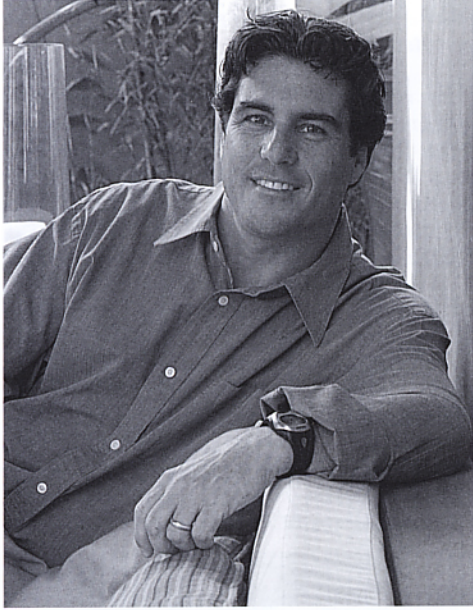


David Hertz

“Leave No Trace” Learning and Living

by Jane D. McCarthy



Traditionally, the measure of how well a building harmonizes with its setting has been narrowly aesthetic, to be evaluated by the senses. Increasingly, however, architects are looking for more than just a pretty façade and adding new measures of harmony to the mix. These architects wonder whether any building, no matter how gorgeous, can be said to harmonize with its environment if the building itself—its construction process, materials, and systems—embodies an ethos that ultimately threatens that environment. For some, like architect David Hertz, the answer is a resounding “no.” David, the architect chosen by Thacher to design the new Lower School dorm, makes sustainability a key component of his projects, incorporating sustainable materials and methods as much as possible, even if that calls for (as it has) developing a new building product or repurposing a mothballed 747. The result? A career now two decades old that has produced projects that earn aesthetic acclaim while embodying an ethic of environmental sustainability.

proach to incorporating “green,” environmentally friendly methods in his designs. And, fortunately for Thacher, David was equally intrigued with doing a project for Thacher. “I was struck immediately with the beauty of the site and how Thacher integrates the equestrian and natural world into the educational process. By designing a building that incorporates ecological ideas and is in harmony with nature, those who live in it will learn how to ‘live green’ and spread the word about environmental sustainability.”

To gain some insight into the lifestyle of Thacher freshmen, David stayed overnight in the Lower School dorm, mucked and rode horses, attended classes, and chatted with the freshman boys. “Stepping on cold cement floors when getting out of bed, watching boys use mashed potatoes to repair wall dings caused by lacrosse balls, overhearing conversations through walls and ducts, and spending a good part of each day taking care of and riding four-legged equine pets, strongly influenced my design for this building. These kids work and play hard in their dorm; the materials must withstand their roughness and creativity, while still being good for the environment.”

Keyed into Lower School’s proximity to the barns and Thacher’s rural and Western heritage, David’s design comprises a four-sided terraced building surrounding an inner courtyard with two faculty residences. Incorporat-

ing natural ventilation and ambient light to the maximum extent possible, the structure maintains a strong connection to the exterior and its locale.

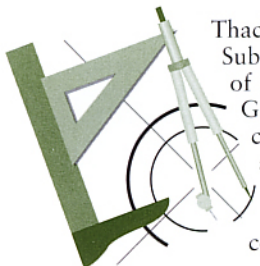
David’s commitment to sustainable building practices ensures that the connection with nature goes beyond design features. The new Lower School will take advantage of a long list of technologies—some old, some very new—derived to minimize its environmental impact:

- energy-efficient lighting sources;
- thin, durable SIPS walls (Structural Insulated Panel, a sandwich of wood and polystyrene foam) that are fire and termite resistant, insulative, sound dampening, and lacrosse ball dent-proof;
- wide overhangs facing the central courtyard that provide shade, privacy, and rain protection;
- exterior views plus natural lighting through monitor windows, Dutch doors with windows in the top half, and external windows;
- natural cooling through cantilevered roof and monitored clerestory window vents;
- non-toxic and natural paint finishes and reuse of oak flooring salvaged from the demolition of other campus buildings;



A rendering of the Lower School Common Room

Thacher’s Architectural Review Subcommittee—an outgrowth of the Board’s Buildings and Grounds Committee that considered over a score of architectural firms before engaging David—was impressed with his creative concepts and energetic ap-





Southwest residence of Lower School

- solar-powered hot water for showers and washing machines with gas back-up;
- metal roof that will last the life of the building and help to gather water runoff for collection in a cistern for gray-water irrigation and fire suppression; and
- concrete floors with embedded radiant heating.

