



## Massachusetts Residential New Construction Program



### Hinckley Trace 115 – 129 Hinckley Street, Florence, MA

#### Massachusetts Residential New Construction Program Involvement

Hinckley Trace located in Florence, Massachusetts is participating in the MA Residential New Construction Program, will complete in August 2017. The Program provided the 8 homes in a 4 duplex community with energy efficiency incentives from National Grid. The project team worked with Program-approved HERS Rater, Adin Maynard of HIS and HERS Energy Efficiency, who conducted an initial plans analysis of the homes along with first and final inspections which document the homes' high performance.



Hinckley Trace was developed by New Harmony Properties, designed by Charles Roberts of Kuhn Riddle Architects, and built by Wright Builders, Inc.

#### Solar Energy Features

- Solar ready roof design with signed agreement that all homes use the same SunPower PV modules.
- Single car port not attached to home for each unit; readily adaptable for EV car charging to take advantage of solar electric production.
- South Facing triple pane window glass allows solar winter heating.
- South facing roof overhang completely shades windows at noon during summer solstice reducing cooling load. House layout eliminates the need for gutters and the associated upkeep.



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## Energy Saving Features



- Long eave overhang providing full shading of south facing windows at noon on summer solstice.



- R-24 insulated concrete floor with Radon pipe in place.
- R-35 wall - 10 inch cellulose. R-60 ceiling - 6 inch high density foam followed by 12 inch cellulose.

 National Fenestration Rating Council® CERTIFIED	350 Series Fixed Frame/Special Shape 	
	One Wide Not Applicable Argon Gas PEL-N-185-00699-00001	
<b>ENERGY PERFORMANCE RATINGS</b>		
U-Factor <b>0.15</b> <small>(U.S./I-P)</small>	Solar Heat Gain Coefficient <b>.85</b> <small>(Metric/SI)</small>	<b>0.26</b>
<b>ADDITIONAL PERFORMANCE RATINGS</b>		
Visible Transmittance <b>0.45</b>	--	



- Triple glazed premium vinyl windows U .17 or better (R-6.28 | Average)



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### Energy Saving Features (continued)

- Low E argon-filled double glass for glazed doors (options for storm and screen doors for additional insulation).
- Estimate HERS ratings of 40 or lower.
- Roof top solar PV (photo voltaic easement); location by vendor.
- Very high efficiency ductless minisplit system. SEER rating 22.
- Air source heat pump domestic hot water heater
- LED lighting.
- ENERGY STAR appliances, where applicable.
- ENERGY STAR 3.1 compliant.

### Environmental Design Features at Hinckley Trace

- One gallon flush low flow Drake II Toto toilets.
- All non-VOC paints utilized in the interior.
- Super high-efficiency minisplit heating and cooling system with Energy Recovery Ventilation filtration and distribution.
- Miratec and fiber cement board exterior trim and siding products with high recycled content.
- Extensive use of engineered lumber products for framing and sheathing to optimize best forestry practice, minimize shrinkage and control waste.

### Benefits with a home at Hinckley Trace

- Very low operating costs achieved through **ENERGY STAR** compliance, low HERS rating and state-of-the-art building envelope design.
- Cleaned, refreshed and healthy indoor air with utilization of efficient air exchange systems (**Energy Recovery Ventilation**).
- Relative humidity levels in the winter can be maintained at 40% or higher, for optimal health results for people, pets and plants.
- Drought tolerant and **native landscape plantings** mean less maintenance and sustainable beauty.
- Superb insulation levels provide lower indoor temperature fluctuation for greater comfort, energy efficiency and cost savings.
- Wright Builders' signature detailing for less sound transference between ALL attached homes.
- Sustainable practices create long term value for homes which perform well and will be economical far into the future when energy costs will inevitably raise significantly.
- Satisfaction of knowing that a long-term investment, enjoyed every day by family members, is also treading as lightly as possible on the planet.
- Minimally vulnerable during power outages - homes hold their temperature for an extended period of time.
- No combustion in appliances, heating system, and domestic hot water for enhanced home safety.



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### PS: One more Design Element



- Direct 6 inch pipe with one elbow for kitchen stove venting. Notice the combination of function and finish in this room with a high ceiling. The nicely matched vent chase bump out over the refrigerator bay matches the cabinet depth.