

BOISE VALLEY HABITAT FOR HUMANITY
HOUSE STANDARDS
And
DURABILITY CHECKLIST

Revision History

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GENERAL, ACCESSIBILITY AND HOUSE SIZE

GENERAL

The following is to serve as a guide for minimum construction standards. Boise Valley Habitat for Humanity (BVHFH) is committed to sustainable, green, building standards, specifically as indicated in the following standards. Where municipal building codes are more restrictive, they shall govern.

BVHFH will provide a selection of color and styling for the homeowner whenever possible. However, because BVHFH receives various donations in order to keep cash outlay at a minimum, not every homeowner may be able to select from the options listed on the following pages. Other products may be substituted for manufacturer's products listed in the following text as long as they are of equal or better quality.

Note 1: Text enclosed in brackets [] denotes choices to be made by the partner family. The construction choices and family budget options are summarized at the end of this document.

Note 2: The Durability Checklist will be referred to and used as best practice guidelines for BVHFH construction.

HANDICAP ACCESSIBILITY

All houses will be constructed to be handicap accessible. Three-foot wide passage doors will be used. At least one bathroom, on the main floor, will be constructed to permit handicap access per ADA. Electrical wall outlets and switches are to be mounted at recommended height for wheelchair access. Halls will be 3'5" wide from rough frame to rough frame except if there is a door in the hallway and then the minimum width increases to 3'7". There will be no steps leading to at least one entrance of the house, accessible from the driveway. Special needs families may require additional modifications.

HOUSE SIZE

Each house will have an appropriate number of bedrooms and bathrooms, a living room, kitchen, dining area, and laundry area.

The number of bedrooms will be determined by the make-up and number of family members. Houses will be built so that not more than two (2) children of the same gender will share a bedroom. Houses shall typically have three or four bedrooms, but smaller or larger houses will be built to meet the selected family's requirements. For a couple or a single person with no children, a two-bedroom house will be provided.

House size will approximate the following limits unless special circumstances warrant an increase and it is approved by the Board of Directors. House size is defined as the perimeter (of the living space) enclosed by the foundation.

Two-bedroom	996 square feet
Three-bedroom	1172 square feet
Four-bedroom	1292 square feet

Five-bedroom	1475 square feet
Six-bedroom	1823 square feet
Eight-bedroom	2433 square feet

When two-story houses or houses with basements are constructed the area required for stairs is in addition to the above allowable areas.

ROOMS

KITCHEN

All kitchens shall be plumbed with waterline for future ice maker.

The kitchen will contain a white, 18.1 cu. ft. Energy Star® refrigerator/freezer with left or right door swing [family budget option]. If the family already owns an energy-efficient refrigerator (i.e., contains an Energy Star® or other energy label on the back) they may decline the new refrigerator and deduct the cost from the house sales price. BVHFH will also provide a 30-inch white range, either gas or electric [construction choice] with an externally vented hood.

Zero CFC or VOC base cabinets and wall cabinets will be installed to provide the maximum storage allowed within the kitchen area. If the family chooses to include a built-in microwave [family budget option] the cabinet above the stove will be designed accordingly. The microwave, if chosen, will include a vented fan, thus eliminating the need for the vented hood over the stove. Counter tops will be laminate with low or zero CFC's or VOC's [construction choice]. The kitchen sink will be a two-compartment, stainless steel, sink with garbage disposal and 1.5 GPM low flow faucets. Optional dishwasher should meet Energy Star® standards.

BATHROOMS

All houses will have at least one bathroom that will be accessible to persons with disabilities. The bathroom will be compartmentalized for increased usefulness, if possible. Houses with three to five bedrooms will have two bathrooms and five or more bedrooms may have an additional full bathroom.

Each bathroom will have a minimum of one hand sink with a 1.5 GPM low flow faucet and vanity with low to zero CFC or VOC laminate counter top [construction choice], one dual flush toilet, and a tub/shower combination with a 1.75 low GPM flow shower head. An externally vented, minimum 65.2 CFM fan will be provided. Accessories will include a shower rod, two towel holders, and toilet paper holder. Either a wall-mirror or medicine cabinet [construction choice] will be provided over the vanity.

A tub/shower fiberglass assembly, enclosed on 3 sides, will be provided. The standard length of a tub/shower assembly is 5' by 30" wide. In a second bathroom, a fiberglass shower enclosure may be substituted for the tub/shower.

When a half-bath is provided, it will be equipped with a dual flush toilet and a hand sink/vanity unit with a 1.5 GPM low flow faucet and either a medicine cabinet or mirror above the sink [construction choice]. One towel bar and a toilet paper holder will be provided.

