

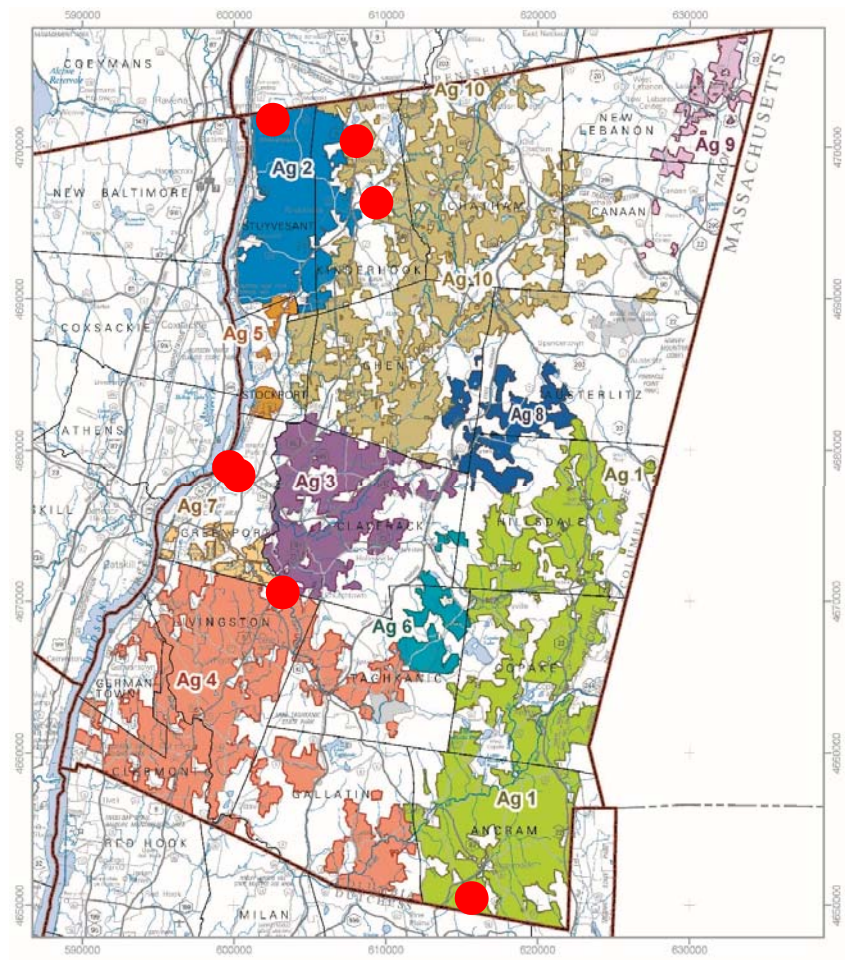
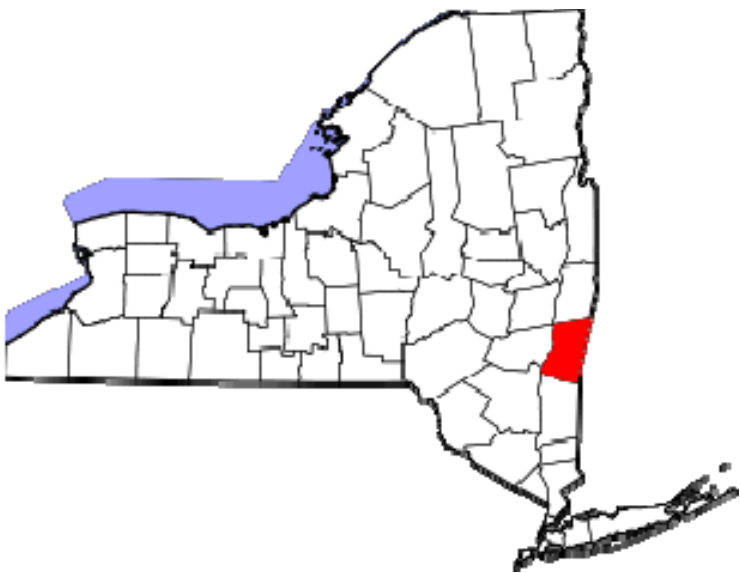


NAPHC2017

Passive House & Columbia
County Habitat for Humanity

BARLIS
WEDLICK

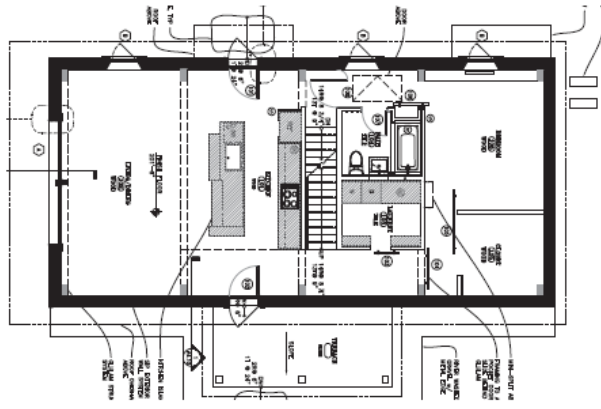






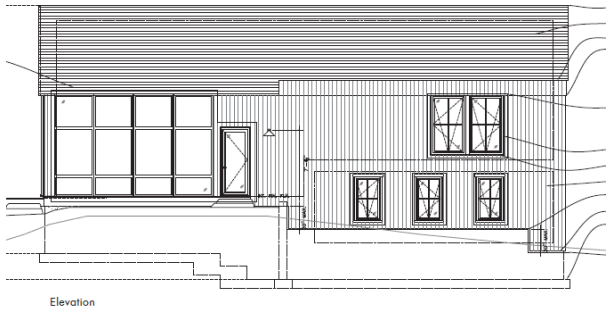


Elevation



First floor plan

No Nukes Passive Project 2013

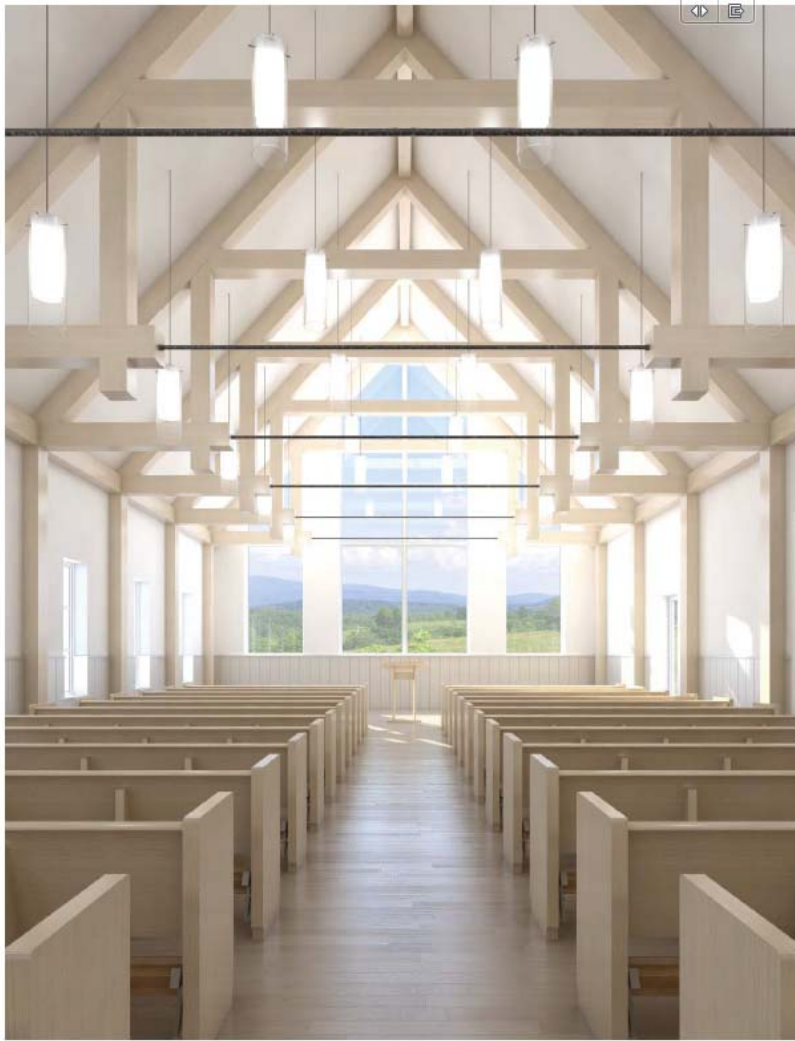
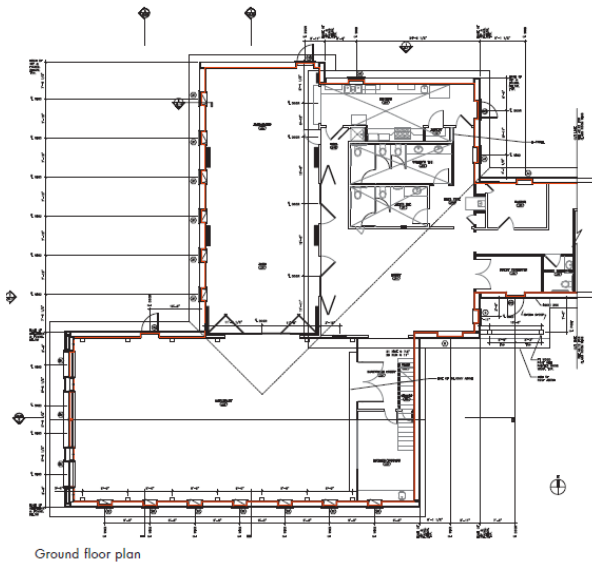
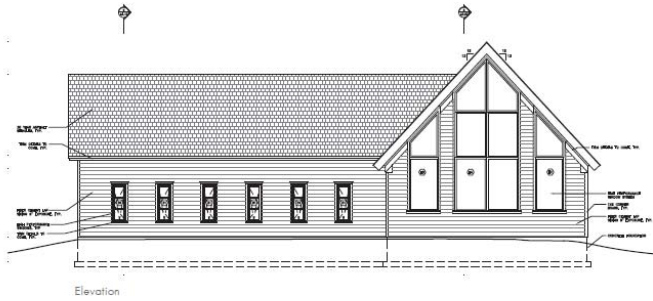


