acconnell Award

TMARK

Eastmark High School



Exective Summany

Overall Description

During a time when educational pedagogies are in flux, Eastmark High School seeks to bridge traditional and progressive curriculum by providing academy-based education and flexible learning spaces that can transition with the school as it changes and adapts over time.

The school is designed to support and foster collaboration amongst four Academies: MASH (Medical and Social Health), FAME (Fine Arts and Media Entertainment), BLIS (Business, Leadership, International Studies), and STEM (Science, Technology Engineering and Math). These academies allow students to explore various areas of interest before college within the comfort and the support that high school provides; preparing them for equired entry assessments to college and an the decision of what career path they would like to follow.

Acting as the heart of the school, a large commons area provides flexible learning space that serves as a link between the gymnasium and classroom building, while celebrating the view of the Superstition Mountains through the use of an open floor plan at the indoor dining, main concourse, learning stair and career center.

The classroom building is organized programmatically with four major blocks of classrooms, surrounding a central maker space for each academy located off the main learning corridor. Provided between classrooms are breakout spaces That accommodate between 4-6 students and allow them to work and study collaboratively.

A Comprehensive High School that offers Music, Sports, and the Arts.



Process

The purpose of a good planning process is to develop the comprehensive vision required to integrate user goals, facilities, personnel, and community goals into a long-range plan that will guide both the design team and the district in creating a dynamic and flexible facility.

The following are five key concepts developed by the QCSD planning committee with regard to all schools. The concepts encompass learning, learning atmosphere, environment, and culture and should guide all decision-making during the design of the school.

PROJECT SITE 60 ACRES





Community Partnerships Hands - on Learning Athletics at all Levels



Career and Technical Education Well - Rounded Students



A Comprehensive High School that offers Music, Sports, and the Arts.

ADMINISTRATION







Scope of Work and Budget

Phase-1 of the school is ~154,000 sf with a capacity of approximately 1,350 students. The site is master planned for future phases to increase capacity to ~2,700-2,800 students. Future spaces added will include auxiliary gym, additional learning spaces, full performing and arts spaces, and an auditorium.

Size:

154,000 sf

Construction Cost

\$39,000,000

Cost Per Sqft \$253.00

Number of Students: 1,350 Students

Admin:

• Front entry and administration offices

Cafeteria

- Kitchen and server
- Auditorium/learning stairs
- Study mezzanine
- Media center
- Career center

Classroom:

- 4 Academies: 1 maker space each
- Labs with foldable partitions
- Multiple types of breakout spaces including seating in major hallways, study rooms, and seating in main entry lobbies
- Counselors offices along main hallway to provide supervision and easy student access to their counselors
- Various classroom types and furniture arrangements 2D art, 3D art, computers

Gym:

- Entry with ticketing and concessions for student games
- Main court and practice court
- Weight room and training room
- Band room
- Locker rooms

- 1 Next Generation Classrooms designed to be specialized to each curriculum.
- 2 Comprehensive Athletic and arts programs with a full gym and fields.
- Future phases planned to include additional g/m, classrooms and performing arts spaces.
- 4 Centralized Media Center with learning stair and smaller auditorium lecture hall
- **(5)** Collaboration spaces and hallway learning spaces are scattered throughout the classroom wings.
- 6 Centralized administration is made accessible to the entire school.
- Classrooms are designed and programmed for teachers to move from class to class and they can be joined together with operable partitions.

Future

Junior High

Building



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Project Schedule

Fast-tracked: Design to Construction



The overall schedule was fast-tracked from design to construction

Designers worked hand in hand with contractors to expedite drawings and construction, often times, collaborating in the field through VR and AR technologies. The design and schedule was thought out to communicate design decisions at every step with multiple presentations to the district board, community, students and staff.

Fast Track Schedule:

 Design:
 05-2017 to 01-2018

 Construction:
 01-2018 to 07-2019

School and Community Engagement

The Community:

The Community as a whole in Queen Creek is one of the fastest growing communities in the State and is situated within the outskirts of Phoenix Chandler Mesa metro area. With the growth, larger businesses and tech companies like Intel are moving in, creating tech and manufacturing careers, as well as healthcare systems like Banner and Dignity Health are expanding to serve the east valley. The community has roots within tech as the site exists on the historical General Motors Testing Ground where generations of cars were evaluated and innovations were made.

