

Chapter 1: Introduction (continued)

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A. Introduction

The Ohio Department of Education - Office for Exceptional Children *is responsible for the educational welfare of exceptional children throughout the state of Ohio. These agencies provide standards for serving students with disabilities that comply with the Ohio Revised Code, Individuals with Disabilities Education Act (IDEA) 2004 and the goals of No Child Left Behind Act of 2001. On July 1, 2008, the Operating Standards for Ohio Educational Agencies Serving Children with Disabilities (Operating Standards) became effective. "These standards provide a framework to ensure that all children receive a quality education tailored to their unique needs." Additionally, these standards define a full continuum of services for students with disabilities in the "Least Restrictive Environment."*

The OSFC Design Manual provides square footage guidelines to comply with the educational program requirements illustrated in the operating standards.

The Ohio Educational Management Information System (EMIS) provides *disability category identifiers and primary service* codes for students with disabilities to meet the Least Restrictive Environment requirement for all students *with disabilities*. These codes *can then be used by the district and design team to differentiate between* the type and number of spaces needed in each school to address the *unique* facility needs for *each type of* student with disabilities. *Example: if a student can be included in the regular classroom for the entire day, their primary service code would be 210021. For a student that spends most of the day in a self-contained classroom their code might be 210028. There are primary service codes, which are subject to change, for other types of students. Districts should refer to EMIS for forms and procedures for identifying students with disabilities.*

Just as every student is unique as represented in their IEP (Individualized Education Program), so is every school district in addressing the specific needs of the students they serve. It is the intent of the OSFC Design Manual to accommodate the specific needs of all students, realizing that a large majority of those students identified with special needs may utilize a variety of spaces throughout the school day to address their IEP. Since Ohio is experiencing a continued increase in the number of *exceptional* students, the facility requirements must provide the flexibility to address the changing demographics as well.

In addressing the requirement to provide the least restrictive environment for each student, accommodations must also be made for the mandated age span requirements established in the *Operating Standards* (48-60 months, depending on the disability).

Another factor that must be taken into consideration when determining space needs is based on research as well as common practice. A large majority of special needs students participate in a regular classroom setting with their "teacher of record" being the special education resource teacher. Typically, those students are scheduled in the regular classroom for activities for which they can benefit and then spend time in the Resource Room based on their IEP. Students are often in the Resource Room and the Core Classroom several times each day. Therefore, it is difficult to arbitrarily assume that each student in a building has only one "home base" in determining space needs.

There are numerous factors to be considered when planning school facilities for students with disabilities. It is important to start planning for these students early in the process by identifying the programs and services, spaces, and staff that will be needed to ensure that their needs will be met through the design and construction of the facility.

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B. OSFC Design Manual Square Footage Allocations

In order to accommodate *school districts* in meeting the *unique requirements of it's children with exceptional needs*, OSFC has provided spaces *that will include instructional and support services for all types of students with exceptional needs. The number and type of spaces is determined by the student's IEP and the number of children in each type of disability and as identified by their primary service code. Listed below are the pertinent spaces provided in the OSFC Design Manual:*

- Self-contained Classroom(s)
- Workroom /Conference Room
- Restroom/Shower
- Resource Rooms
- Small Self-contained Classroom
- **Guidance Services**
- **Health Clinic**
- **Other Support Spaces**

As each school district addresses their specific student requirements, the square footage allocated for classrooms may be utilized to address students *with exceptional needs* as well as *typical* education students. *In order to determine the number of spaces needed to serve these students, it is important for the district to identify the current exceptional student population and by reviewing trends in this population, project the future quantity and type of spaces needed to accommodate these students.*

The square footage and layout guidelines for *exceptional student* spaces *are shown* in the Elementary, Middle, and High School program areas.

C. Service Provider Ratios for Delivery of Services

Shown below is a table summarizing the service provider ratios for delivery of services found in section 3301-51-09 "Delivery of Services" of the Operating Standards.

Disability	Grades K-8	Grades 9-12	Age Span
Cognitive Disabilities	16 (12 at one time)	24 (16 at one time)	60 mos. (in 1 period)
Learning Disabilities	16 (12 at one time)	24 (12 at one time)	60 mos. (in 1 period)
Hearing, Visual, Orthopedic Impairments	10 (8 at one time)	10(8 at one time)	48 mos. (in 1 period)
Emotional Disturbances (<i>Plan for Classroom Management & Crisis intervention in operation.</i> If no plan, one FT paraprofessional)	12 (10 at one time)	12(10 at one time)	48 mos. (in 1 period)
Multiple Disabilities (plus one FT paraprofessional)	8	8	60 mos. (in 1 period)
Autism, deaf-blind, traumatic brain injury (plus one FT paraprofessional)	6	6	60 mos. (in 1 period)

Related Services	K-12 # of Students	Preschool Students
Adapted P.E.	100	100
Audiologist	100	75
Occupational Therapy	50	40
Mobility Instructor	50	40
Physical Therapist	50	40
Speech, language, Pathologist (1SLP for 2000 students)	80	50
School Psychologist (1 Psychologist per 2500 students)	125	75

Information regarding Preschool aged children and additional information on delivery of services can be found in the most recent addition of the Operating Standards and the Ohio Revised Code section 3301-51.

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D. Matrix For Use of Space By Disability

The table below illustrates the various disabilities and instructional and support spaces provided by the OSFC Design Manual that would accommodate the activities associated with each disability. The table is not intended to limit the use of each space, only to suggest how spaces may be utilized.

	Regular Classroom (900 SF)	Self-Contained CR (900 SF)	Restroom	Workroom/ Conference	Resource (900 SF)	Small Self-Contained Classroom (600 SF)
Disability						
Autism	●			●	●	●
Cognitive Disability (Mental Retardation)	●	●	●		●	●
Deaf-Blindness	●				●	●
Emotional Disturbance	●	●			●	●
Hearing Impairment	●				●	●
Multiple Disabilities	●	●	●		●	
Orthopedic Impairment	●			●	●	●
Specific Learning Disability	●				●	●
Speech Language Impairment	●			●		
Visual Impairment	●				●	●
Traumatic Brain Injury	●				●	●
Support Services						
Occupational Therapy				●	●	●
Physical Therapy				●	●	●

- Disabilities are based on the Operating Standards for **Ohio Educational Agencies Serving Children with Disabilities, current edition.**
- Other square footage that could be allocated to meet Special Education program needs includes:
 - Project Laboratory
 - Instructional Material Storage
 - Staff Dining
 - Small Group Rooms
 - Multi-Use Room
 - Teacher Prep Area/Workroom
 - In-School Suspension
 - Itinerant Personnel Offices

E. Definition of Terms

Definitions of terms used in this document and in the discussion of exceptional children can be found in the current edition of the Operating Standards.

F. Additional Resources

For additional information about **planning for exceptional children** there are some excellent resources to obtain. One can be obtained from the OSFC office entitled "Planning Your School Facilities Construction Project with Sensitivity to the Needs of Students with Disabilities." The second document is the "Operating Standards for Ohio **Educational Agencies** Serving Children with Disabilities" from the Ohio Department of Education.

G. Physical Therapy (PT) or Occupational Therapy (OT) Services Overview of Program

Physical Therapy is designed to help restore and maintain useful movement or function. Some of the examples of physical therapy are:

- Stretching and range of motion exercises
- Exercises to develop trunk control and upper arm muscles
- Assistance in obtaining appropriate assistive equipment, including ambulatory aids, braces and wheelchairs, etc.
- Training in walking and appropriate use of assistive devices, such as ambulatory aids, braces, and wheelchairs, etc.
- Transfer training-how to get from one spot to another, such as from student chair to wheelchair or from wheelchair to car
- Training in how to fall safely in order to cause the least possible damage
- Patient and family education

(Source: MS Information Sourcebook, produced by the National MS Society <http://www.nationalmssociety.org/Sourcebook-pt.asp>)

Connections Between Program Requirements and Physical Facilities

The need for a specialized physical therapy space is based on the Individual Education Plan (IEP) of each student that is housed in the educational facility. The program information that is provided in the design manual is based on a physical therapy space that can accommodate the three fundamental requirements in a physical therapy area: exercise; treatment; and hydrotherapy. However, the space needs to support the individual needs of each student and must be flexible to accommodate all students within an educational facility who require physical therapy as an integral part of the services indicated in the IEP. Typically, in the school environment, a limited number of students require physical therapy and the space needs are much less structured as those indicated in this document. In order to determine the appropriate space requirements, it is essential that each District identify all students receiving PT services based on the historical, current and projected enrollment data.

The Exercise Area needs to be:

- Well lighted with flexible lighting (dimmer switches)
- Large enough to allow for unencumbered use of all rehabilitative exercise equipment including: treadmills, bicycles, wall mounted weights, mat tables (Including curtain tracks for privacy), and a reinforced wall of installation of stall bars

The Treatment Area should provide:

- Considerable patient privacy by use of curtains, cubicles or enclosed rooms.
- Flexible lighting (dimmer switches) for student comfort
- Equipment needs may include: massage tables; ultrasonics; thermotherapy (using wet or dry heat) and diathermy (dry heat treatment using short wave or microwave).

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Hydrotherapy is the use of water to treat injuries and disease where the water conducts heat and makes motion easier and less painful. If hydrotherapy space is provided, the wet areas require additional engineering to structurally accommodate Hubbard tanks (large tanks of heated moving water big enough to float the whole body) and overhead lifts. Special plumbing, especially for whirlpool baths, is required for mixing valves that control water temperature in the tubs. Floor drains are required and floor surfaces in all wet areas are of a nonskid surface. Hydrotherapy areas include: full baths, footbaths, whirlpool baths and hot and cold baths.

H. Physical Therapy (PT) or Occupational Therapy (OT) Services, continued

Even though there are three fundamental requirements for physical therapy, no absolute requirements for the type of space can be recommended since the program must be based on the individual needs of the students being housed in the facility. In the event there are a limited number of students requiring these services, (which is most often the case in most educational facilities), an open unobstructed space which allows for maximum flexibility which can be rearranged based on each student's needs is highly recommended. The use of hydrotherapy as defined in the paragraphs above, requires a more specialized space and would not be indicated in most student IEPs. There are other methods of providing hydrotherapy to students without the space requirement of full baths, whirlpools and other water requirements.

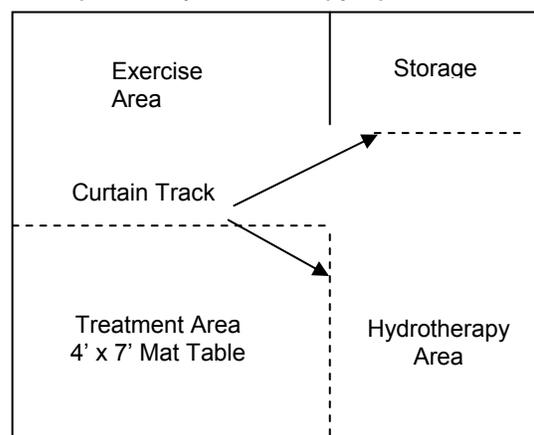
Other facility considerations for a physical therapy area need to be considered. One very important area is the need for storage for the variety of therapy equipment that is needed. Controlled ventilation much be considered since many of the treatment procedures require the use of dry or moist heat or active exercise, which raise body temperature. Air conditioning is also recommended for the therapy area. Often wall-mounted equipment is needed for some students and the recommendation is to line the walls with plywood or particleboard and then cover with the finish material of drywall, plaster or paneling. As has been indicated earlier in this section, the need for a specialized, dedicated physical therapy space is not required or recommended for most educational facilities housing a limited number of students requiring specialized physical therapy. The information included as a brief overview of the physical therapy program to provide an understanding of the requirements of the program to better assist the educators in determining appropriate space needs.

(Source: <http://www.schemmer.com/resource/mfrn/therapy.htm>)

Facility Considerations

- Ability to hang equipment from ceiling
- Dimmable lights
- Tile floor
- Access to water
- Large storage area for:
 - balance beam
 - balls
 - mats
 - small therapy equipment
 - scooter board
 - ramp
 - portable stairs
 - hanging equipment
 - braces
 - wheelchairs

Example of Physical Therapy Space



Occupational therapists who work with children are knowledgeable about stage of development and the appropriate milestones in a child's physical, mental, and behavioral development. For example, a child with delayed development may not show behaviors and abilities that are typical of the child's age. A child may have difficulty achieving independence in feeding, dressing, and using the bathroom; understanding relationships between people, objects, time and space; and development problem-solving and coping strategies.

Occupational Therapists can evaluate a child's level of performance, observe the child's environment, and develop a plan of treatment. They can develop age-appropriate self-care routines and habits and recommend adaptive equipment to facilitate the development of age-appropriate abilities.

Most often the space requirements for the OT program can be shared with the PT and/or the SLP because typically PT and OT are only part-time services in each building. Most often, the caseload is seen individually or in small groups with therapy consisting of hands-on activities. If on occasion larger space is needed, alternative arrangements can be made.

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I. Additional Facility Considerations

The table on the following page illustrates items that should be considered for inclusion in the classroom and school facility when designing spaces for exceptional students.

Additional Facility Considerations for Special Needs Students Housed in Special Needs Classrooms

Disability	Group 1 – Areas Inside the Classroom								Group 2 – Areas Outside the Classroom			
	Art Area	Quiet Area	OT/PT Area	Science Area	Floor Mat Area	Mirrors Floor to Ceiling	Mirror on the Wall	Life Skills Area	Changing Area	Restroom	Shower Area	Wheelchair Storage Area
Autism	X	X	X	X					X	X		
Cognitive Disability (Mental Retardation)	X	X	X	X	X			X	X	X		X
Deaf-Blindness*	X		X	X			X	X				
Emotional Disturbance	X	X		X						X		
Hearing Impairment				X			X					
Multiple Disabilities*	X		X	X	X			X	X	X		X
Orthopedic Impairment	X		X	X						X		X
Specific Learning Disability				X			X					
Speech Language Impairment*							X					
Visual Impairment												
Traumatic Brain Injury	X	X	X	X			X		X			

* Acoustical treatment is critical in these areas

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A. HISTORY

Since the inception of the Ohio School Facilities Commission and development of the Ohio School Design Manual hundreds of successful educational facilities have been planned, designed, constructed and occupied by Ohio school children. The Ohio School Design Manual has and will continue to provide guidance for the planning and development of Ohio educational facilities.

OSFC recognizes the impact of educational delivery models on the planning, design and construction of school facilities. One of its goals is to build facilities responsive to meeting the needs of teaching and learning in the 21st century. As we continue to define what a learning environment is, we need to develop tools and processes to adapt to the evolving programs, services, and delivery methods, and continue to refine current and future definitions. This new section titled “**STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)**” is intended to be used in conjunction with the Ohio School Design Manual to provide guidance for the development of a Student Centered Learning Environment. These planning concepts **may** be implemented by the district to assure that the instructional mission, vision, goals, and objectives of the district will be met today and into the future. The following section is intended to be an **optional** choice for Ohio school districts in the development of their physical facilities as a response to 21st Century Learning Environments. A district desiring pursuance of an OSFC co-funded SCLE facility will be **required** to follow and complete each step in the Planning Process section. As with all sections in the Ohio School Design Manual, this section will continue to be developed over time, respond to educational trends, and updated annually.

In September 2009, the Ohio School Facilities Commission charged the Executive Director with the task of examining concepts associated with building 21st Century Schools. The charge included the task of providing a clear definition of a 21st Century Learning Environments physical environment and the development of a strategic plan to achieve the building of Student Centered Learning Environments.

The Ohio School Facilities Commission reached out and hosted workshops with many topic experts, stakeholders, educational leaders, educational planners, design professionals, construction managers, and OSFC planners to gather, incorporate, and define information to develop this Student Centered Learning Environment addition to the Ohio School Design Manual.

The following section attempts to define 21ST Century Schools referred to from this point forward as SCLE (Student Centered Learning Environment). The following section provides guidelines, a checklist of requirements including deliverables, project costing, a required process, planning concepts, planning diagrams, and an SCLE Program of Requirements (POR).

B. PROJECT COSTS AND SCOPE (square footage)

SCLE project budgets are developed in the same manner as traditional facilities. The number of students served (based upon enrollment projections) times square foot/student (based upon grade configuration and number of students) times cost per square foot (based upon regional cost tables). SCLE project costs must be no greater than traditional facilities, serving the same number of students.

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A. GUIDELINES

A district desiring pursuance of an OSFC co-funded SCLE facility will be **required** to follow and complete each step in this Planning Process section. As SCLE's require a shift in traditional teaching delivery methods so too does the planning process required to develop a successful SCLE.

B. DELIVERABLES

Prior to engaging in the PRE-PLANNING activities of an OSFC co-funded SCLE facility, defined in Chapter 1 INTRODUCTION, B. SUMMARY OF THE PLANNING, DESIGN, AND CONSTRUCTION PROCESS, PAGE 1020-4, the school district shall notify OSFC, during the pre-planning process, of its intent to begin planning a SCLE. In addition to the documents required for a traditional OSFC co-funded facility, defined in Chapter 1 INTRODUCTION, C. DETAILS OF THE PLANNING, DESIGN, AND CONSTRUCTION PROCESS, PAGE 1020-7, the following additional items are required for submittal with SCLE's during the PRE-PLANNING stage. The following deliverables will precede the traditional Program of Requirements (POR) submittal. **OSFC concurrence and approval of co-funding a SCLE will be based upon the specific planning concepts and diagrams and their ability to support the districts educational mission / vision.** It is the responsibility of the school district to provide, at a minimum, the following documents and any other supporting documents deemed necessary to convey the ability of the planning concepts to support the districts educational mission / vision.

1. School district specific Educational Mission / Vision.
2. SCLE Educational Specifications specifically written for the district's proposed SCLE. Educational Specifications are a written communication from the district to the design professional describing current and future programs and services to be accommodated in the new or renovated SCLE school facility. This document represents a compilation of the mission, vision, goals, student learning policies, procedures, and philosophies, program delivery methodologies, Program of Requirements, and space organizational concepts that bring innovation and educational consistency to the planning and design of new and renovated schools. It informs the design team on how to design the building to accommodate instructional and support activities, special needs students, technology, equipment, and furnishings. Finally, the document illustrates and describes how the educational mission and goals of the district are being met.

The SCLE Educational Specifications need to be specifically written supporting the districts educational mission / vision and based upon SCLE planning concepts which encourage learners to;

- learn collaboration, WORK IN TEAMS
- learn independently, CRITICAL THINKING
- learn critical thinking, TAKE ON COMPLEX PROBLEMS
- learn oral communication, PRESENT
- learn written communication, WRITE
- learn technology, TECHNOLOGY LITERACY
- develop citizenship, TAKE ON CIVIC, LOCAL AND GLOBAL ISSUES
- practice healthy lifestyles, PHYSICAL WELLNESS
- learn about careers, PARTICIPATE IN INTERNSHIPS
- core subjects, CORE SUBJECT MASTERY
- learn content, RESEARCH AND DO ALL OF THE ABOVE

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based upon a physical facility that is;

- interdisciplinary
- engaging, relevant, and interesting
- inquiry based
- student centric / mentor facilitated

Provide specific district strategies and concepts developed which respond to and satisfy all of the above learner competencies and physical facility attributes.

