



HOME 2000



BUILDING YOUR HOME FOR LIFE
an affordable, healthy home that
adapts to your changing lifestyle

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A Fresh Idea in Housing

Home 2000 showcases some of the most innovative yet practical ideas in housing today. Ideas that meet your need for an affordable, comfortable, high quality home. Design that accommodates your current lifestyle and anticipates your future one, so that you never have to move.

Using FlexHousing and Healthy Housing concepts, Home 2000 shows you how to create a home in which you can be comfortable for life.

The two-story plus attic, 2,000 sq. ft. house was constructed by Britco Structures Ltd. at their indoor building site in just over a month. It was built in six discrete modules that were then interconnected at the construction site.

The home is designed to fit a typical urban lot that is 33 ft. by 122 ft. with rear lane access. It has two main living floors, a convertible attic space and an optional basement. Sound like typical design? Not really! Depending on your needs, Home 2000 can convert from a four-bedroom, single family home to a code-compliant duplex.

The creative ideas in Home 2000 were the result of a team effort by Canada Mortgage and Housing Corporation, British Columbia Institute of Technology, Greater Vancouver Home Builders' Association, Forest Renewal BC, Canadian Plywood Association, UBC School of Architecture, The Home Depot and a host of other product and service providers.

When the B.C. Home Show ends, Home 2000 will be relocated to BCIT where it will be open to the public for tours at designated times.

A Home for Life

Home 2000 addresses key housing issues facing today's homeowners: families in flux, concerns about personal health, the environment, durability and affordability. In response to these needs, Canada Mortgage and Housing Corporation (CMHC) developed the FlexHousing and Healthy Housing concepts used in Home 2000's design.

It's an affordable, durable, healthy and environmentally conscious home that is designed to change easily as the lifestyle of its occupants change. Using off-the-shelf technology, a flexible design, and health-conscious, high quality building practices, Home 2000 shows you how to create a home in which you can be comfortable for life.



FlexHousing: Adapts to Your Needs

If you never want to move again, FlexHousing design is for you.

It's a new and innovative approach to housing design developed by CMHC. FlexHousing responds to the needs of today's families, which contract and expand as single-parent households become blended families, adult children leave home, and aging parents move in. It's design that supports independent living for senior citizens and people with disabilities. It's design for life.

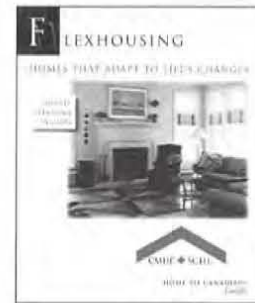
The key to flexible housing design is to think about what your long-term requirements may be before you build or renovate, and to then build in the necessary features during construction. As your lifestyle changes, your home can then be easily and inexpensively adapted to suit your needs.

Adding the right features now can save you time and money later, and help you avoid the heartache and inconvenience of leaving a neighbourhood you've come to know and love.

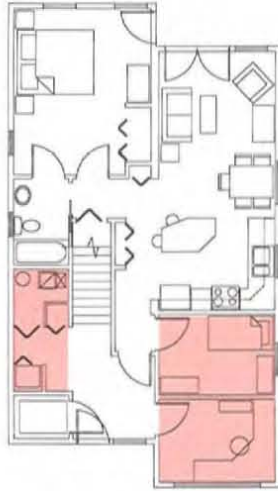
For example, in Home 2000 space was effectively preplanned so that a large, single bedroom could become two rooms. Wide doorways and hallways make it easy to move furniture in and out, give the home an open, airy feel, and make it possible for a wheelchair to manoeuvre should a family member ever need one. In the kitchen, a simple upgrade to the sink counter ensures that it can be used safely and comfortably by anyone - short or tall.

One of the home's most exciting FlexHousing features is its floor plan – it can convert from a four-bedroom, single family home to a code-compliant duplex with two bedrooms per unit. Creative preplanning of the mechanical and electrical systems means that the air supplies to each duplex suite are separate– odours and fires can't travel. It also means that the suites are relatively soundproof.

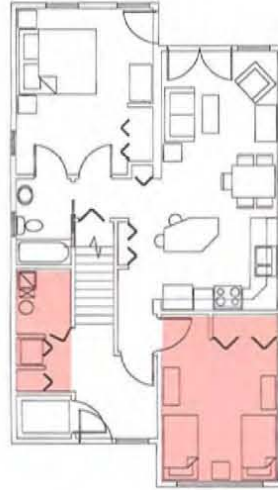
The house is designed to follow a family throughout its entire lifecycle. Young homeowners can rent out one suite as a mortgage helper, then reclaim the house as their family grows. When adult children head to university, they can offer them the suite, and later still, can use it to supplement their retirement income. With FlexHousing there are as many possibilities as there are living arrangements.



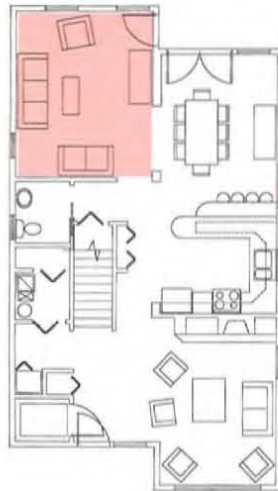
TO ORDER THIS GUIDE, SEE THE
ORDER FORM IN THIS BOOK



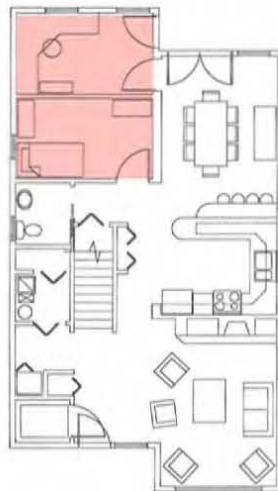
1ST FLOOR
DUPLEX
OPTION A



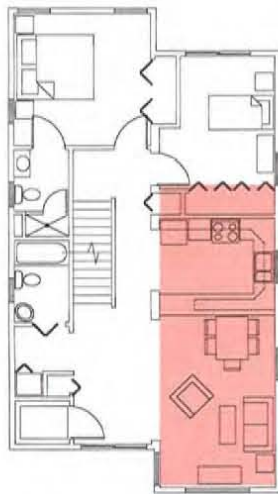
1ST FLOOR
DUPLEX
OPTION B



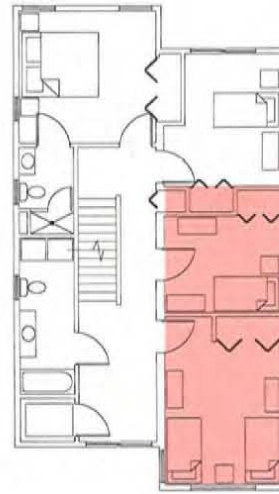
1ST FLOOR
SINGLE FAMILY HOME
OPTION A



1ST FLOOR
SINGLE FAMILY HOME
OPTION B



**2ND FLOOR
DUPLEX**



**2ND FLOOR
SINGLE FAMILY HOME**

FlexHousing Floor Plan

Home 2000 can convert from a four-bedroom, single family house to a code-compliant duplex with two bedrooms per unit. You can also add a small first-floor office or bedroom at the front or back of the house, or a large first-floor master bedroom with an ensuite bathroom. For maximum sunlight, the living room can be located at the front or back of the house.

