



---

---

BEVERLY PUBLIC SCHOOLS

---

---

## **EDUCATIONAL SPECIFICATIONS**

### **Beverly High School**

Beverly, Massachusetts

**January 10, 2007**

#### **Beverly School Committee**

Nancy Brusil, President  
Annemarie Cesa, Vice President  
Maria Decker, Secretary  
James Latter  
Paul Manzo  
David Manzi  
William Scanlon, Mayor

#### **Superintendent of Schools**

Dr. James Hayes

#### **Beverly High School Principal**

Dr. Carla Scuzzarella

### Table of Contents

Letter from the Superintendent ..... 3

What Are Educational Specifications? ..... 4

Why Develop Educational Specifications? .. 4

What Does MSBA Require? ..... 5

Introduction ..... 6

General Overview of the Project ..... 6

Educational Vision and Program

- Community Background ..... 7
- Mission & Expectations ..... 7
- Beliefs & Trends ..... 7
- Special Features ..... 9
- Enrollment Projections ..... 13

General Design Considerations ..... 14

- General Functional Relationships ..... 15
- General Facility Needs ..... 17

Humanities Wing

- First Floor ..... 21
- Second Floor ..... 23
- Third Floor ..... 25

STEM Wing

- First Floor ..... 26
- Second Floor ..... 28

Main Square

- First Floor ..... 30
- Second Floor ..... 32

Performing Arts & Related Spaces ..... 34

Field House

- First Floor ..... 38
- Second Floor ..... 40

Cafeteria & Food Service Area ..... 42

Buildings & Grounds and Transportation .... 44

Site Considerations

- Athletic Fields ..... 46
- Parking ..... 47
- Access for Vehicles & Buses ..... 47
- Exterior Lighting ..... 47
- Landscaping ..... 47





**BEVERLY PUBLIC SCHOOLS**  
502 Cabot Street  
Beverly, Massachusetts  
01915

Telephone (978) 921-6100  
Fax (987) 922-6597

James J. Hayes, Ed.D.  
Superintendent of Schools

Marie E. Galinski, Ed.D.  
Assistant Superintendent

January 10, 2007

This is an exciting time for the City Of Beverly! Construction of a new Beverly High School to serve our students and community for decades to come is a most significant undertaking for this City! On behalf of the Beverly Public Schools, I want to again thank Mayor Bill Scanlon and the Beverly City Council for their leadership in making this project a reality!

The document that follows has been prepared to articulate to the professional designer the educational program and the scope and requirements for a completed facility. Similarly, it is intended to inform members of the community so that they may learn of the proposed plans, provide input, and generate questions. It represents over a year's work by members of my office, the staff and administration of Beverly High School, and the School Committee.

These educational specifications are only a first step toward a design. They are a starting point for many further discussions with the designer firm. Therefore, we have described fully what we would like to see in a new facility but recognize that not all of these proposals will be achievable. The diagrams shown in this document are only meant to identify and show the relative locations of various spaces. By no means are these diagrams intended to be a design for the facility.

Since 2002, the concept for a new academic wing has been a building that parallels Sohier Road, stretching across the upper and lower parking lots. This concept has often been referred to as "Option 4". This document has been prepared with that concept in mind. However, the professional designers are not strictly limited by this concept. The firm that is hired needs to bring their professional expertise to site placement and design of the facility. For example, the designer firm selected for this project has suggested that we consider a four story academic building constructed in the lower parking lot area. We have come to see some advantages to such a design and remain open to new ways of thinking that will provide this community with the best building possible.

The Beverly Public Schools are quite proud of these Educational Specifications. The thoughtful efforts of many people have produced a document that is forward-thinking, clearly expressed, and which will serve us well in the next stage of designing our new Beverly High School! I wish to express my personal thanks to all of those individuals.

I encourage citizens of Beverly who read this document to feel free to email me ([jim.hayes@beverlyschools.org](mailto:jim.hayes@beverlyschools.org)) with their questions and comments. Through our collective efforts, we will build a new High School of which all of Beverly will be proud!

Sincerely,

James J. Hayes, Ed.D.  
Superintendent of Schools

## What Are Educational Specifications?

### Definition

Educational specifications are a written means of communicating between the educational community and the design professionals. They are the means through which educators and school officials articulate to the professional designer the educational program and the scope and requirements for a completed facility.

### Characteristics

Educational specifications are the responsibility of the educators and school officials. They should:

- Involve educators and community representatives in the definition of educational needs.
- State the educators' concept of space and program needs and leave methods of satisfying the needs to the design professionals.
- Eliminate oversights that are expensive to correct once construction is complete.
- Be free of rigid prescription.

## Why Develop Educational Specifications?

### Means of Communication

The primary purpose for developing educational specifications is to provide an effective means of communication between the educational community and the design professionals. In addition to written educational specifications, discussions and visits to other similar facilities may greatly aid in communication and understanding. Better communication will lead to a facility that responds to the specific needs of the entire community.

### Means of Shaping Thought and Reaching Consensus

A second purpose for developing educational specifications is to provide an opportunity for the staff and school officials to collect and analyze pertinent information about critical factors, such as population growth and financial possibilities, and to solidify their thinking with regards to:

- Philosophy and objectives of the school
- School organizational structure
- Program of studies
- Services to students and the community
- Systems for delivering teaching and learning
- Furniture, equipment, and technology
- Environmental considerations
- Space relationships
- Utilization of space

### Public Relations

Developing educational specifications involves the community. In gathering information, numerous contacts must be made with individuals, groups, and various community agencies. These interactions provide a means by which the community, as well as those engaged in the process of gathering and assembling information, may learn of the proposed plans, provide input, and generate questions, and thus increase their support for the project.

### Decisions

Educational specifications serve as a record of decision making. Educational decisions should be reached after involving all stakeholders in a collaborative process, should be in concert with the educational program, and should be made and recorded in accordance with accepted planning procedures.

## What Does MSBA Require?

The Massachusetts School Building Authority refers to educational specifications as the “Design and Educational Program”. In the regulations adopted by the MSBA Board on September 6, 2006, a Design and Educational Program document, necessary for project approval, is defined as

“... a numerical and written description of a specific educational program for a specified number of students over a specified period of time, in a format prescribed by the Authority, together with an itemization of spaces needed to support the educational program, complete to a degree that a designer may use it as the basic document from which to create the design of the new facility.

A Design and Educational Program shall include, but not be limited to,

- the instructional programs,
- grade configuration,
- type of facility,
- the spatial relationships for the functions housed at the facility,
- the number of students,
- a list of any specialized classrooms or major support areas, non-instructional support areas, or external activity spaces,
- gross and net square footage of any affected existing facility,
- the overall security and security measures taken to safeguard the facility and its occupants,
- the school administrative organization,
- the hours of operation that include the instructional day, extracurricular activities, and any public access or community use.

The Design and Educational Program shall begin with a thorough, in-depth explanation of curriculum goals and instructional activities that occur within the learning environment. The Design and Educational Program shall comply with the applicable law and applicable Massachusetts Department of Education regulations including, but not limited to, regulations relative to curriculum, program, student learning time, and length of school year. A Design and Educational Program shall include an itemization of each functional space and determination of square footage allocations to determine total building square footage and establish a realistic construction budget, as determined by the Authority.”

The description of educational specifications in the pages that follow addresses most of the necessary elements which must be included in the Design and Educational Program submission to MSBA. It has been developed with input from school staff and administration, School Committee, students, parents, and members of the community. Its contents will be informative to the project designer in working with the school community to further refine these elements, to complete the Design and Educational Program requirement, and to create the design of the new facility that best meets the needs of future generations of Beverly’s high school students.

## Introduction

In spring 1965, Beverly High School students walked a quarter mile from the old high school (now Briscoe Middle School) to the new high school at 100 Sohier Road. At that time, Beverly Trade School, known as the Claude H. Patten Vocational School, and Beverly High School were combined into one building. In 1973, Beverly’s citizens voted to join the North Shore Regional Vocational District, which eventually opened the North Shore Technical High School. Since then, Beverly has maintained an allotment of about 100 students at that school. The Beverly School Committee gradually phased out its vocational school. In September 1997, the remaining vocational functions were moved to North Shore Technical High School, and the vocational wing was converted into a temporary elementary school. When the five year elementary school building program was completed in 2002, the former vocational wing returned to high school control.

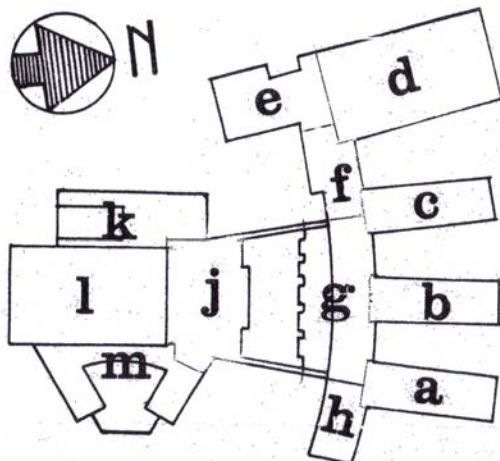
Over the years, the high school facility has aged. In September 2000, the New England Association of Schools and Colleges (NEASC) placed the High School on "warning", citing deteriorating condition of the building, its infrastructure, and its instructional equipment. Shortly thereafter, the City of Beverly, acting through its Building Commission, engaged the architectural firm Symmes Maini & McKee Associates (SMMA) to conduct a feasibility study of Beverly High School. The purpose of the analysis was to provide a comprehensive examination of the current High School and to develop options and costs for future facilities needs. That report, published July 8, 2002, is available on our district website [www.beverlyschools.org](http://www.beverlyschools.org).

The feasibility study details a number of serious infrastructure issues with the current facility and recommended that the City consider a combination of new construction and renovation to remedy the situation. This option would retain the Field House, Auditorium, and Cafeteria spaces and construct a new “academic wing” that would house all classrooms and specialty spaces. The Beverly School Committee and City Council have endorsed that option (referred to as Option 4) as our concept for Beverly High School. These educational specifications are presented with that concept in mind.

## General Overview of the Project

### Renovated Areas

Certain portions in the current facility, generally referred to as the “common spaces”, will be retained and renovated. These spaces include the field house (area l below), small gym, locker rooms, boiler room, and custodial office (area k), cafeteria and kitchen (area j), and auditorium and music rooms (area m). These areas will require substantial renovations in order to meet present day building and handicapped codes. Additionally, certain reconfigurations will be necessary to meet current educational requirements. Renovation of the site will also include renovation of athletic fields.



Current Beverly High School Footprint

### New Construction

A new academic building will house all academic classrooms as well as a library media center, administration, and support areas. This new building would be constructed east of and adjacent to the existing building, in a design that is a combination of two and three story wings and which connects to the renovated common spaces. The design needs to include an improved traffic flow pattern. Following completion of the construction project and opening of the new High School facility, the existing academic wings structure (areas a through h) would be demolished, providing space for new parking lots, tennis courts, and other site improvements.

## Educational Vision and Program

### Community Background

A residential and industrial community located 18 miles north of Boston, Beverly is comprised of fifteen square miles of natural beauty, resources, parks, woodlands, beaches, stately homes, and a lively harbor along nine miles of Atlantic coastline. Founded in 1626, the City of Beverly is one of the oldest communities in the state. Residents describe their city as the birthplace of the United States Navy, noting that the first ship commissioned by the Navy first sailed from Beverly Harbor.

Beverly residents have watched an interesting shift over the past 50 years. The City has changed from an industrial site with huge manufacturers like the United Shoe Machinery Corporation, to a bedroom community that is 85% residential which emphasizes its academic and cultural facilities more than the industrial parks that now house mixed computer and other high technology firms. The City is the home of Endicott College, a four-year, private coed college, and Montserrat College of Art as well as the widely acclaimed North Shore Music Theatre, which brings in hordes of visitors to glittering Broadway-type productions. Intact in Beverly is the spacious echo of the past since the city is still the home of some of the most historic families in America on gracious estates in the northern portion of the community. Residents note the highly-respected hospital, new library, new senior center, municipal airport, the miles of beautiful beach, numerous commuter stops for public transportation, and the diverse sections of the community that offer everything from rural to urban.

### Mission & Expectations

Both the school district and High School have established mission statements which serve the school community as guides in shaping our educational vision and program.

The mission of the Beverly Public Schools is *“To enable all students to reach their potential through an academically challenging and diverse education.”*

The mission of Beverly High School is to provide a safe, respectful environment in which all students are challenged to reach their academic and social potential.

#### *Academic Expectations*

Beverly High School students will:

- Communicate clearly through a variety of media.
- Read, understand, and interpret materials.
- Apply a variety of problem-solving skills.
- Obtain, evaluate, analyze, and apply data.
- Pursue and participate in modes of artistic and creative expression.

#### *Social Expectations*

Beverly High School students will:

- Practice responsible citizenship.
- Respect self and others.
- Accept responsibility.
- Work cooperatively.

### Beliefs & Trends

Our challenge as a community in developing these educational specifications is twofold. First, we need to articulate our vision of the education that will be necessary in the foreseeable future that will enable all students to reach their academic and social potential. That is not an easy task because it incorporates some elements of predicting the trends, in both education and in the world in general, that will shape our children's future. Once this vision is articulated, the second major challenge will be to design a new high school facility that will support that vision and be able to adapt to changing needs of the educational program. The facility we create will need to serve those purposes well for at least the next four to five decades.

As daunting as those challenges may sound, there are a number of major trends and beliefs that we, as a school community, believe are important to consider in designing our new high school facility. Among these are the following:

#### *Preparation for the Future*

- a. The world that our children will face will grow increasingly more dependent upon the use of technology to communicate and solve problems. Distance and language differences will no longer be obstacles, opening the way to broader forms of collaboration and accomplishing work. Students utilize technology best when they have direct access to it, and a facility that fully supports wireless technology will maximize teaching and learning opportunities.
- b. The ability to adapt to changing conditions, in both personal and work environments, will become increasingly important. While “life-long learner” has become an overworked phrase, it is nonetheless important that our children be ready to constantly learn new skills and knowledge throughout their lives if they are to be able to lead productive, satisfied lives.
- c. The economic world is being reshaped, with countries like China and India swiftly establishing new and major roles. This trend is making the competition for many jobs and businesses into a global competition. Our students need to be prepared to both recognize this challenge and compete in an increasingly global marketplace.
- d. Employment opportunities for the North Shore and Metropolitan Boston regions will continue to reflect major emphases in business/finance, high tech, biotechnology, health care, higher education, and a variety of industries related to tourism. Preparing our students for careers in those industries not only supports the region but allows our children the opportunity to remain in the community and region as adults.

#### *Academics*

- e. The major academic emphasis in education on English language arts and mathematics will continue. They are the staples of being able to effectively communicate and work with data. In the future, however, it will be necessary that physical and life sciences, including practical applications in engineering and technology, become a major emphasis in high school education. Along with language and mathematics, knowledge and skills in the sciences will increasingly become essential for our students to successfully compete.
- f. Strong programs in social studies and foreign language will be necessary to produce the intelligent, productive citizenry that our society requires.
- g. The goal of producing well-rounded high school students will continue to be important to the community. Opportunities to develop interests in the visual and performing arts, athletics, and leadership will need to be supported by the facility.
- h. Disturbing trends in the area of personal health (obesity, substance abuse, divorce, mental health issues, etc.) require that our children be provided with the support services, knowledge, skills, and opportunities that will allow them to develop good personal health habits that will lead to healthy, well-adjusted lives.

#### *Learning Environment*

- i. A growing body of research indicates that students perform better in smaller, rather than larger, learning communities. Such research suggests that it is better to look for ways to break up schools into smaller groupings (no more than 400 students) where teachers and students can more closely interact with one another, both socially and academically.
- j. Similar research supports the belief that smaller class sizes support improved student performance. However, alternative forms of instruction may be desirable (or made necessary because of limited resources) in the future. Teaching and learning may take on new forms in terms of online courses and large and small group instruction.

