

Sustainable Urban Villa

Cambridge, Massachusetts
Wolf Architects



▼ Designed by Wolf Architects, this LEED-Silver single family home in Cambridge, Massachusetts, is close to shops, restaurants, and public transportation. Located on a miniscule lot, the house features planters, green roofs, decks, and an inviting garden, creating a pleasant "green" retreat in the city. A geothermal well supports the heating and air conditioning systems, while photovoltaic cells on the highest roof reduce power requirements. The exterior siding was milled from recycled lumber, originally harvested as much as a century ago; reusing this material gives it new life and is durable than most contemporary siding. The National Association of Home Builders Best in American Living Awards program recognized this house with two awards: Best in Green Remodeling and Best in the North Atlantic Region. The project also won First Runner Up in the Excellence in Design Award program sponsored by *Environmental Design + Construction* and was included in the LEED Showcase of the Massachusetts USGBC. *Courtesy of Eric Roth*

▼ A green wall with shade-loving plants defines the entry court, leading to the south-facing vestibule with cobalt blue ceramic tile glazing. Paving on the court and drive combines cut New York bluestone and pea gravel, making this space into a multi-use outdoor room with a permeable surface that reduces storm water run-off. Water from the roofs is directed to underground storage recharger chambers. Grasses, trees, and shrubs in planters at both levels enhance the woodland feel. *Courtesy of Eric Roth*



◀ A birch-bark-clad column in the entry vestibule echoes the birches outdoors and introduces the natural theme inside the house. South-facing windows welcome sunlight and provide passive solar warmth for the marble flooring. The ribbed glazing maintains the owners' privacy. Built-in benches with a storage cabinet and shelf provide convenient places to sit and remove shoes or boots. This practice contributes to the home's cleanliness and indoor air quality by keeping dirt and particulates from entering the building. *Courtesy of Eric Roth*

