

Technical Specifications



Modern becomes a farmhouse:
Simple is Sustainable

Spear Home
St. Peter, Minnesota

2010 Homes by Architects Tour



Energy

- Home Energy Rating System Index of 40 (60% more efficient than code)
- Solar thermal heating and domestic hot water system
- Structural insulated panel wall and roof systems
- 31.0 insulation R-value at exterior walls
- 48.0 insulation R-value at roof
- 31.0 insulation R-value T-Mass foundation walls
- 15.0 insulation R-value below basement slab
- Energy Star rated windows with 0.23 U-value & 0.40 SHGC
- 70% Energy Star indoor lighting
- Energy Star labeled refrigerator, dishwasher and clothes washer

Sustainability

- Recycled construction waste reduced landfill contribution to 2.4 lbs/square foot
- No HVAC refrigerants used
- FSC fir veneer cabinetry
- 85% post-industrial recycled stainless steel counter top
- Reclaimed fir trim
- Locally sourced materials including: concrete, aggregate and field stone patio

Water

- 59% of rain water from roof directed to cistern
- 96% native, drought tolerant plants in planting beds
- 62% reduction in irrigation water demand
- Lavatory faucets: ≤ 1.50 gpm average flow rate

Indoor Environment

- Home air tightness: 0.74 ACH50
- Energy recovery ventilator (ERV) provides continuous fresh air ventilation with 84% heat recovery
- 90% hard surface flooring
- Energy Star labeled bath fans
- MERV 8 air filtration at ERV
- Passive radon mitigation system
- Low VOC paint
- CO detectors located on each floor
- Continuous fresh air exchange for one week prior to occupancy