#### *Community*

- k. School facilities are an integral part of the life of the community. The new High School needs to be designed in a way that allows partnerships with community organizations and facilitates community use.
- l. Protecting our environment will continue to grow as an area in need of our attention. Cleaner air and greater water and energy efficiency are in all our best interests and will be ever more

important in the future. Our new facility needs to incorporate features that maximize this interest and which support teaching our students about the need to protect our environment.

The educational vision for Beverly High School combines the school's mission and expectations with these beliefs and trends. First and foremost, the new Beverly High School must support a comprehensive academic school program, including English language arts, mathematics, science & engineering / technology, social studies, foreign language, business & computer technology, art, music, drama, wellness, and family & consumer science. This program will be complemented by a variety of athletic and cocurricular opportunities and supported by a number of student services.

### **Special Features**

There are several important aspects in our educational vision that we consider special and which deserve further clarification. These include the organization of the learning community, the use of wireless technology, the emphasis on science & technology / engineering, the use of "green schools" design features as learning tools, and several innovative community uses and school district needs.

#### *Organization of the Learning Community*

The environment of a school can be judged by the quality of the interactions among the members of the community. To this end, the Beverly High School community should be organized in ways that facilitate this interaction. Specific information regarding the location of various programs will be provided later in this document. However, it is important to describe here the broad context of how spaces for teaching and learning are organized within the school environment.

The core academic subjects of English language arts, mathematics, science, social studies, and foreign language are to be organized within the school so that each can work as a cohesive department, allowing for sharing of resources and teacher interaction. A second level of organization, however, would place spaces for mathematics and science & technology / engineering instruction in close proximity to one another, facilitating collaboration between those departments and enhancing the technology / engineering aspect of the school program. Similarly, humanities programs will benefit from being in close proximity. Departments will share space in large faculty planning areas which will further support collaboration.

The location of specialized learning spaces enhances the school's programs. Because it is central to teaching and learning in all disciplines, the library media center should be located in a space that is central to the core academic areas. Spaces for music and art need to be located near to the auditorium. While much of the wellness program is conducted in the field house area, there is a need for classroom space as well as cardiovascular fitness and weight rooms in that area. Instructional spaces for family & consumer science, ROTC, and business & computer technology are somewhat more flexible relative to their location in the building.

The design of the facility should provide flexibility in the delivery of instruction, demonstration of student learning, and engagement of students in their own learning. Spaces need to be flexible to allow for both group and individual work. Spaces need to support traditional learning activities, performing and creative arts, and inquiry based learning/manipulative activities. Areas for large group instruction coupled with smaller project/breakout rooms, conference areas, production facilities, and ample space for the display of student work are components of building design that will support the implementation of educational programs.

In order to promote a school climate that is warm, caring, focused, and safe, there are elements that must be included in the building design. Overall, the building should be designed to promote a sense of belonging and security. It is essential that we encourage student involvement in activities that promote their sense of self worth and contribution to the community. There must be enough space and capacity to ensure that students have access to the kinds of facilities that enhance clubs, activities, athletics and intramural activities.

Beverly High School will serve the entire community, and its facilities will be used after school hours and evenings as well as during the school day. We will want public spaces such as the auditorium,

field house, cafeteria, and library media center to be accessible to the community after hours, with nearby restrooms. When not in use, offices, classrooms, lab spaces, and the physical plant facilities will need to be easily secured so that the school is protected and student privacy is maintained. Parking should be designed to not only accommodate student, staff, and visitor use during the day but also community use of indoor and outdoor public spaces on evenings and weekends.

#### *Technology – Wired and Wireless*

We believe that the use of computer technology is integral to teaching and learning in all areas and that students are best served when they have direct, full access to it. Ensuring such access for all requires a facility that has a state-of-the-art network infrastructure with up-to-date hardware and software consistently available to students and staff.

The technology design of Beverly High School should include a robust wired and wireless infrastructure throughout the building. This infrastructure needs to reliably serve all functions and areas in the school with high speed access to network applications and internet. No area should be overlooked in the design phase including administration, academics, library media, support services, athletics, fine arts, maintenance, cafeteria, conference room, storage rooms and server closets etc.

We anticipate a variety of hardware needs for staff including desktops, laptops, LCD projectors, interactive whiteboards, A/V equipment, printers etc. An important goal is to design all hardware configurations to allow for easy end-user access regardless of their technical expertise. The network design and hardware configuration plans need to facilitate flexibility with respect to present and future technology needs as well efficient and cost-effective maintenance and support systems for years to come.

Our vision with respect to hardware for Beverly High School students is to maintain a one-to-one wireless laptop program, with reliable, high-speed wireless capabilities throughout our campus, maximizing technology as a personal learning tool. Technology needs to serve the needs of students before school, during school, and at home, and a one-to-one laptop program will allow this to happen. Such a program enhances our ability to meet the academic and social expectations as stated in the High School's mission statement, addresses several of the global trends previously cited, and helps to develop ethical behavior, systems thinking, and conversational and technological literacy. Classroom designs would need to include state-of-the-art interactive whiteboard and LCD projection technologies to further support instruction.

Creation of a one-to-one laptop program in a fully wireless learning environment will achieve the following goals:

- a. Enhance teaching and learning by providing each student with around-the-clock access to technology. This overcomes the barriers of access to computing labs in terms of both availability and location.
- b. Enhance teaching and learning by enabling the integration of technology into every course. This overcomes the barriers of limited space and limited funding for hands-on computer classroom facilities.
- c. Provide technology to support special population students (special education, ESL, or at-risk students) with access to technology-based instruction to include adaptive and assistive applications and devices.
- d. Implement appropriate, current, and emerging technology as an integral part of learning by teachers and students, creating an atmosphere that fosters innovation in exploring new and innovative technology applications
- e. Support a vision of learning that includes online courses and electronic textbooks.
- f. Provide opportunities for students to use technology as a tool for effective communication, personal productivity, and lifelong learning.

Beverly, like most school systems, has been severely challenged to maintain state-of-the-art computer equipment to support teaching and learning. It is important that we develop a self-sustaining model and not be dependent on grants, special funding requests, or major fundraising efforts. Under this laptop program, interested families can purchase or lease a laptop for the

individual child. There would be a discount program for students whose families qualify for the national school lunch program and an ample supply of laptops to loan to students who need them. This model of providing technology for learning has recently been pioneered by the Gateway Regional School District in western Massachusetts and appears to hold great promise for teaching and learning. The speed with which the district can move to a one-to-one laptop model is still being studied. It is anticipated that, to some degree, laptop carts and at least one open lab with desktops will be needed to serve the instructional needs in many classrooms.

To achieve the technology integration that we desire, it is imperative that full planning for such integration take place during the design phase, with clear specifications defined for those bidding on the project, and allowing for wiring and related installations to take place throughout the construction project, not as the project concludes.

### *Science & Technology / Engineering*

Science tries to understand the natural world. Based on the knowledge that scientists develop, the goal of engineering is to solve practical problems through the development or use of technologies. Technology/engineering works in conjunction with science to expand our capacity to understand the world. We believe its importance to our world will only grow in the future.

Although the term technology is often used by itself to describe the educational application of computers in a classroom, instructional technology is a subset of the much broader field of technology. Technologies developed through engineering include the systems that provide our houses with water and heat; roads, bridges, tunnels, and the cars that we drive; airplanes and spacecraft; cellular phones, televisions, and computers; many of today's children's toys; and systems that create special effects in movies. Each of these came about as the result of recognizing a need or problem and creating a technological solution.

Beverly High School prides itself on the engineering technology curriculum that it has been refining for eight years. Working closely with the Museum of Science, the High School considers itself among the leading schools in developing curriculum that emphasize the Technology / Engineering strand in the Science & Technology / Engineering (STE) Curriculum Frameworks developed by the Massachusetts Department of Education. The school's program is very much a "hands-on" experience" and is taught by teachers who previously worked as engineers. Students apply scientific and mathematical knowledge and engage in experiences that enhance their skills in designing, building, and testing prototypes, culminating in the development and delivery of an engineering presentation. It is important that our new facility support continuation of this "hands-on" approach to technology / engineering instruction.

Spaces that support such learning experiences need to be sufficient in size and flexibility to support future changes in engineering technology. Among these, a Technology Design Lab will support this approach to learning and also serve as a learning lab for our Computer Aided Design (CAD) courses. Learning to work with hand and power tools in a wood construction environment is also seen as a valuable engineering technology experience for our students.

### *Integration of Green Schools Design Features with Instruction*

Beverly High School is served by science facilities that are unique in New England. Adjacent to the High School is a "Green Energy Park" which includes a wind turbine and solar array panels. These generate electricity, which is then sold, and the proceeds are used to offset electricity costs for the school. More importantly, science classes use this site as a learning lab. A classroom in the school is dedicated to "Solar Now," a volunteer organization that supports instruction and professional development in understanding energy conservation. Our new facility needs to continue to support this integration of the Green Energy Park with science instruction.

Furthermore, it is our desire that the new Beverly High School will be a high performance school as defined by the Massachusetts High Performance Green Schools Guidelines (MA-CHPS). As steps are taken to accomplish that goal, consideration needs to be given to features which will serve as learning resources. We see our school as a learning lab that will support effective science instruction.

*Innovative Community Uses of the Facility*

As just described, Solar Now and our Green Energy Park are clearly an innovative community use. Space needs to be incorporated into our facility design to support this function. There are several other community uses which are also noteworthy.

As Beverly's local television station, Beverly Community Access Media, commonly referred to as BevCam, serves Beverly cable subscribers with public, educational, and government based programming. It is funded through a grant by the City of Beverly's Cable TV franchise fees and by BevCam members. The studio and offices for BevCam are located in the current High School facility, providing a great service to the community and also serving as a learning laboratory for BHS students in courses in media production. This partnership needs to continue. The best location for BevCam will be adjacent to the school's auditorium, with its own public entrance. The auditorium should be designed to take full advantage of BevCam's capabilities.

Beverly High School enjoys an ongoing partnership with the Beverly National Bank. Serving as a learning lab for students, space is allocated within the current facility, providing full banking services to both students and staff. Its entrance is attractive, and the interior has the full appearance of entering any banking facility. This partnership should be supported by the new facility.

In recent years, a successful partnership has been established between the High School and the Beverly School for the Deaf (BSD). Students enter in ninth grade and are supported through to graduation. BSD offers high school programming for Deaf and hard of hearing students through a comprehensive program housed at the High School. Both self-contained instruction from a teacher of the deaf/special educator and integrated classes supported by an educational interpreter are offered, along with the services of BSD's speech/language therapist and counselor. Students receive the specialized instruction, curriculum modifications and therapeutic support they need while having the opportunities of integration into the high school community of learners. We will want this partnership to be supported by the new facility.

Located in Beverly, the Northshore Educational Consortium provides programs and services that serve students from Beverly and other communities with a wide variety of special needs. The Beverly Public Schools have for many years housed several classrooms of students with significant developmental disabilities. This relationship has worked very well over the years. We are pleased that we can enable these Beverly students to attend Beverly schools. Looking to a new facility design, this use will not continue. Instead, we see great potential in establishing a new program at the High School that serves high school age students from Consortium programs with a pre-vocational component by including them in BHS classes in several practical areas, including Technology and Engineering, Family & Consumer Science, and Media Production.

There is interest in creating a school health center, in partnership with a local hospital or health agency, within the High School facility. School health centers assist students to achieve better health habits, improve their access to health care, and ensure that students are both physically and emotionally prepared to take advantage of their daily educational opportunities. By being located with the school, it improves student attendance and provides teens with the opportunity to begin to take responsibility for their own health. There are special requirements to the design of this space, and it should be located adjacent to the school's health services office. The City of Beverly Board of Health currently operates a dental clinic in our middle school. Including the dental clinic along with a school health center can bring added benefits of centralized services and third party billing operations.

The Field House and related areas serve as a primary site for use during local emergencies. The need to support local emergency management services requires that space be provided for storage of emergency equipment and materials. Easy access to phones, the internet, and the sound system are necessary.

There has long been a desire to house a preschool program in the high school that would function as a learning laboratory for students interested in careers in early childhood education, a growing field of employment, while also filling a need for our special needs population. Beverly's preschool student

population is growing, and anticipated changes in related state and federal laws would indicate that the population will only continue to grow. Designing such a classroom within the facility brings considerable benefit to our students and community.

#### *School District Needs*

Spaces for the Director of Buildings and Grounds and for maintenance of school district vehicles are located in a part of the current High School facility that will be demolished. Spaces for these functions should be included in designing the new High School facility. In addition relocation of the Transportation Department office and vehicle storage area to this site is an interest that needs to be examined. The current thinking on the future middle school project includes selling property that currently houses the transportation office and a secure space for storage of the district-owned busses and vans. Thus, if at all possible, design of the High School site should incorporate space for this function.

Space for centralization of the district's computer network as well as space for district technology personnel should be located in a Data Center in the High School. This would include a room for file, email, and Web servers as well as offices and work space for tech personnel. This Data Center should be located next to classrooms where computer maintenance and tech repair are taught, producing student technology leaders for the school.

#### **Enrollment Projections**

The Merrimack Education Center (MEC) has conducted a demographic analysis for the Beverly Public Schools, using the cohort survival method and incorporating factors within the environmental context of Beverly that may affect future student enrollment. Their report, Long Range Enrollment Projections for the Beverly Public Schools, was completed on May 10, 2006, and is available on our website [www.beverlyschools.org](http://www.beverlyschools.org). Their assessment summarized data as follows:

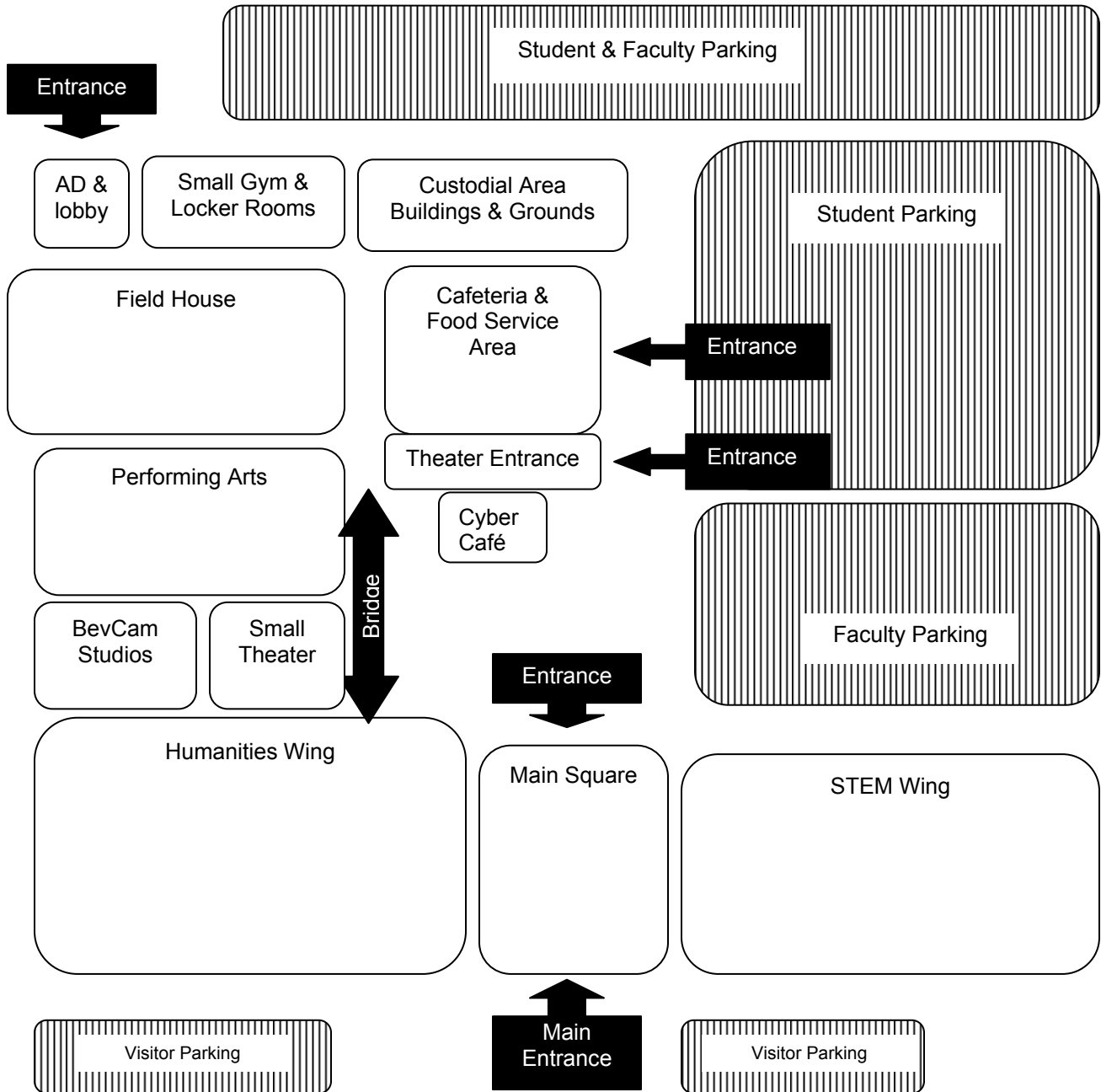
*“Between 2005-06 and 2016-17, enrollments are projected to grow at the elementary level and decline at both the middle and high school levels. Elementary grades PK-5 are expected to expand by 6.4% while the middle school enrollments (6-8) are projected to shrink by 5.9% and high school enrollments are projected to shrink by 163 students or 12.4%. It is anticipated that by 2016-17 overall school population will decrease by 87 students or 1.9%.”*

