

**GENERAL
EDUCATIONAL SPECIFICATIONS
FOR NEW
HOWARD COUNTY HIGH SCHOOLS**

Approved: NOVEMBER 14, 1991

Revised: October 14, 1999

Board of Education of Howard County

**Karen B. Campbell, Chairman
Stephen C. Bounds, Vice Chairman
Sandra H. French, Member
Jane B. Schuchardt, Member
Laura Waters, Member**

MICHAEL E. HICKEY, SUPERINTENDENT

Organizational Plan for New High Schools

The educational specifications in this document are basically organized by curriculum areas and areas of function (e.g. cafeteria, guidance, administration). They reflect a traditional "departmental organization"; however, the high schools that will be designed and built from these educational specifications will have a non-traditional organizational plan. Therefore, architects and planners are to translate the educational specifications contained herein into a facility with all of the components, spaces, and dimensions as indicated in the educational specifications; however, they are to be organized according to the following organizational plan. The result will be a high school facility sized to the target student capacity of 1,400, with all of the areas and functions as approved in the educational specifications organized according to the "High School Organizational Plan."

High School Organization Plan

Before the construction of River Hill High School in 1994 high schools in Howard County, as well as in most of the country were organized by academic departments such as English/language arts, mathematics, science, social studies, etc. While the departmental organizational plan has served students well in the past, several factors argued in favor of organizing high schools differently. With the construction of the 1994 River Hill High School, a window of opportunity was opened for us to design, build, and operate a high school that effectively addresses those factors.

The first factor is the research identified needs for students to view their educations more holistically than has been the case in the past, for students to see the interrelatedness of their classes, and rather than have students study "subjects" that are compartmentalized stand alone disciplines -- to have them understand that one curriculum or area of study is related to other curricula or areas of study. Moreover, it is important that students make use of the natural connections and relationships between and among areas of study to solve problems and to create new knowledge.

The second factor that argued for organizing high schools differently is the identified need to “prepare high schools for eighth graders,” rather than the reverse, “Prepare eighth graders for high schools,” which has been standard practice here and elsewhere. Much professional work has been done by Ted Sizer, the Carnegie Council on Adolescent Development and The Maryland Task Force on the Middle Learning Years, among others, that identify the needs of early adolescents, those students who are in the 10 to 14 or 15 years old age bracket.

Middle schools are specifically designed to accommodate the physical, emotional, developmental, and academic needs for students up to about age 13 or 14, and yet, it is at this very age, while students are still in this period of rapid change, that they cross over into high school. Ninth graders are about 14 years old and are but a few months removed from their middle schools when they begin high school. Therefore, high schools need to be structured so these students have the best possible chance for a smooth and productive transition in their school lives, just as parents and others strive to provide smooth and productive transitions for them from childhood, through adolescence, and into responsible adulthood. It is agreed by those who work with young adolescents that the rush to adulthood needs to be prudently tempered for ninth graders and that schools can play a significant role in this regard.

After consideration of several organizational models and the above factors, it has been determined that the new Howard County high schools shall be organized by the following specifically identified clusters and centers:

Cluster for the Humanities -- Will house most English/language arts, social studies, foreign language classes and some art and music classes. Technology resource facilities and a common teacher planning area will be provided for teachers who teach in this cluster.

Cluster for Science, Mathematics, and Technology -- Will house all science, mathematics, computer related instruction, home economics, business education, and technology education classes. Technology resource facilities and a common teacher planning area will be provided for teachers who teach in this cluster.

Cluster for the Arts and Physical Education -- Will house art, music, physical education, and dance courses and will house an art display area, auditorium, and gymnasium.

Cluster for the Ninth Grade -- Will house English/language arts, mathematics, science, social studies, and health courses for ninth grade students only. Technology resource facilities and a common teacher planning area will be provided for teachers who teach in this cluster.

Student Services Center -- Will house administration, guidance, health suite, cafeteria, and student organizations facilities.

Information Center -- Will house the media and journalism, yearbook, and television production facilities. Technology resource facilities and a common teacher planning area will be provided for teachers who teach in this center.