3. Curriculum delivery methods and criteria.
4. Sample lesson plans which support SCLE instructional delivery and the districts educational mission / vision.
5. Educational planning committee information.
 - participants
 - goals
 - agendas
 - minutes
 - directives
 - outcomes
6. SCLE worksheet summary / Program of Requirements (POR).
7. Schematic diagrams and drawings supporting the educational mission / vision and educational specifications.

C. ROLES OF PARTICIPANTS IN THE EDUCATIONAL PLANNING PROCESS

In most districts the Board of Education is responsible for defining the educational mission / vision of the district and creating learning environments that will meet the current and future needs of the students, parents, staff, teachers, administration, and community members of the district. Although the Board of Education provides the directive to pursue a SCLE, securing input from all stakeholders has proven to be a vital step in the successful implementation of the district's educational vision required to create a SCLE curriculum delivery model. An Educational Planning Team, consisting of the following persons should be formed to complete the planning process. Each member of the team should be familiar with the Ohio School Design Manual and be able to fulfill his/her role and responsibilities.

SCHOOL DISTRICT REPRESENTATIVE(S)

Responsibilities:

Depending on the size of the district and the complexity of the projects, school district representatives may include the Superintendent, Principals, and/or the district's Facility Director. The school district representative is responsible for representing and making decisions on behalf of the school district in communicating the educational mission, vision and goals throughout the process. Final decisions are the responsibility of the Board of Education, curriculum advisors, and students.

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Tasks:

- Develop the educational mission, vision, and goals of the district.
- Creation of SCLE curriculum delivery model.
- Communication with students, district staff, administration, Board of Education, and community stakeholders of a desire to create a SCLE curriculum delivery model.
- Buy-in of students, district staff, administration, Board of Education, and community stakeholders of SCLE curriculum delivery.
- Contracting with an Educational Planner and/or Design Professional for assistance with creation of SCLE curriculum delivery model and planning concepts to support this model.
- Inclusion of OSFC Planners into the SCLE planning process.
- Develop outcome matrix for comparing SCLE curriculum delivery with traditional curriculum delivery.
- Develop learner matrix for comparing a SCLE curriculum delivery with traditional curriculum delivery.

OSFC PLANNING STAFF**Responsibilities:**

Various OSFC staff members provide comprehensive support to the project team. A planner would be an integral part of the educational planning team and provide guidance regarding the educational vision and policies of the OSFC. Additional staff members with varying expertise participate as needed and serve as information resources throughout the project.

Tasks:

- Develop standard SCLE review process.
- SCLE curriculum delivery model review and concurrence.
- Assist with the development of school districts SCLE design.
- Participate on the Educational Planning Team.
- Provide clarification and input of the OSFC mission, vision, and objectives.
- Provide Design Manual clarification.

EDUCATIONAL PLANNER (EP)**Responsibilities:**

The Educational Planner should provide leadership, expertise, and experience in planning a SCLE that will position the school, staff, teachers, administrators and students to meet the ever-changing needs of the future. The Educational Planner should facilitate the educational planning process until the point where the Design Professional completes Schematic Design.

Tasks:

- Guide and assist the District with the development of the curriculum delivery model.
- Guide and assist the District with school planning concepts that meet the district's Student Centered Learning goals.
- Provide leadership and facilitate the educational specifications planning and documentation process.
- Review, monitor, and guide the SCLE POR and schematic design documentation process for concurrence with the district's SCLE goals.

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DESIGN PROFESSIONAL (DP)

Responsibilities:

The Design Professional is involved in developing the SCLE POR for the project. The Design Professional is responsible for the documents that are developed during design and that are ultimately used for the construction of the project.

Tasks:

- Assistance in creation of SCLE with planning team.
- Develop planning concepts to support the districts mission / goals based up the educational specifications.
- Creative task-appropriate physical facility development of an SCLE schematic to support school district's curriculum delivery.
- Participate in educational planning process.

CONSTRUCTION MANAGER (CM)

Responsibilities:

Provide budget and schedule support as early as the SCLE POR, planning concept development, and schematic design phases. Provide parametric budget info to assist with early design decisions.

Tasks:

- Monitor school districts SCLE development.
- Develop SCLE submittal phase review form.
- Assist Educational Planner in budget, estimate, and schedule development of the educational planning process.

D. PLANNING PROCESS

The educational planning process shown below provides an outline for the **required** planning process. The primary purpose of the educational planning process is to give opportunity for all stakeholders to be involved and to assure that the educational goals of the district will be met in the new or renovated facility or facilities.

1. PRE-PLANNING

The school district should define, in writing, its educational mission, vision, goals, and objectives. Additionally, educational program delivery methods should be determined as well as district-wide educational initiatives.

- Define district-wide educational mission, vision, goals, and objectives.
- Develop district-wide educational program delivery methods.
- Decision on direction to pursue (Traditional or SCLE).
- Board of Education resolution to embrace mission, vision, goals, and objectives to pursue.

2. FORM EXECUTIVE CORE COMMITTEE

An Executive Core Committee should be formed to work as a liaison between the board of education and the Educational Planning Committee. The charge of the Executive Core Committee is to provide guidance and review of the Educational Planning Committees deliverables, serve as the final decision makers, and provide the board of education with progress reports along with a final plan for approval. It would be anticipated that the Executive Core Committee would be a smaller group than the Educational Planning Committee and chaired by an administrative member

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of the school district.

Members of the Executive Core Committee would include at a minimum;

- District Superintendent
- Board of education representative
- Administration (School District Representative)
- Other Stake Holders as district desires
- District Design Professional

3. FORM EDUCATIONAL PLANNING COMMITTEE

To assist in the planning process, an Educational Planning Committee should be formed. The charge of the Educational Planning Committee is to provide guidance to the design professional team to “Implement the Board of Education’s mission, vision, goals, and objectives” through development of planning concepts. Additionally, the Educational Planning Committee should engage in a group discovery process.

Members of the Educational Planning Committee would include at a minimum;

- Students
- Parents
- Facilitator (teachers)
- Administration (School District Representative)
- Board of Education representative
- Local Government
- Range of Community Members
- Business Leaders
- Community Leaders
- Community Seniors
- Clubs / Organizations
- Other Stake Holders as district desires
- District Design Professional Team
- Construction Manager (CM)
- OSFC Planner

4. WORK SESSIONS

The Educational Planning Committee will review the educational mission, vision, goals, and objectives and develop an educational framework and develop an educational vision for the learning environment. Additionally, a list of instructional and support spaces, Program of Requirements (POR) and facility conceptual adjacency diagrams that supports the districts mission, vision, goals, and objectives will be developed that will ultimately be used by the design team to develop the learning environments and planning concepts. Incorporate a “holistic” approach to the early development of schematic concepts.

Work session tasks of the Educational Planning Committee would include at a minimum;

- Review mission, vision, goals, and objectives
- Develop planning concepts supporting the mission, vision, goals, and objectives
- Revise, review, and refine concepts

Framework of the work sessions should include;

- Identifying issues.

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- Defining objectives.
- Identifying the process for the flow of information.
- Creating a standard template for documenting information.
- Establishing a quality control process.
- Development of preliminary Leadership in Energy and Environmental Design (LEED) goals.
- Maximize the ability of committee members to participate (social media, streaming video, web based meetings/minutes, etc.
- Develop a schedule for decision making milestones.
- Clearly define outcomes and work product expectations.
- Allow time for review, revision, and feedback.
- Evaluate the framework of the work sessions prior to finalizing.

Deliverables of the work sessions should include;

- Educational specifications specifically written supporting the districts educational mission / vision and based upon SCLE planning concepts which encourage learners to:
 - learn collaboration, WORK IN TEAMS
 - learn independently, CRITICAL THINKING
 - learn critical thinking, TAKE ON COMPLEX PROBLEMS
 - learn oral communication, PRESENT
 - learn written communication, WRITE
 - learn technology, TECHNOLOGY LITERACY
 - develop citizenship, TAKE ON CIVIC, LOCAL AND GLOBAL ISSUES
 - practice healthy lifestyles, PHYSICAL WELLNESS
 - learn about careers, PARTICIPATE IN INTERNSHIPS
 - core subjects, CORE SUBJECT MASTERY
 - learn content, RESEARCH AND DO ALL OF THE ABOVE

based upon a physical facility that is;

- interdisciplinary
- engaging, relevant, and interesting
- inquiry based
- student centric / mentor facilitated

Provide specific district strategies and developed concepts which respond and satisfy to all of the above learner competencies and physical facility attributes.

- Curriculum delivery methods and criteria
- SCLE Summary of Spaces Worksheet / Program of Requirements (POR)
- Multiple diagrammatic studies identifying pros and cons
- Multiple schematic floor plan options and planning concept diagrams (include entire site as well as indoor/outdoor learning environments and their relationships)
- LEED strategies and goals
- Conceptual diagrams and drawings supporting the educational mission / vision and educational specifications

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PLANNING PROCESS**

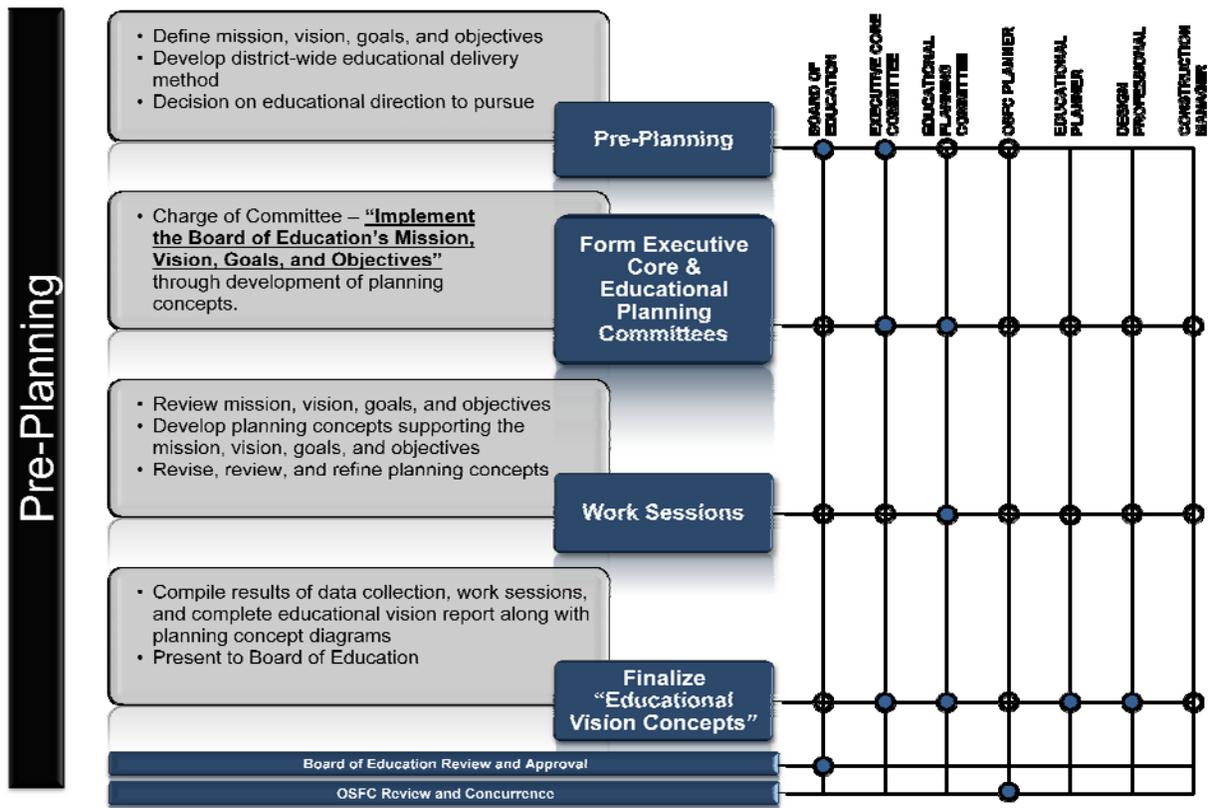
5. FINALIZE “EDUCATIONAL VISION CONCEPTS”

The educational planning committee will compile the results of data collection, work sessions and complete the educational vision report. This step will lead into the Schematic Design Phase of the architectural design team.

Tasks of the Educational Planning Committee would include at a minimum;

- Finalize educational vision concepts.
- Prepare presentation for Board of Education for approval and resolution

STUDENT CENTERED LEARNING ENVIRONMENT PRE-PLANNING PROCESS



- Lead ●
Support ○

EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS

CHAPTER 1: INTRODUCTION

A. DESCRIPTION

SCLE's (SCLE) focus on how students learn within the built and virtual environment focusing on, and supporting, the principals and activities that facilitate learning. The way in which a space is designed shapes and supports the learning that happens in that space. SCLE's are learner centered.

Simply put, SCLE's provide for engagement and interaction, teamwork and learning, and concurrent interdisciplinary themes.

While the roles from "teacher" to "facilitator" are constantly changing and being redefined differently within each school district so is the built and virtual environment. It should be understood that no "one size fits all" solution exists. Solutions should be flexible, encourage the ability for lifelong learning, and support group, individual, team, and collaborative activities.

An objective in SCLE's is their ability to support a shift in traditional teaching methods and student teacher ratios, direct instruction with 25 to 1 student teacher ratios, to team based, team teaching, and project based instruction with 100 to 4 student teacher ratios. Without this shift a new SCLE facility will be less likely to succeed.

Successful SCLE's will contain a variety of spaces that bring students and facilitators together, ensuring that the environment promotes, rather than constrains, learning.

B. EDUCATIONAL CONCEPTS

Educational spaces are themselves agents for change. Changed spaces can affect educational practice. Sometimes learning occurs in classrooms (formal learning); other times it results from unexpected interactions among individuals (informal learning). Spaces that provide experiences, stimulate the senses, encourage the exchange of information, and offer opportunities for rehearsal, feedback, application, and transfer - will most likely support learning.

As we have come to understand more about learners, how people learn, and technology, our notions of effective learning spaces have changed. Increasingly, those spaces are flexible and networked, bringing together formal and informal activities in a seamless environment that acknowledges that learning can occur anyplace, at any time, in either physical or virtual spaces.

Many learners favor active, participatory, experiential learning, the learning style they exhibit in their personal lives. A learner's behavior may not match their self-expressed learning preferences in a traditional classroom setting. SCLE's should facilitate and promote active, social, and experiential learning.

Our global economy has and continues to be transformed from industrial to knowledge-based systems in which lifelong learning and innovation are central for success. Learning environments that reflect and support knowledge-based systems are defined as SCLE's.

SCLE's encompass the entire facility, campus, and/or district and EVERY space becomes a learning environment.

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING PROCESS**

C. PLANNING ATTRIBUTES

1. MINIMUM PRE-REQUISITES (ATTRIBUTES)

While each SCLE will differ, the following **MINIMUM PREREQUISITE ATTRIBUTES** **MUST** be incorporated. Learning environments should be considered holistically; students need to seamlessly move from large group instruction, to small-group collaboration, to independent study, to formal presentation, to outdoor environments; and the activities of reading, writing, research, sharing, investigating, analyzing, performing, introspection, and kinesthetics should be thoughtfully accommodated within the “students place”.

• **FLEXIBILITY**

Learners should be able to quickly change from listening to one instructor (traditional “Chalk and Talk” lecture or demonstration) to working in teams to working independently. While specialized spaces for each kind of activity can accommodate each kind of work, the flow of activities is often immediate. Spaces need to be capable of quick reconfiguration to support different kinds of activity, moveable tables and chairs, moveable partitions, and moveable casework and furnishings are a few examples. Additionally, spaces should be designed with building systems that allow the ability to reconfigure spaces with minimal costs. Examples would include metal stud and gypsum board partitions and demountable partitions.

• **COMFORT**

Individual seating must take into account different body sizes and the periods of time learners need to occupy seating. Varying types of movable and reconfigurable seating and lounging will provide comfort for varying types of learners. Discomfort makes a compelling distraction to learning. Areas should provide surfaces for writing and supporting computers, books, and other materials. Natural lighting, day lighting and natural ventilation as well as controls should be available to occupants to customize the comfort of spaces dependant on the current activity.

• **AMBIANCE**

Learners yearn for color, natural and task-appropriate lighting, and interesting room shapes and configurations. Spaces with multiple, and accessible, levels help to create interest and attract learners and mentors. Learners are attracted to spaces that create an ambiance that does not reflect a traditional classroom environment. The ability of spaces to attract learners will be the most successful environments for learning. Provide interior and exterior views and vistas to create variety.

• **TECHNOLOGY / CONNECTIVITY**

Collecting, analyzing, displaying, and disseminating knowledge typically involves technology. SCLE’s require seamless, flexible technology. As technology changes, smaller devices will travel with users, who will expect wireless environments, the capacity to network with other devices and display vehicles, as well as ample access to power. SCLE’s will need flexible plug-and-play capabilities based upon the current configuration of the space. Technology should be transparent as the pencil and paper were in the 1950’s. Technology should be something you use, not something you do.

EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS

CHAPTER 1: INTRODUCTION

- **PLACES**
 Places must convey co-learning and co-construction of knowledge. Implications for space planning should include the whole facility, campus, or district as a learning place rather than emphasizing traditional classrooms. Provide universal flexible places for discussion and study. All spaces should center on learning. Places should fuse the three R's (reading, writing, and arithmetic) with the four C's (collaboration, communication, critical thinking, and creativity).
- **INTEGRATED SUSTAINABILITY**
 Solar, rain harvesting, recycling, natural ventilation, day-lighting, edible gardens, and LEED strategies, etc. integrated into the educational curriculum.

2. EXAMPLE PLANNING CONCEPTS

While each SCLE will differ, the following **EXAMPLE PLANNING CONCEPTS** identified under each **ATTRIBUTE** MAY be incorporated.