Thus, the new and renovated school shall need to accommodate a student population of approximately 1,200 students. The chart below demonstrates these projected changes:

<b>Beverly Enrollments (Cohort Survival Plus New Development)</b>						
<b>Projected Enrollments</b>						
<b>Year</b>	<b>Grades PK-5</b>	<b>Grades 6-8</b>	<b>Grades 9-12</b>	<b>Total</b>	<b>Change Year / Year</b>	<b>% Change</b>
2006-07	2106	996	1313	4415	- 31	- 0.73 %
2007-08	2116	988	1258	4362	- 53	- 1.20 %
2008-09	2123	995	1224	4342	- 20	- 0.46 %
2009-10	2118	961	1221	4300	- 42	- 0.97 %
2010-11	2148	905	1204	4257	- 43	- 1.00 %
2011-12	2173	916	1188	4277	+20	+0.47 %
2012-13	2175	949	1174	4298	+21	+0.49 %
2013-14	2194	1001	1105	4300	+2	+0.05 %
2014-15	2195	1012	1115	4322	+22	+0.51 %
2015-16	2235	958	1139	4332	+10	+0.23 %
2016-17	2260	944	1155	4359	+27	+0.62 %

### General Design Considerations

As described on page 4, this project is a combination of renovation and new construction, with the greater parts of the new construction being placed east of the current facility. Below is a functional diagram describing the arrangement of programs and facilities. In no way is the diagram intended to define actual physical dimensions; it is provided as a broad overview of the functional relationships of the space and helps to frame further discussion of our educational specifications.



## General Functional Relationships

The comments that follow are intended to clarify elements shown in the functional diagram on the preceding page. This document will then conclude with a more detailed explanation of the functional relationships and specifications for each of these spaces.

### *General*

- Programs and staff are organized by departments. Interaction within and among various departments will enhance student learning and program effectiveness. Departments are housed in one of two wings of the new academic building. These two sections will be referred to as the Humanities Wing and the STEM Wing, with the acronym STEM representing Science, Technology, Engineering, and Mathematics.
- There will be three offices for assistant principals located away from the Main Office, providing better supervision throughout the facility. One will be located in the STEM Wing and two others will be located on different floors of the Humanities Wing.

### *Special Education*

- Spaces for special education offerings are located throughout the facility to enhance the inclusive nature of the program.
  - Four Strategy Based classrooms should be located in the Humanities and STEM wings, spacing them among academic classrooms.
  - A Learning Resource Center located within the Library Media Center provides services for students with mild to moderate academic needs. In addition, small break out rooms and private study areas should be included in the design of this area.
  - The Transition Program is a primarily self-contained program for students with significant emotional or behavioral challenges and should be located near an Assistant Principal's Office. Such space includes three rooms plus a small office for private counseling sessions and conferences.
  - Space for special education office/conference space should be located contiguous to the guidance department. Office space for two school adjustment counselors, lead teacher, and TEAM chair should be included. Two TEAM conference rooms are needed as well as a small testing space for staff to conduct assessments.
  - Self Contained Classes can be located throughout the building. The Language Based program should have two classrooms and be located in the STEM section. The ACCOMPLISH program should have two rooms and be located in the Humanities wing close to Life Skills programs and the Main Square.

### *Main Square*

- The primary entrance to the High School is through an area referred to as Main Square. There is a second entrance to the rear of Main Square, since the major parking areas are located behind the building.
- Anticipating that Main Square will likely be located at one end of the two story portion of the new construction, functions contained in this space are described as being located on the lower and upper floors.
  - Lower Floor: Main Lobby, Main Office, Health Services, School Health Center, Dental Clinic, Beverly National Bank, Data Center
  - Upper Floor: Library Media Center, Guidance Offices, Career Center, Special Education Office

### *STEM Wing*

- Programs contained in this space include: Science, Technology & Engineering, Mathematics, Business & Computer Technology, Assistant Principal's Office, Solar Now, and Northshore Education Consortium.
- A STEM Theater will provide a venue for large group instruction and presentations.

### *Humanities Wing*

- Programs contained in this space include: English Language Arts, Social Studies, Foreign Language, Art, Family & Consumer Science (including the preschool classroom), Wellness, ROTC, Assistant Principals' Offices, and Beverly School for the Deaf.
- Spaces for Art, Family & Consumer Science (including the preschool classroom), and the 9<sup>th</sup> and 10<sup>th</sup> grade *Alternative Program* should occupy the lower floor.
- A "bridge" is shown in the functional diagram connecting the Humanities Wing with the common areas (Performing Arts, Cafeteria, and Field House). Placement of this connector needs to keep in mind that those students and staff at the far end of the STEM Wing need to have the shortest distance possible in traveling to the common areas.
- The Humanities Wing also connects to the BevCam and Small Theater areas since those spaces will be integral to several of the programs in that area of the facility. BevCam will have its own entrance accessible from the visitor parking area.

### *Performing Arts & Related Areas*

- Programs contained in this space include: Auditorium, Music, Small Theater, and a Cyber Café.
- The Small Theater will be used as a venue for large group instruction, presentations, and distance learning, and a community space for many public meetings that would more comfortably be seated here as opposed to the larger auditorium. While a separate classroom for drama instruction is sought, it is anticipated that they will also use the Auditorium and Small Theater for specific needs.
- The entrance to the Auditorium area takes on a new location with the new facility and changes in parking.
- The Cyber Café is to be located adjacent to, but separate from, the new Theater Entrance, perhaps separated with an operable partition. As the name suggests, it is intended as an area supported by wireless technology for use of laptops while also providing food service staff with the ability to serve coffee, tea, juices, and nutritional snacks. A flexible space, it can also be used for theater event receptions and similar events.
- Renovation of the current auditorium should consider an additional tier of seating to be located above the current lobby area. This extension would provide additional tiered seating as well as spaces for lighting and sound control functions.

### *Custodial Area / Buildings & Grounds*

- This existing facility already houses space for the custodial / maintenance staff, equipment, and supplies for the building. The recently installed boilers are located here as well. Two functions need to be located in this area: office space for the Director of Buildings & Grounds and a garage for the district's mechanic.

### *Field House*

- At the southwest corner of the field house, a new entrance needs to be constructed to serve as the primary entrance to the facility. This will allow direct access so as not to be combined with access to the Performing Arts or Cafeteria areas. Office space of the Athletic Director should be included in this space.
- Rooms for weight training and cardiovascular fitness will be new additions to the field house area. A classroom adjacent to these areas would be beneficial. The current weight training room is located in another part of the facility and is planned for demolition. No cardiovascular fitness center currently exists.

### *Cafeteria & Related Areas*

- The Cafeteria & Food Service area generally occupies the same space as in the existing facility. However, the kitchen area, including food preparation and storage, is quite limited and would need to be expanded. This expansion may lead to necessary expansion of the cafeteria seating area.
- The north facing wall of the cafeteria faces parking areas in the new design. A terrace area in front of this wall would offer an outdoor seating area and add a distinctive appearance to a community entrance to the cafeteria.

## General Facility Needs

### *Appearance*

- The exterior of the school facility, especially the side facing Sohier Road where the main entrance is expected, is a key consideration in a successful school design. As perhaps the most important public building in the City, the school's exterior design needs to appear "classic" as opposed to "modern", communicating the long history and character of the City and its strong traditional emphasis on quality in education. It should fit well with the classic designs of some of our most important municipal buildings.
- Main entrances to the facility should be focal points of the exterior design, emphasizing these classic values in education and architecture.
- Well planned exterior lighting not only serves site security needs but can add a great deal to the evening appearance of the school building.
- The school's interior design should likewise communicate that this is an academic building where important work takes place. Rather than simply designing uninteresting hallways lined with classrooms and display cases, a successful design will carry the classic academic appearance throughout the building, giving a first impression of the interior that one is in a stately college academic building or a corporate headquarters.

### *Display Areas*

- Lockable display cases should be adequate in capacity and strategically located to provide for displays of student work.
- Several years ago, a hallway near the auditorium was converted into an "art gallery". With track lighting and large display areas on the walls, it has been used to enhance major presentations of student work for enjoyment by both the school and the community. This concept should likewise be incorporated into the new facility.
- With the use of wide screen TV's for communication, the number of bulletin boards in hallways should be very limited.

### *General Classroom Requirements*

- Classrooms should be visually, thermally, and acoustically comfortable to create the most productive learning environment. There are general requirements that are common in all instructional areas. These requirements are described below.
- Unless otherwise specified, general classrooms should allow for a seating capacity of 30 students, and the configuration of the rooms should maximize flexibility.
- Equipment:
  - Whiteboards (minimum 24 lineal feet) with marker tray and tack strip.
  - Bulletin board display areas (minimum 16 lineal feet).
- Telecommunications:
  - Must have variety of means to communicate ideas, including voice, video, data, LCD ceiling-mounted projectors, and interactive whiteboard technology.
  - Wired and wireless technology with network access.
  - Highly equipped teaching station that serves as the core of the classroom. This should allow a teacher in one step to access ALL associated classroom technologies, including a simple means to switch the audio and video systems from one source to another.
  - Fully capable audio enhanced system (preferably ceiling mounted).
  - Document camera.
  - Interactive assessment system.
  - Laptop lockers able to accommodate 12 machines.
  - A convenient access to power so that students can recharge laptops if needed.
  - A number of computer drops that will fully support wireless technology. All drops should be homerun directly to the server/switches.
  - Two-way telephone communication systems. Phones should be able to call the main office, assistant principals, custodians, and guidance offices as well as other classrooms. Phones should also include some sort of a panic button to get instant access to the nurse or other vital staff.
  - Intercom system.

- Furnishing:
  - Designed to allow flexibility in teaching and learning styles.
  - Clocks controlled by a master clock system.
- Cabinets, Casework, and/or Shelving:
  - Built-in cabinets with shelving and open shelving for storage of books and supplies.
  - One lockable cabinet with adjustable shelving for storage of instructional materials.
  - Some way to allow students to store materials (books, instruments, projects, calculators, in a safe way.
- Walls and Doors:
  - Permanent wall construction, with adequate attention to sound transmission.
  - The design and construction should provide for as much flexibility as possible. This includes minimizing the number of bearing walls within classrooms and designing so that access to mechanical systems is as easy as possible. This applies not only to central systems but the conduits for energy and communication transmissions.
  - Suspended ceilings of sound-absorbing tile.
  - General classroom doors opening directly to the exterior are prohibited. Classroom doors must be recessed and open out, but not extended, into the hallway. Such doors should have window apertures and be lockable from the inside for added security. Doors connecting classrooms, however, should not be lockable.
  - Lockable closets for personal use of teachers, to include areas to hang coats or jackets and shelving.
- Windows and Lighting:
  - Double-paned, well-sealed glass. With a fully climate controlled facility, there may be no need for windows to have operable sashes or screens.
  - Light shelf to reduce glare.
  - Daylighting should be maximized. Daylight sensors and controls that will dim the artificial light when adequate natural light is present.
  - Indirect linear fluorescent fixtures that can be dimmed, blinds, and/or other form of light control are necessary to accommodate visual presentations. This is important so that students can view the LCD projector while still having enough light to take notes.
  - Occupancy sensors to automatically shut off or dim artificial lights in the room when people aren't there, lights aren't needed, or there is sufficient daylight.
  - Light colored ceiling, walls, and floor to reflect light.
- Mechanical:
  - Proper ventilation.
  - Natural ventilation.
- Electrical:
  - Ample electrical outlets according to current codes.

### *Faculty Planning Rooms*

- Further consideration needs to be given to the manner in which space is allocated for department and teacher planning and collaboration. There is a desire to create spaces which support teacher interaction and collaboration. However, all teachers have a need for a space to store their own instructional materials and records and to work in relative privacy. If all teachers had their own classroom, the problem is easily solved. Since it is unlikely that there will be enough classrooms for that to happen, the question arises as to how to address this need for those teachers who are "itinerant". The description of Faculty Planning Rooms that follows is our best plan to date of how to support department and teacher planning and collaboration.
- Two large spaces for department offices, conference space, and teacher planning should be strategically placed within the Humanities and STEM wings.
- The Humanities Faculty Planning Room shall accommodate the following departments: English Language Arts, Social Studies, Foreign Language, and Special Education. Staff members in the Arts, Wellness, and Family & Consumer Science programs will also utilize this space, although department office space for them will likely be located adjacent to their specific classroom areas.
- The STEM Faculty Planning Room shall accommodate the following departments: Science, Technology & Engineering, Mathematics, Business & Computer Technology, and Special Education.

- Each planning room area will provide the following:
  - Four offices to serve the needs of department leaders.
  - Two conference rooms large enough for 12 people, with identical technologies to that which is provided in classrooms and a telephone to support private communications.
  - A large open area that provides seating and work tables, a copier, and several desktop computers and a printer for open use by staff.
  - A secured space for individual work areas for 10-12 itinerant teachers.
  - A small kitchen area that includes a sink, refrigerator, microwave, and storage cabinets.
- Areas for storage of department books and materials will not be located in this space. Such storage needs to be provided more throughout the facility, convenient to the various programs.

#### *Open Use Computer Labs*

- There will be one open use computer lab adjacent to the Library Media Center.
- Depending upon the configuration of the building and the extent to which wireless laptop carts are incorporated, an additional one or two open use labs will be necessary.

#### *Handicap Accessibility*

- Beverly High School is fully committed to a quality education for all students, including those with disabilities. Ramps, elevators, handrails, etc., shall be provided for the convenience of students who require them. There should be a universal design throughout the facility that meets or exceeds the Massachusetts building codes and the Americans with Disabilities Act (ADA) requirement for handicapped individuals.

#### *Student Lockers*

- Student lockers should only be located in hallways in classroom areas. The great majority should have built-in combination locks that allow for master key access by administrators and easy change of combinations by school staff on an annual basis. An occasional locker should allow for padlock security to support the needs of some disabled students.
- Lockers should be of sufficient size to accommodate student coats and backpacks. Tops of lockers should be slanted so as not to serve as shelving.

