HISD EDUCATIONAL SPECIFICATIONS FINAL

ENERGY INSTITUTE HIGH SCHOOL

June 12, 2014

2012 HISD BOND
BUILDING EXCELLENCE

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Educational Specification Approval

The document which follows represents the Educational Specifications as developed in consultation with and as approved (signature page immediately follows) by the Project Advisory Team. This document reflected the original concept for the design for the Energy Institute High School which included shared co-hort teaching spaces and smaller "huddle" spaces. The original specifications included spaces with extensive flexibility to address multiple approaches to the delivery of education with evolving pedagogies.

The design has since evolved into a more traditional layout since this document was originally issued on July 23, 2014. It includes more traditional spaces, including individualized instructional areas for one class to participate in Science, Engineering and/or other core academic classes rather than the larger spaces initially requested. The square footages shown from the original concept were used as a basis for the revised concept and the capacity calculations remain unchanged.

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3200 Center Street, Houston TX 77007-5909

Facilities Planning

PROJECT ADVISORY TEAM SPACE REQUIREMENTS APPROVAL
Energy Institute High School
June 12, 2014

My signature below indicates my approval of the Space Requirements dated June 12, 2014.

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GUIDING PRINCIPLES

Guiding Principles articulate a school's vision, values, hopes and ideals to the design team. Guiding Principles will be used to "test" the decisions that are made throughout the design process, since every element of the building must be created to support the school's vision and values.

Energy Institute High School's Guiding Principles

1. **TWENTY-FIRST CENTURY SKILLS/PROJECT BASED LEARNING CAMPUS:** Students at Energy develop 21st century skills through our campus wide implementation of project based learning. Our space should:
    a. Provide open, flexible, collaborative, and creative space for students to work in project teams.
    b. Allow for students to have individual focus work areas when needed, and space for students to collaborate with multi-media.
    c. Provide presentation spaces for practice as well as professional presentations in front of panels of experts.

2. **TECHNOLOGY:** Continuously updated technology is a priority at Energy. Our space should include:
    a. A school structure that lends itself to current and future technological updated.
    b. Technology to be seamlessly integrated into our workspaces.

3. **PATHWAYS:** Energy has three pathways for students: Offshore Technology, Geoscience, and Alternative Energy. Our space should include:
    a. Areas for students who select each of these three pathways to form a learning community.
    b. A way to use space within each area to highlight information regarding the pathways.
    c. Lab space that exceeds the needs of these specialized curriculums.
    d. Eco-friendly concepts that are an appropriate examples of energy usage.

4. **ENERGY COMMUNITY:** Energy Institute High School is part of a larger energy industry. Houston is the energy capital of the world. Our facility should include:
    a. Space that can serve as a nexus where industry and the local community can come together to develop partnerships and provide educational experiences.
    b. A learning community within our building where the architecture and structure inspires and doesn't limit thinking and learning. All space and structures should become part of the learning from wall to window and ceiling to floor.

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Executive Summary

Overview:

HISD Energy Institute High School is the first school in the nation with a school wide theme of Energy. Energy Institute High School's (EIHS) vision for learning goes far beyond that of a traditional high school. Students at EIHS will participate in authentic project-based learning that enables them to take ownership of their education. Learners will develop essential "soft skills" that will prepare them for the landscape of alternative energy, geoscience, and off shore technology careers.

This Educational Specification evolved through a collaborative process with the school and its Project Advisory Team (PAT). It was developed by exploring program requirements of high schools with consideration for extensive flexibility to address multiple approaches to the delivery of education with evolving pedagogies. Since new buildings are expected to serve multiple generations of learners, spaces must be planned to respond to changing program delivery strategies over time without "bricks and mortar" changes to the building. This educational specification has been prepared to provide spaces in a variety of sizes, interior zoning to enhance after-hours use, and a rich infrastructure to support current and emerging approaches to educational program delivery.

Educational Program Delivery:

Learning at EIHS will transcend the typical school day. Schedules will be flexible around the needs of each learner. Students, teachers, and administrators will communicate at point of need through accessible digital platforms. EIHS will enable learners to connect with teachers, collaborative tools, and online tutorials anytime/any place. Students will have access to workshops to support projects facilitated by a variety of teachers, community experts in the energy field, and peers. Projects will be authentic and clearly connected to the energy industry. Learners will present their work to expert panels and will respond to requests for proposal when appropriate.

Learning environments both on and off campus will be flexible. Students will have unfettered access to a variety of resource rich, customizable environments that support the needs of the user. Learning environments supported by specialized technology and furnishings will be created to support specific learner needs. The online environment will enable access to a variety of learning pathways and support multiple modalities.

EIHS will develop unique learners. Students will graduate with the ability apply the necessary skills to enter the competitive energy focused workplace. Through the personalization and a commitment to authentic project-based learning, EIHS students will be the leaders in their chosen post-secondary pathways.

Technology

Technology is an essential tool for learning in today's schools. Computers are used for instruction in the all subjects for word processing, data analysis, and presentation development. Computers and projection devices are found in classrooms as well as labs. HISD has embarked upon a program that will lead to each student having their own laptop or tablet. All spaces in the facility must be designed to support this 1:1 initiative.
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Flexibility

21st century schools should be organized to have the flexibility to embrace multiple program delivery systems. This may include: self-contained learning centers, team teaching, thematic instruction and/or departmental organization. The buildings must be flexible enough that from year to year the users of the building have the ability to alter the instructional methodology. Additionally, the learning environments must also be flexible enough that from period to period they can appeal to each learner.

Flexibility is addressed in this educational program through providing:

- Spaces in a variety of sizes that can be configured and re-configured in multiple layouts.
- Learning Centers with similar configurations and with as little fixed cabinetry as possible to allow for many configurations.
- Spaces such as the Learning Commons, Dining Commons, and the Multipurpose Activity Learning Center/Fitness Center that will be located to allow for after-hours access without disturbing the entire building.
- Finishes on the floors, walls, and, ceilings, that are easy to clean and allow for maximum personalization of the space.
- Furnishings that are flexible, durable, and easy to move, so the spaces can respond to a dynamic educational program.

Organization

At the high school level, spaces are increasingly organized in houses, schools-within-schools or small learning communities. Essentially these concepts are similar. They all include learning centers and teacher support areas located together with Career and Technical Education (CTE) and administration, creating personalized, smaller Neighborhoods within the larger facility.

Learning Centers

The focus for all disciplines with this Ed Spec is to create flexible and dynamic learning centers that support 21st century learning for whole group, small group, and individuals. Addressing the needs of all learners requires that learning be experiential and hands-on.

Each learning space should have as much moveable (rather than fixed) furniture and equipment as possible. Tables, chairs, moveable storage, and wireless technology, will support flexible configuration during the current school day and year and many different configurations as educational program delivery evolves over time.

Science Learning Centers/Wet Labs will have perimeter counters and sinks with tables that can be configured for individual activities, small group clusters, lab stations or moved back to the edges of the room for experimentation. Each Science Learning Center/Wet Lab will contain a sink for every 4 students and a demonstration table for teacher demonstration of experiments.

A variety of spaces have been included to support non-core academic learning. Learning Centers for visual and performing arts, world language, CTE, and physical education will be configured to provide maximum flexibility through the use of moveable furnishing, fixtures, and equipment with acoustic control, plumbing, etc. to support the intended primary user.

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Program Area Overview

Administration/Guidance

Immediately upon entry, visitors will be greeted in the administration "welcome area." Offices may include the Principal, support staff, guidance and health services. These spaces should be located in a centralized area at the main entrance of the school to provide a controlled access point during the school day.

The front entry lobby should be welcoming and inviting for students, staff, and visitors. However, to address security concerns, a security vestibule will be provided. In order to gain access to the facility, a visitor will pass through the vestibule directly into the main administrative reception area before being allowed into the school.

Neighborhoods

The basic organizational unit for this school will be the neighborhood, consisting of general-purpose learning centers, teachers' work center, administrative spaces, small group rooms, extended teaching area, and science learning centers/wet labs. The neighborhood concept accommodates a variety of instructional strategies and student-grouping approaches. This concept also provides a learning environment that is characterized by flexibility, a sense of community for the students and teachers working and a safe/well-supervised environment. Teachers will have the option and flexibility within a cluster to create and organize learning environments that work for students and their learning styles.

The neighborhoods can be organized based on individual grade levels, multi-grade groupings, or departmental groupings. The learning communities should be located near the Media Center and away from noisy spaces such as the Gymnasium and Cafeteria. Special attention should be given to accessibility of all educational and support spaces and an integrated learning program.

Learning Commons

The Learning Commons serves a dual role. Its traditional role is a library and a place to conduct research. Its new role is to serve as a technology and information base center where students collaborate on projects. In this new role, it houses a transparent voice/video/data network, which runs throughout the entire building. This area is changing from a "depository of books" to a "technology information center." It is not projected that the library functions will discontinue; rather digital technology will enhance voice, video, and data communications within the school, among district facilities, and with distance learning resources. To that end, a portion of the Learning Commons will be included in each Neighborhood as an Extended Learning Area for electronic research, project collaboration, etc.

Visual Arts

The Visual Arts Learning Center will be configured to support both 2-dimensional activities and 3-dimensional creations. Space will be provided both within the classroom and in a connecting storage room for access to materials and storage of student work-in-progress. Configuration will provide as much display space as possible to showcase

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student work within the room and in display cases visible from the corridor. The connecting kiln room will provide an area to store work waiting to be fired as well as safe control and ventilation for the kiln.

Physical Education
A variety of indoor and outdoor areas are required to support school physical education programs. Outdoor physical education teaching areas should be located near the indoor multipurpose activity learning center/fitness center. Physical education facilities should be designed and constructed with a focus on community use during non-school hours, since there is a high demand for both indoor and outdoor facilities. This will be accomplished by locating an entrance near the multipurpose activity learning center/fitness center with lockable doors to control access to the rest of the building.

Food Services
The Dining Commons is planned as a flexible room that can accommodate student dining, meetings, and other events. The serving area will be designed as a food court. Movement among the various activities, i.e. hand washing queuing for serving, and exiting, will be planned for ease of movement.

Building Support – Corridors and Common Spaces
Extensive display areas should be provided for two-dimensional and three-dimensional student work and awards. Finishes should be durable and easy to maintain. The scale of all spaces must be student friendly. Colors, artificial lighting, and natural day-lighting should be artfully managed to create an environment that communicates that school is a very special place. Common spaces should be designed for small student group project based learning. These spaces should have magnetic and/or writable surfaces.

Technology
The facility should contain the latest in technology and be wired and wireless for voice, video and data throughout the building. The program design is intended to bring information to each student, and computer technology will be available in each space. Each student has a laptop checked out to them yearly and access to other updated technology. It is intended therefore that access to technology will be seamless and pervasive throughout the building.

Accessibility
The entire facility must be universally accessible. This should be accomplished through judicious use of ramping and elevators where necessary, sufficient internal clearances for circulation, convenient bus/van loading and unloading, and nearby handicapped parking spaces. All elements of the Americans with Disabilities Act must be complied with, including way-finding and signage, appropriate use of textures, etc.

Aesthetics
Constructing the indoor and outdoor structures and spaces where students go to school today must meet many challenges and expectations. Interior and exterior aesthetics should reflect the high academic aspirations of the school. It should have community visibility and presence.

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Creating a community landmark will establish a recognizable identity that will instill pride in students and community and also express the value that the community has for its children. Areas within the school should be developed to have clear organization and internal identity.

The facility should be inviting to students, making them feel that the space is special, and therefore make it clear that each person is special. Aesthetics that affirm the value of the individual must be emphasized, with spaces for the admiration of the accomplishments of self and others. The school should support academic success, high self-esteem, social interaction, and physical safety. The facility layout should be especially easy to comprehend and reflect how spaces relate to one another. Easily supervised areas should be provided for positive socialization among students and with teachers.

Flexibility

Facilities should be constructed in a manner in which change and flexibility is the norm, not the exception. Building materials, systems, and furniture should be selected to support these concepts as well.

Indoor and Outdoor Learning Environments

By rethinking all spaces, better use of the facilities and site can occur. One way to accomplish this is to use windows and outside areas to make rooms "feel" larger as well as utilizing outdoor areas for teaching environments. All grade level learning centers must have windows to the exterior, and as much visibility as possible to the interior. Visibility from learning commons to circulation areas will provide the passive oversight by Administration and visitors to the school to see, understand, and improve how learning is taking place at EIHS.

Common and shared use areas should be considered to provide spaces for positive interaction and orientation within the school. All learning environments should be developed to foster a sense of belonging and pride. The use of the building system/design as an actual teaching model and example of technology and environmentally conscious design should be considered. Creativity and functionality should work hand in hand.

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CAPACITY MODEL & SPACE REQUIREMENTS

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Capacity Model

	# Teaching Stations	Students per Teaching Station	Building Capacity	% Utilization	Program Capacity
Learning Community	8	28	224	85%	190
Learning Center	8	28	224	85%	190
Science Wet Lab	8	28	224	85%	190
Special Education Learning Center	0	12	0	85%	0
CTE	8	28	224	85%	190
Visual Arts Wet Lab	1	28	28	85%	24
Instrumental Music Learning Center	0	28	0	85%	0
Vocal Music Learning Center	0	28	0	85%	0
Gymnasium	0	32	0	85%	0
Auxiliary Gymnasium	0	32	0	85%	0
Fitness/Multipurpose Activity Room	1	32	32	85%	27
Total	**34**		**956**		**813**

Space Summary

	Teaching Stations	Total
Learning Community	24	39,849
CTE	8	15,024
Visual Arts	1	1,530
Performing Arts	0	0
Physical Education/Athletics	1	3,450
Welcome Center/Administration Space Requirements		10,470
Food Service Space Requirements		8,319
Custodial/Maintenance Space Requirements		1,100
Total Net	**34**	**79,742**
Building Support	38%	30,302
Total Gross		**110,044**

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Space Requirements

Neighborhoods	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Learning Community	8	4	2,700	10,800
Huddle Spaces/Small Group Rooms		16	200	3,200
Covered Outdoor Classroom (Provide minimum of 850 square feet space. Square footage listed was reduced to 450 square feet to reflect reduced cost of non-conditioned, non-enclosed construction.)		4	425	1,700
Learning Center	8	8	850	6,800
Science Learning Center /Wet Lab	8	4	3,256	13,024
Wet Lab Storage		4	300	1,200
Distributed Learning Commons/Media Lounge - included in Learning Community				
Central Media Lounge		1	1,200	1,200
Learning Commons Storage		5	100	500
Office/Workroom		1	175	175
Storage		4	100	400
Computer Repair / Storage Room		1	850	850
Total	**24**			**39,849**

Specific to Program	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Engineering Lab A (Introduction to Engineering Design, 9th Grade Lab)	2	1	3,256	3,256
Engineering Lab B (construction type)	2	1	3,256	3,256
Engineering Lab C (science lab type)	2	1	3,256	3,256
Engineering Lab D (construction lab type w/underwater robot capability)	2	1	3,256	3,256
Engineering Lab Storage (include in lab as furniture)		0	200	0
Lecture/Presentation Hall (Seats 200)		1	1,800	1,800
Podium		1	200	200
Total	**8**			**15,024**

Visual Arts	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Visual Arts Wet Lab	1	1	1,200	1,200
Kiln Room		1	80	80
Storage Room		1	250	250
Total	**1**			**1,530**

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Physical Education/Athletics	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Multipurpose Activity Learning Center/Fitness Center	1	1	2,000	2,000
Boys'/Girls' PE Locker Room		2	200	400
Student Toilets/Showers		2	200	400
Adult Toilet/Shower/Locker		2	100	200
Office (shared)		1	150	150
PE Equipment Storage		1	300	300
Total	1			3,450

Administration/Guidance	Required Spaces			
	Teaching Station	Qty	SF	Net Area
Main Administration				
Reception, Administration		1	350	350
Office A (STEM, Sec, Testing Co-ord)		3	100	300
Test Storage		1	200	200
Office C (Principal)		1	250	250
Principal's Restroom		1	50	50
Conference Room, Main		1	250	250
Workroom/Break Room		1	300	300
Mail Room		1	100	100
Storage		1	125	125
Registrar/Attendance				
Office A (Registrar, Attendance, Itinerant)		4	125	500
Records/File Room		1	130	130
Distributed Administration				
Office B (AP)		4	125	500
AP Reception/Waiting (share between two APs)		2	125	250
Conference Room, Small		4	150	600
Storage		2	50	100
Office A (Security Office)		1	100	100
Health Clinic				
Health Clinic		1	300	300
Reception/Waiting		1	75	75
Office A		1	100	100
Restroom		1	65	65
Guidance/Student Services				
Reception, Guidance shared with AP reception		0	75	0
College Center		1	850	850
Office B (College, Magnet, Counselor, SPED)		4	125	500
Shared				
Teacher Work Center		4	1,000	4,000
Multi-use/Community Room		1	425	425
New Mother's Room		1	50	50
Total	0			10,470

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Food Service	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Kitchen Preparation Area		1	900	900
Serving Area		1	1,000	1,000
Dry Storage		1	225	225
Freezer		1	175	175
Cooler		1	150	150
Kitchen Manager's Office		1	100	100
Laundry/Custodial Area		1	75	75
Locker Room/Restroom		1	150	150
Student Dining Commons (seating for 1/3 of (capacity +200) at one time)		1	4,894	4,894
Stage		1	400	400
Control Room		1	100	100
Dining Commons Storage		1	150	150
Total	**0**			**8,319**

Custodial / Maintenance	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Receiving Entry		1	150	150
Office, Plant Engineer		1	75	75
Custodial/Maintenance Storage		1	200	200
Supply Storage		1	200	200
IT Support		1	100	100
Custodial Closet		3	100	300
Custodial Locker Room/Restroom		1	75	75
Total	**0**			**1,100**

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SITE

Site

Overview

Attractive, functional buildings placed on adequate grounds in an appropriately landscaped environment help to create in students an appreciation for schools and in adults an added civic interest and respect for the dignity of education. Site planning is based on a thorough analysis of the site, determination of human needs, determination of requirements for other uses, sustainability and provision for transportation, communications and utilities. Site planning is the first opportunity for incorporating the four principles of Crime Prevention through Environmental Design (CPTED):

- Natural Surveillance
- Natural Access Control
- Territorial Reinforcement
- Maintenance

In many communities, school facilities are frequently used for purposes other than those directly related to the learning activities of students; such as adult education, public assembly, recreation, election polling places, meetings that require food services, etc. There is a trend toward increasing this multi-use function of school facilities. Some schools are now being built as a part of a larger complex of community service facilities: recreation grounds and parks, health and social services centers, libraries and cultural centers.