The design of the second high school for a District is one of the most challenging opportunities a District will undertake in educational facility design. Equity, lessons learned, new delivery methods and paradigms are just a few of the contributors. Queen Creek Unified School District embarked on the excitingopportunity to develope Eastmark High School for its community. This high school is a direct response to the hyper growth of the east valley, and is the fastest growing District in the state of Arizona; most likely one of the fastest in the nation.

While this school did not have a direct community to pull resources from, Queen Creek Unified and designers reached out to form a committee of business leaders, potential students and parents, and education experts to inform the design throughout the process. This group came together to initially create the driving goals of the project and collaborate on the project until its completion.

The design community knew that they were ultimately setting the tone and to create a landmark informing how the surrounding community would develop as well as design a facility that would be ready to handle any change that community would transform into.



Students can choose to explore potential directions in their careers or focus.



Creating a Shared Vision

The purpose of a good planning process is to develop the comprehensive vision required to integrate user goals, facilities, personnel, and community goals into a long-range plan that will guide both the design team and the district in creating a dynamic and flexible facility. The following summarizes the process and outcomes of the Queen Creek High School #2 (QCHS #2) planning process:

The Ed Spec:

The Educational Specifications Committee was comprised of approximately 60 committee members including staff, students, teachers, community members, board of education members and design professionals. The Committee conducted four exercises in the work sessions1:

Charrette

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Tours

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Charrettes

Manipulation of functional block with designers and committee members creating shared solutions to the built environment.

Input

Large and Small group facilitated interviews that provide detailed wants and needs from design.

Inform

Presentations to committee members, community members, and staff informing on results of activities as well as updated website, and information resources.

Survey

Visual survey acting as data collection sites and vision boards that create collaboration and build community.

Tours

Tours of peer schools as well as virtual tours to give a sense of design decisions and experience as much as possible



Input

Design started off at the site level:

Architects enlisted approximately30 design committee members into three groups with the district with architects on each one of those teams. Each group engaged together to create six site concepts that sought to meet the design goals outlined by the committee. This was based on 6 schemes developed between designers and School District charrette. Each category is scored from 1 (less successful) to 6 (best); then multiplied by the Importance Factor (5: most important). The studio went through and extracted all the positives from each one of them to evolve a ultimate design solution.





Layout Analysis

Based on 6 schemes developed between US and the School District charrette. Each category is scored from 1 (less successful) to 6 (best); then multiplied by the Importance Factor (5: most important). Examples of each scheme appear on pages 10-16.

		Sch	Scheme 1		Scheme 2		Scheme 3		Scheme 4		Scheme 5		Scheme 6	
Curb Appeal	5×	5	25	1	5	3	15	2	10	6	30	2	10	
Traffic & Parking	5×	3	15	1	5	2	10	5	25	5	25	2	110	
Access to Joint Use	1x	2	2	1	1	0	0	5	5	5	5	5	5	
Response To Neigh- borhood	2x	5	10	1	2	3	6	5	10	3	6	3	6	
Integration of Site Views	2x	3	6	3	6	2	4	5	10	z	4	4	8	
Outdoor Spaces	З×	4	12	1	3	2	6	4	12	3	9	4	12	
Energy Efficiency	4x	5	20	1	4	4	16	3	12	4	16	4	16	
Fields Configuration	4x	4	16	1	4	2	8	3	12	4	16	4	16	
Program Efficiency	5×	2	10	1	5	2	10	5	25	2	10	3	15	
			116		35		57		121		121		98	

Categories Description

Curb Appeal Building shape and exposure to the public.

Traffic & Parking

Parking location and access; Distribution of students, staff, and visitors' parking; On campus vehicle flow (school bus, students' drop off, deliveries, service)

Access To Joint Use Integration of partnerships with City of Mesa and the community (Aquatic Center and Library)

Response To Neighborhood Campus layout sensitivity the surroundings (high den commercial vs residential)

Integration Of Site Views Campus layout that promot the experiencing of site vie (Superstition Mountains towards the Northeast)

Outdoor Spaces

Building layout with potent use of outdoor spaces for the occupants and visitors use: Connection between programmatic areas and outdoor spaces.