#### *Air Conditioning*

- Since the facility is in use year-round, it is desirable that the entire facility, with the exception of the field house, be provided with air conditioning.
- Considering that the field house could be used in the warmer months as a place for graduation, other community event, or even as an emergency shelter, a system that would allow shifting the air conditioning capacity from the main facility to the field house in such special circumstances should be investigated.
- A completely climate controlled building raises the question of whether windows need to open or screens need to be installed.

#### *Green School*

- Green design strategies are a high priority for the new facility. The new building should maximize energy efficiency, implement alternative water management strategies, and incorporate renewable energy and “green” materials.
- The building should be designed to provide optimum energy use. Landscape should serve as windbreaks from the winter winds and storms. There should be efficient use of lighting sources and full advantage of daylighting opportunities.
- Reflective roofing and additional insulation for roof and walls will increase energy efficiency.
- Opportunities for grant funding from the Massachusetts Technology Council’s Renewable Energy Trust need to be explored.

#### *Floors*

- Terrazzo flooring will add to making attractive impressions at main entrance lobbies and large public vestibules. Most hallway and classroom floors would likely be vinyl tile. Special areas may require special flooring. For example: hallways near the field house should be a more rugged material; locker rooms and classrooms for science and art could benefit from poured membrane

surfaces that would inhibit damage from water, spills, and cleanup; and offices, faculty planning rooms, and the library media center should be carpeted.

- Subtle color coding of floor tiles can help to indicate the various levels of the facility.

### *Signage*

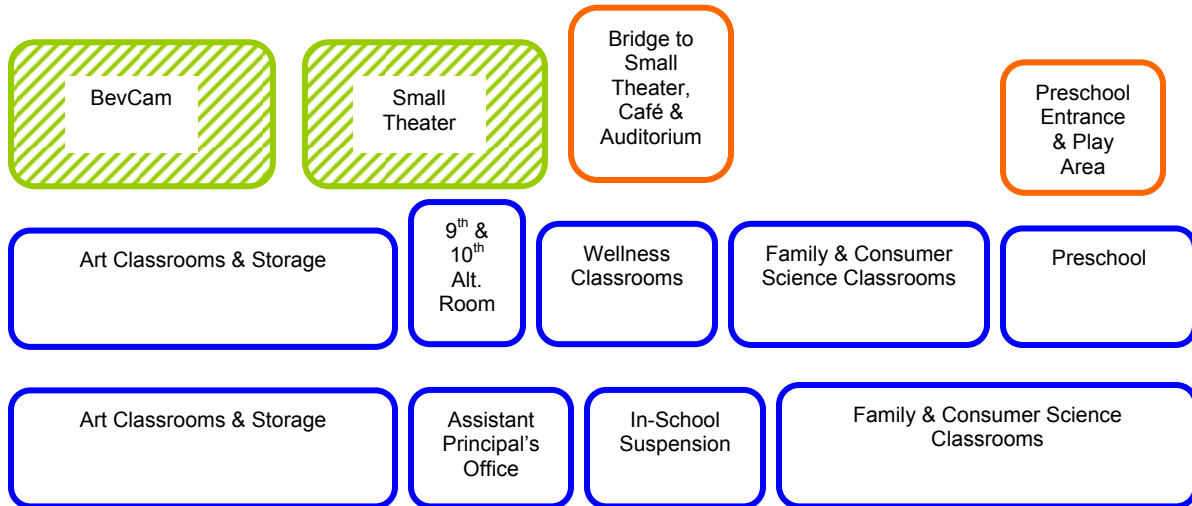
- There should be sufficient, well-designed signs and directories to facilitate movement within the facility and to identify floor levels.
- Wide screen TV's in key public locations (e.g., hallways, main lobby, cafeteria/cyber café, entrances to the field house and auditorium) will support the need to communicate more effectively with students and staff and will minimize the use of posters and flyers that typically pepper school walls.
- An attractive school sign in combination with an electronic message board shall be located at the main entrance to the site on Sohier Road.
- The Panther Paw and school name currently displayed on the exterior wall to the auditorium can be relocated to an appropriate space on the new facility.

### *Security*

- While the "Option 4" design has necessarily served as the basis for this discussion of educational specifications, it presents problems which can only be addressed with the assistance of the design firm. Specifically, the STEM Wing appears to be a dead-ended structure that does not connect well with the remainder of the facility, especially the common areas. Resulting problems include traffic flow and effective building supervision. The desire to have greater interaction amongst all the professional staff of the school also will be enhanced by solving this problem.
- Security of the facility and its occupants is a high priority. The latest in access control systems should be considered. Magnetic locks on exterior doors that lock all doors with the push of a button on a central computer provide a quick response capability. Swipe cards rather than keys may be desirable.
- The ability to lock the vestibule doors at the main entrance, not merely the exterior doors, with a door direct to the main office can eliminate "buzzing in" visitors; they must go through the main office. The secondary entrance serving the Main Square should likewise have the ability to lock the vestibule doors.
- Exterior doors other than the main public entrances should have large identification letters (A, B, C, etc) affixed to both the outside and inside of the doors. The use of handle hardware on the exterior of these doors should be carefully considered.
- A system of digital recording through security cameras at key locations throughout the building and around the exterior is important. The ability to access this system from outside the facility (web based?) when the building is evacuated can be a critical feature for handling an emergency. A "wireless" campus will support such external control.
- Since various areas of the facility must be accessible during nontraditional hours, the building will need to be zoned for security. An ability to limit access from public areas to other parts of the building enhances building security.
- Clear sightlines in corridors will allow for easy visual supervision. As much as possible the design should avoid blind spots.
- Classroom doors opening onto hallways should have window apertures and be lockable from the inside for added security. Doors connecting classrooms should not be lockable.
- All parts of the facility need to allow for the use of cell phone technology, including Nextel service.
- Administrative offices and Faculty Planning Rooms should be located within major circulation areas to maximize visual supervision.
- In restroom design, there is a need to balance the need for privacy with the ability to supervise. Restrooms should be located in close proximity to classrooms. Access to student bathrooms in a manner similar to bathroom entrances at airports would appear to add to student safety. A design that incorporates private faculty bathrooms at these same "airport" entrances provides added supervision, with the added benefit of a more efficient plumbing design.
- Hallways and stairwells should be sufficiently wide for easy movement of large groups of people.
- Emergency lighting in stairwells, hallways, and selected rooms is essential.
- Exterior lighting provides security during darkness.
- The use of high trees and low bushes (less than three feet high) can deter hiding.

## Humanities Wing – First Floor

The Humanities Wing supports a variety of programs, many of which benefit greatly from a close proximity to BevCam, the Performing Arts, and Field House areas. It should be pointed out that this floor is not adjacent to the Main Square. The Humanities Wing is located in what is now the lower parking lot. Given the change in elevation with the upper parking lot (STEM Wing location), the top two floors of the Humanities Wing will be on the same elevation as the two levels of the Main Square and the STEM Wing.



### Art

- Four rooms will serve the needs of drawing and painting, clay and sculpture, photography, and one general art classroom. Each should allow for a seating capacity of 24 students.
- A first floor location should provide for easy access to outside and providing considerable natural light.
- A small kiln room along with space for multiple drying racks should be planned for the clay and sculpture classroom.
- While the current facility has a darkroom, the rise of digital photography makes this obsolete. The design of the photography room, therefore, needs to provide not only for classroom seating but also for desktop computers for graphic design, special printers, counter space, and network access.
- Adequate storage space for supplies and projects is essential.
- Securable display areas will be available throughout the school for student projects in all mediums, as well as adjacent to the art spaces.
- Sinks with clay traps for clean up are necessary.

### Wellness

- Three classrooms, located as near as possible to the field house area. One classroom will be specially set up for instruction in First Aid and Athletic Training. Our preference is that these be located within the general Field House area. If this is not possible, then they should be located on this floor.

### Family & Consumer Science

- Two culinary arts labs and a prep room needed; cooking equipment and prep and dining spaces, a washer and dryer in each, with accompanying safety features. Prep room should be located between the culinary arts labs. Classrooms should allow for a seating capacity of no more than four students per workstation (maximum 24 students).
- One Child Development classroom with one-way mirror view into adjacent pre-school classroom. Microphones placed within the pre-school classroom will transmit sound to this viewing area. The classroom should allow for a seating capacity of 16 students.

*Preschool*

- Classroom has its own entrance with an adjacent fenced in play area.
- One double size class with room for 10 interest areas including building, dramatic play, art, library, sand and water, music and movement, technology, and discovery.
- Adjacent rest rooms for a preschool population are necessary.
- Office space for therapists (4) and one Sensory Integration room.
- Small conference room.
- Playground should be fenced with barrier walls. Ground must be all soil and grass. Age appropriate equipment with guardrails must be used.

*9<sup>th</sup> & 10<sup>th</sup> Grade Alternative Program*

- A regular sized classroom is needed for an established program of academic and social support for students in their first two years of high school. This is not a special education program. It could function anywhere in the academic facility.

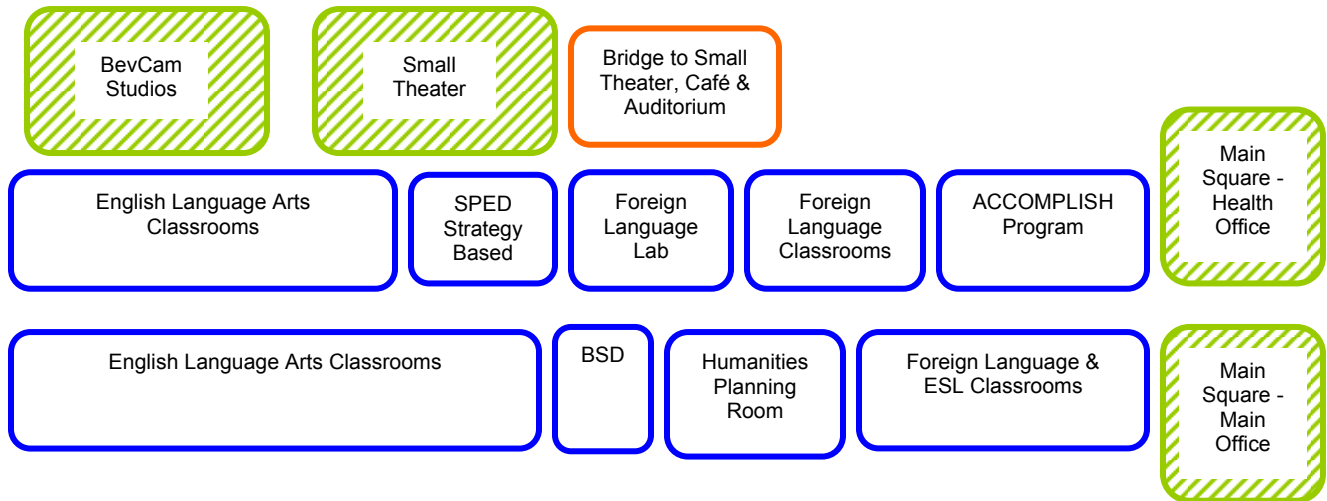
*Assistant Principal's Office*

- Office area.
- Reception space with room for secretary.
- Storage space.
- Conference space for up to 8 people.
- Workroom/copy room.

*In-School Suspension*

- An In-School Suspension room will be located adjacent to the Assistant Principal's office. If possible, it shall have its own restroom facilities.

## Humanities Wing – Second Floor



### English Language Arts

- Need for access to small theater (drama) and BevCam studios.
- A Publication Room with 6-8 computers and large tables for use by all student publications at Beverly High School (newspaper, yearbook, literary magazine), with phone for students and advisors to utilize.
- Media Productions classroom.
  - Need 16 stations for students. Related technology will include editing capabilities.
  - BevCam studio located in area near the Media Productions classroom
- Drama classroom.
  - One oversized classroom located near the auditorium and small theater would serve as a drama classroom. It should be a large square or rectangular room with no view obstructions or windows.
  - This room is effectively a black box theatre. The walls, floors, and ceiling are black.
  - The ceiling has hanging theatrical lighting so that specialty lighting can be provided throughout the room.

### Foreign Language

- Foreign Language Lab
  - The foreign language lab is meant to be a computer-driven media lab used for overall skills enhancement (reading, writing, listening and speaking) that exploits the computer for all the technology it provides: a research tool, a writing and editing tool, a reading and listening resource, and a viewing resource for video, film and live international television broadcasts.
  - A 30-seat lab will accommodate larger class sizes, each seat with its own carrel, headset and chair.
  - There needs to be a teacher station with double servers and adequate storage.
  - There needs to be an LCD projector, good lighting and window screens to enable whole-group viewing of projections, and cable TV.
  - It is vital to engineer the power source properly so that the lab will function adequately. It is suggested that language lab consultants be involved in the planning of the language lab from the start with the architects to avoid very difficult retrofitting after construction.

### English as a Second Language

- One small classroom will be necessary to serve as a home base for this program.

### Beverly School for the Deaf

- One oversized classroom capable of being divided into two smaller classrooms would best serve this program. A carpeted floor is needed in this space.

*Strategy Based Classroom*

- One of four special education classrooms needed for instruction in English.

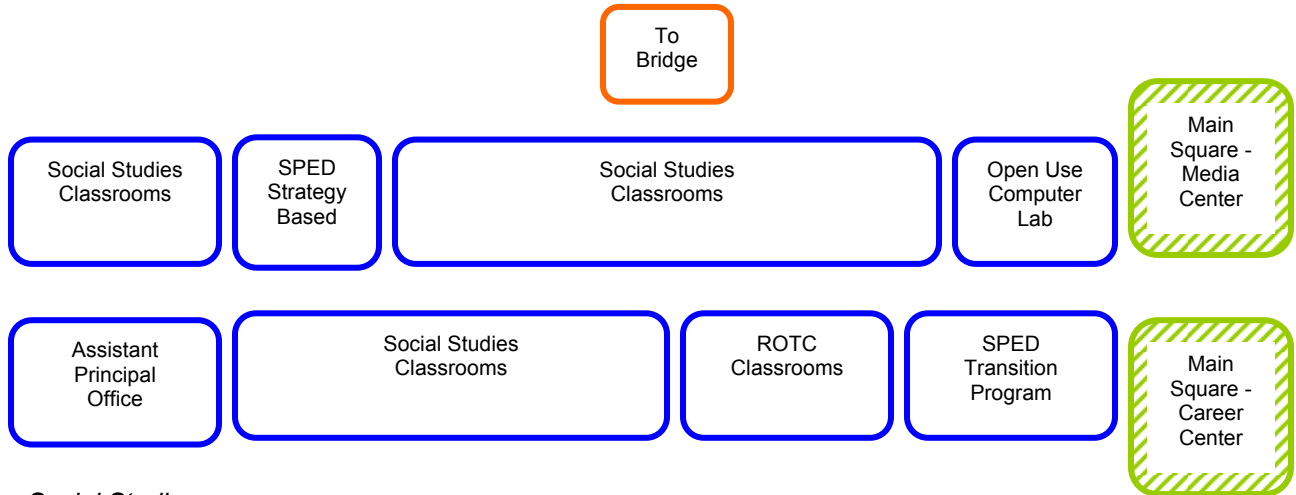
*ACCOMPLISH Program*

- Two large classrooms with life skills areas (cooking, technology, work study and academics)
- Small office for speech therapy
- Bathroom off the classroom
- This space needs easy accessibility because of the physical limitations of students and safety issues. A location near to the main entrance is desirable.

*Humanities Planning Room*

- The Humanities Planning Room shall accommodate the following departments: English Language Arts, Social Studies, Foreign Language, and Special Education. Staff members in the Arts, Wellness, and Family & Consumer Science programs will also utilize this space, although department office space for them will likely be located adjacent to their specific classroom areas.
- The planning room area will provide the following:
  - Four offices to serve the needs of department leaders.
  - Two conference rooms large enough for 12 people, with identical technologies to that which is provided in classrooms and a telephone to support private communications.
  - A large open area that provides seating and work tables, a copier, and several desktop computers and a printer for open use by staff.
  - A secured space for individual work areas for 10-12 itinerant teachers.
  - A small kitchen area that includes a sink, refrigerator, microwave, and storage cabinets.

