

2024 A4LE LE SOLUTIONS AWARD

# Gretna East High School





## Centering on Connections

In 2023 Gretna Public Schools officially opened its doors to the highly anticipated second high school, Gretna East. The design firm and Gretna Public Schools' longstanding partnership dates back over 30 years. As a longtime partner of the school district, the design team developed a district-wide facility master plan that included the addition of a new high school to accommodate the influx of students. With a growing community just outside of Omaha, Nebraska, Gretna East serves 1,600 students in the Gretna community.

The new Gretna East High School is all about connections - from land to sky, interior to exterior, and most critically, people to people. The integrated design team engaged the school board, administration, teachers, and students to ensure each aspect of the facility enriches learning. CTE programming is highlighted with a welding shop, small engines shop, woods lab, and white box lab, which includes drone studies and a makerspace.

Intentional linear movements off the central spine of the building create a connected learning environment of classrooms, breakout spaces, and outdoor learning areas. The glazing, carved into the monolithic walls of the exterior, creates both sunken and extruded reliefs that establish a bold rhythm along the façade. The building layout uses views to the exterior as a form of wayfinding, drawing occupants through the building and inspiring moments of reflection looking at the surrounding natural landscape.

“*We are always amazed and very happy with the community support. They voted for this, we showed them what they would get and I think when they walk in, they probably even got a little bit more than they expected for the money.*”

Travis Lightle, Superintendent





## EXECUTIVE SUMMARY

# Budget / Project Data

### Scope of Work

Owner: Gretna Public Schools

Location: Gretna, NE

Project Type: New High School

Completed: 7/28/2023

Size: 374,483 SF

Budget: \$123,717,138.00

Construction Cost: \$119,824,921.00

Services: Architecture, Engineering, Planning, Design

Change Orders: 6 deductive change orders

Cost/SF: \$320

Delivery Method: CMR

The design for Gretna East High School centers on connections, with special focus on site organization, building orientation, and access to exterior spaces and programs.

The new campus totals over 374,483 SF. In addition to the high school facility, the campus site includes competition soccer, softball, and baseball fields, a practice football field, and track and field facilities.

A 2,000-seat top-loading gymnasium includes a running track around the main court as well as an auxiliary gymnasium space that is also top-loaded and seats 500. The learning commons open up to a large, 22,390 SF courtyard greenspace. The facility offers a variety of different gathering spaces for students and staff, including individual, multiple classrooms, and small breakout spaces.