This organizational plan was selected for the following reasons:

1. It recognizes and addresses the maturational and age differences among high school students through the creation of a ninth grade cluster of rooms that will allow ninth graders to take most, but not all, of their classes in a single area of the school.
2. It is based on a cross-curricular connections paradigm. That paradigm is fostered through common teacher planning areas across subjects taught by teachers, and through the proximity of classrooms in which those subjects are taught.
3. It "de-compartmentalizes" instruction so that subjects can be seen by students and teachers as interrelated rather than as stand alone disciplines.
4. It allows for faculty creativity in the delivery of the approved program of studies.

Note: Services for special education and gifted and talented students will be provided in the school as identified in the educational specifications.

INTRODUCTION

Working on a project such as this -- the development of educational specifications for high schools-- was both overwhelming and exciting. It was overwhelming because of the tremendous amount of information that had to be processed, assimilated, and sorted out into what hopefully is a comprehensive document that can clearly be understood by others. That part of the committee's task was very demanding and included:

Understanding the facilities needed to implement the current high school curriculum and conduct student activities.

Projecting the facilities needed to implement curriculum and conduct student activities that are emerging and which may be the curriculum and student activities of the future.

Identifying current instructional practices.

Projecting instructional practices that are emerging and which may be used in the future.

Studying technology as it currently exists and as it is currently utilized in instruction and administration.

The project was exciting, too, for it is not often that individuals or groups have an opportunity in their lifetimes to make such wide ranging and important recommendations such as these, that will affect thousands of high school students in Howard County for many years into the future.

It is a tribute to the committee members listed below that they approached their work on the high school educational specifications committee keeping in mind both the overwhelming as well as the exciting aspects of the project.

The committee began its work in the late fall of 1988 and completed this phase of it in December of 1990. Many hours were spent by committee members reading and reviewing materials relevant to the areas identified above, visiting schools, and meeting as a group as well as in subgroups. Appreciation is expressed to committee members, administrators, supervisors and central office staff members who participated in any way in the development of the high school educational specifications which are contained in the following pages. Upon careful examination each of them will find at least "a little piece" of what they suggested in this document. This has truly been a collaborative effort and all who have been involved can be proud:

Ms. Frances Albert, Teacher, Howard High School
Ms. Rosalie Bowen, Assistant Principal, Oakland Mills High School
Mr. David Bruzga, Principal, Hammond High School
Ms. Celia Carr, Supervisor of Home Economics and Vocational Education
Ms. Georgia Davis, Facilities Planner
Mr. Joseph Duckworth, Manager, Media Technical Services
Mr. Stephen Duckworth, Supervisor of Physical Education
Dr. Eleanor Hooks, Supervisor of Guidance

Dr. Daniel L. Jett, Instructional Director of High Schools, Chairperson
Mr. Cornelius Freeman, Assistant Principal, Oakland Mills High School
Mr. Glenn Johnson, Director of Transportation
Ms. Mary Klatko, Supervisor of Food Services
Mr. Robert Maxey, Teacher, Hammond High School
Mr. Giles Maurey, Assistant Principal, Centennial High School
Mr. Charles Parvis, Specialist, Community Services
Mr. R. Scott Pfeifer, Principal, Atholton High School
Mr. Charles Ridgeway, Teacher, Harpers Choice Middle School
Mr. Kenneth Rucker, Teacher, Atholton High School
Dr. R. William Sowders, Executive Supervisor Social Studies
Mr. Eugene Streagle, Principal, Howard High School
Dr. Martha Sullivan, Director of Special Education
Mr. Paul Keyser, Supervisor of Science

Special appreciation is expressed to the Centennial High School students listed below who during the 1988-89 school year, as a part of a project in psychology and drafting classes, developed concept drawings and models to reflect their views of what a high school of the future might look like--from students' perspectives. In addition they developed written suggestions for courses and general curriculum offerings for a high school of the future. The high school educational specifications committee met with the Centennial students and discussed their ideas and proposals in detail. The students, too, will find at least "a little piece" of what they suggested in this document. Mr. Andy Wizda, Psychology Teacher, and Mr. Dale Huting, Mechanical Drawing Teacher, can be justifiably proud of the outstanding work of these students.

Nanette Berkley
Christine Fermandif
Matt Fleming
Kevin Hildenbrand
Paul Mauerman
Melissa Schrock
Jeff Tunkel
Julie Whitmore

Special appreciation is also expressed to Dr. Jack Dellastatious for his considerable efforts in editing this material and to Ms. Cindy Barnard who tirelessly and painstakingly word processed it. Their professionalism is obvious in the result.