Humanities Wing – Third Floor



*Social Studies*

- Need for access to small theater and BevCam studios through Bridge.

*Strategy Based Classroom*

- One of four special education classrooms needed for instruction in Social Studies.

*ROTC*

- Two classrooms are needed; one standard size and one large classroom.
- This program makes regular use of drill and calisthenics. Consideration needs to be given to providing an appropriate space for these activities to take place.
- There are considerable needs for secure storage for this program

*Open Use Computer Labs*

- There will be one open use computer lab adjacent to the Library Media Center.

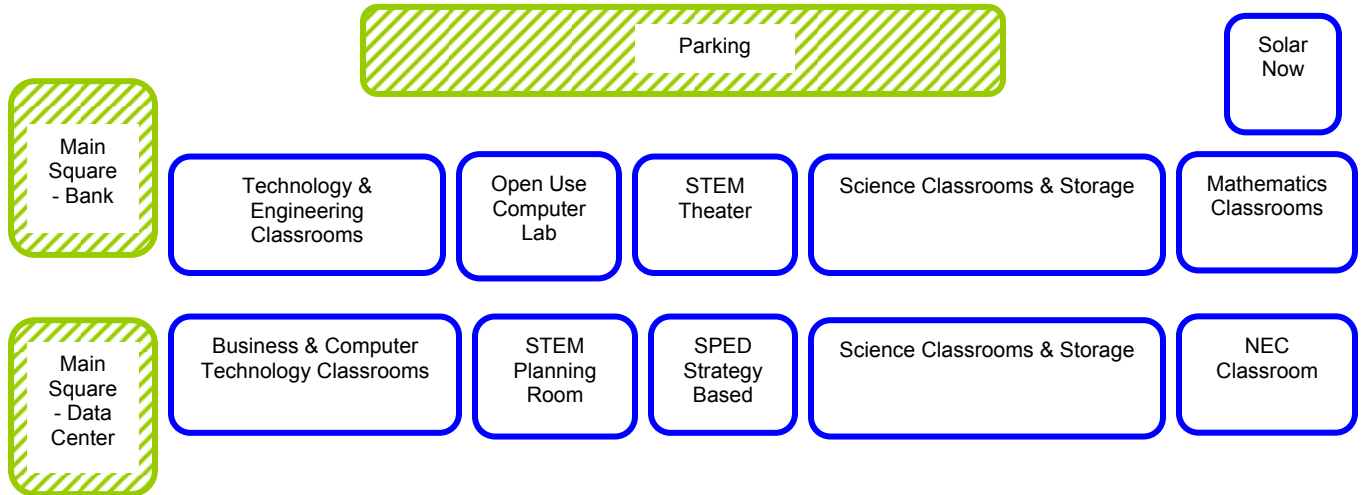
*Assistant Principal's Office*

- Office area.
- Reception space with room for secretary.
- Storage space.
- Conference space for up to 8 people.
- Workroom/copy room.

*SPED Transition Program*

- For non-categorical resource/self-contained programs for students with significant emotional or behavioral challenges.
- Three medium classrooms, carpeted – one for academic instruction, one for students to calm down in or take a break.
- Office space between the two classrooms for special education teacher and adjustment counselor.
- Private space within the office for use with students.

## STEM Wing – First Floor

*Science*

- Science classrooms will be “stacked” with first floor classrooms directly below those on the second floor.
- General classrooms should allow for a seating capacity of 24 students.
- Designed with separate instructional and laboratory areas (fixed peninsula benches and a separate seating area for lectures and demonstrations.) Ample floor space provides the best kind of flexibility.
- Lab area designed according to specific science to be taught and anticipated labs.
- Each lab station will include electrical outlets, sink, gas lines, vacuum distilled water lines, a computer shelf (not on lab bench), and storage areas.
- Safety considerations will be built into each room that includes emergency shower, eyewash, power cut off switch, gas shut off, ventilation for flammables, and hoods (chemistry). Physics rooms will have hanging/suspended outlets.
- Storage and preparation space is critical to safe, effective science instruction. Sharing this space can help reduce cost and foster collaboration. Secure, central rooms (between each two classrooms) will be used to store all chemicals and provide ample teacher preparation space. These should include separate storage cabinets for acids, bases, and flammables. Other storage areas will be provided for non-chemical equipment storage.
- A project room will support ongoing student science projects.

*Technology & Engineering*

- Beverly High School prides itself on the engineering technology curriculum that it has been refining for seven years. The program is very much a “hands-on” experience and is taught by teachers who previously worked as engineers or in the construction trades. Classrooms can be placed on both floors of the STEM Wing.
- Two classrooms are needed for Technology & Engineering and a specialized classroom is needed for Basic Electronics. These are career / practical classrooms, not just traditional science classrooms used for a different purpose.
- In addition, a Technology Design Lab will support this approach to learning and serve as a learning lab for our Computer Aided Design (CAD) courses.

*STEM Theater*

- The STEM Theater, with seating for up to 75 students, is more of a lecture/demonstration hall than a performance-type theater and will provide large group instruction opportunities for Science, Technology, Engineering, and Mathematics. It needs to be equipped with state-of-the-art audio-visual equipment and tiered seating that will enhance the learning experiences.
- The stage area is supported by science hookups such as gas, distilled water, and related utilities for science demonstrations.

*Mathematics*

- The general description for classrooms sufficiently fills the needs for math classrooms. Whiteboards should take full advantage of available wall space.

*Business & Computer Technology*

- Five classrooms are needed for Business & Computer Technology. Two classrooms will support business and accounting/finance; one of these will be a business computer lab.
- A small project room for working on DECA team projects should be located adjacent to the business classroom.
- Three additional computer rooms, including the previously mentioned Technology Design Lab, will provide for instruction in specific computer courses (Computer Lab, CAD, Computer Programming, Web Site Design, Layout and Design, etc.).
- Computer rooms will be wired to accommodate multiple computer and graphic arts equipment stations.
- The school operates a “Students as Technology Leaders (SaTL)” program, providing students with training in computer maintenance. A specialized classroom shall be located adjacent to the Data Center for this purpose.

*Strategy Based Classroom*

- One of four special education classrooms needed for instruction in Science/Technology.

*Solar Now*

- A small classroom sized space should be sufficient for this program’s needs. In many respects it will function as an office space and small group instruction space and will need storage space and a telephone.

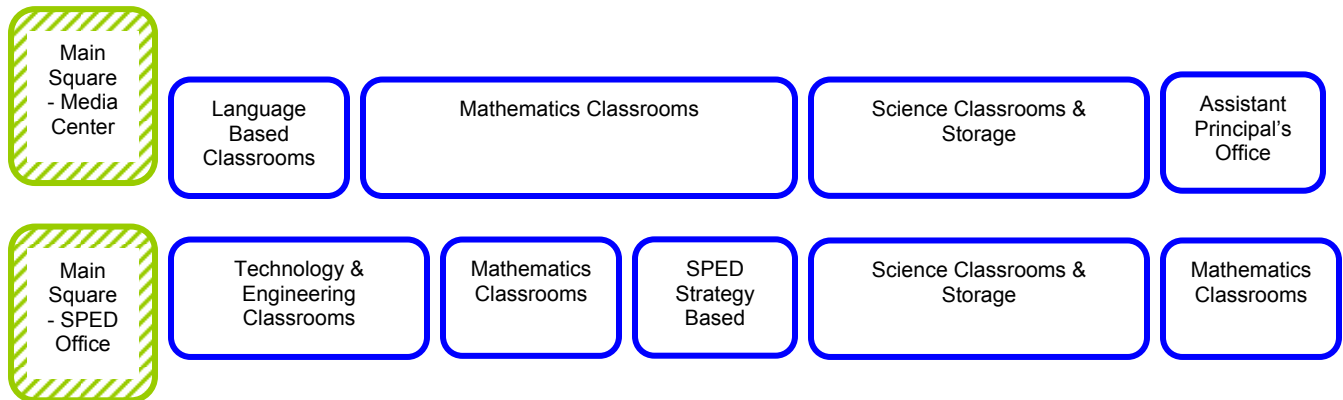
*Northshore Education Consortium*

- There is a need for space to serve as a home base for Consortium students who will be participating in the pre-vocational opportunities at the High School (including Technology and Engineering, Family & Consumer Science, and Media Production) as well as and some academic programs. The size of a typical classroom, the space should be carpeted and capable of being divided into two smaller classrooms.

*STEM Planning Room*

- The STEM Planning Room shall accommodate the following departments: Science, Technology & Engineering, Mathematics, Business & Computer Technology, and Special Education
- Each planning room area will provide the following:
  - Four offices to serve the needs of department leaders.
  - Two conference rooms large enough for 12 people, with identical technologies to that which is provided in classrooms and a telephone to support private communications.
  - A large open area that provides seating and work tables, a copier, and several desktop computers and a printer for open use by staff.
  - A secured space for individual work areas for 10-12 itinerant teachers.
  - A small kitchen area that includes a sink, refrigerator, microwave, and storage cabinets.
- Areas for storage of department books and materials will not be located in this space. Such storage needs to be provided more throughout the facility, convenient to the various programs.

## STEM Wing – Second Floor



### Science

- Science classrooms will be “stacked” with second floor classrooms directly above those on the first floor.
- General classrooms should allow for a seating capacity of 24 students.
- Designed with separate instructional and laboratory areas (fixed peninsula benches and a separate seating area for lectures and demonstrations.) Ample floor space provides the best kind of flexibility.
- Lab area designed according to specific science to be taught and anticipated labs.
- Each lab station will include electrical outlets, sink, gas lines, vacuum distilled water lines, a computer shelf (not on lab bench), and storage areas.
- Safety considerations will be built into each room that includes emergency shower, eyewash, power cut off switch, gas shut off, ventilation for flammables, and hoods (chemistry). Physics rooms will have hanging/suspended outlets.
- Storage and preparation space is critical to safe, effective science instruction. Sharing this space can help reduce cost and foster collaboration. Secure, central rooms (between each two classrooms) will be used to store all chemicals and provide ample teacher preparation space. These should include separate storage cabinets for acids, bases, and flammables. Other storage areas will be provided for non-chemical equipment storage.
- A project room will support ongoing student science projects.

### Mathematics

- The general description for classrooms sufficiently fills the needs for math classrooms. Whiteboards should take full advantage of available wall space.

### Technology & Engineering

- Beverly High School prides itself on the engineering technology curriculum that it has been refining for seven years. The program is very much a “hands-on” experience and is taught by teachers who previously worked as engineers or in the construction trades. Classrooms can be placed on both floors of the STEM Wing.
- Two classrooms are needed for Technology & Engineering and a specialized classroom is needed for Basic Electronics. These are career / practical classrooms, not just traditional science classrooms used for a different purpose.
- In addition, a Technology Design Lab will support this approach to learning and serve as a learning lab for our Computer Aided Design (CAD) courses.

### Strategy Based Classroom

- One of four special education classrooms needed for instruction in mathematics.

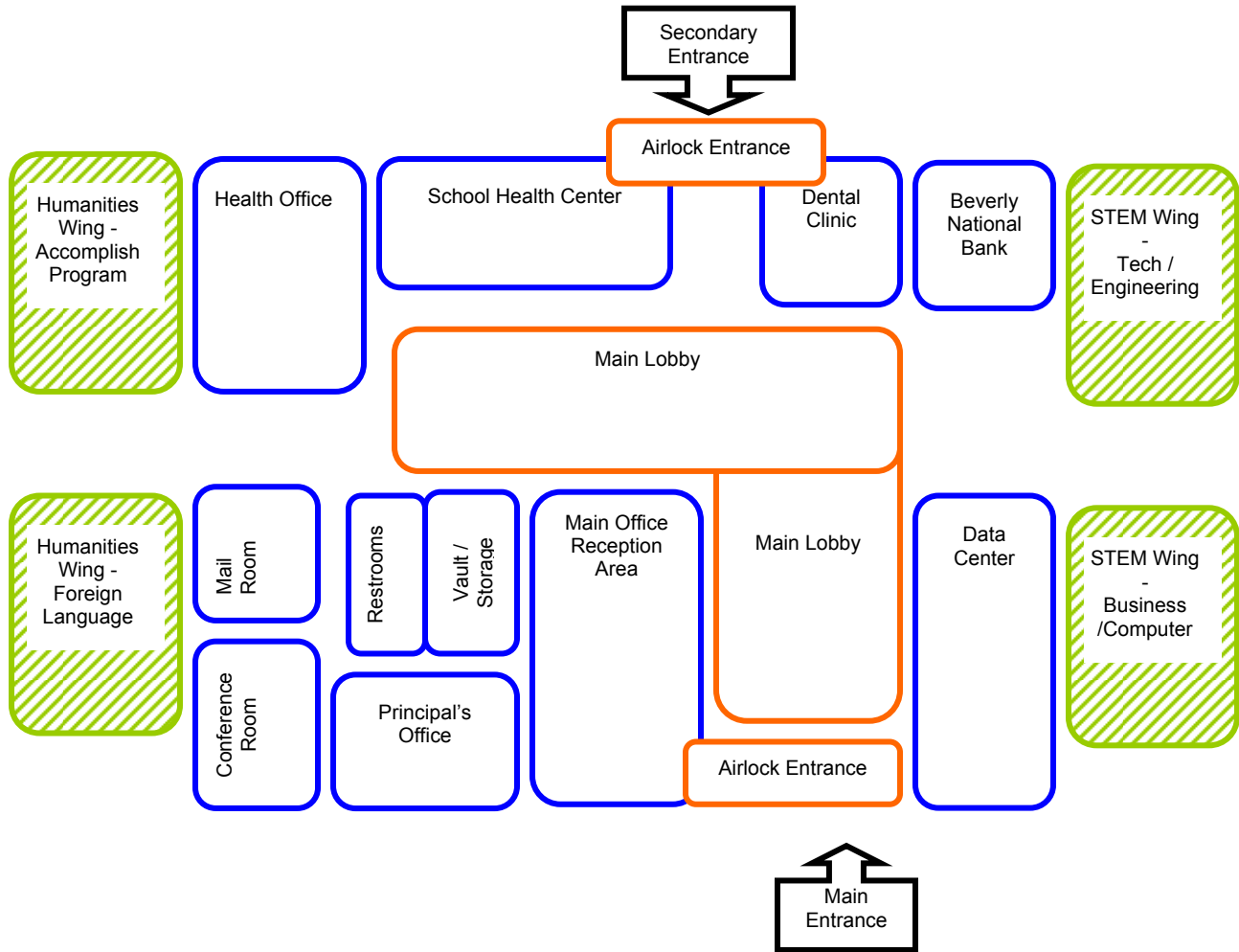
### Language Based classrooms

- Two classrooms are needed for instruction in reading, writing, and English. One small office is needed for tutorials and Senior Decision counseling.

*Assistant Principal's Office*

- Office area.
- Reception space with room for secretary.
- Storage space.
- Conference space for up to 8 people.
- Workroom/copy room.

**Main Square – First Floor**



**Main Lobby**

- The Main Square facilitates the sense of community within the school while providing access to core services. The entrance to Main Square will be a light-filled space expected to serve a variety of purposes appropriate to both student and community use. The entrance lobby should contain trophy displays, benches, and restrooms. Wall space allows for the BHS name and logo, display of our school mission statement, and student artwork.
- Students entering the main lobby are welcomed by a two-story rotunda with a skylight that rises up through the Library Media Center, allowing natural light to filter through the space.

**School Administration**

- The school’s main office shall house:
  - the Principal’s office (seating for 6);
  - a suitable conference room (seating for 12) with a whiteboard, video projection, and a drop-down screen;
  - a reception area with space for up to three secretaries, a counter, a waiting area for students and visitors, a separate work room (copier / printer), and a small “community/volunteer” room located near the main office for use by volunteers working on projects for the staff or storage of coats/supplies.
  - a fireproof vault for storage of valuables and records;
  - a mailroom for distributions to all staff;
  - restroom facilities; and
  - an area for general storage.

