GLENDALE CHILDCARE CENTER

PRE-K PLAY YARD 1

GREEN DOT AWARDS SUBMISSION BUILD CATEGORY

MARMOL RADZINER AIA

architecture
construction
interiors
landscape

12210 Nebraska Avenue
Los Angeles California 90025

info@marmol-radziner.com
www.marmol-radziner.com

310 826 6222 phone
310 826 6226 fax

GLENDALE CHILDCARE CENTER

The Glendale Childcare Center serves 200 infants, toddlers, and pre-Kindergarten children. One of the goals of the center is to expose both children and adults to the benefits of sustainable green design and architecture, and to raise awareness about energy conservation. The building is a teaching tool, where green building strategies are expressed clearly and energy efficient systems are left exposed as educational opportunities.

MATERIALS

The design incorporates recycled and green materials throughout. Its striated rammed earth walls are comprised of cement, earth from local mountains, and crushed brick recycled from site demolition. Rammed earth construction results in durable walls that slow the transmission of heat and sound. The 18-inch thick walls absorb heat during the day and release heat as ambient temperatures cool. Each classroom's nap area is lined with rammed earth, reducing echo and naturally regulating temperature where the children are most sensitive to noise and thermal fluctuations.

Lowering the embodied energy of the materials was a priority. In addition to the rammed earth walls, the Center utilizes a palette of sustainable materials throughout, including composite wood fencing, low VOC paints and adhesives, particle board and recycled paper countertops with no added urea-formaldehyde, and CRI Green Label Plus Certified Carpet Tiles.

DESIGN STRATEGY

The environmentally responsible materials come together in a design that maximizes energy efficiency. Each building is designed to reduce the need for electrical lighting and mechanical cooling. Occupancy sensors in each room help to minimize unnecessary lighting use. Awnings and high, steel-louvered windows bounce natural light into classrooms, maximizing indirect daylight while controlling heat gain and glare. Windows and sliding doors below encourage engagement with the outdoors, and are shaded by deep overhangs that prevent glare even late into the day. High clerestory windows opposite the sliding glass doors allow heat to escape and optimize natural ventilation. East, West, and South-facing windows and doors are double-glazed with low-E glass to balance natural daylight and solar heat gain.

RAMMED EARTH WALL 2

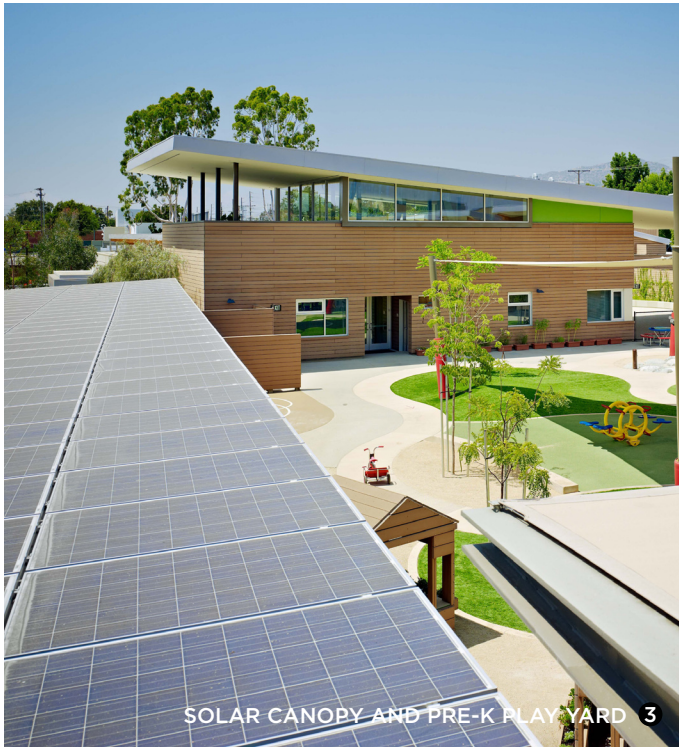
To limit its carbon footprint, the Center encourages alternative transportation methods by offering on-site bicycle storage, changing rooms, and access to two bus lines. The Center further reduces its environmental impact by drawing 12% of its energy from a 30-kW photovoltaic canopy, which also shades the southwest sidewalk just outside the entrance. Finally, the site's landscape and architectural design lead to at least 67% heat island reduction through use of reflective pavement and roofing, shady trees, and deep overhangs on every classroom.

