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Our Mission

Our mission is to promote environmentally friendly home building methods and practices, and to enhance our communities through leadership in sustainable development.

Non-Profit Organization

Built Green is a non-profit 501(c)3 organization accepting donations to promote green building and education programs.

Case Study



View more images [below](#)

SBI Construction
Seattle, WA

This month's featured project is a custom home in Seattle built by [SBI Construction](#). The residence was recently certified as a 5-Star home with a total of 572 points. Energy modeling has shown that the operation of the home will use 32% less energy than a similar home built to the 2004 International Energy Conservation Code. It also featured a 2,500 gallon below ground cistern to collect rainwater, used a furred exterior walls to reduce thermal bridging, a solar water heating system, and whole house radiant heating. It also boasted a 95% construction waste recycling rate, and used sub-contractors who powered equipment and trucks on biodiesel. Designed by Built Green member [Stuart Silk Architects](#), the home is an excellent example of deep green building in an urban custom home.

Site and Water Protection

- Built on infill lot
- Installation of 2,500 gallon below ground cistern for rainwater catchment
- Left half of the site completely undisturbed during construction
- Amended soils to a depth of 12" to ensure rainwater infiltration
- Designed to achieve effective impervious surface for less than 10% for the site
- Either replanted or donated all vegetation from impacted site
- Installed a worm bin for food waste disposal
- Use of non-toxic outdoor materials for landscaping
- Landscaping with drought tolerant plants
- Installed low flow kitchen and bathroom faucets

Energy Efficiency

- Designed and built to use 32% less energy than a comparable code home
- Use of Energy Star appliances and heating equipment
- Installed hydronic radiant heating system with a 95% efficient boiler
- Blower door test showed air tightness at .15 ACH
- Used wall furring system for framing to reduce thermal bridging in exterior walls
- Installed a heat recovery ventilator to capture heat from warm air leaving the home and pre-heating the new colder air entering for home ventilation

Vital Stats	
Location:	Seattle
Star Level:	5-Star
Checklist:	Single Family/ Townhome
Section	Points
Site and Water	131
Energy Efficiency	173
Indoor Air Quality	149
Material Efficiency	119
Multiplier	1.0
Total Score	572

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- Installed high efficiency heat pumps with reverse cycle chiller system
- Used 97% efficient wall hung water heater tied to solar hot water system
- Installation of Energy Star certified heating equipment
- Did not install an air conditioner in the home

Indoor Air Quality

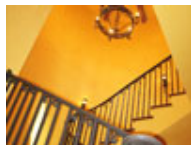
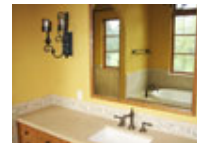
- Educated subcontractors about clean jobsite practices and use of low VOC materials
- Used formaldehyde free insulation throughout home
- Used only low VOC products for tile and grout, framing, flooring, HVAC, insulation, drywall and paints
- Used ceramic tile for flooring
- Used shelving, trim and doors that did not have added urea formaldehyde
- Designed 24" roof overhangs to inhibit moisture on vertical walls
- Had envelope inspected by a 3rd party prior to completion
- Installed a drainage plane between sheathing and house-wrap
- Used sloped sill pans with end dams for all windows and exterior doors
- Hose tested windows to ensure seals
- Installed whole house radiant heating system with no ducted heating
- Used low toxic lime plaster throughout interior walls

Material Use

- Achieved 97% construction waste recycling rate
- Designed components of home for deconstruction to aid in later material re-use
- Used deconstruction to dismantle and re-use existing building on the site
- Re-used doors, appliances, hardware and cabinets
- Home featured urban salvage lumber
- Did not use vinyl products for plumbing, flooring, siding or windows
- Used a 50% minimum of regional wood products for trim
- Installed recycled content cellulose insulation
- Used subcontractors who powered equipment and trucks with biodiesel
- Installed 50 year siding and 40 year roofing products

Still Images

Click on an image to enlarge.



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Photos courtesy of SBI Construction.