

**Appendix I**

# **NWT SCHOOLS CAPITAL STANDARDS AND CRITERIA**

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**Department of Education Culture and Employment  
Government of the NWT**

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## 1.0 Introduction

### 1.1 Purpose

The Department provides funding for school building projects including new construction, renovations, and upgrading of facilities and equipment. Infrastructure is developed and maintained based on need demonstrated by student enrolment levels and existing building condition assessments. The Standards and Criteria are based on the principle of providing suitable and equitable education facilities across the NWT:

- Criteria are used to assess and determine needs
- Standards describe the space characteristics considered adequate to meet those needs

Standards and Criteria need to be revised from time to time to reflect current delivery of education programs. This document will replace the Standards and Criteria currently in place.

Guidelines or “best practices” for school spaces will be developed as a companion document to the revised Standards and Criteria.

### 1.2 Changes from previous Standards and Criteria.

The proposed new standards calculate space allowance to a category level only. The previous standards required detailed calculations to determine each room a school was eligible for, and the area for each room. The proposed change is intended to make the standards simpler to use, and to allow schools to be designed to better meet individual needs of different communities.

Although the new standards allow for more flexibility, they also require more effort during detailed planning to determine what is appropriate for each project. In practice this always has occurred when planning new schools or renovations to existing schools.

The proposed new standards are suitable for all schools. The previous standards included a separate set of standards to be used for schools with enrolments under 44 students.

In some cases spaces have been re-categorized. For example, some spaces that were considered “administrative”, such as storage, have been moved into instructional or learning support categories.

## 2.0 Application of Standards and Criteria

### 2.1 Existing Schools

Standards and Criteria will not be applied to existing schools until such time as Capital Funding is identified to replace or renovate the existing building.

### 2.2 New Facilities

*Standards* New schools will be planned and constructed in accordance with these standards.

*Criteria* There is no existing school building in a community with a population of over 100 people OR

The condition of an existing building is found to be unsafe, a **technical assessment** demonstrates that extensive renovations will be needed in the next five years and the cost would exceed that of new construction OR

Projected enrolments show that the total **capacity** of all community schools will be exceeded in the next 5 years, and an expansion to existing school buildings is not advisable either because it does not meet community needs, or it is not recommended for technical reasons.

### 2.3 Renovations and Additions

*Standards* Renovations and additions will generally be planned and constructed in accordance with these standards, however modifications may be made to take existing building characteristics into consideration. A comparison of the spaces in the existing school with these standards will illustrate differences that should be considered when projects are planned.

*Criteria* The condition of an existing building is unsafe but a technical assessment demonstrates that renovations completed in the next five years could extend the life of the building another 20 years for less than the cost to replace the building OR

Enrolment projections show that the total capacity of all community schools will be exceeded within the next 5 years, an expansion to an existing school will meet the needs of the community, and a **technical assessment** determines that an addition to the existing building is possible.

### 3.0 Overview of Proposed Standards and Criteria

#### 3.1 Organization

School space requirements are organized into seven space categories:

- Instructional
- Resource
- Recreation and Leisure
- Circulation and Gathering
- Learning Support
- Administration
- Building Services

#### 3.2 Space Allowances by Category

- the space **allowance** for each category is based on a **target enrolment**
- the size and attributes of individual rooms and areas are not prescribed in the standards - guidelines will be available as a separate document.
- before renovations or new buildings are designed detailed space requirements are determined in consultation with users, and documented in a **functional program**.

#### 3.3 Target Enrolment

Typically planning is done 5 to 10 years in advance of the actual construction or renovation of a school. Because the space allowance is based on a **target enrolment**, determining this number is critical to the application of the standards. Factors that need to be taken into consideration are more completely explained in Appendix A.

#### 3.4 Modifications to Standards

Space allowances in any category area may be increased only as outlined in these standards, or with the approval of the Minister of Education Culture and Employment. The approval of the Minister is also required where a long term **joint-use partnership** is formed and funding is available from other agencies such as community associations, First Nations, or private donors. Any modifications must be documented in the functional program.

## 4.0 Space Category Allowances

### 4.1 Instructional Area Allowance

This category is subdivided into two types of space, but generally includes all areas that will be used for directed learning activities including classrooms, learning centres, activity stations, seminar rooms, break-out spaces, laboratories, shops and studios. Also included in this category is space for lesson planning/preparation, teaching team meetings, student project supplies, general storage for monthly supplies (for bulk storage see Administration), and frequently used teaching resource materials.

#### *General instructional areas*

Instructional areas for large and small group learning activities not requiring any specialized finishes, equipment, electrical or mechanical services.

