Step 3, Hassle-Free:

Five new British Columbia homes that cost-effectively meet the energy efficiency requirements of the BC Energy Step Code

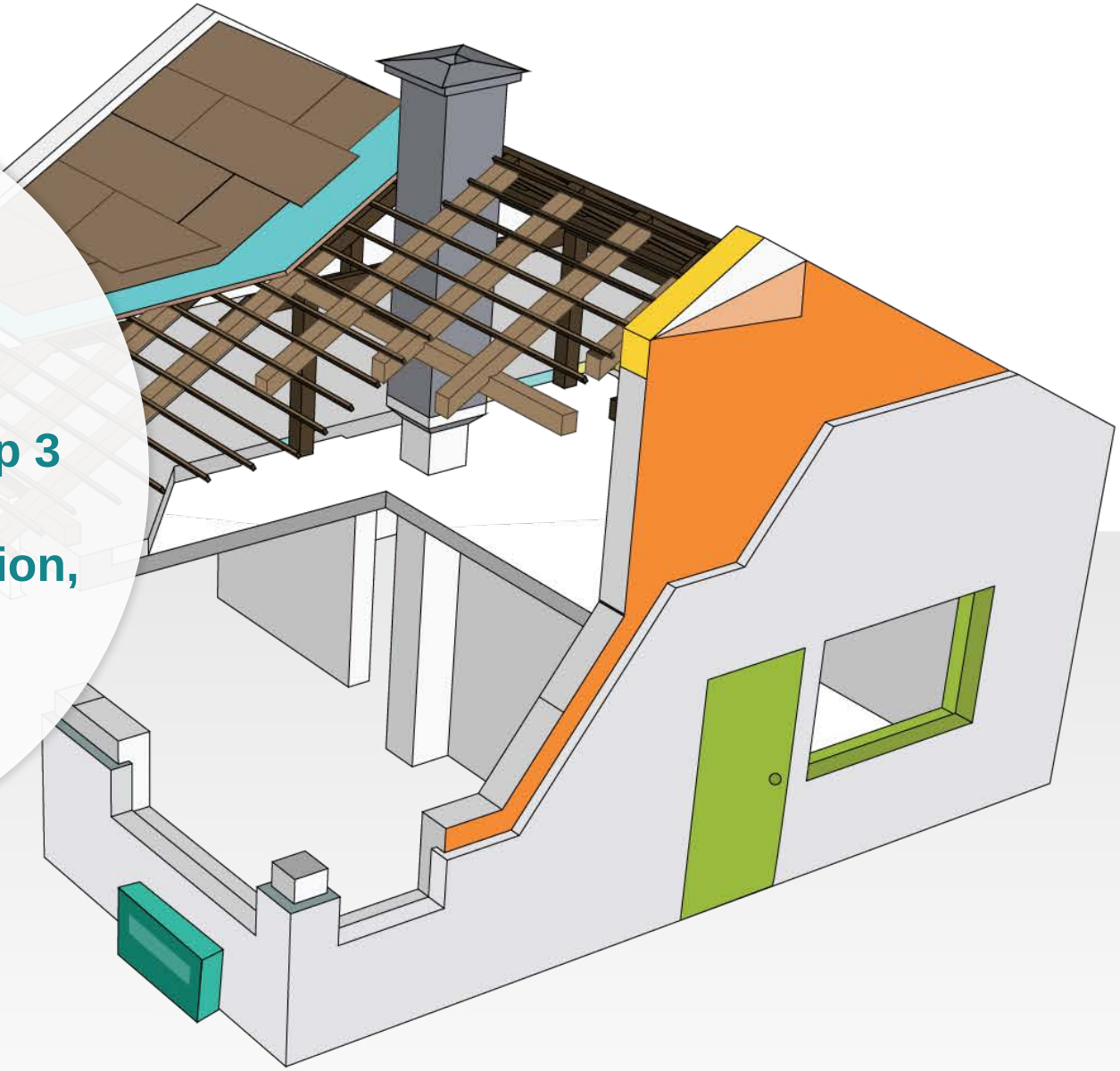
ENERGY STEPCODE
BUILDING BEYOND THE STANDARD

Five projects that point to the future of B.C. home performance

A look inside a typical Step 3 Home

Six Proven Strategies

Builders can meet Step 3 by paying attention to details, adding insulation, and carefully planning mechanical systems.

