



Artist's Concept



# BLOOMFIELD CRAFTSMAN

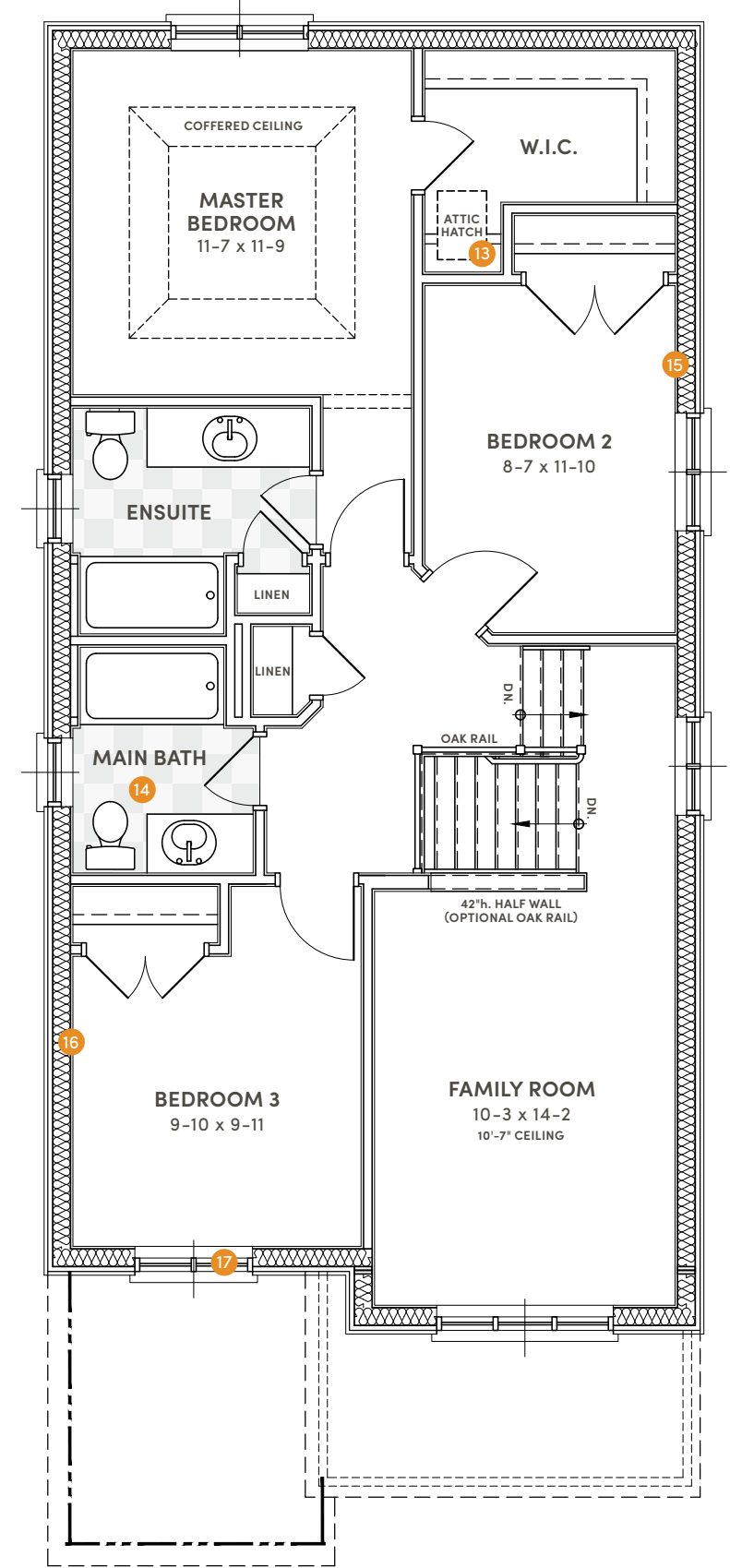
