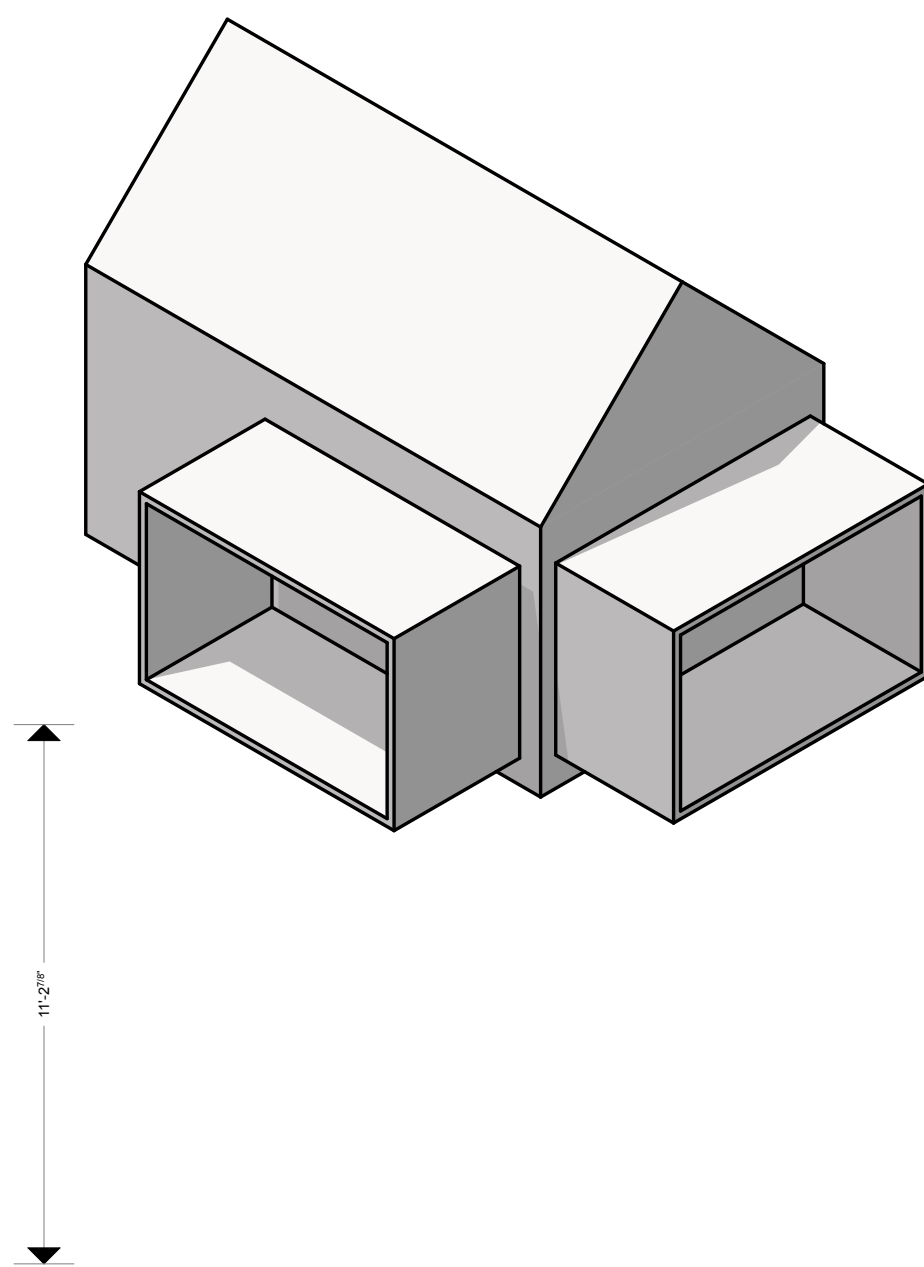
11 Steps to realize your own BeHome Detached Accessory Dwelling Unit