On-site school traffic includes: buses, commercial vans, cars and bicycles transporting students, parents, staff and visitors to and from school, car and bus parking, service and delivery vehicles, and pedestrians entering, exiting and accessing site facilities. This traffic must be managed safely and efficiently so that it supports the school's mission and traffic management does not become a burden to the staff.

Outdoor recreational facilities will accommodate the physical education program, field exercises in academic programs such as science and art, unstructured play and social events such as picnics and carnivals. Group sizes will range from school wide events such as field days, to whole class grouping, small groups and individuals.
In planning new school construction and in site planning on existing campuses, space should be identified to site six temporary classroom units (T-Buildings) and accommodations made for their future utility hookups.

Design Considerations

- The outdoor playing fields shall accommodate the physical education program, and outdoor learning activities.
- As sites are identified, the opportunity for cooperative efforts such as buying adjacent land and master planning together with community groups should be explored.
- In developing a Campus Master Plan, consideration should be given to:
  - Future enhancements such as amphitheaters, picnic tables, nature trails, gardens for vegetables, wildflowers, and butterflies; wildlife habitats, sundials, etc.
  - Fire lane with access to all areas of the campus with special attention paid to allowing trucks to access the cafeteria, bus and parent drop off

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areas as these are the usual locations of fires. However, fire truck access to buildings must not be compromised during drop-off and pick-up times. Therefore, provide a 20' access way at critical points so the parents' vehicle queue will not interfere with emergency access to the building.

- Security of life and property when designing the exterior lighting system. Consider placement of utility stub outs for lights which may be installed by community user groups.
- Ways in which the community may use and upgrade the facilities. For schools these improvements may include stub outs for athletic field lighting (include baseball and softball fields). For schools/parks these improvements may include public restrooms/concession area/storage, spectator control access/storage, score boards & warm-up areas.

- Consider context and surrounding community circulation when planning site.
- Vehicular and pedestrian traffic should be separated.
- Site Master Plan should include covered walkways to bus and/or car loading/unloading areas.
- Coordinate traffic pattern so that students will not have to cross driveways or parking areas in route to outdoor play fields.
- Separate vehicular traffic as much as site and local governing bodies will allow.
- Allow for separate entrances/exits for bus traffic, car queuing and car parking. If separate roadway accesses are not possible separate traffic as soon as feasible on-site.
- The daily school schedule for arrival and dismissal, and occasional events, including large group assemblies and special events should be considered in the design of traffic patterns.
- Make all outdoor facilities ADA accessible.
- Allow for sufficient buffer space for safety when siting outdoor playing fields. Preservation of the natural environment and outdoor spaces for science and arts is desirable.
- Consider making provisions for shade and potential assembly areas.
- Design to allow for future upgrades, if possible.
- Consider safety and social zones of activity.
- Parking lots should be distant from foul ball territory.
- Screen noise producing areas from instructional areas.
- Campus Master Plan should indicate fire lane with access to all areas of the campus. This shall not be a paved road. It is critical that the school building not be encircled by vehicle circulation.
- Determine which development standards will be required, as these may have different requirements.
- In planning fields include fencing such as backstops, and outfields with the thought of providing multiple use of physical education fields.
- See Design Guidelines concerning irrigation.

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Site
Future T-Buildings Area

USERS:	ACTIVITIES:
• Students • Faculty/staff	• Generally square area to accommodate six (6) temporary buildings.

DESIGN CONSIDERATIONS:

- When identifying the location, consider proximity of group toilets and other core facilities such as Learning Commons/Information Center, Food Service, etc.
- When identifying the location, consider access to the area for transporting the buildings to and from the site.
- Students moving to and from permanent buildings should not cross vehicular traffic.
- Do not use areas programmed for other uses for temporary buildings.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Provide underground conduit and stub ups from the nearest power panel in the main building for future electrical connections. This panel should be provided with the required extra capacity.
- Provide underground conduit and stub ups for future data connections.

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- None

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Site
Service Court/Access Drive/Dumpster

USERS:	ACTIVITIES:
• Maintenance Staff • Custodial Staff • Food Service Staff	• School deliveries • Waste disposal bins (dumpsters) • Meeting with parents, students and other visitors • Placing phone calls

DESIGN CONSIDERATIONS:
• Locate in close proximity to Receiving Entry and Food Service
• Area should be sited or shielded so that a visual screen is created
• Consider turning radii and path of delivery vehicles
• Provide drains at waste disposal bins

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Screening
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
•   3 Waste Bins (dumpsters)
•   1 Recycling Bin (dumpster)

Site

Bus Loop/Parking/Staging

USERS:	ACTIVITIES:
• Staff • Teachers • Students • Parents	• Entry, exit and staging of buses

DESIGN CONSIDERATIONS:
• The designated loading zone shall provide a minimum of 60 inches wide by 240 inches long clear floor area adjacent to the vehicle pull-up space with the long dimension parallel to the vehicle direction of travel. • Locate in close proximity to the main entrance, preferably near large assembly area within the school building and as a second priority, outdoor play area. • Provide a convenient, covered, accessible loading area for buses that is closer to the school than the car loading area (with the exception of special needs children). • Consider the turning radii of buses so that buses can discharge and pickup students without having to cross roadways or back up.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

HOUSTON INDEPENDENT SCHOOL DISTRICT
CONSTRUCTION AND FACILITY SERVICES: FACILITIES PLANNING – June 12, 2014
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Site
Car Parking

USERS:	ACTIVITIES:
• Parents • Students (High School) • Community members • Faculty/Staff	• Parking to meet code requirements or as shown below, whichever is greater. • Parking for School Faculty and Staff plus 10% • Parking for Guests – provide spaces equal to 1% of the student capacity or 10 spaces whichever is greater. • Student parking at High Schools will likely not be possible due to the constraints of the site.

DESIGN CONSIDERATIONS:
• Separate car parking from bus traffic and car drop-off/pickup • Car drop-off/pickup should not interfere with traffic flow to car parking • Locate staff/visitor parking at the front of the building to promote and identify the front entrance as well as for visual surveillance from Administration. • Provide convenient preferred parking spaces for low emission vehicles and those with special needs however, all other parking spaces should be located far enough away from the school that it is clear that priority is given to walkers, bikers, playgrounds and open space • Locate 10 of the staff spaces near the Service Court for use by the Maintenance, Custodial and Food Service Staff

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Consecutively numbered spaces • "Visitor" spaces • 6 "Reserved" spaces
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

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Site
Car Staging/Access

USERS:	ACTIVITIES:
• Parents/Students	• Safely discharge and pick-up students from private vehicles

DESIGN CONSIDERATIONS:
• The designated loading zone shall provide a minimum of 60 inches wide by 240 inches long clear floor area adjacent to the vehicle pull-up space with the long dimension parallel to the vehicle direction of travel.
• Locate near the main entrance but so as not to interfere with bus loading.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

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Site

Pedestrian Circulation

USERS:	ACTIVITIES:
• Staff/Faculty • Parents • Students • Community	• Safe and secure passage from parking/access areas to the school's indoor facilities (including T-Buildings if any) and to the outdoor facilities including all athletic facilities

DESIGN CONSIDERATIONS:
• Provide permanent walkways where anticipated foot traffic would destroy vegetation or where required for ADA compliant access • Provide minimum 10'-0" wide walkways to and at Bus Staging • Provide minimum 6'-0" wide walkways to and at Car Staging

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

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Site
Playing/Practice Fields

USERS:	ACTIVITIES:
• Students (PE) • Faculty • Community	• PE Classes
DESIGN CONSIDERATIONS:	
• Each field to be approximately 160' x 360' • Fields should be relatively level but sloped to drain without need of underground drainage • Locate for ease of access for PE classes • Irrigation system for outfield	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Site

Basketball

USERS:	ACTIVITIES:
• Students (PE) • Faculty • Community	• Learning the fundamentals of basketball • Practicing • Exercising
DESIGN CONSIDERATIONS:	
• Provide 1 full basketball court on concrete surface with marking and 4 permanent goals • Locate for ease of access for PE classes	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Pad, markings and goals	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Site
General

USERS:	ACTIVITIES:
• Parents • Students • Community members • Faculty/staff	• Access to school and its facilities

DESIGN CONSIDERATIONS:
• All exterior signage, fencing, and railings should be included in design documents   • Site lighting   • Flagpole should be located near the main entrance with a paved walkway to it   • Bike racks should be located to promote their use   • Fixed landscape equipment (i.e. trash cans, seating benches etc.) should be included in design documents

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Marquee sign, directional and traffic Signage, fencing and railings   • Site lighting   • Flagpole   • Bike Racks   • Landscaping   • Irrigation system at front entrance
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Flags

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NEIGHBORHOODS

2012 HISD BOND
BUILDING EXCELLENCE

HISD EDUCATIONAL SPECIFICATIONS
ENERGY INSTITUTE HIGH SCHOOL – JUNE 12, 2014

CONSTRUCTION AND FACILITY SERVICES
FACILITIES PLANNING

Neighborhoods

Overview:

Core academic requirements for all children are mandated by state and federal law. HISD's promise is to provide 21st Century learning environments, accordingly, the facilities shall:

- Meet the state and federal requirements
- Be safe and conducive to learning
- Create life-long learners
- Create an environment conducive to teacher retention
- Provide for flexibility of course offerings within core academic subject areas
- Accommodate interdisciplinary learning
- Accommodate multiple intelligences and varied learning styles
- Provide effective space for collaboration and increased communication
- Provide easy access to teaching resources for anytime, anywhere learning

The school will include four neighborhoods each of which will include a large space Learning Community space for collaborative use by students and faculty, Learning Centers for direct instruction/lectures, small group or huddle spaces, Science (or other flex) Lab space, and an Engineering Learning Center. It is envisioned that three of the four neighborhoods will focus on a particular pathway. The fourth neighborhood will house the 9th grade students. The Engineering Learning Centers (discussed in a subsequent section) along with the Science Learning Center, should be the hub and focus of the neighborhood. The students will remain in their neighborhood for most of the studies. The Learning Communities as described will be used for most of the students' core academic learning. The Learning Centers will be shared by all teachers in the neighborhood and used for direct instruction or when a more private area is needed for a group of 25-30 students. The neighborhoods will be arranged adjacent to common learning areas as well as Assistant Principal's offices.

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Space Requirements

Neighborhoods	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Learning Community	8	4	2,700	10,800
Huddle Spaces/Small Group Rooms		16	200	3,200
Covered Outdoor Classroom (Provide minimum of 850 square feet space. Square footage listed was reduced to 450 square feet to reflect reduced cost of non-conditioned, non-enclosed construction.)		4	425	1,700
Learning Centers	8	8	850	6,800
Science Learning Center /Wet Lab	8	4	3,256	13,024
Wet Lab Storage		4	300	1,200
Distributed Learning Commons/Media Lounge - included in Learning Community				
Central Media Lounge		1	1,200	1,200
Learning Commons Storage		5	100	500
Office/Workroom		1	175	175
Storage		4	100	400
Computer Repair / Storage Room		1	850	850
Total	**24**			**39,849**

Neighborhoods
Learning Community

USERS:	ACTIVITIES:
• Teachers • 140 Students	• Mastering the core curriculum • Mastering 21st Century learning skills • Project-based learning • Technology - based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:
• Provide easy access to exterior area • Operable partitions are permitted in this area.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades for windows • Presentation Walls
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Presentation Carts • Teacher stools • 35 tables • 140 Student chairs • Projector • 200 student storage units • Clocks

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Neighborhoods
Huddle Spaces / Small Group Rooms

USERS:	ACTIVITIES:
• Teachers • 10 Students	• Mastering the core curriculum • Mastering 21st Century learning skills • Project-based learning • Technology - based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:
• Operable partitions are permitted in this area.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades for windows • Presentation Wall
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Presentation Cart • Teacher stool • Tables for 8-10 students • 10 Student chairs • Projector • Clock

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Neighborhoods
Covered Outdoor Classroom

USERS:	ACTIVITIES:
• Teachers • 28 Students	• Mastering the core curriculum • Mastering 21st Century learning skills • Project-based learning • Technology - based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:
• Locate adjacent to grade level houses. • Consider co-location of the outdoor classrooms to create a larger outdoor space that could be used for dining, PE, etc.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Large ceiling fan(s)
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Outdoor seating

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Neighborhoods

Learning Centers

USERS:	ACTIVITIES:
• Teachers • 28 Students	• Mastering the core curriculum • Mastering 21st Century learning skills • Project-based learning • Technology - based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:
• Provide easy access to exterior area • Operable partitions immediately adjacent to Extended Learning Areas are permitted.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades for windows • Presentation Walls
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Presentation Cart • Teacher stool • 28 tables • 28 Student chairs • Projector • Clock

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HOUSTON INDEPENDENT SCHOOL DISTRICT
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Neighborhoods
Science Learning Center/Wet Lab

USERS:	ACTIVITIES:
• 2 Teachers • Staff/Faculty • 56 Students	• Lecture, labs, computer work • Technology-based instruction • Chemical, physical and biological experimentation • Collaborative relationship building • Working individually, in small groups, and in large groups • Mastering 21st Century learning skills • Project-based learning • Technology-based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations

DESIGN CONSIDERATIONS:

- Emergency utility shut-off
- Power, Data and Gas in apron of casework
- Provide two moveable demonstration teacher stations
- One station in each lab to be handicapped accessible
- Locate science labs near the front of the neighborhood to allow access for students from other neighborhoods
- Locate with direct access to exterior
- Consider adding visibility to Wet Lab Storage
- Provide visibility to Extended Learning Area and circulation.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Shades for windows
- Presentation Wall
- Casework – Side wall:
  - Sink cabinets and drawer/door cabinets
  - Door/shelf cabinets above sinks
- Safety station(s) (number determined by code) including eyewash, body drench shower, fire blanket, fire extinguisher
- Goggle cabinets with UV light for disinfecting

Owner Furnished – Contractor Installed

- Paper towel dispensers
- Soap dispensers

Owner Furnished – Owner Installed

- 28 – 2 person tables with chemical resistant epoxy tops
- 58 adjustable height stools
- 2 short storage cabinets with adjustable shelving
- 1 bookcases (height may be dependent on window sill height), with adjustable shelving
- Presentation Cart
- Portable drying racks for each sink
- Projector
- Portable science demonstration table with gas and water
- Clock
- Large Periodic Table Chart and other large wall charts (provide clear wall space and tack boards to hang additional material) – Locate in one room only. Location to be determined.
- Rolling racks sufficient to hang 56 lab coats

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Neighborhoods
Wet Lab Storage

USERS:	ACTIVITIES:
• Teacher • Staff/Faculty • Students	• Teacher preparation and clean-up for lab exercises

DESIGN CONSIDERATIONS:
• Locate between two labs for shared storage if possible.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Refrigerator/freezer with small ice maker, not self-defrosting so that temperature will be constant
- Casework on one wall with chemical resistant countertop, drawer/door base cabinets, and open shelf wall cabinets
- Drying rack mounted above sink
- Fire rated chemical storage cabinet
- Residential dishwasher with permanently attached sign stating: ***Thoroughly rinse all acid containing items before placing in dishwasher***

Owner Furnished – Contractor Installed

- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed

- Portable fume hood
- 2 tall work stools
- Maximum linear feet of 12"D, adjustable height wooden shelving with rim guards on wall facing casework
- 36"W x 84"H lockable storage cabinet
- Acid base storage cabinet, lockable
- Water distiller system to make distilled water

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Neighborhoods
Learning Commons/Media Lounge

USERS:	ACTIVITIES:
• Students • Faculty • Staff • Community members and parents for after school events	• Learning hub to provide effective using of information and ideas for students and faculty • Circulation of materials and resources in the format of print, digital and multi-media etc. • Reading • Research • Technology based instruction for large group and small group • Provide meeting areas • Processing new media

DESIGN CONSIDERATIONS:

• None

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Presentation wall

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Soft seating: chairs and tables for 10
• Campfire tables
• Chevron tables
• Clock

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Neighborhoods
Central Media Lounge

USERS:	ACTIVITIES:
- Students - Faculty - Staff - Community members and parents for after school events	- Reading - Research - Technology based instruction for large group and small group - Provide meeting areas

DESIGN CONSIDERATIONS:

- Locate near school entrance
- Provide transparency so public can see activities taking place within
- "Wow" factor.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Continuous marker surface on one wall
- Shades for windows

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- Tables
- Chairs
- Soft seating
- Media scape
- Campfire tables
- Chevron tables
- Clock

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Neighborhoods
Central Media Lounge – Learning Commons Storage

USERS:	ACTIVITIES:
• Faculty • Teachers	• Storing instructional materials and supplies • Securing and charging mobile computer cart(s)
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4'x4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Maximum LF of heavy-duty 18"D adjustable shelving	

