

HEIGHTS HIGH SCHOOL

HIGH SCHOOL rethinking: an architecture based on opportunity

contents



executive summary	03
scope of work + budget	05
school + community engagement	07
educational environment	11
physical environment	15
results of the process + project	20

OI. EXECUTIVE SUMMARY

Cleveland Heights-University Heights City School District provides the vision and commitment to prepare students for life.

The District's mission focused on challenge and engagement was the basis for the overall project. The impact provides a place of collaboration and learning. Each element of the new High School provides the students, staff, and community with opportunities for growth. Each compliments one another. The environment at Heights High School provides place for the District's mission of success.

Heights High School, formally Cleveland Heights High School, is a place built on **inclusivity**, **visibility** and **memory**. That is the foundation for a collaborative community-based approach of education and architecture that supports this direction. Each plays a vital role in the experience of the new and renovated facility.

The development of the program of requirements was to provide opportunity for all students. Adjacencies of teaching spaces were not based on disciplines or course levels. Career Technical Education (CTE) was not programmed to be located together or in a separate wing or floor. Integration of educational programs allowed for students to interact with students of different interests, abilities or opportunities. The society and community of college and career is broad and not separated. This inclusive approach to architecture is based on the vision of Heights High and the Cleveland Heights-University Heights City School District.

The building provides collaborative opportunities for success.

Heights High School's prominent location within the community is sited to be a beacon. Visibility became a key factor in the renovation of the site and the overall experience of place within the building. The parti of the building centers on the historic clock tower. It becomes a focal point both physically and symbolically. Prior to the rebuilding of Heights High, the court entrance and clock tower were hidden behind a brutalist addition. The beauty and function of the 1926 plan was lost and

forgotten. **Rethinking** began with a study of the 1926 plan. That plan had a classic sequence of arrival centered on the clock tower, a symmetrical approach to the main entry, and a double loaded corridor classroom wings. Upon entrance into the building was a theater, centered in plan. Circulation was direct and understood. Visibility was a part of the original campus. The clarity of plan and visibility was lost on future additions and renovations.

The new Heights High School centered on the understanding of clarity and visibility of the original building. Plan central was the tower. This element is visible from all sides of the building. Symbolically, the tower became student central. Collaboration space on the main level and locker bays on the second and third floor. The central locker bays look out to the restored courtyard. Rethinking also included elements that provided student views to the community and community views to school activity. Circulation became a critical element of the design. Natural light was provided in all elements of the building. Corridors ended in exterior views. Stair locations allowed the community to see the Heights High Tigers, a global economy and success can be seen.

Place is both about 1926 and the present. Memory of the alumni are not lost but strengthened. The architecture celebrates the relevancy of the experience of being a Heights High Graduate and a member of the Tiger Nation. The original building included elements of sandstone on the exterior at points of entry and interior quarry tile in all corridors. The sandstone elements were salvaged and incorporated into the new student entrance. Quarry tile was protected and added. Memory was not lost.

Cleveland Heights-University Heights City School District leadership and educational direction is at the forefront of the success of Heights High and its architecture. The team had a challenge of utilizing the original 1926 structure, all while allowing for the District to teach in 2017 and beyond. Leadership was not limited to education, but included all members of the Tiger Nation. Heights High educates all, promotes visibility and provides an environment based on tradition, history and memory.





02. SCOPE OF WORK + BUDGET

The original High School was constructed in 1926 and has received a multitude of additions throughout its history. Due to the non-conforming nature of those additions, current changes in technology, and the District's desire to implement an improved educational delivery system, the project includes partial building demolition, a 183,000 SF interior renovation to the building's historic 1926 core. All interior finishes, doors, windows, HVAC, plumbing, electrical and technology systems were replaced to accommodate contemporary instructional models. The building also received 173,000 SF of additions to house the District's career tech programs, additional classrooms, physical education spaces, a new pool and fine and performing arts facilities. The project utilized Student Centered Learning Environments in numerous academic departments. The addition contains a variety of CT programs. The High School is located on two city blocks in the Cleveland Heights Community and accordingly, presented a challenge for all aspects of design, as well as construction. The building was being planned as "net-zero energy ready" and utilizes an HVAC system using hybrid geothermal and gas fired equipment. The opportunities associated with the renovations and addition returned the building to its original grandeur. The building achieved LEED Gold certification.

