



Designing With Dettson In Ron's House



# The Basics

- 3600 square foot house, two levels,
- Our utility bills average \$75 total, including both gas and electric, and of this, about \$25 is baseline utility fees
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- Built by New Tradition Homes
- EPS Score of xxxxxx



# The Shell

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- 2x6 walls with R-5 foam on the exterior
- Triple pane windows
- R-20 under the walkout basement slab
- R-60 in the attic
- Robust air sealing package including AeroBarrier – result 1.2 ACH

## Layout Considerations

- Dettson for HVAC
- Mechanical room near the center of the home
- Keeping all HVAC and ductwork inside the conditioned space
- HVAC trunklines accessible and with mechanical dampers to control summer/winter distribution



# The Score

# EPS

EnergyPerformanceScore

EnergyTrust of Oregon

EPS is a tool to assess a home's energy cost and carbon footprint.

EPS™ is an energy performance score that measures and rates the net energy consumption and carbon footprint of a newly constructed home. The lower the score, the better — a low EPS identifies a home as energy efficient with a smaller carbon footprint and lower energy costs.

## Estimated Monthly Energy Costs

**\$79\***

Estimated average annual energy costs:

**\$942\***

Estimated average energy cost per month: Electric \$65, Natural Gas \$94  
Estimated Energy Cost calculated using \$0.08 per kWh and \$0.8 per therm

## Location

2518 NE 167th Cir  
Ridgefield, WA 98642

YEAR BUILT: 2018

SQ. FOOTAGE: 3,611

EPS ISSUE DATE: 2018-11-29

RATED BY: Four Walls, Inc.

## Utilities:

Gas: NW Natural Gas

Electric: Clark PUD

## Energy Score

**63**

**ENERGY SCALE:** Based on home energy use of natural gas, electricity, or energy generated from an installed renewable system.



Estimated total annual gross energy usage: Electric (kWh) 7,741, Natural Gas (therms) 344

Estimated average annual energy generation: No system

Estimated average net energy usage: Electric (kWh) 7,741, Natural Gas (therms) 344

## CARBON FOOTPRINT:

Measured in tons of carbon dioxide per year (tons/yr). One ton is 2,000 miles driven by one car (typical 24 mpg car).



Estimated average carbon footprint: Electric (tons/yr) 0.5, Natural Gas (tons/yr) 2.1

\*Actual energy costs may vary and are affected by many factors such as occupant behavior, weather, utility rates and potential for renewable energy generation. A home's EPS takes into account the energy-efficient features installed in the home on the date the EPS was issued, but does not account for occupant behavior.

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# Mechanicals

- Dettson Chinook 30K furnace with 2.5" ducts that easily passed through the interior 2x4 walls – blower motor runs continuously to distribute HRV supplied air and mix interior air
- Rinnai tankless water heater on exterior wall of the mechanical room with an eye to the future, where it could be replaced by a HPWH
- First rate ventilation – Lifebreath 195 HRV with HEPA filter; Panasonic exhaust fans in all bath and laundry locations (option to add timers, humidistat switches)
- Central vacuum system to remove dust and dirt from the home



# Dettson Air Handler



## **Dettson**

- Low BTU
- Modulating
- Fits almost anywhere
- Design Assistance







**LIFEBREATH**  
WWW.LIFEBREATH.COM

SHEETROCK 5/8"









What Do I  
Think Now?

- House is very comfortable, my utility bills are very low, designing with Dettson fit well into our plans for building an energy efficient home