*Health Office*

- The location of the Health Office in the Main Square and adjacent to an exit provides easy access by students, staff, parents, and emergency personnel.
- The space consists of :
  - waiting area;
  - work areas for Nurse and Nurse's Assistant, providing a private area for confidential counseling and phone calls/computer work
  - quiet rooms with 6 patient areas for resting or feeding as needed for medically fragile students;
  - a separate treatment area with sink and bed;
  - two handicap accessible toilet facilities, with adequate ventilation; and
  - general supply storage, including secure, dry and refrigerated storage for medications (located in the treatment room). There should be one supply closet in each of the cot rooms and in the treatment room.
- There should be a one way mirror or window into the cot rooms from the nurse's office to help maintain an awareness of what is going on at all times in the recovery rooms.

*School Health Center*

- The location of the School Health Center in the Main Square and near an exit will provide easy access by students, staff, parents, and emergency personnel. Collaboration is enhanced by having the School Health Center located adjacent to the Health Office.
- Locating the School Health Center and the Dental Clinic near each other will allow them to work together to conduct the billing needs that necessarily are a part of these programs.
- The space needs to have its own door to the exterior to support after hours availability to students and the community.
- The School Health Center needs to incorporate enough space to accommodate offices for doctor and nurses, 2 examining/treatment rooms and conference room area.
- The Center is to be constructed to obtain licensure from the Massachusetts Department of Public Health, Division of Health care Quality in accordance with 105 CMR 140.000 "Licensure of Clinics". Consultation with the City's Director of Public health is necessary for preparation of the final design plan.

*Dental Clinic*

- Beverly's Dental Clinic is in its 90<sup>th</sup> year of operation. The current location is at the Briscoe Middle School. By locating it in the High School, we can eliminate some of the stigma attached by high school students to participating.
- The location of the Dental Clinic in the Main Square will provide easy access by high school students, students from our K-8 schools, staff, and parents.
- Locating the School Health Center and the Dental Clinic near each other will allow them to work together to conduct the billing needs that necessarily are a part of these programs.
- The space needs to have its own door to the exterior to support after hours availability to students and the community.

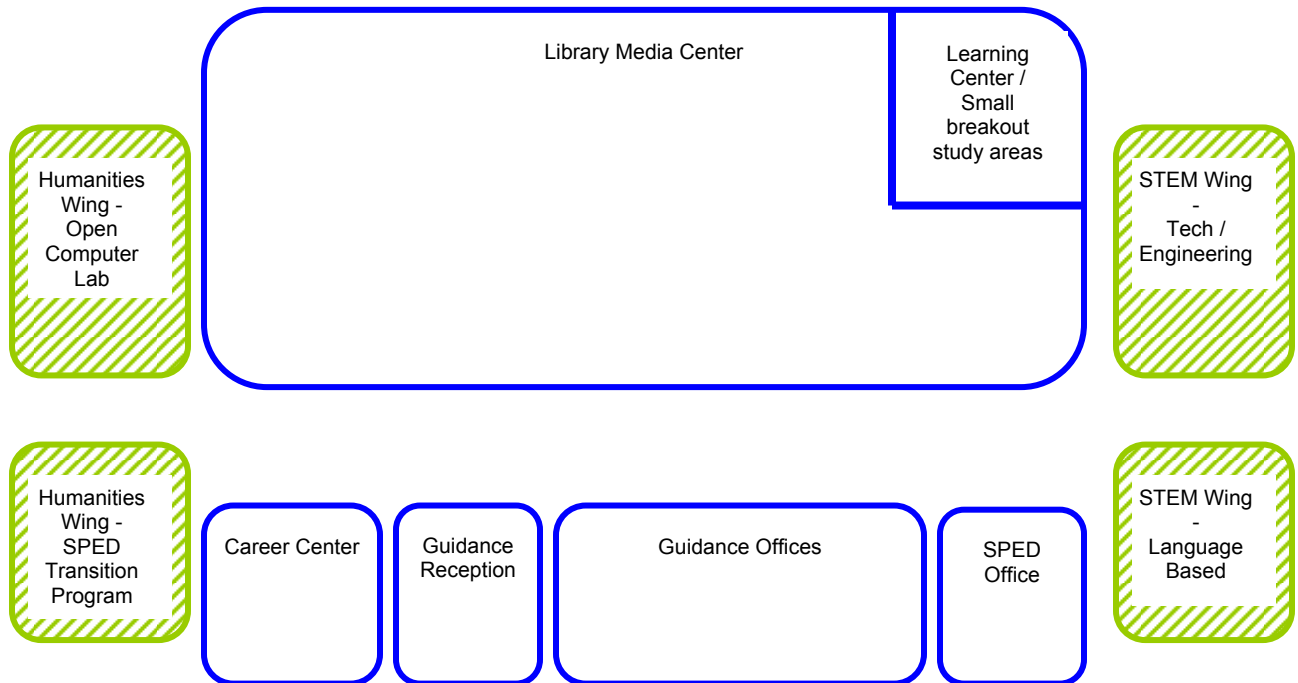
*Beverly National Bank*

- This area should be very similar to the space occupied in the current facility, including two teller windows, an area to write out deposit and withdrawal slips, a safe, and an area for a desk for office staff. Unlike the current facility, it will not be necessary to have a separate office area.

*Data Center*

- Space for centralization of the school and district's computer network as well as space for district technology personnel should be located in a Data Center in the High School. This would include a room for file, email, and Web servers as well as offices and work space for tech personnel. This Data Center should be located in a central location and next to classrooms where computer maintenance and tech repair are taught, producing student technology leaders for the school.
- A central location with outside access for deliveries is necessary.
- This space should also serve as the "tech support" place for students and teachers to bring laptops with issues and where laptop loaners and wireless carts could be dispatched.

Main Square – Second Floor



*Library Media Center*

- The Main Square central location for the Library Media Center supports the instructional programs in the adjacent academic wings.
- Use of sound insulated glass walls for the Center will allow passing students and staff members to have a view of inside the center yet not creating a distraction.
- There is a desire to create a Library Media Center that would serve the entire student population and staff as well as the community in the late afternoon and early evening.
- The main library room would house the book and media collection, with room for growth. At a minimum, it should seat 10% of the student population in a large gathering area with movable seating and tables. Seating would include small tables, individual carrels, and a comfortable seating area for reading (with a display area for periodicals and resources). Display areas or kiosks for showing student work are desirable.
- The circulation desk needs to have a clear view of the entire space, with stacks low enough for good visibility from the circulation desk. Main traffic paths would be non-carpeted. A system for security/theft protection is essential.
- Adjacent spaces include: office space for librarian and assistant;
  - space for storage, a workroom, and archive space;
  - small study rooms/quiet study rooms;
  - a computer lab for classes coming to use the library (see Humanities Wing – Third Floor)
- A Learning Center is incorporated into this area, providing space for special education students and staff. This space includes one large resource center providing quiet study areas and breakout rooms for tutorials.
- Various technologies need to be supported. There need to be computers for Internet/research and “card catalog” functions, an ability to print and pick up materials, an ability to view DVDs, tapes, etc., for one or several students, and a cable broadcast capability.

*Guidance*

- The central Main Square location of the guidance offices allows for easy access for students and parents.
- The Guidance Office space opens to a reception area large enough to seat waiting parents, teachers, and students. Offices are needed for five guidance counselors, a guidance director, registrar, and two adjustment counselors. Each office should have space for four people. Counseling spaces will be designed to ensure individual privacy both in access and soundproofing. In addition, space needs to be provided for the following needs:
  - fire proof and secure storage area for files;
  - large conference room for 10-12 people;
  - workspace with photocopier dedicated to guidance.

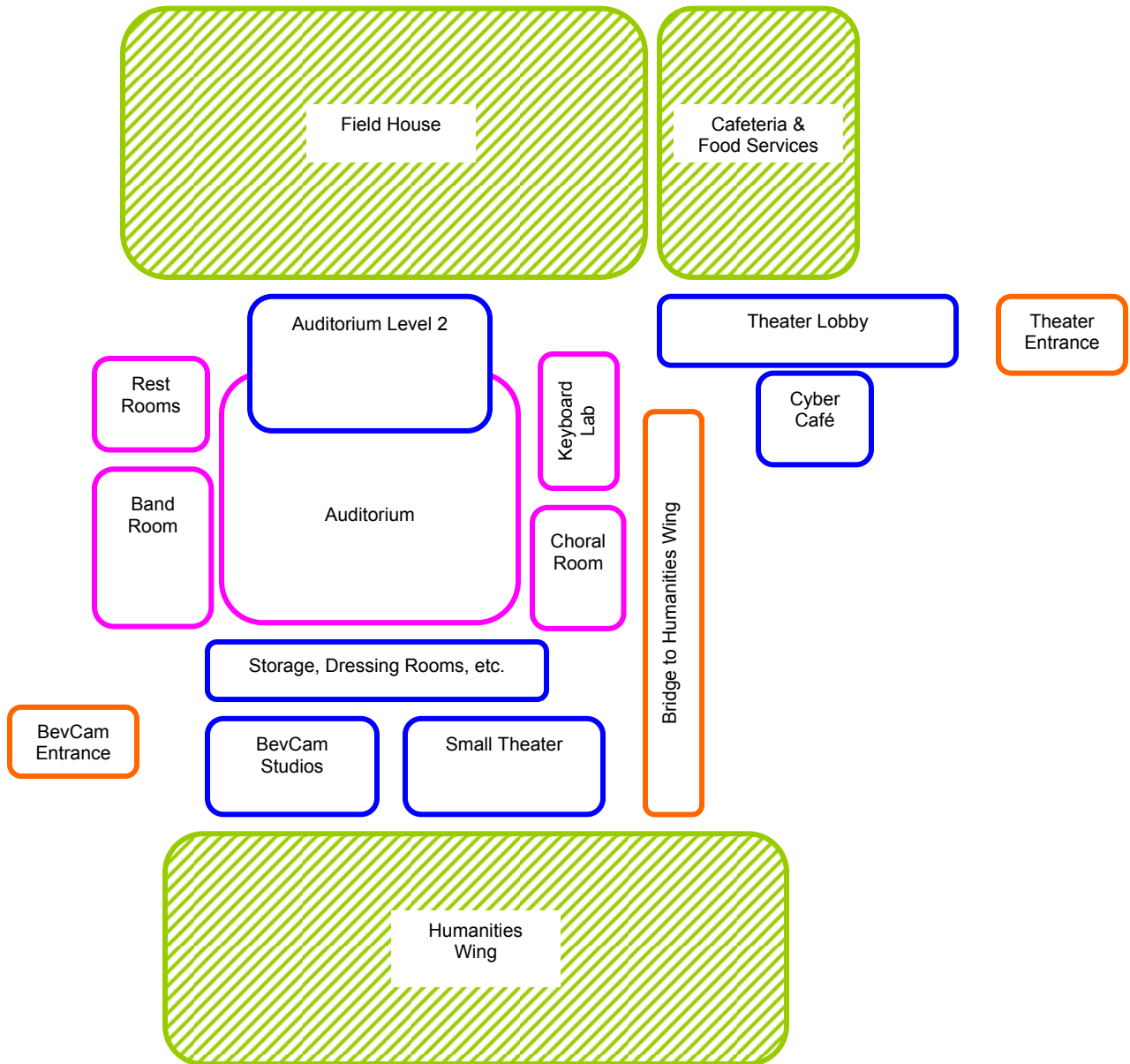
*Career Center*

- The Career Center will be located within or adjacent to the Guidance Offices. This space will have an office for the School-to-Career counselor as well as a large room capable of displaying career/college print materials, work tables for individual and small group work, and computers to conduct career / college searches.

*Special Education Office*

- Spaces supporting this function include the following:
  - Waiting area for parents, students, and visiting team members;
  - Fireproof locking file cabinets in storage room;
  - Two heavy duty shredders;
  - Storage for paper, extra documents or forms, and test protocols;
  - Small testing room;
  - A conference room (seating for up to 10 adults). The Guidance conference room may also be used for special education meetings.

Performing Arts & Related Spaces



*Variation to "Option 4"*

The areas shown above (and on some remaining diagrams) with a purple outline are existing facilities which, under Option 4, are designated for renovation, not new construction. Although constructing a second level to the auditorium is suggested, there is concern that the current auditorium cannot be converted to a state-of-the-art auditorium because of its current design. Similarly, the current spaces for band and choral programs are limiting, and there is concern that a renovation alone will not provide sufficient space for these programs. Thus, we ask whether or not it is possible that these spaces could be entirely new construction, not a renovation, to provide more adequate and more state-of-the-art facilities?

*Auditorium*

- The Auditorium will host the district's outstanding performing arts programs as well as community performances and meetings. As such, it should rival a small community theater, fully supporting music performances, theatrical productions, and other public events. At a minimum, it should seat 800 people. Stadium seating, with lights on floor and effective sight lines, will enhance the viewing experience.
- Easy community access is essential, with the ability to isolate event participants from the rest of the school.
- An orchestra pit, wings, a full-fly loft, catwalks, and follow-spot spaces are necessary components. Productions are further enhanced by having all other rehearsal, production, and office areas located in the same area.
- While the project calls for renovation of the current auditorium, no such space for "Auditorium Level 2" currently exists. This new construction, built above the existing lobby area, would change the seating arrangement, allowing for an improved traffic flow into and out of the auditorium and an improved seating and viewing experience.
- Located under Auditorium Level 2 are a state-of-the-art control room for full sound, lighting, and projection control and an entrance for handicapped individuals which leads to seating areas configured for their needs (physical and hearing).
- Any renovation for the auditorium should include the following:
  - An additional lighting grid and a new sound system.
  - A storage space right off the stage area. Scenery, props and furniture should be stored where they can be easily carried on and off stage. The storage space should make effective use of the space, storage to the ceiling.
  - A door that leads from the parking lot area directly to the stage for loading equipment and scenery. The door must be wider than a standard doorway. In fact a door that provides a 6' x 8' opening would be ideal.

*Storage, Dressing Rooms, etc.*

- Smaller rooms nearby for actor and crew preparation: male and female dressing rooms, bathrooms, and permanent and temporary storage for lighting, sound, costumes, props, scenery etc. are located in this area.

*Small Theater*

- A 150-person capacity theater will be available for instructional use by all subject areas, as well as for after school and evening use by the district and community. The design will accommodate cable broadcast and distance learning and will require quality acoustical considerations and a tiered floor space with fixed seating. A stage area will support small theatrical productions as well as serve as a platform for panels of speakers.
- A fully supported distance learning classroom should include such features as cameras, microphones, full presentation capabilities, a teacher station with embedded touchscreen technology that controls full presentation capabilities, etc. The touchscreen technology controls light, sound, projector, screen, microphones. Presentations can be projected onto a large screen and fully controlled from a podium on the floor.

*Music Rooms*

- Large instructional spaces are necessary to support the choral and instrumental programs. The instrumental music classroom must have access to outside doors.
- Designed with quality sound acoustics, they will be supported by several soundproof practice rooms and instrumental and uniform storage space.
- Requires one extra-large instrumental space for band/orchestra rehearsal, which will be accommodated in the auditorium backstage area
- The area also includes a state-of-the-art music lab with 16-18 computer stations, office space for the band and choral directors, and space for music library storage. Computer and keyboard equipment for this purpose has been recently purchased.
- There needs to be direct outside access to the band room. We load and unload equipment for parades and competitions in the fall season and any time we travel and need to be able to access an outside door directly to the band room.

*Theater Entrance / Lobby*

- Direct community access to the Performing Arts areas is essential. Commensurate with being a full performance area, the entrance must be easily identifiable as a community "theatre entrance". The current lobby area is expanded toward the parking area, providing additional space for displays of student work, ticket sales, and perhaps a "Performing Arts Hall of Fame".