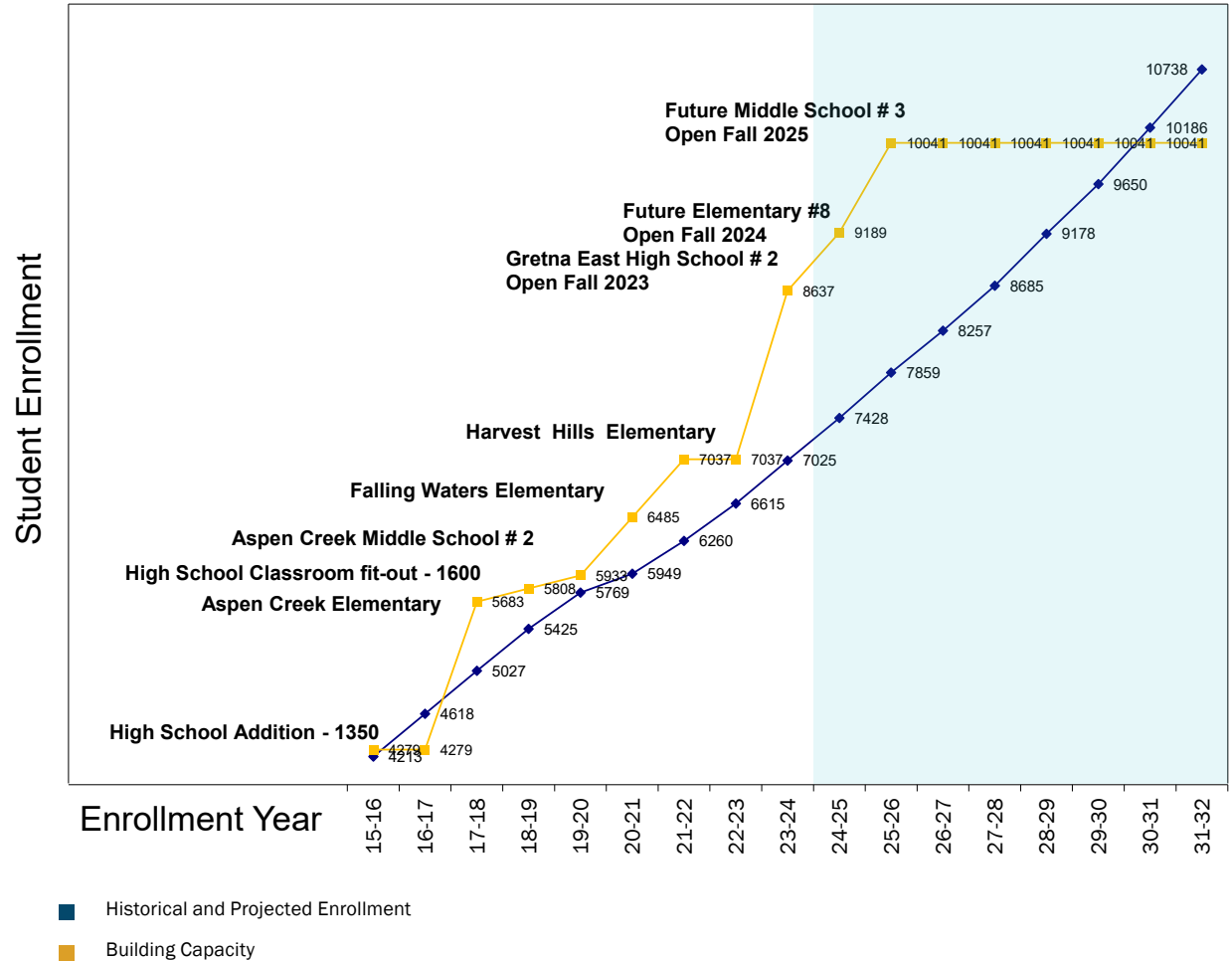


## Community Growth

Located in the western part of Omaha, Nebraska, Gretna Public Schools serves a growing metropolitan area. According to the 2023 census, Gretna is part of the fastest growing county in Nebraska, home to 9,548 people. Beyond providing a safe and welcoming environment to serve the influx of students, this second high school celebrates the community's culture of lifelong learning and embraces the history of the building site.

The community is well-connected and is proud of the small town feel they foster while they grow at a rapid rate. Gretna hopes to maintain this small-town culture and connection in the new Gretna East High School. The design team held visioning meetings to understand the needs of the district. After learning what educators and students love about the existing first high school, designers analyzed curriculum to create spaces that meet educational requirements, while also inspiring students.

GRETNA PUBLIC SCHOOL DISTRICT GROWTH





## SCHOOL & COMMUNITY ENGAGEMENT

# Engaging the Community

### Visioning for the Future

In honor of the original high school mascot, the Dragons, community members selected a mythical creature, the Griffins, as their new mascot. Designers collaborated with school board members and administrators to design the new visual brand identity, which will define a new generation of students in Gretna and serve as the school's rallying point for years to come. School leaders can use the provided brand guide and an experiential graphics package that showcases brand elements in high volume spaces within the facility.

Hy-Vee Grocery Store has partnered with Gretna Public Schools to sell the newly branded merchandise in its Gretna location. Through this partnership Gretna earns a percentage of the merchandise sales.





## SCHOOL & COMMUNITY ENGAGEMENT

# Engaging the District

### Visioning for the Future

The Gretna School District Design Committee worked with designers to generate concepts for the site and building. During the schematic design process the team received feedback from four small groups of school district professionals, which included administrators, teachers, staff, and community members.





## Engaging Students

Art students participated in a competition where they designed precast panels that are seen at the main entrance of the school. It is a way for students to leave a piece of their legacy at Gretna East High School while visually reflecting the landscape. The three designs selected for precast included a crop circle design and a planting row design. Students and educators also expressed their attachment to an outdoor space at the existing high school, which led to the creation of the courtyard. The courtyard serves as a direct link to the beginning stages of planning.





## Future-Facing Vision

Gretna's goals for the new high school include a positive educational environment that emphasizes acceptance and intellectual, physical, emotional and social development. Gretna aims to provide educational programs that help students identify and achieve their career goals and emphasize the value of hard work. They want to attract highly qualified personnel to their school to benefit the educational growth of the students. Academic development in

reading, writing, computing, listening, and speaking as well as an appreciation of the arts are all important to Gretna Public Schools. Designers focused on the goals of the Gretna School District to provide a building that not only spoke to each goal, but specifically influenced and encouraged the achievement of them.



