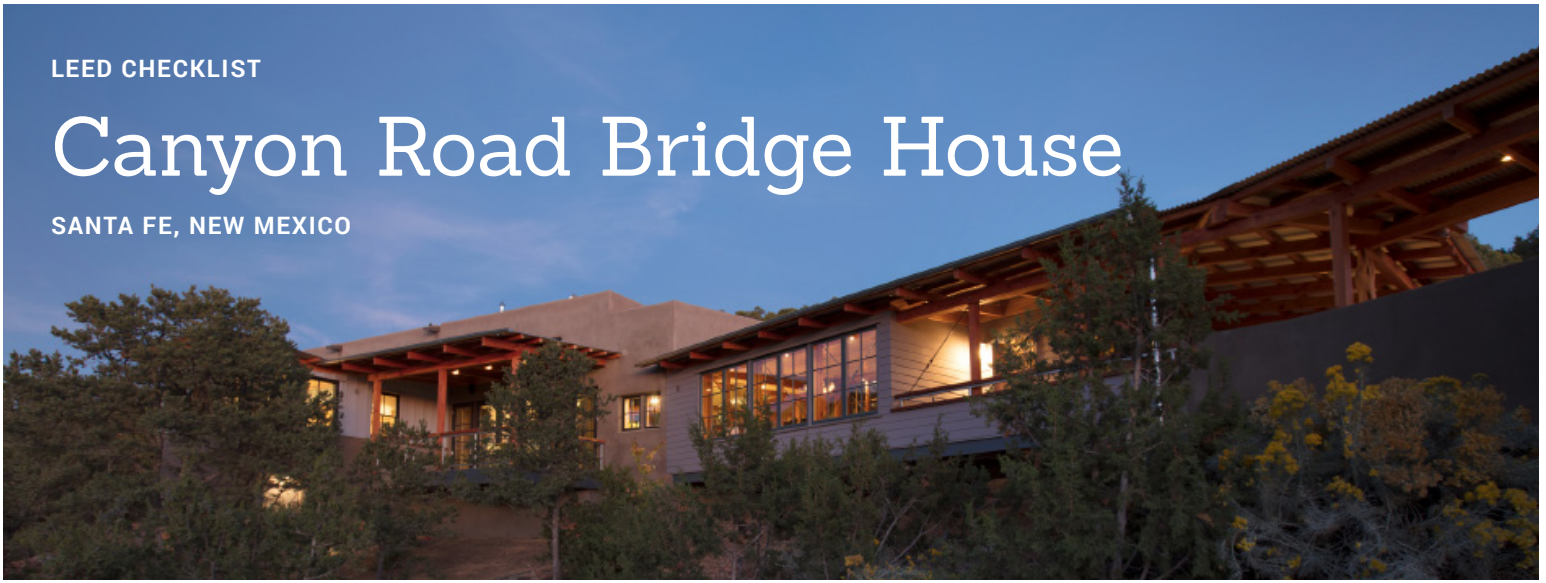


Canyon Road Bridge House

SANTA FE, NEW MEXICO



ID (Innovation & Design)

Integrated Project Planning

- 1.1 Preliminary Rating [prerequisite]
- 1.2 Integrated Project Team [1 pt]
- 1.4 Design Charrette [1 pt]

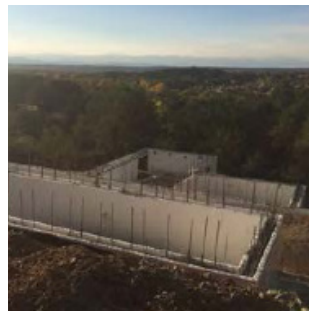
[Weekly construction team meeting with owners, contractor and designers; monthly meeting with entire project team including green building consultants as well as landscape, sub-contractors and fabricators as warranted]

Quality Management for Durability

- 2.1 Durability Planning [prerequisite]
- 2.2 Durability Management [prerequisite]
- 2.3 Third-Party Durability Management Verification [3 pts]



[Details like water-proofing (miradrain / mel-roll below grade, 2-layers of building paper below stucco...) and air-sealing (sealed / gasketed plates and sills, taped sheathing and caulked penetrations) contribute to the overall performance of the home and were credited under Innovation and Design's Durability section]



