

# DESIGN APPROACH

## GOALS AND OBJECTIVES

When taking on the task of designing a new, 21<sup>st</sup> century learning environment, prioritization of needs vs wants is necessary. Our design team of Stantec + QEA couples the #1 K-12 designer in the country with award-winning K-12 learning environments within urban areas to create a collaboration that cannot be rivaled. This breadth of expertise allows our team to design a modern and innovative high school within budgetary and schedule constraints. Our team understands your project goals and objectives and has established a means to leverage our architectural capabilities in the City's best interests.

1. Beginning with the educational program we will design the school from the inside-out and not vice versa; in collaboration with both the school and the Falls Church Community, we will create a broad and effective array of teaching stations that are specifically designed to inspire competence, creativity, compassion to ensure the success of every student.
2. We believe achieving LEED Gold certification, leveraging geothermal technologies, and providing the basis for a net-zero-energy facility is well within reach on this project. In fact, we're optimistic that together we can achieve even more.
3. We recognize that this is first and foremost a school project, but from our point of view, we strongly feel it is every bit a community project. The commercial development that will adjoin the new facility, adjacent public transportation nodes, entry corridor into the city, neighboring businesses, and indeed the rest of greater Falls Church will be impacted by this project. With that in mind we are proposing a holistic, community-based approach to integrate the school into the development and the development into the overall fabric of the city.

On the pages that follow, we have provided more details on how we will approach educational design, sustainability, and the relationship between public and commercial sites.

### CASE STUDY

#### Transforming Aged School Buildings into 21st Century Learning Environments



#### Alice Deal Middle School – Washington, DC

The Alice Deal campus is located in upper Northwest and consists of the Alice Deal Middle School built in 1932 and the Reno/Rose School built in 1903.

The 850 student, \$65 M school was fully modernized and an addition built to house the gymnasium and cafeteria that unified the existing 2 structures. 21<sup>st</sup> Century learning principles were applied to this 4-story structure such as flexible classroom, a central gathering area (heart of the school), informal collaboration and break out spaces as well as an abundance of light and air were utilized.

Key attributes that related to the George Mason High School project are:

- > Urban site
- > Phased construction
- > Work on an occupied site
- > Robust community engagement
- > Challenging approvals process

***A team that has proven to have worked in challenging and unique circumstances is best qualified to lead the design of George Mason High School.***

1) Provide a narrative explaining your underlying philosophy and approach to the design of a modern innovative high school and provide examples of how this philosophy was implemented on other projects.

## EDUCATIONAL DESIGN PHILOSOPHY

Designing a modern, innovative high school begins with a deep understanding of educational best practices, how instruction is delivered today, and how students will learn in the future. In our opinion, it's least of all about architecture and most of all about education and the instructional program housed within the school.

We approach school design from the inside out so the resulting building is subject to the program housed within it, not vice versa. We lend our appreciation for how the built and natural environments – the school building and site – can be leveraged in support of teaching and learning. On every project big or small we attempt to seize upon the opportunity to raise the bar and establish new expectations. Through our designs we promote the overall health, well-being, and safety of our building's occupants. At our best we wield our craft to inspire students to learn, teachers to teach, and communities to engage.

Ultimately, our aim is to push beyond 21st Century into the realm of "future-ready" by providing the places and spaces for students to connect what they're learning with real-world applications, local businesses, and the global marketplace. We hope our buildings become a third teacher visibly reinforcing lessons learned in three and desired outcomes in three dimensions. Our approach concludes with a flexible, adaptable facility designed to be as relevant in 20, 30, 50 years as it is today.

Finally, for us it's about more than just a school; it's equally about community, the role education plays in society, and the ways in which this project will impact greater Falls Church.



Kathlyn Joy Gilliam Collegiate Academy

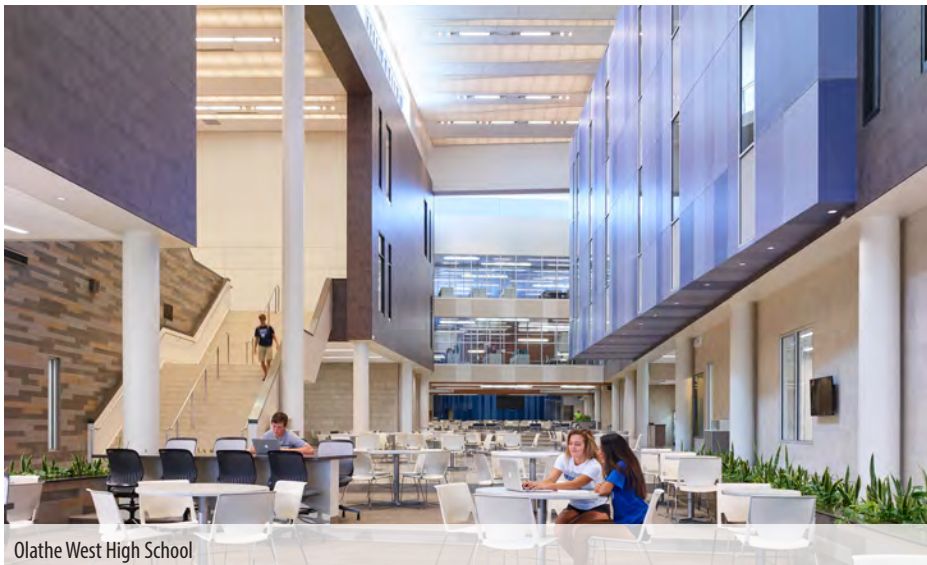
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## EDUCATIONAL DESIGN APPROACH

