EXECUTIVE SUMMARY

OAKLAND UNIFIED SCHOOL DISTRICT

Community Schools, Thriving Students

Together, We Are Building

a full-service community school district that serves the whole child, eliminates inequity and provides each child with an excellent teacher, every day.

Educational Specification

(Baseline)

High School (9 - 12)

June 2011

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Preface

Quote

"We Shape Our Buildings; Thereafter, They Shape Us.

– Winston Churchill

Value Statement

No building type has undergone greater change, in recent years, than the schoolhouse. These changes in the building are, for the most part, the symptoms of changing trends in student learning.

As a dynamic reflection of the culture in which we live, the specific educational needs of each community must continually change to meet the demands of the present and to support the projections of the future. So too must facilities for education – rather than being merely a shelter in which the elements of education are delivered and received, they now have become a complete educational tool, capable of supporting a wide variety of learning experiences for citizens of all ages, abilities, and needs.

These educational specifications have been developed to permit teachers, staff, students and the community an opportunity to experience a 21st century state of the art educational program within a 21st century facility.

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"In reaffirming the greatness of our nation we understand that greatness is never a given. It must be earned. Our journey has never been on of short-cuts or settling for less. It has not been the path of the faint-hearted—for those who prefer leisure over work, or seek only the pleasures of riches and fame. Rather, it has been the risk-takers, the doers, the makers of things—some celebrated but more often men and women obscure in their labor, who have carried us up the long, rugged path towards prosperity and freedom."

President Barack Obama
Inaugural Address
January 20, 2009

PART I: PURPOSE AND DISTRICT OVERVIEW

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A. OVERVIEW

"The Educational Specifications and Standards for Facilities" shall control and provide the basic guidelines in the acquisition and development of school sites and in the master planning, designing and construction of facilities for all public schools in Oakland Unified School District. This document, referred to as the EDSPECS, was developed to meet the need for a baseline guide for consultants, the Department of Education (DOE), the community, other government agencies, and the public in the design and planning of new schools and additions to existing schools.

The EDSPECS are divided into three volumes, for use at each of the three educational levels: elementary, middle/intermediate and high. Although much of the information for school design is the same across levels, the volumes are meant to be used independently. Each volume is categorized into various chapters which provide the appropriate design criteria for a school. To the extent possible, non-technical language is used throughout the guide so that it can be easily understood by all stakeholders: educators, community leaders, parents and students, as well as technical experts in school facilities.

B. OUSD MISSION AND VISION

All students will graduate. As a result, they are caring, competent, and critical thinkers, fully-informed, engaged and contributing citizens and prepared to succeed in college and career.

C. OUSD GOAL

To create a FULL SERVICE COMMUNITY DISTRICT that serves the whole child, eliminates inequity, and provides each child with an excellent teacher every day.

The collective work of caring for and educating every student, turning towards each other, of creating more community, and connecting those communities across our city is work that OUSD is uniquely positioned to do.

D. OUSD PRIORTIES

1. **Safe, Healthy and Supportive Schools (Full Service Community School District)**
2. **High Quality Effective Instruction (Every child, every day, every year has highly effective teachers)**
3. **College and Career Readiness Literacy (Every child graduates ready for college and career)**

Without honesty in effectively addressing the need to educate and fully server every child in Oakland, we will perpetuate the systemic patterns of inequities that persist. We know there are no quick fixes and easy solutions. The reforms of the last five years have begun to create stronger educational opportunities for students in some schools. More aggressive systemic and community centered reforms that address equity and graduate all students as college and career ready are needed now. We must accelerate achievement and enhance positive life outcomes for all our children.

Safe, Healthy and Supportive Schools

Oakland will become a full-service community district that will collaborate with civic and community partners to reduce violence in the community and schools thereby creating secure campuses where a culture of calm prevails. Staff will engage in restorative practices that enhance school culture and improve discipline systems to address equity. Leveraging, aligning and coordinating community assets for student and family services at schools will address the needs of the "Whole Child".

High Quality Effective instruction

Oakland will improve academic outcomes for all students and, in particular, for our historically least well-served. Instruction will focus on college and career readiness standards, curriculum and assessments for all students. Individualized learning plans, progress monitoring and early warning systems will be employed to keep all students supported and early warning systems will be employed to keep all students supported and engaged in high quality effective instruction. All educators, parents and partners will understand and share a clear Framework for Effective Instruction. Teachers and principals will continuously build instructional skills, content knowledge, and cross-cultural competence. Strong structures will support teachers' regular collaborations to examine student work and to plan instruction for success. Principals, teachers and other instructional leaders will provide effective support and feedback to continuously improve instruction. Professional and enriched working conditions and leadership will increase the retention of high quality effective teachers.

College and Career Readiness Literacy

Students will read, write, speak, think critically, and reason mathematically for 21st century success. All students must be instructed by high quality effective teachers that deliver daily a curriculum aligned to college and career readiness standards. In high school, the UC/CSU "A-G" Course Sequence and Curriculum will be the core course of study for all students. Science, Technology, Engineering Arts and Mathematics (STEAM) education will be addressed Pre-K through 12. Pre-K enrollment and family engagement to support early literacy will increase. Students will be provided with multiple pathways to meet graduation standards and meet their interests and aspirations. Career technical education, online options, work-based learning, and access to concurrent community college course credit will create multiple venues for all students to meet graduation requirements. In addition, diverse recovery pathways will hold student and bring back those that have dropped-out, are non-completers or adjudicated students to successful graduation.

E. OAKLAND COMMUNITY OVERVIEW

Oakland, California is a diverse and vibrant city with a rich history closely tied to that of the United States as a whole. Built on land originally settled by the Native American Ohlone people, the area was settled by Spanish colonizers before becoming part of the US when California became a state in 1850. In the late 19th and early 20th century, Oakland blossomed into an industrial capital of Northern California, serving as the western terminus of the first transcontinental railroad. As a major center for the US war effort in World War II, immigrant workers flooded into Oakland from the south, helping to establish Oakland as a major immigration destination. Like many American cities, Oakland suffered from poverty, crime, and disinvestment in the second half of the 20th century, and still struggles with these urban issues. Nonetheless, Oakland's unique character remains strong and it remains the cultural and economic capital of the East Bay.

Geographically, Oakland is characterized by majestic hills in the east that transition into flatlands that meet the San Francisco Bay in the west. Culturally, Oakland is a cultural center for many groups including African-American, Latino, and Asian-American Communities – the rich mosaic of community organizations, cultural centers, and historic neighborhoods speaks to the diversity of groups that call Oakland home. The US Census estimates that approximately 410,000 people currently live in Oakland, a significant increase from the 2000 population of 400,000 and the 1990 population of 370,000. Economically, Oakland continues to serve as a major West Coast harbor with massive port facilities lining the waterfront. Oakland's downtown is also home to major national corporations and numerous small businesses serving the San Francisco Bay Area. With its rich past, dynamic population, and active culture, Oakland is poised to enter a new phase of its history in the 21st Century.

F. DISTRICT OVERVIEW

If the Oakland Unified School District focuses all its efforts on creating the learning conditions each child needs to succeed academically and socially, uses all of its physical and organizational assets in service of these effective conditions, changes the OUSD structure to engage everyone in the community in creating and protecting the conditions students need to succeed, designs interdependent accountability systems that promote individual and shared responsibility, then we will prepare all Oakland children for positive civic participation, diminish the predictability of performance by race, class, gender, primary language, or any demographic identifier, increase community well-being, enhance economic stability, and generate the optimism and self-sufficiency Oakland needs to solve new problems as they arise.

Oakland Unified School District will create three zones were academic and social services are coordinated, aligned and leveraged and deployed to support students. In an effort to best provide full-service schools to communities, OUSD will organize it pre-K schools into a regional structure. Instructionally, the new regional structure ensures coherent educational experience beginning in pre-K through elementary and middle schools for all families within their region. More broadly, the regional structure aligns well with other Oakland public service providers, which will be essential to realizing full-service schools in each community. Advantages of a regional structure include:

- Consistent focus on high quality effective instruction
- Seamless, coherent PK-8 student experience within each region
- Aligned, consistent high expectations of students from pre-K through 8th grade
- Professional Learning Communities based on the needs of all students and families within a region, rather than those within a particular school level
- Vertical, as well as horizontal alignment, for teacher and principal professional development

Broader Advantages:

- Schools services better aligned with other public services available in the region
- Deeper, longer-term relationships between regional leadership and families within the region
- Deeper relationships between regional leadership and partner service providers
- Increased effectiveness and efficiency in providing full-services to all families within regions

G. CURRICULUM DELIVERY

General Principles

We must use the evidence of our good work in Oakland to fuel the next phase in our growth. We cannot afford to ignore the wonderful work in schools, where children are succeeding, where staff is cohesive and reflective, where families and community share in the life of the school, and where leadership is humble and relentless. Some of these schools have thrived for decades and others have grown up in recent years, they are each places with lessons for us to learn. We have to use all of what we have learned as a community to sustain good work and to thoughtfully end practices that are ineffective. In a time of unprecedented cuts to education and social services in our rural, suburban, and urban communities we must use what we have learned that works for children. It is not simply how much money we have that matters, it is how we use what we have. We have to stop wasting resources we do have, share what is working, and become a coherent system that distributes resources where they are most needed to generate the best effect.

The Full Service Community School (FSCS) is a place where the school has broadened its mission and vision to meet the needs of all of its students. The school is the place where in addition to high quality education, health, mental health, and other services are provided. The emphasis is on educating and caring for the whole-child. The full-service school is an environment where adults use a systems approach to understand the needs of individual children. Social and human services are not seen as extra or add-ons in these schools and collaboration, in service of the well-being of children and families, is how these schools consistently behave. Collaboration is not defined as a professional learning community that happens at a certain time on a certain day; collaboration is a constant way of learning and being. By working together and listening to students an engaged community determines how services are provided. By meeting the curricular and extra-curricular needs of children and families, full service community schools ensure that learning will happen for all students in the school.

At this moment the power of those individual centers of community are not sufficient to meet the increasing demand of people who want and deserve full access to the democratic promise of the United States. Single units of success have to become systems of success. We must forge new public institutions that foster the connectivity and collaboration required to nurture the common good. The school district must use every asset at their disposal to protect their chief

mission: to prepare each child for a lifetime of academic and social success. Around this single mission, the district must learn how to facilitate, foster, and forge the conditions for each child to access the learning he or she needs for success. The district is the public institution charged with the well-being of all children within its boundary. Currently, we are failing to meet the needs of all our children.

The purpose of the OUSD must be the full preparation of each child for academic and social success. Accepting the current rates of failure by adults who are employed to educate and meet the needs of children is morally unacceptable. Accepting this failure is also increasingly a matter of personal, local, and national safety. To become communities, cities, and a country where our democratic ideals are practiced as well as espoused, we must name the institutional inequity and take personal responsibility, in an organized way, for refashioning our public institutions in ways that promote the common good.

Grade Configuration

Oakland School's grade configuration is as follows:

Elementary - Pre-K through Grade 5

Middle – Grade 6 through Grade 8

High – Grade 9 through 12

PART II: FACILITIES DESIGN AND FUNCTION

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It is the District's goal to create and maintain learning environments that are safe, warm, and dry that enable students to be successful in the District's academic programs, the arts, health and wellness, and character development. The District will utilize design and building principles derived from best practices and concepts outlined by state, federal and Coalition for High Performance Schools (CHPS) standards to create an environment that is energy efficient, healthy, comfortable, and contains the amenities necessary for a quality education. The following will be considered during design of the learning spaces.

A. GENERAL DESIGN CONSIDERATIONS

The following outlines general design considerations with respect to code compliance, appearance and function.

1. Code Compliance

a) Comply with applicable codes governing structural systems and fire and life safety.
b) Comply with applicable codes for education and school facilities construction.
c) Comply with applicable codes governing accessibility and general safety (e.g. Title 24, Division of State Architect Access Compliance policies and interpretations of regulations) and related local, state and federal guidelines.

2. General Space Appearance and Adjacencies

a) Cluster classrooms to reduce student travel time and to allow for supervision.
b) Group classrooms by grade to strengthen the sharing of resources and curriculum development.
c) Organize to take advantage of smaller learning communities through group configuration.
d) Create common areas within groups to be used for technology, small group instruction, conferencing, planning and storage.
e) Design the library/media center at each school to serve as the 'hub' of learning with easy access for students and staff.
f) Create indoor and outdoor learning spaces for small group instruction and assessment that allow for collaborative teaching/dividing of classes and the flexibly to expand.
g) Replace portable classroom buildings with modular or stick constructed buildings, limiting portables for temporary use.
h) Consider the use of multi-story buildings.
i) Consider weather constraints for circulation and various outdoor activities (create covered areas for paths of travel, outdoor education, eating, pick up and drop off zones, etc).

3. Sustainability

a) Reduce impacts on future generations by integrating building materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction and operation of our built environment.
b) Consideration energy efficiency, maintainability, system life cycle costs, and system standardization across school sites.

4. Flexibility

a) Design district space for flexible and diverse use. All spaces are designed to accommodate best practices as they relate to educational programs and community participation.
b) Design space designations based on wet features, allowing art, science or cooking activities.

c) Design space designations based on dry features, allowing music, technology, theater or graphic art activities.
d) Design for different grade levels to occupy a learning space.
e) Consider readily available resources to convert areas to specific needs (moveable furniture/equipment to allow multiple configurations and associated storage)

B. BUILDING SYSTEMS

1. Climate Control

a) Install energy efficient, low maintenance systems.
b) Consider opportunities where proven geothermal heating and cooling technology can be utilized.
c) Consider integrating an energy management system for central monitoring and control by the District.
d) Maximize use of operable windows and skylights for natural ventilation.

2. Power and Lighting

a) Consider programmable timer and/or motion sensors for lighting systems.
b) Maximize use of natural lighting in building design.
c) Integrate non-glare windows and non-glare light fixtures in designs.
d) Consider lighting controls and fixtures that allow adjustment of light levels for instructional spaces.
e) Consider alternative energy source to power district facilities (e.g. solar, wind, geothermal)

3. Communications

a) Provide all classrooms and specialized rooms telephones with the ability to communicate within the facility, with the District Office, and outside of the District.
b) Equip all schools with public address and intercom systems (accessible to entire school).
c) Equip all schools with clock and bell systems (clocks in all instructional and office spaces).
d) Consider use of integrated, multi-functional systems.
e) Provide all schools both audible and visual alarms for fire or emergency.
f) Ensure the district Office has direct communication with Alameda County Office of Education (ACOE) emergency notification system.

4. Technology

a) Create a technology infrastructure necessary to support the District's teaching, communication and administrative objectives.
b) Provide access to technology for all classrooms and administrative offices. This is accomplished within a flexible classroom setting that can deliver instruction with the integration of technology into learning.
c) Make provisions for the Special Education program's use of technology-based instructional materials.
d) Consider classroom integration of technologies such as interactive white board technology, digital projectors and associated screens, and teacher audio amplification technology for instruction.
e) Ensure hard-wired connectivity to the network is standard for classrooms, other teaching areas, and administrative offices.
f) Use wireless technology as a secondary strategy to provide flexibility and expand areas in which instruction through technology integration can occur.

C. SECURITY

Oakland Unified School District provides secure facilities for students, staff, and families with best practice approaches, such as controlled entrances and lighting. Consideration must be given to balancing the District's ability to monitor and control its school sites while still providing access to the community.

1. Site Layout:

- **a) Consider limited number of campus access points with visible site lines from staff occupied areas.**
- **b) Design layouts that allow law enforcement to visually survey the campus from the street.**
- **c) Create a clearly identifiable main entry for each campus.**
- **d) Give priority of access to emergency response (law enforcement, fire rescue; and medical emergency response).**
- **e) Connect entry and egress for spaces commonly used by the community directly to the exterior.**

2. Physical Features:

- **a) Use appropriate fencing and landscaping to establish and secure the campus boundary while encouraging community use.**
- **b) Consider flexible barriers that can be adjusted to route visitors to Main Office for check-in during school hours.**
- **c) For after-hours security, install sufficient site lighting at main access points and paths of travel between buildings and parking areas.**
- **d) Use a combination of permanent and motion sensor lighting.**

3. SECURITY SYSTEMS

- **a) Install site security systems that can be programmed by zone to allow afterhours use by staff and the community. The system is tied directly to a monitoring station.**

D. SIGNAGE

1. Create signage that clearly defines campus way-finding and operational hours:

- **a) Install standardized signage that clearly identifies the Main Entry to each of the campuses.**
- **b) Post a campus map with the flexibility to display additional information (special instructions, event notices, etc). Identify and provide clear directions for spaces commonly used by the community (Multi-purpose Rooms, Gymnasiums, Performing Arts Rooms, and Play Fields).**
- **c) Create signage and road markings to assist in pedestrian safety at traffic areas.**
- **d) Clearly identify/label all buildings and rooms on the exterior of the buildings.**

E. STORAGE

1. **The following are site storage considerations:**
   These are in addition to the detailed considerations included in the Part III.

- **a) Create storage at each school site for emergency preparedness supplies and equipment (weatherproof and easily accessible).**
- **b) Provide a staging area for large deliveries of equipment and supplies.**
- **c) Centrally locate site storage for instructional materials (to facilitate resources sharing and collaboration on curriculum development).**
- **d) Provide general storage for furniture items such as folding chairs, tables, and easels.**

e) Ensure storage areas are ventilated, lockable and are easily accessible.
f) Consider storage for traffic safety equipment (locations vary by site).
g) Install bike racks at a minimum ratio of 1 bike for 1/20 of the entire site population.

F. COMMUNITY USE AND SUPPORT SERVICES

The community uses District facilities to meet educational needs and to fill gaps in recreational and meeting spaces. School fields are heavily used after school and on weekends. Meeting facilities are provided to the community by opening classrooms, libraries and multi-purpose rooms. Continuing and expanding partnerships with the community remain important goals for the District. As community partnerships evolve, and as the availability of community support programs changes, facilities requirements will need to be re-evaluated.

1. Following are issues that should be considered relating to District partnerships with the community and local agencies:

a) Consider impact of leased spaces (child-care, pre-school, other private schools) on school's needs.
b) Consider impacts on school resulting from relationships with support functions within, OUSD, City of Oakland Parks and Recreation, Community Based Organizations and other local agencies.

G. PLAYFIELDS, PLAYGROUNDS AND OUTDOOR EDUCATION

OUSD emphasizes health and wellness that is sustainable for students beyond their school years. Oakland Schools provide a rich outdoor experience, capitalizing on campus location resources. The District shall create safe environments that support the development of social/emotional and physical health of employees and students. The guidelines set forth by the federal, state, county and district regulations regarding physical education and health and wellness serve as the basis for program development.

Playgrounds provide sufficient space and appropriate equipment to satisfy State of California guidelines. Outdoor spaces are designed to comply with all State accessibility requirements. School playgrounds are used for the supervised play program after school hours for student activities. Following are general considerations guiding design of various outdoor spaces. Detailed considerations are included in the Part III.

1. Playgrounds
a) Ensure that playgrounds and play structures comply with applicable codes and guidelines.
b) Design to consider sight lines for playground supervision.
c) Install playground surfaces that are level and impact absorbing.
d) Construct drainage systems to prevent pooling in play areas and to drain water away from buildings and foundation walls.

2. Playfields
a) Maximize field size within site parameters to promote physical education.
b) Create easy access to waste disposal/recycling stations at and near community use spaces.

3. Landscaping
a) Utilize drought-resistant, low maintenance native plants.
b) Install low water consumption irrigation systems.
c) Protect planted areas from general foot traffic and ball play areas.
d) Consider creating area for outdoor amphitheater for ceremonies and theater productions.

H. TRAFFIC CONTROL AND PARKING

Oakland Unified School District strives to develop solutions to optimize traffic flow around school facilities through road access, school hours times, bikeway and walkway access. To ensure pedestrian safety, the District will apply best practices that separate students and vehicles.

1. Traffic Control

a) Create clearly identified drop-off and pick-up areas that separate students from school traffic, vehicle general traffic flow, and the parking lot.
b) Consider separate drop-off and pick-up areas for Kindergarten students
c) Consider needs of individuals with disabilities.
d) Create physical barriers separating pedestrians from traffic.
e) Construct clear and wide paths of travel for pedestrian use.
f) Utilize clear road markings, signage, and lighting to assist directing vehicle and pedestrian traffic.
g) Consider covered areas for pick-up and drop-off zones.
h) Consider sight lines for supervision of vehicle and pedestrian circulation.
i) Consider traffic controls for service and delivery access, and keeping this separate from common foot traffic areas.
j) Consider traffic and site access needs for emergency response vehicles.

2. Parking Area

a) Consider parking space requirements for staff, volunteers, visitors, itinerant staff and other service providers.
b) Locate visitor parking close to main entry for each school.
c) Clearly mark dedicated school staff parking.
d) Install sufficient lighting at parking areas.
e) Consider creating separate parking lot for staff only, with mechanical entry gates.
f) Design the parking area layout to allow for efficient traffic flow entering/exiting and within the lot.

I. RECYCLING AND COMPOSTING TRANSPORT CENTER

For each campus, it is the District's goal to create a centralized recycling and composting collection space that is easily accessible to outside collection vendors and to staff members to drop off recyclables or compostable materials. These collection spaces have open ventilation and secure settings with room for individual classroom recycling and composting carts. The area is fenced or otherwise isolated from pedestrian routes.

PART III: CLASSROOM/AREA REQUIREMENTS

Part III: CLASSROOM/AREA REQUIREMENTS

C. STANDARD HIGH SCHOOL

Following are core spaces for use in the Standard High School. Note: Not all High schools will require all room types.

1. General High School Classroom

Program Description and Philosophy

Classrooms should be designed to foster interdisciplinary team teaching and provide learning spaces that can personalize students' learning experiences by focusing on students' strengths and assets. When applying a classroom arrangement to support the core classroom concept, it is recommended that general classrooms and specialized classrooms are integrated, e.g: three general classrooms and a science classroom clustered together/adjacent to each other.

Within each general classroom the total area shall provide space for teachers to design large group, small group, and individual instructional areas to allow for a variety of curriculum activities, with ease of student movement from one activity to another. One wall shall be designated as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and a brightboard or an interactive white board with short throw wall mounted projector (or ceiling mounted LCD projection unit and large size screen). Short throw DLP or bulbless projectors are recommended to ease maintenance requirements and eliminate high ceiling problems wiring both electrical and data. Additional whiteboards and tack boards should be strategically located on other walls of the classroom.

a) Activities/Space Use Plan:

The classroom should be flexible enough to:

- **Support the use of multi-media and technology devices to enhance learning;**
- **Allow the teaching of many varied programs;**
- **Allow for after-hours community use; and**
- **Accommodate both dependent and independent learning.**

b) Space/Infrastructure Requirements:

The minimum 980 sf standard classroom (up to 32 students) should provide:

- **Power / data infrastructure sufficient for technology and equipment needs;**
- **(1) Single basin sink / drinking fountain;**
- **Ventilation: natural ventilation (consider ceiling fans) or forced air cooling units;**
- **Acoustical control: interior finishes for adequate sound absorption (acoustical wall panels, ceiling systems, flooring); and**
- **Appropriate adjacencies: restrooms, other classrooms clustered with shared specialized learning spaces, conferencing and quiet study, proximate to library.**

Room Data

a) Finish Requirements:

- **Flooring: Resilient flooring at wet areas (entrances and sinks); (current design standard is no carpet In general classrooms)**

- **Base: Rubber/vinyl or wood**

- **Walls: Painted CMU or painted gypsum board (durable layer for strength and to meet acoustical separations requirements)**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

- **Doors:**
  - **Provide view panel in exterior doors of air-conditioned facilities;**
  - **Provide a solid door with no view panel for naturally ventilated exterior rooms with a hold open device (i.e. hook and eye); Provide a peek hole in exterior doors, as per OEA contract**
  - **Provide view panel in all interior doors for classrooms, offices and conference rooms;**
  - **Provide required number of doors per Building Code exiting requirements; and**
  - **Protect exterior doors from elements and equip with maximum security.**

- **Windows:**
  - **Provide operable windows - type dependent on ventilation (natural or air-conditioned);**
  - **Follow recommended day lighting guidelines; and**
  - **Maximize security protection measures (i.e. minimize glass lite size, include window stops, and provide security screens on jalousies)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA; provide a sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0.X to 0.X.**
- **Provide interior partitions around classrooms with a minimum rating of XX: the partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Provide operable walls dividing classrooms with a minimum STC of XX when tested in accordance with ASTM E XX.**
- **Consider a distributive sound system with at least 4 speakers located in the ceiling throughout the classroom to ensure that all students receive sound as if they were within 5 feet of the teacher. Provide a lavaliere microphone for the teachers.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in all classrooms, including each air-conditioned classroom; locate thermostat near teacher station; and verify the need for lockable protective thermostat cover during design.**

c) Plumbing:

- **Provide a sink with one single compartment, size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains within reasonable distance to classrooms; locate in common circulation area on all floors – high/low type. If area is secured provide electric water coolers in place of drinking fountains.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**

- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these five circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**

  (a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design phase.

  (b) Provide one duplex outlet near the brightboard (whiteboard) and projector.
- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting: see Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media / Communications:

- **Provide a two-way intercom in each classroom with a speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Determine location during design phase.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: ten for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Miscellaneous Features:

Consider the following features:

- **One wall with upper and base cabinets**
- **Lockable storage for miscellaneous equipment**
- **Open shelves for books and 3D displays with free floor area underneath for loose storage**
- **Storage drawers for large production materials (2' x 3')**
- **Lockable cabinet for teacher storage**
- **Student lockers at common area outside of classrooms**
- **Tackable wall surfaces (all open walls)**
- **Provisions for hanging displays from the ceiling (hooks and wires hangers)**
- **(2) 4' x 8' whiteboards with map rails, locate whiteboards on opposing walls if possible; install interactive white board interactive white boards where possible**
- **Blackout window covering / shades for all interior and exterior windows**

h) Equipment/Furniture:

- **Teacher workstation with space for computer**
- **Computer for teacher with peripheral equipment**
- **Short throw wall mounted or LCD ceiling mounted projector for all rooms**
- **File cabinets**
- **(1) Display case adjacent to entrance**
- **Student desks**

Special Considerations:

Items to consider during design:

Access to water, accommodation of student computers, and handling of larger number of students have become key considerations of the general classroom design. Verify need for one sink per classroom during design.

2. Programs Taught in the General Classroom

Language Arts

Program Description and Philosophy

The Language Arts program encompasses the acquisition of listening, speaking, reading, writing and thinking skills, and the study of literature and language, so that the student will develop the ability to communicate in both oral and written forms, to appreciate literature, and to understand language systems within a broad perspective of communication.

Activities:

Students will work alone, in small groups, and as a whole class. Within the groups, they will read published stories and their own compositions to each other, listen to tapes and watch films, develop group dramas, discuss stories, read, and participate in other activities that expand their knowledge, skills, and appreciation of the Language Arts. The teacher will encourage optimum individual initiative, with students doing individual assignments such as writing a paper or conducting research in class, and small-group assignments such as participating in round-table discussions, working on special projects, and rehearsing dramas.

Space Description:

The Language Arts program is taught in the General Classroom. Space should be provided within the general classroom for (1) individual and group work areas, (2) storage for resource materials and equipment, and (3) a teacher station convenient to both resource materials and students.

See Section - General Classroom for space requirements.

Mathematics

Program Description

The Mathematics Education Program provides learning experiences for all students to enable them to meet the mathematics standards of California and be able to do using mathematics in order to make sense of the world around them.

High school courses should enable students to meet all mathematics content standards and related performance standards. School math departments shall ensure that no matter what course sequence students take, they will have opportunities to demonstrate proficiency in all of the standards.

Program Activities:

Students should have opportunities to work in flexible groups, i.e., one large group, small groups, or individually as appropriate. This will sometimes require table arrangements for 4-6 students; at other times, individual students will work sitting on a chair with attached desk. The teacher may need to move among students to assess progress, clarify concepts, and provide small group or individual instruction.

Instructional tools and manipulatives, some for each student, such as calculators, rulers, algebra tiles, and some for total class instruction, such as a document camera, overhead projector and/or video camera, will need to be stored in cabinets. The document camera, projector, and video camera will need either projection screens or televisions in each room. (Short throw projectors will be mounted on walls or LCD Projectors will be hung from ceilings.) This will allow presentations to be made from a table rather than requiring students to gather their things and move to the front of

the room. Teachers should also have access to other technology such as a computer equipped with power point software for class presentations.

Classrooms should be designed to also allow for multiple classes meeting together, especially to facilitate integrated (multiple content integration) instruction. There should also be open, common areas in proximity to math classrooms to facilitate projects and investigations where students could work outside to do various mathematics (i.e.., measurement) activities. Students may also need to work on computers to do research, data base entries, and word processing. These tools should be readily accessible to students via multiple stations (6) or individual desk stations.

Space Description

See Section - General Classroom for space requirements.

Social Studies

Program Description

The Social Studies Program in the high school involves students in exploring the historical, geographic, cultural, economic and political dimensions, and linkages of their local community (from local community to US and the World). They learn social studies by engaging in the roles and behaviors of historians, geographers, anthropologists, etc. The focus is on honing an ever increasingly sophisticated knowledge of concepts, such as justice, equity, democracy, collaboration, and cooperation, and processes, such as problem-posing and solving, decision-making, and conflict-solving.

Goals:

The social studies curriculum empowers learners to be informed and reflective thinkers, responsible and active citizens, productive and self-reliant members of society, and empathetic and ethical individuals by enabling learners to develop:

- **Civic responsibility and the skills of a participatory citizenry;**
- **Perspectives on their own life experiences so that they see themselves as makers and shapers of the larger human adventure in time and place;**
- **Critical understandings of the history, geography, economic, political and social institutions, traditions and values of the United States as expressed in both unity, diversity and interdependence;**
- **Appreciation of the global diversity and interdependence of the world's people, institution traditions, values and environment; and**
- **Critical dispositions and habits of mind appropriate to the world of work and lifelong learning.**

Program Activities:

The learning environment in social studies classes focuses on students and teachers as caring and responsible human beings and on their proficiency as critical thinkers, inquirers, and imaginative problem solvers. Learning approaches, methods and activities focus on learning as a social process which begins and proceeds with curiosity and inquiry. The learning activities focus on significant themes and concepts that allow for integration and interdisciplinary studies; current events and contemporary issues are integral parts of the curriculum and instruction. Learning activities emphasize development of in depth understanding through analysis questioning, synthesis, persuasive writing, self-reflection, self-evaluation, and application of skills and knowledge to real life problems and experiences.

Students are actively involved in their own learning. They are encouraged to investigate and formulate questions about problems and issues of personal relevance and importance. Teachers facilitate the connections between the students' interests, curriculum, and the HCPSIII. Students are learning in cooperative, collaborative partnerships as well as in individual settings. Students with support of teachers set individual and group learning goals, establish criteria and are accountable for them.

Students investigate issues using the tools and methodologies of the social scientists. Students develop global perspectives and empathy by identifying patterns, tracing cause and effect relationships and solving problems.

Students interact beyond the classroom and school via use of telecommunications and personally interact with broader community members through service learning, civic action, and stewardship projects.

Discernible Trends:

The Social Studies are for life-long, life-sustaining and life-enhancing. The trends in social studies include viewing the world globally and multi-culturally. Students today need to practice and engage in democratic citizenship rather than simply studying about it from a textbook. Themes and issues and depth of understanding are encouraged rather than chronology only and wide coverage. A variety of materials and resources are utilized through which students construct their own knowledge and make meaning for themselves. Integration is encouraged and connections from past to present and present to past and future are emphasized. Collaboration includes not only students working together but working with the teacher to determine the best ways to evaluate learning.

Space Description

A general classroom may be required to accommodate more than 32 students on occasion and a teacher (possibly educational aides, family volunteers, tutors, etc.). Space for individual, small and plenary groups, space for presentations and displays, storage for material resources, student works and tools of the social studies (maps, globes, primary documents, display boards, computers, measuring tools, kits, etc.) should be flexible and ample for movement and to accommodate children and adults with special needs.