owner

cleveland heights-university heights city school district cleveland heights, ohio

completion date

august 2017

size

356,000 SF / 173,000 SF New + 183,000 SF Reno

construction cost

\$75M

project scope

addition/renovation

delivery method

CMR

capacity

1,680 students (grades 9-12)

sustainability rating

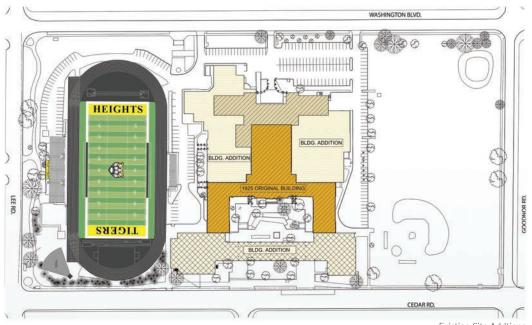
LEED Gold

photography

Eric Hanson Scott Pease



1926 FACADE + CEDAR ROAD PRESENCE RESTORED







Illustrative Site Plan



1959 Science Wing Addition





2017: Original 1926 facade + Cedar Road presence restored

03. SCHOOL + COMMUNITY ENGAGEMENT

COMMUNITY

The Cleveland Heights - University Heights City School District is over 100 years old and located in east Cleveland. The District serves Cleveland Heights, University Heights, and part of South Euclid. The District serves approximately 5,800 students in seven elementary schools, three middle schools, one high school, an early childhood learning center, and a school for students with emotional needs. Heights High's minority enrollment makes up roughly 84 percent of the student body. Overall, the three represented neighborhoods maintain strong pride in history, diversity, culture, and humanity, while maintaining a friendly atmosphere.

With a population of approximately 46,238 residents, Cleveland Heights was ranked the 8th largest city in Greater Cleveland and 20th in Ohio as of the 2010 census. The community is rich in unique architecture being accessible to almost any budget, in addition to boasting 135 acres of park area. Cleveland Heights is in close proximity of downtown and the University Circle area, within reach of eight higher education campuses and world class healthcare systems.

Cleveland Heights-University Heights City School District outlines their sense of community in the following words:

For more than 100 years, the Cleveland Heights-University Heights City School District has been one of the most storied and successful school districts in Northeast Ohio.

We serve a vibrant, diverse community, made up of Cleveland Heights, University Heights, and a section of South Euclid. We educate more than 5,200 students each year, from Pre-Kindergarten through 12th Grade, in seven elementary schools, two middle schools, one high school, a career and technical education consortium, an alternative options school, an early childhood learning center and a school for students with emotional needs.

The CH-UH School District has long been known for providing exceptional academic programs that help prepare students of diverse abilities and backgrounds for lifelong success. We offer esteemed extracurricular

activities at every grade level, including our worldrenowned vocal and instrumental music programs, in addition to accomplished athletic teams.

The CH-UH School District employs a dedicated staff committed to helping all students achieve and excel. The District requires each school to develop a unique Academic Achievement Plan, which are included in the principals' evaluations, thereby holding them accountable for their students' successes and growth. CH-UH teachers work with the nation's foremost educational experts during professional development days and strive throughout the year to enhance classroom experiences.

Dedicated parents, family members, and school volunteers enrich the school-learning environment through their support. The Parent Teacher Association, Reaching Heights Public School Foundation, city governments, and many local non-profit organizations play a critical role in the District's success.

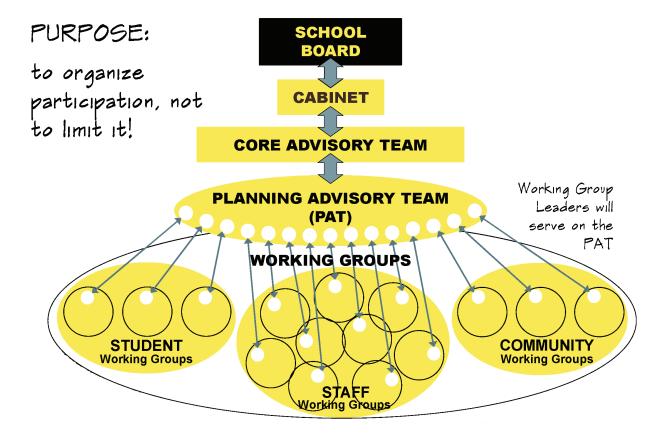


STAKEHOLDERS

Participation of various stakeholders, students, staff, administration, and community members helped directly identify educational goals, programs, activities, practices and support needed to determine the space needs, program of requirements and spatial adjacencies for the new/renovated Heights High School. The design team aided in the framework for group activities. Each working group meet individually with the design team several times throughout the pre-design phase. The pre-design phase also included five community workshops. The work groups were invited to participate as a part of the larger community and Tiger Nation. A Planning Advisory Team (PAT) was established to serve as the liaison between the

