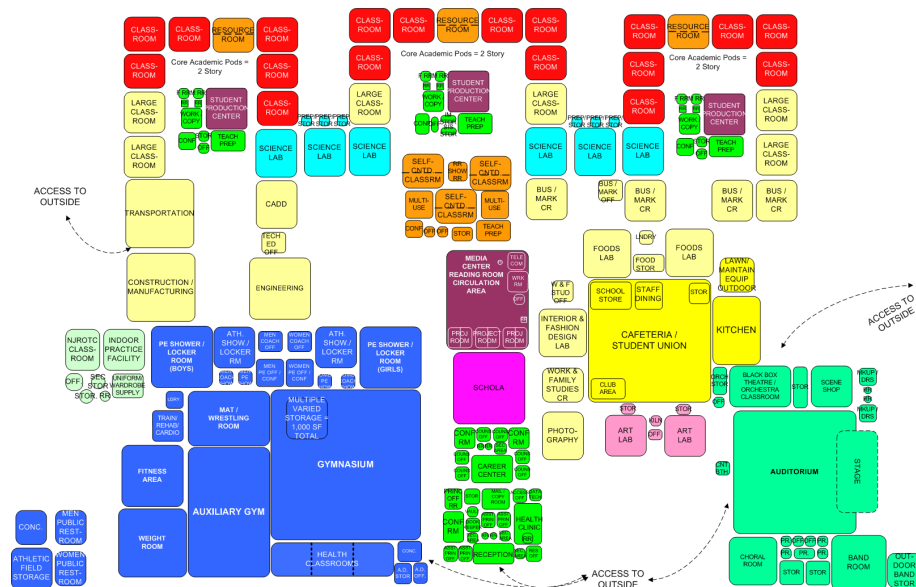


# High School Educational Specifications



**April 2009**

## Acknowledgements

DeJONG and HBA extend their appreciation to the Virginia Beach City Public School Division for commissioning these high school educational specifications and for its cooperation to make this possible. Special acknowledgements go to John Kalocay and Tony Arnold and their staffs for their tremendous support and guidance throughout the entire planning process.

We also thank the High School Educational Specifications Committee and the Virginia Beach City Public School Board.

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## High School Educational Specifications Steering Committee

The School Division and Consultants would like to extend a special appreciation to the members of the High School Educational Specifications Steering Committee.

This Committee represents a broad cross section of the school community including students, parents, teachers, administrative staff, and community members. The Steering Committee had the important task development of the High School Educational Specifications.

The Committee was responsible for reviewing demographic and facility data, examining future trends that will impact educational facilities, and developing the high school educational specifications for presentation to the School Board regarding the future high school facility needs of the Division.

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## Executive Summary

The Division-Wide High School Educational Specifications document is a collaborative effort of a team of approximately fifty teachers, administrators, community representatives, and students to define the program design requirements for future Virginia Beach High Schools. The development of this document is a direct result of the Facility Master Plan which was completed in 2007 and which recommends new construction and renovations beginning at the high school level.

Consultants DeJONG, Inc. and HBA Architecture facilitated the process through a series of work sessions:

- The ***Orientation and Visioning*** session was held on February 26, 2008 and with a focus on how high schools of the future might be organized included a presentation of social and demographic trends, and trends in program delivery options at the high school level.

Participants worked in small groups to discuss the following topics for the year 2030:

- What students will be doing
- What staff will be doing
- What the learning environments will look like
- How communities and schools will collaborate
- The impact of technology on education
- How flexibility in learning environments can be created

Participants also discussed the advantages and disadvantages of organizational structures that included:

- Ninth grade academies, 10-12
  - Small learning communities
  - Thematic schools-within-schools
  - Departmental high schools
  - "Out of the box"
  - Small vs. large high schools
- ***Lab #1*** was a two-day work session held on March 11-12, 2008 in which participants worked in their program areas (e.g. core academic, visual arts, physical education, performing arts) to define the size and number of spaces, describe the adjacencies of spaces, activities in the spaces, as well as requirements for furniture, technology, plumbing, electrical, doors and windows, and any special considerations. Each group presented their descriptions to the whole group which fostered further discussions (such as flexible spaces, shared spaces, location of spaces), on a larger scale. Program spaces that are considerably large (cafeteria, auditorium, media center, schola, and career education) were addressed as well as student and public spaces. Lab #1 also included a review of issues such as safety and security, technology, site issues, outdoor athletic needs, sustainability, community use, and aesthetics that impact the whole school.

- **Lab #2** was a two-day work session held on April 16-17, 2008 in which participants worked in their program areas to review and further refine their descriptions, illustrations, and adjacencies. During the second day of the lab, participants were divided into heterogeneous groups to suggest ways of reducing the overall square footage and to establish priorities. Through the group exercise of sharing suggested reductions, some common patterns were evident (e.g. the elimination of dedicated study halls, the reduction of sizes of some spaces, and suggestions for shared spaces) that brought the proposed square footage into an acceptable range. The resulting building is a total of 289,488 square feet and has a capacity for 1,925 students (an average of 150 square feet per student). Both the summary of space and the overall building layout illustration are highlighted on the next two pages.

- The **Final meeting** was held on May 8, 2008 to give a final review of the High School Education Specifications document, and to address any questions of the committee.

The collaborative process of the work sessions allowed participants to define not only their own program area but gave them the opportunity to look at, and understand all areas. This promoted, for example, productive discussions regarding the merits of centralized and decentralized administration and guidance; having an enclosed cafeteria or an open commons for student dining; how to integrate technology education classes into the core of the building and not on the periphery; and making the media center more available by providing student production centers in each core area. Perhaps one of the most important discussions that resurfaced as a theme was the need to keep the building as flexible as possible to accommodate future programs and changes in program delivery methods.

## Overall Building Compilation of Space

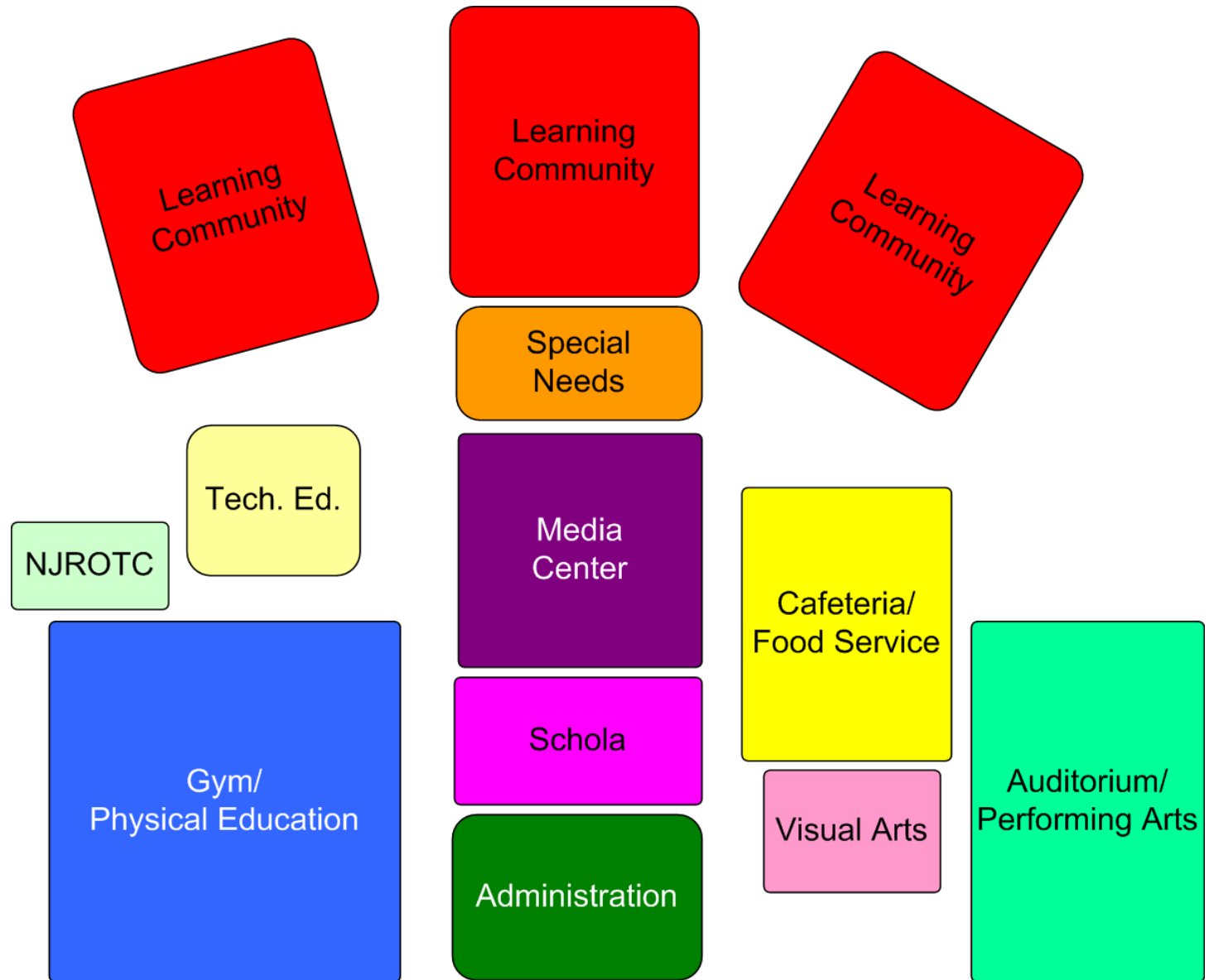
| Space   | Suggested |                |
|---|-----------|----------------|
|   | TS        | Total          |
| Learning Community #1                           | 11        | 13,600         |
| Learning Community #2                           | 11        | 13,600         |
| Learning Community #3                           | 11        | 13,600         |
| Learning Community #4                           | 11        | 13,600         |
| Learning Community #5                           | 11        | 13,600         |
| Learning Community #6                           | 11        | 13,600         |
| Special Needs                                   | 3         | 4,990          |
| Technical / Career Education                    | 13        | 20,050         |
| Visual Arts                                     | 2         | 3,300          |
| Music/Performing Arts                           | 3         | 22,000         |
| Gym / Physical Education                        | 9         | 39,720         |
| Schola  |           | 3,000          |
| Media Center                                    |           | 6,500          |
| Welcome Center/Administration                   |           | 6,055          |
| Cafeteria / Food Services                       |           | 13,600         |
| Custodial / Building Services                   |           | 3,050          |
|   |           |                |
| <b>Sub Total Programmed Areas</b>               |           | <b>203,865</b> |
|   |           |                |
| Building Services, Circulation, Restrooms, etc. | 42%       | 85,623         |
| <b>Total</b>                                    | <b>96</b> | <b>289,488</b> |

Net to Gross: 42% of Program Area or 30% of Total is approx. the Same Number

| Add Alternate [Needs to be decided by Site] | TS | Total |
|---|----|-------|
| NJROTC (add alternate)                      | 2  | 3,100 |

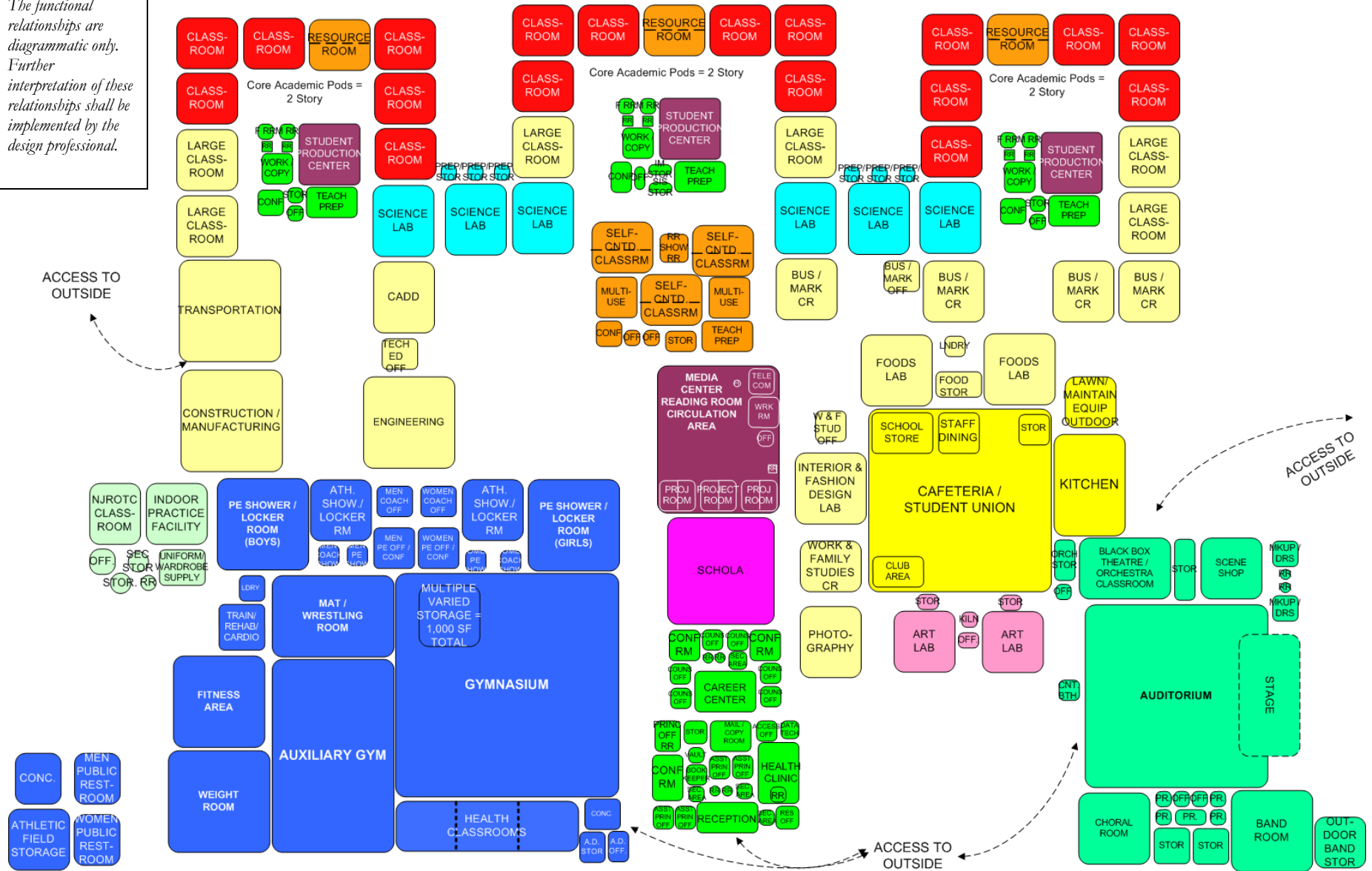
## High School Facility Spatial Relationship Drawing

*The functional relationships are diagrammatic only.  
Further interpretation of these relationships shall be  
implemented by the design professional.*



## High School Facility Illustration

The functional relationships are diagrammatic only. Further interpretation of these relationships shall be implemented by the design professional.



## Program Areas Compilation of Space

### Core Academic Learning Community

| Learning Community                                    | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
| Core Academics  | TS        | Quantity | SF    | Total         |
| Classrooms  | 6         | 6        | 850   | 5,100         |
| Large Classrooms [*Tech Ed Lab]                       | 2         | 2        | 1,000 | 2,000         |
| Resource Room   | 1         | 1        | 850   | 850           |
| Science Lab   | 2         | 2        | 1,200 | 2,400         |
| Science Prep/Storage                                  |           | 2        | 200   | 400           |
| Student Production Center [Decentralized Media]       |           | 1        | 1,000 | 1,000         |
| <b>Decentralized Admin/Guidance/Teacher Prep Area</b> |           |          |       |               |
| Conference Room                                       |           | 1        | 250   | 250           |
| Office  |           | 1        | 150   | 150           |
| Instructional Material Storage                        |           | 1        | 150   | 150           |
| Work/Copy   |           | 1        | 300   | 300           |
| Staff Restrooms                                       |           | 2        | 50    | 100           |
| Teacher Prep  |           | 1        | 500   | 500           |
| Student Restroom (male / female)                      |           | 2        | 200   | 400           |
| <b>Learning Community</b>                             | <b>11</b> |          |       | <b>13,600</b> |
| <b>Number of Learning Communities</b>                 |           |          |       | <b>6</b>      |
| <b>Totals per Pod / Cluster</b>                       | <b>66</b> |          |       | <b>81,600</b> |

\*Larger classrooms also could be Tech Ed Labs [Business, Marketing, Computer Labs]

### Special Needs

| Special Needs                  | Suggested |          |     |              |
|--------------------------------|-----------|----------|-----|--------------|
|                                | TS        | Quantity | SF  | Total        |
| Self-contained Classroom       | 3         | 3        | 850 | 2,550        |
| Restroom/Shower                |           | 1        | 100 | 100          |
| Multi-Use Special Needs Room   |           | 2        | 500 | 1,000        |
| Additional Offices             |           | 2        | 120 | 240          |
| Conference Room                |           | 1        | 300 | 300          |
| Storage                        |           | 1        | 300 | 300          |
| Teacher Prep/Offices           |           | 1        | 500 | 500          |
| <b>Special Needs-Sub Total</b> | <b>3</b>  |          |     | <b>4,990</b> |

**Technical / Career Education**

| Technical / Career Education    | Suggested |          |       |               |
|---------------------------------|-----------|----------|-------|---------------|
|                                 | TS        | Quantity | SF    | Total         |
| Foods Lab                       | 2         | 2        | 1,400 | 2,800         |
| Work & Family Studies Classroom | 1         | 1        | 850   | 850           |
| Food Storage                    |           | 1        | 400   | 400           |
| Laundry                         |           | 1        | 200   | 200           |
| Design Lab                      | 1         | 1        | 1,400 | 1,400         |
| Work & Family Studies Office    |           | 1        | 300   | 300           |
| Construction/Manufacturing      | 1         | 1        | 2,400 | 2,400         |
| Transportation                  | 1         | 1        | 2,400 | 2,400         |
| Engineering                     | 1         | 1        | 2,000 | 2,000         |
| CADD                            | 1         | 1        | 1,200 | 1,200         |
| Photography                     | 1         | 1        | 1,200 | 1,200         |
| Technical Education Office      |           | 1        | 350   | 350           |
| Business/Marketing              | 4         | 4        | 1,000 | 4,000         |
| Storage                         |           | 1        | 200   | 200           |
| Business/Marketing Office       |           | 1        | 350   | 350           |
| <b>Total</b>                    | <b>13</b> |          |       | <b>20,050</b> |

**Visual Arts**

| Visual Arts                  | Suggested                           |          |       |              |
|------------------------------|-------------------------------------|----------|-------|--------------|
|                              | TS                                  | Quantity | SF    | Total        |
| Art Lab                      | 2                                   | 2        | 1,300 | 2,600        |
| Kiln Room                    |                                     | 1        | 100   | 100          |
| Storage                      |                                     | 2        | 200   | 400          |
| Office                       |                                     | 1        | 200   | 200          |
| Digital Art Lab              | See Technical Education Photography |          |       |              |
| <b>Visual Arts Sub-Total</b> | <b>2</b>                            |          |       | <b>3,300</b> |

**Music and Performing Arts**

| Music / Performing Arts                 | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
|   | TS        | Quantity | SF    | Total         |
| Choral Room                             | 1         | 1        | 1,600 | 1,600         |
| Storage (Robes, Music)                  |           | 1        | 500   | 500           |
| Band Room                               | 1         | 1        | 2,300 | 2,300         |
| Band Storage (Instruments, Music)       |           | 1        | 500   | 500           |
| Practice rooms                          |           | 4        | 50    | 200           |
| Auditorium Seating (800 seats)*         |           | 1        | 7,200 | 7,200         |
| Control Booth                           |           | 1        | 200   | 200           |
| Auditorium Stage                        |           | 1        | 3,500 | 3,500         |
| Scene Shop                              |           | 1        | 1,200 | 1,200         |
| Make Up/Dressing                        |           | 2        | 300   | 600           |
| Storage (Costumes, Props)               |           | 1        | 500   | 500           |
| Restrooms                               |           | 2        | 50    | 100           |
| Offices                                 |           | 3        | 150   | 450           |
| Large Practice Room                     |           | 1        | 100   | 100           |
| Orchestra Storage                       |           | 1        | 300   | 300           |
| Black Box Theatre / Orchestra Classroom | 1         | 1        | 2,000 | 2,000         |
| Band Storage (Outdoor)                  |           | 1        | 750   | 750           |
| <b>Music/ Performing Arts Sub-Total</b> | <b>3</b>  |          |       | <b>22,000</b> |

\*Recommended that high schools have seating for 750-800 with 3-4 high schools having seating for 1,000



**Gym / Physical Education**

| Gymnasium / Physical Education              | Suggested |          |        |               |
|---|-----------|----------|--------|---------------|
|   | TS        | Quantity | SF     | Total         |
| Gymnasium                                   | 2         | 1        | 15,000 | 15,000        |
| Seating included in above: 2000 seats       |           |          |        |               |
| Storage                                     |           | Multiple | Varied | 1,000         |
| Auxiliary Gym                               | 1         | 1        | 5,000  | 5,000         |
| PE Shower/Locker Room                       |           | 2        | 2,000  | 4,000         |
| Fitness Area                                | 1         | 1        | 2,000  | 2,000         |
| Wrestling Room                              | 1         | 1        | 2,500  | 2,500         |
| Weight Room                                 | 1         | 1        | 2,500  | 2,500         |
| Athletics Shower/Locker Room                |           | 2        | 1,000  | 2,000         |
| Training / Rehabilitation / Cardio Lab      |           | 1        | 500    | 500           |
| PE Office/Conference                        |           | 2        | 400    | 800           |
| PE Staff Toilets/Showers                    |           | 2        | 100    | 200           |
| Laundry                                     |           | 1        | 200    | 200           |
| Coaches Offices                             |           | 2        | 300    | 600           |
| Coaches Toilet/Shower                       |           | 2        | 100    | 200           |
| Health Classroom                            | 3         | 3        | 850    | 2,550         |
| Concessions                                 |           | 1        | 300    | 300           |
| Athletic Director's Storage                 |           | 1        | 220    | 220           |
| Athletic Director's Office                  |           | 1        | 150    | 150           |
| <b>Physical Education Sub-Total</b>         | <b>9</b>  |          |        | <b>39,720</b> |
| Outdoor Spaces                              | Suggested |          |        |               |
|   | TS        | Quantity | SF     | Total         |
| Football Stadium                            |           |          |        |               |
| Athletic Field Storage                      |           | 1        | 1,000  | 1,000         |
| Public Restrooms                            |           | 2        | 600    | 1,200         |
| Concession                                  |           | 1        | 600    | 600           |
| <b>Physical Education Outdoor Sub-Total</b> |           |          |        | <b>2,800</b>  |
| <b>Physical Education Total</b>             | <b>9</b>  |          |        | <b>42,520</b> |

**Schola**

| Schola                  | Suggested |          |       |              |
|-------------------------|-----------|----------|-------|--------------|
|                         | TS        | Quantity | SF    | Total        |
| Schola [175 Seats]      |           | 1        | 3,000 | 3,000        |
| <b>Schola Sub-Total</b> |           |          |       | <b>3,000</b> |

**Media Center**

| Media Center                     | Suggested                  |          |       |              |
|----------------------------------|----------------------------|----------|-------|--------------|
|                                  | TS                         | Quantity | SF    | Total        |
| Reading Room/Circulation         |                            | 1        | 4,000 | 4,000        |
| Student Production Centers       | In Each Learning Community |          |       |              |
| Media Specialist Office          |                            | 1        | 150   | 150          |
| Workroom/Storage                 |                            | 1        | 400   | 400          |
| Telecommunications Room          |                            | 1        | 300   | 300          |
| Hub Rooms, distributed thru Bldg |                            | 4        | 25    | 100          |
| Project Room                     |                            | 3        | 500   | 1,500        |
| Restroom                         |                            | 1        | 50    | 50           |
| <b>Media Center Sub-Total</b>    |                            |          |       | <b>6,500</b> |

\* 6 Student Production Centers. One in each Learning Community

**Welcome Center / Administration**

| <b>Welcome Center / Administration</b>             |           | <b>Suggested</b> |           |              |
|--|-----------|------------------|-----------|--------------|
| <b>Administration</b>                              | <b>TS</b> | <b>Quantity</b>  | <b>SF</b> | <b>Total</b> |
| Reception  |           | 1                | 600       | 600          |
| Secretarial Area                                   |           | 3                | 80        | 240          |
| Principal's Office/Rest Room                       |           | 1                | 225       | 225          |
| Assistant Principal's Office                       |           | 4                | 125       | 500          |
| Conference Room                                    |           | 1                | 400       | 400          |
| Mail/Copy Room                                     |           | 1                | 300       | 300          |
| Storage  |           | 1                | 150       | 150          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| Resource Officer                                   |           | 1                | 150       | 150          |
| Bookkeeper   |           | 1                | 120       | 120          |
| Data Technician                                    |           | 1                | 100       | 100          |
| Access Office                                      |           | 1                | 120       | 120          |
| Health Clinic                                      |           | 1                | 700       | 700          |
| Vault  |           | 1                | 80        | 80           |
| <b>Guidance</b>                                    |           |                  |           |              |
| Career Center                                      |           | 1                | 700       | 700          |
| Counselors' Offices                                |           | 6                | 120       | 720          |
| Secretarial Area                                   |           | 1                | 100       | 100          |
| Conference Room                                    |           | 2                | 250       | 500          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| <b>Decentralized [See Core Academic]</b>           |           |                  |           |              |
| School Improvement Specialist Storage [In One Pod] |           | 1                | 150       | 150          |
| Offices for Itinerant and Others                   |           | 6                | 150       | See Core     |
| <b>Total</b>                                       |           |                  |           | <b>6,055</b> |

**Cafeteria / Food Service**

| Cafeteria / Food Service      | Suggested |          |       |               |
|-------------------------------|-----------|----------|-------|---------------|
|                               | TS        | Quantity | SF    | Total         |
| Kitchen                       |           | 1        | 3,500 | 3,500         |
| Preparation Area              |           |          |       |               |
| Serving Area                  |           |          |       |               |
| Dry Food Storage              |           |          |       |               |
| Cooler/Freezer                |           |          |       |               |
| Ware Washing                  |           |          |       |               |
| Kitchen Mgr Office            |           |          |       |               |
| Restroom                      |           |          |       |               |
| Lockers                       |           |          |       |               |
| Cafeteria / Student Union     |           | 1        | 8,000 | 8,000         |
| Table & Chair Storage         |           | 1        | 300   | 300           |
| Staff Dining w/Vending        |           | 1        | 600   | 600           |
| School Store                  |           | 1        | 700   | 700           |
| Club Areas                    |           | 1        | 500   | 500           |
| <b>Food Service Sub-Total</b> |           |          |       | <b>13,600</b> |

**Custodial / Building Services**

| Custodial / Building Services                  | Suggested |          |       |              |
|--|-----------|----------|-------|--------------|
|  | TS        | Quantity | SF    | Total        |
| Receiving/Storage                              |           | 1        | 1,000 | 1,000        |
| Maintenance/Repair Area                        |           | 1        | 600   | 600          |
| Office/Planning/Meeting Area/Break Room        |           | 1        | 300   | 300          |
| Locker Room/Toilets                            |           | 2        | 200   | 400          |
| Lawn/Maintenance Equipment (Outdoor Storage)   |           | 1        | 750   | 750          |
| Loading Area                                   | Outside   |          |       |              |
| <b>Custodial / Building Services Sub-Total</b> |           |          |       | <b>3,050</b> |

**NJROTC**

| NJROTC                    | Suggested |          |       |              |
|---------------------------|-----------|----------|-------|--------------|
|                           | TS        | Quantity | SF    | Total        |
| Indoor Practice Facility  | 1         | 1        | 1,200 | 1,200        |
| Classroom                 | 1         | 1        | 850   | 850          |
| Uniform / Wardrobe Supply |           | 1        | 600   | 600          |
| Office                    |           | 1        | 200   | 200          |
| Secure Armory Storage     |           | 1        | 100   | 100          |
| General Storage           |           | 1        | 100   | 100          |
| Restroom                  |           | 1        | 50    | 50           |
| <b>NJROTC Sub-Total</b>   | <b>2</b>  |          |       | <b>3,100</b> |

## Program Area Overview

Listed below is an overview of each program area to be included in high school facilities in Virginia Beach. Special features of the school, such as furniture, equipment, technology, and site are also described.

- **Learning Community**

The learning community (pod/cluster) concept accommodates a variety of instructional strategies and student-grouping approaches. This concept also provides a learning environment that is characterized by flexibility, a sense of community for the students and teachers working in a pod/cluster or community, and a safe/well-supervised environment. Teachers will have the option and flexibility within a cluster to create and organize learning environments that work for students and their learning styles.

The basic organizational unit for this school will be the pod/cluster, consisting of general-purpose learning labs or classrooms, teachers' center, classrooms for intervention, accommodation, or transition, resource rooms, and science labs.

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

- **Special Needs**

To ensure that students with special needs are integrated into the high school, it is important to provide various types of learning environments to best their needs. A learning cluster for special needs students will be developed for students who benefit by learning in self contained classrooms. The cluster will also provide space for special needs teacher offices, a teacher prep area, conference room, restrooms, a shower, and related support services such as speech therapy. Resource rooms will also be located within each of the Core Academic Learning Communities for students to have access for small group learning and assistance. The core classrooms will also provide inclusion for students within each learning community.

- **Technical and Career Education**

Workers of today may change occupations five to seven times in their lifetimes. In order to better prepare students for this trend, technical and career education courses are now organized into career clusters. Courses within the three cluster areas provide for career exploration, pursuit of career interests, preparation for the changing demands of life roles, study of the principles and practical experiences of technology and science, and application of academic learning in the world of work. In addition, many courses apply the concepts of Total Quality Management.

Students seeking employment after graduation from high school, as well as students seeking employment after the completion of college, may choose from a wide variety of technical and career courses.

- **Visual Arts**

Visual Arts is an integral component of the high school curriculum and these spaces should be designed to accommodate both 2-D and 3-D instruction.

Adequate storage, display cases (in the art labs and throughout the building), natural lighting, durable work surfaces, appropriate cabinetry and furnishings, need to be given strong consideration when planning these labs. Access to an outdoor space is also desirable.

- **Music & Performing Arts**

Music and performing arts should be accommodated in teaching spaces specifically designed for this curriculum. Vocal and instrumental music and performing arts are a dynamic part of any curriculum, providing students with an opportunity to improve their creative skills.

Design, size and shape of room, flexibility, ceiling heights, acoustics, storage, and room adjacencies should be especially considered when planning these spaces. Further, since the community will use these spaces, the location should be strategically placed within close proximity to an exterior entrance.

- **Schola**

The schola is a multi-use space similar to a lecture hall with a tiered floor and fixed seating. The schola should have an approximate capacity of 175 and be located between the cafeteria and media center. The schola should have state-of-the-art technology for multi-media presentations and other large group meetings to be utilized by students, teachers, and the community.

- **Physical Education**

To support school physical education programs, a variety of indoor and outdoor areas are required. Outdoor physical education teaching areas should be located near the indoor gymnasium.

Physical education facilities should be designed and constructed with a focus on community use during non-school hours, since there is a high demand for both indoor and outdoor facilities.



- **Media Center / Student Production Center**

The Media Center serves a dual role. Its traditional role is a library and a place to conduct research. Its new role is to serve as a technology and information base center. In this new role, the Media Center houses a transparent voice/video/data network, which runs throughout the entire building. This network enables the transmission of media services to the desktops of teachers and students without them physically entering the Media Center. This area is changing from a "depository of books" to a "technology information distribution center." It is not projected that the library functions will discontinue; rather digital technology will enhance voice, video, and data communications within the school, among district facilities, and with distance learning resources. In addition to the traditional Media Center spaces, each Learning Community will house a Student Production Center.

- **Welcome Center / Administration**

Immediately upon entry, visitors will be greeted in the administration "welcome area." The school principal office, support staff offices, guidance, and health services should be located in a centralized area at the main entrance of the school. Additional offices will be housed in the Learning Communities to offer a decentralized approach for administration and/or guidance if desired. These offices can be used for itinerant staff as well.

- **Cafeteria / Food Service**

This area is planned as a flexible room that can accommodate student dining, assemblies, and community meetings. It is proposed, through creative design, that this area will effectively house multiple functions with seating space for all uses.

- **NJROTC**

The mission of the NJROTC program is to instill in students the values of citizenship, service to the United States, personal responsibility and a sense of accomplishment. This program is currently housed in five VBCPS high schools.

- **Custodial / Building Services**

The diversity of the work provided by the Custodial and Building Services staff requires certain spaces (custodial office, locker room, storage) to be located near food services while other custodial spaces (equipment and supply closets with floor drains and sinks) will need to be conveniently located throughout the building. Oversized doors are needed for all custodial equipment spaces. Provisions for outdoor storage with water and electricity are required as well. Careful consideration must be given to the location of loading docks, providing separate service roads with access for deliveries, and separate parking for custodial and food service staff and for school owned vehicles. Additionally, the custodial staff is concerned about the ease of cleaning. Wall and floor surfaces must be appropriate for the type of use expected and must be durable and easily cleaned. Windows can have window blinds designed in between panes of glass.



## Special Features

Listed below is an overview of special features to be included in Virginia Beach high school facilities. Special features of the school, such as furniture, equipment, technology, and site are also described.

- **Corridors and Commons Spaces**

The front entry lobby should be welcoming and inviting for students, staff, and visitors. Extensive display areas should be provided for two-dimensional and three-dimensional student work and awards. Finishes should be durable and easy to maintain. The scale of all spaces should be student-friendly. Colors, artificial lighting, and natural day lighting should be managed artfully to create an environment that communicates that school is a very special place.



- **Furniture & Equipment**

Classrooms vary in shape and size; therefore, the furniture should be flexible to accommodate a variety of classroom formats for both individual and group activities. Teachers and students should have storage space for personal belongings, papers, and books as well as storage for supplies and materials. Work areas exist with direct access to copiers, multi-media equipment, and telephones. Teacher preparation areas should be located in close proximity to classrooms to permit, encourage, and enhance student and teacher interaction.

- **Technology**

The facility should contain the latest in technology and be configured with wireless access points throughout the facility. It should also be wired for voice, video and data throughout the building. The program design is intended to bring information to the desk of the student, and computer technology will be distributed in every classroom. It is intended that access to technology will be seamless and pervasive throughout the building. The Media Center should serve as the hub for technology distribution. Closets will be required for routers and telephone equipment.

- **Handicapped Accessibility**

The entire facility should be accessible for all students, staff, and visitors. This should be accomplished through judicious use of ramping and elevators where necessary, sufficient internal clearances for circulation, convenient bus/van loading and unloading, and nearby handicapped parking spaces. All elements of the Americans with Disabilities Act must be complied with, including way-finding and signage, appropriate use of textures, and universal accessibility of all indoor and outdoor school facilities.

- **Voting Area**

An area near a public entrance, such as in the cafeteria or in a large lobby, should be designated as an area for use as a voting site on election days. Typically, the space would be used from 5am to 9pm on a Tuesday or Saturday. Access to electrical, internet, and phone outlets would be required.

- **Storage Space**

Some storage spaces, such as custodial closets, do not have potential reuse as occupied spaces, but many other storage spaces may be later reused as offices. Accordingly, all storage areas with potential occupancy should be equipped with power, ample lighting, HVAC, internet and voice outlets as well as fire alarm strobes.

## Flexibility of the Learning Environment

Constructing the indoor and outdoor structures and spaces where students go to school today must meet many challenges and expectations. The aesthetics should reflect, first and foremost, the high academic aspirations of the school. It should have community visibility and presence. Creating a community landmark will establish a recognizable identity that will instill pride in its students and community and also express the value that the community has for its children. Areas within the school should be developed to have clear organization and internal identity.

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

- **Variety of Instructional/Learning Spaces**

Space needs for ongoing student assessments and emerging, more active learning methods results in a greater variety of spaces to support learning. These include Teacher Planning Areas and Instructional Materials Storage Rooms.

### High School Educational Specifications

Spaces should be designed to allow for flexibility in educational delivery, size of student grouping, noisy collaborative student activities, and increasingly intensive reliance on computer technology. Spaces should allow students to work independently and collaboratively, give and/or receive tutoring, as well as accept instruction.

- **Facility Change Should Be the Norm**

Configurations of multiple, isolated classrooms make changes and additions cost-prohibitive and, once a building is constructed, often difficult to accomplish. Facilities should be constructed in a manner in which change and flexibility is the norm, not the exception. Building materials, systems, and furniture should be selected to support these concepts as well.



*(Photograph used for illustration purposes only)*

- **Indoor and Outdoor Learning Environments**

By rethinking all spaces, better use of the facilities and site can occur. One way to accomplish this is to use windows and outside areas to make rooms “feel” larger as well as utilizing outdoor areas for teaching environments.

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

The learning environment should be student-centered and designed for “hands-on learning,” promoting student autonomy and independence. Space for active participation should be incorporated, with classrooms providing opportunities for integrating disciplines and easy access to tools of exploration. The outdoor site should serve as a pro-active learning environment as well. In summary, the school should be a teaching tool, not merely a structure to house students.

- **New versus Existing Buildings**

The concepts found herein can be applied to new construction as well as the renovation of existing facilities. It is important to point out that achieving the educational and facility concepts should be the primary goal, which may result in the need to modify some of the square footage or other guidelines. The final determination for modifications should be: Does the space meet the academic needs of the students?





High School Educational Specifications

These investigations have resulted in a series of educational “best practices” intended to provide students with the greatest opportunity for success. Implementing educational best practices can have a significant impact on facilities and should drive the design of the building. It is important to realize that buildings need to be designed for the future and that constant change requires flexibility to meet the ever changing demands of best practices, technology, instruction, delivery and learning. The following describes a few educational best practices, cites examples where they have been implemented, and expresses the impact each has on facilities.



*(Photograph used for illustration purposes only)*

## 21st Century Best Practices

Public education is at a critical point in history. We have transitioned from the industrial age to the information age, and as most organizations have already done, school districts across the country are considering changing the way they do business. School districts are investigating governance, curricula, organizational models, current and emerging technologies, the role of administration and their local communities to determine the effect each of these has on student performance.

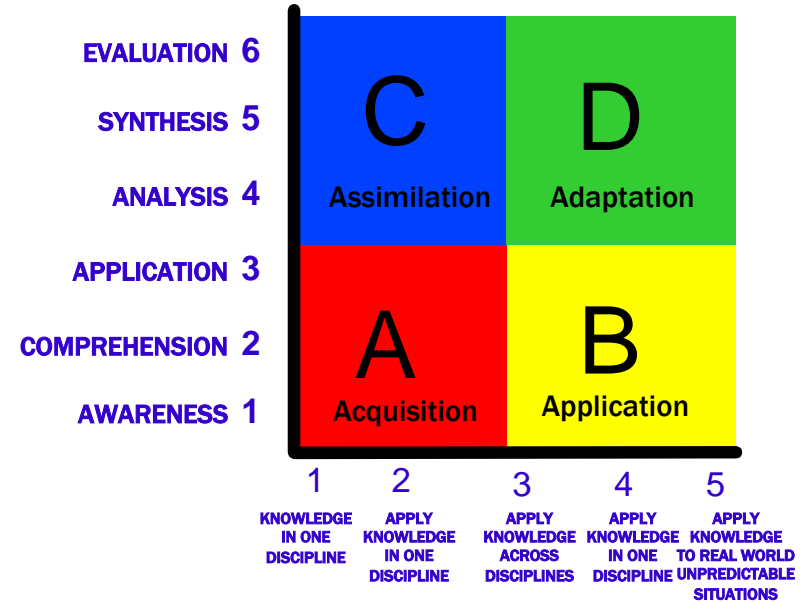
**Curriculum: Offer essential knowledge, integrate it, and make connections to real life**

- Based on federal and state content standards
- Require content areas to be linked to one another
- Accommodate multiple-intelligences and learning styles
- Demand critical thinking and problem-solving
- Incorporate pervasive technology
- Utilize multiple performance assessments

**Best Practice:** Best practices suggest that the core of the school curriculum must offer both the substance and the practicality to prepare students for an uncertain future. The curriculum should strive to meet individual needs without compromising larger goals. Dr. Willard Daggett, President of the International Center for Leadership in Education and a national expert on education, claims that schools should “make education rigorous and relevant for all students.” Daggett uses a Rigor and Relevance Matrix to categorize curricula into one of four quadrants. Daggett defines rigor as the level of Bloom’s Taxonomy achieved in any given lesson. He defines relevance as a continuum ranging from “knowledge in one discipline” to “applications to real-world unpredictable situations.”

**RIGOR/ RELEVANCE FRAMEWORK**

Source: International Center for Leadership in Education



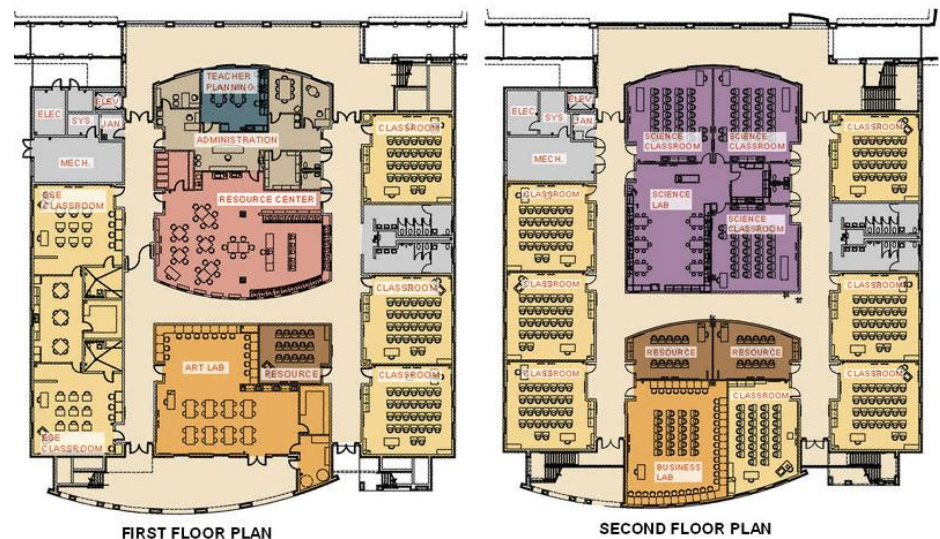
**Facilities Impact:** Adopting curricula that offer essential knowledge, integrated approaches, and connections to real life can have a significant impact on facilities. Facilities may require student production spaces for the creation of projects, small group rooms for collaboration, and large group presentation spaces for students to show their work.

**Organizational Models:** Provide student-centered pod/cluster approach

**Best Practice:** Student-centered approaches provide students with a variety of opportunities to learn and develop skills and competencies based on their individual needs. Organizational models such as grade-level teaming, schools-with-in-a-school, and thematic approaches often characterize these student-centered approaches.

Best practices might suggest that facilities be organized into clusters/pods/houses, instructional units comprised of classroom spaces, student production spaces, and teacher preparation areas. Best practices might also suggest that double-loaded corridor designs cannot provide the flexibility necessary to accommodate multiple organizational models nor can they foster the same level of cooperation, teaming, and sharing of professional resources as house designs.

**Facilities Impact:** Implementing these organizational models, specifically the house/cluster/pod concept, offers significant advantages to the delivery of curriculum and observation of students. While the impact implementing the house concept has on facilities is continually being evaluated in terms of major systems, it typically should not outweigh the educational advantages.



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(Diagram used for illustration purposes only)



## Examples of Organizational Models

- **Grade-Level Teaming:**

Grade-level teaming is based on organizing the building into separate grade-level units. Grade-level teams typically utilize an interdisciplinary approach. Each pod/cluster contains learning centers, regular classrooms, for each of the core academic content areas (i.e. mathematics, science, English, social studies). Students in each respective grade-level take their core academics in their house leaving only for specialty areas such as physical education, visual and performing arts, and technology education.

- **Schools-Within-A-School:**

Smaller schools or learning communities are housed in the same facility, but having separate governing bodies. Thus, a large school can be divided into smaller, more personalized units.

The school-within-a-school model provides an opportunity for more interaction between students and administrators and between administrators and staff. This allows the teachers to work cooperatively to best meet the needs of the students on their team.

- **Thematic Teaming:**

Thematic teaming is based on delivering curriculum within the context of a specific theme. Themes may include Science and Math, Fine and Performing Arts, or Foreign Language and Literature. A given school may have multiple themes or different themes for separate learning communities.



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**Technology: Create pervasive and integrated systems**

- Access to voice, video, data, and electrical outlets provided in every instructional space
- Proficiencies incorporated into other content areas
- Utilize distance-learning opportunities
- Staff development

**Best Practice:** Technology continues to evolve and influence education. Technology has traditionally been perceived as a stand-alone content area with its own dedicated spaces. Best practices, however, suggest that technology should be incorporated into every learning space and into all curricula. Incorporating technology can accomplish two basic goals of education: linking traditionally isolated content areas and providing teachers with tools to explore more of Howard Gardner's multiple intelligences in their lessons.

Howard Gardner has indicated in "Frames of Mind" that there are several different types of intelligences (linguistic, mathematical, musical, kinesthetic, spatial, intrapersonal, interpersonal, and natural intelligence). Each person has strengths in some intelligences and weaknesses in others. Experts have indicated that students retain more information when several intelligences are involved in the learning process. For example, The NTL Institute for Behavior Science reports that students retain only 10% of what they read, but retain 90% of what they read, see, hear, experience, and teach.

**Facilities Impact:** Incorporating technology into all learning spaces and into all curricula can have a significant impact on facilities. First, all learning spaces would require access to voice, video, data ports, and electrical outlets. Second, infrastructure must be designed in such a way to allow access for maintenance and upgrades as technology continues to evolve.

**Administration: Increase student contact and flexibility**

**Best Practice:** As a result of recent violent crimes occurring in school facilities, school districts across the country are searching for both active and passive means of security. While not the only reason, best practices suggest that decentralizing administration serves this purpose. The decentralization of administrative services also provides the flexibility and opportunity for increased student contact, decreased student anonymity, and opportunities for passive supervision.

In addition, assistant principals, deans, and counselors form teams, are closer to the student and teacher, and can more efficiently use their time, expertise, and resources because their offices are located in the academic pods / clusters. Communication between administrators is no longer an issue as access to instructional information and student records and maintaining a positive and secure school environment can be achieved through the effective use of technology.

**Facilities Impact:** Decentralizing administration affects facilities only by the necessity to relocate offices and support spaces within each learning community and/or other areas.

**Community Use:** Instill a sense of participation, ownership, and pride

- Cooperative Alliances
- Youth Services
- Shared Decision-Making
- Community Service Volunteers
- Parent Involvement
- School/College Partnerships
- Polling places for elections

**Best Practice:** Best practices suggest that facilities should serve not only as an instructional centers for students, but also as user-friendly centers of the communities. Facilities should provide programs and access to resources for adults, businesses, and other community organizations. Community/school partnerships are playing an increasing role in secondary school facilities. These partnerships provide students with expanded learning opportunities, professional development opportunities for staff, and a venue for community activities.

High School Educational Specifications

**Facilities Impact:** Providing access to and forming partnerships with the community can have a significant impact on facilities. Additional spaces such as parent or community volunteer rooms, community locker rooms, and storage spaces may be necessary. In addition, for security purposes, community access may require careful attention to the organization of the facility. Community accessible portions of the facility may need to be located in areas that permit the remainder of the facility to be secure before, during, and after school hours.



*(Photograph used for illustration purposes only)*

## Orientation & Visioning Work Session Overview

On Tuesday, February 26, 2008 the Virginia Beach City Public Schools High School Education Specifications Committee met for the first time. The meeting was held at the Virginia Beach Resort Hotel & Conference Center on Shore Drive.

The meeting began with introductions of the committee, the school administration, and the consultants followed by a welcome from John Kalocay, Assistant Superintendent of Administrative Support Services and Director of Facilities Planning & Construction: Tony Arnold.

Tracy Richter, President of DeJONG-RICHTER, presented an overview of the Facility Master Plan that was completed Summer 2007. The plan recommends renovations and new builds across the Division, beginning at the high school level. Therefore, in order to proceed with the Facility Master Plan, educational specifications for the high schools are necessary. Mr. Richter also detailed the educational specifications process.

Dr. William DeJong, DeJONG CEO, made a PowerPoint Presentation entitled: High Schools – the Next Generation which discussed the history of high schools, social and demographic trends currently effecting high schools, and trends that are impacting the high schools of the future.





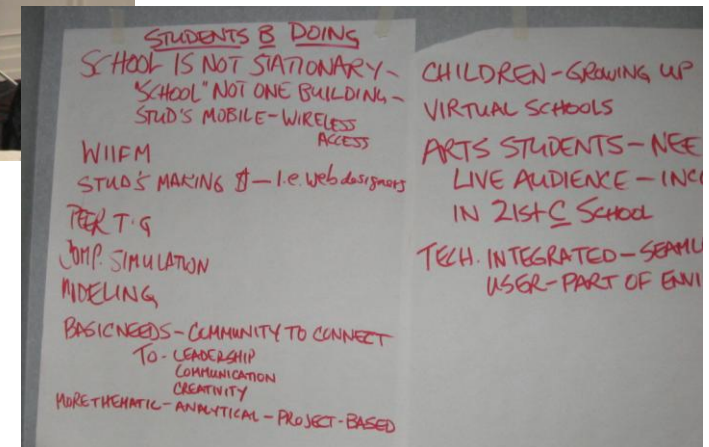
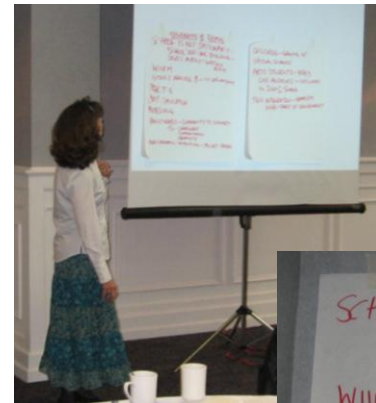
## Schools of the Future [2030]

The first task of the participants in this Work Session was to focus on the future of education. Although facilities are anticipated to have life expectancies of 50 years or more, we can be sure that education models will change during the life of the facility. The exercise was conducted to try to anticipate what the facility should be able to accommodate. Participants worked in one of six groups focused on these topics:

1. What will STUDENTS be doing in 2030?
2. What will STAFF be doing in 2030?
3. What will LEARNING ENVIRONMENTS look like in the year 2030?
4. How will COMMUNITY and SCHOOLS collaborate in the year 2030?
5. What will be the impact of TECHNOLOGY on education in the year 2030?
6. How do you create FLEXIBILITY IN LEARNING ENVIRONMENTS in the year 2030?

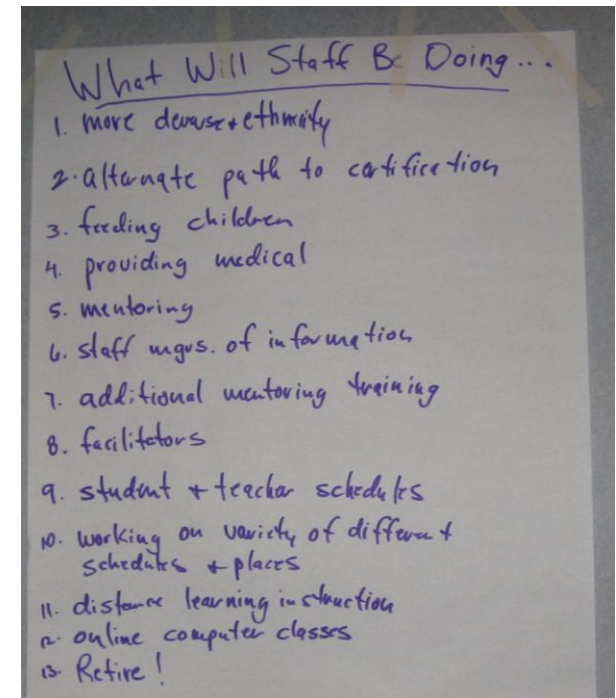
### 1. What will STUDENTS be doing in the year 2030?

- School is not stationary
- Schools not one building
- Students are mobile – wireless access
- Students making money – for example web designers
- Peer tutoring
- Computer simulation
- Modeling
- Basic needs – community to connect to leadership, communication, creativity
- More thematic, analytical, project-based
- Still children – growing up
- Virtual schools
- Art students need live audience – how is it included in the 21<sup>st</sup> Century school
- Technology is integrated – seamless, the user is part of the environment



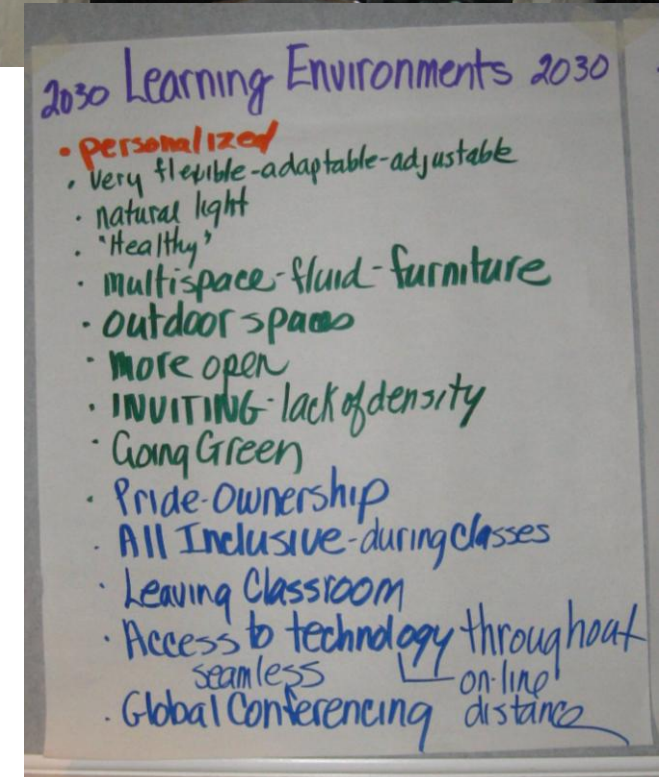
## 2. What will STAFF be doing in the year 2030?

1. More diverse and ethnicity
2. Alternative path to certification
3. Feeding children
4. Providing medical care
5. Mentoring
6. Managers of information
7. Additional mentoring training
8. Facilitators
9. Student and teacher schedules
10. Working on a variety of different schedules and places
11. Distance learning instruction
12. Online computer classes
13. Retire



### 3. What will LEARNING ENVIRONMENTS look like in the year 2030?

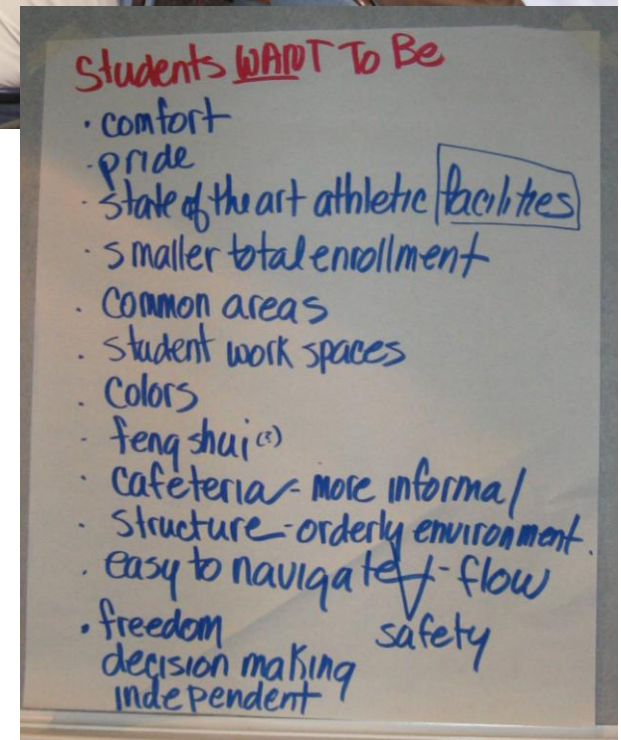
- Personalized
- Very flexible, adaptable, adjustable
- Natural light
- Healthy
- Multi-space, fluid, furniture
- Outdoor spaces
- More open
- Inviting, lack of density
- Going green
- Pride – ownership
- All inclusive – during classes
- Leaving classroom
- Seamless access to technology throughout – on-line, distance
- Global conferencing





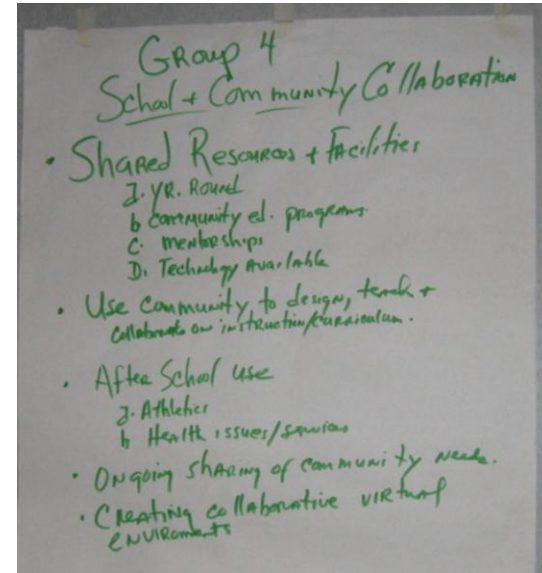
Students want:

- Comfort
- To be proud of environment
- State of the art athletic facilities
- Smaller total enrollment
- Common areas
- Student work spaces
- Colors
- Feng shui
- Informal cafeteria
- Structured and orderly environment
- Environment that's easy to navigate and flows well
- A safe environment
- Freedom
- To make independent decisions
- Storage space, not necessarily a locker
- Inviting entrances
- New library configuration
- Access to facilities after regular school hours
- Production centers
- Books? Real Books? Libraries=Book Museums?
- Adobe Connect
- Technology
- Flexibility



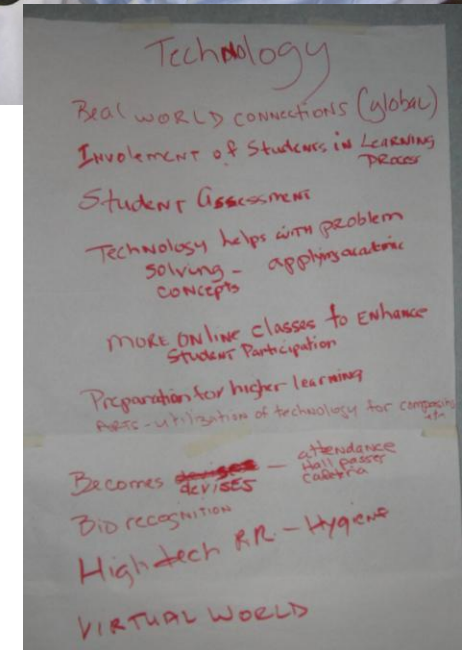
#### 4. How will COMMUNITY and SCHOOLS collaborate in the year 2030?