Elevation



Fox Hall Passive Project: 2014

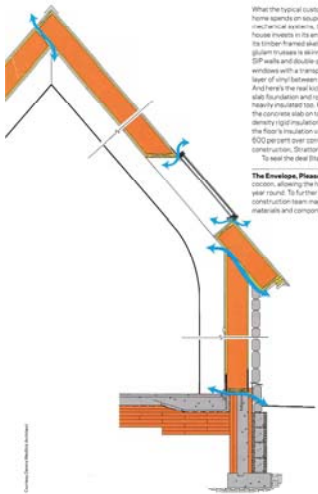
Photos by Johnny Valiant, Reto Guntli



KSDA Passive Project 2016



SUPERINSULATION



When the typical custom home spends on stacked-up mechanical systems, this house invests in its envelope. Its timber frame installation of gasket valves is sealed with SIP walls and double-paneled windows with a transparent layer of air between the panes. And here's the real kicker: The slab foundation and roof are nearly monolithic too. Pouring the concrete slab on top of high-density rigid insulation increased the floor's insulation values by 600 percent over conventional construction, Strouton says.

The Envelope Phase: Structural insulated panels (SIP) form a tight cocoon, allowing the house to maintain temperate internal conditions year-round. To further reduce the potential for thermal bridging, the construction team checked out and sealed up all the spots where materials and components come together.

construction team used caulk, tape, and tight joints to minimize their risk for high-air areas that are typically prone to heat gain and loss, such as sill plates and planer edges where walls meet up with the roof and foundation.

The end result is a monolithic shell that functions as one colossal thermal mass. None of the structure of the house touches the outside. "Electric points out. The garage walls are R-30, the roof is R-53, and the side-wings are concrete floor construction," Strouton says.

To seal the deal, Strouton's construction team used caulk, tape, and tight joints to minimize their risk for high-air areas that are typically prone to heat gain and loss, such as sill plates and planer edges where walls meet up with the roof and foundation.



Type & press ENTER key



- HOME
- NEWS
- VOLUNTEER
- DONATE
- RESTORE
- OWN A HOME
- PARTNERS
- ABOUT US

Columbia County Habitat for Humanity, founded in 1993, is an affiliate of Habitat for Humanity International. To date, our volunteers have built safe, affordable housing for 16 families. We make home ownership possible for lower-income working families through no-interest mortgages. To encourage re-use and recycling as well as generate revenue for building projects, Habitat operates the ReStore, adjacent to our office on Route 66, just north of 9H in Hudson, NY.

About Us

Columbia County Habitat for Humanity's Vision

A community where safe, affordable housing is available to everyone.

Columbia County Habitat for Humanity's Mission

We transform lives of lower-income working families by building safe, sustainable and affordable homes, working in partnership with qualified families, community volunteers, local organizations and area businesses.

Columbia County Habitat for Humanity's Values

- We believe that safe, decent, and affordable housing is a basic human right.
- We believe that collaborative work is central to our mission and honors the worth and dignity of all.
- We believe that diversity is integral to our organization and seek to include all people and efforts who share our vision.
- We believe that humanity is demonstrated through action and partnership with people of all faiths and beliefs.

- Donate Now
- Volunteer Now



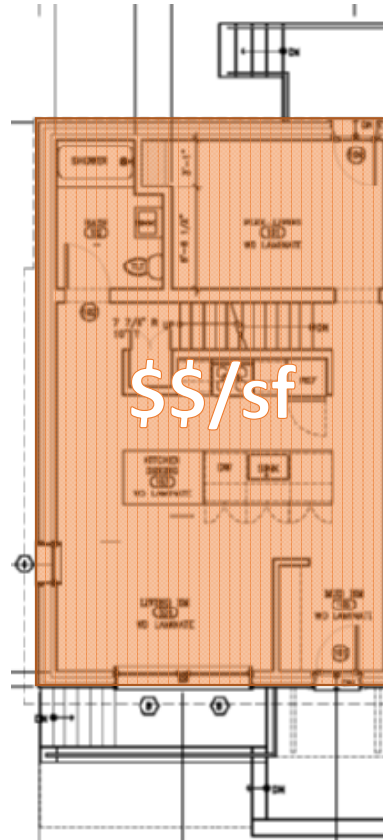
with your **HELP**



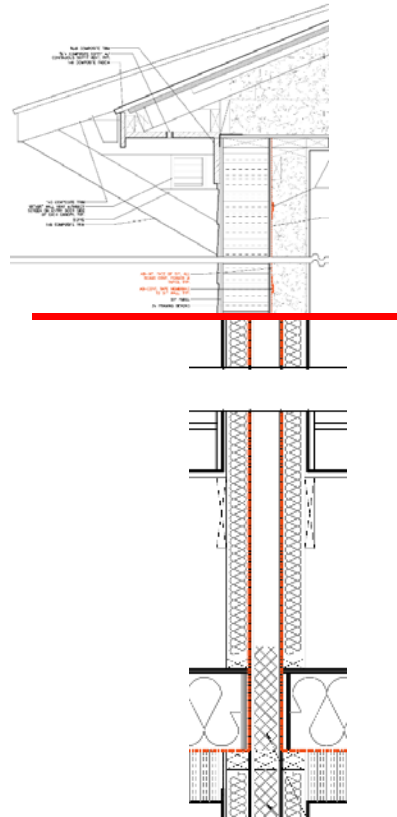
Assessment of Project Goal and Challenges