stakeholders and project leadership. PAT included District and project leadership, members of each working group, staff, students and community. The design team also provided documentation on the process as well as the resultant goals, POR and adjacency diagrams.

Through this inclusive process Cleveland Heights – University Heights City School District aims were to provide an environment that is conducive to direction of education for all students. The resultant architecture shall be visible for the community and allow for education to modify and be forward thinking, while maintaining the successful elements of the past or district memory.









CHALLENGES

With any district, the idea of change is something that not only involves future visioning, but also **memory** of the past. The storied history of Heights High on the corner of Cedar and Lee is the symbolic backbone to the area. The diversity of the area is seen in many differing facets of Cleveland Heights, University Heights, and South Euclid, including the education of its children. Heights High encompasses all aspects of local diversity. The new building must respect and celebrate this. It is a **rethinking** of education with visions of the future and a relevance of the past.

During th inclusive process, an average of over 250 people attended each forum/workshop. With 29 working groups and numerous subgroups, finding common ground and reconciling differing opinions on priorities was a major challenge.

An explanation of the process was given, then following prompts from the design team, participants were given the opportunity via small groups to explore things like how their higher hope for the school mirrored the core beliefs of the District's mission.

The process involved the development of Core Beliefs and District Strategies. The opportunity that the future holds is to be student centric. Each effort, whether a physical building or educational vision is to be student focused. Education based on knowledge provides opportunity for global success. This will in turn improve academic achievement and overall student performance. The Vision is for all to learn and prosper based on individual interests. Relationship building is also key to a student's success. The learning environment, based on accountability, encourages students to think independently, provide thoughtful insight and work in collaboration with others. Education is a collective effort between students, staff, families, and community.

Other workshops used Legos to allow each group to develop options debunking challenges of how spaces relate to each other and problems with existing structures/

sites. Summaries of activities, photo and video gained a presence on the District website could involve the entire community in the pre-design process.

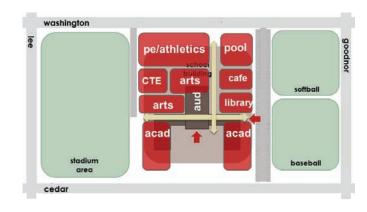
The inevitable introduction of the budget/cost of suggested solutions brought a focus to the final conclusion and potential options for project design.

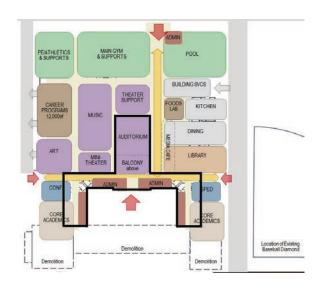
The educational vision and new Heights High provides opportunity for student centered learning. Both allow for a collaborative approach to an education based on one's interests. Education is visible to Tiger Nation. It is not hidden behind a wall of solidity. A student's view of the Global World starts with their view of community and family. Passing the new facility, one must look, wonder, and admire the opportunity that Heights High gives its students, staff, district, and community. This is not a challenge per se, but an educational vision and architecture based on opportunity.

BRAINSTORMING: SITE STRATEGY









AVAILABLE ASSETS

Tiger Nation is a community based on its historic past. The thoughtful approach to change and the constant desire for excellence is a characteristic of the District. Administration and community are dedicated patrons for all students in the district, making it a student-focused approach. Each decision is based on not one but **ALL** students. How can we provide the best education and experience for our children? The architecture is based on that simple question. The constant discussions on educational vision and the resultant architecture answers that question.

Because the community is rich in numerous medical, cultural and academic institutions, the professional resources available were significant. Additionally, the Parent Teacher Association and Alumni Association are both deeply involved in aiding the District' success. The Board of Education was united in support of the process and always available to make decisions throughout the project timeline. Due to the CMR delivery method, constructibility, phasing, and cost control, were all done as a team startling early in the design process, eliminating delays.