- Shared resources & facilities
  - Year round
  - Community education programs
  - Mentorships
  - Technology available
- Use community to design, teach, and collaborate on instruction / curriculum
- After school use
  - Athletics
  - Health issues / services
- Ongoing sharing of community needs
- Creating collaborative virtual environments



## 5. What will be the impact of TECHNOLOGY on education in the year 2030?

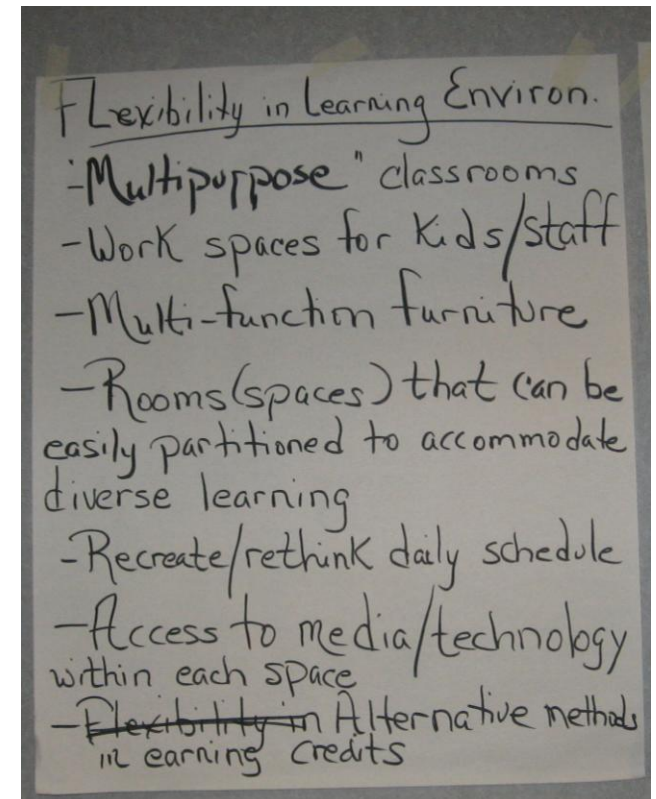
- Real world global connections
- Involvement of students in learning process
- Student assessment
- Technology helps with problem solving – applying academic concepts
- More online classes to enhance student participation
- Preparation for higher learning
- Arts – utilization of technology for composing, etc.
- Becomes devices for attendance, hall passes, cafeteria payments
- Bio-recognition
- High tech restroom – hygiene
- Virtual world





## 6. How do you create FLEXIBILITY IN LEARNING ENVIRONMENTS in the year 2030?

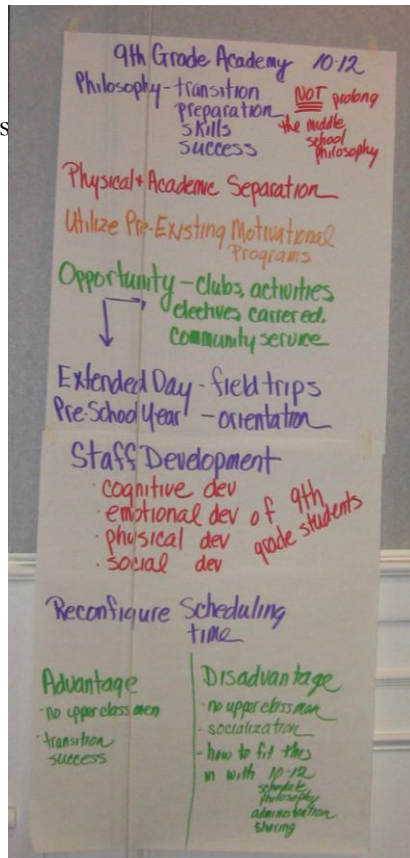
- Multipurpose classrooms
- Work spaces for kids / staff
- Multi-function furniture
- Rooms (spaces) that can be easily partitioned to accommodate diverse learning
- Recreate / rethink daily schedule
- Access to media / technology within each space
- Alternative methods in earning credits



## Program Delivery Options

How high schools are organized is in transition. High schools have historically been departmentalized. In recent years there has been increased focus on academies, thematic schools, small learning communities and a variety of other organizational structures. The construction of a new high school or the renovation of an existing school is costly; they are buildings which are to last for 50 years or more and need to be flexible to embrace change over time. Participants were divided into groups to define and brainstorm ideas regarding various approaches to organizing high schools and to discuss their advantages and disadvantages. The organizational structures examined were:

- A. 9<sup>th</sup> Grade Academy, 10-12
- B. Small Learning Communities
- C. Thematic Schools-Within-Schools
- D. Departmental High School
- E. Combinations of above
- F. Out of the Box



## A. 9<sup>th</sup> Grade Academy, 10-12

- Philosophy:
  - Transition
  - Preparation
  - Skills
  - Success
  - NOT prolong middle school philosophy
- Physical & academic separation
- Utilize pre-existing motivational programs
- Opportunity:
  - Clubs
  - Activities
  - Electives, Career education
  - Community service
- Extended day field trips
- Pre-school year orientation
- Staff Development regarding 9<sup>th</sup> grade students' development:
  - Cognitive
  - Emotional
  - Physical
  - Social
- Reconfigure scheduling time

### Advantages:

- No upper classmen
- Transition success

### Disadvantages:

- No upper classmen
- Socialization
- How to fit this in with 10-12:
  - Schedule
  - Philosophy
  - Administration
  - Sharing

## B. Small Learning Communities

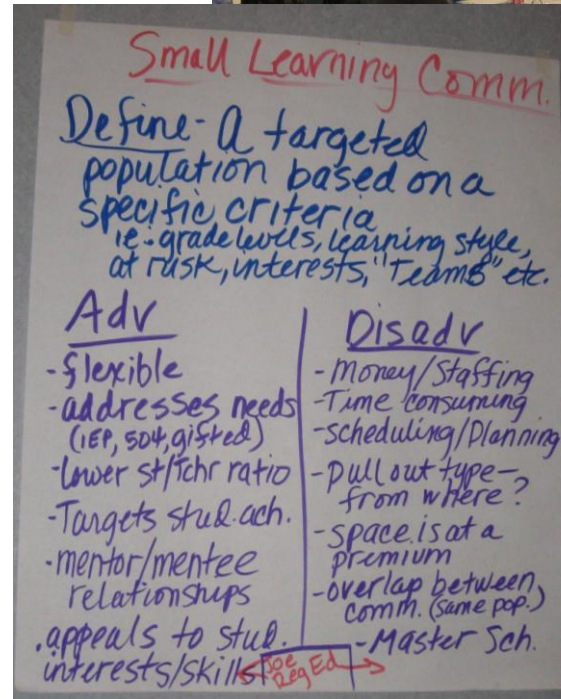
**Definition:** A targeted population based on a specific criteria i.e. grade levels, learning style, at risk, interests, “teams”, etc.

### Advantages:

- Flexible
- Addresses needs:
  - IEP
  - 504
  - Gifted
- Lower student / teacher ratio
- Targets student achievement
- Mentor / mentee relationships
- Appeals to students interests / skills

### Disadvantages:

- Money / staffing
- Time consuming
- Scheduling / Planning
- Pullout type – from where?
- Space is at a premium
- Overlap between communities (same population)
- Master schedule





## C. Thematic Schools-within-Schools

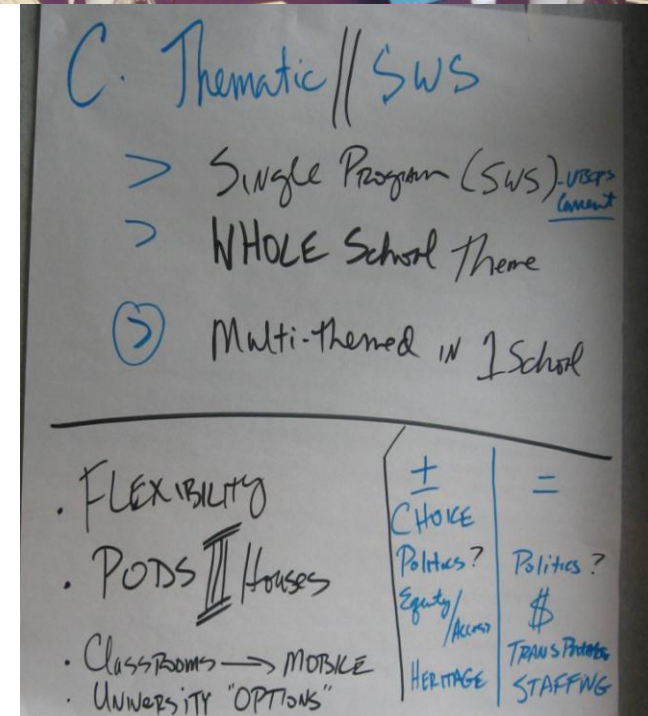
- Single program – Currently Virginia Beach City Public Schools has Schools-within-schools
- Whole school theme
- Multi-themed in one school
- Flexibility
- Pods
- Houses
- Mobile classrooms
- University options

### Advantages:

- Choice
- Politics
- Equity / access
- Heritage

### Disadvantages:

- Politics
- Cost
- Transportation
- Staffing



## D. Departmental High School

### Definition:

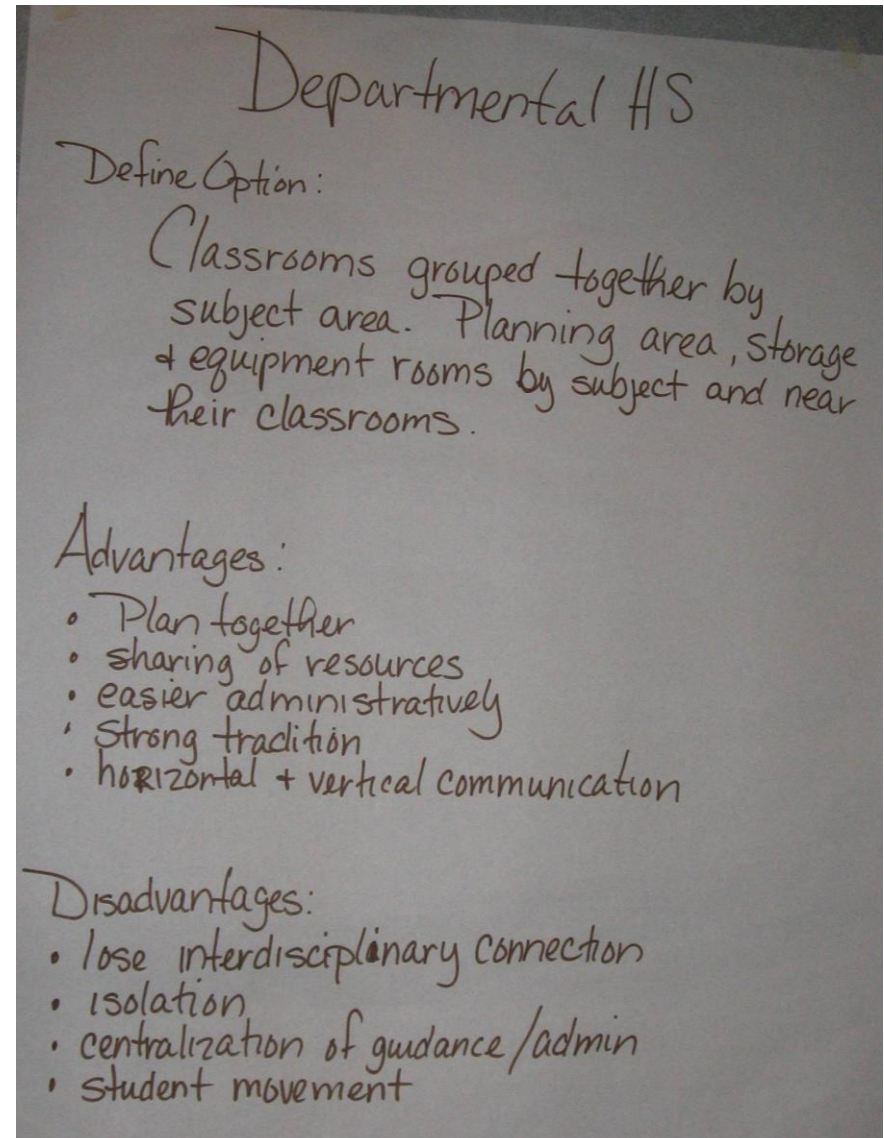
Classrooms grouped together by subject area. Planning area, storage & equipment rooms by subject and near their classrooms.

### Advantages:

- Plan together
- Sharing of resources
- Easier administratively
- Strong tradition
- Horizontal & vertical communication

### Disadvantages:

- Lose interdisciplinary connection
- Isolation
- Centralization of guidance / administration
- Student movement





## E. Combinations of above

**Definition:** Departmental and small learning communities.

### Ideas:

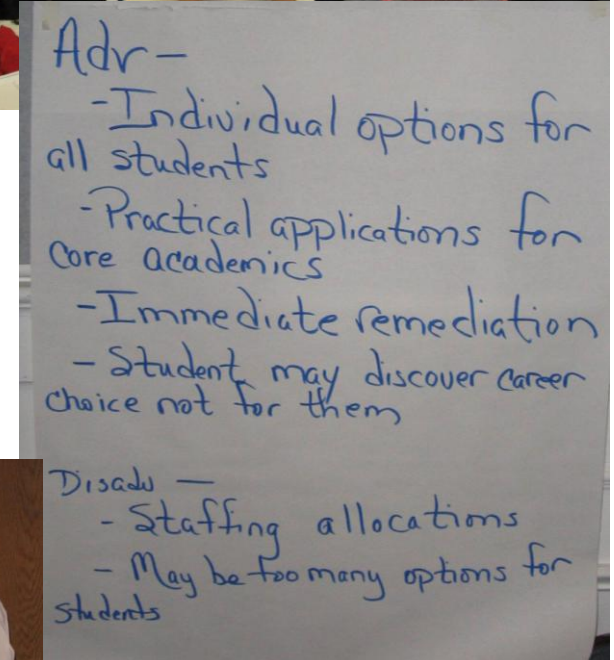
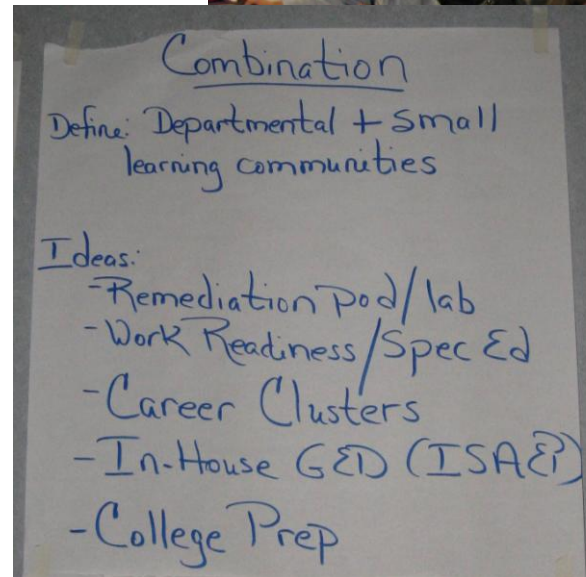
- Remediation pod / lab
- Work readiness / special education
- Career clusters
- In-house GED (ISAEP)
- College preparatory

### Advantages:

- Individual options for all students
- Practical applications for core academics
- Immediate remediation
- Student may discover career choice for them

### Disadvantages:

- Staffing allocation
- May be too many options for students



## F. Out of the Box

- Model high school like a community college, like school within a school 9-10, 11-12
  - Students choose courses
  - Open courses for the public
  - “Experts” teach courses
  - Flexible hours
  - Online, home school, and traditional class options
  - Project based / driven learning & assessments
  - Learning labs
  - Performing arts center / classes

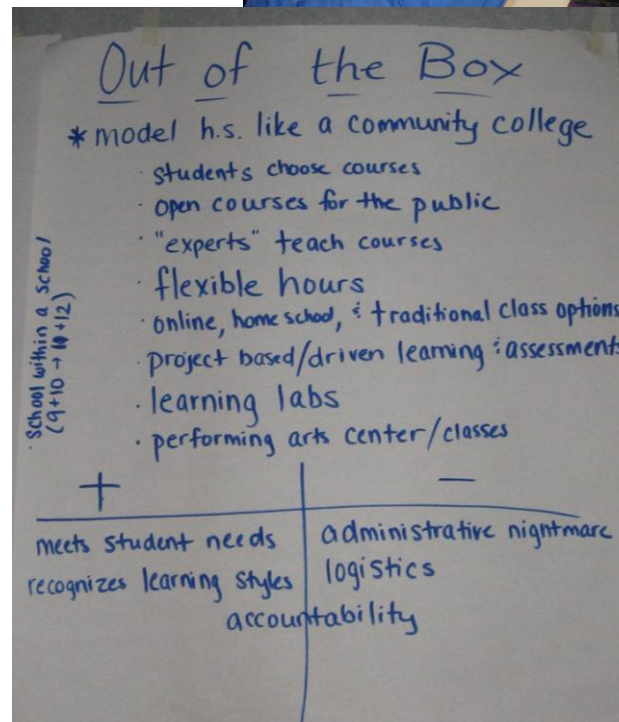


### Advantages:

- Meets students needs
- Recognizes learning styles
- Accountability

### Disadvantages:

- Administrative nightmare
- Logistics
- Accountability



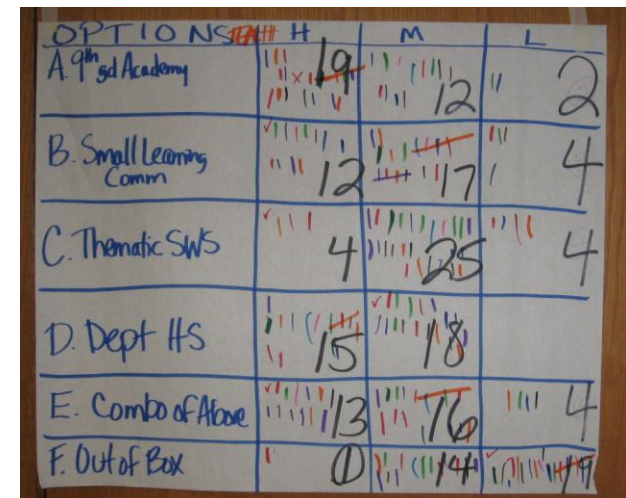
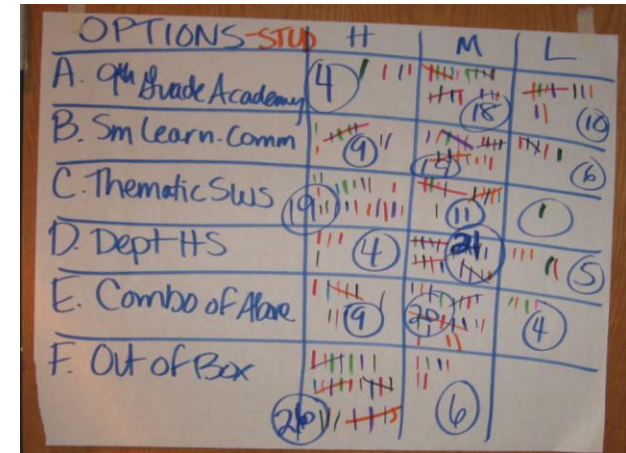


## Prioritize Options

After participants worked in groups to review and discuss the various organizational options, they were asked to rate the desirability of the options from a student's perspective and a staff perspective. As illustrated in this table, there was a wide range of perspective and there was a different perspective as to how these organizational structures would be viewed by students and by staff. The purpose of this exercise was to understand that a high school building in the future may need to be able to embrace a variety of approaches and even approaches which haven't even been identified, not to decide the best approach or which approach the high school educational specification should be based on.

| Option                                  | Student Perspective |          |     | Staff Perspective |          |     |
|---|---------------------|----------|-----|-------------------|----------|-----|
|   | High                | Moderate | Low | High              | Moderate | Low |
| A. 9 <sup>th</sup> Grade Academy, 10-12 | 4                   | 18       | 10  | 19                | 12       | 2   |
| B. Small Learning Communities           | 9                   | 19       | 6   | 12                | 17       | 4   |
| C. Thematic Schools-within-Schools      | 19                  | 11       | 1   | 4                 | 25       | 4   |
| D. Departmental High School             | 4                   | 21       | 5   | 15                | 18       | 0   |
| E. Combinations of Above                | 9                   | 20       | 4   | 13                | 16       | 4   |
| F. Out of the Box                       | 26                  | 6        | 0   | 1                 | 14       | 19  |

It should also be noted that many of the approaches can be accommodated if a building is organized to support team teaching where several teachers work together in an area of a building. Team areas include classrooms, project areas, and support spaces. Dr. DeJong shared several high schools from around the country which were organized into Houses/Clusters/Pods that are able to support the various organizational structures discussed.



## Comparing Large & Small High Schools

One of the most debated topic areas in education today is school size. Although the trend has been to increase the capacity of schools, there has been much effort in creating smaller learning communities as a way to create a small school environment.

The participants of the Visioning Session were asked to work in small groups to first determine what size constituted a small high school and what size constituted a large high school. The groups differed in their definitions of large high schools. Some groups indicated that a large high school would be defined as a school with more than 1,600 students, some groups defined a large high school as a school with more than 1,800 students, while other groups defined a large high school as a school with more than 2,000 students.

The groups then provided advantages and/or disadvantages to small and large high schools. The following are the results of those discussions.

**What are the Advantages / Disadvantages of a LARGE high school?**



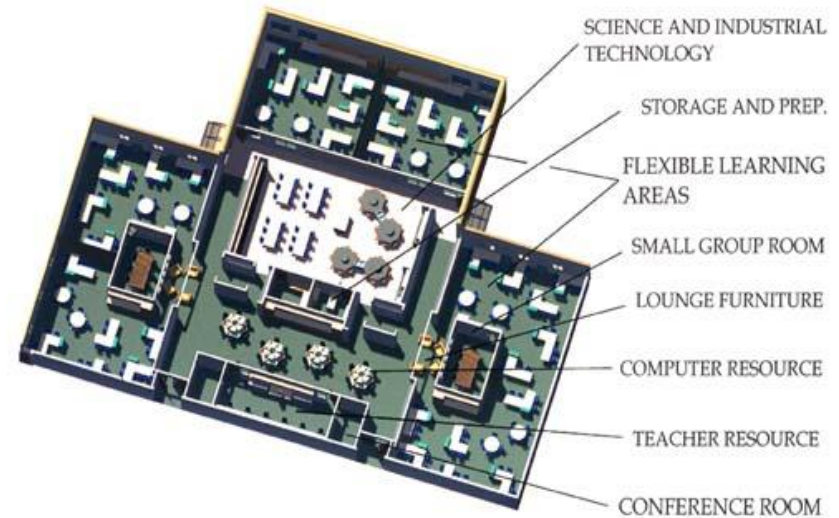
### LARGE HIGH SCHOOL ADVANTAGES:

- Acceptance
- Better:
  - access to resources – i.e. counselor, speech therapist
  - athletic teams
- Broader curriculum
- Cheaper to operate
- Diverse curriculum and student body
- Easier on staff – i.e. preps / extracurricular duties
- Easier to staff
- Extra staffing
- Increased staff development options
- Larger pool for:
  - Athletics
  - Course offerings
  - Resources
- Less Expensive
- More:
  - activities
  - choices / options – course offerings and extracurriculars
  - equipment
  - funding
  - options for specialized areas in buildings
- Services
- Socialization
- Stronger teams
- The numbers justify pay for programs – i.e. Advanced placement, special education, resource



## LARGE HIGH SCHOOL DISADVANTAGES:

- Anonymity
- Crime / safety
- Fall through cracks
- Fewer
  - athletic opportunities
  - leadership opportunities
  - students able to participate
- Hard to have whole school activity
- Impersonal
- Isolation of students and staff
- Lack of small group areas (i.e. schola)
- Less cohesive
- Limited space / crowded
- Lost in crowd
- More competitive in things like SCA
- Overcrowding
- Overwhelming for 9<sup>th</sup> graders
- Parking – morning and evening
- Relationships
- School wide gatherings
- Security
- Sense of Community
- Too many students



What are the Advantages / Disadvantages of a SMALL high school?

Small high school was defined as:

A school with less than 1,000 students.

### SMALL HIGH SCHOOL ADVANTAGES:

- “Big fish in small pond”
- Close-knit staff
- Community and tradition
- Community and parental involvement and support
- Create community
- Everyone knows you
- Flexible spaces
- Greater opportunities for building relationships
- Individual attention
- Less competitive in things like SCA
- Less crowding during transition
- More intimate and personal
- More support systems, like family
- Opportunity for participation
- Safety, or perception of safer feeling
- School wide gatherings
- Smaller class sizes
- Spirit and pride
- Teacher – student interaction
- Transportation

### SMALL HIGH SCHOOL DISADVANTAGES:

- “Big fish in small pond”
- Fewer academic, extracurricular, etc. program offerings
- Not as many advanced courses
- Not as many electives
- Less academic challenge
- Less diversity – social groups, etc.
- Less money
- Cost
- Everybody know everybody’s bad business
- More preps and extracurricular activities responsibilities for staff
- Sharing resource positions
- Small school can mean small building for teaching and learning space
- Flexible spaces



CONCEPT DIAGRAM

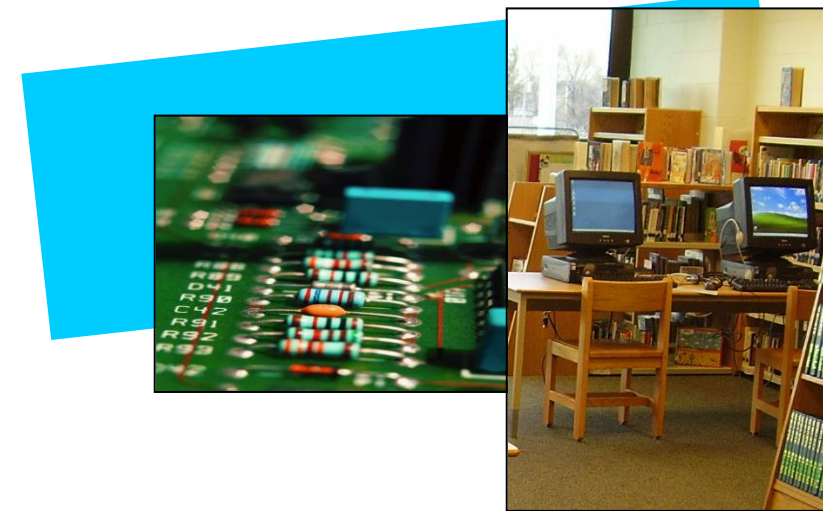
High School Educational Specifications

To take advantage of technology, schools will need comprehensive staff development programs and training; student access to technology applications; updated hardware and software in computer labs, classrooms, and Media Centers; wireless access points, updated school wiring and internet access; integration of technology into the academic content standards; home to school access; technical support personnel at the school level; and a security system that encourages use and protects the investment.

All classrooms should be multi-use/multi-purpose with invisible technological support. There should be a seamless web of technology to support the classroom management between administration, teachers, students, and the home.

Research suggests that multi-sensory teaching is most effective in mastery of basic skills. Technology supports visual, auditory and experiential learning; therefore, it is recommended that all instructional spaces have voice, video, and data accessibility. This access enhances the flexibility of the learning environment to respond positively to alterations in the use of space. The wiring and other infrastructure components should be the first priority since terminal devices can be added later; however, wireless networks should also be included. The facility should have surplus electrical power capacity and network wiring/bandwidth to permit expansion of technology.

It is important that all students demonstrate technology skills appropriate to their grade level. Students will be expected to possess technology skills, as defined and assessed through authentic learning opportunities and applicable technology.



*(Photograph used for illustration purposes only)*

## Technology

Today, technology is used extensively to help students learn basic and critical thinking skills. In the future, the applications and capabilities of educational and information management technology will increase dramatically. Today, the majority of jobs require at least some technology proficiency and as such, it is expected that students will leave school with the ability to work with and use technology.

The implementation of voice, video, and data throughout school facilities is becoming a standard in schools across the country. Appropriate and strategically designed and installed technology will greatly enhance the teaching and learning of basic skills and position a school to take advantage of technological developments in the future.



## Technology Components

**Voice:** Telephone and voice communications in every classroom and workspace to support internal and external communications. As voice and data are integrated, typical phone drops are replaced with normal network data drops.

**Video:** Video distribution in every classroom and throughout the building with interactive video capabilities to support whole and small group instruction, distance learning, and providing access to a wide range of internal and external resources.

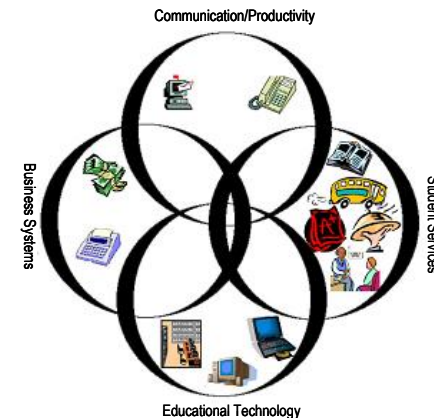
**Data:** Data retrieval capabilities in every classroom and throughout the building as well as network capabilities City-wide and to other external resources (i.e. Internet).

Today's schools are equipped to support management and instructional applications. Current voice, data and video systems can provide leadership, instruction, data management, internet access, and student services which go far beyond the systems in schools that were constructed as recently as the late 1980s. Technology is becoming increasingly useful and appropriate to the student and the educator. As home and business worlds move into higher levels of technological applications, it is critical for schools to be equipped and play a leadership role in the integration of technology into the teaching, learning, and communication processes.

## Applications of Technology

Technology has four primary applications within the school environment. These applications have the potential to have a positive impact on every aspect of the educational process found in school. The following table illustrates the four primary applications that interface with each other and some examples of educational applications in each area.

|   |  |
|---|--|
| <b>Communication/Productivity:</b><br>E-Mail, Word Processing,<br>Database, Spreadsheets,<br>Phone, Internet                  | <b>Student Services:</b><br>Schedules, Grades,<br>Attendance,<br>Counseling,<br>Transportation, Food<br>Services |
| <b>Educational Technology:</b><br>Media Center, Computer<br>Applications, A/V<br>Applications, Distance<br>Learning, Internet | <b>Business Systems:</b><br>Accounting, Payroll,<br>Inventory  |



## Technology & the Learning Environment

Technology greatly enhances the learning environment. Technology, in the typical classroom, can support multiple instructional designs.

**Whole Group Instruction** [20-30 students] – This includes the use of document readers, computer projectors, DVD players, flat screen monitors, LCD flat panels and various forms of computer display techniques.

**Small Group Instruction** [6-8 students] – This includes areas in the classroom and in shared common spaces, which a teacher or another resource person can work with groups of 6-8 students. The technology is essentially the same as whole group instruction technology, the only difference being the size of the groups.

**Individualized Instruction** [1-2 students] – This is primarily a computer-based instruction design where students interact with a computer workstation. As all forms of technology become more and more digitized, it is envisioned that these will be multi-media workstations that integrate voice, video, and data formats as well as having high speed internet access. Technology will comply with accessibility for students with special needs that are mainstreamed in the classroom.

The diagram that follows represents typical technology applications found in schools today.



## Classroom

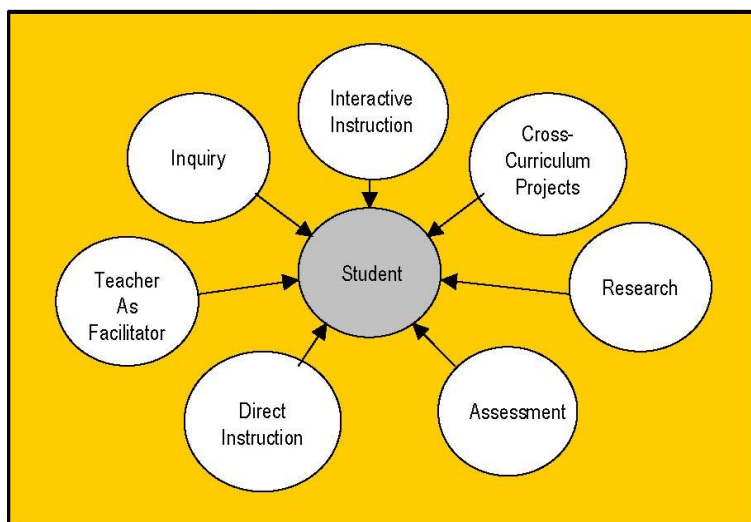
It is recommended that all classrooms have voice, data, wireless internet, and video accessibility. This will enhance the flexibility of the learning environment to respond positively to alterations in the use of space. The wiring and other infrastructure components should be the first priority since terminal devices can be added later with the exception of wireless networking. The facility should have surplus electrical power and cooling capacity to permit expansion of technology. Infrastructure, systems and cabling are typically funded as capital projects.

The following components should be included in each classroom:

- One teacher workstation with two data drops
- All network wiring to be CAT 6
- 5 data outlets for student multimedia stations
- 1 wireless access point – ceiling mounted
- Added cooling systems to offset the heat generated by the computers
- Face plate switches
- Audio classroom enhancements
- Student computer work stations or laptops
- DVD port
- Document readers
- Ceiling mounted projector with data drop in ceiling
- Projection screen
- Mounted Digital Interactive Whiteboard with USB connection to teacher plate
- 2 data outlets for laptop carts
- 1 data outlet for networked printer
- 1 data outlet wall plate for IP or Digital phone

Careful attention should be given to furnishings, i.e., student desks, specialized or customized cabinetry, location of data ports, white boards, and monitors.

Alternative wireless configurations where all staff and students are issued a personal computer/multimedia device should also be considered.





## Offices

Office areas have the following needs:

- Appropriate CAT 6 data drops
- 4 networked data drops for attendance
- 1 wireless access point – ceiling mounted
- Electric power availability (quad per drop)
- 1 data outlet wall plate for IP or digital phone
- Capability to support computer, network, printer, and fax
- Staff workstations or laptops
- Telephones (voicemail and fax capability)
- Security video system (main office only)
- PA system
- Audio system
- Data drop for fax machine
- Capability to support high speed networked copier
- Three office voice lines, independent of electric power for emergencies



*(Photograph used for illustration purposes only)*

## Conference Areas

Conference areas should include:

- Four CAT 6 data outlets (1 at each end of room; 1 for networked printer; 1 for IP or digital phone)
- 1 wireless access point – ceiling mounted
- Electric power availability [quad per drop]
- Ceiling mounted multi-media projector with data drop in ceiling
- Pull down projection screen

## Cafeteria/Student Union

This space should have the following equipment:

- Video ports and monitors that can be used for video displays of electronic bulletin boards
- CAT 6 data drops
- Data outlets in pairs (computer and phone) for each serving line
- Wireless access points mounted in ceiling
- 1 data outlet wall plate for IP or digital phone
- Telephones (voicemail capability in Cafeteria Office)
- Phone line to monitor refrigeration systems
- Mounted LCD and workstation
- Centralized control panel for video and data
- Large, electronically controlled screen

## Blackbox Theater

The theater should include:

- Computer projector capability
- PA system
- Audio system
- Storage space



## Gymnasium

The gymnasium should have the following equipment:

- Video ports and monitors that can be used for video displays of electronic bulletin boards
- 2-3 video and fiber/CAT 6 data drops with LAN, WAN, and Internet access
- Portable video projector (PVP), computer, and document reader
- Large, electric front projection screen concealed and flush with ceiling
- One data wall jack for phone, connected to loud bell ringer; cage mounted to protect phone
- PA system
- Audio system
- Centralized control panel for scoreboard and video

## Technology Control Room

The Technology Control Room will securely house Uninterruptible Power Supplies (UPS), communication servers, PBX, video system, network router, and network switches. In addition, this room will have additional cooling systems to maintain a consistent room temperature, 24 hours a day.

Furniture will consist of equipment racks, worktable, and monitor stand. All equipment must be located by ample electricity and have an assessable diameter of 4-5 feet.

## Wireless Access Points [APs]

The following locations contain the recommended number of wireless access points, all to be ceiling mounted:

- Public areas (media center, cafeteria, auditorium, gym) at least 2 APs)
- Computer labs – 1dedicated AP
- General classrooms – 1 AP per room
- Typical load – 30 users per AP

High School Educational Specifications

If we deal with the symptoms of the problem, we tend to focus on the active security procedures that can be implemented. If we deal with the cause of the problem, we are likely to address most of these issues through passive or program and building layout solutions.

The problems and their causes are multi-dimensional: some issues can be more easily addressed in design more than others. Causes include, but are not limited to, family problems, lack of sense of belonging, lack of identity, lack of communication, lack of accountability, lack of student/teacher relationships, as well as criminal activities by outsiders. Passive program and building layout should be the primary focus and active security systems the secondary focus.

Since the greatest number of discipline problems in a school occurs when students switch classes and have to travel from one end of the building to the other, having students spend the majority of their day in one section of the building, reducing movement will result in fewer discipline problems. Teams of teachers having responsibility for the same students improve the student/teacher relationship and results in greater continuity and monitoring of behavior issues.



*(Photographs used for illustration purposes only)*

## Safety & Security

There is a high interest in maintaining an inviting and deinstitutionalized environment, while simultaneously providing a safe environment for students, staff, and community who use the facility and adjacent support services. The organization of a building will have a major impact on student behavior and safety concerns. Building security can be addressed in an active or a passive manner: active security is based on security systems; passive security is based on program design, building layout, and community participation. Schools should be based on passive concepts with applied active concepts where necessary.

Organizing a building into teams or clusters results in a number of changes which will reduce behavior problems:

- Teacher preparation areas place adults in closer and more direct contact with students.
- Utilizing a decentralized administration approach provides the opportunity to have counselors, and/or assistant principals easily accessible to students in the academic clusters.
- Students have a greater sense of belonging and identity. For the majority of the day, their place is in the cluster/house.
- School pride becomes more apparent.
- Block scheduling is commonly utilized in secondary schools and also helps reduce pedestrian traffic within the building.
- Hidden or underequipped spaces are avoided.

The glass wall into the administration reception/waiting area in the pictures below provides good visibility of the main entrance. It serves a dual purpose of being inviting and welcoming to visitors while allowing administrative staff to monitor access during school hours. Way-finding is crucial to a successful school facility. The front entrance and reception area should be immediately obvious to anyone approaching and entering the building. Similarly, strong glass can provide security and visibility.



*(Photographs used for illustration purposes only)*

*CROSSWINDS MS, St Paul, MN*



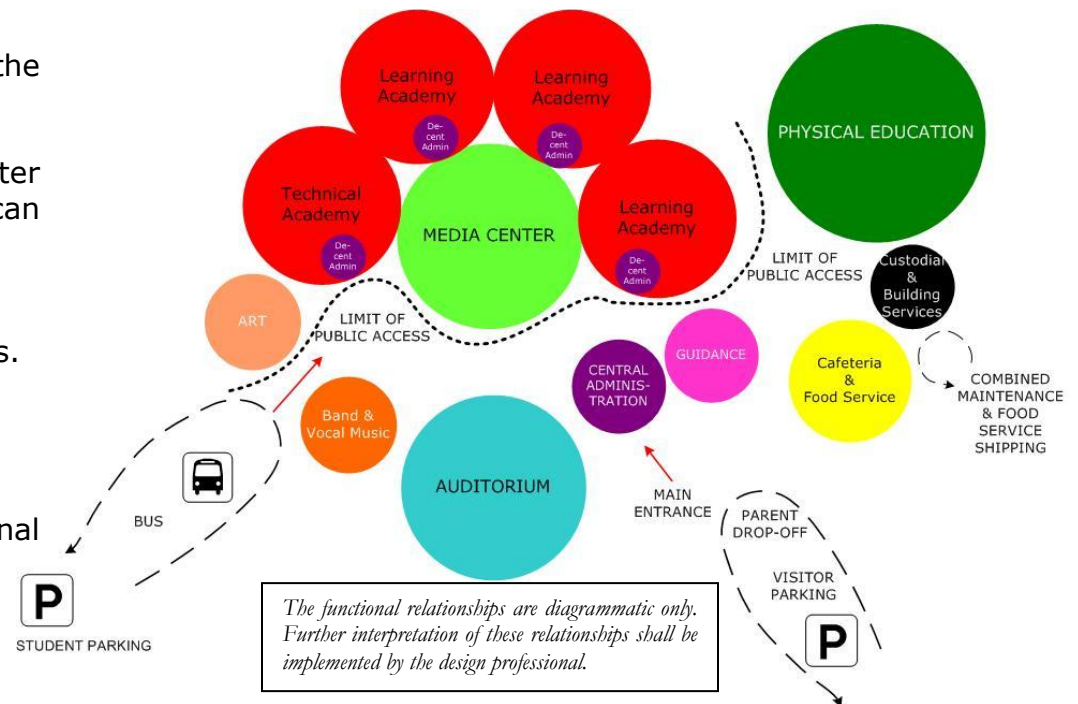


## Passive Security Concepts

### Building Layout

- Avoid blind spots, corners, and cubby holes [inside or outside].
- Locate administrative and teacher preparation with good visual contact of major circulation and gathering areas [i.e., corridors, cafeteria, bus drop-off, parking].
- Develop spatial relationships in such a manner that there are natural transitions from one location to another.
- Locate toilets in close proximity to classrooms.
- Design toilets to balance the need for privacy with the ability to supervise – open restrooms (i.e. airports)
- Locate staff restrooms close to student restrooms.
- Locate areas likely to have significant community [after school] use close to parking and where these areas can be closed off from the rest of the building.
- Provide for natural integration of students and staff.
- External exits from offices.
- Wide, naturally lighted stairwells in multi-story buildings.
- Open stairwells.
- Ability to partition unused portions of building.
- Avoid external exit for toilet rooms.
- Avoid easy access to roofs.
- All separated buildings should be connected via external walkways.

*This example below illustrates a cluster approach. Having teacher workrooms, commons area, restrooms, and storage integral to the cluster, reduces traffic and increases safety and security.*



## Types of Building Materials

- Use durable wall surfaces that are easy to clean so graffiti can be removed.
- Incorporate pitched roofs which inhibit roof entry and are aesthetically pleasing.
- Limits size of windows – use multiple smaller windows rather than one large window.
- Use safety glass or glass bricks.
- Glaze or tint windows.
- Install non-slip floors at point of entry.
- Handicapped accessible entrances.
- Ventilation system adequate to handle size of school.
- Sound device warnings for doors other than main entrance.
- Safe building materials.

## Vehicular and Pedestrian Traffic

- Separate bus drop-off area from other vehicular traffic.
- Separate and adequate staff, student, and community parking area, located in appropriate areas.
- Separate student [pedestrian] traffic flow.
- Consider impact on safety of “closed” campus vs. “open” campus.
- Protect playfields from vehicular traffic and parking.
- Additional exit specifically for sporting events (quick exits = less chaos/fights).
- No portables
- Outdoor restroom facility (centralized)

## Uses of Technology

For instructional and administrative purposes, the school should have extensive technology systems. These same infrastructures and technology components can be use to enhance building security.

- Phones in every instructional and support area.
- Building-wide all-call designed to be heard throughout the school and on the play fields when needed.
- Motion or infra-red detectors.
- Video cameras for security purposes with more people with access to the security cameras.
- Smoke and heat detectors located throughout the building for central monitoring.
- For access control into the building, there are alternatives to keys, such as access control cards. These are plastic “swipe cards” and proximity cards, both of which can be used as identification cards. The swipe card is placed in a machine, while the proximity card simply has to be used close [usually three to seven inches] to the reader to unlock a door. The cards are coded to allow entry to appropriate doors at selected times. Only one card is required for multiple entry points. Used in conjunction with the card is the controller, which monitors alarms, and the software, which is customized for the application [establishes parameters, maps input-output points, enters phone numbers for dial-up site]. Other approaches include a battery-operated lock that requires a numerical code on a keypad.
- Wiring for CCTV in all hallways, offices, classrooms, and parking area.
- Panic buttons located in all rooms.
- Securable lobby area.
- Programmed swipe cards used for doors.

- Sound detection system.
- Electronic student identification system, especially at secondary schools. All students to wear ID's.
- Bio recognition.
- Metal detectors at main entrance and bus loop entrance can be considered.

### Combustibles Storage

- Provide detached, fire-proof, building to store combustibles: paint, solvents, laminates, gasoline, etc.



*Mountain View ES- Johnson City, TN  
Ken Ross Architects, Inc.*

*The images left and below are examples of exterior and interior lighting usage to create a warm, safe, and inviting environment.*



### Landscaping, Playing and Practice Fields, Site, and Lighting

- Use high trees and low bushes (less than three feet high) to deter hiding. Eliminate trees at entrance.
- Use aesthetically pleasing fencing around perimeter of the building. Avoid barbed wiring.
- Consider placing some buildings or a tree buffer along the perimeter of the property to avoid extensive fencing, where feasible.
- Non-intrusive lighting of all area (not correctional-type lighting).
- Emergency lighting/power in hallways, stairwells, and rooms.
- Provide security lighting around building and parking lots with photo cell timer with on/off capacity.
- Provide efficient lighting for outdoor venues.
- Separate athletic fields and informal gathering areas.
- Locate athletic facilities away from building.
- Recess building on site to avoid vehicular and pedestrian conflicts.

*Council Rock HS – Richboro, PA Gilbert Architects*



*The image above is an example of using low bushes and high trees as landscaping features that deter hiding.*



## Site Issues

In some instances, implementation of the High School Educational Specifications for Virginia Beach will result in renovation or construction of new schools on new sites. The Architect of Record for each school will be responsible for location of school on the site as well as site issues including topography, drainage, pedestrian and vehicular traffic, bus drop-off and pick-up areas, service entry, and safety of playground areas.

## Design Considerations

- Separate faculty and visitor parking areas.
- 1/3 parking spaces for students.
- Student management/security in lots – staff, faculty, visitor parking lots
- Separate drives for parent drop-off and buses.
- Provide blacktop area.
- Provide multi-purpose playfield.
- Exterior lighting.
- Fire vehicle access.
- Fencing around school, aesthetically pleasing.
- Location of “athletic centers”.
- Service entry.
- Landscaping.
- Use of adjacent properties.
- Covered walkways between buildings.
- Location of utility “boxes” such as electrical transformers.

## Lighting

- Include exterior security lighting with motion detectors and/or photo-cell timer for parking lots and exterior of building.
- Provide appropriate lighting for athletic and practice fields.
- Provide appropriate lighting for walkways.
- Provide lighting that is easy to maintain and secure against vandalism.
- Must be easy to maintain and service.



## Traffic Flow

- Car, bus, and service vehicle traffic must be separated.
- Vehicular and pedestrian traffic must be separated.
- Consider access by fire department emergency vehicles when planning site circulation.
- Provide drive-up access for large items in areas such as Food Service and Custodial/Maintenance.
- Provide adequate areas for entering and leaving play fields.
- Separate drop-off for special education buses.
- Sufficient length in drop-off for bus stacking.
- Corridor locations off public transit stops, with a hard surface waiting area.

| Parking Spaces Based on<br>Percentage of School Population for 1,800 Students |              |            |
|---|--------------|------------|
|   | High Schools |            |
| <b>Staff</b>  | <b>15%</b>   | <b>270</b> |
| <b>Visitor</b>  | <b>3%</b>    | <b>54</b>  |
| <b>Student</b>  | <b>33%</b>   | <b>600</b> |
| <b>Event</b>  | <b>15%</b>   | <b>270</b> |

## Parking

- Adequate and separate parking facilities should be provided for visitors, staff, and students.
- The school site must provide adequate areas for entering and leaving, parking, and play fields.
- Consider covered walkways from car and bus drop-off areas.
- Comply with regulations for handicapped access.
- Consider bicycle racks.

## Landscaping

- Design irrigation of fields, lawn, and landscaped areas.
- Create landscaped areas that are sustainable from natural rainfall and minimize use of an irrigation system where possible.
- Low-maintenance landscaping plantings.
- Consider outdoor spaces as an extension of the classroom and opportunities for exploration and education.
- Recycling facilities.
- Student-friendly.
- Places to rest and read.
- Trees for shade.
- Benches around trees.
- Sufficient green space.

### Sheltered Areas

- For inclement weather.
- Eating lunch.
- Outdoor classwork.
- Before/after school activities.
- Walkways between buildings.
- Away from noise.

### Playing Fields

- Secure and safe playing fields for students with direct access from the building.
- 4 Practice fields – multi-use (P.E., athletics) with irrigation and lighting.
- Drinking fountains located throughout playing fields.

### Athletic Areas:

- Stadium seating for 5,000 (VHSL reg.), (football, soccer, lacrosse).
- 8 tennis courts.
- Baseball/softball facility complex (shared concession, rest rooms, storage; stand alone field space).
- Provide utilities for all playing fields/areas.
- Track (rubber) (restrooms, concessions, storage); large storage for hurdles, high jumps, pole vaults, etc.).
- **Landscaping:** multi-turf stadium/competition field (i.e. softball, soccer, lacrosse, track & field events; sustainable landscape or adequate irrigation factored in.
- **Lighting:** daylight intensity for athletics, parking, and bus areas.

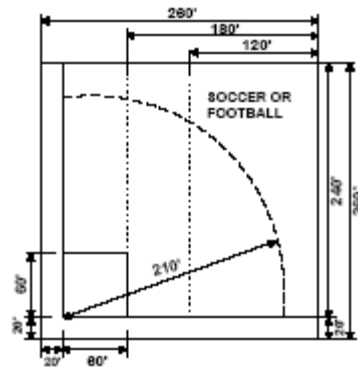
### Storage for Equipment

- Attach to building.
- Multiple, easy access.

### PE Office/Storage

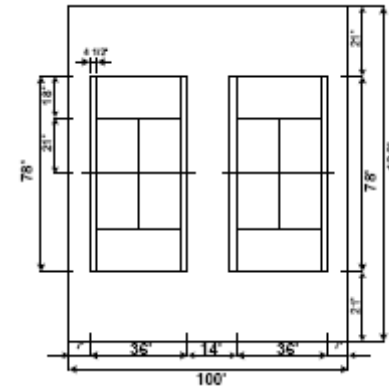
- Telephone.
- Stay in contact with main office.
- Emergencies.
- Recreational Aides.

The following pages illustrate site guidelines for play fields.



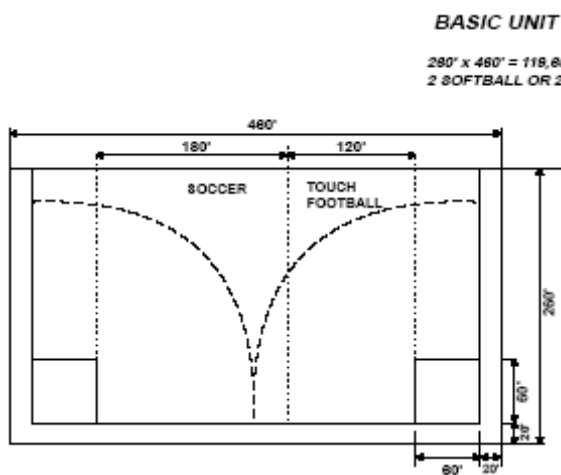
**BASIC UNIT G**

280' x 260' = 67,800 sq. ft.  
1 SOFTBALL OR 1 FIELD AREA



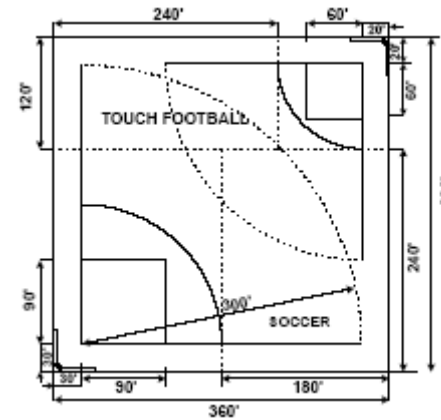
**BASIC UNIT K**

100' x 120' = 12,000 sq. ft.  
2 TENNIS COURTS



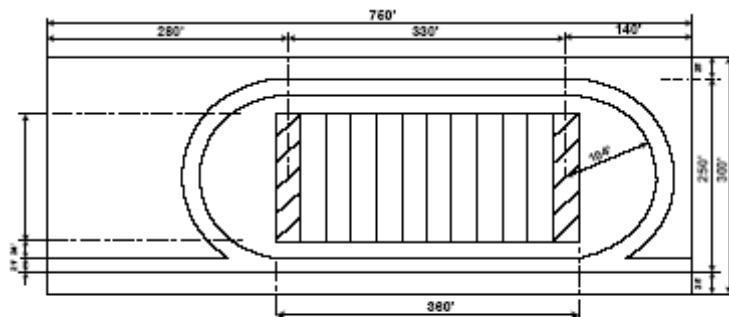
**BASIC UNIT H**

280' x 480' = 118,800 sq. ft.  
2 SOFTBALL OR 2 FIELD AREAS

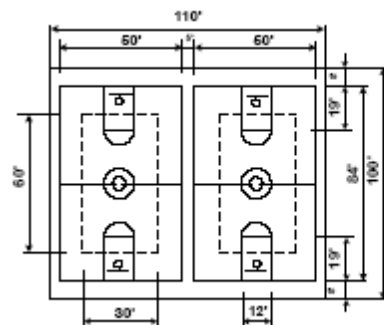


**BASIC UNIT L**

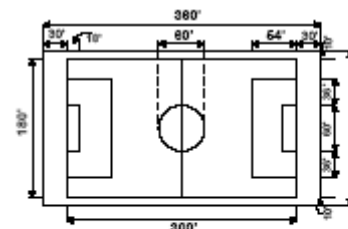
360' x 360' = 129,600 sq. ft.  
1 BASEBALL AND SOFTBALL  
OR 2 FIELD AREAS



**BASIC UNIT M**  
300' x 760' = 226,000 sq. ft.  
FOOTBALL & TRACK

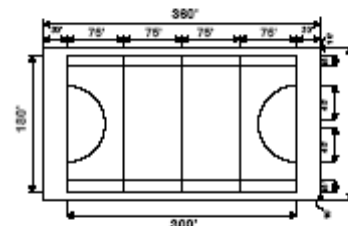


**BASIC UNIT N**  
100' x 110' = 11,000 sq. ft.  
BASKETBALL OR VOLLEYBALL

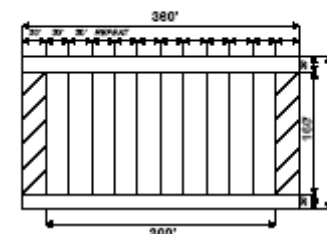


**BASIC UNIT O**  
200' x 360' = 72,000 sq. ft.

SOCCER



FIELD HOCKEY



TOUCH FOOTBALL

Basic Unit P, an apparatus area, is a space module of 1,000 square feet. The architect may design the area according to the dimensions of the particular type of apparatus to be installed as long as the total area does not exceed 1,000 square feet. Basic Unit P provides space for up to 75 students in grades six through twelve. (See Tables 4, 5, and 6 for additional basic units needed for enrollments beyond 75 in the upper grades.)



## Green Sustainable Schools



Green schools are healthy for students, teachers and the environment. Built right, green schools are productive learning environments with ample natural light, high-quality acoustics and air that is safe to breathe. Schools everywhere are going green, nurturing children while saving money.

The U.S. Green Building Council [USGBC], a nonprofit organization works to move the building industry toward sustainability which is the design and construction of buildings that are environmentally responsible. Green design refers to design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five areas:

- Sustainable site planning
- Safeguarding water and water efficiency
- Energy efficiency and renewable energy
- Conservation of materials and resources
- Indoor environmental quality

The USGBC developed and maintains the LEED Green Building Rating System. LEED is the national benchmark for green buildings promoting sustainable design and construction. The objective is to:

- Reduce impacts of natural resource consumption
- Protect air quality and water quality, biodiversity, and ecosystem health
- Improve economics of building operations, asset value, worker productivity, and the local economy
- Enhance building occupants health and safety, relating to risk management
- Minimize strain on local infrastructure such as landfills, water supply, stormwater sewers and related development and costs; decrease transportation development and maintenance for roadways, and encourage better performance of mass transit systems.

The LEED for Schools Rating System recognizes the unique nature of the design and construction of educational facilities and provides verification that a building project, whether new or renovated, is sensitive to the environment. It addresses such issues as classroom acoustics, mold prevention, environmental site assessment, and other matters related to school design and operation.

Green schools are healthy places to learn, to teach, save money, provide hands-on learning and are environmentally friendly.

## Planning Principles

Following are planning principles employed by school divisions when renovating or constructing new schools.

### Sustainable Sites:

- Construction activity pollution prevention
- Protect or restore habitat
- Stormwater design [i.e. using existing natural features such as ponds and creeks enhanced by constructed basins, and lot-line swales over gutter-and-pipe engineering]
- Joint use of facilities

### Water Efficiency:

- No potable use or no irrigation
- Water use reduction [i.e. use collected rainwater or gray water for toilet and urinal flushing or other non-potable uses]

### Energy & Atmosphere:

- Optimize energy performance
- On-Site renewable energy [i.e. geothermal, hydroelectric, solar, wind]
- Green power [i.e. purchase of green electricity]

### Materials & Resources:

- Storage & collection of recyclables
- Building reuse
- Construction waste management
- Regional materials
- Rapidly renewable materials [i.e. bamboo flooring, cork wall covering]
- Certified wood [wood/paper that comes from good forest management]

### Indoor Environmental Quality:

- Increased ventilation
- Outdoor air delivery monitoring
- Low-emitting materials
- Lighting system design & controllability
- Thermal comfort design & controllability
- Daylight & views [75-90% of classrooms & other spaces]
- Enhanced acoustical performance
- Mold prevention

### Innovation & Design Process:

- Innovation in design – project specific
- LEED accredited professional
- School as a teaching tool [i.e. high school students learn about alternative energy from the solar panels on their roof]



This school building uses native plants and natural wild flower grasses in the landscape as well as provides water quality treatment on site with an outlet into an existing creek.

Source: *Multnomah Education Service District, Dull Olson Weekes Architects, Portland, Oregon*

## Virginia Beach City Public Schools

With the completion of *Hermitage Elementary* in 2005, this school earned the distinction of being the first LEED Certified Elementary school in the State. Additionally, two schools under construction, *The Renaissance Academy*, and *Virginia Beach Middle School* are slated to be LEED Certified.

The School Division is committed to conserving resources and protecting the environment and received the 2007 Virginia Recycling Association Award for Excellence. Perhaps this is because they recycle on average, 123 tons of material per month. In September 2008, a *Sustainable Schools Committee* was formed to monitor and make recommendations regarding sustainability within the school division.



*(Photograph used for illustration purposes only)*

## Aesthetics

The indoor and outdoor structures and spaces where students go to school need to be aesthetically pleasing and healthful settings. The facility should be inviting to the students, making them feel that the space is special, and therefore emphasizing that each individual is important. Aesthetics that affirm the value of the individual must be stressed, with spaces for the admiration of the accomplishments of self and others. The school should resemble a place for academic success, high self-esteem, social interaction, and physical safety. The facility layout should be especially easy to comprehend and reflect how classes relate to one another in order to minimize the lost

## High School Educational Specifications

feeling common in students. Spaces should be provided for socialization among students and with teachers. Spaces should also be provided to display student work.

## Variety of Instructional / Learning Spaces

Ongoing assessment of student progress will require facilities to be able to adapt to a changing program. Multi-use of buildings should be the norm. Spaces should allow for a wide variety of specialized instructional and hands-on learning experiences.

Today, students do not just work in groups of 20-25. As technology continues to advance, students are becoming more involved in extensive individual learning activities that are supplemented by small group (2-6 students), moderate group (10-20), and large group (50-150) activities. Space should be provided for students to plan, work independently and collaboratively, give and/or receive tutoring as well as accept instruction.

## Staffing Patterns

The predominant staffing pattern is composed of teachers, supplemented with paraprofessionals and specialists. As the programs and groupings change, a more differentiated staffing pattern may emerge with lead or master teachers and more specialists and paraprofessional facilitators.

## Indoor and Outdoor Learning Environments

By rethinking spaces, better use of facilities can be made. Some ideas include: use gardens instead of pavement and use hallways as art galleries or museum strips. Creativity and functionality should work hand-in-hand. Color, greenery, building materials, and furniture should be



selected carefully to develop a pleasing and inviting atmosphere.

The learning environment should be student-centered and designed for "hands-on learning," promoting student autonomy and independence. Space for active participation should be incorporated with modular, flexible classrooms providing opportunities for integrating disciplines and easy access to tools of exploration. The outdoor site should serve as a pro-active learning environment as well. Outdoor spaces with benches, sheltered areas, and amphitheaters can be incorporated in the design.

### **Learning from Others**

Modern office environments provide greater insights into flexibility than current school environments. Many of their concepts should be taken into consideration:

- Demountable, movable wall systems.
- Modular furnishings.
- In-floor wiring.
- Non-load bearing wall systems.
- Raceways, cable trays.
- More generic space that can be adapted to specialized uses.

### **Planning Principles**

Following are planning principles employed by other districts when developing school facilities and sites:

- Building orientation important - obvious focal point/main entrance. Front of building should be facing where public can see it.

### **High School Educational Specifications**

- Good signage – marquee board (with directions on how to find entrance and location within the facility) – good directional/informational signage inside and out.
- Welcoming area by front door. Welcome area open, using spacious hallways and common areas.
- Create easy access for parents/community.
- Pleasing, warm, inviting, soothing colors.
- Visually appealing, both internally and externally.
- Cove lighting in corridors.
- Arched ceilings in corridors.
- Lighting – natural – skylights, glass, windows, open areas.
- Enclosed media center with skylights.
- Student art work – several showcases around school to promote student achievement.
- Plants – artificial and real.
- Classroom –tile with soothing pattern and color; comfortable furniture.
- Complimentary carpet and tile mix appropriately used throughout the building.
- Top windows operable.
- Student spaces should be equipped with technologies for student use.
- Transparent spaces.
- Landscaping – good upkeep.
- Dumpster not visible.
- Separate access road for deliveries.