Near the entrance, stacked closets on the first and second floor can be turned into an elevator shaft. A chair or platform lift can easily be installed on the straight-run stairs.



Healthy Housing: Good for You and the Environment



Did you know that indoor air can be more polluted than the air you breathe outside? Facts like that are why CMHC developed the Healthy Housing concept. It's an approach to housing that considers the effect of your home on your health and on the environment.

Poor indoor air quality can trigger asthma and allergies, and it can also be the cause of common ailments such as a stuffy nose, headaches, and fatigue. The irritants floating in your home's air may range from relatively minor ones, such as dust mites and animal hair, to the more serious problems of mould and gasses from building materials, furnishings, cleaning products, and heating systems.



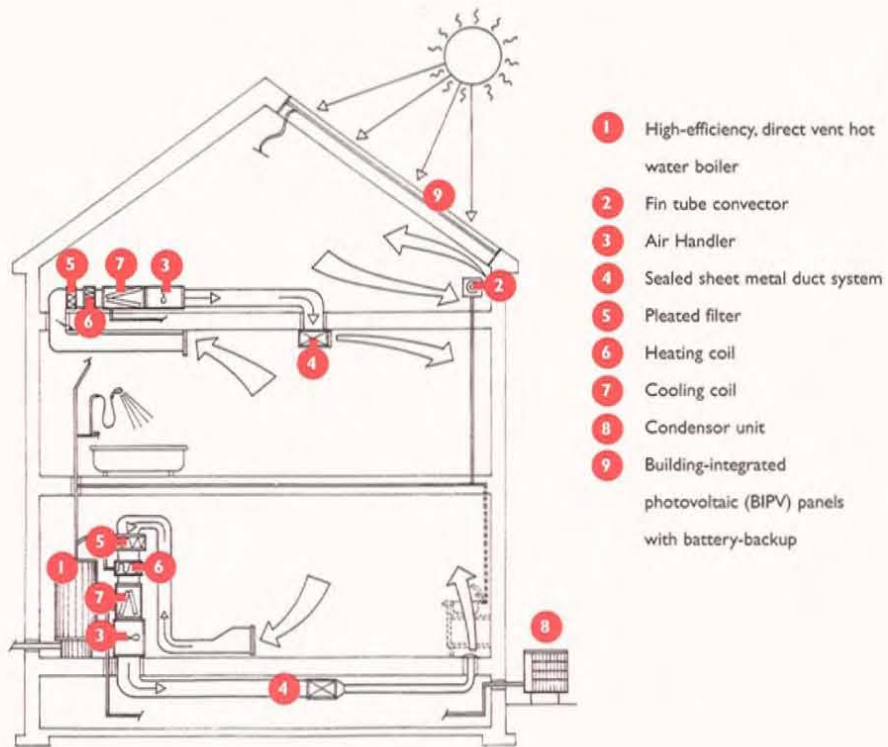
A healthy home is one that helps you breathe easier. It's well ventilated and furnished with materials chosen to reduce off-gassing. For example, in Home 2000 a heat recovery ventilation system supplies fresh air to all living spaces, and exhausts moist, stale air from the bathrooms and kitchen – especially benefiting people with asthma or other respiratory conditions. Low-emission plywood and finishes, hardwood and ceramic flooring, solid wood cabinets, mouldings and baseboards also help to keep the air clean.



TO ORDER ANY OF THESE PRODUCTS, SEE THE ORDER FORM IN THIS BOOK

Heating and Cooling

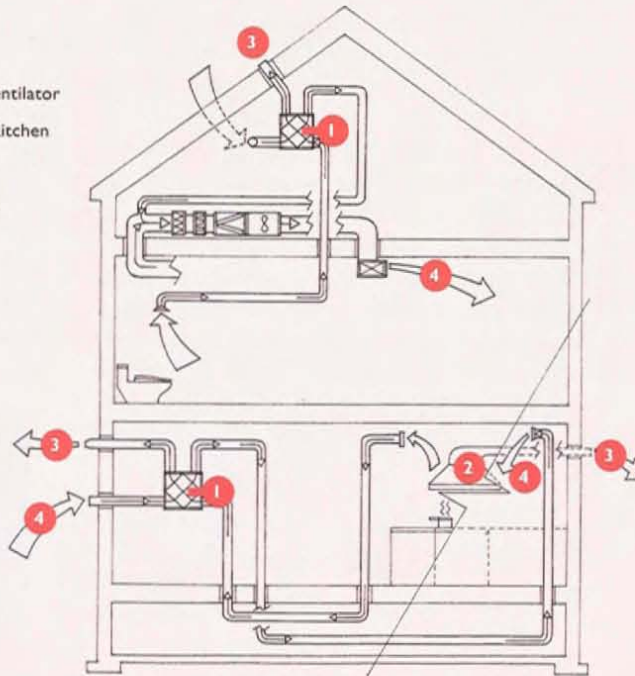
The boiler feeds hot water to a heating coil and air handling unit on each floor and a fin tube convector in the attic. Warm air is distributed through ducts – separate systems on each floor ensure that air, odours, sound and fires don't travel. The system also includes provision for summertime cooling.



Ventilation

A heat recovery ventilator (HRV) operates continuously at low or medium speed to supply fresh outside air to all living spaces, and exhaust moist, stale air from the bathrooms and kitchens. With the flick of a switch, you can increase its speed to quickly clear stale air from a room. The heat from the outgoing stale air is transferred to incoming fresh air – lowering your energy bill. As with the heating and cooling system, separate HRV systems on each floor ensure that air, odours, sound and fires are contained.

- 1 Heat recovery ventilator
- 2 Outside-vented kitchen range hood
- 3 Stale air exhaust
- 4 Fresh air supply



A healthy home is also energy and resource-efficient. Home 2000 uses low-volume toilets and energy-efficient appliances, lighting and windows. If the floor plan is oriented to take advantage of the sun, the high-efficiency hot water heating system can be supplemented by nature.