(Architects note) At least one bathroom will be handicap accessible. Wall backing will be provided for future grab bars at the tub, and toilet.

LAUNDRY SPACE

An area will be provided for an Energy Star® clothes washer and dryer. A single throw water supply and drain plumbing will be provided for the washer. Appropriate electrical receptacles will be provided for both appliances. A gas or electrical connection will be provided for the dryer [construction choice]. The dryer will be vented to the outside. Add a drain pan under the washer and use stainless steel lines.

When the washer and dryer are located in a corridor area, cabinets shall be provided over the two units. If washer and dryer are located in confined area with doors, a shelf shall be provided above the units.

CLOSETS

Bedroom clothes closets shall be six feet wide in the largest bedroom, and a minimum of four feet wide in other bedrooms. Each house will have a linen closet in the hall area and a coat closet near the front entrance.

Closet Shelving

Closets up to 5'0 wide

Shelving for bedroom closets with up to 5'0 wide doors: A 12" wide top shelf shall be installed 72" above finished floor with an optional 72" vertical divider installed at one end within 2'0 of closet wall to form a point of support. On the wider side of the divider, a hanger rod shall be installed between divider and closet wall. On the 2'0 side of the divider, a shelf shall be installed at 36" of floor, with a hanger rod beneath. One additional shelf shall be installed mid-point between the lower and top shelf.

Closets 6'0 wide

Shelving for closets with 6'0 wide doors: A 12" wide top shelf shall be installed 72" above finished floor and optionally with two 72" vertical dividers spaced 2'0 apart, centered in the closet door opening to form mid point supports. Between these supports, a shelf shall be installed at 36" of floor, with a hanger rod beneath. One additional shelf shall be installed mid-point between the lower and top shelf. Hanger rods shall be installed under the 72" shelf on each side the divider section.

Laundry Area

When the clothes washer and dryer are located in an enclosed area with doors, one 12" wide shelf shall be provided above for storage. The shelf shall be located 68" above finished floor.

Shelving materials

Materials for shelving shall be coated wire or nominal 3/4" thick, pre-finished Melamine coated particleboard.

FLOORING, WINDOW COVERINGS, LIGHTING AND ATTIC

FLOORING

Laminate wood flooring, meeting Green standards, will be used throughout the house; alternatively vinyl flooring will be used. Vinyl flooring will meet Green standard floor score in the bathroom, and laundry area [construction choice].

WINDOW COVERINGS

Mini-blinds will be provided and installed on all windows in privacy areas. Mini-blinds in other areas may be installed as part of the [family budget options]. Opaque windows will optionally be installed in bathrooms.

LIGHTING

Ceiling light fixtures for CFL's will be provided in the bedrooms, dining area, living room and bathrooms. A fluorescent light fixture will be provided in the kitchen and laundry area. Outdoor light fixtures with CFL's will be provided for entrance areas.

ATTIC

A ceiling access panel will be provided from either the utility or hall area to permit access into the attic for maintenance purposes. A floor access panel will be provided in a closet to permit access to the crawl space. Both access areas need to be sealed with weather stripping.

GARAGES

Garage size will approximate 22' x 22' and be detached if possible. Attached garages shall be insulated and dry-walled; detached garages shall be unfinished. Carbon monoxide detectors shall be mandatory for all attached garages.

Orientation of the house, window placement, shading, etc., will be considered to prevent heat gain in the summer and heat loss in winter. A minimum of a 12" overhang of the roof will be provided.

INFRASTRUCTURE AND SYSTEMS

TYPE OF CONSTRUCTION

Following is a listing of the types of construction and components that normally will be used:

- Concrete footings with pony walls
- Floor system 7/8" T&G OSB over 9-1/2" TJI's joist @ 24" O.C.
- Wood frame 2 x 4 interior wall framing @ 16" O.C. and 2 x 6 exterior wall framing @ 24" O.C.
- In the alternative: ThermaSteel® exterior wall panels or environmentally conscious equivalent.
- Roof system constructed with factory fabricated truss and 7/16 OSB sheathing or

- ThermaSteel® exterior wall panels or environmentally conscious equivalent.
- Roof pitch will typically be a minimum of 4/12 and a maximum of 6.5/12 pitch. This is for safety reasons as well cost savings.
- Architects are allowed flexibility for second floor design and attic.
- Conditioned attics can be considered.

Shingles used on roofs will have a minimum 25 year rating. Only light-colored shingles will be used.

Ridge vents and soffit vents may be either continuous or individual vents sized in accordance with municipal building codes.