HIGH SCHOOL EDUCATIONAL SPECIFICATIONS EXECUTIVE SUMMARY

1999

General high school educational specifications for the Howard County Public School System were revised in 1983. Those revisions were utilized to design the renovations of Glenelg and Atholton High Schools which took place during the 1985-86 and 1986-87 school years.

A High School Educational Specifications Committee was convened by Dr. Daniel Jett, Instructional Director of High Schools, during the late fall of 1988 and completed its work in December of 1990. The committee was comprised of teachers, school, and central office administrators. It received advice from Centennial High School students and all of the school system curriculum offices.

The charge to the committee was to describe the nature of future high schools in terms of the size and location of space that will be required in total as well as for each instructional and student activity area. It was not the committee's charge to "design" a new high school. That task is left to architects once the educational specifications are adopted by the Howard County Board of Education. The development of educational specifications is the first step in the process that will ultimately result in the construction of additional capacity for high school students in Howard County. Additional capacity needs are projected to be heavy between now and the year 2000 and will call for the construction of one or more high schools that will use the approved educational specifications in their design.

The committee's recommendation calls for a school building to house 1,400 students. The 1983 High School Educational Specifications were for a high school of 1,100 students. Differences between the 1983 and 1990 educational specifications, in addition to increased capacity of the building, primarily involve increases in square footage for some curriculum and student activities areas and thus an increase in the overall size of the building. The increases are intended to serve the needs of current and future instructional techniques as well as those of student activity programs. Space increases in some curriculum areas are caused by increases in student enrollment in those areas over the past several years. Some enrollment increases are driven by the revised requirements for graduation that were implemented in 1986 and others were driven by the inclusion of facilities to education students with disabilities who require Intensity V services. Space for the increased use of technology in instruction and overall school administration is also provided.

The committee suggests that in addition to space and facility needs planners should keep the following concepts in mind as new high school facilities are planned and constructed (see full text of the committee's report for details of each).

User Friendliness

Communications

**Age and Maturation Differences
Among High School Students**

Technology

Flexibility

Security

Joint Use of Facilities

IMPORTANT CONSIDERATIONS

During the committee's deliberations some recurring themes dominated much of its time and attention. Those themes are major in importance and go beyond square footage needs of the subject areas and the overall facilities to be included in the school. The committee recommends these considerations be given a high priority in future deliberations concerning the planning and construction of new high schools in Howard County. Those themes with some explanation are:

User Friendliness

This term is usually associated with computers, computer programs, and other technologies that have come into all of our lives. The committee believes this term can be applied to qualities in a school building as well. To create user friendliness, accommodations must be made for physical comfort, aesthetics, and the recognition that people are the most important component of successful schools. Committee members recognize the various needs for high school facilities that require them to be rather large because of economy of scale and for adequate program development. However, there is a concomitant need to always keep in mind the human needs of the students, teachers, and other staff members who will spend a considerable amount of time and an important part of their lives in the school building. For example, windows and copious amounts of natural light could help people feel that a large, technologically equipped facility is user friendly. The committee urges policy makers, planners, and designers to make user friendliness an important consideration as new high schools are constructed.

Age and Maturation Differences Among High School Students

High school students generally range in age from 14 to 18 years which means great differences exist among them with respect to physical size, decision making capabilities, maturation levels, and the type of environment in which they flourish best. The High School Educational Specifications Committee suggests that it is important for facilities planners to note these differences among students rather than assuming that all high school students are the same. Parents and educators can attest to the fact that major changes occur to students during their high school years in terms of their physical and emotional maturity and how they feel about themselves; therefore, it is important, wherever possible, for schools to be constructed with these differences in mind. Not all high school students are fourteen years of age nor are they all eighteen years of age, and the dramatic transition between those ages calls for differences in facilities, program, and instruction.