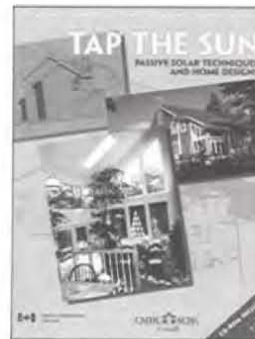
Solar energy can also be used by the building-integrated photovoltaic (BIPV) roof panels to supply most of the home's electricity. If they create a surplus, the BIPV panels can even feed back electricity to the main power grid for use by others! You may think that systems like this are out of reach, but they're not. Affordable, off-the-shelf technology is available in a range of sizes.

Two other key Healthy Housing features in Home 2000 are a durable building envelope, which ensures that moisture doesn't go where it shouldn't, and earthquake-resistant design.

Durable Building Envelope: Keeps You Warm and Dry

Your home's building envelope is all that stands between you and the elements. With a well-designed building envelope you're comfortable all year round, and use less energy for heating and cooling - lowering your operating costs. Durable, long-lasting materials mean that you conserve resources and save on maintenance.

Home 2000's envelope - the exterior walls, roof and foundation - is airtight, well insulated and uses energy-efficient windows. The home was built in modules in a weather-protected factory setting, a method that ensures tight quality control and a dry building. It's constructed of long-lasting materials such as a standing seam metal roof, fibre-reinforced cement bevelled siding, and pressure-treated wood decking.



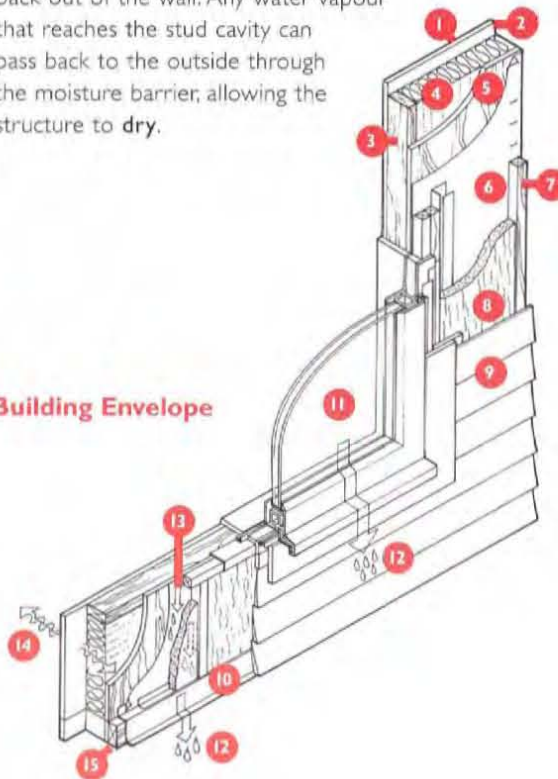
TO ORDER THIS GUIDE, SEE THE
ORDER FORM IN THIS BOOK

To really be durable, your building envelope must effectively manage moisture. Large amounts of trapped water can cause your home to prematurely degrade; symptoms such as mould, mildew, and wood rot may appear. There are many ways for water to get into your building envelope: rain and groundwater can penetrate, water vapour from cooking and bathing can pass through the envelope and condense on cold surfaces, and wet lumber or other building materials may be used during construction.

Home 2000 keeps water out with a rain screen wall assembly and CMHC's 4-D moisture management principle. **Durable** building materials are used in areas of the envelope that often get wet. Water is **deflected** from the envelope by roof overhangs, canopies, flashing and bevelled siding. It's **drained** by a cavity behind the cladding and directed down to a metal flashing and back out of the wall. Any water vapour that reaches the stud cavity can pass back to the outside through the moisture barrier, allowing the structure to **dry**.

- 1 Low-VOC, water-based paint over low-VOC vapour-retarding primer
- 2 16mm (5/8") gypsum wallboard
- 3 38mm x 89mm (2"x 4") kiln-dried SPF stud wall
- 4 RSI2.47 (R14) rockwool batt insulation
- 5 13mm (1/2") plywood sheathing
- 6 Housewrap moisture and air barrier (air tightness of 1.5 ACH @ 50 Pa)
- 7 38mm x 38mm (2"x 2") pressure-treated strapping
- 8 RSI0.95 (R5.4) rockwool draining insulation
- 9 Fibre-reinforced cement bevelled siding
- 10 Preformed metal flashing
- 11 High-performance rain screen windows
- 12 DEFLECTION of water
- 13 DRAINAGE of water
- 14 DRYING of water vapour
- 15 DURABLE materials in moist locations

Building Envelope



Earthquake-resistant Construction: Stands up to Disaster

In a disaster, your home is your refuge.

You can take steps to improve your home's chances of surviving an earthquake - steps that will increase your personal safety during the quake, and your chances of being able to live in the house afterwards.

For most homes the cost of seismic upgrading is relatively inexpensive, and insignificant when compared to the cost of catastrophe. When deciding what to do keep this in mind: any amount of upgrade is an advantage – even minor improvements can make the difference between repair and ruin.

Earthquake-resistance is built into the design of Home 2000. The house is bolted to the foundation and exterior walls are reinforced with plywood sheathing. To ensure good load distribution, the builders used ample quantities of nails that embed securely, and metal ties to attach floors and walls. The water tank is strapped down to prevent it from tipping over, and major appliances are restrained to stop them from sliding across the room. The upper kitchen cabinets have latches to prevent the contents from spilling out during an earthquake.

Affordability is Key

Affordability is a key principle of FlexHousing and Healthy Housing.

While incorporating these features slightly increased the capital cost of Home 2000, homeowners can expect to recover the cost, and actually begin saving, through reduced energy and maintenance costs.

And with FlexHousing design, the money you invest now is usually significantly less than what you'd have to spend later on extensive renovations. Even better, a house like Home 2000 can be turned into a revenue generator if it's converted to a duplex.



TO ORDER ANY OF THESE
PRODUCTS, SEE THE
ORDER FORM IN THIS BOOK.

Last but not least, if you do decide to sell, because your home suits the needs of a wide range of Canadians and is less expensive to maintain and operate, it's attractive to purchasers.