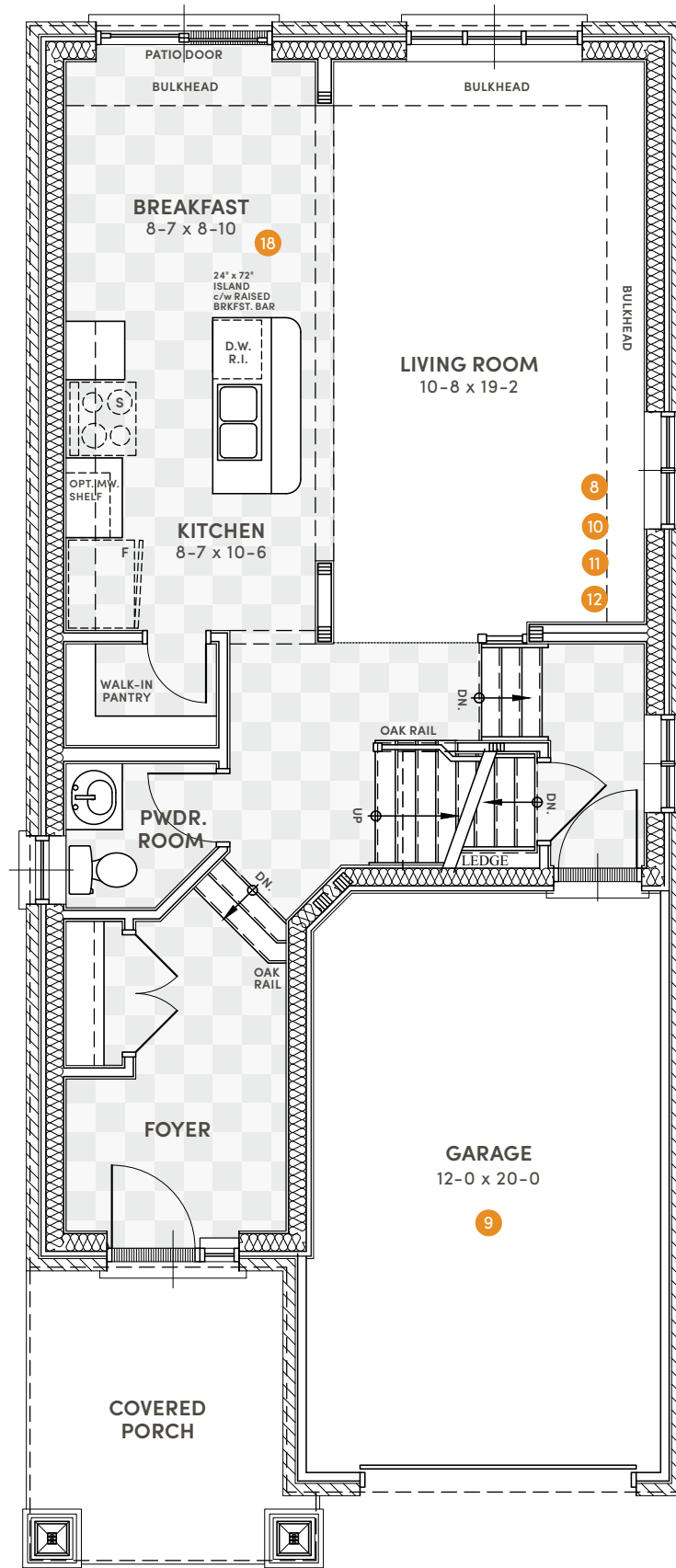