Flexibility

This concept certainly is not a new one created by the high school educational specifications committee. It has been around for considerable time; however, as this committee deliberated the many considerations involved in this project, often was the case that flexibility in the use of space was a driving consideration. In this instance, flexibility means that spaces have more than one use or that spaces can be converted to alternate uses within a relatively short period of time and with little difficulty and cost. This is especially true in terms of attempting to identify the technology and teaching strategies that are emerging and may well modify or replace those in use today. Foreseeing the future in those and other areas is most difficult and thus makes the strongest argument possible for the design of flexible spaces within a school building. The committee recognizes there may be a direct relationship between the amount of flexibility designed into schools and the cost of those schools in the short run. However, in the committee's view, to build a school without considerable flexibility is to perhaps have the school facility dictate the nature of instructional activity that will take place in the school, especially as one looks to the twenty-first century.

Technology

To say our society is in the midst of a technology revolution is to understate the obvious and our schools are not exempt from being impacted by that revolution. We have seen demonstrable evidence of that over the past five years. Our schools have made great strides towards becoming automated offices and the number of computers in use for instructional purposes seems to be increasing at a geometric rather than an arithmetic rate. Because of these changes the High School Educational Specifications Committee found it most difficult to make informed recommendations concerning the design of teaching and learning facilities that will be able to take advantage of emerging and yet to be discovered technologies. Based on information received from teachers, students, and supervisors, the committee recommends a differential approach to the method by which technology is provided for in these educational specifications. For example, in language arts it is recommended that each classroom be provided with additional square footage to accommodate small numbers of computers for instructional use; in social studies the square footage recommended is less than in language arts, however, a full sized room for the placement of a class size set of computers is provided. It was suggested that each student have a "credit card" with which he/she would charge lunches, pay library fines, make purchases at the school store, obtain tickets to school athletic events, concerts, and dramatic productions, and check out media center materials. In addition, that "credit card" could be used to take daily attendance, register for courses, and even open hall lockers. In summary, planning for the use of future technologies is a very difficult task and one which the committee recommends be done with an openness to new and different arrangements than have been used in the past.

Communications

Communications within a school building among the personnel who work there is important to its smooth, efficient, and successful operation. In addition, the ability of staff members to communicate with parents of students and others has been identified as one of the most critical factors in establishing and maintaining positive home-school contacts. A sophisticated communication system that includes a sufficient number of telephone lines and telephone instruments is an absolute must to accomplish these ends. The High School Educational Specifications Committee identified communications, internal and external, as one of the most important considerations of all the educational specifications contained in this document.

Security

While the committee spent the majority of its time considering other aspects of the educational specifications for new high schools in Howard County, it did find the need to make recommendations in the area of security. In this case security refers to the security of the school building and its contents, the safety of students, teachers, and other staff members, as well as the safety of parents and other community members who will undoubtedly make regular and frequent use of the school building. The Centennial High School students made a number of suggestions concerning security and the use of technology. While the desirability and viability of these suggestions and others like it as they pertain to security is subject to further study, they do point out the interest in and the need for security of "people and things". The committee also discussed the need to maintain a very delicate balance in the area of security and one side of that balance was alluded to earlier in the "User Friendliness" section of this document. Schools can certainly be made secure, however, people will undoubtedly behave differently as a result of the level of security that is used in a school building. Howard County schools are considered "community schools" and as such enjoy the frequent visits of parents and other community members. Unencumbered access to schools, student and staff safety, and the concept of community schools must be balanced with safety concerns as new schools are planned and constructed.

Joint Use of Facilities

In the past there has been discussion among school and government officials concerning this topic. The High school Educational Specifications Committee recognizes this past interest and shares the desires of those who would like to see the concept become a reality. For the purpose of meeting its charge, the committee does not make specific recommendations in this area, and while these educational specifications speak primarily to the needs of the students who will be using them, the committee does wish to support further discussion as to whether the media center, cafeteria, gymnasiums, and/or other school facilities can be jointly constructed by the school system and the county government for joint school and community use.

Barrier Free Facility

In order to create a building that is considered to be inclusive of students with disabilities it is important to consider particular design aspects. For instance, toilet facilities that are designed for the handicapped should have adequate square footage to permit straight in transfer and provide enough space for wheelchairs to pass through with ease with thresholds as flat as possible for the smooth travel of wheelchair users. Some doorways might also need automatic door openers installed. Each classroom should have at least one desk or table that accommodates a wheelchair user.

