

ST. CLOUD TECH HIGH SCHOOL AT A GLANCE

320,000 Square Feet

69 acres

1,600 Students

\$104,500,000.00 (Total Project Cost)

Completed: August 2019



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Overview

The design of St. Cloud's New Tech High School is rooted in connections. The building is connected to its site. The present is connected to the past. Technical education is connected to academics. Students are connected to themselves, their learning, and each other.

Through these connections, designers were able to transform traditional learning spaces into flexible learning environments that support a variety of teaching and learning needs. Divided into six learning communities featuring a combination of flexible learning spaces, group collaborative spaces, project and science labs, and collaborative teaching spaces, the new Tech School fosters an environment that meets both the physical and social-emotional needs of its students while preparing them for success in a technological, global society.

Visioning Process

The visioning process for the new Tech High School was relatively unique in that the first workshops between Cunningham Group and the St. Cloud community were held with the goal of determining whether a new school was even needed, or if it would be better to simply remodel the existing, 100-year-old space. Further, the committee decided it would be best to look at how high education is to be delivered across this district, including at Apollo. Ultimately, it was decided that a new school would be necessary, and Apollo could be remodeled to meet the new delivery model.

The committee developed the following Vision statement to guide the design and educational delivery for the high schools:

"We see inviting, student-centered designs that integrate environmental, community and technological resources to cultivate a love of learning in all students. By celebrating beauty, function and sustainability, we build on a tradition of excellence that serves as a source of pride for students, staff and the community."

This statement, based off of the school's Mission and the core values of District 742, guided the design process.

Connection to Site

From the very moment students arrive on campus, the line between the built environment and the surrounding natural area is blurred, both literally and figuratively. The school's footprint is designed so that students and visitors must drive through the woodland landscape, progressing through trees and across a creek, before arriving at the building's main entrance. This short journey creates a liminal space wherein the school and its surrounding environment are joined, intentionally disconnecting students from the adjacent residential and commercial areas. The site is bound on the north by protected woodlands

Cunningham Group
Architecture, Inc.

St. Anthony Main
201 Main Street SE
Suite 325
Minneapolis, MN
55414

Tel: 612 379 3400
Fax: 612 379 4400

cunningham.com



through which runs a trout stream, and a natural city park to the east. Neither of these areas will be developed in the future, maintaining the school's natural setting.

The site — a cross section of woodland and wetland areas and farmland — necessitated that the new school consciously respond to its surrounding natural features in a holistic way. This becomes especially apparent as students and visitors move throughout the space, as learning neighborhoods are positioned to the north of the site, pushing them up against the forest and providing access to serene views and generous amounts of northern light.

This porosity is mirrored by the main student commons, which is dominated by a full, east-facing glass wall. This bold feature allows the early morning sun to penetrate deep within the space, greeting students each day with a welcoming, natural light. In other areas of the school, daylighting is more curated. By providing both direct and indirect light sources, designers created a dynamic lighting system that mimics the patterns and rhythms found in nature.

Neenah Creek, a protected trout stream, runs through the north end of the site and all storm water is infiltrated on site through an extensive use of rain gardens, native landscaping and permeable pavers. One hundred percent of the storm water is managed on the site, filtering it through these systems to treat it and regulate the temperature to match the temperature of the stream. Studies were also conducted which identified that the site also contains the Rusty Patched Bumble Bee, Northern Long-eared Bat and Blanding's Turtle — all of which were protected species.

The school is also symbolically connected to the greater St. Cloud community. The most visible of these connections is the building's granite façade, a nod to St. Cloud's identity as "The Granite City." All granite used on the building's exterior was excavated from a local quarry, just 10 miles away from the site. Additionally, interior designers used a color palette that reflected St. Cloud's collective history: hues of deep charcoal and rust pay homage to the city's roots in the granite industry, while angled intersections of metal, stone, and wood evoke the train tracks that were vital in connecting St. Cloud to the industrial east coast.

Integrated Technical Learning

In the same way that designers sought to blend the line between outdoor and indoor environments, so too did they deconstruct the way in which St. Cloud's Career & Technical Education (CTE) labs would be integrated throughout the school. Instead of isolating their CTE spaces, as is common in many traditional learning environments, the new Tech High School distributes them throughout the building. By placing the CTE labs adjacent to the other learning neighborhoods, not only do students have easier access to these spaces, but the added transparency highlights the many different ways in which learners can be innovative and take their education into their own hands. Additionally, a two-story FAB lab is placed at the heart of the school, just off of the student commons. Like the CTE labs, this integrated approach helps provide awareness of specialized learning, and its central location shows the inherent value of all types of learners.

Both the CTE spaces and the FAB lab were designed with programmatic flexibility in mind, allowing them to adapt and change with industry trends.



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Distributed Media

The new Tech School is designed to be a “student-centered” learning environment. And perhaps nowhere is this more apparent than in the building’s deconstructed approach to the traditional media/learning resource center.

On the first floor, the learning resource center takes the shape of a coffee shop — an informal area for gathering, studying, and eating. This environment spills out onto an outdoor patio area where a variety of furniture types lend students the flexibility to use the space as they wish. Large windows and strategic glazing ensure that this transition to the outdoors feels natural.

Back inside, furniture and bookshelves are arranged to maintain strong views to the exterior and provide easy supervision within the space. Easy access to power strips make this a place where students can relax and recharge, mentally and digitally. On the school’s second level, the learning resource center has a clear visual connection to the digital labs and Visualization Studio where students can record, video, edit, and 3D print.

Spaces are also provided where students can get away from technology – a feature identified during the design process by the students as important to them.

Learning Neighborhoods

The school is split into three separate learning neighborhoods, each of which is gathered around an open, two-story, informal learning area. The three neighborhoods — which are visually branded with colors and graphics representing the way light changes throughout the day in a forest — provide a variety of learning spaces, from classroom-equivalent learning studios, to more personal medium and small group learning rooms that give teachers logistical flexibility. Also included in the learning neighborhoods are a combination of fixed and flexible science labs. Each neighborhood is naturally lit by large, clerestory windows.

Because each learning studio is centered around an open, informal area, teachers can passively supervise students without compromising the students’ ability to work independently. A variety of flexible furniture in this space (soft-booths, hard mobile tables) lets students choose where they want to work, which in turn increases their ownership of the space. Roughly 80 percent of the walls in each learning community are useable (writing or tacking), and the use of a post and beam structural systems coupled with moveable walls mean that spaces within the building can be reconfigured over time as needed to continue to meet the changing needs of learning and teaching.