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Neighborhoods
Central Media Lounge – Office/Workroom

USERS:	ACTIVITIES:
• Media Specialist	• Paper work
• Faculty	• Processing materials
• Staff	• Laminating

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Shades for windows
- Casework:
  - Maximum LF of cabinets on 1 wall, including sink cabinet, drawer/door cabinets and wall-mounted door/shelf cabinets
- 4'x4' marker board
- 4'x4' tack board

Owner Furnished – Contractor Installed

- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed

- Double pedestal desk with center drawer & lock, 60" x 30"
- Task chairs, swivel, tilt, armless
- 3 Four-shelf bookcases, 60"h x 36"w x 12"d
- 2 Four-drawer vertical files, letter size, lockable
- Teacher wardrobe cabinet: coat hook, shelving, 2 drawers, lockable
- 2 Mobile book trucks

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Neighborhoods

Storage

USERS:	ACTIVITIES:
• Faculty • Teachers	• Storing instructional materials and supplies • Securing and charging mobile computer cart(s)
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4'x4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Maximum LF of heavy-duty 18"D adjustable shelving	

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Neighborhoods
Computer Repair/Storage

USERS:	ACTIVITIES:
• 2 Computer Repair Technicians • 2-4 Students	• Distributing computers • Receiving computers needing repair • Repairing computers • Storing computers • Instructing students on the repair of computers

DESIGN CONSIDERATIONS:

• Locate on first floor of multi-story buildings
• Provide surveillance cameras focused on entry to room
• No exterior windows into this space

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Power and Data outlets located along perimeter
• Marker Board
• Tack Board

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Tall storage cabinets similar to Tennsco #7824MGY
• 4 – wire bin shelving similar to Quantum #QUS954BLMetal storage shelving
• 12 Modular work benches
• 4 folding tables
• 6 task chairs
• 1 bookcase (height may be dependent on window sill height), with adjustable shelving
• Modular reception desk
• Clock
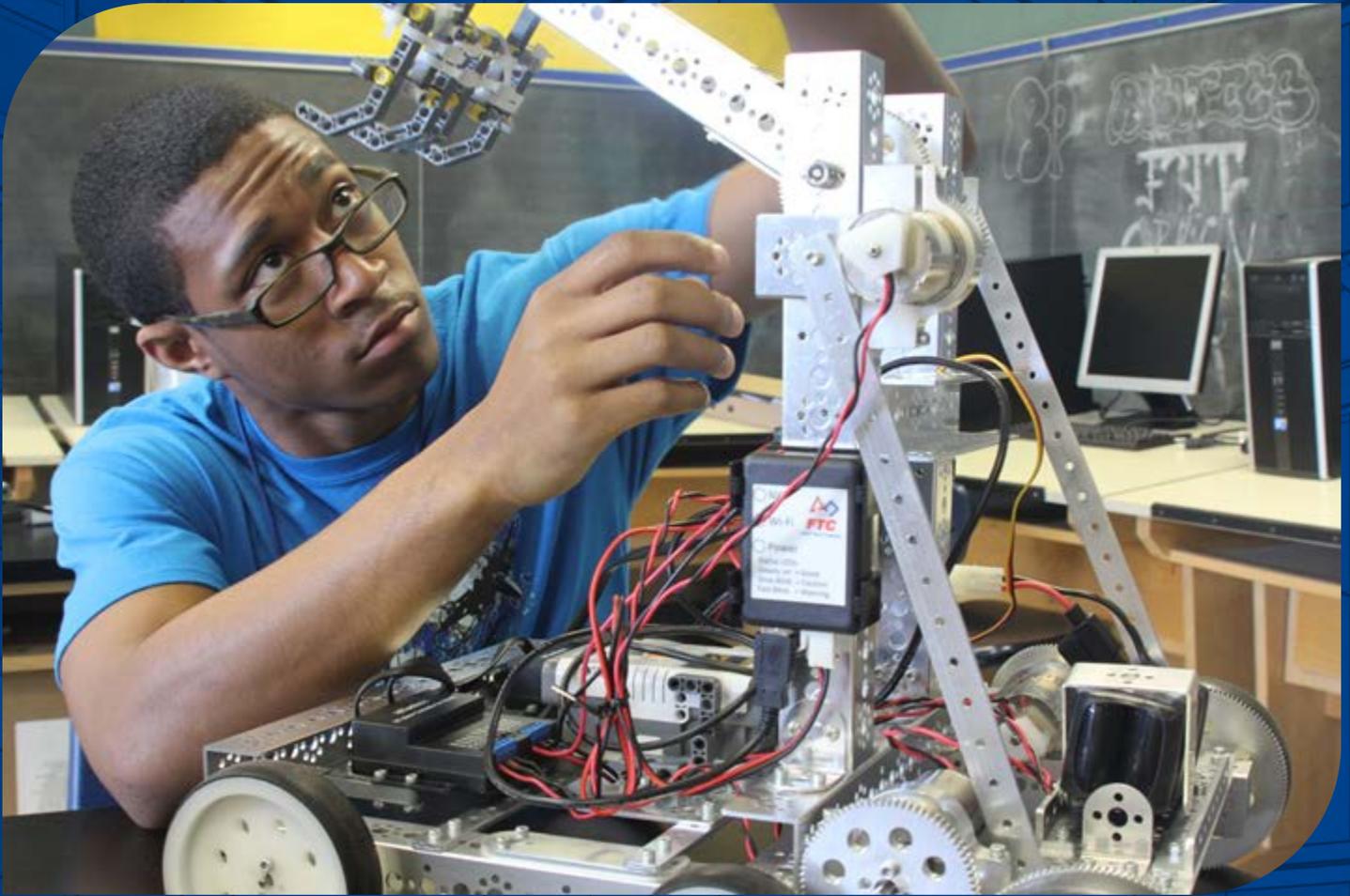
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CAREER AND TECHNICAL EDUCATION

2012 HISD BOND
BUILDING EXCELLENCE

HISD EDUCATIONAL SPECIFICATIONS
ENERGY INSTITUTE HIGH SCHOOL – JUNE 12, 2014

CONSTRUCTION AND FACILITY SERVICES
FACILITIES PLANNING

Career and Technical Education

Overview:

Energy Institute High School is a full magnet program with a school wide theme of Energy. Students at Energy focus in one of three pathways: Geoscience, Alternative Energy, and Offshore Technology. College and career readiness is a key priority for HISD and by working closely with college partners and area businesses the students are prepared for post-secondary success. They participate in rigorous core academic courses as well as specialized courses in a career-focused area that integrates learning and provides work world experiences such as internships, job shadowing and work-based learning. CTE program clusters help students organize and prepare for college and their future career by linking both core and elective courses based on commonalities. The program also provides articulated offerings which are part of Tech Prep sequences of courses and are articulated with a specific college and credits can apply toward a four-year degree. The clusters are:

Science, Technology, Engineering – planning, managing and providing scientific research and professional and technical services including laboratory testing and research & development.

- Engineering A – Introduction to Engineering Design, 9th Grade Lab (1/2 computer lab, ½ construction)
- Engineering B – (similar to construction type lab)
- Engineering C – (similar to Science type lab)
- Engineering D – (construction lab w/underwater robot capability)

The engineering spaces should be located as the hub and focus of each neighborhood. This will allow for collaboration with the core academic programs.

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Career and Technical Education
Space Requirements

Specific to Program	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Engineering Lab A (Introduction to Engineering Design, 9th Grade Lab)	2	1	3,256	3,256
Engineering Lab B (Construction type lab)	2	1	3,256	3,256
Engineering Lab C (Science type lab)	2	1	3,256	3,256
Engineering Lab D (Construction type lab w/underwater robot capability)	2	1	3,256	3,256
Engineering Lab Storage (include in lab as furniture)		0	200	0
Lecture/Presentation Hall (Seats 200)		1	1,800	1,800
Podium		1	200	200
Total	8			15,024

Career and Technical Education-Engineering
Engineering A Lab - Introduction to Engineering Design, 9th Grade Lab

USERS:	ACTIVITIES:
• Teachers • 56 Students	• Project-based learning • Technology-based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:
- Locate adjacent to Science Wet Lab in 9th Grade House.
- Transparent operable partitions should separate two labs so that they can be used as one large flexible space when needed.
- Provide large uninterrupted floor space
- Provide direct access to exterior driveway/parking area for easy relocation of student projects – either double doors or overhead door
- Provide exhaust capability
- Consider making as transparent as possible so that it is the focus/center piece of the Neighborhood
- Consider providing narrow display space in the corridor or other common space serving this lab.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed
- Shades for windows
- 2- Deep sinks, one to be ADA compliant
- Innovative method of displaying projects located above door head height around perimeter of room
- Provide power overhead – 220 volt and 120 volt
- Presentation Wall
- 2 flag holders and map hooks
- Adjacent or Rear Wall:
  - 2 - 4'x4' Tack Boards (one on each side of 8'x4' Marker Board)
  - 1 – 8'x4' Marker Board

Owner Furnished – Contractor Installed
- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed
- Presentation Cart
- Teacher stool
- Student Area
  - 7 – 4- Student tables
  - 56 Student chairs
  - 28 - computer tables, 30"x60"
- 1 tall storage cabinets with adjustable shelving
- 3 bookcases (height may be dependent on window sill height), with adjustable shelving
- 28 Desk top computers
- Projector
- Clock

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Career and Technical Education-Engineering

Engineering B Labs – (Construction type lab)

USERS:	ACTIVITIES:
• Teachers • 56 Students	• Project-based learning • Technology-based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:

- Locate adjacent to Science Lab.
- Transparent operable partitions should separate two labs so that they can be used as one large flexible space when needed.
- Provide large uninterrupted floor space
- Provide direct access to exterior driveway/parking area for easy relocation of student projects – either double doors or overhead door
- Provide exhaust capability
- Consider making as transparent as possible so that it is the focus/center piece of the Neighborhood
- Consider providing narrow display space in the corridor or other common space serving this lab.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Wall hooks near entry door for student aprons
- Shades for windows
- 2 – single sided fume hoods for student work
- 2- Deep sinks, one to be ADA compliant
- Innovative method of displaying projects located above door head height around perimeter of room
- Provide power overhead – 220 volt and 120 volt
- Presentation Wall
- 2 flag holders and map hooks
- Adjacent or Rear Wall:
    - 2 - 4'x4' Tack Boards (one on each side of 8'x4' Marker Board)
    - 1 – 8'x4' Marker Board

Owner Furnished – Contractor Installed

- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed

- Presentation Cart
- Teacher stool
- Student Area
    - 12- 5x10 rolling work tables w/storage underneath. Provide four casters on two sides to allow vertical and horizontal storage capabilities.
    - 56 Student chairs
- 2 tall storage cabinets with adjustable shelving
- 3 bookcases (height may be dependent on window sill height), with adjustable shelving
- Projector
- Clock

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Career and Technical Education-Engineering
Engineering Lab C (Science type lab)

USERS:	ACTIVITIES:
• Teacher • Staff/Faculty • Students	• Lecture, labs, computer work • Technology-based instruction • Chemical, physical and biological experimentation • Working individually, in small groups, and in large groups • Mastering 21st Century learning skills • Project-based learning • Technology-based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations

DESIGN CONSIDERATIONS:

- Emergency utility shut-off
- Power, Data and Gas in apron of casework
- Provide moveable demonstration teacher station
- Provide exhaust capability
- One station in each lab to be handicapped accessible
- Locate with access to exterior
- Consider making as transparent as possible so that it is the focus/center piece of the Neighborhood
- Consider providing narrow display space in the corridor or other common space serving this lab.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Shades for windows
- Presentation Wall
- 2 flag holders and map hooks
- Adjacent or Rear Wall:
  - 1 - 4'x4' Tack Boards (one on each side of 8'x4' Marker Board)
  - 1 – 8'x4' Marker Board
- Casework – Side wall:
  - Sink cabinets and drawer/door cabinets
  - Door/shelf cabinets above sinks
- Safety station(s) (number determined by code) including eyewash, body drench shower, fire blanket, fire extinguisher
- Goggle cabinet with UV light for disinfecting
- Portable science demonstration table with gas and water

Owner Furnished – Contractor Installed

- Paper towel dispensers
- Soap dispensers

Owner Furnished – Owner Installed

- 28 – 2 person tables with chemical resistant epoxy tops
- 58 adjustable height stools
- 2 tall storage cabinets with adjustable shelving
- 1 bookcases (height may be dependent on window sill height), with adjustable shelving
- Presentation Cart
- Portable drying racks
- Projector
- Clock

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Career and Technical Education-Engineering
Engineering Lab D (Construction type lab w/underwater robot capability)

USERS:	ACTIVITIES:
• Teachers • 60 Students	• Project-based learning • Technology-based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:

- Locate adjacent to Science Lab in House.
- Transparent operable partitions should separate two labs so that they can be used as one large flexible space when needed.
- Provide large uninterrupted floor space
- Provide direct access to exterior driveway/parking area for easy relocation of student projects – either double doors or overhead door
- Provide exhaust capability
- Provide large wading pool/aquarium for underwater robotics experiments
- Consider making as transparent as possible so that it is the focus/center piece of the Neighborhood
- Consider providing narrow display space in the corridor or other common space serving this lab.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Shades for windows
- 2 – single sided fume hoods for student work
- 2- Deep sinks, one to be ADA compliant
- Innovative method of displaying projects located above door head height around perimeter of room
- Provide power overhead – 220 volt and 120 volt
- Presentation Wall
- 2 flag holders and map hooks
- Adjacent or Rear Wall:
  - 2 - 4'x4' Tack Boards (one on each side of 8'x4' Marker Board)
  - 1 – 8'x4' Marker Board

Owner Furnished – Contractor Installed

- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed

- Presentation Cart
- Teacher stool
- Student Area
  - 12- 5x10 rolling work tables w/storage underneath. Provide four casters on two sides to allow vertical and horizontal storage capabilities.
  - 56 Student chairs
- Wading pool sufficiently sized for underwater robots – may need to be custom built and included in Contractor's scope
- 1 tall storage cabinets with adjustable shelving
- 3 bookcases (height may be dependent on window sill height), with adjustable shelving
- Projector
- Clock

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Career and Technical Education-Engineering

Lecture/Presentation Hall

USERS:	ACTIVITIES:
• Teachers • Students (200) capacity	• Large group meetings and work • Guest Lectures • Group Instruction • Testing

DESIGN CONSIDERATIONS:

- Design should be in form of college style lecture hall
- Consider use of retractable lecture seating to allow for multi-purpose use of the space
- Centrally locate for easy access by all students

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Retractable seating with seatbacks, armrests and flip up writing space for 200
- Sound system
- Electric projection screen or large electronic display

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- Projector
- Clock

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Career and Technical Education-Engineering
Lecture / Presentation Hall – Podium

USERS:	ACTIVITIES:
• Students • Faculty	• Small Assemblies • Guest Lecturers

DESIGN CONSIDERATIONS:
• Provide some stage/lecture area lighting with control board.   • Provide outlets and microphone plugs at the top step.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Motorized Projection Screen   • Ceiling Mounted Projector   • Presentation Wall   • 2 flag holders and map hooks   • Sound System
Owner Furnished – Contractor Installed
• Presentation Cart   • Speaker Podium
Owner Furnished – Owner Installed
• Teacher stool   • Clock

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VISUAL ARTS

Visual Arts

Overview:

The arts are fundamental to communicating and understanding not only ourselves, but others. Through the arts we learn to appreciate and to create things of beauty. Important 21st Century skills enhanced by arts education include creativity, innovation, critical thinking, cooperative decision making, leadership, and capacity of problem-posing and solving. Visual Arts Learning Centers should:

- Provide a view to the outdoors
- Provide for flexibility of course offerings
- Be easy to clean
- Create an environment conducive to creativity

The Visual Arts should be located in proximity to the Performing Arts to encourage collaboration.
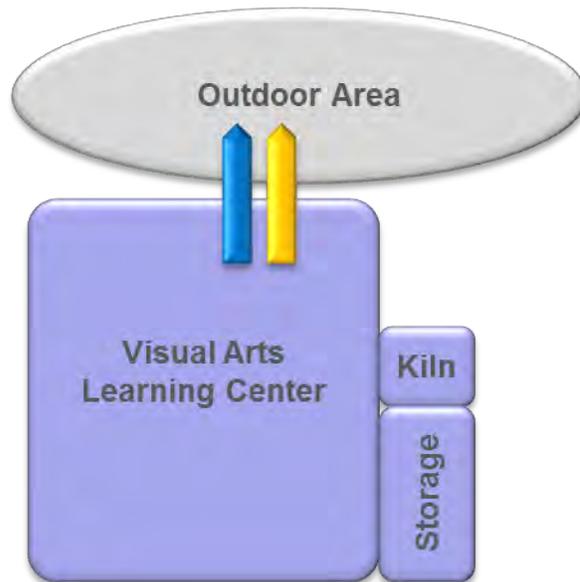
Legend

⬌ Physical connection
⬌ Visual connection
⬌ Physical and/or acoustic separation

The functional relationships illustrated are diagrammatic only. Further interpretation of these relationships shall be implemented by the Design Team.