- **ATTRIBUTE**
Example planning concepts
- **FLEXIBILITY**
 Movable casework
 Enhanced operable walls
 Flexible, comfortable spaces
 Large doors (garage doors) to convert and connect spaces quickly
 Large view window partitions to encourage collaboration and provide supervision
 Interactive white boards
 Immediate access to information
 Outdoor seating areas
 Areas to promote fitness
 Connection from indoor to outdoor spaces and views
 Overhead power and services in lab and project areas for immediate flexibility
 Varied food service and dining areas in size and location
- **COMFORT**
 Movable casework
 Enhanced operable walls
 Flexible, comfortable spaces
 Various types of seating / furniture
 Proper ventilation and temperature control
 Adequate variable lighting
 Large doors (garage doors) to convert and connect spaces quickly
 Large view window partitions to encourage collaboration and provide supervision
 Outdoor seating areas
 Areas to promote fitness
 Connection from indoor to outdoor spaces and views
 Varied food service and dining areas in size and location

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING PROCESS**

CHAPTER 1: INTRODUCTION

- **AMBIANCE**
 - Visual connection between spaces and the outside
 - Sound transmission and acoustical control
 - Soft materials
 - Enhanced operable walls
 - Multiple accessible levels
 - Flexible, comfortable spaces
 - Large doors (garage doors) to convert and connect spaces quickly
 - Large view window partitions to encourage collaboration and provide supervision
 - Student display areas
 - Student work walls
 - 3D display areas
 - Outdoor seating areas
 - Connection from indoor to outdoor spaces and views
 - Overhead power and services in lab and project areas for immediate flexibility
 - Campus wireless access
 - Varied food service and dining areas in size and location
- **TECHNOLOGY / CONNECTIVITY**
 - Interactive white boards
 - Immediate access to information
 - Overhead power and services in lab and project areas for immediate flexibility
 - Campus wireless access
- **PLACES**
 - Enhanced operable walls
 - Flexible, comfortable spaces
 - Large doors (garage doors) to convert and connect spaces quickly
 - Large view window partitions to encourage collaboration and provide supervision
 - Student display
 - Student work walls
 - Interactive white boards
 - 3D display areas
 - Outdoor seating areas
 - Areas to promote fitness
 - Connection from indoor to outdoor spaces and views
 - Overhead power and services in lab and project areas for immediate flexibility
 - Varied food service and dining areas in size and location
- **INTEGRATED SUSTAINABILITY**
 - Large doors (garage doors) to convert and connect spaces quickly
 - Outdoor seating areas
 - Connection from indoor to outdoor spaces and views
 - On-site energy production and inclusion into curriculum
 - Storm water management and preservation and inclusion into curriculum
 - On site recycling
 - Water conservation and inclusion into curriculum

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS**

CHAPTER 1: INTRODUCTION

D. EXAMPLE DIAGRAMS with ATTRIBUTES and PLANNING CONCEPTS

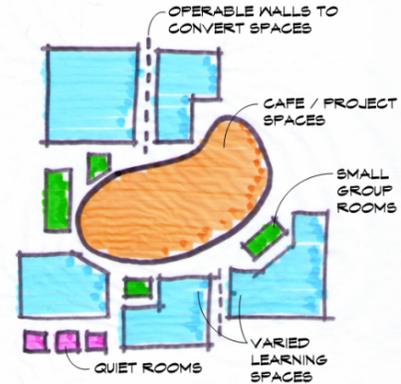
1. COLLABORATIVE LARGE GROUP SPACES / PROJECT SPACES/ INDIVIDUAL SMALL GROUP SPACES / INDIVIDUAL STUDY SPACES / BREAK-OUT SPACES / QUIET ROOMS

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places

PLANNING CONCEPTS

- Varied in design
- Flexible
- Small and large
- Reconfigurable
- Soft and hard seating



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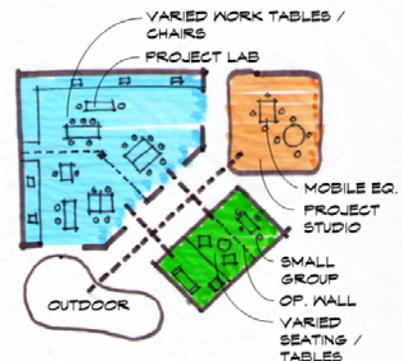
2. RECONFIGURABLE LABS (SCIENCE, ART, PROJECT)

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places

PLANNING CONCEPTS

- Varied movable equipment (tables, desks, chairs, storage)
- Overhead power and services for quick reconfiguration



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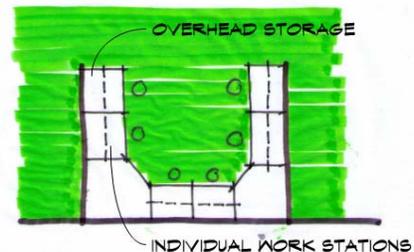
3. INDIVIDUAL LEARNER WORK STATION WITH STORAGE

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places

PLANNING CONCEPTS

- Single use work stations with personal storage
- Campus wireless access



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**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS**

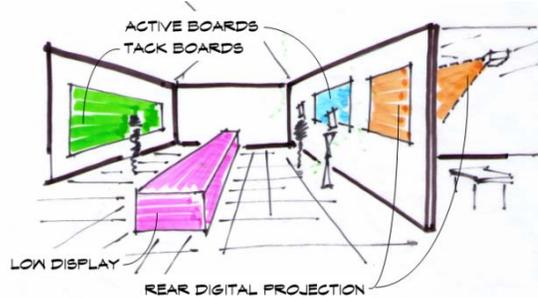
4. LEARNER DISPLAY SPACE

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places

PLANNING CONCEPTS

- Provide for throughout entire facility
- Tackable surfaces
- 3D display (wall, floor, low)
- Digital display screens (front and rear)
- Active boards
- Island display / movable, flexible work zones



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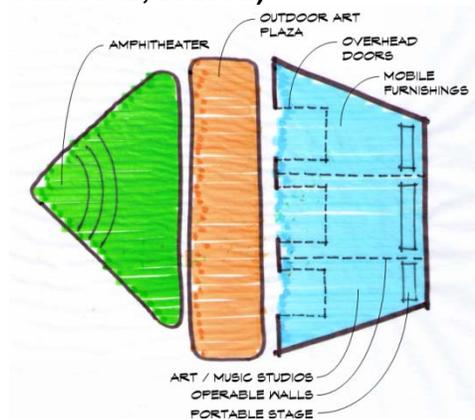
5. COMBINED ARTS LAB (MUSIC, ART, PERFORMANCE, DANCE)

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places
- Integrated sustainability

PLANNING CONCEPTS

- Flexible / Operable partitions
- Indoor / Outdoor areas
- Overhead power and services for quick reconfiguration



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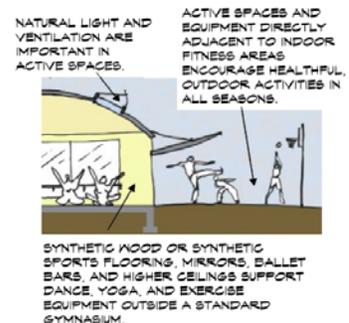
6. WELLNESS / PHYSICAL EDUCATION

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places
- Integrated sustainability

PLANNING CONCEPTS

- Flexible, comfortable spaces
- Proper ventilation and temperature control
- Adequate variable lighting
- Large doors (garage doors) to convert and connect spaces
- Outdoor seating areas
- Areas to promote fitness
- Connection from indoor to outdoor spaces and views



The Language of School Design: Design Patterns for 21st Century Schools
Fielding Nair International

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS**

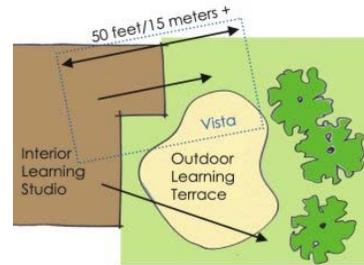
10. INDOOR / OUTDOOR PHYSICAL AND VISUAL CONNECTIVITY

ATTRIBUTES

- Comfort
- Ambiance
- Places
- Integrated sustainability

PLANNING CONCEPTS

- Flexible, comfortable spaces
- Large doors (garage doors) to convert and connect spaces quickly
- Outdoor seating areas
- Areas to promote fitness
- Connection from indoor to outdoor spaces and views



Vistas of 50 feet (15 meters) or more allow us to change our focal length, important to both eye health and comfort.

The Language of School Design: Design Patterns for 21st Century Schools
Fielding Nair International

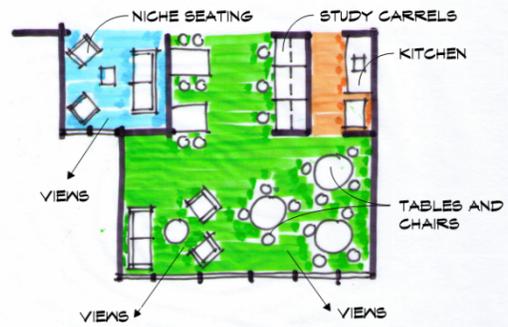
11. NICHE SPACES FOR INDIVIDUALS AND SMALL GROUPS

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology
- Connectivity
- Places

PLANNING CONCEPTS

- Varied movable seating types and layouts



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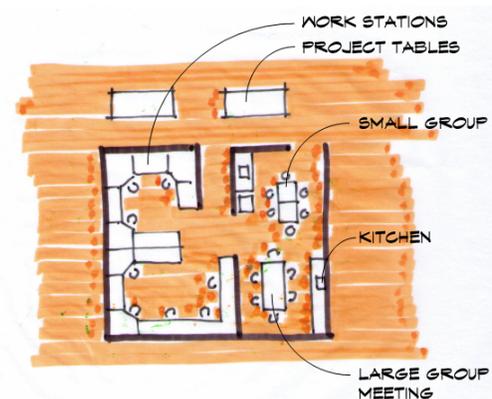
12. FACILITATOR SPACES

ATTRIBUTES

- Flexibility
- Comfort
- Ambiance
- Technology / Connectivity
- Places

PLANNING CONCEPTS

- Flexible, comfortable spaces
- Single use work stations with personal storage
- Campus wireless access
- Varied food service and dining areas in size and location



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EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
PLANNING CONCEPTS

CHAPTER 1: INTRODUCTION

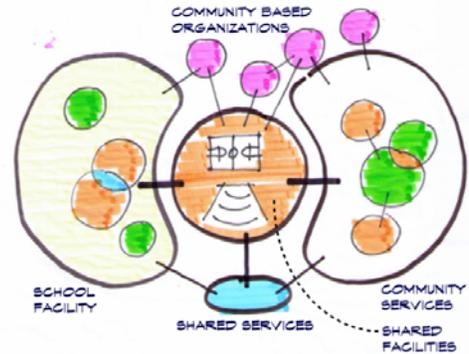
13. SCHOOL / COMMUNITY CONNECTIONS

ATTRIBUTES

Ambiance
Places

PLANNING CONCEPTS

Shared facilities
Enhance local architectural fabric
Flexible, comfortable spaces
Outdoor seating areas
Connection from indoor to outdoor spaces and views



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14. LIBRARY / MEDIA CENTER

ATTRIBUTES

Flexibility
Comfort
Ambiance
Technology / Connectivity
Places

PLANNING CONCEPTS

Movable casework
Enhanced operable walls
Flexible, comfortable spaces
Large doors (garage doors) to convert and connect spaces quickly
Large view window partitions to encourage collaboration and provide supervision
Student display
Student work walls
Interactive white boards
Immediate access to information
3D display areas
Outdoor seating areas
Connection from indoor to outdoor spaces and views
Campus wireless access
Library/media center - Areas should be welcoming to everyone, open day and night, and encourage open conversation. Furnishings would include comfortable, varied, flexible, movable seating throughout the space as well as mobile storage, books and media displays, and reconfigurable formal and informal work stations.

15. INTEGRATED SUSTAINABILITY

ATTRIBUTES

Integrated sustainability

PLANNING CONCEPTS

Solar, rain harvesting, recycling, natural ventilation, day-lighting, edible gardens, and LEED strategies, etc. integrated into the educational curriculum.

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
POR DEVELOPMENT****A. INTRODUCTION**

The SCLE should be planned, developed, designed, and implemented with the learner as the focus of all decisions, direction, and planning initiatives. It should be understood that no “one size fits all” solution exists. Solutions should be flexible, encourage the ability for lifelong learning, and support group, individual, team, and collaborative activities. While every effort should be made to encourage educational facility planning, design, and direction to support the SCLE the facilities will need to meet the requirements within the POR development section. The Educational Specifications along with each phase of the design document diagrams, including specific POR area requirements will be the basis for all phases of CM and OSFC review and approval.

B. VISION

Many learners favor active, participatory, experiential learning, the learning style they exhibit in their personal lives. A learner’s behavior may not match their self-expressed learning preferences in a traditional classroom setting. SCLE’s should facilitate and promote active, social, and experiential learning.

SCLE’s encompass the entire facility, campus, and/or district and EVERY space becomes a learning area.

C. POR CATEGORIES

As a result of SCLE’s having every space becoming learning areas the traditional Program of Requirements (POR) has been modified to aid in the planning and reviews of SCLE’s. All of the traditional POR categories are included in a SCLE POR except they are combined into four major categories allowing for the creation of spaces to promote a shift in traditional teaching methods. The traditional bracketing worksheets used to develop a traditional educational facility are reduced to a single summary page titled “SCLE Worksheet Summary”. The SCLE – SUMMARY OF SPACES WORKSHEET populates the four (4) SCLE categories based upon the net area developed within the master plan.

Spaces in each category do not necessarily need to be a collection of contiguous square footage.

EDUCATIONAL PROGRAMMING STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE) POR DEVELOPMENT

CHAPTER 1: INTRODUCTION

D. SAMPLE SUMMARY OF SPACES WORKSHEET

Sample School District, **SAMPLE ELEMENTARY SCLE**

CHAPTER 2: BRACKETING STUDENT CENTERED LEARNING ENVIRONMENT - SUMMARY OF SPACES WORKSHEET

The following worksheet provides a summary of the four major POR categories defined in a "Student Centered Learning Environment" project.

Entering the grade configuration, student enrollment, and both "Net" and "Gross" square footage totals from the educational specifications and schematic diagrams (based upon the traditional POR categories) this worksheet summarizes the ALLOWABLE and ACTUAL areas in a STUDENT CENTERED LEARNING ENVIRONMENT (SCLE). This worksheet is part of the required submittal for any SCLE project.

ELEMENTARY SCHOOL SCLE Worksheet ALLOWABLE				ACTUAL
Enter Grade Configuration	K-5			K-5
Enter Student Enrollment	550			550
Square Feet Per Student	117.31			
Total Gross Square Feet Funded from MASTER PLAN	64,520			
Vert. Cir. Area Allowable	0			
<input checked="" type="checkbox"/> Single Story Building <input type="checkbox"/> Multistory Building				
Total Adjusted POR Gross Square Footage	64,520			
SCLE POR SUMMARY			SF	
Academic / Special Education Spaces / Media / Visual Arts / Music / Student Dining			35,176	MINIMUM
Administrative Spaces			2,569	
Physical Education Spaces			4,300	MAXIMUM
Food Service Spaces / Custodial Spaces / Building Services			16,610	
Facility Total (NET SF)			58,655	
Construction Factor (10% multiplied by the facility total)			0.10	
Gross Square Feet (GSF) Developed			64,520	

Difference of GSF developed from GSF allowable **(64,520)**

- Note 1.** Enter grade configuration.
- Note 2.** Enter Student Enrollment.
- Note 3.** **MINIMUM SQUARE FOOTAGE REQUIRED** - Includes E-AC Academic Core Spaces, E-SE Special Education Spaces, E-MC Media Center Spaces, E-VA Visual Arts Spaces, E-MU Music Spaces, and E-SD Student Dining Spaces derived from total areas developed with traditional bracketing program areas including the ADDITIONAL E-AC-8 Small Group Room, E-AC-9 Multi-use Studio, E-AC-10 Kinesthetic Learning Studio included in the 2011 Design Manual Update.
- Note 4.** Includes all spaces included in traditional bracketing program areas identified under E-AD Administrative Spaces.
- Note 5.** **MAXIMUM SQUARE FOOTAGE ALLOWED** - Includes all spaces included in traditional bracketing program areas identified under E-PE Physical Education Spaces.
- Note 6.** Includes all spaces included in traditional bracketing program areas identified under E-FS Food Service Spaces, E-CU Custodial Spaces, E-BS Building Service Spaces.

SCLE Educational Specification Schematic S.F. Summary			
PROGRAM AREA	New SF	Exist. SF	TOTAL SF
E-AC Academic Core Spaces	0	0	0
E-SE Special Education Spaces	0	0	0
E-AD Administrative Spaces	0	0	0
E-MC Media Center Spaces	0	0	0
E-VA Visual Arts Spaces	0	0	0
E-MU Music Spaces	0	0	0
E-PE Physical Education Spaces	0	0	0
E-SD Student Dining Spaces	0	0	0
E-FS Food Service Spaces	0	0	0
E-CU Custodial Spaces	0	0	0
E-BS Building Services	0	0	0
Facility Total (NET AREA)	0	0	0
Facility Total (GROSS AREA)	0	0	0
Calculated Construction factor	0.00	0.00	0.00
Minus exist. co-funded Oversize Area from Master Plan	0	-	-
Adjusted Existing Area	0	-	-
Total Adjusted GSF Developed (without Oversize Area)			0
Difference of GSF developed from GSF allowable			(64,520)

- Note 7.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-AC Academic Core Spaces**.
- Note 8.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-SE Special Education Spaces**.
- Note 9.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-AD Administration Spaces**.
- Note 10.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-MC Media Center Spaces**.
- Note 11.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-VA Visual Arts Spaces**.
- Note 12.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-MU Music Spaces**.
- Note 13.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-PE Physical Education Spaces**.
- Note 14.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-SD Student Dining Spaces**.
- Note 15.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-FS Food Service Spaces**.
- Note 16.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-CU Custodial Spaces**.
- Note 17.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing as **E-BS Building Services**.
- Note 18.** Enter "New" and "Existing" calculated GROSS AREA totals from schematic diagrams developed.
- Note 19.** Enter existing co-funded Oversize Area from Master Plan

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
POR DEVELOPMENT**

E. PROGRAM OF REQUIREMENTS / FUNCTIONAL RELATIONSHIPS / DEVIATIONS FROM STANDARD POR

1. ACADEMIC CORE SPACES

- TOTAL area to remain equal to standard POR but the layout and configurations of the SCLE - Academic Core Spaces can vary in layout and design as long as they support the SCLE.
- Restrooms can vary in sizes but must be code compliant.
- Material storage areas may be included within Academic Core spaces if part of SCLE delivery plan.
- Spaces should reinforce concurrent interdisciplinary themes and remain immediately flexible in equipment, resources, layout, function, and promote active, social, and experiential learning.
- Mixture of soft and quiet, hard and wet spaces in a variety of sizes and configurations.

2. SCIENCE SPACES

- TOTAL area may be included within Academic Core spaces, but the layout and configurations of the SCLE - Science spaces can vary in layout and design as long as they support the SCLE.
- Science spaces must be identified as a part of the school district SCLE curriculum delivery plan. Dedicated separate or combined spaces within the Academic Core spaces are acceptable.
- Spaces should reinforce concurrent interdisciplinary themes and remain immediately flexible in equipment, resources, layout, function, and promote active, social, and experiential learning.

3. SPECIAL EDUCATION SPACES

- Dedicated special education spaces must be identified as a part of the school district SCLE curriculum delivery plan. Dedicated separate or combined spaces within the Academic Core spaces are acceptable.
- Spaces should reinforce concurrent interdisciplinary themes and remain immediately flexible in equipment, resources, layout, function, and promote active, social, and experiential learning.

4. ADMINISTRATIVE SPACES

- Functionally, separate Administrative spaces are required but the segmentation of faculty offices from learning areas decreases the learner/facilitator teaming relationship. Provide close adjacencies between learning areas and administrative spaces to reinforce the teaming concept of SCLE's.

5. MEDIA CENTER FUNCTIONS

- The functions of the Media Center cannot be lost however the separation and centrally located Media Center functions can be dispersed throughout the facility to promote immediate access to the Media Center functions. Innovative and immediate use of technology and Media Center resources are required throughout the facility.

EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
POR DEVELOPMENT

CHAPTER 1: INTRODUCTION

- 6. VISUAL ARTS SPACES AND MUSIC SPACES**
 - Art and Music resources should be accessible to all learners and except for art activities that are messy should be immediately available in several different forms and included within academic core spaces, special education spaces, and flexible in other areas as needed.
 - The school district's SCLE's "Curriculum Delivery Model" should identify the connection of the Arts and Music in the core spaces.

- 7. FAMILY AND CONSUMER SCIENCE SPACES / TECHNOLOGY EDUCATION SPACES / BUSINESS EDUCATION SPACES**
 - Family and Consumer Science, Technology Education, and Business Education resources should be accessible to all learners and included within academic core spaces, special education spaces, and be flexible in other areas as well.
 - The school district's SCLE's "Curriculum Delivery Model" should identify the connection of the Family and Consumer Sciences, Technology Education, and Business Education spaces in the core spaces.

- 8. PHYSICAL EDUCATION SPACES**
 - Physical Education and Wellness spaces may be displaced into smaller flexible multi-use areas as long as the standard POR Physical Education total area is not exceeded with the SCLE POR Physical Education total area.
 - Spaces should reinforce indoor/outdoor connections of Physical Education spaces.

- 9. STUDENT DINING SPACES AND FOOD SERVICE SPACES**
 - Ability for learners and facilitators to have access to healthy food choices any time during the day should be available.
 - Dispersing large group eating areas (dining commons) and food preparation spaces to smaller, more accessible, eating and food preparation areas.

- 10. CUSTODIAL SPACES**
 - Area of Custodial Spaces in a SCLE should remain unchanged and be designed to serve the facility and spaces.

- 11. BUILDING SERVICES**
 - Area of Building Services in a SCLE should remain unchanged and be designed to serve the facility and spaces.

END OF SECTION

**EDUCATIONAL PROGRAMMING
STUDENT CENTERED LEARNING ENVIRONMENTS (SCLE)
FOR DEVELOPMENT**

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Sample School District, **SAMPLE ELEMENTARY SCLE**

CHAPTER 2: BRACKETING **STUDENT CENTERED LEARNING ENVIRONMENT - SUMMARY OF SPACES WORKSHEET**

The following worksheet provides a summary of the four major POR categories defined in a "Student Centered Learning Environment" project.

Entering the grade configuration, student enrollment, and both "Net" and "Gross" square footage totals from the educational specifications and schematic diagrams (based upon the traditional POR categories) this worksheet summarizes the ALLOWABLE and ACTUAL areas in a STUDENT CENTERED LEARNING ENVIRONMENT (SCLE). This worksheet is part of the required submittal for any SCLE project.

ELEMNTARY SCHOOL			
SCLE Worksheet ALLOWABLE			ACTUAL
Enter Grade Configuration		K-5	
Enter Student Enrollment		550	K-5
Square Feet Per Student		117.31	550
Total Gross Square Feet Funded from MASTER PLAN		64,520	
Vert. Cir. Area Allowable <input checked="" type="radio"/> Single Story Building <input type="radio"/> Multistory Building		0	
Total Adjusted POR Gross Square Footage		64,520	
SCLE POR SUMMARY		SF	
Academic / Special Education Spaces / Media / Visual Arts / Music / Student Dining	34,825	MINIMUM	0
Administrative Spaces	2,569		0
Physical Education Spaces	4,300	MAXIMUM	0
Food Service Spaces / Custodial Spaces / Building Services	16,961		0
Facility Total (NET SF)		58,655	0
Construction Factor (10% multiplied by the facility total)		0.10	
Gross Square Feet (GSF) Developed		64,520	0

See Note 1.
See Note 2.

See Note 3.
See Note 4.
See Note 5.
See Note 6.

Difference of GSF developed from GSF allowable **(64,520)**

- Note 1.** Enter grade configuration.
- Note 2.** Enter Student Enrollment.
- Note 3.** **MINIMUM SQUARE FOOTAGE REQUIRED**- Includes E-AC Academic Core Spaces, E-SE Special Education Spaces, E-MC Media Center Spaces, E-VA Visual Arts Spaces, E-MU Music Spaces, and E-SD Student Dining Spaces derived from total areas developed with traditional bracketing program areas including the ADDITIONAL E-AC-8 Small Group Room, E-AC-9 Multi-use Studio, E-AC-10 Kinesthetic Learning Studio included in the 2011 Design Manual Update.
- Note 4.** Includes all spaces included in traditional bracketing program areas identified under E-AD Administrative Spaces.
- Note 5.** **MAXIMUM SQUARE FOOTAGE ALLOWED**- Includes all spaces included in traditional bracketing program areas identified under E-PE Physical Education Spaces.
- Note 6.** Includes all spaces included in traditional bracketing program areas identified under E-FS Food Service Spaces, E-CU Custodial Spaces, E-BS Building Service Spaces.

SCLE Educational Specification S.F. Summary			
PROGRAM AREA	New SF	Exist. SF*	TOTAL SF
E-AC Academic Core Spaces	0	0	0
E-SE Special Education Spaces	0	0	0
E-AD Administrative Spaces	0	0	0
E-MC Media Center Spaces	0	0	0
E-VA Visual Arts Spaces	0	0	0
E-MU Music Spaces	0	0	0
E-PE Physical Education Spaces	0	0	0
E-SD Student Dining Spaces	0	0	0
E-FS Food Service Spaces	0	0	0
E-CU Custodial Spaces	0	0	0
E-BS Building Services	0	0	0
Facility Total (NET AREA)	0	0	0
Facility Total (GROSS AREA)	0	0	0
Calculated Construction factor	0.00	0.00	0.00
Minus exist. co-funded Oversize Area from Master Plan		0	-
Adjusted Existing Area		0	-
Total Adjusted GSF Developed (without Oversize Area)			0
Difference of GSF developed from GSF allowable			(64,520)

See Note 7.
See Note 8.
See Note 9.
See Note 10.
See Note 11.
See Note 12.
See Note 13.
See Note 14.
See Note 15.
See Note 16.
See Note 17.

See Note 18.

See Note 19.

- Note 7.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-AC Academic Core Spaces.
- Note 8.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-SE Special Education Spaces.
- Note 9.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-AD Administration Spaces.
- Note 10.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-MC Media Center Spaces.
- Note 11.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-VA Visual Arts Spaces.
- Note 12.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-MU Music Spaces.
- Note 13.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-PE Physical Education Spaces
- Note 14.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-SD Student Dining Spaces.
- Note 15.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-FS Food Service Spaces.
- Note 16.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-CU Custodial Spaces.
- Note 17.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~E~~-BS Building Services.
- Note 18.** Enter "New" and "Existing" calculated GROSS AREA totals from schematic diagrams developed.
- Note 19.** Enter existing co-funded Oversize Area from Master Plan

Sample School District, SAMPLE MIDDLE SCHOOL SCLE

CHAPTER 2: BRACKETING STUDENT CENTERED LEARNING ENVIRONMENT - SUMMARY OF SPACES WORKSHEET

The following worksheet provides a summary of the four major POR categories defined in a "Student Centered Learning Environment" project.

Entering the grade configuration, student enrollment, and both "Net" and "Gross" square footage totals from the educational specifications and schematic diagrams (based upon the traditional POR categories) this worksheet summarizes the ALLOWABLE and ACTUAL areas in a STUDENT CENTERED LEARNING ENVIRONMENT (SCLE). This worksheet is part of the required submittal for any SCLE project.

MIDDLE SCHOOL					
SCLE Worksheet ALLOWABLE				ACTUAL	
Enter Grade Configuration		6-8			6-8
Enter Student Enrollment		450		See Note 1.	450
Square Feet Per Student		151.00		See Note 2.	
Total Gross Square Feet Funded from MASTER PLAN		67,950			
Vert. Cir. Area Allowable	<input checked="" type="radio"/> Single Story Building <input type="radio"/> Multistory Building	0			
Total Adjusted POR Gross Square Footage		67,950			
SCLE POR SUMMARY			SF		
Academic / Special Education / Media / Visual Arts / Music / Technology / Family and Consumer Science / Student Dining			32,585	MINIMUM	0
Administrative Spaces			2,282		0
Physical Education Spaces			9,300	MAXIMUM	0
Food Service Spaces / Custodial Spaces / Building Services			17,049		0
Facility Total (NET SF)			61,216		0
Construction Factor (11% multiplied by the facility total)			0.11		
Gross Square Feet (GSF) Developed			67,950		0

Difference of GSF developed from GSF allowable (67,950)

- Note 1.** Enter grade configuration.
- Note 2.** Enter Student Enrollment.
- Note 3.** **MINIMUM SQUARE FOOTAGE REQUIRED**- Includes M-AC Academic Core Spaces, M-SE Special Education Spaces, M-MC Media Center Spaces, M-VA Visual Arts Spaces, M-MU Music Spaces, M-TE Technology Education Spaces, M-FCS Family and Consumer Science Spaces, and M-SD Student Dining Spaces derived from total areas developed with traditional bracketing program areas including the ADDITIONAL M-AC-7a Small Group Room, M-AC-8 Multi-use Studio, M-AC-9 Kinesthetic Learning Studio included in the 2011 Design Manual Update.
- Note 4.** Includes all spaces included in traditional bracketing program areas identified under M-AD Administrative Spaces.
- Note 5.** **MAXIMUM SQUARE FOOTAGE ALLOWED**- Includes all spaces included in traditional bracketing program areas identified under M-PE Physical Education Spaces.
- Note 6.** Includes all spaces included in traditional bracketing program areas identified under M-FS Food Service Spaces, M-CU Custodial Spaces, M-BS Building Service Spaces.

SCLE Educational Specification Schematic S.F. Summary				
PROGRAM AREA	New SF	Exist. SF*	TOTAL SF	
M-AC	0	0	0	See Note 7.
M-SE	0	0	0	See Note 8.
M-AD	0	0	0	See Note 9.
M-MC	0	0	0	See Note 10.
M-VA	0	0	0	See Note 11.
M-MU	0	0	0	See Note 12.
M-TE	0	0	0	See Note 13.
M-FCS	0	0	0	See Note 14.
M-PE	0	0	0	See Note 15.
M-SD	0	0	0	See Note 16.
M-FS	0	0	0	See Note 17.
M-CU	0	0	0	See Note 18.
M-BS	0	0	0	See Note 19.
Facility Total (NET AREA)	0	0	0	
Facility Total (GROSS AREA)	0	0	0	See Note 20.
Calculated Construction factor	0.00	0.00	0.00	
Minus exist. co-funded Oversize Area from Master Plan		0	-	See Note 21.
Adjusted Existing Area		0	-	
Total Adjusted GSF Developed (without Oversize Area)			0	
Difference of GSF developed from GSF allowable			(67,950)	

- Note 7.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-AC Academic Core Spaces**.
- Note 8.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-SE Special Education Spaces**.
- Note 9.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-AD Administration Spaces**.
- Note 10.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-MC Media Center Spaces**.
- Note 11.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-VA Visual Arts Spaces**.
- Note 12.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-MU Music Spaces**.
- Note 13.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-TE Technology Spaces**.
- Note 14.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-FCS Family and Consumer Science Spaces**.
- Note 15.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-PE Physical Education Spaces**.
- Note 16.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-SD Student Dining Spaces**.
- Note 17.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-FS Food Service Spaces**.
- Note 18.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-CU Custodial Spaces**.
- Note 19.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **M-BS Building Services**.
- Note 20.** Enter "New" and "Existing" calculated GROSS AREA totals from schematic diagrams developed.
- Note 21.** Enter existing co-funded Oversize Area from Master Plan

Sample School District, **SAMPLE HIGH SCHOOL SCLE**

CHAPTER 2: BRACKETING STUDENT CENTERED LEARNING ENVIRONMENT - SUMMARY OF SPACES WORKSHEET

The following worksheet provides a summary of the four major POR categories defined in a "Student Centered Learning Environment" project.

Entering the grade configuration, student enrollment, and both "Net" and "Gross" square footage totals from the educational specifications and schematic diagrams (based upon the traditional POR categories) this worksheet summarizes the ALLOWABLE and ACTUAL areas in a STUDENT CENTERED LEARNING ENVIRONMENT (SCLE). This worksheet is part of the required submittal for any SCLE project.

HIGH SCHOOL					
SCLE Worksheet ALLOWABLE				ACTUAL	
Enter Grade Configuration		9-12			9-12
Enter Student Enrollment		2,400		See Note 1.	2,400
Square Feet Per Student		156.00		See Note 2.	
Total Gross Square Feet Funded from MASTER PLAN		374,400			
Vert. Cir. Area Allowable	<input checked="" type="radio"/> Single Story Building	<input type="radio"/> Multistory Building	0		
Total Adjusted POR Gross Square Footage		374,400			
SCLE POR SUMMARY			SF		
Academic / Special Education / Media / Visual Arts / Music / Technology / Business Education / Family and Consumer Science / Student Dining			189,360	MINIMUM	0
Administrative Spaces			10,475		0
Physical Education Spaces			46,790	MAXIMUM	0
Food Service Spaces / Custodial Spaces / Building Services			90,673		0
Facility Total (NET SF)			337,297		0
Construction Factor (11% multiplied by the facility total)			0.11		
Gross Square Feet (GSF) Developed			374,400		0

Difference of GSF developed from GSF allowable **(374,400)**

- Note 1.** Enter grade configuration.
- Note 2.** Enter Student Enrollment.
- Note 3.** **MINIMUM SQUARE FOOTAGE REQUIRED**- Includes H-AC Academic Core Spaces, H-SE Special Education Spaces, H-MC Media Center Spaces, H-VA Visual Arts Spaces, H-MU Music Spaces, H-TE Technology Spaces, H-BE Business Education Spaces, H-FCS Family and Consumer Science Spaces, and H-SD Student Dining Spaces derived from total areas developed with traditional bracketing program areas including the ADDITIONAL H-AC-9a Small Group Room, H-AC-13 Multi-use Studio, H-AC-14 Kinesthetic Learning Studio included in the 2011 Design Manual Update.
- Note 4.** Includes all spaces included in traditional bracketing program areas identified under H-AD Administrative Spaces.
- Note 5.** **MAXIMUM SQUARE FOOTAGE ALLOWED**- Includes all spaces included in traditional bracketing program areas identified under H-PE Physical Education Spaces.
- Note 6.** Includes all spaces included in traditional bracketing program areas identified under H-FS Food Service Spaces, H-CU Custodial Spaces, H-BS Building Service Spaces.

SCLE Educational Specification Schematic S.F. Summary					
PROGRAM AREA	New SF	Exist. SF*	TOTAL SF		
H-AC	Academic Core Spaces	0	0	0	See Note 7.
H-SE	Special Education Spaces	0	0	0	See Note 8.
H-AD	Administrative Spaces	0	0	0	See Note 9.
H-MC	Media Center Spaces	0	0	0	See Note 10.
H-VA	Visual Arts Spaces	0	0	0	See Note 11.
H-MU	Music Spaces	0	0	0	See Note 12.
H-TE	Technology Education Spaces	0	0	0	See Note 13.
H-BE	Business Education Spaces	0	0	0	See Note 14.
H-FCS	Family and Consumer Science Spaces	0	0	0	See Note 15.
H-PE	Physical Education Spaces	0	0	0	See Note 16.
H-SD	Student Dining Spaces	0	0	0	See Note 17.
H-FS	Food Service Spaces	0	0	0	See Note 18.
H-CU	Custodial Spaces	0	0	0	See Note 19.
H-BS	Building Services	0	0	0	See Note 20.
Facility Total (NET AREA)		0	0	0	
Facility Total (GROSS AREA)		0	0	0	See Note 21.
Calculated Construction factor		0.00	0.00	0.00	
Minus exist. co-funded Oversize Area from Master Plan			0	-	See Note 22.
Adjusted Existing Area			0	-	
Total Adjusted GSF Developed (without Oversize Area)				0	
Difference of GSF developed from GSF allowable				(374,400)	

- Note 7.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-AC Academic Core Spaces**.
- Note 8.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-SE Special Education Spaces**.
- Note 9.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-AD Administration Spaces**.
- Note 10.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-MC Media Center Spaces**.
- Note 11.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-VA Visual Arts Spaces**.
- Note 12.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-MU Music Spaces**.
- Note 13.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-TE Technology Spaces**.
- Note 14.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-BE Business Education Spaces**.
- Note 15.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-FCS Family and Consumer Science Spaces**.
- Note 16.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-PE Physical Education Spaces**.
- Note 17.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-SD Student Dining Spaces**.
- Note 18.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-FS Food Service Spaces**.
- Note 19.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-CU Custodial Spaces**.
- Note 20.** Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing **H-BS Building Services**.
- Note 21.** Enter "New" and "Existing" calculated GROSS AREA totals from schematic diagrams developed.
- Note 22.** Enter existing co-funded Oversize Area from Master Plan

Sample School District, SAMPLE COMBINATION SCHOOL SCLE

CHAPTER 2: BRACKETING STUDENT CENTERED LEARNING ENVIRONMENT - SUMMARY OF SPACES WORKSHEET

The following worksheet provides a summary of the four major POR categories defined in a "Student Centered Learning Environment" project.

Entering the grade configuration, student enrollment, and both "Net" and "Gross" square footage totals from the educational specifications and schematic diagrams (based upon the traditional POR categories) this worksheet summarizes the ALLOWABLE and ACTUAL areas in a STUDENT CENTERED LEARNING ENVIRONMENT (SCLE). This worksheet is part of the required submittal for any SCLE project.

COMBINATION SCHOOL			
SCLE Worksheet ALLOWABLE			
Student Enrollment	Enter Grade Configuration	K-12	See Note 1.
	Enter ELEMENTARY SCHOOL Student Enrollment	300	See Note 2.
	Enter MIDDLE SCHOOL Student Enrollment	150	See Note 2.
	Enter HIGH SCHOOL Student Enrollment	200	See Note 2.
	TOTAL Student Enrollment	650	
SF per student			
	SF per ELEMENTARY SCHOOL student	134	
	SF per MIDDLE SCHOOL student	162	
	SF per HIGH SCHOOL student	193	
	Total Gross Square Feet Funded from MASTER PLAN	103,215	
Vert. Cir. Area Allowable	<input checked="" type="radio"/> Single Story Building <input type="radio"/> Multistory Building	0	
	Total Adjusted POR Gross Square Footage	103,215	
SCLE POR SUMMARY		SF	
Academic / Special Education / Media / Visual Arts / Music / Technology / Business Education / Family and Consumer Science / Student Dining		48,802	MINIMUM
Administrative Spaces		2,990	
Physical Education Spaces		15,800	MAXIMUM
Food Service Spaces / Custodial Spaces / Building Services		25,395	
Facility Total (NET SF)		92,986	
Construction Factor (11% multiplied by the facility total)		0.11	
Gross Square Feet (GSF) Developed		103,215	

ACTUAL	
	K-12
	300
	150
	200
	650
0	
0	
0	
0	
0	
0	

Difference of GSF developed from GSF allowable (103,215)

- Note 1. Enter grade configuration.
- Note 2. Enter Student Enrollments for ES, MS, and HS.
- Note 3. **MINIMUM SQUARE FOOTAGE REQUIRED**- Includes C-AC Academic Core Spaces, C-SE Special Education Spaces, C-MC Media Center Spaces, C-VA Visual Arts Spaces, C-MU Music Spaces, C-TE Technology Spaces, C-BE Business Education Spaces, C-FCS Family and Consumer Science Spaces, and C-SD Student Dining Spaces derived from total areas developed with traditional bracketing program areas including the ADDITIONAL C-AC-9a Small Group Room, C-AC-13 Multi-use Studio, C-AC-14 Kinesthetic Learning Studio included in the 2011 Design Manual Update.
- Note 4. Includes all spaces included in traditional bracketing program areas identified under C-AD Administrative Spaces.
- Note 5. **MAXIMUM SQUARE FOOTAGE ALLOWED**- Includes all spaces included in traditional bracketing program areas identified under C-PE Physical Education Spaces.
- Note 6. Includes all spaces included in traditional bracketing program areas identified under C-FS Food Service Spaces, C-CU Custodial Spaces, C-BS Building Service Spaces.