VALUE

The physical building is a result of the community. Stakeholders and other valuable members of the overall community aided in the development of the vision for education and architecture. One is not successful without the other. Elements of the Architecture are a direct result of community discussions. Programmed of requirements included spaces for community use. The mechanical system, an integral part of the building design, resulted in the overall commitment by the community of sustainable design. This project with a natatorium, large gym spaces and confined site is a LEED Gold Building. This is a result of the dedication of the community, district, construction team and design team. An architecture based on respect of the original does not overshadow the original structure but compliments it. It is the Historic Courtvard and the renovated bell tower that one sees. The building also includes elements of the times and modifies its architecture based on function and location on the site. New Heights High has both vision of the future while maintaining history and memory of the past.

The building provides opportunities of collaboration for success.

Heights High School's prominent location within the community is sited to be a beacon. The school is to be

seen. Rethinking began with a study of the 1926 plan. That plan had a classic sequence of arrival centered on the clock tower, a symmetrical approach to the main entry, and a double loaded corridor classroom wings. Upon entrance into the building was a theater, centered in plan. Circulation was direct and understood. Visibility was a part of the original campus. The clarity of plan and visibility was lost on future additions and renovations.

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04. EDUCATIONAL ENVIRONMENT

DISTRICT VISION.

P.A.S.S.A.G.E. PREPARING ALL STUDENTS FOR SUCCESS IN A GLOBAL ECONOMY

GOALS

ALL | The environment is designed to educate all. This is the basis for the District's educational approach. Each student is given an unbiased opportunity to learn and be successful in their interests. The direction of education and growth resulted from the districts inclusive process of discussion with the community. Core beliefs of the community resulted in a fundamental understanding that each decision was based on CH-UH students. The core beliefs include the following. Knowledge enhances CH-UH lives, collaboration as a culture, partnership in education between student, staff, district, family and community and opportunity for ALL. The result was a list of desires and recommendations for the new Heights High.

HEIGHTS HIGH SHOULD:

- celebrate community history
- honor the environment
- appreciate diversity
- create a building that teaches
- provide a facility the community can enjoy
- accommodate future generations
- be stewards of a public process
- spend money wisely

This process, a rethinking, included all aspects of what Heights High currently is and what the New Heights High can accomplish. The rethinking also included the physical structure of what the building can become.

The following are community thoughts on the buildings parti / layout.

- restoration of the historic courtyard
- defined secured building entrances
- clarity of circulation
- natural light throughout the new facility
- adjacencies between cafeteria and media Center
- community access to conference rooms +assembly spaces
- Tiger Nation Safety

This is the basis for the Program of Requirements as well as the design of the new facility. **Memory** of the Courtyard, **Visibility** of Community and **Inclusivity** for all.

In 2004, Cleveland Heights High School became a pilot school of the Bill and Melinda Gates Foundation Small School Movement. Heights High was divided into five small schools based on differing areas of focus. The program ended in 2015. This allowed the school to experience collaboration in learning, as well as a building layout based on the educational direction of the district. This knowledge base aided in the direction of classroom layouts and adjacencies. While the program did not continue, understanding relationships and adjacencies of disciplines were critical in the development of the new comprehensive school. Specifically, the major benefit to remain was each student having a supportive relationship and accountability to a teacher/staff member. The District refers to smaller groups within the school as their Professional Learning Communities.

SUPPORT CURRICULUM

Clarity of the building provides an opportunity for the building to evolve based on curriculum and opportunities CH-UH provides for each student. The Heights High environment includes a number of specialty programs in addition to core academic communities or pods. These include world languages, expansive fire arts, and music/performing arts. Health, physical education and athletics are also a significant part of the high school's committment to a broad spectrum of opportunities for student involvement. Th building also hosts a portion of the District's career programs.

The building allows for the school classrooms to be scheduled based on a variety of educational directions. The building includes five educational pods. One being

dedicated to special needs. This includes MD classrooms, living suites and other associated functions. This location is on the Cedar Level. The remaining academic communities are located on floors two and three. The academic communities scheduling can be based on grade level, similar discipline or multi interdisciplinary. Included in each academic community are teaching workrooms, school administration and science.