See Section - General Classroom for space requirements.

World Languages

Program Description and Philosophy

The World Languages program is 1 of the 10 content areas of the California Content and Performance Standards. World Languages begin in the middle/intermediate or high school. The program consists of coordinated, sequential levels of instruction beginning with an introductory course in middle school and continuing through the high school years. The objective of the program is to provide students with the language skills of speaking, listening, comprehending, reading, and writing. The skills are developed within the context of acquiring knowledge and understanding of the culture and people whose language is being studied.

The Introductory "A/B" course and Level 1 & 2 available at the intermediate level are designed to provide experiences with simple conversational patterns and cultural aspects of the language. These courses are offered as preparation for the language level courses. Languages currently taught are Spanish, French, Chinese, and Italian.

Program Activities:

At the novice or beginning stage, students frequently work together with the teacher as a total group. A number of activities, however, call for small group interaction. Language games, peer tutoring, the use of audio/visual aids, drama productions as well as reading and conversation practice are all part of the paired and small group activities. The teachers are able to interact with the various groups and assist with the organization and evaluation of their various activities. Flexible use of existing space is a key factor in facilitating this teaching/learning approach.

Discernible Trends:

As in other disciplines, participatory learning and exploring topics in depth, using all the senses is the leading direction of World Languages Pedogogy. For example, when learning the vocabulary related to painting and art, students would actually make their own art work during the language class and then break up into groups to practice describing one another's artwork, using both nouns like "frame", adjectives such as "colorful", and verbs like "painted." This brings the vocabulary and grammatical structures to life through an activity that engages the students in a deeper way.

Space Description

See Section - General Classroom for space requirements. Include at least 10 computer sections to allow for language development software to be utilized in class.

3. Breakout Room

Program Description and Philosophy

This space supports differentiation of instruction by providing an area to break out into smaller work groups at various times with ease of supervision and immediate adjacency to the classroom setting. Size may vary depending on the direction of the school or steering committee and the particular educational need they are addressing.

This space is designed to accommodate 1 to 6 people and would provide an acoustically separated space from the adjacent classrooms, with some visual control.

a) Activities and Space Use:

Activities that occur in the breakout room could be:

- **Individual studying/test taking,**
- **Small group meetings,**
- **Tutorial work sessions,**
- **Practicing of presentations, and**
- **One-on-one teacher/student sessions.**

Room Data Information (Use General Classroom except where noted below)

b) Space/Infrastructure Requirements:

- **120 SF Recommended Size**
- **Exact size and location to be determined during the design;**
- **Recommended maximum number of rooms is one between every two classrooms;**
- **Square footage can be taken from adjacent classrooms and trade offs from other areas; and**
- **Breakout Rooms are recommended to support general classrooms, supplemental classrooms, and special education resource classrooms.**

Room Data

a) Finish Requirements:

See General Classroom

b) Fenestration:

Doors:

Provide doors with half glass for supervision. No exterior doors.

Windows:

Maximize interior walls with windows for adult supervision. For exterior windows, maximize security protection measures (i.e. include window stops and security screens on jalousies.)

c) Other Considerations:

Use of room as determined during design phase may impact windows, possible built-ins, and furniture (i.e. if school wishes to locate student computers from adjacent classrooms in Breakout Room, built-in work surfaces may be appropriate with window design to address glare.)

Utility and Room Data Requirements (Use General Classroom information except where noted below):

a) Air Conditioning and Ventilation:

- **Air conditioning may be individually controlled or fed from adjacent classroom.**

b) Plumbing: (None)

c) Electrical:

- **See General Classroom**

d) Lighting:

- **See General Classroom**

e) Multi-Media / Communications:

- **See General Classroom**

f) Special Considerations

Items to consider during design:

- **Per code requirements, rooms cannot be lockable;**
- **Visual supervision of students is stressed in the design;**
- **Ability to enter from either classroom if shared by two or more classrooms; and**
- **Size and primary anticipated use are determined during the design.**

4. Special Education Classroom

Program Description and Philosophy

The special education program provides services to students with a range of disabilities. Because students with a variety of disabilities are served, most of their needs must be taken into account when designing these rooms.

a) Activities and Space Use

Students are instructed across subject areas at times inclusive of both functional and academic curricula, speech and language, occupational and physical therapy, adapted physical education, therapeutic interventions and other itinerate services. Heterogeneous groupings across ages, grade levels, academic, health, and social and emotional needs may be instructed together. A variety of multi-level materials, equipment, and furnishings may be needed. Students may be instructed individually, in study carrels, in centers, at computers, or in small groups.

b) Space and Infrastructure Requirements

Classroom Areas

- **Fully Self-Contained Classroom – Large 1,880 SF**
- **Fully Self-Contained Classroom – Small 1,240 SF**
- **Resource Services Classroom 980 SF**
- **Itinerant Services Room (not counted as a classroom) 330 SF**

Space Description

To meet the needs of the special education program, three sizes of classrooms are provided:

Fully Self-Contained Classroom:

- **A large Fully Self-Contained (FSC) classroom contains two restrooms, a shower, lecture area, activity area, storage, a kitchen, and laundry facilities. This classroom is designed to meet the needs of significantly disabled students.)**
- **A smaller version of the FSC classroom contains two restrooms, a shower and a laundry area, in addition to lecture and activity areas.**
- **These rooms are designed fully accessible due to the various disabilities of its students. The room should accommodate a variety of learning activities as well as instructional and adaptive equipment.**
- **Carpeted floors are required at the small group activity areas and the motor development areas.**
- **Hot and cold water shall be available in the FSC classrooms for bathing, washing, and home living skill activities.**

Resource Services Classroom:

- **This is similar in size and function to the General classroom.**
- **The students using these rooms are typically assigned to a general education classroom and attend the Resource Services classroom for up to two periods of instruction.**
- **In the FSC classrooms and the Resource Services classroom, one wall shall be designated as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and space for mounting a short throw or LCD Projector**
- **Adequate space shall be provided for display and storage of student work.**

Itinerant Services Room:

- **The FADS provides one Itinerant Services Room for each 500 students.**
- **The Itinerant Services Room may be located within the Administrative Center, Student Center, or near a FSC classroom.**
- **This room is used for student individual educational plan (IEP) meetings, testing or servicing of students, teacher planning, etc.**

Room Data Information

See General Classroom

Utility and Room Data Requirements

a) Acoustics

The special education rooms should be sound treated to provide maximum acoustic conditions necessary to conduct hearing screenings and therapy activities. The following treatments are recommended:

- **Ensure that room meet a background ambient noise level of XX to XX DBA; provide a sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0.X to 0.X.**
- **Provide interior partitions with a minimum rating of 51 to surround classrooms.**
- **The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in all classrooms, including each air-conditioned classroom; locate thermostat near teacher station; and verify the need for lockable protective thermostat cover during design.**
- **Provide dryer exhaust duct and wall cap.**
- **Provide residential style kitchen hood, ducted style with galvanized steel duct and roof cap.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains within reasonable distance to classrooms; locate in common circulation area on all floors – high/low type. If area is secured provide electric water coolers in place of drinking fountains.**
- **Provide flush mounted washer box for hot and cold water connections and shutoff valves and drain connection for washer hose.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide key operable hose bibb and floor drains in single use restrooms.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum 2 computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location determined during design.**
  - **(b) Provide one duplex outlet near the TV mount.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting: see Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media/Communications:

- **Provide a two-way intercom in each classroom with a speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Determine location during design phase.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: six for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations:

Items to consider during design:

- **Place FSC classrooms near special education transport drop-off and pick-up.**
- **Distribute Special Education classrooms throughout the campus for appropriate integration with general education. Take care not to create Special Education areas or a "wing" of campus.**
- **Locate the Itinerant room near the self-contained classroom/s for more convenient and timely service of students.**

g) Miscellaneous Features:

Consider the following features:

- **One wall with upper and base cabinets**

- **Lockable storage for miscellaneous equipment**
- **Open shelves for books and 3D displays with free floor area underneath for loose storage**
- **Storage drawers for large production materials (2' x 3')**
- **Lockable cabinet for teacher storage**
- **Interactive white board or brightboard**
- **Short throw or LCD Projector**
- **Student lockers at common area outside of classrooms**
- **Tackable wall surfaces (all open walls)**
- **Provisions for hanging displays from the ceiling (hooks and wires hangers)**
- **(2) 4' x 8' whiteboards with map rails, locate whiteboards on opposing walls if possible**
- **Blackout window covering / shades for all interior and exterior windows**

h) Equipment/Furniture:

- **Teacher workstation with space for computer**
- **Computer for teacher with peripheral equipment**
- **(1) DVD / VCR player and associated monitor or digital projector and screen**
- **File cabinets**
- **(1) Display case adjacent to entrance**
- **Student desks**

5. Agriculture and Natural Resources Industry Sector

Program Description and Philosophy

The Agriculture and Natural Resources sector is designed to provide a foundation in agriculture. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in Agricultural Business, Agricultural Technology, Agriscience, Animal Science, Forestry and Natural Resources, Ornamental Horticulture, and Plant and Soil Science. Instruction occurs in both classroom and laboratory settings and may include supervised agricultural experience projects.

a) Activities and Space Use

The program activities for (a) Agricultural Technology and (b) Ornamental Horticulture include the following:

- **Agricultural Technology: This program combines classroom study with farmshop and land laboratory activities that include both plant and animal sciences. Also included are FFA activities.**
- **Ornamental Horticulture: In this program, classroom study is combined with activities in greenhouses, environmental controlled houses and outdoor planting areas.**

The natural resources career pathway program of activities combines classroom study, laboratory/fabrication activities, and land laboratory activities. Activities include scientific investigation, design, repair, and fabrication of equipment and various structures, and care for plants and/or animals. Traditional areas of study are Agriculture Technology and Ornamental Horticulture. Natural resources pathway program of study may include these traditional areas as well as aquaculture, marine, forestry and environmental sciences. Students will usually operate in project teams and groups. Individuals will work on appropriate equipment as necessary to complete projects and other tasks assigned to the group or the individual.

b) Space and Infrastructure Requirements

- **Horticulture/Agriculture Classroom 1750 SF (Indoor Area)**
  Outdoor Areas
  - **Lath House 800 SF**

- Mist House 2 @ 32 SF = 64 SF
- Lumite Green House 800 SF
- Controlled Environment House 1500 SF
- Soil Bins 400 SF

- **Agriculture Technology Laboratory 4395 SF (Indoor Area)**
  Outdoor Areas
  - Controlled Environment House 1500 SF
  - Swine Pens 200 SF
  - Poultry Shed 270 SF

c) Space Description
The Horticulture/Agriculture classroom shall follow the same guidelines as a general classroom with the ability to accommodate approximately 34 students. One wall shall be designated as the main instructional wall with the main whiteboard space, supplemental tackboard space, and space for mounting a television (or locating a television on a cart). Adequate reserve space shall be provided for display and storage of student work.

The Horticulture Lab shall also accommodate 34 students. In addition to the instructional wall and teacher station (similar to the classroom description above), it shall include student lab stations/tables with electrical outlets for microscopes, stereoscopes, lamps, etc. The support areas need to be easily accessible from the Lab and from the outdoor areas. The Equipment Shed/Storage area should have access from both the Lab and the outside areas.

- **Provide masonry walls with appropriate fire rating for this space. Good ventilation (i.e. 2 feet of security screens above masonry along exterior walls) is also required for the Equipment Shed.**

- **Include benches, irrigation drip and/or sprinkler systems, timers and hose bibs in The Green House, Saran House, and Mist House. Provide pipes/wires for hanging baskets.**

- **Use the Outdoor Garden for vegetable crop production and hands-on horticultural learning experiences. Provide a drip irrigation system with submain, connectors, and dripline, pressure regulator and valves for the Garden. For security, fence in the Garden.**

d) Program Description
Agricultural Program:
The agriculture education program deals with the acquisition of skills, understanding, attitudes, and abilities that are necessary for entry into or progress in an agriculture or agriculture-related occupation. The program combines classroom study, farm shop activities, and land laboratory activities that include both plant and/or animals. Also included are FFA activities. The program in agriculture can be grouped under two headings: (a) Agricultural Technology and (b) Ornamental Horticulture.

a. Agricultural Technology: A vocational program directed essentially toward students who are interested in pursuing agriculture-oriented occupation, including grounds maintenance as well as growing produce and small live-stock. This program is usually provided in rural schools where interest is more prevalent and large areas of open land are available. Several courses are offered in this portion of the program: agricultural technology I and II, cooperative agricultural education, and grounds maintenance services.

b. Ornamental Horticulture: This portion of the program is usually provided in urban schools where the normally limited available land will be adequate and students tend to be more interested in the skills as a practical art. The two horticultural courses, I and II, may be added to the Agricultural Technical program as well and utilize some of the same facilities.

The objectives of the agriculture program are: (1) to provide students with skills and knowledge to use ornamental horticulture to beautify and enrich their personal lives and their communities, and (2) to prepare more serious students with training to qualify them for entry into agricultural occupations, both plant and animal.

Room Data Information

a) Finish Information:

Floor:

- **Resilient tile or sealed concrete for the following areas:**
  - **Agriculture classrooms**
  - **Sealed concrete**
  - **Horticulture Lab**
  - **Broom finish concrete**
  - **Fertilizer/Insecticide Room**
  - **Equipment Shed**
  - **Oil and Gas Storage Room**
- **Base: Rubber/vinyl**
- **Walls: Painted CMU. For cleaning purposes, provide water resistant proof material.**
- **Ceiling: Acoustical tile at 10'-0" minimum height or exposed structure (if acoustic levels can be achieved). Special acoustical tile required due to moisture and odor conditions.**

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities;**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye);**
- **Provide view panel in all interior doors for classrooms, offices and conference rooms;**
- **Provide required number of doors per Building Code exiting requirements; and**
- **Protect exterior doors from elements and equip with maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioned);**
- **Follow recommended day lighting guidelines; and**
- **Maximize security protection measures (i.e. minimize glass lite size, include window stops, and provide security screens on jalousies.)**

c) Other Considerations: Presence of water needs to be considered in selection of wall and ceiling materials.

Utility and Room Data Requirements

a) Acoustics: The classroom shall have:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA; provide a sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0.X to 0.X.**
- **Provide interior partitions with a minimum rating of 51 to surround classrooms.**
- **The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom; locate thermostat near teacher station; and verify the need for lockable protective thermostat cover during design.**
- **Provide ceiling fans in naturally ventilated classrooms/labs.**

- **Ventilate enclosed storage areas for fertilizers, insecticides, equipment and oil/gas to meet the requirements of the County Building Code and Fire Code. Mechanical ventilation, if required, shall be designed to meet the requirements of classified areas defined by the National Electric code as adopted by the County where the building is located.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains within reasonable distance to classrooms; locate in common circulation area on all floors – high/low type. If area is secured provide electric water coolers in place of drinking fountains.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide a combination emergency shower and eyewash station in the Horticulture Lab that meets the requirements of ADAAG. Shower drains shall be provided with a trap primer.**
- **In the Horticulture Lab, provide four large (approx. 22" x 48") stainless steel trough sinks.**
- **Provide accessible sink for similar use; provide sink at demonstration island. Location of other sinks to be determined during design.**

Outdoor Areas:

- **Provide adequate water supply for saran house, green house, mist house, and garden irrigation requirements. Provide hose bibbs and irrigation at each house. Main supply shall be protected by approved backflow preventer device meeting requirements of the local Plumbing Code.**
- **Provide large stainless steel sinks. Size and location to be determined during design.**
- **Main water lines shall have easily accessible shut-off.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide a 120 volt duplex outlet for each permanent computer station. Maximum 2 computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the design will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location determined during design.**
  - **(b) Provide one duplex outlet near the T.V. mount.**
- **Need for 220V power to be determined during design.**
- **Provide electric powered quartz wall clock.**

Outdoor Areas:

- **Provide electrical power.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting: see Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**

Outdoor Areas:

- **Provide lighting in outdoor houses and garden.**

f) Multi-Media/Communications:
Agriculture Classroom

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate the call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Determine location during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: six for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

Horticulture Lab

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate the call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Determine location during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: six for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

Special Considerations
Items to consider during design:

- **Provide an electric panic switch to shut of all power in case of an emergency.**
- **Provide fire extinguishers and signage per NFPA's life safety code requirements.**
- **Due to exterior grounds implication, classroom and lab are typically located adjacent to areas for planting and aquaculture tanks/ponds, etc.**
- **Ensure that storage facilities for the accommodation of supplies and equipment (i.e. for gardening farm tools, tractor and other related equipment, and fertilizer) are easily accessible from both the building and outdoor areas.**

Discernible Trends:
The trend in agricultural education is to create and maintain flexibility in the program so that individual and local needs are satisfied by providing more:

- **Individual and small group activities for students such as productive enterprises, research, varietals trials, experimentation projects.**
- **Interdisciplinary and unified approaches using concepts from physical and biological sciences in solving problems of agriculture.**

6. Arts, Media, and Entertainment Industry Sector

Program Description and Philosophy
The Arts, Media, and Entertainment sector requires perhaps the greatest cross-disciplinary interaction and development because the work in this sector has a propensity to be largely project-based, requiring uniquely independent work and self-management career skills. New technological developments are also constantly reshaping the boundaries and skill sets of many arts career pathways. Consequently, core arts sector occupations demand constantly varying combinations of artistic imagination, metaphoric representation, symbolic connections, and technical skills.

Successful career preparation involves both in-depth and broad academic preparation as well as the cultivation of such intangible assets as flexibility, problem-solving abilities, and interpersonal skills. Careers in the Arts, Media, and Entertainment sector fall in three general pathways: Media and Design Arts, Performing Arts, and Production and Managerial Arts. The foundation and pathway standards make explicit the appropriate knowledge, skills, and practical experience students should have to pursue their chosen profession through whatever course of postsecondary, collegiate,

and graduate training or apprenticeship it may require.

Learning the skills and knowledge for creating, refining, and exhibiting works of art promotes teamwork, communication, creative thinking, and decision-making abilities, all traits needed to function successfully in the competitive and media-rich twenty-first century. Through the manipulation of sight, sound, and motion, those choosing a pathway from this sector reach out in unique ways to enhance the quality of life for those around them.

Media and Design Arts Pathway
This pathway includes occupations that use tools and materials as the primary means of creative expression. Artists and photographers use visual mediums as their tools in the same way writers, poets, and publishers use written mediums. The electronic and aural fields used in this pathway are constantly changing as technology evolves, requiring continuing studies to keep up. With the increasing use of art and design elements in daily life, the demand for jobs in this pathway will continue to grow.

Production and Managerial Arts Pathway
The Production and Managerial Arts Pathway focuses on the technical, organizational, and managerial knowledge and skills necessary to bring arts, media, and entertainment to the public. Artistic occupations require some form of publication to reach their target audience. Managers are needed to advance individual careers, technicians are needed to craft and run shows, producers are needed to create the shows, and editors and proofreaders are needed to help bring shows to life.

Performing Arts Pathway
The Performing Arts Pathway includes occupations that involve the direct creation of art and entertainment by the individual artist. The performing artists are themselves the means of creative expression, without a dependence on an outside medium.

Facilities requirements for Arts, Media, and Entertainment Industry Sector programs consist of drawing and painting rooms, crafts and photography rooms, media arts and technology rooms, performing arts space, theater, dance studio, etc. Adjoining the drawing and painting rooms will be a kiln room; storage rooms shall be located between two art rooms.

a) Space and Infrastructure Requirements

- **Radio/video production facilities**
- **Traditional visual design studios/materials with access to computer design labs, equipment**

a) Space and Infrastructure Requirements
Classroom Area

- **Drawing and Painting Classroom 1,700 SF**
- **Arts and Crafts Classroom 2,000 SF**
- **Photography Classroom 1,660 SF**
- **Media Arts & Technology 3,610 SF**
- **Theater XX SF**
- **Dance Studio XX SFu**

b) Activities and Space Use
Activities: The art program for the high school level is comprised of elective courses for all ninth – twelfth grade students.

- **The high school art curriculum involves many types of activities - doing, seeing, discussing, reading and evaluating related to all types of art such as architecture, sculpture, jewelry making, graphics, drawing, painting, weaving, textiles, printmaking, layout, art appreciation, community planning, environmental arts and digital media.**
- **Grouping patterns vary when students engage in various art activities. Students work in small and large groups depending on the type of art activity. Students spend most of the instructional period working individually on**

assignments. At times, when group projects such as painting of murals and stage sets are involved, the entire class may work to complete the project.

- Instruction begins with students each obtaining their own materials and tools from the storeroom or individual student storage cabinets. This is followed by a lecture demonstration, work session and clean-up session. When appropriate, color reproductions and examples of works by students and artists are used. In addition, a multitude of art materials, tools and equipment items are used by students when they engage in individual and group activities.

c) Program Description

Media and Design Arts Pathway:

Media and Design Arts provide a balance of theory and practice, so that students develop skills that focus on visual communication design in:

- **Fine Arts**
- **Audio/Video Film,**
- **Web Design,**
- **Graphic Technology, and**
- **Animation.**

The Media and Design Arts program for the high school level provides students with an in-depth, more specialized art curriculum consisting of a variety of two- and three-dimensional modes of expression. It emphasizes experimentation and exploration with a variety of art materials, tools, and equipment in specialized areas of concentration in either the two-dimensional modes (drawing, painting, printmaking, photography, and digital media) or three-dimensional modes (ceramics, sculpture, metal, jewelry, weaving).

The objectives of the high school art program are to enable students to:

a. Demonstrate skills, knowledge and attitudes relating to one or more of their creative areas of specialization;
b. Produce works of art which express feelings, ideas and thoughts in visual form through various media;
c. Explore and experiment with various art materials, tools and equipment;
d. Verbalize and write about works of art using vocabulary unique to the visual/tactile arts; and
e. Relate and apply an understanding of the principles of good design to everyday living situations as appreciators, consumers and creators of art.

Discernible Trends: The high school art program provides students with opportunities to further develop their creative talents in specialized areas of their choice. This will require facilities to be designed to accommodate students specializing in a greater variety of two- and three-dimensional modes of expression.

SUB-PROGRAM: Drawing and Painting

Program Description:

Drawing and painting, two-dimensional elective courses for high school students, are offered to sequentially develop and expand students' skills, attitudes, knowledge, and experiences in the productive, critical, and historical domains. In the productive domain, students create and produce works of art through experimentation and exploration in various media and techniques. In the historical and critical domains, students learn about the artists' styles and techniques, the period of time and culture in which works of art were created, and techniques in analyzing and making discriminating judgments about art.

The objective of the high school drawing and painting courses are to enable students to:

a. Use the concepts of design to create works of art;
b. Create drawings and paintings by exploring and experimenting with a variety of media and techniques;
c. Demonstrate the acquisition of skills and techniques in various two-dimensional modes of expression;
d. Develop unique and personalized styles in creating works of art; and
e. Conduct research in order to interpret and analyze styles and techniques of past and contemporary artists.

Activities:
Small and large group activities in drawing include the use of various media such as pencil, pen, brush and ink, andconte crayon; in painting, media such as oil, acrylic, watercolor, tempera, encaustic and polymer are used. Experiences also include the viewing of colored slides, original art works and color reproductions of famous artists. Each student's individual style and interpretation of expression is enhanced through studio and outdoor experiences. Year-end experiences focus on the preparation and exhibition of student works in school, district, state, and national art exhibitions.

Classroom Description:
Rooms must include space for instruction, storage of art supplies and materials, storage of individual projects in cabinets and counters and sinks with clay traps. Adequate display space and display cabinets must also be provided for exhibit of student works.

SUB-PROGRAM: Arts & Crafts
Program Description:
Craft courses such as ceramics, sculpture, printmaking, weaving, metals and jewelry are offered as elective courses for high school students. These courses provide students with a sequential development and refinement of skills, attitudes knowledge and experiences in the productive, critical and historical domains. Students create and produce works of art through experimentation and exploration in various media, techniques, and processes. Knowledge of the domains along with application of the techniques and process helps students to analyze and make discriminating judgment about art. The objectives of the craft courses are the same as for the drawing and painting.

Activities:
Small and large group activities in drawing include the use of various media such as clay, wood, metal, fibers, textiles, native and found materials. Experiences also include the viewing of colored slides and original art works in the various art modes. Students are taught to use art tools and equipment related to three dimensional arts. Each student's style and interpretation is enhanced through studio instruction; experiences at art galleries and museums also help in the development of the aesthetics. Culminating experiences focus on preparation and exhibition of student works in school, district, state, and national art exhibits.

Classroom Description:
Space is needed for instruction, storage of art materials and supplies and individual projects, counters, and sinks. It is essential that adequate space be provided to house all necessary art equipment. Display space and display cabinets are also needed. A separate kiln room that is properly ventilated is necessary. Moreover, these rooms should be built on the ground floor to facilitate the delivery of supplies and materials.

SUB-PROGRAM: Photography
Program Description:
Photography is a course that provides students with experiences in photography as an art form, with emphasis on the technical and creative aspects of photography. Photography courses provide students with experiences in operating the camera and other photographic equipment; the technical aspects of laboratory techniques in developing, printing, enlarging, and darkroom procedures; and mounting and exhibition techniques. The laboratory work can be done via two distinct methods; wet (use of chemicals) or dry (use of computers, scanner, and color printer with a digital camera).

Photography courses include instruction in the historical aspects of photography and famous photographic artists of the past and present.

Objective of the photography program are to enable students to:

- **a. Apply skills in the use of photography as an art form;**
- **b. Demonstrate students' ability to use various types of photographic equipment;**
- **c. Provide students with opportunities to experiment with and explore various photographic techniques; and**
- **d. Analyze the merits and limitations of photographic composition by artists of past and present.**

Activities:
The photography curriculum involves many types of activities such as camera care and operation and operation, film development, contact printing, enlarging, print mounting, and prints manipulation. Activities also involve the application of photographic techniques to advertising art and school publications. Small groups work at one time in the printing and film processing rooms. Larger groups of students can be accommodated in the classroom area for instruction, film preparation purposes, or exploring digital techniques. Photographic field trips provide students with activities which extend beyond the classroom environment.

Classroom Description:
Photography classrooms need to address adequate security to minimize vandalism and theft of the equipment. Proper disposal of the chemical must be addressed if the wet method of development is used.

Production and Managerial Arts Pathway – ***will be filled in during the development of the final Educational Specifications.***
Overview
Description
Objectives
Discernable Trends

SUB-PROGRAM: Audio, Video Film, Web Design, Graphic Technology and Animation
Program Description:
Through a balance of theory and practice, students develop skills that focus on visual communication design in:

- **Audio/Video Film,**
- **Web Design,**
- **Graphic Technology, and**
- **Animation.**

Activities:
Students will participate in both individual and group projects exploring and refining their skills in film making, web design, graphic technology, and animation.

Classroom Description:
Particular focus and specific program description will be developed prior to design to provide guidance in room layout during design. Room design needs to provide sufficient security to minimize vandalism and theft of the equipment.

Space Description
The space description for digital animation labs will be added during a future phase of the Ed Specs process.

Room Data Information
a) Finish Information:
Floor:

- **Resilient tile at Classrooms, Offices, Composing Area, Planning Area, Photo Lab and Press Area.**
- **Glazed tile non-skid at restrooms and locker rooms.**
- **Base: Rubber**
- **Walls: Painted Gypsum Board or Painted CMU. Glazed tile wainscot at restrooms and locker rooms.**
- **Ceiling: Acoustical Tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities;**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye);**

- **Provide view panels in all interior doors for classrooms, offices, and conference rooms;**
- **Provide required number of doors per Building Code exiting requirements;**
- **Protect exterior doors from elements and equip with maximum security.**
- **Locate the entry to restrooms from shop area.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioned);**
- **Follow recommended day lighting guidelines;**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, security screens on jalousies.)**
- **At composing area, provide windowsills 7' above floor level.**
- **Install security screens on all exposed windows.**

Utility and Room Data Requirements

a) Acoustics:

The Art classroom shall have:

- **Ensure rooms meet background ambient noise levels of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0.X to 0.X.**
- **Provide interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Ensure that operable walls dividing classrooms have a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**
- **Exhaust odor producing areas such as paint drying areas with no air re-circulated. Paint spray booths shall be exhausted by dedicated exhaust system.**
- **Coordinate classified areas defined by National Electrical Code with specification of motors for exhaust system (i.e. explosion proof).**
- **Coordinate design of exhaust and duct system for kiln room needs with selection/purchase of kiln.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide 5 stainless steel trough sinks (10" D x 22 " W x 48" L) in base cabinets, all with clay traps and 2 cold water faucets each spaced 2 feet apart.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide water supply and drainage for specialized artwork equipment. Investigate if additional pretreatment devices required for specialized equipment by determining type of effluent discharged from the equipment.**
- **Provide compressed air system including pipe distribution and regulating stations where required for the specialized art equipment.**
- **See Mechanical Standards for additional requirements.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station.**
- **Maximum 2 computer stations on one 20 amp branch circuit.**

Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.

(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Determine location during the design process.
(b) Provide one duplex outlet near the TV mount.

- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting. See Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: six for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations
Items to consider in design:

- **Art spaces are often viewed from the perspective of wet and dry or clean and dirty; ensure that functional design requirements accommodate accordingly.**
- **Be aware of wetness and drying of materials: mold, mildew and smell can become problems if not properly addressed,**
- **Provide access for delivery of materials.**
- **Design for separation of water, dust, and technology (computer).**
- **Provide sufficient storage the range of sizes and weights of the various types of materials.**
- **Consider areas for display of student work both within the classroom/s and throughout campus**

Performing Arts Pathway

a) Program Description:
The Performing Arts Pathway includes occupations that involve the direct creation of art and entertainment by the individual artist. The performing artists are themselves the means of creative expression, without a dependence on an outside medium.

b) Space and Infrastructure Requirements
Area (Recommended) 1,960 SF
Should a school choose to implement a dance and theater program, it is suggested that the space of 2 General Classrooms be considered.

c) Activities and Space Use:
Students are actively involved in the dance learning experience. They participate in creating dance movements; observing others and self performing dance movements; and responding to dance through talking, writing, or drawing. Learning experiences include moving to music and singing; creating their own dances; and moving to reading, poetry, and stories.

The theater curriculum involves storytelling, pantomime, improvisation, and puppetry. Performance is an integral part of the theater experience.

d) Space Descriptions
Designed as a multi-purpose classroom that supports a variety of activities.

Room Data Information
a) Finish Information:
Floor:

- **Resilient tile, sealed concrete, or special flooring.**
- **Base: Rubber, vinyl or wood.**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 10'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no vision panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**
- **Windows: Provide operable windows - type dependent on ventilation (natural or ac).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements
a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA. Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Provide interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Ensure that operable walls dividing classrooms have a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains within each classroom building at – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum 2 computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
    - **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
    - **Provide one duplex outlet near the T.V. mount.**

- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting. See Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **During the design phase, review and determine exact lighting needs.**

f) Multi-Media / Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station 6, including conduit and wiring, and one for the teacher. Provide a telephone jack for the teacher.**

g) Special Considerations

Items to consider during design:

- **Make sure the flooring choice support the curriculum and activity focus. Provide a dance floor with spring/resilience to minimize student injury and discomfort.**
- **Consider amount of noise generated shall be considered and adjust design accordingly.**
- **Clarify and finalize lighting needs during design.**

7. Building Trades and Construction Industry Sector

Program Description and Philosophy

The Building Trades and Construction sector provides a foundation in the building trades and construction industry for secondary students in California. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in the building trades and construction industry. The sector encompasses four career pathways: Cabinetmaking and Wood Products, Engineering and Heavy Construction, Mechanical Construction, and Residential and Commercial Construction. These pathways emphasize processes, systems, and the way in which structures are built. The knowledge and skills are acquired in a sequential, standards-based pathway program that integrates hands-on, project-based, and work-based instruction as well as internship, community classroom, work experience, apprenticeship, and cooperative career technical education. Standards included in the Building Trades and Construction sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Engineering and Heavy Construction Pathway

Typical engineering and heavy construction careers focus on the planning and construction of complex projects associated with roads, highways, and subdivisions. Creating and following specifications and blueprints, as well as complying with state and local building codes are all important elements of this career.