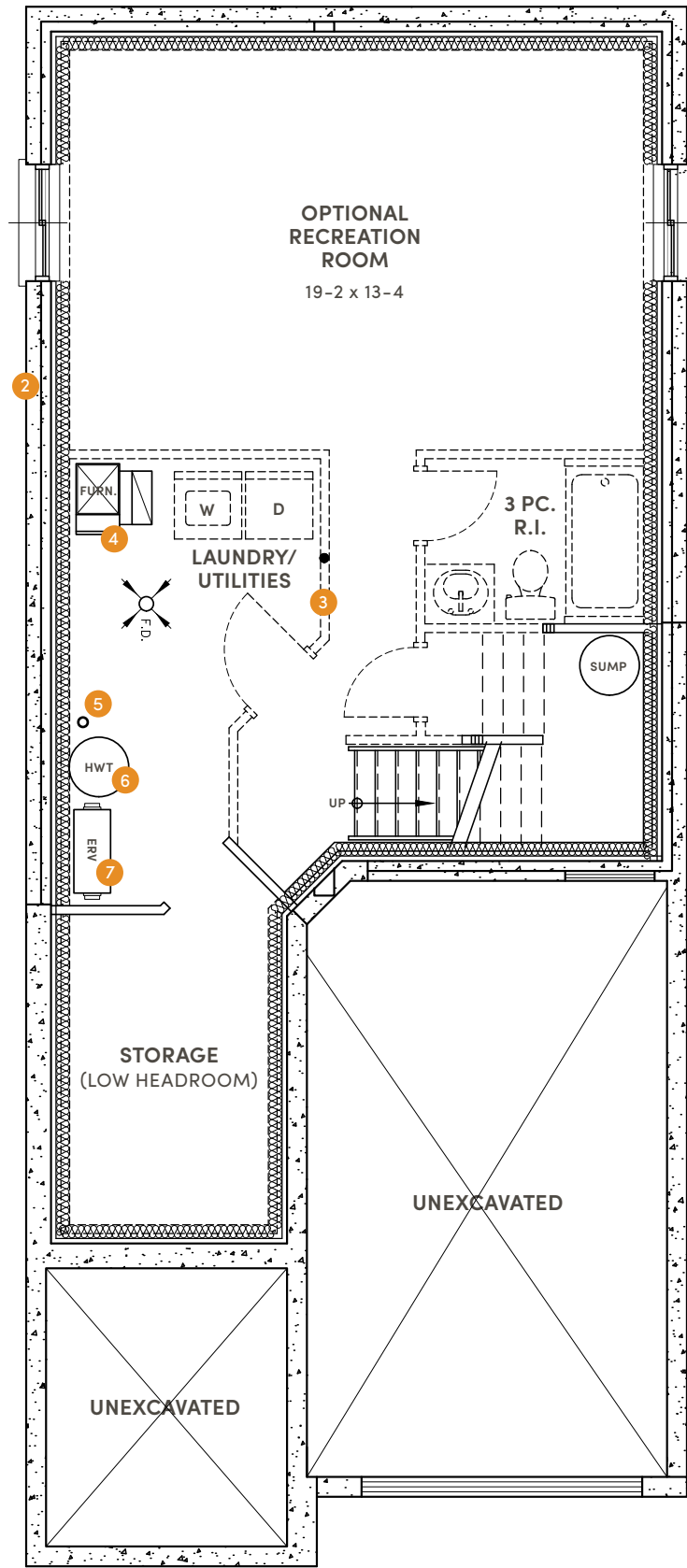
LOT 4  
191 GOODWIN DRIVE  
GUELPH, ON

