



Completed checklists form part of the application package reviewed by staff and ultimately Council. New buildings and developments have impacts that last well beyond the construction period. Reducing the consumption of natural resources and increasing resilience to a changing climate are part of the challenge of building more sustainably. This checklist will help you identify and present how your project will help the Township meet its goals of becoming carbon neutral by 2050.

Applicant's Name CITTA CONSTRUCTION

Site Address 469 STURDEE ST

1.0 Certification		Please check
1.1	Step Code (Please indicate level) <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
1.2	EnerGuide rating	
1.3	LEED	
1.4	Passive House	
1.6	Living building	
1.7	Other (Built Green BC, R-2000, Green Shores etc.)	<input checked="" type="checkbox"/>
2.0 Siting		
2.1	New buildings > 10 m ² are located > 20 m from the high water mark (HWM) of the Gorge Waterway.	Required
2.2	New buildings > 10 m ² are located at least 10 m from the HWM from the outer coastline.	Required
2.3	Flood Construction Level has been established using sea level rise projections for the life of the building.	
2.4	Habitats of threatened and endangered species have been protected from impacts of development.	
2.5	Buildings are located within disturbed or developed areas.	<input checked="" type="checkbox"/>
3.0 Shoreline Protection Measures		
3.1	Landscaping within 10 m of the high water mark consists primarily of native plant and tree species.	Required
3.2	A conservation covenant has been signed to protect sensitive ecosystems within 10 m of the shoreline.	
3.3	At least one native tree capable of (now or in the future) supporting the nest of a Bald Eagle, Osprey etc. has been retained or is planted within 30 m of the high water mark (HWM).	
3.4	Removal of at least 30% of hardened shoreline and replacement with erosion control measures designed to improve the habitat of the shoreline.	
3.5	Light from building and landscaping does not cast over water.	<input checked="" type="checkbox"/>
3.6	Wildlife habitat has been incorporated into seawall design.	

4.0 Stormwater Absorption and Treatment		Please Check
4.1	An on-site stormwater retention system has been designed to retain at least the first 3 cm of rainfall from each rain event.	
4.2	Stormwater will be treated for pollutants prior to release to the stormdrain system or to a surface water source.	
4.3	The project features a green roof.	
4.4	The total amount of impervious surface is not greater than 20%.	✓
5.0 Water Conservation		
5.1	The irrigation system has been designed to reduce potable water use by 50% compared to conventional systems.	
5.2	Waterless urinals will be used.	
5.3	Water features use re-circulating water systems.	
5.4	Rainwater will be collected for irrigation purposes.	✓
5.5	Toilet and kitchen sink drains are separate from other drains to the point of exit.	
5.6	An approved greywater reuse system will be installed.	
6.0 Trees/Landscaping		
6.1	The project is designed to protect as many native and significant trees as possible.	
6.2	There will be no net loss of trees.	
6.3	Trees will be planted in soil volumes calculated to support the full grown size of the tree.	✓
6.4	At least 25% of replacement trees are large canopy trees.	
6.5	Topsoil will be protected from compaction, or stockpiled and reused.	✓
6.6	Erosion control measures have been designed and installed to prevent erosion of topsoil.	
7.0 Biodiversity		
7.1	New landscaping is predominantly native plant and tree species.	✓
7.2	Invasive species will be removed from landscaped areas.	✓
7.3	At least two biodiversity features have been incorporated into the new or existing landscaping (see section 18.5.3 of the OCP for ideas).	
8.0 Energy Conservation		
8.1	The building is pre-plumbed for solar hot water.	Required
8.2	Install a greywater heat recovery unit.	
8.3	Passive cooling is supported through flow-through ventilation design, low E windows, solar shades, shade trees etc.	✓
8.4	Passive heating is supported via building orientation, window design and thermal mass.	
8.5	The building will have necessary structural support and conduit for Solar PV.	
8.6	Obtain minimum of 20% of building energy consumption through community based or on-site renewables, such as district energy, waste heat recovery, geothermal, solar PV, solar hot water.	
8.7	Heating uses a low carbon heating source, such as air source heat pump.	✓

9.0 Transportation		Please Check
9.1	Building will have a car share or bus pass program for residents.	
9.2	Enhanced facilities for bicyclists such as showers, lockers, storage etc.	
9.3	Charging infrastructure for E-bikes will be provided.	
9.4	EV charging conduit supplied to 100% of residential parking units.	
9.5	30% of residential parking spaces include an electrical outlet or EV charging equipment.	
9.6	Adequate space in the electrical system to provide EV charging for 100% of parking stalls.	✓
9.7	For commercial buildings, Level 2 or Level 3 EV charging provided for employees and/or visitors.	
10.0 Materials/Waste		
10.1	Employs at least 3 advanced framing techniques described in the CHBA builder's manual to reduce unnecessary lumber and sheathing.	
10.2	Uses at least two materials which are certified for recycled content.	✓
10.3	Uses engineered structural material for two major applications (>10% of floor area).	
10.4	5 major building elements made from >50% recycled content.	
10.5	Use foundation, floor and >50% of walls from existing building.	
10.6	Deconstruct at least 50% of existing building for material salvage.	
10.7	Use at least five major materials or systems produced in BC.	
10.8	Use certified sustainably harvested wood for one major structural or finishing application (eg framing, plywood, floors)	✓
10.9	Eliminate use of wood from threatened trees.	✓
10.10	Recycling area provided within residential suites.	
10.11	Recycling collection area for multi-family buildings.	
10.12	Pickup of compostables provided in multi-family units.	
10.13	Construction waste management practices used to reduce and separate waste and divert at least 50% from the landfill.	✓

Please include a brief description of how this project contributes to a reduction in greenhouse gas emissions and moves the municipality closer to its ultimate target of becoming carbon neutral by 2050 (use another page if needed).

Energy Modeling Report

WO# 0439

For: Citta Construction Ltd. ERS # 5187 - 01211 by: Stuart Kidson
 Unit 1 - 469 Sturdee St 250.886.3142
 Att'n: Esquimalt B.C. stuart@enerlytics.ca

Ener Guide (GJ/yr)	Step Code	ACH		Whole House					Envelope		GHG tonnes/yr	Utility Cost \$/yr			Built Green
		@ 50 pa	Step	LTRH %	Step	MEUI kWh/m ² /y	Step	Step	TEDI kWh/m ² /y	Step		Elec	NG	Total	
47.6	1	3.50	1	40.3	4	38.5	5	5	29.0	3	0.879	1,077	297	1,374	Platinum

modeled in H2k v-11.7 as SFH

HOUSE SPECIFICATIONS	Orientation: West	Floor Area: AG 1704.5 ft ²	Fenestration/ Wall
	Volume: 17,325 ft ³	BG 0.0 ft ²	Area: 13.9%
ROOFS		WINDOWS	
Scissor: 2"x 4" Truss at 24" o.c., R40 Blown Fibreglass Insulation		Vinyl framed, double, low E, argon, insulating spacer (Energy Star)	
WALLS		DOORS	
2"x 6"; 16" o.c.; 3 stud corners c/w R20 Batt; 7/16" OSB sheat Garage: 2"x 6"; 16" o.c. c/w R20 Batt; 1/2" Gypsum sheat Joists: R20 Batt Lintels: Double with 2.5" XPS		Fibreglass medium density spray foam (Energy Star)	
FOUNDATIONS		SPACE HEATING	
Slab: 2.5" XPS full perimeter, thermal break at slab edge		ASHP- Mini Split Ductless 1 Head Electric Baseboard NG Fireplace	
EXPOSED FLOORS		HOT WATER	
2x10" Joists , 16" o.c. c/w R28 Batt; 3/4" Plywood		DHW: NG Instantaneous	
		VENTILATION	
		HRV: Venmar K10 BCBC min. air-flow rate: 60 cfm	