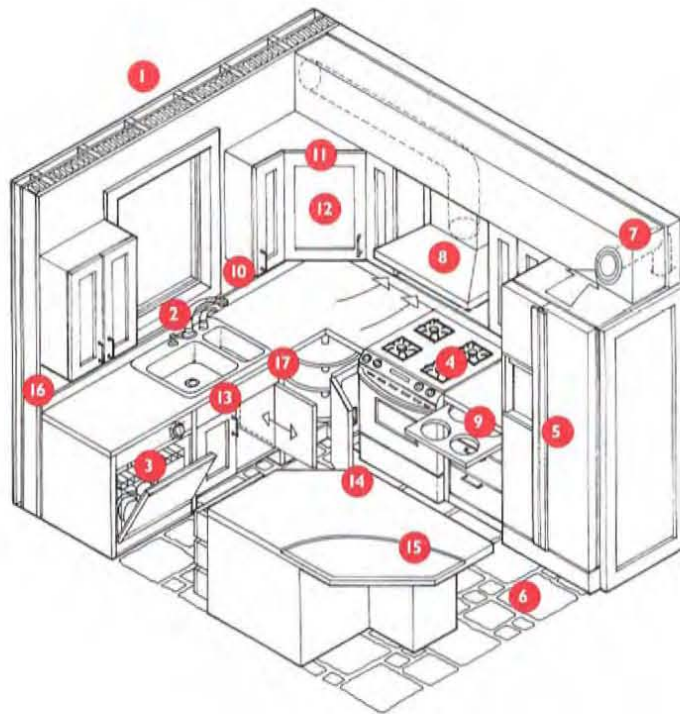
To Find Out More

For more information about FlexHousing, Healthy Housing, durable building envelopes and earthquake-resistant design, contact CMHC's B.C. and Yukon Business Centre (604) 731-5733 or visit our Web site at www.cmhc-schl.gc.ca. You can order a range of publications on these topics – look for the order form in this book.

Kitchen Tips

If your kitchen is like most people's, it's the centre of activity in your home. It's important that everyone in your family can use it safely and comfortably. It's also a good place to start saving money by making it more resource and energy-efficient. Here are some FlexHousing and Healthy Housing tips from CMHC to help get you started:

- Energy-efficient dishwashers and refrigerators cut energy consumption by at least 15%.
- Aerator taps can reduce water consumption by more than 60%.
- Microwaves are an energy-efficient cooking source.
- Lever and D-shaped handles and faucets are easy for stiff fingers to operate.
- Task lighting and non-slip flooring make your kitchen a safer place to work.
- Variable-height work surfaces, and electrical switches and outlets at the front of counters, can be used by anyone.
- Modular cabinets under the sink can be removed to allow wheelchair access.
- A continuously operating Heat Recovery Ventilator (HRV) controls humidity and exhausts cooking odours.
- Low-emission building materials won't trigger asthma, allergies or chemical sensitivities.
- Solid wood cabinets are durable and emit fewer vapours than pressboard products.
- Latches on upper cabinets, restraints on major appliances, and a flexible hose gas line help keep your kitchen intact in an earthquake.



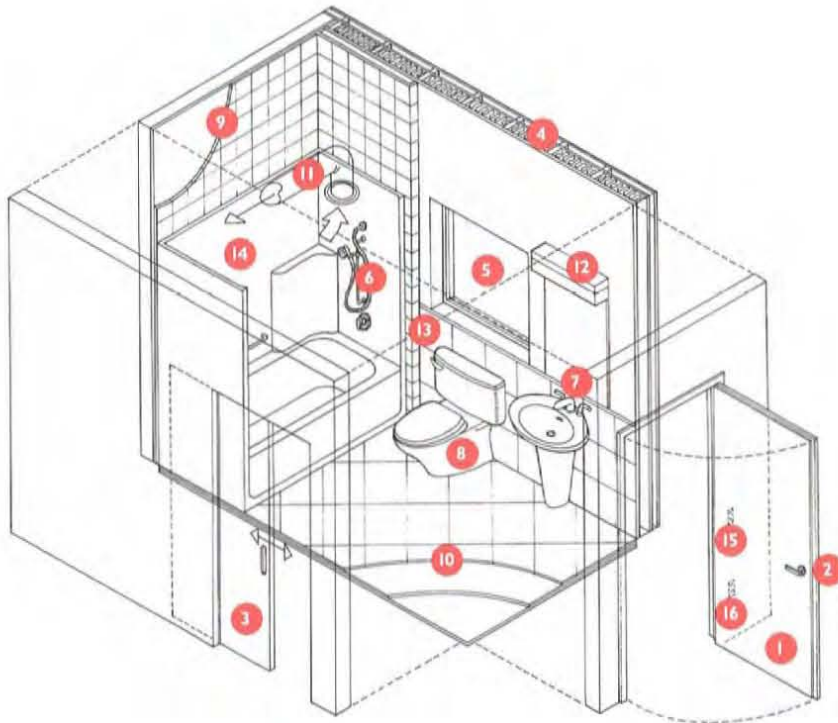
- 1 Thermally efficient wall
- 2 Low-flow, aerator faucet with pull-out hose and easy-to-use lever handles
- 3 Water and energy-efficient dishwasher
- 4 Energy-efficient gas stove and oven with easy-access controls, optional side-swing oven door, earthquake restraints and flexible hose gas line
- 5 Energy-efficient refrigerator with minimum-clearance swing doors and earthquake restraints
- 6 Non-slip, ceramic tile over water-resistant underlay and low-emission tongue and groove plywood
- 7 Continuous exhaust to HRV system with manual switch for high speed exhaust
- 8 Outside-vented kitchen range hood
- 9 Pull-out pot holder and cutting board
- 10 Energy-efficient task lighting below upper cabinets
- 11 Low-emission solid wood cabinets with easy-open handles
- 12 Latch locks on upper cabinets
- 13 Removable sink cabinet module
- 14 Microwave set in easy-access island cabinet (hidden from view)
- 15 Low-emission adhesive adheres countertop laminate to low-emission plywood substrate
- 16 GFI electrical outlets
- 17 Some electrical switches and outlets at front of counters

Bathroom Tips

Increasingly, people use the bathroom as a refuge – a place to soak away the cares of the world – so it needs to be both attractive and functional. At the same time, it should offer a healthy environment, be accessible to everyone in the family, and use water and energy efficiently. Nearly 75% of all the water you use in your home is used in your bathroom. Water-efficient fixtures can reduce your consumption by as much as 50%.

Here are some more FlexHousing and Healthy Housing tips for your bathroom:

- Low-volume toilets use 80% less water than a regular toilet.
- An aerator shower head can reduce water use by more than 60%.
- Ceramic tile can easily be kept clean and dry (carpets encourage mould growth).
- A continuously operating Heat Recovery Ventilator (HRV) controls humidity, reducing the opportunity for mould and mildew to grow.
- Thermally efficient windows reduce condensation so mould can't grow.
- Reinforced walls near the toilet and in the tub allow grab bars to be easily and inexpensively installed.
- Outlets placed slightly higher than usual, and switches and controls placed slightly lower, are more accessible.
- Space along the full length of a bathtub and beside a toilet make them easy to clean and accessible.
- A vertically adjustable, hand-held shower with water-temperature regulators prevents scalding and can be used safely by anyone.