Cabinetmaking and Wood Products Pathway

The Cabinetmaking and Wood Products Pathway provides learning opportunities for students considering careers in cabinet construction, millwork, and wood products, and covers the construction of both custom and production products. Planning and layout, following plans, use of hand, power and stationary tools are all parts of the training process.

Residential and Commercial Construction Pathway

Large and small residential and commercial construction projects are the bread and butter of the construction industry. Many skilled workers with diverse specialty skills take a project from start to finish. The majority of the skill areas in this pathway are classified as individual trades.

a) Program Description:

b) Space and Infrastructure Requirements

- **dual-use facilities – "classroom" setup with computers as well as hands-on work space**
- **Building and Construction Shop with welding capacity**

c) Activities and Space Use:
d) Space Descriptions

Room Data Information
a) Finish Information:

Building and Construction Shop:
Floor:

- **Resilient Tile:**
  - **Offices**
  - **Classrooms**
- **Finished concrete:**
  - **Supply/Parts Room**
  - **Tool Room**
  - **Project Storage Room**
  - **Material Storage Room**
  - **Finishing Room**
  - **Compressor Room**

- **Finished concrete leveled and coated with hardener:**
  - **Bench Woodworking Area**
  - **Machine Woodworking Area**

Floors around machines and workbenches:

- **Slip-resistant with special abrasive material**
- **Provide traffic lines around workstations to be clearly marked with 2 inch wide yellow stripes.**
- **Machine areas to be separated from bench working areas**
- **Glazed tile (non-skid) sloped to drainage at all restrooms**
- **Locker Rooms with a 4 foot high wainscot and 4 inch concrete base at lockers**

Fenestration:

Building and Construction Shop:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device**
- **Provide view panels in all interior doors for classrooms, offices.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**
- **Use roll-up doors where required to accommodate delivery of materials and supplies.**

Materials Storage Room:

- **Provide double leaf sliding doors for removing stored lumber from one end of room.**
- **Construct doors on expanded metal and hang on heavy industrial rails.**

Finishing Room:

- **Provide observation and supervision glass windows on doors (6' x 7' double leaf).**

Tool Room:

- **Provide metal Dutch door serving counter and metal door frame with lock and key.**

Machine Woodworking:

- **Provide metal exterior doors with metal jambs.**
- **Make locks and hardware to be burglar proof.**
- **Provide 1 - 10' x 9'H metal roll-up door with metal frame facing service road for ripping and planning large stocks and for receiving and storing materials.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioning)**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies). Certain glass areas may require safety glass.**
- **Machine Woodworking Area:**
  - **Install window sill to be minimum 7 feet above floor; and**
  - **Install security screens on exposed windows.**

Building and Construction Shop:
Machine Woodworking Shop:

- **Provide centralized dust collection system to be provided for: uniplane, planer, table saw, belt sander, and disc sander with 2 floor sweeper ducts.**
- **Locate dust collection unit outside the building, under shelter, protected from elements, vandalism, and disturbance to instruction.**
- **Provide stand for dust collection and should be high enough to accommodate hopper and 55-gallon drum on casters to remove waste.**
- **Protect exhaust system from elements and discharge of wood shavings and dust.**
- **Install mechanical ventilation system whenever natural ventilation is inadequate.**
- **Anchor all heavy machinery to the floor.**

Finish Room:

- **Provide exhaust system and hood to meet safety and health standards.**
- **Keep floor area below hood clear to accommodate large projects and portable spray cart (3' x 4') on casters.**

Utility and Room Data Requirements:
a) Acoustics
The classroom shall have:

- **Ensure that all rooms meet a background ambient noise levels of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Install interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Contain compressor noise as much as possible.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range points in each air-conditioned classroom. Locate thermostat near teacher station. Determine during design if a lockable cover is needed for adult control.**

- **Exhaust odor producing areas such as paint drying areas with no area re-circulated. Exhaust welding and paint spray booths with a dedicated exhaust system designed for welding and paint spraying respectively. Design all exhaust systems in accordance with the recommendations of the ACIGH. (American Conference of Governmental Industrial Hygienists).**

- **Coordinate classified areas defined by National Electric Code with the electrical consultant. Specify motors and appurtenances for specialized exhaust system to meet the requirements (e.g. explosion proof, non-sparking, etc.)**

- **Provide welding fume exhaust system if welding is performed indoors.**

- **Provided ducted dust collection system for wood working operations.**

- **Verify air filtration systems to meet all air quality standards.**

c) Plumbing:
Typical Classroom:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide work counter on either side of the wash sink with cabinets above and below for Building and Construction Shop.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide a combination emergency shower and eyewash station that meet the requirements of ADAAG. Shower drains shall be provided with a trap primer.**
- **Ensure that design of ground and floor surfaces does not allow run-off from pressure washer and hazardous waste to go into storm drain.**
- **Provide adequate water supply for lath house, green house and mist house irrigation requirements. At minimum provide hose bibs at each house. Protect main supply shall by approved backflow preventer device meeting requirements of the local Plumbing Code.**

Plumbing
Building and Construction Shop:
Bench Woodworking:

- **Provide compressed air outlets with regulators and 5/16 inch quick-clip couplings (male and female) spaced equally apart on open accessible wall spaces.**

Machine Woodworking:

- **Provide stainless steel scullery-type, 2 compartment sink (24"x 24" x 16"D) with drainboards on each side, with 1 drinking faucet and 3 regular faucets. Install compressed air outlets with regulator and 5/16 inch quick clip couplings (male and female) spaced 54 inches apart on open and accessible walls.**

Finish Room:

- **Provide compressed air with water trap and air pressure regulator on outside wall and provide water bib.**

Compressor Room:

- **Minimize accumulation of moisture in all compressed air lines and/or provide adequate water traps.**

Restrooms:

- **Provide 2 lavs, 1 hose bibb below lav and 2 water closets with stalls in women's restroom.**
- **Provide 2 lavs, 1 hose bibb below lav, 1 water closet with stall and 2 urinals in men's restroom.**
- **Provide 1 lav and 1 water closet in staff toilet.**

e) Electrical:
Typical for Classrooms:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**

- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit. Typically, each classroom has six student computer work stations, one teacher computer, and one laser printer.**
- **Provide a minimum of five (5) circuits per classroom. Utilize a minimum of two (2) dedicated homeruns for these five circuits t allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the design will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
  - **(b) Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

Building and Construction Shop:

Office:

- **Provide a master safety switch to control all lab power circuits and compressor in the office.**

Tool Room:

- **Provide 120-V duplex outlets on 3 walls above counter.**

Bench Woodworking:

- **Provide 120-V rail type convenience outlet with male and female plugs hanging above (20 inches) each of 8 workbenches. Rail to be securely braced from swinging.**
- **Provide 120-V convenience outlets every 4 feet above all counter tops and along walls.**

Machine Woodworking:

- **Provide overhead electrical system with branched outlets and starter switches for all machinery with power ratings to meet the furniture and equipment standards.**
- **Provide 120-V convenience outlets every 4 feet above all countertops and along all walls.**
- **Provide master switch and switch box circuit breakers with lock and key to be placed in the office for safety and supervision.**
- **Provide separate bell systems for cleanup and emergency.**
- **Provide switch for dust collection system to be separate and under lock and key placed close to Planer. Locate master safety switch in instructor's office to control all power circuits.**

Compressor Room:

- **Provide magnetic starter and automatic switch to meet specs of motor and place control switch in office or lab area for supervision and safety.**

f) Lighting:

Typical at all shops:

- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **Provide appropriate fixtures to comply with hazardous classifications as required in the Finish Room.**
- **Provide safety guards over lamps.**
- **Provide light switch at foot of access ladder at Staff Toilet.**

Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**

- **Provide multi-media outlets with conduit and data cabling at each permanent computer station (6) for students and one (1) for the teacher. Equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations

- **Verify that electric panic/kill switch to shut off all power in case of an emergency is provided within each industrial arts facility, typically located in the teacher's office.**
- **Seriously consider installing a security alarm system.**
- **If a school has an auto body program, consider a separate automotive stall for body work for the following reasons:**
  - **Keeps hazardous waste from body filler, primers, etc. contained for clean up control.**
  - **Keeps sanded body filler & materials from contaminating mechanical parts that should be clean during inspection & re-assembly.**

For safety and security reasons:

- **Ensure all areas have appropriate fire and smoke detection devices.**
- **Install fire alarm pull stations (where located per code) at adult height/reach levels per ADAAG**
- **Provide doors with locks**
- **Provide illuminated exit signs**
- **Investigate intrusion detection alarm system for security.**
- **Revise or combine restroom fixture counts during design of new schools.**

8. Finance and Business Industry Sector

Persons trained in such fields as accounting, banking, and finance will find that their skills are highly marketable. Students master basic accounting principles and procedures before proceeding to the career path specializations. The specializations emphasize concepts of accounting and finance, including computer applications, taxes, investments, and asset management. Because almost every business organization has an accounting component, students with knowledge of accounting will find that opportunities exist in many other career paths in addition to those in finance and business.

Accounting Services Pathway

The job market for accountants and auditors is estimated to grow steadily in the future with job opportunities in high demand. Accounting is essential to business institutions and organizations. Students in the accounting pathway will learn how to prepare, analyze, and verify financial reports, as well as design, install, and maintain general accounting systems.

Banking and Related Services Pathway

The Banking and Related Services Pathway can lead to an exciting career while also making you a savvy consumer. Money is something we all deal with on a daily basis and having an arsenal of knowledge on the subject may increase your capital. Students will learn basic concepts of banking and related financial services such as loans, credit, and payment services. Knowledge of banking regulations is also necessary for handling financial transactions.

.Business Financial Management Pathway

Students in the Business and Financial Management Pathway learn how to provide investment analysis and guidance to help businesses and individuals with investment decisions. Insurance, stocks, and commodities are topics covered in this pathway. Students will learn how to explore, apply, and monitor investment opportunities for a stable financial future.

a) Space and Infrastructure Requirements:

Computer labs for mastery of software and online research.

.Classroom Area

- **General Classroom (used for various business classes) 980 SF**
- **Small Business Classroom 1,400 SF**
- **Large Business Classroom 1,600 SF**

- **See latest High School Facilities Assessment and Development Schedule (FADS) for any updates or changes to Business Education areas.**

The Business Classrooms should be designed to include the following:

- **A 60" x 30" instructor presentation desk in the front corner of the classroom on which a computer and ELMO can be placed. The desk should also be consoled with a communications control unit to facilitate uses of computer or ELMO lesson presentations onto a motorized projection screen to be located in front of the classroom. See illustration below.**

- **An LCD projection unit to project manual and computerized presentations should be mounted/secured on a rack or shelf which is hung two to three feet from the classroom ceiling. This will reduce easy removal and theft of LCD projectors. See illustration below.**

- **Inclusion of this ELMO/LCD Projection System may be considered for General Classrooms used for delivery of General Business and Note Taking.**

b) Activities and Space Use:

At the high school level, pathways can be addressed through an appropriately equipped single classroom and computer laboratory facility. Students will usually operate in project teams and groups. Individuals will work on appropriate equipment as necessary to complete projects and other tasks assigned to the group or the individual. Resource centers and work stations support the concept of problem-based learning in all areas of the Business program.

c) Program Description

Space Description
For Business Classrooms:

- **Designate one wall as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and space for mounting a television (or locating a television on a cart).**
- **Provide additional wall space for display and storage of student work.**

c) Room Data Information
a. Finish Information:
Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b. Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or ac).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**
- **Include fixed glass windows in walls adjacent to classroom for observation and supervision.**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure rooms meet background ambient noise levels of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0.X to 0.X.**
- **Provide interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Ensure that operable walls dividing classrooms have a minimum STC of 48 when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**
- **Size air conditioning system to include internal heat load generated by business machines planned for the classroom.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these five circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
    - **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
    - **Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting. See Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station: six for students and one for the teacher. Also equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations

Items to consider during design: Specific furniture requirements will be determined during design based on program emphasis and needs.

9. Public Services Industry Sector

a) Program Description and Philosophy

The Public Services sector provides a foundation for secondary students in government, public administration, public safety, legal, and human services. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in the industry.

The sector encompasses three career pathways: Human Services, Legal and Government Services, and Protective Services. These pathways emphasize processes, systems, and services related to serving the public's interest. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates classroom, laboratory, and project- and work-based instruction as well as internship, community classroom, work experience, and cooperative career technical education. Standards included in the Public Services sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Human Services Pathway

Those involved in human services are concerned with the well-being of the people in the communities they serve. Human services is an umbrella term that includes a variety of different careers with one common denominator, the desire to help people improve the quality of their lives. Services often include providing or supporting client participation in a treatment plan. Many people are drawn to this pathway because of the personal satisfaction they receive from helping others.

Protective Services Pathway

Careers in this pathway primarily address public order, fire protection, and emergency medical services. With a continually growing population, the need for protective services is in constant high demand. Successful individuals who follow this pathway are concerned with protecting people from danger and helping to ensure their health and safety. Many of these careers provide great personal satisfaction from seeing the positive results of personal effort.

Legal and Government Services Pathway

The Legal and Government Services Pathway examines the unique nature of careers in our government and legal system. Careers in the legal field are in constant demand with numerous lucrative positions available. While some careers in this pathway require a college education, many require no more than a high school diploma.

b) Space and Infrastructure Requirements:

- **Classroom area appropriate for physical training such as first aid, CPR**
- **Computer access for lecture/lab teaching**

c) Activity and Space Use:

Space Description
Room Data Information
a) Finish Information:
Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**

- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or ac).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure rooms meet a background ambient noise level of XX to XX DBA. Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Provide interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Provide operable walls dividing classrooms with a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**
- **Provide commercial style grease hood at each range. Protect grease ducts with one-hour enclosure or as approved by the local Building Department.**
- **Provide vent to exterior for dryer.**

c) Plumbing:

- **Provide a two-compartment stainless steel sink, ADAAG compliant at one station, for front approach at each island including the teacher's demonstration table. Include a solids interceptor in each sink. Cold and hot water for sanitation.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide closet with utility sink with hot water and mop rack for sanitation.**
- **Provide an accessible hand wash sink.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per wall for general use.**
- **Provide/verify sufficient floor or wall outlets for the following:**
  - **a)Ten sewing machines**
  - **b) Six rice cookers**
  - **c) Three microwave ovens**
  - **d) Six electric ranges – 30 inch free standing, cleantop, 4 burners, self-cleaning oven (no gas ranges)**
  - **e) No disposals**
  - **f) Two refrigerator/freezers, 16 – 18 cubic feet, frost-free, upright freezer with separate door.**
  - **g) Washer, clothes, automatic 1/2 HP, 120 V.**
  - **h) Dryer, clothes, electric, 1/2 HP with sensor, 220V.**
  - **i) One freezer**
- **Provide remote power shutdown for ovens/stoves. Location determined during the design.**
- **Provide one 120 volt G.F.I. duplex outlet near each sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Verify number of circuits required per list in paragraph 2 above. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**

  - Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.
  - Provide one duplex outlet near the TV mount.
- Provide electric powered quartz wall clock.

e) Lighting:

- Efficiently combine use of day lighting with artificial lighting. See Sustainable Design Criteria for additional guidance.
- Provide fluorescent lighting with multi-level and/or zoned switching.

f) Multi-Media/Communications:

- Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.
- Outlets for interactive white board and short throw projector. Location determined during design.
- Provide multi-media outlets with conduit and data cabling at each permanent computer station, 6 for students and 1 for the teacher. The multi-media outlet for the teacher shall also be equipped with telephone cabling. Terminate cables onto modular jacks for single device plate mounting.

g) Special Considerations

Items to consider during design:

- Verify specific kitchen equipment needs for Food Service Lab during design. Focus may vary with school.
- Consider layout of the classroom and food prep area with an operable wall with white boards and tackboards for flexibility in use.
- Allow for vehicular access and ease of supply deliveries.
- Consider screens on doors and doorways for insect control.

10. Engineering and Design Industry Sector

a) Program Description and Philosophy:

The Engineering and Design sector is designed to provide a foundation in engineering and design for students in California. Students are engaged in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and career preparation in five pathways. The following pathways emphasize real-world, occupationally relevant experiences of significant scope and depth: Architectural and Structural Engineering; Computer Hardware, Electrical, and Networking Engineering; Engineering Design; Engineering Technology; and Environmental and Natural Science Engineering. To prepare students for continued training, advanced educational opportunities, and direct entry to a career, the engineering and design programs offer the following components: classroom, laboratory, and hands-on contextual learning; project- and work-based instruction; internship, community classroom, and cooperative career technical education; work experience education; and leadership and interpersonal skills development.

Architectural and Structural Engineering Pathway

The Architectural and Structural Engineering Pathway provides learning opportunities for students interested in the safety, cost, design, and construction of a building. Work elements of this pathway often involves working in conjunction with an architect. Students interested in this pathway should possess artistic ability and strong mathematical skills.

Computer Hardware, Electrical, and Networking Engineering Pathway

Careers in this pathway are highly technical and require continuing education to stay abreast of constantly changing technology. Students are introduced to the design, manufacturing, assembly, programming, and maintenance of computers and networking systems essential to telecommunications and information technology. These pathway careers will continue to be in high demand as technological systems become increasingly intricate. Students interested in this pathway should have a desire to understand, diagnose, and create within a technological framework.

Environmental and Natural Science Engineering Pathway

If your heart is set on protecting the environment, this may be your pathway. Improving and protecting our air, land and water is the focus of this career area. Students will be involved in the design and development of equipment, processes, and systems used to create, monitor, prevent or correct environmental events and conditions.

Engineering Technology Pathway
The Engineering Technology Pathway provides learning opportunities for students interested in preparing for careers in the design, production, and maintenance of mechanical, telecommunications, electrical, electronics, and electromechanical products and systems.

b) Space and Infrastructure Requirements

- **Traditional and digital design/drafting tools and space**
- **Computer/electrical engineering lab**
- **Physical science lab**
- **Design and Engineering Classroom**
- **Electronics and Computer Systems**

c) Activities and Space Use:
Space Description:
The basic training in the use of tools, machines, etc., requires a laboratory, which should be designed to accommodate approximately 28-32 students. Each lab must be designed to contain adequate work spaces, benches, and tools and sufficient numbers of tools and equipment to provide for all students working at different functions during a class period.

Description of Programs

Room Data Information
a) Finish Information:

Design and Engineering Classroom:
Floor:

- **Resilient Tile at classrooms and offices.**
- **Finished concrete at Equipment/Supply Room.**
- **Base: Rubber**
- **Walls: Painted Gypsum Board or Painted CMU**
- **Ceiling: Acoustical Tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved).**

Electronics and Computer Systems:
Floor:

- **Resilient tile:**
  - **Classroom**
  - **Office**
  - **Communication Room**
  - **Project Storage Room**
  - **Computer Lab**
  - **Benchworking Area**
  - **Testing Room**
- **Glazed non-skid tile at restrooms with 4 feet high wainscot**
- **Finished concrete at Equipment/Supply Room**
- **Base: Rubber**
- **Walls: Painted Gypsum Board or Painted CMU**
- **Ceiling: Acoustical Tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved).**

b) Fenestration:

Electronics and Computer Systems:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices, and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Benchworking:

- **Provide a metal exterior door and frame where the entrance door is 3 feet wide and the service door (double) is 6 feet wide.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioned).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**
- **Install window sill a minimum of 7 feet above floor, facing the entrance, and install security screens on all exposed windows.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range points in each air-conditioned classroom. Locate thermostat near teacher station. Determine during design if a lockable cover is needed for adult control.**

- **Exhaust odor producing areas such as paint drying areas with no area re-circulated. Exhaust welding and paint spray booths with a dedicated exhaust system designed for welding and paint spraying respectively. Design all exhaust systems in accordance with the recommendations of the ACIGH. (American Conference of Governmental Industrial Hygienists).**

- **Coordinate classified areas defined by National Electric Code with the electrical consultant. Specify motors and appurtenances for specialized exhaust system to meet the requirements (e.g. explosion proof, non-sparking, etc.)**

- **Provide welding fume exhaust system if welding is performed indoors.**

- **Provided ducted dust collection system for wood working operations.**

- **Verify air filtration systems to meet all air quality standards.**

Electronics and Computer Systems: (See typical classroom)

c) Plumbing:
Typical Classroom:

- **Provide a sink with one single compartment size large (31” x 22” x 6”D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide work counter on either side of the wash sink with cabinets above and below for Building and Construction Shop.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide a combination emergency shower and eyewash station that meet the requirements of ADAAG. Shower drains shall be provided with a trap primer.**
- **Ensure that design of ground and floor surfaces does not allow run-off from pressure washer and hazardous waste to go into storm drain.**

- **Provide adequate water supply for lath house, green house and mist house irrigation requirements. At minimum provide hose bibs at each house. Protect main supply shall by approved backflow preventer device meeting requirements of the local Plumbing Code.**

Design and Engineering Classroom:

- **Drafting Area: Provide stainless steel, flat double-tray sink (10" x 22" x 54"L) with coldwater faucet with water fountain unit.**

Electronics and Computer Systems:
Benchworking:

- **Provide combination stainless steel laundry tray and sink, (20" x 42") with counter extended on each side.**
- **Provide cold water lines to faucets.**

Restrooms:

- **Provide 2 lavs, 1 hose bibb below lav and 2 water closets with stalls in women's restroom.**
- **Provide 2 lavs, 1 hose bibb below lav, 1 water closet with stall and 2 urinals in men's restroom.**
- **Provide 1 lav and 1 water closet in staff toilet.**

e) Electrical:
Typical for Classrooms:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit. Typically, each classroom has six student computer work stations, one teacher computer, and one laser printer.**
- **Provide a minimum of five (5) circuits per classroom. Utilize a minimum of two (2) dedicated homeruns for these five circuits t allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the design will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
  - **(b) Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

Design and Engineering Classroom:
Office:

- **Provide duplex 120-V outlets along baseboard of 2 walls, with 1 near desk.**
- **Locate master safety switch controlling all power circuits in drafting and model building areas.**

Electronics and Computer Systems:
Office:

- **Provide 120-V duplex outlets on baseboards of 2 walls, with 1 near desk.**
- **Provide master safety switch controlling all power circuits near desk.**

Communications Room:

- **Provide 1-208-V, 1-ph., 20-amp outlet above front counter top.**
- **Provide 110-V duplex outlets above counter top, space 4 feet apart.**
- **Provide control switch for rotator.**

Testing Room:

- **Provide 120-V continuous-type strip receptacles and/or duplex outlets above all counter tops.**

Benchworking:
- **Provide 120-V wired mold strip-type receptacles on face of tunnel for each carrel.**
- **Provide 120-V duplex outlets on all open wall spaces, every 4 feet.**

f) Lighting:
Typical at all shops:
- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **Provide appropriate fixtures to comply with hazardous classifications as required in the Finish Room.**
- **Provide safety guards over lamps.**
- **Provide light switch at foot of access ladder at Staff Toilet.**

Multi-Media/Communications:
- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station (6) for students and one (1) for the teacher. Equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations
- **Verify that electric panic/kill switch to shut off all power in case of an emergency is provided within each industrial arts facility, typically located in the teacher's office.**
- **Seriously consider installing a security alarm system.**
- **If a school has an auto body program, consider a separate automotive stall for body work for the following reasons:**
    - **Keeps hazardous waste from body filler, primers, etc. contained for clean up control.**
    - **Keeps sanded body filler & materials from contaminating mechanical parts that should be clean during inspection & re-assembly.**

For safety and security reasons:
- **Ensure all areas have appropriate fire and smoke detection devices.**
- **Install fire alarm pull stations (where located per code) at adult height/reach levels per ADAAG**
- **Provide doors with locks**
- **Provide illuminated exit signs**
- **Investigate intrusion detection alarm system for security.**
- **Revise or combine restroom fixture counts during design of new schools.**

11. Energy and Utilities Industry Sector

a) Program Description and Philosophy:
The Energy and Utilities sector is designed to provide a foundation in energy and utilities for all students in California. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in Electromechanical Installation and Maintenance, Energy and Environmental Technology, Public Utilities, and Residential and Commercial Energy and Utilities. The standards integrate academic and technical preparation and focus on career awareness, career exploration, and skill preparation in four pathways. The following components are integral to the Energy and Utilities sector pathways: classroom, laboratory, hands-on contextual learning, project-and work-based instruction, internship, community classroom, cooperative career technical education, and leadership development. The Energy and Utilities sector standards prepare students for continued training, postsecondary education, or entry to a career.

Electromechanical Installation and Maintenance Pathway
Electromechanical refers to the combining of electrical and mechanical parts in devices such as electric motors, loudspeakers, and adding machines. Students will need to understand energy conversion processes and energy transmission systems, as well as the installation and maintenance of equipment used in this field.

Energy and Environmental Technology Pathway
Individuals preparing for careers in energy and environmental technology will need to develop a working knowledge of related available resources and how the use of these resources and systems impact the environment. Conservation methods including procedures to measure energy efficiency will be important for the future of our nation.

Residential and Commercial Energy and Utilities Pathway
The Residential and Commercial Energy Utilities Pathway provides learning opportunities for jobs involved in obtaining, verifying, and maintaining primary financial data and records for the usage of electricity, gas, water, and sewer utilities. Technicians and engineers are needed to develop, operate, and maintain energy and utility systems for homes and businesses.

Public Utilities Pathway
The word "utilities" refers to the set of services associated with electricity, natural gas, water, and sewage. Because these services are expensive to develop, operate, and maintain, utility companies are primarily "public" in governance. However, a growing number of privately owned utilities are emerging. Public utility companies are subject to government control and regulation and employ a large number of people.

a) Program Description: Program description will be added in a future phase of the

b) Space and Infrastructure Requirements
Adequate lab and construction capacity to explore the science and engineering of energy technology
Computer lab access for lecture/lab teaching

c) Activities and Space Use:

d) Space Descriptions:

12. Education, Child Development, and Family Services Industry Sector

The Education, Child Development, and Family Services sector is composed of four career pathways: Child Development, Consumer Services, Education, and Family and Human Services. The high staffing needs and growing emphasis on improving education will create exciting career opportunities in those fields. The Child Development Pathway provides students with the skills and knowledge they need to pursue careers in child care and related fields, and the Education Pathway emphasizes the preparation of students to become teachers.

The Consumer Services Pathway gives students the employment and management skills needed in careers helping consumers. Students pursuing careers in the Family and Human Services Pathway learn the skills they need for careers related to family and social services. The standards are designed to integrate academic and career technical concepts. The components of the pathways support classroom and laboratory instruction or provide supervised, work-based learning experiences and leadership development.

Child Development Pathway
Careers that fall under the Child Development Pathway range from child care providers to child psychologists. Graduating students will be equipped to work with infants through young children. They will have studied growth and development, nutrition and health, learning theories and age appropriate curriculum activities.

Education Pathway

The Education Pathway prepares students for professional or support positions, pre-kindergarten through grade twelve. Students study human development, positive guidance and counseling techniques, age and grade appropriate learning strategies, and instructional design.

Family and Human Services Pathway
Family and Human Services Pathway encompasses a broad range of careers. Employment opportunities will be available working with children, families, and the elderly. Working with families and individuals to create healthy and stable environments can be a satisfying career. Working with the older generation as an elder care specialist is a relatively new and growing specialty. Continued growth in employment opportunities should be expected as health care professionals find ways to extend life.

Consumer Services Pathway
Students following the Consumer Services Pathway will learn employment and management skills that include business structure, consumer rights and responsibilities, energy, environment and resource management, product testing and demonstration, and consumer communications. Education is broad-based and designed to prepare students for careers helping customers. With the wide variety of skills acquired through this pathway, the job market is ever expanding.

a) Program Description:

c) Space and Infrastructure Requirements
- **All lecture lab teaching requires dual access to hands on and computer lab spaces**
- **Child development/preschool facility**
- **Elder/disability assistance "lab" (or is this medical sector?)- permitting access to and use of assistive devices**

c) Activities and Space Use:
- **Financial Literacy: Management of personal and family resources selection and purchasing of consumer goods and services, management of personal and family income.**
- **Human Development and the Family: Observation of children, discussions demonstrations and participation of personal, family and community relations, care and guidance of children. Family and Consumer Science in the high school level has two components: Comprehensive and Occupational.**

d) Space Descriptions: ***will be added during a future phase of the Ed Specs process.***

13. Fashion and Interior Design Industry Sector

The Fashion and Interior Design sector contains two career pathways: Fashion Design, Manufacturing, and Merchandising; and Interior Design, Furnishings, and Maintenance. To meet the growing needs of this industry, the career pathways prepare students with the knowledge, skills, and attitude necessary to pursue related careers and succeed in entry-level positions or pursue additional postsecondary education and training for technical and professional-level positions. The pathways include introductory standards for Consumer and Family Studies that lead to the other pathway standards. The standards are designed to integrate academic concepts with career technical concepts. Key components of the pathways support classroom and laboratory instruction or supervised work-based learning experiences and leadership development.

Fashion Design, Manufacturing, and Merchandising Pathway
The Fashion Design, Manufacturing, and Merchandising Pathway can lead to careers from clothing designer to professional shopper. Few careers offer the opportunities, creativity, and versatility of the fashion world. From small entrepreneur to large manufacturer, rewarding jobs in fashion exist in most communities. Students in this pathway will gain in-depth knowledge of the fashion industry including fashion history, textiles and textile production, apparel merchandising, and garment construction.

Interior Design, Furnishings, and Maintenance Pathway
From corporate America to individual homeowners, professionals are in demand to help create or enhance living and working environments. Students' preparation for careers in this rapidly growing field includes learning the elements of design and decorating, furniture designs from historical periods, space planning, and computer-assisted design.

a) Program Description: ***will be completed during a future phase of the Ed Specs process.***

b) Space and Infrastructure Requirements
Full design studio space with traditional as well as digital tools

c) Activity and Space Use: ***will be completed during a future phase of the Ed Specs process.***

- **Clothing and Textiles: Selection, care, construction of garments, study of textiles experimentation.**

d) Space Descriptions: ***will be added during a future phase of the Ed Specs process.***

14. Hospitality, Tourism and Recreation Industry Sector

The Hospitality, Tourism, and Recreation sector provides students with the academic and technical preparation to pursue high-demand and high-skill careers in these related and growing industries. The sector encompasses three distinct, yet interrelated, career pathways: Food Science, Dietetics, and Nutrition; Food Service and Hospitality; and Hospitality, Tourism, and Recreation.

The foundation standards include core, comprehensive technical knowledge and skills that prepare students for learning in the pathways. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on and project- and work-based instruction as well as internship, community classroom, work experience, apprenticeship, and cooperative career technical education. Standards included in the Hospitality, Tourism, and Recreation sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Food Service and Hospitality Pathway
The paths in the Food Service and Hospitality Pathway prepare students for a wide range of careers in restaurants, hotels, clubs, schools, resorts, hospitals, and institutions. The pathway focuses on key aspects of the industry including sanitation and safe food handling, food and beverage production, nutrition, food service management, and customer service. A self-motivated person might also take these skills and open a catering or food service business.

Hospitality, Tourism, and Recreation Pathway
How would you like to spend every day at Disneyland? Not as a tourist, but as an employee of the theme park, helping others have fun. The Hospitality, Tourism, and Recreation Pathway includes careers in lodging, travel services, eco-tourism, recreation, and event planning. This pathway appeals to students who enjoy working with people and are willing to acquire or already have excellent communication skills. With California being a popular vacation spot, career opportunities in this pathway are always plentiful.