SCLE Educational Specification Schematic S.F. Summary			
PROGRAM AREA	New SF	Exist. SF*	TOTAL SF
C-AC	Academic Core Spaces	0	0
C-SE	Special Education Spaces	0	0
C-AD	Administrative Spaces	0	0
C-MC	Media Center Spaces	0	0
C-VA	Visual Arts Spaces	0	0
C-MU	Music Spaces	0	0
C-TE	Technology Education Spaces	0	0
C-BE	Business Education Spaces	0	0
C-FCS	Family and Consumer Science Spaces	0	0
C-PE	Physical Education Spaces	0	0
C-SD	Student Dining Spaces	0	0
C-FS	Food Service Spaces	0	0
C-CU	Custodial Spaces	0	0
Facility Subtotal:			
		0	0
C-BS	Building Services	0	0
Facility Total:			
		0	0
Facility Total (GROSS AREA)			
		0	0
Calculated Construction factor			
		0.00	0.00
Minus exist. co-funded Oversize Area from Master Plan			
		0	-
Adjusted Existing Area			
		0	-
Total Adjusted GSF Developed (without Oversize Area)			
		0	0
Difference of GSF developed from GSF allowable			
		(103,215)	-

- Note 7. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-AC~~ Academic Core Spaces.
- Note 8. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-SE~~ Special Education Spaces.
- Note 9. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-AD~~ Administration Spaces.
- Note 10. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-MC~~ Media Center Spaces.
- Note 11. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-VA~~ Visual Arts Spaces.
- Note 12. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-MU~~ Music Spaces.
- Note 13. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-TE~~ Technology Spaces.
- Note 14. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-BE~~ Business Education Spaces.
- Note 15. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-FCS~~ Family and Consumer Science Spaces.
- Note 16. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-PE~~ Physical Education Spaces.
- Note 17. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-SD~~ Student Dining Spaces.
- Note 18. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-FS~~ Food Service Spaces.
- Note 19. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-CU~~ Custodial Spaces.
- Note 20. Enter "New" and "Existing" net square footage totals from schematic diagrams for areas identified in traditional bracketing ~~C-BS~~ Building Services.
- Note 21. Enter "New" and "Existing" calculated GROSS AREA totals from schematic diagrams developed.
- Note 22. Enter existing co-funded Oversize Area from Master Plan

A. OBJECTIVE**New K-12 and Career Technical Buildings and Additions**

The objective of this section is to establish a baseline "cost per square foot per student" for new school buildings to be constructed under the funding mechanism administered by the Ohio School Facilities Commission. It is the intent of the "Design Manual" and the corresponding costs to establish a standard level of quality to be used by all Ohio schools. Under the classroom facilities assistance program and other applicable programs, the costs are to be used for new buildings as well as additions to existing buildings. The costs do not apply to renovation of existing structures.

Renovations

A separate document entitled "Assessment Cost Guidelines" addresses the costs of renovations, and is included herein. Since the approach for the renovations costing differs somewhat from the approach on the new school buildings and additions, all assumptions regarding the assessment cost guidelines are included within the Assessment Cost Guidelines document.

B. CONSIDERATIONS

There are dozens of variables that affect the cost of construction. They vary in degree, in the ability to be quantified, and the potential effect they may have on a project. An opinion of probable cost is just that—an opinion based on the best information known at the time of bidding. This report considers many variables that may affect construction and utilizes a baseline for purposes of establishing an initial starting point. Regional factors are then applied based on the area where the building is to be constructed within the state.

In addition to the considerations for K-12 facilities, the development of all inclusive construction square foot numbers for the Career-Technical school is a challenging exercise. These challenges include:

- **Limited** historical data on projects is available nationally.
- Each program space cost is different and there are over 80 programs.
- Some spaces are atypical, and include features such as high bays and thickened slabs.
- Few Career-Technical schools in Ohio have done any building recently, again limiting the availability of historical data.

Regardless of the challenges, much time and effort was put into developing realistic costs through various methods. The processes followed are outlined in detail herein.

COST INFORMATION

CHAPTER 1: INTRODUCTION

C. NEW K-12 AND CAREER TECHNICAL APPROACH

1. Modification Factors: Because the information is intended to be used to establish budgets throughout Ohio, it is important to establish cost modification factors for various State regions relative to a baseline established in Central Ohio (100.0 Factor.) The regions established correspond with the 9 regions identified in the 1990 Ohio Public School Facility Study. These modification factors were applied to both the K-12 and the Career Technical sections of the Design Manual.
2. Variables:
 - a. An opinion of probable cost developed by an estimating professional is "an opinion of cost." There are a number of factors and variables that can significantly affect these costs. Unfortunately, many of these issues are out of the control of the estimator, Ohio School Facilities Commission, Design Professional, and school district.
 - b. In an effort to establish a baseline cost for Central Ohio, the following factors were identified:
 - .1 Projects are to be bid approximately 15 to 18 months after bond issue passage.
 - .2 Projects are to be bid in the Central Ohio market.
 - .3 Moderate bidding activity will be present during bidding.
 - .4 Projects may or may not include prevailing wage, as indicated by **federal or** Ohio law.
 - .5 All materials from the standards will be "middle of the road" as indicated in the Design Manual.
 - .6 Foundations will be standard spread footings.
 - .7 In most instances, buildings are priced as single story. However, allowances have been included in the two large high school projects for elevators. It is understood that some buildings in various locations may require additional stories. An analysis has shown reduced site needs and costs counterbalance any potential increased costs for multiple stories.
 - .8 The site size will be adequate for staging and material storage in most cases. Certain sites may be smaller and require specific security and laydown requirements. In these instances, it appears that reduced sitework costs will counterbalance the specific costs for these items.
 - .9 **If the option is selected to** use a construction manager with multi-prime bidding, the number of packages may vary by construction manager and could also be affected by market conditions, labor and material availability, project location, etc.
 - .10 Typical subsoil conditions.
 - .11 Excludes impact on contractor pricing due to private sector activity.

In addition to these factors and the variations that can occur, other variables can significantly affect the costs and should be considered when analyzing these costs.

- Availability of qualified contractors and tradesmen.
- Availability of materials. Lead times on materials in the current marketplace are significant, and can lead to higher costs.
- Anticipated weather conditions during construction.
- Final site selected and usability of the site.
- Project deadlines. A more aggressive schedule in a tight labor and material marketplace can lead to higher costs.
- Construction activity in the private sector market place.
- Efficiency of design. Redesign, engineering and structural details can significantly affect costs.
- Fluctuation in material prices and wages.
- The capacity of the Design firm selected.
- Exact locale (labor rates, major material costs).
- Market activity at project location and throughout the State (how busy is the market at any given moment.)
- Final selected materials for each project.
- Bidder competitiveness.
- Method of construction procurement.
- Final scope of work.
- Time of year / schedule of proposed construction.
- Mechanical and electrical systems to be utilized.
- Material price fluctuations: including steel, lumber, copper, brick, casework, HVAC materials, etc.
- Workers compensation and other insurance and tax rate modifications.
- Union strength / marketplace versus the non-prevailing wage rates.

The application of these variables to a particular cost/SF will be difficult. However, it is strongly urged that this be done to increase the accuracy of the project cost estimate.

3. Career Technical Approach

a. Component Estimate

Because the Career-Technical sections contain over 80 different programs, with significant differences among programs, including the construction materials and types required for the programs, the following approach was taken on developing budgets for these buildings.

b. Specific Program Areas

- .1 Each program instructional space was evaluated separately and estimated as its own single entity. **Support spaces** also followed the same procedure, **based on the cost of the corresponding lab.**
- .2 By doing this, a standard list of components was identified that are common to all programs. For instance, each space has concrete masonry unit walls, ceilings, etc.

COST INFORMATION

CHAPTER 1: INTRODUCTION

- .3 After the standard list of components for each program and associated space was estimated for cost, the items specific to an individual program were then budgeted. For instance, this could include items such as the “kennel” which is specific only to the Animal Science and Management program. Other examples of considerations applicable to specific programs included ceiling heights, additional HVAC or electrical requirements, etc.
 - .4 Furnishings were estimated for each specific program, and are included in the basic building cost.
 - .5 In addition, technology infrastructure was estimated for each specific program and is included in the basic building cost.
 - .6 A construction contingency is included that is a percentage of site costs, basic building construction costs, furnishings and technology.
 - .7 Non-construction costs are included as a percentage of the total of site, construction, furnishings, technology infrastructure and contingency.
 - .8 The final program area opinion of probable costs indicated includes site, building, non-construction costs and all contingencies.
- c. Core Areas
- .1 It was determined that the academic area costs will be the same as OSDM high school costs.
- d. General Comments specific to both Program Areas and Core Areas
- .1 Non-construction costs are calculated the same for both areas.
 - .2 The narrative and components of the Career-Technical sections were thoroughly reviewed and taken into consideration when establishing the costs for each system. The system costs were established using past project data and history. Where design guidelines were not yet completely identified, “middle of the road” costs were incorporated.
 - .3 Although no typical floor plans were available to use in quantifying the systems, proven design **best practices** were incorporated. Some examples include: ratio of exterior wall space to floor area, ratio of interior wall space to floor area and ratio of glazing to exterior wall area. These ratios do vary from one design to the next, but they generally fall into a fairly tight range. These ratios generally prove to be reliable when they are coupled with the programming and design approach of the Guidelines Developer.
 - .4 A general specifications outline for items included and assumptions made per particular category of construction was also developed.

4. Other Considerations for both K-12 and Career Technical
- a. Non-Construction Costs
- .1 Non-Construction costs are included as part of the overall, all inclusive, square foot costs. Items included in non-construction costs are as follows:
- Land Survey
 - Soils/Environmental Report
 - Agency Approval Fees
 - Construction Testing
 - Printing - Bid Documents
 - Advertising For Bids
 - Builder's Risk Insurance
 - Design Professional Compensation
 - Construction Management Compensation
 - Non-construction Contingency includes
 - Partnering/Mediation Services
 - Maintenance Plan Advisor Fees
 - Commissioning Agent Fee
- .2 ***USGBC LEED Fees for Registration are paid 100% by the OSFC.***
- b. Square Foot Cost Inclusions
- .1 Square foot costs presented on the matrix are all inclusive of all costs required to design and construct the building and include both construction and non-construction costs. The components of the “non-construction costs” are described above. The “construction costs” are described as follows and include the following major components:
- Site ***Development*** Costs
 - Building Costs
 - Furnishings (including playgrounds for elementary)
 - Technology – see description below
 - Construction Contingency
- c. Site ***Development*** Costs
- .1 Site ***development*** costs are included in the square foot costs. A reasonable amount of cut and fill is assumed and overall site costs are based on the site described in the Design Manual. Many factors affect site work including cut/fill of soil, topography, location of adjacent utilities, tap-in fees, etc. Site costs do not include the cost to purchase land.
- .2 The baseline square foot site ***development*** costs take into account standard tap fees and/or on-site water or wastewater treatment plants. However, since every site is unique, the overall allowed site costs should be used wisely by the professionals and the District, and care should be taken to select the most effective and efficient site that can be developed within the allowable cost.

COST INFORMATION

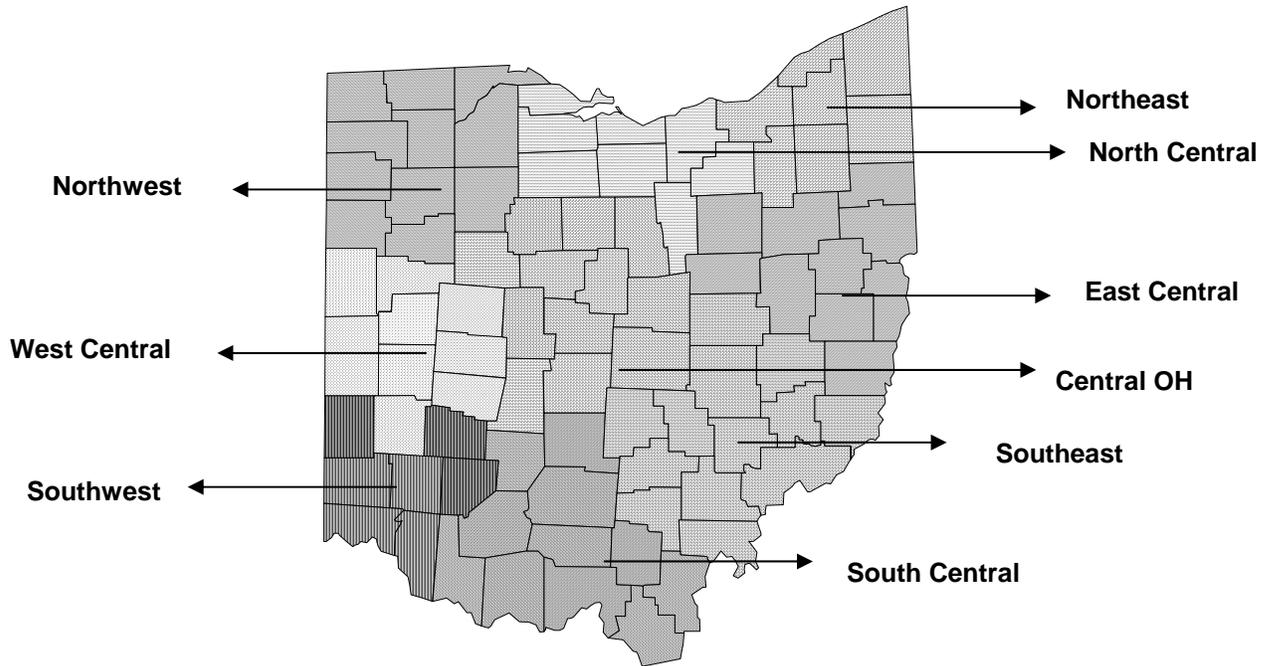
CHAPTER 1: INTRODUCTION

- d. Technology
 - .1 Technology costs include cable tray in academic areas, and voice, video, and data outlets. Also included is a fully digital telephone system with telephones in the classrooms and offices, and an integrated voice mail system. Additionally, there will be a video distribution system with projectors in the classrooms and access to cable systems and some additional media resources. There will also be **wired and wireless** computer network system with data locations throughout and electronics, patch panels, and patch cables as required.

- e. Security
 - .1 Within the total project cost budget, an allowance based on gross building area shall be set aside for exterior and interior building security systems and protection and utilized most effectively for the project conditions. Refer to Chapter 8, Section 8600.

D. RESULTS

The opinion of probable cost summary matrix for K-12 facilities and Career-Technical facilities and a diagram of the state showing the regions are included in this section.



1-Southwest

Butler
Clermont
Clinton
Greene
Hamilton
Preble
Warren

2-West Central

Auglaize
Champaign
Clark
Darke
Logan
Mercer
Miami
Montgomery
Shelby

3-Northwest

Allen
Defiance
Fulton
Hancock
Henry
Lucas
Paulding
Putnam
Van Wert
Williams
Wood

4-North Central

Ashland
Huron
Medina
Sandusky
Erie
Lorain
Ottawa
Seneca
Wayne

5-South Central

Adams
Fayette
Highland
Lawrence
Pike
Scioto
Brown
Gallia
Jackson
Pickaway
Ross

6-Southeast

Athens
Fairfield
Guernsey
Hocking
Meigs
Monroe
Morgan
Muskingum
Noble
Perry
Vinton
Washington

7-East Central

Belmont
Carroll
Columbiana
Coshocton
Harrison
Holmes
Jefferson
Mahoning
Stark
Tuscarawas

8-Northeast

Ashtabula
Cuyahoga
Geauga
Lake
Portage
Summit
Trumbull

0-Central OH

Crawford
Delaware
Franklin
Hardin
Knox
Licking
Madison
Marion
Morrow
Richland
Union
Wyandot

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**STATE OF OHIO SUMMARY OF NEW SCHOOL CONSTRUCTION "OPINION OF PROBABLE COSTS"
PER SQUARE FOOT OF FLOOR AREA
BASELINE, REGION 0 (CENTRAL OHIO)
Revised April 4, 2011 for 2011 Design Manual Update**

