



Learning and Playing by Design

A new center provides a safe, sustainable, and educational space for children at the Jacksonville Naval Air Station

By Thomas Matzke, CSI, LEED AP

When you drop off your child at a care center and leave with a good feeling, it says a lot about the facility itself. And if your child looks forward to attending the center, you have the added satisfaction of being in sync with the child's best interests and trusting that he or she is receiving the best possible care.

Just as children's and parents' emotional response to a daycare center is a reliable indicator of the nurturing care and quality of education there, it also indicates the design objective to create a retreat where kids can flourish men-

tally and socially. Working in concert with those charged to ensure a secure and positive child-care experience, our role as designers is to ask, "What can we do to make that experience even better?"

Designing a Child Development Center is a holistic team approach. The design process begins with the authors of the DoD RFP and the government design professionals who administer the contract and oversee the process. It then proceeds to a collaboration of facility operators, project architects and consultants, and the contractor team.

In this instance, the design team of VOA Associates, Inc., addressed the challenge to resourcefully create a balanced, natural, and safe environment for children attending the new Child Development Center (CDC) at Jacksonville Naval Air Station in Florida. Naval Facilities Engineering Command Southeast administered the project, with Sauer, Inc., of Jacksonville, Florida, serving as prime contract holder and general contractor. VOA's Orlando, Florida, office served as subcontract/prime architect engineer and architect of record, providing full service for the design.

Design objectives

While drawing on past experience for similar facilities, the design team's primary focus was to approach the facility from the child's perspective. We put strong consideration on the child's journey from arrival to departure, emphasizing the importance of seamlessly stitching all of the events of the day together within an educationally sustainable environment.

A sense of scale and proportion is clear upon arrival. The intent was to de-institutionalize the design as much as possible, using scaled-down, recognizable features such as residential-sized windows with shutter-like light shelves and small-scale exterior materials such as split face block and stucco.

The area where parents drop their children off is lined with oak trees that are strategically spaced to frame the entire face of the building. The house-like gable is a focal point for the entry. The main walkway is lined with ground-cover plants to create a sense of procession, with windows and playgrounds sited at the front of the building to immediately dial down the scale to a child's level.

Once inside, the design components work in tandem to establish a safe environment and create a sense of order for parents and students. The front desk/check-in area, strategically located to facilitate visual and physical control of access and circulation, presents a low, soft-featured design that curves prominently through the lobby. Various factors enhance and promote a highly secure environment, including preprogrammed key cards provided by the center and required for parental access and multiple flat-screen lobby monitors that are connected to cameras in each child activity room (CAR).

The circulation concept itself is simple and effective: Three corridors are all visible from the lobby desk. The infant rooms are sited closest to the front desk to reduce travel distance and avoid stress at check-in, and a specified area located immediately off the lobby provides handy storage space for strollers and car seats.

Child activity rooms

Each CAR is designed for a specific age group: infants, pre-toddlers, toddlers, and preschoolers. The rooms are open



The entryway to the Jacksonville Naval Air Station's new Child Development Center was designed to be welcoming to children and parents.

spaces where the teacher can see the children and the children can see the teacher at all times. The furnishings feature easily cleanable, solid acrylic or wood surfaces, and the art sinks, lavatory sinks, and toilets are designed at children's levels.

Each CAR is a visually transitional space: The children can see the natural landscape and playgrounds outside from almost every spot in the rooms. Glass doors connect the CARs to age-specific playgrounds. The exterior wall of the CAR forms one side of the playground, essentially making it an extension of the room. Windows extend to the floor in the infants' rooms and about 9 inches up from the floor in the other rooms. All windows are fitted with integral blinds with teacher-only controls that prohibit use by children; the skylights are controlled by electric horizontal shades to allow abundant natural light into the activity areas.

Carefully selected interior finishes and materials compose a backdrop conducive to an array of functional, educational furnishings. Color and materials palettes feature a natural or pastel approach, with furnishings, learning tools, and other room items represented in bold primary colors.

Acoustics, too, are an important tool in creating a functional and effective learning environment. Each CAR is designed to reduce reverberation and control sound transmission from one room to another, with laminated and insulated glass windows lessening sound between the interior and the exterior.

Playground areas

The playground areas are an outdoor continuation of the CARs. Like the rooms, each playground area is designed for an individual age group and arranged to support social, dramatic, and quiet play, as well as to stimulate



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peer interaction and creative opportunities.

The playgrounds feature large shades, or "sky sail structures," for shelter from the sun and inclement weather. Poured-in-place rubber surfacing is used in the infant area and under all playground equipment throughout remaining areas, with synthetic turf in open play areas. Each playground has its own color-coordinated outdoor storage structure where children can park their tricycles. A concrete circular tricycle pathway with stamped and painted features meanders through the playground to spark children's imagination.

Designated natural areas in each playground let teachers introduce a variety of natural elements to stimulate and encourage a relationship with the native environment. The entire playground surface is carefully sloped to promote positive drainage away from the building so that

the playground does not "pond" and dries out after rain.

Playground equipment was selected on the basis of age-appropriateness. Features include bright colored hopscotch and foursquare areas for team and group play, water play centers, musical instrument play centers, and stage areas for dramatic play. All playground equipment is durable, resistant to rusting and fading, and splinter-free as well as compliant with fall protection and requirements of the Americans with Disabilities Act.

Sustainability

With an eye to certification at the LEED Gold level, the Jacksonville CDC incorporates an array of sustainable features that directly affect its young users. Many studies show the learning benefits of natural light and blurred barriers between inside and outside space. Extensive daylighting features throughout the CARs include strategically located windows, clerestory, and skylights. Linked to the automatic artificial lighting controls within each room, these features afford an abundance of natural light and reduce energy costs.

High-performance tinted glazing, working in tandem with the active control of operable blinds, reduces window glare and promotes energy efficiency while adding an additional safety element. These laminated/insulated windows thwart vandalism and prevent debris from blowing in during hurricanes and other strong storms, while providing a significant level of acoustic performance to enhance quiet times.

A centrally located recycling area is outfitted with containers designated for glass, cans, plastic, and paper. The administrators and teachers develop the recycling effort, and the children participate in the recycling as part of their daily learning activities.

Children are magnets for absorbing context; they retain a tremendous amount of information by seemingly breathing in their surroundings. When teachers tell children not to waste water or instruct them about low-flow toilets and lavatories, for example, the children are given the opportunity to think about water usage at their art sinks and throughout other water activities.

While the children may not understand the technology inherent in solar panels on the roof, they can be taught that the sun is powering the lights and other electrical devices in the building. And when a teacher dims those lights at varying levels or when the lighting automatically dims to save energy, the children witness these operations in action as they learn about the importance of saving electricity. When the learning environment itself is a sustainable facility, children are inevitably influenced. ■

Thomas Matzke is Associate Principal with the international architecture, planning, and interior design firm VOA Associates, Inc. Reach him at tmatzke@voa.com.