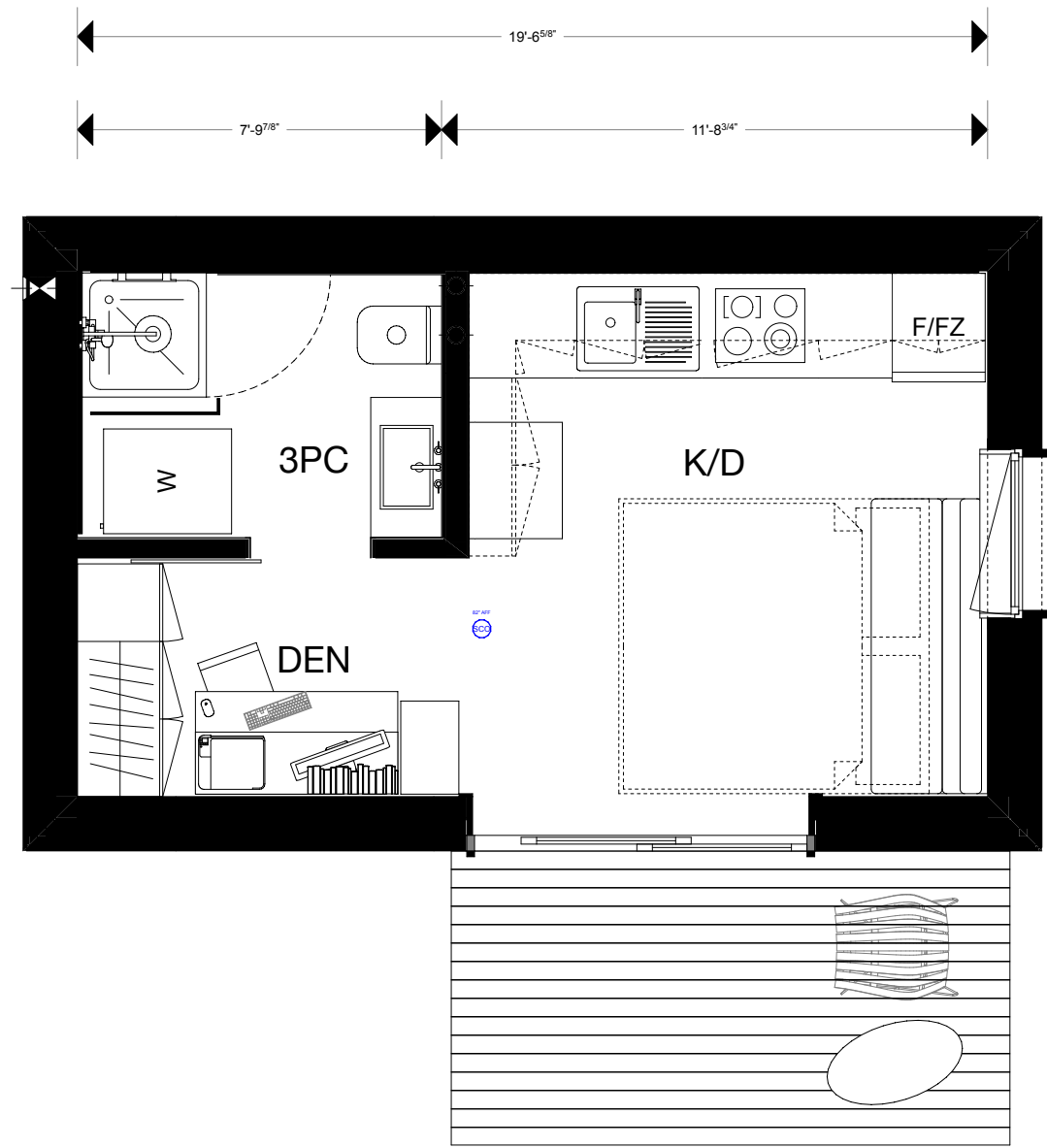
1. Determine your budget and select a configuration by selecting a **Floor plan** from the options in the booklet. We offer a wide range of configurations all based on the 12x12 Cubic Platform.
2. Select a **Roof** type to determine the shape that you prefer.
3. Select Optional **Decks**, Stairs, Skirting for steep sites, etc.
4. Select your **Foundation** preference. All BeHomes feature helical pier foundations for speed and access to rear yards, however there are beam options (Wood or Steel)
5. Select your **Cladding** options (All BeHomes feature unitary corrugated steel cladding for walls/roofs/trims, fire resilience and low maintenance, recyclability are added benefits, many paint options are available)
6. Select your **Interior Finish** options.
7. Determine your preferred **Construction** approach, are you using a GC, will you have a third party deliver a kit (vendors may be providing these).
8. **Contract** with Thomson Architecture, Inc. to tailor your unit to your site and assist with permit issuance for a reasonable fee.
9. We will start the **Customized Construction Document Process** within 1month of processing your deposit and permit application, expect 6-12 months of construction.
10. Your Architect/Engineer/Builder Team will complete the site-specific **Site Study** and permit application package for express review with the City of Barrie.
11. Payment to formally engage the City of Barrie **Permit Review** process to authorize construction.