INSULATION, WIND AND MOISTURE CONTROL

Insulation will follow international energy codes and adhere to local ordinances. Insulation is not required with ThermaSteel® exterior wall panels or environmentally conscious equivalent.

A building wrap will be installed between the wall sheathing and the exterior siding as a barrier against water and air infiltration. This is not required with ThermaSteel® exterior wall panels or environmentally conscious equivalent.

Moisture control will be provided to prevent migration of moisture from the crawl space and walls. A 6 mil. Polyethylene vapor barrier will be provided in crawl spaces. A vapor barrier will be provided over the wall insulation prior to installing the gypsum board wall finish. A moisture barrier is not required with ThermaSteel® exterior wall panels or environmentally conscious equivalent.

All holes in the walls which open into a conditioned crawl space require 2.5” of Thermax® insulation on all exterior and foundation walls. The crawl space or into the attic, will be sealed with caulk or foam insulation. This is not required for ThermaSteel® exterior wall panels or environmentally conscious equivalent. All electrical junction boxes located in the exterior walls will be sealed with caulk where the wires enter into the box and between the box and the gypsum wallboard. Space between window frames and wood framing will be filled with foam blanket insulation. All holes through the floor system into the crawl space, such as openings cut under the tub and or shower for plumbing, will be sealed with insulation to prevent air movement. All penetrations through the floor system, exterior walls and ceiling system will be sealed, in accordance with all energy codes.

A continuous bead of caulk will be run at all exterior walls where the base plate and the floor deck meet. Where gable trusses meet the wall, a bead of caulk will be run between the gypsum wallboard and all window frames to seal against infiltration around windows. All joints and seams will be insulated or caulked.

Heating supply and return ducts located in the attic or in the crawl space are to be insulated with R8 duct wrap to prevent heat loss. Hot water piping is to be insulated with a minimum of ½” thick pipe insulation.

- R21 perimeter insulation in condition crawl space.
- R30 in floor of vented crawl space.
- R21 in wood exterior walls.

- R33 in ThermaSteel® exterior wall panels.

Attics should use 1” sprayed foam to seal to R4 and R38 blown (15”) to total R42.

HEATING, VENTILATION AND AIR CONDITIONING

All houses will be provided with a ducted heating and air conditioning (Seer 15, 95%+) systems. Gas will be used unless it is not available and then electricity will be used.

A Tee will be installed in the gas line for any future gas runs to a dryer or range

ELECTRICAL SUPPLY AND WIRING

Electrical service and wiring will be provided in strict compliance with requirements of the National Electrical Code as modified by municipal agencies. The main electrical panel will have a minimum rating of 200-ampere capacity. The electrical meter will be located in an accessible area on the side or rear of the house.

In addition to the requirements for normal lighting and electrical outlets for each room, the following will be provided:

- An outlet under the kitchen sink for dishwasher and garbage disposal.
- A switch will be provided above counter for the disposal.
- Electrical provisions for air conditioning condensing unit at the rear or side of the house.
- Outlets in the utility area for washer and dryer.
- Junction box with adequate support for ceiling fans in the living room, dining room and all bedrooms. A wall switch for the fan will be provided next to the light switch for the respective room. Ceiling fans may be selected as a family budget option.
- ASHRAE 62.2 fans shall be installed in bathrooms, laundry room, kitchen and attached garage. Refer to Durability Check list.
- Bathrooms shall have an occupancy sensor or timer on ASHRAE fan switch.

The following wiring will be provided in each house:

- Telephone jacks in the living room, kitchen and each bedroom.
- Television antenna jacks in the living room and in each bedroom.
- Doorbell chime, with push button at the front door.

Smoke detectors will be provided in accordance with municipal codes and a minimum of one carbon monoxide detector will be installed in each residence and attached garage.

WATER HEATING

A 98%+ efficient tankless gas water heater or standard gas water heater will be provided and sized as follows:

- 50 gallons/50 MBH for two/five bedrooms
- 75 gallons/60 MBH for six bedrooms
- 75 gallons/75 MBH for eight bedrooms

Standard water heaters will be high efficiency models, having 10-year factory warranty on tank and two-year warranty on all other parts.

WALLS, WINDOWS AND DOORS

INTERIOR WALLS & CEILINGS

Wall & ceiling surfaces inside the house will be finished textured drywall and painted with latex low to zero VOC paint of less than 50 g/L flats and 150 g/L non-flats. Paint colors will be Valspar® eggshell 4400 or equivalent. Primer will be applied to all interior walls using Valspar® primer or equivalent. Walls and ceilings will be the same color. Trim will be Valspar® high gloss ultra white or equivalent, with low to zero VOC white latex enamel.