Food Science, Dietetics, and Nutrition Pathway
This pathway focuses on three specializations centered on the science of food and its relationship to the health and well-being of individuals. It involves food from harvesting to consumption. With health concerns related to food and diet that are commonplace in the United States, people with knowledge and skills in food composition and preparation will be in high demand. Jobs which address the special needs of seniors and children are predicted to experience large growth as our population changes.

a) Program Description: ***will be completed during a future phase of the Ed Specs process.***

c) Space and Infrastructure Requirements

- **For foodservice - industrial grade kitchen with secure storage and full access for deliveries**
- **lecture and lab teaching requires access to computer lab as well as hands on space**

c) Activity and Space Use: ***will be completed during a future phase of the Ed Specs process.***

- **Foods and Nutrition: Selection, preparation, service, care and storage of food, class discussion, demonstration and observation.**

d) Space Descriptions: ***will be added during a future phase of the Ed Specs process.***

15. Information Technology Industry Sector

Technology and the growing complexity of businesses have expanded the need for employees who can analyze, design, and manage information. Skills for evaluating data, the ability to work with people, and clear communication are companion components for careers in information technology systems. Employment opportunities for technically and professionally trained persons are outstanding in this emerging career path. After mastering basic technology skills, students can select one of many specializations in the field of technology.

Information Support and Services Pathway
Mastery of information technologies is an essential part of nearly all successful business organizations today. People who have experience in information support services are constantly in high demand for a variety of positions.
Students in this pathway prepare for careers that involve the implementation of computer services and software, provision of technical assistance, creation of technical documentation, and management of information systems.

Media Support and Services Pathway
Organizations of all types and sizes use digital media to communicate with existing and potential customers.
Students in the Media Support and Services Pathway prepare for careers that involve creating, designing, and producing multimedia products and services. These services may include e-business web sites or computer enhanced visual media.

Network Communications Pathway
The successful establishment and maintenance of an information technology infrastructure is critical to the success of 21st Century businesses and organizations. In the Network Communications Pathway, students learn skills and techniques for network analysis, planning, design, implementation, maintenance, and management of network systems. As network administrators, they are often responsible for making recommendations regarding hardware and software issues. Network communication skills will qualify students for careers in most areas of business.

Programming and Systems Development Pathway
Students in the Programming and Systems Development Pathway prepare for careers that involve the design, development, and implementation of computer systems and software. Students learn different operating systems, programming language, and software development. Having expertise in these areas opens doors to careers involving cutting-edge technology and developing products for businesses and consumers.

a) Program Description:
b) Space and Infrastructure Requirements

Critical needs

- **Multi-media lab facilities for media services XX SF**
- **Electrical engineering/computer lab paired with classroom for theoretical and hands-on network studies, programming studies XX SF**
- **Electronics and Computer Systems 4,210 SF**

c) Activity and Space Use: ***will be completed during a future phase of the Ed Specs process.***
d) Space Descriptions: ***will be completed during a future phase of the Ed Specs process.***

Room Data Information

a) Finish Information: ***will be completed during a future phase of the Ed Specs process.***

Electronics and Computer Systems:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices, and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Benchworking:

- **Provide a metal exterior door and frame where the entrance door is 3 feet wide and the service door (double) is 6 feet wide.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioned).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**
- **Install window sill a minimum of 7 feet above floor, facing the entrance, and install security screens on all exposed windows.**

16. Health Science and Technology Industry Sector

The standards in the Health Science and Medical Technology sector represent the academic and technical skills and knowledge students need to pursue a full range of career opportunities in this sector, from entry level to management, including technical and professional career specialties.

The career pathways are grouped into functions that have a common purpose and require similar attributes. The career pathways are Biotechnology Research and Development, Diagnostic Services, Health Informatics, Support Services, and Therapeutic Services Standards for each career path build on and continue the foundation standards with more complexity, rigor, and career specificity.

Biotechnology Research and Development Pathway
Want to search for new answers and develop medical breakthroughs? The Biotechnology Research and Development Pathway includes occupations that use biological science to research and develop applications used to benefit human health.

Diagnostic Services Pathway
If you like to help solve medical problems, the Diagnostic Services Pathway may be for you. Analyzing the cause or nature of a person's condition by creating a picture of their health status at a single point in time is the basis of the work performed in diagnostic services.

Health Informatics Pathway
Computer utilization is very fascinating to many people. If you think operating a computer as your primary work focus sounds intriguing, the Health Informatics Pathway may be right for you. Health informatics involves distribution of patient

health data organized via the computer. As software continues to be developed, the health informatics job opportunities will continue to grow.

Therapeutic Services Pathway
Want to assist patients in overcoming disease, illness, or injury? Occupations that affect the ongoing treatment and rehabilitation of patients are part of the Therapeutic Services Pathway, which includes an extensive list of entry through professional level career options.

Support Services Pathway
The Support Services Pathway provides an opportunity to work directly or indirectly with patients, their environment, and their material needs.

a) Program Description: ***will be added in a future phase of the Ed Specs process.***

d) Space and Infrastructure Requirements

- **Biotech lab facilities**
- **Hands-on "patient care" practice labs with space for beds, wheelchairs and other assistive devices, and equipment/furniture that will assimilate medical offices or other caregiving situations. Must be in proximity to lecture classrooms/computer labs for lecture/study part of curriculum.**

c) Activity and Space Use: ***will be added in a future phase of the Ed Specs process.***

d) Space Descriptions: ***will be added in a future phase of the Ed Specs process.***

17. Marketing, Sales and Service Industry Sector

The Marketing, Sales, and Service sector is designed to align career path course work with current and projected employment opportunities. Marketing includes the processes and techniques of transferring products or services to consumers and is a function of almost every business. It exists within an environment of rapidly changing technology, interdependent nations and economies, and increasing demands for ethical and social responsibility.

The four pathways in this sector, E-commerce, Entrepreneurship, International Trade, and Professional Sales and Marketing, emphasize training to meet the growing need for marketing professionals with skills in communication, global marketing, marketing strategies, product and service management, promotion, and selling concepts. These pathways provide a firm foundation for advanced education, entry to a career, and success in the global marketplace.

E-commerce Pathway
The buying and selling of products and services over the Internet are now everyday occurrences. For large corporations, globalization via e-commerce is no longer an option, but a strategic necessity. E-commerce has spurred innovations in electronic funds transfer, inventory management, marketing, automated data collection systems, and many other areas. Career opportunities in this pathway have grown to meet the needs of the global market.

Entrepreneurship Pathway
Entrepreneurship is the practice of starting a new business or organization. Though starting a business presents challenges and hardships, entrepreneurs are not discouraged in their pursuit of being their own boss. While no specific personality type is associated with entrepreneurs, successful entrepreneurs share common characteristics. Some key descriptors include visionary, prudent risk takers, positive thinker, persistent, enthusiastic, and determined.

International Trade Pathway

Twenty-first Century travel and communication make the commerce world seem smaller. The resulting global marketplace is a thriving and competitive place to do business. Students focusing on international trade need an understanding of the political, historical, cultural, legal, economic, and ethical systems of the countries trading in the world market.

Professional Sales and Marketing Pathway
Sales and marketing involve the transfer of goods and services in the economy. Marketing entails promotion, advertising, and distribution. Types of sales include direct, retail, consignment, telemarketing, door-to-door, route, and auction.

a) Program Description:

b) Space and Infrastructure Requirements: ***will be added in a future phase of the Ed Specs process.***

- **media lab for study, production of marketing tools and messages**

c) Activity and Space Use: ***will be added in a future phase of the Ed Specs process.***

d) Space Descriptions: ***will be added in a future phase of the Ed Specs process.***

18. Transportation Industry Sector

The Transportation sector is designed to provide a foundation in transportation services for all industrial technology education students in California. The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in Aviation and Aerospace Transportation Services, Collision Repair and Refinishing, and Vehicle Maintenance, Service, and Repair.

The standards are designed to integrate academic and technical preparation and focus on career awareness, career exploration, and skill preparation in the three pathways. Integral components include classroom, laboratory, hands-on contextual learning, and project- and work-based instruction as well as internship, community classroom, cooperative career technical education, and leadership development. The Transportation sector standards prepare students for continued training, postsecondary education, and entry to a career.

Aviation and Aerospace Transportation Services Pathway
More and more people and products are being moved by air than ever before. This practice is expected to continue increasing at a fast pace, which will in turn open more opportunities in this pathway. Aviation and aerospace services include maintaining aircrafts, operating airports, and designing and flying various types of aircrafts.

Vehicle Maintenance, Service, and Repair Pathway
In your grandparent's day, "shade tree" mechanics were common. You could claim to be a mechanic with a few simple tools – but that day has long passed! Vehicle service and repair is now a highly skilled profession that requires more brainpower than muscle power. Solving problems with your head is critical. In addition to cars and trucks, the motor vehicles category includes boats, motorcycles, trains, and outdoor power equipment. All require specific knowledge in order to be serviced, repaired, and maintained properly.

Collision Repair and Refinishing Pathway
Like to work on puzzles? Piece together broken items? Then collision repair may be for you. Using specialized equipment, a frame technician can return most damaged vehicles to the road. An exterior finisher returns the vehicle to its original appearance.

a) Program Description: ***will be added during a future phase of the Ed Specs process.***

b) Space and Infrastructure Requirements

Dual lecture and lab teaching requires hands-on facilities as well as computer access

c) Activity and Space Use: ***will be added during a future phase of the Ed Specs process.***

d) Space Descriptions ***will be added during a future phase of the Ed Specs process.***

Room Data Information

a) Finish Information: ***will be added during a future phase of the Ed Specs process.***

Transportation Systems: ***will be added during a future phase of the Ed Specs process.***
Floor:

- **Resilient Tile:**
  - **Classroom**
  - **Offices**
- **Finished concrete:**
  - **Supply/Parts Room**
  - **Storage Room**
  - **Compressor Room**
  - **Combustible Storage Room**
- **Finished non-slip concrete:**
  - **Components Parts Service Area**
- **Finished concrete with 4-1/2 inch traffic lines 7 feet apart for each stall and 4 inch concrete locker base:**
  - **Automotive Stalls**
- **Finished concrete with marked traffic lines around engine area with 2 inches yellow stripes:**
  - **Automotive Engine Area**
- **Finished concrete with 4-1/2 inch traffic lines 8 feet apart and dead center for:**
  - **Aligning automobile with hoist and for identifying safety zone**
- **Secure tire changer at available open area with 2 inch yellow stripe for safety zone:**
  - **Automotive Hoist Area**
- **Finished concrete with raised curb around base of booth wall 2" H x 3" W, except at door:**
  - **Spray Booth Area**

- **Finished concrete with hardener:**
  - **Tool Room**
  - **Testing Room**
- **Glazed tile (non-skid) sloped to drainage with 4 foot high wainscot at restrooms and locker rooms**
- **Provide 4 inch concrete base at lockers**
- **Rough concrete finish at outside service areas.**
- **Area between concrete slab and fence to be surfaced with asphalt concrete.**
- **Finished concrete at Equipment/Supply Room.**
- **Base: Rubber**
- **Walls: Painted Gypsum Board or Painted CMU**
- **Ceiling: Acoustical Tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**
- **14' minimum height at Component Parts Service Area**

Fenestration

Transportation Systems:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**

- **Provide view panels in all interior doors for classrooms, offices, and conference rooms.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Automotive Hoist Area:

- **Provide 10' x 10' roll-up door for use of twin post hoist.**

Automotive Stall Area:

- **Provide 10' x 10' roll-up door at each of the 3 stalls.**

Spray Booth Area:

- **Provide 10' x 10' roll-up door.**

Outdoor Area:

- **Provide overhead doors for spray booth, hoist area, and auto stalls (3) will form one side of the outside service area.**

Tool Room:

- **Provide metal Dutch door with serving counter and metal frame.**
- **Provide metal with metal frame roll-up doors.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air-conditioned)**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**
- **Walls facing classroom and shop areas must have fixed wire glass windows with 3 feet high sill for supervision and safety.**

Components Parts

Service Area:

- **Install window sill a minimum of 7 feet above floor with security screen installed from the outside.**

Spray Booth:

- **Window sills at 7 feet high minimum.**

Utility and Room Data Requirements:
a) Acoustics
The classroom shall have:

- **Ensure that all rooms meet a background ambient noise levels of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Install interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Contain compressor noise as much as possible.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range points in each air-conditioned classroom. Locate thermostat near teacher station. Determine during design if a lockable cover is needed for adult control.**

- **Exhaust odor producing areas such as paint drying areas with no area re-circulated. Exhaust welding and paint spray booths with a dedicated exhaust system designed for welding and paint spraying respectively. Design all exhaust systems in accordance with the recommendations of the ACIGH. (American Conference of Governmental Industrial Hygienists).**

- **Coordinate classified areas defined by National Electric Code with the electrical consultant. Specify motors and appurtenances for specialized exhaust system to meet the requirements (e.g. explosion proof, non-sparking, etc.)**

- **Provide welding fume exhaust system if welding is performed indoors.**

- **Provided ducted dust collection system for wood working operations.**

- **Verify air filtration systems to meet all air quality standards.**

Transportation System:

- **Ensure that exhaust system and hood meet safety and health standards.**
- **See Mechanical Design Criteria for additional requirements.**

c) Plumbing:
Typical Classroom:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide work counter on either side of the wash sink with cabinets above and below for Building and Construction Shop.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide a combination emergency shower and eyewash station that meet the requirements of ADAAG. Shower drains shall be provided with a trap primer.**
- **Ensure that design of ground and floor surfaces does not allow run-off from pressure washer and hazardous waste to go into storm drain.**
- **Provide adequate water supply for lath house, green house and mist house irrigation requirements. At minimum provide hose bibs at each house. Protect main supply shall by approved backflow preventer device meeting requirements of the local Plumbing Code.**

Transportation Systems:
Composing Parts Service Area:

- **Provide compressed-air outlets with valve and 5/16 inch quick clip coupling (male and female) spaced equally apart on open and accessible wall space.**
- **Provide 5 each of 2 inch pipe outlets spaced equally along open wall space, 3 feet above floor, with spring tension caps for discharging exhaust fumes from live engines.**

Auto Stalls:

- **Provide compressed air outlets with regulator and 5/16 inch quick-clip couplings (male and female) at each stall post and available wall space.**
- **Provide rolled-rim service sink with hose bibb at available wall space.**
- **Provide cold-water lines to service sink.**

Automotive Engine Area:

- **Provide cold water line to wash sink.**

Hoist Area:
Provide compressed air outlets with regulator and 5/16 inch quick-clip couplings (male and female) at each stall post and available wall space.

Compressor Room:

- **Provide pressure regulator and water trap.**

Spray Booth:

- **Provide stainless steel service sink at outside booth with hose bibb below.**
- **Provide compressed air outlets with regulator, water trap, and 5/16 inch quickclip couplings (male and female) inside and outside booth.**

Restrooms:

- **Provide 2 lavs, 1 hose bibb below lav and 2 water closets with stalls in women's restroom.**
- **Provide 2 lavs, 1 hose bibb below lav, 1 water closet with stall and 2 urinals in men's restroom.**
- **Provide 1 lav and 1 water closet in staff toilet.**

e) Electrical:

Typical for Classrooms:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit. Typically, each classroom has six student computer work stations, one teacher computer, and one laser printer.**
- **Provide a minimum of five (5) circuits per classroom. Utilize a minimum of two (2) dedicated homeruns for these five circuits t allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the design will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate future LCD projector. Location to be determined during design.**
  - **(b) Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

Transportation Systems:

Office:

- **Provided duplex outlets on baseboards of 2 walls, with 1 near desk**
- **Master safety switch controlling all power circuits for entire metal lab area**

Composing Parts Service Area:

- **Provide 208-V, 1-ph, industrial-type outlet and plug for arc welder**
- **Provide 120-V outlets paced every 4 feet above all counter tops, carrels, and open walls**

Automotive Stalls:

- **Provide 120-V overhead electrical system with 2 plugs hanging at 20 inches over each workbench**
- **Provide 120-V outlets every 4 feet along available walls**
- **Provide separate bell system for emergency and cleanup**
- **Provide 2 overhead 208-V., 60 amp, 1-ph outlets at 1st and 3rd. end of stall for arc welders**

Tool Room:

- **Provide 120-V outlets on 3 walls above counter**

f) Lighting:

Typical at all shops:

- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **Provide appropriate fixtures to comply with hazardous classifications as required in the Finish Room.**
- **Provide safety guards over lamps.**
- **Provide light switch at foot of access ladder at Staff Toilet.**

Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Provide one outlet for closed-circuit TV. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station (6) for students and one (1) for the teacher. Equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations

- **Verify that electric panic/kill switch to shut off all power in case of an emergency is provided within each industrial arts facility, typically located in the teacher's office.**
- **Seriously consider installing a security alarm system.**
- **If a school has an auto body program, consider a separate automotive stall for body work for the following reasons:**
  - **Keeps hazardous waste from body filler, primers, etc. contained for clean up control.**
  - **Keeps sanded body filler & materials from contaminating mechanical parts that should be clean during inspection & re-assembly.**

For safety and security reasons:

- **Ensure all areas have appropriate fire and smoke detection devices.**
- **Install fire alarm pull stations (where located per code) at adult height/reach levels per ADAAG**
- **Provide doors with locks**
- **Provide illuminated exit signs**
- **Investigate intrusion detection alarm system for security.**
- **Revise or combine restroom fixture counts during design of new schools.**

19. Manufacturing and Product Development Industry Sector

The Manufacturing and Product Development sector provides a foundation in manufacturing processes and systems, including machine tool, welding, graphic communications, and graphic design, for secondary students in California. Students engage in an instructional program that integrates academic and technical preparation and focuses on career awareness, career exploration, and skill preparation in four pathways.

The pathways emphasize real-world, occupationally relevant experiences of significant scope and depth in manufacturing and in graphic communication. The knowledge and skills are acquired within a sequential, standards-based pathway program that integrates hands-on, project-based, and work-based instruction as well as internship, community classroom, work experience, apprenticeship, and cooperative career technical education. Standards included in the Manufacturing and Product Development sector are designed to prepare students for technical training, postsecondary education, and entry to a career.

Graphic Arts Technology Pathway
The Graphic Arts Technology Pathway provides students with an understanding of manufacturing processes and systems common to careers in graphic arts and printing technology. Designers make sketches, models, and computer simulations which are presented to engineers and marketing staff. Students will be introduced to different printing enterprises, graphic design, photography, and art and copy preparation.

Integrated Graphics Technology Pathway
The Integrated Graphics and Technology Pathway is for students who have a passion for both the arts and electronics. Technology related to this pathway is continually evolving. Creativity ranks in importance with education and experience. Text, graphics, audio, video, and animation are areas explored in this pathway. Careers in this pathway involve a wide

range of activities including on-demand publishing, digital imaging, analog and digital videography, and electronic image assembly.

Machine and Forming Technology Pathway
The Machine and Forming Technology Pathway teaches students how machines are designed to form products in the manufacturing industry. After a layout design is developed, the machine forming process cuts, shapes, forges, molds, casts, fastens, and finishes the manufacturing process. Skilled craftsmen ensure the finished product meets the product specifications.

Welding Technology Pathway
The Welding Technology Pathway provides students with an understanding of how welding and related careers fit in the manufacturing process. During the manufacturing process, highly skilled craftsmen apply a wide variety of bonding techniques. Topics include mechanical bonding, joining, cohesive bonding, adhesive bonding, and mechanical fastening. Newer welding methods include laser, ultrasonic, and electron beam. The demand for trained welders continues to look good.

a) Program Description:

b) Space and Infrastructure Requirements

- **Graphic design studio and equipment (digital and mechanical?)**
- **Contiguous computer labs with all machine/production shops for lecture/lab teaching**
- **Manufacturing Shop (welding facilities?)**
- **Design and Engineering Classroom**

c) Activity and Space Use:

d) Space Descriptions
Room Data Information
a) Finish Information:

Manufacturing Shop:
Floor:

- **Resilient Tile:**
  - **Classrooms**
  - **Offices**

- **Finished concrete:**
  - **Supply/Parts Room**
  - **Tool Room**
  - **Project Storage Room**
  - **Material Storage Room**
  - **Finishing Room**
  - **Compressor Room**

- **Finished concrete (non-slip) with hardener:**
  - **Bench Woodworking**
  - **Machine Woodworking**
  - **Welding Area**

Floors around machines and workbenches to be:

- **Slip-resistant with special abrasive material**
- **Provide traffic lines around work stations to be clearly marked with 2 inch wide yellow stripes**

- **Machine areas to be separated from bench working areas**

Finished concrete (non-slip) with hardener and with special abrasive material:

- **Hot Metalworking Area:**

b) Fenestration:

Manufacturing Shop:
Doors:

- **Provide a view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices, and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**
- **Use roll-up doors where needed to accommodate delivery of materials and supplies.**

Material Storage:

- **Provide double leaf sliding doors for removing and storing metals at one end of room.**
- **Construct doors with expanded metal hung on heavy industrial rails.**

Finishing Room:

- **Provide observation glass window (10" x 10") on doors (6' x 7' double leaf).**
- **Air intake with metal louver outside and replaceable filter inside**

Tool Room: Provide metal Dutch door with serving counter and meal door frame, lock and key.

Machine Toolworking:

- **Provide 1 – 10' x 9'H roll-up door facing lanai and service road to be provided in addition to separate entrance door.**
- **All roll-up doors shall be metal with metal frame.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or ac). Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, security screens on jalousies.)**
- **Certain glass areas may require safety glass.**
- **Bench Metalworking, Hot Metalworking, Welding Area, and Machine**

Toolworking Area:

- **Install windowsill a minimum of 7 feet above floor and install security screens on all exposed windows.**

Utility and Room Data Requirements:
a) Acoustics
The classroom shall have:

- **Ensure that all rooms meet a background ambient noise levels of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Install interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Contain compressor noise as much as possible.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range points in each air-conditioned classroom. Locate thermostat near teacher station. Determine during design if a lockable cover is needed for adult control.**

- **Exhaust odor producing areas such as paint drying areas with no area re-circulated. Exhaust welding and paint spray booths with a dedicated exhaust system designed for welding and paint spraying respectively. Design all exhaust systems in accordance with the recommendations of the ACIGH. (American Conference of Governmental Industrial Hygienists).**

- **Coordinate classified areas defined by National Electric Code with the electrical consultant. Specify motors and appurtenances for specialized exhaust system to meet the requirements (e.g. explosion proof, non-sparking, etc.)**

- **Provide welding fume exhaust system if welding is performed indoors.**

- **Provided ducted dust collection system for wood working operations.**

- **Verify air filtration systems to meet all air quality standards.**

Manufacturing Shop:

- **Hot Metalworking Area: Provide cross and mechanical ventilation over foundry furnace. Combine exhaust system with that of welding areas.**
- **Welding Area: Provide mechanical exhaust system with hood above welding benches.**
- **Machine Toolworking Area: Provide both mechanical and cross ventilation where arc and gas welding equipments are placed.**

Finishing Room:

- **Provide exhaust system and hood to meet safety and health standards**

Bench Metalworking Area:

- **Provide both mechanical and cross ventilation**

c) Plumbing:

Typical Classroom:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide work counter on either side of the wash sink with cabinets above and below for Building and Construction Shop.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide a combination emergency shower and eyewash station that meet the requirements of ADAAG. Shower drains shall be provided with a trap primer.**
- **Ensure that design of ground and floor surfaces does not allow run-off from pressure washer and hazardous waste to go into storm drain.**
- **Provide adequate water supply for lath house, green house and mist house irrigation requirements. At minimum provide hose bibs at each house. Protect main supply shall by approved backflow preventer device meeting requirements of the local Plumbing Code.**

Manufacturing Shop:

Bench Metalworking:

- **Provide compressed air outlets with regulator and 5/16 inch quick couplings (male and female) spaced equally apart on open and accessible wall spaces.**

Hot Metalworking:

- **Provide 3/4 inch pipeline for foundry furnace and 1/2 inch for soldering furnace with separate control valves.**

- **Provide 1 additional 1/2 inch outlet switch valve for combination gas/air torch whenever possible.**
- **Connect gas line to main service line of school.**
- **Install 2 compressed-air outlets with 3/16 inch quick-clip couplings (male and female) above work-bench.**

Machine Toolworking:

- **Provide stainless steel scullery-type, 2 compartment sink (24" x 24" x 16"D) with drain boards on each side with 1 drinking and 3 regular faucets.**
- **Install compressed-air outlets with regulator and 5/16 inch quick-clip couplings (male and female) on open and accessible walls, equally spaced.**

Finishing Room:

- **Provide compressed air outlets with water trap and air pressure regulator and 5/16 inch quick couplings (male and female).**
- **Provide water bibb on outside wall.**

Compressor Room:

- **Minimize accumulation of moisture in all compressed air lines and/or provide adequate water traps.**

Restrooms:

- **Provide 2 lavs, 1 hose bibb below lav and 2 water closets with stalls in women's restroom.**
- **Provide 2 lavs, 1 hose bibb below lav, 1 water closet with stall and 2 urinals in men's restroom.**
- **Provide 1 lav and 1 water closet in staff toilet.**

e) Electrical:
Typical for Classrooms:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit. Typically, each classroom has six student computer work stations, one teacher computer, and one laser printer.**
- **Provide a minimum of five (5) circuits per classroom. Utilize a minimum of two (2) dedicated homeruns for these five circuits t allow for addition of conductors for the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the design will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate future LCD projector. Location to be determined during design.**
  - **(b) Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**
- **See Electrical Design Criteria for additional requirements.**

Manufacturing Shop:
Office:

- **Provide convenience outlets at 2 walls at baseboard, with 1 at desk.**
- **Locate master switch controlling all power circuits near desk.**

Tool Room:

- **Provide 120-V duplex outlets on 3 walls above counter.**

Bench Metalworking:

- **Provide 120-V rail type convenience outlet with male and female plugs hanging above (20 inches) each of 8 workbenches. Rail to be securely braced from swinging.**
- **Provide 120-V convenience outlets every 4 feet above all counter tops and along walls.**

- **Provide separate bell systems for emergency and cleanup.**

Hot Metalworking:

- **Provide separate control switch for foundry furnace.**

Machine Toolworking:

- **Provide overhead electrical system with branched outlets and starter switches for all machinery with power ratings to meet the furniture and equipment standards.**
- **Provide 120-V convenience outlets each 4 – 5 feet at open wall space, 54 inches above floor.**

Compressor Room:

- **Provide magnetic starter and automatic switch to meet specs of motor and place control switch in office or lab area for supervision and safety.**

f) Lighting:

Typical at all shops:

- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **Provide appropriate fixtures to comply with hazardous classifications as required in the Finish Room.**
- **Provide safety guards over lamps.**
- **Provide light switch at foot of access ladder at Staff Toilet.**

Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Provide one outlet for closed-circuit TV. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station (6) for students and one (1) for the teacher. Equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations

- **Verify that electric panic/kill switch to shut off all power in case of an emergency is provided within each industrial arts facility, typically located in the teacher's office.**
- **Seriously consider installing a security alarm system.**
- **If a school has an auto body program, consider a separate automotive stall for body work for the following reasons:**
    - **Keeps hazardous waste from body filler, primers, etc. contained for clean up control.**
    - **Keeps sanded body filler & materials from contaminating mechanical parts that should be clean during inspection & re-assembly.**

For safety and security reasons:

- **Ensure all areas have appropriate fire and smoke detection devices.**
- **Install fire alarm pull stations (where located per code) at adult height/reach levels per ADAAG**
- **Provide doors with locks**
- **Provide illuminated exit signs**
- **Investigate intrusion detection alarm system for security.**
- **Revise or combine restroom fixture counts during design of new schools.**

20. Dance and Theater

a) Program Description and Philosophy

Dance and theater are programs that are being integrated into the curriculum throughout the day. Movement in the form of creative dance is part of the everyday classroom experience as a means to express and communicate ideas, feelings, and concepts. Creative dance uses movement children do everyday – such as walking, running, galloping, shaking, turning and rolling – rather than teaching formal dance steps.

b) Space and Infrastructure Requirements
Area (Recommended) 1,960 SF
Should a school choose to implement a dance and theater program, it is suggested that the space of 2 General Classrooms be considered.

c) Activities and Space Use:
Students are actively involved in the dance learning experience. They participate in creating dance movements; observing others and self performing dance movements; and responding to dance through talking, writing, or drawing. Learning experiences include moving to music and singing; creating their own dances; and moving to reading, poetry, and stories.

The theater curriculum involves storytelling, pantomime, improvisation, and puppetry. Performance is an integral part of the theater experience.

d) Space Descriptions
Designed as a multi-purpose classroom that supports a variety of activities.

Room Data Information
a) Finish Information:
Floor:

- **Resilient tile, sealed concrete, or special flooring.**
- **Base: Rubber, vinyl or wood.**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 10'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no vision panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**
- **Windows: Provide operable windows - type dependent on ventilation (natural or ac).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements
a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA. Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Provide interior partitions surrounding classrooms with a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Ensure that operable walls dividing classrooms have a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**

c) Plumbing:

- **Provide a sink with one single compartment size large (31" x 22" x 6"D) stainless steel with an ADAAG compliant front approach, a countertop, a gooseneck faucet, and a solids interceptor. Cold water only.**
- **Provide accessible drinking fountains within each classroom building at – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum 2 computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
    - **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
    - **Provide one duplex outlet near the T.V. mount.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Efficiently combine use of day lighting with artificial lighting. See Sustainable Design Criteria for additional guidance.**
- **Provide fluorescent lighting with multi-level and/or zoned switching.**
- **During the design phase, review and determine exact lighting needs.**

f) Multi-Media / Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station 6, including conduit and wiring, and one for the teacher. Provide a telephone jack for the teacher.**

g) Special Considerations

Items to consider during design:

- **Make sure the flooring choice support the curriculum and activity focus. Provide a dance floor with spring/resilience to minimize student injury and discomfort.**
- **Consider amount of noise generated shall be considered and adjust design accordingly.**
- **Clarify and finalize lighting needs during design.**

21. Music

Program Description and Philosophy

The music program in the high school encompasses both passive activities such as listening to and learning to appreciate many kinds of music, from the earliest classical to today's broad spectrum of musical expression and participatory activities such as singing, moving in rhythm, playing instruments, and reading music. The objectives of the music program focus on the development of skills, understandings, attitudes, and appreciations, which contribute to all-around musical comprehension. Improved musical performance is a natural outcome of this type of instruction.

Activities/Space Use Plan:

All music courses are electives at the high school level. The curriculum consists of music literature and theory; general, instrumental, and choral music; ensembles and applies music. Ethnic music is a component of each sub-program.

b) Space/Infrastructure Requirements

- **Choral Room 1,925 SF**
- **Band Room 3,820 SF**
- **Common Facilities 725 SF**

(Choral Room includes main Choral Room, Office/Library, and Robe Storage. Band Room includes main Band/Orchestra Room, Practice Rooms, Ensemble Room, Office/Library, and Instrument Repair/Storage. Common Facilities include Vestibule, Restrooms.)

Description of Programs
General Music:
General music is a basic music course, which provides an opportunity for all students regardless of previous experience in music to become more familiar with and receptive to music as performers and consumers. Students participate in and make their music with keyboard experiences, playing melodic, rhythmic, and harmonic instruments, singing, creating, dancing music of various ethnic cultures, and moving and listening to music.

- **Band:**
  The band program at the high school is organized into several groups – beginning band, intermediate band and advanced band. Students may participate in the marching band. Some ensembles related to band are percussion choirs, quartets, stage, and jazz bands.

- **Orchestra: The orchestra program at the high school provides intermediate strings for those with at least one or two years of previous instruction. String orchestra is offered to more advanced students who have gained sufficient musical development to play in ensembles.**

- **Chorus and Glee Clubs:**
  The vocal program in the high school provides for maximum growth in choral singing. Chorus is offered to those students who are interested in singing, vocal techniques, and literature. Other offerings consist of small and large ensembles accompanied or unaccompanied; chorus and glee clubs may also include movement and dance activities.