- | | | |
|--|---|--|
| 1 Swing out, solid wood, 900mm (36") wide door | 8 Low-volume toilet | 15 Switches and controls 1050mm (41") above floor |
| 2 Easy-to-use lever door handles | 9 Ceramic tile over water-resistant backing | 16 Outlets 450mm (18") above floor |
| 3 Pocket door, 900mm (36") wide | 10 Non-slip, ceramic tile over water-resistant underlay and low-emission tongue and groove plywood | |
| 4 Thermally efficient wall | 11 Continuous exhaust to HRV system with manual switch for high speed exhaust | |
| 5 Energy-efficient window with easy-to-use opening and locking hardware | 12 Energy-efficient task lighting | |
| 6 Low-flow, aerator showerhead with hose and anti-scald protection | 13 Reinforced walls for future grab bars | |
| 7 Low-flow, aerator faucet with easy-to-use lever handles | 14 Low-emission tub/shower insert with grab bar | |

Where to Find It

The following is a list of the suppliers whose products and services are featured in Home 2000.

Home 2000 Project Management Team

Builder – Factory Assembly
Britco Structures Ltd.
www.britco.com
Jeff Wright, Allan Christie
ph: 888-2000 fax: 888-2086

Architectural Design
Russcher & Evans Architects
Bill Evans
ph: 530-9030 fax: 530-9611

Architectural Design
UBC School of Architecture
Sandy Hirshen, Linda Brock,
Elizabeth MacKenzie
www.arch.ubc.ca
ph: 822-2483 fax: 822-3808

Project Management
Royal Park Homes
Brad Hughes
brad_hughes@telus.net
ph: 513-9143 fax: 513-9123

Project Management
Canada Mortgage and Housing Corporation
Mark Salerno, Vivienne Taylor,
Anand Mishra
(Technical Support: Tom Kerwin,
Chris Ives, Tom Parker)
www.cmhc-schl.gc.ca
ph: 731-5733 fax: 737-4139

Envelope Consultant
ProPacific Architecture Ltd.
Brian Palmquist
brian@propacificarchitecture.com
ph: 730-9612 fax: 730-9624

Interior Design and Merchandising
The Connor Group Real Estate Marketing Inc.
MaryAnne Connor-Simpson, Leslie
Johnston-Muir, M.J. Whitmarsh
www.yourhomeshoppingmall.com
ph: 734-3818 fax: 734-3810

Mechanical System Coordination,
Ventilation System Design
Eneready Products Ltd.
(Member of HVCJ)
David Hill
ph: 433-5697 fax: 438-8906

Heating, Cooling, Ventilation,
Controls and Gas Fitting
Helma Heating Ltd.
Rob Sawatsky
ph: 327-8798 fax: 327-8224

Building Integrated Photovoltaic
Array, BCIT Site Preparation and
Foundation Construction
BCIT Technology Centre
Norman Street, Lou Stamenic
www.bcit.ca
ph: 432-8815 / 451-6934
fax: 436-0286

Landscape Design and Placement
**B.C. Landscape & Nursery
Association / Calibre Landscaping
Association**
Michael Evison
ph: 926-2892 / 922-4355
fax: 922-4355

Facilities Management
**B.C. Home & Garden Show /
dmg world media**
Corinne Johnston
www.southex.com
ph: 412-2286 fax: 434-6853

B.C. Place Stadium
Deborah Dutton
ph: 661-3405 fax: 661-3412

Home 2000 Suppliers

Structural Materials and Components

Cement for crawl space foundation
Tilbury Cement Ltd.
Rodger Nissen
ph: 946-0411 fax: 946-2420

Concrete for crawl space foundation
Rempel bros Concrete Ltd.
Terry Berget
ph: 525-9344 fax: 533-7235

Site preparation and foundation
construction
BCIT Technology Centre
John Wong
www.bcit.ca
ph: 432-8299 fax: 436-3255

Low-emission plywood sheathing,
stair treads/risers, counters, LVL
beams, forming plywood
**Canadian Plywood Association
(CANPLY)**
Alberta Plywood Ltd.
**CANFOR - North Central
Plywoods**
**Evans Forest Products (a Louisiana
Pacific company) (LVL Beams)**
Federated Co-operatives Limited
Richmond Plywood Corporation
Riverside Forest Products Limited
Slocan Forest Products Limited
Tolko Industries Limited
Weldwood of Canada
Weyerhaeuser Canada Ltd
Natalia Bouvier
www.canply.org
ph: 981-4178 fax: 981-4196

Finger-jointed wood framing, fascia,
window trims, skirting boards, misc.
lumber
Hollyburn Lumber Company
Lorne Derksen
ph: 590-2241 fax: 521-3287

Miscellaneous lumber products
BC Wood Specialties
Rob Mitchell, Bob Homes
ph: 583-8786 fax: 583-9916

Nails, staples, screws, fasteners, joist
hangers, anchor bolts
The Home Depot Canada
Jessie Jessup
www.homedepot.com
ph: 415-4351 fax: 415-4355

Insulation, Air Sealing and Moisture Protection

Fibrex rockwool insulation prod-
ucts: MB Plus Batts, EWB Rigid
Wallboard, below grade drainage
media
**Steels Industrial Products Ltd. /
Fibrex Insulations Inc.**
Chris Ishkanian / David Kernohan
www.steels.com / www.fibrex.on.ca
ph: 576-3111 / 1-800-265-7514
fax: 576-0111 / 1-800-363-4440

6mil polyethylene, weather stripping,
acoustic caulking, sill foam gasket
The Home Depot Canada
See "Structural Materials and
Components".

Tyvek moisture, air barrier & Tuck-Tape
**Cameron Ashley Building Products/
Dupont Canada Inc.**
Ron Paustie
ph: 520-0040 fax: 520-1321

Self-adhering waterproof membrane for window sills
ConSpec Construction Specialties Ltd.
Angus McGregor
ph: 435-7400 fax: 435-7420

Exterior Cladding, Roofing and Finish Materials

Hardi-Plank fibre-reinforced cement siding
Weyerhaeuser Canada Ltd.
Langton Lynn
www.weyerhaeuser.com
ph: 882-6572 fax: 882-3553

Metal standing seam roofing
VICWEST
Vance Ford
www.vicwest.com
ph: 590-2220 fax: 590-4835

Metal roof installation
Hillron Cladding Ltd.
Ian Ballam
ph: 857-9600 fax: 856-3605

Window, cap, through wall metal flashings
Alliance Roofing Systems Ltd.
Robert Oldford
ph: 437-4648 fax: 437-4649

Vinyl decking material supply and installation
ConSpec Construction Specialties Ltd.
See "Insulation, Air Sealing and Moisture Protection."