Site Layout Options

d to nsity	Energy Efficiency Building orientation for maximum energy savings.
tes ews	Fields Configuration Location of fields, orientation, and proximity between each other and to the Athletic facilities; Ease access for students and visitors.
tial	Program Efficiency Distribution of school spaces; Opportunities for program overlap for space efficiency; Location of main building functions for the use of students and visitors.



lembers of the community staff and students and usiness partnerships and their impact on design

Community partnerships opportunities, hands-on learning, athletics at all levels, CTE and integration will serve to produce well rounded students.

Career and technical opportunities that are relevant to the context of the new high school. Community partnerships that will enhance curriculum delivery and its relevance.

Community partnerships that strengthen the fabric of the Queen Creek community with the potential of a future Aquatic Center and or Public library both operated by the City of Mesa. Most important to the design being the delivery of education:

Providing hands on learning at all levels, project-based learning has demonstrated it effectiveness in developing team orientated problem solvers through a collaborative learning environment. In the end, it is all about setting our young citizens up for career success, this high school will deliver on that expectation.

This design presents another opportunity, to increase the capture rate for the District.

Currently the capture rate hovers slightly above 50% with students headed to both Charters and out of District public high schools. This design will offer a number of components that will be attractive to the community. A comprehensive high school offering a full complement of programs, sports, the arts, career and technical all being part of the ultimate build out.

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Community Partnerships

- Hands On (apprenticeships) with local businesses and entiti
- Creates better working partnerships with the City of Mesa
- Creates better working partnerships with the Chamber of Commerce

Results of Design Committee

Goals/Guiding Principles

The committee came up with five guiding principles and goals to make Eastmark the great school it is today. With these goals, the committee needed to make sure eastmark would demonstrate to be a comprehensive high school that offered sports, music and the arts:

And as a result, the site was selected with growth in mind and attracting kids back into the district that would otherwise be lost to a growing population of charter schools.

Vision and Goals

The following are five key concepts developed by the QCUSD planning committee with regard to all schools.

The concepts encompass learning, learning atmosphere, environment, and culture and should guide all decision-making during the design of the school.

- Hands-on Learning
- Athletics at all Levels
- Partners with the City of Mesa to enhance community athletics
- Pools
- Jr High Athletics
- Career and Technical Education
- Provide More Variety
- Integrate Coding into Lower Grades
- Well-Rounded Students
- Fine Arts Opportunities
- Civic Responsibility
- Service Hours
- Holistic Education
- Communication Skills

Academies

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The overall curriculum is focused on providing career pathways that students can explore while promoting collaboration, and providing project-based learning that inspires students to reach new horizons. This mission is supported through an academies-based model that is reflective in the overall design of classrooms buildings and the school. There are four academies that students can choose to and be apart of an explore. These are: MASH (Medical and Social Health), FAME (Fine Arts and Media Entertainment), BLIS (Business, Leadership, International Studies), and STEM (Science, Technology Engineering and Math).

Academies have a light focus today so that students can explore potential choices in their career or focus on those things that are project-based learning that really inspires them



Students who choose the Business, Leadership, and International Studies (BLIS) career path are dynamic, business-minded, globally-focused, and committed to discovering new perspectives and cultivating critical thinking skills. If you would like to pursue a career as an executive or consultant in an international organization, an entrepreneur, or a developer of a non-government organization, this is the career path for you.

FAME

The Fine Arts and Media Entertainment (FAME) career path prepares students for a career in the field of performing, visual and technical arts. Whether students are performing on the stage with theatre and music, developing visual masterpieces in drawing and ceramics, or mastering technical knowledge necessary for still photo and video production, students develop skills that can transfer to almost any other career in the 21st century. If all that sounds exciting, stick with us, and we'll help you toward a career you'll love.



The Medical and Social Health (MASH) career path helps students on their way into the healthcare field. If becoming a medical doctor, a physical therapist, a nurse, a medical technician, or myriad other health-related professional occupations sounds interesting to you, joining the MASH career path is a great way to a start.



Many Science, Technology, Engineering, and Mathematics (STEM) careers are currently in high demand. Students who choose this career path at Eastmark have the desire to work as software developers, engineers, computer support specialists, scientists, economists, statisticians, and more.

Overall High School

Collaborative Learning Environments

its critical for students to learn to work in teams, have a dialogue andsolve problems together This school is focused on providing spaces meant for collaboration and inspire collaboration amongst others. Any spare area is utilized for collaboration with furniture, writable surfaces, or gathering.

