EDUCATIONAL SPECIFICATIONS

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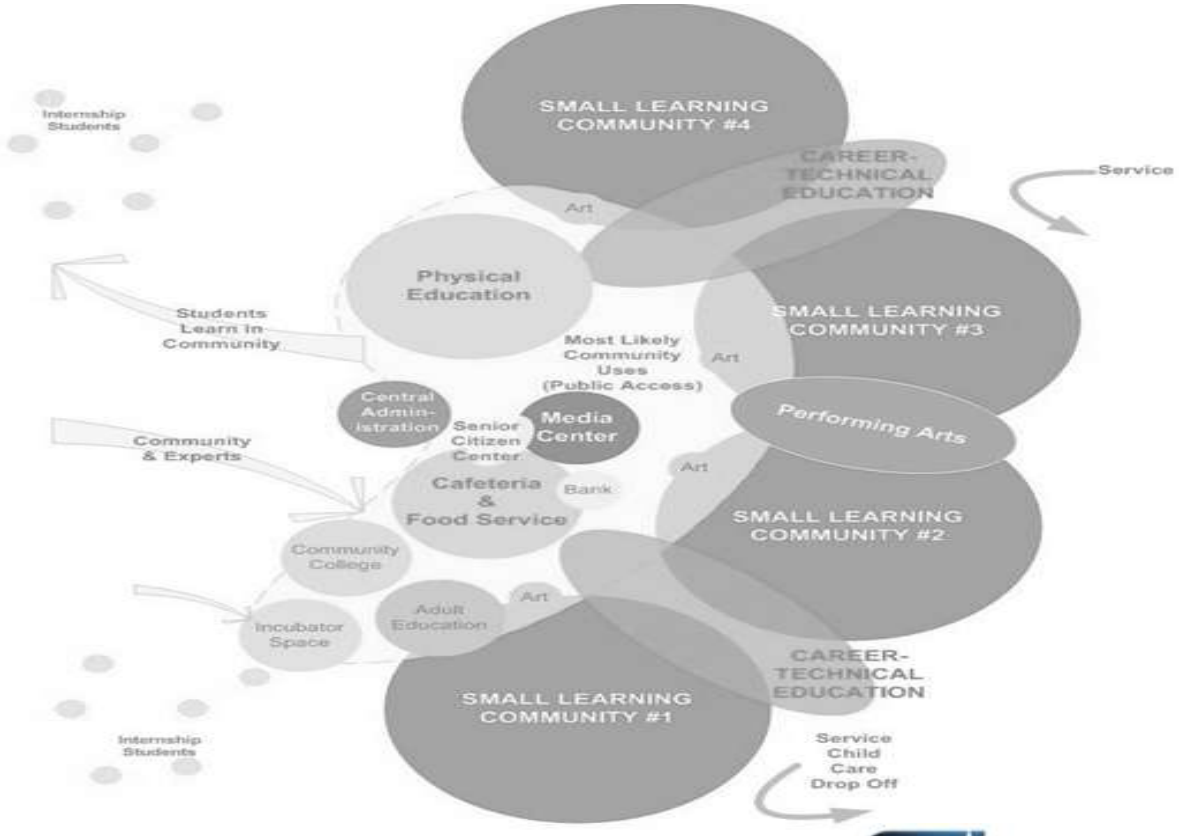

Maine Department of Education

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TABLE OF CONTENTS

		Page
I.	Introduction	1-2
II.	Definitions Of Educational Specifications	3
III.	Developing Educational Specifications	4
IV.	Completed Application Package	5
V.	Directions For Written Responses	5
VI.	Questions 1 thru 8	6-13
VII.	School System Authorization	14

I. INTRODUCTION

Designing Maine's Schools for the Future

The *Educational Specifications* together with the *Space Allocation Guidelines* and the *Public School Standards and Guidelines for New School Construction and Major Renovation Projects* constitute planning documents for the design of new school facilities that meet the goals and objectives of education in the 21st Century.

Maine schools are serving a new generation of students with new educational needs. Unlike previous generations, these 21st century students are growing up in a fast-paced, ever-changing digital age. Their world is no longer built around local industrial economies; they will become part of a globally interconnected, knowledge-based society that is governed by radically different rules and expectations. Today's students are no longer largely the products of local experience and education – they can access different cultures and educational programs on-line or through other interactive media, and worldwide travel opportunities are more accessible and affordable. They will live out their adult lives in a more demanding and competitive world that will require significantly higher levels of educational attainment. As our students grow up in this new global environment, they will increasingly become the primary agents of their own education, tapping into new learning and experiences both in and out of school. And they will not only expect but also demand an education that is both engaging and relevant and that will prepare them for success in the future. To design facilities for the next generation, planners must consider the needs of these new students and what the world will eventually require of them as they navigate a new borderless world of knowledge, industry, and innovation.