The physical layout and design for special needs and each academic community are stacked and virtually identical in plan. Each include classrooms and resource labs. Clarity of circulation is the backbone for each community. The main east/west corridor is the link. Locker commons are central and located at the iconic bell tower. The plan also allows for a flexibility of scheduling based on the educational direction of the district without modifications to the building.

VARIETY OF LEARNING AND TEACHING STYLES

The ideals of visibility collaboration and flexibility provides spaces for various styles or direction in teaching. New Heights includes unscheduled spaces for extended learning or co-teaching. Resource classrooms are provided for smaller class size and individual learning. The building itself is a teaching tools. Students can view into mechanical rooms. Bioswales on the site allow for sustainable approach and is visible. The Historic Entrance at the Bell tower is an open space for student interaction with other students, teachers or community. The approach was to provide spaces for all to learn.

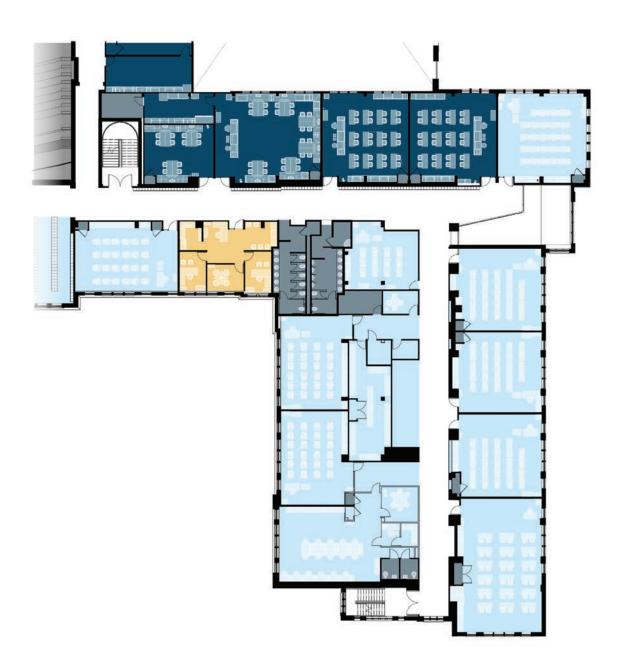
The core classrooms are organized into communities that support teaching by grade level academics or by subject. Science rooms are located so that they can function either as part of a grade level or as a science cluster. Other core classrooms include spaces such as labs, lecture and common areas. All core spaces include decentralized teacher support spaces, storage, display and locker areas.

With the approach of collaboration, new Heights is respectful to the 1926 fabric. The additions wrap the existing building framing a portal to the past while provided adequate space, technology and adaptability for District flexibility in the future, should curriculum delivery be modified.

ADAPTABILITY AND FLEXIBILITY

Within a school adaptability can play a vital role in the overall approach to a building. The planning for Heights

ACADEMIC COMMUNITY SPACE / LEVEL 2









High included the premise that modifications would occur at sometime in its history. Modifications can be based on a teaching dynamic, additional class typology or a simple change in enrollment. The academic communities as designed, are set up for change. Modifications to planning can occur. With the inclusion of Career Technical Education, the building includes alternative spaces for a variety of class types.

As with most new school buildings, the renovated Heights High School has an efficient hybrid geothermal HVAC system and LED lighting. This provide comfortable climate for learning. One of the major problems with the

old building was that it had numerous floor level changes, making it difficult for disabled individuals to navigate. It also was a "maze" of narrow passageways that made it difficult to move through the building. The building now has reduced the number of floor level changes to simply align with the original building floor levels. Additionally, the circulation pattern is clean, allowing both students and community to easily know where they are going as they navigate through the building. Most places with vertical circulation are also daylit, giving a glimpse of the outside, allowing people to better realized weather and time of day. All major classrooms, labs, athletic facilities are daylit, helping the school's inhabitants to make a connection to

the outside, as well as providing a reduction in artificial lighting use, i.e. energy.

By providing a variety of classrooms and study spaces adjacent to each other, teachers can co-teach in a larger setting, students can use smaller spaces for group activity or study, and also use casual areas for interaction. This aspect could be beneficial should there be a bubble in the school population for any grade level.