Regions	REG. MODIF. FACTOR	ELEMENTARY SCHOOLS					MIDDLE SCHOOLS					HIGH SCHOOLS				
		350-400 Students 43,750 - 50,000 SF	401 - 600 Students 50,000 - 69,360 SF	601-655 Students 69,361 - 100,000 SF	656 Students and up 100,001 SF and up	REVISÉD DM 2011	350 - 460 Students 52,850 - 67,950 SF	451 - 650 Students 67,951 - 91,650 SF	651-709 Students 91,651-100,000 SF	710 Students and up 100,001 SF and up	350 - 598 Students 63,000 - 100,000 SF	599 - 800 Students 100,001 - 133,600 SF	801 - 1,200 Students 133,601 - 200,400 SF	1,201 Students and up 200,401 SF and up		
BASELINE 0 - CENTRAL OH	100.00	\$20.48 \$175.01	\$18.61 \$189.50	\$17.89 \$162.38	\$17.36 \$157.78	\$20.85 \$175.07	\$19.45 \$165.39	\$19.44 \$165.07	\$18.89 \$160.43	\$19.79 \$175.44	\$19.23 \$170.44	\$21.72 \$164.27	\$20.51 \$161.23			
TOTAL		\$195.49 \$31.47	\$188.11 \$30.29	\$180.27 \$29.02	\$175.14 \$28.20	\$195.92 \$31.54	\$184.84 \$29.76	\$184.51 \$28.71	\$179.32 \$28.87	\$195.23 \$31.43	\$186.67 \$30.54	\$186.99 \$29.94	\$181.74 \$29.26			
GRAND TOTAL		\$226.96	\$218.40	\$209.29	\$203.34	\$227.46	\$214.60	\$214.22	\$208.19	\$226.66	\$220.21	\$215.93	\$211.00			
1 - SOUTH WEST	99.02	\$20.28 \$173.29	\$18.42 \$167.84	\$17.71 \$160.78	\$17.19 \$156.22	\$20.64 \$173.34	\$19.36 \$163.77	\$19.25 \$163.45	\$18.70 \$168.87	\$19.60 \$173.73	\$19.04 \$168.77	\$21.52 \$162.66	\$20.31 \$159.65			
TOTAL		\$193.57 \$31.16	\$186.26 \$29.99	\$178.49 \$28.74	\$173.41 \$27.92	\$193.98 \$31.23	\$183.03 \$28.47	\$182.70 \$28.42	\$177.57 \$28.59	\$193.33 \$31.12	\$187.81 \$30.24	\$184.18 \$29.65	\$179.96 \$28.97			
GRAND TOTAL		\$224.73	\$216.25	\$207.23	\$201.33	\$225.21	\$212.50	\$212.12	\$206.16	\$224.45	\$218.05	\$213.83	\$206.93			
2 - WEST CENTRAL	99.76	\$20.45 \$174.38	\$18.56 \$168.09	\$17.84 \$161.99	\$17.32 \$157.40	\$20.90 \$174.94	\$19.41 \$164.99	\$19.40 \$164.97	\$18.84 \$160.04	\$19.75 \$175.03	\$19.19 \$170.03	\$21.67 \$163.98	\$20.46 \$160.84			
TOTAL		\$195.02 \$31.39	\$187.65 \$30.22	\$179.83 \$29.95	\$174.72 \$28.13	\$196.44 \$31.46	\$184.40 \$28.69	\$184.07 \$29.64	\$178.88 \$28.80	\$194.78 \$31.35	\$189.22 \$30.47	\$185.55 \$29.87	\$181.30 \$29.19			
GRAND TOTAL		\$226.41	\$217.87	\$208.78	\$202.85	\$226.90	\$214.09	\$213.71	\$207.68	\$226.13	\$219.69	\$215.42	\$210.49			
3 - NORTHWEST	103.87	\$21.27 \$161.78	\$19.33 \$176.07	\$18.57 \$168.66	\$18.04 \$163.89	\$21.65 \$181.85	\$20.20 \$171.79	\$20.19 \$171.45	\$19.62 \$166.64	\$20.56 \$182.23	\$19.97 \$177.05	\$22.57 \$170.65	\$21.31 \$167.47			
TOTAL		\$203.05 \$32.69	\$195.40 \$31.46	\$187.23 \$30.14	\$181.93 \$29.29	\$206.50 \$32.76	\$191.99 \$30.91	\$191.64 \$30.86	\$186.26 \$29.99	\$202.79 \$32.65	\$197.02 \$31.72	\$193.20 \$31.10	\$188.78 \$30.39			
GRAND TOTAL		\$235.74	\$226.86	\$217.37	\$211.22	\$236.26	\$222.90	\$222.50	\$216.25	\$235.44	\$228.74	\$224.30	\$219.17			
4 - NORTH CENTRAL	102.35	\$20.96 \$179.12	\$19.04 \$173.48	\$18.30 \$161.48	\$17.77 \$161.48	\$21.34 \$178.18	\$19.91 \$168.29	\$19.91 \$168.94	\$19.33 \$164.21	\$20.26 \$179.56	\$19.68 \$174.45	\$22.23 \$168.13	\$20.99 \$165.02			
TOTAL		\$200.08 \$32.21	\$192.52 \$31.00	\$184.50 \$29.70	\$179.25 \$28.86	\$200.52 \$32.28	\$189.20 \$30.46	\$189.85 \$30.41	\$183.54 \$29.55	\$199.82 \$32.17	\$194.13 \$31.26	\$190.36 \$30.64	\$186.01 \$29.95			
GRAND TOTAL		\$232.29	\$223.52	\$214.20	\$208.11	\$232.80	\$219.66	\$219.26	\$213.09	\$231.99	\$225.39	\$221.00	\$215.96			

STATE OF OHIO SUMMARY OF NEW SCHOOL CONSTRUCTION "OPINION OF PROBABLE COSTS"
 PER SQUARE FOOT OF FLOOR AREA
 BASELINE: REGION 0 (CENTRAL OHIO)
 Revised April 4, 2011 for 2011 Design Manual Update

Regions	REG. MODIF FACTOR	ELEMENTARY SCHOOLS				MIDDLE SCHOOLS				HIGH SCHOOLS			
		350-400 Students 43,750 - 50,000 SF	401 - 600 Students 50,000 - 69,380 SF	601-865 Students 69,381 - 100,000 SF	866 Students and up 100,001 SF and up	350 - 450 Students 52,850 - 67,950 SF	451 - 650 Students 67,951 - 91,650 SF	651-769 Students 91,651-100,000 SF	770 Students and up 100,001 SF and up	350 - 538 Students 63,000 - 100,000 SF	539 - 800 Students 100,001 - 133,600 SF	801 - 1,200 Students 133,601 - 200,400 SF	1,201 Students and up 200,401 SF and up
5 - SOUTH CENTRAL	101.40	\$20.76 \$177.46	\$18.87 \$171.88	\$18.14 \$164.65	\$17.61 \$159.98	\$21.14 \$177.52	\$19.73 \$167.71	\$19.71 \$167.38	\$19.15 \$162.68	\$20.07 \$177.90	\$19.50 \$172.84	\$22.02 \$166.57	\$20.81 \$169.50
Site		\$177.46	\$171.88	\$164.65	\$159.98	\$177.52	\$167.71	\$167.38	\$162.68	\$177.90	\$172.84	\$166.57	\$169.50
Building		\$20.76	\$18.87	\$18.14	\$17.61	\$21.14	\$19.73	\$19.71	\$19.15	\$20.07	\$19.50	\$22.02	\$20.81
TOTAL		\$198.22	\$190.75	\$182.79	\$177.59	\$198.66	\$187.44	\$187.09	\$181.83	\$197.97	\$192.34	\$188.59	\$194.31
Non - Const. Costs		\$31.91	\$30.71	\$29.43	\$28.59	\$31.98	\$30.18	\$30.13	\$29.27	\$31.87	\$30.97	\$30.36	\$29.67
GRAND TOTAL		\$230.13	\$221.46	\$212.22	\$206.18	\$230.64	\$217.62	\$217.22	\$211.10	\$229.84	\$223.31	\$218.95	\$219.98
6 - SOUTHEAST	100.50	\$20.58 \$175.89	\$17.70 \$163.19	\$17.98 \$163.19	\$17.45 \$158.56	\$20.95 \$175.95	\$19.54 \$166.22	\$19.54 \$165.89	\$18.88 \$161.24	\$19.89 \$176.32	\$19.32 \$171.29	\$21.83 \$165.09	\$20.61 \$162.04
Site		\$175.89	\$163.19	\$163.19	\$158.56	\$175.95	\$166.22	\$165.89	\$161.24	\$176.32	\$171.29	\$165.09	\$162.04
Building		\$20.58	\$17.70	\$17.98	\$17.45	\$20.95	\$19.54	\$19.54	\$18.88	\$19.89	\$19.32	\$21.83	\$20.61
TOTAL		\$196.47	\$180.06	\$181.17	\$176.01	\$196.90	\$185.76	\$185.43	\$180.22	\$196.21	\$190.61	\$186.92	\$182.65
Non - Const. Costs		\$31.63	\$30.44	\$29.17	\$28.34	\$31.70	\$29.91	\$29.86	\$29.01	\$31.59	\$30.69	\$30.09	\$29.41
GRAND TOTAL		\$228.10	\$219.50	\$210.34	\$204.35	\$228.60	\$215.67	\$215.29	\$209.23	\$227.80	\$221.30	\$217.01	\$212.06
7 - EAST CENTRAL	100.70	\$20.63 \$176.24	\$18.74 \$170.69	\$18.01 \$163.52	\$17.48 \$159.88	\$20.89 \$176.30	\$19.59 \$166.55	\$19.59 \$166.23	\$19.02 \$161.55	\$19.83 \$176.67	\$19.36 \$171.63	\$21.88 \$165.42	\$20.66 \$162.36
Site		\$176.24	\$170.69	\$163.52	\$159.88	\$176.30	\$166.55	\$166.23	\$161.55	\$176.67	\$171.63	\$165.42	\$162.36
Building		\$20.63	\$18.74	\$18.01	\$17.48	\$20.89	\$19.59	\$19.59	\$19.02	\$19.83	\$19.36	\$21.88	\$20.66
TOTAL		\$196.87	\$189.43	\$181.53	\$177.36	\$197.19	\$186.14	\$185.81	\$180.57	\$196.50	\$190.99	\$187.30	\$184.02
Non - Const. Costs		\$31.68	\$30.59	\$29.22	\$28.40	\$31.76	\$29.87	\$29.92	\$29.07	\$31.65	\$30.75	\$30.15	\$29.46
GRAND TOTAL		\$228.56	\$219.93	\$210.75	\$204.76	\$228.95	\$216.11	\$215.73	\$209.64	\$228.15	\$221.74	\$217.45	\$212.48
8 - NORTHEAST	104.16	\$21.33 \$182.29	\$19.38 \$176.55	\$18.62 \$168.14	\$18.09 \$164.33	\$21.71 \$182.35	\$20.28 \$172.27	\$20.25 \$167.11	\$19.67 \$167.11	\$20.62 \$182.74	\$20.04 \$177.53	\$22.63 \$171.10	\$21.37 \$167.94
Site		\$182.29	\$176.55	\$168.14	\$164.33	\$182.35	\$172.27	\$167.11	\$167.11	\$182.74	\$177.53	\$171.10	\$167.94
Building		\$21.33	\$19.38	\$18.62	\$18.09	\$21.71	\$20.28	\$20.25	\$19.67	\$20.62	\$20.04	\$22.63	\$21.37
TOTAL		\$203.62	\$195.93	\$186.76	\$182.42	\$204.06	\$192.53	\$192.19	\$186.78	\$203.36	\$197.57	\$193.73	\$189.31
Non - Const. Costs		\$32.78	\$31.55	\$30.23	\$29.37	\$32.85	\$31.00	\$30.95	\$30.07	\$32.74	\$31.81	\$31.19	\$30.48
GRAND TOTAL		\$236.40	\$227.48	\$217.99	\$211.79	\$236.91	\$223.53	\$223.14	\$216.85	\$236.10	\$229.38	\$224.92	\$219.79

COST INFORMATION

CHAPTER 1: INTRODUCTION

**EXPLANATION OF K – 12 CHART
OPINION OF PROBABLE COST**

Regions	REG.	ELEMENTARY SCHOOLS			TYPE OF SCHOOL FACILITY
	MOD.F. FACTOR	350-400 Students 43,750 - 50,000 SF	401 - 600 Students 50,001 - 69,360 SF	601 Students and up 69,361 SF and up	
BASELINE					
0 – CENTRAL OH	100.00				AVERAGE SITE COST PER SF
Site		\$19.45	\$17.67	\$16.99	
Building		\$166.19	\$160.96	\$154.20	
TOTAL		\$185.64	\$178.63	\$171.19	TOTAL BUILDING AND SITE COST PER SF
Non - Const. Costs		\$29.89	\$28.76	\$27.56	
GRAND TOTAL		\$215.53	\$207.39	\$198.75	
1 – SOUTH WEST	99.02				NON-CONSTRUCTION COST PER SF
Site		\$19.26	\$17.49	\$16.82	
Building		164.56	159.38	152.68	
TOTAL		\$183.82	\$176.87	\$169.50	TOTAL PROJECT COST IN DOLLARS PER SF
Non - Const. Costs		\$29.60	\$24.48	27.29	
GRAND TOTAL		\$213.42	\$205.35	\$196.79	

TOTAL PROJECT

OPINION OF PROBABLE CONSTRUCTION COSTS

Construction Costs

Site Cost		See Chart
Building Cost		See Chart
Building cost to include loose furnishings, technology, and security systems.		
Division of project budgets for these areas is to be determined by project team.		
Construction Contingency	(new)	5.0%
	(renovation)	7.0%

<u>Non-Construction Costs (% of Site/Building Cost)</u>	<u>NEW</u>	<u>RENOV</u>
Land Survey	0.08%	0.03%
Soils/Environmental Report	0.07%	0.10%
Agency Approval Fees	0.30%	0.25%
Construction Testing	0.77%	0.25%
Printing – Bid Documents	0.29%	0.27%
Advertising for Bids	0.02%	0.03%
Builder's Risk Insurance	0.28%	0.11%
Non-Construction Contingency		
Commissioning	0.33%	0.52%
Maintenance Plan Advisor/Consultant	0.07%	0.11%
Non-Construction Contingency	1.39%	1.23%

Design Professional Fee*

Construction Management Fee*

USGBC LEED Fees for Registration are paid 100% by the OSFC.

Note: A factor for inflation is intended to address the cost of inflation for the duration of the project.

* The Non-Construction Costs includes a budget of 6.5% for new and 7.5% for renovations for the Design Professional Fee, and 6.0% for the Construction Management Fee.

**OHIO SCHOOL FACILITIES COMMISSION
CAREER-TECHNICAL
OPINION OF PROBABLE COSTS FOR
CORE AND PROGRAM AREAS FOR NEW SCHOOL/ADDITION CONSTRUCTION**

“OVERALL PROJECT COST SUMMARY SHEET”

**BASELINE IS REGION 0 (CENTRAL OHIO)
Updated: 2006**

Summary of Core Area and Program Costs

Core Spaces

Total SF of all Core Spaces

Total SF	\$/SF	Total
0	\$0.00	\$0.00

This figure is calculated from the bracketing sheets for the Core and is the total Core SF.

This figure is taken from the “Core SF Cost Summary Sheet” for the particular size school.

Program Spaces

Total SF of all Program Spaces

0	\$0.00	\$0.00
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This figure is calculated by using the total SF for each specific Program from the Program bracketing sheets.

This figure is calculated by using the total cost of all Program Types from the Program bracketing sheets and dividing by the total square feet.

Subtotal		\$0.00
Regional Factor (insert from Regional Factor List)		1.0000
Total Funded Amount		\$0.00
Total Cost Per Square Foot		\$0.00

Factor is taken from Regional Factor sheet. Subtotal is multiplied by Regional Factor.

This amount is total funded amount and is a total of Core Program space funding.

**OHIO SCHOOL FACILITIES COMMISSION
CAREER TECHNICAL
OPINION OF PROBABLE COSTS FOR
FOR NEW SCHOOL / ADDITION CONSTRUCTION**

"REGIONAL FACTORS"

BASELINE IS REGION 0 (Central Ohio)

Updated: 2009

<u>Region</u>	<u>Approximate Location</u>	<u>2009 Final Regional Factor</u>
0	Central OH	1.0000
1	South West	0.9902
2	West Central	0.9976
3	North West	1.0387
4	North Central	1.0235
5	South Central	1.0140
6	South East	1.0050
7	East Central	1.0070
8	North East	1.0416

Note: The above Regional Factors are to be used on the "Overall Project Cost Summary " Sheet when calculating total funding for a particular Career-Technical District.

COST INFORMATION

CHAPTER 1: INTRODUCTION

OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 1	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
14.0100	<u>Accounting</u>								
	Lab	1,200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.75	\$ 221.71	3.06%
	Related Office	120	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
	Related Storage	200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
14.0300	<u>Administrative and Professional Support</u>								
14.0310	<u>Legal Management and Support</u>								
	Lab	1,200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Office	120	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Storage	200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
14.0320	<u>Medical Management Support</u>								
	Lab	1,200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Office	120	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Storage	200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
17.0400	<u>Aviation Occupations</u>								
	Lab	1,200	\$ 20.41	\$ 190.49	\$ 10.54	\$ 221.44	\$ 35.65	\$ 257.10	3.06%
	Related Office	120	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
	Related Storage	200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
14.0800	<u>Business Management</u>								
	Lab	1,200	\$ 20.41	\$ 180.98	\$ 10.07	\$ 211.46	\$ 34.05	\$ 245.51	3.06%
	Related Office	120	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
	Related Storage	200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
14.0210	<u>Information Support & Services</u>								
14.0230	<u>Programming & Software Development</u>								
14.0240	<u>Interactive Media</u>								
14.0220	<u>Network Systems</u>								
34.0005	<u>Visual Design and Imaging</u>								
	Lab	1,200	\$ 20.41	\$ 159.08	\$ 8.97	\$ 188.46	\$ 30.34	\$ 218.80	3.06%
	Related Office	120	\$ 20.41	\$ 159.08	\$ 8.97	\$ 188.46	\$ 30.34	\$ 218.80	3.06%
	Related Storage	200	\$ 20.41	\$ 159.08	\$ 8.97	\$ 188.46	\$ 30.34	\$ 218.80	3.06%
17.1503	<u>Electronics</u>								
17.0370	<u>Automation & Robotics</u>								
	Lab	1,800	\$ 20.41	\$ 147.85	\$ 8.41	\$ 176.67	\$ 28.44	\$ 205.12	3.06%
	Related Office	120	\$ 20.41	\$ 147.85	\$ 8.41	\$ 176.67	\$ 28.44	\$ 205.12	3.06%
	Related Storage	200	\$ 20.41	\$ 147.85	\$ 8.41	\$ 176.67	\$ 28.44	\$ 205.12	3.06%
14.0110	<u>Financial Services</u>								
	Lab	1,200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
	Related Office	120	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
	Related Storage	200	\$ 20.41	\$ 161.46	\$ 9.09	\$ 190.96	\$ 30.74	\$ 221.71	3.06%
17.1504	<u>Telecommunications</u>								
	Lab	1,200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Office	120	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
	Related Storage	200	\$ 20.41	\$ 158.28	\$ 8.93	\$ 187.63	\$ 30.21	\$ 217.84	3.06%
33.0020	<u>Travel and Tourism</u>								
	Lab	1,200	\$ 20.41	\$ 160.74	\$ 9.06	\$ 190.21	\$ 30.62	\$ 220.84	3.06%
	Related Office	120	\$ 20.41	\$ 160.74	\$ 9.06	\$ 190.21	\$ 30.62	\$ 220.84	3.06%
	Related Storage	200	\$ 20.41	\$ 160.74	\$ 9.06	\$ 190.21	\$ 30.62	\$ 220.84	3.06%