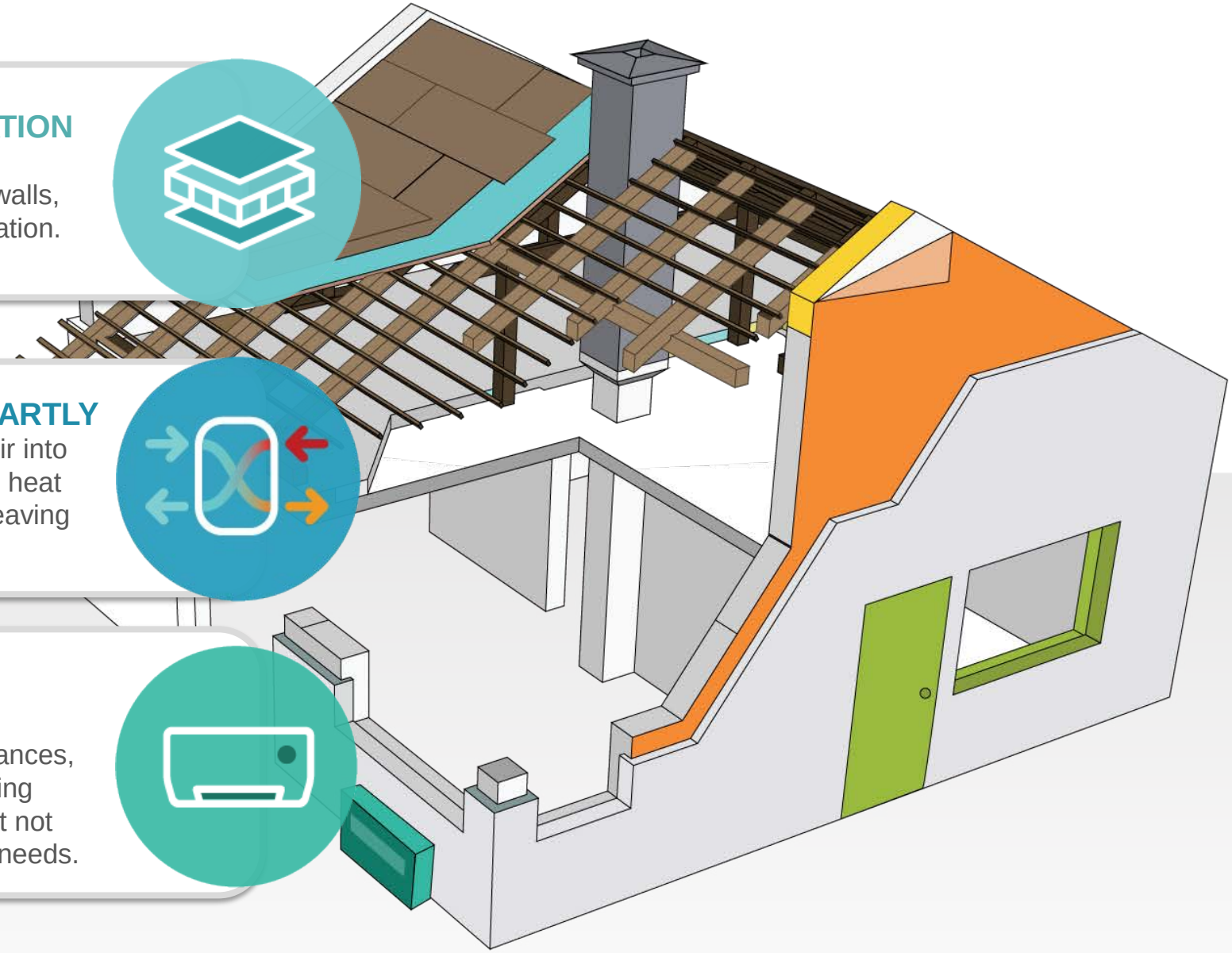


The Six Strategies that cost-effectively boost performance