It was also important that furnishings being able to mobilize in order to accommodate a variety of configurations from individual desks to group activities.





original auditorium restored



original auditorium restoration



renovated fly space



students rehearse for their production of Shrek, The Musical

05. PHYSICAL ENVIRONMENT

QUANTITATIVE PARAMETERS SUPPORT GUIDING PRINCIPLES

The design of a comprehensive school is not about square footage or room quantity. It is about relationships, adjacencies, and collaboration between differing user groups. The physical attributes based on quantitative parameters aid in the overall parti of the new facility. The new Heights High, based on adjacencies and collaboration, provides opportunities for teaching in a traditional lecture setting, as well as student centered learning. It does not limit those who teach and those who learn. Learning is not exclusive to students, but instead an all-inclusive approach by the District. The educational vision of Cleveland Heights-University Heights City School District is about teaching and learning by all.

QUANTIATIVE PARAMETERS THAT SUPPORT GUIDING PRINCIPLES ARE AS FOLLOWS:

student capacity: 1,680 students average class size: 22-24 students utilization rate: 75 percent

teaching stations: designed for 111 teaching stations

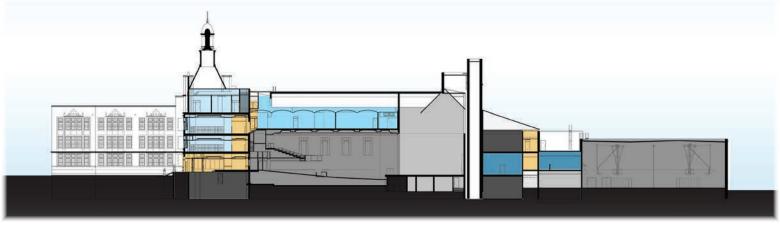
17 auxiliary teaching stations (computer/project labs for extended learning)

PROGRAM OF SPACES academic core: 36 classrooms

science core: 4
science labs: 12
world languages: 8
special education: 8
project lab (ELA): 4
visual arts: 4
music: 5
theater: 1
library/media: 1
physical education*: 12

^{*}Physical Education includes a competition gym, auxiliary gym, natatorium, fitness room, weight room, and associated offices and support spaces.

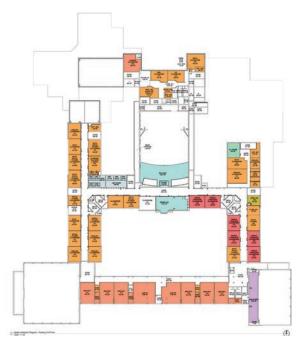




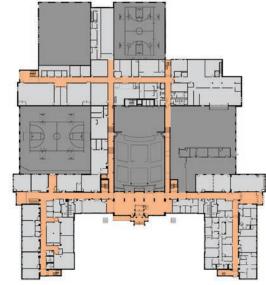
FLOOR PLAN TRANSFORMATION



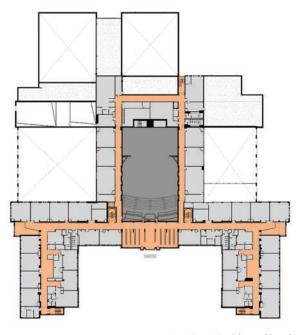
Existing Floor Plan | Cedar Level



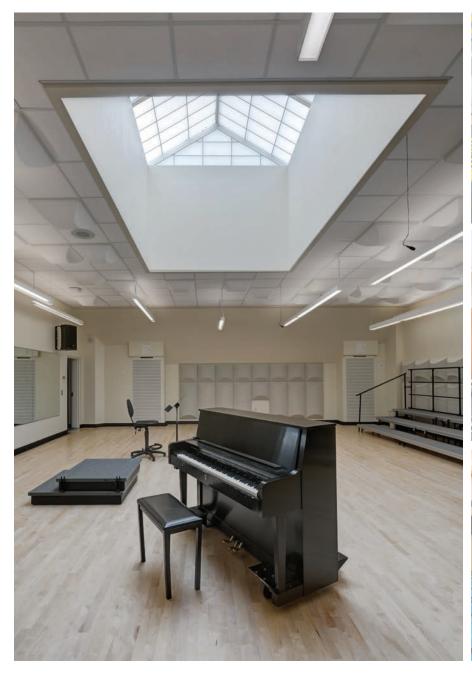
Existing Floor Plan | Second Level



New Floor Plan | Cedar Level



New Floor Plan | Second Level









COMMUNITY-BASED DESIGN

Memory became a key component of the new Heights High design model. Prominent presence of the Historic Entrance and Bell Tower from Cedar Road was a key moment in the overall design and construction of the New Heights High. Visibility of the Building and Students was no longer internal. Seeing has become knowing. The removal of solidity provided opportunity for communal participation. While it was imperative for the community to see the knowledge and activities of education, this also allowed the students to see their community, support and friends and family.