PH Certification



Cost Effectiveness

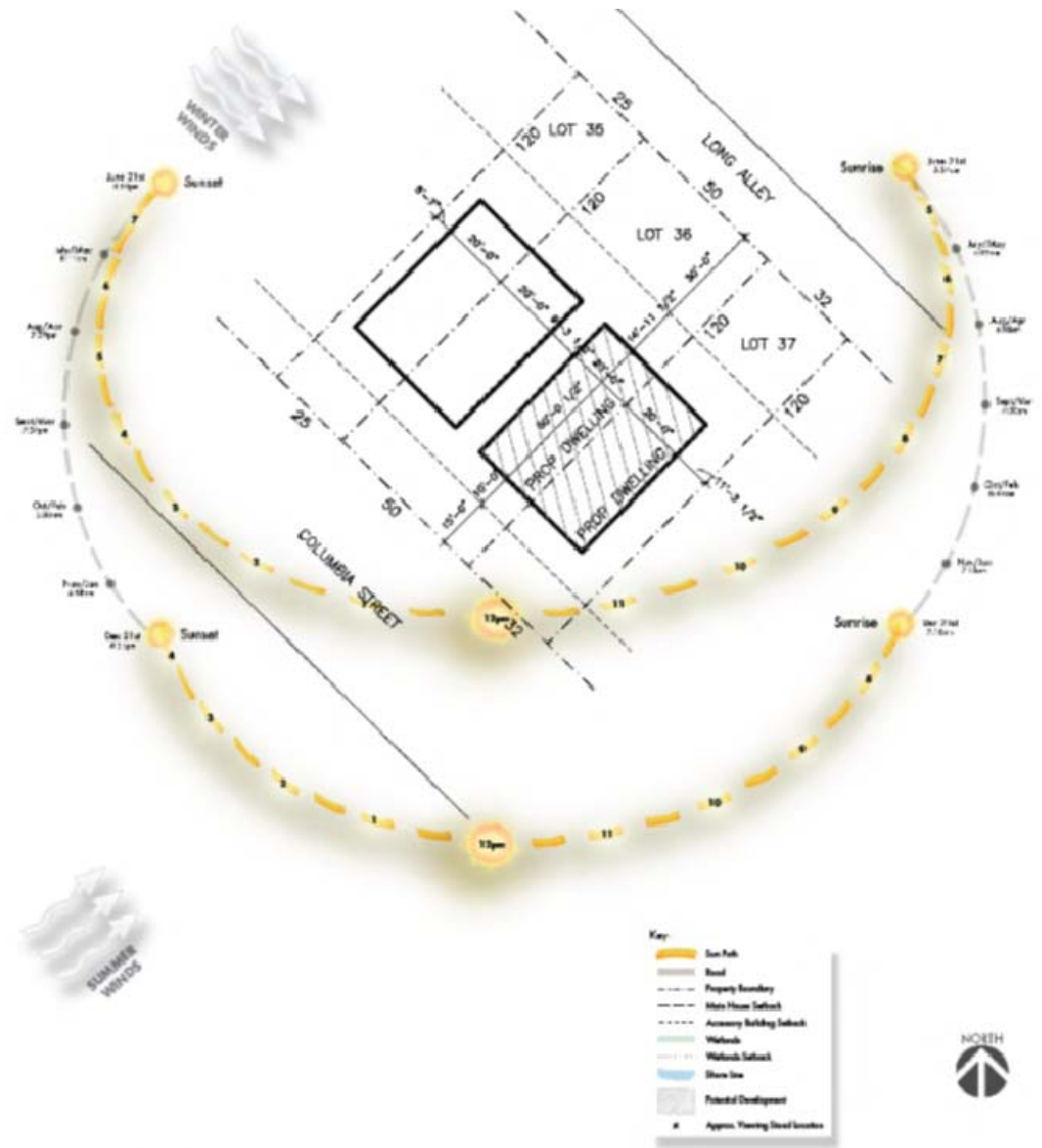


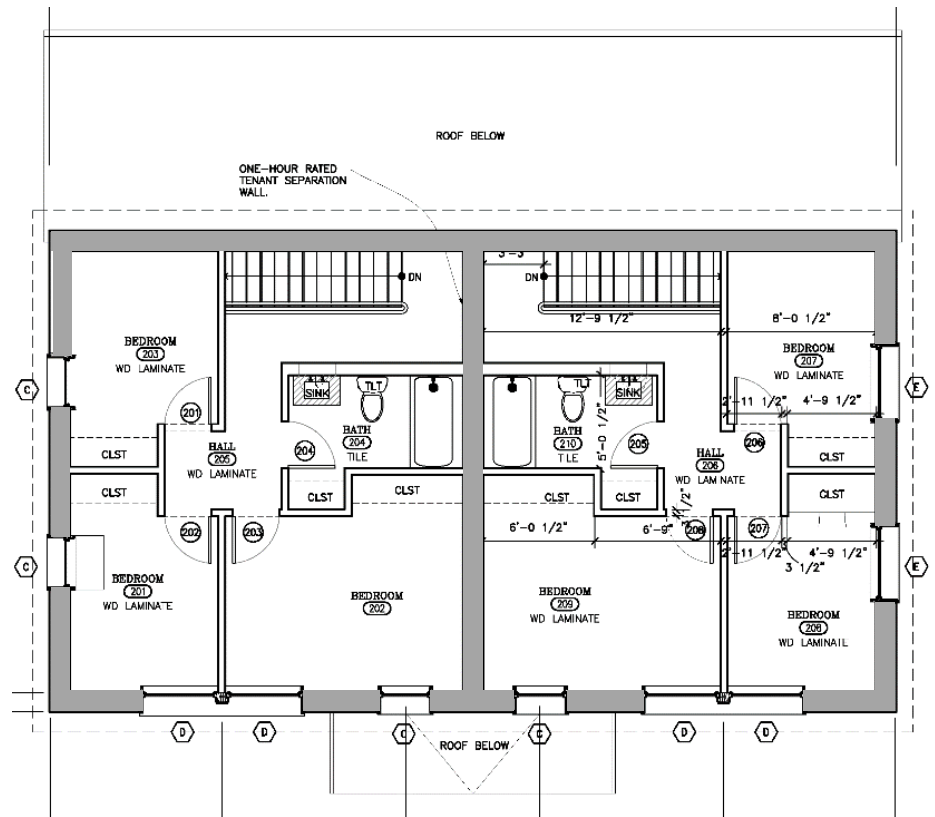
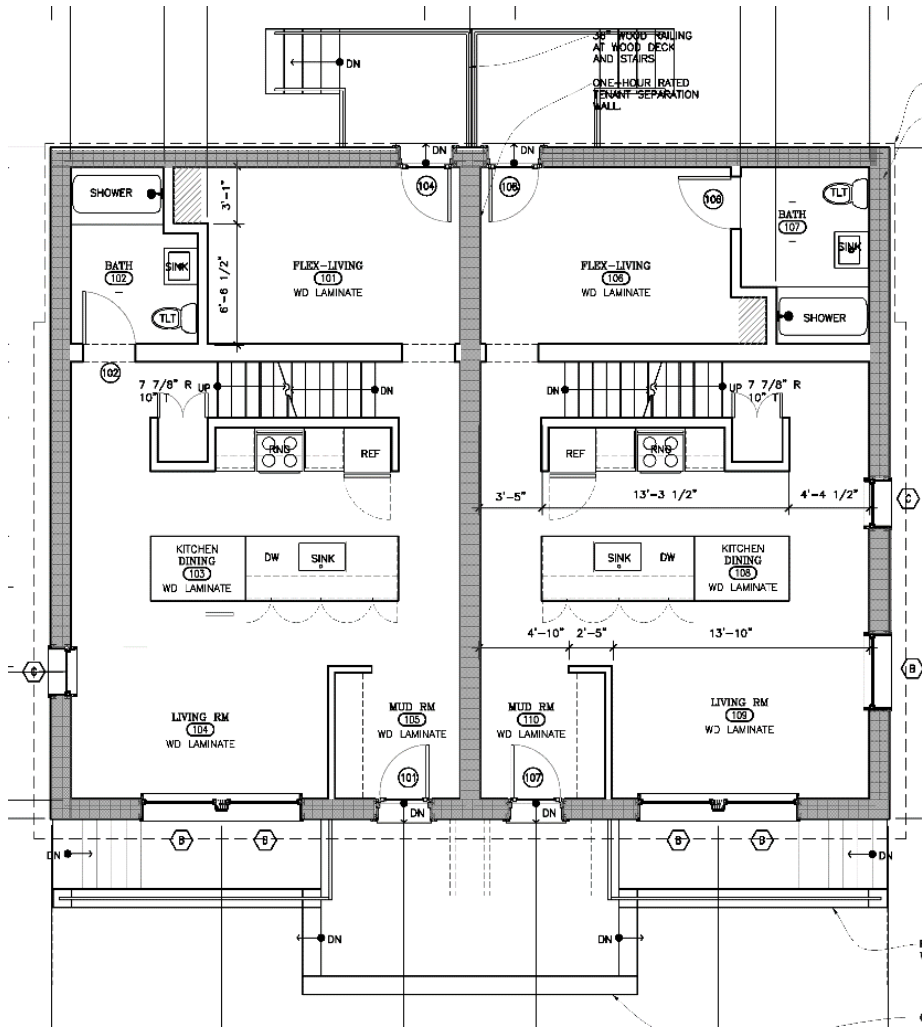
Construction Method Testing