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Real World Experience Environments

Maker Spaces

The makerspaces act as an anchor to the classrooms. Designers took care to design the makerspaces to be very transparent and encourage cross pollination between varying academies. They are centrally located along the main pathway into each academy so students can visually see the various projects and happenings of each space, while being in the center of the classrooms so each class can take advantage of the makerspace. Each makerspace is uniquely specific to each academy. For instance, the engineering makerspace is built out with more power at various locations and flexibile for many projects. The MASH makerspace is a real world simulation of a hospital unit where students take advantage of a mock patient room and other healthcare settings.





Describe & illustrate how the environment is adaptable and flexible

The flexibility of the furnishing and interior walls within the classrooms and makerspaces allow for spaces to be adapted as necessary in this rapidly changing educational environment.

Operable partitions in certain classrooms allow for classroom sizes to transition on a day to day basis depending on the lesson plans. The makerspaces flanking the learning corridor in the classroom building also have operable partitions allowing them to open up to the main hallway, encouraging greater interaction among students. Finally, the flexibility comes in to play where some spaces were loosely programmed to allow them to adapt to various needs. Hallway and nook spaces within the buildings have flexible furniture to allow for impromptu collaboration between students.



Flexible Learning Environments

Furniture is designed to be movable and reconfigurable for a multitude of scales of school work. Single desks offer opportunities for individual learning, but can be pushed together modularly for students to work in small groups, or even large groups.

Study rooms adjacent to classrooms, providing a breakout space for small groups of students to leave the classroom to work. Windows from the classroom and hallway into the study rooms still allow for safety/teacher supervision. Study rooms are equipped with necessary items such as collaboration tables for groups to gather, tv's they can connect laptops to, to project what they're working on, and writable surfaces to use to further their dialogue.

Hallways are not looked at as simply circulation but are wide enough to also comfortably incorporate breakout seating along major corridors for students to work (main classroom corridors and lobbies, second floor student walkway above learning stair and in front of career center, second floor hallway above cafeteria, areas in learning commons.

There are a number of operable/folding partitions throughout the school. Makerspace rooms have folding glass partitions opening up to the main hallway in the classroom building allowing for the expansion of classes to activate the space. There is a folding partition between science labs to allow for two classes to become one large class as the curriculum sees fit/adapts. Career center consist of two classrooms divided by an operable partition allowing for it to become one larger space.



The Administration building that houses the front office, cafeteria, learning commons, media center, and career center acts as a hinge point for the school. It is in a central location for the campus

Lobby

Front lobby is main point of entry to the school. Not just limited to the classrooms, the lobby and entire school facility fully embraces 21st century concepts. The lobby is very transparent. It creates a welcoming and collegiate feel and sets the first impression for students, parents and visitors. The lobby is always balancing its needs for transparency and inclusion with security. We used 7 principles crime prevention through environmental design.

The 4 Ds: Deterrannce Detection delay and defen

The entire lobby is designed to provide deference against any threats. All transparency is hardened with film and all security features focuses on layers of security. At the site level, fencing and buildings create barriers for entry. The lobby and receptionist create a filter where visitors may be buzzed in when necessary. The transparency is hardened and receptionists can still see potential threats as they manifest. Overall, because of these layers and zones, the schools creates a defense for the students and staff throughout the campus.



Gymnasium

Eastmark features a full bevy of sports with football, basketball, softball, and baseball in its first phase. Eastmark even has a ticket booth, concession stand, trophy case, and a full gym which is an incredible space to welcome community and create a sense of being and rally behind a team in the Queen Creek valley

Future Athletics - District administration worked so athletics could evolve overtime. With a full gymnasium with lots of functionality, the Gym designed to add an additional court. The current Band Room can be turned into a weight room. When the band room will expand into the full performing arts venue when added in phase 2. We had to take into consideration the expansion capability and layered on the multiplicity of design ideas to offer a full comprehensive athletic experience.

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Commons

The heart of the school: The commons features both high and low seating for students and an efficient flow for food service. The space is large enough for students to gather with access to the outdoors, and space where they can go into the audtorium / learning stair.

The entire commons is available and designed to accommodate use by the community with functions, banquettes and functions at night. Together, with the auditorium / learning stair, it becomes centerpiece of the school.