The physical connectivity to community includes elements that allow memory to be maintained. Original 1926 exterior stair sandstone egress elements were salvaged. The two-story element became the student and visitor entrance/security counter surround. This element is also in view from the upper academic corridors. Various locations of site and building include components from the original building and site.

Assembly spaces for community use include the renovated 1926 Auditorium, a "mini" Auditorium, Commons (cafeteria), Media Center, Historic Entrance ELA, and Main Competition Gym. All community-accessible areas are located off the main east/west corridor.¬ The Historic Entrance/Bell Tower is central to this circulation, as well.

Heights High demands your attention as an integral part of the overall community. Tiger Nation includes daily use of the natatorium and fitness facilities. Community meeting rooms are located adjacent to the main secured entrance. Community visibility is not from afar.

PHYSICAL ATTRIBUTES

Motivation

The educational vision of Cleveland Heights-University Heights City School District prepares all students for success. New Heights High is a comprehensive school. Education is not limited to reading, writing and math. The direction of education within the District propels itself into the future of learning. While methods have evolved, the goal and vision remain constant.

The parti for the building is based on the east/west corridor. This corridor has both physical and symbolic memory. Quarry tile and the views to the entrance and community represent physical memory. The symbolic is maintaining the historic corridor, locker commons under the clock tower, and the entrance of programmed spaces for both the Tigers and community-at-large. To the north of the corridor, are the Performance Arts, Media Center and Commons (Cafeteria). The Physical Education spaces are located on the lowest level with direct access to practice and competition fields. Career Technical Education is not in a specific area but integrated throughout the overall

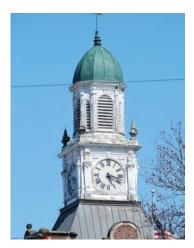
plan of the building.

The idea behind the academic pods is to allow for the school to modify the approach of education based on relationships and adjacencies. The facility includes four pods of academic core, language, and science. Discipline placement can be by grade, similar disciplines, or multiple disciplines. Central, at the clock tower, to the academic pods are the locker commons and administration. Included in each pod are teacher work rooms and project labs for extended learning.

The building's architecture relates to the site. Historical restoration of the Cedar level conceptually continues in the academic area, wrapping on the east and west sides. The new entries also carry on the historic ideals of presence. Color and scale of the historic bell tower entrance become a point of reference. Architecturally, the building's aesthetic modifies utilizing color and scale for the larger assembly spaces, including the cafeteria, physical education areas, and natatorium. Each maintain views of the site and community.

Visibility and inclusivity again become the focus on the students, teachers, and administrators in the academic pods. Collaboration occurs across disciplines, interests, and grade level. Students and teachers are seen and heard. Excellence is known and expected.

SYMBOLIC HISTORICAL RESTORATION





left: original clock tower restored as it maintains as the focal point to school circulation

right: repurposing of original exterior stonework in the new student (east) entrance, part of the addition.









student (east) entrance

06. RESULTS OF THE PROCESS + PROJECT

Since the building has reopened, the student population exceeds the anticipated student population. The utilization factor and class size also aid in the inclusion of additional students. In addition CH-UH class size is typically around 20-22 students, and now has the potential to accommodate the increase. According to the 2019 District Profile, an increase to 85 percent of students plan to pursue post-secondary education and will earn \$12.1 million in scholarships. Additionally, Heights High School made the Annual AP District Honor Roll, being one of 250 in the United States and Canada, as well as one of nine in Ohio. At least 343 students took one AP course in the 2018-2019 school year.

Heights High and CH-UH was an instrumental voice for students. The discussion was not about the I but about all. It was focused on education for Tiger Nation today but also an adaptable building for tomorrow.

New Heights High received the 2017 Best Public Building Rehabilitation Award by Heritage Ohio, in addition to the 2019 Community Impact Award from Cleveland Restoration Society & AIA Cleveland.

"Renovating Heights High . . .
was an important step in
providing an environment
that encourages learning and
striving for excellence."

- Cheryl Stevens, Cleveland Heights Mayor