*(Photograph used for illustration purposes only)*

## Student Spaces

From the time students arrive in the morning to the time they leave in the afternoon, they move through the building performing many tasks and visiting many spaces. Adhering to the principle that learning can and should take place anywhere and anytime, we need to look beyond the classroom at other “student spaces”. Students need places to work with peers on projects in a small group setting to collaborate, discuss, research, create, edit, organize, and prepare for presentation. This requires yes, a separate room, but a room with appropriate wireless technology for laptops, an interactive whiteboard, and appropriate flexible furniture. This type of room should be located throughout the learning clusters for ease of accessibility and visibility. This room can also be used for tutoring or testing.

Students need spaces to support their social involvement, leadership skills, and the various activities in which they are involved. This suggests dedicated meeting space for Student Council, for other various small club meetings (to include sufficient storage), and a school store.

Careful consideration should be given to the type of furniture chosen for the student dining area. Round tables promote conversation and a friendlier, less institutionalized environment. Other furniture in the perimeter or adjoining areas could include benches, small tables, and comfortable seating. The atmosphere becomes one of a student union.

Students also need to hear speakers and attend larger club meetings. A schola would work well for this purpose and could be used by the staff and community as well.

Looking to the future, it is very possible that some or many students would function well in a Virtual High Setting, spending perhaps, every other day at home, connected through technology, still learning and still contributing as a member of their school.

Ask students what spaces are currently “theirs” at school – and you will likely hear “our lockers” as a response. It is what they have to call their own.

High School Educational Specifications

Other more visible components, such as choice of colors, display and showcase areas, durable yet comfortable furnishings, use of glass, and lockers that do not block the view, make the school more inviting and appealing.

Still other components, such as appropriate interior and exterior signage, ensure good wayfinding for students, staff, and visitors. Electronic screens are also helpful in communicating current news and announcements to anyone in the building. Appropriate sidewalks and pathways should be designed on the site to provide logical pedestrian traffic patterns. Parking should be strategically located to provide separation for staff, students, and visitors, and to provide convenient event parking for off hours.

Along with wayfinding, comes the need for security and safety. This can be achieved in many ways through the arrangement and adjacencies of the various types of spaces to the intentional use of cameras, swipe cards, motion detectors, and security gates for off hours.

Energy saving practices such as water use reduction in restrooms, optimal heating and cooling, and lighting controls should also be considered.

These components, some obviously more visible and more tangible than others, provide a sense of belonging, a sense of comfort, a sense of security, and a sense of welcoming to all who enter the school.



*(Photograph used for illustration purposes only)*

## Public Spaces

There are many components of the school which could be considered public as they affect all who enter. Some of these, such as natural lighting, good air quality, good acoustics, and good heating and cooling systems are essential to provide comfort and a healthy environment.



## Community Use

It is anticipated that high schools will be used for a variety of community uses. Community involvement in education can take a variety of forms before, during, and after the school day. Additionally the school division would not have to pay for space elsewhere for banquets, PTA events, retirement events, student recognition events, if these types of spaces were available.

### The following is a partial list of potential community uses:

- Mentoring Programs.
- After School Youth Enrichment.
- Speech/Debate Clubs.
- Pageants.
- Child care (staff, community).
- Parks & Recreation Programs.
- Outdoor Festivals.
- Intramural Sports Programs.
- Dance Recitals.
- Open House Activities.
- Adult Education.
- Community Meetings and public hearings.
- School Board Meetings.
- School/Business Partnerships.
- Health Screening.
- Special Seminars.
- Voting.
- Teacher Training.
- Professional Development.
- Testing.
- Rental space for churches, local arts groups, sporting events.



**The areas in schools that have the greatest possibility for community usage include:**

- Gymnasium.
- Auditorium.
- Schola (Forum Room).
- Cafeteria.
- Media Center.
- Community Room/ Project Lab.
- Conference Rooms.
- Foyer/Entrance.
- Playfields/Stadium.
- Parking Lots.

**Special considerations include:**

- Disaster and emergency use.
- Configure and zone facility and site to enhance parking and circulation, security, and energy conservation.
- Adequate signage to assist community members.
- Layout of community use areas should be of a "user friendly" design.
- Storage for community functions –gym; auditorium; community use.
- After-hours lighting for parking areas.
- Extended hours – (6 am – 3pm typical day vs. 7 am – 11pm for all)
- Joint use.
- Mixed use.

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## Learning Community Concept

The Learning Community concept has been developed nationally as a way of achieving many of the advantages of small schools while maintaining many of the advantages of larger schools. When properly organized and supported through facilities the Pod/Cluster concept can deliver:

- **Small School Advantages:** Greater administrative flexibility, collective professional decision-making, smaller learning communities, greater personalization, less anonymity for students and teachers, possibility of thematic, focused instruction.
- **Large School Advantages:** Economies of scale, available of facilities, such as large media centers, auditoriums and gymnasiums, only affordable in large schools, greater range of competitive sports and extracurricular activities, shared special services and specialized instructional programs.

Additionally, in Virginia Beach the Learning Community concept allows the continued use of existing, large high school buildings when many of the educational and social values support small high schools.

This concept takes a total building capacity of 1,800 students and breaks it down into smaller Learning Communities. These communities have their own core academic spaces, special needs spaces, administration spaces, student spaces, and technology education spaces within their cluster or pod.

### Potential Types of Learning Communities:

- A. Traditional Departmental
- B. Themes
- C. Tech Focused [i.e. Engineering, Communications, Business]
- D. Combination of approaches

Shared between each community would be the self-contained special needs, cafeteria, media center, art, music and performing arts area, the physical education area and some administrative spaces.

## Overall Building Compilation of Space

| Space   | Suggested |                |
|---|-----------|----------------|
|   | TS        | Total          |
| Learning Community #1                           | 11        | 13,600         |
| Learning Community #2                           | 11        | 13,600         |
| Learning Community #3                           | 11        | 13,600         |
| Learning Community #4                           | 11        | 13,600         |
| Learning Community #5                           | 11        | 13,600         |
| Learning Community #6                           | 11        | 13,600         |
| Special Needs                                   | 3         | 4,990          |
| Technical / Career Education                    | 13        | 20,050         |
| Visual Arts                                     | 2         | 3,300          |
| Music/Performing Arts                           | 3         | 22,000         |
| Gym / Physical Education                        | 9         | 39,720         |
| Schola  |           | 3,000          |
| Media Center                                    |           | 6,500          |
| Welcome Center/Administration                   |           | 6,055          |
| Cafeteria / Food Services                       |           | 13,600         |
| Custodial / Building Services                   |           | 3,050          |
|   |           |                |
| <b>Sub Total Programmed Areas</b>               |           | <b>203,865</b> |
|   |           |                |
| Building Services, Circulation, Restrooms, etc. | 42%       | 85,623         |
| <b>Total</b>                                    | <b>96</b> | <b>289,488</b> |

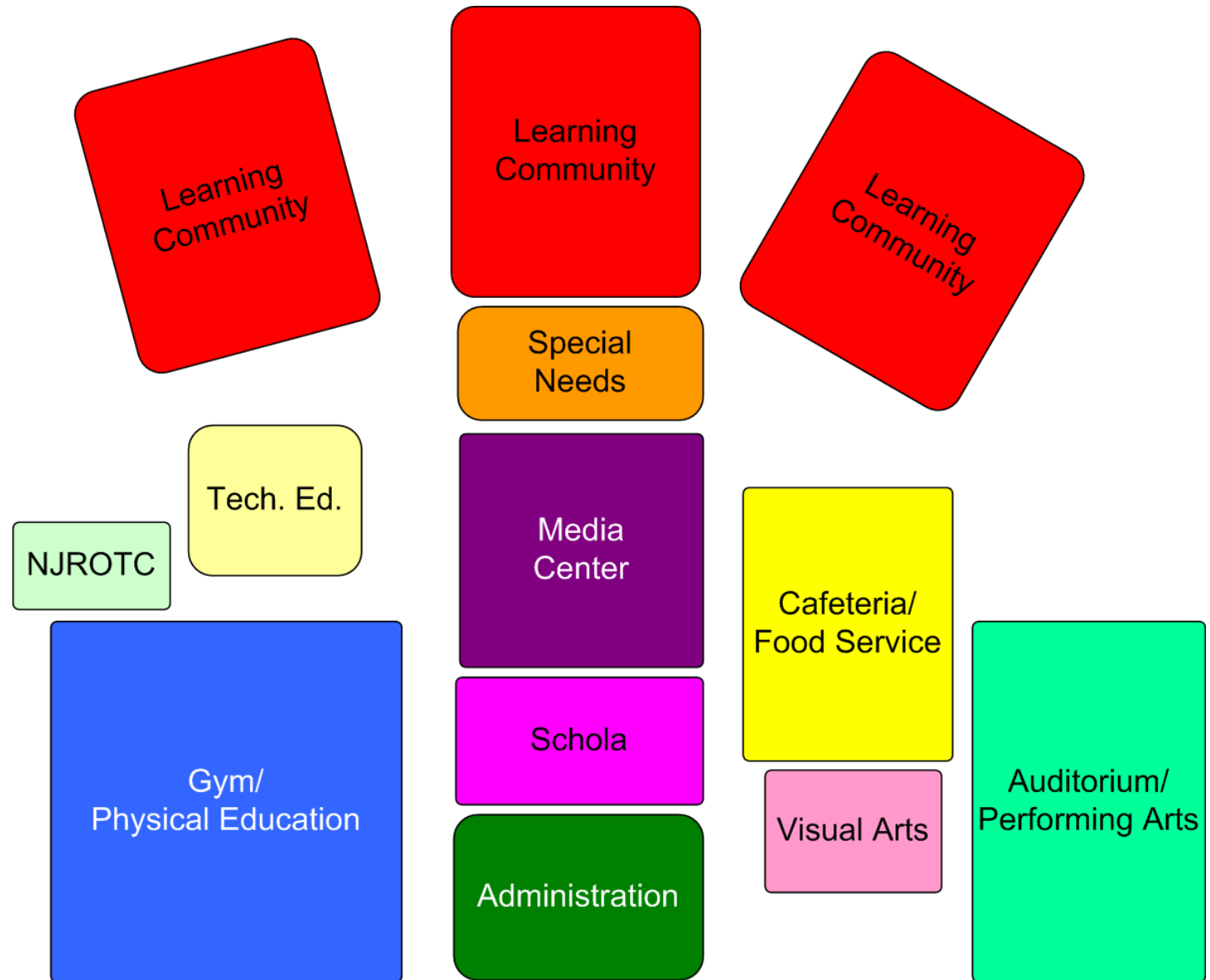
Net to Gross: 42% of Program Area or 30% of Total is approx. the Same Number

| Add Alternate [Needs to be decided by Site] | TS | Total |
|---|----|-------|
| NJROTC (add alternate)                      | 2  | 3,100 |



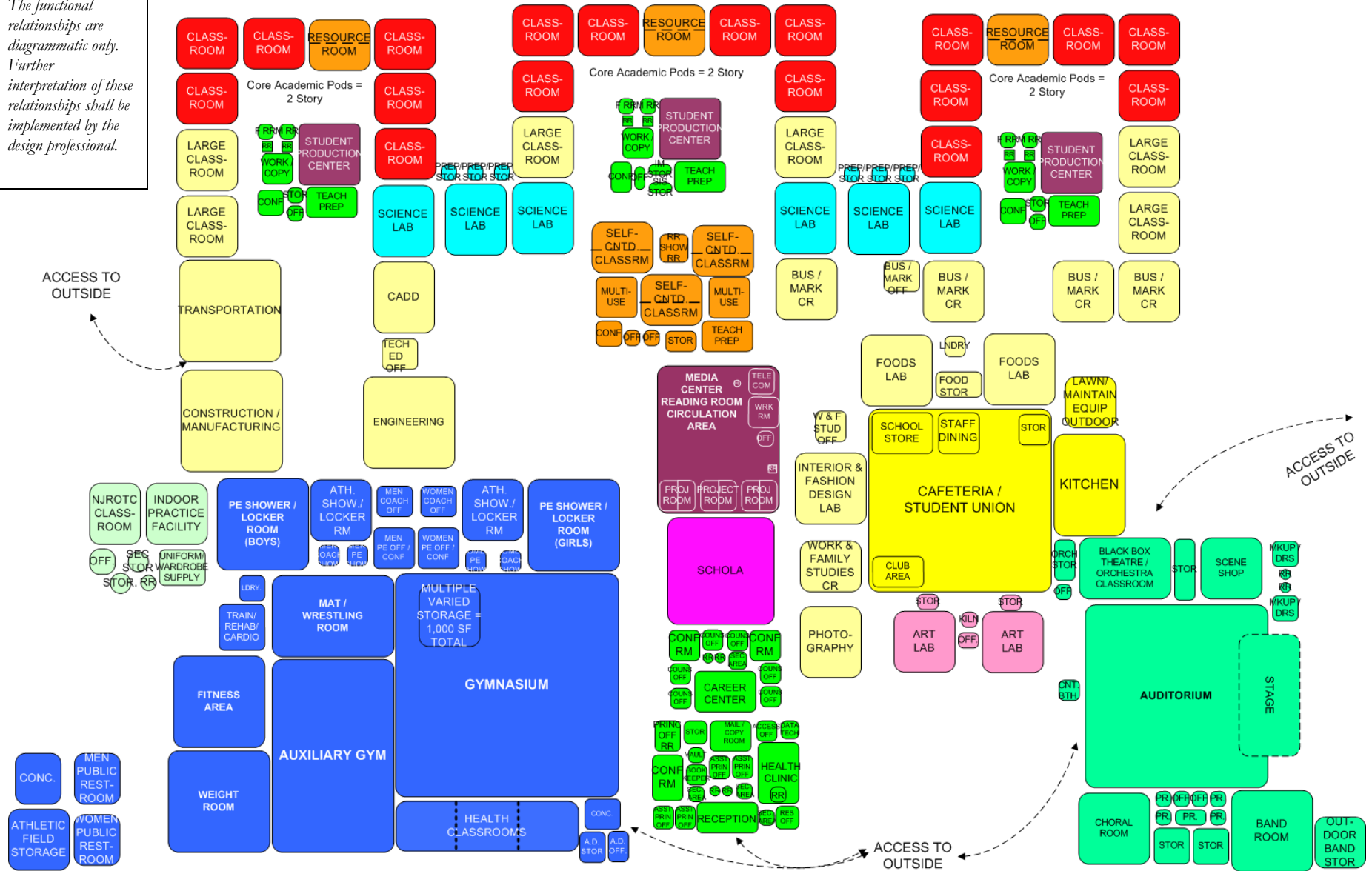
## High School Facility Spatial Relationship Drawing

*The functional relationships are diagrammatic only.  
Further interpretation of these relationships shall be  
implemented by the design professional.*



## High School Facility Illustration

The functional relationships are diagrammatic only. Further interpretation of these relationships shall be implemented by the design professional.



## Program Areas Compilation of Space

### Core Academic Learning Community

| Learning Community                                    | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
| Core Academics  | TS        | Quantity | SF    | Total         |
| Classrooms  | 6         | 6        | 850   | 5,100         |
| Large Classrooms [*Tech Ed Lab]                       | 2         | 2        | 1,000 | 2,000         |
| Resource Room   | 1         | 1        | 850   | 850           |
| Science Lab   | 2         | 2        | 1,200 | 2,400         |
| Science Prep/Storage                                  |           | 2        | 200   | 400           |
| Student Production Center [Decentralized Media]       |           | 1        | 1,000 | 1,000         |
| <b>Decentralized Admin/Guidance/Teacher Prep Area</b> |           |          |       |               |
| Conference Room                                       |           | 1        | 250   | 250           |
| Office  |           | 1        | 150   | 150           |
| Instructional Material Storage                        |           | 1        | 150   | 150           |
| Work/Copy   |           | 1        | 300   | 300           |
| Staff Restrooms                                       |           | 2        | 50    | 100           |
| Teacher Prep  |           | 1        | 500   | 500           |
| Student Restroom (male / female)                      |           | 2        | 200   | 400           |
| <b>Learning Community</b>                             | <b>11</b> |          |       | <b>13,600</b> |
| <b>Number of Learning Communities</b>                 |           |          |       | <b>6</b>      |
| <b>Totals per Pod / Cluster</b>                       | <b>66</b> |          |       | <b>81,600</b> |

\*Larger classrooms also could be Tech Ed Labs [Business, Marketing, Computer Labs]

### Special Needs

| Special Needs                  | Suggested |          |     |              |
|--------------------------------|-----------|----------|-----|--------------|
|                                | TS        | Quantity | SF  | Total        |
| Self-contained Classroom       | 3         | 3        | 850 | 2,550        |
| Restroom/Shower                |           | 1        | 100 | 100          |
| Multi-Use Special Needs Room   |           | 2        | 500 | 1,000        |
| Additional Offices             |           | 2        | 120 | 240          |
| Conference Room                |           | 1        | 300 | 300          |
| Storage                        |           | 1        | 300 | 300          |
| Teacher Prep/Offices           |           | 1        | 500 | 500          |
| <b>Special Needs-Sub Total</b> | <b>3</b>  |          |     | <b>4,990</b> |

**Technical / Career Education**

| Technical / Career Education    | Suggested |          |       |               |
|---------------------------------|-----------|----------|-------|---------------|
|                                 | TS        | Quantity | SF    | Total         |
| Foods Lab                       | 2         | 2        | 1,400 | 2,800         |
| Work & Family Studies Classroom | 1         | 1        | 850   | 850           |
| Food Storage                    |           | 1        | 400   | 400           |
| Laundry                         |           | 1        | 200   | 200           |
| Design Lab                      | 1         | 1        | 1,400 | 1,400         |
| Work & Family Studies Office    |           | 1        | 300   | 300           |
| Construction/Manufacturing      | 1         | 1        | 2,400 | 2,400         |
| Transportation                  | 1         | 1        | 2,400 | 2,400         |
| Engineering                     | 1         | 1        | 2,000 | 2,000         |
| CADD                            | 1         | 1        | 1,200 | 1,200         |
| Photography                     | 1         | 1        | 1,200 | 1,200         |
| Technical Education Office      |           | 1        | 350   | 350           |
| Business/Marketing              | 4         | 4        | 1,000 | 4,000         |
| Storage                         |           | 1        | 200   | 200           |
| Business/Marketing Office       |           | 1        | 350   | 350           |
| <b>Total</b>                    | <b>13</b> |          |       | <b>20,050</b> |

**Visual Arts**

| Visual Arts                  | Suggested                           |          |       |              |
|------------------------------|-------------------------------------|----------|-------|--------------|
|                              | TS                                  | Quantity | SF    | Total        |
| Art Lab                      | 2                                   | 2        | 1,300 | 2,600        |
| Kiln Room                    |                                     | 1        | 100   | 100          |
| Storage                      |                                     | 2        | 200   | 400          |
| Office                       |                                     | 1        | 200   | 200          |
| Digital Art Lab              | See Technical Education Photography |          |       |              |
| <b>Visual Arts Sub-Total</b> | <b>2</b>                            |          |       | <b>3,300</b> |



**Music and Performing Arts**

| Music / Performing Arts                 | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
|   | TS        | Quantity | SF    | Total         |
| Choral Room                             | 1         | 1        | 1,600 | 1,600         |
| Storage (Robes, Music)                  |           | 1        | 500   | 500           |
| Band Room                               | 1         | 1        | 2,300 | 2,300         |
| Band Storage (Instruments, Music)       |           | 1        | 500   | 500           |
| Practice rooms                          |           | 4        | 50    | 200           |
| Auditorium Seating (800 seats)*         |           | 1        | 7,200 | 7,200         |
| Control Booth                           |           | 1        | 200   | 200           |
| Auditorium Stage                        |           | 1        | 3,500 | 3,500         |
| Scene Shop                              |           | 1        | 1,200 | 1,200         |
| Make Up/Dressing                        |           | 2        | 300   | 600           |
| Storage (Costumes, Props)               |           | 1        | 500   | 500           |
| Restrooms                               |           | 2        | 50    | 100           |
| Offices                                 |           | 3        | 150   | 450           |
| Large Practice Room                     |           | 1        | 100   | 100           |
| Orchestra Storage                       |           | 1        | 300   | 300           |
| Black Box Theatre / Orchestra Classroom | 1         | 1        | 2,000 | 2,000         |
| Band Storage (Outdoor)                  |           | 1        | 750   | 750           |
| <b>Music/ Performing Arts Sub-Total</b> | <b>3</b>  |          |       | <b>22,000</b> |

\*Recommended that high schools have seating for 750-800 with 3-4 high schools having seating for 1,000

**Gym / Physical Education**

| Gymnasium / Physical Education              | Suggested |          |        |               |
|---|-----------|----------|--------|---------------|
|   | TS        | Quantity | SF     | Total         |
| Gymnasium                                   | 2         | 1        | 15,000 | 15,000        |
| Seating included in above: 2000 seats       |           |          |        |               |
| Storage                                     |           | Multiple | Varied | 1,000         |
| Auxiliary Gym                               | 1         | 1        | 5,000  | 5,000         |
| PE Shower/Locker Room                       |           | 2        | 2,000  | 4,000         |
| Fitness Area                                | 1         | 1        | 2,000  | 2,000         |
| Wrestling Room                              | 1         | 1        | 2,500  | 2,500         |
| Weight Room                                 | 1         | 1        | 2,500  | 2,500         |
| Athletics Shower/Locker Room                |           | 2        | 1,000  | 2,000         |
| Training / Rehabilitation / Cardio Lab      |           | 1        | 500    | 500           |
| PE Office/Conference                        |           | 2        | 400    | 800           |
| PE Staff Toilets/Showers                    |           | 2        | 100    | 200           |
| Laundry                                     |           | 1        | 200    | 200           |
| Coaches Offices                             |           | 2        | 300    | 600           |
| Coaches Toilet/Shower                       |           | 2        | 100    | 200           |
| Health Classroom                            | 3         | 3        | 850    | 2,550         |
| Concessions                                 |           | 1        | 300    | 300           |
| Athletic Director's Storage                 |           | 1        | 220    | 220           |
| Athletic Director's Office                  |           | 1        | 150    | 150           |
| <b>Physical Education Sub-Total</b>         | <b>9</b>  |          |        | <b>39,720</b> |
| Outdoor Spaces                              | Suggested |          |        |               |
|   | TS        | Quantity | SF     | Total         |
| Football Stadium                            |           |          |        |               |
| Athletic Field Storage                      |           | 1        | 1,000  | 1,000         |
| Public Restrooms                            |           | 2        | 600    | 1,200         |
| Concession                                  |           | 1        | 600    | 600           |
| <b>Physical Education Outdoor Sub-Total</b> |           |          |        | <b>2,800</b>  |
| <b>Physical Education Total</b>             | <b>9</b>  |          |        | <b>42,520</b> |

**Schola**

| Schola                  | Suggested |          |       |              |
|-------------------------|-----------|----------|-------|--------------|
|                         | TS        | Quantity | SF    | Total        |
| Schola [175 Seats]      |           | 1        | 3,000 | 3,000        |
| <b>Schola Sub-Total</b> |           |          |       | <b>3,000</b> |

**Media Center**

| Media Center                     | Suggested                  |          |       |              |
|----------------------------------|----------------------------|----------|-------|--------------|
|                                  | TS                         | Quantity | SF    | Total        |
| Reading Room/Circulation         |                            | 1        | 4,000 | 4,000        |
| Student Production Centers       | In Each Learning Community |          |       |              |
| Media Specialist Office          |                            | 1        | 150   | 150          |
| Workroom/Storage                 |                            | 1        | 400   | 400          |
| Telecommunications Room          |                            | 1        | 300   | 300          |
| Hub Rooms, distributed thru Bldg |                            | 4        | 25    | 100          |
| Project Room                     |                            | 3        | 500   | 1,500        |
| Restroom                         |                            | 1        | 50    | 50           |
| <b>Media Center Sub-Total</b>    |                            |          |       | <b>6,500</b> |

\* 6 Student Production Centers. One in each Learning Community

**Welcome Center / Administration**

| <b>Welcome Center / Administration</b>             |           | <b>Suggested</b> |           |              |
|--|-----------|------------------|-----------|--------------|
| <b>Administration</b>                              | <b>TS</b> | <b>Quantity</b>  | <b>SF</b> | <b>Total</b> |
| Reception  |           | 1                | 600       | 600          |
| Secretarial Area                                   |           | 3                | 80        | 240          |
| Principal's Office/Rest Room                       |           | 1                | 225       | 225          |
| Assistant Principal's Office                       |           | 4                | 125       | 500          |
| Conference Room                                    |           | 1                | 400       | 400          |
| Mail/Copy Room                                     |           | 1                | 300       | 300          |
| Storage  |           | 1                | 150       | 150          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| Resource Officer                                   |           | 1                | 150       | 150          |
| Bookkeeper   |           | 1                | 120       | 120          |
| Data Technician                                    |           | 1                | 100       | 100          |
| Access Office                                      |           | 1                | 120       | 120          |
| Health Clinic                                      |           | 1                | 700       | 700          |
| Vault  |           | 1                | 80        | 80           |
| <b>Guidance</b>                                    |           |                  |           |              |
| Career Center                                      |           | 1                | 700       | 700          |
| Counselors' Offices                                |           | 6                | 120       | 720          |
| Secretarial Area                                   |           | 1                | 100       | 100          |
| Conference Room                                    |           | 2                | 250       | 500          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| <b>Decentralized [See Core Academic]</b>           |           |                  |           |              |
| School Improvement Specialist Storage [In One Pod] |           | 1                | 150       | 150          |
| Offices for Itinerant and Others                   |           | 6                | 150       | See Core     |
| <b>Total</b>                                       |           |                  |           | <b>6,055</b> |



**Cafeteria / Food Service**

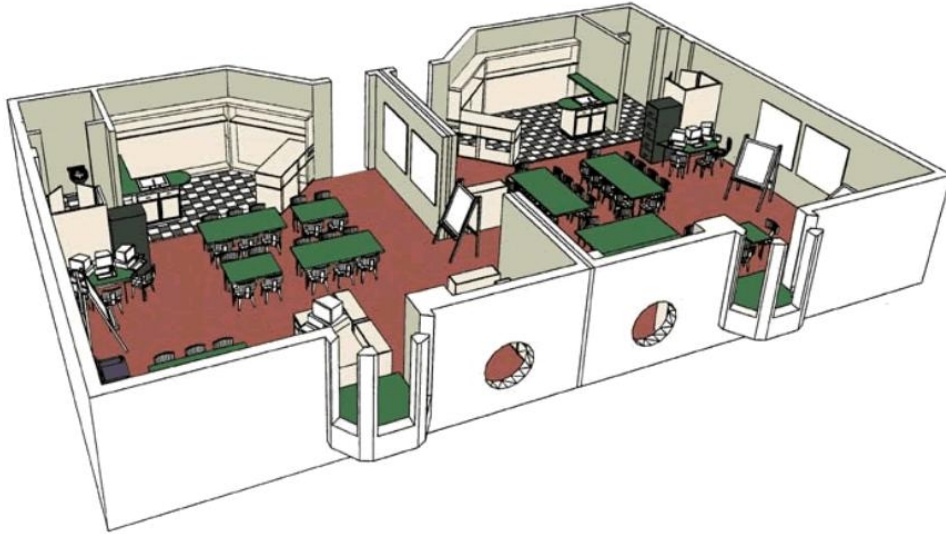
| Cafeteria / Food Service      | Suggested |          |       |               |
|-------------------------------|-----------|----------|-------|---------------|
|                               | TS        | Quantity | SF    | Total         |
| Kitchen                       |           | 1        | 3,500 | 3,500         |
| Preparation Area              |           |          |       |               |
| Serving Area                  |           |          |       |               |
| Dry Food Storage              |           |          |       |               |
| Cooler/Freezer                |           |          |       |               |
| Ware Washing                  |           |          |       |               |
| Kitchen Mgr Office            |           |          |       |               |
| Restroom                      |           |          |       |               |
| Lockers                       |           |          |       |               |
| Cafeteria / Student Union     |           | 1        | 8,000 | 8,000         |
| Table & Chair Storage         |           | 1        | 300   | 300           |
| Staff Dining w/Vending        |           | 1        | 600   | 600           |
| School Store                  |           | 1        | 700   | 700           |
| Club Areas                    |           | 1        | 500   | 500           |
| <b>Food Service Sub-Total</b> |           |          |       | <b>13,600</b> |

**Custodial / Building Services**

| Custodial / Building Services                  | Suggested |          |       |              |
|--|-----------|----------|-------|--------------|
|  | TS        | Quantity | SF    | Total        |
| Receiving/Storage                              |           | 1        | 1,000 | 1,000        |
| Maintenance/Repair Area                        |           | 1        | 600   | 600          |
| Office/Planning/Meeting Area/Break Room        |           | 1        | 300   | 300          |
| Locker Room/Toilets                            |           | 2        | 200   | 400          |
| Lawn/Maintenance Equipment (Outdoor Storage)   |           | 1        | 750   | 750          |
| Loading Area                                   | Outside   |          |       |              |
| <b>Custodial / Building Services Sub-Total</b> |           |          |       | <b>3,050</b> |

**NJROTC**

| NJROTC                    | Suggested |          |       |              |
|---------------------------|-----------|----------|-------|--------------|
|                           | TS        | Quantity | SF    | Total        |
| Indoor Practice Facility  | 1         | 1        | 1,200 | 1,200        |
| Classroom                 | 1         | 1        | 850   | 850          |
| Uniform / Wardrobe Supply |           | 1        | 600   | 600          |
| Office                    |           | 1        | 200   | 200          |
| Secure Armory Storage     |           | 1        | 100   | 100          |
| General Storage           |           | 1        | 100   | 100          |
| Restroom                  |           | 1        | 50    | 50           |
| <b>NJROTC Sub-Total</b>   | <b>2</b>  |          |       | <b>3,100</b> |



## Core Academics

It is the goal of the core academic program to provide opportunities for students of all grade levels to foster mastery of basic skills in reading, language, social studies, mathematics, science, citizenship, health, technology, and other content areas; experience and enhance their awareness and understanding of multi-cultural values, beliefs, and other aspects of society; and become involved in inquiry-based learning expressed by hands-on, minds-on, experiences.

The core academic area is composed of spaces associated with typical academic content areas such as language arts, mathematics, science, and social studies. Spaces include

classrooms, teacher workrooms, restrooms, and materials storage.

Specific spaces associated with the core academics and corresponding illustrations and adjacencies are described herein. Additionally, descriptions of activities and persons to be accommodated as well as design considerations are listed.

## Overview

The core academics concept should be organized to facilitate an interdisciplinary approach to instruction. Characteristics of this area are:

- Ability to organize space by teams
- Instruction and facility space to encourage team and student communication
- A flexible learning environment that is:
  - ✓ adaptable to change and supportive of different program delivery/organizational patterns
  - ✓ adequately sized with space to support the work of teams and production of student work, and encourages the integration of curricula

The concepts that will give direction to this interdisciplinary approach are:

- Integrated curricula
- Performance objectives for students
- Individualized/intra-dependent learning environments
- Performance assessment
- Decentralized/shared decision-making
- Coordination of services provided to students

In addition to the traditional large and small group instruction, many varied activities take place in the various Core Academic learning areas:

- Writing/composing
- Role playing – skits, acting out situations
- Hands-on projects and activities – individuals and groups
- Oral presentations
- Interactive activities – room-to-room, school-to-school, class-to-community
- Team teaching among all the disciplines
- Group and teamwork activities



**SCIENCE LAB**

**RESOURCE CENTER**



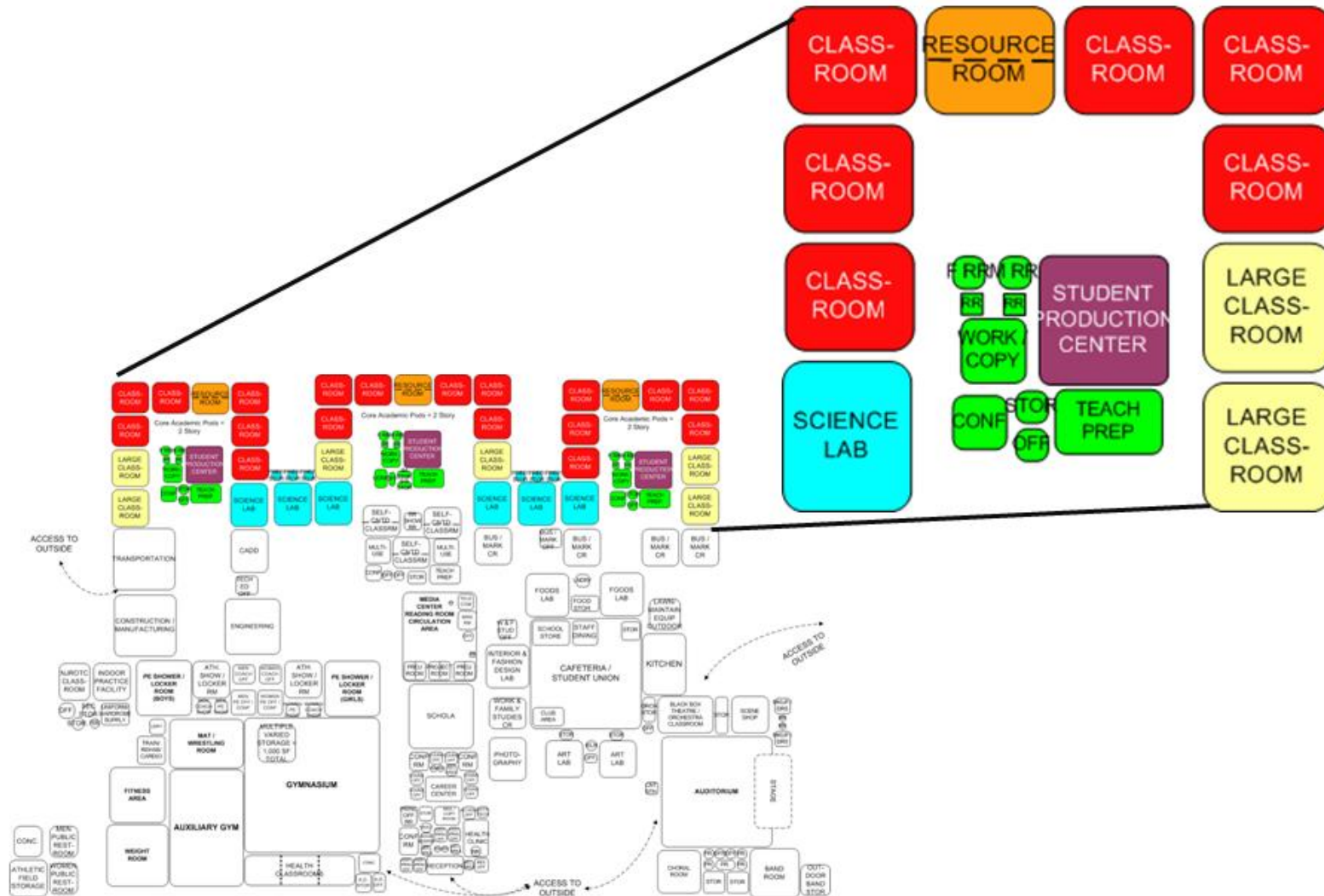


**Core Academics Space Requirements**

| Learning Community                                    | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
| Core Academics  | TS        | Quantity | SF    | Total         |
| Classrooms  | 6         | 6        | 850   | 5,100         |
| Large Classrooms [*Tech Ed Lab]                       | 2         | 2        | 1,000 | 2,000         |
| Resource Room   | 1         | 1        | 850   | 850           |
| Science Lab   | 2         | 2        | 1,200 | 2,400         |
| Science Prep/Storage                                  |           | 2        | 200   | 400           |
| Student Production Center [Decentralized Media]       |           | 1        | 1,000 | 1,000         |
| <b>Decentralized Admin/Guidance/Teacher Prep Area</b> |           |          |       |               |
| Conference Room                                       |           | 1        | 250   | 250           |
| Office  |           | 1        | 150   | 150           |
| Instructional Material Storage                        |           | 1        | 150   | 150           |
| Work/Copy   |           | 1        | 300   | 300           |
| Staff Restrooms                                       |           | 2        | 50    | 100           |
| Teacher Prep  |           | 1        | 500   | 500           |
| Student Restroom (male / female)                      |           | 2        | 200   | 400           |
| <b>Learning Community</b>                             | <b>11</b> |          |       | <b>13,600</b> |
| <b>Number of Learning Communities</b>                 |           |          |       | <b>6</b>      |
| <b>Totals per Pod / Cluster</b>                       | <b>66</b> |          |       | <b>81,600</b> |

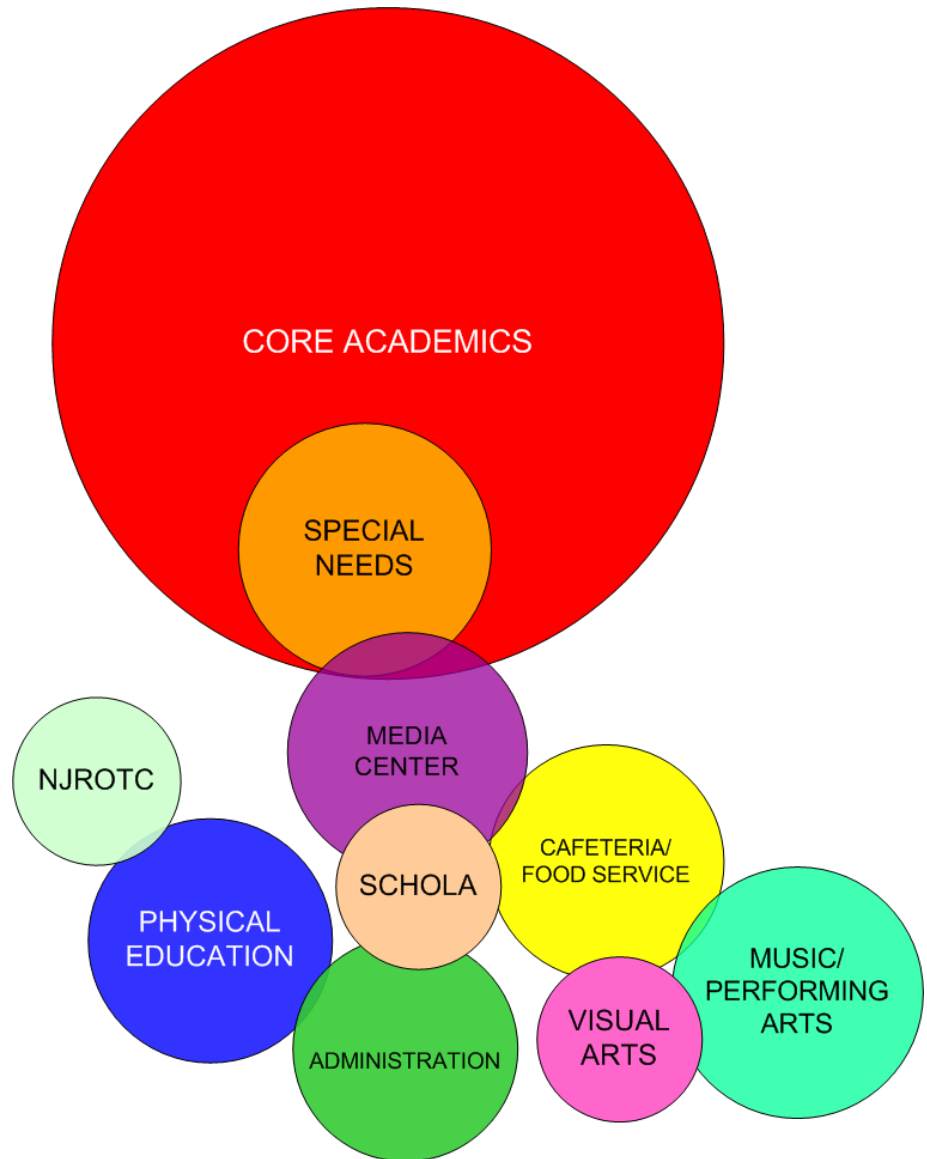
\*Larger classrooms also could be Tech Ed Labs [Business, Marketing, Computer Labs]

## Core Academics Illustration



### Core Academics Spatial Relationships

Core academics should be located adjacent to all other program areas: special needs, technical and career education as well as the media center. The three pod/cluster illustration is for a 2-story school.



## Core Academics Space Descriptions

### Classrooms

| CLASSROOMS                                    |                   |
|---|-------------------|
| ACTIVITIES                                    | PERSONS           |
| Individual, small, and large group activities | Students          |
| Storage of materials                          | Teachers          |
| Project-based learning                        | Aides             |
| Demonstrations                                | Volunteers        |
| Computer-based instruction                    | Paraprofessionals |
|   | Staff             |

| CLASSROOMS                   |  | QTY        |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>              | Sink with hot and cold water   | 1          |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                                  | Yes        |
|                              | Controlled day lighting, banked lighting                                     | Yes        |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Voice, data, video outlets at teacher desk                                   | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless, high on wall                         | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                      | 1          |
|                              | Ceiling mounted computer projector with retractable screen                   | Yes        |
|                              | Laptop computers with carts, shared  | 26         |
|                              | Access to voice, video, data ports, and electrical outlets                   | Yes        |
|                              | Teacher data port separate from student data ports                           | Yes        |
|                              | Audio enhancement  | 1 system   |
|                              | Document cameras for each class  | Yes        |



## Core Academics Space Descriptions

### Classrooms

| CLASSROOMS                    |  | QTY |
|-------------------------------|--|-----|
| <b>FURNITURE / EQUIPMENT</b>  | Student work tables, 2 students each   | Yes |
|                               | Comfortable ergonomic student chairs that allow movement                           | Yes |
|                               | Countertop over base cabinets  | Yes |
|                               | Lockable overhead cabinets   | Yes |
|                               | Magnetic marker board with tack strips above whiteboard                            | Yes |
|                               | Bulletin board   | Yes |
|                               | Shelving   | Yes |
|                               | Clock  | Yes |
|                               | Locking storage cabinet with outlet  | Yes |
|                               | All in One Computer Device   | Yes |
|                               | Retractable projection screen  | Yes |
|                               | Flexible or multiple display surfaces  | Yes |
|                               | Adjustable, lockable, and mobile storage cabinets and shelving                     | Yes |
|                               | Flexible furniture: can be used as individual desks or fit together to make tables | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Door with windows or view panel  | Yes |
|                               | Locking mechanism  | Yes |
|                               | Large energy efficient windows to outdoors with blinds                             | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Climate control for each classroom   | Yes |
|                               | Vinyl tile, no scratch flooring  | Yes |
|                               | Acoustical privacy   | Yes |
|                               | Walls painted with warm and cool colors  | Yes |

**Core Academics Space Descriptions**
**Large Classrooms**

| <b>LARGE CLASSROOMS</b>                       |                   |
|---|-------------------|
| <b>ACTIVITIES</b>                             | <b>PERSONS</b>    |
| Business Classes                              | Students          |
| Marketing Classes                             | Teachers          |
| Individual, small, and large group activities | Aides             |
| Project-based learning                        | Volunteers        |
| Demonstrations                                | Paraprofessionals |
| Computer-based instruction                    | Staff             |
|   |                   |

| <b>LARGE CLASSROOMS</b>      |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>              | No Special Requirements  |            |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                                  | Yes        |
|                              | Controlled day lighting, banked lighting                                     | Yes        |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Voice, data, video outlets at teacher desk                                   | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless in ceiling                            | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                      | 1          |
|                              | Ceiling mounted computer projector with retractable screen                   | Yes        |
|                              | Laptop computers with carts, shared  | 26         |
|                              | Access to voice, video, data ports, and electrical outlets                   | Yes        |
|                              | Teacher data port separate from student data ports                           | Yes        |
|                              | Audio enhancement  | 1 system   |
|                              | Document cameras for each class  | Yes        |

## Core Academics Space Descriptions

### Large Classrooms

| LARGE CLASSROOMS       |  | QTY |
|------------------------|--|-----|
| FURNITURE / EQUIPMENT  | Student work tables, 2 students each   | Yes |
|                        | Comfortable ergonomic student chairs that allow movement                           | Yes |
|                        | Countertop over base cabinets  | Yes |
|                        | Overhead cabinets  | Yes |
|                        | Magnetic marker board with tack strips above whiteboard                            | Yes |
|                        | Bulletin board   | Yes |
|                        | Shelving   | Yes |
|                        | Locking storage cabinet with outlet  | Yes |
|                        | All in One Computer Device   | Yes |
|                        | Retractable projection screen  | Yes |
|                        | Flexible or multiple display surfaces  | Yes |
|                        | Adjustable, lockable, and mobile storage cabinets and shelving                     | Yes |
|                        | Flexible furniture: can be used as individual desks or fit together to make tables | Yes |
| DOORS & WINDOWS        | Door with windows or view panel that open to exterior                              | Yes |
|                        | Locking mechanism  | Yes |
|                        | Large energy efficient windows to outdoors with blinds                             | Yes |
| SPECIAL CONSIDERATIONS | Climate control for each classroom   | Yes |
|                        | Vinyl tile, no scratch flooring  | Yes |
|                        | Acoustical privacy   | Yes |
|                        | Walls painted with warm and cool colors  | Yes |

## Core Academics Space Descriptions

### Resource Room

| RESOURCE ROOM                                 |            |
|---|------------|
| ACTIVITIES                                    | PERSONS    |
| Individual, small, and large group activities | Teachers   |
| Physical therapy                              | Aides      |
| Tutoring                                      | Staff      |
|   | Volunteers |
|   | Students   |
|   |            |

| RESOURCE ROOM                |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Quiet air conditioning   | Yes |
| <b>PLUMBING</b>              | Sink with hot and cold water   | 1   |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                                   | Yes |
|                              | Quad outlet @ each data port   | Yes |
|                              | Overhead lighting  | Yes |
|                              | Banked lighting  | Yes |
| <b>TECHNOLOGY</b>            | Front row of light, dimmable   | 1   |
|                              | Telephone  | 1   |
|                              | Intercom   | Yes |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets | Yes |
|                              | Access to voice, video, data ports, and electrical outlets               | Yes |

**Core Academics Space Descriptions**  
**Resource Room**

| <b>RESOURCE ROOM</b>          |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Student work tables                                    | 1          |
|                               | Comfortable ergonomic student chairs                   | 1/ 25 SF   |
|                               | Magnetic whiteboard                                    | 8LF        |
|                               | Ceiling mounted data projector                         | 1          |
|                               | Retractable projection screen                          | 1          |
|                               | Bulletin board   | 4 LF       |
|                               | Clock  | 1          |
|                               | Lockable storage cabinets                              | Yes        |
|                               | Flexible surfaces                                      | Yes        |
|                               | Abundant shelving                                      | Yes        |
|                               | Flexible or multiple display surfaces                  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door with windows or view panel                        | Yes        |
|                               | Locking mechanism                                      | Yes        |
|                               | Large energy efficient windows to outdoors with blinds | Yes        |
|                               | Windows to corridor and / or Learning Community        | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Spill and stain-resistant flooring                     | Yes        |
|                               | Walls painted with warm / cool colors                  | Yes        |



## Core Academics Space Descriptions

### Science Lab

| SCIENCE LAB                     |            |
|---------------------------------|------------|
| ACTIVITIES                      | PERSONS    |
| Cooperative learning            | Students   |
| Hands-on experiments            | Teachers   |
| Demonstrations                  | Aides      |
| Long-term projects              | Volunteers |
| Independent study               | Staff      |
| Interdisciplinary team teaching |            |
| Computer-based instruction      |            |

| SCIENCE LAB                  |  | QTY      |
|------------------------------|--|----------|
| <b>MECHANICAL</b>            | Fume hood  | Yes      |
|                              | Air conditioning   | Yes      |
|                              | Exhaust fan  | Yes      |
|                              | Gas at each sink   | Yes      |
| <b>PLUMBING</b>              | Access to water, air, electric, and gas at every lab station               | Yes      |
|                              | Sinks with sliding / lockable cover (possibly with quick disconnects)      | Yes      |
|                              | Eye washing station, shower station, and sprinkler system                  | Yes      |
| <b>ELECTRICAL / LIGHTING</b> | Front row of light, dimmable   | Yes      |
|                              | Quad outlet @ each data port   | Yes      |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets   | Yes      |
|                              | Banked lighting  | Yes      |
|                              | Controlled day lighting  | Yes      |
|                              | Room darkening capability  | Yes      |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets at lab stations | Yes      |
|                              | Ceiling-mounted computer projector with retractable screen                 | Yes      |
|                              | Localized routers for computer WIFI wireless network access                | Yes      |
|                              | Interactive whiteboard w/integral computer projector                       | 1        |
|                              | Audio enhancement  | 1 system |
|                              | Voice, data, video outlets at teacher desk                                 | 1        |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets   | 6        |
|                              | 2 data drops at teacher desk area  | 2        |
|                              | Single data drop dedicated to wireless, high on wall                       | 1        |
|                              | Analog telephone   | Yes      |
|                              | Intercom   | Yes      |
|                              | Laptop computers with carts, shared  | 26       |

**Core Academics Space Descriptions**
**Science Lab**

| <b>SCIENCE LAB</b>            |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Flexible or multiple display surfaces  | Yes        |
|                               | Magnetic whiteboard with tack strips above                                     | Yes        |
|                               | Lab seating  | Yes        |
|                               | Hanging display area [i.e. atom models, DNA models, cells, art projects, etc.] | Yes        |
|                               | Small chairs   | Yes        |
|                               | Easels   | Yes        |
|                               | Mobile Labs  | Yes        |
|                               | Equipment storage / display cabinets   | Yes        |
|                               | Students work tables, 4 students each, 4' x 6'                                 | 6          |
|                               | Student chairs   | 24         |
|                               | Countertop over lockable base cabinets   | Perimeter  |
|                               | Lockable overhead cabinets   | Perimeter  |
|                               | Bulletin board   | 24 LF      |
|                               | Shelving   | 24 LF      |
|                               | Clock  | Yes        |
|                               | Locking storage cabinet  | 6 LF       |
|                               | All in One Device  | 1          |
|                               | Teacher demonstration desk   | Yes        |
|                               | Equipment storage / display cabinets   | 6 LF       |
|                               | Retractable projection screen  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | View panel in door   | Yes        |
|                               | Windows with blinds to control natural lighting                                | Yes        |
|                               | Screens on windows   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Spill and stain resistant flooring   | Yes        |
|                               | Accessible to science prep area and storage                                    | Yes        |
|                               | Fire blankets and first aid kits   | Yes        |
|                               | Meet OSHA requirements for science   | Yes        |
|                               | Climate control for each classroom   | Yes        |
|                               | Lamps  | Yes        |
|                               | Copier / scanner / fax   | Yes        |
|                               | Bio lab, physical sciences, chemical lab                                       | Yes        |
|                               | Place to store / display projects  | Yes        |
|                               | Vandal and acid resistant surfaces   | Yes        |
|                               | Master shut-off switch for water, gas, and electricity                         | Yes        |
|                               | Flip down gas outlets to regain table-top space                                | Yes        |
|                               | Secure gas outlets below table-top with sliding, locking cover                 | Yes        |
|                               | General exhaust fan to outside   | Yes        |

**Core Academics Space Descriptions**  
**Science Prep / Storage**

| <b>SCIENCE PREP STORAGE</b>                 |                |
|---|----------------|
| <b>ACTIVITIES</b>                           | <b>PERSONS</b> |
| Staff meetings                              | Teachers       |
| Lesson planning and grading                 | Aides          |
| Scheduling of appointments                  | Volunteers     |
| Record keeping                              | Staff          |
| Development and review of teacher materials |                |
| Lab preparations                            |                |
| Chemical (acid) storage                     |                |
| Flammable storage                           |                |
| Storage of refrigerated items               |                |

| <b>SCIENCE PREP STORAGE</b>  |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Fume hood  | Yes        |
|                              | Exhaust fan  | Yes        |
| <b>PLUMBING</b>              | Quad outlet @ each data port                               | Yes        |
|                              | For Dishwasher   | Yes        |
|                              | Eye washing station, shower station, and sprinkler system  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                     | Yes        |
|                              | Overhead lighting  | Yes        |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets | Yes        |

**Core Academics Space Descriptions**  
**Science Prep / Storage**

| <b>SCIENCE PREP STORAGE</b>   |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets  | Yes        |
|                               | Dishwasher   | Yes        |
|                               | Abundant shelving  | Yes        |
|                               | Flexible or multiple display surfaces                                    | Yes        |
|                               | Chemical storage cabinet   | Yes        |
|                               | Adequate counter-top space for small appliances and production equipment | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | View panel at door   | Yes        |
|                               | Lockable   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Spill and stain resistant flooring                                       | Yes        |
|                               | Accessible to Science Lab / Classroom                                    | Yes        |
|                               | Vandal and acid resistant surfaces                                       | Yes        |
|                               | Layout to maximize storage and efficiency                                | Yes        |
|                               | Temperature and humidity control   | Yes        |
|                               | Secure   | Yes        |
|                               | Fire safety equipment  | Yes        |
|                               | Acid storage cabinet   | Yes        |
|                               | Nitric acid storage  | Yes        |
|                               | Flammable storage  | Yes        |
|                               | Corrosives storage   | Yes        |

## Core Academics Space Descriptions

### Student Production Center

| STUDENT PRODUCTION CENTER               |  |
|---|--|
| ACTIVITIES                              | PERSONS                                  |
| Reading                                 | Students                                 |
| Circulation of materials and resources  | Individual students for research         |
| Whole group and small group instruction | Media specialist                         |
| Provide meeting areas                   | Community patrons for after school hours |
| Research                                | Volunteers                               |
| Processing new media                    | Teachers                                 |
|   | Technology Information Specialist        |

| STUDENT PRODUCTION CENTER    |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | No special requirements  |     |
| <b>PLUMBING</b>              | No special requirements  |     |
| <b>ELECTRICAL / LIGHTING</b> | Multiple duplex electrical outlets on each wall                                | Yes |
|                              | Full spectrum lighting   | Yes |
|                              | Ability to control specific lighting areas; dimmable                           | Yes |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port  | Yes |
|                              | Video and data ports   | Yes |
|                              | Quad outlet adjacent to each data port   | Yes |
|                              | Wireless laptops with carts for battery recharging                             | Yes |
|                              | Electronic surveillance system   | Yes |
|                              | Interactive whiteboards, computer projection opportunities throughout the room | Yes |



**Core Academics Space Descriptions**  
**Student Production Center**

| <b>STUDENT PRODUCTION CENTER</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>     | Bookshelves, some portable  | Yes        |
|                                  | Portable, lightweight 4-person tables with chairs   | Yes        |
|                                  | Soft seating for recreational reading   | 20         |
|                                  | Computer tables with chairs   | Yes        |
|                                  | Clock   | Yes        |
|                                  | Copier / printer  | 1          |
|                                  | Printers and printer tables   | Yes        |
|                                  | Networked computers with access to programs and online-card catalog                         | Yes        |
|                                  | Computer projector and mounted screen   | 2          |
|                                  |   |            |
| <b>DOORS &amp; WINDOWS</b>       | Door: double doors, large view panel  | Yes        |
|                                  | Windows: operable, with blinds to allow controlled natural lighting                         | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Controlled natural light  | Yes        |
|                                  | Open flow for traffic in reference/ professional/periodicals area                           | Yes        |
|                                  | Auditory privacy  | Yes        |
|                                  | Provide method to darken room for AV presentations  | Yes        |
|                                  | During/ after school hours access while maintaining security in the remainder of the school | Yes        |
|                                  | Carpeted flooring   | Yes        |
|                                  | Magnetic marker boards  | Yes        |
|                                  | Glass walls to corridor   |            |
|                                  | Wireless, portable microphone to use when teaching  | Yes        |
|                                  | Laptop charging stations  | Yes        |

## Core Academics Space Descriptions

### Conference Room

| CONFERENCE ROOM                  |                |
|----------------------------------|----------------|
| ACTIVITIES                       | PERSONS        |
| Small group meetings/conferences | Administrators |
|                                  | Counselors     |
|                                  | Parents        |
|                                  | Students       |
|                                  | Visitors       |
|                                  | Staff          |

| CONFERENCE ROOM               |   | QTY     |
|-------------------------------|---|---------|
| <b>MECHANICAL</b>             | Air conditioning                                | Yes     |
| <b>PLUMBING</b>               | Sink with hot and cold water                    | Yes     |
| <b>ELECTRICAL / LIGHTING</b>  | Multiple duplex electrical outlets on each wall | Yes     |
|                               | Duplex outlet                                   | 1       |
|                               | Overhead lighting [dimmable]                    | Yes     |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port               | Yes     |
|                               | Video and data ports                            | Yes     |
|                               | Quad outlet adjacent to each data port          | Yes     |
|                               | Whiteboard screen on whole wall                 | Yes     |
| <b>FURNITURE / EQUIPMENT</b>  | Countertop with sink, base, and wall cabinets   | Yes     |
|                               | Ceiling mounted data projector                  | 1       |
|                               | Modular conference table                        | 1       |
|                               | Conference chairs                               | 1/25 SF |
|                               | Credenza  | Yes     |
|                               | Magnetic marker board                           | Yes     |
|                               | Retractable projection screen                   | 1       |
|                               | Tack board                                      | Yes     |
|                               | Bulletin board                                  | 4 LF    |
|                               | Bookshelves                                     | Yes     |
|                               | Clock   | 1       |
| <b>DOORS &amp; WINDOWS</b>    | Door: large view panel with optional sidelight  | Yes     |
|                               | Windows: to hallway with mini-blinds            | Yes     |
| <b>SPECIAL CONSIDERATIONS</b> | Consideration for sound transfer                | Yes     |
|                               | Carpeted flooring                               | Yes     |

**Core Academics Space Descriptions**
**Offices**

| <b>OFFICES</b>        |                    |
|-----------------------|--------------------|
| <b>ACTIVITIES</b>     | <b>PERSONS</b>     |
| Meeting with students | School staff       |
|                       | Student population |

| <b>OFFICES</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                   | Yes        |
|                               | Quad outlet at each data port  | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port  | Yes        |
|                               | Video and data ports   | Yes        |
|                               | Duplex outlet  | Yes        |
|                               | Quad outlet @ each data port   | Yes        |
|                               | Intercom   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Flexible surfaces  | Yes        |
|                               | Legal size file lateral drawer   | Yes        |
|                               | 6 data drops with double, triple, or quad Communications Network Outlets | 1          |
|                               | Desk chair   | 1          |
|                               | Guest chairs   | 2          |
|                               | Lamps  | Yes        |
|                               | Bookshelves  | 18LF       |
|                               | Marker board   | 4LF        |
|                               | Laptop computer  | 1          |
|                               | Printer  | 1          |
|                               | Locking file cabinet, 4 drawer   | 1 to 2     |
|                               | Bulletin board   | 4LF        |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting  | Yes        |
|                               | Carpeted flooring  | Yes        |

**Core Academics Space Descriptions**  
**Instructional Material Storage**

| <b>INSTRUCTIONAL MATERIAL STORAGE</b>   |                |
|---|----------------|
| <b>ACTIVITIES</b>                       | <b>PERSONS</b> |
| Storage of instructional team materials | Teachers       |
|   | Staff          |

| <b>INSTRUCTIONAL MATERIAL STORAGE</b> |  | <b>QTY</b> |
|---------------------------------------|--|------------|
| <b>MECHANICAL</b>                     | No Special Requirements                |            |
| <b>PLUMBING</b>                       | No Special Requirements                |            |
| <b>ELECTRICAL &amp; LIGHTING</b>      | Duplex outlets on each wall            | Yes        |
|                                       | Overhead lighting                      | Yes        |
| <b>TECHNOLOGY</b>                     | No Special Requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>          | Casework to include:                   |            |
|                                       | Countertop with base and wall cabinets | Yes        |
|                                       | Lockable storage cabinets              | Yes        |
|                                       | Abundant wall shelving                 | Yes        |
| <b>DOORS &amp; WINDOWS</b>            | Solid door                             | Yes        |
|                                       | Keypad access                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>         | Vinyl tile                             | Yes        |

**Core Academics Space Descriptions**
**Work / Copy**

| <b>WORK / COPY</b>                     |                |
|--|----------------|
| <b>ACTIVITIES</b>                      | <b>PERSONS</b> |
| Copying                                | Teachers       |
| Collating                              | Staff          |
| Laminating, book making, poster making |                |
| General office work                    |                |

| <b>WORK / COPY</b>            |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Quiet air conditioning                         | Yes        |
| <b>PLUMBING</b>               | No special requirements                        |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex outlet                                  | Yes        |
|                               | Quad outlet @ each data port                   | 1          |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port              | Yes        |
|                               | Video and data ports                           | Yes        |
|                               | Quad outlet adjacent to each data port         | Yes        |
|                               | Intercom                                       | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Work tables                                    | 2          |
|                               | Counter over base cabinets                     | 16 LF      |
|                               | Overhead cabinets                              | 8 LF       |
|                               | Chairs   | 2          |
|                               | Computer workstations                          | 1          |
|                               | Wall shelving                                  | 8 LF       |
|                               | Lockable storage cabinet                       | Yes        |
|                               | Fax machine                                    | 1          |
|                               | Copier w/Sorter                                | 1          |
|                               | B&W and color printer                          | 1          |
|                               | Scanner  | 1          |
|                               | Laminating machine                             | 1          |
|                               | Paper storage, shredder, and cutter            | Yes        |
|                               | Marker board                                   | 8 LF       |
|                               | Tack board                                     | Yes        |
|                               | Bookshelves                                    | Yes        |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: large view panel with optional sidelight | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Consideration for sound transfer               | Yes        |
|                               | Tile flooring                                  | Yes        |



**Core Academics Space Descriptions**
**Staff Restrooms**

| <b>STAFF RESTROOMS</b> |                |
|------------------------|----------------|
| <b>ACTIVITIES</b>      | <b>PERSONS</b> |
| Personal hygiene       | Teachers       |
|                        | Administrators |

| <b>STAFF RESTROOMS</b>        |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Exhaust fan                             | Yes        |
| <b>PLUMBING</b>               | Sink with hot and cold water            | Yes        |
|                               | Toilet                                  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall  | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                 |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include cabinet with mirror | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Solid door                              | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Hand-free dispensers                    | Yes        |

## Core Academics Space Descriptions

### Teacher Prep

| TEACHER PREP                       |                   |
|------------------------------------|-------------------|
| ACTIVITIES                         | PERSONS           |
| Teacher planning and collaboration | Teachers          |
| Team meetings                      | Staff             |
| Professional development           | Paraprofessionals |
| Recordkeeping                      |                   |
| Preparation of teaching materials  |                   |
| Faculty lunch                      |                   |
| Storage                            |                   |

| TEACHER PREP                 |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Quiet air conditioning                                     | Yes |
| <b>PLUMBING</b>              | Sink with hot and cold water                               | Yes |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | Yes |
|                              | Quad outlet @ each data port                               | Yes |
|                              | Controlled day lighting                                    | Yes |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets | Yes |
|                              | Intercom   | Yes |

## Core Academics Space Descriptions

### Teacher Prep

| TEACHER PREP                  |  | QTY  |
|-------------------------------|--|------|
| <b>FURNITURE / EQUIPMENT</b>  | Teacher desks  | 12   |
|                               | Lockable storage cabinets and closets                                    | Yes  |
|                               | Flexible surfaces  | Yes  |
|                               | Adequate counter top space for small appliances and production equipment | Yes  |
|                               | Computer station with Internet access                                    | Yes  |
|                               | Work tables  | 2    |
|                               | Conference chairs  | Yes  |
|                               | Conference table   | Yes  |
|                               | Abundant shelving  | Yes  |
|                               | Layout of shelving to maximize efficiency                                | Yes  |
|                               | File cabinet, 4 drawer   | 12   |
|                               | Refrigerator w/ ice maker  | Yes  |
|                               | Microwave  | Yes  |
|                               | Laptop computer  | 6    |
|                               | Printer  | 1    |
|                               | Magnetic Marker board  | Yes  |
|                               | Bulletin board   | 4 LF |
|                               | Clock  | 1    |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes  |
| <b>SPECIAL CONSIDERATIONS</b> | Acoustical privacy   | Yes  |

## Core Academics Space Descriptions

### Student Restroom

| STUDENT RESTROOMS |          |
|-------------------|----------|
| ACTIVITIES        | PERSONS  |
| Personal hygiene  | Students |
|                   |          |

| STUDENT RESTROOMS             |   | QTY |
|-------------------------------|---|-----|
| <b>MECHANICAL</b>             | Exhaust fan                             | Yes |
| <b>PLUMBING</b>               | Sinks with hot and cold water           | Yes |
|                               | Toilets                                 | Yes |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall  | Yes |
| <b>TECHNOLOGY</b>             | No special requirements                 |     |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include cabinet with mirror | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Door: no view panel                     | Yes |
|                               | Windows: none                           |     |
| <b>SPECIAL CONSIDERATIONS</b> | Hand-free dispensers                    | Yes |



The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

## Special Needs

The goal of the Special Needs Program Area is to meet the requirements of students with disabilities within the least restrictive environment enabling them to become responsible, life-long learners. To meet students' needs, the Special Education Program provides instruction within the general education environment through an inclusion process as well as separate classrooms for those students who need a resource environment or for those students who need a self-contained environment.