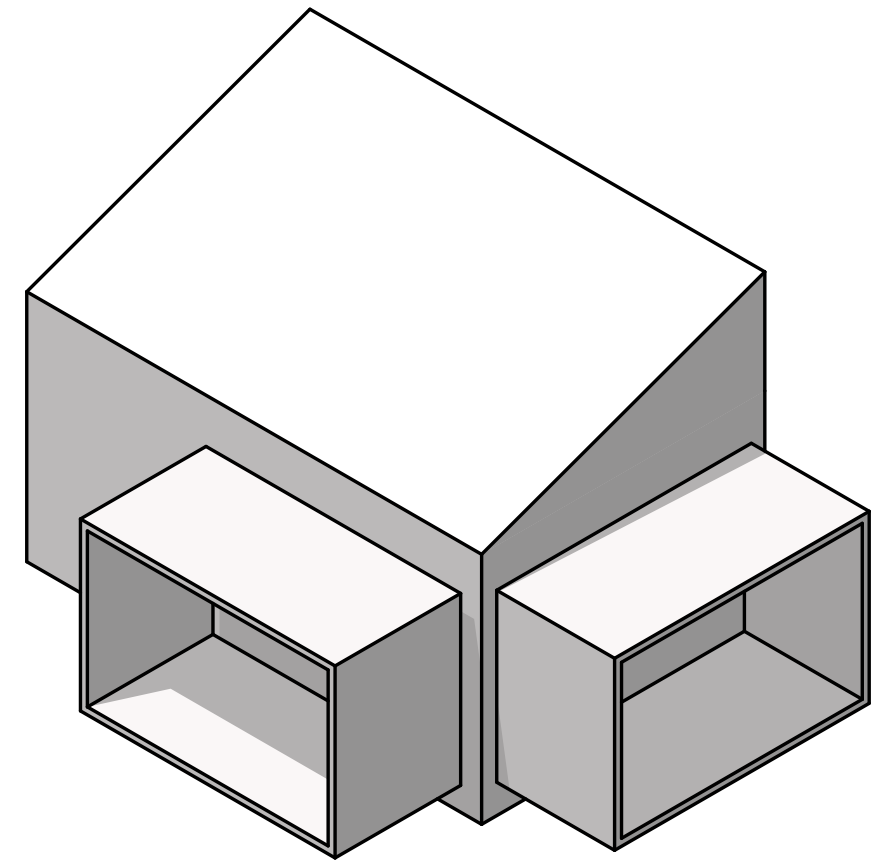


Bachelor Shed
27.70 m² GCA
23.37 m² TCA
76.71 m³ TCV

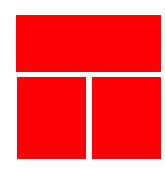
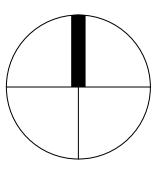
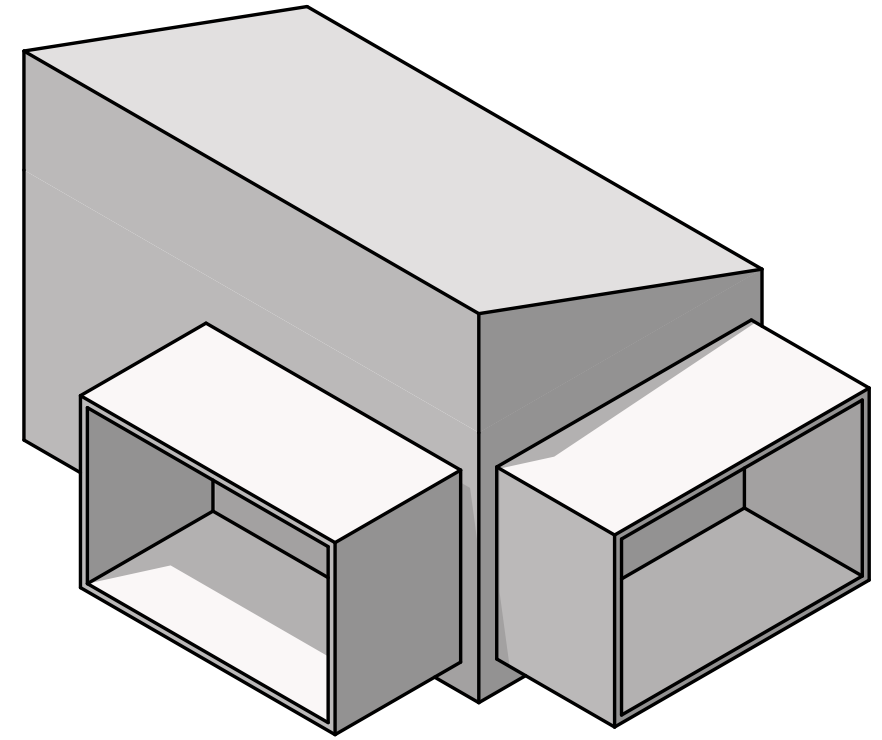