[Similarly, redundant systems like a membrane roof under a corrugated metal roof, and long-lasting materials like ICF (insulated-concrete formwork), aluminum-clad wood windows with high-altitude glazing, fiber cement siding and concrete floors add to the durability and lifespan of a house]



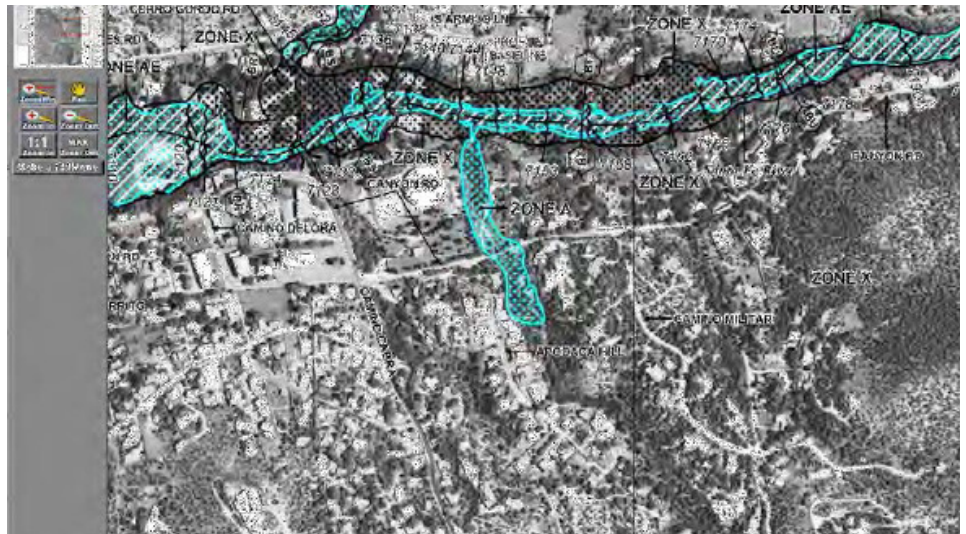
Innovative or Regional Design

- 3.1 Innovation Ruling #1
(Water Efficiency) [1 pt]
- 3.2 Innovation Ruling #2
(Environment & Atmosphere) [1 pt]

LL (Location & Linkages)

Site Selection

- 2 Site (built above 100-year flood plain, no endangered species, not within 100' of water, not public parkland, no prime / unique soils) [2 pts]



[FEMA 100-year flood plain]

Preferred Locations

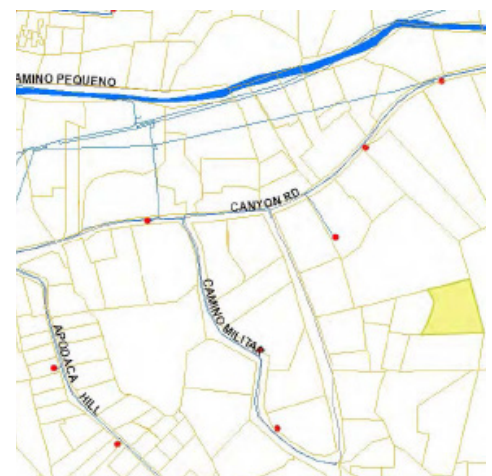
- 3.1 Edge Development [1 pt]

Infrastructure

- 4 Existing Infrastructure (Existing Sewer / Water within ½ mile) [1 pt]



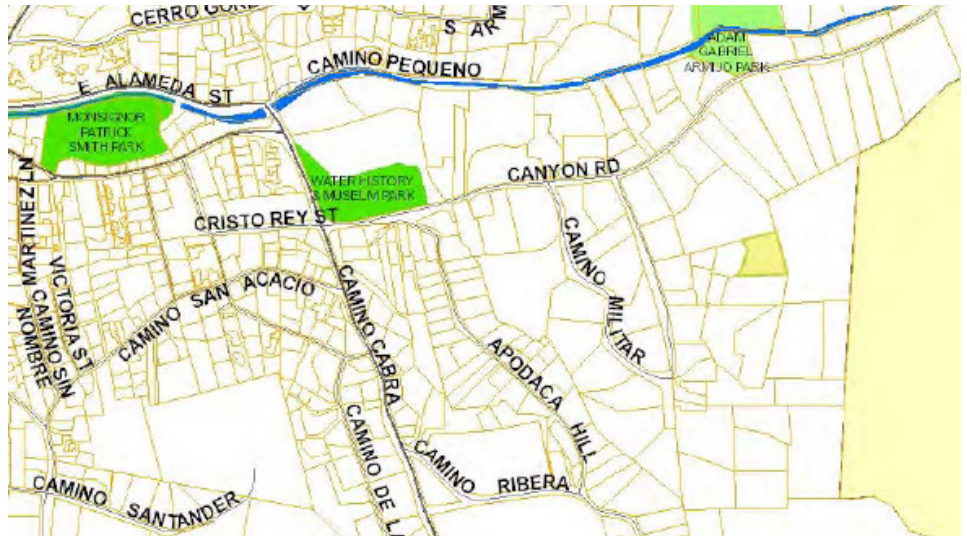
[Existing Waste Water & Manhole Covers]