Ener Guide Rating	New EnerGuide Rating: (GJ/year) This is the annual energy consumption for the proposed house/MURB. It includes space heating and cooling, DHW, and base loads (as set to the NRCAN/HOT2000 defaults for lighting, appliances, and plug loads). Takes into account internal and solar heat gains.
% LTRH	% Lower Than (EnerGuide) Reference House: This metric compares the annual energy use (not including Base Loads) of the proposed house with a corresponding reference house. The reference house represents the prescriptive requirements of 9.36 in the NBC and is auto-generated in HOT2000.
MEUI kWh/m ² /a	Mechanical Energy Use Intensity: (kWh/m ² /year) This metric is the yearly energy use per unit floor area used for Space Heating and Cooling, DHW, Fans, Pumps, and Ventilation.
TEDI kWh/m ² /a	Thermal Energy Demand Intensity: (kWh/m ² /year) This metric is the yearly heating requirement, per unit floor area, for space conditioning and for conditioning ventilation air (including leakage air).

Energy Modeling Report

WO# 0439

For: Citta Construction Ltd. ERS # 5187 - 01212 by: Stuart Kidson
 Unit 2 - 469 Sturdee St 250.886.3142
 Att'n: Esquimalt B.C. stuart@enerlytics.ca

Ener Guide (GJ/yr)	Step Code	ACH		Whole House					Envelope		GHG tonnes/yr	Utility Cost \$/yr			Built Green
		@ 50 pa	Step	LTRH %	Step	MEUI kWh/m ² /y	Step	Step	TEDI kWh/m ² /y	Step		Elec	NG	Total	
47.9	1	3.50	1	41.1	4	39.0	5	5	30.5	2	0.880	1,089	297	1,386	Platinum

modeled in H2k v-11.7 as SFH

HOUSE SPECIFICATIONS	Orientation: West	Floor Area: AG 1704.5 ft ²	Fenestration/ Wall
	Volume: 17,339 ft ³	BG 0.0 ft ²	Area: 15.7%
ROOFS		WINDOWS	
Scissor: 2"x 4" Truss at 24" o.c., R40 Blown Fibreglass Insulation		Vinyl framed, double, low E, argon, insulating spacer (Energy Star)	
WALLS		DOORS	
2"x 6"; 16" o.c.; 3 stud corners c/w R20 Batt; 7/16" OSB sheat Garage: 2"x 6"; 16" o.c. c/w R20 Batt; 1/2" Gypsum sheat Joists: R20 Batt Lintels: Double with 2.5" XPS		Fibreglass medium density spray foam (Energy Star)	
FOUNDATIONS		SPACE HEATING	
Slab: 2.5" XPS full perimeter, thermal break at slab edge		ASHP- Mini Split Ductless 1 Head Electric Baseboard NG Fireplace	
EXPOSED FLOORS		HOT WATER	
2x10" Joists , 16" o.c. c/w R28 Batt; 3/4" Plywood		DHW: NG Instantaneous	
		VENTILATION	
		HRV: Venmar K10 BCBC min. air-flow rate: 60 cfm	

Ener Guide Rating	New EnerGuide Rating: (GJ/year) This is the annual energy consumption for the proposed house/MURB. It includes space heating and cooling, DHW, and base loads (as set to the NRCAN/HOT2000 defaults for lighting, appliances, and plug loads). Takes into account internal and solar heat gains.
% LTRH	% Lower Than (EnerGuide) Reference House: This metric compares the annual energy use (not including Base Loads) of the proposed house with a corresponding reference house. The reference house represents the prescriptive requirements of 9.36 in the NBC and is auto-generated in HOT2000.
MEUI kWh/m ² /a	Mechanical Energy Use Intensity: (kWh/m ² /year) This metric is the yearly energy use per unit floor area used for Space Heating and Cooling, DHW, Fans, Pumps, and Ventilation.
TEDI kWh/m ² /a	Thermal Energy Demand Intensity: (kWh/m ² /year) This metric is the yearly heating requirement, per unit floor area, for space conditioning and for conditioning ventilation air (including leakage air).

BUILT GREEN® Checklist: Single Family New Construction

Effective January 1, 2019 (using EnerGuide v15)



To select checklist points, click and select point values from the drop-down list for each point.

Energy Modelling for Section I (Energy & Envelope) is a requirement. Please enter your EnerGuide rating below; Section 1 will not total without the EnerGuide rating.

Builder	CITA CONSTRUCTION	
Address	469 STURDEE ST UNITS 1 & 2	
Summary	1 - Energy and Envelope:	40 points
	2 - Materials and Methods:	29 points
	3 - Indoor Air Quality:	17 points
	4 - Ventilation:	6 points
	5 - Waste Management:	7 points
	6 - Water Conservation:	12 points
	7 - Business Practice:	11 points
	TOTAL POINTS:	122 points (GOLD) OK!



I. ENERGY AND ENVELOPE

This section awards points for construction methods and types of products that contribute to lower energy consumption, as well as alternative heating and electrical systems.

Minimum Energy Modelling: 25 Points required for Bronze, 30 points for Silver, 35 points for Gold, and 40 points for Platinum.

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/i-envelope-and-energy-systems

Relative cost

Points per item

I.0: Energy Modelling - EnerGuide v15

EnerGuide v15 modelling is a requirement for Section I (Energy & Envelope). The energy requirement for each certification level is based on the percent lower than reference house (% LTRH). In other words, the ERS v15 rating must meet the required percent lower than the corresponding ERS v15 reference house.

Input the ERS v15 "As Built" house and the ERS v15 reference house in the boxes below. The checklist will automatically calculate the percentage lower than reference house.

EnerGuide Rating "As Built"

57.8

← Input Rating Here

EnerGuide Rating "Reference House"

74.3

← Input Rating Here

Percentage Below Reference House

34

Your percentage varies from your ERS label, as Built Green removes the electric baseloads from both the "As Built" house rating and the "Reference House" rating. This is to ensure that the home's energy improvements are not affected by the electric baseloads, which are constant through all EnerGuide-rated homes and cannot be improved upon in the EnerGuide model.

Bronze certification: house rating meets the energy requirements of 9.36 reference house and earns 25 points.

Silver certification: house rating is 10% lower than reference house and earns 30 points.

Gold certification: house rating is 20% lower than reference house and earns 35 points.

Platinum certification: house rating is 30% lower than reference house and earns 40 points.

Built Green Canada recognizes there are many paths to success for the energy section. For information on one of the ways, read more here: www.builtgreencanada.ca/5-cost-effective-ways-to-build-a-built-green-home

** In certain regions due to lower heating consumption it has become necessary to become more exact between the standard operating conditions house and the reference house. Built Green Canada will accept the better of the difference on the ERS label or the difference on the Advanced Tab of the Calculate Function in Hot2000. For those using the Advanced Tab, a screen shot is required.