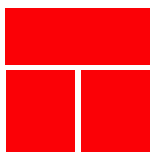
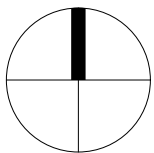
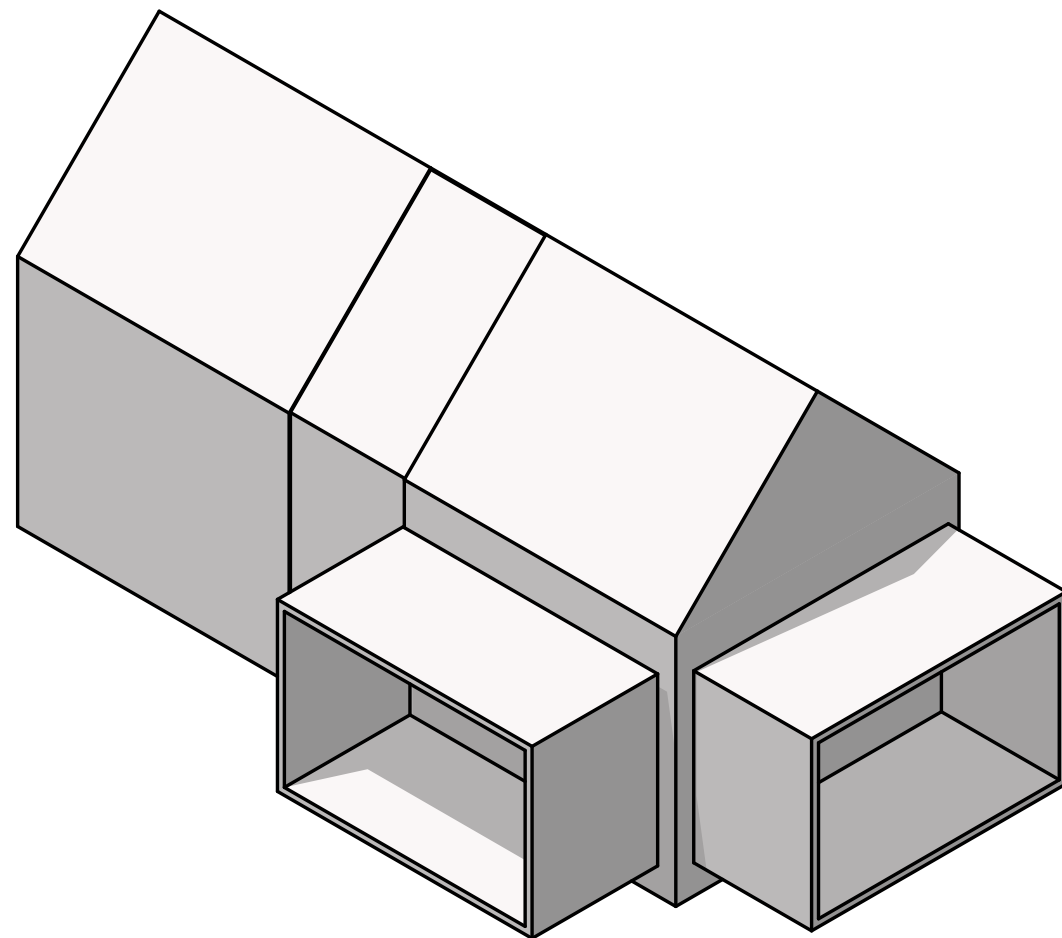
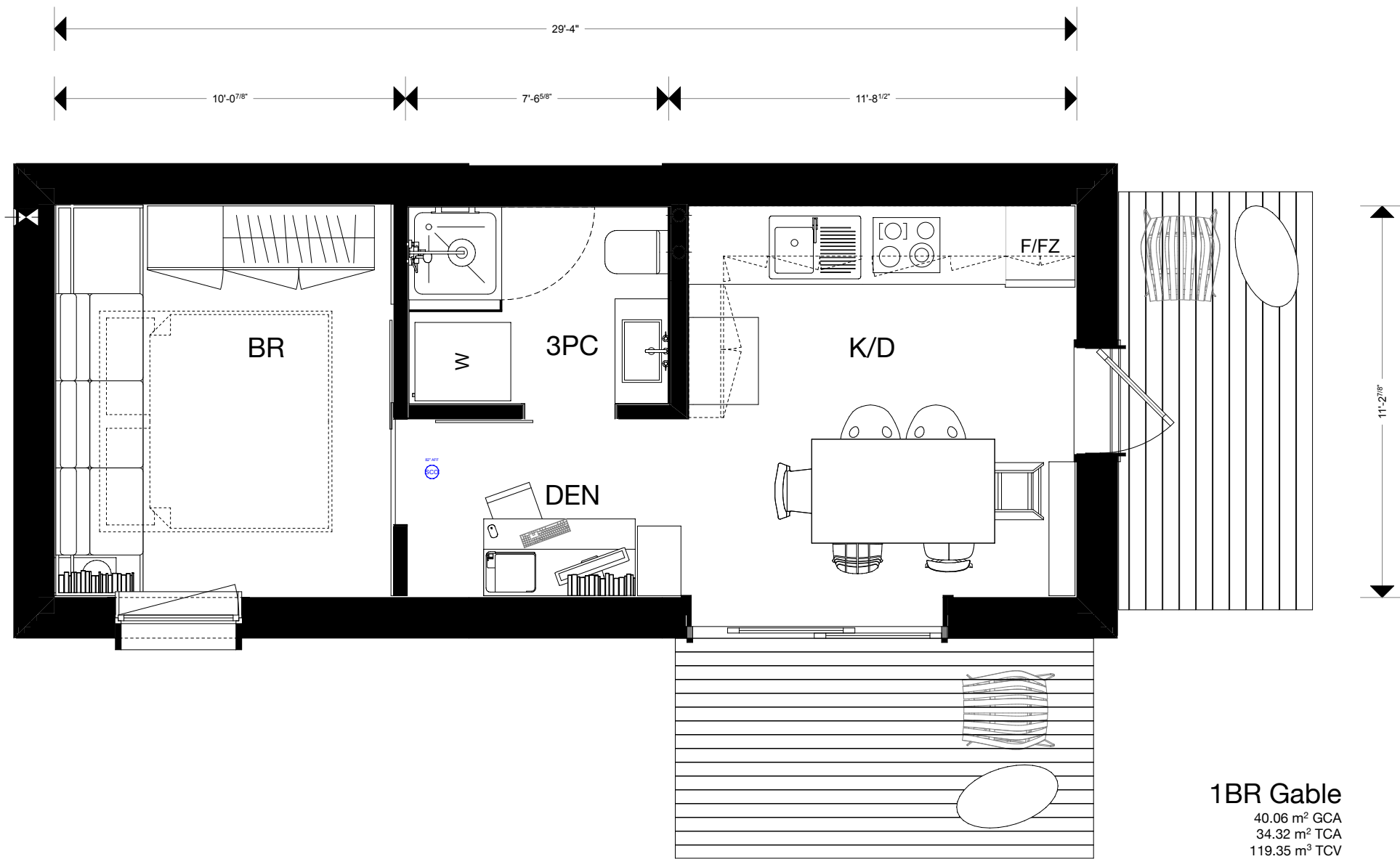