[Existing City Water Service & Fire Hydrants]

Access to Open Space

- 6 Within ½ mile of existing publicly-accessible or community-based open space [1 pt]



[Existing Open Space / Parks within ½ mile]

SS (Sustainable Site)

Site Stewardship

- 1.1 Erosion Controls During Construction [prerequisite]



[Straw wattles filter / slow stormwater runoff]



Fencing prevents access to hillsides >30% slope]

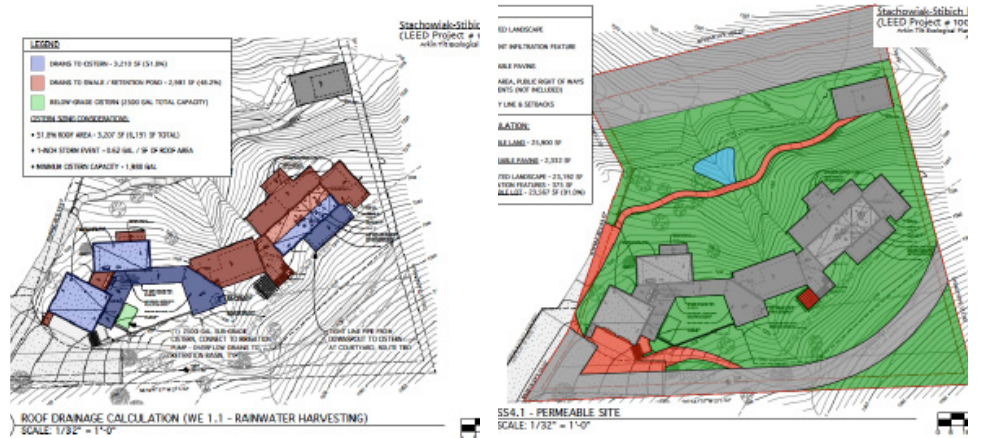
Landscaping

- 2.1 No Invasive Plants [prerequisite]
2.2 Basic Landscaping Design (no turf, mulch / amendments, compacted soil tilled to 6 inches) [2 pts]
2.3 Limit Conventional Turf (0% turf) [3 pts]
2.4 Drought-Tolerant Plants (82% of plants drought-tolerant) [1 pt]



Surface Water Management

- 4.1 Permeable Lot (90% vegetated landscape, 0% impermeable paving, 1% impermeable and directed to infiltration, 9% impermeable surfaces) [3 pts]
- 4.2 Permanent Erosion Controls [1 pt]
- 4.3 Management of Roof Runoff (Have lot designed by professional to manage run-off – civil engineer and landscape architect-designed elements) [2 pts]



[stacked stone wall in dry creek bed detains stormwater and prevents erosion; avoiding construction on any slopes >30%, a local terrain management requirement, led to the design of the dining room as a truss bridge which maintains natural site drainage, and minimizes the impacts of construction while providing a bird's-eye-view of the valley below]

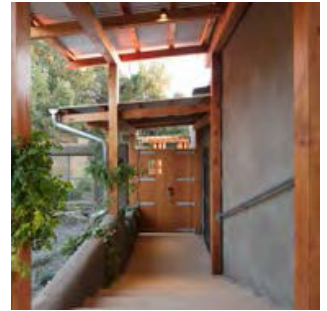
Nontoxic Pest Control

- 5 Pest Control Alternatives (mature plants kept 24" from home, solid concrete foundation, seal cracks / joints with caulking and / or pest-proof screens) [1.5 pts]

WE (Water Efficiency)

Water Reuse

- 1.1 Rainwater Harvesting System (51% of roof area directed to cistern with overflow for irrigation) [3 pts]