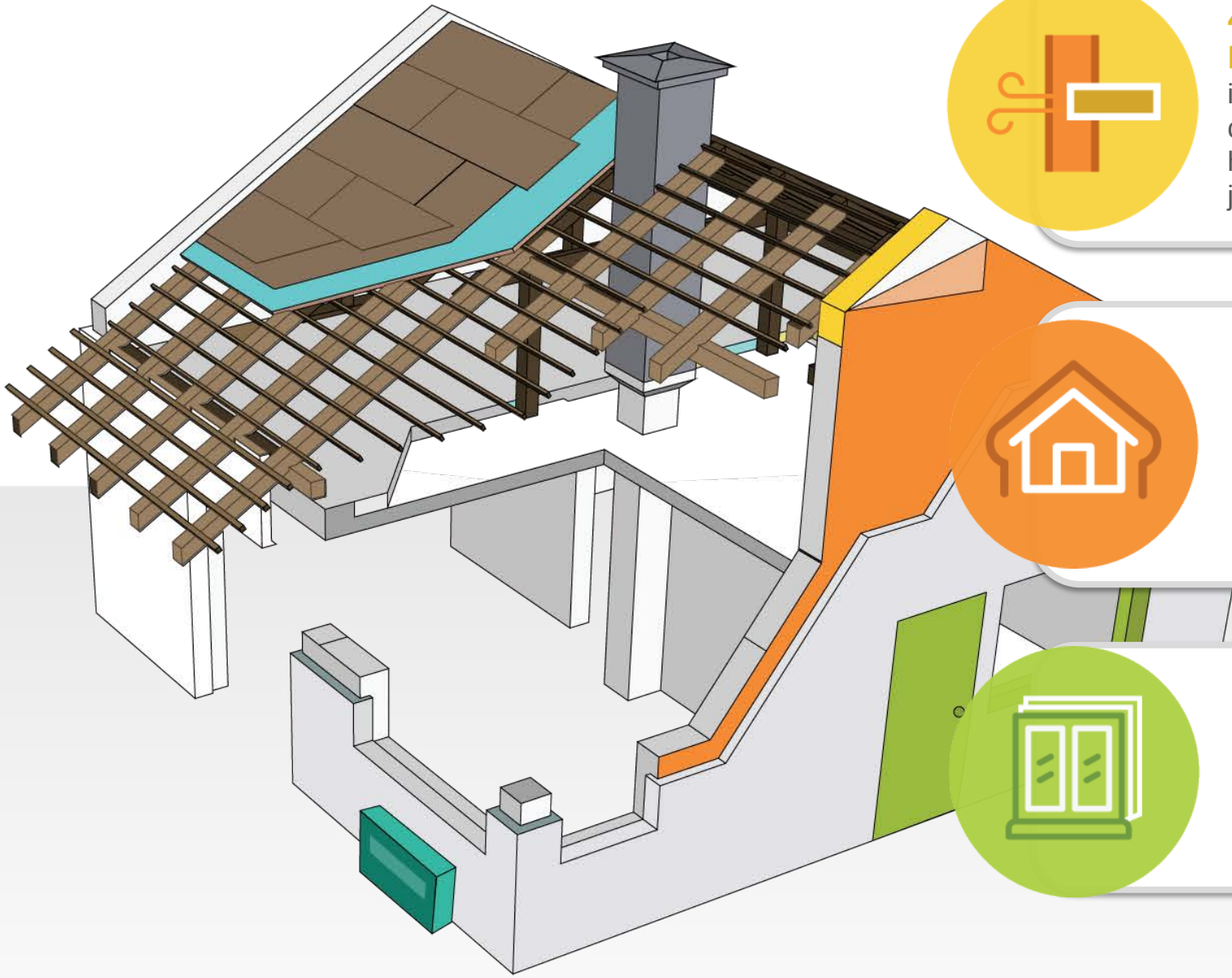
1. BOOST INSULATION
To reduce heat loss, increase insulation in walls, floors, roof, and foundation.