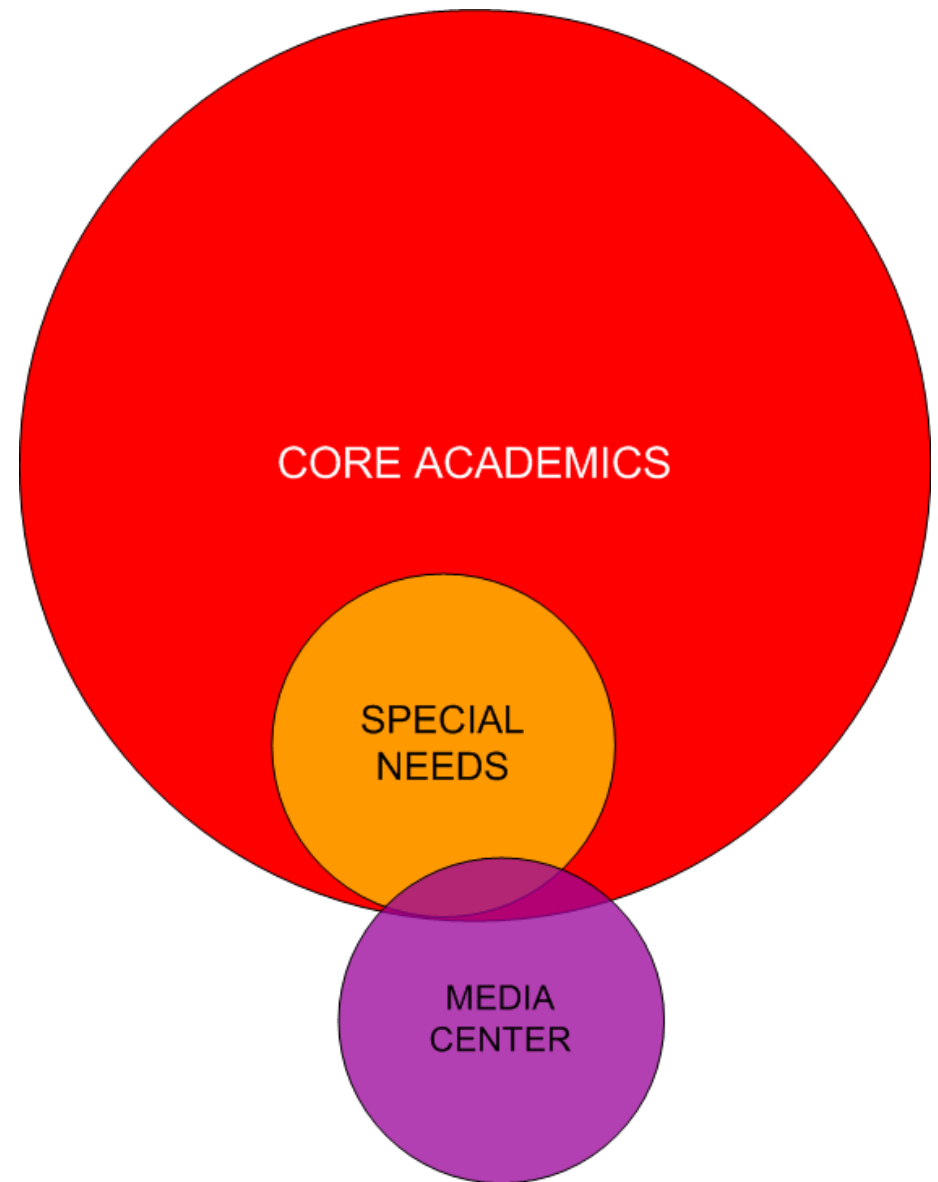


## Special Needs Space Requirements

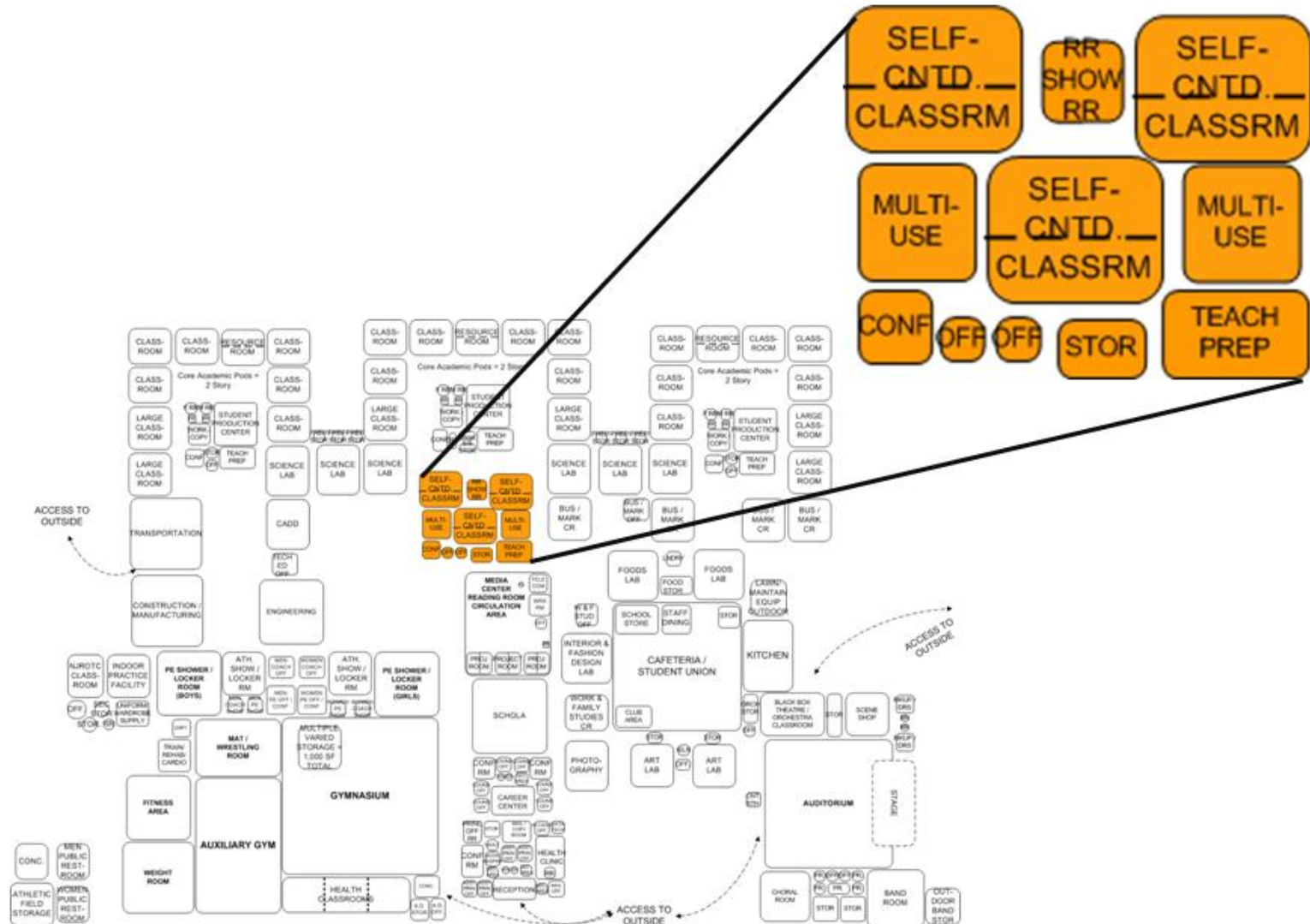
| Special Needs                  | Suggested |          |     |              |
|--------------------------------|-----------|----------|-----|--------------|
|                                | TS        | Quantity | SF  | Total        |
| Self-contained Classroom       | 3         | 3        | 850 | 2,550        |
| Restroom/Shower                |           | 1        | 100 | 100          |
| Multi-Use Special Needs Room   |           | 2        | 500 | 1,000        |
| Additional Offices             |           | 2        | 120 | 240          |
| Conference Room                |           | 1        | 300 | 300          |
| Storage                        |           | 1        | 300 | 300          |
| Teacher Prep/Offices           |           | 1        | 500 | 500          |
| <b>Special Needs-Sub Total</b> | <b>3</b>  |          |     | <b>4,990</b> |

### Special Needs Spatial Relationships

Self-contained special needs classrooms should be adjacent to the core academics. Within the learning communities, special education resource rooms should be incorporated into the pod / cluster.



## Special Needs Illustration



**Special Needs Space Descriptions**
**Self-Contained Classrooms with Divider Wall**

| <b>SELF CONTAINED CLASSROOM WITH DIVIDER WALL</b> |                |
|---|----------------|
| <b>ACTIVITIES</b>                                 | <b>PERSONS</b> |
| Individual, small, and large group activities     | Students       |
| Storage of materials, equipment                   | Teachers       |
| Project-based learning                            | Parents        |
| Computer-based instruction                        | Volunteers     |
|   | Other staff    |

| <b>SELF CONTAINED CLASSROOM WITH DIVIDER WALL</b> |  | <b>QTY</b> |
|---|--|------------|
| <b>MECHANICAL</b>                                 | Low incidence equipment/ Assisted Technology equipment     | Yes        |
|   | Air conditioning   | Yes        |
|   | Hoyer lift [to be located in restroom]                     | Yes        |
|   | Gait trainer wheelchair                                    | Yes        |
| <b>PLUMBING</b>                                   | Sink with hot and cold water                               | Yes        |
|   | Drinking fountain  | Yes        |
|   | Age appropriate changing area [to be located in restroom]  | Yes        |
|   | Kitchen sink   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>                      | Multiple duplex electrical outlets on each wall            | Yes        |
|   | Banked switching to allow varied light levels              | Yes        |
|   | Room darkening capabilities                                | Yes        |
| <b>TECHNOLOGY</b>                                 | Telephone/intercom/voicemail port                          | Yes        |
|   | Video and data ports                                       | Yes        |
|   | Quad outlet adjacent to each data port                     | Yes        |
|   | Audio enhancement system                                   | Yes        |
|   | Ceiling-mounted computer projector with retractable screen | Yes        |
|   | Equipment for Deaf and Hearing Impaired                    | Yes        |

**Special Needs Space Descriptions**
**Self-Contained Classrooms with Divider Wall**

| <b>SELF CONTAINED CLASSROOM WITH DIVIDER WALL</b> |  | <b>QTY</b> |
|---|--|------------|
| <b>FURNITURE / EQUIPMENT</b>                      | Casework to Include: <ul style="list-style-type: none"> <li>- Countertop with sink, base, and wall cabinets</li> <li>- 4 tall storage cabinets with shelving, drawers, and lockable doors</li> <li>- Adjustable height bookshelves</li> <li>- Large shallow drawers sized to hold poster board and chart paper</li> <li>- Drawers for teacher storage</li> <li>- 2 Lockable file cabinets</li> </ul> | Yes        |
|   | Fixed cubbies for student storage with hooks   | Yes        |
|   | Tables, chairs, and student desks that are mobile [wheelchair accessibility]   | Yes        |
|   | Networked computers  | 4          |
|   | Teacher work station   | Yes        |
|   | Kidney-shaped tables   | 2          |
|   | Rectangle tables   | 4 or more  |
|   | Magnetic marker board on primary and secondary teaching wall   | Yes        |
|   | Tack board at each end of marker board on primary wall   | Yes        |
|   | Tack strip above marker board and on walls   | Yes        |
|   | Clock  | yes        |
|   | Video screen   | Yes        |
|   | One classroom equipped with kitchen, washer & dryer with areas for activities of daily living  | Yes        |
|   |  |            |
| <b>DOORS &amp; WINDOWS</b>                        | Door: view panel, outside accessibility  | Yes        |
|   | Windows: operable, with blinds to allow controlled natural lighting  | Yes        |
|   | Acoustical privacy   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>                     | Comfortable rooms with pleasant décor that contribute to an atmosphere conducive to creativity   | Yes        |
|   | Proportion classroom for effective viewing and listening from all areas of the classroom   | Yes        |
|   | Plenty of natural/quality lighting   | Yes        |
|   | Oversize wheelchair accessibility  | Yes        |
|   | Tile flooring: soft, padded  | Yes        |
|   | Platform approximately one inch off of floor to be fitted for mat and moveable for students that participate in Mobility Opportunities Via Education   | Yes        |
|   | Two-way mirrors into connected rooms   | Yes        |
|   | Doors and windows should have built in safety features, childproof   | Yes        |
|   | Evacuation chair   | Yes        |



**Special Needs Space Descriptions**
**Restroom / Shower**

| <b>RESTROOM / SHOWER</b>             |  |            |
|--------------------------------------|--|------------|
| <b>ACTIVITIES</b>                    | <b>PERSONS</b>   |            |
| Personal hygiene                     | Nurse  |            |
| Adult supported for changing diapers | Paraprofessionals  |            |
|                                      | Students   |            |
|                                      | Teachers   |            |
|                                      | Other staff  |            |
| <b>RESTROOM / SHOWER</b>             |  | <b>QTY</b> |
| <b>MECHANICAL</b>                    | Exhaust fan  | Yes        |
|                                      | Intake and outtake ventilation                                   | Yes        |
| <b>PLUMBING</b>                      | Sink with hot and cold water adaptable to special physical needs | Yes        |
|                                      | Toilet - adaptable to special apparatus                          | Yes        |
|                                      | Shower: wheelchair accessible                                    | Yes        |
|                                      | Age appropriate changing area                                    | Yes        |
|                                      | Hoyer lift   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>         | Multiple duplex electrical outlets on each wall                  | Yes        |
| <b>TECHNOLOGY</b>                    | Intercom/phone/"help button"                                     | Yes        |
| <b>FURNITURE / EQUIPMENT</b>         | Casework to include:   |            |
|                                      | - Cabinet with mirror  | Yes        |
|                                      | Hooks for clothing   | Yes        |
|                                      | Hampers  | Yes        |
|                                      | Clock  | Yes        |
|                                      | Changing table   | Yes        |
|                                      | Biohazard disposal can / Diaper disposal                         | Yes        |
|                                      | Cubbies for student supplies                                     | Yes        |
| <b>DOORS &amp; WINDOWS</b>           | Door: no view panel  | Yes        |
|                                      | Windows: none  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>        | Situated near the Health Clinic                                  | Yes        |
|                                      | Large restroom to accommodate wheel chair separate shower        | Yes        |
|                                      | Hoyer lifts  | Yes        |
|                                      | Chairs for changing assistance [pants, shoe removal]             | Yes        |

**Special Needs Space Descriptions**
**Multi-Use Special Needs Room**

| <b>MULTI-USE SPECIAL NEEDS ROOM</b>           |                        |
|---|------------------------|
| <b>ACTIVITIES</b>                             | <b>PERSONS</b>         |
| Individual, small, and large group activities | Occupational Therapist |
| Storage of materials                          | Physical Therapist     |
| Physical therapy                              | Psychologist           |
| Occupational therapy                          | Social Worker          |
| Storage                                       | Speech Therapist       |
| Testing                                       | Community agencies     |
| Speech therapy                                | Aides                  |
|   | Staff                  |
|   | Volunteers             |

| <b>MULTI-USE SPECIAL NEEDS ROOM</b> |   | <b>QTY</b> |
|-------------------------------------|---|------------|
| <b>MECHANICAL</b>                   | Air conditioning  | Yes        |
| <b>PLUMBING</b>                     | No special requirements   |            |
| <b>ELECTRICAL / LIGHTING</b>        | Duplex electrical outlets on each wall                              | 2          |
|                                     | Overhead lighting   | Yes        |
|                                     | Controlled day lighting   | Yes        |
| <b>TECHNOLOGY</b>                   | Access to voice, video, data ports, and electrical outlets          | Yes        |
| <b>FURNITURE / EQUIPMENT</b>        | Lockable storage cabinets   | 2          |
|                                     | Teacher desks and chairs  | 2          |
|                                     | Rectangular tables  | 3          |
|                                     | Clock   | Yes        |
|                                     | Flexible surfaces   | Yes        |
|                                     | Abundant shelving   | Yes        |
|                                     | Multiple display surfaces   | Yes        |
| <b>DOORS &amp; WINDOWS</b>          | Door: one-way for observation                                       | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>       | Room for different OT/PT activities such as motor skill development | Yes        |
|                                     | Moveable partition to divide room                                   | Yes        |
|                                     | Handicapped accessible and accessible to large wheelchairs          | Yes        |
|                                     | One Multi-Use Room attached to self-contained classroom with door   | Yes        |
|                                     | Accessible to teachers' centers                                     | Yes        |

**Special Needs Space Descriptions**
**Additional Offices**

| <b>ADDITIONAL OFFICES</b> |                |
|---------------------------|----------------|
| <b>ACTIVITIES</b>         | <b>PERSONS</b> |
| Meeting with students     | School staff   |
|                           | Students       |

| <b>ADDITIONAL OFFICES</b>     |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Air conditioning                       | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Quad outlet at each data port          | 1          |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port      | Yes        |
|                               | Video and data ports                   | Yes        |
|                               | Quad outlet adjacent to each data port | Yes        |
|                               | Telephone                              | 1          |
|                               | Intercom                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Locking file cabinet, 4 drawer         | 1 to 2     |
|                               | Clock                                  | 1          |
|                               | File lateral drawer                    | 1          |
|                               | Desk                                   | 1          |
|                               | Desk chair                             | 1          |
|                               | Guest chairs                           | 2          |
|                               | Lamps                                  | 1          |
|                               | Bookshelves                            | 18LF       |
|                               | Marker board                           | 4LF        |
|                               | Laptop computer                        | 1          |
|                               | Printer                                | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel                       | Yes        |
|                               | Windows: no special considerations     | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting                  | Yes        |
|                               | Tile                                   | Yes        |

**Special Needs Space Descriptions**
**Conference Room**

| <b>CONFERENCE ROOM</b>           |   |            |
|----------------------------------|---|------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b>  |            |
| Small group meetings/conferences | Administrators  |            |
|                                  | Counselors  |            |
|                                  | Parents   |            |
|                                  | Students  |            |
|                                  | Visitors  |            |
|                                  | Staff   |            |
| <b>CONFERENCE ROOM</b>           |   | <b>QTY</b> |
| <b>MECHANICAL</b>                | Air conditioning  | Yes        |
| <b>PLUMBING</b>                  | Sink with hot and cold water  | 1          |
| <b>ELECTRICAL / LIGHTING</b>     | Multiple duplex electrical outlets on each wall                         | 2 per wall |
|                                  | Quad outlet at each data port   | 1          |
|                                  | Overhead lighting [dimmable]  | Yes        |
| <b>TECHNOLOGY</b>                | Telephone/intercom/voicemail port                                       | Yes        |
|                                  | Video and data ports  | Yes        |
|                                  | Quad outlet adjacent to each data port                                  | Yes        |
|                                  | White board screen on whole wall  | Yes        |
|                                  | Ceiling-mounted computer projector with retractable screen and computer | 1          |
| <b>FURNITURE / EQUIPMENT</b>     | Counter top with sink, base, and wall cabinets                          | Yes        |
|                                  | Modular conference table  | 1          |
|                                  | Conference chairs   | 1/25 SF    |
|                                  | Credenza  | 1          |
|                                  | Magnetic marker board   | Yes        |
|                                  | Laptop computer printer   | Yes        |
|                                  | Retractable projection screen   | 1          |
|                                  | Tack board  | Yes        |
|                                  | Bookshelves   | 2 or more  |
|                                  | Clock   | 1          |
| <b>DOORS &amp; WINDOWS</b>       | Door: large view panel with optional sidelight                          | Yes        |
|                                  | Windows: to hallway with mini-blinds                                    | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Consideration for sound transfer  | Yes        |
|                                  | Tile  | Yes        |

**Special Needs Space Descriptions**
**Storage**

| <b>STORAGE</b>    |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Storage           | Staff          |

| <b>STORAGE</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Air conditioning   | Yes        |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>  | Case work to include:<br>- Countertop with base and wall cabinets<br>- Lockable storage cabinets (2)<br>- Wall shelving<br>- Lateral files (2) | Yes        |
|                               | Fireproof storage cabinet  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: solid  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Connected with teacher prep room   | Yes        |
|                               | Tile flooring  | Yes        |



## Special Needs Space Descriptions

### Teacher Prep / Offices

| TEACHER PREP / OFFICES             |                  |
|------------------------------------|------------------|
| ACTIVITIES                         | PERSONS          |
| Teacher planning and collaboration | Teachers         |
| Team meetings                      | Staff            |
| Professional development           | Paraprofessional |
| Recordkeeping                      |                  |
| Preparation of teaching materials  |                  |
| Faculty lunch                      |                  |
| Storage                            |                  |

| TEACHER PREP / OFFICES       |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Air conditioning   | Yes |
| <b>PLUMBING</b>              | Sink   | Yes |
| <b>ELECTRICAL / LIGHTING</b> | Multiple duplex electrical outlets on each wall            | 2   |
|                              | Overhead lighting  | Yes |
|                              | Controlled day lighting                                    | Yes |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets | Yes |
|                              | Telephone  | Yes |
|                              | Intercom   | Yes |

## Special Needs Space Descriptions

### Teacher Prep / Offices

| TEACHER PREP / OFFICES |  | QTY  |
|------------------------|--|------|
| FURNITURE / EQUIPMENT  | Lockable storage cabinets and closets                                    | 3    |
|                        | Adequate counter top space for small appliances and production equipment | Yes  |
|                        | Computer station with Internet access                                    | 4    |
|                        | Work tables  | 3    |
|                        | Abundant shelving  | Yes  |
|                        | Layout of shelving to maximize efficiency                                | Yes  |
|                        | File cabinet, 4 drawer   | 4    |
|                        | Refrigerator   | 1    |
|                        | Microwave  | 1    |
|                        | Laptop computer  | 4    |
|                        | Printer  | 1    |
|                        | Copy machine   | 1    |
|                        | Bulletin board   | 4 LF |
|                        | Clock  | 1    |
| DOORS & WINDOWS        | Door: view panel   | Yes  |
|                        | Windows: open to Learning Community                                      | Yes  |
| SPECIAL CONSIDERATIONS | Connected with storage area  | Yes  |
|                        | Acoustical privacy   | Yes  |



## Technical / Career Education

Workers of today may change occupations five to seven times in their lifetimes. In order to better prepare students for this trend, technical and career education courses are now organized into career clusters. Courses within the three cluster areas provide for career exploration, pursuit of career interests, preparation for the changing demands of life roles, study of the principles and practical experiences of technology and science, and application of academic learning in the world of work.

Students seeking employment after graduation from high school, as well as students seeking employment after the completion of college, may choose from a wide variety of technical and career courses.

A student in Grade 12 who completes any approved technical and career education program sequence may substitute one credit for either math or science under the 22-credit diploma system. Virginia Beach City Public Schools offers both one- and two-year career/vocational preparation programs in the following clusters: Business and Marketing, Engineering and Technology, and Work & Family Studies. All programs meet the state substitution requirement for the third math or science.

Some programs that might be included are:

### Technical Education:

- Construction / Manufacturing
- Power & Transportation
- Computers & Communications
- Technical Drawing
- Photography / Graphics

### Work & Family Studies:

- Introduction to Culinary Occupations I & II
- Hospitality & Catering
- Child Development & Parenting
- Child Care Occupations
- Introduction to Design I & II
- Independent Living
- Teach for tomorrow

Business:

- Accounting / Adv.
- Computer Systems / Adv.
- Information Technology Fundamentals
- Virtual Enterprise
- Keyboarding / Key Applications / Desktop
- Business Law
- Office Administration
- Cooperative Office Education

Marketing:

- Marketing / Adv.
- Fashion / Adv.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

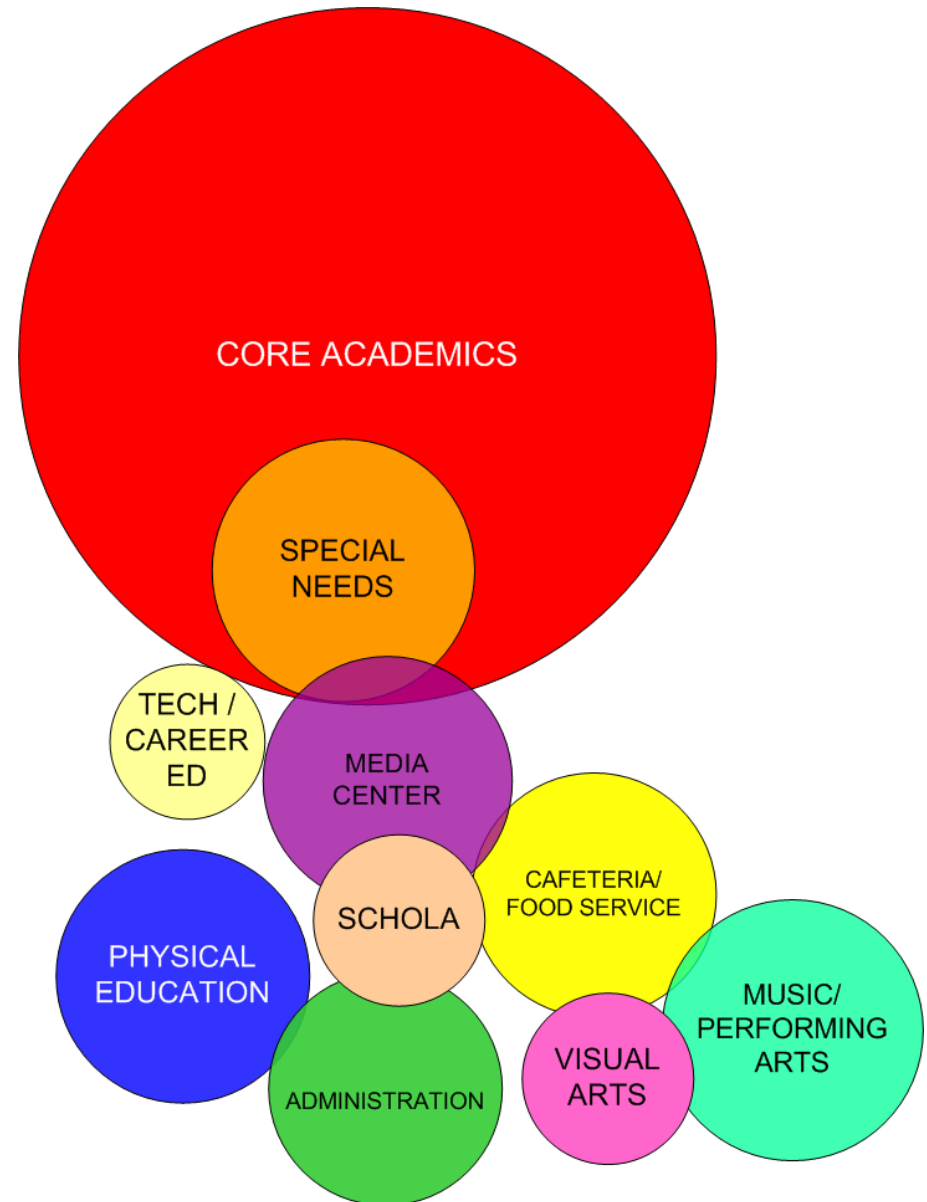
## Technical / Career Education Space Requirements

The table below lists the square footage allocated specifically for the Technical and Career Education classes. In addition to these spaces, some technical and career education courses such as Business & Marketing classes and Computers could be taught in the Large Classrooms contained within the Core Academics Area within each Learning Community. Finalization of space use will be determined on a site specific basis

| Technical / Career Education    | Suggested |          |       |               |
|---------------------------------|-----------|----------|-------|---------------|
|                                 | TS        | Quantity | SF    | Total         |
| Foods Lab                       | 2         | 2        | 1,400 | 2,800         |
| Work & Family Studies Classroom | 1         | 1        | 850   | 850           |
| Food Storage                    |           | 1        | 400   | 400           |
| Laundry                         |           | 1        | 200   | 200           |
| Design Lab                      | 1         | 1        | 1,400 | 1,400         |
| Work & Family Studies Office    |           | 1        | 300   | 300           |
| Construction/Manufacturing      | 1         | 1        | 2,400 | 2,400         |
| Transportation                  | 1         | 1        | 2,400 | 2,400         |
| Engineering                     | 1         | 1        | 2,000 | 2,000         |
| CADD                            | 1         | 1        | 1,200 | 1,200         |
| Photography                     | 1         | 1        | 1,200 | 1,200         |
| Technical Education Office      |           | 1        | 350   | 350           |
| Business/Marketing              | 4         | 4        | 1,000 | 4,000         |
| Storage                         |           | 1        | 200   | 200           |
| Business/Marketing Office       |           | 1        | 350   | 350           |
| <b>Total</b>                    | <b>13</b> |          |       | <b>20,050</b> |

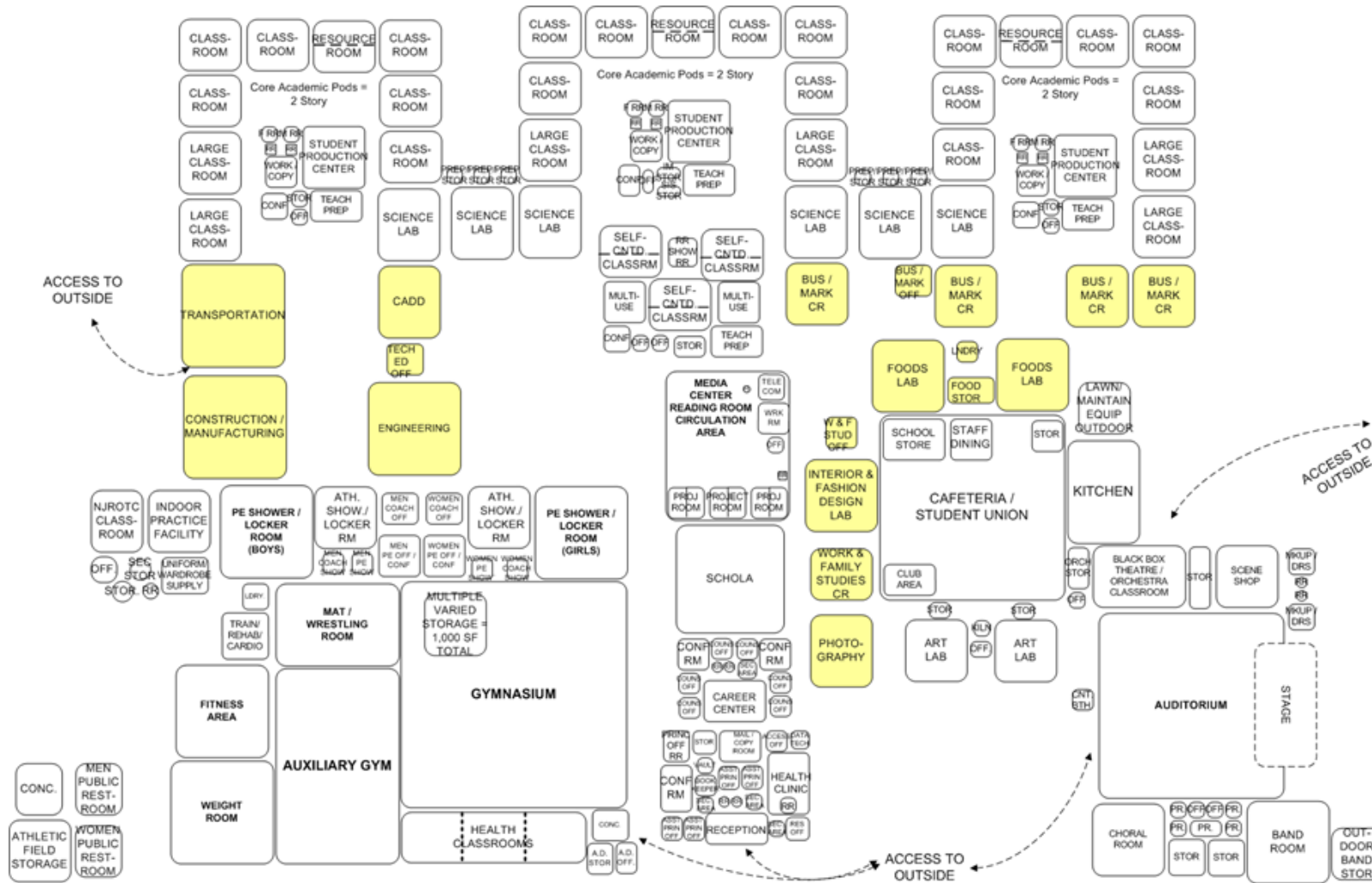
## Technical / Career Education Spatial Relationships

Technical and career education spaces should be adjacent to the core academic learning communities. Technical education classes should have access to the outside. Work & Family Studies classes should be adjacent to the food service area and be accessible for deliveries from the outside. A Business & Marketing Classroom should be adjacent to the school store. The photography classroom should be adjacent to the Visual Arts.





## Technical / Career Education Illustration



**Technical / Career Education Space Descriptions**
**Foods Lab**

| <b>FOODS LAB</b>      |                |
|-----------------------|----------------|
| <b>ACTIVITIES</b>     | <b>PERSONS</b> |
| Commercial Foods Labs | Students       |
| Consumer Foods Labs   | Teacher        |
|                       | Aides          |
|                       | Parents        |
|                       |                |

| <b>FOODS LAB</b>             |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Adequate ventilation for ranges  | Yes        |
| <b>PLUMBING</b>              | 3 compartment sink in commercial kitchen                                 | Yes        |
|                              | Commercial washer & dryer  | 1          |
|                              | Hand washing sinks   | 3          |
|                              | Sink / cleaning facilities   | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                                   | Yes        |
|                              | Front row of light, dimmable   | Yes        |
|                              | Quad outlet @ each data port   | Yes        |
|                              | Flexible electrical access   | Yes        |
|                              | Ability to control specific lighting areas                               | Yes        |
|                              | Room darkening capability  | Yes        |
| <b>TECHNOLOGY</b>            | Telephone / intercom / voicemail port                                    | Yes        |
|                              | Computer access for each student   | Yes        |
|                              | Quad outlet adjacent to each data port                                   | Yes        |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets | Yes        |
|                              | Wireless laptops with carts for battery recharging                       | Yes        |
|                              | Data ports   | Yes        |

## Technical / Career Education Space Descriptions

### Foods Lab

| FOODS LAB              |  | QTY |
|------------------------|--|-----|
| FURNITURE / EQUIPMENT  | Walk in refrigerator & freezer                                   | Yes |
|                        | Lockers for student uniforms in Commercial Kitchen               | Yes |
|                        | Food work stations + demo area                                   | 4   |
|                        | Large table / workspace  | Yes |
|                        | Tables for use as desks as well as serving meals                 | Yes |
|                        | Computer tables and chairs                                       | Yes |
|                        | Printers and printer tables                                      | Yes |
|                        | LCD projector and mounted screen                                 | Yes |
|                        | Tack board   | Yes |
|                        | Magnetic marker board  | Yes |
|                        | Anti-static carpets  | Yes |
| DOORS & WINDOWS        | Double doors with large view panel                               | Yes |
|                        | Windows: to outside, operable, allow controlled natural lighting | Yes |
| SPECIAL CONSIDERATIONS | Natural light  | Yes |
|                        | Auditory privacy   | Yes |
|                        | Provide method to darken room for AV Presentations               | Yes |
|                        | Non porous floor covering  | Yes |
|                        | Access to exterior for deliveries                                | Yes |
|                        | Soundproofing  | Yes |

## Technical / Career Education Space Descriptions

### Work & Family Studies Classroom

#### WORK & FAMILY STUDIES CLASSROOM

| ACTIVITIES                                    | PERSONS           |
|---|-------------------|
| Individual, small, and large group activities | Students          |
| Storage of materials                          | Teachers          |
| Project-based learning                        | Aides             |
| Demonstrations                                | Volunteers        |
| Computer-based instruction                    | Paraprofessionals |
|   | Staff             |

#### WORK & FAMILY STUDIES CLASSROOM

|                              | QTY  |
|------------------------------|--|
| <b>MECHANICAL</b>            | Quiet air conditioning   |
| <b>PLUMBING</b>              | Sink with hot and cold water   |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  |
|                              | Quad outlet @ each data port   |
|                              | Overhead lighting  |
|                              | Room darkening capability - dimmer switches                                  |
|                              | Controlled day lighting, banked lighting                                     |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] |
|                              | Front row of light, dimmable   |
| <b>TECHNOLOGY</b>            | Voice, data, video outlets at teacher desk                                   |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     |
|                              | 2 data drops at teacher desk area  |
|                              | Single data drop dedicated to wireless, high on wall                         |
|                              | Telephone  |
|                              | Intercom   |
|                              | Interactive whiteboard with integral computer projector                      |
|                              | Ceiling mounted computer projector with retractable screen                   |
|                              | Laptop computers with carts, shared  |
|                              | Access to voice, video, data ports, and electrical outlets                   |
|                              | Teacher data port separate from student data ports                           |
|                              | Audio enhancement  |
|                              | Document cameras for each class  |

## Technical / Career Education Space Descriptions

### Work & Family Studies Design Labs

| WORK & FAMILY STUDIES CLASSROOM |  | QTY |
|---------------------------------|--|-----|
| FURNITURE / EQUIPMENT           | Student work tables, 2 students each   | Yes |
|                                 | Comfortable ergonomic student chairs that allow movement                           | Yes |
|                                 | Countertop over base cabinets  | Yes |
|                                 | Lockable overhead cabinets   | Yes |
|                                 | Magnetic marker board with tack strips above whiteboard                            | Yes |
|                                 | Bulletin board   | Yes |
|                                 | Shelving   | Yes |
|                                 | Clock  | Yes |
|                                 | Locking storage cabinet with outlet  | Yes |
|                                 | All in One Computer Device   | Yes |
|                                 | Retractable projection screen  | Yes |
|                                 | Flexible or multiple display surfaces  | Yes |
|                                 | Adjustable, lockable, and mobile storage cabinets and shelving                     | Yes |
|                                 | Flexible furniture: can be used as individual desks or fit together to make tables | Yes |
| DOORS & WINDOWS                 | Door with windows or view panel  | Yes |
|                                 | Locking mechanism  | Yes |
|                                 | Large energy efficient windows to outdoors with blinds                             | Yes |
| SPECIAL CONSIDERATIONS          | Climate control for each classroom   | Yes |
|                                 | Vinyl tile, no scratch flooring  | Yes |
|                                 | Acoustical privacy   | Yes |
|                                 | Walls painted with warm and cool colors  | Yes |

**Technical / Career Education Space Descriptions**
**Food Storage**

| <b>FOOD STORAGE</b> |                |
|---------------------|----------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b> |
| Storage             | Student        |
|                     | Staff          |

| <b>FOOD STORAGE</b>           |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Temperature and humidity control       | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Overhead lighting                      | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>  | Shelving                               | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Solid doors                            | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Lockable                               | Yes        |



**Technical / Career Education Space Descriptions**
**Laundry**

| <b>LAUNDRY</b>                          |                |
|---|----------------|
| <b>ACTIVITIES</b>                       | <b>PERSONS</b> |
| Wash clothing and other fabric projects | Teachers       |
|   | Aides          |
|   | Staff          |

| <b>LAUNDRY</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements                |            |
| <b>PLUMBING</b>               | Hot and cold water for washer and sink | Yes        |
|                               | Drain for washer                       | Yes        |
|                               | Floor drain                            | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Appropriate power for washer and dryer | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>  | Commercial grade washer and dryer      | Yes        |
|                               | Base cabinets                          | Yes        |
|                               | Wall cabinets                          | Yes        |
|                               | Tables [folding]                       | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | No special requirements                |            |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements                |            |

## Technical / Career Education Space Descriptions

### Design Lab

| WORK & FAMILY STUDIES DESIGN LAB |          |
|----------------------------------|----------|
| ACTIVITIES                       | PERSONS  |
| Interior Design                  | Students |
| Fashion Design                   | Teacher  |
|                                  | Aides    |
|                                  | Parents  |
|                                  |          |

| WORK & FAMILY STUDIES DESIGN LAB |  | QTY |
|----------------------------------|--|-----|
| <b>MECHANICAL</b>                | No Special Requirements  |     |
| <b>PLUMBING</b>                  | Hand washing sinks   | 3   |
|                                  | Sink / cleaning facilities   | Yes |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlets on each wall                                   | Yes |
|                                  | Front row of light, dimmable   | Yes |
|                                  | Flexible electrical access   | Yes |
|                                  | Ability to control specific lighting areas                               | Yes |
|                                  | Room darkening capability  | Yes |
| <b>TECHNOLOGY</b>                | Telephone / intercom / voicemail port                                    | Yes |
|                                  | Computer access for each student   | Yes |
|                                  | Quad outlet adjacent to each data port                                   | Yes |
|                                  | 6 data drops with double, triple, or quad Communications Network Outlets | Yes |
|                                  | Wireless laptops with carts for battery recharging                       | Yes |
|                                  | Data ports   | Yes |

## Technical / Career Education Space Descriptions

### Design Lab

| WORK & FAMILY STUDIES DESIGN LAB |  | QTY  |
|----------------------------------|--|------|
| FURNITURE / EQUIPMENT            | Demonstration area   | Yes  |
|                                  | Large table / workspace  | Yes  |
|                                  | Stations for Sewing Machines                                     | 20   |
|                                  | Commercial Embroidery Machine                                    | 1    |
|                                  | Small embroidery machines  | 6-10 |
|                                  | Sergers  | 6-10 |
|                                  | Ironing boards   | Yes  |
|                                  | Computer tables and chairs                                       | Yes  |
|                                  | Printers and printer tables                                      | Yes  |
|                                  | LCD projector and mounted screen                                 | Yes  |
|                                  | Tack board   | Yes  |
|                                  | Magnetic marker board  | Yes  |
|                                  | Anti-static carpets  | Yes  |
| DOORS & WINDOWS                  | Double doors with large view panel                               | Yes  |
|                                  | Windows: to outside, operable, allow controlled natural lighting | Yes  |
| SPECIAL CONSIDERATIONS           | Natural light  | Yes  |
|                                  | Auditory privacy   | Yes  |
|                                  | Provide method to darken room for AV Presentations               | Yes  |
|                                  | Non porous floor covering  | Yes  |
|                                  | Access to exterior for deliveries                                | Yes  |
|                                  | Soundproofing  | Yes  |

**Technical / Career Education Space Descriptions**
**Offices**

| <b>OFFICES</b>                   |                |
|----------------------------------|----------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b> |
| Teacher meetings and preparation | Teachers       |

| <b>OFFICES</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                   | Yes        |
|                               | Quad outlet at each data port  | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port  | Yes        |
|                               | Video and data ports   | Yes        |
|                               | Duplex outlet  | Yes        |
|                               | Quad outlet @ each data port   | Yes        |
|                               | Intercom   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Flexible surfaces  | Yes        |
|                               | Legal size file lateral drawer   | Yes        |
|                               | 6 data drops with double, triple, or quad Communications Network Outlets | 1          |
|                               | Desk chair   | 1          |
|                               | Guest chairs   | 2          |
|                               | Lamps  | Yes        |
|                               | Bookshelves  | 18LF       |
|                               | Marker board   | 4LF        |
|                               | Laptop computer  | 1          |
|                               | Printer  | 1          |
|                               | Locking file cabinet, 4 drawer   | 1 to 2     |
|                               | Bulletin board   | 4LF        |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting  | Yes        |
|                               | Carpeted flooring  | Yes        |

**Technical / Career Education Space Descriptions**
**Construction / Manufacturing**

| <b>CONSTRUCTION / MANUFACTURING</b> |                |
|-------------------------------------|----------------|
| <b>ACTIVITIES</b>                   | <b>PERSONS</b> |
| Construction                        | Teacher        |
| Fabrication                         | Aides          |
| Production                          | Parents        |
| Manufacturing                       | Students       |
| Project work                        |                |

| <b>CONSTRUCTION / MANUFACTURING</b> |  | <b>QTY</b> |
|-------------------------------------|--|------------|
| <b>MECHANICAL</b>                   | Dust Collection  | Yes        |
|                                     | Fume hood  | Yes        |
|                                     | Compressed air   | Yes        |
|                                     | Adequate ventilation   | Yes        |
| <b>PLUMBING</b>                     | Sinks with hot and cold water  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>        | Duplex electrical outlets on each wall                                   | Yes        |
|                                     | Quad outlet @ each data port   | Yes        |
|                                     | Ability to control specific lighting areas                               | Yes        |
|                                     | Room darkening capability  | Yes        |
| <b>TECHNOLOGY</b>                   | Telephone / intercom / voicemail port                                    | Yes        |
|                                     | Multi media projection   | Yes        |
|                                     | Digital camera   | Yes        |
|                                     | Projector from Ceiling   | Yes        |
|                                     | Whiteboard / Projector Screen  | Yes        |
|                                     | Front row of light, dimmable   | Yes        |
|                                     | Data ports   | Yes        |
|                                     | Quad outlet adjacent to each data port                                   | Yes        |
|                                     | 6 data drops with double, triple, or quad Communications Network Outlets | Yes        |
|                                     | Wireless laptops with carts for battery recharging                       | Yes        |
|                                     | Area for distance learning (with video conferencing)                     | Yes        |
|                                     | Headphones and microphones   | Yes        |

**Technical / Career Education Space Descriptions**  
**Construction / Manufacturing**

| <b>CONSTRUCTION / MANUFACTURING</b> |  | <b>QTY</b> |
|-------------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>        | Benches  | Yes        |
|                                     | Tables and chairs  | Yes        |
|                                     | Printers and printer tables                                  | Yes        |
|                                     | Networked computers with access to programs and card catalog | Yes        |
|                                     | LCD projector and mounted screen                             | Yes        |
|                                     | Tack board   | Yes        |
|                                     | Magnetic marker board  | Yes        |
|                                     | Tools  | Yes        |
|                                     | Anti-static carpets  | Yes        |
| <b>DOORS &amp; WINDOWS</b>          | Exterior Access Overhead Quality Doors with Keypads          | Yes        |
|                                     | Windows: operable, allow controlled natural lighting         | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>       | Natural light  | Yes        |
|                                     | Auditory privacy   | Yes        |
|                                     | Presentation space   | Yes        |
|                                     | Light and sound studio                                       | Yes        |
|                                     | Provide method to darken room for AV Presentations           | Yes        |
|                                     | Accessible computer equipment for special needs              | Yes        |
|                                     | Soundproofing  | Yes        |



**Technical / Career Education Space Descriptions**
**Transportation**

| <b>TRANSPORTATION</b>                   |                |
|---|----------------|
| <b>ACTIVITIES</b>                       | <b>PERSONS</b> |
| Power & Transportation Classes          | Students       |
| Project Work                            | Teacher        |
| Whole group and small group instruction | Aides          |
|   | Parents        |
|   |                |

| <b>TRANSPORTATION</b>        |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Dust Collection  | Yes        |
|                              | Fume hood  | Yes        |
|                              | Compressed air   | Yes        |
|                              | Adequate ventilation   | Yes        |
| <b>PLUMBING</b>              | Sinks with hot and cold water  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                                   | Yes        |
|                              | Quad outlet @ each data port   | Yes        |
|                              | Ability to control specific lighting areas                               | Yes        |
|                              | Room darkening capability  | Yes        |
| <b>TECHNOLOGY</b>            | Telephone / intercom / voicemail port                                    | Yes        |
|                              | Multi media projection   | Yes        |
|                              | Digital camera   | Yes        |
|                              | Projector from Ceiling   | Yes        |
|                              | Whiteboard / Projector Screen  | Yes        |
|                              | Front row of light, dimmable   | Yes        |
|                              | Data ports   | Yes        |
|                              | Quad outlet adjacent to each data port                                   | Yes        |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets | Yes        |
|                              | Wireless laptops with carts for battery recharging                       | Yes        |
|                              | Area for distance learning (with video conferencing)                     | Yes        |
|                              | Headphones and microphones   | Yes        |

**Technical / Career Education Space Descriptions**
**Transportation**

| <b>TRANSPORTATION</b>         |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Benches  | Yes        |
|                               | Tables and chairs  | Yes        |
|                               | Printers and printer tables                                  | Yes        |
|                               | Networked computers with access to programs and card catalog | Yes        |
|                               | LCD projector and mounted screen                             | Yes        |
|                               | Tack board   | Yes        |
|                               | Magnetic marker board  | Yes        |
|                               | Tools  | Yes        |
|                               | Anti-static carpets  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Exterior Access Overhead Quality Doors with Keypads          | Yes        |
|                               | Windows: operable, allow controlled natural lighting         | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Natural light  | Yes        |
|                               | Auditory privacy   | Yes        |
|                               | Presentation space   | Yes        |
|                               | Light and sound studio                                       | Yes        |
|                               | Provide method to darken room for AV Presentations           | Yes        |
|                               | Accessible computer equipment for special needs              | Yes        |
|                               | Soundproofing  | Yes        |

**Technical / Career Education Space Descriptions**
**Engineering**

| <b>ENGINEERING</b>                      |                |
|---|----------------|
| <b>ACTIVITIES</b>                       | <b>PERSONS</b> |
| Whole group and small group instruction | Students       |
| Engineering Classes                     | Teacher        |
| Project Work                            | Aides          |
|   | Parents        |
|   |                |

| <b>ENGINEERING</b>           |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Dust Collection  | Yes        |
|                              | Fume hood  | Yes        |
|                              | Compressed air   | Yes        |
|                              | Adequate ventilation   | Yes        |
| <b>PLUMBING</b>              | Sinks with hot and cold water  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                                   | Yes        |
|                              | Quad outlet @ each data port   | Yes        |
|                              | Ability to control specific lighting areas                               | Yes        |
|                              | Room darkening capability  | Yes        |
| <b>TECHNOLOGY</b>            | Telephone / intercom / voicemail port                                    | Yes        |
|                              | Multi media projection   | Yes        |
|                              | Digital camera   | Yes        |
|                              | Projector from Ceiling   | Yes        |
|                              | Whiteboard / Projector Screen  | Yes        |
|                              | Front row of light, dimmable   | Yes        |
|                              | Data ports   | Yes        |
|                              | Quad outlet adjacent to each data port                                   | Yes        |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets | Yes        |
|                              | Wireless laptops with carts for battery recharging                       | Yes        |
|                              | Area for distance learning (with video conferencing)                     | Yes        |
|                              | Headphones and microphones   | Yes        |

**Technical / Career Education Space Descriptions**
**Engineering**

| <b>ENGINEERING</b>            |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Benches  | Yes        |
|                               | Tables and chairs  | Yes        |
|                               | Printers and printer tables                                  | Yes        |
|                               | Networked computers with access to programs and card catalog | Yes        |
|                               | LCD projector and mounted screen                             | Yes        |
|                               | Tack board   | Yes        |
|                               | Magnetic marker board  | Yes        |
|                               | Tools  | Yes        |
|                               | Anti-static carpets  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Exterior Access Overhead Quality Doors with Keypads          | Yes        |
|                               | Windows: operable, allow controlled natural lighting         | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Natural light  | Yes        |
|                               | Auditory privacy   | Yes        |
|                               | Presentation space   | Yes        |
|                               | Light and sound studio                                       | Yes        |
|                               | Provide method to darken room for AV Presentations           | Yes        |
|                               | Accessible computer equipment for special needs              | Yes        |
|                               | Soundproofing  | Yes        |

**Technical / Career Education Space Descriptions**
**CADD**

| <b>CADD</b>       |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Project work      | Teachers       |
| Research          | Students       |
| Computer access   | Volunteers     |
| Group work        |                |

| <b>CADD</b>                  |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | No Special Requirements  |            |
| <b>PLUMBING</b>              | No Special Requirements  |            |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                                  | Yes        |
|                              | Controlled day lighting, banked lighting                                     | Yes        |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Wall mounted projection screen   | Yes        |
|                              | Voice, data, video outlets at teacher desk                                   | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless, high on wall                         | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                      | 1          |
|                              | Ceiling mounted computer projector with retractable screen                   | Yes        |
|                              | Laptop computers with carts, shared  | 26         |
|                              | Access to voice, video, data ports, and electrical outlets                   | Yes        |
|                              | Teacher data port separate from student data ports                           | Yes        |
|                              | Audio enhancement  | 1 system   |

**Technical / Career Education Space Descriptions**
**CADD**

| <b>CADD</b>                   |                                  | <b>QTY</b> |
|-------------------------------|----------------------------------|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Computer tables                  | Yes        |
|                               | Teacher desk and chair           | Yes        |
|                               | Ergonomic chairs                 | Yes        |
|                               | Interactive whiteboard           | Yes        |
|                               | Black and white printer          | Yes        |
|                               | Color printer                    | Yes        |
|                               | Scanner                          | Yes        |
|                               | Ceiling mounted projector screen | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel             | Yes        |
|                               | Windows with built in blinds     | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements          |            |



## Technical / Career Education Space Descriptions

### Photography

| PHOTOGRAPHY     |            |
|-----------------|------------|
| ACTIVITIES      | PERSONS    |
| Project work    | Teachers   |
| Research        | Students   |
| Computer access | Volunteers |
| Group work      |            |

| PHOTOGRAPHY                  |  | QTY        |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | No Special Requirements  |            |
| <b>PLUMBING</b>              | No Special Requirements  |            |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                                  | Yes        |
|                              | Controlled day lighting, banked lighting                                     | Yes        |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Wall mounted projection screen   | Yes        |
|                              | Voice, data, video outlets at teacher desk                                   | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless, high on wall                         | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                      | 1          |
|                              | Ceiling mounted computer projector with retractable screen                   | Yes        |
|                              | Laptop computers with carts, shared  | 26         |
|                              | Access to voice, video, data ports, and electrical outlets                   | Yes        |
|                              | Teacher data port separate from student data ports                           | Yes        |
|                              | Audio enhancement  | 1 system   |

**Technical / Career Education Space Descriptions**
**Photography**

| <b>PHOTOGRAPHY</b>            |                                  | <b>QTY</b> |
|-------------------------------|----------------------------------|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Computer tables                  | Yes        |
|                               | Teacher desk and chair           | Yes        |
|                               | Ergonomic chairs                 | Yes        |
|                               | Interactive whiteboard           | Yes        |
|                               | Black and white printer          | Yes        |
|                               | Color printer                    | Yes        |
|                               | Scanner                          | Yes        |
|                               | Ceiling mounted projector screen | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel             | Yes        |
|                               | Windows with built in blinds     | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements          |            |

## Technical / Career Education Space Descriptions

### Business & Marketing

| <b>BUSINESS &amp; MARKETING</b>         |                   |
|---|-------------------|
| <b>ACTIVITIES</b>                       | <b>PERSONS</b>    |
| Whole group and small group instruction | Students          |
| Computer learning                       | Teacher           |
|   | Aides             |
|   | Parents           |
|   | Community Members |

| <b>BUSINESS &amp; MARKETING</b> |  | <b>QTY</b> |
|---------------------------------|--|------------|
| <b>MECHANICAL</b>               | No Special Requirements  |            |
| <b>PLUMBING</b>                 | No Special Requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>    | Duplex electrical outlets on each wall                                   | Yes        |
|                                 | Quad outlet @ each data port   | Yes        |
|                                 | Ability to control specific lighting areas                               | Yes        |
|                                 | Room darkening capability  | Yes        |
| <b>TECHNOLOGY</b>               | Telephone / intercom / voicemail port                                    | Yes        |
|                                 | Multi media projection   | Yes        |
|                                 | Projector from Ceiling   | Yes        |
|                                 | Whiteboard / Projector Screen  | Yes        |
|                                 | Front row of light, dimmable   | Yes        |
|                                 | Data ports   | Yes        |
|                                 | 6 data drops with double, triple, or quad Communications Network Outlets | Yes        |
|                                 | Wireless laptops with carts for battery recharging                       | Yes        |
|                                 | Area for distance learning (with video conferencing)                     | Yes        |
|                                 | Headphones and microphones   | Yes        |

## Technical / Career Education Space Descriptions

### Business & Marketing

| <b>BUSINESS &amp; MARKETING</b> |  | <b>QTY</b> |
|---------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>    | Movable tables and chairs                                    | Yes        |
|                                 | Printers and printer tables                                  | Yes        |
|                                 | Networked computers with access to programs and card catalog | Yes        |
|                                 | LCD projector and mounted screen                             | Yes        |
|                                 | Tack board   | Yes        |
|                                 | Magnetic marker board  | Yes        |
|                                 | Anti-static carpets  | Yes        |
| <b>DOORS &amp; WINDOWS</b>      | Door with view panel   | Yes        |
|                                 | Windows: operable, allow controlled natural lighting         | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>   | Natural light  | Yes        |
|                                 | Auditory privacy   | Yes        |
|                                 | Provide method to darken room for AV Presentations           | Yes        |
|                                 | Accessible computer equipment for special needs              | Yes        |

**Technical / Career Education Space Descriptions**
**Storage**

| <b>STORAGE</b>                     |                |
|------------------------------------|----------------|
| <b>ACTIVITIES</b>                  | <b>PERSONS</b> |
| Storage of instructional materials | Teachers       |
|                                    | Staff          |

| <b>STORAGE</b>                   |  | <b>QTY</b> |
|----------------------------------|--|------------|
| <b>MECHANICAL</b>                | No Special Requirements                |            |
| <b>PLUMBING</b>                  | No Special Requirements                |            |
| <b>ELECTRICAL &amp; LIGHTING</b> | Duplex outlets on each wall            | Yes        |
|                                  | Overhead lighting                      | Yes        |
| <b>TECHNOLOGY</b>                | No Special Requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>     | Casework to include:                   |            |
|                                  | Countertop with base and wall cabinets | Yes        |
|                                  | Lockable storage cabinets              | Yes        |
|                                  | Abundant wall shelving                 | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Solid door                             | Yes        |
|                                  | Keypad access                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Vinyl tile                             | Yes        |



technology for completing 3-dimensional projects, doing virtual art museum tours and other design work.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

## Visual Arts

It is the goal of the visual arts program to increase students' skills, knowledge and appreciation of the visual arts. All 3 art labs should allow for multi-use for the visual arts discipline: 3-dimensional, 2-dimensional, and Graphic/Electronic Arts as well as traditional teaching of art appreciation and art history. All spaces should accommodate an "art portrait" area, i.e., photography, creating digital prints, and portfolios. There should be appropriate



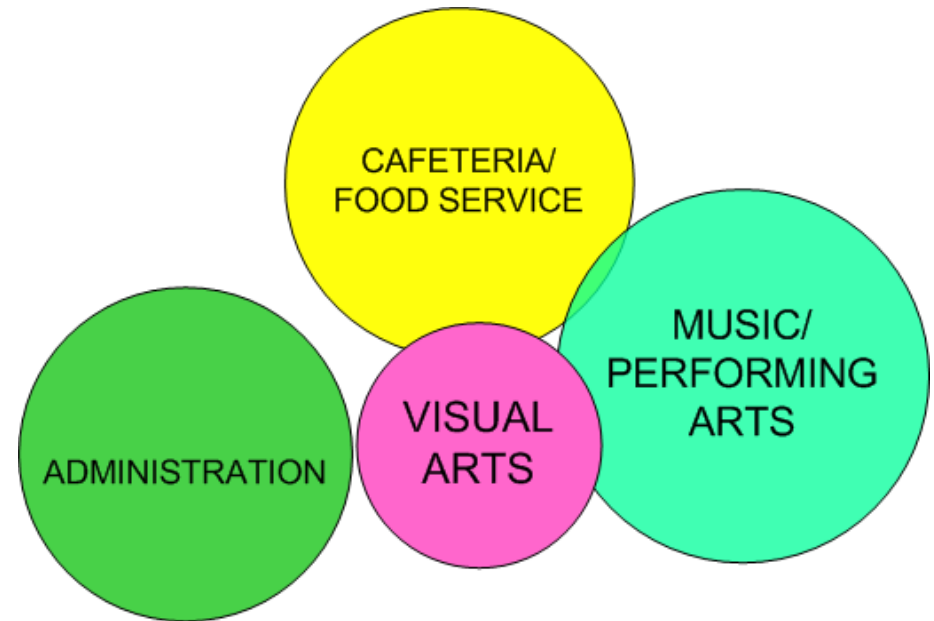
### Visual Arts Space Requirements

Visual arts spaces will be shared by each learning community. The pages that follow describe in more detail each program area spaces listed in the space requirements table below.

| Visual Arts                  | Suggested                           |          |       |              |
|------------------------------|-------------------------------------|----------|-------|--------------|
|                              | TS                                  | Quantity | SF    | Total        |
| Art Lab                      | 2                                   | 2        | 1,300 | 2,600        |
| Kiln Room                    |                                     | 1        | 100   | 100          |
| Storage                      |                                     | 2        | 200   | 400          |
| Office                       |                                     | 1        | 200   | 200          |
| Digital Art Lab              | See Technical Education Photography |          |       |              |
| <b>Visual Arts Sub-Total</b> | <b>2</b>                            |          |       | <b>3,300</b> |

### Visual Arts Spatial Relationships

The visual arts program area should be adjacent to the music and performing arts as well as the technical education photography classroom.