These design features create a colorful, dynamic environment that invites engagement and education. By integrating sustainable design features into the learning environment, our hope is to inspire children to become enlightened decision makers of tomorrow.

ABOUT MARMOL RADZINER

Since its inception in 1989, the Los Angeles-based firm Marmol Radziner has developed a growing reputation for its innovative design approach, research, and precision in applying construction standards. By adopting the role of the traditional "master builder," Marmol Radziner integrates design services with a variety of construction capabilities. A wide range of in-house skills underpins the work of the practice, including architects, interior and landscape designers, metal fabricators, carpenters, furniture and cabinet-makers, and construction crew. The firm's unique business practice and commitment to design excellence was rewarded with the American Institute of Architects California Council's 2004 Firm of the Year Award. Today, a breadth of projects distinguishes the firm, from small, intimately scaled residences to large public and community urban proposals.

CONTACT Todd Jerry, Chief Operating Officer
todd@marmol-radziner.com



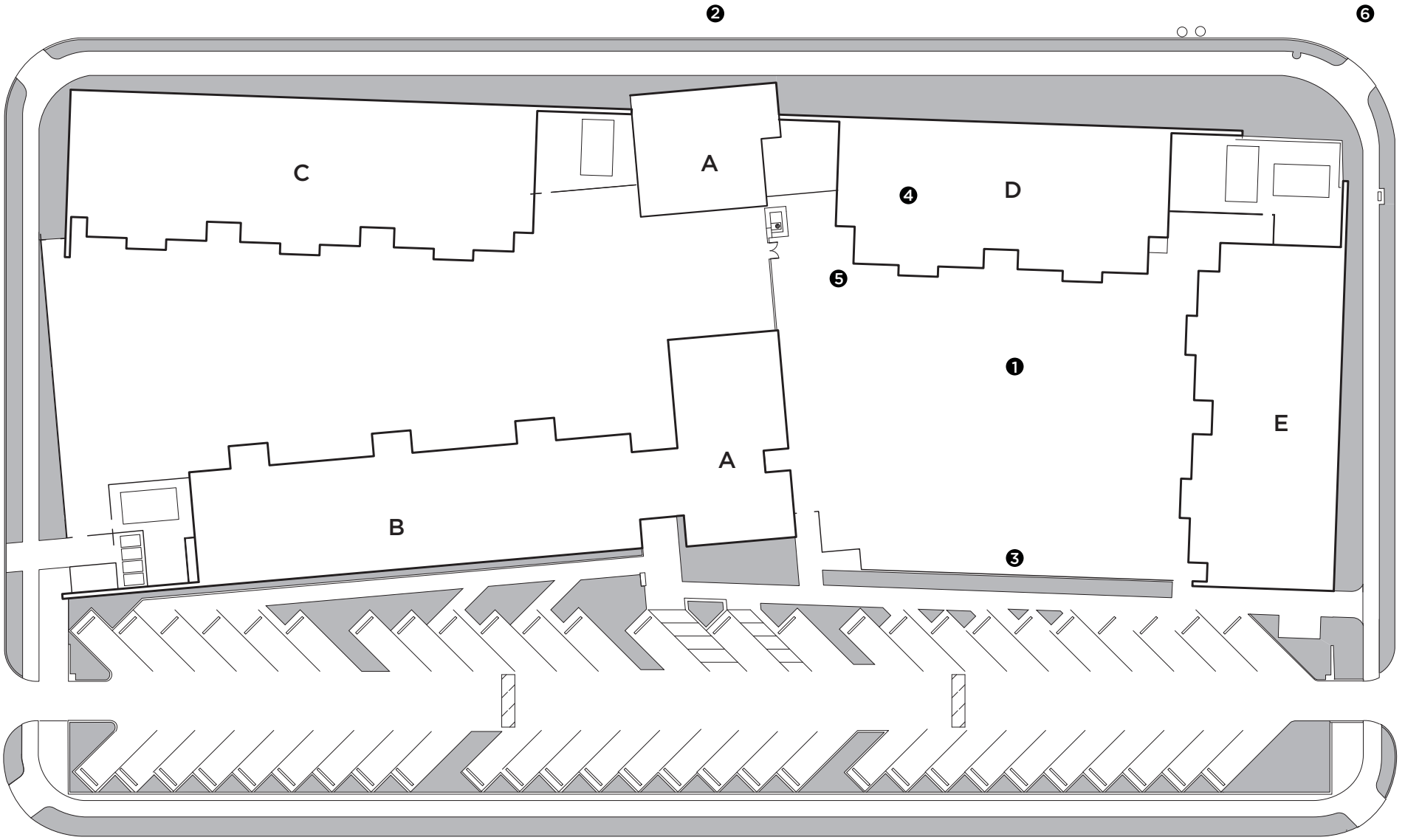
SOLAR CANOPY AND PRE-K PLAY YARD 3

PRE-K CLASSROOM INTERIOR 4

PRE-K CLASSROOM EXTERIOR 5

NORTHEAST CORNER OF CHILDCARE CENTER 6

SITE PLAN