The remaining action items and points hereafter in Section I may be used for additional points to be earned in your overall score; however, these points will not impact the earned energy points determined by the % lower than reference house calculation.

40

\$\$ - \$\$\$\$\$

0 to 75

I.1: Building Envelope

1.1.1	Install additional insulation on exterior of above-grade walls, above insulation amounts already required by code: add R5 for 2 points or R10 for 4 points.	<input type="checkbox"/> \$ - \$\$\$	2 or 4
1.1.2	Replace exterior wood sheathing with insulating sheathing and structurally required metal bracing.	<input type="checkbox"/> NC - \$\$	2
1.1.3	Insulated Concrete Form (ICF) system used for foundation walls.	<input type="checkbox"/> \$\$\$\$	3
1.1.4	Insulated Concrete Form (ICF) system used for 75% of above-grade house walls.	<input type="checkbox"/> \$\$\$\$	4
1.1.5	Structural insulated panel system used for at least 75% of roof/ceiling (4 points), 75% of walls (6 points), exposed floors (2 points) and/or foundation (2 points).	<input type="checkbox"/> \$\$ - \$\$\$\$	2 to 14
1.1.6	Install site-applied spray foam (or cut-to-size rigid foam, sealed with appropriate foam/caulking) to insulate entire rim joist area (1 point), exposed floors (2 points), and/or house walls (4 points), and/or entire roof (3 points).	<input type="checkbox"/> \$\$\$\$	1 to 10
1.1.7	Install additional exterior insulations system on exterior of foundation system, above code-required interior insulation level: minimum R Value of 7.5 (1 point), R10 (2 points), or R15 (3 points).	<input type="checkbox"/> \$\$\$	1, 2 or 3
1.1.8	Install R5 (1 point), R8 (2 points), or R12 (3 points) above building code required under entire basement slab.	<input type="checkbox"/> \$\$ - \$\$\$	1, 2 or 3
1.1.9	Use of insulated headers/lintels (either manufactured or site-built) with minimum insulation value of R10.	<input type="checkbox"/> \$ - \$\$	1
1.1.10	Install manufactured insulated rim/band joist, or use on-site built header wrap detail for continuous air barrier.	<input type="checkbox"/> \$ - \$\$	1
1.1.11	All electrical back-boxes in exterior walls and ceilings are airtight (molded plastic) for 1 point, and/or ceiling boxes are airtight and builder incorporates an exterior air barrier system for the walls (1 point).	<input type="checkbox"/> NC - \$	1 or 2
1.1.12	All sill plates sealed with foam, sill gaskets, or a continuous sandwiched bead of acoustical sealant.	<input type="checkbox"/> NC - \$	1
1.1.13	Install weather-stripped and insulated (R20 minimum for 1 point and R28 for 2 points) manufactured interior attic hatch, or no interior attic access.	<input type="checkbox"/> NC - \$	1 or 2
1.1.14	Attached garage is fully insulated, has no provision for future heating, and overhead door is insulated to minimum R8 (for 1 point) or R12 (for 2 points).	<input type="checkbox"/> \$ - \$\$\$	1 or 2
1.1.15	Builder uses passive solar design shading devices for home: permanent horizontal and/or vertical exterior shading devices for glazing (2 points), computer-controlled devices (additional 1 point). Use of professional lighting design/placement (additional 1 point).	<input type="checkbox"/> \$\$ - \$\$\$\$	2, 3 or 4
1.1.16	All windows in home are ENERGY STAR labelled (or equivalent) for the climatic zone of the home (1 point), or for a higher zone (e.g. zone 3 windows on a home in zone 2) (for 2 points).	<input type="checkbox"/> \$ - \$\$\$	1 or 2
1.1.17	Install opaque doors that are minimum R6, and any glazed sliding or swing doors at minimum R4 (1 point).	<input type="checkbox"/> \$\$	1
1.1.18	All decks or balconies are thermally broken from the building envelope by: (i) Minimum R10 (1 point); OR (ii) Are fully separated (2 points).	<input type="checkbox"/> \$ - \$\$	1 or 2
1.1.19	For this house, the builder conducts an air-tightness inspection at the mid-construction stage (1 point), with optional blower door test (additional 1 point). This will allow the Energy Advisor to identify areas of air leakage before completion. At completion, additional points for final Air Change per Hour levels: less than 3 ACH (1 point), less than 2 ACH (3 points), and less than 1 ACH (5 points).	<input type="checkbox"/> \$	1 to 7
1.1.20	Builder utilizes a certified building envelope engineer for the design of the building envelope (1 point).	<input type="checkbox"/> \$\$\$	1

I.2: Mechanical Systems

1.2.1	All mechanical is placed above grade in the home to prevent damage from potential flooding.	<input type="checkbox"/> \$\$	1
1.2.2	Install a zoned heating system. Either a) from a single HVAC source utilizing two or more programmable, thermostatically controlled zones; or b) zoning separate systems through separate programmable thermostats. (2 zones = 2 points; 3 zones = 3 points; 4 zones = 4 points).	<input type="checkbox"/> \$ - \$\$\$\$	2, 3 or 4
1.2.3	Install high efficiency, sealed combustion heating appliance, with a minimum 94% AFUE (2 points), or 95% AFUE (3 points), or 96% AFUE and above (4 points).	<input type="checkbox"/> \$ - \$\$\$	2, 3 or 4
1.2.4	Install heat pumps to supply majority of space heating and cooling loads: - ground/water with minimum COP of 4 and SEER 15; OR - air source heat pump (ASHP) meeting minimum requirements: for split-system minimum 8.5 HSPF and minimum SEER 15. Or for single package system minimum 8.2 HSPF and minimum SEER 15.	<input type="checkbox"/> \$\$ - \$\$\$\$\$	5
1.2.5	Install a programmable thermostat with set back and continuous fan for 1 point, programmable thermostat with WIFI that can be controlled by a smart phone or app for 2 points, and programmable thermostat with WIFI with learning capable for 3 points.	<input type="checkbox"/> \$ - \$\$	1, 2, or 3

