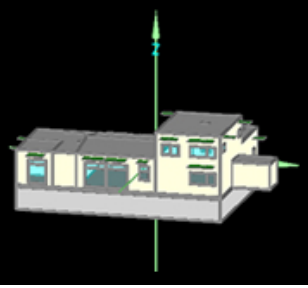
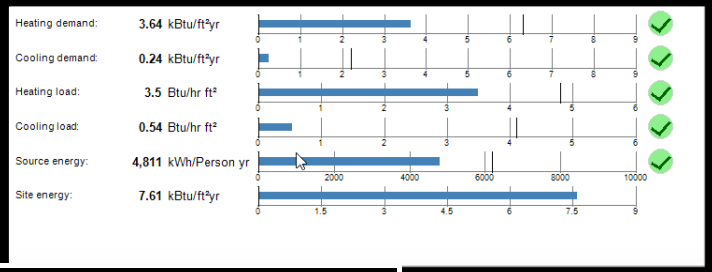
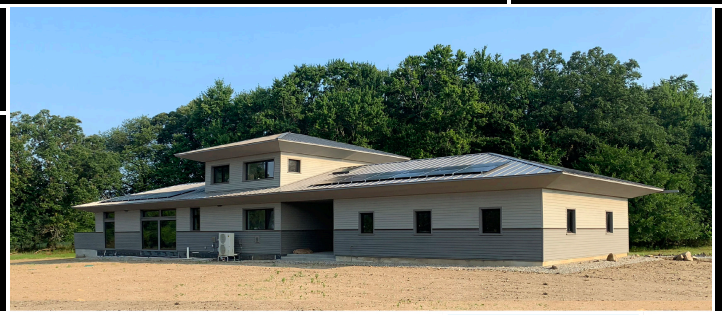




Visible Green Home® Tour
The P2 Passive House - A Building Revolution



ARCHITECTURAL Resource

ZERO ENERGY READY HOME
U.S. DEPARTMENT OF ENERGY

Welcome to the first house in the State of Michigan to receive the PHIUS + 2015 certification!

ENERGY STAR

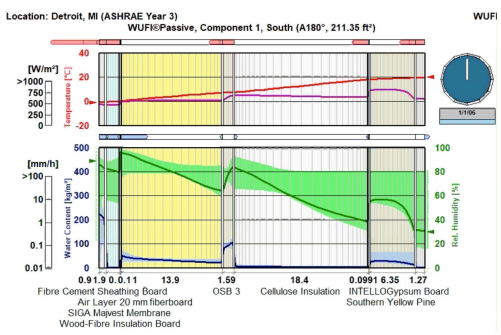
At Architectural Resource, we design homes built right now that are ready for tomorrow. We utilize advanced design, building science and construction systems that create homes that far exceed code minimum standards in terms of energy efficiency, water efficiency, thermal confort, indoor air quality and building durability. We help our clients to create inspired living spaces that create inspired lives, and avoid building homes that are BNO (Brand New and Obsolete) the day they move in. We are creating...

The Homes of the Future - Today™

Residential Architecture
it is not just what we do...
It is who we are,
for over 25 years!