Volunteer Labor Participation







Habitat #1 Building Section





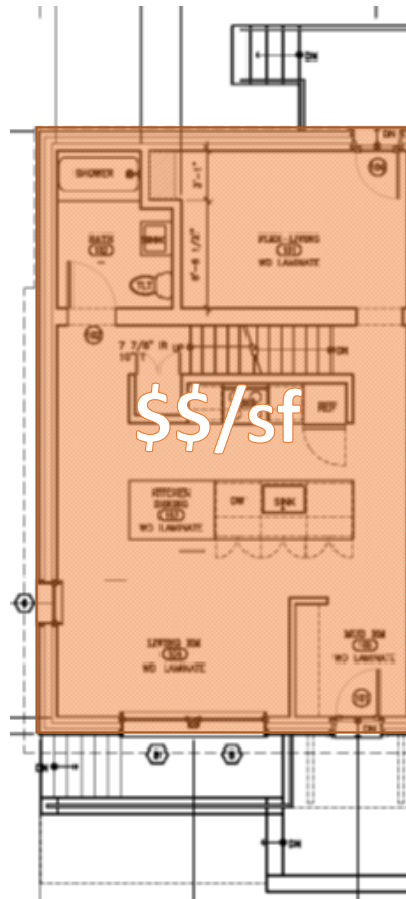




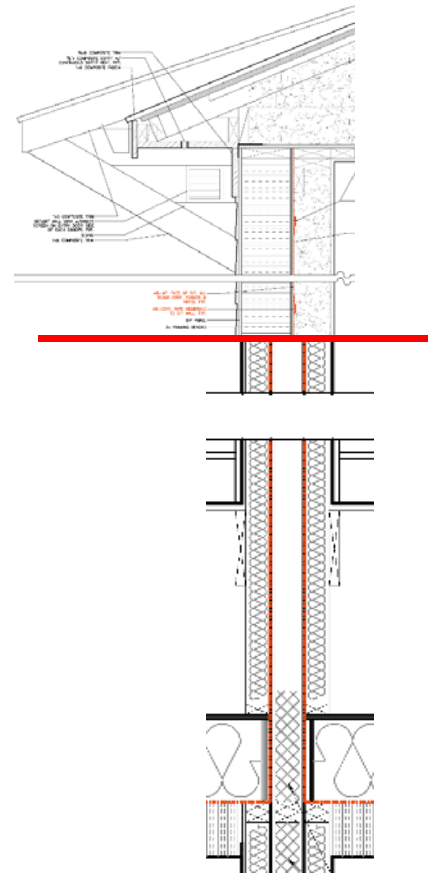
Project Goal and Challenges