We believe that modern, innovative high schools depart in several important ways from the industrial-era facilities that characterized the last century. As education has shifted away from a one-size-fits-all, factory model aimed at preparing students for a predictable future, we've observed rows of generic classrooms giving way to a collection of a variety of educational space types designed to more closely simulate the kinds of environments that students will encounter after graduation. The result is that modern high schools bear very little resemblance to state-of-the-shelf facilities pervasive as recently as 10 or 20 years ago.

Acknowledging that learning can occur beyond the classroom, too, modern educational space types are designed to encourage the kinds of activities, behaviors, and outcomes consistent with 21st Century teaching and learning. Together with spaces typical of a comprehensive high school (e.g. classrooms and labs), modern educational space types shape a new type of facility supporting instruction with the goal of preparing students for a future that is anything but predictable.

Following this page, ***we have provided examples of a few of the educational space types that we deploy in "future-ready" facilities*** designed to facilitate modern curricula. We have developed many others, and we look forward to reviewing them with you during the next phase to discover new ways your programs can be supported through design.



Olathe West High School

**Modern educational space types shape a new type of facility supporting instruction with the goal of preparing students for a future that's anything but predictable.**



## “FUTURE-READY” DESIGN EXAMPLES

The four projects that follow enlist several of our educational space types. Please see section H of this proposal for additional examples of how we design modern, innovative educational facilities that acknowledge the important legacy of traditional instruction while at the same time pushing beyond 21<sup>st</sup> Century into the realm of “future-ready.”



### KATHLYN JOY GILLIAM COLLEGIATE ACADEMY

- › Dallas Independent School District sought to replicate the college experience in an environment appropriate for high schoolers.
- › The Gilliam Collegiate Academy is made up of a series of academic and social spaces centered around a common area giving the facility the feel of a multi-building college campus while keeping the students inside a secure environment.
- › The money saved in square footage was used to incorporate high-end finishes, which further enhance the higher education atmosphere.
- › The facility incorporates multiple spaces for informal learning to assert the importance of planning unstructured time, and open visibility to all spaces allows staff to maximize supervision, providing transparency and accountability, while encouraging self-directed learning.



### BROOKE POINT HIGH SCHOOL LIBRARY

- › Varied learning styles within a library setting to encourage digital natives access, manage, and synthesize information.
- › Our team transformed the library into a vibrant, inviting space that became the epicenter of the school.
- › Designed to flex and serve multiple functions at once, the new space aligns with students’ preferred environments, gives them the tools to manage their own learning, and inspires them to engage, collaborate, communicate, and create.
- › After it opened, walk-ins increased by 55% and usage by teachers (as indicated by classes held in the library) is up 107%.

## ROSS STERLING AVIATION HIGH SCHOOL

- › Houston Independent School District developed an aviation magnet in conjunction with its new comprehensive high school.
- › In an environment designed to simulate post-secondary environments, students at Sterling Aviation High School pursue career foci in conjunction with their core academic courses.
- › The project promotes differentiation through spaces that support fluid functions – walls move, visibility is high, and students choose their space.
- › The post-secondary emphasis allows for multiple approaches to instruction and delivery in a flexible setting designed to evolve along with the curriculum.



## ACADEMIES OF LOUDOUN

- › Integrates advanced academic and technical programs and the growing trend in public education to create more contextualized, hands-on learning experiences for all.
- › The project is inspired by a desire to erode the boundaries – and biases – that currently exist between the academies' rigorous but independently operated STEM and CTE programs, and to leverage the unique learning opportunities at the intersection of research, engineering and fabrication.
- › Co-locating three existing high school programs – the Academy of Science, the Monroe Advanced Technical Academy, and the Academy of Engineering and Technology – into a single facility.
- › Learning spaces are designed to be highly flexible and easily adaptable in response to the rapidly shifting demands of STEM and CTE programs and careers.



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## JOINT/SHARED USE FACILITY

We think it's important to also talk about community utilization of the high school and its facilities. Modern day schools are becoming more than just learning environments for students. Because of urbanization and the slow erosion of available land, our schools are becoming community centers that serve a broader array of the population. School grounds are now being used for the entire year and for longer periods throughout the day. They are becoming more efficient. We see the new George Mason High School and its campus as a community resource too. Our team has experience designing education facilities that successfully blend the functionality of a school with the complexities involved with a joint-use facility. We understand the circulation and security challenges that are present when the facility is used for different populations and will provide a solution that successfully blends an open and collaborative environment that also limits access during certain times to the remaining portions of the building. Some of our most recent projects that face similar challenges include the Marie Reed Community Learning Center in Adams Morgan that has successfully blended the school, a community center with pool and day care, and a clinic into one harmonious resource for the community. Similarly, our projects in neighboring Arlington County all have community functions to them and have the same requirements that the new High School will. Our team is well versed in addressing these issues and will be prepared to address those concerns with all stakeholders.