The floor plan illustrates a comprehensive school layout. Key features include:

- Classrooms:** Multiple clusters of classrooms, some labeled as "Core Academic Pods = 2 Story".
- Labs:** Science labs, a computer lab, and two art labs (highlighted in pink).
- Gymnasium:** A large central gymnasium with an auxiliary gym and various storage areas.
- Auditorium:** A large performance space with a stage and orchestra pit.
- Other Rooms:** Library, media center, cafeteria, kitchen, and various support spaces like restrooms and storage.
- Access Points:** Arrows indicate "ACCESS TO OUTSIDE" and "ACCESS TO INSIDE" throughout the building.

**Visual Arts Space Descriptions:**
**Art Labs**

| <b>ART LABS</b>            |                |
|----------------------------|----------------|
| <b>ACTIVITIES</b>          | <b>PERSONS</b> |
| Drawing                    | Students       |
| Photography                | Teacher        |
| Sculpture                  | Other staff    |
| Ceramics                   |                |
| Art appreciation & history |                |
| 3-D & 2-D projects         |                |

| <b>ART LABS</b>              |   | <b>QTY</b> |
|------------------------------|---|------------|
| <b>MECHANICAL</b>            | Ventilation for dust control                                      | Yes        |
| <b>PLUMBING</b>              | Large, deep bowled sinks with hot and cold water, with clay traps | 6          |
|                              | Sinks built as island or peninsula - back to back                 | Yes        |
|                              | Floor drains with sediment traps                                  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                            | Yes        |
|                              | Adjustable full-spectrum lighting                                 | Yes        |
|                              | Movable track lighting  | Yes        |
|                              | Electrical service to support art equipment                       | Yes        |
|                              | Track lighting for flexibility                                    | Yes        |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port                                 | Yes        |
|                              | Video and data ports  | Yes        |
|                              | Data port for teacher   | Yes        |
|                              | Quad outlets adjacent to each port                                | Yes        |
|                              | Ceiling-mounted computer projector with retractable screen        | Yes        |
|                              | Document camera   | Yes        |

**Visual Arts Space Descriptions:**
**Art Labs**

| <b>ART LABS</b>               |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Acid and heat resistant countertops with sink, base, and wall cabinets with adjustable shelves<br>- Bookcases with adjustable shelves<br>- Built-in drying rack<br>- Flat drawer storage for paper and multiple drawers for various papers<br>- Tack board between base and wall cabinets<br>- Clay bins with strong built-in counter | Yes        |
|                               | Work tables with heavy flat surfaces and chairs   | Yes        |
|                               | Potters' wheels for ceramics  | Yes        |
|                               | Computer tables   | Yes        |
|                               | Vertical rolling cart storage built with vertical slots for individual student portfolios   | Yes        |
|                               | Vertical cabinets with pullout bins for individual student supplies or mini lockers   | Yes        |
|                               | Built in vertical slots open in front for canvases  | Yes        |
|                               | Cabinets for storing 3-D work and supplies  | Yes        |
|                               | Printer and table   | Yes        |
|                               | Light tables  | Yes        |
|                               | Scanner   | Yes        |
|                               | Tack boards and tack strips   | Yes        |
|                               | Marker boards   | Yes        |
|                               | Network computers   | Yes        |
|                               | Retractable screen  | Yes        |
|                               | Computer projector  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Double glass doors  | Yes        |
|                               | Windows: operable, with blinds to allow controlled natural lighting   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Floor to ceiling windows to allow tracing   | Yes        |
|                               | Natural lighting  | Yes        |
|                               | Access to outside   | Yes        |
|                               | Design space for ease in clean-up   | Yes        |
|                               | Floor drains on 1 <sup>st</sup> floor   | Yes        |
|                               | Vinyl flooring  | Yes        |
|                               | Drapes to darken room   | Yes        |
|                               | Secure display surfaces/areas for exhibiting art in corridors for 2-D & 3-D work  | Yes        |

**Visual Arts Space Descriptions:**
**Kiln Room**

| <b>KILN ROOM</b>                             |  |            |
|--|--|------------|
| <b>ACTIVITIES</b>                            | <b>PERSONS</b>   |            |
| Store ceramics                               | Students   |            |
| Firing of student projects                   | Teacher  |            |
| Storage of projects, equipment, and supplies | Aids   |            |
| <b>KILN ROOM</b>                             |  | <b>QTY</b> |
| <b>MECHANICAL</b>                            | Adequate ventilation for kiln  | Yes        |
|  | Air conditioning   | Yes        |
| <b>PLUMBING</b>                              | Sink with hot and cold water   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>                 | Appropriate wiring for kiln  | Yes        |
|  | Duplex electrical outlets on each wall   | Yes        |
|  | See manufacturers requirements for power and venting   | Yes        |
| <b>TECHNOLOGY</b>                            | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>                 | Casework to include:<br>-Adjustable, deep shelving built to ceiling height<br>-File cabinets | Yes        |
|  | Storage for wet clay projects (green ware rack)  | Yes        |
|  | Metal cabinets for storing glaze   | Yes        |
|  | Shelving for projects  | Yes        |
|  | Clay bin   | Yes        |
|  | Kiln with vent   | Yes        |
|  | Layout of room to maximize storage   | Yes        |
|  |  |            |
| <b>DOORS &amp; WINDOWS</b>                   | Door: appropriate for high temperature   | Yes        |
|  | No Windows   |            |
| <b>SPECIAL CONSIDERATIONS</b>                | Door to include tack board   | Yes        |
|  | Tile flooring  | Yes        |



**Visual Arts Space Descriptions:**  
**Storage**

| <b>STORAGE</b>                               |                |
|--|----------------|
| <b>ACTIVITIES</b>                            | <b>PERSONS</b> |
| Storage of projects, equipment, and supplies | Teacher        |
|  | Students       |

| <b>STORAGE</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | Sink with hot and cold water   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Adjustable, deep shelving built to ceiling height<br>- Large, flat paper storage drawers<br>- File cabinets<br>- Cabinets with pullout bins for supplies | Yes        |
|                               | Tall center table for paper cutter   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
|                               | No Windows   |            |
| <b>SPECIAL CONSIDERATIONS</b> | Door to include tack board   | Yes        |
|                               | Tile flooring  | Yes        |

**Visual Arts Space Descriptions:**
**Office**

| <b>OFFICE</b>       |                |
|---------------------|----------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b> |
| Teacher preparation | Teacher        |

| <b>OFFICE</b>                 |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                   | Yes        |
|                               | Quad outlet at each data port  | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port  | Yes        |
|                               | Video and data ports   | Yes        |
|                               | Duplex outlet  | Yes        |
|                               | Quad outlet @ each data port   | Yes        |
|                               | Intercom   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Flexible surfaces  | Yes        |
|                               | Legal size file lateral drawer   | Yes        |
|                               | 6 data drops with double, triple, or quad Communications Network Outlets | 1          |
|                               | Desk chair   | 1          |
|                               | Guest chairs   | 2          |
|                               | Lamps  | Yes        |
|                               | Bookshelves  | 18LF       |
|                               | Marker board   | 4LF        |
|                               | Laptop computer  | 1          |
|                               | Printer  | 1          |
|                               | Locking file cabinet, 4 drawer   | 1 to 2     |
|                               | Bulletin board   | 4LF        |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting  | Yes        |



## Music/Performing Arts

It is the goal of the music program to increase students' knowledge and appreciation of music and the performing arts.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

An important consideration for all music and performing arts spaces is flat flooring without steps, to ease transitions and movement of instruments scenery in and out of the building.

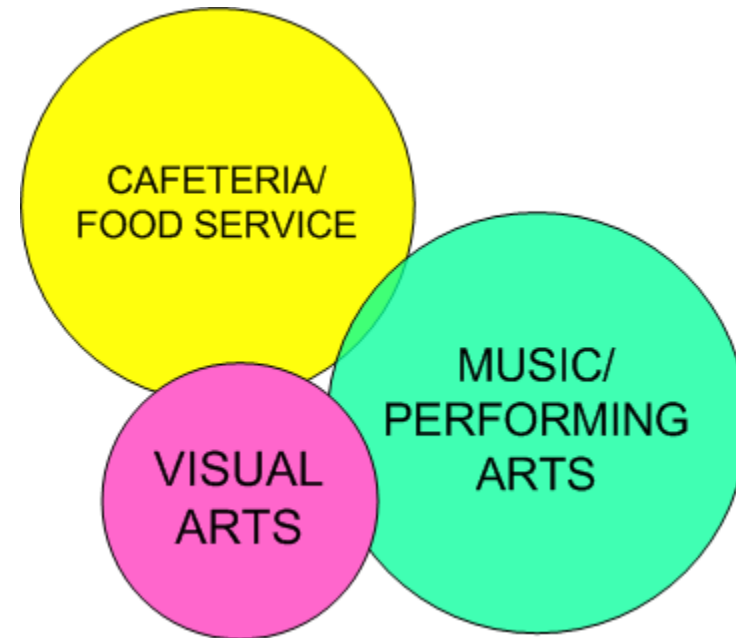
## Music / Performing Arts Space Requirements

| Music / Performing Arts                 | Suggested |          |       |               |
|---|-----------|----------|-------|---------------|
|   | TS        | Quantity | SF    | Total         |
| Choral Room                             | 1         | 1        | 1,600 | 1,600         |
| Storage (Robes, Music)                  |           | 1        | 500   | 500           |
| Band Room                               | 1         | 1        | 2,300 | 2,300         |
| Band Storage (Instruments, Music)       |           | 1        | 500   | 500           |
| Practice rooms                          |           | 4        | 50    | 200           |
| Auditorium Seating (800 seats)*         |           | 1        | 7,200 | 7,200         |
| Control Booth                           |           | 1        | 200   | 200           |
| Auditorium Stage                        |           | 1        | 3,500 | 3,500         |
| Scene Shop                              |           | 1        | 1,200 | 1,200         |
| Make Up/Dressing                        |           | 2        | 300   | 600           |
| Storage (Costumes, Props)               |           | 1        | 500   | 500           |
| Restrooms                               |           | 2        | 50    | 100           |
| Offices                                 |           | 3        | 150   | 450           |
| Large Practice Room                     |           | 1        | 100   | 100           |
| Orchestra Storage                       |           | 1        | 300   | 300           |
| Black Box Theatre / Orchestra Classroom | 1         | 1        | 2,000 | 2,000         |
| Band Storage (Outdoor)                  |           | 1        | 750   | 750           |
| <b>Music/ Performing Arts Sub-Total</b> | <b>3</b>  |          |       | <b>22,000</b> |

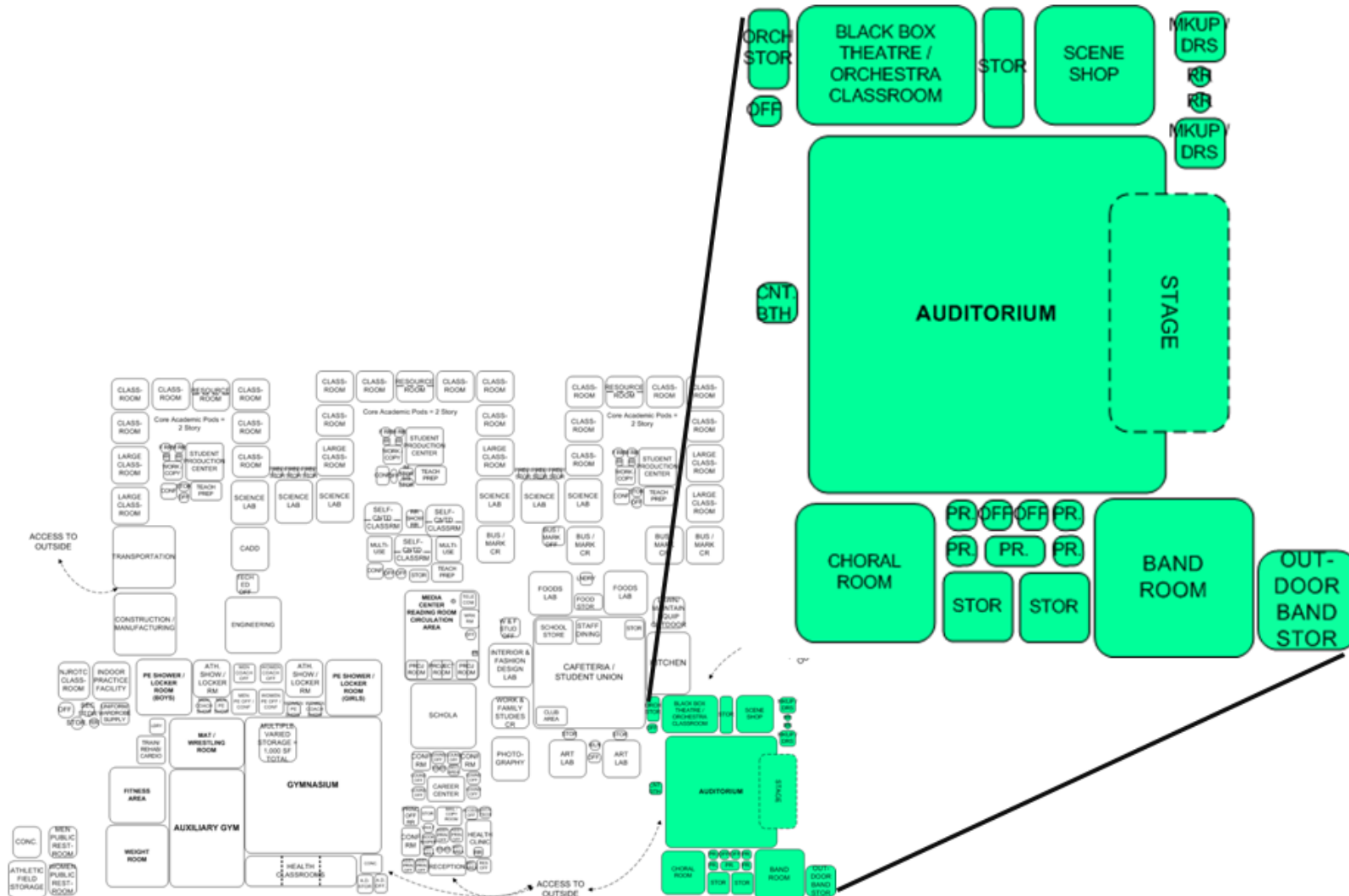
\*Recommended that high schools have seating for 750-800 with 3-4 high schools having seating for 1,000

### **Music / Performing Arts Spatial Relationships**

Music/performing arts spaces will be shared by each learning community. Music/ performing arts should be adjacent to Visual Arts. Members of the community will also use the music/performing arts before, after, and possibly during school hours. For this reason, there should be access to the outside, a separate secured entry, and a location near the Welcome Center.



## Music / Performing Arts Illustration





**Music / Performing Arts Space Descriptions:**  
**Choral Room**

| <b>CHORAL ROOM</b>                    |                |
|---------------------------------------|----------------|
| <b>ACTIVITIES</b>                     | <b>PERSONS</b> |
| Rehearsals                            | Students       |
| Gathering performance area            | Teachers       |
| Recitals                              | Parents        |
| Meeting area for school and community | Volunteers     |
| Instruction                           | Other staff    |
| Recording of performances             | Community      |

| <b>CHORAL ROOM</b>           |   | <b>QTY</b> |
|------------------------------|---|------------|
| <b>MECHANICAL</b>            | Quiet HVAC system [noise from mechanical equipment should not be audible in classroom]                                      | Yes        |
|                              | Climate controlled  | Yes        |
| <b>PLUMBING</b>              | Sink with hot and cold water  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall  | Yes        |
| <b>TECHNOLOGY</b>            | Video and data ports  | Yes        |
|                              | Telephone/intercom/voicemail port   | Yes        |
|                              | Data port for teacher   | Yes        |
|                              | Quad outlet adjacent to each data port  | Yes        |
|                              | Ceiling-mounted computer projector with retractable screen  | Yes        |
|                              | Sound system w/microphones, amplifier, mixer, MIDI, speaker for recording and playing back student rehearsals, performances | Yes        |
|                              | Ceiling-mounted recording microphones   | Yes        |

**Music / Performing Arts Space Descriptions:**
**Choral Room**

| <b>CHORAL ROOM</b>            |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Countertops with sink, base, and wall cabinets<br>- 4 tall storage cabinets with shelving, drawers, and lockable doors<br>- Adjustable height bookshelves<br>- Wardrobe cabinets<br>- Music storage cabinets, lockable | Yes        |
|                               | Musician ergonomic chairs and stands   | Yes        |
|                               | Portable music stand storage   | Yes        |
|                               | Conductor's chair, podium, and stand   | Yes        |
|                               | Mobile student desks   | Yes        |
|                               | Printer and printer table  | Yes        |
|                               | Desk and chair   | Yes        |
|                               | Portable risers and guard rails  | Yes        |
|                               | Electronic keyboard and upright piano  | Yes        |
|                               | CD/DVD player/burner, tape player, and video camera  | Yes        |
|                               | Networked computers  | Yes        |
|                               | Magnetic marker board with music staff on one section  | Yes        |
|                               | Tack boards and strips   | Yes        |
|                               | Instrument storage cabinets  | Yes        |
|                               | Keyboard lab tables  | Yes        |
|                               | Moveable teaching cart [portable]  | Yes        |
|                               | Microphones & speakers   | Yes        |
|                               | Metronome  | Yes        |
|                               | Teacher amplification system   | Yes        |
|                               | Digital recording system   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: double doors that lead onto stage  | Yes        |
|                               | Windows: operable, with blinds to allow for controlled lighting  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Appropriate acoustical treatment   | Yes        |
|                               | High ceilings  | Yes        |
|                               | Direct access to stage from music room [if possible]   | Yes        |

**Music / Performing Arts Space Descriptions:**
**Storage (Robes, Music)**

| <b>STORAGE (ROBES, MUSIC)</b> |                |
|-------------------------------|----------------|
| <b>ACTIVITIES</b>             | <b>PERSONS</b> |
| Storage of:                   | Teacher        |
| textbooks                     | Students       |
| instruments                   |                |
| choir robes                   |                |
| supplies                      |                |
| equipment                     |                |

| <b>STORAGE (ROBES, MUSIC)</b> |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements   |            |
| <b>PLUMBING</b>               | No special requirements   |            |
| <b>ELECTRICAL / LIGHTING</b>  | At least 2 duplex electrical outlet on each wall  | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements   |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Heavy duty, adjustable shelving on 2 walls<br>- Filing cabinets | Yes        |
|                               | Closets for choir robes and band uniforms   | Yes        |
|                               | Music folio cabinet, one per performing group or period                                   | Yes        |
|                               | Instrument storage shelving   | Yes        |
|                               | Storage cart for sound system   | Yes        |
|                               | Moveable teaching cart [portable]   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel  | Yes        |
|                               | Windows: no special requirements  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | 2 Story - possibly in the mezzanine of the auditorium                                     | Yes        |
|                               | Security and visibility   | Yes        |

**Music / Performing Arts Space Descriptions:**
**Band Room**

| <b>BAND ROOM</b>                      |                |
|---------------------------------------|----------------|
| <b>ACTIVITIES</b>                     | <b>PERSONS</b> |
| Rehearsals                            | Students       |
| Gathering performance area            | Teachers       |
| Recitals                              | Parents        |
| Meeting area for school and community | Volunteers     |
| Instruction                           | Other staff    |
| Recording                             | Community      |

| <b>BAND ROOM</b>             |   | <b>QTY</b> |
|------------------------------|---|------------|
| <b>MECHANICAL</b>            | Quiet HVAC system [noise from mechanical equipment should not be audible in classroom]                                      | Yes        |
|                              | Climate controlled  | Yes        |
| <b>PLUMBING</b>              | Sink with hot and cold water  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall  | Yes        |
| <b>TECHNOLOGY</b>            | Video and data ports  | Yes        |
|                              | Telephone/intercom/voicemail port   | Yes        |
|                              | Data port for teacher   | Yes        |
|                              | Quad outlet adjacent to each data port  | Yes        |
|                              | Ceiling-mounted computer projector with retractable screen  | Yes        |
|                              | Sound system w/microphones, amplifier, mixer, MIDI, speaker for recording and playing back student rehearsals, performances | Yes        |
|                              | Ceiling-mounted recording microphones   | Yes        |
|                              | Document camera   | Yes        |
|                              | Interactive whiteboard  | Yes        |

**Music / Performing Arts Space Descriptions:**
**Band Room**

| <b>BAND ROOM</b>              |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Countertops with sink, base, and wall cabinets<br>- 4 tall storage cabinets with shelving, drawers, and lockable doors<br>- Adjustable height bookshelves<br>- Wardrobe cabinets<br>- Music storage cabinets, lockable | Yes        |
|                               | Musician ergonomic chairs and stands   | Yes        |
|                               | Conductor's chair, podium, and stand   | Yes        |
|                               | Mobile student desks   | Yes        |
|                               | Printer and printer table  | Yes        |
|                               | Desk and chair [foldable]  | Yes        |
|                               | Portable risers and guard rails  | Yes        |
|                               | Electronic keyboard [MIDI compatible]  | Yes        |
|                               | CD/DVD player/burner, tape player, and video camera  | Yes        |
|                               | Networked computers  | Yes        |
|                               | Magnetic marker board with music staff on one section  | Yes        |
|                               | Tack boards and strips   | Yes        |
|                               | Instrument storage cabinets  | Yes        |
|                               | Keyboard and MIDI workstations   | Yes        |
|                               | Moveable teaching cart [portable]  | Yes        |
|                               | Microphones & speakers   | Yes        |
|                               | Metronome  | Yes        |
|                               | Teacher amplification system   | Yes        |
|                               | Digital recording system   | Yes        |
|                               | Keyboard stands and cases  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: double doors that lead onto stage, no center bar   | Yes        |
|                               | Exterior double doors with no center bar   | Yes        |
|                               | Windows: operable, with blinds to allow for controlled lighting  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Appropriate acoustical treatment   | Yes        |
|                               | Direct access to stage from music room [if possible]   | Yes        |
|                               | High ceilings  | Yes        |
|                               | STET software  | Yes        |
|                               | Brass water valves   | Yes        |

**Music / Performing Arts Space Descriptions:**
**Band Storage (Instruments, Music)**

| <b>BAND STORAGE (INSTRUMENTS, MUSIC)</b> |                |
|--|----------------|
| <b>ACTIVITIES</b>                        | <b>PERSONS</b> |
| Storage of:                              | Teacher        |
| textbooks                                | Students       |
| instruments                              |                |
| supplies                                 |                |
| band uniforms                            |                |
| equipment                                |                |

| <b>BAND STORAGE (INSTRUMENTS, MUSIC)</b> |   | <b>QTY</b> |
|--|---|------------|
| <b>MECHANICAL</b>                        | No special requirements   |            |
| <b>PLUMBING</b>                          | No special requirements   |            |
| <b>ELECTRICAL / LIGHTING</b>             | At least 2 duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>                        | No special requirements   |            |
| <b>FURNITURE / EQUIPMENT</b>             | Casework to include:<br>- Heavy duty, adjustable shelving on 2 walls<br>- Filing cabinets | Yes        |
|  | Music folio cabinet, one per performing group or period                                   | Yes        |
|  | Instrument storage shelving   | Yes        |
|  | Storage cart for sound system   | Yes        |
|  | Moveable teaching cart [portable]   | Yes        |
|  | Microphones & speakers  | Yes        |
|  | Metronome   | Yes        |
|  | Teacher amplification system  | Yes        |
|  | Digital recording system, updated as technology improves                                  | Yes        |
| <b>DOORS &amp; WINDOWS</b>               | Door: view panel  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>            | Shelving to optimize storage  | Yes        |
|  | Hanging rods for uniforms   | Yes        |
|  | Security and visibility   | Yes        |



**Music / Performing Arts Space Descriptions:**  
**Practice Rooms**

| <b>PRACTICE ROOMS</b>  |                |
|--|----------------|
| <b>ACTIVITIES</b>  | <b>PERSONS</b> |
| Provides an exclusive area for student musical practice and one-on-one instruction | Students       |
| Recording performances   | Teachers       |

| <b>PRACTICE ROOMS</b>         |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements                       |            |
| <b>PLUMBING</b>               | Drinking fountain near vocal practice rooms   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlet                      | Yes        |
|                               | Quad outlet adjacent to each data port        | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                       |            |
| <b>FURNITURE / EQUIPMENT</b>  | Chairs  | Yes        |
|                               | Music stands                                  | Yes        |
|                               | Mirror  | Yes        |
|                               | Acoustic tiling                               | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: secure, sound proof, with view panel    | Yes        |
|                               | Window: secure, sound proof                   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Sound proof walls                             | Yes        |
|                               | Adjacent to music room and instrument storage | Yes        |
|                               | Visibility from music room/band room          | Yes        |
|                               | Carpet flooring                               | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Large Practice Room**

| <b>LARGE PRACTICE ROOM</b>   |                |
|--|----------------|
| <b>ACTIVITIES</b>  | <b>PERSONS</b> |
| Provides an exclusive area for student musical practice and one-on-one instruction | Students       |
| Small ensembles  | Teachers       |
| Recording performances   |                |

| <b>LARGE PRACTICE ROOM</b>    |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements                       |            |
| <b>PLUMBING</b>               | Drinking fountain near vocal practice rooms   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlet                      | Yes        |
|                               | Quad outlet adjacent to each data port        | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                       |            |
| <b>FURNITURE / EQUIPMENT</b>  | Chairs  | Yes        |
|                               | Music stands                                  | Yes        |
|                               | Mirror  | Yes        |
|                               | Acoustic tiling                               | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: secure, sound proof, with view panel    | Yes        |
|                               | Window: secure, sound proof                   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Sound proof walls                             | Yes        |
|                               | Adjacent to music room and instrument storage | Yes        |
|                               | Visibility from music room/band room          | Yes        |
|                               | Carpet flooring                               | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Auditorium Seating**

| <b>AUDITORIUM SEATING</b>                              |  |
|--|--|
| <b>ACTIVITIES</b>                                      | <b>PERSONS</b>                           |
| Student performances                                   | Staff members                            |
| School and community program, meetings, and activities | Community – primarily after school hours |
| Faculty meetings                                       | Students                                 |
| Class instruction                                      |  |

| <b>AUDITORIUM SEATING</b>    |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet separate zone                                | Yes        |
| <b>PLUMBING</b>              | No special requirements                            |            |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall             | Yes        |
|                              | Variable lighting levels                           | Yes        |
|                              | Theater lighting                                   | Yes        |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port                  | Yes        |
|                              | Video and data ports                               | Yes        |
|                              | Quad outlet adjacent to each data port             | Yes        |
|                              | Audio enhancement system                           | Yes        |
|                              | Sound system with portable or wireless microphones | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Auditorium Seating**

| <b>AUDITORIUM SEATING</b>     |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | CD/DVD player  | Yes        |
|                               | Equipment rack in control closet   | Yes        |
|                               | Computer projector   | Yes        |
|                               | Large, retractable projection screen   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Overhead doors   | Yes        |
|                               | Door: double doors with access to outside courtyard/dining area                  | Yes        |
|                               | Windows: None  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Good sight lines to all areas of the room for supervision                        | Yes        |
|                               | Acoustic sound panels  | Yes        |
|                               | Wing space   | Yes        |
|                               | Fly system   | Yes        |
|                               | Control closet with light and sound control box                                  | Yes        |
|                               | Sloped floor   | Yes        |
|                               | Fixed seats  | Yes        |
|                               | First several rows of seats removable to create orchestra space or orchestra pit | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Control Booth**

| <b>CONTROL BOOTH</b>                                |                |
|---|----------------|
| <b>ACTIVITIES</b>                                   | <b>PERSONS</b> |
| Control of audio and lighting systems of Auditorium | Students       |
|   | Teachers       |

| <b>CONTROL BOOTH</b>          |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements                               |            |
| <b>PLUMBING</b>               | No special requirements                               |            |
| <b>ELECTRICAL / LIGHTING</b>  | Overhead lighting [dimmable]                          | Yes        |
|                               | Multiple duplex outlets above work counter            | Yes        |
|                               | Coordinate power requirements with lighting and sound | Yes        |
| <b>TECHNOLOGY</b>             | Intercom  | Yes        |
|                               | Wireless headset communication to Stage               | Yes        |
|                               | Plug-ins for lighting and sound boards                | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Built-in work counter                                 | Yes        |
|                               | Adjustable height swivel stools                       | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: secure with small view panel                    | Yes        |
|                               | Windows: sliding glass window to Auditorium           | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Acoustical ceiling                                    | Yes        |
|                               | Dark colored walls                                    | Yes        |

## Music / Performing Arts Space Descriptions:

### Auditorium Stage

| AUDITORIUM STAGE  |                   |
|---|-------------------|
| ACTIVITIES  | PERSONS           |
| Provides multi-function place for student and community | Students          |
| Musical and dramatic performances and rehearsals        | Teachers          |
| Student assemblies                                      | Staff             |
| Awards programs   | Parents           |
| Presentations   | Community members |
| Guest speakers  |                   |
| Community meetings                                      |                   |
| Large group instruction                                 |                   |

| AUDITORIUM STAGE             |   | QTY |
|------------------------------|---|-----|
| <b>MECHANICAL</b>            | No special requirements                                 |     |
| <b>PLUMBING</b>              | Fire sprinkler is under stage if storage in under stage | Yes |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets                               | Yes |
|                              | Stage lighting  | Yes |
|                              | Quad outlets adjacent to each data port                 | Yes |
|                              | Audio ports   | Yes |
| <b>TECHNOLOGY</b>            | Voice port/phone  | Yes |
|                              | Data ports and access to wireless network               | Yes |



**Music / Performing Arts Space Descriptions:**  
**Auditorium Stage**

| <b>AUDITORIUM STAGE</b>       |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Upright piano  | Yes        |
|                               | Microphones  | Yes        |
|                               | Curtain  | Yes        |
|                               | Side curtains  | Yes        |
|                               | Pit cover [if there is an orchestra pit]   | Yes        |
|                               | Acoustic music shell and portable risers [instrumental and choral]                                   | Yes        |
|                               | Back drop screen   | Yes        |
|                               | Video production/projection screen   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Large overhead door from stage to scene shop   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Adjacent to auditorium and along edge that allow for the best sight lines of spectators to platforms | Yes        |
|                               | Wing space - Minimum 10' on each side  | Yes        |
|                               | Wood flooring, also conducive for dance programs   | Yes        |
|                               | Adjacent to or in close proximity to music room and art room and drama room                          | Yes        |
|                               | Pulleys and rigging for backdrop scenery   | Yes        |
|                               | Full fly space (Minimum 40' clearance)   | Yes        |
|                               | Storage area under stage   | Yes        |
|                               | Handicap access for raised stage   | Yes        |

**Music / Performing Arts Space Descriptions:**
**Scene Shop**

| <b>SCENE SHOP</b>  |                |
|--|----------------|
| <b>ACTIVITIES</b>  | <b>PERSONS</b> |
| Preparation of props and scenery for use on Stage such as carpentry and painting | Students       |
|  | Teachers       |

| <b>SCENE SHOP</b>             |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements                   |            |
| <b>PLUMBING</b>               | Sink with hot and cold water              | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex outlets at 5' OC                   | Yes        |
|                               | Uniform fluorescent lighting              | Yes        |
| <b>TECHNOLOGY</b>             | Intercom                                  | Yes        |
|                               | Voice, video, and data ports              | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | 2' deep storage racks for tools and props | Yes        |
|                               | Flammable materials storage cabinets      | Yes        |
|                               | Work benches                              | Yes        |
|                               | Power tools                               | Yes        |
|                               | Adjustable height stools                  | Yes        |
|                               | Racks for storing backdrops               | Yes        |
|                               | Woodworking equipment                     | Yes        |
|                               | Painting equipment                        | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Large overhead door to outside dock       | Yes        |
|                               | Large overhead door to stage              | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Ventilation                               | Yes        |
|                               | Recessed flooring                         | Yes        |
|                               | Sealed concrete floor                     | Yes        |
|                               | Paint rack area at one wall               | Yes        |
|                               | Adjacent to Stage                         | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Make-up / Dressing**

| <b>MAKE-UP / DRESSING</b>                            |                   |
|--|-------------------|
| <b>ACTIVITIES</b>                                    | <b>PERSONS</b>    |
| Preparation of make-up and costumes for performances | Students          |
|  | Teachers          |
|  | Community members |
|  | Staff             |

| <b>MAKE-UP / DRESSING</b>     |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements                       |            |
| <b>PLUMBING</b>               | Sinks with hot and cold water                 | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Make-up lighting at mirrors                   | Yes        |
| <b>TECHNOLOGY</b>             | Intercom                                      | Yes        |
|                               | Voice and data ports                          | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Make-up counter with adjustable height chairs | Yes        |
|                               | Mirrors with lighting above and adjacent      | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Solid doors                                   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Privacy and security                          | Yes        |

**Music / Performing Arts Space Descriptions:**  
**Storage (Costumes, Props)**

| <b>STORAGE (COSTUMES, PROPS)</b>                      |                   |
|---|-------------------|
| <b>ACTIVITIES</b>                                     | <b>PERSONS</b>    |
| Storage for equipment, materials, props, and costumes | Students          |
|   | Teachers          |
|   | Staff             |
|   | Community members |
|   | Parents           |

| <b>STORAGE (COSTUMES, PROPS)</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>MECHANICAL</b>                | No special requirements                               |            |
| <b>PLUMBING</b>                  | No special requirements                               |            |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlet                              | Yes        |
|                                  | Quad outlet adjacent to each data port                | Yes        |
| <b>TECHNOLOGY</b>                | No special requirements                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>     | Closet rods   | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Doors: double doors to Stage                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Adjacent to stage                                     | Yes        |
|                                  | 2 Story - possibly in the mezzanine of the auditorium | Yes        |
|                                  | Large door opening                                    | Yes        |

**Music / Performing Arts Space Descriptions:**
**Restrooms**

| <b>RESTROOMS</b>  |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Personal hygiene  | Students       |

| <b>RESTROOMS</b>              |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Exhaust fan                             | 1          |
|                               | Intake and outake ventilation           | 1          |
| <b>PLUMBING</b>               | Sinks with hot and cold water           | 2          |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex outlets on each wall             | 4          |
| <b>TECHNOLOGY</b>             | No special requirements                 |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include cabinet with mirror | 1          |
|                               | Biohazard disposal can                  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Solid doors                             | 1          |
| <b>SPECIAL CONSIDERATIONS</b> | Separate from dressing room             |            |

**Music / Performing Arts Space Descriptions:**
**Offices**

| <b>PREP OFFICES</b>           |  |   |
|-------------------------------|--|---|
| <b>ACTIVITIES</b>             |  | <b>PERSONS</b>                          |
| Meeting with students         |  | School staff                            |
| Teacher class preparation     |  | Band, orchestra, and chorus instructors |
|                               |  | Students                                |
| <b>PREP OFFICES</b>           |  | <b>QTY</b>                              |
| <b>MECHANICAL</b>             | Air conditioning                       | Yes                                     |
| <b>PLUMBING</b>               | No special requirements                |   |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes                                     |
|                               | Quad outlet at each data port          | 1                                       |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port      | Yes                                     |
|                               | Video and data ports                   | Yes                                     |
|                               | Quad outlet adjacent to each data port | Yes                                     |
|                               | Telephone                              | 1                                       |
|                               | Intercom                               | Yes                                     |
| <b>FURNITURE / EQUIPMENT</b>  | Locking file cabinet, 4 drawer         | 1 to 2                                  |
|                               | Clock                                  | 1                                       |
|                               | File lateral drawer                    | Yes                                     |
|                               | Desk                                   | 1                                       |
|                               | Desk chair                             | 1                                       |
|                               | Guest chairs                           | 2                                       |
|                               | Lamps                                  | Yes                                     |
|                               | Bookshelves                            | 18LF                                    |
|                               | Marker board                           | 4LF                                     |
|                               | Laptop computer                        | 1                                       |
|                               | Printer                                | 1                                       |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel                       | Yes                                     |
|                               | Windows: no special considerations     | Yes                                     |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting                  | Yes                                     |
|                               | Tile                                   | Yes                                     |

**Music / Performing Arts Space Descriptions:**
**Orchestra Storage**

| <b>ORCHESTRA STORAGE</b> |                |
|--------------------------|----------------|
| <b>ACTIVITIES</b>        | <b>PERSONS</b> |
| Storage of:              | Teacher        |
| textbooks                | Students       |
| instruments              |                |
| supplies                 |                |
| equipment                |                |

| <b>ORCHESTRA STORAGE</b>      |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements   |            |
| <b>PLUMBING</b>               | No special requirements   |            |
| <b>ELECTRICAL / LIGHTING</b>  | At least 2 duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements   |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Heavy duty, adjustable shelving on 2 walls<br>- Filing cabinets | Yes        |
|                               | Music folio cabinet, one per performing group or period                                   | Yes        |
|                               | Instrument storage shelving   | Yes        |
|                               | Storage cart for sound system   | Yes        |
|                               | Moveable teaching cart [portable]   | Yes        |
|                               | Microphones & speakers  | Yes        |
|                               | Metronome   | Yes        |
|                               | Teacher amplification system  | Yes        |
|                               | Digital recording system, updated as technology improves                                  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Shelving to optimize storage  | Yes        |
|                               | Security and visibility   | Yes        |



**Music / Performing Arts Space Descriptions:**
**Black Box Theatre / Orchestra Classroom**

| <b>BLACK BOX THEATRE / ORCHESTRA CLASSROOM</b>    |                   |
|---|-------------------|
| <b>ACTIVITIES</b>                                 | <b>PERSONS</b>    |
| Preparation area for drama and music performances | Students          |
|   | Teachers          |
|   | Staff             |
|   | Community members |
|   | Parents           |

| <b>BLACK BOX THEATRE / ORCHESTRA CLASSROOM</b> |  | <b>QTY</b> |
|--|--|------------|
| <b>MECHANICAL</b>                              | No special requirements  |            |
| <b>PLUMBING</b>                                | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>                   | With light grid  | Yes        |
|  | Duplex electrical outlets on each wall                                 | Yes        |
|  | Overhead lighting  | Yes        |
| <b>TECHNOLOGY</b>                              | Telephone / intercom / voicemail port                                  | Yes        |
|  | Data ports   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>                   | Movable auditorium-like seating  | Yes        |
| <b>DOORS &amp; WINDOWS</b>                     | Doors with view panel  | Yes        |
|  | Windows: operable with blinds to allow for controlled natural lighting | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>                  | Access to storage  | Yes        |
|  | Movable stage  | Yes        |

## Music / Performing Arts Space Descriptions:

### Outdoor Band Storage

| OUTDOOR BAND STORAGE          |          |
|-------------------------------|----------|
| ACTIVITIES                    | PERSONS  |
| Storage of:                   | Teacher  |
| paint                         | Students |
| outdoor percussison equipment |          |
| flatbed trailers              |          |
| golf cart                     |          |
| tractor                       |          |
| field podiums                 |          |
| yard markers                  |          |

| OUTDOOR BAND STORAGE          |   | QTY |
|-------------------------------|---|-----|
| <b>MECHANICAL</b>             | Climate controlled                                | Yes |
| <b>PLUMBING</b>               | No special requirements                           |     |
| <b>ELECTRICAL / LIGHTING</b>  | At least 2 duplex electrical outlets on each wall | Yes |
| <b>TECHNOLOGY</b>             | No special requirements                           |     |
| <b>FURNITURE / EQUIPMENT</b>  | Shelving to optimize storage                      | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Solid double lockable doors without center bar    | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Shelving to optimize storage                      | Yes |
|                               | Security and visibility                           | Yes |



**Physical Education Goals:** The goal of the physical education curricula is to ensure that all students will:

- Learn about the health issues that affect their lives
- Learn how to become more physically fit
- Have a greater understanding of the need for physical fitness and health
- Gain the skills to become more productive individuals through physical activity and training
- Learn team activities and sportsmanship
- Practice and/or maintain a healthy lifestyle
- Learn and practice methods of self-assessment

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

## **Gym/Physical Education**

A variety of indoor and outdoor areas will be required to meet the physical education/health, athletic, and recreation needs of the students and the residents of the school division that will use these facilities.

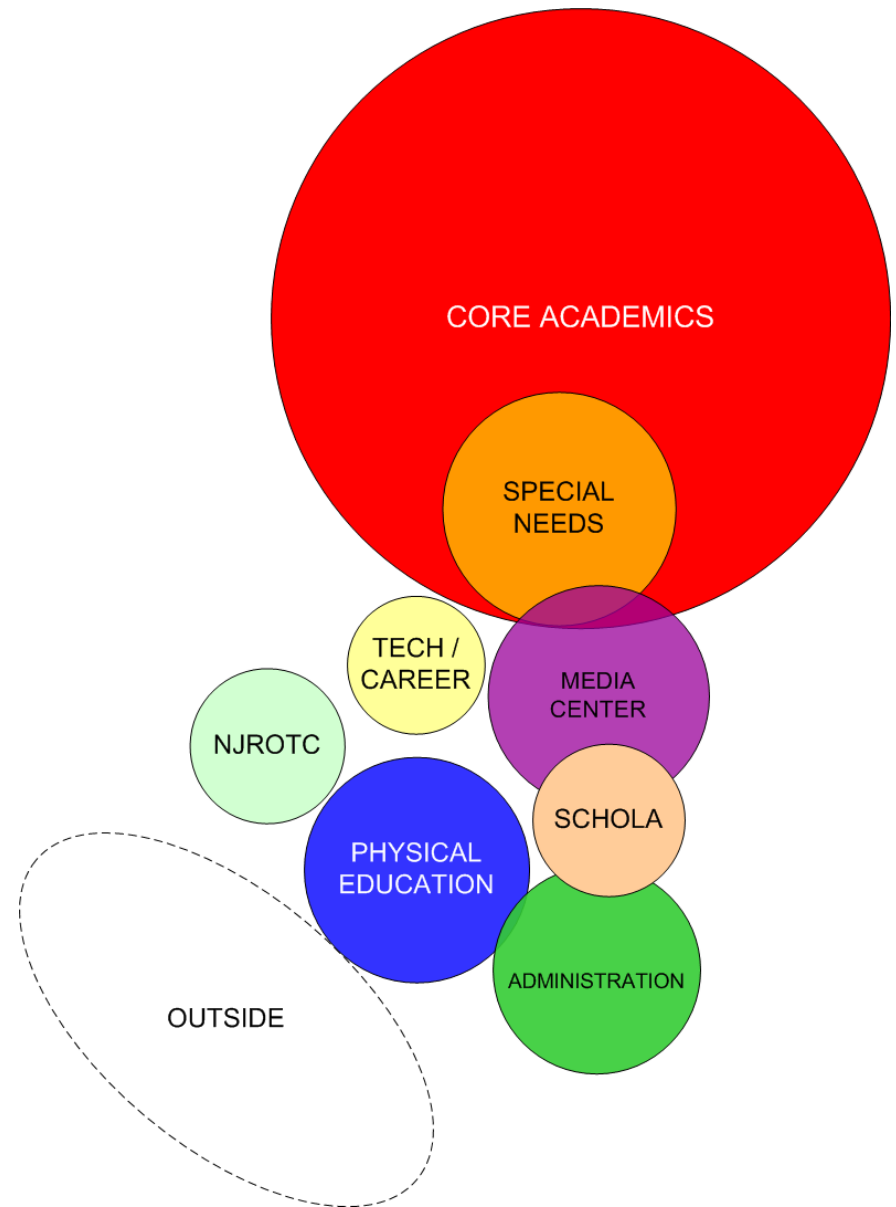
**Gym / Physical Education Space Requirements**

| Gymnasium / Physical Education              | Suggested        |          |        |               |
|---|------------------|----------|--------|---------------|
|   | TS               | Quantity | SF     | Total         |
| Gymnasium                                   | 2                | 1        | 15,000 | 15,000        |
| Seating included in above: 2000 seats       |                  |          |        |               |
| Storage                                     |                  | Multiple | Varied | 1,000         |
| Auxiliary Gym                               | 1                | 1        | 5,000  | 5,000         |
| PE Shower/Locker Room                       |                  | 2        | 2,000  | 4,000         |
| Fitness Area                                | 1                | 1        | 2,000  | 2,000         |
| Wrestling Room                              | 1                | 1        | 2,500  | 2,500         |
| Weight Room                                 | 1                | 1        | 2,500  | 2,500         |
| Athletics Shower/Locker Room                |                  | 2        | 1,000  | 2,000         |
| Training / Rehabilitation / Cardio Lab      |                  | 1        | 500    | 500           |
| PE Office/Conference                        |                  | 2        | 400    | 800           |
| PE Staff Toilets/Showers                    |                  | 2        | 100    | 200           |
| Laundry                                     |                  | 1        | 200    | 200           |
| Coaches Offices                             |                  | 2        | 300    | 600           |
| Coaches Toilet/Shower                       |                  | 2        | 100    | 200           |
| Health Classroom                            | 3                | 3        | 850    | 2,550         |
| Concessions                                 |                  | 1        | 300    | 300           |
| Athletic Director's Storage                 |                  | 1        | 220    | 220           |
| Athletic Director's Office                  |                  | 1        | 150    | 150           |
| <b>Physical Education Sub-Total</b>         | <b>9</b>         |          |        | <b>39,720</b> |
| <b>Outdoor Spaces</b>                       | <b>Suggested</b> |          |        |               |
|   | TS               | Quantity | SF     | Total         |
| Football Stadium                            |                  |          |        |               |
| Athletic Field Storage                      |                  | 1        | 1,000  | 1,000         |
| Public Restrooms                            |                  | 2        | 600    | 1,200         |
| Concession                                  |                  | 1        | 600    | 600           |
| <b>Physical Education Outdoor Sub-Total</b> |                  |          |        | <b>2,800</b>  |
| <b>Physical Education Total</b>             | <b>9</b>         |          |        | <b>42,520</b> |

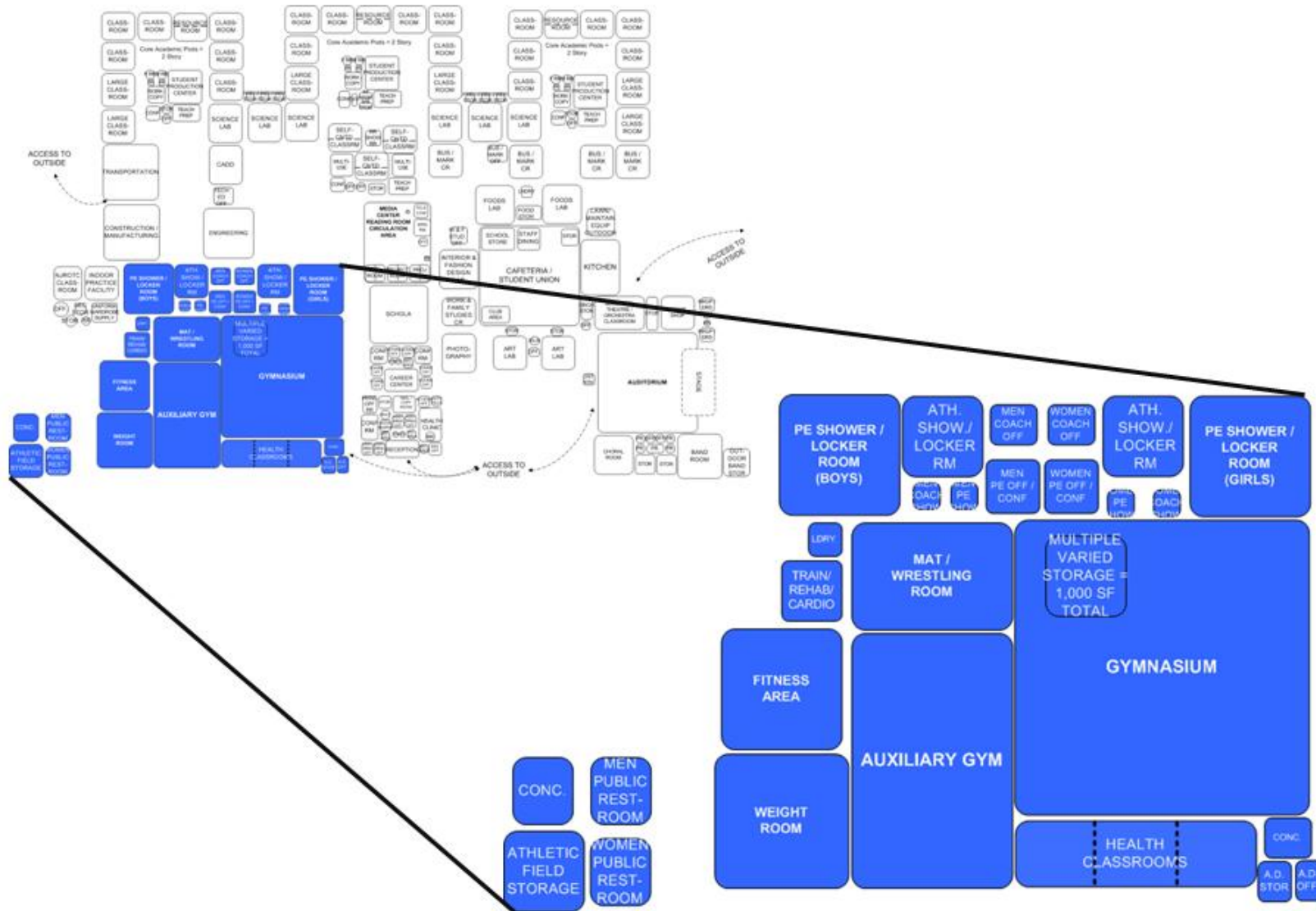
## Gym / Physical Education Spatial Relationships

Physical education spaces will be shared by each learning community. If the building will have the NJROTC Program, it should be adjacent to the Physical Education Area with access to the locker rooms. Members of the community will also use some of the physical education spaces before, after, and possibly during school hours. For this reason, there should be access to the outside, a separate secured entry, and a location near the Welcome Center. The pages that follow describe in more detail each program area space listed in the space requirements table.

Physical education spaces should be centrally located within the facility and in close proximity to the administration area, outdoor areas and spectator parking. In addition, the physical education spaces should be accessible by the community.