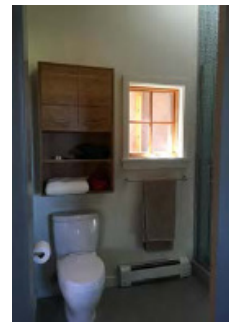


Irrigation System

- 2.1 High-Efficiency Irrigation System (central shut-off valve, submeter, >50% drip irrigation, zoned beds, timer / controller, pressure-regulating device, high-efficiency nozzles, moisture sensor) [3 pts]
- 2.2 Third Party Inspection [1 pt]

Indoor Water Use

- 3.1 High-Efficiency Fixtures and Fittings (faucets <2 gpm, dual-flush toilets) [2 pts]
- 3.2 Very High-Efficiency Fixtures and Fittings (faucets <1.5 gpm) [2 pts]

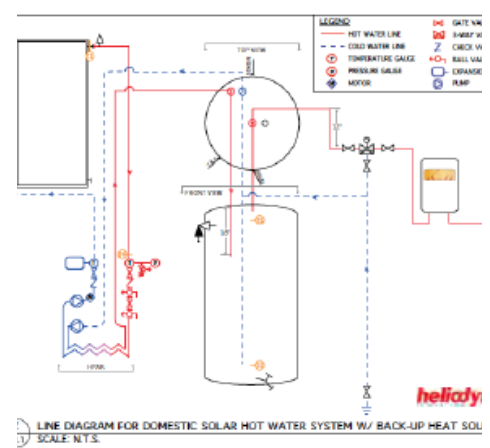


[with a couple exceptions, all shower heads, tub spouts, lav and sink faucets were Hansgrohe watersense fixtures; all W.C.s were dual-flush Toto Aquia II]

EA (Energy & Atmosphere)

Optimize Energy Performance

- 1.1 Performance of ENERGY STAR for Homes [prerequisite]
- 1.2 Exceptional Energy Performance (HERS Index of 16 in IECC Climate Zone 5 – super-insulated walls, roofs, floors; electricity provided by Photovoltaic panels; domestic hot water provided by solar hot water panels; thermal mass and passive solar design techniques minimize need for mechanical conditioning) [32 pts]



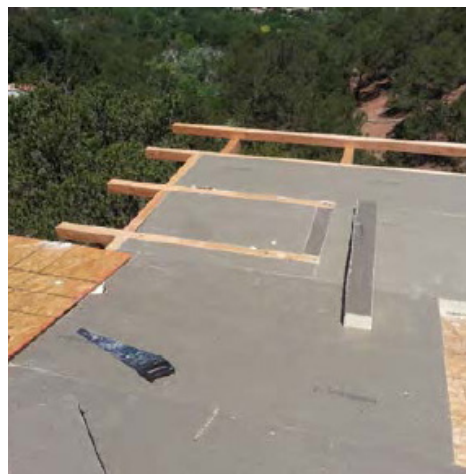
[Exterior polyisocyanurate wrap (2" at walls, 3 1/2" at roofs, 7" at dining room / bridge floor)]



[6.7kW Roof-top photovoltaic array – prep for future battery backup / off-grid arrangement]



Full-cavity blown fiberglass insulation at all wood-framed walls (R-28 min) and roofs (R-38 min)]

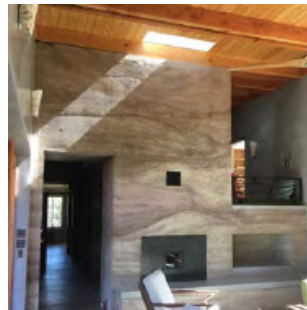




[Exterior polyisocyanurate wrap (2" at walls, 3 1/2" at roofs, 7" at dining room / bridge floor cavity)]



[EPS Insulation below slabs (R-10 min), at slab edges (R-20 min), at conc. stem and basement walls]



Thermal mass (concrete floors, rammed earth masonry heater, concrete benches, concrete counters) combined with a highly-insulated envelope, radiant tube heating and passive solar control (Low-E 366 glazing at East, South and North facing windows, Low-E 180 glazing facing South with overhangs and trellises that reduce Summer solar gain) provides thermal comfort from the sun throughout the year with minimal mechanical system support.