The attributes of high-performing schools are well documented and they must be considered when planning and designing new schools. Furthermore, the science of cognition and cognitive development, as well as research on student learning, is not only rapidly revealing new insights, but is a creative, ever-evolving process. Taking these factors into consideration, new school facilities should:

- Offer rigorous academics and instill high expectations for all students
- Provide relevant, engaging curricula and teaching practices that incorporate real-world applications
- Have a common, school-wide mission and design
- Foster a healthy, supportive school culture
- Be organized into small, safe, and personalized learning communities
- Incorporate into the facility's design flexible school structures, practices, spaces, and furnishings that can adapt to emerging needs
- Support professional learning partnerships and collaborative leadership

The guidelines that follow will provide school designers with a clear roadmap for planning and building schools that structurally support innovative teaching and learning practices, and that can accommodate both new and emerging technologies and practices. Maine communities must embrace the opportunity to design unique learning centers that meet the specialized needs of their students, while also ensuring that every student is given equitable access to high-quality education and the opportunity to achieve rigorous academic standards. The State of Maine provides significant resources to communities constructing new schools, and it is therefore largely responsible for ensuring that new schools are built to meet both contemporary and future needs. To that

end, communities must reconsider traditional practices, the use of school spaces and classrooms, and the overall blueprint for teaching and learning. It's time to think of school in a much broader context – as a lifelong learning center.

Throughout the nation – and around the world – we can see many examples of schools being designed to provide inviting and stimulating spaces for learners of all ages. We can find schools that are engaging students in a rich array of experiences that connect learning to the work, culture, and everyday life of local communities and the larger world. We see schools organized into personalized learning environments that dissolve the barriers between functional school design and effective learning. Every aspect of building design – whether it's space, light, color, furnishings, or equipment – should enhance school programs and provide for flexible approaches to teaching and learning.

These Educational Specifications ask planners to reconsider traditional ways of organizing space and personnel, and to build integrated, personalized schools that will maximize the learning experience for all students.

II. DEFINITIONS OF EDUCATIONAL SPECIFICATIONS

A number of organizations have defined the purpose and meaning for developing educational specifications. These quotes are provided for you to consider as you embark on planning and leading this critical process.

"Educational Specifications are the means by which a school administrative unit describes its educational goals and activities, and the interrelationships between those educational goals and activities and their associated spaces that need to be provided in a proposed new or renovated school facility." – *Maine State Board of Education*

"A means of communication between educators and the design professionals that defines the specific ways that local educators see an educational facility supporting and enhancing the instructional program." – *The KBD Planning Group 2000*

"Educational specifications serve as the written documentation of the educators' intent for program delivery and defines the physical parameters of the learning environment, both building and site." – *CEFPI Guide for Educational Facility Planning*

"One of the major purposes of educational specifications is to describe clearly and concisely the various learning activities to be housed in the school, their spatial relationships, and special features." – *National School Boards Association*

Another "important reason is that writing educational specifications draws all user groups together and builds consensus around common educational and community goals." – *CEFPI*

"A true educational specification is a dynamic, visionary document reflecting activities that engage students. The educational vision must reflect specific needs within the community so the educational program must grow out of dialogue with all user groups. Every educational specification should be unique to its users." – *CEFPI*

"The process of defining educational specifications provides an opportunity for everyone who uses the facility to express their needs and specific program requirements in writing, and gives its planners an opportunity to integrate these needs into the facility design. This is often the only time user groups can look objectively at successful and less-than-successful programs and think about the future of educational delivery systems. It allows for open dialogue to discuss current research and best practices." – *CEFPI*

III. DEVELOPING EDUCATIONAL SPECIFICATIONS

In order to develop the most appropriate Educational Specifications for the school and the community all user groups must be represented in their formation.

The school board is officially in charge of a school construction project but they may delegate to one or more ad hoc building committees the responsibilities of doing research, collecting data, and ensuring that there is an alignment between the program and the building design. Well-written Educational Specifications will ensure that alignment.