PH Certification



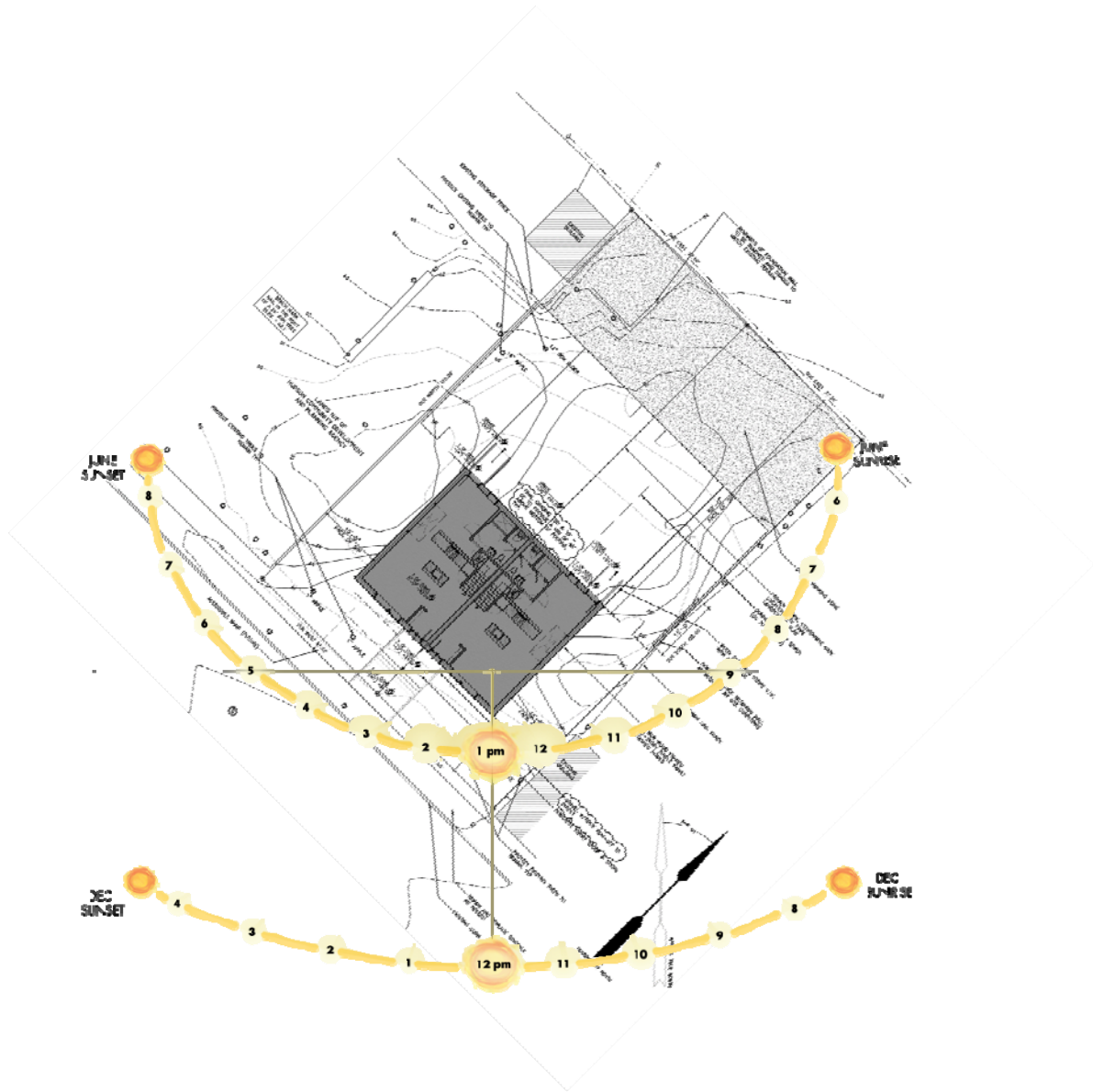
Cost Effectiveness

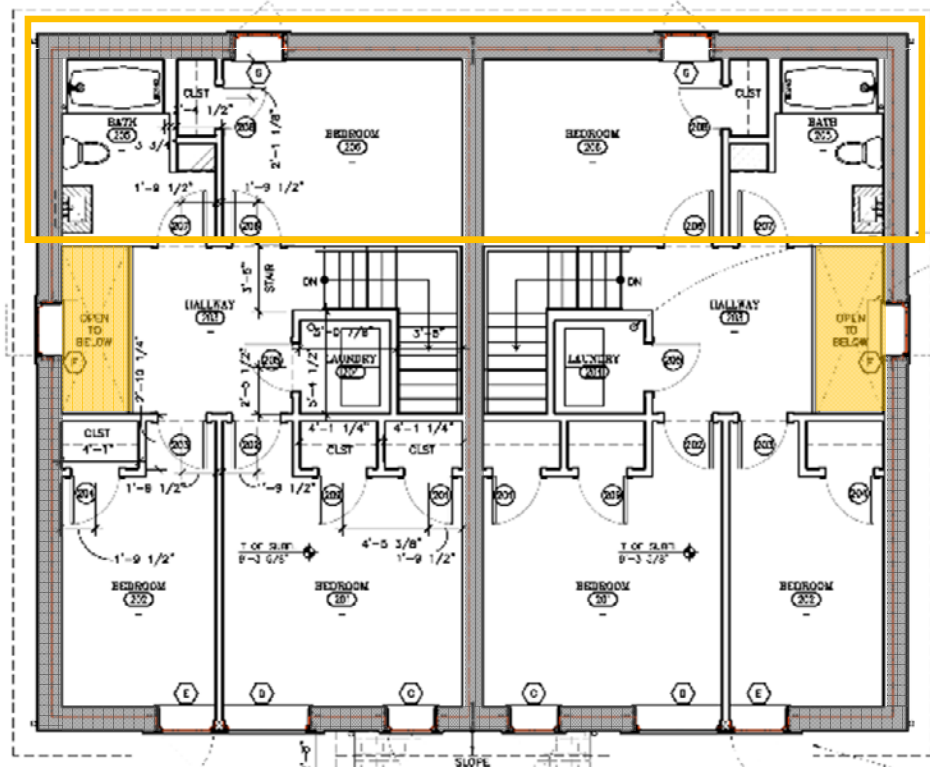
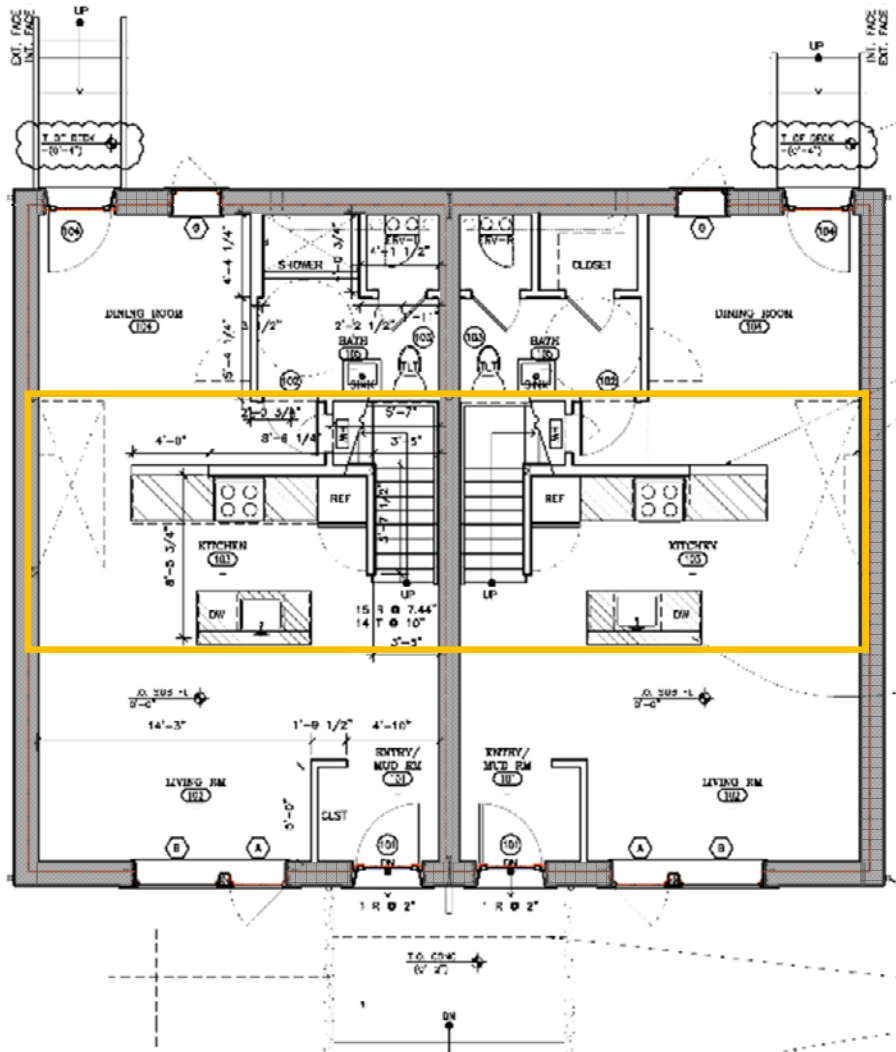