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Visual Arts
Space Requirements

Visual Arts	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Visual Arts Wet Lab Learning Center	1	1	1,200	1,200
Kiln Room		1	80	80
Storage Room		1	250	250
Total	1			1,530

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Visual Arts
Visual Arts Wet Lab Learning Center

USERS:	ACTIVITIES:
• Teachers • Students	• Creative individual and group activities • Learning/researching art history/artist • Discussions on Art criticism • Learning/practicing drawing, painting, embossed prints, ceramics, sculptures, etc

DESIGN CONSIDERATIONS:

- Need area for arranging still lifes with track lighting.
- Northern exposure is desirable.
- Provide floor drain for ceramic room.
- Slant floor towards floor drain if provided.
- Provide a water hose connection.
- Provide secure display cases in hallway outside room and near Main Administration area.
- Consider having a computer alcove for digital art

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Shades for windows
- Presentation Wall
- Adjacent or Rear Wall: (all items at appropriate height for age group)
    - 8' marker board with tack strip
    - 4' tack boards
- Casework – Side wall:
    - Sink cabinet – with sinks projecting from front edge of casework to allow access from 3 sides
- Door/shelf cabinets above sink
- Shelving above marker boards and windows for project display
- 1 wall with continuous tackable surface

Owner Furnished – Contractor Installed

- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed

- Teacher demonstration table, 30"x60", adjustable height, with chemical resistant top
- Tall teacher stool
- Student Area
    - 24 student adjustable height stools
    - 7 tilt-up art tables, 42"x60", with chemical resistant tops (1 to be used for still life set-up)
    - 4-5 computer tables, 30"x60", with desk top computers
- Projector
- 2 tall storage cabinets with adjustable shelving
- Portfolio cabinets
- Double-sided mobile drying rack
- 2 mobile paper racks
- 55-tray tote tray cabinet
- 3 bookcases (height may be dependent on window sill height), with adjustable shelving
- Shallow drawer cabinet (must accommodate 24" x 46" paper)

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Visual Arts

Kiln Room

USERS:	ACTIVITIES:
• Art teacher	• Storing greenware. • Firing items in kiln.

DESIGN CONSIDERATIONS:
• Provide ventilation.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Electric kiln
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Greenware cabinet with doors

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Visual Arts
Storage Room

USERS:	ACTIVITIES:
• Art teacher	• Storing and maintaining art supplies.

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Maximum LF of heavy-duty, adjustable height shelving – 50% 18" deep, 25% 24" deep, 25% 12" deep.
• 3-shelf mobile cart with recessed top well for moving supplies between Art Storage and Visual Arts Learning Center

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PHYSICAL EDUCATION / ATHLETICS

Physical Education

Overview:

The mission of HISD's Health and Physical Education programs is to provide a framework of knowledge, practices and skills to positively impact student's health and physical well-being. Health Education focuses on the development of wellness lifestyles by addressing knowledge, attitudes, behaviors and skills for healthy living. Physical Education programs focus on personal fitness through participation in leisure and lifetime activity that lead to self-responsibility, teamwork, sportsmanship, and leadership.

Community use and involvement with the PE programs is needed and encouraged through the availability of indoor and outdoor facilities when not being used as part of the school program.

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Physical Education
Space Requirements

Physical Education/Athletics	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Multipurpose Activity Learning Center/Fitness Center	1	1	2,000	2,000
Boys'/Girls' PE Locker Room		2	200	400
Student Toilets/Showers		2	200	400
Adult Toilet/Shower/Locker		2	100	200
Office (shared)		1	150	150
PE Equipment Storage		1	300	300
Total	**1**			**3,450**

P.E.
Multipurpose Activity Learning Center / Fitness Center

USERS:	ACTIVITIES:
• PE Teachers/Coaches • Students • Parents • Community Groups • Staff • Sports teams	• Physical education classes and activities • Fitness/health presentations

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Mirror on one wall
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Cardio equipment • Free weights • Yoga mats

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P.E.

Boys'/Girls' P.E. Locker Room

USERS:	ACTIVITIES:
• PE Teachers • Coaches • Students	• Changing clothes • Storing personal items during classes, practices or competitions

DESIGN CONSIDERATIONS:
• Design for air flow that will maintain consistent temperature and humidity level • Provide clear view for passive supervision (no tall lockers blocking line of sight)

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 18 - 6:1 lockers • Benches • 4'x4' marker board • 4'x4' tack board • Mirrors
Owner Furnished – Contractor Installed
• Paper towel dispenser • Sanitizer dispenser
Owner Furnished – Owner Installed
• None

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P.E.
Student Toilet/Showers

USERS:	ACTIVITIES:
• Students	• Restroom and bathing
DESIGN CONSIDERATIONS:	
• Provide individual showers, 4 per gender	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mirrors	
Owner Furnished – Contractor Installed	
• Paper towel dispensers	
• Soap dispensers	
• Toilet paper dispenser	
Owner Furnished – Owner Installed	
• Shower curtains	

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P.E.

Adult Toilet/Shower/Locker

USERS:	ACTIVITIES:
• Coaches/Teachers	• Restroom and bathing activities
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mirrors	
• 2 high lockers	
Owner Furnished – Contractor Installed	
• Paper towel dispenser	
• Soap dispenser	
• Toilet paper dispenser	
Owner Furnished – Owner Installed	
• Shower curtain	

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P.E.
Office (Shared)

USERS:	ACTIVITIES:
• Coaches/Teachers • Students	• Coach and teacher administrative tasks • Changing clothes before and after physical education activities • Storing personal items

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 4'x4' marker board • 4'x4' tack board
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• 2 Double pedestal desk with center drawer & lock, 60" x 30" • 2 Task chair, swivel, tilt, armless • 2 Guest chairs • 1 4-shelf bookcase, 52"H x 36"W x 15"D • 2 4-drawer vertical file, letter size, lockable

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P.E.
P.E. Equipment Storage

USERS:	ACTIVITIES:
• PE Teachers/Coaches • Students	• Storing and retrieving equipment used for physical education classes

DESIGN CONSIDERATIONS:
• Floors need to be level and transition strip should be low profile to allow for easy movement of heavy equipment on carts.   • Provide exterior access 4'-0" door

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Heavy-duty adjustable shelving on 3 walls. Lower shelf 24"D. Upper shelves to ceiling 18"D. Locate bottom shelf on 2 walls 48" AFF for ball carts and mats.   • Provide pegboard on 1 wall for hanging jump ropes, hula hoops, etc.

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ADMINISTRATION / GUIDANCE

2012 HISD BOND
BUILDING EXCELLENCE

HISD EDUCATIONAL SPECIFICATIONS
ENERGY INSTITUTE HIGH SCHOOL – JUNE 12, 2014

CONSTRUCTION AND FACILITY SERVICES
FACILITIES PLANNING

Administration/Guidance

Overview:

These facilities are most community member's first introduction to the School. As such, they must not only be inviting, professional and businesslike but also serve as the secure checkpoint prior to visitors entering the school.

The Administration/Guidance facilities should:

- Provide a secure entrance
- Provide privacy for confidential discussions
- Store student and financial records
- Serve as the communications hub of the school
- Provide a readily accessible location for the School Clinic
- Provide spaces for receiving and distributing incoming mail and packages

The entrance to the Administration suite shall be located adjacent to the front door of the school. It should be located adjacent to but separate from Guidance. Guidance should be readily accessible to Students and easy to find by Parents but should not be perceived as being part of Administration. Satellite Administration and Guidance offices should be located adjacent to the various neighborhoods.

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Administration/Guidance
Space Requirements

Administration/Guidance	Required Spaces			
	Teaching Station	Qty	SF	Net Area
Main Administration				
Reception, Administration		1	350	350
Office A (STEM, Sec, Testing Coordinator)		3	100	300
Test Storage		1	200	200
Office C (Principal)		1	250	250
Principal's Restroom		1	50	50
Conference Room, Main		1	250	250
Workroom/Break Room		1	300	300
Mail Room		1	100	100
Storage		1	125	125
Registrar/Attendance				
Office A (Registrar, Attendance, Itinerant)		4	125	500
Records/File Room		1	130	130
Distributed Administration				
Office B (AP)		4	125	500
AP Reception/Waiting (share between two APs)		2	125	250
Conference Room, Small		4	150	600
Storage		2	50	100
Office A (Security Office)		1	100	100
Health Clinic				
Health Clinic		1	300	300
Reception/Waiting		1	75	75
Office A		1	100	100
Restroom		1	65	65
Guidance/Student Services				
Reception, Guidance shared with AP reception		0	75	0
College Center		1	850	850
Office B (College, Magnet, Counselor, SPED)		4	125	500
Shared				
Teacher Work Center		4	1,000	4,000
Multi-use/Community Room		1	425	425
New Mother's Room		1	50	50
Total	**0**			**10,470**

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Administration/Guidance
Reception, Administration

USERS:	ACTIVITIES:
• Parents • Students • Community members • Faculty/staff	• Greeting and welcoming people and directing them to the proper location or person • Waiting/seating area for visitors, students, and staff members • Controlling entrance to the school

DESIGN CONSIDERATIONS:

- All visitors must pass through reception to enter school
- Use modular furniture for the circulation desk. A portion shall be at height to meet accessibility requirements.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- None

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- Modular reception desk with work stations to include:
  - 30"D x 30"H x 10-12 LF work surface
  - Half of the reception desk should have a transaction counter 1'D x 42"H with a maximum of 6" overlapping work surface
  - Rear work surface 30"D x 30"H
- Work surfaces should have lockable built-in storage below including a combination of 6"D and file drawers (at least 4) as well as cabinets with adjustable shelving2 Task chairs
- Guest chairs
- Side tables
- Video Display

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Administration/Guidance
Office A (STEM, Sec, Testing Coordinator)

USERS:	ACTIVITIES:
• Staff/Faculty • Clerical Support Staff • Students • Parents	• Assisting in administrative record keeping • Preparation of correspondence, reports and other administrative tasks • Private conferences

DESIGN CONSIDERATIONS:

• None

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Shades on windows
• 4'x4' marker board
• 4'x4' tack board

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Double pedestal desk with center drawer & lock, 60" x 30"
• Task chair
• 2 guest chairs
• 4-shelf bookcase, 52"H x 36"W x 15"D
• 4-drawer vertical file, letter size, lockable

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Administration/Guidance

Test Storage

USERS:	ACTIVITIES:
• Guidance Clerk • Testing Co-Ord • Administrators	• Storing and retrieving student test records

DESIGN CONSIDERATIONS:
• Should be located with secure access from Testing Coordinator's office

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- 4'x4' marker board
- 4'x4' tack board
- Maximum LF of heavy-duty, adjustable, wall-mounted shelving above filing cabinets for additional storage

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- 24"x36" folding table
- Maximum linear feet heavy duty adjustable shelving

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Administration/Guidance
Office C (Principal)

USERS:	ACTIVITIES:
• Principal • Students • Parents	• Conducting administrative duties • Preparing correspondence and reports • Meeting with parents, students and other visitors • Placing phone calls

DESIGN CONSIDERATIONS:
- Locate with view to school entry drive.
- Locate so Principal can leave Administration Suite without being seen from reception.
- Should have direct access to large conference room

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed
- Shades on windows
- 4'x4' marker board
- 4'x4' tack board

Owner Furnished – Contractor Installed
- None

Owner Furnished – Owner Installed
- Double pedestal desk with center drawer & lock, 60" x 30"
- Credenza
- Task chair
- 4 guest chairs
- 48" conference table
- Video Display
- 2 - 4-shelf bookcases, 52"H x 36"W x 15"D
- 4-drawer vertical file, letter size, lockable

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Administration/Guidance

Principal's Restroom

USERS:	ACTIVITIES:
• Principal	• Personal hygiene
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mirrors	
Owner Furnished – Contractor Installed	
• Paper towel dispenser	
• Soap dispenser	
• Toilet paper dispenser	
Owner Furnished – Owner Installed	
• None	

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Administration/Guidance
Conference Room, Main

USERS:	ACTIVITIES:
• Principal • Staff/Faculty • Parents/Students • School Support Groups (PTO, etc.)	• Meetings/Conferences between Faculty/Staff and Students, Parents and Community

DESIGN CONSIDERATIONS:
• Provide direct access from Principal's Office and secondary corridor.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades on windows • Marker and tack board in cabinet
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Credenza • Conference table for 12 people • 12 Swivel, tilt armchairs • Television and/or electronic whiteboard

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Administration/Guidance
Workroom/Break Room

USERS:	ACTIVITIES:
• Faculty • Staff • Volunteers • Parents	• Copying • Collating • Preparing communications for mailing • Laminating, book making, poster making • General office work • Storing and retrieving supplies • Mail delivery and retrieval

DESIGN CONSIDERATIONS:
- Mail slots should open directly to mail pick up room.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed
- Shades on windows
- 4'x4' marker board
- 4'x4' tack board
- 12"W x 9"H x 12"D pass through mail slots with 24"D adjustable shelving below for packages – provide one per staff member plus 10%
- Approximately 10 LF of casework with countertop, sink cabinet, drawer/door base cabinets and door/shelf wall cabinets
- Large counter (standing height) in the middle of the space for sorting (with a stack of flat file drawers and drawer/door cabinets).

Owner Furnished – Contractor Installed
- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed
- 36" x 72" work tables
- 2 Lounge chairs
- Refrigerator with icemaker
- 4 Chairs
- 1 - 42" square tables
- Vending machines – 1 drink & 1 snack (vendor provided)
- Microwave/Oven
- Copier

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Administration/Guidance
Mail Room

USERS:	ACTIVITIES:
• Faculty • Staff	• Picking up mail • Reading notices • Dropping off mail
DESIGN CONSIDERATIONS:	
• Provide in/out doors off of secondary corridor. • Mailboxes provide separation between this space and workroom/break room.	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4'x8' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Administration/Guidance

Storage

USERS:	ACTIVITIES:
• Guidance Clerk • Counselors • Administrators' • Office Staff	• Storing office supplies • Storing educational materials
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Maximum LF of heavy duty adjustable shelving	

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Administration/Guidance

Registrar/Attendance - Office A (Registrar, Attendance, Itinerant)

USERS:	ACTIVITIES:
- Attendance Clerk, Registrar, Itinerant - Staff - Students - Parents	- Administrative tasks - Preparation of correspondence and reports - Creating and documenting new and existing students - Meeting with parents, students and other visitors
DESIGN CONSIDERATIONS:	
None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
- Shades on windows 4'x4' marker board 4'x4' tack board	
Owner Furnished – Contractor Installed	
None	
Owner Furnished – Owner Installed	
- Double pedestal desk with center drawer & lock, 60" x 30" - Task chair 2 Guest chairs 4-shelf bookcase, 52"H x 36"W x 15"D 4-drawer vertical file, letter size, lockable	

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Administration/Guidance

Registrar/Attendance - Records/File Room

USERS:	ACTIVITIES:
• Guidance Clerk • Counselors • Administrators	• Storing and retrieving student records

DESIGN CONSIDERATIONS:
• Room should be treated as a 1 hour fire-rated enclosure.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 4'x4' marker board   • 4'x4' tack board   • Maximum LF of heavy-duty, adjustable, wall-mounted shelving above filing cabinets for additional storage
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• 24"x36" table   • 2-door lockable storage cabinet   • Side chair   • 10 - 5-drawer vertical file cabinets

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Administration/Guidance
Distributed Administration - Office B (AP)

USERS:	ACTIVITIES:
• Staff • Teachers • Assistant Principal • Students • Parents	• Conducting administrative tasks • Preparing correspondence and reports • Creating and documenting new and existing students • Meeting with parents, students and other visitors • Placing phone cards

DESIGN CONSIDERATIONS:

• Locate with neighborhoods

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Shades on windows
• 4'x4' marker board
• 4'x4' tack board

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Double pedestal desk with center drawer & lock, 60" x 30"
• Task chair
• 4 guest chairs
• 36" conference table
• 4-shelf bookcase, 52"H x 36"W x 15"D
• 4-drawer vertical file, letter size, lockable

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Administration/Guidance
Distributed Administration - AP Reception / Waiting

USERS:	ACTIVITIES:
• Parents • Students • Community members • Faculty/staff	• Greeting and welcoming people • Waiting/seating area for visitors, students, and staff members

DESIGN CONSIDERATIONS:
- Should be located adjacent to Neighborhoods
- Space shall serve 2 AP's and Counselors

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed
- None

Owner Furnished – Contractor Installed
- None

Owner Furnished – Owner Installed
- Modular reception desk with work stations to include:
  - 30"D x 30'H x 6-8 LF work surface.
  - Half of the reception desk should have a transaction counter 1'D x 42"H with a maximum of 6" overlapping work surface
  - Rear work surface 30"D x 30"H
- Work surfaces should have lockable built-in storage below including a combination of 6"D and file drawers (at least 4) as well as cabinets with adjustable shelving
- Task chair
- Guest chairs
- Side tables

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Administration/Guidance
Distributed Administration - Conference Room, Small

USERS:	ACTIVITIES:
• Staff/Faculty • Parents • School Support Groups (PTO, etc.)	• Meetings/Conferences between Faculty/Staff and Students, Parents and Community

DESIGN CONSIDERATIONS:

• None

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Shades on windows
• Marker and tack board in cabinet

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Credenza
• Conference table for 6 people
• 6 Swivel, tilt armchairs
• Television and/or electronic whiteboard

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Administration/Guidance
Distributed Administration - Storage Room

USERS:	ACTIVITIES:
• Guidance Clerk • Counselors • Administrators' • Office Staff	• Storing office supplies • Storing educational materials
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Maximum LF of heavy duty adjustable shelving	

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Administration/Guidance

Distributed Administration - Office A (Security Office)

USERS:	ACTIVITIES:
• Security Officer • Staff/Faculty • Students • Parents	• Administrative tasks • Preparing correspondence and reports • Creating and documenting safety and security matters • Meeting with parents, students and other visitors

DESIGN CONSIDERATIONS:
• Locate near main entrance with full access and visibility to Lobby

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades on windows • 4'x4' marker board • 4'x4' tack board
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Double pedestal desk with center drawer & lock, 60" x 30" • Task chair • 2 guest chairs • 4-shelf bookcase, 52"H x 36"W x 15"D • 4-drawer vertical file, letter size, lockable