## Gym / Physical Education Illustration



**Physical Education Space Descriptions:**  
**Gymnasium**

| GYMNASIUM                                 |                            |
|---|----------------------------|
| ACTIVITIES                                | PERSONS                    |
| Physical education                        | Students                   |
| Sports – Basketball, Volleyball, Baseball | Faculty                    |
| Fitness/Health presentations, workouts    | Staff                      |
| Large group activities                    | After-school community use |
| Ticket sales                              |                            |

| GYMNASIUM                    |   | QTY |
|------------------------------|---|-----|
| <b>MECHANICAL</b>            | Quiet mechanicals or on outside of building   | Yes |
|                              | Additional ventilation  | Yes |
| <b>PLUMBING</b>              | Recessed drinking fountains located in corridor directly outside the gym                                  | Yes |
|                              | Outside hose bib  | Yes |
| <b>ELECTRICAL / LIGHTING</b> | Floor outlets and data access   | Yes |
|                              | Wiring for power scoreboards, bleachers, sound system, lighting, curtains, and outlets on perimeter walls | Yes |
|                              | Drop down mat lamp for center stage type activities / shows   | Yes |
|                              | Lighting which does not add heat to gym   | Yes |
|                              | Cage over lights to avoid breakage  | Yes |
| <b>TECHNOLOGY</b>            | All technology should be protected: wireless or recessed into wall  | Yes |
|                              | Telephone/intercom/voicemail port   | Yes |
|                              | Video and data ports  | Yes |
|                              | Quad outlet adjacent to each data port  | Yes |
|                              | Wireless  | Yes |
|                              | Audio enhancement system  | Yes |
|                              | Sound system  | Yes |



**Physical Education Space Descriptions:**
**Gymnasium**

| <b>GYMNASIUM</b>              |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Adjustable baskets from ceiling  | Yes        |
|                               | Whiteboards  | Yes        |
|                               | Scoreboards  | Yes        |
|                               | Two portable magnetic marker boards  | Yes        |
|                               | Safety wall mats behind baskets if close to wall   | Yes        |
|                               | Floor mats   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: large double doors to outside for equipment  | Yes        |
|                               | Garage door  | Yes        |
|                               | Door: double door to storage area for moving equipment   | Yes        |
|                               | Unbreakable, translucent glass in windows  | Yes        |
|                               | Windows: cages to avoid breakage   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Must be able to isolate gym from the rest of the school for activities after hours                   | Yes        |
|                               | Acoustics for activities other than basketball for community use, guest speaker, district in-service | Yes        |
|                               | Retractable bleachers  | Yes        |
|                               | Glass basketball backboards  | Yes        |
|                               | Multi-purpose flooring   | Yes        |

**Physical Education Space Descriptions:**
**Storage**

| <b>STORAGE</b>  |                |
|---|----------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b> |
| Storing equipment used in the physical education/athletic areas | Staff          |

| <b>STORAGE</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | Floor drain  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                           |            |
| <b>TECHNOLOGY</b>             | No special requirements  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Mat storage  | Yes        |
|                               | Equipment storage  | Yes        |
|                               | Heavy duty adjustable shelving                                   | Yes        |
|                               | Layout to maximize storage of Physical Education equipment       | Yes        |
|                               | Lockable storage area for athletic teams' equipment and uniforms | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Doors: oversized that opens into gym                             | Yes        |
|                               | Windows: none  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Secure/lockable  | Yes        |

**Physical Education Space Descriptions:**  
**Auxiliary Gymnasium**

| <b>AUXILIARY GYMNASIUM</b>                |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>                         | <b>PERSONS</b>             |
| Physical education                        | Students                   |
| Sports – Gymnastics, Volleyball, Baseball | Faculty                    |
| Fitness/Health presentations, workouts    | Staff                      |
| Large group activities                    | After-school community use |

| <b>AUXILIARY GYMNASIUM</b>   |   | <b>QTY</b> |
|------------------------------|---|------------|
| <b>MECHANICAL</b>            | Quiet mechanicals or on outside of building   | Yes        |
|                              | Additional ventilation  | Yes        |
| <b>PLUMBING</b>              | Recessed drinking fountains located in corridor directly outside the gym                                  | Yes        |
|                              | Outside hose bib  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Floor outlets and data access   | Yes        |
|                              | Wiring for power scoreboards, bleachers, sound system, lighting, curtains, and outlets on perimeter walls | Yes        |
|                              | Lighting which does not add heat to gym   | Yes        |
|                              | Cage over lights to avoid breakage: translucent, unbreakable glass  | Yes        |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port   | Yes        |
|                              | Video and data ports  | Yes        |
|                              | Quad outlet adjacent to each data port  | Yes        |
|                              | Audio enhancement system  | Yes        |
|                              | Sound system  | Yes        |

**Physical Education Space Descriptions:**  
**Auxiliary Gymnasium**

| <b>AUXILIARY GYMNASIUM</b>    |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Adjustable baskets from ceiling  | Yes        |
|                               | Tack boards  | Yes        |
|                               | Scoreboards  | Yes        |
|                               | Two portable magnetic marker boards  | Yes        |
|                               | Safety wall mats   | Yes        |
|                               | Floor mats   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: large double doors to outside for equipment or garage door                                     | Yes        |
|                               | Removable center posts   | Yes        |
|                               | Door: double door to storage area for moving equipment   | Yes        |
|                               | Windows: cages to avoid breakage   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Must be able to isolate gym from the rest of the school for activities after hours                   | Yes        |
|                               | Acoustics for activities other than basketball for community use, guest speaker, district in service | Yes        |
|                               | Gym key control  | Yes        |
|                               | Glass basketball backboards  | Yes        |
|                               | Multi-purpose flooring   | Yes        |

**Physical Education Space Descriptions:**
**PE Shower / Locker Room**

| <b>PE SHOWER / LOCKER ROOM</b>                            |                             |
|---|-----------------------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b>              |
| Storage of personal items while using gym or fitness area | Physical Education students |
| Personal hygiene  | Sports teams                |
|   | Students [after-hours]      |

| <b>PE SHOWER / LOCKER ROOM</b> |  | <b>QTY</b> |
|--------------------------------|--|------------|
| <b>MECHANICAL</b>              | Additional ventilation   | Yes        |
| <b>PLUMBING</b>                | Drinking fountains   | Yes        |
|                                | Sinks  | Yes        |
|                                | Showers  | Yes        |
|                                | Restrooms  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>   | Overhead lighting  | Yes        |
|                                | Duplex outlets   | Yes        |
| <b>TECHNOLOGY</b>              | No special requirements  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>   | Benches  | Yes        |
|                                | Small lockers [based on school enrollment divided by two for each locker room] | Yes        |
|                                | Large lockers [based on number of students]                                    | Yes        |
| <b>DOORS &amp; WINDOWS</b>     | Door: solid door with no window  | Yes        |
|                                | Windows: No windows  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>  | Handicap accessible  | Yes        |
|                                | Non-slip flooring  | Yes        |
|                                | Privacy and security   | Yes        |
|                                | Layout to optimize locker arrangements   | Yes        |
|                                | Layout should avoid congestion   | Yes        |

**Physical Education Space Descriptions:**
**Fitness Area**

| <b>FITNESS AREA</b>     |                            |
|-------------------------|----------------------------|
| <b>ACTIVITIES</b>       | <b>PERSONS</b>             |
| Physical fitness        | Students                   |
| Aerobics                | Faculty                    |
| Cardiovascular Training | Staff                      |
| Physical Education      | After-school community use |
| Team Training           |                            |
| Rehabilitation          |                            |
| Plyometrics             |                            |

| <b>FITNESS AREA</b>          |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Additional ventilation   | Yes        |
| <b>PLUMBING</b>              | Recessed drinking fountains  | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Lighting which does not add heat                                   | Yes        |
|                              | Uniform lighting   | Yes        |
| <b>TECHNOLOGY</b>            | All technology should be protected: wireless or recessed into wall | Yes        |
|                              | Telephone/intercom/voicemail port                                  | Yes        |
|                              | Video port and monitor/flatscreen                                  | Yes        |
|                              | Data ports   | Yes        |
|                              | Quad outlet adjacent to each data port                             | Yes        |
|                              | Media player   | Yes        |
|                              | Audio enhancement system   | Yes        |
|                              | Sound system   | Yes        |

**Physical Education Space Descriptions:**
**Fitness Area**

| <b>FITNESS AREA</b>           |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Tack boards   | Yes        |
|                               | Portable magnetic marker boards   | Yes        |
|                               | Storage closet  | Yes        |
|                               | Rolling storage racks   | Yes        |
|                               | Dumbbell racks  | Yes        |
|                               | Physio balls  | Yes        |
|                               | Aerobic steps   | Yes        |
|                               | Stationary bikes  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Double Door with removable post and windows to corridor                     | Yes        |
|                               | Windows: to corridor for external monitoring                                | Yes        |
|                               | Windows: natural light  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Isolate fitness area from the rest of the school for activities after hours | Yes        |
|                               | Sanitizable flooring  | Yes        |
|                               | Resilient rubber flooring   | Yes        |
|                               | Adjacent to the Gymnasium and Locker Rooms                                  | Yes        |
|                               | Acoustical sound treatment  | Yes        |
|                               | Mirrors on wall   | Yes        |



**Physical Education Space Descriptions:**  
**Wrestling**

| <b>WRESTLING</b>  |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Dance Class       | Instructor     |
| Fitness Program   | Students       |
| Fitness Training  | Community      |
| Wrestling         |                |
| Aerobics Classes  |                |

| <b>WRESTLING</b>              |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Additional ventilation                      | Yes        |
| <b>PLUMBING</b>               | Recessed drinking fountains                 | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Lighting which does not add heat            | Yes        |
|                               | Uniform lighting                            | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port           | Yes        |
|                               | Video port and data ports                   | Yes        |
|                               | Quad outlet adjacent to each data port      | Yes        |
|                               | Audio enhancement system                    | Yes        |
|                               | Sound system                                | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Sound system                                | Yes        |
|                               | Mats = 42' x 56'                            | Yes        |
|                               | Floor to ceiling mirrors on one long wall   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Large doors for moving mats with view panel | Yes        |
|                               | No windows                                  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Low ceiling with storage room above         | Yes        |
|                               | Padded walls                                | Yes        |
|                               | Rubberized flooring                         | Yes        |

**Physical Education Space Descriptions:**
**Weight Room**

| <b>WEIGHT ROOM</b>      |                            |
|-------------------------|----------------------------|
| <b>ACTIVITIES</b>       | <b>PERSONS</b>             |
| Weight training         | Students                   |
| Cardiovascular training | Faculty                    |
| Physical education      | Staff                      |
| Team training           | After school community use |
| Rehabilitation          |                            |

| <b>WEIGHT ROOM</b>            |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Additional ventilation   | Yes        |
| <b>PLUMBING</b>               | Recessed drinking fountains  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Lighting which does not add heat   | Yes        |
|                               | Uniform lighting   | Yes        |
| <b>TECHNOLOGY</b>             | Telephone / intercom / voicemail port  | Yes        |
|                               | Video port and monitor   | Yes        |
|                               | Data ports   | Yes        |
|                               | Quad outlet adjacent to each data port   | Yes        |
|                               | Audio enhancement system   | Yes        |
|                               | Sound system   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Tack boards / strips   | Yes        |
|                               | Portable magnetic marker boards  | Yes        |
|                               | Shelves  | Yes        |
|                               | Desk   | Yes        |
|                               | Weights and stationary equipment   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Large door with windows to corridor  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Must be able to isolate from the rest of the school for activities after hours | Yes        |
|                               | High ceilings  | Yes        |
|                               | Resilient rubber flooring  | Yes        |
|                               | Adjacent to fitness room   | Yes        |
|                               | Acoustical sound treatment   | Yes        |

**Physical Education Space Descriptions:**  
**Athletics Shower / Locker Room**

| <b>ATHLETICS SHOWER / LOCKER ROOM</b>                     |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b>             |
| Storage of personal items while using gym or fitness area | Students                   |
| Personal hygiene  | Sports teams               |
|   | After-school community use |

| <b>ATHLETICS SHOWER / LOCKER ROOM</b> |                                    | <b>QTY</b> |
|---------------------------------------|------------------------------------|------------|
| <b>MECHANICAL</b>                     | Additional ventilation             | Yes        |
|                                       |                                    |            |
| <b>PLUMBING</b>                       | Drinking fountains                 | Yes        |
|                                       | Sinks                              | Yes        |
|                                       | Showers                            | Yes        |
|                                       | Restrooms                          | Yes        |
| <b>ELECTRICAL / LIGHTING</b>          | Overhead lighting                  | Yes        |
|                                       | Duplex outlets                     | Yes        |
| <b>TECHNOLOGY</b>                     | No special requirements            | Yes        |
| <b>FURNITURE / EQUIPMENT</b>          | Benches                            | Yes        |
|                                       | Lockers                            | Yes        |
|                                       | Informational boards               | Yes        |
|                                       | Storage cabinets                   | Yes        |
| <b>DOORS &amp; WINDOWS</b>            | Door: solid door with no window    | Yes        |
|                                       | Windows: No windows                | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>         | Handicap accessible                | Yes        |
|                                       | Porcelain or ceramic tile flooring | Yes        |
|                                       | Hair dryers                        | Yes        |
|                                       | Vending machines                   | Yes        |

**Physical Education Space Descriptions:**
**Training / Rehab / Cardio Lab**

| <b>TRAINING / REHAB / CARDIO LAB</b>                    |                             |
|---|-----------------------------|
| <b>ACTIVITIES</b>                                       | <b>PERSONS</b>              |
| Injury rehabilitation                                   | Athletic Trainer            |
| Injury prevention                                       | Physical Education Teachers |
| Injury management                                       | Students                    |
| Treatments such as hydrotherapy, stretching, and taping | Coaches                     |

| <b>TRAINING / REHAB / CARDIO LAB</b> |   | <b>QTY</b> |
|--------------------------------------|---|------------|
| <b>MECHANICAL</b>                    | No special requirements                           | Yes        |
| <b>PLUMBING</b>                      | Sink  | Yes        |
|                                      | Floor drain                                       | Yes        |
|                                      | Portable whirlpool tubs                           | Yes        |
| <b>ELECTRICAL / LIGHTING</b>         | No special requirements                           | Yes        |
| <b>TECHNOLOGY</b>                    | Voice, video, and data ports                      | Yes        |
|                                      | Intercom  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>         | Trainer workstation                               | Yes        |
|                                      | Trainer tables                                    | Yes        |
|                                      | Lockable medicine cabinets                        | Yes        |
|                                      | Portable modesty screens/ceiling divider curtains | Yes        |
|                                      | Portable chairs                                   | Yes        |
| <b>DOORS &amp; WINDOWS</b>           | View panel  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>        | Ceramic, non-slip tile flooring                   | Yes        |

**Physical Education Space Descriptions:**
**PE Office / Conference**

| <b>PE OFFICE / CONFERENCE</b>                             |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b>             |
| Central place for coach and teacher administrative duties | Coaches                    |
| Storage of PE student portfolios                          | Athletic Trainer           |
| Secure storage for:                                       | Physical Education Teacher |
| video cameras   | Students                   |
| heart rate monitors                                       |                            |
| DVDs  |                            |
| music   |                            |
| other equipment   |                            |

| <b>PE OFFICE / CONFERENCE</b> |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex outlets at each station   | Yes        |
| <b>TECHNOLOGY</b>             | Intercom   | Yes        |
|                               | Voice and data ports   | Yes        |
|                               | Outlets for charging batteries of portable sound system and for ball pumps | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Moveable furniture [desk, chair, filing cabinet]                           | Yes        |
|                               | Dry board/ tack board  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no special requirements  | Yes        |
|                               | Window: ½ windows to adjacent corridors or gymnasium                       | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements  |            |

**Physical Education Space Descriptions:**  
**PE Staff Toilets / Showers**

| <b>PE STAFF TOILETS / SHOWERS</b>                 |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>                                 | <b>PERSONS</b>             |
| Changing clothes, showering, and personal hygiene | Coaches                    |
|   | Athletic Trainer           |
|   | Physical Education teacher |
|   | Game officials             |

| <b>PE STAFF TOILETS / SHOWERS</b> |  | <b>QTY</b> |
|-----------------------------------|--|------------|
| <b>MECHANICAL</b>                 | No special requirements                    |            |
| <b>PLUMBING</b>                   | Hot and cold water for sink & shower       | Yes        |
| <b>ELECTRICAL / LIGHTING</b>      | No special requirements                    |            |
| <b>TECHNOLOGY</b>                 | No special requirements                    |            |
| <b>FURNITURE / EQUIPMENT</b>      | Shower with adjacent private changing wall | Yes        |
|                                   | Floor drain                                | Yes        |
|                                   | Lockers                                    | Yes        |
|                                   | Mirror above counter                       | Yes        |
|                                   | Paper towel holder                         | Yes        |
|                                   | Soap dispenser                             | Yes        |
|                                   | Hand dryer                                 | Yes        |
| <b>DOORS &amp; WINDOWS</b>        | Door to Office                             | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>     | Adjacent to team locker rooms              | Yes        |
|                                   | Adjacent to gymnasium                      | Yes        |
|                                   | Connected to coach's office                | Yes        |

**Physical Education Space Descriptions:**
**Laundry**

| <b>LAUNDRY</b>                     |                |
|------------------------------------|----------------|
| <b>ACTIVITIES</b>                  | <b>PERSONS</b> |
| Wash uniforms and student clothing | Teachers       |
|                                    | Aides          |
|                                    | Staff          |

| <b>LAUNDRY</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements                |            |
| <b>PLUMBING</b>               | Hot and cold water for washer and sink | Yes        |
|                               | Drain for washer                       | Yes        |
|                               | Floor drain                            | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Appropriate power for washer and dryer | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>  | Commercial grade washer and dryer      | Yes        |
|                               | Base cabinets                          | Yes        |
|                               | Wall cabinets                          | Yes        |
|                               | Tables [folding]                       | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | No special requirements                |            |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements                |            |



**Physical Education Space Descriptions:**  
**Coaches Offices**

| <b>COACHES OFFICES</b>                                    |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b>             |
| Central place for coach and teacher administrative duties | Coaches                    |
| Storage of PE student portfolios                          | Athletic Trainer           |
| Secure storage for:                                       | Physical Education Teacher |
| video cameras   | Students                   |
| heart rate monitors                                       |                            |
| DVDs  |                            |
| music   |                            |
| other equipment   |                            |

| <b>COACHES OFFICES</b>        |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex outlets at each station   | Yes        |
| <b>TECHNOLOGY</b>             | Intercom   | Yes        |
|                               | Voice and data ports   | Yes        |
|                               | Outlets for charging batteries of portable sound system and for ball pumps | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Moveable furniture [desk, chair, filing cabinet]                           | Yes        |
|                               | Dry board/ tack board  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no special requirements  | Yes        |
|                               | Window: ½ windows to adjacent corridors or gymnasium                       | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements  |            |

**Physical Education Space Descriptions:**  
**Coaches Toilet / Shower**

| <b>COACHES TOILETS / SHOWERS</b>                  |                            |
|---|----------------------------|
| <b>ACTIVITIES</b>                                 | <b>PERSONS</b>             |
| Changing clothes, showering, and personal hygiene | Coaches                    |
|   | Athletic Trainer           |
|   | Physical Education teacher |
|   | Game officials             |

| <b>COACHES TOILETS / SHOWERS</b> |  | <b>QTY</b> |
|----------------------------------|--|------------|
| <b>MECHANICAL</b>                | No special requirements                    |            |
| <b>PLUMBING</b>                  | Hot and cold water for sink & shower       | Yes        |
| <b>ELECTRICAL / LIGHTING</b>     | No special requirements                    |            |
| <b>TECHNOLOGY</b>                | No special requirements                    |            |
| <b>FURNITURE / EQUIPMENT</b>     | Shower with adjacent private changing wall | Yes        |
|                                  | Floor drain                                | Yes        |
|                                  | Lockers                                    | Yes        |
|                                  | Mirror above counter                       | Yes        |
|                                  | Paper towel holder                         | Yes        |
|                                  | Soap dispenser                             | Yes        |
|                                  | Hand dryer                                 | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Door to Coach's Office                     | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Adjacent to team locker rooms              | Yes        |
|                                  | Adjacent to gymnasium                      | Yes        |
|                                  | Connected to coach's office                | Yes        |

**Physical Education Space Descriptions:**  
**Health Classroom**

| <b>HEALTH CLASSROOM</b>                       |                                    |
|---|------------------------------------|
| <b>ACTIVITIES</b>                             | <b>PERSONS</b>                     |
| Individual, small, and large group activities | Physical Education/ Health teacher |
| Storage of materials                          | Students                           |
| Project-based learning                        |                                    |
| Demonstrations                                |                                    |
| Computer-based instruction                    |                                    |

| <b>HEALTH CLASSROOM</b>      |  | <b>QTY</b> |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet air conditioning                                     | Yes        |
| <b>PLUMBING</b>              | Sink with hot and cold water                               | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall                     | Yes        |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability                                  | Yes        |
|                              | Abundant day lighting                                      | Yes        |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets | Yes        |
|                              | Teacher data port separate from student data ports         | Yes        |
|                              | Interactive whiteboard with integral computer projector    | Yes        |

**Physical Education Space Descriptions:**  
**Health Classroom**

| <b>HEALTH CLASSROOM</b>       |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Student work tables, 2 students each   | 18         |
|                               | Comfortable ergonomic student chairs that allow movement                           | 36         |
|                               | Countertop over base cabinets  | 4 LF       |
|                               | Overhead cabinets  | 4 LF       |
|                               | Magnetic marker board  | 16 LF      |
|                               | Bulletin board   | 24 LF      |
|                               | Shelving   | 24 LF      |
|                               | Locking storage cabinet  | 6 LF       |
|                               | All in One Computer Device   | 1          |
|                               | Mobile bookcases, 3' long  | 2          |
|                               | Retractable projection screen  | 1          |
|                               | Flexible or multiple display surfaces  | Yes        |
|                               | Adjustable, lockable, and mobile storage cabinets and shelving                     | Yes        |
|                               | Interactive whiteboard   | Yes        |
|                               | White boards   | Yes        |
|                               | Flexible furniture: can be used as individual desks or fit together to make tables | Yes        |
|                               | Tack boards and tack walls   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
|                               | Windows: with blinds   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No special requirements  |            |

**Physical Education Space Descriptions:**
**Concessions**

| <b>CONCESSIONS</b> |                |
|--------------------|----------------|
| <b>ACTIVITIES</b>  | <b>PERSONS</b> |
| Sales              | Volunteers     |
|                    | Students       |
|                    | Parents        |

| <b>CONCESSIONS</b>            |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Ventilation   | Yes        |
|                               | Heating and Cooling   | Yes        |
| <b>PLUMBING</b>               | Sinks   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Outlets for refrigerator, grill, crock pots                               | Yes        |
|                               | Duplex electrical outlets on each wall                                    | Yes        |
| <b>TECHNOLOGY</b>             | PA system from gymnasium  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Shelving  | Yes        |
|                               | Locked storage areas  | Yes        |
|                               | Cashier areas   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door  | Yes        |
|                               | Roll-up 1/2 door for serving area   | Yes        |
|                               | Concession window   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Good proximity to gymnasium and athletic events                           | Yes        |
|                               | Sufficient corridor area for groups of people to stand in line and mingle | Yes        |

**Physical Education Space Descriptions:**  
**Athletic Director's Storage**

| <b>ATHLETIC DIRECTOR'S STORAGE</b>                              |                |
|---|----------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b> |
| Storing equipment used in the physical education/athletic areas | Staff          |

| <b>ATHLETIC DIRECTOR'S STORAGE</b> |  | <b>QTY</b> |
|------------------------------------|--|------------|
| <b>MECHANICAL</b>                  | No special requirements  |            |
| <b>PLUMBING</b>                    | No special requirements  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>       | Duplex electrical outlets on each wall                           |            |
| <b>TECHNOLOGY</b>                  | No special requirements  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>       | Equipment storage  | Yes        |
|                                    | Heavy duty adjustable shelving                                   | Yes        |
|                                    | Layout to maximize storage of Physical Education equipment       | Yes        |
|                                    | Lockable storage area for athletic teams' equipment and uniforms | Yes        |
| <b>DOORS &amp; WINDOWS</b>         | Doors: oversized that opens into gym                             | Yes        |
|                                    | Windows: none  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>      | Secure/lockable  | Yes        |

**Physical Education Space Descriptions:**  
**Athletic Director's Office**

| <b>ATHLETIC DIRECTOR'S OFFICE</b> |                                    |
|-----------------------------------|------------------------------------|
| <b>ACTIVITIES</b>                 | <b>PERSONS</b>                     |
| Administration of Athletics       | Athletic Director                  |
|                                   | Athletic Trainer                   |
|                                   | Physical Education/ Health teacher |
|                                   | Coaches                            |
|                                   | Students                           |

| <b>ATHLETIC DIRECTOR'S OFFICE</b> |  | <b>QTY</b> |
|-----------------------------------|--|------------|
| <b>MECHANICAL</b>                 | No special requirements                                    |            |
| <b>PLUMBING</b>                   | No special requirements                                    |            |
| <b>ELECTRICAL / LIGHTING</b>      | Duplex electrical outlets on each wall                     | Yes        |
|                                   | Overhead lighting  | Yes        |
| <b>TECHNOLOGY</b>                 | Access to voice, video, data ports, and electrical outlets | Yes        |
| <b>FURNITURE / EQUIPMENT</b>      | Desk   | Yes        |
|                                   | Desk chair   | Yes        |
| <b>DOORS &amp; WINDOWS</b>        | Doors with windows   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>     | No special requirements                                    |            |



**Physical Education Space Descriptions:**
**Athletic Field Storage**

| <b>ATHLETIC FIELD STORAGE</b>   |                |
|---|----------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b> |
| Storing equipment used in the outdoor physical education/athletic areas | Staff          |

| <b>ATHLETIC FIELD STORAGE</b> |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | Floor drain  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                           |            |
| <b>TECHNOLOGY</b>             | No special requirements  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  |  | Yes        |
|                               | Equipment storage  | Yes        |
|                               | Heavy duty adjustable shelving                                   | Yes        |
|                               | Layout to maximize storage of Physical Education equipment       | Yes        |
|                               | Lockable storage area for athletic teams' equipment and uniforms | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Solid doors - either double without center bar or garage doors   | Yes        |
|                               | Windows: none  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Secure/lockable  | Yes        |

**Physical Education Space Descriptions:**  
**Public Restrooms**

| <b>PUBLIC RESTROOMS</b> |                |
|-------------------------|----------------|
| <b>ACTIVITIES</b>       | <b>PERSONS</b> |
| Personal hygiene        | Community      |

| <b>PUBLIC RESTROOMS</b>       |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements                      |            |
| <b>PLUMBING</b>               | Appropriate for public toilets and sinks     | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall       |            |
| <b>TECHNOLOGY</b>             | No special requirements                      | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Storage cabinet for restroom supplies        | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Solid exterior doors                         | Yes        |
|                               | Windows: none                                | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Secure/lockable when not in use for activity | Yes        |



## Schola

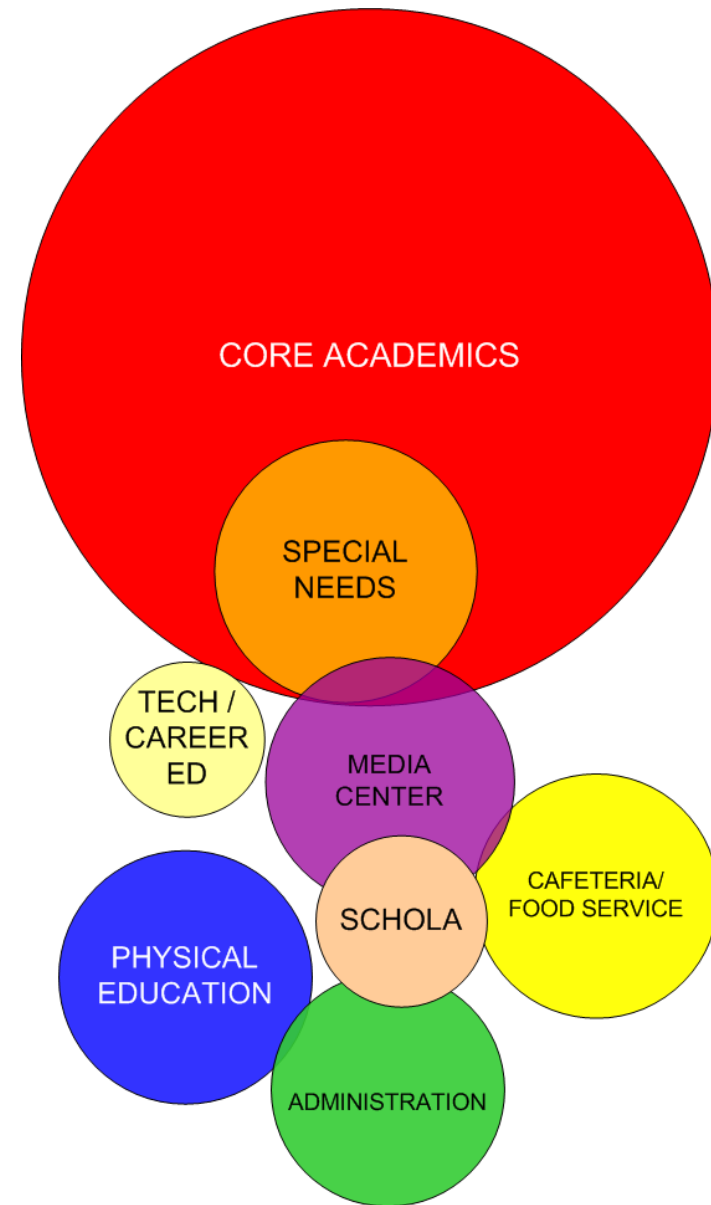
The schola is a multi-use space similar to a lecture hall with a tiered floor, fixed seating and tables. The schola should have an approximate capacity of 175, or enough capacity to seat the entire faculty and staff and be located between the cafeteria and media center. The schola should have state-of-the-art technology for multi-media presentations and other large group meetings to be utilized by students, teachers and the community.

## Schola Space Requirements

| Schola                  | Suggested |          |       |              |
|-------------------------|-----------|----------|-------|--------------|
|                         | TS        | Quantity | SF    | Total        |
| Schola [175 Seats]      |           | 1        | 3,000 | 3,000        |
| <b>Schola Sub-Total</b> |           |          |       | <b>3,000</b> |

## Schola Spatial Relationships

The schola should be accessible to the public and be adjacent to the welcome center.



The floor plan illustrates a comprehensive school layout. Key areas include:

- Academic Core:** Multiple classroom pods, resource rooms, and a student production center.
- Specialized Labs:** Science labs, CADD, Engineering, and a Media Center/Reading Room.
- Student Life & Support:** Cafeteria/Student Union, Kitchen, School Store, Staff Dining, and various student activity spaces like the Black Box Theatre and Stage.
- Physical Education & Recreation:** A large Gymnasium, Auxiliary Gym, and various PE facilities.
- Support Spaces:** Numerous restrooms, storage rooms, and a reception area.

A large pink area labeled **SCHOLA** is situated diagonally across the middle-right portion of the plan. Dashed arrows point to three locations for **ACCESS TO OUTSIDE**: near the Transportation/Construction area, near the Kitchen, and near the Reception area.

## Schola Space Descriptions

### Schola

| SCHOLA                   |           |
|--------------------------|-----------|
| ACTIVITIES               | PERSONS   |
| Presentations            | Students  |
| Debates                  | Teachers  |
| Church                   | Community |
| Senior Meetings          | Staff     |
| Testing                  |           |
| Guest Speakers           |           |
| Faculty Meetings         |           |
| Lecture                  |           |
| Professional Development |           |
| Community Meetings       |           |

| SCHOLA                        |  | QTY |
|-------------------------------|--|-----|
| <b>MECHANICAL</b>             | No Special Requirements  |     |
| <b>PLUMBING</b>               | No Special Requirements  |     |
| <b>ELECTRICAL / LIGHTING</b>  | Dimmable lighting  | Yes |
|                               | Microphones with sound system  | Yes |
|                               | Data ports   | Yes |
|                               | Electrical outlets   | Yes |
| <b>TECHNOLOGY</b>             | Ceiling mounted projector  | Yes |
|                               | Retractable projection Screen  | Yes |
|                               | Wireless laptop access   | Yes |
|                               | Interactive whiteboard   | Yes |
| <b>FURNITURE / EQUIPMENT</b>  | Fixed seating  | Yes |
|                               | Narrow lecture style table with built-in raceways and modesty panels | Yes |
|                               | Ergonomic chairs   | Yes |
|                               | Podium   | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel   | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Mobile walls   | Yes |
|                               | Convention Style   | Yes |
|                               | Tiered   | Yes |





## Media Center

The Media Center will serve as the information hub of the school, providing access to materials within and outside the physical facility. An important aspect of this area is the continued use of printed material as well as electronic sources of information.

All curricular areas of the school will share the Media Center instructional technologies, which include computers, audio, database access, and Internet information technologies. The Media Center is a technology-intensive environment, with computer information stations located throughout the Reading/Learning/Circulation area.

The Media Center Program Area is the program containing spaces for library and technology services. This includes spaces for a reading room and circulation, a media specialist's office, storage, and a workroom. It also includes separate spaces for the technology control center and student instruction.

While there will be a central Media Center, each Learning Community will also contain a Student Production Center.

The Media Center should be utilized by all students, staff, teachers, and community members. Therefore, a centrally located Media Center with public access would be ideal.

The Media Center will consist of:

- Reading Room/Circulation/ Instructional Space
- Reference Center
- Computer Lab
- Media Specialist Office
- Workroom/Storage
- Telecommunications Room
- Document Storage
- Internal unisex restroom
- Student production center
- Distance learning lab

The Media Center maintains a high profile in the life of the school and is an active participant.

An emphasis is placed on the Media Center providing experiences regarding the following opportunities for students:

- Identify, evaluate, and communicate information
- Exercise responsibility when using materials, information, and technology
- Maintain the highest standards of scholarship
- Develop the habits of confident, skillful, and discerning readers

Students are expected to become self-directed learners and feel comfortable using the Media Center for any field of inquiry.

The Media Center will serve students in grades 9-12. Its resources are available to all students in an atmosphere that is inviting, comfortable, and vibrant.

The Media Center should have flexible work and social settings for multiple activities that take place simultaneously. The instructional and meeting rooms should be able to be used without impacting the reading room and other spaces. The Media Center also provides spaces for reflection.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.



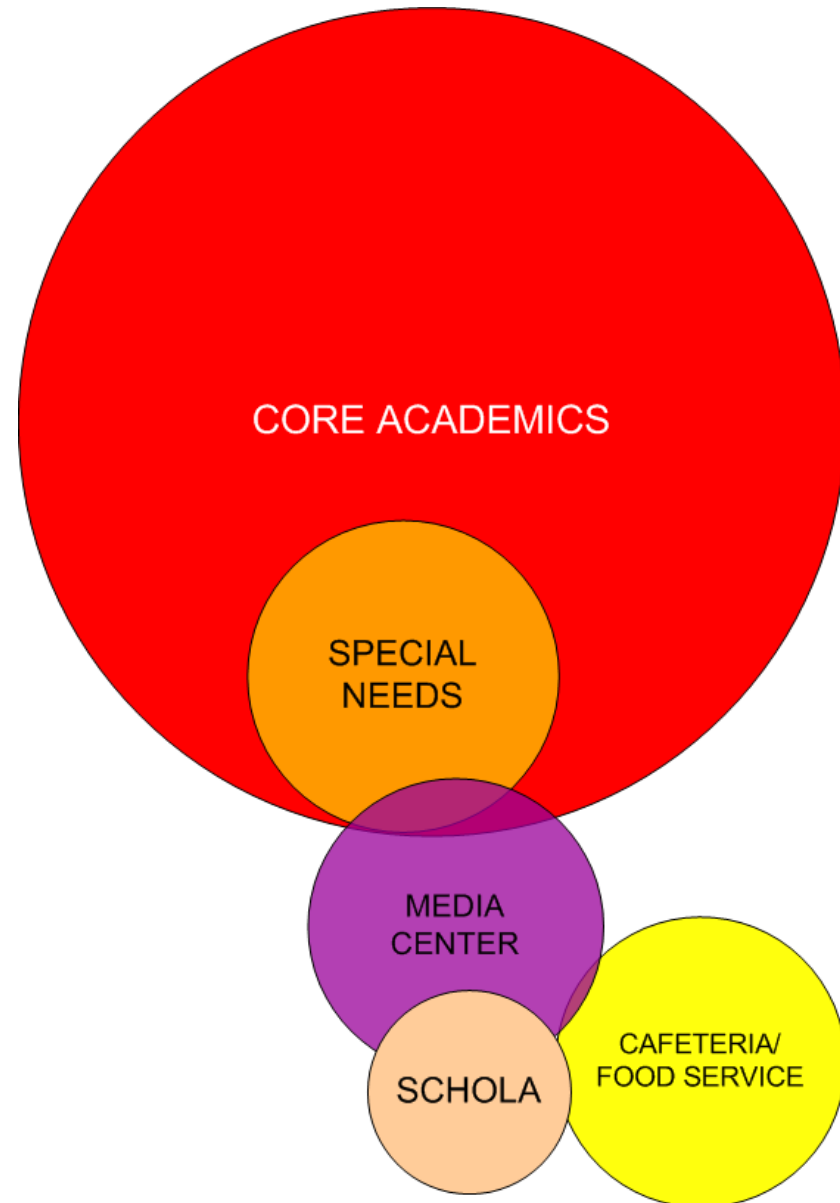
## Media Center Space Requirements

| Media Center                     | Suggested                  |          |       |              |
|----------------------------------|----------------------------|----------|-------|--------------|
|                                  | TS                         | Quantity | SF    | Total        |
| Reading Room/Circulation         |                            | 1        | 4,000 | 4,000        |
| Student Production Centers       | In Each Learning Community |          |       |              |
| Media Specialist Office          |                            | 1        | 150   | 150          |
| Workroom/Storage                 |                            | 1        | 400   | 400          |
| Telecommunications Room          |                            | 1        | 300   | 300          |
| Hub Rooms, distributed thru Bldg |                            | 4        | 25    | 100          |
| Project Room                     |                            | 3        | 500   | 1,500        |
| Restroom                         |                            | 1        | 50    | 50           |
| <b>Media Center Sub-Total</b>    |                            |          |       | <b>6,500</b> |

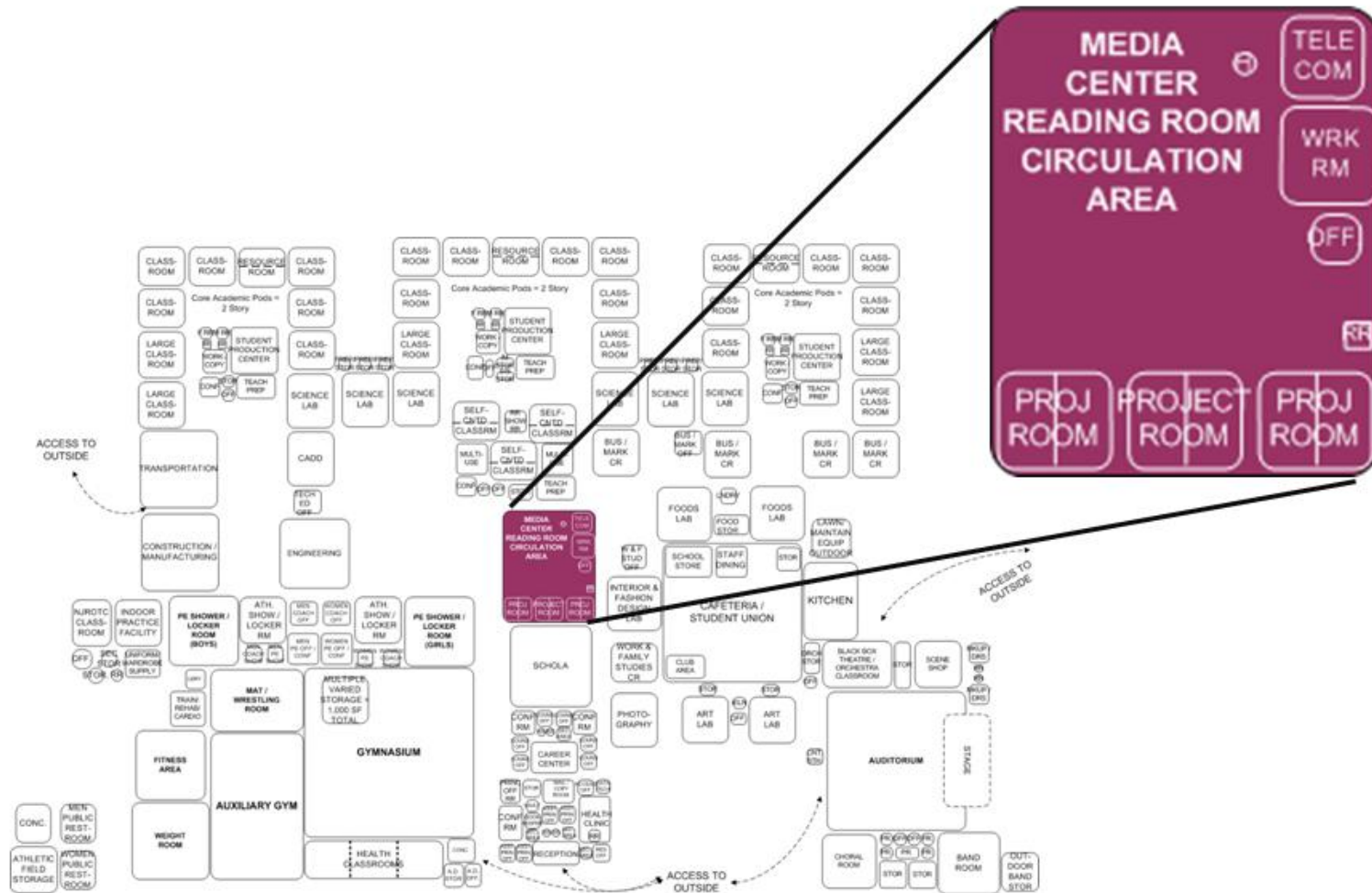
\* 6 Student Production Centers. One in each Learning Community

## Media Center Spatial Relationships

Media center spaces will be shared by each learning community. In addition to the traditional media center spaces, each learning community will also house the Student Production Centers. Members of the community will also use the media center before, after, and possibly during school hours. For this reason, the media center should have access to the outside, a separate secured entry, and should be located near the Welcome Center. The pages that follow describe in more detail each program area space listed in the table below.



## Media Center Illustration



## Media Center Space Descriptions

### Reading Room / Circulation

| READING ROOM / CIRCULATION              |  |
|---|--|
| ACTIVITIES                              | PERSONS                                  |
| Reading                                 | Students                                 |
| Circulation of materials and resources  | Individual students for research         |
| Whole group and small group instruction | Media specialist                         |
| Provide meeting areas                   | Community patrons for after school hours |
| Research                                | Volunteers                               |
| Processing new media                    | Teachers                                 |
|   | Technology Information Specialist        |

| READING ROOM / CIRCULATION   |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | No special requirements  |     |
| <b>PLUMBING</b>              | No special requirements  |     |
| <b>ELECTRICAL / LIGHTING</b> | Multiple duplex electrical outlets on each wall                                | Yes |
|                              | Full spectrum lighting   | Yes |
|                              | Ability to control specific lighting areas; dimmable                           | Yes |
|                              | Book theft detector  | Yes |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port  | Yes |
|                              | Video and data ports   | Yes |
|                              | Quad outlet adjacent to each data port   | Yes |
|                              | Wireless access points throughout school                                       | Yes |
|                              | Wireless laptops with carts for battery recharging                             | Yes |
|                              | Electronic surveillance system in every area/room                              | Yes |
|                              | Interactive whiteboards, computer projection opportunities throughout the room | Yes |



**Media Center Space Descriptions**
**Reading Room / Circulation**

| <b>READING ROOM / CIRCULATION</b> |   | <b>QTY</b> |
|-----------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>      | Casework to include:<br>- Circulation desk and base cabinets<br>- Periodical shelving<br>- Bookshelves, some portable | Yes        |
|                                   | Portable, lightweight 4-person tables with chairs   | Yes        |
|                                   | Soft seating for recreational reading   | 20         |
|                                   | Computer tables with chairs   | Yes        |
|                                   | Clock   | Yes        |
|                                   | Copier / printer (multi-function device)  | 1          |
|                                   | Printers and printer tables   | Yes        |
|                                   | Networked computers with access to programs and online-card catalog   | Yes        |
|                                   | Computer projector and mounted screen   | 2          |
|                                   |   |            |
| <b>DOORS &amp; WINDOWS</b>        | Door: double doors, large view panel with built in book drop  | Yes        |
|                                   | Windows: operable, with blinds to allow controlled natural lighting   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>     | Controlled natural light  | Yes        |
|                                   | Ceiling height proportionate to room dimensions (1.5 story)   | Yes        |
|                                   | Open flow for traffic in reference/ professional/periodicals area   | Yes        |
|                                   | Auditory privacy  | Yes        |
|                                   | Provide method to darken room for AV presentations  | Yes        |
|                                   | Access to Library/Media Center during/ after school hours while maintaining security in the remainder of the school   | Yes        |
|                                   | Carpeted flooring   | Yes        |
|                                   | Magnetic marker boards  | Yes        |
|                                   | Passive and active security   | Yes        |
|                                   | Wireless, portable microphone to use when teaching  | Yes        |
|                                   | Laptop charging stations  | Yes        |



## Media Center Space Descriptions

### Media Specialist Office

| MEDIA SPECIALIST OFFICE  |                           |
|--|---------------------------|
| ACTIVITIES   | PERSONS                   |
| Administrative work  | Library/ Media Specialist |
| Scheduling   |                           |
| Minor repairs  |                           |
| Processing new books   |                           |
| Materials – ordering   |                           |
| Preliminary website search for curricular match – classroom presentation and bookmarking |                           |

| MEDIA SPECIALIST OFFICE       |  | QTY |
|-------------------------------|--|-----|
| <b>MECHANICAL</b>             | No special requirements  |     |
| <b>PLUMBING</b>               | No special requirements  |     |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets  |     |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port  | Yes |
|                               | Video and data ports   | Yes |
|                               | Quad outlet adjacent to each data port   | Yes |
|                               | Desktop and laptop   | Yes |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- Counter top with base and wall cabinets<br>- File cabinets<br>- Bookcase | Yes |
|                               | Desk and chair   | 2   |
|                               | Networked computer   | 2   |
|                               | Printer  | 1   |
|                               | Magnetic marker board  | Yes |
|                               | Small tack board   | Yes |
|                               |  |     |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes |
|                               | Windows: ½ glass wall looking into Reading Stacks and Circulation                                  | Yes |
|                               | Clear visibility of Library/ Media Center  | Yes |
|                               | Operable blinds  | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Auditory privacy   | Yes |
|                               | Carpeted flooring  | Yes |
|                               | Adjacent to Workroom/Storage & Reading Room  | Yes |

## Media Center Space Descriptions

### Workroom / Storage

| WORKROOM / STORAGE          |                          |
|-----------------------------|--------------------------|
| ACTIVITIES                  | PERSONS                  |
| Preparing for presentations | Library/Media Specialist |
| Processing new media        | Students                 |
| Repair book bindings        | Teachers                 |
|                             | Other staff              |
|                             | Community                |

| WORKROOM / STORAGE            |  | QTY |
|-------------------------------|--|-----|
| <b>MECHANICAL</b>             | No special requirements  |     |
| <b>PLUMBING</b>               | No special requirements  |     |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes |
|                               | Electrical outlets with building surge protectors as needed                                    | Yes |
|                               | Dedicated circuits with grounds  | Yes |
|                               | Dimmer for all lights  | Yes |
| <b>TECHNOLOGY</b>             | Telephone intercom/voicemail port  | Yes |
|                               | Video and data ports   | Yes |
|                               | Quad outlet adjacent to each data port   | Yes |
|                               | Wireless network equipment   | Yes |
|                               | Wireless laptops with room for 1 cart for battery recharging                                   | Yes |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- 4 tall storage cabinets with shelving, drawers, and lockable devices | Yes |
|                               | Equipment racks  | Yes |
|                               | Tables, chairs, and student work desks   | Yes |
|                               | Networked computers  | Yes |
|                               | Printer and printer tables   | Yes |
|                               | Portable video conferencing equipment  | Yes |
|                               | Portable video production equipment  | Yes |
|                               | Scanner  | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes |
|                               | Windows: ½ glass wall looking into Reading Stacks and Circulation                              | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Vinyl flooring   | Yes |

**Media Center Space Descriptions**
**Telecommunications Room**

| <b>TELECOMMUNICATIONS ROOM</b> |                                |
|--------------------------------|--------------------------------|
| <b>ACTIVITIES</b>              | <b>PERSONS</b>                 |
| Security                       | Media Specialist               |
| Networking of computers        | Technology Technician          |
| Storage of licensed technology | Curriculum Resource Specialist |
| Recharging laptops             | Other staff                    |

| <b>TELECOMMUNICATIONS ROOM</b> |   | <b>QTY</b> |
|--------------------------------|---|------------|
| <b>MECHANICAL</b>              | HVAC to meet requirements of heat producing equipment       | Yes        |
| <b>PLUMBING</b>                | No special requirements                                     |            |
| <b>ELECTRICAL / LIGHTING</b>   | Duplex electrical outlets on each wall                      | Yes        |
|                                | Electrical outlets with building surge protectors as needed | Yes        |
|                                | Dedicated circuits with grounds                             | Yes        |
|                                | Special electrical requirements and protection              | Yes        |
| <b>TECHNOLOGY</b>              | Telephone/intercom/voicemail port                           | Yes        |
|                                | Video and data ports  | Yes        |
|                                | Quad outlet adjacent to each data port                      | Yes        |
|                                | Wireless network equipment                                  | Yes        |
|                                | Video distribution system                                   | Yes        |
|                                | See district technology specifications                      | Yes        |
| <b>FURNITURE / EQUIPMENT</b>   | Equipment racks   | Yes        |
|                                | Shelving for video/cable system                             | Yes        |
|                                | Work tables   | Yes        |
| <b>DOORS &amp; WINDOWS</b>     | Doors: lockable   | Yes        |
|                                | Windows: none   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>  | Tile flooring   | Yes        |
|                                | Optional special requirements for technology consultants    | Yes        |

## Media Center Space Descriptions

### Hub Rooms

#### HUB ROOMS, DISTRIBUTED THRU BLDG

| ACTIVITIES          | PERSONS              |
|---------------------|----------------------|
| File server storage | Administration       |
| WAN equipment       | Technology personnel |
| Network equipment   |                      |
| Telephony           |                      |

| HUB ROOMS, DISTRIBUTED THRU BLDG |                           | QTY |
|----------------------------------|---------------------------|-----|
| <b>MECHANICAL</b>                | Climate controlled        | Yes |
| <b>PLUMBING</b>                  | No special requirements   |     |
| <b>ELECTRICAL / LIGHTING</b>     | Quad outlets on each wall | Yes |
| <b>TECHNOLOGY</b>                | Data ports                | Yes |
|                                  | Wireless access points    | Yes |
|                                  |                           |     |
| <b>FURNITURE / EQUIPMENT</b>     | Racks                     | Yes |
|                                  | Servers                   | Yes |
| <b>DOORS &amp; WINDOWS</b>       | Lockable door             | Yes |
|                                  | No windows                | Yes |
| <b>SPECIAL CONSIDERATIONS</b>    | No sunlight               | Yes |

**Media Center Space Descriptions**
**Project Room**

| <b>PROJECT ROOM</b>                   |                  |
|---------------------------------------|------------------|
| <b>ACTIVITIES</b>                     | <b>PERSONS</b>   |
| Meeting space for school community    | Media Specialist |
| Quiet reading/study area for students | Media Assistant  |
|                                       | Staff            |
|                                       | Students         |
|                                       | Teachers         |

| <b>PROJECT ROOM</b>           |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | No special requirements   |            |
| <b>PLUMBING</b>               | Hot and cold water for sink   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Multiple duplex electrical outlets on each wall                         | Yes        |
|                               | Quad outlet at each data port   | 1          |
|                               | Overhead lighting [dimmable]  | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port                                       | Yes        |
|                               | Video and data ports  | Yes        |
|                               | Quad outlet adjacent to each data port                                  | Yes        |
|                               | White board screen on whole wall  | Yes        |
|                               | Ceiling-mounted computer projector with retractable screen and computer | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Counter top with sink, base, and wall cabinets                          | Yes        |
|                               | Modular conference table  | 1          |
|                               | Conference chairs   | 1/25 SF    |
|                               | Credenza  | Yes        |
|                               | Magnetic marker board   | Yes        |
|                               | Retractable projection screen   | 1          |
|                               | Tack board  | Yes        |
|                               | Clock   | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: large view panel with optional sidelight                          | Yes        |
|                               | Windows: to hallway with mini-blinds                                    | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Carpeted flooring   | Yes        |

**Media Center Space Descriptions**
**Restroom**

| <b>RESTROOM</b>   |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Personal hygiene  | Teachers       |
|                   | Community      |
|                   | Staff          |
|                   | Administrators |

| <b>RESTROOM</b>               |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Exhaust fan                                   | Yes        |
| <b>PLUMBING</b>               | Sink with hot and cold water                  | 1          |
|                               | Toilet (male / female)                        | 1          |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall        | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                       |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- cabinet with mirror | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no view panel                           | Yes        |
|                               | Windows: none                                 | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Hands-free dispensers                         | Yes        |



*Brooklyn Park MS (MD) Grimm and Parker Architects*

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

## **Welcome Center / Administration**

Administration will provide the organizational and instructional leadership needed to create an atmosphere that is conducive for teaching and learning. This area includes the centralized and decentralized administrative functions of the Learning Community and student support services (counselors, support staff, etc.).

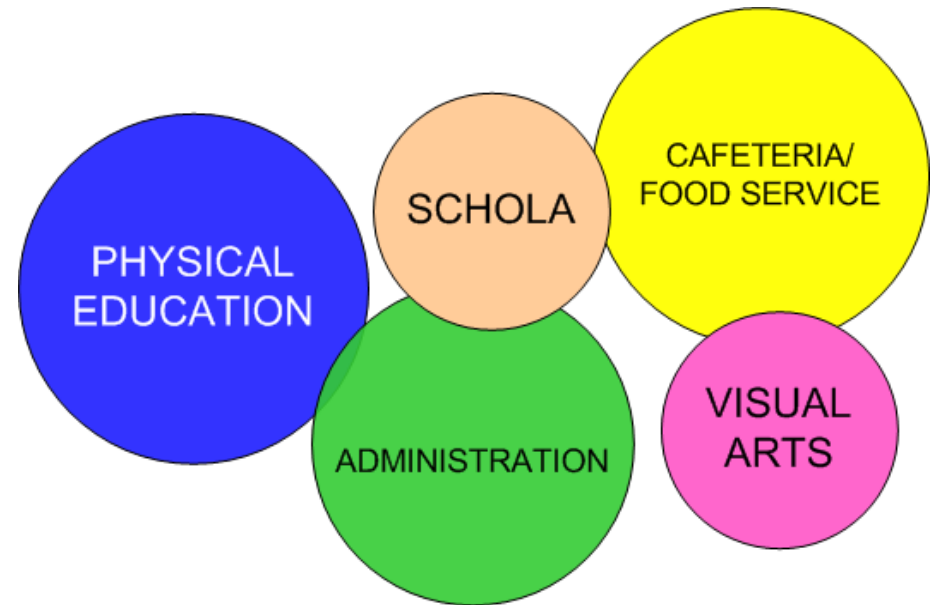


**Welcome Center / Administration Space Requirements**

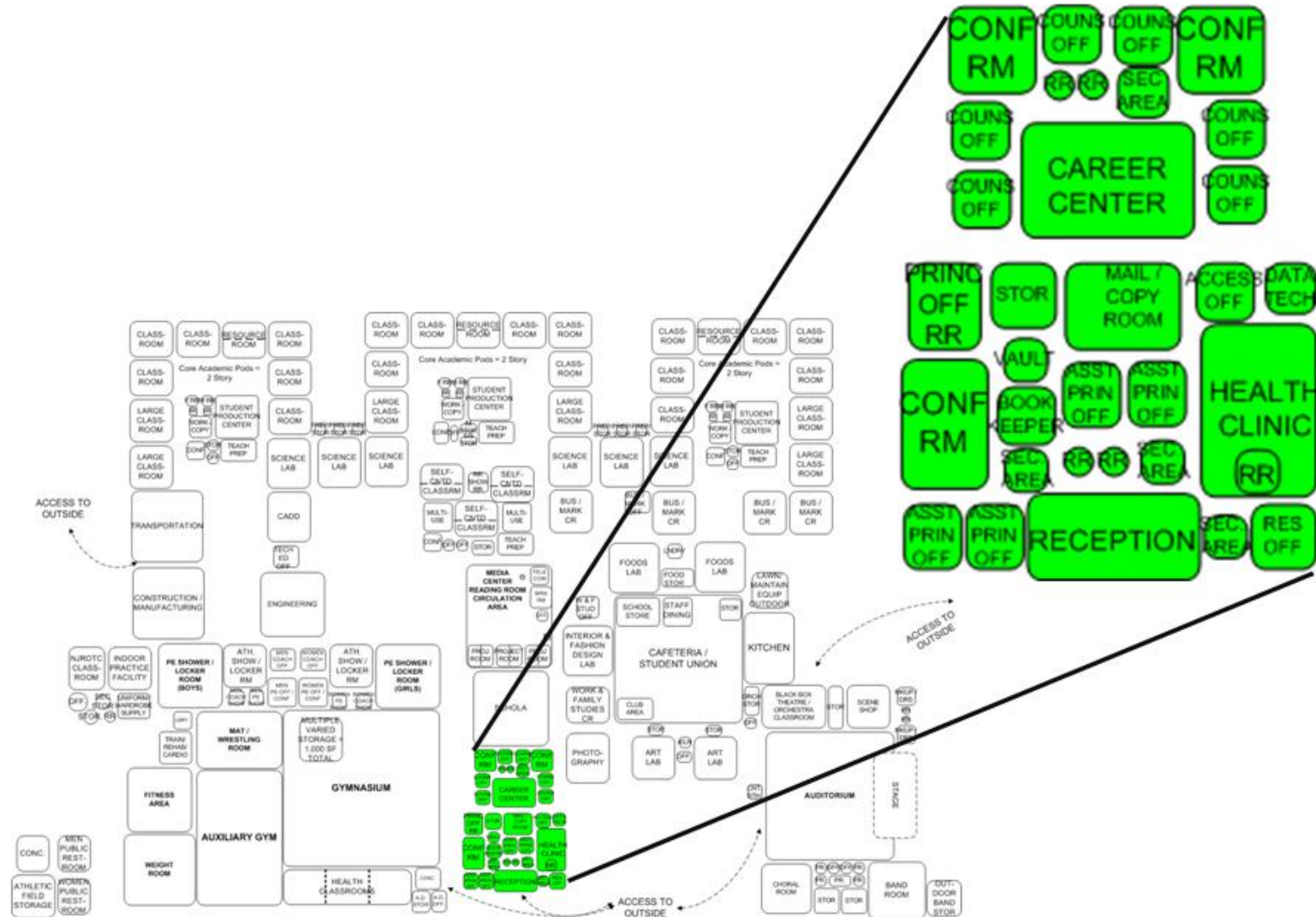
| <b>Welcome Center / Administration</b>             |           | <b>Suggested</b> |           |              |
|--|-----------|------------------|-----------|--------------|
| <b>Administration</b>                              | <b>TS</b> | <b>Quantity</b>  | <b>SF</b> | <b>Total</b> |
| Reception  |           | 1                | 600       | 600          |
| Secretarial Area                                   |           | 3                | 80        | 240          |
| Principal's Office/Rest Room                       |           | 1                | 225       | 225          |
| Assistant Principal's Office                       |           | 4                | 125       | 500          |
| Conference Room                                    |           | 1                | 400       | 400          |
| Mail/Copy Room                                     |           | 1                | 300       | 300          |
| Storage  |           | 1                | 150       | 150          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| Resource Officer                                   |           | 1                | 150       | 150          |
| Bookkeeper   |           | 1                | 120       | 120          |
| Data Technician                                    |           | 1                | 100       | 100          |
| Access Office                                      |           | 1                | 120       | 120          |
| Health Clinic                                      |           | 1                | 700       | 700          |
| Vault  |           | 1                | 80        | 80           |
| <b>Guidance</b>                                    |           |                  |           |              |
| Career Center                                      |           | 1                | 700       | 700          |
| Counselors' Offices                                |           | 6                | 120       | 720          |
| Secretarial Area                                   |           | 1                | 100       | 100          |
| Conference Room                                    |           | 2                | 250       | 500          |
| Staff Restrooms                                    |           | 2                | 50        | 100          |
| <b>Decentralized [See Core Academic]</b>           |           |                  |           |              |
| School Improvement Specialist Storage [In One Pod] |           | 1                | 150       | 150          |
| Offices for Itinerant and Others                   |           | 6                | 150       | See Core     |
| <b>Total</b>                                       |           |                  |           | <b>6,055</b> |

### Welcome Center / Administration Spatial Relationships

The Welcome Center should be located near the front and center of the building. There should be some decentralized administration spaces near the Learning Community's entrance. Administration should be accessible to the community and adjacent to the Core Academic Program Area. The Welcome Center should contain the main office space off the front entrance. Guidance offices should be in the rear of the Welcome Center to maintain a connection with the Learning Communities.