Construction Method Testing



Volunteer Labor Participation







Habitat #1

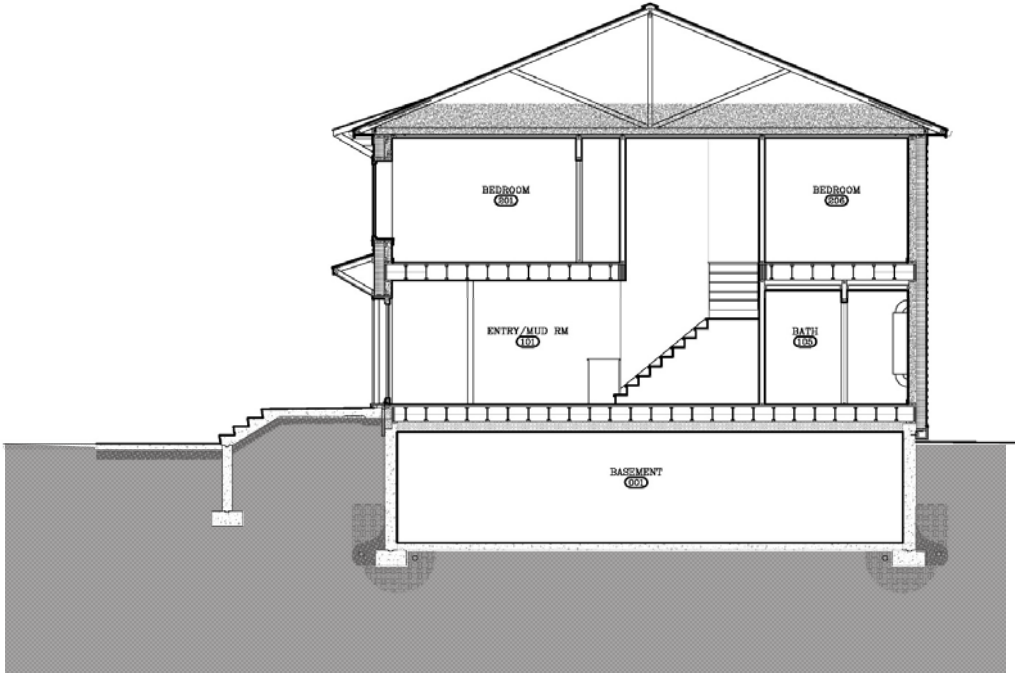


Habitat #2

Building Section Comparison

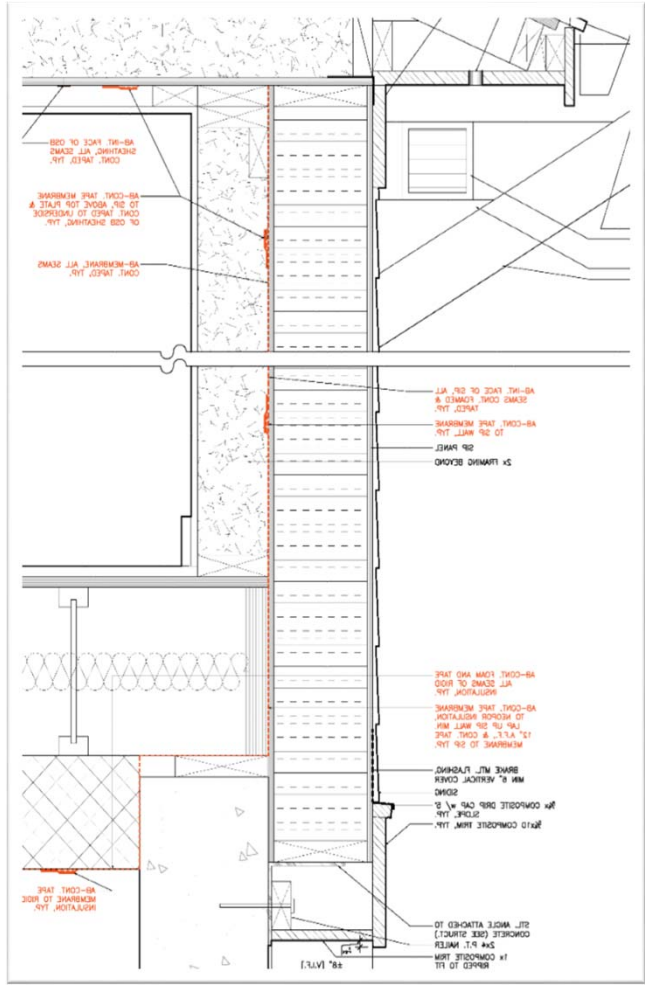
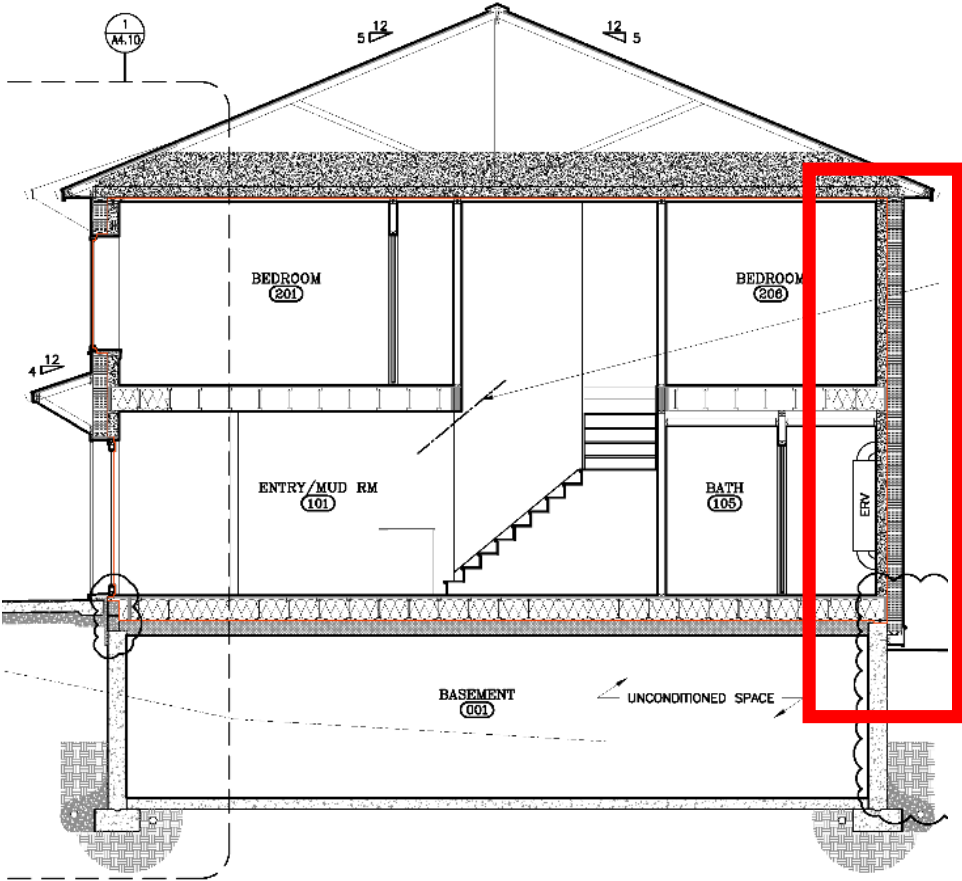