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Administration/Guidance

Health Clinic

USERS:	ACTIVITIES:
• School nurse • Staff • Students • Parents	• Treating ill or hurt students • Conducting medical exams/screening • Dispensing medications • Waiting area for ill students prior to being picked up

DESIGN CONSIDERATIONS:
- Visual connection between Nurses' Office and Clinic

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed
- Shades on all windows
- Sink cabinet with single deep sink
- 4 LF of Drawer/door cabinets – lockable
- 6 LF Door/shelf wall cabinets
- Cubicle curtain and track to create semi private exam areas

Owner Furnished – Contractor Installed
- Paper towel dispenser
- Soap dispenser

Owner Furnished – Owner Installed
- Cot/exam tables
- Adjustable height stool
- Locking refrigerator with ice maker
- Biohazard disposable can
- Medical sharps waste disposal
- 2 guest chairs
- Defibrillator

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Administration/Guidance

Health Clinic – Reception/Waiting

USERS:	ACTIVITIES:
• School nurse • Staff • Students • Parents • Visitors	• Waiting area for visitors, students, and staff members

DESIGN CONSIDERATIONS:
• Visual connection between Nurses' Office and Waiting

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• 4 guest chairs • Literature racks

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Administration/Guidance
Health Clinic – Office A

USERS:	ACTIVITIES:
• School nurse • Staff • Students • Parents • Visitors	• Consultation by nurse with students, parents and staff • Record-keeping and paperwork • Working with student health files

DESIGN CONSIDERATIONS:
• Visual connection between Nurses' Office and Waiting

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades on windows • 4'x4' marker board • 4'x4' tack board
Owner Furnished – Contractor Installed
• File cabinet • Literature rack
Owner Furnished – Owner Installed
• Double pedestal desk with center drawer & lock, 60" x 30" • Credenza • Task chair • 2 guest chairs • 4-shelf bookcases, 52"H x 36"W x 15"D • 4-drawer vertical file, letter size, lockable

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Administration/Guidance

Health Clinic - Restroom

USERS:	ACTIVITIES:
• Staff • Students • Faculty • Visitors	• Restroom activities • Hand Washing • Personal hygiene
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mirror • Toilet seat cover dispenser • Coat hook	
Owner Furnished – Contractor Installed	
• Toilet paper dispenser • Paper towel dispenser • Soap dispenser	
Owner Furnished – Owner Installed	
• None	

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Administration/Guidance
Guidance/Student Services - College Center

USERS:	ACTIVITIES:
• Teachers • 28 Students	• Mastering the core curriculum • Mastering 21st Century learning skills • Project-based learning • Technology - based instruction • Activities that stimulate inventive thinking, creativity and imagination • Collaborative relationship building • Demonstrations • Working individually, in small groups and in large groups

DESIGN CONSIDERATIONS:

• Location to be determined during initial design phase. Could be central or could be located adjacent to one of the distributed administration areas
• Operable partitions are permitted in this area.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Shades for windows
• Presentation Walls

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Presentation Carts
• Teacher stool
• 28 tables
• 28 Student chairs
• Projectors
• Clock

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Administration/Guidance
Guidance/Student Services - Office B (College, Magnet, Counselor, SPED)

USERS:	ACTIVITIES:
• Staff	• Administrative tasks
• Students	• Preparation of correspondence and reports
• Parents	• Creating and documenting new and existing students
	• Meeting with parents, students and other visitors

DESIGN CONSIDERATIONS:
• Locate with Neighborhoods, Office B (AP) and Teacher Work Centers.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Shades on windows
• 4'x4' marker board
• 4'x4' tack board
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Double pedestal desk with center drawer & lock, 60" x 30"
• Task chair
• 2 Guest chairs
• 4-shelf bookcase, 52"H x 36"W x 15"D
• 4-drawer vertical file, letter size, lockable

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Administration/Guidance
Shared – Teacher Work Center, Work Stations

USERS:	ACTIVITIES:
• Teachers	• Preparing lesson plans • Teacher supply storage • Researching • Meeting

DESIGN CONSIDERATIONS:

• None

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• 4'x4' marker board
• 4'x4' tack board

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Modular open office systems furniture with keyed over desk storage and file drawers, each set separately keyed to a master.
• Tilt swivel desk chairs on casters
• Media scape
• Conference table

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Administration/Guidance
Shared – Teacher Work Center, Copier Room

USERS:	ACTIVITIES:
• Teachers	• Preparing lesson documents • Teacher supply storage
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4'x4' marker board	
• 4'x4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Copier	
• Tall double door storage cabinet	

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Administration/Guidance

Shared – Teacher Work Center, Conference Room

USERS:	ACTIVITIES:
• Teachers	• Meetings
	• Collaboration

DESIGN CONSIDERATIONS:

• May be open to teacher work area

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• 4'x4' marker board

• 4'x4' tack board

Owner Furnished – Contractor Installed

• None

Owner Furnished – Owner Installed

• Credenza

• Conference table for 6 people

• 6 Swivel, tilt armchairs

• Television and/or electronic whiteboard

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Administration/Guidance

Shared – Teacher Work Center, Break Area

USERS:	ACTIVITIES:
• Teachers	• Lounging
	• Eating
DESIGN CONSIDERATIONS:	
• May be open to teacher work area	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 8-12' countertop with sink, under counter refrigerator and over counter cabinets	
• 4'x4' marker board	
• 4'x4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Under counter refrigerator	
• Chairs	
• Tables	

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Administration/Guidance
Shared – Multi-Use/Community Room

USERS:	ACTIVITIES:
• Community Members • Principal • Staff/Faculty • Parents/Students • School Support Groups (PTO, etc.)	• Meetings/Conferences between Faculty/Staff and Students, Parents and Community

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Approximately 6' LF casework including, sink cabinet, door base and wall cabinet • Marker board • Tack board
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• 1 door locking storage cabinet • 1 - computer tables • Modular tables for easy rearrangement depending on room use (18" x 48") • Stackable chairs • PROJECTOR

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Administration/Guidance

New Mother's Room

USERS:	ACTIVITIES:
• Students • Parents • Visitors	• Diapering • Sleeping • Nursing • Feeding
DESIGN CONSIDERATIONS:	
• Locate centrally for easy access by all	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Shades on windows • 4'x4' marker board • 4'x4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Comfortable Chair • Side table	

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FOOD SERVICE

Food Service
Overview:

School Food Service Trends

Source: National Food Service Management Institute

Purchasing food service equipment and/or planning new and renovated school nutrition facilities can be one of the most challenging projects for school administrators. Success with these projects can be achieved by communicating with professionals in the industries of school food and nutrition, engineering, and architecture.

There are many aspects that need to be considered. When you take into account the rapidly changing architecture technology, the constantly evolving school food nutrition requirements, and student preferences, it is essential to design school cafeterias that are functionally sound, financially and operationally efficient, and student relevant.

A state-of-the-art school cafeteria and operation can make a significant impact on student participation in the child nutrition program and thereby on student performance.

Furthermore, with the increase in the number of summer or after-school feeding programs across the country, and especially in urban settings, school cafeterias are evolving into areas for community centers, parent open houses, and other common meeting places, acting as living rooms for the broader community we serve.

Key Considerations in Designing a Successful School Food Operation and Cafeteria

Increased Emphasis on Health and Wellness

- The Healthy, Hunger-Free Kids Act of 2010, championed by First Lady Michelle Obama and signed by President Obama, authorizes funding and sets policy for the United States Department of Agriculture (USDA) core child nutrition programs, including the National School Lunch Program and National School Breakfast Program. Through this Act, the USDA made the first major changes in school meals in 15 years to help ensure a healthier generation of children. These changes are intended to significantly benefit the long-term well-being and success of today's students.

- Even prior to the Healthy, Hunger-Free Kids Act of 2010, during the Child Nutrition and WIC Reauthorization Act of 2004, and in addition to wellness policies on food and nutrition education, there were ramifications and policies focusing on the food environment, food service operations, and even food service equipment and design. For example, local policies might suggest the following in regard to the eating environment:

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Increased Emphasis on Health and Wellness (continued)

- Dining areas should be clean, attractive, well lighted, and well maintained and should provide adequate time and space to eat meals.
- Dining areas should be designed to minimize the amount of time that students spend waiting in line.
- Safe drinking water and convenient access to facilities for hand washing and oral hygiene should be available during all meal periods.
- Dining areas should consider additional wellness messaging in their design, such as the need for signage or demonstrations that incorporate wellness education.

- The increased emphasis on healthy methods of cooking has also changed the types of equipment that used to be standard in food service kitchens. For example, instead of deep- fat fryers that once were included in kitchen preparation areas, steamers and convection ovens are now a more suitable replacement.

Food Security and Emergency Preparedness

Food security and emergency preparedness are very real issues for today's school nutrition programs. Crisis management may include having a plan in place in case of lockdown of a school building. Such a crisis may require schools to plan food to accommodate a different number of students, particularly for centralized or satellite operations. Security planning may include additional locking, camera, or communication systems, such as phone tree networks, or an NOAA radio which was originally used to transmit weather-related information, but can also be used to communicate other alerts and emergency information.
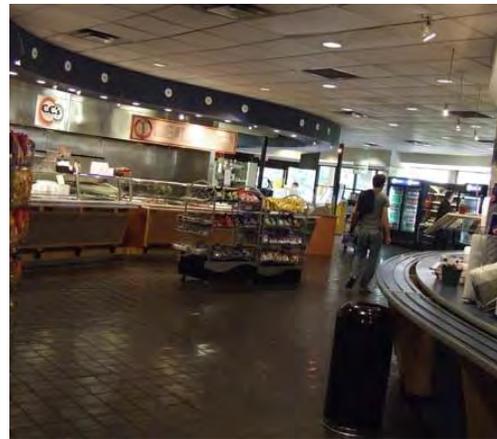
Emergency planning for natural disasters is also receiving renewed attention, both from the standpoint of planning for evacuation and for sheltering in place. The idea of sheltering in place as a response to an emergency situation may mean that schools must contend with the possibility that a major incident might necessitate keeping students at school for longer periods of time, such as days rather than hours. The use of schools for emergency shelters for both students and residents of the community has also become a priority planning issue with disasters such as Hurricane Katrina.

Alternate Food Production Systems

Labor shortages are not new, but continue to be a concern across the entire food service industry, including schools. To answer this problem, some large school districts such as HISD have switched to centralized production facilities. Although high school kitchen designs tend to focus more on fresh on-site cooking, often in view of the customer service area, many high-use items can be prepared in the central location and supplied to the school campus to eliminate preparation time and deliver consistent, safe products for menu incorporation. This method reduces equipment, inventory, and storage needs in school sites. In most cases, it can reduce

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overall labor or, at a minimum, redirect labor to a front-of-the-house customer focus. This is especially critical with older student customers.

Smaller and More Mobile Equipment

Newer equipment trends include a focus on smaller equipment and more mobile units, particularly for self-service areas such as salad, deli, or fruit and vegetable bars. Smaller and more mobile equipment offers the maximum flexibility to accommodate daily, as well as long-term menu needs. In addition, smaller, more mobile equipment also allows the service of food in schools in non-traditional locations.

Equipment with New or Blended Technologies

Cooking equipment with multiple or blended cooking options has become more common. Blended cooking equipment offers efficient and faster cooking. Examples include:
- Combi-ovens which offer the opportunity to cook with or without steam
- Central cooking units or "mono-blocks" may include gas burners, induction cooking plates, electric solid tops, wok ports, etc.
- Combined convection and microwave systems
- Combined lightwave and microwave ovens

Combination technology is now being found in other areas besides cooking equipment. Blixers or combination blenders and mixers are a more versatile and powerful option in food preparation. Conversely, more specialized equipment is also popular. Although not as commonly purchased in schools, bagel mixers, pizza ovens, and specialty coffee equipment have become popular in commercial restaurants.

Labor-Saving Options

Automation of equipment has already been used as one solution to the labor shortage in quick service restaurants. While schools may not be able to take advantage of this solution as completely as other segments of the food service industry, purchasing equipment that enables labor savings is one way to combat the labor shortage. Options that schools have installed include self-cleaning or descaling systems on certain types of equipment such as steamers, or water washing hoods that can be pre-set to wash when they are not being used. A trend toward manufacturing equipment with built-in maintenance operations is being observed across the board for many types of equipment. As it becomes a value-added feature, it may also reduce warranty cost.

Better Ventilation

Newer technology in ventilation systems allows for more comfortable work environments. Newer technologies include ventless hoods and cooking equipment that have been developed to allow the use of equipment outside of a ventilation hood; an example would be some specialty steamers. Local regulations should be followed in regard to the use of these; however, some schools have profited from the expanded cooking area. Less equipment underneath the hood might also be considered energy saving as it decreases the load on the heating, ventilation, and air conditioning (HVAC) systems. Due to increasing energy costs, the goal to minimize ventilation needs is also a trend for the future. In addition, ultraviolet hoods are now available for cleaning

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grease that accumulates in and above range filters and ducts.

Increased Emphasis on Food Safety

Implementation of HACCP (Hazard Analysis Critical Control Point)-based Standard Operating Procedures is required in all areas of the school food service operation shown below:

- Improved chilling of foods with smallwares and refrigeration equipment
- Better temperature tracking with faster and more convenient types of thermometers (for example, thermocouple and infrared thermometers) as well as more efficient documentation systems
- Decreased cross-contamination with equipment and supplies using color-coded methodology
- Greater availability of equipment that meets HACCP standards
- More effective hot- and cold-holding of foods
- Greater emphasis on equipment that is easy to clean and sanitize, as well as more effective, easier-to-use cleaning supplies
- Equipment systems that are integrated into computerized smart systems for better tracking and efficiency

Incorporation of Electro-Processors and Computers into Equipment

The use of electro-processor-based controls from electro-mechanical controls has become the standard. Electro-processor-based controls may be seen as digital read outs, touch pads, and other computer programming options. As these controls have become more reliable and multi- functional, they also have become smaller.

This enhancement results in a smaller piece of equipment with the same or greater production capacity. Programmable equipment can also result in significant energy savings if it is used to adjust equipment settings during periods when the equipment is not needed. It has been used extensively for heating, ventilation, and air conditioning systems, but is also possible in other areas.

Computer technology also includes computer monitored freezer alarms that will dial the central office or designated manager's home phone if the temperature falls to a certain level. Food loss can be avoided and food safety maintained with the proper use of these alarm systems. Computers can even be used to track defrost cycles and how long the freezer doors remain open.

Smart kitchens are one of the latest trends that make a great deal of sense in light of today's energy concerns. In a smart kitchen, equipment is hooked up to modems to remotely monitor temperature changes, malfunctions, and data related to food safety, as well as data related to food quality. Smart systems are a wave of the future for efficiency, quality, and control, but require greater investment to start. Examples of equipment that could be hooked up to smart systems include warewashers, blast chillers, walk-in and other refrigerators, and cooking equipment, as well as heating, ventilation, and air conditioning systems.

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More Colorful and/or Less Expensive Construction Materials

Construction materials have also evolved. Although stainless steel will continue to be viewed as one of the most durable materials, newer materials are being developed that are attractive and less expensive, yet still very practical. Some of these materials even incorporate additional benefits, such as antimicrobial properties. Examples range from colorful porcelain or enamel on equipment surfaces to the use of new materials such as silicone for smallwares. Silicone bakeware offers unique properties for insulation, but is considerably more expensive than metal bakeware and is not as likely to be used in volume preparation. Color-coded cutting boards, utensils, and plastic boxes offer food safety protection through their ability to identify their separate use for different food products, such as poultry, beef, and vegetables, thus minimizing the risk of cross-contamination.

Environmentally Friendly Equipment

Manufacturers are adapting equipment to meet growing environmental concerns. These concerns include energy use, air quality, water quality, and water use. Other environmental trends include reflective window glass, products made from recyclable materials, or energy-saving equipment. For example, air-cooled ice machines may be selected over water-cooled ice machines.

Consumer Trends

Changing lifestyles have affected the way we serve food in school cafeterias. There are many factors that contribute to this:

- Changing Lifestyles: Students are clearly more savvy and sophisticated in their tastes and desires for food service. Students have higher expectations resulting from their dining out experiences. Their expectations demand a wider variety of foods, better quality, increased food service choices, and an enhanced dining atmosphere. Students expect what they see in retail food courts or restaurants.
- Dining Environments: Student demands include more variety including "ethnic" menu items that are served in retail-like environments that offer convenience. Historical "scramble" or "single line serving" systems are not sufficient to satisfy the needs of these increasingly demanding and savvy students. There also is an increasing requirement to focus on the student as a "customer" instead of as a "captive audience."
- Convenience: Speed of service is a significant determining factor in the success of the food service operation as students simply do not want to wait in line. As a result, multiple service points are becoming the norm in new school cafeteria designs. Nationally, students have 22 minutes on average to pick up their food and eat. Most students prefer to spend this time eating and socializing with their friends rather than waiting in line.

> *According to the student ViewPOINT™ survey conducted by ARAMARK Education in 2012 among 42,000 students across the country:*
> - *Of the students who skip lunch or do not eat at the cafeteria, 53 percent of them stated that long lines are the main reason why they do not eat at the cafeteria one or more days in a week.*
> - *Eighty percent of the students stated that shorter lines or line speed is an important factor when they decide whether or not to get lunch at school.*

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Service Trends

The trends being observed in new school food service programs include a blend of self-service and multiple points of employee service with greater showcasing of food. This includes more open kitchen/preparation areas allowing for some part of the food preparation to be seen and appreciated by the student customer. Rounding out this trend is the food service operations' use of school kitchens to prepare meals for non-student populations. If a school program provides meals to groups outside of the school population or is considering it in the next five years, there may be an additional set of customer expectations to address in the purchase of food service equipment.