*Cyber Café*

- As the name suggests, the Cyber Café is intended as an area for daytime use, supported by wireless technology for use of laptops while also providing food service staff with the ability to serve coffee, tea, juices, and nutritional snacks.
- As a flexible space located open to the theater lobby, however, it can also be used for a concession area or theater event receptions.
- The area can also make good use of a high definition video monitor with cable access.

*BevCam*

While BevCam coordinates closely with high school faculty in providing access to our facilities, its mission extends beyond the walls of the school building to the entire Beverly community. Its list of specifications, therefore, includes needs beyond those directly related to serving the school faculty.

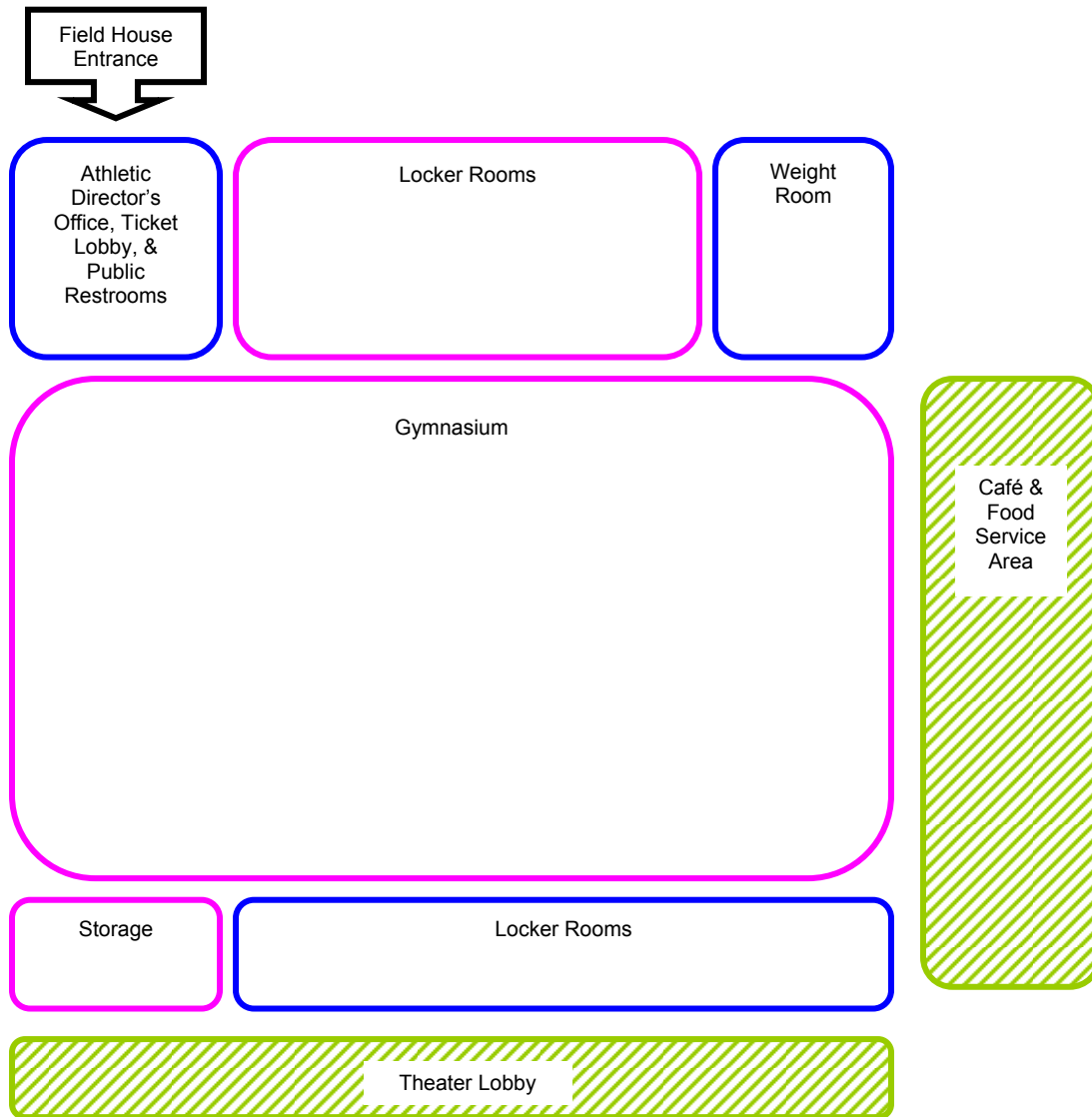
- Media technology is evolving at a rapid pace. It is essential, therefore, to provide the maximum in flexibility in consideration of future modes of communication and delivery of educational content by providing as much interconnection capability in video, audio and data throughout the building and athletic fields. BevCam should serve as a nexus enabling it to provide interconnections to all locations and to provide content for "smart board" and video & audio technology delivery.
- Consideration should also be given to interconnection with other educational institutions to provide for remote learning, inter-conferencing, town-hall style productions and for the development of a "virtual classroom." The requirement here involves considerable technological advancement in the direction of internet-based media transmission and reception but is a rapidly developing area.
- BEVCAM studios are located in the Performing Arts area to support live and taped production in the nearby public spaces, such as the auditorium, small theater, and field house.
- The current facility is well equipped to meet BevCam's needs
  - Most all of the equipment involved in BevCam operations in the studio, control room, cablecast and editing suites is removable.
  - The studio lighting grid consisting of the pipe lattice work suspended from the ceiling may be salvageable but this decision should await a cost/benefit analysis.
  - The cyclorama (curtain) track in the studio could also be salvaged and reconfigured for a similarly sized and shaped new location.

Specific space needs include the following:

- Administration
  - Office - Executive Director - large enough for small group meetings
  - Office - Studio Manager administration computer operation
  - Office - Equipment checkout & receiving - to accommodate access producers
  - Office - access producers work area during production
  - Conference room large enough for 10- 12 person meetings for production planning
  - Reception - entrance, waiting area, security control and weather entrance lock
  - Copier & Files - office supplies, copier, file cabinets
- Animation – Stop Motion Studio
  - A large space for working with flat art and tabletop "claymation" and other single frame shooting setups left in place for extended periods of time
- Cablecast – Playback
  - The heart of an access facility needs to contain several racks of equipment, monitors and have adequate A/C for equipment stability.
  - May be combined with a server room, which is separated because of noise generation by that equipment and could include telephone and data equipment, tape vault or other storage.
- Master Control

- A room for studio control with access to the studio and window overlooking, separate entrance from corridor without going through the studio.
- Room is needed here for several racks of equipment and also for a class of student observers to be located apart from the working area required for production.
- This room should contain the equipment and have the capability to serve as the control center for all locations such as theaters, auditorium, gymnasium and athletic fields and be large enough to enable crews and observers to operate comfortably for long periods of time.
- Editing
  - Several small rooms dedicated to computer-based editing with attention to sound isolation.
- Two Production Studios
  - Studio A – A large enough space for several shooting areas and also for a class of students to observe without interference in production. Low velocity A/C and adequate electrical supply is a major consideration.
  - Studio B – A small space appropriate for shooting an interview between four or fewer people or a single lecturer/presenter. This second studio enables narration "voice-over" recording, simultaneous video production and allows sets and props to remain in place on a set for longer periods of time between shoots.
- Green Room
  - This term, used in theater and film, refers to a small room immediately adjacent to the stage or studio for talent to review the script, to confer with the director and otherwise prepare their performance without interfering with studio setup work.
- Training / Classroom
  - A large room to accommodate a class of students working with computer-based editing equipment to also serve as a community technology learning center for adults interested in computer and media skills development.
  - The Media Production class will work closely with BevCam and will use this space as its regular classroom.
- Equipment Storage
  - A room for shelving units to contain currently unused equipment. This room should be located adjacent to the studio and equipment checkout and receiving areas with separate entrance to enable studio production to continue without interference
- Set Storage – Space to store scenery and props; storage adjacent to studio.
- Tape Vault – A room for shelving to accommodate storage of finished productions.
- Loading Dock – This will enable on and off loading of equipment, props and scenery.
- Parking & Entrance – A separate from school entrance and including ADA approved access.
- Security
  - As part of a separate exterior entrance to enable after-hours access, including controlled access from inside the school.
- Rest Rooms / Dressing Rooms
  - Studio rest rooms combining the usual toilet facilities with a makeup station with enough room for comfortable costume dressing accommodating more than one person.
- Other Space Requirements
  - Studio ceiling height = 13 feet
  - Studio requires low flow A/C
  - Gigabit Ethernet connection each room - CAT 5 or 5e minimum
  - Fiber optic cable to I-net in cablecast room and throughout the building
  - Telephone center in cablecast room
  - Electrical
    - Studio A                    30 X 20 AMP circuits
    - Studio B                    10 X 20 AMP circuits
    - Master Control            6 x 20 AMP circuits
    - Cablecast                    3 x 20 AMP circuits
    - Server                        2 x 20 AMP circuits
    - Edit bays                    1 x 20 AMP circuit each
    - Training                      4 x 20 AMP circuits (assume 10 computers)

Field House – First Floor



*Gymnasium*

- The main gym floor area needs to be dividable for indoor classes of 30 students. The area will support high school basketball programs and be surrounded by a synthetic track. Daylighting and artificial lights must provide excellent lighting for competition and other indoor athletic activities.
- A traditional wood floor for main basketball court area is important.
- Audio and video capabilities will enhance the functionality of the space.

*Locker Rooms, Team Rooms, etc.*

- The locker room space will have an appropriate number of lockers, showers, separate team rooms (accessible to the outside), separate room for officials, separate training room, laundry space, and an office for members of the Wellness department as well as coaches.
- A separate locker room for visiting teams.
- Training room needs to include a shower and restroom (possibly off lobby area).
- Girl’s locker room needs to include team rooms and coaches office equal to boy’s locker room.
- Coaches’ offices need to have shower and restroom included.

*Athletic Director's Office and Ticket Lobby Area*

- Direct community access to the field house is important. An entrance/lobby area will support athletic display cases, ticket area, concessions, and public rest rooms.
- The office space for the Athletic Director will open to the lobby. It should contain space large enough for meetings with coaches, league officials, and parents (seating for 6) as well as a reception area for the AD's secretary.
- Lobby area should also include locker room for game officials, to include a restroom and shower (to avoid contact with team locker rooms).
- AD office to include restroom with shower.

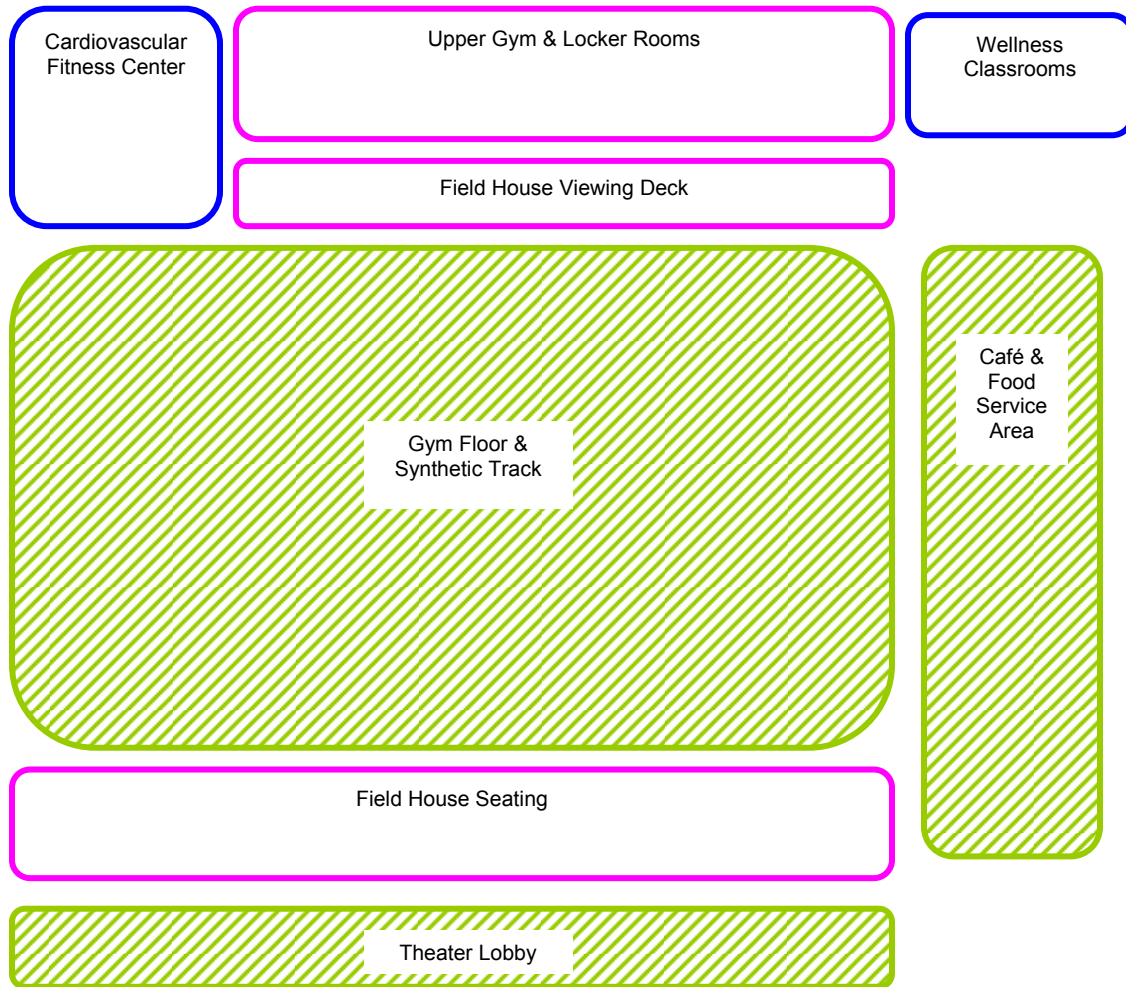
*Storage*

- Adequate space needs to be provided for equipment and uniform storage.
- Storage room for athletic equipment needs to come with separate storage lockers for each athletic team (security).
- We need one large storage room indoors for all of the uniforms and other small equipment. This room would have storage lockers for security, and a industrial washer and dryer (washer dryer could also be in training room). We also need one large storage room indoors for high jump equipment, cheering flooring, hurdles, etc. There should also be internal storage for wellness equipment. This could possibly be accomplished with our current space.

*Emergency Management*

- Beverly High School, and specifically the Field House area, is an important aspect of the City's local emergency response plans. Space necessary to store related equipment and supplies is required. This need requires special telecommunications planning as well.

**Field House – Second Floor**



*Field House Roof*

- Considerable work has recently been done to restore the field house roof and Kalwall sections of the walls.

*Upper Gym*

- The upper gym is to be used as a dance studio as well as space for cheerleading and wrestling programs.

*Cardiovascular Fitness Center*

- A Fitness Center would be an excellent addition to our Wellness Program. With windows looking into field house and out over current parking lot, it is possible that this need could be combined with the dance studio area.

*Weight Room*

- The school currently has an excellent weight room, both in size and equipment. However, it is located in a part of the building due to be demolished and would thus need relocation.
- We should consider combining the Weight Room and Fitness Center spaces.

*Locker Rooms*

- The upper level of the Field House can also support the need for locker rooms.