The design takes into account this could be a much larger high school in years to come so all the spaces had to be designed to accommodate a larger capacity while also layering multiplicity of uses for each space. Food service was designed to have a collegiate feel to encourage participation. Points of sale are designed to be more of a food court design with efficient flow like an airport lobby or lounge. The kitchen is designed to accommodate add on space to expand the kitchen in the future when enrollment goes up.

The Auditorium is hyper flexible and can accommodate performing arts, orchestra, choir, or facilitate lectures between two classes. It can accomodate small pep assemblies for small groups. Additionally, in the evenings, this auditorium could transform itself into a great space for drama performances.





Learning Stair

There is a lot of utility to the space; both intrinsic and external. The design had to allow for transparency and inclusivity while also being able to accommodate privacy and control acoustics. This challenge was mitigated by creating a limited amount of enclosure while using acoustical decking and speakers.

Branding and school spirit are a big component to this space. They tie the school back to its history of being on the GM Proving Grounds. Graphics at the auditorium / learning stair is reflective of performing arts and gathering.

Branding was integral to the project. We developed this branding with district leadership and the community to create the mascot, logo and graphics to go along with each of the career pathways and academy spaces.

College and Career Center

This is a space for professional development center and a space for businesses to come in and describe what they do to create a pipeline of students who are truly ready for their career.

Student Union: place where students can have a space for reflection... It serves as the traditional library space where it has stacks on either side. Its a space for kids to be able to study, worth together an Collaborate. Fulfilling the schools mission statement of students developing collaborative skills.



Classroom Buildings

Due to tight budget with very progressive learning environment goals, we had to figure out a way to create a lot of utility out of these spaces.

Makers spaces are the anchor to each academy surrounded by traditional learning stations and prep areas between makerspaces and labs. Makerspaces are showpiece of learning areas of the school. Makerspaces will then flank hallways of the classroom building in the future, when classroom wings, academies added. The main hallways will also be extended. The maker spaces are tailored to each academy. Learning stations were all designed to be modular.







Project Based Learning is the Anchor to Learning.



Fitting within the larger context of the community

Queen Creek is a suburban community located in central Arizona. The town has many amenities for growing families and is a short commute from the Phoenix metropolitan area. Queen Creek is proud of that small town feel and family atmosphere It is often illustraited as a place where you know your neighbors by name.

Queen Creek School District consists of four kindergarten through 5th grade schools; one kindergarten through 7th grade school; two 6th grade through 8th grade middle schools; and one 9th through 12th grade high school. The enrollment is approximately 6,000+ students. While offering a quality educational program with top-notch educators and support staff, students continue to exceed at state and national score averages on their achievement tests. Eastmark is dedicated to providing a challenging learning experience for its students in a caring, supportive environment, while building that small town sense of community.





Eastmark is no exception to quality and community building. Community use at all QCUSD Schools is utilized for a wide variety of purposes; including parent meetings, student presentations and events, after-school clubs, athletic and performing arts, and summer activities. Eastmark high school positions itself not as a school within the community but as an extension to the philosophy of Queen Creek.

Dining Areas all provide space for student presentations and parent meetings. Athletic facilities will be utilized for physical education and athletic activities. Community groups are able to utilize these areas for after-school and summer activities. The media center areas and conference areas provide additional meeting spaces for parents, community and student clubs. The Performing Arts space is widely used by the community for lectures, musical performances, dances, and a variety of other types of meetings.

21st Century Learning Spaces

The spaces, curriculum, and layout of Easmark high school are completely unique to the school. They all truely embody 21st century thinking and the next generation of learning spaces.

During the design process, were able to see the challenges emerge through collaborative charrettes, 3D Modeling, and Virtual Reality settings. Issues like traffic congestion, drop off and pick up and visibility concerns were quickly remedied as district users could quickly test and get a feel for the spaces.

The Design team and District did a great job of involving kids into the process so they develop a deeper sense of learning. Augmented reality experiencess were given to kids and community members to build consensus and get the community excited about the building. The students and community participated in design charrettes at every step and kids were given tours on the construction site to learn about trades and potential careers.

Makerspaces and classrooms are designed to promote hands-on learning and collaboration. Each maker space is located along a major corridor to encourage cross pollination between academies. Glass enables student to view into each subject matter and see the various projects going on within each makerspace. The makerspaces open up and students are encouraged to break out into the hallways with specific gathering spaces located throughout. Every of space is devoted to fostering collaboration and encourage project-based learning across all of Eastmark High School.