1.2.6	Install HVAC appliance with variable speed fan (i.e. brushless DC electrically commutated motors: ECM).	<input type="text"/> NC - \$\$	1
1.2.7	All mechanical systems are designed through certified mechanical designer or engineer. Domestic hot water (1 point), heating/cooling whole house (2 points).	<input type="text"/> \$ - \$\$	1 or 2
1.2.8	Water Heating Systems:		
1.2.8.1	Install sealed combustion direct vent (two pipe) tank system (2 points), or condensing DHW tank system (3 points).	<input type="text"/> \$ - \$\$\$	2 or 3
1.2.8.2	OR Install ENERGY STAR rated "tankless" hot water heater (EF >0.80 for 2 points; EF >0.90 for 3 points).	<input type="text"/> \$\$ - \$\$\$	2 or 3
1.2.7.3	OR Install high efficiency boiler domestic hot water system (AFUE 92 for 2 points; 95 or better for 3 points).	<input type="text"/> \$\$ - \$\$\$	2 or 3
1.2.8.4	Install heat pump based DHW heating system (ground, water, or air sourced, EF of 1.5 for 2 points; EF of 2 for 3 points) to supply a minimum of 35% of the peak DHW heating load and 70% of the total DHW energy load.	<input type="text"/> \$\$\$ - \$\$\$\$	2 or 3
1.2.8.5	OR Install high-efficiency electrical domestic hot water system (standby loss in watts: 5% better than NECB 2011 for 2 points; 10% better for 3 points).	<input type="text"/> \$	2 or 3
1.2.9	Insulate hot water lines with flexible pipe insulation for first six feet from the hot water tank, including the heat trap (1 point) or all hot water lines (2 points).	<input type="text"/> \$ - \$\$\$	1 or 2
1.2.10	Install drain water heat recovery (DWHR) units on the main drain stack to recover heat from shower drain water. DWHR units must be CSA certified to B55.1 and B55.2: 1 point for units less than 42% efficient and 2 points for units greater than, or equal to, 42% efficient. Additional point if unit is fully insulated (1 point).	<input type="text"/> \$\$ - \$\$\$	1, 2 or 3
1.2.11	Install an EPA or CSA certified high-efficiency wood stove or pellet stove with a minimum efficiency of 72% (1 point) or 85% (2 points).	<input type="text"/> \$ - \$\$	1 or 2
1.2.12	Install fireplace fan kit to circulate warm air into room (1 point per fan, maximum 3 points).	<input type="text"/> \$ - \$\$	1, 2 or 3
1.2.13	Rough-in a properly supported and wired ceiling fan and a wall mounted switch for future installation (1 point). Install a reversible ENERGY STAR qualified fan (1 additional point).	<input type="text"/> \$	1 or 2

I.3: Appliances

1.3.1	Electric oven is convection based.	<input type="text"/> \$ - \$\$	1
1.3.2	Electric range/cooktop is induction based.	<input type="text"/> \$ - \$\$	1
1.3.3	Refrigerator is an ENERGY STAR labelled product.	<input type="text"/> \$ - \$\$	2
1.3.4	Dishwasher is an ENERGY STAR labelled product.	<input type="text"/> \$ - \$\$	1
1.3.5	Clothes washer or combo washer dryer is an ENERGY STAR labelled product.	<input type="text"/> \$\$\$	1
1.3.6	Clothes dryer is ENERGY STAR labelled (1 point) and has an energy performance "auto sense" dry setting, which utilizes a humidity sensor for energy efficiency (1 additional point).	<input type="text"/> \$ - \$\$	1 or 2

I.4: On-Site Energy Generation

1.4.1	Home is built "solar ready", following the guidelines from Natural Resources Canada (NRCAN) or the Canadian Solar Industries Association (CanSIA): solar ready for domestic hot water (1 point) and/or solar ready for photovoltaic (1 point).	<input type="text"/> \$\$	1 or 2
1.4.2	OR Install active solar hot water heating system, sized for 30% of DHW load (5 points), 50% (6 points), or 80% (8 points).	<input type="text"/> \$\$ - \$\$\$\$	5, 6, or 8
1.4.3	AND/OR Install photovoltaic electrical generation system, sized for 30% of electric load (5 points), 50% (6 points), or 80% (8 points).	<input type="text"/> \$\$\$ - \$\$\$\$\$	5, 6, or 8
1.4.4	Home is built ready for plug-in electric vehicles: 1 point for 240V plug in the vehicle parking area, 2 points for a certified charging station.	<input type="text"/> \$ - \$\$	1 or 2

I.5: Lighting and Automation

1.5.1	ENERGY STAR lighting or LED used in kitchen, living room, main hallways, and main bath (1 point), or interior and exterior lighting uses ENERGY STAR bulbs or LED (2 points).	<input type="text"/> \$ - \$\$	1 to 2
1.5.2	Insulated ceilings have no recessed lights, or advanced air-sealing methods are employed to ensure that recessed lights are fully air-tight.	<input type="text"/> \$	1
1.5.3	Install interior motion sensor light switches. 1 point per switch, to a maximum of 3 points.	<input type="text"/> \$ - \$\$	1, 2 or 3

1.5.4	Install central lighting automation system with inherent conservation features (e.g. "away" mode).	<input type="text"/>	\$ - \$\$\$\$	1
1.5.5	Install a central "all-off" switch that disables all non-essential electrical loads in the home.	<input type="text"/>	\$	1
1.5.6	Install and operate a home automation system that is capable of monitoring and adjusting (max. 4 points): (i) heating, cooling, and humidity (2 points); (ii) lighting greater than 4 locations/rooms (1 point); (iii) if system can be controlled through a Wi-Fi, a smart phone, or app (1 point); (iv) all lighting and/or blinds to adjust to hourly sun schedule (1 point); (v) Domestic Hot Water (1 point); (vi) a "vacation or away" mode that can turn off all non-essential electrical loads (1 point); (vii) and learning capability (1 point).	<input type="text"/>	\$ - \$\$\$\$	1 to 4
1.5.7	Install home energy monitoring system which monitors and reports use and consumption patterns of all energy (gas, electricity, oil) in the home (1 point). An additional 1 point may be gained if the system is integrated with onsite renewable energy generation and storage technology.	<input type="text"/>	\$\$\$ - \$\$\$\$	1 or 2
1.5.8	Light tubes incorporated into daylight strategy.	<input type="text"/>	\$	1
TOTAL SECTION POINTS		<input type="text" value="40"/>		

Section 1 will not total without EnerGuide rating.

II. MATERIALS AND METHODS

This section rewards efficient use of framing materials, alternatives to using large dimensional lumber, products, and finishes that are more durable, made with recycled content or wood products that come from sustainably managed forests. Many of these checklist items also improve thermal performance and offer energy benefit.

Minimum 20 Points Required.

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/ii-materials-and-methods

2.1: Material Efficient Framing

2.1.1	Exterior and interior wall stud spacing at 19.2 inches on-center (1 point) or 24 inches on-center (2 points).	<input type="text"/>	NC	1 or 2
2.1.2	Elimination of headers at non-bearing interior and exterior walls.	<input type="text" value="1"/>	NC	1
2.1.3	Use of header hangers instead of jack studs.	<input type="text"/>	\$	1
2.1.4	Elimination of cripples on hung windows.	<input type="text"/>	NC	1
2.1.5	Elimination of double plates, using single plates with connectors by lining up roof framing with wall and floor framing.	<input type="text"/>	NC	1
2.1.6	Use of two stud corner framing with drywall clips or scrap lumber for drywall backing instead of studs.	<input type="text" value="0"/>	\$	2
2.1.7	Deck or veranda surfaces (1 point) and/or structure (1 point) made from a third-party certified sustainably harvested wood source (CSA, SFI, or FSC).	<input type="text"/>	\$\$\$	1 or 2
2.1.8	Deck or veranda surfaces (1 point) and/or structure (1 point) made from a third-party certified concrete (i.e. concrete from a source having a third-party certified reclamation plan), or from concrete containing a minimum of 25% supplementary cementitious materials.	<input type="text" value="1"/>	NC - \$\$\$\$	1 or 2
2.1.9	Dimensional lumber from a third-party certified, sustainably harvested source used for floor framing (CSA, SFI, or FSC).	<input type="text" value="1"/>	\$ - \$\$	1
2.1.10	Dimensional lumber from a third-party certified, sustainably harvested source used for wall framing (CSA, SFI, or FSC).	<input type="text" value="2"/>	\$\$ - \$\$\$	2
2.1.11	Dimensional lumber from a third-party certified, sustainably harvested source used for roof framing (CSA, SFI, or FSC).	<input type="text"/>	NC - \$\$\$\$	1
2.1.12	Use manufactured wood products for floor systems instead of dimensional lumber (1 point), from third-party certified, sustainably harvested sources (CSA, SFI, or FSC for 2 points). The use of third-party certified subfloor sheathing for 1 extra point.	<input type="text"/>	NC - \$\$\$	1 to 3
2.1.13	Reduce dimensional lumber use by using engineered product for all load-bearing beams and columns (1 point), from third-party certified, sustainable sources (CSA, SFI, or FSC for 2 points).	<input type="text"/>	\$\$ - \$\$\$\$	1 or 2
2.1.14	Reduce dimensional lumber use by using third-party certified engineered products for all exterior window and door headers.	<input type="text"/>	\$ - \$\$\$	2
2.1.15	Finger-jointed plate material and/or engineered plate material used for all framing plates.	<input type="text"/>	\$ - \$\$\$	1
2.1.16	Reduce dimensional lumber use by using engineered wood stud material for 10% of structural stud wall framing.	<input type="text"/>	\$ - \$\$\$	2