A guiding principle when making equipment purchasing decisions should be flexibility to meet future needs of the changing customer base. This will allow operations to handle incoming fads and long-term trends while maintaining operational viability.

Food Court Concepts

The food court design has been an extremely popular trend where students select from various specialty stations, such as burger bars, deli stations, and taco bars. This allows the students to wait only at the stations of their choice and go to different stations depending on their preference for the day. These kiosks or stations should consider providing standard pieces of equipment in each station so flexibility is retained when menus are redesigned as student tastes change.

Alternative Service Points

Quick service walk-up windows are being offered in some schools with positive outcomes. These service points can be in addition to the food court concept as an alternative point of service for the student population to be able to "grab and go." Schools also feel that the window service allows additional opportunities beyond the normal meal service periods. Clubs, for example, may use the windows after hours to sell concessions for different events at the school.

Speed Lines

Speed lines provide a fast system where multiple points of service are offered. Foods may include pre-wrapped products such as fresh salads, bagged lunches, breakfast meals, or other grab-and-go healthy options. Lines are often double-sided and the focus is on efficient movement for students on the go.

Kiosks and Food Carts

Kiosks offer food for faster service at small, mobile, free-standing carts. This increases and/or diversifies the number of service locations offered. It also enables higher participation as we are able to take more options to the students in places such as hallways, entrances, and gymnasiums.

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Exhibition-Style Cooking

Some form of display cooking or custom assembly of food right in front of the customer's view adds to a preferred perception of quality and freshness. Savvy students of all ages are catching on to the resurgence of *"fresh is best."* Television cooking channels also continue to push this approach as well as increasing the popularity of cooking "from scratch."

In order to meet customer demand for freshness, high schools may choose to include exhibition-style cooking at some service points. Panini grills, conduction cook tops, woks, grill/broilers, and pizza impinge (conveyor) ovens are often incorporated in cooking areas behind the service stations. Given the high volume of typical school lunch period customer traffic, these stations are limited to certain service points and are incorporated into serving areas offering more traditional speed-of-service and grab-and-go stations to meet volume demands. They serve to pique customer interest and sales and should be versatile to meet changing student preferences.

Critical Needs List

Following site visits to a number of Texas schools a broader group of HISD Food Services/ARAMARK operations and support services senior team members reviewed the findings and discussed key local considerations for an HISD facility. The group included leaders from maintenance, quality control, operations, warehouse and distribution, marketing, and administrative staffs. The following five factors were determined to be the critical drivers to successfully achieving HISD's food service's end goal:

1. Key regulatory considerations/National School Lunch Program requirements:
   a. HISD should continue offering a large variety of fresh fruit and vegetables with every meal. Adequate and refrigerated merchandising space is needed on each service line.
   b. The POS (point-of-sale) units must be located at the end of the serving line after all food and beverages have been served in order to comply with NSLP regulations.
   c. To comply with NSLP potable water access regulations, water fountains must be located in the dining area.

2. Changing trends in menus:
   a. Student ViewPOINT surveys conducted over the last three years in all HISD middle and high schools show the consumer preference to continue popular build-your-own style serving options for our students.
   b. Relevant concepts and environments where students want to eat must be offered.
   c. Serving lines need mobile serving equipment and versatile cooking equipment to change menu theme with consumer preference. For example, this could include a grill station that can

Home Zone Concept
Traditional and fresh fare; build-your-own meal as you like it

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double as a Mexican theme station (including fresh tortilla grilling and live action preparation of items) without major equipment change.

d. The HISD Parent Advisory Committee recommends that small high schools be afforded full-service menu options with a cooking facility versus a non-cooking satellite setup whenever possible.

Corner Crust Original Pizza & Pasta
Made fresh and daily: pizza, salads, calzones,and made-to-order pasta

3. The HISD Food Services Support Facility (FSSF) production model:
   a. Specialized small equipment needs will be kept to a minimum as all HISD campuses are supplemented with prepared foods from the Food Service Support Facility.
   b. Storage space needs are significantly less than the NFSMI standard as the FSSF warehouse and production center controls the product delivery schedule and menuing. Inventory levels in HISD campuses are tightly controlled.
   c. With the production facility supplementing food production, site staffing should meet service model requirements with the majority of staff assigned to the serving line area for speed of service at an average of 17 students per minute.

4. Design by enrollment:
   a. The size and number of serving areas should adjust and vary with enrollment. À la carte serveries were deemed necessary at all campuses, with smaller locations serving less enrollment receiving smaller à la carte serving areas.

5. Equipment considerations:
   a. Equipment quantities will adjust with enrollment size, although the type of equipment would be standard for most school models.
   b. Walk-in freezers should open into coolers to temper air.
   c. Cook lines should be separated in larger kitchens to manage the work flow of traffic efficiently and to avoid unsafe conditions.

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ARAMARK Marketing and Design Services Engagement

ARAMARK regional and national marketing representatives were engaged to discuss consumer trends in dining and service concepts to ensure that the proposed cafeterias for HISD 2012 Bond High Schools would be in line with cutting-edge marketing trends. John Kandemir, Vice President of ARAMARK Education Marketing, and Rick Ward, Regional Marketing Director, were consulted for their expertise in consumer trends and operational design to meet consumer expectations.

John and Rick monitor the latest research from education organizations, K–12 publications, industry experts, and agencies to stay abreast of K–12 legislation, regulations, and food and customer trends. Providing their expertise and support to more than 400 school district partners across the country, they complement their research with a proprietary ViewPOINT Survey to provide an integrated 360-degree view of the K–12 environment that delivers insight for school- specific improvements and innovation. The local HISD ViewPOINT Survey results were considered in developing this document.

ARAMARK Capital Projects' design experts were also consulted for their expertise and validation of our plan direction. Their group connects resources, guides capital project innovations, and educates the company and its partners on ways to maximize investment value. They are responsible for ARAMARK's creation and management of dining concepts, facility design standards, and managing our network of equipment and smallwares relationships. The Associate Vice President of Project Development, Michael Bolanos; Director of Project Execution, Bill Miller; and Project Agent, Mark Bond, were specifically consulted in our planning.

Last year they supported more than 500 facility and food concept design projects throughout ARAMARK. The K–12 district partners made up over 200 of these projects, including the concept development of the 75 new build-your-own service lines recently installed in HISD high schools. Their expertise, feedback, and support have been invaluable in the development of the enclosed plan.

The facilities described on subsequent pages provide for the preparation and serving of food to the students, staff and faculty. The Dining Commons serves not only as a place for eating but also a location used by the school for assemblies and student performances.

These facilities should be located in close proximity to the Custodial/ Maintenance area so that the receiving area can be shared.
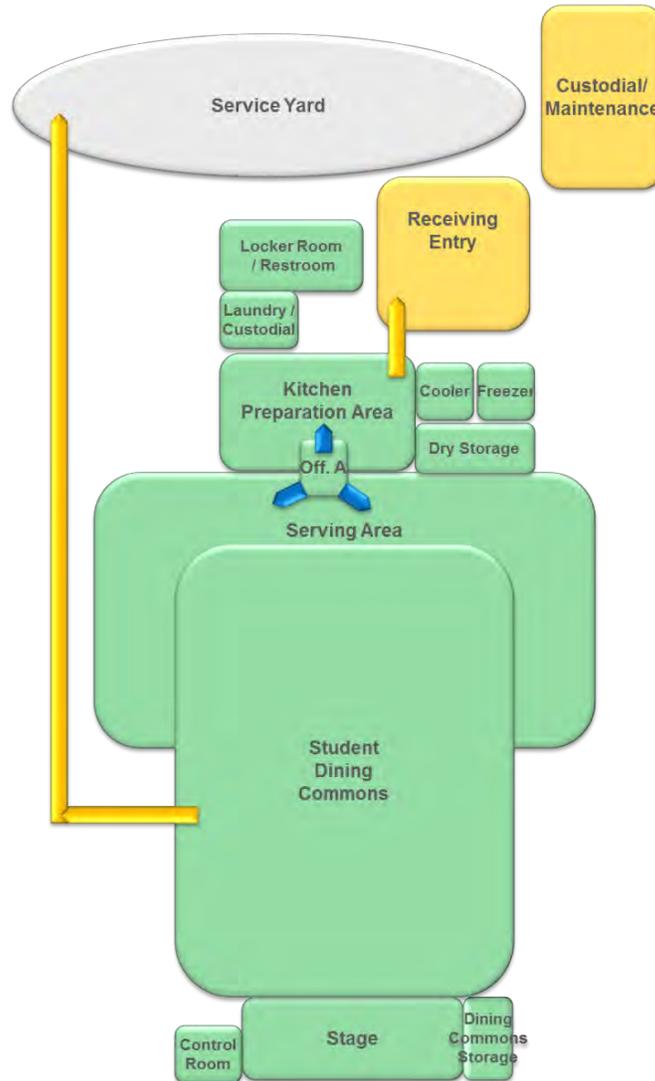
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Food Service

Legend

- Physical connection
- Visual connection
- Physical and/or acoustic separation

The functional relationships illustrated are diagrammatic only. Further interpretation of these relationships shall be implemented by the Design Team.

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Food Service
Space Requirements

Food Service	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Kitchen Preparation Area		1	900	900
Serving Area		1	1,000	1,000
Dry Storage		1	225	225
Freezer		1	175	175
Cooler		1	150	150
Kitchen Manager's Office		1	100	100
Laundry/Custodial Area		1	75	75
Locker Room/Restroom		1	150	150
Student Dining Commons (seating for 1/3 of (capacity +200) at one time)		1	4,894	4,894
Stage		1	400	400
Control Room		1	100	100
Dining Commons Storage		1	150	150
Total	0			8,319

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Food Service

Kitchen Preparation Area

USERS:	ACTIVITIES:
• Manager • Food Service Staff	• Preparation of food • Cooking foods • Staging meals before moving to serving lines • Cleaning equipment, work surfaces and floors

DESIGN CONSIDERATIONS:

- Equipment shall be located under two exhaust hoods located in close proximity to serving areas.
- Gas line to be exposed with additional electric circuit for expansion.
- Fire protection system – add one floor sink and water connection under each hood.
- Doorbell at receiving should be audible in Food Preparation Area.
- Allow space to store Utility Carts.
- Provide a minimum of 4' - 0" wide doors.
- Provide window, peep hole or camera for visibility of persons making deliveries to those receiving deliveries.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

• Markerboard
• Tackboard
• Cookline:
  • 2- Vent Hoods, 15' min. size each
  • Fire Protection System
  • 2- Convection ovens, double
  • 1- Four burner range convection oven
  • 1- Steamer Electric w/stand
  • 1- Two comp. sink w/disposal
  • 1- Disposal
  • 4- work tables min., number as needed
  • 10' Worktable w/ utility rack located in front of cook line, number as needed
	• 8- Pan Racks (Bun rack)
	• 1- Three compartment sink w/shelf
	• Mobile Utensil shelf, number as needed
	• 1- Ice machine w/bin
	• 8- Utility Carts
	• 8- Dolly, Milk Case
	• 8- Camcarts (1 cart for every 100 students)
	• Small Wares package(s), as needed
	• 2- Manual Can openers
	• 1- Commercial Blender

Owner Furnished – Contractor Installed

- Soap Dispensers
- Paper Towel Dispensers

Owner Furnished – Owner Installed

- Clock(s)

Food Service
Serving Area

USERS:	ACTIVITIES:
• Kitchen Manager • Food Service Staff • Students • Faculty	• Serving food • Receiving payment for food

DESIGN CONSIDERATIONS:

- Equipment is based on a minimum of 3 lunch periods.
- Serving will be in a food court design – number of stations dependent upon school capacity.
- If more than four stations, one station to be separate from kitchen so it can be used by school organizations after hours.
- Doorbell at receiving should be audible in Serving Area.
- Provide a minimum of 4'-0" wide doors.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- 2- Traditional (Standard Serving Lines)
  - 1 – Cold Display Merchandiser, 3' min.
  - 2- 3' Serving Unit Pan Flat
  - 1- 5' Serving Unit Pan Hot
  - 1- 3' Serving Unit Pan Cold
  - 1- Cold Tier Hot/Frost
  - 1- Cash Table
- 1- Specialty Line
  - 2- Cold Tier Hot/Frost
  - 1- 2' Serving Unit Pan Cold
  - 1- 3' Serving Unit Pan Flat
  - 1- 4' Serving Unit Pan Hot
  - 1- 3' Serving Unit Pan Cold
  - 1- 2' Serving Unit Pan Flat
  - 1- Cash Table
- 1- Heated Cabinet, 2 Door, pass thru preferred
- 1- Refrigerator, 1 door, pass thru preferred
- Back Counter, as needed
- Multi-fold Hand Towel Dispensers
- Soap Dispensers
- 3- Electronic Display (Menus)

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- 3- Point Of Sale (POS) Units
- 3- Adjustable height stools
- Clock(s)

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Food Service
Dry Storage

USERS:	ACTIVITIES:
• Food Service Staff	• Storing dry food / supplies

DESIGN CONSIDERATIONS:
• Locate Dry Storage near Kitchen Preparation Area
• Locate Dry Storage for easy access to Receiving Entry
• Provide security camera to monitor entrance
• Provide a minimum of 4' - 0" wide doors.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 2 - Can Racks – gravity fed
• Dry Storage Shelving, solid, as needed
• Dunnage Racks, solid, as needed
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

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Food Service

Freezer

USERS:	ACTIVITIES:
• Food Service Staff	• Storing frozen food

DESIGN CONSIDERATIONS:

- Locate freezer near Kitchen Preparation Area and have it open from Cooler.
- Enter freezer through cooler
- Locate for easy access to Receiving Entry
- Provide computerized remote monitoring system.
- Provide a minimum of 4' - 0" wide door

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- 1- Walk-in Freezer – TN-078, walk thru evenly spaced, min. 400 sq. ft.
- 2- Dunnage Racks, (Vented cold storage)
- Cold Storage Shelving, vented, number as needed.

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- None

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Food Service
Cooler

USERS:	ACTIVITIES:
• Food Service Staff	• Storing cold foods • Defrosting frozen food

DESIGN CONSIDERATIONS:
- Locate cooler near Kitchen Preparation Area and have it open into both Prep and Freezer
- Locate cooler/freezer for easy access to Receiving Entry.
- Provide computerized remote monitoring system
- Provide a minimum of 4' - 0" wide doors.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
- 1- Walk-in Cooler, walk thru evenly spaced, min. 400 sq. ft.
- 2- Dunnage Racks, (Vented Cold Storage)
- Cold Storage Shelving, vented, number as needed

Owner Furnished – Contractor Installed
- None

Owner Furnished – Owner Installed
- None

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Food Service

Office A (Kitchen's Manager's Office)

USERS:	ACTIVITIES:
• Manager	• Filing out Food Service documentation • Reviewing employee request • Ordering supplies • Counting cash •

DESIGN CONSIDERATIONS:

- Locate manager's office in a central location to allow visibility into kitchen prep area, service line holding area and receiving.
- Provide window, peep hole or camera for visibility of person receiving deliveries.
- Provide windows above 3' to below ceiling on all sides.
- Doorbell at receiving should be audible in Kitchen Manager's Office and Kitchen Preparation Area.
- If camera is provided it needs to be monitored through the computer system in the office.
- Combination safe should be secured to the building in a non- visible space in the office.
- Provide minimum of 4' wide doors.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- 1- Combination Safe
- 4' x 4' marker board
- 4' x 4' tack board

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- Desk
- 1- Task Chair
- 1- Guest Chair
- File Cabinet
- Bookcase
- Shades
- Clock
- Printer
- Computer
- Trash cans

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Food Service
Laundry / Custodial Area

USERS:	ACTIVITIES:
• Manager • Food Service Staff	• Washing food prep clothes and aprons • Drying food prep clothes and aprons • Storing cleaning supplies • Storing cleaning equipment • Cleaning mops
DESIGN CONSIDERATIONS:	
• Provide sufficient ventilation to prevent fumes from cleaners from damaging mother boards in washer and dryer. Alternatively, provide separate rooms for washer and dryer from mop sink.	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 1- Washer • 1- Dryer • Shelving, composite, as needed • Mop/Broom Rack • Mop Sink	
Owner Furnished – Contractor Installed	
• Paper Towel Dispenser	
Owner Furnished – Owner Installed	
• None	

Food Service
Locker Room / Restroom

USERS:	ACTIVITIES:
• Kitchen Manager • Food Service Staff	• Staff clothes changing • Storing of personal items by Staff

DESIGN CONSIDERATIONS:
• Provide floor drains with easy access clean-outs.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 8-10 Lockers min. • Coat Hooks
Owner Furnished – Contractor Installed
• Paper towel dispenser • Soap dispenser • Toilet paper dispenser
Owner Furnished – Owner Installed
• Bench • Clock

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Food Service

Student Dining Commons

USERS:	ACTIVITIES:
• Kitchen Manager • Food Service Staff • Students • Faculty	• Eating • Student Assembly • Social Gathering

DESIGN CONSIDERATIONS:

- Provide access from Dining Commons to dumpster area without going through Kitchen Prep.
- Include drinking fountains in the Dining Commons per code
- Provide area for future addition of vending machines
- Provide small stage for lectures and presentations. This space should include projection capability.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- 4' x 8' Tack board(s)
- Connections for projectors
- Sound System, to balance sound throughout the room
- Electronic Display(s)
- Charging stations, as needed

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- Tables and chairs for 1/3 of the program capacity plus 200 for dining
- Size and shape of tables should be varied to prevent an institutional appearance
- PROJECTOR
- Clock

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Food Service
Student Dining Commons – Stage

USERS:	ACTIVITIES:
• Students	• Student Performances
• Faculty	• School Assemblies
DESIGN CONSIDERATIONS:	
• Provide stage lighting with control board.	
• Provide outlets and microphone plugs at the top step.	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Motorized Projection Screen	
• Curtains – front, sides and back	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Food Service
Student Dining Commons – Control Room

USERS:	ACTIVITIES:
• Students • Faculty	• Controlling stage lighting • Controlling sound system • Storing A/V Equipment for stage
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4' x 4' Markerboard • 4' x 4' tack board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Chairs • 30" x 60" table • Tall lockable 2-door cabinets	

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Food Service
Student Dining Commons – Storage

USERS:	ACTIVITIES:
• Kitchen Manager • Food Service Staff • Students • Faculty	• Storing dining tables and chairs • Storing dining room equipment

DESIGN CONSIDERATIONS:
• None

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• Cart for Chairs • Cart for Tables

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CUSTODIAL / MAINTENANCE

Custodial / Maintenance

Overview:

These facilities provide for the cleaning and maintenance of the facility and include not only spaces dispersed throughout the school, but also central facilities for receiving, inventorying and storing supplies and equipment.

