

17 Mile Haus

Pebble Beach, CA

Single Family Building

New Build

PHI Database ID#: Not yet registered

Certification Goal:



Status: Pending-in construction phase

Size: 2,906 FT2 TFA with One Unit

Description: This two-story single family home is looking to sit lightly on the land and achieve exemplary building performance.

DOE Climate Zone: 3c

Team:

Owner:

Anna and Ilya Asnis

Architect/Designer:

Bronwyn Barry, Passive House BB
<https://www.passivehousebb.com>

PH Consultant:

Bronwyn Barry, Passive House BB
<https://www.passivehousebb.com>

MEP Design:

Hyperlocal Workshop
<https://hyperlocalarch.com>

Structural Engineer:

Andrew Arnold
<https://www.hohbach-lewin.com>

Builder:

Carmel Building & Design
<https://www.carmelbuilding.com>

Certifier:

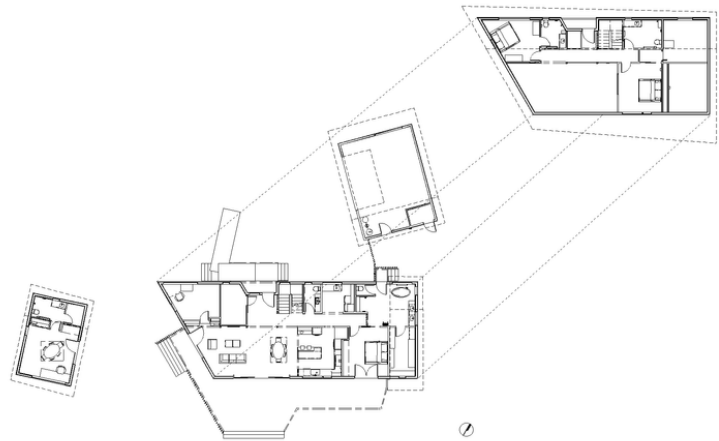
Steve Mann, Home Energy Services
<https://green-mann.com/about>

Landscape Designer:

Anna Asnis



This site and location called for something special. To find a form that would honor this site, we spent time digging into the rich legacy of Monterey modernism and its deep connection to the landscape and materials of this region. We drew inspiration directly from the vertical pines and horizontal oak trees located on the site, which we repeated, using elongated vertical and horizontal fenestration. We did the same with cedar siding, laying it both vertically and horizontally across otherwise simple forms. We borrowed our sweeping roofline and extended overhangs from the 70s modernist vernacular of this region, and used the same natural materials palette of cedar siding, slate floors, and metal roof.



We detached the house, garage, and studio into separate forms to allow them to nestle carefully in between the existing trees, causing as little disruption to the site as possible. We pushed the peak of the main building roofline to the maximum allowed by the local zoning ordinance. This was done to raise the floor level as high as possible above grade because the water table at this location is very high. We wanted to keep the house well above any possible future high water marks. A cantilevered front corner exaggerates the floating effect of the raised floor, simultaneously allowing us to reduce the amount of concrete required for the foundation. No structural steel was required to support this cantilever, or the soaring ceilings and exaggerated roof overhangs, which greatly benefited our embodied carbon results.

Thermal Envelope

Ground:

R-32

Walls:

R-19

Roof:

R-36

Windows & Doors:

Average: U-value: 0.12 BTU/hr.sf.F

Shading Strategies:

Optimized building orientation with deep overhangs to the south.

Mechanical Systems:

Ventilation:

Brink Flair ERV

Heating:

Mitsubishi ducted heat pump

Cooling/Dehumidification:

Mitsubishi ducted heat pump

Domestic Hot Water:

Sanco2 Heat Pump water heater

Onsite Renewable Energy:

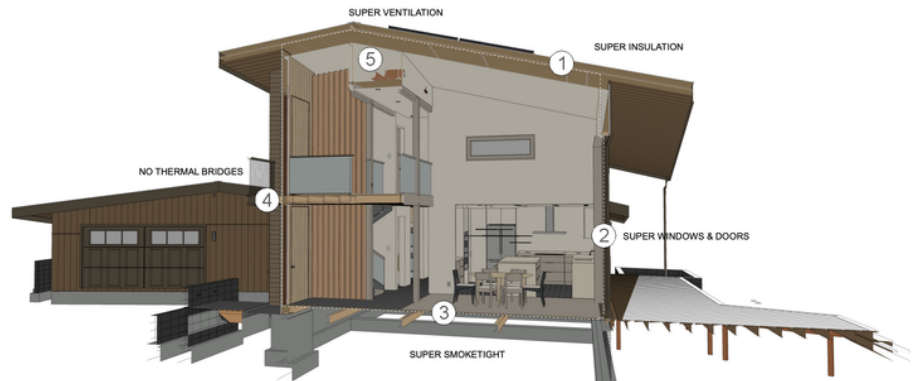
18 REC PV panels

PHPP Values

Climate: Monterey, CA. Warm	Cooling & Dehumidification Demand: 0.97 kBtu/ft2/yr
Airtightness: 0.6 ACH 50 (unconfirmed)	Cooling Load: 1.28 BTU/hr.ft2
Annual Heating Demand: 1.14 kBtu/ft2/yr	PE Demand: 16.32 kBtu/ft2/yr
Heating Load: 1.69 BTU/hr.ft2	PER Demand: 24.32 kBtu/ft2/yr



Our client on this project served as the landscape designer. She worked closely with the architect to strategically locate and create raised planter beds beneath all downspouts. These planters serve as both transitions and intermediaries to filter all water on site as it transitions from the built form rooftops into the landscape. The rest of the site is planned as natural wildland and is planned as native, undisturbed grasses beneath the existing tree canopy.



The contractor served as the primary driver of this project. The experienced team at Carmel Building and Design provided invaluable design input and early feedback on material costs and availability, which allowed the client to make judicious choices that aligned with their disciplined budget. All this occurred during a period of extreme volatility in the construction supply chain caused by a global pandemic and the Ukrainian war. With the exception of an eight month delay in the window production schedule and subsequent delivery, the project has remained on track and on budget.

We intend to monitor this project for two years to ensure that the post-occupancy results meet our predicted targets. Extensive presentations and articles on the design and modeling of this home have already been shared. We intend to continue to share our experience — successes and mistakes — in the hopes of contributing to the collective shift in our industry towards better building outcomes that tread lightly on the land.