2.1.17	Steel studs made from minimum 75% recycled steel are used for interior walls (1 point) and exterior walls (1 additional point).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$	1 or 2
--------	---	--	----	--------

2.2: Environmentally Preferable Materials

2.2.1	Finger-jointed studs for 90% of non-structural (1 point) and/or 90% of structural (1 point) wall framing.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>	\$ - \$\$\$	1 or 2
2.2.2	Recycled and/or recovered content gypsum wallboard, minimum of 15% post-consumer recycled content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>	\$\$	1
2.2.3	Use sustainably harvested exterior wall sheathing products (CSA, SFI, or FSC) for 1 point; recycled content of minimum 50% pre- or post-consumer for 1 point.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">0</div>	\$\$\$	2
2.2.4	All insulation used in home is certified by a third-party to contain a minimum recycled content: 25% (1 point), 50% (2 points), or 90% (3 points).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	1 to 3
2.2.5	Overhead garage door is made of 75%, or greater, recycled material.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	1
2.2.6 Concrete:				
2.2.6.1	Concrete used in home has a minimum supplementary cementing material of 25% (1 point) or 40% (2 points) within the scope of proper engineering practices.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">2</div>	\$ - \$\$\$	1 or 2
2.2.6.2	Concrete used in home has undergone carbon dioxide (CO2) treatment to reduce portland cement content by at least 5%.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	1
2.2.7 Carpet and underpadding:				
2.2.7.1	Install carpet that has a minimum of 50% recycled content or 30% renewable content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	NC - \$	1
2.2.7.2	Natural or 100% recycled-content carpet pad (e.g. made from textile, carpet cushion, or tire waste. Rebond qualifies).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>	NC - \$\$	1
2.2.8	Install ecologically preferred bamboo, cork, or hardwood flooring for a minimum of 300 ft² (1 point), more than 50% of all indoor floors (2 points) or more than 90% of all indoor floors (3 points). Products must be third-party certified from sustainably managed forests or certified sustainable sources (e.g. Rainforest Alliance, FSC, CSA, or SFI).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>	\$ - \$\$\$	1 to 3
2.2.9	All ceramic tile installed in the home has a minimum of 25% recycled content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$\$\$	2
2.2.10	Paints or finishes are manufactured with a minimum of 20% recycled content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">0</div>	\$ - \$\$	1
2.2.11	Solid countertops are made from durable materials such as granite, concrete, glass, metal, or local natural stone, for all kitchen counters (2 points), or all other countertop areas (1 point), or both (3 points total). Countertops have 30% or higher recycled content (1 additional point).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">2</div>	\$ - \$\$\$	1 to 4
2.2.12	Shelving is made from 100% agricultural waste or 100% recycled wood particle board.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	2
2.2.13 Doors:				
2.2.13.1	Exterior doors contain minimum 15% recycled and/or recovered content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$	1
2.2.13.2	Interior doors contain minimum 15% recycled and/or recovered content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$	1
2.2.13.3	Minimum 75% of interior and/or exterior doors are made from third-party certified, sustainably harvested wood (CSA, FSC, or SFI).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	NC - \$\$	2
2.2.13.4	Minimum 50% of interior doors have been salvaged from another project.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	NC - \$\$	3
2.2.14 Windows:				
2.2.14.1	Exterior window frames contain a minimum of 10% recycled content.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$\$	1
2.2.14.2	Exterior window frames made from third-party certified, sustainably harvested wood (CSA, FSC, or SFI).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">0</div>	\$\$\$	2
2.2.15	Minimum 25% recycled or reclaimed exterior cladding material for 1/3 of exterior (1 point), or more than 2/3 of exterior (2 points), or more than 90% of the exterior (for 3 points).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	1 to 3
2.2.16	Fascia and soffit made from a minimum of 50% recycled and/or recovered content (pre- or post-consumer) (1 point for each).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$	1 or 2
2.2.17	Exterior trim materials have recycled and/or recovered-content (minimum 50%).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	3
2.2.18	MDF and/or finger-jointed casing and baseboard used throughout home (1 point), and in all jams (1 point).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block; text-align: center;">1</div>	\$\$	1 to 2
2.2.19	Solid hardwood trim from third-party certified, sustainably harvested sources (CSA, FSC, or SFI) approved for millwork and/or cabinets (2 points per application—maximum of 4 points).	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$ - \$\$\$	2 or 4
2.2.20	Domestic wood from reused/recovered or re-milled sources, 500 ft² minimum for flooring or all cabinets or all millwork.	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div>	\$\$\$ - \$\$\$\$	4