Space allowance: **3.5 m<sup>2</sup>**/ student

#### *Specialized instruction areas*

Instructional areas for large and small group learning activities where water, equipment, or materials are used that can be “messy” or create noise, dust or fumes such as: arts and crafts, music, drama, home economics, industrial arts. Specialized features may include: finishes, equipment, electrical/mechanical services (such as multiple sinks, fume hoods, appliances, or power tools), and storage areas for supplies, equipment or student projects.

Space allowance: **0.5 m<sup>2</sup>**/students in all grades  
plus **1.0 m<sup>2</sup>**/student grades 7 to 12

### 4.2 Resource Area Allowance

Space is provided under this category to accommodate centralized resources such as books, videos and computers and work areas for students using these resources and engaged in self directed learning activities. Generally for small group or individual use on an ad hoc basis and may be available outside of regularly scheduled school hours. Also included in this category are any spaces required for staff offices and workrooms, and any central computer servers or other related equipment.

Space allowance: **0.5m<sup>2</sup>** /student

Modifications: In communities where no other public library facility exists an additional **50m<sup>2</sup>** is allowed when needed to provide at least one library in the community.

#### 4.3 Recreation and Leisure Areas Allowance

Space is provided under this category to accommodate both **school** and **community** sports, recreation and leisure activities in spaces such as recreation rooms, gymnasias, fitness studios, game rooms, performance stages and seating areas, change rooms, as well as spaces used for the storage of equipment directly associated with activities, and spaces used for the preparation or sales of snacks and refreshments. Also included in this category are any spaces required for staff offices or workroom needed to operate recreation or leisure programs.

Space Allowance:	target enrolment 50 – 150	<b>70 m2</b>
	target enrolment 150 – 300	<b>550 m2</b>
	target enrolment 300 – 600	<b>850 m2</b>

Modifications: In communities where there is more than one school, and total target enrolment is greater than 200, an additional **300m2** is allowed if needed to provide at least one **full size gym** in the community.

*In communities with schools enrolments under 150 the Department will work with the Department of Municipal and Community Affairs and the community so that a gymnasium is available in the community for school use.*

#### 4.4 Learning Support Area Allowance

Space is provided under this category to accommodate student counseling, community program assistants, medical or dental facilities, and storage for personal belongings during the school day such as school supplies, coats and boots.

Space allowance: **0.4 m2**/students in all grades  
plus **0.1 m2**/ student grades 7 to 12

#### 4.5 Administration Area Allowance

Space is provided under this category to accommodate administrative functions and semi-private spaces for teachers and school staff to work or relax including: General office, principal and vice-principal offices, staff lounge, lockers for personal effects and closets for coats and boots, staff washrooms as well as any internal circulation where rooms are grouped in a suite. Also included in this category is general storage for bulk office and instructional supplies.

Space allowance:	School capacity < 50	<b>15 m2</b>
	School capacity 50 - 100	<b>45 m2</b>
	School capacity 100 - 200	<b>70 m2</b>
	School capacity 200 - 400	<b>120 m2</b>
	School capacity 400 - 600	<b>180 m2</b>

Modifications: Space allowance may be increased by 10% for schools in communities not accessible by all-weather road to increase space allocated to storage

#### 4.6 Circulation and Gathering

This category includes space to provide public access to all instructional, recreation and leisure, resource, and student support areas, general administration area entrance, as well as washrooms, and required exits. This category also includes gathering areas where students interact socially, current activity information can be posted, and artwork and awards can be displayed. Typical spaces would be corridors, lobbies, lounges, and sports viewing areas.

Space allowance: Calculated as a percentage of total area allowances for Instructional, resource, recreation and leisure, administration, learning support areas and any space modifications as follows:

Schools with target enrolments under 300 FTE, **30%**  
Schools with target enrolments over 300 FTE, **25%**

#### 4.7 Building Services

Space is provided under this category to accommodate public washrooms (not staff washrooms in administration), mechanical and electrical service rooms, janitorial/maintenance supplies and any internal circulation required.

Space allowance: **9%** of total area allowances for instructional, resource, recreation and leisure, administration and learning support areas.

## Tables - Area Allowance

These tables that show total area allowances described in the preceding section by increments of 25 FTE for K to 12 Schools.