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 2	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Const. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
07.0913 07.4890	<u>Health Unit Coordinator</u> <u>Health Information Management Service</u>								
	Lab	1,500	\$ 20.41	\$ 142.98	\$ 8.17	\$ 171.56	\$ 27.62	\$ 199.18	3.06%
	Related Office	120	\$ 20.41	\$ 142.98	\$ 8.17	\$ 171.56	\$ 27.62	\$ 199.18	3.06%
	Related Storage	200	\$ 20.41	\$ 142.98	\$ 8.17	\$ 171.56	\$ 27.62	\$ 199.18	3.06%
	Related Changing Room	490	\$ 20.41	\$ 142.98	\$ 8.17	\$ 171.56	\$ 27.62	\$ 199.18	3.06%
07.0307 07.0906	<u>Home Health</u> <u>Community Health Aide</u>								
	Lab	1,500	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Office	120	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Storage	200	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Changing Room	490	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
07.0103	<u>Dental Laboratory Technology</u>								
	Lab	1,500	\$ 20.41	\$ 177.90	\$ 9.92	\$ 208.23	\$ 33.52	\$ 241.75	3.06%
	Related Office	120	\$ 20.41	\$ 177.90	\$ 9.92	\$ 208.23	\$ 33.52	\$ 241.75	3.06%
	Related Storage	200	\$ 20.41	\$ 177.90	\$ 9.92	\$ 208.23	\$ 33.52	\$ 241.75	3.06%
	Related Changing Room	490	\$ 20.41	\$ 177.90	\$ 9.92	\$ 208.23	\$ 33.52	\$ 241.75	3.06%
17.2811	<u>Emergency Medical Technician</u>								
	Lab	1,500	\$ 20.41	\$ 151.21	\$ 8.58	\$ 180.20	\$ 29.01	\$ 209.22	3.06%
	Related Office	120	\$ 20.41	\$ 151.21	\$ 8.58	\$ 180.20	\$ 29.01	\$ 209.22	3.06%
	Related Storage	200	\$ 20.41	\$ 151.21	\$ 8.58	\$ 180.20	\$ 29.01	\$ 209.22	3.06%
	Related Changing Room	490	\$ 20.41	\$ 151.21	\$ 8.58	\$ 180.20	\$ 29.01	\$ 209.22	3.06%
07.0410	<u>Exercise Science/Sports & Recreation Health Care</u>								
	Lab	1,500	\$ 20.41	\$ 149.19	\$ 8.48	\$ 178.08	\$ 28.67	\$ 206.76	3.06%
	Related Office	120	\$ 20.41	\$ 149.19	\$ 8.48	\$ 178.08	\$ 28.67	\$ 206.76	3.06%
	Related Storage	200	\$ 20.41	\$ 149.19	\$ 8.48	\$ 178.08	\$ 28.67	\$ 206.76	3.06%
	Related Changing Room	490	\$ 20.41	\$ 149.19	\$ 8.48	\$ 178.08	\$ 28.67	\$ 206.76	3.06%
07.0203 17.2815 01.2000	<u>Medical Laboratory Technology</u> <u>Criminal Science Technology</u> <u>Biotechnology for Food, Plant & Animal</u>								
	Lab	1,500	\$ 20.41	\$ 174.90	\$ 9.77	\$ 205.08	\$ 33.02	\$ 238.10	3.06%
	Related Office	120	\$ 20.41	\$ 174.90	\$ 9.77	\$ 205.08	\$ 33.02	\$ 238.10	3.06%
	Related Storage	200	\$ 20.41	\$ 174.90	\$ 9.77	\$ 205.08	\$ 33.02	\$ 238.10	3.06%
	Related Changing Room	490	\$ 20.41	\$ 174.90	\$ 9.77	\$ 205.08	\$ 33.02	\$ 238.10	3.06%
07.4850 07.0912 17.1600	<u>Biotechnology</u> <u>Pharmacy Technician</u> <u>Energy Science</u>								
	Lab	1,500	\$ 20.41	\$ 180.46	\$ 10.04	\$ 210.92	\$ 33.96	\$ 244.87	3.06%
	Related Office	120	\$ 20.41	\$ 180.46	\$ 10.04	\$ 210.92	\$ 33.96	\$ 244.87	3.06%
	Related Storage	200	\$ 20.41	\$ 180.46	\$ 10.04	\$ 210.92	\$ 33.96	\$ 244.87	3.06%
	Related Changing Room	490	\$ 20.41	\$ 180.46	\$ 10.04	\$ 210.92	\$ 33.96	\$ 244.87	3.06%
07.0302	<u>Practical Nursing</u>								
	Lab (includes optional restroom)	1,500	\$ 20.41	\$ 150.79	\$ 8.56	\$ 179.76	\$ 28.94	\$ 208.71	3.06%
	Related Office	120	\$ 20.41	\$ 150.79	\$ 8.56	\$ 179.76	\$ 28.94	\$ 208.71	3.06%
	Related Storage	200	\$ 20.41	\$ 150.79	\$ 8.56	\$ 179.76	\$ 28.94	\$ 208.71	3.06%
	Related Changing Room	490	\$ 20.41	\$ 150.79	\$ 8.56	\$ 179.76	\$ 28.94	\$ 208.71	3.06%
07.4840 07.4830	<u>Health Support Pathway</u> <u>Therapeutic Pathway</u>								
	Lab	1,500	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Office	120	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Storage	200	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%
	Related Changing Room	490	\$ 20.41	\$ 147.09	\$ 8.38	\$ 175.88	\$ 28.32	\$ 204.19	3.06%

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 3	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
17.0403	<u>Ground Operations</u>								
	Lab	1,500	\$ 20.41	\$ 141.61	\$ 8.10	\$ 170.12	\$ 27.39	\$ 197.51	3.06%
	Related Office	120	\$ 20.41	\$ 141.61	\$ 8.10	\$ 170.12	\$ 27.39	\$ 197.51	3.06%
	Related Storage	200	\$ 20.41	\$ 141.61	\$ 8.10	\$ 170.12	\$ 27.39	\$ 197.51	3.06%
	Reference Room	150	\$ 20.41	\$ 141.61	\$ 8.10	\$ 170.12	\$ 27.39	\$ 197.51	3.06%
33.0010	<u>Lodging</u>								
	Lab (includes optional restroom & laundry)	1,500	\$ 20.41	\$ 153.79	\$ 8.71	\$ 182.91	\$ 29.45	\$ 212.36	3.06%
	Related Office	120	\$ 20.41	\$ 153.79	\$ 8.71	\$ 182.91	\$ 29.45	\$ 212.36	3.06%
	Related Storage	200	\$ 20.41	\$ 153.79	\$ 8.71	\$ 182.91	\$ 29.45	\$ 212.36	3.06%
	Banquet Room	800	\$ 20.41	\$ 153.79	\$ 8.71	\$ 182.91	\$ 29.45	\$ 212.36	3.06%
04.0810	<u>Marketing Management</u>								
	Lab	900	\$ 20.41	\$ 187.77	\$ 10.41	\$ 218.59	\$ 35.19	\$ 253.79	3.06%
	Bookstore	800	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Display	100	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Office	120	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Storage	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
04.4110	<u>Entrepreneurship</u>								
04.0815	<u>Marketing Communications</u>								
	Lab	1,000	\$ 20.41	\$ 187.77	\$ 10.41	\$ 218.59	\$ 35.19	\$ 253.79	3.06%
	Bookstore	800	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Display	100	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Office	120	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Storage	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
35.0201	<u>Early Childhood Education</u>								
	Lab	1,500	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Related Office	120	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Related Storage	200	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Observation	120	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Infants	700	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Kitchenette	350	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Work Room	150	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Toddler Restroom	60	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Reception	500	\$ 20.41	\$ 154.74	\$ 8.76	\$ 183.91	\$ 29.61	\$ 213.52	3.06%
	Playground	1,300	\$ 20.41	\$ 75.57	\$ 4.80	\$ 100.78	\$ 16.23	\$ 117.01	3.06%
04.1900	<u>Acquisitions & Logistics</u>								
	Lab	900	\$ 20.41	\$ 187.77	\$ 10.41	\$ 218.59	\$ 35.19	\$ 253.79	3.06%
	Related Office	120	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Storage	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 4	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Const. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
17.2602	<u>Cosmetology</u>								
	Lab	1,600	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Related Classrooms	900	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Related Office	120	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Related Storage	200	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Related Changing Room	450	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Dispensary	175	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Laundry Room	150	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Facial Room	200	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Manicure Room	200	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
	Customer Toilet	60	\$ 20.41	\$ 153.02	\$ 8.67	\$ 182.11	\$ 29.32	\$ 211.43	3.06%
17.2802	<u>Criminal Justice</u>								
17.2808	<u>Private Security</u>								
17.2810	<u>Career Paths for the Law Profession</u>								
	Lab	1,200	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Related Classrooms	900	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Related Office	120	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Related Storage	200	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Related Changing Room	450	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Weight Room	800	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
	Interrogation Room	150	\$ 20.41	\$ 149.42	\$ 8.49	\$ 178.32	\$ 28.71	\$ 207.04	3.06%
33.0005	<u>Culinary and Food Service Operations</u>								
	Lab	1,800	\$ 20.41	\$ 283.21	\$ 15.18	\$ 318.80	\$ 51.33	\$ 370.13	3.06%
	Related Classrooms	900	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
	Related Office	120	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
	Related Storage	200	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
	Related Changing Room	450	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
	Restaurant	1,500	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
	Dry Storage	150	\$ 20.41	\$ 163.44	\$ 9.19	\$ 193.04	\$ 31.08	\$ 224.12	3.06%
07.0101	<u>Dental Assistant</u>								
	Lab	1,500	\$ 20.41	\$ 179.97	\$ 10.02	\$ 210.40	\$ 33.87	\$ 244.28	3.06%
	Related Classrooms	900	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Office	120	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Storage	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Changing Room	450	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	X-Ray Room	80	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Darkroom	80	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
07.0904	<u>Medical Assistant</u>								
	Lab	1,200	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Classrooms	900	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Office	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Storage	200	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Changing Room	450	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Training Restroom	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Laundry Room	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
07.0303	<u>Nurse Assisting</u>								
07.1100	<u>Clinical Health Care Services</u>								
	Lab	1,200	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Classrooms	900	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Office	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Storage	200	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Related Changing Room	450	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Training Restroom	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
	Laundry Room	120	\$ 20.41	\$ 153.64	\$ 8.70	\$ 182.76	\$ 29.42	\$ 212.18	3.06%
07.0603	<u>Optometric Occupations</u>								
	Lab	1,200	\$ 20.41	\$ 187.66	\$ 10.40	\$ 218.48	\$ 35.18	\$ 253.66	3.06%
	Related Classrooms	900	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Office	120	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Storage	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Related Changing Room	450	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%
	Exam Room	200	\$ 20.41	\$ 161.43	\$ 9.09	\$ 190.93	\$ 30.74	\$ 221.67	3.06%

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 4	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., +contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
07.0994	<u>Patient Care Technician</u>								
	Lab	1,500	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Related Classrooms	900	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Related Office	120	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Related Storage	200	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Related Changing Room	450	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Training Restroom	120	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
	Laundry Room	120	\$ 20.41	\$ 151.45	\$ 8.59	\$ 180.45	\$ 29.05	\$ 209.50	3.06%
07.4820	<u>Diagnostic Pathway</u>								
	Lab	1,200	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
	Related Classrooms	900	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
	Related Office	120	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
	Related Storage	200	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
	Related Changing Room	450	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
	Exam Room	200	\$ 20.41	\$ 146.27	\$ 8.33	\$ 175.02	\$ 28.18	\$ 203.20	3.06%
01.0901	<u>Animal Science and Management (small animal)</u>								
	Lab	1,000	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Related Classrooms	900	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Related Office	120	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Related Storage	200	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Related Changing Room	450	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Pet Shop	1,200	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Clinic	350	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Grooming	350	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Animal Room	200	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Animal Room	600	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
	Kennel	250	\$ 20.41	\$ 163.04	\$ 9.17	\$ 192.63	\$ 31.01	\$ 223.64	3.06%
07.0305	<u>Surgical Technology</u>								
	Lab	1,000	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Operating Room	800	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Instrument Room	700	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Scrub Room	500	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Related Classrooms	900	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Related Office	120	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Related Storage	200	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
	Related Changing Room	450	\$ 20.41	\$ 159.68	\$ 9.00	\$ 189.10	\$ 30.44	\$ 219.54	3.06%
17.2801	<u>Fire Fighter Training</u>								
	Lab	1,500	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Classrooms	900	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Office	120	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Storage	200	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Changing Room	490	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Weight Room	800	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
34.0115	<u>Media Arts</u>								
	Lab	1,500	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Media Arts Control Room/Edit	450	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Vestibule	84	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Classrooms	900	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Office	120	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Storage	200	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Changing Room	490	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
34.0020	<u>Performing Arts</u>								
	Lab	1,500	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Practice Room	150	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Related Classrooms	900	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Office	120	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Storage	200	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%
	Changing Room	490	\$ 20.41	\$ 160.27	\$ 9.03	\$ 189.71	\$ 30.54	\$ 220.26	3.06%

CHAPTER 1: INTRODUCTION

COST INFORMATION

OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 5	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
01.0301	<u>Agribusiness and Production Systems</u>								
	Lab	4,500	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Classroom	900	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Office	120	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Storage	200	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Restroom	68	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Related Reference Room	200	\$ 20.41	\$ 156.71	\$ 8.86	\$ 185.98	\$ 29.94	\$ 215.92	3.06%
	Greenhouse	1,000	\$ 20.41	\$ 54.96	\$ 3.77	\$ 79.14	\$ 12.74	\$ 91.88	3.06%
17.0303	<u>Auto Specialization</u>								
	Lab	3,500	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Classroom	900	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Office	120	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Storage	200	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Restroom	68	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
	Related Reference Room	200	\$ 20.41	\$ 144.40	\$ 8.24	\$ 173.06	\$ 27.86	\$ 200.92	3.06%
17.1011	<u>Building & Property Maintenance</u>								
17.1017	<u>Building Technology</u>								
	Lab	3,000	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Classroom	900	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Office	120	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Storage	200	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Restroom	68	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
	Related Reference Room	200	\$ 20.41	\$ 156.49	\$ 8.85	\$ 185.75	\$ 29.91	\$ 215.66	3.06%
17.1100	<u>Custodial Services</u>								
	Lab	2,500	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Classroom	900	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Office	120	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Storage	200	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Restroom	68	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
	Related Reference Room	200	\$ 20.41	\$ 132.63	\$ 7.65	\$ 160.69	\$ 25.87	\$ 186.56	3.06%
17.1002	<u>Electrical Trades</u>								
	Lab	3,000	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Classroom	900	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Office	120	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Storage	200	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Restroom	68	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
	Related Reference Room	200	\$ 20.41	\$ 135.74	\$ 7.81	\$ 163.96	\$ 26.40	\$ 190.36	3.06%
17.0100	<u>Environmental Controls Technologies</u>								
	Lab	3,000	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Classroom	900	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Office	120	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Storage	200	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Restroom	68	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%
	Related Reference Room	200	\$ 20.41	\$ 137.09	\$ 7.88	\$ 165.38	\$ 26.63	\$ 192.00	3.06%

COST INFORMATION

CHAPTER 1: INTRODUCTION

OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 5	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Const. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
17.1003	<u>Heavy Equipment (Construction)</u>								
	Lab	4,500	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Classroom	900	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Office	120	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Storage	200	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Restroom	68	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
	Related Reference Room	200	\$ 20.41	\$ 128.00	\$ 7.42	\$ 155.84	\$ 25.09	\$ 180.93	3.06%
17.1012	<u>Integrated Systems Technology</u>								
	Lab	3,500	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Classroom	900	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Office	120	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Storage	200	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Restroom	68	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
	Related Reference Room	200	\$ 20.41	\$ 159.42	\$ 8.99	\$ 188.83	\$ 30.40	\$ 219.23	3.06%
17.1300	<u>Manufacturing Design and Development</u>								
17.0360	<u>Manufacturing Operations</u>								
	Lab	4,500	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Classroom	900	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Office	120	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Storage	200	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Restroom	68	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
	Related Reference Room	200	\$ 20.41	\$ 128.42	\$ 7.44	\$ 156.27	\$ 25.16	\$ 181.43	3.06%
17.1004	<u>Brick, Block and Cement Masonry</u>								
	Lab	3,500	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Classroom	900	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Office	120	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Storage	200	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Restroom	68	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
	Related Reference Room	200	\$ 20.41	\$ 128.40	\$ 7.44	\$ 156.25	\$ 25.16	\$ 181.41	3.06%
01.0701	<u>Natural Resource Management</u>								
	Lab	3,000	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Classroom	900	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Office	120	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Storage	200	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Restroom	68	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Related Reference Room	200	\$ 20.41	\$ 155.58	\$ 8.80	\$ 184.79	\$ 29.75	\$ 214.54	3.06%
	Greenhouse	1,000	\$ 20.41	\$ 54.96	\$ 3.77	\$ 79.14	\$ 12.74	\$ 91.88	3.06%
17.1005	<u>Interior Design and Application</u>								
	Lab	3,000	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Classroom	900	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Office	120	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Storage	200	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Restroom	68	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
	Related Reference Room	200	\$ 20.41	\$ 134.92	\$ 7.77	\$ 163.10	\$ 26.26	\$ 189.36	3.06%
17.1007	<u>Plumbing & Piping</u>								
	Lab	3,000	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Classroom	900	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Office	120	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Storage	200	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Restroom	68	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%
	Related Reference Room	200	\$ 20.41	\$ 141.02	\$ 8.07	\$ 169.50	\$ 27.29	\$ 196.79	3.06%

OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 5	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Const. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
17.3100	<u>Power Equipment Technology</u> Lab	3,500	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Classroom	900	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Office	120	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Storage	200	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Restroom	68	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
	Related Reference Room	200	\$ 20.41	\$ 146.33	\$ 8.34	\$ 175.08	\$ 28.19	\$ 203.26	3.06%
17.1402	<u>Power Transmission</u> Lab	3,500	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Classroom	900	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Office	120	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Storage	200	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Restroom	68	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
	Related Reference Room	200	\$ 20.41	\$ 139.05	\$ 7.97	\$ 167.44	\$ 26.96	\$ 194.39	3.06%
17.2306	<u>Welding & Cutting</u> Lab	3,500	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Classroom	900	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Office	120	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Storage	200	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Restroom	68	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%
	Related Reference Room	200	\$ 20.41	\$ 171.42	\$ 9.59	\$ 201.43	\$ 32.43	\$ 233.86	3.06%

COST INFORMATION

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 6	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site+BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
01.0201	<u>Agriculture / Industrial Equipment</u>								
	Lab	5,000	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Classroom	900	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Office	120	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Storage	200	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Restroom	68	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Related Reference Room	200	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Engine Storage	1,000	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
	Flammable Storage	200	\$ 20.41	\$ 130.39	\$ 7.54	\$ 158.34	\$ 25.49	\$ 183.84	3.06%
17.0301	<u>Auto Collision Repair</u>								
	Lab	5,000	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Classroom	900	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Office	120	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Storage	200	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Restroom	68	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Related Reference Room	200	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
	Auto Parts Storage	300	\$ 20.41	\$ 144.84	\$ 8.26	\$ 173.51	\$ 27.94	\$ 201.45	3.06%
17.0302	<u>Auto Technology</u>								
	Lab	5,000	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Classroom	900	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Office	120	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Storage	200	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Restroom	68	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Related Reference Room	200	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Engine Storage	800	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Machine Room	900	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
	Flammable Material Storage	60	\$ 20.41	\$ 129.38	\$ 7.49	\$ 157.28	\$ 25.32	\$ 182.60	3.06%
17.1001	<u>Carpentry</u>								
	Lab	4,000	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Classroom	900	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Office	120	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Storage	200	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Restroom	68	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Related Reference Room	200	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
	Finishing Room	500	\$ 20.41	\$ 137.65	\$ 7.90	\$ 165.97	\$ 26.72	\$ 192.69	3.06%
	Material Storage	800	\$ 20.41	\$ 137.19	\$ 7.88	\$ 165.48	\$ 26.64	\$ 192.12	3.06%
17.1810	<u>Engineering Technologies</u>								
	Lab	1,500	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Classroom	900	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Office	120	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Storage	200	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Restroom	68	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	Related Reference Room	200	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
	CAD Room	400	\$ 20.41	\$ 181.42	\$ 10.09	\$ 211.92	\$ 34.12	\$ 246.04	3.06%
01.1001	<u>Food Science and Technology</u>								
	Lab	2,000	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Classroom	900	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Office	120	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Storage	200	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Restroom	68	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Related Reference Room	200	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Freezer	400	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Cooler	400	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%
	Retail	400	\$ 20.41	\$ 136.28	\$ 7.83	\$ 164.52	\$ 26.49	\$ 191.01	3.06%