- **Discernible Trends: There is a growing trend to use varieties and combinations of music such as recreational, jazz, folk, pop, spiritual, and art music. Some of these need special electronic instruments and equipment. This has implications for rehearsal rooms such as space, electrical outlets, storage and security.**

Space Description
Band/Orchestra Room:

- **Flexible options for rehearsal are required for small and large groups in the main instrument room.**
- **The room should have good acoustic properties.**
- **Arrangements should be made for a well-placed speaker system.**
- **An accessible wall mounted lavatory for hand and mouthpiece washing should be located with the space along with instrument storage lockers.**
- **Intermediate band and orchestra programs require practice rooms for groups of one to five and an ensemble room for groups up to fifteen. (The choral/general music students may share the ensemble room with the instrumental students when not in use.) These smaller rooms also need good acoustic characteristics.**

Instrument Repair and Storage Room:

- **Adequate and secure storage space for instruments, stands, racks for uniforms, oversized cases, and instruments not in daily use is needed.**
- **Within this room, provide a counter with a sink, base cabinets with adjustable shelves and overhead cabinets.**

- **Cabinets should be deep enough to accommodate small and large instruments, including specialized storage areas for cellos and basses.**

Office / Library:

- **This area needs good acoustic separation from the Band Room and other practice rooms is needed for conferences and quiet workstations for teachers large enough for 2-4 file cabinets.**
- **The main instrument room must be visible from within the office area.**

Choral Room:

- **Facilities are needed to perform music and listen to music, to have flexible arrangements of small groups in corners and floor, and for larger group vocal and instrumental activities.**
- **The designer needs to layout the space with the appropriate number of risers per the current Program Equipment List. Special considerations are needed for student expressions in dance related to music being studied, simple dramatizations and interpretations to highlight music. (This is especially true if the school does not have a drama or dance classroom and/or permanent stage.)**
- **The Office/Library for the Choral Room should have good visual control of the space while being separated acoustically. It should be large enough to accommodate 2-4 file cabinets.**
- **For both the Band/Orchestra Room and Choral Room one wall shall be designated as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and space for mounting a television (or locating a television on a cart).**
- **Additional whiteboard and tackboard space shall be provided on remaining walls in conjunction with any required acoustical wall coverings.**

Common Facilities:

- **These include a vestibule, boys' and girls' restrooms, mechanical and electrical support spaces, and a custodial closet.**
- **The vestibule serves as an acoustical barrier and an entry, while the student restrooms and custodial closet are included for the convenience of the students and staff.**

Room Data Information

a) Finish Information:

- **Floor: Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU, acoustical requirements may include acoustical treatment on walls**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

Doors:

- **Provide acoustical ratings on all doors (except to storage spaces) into Main Instrument and Choral rooms.**
- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide acoustical ratings on fixed windows between offices and instructional spaces. If windows are provided, provide strategically located operable windows.**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops)**

Other Considerations:

- **Acoustical considerations may include non-parallel walls in large rooms and minimal or no windows to exterior.**

Utility and Room Data Requirements

a. Acoustics:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA. Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Interior partitions surrounding classrooms require a minimum rating of 51. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**
- **Provide soundproofed metal doors to exterior of any music classroom with STC rating of XX minimum.**
- **Design music and choral rooms with higher standards than regular classrooms. Include an acoustical consultant on the design team.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**
- **Incorporate sound attenuation measures as recommended by an acoustical consultant.**

c) Plumbing:

- **In the Instrument Repair/Storage Room provide one single compartment, large stainless steel with a gooseneck faucet,and a solids interceptor. Cold water only. This trough type sink is for cleaning of instruments; accessibility is provided per sink in Main Instrument Room.**
- **Provide a cold water only hand wash sink in the Main Instrument Room that is accessible.**
- **Provide accessible drinking fountain – high/low type in or near the vestibule.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in the room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlet per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near and above the sinks.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide a minimum of 5 circuits per classroom. Utilize a minimum of 2 dedicated homeruns for these 5 circuits to allow for the addition of conductors in the future to increase circuit quantities. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design.**
  - **(b) Provide one duplex outlet near the TV mount.**
- **Provide electric powered quartz wall clock.**

e) Lighting :

- **Provide fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media / Communications:

- **Provide a two-way intercom in classroom with P.A. speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location determined during design.**
- **Provide multi-media outlets with conduit and data cabling at each permanent computer station, 6 for students and 1 for the teacher. Equip the multi-media outlet for the teacher with telephone cabling. Terminate all cables onto modular jacks for single device plate mounting.**

g) Special Considerations:

Items to consider during design:

- **Building and room require security measures that include door and window mechanism and alarm systems.**
- **Bathrooms are needed in the building.**
- **Locate facility convenient for vehicular access for transporting instruments with ability to drive vehicles close to building access doors to minimize travel distance of instruments.**
- **Design with an entry/foyer that contains sound of music/singing.**
- **Location typically supports ability to quickly setup for assemblies, pep rallies, etc. Therefore, music rooms are often located adjacent to/adjoining the cafeteria/covered playcourt/outdoor assembly areas.**
- **Design to provide outdoor covered area for performers subject to available funding.**
- **Request that an accessible handwash lavatory be provided in the main instrument room to allow utility sink in the instrument repair and storage room to have depth that facilitates the cleaning of instruments.**
- **Design of both main choral and band rooms need to address the storage, placement and use of risers, though they may typically be purchased with other funds.**
- **All offices, repair and storage, ensemble, and practice rooms require a view of the main band for student supervision and well-being. Similar for the support spaces of the main choral room.**

22. Science

Program Description and Philosophy
The traditional model recommends a fully equipped wing of science rooms, in part due to the curriculum and also in part due to the ability to reduce costs through collocation. This arrangement can meet the needs of the current and foreseeable science curriculum. While interdisciplinary science leads the standards reform movement, where integration is not natural, specialized rooms are required due to the unique equipment, supply, and laboratory activities necessary for specific instruction.

Consider arranging science classrooms/laboratories with other disciplines with related facilities and program areas. These include: technology education, home economics, fine arts, computer center, media center, and mathematics.

a) Space/Infrastructure Requirements
Classroom Areas: 1200-1400 (Exact size and configuration to be determined during the design phase.)

- **Biology/Marine Science Classroom**
- **Chemistry Classroom**
- **Physics/Earth Science Classroom**
- **General Science Laboratory Classroom**
- **See latest High School Facilities Assessment and Development Schedule (FADS) for any updates or changes to Science area.**

b) Space Description
Science rooms are specially designed, with separate teaching spaces for direct instruction and laboratory activities. The direct instruction space must have flexible furniture arrangements, appropriate equipment and sufficient space. The recommended science room is a combination laboratory/classroom. It is difficult to design a science room that can accommodate work in all science disciplines because the content standards expected from the disciplines require specialized equipment, fixtures, ventilation and resources.

Additional requirements focus on the safety, storage and the specific functions of a laboratory.

- **Provide unobstructed aisle space a minimum of 4 feet between tables and areas for general seating.**
- **Allow a minimum of 8 feet from front wall to first row of seats.**
- **Provide exits per code, located and sized for the safe movement of students.**
- **Consider storage space for long-term student projects. (Store for days or weeks).**

Additional workspace and storage can be created by providing base cabinets and countertops along at least two walls.

- **Construct cabinets from marine-grade plywood with plastic laminate fronts; avoid particle board.**

- **Install base cabinets with a mix of drawers of various sizes and shelves of adjustable heights.**
- **Provide tote tray cabinets, 12 inches to 15 inches deep in the base cabinets.**
- **Provide two exists and ADA doorway. Minimum ceiling height is 10 feet.**

Storage Needs:
Additional workspace and storage can be created by providing base cabinets and countertop along at least two walls. Use marine-grade plywood with plastic laminate fronts. Avoid particle board or MDF.

Utilities:

- **Provide both hot and cold water at demonstration table and at least one utility sink.**
- **Provide Laboratory stations: cold water only, gas and electricity. Sinks: 1 sink per 4 students - resin.**
- **Provide aerators with serrated nozzles. Locate water (swivel gooseneck) and gas jets on separate fixtures.**
- **Provide power for equipment and computers. Install network connections/power at regular intervals along the counter.**
- **Install gas jets with emergency shut off for each room for water, gas and electricity (independent of other classrooms).**
- **Provide two stainless steel utility sinks – large and deep. (15" x 15" minimum). Hot water desirable for hygiene. (Rinse away sink may be used)**

General Instruction Area:

- **Moveable seating/tables.**
- **Designate one wall shall be designated as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and space for mounting a television (or locating a television on a cart).**
- **Provide adequate reserve space for display and storage of student work and to house the movable teacher storage cabinets.**
- **Allocate space for seven permanent computer stations (one teacher and six student stations) and one printer with the appropriate power and data connections.**
- **Locate the teacher workstation (typically a desk with L-Return and a vertical file cabinet) needs to be located to allow visual control of the classroom.**
- **Floor space is also required for movable furniture and equipment such as bookshelves and storage units.**

Teacher Preparation Room: Size at a minimum 10 s.f. per student (32 x 10 s.f. = 320 s.f.) for teacher prep functions and storage needs. Within this room, provide three (3) safety cabinets for chemicals and flammable storage, a range, and a refrigerator. If the emergency shut-off switch is not provided near the teacher's demonstration table, it may be located near the entrance of this prep room.

Room Data Information
a. Finish Information:

- **Floor: Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 10'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b. Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements
a) Acoustics:
The classroom shall have:

- **Ensure rooms meet a background ambient noise level of XX to XX DBA.**
- **Provide sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Interior partitions surrounding classrooms require a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control with range set points in each air-conditioned classroom. Locate thermostat near teacher station. Verify need for lockable protective thermostat cover during design.**
- **Provide laboratory hood exhaust for each fume hood. Design exhaust system in accordance with the**

c) Plumbing:

- **Provide a minimum of 4 single-compartment large (31" x 22" x 6" deep) stainless steel, ADAAG compliant for front approach, countertop sinks with a gooseneck faucet and solids interceptor. Cold water only.**
- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Match lab sink material and specifications to lab countertop. Provide cold water only for faucet and duplex gas outlet. Provide each faucet and gas outlet with a local shutoff valve.**
- **Install gooseneck faucets at lab where faucet valve is not part of the gooseneck. If the gooseneck is overstressed and broken from the base, the water will not leak since the valve remains in-place. If the faucet valve is part of the gooseneck and the gooseneck is broken from the base, water will leak until the room shutoff valve is closed.**
- **Provide master shutoff valves for each science classroom, one for the water and one for gas at the teacher's lab station. Closing the master shutoff valves isolates water and gas sources from all lab outlets in the room. Optional location for master shutoff valves may be at entrance of teacher's preparation room.**
- **Make sure lab sinks drain to an acid neutralization tank. Drainage, waste and vent piping shall be acid resistant construction.**
- **Provide rough-in for distilled water equipment for chemistry labs.**
- **Provide emergency eyewash and shower that meets requirements of ADAAG. Provide tap primer for shower drains.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near each sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum 2 computer stations on one 20 amp branch circuit.**

23. Exterior Commons, School Gardens, and Outdoor Classroom Gardens

Program Description and Philosophy

Designer shall provide a variety of exterior areas throughout the school that supports delivery of educational curriculum. There are numerous opportunities to study outdoors in the hospitable California climate. Outdoor areas can be utilized as classrooms when well designed with thoughtful solutions for seating and shade to take advantage of the benefits of fresh air, the change of pace from a formal classroom, and the potential of the outdoors being a learning laboratory.

a) Activities/Space Use Plan:
Activities that can occur are instruction, garden experimentation, amphitheater presentation, and small group interaction, etc. For more information on school gardens and outdoor classroom gardens, please refer to the OUSD Department of Building & Ground's *School Garden Policy*. "Buildings & Grounds recognizes the importance of outdoor classroom gardens within school sites for nutritional and educational purposes. In order to assist with school gardens while maintaining the sites, Buildings & Grounds has set up specific protocols that outline guidelines and requirements for outdoor classroom gardens on OUSD Grounds and those areas where B&G can assist with gardens."

b) Space/Infrastructure Requirements (Determined for each site individually)
Room Data Information (Not Applicable)

Utility and Room Data Requirements

a) Acoustics: Not applicable
b) Air Conditioning and Ventilation: Not applicable
c) Plumbing: Provide drinking fountains where appropriate and securable. For securable areas consider the use of electric water coolers.

d) Electrical: Provide weatherproofed outlets.

e) Lighting:

- **Install security lighting as necessary. Automated night or curfew switching lighting branch circuit.**
- **Determine need for evening lighting of main assembly area during the design.**

f) Multi-Media/Communications: None required. However, consider infrastructure to connect to campus public address system during the design.

Special Considerations

Items to consider during design:
a. Provide lockable protective covering over exterior tackboards and display cases/cabinets.

Support Spaces

24. Administrative Center

Program Description and Philosophy

The Administrative Center provides the leadership as well as serving as the central core of the School for facilitating the transfer of information. It is the gateway of the school for parents and community while coordinating and monitoring the educational program needs and addressing the daily operational aspects of the school.

Area Varies with the design enrollment

See latest High School Facilities Assessment and Development Schedule (FADS) for any updates or changes to Administration area.

Activities/Space Use Plan:
The facility typically:

- **Serves as a central location and office work areas for administrative (Principal, Vice- Principal) and office staff and may include the counseling functions in some design layouts.**
- **Provides registration space for the development and maintenance of student class schedules, records, enrollment data, and other related information.**

- **Provides areas for conferencing with students, parents, staff, and community while serving as the connection between the school and the greater community.**
- **Houses the student health services center.**
- **Associated with the computerized school based management system for student registration, budgeting, enrollment data, and all required forms and information.**
- **Serves as a centralized location for secretarial services.**
- **Provides the opportunity for interpersonal communication through group meetings/conference areas.**
- **Provides a location for school based and community based meetings.**

Space/Infrastructure Requirements:

Principal's Office: This office should be conveniently located within the administrative center and adjacent to a planning conference room. Activities include: private conferences, planning, school reports, public relations, and student discipline. This office should have a second door with access to the corridor and with a close adjacency to the general office staff. The conference room should be private, to allow for confidential conversations. It is desirable that this office has a view of the entire campus.

Vice Principal's Office: This office should be conveniently located within the administrative center. Activities include: private conferences, planning, school reports, public relations, and student discipline.

Counselor/s Office: This office(s) should be conveniently located to both the administrative functions and CSSS functions. Counselors interact on a daily basis with students, administrators, support staff, and parents or other visitors. The office needs to accommodate a work station and small group meeting area.

Conference Rooms: The staff conference room shall be designed for an occupant load of approximately 16 people. PCNC conference rooms shall be designed for an occupant load of approximately 20 people.

Lobby: Serves as a reception area for the public and is located adjacent to the general office. Locate flat screen TV to be viewed by lobby and office staff. The Lobby should be designed so that there is not direct access to other office functions. Usually a gate or door separates the lobby from the rest of the administrative areas for public safety and security.

Duplicating Room: Shall include a counter and storage cabinet for supplies and a dedicated space and appropriate power for the copier. Designers shall provide careful attention in the placement of the copier to assure that staff has available circulation and workspace around it.

PCNC: This room provides a meeting space for interaction with parents and the community, complete with a workstation, sink and counter area with overhead cabinets, whiteboard and tackboard surface, space for a refrigerator, shelves, and storage. The room has accommodation for voice, video, and data. The PCNC needs its own entrance. Design and locate for after hour use with access to restrooms. This room may not always be located within the administration building but is usually at the front of the campus and easily accessed by parents.

General Office: Provides office work space for staff and storage. Within this area is housed the Financial Management System (FMS) station, workstations for the SASA and clerks, an open reception counter to the lobby, and teacher's mailboxes that can be accessed from both sides.

- **Clerical/SASA stations face main counter for attending to the front counter/lobby. The desks are arranged so that the front counter can be readily viewed for prompt service.**
- **Teacher/Staff mailboxes located for easily backloading by clerical staff. Mailbox cabinetry shall include a 12 inch deep shelf on either side to facilitate loading/unloading.**
- **Number of mailboxes to be determined during design. A portion of mailboxes need to be oversized (twice as deep as standard) to accommodate persons/programs with higher volume. Often the entire bottom is oversized.**

Storage Needs: Maximize storage with storage units that can be lockable. Provide a lockable key cabinet within the Storage Room and a floor safe.

Hallways: Provide a minimum of 32 linear feet of tackboard in 4 x 8 foot sections strategically placed in the design phase for teacher information and display of students' works.

Staff Lounge: This room provides an area for administrative staff's dining and break needs. It is located so that it can monitor/provide coverage of the front counter area.

Receiving Room: This room provides a place where items can be received and stored until they are processed for distribution to the appropriate location on campus. Locate and provide an entrance that is readily accessible for delivery trucks and vans.

Safety Office: This room houses the school safety officer's workstation and may be used for interviews. It is usually located within the administration facility or the student center, to be determined during design.

Room Data Information

a) Finish Information:

Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye)**
- **Provide view panels in all interior doors for classrooms, offices, and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure rooms meet a background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Interior partitions require a minimum rating of X. The partition section above a ceiling with an STC of X – XX may be less than STC XX.**
- **Operable walls require a minimum STC of 48 when tested in accordance with ASTM E 90.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control in each air-conditioned space.**

c) Plumbing:

- **Provide stainless steel sinks with hot water dispenser at countertop applications. Supply faucet with cold water only.**
- **Provide accessible electric water coolers, dual height unit within the administrative center.**
- **Provide hot and cold water at sinks, lavatories, and shower within the Health Service area.**
- **Provide hot shot type faucet in the staff lounge and PCNC if larger hot water source is not readily available.**
- **Provide accessible sinks with front approach as requested by DCAB; design such that the depth of the sink and the faucet operating force meet the requirements of ADAAG.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electric powered quartz wall clock in each occupied area.**

e) Lighting:

- **Provide fluorescent lighting with multi-level and/or zoned switching at PCNC and conference rooms as a minimum. (Other rooms as necessary to conform to energy code restrictions).**

f) Multi-Media / Communications:

- **Install a control center for the intercom/program bell combination system. Locate master stations at Principal, Vice Principal and general office.**
- **Provide one outlet for closed-circuit TV at all conference rooms, Principal's office, Vice Principal's office, all other offices, the health room and PCNC. Location to be determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station, including conduit and wiring.**
- **Install two-way intercoms with control switches in offices and conference rooms, except Principal, Vice Principal and general office, which have master stations.**
- **Provide telephone lines for all offices.**

g) Special Considerations

Items to consider during design:

a. The Administrative Center is ideally located near the main entrance and not hidden to facilitate clear pedestrian traffic. It should provide a comfortable working environment and possess a clearly defined atmosphere, which encourages students, teachers, and visitors to enter. It should be located accessible to the general public but not so distant from the classrooms that the teachers and students lose a feeling of closeness.

b. The General Office contains staff work areas and staff mailboxes. Therefore, this location of this area should be in concert with staff traffic. Strong consideration should be given to entrance/exit doors different than non-staff persons' traffic pattern. This would allow flow of traffic without impediments to the overall school operation.

d. The Lobby is an important area since it is the main entrance to the school.

e. Usually the Safety Office is housed and located in the administration building.

f. Many recent projects have created a student center separate from the Administrative Center. It typically included:

- **Counselor Offices and Special Services Conference Room.**
- **CSSS Space area. - Comprehensive Student Support System (CSSS) Space.**
- **SSC/EA. See Student Services Coordinator/Educational Assistant (SSC/EA) Office.**

- **Student Activities Space. See Student Activities Space.**
- **PCNC and/or the Safety Office in some cases.**
- **Locate the Student Center near the administration building and convenient for students to visit.**
- **If the student center approach is considered it is usually located close to the administration for interaction with the administration as appropriate. The goal is to have these student functions/services very convenient and accessible to the students to foster pro-active use.**
- **If a student center is implemented, provide a minimum of 8 linear feet of lockable display cabinet in its waiting area.**

g. Two components to the Administrative Center are:

- **Safety Office. See Safety Office.**
- **Receiving/Storage Room. See Receiving/Storage Room.**

h. Location of administration offices (principal and vice-principal) should allow for prompt intervention to front office in case of emergency or to meet an irate parent. Also, visibility to the campus and location at the entry of the campus for security reasons are also considerations in determining location(s).

i. A conference room follows the administrative and counseling functions. Often the common wall between the principal's office and the staff conference room is a sliding, obscure glass door.

j. Provide security gate or other means for after hour deterrent to unauthorized entry at main front entrance.

25. Comprehensive Student Support System (CSSS) Space

Program Description and Philosophy

The CSSS draws together the resources of the classroom, the school, neighborhood, DOE, and larger community to provide the social, emotional, and physical environments that help all children attain personal success and the goals of Thriving Students. CSSS is based on the belief that, given the appropriate support, every student will learn and succeed. It is a system that addresses the broad needs of all students in a caring and supportive learning environment. CSSS is student-centered and strength-based. The emphasis is for each school to incorporate a consistent range of services, for students with identified learning and behavior concerns, which includes:

- **Prevention and early intervention**
- **Referral**
- **Assessment and determination of eligibility**
- **Appropriate, integrated, timely, and coordinated service delivery of all resources with increasing intensity.**
- **CSSS requires close collaboration with private and public agencies and organizations to meet the unique needs of students and families at the school sites.**

a) Activities/Space Use Plan:

Activities would include: contract service providers' offices and administrative functions, reception and waiting, meetings to be held in the conference rooms, and secured file storage for student files, testing materials, etc.

Space Descriptions/Infrastructure Requirements

Area 2,300 SF

Design of this space will be similar to an administrative center and typically provides:

- **Five offices of 170 square feet each**
- **Two conference rooms of 320 square feet each with an operable partition**
- **Work/storage/reception area of 490 square feet**
- **Waiting/circulation area of 200 square feet**
- **Two unisex accessible restrooms (one for students and one for adults) of 60 square feet each**

This area functions as an auxiliary space to handle the multitude of student support services and to accommodate a number of outside service providers such as Department of Health social workers, etc. The intent is to provide a welcoming space, easily accessible from both within the campus and for visitors, yet separate from the school's administrative operations, which could be open both during and after school hours for various meetings and services. The counselors' offices may be co-located with these spaces (to share the work production and waiting functions).

Room Data Information

a) Finish Information: (typical unless noted otherwise)

Floor:

- **Resilient tile (Storage Room floor option: sealed concrete)**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device.**
- **Provide view panels in all interior doors for offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of 45 to 55 DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC 35 to 44 and NRC of 0.5 to 0.6.**
- **Interior partitions require a minimum rating of 51. The partition section above a ceiling with an STC of 40 – 44 may be less than STC 51.**
- **Operable walls require a minimum STC of 48 when tested in accordance with ASTM E 90.**

b) Air Conditioning and Ventilation:

- **Provide centralized thermostat control in Work/Production Area.**

c) Plumbing:

- **Provide an accessible stainless steel sink at countertop application. Supply faucet with cold water only.**
- **Provide accessible electric water coolers, dual height unit within the CSSS space.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electric powered quartz wall clock in each occupied area.**

e) Lighting

- **Install fluorescent lighting with multi-level and/or zoned switching at conference rooms as a minimum; other rooms as necessary to conform to energy code restrictions.**

f) Multi-Media / Communications: Provide permanent audio/data/video connections at each permanent computer station – conduit and wiring.

- **Provide two-way intercom with control switches in offices and conference rooms.**
- **Provide private telephone lines in offices.**

g) Special Considerations
Items to consider during design:

- **This area may be combined with student activities components and the counseling office and conference room to create a student center. Location should be convenient for both student access and ease of attendance by the administration.**
- **Locate and design so that the CSSS areas can operate after school hours with access to restroom.**

26. Receiving/Storage Room

Program Description and Philosophy

This room serves as a short term receiving and storage room for equipment and supplies for the school. This room relieves the disruption to the administration building and staff, when supplies are being delivered and stored. This secured room shall also discourage any pilfering of supplies and equipment. It should be located with easy access from a loading zone, and near a secondary entry to the Administration Building.

Space/Infrastructure Requirements

- **Area 150 SF**

Storage room for temporary storage of supplies.

Room Data Information

a) Finish Information:
Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU. Provide corner guards in high traffic areas.**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide a solid door with no vision panel.**
- **Provide number of doors per Building Code exiting requirements.**

Windows: Not required for this storage room.

Utility and Room Data Requirements

a) Acoustics: (None)

b) Air Conditioning and Ventilation: (None)
c) Plumbing: (None)

d) Electrical:

- **Provide a minimum of one 120 volt duplex outlet for each room.**

e) Lighting:

- **Provide fluorescent lighting.**

f) Multi-Media/Communications:

- **Install data Connection (for logging in of supplies).**

g) Special Considerations:

- **Location of room to be convenient for delivery of office and curriculum supplies.**
- **Consider the use of an oversized door and corner guards where appropriate.**

27. Security Office

Program Description and Philosophy

This program is to support the school's efforts to provide a safe and secure environment for students and staff. The room provides space to support the administrative functions of the program and serve as area for conducting individual interviews with students and others.

Activities/Space Use Plan:
Activities that occur here are administrative functions such as writing of reports and/or conducting individual interviews with students by the safety officer.

Space/Infrastructure Requirements

- **Area 200 SF**

Area designed as a single office to house a safety officer and as an interview room.

Room Data Information

a. Finish Information:
Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b. Fenestration:

- **Doors: Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of 45 to 55 DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC 35 to 44 and NRC of 0.5 to 0.6.**
- **Interior partitions require a minimum rating of 51. The partition section above a ceiling with an STC of 40 – 44 may be less than STC 51.**

b) Air Conditioning and Ventilation.

- **Provide individual thermostat control in each air-conditioned space.**

c) Plumbing: (None)

d) Electrical:

- **Provide one 120 volt duplex outlets minimum of one per each wall and/or as appropriate for the furniture layout.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Provide fluorescent lighting.**

f) Multi-Media/Communications:

- **Provide permanent audio/data/video connections at each permanent computer station, including conduit and wiring.**
- **Provide two-way intercom with control switches for offices.**
- **Provide private telephone lines for offices.**

Special Considerations

Items to consider during design:

- **Located usually within the administration facility or the student center, depending on design approach.**
- **Locate with a view of campus and with direct access from the building to the outside.**

28. Student Activities Space

Program Description and Philosophy

The Student Activities program is that portion of the K-12 curriculum, which complements the academic program by providing learning experiences which meet individual needs and develop citizenship, leadership skills, civic experiences, and positive attitudes. Many of the activities are conducted in laboratory settings where students are able to apply their learning through direct participation. The program includes continuous and sequential learning activities such as student council and class council work, conferences and seminars, clubs, contests and tournaments, sports, community service, service learning opportunities, peer counseling and advisory, voter education/registration, and leadership training camps/workshops.

Student Activities Coordinators (SACs) provide student activity coordination services in keeping with Board of Education (BOE) Student Affairs Program Policy and regulations. SACs establish and coordinate a student activities program that provides opportunities for students to acquire, as an important part of the school curriculum, the skills and experiences necessary to participate actively as citizens, practicing and applying learned concepts, process, and skills. The program enriches and broadens the lives of students socially, culturally, and physically, and is designed to provide opportunities for students to participate, on an individual and group basis, in activities that serve the personal, social, and educational needs and interests of all students. These leadership opportunities also help develop student's attachment to their surrounding communities through various experiences where they interact with civic leaders, residents, and agencies to better their neighborhoods.

Activities/Space Use Plan:

Activities in this space typically involve planning/coordinating meetings, group work of various sizes, student government activities, and sales of school related items.

Space/Infrastructure Requirements

Area 1,160 SF

- **(1020 SF for Activity Room/Store and 140 SF for Student Activities Coordinator)**

Per designer. See program descriptions and activities.

Room Data Information

a. Finish Information:

- **Floor:**
  Resilient tile or sealed concrete
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b. Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**
- **Provide an operable exterior window for student sales.**
- **Provide an exterior display window.**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure room meets a background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of 0X to X.**
- **Interior partitions surrounding classrooms require a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing require a minimum STC of XX when tested in accordance with ASTM E XX.**
- **See Acoustical Design Criteria for additional requirements.**

b) Air Conditioning and Ventilation:

- **If thermostat is provided, locate away from entry door.**
- **See Mechanical Design Criteria for additional requirements.**

c) Plumbing:

- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**

- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Provide fluorescent lighting.**

f) Multi-Media / Communications:

- **Provide a two-way intercom in classroom with P.A. system that includes a speaker above the main instructional board with communication between classroom and administration. Locate the call button near teacher's desk.**
- **Install one outlet for closed circuit TV. Location to be determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station.**

g) Special Considerations
Items to consider during design:

- **Locate in the administration building, student center, or adjacent to a high traffic area such as the cafeteria/music rooms.**
- **Access to high traffic pedestrian areas for student display and sale of school supplies, clothing, etc. Usually has a counter window to facilitate sales operation.**

29. Cafeteria/Food Service Center

Area Varies with design enrollment
Program Description and Philosophy
Student Dining and Support Spaces:

Student Dining/Multi-Purpose Room:
The primary purpose of the dining/multi-purpose facility is to provide students with dining facilities. Because the facility may be used for other school related purposes such as assemblies, large group instruction, small stage productions, music, certain physical educational activities and music instruction and other demonstrations a permanent stage is provided. Community groups may use the facility for meetings, demonstrations, may be used as an emergency shelter in the event of emergencies and for other community affairs. The discernible trend for this space is higher demand for this facility by both school and community groups for functions other than dining.

Staff Dining Room:
Every school shall provide a separate staff dining room, sized to enable the facility to serve the entire school staff in three servings. Staff members will receive their food from the regular school lunch serving line and carry it to the staff dining room or by a side arrangement directly from the kitchen. A serving area within the staff dining room servicing the staff may be arranged. During non-lunch periods, the dining area may supplement the regular campus faculty lounge. As a teacher preparation facility, this room can be used as a meeting place through proper arrangements with the administration.

Activities/Space Use Plan:
The dining/multi-purpose facility facilitates the following functions for:

School Use

a. Dining space for the school
b. Dramatic and musical presentations and movies
c. Assemblies
d. Demonstrations
e. Student displays

f. Physical education or music classes
g. Teacher workshops

Community Use
a. Meetings
b. Hearings
c. Demonstration and classes
d. Dramatic and musical presentations and movies
e. Others

Space/Infrastructure Requirements Descriptions

Student and Support Spaces:

Student Dining Room:
The student dining area serves as a gathering place for students and is the social center of the school. It also serves as a multi-purpose use as being a gathering place for the community. Although its main function is a student dining area, it should be designed to accommodate a wide range of activities and events from student government assemblies, speech festivals, performance, and a place for community meetings. In more recent projects, the student dining area has access to an outdoor stage which provides an exciting alternative performance venue. The dining room will be of sufficient size to meet the needs of the schools lunch periods for closed campus lunch. Additionally, the furniture will be age appropriate and conducive to meeting the needs of closed campus lunch.

Kitchen Areas:
All kitchens will be conventional or on-site kitchens. The kitchen will prepare and serve meals for the single dining room that is attached to the kitchen. Decision on kitchen type must be made prior to the start of design. The conventional kitchen is a fully equipped school kitchen planned to prepare and serve foods to the students and staff of that particular school. The serving kitchen is a serving area, with limited food-preparation facilities, that serves food prepared at and transported from another site. Ideally, but depending on the size of the school, all high schools will have conventional kitchens rather than serving kitchens.

Definitions:
Conventional Kitchen: Is a kitchen that prepares and serves meals for a single dining room that is attached to the kitchen – prepares and serves only itself.

Serving Kitchen:
Is a kitchen in a school that does not have a full conventional kitchen and it may or may not have a permanent dining facility. The serving kitchen may be permanently designed or temporarily established to provide a sanitary environment to serve the meals that are prepared and delivered from a preparation kitchen or central kitchen. Generally a serving kitchen is equipped with a minimum amount of equipment, primarily for serving/maintaining warmth, not cooking.

Policies:
The following are Department of Education policies to determine when and under what circumstances conventional and preparation kitchens will be planned.

- **Determination of kitchen type shall be made prior to start of design, in the planning phase.**
- **All schools (including satellite schools) shall have an approved dining facility.**
- **High schools shall not prepare and deliver meals to satellite schools.**
- **OUSD is moving toward having one central kitchen serving satellite schools.**

Enrollment increase at existing schools shall require modification to storage capacity for dry, freezer and chill. Those storage areas shall be increased by "X" square feet for every "X" students, adjusted every "X" years.