Gutters, downspouts
Pro-Image Gutters Ltd.
Nabeil Nasser
ph: 533-7325 fax: 533-7309

Aluminum railings, exterior glass for railings, security shutters
AAA Aluminum Products Ltd.
Steve Henderson
www.aaa_aluminum.com
ph: 298-7241 fax: 294-2411

Low-VOC,
ICI Decrashield exterior paint
ICI Glidden Paints
Bill Wooffinden
ph: 940-3998 fax: 940-2998

Windows and Doors

High thermal performance, rainscreen windows, sliding doors, exterior french doors
Euroline Windows Inc.
Al Godin, Victor Hirsch
www.euroline-windows.com
ph: 940-8485 fax: 940-8486

Metal exterior door, solid wood interior doors, pocket door
Leadwin Decorative Doors Ltd.
Sven Mothe
ph: 589-4717 fax: 589-4712

Lever handle door hardware
Weiser Inc.
www.weiserlock.com
ph: 419-4300 fax: 419-4383

Interior Wall Board, Paints and Primers

Drywall, water-resistant Denz-shield backer for bathroom tiled areas
Georgia-Pacific Canada Inc.
Marcel Tack
ph: 580-0620 fax: 580-1073

Drywall compound and tape
The Home Depot Canada
See "Structural Materials and Components".

Low-VOC, Ultra-Hide vapour barrier latex primer/sealer, LifeMaster 2000 interior paint
ICI Glidden Paints
See "Exterior Cladding, Roofing and Finish Materials".

Millwork

Solid wood cabinetry, laminate over plywood countertops
Montalco Cabinets Ltd.
Herb Klassen
ph: 273-5105 fax: 273-2963

Solid wood baseboards, interior finish moulding
Leadwin Decorative Doors Ltd.
see "Windows and Doors"

Solid wood interior handrails and spindles
Creative Woodworking Inc.
ph: 279-0402 fax: 279-0402

Finishing carpentry
Edgecroft Building and Finishing Ltd.
Chris Lucas
ph: 728-6207 fax: 709-3859

Flooring

Hardwood floor supply and installation
Metropolitan Hardwood Floors Inc.
Dave Sandover
www.metrofloors.com
ph: 270-7750 fax: 270-7223

Ceramic tiles, grout, mortar, edging, soap dishes, etc.
Fontile Corporation
Gary Kershaw
ph: 683-9358 fax: 683-6758

Water-resistant Denz-shield underlay for tiled areas
Georgia-Pacific Canada Inc.
See "Interior Wall Board, Paints and Primers".

Plumbing

ABS waste water pipe, misc. plumbing and supply pipe, pipe insulation
The Home Depot Canada
See "Structural Materials and Components".

Potable water pipe and fittings
Barclay Sales Ltd.
Bruce Barclay
ph: 945-1010 fax: 945-3030

Low-flow toilets, lever bathroom faucets, anti-scald shower heads, bathroom sink
Equipco Ltd.
Doug McLean
ph: 522-5590 fax: 522-0726

Kitchen sink
Kindred Industries Ltd.
Dan Fitzpatrick
ph: 220-7323 fax: 444-9238

Kitchen faucet
Westpoint Sales Inc.
Jeff Bird
ph: 291-7271 fax: 291-8258

Bathtubs and shower units
Venco Products Ltd.
Ralph Pregschat
ph: 278-4968 fax: 278-7333

Plumbing installation
MLM National Plumbing.Com Inc.
Mooshon Mizrahi
www.nationalplumbing.com
ph: 232-4000 fax: 232-4001

Electrical

Building-integrated photovoltaic array (harnessing sunlight to produce electricity), design, supply and commissioning

BCIT Technology Centre
Norman Street / Lou Stamenic
www.bcit.ca
ph: 432-8815 / 451-6934
fax: 436-0286

Breaker box, wiring, outlet boxes, switches, outlets

The Home Depot Canada
See "Structural Materials and Components".

Lighting fixtures, ceiling fans, door bell, motion sensor lighting, CO and smoke detector

Pine Lighting Ltd. / Progress Lighting
Dave Guthrie
ph: 591-8895 fax: 591-8114

Cable, telephone, stereo, media, networking and computer lines, security system supply and installation

Voxcom Inc.
Robert Churcott
www.voxcom.com
ph: 728-7448 fax: 574-3466

Mechanicals

American water heater; Polaris boiler/tank for domestic water and space heating; boiler, supply and return registers

Century Robinson / EMCO
Ron Frame
ph: 299-1353 fax: 299-9397

Armstrong heating and cooling equipment (blowers, heating / cooling coils, condenser), sheet metal ducts and fittings

ECCO Heating Products Ltd.
Paul Vaillancourt
ph: 420-4323 fax: 420-6523

Eneready HRVs, ventilation zone control system ("Whisper" POWER Grilles, Poshtime Controls), fittings ('albo' and spedi-sleeve rough-in fittings)

Eneready Products Ltd.
(Member of HVCI)
David Hill
ph: 433-5697 fax: 438-8906

Pleated filters
BC Air Filter Ltd.

Gordon Hoover
ph: 291-2544 fax: 291-2510

Automatic timers and setback thermostat

Honeywell Ltd.
Andrew Dyck
www.honeywell.com
ph: 888-3319 fax: 484-5685

Gas fireplace unit
Mr. Fireplace Ltd.

Roland Patrick
www.mrfireplace.com
ph: 591-2261 fax: 597-4006

Multi-gas detector and gas shut-off valve to detect gas leaks resulting from earthquake damage to gas lines

GPS Gas Protection Systems Inc.
Stephen Gibson
ph: 467-2625 fax: 467-2692

Heating and cooling load analysis
BC Gas (Member of HVCI)

Gary Way
ph: 576-7139 fax: 576-7122

Heating and cooling duct system design (Quality First Standards)

Delta T Engineering
(Member of HVCI)
Doug Harwood
ph: 597-0393 fax: 597-0393

R2000 Energy Performance Analysis
Richard Kadulski Architect

Richard Kadulski
ph: 689-1841
fax: 689-1841

Combination system advice
Modale Industries Ltd.

(Member of HVCI)
Dale Rigg
ph: 224-5527 fax: 224-7230

Interior Furnishings, Appliances, Decorating

Energy-efficient refrigerator, gas range and self-cleaning oven, dishwasher, washer, dryer

Inglis Ltd.
Dave Mooney
www.InglisLimited.com
ph: 291-8585 fax: 291-1824

Rogers Cablesystems, computer hook-up

Rogers Cablesystems
Carolynn Stever
ph: 412-2792 fax: 431-1000

Closet organizers, window blinds
Stor-More Closet & Blinds Ltd.

Steve Swift
ph: 533-1128 fax: 533-1106

Mirrors, shower doors
Glass World

www.fastfind.com/glasworld
Dale Waddell
ph: 534-1515 fax: 534-1646

Bathroom fixtures (towel bars, soap holders etc.)