Student Capacity (60% K-6, 40% 7-12)

FTE	25	50	75	100	125	150	175	200	225	250
K-6	15	30	45	60	75	90	105	120	135	150
<b>Space Category</b> 7-12	10	20	30	40	50	60	70	80	90	100
General Instruction	88	175	263	350	438	525	613	700	788	875
Special Instruction	23	45	68	90	113	135	158	180	203	225
Resource	13	25	38	50	63	75	88	100	113	125
Recreation/Leisure	0	0	70	70	70	550	550	550	550	550
Learning Support	11	22	33	44	55	66	77	88	99	110
Administration	15	15	45	70	70	70	70	70	120	120
<i>subtotal</i>	150	282	517	674	809	1,421	1,556	1,688	1,873	2,005
Circulation/Gathering	45	85	155	202	243	426	467	506	562	602
Building Services	14	25	47	61	73	128	140	152	169	180
Total Useable Space	209	392	719	937	1,125	1,975	2,163	2,346	2,604	2,787
Gross Area	226	423	777	1,012	1,215	2,133	2,336	2,534	2,812	3,010

FTE	275	300	325	350	375	400	425	450	475	500
K-6	165	180	195	210	225	240	255	270	285	300
<b>Space Category</b> 7-12	110	120	130	140	150	160	170	180	190	200
General Instruction	963	1,050	1,138	1,225	1,313	1,400	1,488	1,575	1,663	1,750
Special Instruction	248	270	293	315	338	360	383	405	428	450
Resource	138	150	163	175	188	200	213	225	238	250
Recreation/Leisure	550	850	850	850	850	850	850	850	850	850
Learning Support	121	132	143	154	165	176	187	198	209	220
Administration	120	120	120	120	120	120	180	180	180	180
<i>subtotal</i>	2,140	2,572	2,707	2,839	2,974	3,106	3,301	3,433	3,568	3,700
Circulation/Gathering	642	643	677	710	744	777	825	858	892	925
Building Services	193	231	244	256	268	280	297	309	321	333
Total Useable Space	2,975	3,446	3,628	3,805	3,986	4,163	4,423	4,600	4,781	4,958
Gross Area	3,213	3,722	3,918	4,109	4,305	4,496	4,777	4,968	5,163	5,355

### Gross Area Calculation

Although not a program area, an allowance for structural area is included to calculate the gross area to be used to determine construction costs. An increase of 8% is shown here to account for typical structural space, however this will vary depending on building configuration and construction.

## 5.0 Site Standards

Most NWT communities have reserved school sites that are adequate for existing schools, and will remain so for some time. The following standards apply only to new school sites:

### Basic Site Area

The basic school site area need not exceed **60 m<sup>2</sup>/student** and as a minimum must be of adequate size to accommodate the following:

- the building footprint at the time of construction plus 50% to allow for future additions
- outdoor use areas for playgrounds and outdoor classrooms calculated at **15 m<sup>2</sup>/student capacity** x 1.5 to allow for growth
- parking spaces equal to one parking space for every classroom including CTS suites
- passenger drop-off area
- school bus drop-off area
- dedicated service vehicle access route from the street to building service

### Additional Site Areas

Additional outdoor areas may be combined with the school site where land is made available by the community or any other organization that will contribute to the development and maintenance of the site. Examples of additional site areas include:

- Sports fields used for community and school events
- Parking areas for community events
- Parking areas for students

## 6.0 Working with Standards and Criteria

Although the Department of Education Culture and Employment has a primary responsibility for the design and construction of school facilities in the NWT, a number of different people and organizations are involved in the planning, design and use of school buildings. The following sections describe briefly the process and roles of these participants.

### 6.1 Participants

Department of Education Culture and Employment (ECE)  
District Education Authorities (DEA)  
Divisional Education Councils (DEC)  
School Staff, Students and Parents  
Community Groups  
Department of Public Works and Services (PW&S)  
Architectural Design Consultants

### 6.2 Needs Assessment

The following points summarize the needs assessment process followed by ECE for NWT Schools.

- **ECE** maintains a space inventory, school floor plans, and building condition reports for all schools
- **DEC's** provide annual enrolment
- **ECE** produces enrolment projections annually
- **DEC's** communicate all building concerns to ECE annually (typically in May or June) and review ECE inventory information
- **ECE** forecasts 5 and 20 year capital needs annually for NWT Schools based on target enrolments and building conditions (typically in June and July).
- **ECE** requests building condition reports from **PW&S** where work is anticipated in the next 5 years OR when specific problems need to be assessed.
- **PW&S** assists ECE to finalize the scope and estimated cost of construction projects to be identified as part of the GNWT annual Needs Assessment process (typically in June and July).

