



Located in the Riverside Business Park in Asheville, the future home of the French Broad River Academy is currently under construction. Utilizing renowned structural components and designs from Deltec Homes in Asheville, the school will not only have optimum functionality, it will also have the highest standard of green building materials for an eco-friendly and economical alternative to traditional building methods. Garret K. Woodward photos

Education, economics and eco-friendly

□ BY GARRET K. WOODWARD □

The smile on Will Yeiser's face is ear-to-ear.

"We believe the time is now," he said. "Everything we've pursued in this project is aligned with my personal philosophy, and with the core mission of the school."

Director/co-founder of the French Broad River Academy, Yeiser has spent the last few years preparing, planning and perpetuating his ultimate vision for the institution. Founded in 2009 within the River Arts District of Asheville, the all-boys middle school emphasizes a core of progressive education, one that is nurtured by a keen sense of outdoor recreation and agricultural responsibility.

Originally housed in a large structure in the RAD, alongside art galleries and other businesses, the space began to get cramped with

the growing popularity of the school and its rising enrollment numbers. So, Yeiser began to plot the next move – their own building on their own piece of property.

"Since day one, we've envisioned a true waterfront campus, one that is autonomous and safe," he said. "And we didn't have water access for our outdoor activities in the beginning, and needed to get our own space on the French Broad River."

Eventually, through a gracious three-acre riverside land donation, FBRA now had their dream property. Though on a flood plain, the property was ideal to the school's needs. All that remained was figuring out the appropriate structure to place on it, one that was green built, eco-friendly and cost saving.

Cue Deltec Homes.

"Here at Deltec, we focus on



building a high performance building envelope: the walls, floors and windows – what separates the outside from the inside, for homes and smaller commercial buildings,” said Deltec President Steve Linton. “For FBRA, we are using the products we already make, but re-imagine them into a larger structure, where we focus on air-tight walls and high-grade insulation to provide the best product possible.”

Based out of Asheville, Deltec is a 47-year-old company that is at the forefront of the green building movement. With their signature round homes and structural integrity that can withstand any hurricane or wind load, the buildings are produced to a much higher standard than what it normally offered for residen-



from the landfill) and an energy efficient shape – the model was stretched and formatted to sit seamlessly on the 12-foot superior concrete walls (the only part of project constructed onsite), which are ideal for the flood plain.

“Even though the school is a commercial building, we’re able to get a better value for the dollar using a more residential style system,” said Robert Todd of Red House Architecture in Asheville. “A 10,000-square-foot school can be considered a 10,000-square-foot home, so it worked well, seeing as when you tend to step up to commercial without utilizing green building techniques, you tend to lose efficiency unless you build to a higher level.”

Todd noted the school is equipped with high R-values, air tight construction, efficient lighting and lighting controls, all of which is blanketed on the outside with rigid insulation and an outer skin of vertical metal siding. Plans are also currently in the works for solar panels.

“With Deltec, you get a locally made product, engineered to be of higher strength compared to other framing options,” Todd said. “It comes in at a price point per square foot that a school can afford, is put together in a green facility, and will have long-term sustainability and energy-saving factors.”

For Yeiser himself, an added bonus is having his students able to experience and interact with how their school is coming to fruition. The pupils were able to tour the Deltec manufacturing floor, and see first-hand how sustainable materials are created and put together.

“To see how the building is made is an unforgettable life lesson about the processes involved, and how waste products are reused,” Yeiser said. “It’s all about, ‘What kind of world are they going to inherit?’”



From left, Robert Todd (Red House Architecture), Steve Linton (president, Deltec Homes), Will Yeiser (director, French Broad River Academy), Jack Eller (general contractor), Leigha Dickens (green building and sustainability manager, Deltec Homes) and Ben Poss (engineer, Innovative Structural Engineering).

Ceiling: R43 Spray Foam Insulation

Walls: R19 fiberglass batts in the cavity, plus R7.5 continuous EPS insulation on the outside

Floor: R38, combination spray foam and fiberglass batt system
Insulation: Delkote Machine Finishing

Windows: Marvin Integrity, double-pane with argon gas low-E coating, U-Factor 0.27

Prefab Building Kit: manufactured by Deltec Homes

Foundation: Pre-cast Superior Wall XI, a pre-insulated, panelized system with built-in R12 (Foundation is an unheated parking space)

Plumbing: Bartlett Construction
PVC piping: donated by Silverline Plastics

HVAC installation: Gentry Heating and Cooling

Insulation installation: Delkote Machine Finishing

Architect: Red House Architecture

Engineer: Innovative Structural Engineering

General Contractor: Jack Eller

tial and commercial structures.

And with FBRA – which needed a 10,000-square-foot structure – Deltec found itself putting together the largest product they’d ever come across. Assembling a team of architects, engineers and contractors from previous projects, the “A-team” turned Yeiser’s vision into a reality.

Taking the key green components from a Deltec home – sustainable manufacturing and materials (the factory is solar powered, with 81.2 percent of waste diverted