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COST INFORMATION

OHO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 6	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
01.0601	<u>Horticulture</u>								
	Lab	2,000	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Classroom	900	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Office	120	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Storage	200	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Restroom	68	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Related Reference Room	200	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Retail	400	\$ 20.41	\$ 139.58	\$ 8.00	\$ 167.99	\$ 27.05	\$ 195.04	3.06%
	Greenhouse	3,000	\$ 20.41	\$ 54.96	\$ 3.77	\$ 79.14	\$ 12.74	\$ 91.88	3.06%
17.1200	<u>Medium/Heavy Truck Technician</u>								
	Lab	6,000	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Classroom	900	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Office	120	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Storage	200	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Restroom	68	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Related Reference Room	200	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Engine Storage	800	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Machine Room	900	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
	Flammable Material Storage	60	\$ 20.41	\$ 130.04	\$ 7.52	\$ 157.98	\$ 25.43	\$ 183.41	3.06%
17.1806	<u>Construction - Management</u>								
17.1805	<u>Construction - Design/Build</u>								
	Lab	3,000	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Classroom	900	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Office	120	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Storage	200	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Restroom	68	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	Related Reference Room	200	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
	CAD Room	400	\$ 20.41	\$ 155.44	\$ 8.79	\$ 184.64	\$ 29.73	\$ 214.37	3.06%
17.3601	<u>Wood Product Technologies</u>								
	Lab	3,000	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Classroom	900	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Office	120	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Storage	200	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Restroom	68	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Related Reference Room	200	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
	Finishing Room	500	\$ 20.41	\$ 149.78	\$ 8.51	\$ 178.70	\$ 28.77	\$ 207.48	3.06%
	Material Storage	800	\$ 20.41	\$ 149.32	\$ 8.49	\$ 178.22	\$ 28.69	\$ 206.91	3.06%
17.2302	<u>Precision Machining</u>								
	Lab	3,500	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Classroom	900	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Office	120	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Storage	200	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Restroom	68	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	Related Reference Room	200	\$ 20.41	\$ 122.68	\$ 7.15	\$ 150.25	\$ 24.19	\$ 174.44	3.06%
	CNC Room	900	\$ 20.41	\$ 123.14	\$ 7.18	\$ 150.73	\$ 24.27	\$ 175.00	3.06%
	Inspection Room	150	\$ 20.41	\$ 123.14	\$ 7.18	\$ 150.73	\$ 24.27	\$ 175.00	3.06%

COST INFORMATION

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OHIO SCHOOL FACILITIES COMMISSION CAREER-TECHNICAL SUPPLEMENT 2011 OSDM Update - Career Tech Revised 4/4/2011									
SUBJECT CODE	PROGRAM TYPE 7	PROG SF	2011 Site Cost (\$/SF)	2011 Basic Building Cost (\$/SF) (incl. Furn. and Tech.)	Contingency (\$/SF based on 5% of + BBC)	Total Construction Cost (incl. site, bldg., contingency.)	Total Non-Constr. Costs (\$/SF based on 16.1% of Site +BBC + Cont.)	2011 Update Total Line Item Component Cost(\$/SF)	% Change From 2010 to 2011
17.0401	<u>Aircraft Maintenance</u>								
	Lab	13,000	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Classroom	900	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Office	120	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Storage	200	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Restroom	68	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Related Reference Room	200	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Cleaning Room	400	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Parts Storage	300	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
	Hazardous Material Storage	60	\$ 20.41	\$ 158.44	\$ 8.94	\$ 187.79	\$ 30.23	\$ 218.03	3.06%
01.0901	<u>Animal Science and Management (Equine)</u>								
	Lab	8,000	\$ 20.41	\$ 63.05	\$ 4.17	\$ 87.63	\$ 14.11	\$ 101.74	3.06%
	Stables	6,800	\$ 20.41	\$ 73.73	\$ 4.71	\$ 98.85	\$ 15.91	\$ 114.76	3.06%
	Related Classroom	900	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Office	120	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Storage	200	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Changing Room (one per type 5, 6 & 7)	270	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Restroom	68	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Tool Crib	550	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%
	Related Reference Room	200	\$ 20.41	\$ 158.73	\$ 8.96	\$ 188.10	\$ 30.28	\$ 218.39	3.06%

A. GENERAL DESIGN MANUAL DEFINITIONS

Auditeria	A student dining area with characteristics of an auditorium: sound, acoustical treatment, lighting, etc.
Composite	Two or more play structures attached or functionally linked, to create one integral unit that provides more than one play activity. The term "modular play structure" is also used interchangeable with this term.
Construction Factor	The construction factor shown is the area of a building which is used for wall thickness, pipe chase, etc. in the wall.
Distance Learning	The process of transmitting and/or receiving instruction and demonstration via video and/or audio means.
Modular Play Structure	Two or more play structures attached or functionally linked, to create one integral unit that provides more than one play activity. The term "composite" is also used interchangeable with this term.
ORFF	Large instruments capable of being beat upon by children.
Plan for	The design is to accommodate the item. The item will be funded by the school district.
Provide for	The item is to be part of the project. The item will be funded by the Classroom Facilities Assistance Program.
School District	A general term applied to a legally constituted school entity which is governed by a Board of Education. They may include city, local, exempted village, and joint vocational school districts.

DEFINITIONS

CHAPTER 1: INTRODUCTION

B. CAREER-TECHNICAL DEFINITIONS**Academies**

Many Career-Technical Schools and Comprehensive High Schools group similar cluster programs into units called Academies. An Academy may contain 75 to 100 students in a general area such as Arts & Communications, Health Services, Business and Management, , etc. These units may be the equivalent of three to five individual program types within the Career-Technical clusters. The Ohio School Facilities Commission Design Manual defines instructional spaces such as laboratory and related spaces in terms of individual programs since academies can vary in the combination of programs making up the academy.

Career Clusters

The Ohio Department of Education, Career-Technical and Adult Education Division has created career fields under which programs/coursework are organized into pathways or specializations of study. ODE defines career field as “a grouping of occupations and broad industries based on commonalities.” “The career field concept calls for balancing broad-based, career-technical education and the specialized training necessary for success in employment, further study and adaptation of an ever-changing economy.” The career fields are listed below. Additional information regarding the scope of each career field can be found on ODE’s website. They are shown here for definition purposes only and are not intended to directly relate to the seven program types found in the Program of Requirements.

Agricultural and Environmental Systems

Arts and Communication

Business and Administrative Services

Construction Technologies

Education and Training

Engineering and Science Technologies

Finance

Government and Public Administration

Health Science

Hospitality and Tourism

Human Services

Information Technology

Law and Public Safety

Manufacturing Technologies

Marketing

Transportation Systems

Career-Technical Education

Organized education programs that (a) offer a sequence of courses that provide individuals with the academic knowledge and skills the individuals need to prepare for further education and careers in current or emerging employment sectors; and (b) include competency-based applied learning that contributes to the academic knowledge higher-order reasoning and problem-solving skills, work attitudes, general employability skills, and occupational-specific skills of an individual.

B. CAREER-TECHNICAL DEFINITIONS, continued

Career-Technical School Districts	<p>Synonymous with Vocational Education and the term that is utilized within the Career-Technical sections when addressing vocational programming.</p> <p><i>Career-Technical Planning District (CT)</i> by the Department of Education as being responsible for the planning and provision of Career-Technical Education services to students within the district or group of districts.</p> <p><i>Compact CTPD</i> – a vocational educational planning district composed of a group of school districts which contract within the group to deliver Career-Technical Education. A “lead district” acts as the funding agent and usually offers the majority of the programs.</p> <p><i>Comprehensive CTPD</i> – a vocational education planning district composed of a single school district. The high school providing such service is a Comprehensive High School.</p> <p><i>Joint Career-Technical School District VEPD</i> – a School district formed by a group of city, local, or exempted village school districts to offer Career-Technical education to students of all of the participating districts.</p>
Instructional Spaces	<p>The Ohio School Facilities Commission Design Manual defines instructional spaces such as laboratory and related spaces in terms of individual programs since academies can vary in the combination of programs making up the academy. The space needed to house an academy is generally the combined totals for the individual programs within the academy. Some economy of space should be realized in areas such as related classrooms and perhaps office, storage, and specialized facilities. These decisions will need to be determined on a case-by-case basis.</p>
Satellite Program	<p>A program offered by a Career-Technical, comprehensive, or compact school at an off-site location which could include a member school, a business, or any other facility properly equipped to house the program.</p>
Subject Codes	<p>The term utilized by the Ohio Department of Education, Career-Technical and Adult Division, to classify the various programs which may be approved for operation within a school district.</p>
VE-26	<p>The vocational education form which must be submitted by a school district to the Ohio Department of Education in order to gain approval to offer and conduct a vocational program.</p>
VE-26A	<p>The adult education equivalent of the VE-26 form.</p>

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ABBREVIATIONS

AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ABMA	American Boiler Manufacturers Council
AC	Alternating Current
ACI	American Concrete Institute
ADA	American with Disabilities Act
ADC	American Diffusion Council
ADDM	Addendum Administration
AGA	American Gas Association
AHA	American Hardboard Association
AIA	American Institute of Architects
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association, Inc.
ANSI	American National Standards Institute
AP	Access Point
APA	American Plywood Association
API	American Petroleum Institute
APP	Atactic polypropylene
ARI	Air Condition and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Civil Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
ATM	Asynchronous Transfer Mode
AWCI	Association of the Wall and Ceiling Industries
AWG	American Wire Gauge
AWI	Architectural Woodwork Institute
AWS	American Welding Society
AWWA	American Waste Water Association
AWWA	American Water Work Association
B-B-G	<i>Blinds between glass</i>
BHMA	Builders Hardware Manufacturers Association
bhp	Brake Horsepower
BIA	Brick Institute of America
BICSI	Building Industry Consulting Services International
CAC	Ceiling Attenuation Class
CADD	Computer Aided Design Drafting
Carrier HAP	Carrier Hourly Analysis Program
CAT-5e	Category 5e
CATV	Community Antenna Television (Cable Television)
ccd	Charge Coupled Device

ABBREVIATIONS**ABBREVIATIONS**

CCTV	Closed Circuit Television
CD	Construction Documents
CD	Compact Disk
CDF	Combined Distributing Frame
CDS	Customer Direct Service
CFM	Cubic Feet per Minute
CFR	Code of Federal Regulations
CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CL	Lighting Contactor
CM	Construction Manager
CMP	Communications Plenum Cable
CMU	Concrete Masonry Unit
COAX	Coaxial Cable
COE	Corps of Engineers
CPSC	Consumer Product Safety Commission
CPVC	Chlorinated Polyvinyl Chloride
CRI	Carpet and Rug Institute
CRI	Color Rendering Index
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards
CSE	Central Switching Exchange
CSI	Construction Specification Institute
CTI	Cooling Tower Institute
CX	Commissioning
DB	Decibel
DC	Direct Current
DD	Design Development
DDC	Direct Digital Control
DEMARC	Demarcation
DFT	Dry Film Thickness
Div.	Division
DNR	Department of Natural Resources
DOE	Department of Energy
DSL	Digital Subscriber Line
DVD	Digital Versatile Disk
DX	Direct Expansion
EIA	Electronic Industries Association
EIFS	Exterior Insulation and Finish System
EIMA	EIFS Industry Members Association
EIMA	Exterior Insulation Manufacturer Association
EIT	Engineer in Training
EJMA	Expansion Joint Manufacturers Association, Inc.
EF	Entrance Facilities
ELA	Extended Learning Area
EMT	Electrical Metallic Tubing
EPA	Environmental Protection Agency or Effective Projected Area
EPDM	Ethylene Propylene Diene Monomers
EPS	Expanded Polystyrene

ABBREVIATIONS

ER	Main Control/Equipment Room
<i>ET</i>	<i>Enhanced Tile</i>
ETL	Electrical Testing Laboratories
f'c	Specified Compressive Strength (Concrete at the age of 28 days)
FCAN	Full Capacity Above Normal
FCBN	Full Capacity Below Normal
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
FEP	Front End Processor
FF/FL	Floor Flatness/Floor Levelness
FGMA	Flat Glass Marketing Association
Flt-Fn	Float Finish
FM	Factory Mutual
FS	Federal Specification
Gb	Gigabit (billion bits)
Gbps	Gigabits (billions of bits) per Second
GC	General Contractor
GG	Geogrid
Gnd	Ground
gpm	Gallon per Minute
GRI	Geosynthetic Research Institute
Grt-CI-Fn	Grout Clean Finish
HCFC	Hydrochlorofluorocarbons
HDPE	High Density Polyethylene
HI	Hydronics Institute
HID	High Intensity Discharge
HPMA	Hardwood Plywood Manufacturers Association
HPVA	Hardwood Plywood and Veneer Association
HSS	Hollow Structural Sections
HUD/FHA	U.S. Department of Housing and Urban Development/Federal Housing
HVAC	Heating, Ventilating, and Air Conditioning
IAPMO	International Association of Plumbing and Mechanical Officials
ICEA	Insulated Cable Engineers Association
ID	Inside Dimension
IDF	Intermediate Distribution Frame Closets
IEEE	Institute of Electrical and Electronics Engineers, Inc.
IEP	Individual Education Programs
IES	Illuminating Engineers Society
IP	Internet Protocol
IPCEA	Insulated Power Cable Engineers Association
IR	Infrared
ISDN	Integrated Services Digital Network
ITL	Independent Testing Laboratories
IVDL	Interactive Video Distance Learning
kb	Kilobit
kB	KiloByte
kbps	Kilo (thousand) bits per second
L/H	Length/Height
LAN	Local Area Network

ABBREVIATIONS**ABBREVIATIONS**

LEC	Local Exchange Carrier (Now Service Provider [SP])
LED	Light Emitting Diode
LP	Liquid Petroleum
LP	Liquid Propane
MB	MegaByte
Mb	Megabit
MBA	Modified Bitumen APP
Mbps	Millions of bits per Second
MC	Main Cross-connect (aka Technology Control Center)
MERV	Minimum Efficiency Reporting Value
MFMA	Maple Flooring Manufacturers Association
MHz	Million Hertz (Cycles per Second)
MIA	Masonry Institute of America
MLMA	Metal Lath Manufacturer Association
mm	Multi-Mode
MSS	Manufacturers Standardization Society of the Valve and Fitting Industry
MW	Moderate Weather
NAB	National Association of Broadcasters
NAEB	National Association of Educational Broadcasters
NBC	National Building Code
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NCPI	National Clay Pipe Institute
NDL	No Dollar Limit
NEBB	National Environmental Balancing Bureau
NEC	Nation Electric Code-Latest Edition
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code
NFPA	National Fire Protection Association
NMC	National Mechanical Code
NPA	National Particleboard Association
NPC	National Plumbing Code
NRC	Noise Reduction Coefficient
NRCA	National Roofing Contractors Association
NsBrm-Fn	Non-slip Broom Finish
NSF	National Sanitation Foundation
NWWDA	National Wood Window and Door Association
OBC	Ohio Building Code
ODOT	Ohio Department of Transportation
OEPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
OSFC	Ohio School Facilities Commission
OSN	Ohio SchoolNet Commission
OSP	Outside Plant
OTDR	Optical Time Division Reflectometer
PA	Project Administrator
PABX	Private Automatic Branch Exchange
PC	Personal Computer
PCA	Portland Cement Association

ABBREVIATIONS

PCI	Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PID	Proportional, Integral, Derivative
PPM	Parts per Million
PRI	Primary Rate Interface
psi	Pounds per Square Inch
psig	Pounds per Square Inch Gauge
PSTN	Public Switched Telephone Network
PVC	Polyvinyl Chloride
PVC	Permanent Virtual Circuit
QoS	Quality of Service
RCDD	Registered Communications Distribution Designer
RF	Radio Frequency
RfFm-Fn	Rough Formed Finish
RFI	Request for Information
RIS	Redwood Inspection Service
RJ	Residential Jack
SACMU	Sound Absorbing Concrete Masonry Unit
SBS	Styrene-Butadiene-Styrene
SC	Subscriber Connector (Fiber-Optic Connector)
SCP	System Control Processor
SD	Schematic Design
SDI	Steel Deck Institute
SDI	Steel Door Institute
SF	Square Feet
SF	Square Foot
SJI	Steel Joist Institute
sm	Single-Mode
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association, Inc.
SmFm-Fn	Smooth Formed Finish
SNMP	Simple Network Management Protocol
SP	Service Provider
SPL	Sound Pressure Level
SPRI	Single Ply Roofing Institute
ST	Straight Tip (Fiber-Optic Connector)
STC	Sound Transmission Coefficient
STI	Steel Tank Institute
SVC	Switched Virtual Circuit
SW	Severe Weather
SWP	Standard Water Pressure
TBB	Telecommunications Bonding Backbone
TC	Telecommunications Closet (aka Telecommunications Room)
TCA	Tile Council of America
TCC	Technology Control Center (aka Main Cross-Connect)
TCP/IP	Transmission Control Protocol/Internet Protocol
TDM	Time Division Multiplexing
TGB	Telecommunications Grounding Busbar
THHN	Heat Resistant Thermoplastic Conductor

ABBREVIATIONS**ABBREVIATIONS**

THWN	Moisture and Heat Resistant Thermoplastic Conductor
TIA	Telecommunications Industry Association
TIS	Traffic Impact Study
TMGB	Telecommunications Main Grounding Busbar
TMS	The Masonry Society
TR	Telecommunications Room (aka Telecommunications Closet)
Tr-Fn	Trowel Finish
TV	Television
TWS	Tackable Wall Surface
UL	Underwriters Laboratories
UL	Underwriter's Lab
UPS	Uninterruptible Power Supply
UTP	Unshielded Twisted Pair
VAV	Variable Air Volume
VCP	Visual Comfort Probability
VCR	Video Cassette Recorder
VCT	Vinyl Composition Tile
VCTT	Vinyl Cushion Tufted Textiles
VET	Vinyl Enhanced Tile
VGA	Video Graphic Array (800 x 640)
VLAN	Virtual Local Area Network
VOC	Volatile Organic Compound
VoIP	Voice over IP
WAN	Wide Area Network
WLAN	Wireless Local Area Network
WSP	Working Steam Pressure
WWF	Welded Wire Fabric
WWPA	Western Wood Products Association
XGA	Extended Graphic Array (1024 x 768)