Taymor Industries Ltd.
Laurie Hearn
ph: 540-9525 fax: 540-2153

Furniture

The Brick
Lyle Griffith
ph: 588-6138 fax: 502-3122

Bedding

Forty Winks Bedding Company
Janette MacDonald
ph: 736-7233 fax: 736-7203

Interior merchandising and interior finishes

Pier 1 Imports
Valerie Rakush
ph: 539-5070 fax: 539-5072

Landscaping

Calibre Landscaping
Michael Evison
ph: 926-2892 / 922-4355
fax: 922-4355

Fencing

CPI Equipment Ltd.
Karen Slack
ph: 530-0264 fax: 530-6336

Home 2000 architectural renderings

Artwave Design
Aleksander Visnjic
ph: 990-6729 fax: 990-6729

Good Neighbours

It takes a team of dedicated and knowledgeable housing professionals to create a project like Home 2000 - the research that results in the products and systems you see, has been ongoing for years. Sponsors and suppliers throughout B.C. pooled their resources to show you the latest in high quality, affordable, and adaptable housing.

Home 2000 Sponsors

Canada Mortgage and Housing Corporation

Mark Salerno,
Vivienne Taylor
(Technical Support:
Tom Kerwin, Chris Ives, Tom Parker)
www.cmhc-schl.gc.ca
ph: 731-5733
fax: 737-4139

British Columbia Institute of Technology

Norman Streat / Lou Stamenic
www.bcit.ca
ph: 432-8815 / 451-6934
fax: 436-0286

Greater Vancouver Home Builders' Association

Peter Simpson
www.vancouverhomebuilders.org
ph.: 590-5256
fax: 520-6959

Forest Renewal BC

Robert Gunn
www.forestrenewal.bc.ca
ph.: (250) 387-3082
fax: (250) 387-5677

Canadian Plywood Association

Natalia Bouvier
www.canply.org
ph.: 981-4178
fax: 981-4196

UBC School of Architecture

Sandy Hirshen, Linda Brock, Elizabeth MacKenzie
www.arch.ubc.ca
ph: 822-2483
fax: 822-3808

The Home Depot Canada

Jessie Jessup
www.homedepot.com
ph: 415-4351
fax: 415-4355

Canada Mortgage and Housing Corporation

Canada Mortgage and Housing Corporation (CMHC) is the federal government's housing agency and Canada's housing expert.

You may know us as Canada's leading provider of mortgage loan insurance, but we're much more than that. We're your number-one source for up-to-the-minute, reliable, objective housing information. We research all aspects of housing – if you have a question about housing, we probably have the answer.

Many of our research results are featured in Home 2000. It's designed using FlexHousing and Healthy Housing concepts we developed in response to Canadians' need for high-quality, affordable, adaptable and sustainable housing. Highlights include a durable and energy-efficient building envelope, quiet and efficient heating and ventilation system, and earthquake-resistant features. Home 2000 shows you how to incorporate ideas like these into your home in ways that are practical and affordable.

But a demo home can't show everything we do. We also support social housing programs through the Canadian Centre for Public-Private Partnerships in Housing. And we work with exporters in Canada's housing industry to promote their products and services in international markets.

For more information about the products and services that CMHC offers, contact the B.C. and Yukon Business Centre (604) 731-5733 or visit our Web site at www.cmhc-schl.gc.ca. To request a copy of our information products catalogue, call 1-800-668-2642.



HOME TO CANADIANS
Canada

British Columbia Institute of Technology

British Columbia Institute of Technology (BCIT) is one of Canada's leading institutes of advanced technology and trades training, covering a range of subject areas that includes construction, engineering technology, electronics, trades, business, health sciences and computers.

The Photovoltaic Energy Applied Research Lab (PEARL), which designed Home 2000's building-integrated solar power system, is one of BCIT's newest applied research specialties.

Exploring ways to integrate efficient solar panels into building construction—right from the design and building stage—is at the heart of PEARL's research. Building-integrated design is key to making solar power truly usable; in projects like Home 2000, the solar panels are used as vital building components during construction, rather than being mounted separately at a later date. BCIT is currently developing a new training program in photovoltaics that will be the first of its kind in Canada.

For more than three decades BCIT has been a leader in training British Columbians to work in a host of residential and commercial construction-related fields. Included in the school's programs are carpentry, painting and decorating, joinery, sheet metal, drywalling, plumbing, welding, building engineering technology, and civil and structural engineering technology.

BCIT serves nearly 16,000 full-time students (including 4,300 trades apprentices) and more than 31,000 part-time students. For program information call 434-1610 or visit www.bcit.ca



Greater Vancouver Home Builders' Association

The Greater Vancouver Home Builders' Association (GVHBA) – the voice of the residential construction industry in the Greater Vancouver area – is dedicated to promoting professionalism in the homebuilding industry and is committed to providing consumers with a wide variety of timely information on new homes and renovation.

Affiliated with the Canadian Home Builders' Association, GVHBA members include builders, renovators, architects, designers, sub-contractors, manufacturers, suppliers, government agencies, utilities, publishers, bankers, lawyers and other professionals.

A clearinghouse of industry information, GVHBA circulates to its members a wealth of data on housing starts, consumer trends, technical advances, educational opportunities, economic indicators and government legislation that affects the homebuilding industry.

GVHBA is a proud sponsor of two of Canada's largest consumer home shows – B.C. Home & Garden Show and B.C. Fall Home Show. Active in community outreach, GVHBA supports the South Fraser Child Development Centre, Salvation Army, B.C. Children's Hospital, Lower Mainland Christmas Bureau and the Vancouver Rape Relief and Women's Centre.

GVHBA's free seminars on new homes and renovation are popular with consumers, and articles on a range of housing-related topics are also available for the asking. For more information, contact GVHBA at 590-5256 or visit our Web site at www.vancouverhomebuilders.org



Forest Renewal BC

As a working partnership of forest companies, workers, First Nations, environmentalists, communities and the provincial government, Forest Renewal BC is a dynamic investment agency charged with supporting a full range of forest renewal activities in every region of the province.

With our partners, Forest Renewal BC shares the goal of a sustainable, prosperous and diversified forest sector for the future. Our long-term focus is to invest in land-based activities (growing more, high-value timber; restoring environmentally-damaged watersheds; and filling knowledge gaps to allow more informed forest management decisions) and to implement our strategy to help the B.C. value-added sector expand and diversify.

To that end, Forest Renewal BC has become the value-added sector's number-one financial supporter. Working with the industry, Forest Renewal's value-added strategy targets specific areas for investment and guides this year's planned expenditure of \$20.9 million. Almost all initiatives are demand-driven, cost-shared, and operate on a province-wide basis.