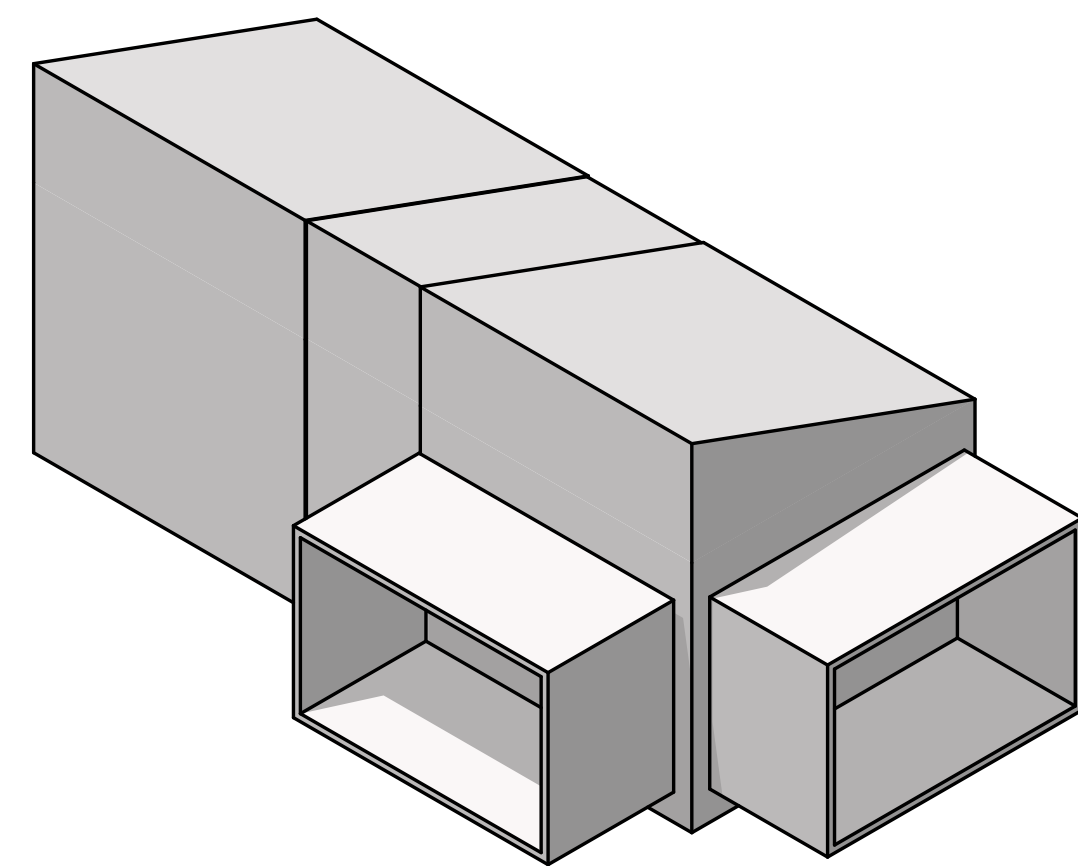
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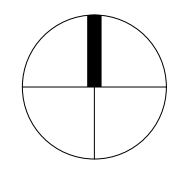
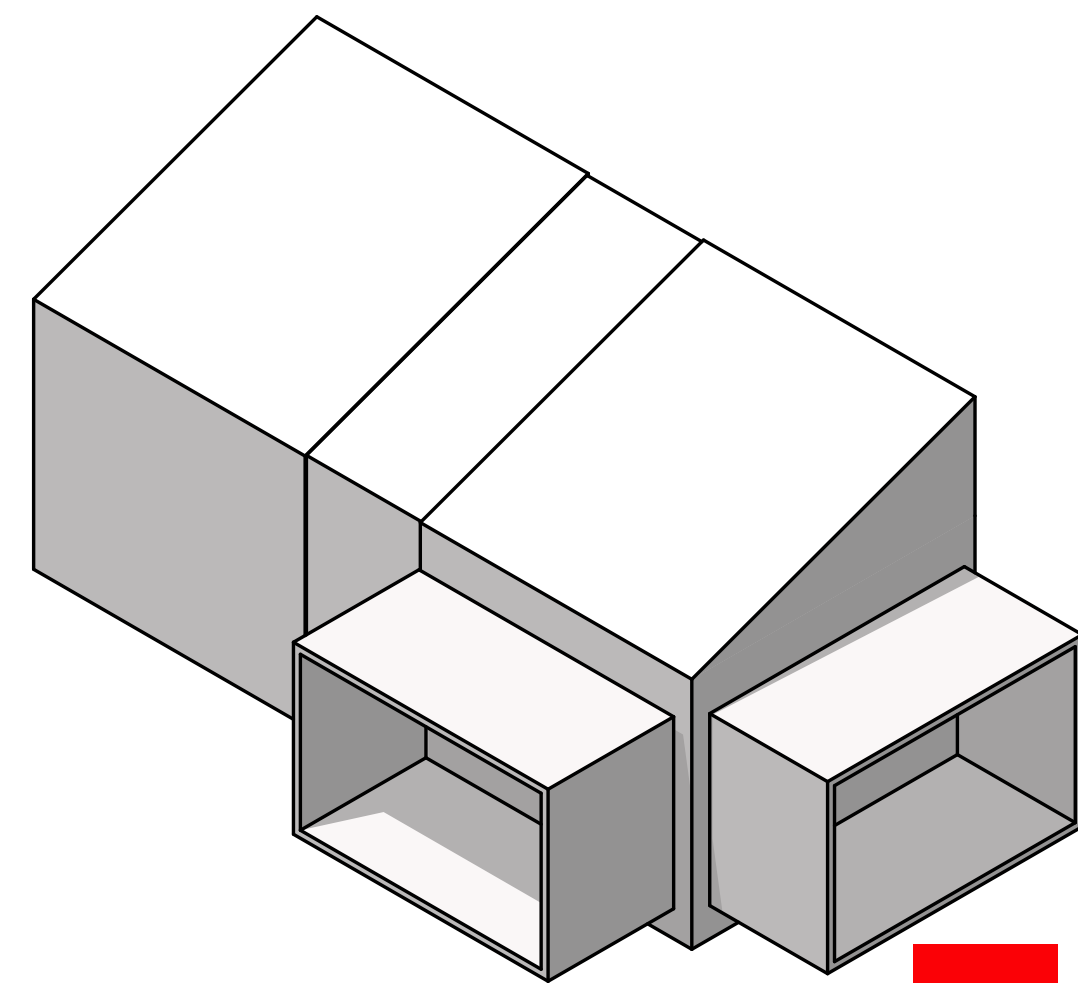
Roofs pitch two ways