The centralized facilities should be located in close proximity to the Food Service area so that the receiving area can be shared.

Legend
- → Physical connection
- → Visual connection
- ▬ Physical and/or acoustic separation

The functional relationships illustrated are diagrammatic only. Further interpretation of these relationships shall be implemented by the Design Team.

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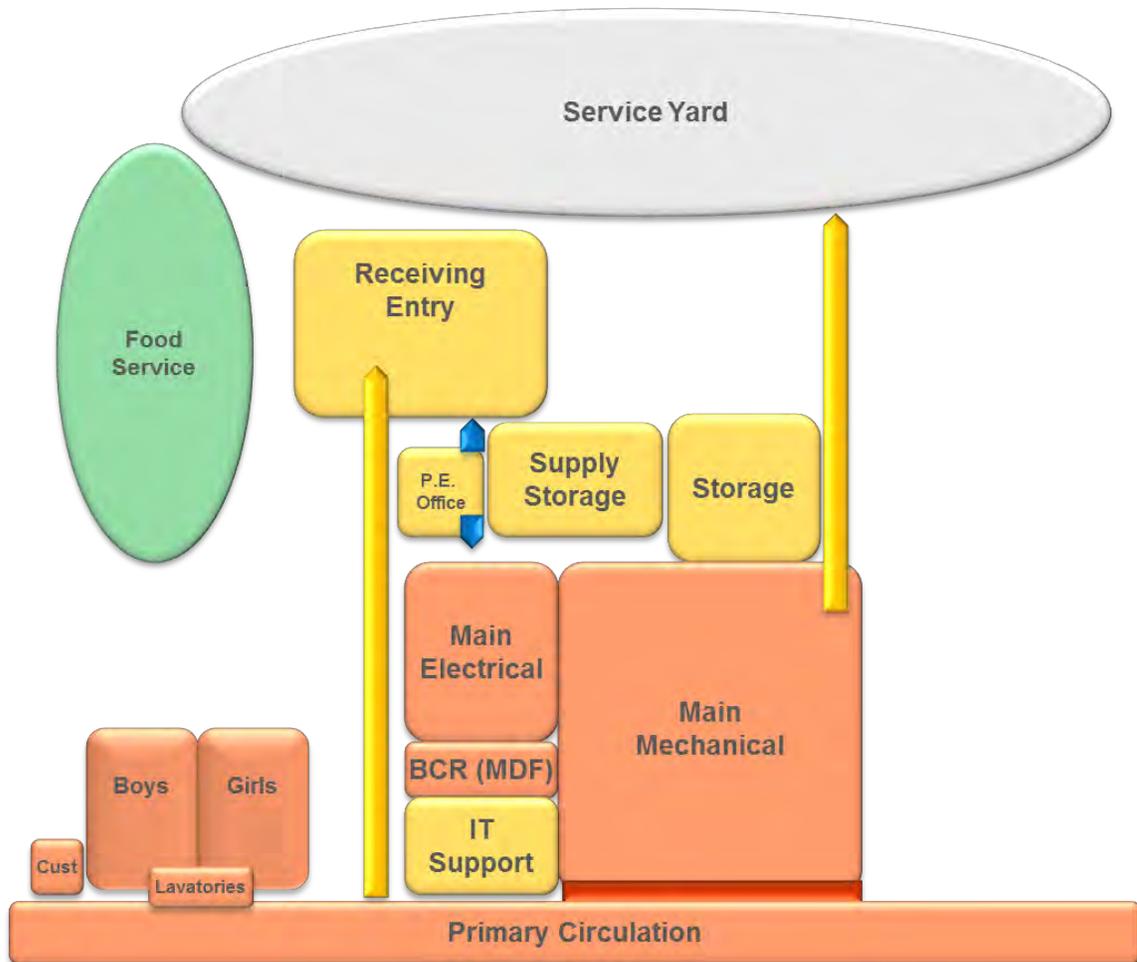
Custodial / Maintenance
Space Requirements

Custodial / Maintenance	Required Spaces			
	Teaching Station(s)	Quantity	Square Feet	Net Area
Receiving Entry		1	150	150
Office, Plant Engineer		1	75	75
Custodial/Maintenance Storage		1	200	200
Supply Storage		1	200	200
IT Support		1	100	100
Custodial Closet		3	100	300
Custodial Locker Room/Restroom		1	75	75
Total	0			1,100

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Custodial / Maintenance
Receiving Entry

USERS:	ACTIVITIES:
- Plant Operator - Maintenance Staff - Custodial Staff - Kitchen Staff - Delivery Personnel	- Filing out documentation for receipt of goods - Receiving miscellaneous school supplies - Receiving equipment - Receiving food deliveries - Disposal of school & food service waste

DESIGN CONSIDERATIONS:

- Provide space for a minimum of 2 waste bins and 1 recycle bin in Service Yard.
- Loading area is not to be a dock, but a curb.
- Provide doorbell that will be audible in kitchen.
- Provide window, peep hole or camera for visibility of persons making deliveries to those receiving deliveries.
- Provide bollards to prevent damage to buildings.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- None

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- None

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Custodial / Maintenance

Plant Engineer's Office

USERS:	ACTIVITIES:
• Plant Engineer • Custodial Staff • Maintenance Personnel	• Office functions for Plant Engineer • Repairing equipment using hand tools • Scheduling of custodial staff • Reviewing staff requests
DESIGN CONSIDERATIONS:	
• View to receiving entry	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 4' x 4' Tack board • 4'x4' Marker board	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Desk • Filing cabinet • Task chair • Guest chair • Bookcase	

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Custodial / Maintenance
Storage

USERS:	ACTIVITIES:
• Plant Engineer • Custodial Staff • Maintenance Personnel	• Repairing equipment using hand tools • Storing miscellaneous building supplies • Storing building maintenance equipment
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• 3 locking cages to secure equipment/supplies	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• 30" x 48" table • 2- Chairs • 3 tall deep heavy duty shelf units • Maximum LF of 24" D x 84" H x 16' L heavy duty open adjustable shelving on perimeter	

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Custodial / Maintenance
Supply Storage

USERS:	ACTIVITIES:
• Plant Engineer • Custodial Staff	• Storing miscellaneous school supplies • Storing school furniture • Storing school equipment
DESIGN CONSIDERATIONS:	
• Custodial Staff	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Adjustable metal shelving	

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Custodial / Maintenance

IT Support

USERS:	ACTIVITIES:
• IT Personnel • Plant Operator	• Store building support IT equipment • Repair IT devices
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• 30 x 60 Table • 2 Chairs • Adjustable shelves	

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Custodial / Maintenance
Custodial Closet

USERS:	ACTIVITIES:
• Plant Engineer • Custodial Staff	• Storing of Mops and Brooms • Cleaning of mops and other custodial equipment
DESIGN CONSIDERATIONS:	
• Locate throughout school	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mop Sink • Mop and Broom Rack	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• Metal shelving unit	

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Custodial / Maintenance
Locker Room / Restroom

USERS:	ACTIVITIES:
• Plant Operator • Custodial Staff • Maintenance Workers	• Staff clothes changing • Storing of personal items by Staff • Personal hygiene

DESIGN CONSIDERATIONS:
• Provide floor drains with easy access clean-outs.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• 4-8 Lockers min.   • Coat Hooks
Owner Furnished – Contractor Installed
• Paper towel dispenser   • Soap dispenser   • Toilet paper dispenser
Owner Furnished – Owner Installed
• Bench   • Clock

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BUILDING SUPPORT

Building Support

Overview:

These facilities provide for centralized building services including electrical and mechanical necessary for the operations of the building, but also service areas that are located throughout the building.

The centralized facilities should be located in close proximity to the Food Service area so that the receiving area can be shared.

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Building Support
Corridors

USERS:	ACTIVITIES:
• Students • Faculty • Staff • Visitors	• Circulation of occupants • Displaying awards, pictures, student work and school announcements

DESIGN CONSIDERATIONS:

- Lockable display cases are encouraged for the displaying of awards, pictures, school announcements and student work.
- Decision on whether to provide student lockers as well as their size and location will be determined in conjunction with the PAT during the Schematic Design phase.
- Minimum corridor widths are:
  - Serving more than two classrooms: 8'-0"
  - Serving more than eight classrooms: 9'-0"
  - Major corridor: 12'-0"
  - Lockers along one wall: add 2'-0"
  - Lockers along two walls: add 3'-0"

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Lockable display cabinets
- Tack board / Tack wall

Owner Furnished – Contractor Installed

- None

Owner Furnished – Owner Installed

- None

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HOUSTON INDEPENDENT SCHOOL DISTRICT
CONSTRUCTION AND FACILITY SERVICES: FACILITIES PLANNING – June 12, 2014
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Building Support
Group Restrooms

USERS:	ACTIVITIES:
• Students	• Personal hygiene

DESIGN CONSIDERATIONS:

- Design entry without doors
- Locate male and female restroom entrances apart so that there can be no "accidental" entry into the wrong gender's facility.

FURNITURE, FIXTURES & EQUIPMENT:

Contractor Furnished – Contractor Installed

- Mirrors (not above sinks)

Owner Furnished – Contractor Installed

- Paper towel dispensers
- Toilet paper dispensers
- Soap dispensers

Owner Furnished – Owner Installed

- None

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Building Support
Single Restrooms

USERS:	ACTIVITIES:
• Faculty • Visitors	• Personal hygiene
DESIGN CONSIDERATIONS:	
• None	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mirrors • Coat hook	
Owner Furnished – Contractor Installed	
• Paper towel dispenser • Soap dispenser • Toilet paper dispenser	
Owner Furnished – Owner Installed	
• None	

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Building Support
Main Mechanical

USERS:	ACTIVITIES:
• Plant Operator • Maintenance Staff	• Mechanical Equipment which heats and cools school • Repairing Mechanical Equipment • Servicing Mechanical Equipment
DESIGN CONSIDERATIONS:	
• Size doors to allow for replacement of equipment. • Consider roll up doors.	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Mechanical Equipment	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Building Support

Main Electrical

USERS:	ACTIVITIES:
• Plant Engineer • Maintenance Personnel	• Electrical Equipment for school's electrical needs • Repairing Electrical Equipment • Servicing Electrical Equipment
DESIGN CONSIDERATIONS:	
• Attempt to locate so not below "wet" spaces.	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• Electrical Equipment	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

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Building Support

BCR - Building Communication Room (MDF)
FCR - Floor Communication Room (IDF)

USERS:	ACTIVITIES:
• Plant Engineer • IT Personnel	• House IT equipment • House mission critical equipment (i.e. fire alarm, burglar alarm, intercom)

DESIGN CONSIDERATIONS:
• Maintain a temperature of 40 degrees in the BCR. • Locate FCRs so that there is one within a 190 foot radius. • In multi-story facilities, locate FCRs so that they stack vertically.

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• Fire Rated Plywood on a minimum of 3 walls • Fire alarm • Burglar alarm • Intercom system
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• IT Racks • IT Equipment

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Building Support

Stairs

USERS:	ACTIVITIES:
• Students • Faculty • Staff • Visitors	• Vertical circulation for building occupants

DESIGN CONSIDERATIONS:
• Visual supervision of stairs from corridors should be maintained • Multiple staircases for student circulation should be considered rather than a single monumental stair

FURNITURE, FIXTURES & EQUIPMENT:
Contractor Furnished – Contractor Installed
• None
Owner Furnished – Contractor Installed
• None
Owner Furnished – Owner Installed
• None

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Building Support

Elevator

USERS:	ACTIVITIES:
• Students • Faculty • Staff • Visitors	• Vertical circulation for building occupants
DESIGN CONSIDERATIONS:	
• Key operated only	
FURNITURE, FIXTURES & EQUIPMENT:	
Contractor Furnished – Contractor Installed	
• None	
Owner Furnished – Contractor Installed	
• None	
Owner Furnished – Owner Installed	
• None	

HOUSTON INDEPENDENT SCHOOL DISTRICT
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EDUCATIONAL SPECIFICATIONS
MATRIX

2012 HISD BOND
BUILDING EXCELLENCE

HISD EDUCATIONAL SPECIFICATIONS
ENERGY INSTITUTE HIGH SCHOOL – JUNE 12, 2014

CONSTRUCTION AND FACILITY SERVICES
FACILITIES PLANNING

General Notes

G1. Provide base as appropriate for flooring material, for concrete provide flexible base.

G2. Provide acoustical wall treatment as appropriate for all open, tall and / or noise producing spaces.

G3. All materials should be easily sanitized and long wearing.

G4. Ceiling Heights shall be 9'-0" minimum, 10'-0" maximum, unless noted otherwise on Matrix

G5. Terrazzo may be used as a floor finish in high traffic areas if project can bear the additional cost.

G6. Use of carpet in non office areas must be approved by HISD.

G7. The use of flexible furniture/equipment is encouraged. Built-in casework and shelving should be minimized-generally casework should only be provided where a sink is required.

G8. All windows in spaces that are occupied on a regular basis shall receive shades or blinds.

G9. All spaces to which a student may go shall have a visual connection (fixed window, door light or sidelight) to the adjacent space or circulation.

G10. All spaces shown to receive an electronic whiteboard/projector by Owner should have blocking installed in the wall by the Contractor. The projector is integral to the board.

G11. Provide acoustical wall treatment as appropriate for all open, tall and/or noise producing spaces.

G12. Not Used

G13. Consider the use of large tackable wall surfaces where tackboard is noted.

G14. Data drops noted on the matrix do not include wireless access or video display connections. See Design Guidelines for number and locations of drops for these devices.

Program Specific Notes

A. Continue flooring from corridor to front side of reception counter.

B. Removable interlocking rubber tile floor designed for use in weight rooms shall be provided and installed by contractor over a permanent substrate.

C. 2 duplex outlets located in casework apron at each student station

D. One duplex and data located for wall mounted display monitor

E.   Locate one set of drinking fountains in adjacent corridor.

F.   Provide floor drain at emergency shower/eyewash station. Provide acid resistant piping and neutralization.

G.   Provide system noted with an * if required for specific curriculum.

H.   Provide lockable storage, including one ventilated cabinet for paints and thinners. Coordinate mechanical for proper ventilation.

I.   Provide large deep sink for cleaning instruments.

J.   Provide large electrically operated, projection screen with projector

K.   Install an eye wash station at sink.

L. Provide drinking fountain in or near treatment area.

M. Wall and ceiling finishes of walk-in are by the manufacturer. Floor to match the floor in food preparation area

N. Provide mop sink in Custodial area.

O. Provide washer and dryer connections and sufficient ventilation in Laundry area.

P. Plaster Traps at art sinks

Q. Coordinate HVAC/Plumbing/Electrical requirements with equipment

R.   Provide permanent speaker system

S. Provide double door with removable mullion at corridor.

T. Provide electrical and data outlets as required by equipment layout.

U. Provide plywood under GWB these areas to allow for hanging of artwork. Develop detail at floor base to address the need to constantly repaint these walls.