Habitat #1



Habitat #2

Habitat #2 Foundation and Walls





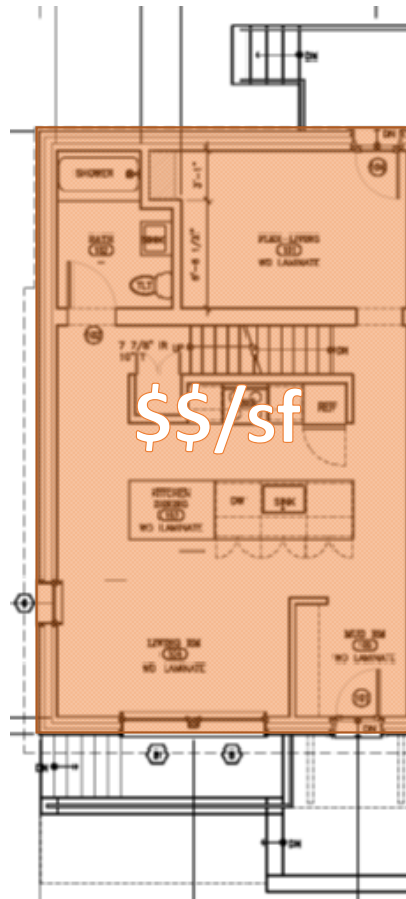




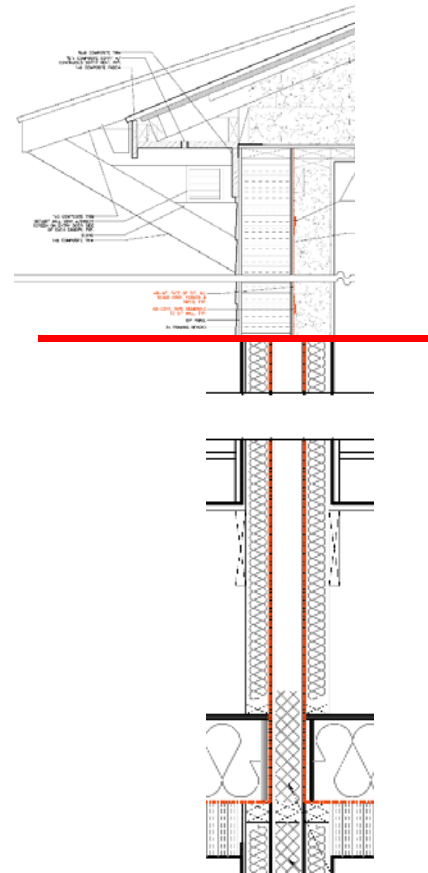
Project Goal and Challenges



PH Certification



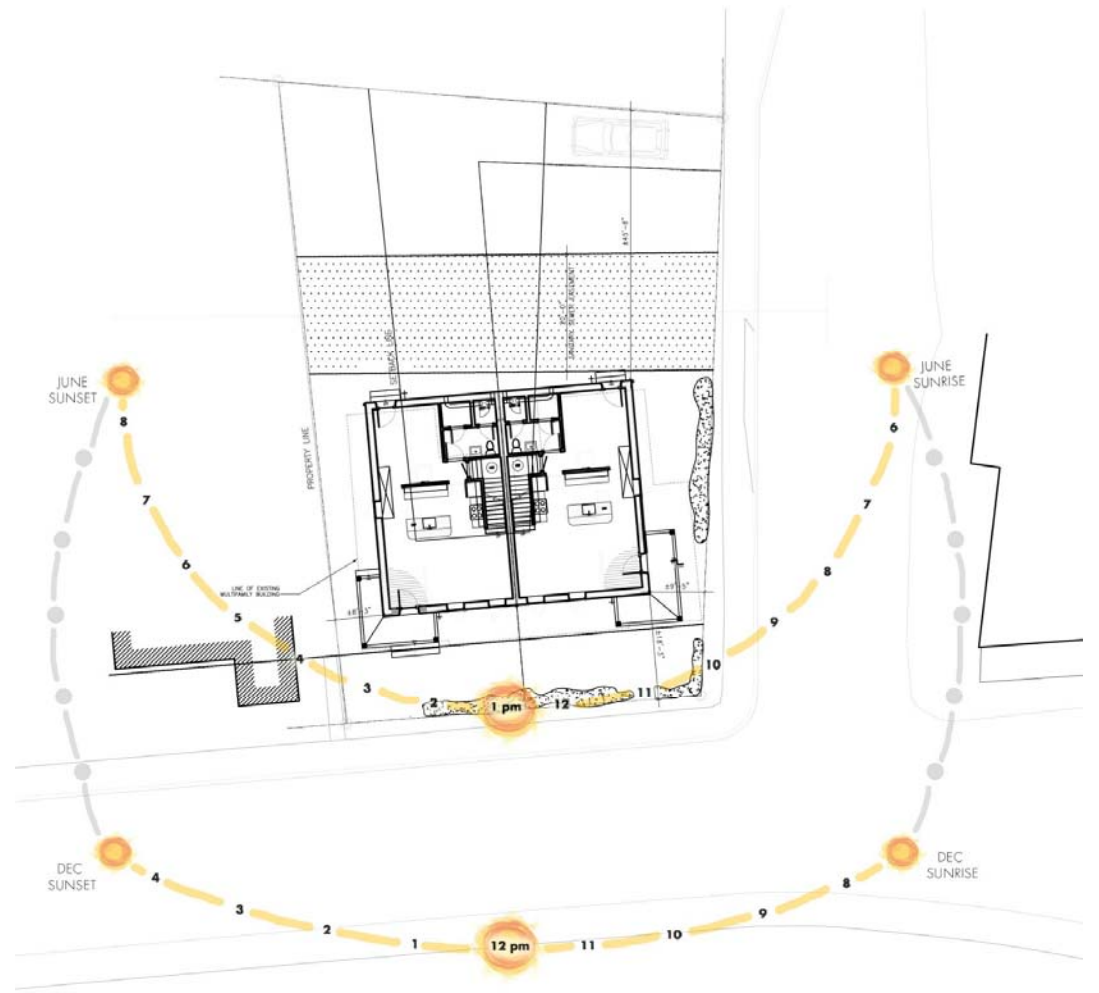
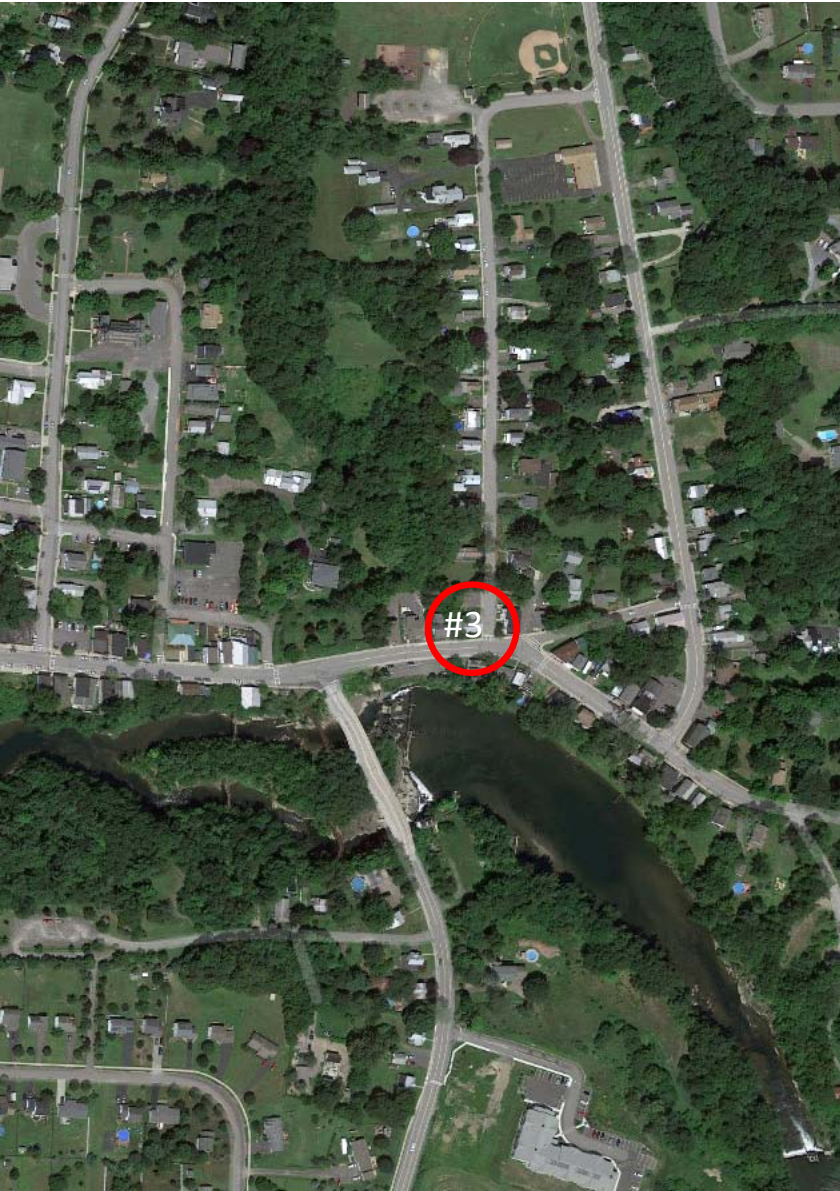
Cost Effectiveness