2. VENTILATE SMARTLY
Bring plenty of fresh air into the home and recover heat from the exhaust air leaving the building.

3. MIND YOUR MACHINES
Specify efficient appliances, and ensure your heating system will meet – but not exceed – the home's needs.



The Six Strategies that cost-effectively boost performance

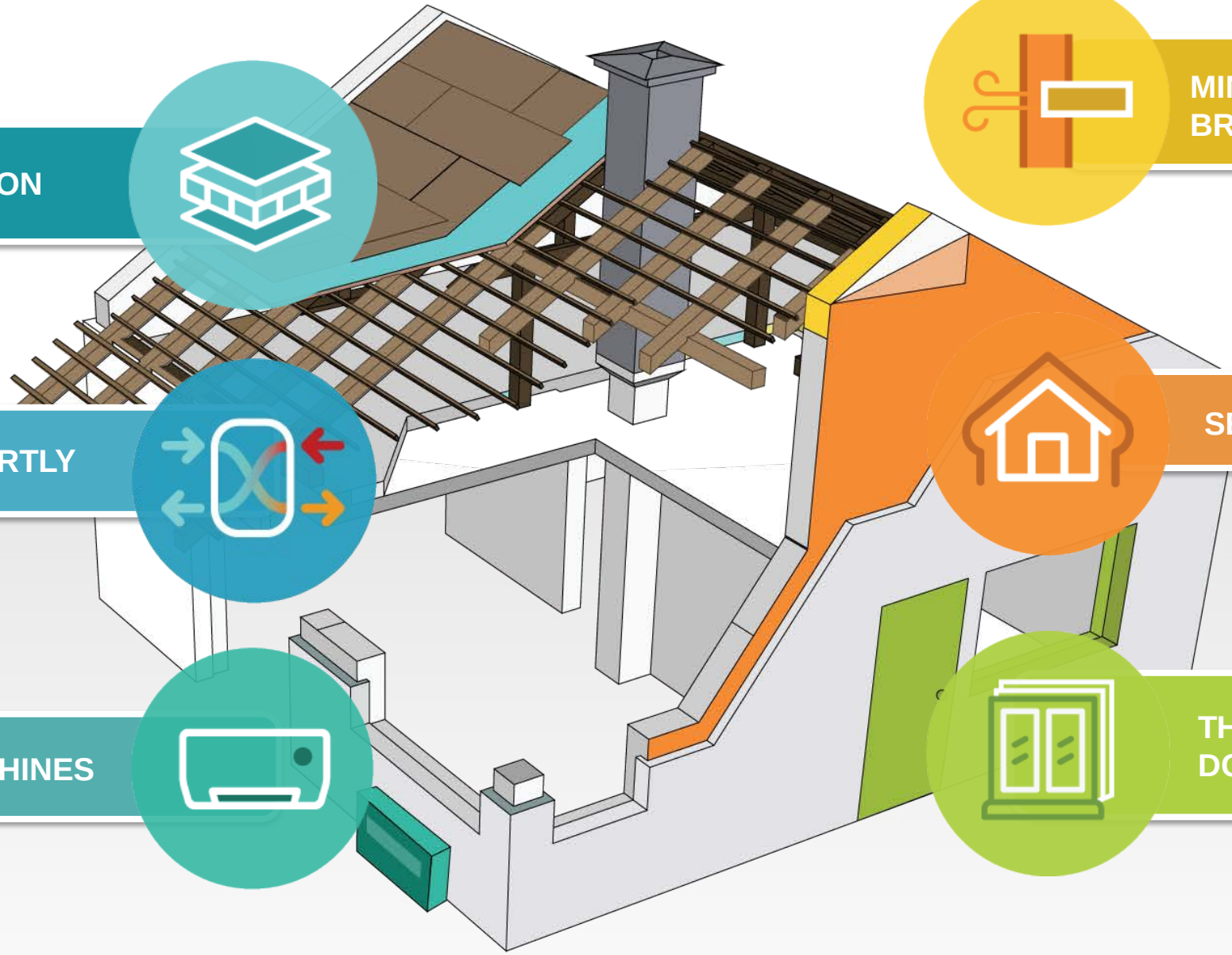


4. MINIMIZE THERMAL BRIDGES A break in your insulation acts like a bridge that carries heat straight out of the house. Take care with corners, junctions, gaps and studs!