**1,736 SQ. FT.**  
**3 BED, 2.5 BATH**





WITH GREY WATER RECOVERY SYSTEM



REFERENCE THE FOLLOWING PAGES FOR DESCRIPTIONS OF EACH FEATURE

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# NET ZERO ENERGY HOME BENEFITS

## 1. SOLAR PANELS

With energy costs forecasted to increase into the future, renewable solar is one of the most important aspects of a Net Zero home. 32 photovoltaic solar panels on each home (by Bluewater Energy) capture the sun's energy and converts it into electricity for household use. The homes include a 60 amp disconnect and dual gang meter base (for microfit applications) to reduce incurred costs upon application to available energy rebate programs. Homeowner must apply for the rebate after possession.



Image shown is of Lot 6, to display how 32 solar panels may be installed on Lot 3, 4, and 5

## 2. INSULATION IN FOUNDATION WALLS AND UNDER SLAB

Owens Corning FOAMULAR® rigid foam insulation is installed directly against the inside concrete foundation walls and under the concrete basement floor. Thanks to its excellent moisture resistance and rugged construction, it does not lose any insulating power even after long-term exposure to water and wet or acidic soil. Implementation of this insulation removes the feeling of a cold basement and improves the efficiencies of heat loss through the basement floor.

### Basement Slab:

Ontario Building Code = 0  
Net Zero Energy Home = R10

### Below Grade Exterior Wall:

Ontario Building Code = R12  
Net Zero Energy Home = R33



Owens Corning FOAMULAR® Rigid Foam Insulation

## 3. FLEX DUCTS INSIDE WALLS

Utilizing flex ducts throughout the home instead of traditional tin ducts improves air circulation by locating the air vent in the upper portion of the walls rather than in the floor. As a result, there are fewer hot and cold spots in the home.



## 4. FURNACE

The Dettson Alizé electric air source heat pump provides the heating and cooling for the home. The modulating high efficiency gas furnace acts as the backup. The unit optimizes the energy generated by the surrounding air with gas as a backup when temperatures fall below the optimal efficiency levels. The system will additionally modulate to the demands of the home by adjusting up and down accordingly. This feature will provide constant temperature control by operating at a significantly lower capacity.



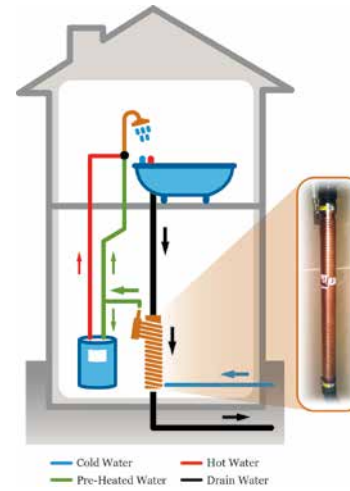
Electric Heat Pump



Gas Furnace

## 5. DRAIN WATER HEAT RECOVERY SYSTEM

When warm water goes down the drain from a shower, a faucet, or washing appliance, it carries away valuable energy. This Net Zero home is equipped with a drain water heat recovery unit that recovers part of this valuable energy from the warm water, and uses it to preheat incoming cold fresh water. This unit consists of multiple coils of copper tube wrapped together around a central copper drain pipe. Hot water going down the drain transfers its heat to incoming cold water moving up the coils. The preheated water reduces the energy used by the water heater and provides substantial savings.



— Cold Water — Hot Water  
— Pre-Heated Water — Drain Water

## 6. HYBRID HEAT PUMP WATER HEATER

The Rheem hybrid hot water tank improves hot water delivery efficiency by incorporating air source heat pump technology. This technology takes interior air and uses this energy to warm the water in the hot water delivery system. In doing so, renewable energy is used to provide the make-up heat for the water. As a result, homeowners will save on energy costs by up to \$370 annually while also being eco-friendly.



## 7. ENERGY RECOVERY VENTILATOR

The energy recovery ventilator acts as the lungs of the home offering superior indoor air quality and excess humidity control. It utilizes a high performance motor that is equivalent in power consumption to a compact fluorescent light bulb (13.5 watts each), which significantly lowers energy costs without affecting performance.



## 8. ENERGY MONITORING

The Energy Detective (TED) cloud-based tool provides a comprehensive view of the home's production and consumption of electricity. It also provides net usage information - all in real time. Data can be viewed locally or remotely. Using the portable wireless display for increased mobility, phantom loads can be discovered when turning appliances on and off.



## 9. ELECTRIC VEHICLE CHARGER ROUGH-IN

Rough-in included (30 amp/240v). Charging unit not included.

## 10. COMFORT ZONING

With zoning controls in the basement as well as on the main and second floors, the temperature of each individual floor can be conveniently changed without affecting the temperature of other floors.



Control may differ from above image depending on manufacturer

## 11. SOLAR PRODUCTION MONITORING

The advanced cloud based energy monitoring dashboard shows in real time whether the home is producing or consuming renewable solar energy, as well as where the energy is being utilized.