## Guiding Principals for Gretna Public Schools

### **Celebrating Our Past and Embracing the Future**

The learning environment celebrates the storied history and culture of Gretna while embracing the future of our students' education through innovation and technology.

### **Utilizing Diversity to Inspire Student Engagement**

The learning environment addresses the unique needs of our diverse student body and engages students by celebrating our differences.

### **Creative Functionality & Flexible Comfort**

The learning environment is innovative, inviting, and functional while offering a range of comfortable spaces, from outdoor classrooms to breakout areas.

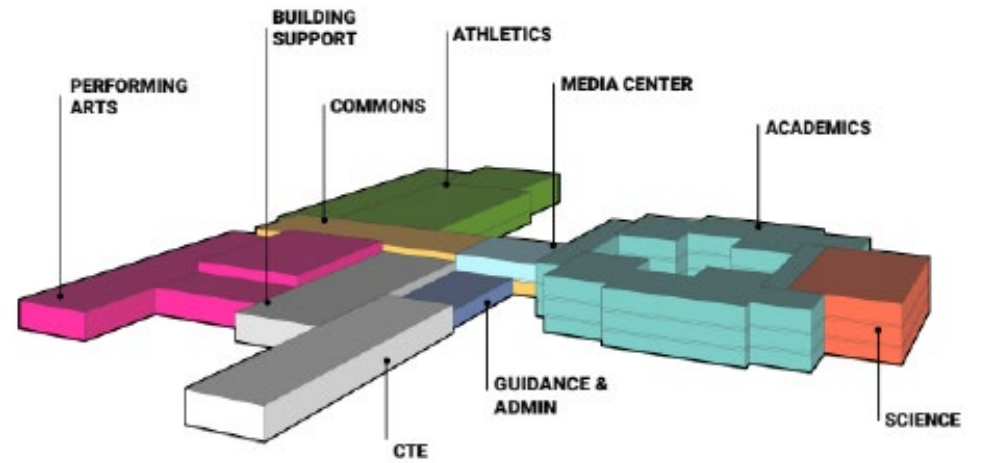
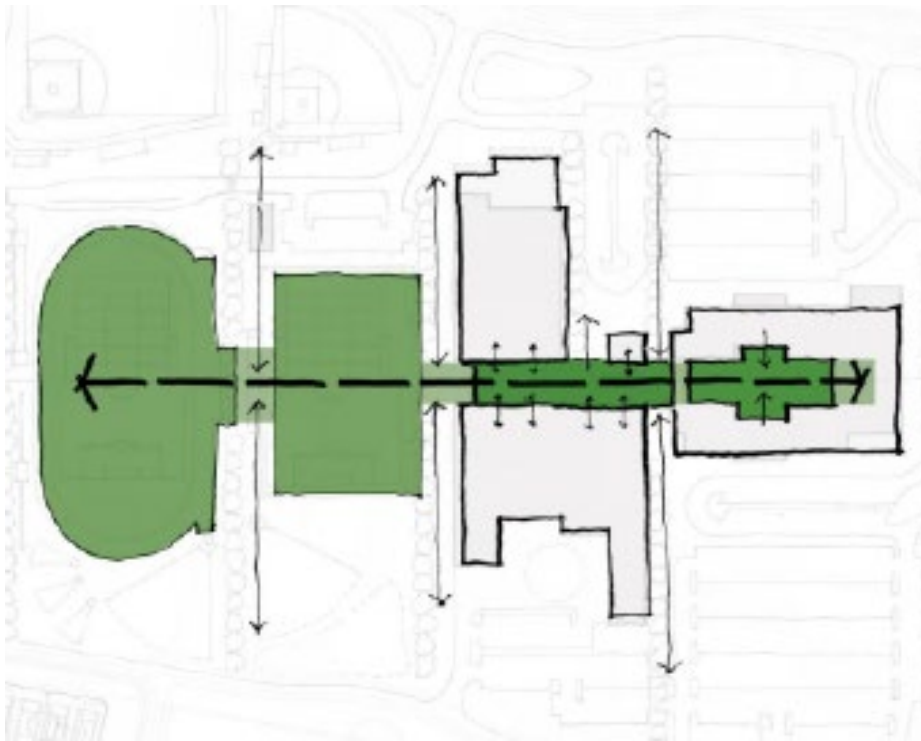
### **Safe & Educationally Stimulating**

The learning environment provides a safe place where students are inspired to explore and achieve their full potential.