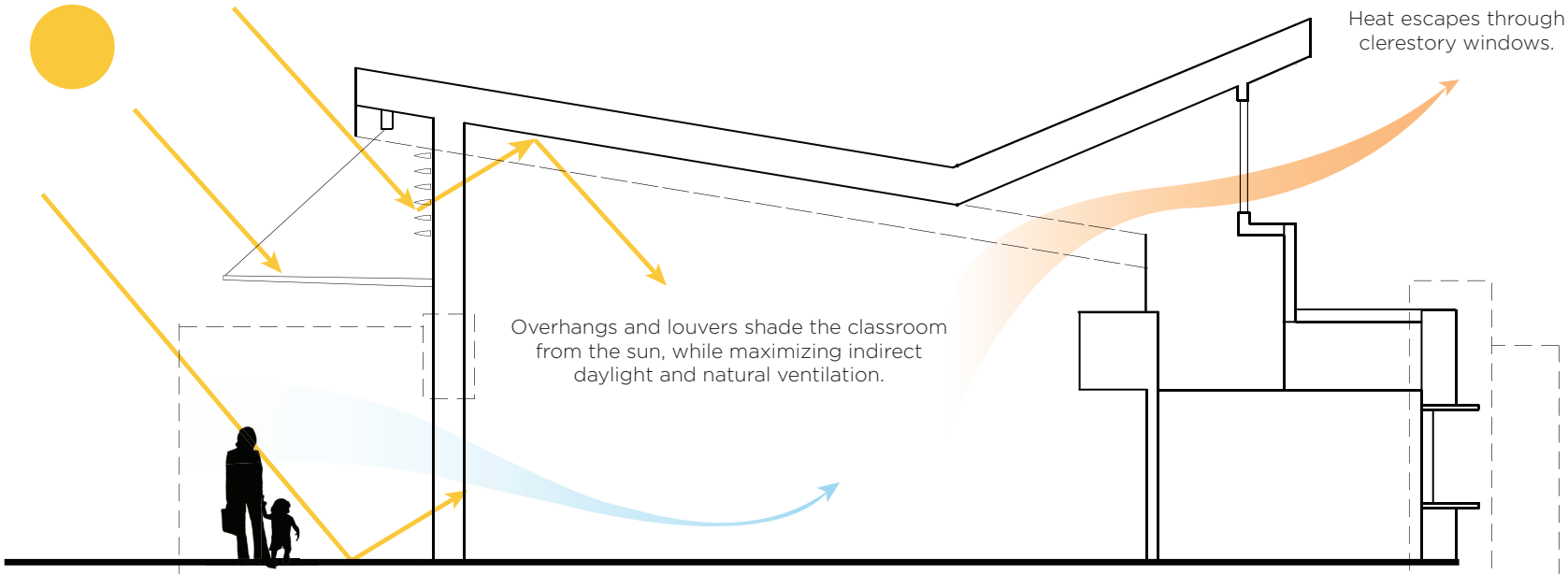


A ADMINISTRATIVE BUILDING
B INFANT CLASSROOMS
C TODDLER CLASSROOMS
D PRE-K CLASSROOM
E PRE-K CLASSROOM

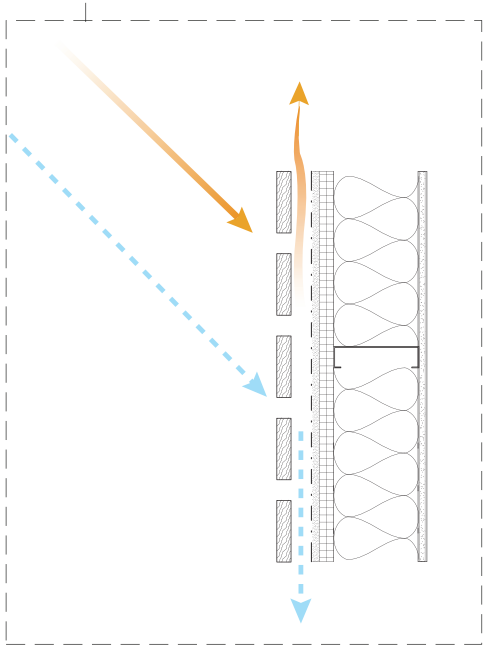
0 2.5' 5' 10'

NORTH
ARCHITECTURAL NORTH

DIAGRAM PASSIVE HEATING AND COOLING STRATEGIES



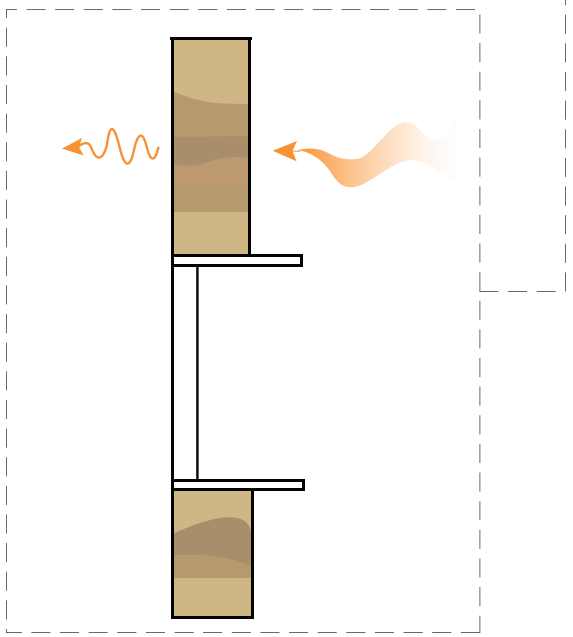
TODDLER CLASSROOM SECTION



RAINSCREEN WALL

The rainscreen wall assembly allows rain to drain through the interstitial space between screen and building.

The airspace heat gain from the outer wall, keeping the interior layer cool.



RAMMED EARTH WALL

Eighteen-inch thick rammed earth walls slow the passage of heat, effectively absorbing it during the day and releasing at night as the ambient temperature drops.