- **Enrollment increase at existing schools shall require modification to the kitchen preparation area and equipment inventory. The factors shall be in accordance with the educational specifications for equipment as applied to the projected average daily participation (ada) formula.**

Food Preparation Area:
Preparation includes the total processing of foods from raw to ready. This may involve baking, boiling, steaming, reheating, raw vegetable and fruit preparation. To maintain worker efficiency and morale, a system that maintains satisfactory ventilation of comfortable temperature is desirable. Ventilation is required over the cooking area. Any equipment which is not readily movable should be installed a sufficient distance from any other fixed equipment or wall to allow space for cleaning:

- **Space between ovens: 6 inches**
- **Steamer/Kettle: 9 inches**
- **Kettles: 18 inches**
- **Back to back: 30 inches**

To permit efficient flow of work, optimum aisle allowances are:

- **Between oven equipment and work tables: 42 inches**
- **Traffic aisles: 42 to 48 inches**
- **Traffic aisles where mobile equipment used: 48 inches**
- **Between front of refrigerator and other equipment: 42 inches**
- **Between two work tables: 42 inches**
- **For ease of cleaning, a tiled or stainless steel clad wall to enclose the utility lines (gas, electric, water and waste, etc.) may be provided behind and/or between the front and back of the cooking equipment.**

Equipment, utility and facility needs in this area include, but is not limited to:

***Vegetable Preparation Sink*:**

- **Vegetable sinks are two compartments with drainboard on each side. When possible, it shall be located near point of delivery, refrigerator and the cooking equipment.**
- **Locate a floor sink with grating cover away from the flow of traffic in an accessible location for cleaning, preferably not directly under the sink. Minimum compartment size: 24”L x 24”W x 12”D.**
- **Minimum drainboard: 36 inches long each with under shelf 8 inches above floor.**
- **Drainboard/ counter top edge shall be 1-1/2 inch diameter rolled edge 2 inches high from countertop. Working height (from floor to top of drainboard) should be 32 to 34 inches.**
- **Where sinks are multiple (with compartment), each compartment shall have a mixer faucet with hot and cold water.**
- **All faucets should have replaceable valve seats.**
- **Sink drains shall have center drain, rotary quick waste valve assembly, lever handle shall be located in front, under sink. FRP wall finish behind all sink areas.**

***Mixer*:**
Electric outlet is required.

***Slicer*:**
Slicer may be on mobile table. Electric outlet is required and location will be specified by School Food Services Branch.

***Can Opener*:**

- **Electric can opener may be on a mobile table. Electric outlet is required and location will be specified by School Food Services Branch.**
- **Work tables are portable and of stainless steel, varying in width and length, and height. Typical stainless steel work table may be 32 inches high with one stainless steel shelf, 1 inch radius on 4 corners. Drawers with**

removable dividers on rollers of stainless steel. The 4 stainless steel pipe legs have 5 inch swivel casters, two casters with brakes.

***Steam Equipment (Steamers)*:**
Steam equipment may be self-contained or direct. Self-contained steam equipment has a small jacketed steam cooker. Direct steam may be supplied from a separate low pressure generator which is capable of supply steam to several pieces of equipment. Steam lines shall be insulated for safety. A hot and cold water swivel faucet on stanchion with automatic shut-off valves or a hot and cold water swivel faucet mounted on the equipment is needed for filling and cleaning. Water supply is required for self-contained equipment.

Utilities (electricity, gas, steam, water and waste connection) shall be provided as needed. Floor sinks with grating covers and/or a stainless steel grated trough in front of the food preparation equipment is required.

***Range*: Where adequate steam equipment and ovens are provided, ranges may be eliminated completely. Some installations may include a half section of range.**

***Oven*: Convection ovens have a motor drive, high velocity fan to circulate heated air within the cooking chamber. A duplex outlet for every two ovens is needed. The receptacle should be such that would permit the plugging of two 3-prong units simultaneously.**

***Titling Skillet*: A tilting skillet may be an option available to the schools on request.**

***Garbage Disposer*: Garbage disposer may be located in the preparation area, pot washing and tray return area. It should not be connected to grease traps and cannot be used in areas not connected to a municipal sewer system, unless otherwise directed by the local authority having jurisdiction. Verify the current local regulations with County officials.**

***Hood Fire Extinguishing System*:**
When required, an automatic fire extinguisher system shall be provided. The extinguishing system shall not interfere with the flow of gas in event of a non-fire related electrical power outage. The hood fire extinguishing system must be interfaced with the campus fire alarm system.

Wok:
Required for the proper preparation of Asian foods.

Three Compartment Sink:
Required.

Hand Wash Sink:
Required for workers to maintain sanitation standards.

2. Storage Areas:
Storing includes the storage of consumable food and nonconsumable products in case lots, bulk, packages, and broken case lots on freestanding shelving, portable pallets and/or dunnage racks, and storage bins on dollies. Cleaning supplies and other chemicals shall be stored separately from food products. Frozen and refrigerated items are stored at proper temperature.

There are four basic storage areas:

- **Dry storage for food and paper supplies.**
- **Walk-in refrigerator for chill food storage.**
- **Walk-in freezer for frozen food storage.**
- **Milk coolers.**

Other storage accommodations are a separate storage area for cleaning supplies and chemicals (detergents, sanitizing solutions, bleach, polishes, drain cleaners, oven cleaners, etc.), generally, in the utility area.

Dry Storage:
The size of the storeroom is determined by the type of kitchen, projected enrollment, location of the school, delivery service and whether additional central storage facilities are available. Steel wire shelving, pallets and/or dunnage racks shall be specified according to each school's storeroom plan. The storeroom should not be subjected to excessive heat (after-noon sun) or excessive dampness should have adequate natural or mechanical ventilation. Storerooms should be kept free of electric distribution panels, uninsulated pipe, water heaters, refrigerator and freezer condensing units or other heat producing components. Any wall between a storeroom and a boiler room (or heater room) should be well insulated. Storeroom locks should be keyed separately from the master system.

Walk-in Refrigerators:
Walk-in refrigerators are a necessity for immediate bulk storage or perishables in hampers, crates, baskets, and boxes, the size and construction of which are not suitable for reach-in storage. They are also needed for semi-prepared and prepared foods in bulk. They should be located to make delivery of foods from receiving to production as short a distance as possible. For interior walk-ins, door sills must be level with finished building floor line. Outside temperature dials should be provided as well as inside emergency opening devices. Walk-ins should be sized to accommodate mobile equipment. Eight feet is regarded as minimum width to provide a 2-1/2 feet of storage space on either side of the door and a 3-foot passage. Compressor and condenser should be remotely mounted and installed to prevent tampering but accessible for maintenance. A floor drain should be located on the outside of the refrigerator box and out of way of traffic for cleaning, condensate or both.

Walk-in freezer floors must be insulated. Heater strips should be provided in full perimeter of door spacing including sill to prevent freezing or icing.

Reach-in-Refrigerator: **These are furnished as needed. A roll-in refrigerator is an adaptation of the standard reach-in, constructed so that the entire contents of a lower door or full height section may be inserted or removed en masse and transported to or from the preparation or service area.**

Milk Cooler: **Milk coolers will be provided based on milk consumption and deliveries.**

Storage Area:
General construction features include:
a) Floors should be slip resistant and level with surrounding food preparation and receiving areas to allow for mobile movement of supplies.
b) Walls, exterior walls and sub-floors need to be tightly constructed, rodent-and insect-proof.
c) A heavy-duty door with a minimum width of 42 inches is needed. The door should lock from the outside but always open from the inside without a key. The door should have a "kick plate" to protect it from dollies and carts.
d) Wall thermometers for walk-in refrigerators and walk-in freezers should be mounted in the vicinity of the door where there is less danger of breakage or bumping and about eye level for easy reading. It should not be mounted on the door, near a light bulb, or in a recessed pocket.
e) Refrigeration coils should be located in an area to minimize storage space waste.

Serving Areas 3: Serving includes attractive display of the various food offerings, both hot and cold, and the holding and replenishing of these items as needed.

General Serving Area Appointments: **Foods may be served from: Conventional mobile or built-in serving counters, counter comprised of transported units, mobile units taken to remote serving areas, existing snack bars and mechanical vending. Number of serving counters needed depends on the size of the dining space or the number of students released at a given interval. One length of counter space needs to be approximately 18 feet including the milk cooler. The material used for serving counter exterior may be laminated plastic, molded fiberglass, stainless steel, or a combination of these. Walls**

adjacent to serving counter and student traffic should be washable. Sneeze guards are required by State Department of Health regulations. Fold up counter located on the workers' side (server'side) of the counter. Tray slides on customer size is optional.

***Dish Storage*:**
Compartment trays in self-leveling dispensing units are located at the point where they are used.

***Supplies and Food Replenishment*:**
Enclosed cabinets (heated or insulated) are placed behind or adjacent to the serving counters for 18" x 26" pans and 12" x 30" pans. Heated units require ground electric outlets.

***Eating Utensils*:**
Dispensers for eating utensils, napkins, and straws are placed on serving counters.

***Hot Items*:**
Standard pans (12" x 20") are used for serving. Cutouts to accommodate these pans are provided. Heated wells are optional and may be specified by the School Food Services Branch.

***Cold Items*:**
Cold items are held in the refrigerator and served from a flat counter. Room temperature items are also served from a flat section.

Milk Cooler:
The milk dispenser to dispense half pint carton milk directly from the milk case is refrigerated and designed for service from the top and front. A grounded electric outlet is required.

***Cashier Space*:**
Cashier space is usually provided at the beginning of the counter in the elementary grades and at the end of the serving counter in the secondary schools where supplementary items are sold to be verified during design. Electric outlets and conduits for data transmission shall be provided. The data transmission conduit shall be from the cashier stand area(s) to the kitchen office. Data transmission from the kitchen office to the administration building directly or via a hub is required.

Tray Return Area:
Paper, foam, and disposable plastic trays and flatware may be used. Schools using disposable ware shall have a tray return area arranged to accommodate food and paper waste receptacles, with or without a landing table. Compactors may be used for disposable ware. Schools using reusable serving ware will incorporate tray return area in the dishwashing area.

Can Wash Area:
The can wash area includes the storage and washing of garbage cans and other equipment. The can wash area is a tiled area semi-enclosed (to contain the splash). The area is sloped to a floor drain. A sanitizing spray system is provided. The enclosure should be large enough to permit cleaning of the largest mobile cabinet. The enclosure is depressed to contain the water however, provide an area on one side to enable equipment to be easily wheeled in and out.

Pot and Pan Washing Area:
The process of washing pots and pans includes scraping, soaking, washing, rinsing, sanitizing, and drying. The "scraped" material may be disposed through a food waste disposer in or adjacent to the pot sink or collected in a garbage receptacle. FRP wall finish behind all sink areas.

***Pot and Pan Sinks*:**

Provide four compartments with a drain board on each side. (At time of planning individual installations, the extreme right hand or left hand compartment will be designated as the "soak" sink and a mechanical surge motor may be specified.) FRP wall finish behind all sinks.

Compartment size shall be minimum 30"L x 2"W x 14"D. Drain board shall be 36 inches long each with under shelf 8" above floor. Clear width to be 27 inches, 1-1/2 inches diameter rolled edge 2 inches high from counter top. Space for storing clean pots and pans is needed. Wire shelving of appropriate size shall be used. Sink drains should have center drain, rotary quick waste valve assembly, lever handle under sink. Working height should be 32 inches from floor.

Manager's Office:
The office activities include record keeping, menu planning, ordering, filing, money-handling, administration, consultants with food service and other personnel and frequently meeting the public. It should be located to permit view of the food preparation area and possibly the receiving area. Some means of ventilation should be provided. Office equipment should include a desk, at least two chairs, file cabinets, shelves, wastebasket, telephone and calculator and electrical outlets for computer equipment, food service equipment inventory, point of sales server and printer, conduits for data transmission to administration office and serving area.

Lockers/Toilet Area:
This area provides for the storage of personal items and includes an accessible restroom. Exhaust fan required in restroom. Securable lockers with padlock are needed as follows:

Number and size of needed lockers will depend on number of employees.
Sample size lockers are:

- **9" x 18" x 20" locker with one hook**
- **18" x 18" x 60" with full length coat rod (no hook)**

Utility Area:
If it has a mop sink, it needs FRP wall finish. Brooms, mops and other maintenance equipment may be stored in this area. A cabinet for clean linen.

Heater Room:
The heat room shall house water heaters sized to meet the needs of the operations. Provide ventilation and makeup air for combustion for gas fired heaters. Provide clearances for boilers and unfired pressure vessels as defined by the State of Hawaii Boiler Code.

Electrical Room:
The electrical room shall house the electrical panels and step down transformers for the kitchen.

Signal Room:
The signal room shall house the data transmission and telephone panels for the building.

Compressor Room:
The compressor room shall house the compressor and condenser for the refrigeration equipment. Provide adequate ventilation for air-cooled condensers. Consider sound attenuation techniques if classrooms are nearby.

Dishwashing Area:
Determination of dishwashing or use or disposable serving ware will be made on a school-by-school basis of School Food Services Branch. Dishwashing includes the return of soiled dishes and utensils for washing and sanitizing or disposal and the collection and disposal of plate waste. It is desirable to minimize the non-aesthetic qualities of the disposing or returning process by one of the following:

***Wash-off Dish Return*:**

This system is optional. Space shall be provided from the dining room area. The walk-off dish return is planned in such a way that students leave the dining room, deposit trays and exit without returning to the dining room. This removes dishwashing area from view and reduces dining room noise.

***Remote Dishwashing Area*:**
This system is optional. Space shall be provided from the dining room area. Removing the dishwashing area from the serving area ensures a smoother flow of traffic from serving to eating to disposal without any cross traffic. The dish return area should provide for separating the items to be washed and those to be discarded. To minimize loss of utensils, they are removed first. The disposal of paper (in a receptacle) as well as food waste (through a food disposer) is handled next. The soiled dishes are ready for pre-wash. Where dish machines are used, a one-compartment pre-rinse sink is needed. Where flight-type dish machines are used, the requirements will depend upon adequate sewage system and will be treated on an individual basis by School Food Services Branch and architect. The counter space between sink and dish machine should be a minimum of 30 inches long (to accommodate one dish rack). The sink shall be 24"L x 24"W x 8"D. Working height shall be 32" from the floor.

***Removable Pre-Rinse Baskets*:**
Two required, each 6" deep, 1/8" mesh stainless steel. The baskets shall rest on indented edges of the sink. Each basket shall have a handle which also acts as a slide; therefore, no rollers are required. Pre-rinse assembly shall be spring-action type gooseneck instead of swivel type gooseneck which is difficult to operate. Do not use swivel type gooseneck. Provide integral check stops in supply arms for each faucet. Splash Guard: 8"H x 26"L.

Dishwashing Machine: In general, three types of dish machines are used:

- **Door type: The door type operates with less water but requires much manual effort. It is suitable only for schools serving less than 400 meals.**
- **Rack conveyor type: Racks with dishes (or trays) are automatically conveyed through pre-wash (when provided), wash, and rinse. Machine may be single tank or two tanks in a variety of capacities.**
- **Flight type is most efficient for schools serving at least 1200 lunches. Soiled trays are placed directly on the conveyor without racking. Unloading is done directly from the conveyor or dish or tray carts.**

Hot water should be supplied at 120 degrees – 140 degrees. Rinse water must be at 180 degrees at the entrance of the manifold. Blower dryers expedite the drying process and are especially useful for drying plastic ware. Rinse injectors add a "wetting agent" to the rinse line of the machine. This reduced the drying time. Counter space for air-drying of sanitized utensils is needed. Length of counter will vary. This is not needed for flight type machines. Hose bibb is needed. Adequate drainage system is needed.

Preparation Kitchen:
A preparation kitchen requires transportation activities which includes, moving food and non-food products and van storage and cleaning. Food may be transported:

1. **In bulk**
2. **Pre-portioned on individual serving trays**
3. **Frozen and chilled**
4. **By covered van or commercial truck in appropriate cabinets to maintain appropriate temperatures.**
5. **By electric or gas operated carts.**

The delivery area should be large enough to permit the use of commercial vehicle or transport van. The loading area should permit easy access in and out of food service van. Additional holding space for transport equipment is needed in or near the receiving area. Heated cabinets require electric outlets. A separate pot and pan sink to accommodate returning equipment is optional, to be specified by the School Food Services Branch.

Receiving/Delivery:
Receiving involves the unloading of food and non-food items from commercial vendors' trucks, checking orders for quantity and specified quality, and checking invoices for accuracy. The loading/delivery area should be easily accessible to the service entry and should be the same level as the kitchen floor. It should be of a slip resistant surface.

The loading area should have a protective roof high enough to clear high trucks and should extend over the vendors' tailgate and doors. A service drive and turning area should be separated from student activity areas and large enough to accommodate service vehicles.

The service door entrance should be a minimum of five feet wide. Screen doors and/or fly fans are optional, specified by the School Food Services Branch. Security doors shall be provided. Weighing of foods as they are received is of prime importance; therefore, space for a platform scale is essential.

Refuse Area:
Refuse disposal and pick up point should be easily accessible to the kitchen. Water source for cleaning spills now required per Alameda health dept.

Hand Wash Sink:
Department of Health requires a hand wash sink. Provision should be made for hot and cold water (with mixer faucet), a soap dispenser, and a paper towel dispenser. It should be located in the most convenient location for all staff within each and every kitchen.

Grease Interceptor: **The grease interceptor shall be located outside of the kitchen and on the exterior of the building, away from the delivery entrance, and accessible for servicing. See Mechanical Standards for other requirements.**

Serving Kitchen:
There are two sizes of serving kitchens based on the projected enrollment. Serving Kitchen I will be based on projected enrollment of 500 or less. Serving Kitchen II will be based on projected enrollment from 501 to 700 students.

The education specifications for serving kitchens are predicted on the following assumptions:

- **Projected enrollment shall not exceed 700 students.**
- **Distance of preparation kitchen not further than 20-40 minutes.**

The following equipment and appointments will be standard for the serving kitchen:

- **Serving kitchen will have a hood for ovens and/or steamers for proper ventilation.**
- **Serving kitchen will have a two compartment preparation sink with hot and cold water.**
- **Serving kitchen will have appropriate sanitation equipment (minimum 3 compartment sink) hot and cold water and grease interceptor, to wash utensils and other kitchen equipment.**
- **Serving kitchen will have electrical and gas utilities to accommodate freezers and refrigerators and ovens and steamers.**
- **Serving kitchen will have one or two 18 foot serving counters with milk cabinets.**
- **Serving kitchen will have a can wash area adjacent to the tray return area.**
- **One uni-sex toilet and lavatory**

Food Preparation Area includes:
Pot and pan sink, preparation sink, work area, storage area for supplies and freezer and refrigerator area.

Serving Area includes:
Mobile serving counters with milk coolers, student walkway, workers' walkway.

Can Wash Area includes:
Tray return area, can wash sink and mop and broom storage.

Student Dining and Support – required for all schools
Consultant shall provide sound equipment including amplifier, microphone, and appropriate number of assistive listening devices to meet ADAAG requirements for student dining area. Locate equipment in amplifier room. Locate amplifier room so user can easily view student audience and stage to facilitate sound and lighting adjustments.

Room Data Information

a) Finish Information:
Floor:

- **Resilient tile in offices, dining, tray return. Quarry tile in kitchen. Sealed concrete in storage areas.**
- **Base: Rubber or none.**
- **Walls: Painted gypsum board or painted CMU. Ceramic tile wainscot in kitchen.**
- **Provide corner guards in high traffic areas.**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide vision panel.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provided maximum security.**
- **Windows: Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Provide background ambient noise levels of XX to XX dBA in eating areasl**
- **Provide sound system at the stage/dining area.**

b) Air Conditioning & Ventilation for all areas including student dining, staff dining and kitchen.

- **Dining Rooms are not authorized air-conditioned spaces unless approved by the DOE.**
- **Provide kitchen hood exhaust system for each hood and design in accordance with the requirements of the State DOH. Where required by the local Building Code, provide rated duct shafts for the exhaust duct.**
- **Outside air supply fans are recommended for the kitchen exhaust hoods to prevent excessive negative pressures in the kitchen. Outside air shall be filtered.**
- **Mechanically ventilate dry storage rooms.**
- **Provided ducted exhaust system if required by dishwashing machine manufacturer.**
- **Provide air curtains at dining room and kitchen exterior entrances.**
- **Provide local on-off control with locking cover for each air curtain.**
- **Air conditioning is not allowed in the dining room and is designed as a naturally ventilated room meeting the requirements of UBC. Provide variable speed ceiling fans to promote air circulation at student dining, staff dining, dressing rooms and all other areas per the DOE guide specifications.**
- **Ventilation for compressor room heat rejection requirements.**

c) Plumbing:

- **Provide accessible hand sinks to meet the requirements of ADAAG.**

d)Electrical:
Stage:

- **Duplex outlets ever 12 linear feet around walls and three floor outlets.**

- **Provide three duplex outlets between stage deck and dining room floor.**
- **Provide master control panel and amplifier for the sound system.**
- **Provide five microphone outlets: four evenly spaced and one in the middle of the stage approximately 24 inches from the front edge. Provide three outlets for suspended microphones. CATV outlets at stage.**

Dressing Rooms:
Switched duplex outlets on each wall, 18" above floor and one outlet above dressing table. Provide pilot light to indicate outlet is energized.

Serving Area:
Provide separate, dedicated point of sales electrical hookup for cash register.

All Other Areas:
- **Provide adequate electrical outlets for equipment connections.**
- **Covered Outdoor Stage Area (if any): Provide adequate covered and keyed electrical outlets and outlets for spot lighting hookup.**

Staff Dining Room:
- **Provide CATV outlet.**
- **Provide electrical power for 4 computers.**

- **Electric Powered Quartz Wall Clocks: Provide in Student Dining, Dressing Rooms, Kitchen, Cafeteria Manager's Office, and Staff Dining Room.**

e) Lighting:
Dining Area:
- **Ability to darken area for AV purposes and presentations.**
- **Fluorescent lighting on zoned and/or multi-level controls.**
- **Provide spot lighting at the stage area with dimmer controls.**

Dressing Room:
Provide make-up lighting around the mirror area.

f) Communications:
Provide accommodation for voice, video, and data in Manager's Office, Dressing Rooms, and Staff Dining Room.

Manager's Office:
- **Provide two-way speaker/intercom connection.**
- **Provide outlets for cash register.**

g) Special Considerations

Items to consider during design:
- **Air-conditioning for the kitchen is determined on a site by site basis. If the kitchen is not going to be air-conditioned, then the design needs to maximize the opportunities for natural and cross-ventilation. The cafeteria manager's office is air-conditioned in either situation.**

- **The dining area is planned for dual use as a multi-purpose are and as part of the educational curriculum. Therefore, design this space should be planned for flexibility of use.**

- **In order to eliminate congestion, waste return area should be opposite side of where students line up to enter the serving area.**

- **The Cafeteria/Multi-Purpose building should be located near accessible service drives and away from student traffic.**

- **The manager's office needs to have a view of the service delivery area and the food preparation/cooking area for control and supervision needs.**

- **The exterior delivery double door design needs to accommodate being open for the period of time during deliveries. Also the screen doors need to be provided with double action swinging hinges and a heavy-duty fly fan controlled by an interior manual switch. Screen door design shall allow for the opening of the solid exterior doors when pushed on from inside.**

- **At student dining double door locations, provide either air curtains with keyed, interior manual switch or double acting screen doors for insect control. Screen door design shall allow for the opening of the solid exterior doors when pushed on from inside.**

30. Custodial Service Rooms

Program Description and Philosophy

The Custodial Service Center supports the instructional program of the high school. The custodial staff strives to provide a healthy, safe, and caring environment for the students which will foster student learning.

Activities/Space Use Plans:
The custodial service center provides three distinct areas:

- ***Custodial Offices*** **are spaces that allow custodians to conduct meetings and should have cabinets allowing for the storage of non-toxic supplies as well as a faucet and sink area**
  - **A central location and work area for the custodial staff.**
  - **A space where custodians check in and out and have their lunch and a desk area for the head custodian and the Night Lead Custodian**
  - **A computer connection including internet capability**
  - **An employee faucet and sink area separate from the restroom sink.**
- ***Custodial Storage Rooms*** **(for custodial supplies ONLY) are spaces used for the bulk supply orders that are stored at the school site; cabinets are necessary for the storage of toxic and non-toxic chemicals**
  - **An area where minor repairs on equipment are completed.**
  - **A storage area for small numbers of custodial supplies and equipment.**
- ***Custodial Utility Closets*** **are closets usually placed on different floors and used for the day to day cleaning at the sites. It should have a drop sink used for the mopping needs, as well as cabinets for the storage of toxic (metal cabinets) and non-toxic chemicals (wooden cabinets)**

Space/Infrastructure Requirements

- ***Custodial Offices:*** **150-200 sf**
- ***Custodial Storage Rooms:*** **150 - 200 sf**
- ***Custodial Utility Closets:*** **50 sf**

Room Data Information
a) Finish Information:
Floor:

- **Sealed concrete/linoleum tile are recommended**
- **Base: None**
- **Walls: Painted gypsum board or painted CMU. Provide corner guards in high traffic areas.**

- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b.) Fenestration:
Doors:

- **Provide a solid door with no vision panel for naturally ventilated or air conditioned rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements
a) Acoustics:

- **Allowed background ambient noise level of XX – XX dBA.**

b) Air Conditioning and Ventilation: (None)

c) Plumbing:

- **Provide toilet and shower facility with hot and cold water.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical:

- **Provide 120 volt duplex outlets on each wall at 12'-0" o.c.**
- **Provide one 120 volt G.F.I. duplex outlet near any sinks above the backsplash.**
- **Provide one dedicated 120 volt duplex outlet for each permanent computer station.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Fluorescent lighting.**

f) Communications:

- **Provide permanent audio/data/video connections at one permanent computer station, including conduit and wiring.**
- **Office shall have private telephone lines.**

g) Special Considerations
Items to be considered during the design:

a. Locate the custodial service center for ease and availability of deliveries. Typically it shares the delivery area of the kitchen.
b. Due to location, attention to appropriate comfort level for either natural ventilation or air conditioning needs to be addressed during design.
c. Provide a secured area for the parking and re-charging of golf cart/s. Provide an exterior electrical outlet for cart re-charging that is switched to control use.
d. Maximize storage capacity to meet the variety of supplies and equipment (i.e. paint, paper products, wax machines, lawn mowers, weed wackers, etc.)

31. Library/Information Resource Center

Program Description and Philosophy

The Information Resource Center (formerly the Library/Media Center) provides a multitude of learning spaces and materials to support and enrich the educational curriculum. The center provides additional instruction that enhances classroom learning and meets the individual needs of each student. The center provides:

- **A variety of current print and non-print resources ~~are~~ made available to meet curriculum needs of student and staff.**
- **A place for the development of innovative programs and techniques to motivate users.**
- **Equipment and services for multi-media production and services.**
- **a place for curriculum planning and research and supports faculty working in these areas.**
- **A place to coordinate teaching of library skills, work with students in independent study projects and provides reading guidance.**

Information Resource Centers are:

- **Becoming a "learning emporium" where a multitude of services can be provided in this facility which support and reinforce the general movement in education towards team teaching, large/small group instruction, independent study and flexible scheduling.**
- **A place for multi-media services which includes video conferencing capabilities, networking, closed circuit TV's, multi-media reproduction, studios, computer labs, cyber cafes etc.**

Activities/Space Use Plan:
The Information Resource Center is arranged for individuals as well as large and small groups as they engage in creative inquiry and discovery. A wide variety of varying levels of media are available for student and staff use. Because of the ever changing knowledge and rapid development of technology, this building will require a technological coordinator and/or a Teacher/Librarian to select the appropriate materials and implement this curriculum. The school staff is encouraged to continually evaluate its media services. CSLA guidelines are recommended for staffing this facility.

Space/Infrastructure Requirements:

Entrance: Provide a controlled entrance for accounting of library books and materials. Also serves as an area for display of student work and recognition.

Librarian's Office: (1-3 persons) office area adjacent to the circulation desk with glass panels for view of activities within the library.

Large Group Area includes:
Circulation Desk Area:
An area for checking books and resources in and out. May include alternative self checkout station.
Textbook storage and circulation will take place in a separate area designated for this purpose.

Reading and Study Areas:
For activities such as library skills, work, research assignments, independent study projects, recreational reading. Area needs to accommodate use by two classes simultaneously and serve as a faculty meeting area. Area should include computer clusters and PACs for teachers and students.

Bookstack Area:
Easily accessible for student use and visual control.

Catalog and Index Areas:
OPAC stations for the online searching of information and resources should be located in several areas of library as needed.

Periodical Area:
For browsing, research and study.

Resource Centers:
For use by full class, lecture, research, etc.

The arrangement of the above components needs to be finalized during design.

Workroom/Production Room:
Storage for the development of instructional material/resources, maintenance of the collection and of the library records, the preparation of materials for circulation and of instructional materials. This area is utilized by staff and faculty.

Media Production Area:
For students and teachers use, and production training programs, production of various graphics, and storage of production supplies. This area supports the school's closed circuit TV broadcasts and other video production activities.

Student/Teacher Conference Room:
For both large and small-group meetings, use by students or teachers for planning committee assignments individually or in groups, quiet place for study. Scheduled use by teachers for classes held in the library.

Storage Room:
To accommodate storage of magazines, newspapers, dvds, etc . and provide a door to a central hallway for easy movement of any large equipment.

Media Control Center/Signal Processing Room:
Area/room for locating head-end equipment for the various signal systems supporting the campus operations. Includes: computer network, telephone, CATV utility feed and locally generated CCTV channels, administrative data, instructional data, and intercom/program bell and security systems. Limited people use; primarily only used by technology coordinator.

Staff Toilet:
For staff and student use.

Mechanical Room: For air-conditioning equipment and electrical panel.

Technology Coordinator Office: For Technology Coordinator's use to service and maintain equipment along with typical office functions.

Archives Room: For storage and display of school archives , special collections, and presentation materials

CSLA guidelines are recommended for space and usage requirements for this facility.

32. Computer Resource Center

Program Description and Philosophy

The computer program at the high school level focuses on the development of four processes: access, process, manage, and communicate.

Activities/Space Use Plan:
A description of the activities is as follows and involves the four processes:

- ***Access:*** **Students will display and record data via the use of computers or may be wireless pads in the future.**
- ***Process:*** **Students will be able to change the form of the data collected – word processing.**
- ***Manage:*** **Students will learn how to gather information and learn how to store data.**
- ***Communicate:*** **Students will be able to share their portfolios by presentations and communicating in non-verbal language.**

These activities can be done within the general classroom and/or the dedicated computer resource center.

Space/Infrastructure Requirements:

Classroom Area 1,200 SF
Typical room arrangements may be based on:

- **Individual computer work stations**
- **Tables that accommodate 2 or 3 student computers**
- **A cluster type table, two trapezoidal tables or a 5 or 6 sided table with accommodation for the cabling through the center portion**
- **Built-in perimeter counters: Make sure that wiring raceways mounted 18 inches or more above floor and best at just above counter tops for ease of repair and wiring change outs.**
- **Charging station for mobile devices housed in a secure locking cabinets**
- **Or a combination of the above**

Particular arrangement is determined during the design phase to best meet the program needs. One wall shall be designated as the main instructional wall to accommodate the main whiteboard space, supplemental tackboard space, and a bright board or a interactive white board with short throw wall mounted projector (or ceiling mounted LCD projection unit and large size screen). Short throw DLP or bulbless projectors are recommended to ease maintainence requirements and eliminate high ceiling problems with wiring both electrical and data. Adequate reserve space shall be provided for display and storage of student work and to house the movable teacher storage cabinets. Space shall be allocated for thirty-three permanent computer stations (one teacher and 32 student stations) and two printers with the appropriate power and data connections. The teacher workstation needs to be located to allow visual control of the classroom. Floor space is also required for movable furniture and equipment such as bookshelves, and storage units. A charging station and security lock up is ideal for wireless devices.