## 12. SMART HOME MONITORING & AUTOMATION ROUGH-IN

Rogers provides anytime, anywhere solutions for home security, automation control and energy management. Set alarms, lock doors, check on family or pets, turn off lights – all remotely. The home comes pre-wired at the entrance foyer with an outlet and a rough-in for installation of future home automation wireless hardware.



Solar Production Monitoring / Smart Home Monitoring & Automation Rough-In  
Tablets not included

## 13. ATTIC INSULATION

Owens Corning AttiCat® Expanding Blown-In Insulation System is increased in the attic space. This can save the homeowner up to 20% on cooling and heating bills year round.

Ontario Building Code = R50  
Net Zero Energy Home = R60

Below image is example only, demonstrating attic insulation



Image shown is of the Net Zero Discovery Home (Lot 7) to demonstrate the exterior air barrier system

## 14. FRESH AIR VENTILATION SYSTEM

Unlike a traditional exhaust fan, the VanEE fresh air ventilation system with integrated controls offers similar qualities but recovers the energy from humidity produced by hot showers. This energy ties back to the energy recovery ventilator in the basement to maximize efficiencies and air quality throughout the home.

## 15. WALL INSULATION

Owens Corning CodeBord® Air Barrier System is the primary air barrier placed on the exterior of the building envelope. It insulates the exterior of the building preventing thermal bridging from occurring. It helps keep the wall cavity warm which significantly reduces the risk of condensation, providing long term energy efficiency performance and comfort for homeowners.

Ontario Building Code = R22  
Net Zero Energy Home = R38

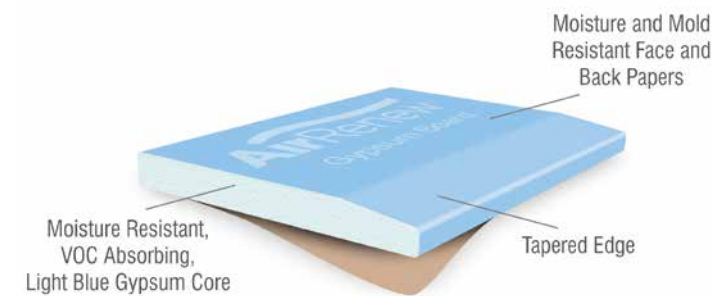
## R VALUE COMPARISON CHART

	ONTARIO BUILDING CODE (PKG J)	ENERGY STAR BY REID'S HERITAGE HOMES	NET ZERO HOMES REID'S HERITAGE HOMES
Attic	R50	R50	R60
Above Grade Exterior Walls	R22	R29	R38
Below Grade Exterior Walls	R12	R20	R33
Basement Slab	0	0	R10
Windows (Max U-Value)	1.8	Low E Double Pane (1.6)	Low E Triple Pane (1.1)

The R in R-Value stands for "resistance". When referring to insulation, this resistance is for heat. Insulation resists the flow of heat through the home's walls, floors and ceilings. This resistance slows heat down and keeps it inside in the winter and outside in the summer, making the home more comfortable and energy efficient. Therefore, the higher the R-value, the greater the insulating power.

## 16. LOW VOC DRYWALL

CertainTeed's AirRenew® IAQ Drywall captures and converts low VOCs – found in everyday household items such as candles, paint, perfume, hair spray, carpet, flooring – into inert compounds, so that it cannot be re-emitted into the air. This means cleaner and fresher air inside the home.



## 17. TRIPLE PANE WINDOWS

Jeld-Wen triple pane Low E glass windows allow the homeowner to control the indoor temperature much better than traditional dual pane windows. They also help to reduce noise from the outside. These windows have also been upgraded to a split finish – white on the inside and a beige colour on the exterior on all sides of the home.

The two basement windows are the exception – they are dual pane and white on both the interior and exterior. The small size of these windows does not have a negative impact on the overall efficiency of the home.



## 18. LED LIGHT BULBS

Enhanced lighting components incorporating LED light bulbs are installed throughout the home to increase energy efficiency by 80-90% when compared to traditional light bulbs.