EXTERIOR WALLS

Wall covering on the exterior will be pre-primed James Hardie® siding. Siding and trim will be earth tone colors [construction choice]. The family may be provided with samples to choose from.

G-metal is required over all windows and doors.

WINDOWS

Windows will be triple u.20 or better, LowE Argon-filled thermal pane with a minimum of 1/8" space between panes and with a thermal break between the outer and inner surfaces of the frame.

Ice and water shields will be installed around all windows and doors.

Windows with a 4x4 ft. minimum size are required for the bedrooms to meet codes.

DOORS

Exterior doors will be insulated fiberglass u 0.14 doors. A single cylinder dead bolt and entry lock will be provided on the front and rear doors. Lock hardware will be standard duty. All locks will be keyed alike so that one key can operate all locks.

Interior doors will be pre-hung, hollow-core doors, 3 feet wide in bedrooms and bathrooms. Standard bedroom and bathroom lock hardware will be provided.

Door rough opening height must be 80-1/4" to accommodate wood laminate flooring.

EXTERIOR

ENTRANCES

A minimum of 4' by 8' covered front entrance will be provided. All houses will be handicap accessible so there will be no steps leading up to at least one entrance, accessible from the driveway. The maximum rise of a ramp will be 1:12, therefore the start of the ramp must be at least 6 ft from the

entrance. At the rear entrance a maximum of 3' x 4' stoop will be provided with a concrete patio area approximately 8' by 10'. If the riser is less than 8" from the patio to the door threshold, no stoop is required. When possible there should be no steps leading to the back door from the patio and the stoop eliminated.

A minimum standard on all concrete will be a 5" slump and 3500 psi.

DRIVEWAYS

Driveways between parking pads and public streets will be constructed with a minimum of 4" of concrete over 8" of road mix. Minimum width of drives will be 18 feet.

Public streets should be constructed when economically feasible for access for two or more houses. When public streets are not feasible, provisions in the CC&R's will be made for shared maintenance between the homeowners for share driveways.

VEHICLE PARKING AND WALKWAY

A 22'x22' garage will be provided. A minimum of 8" compacted road mix shall be installed as a base for the concrete.

A standard concrete or permeable walkway up to 4' wide will lead to the front door entrance.

FENCES

BVHFH will install a perimeter fence around all subdivisions (two or more residences on a single lot or multiple lots) where there is no fence or an existing fence is dilapidated.

Fences are normally excluded from the provisions of a single BVHFH house. An exception to this is when a fence is needed for safety (e.g., high traffic areas such as a collector street or screening from public parking lots, a ditch, railroad tracks or other hazard), to replace a deteriorating fence, or when required by zoning or covenants.

The partner family may elect to have any fencing not covered above, installed during construction of the home and have the cost included as a family budget option. Any fence costs not paid by adjoining neighbors will also be charged to the family budget options.

For all fencing projects BVHFH undertakes where a fence is to be shared by an adjoining neighbor, BVHFH will attempt to negotiate with the neighbor(s) to share in the cost and collect the monies from the neighbors.

WATER SUPPLY

In addition to the normal plumbing inside the house, a hose bib will be provided on the house exterior at two places or as required for a fifty-foot hose to reach all areas of the landscaped yard for watering. One of these hose bibs will be near the concrete driveway.

LANDSCAPING

There will be a \$700 budget for landscaping including sod and locally grown and drought resistant plant material. If the family desires additional landscaping materials they can use money from their budget options. Families moving into a “used” house will not receive the \$700 budget as it has already been allocated to that house. However, if they desire additional plant materials they may use their budget option money.

Execution of the landscaping plan will focus on the front yard, to include the minimum standards. The remainder of the lot may be landscaped as the budget allows.

Landscaping standards:

- There will be a minimum of one tree and 3 bushes in the front of the house
- If rock is used as a ground cover, weed barrier must be used underneath
- Plants that are minimum maintenance and drought tolerant should be chosen when possible

When there are existing trees on the lot, only those that are diseased, of poor quality and type, overgrown or conflict with construction will be removed. Trees that provide shade for the house will be retained if possible.

Common areas will be landscaped with plants requiring a minimum of water (drought resistance) and maintenance. The use of shredded cedar mulch with a weed barrier will be provided for ground cover. All shrubs in common areas should be low growing, requiring little or no trimming, except where screening is desirable. Sprinkler systems, where they are required, will be installed and make use of drip irrigation where possible, will be provided for common areas only. The CC&R’s for the development will make provision for the common area landscaping and sprinkler system.

CONSTRUCTION SITE WASTE MANAGEMENT

The goal of every BVHFH build should be good stewardship through reduction or reuse of construction site waste and should be considered an integral part of green building standards.