The school board must formally vote to approve the final version of the Educational Specifications prior to forwarding them to the Department of Education as part of the Concept Approval process.

Please include the names of the people involved in the preparation of your Educational Specifications and the constituencies they represent. At a minimum, the following must be represented:

Constituency	Individuals Represented

- Students
- Faculty
- Staff
- Administration
- Parents
- Community
- Local Officials

The architect should play a supportive role in the development of the Educational Specifications. Their experience will be a valuable resource to the group in discussing spatial relationships, area requirements, codes and regulations, sustainable designs, budgeting and scheduling.

A major objective in developing the Educational Specifications is to give the user groups time to interact with their colleagues in addressing the development of a set of Educational Specifications that best meet the student and community needs.

Please include the dates, times, agendas, and minutes of the Educational Specifications planning meetings held.

The finalized Educational Specifications Packet, including two copies of the formally approved specifications plus all supporting data, must be turned in to the Department of Education at least two weeks prior to the first Program Conference.

IV. THE COMPLETED APPLICATION PACKAGE

Your completed application must include **two (2) copies**:

1. Completed cover page
2. A list of all individuals involved in preparation of the Educational Specifications
3. Date, time, agendas and minutes of all meetings involved in developing Educational Specifications, including committee and community meetings.
4. Minutes of Board meeting at which the Educational Specifications were approved.
5. Narrative responses to each of the attached eight questions and their bullets, identifying each response using the corresponding question number and title.
6. A list of site visits (location, date, and who went) to schools.
7. Additional information, data, and research that will help others understand your school's Educational Specifications.

V. DIRECTIONS FOR WRITTEN RESPONSES

1. Please respond in writing to each of the following eight questions and their bullets.
2. Please identify each response using the corresponding question number and title.
3. Feel free to provide additional information not requested that would help you to define your school's Educational Specifications.

VI. QUESTIONS 1 thru 8

A Forward-Looking Program for All Learners

Question 1: How does the project enhance teaching and learning to meet the needs of all learners in the 21st century?

Describe the manner in which this project aligns with the state and local vision for teaching and learning and how it is supported by current research on high-performing schools. How will the new school:

1. Create equitable opportunities for all students to achieve Maine's Learning Results?

2. Offer the skills and tools students need to succeed in a global, knowledge-based economy?

3. Be a center of learning for multiple audiences and a partner with the community?

4. Address needed improvements based on current and projected school data, such as student attendance, anticipated enrollment, academic performance, graduation rate, and college going data?

5. Be flexible enough to incorporate a broad repertoire of instructional practices and strategies?

6. Be a personalized learning environment that will create an energized educational culture for students and teachers?

7. Support relevant learning models and instructional practices that can accommodate current and future student needs?

IMPORTANT NOTE: It is essential that the school's design team demonstrate, in the Educational Specifications submitted to the Department of Education, the connection between its mission statement and the design needs of the new school. Will the facility be responsive to unanticipated problems? Will it fulfill the long-range needs of its students? Will it address the demands of the outside world and the need for continued relevance in student learning? School planners must recognize the considerable financial investments being made, and build schools that will anticipate the future and ensure a long shelf life. Buildings that are constructed today should ideally endure as vibrant centers of learning for at least 75 years or longer.

Best Practices in Educational Programming
Ensuring High Achievement and High Aspirations

Question 2: How will the range of programs housed in the facility guarantee equitable access to the essential resources needed to achieve the high expectations of Maine's Learning Results? And how will the facility's programs help students become engaged, responsible, and ethical citizens?

Describe how the programs to be included in the facility enhance rigorous expectations, high achievement, and the future aspirations of every student, including:

1. Student-support services that guide students and reinforce high expectations, achievement, and aspirations.

2. Administrative services that are organized to support collaborative leadership.

3. A rigorous academic program that is aligned with Maine's Learning Results.

4. Specialized programs that support and enhance the arts, cultural opportunities, and physical education for students and the community.

5. Embedded programs that will accommodate rich and diverse multigenerational interaction among students, faculty, and the community.

6. Programs that support and enhance multigenerational learning within the facility.

7. Programs that encourage small and personalized learning communities, flexible school structures and practices, and professional learning partnerships among teachers.

8. Programs that overcome demographic and economic challenges to give every student access to the best teaching and learning available.

IMPORTANT NOTE: This vision of Maine's Learning Results is to ensure equitable opportunity for all Maine youth, no matter what their background is or where they may happen to live. A learning environment that enhances expectations and provides high-quality education to all learners is the key foundation for building design. Planners need to ask themselves: How will this facility guarantee equity, personalization, and high expectations for all students well into the future?