Projects such as Home 2000 and Forest Renewal BC's wood products showcase, also on display at the B.C. Home Show, are working to promote made-in-B.C. products and demonstrate the great potential and opportunities available in B.C.'s value-added sector.

For more information, contact us at one of the numbers listed below.

In Greater Victoria call: 250-387-2500

Elsewhere in B.C. call toll-free: 1-800-663-7867
(ask for transfer to 387-2500)

You can also reach us through the Internet at
www.forestrenewal.bc.ca



Canadian Plywood Association

The Canadian Plywood Association (CANPLY) is a non-profit organization representing and serving the manufacturers of plywood, veneer and veneer composite products in Canada.

Founded in 1951 as the Plywood Manufacturers Association of B.C., CANPLY has evolved from an organization of coastal B.C. manufacturers focused on establishing standards, into a multi-faceted organization with both a national and international mandate to serve the many and varied interests of its members.

CANPLY represents 10 member companies in Western Canada. Together, they operate 12 mills and produce 95% of all structural, construction and industrial softwood plywood manufactured in Canada.

CANPLY member mills incorporate state-of-the-art technology to produce high-quality plywood engineered for excellence. This advanced technology also promotes environmentally responsible forest practices – logs in the use of CANPLY plywood manufacture average 10 inches in diameter and are taken from managed sustainable forests. In addition, the waterproof, highly durable phenolic resin in plywood manufacture emits almost zero formaldehyde off gas – ensuring the health and safety of homeowners by promoting a high caliber of indoor air quality.

For Home 2000, our members supplied Douglas Fir plywood (DFP) and Canadian Softwood plywood (CSP) sheathing, and laminated veneer lumber (LVL) for use in roof trusses, floor joists and header beams.

For more information about CANPLY,
call (604) 981-4190
or visit our Web site at www.canply.org



UBC School of Architecture

The School of Architecture at the University of British Columbia offers graduate programs in professional studies and advanced research. A concern for environmentally responsible design and appropriate building technologies informs work throughout the School, as well as revealing itself in community-centered activities such as the Design-Build Program.

Students in the MArch program, working under the supervision of Professor Linda Brock and MASA student Elizabeth MacKenzie, provided the primary design parameters for Home 2000. Preliminary research was followed by a three-week design study led by Professor Sandy Hirshen.

Their design had to meet diverse requirements; for example, it had to accommodate changing family patterns while meeting siting restrictions and remaining affordable. The varied expectations of Home 2000 stakeholders also contributed to the students' understanding of the complexity of "real-life" design. And ultimately, the design had to assimilate into the builder's own design parameters.

Student designers on the project included: Jeffrey Anders, Robert Bateman, Kevin Bismanis, Bill Cicvaric, Maxine Cowan, Lisa Ditschum, Graham Elvidge, Varouj Gumuchian, Baldwin Hum, Yvonne Ip, Herman Kao, Savina Praseuth, Joel Redmond, Glenn Ross, Marc Soehngen, Heather Tremain, Jenny Tsai, and George Wang.

For more information about the UBC School of Architecture programs and community outreach initiatives, please call (604) 822-2779 or visit our Web site at www.architecture.ubc.ca



ubc school of architecture

The Home Depot

Founded in 1978, The Home Depot is the world's largest home improvement retailer. We are credited as being the innovator of the home improvement industry, combining warehouse pricing with a level of service unprecedented among warehouse-style retailers. Home Depot stores cater to do-it-yourselfers, as well as home improvement, construction and building maintenance professionals. Each store stocks approximately 50,000 different kinds of building, home improvement, and lawn and garden products.

At The Home Depot, our associates take great pride in providing the very best in customer service. Each store offers free design and decorating consultations, truck and tool rentals, home delivery, free potting, and many other services to accommodate our customers' home improvement needs. Our free in-store clinics help homeowners develop their do-it-yourself skills. To ensure complete satisfaction, The Home Depot offers our No Hassle Return Policy on every item in our stores.

Home Depot's progressive corporate culture includes a philanthropic budget which is directed back to the communities The Home Depot serves. The company's three major areas of focus are: affordable housing, at-risk youth and the environment.

There are nine Home Depot stores in British Columbia. To find the location nearest you, look in the white pages of your telephone book. You'll also find store locations and home improvement tips on our Web site at www.homedepot.com





Healthy Housing Renovation Planner NE2172 (\$34.95)

This new book includes detailed illustrations and helpful planning guides to make your home healthy, safe and sound. It provides useful tips on ways to improve the health and efficiency of your home.

Healthy Housing Kit 4029E (\$24.95)

This kit provides you with a video and over 200 pages of research to help you assess the air quality and energy efficiency of your home – conduct your own indoor air quality audit!

Building Materials for the Environmentally Hypersensitive 6742E (\$29.95)

A practical sourcebook for persons with environmental hypersensitivities, serious asthma or allergies, and for those building them a house. An easy-to-use format with 180 product listings. Includes personal test instructions and comprehensive index.

FlexHousing: Homes That Adapt to Life's Changes NE2020 (\$9.95)

FlexHouses are houses that adapt to your changing needs. This book includes design options and floor plans; insights from a top Canadian architect specializing in FlexHousing; decorating hints and tips for hiring a contractor.

Tap the Sun: Passive Solar Techniques and Home Designs 2000E (\$39.95)

The only guide of its kind that's written specifically for Canadian architects and designers. Everything you need to know about designing homes to capture the sun's free energy...plus 20 stunning home designs!

Residential Guide to Earthquake Resistance NE6995 (\$39.95)

Intended as a reference guide for parties working with existing wood-frame homes but is also applicable to new construction. The information in this guide can be applied to all of the high-risk areas in Canada (both coasts, the Montreal/Quebec City area, the Ottawa Valley and some northern areas).

Is Your Home Earthquake Resistant? (Video) 7873 (\$19.95)

This video demonstrates what homeowners can do in advance to prepare their home to better withstand the destructive forces of an earthquake, and how to survive the first 72 hours after an earthquake.

Homeowner's Manual NE2322 (\$39.95)

The new Homeowner's Manual is customized and comprehensive with everything homeowners need to know about operating and maintaining their new home. It's another tool to help you grow your business and provide quality customer care.

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Three easy and convenient ways to order CMHC information products:

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Order #	Title	Qty.	Unit Price	Sub-total	Tax	S+H	Total
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4029E	Healthy Housing Kit		24.95				
6742E	Building Materials for the Environmentally Hypersensitive		29.95				
NE2020	FlexHousing: Homes That Adapt to Life's Changes		9.95				
2000E	Tap the Sun: Passive Solar Techniques and Home Designs		39.95				
6995E	Residential Guide to Earthquake Resistance		39.95				
7291	Is Your Home Earthquake Resistant? (Video)		19.95				
NE2322	Homeowner's Manual		39.95				

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