PHIUS
Passive House Institute US

EPA Indoor airPLUS QUALIFIED HOMES



Residential Specialist
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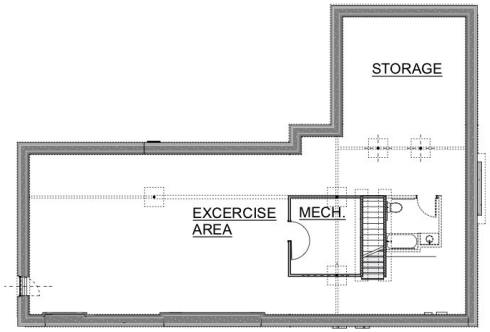
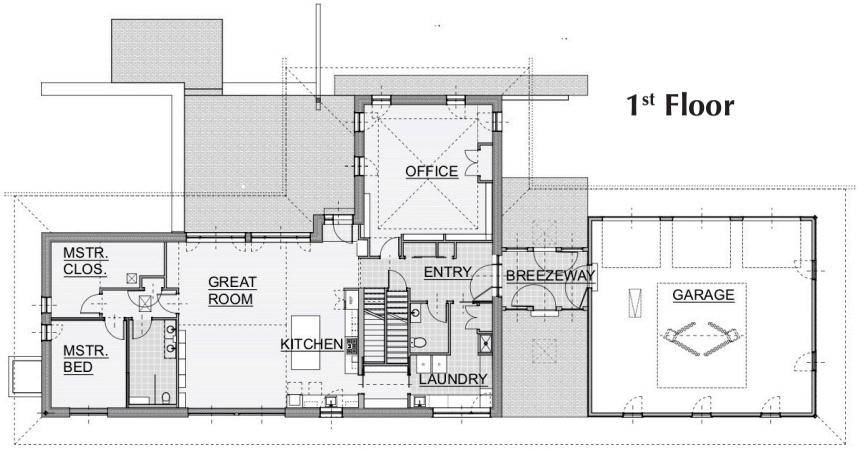
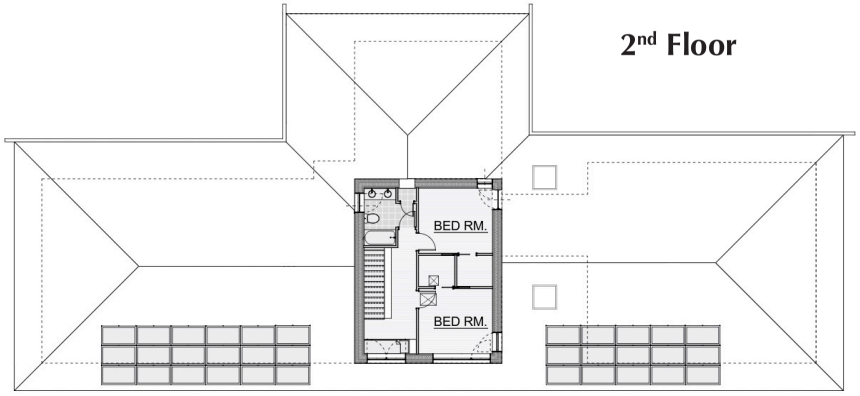


Basement



1st Floor



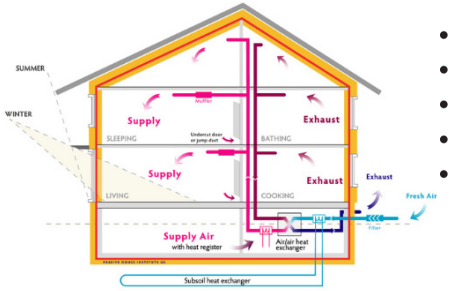
2nd Floor

Project Information

Site Acreage:	4.8 Acres	Finished Space:	3,396 S.F
1st Floor	2,719 S.F.	2nd Floor	677 S.F.
Basement	2,615 S.F.	Garage:	1,091 S.F.

Passive House Principles

Passive House Principles



- Continuous insulation without any thermal bridging
- Building envelope extremely airtight
- High performance windows
- Uses minimal space conditioning system
- Balance ventilation with heat & moisture recovery

Exterior Enclosure	Code Minimum Performance	Passive House Performance
1. Fenestrations	R-3.125	R-10
2. Ceilings	R-38	R-90
3. Wood Frame Walls	R-20/R-13+5	R-50
4. Basement Walls	R-10	R-37
5. Slab R- value & depth	R-10, 2ft	R-30
6. Trombe Wall Glazing	R-3.125	R-5.26

Energy Performance

Total heating demand: 18,141 kBtu/yr (18.1 million BTU per year)
Compare this to 19,418 kBtu/yr anticipated from passive solar gains!
Total cooling demand: 1,180 kBtu/yr

94.3 million BTU per year average home in midwest (per 2015 US E.I.A.)
129.5 million BTU per year average for homes above 3000 SF (per 2015 US E.I.A.)

18.1 million BTU (P2 Passive house)/94.3 million BTU (typ.)=19% (> 80% reduction)
18.1/129.5 = 14% (> 86% reduction from a similar size home)

Site EUI 5.35 kBtu/yr/sf