Construction Method Testing



Volunteer Labor Participation





FIRST FLOOR



SECOND FLOOR

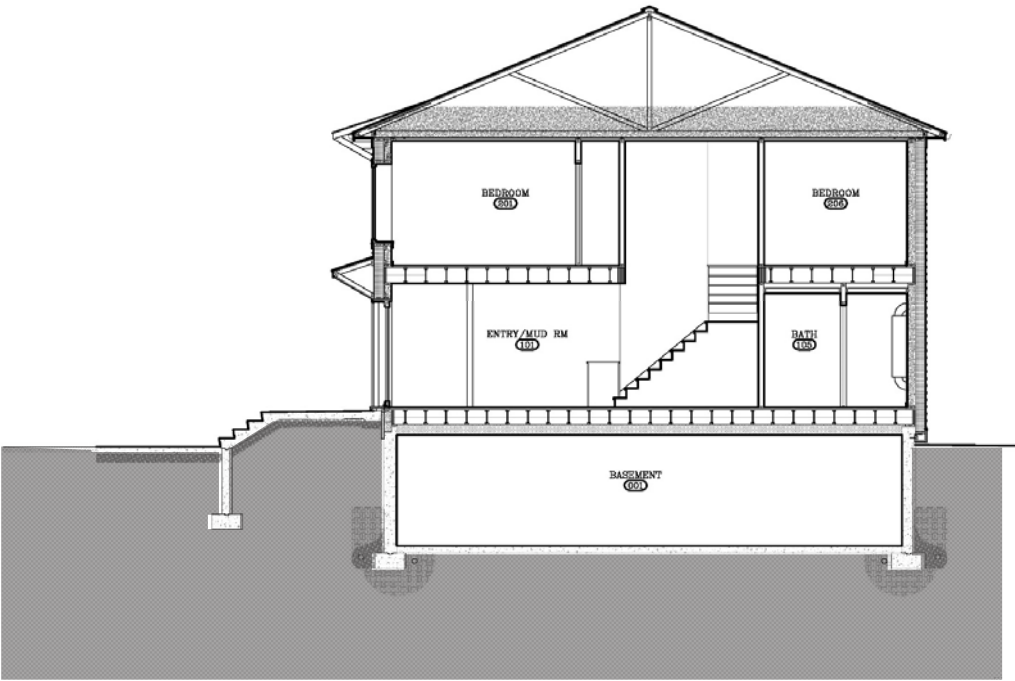


Habitat #2

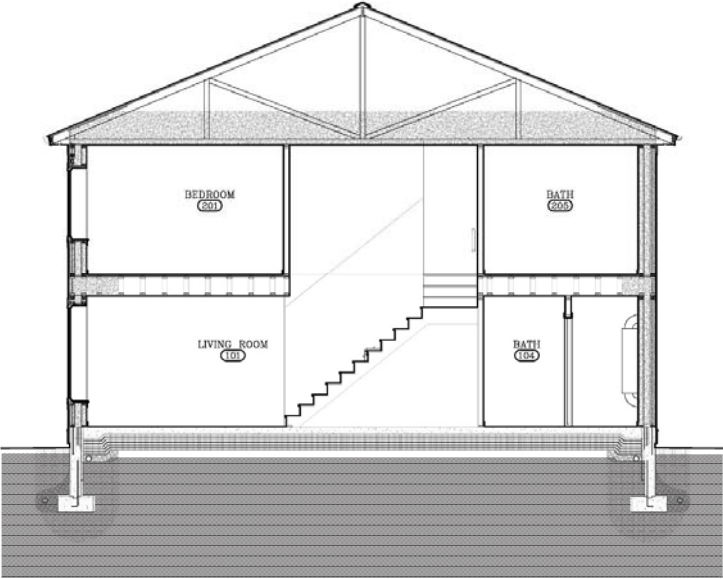


Habitat #3

Building Section Comparison



Habitat #2



Habitat #3



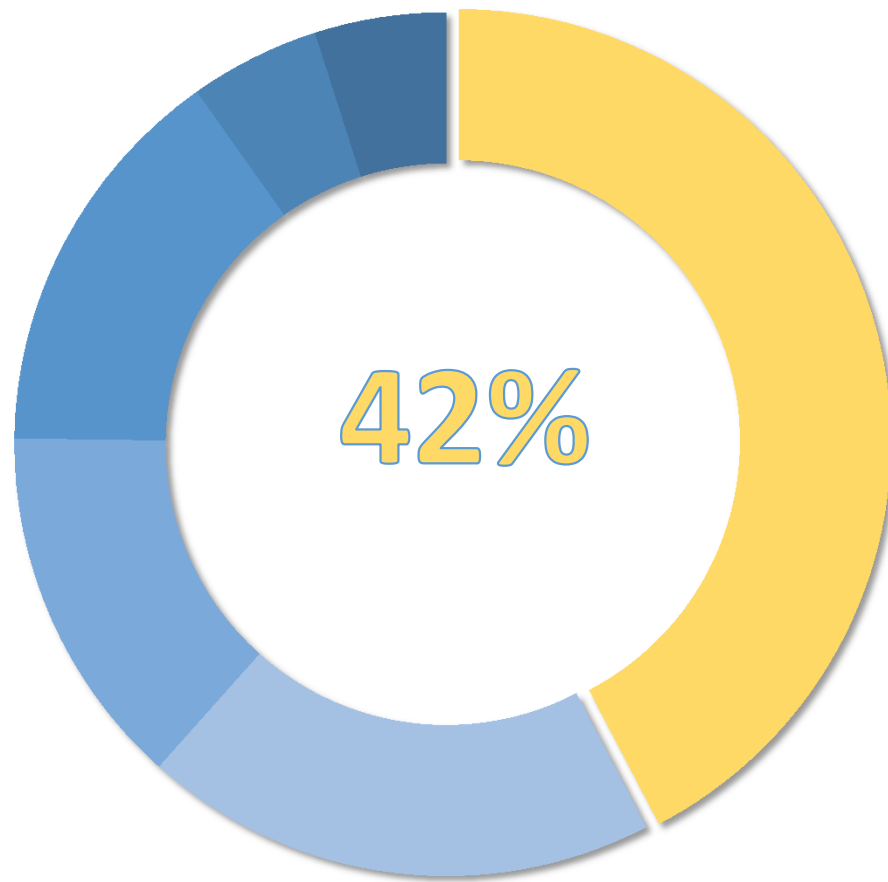
Habitat for Humanity
Volunteer Opportunities
We are looking for volunteers to help with the construction of this home. If you are interested, please contact us at (508) 885-1111 or visit our website at www.habitat.org.

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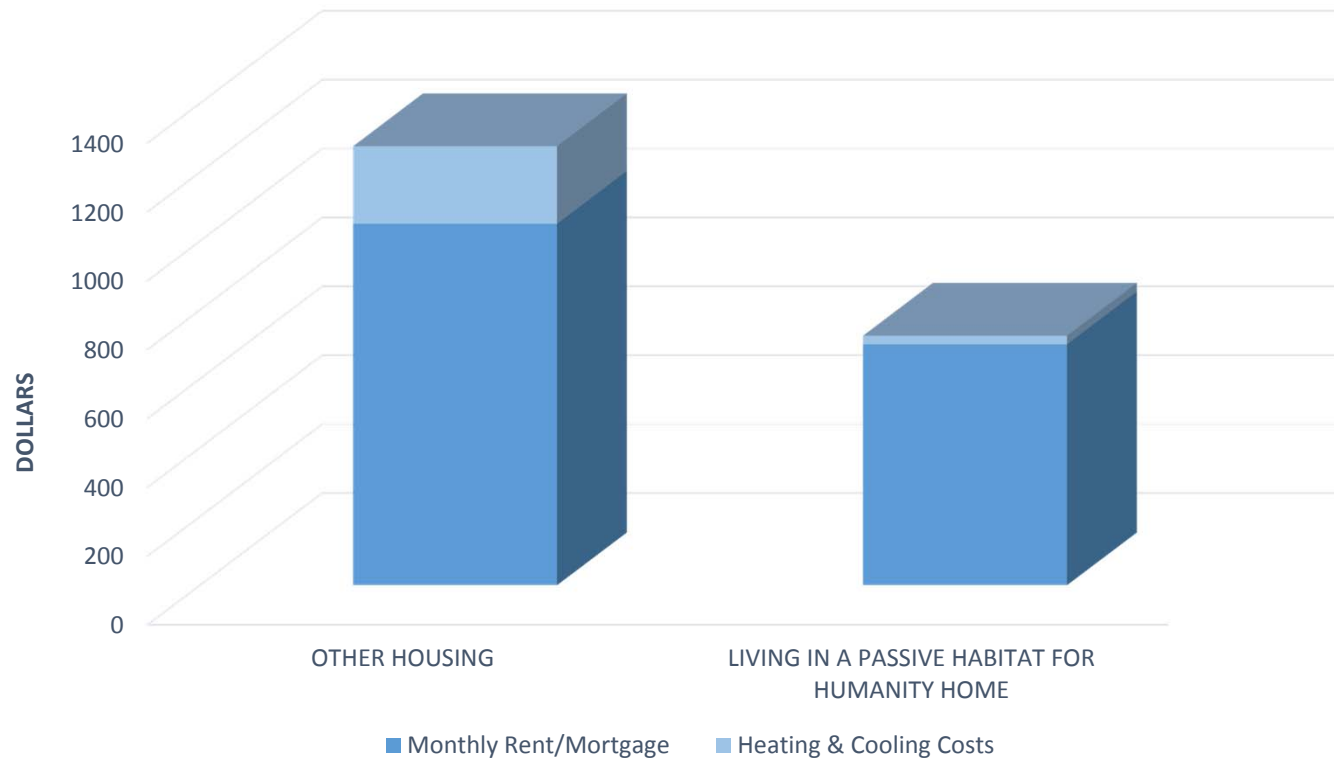
HABITAT for HUMANITY Modeled and Actual Energy Use

kWh	REM/Rate Passive House	Actual Passive House (Weather Normalized)	REM/Rate Base Code	Actual Passive House vs. Base Code
Heating	1,114	678	15,750	-96%
Cooling	1,026	399	1,378	-79%
DHW energy	4,396	4,810	5,074	
Other energy	5,305	4,741	6,364	

Percent of Columbia County Residents
At or below Habitat for Humanity's Income Qualifications



Average Monthly Costs for Qualified Habitat for Humanity Family









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Passive House & Columbia
County Habitat for Humanity

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