Water Heating

7.2 Pipe Insulation [1 pt]



[minimum R-4 insulation at all hot-water piping throughout project]

Residential Refrigerant Management

11.1 Refrigerant Charge Test [prerequisite]

11.2 Appropriate HVAC Refrigerants (no refrigerants used) [1 pt]

MR (Materials & Resources)

Material-Efficient Framing

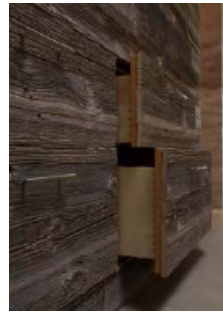
1.1 Framing Order Waste Factor [prerequisite]

1.4 Framing Efficiencies (Stud spacing >16" o.c., roof rafter spacing >16" o.c., sized headers and ladder blocking) [2 pts]



Environmentally Preferable Products

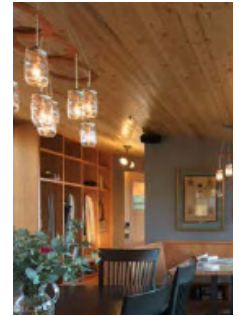
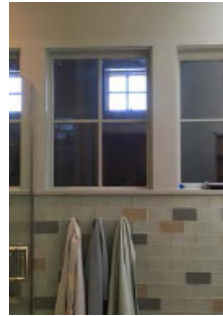
- 2.1 FSC Certified Tropical Wood (no tropical wood, FSC used where possible) [prerequisite]
- 2.2 Environmentally Preferable Products (local concrete with min 25% fly ash, local gypsum board, low v.o.c. finishes, local salvaged lumber, renewable bamboo casework & flooring, pex piping) [4.5 pts]



[Salvaged barnwood – before and after]



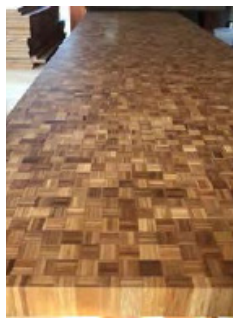
[stripped cedar column - before and after]



[salvaged wdws at courtyard and interior bath] [jeldwen salvaged wd] [mason jar chandeliers]



[salvaged metal grate bridge] [bowling alley table w/ custom base] [recycled glass countertop remnant]



[composite bamboo deck - bamcore] [bamboo flooring, casework and countertops – teragren]

Waste Management

- 3.1 Construction Waste Management Planning [prerequisite]
-

EQ (Indoor Environment Quality)

Combustion Venting

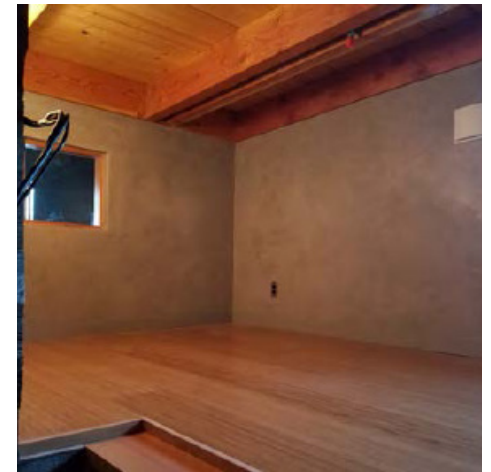
- 2.1 Basic Combustion Venting (no unvented appliances, closed combustion water heating, carbon monoxide alarms, gasketed fire-place doors) [prerequisite]
- 2.2 Enhanced Combustion Venting Measures (masonry heater) [1 pt]



[Rammed Earth Masonry Heater w/ gasketed metal doors and flue to roof with exterior make-up air]