David is the founder and president of Syndesis, Inc., a multidisciplinary group that focuses on design and construction of residential and commercial buildings, product and furniture design, and public sculpture in addition to material development and manufacturing. Syndesis created Syndecrete[®], an innovative pre-cast lightweight concrete material that is extracted from society's waste stream to become a highly valued product and an alternative to limited or nonrenewable natural materials such as wood or stone. Like standard concrete, Syndecrete is chemically inert, but incorporates 41% recycled or recovered materials from industry and post-consumer goods. Fly ash (a powder residue from the combustion of coal in electric power generating plants) is added by 15% to displace the cement base while polypropylene fiber is incorporated to increase the product's tensile strength and give it a physical property similar to wood.

As far back as elementary school, David has felt a strong connection with the natural world—whether surfing, backpacking, or just being outside. As an architect, he has combined his outdoor interests with his keen interest in building things and drawing. And his creativity is nourished when Syndesis is tapped to design buildings for various companies. For instance, when Rhino Record Company needed a new headquarters, David hired some inner-city gang members to demolish discontinued CDs and vinyl records that became Rhino's corporate flooring. For a Venice Beach home on a narrow lot, he employed refrigerator panels from walk-in coolers for the walls.

Perhaps the most unusual components David has used are from a mothballed Boeing 747 plane for a 55-acre ocean-view lot in the Santa Monica Mountains. The property's owner asked for a "feminine and curvilinear house, something resembling a wave;" the wings will serve as an overhanging roof for the 5500-square-foot main residence; the tail will be a viewing platform; the horizontal stabilizers will serve as the roof for the master bedroom; the first-class section of the fuselage will serve as part of the guest house; and the plane's roof will become an art studio. A circular engine component will be turned into an overflowing fountain; first-class chairs will be brought into the library; and the nose cone will be an open-air meditation pavilion (28 feet in diameter and 45 feet tall). As David says, "Finding another role for an outdated airplane communicates the obsolescence and disposable

nature of our society. Billions of dollars in research went into that plane and after its life, it is devalued to the price of aluminum. Better than recycling or down-cycling is reuse." The idea is catching on. David has received calls from people in Northern California who want to build a wine cave from a fuselage and some others in Texas are interested in using plane parts to create various residential structures. "In its flying role, a plane can withstand huge fluctuations in air pressure, temperature, and wind; its insulation and strength properties make it an ideal building medium."

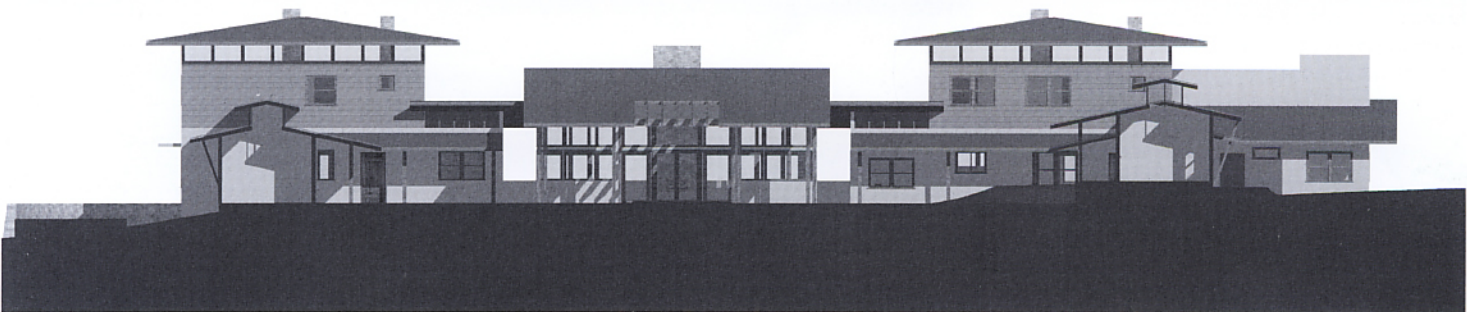
Although Thacher's new Lower School dormitory will employ more earth-bound materials, David's design has met well the needs of students, their parents, faculty, and the environment. While some may miss the drafty, dank, and destructible cinderblock Lower School, faculty members and students look forward to inhabiting a dorm that better reflects Thacher's mission to teach students to live for their own greatest good and for the greatest good of their fellow citizens. A more energy-efficient dorm will allow students to transfer our "leave no trace" camping approach to everyday living in the dorm.

Construction on the Lower School is set to begin during the summer of 2006. If you would



Main approach to Lower School from the south

like more information on the new Lower School Dormitory and how you can support it, please visit *The Campaign for Thacher* website: campaign.thacher.org.



View from the west: two faculty residences sandwich the Common Room