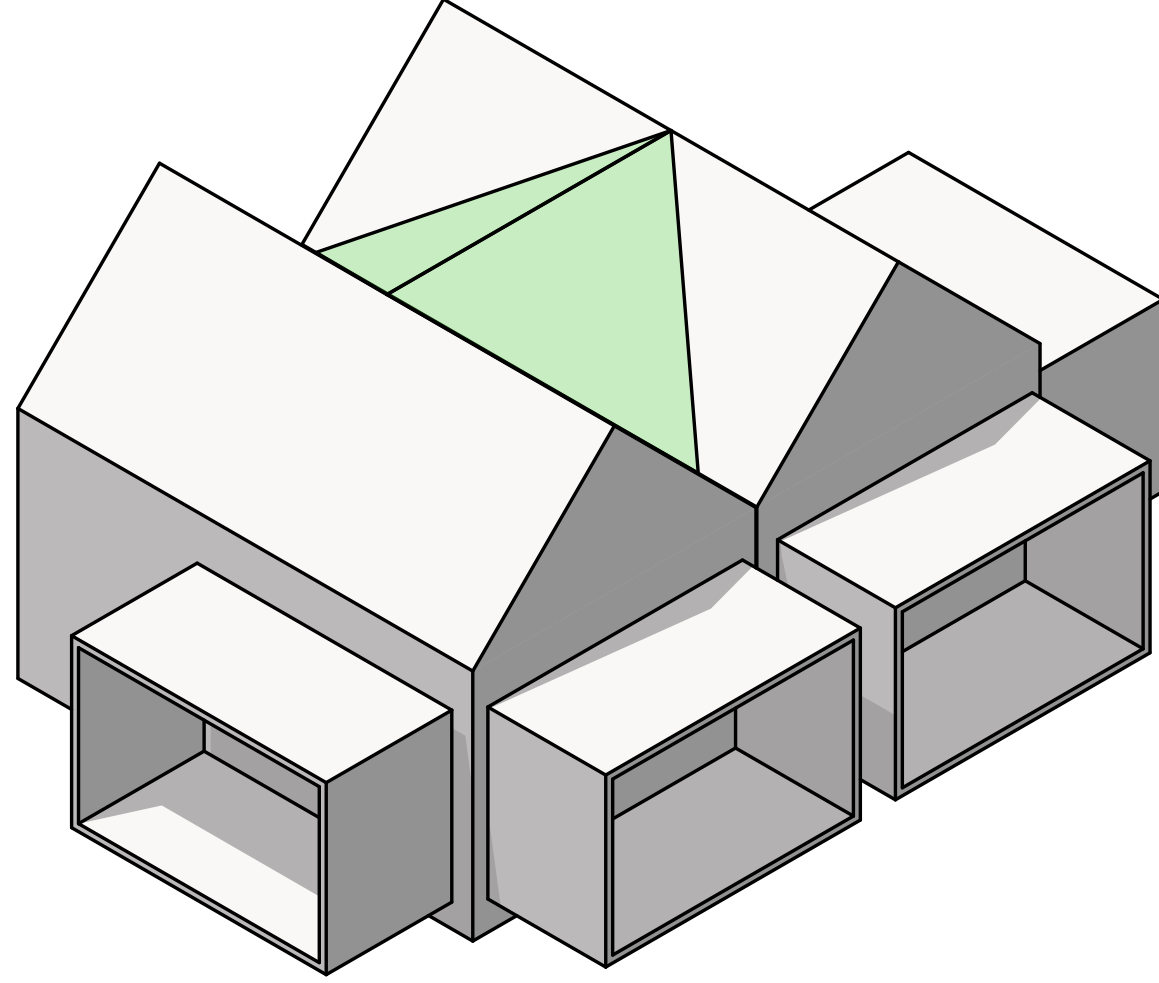