2.2.21	Minimum 25% recycled-content roofing system, including underlay and finish for 1 point, 50% recycled content for 2 points.	2	NC - \$\$	1 or 2
2.2.22	Use of salvaged materials derived from local sources for any building assembly or component not otherwise listed above (1 point for each different product used, to maximum of 3 points).		\$ - \$\$\$\$	1 to 3
2.3: Durable Construction				
2.3.1	Roofing:			
2.3.1.1	Minimum 30-year manufacturer warranty roofing material (2 points plus 1 point for each additional 5 years). "Lifetime" warranties have terms/conditions that ultimately have a limit in real years, and will not be considered unless clarified. Inspection by certified roofing inspector or an envelope engineer for 1 point.	6	NC - \$\$\$\$	2 to 7
2.3.1.2	Fire-resistant roofing materials such as metal, clay, tile, and asphalt shingles (Class A Fire Rating through American Society for Testing and Materials standards).		\$	1
2.3.1.3	Impact-resistant roofing materials used (Class 4 asphalt, rubber, metal, cement through American Society for Testing and Materials (ASTM) standards regarding impact resistance (wind, hail).		\$\$\$	1
2.3.1.4	Install ice-and-water underlayment shield over entire roof for a secondary line of defense against water penetration and ice buildup (wind, hail).		\$\$\$	1
2.3.2	Low-VOC water or damp proofing on foundation walls. (SCAQMD Rule 1113, 2016 VOC limits: Waterproofing sealers <=100 g/L / Waterproofing Concrete or Masonry Sealers: <=100 g/L).	1	\$ - \$\$	1
2.3.3	Use a rain screen system to separate cladding from the wall sheathing with a drainage plane (2 points), made from 60% or more recycled content (additional 1 point for 60% OR additional 2 points for more than 90% recycled content). Integrate windows into drainage plane by angling bottom sills slightly down towards the exterior, and install window flashing to direct moisture out towards the drainage plane (additional 1 point).	1	\$ - \$\$\$	1 to 5
2.3.4	Natural cementitious stone/stucco/brick or fiber cement siding, or combination thereof for 25% of exterior cladding (for 1 point), 50% (for 2 points), 75% (for 3 points), 90% (for 4 points), or 100% (for 5 points).	4	\$\$\$	1 to 5
2.3.5	All exterior doors and windows manufactured from fiberglass (1 point for windows and/or 1 point for doors).		NC - \$\$	1 or 2
2.3.6	Window safety film is applied on interior face of window or laminate glass used on interior face of window.		\$	1
2.3.7	Fascia and/or soffit made from fiber cement (1 point each).		\$\$\$ - \$\$\$\$	1 or 2
2.3.8	Further anchor the soffits of a home, firmly secured to reduce wind damage between the wall and the trim into which the soffit panels are inserted.		\$ - \$\$	1
2.3.9	Exterior trim materials made from alternatives to solid lumber.		\$ - \$\$\$\$	1
2.3.10	All exterior trim is clad with pre-finished metal (1 point over wood backings, 2 points without wood backings).		\$\$\$	1 or 2
2.3.11	Deck or veranda surfaces made from environmentally preferable low-maintenance materials (e.g. stone, concrete, tile, composites, etc.) that do not need maintenance of any kind, including painting, for a minimum of 5 years.		\$ - \$\$\$	2
2.3.12	Lifetime finish on all faucets.	1	NC - \$	1
2.3.13	Lifetime finish on all door hardware.	1	NC - \$	1
2.3.14	Install only Type 1 or 2 grade door hardware with lifetime mechanical warranty.		\$ - \$\$\$	2
2.3.15	Install durable flooring (e.g. laminate, finished concrete, tile, hardwood, etc.) in all high-traffic areas (halls, kitchen, living space) (1 point), more than 30% of all indoor flooring (2 points), more than 60% of all indoor flooring (3 points), or more than 90% of all indoor flooring (4 points).	1	\$\$ - \$\$\$\$	1 to 4
2.3.16	Install a garage door that is pressure-rated for the geographic area of the home (winds) (ASTM E330 standard).		\$\$ - \$\$\$	1
2.3.17	Full-house sprinkler system is installed.		\$\$\$\$	2
2.3.18	For projects adjacent to forested areas only, complete the FireSmart Structure and Site Hazard Assessment Form (1 point). Projects will earn additional points for achieving either a Moderate hazard level (1 point) or Low hazard level (2 points).		NC - \$	3

TOTAL SECTION POINTS 29

III. INDOOR AIR QUALITY

This section focuses on the quality of the air within the finished home. Products listed here include materials that are low in VOCs, products made from all-natural materials, as well as air cleaning and ventilation systems.

Minimum 15 Points Required

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/iii-indoor-air-quality

		Relative cost	Points per item
3.1.1	Install pleated media filter on HVAC system with minimum MERV rating of 7 (for 1 point) or 12 (for 2 points).	<input type="text"/> NC - \$\$\$	1 or 2
3.1.2	Install electronic or electrostatic air cleaner on HVAC system.	<input type="text"/> \$ - \$\$	1
3.1.3	Install HEPA filtration system in conjunction with an HVAC system.	<input type="text"/> \$\$\$\$	4
3.2	Install a thermostat / HRV controller that indicates the need for the air filter to be changed or cleaned.	<input type="text"/> \$	1
3.3	No combustion-based fireplaces are provided, or all gas fireplaces are sealed and have electronic ignition.	<input type="text"/> 2 \$ - \$\$	2
3.4	Provide a minimum of one Carbon Monoxide (CO) detector per floor.	<input type="text"/> 1 \$	1
3.5	Provide soil gas/radon protection: passive sub-slab ventilation (for 1 point), or actively depressurizing the sub-slab (i.e. add a fan, for 2 points).	<input type="text"/> \$	1 or 2
3.6	Provide homeowner with a do-it-yourself radon test kit to be conducted for a three-month duration (1 point), coupled with radon education materials available through Health Canada's website (1 additional point).	<input type="text"/> \$	1 or 2
3.7	Power vacuum all HVAC ducting prior to occupancy by homeowner, or keep all ducts sealed (and clean) during construction.	<input type="text"/> NC - \$	1
3.8	Prior to occupancy, but after all interior construction is substantially complete and all finishes have been installed, perform a full flush of the air within the house by running the air handler (on maximum speed, if a variable speed device) for a minimum of 48 hours (combined over not more than 4 sessions), and provide new filters in the air handler after the flush is complete.	<input type="text"/> \$	1
3.9	Central vacuum system vented to exterior as recommended by the Carpet and Rug Institute.	<input type="text"/> \$ - \$\$	1
3.10	Insulation used is third-party certified to have zero or ultra-low formaldehyde (less than 0.008 ppm) or GREENGUARD Gold product.	<input type="text"/> 2 \$	2
3.11	Low-formaldehyde sub-floor sheathing (third-party certified to less than 0.09 ppm for particle board or 0.11 ppm for MDF) or sub-floor made from substance material that is formaldehyde-free, such as concrete.	<input type="text"/> 2 \$ - \$\$\$	2
3.12	Low-formaldehyde underlayment is used throughout (third-party certified to less than 0.09 ppm for particle board or 0.11 ppm for MDF).	<input type="text"/> 1 \$	1
3.13	Low-formaldehyde particle board/MDF used for cabinets: less than 0.09 ppm for particle board or 0.11 ppm for MDF for 1 point, or zero formaldehyde for 2 points.	<input type="text"/> 1 \$ - \$\$	1 or 2
3.14	Low-formaldehyde particle board/MDF used for shelving: less than 0.09 ppm for particle board or 0.11 ppm for MDF for 1 point, or zero formaldehyde for 2 points.	<input type="text"/> 1 \$ - \$\$	1 or 2
3.15	All interior wire shelving is factory coated with low VOC, or no off-gassing coatings.	<input type="text"/> \$ - \$\$	1
3.16	Water-based urethane finishes are used on all site-finished wood floors.	<input type="text"/> \$ - \$\$	1
3.17	All hardwood flooring is factory finished.	<input type="text"/> 1 \$	1
3.18	Water-based lacquer or paints are used on all site-built and installed millwork, including doors, casing, and baseboards (less than 100 grams/litre of VOCs for 2 points or less than 50 grams/litre for 3 points).	<input type="text"/> 2 \$\$	2 or 3
3.19	Interior paints used have low VOC content (less than 100 grams/litre of VOCs for 1 point or less than 50 grams/litre for 2 points).	<input type="text"/> 1 NC - \$	1 or 2
3.20	Interior paints used have no VOCs in base paint prior to tint (for 1 point) or in tint (for 2 additional points). Alternatively, for a full 3 points, use natural finishes, such as lime plasters (NOTE: if taking points in 3.19 also take point in 3.18).	<input type="text"/> 1 \$\$\$	1 to 3
3.21	All ceramic tiles are installed with low VOC adhesives and plasticizer-free grout (low VOC standard is less than 150 grams/litre).	<input type="text"/> 1 \$\$	1
3.22	All vinyl flooring is replaced with natural linoleum installed with low VOC adhesives, or other hard-surface flooring.	<input type="text"/> \$\$ - \$\$\$\$	2
3.23	Carpet and Rug Institute (CRI) Green Label Plus on all carpet used in home. Gemeinschaft umweltfreundlicher Teppichboden's (GUT) production information system PRODIS is also recognized.	<input type="text"/> NC - \$\$	2
3.24	Carpet and Rug Institute (CRI) Green Label Plus on all underlay used in home. Gemeinschaft umweltfreundlicher Teppichboden's (GUT) production information system PRODIS is also recognized.	<input type="text"/> 1 NC - \$\$	1
3.25	Natural material based carpet in all living areas.	<input type="text"/> \$\$\$	2
3.26	House is carpet free: all flooring surfaces are hard (including stairs).	<input type="text"/> \$ - \$\$\$\$	2

- 3.27 Provide a building component (e.g. a finishing product or interior surface product such as drywall) with the capacity to permanently absorb VOC emissions from other sources without creating any residual, or other offgassing.