Connecting Best Practices in Educational Programming to Facility Design

Question 3: In what ways does the interrelationship of instructional and non-instructional programs and facilities enhance teaching and learning, provide a personalized learning environment, allow for program adaptability and flexibility and maximize s collaboration for the benefit of students as a group and individually?

Describe how the school envisions the relationship among building facilities, instructional and non-instructional programs, and programs that involve multigenerational, community-based learning, including:

1. Creating programs that provide for collaborative, interdisciplinary teaching models instead of the traditional content-driven organization of spaces and programs.

2. Building facilities that incorporate personalized work environments for students to work either individually or in small teams.

3. Arranging libraries, performing arts spaces, gymnasia, health centers, cafeterias, community education centers, and other multi-use areas to maximize use by students and community.

4. Considering the physical and social-developmental stages of youth when designing areas for students to gather (inviting social gathering spaces communicate to students that the school values and respects them.)

5. Designing spaces that honor student individuality and communicates respect for the diverse interests and social lives of students.

6. Addressing the interrelationship of specialized programs, such as special education, with regular academic curricula to help ensure an inclusive, cohesive school program that encourages collaboration among staff.

Organizing People to More Effectively Deliver Programs

Question 4: How does the grouping of people (staff, support personnel, other) guarantee the support and resources needed for all students to meet or exceed Maine's Learning Results?

Describe school staff, their responsibilities, and the varieties of staffing configurations required to fulfill the vision for the teaching and learning outlined in Questions 1 and 2, including:

1. The potential grouping of professional staff that will enhance opportunities for integrated project- and community-based learning (as envisioned in Maine's Learning Results.)

2. Locating student-support and administrative services in close proximity to classrooms and learning areas in order to encourage professional collaboration and support between guidance, administration, and teaching staff.

3. The groupings of professional and support staff that will help ensure the inclusion of all learners.

4. Groupings that minimize grade-level and content-driven models of organizing spaces for teaching and learning.

5. The grouping of personnel (office, food service, security, custodial, etc.) necessary to support a healthy and safe environment for youth.

6. Groupings and facility designs that enhance the professional skills essential to preparing youth for college and work, including skills not currently possessed by existing staff.

7. Other potential uses for the school that broaden the learning experiences of students and the community.

IMPORTANT NOTE: Organizing learning opportunities based on the belief in common high expectations – as opposed to various subjective perceptions about students' ability or assumptions about their future education or careers – provides true choice for all students. Compelling national research shows that heterogeneously grouped learning environments enhance the performance of all learners, which should be extended to facility design.

Department based leadership structures, or organizing by content, inhibit a school's ability to develop new models, integrate diverse learning opportunities, or change outmoded practices (see Breaking Ranks II). For example, placing all of the school's science labs in one area is often a default organizational model for building spaces, staff location, and the delivery of instruction

Furnishings as a Key Strategy for Teaching and Learning

Question 5: How will the School's furnishings and equipment enhance its long-term vision for teaching and learning?

Describe the kinds of furnishings and equipment that are comfortable, durable, and age appropriate. All furnishings and equipment should engender a highly personalized environment for teaching, learning, and living in the school and should be appropriate for both working and socializing, including:

1. The use of tables – and other furnishings – that will maximize student collaboration and minimize isolation.
2. Furnishings and equipment that are easily rearranged and provide for the flexible grouping of students and multiple uses.
3. Furnishings and equipment that foster student "ownership" of space (i.e., they can be personalized by students.)
4. Locating lockers, student "cubbies" or similar storage spaces in student work areas.
5. Furnishings in public spaces, including the dining area, that support safe and appropriate social gatherings.
6. Specialized furnishings and equipment essential to specific programs, such as multi-media, science-lab, and special-needs equipment, etc.
7. Furnishings that provide flexible, project-based work areas for individuals and groups of students.
8. Furnishings that maximize the use of existing, emerging, and potential technologies.
9. Furnishings that allow for the display of student work in all areas of the facility, and that provide space for various presentations (artistic, academic, performing) of student work.
10. Furnishings that allow for large- and small-group instruction.
11. Furnishings that enhance the aesthetic appeal of all spaces, making them warm and inviting as well as functional.
12. Play and athletic equipment that are safe and durable and can be integrated with student learning.