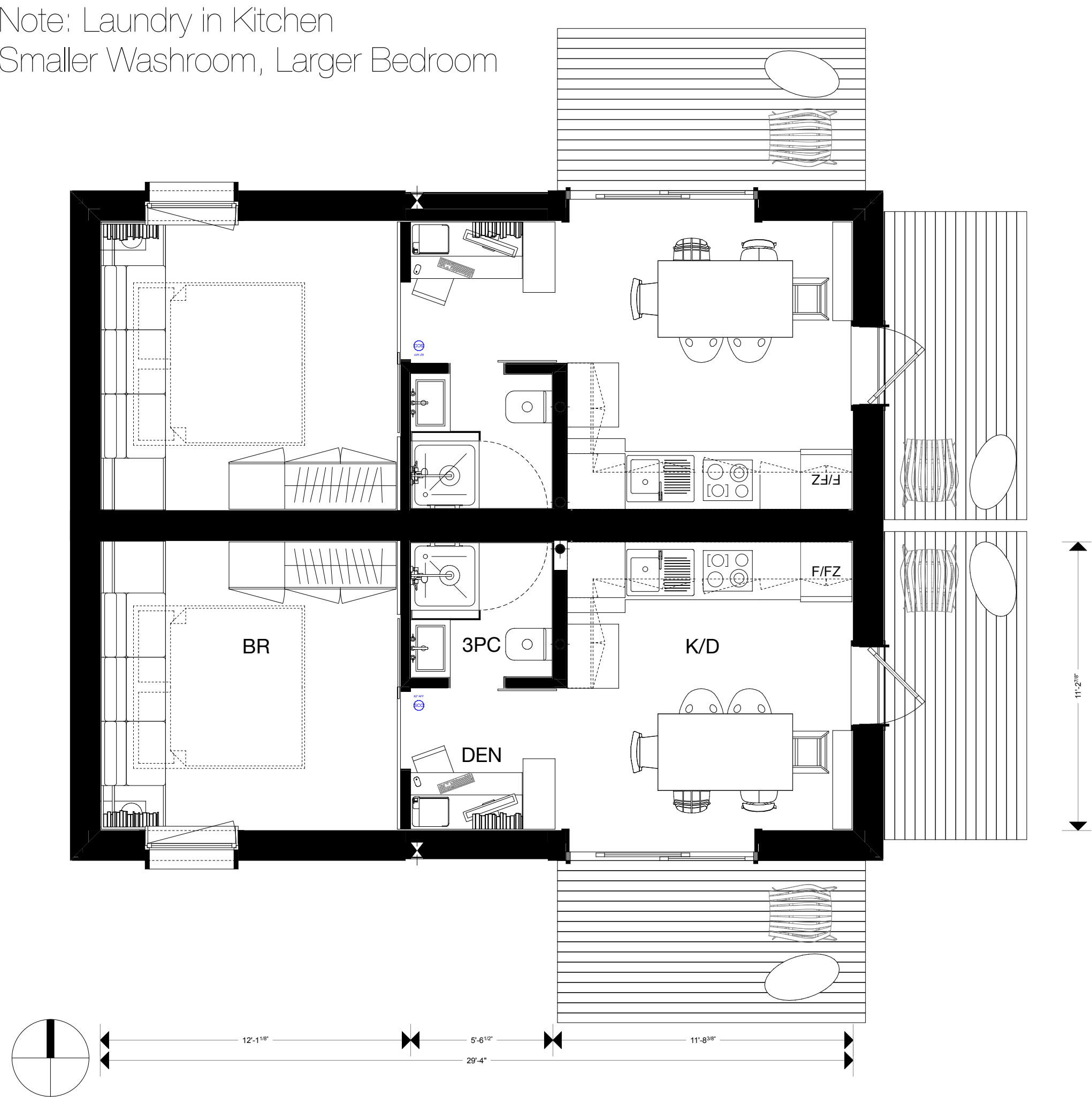