NC - \$\$

1

TOTAL SECTION POINTS 17

IV. VENTILATION

This section covers the mechanical ventilation systems in the home, including filtrations and heat recovery.

Minimum 5 Points Required

Platinum Level Note: Platinum level homes must use item 4.7.

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/iv-ventilation

- | | Relative cost | Points per item |
|--|-----------------|-----------------|
| 4.1 All ductwork is thoroughly sealed along all seams, joints, connections, penetrations, etc., in accordance with local prevailing code and industry best practice (2 points) or test/verify duct leakage to be less than 8 cfm (at 25 Pa) per 100 ft ² of conditioned floor area (2 additional points). | 2 NC - \$\$ | 2 or 4 |
| 4.2 Install motorized damper on all bathroom/exhaust fans. | \$ | 2 |
| 4.3 Ventilation Fans: | | |
| 4.3.1 All ventilation fans (bath or in-line type) meet or exceed the ENERGY STAR requirements. | 1 \$ | 1 |
| 4.3.2 Kitchen Range Hood is ENERGY STAR certified and has a CFM rating of less than 300. | \$ | 1 |
| 4.4 Install a programmable timer or humidistat-controlled ventilation fan. | \$ | 1 |
| 4.5 Install an active Heat Recovery Ventilator or Energy Recovery Ventilator (HRV or ERV) and verify balanced installation for 1 point; 2 points for more than 65% (Sensible Recovery Efficiency); 3 points for more than 80%. | 1 \$\$ - \$\$\$ | 1, 2 or 3 |
| 4.6 Install permanent (de)humidification control (ERV's are considered acceptable). | \$ - \$\$ | 1 |
| 4.7 Ventilation system is installed according to CSA Standard F326. | \$ - \$\$\$ | 4 |
| 4.8 All local bath exhaust fans used throughout home have a noise level of 1 sone or less. | 2 NC - \$\$ | 2 |

TOTAL SECTION POINTS 6

V. WASTE MANAGEMENT

This section deals with the handling of waste materials on the construction site and encourages recycling.

Minimum 7 Points Required

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/v-waste-management

- | | Relative cost | Points per item |
|---|-------------------|-----------------|
| 5.1 Comprehensive recycling program during construction for building site, including education, site signage, and bins. | 2 \$ | 2 |
| 5.2 Implement a recycling program: collection of waste materials from site by a waste management company that is a current member of a provincial recycling council or equivalent association and verifies that a minimum of 25% of the materials collected from the construction site have been recycled. | \$ - \$\$ | 3 |
| 5.3 Suppliers and trades recycle their own waste, including leftover material and packaging (1 point per trade—maximum 4 points). | 3 \$ | 1, 2, 3 or 4 |
| 5.4 Minimum 35% (1 point), 50% (2 points), 75% (3 points), or 90% (4 points) by weight or volume of waste materials collected from construction site is diverted from waste stream. | \$ - \$\$\$ | 1, 2, 3 or 4 |
| OR | | |
| 5.5 Waste reduction for remote projects: for projects occurring in regions that are a minimum 100 km away from the nearest population center with minimum 30,000 residents, the project may earn 1 point if the total amount of waste produced on the construction site is less than 4 lbs/ft ² ; 2 points are available for less than 3 lbs/ft ² ; 3 points for less than 2 lbs/ft ² ; and 4 points for less than 1 lbs/ft ² . | \$ - \$\$\$ | 1, 2, 3 or 4 |
| 5.6 Onsite gravel crusher to reduce vehicle miles. Crusher must be sensitive to neighbouring properties. | \$\$\$ - \$\$\$\$ | 1 |
| 5.7 Metal or engineered durable form systems used for concrete foundation walls (1 point) and for footings (1 point). | 1 NC - \$\$ | 1 or 2 |
| 5.8 Install permanent recycling center for the homeowner with two or more 26L bins (for 1 point), or four or more 26L bins (for 2 points) located in or conveniently close to the kitchen. Equivalent bin configurations will be accepted where aligned with local recycling program requirements. | 1 \$ - \$\$\$ | 1 or 2 |

5.9	Provide convenient onsite facilities to homeowner to encourage collection of compost materials or on-site composting. For example, storage bin in kitchen or separator where local composting programs exist; or wormery or backyard compost bin.	<input type="text"/>	\$	1
5.10	Existing dwellings onsite are recycled (more than 50% diverted from landfill, for 3 points) or relocated (6 points) instead of demolished.	<input type="text"/>	\$\$\$\$ - \$\$\$\$\$	3 or 6

TOTAL SECTION POINTS

VI. WATER CONSERVATION

This section encourages a reduction in the amount of water used in the home.

