



LIEBSTUDIOS: architecture

2017 - 2019

**The Hess Residence**  
**Additions and Renovations**  
Winchester, MA

Completed in 2019, the Hess Residence is an 1850 carriage house in the Highland Avenue section of Winchester, nestled on an historic street, heavily treed and near an intermittent stream.



2017 - 2018

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Still in construction, the Hess Residence is an 1850 carriage house in the Highland Avenue section of Winchester, nestled on an historic street, heavily treed and near an intermittent stream.

**Renovations and Additions Program:**

- Demo of two existing, small additions from 1960's and 1980's to be replaced with a two-story addition to continue the historic roof line of the carriage house and incorporate existing, decorative rafter tails and dormer details.

- New addition - great room first floor (new kitchen and wood stove insert), master bedroom and bathroom suite and one additional child's bedroom;

- Renovation of the existing first floor dining room / entry;

- Update of new infrastructure systems (plumbing, electrical, HVAC, spray foam insulation);

**Sustainability:**

As part of the renovations, and where able and practicable for the existing fabric of the historic house, the following sustainable approaches were incorporated into the final design:

- Retaining a significant portion of existing historic infrastructure and framing including: stabilization of historic timber beams; incorporating historic bead-board ceilings and hardwood floors (refinished with low VOC coatings); retaining existing stone foundation; composite / recycled content exterior decking materials; re-purposing historic doors for interior use.

- Incorporating sustainable products and materials: low/no VOC paints, adhesives, and coatings; granite remnants from tile yard; high efficiency HVAC; high R-value closed cell spray foam insulation; LED lighting throughout.

**Green Ratings:**

Though the clients opted not to pursue certification of the house under Green Building rating systems, the house as designed and constructed could achieve:

- LEED Homes Certification (base)
- Green Globes - 1 or 2 Green Globes



2016 - 2018

**69 Harrison Avenue  
Additions and Renovations**  
West Peabody, MA

This single-family residential project started in design and planning in the spring of 2016 and was completed in early 2018. The project included the renovation and additions to an existing post WWII, split ranch house in the Presidential Heights neighborhood of West Peabody, MA.

**Renovations and Additions Program:**

- addition - 2-car garage with 400 sf great room above;
- vertical circulation connector to connect two existing house levels and two new addition levels;
- addition off end of main house for new master bedroom / bath suite;
- renovation of the existing house interior with new kitchen and bathrooms, laundry and activity room for an adult child with special needs;

**Solar:**

As part of the project and siting of the house additions, the house was converted to complete solar electric with two photovoltaic arrays with a total of 40 panels and an energy production capability of 15,000 KWh per year.

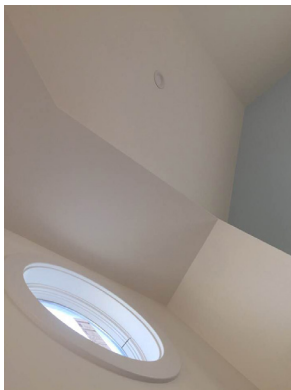
**Sustainability:**

The project was approached sustainably with LEED Homes and Green Globes. The overall planning and design through selection of finish materials for the interior and exterior include "green" products and systems (eg. cementitious exterior siding and trim, interior floors include bamboo for new spaces and refinished hardwood with water based stains and sealers, all LOW VOC at existing; all interior paints are no VOC. Plumbing fixtures in bathroom and kitchen were specified as low flow/use. Kitchen counters are a recycled content solid surfacing. All new lighting is LED throughout the house.

**Green Ratings:**

Though the client opted not to pursue certification of the house under Green Building rating systems, the house as designed and constructed could achieve:

- LEED Homes Silver
- Green Globes - 2 Green Globes



01/2004 - 01/2006

## 54 Beacon Street - Lapey Residence Additions and Renovations

Marblehead, MA

Completed in 2006, the Lapey Residence involved a major renovation and addition to a seaside summer cottage that had been made into a year-round 1-bedroom house. The proximity to Grace Oliver's Beach near the Peaches Point area of Marblehead, MA and adjacency to the historic district presented a multitude of design and permitting challenges.

### Renovations and Additions Program:

- Demo of the existing cottage, stripping down to bare framing and foundation.
- New addition - expansion of the house to two-stories, two-bedroom, two full bath, Master suite with ocean views and deck, new kitchen with ocean view deck, new dining, den and living room with wood burning fireplace;
- Comprehensive Green design and sustainability program;
- New HVAC, plumbing and electrical infrastructure;

### Sustainability:

The residence was designed to include two, 20-panel solar arrays (on the south facing gambrel roof) and be complete solar electric. The project was within a municipal light district and they would not support the solar conversion at that time.

- Passive solar design (after PV proposal was not approved by Town);
- Exterior finishes: cementitious, pre-finished siding and trim; thermal insulated, low E fiberglass windows; aluminum cable rail and composite decking and trim.
- Interior sustainable products and materials: closed-cell high R-value foam insulation throughout; low VOC paints and coatings; conversion to compact fluorescent lighting; bamboo flooring; Energy star appliances and fixtures; high efficiency HVAC and HW systems; recycled content avonite solid surface counter tops; low flow plumbing fixtures; radiant floor heating in master bathroom.

### Green Ratings:

In 2006, the residence would have qualified for a LEED Silver for Homes certification.



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