The positioning of other amenities must also be considered. Water foundations, fire alarms and telephones should also be handicapped assessable. All "USER" statements should be interpreted to mean: students (including wheel chair users).

Special Notice

1. The lists of moveable equipment contained in these educational specifications are representative of the types of moveable equipment that may ultimately be purchased for each of the areas of the school; however, those lists are primarily for the use of architects and planners as they design the facilities. Detailed moveable equipment lists will be developed as the final design of the building is completed.
2. In most areas of these educational specifications, references to specific types of technology to be housed in them are omitted since technology may well change dramatically during the course of design and construction of this project; therefore, to specify current technology for use in a facility that will open for use three or more years in the future could cause outdated technology to be placed in the new school. Added to these educational specifications is the current Technology Plan for the Howard County Public School System which serves as the system's road map for current and future use of technology. The Technology Plan will provide the starting point for the determination of the specific technology that will be employed in this school and that will be the standard for the school system in the future.
3. Space for teachers' planning is indicated in each of the curriculum program areas; however, it is understood that the organizational plan for the school may be such that teachers' planning areas are located within the building in locations other than academic departments. Therefore, each teacher will be provided 60 sq. feet of appropriately equipped planning space as determined by the organizational plan of the school.

**SUMMARY OF NET SQUARE FOOTAGE IN
1999 EDUCATIONAL SPECIFICATIONS**

LOCATION	1999 Total Sq. Ft.
ADMINISTRATION	3,290
ART EDUCATION	5,130
AUDITORIUM	19,500
BUSINESS EDUCATION & COMPUTER MANAGEMENT SYSTEM	4,540
CAFETERIA/FOOD SERVICE	10,880
CUSTODIAL AREA	1,690
ENGLISH/LANGUAGE ARTS	12,240
FOREIGN LANGUAGE / ESOL	5,095
GIFTED & TALENTED	910
GUIDANCE	2,820
HEALTH EDUCATION	910
HEALTH SUITE	800
HOME ECONOMICS	3,080
MATHEMATICS	9,820
MEDIA	9,560
MUSIC EDUCATION	6,155
PHYSICAL EDUCATION	28,510
SCIENCE	16,450
SOCIAL STUDIES	10,295
SPECIAL EDUCATION	6,652
STAFF LOUNGE	1,250
STUDENT ORGANIZATIONS	425
TECHNOLOGY EDUCATION	4,570
	<hr/>
TOTAL	164,572 sq. ft.

TABLE OF CONTENTS

Introduction	i
Mission Statement-HCPS	iii
High School Mission Statement	iii
Executive Summary	iv
Important Considerations	v
Summary of Net Square Footage 1999 Ed. Specs.	viii
Administration	1
Art Education	5
Auditorium	15
Business and Computer Management Systems	21
Cafeteria/Food Service	27
Custodial Area	35
English Language Arts	39
Foreign Language	49
ESOL (English for Speakers of Other Languages)	57
Gifted and Talented Resource Room	59
Guidance	65
Health Education	75
Health Suite	77
Home Economics	85
Mathematics	99
Media	111
Music	123
Physical Education and Athletics	135
Science	145
Site Considerations	157
Social Studies	161

Special Education	
Related Services Area	169
Classrooms	172
Program for Students with Emotional Disturbance	179
Staff Lounge	191
Student Organizations	193
Technology Education	195

Review of the

General Educational Specifications
for
New Howard County
High Schools

March 21, 2002

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY:

Chairman
Vice Chairman
Members

Dr. Jane B. Schuchardt
Mrs. Sandra H. French
Mrs. Virginia W. Charles
Ms. Patricia S. Gordon
Mr. James P. O'Donnell

Superintendent of Schools

John R. O'Rourke

Table of Contents

3	Participants in the Process
4	Purpose
4	Process
5	Format
6	General Issues
7	Space Analysis
	Section I: Request for Additional Spaces
8	Space Analysis
	Section II: Request of Modifications to Existing Requirements
13	Summary of Requests Which Add Square Footage to the Current Prototype
14	Floor Plans
	Appendix
22	Justification for Career Connection's Office
23	Justification for Professional Development School's Space
24	Justification for increase to Auditorium
25	Justification for increase to Math Classrooms
26	Justification for increase to Weight Training Room
27	Justification for change to Science Labs