## Future-Facing Vision

Subject bubbles are organized to be flexible and cluster subject areas to allow students to move between independent study breakout areas, labs, and community spaces within the same study focus. Large windows allow for transparency among spaces while constant views to the exterior assist in wayfinding.





EDUCATIONAL ENVIRONMENT

Site/Floor Plan





## EDUCATIONAL ENVIRONMENT

### Space to Explore

Instructional spaces are designed for maximum flexibility to deliver the subjects and skillsets that Gretna aims to instill into its students. For instance, curriculum calls for 12 science classrooms but not 12 labs. Therefore, two classrooms directly feed into a shared lab space. With six labs instead of 12, this grouping approach results in the most efficient use of the space that meets science curriculum needs and encourages a variety of collaborative learning and teaching.

The commons area is an adaptable space that can seat up to 1,800 students to account for future growth. It is used for dining, after school activities, and large assemblies. The flag corp regularly practices here both before and after school. The spaces are artful with thoughtful design elements that encourage an appreciation for art and school pride. Designers included the Gretna East logo in a variety of spaces and pops of Gretna East's bright yellow are found throughout the building as a way of improving emotional well being while also inspiring students to feel pride in their school.

Breakout rooms are a sensory friendly feature of the school that supports students that may need personal study spaces. These rooms are located just outside the main classrooms, which allows for supervision but also gives students a sense of freedom and fosters their academic independence.





## PHYSICAL ENVIRONMENT

### Connection to the Outdoors

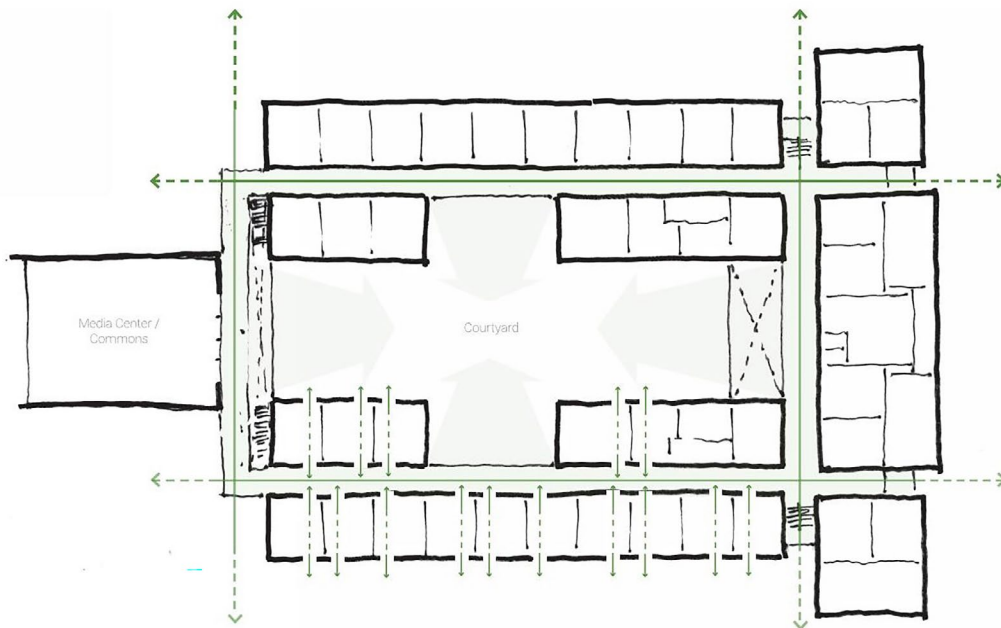
Gretna High School involved designers with the selection of the site. Site context and approach was critical to the overall design and needs of the school and community. The school has plenty of space that supports future growth and allows the school to have lots of sports programming. The campus site includes the large school building and outdoor courtyard spaces, but also a competition soccer, softball, and baseball fields. It provides a safe and welcoming environment while celebrating Gretna's culture and the district's principles of lifelong learning.





## Visual Connections to the Outdoors

The materials are inspired by the rhythmic landscape of the site. Materials are meant to create texture and play with light. Linear movement creates connection between classrooms and outdoor spaces.