Room Data Information

a) Finish Information:
Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide with maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**

- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Ensure room shall meet a background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Interior partitions surrounding classrooms require a minimum rating of 51. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Provide individual thermostat control in each air-conditioned classroom. Locate thermostat near teacher station.**

c) Plumbing:

- **Provide accessible drinking fountains on each floor of a classroom building – high/low type.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide an accessible lavatory for hand wash.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electrical accommodation to support, interactive white board, short throw projector, 33 computers, 2 printers, 1 scanner, and charging capability for a mobile cart of 32 laptop computers. Note to Designer: If there is an inconsistency between EDSPECS and the program equipment list, the designer will use the higher number.**
  - **(a) Provide one electrical and data connection to accommodate projector. Determine location during design.**
  - **(b) Provide one duplex outlet near the TV mount.**
- **Provide electric powered quartz wall clock.**

d) Lighting:

- **Fluorescent lighting with multi-level and/or zoned switching.**

e) Multi-Media / Communications:

- **Two way intercom in classroom with P.A. system to include a speaker above the main instructional board with communication between classroom and administration. Call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector.**
- **Provide permanent data cabling connections at each permanent computer station, including conduit and wiring, and one for the teacher. Provide a telephone jack for the teacher.**

f) Special Considerations

Items to consider during design:

- **Provide maximum security for the Computer Resource Center in the glazing and door design.**
- **Locate the computer resource center adjacent to the library/media center for convenient use by students.**
- **Design for after-hours use with access to a restroom is often considered.**

33. Faculty Center

Program Description and Philosophy

This area functions primarily as a faculty work and lounge area with shared storage space. Areas in the Faculty Center include:

Activities/Space Use Plan:

Work Area:
This are will be similar to the OUSD Make and Take Resource Center. Primary function of this area is to provide faculty members the capability to perform minor media reproduction activities as well as the accomplishment of class preparation work in privacy and in close proximity to their classrooms. This facility supplements teacher work done in classrooms as well as the extensive media reproduction capability of the library/media center. The Faculty Center may be combined with the Teacher Planning Center but must be separated from the lounge area for privacy.

The work area shall include:
- **Large work tables**
- **Computers/printer/phone**
- **Photocopier**
- **Laminator**
- **Poster maker**
- **Whiteboard**
- **Shared supplies (butcher paper, poster board, paper cutter, markers, etc.)**

Lounge Area:
This setting provides for faculty lounging purposes. In addition, it may also serve as a secluded area for coffee and lunch breaks, small group faculty meetings, parent-teacher conferences and teacher-student counseling activities. Space for a refrigerator shall be provided. Two unisex (usually signage states "Staff") accessible toilets shall be provided.

The Lounge area shall include:
- **Whiteboard**
- **Conference table/chairs**
- **Small round table for group discussions**
- **Sink/cabinet for food and storage**
- **Couch**

General Classroom Storage Room:
A storage area to supplement the general classroom storage is included with the capability to store equipment shared by several classrooms as well as furniture and equipment used by classrooms on an infrequent basis.

Space/Infrastructure Requirements:

Area 980 SF

Room Data Information

a) Finish Information:
Floor:
- **Resilient tile or sealed concrete, ceramic tile in restrooms with wainscot.**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics: Office areas shall be acoustically designed as follows:

- **Ensure rooms meet a background ambient noise level of XX to XX DBA.**
- **Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**
- **Interior partitions surrounding regular type offices require a minimum rating of XX and XX at executive offices and conference rooms. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**

b) Air Conditioning and Ventilation: (None)

c) Plumbing:

- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide one single compartment size large (31" x 22" x 6"D) stainless steel ADAAG compliant for front approach countertop sink with a gooseneck faucet and a solids interceptor. Cold water only.**
- **Provide a hot water dispenser.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near any sinks above the backsplash.**
- **Provide one 110 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide electric powered quartz wall clock.**

e) Lighting

- **Install fluorescent lighting.**

f) Multi-media/Communications:

- **Provide permanent audio/data/video connections at each permanent computer station, including conduit and wiring.**
- **Office shall have private telephone lines.**

g) Special Considerations

Items to consider during design:

- **Locate Faculty Centers throughout the campus for teacher convenience**
- **May be combined with the Teacher Planning Center**
- **Work and lounge area need to be separated within the Faculty Center for noise levels and privacy**

34. Storage Space

Program Description and Philosophy

In the YRE-MT schedule, a storage room is required for the movable teacher's storage carts. The space requirement for this room is determined by the amount of carts required. The cart size is approximately 48"W x 28"D x 72"H and has casters. The location of this room is near the Faculty Center or a Teacher's Planning Center or may be included as part of these rooms. There are also general storage rooms located throughout the campus. They are based on a percentage of the overall campus program space square footage if funding allows.

Activities/Space Use:

Area Within various EDSPEC components and/or by Designer

Typically the DOE addresses a school's storage needs in the following ways:

- **As a component within other EDSPEC program areas,**
- **As space for the storage needs of YRE-MT (typical mobile cart size is 48"W x 28"D x 66"H), and**
- **As a percentage of the programmed school area (Hold on implementation of this component at this time).**

Space/Infrastructure Requirements:

These rooms serve as storage for equipment, instructional materials and supplies, and movable teachers' carts.

Room Data Information

a) Finish Information:

Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber/vinyl or wood**
- **Walls: Painted gypsum board or painted CMU**
- **Ceiling: Acoustical tile at 9'-0" minimum height or exposed structure**

b) Fenestration:

Doors:

- **Provide a solid door with no vision panel.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from elements and provide maximum security.**

Windows:

Not required for this storage room.

Utility and Room Data Requirements

a) Acoustics:

- **Allowed background ambient noise levels of XX – XX dBA.**

b) Air Conditioning and Ventilation: (None)

c) Plumbing: (None)

d) Electrical:

- **Provide a minimum of one 120 volt duplex outlet for each wall.**

e) Lighting:

- **Install fluorescent lighting.**
- **Also, consider tube type of lighting.**

f) Multi-Media/Communications: (None)

g) Special Considerations:
Items to consider during design:

- **Locate storage for YRE-MT cabinet storage near Teacher Planning and Faculty Centers. Size & design room so that cabinets can be with minimum movement of other cabinets.**
- **Locate general storage rooms throughout campus for convenient use by teachers and staff.**
- **If the facility is multi-story, proximity/nearness to the elevator needs to be considered.**
- **Maximize opportunities for storage as floor plans and structural grid are developed.**

35. Toilets

Area By Designer

Program Description

Toilets for students are Per Department of Health Sanitation requirements Chapter 11 Administrative Rules and Department of Education Criteria and Uniform Plumbing Code requirements.

Space/Infrastructure Requirements

- **Toilet and restroom design shall be fully ADAAG compliant.**
- **Toilet stall partitions**
- **Soap dispensers located within or above the lavatory to contain droppings**
- **Paper towel dispensers and receptacles**
- **Mirrors; coordinate locations with placement of soap dispensers**
- **Toilet tissue dispensers – roll type for ADA stalls, single dispensing type for non-ADA stalls**
- **Sanitary napkin disposal receptacles**
- **Use institutional hardware i.e. piano hinges**

Room Data Information

a) Finish Information:
Floor:

- **Ceramic tile with wainscot. Design needs to provide slope to drain for all areas of the floor to minimize any ponding condition/s.**
- **Base: Ceramic tile**
- **Walls: Painted gypsum board or painted CMU above ceramic tile wainscot.**
- **Ceiling: Gypsum board at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:
Doors:

- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**
- **Provide means for holding open door in the open position.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes; include window stops, and provide security screens on jalousies.) Location of windows must address privacy issues.**

Utility and Room Data Requirements

a) Acoustics:

- **Allowed background ambient noise levels of XX – XX dBA.**

b) Air Conditioning & Ventilation: See Mechanical Design Criteria.

c) Plumbing:

- **Provide floor drains in each toilet room and include trap primers.**
- **Provide hose bibs with keyed operation.**

d) Electrical:

- **Provide one switched G.F.I. outlet per restroom to facilitate cleaning. Locate pilot lighted switch in nearby general utility closet.**

e) Lighting:

- **Install fluorescent lighting with high impact lens at any student bathrooms.**
- **Consider use of occupancy sensors.**

f) Multi-Media/Communications: (None)

g) Special Considerations
Items to consider during design:

- **Attention to floor design and construction needs to be given to avoid areas of water ponding.**
- **The design needs to provide appropriate privacy from the entrance/hallways, etc. Use of privacy walls is usually incorporated in the design.**
- **To facilitate supervision of students, location of lavatories may be considered outside of water closet/urinal area.**
- **Providing the appropriate height for the stall partitions/walls to match the height of the users needs to be confirmed during the design phase with the school. Goal is to provide appropriate privacy balanced with ability to supervise.**
- **Minimize number of mirrors and give attention to location of mirrors to ensure privacy. Mirror location may be other than above sink.**
- **The number of water closets for girls/women gang toilets needs to be discussed and adjusted to address the accommodation of the crowd in a timely manner. Typically, the women's toilets will always have a greater number of water closets than the men's toilets and will exceed the minimum number required by code/regulations.**
- **Durability, sturdiness, and resistance to abuse (graffiti, scratching) are qualities that are to be considered in the selection of the appropriate hardware. Institutional grade hardware is a minimum standard, i.e. hinges are the continuous or piano type. Partition panel material is a waterproof, solid/uniform colored material, such as phenolic plastic.**
- **When determining location of toilets, minimal travel distance needs to be considered for supervision and security reasons and to minimize time out of class. Path of travel needs to be visible for staff supervision. If facility is multi-story, toilets are provided on each floor for student use.**
- **Staff toilets are typically single user unisex in design. Signage designation is either "staff" or "men" and "women". Determination is made during the design phase.**
- **Staff and single user student restrooms are provided with hardware that designates "Occupied/Vacant".**

36. General Utility Closet

Program Description and Philosophy

General Utility Closets are satellite stations directly related to the custodial service center. Minimal quantities of custodial supplies are distributed from this station to the surrounding areas. Cleaning equipment and supplies used by classroom cleaners are kept here. A minimum of one custodial closet shall be provided for each floor of a building and typically located near the student restrooms to share plumbing. The environmental services and effort of the custodial

services staff members supports the instructional and educational program by providing a healthy, safe, attractive, and caring environment where children can learn and staff can work with minimal distractions.

Activities/Space Use Plan:
This space supports the cleaning/maintaining of facilities and provides storage for custodial supplies and equipment used routinely.

Space/Infrastructure Requirements:
Area 40 SF
General Utility Closet is typically a minimum of 40 SF.
(See Program Description)

Room Data Information

a. Finish Information:
Floor:

- **Sealed concrete and ceramic tile at mop sink.**
- **Sealed integral concrete cove curb/base or other water proof construction with a floor drain**
- **Walls: Painted water resistant gypsum board or painted CMU, ceramic tile wainscot 4'-0" H at mop sink and below mop rack.**
- **Ceiling: Gypsum board at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b. Fenestration:
Doors:

- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Typically this space does not have windows. If windows are included, provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite size, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics:

- **Allowed background ambient noise level of XX – XX dBA.**

b) Air Conditioning and Ventilation:

- **Due to the mop sink and storage of wet equipment, this room needs to be mechanically exhausted if operable windows are not provided.**

c) Plumbing:

- **Provide hot and cold water.**
  Select mop sink orientation to match floor plan and space available.
- **Confirm mop sink type (utility sink with hose attachment for filling mop bucket or floor type, etc.) with school during design.**

d) Electrical:

- **Provide one 120 volt duplex outlet, G.F.I. type if near the service/mop sink.**
- **Locate pilot lighted switch for student restroom and exterior outlets within this room.**

e) Lighting:

- **Fluorescent lighting.**

f) Multi-Media/Communications: (None)

g) Special Considerations
Items to consider during design:
Location and amount of General Utility Closets throughout a school will depend on the ultimate layout of the spaces and functions. Convenience is important to help promote effective preventative maintenance of the facilities.

37. Mechanical/Electrical/Media-Communication Rooms

Program Description

Program Description for Mechanical Rooms:
Mechanical rooms contain major mechanical systems for building plumbing and/or air conditioning systems. Access to these rooms should be from the exterior where possible, or from corridor spaces where maintenance activities will not disturb learning activities. Main mechanical rooms contain mechanical components based on the system design. These items could include but may not be limited to boilers, pumps, storage tanks, domestic hot water systems, air conditioning equipment, air handling equipment, and control panels. Mechanical rooms shall be sized based on the repair or replacement of the largest component of the system. For example, the AHU rooms shall be large enough to allow removing the fan shaft or cooling coil. Access space may include space through opened doors, but doors in the open position shall not block egress paths. Main chiller rooms shall be sized to allow pulling tubes from the chiller. Provide a path for future chiller replacement such that other equipment does not have to be removed to access the equipment being replaced. Heights of rooms with boilers or unfired pressure vessels such as hot water storage tanks shall meet the requirements of the State Boiler Inspector for clearance from the top of the equipment to the ceiling.

All mechanical rooms shall provide sufficient access space for the maintenance mechanic to work safely when performing common maintenance tasks such as filter replacement, belt adjustment, etc. Air conditioning equipment shall be floor mounted, not above suspended ceilings unless adequate provisions such as maintenance platforms, permanent ladders, and standing headroom are provided.

Program Description for Electrical Rooms:
Main electrical rooms contain electrical components based on the system design. These items could include but are not limited to: the main electrical switch gear for a building, emergency generator panels and transfer switch, transformers, telephone system, and electrical panels. Depending on the size and complexity of the facility this space may be combined with the following program.

Program Description for Media - Communication Rooms:
These rooms house the signal and backboard connections which interface with the connections of individual outlets to the campus distribution systems. Provide space as well for servers and internet connection equipment. See Chapter 8 – Multi-Media Design Criteria for additional information. Note: Minimum dimension for IDF rooms shall be 8’ x 10’.

Space/Infrastructure Requirements:

Area By Designer
Area to be determined by designer based on type of systems used and on configuration of buildings. Note: Minimum dimensions of IDF Rooms shall be 8 feet by 10 feet.
(See Program Descriptions)

Room Data Information:

a) Finish Information:
Floor:

- **Sealed integral concrete cove curb/base or other water proof construction with a floor drain**

- **Base: None**
- **Walls: Painted gypsum board or painted CMU (Important to meet acoustical requirements, see 351.7 Utility and Room Data Requirements, item a. Acoustics and Chapter 5 – Acoustic Design Criteria).**
- **Ceiling: Gypsum board at 9'-0" minimum height (height to be determined by equipment needs) or exposed structure (if acoustic levels can be achieved).**

b) Fenestration:
Doors:

- **Protect exterior doors from elements and provide maximum security.**
- **Sound insulated doors required per Acoustical Consultant's recommendation at mechanical rooms.**

Windows:

- **Typically these spaces do not have windows.**
- **Mechanical rooms require fixed louvers for air intake and exhaust. Louvers should be sized per mechanical system requirements and detailed with security and weatherproof features.**
- **Determine if there is a need for windows during the design.**
- **Maximize security protection measures (i.e. minimize glass lites sizes, include window stops, security screens on jalousies) if windows are needed.**

Utility and Room Data Requirements

a) Acoustics:

- **Two hour, STC 54 partitions are required around mechanical rooms.**
- **Mechanical rooms that contain air handlers should have full height CMU walls that are fully grouted. Bare ceiling and walls should be treated with 3 inch – K-13 acoustical spray on insulation down to one foot off the floor. Doors should be solid, 16-gauge steel with adjustable head, jamb, astragal, and automatic door bottom seals.**

b) Air Conditioning and Ventilation:

- **Consultant shall consider accommodations to address heat and ventilation in these rooms.**
- **Outside air shall be ducted to AHU's. Mechanical rooms with AHU's shall not be used as a mixing plenum.**

c) Plumbing:

- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**
- **Provide floor drains in main chiller and trap primers in boiler rooms.**
- **Provide a hose bib for maintenance of the mechanical room equipment in the mechanical room or close by, reachable with a common hose.**

d) Electrical:

- **Provide 120 volt duplex outlets as appropriate to facilitate equipment connections and maintenance.**
- **Provide surge protected outlets in the main signal room.**

e) Lighting:

- **Install fluorescent lighting.**

f) Multi-Media/Communications:

- **Provide telephone outlets within major rooms for maintenance personnel.**
- **Provide telephone interface for utility company power metering interface.**
- **Provide telephone outlet for interface with security system in signal rooms where required.**

g) Special Considerations
Items to consider during design:

- **The mechanical and electrical rooms are generally not entered by school staff, but rather by Buildings & Ground Staff or a contracted service/maintenance vendor.**
- **The media-communication rooms are more apt to be entered by Information Technology Staff. Therefore, these are often interior rooms.**
- **Sensitivity to heat needs to be considered in the design of the media-communication rooms. These rooms typically have some means of heat control, i.e. air conditioning, etc.**

38. Adult Education Services

Program Description and Philosophy

Adult Education services are provided to adults in the community who have not completed high school education and adults who are seeking to upgrade their employment skills, and/or language and literacy skills. A focus on young adults drives priority services for non-high school completers to attain their GED or Adult High School diploma.

Activities/Space Use Plan:

Classes are conducted in public school buildings and in churches, hospitals, libraries, senior centers, military bases and other off-campus locations during day and evening hours and on weekends. The administrative centers for adult program operations are all located at central office facilities.

Space and Infrastructure Requirements

NOTE: CTE Classrooms for adult education services should meet the same activities/space use plans as high school CTE classrooms.

Area (Varies with the design enrollment)

Room Data Information

a) Finish Information:

Floor:

- **Resilient tile or sealed concrete**
- **Base: Rubber**
- **Walls: Painted Gypsum Board or Painted CMU**
- **Ceiling: Acoustical Tile at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved)**

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Utility and Room Data Requirements

a) Acoustics

- **Ensure rooms meet a background ambient noise level of XX to XX DBA. Install a sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X.**

- **Interior partitions require a minimum rating of 51. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation

- **Provide individual thermostat control in each air-conditioned space.**

c) Plumbing

- **Provide stainless steel sinks with hot water dispenser at countertop applications. Supply faucet with cold water only.**
- **Provide accessible electric water coolers, dual height unit within the administrative center.**
- **Provide hot and cold water at sinks and lavatories within the Health Service area.**
- **Provide hot shot type faucet in the staff lounge if larger hot water source is not readily available.**
- **Sinks need to be accessible. Front approach is requested by DCAB. The depth of the sink and the faucet operating force shall meet the requirements of ADAAG.**
- **Provide floor sink or standpipe for draining condensate if cooling coil for air conditioning is located in this room.**

d) Electrical

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near the sink above the backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit.**
- **Provide electric powered quartz wall clock.**

e) Lighting

- **Install fluorescent lighting with multi-level and/or zoned switching at PCNC and conference rooms as a minimum. (Other rooms as necessary to conform to energy code restrictions).**

f) Multi-Media/Communications

- **Provide control center for the intercom/program bell combination system. Locate master stations at Principal, Vice Principal and general office.**
- **Install one outlet for closed-circuit TV at all conference rooms, Principal's office, Vice Principal's office, all other offices, the health room and PCNC. Location to be determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station – conduit and wiring.**
- **Provide two-way intercom with control switches in offices and conference rooms, except Principal, Vice Principal and general office, which have master stations.**
- **Provide telephone lines for offices.**

Physical Education

39. Lockers and Showers

Area

PE Locker/Shower – Girls 3,350 SF
PE Locker/Shower – Boys 3,350 SF
Common Area (Fitness Room, Laundry, First Aid Room) 2,080 SF

Program Description and Philosophy

Program Description

Physical Education (PE) is the discipline that teaches students the knowledge and skills to be physically competent. PE determines the curriculum content that students need to know and be able to demonstrate at benchmarked grade levels. In its entirety, PE builds a foundation of appropriate instructional practices to promote and facilitate the attainment of

movement forms, concepts, skills, physical fitness, and the development and improvement of physical activity that can be maintained throughout life. PE's Goal: To empower learners to actualize a vision of themselves as physically fit with the skills and knowledge and desire to become life-long participants in physical activities.

Activities/Space Use Plan:
The California Physical Education Content and Performance Standards are:

- **Movement Forms: Students demonstrate motor skills and movement patterns to perform a variety of activity.**
- **Cognitive Concepts: Students understand movement concepts, principles and tactics as they apply to the learning and performance of physical activities.**
- **Active Lifestyle: Students utilize appropriate motor skills, tactics and movement concepts/principles while participating regularly in physical activity.**
- **Physical Fitness: Students demonstrate ways to achieve and maintain a health-enhancing level of physical fitness.**
- **Social Behavior: Students demonstrate responsible personal and social behavior in physical activity settings.**
- **Respecting Differences: Students demonstrate understanding and respect for differences among people in physical activity settings.**
- **Expression: Students choose physical activity for health, enjoyment, challenge, self-expression and/or social interaction.**

The secondary PE program is organized around courses of study by semester. PE will provide opportunities to apply combinations of movement forms starting at a basic level and working towards more complex and challenging situations. In addition, PE courses will enable students to make the connections between physical activity and the many health-enhancing benefits of exercise. Students will develop a working knowledge of a variety of training and conditioning principles to choose activities and exercises that improve health and well-being.

Space/Infrastructure Requirements:

Each High school campus shall be provided with one PE Center, within which shall include:

a) General Classrooms:
For activities such as rhythms, dance, tumbling, and gymnastics, conditioning, weight training, etc. these rooms should be adjacent and be amendable to combining classes during inclement weather. They shall be wired per Multi-media/ Communications Design Criteria.

b) PE Locker/Shower Building:

- **Individual shower stalls and dressing/locker facilities for both boys and girls.**
- **Offices and shower and locker facilities for instructional staff.**
- **Suitable storage space for equipment and uniforms.**
- **Fitness room with specific focus of program and focus (i.e. fitness center of aerobics/dance studio) to be determined during the design phase.**
- **First aid room.**
- **Laundry room.**

c) Outdoor Areas for:

- **Flag football, softball, soccer.**
- **Paved courts for badminton, basketball, volleyball, paddle tennis.**

d) Playfields: Entire field graded for proper water runoff and grassed.

e) Outdoor Courts:
Crowned asphalt concrete 72' x 144' with appropriate curbing on four sides of court. Provide 2" wide color coded outlines for each paved playcourt unit:

1. Tennis court 36' x 78'

2. Basketball courts 40' x 60' each.
3. Regulation volleyball court 30' x 60'
4. Paddle tennis courts 20' x 44' each
5. Handball courts 20' x 44'

f) Fencing at Outdoor Courts:

- 12 foot high wire fence with gates and smooth masonry handball wall with vertical lines. Horizontal line 3' high on wall face for tennis.
- 12 foot high wire fence with gates and smooth tennis wall with 3' horizontal line. The high school PE Locker/Shower component is to meet the needs of the high school PE curriculum, separate from the athletic program's requirements. The supervision and safety of students needs to be addressed in the layout of the various spaces. Both the boys and the girls locker rooms include the following spaces:

    - Locker Room
    - Shower / Drying Areas
    - Toilet Room
    - Faculty Office
    - Storage Rooms
    - Custodial Closet
    - Common spaces include:
    - Fitness Room
    - Laundry Room
    - First Aid Room
    - Heater and Electrical Room

Room Data Information

a) Finish Information:

Floor:

Resilient tile or finished concrete:

- PE Offices
- First Aid Room
- Fitness Room (verify flooring type during design)

Finished concrete

- Storage Room

Finished non-slip concrete sloped to drain

- Locker Rooms
- Laundry Room

Ceramic tile sloped to drains

- Showers/Drying Areas
- Toilet Rooms

Base: Rubber/vinyl

- PE Offices
- First Aid Room
- Fitness Room
- Laundry Room

Walls:

Ceramic tile wainscot

- Toilet Rooms/Drying Areas
- Shower (full height)

Painted gypsum board or painted CMU

- **Locker Rooms**
- **PE Offices**
- **First Aid Room**
- **Storage**
- **Laundry**

Ceiling: Moisture resistant gypsum board at 12'-0" minimum height or exposed structure (if acoustic levels and necessary security can be achieved)

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms.**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite size; include window stops, and provide security screens on jalousies.)**

c) Other Considerations: Address privacy and visual control of locker rooms with door and window design.

Utility and Room Data Information

a) Acoustics:

- **Ensure that rooms meet a background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X. Locker Rooms are normally XX to XX DBA.**
- **Interior partitions surrounding classrooms require a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Mechanically ventilate shower rooms by exhausting the area.**
- **Ventilate locker rooms in accordance with the Building Code if naturally ventilated or DOH requirements if mechanically ventilated.**
- **Provide dryer exhaust duct and wall cap.**

c) Plumbing:

- **Locate water piping above the ceiling where feasible to allow less costly repair and alteration in the future. Shutoff valves located above gypsum board or other non-removable tile ceilings shall be provided with access panels.**
- **Provide hot water return system or equivalent to maintain hot water temperatures at the fixtures furthest from the heater.**
- **Provide mixing valve station to temper hot water for showers and other fixtures in the building.**
- **Provide laundry tray with hot and cold water in Laundry Room.**

d) Electrical:

- **Provide a minimum of two 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near any sinks and above backsplash.**

- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum five computer stations on one 20 amp branch circuit.**
- **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design (at PE Classrooms)**
- **Install one duplex outlet near the T.V. mounting bracket in the PE Classroom.**
- **Provide electric powered quartz wall clock.**

e) Lighting:

- **Install fluorescent lighting with multi-level and/or zoned switching.**

f) Multi-Media/Communications:

- **Provide a two way intercom in classroom with P.A. system that includes a speaker above the main instructional board with communication between classroom and administration. Locate the call button near teacher's desk.**
- **Install one outlet for closed-circuit TV in PE classroom and locker/shower group area. Location to be determined during design.**
- **Provide permanent data cabling connections at each permanent computer station (6), including conduit and wiring, and one for the teacher. Provide a telephone jack for the teacher.**

g) Special Considerations
Items to consider during design:

- **Provide appropriate attention to facility orientation for maximum cross-ventilation.**
- **Address humidity and moisture of showers in the building design.**
- **Focus layout of locker rooms to provide safety, visual control, and privacy.**
- **Locate facility to accommodate two classrooms (may be future) for PE.**
- **Consider integrated locker pedestal and bench (16" – 18" height) design to maximize space and facilitate cleaning (arrangement facilitates shooting of floor with hose). Locker area and laundry areas to be sloped to drains.**
- **Give attention to sloped floor/drain design to contain and channel water appropriately.**

40. Athletic Lockers and Showers

Program Description and Philosophy

See Physical Education program description and philosophy.

Space/Infrastructure Requirements

Area

Athletic Locker/Shower – Girls 3,150 SF
Athletic Locker/Shower – Boys 3,150 SF
Common Area 3,750 SF
Each High School campus shall be provided with one Athletic Locker/Shower Facility, within which shall include a boys and girls locker/shower facilities, coaches offices, equipment storage rooms, towel storage, laundry, trainer's room and weight training room.

Room Data Information

a) Finish Information:
Floor:
Resilient tile or finished concrete:

- **Varsity and Junior Varsity**
- **Coach's Office**
- **Coach's Locker-Shower-Toilet**
- **Weight Training Room**

Glazed non-slip tile with 7' high wainscot

- **Toweling Room – slope to drain**
- **Locker Room Toilet – slope to drain**
- **Shower Room – slope to drain**

Trainer's Room with drain and 4" high tiled curb surrounding the whirlpool bath area. All other surrounding floors shall be resilient tile or finished concrete.

Finished Concrete:

- **Locker Room**
- **Equipment Storage Room**
- **Heavy Equipment Storage Room**
- **Laundry Room – slope floor to drain**

Base: Rubber and ceramic tile
Walls: Painted Gypsum Board or Painted CMU

- **Ceiling: Gypsum board at 9'-0" minimum height or exposed structure (if acoustic levels can be achieved) with moisture resistant finish.**
- **12'-0" minimum clear height at locker rooms.**
- **Provide 3/4-inch round equipment drying pipe rods suspended horizontally from ceiling at 7 foot height directly over the locker benches.**
- **12 foot minimum height at Equipment Storage Room, Toweling Room, Laundry Room, and Weight Training Room.**
- **Exposed ceiling construction at Equipment Storage Room.**
- **Accommodate security needs in ceiling design.**

b) Fenestration:
Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors form elements and provide maximum security.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.) Set operable windows with sill height at or above top of lockers.**
- **Provide an entry door situated for easy access from outdoor facilities.**
- **Provide 6' double leaf exterior doors leading directly to outdoor areas at the Custodial Heater Room, Laundry Room, and Heavy Equipment Storage Room.**

Utility and Room Data Information

a) Acoustics:

- **Ensure rooms meet a background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X. Locker Rooms are normally XX to XX DBA.**
- **Interior partitions surrounding classrooms require a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Mechanically ventilate shower rooms by exhausting the area.**
- **Ventilate locker rooms in accordance with the Building Code if naturally ventilated or DOH requirements if mechanically ventilated.**
- **Provide dryer exhaust duct and wall cap.**

c) Plumbing:

- **Locate water piping above the ceiling where feasible to allow less costly repair and alteration in the future. Shutoff valves located above gypsum board or other nonremovable tile ceilings shall be provided with access panels.**
- **Provide hot water return system or equivalent to maintain hot water temperatures at the fixtures furthest from the heater.**
- **Provide mixing valve station to temper hot water for showers and other fixtures in the building.**

d) Electrical:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near any sinks and above backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit.**
- **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design (at PE Classrooms)**
- **One duplex outlet near the T.V. mount at the PE Classroom.**
- **Provide electric powered quartz wall clock.**

f) Lighting:

- **Install fluorescent lighting with multi-level and/or zoned switching.**

g) Multi-Media/Communications:

- **Provide a two-way intercom in classroom with P.A. system that includes a speaker above the main instructional board with communication between classroom and administration. Locate the call button near teacher's desk.**
- **Outlets for interactive white board and short throw projector. Location to be determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station (6) – conduit and wiring and (1) for the teacher. Provide a telephone jack for the teacher.**

Special Considerations

Items to consider during design:

- **Provide appropriate attention to facility orientation for maximum cross-ventilation.**
- **Address humidity and moisture of showers in the building design.**
- **Layout of locker rooms to focus on safety, visual control, and privacy.**
- **Locate facility to accommodate two classrooms (may be future) for PE.**
- **Consider integrated locker pedestal and bench (16" – 18" height) dsign to maximize space and facilitate cleaning (arrangement facilitates shooting of floor with hose). Locker area and laundry areas to be sloped to drains.**
- **Give attention to sloped floor/drain design to contain and channel water appropriately.**
- **Consider design of "home" side locker area to be separated into a junior varsity (JV) and varsity sections, each with 80 lockers each. Sports will rotate use to accommodate gender issues requiring JV and varsity sports.**
- **Design each gang restroom area to accommodate boys and girls to provide flexibility and meet genera issues.**

41. Gynasium

Program Description and Philosophy

The high school gymnasium must meet the needs of both the physical education program and the interscholastic athletic program along with consideration for multiple use by other school programs and community groups.

Space/Infrastructure Requirements

Area 20,280 SF*
Lobby and Support Rooms
3,210 SF
Main Floor 12,540 SF*
Wrestling Room 1,890 SF
Boy's JV and Varsity Facilities 1,320 SF
Girl's JV and Varsity Facilities 1,320 SF
***Main Floor area based on Design Enrollment of 1,000; area varies with changes in DE.**
Verify audience seating capacity with DOE during initial design.