Management should include:

- Onsite recycling containers for delivery of recyclables to recycling centers.

- Wood (in separate bin for recycling agency to haul off)
- Cardboard packaging
- Household recyclables (i.e. beverage containers)
- Metal scraps

- Reuse or disposal of surplus materials as in:

- Send to the ReStore
- Offer small wood waste for use as firewood
- Use scraps for walkways over mud at next build site
- Use large cardboard pieces for protective cover of finished flooring

EXCLUSIONS, OPTIONS AND EXCEPTIONS

EXCLUSIONS

Certain features and amenities will be excluded from BVHFH houses. These exclusions do not detract from the basic livability of the houses and they are made in order to share the limited monetary resources and provide as much basic housing as possible.

Excluded features include:

- Fireplaces
- Jetted-tubs
- Freezer
- Dishwasher [family budget option]
- Washer [family budget option]
- Dryer [family budget option]
- Ceiling fans [family budget option]
- Picture windows
- Paneling
- Sliding glass doors
- Fences (except when required by municipal codes or for safety) [family budget option]

FAMILY BUDGET OPTIONS

The partner family may select one or more options, detailed in the Family Budget Options, totaling not more than \$1,500. This amount *will be added to* the cost of the house.

Other budget options may be provided if agreed to by the construction committee.

EXCEPTION TO CRITERIA

Criteria set down in this document are intended to define the basic BVHFH house. Exceptions will be allowed for the following reasons:

1. Materials or equipment of equal or higher quality are donated and have no financial impact on BVHFH and the prospective owner.
2. Safety or municipal codes require changes.
3. The selected family has special needs related to health or well being.
4. Other reasons as approved by the Board of Directors.

MODIFICATION TO CRITERIA

The construction committee will review the criteria annually.

**BOISE VALLEY HABITAT FOR HUMANITY
HOME CONSTRUCTION CHOICES**

FAMILY NAME _____ DATE REQUIRED _____

<u>ITEM</u>	<u>CHOICE</u>
*Interior wall & trim paint (neutral color)	Per Interior Wall and Ceilings Standards
*Exterior wall paint (color) – samples will be provided	_____
*Exterior trim paint (color) – samples will be provided	_____
* Kitchen & bath laminate counters (color)	_____
Dining area flooring laminate	_____
Entry way flooring vinyl or laminate wood	_____
* laminate wood	_____
* Green standard floor score Vinyl (color)	_____
Stove type (gas, electric)	_____
Bathroom mirror (wall, medicine cabinet)	_____
Clothes dryer connection (gas, electric)	_____

* The family can choose from provided samples, or visit the vendors provided by the Construction Director.

**BOISE VALLEY HABITAT FOR HUMANITY
FAMILY BUDGET OPTIONS**

FAMILY NAME _____ DATE REQUIRED _____

You have a budget of \$1,500 that you may use to add to your basic house package. The costs below are estimates. The actual cost of any item selected will be included in the total cost of the house. Because these items will increase your total mortgage debt, you may decline all items.

<u>ITEM</u>	<u>COST</u>	<u>YES</u>	<u>QTY</u>	<u>\$</u> <u>AMOUNT</u>
****Should be Energy Star appliances				
Clothes washer, electric (white)	\$441	___	___	_____
Clothes dryer, electric (white)	\$431	___	___	_____
Clothes dryer, gas (white)	\$479	___	___	_____
Dishwasher (white)	\$290	___	___	_____
Microwave oven with stove hood vent	\$ \$276-290	___	___	_____
Mini blinds for living area (white)	\$40/ea.	___	___	_____
Ceiling fan(s)	\$70/ea.	___	___	_____
Fence – chain link	Installed \$11/lin.ft.	___	___	_____
	You install \$5/lin.ft.	___	___	_____
Fence – wood	Installed \$19/lin.ft.	___	___	_____
	You install \$9.50/lin.ft.	___	___	_____
Other _____	_____	___	___	_____
	TOTAL			_____

It is understood that the replacement cost for any of these items not remaining with the house upon resale will be deducted from the sales price.

REFRIGERATOR ADJUSTMENT

BVHFH will provide an energy efficient, 18.1 cu. ft. refrigerator with each house. If you already own an energy efficient refrigerator (contains Energy Star or other energy label on back) and wish to keep it, the cost of a new one (about \$450) will be deducted from the total cost of the house.

New refrigerator (white) YES / NO

Door swing - left hinge ____, right hinge ____.

(Signed by partner family)

(Date)

(Signed by spouse, if applicable)

(Date)