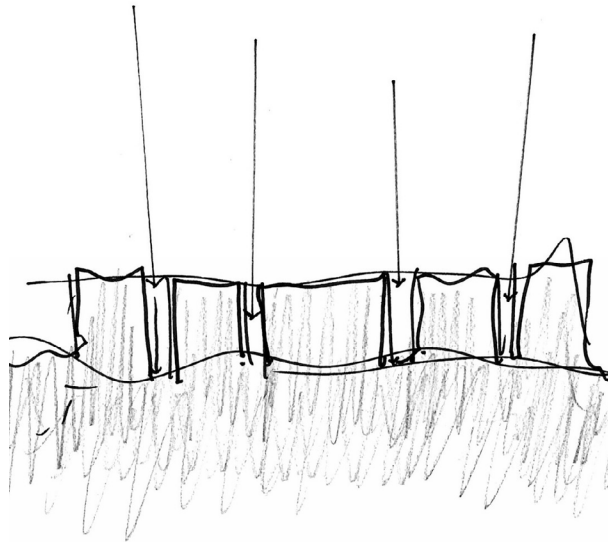
Views of the exterior are a form of wayfinding and connection to nature.



## PHYSICAL ENVIRONMENT

# Connections to the Outdoors

Design and construction teams selected themes to display that pay homage to the site's history of crop fields. The building takes physical cues from the corn fields that Nebraska is known for. A tranquil and calming effect of long grasses are incorporated in the landscaping. Lines and rows mimic corn field patterns in the building façade, which creates a rich texture and fosters a rhythmic aesthetic. Intentional linear movements stemming from the central spine of the building create a connected learning environment of classrooms, breakout spaces, and outdoor learning areas.