IMPORTANT NOTE: Well-chosen furnishings can be an important strategy for enhancing student learning. Test the furniture with the space you are laying out: Is the furniture comfortable and inviting? Does it enhance the aesthetic appeal of the area? Will it last for many years? What work areas or furnishings will students "own" in the school? Is it flexible for various teaching and learning styles?

Smart, Safe, and Environmentally Sound Construction

Question 6: What special environmental and/or technological provisions are required to fulfill the school's long-term vision for teaching and learning, including personalized, safe, and aesthetically enhanced environments?

Describe the environment and/or technological requirements that are required to fulfill the long-term vision for student programs, including:

1. Controlled environments in spaces that are used year-round by the community (library/media areas, tech labs, the arts and performing arts spaces.)

2. Controlled environments as required or determined by equipment (e.g.: computers, lab instruments.)

3. Technical consideration for acoustical enhancement as required for various learners and teaching strategies.

4. Increased ventilation in multipurpose rooms, science- and wet-lab areas, and enclosed small-group workrooms to maintain air quality standards.

5. Maximized use of daylight and seasonal movements of the sun to enhance teaching and learning environments and public spaces, while also promoting energy efficiency throughout the year.

6. Provide for wireless internet access throughout the facility, including some outdoor areas.

7. Staff training in all new technologies and "smart tools" to be used for teaching and learning: digital communications, smart boards, video projectors, wireless and hard-wired technologies, distance learning equipment, etc.

8. To the extent affordable, utilize the principles of "green-facility design."

9. Safety considerations for "lock-down" management.

10. Outside landscaping that serves as an extension of the learning environment and that provides for additional outdoor educational programs.

Designing a Building for the Future

Question 7: What will the future require regarding learning spaces for public-school youth?

Consider the multiple means through which our youth may acquire an education and describe how the facility may be used beyond daily instruction, including:

1. Flexibility in the size, number, and configurations of rooms to accommodate changes in teaching and learning strategies.

2. New and varied uses for public spaces (library/media centers, gymnasium, arts and performance arts, dining areas, etc.) to build a strong connection between the school and the community.

3. Classrooms designed to be spacious, bright, and multi-use, and accommodate diverse teaching methods and varied class sizes.

4. The use of space for independent work and year-round use beyond the traditional school day, including open, 24-7 access to specific areas.

5. Spaces that provide work and social areas for students beyond the context of their school programs (clubs, projects, co- and extra-curricular activities, etc.)

6. Spaces that can be used by entrepreneurs, private businesses, and other ventures that may enhance student opportunities, such as student internships, community health care, family agencies, higher education, etc.

7. Spaces used to enhance student opportunities, such as pre-school, childcare, Head Start, community-based learning, internships, community college or university partnerships, etc.

8. Spaces that enhance alternative-instructional and learning opportunities, such as distance learning or early college options.

9. Design and organize the cafeteria and performing arts spaces to ensure maximum educational utilization.

10. Best use of current and emerging learning technologies to enhance instructional strategies.

A Building Designed for Multiple Generations

Question 8: How will the school (1) be an attraction to people of all ages, (2) honor community partnerships, and (3) encourage year-round use by the community?

Describe how the facility's design and programs will enhance the life, work, and culture of the community, including:

1. The full range of services provided to the community, such as day-care, pre-school, library, health, and social services.

2. The building design must accommodate many hours of use and extended school days without compromising the security of other spaces, while maximizing energy efficiency.

3. Community use of technological tools in the facility (computer and science labs, on-line libraries, media technologies, etc.)

4. The potential integration and availability for adults and youth in the school's program, including child-care, senior-citizen, community health center, distance-learning, and adult-educational programs and services.

5. The potential use and availability of gymnasia, fitness facilities, athletic fields, meeting rooms, computer labs, and performance spaces to the community.

6. The availability of meal programs and other community-based services to special populations.

7. Spaces designed to support community mentorship, internship, or early college programs for students.

8. Spaces that may be made available to private businesses, entrepreneurs, service agencies, etc. that could enhance student-learning opportunities (banking, marketing, media, communications, etc.), including local-media needs (television, video production.)

9. Use of the facility to promote local culture and history.

10. Educational and recreational use by multigenerational community members that takes into consideration potential changes in use and demographics.

VII. SCHOOL SYSTEM AUTHORIZATION

School

School System

Date Approved by School Board

Vote

Superintendent's Signature

Date

Maine Department of Education
Division of School Facilities
http://www.maine.gov/doe/facilities/
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