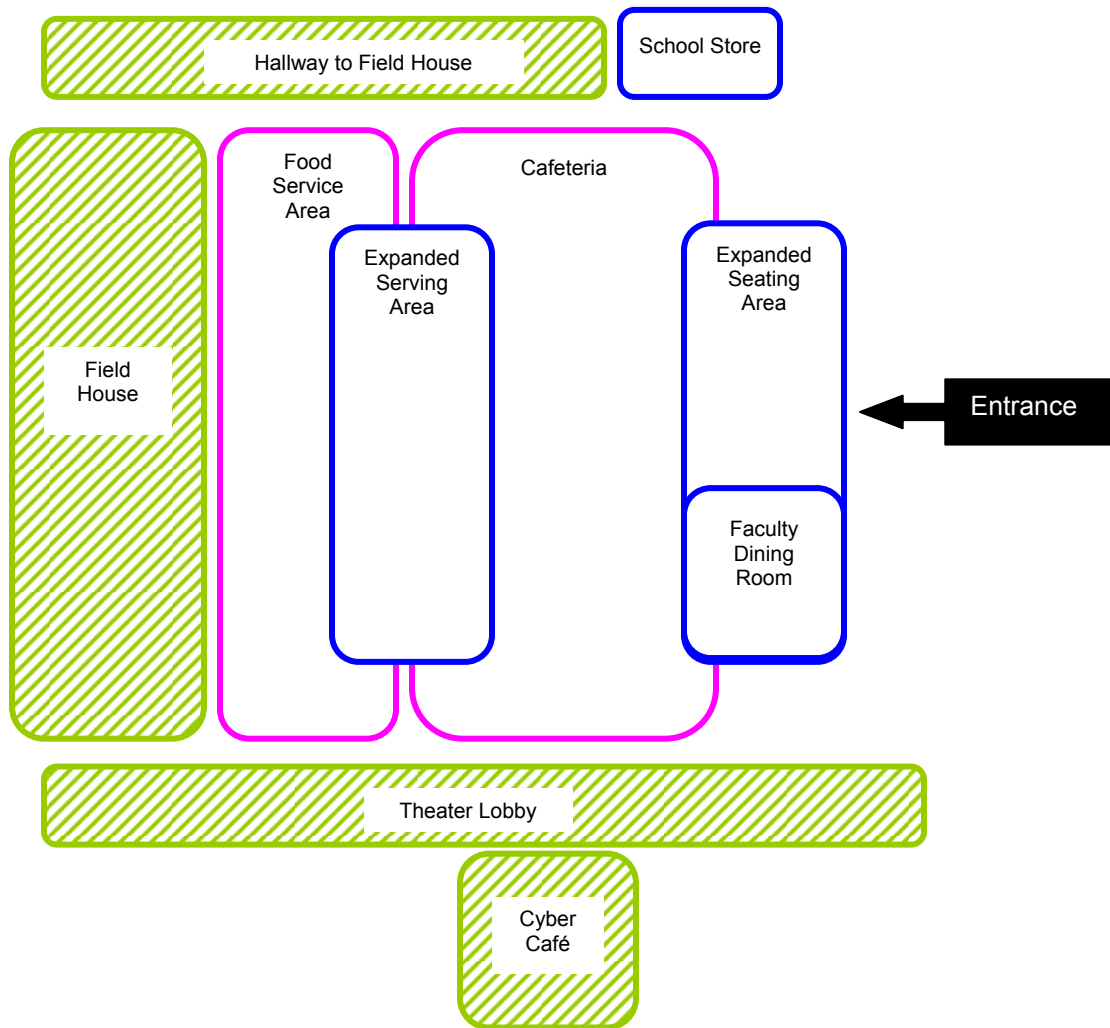
*Field House Seating and Viewing Deck*

- Bleachers to seat the entire student body and staff are necessary.

*Wellness*

- Three classrooms, located as near as possible to the field house area are requested. One classroom will be specially set up for instruction in First Aid and Athletic Training. Our preference is that these be located within the general Field House area. If this is not possible, then they should be located on the first floor of the Humanities Wing.

### Cafeteria & Food Service Area



#### Cafeteria

- The cafeteria should accommodate at least 1/3 of the student population, providing a safe, secure, and relaxing atmosphere, conducive to civilized conversation. Unlike our current arrangement (long rectangular tables with attached stools), a variety of tables (round, oval, small & large rectangular) with adult size chairs (not attached to tables) are desirable. We would also like to consider inclusion of several restaurant-style booths in appropriate locations within the cafeteria.
- Display spaces and a wide screen TV will allow for viewing notices and school information,
- To support the variety of school and community uses, attention needs to be given to appropriate lighting controls, sound reduction, and audio visual presentation capabilities.
- Adjacent to the cafeteria, student restrooms and a storage area for chairs and tables will facilitate the variety of uses of the area.
- The wall on the Open Terrace side of the Cafeteria will provide a welcoming direct entrance for community uses. This should be a source of considerable natural light.
- Outside the cafeteria will be a concrete patio, which could include tables and seating suitable for outdoors. The area will be defined by a bench wall that identifies the limits of the space and helps focus attention to an attractive public entrance.

*Faculty Dining Room*

- A separate area near the cafeteria will provide for faculty and staff dining.

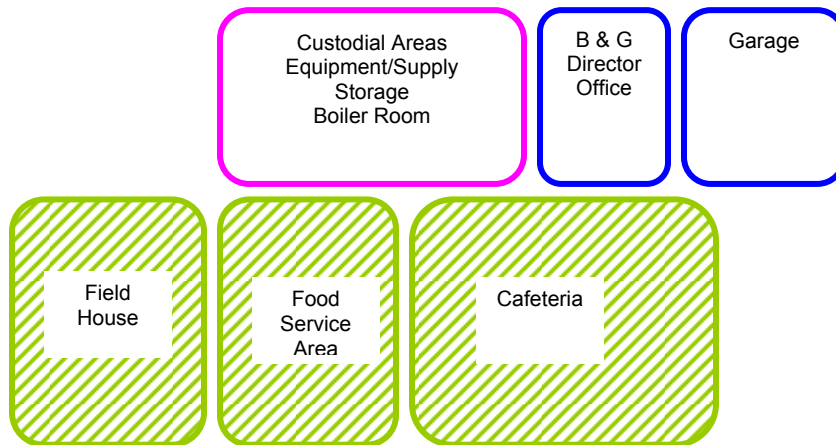
*Food Service Area*

- A food court style serving area to expedite serving time is desired, providing the ability to distribute students to avoid long lines, to support greater flexibility in serving the needs of students, and to promote interaction among all individuals in the school. Multiple payment stations, incorporating a point-of-sale ID card swipe system, will expedite service.
- A “public” kitchen area with small equipment access will support school and community uses such as spaghetti suppers, dances, etc.
- Attention needs to be given to maintenance, cleaning, and odor control.
- Appropriate storage facilities (freezers, coolers, and dry goods) and service delivery entrance are necessary to support storage of multi-month government food deliveries.
- Kitchen employees will need space for lockers, restrooms, and a kitchen manager’s office.
- The facility needs to provide easy access for teachers and custodians for recycling paper and plastic and provide a secure location for these materials outdoors without risk of "critters" getting into stored recycled products with food-stuff on them.
- Manager’s Office should be centrally located.
- Phones are needed inside the manager’s office and in the cooking area – current design doesn’t allow employees to hear it when it rings.
- School speaker system installed in the cooking area and manager’s office so that they can hear announcements.
- Food/Supply storage rooms accessible from inside the kitchen – to avoid having to run back and forth into hallways locking and unlocking doors during the workday.
- Kiosk style serving areas with cash registers – avoid theft, which is a big problem. (anything other than a “scramble system”)
- Flow of Traffic – Reduce Congestion - must be well designed to allow as orderly a flow of traffic as possible. No crossing over – too much theft.
- Point of Sale System – Fingerprints or pin number – No cards to lose. We are looking at NutriKids POS. We currently use NutriKids for the nutritional analysis and the processing of Free & Reduced applications
- Blast Chiller – to chill foods quickly as specified in the Food Code.
- Flat Grill and/or Tilting Skillet.

*School Store*

- This space would be operated by students and staff in our DECA program. An ideal space would be near the Bank or some central location that is seen for all who enter the building. It will have stock of a variety of school supplies for purchase.

## Buildings & Grounds and Transportation



### *Custodial Area*

- Lockable office for senior custodian and building key storage
- Break area
- Men's' and ladies' rest rooms
- Combination workroom and vehicle storage area
- Three supply stock rooms: one each for paper goods, trash liners, and chemicals
- Shared loading bay area
- Boiler room
- The facility needs to provide easy access for teachers and custodians for recycling paper and plastic and provide a secure location for these materials outdoors without risk of "critters" getting into stored recycled products with food-stuff on them.

### *Director of Buildings & Grounds Office*

- Space for the director buildings and grounds currently exists in an area of the building that will be demolished. There is a need to duplicate this space. The diagram above shows it as space included in the new facility. However, location of such space in a building on-site but separate from the High School facility could be considered.
- Space is necessary for the following needs:
  - office space for the Director and support personnel
  - storage for all district blueprints, plot plans, and O & M plans
  - storage space for all district recycling containers
  - a full carpentry shop, including power and hand tools and lumber storage
  - a full paint shop, including paint storage, airless sprayers, and equipment
  - plumbing and electrical component storage
  - storage of man lifts and ladders
- A fenced-in exterior area is needed for:
  - Storage of snow removal equipment
  - Storage of all landscaping trailers and lawn mowing equipment
  - Storage of equipment for football team practices and surplus food service equipment

### *Vehicle Maintenance Garage*

- Space for the maintenance garage currently exists in an area of the building that will be demolished. There is a need to duplicate this space. The diagram above shows it as space included in the new facility. However, location of such space in a building on-site but separate from the High School facility could be considered. The best located would be adjacent to the Transportation School Bus Facility described below.

*Transportation Department / School Bus Facility*

- Currently located behind the Briscoe Middle School is the office for the Transportation Department as well as a storage area for all the district's buses and vans. The school district wishes to consider relocation of these facilities to the High School site for three reasons.
  - Our long term plan for the Briscoe facility does not include inclusion of the transportation spaces; thus this space, in the long term, faces relocation anyway, and the High School location continues to fill the essential need of having a location central to our various schools (drive times, radio transmission, ability to switch buses quickly).
  - An additional advantage to locating these functions at the High School will be the proximity to the Vehicle Maintenance Garage.
  - Relocation to the High School greatly removes the noise of buses from a residential neighborhood.
- Approximately 1 acre of land is needed to locate the office building and vehicle storage area.
- These areas should be fenced in to provide the needed security. A camera integrated with the building's security system is necessary.
- The current office building is a portable building and could be reused.

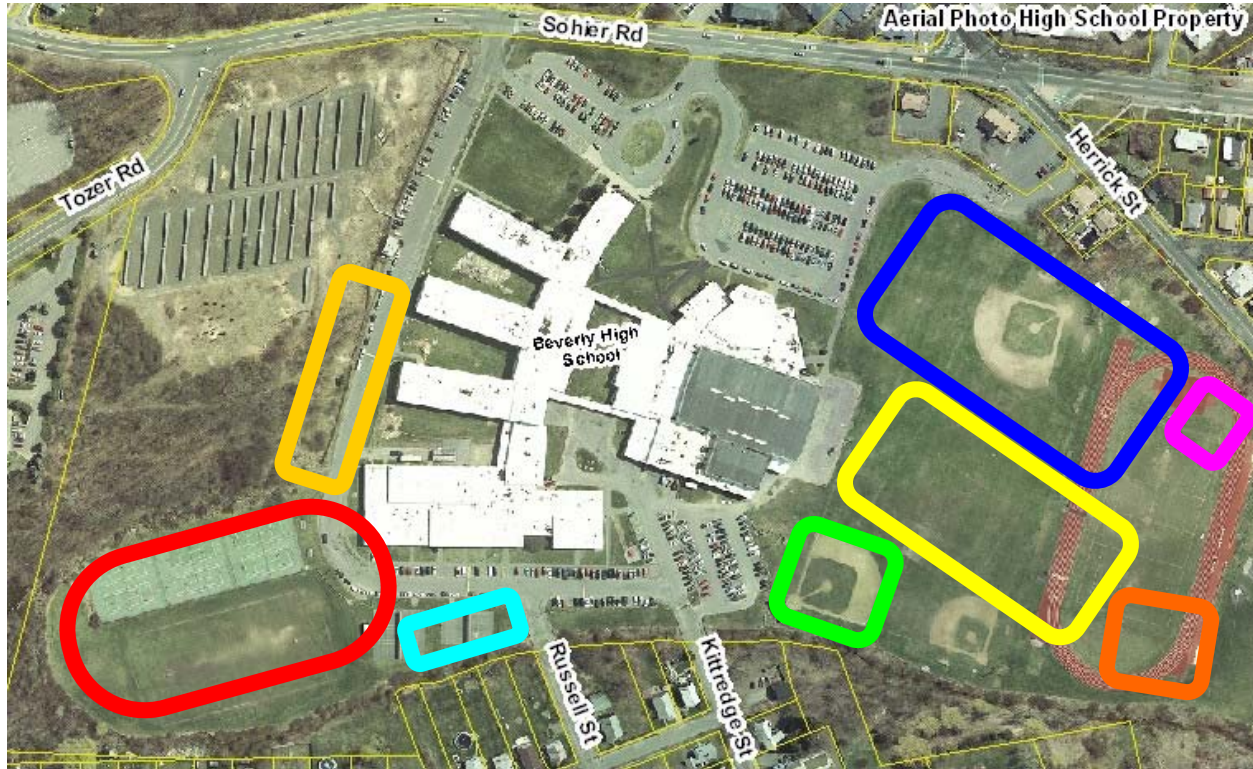
*Other Considerations*

- Given that the district functions in this area may not be able to be accommodated in the new facility, consideration ought to be given to either constructing appropriate facilities elsewhere on the site or retaining a portion of the Patten Wing (to be renovated separately from this project).

## Site Considerations

### Athletic Fields

- Outside there will be sufficient fields for football, track, soccer, field hockey, lacrosse, softball, baseball, tennis, and a project adventure course. The aerial photo and overlays below demonstrate some of our current thinking as to how these areas can be arranged on the site.



### Legend

<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: red; margin-right: 5px;"></span> New outdoor track facility</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; margin-right: 5px;"></span> New tennis courts</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: cyan; margin-right: 5px;"></span> New storage – athletics &amp; grounds</li> </ul>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: blue; margin-right: 5px;"></span> New football stadium</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: yellow; margin-right: 5px;"></span> New soccer field</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: green; margin-right: 5px;"></span> New baseball diamond</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: orange; margin-right: 5px;"></span> New softball diamond</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: magenta; margin-right: 5px;"></span> New storage – athletics &amp; grounds</li> </ul>
--	--

- Two synthetic playing surfaces will allow for greater field use and durability. These would be installed in the new football stadium and within the new track.
- A fenced in set of six tennis courts will be needed and will serve students in wellness courses, tennis teams, and the public.
- Two storage building situated near the athletic fields will support outdoor activities and care of the grounds. The building at the far end of the football stadium could contain a team room for visiting teams as well storage of athletic and grounds equipment.
- Located on a different site in the City is Hurd Stadium, an outdoor playing area with ample bleacher seating, a concession stand, restrooms, and a building containing a team room and space for ticket sales. It is used for varsity football games and for various city events. There is interest in exploring whether a similar facility, with a synthetic playing surface, could be developed on the High School site. As shown in the diagram above it could be built into the hill parallel to Herrick Street. A facility for concession stand, restrooms, team room, ticket sales, and storage could be constructed near the main school building. The public restrooms should be accessible for any outside events, not merely for contests in the football stadium.

*Parking*

- General parking should be sufficient for staff and students, with walkways to the building for easy access.
- There should be parking for authorized personnel, visitors, and the handicapped at the front of the building and parking for authorized personnel and the handicapped near the athletic fields.

*Access for Vehicles and Buses*

- We experience a fair amount of traffic flow from parents who drop off and pick up their children. A separation of this traffic from an area for bus loading and dropoff is desirable. Access to the general parking area should be separate from the dropoff/pickup and bus traffic patterns.

*Exterior Lighting*

- Exterior lighting serves the dual purposes of providing nighttime security and facilitating safe access to the building. Such lighting also enhances the nighttime appearance of the building.

*Landscaping*

- Native species landscaping with drought resistant characteristics.
- Use high trees and low bushes (less than three feet high) to deter hiding.