### 6.3 Project Planning and Delivery

The GNWT Capital Plan is approved each year by the Legislative Assembly. This usually occurs by February, although it may be later in the year. When the Capital Plan is approved ECE will advise stakeholders of projects that will be funded in the coming fiscal year. Project funding is usually available in April at the start of the fiscal year. Typically projects are completed over 2 to 4 years as described in the following points (however the process can vary depending on individual project circumstances):

- During the first year of a project **ECE** and **PW&S** work with user groups including representatives of the **community, DEC, DEA, school staff, parent groups** and **students** to complete a **functional program**.
- Proposals for design services are requested from Architectural firms once the functional program is complete. A selection is made by a committee made up of ECE, PW&S and user group representatives.
- The selected **Architects** will design the building or renovations in stages usually referred to as Schematic Design, Design Development and Construction Documentation.
- **ECE** and **user groups** are responsible for reviewing schematic design and design development submissions from the Architect. They check that the functional program has been correctly translated into the design, and that the estimated costs are within the allocated budget for the project.
- The entire design process can take up to a year or more. This allows time for the Architects to do their work, and for other participants to review and discuss design issues.
- With the approval of PW&S, ECE and the user groups, the **Architect** will produce construction documents. **PW&S** will check these to make sure they comply with current “Best Practices” for northern buildings. Other regulatory authorities, such as the Office of the Fire Marshal, will also review construction documents to make sure they comply with the requirements of the **NBC**.
- The construction work will generally be publicly tendered. Some adjustments to the design, budget, or schedule may need to be made at this time.
- Construction projects usually begin in the spring or summer. The length of time required for construction depends on the size of the building. Typically a smaller school or renovation project can be completed within a year. Larger projects may take over two years.

## **Glossary of Terms**

<b>Allowance</b>	total space that can be used
<b>Allocation</b>	division of allowance into discreet areas
<b>Capacity</b>	the number of students that can be enrolled in a school
<b>Capital Plan</b>	funding approved by the Legislative Assembly for capital projects
<b>Criteria</b>	conditions that must be met before the Department will support a course of action
<b>Enrolment</b>	the number of students registered and attending school as of September 30 <sup>th</sup> each year
<b>FTE</b>	Full time equivalent
<b>Functional program</b>	a written description of program operation and related space requirements
<b>NBC</b>	National Building Code of Canada
<b>Projected enrolment</b>	estimated future enrolment, calculated annually and subject to change
<b>Target enrolment</b>	the number of students a school should be designed to accommodate (see appendix A)
<b>Technical assessment</b>	a comprehensive review of the condition of a building. It may be produced by PW&S or Professional Architects or Engineers. The report usually indicates the remaining life of building systems such as structure, interior and exterior finishes, windows, doors, heating, plumbing, ventilation, lighting, power supplies and communication systems.
<b>User groups</b>	students, teachers, administrative staff, parents and other community members who regularly attend school or other activities in the school
<b>Utilization</b>	a measure of how well space is being used, calculated by dividing current enrolment by capacity

## APPENDIX A

### Target Enrolments

Schools need to be designed so that they will provide suitable space over a number of years. Typically planning is done years in advance of the actual construction project. Although the department projects future enrolments annually, these projections will vary from year to year for a given future year. So, in order to determine a reasonable enrolment capacity or **target enrolment** to plan a school for, the following factors must be taken into consideration:

- Community population projections provided by the NWT Bureau of Statistics and particularly a review of population pyramids and birth rates.
- A review of **projected enrolments** for the same future year, based on at least 3 years of annual enrolment projections.
- Economic development forecasts and anticipated impacts on community populations.

## APPENDIX B

### NWT School Building Profiles

As of July, 2003 there were 48 public schools in 32 NWT communities. The majority of communities have only one school building where grades K-12 programs are delivered. Multi-grade classrooms are normal. Only 6 communities have more than one school where grades are divided into separate elementary, middle or high school buildings.

#### Size of Schools

The majority of schools in the NWT had enrolments under 400 FTE as of September 30, 2003.

- 22% of NWT schools had enrolments under 50 FTE
- 27% of NWT schools had enrolments between 50 and 150 FTE
- 18% of NWT schools had enrolments between 150 and 250 FTE
- 25% of NWT schools had enrolments between 250 and 400 FTE
- 8% of NWT schools had enrolments over 400 FTE

In 27 of the 32 NWT communities total enrolment was under 250 FTE.

The majority of schools in the NWT have a design capacity adequate to accommodate projected enrolments to the year 2010. The gross area of many schools exceeds the space that would be allocated using the standards: this has occurred either because schools were initially built for a larger enrolment, or were designed prior to standards.

#### Ages and Types of School Buildings

Approximately 58% of the schools buildings in use in the NWT were constructed after 1982. The remaining 42% date from between 1956 to 1982 and half of these have been extensively renovated since 1990. Most school buildings are of wood frame construction and range in size from 150 to 6,000 m<sup>2</sup>.