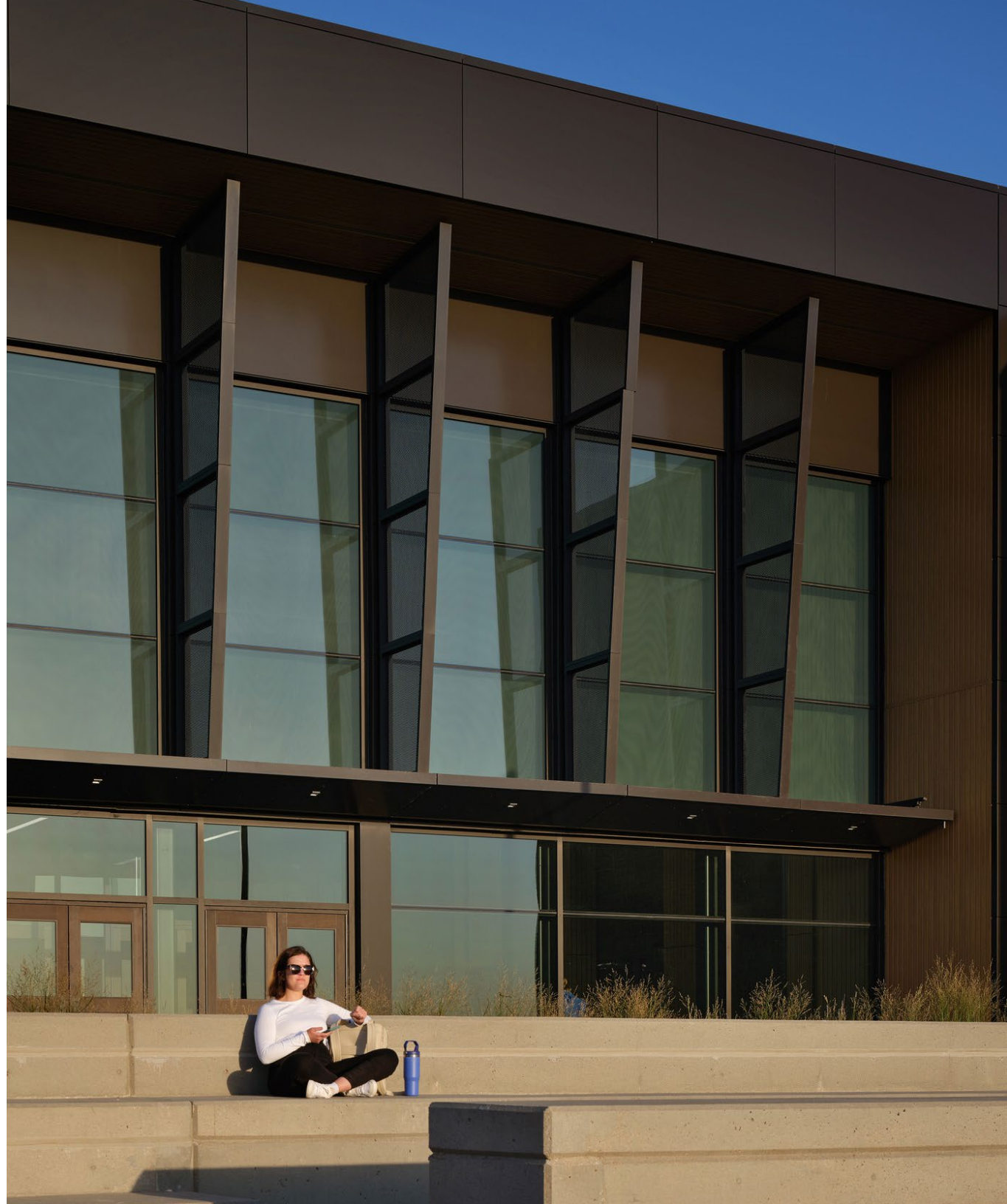




## PHYSICAL ENVIRONMENT

### Gretna's Rhythm

The glazing, carved into the monolithic walls of the exterior, creates sunken and extruded reliefs that add boldness to the linear rhythm. Large windows are meant to improve productivity and reduce stress, seamlessly integrating nature into educational spaces. Visually pleasing wall extrusions provide shade and privacy.

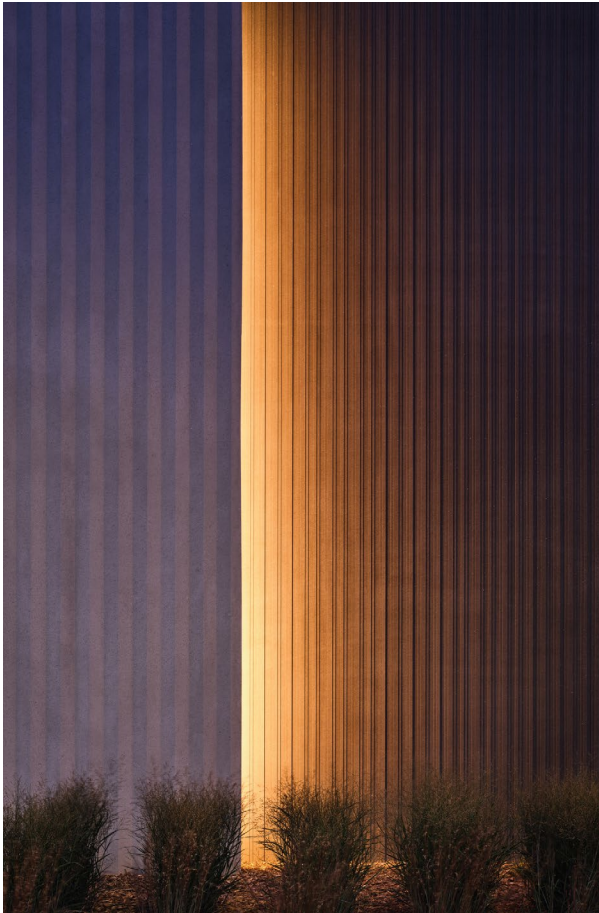




## PHYSICAL ENVIRONMENT

### A Breathe of Fresh Air

Outdoor educational spaces are emphasized with long grasses included in the landscaping that create a soothing atmosphere through movement and sound. The courtyard features a variety of linework in the benches, windows and walls. Exterior lighting emphasizes the extrusions and clean linear movement of the exterior design.





## RESULTS

### Encouraging Achievement

Gretna East High School is a space that encourages the achievement of the school district's goals. It emphasizes nature and has spaces that help students experience a variety of learning. The layout of the design provides value to staff and students by improving the educational environment.

Gretna East High School has been featured in the Omaha World Herald for the beauty of the design. Daylighting studies were conducted to optimize glass frit and shade structures. A high-performance envelope and energy model resulted in a 59% predicted energy use reduction from baseline. The science classroom is set up to serve staff and students effectively while also saving money.

Gretna High School has an abundant amount of learning spaces that help staff and students work toward personal growth. Breakout rooms are sensory friendly spaces with adjustable lighting to suit student needs. The bubbles of learning allow for a small-school feel in a large, beautiful building.





## RESULTS

### Encouraging Achievement

“*Gretna East High School stands out not just for its stunning architecture but also for its remarkable efficiency in accommodating student needs. Despite its size, students move swiftly between classes, thanks to thoughtful design. Moreover, it’s evident that this building was constructed with longevity in mind. Similarly, Gretna East prioritizes easy maintenance, featuring durable materials like stainless steel handrails and terrazzo flooring, reducing annual district expenses.*”

- Travis Lightle, Superintendent