5. SEAL IT UP
Air leaks are heat leaks. Wrap the home tightly, taking care to seal around ducts, pipes, fixtures, and wires that pass through walls, ceilings, and roof.

6. THINK ABOUT DOORS & WINDOWS
Carefully consider their energy performance, size, and location.

The Six Strategies that cost-effectively boost performance



BOOST INSULATION

MINIMIZE THERMAL BRIDGES

VENTILATE SMARTLY

SEAL IT UP

MIND YOUR MACHINES

THINK ABOUT DOORS & WINDOWS

CASE STUDY: Autumn Place Residence, Whistler

CASE STUDY: Autumn Place Residence, Whistler

Climate zone:	**6**
Project size:	2,198 square feet
Build cost:	$1.3 million, $591/square foot
Step achieved:	3

2% above

costs to build to the energy efficiency requirements of the BC Building Code

> ***"The additional investment went into extra insulation, higher-quality windows, and additional labour costs to boost airtightness.***

CASE STUDY: Autumn Place Residence, Whistler

BOOST INSULATION

Graphite-coated foam board reflects radiant heat back into the home. (Every particle counts!)

SEAL IT UP

The crew affixed **rigid insulation board** to the home exterior, and **sealed joints** to make the home airtight.

CASE STUDY: Westside Park Residence, Invermere

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Climate zone:	**6**
Project size:	1,536 square feet
Build cost:	$308,800, or $201/square foot
Step achieved:	3

Less than 2% above

cost to build to the energy efficiency requirements of the BC Building Code

> ***We will not build a house that is simply 'code compliant.' It's not worth it for anyone. It doesn't deliver comfort, cost efficiency. It doesn't deliver any benefits.***

CASE STUDY: Westside Park Residence, Invermere

THINK ABOUT DOORS & WINDOWS

The team specified **triple-pane windows.** They're not top-of-the-line, but solid performers, all.

MINIMIZE THERMAL BRIDGES

Doubled-up exterior walls feature a half-inch air gap that discourages precious indoor heat from leaking to the great outdoors.

CASE STUDY: Quail’s Roost Residence, Kamloops

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Climate zone:	**5**
Project size:	2,300 square feet
Build cost:	$469,000, or $204/square foot.
Step achieved:	4

4% above

costs to build to the energy efficiency requirements of the BC Building Code

> ***"In winter, the exposed concrete slab floor absorbs the heat of the low sun through the home's south-facing windows, which radiates it into the house well into the evening.***