FINISH, FENESTRATION & INFRASTRUCTURE MATRIX
ENERGY INSTITUTE HIGH SCHOOL

Column groups — **FINISHES** (Floor: Carpet, Wood, Concrete, Polished or Stained Concrete, Sports, Ceramic Tile, Quarry Tile, Resinous, Resilient; Partitions: CMU, Gypsum Wallboard, Ceramic Tile, Glass Wall, Markable Wall, Folding Wall; Ceiling: Exposed Structure, Acoustical Ceiling Tile, Gypsum Wallboard, Ceiling Height Min/Max) — **OPENINGS** (Doors: Alumin/Storefront, Hollow Metal, Wood plastic laminate, Roll-up exterior-insulated, Roll-up interior door/grille, View Lite; Windows: Interior, None, Operable, Daylighting) — **HVAC, PLUMBING AND ELECTRICAL** (HVAC: Exhaust to exterior, Fume/Exhaust Hood, Dust Collection System; Plumbing: Sink, Natural Gas (double outlet @ each), Drinking fountain, Eye wash/Shower, Floor drain; Electrical: Duplex, Quad, Data/Voice, Switching to Allow Multiple Light Levels, Specialty) — **EQUIPMENT AND SPECIAL SYSTEMS** (Equipment: Lockers, Markerboard, Tackboard/Tackwall, Interactive Board, Projection Screen; Built-ins: Base Cabinets with Counters, Wall Cabinets, Tall Storage Cabinets, Built-in Shelves; Special Systems: Phone, Specialty) — **NOTES**

Neighborhoods

Room	Carpet	Wood	Concrete	Polished/Stained Concrete	Sports	Ceramic Tile (Fl)	Quarry Tile	Resinous	Resilient	CMU	Gypsum WB (Part)	Ceramic Tile (Part)	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Ceiling Tile	Gypsum WB (Ceil)	Ceiling Ht Min/Max	Alumin/Storefront	Hollow Metal	Wood plastic laminate	Roll-up ext-insulated	Roll-up int door/grille	View Lite	Interior	None	Operable	Daylighting	Exhaust to exterior	Fume/Exhaust Hood	Dust Collection Sys	Sink	Natural Gas (dbl ea)	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data/Voice	Switching Mult Light	Specialty	Lockers	Markerboard	Tackboard/Tackwall	Interactive Board	Projection Screen	Base Cab w/ Counters	Wall Cabinets	Tall Storage Cab	Built-in Shelves	Phone	Specialty	NOTES
Learning Community				X					X	X	X		X	X	X		X		9/10	X		X		X	X				X									8	3	6	X			2	3	1						X		
Huddle Spaces/Small Group Rooms	X			X					X	X	X		X	X	X		X		9/10	X		X		X	X				X									8	3	6	X			2	3	1						X		
Learning Center				X					X	X	X		X	X	X		X		9/10	X		X		X	X				X									8	3	6	X			2	3	1						X		
Wet Lab				X					X	X	X		X	X			X		9/10	X		X			X				X	X	X		8	8		1	X	16		10	X			2	3	1		X	X	X	X	X		C,F,G
Wet Lab Storage				X					X	X	X						X		8			X					X			X	X		1	1		1	X	4	1	1				1	1			X	X	X	X	X		
Learning Commons/Media Lounge	X			X							X		X	X	X	X	X		12/16	X		X		X	X	X			X									2 charging areas with 3 quads e			X			1	1	1						X		D
Central Media Lounge	X			X							X		X	X	X	X	X		12/16	X		X		X	X	X			X									2 charging areas with 3 quads e			X			1	1	1						X		D
Storage				X						X	X	X					X		8			X					X			X																									
Office / Workroom	X			X						X	X						X		8			X					X						1					4	1	2				1	1			X	X			X		
College Center	X			X							X		X	X	X	X	X		12/16	X		X		X	X	X			X									2 charging areas with 3 quads e			X			1	1	1						X		D
Computer Repair/Storage Room				X						X	X	X					X		8			X					X			X								2													X			

FINISH, FENESTRATION & INFRASTRUCTURE MATRIX
ENERGY INSTITUTE HIGH SCHOOL

Career and Technical Education (CTE)

Room	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	CMU	Gypsum Wallboard	Ceramic Tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Ceiling Tile	Gypsum Wallboard	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up, exterior-insulated	Roll-up, interior door/grille	View Lite	Interior	None	Daylight Exposure	Exhaust to exterior	Fume Hood	Individual Dust Collection Systems	Sink	Natural Gas	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data / Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard / Tackwall	Interactive Board	Projection Screen	Base Cabinets with Counters	Wall Cabinets	Tall Storage Cabinets	Built-in Shelves	Phone	Specialty	NOTES
Engineering Lab A (9th Grade Principles of Engineering)			X	X						X	X		X	X	X	X	X		12/16	X		X		X				X	X	2		1			X	X	17	8	17	X	X		2	3	1						X		D,I,T
Engineering Lab B (Construction type lab)			X	X						X			X			X			12/16	X			X	X				X	X		X	1			1	1	30	8	8	X			2	3	1						X		D,I,T
Engineering Lab C (Science type lab)			X	X					X	X			X	X			X				X	X		X				X				12				X	18	24	24	X			1	1	1						X		D, Q, T
Engineering Lab D (Construction type lab w/underwater robot capability)			X	X						X			X			X			12/16	X			X	X				X	X		X	1			1	1	30	8	8	X			2	3	1						X		D,I,T
Lecture/Presentation Hall (Seats 200)	X		X							X	X		X	X			X		12/16		X							X									30	8	30	X			2	3	1						X		D,I,T
Podium	X		X							X	X		X	X			X				X							X									30	8	30	X			2	3	1						X		D,I,T

	FINISHES																			OPENINGS										HVAC, PLUMBING AND ELECTRICAL													EQUIPMENT AND SPECIAL SYSTEMS											
	FLOOR									PARTITIONS						CEILING				DOORS						WINDOWS				HVAC			PLUMBING					ELECTRICAL					EQUIPMENT					BUILT-INS				SPECIAL SYSTEMS		
	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	CMU	Gypsum Wallboard	Ceramic Tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Ceiling Tile	Gypsum Wallboard	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up, exterior-insulated	Roll-up, interior door/grille	View Lite	Interior	None	Operable	Daylight Exposure	Exhaust to exterior	Fume Hood	Dust Collection System	Sink	Natural Gas	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data / Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard / Tackwall	Interactive Board	Projection Screen	Base Cabinets with Counters	Wall Cabinets	Tall Storage Cabinets	Built-in Shelves	Phone	Specialty	NOTES
Visual Arts																																																							
Visual Arts Learning Center				X					X		X		X	X			X		10/12		X				X		X	X					2				X	8	4	6	X			2	3	1		X	X		X	X		P
Kiln Room				X					X		X						X				X				X			X		X							1					X		X	X								X	Q
Storage Room				X					X		X						X				X				X			X		X																					X			H

| | FINISHES | | | | | | | | | | | | | | | | | | | OPENINGS | | | | | | | | | HVAC, PLUMBING AND ELECTRICAL | | | | | | | | | | | | EQUIPMENT AND SPECIAL SYSTEMS | | | | | | | | | | | |
| | FLOOR | | | | | | | | | PARTITIONS | | | | | | CEILING | | | | DOORS | | | | | | WINDOWS | | | HVAC | | | PLUMBING | | | | | ELECTRICAL | | | | | EQUIPMENT | | | | | BUILT-INS | | | | SPECIAL SYSTEMS | | |
	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	CMU	Gypsum Wallboard	Ceramic tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical	Gypsum Wallboard	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up, exterior-insulated	Roll-up, interior door/grille	View Lite	Interior	None	Daylighting	Exhaust to exterior	Fume Hood	Dust Collection System	Sink	Natural Gas	Drinking fountain (dual height)	Drinking fountain	Floor drain	Duplex	Quad	Data/Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard/Tackwall	Interactive Board	Projection Screen	Base Cabinets with Counters	Wall Cabinets	Tall Storage Cabinets	Built-in Shelves	Phone	Specialty	Notes
Physical Education / Athletics																																																					
Multi-Purpose Activity/Fitness Learning Center					X					X	X				X		X		16/23		X					X		X									8	3	6	X				2							X		R
Boys/Girls P.E. Locker Rooms				X		X			X	X	X						X				X						X									X	4		2			X	1	2							X		E
Student Toilet / Showers				X		X			X	X	X	X					X			X					X				X			X				X																	
Adult Toilet / Shower / Locker				X		X			X	X	X	X					X			X					X				X			X				X						X											
Office (shared)				X					X	X	X						X				X					X		X									8	1	2	X			1	2							X		
P.E. Equipment Storage				X					X	X	X						X				X					X		X									1																

Column groups: **FINISHES** (FLOOR, PARTITIONS, CEILING) · **OPENINGS** (DOORS, WINDOWS) · **HVAC, PLUMBING AND ELECTRICAL** (HVAC, PLUMBING, ELECTRICAL) · **EQUIPMENT AND SPECIAL SYSTEMS** (EQUIPMENT, BUILT-INS, SPECIAL SYSTEMS)

Space	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	CMU	Gypsum Wallboard	Ceramic Tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Ceiling Tile	Gypsum Wallboard	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up exterior-insulated	Roll-up interior door/grille	View Lite	Interior	None	Operable	Daylighting	Exhaust to exterior	Fume Hood	Dust Collection System	Sink	Natural Gas	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data / Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard / Tackwall	Interactive Board	Projection Screen	Base Cabinets with Counters	Wall Cabinets	Tall Storage Cabinets	Built-in Shelves	Phone	Specialty	NOTES
Administration / Guidance																																																						
Administration																																																						
Main Reception	X			X					X	X	X		X				X			X						X	X		X									7	2	4	X				X							X		A, D
Office A (STEM, Sec, Testing Co-ord)	X									X	X						X					X				X		X	X									4	1	2	X			1	1							X		
Office C (Principal)	X									X	X						X					X				X		X	X									6	2	4	X			1	1							X		D
Restroom						X		X		X	X	X						X				X					X						1				1	1																
Main Conference Room	X									X	X		X	X			X			X						X			X									6	2	4	X			1	1							X		D
Workroom / Break Room	X			X						X	X	X					X					X				X		X	X				1				X	8	2	4		X		1	1			X	X	X		X		Q
Mail Room				X						X	X						X					X							X								X	2		1		X			1							X		
Registrar/Attendance																																																						
Office A (Registrar, Attendance, Itinerant)	X									X	X						X					X				X		X	X									4	1	2	X			1	1							X		
Records / File Room				X						X	X						X					X		X		X												1		1				1	1						X	X		
Distributed Administration																																																						
Office B (A.P.)	X									X	X						X					X				X		X	X									4	1	2	X			1	1							X		
A.P. Reception / Waiting	X									X	X						X			X						X			X									4	1	2	X				1							X		
Small Conference Room	X									X	X		X	X			X			X						X			X									4	1	2	X			1	1							X		D
Storage				X						X	X						X					X		X		X												1		1														
Office A (Security)	X									X	X						X					X				X		X	X									4	1	2	X			1	1							X		
Health Clinic																																																						
Health Clinic			X						X	X	X						X					X			X	X			X				1			X		6	1	2	X			1	1			X	X			X		K
Reception/Waiting			X						X	X	X						X			X		X			X	X			X									4	1	2					1							X		
Office A			X						X	X	X						X					X			X	X		X	X									4	1	2	X			1	1							X		
Restroom						X		X		X	X	X						X				X					X						1				1	1																
Guidance / Student Services																																																						
College Center	X									X	X		X	X			X			X						X			X									4	1	2	X			1	1							X		D
Office B (College, Magnet, Counselor, SPED)	X									X	X						X					X				X		X	X									4	1	2	X			1	1							X		
Conference Room, Small	X									X	X		X	X			X			X						X			X									4	1	2	X			1	1							X		
Shared																																																						
Teacher Work Center	X			X						X	X	X					X					X				X		X	X				X					X	X	X	X			1	1			X	X			X		
Multi-use / Community Room	X			X						X	X	X	X	X			X		9/10	X								X	X									8	4	8	X			2	3	1						X		
New Mother's Room	X			X						X	X	X	X	X			X			X								X	X									1		1	X			1	1									

Column groups: FINISHES (FLOOR, PARTITIONS, CEILING) · OPENINGS (DOORS, WINDOWS) · HVAC, PLUMBING AND ELECTRICAL (HVAC, PLUMBING, ELECTRICAL) · EQUIPMENT AND SPECIAL SYSTEMS (EQUIPMENT, BUILT-INS, SPECIAL SYSTEMS) · NOTES

Space	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	Manufacturer's Panels	CMU or GWB	Ceramic Tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Ceiling Tile	Gypsum Wallboard	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up, exterior-insulated	Roll-up, interior door/grille	View Lite	Interior	None	Operable	Daylighting	Exhaust to exterior	Fume/Exhaust Hood	Dust Collection System	Sink	Natural Gas (double outlet @ each)	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data / Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard / Tackwall	Interactive Board	Projection Screen	Base Cabinets with Counters	Wall Cabinets	Tall Storage Cabinets	Built-in Shelves	Phone	Specialty	NOTES
Food Service																																																							
Food Preparation																																																							
Food Prep. / Cook Line			X			X	X					X					X				X	X				X				X	X		X				X	as required for equipt																
Serving Area			X			X	X				X	X					X				X	X		X	X	X				X			X				X	X		X	1 per POS													
Dry Storage						X	X					X					X				X	X			X		X											X																
Cooler						X	X			X							Mfr.			Mfr.																																		
Freezer						X	X			X							Mfr.			Mfr.						X																												
Kitchen Manager's Office						X	X	X			X	X	X				X				X	X			X	X	X											2	2	2	X			X	X							X		
Laundry Area			X			X	X				X	X					X				X	X				X				X							X	1			X													N,O
Custodial			X			X	X				X	X					X				X	X				X				X			X				X	1																N,O
Locker Room			X			X	X	X			X	X					X				X	X				X				X			X				X	1			X		X		X								X		
Restroom			X			X	X	X			X	X					X				X	X				X					X				X		X	1																
Student Dining																																																							
Commons Area				X					X		X			X	X	X	X	X	16/20	X	X		X	X	X				X						X			12	4	4	X			X	X							X		R
Storage		X		X					X		X						X			X	X																	1																
Control Room		X		X					X		X						X	X		X	X				X	X												4	3	4		X											
Stage				X					X		X						X			X	X																	3	6	5		X					X						

	FINISHES — FLOOR									PARTITIONS						CEILING				OPENINGS — DOORS						WINDOWS				HVAC			PLUMBING					ELECTRICAL					EQUIPMENT					BUILT-INS				SPECIAL SYSTEMS		
	Carpet	Wood	Concrete	Polished or Stained Concrete	Sports	Ceramic Tile	Quarry Tile	Resinous	Resilient	CMU	Gypsum Wallboard	Ceramic Tile	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical	Gypsum Board	Ceiling Height Min/Max	Alumin / Storefront	Hollow Metal	Wood, plastic laminate	Roll-up exterior-insulated	Roll-up interior door/grille	View Lite	Interior	None	Operable	Daylight Exposure	Exhaust to exterior	Fume Hood	Dust Collection System	Sink	Natural Gas	Drinking fountain	Eye wash/Shower	Floor drain	Duplex	Quad	Data / Voice	Switching to Allow Multiple Light Levels	Specialty	Lockers	Markerboard	Tackboard	Interactive Board	Projection Screen	Base Cabinets w/ Counters	Wall Cabinets	Tall Storage Cabinets	Built-In Shelves	Phone	Specialty	Notes
Custodial / Maintenance																																																							
Receiving Entry			X							X							X		16/20	X		X			X										X	X		4		1												X		
Plant Engineer Office			X						X	X	X						X			X				X	X		X	X										4	2	2	X							1	1					
Custodial / Maintenance Storage		X	X						X	X	X						X			X				X		X											X	6		1								1	1					
Supply Storage																																																						
IT Support			X						X	X	X						X			X				X		X	X	X										12	4	6								1	1					
Custodial Closets			X			X		X		X							X	X		X	X			X				X									X	1																N
Custodial Loocker / Restroom			X			X	X	X			X	X					X			X	X				X			X		X					X		X	1																

FINISH, FENESTRATION & INFRASTRUCTURE MATRIX

Column groups:
- **FINISHES** — FLOOR (Carpet, Wood, Concrete, Polished or Stained Concrete, Sports, Ceramic Tile, Quarry Tile, Resinous, Resilient); PARTITIONS (CMU, Gypsum Wallboard, Ceramic Tile, Glass Wall, Markable Wall, Folding Wall); CEILING (Exposed Structure, Acoustical Ceiling Tile, Gypsum Wallboard, Ceiling Height Min/Max)
- **OPENINGS** — DOORS (Alumin / Storefront, Hollow Metal, Wood plastic laminate, Roll-up exterior-insulated, Roll-up interior door/grille, View Lite, Interior, None); WINDOWS (Daylighting)
- **HVAC, PLUMBING AND ELECTRICAL** — HVAC (Exhaust to exterior, Fume Hood, Dust Collection System); PLUMBING (Sink, Natural Gas, Drinking fountain, Drinking fountain, Floor drain); ELECTRICAL (Duplex, Quad, Data / Voice, Switching to Allow Multiple light Levels, Specialty)
- **EQUIPMENT AND SPECIAL SYSTEMS** — EQUIPMENT (Lockers, Markerboard, Tackboard / Tackwall, Interactive Board, Projection Screen); BUILT-INS (Base Cabinets with Counters, Wall Cabinets, Tall Storage Cabinets, Built-in Shelves); SPECIAL SYSTEMS (Phone, Specialty)

Building Support

Room	Carpet	Wood	Concrete	Polished/Stained Concrete	Sports	Ceramic Tile (fl)	Quarry Tile	Resinous	Resilient	CMU	Gypsum WB	Ceramic Tile (part)	Glass Wall	Markable Wall	Folding Wall	Exposed Structure	Acoustical Clg Tile	Gypsum WB (clg)	Clg Height Min/Max	Alumin/Storefront	Hollow Metal	Wood plastic lam	Roll-up ext-insul	Roll-up int door/grille	View Lite	Interior	None	Daylighting	Exhaust to exterior	Fume Hood	Dust Collection Sys	Sink	Natural Gas	Drinking fountain	Drinking fountain	Floor drain	Duplex	Quad	Data/Voice	Switching Mult Light	Specialty	Lockers	Markerboard	Tackboard/Tackwall	Interactive Board	Projection Screen	Base Cab w/ Counters	Wall Cabinets	Tall Storage Cab	Built-in Shelves	Phone	Specialty	Specialty	NOTES
Corridors			X	X					X	X	X		X		X	X	X			X	X	X			X	X	X	X						X			X	X						X							X	X		
Student Restrooms				X		X		X		X	X	X						X		No Doors												X		X		X	X	X	X	X											X	X		
Adult Restrooms				X		X		X		X	X	X					X	X				X										X				X	X	X	X	X											X	X		
Stair, Main / Open			X	X						X	X	X	X			X	X	X			X				X			X																										
Stair, Exit			X	X						X	X					X		X			X							X																										
Mechanical Room			X								X					X											X											1	2														
Electrical Room			X							X	X	X				X											X											1	2														
Building Data Room			X							X	X	X	X			X											X																										
Elevator										X	X									Mft Standard							X																										3
Elevator Machine Room			X							X	X					X	X			X	X					X																									X	X		