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RAMMED-EARTH PIONEER DAVID EASTON BRINGS BACK AN ANCIENT CONSTRUCTION METHOD TO BUILD STURDY AND SUSTAINABLE MODERN HOMES. BY LEILANI LABONG

At the Lawrence house, located just a few minutes' drive east of Napa, the entry tower houses a half bath and mechanic's closet and features an outdoor staircase leading to a roof deck.

The Lawrence house possesses none of the airs one might expect upon hearing it referred to as "The Lawrence." Rather, this cozy, single-story dwelling rests unassumingly just east of the town of Napa. Were it built from Italian marble, the Lawrence might stand apart from its environment like the proverbial sore thumb. Instead, its relationship to the site is intimate, thanks almost entirely to its construction. With walls made of rammed earth—a compressed mixture of soil, cement and water—the house enjoys a discreet and harmonious existence in the hills of Napa County.

Destined to become California's authority on rammed-earth construction, David Easton was an engineering student at Stanford University in the late 1960s when he first learned about the ancient building technique used in China, Africa and Northern Europe. Recognizing great promise in this primitive method, Easton viewed rammed earth as "an easy way to build ecologically responsible houses that cost less"—a



“At their essence, rammed-earth houses speak of permanence.”

desirable combination, to be sure. Not only is the fortitude of solid-earth walls indisputable (they have historically endured several hundred years of weathering) but also the environmental impact of building them is negligible, since rammed earth uses widely available unprocessed soil. Emboldened by his unwavering faith in rammed earth's adaptability to modern needs, Easton founded the Napa-based construction company Rammed Earth Works in 1979. Twenty-six years and 200 houses (including Easton's own) later, the two-year-old Lawrence house stands as a distinctive yet modest model of the marriage between time-honored tradition and newfangled technology.

“The Lawrence is a beautiful rammed-earth house,” Easton says. “It juxtaposes the mass and stability of rammed earth with the transparency and openness of indoor/outdoor rooms.” The solid-earth walls that enclose the home's north and south courtyards absorb the sun's rays in the daytime and radiate the heat back out after dark, keeping the courtyards at an ideal temperature. At the Lawrence, alfresco dining is ritual rather than exception.

ABOVE: The Lawrence house is nestled at the foot of Napa County's Mount George. RIGHT: “It's not a huge showcase kitchen. It's more of a galley kitchen,” points out architect Michael Baushke, but a doorway leads to an outdoor cooking area in the south courtyard.





LEFT: "It's easier to make a fireplace from rammed earth than from other masonry elements," says Baushke of the living room's 16-foot centerpiece. ABOVE: In the master bathroom, redwood decking is set into a base of black river rocks.

"It's an easy way to build ecologically responsible houses."

Architect Michael Baushke, a principal at the San Francisco firm Apparatus Architecture, designed the Lawrence as well as 20 other rammed-earth houses constructed by Easton over the last 15 years. "At their essence, rammed-earth houses speak of strength and permanence," he says. The durability of traditional rammed-earth construction relies on a slow, laborious layering and compacting of a moist soil mixture into a wooden form. The Lawrence, however, was built using a contemporary technology called Pneumatically Impacted Stabilized Earth. Invented by Easton in 1988 to expedite the rammed-earth process, PISE uses hoses, machinery and high-pressure air to "shoot" the earth and cement mixture against a one-sided form. "PISE uses the tools of the existing gunite [spray-concrete] industry, so I believed it had a better chance of moving into home-building markets," Easton explains. Indeed, the use of PISE is expected to multiply the number of rammed-earth homes in the US. Currently, they are far from widespread; in fact, only two regions—northern California and southern Arizona—have concentrations of rammed-earth constructions. "David has advanced earth as a viable option to mainstream building," says Baushke. "Others may have contributed, but the ongoing spirit belongs to David." ■