CASE STUDY: Quail's Roost Residence, Kamloops

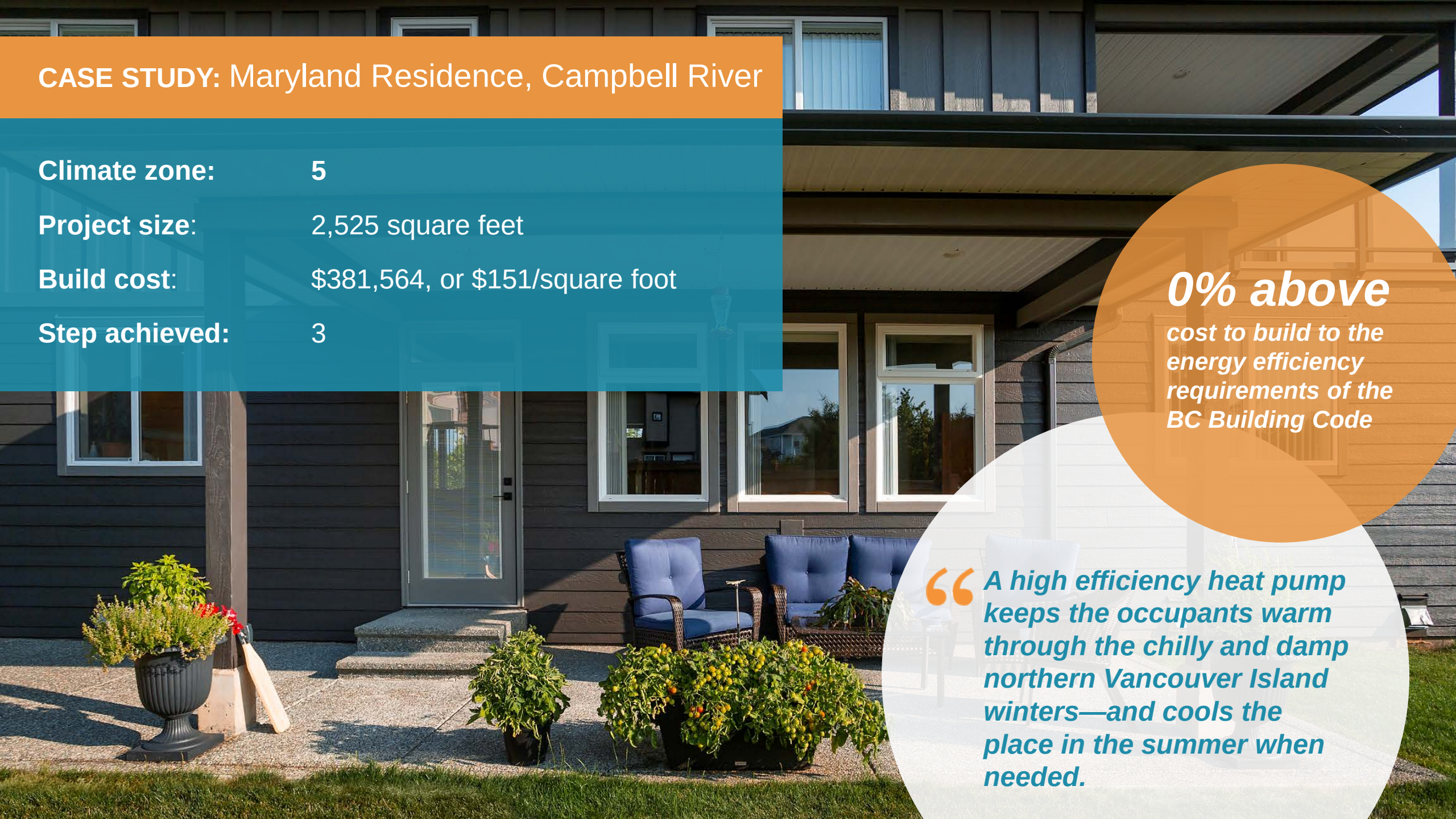
THINK ABOUT DOORS & WINDOWS

There's a lot of south-facing glass here to soak up winter sun. A **roof overhang** keeps things cool in the summer.

BOOST INSULATION

The energy advisor recommended **four inches of rigid foam** under the slab, plus **extra fiberglass** in the foot-thick exterior walls and roof.

CASE STUDY: Maryland Residence, Campbell River



CASE STUDY: Maryland Residence, Campbell River

Climate zone:	**5**
Project size:	2,525 square feet
Build cost:	$381,564, or $151/square foot
Step achieved:	3

0% above

cost to build to the energy efficiency requirements of the BC Building Code

> ***A high efficiency heat pump keeps the occupants warm through the chilly and damp northern Vancouver Island winters—and cools the place in the summer when needed.***

CASE STUDY: Maryland Residence, Campbell River

SEAL IT UP

A squirt of **spray foam targeted air leaks** along the outside edges of the first and second floors.

MIND YOUR MACHINES

A **tankless on-demand natural gas water heater** serves up abundant hot water, and allowed the builder to access an energy-efficiency incentive program.

CASE STUDY: Bowers Residence, Victoria

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Climate zone: **4**

Project size: 2,505 square feet

Build cost: $551,100, or $221/square foot

Step achieved: 4

2% above

cost to build to the energy efficiency requirements of the BC Building Code

> ***“The builder constructed this home with insulated concrete forms, making a high efficiency vertical ‘sandwich’ of concrete and foam running from foundation to roof.***

CASE STUDY: Bowers Residence, Victoria

SEAL IT UP

The builder draped **air barrier material** across the top of the exterior walls, lowered the trusses down on it, then taped and sealed the underside

Thank You!

Questions?

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