Roofs pitch two ways



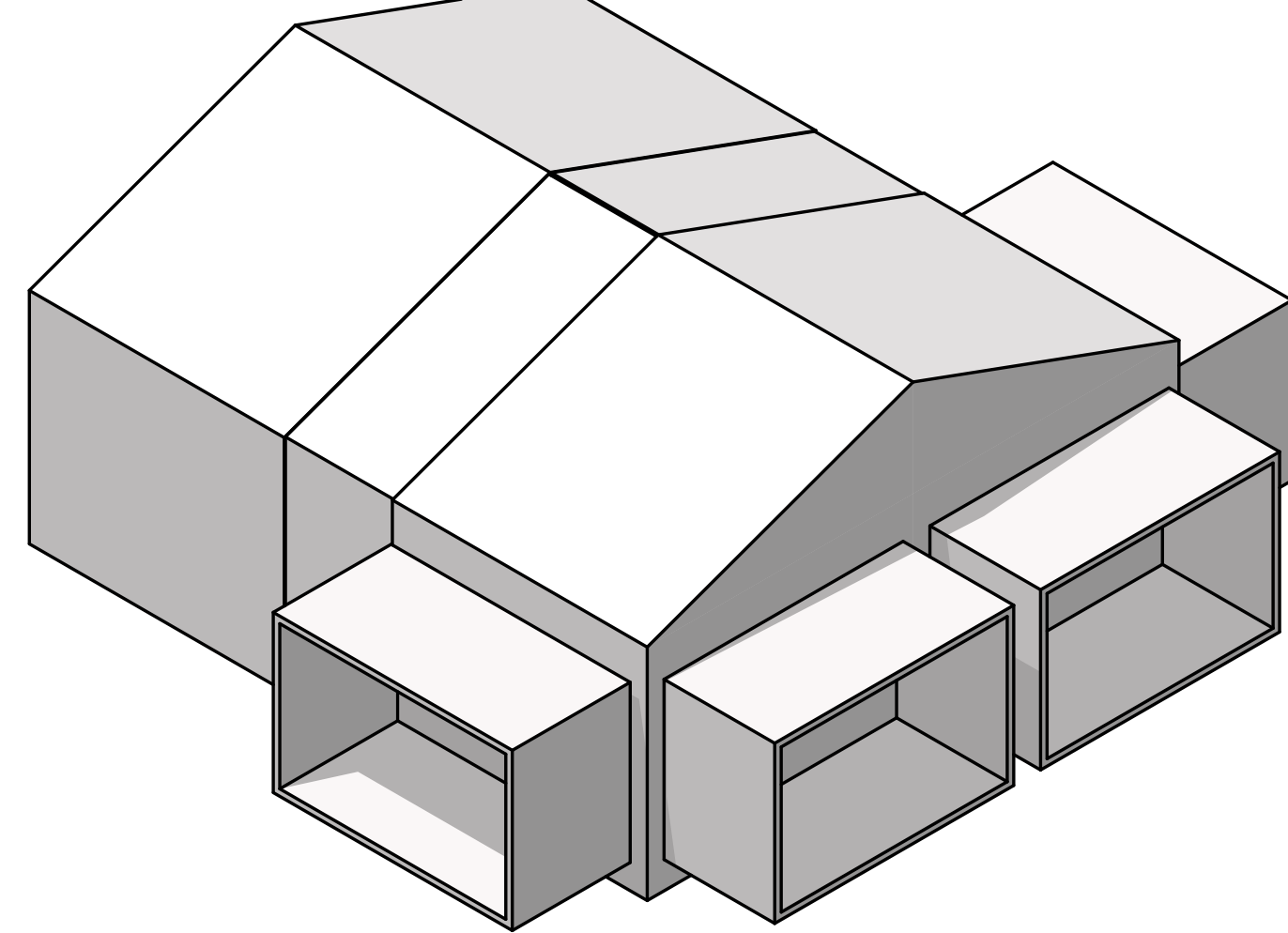
Note: Laundry in Kitchen
Smaller Washroom, Larger Bedroom



Note: roof crickets shown as connector in green



Note: Laundry in Kitchen
Smaller Washroom, Larger Bedroom



BeHome: Exterior Finish Options

BeHomes are designed with three finish options available: 1) Unfinished: The BeHome's interior roof structure, trusses, wall-framing and floors can be left raw/unpainted natural woods, examples in the images below, 2) Painted raw finishes: a low-VOC interior paint can be sprayed to finish the interiors, similar to the 'Swedish Cottage' style, 3) Plywood Interior finish panels with exposed button-washer fasteners, you can also use 1/2" G1S Birch, Beech, Fir, Maple or Oak plywood as an interior finish or lastly 4) Painted/Sanded Gypsum Wall-board, the latter being conventional construction, but with significant mess, additional labour inputs and an inability to easily visually inspect or repair the wall cavity or add services at a later date.

Interior options can be customized by working with the BeHome's Architect, Thomson Architecture, Inc. thomsonarchitecture.ca



Exposed floor joists and structural decking may be used for the roof structure and finish. No painting or other finish is required, saving on labour and material costs, and providing a pleasant organic aesthetic.



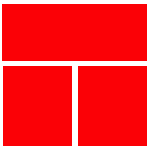
*White-painted GWB is shown below the top of wall junction.
Photograph of completed work by Thomson Architecture, Inc.*



This bathroom is finished with a 1/2" G1S sanded Birch Plywood finish. The lower 4x8 sheet is treated with a water resistant coating (low VOC Varathane). No seam finish is required, simple black anodized button fasteners and inexpensive floor screws complete the look. This permits easy repairs and additions over the long term while concealing cavity spaces.

Photograph of completed work by Thomson Architecture, Inc.

Barrie BeHomes



BeHome: Exterior Finish Options

BeHomes are designed to be clad in steel corrugated cladding and roofing. This is designed to facilitate construction efficiency and ease of maintenance, as well as to provided exceptional durability and serviceability. Silver galvalume finish, or any number of painted finishes are available from big-box stores under the brands Vicwest, Andex, Agway and many others. All of these products are milled from sheet stock and formed in Canada. Standard trims for corners, edges, sills and ridges are readily available. Material costs are on the order of \$5/sf. Images below show a Galvalume/Silver option, and images right show a black galvalume painted finish. Steel cladding also has substantial fire-resistance characteristics, and is 100% recyclable, with a service life of +50yrs.

Additional cladding options can be customized by working with the BeHome's Architect, Thomson Architecture, Inc. thomsonarchitecture.ca



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