Outdoor Air Ventilation

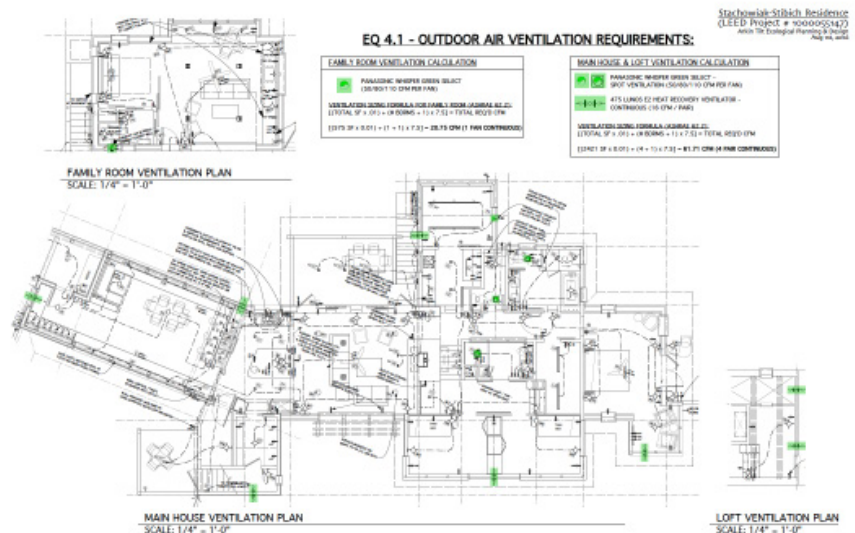
- 4.1 Basic Outdoor Air Ventilation [prerequisite]
- 4.2 Enhanced Outdoor Air Ventilation (heat recovery system – 4 pairs of Lunos e2's: 71 cfm) [2 pts]
- 4.3 Third-Party Performance Testing [1 pt]



[4-pairs of Lunos HRVs (heat-recovery ventilators) – decentralized, balanced & quiet ductless, system]

Local Exhaust

- 5.1 Basic Local Exhaust (meet ASHRAE 62.2) [prerequisite]
- 5.3 Third-Party Performance Testing [1 pt]



Distribution of Space Heating and Cooling

- 6.1 Room-by-Room Load Calculations (manual S, D & J reports) [prerequisite]
- 6.2 Return Air Flow / Room-by-Room Controls (radiant floor system w/ zoned, thermostatic controls, no-ducts, heat-recovery ventilation, whole-house humidification and air-sealing details) [1 pt]
- 6.3 Third-Party Performance Test / Multiple Zones (6-zone system) [2 pts]

Air Filtering

- 7.1 Good Filters (paired Lunos e2 HRV system w/ MERV 9-10 filters) [prerequisite]

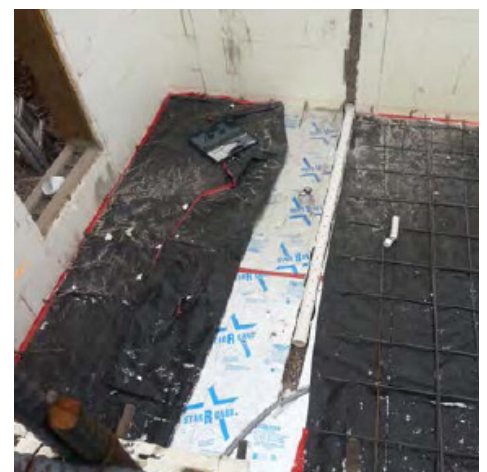


Contaminant Control

- 8.1 Indoor Contaminant Control during Construction [1 pt]
- 8.2 Indoor Contaminant Control (hard floors throughout with shoe storage by entry) [1 pt]
- 8.3 Preoccupancy Flush [1 pt]

Radon Protection

- 9.1 Radon-Resistant Construction in High-Risk Areas (passive sub-slab ventilation piping and vapor-barrier installed; prep for elec fan ventilation in future if necessary) [prerequisite]



[sub-slab vapor barrier and perforated pipes vented to roof – elec connection for active venting if necessary]

Garage Pollutant Protection

- 10.1 No HVAC in Garage [prerequisite]
- 10.4 Detached Garage or No Garage [3 pts]

AE (Awareness & Education)

Education of Homeowner or Tenant

- 1.1 Basic Operations Training (Operations / Training Manual, 1-hour walk-thru w/ occupant) [prerequisite]
- 1.3 Public Awareness (Website about LEED features, newspaper article, Display LEED signage on exterior of the home) [1 pt]



Article (online): <https://www.arkintilt.com/sites/default/files/Western-Art-June-July18sm.pdf>

Pictures or description of the follow sustainable practices were left out of this breakdown (and should be incorporated if we can find a photo or two):

- Clear sealer (low-voc) with 99% UV protection used on all exposed interior & exterior lumber
- High-efficacy LED lighting used throughout (over 90%)
- Surface-mounted sconces and pendants used throughout (95%) to minimize interruption of insulation
- Button-activated (non-motion-sensor) on water-saving hot water circulation pumps
- Permeable walking / driving surfaces throughout (DG walkways, gravel driveway, and sand-set pavers)