## Welcome Center / Administration Illustration



## Welcome Center / Administration Space Descriptions

### Reception

| RECEPTION AREA  |              |
|---|--------------|
| ACTIVITIES  | PERSONS      |
| Greeting and welcoming people and directing them to the proper location or person | School staff |
| Waiting area for visitors, students, and staff members                            | Parents      |
|   | Students     |

| RECEPTION AREA        |  | QTY |
|-----------------------|--|-----|
| MECHANICAL            | No special requirements                      |     |
| PLUMBING              | No special requirements                      |     |
| ELECTRICAL / LIGHTING | Duplex electrical outlets on each wall       | Yes |
| TECHNOLOGY            | Telephone/voicemail port at each workstation | Yes |
|                       | Video and data ports for each workstation    | Yes |
|                       | Quad outlet for each data port               | Yes |
|                       | Mounted television monitor                   | Yes |
|                       | Intercom                                     | Yes |

## Welcome Center / Administration Space Descriptions

### Reception

| RECEPTION AREA         |  | QTY |
|------------------------|--|-----|
| FURNITURE / EQUIPMENT  | Student and visitor seating  | Yes |
|                        | Locking file cabinets  | Yes |
|                        | Ergonomic task chairs  | Yes |
|                        | Networked computers  | Yes |
|                        | Information board  | Yes |
|                        | Message board  | Yes |
|                        | Bulletin board   | Yes |
|                        | Magnetic marker board  | Yes |
|                        | Clock  | Yes |
|                        | Reception desk   | Yes |
| DOORS & WINDOWS        | Door: large view panel   | Yes |
|                        | Windows: operable with blinds to allow controlled natural lighting | Yes |
|                        | Glass walls to work room and front hall                            | Yes |
|                        | Visual ability to view persons entering and leaving building       | Yes |
| SPECIAL CONSIDERATIONS | Bright, yet soft lighting  | Yes |
|                        | Inviting to visitors   | Yes |
|                        | Colorful   | Yes |
|                        | Secure entry for visitors [light and buzzer indicator alerts]      | Yes |
|                        | Multiple Parent and Student entrances                              | Yes |
|                        | Vinyl tile flooring  | Yes |
|                        | Kiosk  | Yes |

## Welcome Center / Administration Space Descriptions

### Secretarial Area

| SECRETARIAL AREA  |              |
|---|--------------|
| ACTIVITIES  | PERSONS      |
| Greeting people and directing them to the proper location or person | School staff |
| Assisting in administrative duties                                  |              |

| SECRETARIAL AREA       |   | QTY |
|------------------------|---|-----|
| MECHANICAL             | No special requirements                       |     |
| PLUMBING               | No special requirements                       |     |
| ELECTRICAL / LIGHTING  | Duplex electrical outlets                     | Yes |
| TECHNOLOGY             | Telephone/voicemail port at each workstation  | Yes |
|                        | Video and data ports for each workstation     | Yes |
|                        | Quad outlet for each data port                | Yes |
|                        | Mounted television monitor                    | Yes |
|                        | Entryway buzzer                               | Yes |
| FURNITURE / EQUIPMENT  | Desk/computer workstation                     | Yes |
|                        | Locking file cabinets                         | Yes |
|                        | Ergonomic task chairs                         | Yes |
|                        | Bulletin board                                | Yes |
|                        | Magnetic marker board                         | Yes |
|                        | Message board                                 | Yes |
|                        | Networked computers                           | Yes |
|                        | Printer/copier                                | Yes |
|                        | Paper shredder                                | Yes |
|                        | Fax machine                                   | Yes |
|                        | Clock   | Yes |
| DOORS & WINDOWS        | Windows: operable with blinds                 | Yes |
| SPECIAL CONSIDERATIONS | Bright, yet soft lighting                     | Yes |
|                        | Inviting to visitors                          | Yes |
|                        | Colorful                                      | Yes |
|                        | Secure entry for visitors                     | Yes |
|                        | Enclose one secretarial area                  | Yes |
|                        | Carpeted flooring                             | Yes |
|                        | Additional storage for secretarial/bookkeeper | Yes |

## Welcome Center / Administration Space Descriptions

### Principal's Office / Restroom

| PRINCIPAL'S OFFICE RESTROOM         |                                   |
|-------------------------------------|-----------------------------------|
| ACTIVITIES                          | PERSONS                           |
| Conferences with staff and visitors | Principal                         |
| Telephone calls                     | Small group meetings [4-6 people] |
| Administrative activities           |                                   |
| Planning                            |                                   |
| Computer Work                       |                                   |

| PRINCIPAL'S OFFICE RESTROOM   |   | QTY    |
|-------------------------------|---|--------|
| <b>MECHANICAL</b>             | No special requirements   |        |
| <b>PLUMBING</b>               | Small restroom adjacent to office                                       | 1      |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                  | Yes    |
|                               | Quad outlet at each data port   | 1      |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port                                       | Yes    |
|                               | Video and data ports [walls and floors]                                 | Yes    |
|                               | Quad outlet adjacent to each data port                                  | Yes    |
|                               | Security monitor  | Yes    |
|                               | Telephone   | Yes    |
|                               | Intercom  | Yes    |
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets   | Yes    |
|                               | Flexible surfaces   | Yes    |
|                               | Legal size file lateral drawer  | Yes    |
|                               | Desk with return  | 1      |
|                               | Desk chair  | 1      |
|                               | Guest chairs  | 4      |
|                               | Lamps   | Yes    |
|                               | Bookshelves   | 18LF   |
|                               | Marker board  | 4LF    |
|                               | Laptop computer   | 1      |
|                               | Printer   | 1      |
|                               | Locking file cabinet, 4 drawer  | 1 to 2 |
|                               | Bulletin board  | 4LF    |
|                               | Clock   | 1      |
| <b>DOORS &amp; WINDOWS</b>    | Door: narrow or view panel [two entrances]                              | Yes    |
|                               | Windows: operable, with blinds to allow for controlled natural lighting | Yes    |
| <b>SPECIAL CONSIDERATIONS</b> | Second exit for security  | Yes    |
|                               | Carpeted flooring   | Yes    |
|                               | Access to conference room   | Yes    |



## Welcome Center / Administration Space Descriptions

### Assistant Principal's Office

| ASSISTANT PRINCIPAL'S OFFICE        |                     |
|-------------------------------------|---------------------|
| ACTIVITIES                          | PERSONS             |
| Conferences with staff and visitors | Assistant Principal |
| Telephone calls                     |                     |
| Administrative activities           |                     |
| Planning                            |                     |
| Computer Work                       |                     |

| ASSISTANT PRINCIPAL'S OFFICE  |  | QTY    |
|-------------------------------|--|--------|
| <b>MECHANICAL</b>             | Air conditioning   | Yes    |
| <b>PLUMBING</b>               | No special requirements  |        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                 | Yes    |
|                               | Quad outlet at each data port  | 1      |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port                                      | Yes    |
|                               | Video and data ports   | Yes    |
|                               | Quad outlet adjacent to each data port                                 | Yes    |
|                               | Telephone  | 1      |
|                               | Intercom   | Yes    |
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets  | Yes    |
|                               | Flexible surfaces  | Yes    |
|                               | Legal size file lateral drawer   | Yes    |
|                               | Desk with return   | 1      |
|                               | Desk chair   | 1      |
|                               | Guest chairs   | 4      |
|                               | Lamps  | Yes    |
|                               | Bookshelves  | 18LF   |
|                               | Marker board   | 4LF    |
|                               | Laptop computer  | 1      |
|                               | Printer  | 1      |
|                               | Locking file cabinet, 4 drawer   | 1 to 2 |
|                               | Bulletin board   | 4LF    |
|                               | Clock  | 1      |
| <b>DOORS &amp; WINDOWS</b>    | Door: narrow or view panel [two entrances]                             | Yes    |
|                               | Door: to the conference room   | Yes    |
|                               | Windows: operable with blinds to allow for controlled natural lighting | Yes    |
| <b>SPECIAL CONSIDERATIONS</b> | Carpeted flooring  | Yes    |

**Welcome Center / Administration Space Descriptions**
**Conference Room**

| <b>CONFERENCE ROOM</b>           |                |
|----------------------------------|----------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b> |
| Small group meetings/conferences | Administrators |
|                                  | Counselors     |
|                                  | Staff          |
|                                  | Parents        |
|                                  | Students       |
|                                  | Visitors       |

| <b>CONFERENCE ROOM</b>        |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Air conditioning  | Yes        |
| <b>PLUMBING</b>               | No special requirements   |            |
| <b>ELECTRICAL / LIGHTING</b>  | Multiple duplex electrical outlets on each wall                         | Yes        |
|                               | Quad outlet at each data port   | 1          |
|                               | Overhead lighting [dimmable]  | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port                                       | Yes        |
|                               | Video and data ports  | Yes        |
|                               | Television  | Yes        |
|                               | Quad outlet adjacent to each data port                                  | Yes        |
|                               | White board screen on whole wall  | Yes        |
|                               | Ceiling-mounted computer projector with retractable screen and computer | 1          |
| <b>FURNITURE / EQUIPMENT</b>  | Counter top with sink, base, and wall cabinets                          | Yes        |
|                               | Modular conference table  | 1          |
|                               | Conference chairs   | 1/25 SF    |
|                               | Credenza  | Yes        |
|                               | Magnetic marker board   | Yes        |
|                               | Retractable projection screen   | 1          |
|                               | Tack board  | Yes        |
|                               | Bulletin board  | 4 LF       |
|                               | Bookshelves   | Yes        |
|                               | Clock   | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: large view panel with optional sidelight                          | Yes        |
|                               | Windows: to hallway with mini-blinds                                    | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Consideration for sound transfer  | Yes        |
|                               | Carpeted flooring   | Yes        |

## Welcome Center / Administration Space Descriptions

### Mail / Copy Room

| MAIL/COPY ROOM                         |         |
|--|---------|
| ACTIVITIES                             | PERSONS |
| Copying                                | Staff   |
| Collating                              |         |
| Preparing communications for mailing   |         |
| Laminating, book making, poster making |         |
| General office work                    |         |
| Delivery of general mail               |         |
| Storage                                |         |

| MAIL/COPY ROOM               |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Air conditioning                       | Yes |
| <b>PLUMBING</b>              | No special requirements                |     |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall | Yes |
|                              | Quad outlet at each data port          | 1   |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port      | Yes |
|                              | Video and data ports                   | Yes |
|                              | Quad outlet adjacent to each data port | Yes |
|                              | Telephone                              | 1   |
|                              | Intercom                               | Yes |

**Welcome Center / Administration Space Descriptions**  
**Mail / Copy Room**

| <b>MAIL/COPY ROOM</b>         |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Work tables  | 2          |
|                               | Counter over base cabinets                         | 16 LF      |
|                               | Electric paper cutter                              | Yes        |
|                               | Overhead cabinets                                  | 8 LF       |
|                               | Chairs   | 2          |
|                               | Computer workstations                              | 1          |
|                               | Wall shelving                                      | 8 LF       |
|                               | Lockable storage cabinet                           | Yes        |
|                               | Staff mailboxes                                    | Yes        |
|                               | Fax machine  | 1          |
|                               | Copier w/Sorter                                    | 1          |
|                               | B&W and color printer                              | 1          |
|                               | Scanner  | 1          |
|                               | Laminating machine                                 | 1          |
|                               | Paper storage, shredder, and cutter                | yes        |
|                               | Marker board                                       | 8 LF       |
|                               | Tack board   | Yes        |
|                               | Bookshelves  | Yes        |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: large view panel with optional sidelight     | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Consideration for sound transfer                   | Yes        |
|                               | Separate entrance for staff to have mailbox access | Yes        |
|                               | Multiple access points                             | Yes        |
|                               | Tile flooring                                      | Yes        |

**Welcome Center / Administration Space Descriptions**
**Storage**

| <b>STORAGE</b>    |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Storage           | Staff          |

| <b>STORAGE</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>  | Case work to include:<br>- countertop with base and wall cabinets<br>- Lockable storage cabinets<br>- Wall shelving<br>- Lateral files | Yes        |
|                               | Fireproof storage cabinet  | Yes        |
|                               | Clock  | Yes        |
|                               |  |            |
| <b>DOORS &amp; WINDOWS</b>    | Solid, lockable door   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Tile flooring  | Yes        |
|                               | Optimize layout for storage  | Yes        |

**Welcome Center / Administration Space Descriptions**
**Staff Restrooms**

| <b>STAFF RESTROOMS</b> |                |
|------------------------|----------------|
| <b>ACTIVITIES</b>      | <b>PERSONS</b> |
| Personal hygiene       | Teachers       |
|                        | Administrators |

| <b>STAFF RESTROOMS</b>        |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Exhaust fan                                   | Yes        |
| <b>PLUMBING</b>               | Sink with hot and cold water                  | 2          |
|                               | Toilet (male / female)                        | 2          |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall        | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                       |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- cabinet with mirror | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no view panel                           | Yes        |
|                               | Windows: none                                 | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Hands-free dispensers                         | Yes        |

## Welcome Center / Administration Space Descriptions

### Resource Officer

#### RESOURCE OFFICER

| ACTIVITIES      | PERSONS          |
|-----------------|------------------|
| School security | Resource officer |
|                 |                  |

| RESOURCE OFFICER              |                                | QTY |
|-------------------------------|--------------------------------|-----|
| <b>MECHANICAL</b>             | Climate controlled             | Yes |
| <b>PLUMBING</b>               | No Special Requirements        |     |
| <b>ELECTRICAL / LIGHTING</b>  | Quad outlets at each data port | Yes |
| <b>TECHNOLOGY</b>             | Data ports                     | Yes |
|                               | Wireless access                | Yes |
|                               |                                |     |
| <b>FURNITURE / EQUIPMENT</b>  | Security monitoring system     | Yes |
|                               | Desk                           | Yes |
|                               | Chairs                         | 4   |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel           | Yes |
|                               | Windows with operable blinds   | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Securable room                 | Yes |
|                               | Lockable storage               | Yes |



**Welcome Center / Administration Space Descriptions**
**Bookkeeper**

| <b>BOOKKEEPER</b>     |                |
|-----------------------|----------------|
| <b>ACTIVITIES</b>     | <b>PERSONS</b> |
| General journal entry | School staff   |

| <b>BOOKKEEPER</b>             |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Air conditioning                       | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Quad outlet at each data port          | 1          |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port      | Yes        |
|                               | Video and data ports                   | Yes        |
|                               | Quad outlet adjacent to each data port | Yes        |
|                               | Telephone                              | 1          |
|                               | Intercom                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets              | Yes        |
|                               | Flexible surfaces                      | Yes        |
|                               | Legal size file lateral drawer         | Yes        |
|                               | Desk with return                       | 1          |
|                               | Desk chair                             | 1          |
|                               | Guest chairs                           | 2          |
|                               | Lamps                                  | Yes        |
|                               | Bookshelves                            | 18LF       |
|                               | Marker board                           | 4LF        |
|                               | Laptop computer                        | 1          |
|                               | Printer                                | 1          |
|                               | Locking file cabinet, 4 drawer         | 1 to 2     |
|                               | Bulletin board                         | 4LF        |
|                               | Clock                                  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel                       | Yes        |
|                               | Windows: no special considerations     |            |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting                  | Yes        |
|                               | Carpeted flooring                      | Yes        |

**Welcome Center / Administration Space Descriptions**
**Data Technician**

| <b>DATA TECHNICIAN</b>             |                |
|------------------------------------|----------------|
| <b>ACTIVITIES</b>                  | <b>PERSONS</b> |
| Maintain technology infrastructure | School staff   |

| <b>DATA TECHNICIAN</b>        |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Air conditioning                       | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Quad outlet at each data port          | 1          |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port      | Yes        |
|                               | Video and data ports                   | Yes        |
|                               | Quad outlet adjacent to each data port | Yes        |
|                               | Telephone                              | 1          |
|                               | Intercom                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets              | Yes        |
|                               | Flexible surfaces                      | Yes        |
|                               | Legal size file lateral drawer         | Yes        |
|                               | Desk with return                       | 1          |
|                               | Desk chair                             | 1          |
|                               | Guest chairs                           | 2          |
|                               | Lamps                                  | Yes        |
|                               | Bookshelves                            | 18LF       |
|                               | Marker board                           | 4LF        |
|                               | Laptop computer                        | 1          |
|                               | Printer                                | 1          |
|                               | Locking file cabinet, 4 drawer         | 1 to 2     |
|                               | Bulletin board                         | 4LF        |
|                               | Clock                                  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel                       | Yes        |
|                               | Windows: no special considerations     |            |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting                  | Yes        |
|                               | Carpeted flooring                      | Yes        |

**Welcome Center / Administration Space Descriptions**
**Access Office**

| <b>ACCESS OFFICE</b>          |  |            |
|-------------------------------|--|------------|
| <b>ACTIVITIES</b>             | <b>PERSONS</b>                         |            |
| Meeting and work space        | School staff                           |            |
| <b>ACCESS OFFICE</b>          |  | <b>QTY</b> |
| <b>MECHANICAL</b>             | Air conditioning                       | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Quad outlet at each data port          | 1          |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port      | Yes        |
|                               | Video and data ports                   | Yes        |
|                               | Quad outlet adjacent to each data port | Yes        |
|                               | Telephone                              | 1          |
|                               | Intercom                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Lockable storage cabinets              | Yes        |
|                               | Flexible surfaces                      | Yes        |
|                               | Legal size file lateral drawer         | Yes        |
|                               | Desk with return                       | 1          |
|                               | Desk chair                             | 1          |
|                               | Guest chairs                           | 2          |
|                               | Lamps                                  | Yes        |
|                               | Bookshelves                            | 18LF       |
|                               | Marker board                           | 4LF        |
|                               | Laptop computer                        | 1          |
|                               | Printer                                | 1          |
|                               | Locking file cabinet, 4 drawer         | 1 to 2     |
|                               | Bulletin board                         | 4LF        |
|                               | Clock                                  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel                       | Yes        |
|                               | Windows: no special considerations     |            |
| <b>SPECIAL CONSIDERATIONS</b> | Bright, soft lighting                  | Yes        |
|                               | Carpeted flooring                      | Yes        |

## Welcome Center / Administration Space Descriptions

### Health Clinic

| HEALTH CLINIC                    |              |
|----------------------------------|--------------|
| ACTIVITIES                       | PERSONS      |
| Treating students with illnesses | School nurse |
| Preventative health measures     | School staff |
|                                  | Parents      |
|                                  | Students     |

| HEALTH CLINIC                |   | QTY |
|------------------------------|---|-----|
| <b>MECHANICAL</b>            | Exhaust fan   | Yes |
| <b>PLUMBING</b>              | Restrooms   | 2   |
|                              | Sinks with hot and cold water   | 2   |
|                              | One sink should be larger than standard to accommodate eye flush adapted faucet | Yes |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall  | Yes |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port   | Yes |
|                              | Video and data ports  | Yes |
|                              | Quad outlet adjacent to each data port  | Yes |

## Welcome Center / Administration Space Descriptions

### Health Clinic

| HEALTH CLINIC          |   | QTY |
|------------------------|---|-----|
| FURNITURE / EQUIPMENT  | Casework to include:<br>- Countertop with sink<br>- Base and wall cabinets<br>- Wardrobe cabinet<br>- Locking file cabinet [minimum of 3]<br>- Student clothing storage with drawers<br>- Locking medicine cabinets | Yes |
|                        | Desk and chair  | Yes |
|                        | Side chairs and table   | Yes |
|                        | Fax and copy machine  | Yes |
|                        | Cots  | Yes |
|                        | Rolling carts   | Yes |
|                        | Lamps   | Yes |
|                        | Refrigerator  | Yes |
|                        | Networked computer  | Yes |
|                        | Magnetic marker board   | Yes |
|                        | Tack board  | Yes |
|                        | Cubicle curtains with track   | Yes |
|                        | Clock   | Yes |
|                        | Medical sharps waste disposal   | Yes |
|                        | Defibrillator   | Yes |
|                        | Biohazard disposable can  | Yes |
| DOORS & WINDOWS        | Door: narrow or view panel with blinds  | Yes |
|                        | Windows: with blinds for privacy  | Yes |
|                        | Window between office clinic  | Yes |
| SPECIAL CONSIDERATIONS | Auditory/visual privacy   | Yes |
|                        | Health clinic to include restroom, nurse's office, exam room  | Yes |
|                        | Tile flooring   | Yes |

## Welcome Center / Administration Space Descriptions

### Vault

| VAULT      |         |
|------------|---------|
| ACTIVITIES | PERSONS |
| Storage    | Staff   |

| VAULT                  | QTY                                    |
|------------------------|--|
| MECHANICAL             | No special requirements                |
| PLUMBING               | No special requirements                |
| ELECTRICAL / LIGHTING  | Duplex electrical outlets on each wall |
| TECHNOLOGY             | No special requirements                |
| FURNITURE / EQUIPMENT  | Fireproof storage cabinet              |
| DOORS & WINDOWS        | Solid, lockable door                   |
| SPECIAL CONSIDERATIONS | Tile flooring                          |
|                        | Optimize layout for storage            |

**Welcome Center / Administration Space Descriptions**
**Career Center**

| <b>CAREER CENTER</b>          |                    |
|-------------------------------|--------------------|
| <b>ACTIVITIES</b>             | <b>PERSONS</b>     |
| Research colleges and careers | Media Specialist   |
|                               | Guidance Counselor |
|                               | Media Assistant    |
|                               | Students           |

| <b>CAREER CENTER</b>          |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements                  |            |
| <b>PLUMBING</b>               | No special requirements                  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port        | Yes        |
|                               | Wireless lab cart                        | Yes        |
|                               | Video and data ports                     | Yes        |
|                               | Quad outlet adjacent to each data port   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Conference table                         | Yes        |
|                               | Conference chairs                        | Yes        |
|                               | Side chairs                              | Yes        |
|                               | Magnetic marker board                    | Yes        |
|                               | Tack board                               | Yes        |
|                               | Clock                                    | Yes        |
|                               | DVD compatible projection or flat screen | Yes        |
|                               | Lockable cabinets                        | Yes        |
|                               | Pamphlet rack                            | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: solid                              | Yes        |
|                               | Windows: large view panel                | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Carpet flooring                          | Yes        |



## Welcome Center / Administration Space Descriptions

### Counselors' Offices

| COUNSELORS' OFFICES                            |              |
|--|--------------|
| ACTIVITIES                                     | PERSONS      |
| Counseling of students with concerns           | Counselors   |
| Conferencing with parents, students, and staff | School staff |
|  | Parents      |
|  | Students     |
|  | Visitors     |

| COUNSELORS' OFFICES          |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Air conditioning                       | Yes |
| <b>PLUMBING</b>              | No special requirements                |     |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall | Yes |
|                              | Quad outlet at each data port          | 1   |
| <b>TECHNOLOGY</b>            | Telephone/intercom/voicemail port      | Yes |
|                              | Video and data ports                   | Yes |
|                              | Quad outlet adjacent to each data port | Yes |
|                              | Telephone                              | 1   |
|                              | Intercom                               | Yes |

## Welcome Center / Administration Space Descriptions

### Counselors' Offices

| COUNSELORS' OFFICES    |  | QTY    |
|------------------------|--|--------|
| FURNITURE / EQUIPMENT  | Lockable storage cabinets              | Yes    |
|                        | Flexible surfaces                      | Yes    |
|                        | Legal size file lateral drawer         | Yes    |
|                        | Desk with return                       | 1      |
|                        | Desk chair                             | 1      |
|                        | Guest chairs                           | 4      |
|                        | Storage closet/wardrobe                | Yes    |
|                        | Lamps                                  | Yes    |
|                        | Bookshelves                            | 18LF   |
|                        | Marker board                           | 4LF    |
|                        | Laptop computer                        | 1      |
|                        | Printer                                | 1      |
|                        | Locking file cabinet, 4 drawer         | 1 to 2 |
|                        | Bulletin board                         | 4LF    |
|                        | Clock                                  | 1      |
| DOORS & WINDOWS        | Door: narrow or view panel with blinds | Yes    |
|                        | Door: to the conference room           | Yes    |
|                        | Windows: no specific requirements      | Yes    |
| SPECIAL CONSIDERATIONS | Auditory/visual privacy                | Yes    |
|                        | Carpeted flooring                      | Yes    |

## Welcome Center / Administration Space Descriptions

### School Improvement Specialist Storage

| SCHOOL IMPROVEMENT SPECIALIST STORAGE |                               |
|---------------------------------------|-------------------------------|
| ACTIVITIES                            | PERSONS                       |
| Storage                               | School Improvement Specialist |

| SCHOOL IMPROVEMENT SPECIALIST STORAGE |  | QTY |
|---------------------------------------|--|-----|
| MECHANICAL                            | No special requirements                |     |
| PLUMBING                              | No special requirements                |     |
| ELECTRICAL / LIGHTING                 | Duplex electrical outlets on each wall | Yes |
| TECHNOLOGY                            | No special requirements                |     |
| FURNITURE / EQUIPMENT                 | Fireproof storage cabinets             | Yes |
| DOORS & WINDOWS                       | Solid, lockable door                   | Yes |
| SPECIAL CONSIDERATIONS                | Tile flooring                          | Yes |
|                                       | Optimize layout for storage            | Yes |



## Cafeteria/Food Services

The Cafeteria / Student Union will serve as a center where students, staff, and visitors can obtain a quick, desirable, economical snack or meal. The facility should be comfortable, inviting, and cheerful and can also serve as a banquet facility, meeting room, or hold other after school activities.

The Cafeteria/Kitchen area will consist of a large student eating area, kitchen where meals are prepared, storage areas, and an area for trucks delivering supplies for food service.

The physical layout should permit efficient movement and storage of tables and chairs so that the facility may be quickly converted from a dining area to large group meeting/instruction spaces and a large open area for dances and other reception activities.

The Cafeteria should be available for public use with:

- Parking nearby
- Easy access
- Ability to be separated
- Ability to secure
- Restroom availability
- Serving lines organized for efficient traffic flow and multi-item service

As the main dining area will likely serve as a meeting area and location of social events after school hours, it should be near adequate public parking and have the ability to be closed off from areas of the school that may need to avoid unsupervised foot traffic during certain times.

The purpose of the Cafeteria / Student Union is to provide a pleasant atmosphere for students to eat meals and to provide a flexible meeting space for groups if needed.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

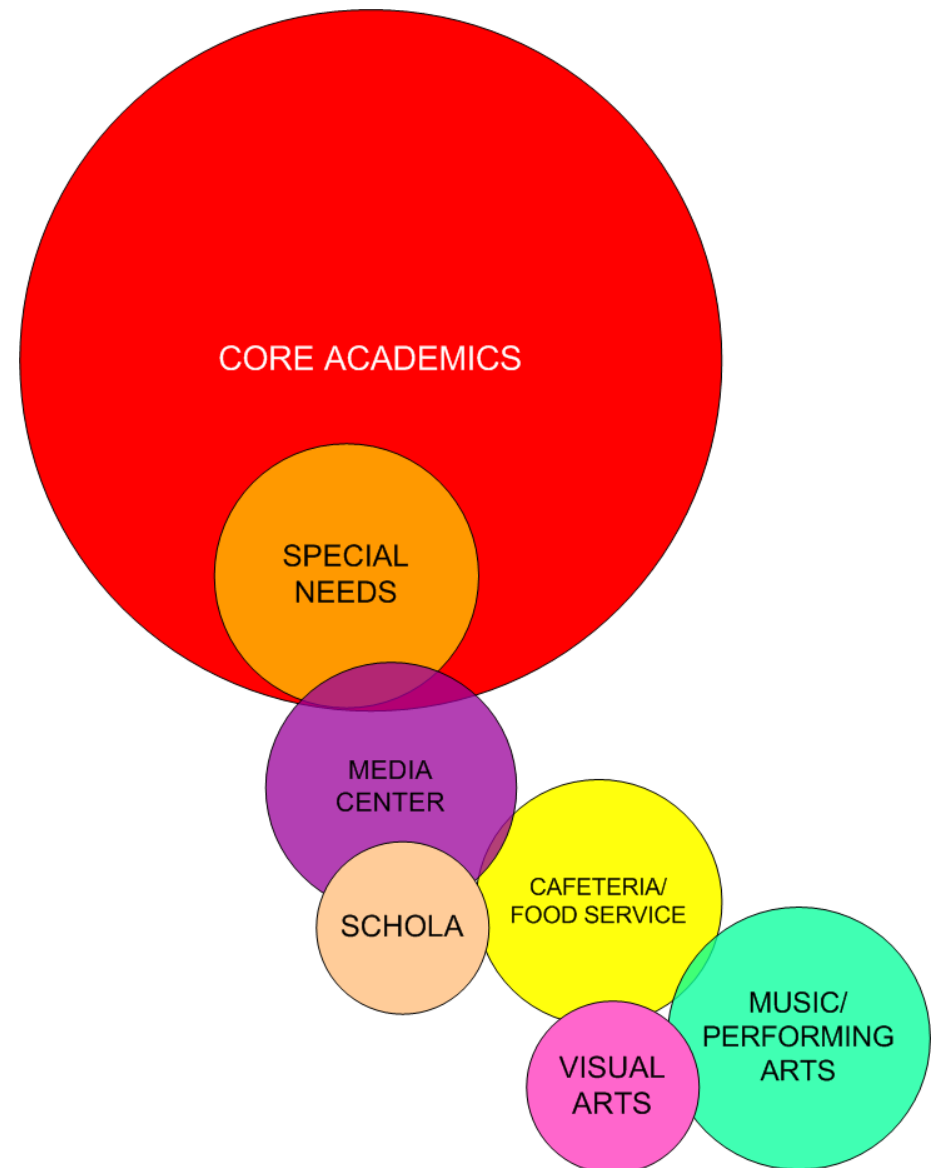
## Cafeteria / Food Services Space Requirements

| Cafeteria / Food Service      | Suggested |          |       |               |
|-------------------------------|-----------|----------|-------|---------------|
|                               | TS        | Quantity | SF    | Total         |
| Kitchen                       |           | 1        | 3,500 | 3,500         |
| Preparation Area              |           |          |       |               |
| Serving Area                  |           |          |       |               |
| Dry Food Storage              |           |          |       |               |
| Cooler/Freezer                |           |          |       |               |
| Ware Washing                  |           |          |       |               |
| Kitchen Mgr Office            |           |          |       |               |
| Restroom                      |           |          |       |               |
| Lockers                       |           |          |       |               |
| Cafeteria / Student Union     |           | 1        | 8,000 | 8,000         |
| Table & Chair Storage         |           | 1        | 300   | 300           |
| Staff Dining w/Vending        |           | 1        | 600   | 600           |
| School Store                  |           | 1        | 700   | 700           |
| Club Areas                    |           | 1        | 500   | 500           |
| <b>Food Service Sub-Total</b> |           |          |       | <b>13,600</b> |

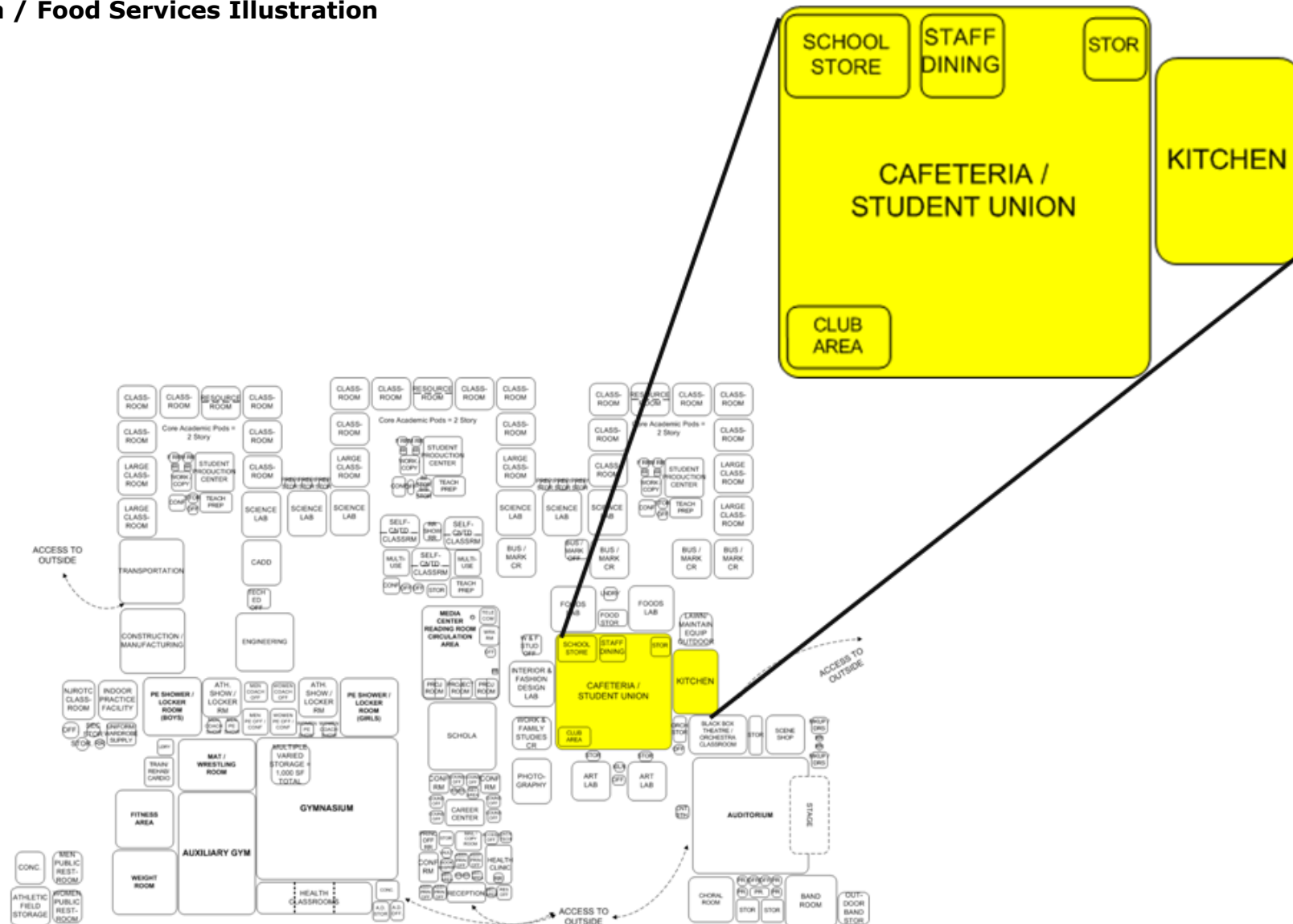
## Cafeteria / Food Services Spatial Relationships

Cafeteria / Food Services spaces will be shared by each learning community. Members of the community will use the cafeteria / student union before, after, and possibly during school hours. For this reason, there should be access to the outside, a separate secured entry, and a location near the loading dock. The pages that follow describe in more detail each program area space listed in the space requirements table above.

The Cafeteria / Student Union should be located adjacent to the Food Service Area, the Custodial & Maintenance Area, and the Auditorium. The Cafeteria / Student Union should also be located in an area that is easily accessible to community members.



## Cafeteria / Food Services Illustration





**Cafeteria / Food Service Space Descriptions:**
**Preparation Area**

| <b>PREPARATION AREA</b> |                        |
|-------------------------|------------------------|
| <b>ACTIVITIES</b>       | <b>PERSONS</b>         |
| Warming & cooking food  | Food service personnel |

| <b>PREPARATION AREA</b>      |   | <b>QTY</b> |
|------------------------------|---|------------|
| <b>MECHANICAL</b>            | 65-70 Degrees year round temperature  | Yes        |
|                              | MUA unit capable of heating and cooling [evaporative or air conditioning]       | Yes        |
|                              | Mechanical [cable operated] gas shut-off valve for hood fire suppression system | Yes        |
|                              | Surface mounted gas manifold under hood for cooking equipment gas supply        | Yes        |
| <b>PLUMBING</b>              | Multiple sinks  | Yes        |
|                              | Waste disposal  | Yes        |
|                              | Trough drain at cook line   | Yes        |
|                              | Floor sinks and drains  | Yes        |
|                              | Garbage disposals & pre-rinse   | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex electrical outlets on each wall  | Yes        |
|                              | Other electric based on equipment requirements                                  | Yes        |
| <b>TECHNOLOGY</b>            | Data ports  | Yes        |
|                              | Telephone   | Yes        |

**Cafeteria / Food Service Space Descriptions:**  
**Preparation Area**

| <b>PREPARATION AREA</b>       |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Special equipment needs for food preparation to be determined by Kitchen Consultant   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel  | Yes        |
|                               | Windows: none   | Yes        |
|                               | Security system   | Yes        |
|                               | Double doors to Storage, Loading/Receiving, and Serving Area  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Quarry tile flooring  | Yes        |
|                               | Locate near dock  | Yes        |
|                               | Grease traps  | Yes        |
|                               | Acoustical separation between kitchen and multi-purpose room so functions can occur in the multi-purpose room while kitchen is in use | Yes        |

**Cafeteria / Food Service Space Descriptions:**  
**Serving Area**

| <b>SERVING AREA</b>                       |                                    |
|---|------------------------------------|
| <b>ACTIVITIES</b>                         | <b>PERSONS</b>                     |
| Serving food                              | Food personnel                     |
| Serving lines or distributed food serving | Student workers                    |
|   | Students -- multiple serving lines |

| <b>SERVING AREA</b>           |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | 65 - 70 Degrees year round temperature                                  | Yes        |
| <b>PLUMBING</b>               | Floor drains  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                                  | Yes        |
|                               | Cord drops for serving equipment and POS equipment – dedicated circuits | Yes        |
| <b>TECHNOLOGY</b>             | Cash register/computers for food check-out                              | Yes        |
|                               | Multi-lane POS system   | Yes        |
|                               | Data drops from T-bar ceiling   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Point-of-sale cash registers  | Yes        |
|                               | Other special equipment needs for food serving                          | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel  | Yes        |
|                               | Security system   | Yes        |
|                               | Serving windows to outdoor dining areas                                 | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Tile flooring   | Yes        |
|                               | Locate near dock and kitchen  | Yes        |
|                               | Special opening to enable multiple serving areas for community use      | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Dry Food Storage**

| <b>DRY FOOD STORAGE</b>        |                        |
|--------------------------------|------------------------|
| <b>ACTIVITIES</b>              | <b>PERSONS</b>         |
| Storage for dry food and paper | Food service personnel |

| <b>DRY FOOD STORAGE</b>       |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | 65-70 Degrees year round   | Yes        |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall                               | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>  | Rust resistant 24" deep shelving and dunnage racks                   | Yes        |
|                               | Other special equipment needs for food storage                       | Yes        |
|                               | Shelving to maximize storage   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Windows: none  | Yes        |
|                               | Door: view panel   | Yes        |
|                               | Security system – locks keyed for food service personnel access only | Yes        |
|                               | Double doors to kitchen  | Yes        |
|                               | Double doors to Receiving  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Tile flooring  | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Cooler / Freezer**

| <b>COOLER / FREEZER</b> |                        |
|-------------------------|------------------------|
| <b>ACTIVITIES</b>       | <b>PERSONS</b>         |
| Storage                 | Food service personnel |

| <b>COOLER / FREEZER</b>       |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | See manufacturer's specifications  | Yes        |
|                               | Separate condensing units for each box [cooler and freezer]                                      | Yes        |
| <b>PLUMBING</b>               | Freezer-heated condensate  | Yes        |
|                               | Hose bib   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall   | Yes        |
|                               | Coordinate power requirements with equipment manufacturer  | Yes        |
|                               | Fluorescent lighting   | Yes        |
|                               | Emergency lighting   | Yes        |
| <b>TECHNOLOGY</b>             | Radio controlled temperature monitoring or similar devise  | Yes        |
|                               | Locate remote, hard wired  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Walk-in freezer and cooler   | Yes        |
|                               | Rust-proof shelving, 18' deep with additional 24" deep dunnage racks in freezer and refrigerator | Yes        |
|                               | Open wall space for utility racks  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel, safety latch   | Yes        |
|                               | Gravity closing hinges   | Yes        |
|                               | Snubber-type door closer   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Quarry tile or sealed concrete flooring  | Yes        |
|                               | Located next to delivery door, close to supervisor's office                                      | Yes        |
|                               | Floor drain  | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Ware Washing**

| <b>WARE WASHING</b>              |                        |
|----------------------------------|------------------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b>         |
| Washing of preparation equipment | Food service personnel |
| Sanitizing                       |                        |

| <b>WARE WASHING</b>           |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Exhaust fan over utensil sink          | Yes        |
| <b>PLUMBING</b>               | Large sinks and sprayers [pre-rinse]   | Yes        |
|                               | Garbage disposal                       | Yes        |
|                               | Floor drain                            | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
|                               | Coordinate power requirements with     | Yes        |
|                               | Fluorescent lighting                   | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>  | Rust-proof shelving                    | Yes        |
|                               | Drying racks                           | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no special requirements          | Yes        |
|                               | Windows: none                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Tile flooring                          | Yes        |
|                               | Rubber flooring                        | Yes        |

**Cafeteria / Food Service Space Descriptions:**  
**Kitchen Manager Office**

| <b>KITCHEN MANAGER'S OFFICE</b>             |                      |
|---|----------------------|
| <b>ACTIVITIES</b>                           | <b>PERSONS</b>       |
| Scheduling                                  | Food service manager |
| Staff evaluations/discipline/small meetings |                      |
| Customer Service                            |                      |
| Ordering Supplies                           |                      |

| <b>KITCHEN MANAGER'S OFFICE</b> |  | <b>QTY</b> |
|---------------------------------|--|------------|
| <b>MECHANICAL</b>               | Air conditioning   | Yes        |
| <b>PLUMBING</b>                 | No special requirements                                    |            |
| <b>ELECTRICAL / LIGHTING</b>    | Quad electrical outlets on each wall                       | Yes        |
|                                 | Overhead lighting  | Yes        |
| <b>TECHNOLOGY</b>               | Access to voice, video, data ports, and electrical outlets | Yes        |
|                                 | Quad outlets adjacent to each data port                    | Yes        |
|                                 | Telephone  | Yes        |
|                                 | Cable access to IDF  | Yes        |



**Cafeteria / Food Service Space Descriptions:**  
**Kitchen Manager Office**

| <b>KITCHEN MANAGER'S OFFICE</b> |   | <b>QTY</b> |
|---------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>    | Lockable storage cabinets   | Yes        |
|                                 | Flexible surfaces   | Yes        |
|                                 | Portable work stations  | Yes        |
|                                 | Desk with return  | 1          |
|                                 | Desk chair  | 1          |
|                                 | Credenza  | 1          |
|                                 | Bookshelves   | 18LF       |
|                                 | Marker board  | 4LF        |
|                                 | Laptop computer   | 1          |
|                                 | Printer   | 1          |
|                                 | File cabinet, 4 drawer  | 1 to 2     |
|                                 | Bulletin board  | 4LF        |
|                                 | Safe  | Yes        |
|                                 | Wall-mounted bin boxes above desk/work surface  | Yes        |
|                                 | First-Aid kit   | Yes        |
|                                 | Clock   | 1          |
| <b>DOORS &amp; WINDOWS</b>      | Door: large view panel  | Yes        |
|                                 | Windows: operable with ½ glass looking into serving area, food prep area, and receiving/storage areas | Yes        |
|                                 | Door keyed for food service personnel access only   | Yes        |
|                                 | Security system   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>   | Located to view both delivery and production areas  | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Restroom**

| <b>RESTROOMS</b>  |                        |
|-------------------|------------------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b>         |
| Personal hygiene  | Food service personnel |

| <b>RESTROOMS</b>              |   | <b>QTY</b> |
|-------------------------------|---|------------|
| <b>MECHANICAL</b>             | Exhaust fan                                   | Yes        |
| <b>PLUMBING</b>               | Sink with hot and cold water                  | Yes        |
|                               | Toilet  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall        | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                       |            |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include:<br>- cabinet with mirror | Yes        |
|                               | Soap dispenser                                | Yes        |
|                               | Towel dispenser                               | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no view panel                           | Yes        |
|                               | Windows: none                                 | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Adjacent to locker room                       | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Lockers**

| <b>LOCKERS</b>                 |                        |
|--------------------------------|------------------------|
| <b>ACTIVITIES</b>              | <b>PERSONS</b>         |
| Food service personnel storage | Food service personnel |

| <b>LOCKERS</b>                |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Ventilation                            | Yes        |
| <b>PLUMBING</b>               | No special requirements                |            |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>  | Lockers – sloped tops                  | Yes        |
|                               | Benches                                | Yes        |
|                               | Locking storage cabinet                | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: no special requirements          | Yes        |
|                               | Windows: none                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Adjacent to food service restroom      | Yes        |

**Cafeteria / Food Service Space Descriptions:**  
**Cafeteria / Student Union**

| <b>CAFETERIA / STUDENT UNION</b>                       |  |
|--|--|
| <b>ACTIVITIES</b>                                      | <b>PERSONS</b>                           |
| Student dining   | Staff members                            |
| School and community program, meetings, and activities | Community – primarily after school hours |
| Performances   | Parents                                  |
|  | Students                                 |

| <b>CAFETERIA / STUDENT UNION</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>MECHANICAL</b>                | No special requirements   |            |
| <b>PLUMBING</b>                  | Drinking fountain   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlets on each wall  | Yes        |
|                                  | Adequate sound / lighting system for multiple use of facility including audience & staging ca | Yes        |
|                                  | Variable lighting levels  | Yes        |
|                                  | Special stage lighting or performances  | Yes        |
| <b>TECHNOLOGY</b>                | Telephone/intercom/voicemail port   | Yes        |
|                                  | Video and data ports  | Yes        |
|                                  | Quad outlet adjacent to each data port  | Yes        |
|                                  | Audio enhancement system  | Yes        |
|                                  | Sound system with portable or wireless microphones  | Yes        |
|                                  | POS capability for remote serving carts for rainy days  | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Cafeteria / Student Union**

| <b>CAFETERIA / STUDENT UNION</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>     | Round, fold up tables   | Yes        |
|                                  | Stackable, free standing chairs and chair dolly   | Yes        |
|                                  | CD/DVD player   | Yes        |
|                                  | Equipment rack in control closet  | Yes        |
|                                  | Computer projector  | Yes        |
|                                  | Large, retractable projection screen  | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Door: double doors with access to outside courtyard/dining area   | Yes        |
|                                  | Door: double doors to table storage   | Yes        |
|                                  | Windows: operable, with blinds to allow for controlled natural lighting   | Yes        |
|                                  | Room darkening capabilities   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Good sight lines to all areas of the room for supervision   | Yes        |
|                                  | Acoustic sound panels   | Yes        |
|                                  | Control closet with light and sound control box   | Yes        |
|                                  | Tile flooring with various colors to show table placement   | Yes        |
|                                  | Special consideration needs to be given to multiuse of cafeteria [i.e., auditoria, cafetorium, etc.]; this is to be a presentation area as well as dining area; this will have a major impact on ceiling heights, windows, wall treatment, lighting, etc. | Yes        |

**Cafeteria / Food Service Space Descriptions:**
**Table & Chair Storage**

| <b>TABLE &amp; CHAIR STORAGE</b> |                             |
|----------------------------------|-----------------------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b>              |
| Storage                          | Custodial/Maintenance staff |

| <b>TABLE &amp; CHAIR STORAGE</b> |  | <b>QTY</b> |
|----------------------------------|--|------------|
| <b>MECHANICAL</b>                | No special requirements                |            |
| <b>PLUMBING</b>                  | Sink with hot & cold water             | Yes        |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlets on each wall | Yes        |
| <b>TECHNOLOGY</b>                | No special requirements                |            |
| <b>FURNITURE / EQUIPMENT</b>     | Table and chair racks                  | Yes        |
|                                  | Shelving above tables and chairs       | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Door: solid, double doors to cafeteria | Yes        |
|                                  | Windows: none                          | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | No special requirements                |            |

**Cafeteria / Food Service Space Descriptions:**  
**Staff Dining with Vending**

| <b>STAFF DINING WITH VENDING</b> |                |
|----------------------------------|----------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b> |
| Staff dining                     | Faculty        |
|                                  | Staff          |

| <b>STAFF DINING WITH VENDING</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>MECHANICAL</b>                | No special requirements   |            |
| <b>PLUMBING</b>                  | Counter and sink  | Yes        |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlets on each wall                                  | Yes        |
| <b>TECHNOLOGY</b>                | Telephone/intercom/voicemail port                                       | Yes        |
|                                  | Video and data ports  | Yes        |
|                                  | Quad outlet adjacent to each data port                                  | Yes        |
| <b>FURNITURE / EQUIPMENT</b>     | Casework to include:<br>- Countertop with sink, base, and wall cabinets | Yes        |
|                                  | Microwave oven  | Yes        |
|                                  | Table and chairs  | Yes        |
|                                  | Magnetic marker board   | Yes        |
|                                  | Tackboard   | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Door: view panel  | Yes        |
|                                  | Windows: operable, allow controlled natural lighting                    | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Carpet and partial vinyl tile flooring                                  | Yes        |
|                                  | Lounge capability   | Yes        |
|                                  | Vending machines  | Yes        |



**Cafeteria / Food Service Space Descriptions:**  
**Teacher Lounge with Kitchenette**
**TEACHER LOUNGE WITH KITCHENETTE**

| ACTIVITIES      | PERSONS       |
|-----------------|---------------|
| Dining Area     | Staff members |
| Serving Area    |               |
| Small meetings  |               |
| Mini Coffee Bar |               |

| TEACHER LOUNGE WITH KITCHENETTE |   | QTY |
|---------------------------------|---|-----|
| <b>MECHANICAL</b>               | No special requirements   |     |
| <b>PLUMBING</b>                 | Hand wash sink/sanitizing station   | Yes |
| <b>ELECTRICAL / LIGHTING</b>    | Duplex electrical outlets on each wall  | Yes |
| <b>TECHNOLOGY</b>               | Telephones/intercom/voicemail port  | Yes |
|                                 | Video and data ports  | Yes |
|                                 | Quad outlet adjacent to each data port  | Yes |
|                                 | Mounted television monitor  | Yes |
|                                 | Sound system  | Yes |
| <b>FURNITURE / EQUIPMENT</b>    | Casework to include countertop with sink, base, and wall cabinets                             | Yes |
|                                 | Microwave oven  | Yes |
|                                 | Refrigerator with icemaker  | Yes |
|                                 | Table and chairs  | Yes |
|                                 | Magnetic marker board   | Yes |
|                                 | Tack board  | Yes |
|                                 | Telephone   | Yes |
|                                 | Combination of tables, chairs, and informal furniture such as couches and over-stuffed chairs | Yes |
|                                 | Workstations for staff to access computers, e-mail, etc.                                      | Yes |
| <b>DOORS &amp; WINDOWS</b>      | Windows   | Yes |
|                                 | Outside courtyard access  | Yes |
| <b>SPECIAL CONSIDERATIONS</b>   | Vinyl tile or carpet flooring   | Yes |

**Cafeteria / Food Service Space Descriptions:**  
**School Store**

| <b>SCHOOL STORE</b>                  |                |
|--------------------------------------|----------------|
| <b>ACTIVITIES</b>                    | <b>PERSONS</b> |
| Sell school merchandise and supplies | Students       |
|                                      | Staff          |
|                                      |                |

| <b>SCHOOL STORE</b>           |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No Special Requirements                            |            |
| <b>PLUMBING</b>               | No Special Requirements                            |            |
| <b>ELECTRICAL / LIGHTING</b>  | Quad outlets at each data port                     | Yes        |
| <b>TECHNOLOGY</b>             | Data ports   | Yes        |
|                               | Computer   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Slat wall displays                                 | Yes        |
|                               | Lockable storage closet                            | Yes        |
|                               | Chairs   | 2          |
|                               | Networked printer                                  | Yes        |
|                               | Free Standing displays                             | Yes        |
|                               | Counter top with lockable roll up window for sales | Yes        |
|                               | Shelving   | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel                               | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Equipment for financial transactions               | Yes        |

**Cafeteria / Food Service Space Descriptions:**  
**Club Areas**

| <b>CLUB AREAS</b> |                |
|-------------------|----------------|
| <b>ACTIVITIES</b> | <b>PERSONS</b> |
| Club meetings     | Students       |
|                   | Club Advisors  |
|                   |                |

| <b>CLUB AREAS</b>             |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | Hot and cold water for sink                                    | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Quad outlet at each data port                                  | Yes        |
| <b>TECHNOLOGY</b>             | Data ports   | Yes        |
|                               | Wireless access points   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Tables and chairs  | Yes        |
|                               | Counter top with sink with upper and base cabinets for storage | Yes        |
|                               | Tall lockable storage cabinets                                 | Yes        |
|                               | Bulletin board   | Yes        |
|                               | White board  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door with view panel   | Yes        |
|                               | Windows to outdoors with blinds for lighting control           | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | No Special Requirements  |            |



## Custodial/Building Services

The Custodial/Maintenance operations are two distinct units. The custodial staff will provide a quality, cost-effective service to ensure a safe and clean environment that promotes the educational process. Custodians will be responsible for the care, cleaning, and light maintenance of the facility; provide daily cleaning of facility; and coordinate with all building users, administration, teaching staff, and community users to ensure a safe and climate controlled environment that will allow uninterrupted use of the facility. Custodians will maintain storage of materials to readily service the operation of the school and maintain necessary janitorial equipment and supplies to ensure that occupants' needs are met. They will also inspect, report, and correct

safety-related issues and maintain trained personnel on site to ensure that proper inspection, maintenance, and corrective measures are implemented so facility users are aware of the Division's commitment to safety.

The maintenance staff will, at the request of the Division coordinator, provide the "heavy maintenance" service to ensure that the school is safe, operational, and properly maintained in order to promote the learning environment. The maintenance staff will conduct routine maintenance and perform repair of major physical systems within the school.

The pages that follow contain a list of spaces and drawings illustrating the relationship between various program areas, and the individual spaces within the program area. Additionally, a description of the activities, persons to accommodate, and items to be considered is included.

## Facility Considerations

Listed below are various items that should be considered during the design of the new facility.

### Exterior:

- Outside hose bibs every 200 feet around perimeter of building and on roof (to clean rooftop units)
- Concrete pad sized for dumpster storage with outside trash compactor and recycling dumpster, including sewer drain and hose bib (hot and cold water) near trash area; trash compactor accessible from inside building if not inside
- Road access (separate from vehicular and student traffic and from play areas)
- Outside storage to have electricity
- Direct access from building near dumpsters only
- Centralized delivery for food service and supply deliveries/ share loading dock space
- Mini loading dock connected to building

### Interior:

- Electrical outlets in corridors 12' max separation
- Chemical dispensing system—area on wall for rack
- Service closets spread throughout the building with floor drain, recessed mop sink, and storage shelving; dam 6-8" high + floor drain
- All restrooms to have floor drains, outlets, and hose bibs
- Electrical and lighting for science and art and any location with a sink shall have GFCI protected circuits
- Storage
- Window blinds / cords not accessible to students; shades in double pane windows

### Dock:

- Dock area height to match Division delivery truck lift height
- Hand dolly ramp with adjustable dock plate
- Dock shared by food service – near food service area
- Lockable doorways that separate dock area from hallways
- Staging area for deliveries
- Outside lighting for early/late deliveries
- Sealed concrete
- Recessed docks shall have pumps and drains

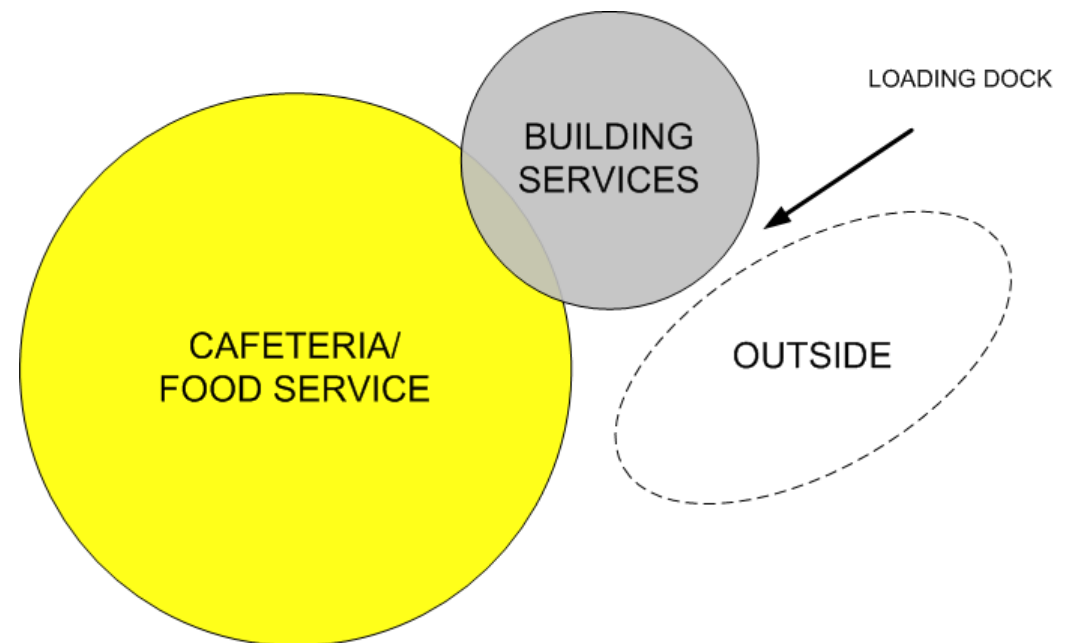
## Custodial / Building Services Space Requirements

| Custodial / Building Services                  | Suggested |          |       |              |
|--|-----------|----------|-------|--------------|
|  | TS        | Quantity | SF    | Total        |
| Receiving/Storage                              |           | 1        | 1,000 | 1,000        |
| Maintenance/Repair Area                        |           | 1        | 600   | 600          |
| Office/Planning/Meeting Area/Break Room        |           | 1        | 300   | 300          |
| Locker Room/Toilets                            |           | 2        | 200   | 400          |
| Lawn/Maintenance Equipment (Outdoor Storage)   |           | 1        | 750   | 750          |
| Loading Area                                   |           | Outside  |       |              |
| <b>Custodial / Building Services Sub-Total</b> |           |          |       | <b>3,050</b> |

## **Custodial / Building Services Spatial Relationships**

Building Services will be utilized by each learning community and should be located near the Cafeteria/Food Services area and the loading dock.

The Custodial & Building Services Area should be located adjacent to Food Services, Cafeteria / Student Union, and the Loading Dock.





**Custodial / Building Services Space Descriptions:**  
**Receiving / Storage**

| <b>RECEIVING / STORAGE</b>   |                                     |
|--|-------------------------------------|
| <b>ACTIVITIES</b>  | <b>PERSONS</b>                      |
| Delivery area for bulk commodities, supplies, materials, and equipment | Custodial and Maintenance personnel |
| Loading and unloading  | Food service personnel              |
| Storage connected to building and secure                               |                                     |

| <b>RECEIVING / STORAGE</b>    |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | Hot and cold water   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Wiring for roll up door  | Yes        |
| <b>TECHNOLOGY</b>             | Voice/video/data   | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Step ladders   | Yes        |
|                               | Dollies  | Yes        |
|                               | Lifts  | Yes        |
|                               | Shelving optimized for storage cleaning supplies, equipment, and school deliveries | Yes        |
|                               | Pallet jack  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Oversized Doors for all custodial equipment: electric roll-up door to loading dock | Yes        |
|                               | Double doors with removable mullions to hallway                                    | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Located adjacent to the Custodial and maintenance area and Food Service area       | Yes        |
|                               | Proper lighting and ventilation  | Yes        |

**Custodial / Building Services Space Descriptions:**  
**Maintenance / Repair Area**

| <b>MAINTENANCE / REPAIR AREA</b>  |                                  |
|---|----------------------------------|
| <b>ACTIVITIES</b>   | <b>PERSONS</b>                   |
| General maintenance   | Custodial/ maintenance personnel |
| Painting  |                                  |
| Repair of small electrical items, equipment, furniture, doors, blinds, fixtures, etc. |                                  |
| Preventative maintenance  |                                  |

| <b>MAINTENANCE / REPAIR AREA</b> |  | <b>QTY</b> |
|----------------------------------|--|------------|
| <b>MECHANICAL</b>                | Exhaust fan  | Yes        |
|                                  | HVAC   | Yes        |
| <b>PLUMBING</b>                  | Sink with hot and cold water                           | Yes        |
|                                  | Hot and cold water hose bib                            | Yes        |
|                                  | Floor drains   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>     | Duplex electrical outlets on each wall, spaced 12' max | Yes        |
|                                  | 20 amp outlets in workroom                             | Yes        |
| <b>TECHNOLOGY</b>                | Telephone/intercom/voicemail port                      | Yes        |
|                                  | Video and data ports                                   | Yes        |
|                                  | Quad outlet adjacent to each data port                 | Yes        |

**Custodial / Building Services Space Descriptions:**  
**Maintenance / Repair Area**

| <b>MAINTENANCE / REPAIR AREA</b> |   | <b>QTY</b> |
|----------------------------------|---|------------|
| <b>FURNITURE / EQUIPMENT</b>     | Work bench with built-in electrical outlets                       | Yes        |
|                                  | Peg boards for bench work   | Yes        |
|                                  | Hazmat storage  | Yes        |
|                                  | Locking shelving for tools  | Yes        |
|                                  | Compressor  | Yes        |
|                                  | Eye wash  | Yes        |
|                                  | Soap dispenser  | Yes        |
|                                  | Paper towel holder  | Yes        |
|                                  | Built in vise   | Yes        |
|                                  | Ladder  | Yes        |
|                                  | Fire extinguisher   | Yes        |
|                                  | Shelving optimized for storage of cleaning supplies and equipment | Yes        |
| <b>DOORS &amp; WINDOWS</b>       | Door: for moving large equipment                                  | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Soundproofing between workroom and instruction areas              | Yes        |
|                                  | Adjacent to loading dock  | Yes        |

**Custodial / Building Services Space Descriptions:**  
**Office / Planning / Meeting / Break Room**

| <b>OFFICE / PLANNING / MEETING / BREAK ROOM</b> |                                     |
|---|-------------------------------------|
| <b>ACTIVITIES</b>                               | <b>PERSONS</b>                      |
| Telephone calls                                 | Maintenance and Custodial personnel |
| Paperwork                                       |                                     |
| Scheduling                                      |                                     |
| Training  |                                     |

| <b>OFFICE / PLANNING / MEETING / BREAK ROOM</b> |  | <b>QTY</b> |
|---|--|------------|
| <b>MECHANICAL</b>                               | Air conditioning   | Yes        |
| <b>PLUMBING</b>                                 | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>                    | Duplex electrical outlets on each wall   | Yes        |
| <b>TECHNOLOGY</b>                               | Telephone/intercom/voicemail port  | Yes        |
|   | Video and data ports   | Yes        |
|   | Quad outlet adjacent to each data port   | Yes        |
|   | HVAC controls  | Yes        |
|   | Data ports or e-mail (hand held) access and charging ports in custodial office | Yes        |

**Custodial / Building Services Space Descriptions:**  
**Office / Planning / Meeting / Break Room**

| <b>OFFICE / PLANNING / MEETING / BREAK ROOM</b> |  | <b>QTY</b> |
|---|--|------------|
| <b>FURNITURE / EQUIPMENT</b>                    | Casework to include:<br>- Filing cabinet<br>- Bookcase   | Yes        |
|   | Tack board   | Yes        |
|   | Desk with return   | Yes        |
|   | Desk chair   | Yes        |
|   | Small conference table with chairs                       | Yes        |
|   | Ergonomic task chairs                                    | Yes        |
|   | Networked computer                                       | Yes        |
|   | Printer  | Yes        |
|   | File cabinet, 4 drawer                                   | Yes        |
|   | Bulletin board   | Yes        |
|   | Clock  | Yes        |
| <b>DOORS &amp; WINDOWS</b>                      | Door: view panel   | Yes        |
|   | Windows: window with a view of workroom and loading dock | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>                   | No special requirements                                  |            |

**Custodial / Building Services Space Descriptions:**
**Locker Room / Toilets**

| <b>LOCKER ROOM / TOILETS</b> |                     |
|------------------------------|---------------------|
| <b>ACTIVITIES</b>            | <b>PERSONS</b>      |
| Custodial personnel storage  | Custodial personnel |

| <b>LOCKER ROOM / TOILETS</b>  |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | Ventilation  | Yes        |
| <b>PLUMBING</b>               | Toilet   | Yes        |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall             | Yes        |
| <b>TECHNOLOGY</b>             | Telephone/intercom/voicemail port                  | Yes        |
|                               | Video and data ports                               | Yes        |
| <b>FURNITURE / EQUIPMENT</b>  | Lockers  | Yes        |
|                               | Bench  | Yes        |
|                               | Locking storage cabinet                            | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | No Special Requirements                            |            |
| <b>SPECIAL CONSIDERATIONS</b> | Should be combined with receiving and storage area | Yes        |

**Custodial / Building Services Space Descriptions:**
**Loading Area**

| <b>LOADING AREA</b>  |                                     |  |
|--|-------------------------------------|--|
| <b>ACTIVITIES</b>  | <b>PERSONS</b>                      |  |
| Delivery area for bulk commodities, supplies, materials, and equipment | Custodial and Maintenance personnel |  |
| Loading and unloading  | Food service personnel              |  |

| <b>LOADING AREA</b>           |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>MECHANICAL</b>             | No special requirements  |            |
| <b>PLUMBING</b>               | No special requirements  |            |
| <b>ELECTRICAL / LIGHTING</b>  | Wiring for roll-up door  | Yes        |
| <b>TECHNOLOGY</b>             | No special requirements  |            |
| <b>FURNITURE / EQUIPMENT</b>  | Step ladders   | Yes        |
|                               | Dollies  | Yes        |
|                               | Lifts  | Yes        |
| <b>DOORS &amp; WINDOWS</b>    | Door: electric roll-up door to loading dock                                  | Yes        |
|                               | Double doors with removable mullions to hallway                              | Yes        |
|                               | Windows: no special requirements   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Located adjacent to the Custodial and maintenance area and Food Service area | Yes        |
|                               | Proper lighting and ventilation  | Yes        |



## NJROTC

The NJROTC Program is administered by the Chief of Naval Education and Training (CNET) located at Naval Air Station, Pensacola, Florida, and locally supervised by the NJROTC AREA FIVE Manager located at Norfolk Naval Base, Virginia. Naval Science (NJROTC) is an elective course with one credit earned for each year of Naval Science completed.

