CRSMCA MEMBERS SPOTLIGHT:
PETERSEN ALUMINUM CORPORATION + WATTS & ASSOCIATES ROOFING, INC.

FLEXIBLE LEARNING

Multigenerational learning center encourages collaboration and engagement

Written by Marcy Marro, Editor of Metal Architecture
Reprinted with permission by Metal Architecture Magazine*, November 2017 issue*
www.metalconstructionnews.com

A unique educational center for multigenerational learning, the new Richland Two Institute of Innovation in Columbia, S.C., was envisioned as a "fishbowl of learning" that weaves together spaces and programs for the Richland School District Two as well as the local community.

Completed as a design-build partnership between architectural firm LS3P Associates Ltd., Columbus, and builder M.B. Kahn Construction Co., Columbus, the facility brings together students, parents, teachers and academic support personnel, serving as an interactive hub offering resources to the entire community. The educational spaces are visible and active, while encouraging collaboration and engagement.

According to Mary Beth Branham, AIA, vice president, principal and office leader at LS3P Associates, the desire was to design a facility that would be dynamic and engaging; creating a real asset for the community while attracting the best talent to work in the district; to attract families to live in a community where their students would have great learning opportunities; and to attract students from each high school to take advanced courses which can ultimately play a critical role in future opportunities and success.

Photography: Matt Horton, Horton Photography, Oakland Park, Fla.

LEARNING SPACES

The 212,279-square-foot building is dedicated to educational innovation by providing a leading-edge, multigenerational learning hub for the Sandhills community. Centrally located within the five districts it serves, the facility offers community resources, such as a public library, public meeting rooms, shared auditorium, dining and conference areas, as well as offices and training facilities for the school district. "As a joint-use institution, the building offers educational spaces throughout to encourage engagement and collaboration," Branham says.

Juniors and seniors from the district's five high schools can take specialized classes focused on advanced STEM and vocational programs. Local adults can also participate in comprehensive training and certification programs. The building accommodates up to 800 people for workforce development classes and professional workshops.

"This 21st Century learning environment is designed with flexibility at its core to adapt to changing programs, evolving technologies and future expansion," Branham says. "Classrooms have garage door access to a large, open area for project-based student activities and access to outdoor learning areas, and an incubator space allows students an opportunity to interface with business partners and professionals to work on real-world business challenges."

COLORFUL AND INVITING

The building has a highly contemporary design with an inviting and colorful material palette. "Reflecting on the state-of-the-art technology and programs offered, the façade utilizes a combination of vertical metal panel veneers and pre-cast construction to create an overall industrial, high-tech appearance," Branham says. "Clerestories and abundant glazing with sun shading devices are paramount in introducing natural light throughout the facility. The stone accent walls bring a textural element to the building to highlight the main entry and bring down the scale to enclose outdoor areas reading areas for the library."

Since the building is composed of various functions and metal panels are a primary façade element, Branham says the design intent was to help break down the building scale in a variety of ways, including color variation, variation in the direction of the ribbing and variations between smooth and ribbed panels. "The precast elements of the building were painted to match the grey and taupe colors of the metal panels to create a consistent look—even with a change of materials," she explains. "The navy color is reflective of the district's logo color to also create an identifiable main entry that becomes recognizable as the district's hub. The colors on the exterior are also expressed on the interior to create cohesiveness."

Petersen Aluminum Corp., Elk Grove Village, Ill., provided four different PAC-CLAD profiles for a variety of interior and exterior applications. For the exterior, Petersen Aluminum supplied its 22-gauge Reveal Panels in five colors: Interstate Blue, Silver, Sierra Tan, Slate Gray and Almond. In addition to the Reveal Panels, Petersen Aluminum supplied approximately 10,000 square feet of its Tite-Loc Plus profile panels that were used on the four clerestory roof elements, as well as 2,000 square feet of its Precision Series HWP panels for accent areas under many of the windows in the back of the building, and its Flush Panels for a variety of soffit applications.

Watts & Associates Roofing Inc., Columbia, installed the PAC-CLAD systems, which was a complex job, according to Scott Mathias, vice president and project manager. The use of four different panel types and five colors added to the complexity of the installation.

"Determining the transitions between the colors required careful detailing where the various color panels tied in with each other," Mathias explains. "But again, that was mainly front-end stuff. We made samples to show everyone how we planned to do it and then everyone was on-board. Throughout the process, it was a total team effort. All of the players—including the school district—were totally committed to make sure we got it done and got it done right."

A LEADER IN SUSTAINABILITY

The Richland Two Institute of Innovation has received two Green Globes from the Green Building Initiative, Portland, Ore. The building has a rooftop solar array with 936 panels, shading devices on the east and south façades with light shelves. The parking lot has electric car charging stations, as well as a solar tree and wind generator. A 10,000-gallon underground cistern collects water for landscaping, and a solar hot water thermal system pre-heats water for food service.

A stand-alone Student Energy Lab is adjacent to the solar farm, which includes project-specific curriculum written to SC Science Standards leading to solar installer certification for students. "The Student Energy Lab is used as a teaching tool for the students to understand and learn the impacts of the sustainable initiatives," Branham says.

Richland Two Institute of Innovation, Columbia, S.C.

- Owner: Richland School District Two, Columbia,
- Architect: LS3P Associates Ltd., Columbia,www.ls3p.com
- Builder: M.B. Kahn Construction Co. Inc., Columbia,www.mbkahn.com
- Installer: Watts & Associates Roofing Inc., Columbia,www.wattsroofing.com
- Solar contractor: Advanced Green Technologies, Fort Lauderdale, Fla., www.agt.com
- Curtainwall/glazing: Oldcastle BuildingEnvelope, Santa Monica, Calif., www.obe.com
- Metal roof/wall panels: Petersen Aluminum Corp., Elk Grove Village, Ill., www.pac-clad.com