Minimum 10 Points Required

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/vi-water-conservation

			Relative cost	Points per item
6.1	Install ultra-efficient toilets with average flow rates less than, or equal to, 3L/flush (0.8 GPF) for 2 points each (up to 6 points).	<input type="text" value="0"/>	\$ - \$\$\$	2, 4 or 6
6.2	Install efficient toilets or dual-flush toilets with average flow rates less than, or equal to, 4.8L/flush (1.28 GPF) for 1 point each (up to 3 points).	<input type="text" value="3"/>	\$ - \$\$\$	1, 2 or 3
6.3	Install manufactured non-electric composting toilet (3 points each; maximum of 6 points).	<input type="text"/>	\$\$\$\$	3 or 6
6.4	Install hot water recirculation system with all hot water lines insulated (2 points) with local activation/call switches installed at all points of use (additional 2 points), or point-of-use instant DHW system (1 point each; maximum 4 points).	<input type="text"/>	\$\$\$ - \$\$\$\$\$	1, 2, 3 or 4
6.5	Install low-flow faucets for all lavatories (less than 5.7 lpm) for 2 points, and all showers and tub/showers (less than 7.6 lpm) for 1 additional point.	<input type="text" value="2"/>	\$	2 or 3
6.6	Provide ENERGY STAR clothes washers: front loading (3 points), top loading or laundry centre (combo washer/dryer) (2 points), or combo ventless (4 points). Alternatively, the integrated water factor (IWF) can be calculated, and if it's below the maximum IWF, 3 points will be awarded. - Front loading >2.5 cu ft capacity, maximum IWF of 3.7; - Top loading >2.5 cu ft capacity, maximum IWF of 4.3; - Washers <2.5 cu ft capacity, maximum IWF of 4.2.	<input type="text" value="3"/>	\$ - \$\$\$	2, 3, or 4
6.7	Install water-saving dishwasher that uses equal to or less than 13.25 L of water per cycle (3.5 US gallons/cycle).	<input type="text" value="1"/>	\$ - \$\$	1
6.8	Install permeable paving materials for all driveways and walkways.	<input type="text"/>	\$\$\$ - \$\$\$\$\$	3
6.9	Builder supplies a minimum of 8 inches of topsoil or composted yard waste, as finish grading throughout site.	<input type="text" value="2"/>	\$\$\$ - \$\$\$\$\$	2
6.10	Provide a list of drought-tolerant and native plants and a copy of the local municipality water usage guide to homebuyers with closing package (1 point). In homeowner guide, specify the requirement to indicate which ones are native (for additional point).	<input type="text" value="1"/>	NC - \$	1 or 2
6.11	Builder incorporates permeable landscaping that is water efficient (for 1 point), xeriscaped (50% of landscaping 2 points, 100% 4 points), or is 100% plant-free landscaping (4 points).	<input type="text"/>	\$ - \$\$\$\$	1, 2 or 4
6.12	OR Install efficient irrigation technology including (for 1 point each, to maximum 3 points): (i) has head-to-head coverage; (ii) uses high efficiency spray heads with distribution uniformity of 0.7 or greater; (iii) uses square spray patterns to increase efficiency and reduce overspray onto non-permeable surfaces; (iv) uses drip irrigation for minimum 50% of planting bed area, including all larger shrub bed areas; (v) includes a flow sensor, central shut-off valve, and sub meter; (vi) has a pressure regulating device; (vii) includes a moisture sensor/rain delay controller; (viii) pre-set irrigation systems to account for weather.	<input type="text"/>	\$ - \$\$\$	1 to 3
6.13	Builder attaches water barrel with insect screen to downspout. Water barrel should also have a drain spout and overflow spout (1 point).	<input type="text"/>	NC - \$	1
6.14	Provide a rainwater collection cistern (minimum 750L) to offset either indoor (e.g. toilet flushing) or outdoor (e.g. irrigation) domestic water usage (3 points for above grade; 5 points for below grade).	<input type="text"/>	\$ - \$\$\$\$\$	3 or 5
6.15	Install grey water system collecting waste from sinks, shower, and/or kitchen to capture and treat for use in toilets or irrigation (6 points), rough-in for future grey water system (3 points).	<input type="text"/>	\$\$\$ - \$\$\$\$\$	3 or 6
6.16	Install on-site black water treatment system or engineered wetland for reprocessing local sewage (8 points).	<input type="text"/>	\$\$\$\$	8

TOTAL SECTION POINTS

VII. BUSINESS PRACTICE

This section deals more with manufacturers and builders office and business practices.

Minimum 8 Points Required

Find BUILT GREEN® Approved products that help earn your build points towards certification by viewing our online Product Catalogue: www.builtgreencanada.ca/vii-business-practices

Relative cost

Points per item

7.1: Builder's Internal Policies

7.1.1	Builder has a written environmental policy defining their commitment (must include an office recycling program, a staff education program, appropriate signage in the builder's offices and onsite, and energy efficient lighting). The policy must be signed by a senior executive and published on the company website.	1	NC	1
7.1.2	Builder's environmental policy includes and prioritizes milestones for future net zero homes.	1	\$\$\$\$\$	1
7.1.3	Manufacturer and/or supplier has a written environmental policy with defined environmental commitments (must include an office recycling program and energy efficient lighting). (1 point per manufacturer/supplier—maximum of 2 points).		NC	1 or 2
7.1.4	Products used for home are manufactured within 800 km of build site (1 point for each 2 products—maximum of 5 points).	2	\$	1 to 5
7.1.5	Builder (office and show homes) offsets their carbon footprint by purchasing up to 50% (1 point) or 100% (2 points) of their electrical use in renewable energy certificates.		\$\$	1 or 2
7.1.6	Manufacturers and/or suppliers purchase 50% or more of their power needs from solar, wind, or renewable electricity (1 point per supplier to a maximum of 3).		NC	1, 2, or 3
7.1.7	50% (2 points) or 100% (4 points) of electricity used during construction of home is generated by wind power or equivalent green power certificate. Usage from a typical 6 month construction period or a recent similar project can be used to determine the monthly average.		\$\$\$	2 or 4
7.1.8	50% (2 points) or 100% (4 points) of electricity used by homeowner during first year of occupancy is generated by wind power or an equivalent renewable energy supply (prepaid by builder).		\$ - \$\$\$	2 or 4
7.1.9	Builder roughs in, and shows on drawings, provisions for future emergency power supply.		\$	1
7.1.10	Builder's show home(s) or presentation centres (i.e. the building(s) incorporating model suites) incorporate permeable landscaping, which is water efficient or xeriscaped (50% of lawn for 1 point, 100% for 2 points).		\$\$ - \$\$\$\$	1 or 2
7.1.11	The builder integrates innovative sustainable building practices above and beyond what is contained within the checklist section and provides supporting documentation. The innovation must apply to the project and will be reviewed by the Technical Standards Committee at the time of submission.		NC - \$\$\$	1 to 5

7.2 Community Development & Transportation

7.2.1	Builder's company vehicles are electric, hybrid, or bio-diesel vehicles (1 point per vehicle—maximum of 3 points).		\$\$\$\$\$	1 to 3
7.2.2	Protect trees and natural features on site during construction. Point not available where there is nothing to protect.	1	NC	1

7.3 Staff / Trades Training & Homeowner Education

7.3.1	Builder provides BUILT GREEN® homeowner manual, completed BUILT GREEN® checklist, and educational walkthrough for the homeowner upon closing.	0	\$ - \$\$	3
7.3.2	Builder provides homeowner with emergency kit.		\$	1
7.3.3	Builder provides homeowner resiliency plan.		NC - \$	1
7.3.4	Contracted trades, suppliers, and/or supporting design professionals have successfully taken and maintained BUILT GREEN® Training: Program Fundamentals, Module 1, or Building Science Training endorsed by Built Green Canada (e.g. Construction Technology for BUILT GREEN®, NRCan's Energy Advisor or R-2000 courses, or related formal schooling). BUILT GREEN® training must be updated every two years. (1 point per trade organization—maximum 5).	1	\$	1 to 5
7.3.5	Builder's site superintendent has successfully taken and maintained BUILT GREEN® Training: Program Fundamentals, Module 1 (1 point), and/or Building Science Training endorsed by Built Green Canada (e.g. Construction Technology for BUILT GREEN®, NRCan's Energy Advisor or R-2000 courses, or related formal schooling) (2 additional points). BUILT GREEN® training must be updated every two years.	1	\$	1 to 3

7.4: BUILT GREEN® Promotion

7.4.1	Builder's construction site and sales office signage clearly display the BUILT GREEN® logo and promote that the project is enrolled for BUILT GREEN® certification.	1	\$	1
7.4.2	Builder's primary place of business (i.e. office) is certified via a recognized third-party best practice program.		\$\$	3
7.4.3	Builder agrees to BUILT GREEN® certify a minimum of 50% of all homes per calendar year (3 points for 50%; 5 points for 100%).	3	\$ - \$\$	3 or 5

TOTAL SECTION POINTS 11

TOTAL CHECKLIST POINTS 122