### Program Mission

The mission of the NJROTC program is to instill in students the values of citizenship, service to the United States, personal responsibility and a sense of accomplishment.

### Program Goals

The following are goals of the program as established by the Chief of Naval Education and Training.

- Promote patriotism.
- Develop informed and responsible citizens.
- Promote habits of orderliness and precision.
- Develop a high degree of personal honor, self-reliance, self-discipline, and leadership.
- Promote an understanding of the basic elements and requirements for national security.
- Develop respect for an understanding of the need for constituted authority in a democratic society.
- Provide incentives to live healthy and drug-free lives.
- Develop leadership.
- Promote high school completion.
- Provide information on military services as a possible career.

### Curriculum Topics

A few of the areas of NJROTC classroom study include leadership, seamanship, communications, sea power, naval history, naval weapon systems, oceanography, astronomy, weather, and strategy. Other out-of-class activities include physical readiness training, parades, special ceremonies, drill meets, rifle competitions and athletics competitions, and field trips.



## **Field Trips and At-Sea Cruise**

A cornerstone of the NJROTC program is the opportunity for cadets to visit naval units, military installations, museums, and other interesting destinations.

## **Enrollment Requirements**

To be eligible for enrollment in the NJROTC Program, a student must:

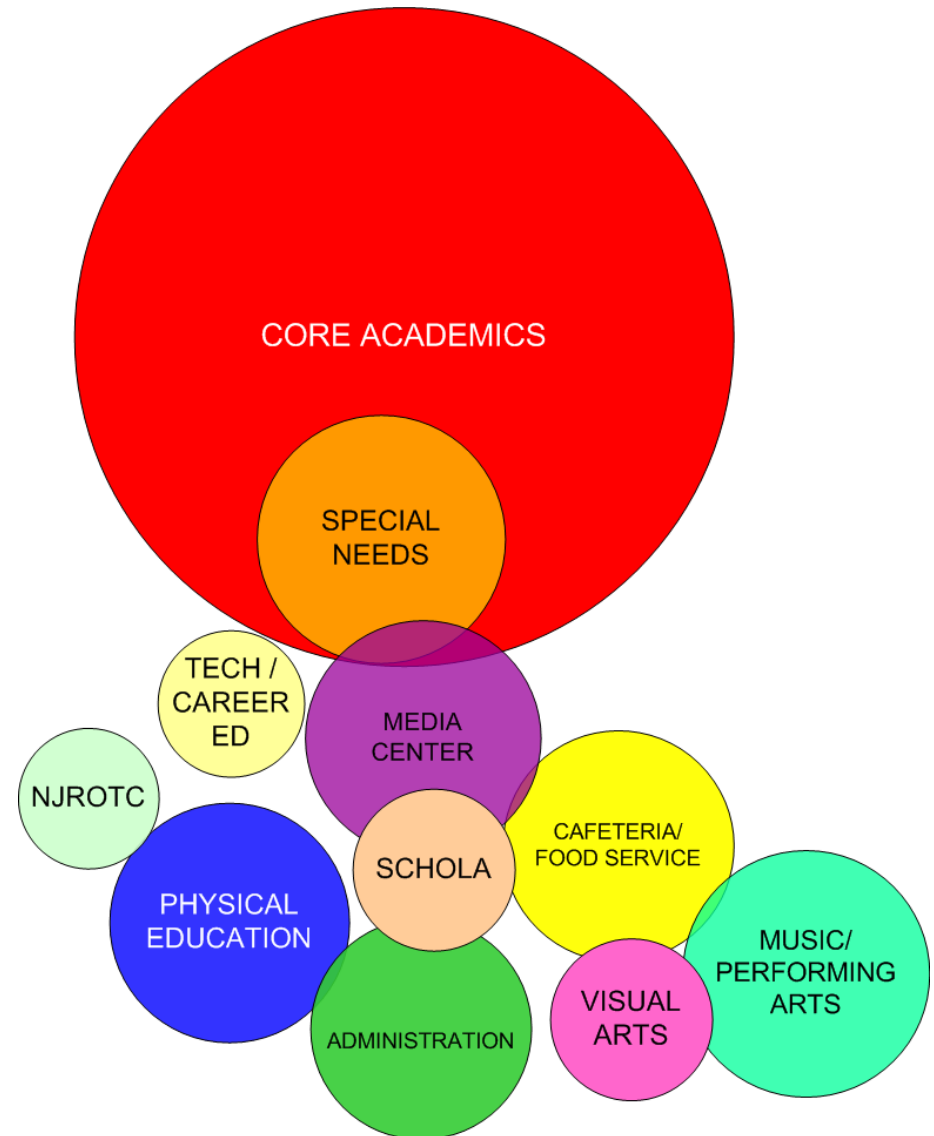
1. Be enrolled in and attending a regular course of instruction at the school in a grade 9 through 12.
2. Be a United States citizen or national, or alien lawfully admitted to the U. S. for permanent residence.
3. Be physically qualified to participate fully in the school's physical education program.
4. Be selected by one of the Naval Science Instructors with the approval of the school Principal.
5. Maintain acceptable standards of academic achievement and an academic standing that warrants normal progression leading to graduation.
6. Maintain acceptable standards of conduct.
7. Comply with personal grooming standards as promulgated in the "NJROTC Cadet Field Manual;" NAVEDTRA 37116.

## NJROTC Space Requirements

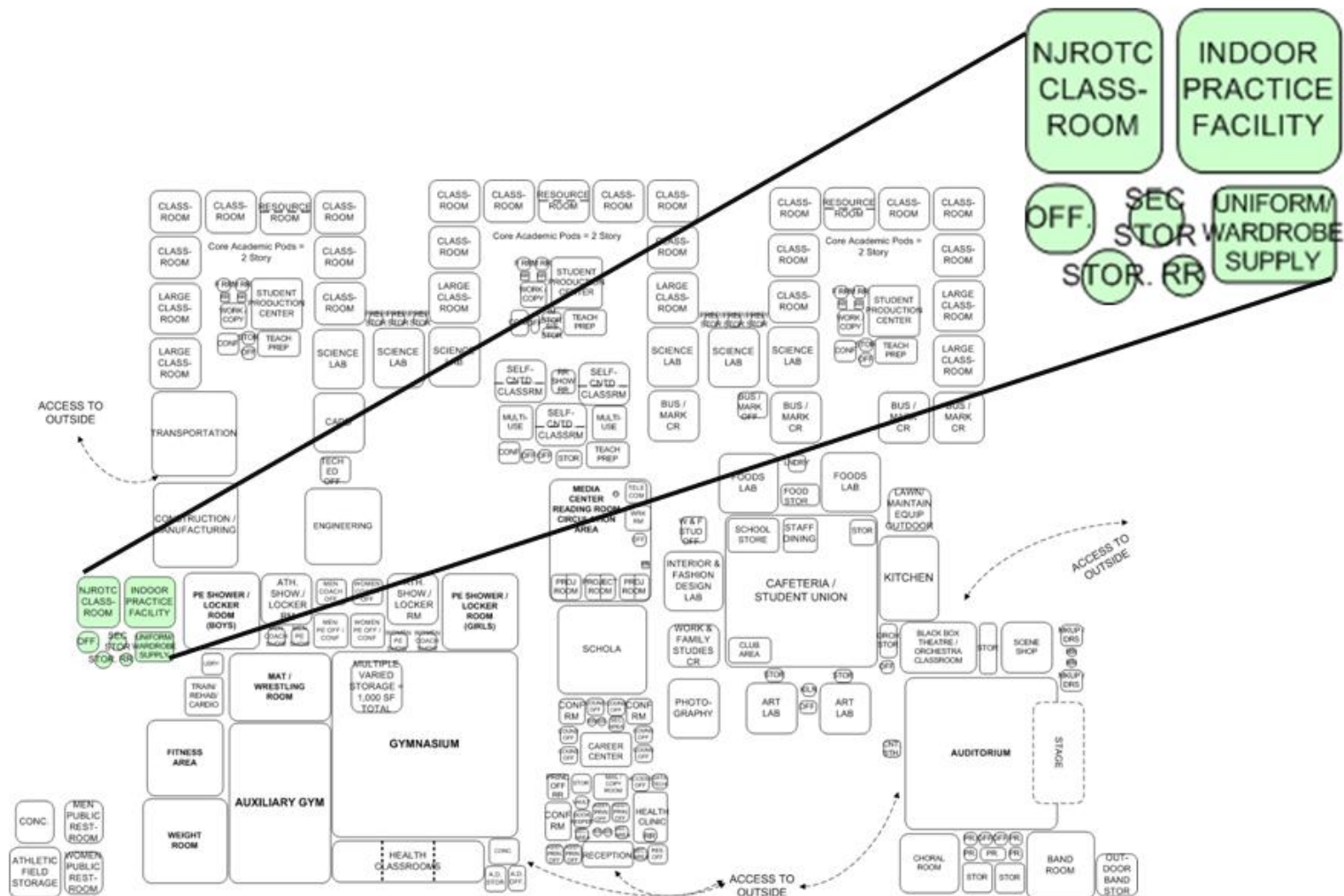
| NJROTC                    | Suggested |          |       |              |
|---------------------------|-----------|----------|-------|--------------|
|                           | TS        | Quantity | SF    | Total        |
| Indoor Practice Facility  | 1         | 1        | 1,200 | 1,200        |
| Classroom                 | 1         | 1        | 850   | 850          |
| Uniform / Wardrobe Supply |           | 1        | 600   | 600          |
| Office                    |           | 1        | 200   | 200          |
| Secure Armory Storage     |           | 1        | 100   | 100          |
| General Storage           |           | 1        | 100   | 100          |
| Restroom                  |           | 1        | 50    | 50           |
| <b>NJROTC Sub-Total</b>   | <b>2</b>  |          |       | <b>3,100</b> |

## NJROTC Spatial Relationships

NJROTC should be located near the gymnasium and locker rooms and have access to the core academics area. NJROTC should have outdoor access.



## NJROTC Illustration



## NJROTC Space Descriptions:

### Indoor Practice Facility

| INDOOR PRACTICE FACILITY                      |                   |
|---|-------------------|
| ACTIVITIES                                    | PERSONS           |
| Individual, small, and large group activities | Students          |
| Demonstrations                                | Teachers          |
| Project work                                  | Aides             |
|   | Volunteers        |
|   | Paraprofessionals |
|   | Staff             |

| INDOOR PRACTICE FACILITY     |  | QTY        |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>              | Water fountain   | Yes        |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                              | Yes        |
|                              | Controlled day lighting, banked lighting                                 | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Voice, data, video outlets at teacher desk                               | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless, high on wall                     | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                  | 1          |
|                              | Ceiling mounted computer projector with retractable screen               | Yes        |
|                              | Laptop computers with carts, shared                                      | 26         |
|                              | Access to voice, video, data ports, and electrical outlets               | Yes        |
|                              | Teacher data port separate from student data ports                       | Yes        |
|                              | Audio enhancement  | 1 system   |
|                              | Document cameras for each class  | Yes        |

## NJROTC Space Descriptions:

### Indoor Practice Facility

| INDOOR PRACTICE FACILITY |   | QTY |
|--------------------------|---|-----|
| FURNITURE / EQUIPMENT    | Comfortable ergonomic student chairs that allow movement                | Yes |
|                          | Magnetic marker board with tack strips above whiteboard                 | Yes |
|                          | Collapsible, storable work tables                                       | Yes |
|                          | Bulletin board  | Yes |
|                          | Shelving  | Yes |
|                          | Locking storage cabinet   | Yes |
|                          | All in One Computer Device  | Yes |
|                          | Retractable projection screen   | Yes |
|                          | Built in trophy cases   |     |
|                          | Flexible or multiple display surfaces                                   | Yes |
|                          | Adjustable, lockable, and mobile storage cabinets and shelving          | Yes |
| DOORS & WINDOWS          | Door with windows or view panel   | Yes |
|                          | Locking mechanism   | Yes |
|                          | Large energy efficient windows to outdoors with blinds                  | Yes |
|                          | Windows to corridor and / or Learning Community                         | Yes |
| SPECIAL CONSIDERATIONS   | Climate control   | Yes |
|                          | Own security system, a way to close off access to remainder of building | Yes |
|                          | Access to P.E. showers in locker rooms                                  | Yes |
|                          | Vinyl tile, no scratch flooring   | Yes |
|                          | Acoustical privacy  | Yes |
|                          | Walls painted with warm and cool colors                                 | Yes |

## NJROTC Space Descriptions:

### Classroom

| CLASSROOM                                     |                   |
|---|-------------------|
| ACTIVITIES                                    | PERSONS           |
| Individual, small, and large group activities | Students          |
| Computer-based instruction                    | Teachers          |
| Project-based learning                        | Aides             |
| Demonstrations                                | Volunteers        |
|   | Paraprofessionals |
|   | Staff             |

| CLASSROOM                    |  | QTY        |
|------------------------------|--|------------|
| <b>MECHANICAL</b>            | Quiet air conditioning   | Yes        |
| <b>PLUMBING</b>              | No Special Requirements  |            |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | 1 per wall |
|                              | Quad outlet @ each data port   | 1          |
|                              | Overhead lighting  | Yes        |
|                              | Room darkening capability - dimmer switches                                  | Yes        |
|                              | Controlled day lighting, banked lighting                                     | Yes        |
|                              | Mobile tables need variety of ways to set electricity [floor or fixed table] | Yes        |
|                              | Front row of light, dimmable   | Yes        |
| <b>TECHNOLOGY</b>            | Voice, data, video outlets at teacher desk                                   | 1          |
|                              | 6 data drops with double, triple, or quad Communications Network Outlets     | 6          |
|                              | 2 data drops at teacher desk area  | 2          |
|                              | Single data drop dedicated to wireless, high on wall                         | 1          |
|                              | Telephone  | 1          |
|                              | Intercom   | Yes        |
|                              | Interactive whiteboard with integral computer projector                      | 1          |
|                              | Ceiling mounted computer projector with retractable screen                   | Yes        |
|                              | Laptop computers with carts, shared  | 26         |
|                              | Access to voice, video, data ports, and electrical outlets                   | Yes        |
|                              | Teacher data port separate from student data ports                           | Yes        |
|                              | Audio enhancement  | 1 system   |
|                              | Document cameras for each class  | Yes        |

## NJROTC Space Descriptions:

### Classroom

| CLASSROOM              |  | QTY |
|------------------------|--|-----|
| FURNITURE / EQUIPMENT  | Student work tables, 2 students each   | Yes |
|                        | Comfortable ergonomic student chairs that allow movement                           | Yes |
|                        | Countertop over base cabinets  | Yes |
|                        | Overhead cabinets  | Yes |
|                        | Magnetic marker board with tack strips above whiteboard                            | Yes |
|                        | Bulletin board   | Yes |
|                        | Shelving   | Yes |
|                        | Locking storage cabinet  | Yes |
|                        | All in One Computer Device   | Yes |
|                        | Retractable projection screen  | Yes |
|                        | Flexible or multiple display surfaces  | Yes |
|                        | Adjustable, lockable, and mobile storage cabinets and shelving                     | Yes |
|                        | Flexible furniture: can be used as individual desks or fit together to make tables | Yes |
| DOORS & WINDOWS        | Door with windows or view panel  | Yes |
|                        | Large energy efficient windows to outdoors with blinds                             | Yes |
|                        | Windows to corridor and / or Learning Community                                    | Yes |
| SPECIAL CONSIDERATIONS | Climate control  | Yes |
|                        | Vinyl tile, no scratch flooring  | Yes |
|                        | Walls painted with warm and cool colors  | Yes |
|                        | Carpeted area for alternative setting  | Yes |



**NJROTC Space Descriptions:**
**Uniform / Wardrobe Supply**

| <b>UNIFORM / WARDROBE SUPPLY</b> |                |
|----------------------------------|----------------|
| <b>ACTIVITIES</b>                | <b>PERSONS</b> |
| Storage of uniforms              | Teachers       |
|                                  | Students       |

| <b>UNIFORM / WARDROBE SUPPLY</b> |                         | <b>QTY</b> |
|----------------------------------|-------------------------|------------|
| <b>MECHANICAL</b>                | Climate controlled      | Yes        |
| <b>PLUMBING</b>                  | No Special Requirements |            |
| <b>ELECTRICAL / LIGHTING</b>     |                         | Yes        |
|                                  |                         | Yes        |
|                                  |                         | Yes        |
| <b>TECHNOLOGY</b>                |                         | Yes        |
|                                  |                         | Yes        |
| <b>FURNITURE / EQUIPMENT</b>     |                         |            |
|                                  |                         |            |
|                                  |                         |            |
|                                  |                         |            |
| <b>DOORS &amp; WINDOWS</b>       | Door: view panel        |            |
|                                  |                         |            |
| <b>SPECIAL CONSIDERATIONS</b>    |                         |            |

## NJROTC Space Descriptions:

### Office

| OFFICE                             |                   |
|------------------------------------|-------------------|
| ACTIVITIES                         | PERSONS           |
| Teacher planning and collaboration | Teachers          |
| Team meetings                      | Staff             |
| Professional development           | Paraprofessionals |
| Recordkeeping                      |                   |
| Preparation of teaching materials  |                   |
| Faculty lunch                      |                   |
| Storage                            |                   |

| OFFICE                       |  | QTY |
|------------------------------|--|-----|
| <b>MECHANICAL</b>            | Quiet air conditioning                                     | Yes |
| <b>PLUMBING</b>              |  |     |
| <b>ELECTRICAL / LIGHTING</b> | Duplex outlet  | Yes |
|                              | Quad outlet @ each data port                               | Yes |
|                              | Controlled day lighting                                    | Yes |
| <b>TECHNOLOGY</b>            | Access to voice, video, data ports, and electrical outlets | Yes |
|                              | Intercom   | Yes |

**NJROTC Space Descriptions:**
**Office**

| <b>OFFICE</b>                 |  | <b>QTY</b> |
|-------------------------------|--|------------|
| <b>FURNITURE / EQUIPMENT</b>  | Teacher desk   | 2          |
|                               | Lockable storage cabinets and closets                                    | Yes        |
|                               | Flexible surfaces  | Yes        |
|                               | Adequate counter top space for small appliances and production equipment | Yes        |
|                               | Computer station with Internet access                                    | Yes        |
|                               | Work tables  | 2          |
|                               | Conference chairs  | 4          |
|                               | Conference table   | 1          |
|                               | Abundant shelving  | Yes        |
|                               | Layout of shelving to maximize efficiency                                | Yes        |
|                               | File cabinet, 4 drawer   | 1          |
|                               | Laptop computer  | 2          |
|                               | Printer  | 1          |
|                               | Magnetic Marker board  | 1          |
|                               | Bulletin board   | 4 LF       |
|                               | Clock  | 1          |
| <b>DOORS &amp; WINDOWS</b>    | Door: view panel   | Yes        |
|                               | Windows: open to Classroom   | Yes        |
| <b>SPECIAL CONSIDERATIONS</b> | Small parent / reception area with seating                               | Yes        |

**NJROTC Space Descriptions:**
**Secure Armory Storage**

| <b>SECURE ARMORY STORAGE</b>              |                |
|---|----------------|
| <b>ACTIVITIES</b>                         | <b>PERSONS</b> |
| Storage of rifles, swords, and air rifles | Teachers       |

| <b>SECURE ARMORY STORAGE</b>     |                             | <b>QTY</b> |
|----------------------------------|-----------------------------|------------|
| <b>MECHANICAL</b>                | No Special Requirements     |            |
| <b>PLUMBING</b>                  | No Special Requirements     |            |
| <b>ELECTRICAL &amp; LIGHTING</b> | Duplex outlets on each wall | Yes        |
|                                  | Overhead lighting           | Yes        |
| <b>TECHNOLOGY</b>                | No Special Requirements     |            |
| <b>FURNITURE / EQUIPMENT</b>     |                             |            |
|                                  |                             |            |
|                                  |                             |            |
|                                  |                             |            |
| <b>DOORS &amp; WINDOWS</b>       | Solid door                  | Yes        |
|                                  | Keypad access               | Yes        |
| <b>SPECIAL CONSIDERATIONS</b>    | Vinyl tile                  | Yes        |

## NJROTC Space Descriptions:

### General Storage

| GENERAL STORAGE                         |          |
|---|----------|
| ACTIVITIES                              | PERSONS  |
| Storage of instructional team materials | Teachers |
|   | Staff    |

| GENERAL STORAGE        |  | QTY |
|------------------------|--|-----|
| MECHANICAL             | No Special Requirements                |     |
| PLUMBING               | No Special Requirements                |     |
| ELECTRICAL & LIGHTING  | Duplex outlets on each wall            | Yes |
|                        | Overhead lighting                      | Yes |
| TECHNOLOGY             | No Special Requirements                |     |
| FURNITURE / EQUIPMENT  | Casework to include:                   |     |
|                        | Countertop with base and wall cabinets | Yes |
|                        | Lockable storage cabinets              | Yes |
|                        | Abundant wall shelving                 | Yes |
| DOORS & WINDOWS        | Lockable solid door                    | Yes |
| SPECIAL CONSIDERATIONS | Vinyl tile                             | Yes |

## NJROTC Space Descriptions:

### Restroom

| RESTROOMS        |                |
|------------------|----------------|
| ACTIVITIES       | PERSONS        |
| Personal hygiene | Teachers       |
|                  | Administrators |

| RESTROOMS                     |   | QTY |
|-------------------------------|---|-----|
| <b>MECHANICAL</b>             | Exhaust fan                             | Yes |
| <b>PLUMBING</b>               | Sink with hot and cold water            | Yes |
|                               | Toilet                                  | Yes |
| <b>ELECTRICAL / LIGHTING</b>  | Duplex electrical outlets on each wall  | Yes |
| <b>TECHNOLOGY</b>             | No special requirements                 |     |
| <b>FURNITURE / EQUIPMENT</b>  | Casework to include cabinet with mirror | Yes |
| <b>DOORS &amp; WINDOWS</b>    | Solid door                              | Yes |
| <b>SPECIAL CONSIDERATIONS</b> | Hands-free dispensers                   | Yes |

## **Technology Resource Requirements for Secondary Schools**

### **Updating of Classroom Technology Standards**

As current school standards are reviewed and revised to meet new industry standards and new evolving trends in education, the Department of Technology should provide continuous updated infrastructure recommendations to the Office of Facilities Planning and Construction.

Representatives from both Technical Services and Instructional Technology within the Department of Technology should revalidate these standards on an annual basis and submit all changes to the Office of Facilities Planning and Construction for incorporation into the programs/scope of work associated with VBCPS's plans for new construction and school renovation projects.

Construction documents (drawings and specifications) should be submitted to the Department of Technology for all new school construction and renovation projects early in the design process for review and comment. The Department of Curriculum and Instruction should be included in this review process. Final plans should also be submitted to the Department of Technology for their review and final equipment planning purposes.

The Department of Technology should be considered a partner in the construction of new or renovated facility and as such should receive copies of any design modifications associated with the project if the technology infrastructure is affected.

### **Description of Ceiling Mounted Projector System**

- Ceiling mounted projector
- Speakers shall be ceiling mounted with an amplifier to power speakers at a sufficient DB level
- Teacher panel should provided connectivity for
  - 1 x RCA Video - (VCR, DVD)
  - 2 x RCA Audio (Left, Right) - (VCR, DVD)
  - 1 x DVI-D Video - (Computer)
  - 1 x VGA Video - (Computer, Document camera)
  - 2 x RJ45 - (Data)
  - 2 x USB (A Type) – (1 for Smartboard, 1 for projector mouse control)
  - 1 x 3.5mm Stereo Audio - (Computer Audio)
  - 1 x “F” coax connector - (Local Origination, CATV)

**(A 20A, 120V quad receptacle outlet shall be located adjacent to the teacher's plate to support the various pieces of technology equipment which can interface with the monitor.)**

- 1 data outlet in the ceiling next to the mounting for the projector
- 1 TV tuner
- 1 projector/tuner mount

- Electrical outlet in ceiling next to the mounting for the projector
- 1 Digital Interactive WhiteBoard (between 64" and 94")
- 1 laptop with case, that meets or exceeds the teacher laptop specs on the current "What to Buy List"

## **Data Network Drop Requirements:**

### **Wiring Standard**

All network wiring should be CAT-6 rated to handle at least 1Gbit Ethernet traffic. All switches must also be able to support 1Gbit Ethernet via copper wire as well as fiber. All switches must provide power-over-Ethernet (PoE).

There will no separate 'phone' drops as voice and data are integrated. All 'phone' drops are replaced with normal network data drops,

### **Wireless Access in Schools**

All schools will be configured with ubiquitous wireless access. Any inhabitable room in the school will have wireless access sufficient to support the expected capacity of the room. In most instances, this will mean one wireless access point per room. (Exceptions will be very large areas: cafeteria, gym, auditoriums, etc. These rooms will require more than one.) Ceiling mounted data outlets will be required to support the wireless access points.

### **Classrooms**

- 5 data outlets for student instructional multimedia stations
- 1 data outlet for a networked printer
- 1 teacher panel with 2 data drops
- 2 data outlets for laptop carts
- 1 ceiling mounted projector system with 1 additional data outlet in the ceiling
- 1 ceiling mounted network drop for wireless access point (near center of room)
- 1 data outlet wall plate for RJ45 for IP or Digital phone (See Exhibit A (Typical Telephone Classroom Installation))
- 1 USB connection to be linked to the teacher plate for the connection to the mounted Digital Interactive WhiteBoard

**A total of 13 network drops required for each Classroom, plus 1 USB connection for mounted Digital WhiteBoard.**

Built-in casework for student workstations is preferred. The data outlets and receptacles should be provided below the work surface with an adequate number of slotted openings provided for cable pass-through. The slotted opening is better suited for the large connectors on video cable than a grommetted hole.



## **Computer Resource Lab**

- 30 data outlets to support multimedia workstations for students
- 4 data outlets for networked printers
- 1 teacher plate with 2 data outlets
- 1 ceiling mounted projector system with 1 additional data outlet in the ceiling
- 1 ceiling mounted network drop for wireless access point (near center of room)
- 5 additional data outlets for use with other technology equipment
- 1 data outlet wall plate for RJ45 for IP or Digital phone (See Exhibit A (Typical Telephone Classroom Installation))

**A total of 44 network drops are required for each Computer Resource Lab.**

- **Layout of the Computer Resource Lab**
  - Peripheral three to four-sided layout utilizing all walls in the room. Instructors in the middle school environment prefer all monitors be readily viewable.
- **Lighting in the Computer Resource Labs**
  - Should be circuited for multiple levels of control. Light fixtures should be provided with multiple ballasts allowing for 1/3, 2/3, and 3/3 illumination levels. Additionally, the light in the front 1/3 of the classroom (nearest the projection screen) should be controlled from different switches than the remainder of the space.
- **Storage Cabinets**
  - Locking overhead cabinets should be mounted on both side walls. The cabinets should be at least 36" in height [*clear, inside*] with adjustable shelving in order to accommodate two 14" deep shelves, 1" thick.
  - 36" deep, 36" high cabinetry with adjustable shelving and locking doors should be installed at the rear of the computer lab on the wall opposite the interactive board or screen. Network and electrical outlets would need to be placed above the top of the cabinets for easy access.
  - A wardrobe type cabinet should be installed in the computer lab. There should be adjustable shelving with locking doors. This would be placed in one of the corners of the lab.

## **Computer Resource Lab Office**

- The computer resource specialist office should be located adjacent to or in close proximity to the computer resource lab.
- There should be a minimum of 8 data outlets located on at least two walls of the office area with 12 electrical outlets spread out on all walls to accommodate plugging in 2 computers and monitors, 1 networked printer, scanner, laptop and alpha smart carts, and other electrical equipment.
- Built-in upper and lower cabinetry with locked, adjustable shelving should be placed on one wall.
- Owner furnished modular furniture should be designed into the office area allowing for access to network and electrical outlets. This furniture should provide a conference area for meeting with teachers.
- 1 data outlet for desk phone (IP or digital)

**A total of 9 network drops are required for each Computer Resource Lab Office.**

### **Curricular Computer Lab**

- 30 data outlets to support multi-media workstations for students
- 2 data outlets for networked laser printers
- 1 teacher panel for ceiling mounted projector with 2 data outlets
- 1 ceiling mounted projector system with 1 additional data outlet in the ceiling
- 1 ceiling mounted network drop for wireless access point (near center of room)
- 1 data outlet wall plate for RJ45 for IP or Digital phone (See Exhibit A (Typical Telephone Classroom Installation))

**A total of 37 network drops are required for each Curricular Computer Lab.**

### **Library Media Center Suite**

#### Library Media Center Main Floor

- 20 data outlets are required to accommodate 20 computers and 1 networked printer on the main floor of the library.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Sufficient electrical outlets should be provided to accommodate 20 computers and monitors, 3 printers, and other electrical devices.
- The electrical and network access should be configured with the island (short wall) configuration (see computer lab specifications for elementary school computer labs). This island(s) should be centrally located and easily accessible from both instructional areas of the library. DOT should be consulted with regard to the placement of the island(s).
- Owner furnished tables should be located in the area of the island(s).
- 8 additional data outlets and sufficient electrical outlets should be placed around the LMC for use of laptop carts and other electrical devices.
- Two ceiling mounted digital projector systems with two electrically operated projection screens should be provided in the media center. These screens should be located in an area which will support a reasonable concentration of 25 to 50 students.
- The teacher plates (one per projector) should be placed in each of these two areas.
- Furniture for the media center should be wooden furniture designed for library media centers. The Department of Technology does not endorse the use of plastic and metal furniture in the library media center.

#### Library Circulation Desk Area

- A minimum of 5 data outlets are required at the circulation desk.
- Data and electrical outlets should be installed under the circulation desk for easy access.
- 1 data outlet for phone (IP or digital)
- If circulation desk is included in CIP, DOT recommends that the desk be purchased from a recognized vendor as opposed to being custom-built.

#### Library Media Specialist's Office

- Sufficient space should be allowed to house two library media specialist and one library media assistant.
- A minimum of 9 data outlets are required in the Library Media Specialist's office.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Built-in, adjustable shelving and cabinetry should be placed in a manner that maximizes room usability.
- 1 data outlet for phone (IP or digital)
- Owner furnished modular furniture allowing for access to network and electrical outlets should be designed into the office area.

#### Audio-visual Workroom

- A minimum of 6 data outlets are needed in the audio-visual workroom.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Sufficient floor area should be provided for audio-visual equipment storage, laptop storage, AlphaSmart storage, area for additional equipment, and a work table area.
- Sufficient electrical outlets need to be provided. In the areas of built-in cabinetry, the electrical outlets should be above the cabinetry. It is recommended that 1 quad electrical outlet be placed every 4 feet around the perimeter of the room.
- Owner furnished shelving should be provided for storage in this area.

#### Television Production Room

- A room matching the dimensions of the regular instructional classroom should be provided for television production studio.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Closed circuit television access/setup (see requirements listed under television distribution system)
- 7 data outlets to accommodate computers.
- A minimum of 16 electrical outlets
- Adequate ceiling mounted lighting and acoustical tile should be provided.

#### Professional Library

- A minimum of 3 data outlets are needed in this area.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Sufficient electrical outlets should be provided on all four walls of this area.
- Sufficient built-in book shelving should be provided.
- A pull-down screen should be provided in this area.
- 1 data outlet for phone (IP or digital)

#### Conference Room

- A minimum of 3 data outlets are needed in this area.
- 1 ceiling mounted network drop for wireless access point (near center of room)
- Sufficient electrical outlets should be provided on all four walls of this area.
- A pull-down screen should be provided in this area.
- Ceiling-mounted multimedia projector system.

- 1 data outlet for phone (IP or digital)

#### Library Media Center Lighting

- The lighting in the library media center should be circuited for multiple levels of control. Light fixtures should be provided with multiple ballasts allowing for 1/3, 2/3, and 3/3 illumination levels.
- Zoned individual lighting should be provided to allow individual control of lighting in various and separate areas, (i.e., stacks, circulation desk, and instructional areas).
- Architects should keep skylights, windows, and emergency lights in mind when determining the placement of projector screens.

**A total of 71 network drops are required for the Library Media Center Suite.**

#### Faculty Work Area

- 5 data outlets for workstations
- 1 data outlet for a networked printer
- 1 ceiling mounted network drop for wireless access point (center of room)
- 2 additional network drops for future workstations
- 1 data outlet for phone (IP or digital)

**A total of 10 network drops are required for each Faculty Work Area.**

#### Auxiliary Areas

Each space within a school facility must be reviewed for its functionality not only at completion of construction but for its potential in the future. What may be a book storage room today may be an office tomorrow. There should be very few spaces in any school facility without at least two data outlets (computer and phone)

#### **Auxiliary area data outlet requirements are as follows:**

- A minimum of 2 data outlets should be placed in each office. Offices designed as shared spaces should receive a number of data outlets which should be at least double the number of staff scheduled to occupy the space. Data outlets should be placed in pairs (phone and computer) on multiple walls.
- Any room that is designed to be occupied by students, teachers or administrators must be wired to support wireless access points. As a rule, there should be one ceiling mounted data drop per 30 people. The calculation should be based on maximum occupancy of each room. If multiple drops are put in the ceiling of a room for wireless access, they should be distributed throughout the room, not installed side-by-side.
- The data outlet requirements for resource rooms is the same as for instructional classrooms.

- Each conference room should receive a minimum of 4 data outlets; 1 data outlet at each end of the room, 1 data outlet for a networked printer and 1 for a phone.
- Data outlets should be provided in pairs (computer and phone) in spaces, such as the clinic, parent resource rooms, the custodial office, the dietician's office, and at each serving line cash register location.
- Facilities provided with combination cafeteria/multi-purpose rooms with teaching platforms (stages) and auditoriums should have data outlets provided in two locations on the rear stage wall and a data outlet on the stage side of each wall forming the stage opening. Data outlets should be provided in a minimum of 3 additional locations throughout the cafeteria space. One data outlet for phone and a loud bell ringer should be provided in the serving area of the cafeteria.
- The auditorium should be equipped with a ceiling mounted projector system and 2 teacher panels. 1 teacher panel should be located in the center of the front stage and 1 teacher panel should be located in the control/projection room.
- 2 data outlets with video capability should be provided in the gymnasium and should be located in diagonal corners of the space approximately 15 feet from the end wall or at the end of the extended bleachers. One data wall jack for phone to be connected to a loud bell ringer. A cage should be mounted to protect the phone from damage during athletic events.
- At least 3 data outlets (2 for computers 1 for phone) should be located in the main entrance lobby. There should also be a ceiling mounted wireless access point.
- Special classrooms, such as art, chorus, band, and special education classrooms, should be provided with the same standards as a regular classroom. All practice rooms should have at least 2 data outlets for computer and phone.
- Large group instructional spaces, such as KIVAs and SCHOLAs, should be provided with a ceiling mounted projector system and extra ceiling data drop for wireless access point. A teacher's panel should be located on the rear wall for access to the multi-media projector.
- 1 network data outlet for phone to be installed in the administrative counter area for visitor and student use.
- 1 network data outlet for phone to be installed in the athletic field press box area for analog phone connection.
- 4 network data drops are needed to support the attendance modems in the office area.

- 4 network data outlets to support connecting the paging system to the phone MDF to be cross connected to the phone system for analog trunk ports.
- 4 network data drops in the phone system equipment area to be used to connect the phone system to the main MDF.
- Network data outlets are also needed for each fax machine and credit card machine, where previously served by 'phone' drops.
- 3 regular **phone** drops of the 'old' analog kind are required for emergency power outage situations. One in the Principal's office, and two in the main administrative office area centrally located in opposite sides.
- 1 regular **phone** drops of the 'old' analog kind is required in the main MDF room for technology support.

**NOTE:** These auxiliary spaces should also be provided with a video outlet for connection of a camera to enable the broadcasting of events within the room throughout the school on the video distribution cabling.

### **Other Design Considerations:**

- In spaces with large concentrations of computers, such as Business Labs and Curriculum Computer Labs, a multi-level lighting system should be provided to enhance viewing of monitor screens.
- Rooms with large concentrations of computers may also require more cooling than an average room.

### **Foundation Level Equipment needs**

#### **ARS Scanner**

- 1 data outlet per school to serve an ARS Scanner. This data outlet should be located in a general area accessible by all staff for the purpose of scoring pre and post tests. The location of this outlet should be as directed by the Building Administrator or CRS.

#### **AlphaSmart Carts**

Storage space is required for this piece of technology equipment.

- The cart is approximately 4' long by 2' wide. It houses up to 30 AlphaSmart units (wireless keyboards with mini-screens).
- The cart requires a 20A-120V receptacle for overnight battery charging. When in use, the cart plugs into a standard 20A-120V receptacle.

The Computer Resource Specialist at each facility should be consulted concerning the number of carts that will be required.

## **StarPanel**

- 1 panel per classroom

## **Scanner**

- 1 scanner per Computer Resource Lab

## **Document Camera**

- 1 per classroom
- 1 per Computer Resource Lab
- 2 per Library Media Center

## **Network Printers**

In addition to the networked printers previously identified as dedicated to particular instructional spaces,

- 2 data outlets for networked color laser printers and
- 2 data outlets for flatbed scanners.

The Computer Resource Specialist should be consulted concerning the desired location for each.

## **Wireless Keyboard and Mouse**

- 1 per classroom
- 1 per Computer Resource Lab
- 2 per Library Media Center

Wireless keyboards should have multiple RF options.

## **Television Distribution System Requirements:**

**NOTE: Input needs to be provided from Wendall Jenkins, School Plant and Susan Richard, Department of Technology.**

The functionality of the television distribution system should provide for in house broadcasts and in house playback on at least 5 channels.

- Broadcast distribution is required throughout every school facility. All instructional spaces and most auxiliary spaces are to receive video outlets.
- Teacher panels, which include a video outlet, are to be provided in all instructional spaces and selected other spaces.
- Other auxiliary spaces, as specified below, in need of video outlets.
  - The main entrance lobby. The number of video outlets in this space shall be determined by the design of the school and specifically the size of this space. The purpose of this outlet is to provide a video bulletin board of school activities to the school staff as well as visitors to the school.

- Cafeterias are to be provided with a minimum of two video outlets located strategically in the main space. Additionally, a teacher panel should be provided on the backside of the stage wall.
- Additional video outlet locations include all administrative offices (Principal, Assistant Principal, Guidance Counselors), the Library Media Specialist's Office, the Computer Resource Specialist's Office, teacher workrooms, office waiting area, clinic, and other spaces as deemed necessary by the Department of Technology.
- Head-end equipment should be located in the library media center for easy access by the Library Media Specialist. The television distribution system shall provide for five channels and access to channels provided by franchised cable TV systems, such as Cox. The incoming Cox cable shall terminate in the head-end equipment room where the TV distribution equipment is located.
- Two data outlets should be installed close to the head-end of the video distribution system to allow computer access to video distribution.

### **Technology Power Considerations:**

**NOTE: Information in this section needs to be reviewed by electrical contractor.**

#### **General rule:**

**1 quad electrical outlet is required per 2 data outlets**

#### **Exceptions to the rule include:**

**Teacher panels**

**Other equipment requiring electrical outlets**

In order to adequately support the technology systems provided in VBCPS schools, careful consideration needs to be given to the branch circuitry design such that the facilities are provided with sufficient electrical distribution enabling all technology equipment to be used simultaneously.

Generally, a 20A-120V circuit will support 4-5 multi-media stations using 17" monitors. When designing branch circuitry serving printers, the type of printer being must be identified and the appropriate branch circuitry be provided. Laser printer locations should be provided with dedicated 20A circuits. A single 20A circuit can serve multiple inkjet printers. Consideration should be given, however, to providing dedicated 20A circuits for all printers in anticipation that laser printers are likely to be provided at those locations in the future. All printer locations shall be provided with network drops.

Dry-type transformers provided for service to the technology equipment in the facility should be K-4 rated. Consideration should be given to future additions to the technology



infrastructure within each building with anticipation that virtually every 120/208V panelboard may at some point in time serve a technology load. Only those transformers serving loads, such as mechanical and kitchen equipment, should be of the standard rating type. The project electrical designer should avoid to the degree possible serving mechanical equipment loads from the same panel serving computer workstations.

Panelboards provided to serve technology equipment loads should be specified with full-sized, double neutrals. Branch circuitry serving computer loads should be provided with individual neutrals per phase. The sharing of neutrals by circuits serving computer loads is not acceptable. No more than three individual phases (A phase, B phase, and C phase) plus three neutrals are to be installed in a single conduit. It is recommended that this practice be employed for all general receptacle circuits throughout the facility.

Each 120/208V panelboard serving or likely to serve technology equipment should be provided with a panel-type surge suppression device (TVSS). This device should be installed in accordance with the manufacturer's recommendations with particular attention paid to the length of conductor between the TVSS and the circuit breaker which protects it. Panelboard-type TVSS devices are generally provided with approximately 18" of conductor connected thereto. These conductors should not be extended. Depending on budget availability, TVSS devices with audible alarms should be specified.

The main service entrance equipment should also be provided with a Service Entrance Rated TVSS device to protect the facility from incoming surges and spikes as well as surges caused by large mechanical equipment which may be connected at this location.

Receptacles designed for use with technology equipment shall be grey in color. General purpose receptacles for non-technology loads shall be ivory in color. All receptacle coverplates shall be ivory in color.

No "master disconnect" or "push button" controlling a main line contactor shall be provided in the circuitry serving technology equipment loads.

Docking stations shall be provided for overnight charging of laptop carts. Each cart will seat 20 laptops. There will be three carts in each facility. The exact electrical requirements for these carts should be obtained from the Department of Technology. The docking location should be coordinated with the Computer Resource Specialist.

### **Network Configuration**

All cabling shall comply with the following standards:

- ANSI/TIA/EIA-568-A "Commercial Building Telecommunication Cabling Standard"
- ANSI/EIA/TIA-569-A "Commercial Building Standard for Telecommunication Pathways and Spaces"

- Contractor shall utilize installation methods as recommended in the “Building Industry Consulting Services International (BICSI) Telecommunications Distributions Methods Manual”
- The data network and cabling design shall provide IEEE-compliant CAT 6 plenum cabling from each activated data\phone port to an IDF or MDF. These cables shall terminate in 24-port or 48-port patch panels installed in full height, floor-mounted racks with side panels and lockable front and back doors. Patch panels should be provided in a quantity that provides a minimum of 10 spare ports in each IDF location and 20 spare parts in an MDF location. The facility should be provided with a 12' long jumper cable (computer to data\phone outlet) and a 5' long patch cable (patch panel to switch) for each activated data\phone port in the building. The data cabling, patch panels, and floor racks are supplied and installed by the Contractor.
- Cable organizers need to be installed in each rack, between patch panels and/or switches
- The jumper cables and patch cables should be turned over to the facility for their use.
- Cable Trays are to be used in ceilings, where this is not accessible J hooks are to be used ABSOLUTELY no acute angles to be run on fiber. (wrapped around the walls) Service loops of 10' to be applied at all terminations.
- Telecommunications cabling is also CAT 6 plenum
- Cables should be labeled to match rooms and IDF/MDF locations. Fiber should be labeled.
- Fire stop all cable and conduit to meet all national and local fire codes. All walls must maintain their fire rating.
- Electrical and Voice/Data drops installed must be at least 5” apart as stated by industry standards.
- All fiber optic cable is to be connected through a rack-mount fiber termination cabinet (Superior Fiber Optic XP/N TRC-18 or equivalent). A 10' service loop must exist and be neatly wrapped within cabinet. Hazardous warning labels are to be permanently attached where applicable. Cable is to be properly labeled at each end with room/rack location. Fiber cords are to be left attached to the fiber enclosure.
- Conduit must meet or exceed requirements as stated in EIA/TIA-569 standards. Conduit shall be reamed throughout and bushed at both ends. There shall be no more than two 90-degree bends between pull points. Pull strings are to be left in conduits that are not filled to maximum capacity. Conduit must be uniformly installed and firmly. Cable Trays shall have an electronic zinc galvanized finish and installation shall comply
- Cable-bend radii shall not be less than four times the cable diameter for horizontal cable." This applies to termination on the back of the patch panel and outlet location where the horizontal cables terminate and bend-radius stability can occur due to securing the cables in place by tie wraps or other means.

## **MDF/IDF Room Standards:**

**These standards are to set forth the minimum requirements for file server rooms (MDF-Main Distribution Frames) and patch panel rack locations (IDF-Intermediate Distribution Frames).**

IDF Rooms (size, cooling, and electrical requirements may change in proportion to the amount of equipment needed)

- IDF locations should be provided throughout school facilities in order to limit the total cable length between a data network drop and the patch panel to which the cable connects to a maximum of 290 feet. IDF locations should be individual spaces, not a space within a space shared by others or other equipment.
- The IDF room should be nominally 9 foot by 9 foot in size and be provided with a lockable door which opens out of the space. Each IDF location should be provided with 2 30A, 120V twistlock receptacles, each fed from a dedicated rack mounted UPS. The UPS should be fed from a grounded circuit. The circuits **MUST** emanate from a power panel supported by an emergency generator since power to the phones are fed from these closets. (Safe Schools)
- Patch panels and enclosures shall be mounted in a floor mounted rack securely fastened and free from vibration and workspace clearance around the rack of 3 ft. The rack shall be grounded.
- The IDF room should have sufficient cooling and airflow to maintain a temperature between 60°F and 70°F with a heat load of approximately 4,000 watts, 12,000 BTU/H. Relative humidity can maintained within a range of 5 to 95% at 30C non-condensing. The cooling system must be connected to the school generator to prevent overheating conditions during power outages.
- Each IDF location should connect to the MDF location using a 8-strand multi-mode fiber. All fiber should terminate in a fiber enclosure. The fiber termination should be a Type SC, with SC-SC 6-foot zip-cords.
- Location of Patch panels and electronics shall be installed in the rack as indicated in Exhibit B

MDF Rooms (size, cooling, and electrical requirements may change in proportion to the amount of equipment needed)

- An MDF location shall be provided in each school facility. The MDF location must be an individual space, not a space within a space shared by others or

other equipment. The MDF room will be the location for all file servers, racks, WAN equipment, Telephony, and network equipment at the facility.

- The MDF room should be nominally 10 foot by 12 foot in size and be provided with a lockable door which opens out of the space. The MDF room should be provided with 4 20A, 120V quad receptacles, and 4 30A 120 V twist-lock outlets; each fed from a dedicated circuit. The circuits should emanate from a power panel supported by an emergency generator if a generator is included in the project.
- The MDF room should have sufficient cooling and airflow to maintain a temperature between 60°F and 77°F with a heat load of approximately 12,000 watts, 37,000 BTU/H. Relative humidity can maintained within a range of 5 to 95% at 30C non-condensing and should not be conducive to generating electrostatic energy. The cooling system must be connected to the generator to cool the room during extended power-outages.
- The room should be clean, dust free, and all ceiling tiles present. While lighting should be conducive to permit work on equipment, direct sunlight is not allowed to shine on the electronics
- Liquid carrying pipes shall not be located directly above the racks.
- Fire protection should be installed that meets NFPA 75 specifications.
- Telephony equipment shall be mounted in a 19" floor mounted rack securely fastened and free from vibration and workspace clearance around the rack of 3 ft.
- A  $\frac{3}{4}$ " plywood backboard shall be mounted on the sufficient to carry the minimum weight of 300 lbs
- The telephony and data racks shall be located 12 feet away from electromagnetic, electrostatic, or Radio frequency sources.
- All racks shall be grounded and supplied with rack mounted UPS systems. This should be single point ground reference installed in the AC service panel and should measure no more than 5 ohms. Ground connections shall be clearly marked with instruction not to remove. All supply conductors in the AC service panel are installed in the same raceway (phase, neutral ,ground wires). The ground conductor in the service panel should not measure more than .5 amps and should not be smaller than any phase conductor in the same conduit. The difference of potential between the isolated neutral bus and the ground bus (IG or ACEG) in the service panel should measure no more than .5 Vrms. Neutral to ground bonding must be performed at the serving transformer.

- Power wiring must not be installed parallel to data\phone cabling.
- Servers, routers, and switches shall be supported on contractor furnished data equipment floor standing racks of 42U; model HP 10642 or Dell 4210 or equivalent HP or Dell racks. Racks must include heavy duty lockable wheels, have closed side panels, lockable front and back doors; top mounted heat exhaust fans and open bottom for cable access. Side panels and doors must provide adequate ventilation.
- Racks must also include 1U LCD display/keyboard/trackball assembly and an IP accessible 16 port KVM switch.
- Racks must include dual UPS systems and dual redundant electrical wiring. The UPSs require dual industrial 30 amps power supplies for a total of 4 30A 120 V outlets as mentioned above.
- The MDF room will also serve as the landing location for school incoming fiber optic cabling and the incoming telephone cabling. There must be 4 physical entrances for data through Contractor-provided, underground conduits of minimum 3 inches in diameter following 2 separate physical paths in two pairs. These building data cabling entrances must be spaced separately from any electrical power entrances by at least 18 inches apart.
- A detailed floor plan of the MDF to include wiring and electrical diagram shall be provided.
- Racks must also include two 24-port gigabit copper switches and dual fiber ports, pre-wired to provide dual redundant network connectivity. Each network wiring system must be of different color (not black, white or red) and must be placed on a different side of the rack. All switches must support power over Ethernet (PoE)

#### Network Servers

- All servers should be located in the Main Distribution Frame (MDF) room, rack which is discussed elsewhere in this document.
- The servers anticipated to be required in an secondary school are as follows:
  - 1 Windows 2003 server for applications and SOL caching
- The Department of Technology should be consulted as to the number of servers that are required at a specific site.

#### Main School Fiber WAN routers

- All routers should be located in the Main Distribution Frame (MDF) room, rack which is discussed elsewhere in this document.

- The routers anticipated to be required in an elementary school are as follows:
  - 2 CISCO 3570G (or equivalent) with enhanced image, 4 SFP
- Cisco RPS 675 (model PWR675-AC-RPS-N1=)to provide redundant power to the 3560
- The Department of Technology should be consulted as to the exact type of WAN equipment that is required at a specific site.

#### Telecom Equipment

Sample listing of equipment to be installed in the Telephone Equipment Room 19' Rack:

- |   |   |
|---|---|
| 1 | CS1000M Chassis with up to 2 Expansion Cabinets         |
| 1 | Nortel Signaling Server                                 |
| 1 | Baystack 470  |
| 1 | APC 2200 UPS  |
| 1 | SEB Modem (Netsend Modem)                               |
| 1 | Music source storage device                             |
| 1 | Environmental Monitoring Cards and Switch               |
| 1 | 19", 7 foot floor mount rack to support above equipment |

#### Other Design Considerations:

- Consideration should be given to providing a separate air-conditioning system to support the spaces containing the Main Distribution Frame, any head-end equipment associated with the technology systems provided in the facility, and the main building servers. This equipment should be provided with emergency power.

**Exhibit A**  
**(Typical Classroom**  
**Telephone Installation)**

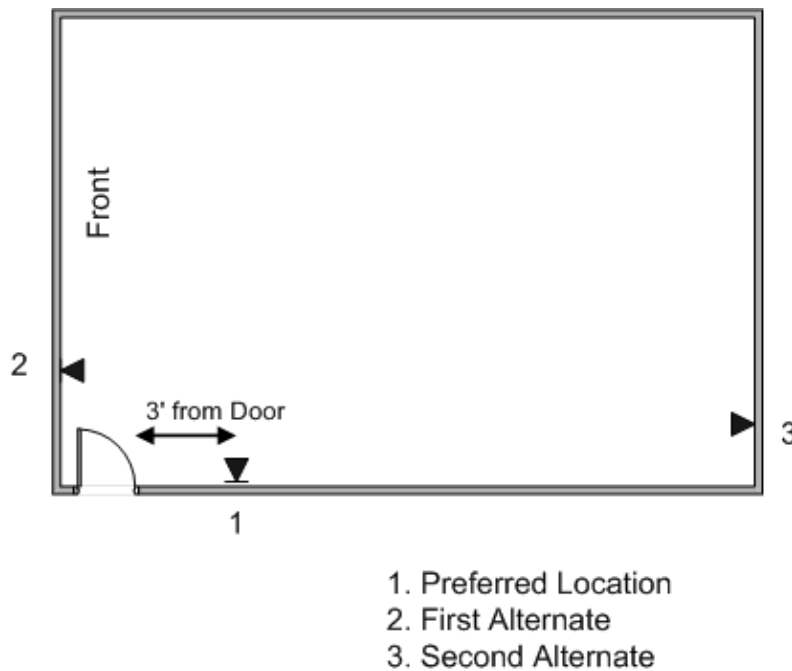
The below diagram notes the standard position of the installation of all new telephone sets that are to be installed by DOT for the replacement program. This standard was designed and is supported by the Department of Administrative Support Services, Security and Safe Schools.

Technicians have been instructed to install an RJ45 wall outlet to support the phone (IP or Digital) in the follow order:

- The standard installation, as designated on the diagram as preferred, will be a wall phone installed 3' foot from the door jam as designated on the diagram. This distance will reduce the risk of student access from the hall.
- If this is not feasible, the first alternative as designated on the diagram, will be utilized. This is approximately 3' from the doorjamb. This distance is necessary to avoid staff from being injured when utilizing the phone.
- The second alternative as designated on the diagram, has been identified to avoid line of site from the door.

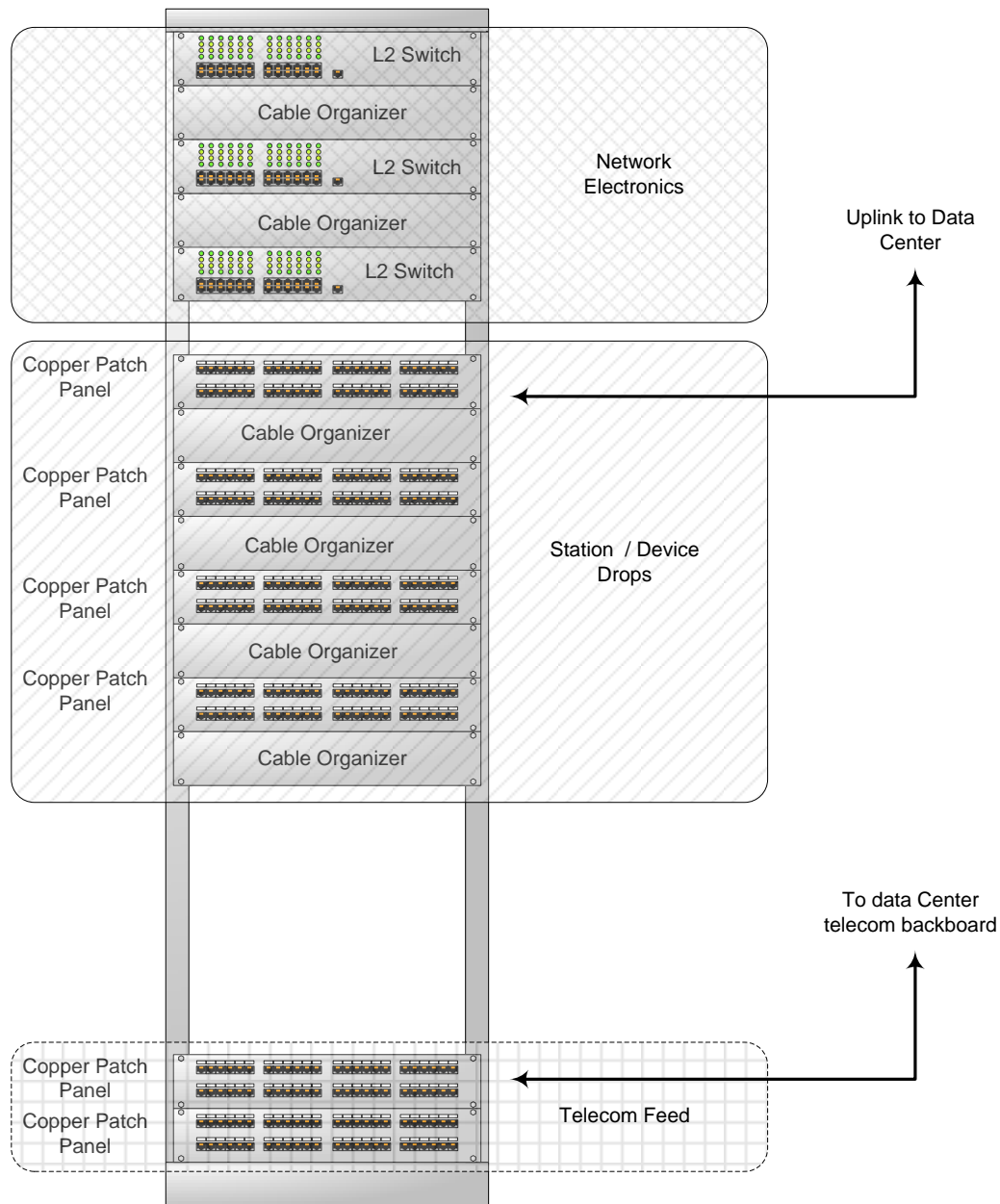
These standards will support DOT objectives to standardize the installation for all schools, support safe school initiative, reduce cost and provide for timely installations. All voice outlets to be installed at the level to meet ADA requirements.

Typical Classroom  
Telephone Installation



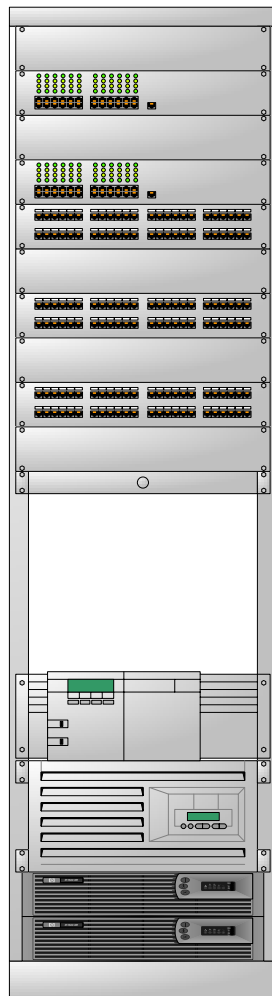
## Exhibit B

### IDF Rack Cabling Distribution





## MDF

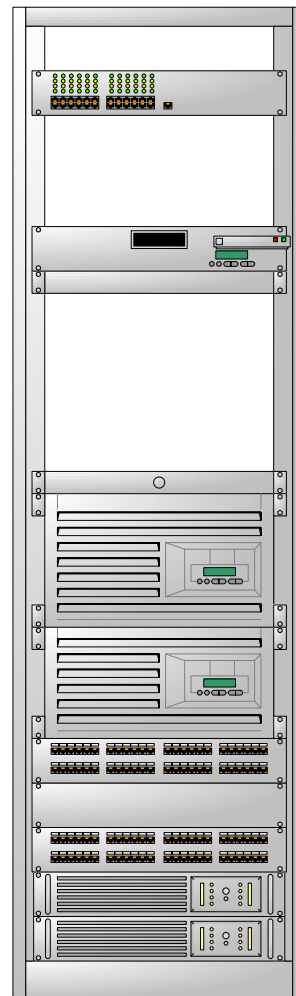


Fiber Enclosure  
Layer 2 Switch  
Cable Organizer  
Layer 2 Switch  
Patch Panel  
Cable Organizer  
Patch Panel  
Cable Organizer

Router

Server

Telecom



1000M