The gymnasium should be planned for the instruction of classes, intramurals, and interscholastic athletics with spectator seating. Sports to be accommodated include, but are not limited to: basketball, volleyball, judo, and wrestling. The many spaces inside the gymnasium include:

- **Lobby with ticket booth, public restrooms, concession stand,**
- **Athletic Director's Office with restroom, shower, and adjacent Conference Room**
- **Main Floor with direct access to storage rooms and locker facilities**
- **JV and Varsity Locker/Shower Rooms for Boys and Girls**

Room Finish Information:

a) Finish Information:
Floor:
Resilient tile or finished concrete

- **Office**
- **PE Equipment Room**
- **Lobby**
- **Concession Booth**
- **Ticket Booth**
- **Wrestling Room**

Finished Concrete:

- **Janitor Closet**
- **Electrical - Heater Room**
- **Sloped to drain with 4" concrete locker base at locker rooms**
- **General Storage Room**
- **Hallways**

Glazed non-skid tile:

- **Locker Room Toilets – sloped to drains**
- **Locker Room – Drying, and Shower Rooms – sloped to drains**

Synthetic or Wood Floor at Main Gym Floor
Provide concrete floor ring around synthetic/wood floor area

Base: None
Walls: CMU, partially open

Ceiling: Exposed Construction:

- **Janitor's Closet**
- **Electrical – Heater Rooms**
- **Gypsum Board with moisture resistant finish, 12 foot minimum height at locker room areas.**

Main Floor: Minimum clear height of 24 feet over playing area with durable acoustical qualities capable of withstanding impact caused by sporting events.

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide required number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide maximum security.**

General Storage Rooms: Provide 6' double leaf exterior metal doors.

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.)**

Ticket Office: Provide clear glass above counter.

Concession: Provide operable pass-through window over 8' long sales counter facing lobby.

Utility and Room Data Information

a) Acoustics:

- **Ensure rooms shall meet background ambient noise level of XX to XX DBA. Install sound absorptive ceiling with acoustical tiles with an STC rating of CAC XX to XX and NRC of X to X. Locker Rooms are normally XX to XX DBA.**
- **Interior partitions surrounding classrooms require a minimum rating of XX. The partition section above a ceiling with an STC of XX – XX may be less than STC XX.**
- **Operable walls dividing classrooms require a minimum STC of XX when tested in accordance with ASTM E XX.**

b) Air Conditioning and Ventilation:

- **Mechanically ventilate shower rooms by exhausting the area.**
- **Ventilate locker rooms in accordance with the Building Code if naturally ventilated or DOH requirements if mechanically ventilated.**
- **Provide dryer exhaust duct and wall cap.**

c) Plumbing:

- **Locate water piping above the ceiling where feasible to allow less costly repair and alteration in the future. Shutoff valves located above gypsum board or other non-removable tile ceilings shall be provided with access panels.**
- **Provide hot water return system or equivalent to maintain hot water temperatures at the fixtures furthest from the heater.**
- **Provide mixing valve station to temper hot water for showers and other fixtures in the building.**
- **Public Toilets: Men: Provide 4 water closets, 4 urinals and 4 lavs. Women: Provide 6 water closets and 4 lavs. Typical, provide hose bibb below lavatory.**
- **Shower Room: Provide 5 shower units with built-in soap racks and floor drains in each shower area.**

d) Electrical:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide one 120 volt G.F.I. duplex outlet near any sinks and above backsplash.**
- **Provide one 120 volt duplex outlet for each permanent computer station. Maximum two computer stations on one – 20 amp branch circuit.**
- **Provide one electrical and data connection to accommodate the brightboard or interactive white board with short throw wall-mounted projector (or LCD projector). Location to be determined during design (at PE Classrooms)**
- **Install one duplex outlet near the T.V. mount at the PE Classroom.**
- **Provide electric powered quartz wall clock.**

Main Floor:

- **Provide custodial outlets 50' on center along perimeter wall.**
- **Provide two duplex outlets near portable stage. Provide duplex outlets at amplifier stations.**
- **Provide circuit to basketball scoreboards with controls at official able.**
- **Provide appropriate circuitry and key operated switching controls for each manual-motorized basketball backboard hoist.**

e) Lighting:

- **Install fluorescent lighting with multi-level and/or zoned switching.**
- **Install light fixtures at main gym floor with protective guards and electric control panel near gymnasium office.**

f) Multi-Media/Communications:

- **Provide two way intercom in classroom with P.A. system that includes a speaker above the main instructional board with communication between classroom and administration. Locate call button near teacher's desk.**
- **Install one outlet for closed-circuit TV. Location to be determined during design.**
- **Provide permanent audio/data/video connections at each permanent computer station (6) – conduit and wiring and (1) for the teacher. Provide a telephone jack for the teacher.**

g) Special Considerations

- **Consider separate exterior entry to Public Restrooms if gym is located on campus near other outdoor athletic facilities (i.e. track & field, outdoor courts). This would allow flexibility in use.**
- **Attention to thermal comfort is a major design factor.**
- **Orient gymnasium to efficiently maximize natural ventilation.**
- **Design gymnasium to provide maximum cross-ventilation at the court floor level. Consider use of operable or fixed louvers, grilled openings, etc. with modified bleacher design to maximize cross-ventilation at floor level.**
- **Attention to design to promote hot air to rise and escape.**

42. Outdoor PE/Athletic Facilities

Program Description and Philosophy:

Interscholastic Athletics

Program Description:

Interscholastic Athletics is a voluntary program and refers to all athletic activities in which teams from two or more schools participate in competitive games involving physical activity, rules of play, and a system of scoring. The athletics program has a number of objectives, based on benefits derived by the individual participant, the school and the community:

- **To provide opportunities for and to involve all eligible and qualified students in athletic activities.**
- **To insure their safety and satisfaction in participation.**
- **To develop individual participant's benefits of: good health, ideals of hygienic living and skills development; mental alertness, initiative, and resourcefulness; discipline, self-control, responsibility, dependability,**

decisiveness, and courage; good sportsmanship, fairness, courtesy; cooperation, loyalty, self-sacrifice, public spirit, good citizenship; and opportunities to meet and make friends with people from other schools and communities.

- **To develop wholesome school spirit, loyalty, enthusiasm, and pride, improve discipline, favorably influence scholarship standards through eligibility requirements; promote good spirit between teachers and pupils.**
- **To create community interest in schools, good will and good feeling among different schools and communities.**

Activities/Space Use Plan:
The major sports with active participation yearly include: baseball, basketball, bowling, soccer, rowing, cross country, football, golf, judo, tennis, swimming and diving, track and field, tennis, volleyball and wrestling.
Components to include outdoor facilities and support facilities:

Outdoor facilities include:

- **Grassed Playfield**
- **Four Tennis Courts**
- **Two Paved Playcourts (or One Paved and One Covered Playcourt to be considered for specific site/phasing considerations)**
- **Baseball Field**
- **Softball Field**
- **Track and Football/Soccer Field**
- **Practice Field**
- **Swimming Pool**

Support facilities include:

- **Bleachers**
- **Ticket Booth**
- **Broadcast Booth**
- **Concession**
- **Public Restrooms**
- **Storage**
- **Announcer's Booth**
- **Headhouse (with Pool)**

Discernible Trends:
Interscholastic athletics for both boys and girls is expanding in popularity and in accordance with Title IX of the Federal laws; equivalent facilities and opportunities for participation must be made available for both girls and boys. Each year more sports are added, the number of spectators and participants has also increased. Thus game rules and regulations have changed and probably will continue to change to insure the safety and enjoyment of both participants and spectators – artificial turfs, widening of football goal posts, basketball freethrow lines, and track lanes etc.

Space/Infrastructure Requirements:

If the Interscholastic Athletics Program is to be an educational asset, certain minimum requirements are essential. Official standards for outdoor and indoor sports facilities must be followed: dressing, shower, equipment, and storage rooms – separate for boys and girls are necessary and provisions must be made for spectator accommodations. Sufficient facilities are one of the primary factors in determining the administrative feasibility for any sport which might be included in the program. Inadequate facilities restrict the potential on any athletic activity. Limited space cannot accommodate large number of athletes, thus restricting and affecting performance in sports.

Outdoor Areas: In areas where open space becomes less available, consideration must be given to multiple use these lands and every measure taken to utilize them in the best possible and most efficient manner. It is generally agreed that grassed fields provide the best surface for the usual outdoor games. Artificial turfs or all weather turfs, initially are costly. However, amortized over a period of years, maintenance becomes less than for grassed fields.

a. Football: Every high school with football teams should have a field available for practice on campus or near the school within the community. The selection of a site for the football field should include these factors: orientation of the filed, drainage, grading and surfacing, provisions for spectator seating, parking, lights for night games and possible future expansion. High school football fields will be placed within track ovals to conserve space. The approximate area should be 160,000 square feet (including bleacher areas and track oval). It is not always possible to orient the football field according to accepted standards because of topography and general slope of the available area. However, every effort should be made to give first consideration to the participants. This consideration indicates that the long axis of the filed should be in a north-south direction so that the late afternoon sunrays will fall at approximately right angles to the long axis of the field. The football field should be designed to accommodate other field sports such as soccer or field hockey.

Where strong winds are prevalent, due consideration should be given to local conditions. For surface drainage of football fields, the crown of the field is established down the center of its long axis, about 12 to 14 inches above the sidelines. Surface water will then drain toward both sides of the field to be carried away by series of catch basins. Where football fields are located inside the track oval, subsoil drains for both the football field and track should be connected. Where soil is not porous, the football field may require subsoil drainage. Consult the experts on this matter. Provide hand holes near team bench areas for field telephones and connect to broadcast booth and P.A. microphone circuit from home team hand hole to broadcast booth.

Provide 4-foot high chain link fence enclosure with appropriate number and location of gates for efficient traffic flow around field.

Portable bleachers will provide the basic spectator seating capability. Permanent stands may be considered, depending on site conditions and availability of funds. Bleacher placement to provide optimum viewing results for football, soccer and track events.
Maximum seating capacity will be 5,000 unless DOE deems otherwise.

a. Baseball: Baseball field should be separate from and outside the football field and track and oval. Full baseball facilities shall be provided where land is available. Orientation of the field is based on the protection of players in the more hazardous positions. These players are the batter, catcher, and pitcher. A line drawn through these positions is therefore used as the axis for orienting the field. This axis is placed at approximately right angle to the late afternoon sun rays. (This places home plate in a general north-by-east or south-by-west location at one end of the axis.) Baseball field should be located away from the activities for small children. It should not overlap the football or track areas.

The outfield fence is generally placed approximately 300 feet to 320 feet from home plate down each foul line. The fence is straightaway centerfield is usually 350 feet to 400 feet from the home plate. It is important that a large frame backstop is installed for all high school baseball. It requires sturdy wire netting, stationed 60 feet. (depends on availability of space) behind the home plate. This backstop should be a minimum of 20 feet in height to help keep the ball in the field of play. Three feet from the extremity of the backstop, there should be a 4 feet high fence 60 feet from the foul line extending 10 ft. beyond the first and third base. Where it is necessary to put the backstop, a great deal less than 60 feet behind home plate, a hood which slopes 45 degrees toward the field should be installed. The pitcher's mound should be largely of clay and is, by rule, required to be 10 inches above base line level.

Fixed hollow posts or sleeves should be driven or embedded beneath baseline ground level to secure bases. Provide attention to control of foul balls during design. Consider including netting above home plate and extending to first and third base for ball containment. Provide attention to the design of the backstop, dugouts, and walkways to eliminate extension into playing field. The surface drainage of the baseball diamond is accomplished by sloping the infield grade down from the pitcher's mound toward all base line. Official rules permit a slop of 10 inches from the pitcher's box to base line. Home plate and the base lines must be level. In the outfields, finished grading should slope away from center field toward right and left fields. This grade may approximate 1 per cent or a drop of 1 foot to each 1000 linear feet.

Where is "B"?

c. Softball: Implement concepts similar to baseball but sized to official softball standards. Girls' softball needs to be accommodated based on Title IX.

d. Track and Field: A 400-meter track is standard. An attempt should be made to include one straightaway to accommodate the 180 yards low hurdles. Lanes should have a minimum width of 42 inches and a maximum of 48 inches. Surface drainage of the track is accomplished best by having the top surface of the track elevated 12 inches above its surrounding area. Outlets, or "weep-holes" in the curbing, space at approximately 15 feet, permit the runoff of surface water.

Artificial track surface is highly recommended but cost factor must be considered. Standard tracks are usually built in three layers: 1) the rough fill, 6 to 10 inches thick, consisting of crushed rock or heavy course cinders leveled and rolled to grade, 2) the middle layer, 4 to 10 inches thick, consisting of straight-run cinders of rather course grade but with heavy clinkers, leveled and rolled to grade, and 3) the top layer, approximately 2 inches thick, composed of a mixture of front-end or crushed cinders with clay or loan as binders. The cinders for the top dressing should be screened through a ¼ inch mesh. The depth of the total fill required varies from 10 to 30 inches, depending largely upon the porosity of the soil and the surface structure (blue rock area).

Inclination shall be limited to 1:100 laterally and 1:1000 in the longitudinal direction. All track turns should be banked sloping down from the outside curb down to the inside curb. This slope is restricted by the inclination rule of 1:100. A solid curb with rounded corners 2 inches above track level shall mark the inner edge of the track. Concrete curbs 4 inches wide at the top and 6 to 8 inches wide at the base are recommended for both the inside and outside curb. Design may vary on all-weather track design.

The running surface for the pole vault, high jump, long and triple jump should be constructed with artificial surfaces. The discuss and short-put rings should have a concrete surface. The landing pits for the high jump and pole vault should be portable and placed on a level surface. The landing pits for the triple and long jump landing pits shall be filled with sand. Accommodation for covering when not in use shall be considered.

e. Swimming: Recommended specifications for high school pools should be 25 yards plus 1 inch long measured from the inside walls or from the inside tile walls and at least 60 feet wide. Swimming lane dimensions (width) should be:
Lanes # 1 & 8 = 9'-0" Lanes # 2 - 7 = 7'-0"

Water depth shall be a minimum of 3 feet inches in the shallow end to 12 feet in the deep end. Approximately 60 percent of the pool should range in depth from 3 feet six inches to 5 feet 6 inches with the slop of the pool not exceeding one foot for each 15 feet of distance.

End-walls shall be vertical up to a height of approximately 3 feet inches below the overflow level of the water, with no protrusions of inlets below the surface water. It is recommended end-walls be finished with non-slip surface. All ladders, steps or stairs shall be recessed into side-walls or easily removable for competition. For high school pools, diving facility should be centered at the deep end of the pool with one-meter board.

Bleacher stands to accommodate 700 spectators. Provide minimum 6 feet high fence with gates to enclose swimming pool area. Flood light poles should be situated behind both bleacher sections to saturate entire pool surface with appropriate level of illumination. Bleacher capacity to be verified during design.

A building structure containing the following shall be situated at one end of the swimming pool: Instructor's office, boy's locker room (omit locker facilities if P.E. locker/shower building is in close proximity to swimming pool), boy's shower area, boy's P.E./Public Toilet, girl's locker room (omit locker facilities if P.E. locker/shower building is in close proximity to swimming pool), girl's shower area, girl's P.E./Public Toilet, storage room, janitor's closet, mechanical equipment room, and chlorine room.

Room Finish Information:

a) Finish Information:

Floor:

Resilient tile at Broadcast Booth at football field.

Finished Concrete:

- **Ticket Booth**
- **Janitor's Closet**
- **Bleacher Area**

Finished Concrete in Pool Headhouse:

- **Office**
- **Storage Room**
- **Mechanical Equipment Room**
- **Chlorine Room**
- **Janitor's Closet**

Glazed non-skid tile with 7' high wainscot:

- **Locker Room Toilets**
- **Locker Room – Drying, and Shower Rooms**
- **Public Toilets**

Non-slip concrete, sloped to floor drains with 4 inch concrete locker base at locker rooms.
Non-porous, non-slip materials at pool deck.
Leak-proof deck at movie platform if underside of deck is utilized.

Base: Rubber at resilient tile areas.
Walls: CMU, partially open. Wood or CMU at Ticket Booth at football field.

Ceiling: Exposed Construction:

- **Janitor's Closet**
- **Electrical/Mechanical/Heater Rooms**
- **Storage Rooms**

Gypsum Board with moisture resistant finish, 12 foot minimum height at locker room areas.

b) Fenestration:

Doors:

- **Provide view panel in exterior doors of air-conditioned facilities.**
- **Provide a solid door with no view panel for naturally ventilated rooms with a hold open device (i.e. hook and eye).**
- **Provide view panels in all interior doors for classrooms, offices and conference rooms.**
- **Provide number of doors per Building Code exiting requirements.**
- **Protect exterior doors from the elements and provide with maximum security.**
- **General Storage Rooms: Provide 6' double leaf exterior metal doors.**

Windows:

- **Provide operable windows - type dependent on ventilation (natural or air conditioning).**
- **Maximize security protection measures (i.e. minimize glass lite sizes, include window stops, and provide security screens on jalousies.) Ticket Booth: wire mesh on metal frame above counter height with two 18"W x 12"H hinged ticket windows.**
- **Provide removable closure panels over wire mesh facing to close up booth when not in use.**

- **Announcer's Booth: Design of windows and coverings/shutters need to maximize uninterrupted vision plane. Design may consider use of removable glass panels. After hour security is a major factor in design.**

Utility and Room Data Information

a) Acoustics:

- **Broadcast booth shall be acoustically isolated.**

b) Air Conditioning and Ventilation:

- **Mechanically exhaust shower rooms by exhausting the area.**
- **Ventilate locker rooms in accordance with the Building Code if naturally ventilated or DOH requirements if mechanically ventilated.**

c) Plumbing:

- **Provide accessible drinking fountains at the outdoor playfields – high/low type. Provide drinking fountains near home and visiting team benches.**
- **Irrigate fields to facilitate maintenance and care of grassing if funding permits. Design of irrigation system should not hamper safe us of playfields.**
- **Provide hose bibbs around perimeter of playcourts for cleaning. Possibly coordinate locations with drinking fountains.**
- **Pool Headhouse:**
  - **Locate water piping above the ceiling where feasible to allow less costly repair and alteration in the future. Shutoff valves located above gypsum board or other nonremovable tile ceilings shall be provided with access panels.**
  - **Provide hot water return system or equivalent to maintain hot water temperatures at the fixtures furthest from the heater.**
  - **Provide mixing valve station to temper hot water for showers and other fixtures in the building.**
- **Locker Room: Men: 3 showers, 2 water closets, 2 urinals, 2 lavatories. Women: 3 showers, 4 water closets, 2 lavatories. Provide custodial water spigot under one lavatory and provide adequate floor drains.**
- **Public Toilets: Men: 7 water closets, 7 lavatories, 8 urinals. Women: 10 water closets, 8 lavatories. Provide custodial water spigot under one lavatory and provide adequate floor drains.**

d) Electrical:

- **Provide a minimum of two (2) 120 volt duplex outlets per each wall for general use.**
- **Provide duplex outlets at counter tops.**
- **Provide two duplex outlets for home team at broadcast booth, situated in backsplash of counter. Electric scoreboard-clock controls in home team area of booth.**
- **Provide duplex outlets for repair and maintenance in mechanical rooms.**

e) Lighting:

- **Provide adequate playfield lighting for night games in accordance to the prevailing lighting standards.**

f) Multi-Media/Communications:

- **Provide public address system with speaking station in broadcast booth and home team bench handhole. Speakers situated for optimum audibility.**
- **Provide telephone jack and line from home team bench handhole to booth structure.**
- **Provide complete PA system with microphone jack in field handhole (behind home team bench) and home team counter station with controls in booth.**
- **Provide field telephone jack in field handhole, connected to home team area in booth.**
- **Provide telephone outlet in broadcast booth.**
- **Provide PA speakers attached to exterior wall of headhouse with controls located in office at the swimming pool area.**

- **Provide telephone outlet adjacent to desk and PA controls in office at swimming pool.**

g) Special Considerations:
Items to consider during design:

- **Soil to be tested to determine percolation rate, quality and chemistry of the soil. Based on results, soil may need to be amended for appropriate percolation, resiliency, and growth of grass.**
- **Grassed fields are to be turned over to the school in a weed free condition after initial construction or renovation of field project.**
- **Incorporate proper drainage practices to meet all appropriate codes/regulations and avoid situations of ponding, extended wetness/muddiness, growth of mold/mildew, and erosion of soil.**
- **Address safety, durability and drainage concerns in the perimeter detailing of the fencing location and edge of the playcourt surfacing.**
- **Coordinate the design of the covered and outdoor playcourts if applicable.**
- **Provide a securable design of the covered playcourt or non-use hours**
- **Minimize entry of/nesting areas for birds. Avoid creation of ledges for nesting of birds.**
- **Provide after hour security for announcer's booth.**
- **Review design of athletic and PE outdoor facilities in detail with users (coachers, teachers, athletic director, etc.) for understanding and approval.**

PART I: PURPOSE AND DISTRICT OVERVIEW

A. OVERVIEW

"The Educational Specifications and Standards for Facilities" shall control and provide the basic guidelines in the acquisition and development of school sites and in the master planning, designing and construction of facilities for all public schools in Oakland Unified School District. This document, referred to as the EDSPECS, was developed to meet the need for a baseline guide for consultants, the Department of Education (DOE), the community, other government agencies, and the public in the design and planning of new schools and additions to existing schools.

The EDSPECS are divided into three volumes, for use at each of the three educational levels: elementary, middle/intermediate and high. Although much of the information for school design is the same across levels, the volumes are meant to be used independently. Each volume is categorized into various chapters which provide the appropriate design criteria for a school. To the extent possible, non-technical language is used throughout the guide so that it can be easily understood by all stakeholders: educators, community leaders, parents and students, as well as technical experts in school facilities.

B. OUSD MISSION AND VISION

All students will graduate. As a result, they are caring, competent, and critical thinkers, fully-informed, engaged and contributing citizens and prepared to succeed in college and career.

C. OUSD GOAL

To create a FULL SERVICE COMMUNITY DISTRICT that serves the whole child, eliminates inequity, and provides each child with an excellent teacher every day.

The collective work of caring for and educating every student, turning towards each other, of creating more community, and connecting those communities across our city is work that OUSD is uniquely positioned to do.

D. OUSD PRIORTIES

1. **Safe, Healthy and Supportive Schools (Full Service Community School District)**
2. **High Quality Effective Instruction (Every child, every day, every year has highly effective teachers)**
3. **College and Career Readiness Literacy (Every child graduates ready for college and career)**

Safe, Healthy and Supportive Schools

Oakland will become a full-service community district that will collaborate with civic and community partners to reduce violence in the community and schools, creating secure campuses where a culture of calm prevails. Staff will engage in practices that enhance school culture and improve discipline systems to address equity. Leveraging, aligning and coordinating community assets for student and family services at schools will address the needs of the "Whole Child".

High Quality Effective instruction

Oakland will improve academic outcomes for all students and, in particular, for our historically least well-served. Instruction will focus on college and career readiness standards, curriculum and assessments for all students. Individualized learning plans, progress monitoring and early warning systems will be employed to keep all students supported and early warning systems will be employed to keep all students supported and engaged in high quality effective instruction. All educators, parents and partners will understand and share a clear Framework for Effective Instruction. Teachers and principals will continuously build instructional skills, content knowledge, and cross-cultural competence. Principals, teachers and other instructional leaders will provide effective support and feedback to

continuously improve instruction. Professional and enriched working conditions and leadership will increase the retention of high quality effective teachers.

College and Career Readiness Literacy

Students will read, write, speak, think critically, and reason mathematically for 21st century success. All students must be instructed by high quality effective teachers that deliver daily a curriculum aligned to college and career readiness standards. In high school, the UC/CSU "A-G" Course Sequence and Curriculum will be the core course of study for all students. Science, Technology, Engineering Arts and Mathematics (STEAM) education will be addressed Pre-K through 12. Pre-K enrollment and family engagement to support early literacy will increase. Students will be provided with multiple pathways to meet graduation standards and meet their interests and aspirations. Career technical education, online options, work-based learning, and access to concurrent community college course credit will create multiple venues for all students to meet graduation requirements. In addition, diverse recovery pathways will bring back those that have dropped-out, are non-completers or adjudicated students to successful graduation.

E. OAKLAND COMMUNITY OVERVIEW

Oakland, California is a diverse and vibrant city with a rich history closely tied to that of the United States as a whole. Built on land originally settled by the Native American Ohlone people, the area was settled by Spanish colonizers before becoming part of the US when California became a state in 1850. In the late 19th and early 20th century, Oakland blossomed into an industrial capital of Northern California, serving as the western terminus of the first transcontinental railroad. As a major center for the US war effort in World War II, immigrant workers flooded into Oakland from the south, helping to establish Oakland as a major immigration destination. Like many American cities, Oakland suffered from poverty, crime, and disinvestment in the second half of the 20th century, and still struggles with these urban issues. Nonetheless, Oakland's unique character remains strong and it remains the cultural and economic capital of the East Bay.

Geographically, Oakland is characterized by majestic hills in the east that transition into flatlands that meet the San Francisco Bay in the west. Culturally, Oakland is a cultural center for many groups including African-American, Latino, and Asian-American Communities – the rich mosaic of community organizations, cultural centers, and historic neighborhoods speaks to the diversity of groups that call Oakland home. The US Census estimates that approximately 410,000 people currently live in Oakland, a significant increase from the 2000 population of 400,000 and the 1990 population of 370,000. Economically, Oakland continues to serve as a major West Coast harbor with massive port facilities lining the waterfront. Oakland's downtown is also home to major national corporations and numerous small businesses serving the San Francisco Bay Area. With its rich past, dynamic population, and active culture, Oakland is poised to enter a new phase of its history in the 21st Century.

F. DISTRICT OVERVIEW

If the Oakland Unified School District focuses all its efforts on creating the learning conditions each child needs to succeed academically and socially, uses all of its physical and organizational assets in service of these effective conditions, changes the OUSD structure to engage everyone in the community in creating and protecting the conditions students need to succeed, designs interdependent accountability systems that promote individual and shared responsibility, then we will prepare all Oakland children for positive civic participation, diminish the predictability of performance by race, class, gender, primary language, or any demographic identifier, increase community well-being, enhance economic stability, and generate the optimism and self-sufficiency Oakland needs to solve new problems as they arise.

Oakland Unified School District will create three zones were academic and social services are coordinated, aligned and leveraged and deployed to support students. In an effort to best provide full-service schools to communities, OUSD will organize it pre-K schools into a regional structure. Instructionally, the new regional structure ensures coherent educational experience beginning in pre-K through elementary and middle schools for all families within their region. More broadly, the regional structure aligns well with other Oakland public service providers, which will be essential to realizing full-service schools in each community. Advantages of a regional structure include:

- Consistent focus on high quality effective instruction
- Seamless, coherent PK-8 student experience within each region
- Aligned, consistent high expectations of students from pre-K through 8th grade
- Professional Learning Communities based on the needs of all students and families within a region, rather than those within a particular school level
- Vertical, as well as horizontal alignment, for teacher and principal professional development

Broader Advantages:

- Schools services better aligned with other public services available in the region
- Deeper, longer-term relationships between regional leadership and families within the region
- Deeper relationships between regional leadership and partner service providers
- Increased effectiveness and efficiency in providing full-services to all families within regions

G. CURRICULUM DELIVERY

General Principles

We must use the evidence of our good work in Oakland to fuel the next phase in our growth. We cannot afford to ignore the wonderful work in schools, where children are succeeding, where staff is cohesive and reflective, where families and community share in the life of the school, and where leadership is humble and relentless. Some of these schools have thrived for decades and others have grown up in recent years, they are each places with lessons for us to learn. We have to use all of what we have learned as a community to sustain good work and to thoughtfully end practices that are ineffective. In a time of unprecedented cuts to education and social services in our rural, suburban, and urban communities we must use what we have learned that works for children. It is not simply how much money we have that matters, it is how we use what we have. We have to stop wasting resources we do have, share what is working, and become a coherent system that distributes resources where they are most needed to generate the best effect.

The Full Service Community School (FSCS) is a place where the school has broadened its mission and vision to meet the needs of all of its students. The school is the place where in addition to high quality education, health, mental health, and other services are provided. The emphasis is on educating and caring for the whole-child. The full-service school is an environment where adults use a systems approach to understand the needs of individual children. Social and human services are not seen as extra or add-ons in these schools and collaboration, in service of the well-being of children and families, is how these schools consistently behave. Collaboration is not defined as a professional learning community that happens at a certain time on a certain day; collaboration is a constant way of learning and being. By working together and listening to students an engaged community determines how services are provided. By meeting the curricular and extra-curricular needs of children and families, full service community schools ensure that learning will happen for all students in the school.

At this moment the power of those individual centers of community are not sufficient to meet the increasing demand of people who want and deserve full access to the democratic promise of the United States. Single units of success have to become systems of success. We must forge new public institutions that foster the connectivity and collaboration required to nurture the common good. The school district must use every asset at their disposal to protect their chief mission: to prepare each child for a lifetime of academic and social success. Around this single mission, the district must learn how to facilitate, foster, and forge the conditions for each child to access the learning he or she needs for success. The district is the public institution charged with the well-being of all children within its boundary. Currently, we are failing to meet the needs of all our children.

The purpose of the OUSD must be the full preparation of each child for academic and social success. Accepting the current rates of failure by adults who are employed to educate and meet the needs of children is morally unacceptable. Accepting this failure is also increasingly a matter of personal, local, and national safety. To become communities, cities,

and a country where our democratic ideals are practiced as well as espoused, we must name the institutional inequity and take personal responsibility, in an organized way, for refashioning our public institutions in ways that promote the common good.

Grade Configuration

Oakland School's grade configuration is as follows:

Elementary - Pre-K through Grade 5

Middle – Grade 6 through Grade 8

High – Grade 9 through 12

PART II: EDUCATIONAL SPECIFICATIONS SUMMARY

After Section I: Purpose and District Overview, the Educational Specifications have four primary sections:

- **II. Facilities Design and Function**
- **III. Classroom/Area Requirements**
- **IV. District Facilities**
- **V. School Site Information**

II. FACILITIES DESIGN & FUNCTION

It is the District's goal to create and maintain learning environments that are safe, warm, and dry that enable students to be successful in the District's academic programs, the arts, health and wellness, and character development. The District will utilize design and building principles derived from best practices and concepts outlined by state, federal and Coalition for High Performance Schools (CHPS) standards to create an environment that is energy efficient, healthy, comfortable, and contains the amenities necessary for a quality education.

This section then goes on in further detail to address the following areas for consideration during design of the learning spaces:

- **A. General Design Considerations**
- **B. Building Systems**
- **C. Security**
- **D. Signage**
- **E. Storage**
- **F. Community Use and Support Services**
- **G. Playfields, Playgrounds, and Outdoor Education**
- **H. Traffic Control and Parking**
- **I. Recycling and Composting Transit Center**

III. CLASSROOM/AREA REQUIREMENTS

This is the longest and most extensive section: it outlines the standard room types as well as unique OUSD Industry Sectors required for a successful High School, explains the philosophy behind the programs and activities that occur in each space type, and then details the spatial and infrastructural requirements for each space type.

A typical section follows this outline:

Program Description and Philosophy

- **a. Activities/Space Use Plan**
- **b. Space/Infrastructure Requirements**

Room Data

- **a. Finish Requirements**
- **b. Fenestration**

Utility and Room Data Requirements

- **a. Acoustics**
- **b. Air Conditioning and Ventilations**
- **c. Plumbing**

d. Electrical
e. Lighting
f. Multi-Media / Communications
g. Miscellaneous Features
h. Equipment/Furniture

The Classroom/Area Requirements will be revised after the Strategic Plan has been approved and the 14 Task Forces have had a chance to provide the input needed to draft the final version of the of the Educational Specifications.

IV. DISTRICT FACILITIES (not included in the High School Educational Specifications Document – see the K-8 document revised in May 2011)

Section IV documents the spaces required to support district functions, which are separate from schools: Administrative Office, Warehouse, Maintenance Shop, and Instructional Material Center (IMC). The following sub-sections provide important details:

a. Activities/Space Use Plan
b. Space Infrastructure Requirements
c. Miscellaneous Features
d. Equipment/Furniture

V. SCHOOL SITE INFORMATION

For each of OUSD's XX high schools one page of salient information is included in this document. The school profiles list site acreage, building square footage, classroom count, and current enrollment.

Comment [cl1]:

Comment [cl2]: Waiting for exact info from Josh.