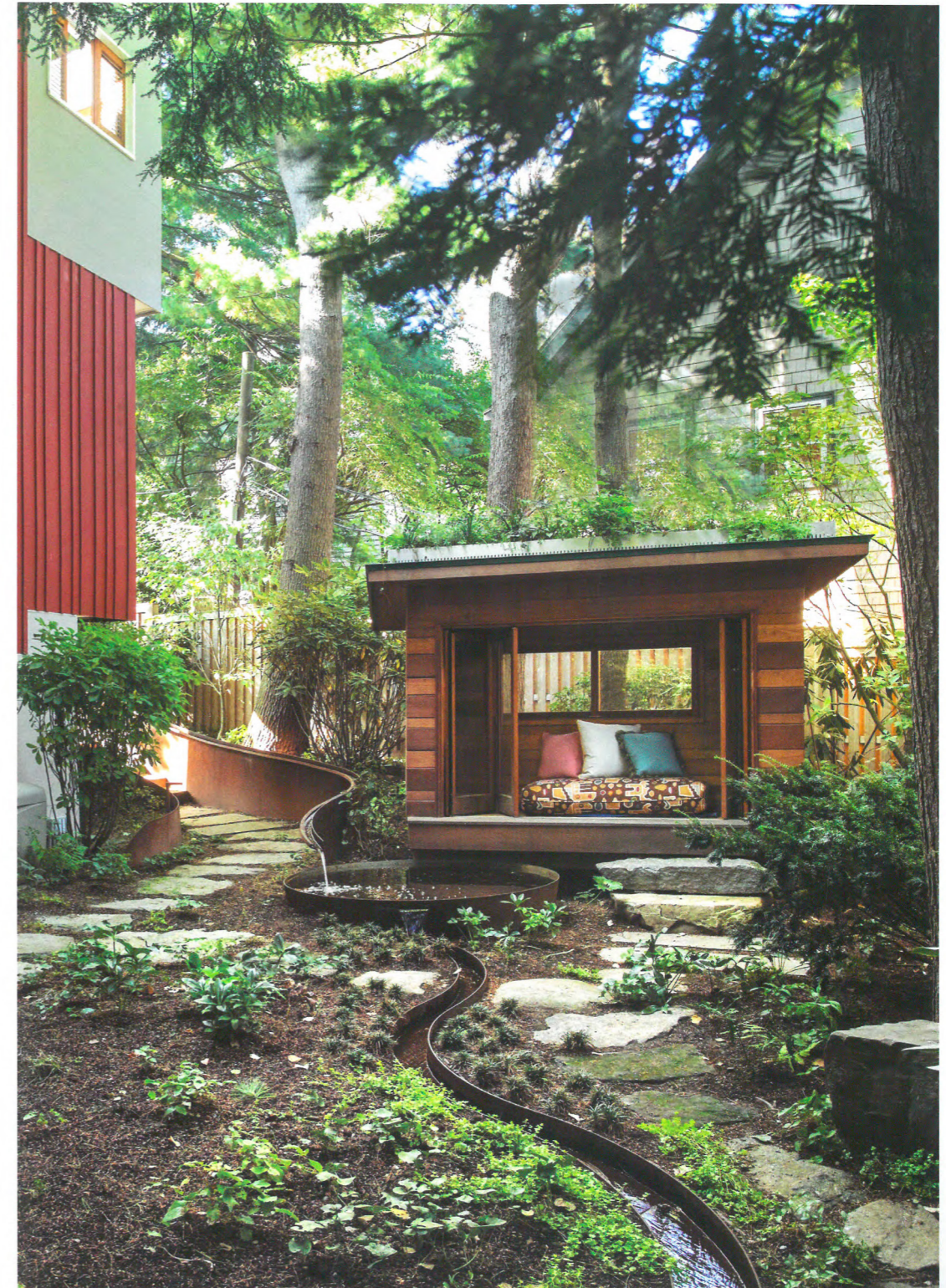


▲ The open main level features heart pine flooring milled from reclaimed lumber, with boards as long as sixteen feet. A single oversized slab of Vermont marble clads the wall of the fireplace, which draws its combustion air from outdoors. The owners are able to easily configure the space for different activities by rearranging the sliding screens at several locations on this floor. In another poetic expression of the link between inside and outside, the screens' cutouts are derived from the leaves of neighborhood trees, while their vertical veneer stripes evoke the tree trunks outside the windows. *Courtesy of Eric Roth*

► On the top level, the study overlooks a roof deck, green roofs on three sides, and treetops all around. Inside, cherry cabinets and marble countertops provide natural finishes, along with the heart pine floor. Adjustable light fixtures use low-energy LEDs. Double-paned windows feature argon gas and low-E treatment for energy efficiency. The south-facing stair that connects all floors reaches this fourth-floor study and the adjoining deck. The house also has a residential elevator that will enable the owners to age in place. *Courtesy of Eric Roth*



▼ The roof deck looks out over the green roof and surrounding trees. The roof consists of a naturalistic mix of wildflower and meadow plantings, as seen in this autumn view. Striped retractable awnings on the deck off the owners' suite allow them to sit outside comfortably in a variety of weather conditions. Beyond the green roof, the chimney top rises as an abstract sculpture. On the cedar-clad side wall are light fixtures for enjoying the deck after dark, and a safety hook for servicing the green roof. Photovoltaic panels are mounted on the roof above. *Courtesy of Eric Roth*



▲ In the garden, a meditation hut with a green roof offers a quiet, sheltered spot adjacent to one of the property's pools. An undulating water course, sculpted in Corten steel by Richard Duca, winds through the site from the upper to the lower level. The gentle sounds of falling water, recycled from rainfall, contribute to the peaceful quality of this villa retreat within the city. Julie Moir Messervy Design Studio designed the sustainable landscape. Her inviting garden makes the most of this small lot and used earth-friendly practices and native plants to complement Wolf Architects' design for this LEED-Silver project. *Courtesy of Eric Roth*